伽盛电子

JARSON ELECTRONICS

SMD Aluminum Electrolytic Capacitors

Conductive Polymer Hybrid Capacitors

Empowering Innovation

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2025 CAPACITOR CATALOG

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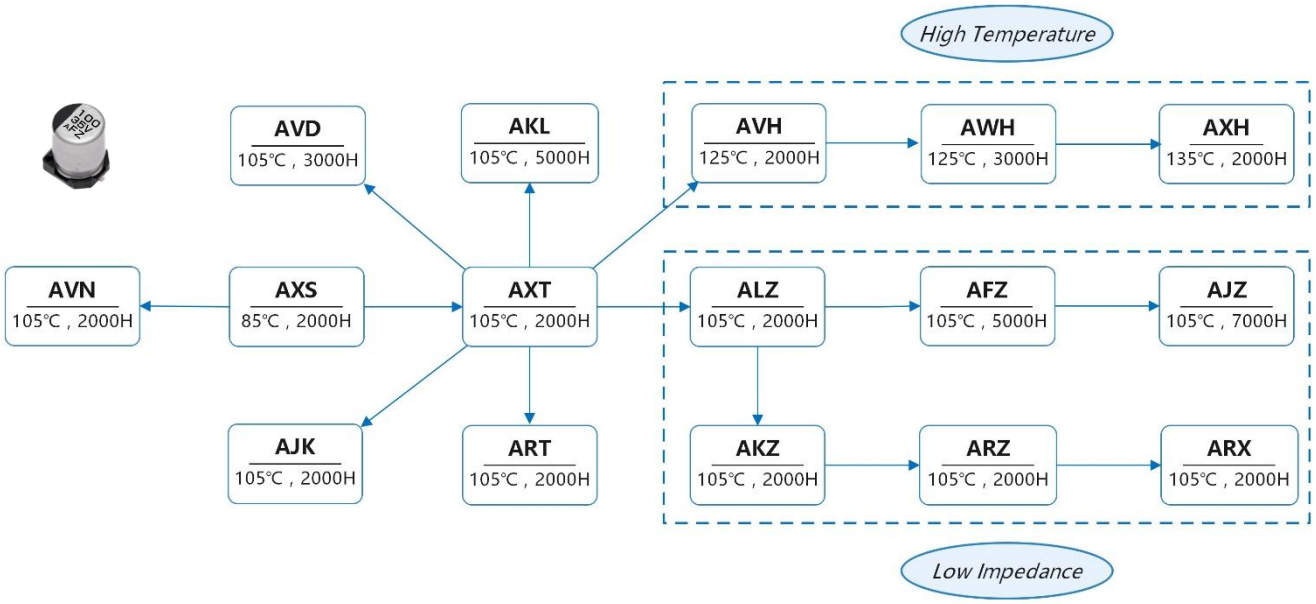
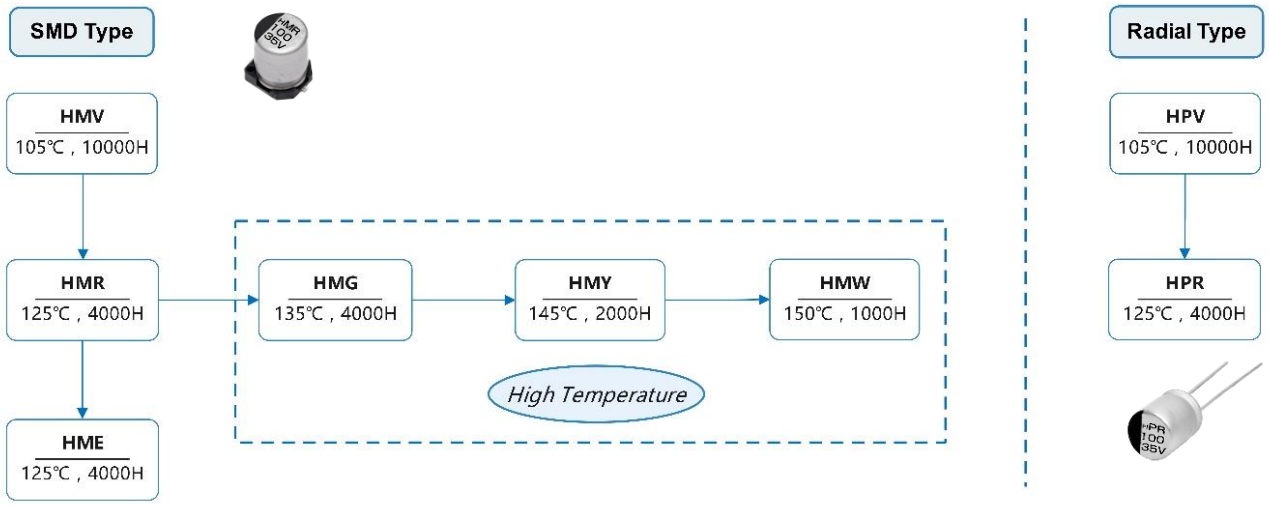


- ***Conductive Polymer Hybrid Capacitors***



Capacitor Series Table

● *SMD Aluminum Electrolytic Capacitors*

Series Name		Features	Endurance	Rated Voltage Range(V)	Capacitance Range(μF)	Page
SMD Type	AXS	Standard, 85℃	85℃, 2000H	6.3~100	1~3300	11
	AXT	Standard, 105℃	105℃, 2000H	6.3~100	1~3300	16
	ART	Standard, Miniaturized	105℃, 2000H	6.3~50	10~2200	21
	AJK	For LED display screen	105℃, 2000H	10~16	220	24
	AVD	High Voltage, 160V~450V	105℃, 3000H	160~450	1~33	26
	AKL	Standard, Long Life, 105℃	105℃, 3000~5000H	6.3~100	1~2200	28
	ALZ	Low Impedance	105℃, 2000H	6.3~50	1~2200	31
	AFZ	Extra Low Impedance, Long Life	105℃, 2000~5000H	6.3~100	1~3300	35
	AJZ	Extra Low Impedance, Long Life	105℃, 7000H	6.3~50	10~470	40
	AKZ	Extra Low Impedance	105℃, 2000H	6.3~50	4.7~1500	42
	ARZ	Ultra Low Impedance, High R.C.	105℃, 2000H	6.3~50	22~2200	45
	ARX	Miniaturized, Ultra Low Impedance	105℃, 2000H	6.3~50	10~2200	48
	AVH	High Temperature Usage, 125℃	125℃, 1000~2000H	10~63	10~1500	51
	AWH	High Temperature Usage, 125℃, Low Impedance	125℃, 2000~3000H	10~50	22~1000	54
	AXH	High Temperature Usage, 135℃, Low Impedance	135℃, 2000H	10~50	47~1000	56
	AVN	Bi-polarized, 105℃	105℃, 2000H	6.3~100	1~1000	58

● *Conductive Polymer Hybrid Capacitors*

Series Name		Features	Endurance	Rated Voltage Range(V)	Capacitance Range(μF)	Page
SMD Type	HMV	Ultra Low ESR, Long Life	105℃, 5000~10000H	10~80	10~560	62
	HMR	High Temperature Usage,125℃	125℃, 4000H	16~80	10~820	65
	HME	125℃, Higher R.C.	125℃, 4000H	25~63	33~470	68
	HMG	High Temperature Usage,135℃	135℃, 4000H	25~63	22~560	70
	HMY	High Temperature Usage,145℃	145℃, 2000H	25~63	33~330	72
	HMW	High Temperature Usage,150℃	150℃, 1000H	25~63	33~270	74
Radial Type	HPV	Ultra Low ESR, Long Life	105℃, 10000H	16~80	22~560	76
	HPR	High Temperature Usage,125℃	125℃, 4000H	16~80	22~680	78

Taping Specifications for SMD type:

1.Carrier Tape

Fig. 1-1 φD≤10

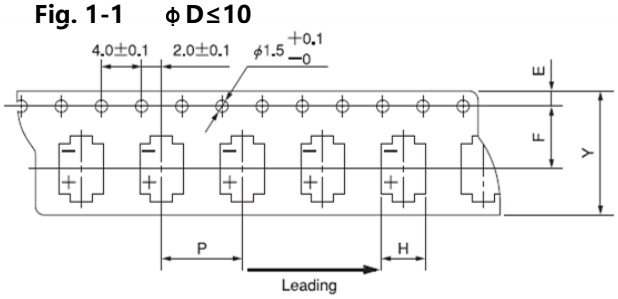
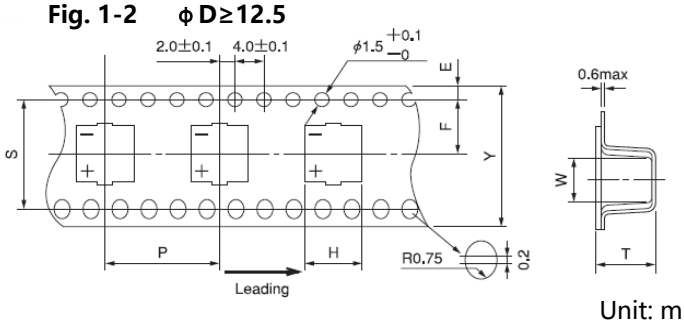


Fig. 1-2 φD≥12.5

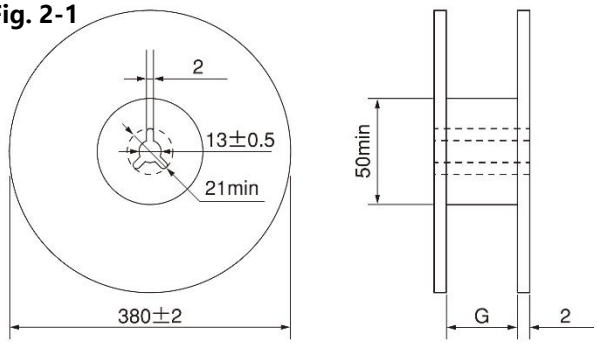


Unit: mm

Type	φD×L	Y±0.3	H±0.2	W±0.2	P±0.1	E±0.1	F±0.1	T±0.2	S±0.1	Fig.No.
SMD	φ4×5.4	12.0	5.0	5.0	8.0	1.75	5.5	5.8	/	1-1
	φ4×5.7/5.8							6.2		1-1
	φ5×5.4		6.0	6.0	12.0			5.8		1-1
	φ5×5.7/5.8							6.2		1-1
	φ5×7.0							7.4		1-1
	φ6.3×5.4	16.0	7.0	7.0			7.5	5.8		1-1
	φ6.3×5.7/5.8							6.2		1-1
	φ6.3×7.0/7.7							8.2		1-1
	φ6.3×8.7							9.3		1-1
	φ8×6.5		8.7	8.7				7.0		1-1
	φ8×10.5	24.0			16.0		11.5	11.0		1-1
	φ8×13							13.5		1-1
	φ10×7.7		10.7	10.7				8.5		1-1
	φ10×10.5							11.0		1-1
	φ10×13							13.5		1-1
	φ12.5×13.5	32.0	13.7	13.7	24.0		14.2	14.5	28.5	1-2
	φ12.5×16.0							16.5		1-2
Hybrid	φ5×6	16.0	6.0	6.0	12.0	1.75	5.5	6.3	/	1-1
	φ6.3×6		7.0	7.0			7.5			1-1
	φ6.3×7.7							8.3		1-1
	φ8×6.5		8.7	8.7				7.0		1-1
	φ8×10	24.0			16.0		11.5	11.0		1-1
	φ10×10.5		10.7	10.7				11.0		1-1
	φ10×12.5							13.2		1-1
	φ10×16.5							17.5		1-1

2.Reel Package

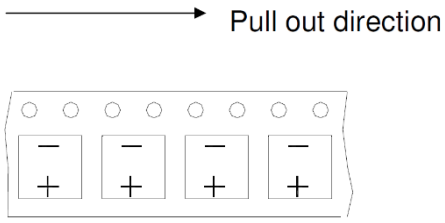
Fig. 2-1



Unit: mm

Case size	G
Φ4~5	14
Φ6.3	18
Φ8×6.5	18
Φ8	26
Φ10	26
Φ12.5	34

Fig. 2-2



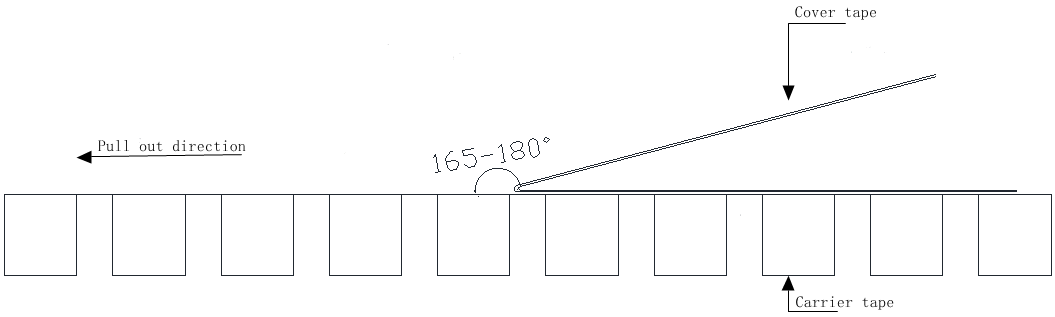
3.Sealing Tape Reel Strength

3.1 Peel angle: 165 to 180° referred to the surface on which the tape is glued.

3.2 Peel speed: 300mm per minutes

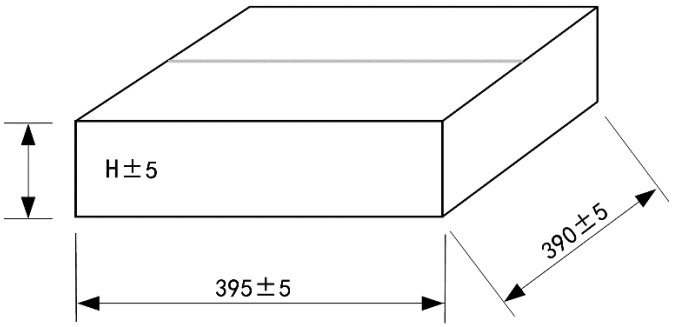
3.3 The peel strength must be 0.1 ~ 0.7N under these conditions.

Fig. 3-1



4. Package Quantity

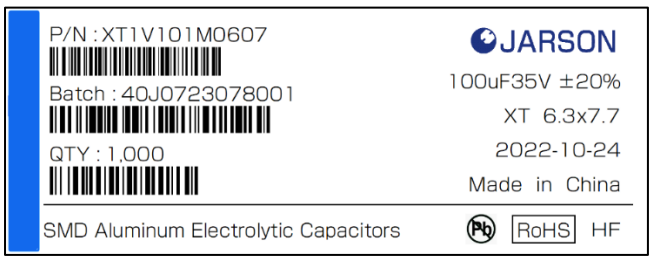
Fig. 4-1

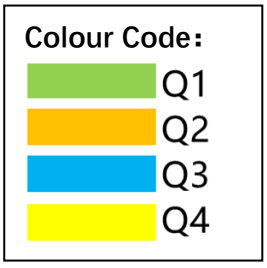


Case size	pcs/reel	reels/Box	pcs/Box
Φ4	2,000	10	20,000
Φ5	1,000	10	10,000
Φ6.3	1,000	10	10,000
Φ8×6.5	1,000	10	10,000
Φ8×10.5	500	10	5,000
Φ8×13	400	10	4,000
Φ10×7.7~10.5	500	10	5,000
Φ10×12.8~13	400	10	4,000
Φ10×16.5	300	10	3,000
Φ12.5×13.5	200	8	1,600
Φ12.5×16	200	8	1,600

Case size	Φ4~Φ5	Φ6.3, Φ8×6.5	Φ8~Φ12.5
H	205	245	325

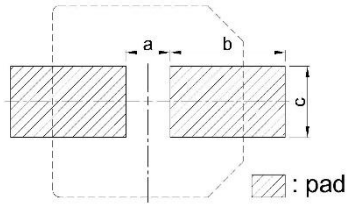
Fig. 4-2 Label: 105mm × 38mm





Reflow Conditions for SMD type

1.Recommended pad pattern and size



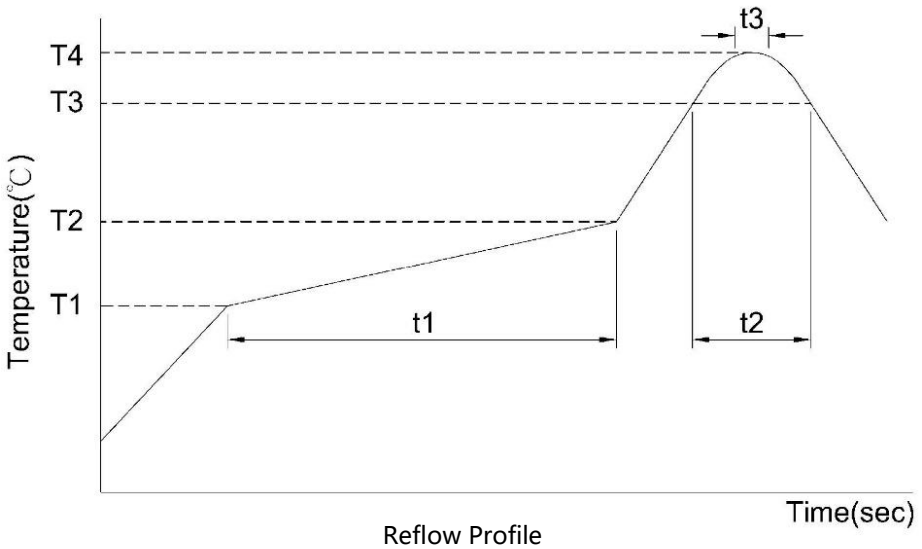
Unit: mm

Case size	Land size		
	a	b	c
Φ4	1.0	2.6	1.8
Φ5	1.4	3.0	1.8
Φ6.3	1.9	3.5	1.8
Φ8	3.0	4.0	2.5
Φ10	4.0	4.0	2.5
Φ12.5	4.0	6.0	3.0

2.Recommended Soldering Methods

2.1 Solder iron method: Bit temperature: 350 ± 5℃, Application time of soldering Iron: 3 +1/-0 sec

2.2 Reflow Soldering（Pb-free）:



Reflow Profile

Rated voltage (V)		4~50		≥63	4~100		≥160
Case size (Φ)		4~6.3		4~6.3	8~18		6.3~18
Preheat	Temp. (T1~T2, ℃)	150-180					
	Time (t1) (Max, secs)	100					
Duration	Temp. (T3, ℃)	217	230	217	217	230	217
	Time (t2) (Max, secs)	90	40	60	60	40	40
Peak	Temp. (T4, ℃)	260		250	250		245
	Time (t3, secs)	5					
Reflow cycles		≤ 2					

※Please contact our representative if your condition is higher.

※Please ensure that the capacitor became cold enough to the room temperature (5~35℃)before the second reflow. Do not attempt to reflow three times.

Precautions and Guidelines for Using Aluminum Electrolytic Capacitors and Conductive Polymer Hybrid Capacitors

1. Guidelines for Circuit Design

(1) Polarity

Aluminum electrolytic capacitors are polarized. Make sure of the polarity, if used in reverse polarity, the circuit life may be shortened or the capacitor may be damaged. When the polarity in a circuit sometimes can be reversed or unknown, a bi-polar capacitor shall be used. Also, note that DC capacitors cannot be used for AC application.

(2) Operating Voltage

Do not apply DC voltage, which exceeds the rated voltage of the capacitor and not be reverse voltage. If a voltage exceeding the capacitor’ s voltage rating is applied, the capacitor may be damaged as leakage current increase. Using capacitors at recommended working voltage prolongs capacitor life. The surge voltage rating is the maximum DC over-voltage to which the capacitors may be subjected of short periods.

(3) Ripple Current

The combined value of DC voltage and the peak AC voltage shall not exceed the rated voltage. When an excessive ripple current passes, the capacitor may be damaged with the vent operating, etc. Use the electrolytic capacitor within the permissible ripple range current at specified frequency and temperature.

(4) Operating Temperature

Use the capacitors according to the specified operating temperature range. If used the capacitor outside the maximum rated temperature will considerably shorten the life or cause the capacitor to vent. Usage at room ambient will ensure longer life.

(5) Leakage Current

The leakage current shall be within specified levels. When capacitors are applied at a lower voltage, the actual leakage current will be reduced proportionately.

(6) Charge and Discharge

The capacitor is not suitable for a circuit in which charge and discharge are frequently repeated. The capacitance value may drop by forming oxide layer on the cathode foil, or the capacitor may be damaged by generating heat due to continuous rapid charge and discharge.

(7) Surge Voltage

The Surge voltage rating is referred as the maximum DC overvoltage that may be applied to an electrolytic capacitor for a short time. Unless otherwise described on the catalogue or product specifications, please do not apply a voltage exceeding the capacitor’ s voltage rating. The rated surge voltages corresponding to rated voltages of electrolytic capacitor are presented as follows:

Rated Voltage（V）	4	6.3	10	16	25	35	50	63	80	100
Surge Voltage（V）	4.6	7.3	11.5	18.4	28.8	40.3	57.5	72.5	92	115
Rated Voltage（V）	160	180	200	250	315	350	400	420	450	500
Surge Voltage（V）	184	207	230	288	347	385	440	462	495	550

(8) Condition of Use

(a) The capacitors shall not be exposed to water, saltwater spray, oil or fumes, high humidity or humidity condensation and direct sunlight.

(b) Ambient conditions that include hazardous gases / fumes such as hydrogen sulfide, sulfurous acid, nitrous acid, chlorine or bromine gas, ammonia, etc.

(c) Exposed to ozone, ultraviolet rays and radiation.

(d) Severe vibration or physical shock that exceeds the condition in specification sheets.

(9) Consideration to Circuit Design

(a) Please make sure the application and mounting conditions that the capacitor will be used are within the conditions specified in the catalog. If the conditions are beyond the conditions specified in the catalog, please contact us.

(b) Do not design a circuit board so that heat-generating components are places near an aluminum electrolytic capacitor or reverse side of PCB. A cooling system is recommended.

(c) Operating temperature, applied voltage and ripple current shall be within specification. The ambient temperature shall not exceed the operating temperature and applied ripple current shall not exceed the allowable ripple current specified in the specification.

(d) Performances of electrical characteristics of aluminum electrolytic capacitors are affected by variation of operating temperature and frequency. Consider this variation designing the circuit.

(e) When two or more aluminum capacitors are connected in parallel, consider the current balance that flow through the capacitors.

(f) If more than two capacitors are connected in series, make sure the applied voltage will be lower than the rated voltage and that voltage will be applied to each equally using a balancing resistor in parallel with each capacitor.

(g) Do not tilt lay down or twist the capacitor’ s body after the capacitor is soldered to the PCB.

2. Caution for Assembling Capacitors

(1) Mounting

(a) Aluminum electrolytic capacitors cannot be re-used once the capacitor has assembled in the set and power applied.

(b) Aluminum electrolytic capacitors may have electrical potential between positive and negative terminal, please discharge through a 1KΩ resistor before use.

(c) Please confirm the rated voltage before mounting.

(d) Please confirm the polarity before mounting.

(e) Do not use the capacitor that once dropped on the hard floor.

(f) Do not damage the capacitor while mounting.

(g) Capacitors shall be mounted that hold spacing on PCB matches the lead pitch of the capacitors.

(h) During the auto-insertion process and parts inspection, capacitors shall avoid the excessive force and shock.

(i) Do not design to locate any wiring or circuit around the capacitor’ s pressure relief vent. The following clearance should be made above the pressure relief vent. The pressure relief vent will not open without the appropriate free space.

Case Diameter	φ6.3 ~ φ16	φ18 ~ φ35
Clearance(mm)	2 mm	3 mm

(2) Soldering

(a) Be careful of temperature and time when soldering. Dip of flow soldering of the capacitors should be limited at less than 260±5℃ and 10±1 seconds or soldering iron with 350±10℃ for 3+1/-0 seconds . Do not dip capacitor’ s body into melted solder.

(b) High humidity will affect the solder ability of lead wire and terminals. High temperature will reduce long-term operating life.

(c) Except SMD type, reflow soldering cannot be used for any types of aluminum electrolytic capacitors. When using SMD type capacitor, please check the reflow profile. The temperature and duration shall not exceed the specified

temperature and duration in the specification. If the temperature or duration is higher than the value specified, please consult us before usage.

(d) Standard aluminum electrolytic capacitors cannot withstand more than 2 reflow process. Please consult our engineering department when needed.

(3) Cleaning Circuit Boards After Soldering

Do not use following chemicals for cleaning: Solvent containing halogen ions, Alkaline solvent, Xylene, Acetone, Terpene, petro-based solvent.

3. Maintenance Inspection

Periodical inspection is necessary for using the aluminum capacitors with industrial equipment. The following items should be checked:

(1) Appearance: Bloated, vent operation, leaking electrolyte, etc.

(2) Electrical characteristic: Capacitance, dissipation factor, leakage current, and other specified items listed in specification. We recommend replacing the capacitors if the parts are out of specification.

4. Storage

(1) Aluminum electrolytic capacitor should not be stored in high temperature or high humidity condition. The suitable condition is 5℃ ~ 35℃ and less than 75% in relative humidity indoor.

(2) Do not store the capacitors in damp conditions such as water, brine or oil.

(3) Do not store the capacitors that exposed to hazardous gas such as hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, ammonium, etc.

(4) Do not store the capacitors that exposed to ozone, ultraviolet rays or radiation.

(5) Do not expose the capacitors to acidic or alkaline solutions.

5. Disposal

Please consult with a local industrial waste disposal specialist when disposing of aluminum electrolytic capacitors.

6. Environmental Consideration

We already have received ISO 14001 certificate. Cadmium (Cd), Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr+6), PBB, PBDE, DEHP, BBP, DBP and DIBP have never been using in capacitor. All the capacitors are If you need "Halogen-free" products, please consult with us.

Part Number System - SMD Aluminum Electrolytic Capacitors

e.g.: Product 220μF /16V，±20%，6.3x7.7，AXT series（P/N：AXT1C221M0607）

SMD Aluminum E-Caps	AXT series	16V	220μF	±20 %	6.3 ϕ x7.7L
A	**XT**	**1C**	**221**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Series name	Rated voltage (V)	Code	Cap. (μF)	Code	Capacitance tolerance	Code	Case Size (ϕ x L)	Code
AXS	4	0G	1	010	±20%	M	4x5.4	0405
AXT	6.3	0J	2.2	2R2	±10%	K	4x5.7/5.8	0406
ART	10	1A	3.3	3R3	-10%~+20%	V	5x5.4	0505
AJK	16	1C	4.7	4R7	0~+20%	R	5x5.7/5.8	0506
AVD	25	1E	6.8	6R8			5x7	0507
AKL	35	1V	10	100			6.3x5.4	0605
ALZ	50	1H	22	220			6.3x5.7/5.8	0606
AFZ	63	1J	33	330			6.3x7/7.7	0607
AJZ	80	1K	47	470			6.3x8.7	0608
AKZ	100	2A	68	680			6.3x10.5	0610
ARZ	160	2C	100	101			8x6.5	0806
ARX	200	2D	150	151			8x10.5	0810
AVH	250	2E	220	221			8x13	0813
AWH	350	2V	330	331			10x7.7	1007
AXH	400	2G	470	471			10x10.5	1010
AVN	450	2W	560	561			10x13	1013
			680	681			12.5x13.5	1313
			1000	102			12.5x16	1316
			2200	222				
			2700	272				
			3300	332				

※For automotive，the Part Number is appended with "a" at the end
※For Vibration resistant structure，the Part Number is appended with "v" at the end.

AXS Series

Features

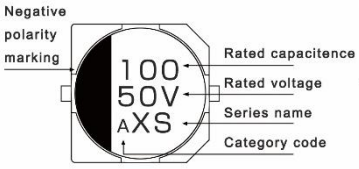
- φ4 ~ φ12.5, 85℃, 2000 hours assured
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

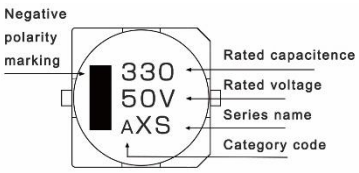
Specifications									
Category temp. range	–40℃ to +85℃								
Capacitance tolerance	±20% (120 Hz / +20 ℃)								
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)								
Tan δ	Please see the attached characteristics list								
Characteristics at low temperature	Rated voltage (V)	6.3	10	16	25	35	50	63	100	Impedance ratio at 120 Hz
	Z (-25 ℃) / Z (+20 ℃)	4	4	3	2	2	2	2	2	
	Z (-40 ℃) / Z (+20 ℃)	8	6	4	3	3	3	3	3	
Endurance	After applying rated working voltage for 2000 hours at +85 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.									
	Capacitance change	Within ±20% of the initial value								
	Dissipation factor (tan δ)	Less than 200% of the initial value								
	Leakage current	Within the initial limit								
Shelf life	After storage for 1000 h at +85 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.									
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.									
	Capacitance change	Within ±10% of the initial value								
	Dissipation factor (tan δ)	Within the initial limit								
	Leakage current	Within the initial limit								
Frequency correction factor for ripple current	Frequency	50Hz		120Hz		1kHz		10kHz≦		
	C≤ 1000μF	0.7		1.0		1.2		1.3		
	C > 1000μF	0.8		1.0		1.1		1.2		

Marking:

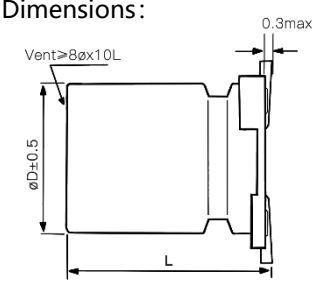
φD ≦ 10mm

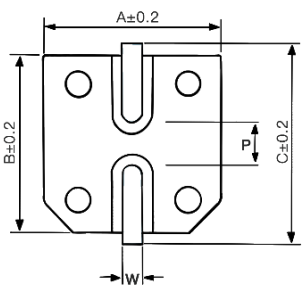


φD ≧ 12.5mm



Dimensions:





Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
4	5.4±0.3	4.3	4.3	5.1	0.5~0.8	1.0
5	5.4±0.3	5.3	5.3	6.0	0.5~0.8	1.4
6.3	5.4±0.3	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
8	6.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	7.7±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	13±0.5	10.3	10.3	11.1	0.7~1.3	4.4
12.5	13.5±0.5	13.0	13.0	14.0	1.1~1.4	4.4
12.5	16±0.5	13.0	13.0	14.0	1.1~1.4	4.4

Part Number System:

SMD Aluminum E-Caps	AXS series	16V	220μF	±20 %	6.3 φ x7.7L
A	**XS**	**1C**	**221**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
6.3	22	4	5.4	26	0.35	AXS0J220M0405	2000
	33	4	5.4	31	0.35	AXS0J330M0405	2000
	47	4	5.4	34	0.35	AXS0J470M0405	2000
		5	5.4	55	0.35	AXS0J470M0505	1000
	68	5	5.4	58	0.35	AXS0J680M0505	1000
		6.3	5.4	89	0.35	AXS0J680M0605	1000
	100	5	5.4	58	0.35	AXS0J101M0505	1000
		6.3	5.4	89	0.35	AXS0J101M0605	1000
	220	6.3	5.4	89	0.35	AXS0J221M0605	1000
		6.3	7.7	124	0.35	AXS0J221M0607	1000
	330	6.3	7.7	124	0.35	AXS0J331M0607	1000
		8	6.5	190	0.35	AXS0J331M0806	1000
	470	6.3	7.7	124	0.35	AXS0J471M0607	1000
		8	10.5	290	0.35	AXS0J471M0810	500
	680	10	7.7	290	0.35	AXS0J681M1007	500
	1000	8	10.5	290	0.35	AXS0J102M0810	500
		10	10.5	430	0.35	AXS0J102M1010	500
	2200	12.5	13.5	890	0.40	AXS0J222M1313	200
	3300	12.5	16	1000	0.42	AXS0J332M1316	200
10	10	4	5.4	26	0.30	AXS1A100M0405	2000
	22	4	5.4	26	0.30	AXS1A220M0405	2000
		5	5.4	44	0.30	AXS1A220M0505	1000
	33	4	5.4	31	0.30	AXS1A330M0405	2000
		5	5.4	55	0.30	AXS1A330M0505	1000
	47	5	5.4	55	0.30	AXS1A470M0505	1000
		6.3	5.4	75	0.30	AXS1A470M0605	1000
	68	5	5.4	58	0.30	AXS1A680M0505	1000
		6.3	5.4	89	0.30	AXS1A680M0605	1000
	100	5	5.4	58	0.30	AXS1A101M0505	1000
		6.3	5.4	89	0.30	AXS1A101M0605	1000
	220	6.3	5.4	89	0.30	AXS1A221M0605	1000
		6.3	7.7	124	0.30	AXS1A221M0607	1000
		8	6.5	175	0.30	AXS1A221M0806	1000
		8	10.5	270	0.30	AXS1A221M0810	500
	330	6.3	7.7	124	0.30	AXS1A331M0607	1000
		8	10.5	290	0.30	AXS1A331M0810	500
	470	6.3	7.7	110	0.30	AXS1A471M0607	1000
		8	10.5	290	0.30	AXS1A471M0810	500
		10	7.7	290	0.30	AXS1A471M1007	500
		10	10.5	400	0.30	AXS1A471M1010	500
	680	10	10.5	410	0.30	AXS1A681M1010	500
	1000	10	10.5	430	0.30	AXS1A102M1010	500
	2200	12.5	13.5	890	0.36	AXS1A222M1313	200

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive，the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
16	10	4	5.4	26	0.24	AXS1C100M0405	2000
	22	4	5.4	30	0.24	AXS1C220M0405	2000
		5	5.4	44	0.24	AXS1C220M0505	1000
	33	5	5.4	55	0.24	AXS1C330M0505	1000
	47	5	5.4	55	0.24	AXS1C470M0505	1000
		6.3	5.4	75	0.24	AXS1C470M0605	1000
	68	6.3	5.4	89	0.24	AXS1C680M0605	1000
	100	6.3	5.4	89	0.24	AXS1C101M0605	1000
		6.3	7.7	109	0.24	AXS1C101M0607	1000
		8	6.5	125	0.24	AXS1C101M0806	1000
	220	6.3	7.7	124	0.24	AXS1C221M0607	1000
		8	6.5	124	0.24	AXS1C221M0806	1000
		8	10.5	270	0.24	AXS1C221M0810	500
	330	8	10.5	290	0.24	AXS1C331M0810	500
		10	7.7	290	0.24	AXS1C331M1007	500
	470	8	10.5	290	0.24	AXS1C471M0810	500
		10	10.5	400	0.24	AXS1C471M1010	500
	680	10	10.5	410	0.24	AXS1C681M1010	500
	1000	10	10.5	370	0.24	AXS1C102M1010	500
		10	13	430	0.24	AXS1C102M1013	400
		12.5	13.5	750	0.32	AXS1C102M1313	200
25	4.7	4	5.4	26	0.18	AXS1E4R7M0405	2000
	10	4	5.4	26	0.18	AXS1E100M0405	2000
		5	5.4	44	0.18	AXS1E100M0505	1000
	22	5	5.4	47	0.18	AXS1E220M0505	1000
		6.3	5.4	59	0.18	AXS1E220M0605	1000
	33	5	5.4	55	0.18	AXS1E330M0505	1000
		6.3	5.4	67	0.18	AXS1E330M0605	1000
	47	6.3	5.4	75	0.18	AXS1E470M0605	1000
		6.3	7.7	98	0.18	AXS1E470M0607	1000
		8	6.5	98	0.18	AXS1E470M0806	1000
	68	6.3	5.4	75	0.18	AXS1E680M0605	1000
		6.3	7.7	109	0.18	AXS1E680M0607	1000
	100	6.3	5.4	67	0.18	AXS1E101M0605	1000
		6.3	7.7	109	0.18	AXS1E101M0607	1000
		8	6.5	125	0.18	AXS1E101M0806	1000
		8	10.5	270	0.18	AXS1E101M0810	500
	220	8	10.5	270	0.18	AXS1E221M0810	500
		10	7.7	270	0.18	AXS1E221M1007	500
	330	8	10.5	270	0.18	AXS1E331M0810	500
		10	10.5	400	0.18	AXS1E331M1010	500
	470	10	10.5	400	0.18	AXS1E471M1010	500
	680	10	13	430	0.18	AXS1E681M1013	400
		12.5	13.5	680	0.26	AXS1E681M1313	200
	1000	12.5	13.5	750	0.28	AXS1E102M1313	200

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive，the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
35	4.7	4	5.4	26	0.16	AXS1V4R7M0405	2000
	10	4	5.4	26	0.16	AXS1V100M0405	2000
		5	5.4	44	0.16	AXS1V100M0505	1000
	22	5	5.4	47	0.16	AXS1V220M0505	1000
		6.3	5.4	59	0.16	AXS1V220M0605	1000
	33	6.3	5.4	67	0.16	AXS1V330M0605	1000
		6.3	7.7	85	0.16	AXS1V330M0607	1000
	47	6.3	5.4	67	0.16	AXS1V470M0605	1000
		6.3	7.7	98	0.16	AXS1V470M0607	1000
		8	6.5	105	0.16	AXS1V470M0806	1000
	68	6.3	7.7	109	0.16	AXS1V680M0607	1000
	100	6.3	7.7	109	0.16	AXS1V101M0607	1000
		8	10.5	252	0.16	AXS1V101M0810	500
	150	10	7.7	252	0.16	AXS1V151M1007	500
	220	8	10.5	270	0.16	AXS1V221M0810	500
		10	10.5	370	0.16	AXS1V221M1010	500
	330	10	10.5	400	0.16	AXS1V331M1010	500
		10	13	430	0.16	AXS1V331M1013	400
	470	10	10.5	370	0.16	AXS1V471M1010	500
		10	13	430	0.16	AXS1V471M1013	400
		12.5	13.5	680	0.22	AXS1V471M1313	200
	680	12.5	13.5	680	0.22	AXS1V681M1313	200
50	1	4	5.4	10	0.14	AXS1H010M0405	2000
	2.2	4	5.4	14	0.14	AXS1H2R2M0405	2000
	3.3	4	5.4	17	0.14	AXS1H3R3M0405	2000
	4.7	4	5.4	20	0.14	AXS1H4R7M0405	2000
		5	5.4	35	0.14	AXS1H4R7M0505	1000
	10	5	5.4	35	0.14	AXS1H100M0505	1000
		6.3	5.4	50	0.14	AXS1H100M0605	1000
	22	6.3	5.4	50	0.14	AXS1H220M0605	1000
		6.3	7.7	65	0.14	AXS1H220M0607	1000
		8	6.5	70	0.14	AXS1H220M0806	1000
	33	6.3	7.7	75	0.14	AXS1H330M0607	1000
		8	6.5	95	0.14	AXS1H330M0806	1000
	47	6.3	7.7	75	0.14	AXS1H470M0607	1000
		8	6.5	95	0.14	AXS1H470M0806	1000
		8	10.5	190	0.14	AXS1H470M0810	500
	68	8	10.5	190	0.14	AXS1H680M0810	500
	100	8	10.5	190	0.14	AXS1H101M0810	500
		10	10.5	320	0.14	AXS1H101M1010	500
	220	10	10.5	320	0.14	AXS1H221M1010	500
	330	10	13	320	0.14	AXS1H331M1013	400
		12.5	13.5	600	0.18	AXS1H331M1313	200
	470	12.5	16	740	0.18	AXS1H471M1316	200

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive，the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
63	1	4	5.4	8	0.12	AXS1J010M0405	2000
	2.2	4	5.4	12	0.12	AXS1J2R2M0405	2000
	3.3	5	5.4	22	0.12	AXS1J3R3M0505	1000
	4.7	5	5.4	25	0.12	AXS1J4R7M0505	1000
	10	6.3	5.4	40	0.12	AXS1J100M0605	1000
		8	6.5	46	0.12	AXS1J100M0806	1000
	22	6.3	7.7	49	0.12	AXS1J220M0607	1000
		8	6.5	55	0.12	AXS1J220M0806	1000
		8	10.5	139	0.12	AXS1J220M0810	500
	33	8	10.5	139	0.12	AXS1J330M0810	500
	47	8	10.5	139	0.12	AXS1J470M0810	500
		10	10.5	200	0.12	AXS1J470M1010	500
	68	10	10.5	226	0.12	AXS1J680M1010	500
	100	10	10.5	226	0.12	AXS1J101M1010	500
		10	13	270	0.12	AXS1J101M1013	400
	220	12.5	13.5	500	0.14	AXS1J221M1313	200
	330	12.5	16	600	0.14	AXS1J331M1316	200
100	4.7	5	5.4	15	0.12	AXS2A4R7M0505	1000
		6.3	5.4	21	0.12	AXS2A4R7M0605	1000
		6.3	7.7	35	0.12	AXS2A4R7M0607	1000
	10	6.3	5.4	25	0.12	AXS2A100M0605	1000
		6.3	7.7	35	0.12	AXS2A100M0607	1000
		8	6.5	50	0.12	AXS2A100M0806	1000
		8	10.5	90	0.12	AXS2A100M0810	500
	22	8	10.5	90	0.12	AXS2A220M0810	500
		10	10.5	120	0.12	AXS2A220M1010	500
	33	10	10.5	120	0.12	AXS2A330M1010	500
	47	10	10.5	120	0.12	AXS2A470M1010	500
		10	13	160	0.12	AXS2A470M1013	400
		12.5	13.5	340	0.12	AXS2A470M1313	200
	68	10	13	180	0.12	AXS2A680M1013	400
		12.5	13.5	380	0.14	AXS2A680M1313	200
	100	12.5	13.5	440	0.14	AXS2A101M1313	200

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive，the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

AXT Series

Features

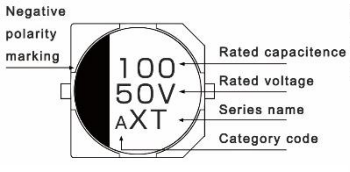
- φ4 ~ φ12.5, 105℃, 2000 hours assured
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

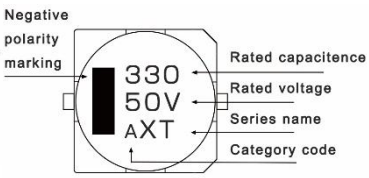
Specifications									
Category temp. range	–55℃ to +105℃								
Capacitance tolerance	±20% (120 Hz / +20 ℃)								
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)								
Tan δ	Please see the attached characteristics list								
Characteristics at low temperature	Rated voltage (V)	6.3	10	16	25	35	50	63	100	Impedance ratio at 120 Hz
	Z (-25 ℃) / Z (+20 ℃)	4	4	3	2	2	2	2	3	
	Z (-55 ℃) / Z (+20 ℃)	12	8	6	4	3	3	3	4	
Endurance	After applying rated working voltage for 2000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.									
	Capacitance change	φD ≦ 6.3mm: Within ±25% of the initial value φD ≧8mm: Within ±20% of the initial value								
	Dissipation factor (tan δ)	φD ≦ 6.3mm: Less than 300% of the initial value φD ≧8mm: Less than 200% of the initial value								
	Leakage current	Within the initial limit								
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.									
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.									
	Capacitance change	Within ±10% of the initial value								
	Dissipation factor (tan δ)	Within the initial limit								
	Leakage current	Within the initial limit								
Frequency correction factor for ripple current	Frequency	50Hz		120Hz		1kHz		10kHz≦		
	C ≦ 1000μF	0.7		1.0		1.2		1.3		
	C > 1000μF	0.8		1.0		1.1		1.2		

Marking:

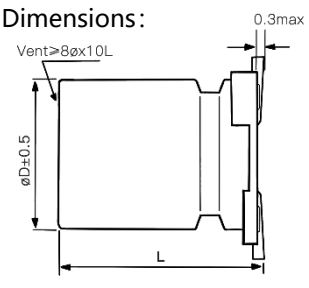
φD ≦ 10mm

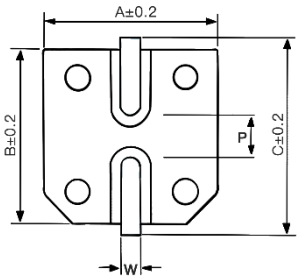


φD ≧ 12.5mm



Dimensions:





Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
4	5.7±0.3	4.3	4.3	5.1	0.5~0.8	1.0
5	5.7±0.3	5.3	5.3	6.0	0.5~0.8	1.4
6.3	5.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
8	6.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	7.7±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	13±0.5	10.3	10.3	11.1	0.7~1.3	4.4
12.5	13.5±0.5	13.0	13.0	14.0	1.1~1.4	4.4
12.5	16±0.5	13.0	13.0	14.0	1.1~1.4	4.4

Part Number System:

SMD Aluminum E-Caps	XT series	16V	220μF	±20 %	6.3 φ x7.7L
A	**XT**	**1C**	**221**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
6.3	22	4	5.7	22	0.45	AXT0J220M0406	2000
	33	5	5.7	34	0.45	AXT0J330M0506	1000
	47	5	5.7	38	0.45	AXT0J470M0506	1000
	100	5	5.7	44	0.45	AXT0J101M0506	1000
		6.3	5.7	69	0.45	AXT0J101M0606	1000
	220	6.3	5.7	75	0.45	AXT0J221M0606	1000
		6.3	7.7	120	0.45	AXT0J221M0607	1000
	330	6.3	7.7	120	0.45	AXT0J331M0607	1000
		8	6.5	120	0.45	AXT0J331M0806	1000
		8	10.5	290	0.45	AXT0J331M0810	500
	470	6.3	7.7	120	0.45	AXT0J471M0607	1000
		8	10.5	320	0.45	AXT0J471M0810	500
	1000	10	10.5	410	0.45	AXT0J102M1010	500
	2200	12.5	13.5	680	0.42	AXT0J222M1313	200
	3300	12.5	16	850	0.44	AXT0J332M1316	200
10	22	4	5.7	22	0.35	AXT1A220M0406	2000
	33	5	5.7	34	0.35	AXT1A330M0506	1000
	47	5	5.7	38	0.35	AXT1A470M0506	1000
	100	5	5.7	40	0.35	AXT1A101M0506	1000
		6.3	5.7	69	0.35	AXT1A101M0606	1000
		8	6.5	90	0.35	AXT1A101M0806	1000
	150	6.3	5.7	80	0.35	AXT1A151M0606	1000
	220	6.3	5.7	80	0.35	AXT1A221M0606	1000
		6.3	7.7	120	0.35	AXT1A221M0607	1000
		8	6.5	120	0.35	AXT1A221M0806	1000
	330	6.3	7.7	125	0.35	AXT1A331M0607	1000
		8	10.5	290	0.35	AXT1A331M0810	500
	470	8	10.5	320	0.35	AXT1A471M0810	500
		10	7.7	320	0.35	AXT1A471M1007	500
	1000	10	10.5	410	0.35	AXT1A102M1010	500
	2200	12.5	13.5	680	0.40	AXT1A222M1313	200

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive，the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
16	10	4	5.7	20	0.28	AXT1C100M0406	2000
	22	4	5.7	22	0.28	AXT1C220M0406	2000
		5	5.7	30	0.28	AXT1C220M0506	1000
	33	5	5.7	34	0.28	AXT1C330M0506	1000
		6.3	5.7	43	0.28	AXT1C330M0606	1000
	47	5	5.7	39	0.28	AXT1C470M0506	1000
		6.3	5.7	48	0.28	AXT1C470M0606	1000
	100	6.3	5.7	70	0.28	AXT1C101M0606	1000
		8	6.5	120	0.28	AXT1C101M0806	1000
	220	6.3	7.7	120	0.28	AXT1C221M0607	1000
		8	6.5	120	0.28	AXT1C221M0806	1000
		8	10.5	270	0.28	AXT1C221M0810	500
	330	8	10.5	290	0.28	AXT1C331M0810	500
		10	7.7	290	0.28	AXT1C331M1007	500
	470	8	10.5	300	0.28	AXT1C471M0810	500
		10	10.5	380	0.28	AXT1C471M1010	500
	1000	10	10.5	380	0.28	AXT1C102M1010	500
		10	13	400	0.28	AXT1C102M1013	400
		12.5	13.5	500	0.34	AXT1C102M1313	200
25	4.7	4	5.7	17	0.18	AXT1E4R7M0406	2000
	10	4	5.7	20	0.18	AXT1E100M0406	2000
		5	5.7	27	0.18	AXT1E100M0506	1000
	22	5	5.7	30	0.18	AXT1E220M0506	1000
		6.3	5.7	44	0.18	AXT1E220M0606	1000
	33	5	5.7	35	0.18	AXT1E330M0506	1000
		6.3	5.7	46	0.18	AXT1E330M0606	1000
	47	6.3	5.7	48	0.18	AXT1E470M0606	1000
		8	6.5	79	0.18	AXT1E470M0806	1000
	100	6.3	7.7	100	0.18	AXT1E101M0607	1000
		8	6.5	100	0.18	AXT1E101M0806	1000
		8	10.5	210	0.18	AXT1E101M0810	500
	220	8	10.5	270	0.18	AXT1E221M0810	500
		10	7.7	270	0.18	AXT1E221M1007	500
	330	8	10.5	290	0.18	AXT1E331M0810	500
		10	10.5	370	0.18	AXT1E331M1010	500
	470	10	10.5	380	0.18	AXT1E471M1010	500
	1000	12.5	13.5	500	0.26	AXT1E102M1313	200
		12.5	16	550	0.26	AXT1E102M1316	200

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive，the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
35	4.7	4	5.7	17	0.16	AXT1V4R7M0406	2000
	10	4	5.7	20	0.16	AXT1V100M0406	2000
		5	5.7	27	0.16	AXT1V100M0506	1000
	22	5	5.7	30	0.16	AXT1V220M0506	1000
		6.3	5.7	44	0.16	AXT1V220M0606	1000
	33	6.3	5.7	46	0.16	AXT1V330M0606	1000
		8	6.5	76	0.16	AXT1V330M0806	1000
	47	6.3	5.7	50	0.16	AXT1V470M0606	1000
		6.3	7.7	80	0.16	AXT1V470M0607	1000
		8	6.5	80	0.16	AXT1V470M0806	1000
	100	6.3	7.7	95	0.16	AXT1V101M0607	1000
		8	10.5	240	0.16	AXT1V101M0810	500
		10	7.7	240	0.16	AXT1V101M1007	500
	150	8	10.5	250	0.16	AXT1V151M0810	500
	220	8	10.5	270	0.16	AXT1V221M0810	500
		10	10.5	330	0.16	AXT1V221M1010	500
	330	10	10.5	370	0.16	AXT1V331M1010	500
		10	13	430	0.16	AXT1V331M1013	400
	470	10	10.5	380	0.16	AXT1V471M1010	500
		10	13	430	0.16	AXT1V471M1013	400
		12.5	13.5	520	0.22	AXT1V471M1313	200
50	1	4	5.7	8	0.14	AXT1H010M0406	2000
	2.2	4	5.7	12	0.14	AXT1H2R2M0406	2000
	3.3	4	5.7	14	0.14	AXT1H3R3M0406	2000
	4.7	4	5.7	16	0.14	AXT1H4R7M0406	2000
		5	5.7	20	0.14	AXT1H4R7M0506	1000
	10	5	5.7	24	0.14	AXT1H100M0506	1000
		6.3	5.7	32	0.14	AXT1H100M0606	1000
	22	6.3	5.7	38	0.14	AXT1H220M0606	1000
		6.3	7.7	58	0.14	AXT1H220M0607	1000
		8	6.5	67	0.14	AXT1H220M0806	1000
	33	6.3	7.7	65	0.14	AXT1H330M0607	1000
		8	6.5	70	0.14	AXT1H330M0806	1000
	47	6.3	7.7	70	0.14	AXT1H470M0607	1000
		8	6.5	80	0.14	AXT1H470M0806	1000
		8	10.5	170	0.14	AXT1H470M0810	500
	100	8	10.5	210	0.14	AXT1H101M0810	500
		10	7.7	210	0.14	AXT1H101M1007	500
		10	10.5	310	0.14	AXT1H101M1010	500
	220	10	10.5	330	0.14	AXT1H221M1010	500
		10	13	400	0.14	AXT1H221M1013	400
	330	12.5	13.5	490	0.18	AXT1H331M1313	200
	470	12.5	16	550	0.18	AXT1H471M1316	200

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive，the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
63	1	4	5.7	8	0.12	AXT1J010M0406	2000
	2.2	4	5.7	12	0.12	AXT1J2R2M0406	2000
	3.3	5	5.7	17	0.12	AXT1J3R3M0506	1000
		6.3	5.7	22	0.12	AXT1J3R3M0606	1000
	4.7	6.3	5.7	22	0.12	AXT1J4R7M0606	1000
	10	6.3	5.7	32	0.12	AXT1J100M0606	1000
		8	6.5	51	0.12	AXT1J100M0806	1000
	22	6.3	7.7	58	0.12	AXT1J220M0607	1000
		8	6.5	58	0.12	AXT1J220M0806	1000
		8	10.5	100	0.12	AXT1J220M0810	500
	33	8	10.5	140	0.12	AXT1J330M0810	500
	47	8	10.5	170	0.12	AXT1J470M0810	500
		10	10.5	200	0.12	AXT1J470M1010	500
	100	10	10.5	310	0.12	AXT1J101M1010	500
		10	13	340	0.12	AXT1J101M1013	400
		12.5	13.5	380	0.14	AXT1J101M1313	200
	220	12.5	13.5	470	0.14	AXT1J221M1313	200
100	4.7	5	5.7	15	0.12	AXT2A4R7M0506	1000
		6.3	5.7	21	0.12	AXT2A4R7M0606	1000
		6.3	7.7	35	0.12	AXT2A4R7M0607	1000
	10	6.3	7.7	35	0.12	AXT2A100M0607	1000
		8	10.5	80	0.12	AXT2A100M0810	500
	22	8	10.5	100	0.12	AXT2A220M0810	500
		10	10.5	130	0.12	AXT2A220M1010	500
	33	10	10.5	150	0.12	AXT2A330M1010	500
	47	10	10.5	160	0.12	AXT2A470M1010	500
		10	13	200	0.12	AXT2A470M1013	400
		12.5	13.5	250	0.12	AXT2A470M1313	200
	100	12.5	13.5	380	0.12	AXT2A101M1313	200

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive，the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

ART Series

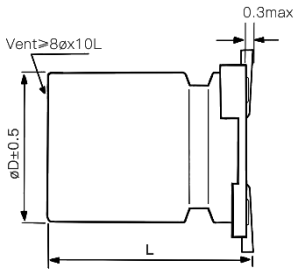
Features

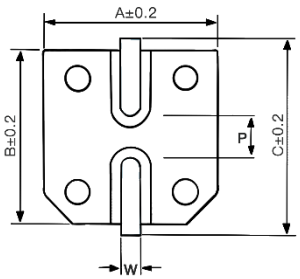
- φ4 ~ φ10, 105℃, 2000 hours assured
- Miniaturized Products (1 size smaller than XT Series)
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

Specifications								
Category temp. range	–55℃ to +105℃							
Capacitance tolerance	±20% (120 Hz / +20 ℃)							
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)							
Tan δ	Please see the attached characteristics list							
Characteristics at low temperature	Rated voltage (V)	6.3	10	16	25	35	50	Impedance ratio at 120 Hz
	Z (-25 ℃) / Z (+20 ℃)	4	3	2	2	2	2	
	Z (-55 ℃) / Z (+20 ℃)	8	6	4	3	3	3	
Endurance	After applying rated working voltage for 2000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±30% of the initial value						
	Dissipation factor (tan δ)	Less than 300% of the initial value						
	Leakage current	Within the initial limit						
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.							
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±10% of the initial value						
	Dissipation factor (tan δ)	Within the initial limit						
	Leakage current	Within the initial limit						
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	1kHz	10kHz≦			
	C ≦ 1000μF	0.7	1.0	1.2	1.3			
	C > 1000μF	0.8	1.0	1.1	1.2			

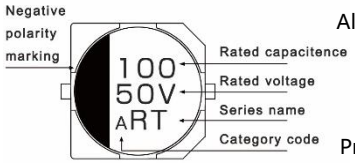
Dimensions:





Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
4	5.7±0.3	4.3	4.3	5.1	0.5~0.8	1.0
5	5.7±0.3	5.3	5.3	6.0	0.5~0.8	1.4
6.3	5.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4

Marking:



Part Number System:

Aluminum E-Caps	RT series	25V	220μF	±20 %	6.3Φx7.7L
A	**RT**	**1E**	**221**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
6.3	100	4	5.7	60	0.30	ART0J101M0406	2000
	220	5	5.7	95	0.30	ART0J221M0506	1000
	330	6.3	5.7	180	0.30	ART0J331M0606	1000
	470	6.3	5.7	180	0.30	ART0J471M0606	1000
		6.3	7.7	360	0.30	ART0J471M0607	1000
	680	6.3	7.7	360	0.30	ART0J681M0607	1000
	1500	8	10.5	510	0.34	ART0J152M0810	500
	2200	10	10.5	710	0.36	ART0J222M1010	500
10	68	4	5.7	60	0.26	ART1A680M0406	2000
	150	5	5.7	95	0.26	ART1A151M0506	2000
	220	6.3	5.7	180	0.26	ART1A221M0606	1000
	330	6.3	7.7	360	0.26	ART1A331M0607	1000
	470	6.3	7.7	360	0.26	ART1A471M0607	1000
	1000	8	10.5	510	0.28	ART1A102M0810	500
	1500	10	10.5	710	0.28	ART1A152M1010	500
16	47	4	5.7	60	0.22	ART1C470M0406	2000
	68	5	5.7	95	0.22	ART1C680M0506	1000
	100	5	5.7	95	0.22	ART1C101M0506	1000
	150	6.3	5.7	120	0.22	ART1C151M0606	1000
	220	6.3	5.7	180	0.22	ART1C221M0606	1000
	330	6.3	7.7	360	0.22	ART1C331M0607	1000
	470	8	6.5	360	0.24	ART1C471M0806	1000
	680	8	10.5	510	0.24	ART1C681M0810	500
	820	8	10.5	510	0.24	ART1C821M0810	500
	1000	10	10.5	710	0.26	ART1C102M1010	500
	1200	10	10.5	710	0.26	ART1C122M1010	500
25	22	4	5.7	55	0.20	ART1E220M0406	2000
	33	4	5.7	60	0.20	ART1E330M0406	2000
	47	5	5.7	95	0.20	ART1E470M0506	1000
	68	5	5.7	95	0.20	ART1E680M0506	1000
	100	6.3	5.7	120	0.20	ART1E101M0606	1000
	150	6.3	7.7	240	0.20	ART1E151M0607	1000
	220	6.3	7.7	360	0.20	ART1E221M0607	1000
	390	8	10.5	510	0.22	ART1E391M0810	500
	470	8	10.5	510	0.22	ART1E471M0810	500
	560	8	10.5	510	0.22	ART1E561M0810	500
	820	10	10.5	710	0.22	ART1E821M1010	500
	1000	10	10.5	710	0.24	ART1E102M1010	500

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive，the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
35	22	4	5.7	55	0.18	ART1V220M0406	2000
	33	5	5.7	85	0.18	ART1V330M0506	1000
	47	5	5.7	95	0.18	ART1V470M0506	1000
	68	6.3	5.7	120	0.18	ART1V680M0606	1000
	100	6.3	5.7	120	0.18	ART1V101M0606	1000
	150	6.3	7.7	240	0.18	ART1V151M0607	1000
	330	8	10.5	510	0.20	ART1V331M0810	500
	390	8	10.5	510	0.20	ART1V391M0810	500
	470	10	10.5	660	0.20	ART1V471M1010	500
	560	10	10.5	660	0.20	ART1V561M1010	500
	680	10	10.5	710	0.20	ART1V681M1010	500
50	10	4	5.7	30	0.16	ART1H100M0406	2000
		5	5.7	55	0.16	ART1H100M0506	1000
	22	5	5.7	55	0.16	ART1H220M0506	1000
	47	6.3	5.7	75	0.16	ART1H470M0606	1000
	100	6.3	7.7	140	0.16	ART1H101M0607	1000
	220	8	10.5	400	0.18	ART1H221M0810	500
	330	10	10.5	450	0.18	ART1H331M1010	500

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive，the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

AJK Series

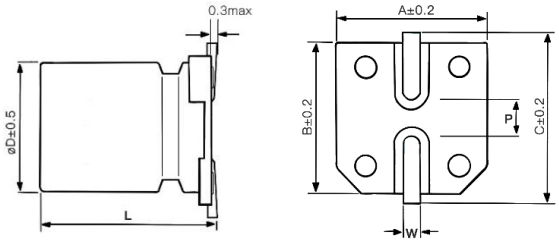
Features

- φ6.3, 105℃, 2000 hours assured
- Specially designed for LED display screen
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- RoHS 2.0 compliant, 247 REACH&SVHC compliant

Marking color: Black

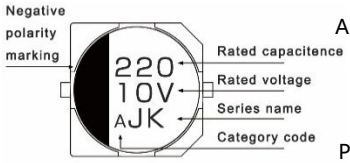
Specifications					
Category temp. range	–40℃ to +105℃				
Capacitance tolerance	±20% (120 Hz / +20 ℃)				
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)				
Tan δ	Please see the attached characteristics list				
Characteristics at low temperature	Rated voltage (V)	10	16	Impedance ratio at 120 Hz	
	Z (-25 ℃) / Z (+20 ℃)	4	3		
	Z (-40 ℃) / Z (+20 ℃)	8	6		
Endurance	After applying rated working voltage for 2000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.				
	Capacitance change	Within ±30% of the initial value			
	Dissipation factor (tan δ)	Less than 300% of the initial value			
	Leakage current	Within the initial limit			
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.				
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.				
	Capacitance change	Within ±10% of the initial value			
	Dissipation factor (tan δ)	Within the initial limit			
	Leakage current	Within the initial limit			
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	1kHz	10kHz≦
	Correction Factor	0.7	1.0	1.2	1.3

Dimensions:



Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
6.3	5.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0

Marking:



Part Number System:

Aluminum E-Caps	JK series	16V	220μF	±20 %	6.3 φ x7.7L
A	**JK**	**1C**	**221**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
10	220	6.3	5.7	75	0.26	AJK1A221M0606	1250
16	220	6.3	7.7	110	0.22	AJK1C221M0607	1000

① Rated ripple current (120Hz / +105℃)　② tan δ (120Hz / +20℃)

※ Please refer to the page of reflow conditions for reflow profile.

AVD Series

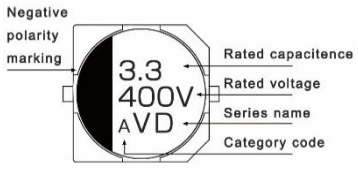
Features

- φ6.3 ~ φ12.5, 105℃, 3000 hours assured
- Designed for High Voltage DC160~450V
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- RoHS 2.0 compliant, 247 REACH&SVHC compliant

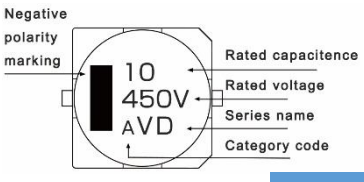
Marking color: Black

Specifications							
Category temp. range	–40℃ to +105℃						
Capacitance tolerance	±20% (120 Hz / +20 ℃)						
Leakage current	I ≦ 0.04 CV +100μA, after 5 minutes						
Tan δ	Please see the attached characteristics list						
Characteristics at low temperature	Rated voltage (V)	160	200	250	400	450	Impedance ratio at 120 Hz
	Z (-25 ℃) / Z (+20 ℃)	3	3	3	6	6	
	Z (-40 ℃) / Z (+20 ℃)	6	6	6	10	10	
Endurance	After applying rated working voltage for 3000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.						
	Capacitance change	Within ±30% of the initial value					
	Dissipation factor (tan δ)	Less than 300% of the initial value					
	Leakage current	Within the initial limit					
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.						
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.						
	Capacitance change	Within ±10% of the initial value					
	Dissipation factor (tan δ)	Within the initial limit					
	Leakage current	Within the initial limit					
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	1kHz	10kHz≦		
	Correction Factor	0.8	1.0	1.25	1.4		

Marking: φD ≦ 10mm



φD ≧ 12.5mm



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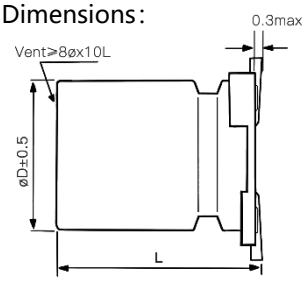
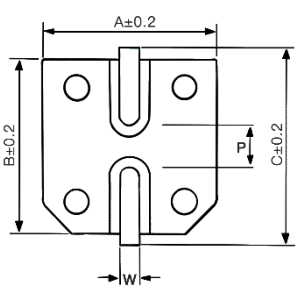




Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
6.3	10.5±0.5	6.6	6.6	7.3	0.5~0.8	2.0
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
8	13±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	13±0.5	10.3	10.3	11.1	0.7~1.3	4.4
12.5	13.5±0.8	13.0	13.0	14.0	1.1~1.4	4.4

Part Number System:

SMD Aluminum E-Caps	VD series	400V	4.7μF	±20 %	8φx10.5L
A	**VD**	**2G**	**4R7**	**M**	**0810**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
160	6.8	6.3	10.5	24	0.20	AVD2C6R8M0610	500
	8.2	8	10.5	32	0.20	AVD2C8R2M0810	500
	10	8	10.5	39	0.20	AVD2C100M0810	500
	15	10	10.5	50	0.20	AVD2C150M1010	500
	22	10	13	50	0.20	AVD2C220M1013	400
	33	10	13	57	0.20	AVD2C330M1013	400
		12.5	13.5	95	0.20	AVD2C330M1313	200
200	4.7	8	10.5	22	0.20	AVD2D4R7M0810	500
	5.6	8	10.5	24	0.20	AVD2D5R6M0810	500
	6.8	8	10.5	27	0.20	AVD2D6R8M0810	500
	8.2	8	10.5	30	0.20	AVD2D8R2M0810	500
	10	8	13	34	0.20	AVD2D100M0813	400
	15	10	10.5	48	0.20	AVD2D150M1010	500
	22	12.5	13.5	80	0.20	AVD2D220M1313	200
250	1	6.3	10.5	9	0.25	AVD2E010M0610	500
	2.2	6.3	10.5	14	0.25	AVD2E2R2M0610	500
	3.3	6.3	10.5	16	0.25	AVD2E3R3M0610	500
	4.7	8	10.5	23	0.25	AVD2E4R7M0810	500
	5.6	8	10.5	25	0.25	AVD2E5R6M0810	500
	6.8	8	10.5	27	0.25	AVD2E6R8M0810	500
	8.2	10	10.5	33	0.25	AVD2E8R2M1010	500
	10	10	10.5	41	0.25	AVD2E100M1010	500
	15	10	13	60	0.25	AVD2E150M1013	400
		12.5	13.5	70	0.25	AVD2E150M1313	200
	22	12.5	13.5	105	0.25	AVD2E220M1313	200
400	1	6.3	10.5	8	0.25	AVD2G010M0610	500
	2.2	6.3	10.5	12	0.25	AVD2G2R2M0610	500
		8	10.5	15	0.25	AVD2G2R2M0810	500
	3.3	8	10.5	18	0.25	AVD2G3R3M0810	500
	4.7	8	10.5	25	0.25	AVD2G4R7M0810	500
		8	13	30	0.25	AVD2G4R7M0813	400
		10	10.5	30	0.25	AVD2G4R7M1010	500
	5.6	8	13	34	0.25	AVD2G5R6M0813	400
		10	10.5	34	0.25	AVD2G5R6M1010	500
	6.8	10	10.5	40	0.25	AVD2G6R8M1010	500
	8.2	10	13	45	0.25	AVD2G8R2M1013	400
	10	10	13	45	0.25	AVD2G100M1013	400
		12.5	13.5	50	0.25	AVD2G100M1313	200
450	1	8	10.5	13	0.30	AVD2W010M0810	500
	2.2	8	10.5	18	0.30	AVD2W2R2M0810	500
	3.3	8	13	22	0.30	AVD2W3R3M0813	400
	4.7	10	10.5	32	0.30	AVD2W4R7M1010	500
	5.6	10	13	43	0.30	AVD2W5R6M1013	400
	6.8	10	13	48	0.30	AVD2W6R8M1013	400
	8.2	12.5	13.5	60	0.30	AVD2W8R2M1313	200
	10	12.5	13.5	75	0.30	AVD2W100M1313	200

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃)

※ Please refer to the page of reflow conditions for reflow profile.

AKL Series

Features

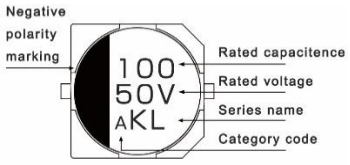
- φ4 ~ φ12.5, 105℃, 3000~5000 hours assured
- Long life assured
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

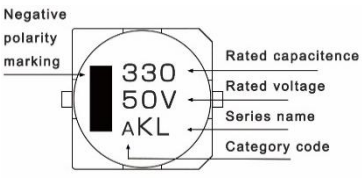
Specifications									
Category temp. range	–55℃ to +105℃								
Capacitance tolerance	±20% (120 Hz / +20 ℃)								
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)								
Tan δ	Please see the attached characteristics list								
Characteristics at low temperature(Impedance ratio at 120 Hz)	Rated voltage (V)	6.3	10	16	25	35	50	63	80	100
	Z(-25 ℃)/Z(+20 ℃)	4	3	2	2	2	2	2	2	2
	Z(-55 ℃)/Z(+20 ℃)	10	7	5	4	4	4	3	3	3
Endurance	After applying rated working voltage for 3000/5000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.								
	Test Time	φD ≦ 6.3mm: 3000H, φD ≧8mm: 5000H							
	Capacitance change	Within ±30% of the initial value							
	Dissipation factor (tan δ)	Less than 300% of the initial value							
	Leakage current	Within the initial limit							
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.								
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.								
	Capacitance change	Within ±10% of the initial value							
	Dissipation factor (tan δ)	Within the initial limit							
	Leakage current	Within the initial limit							
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	1kHz	10kHz≦				
	C ≦ 1000μF	0.7	1.0	1.2	1.3				
	C > 1000μF	0.85	1.0	1.1	1.15				

Marking

φD ≦ 10mm



φD ≧ 12.5mm



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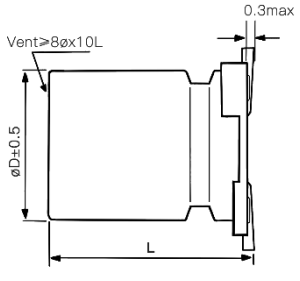
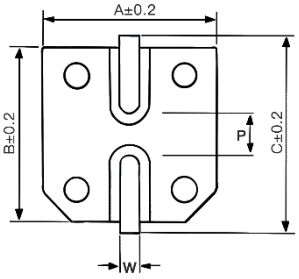




Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
4	5.7±0.3	4.3	4.3	5.1	0.5~0.8	1.0
5	5.7±0.3	5.3	5.3	6.0	0.5~0.8	1.4
6.3	5.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	13±0.5	10.3	10.3	11.1	0.7~1.3	4.4
12.5	13.5±0.5	13.0	13.0	14.0	1.1~1.4	4.4
12.5	16±0.5	13.0	13.0	14.0	1.1~1.4	4.4

Part Number System:

SMD Aluminum E-Caps	KL series	16V	220μF	±20 %	8φx10.5L
A	**KL**	**1C**	**221**	**M**	**0810**
Produce category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
6.3	22	4	5.7	22	0.30	AKL0J220M0406	2000
	33	5	5.7	35	0.30	AKL0J330M0506	1000
	47	5	5.7	38	0.30	AKL0J470M0506	1000
	100	6.3	5.7	69	0.30	AKL0J101M0606	1000
	220	6.3	7.7	120	0.30	AKL0J221M0607	1000
	330	8	10.5	141	0.30	AKL0J331M0810	500
	470	10	10.5	320	0.30	AKL0J471M1010	500
	1000	10	10.5	410	0.32	AKL0J102M1010	500
	1500	12.5	13.5	500	0.40	AKL0J152M1313	200
	2200	12.5	13.5	600	0.42	AKL0J222M1313	200
10	22	4	5.7	22	0.24	AKL1A220M0406	2000
	33	5	5.7	35	0.24	AKL1A330M0506	1000
	47	6.3	5.7	50	0.24	AKL1A470M0606	1000
	100	6.3	7.7	81	0.24	AKL1A101M0607	1000
	220	8	10.5	141	0.24	AKL1A221M0810	500
	330	10	10.5	290	0.24	AKL1A331M1010	500
	470	10	10.5	320	0.24	AKL1A471M1010	500
	1000	10	13	390	0.26	AKL1A102M1013	400
	1500	12.5	13.5	500	0.38	AKL1A152M1313	200
	2200	12.5	13.5	600	0.40	AKL1A222M1313	200
16	10	4	5.7	18	0.20	AKL1C100M0406	2000
	22	5	5.7	30	0.20	AKL1C220M0506	1000
	33	6.3	5.7	48	0.20	AKL1C330M0606	1000
	47	6.3	5.7	50	0.20	AKL1C470M0606	1000
	100	6.3	7.7	81	0.20	AKL1C101M0607	1000
	220	8	10.5	141	0.20	AKL1C221M0810	500
	330	10	10.5	290	0.20	AKL1C331M1010	500
	470	10	10.5	320	0.20	AKL1C471M1010	500
	1000	12.5	13.5	550	0.34	AKL1C102M1313	200
	1500	12.5	13.5	600	0.36	AKL1C152M1313	200
25	10	5	5.7	27	0.16	AKL1E100M0506	1000
	22	6.3	5.7	44	0.16	AKL1E220M0606	1000
	33	6.3	5.7	50	0.16	AKL1E330M0606	1000
	47	6.3	7.7	63	0.16	AKL1E470M0607	1000
	100	8	10.5	116	0.16	AKL1E101M0810	500
	220	10	10.5	290	0.16	AKL1E221M1010	500
	330	10	10.5	320	0.16	AKL1E331M1010	500
	470	12.5	13.5	400	0.26	AKL1E471M1313	200

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive, the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
35	4.7	4	5.7	16	0.14	AKL1V4R7M0406	2000
	10	5	5.7	27	0.14	AKL1V100M0506	1000
	22	6.3	5.7	44	0.14	AKL1V220M0606	1000
	33	6.3	7.7	57	0.14	AKL1V330M0607	1000
	47	8	10.5	92	0.14	AKL1V470M0810	500
	100	10	10.5	151	0.14	AKL1V101M1010	500
	220	10	10.5	320	0.14	AKL1V221M1010	500
	330	12.5	13.5	320	0.22	AKL1V331M1313	200
	470	12.5	16	410	0.22	AKL1V471M1316	200
50	1	4	5.7	8	0.12	AKL1H010M0406	2000
	2.2	4	5.7	12	0.12	AKL1H2R2M0406	2000
	3.3	4	5.7	17	0.12	AKL1H3R3M0406	2000
	4.7	5	5.7	22	0.12	AKL1H4R7M0506	1000
	10	6.3	5.7	32	0.12	AKL1H100M0606	1000
	22	6.3	7.7	58	0.12	AKL1H220M0607	1000
	33	8	10.5	130	0.12	AKL1H330M0810	500
	47	8	10.5	141	0.12	AKL1H470M0810	500
	100	10	10.5	160	0.12	AKL1H101M1010	500
	220	12.5	13.5	280	0.18	AKL1H221M1313	200
	330	12.5	16	360	0.18	AKL1H331M1316	200
63	10	6.3	7.7	45	0.10	AKL1J100M0607	1000
	22	8	10.5	65	0.10	AKL1J220M0810	500
	33	10	10.5	80	0.10	AKL1J330M1010	500
	47	10	10.5	110	0.10	AKL1J470M1010	500
	100	12.5	13.5	200	0.14	AKL1J101M1313	200
	150	12.5	13.5	240	0.14	AKL1J151M1313	200
	220	12.5	16	240	0.14	AKL1J221M1316	200
80	100	12.5	13.5	220	0.10	AKL1K101M1313	200
	150	12.5	16	290	0.10	AKL1K151M1316	200
100	10	8	10.5	55	0.08	AKL2A100M0810	500
	22	10	10.5	70	0.08	AKL2A220M1010	500
	33	10	10.5	80	0.08	AKL2A330M1010	500
	47	12.5	13.5	150	0.10	AKL2A470M1313	200
	68	12.5	13.5	180	0.10	AKL2A680M1313	200
	100	12.5	16	240	0.10	AKL2A101M1316	200

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive, the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

ALZ Series

Features

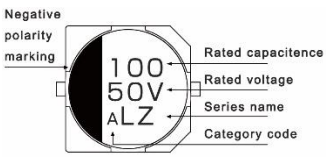
- φ4 ~ φ12.5, 105℃, 2000 hours assured
- Low impedance capacitors
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

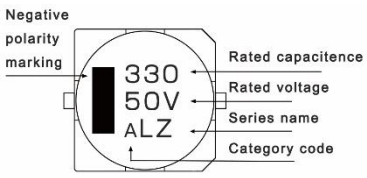
Specifications								
Category temp. range	–55℃ to +105℃							
Capacitance tolerance	±20% (120 Hz / +20 ℃)							
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)							
Tan δ	Please see the attached characteristics list							
Characteristics at low temperature	Rated voltage (V)	6.3	10	16	25	35	50	Impedance ratio at 120 Hz
	Z(-25 ℃)/Z(+20 ℃)	4	3	2	2	2	2	
	Z(-55 ℃)/Z(+20 ℃)	10	7	5	3	3	3	
Endurance	After applying rated working voltage for 2000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±25% of the initial value						
	Dissipation factor (tan δ)	Less than 250% of the initial value						
	Leakage current	Within the initial limit						
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.							
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±10% of the initial value						
	Dissipation factor (tan δ)	Within the initial limit						
	Leakage current	Within the initial limit						
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	1kHz	10kHz≦			
	Correction Factor	0.6	0.75	0.9	1.0			

Marking:

φD ≦ 10mm



φD ≧ 12.5mm



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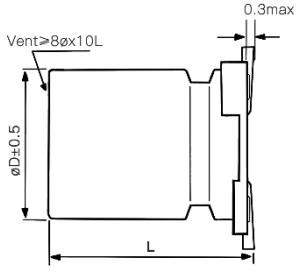
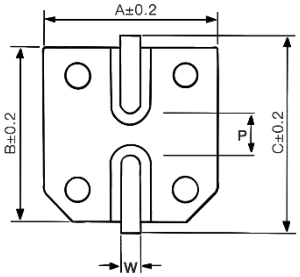




Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
4	5.7±0.3	4.3	4.3	5.1	0.5~0.8	1.0
5	5.7±0.3	5.3	5.3	6.0	0.5~0.8	1.4
6.3	5.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
8	6.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	7.7±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	13±0.5	10.3	10.3	11.1	0.7~1.2	4.4
12.5	13.5±0.5	13.0	13.0	14.0	1.1~1.4	4.4
12.5	16±0.5	13.0	13.0	14.0	1.1~1.4	4.4

Part Number System:

SMD Aluminum E-Caps	LZ series	16V	220μF	±20 %	6.3 φ x7.7L
A	**LZ**	**1C**	**221**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
6.3	22	4	5.7	65	3.20	0.28	ALZ0J220M0406	2000
	33	4	5.7	65	3.20	0.28	ALZ0J330M0406	2000
		5	5.7	110	1.50	0.28	ALZ0J330M0506	1000
	47	5	5.7	110	1.50	0.28	ALZ0J470M0506	1000
	100	5	5.7	110	1.50	0.28	ALZ0J101M0506	1000
		6.3	5.7	170	0.85	0.28	ALZ0J101M0606	1000
	220	6.3	5.7	170	0.85	0.28	ALZ0J221M0606	1000
		6.3	7.7	255	0.50	0.28	ALZ0J221M0607	1000
	330	6.3	7.7	255	0.50	0.28	ALZ0J331M0607	1000
	470	6.3	7.7	255	0.50	0.28	ALZ0J471M0607	1000
		8	10.5	450	0.45	0.28	ALZ0J471M0810	500
	820	8	10.5	450	0.45	0.28	ALZ0J681M0810	500
		10	10.5	670	0.25	0.28	ALZ0J681M1010	500
	1000	10	10.5	670	0.25	0.28	ALZ0J102M1010	500
	1500	10	10.5	670	0.25	0.28	ALZ0J152M1010	500
	2200	12.5	13.5	820	0.16	0.34	ALZ0J222M1313	200
10	10	4	5.7	65	3.20	0.24	ALZ1A100M0406	2000
	22	4	5.7	65	3.20	0.24	ALZ1A220M0406	2000
		5	5.7	110	1.50	0.24	ALZ1A220M0506	1000
	33	5	5.7	110	1.50	0.24	ALZ1A330M0506	1000
	47	5	5.7	110	1.50	0.24	ALZ1A470M0506	1000
		6.3	5.7	170	0.85	0.24	ALZ1A470M0606	1000
	100	5	5.7	110	1.50	0.24	ALZ1A101M0506	1000
		6.3	5.7	170	0.85	0.24	ALZ1A101M0606	1000
	150	6.3	5.7	170	0.85	0.24	ALZ1A151M0606	1000
	220	6.3	5.7	170	0.85	0.24	ALZ1A221M0606	1000
		6.3	7.7	255	0.50	0.24	ALZ1A221M0607	1000
		8	10.5	450	0.45	0.24	ALZ1A221M0810	500
	330	6.3	7.7	255	0.50	0.24	ALZ1A331M0607	1000
		8	10.5	450	0.45	0.24	ALZ1A331M0810	500
	470	8	10.5	450	0.45	0.24	ALZ1A471M0810	500
	1000	10	10.5	670	0.25	0.24	ALZ1A102M1010	500
	2200	12.5	13.5	820	0.16	0.28	ALZ1A222M1313	200

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive, the Part Number is appended with "a" at the end.

※Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
16	10	4	5.7	65	3.20	0.20	ALZ1C100M0406	2000
	22	4	5.7	65	3.20	0.20	ALZ1C220M0406	2000
		5	5.7	110	1.50	0.20	ALZ1C220M0506	1000
	33	5	5.7	110	1.50	0.20	ALZ1C330M0506	1000
		6.3	5.7	170	0.85	0.20	ALZ1C330M0606	1000
	47	5	5.7	110	1.50	0.20	ALZ1C470M0506	1000
		6.3	5.7	170	0.85	0.20	ALZ1C470M0606	1000
	100	6.3	5.7	170	0.85	0.20	ALZ1C101M0606	1000
		6.3	7.7	255	0.50	0.20	ALZ1C101M0607	1000
		8	6.5	255	0.50	0.20	ALZ1C101M0806	1000
	150	6.3	7.7	255	0.50	0.20	ALZ1C151M0607	1000
		8	10.5	450	0.45	0.20	ALZ1C151M0810	500
	220	6.3	7.7	255	0.50	0.20	ALZ1C221M0607	1000
		8	6.5	255	0.50	0.20	ALZ1C221M0806	1000
		8	10.5	450	0.45	0.20	ALZ1C221M0810	500
	330	8	10.5	450	0.45	0.20	ALZ1C331M0810	500
		10	7.7	450	0.45	0.20	ALZ1C331M1007	500
	470	8	10.5	450	0.45	0.20	ALZ1C471M0810	500
		10	10.5	670	0.25	0.20	ALZ1C471M1010	500
	680	10	10.5	670	0.25	0.20	ALZ1C681M1010	500
	1000	10	10.5	670	0.25	0.20	ALZ1C102M1010	500
		10	13	750	0.20	0.20	ALZ1C102M1013	400
	1500	12.5	13.5	820	0.16	0.22	ALZ1C152M1313	200
25	4.7	4	5.7	65	3.20	0.16	ALZ1E4R7M0406	2000
	10	4	5.7	65	3.20	0.16	ALZ1E100M0406	2000
		5	5.7	110	1.50	0.16	ALZ1E100M0506	1000
	22	5	5.7	110	1.50	0.16	ALZ1E220M0506	1000
		6.3	5.7	170	0.85	0.16	ALZ1E220M0606	1000
	33	6.3	5.7	170	0.85	0.16	ALZ1E330M0606	1000
	47	6.3	5.7	170	0.85	0.16	ALZ1E470M0606	1000
	100	6.3	7.7	255	0.50	0.16	ALZ1E101M0607	1000
		8	10.5	450	0.45	0.16	ALZ1E101M0810	500
	150	8	10.5	450	0.45	0.16	ALZ1E151M0810	500
	220	8	10.5	450	0.45	0.16	ALZ1E221M0810	500
		10	7.7	450	0.45	0.16	ALZ1E221M1007	500
		10	10.5	670	0.25	0.16	ALZ1E221M1010	500
	330	8	10.5	450	0.45	0.16	ALZ1E331M0810	500
		10	10.5	670	0.25	0.16	ALZ1E331M1010	500
	470	10	10.5	670	0.25	0.16	ALZ1E471M1010	500
	680	10	13	750	0.20	0.16	ALZ1E681M1013	400
	1000	12.5	13.5	820	0.16	0.20	ALZ1E102M1313	200

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end.

※Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
35	4.7	4	5.7	65	3.20	0.14	ALZ1V4R7M0406	2000
	10	4	5.7	65	3.20	0.14	ALZ1V100M0406	2000
		5	5.7	110	1.50	0.14	ALZ1V100M0506	1000
	22	5	5.7	110	1.50	0.14	ALZ1V220M0506	1000
		6.3	5.7	170	0.85	0.14	ALZ1V220M0606	1000
	33	6.3	5.7	170	0.85	0.14	ALZ1V330M0606	1000
	47	6.3	5.7	170	0.85	0.14	ALZ1V470M0606	1000
		6.3	7.7	255	0.50	0.14	ALZ1V470M0607	1000
		8	6.5	255	0.50	0.14	ALZ1V470M0806	1000
		8	10.5	450	0.45	0.14	ALZ1V470M0810	500
	100	6.3	7.7	255	0.50	0.14	ALZ1V101M0607	1000
		8	6.5	255	0.50	0.14	ALZ1V101M0806	1000
		8	10.5	450	0.45	0.14	ALZ1V101M0810	500
	150	8	10.5	450	0.45	0.14	ALZ1V151M0810	500
		10	7.7	450	0.45	0.14	ALZ1V151M1007	500
	220	8	10.5	450	0.45	0.14	ALZ1V221M0810	500
		10	10.5	670	0.25	0.14	ALZ1V221M1010	500
	330	10	10.5	670	0.25	0.14	ALZ1V331M1010	500
	470	10	13	750	0.20	0.14	ALZ1V471M1013	400
	680	12.5	13.5	820	0.15	0.16	ALZ1V681M1313	200
50	1	4	5.7	30	5.00	0.12	ALZ1H010M0406	2000
	2.2	4	5.7	30	5.00	0.12	ALZ1H2R2M0406	2000
	3.3	4	5.7	30	5.00	0.12	ALZ1H3R3M0406	2000
	4.7	4	5.7	30	5.00	0.12	ALZ1H4R7M0406	2000
		5	5.7	50	3.00	0.12	ALZ1H4R7M0506	1000
	10	5	5.7	50	3.00	0.12	ALZ1H100M0506	1000
		6.3	5.7	70	2.00	0.12	ALZ1H100M0606	1000
	22	6.3	5.7	70	2.00	0.12	ALZ1H220M0606	1000
		6.3	7.7	170	1.00	0.12	ALZ1H220M0607	1000
		8	6.5	170	1.00	0.12	ALZ1H220M0806	1000
	33	6.3	7.7	170	1.00	0.12	ALZ1H330M0607	1000
		8	10.5	300	0.60	0.12	ALZ1H330M0810	500
	47	6.3	7.7	170	1.00	0.12	ALZ1H470M0607	1000
		8	6.5	170	1.00	0.12	ALZ1H470M0806	1000
		8	10.5	300	0.60	0.12	ALZ1H470M0810	500
	100	8	10.5	300	0.60	0.12	ALZ1H101M0810	500
		10	7.7	300	0.60	0.12	ALZ1H101M1007	500
		10	10.5	500	0.30	0.12	ALZ1H101M1010	500
	150	10	10.5	500	0.30	0.12	ALZ1H151M1010	500
	220	10	10.5	500	0.30	0.12	ALZ1H221M1010	500
	330	12.5	13.5	650	0.25	0.15	ALZ1H331M1313	200

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive, the Part Number is appended with "a" at the end.

※Please refer to the page of reflow conditions for reflow profile.

AFZ Series

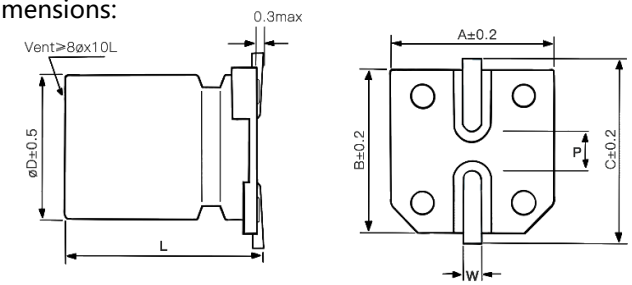
Features

- φ4 ~ φ12.5, 105℃, 2000~5000 hours assured
- Extra low impedance capacitors (40% ~ 60% lower than ALZ Series)
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- Vibration resistant structure
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

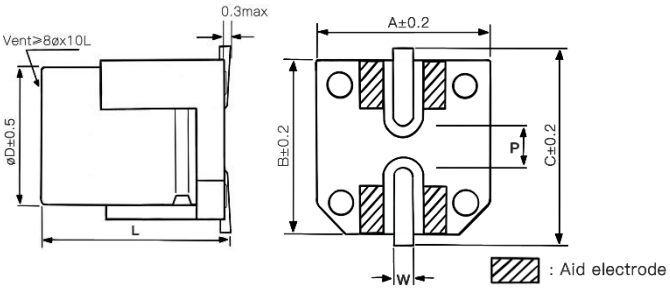
Marking color: Black

Specifications										
Category temp. range	–55℃ to +105℃									
Capacitance tolerance	±20% (120 Hz / +20 ℃)									
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)									
Tan δ	Please see the attached characteristics list									
Characteristics at low temperature(Impedance ratio at 120 Hz)	Rated voltage (V)	6.3	10	16	25	35	50	63	80	100
	Z(-25 ℃)/Z(+20 ℃)	4	3	2	2	2	2	2	2	2
	Z(-55 ℃)/Z(+20 ℃)	8	5	4	3	3	3	3	3	3
Endurance	After applying rated working voltage for 2000/3000/5000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.									
	Test Time	ΦD x L ≦ 6.3x 5.7Lmm: 2000H 6.3 Φx7.7L , 8 Φx 6.5L, 10 Φx7.7L: 3000H φD ≧ 8mm: 5000H								
	Capacitance change	Within ±30% of the initial value								
	Dissipation factor (tan δ)	Less than 300% of the initial value								
	Leakage current	Within the initial limit								
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.									
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.									
	Capacitance change	Within ±10% of the initial value								
	Dissipation factor (tan δ)	Within the initial limit								
	Leakage current	Within the initial limit								
Frequency correction factor for ripple current	Frequency	50Hz		120Hz		1kHz		10kHz≦		
	Correction Factor	0.6		0.7		0.85		1.0		

Dimensions:



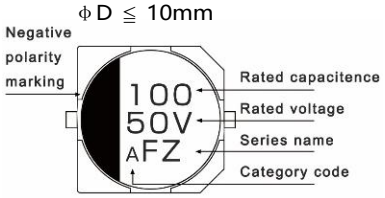
Vibration resistant structure:



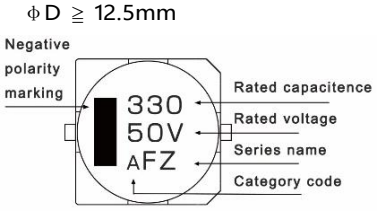
Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
4	5.7±0.3	4.3	4.3	5.1	0.5~0.8	1.0
5	5.7±0.3	5.3	5.3	6.0	0.5~0.8	1.4
6.3	5.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
8	6.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	7.7±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	13±0.5	10.3	10.3	11.1	0.7~1.3	4.4
12.5	13.5±0.5	13.0	13.0	14.0	1.1~1.4	4.4
12.5	16±0.5	13.0	13.0	14.0	1.1~1.4	4.4

Marking:

ϕD ≦ 10mm



ϕD ≧ 12.5mm



Part Number System:

SMD Aluminum E-Caps	FZ series	16V	220μF	±20 %	6.3 ϕ x7.7L
A	**FZ**	**1C**	**221**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
6.3	22	4	5.7	80	1.45	0.30	AFZ0J220M0406	2000
	33	4	5.7	80	1.45	0.30	AFZ0J330M0406	2000
	47	5	5.7	150	0.80	0.30	AFZ0J470M0506	1000
	100	5	5.7	150	0.80	0.30	AFZ0J101M0506	1000
		6.3	5.7	230	0.44	0.30	AFZ0J101M0606	1000
	150	6.3	5.7	230	0.44	0.30	AFZ0J151M0606	1000
	220	6.3	5.7	230	0.44	0.30	AFZ0J221M0606	1000
		6.3	7.7	280	0.36	0.30	AFZ0J221M0607	1000
	330	6.3	7.7	280	0.36	0.30	AFZ0J331M0607	1000
		8	6.5	280	0.36	0.30	AFZ0J331M0806	1000
		8	10.5	450	0.17	0.30	AFZ0J331M0810	500
	470	6.3	7.7	280	0.36	0.30	AFZ0J471M0607	1000
		8	10.5	450	0.17	0.30	AFZ0J471M0810	500
		10	7.7	450	0.17	0.30	AFZ0J471M1007	500
	680	8	10.5	450	0.17	0.30	AFZ0J681M0810	500
		10	7.7	450	0.17	0.30	AFZ0J681M1007	500
	1000	8	10.5	450	0.17	0.30	AFZ0J102M0810	500
	1500	10	10.5	670	0.09	0.32	AFZ0J152M1010	500
		10	13	720	0.08	0.32	AFZ0J152M1013	400
	2200	12.5	13.5	820	0.07	0.34	AFZ0J222M1313	200
	3300	12.5	16	950	0.06	0.36	AFZ0J332M1316	200

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end. ⑤ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
10	22	4	5.7	80	1.45	0.26	AFZ1A220M0406	2000
	33	5	5.7	150	0.80	0.26	AFZ1A330M0506	1000
	47	6.3	5.7	230	0.44	0.26	AFZ1A470M0606	1000
	100	6.3	5.7	230	0.44	0.26	AFZ1A101M0606	1000
	150	6.3	5.7	230	0.44	0.26	AFZ1A151M0606	1000
	220	6.3	7.7	280	0.36	0.26	AFZ1A221M0607	1000
		8	6.5	280	0.36	0.26	AFZ1A221M0806	1000
	330	8	10.5	450	0.17	0.26	AFZ1A331M0810	500
		10	7.7	450	0.17	0.26	AFZ1A331M1007	500
	470	8	10.5	450	0.17	0.26	AFZ1A471M0810	500
		10	7.7	450	0.17	0.26	AFZ1A471M1007	500
	680	10	10.5	670	0.09	0.26	AFZ1A681M1010	500
	1000	10	10.5	670	0.09	0.26	AFZ1A102M1010	500
	1500	10	13	720	0.08	0.28	AFZ1A152M1013	400
		12.5	13.5	820	0.07	0.28	AFZ1A152M1313	200
	2200	12.5	16	950	0.06	0.30	AFZ1A222M1316	200
16	10	4	5.7	80	1.45	0.22	AFZ1C150M0406	2000
	22	5	5.7	150	0.80	0.22	AFZ1C220M0506	1000
	33	5	5.7	150	0.80	0.22	AFZ1C330M0506	1000
		6.3	5.7	230	0.44	0.22	AFZ1C330M0606	1000
	47	6.3	5.7	230	0.44	0.22	AFZ1C470M0606	1000
	100	6.3	5.7	230	0.44	0.22	AFZ1C101M0606	1000
		8	6.5	280	0.36	0.22	AFZ1C101M0806	1000
	150	6.3	7.7	280	0.36	0.22	AFZ1C151M0607	1000
		8	6.5	280	0.36	0.22	AFZ1C151M0806	1000
	220	6.3	7.7	280	0.36	0.22	AFZ1C221M0607	1000
	330	8	10.5	450	0.17	0.22	AFZ1C331M0810	500
		10	7.7	450	0.17	0.22	AFZ1C331M1007	500
	470	8	10.5	450	0.17	0.22	AFZ1C471M0810	500
		10	10.5	670	0.09	0.22	AFZ1C471M1010	500
	680	10	10.5	670	0.09	0.22	AFZ1C681M1010	500
	1000	10	13	720	0.08	0.24	AFZ1C102M1013	500
		12.5	13.5	820	0.07	0.24	AFZ1C102M1313	200
	1500	12.5	16	950	0.06	0.24	AFZ1C152M1316	200
25	10	4	5.7	80	1.45	0.16	AFZ1E100M0406	2000
	22	5	5.7	150	0.80	0.16	AFZ1E220M0506	1000
	33	6.3	5.7	230	0.44	0.16	AFZ1E330M0606	1000
	47	6.3	5.7	230	0.44	0.16	AFZ1E470M0606	1000
	68	6.3	5.7	230	0.44	0.16	AFZ1E680M0606	1000
	100	6.3	7.7	280	0.36	0.16	AFZ1E101M0607	1000
		8	6.5	280	0.36	0.16	AFZ1E101M0806	1000
	150	8	10.5	450	0.17	0.16	AFZ1E151M0810	500
	220	8	10.5	450	0.17	0.16	AFZ1E221M0810	500
		10	7.7	450	0.17	0.16	AFZ1E221M1007	500
	330	8	10.5	450	0.17	0.16	AFZ1E331M0810	500
	470	10	10.5	670	0.09	0.16	AFZ1E471M1010	500
	680	10	13	720	0.08	0.16	AFZ1E681M1013	400
		12.5	13.5	820	0.07	0.18	AFZ1E681M1313	200
	1000	12.5	16	950	0.06	0.20	AFZ1E102M1313	200

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end. ⑤ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
35	4.7	4	5.7	80	1.45	0.13	AFZ1V4R7M0406	2000
	10	4	5.7	80	1.45	0.13	AFZ1V100M0406	2000
		5	5.7	150	0.80	0.13	AFZ1V100M0506	1000
	22	6.3	5.7	230	0.44	0.13	AFZ1V220M0606	1000
	33	6.3	5.7	230	0.44	0.13	AFZ1V330M0606	1000
	47	6.3	5.7	230	0.44	0.13	AFZ1V470M0606	1000
	68	6.3	7.7	280	0.36	0.13	AFZ1V680M0607	1000
		8	6.5	280	0.36	0.13	AFZ1V680M0806	1000
	100	6.3	7.7	280	0.36	0.13	AFZ1V101M0607	1000
		8	10.5	450	0.17	0.13	AFZ1V101M0810	500
	150	8	10.5	450	0.17	0.13	AFZ1V151M0810	500
		10	7.7	450	0.17	0.13	AFZ1V151M1007	500
	220	8	10.5	450	0.17	0.13	AFZ1V221M0810	500
		10	10.5	670	0.09	0.13	AFZ1V221M1010	500
	330	10	10.5	670	0.09	0.13	AFZ1V331M1010	500
		12.5	13.5	820	0.07	0.15	AFZ1V331M1313	200
	470	10	13	720	0.08	0.13	AFZ1V471M1013	400
		12.5	13.5	820	0.07	0.15	AFZ1V471M1313	200
		12.5	16	950	0.06	0.15	AFZ1V471M1316	200
	680	12.5	16	950	0.06	0.15	AFZ1V681M1316	200
50	1	4	5.7	60	2.9	0.10	AFZ1H010M0406	2000
	2.2	4	5.7	60	2.9	0.10	AFZ1H2R2M0406	2000
	3.3	4	5.7	60	2.9	0.10	AFZ1H3R3M0406	2000
	4.7	4	5.7	60	2.9	0.10	AFZ1H4R7M0406	2000
		5	5.7	85	1.52	0.10	AFZ1H4R7M0506	1000
	10	6.3	5.7	165	0.88	0.10	AFZ1H100M0606	1000
	22	6.3	5.7	165	0.88	0.10	AFZ1H220M0606	1000
	33	6.3	7.7	185	0.68	0.10	AFZ1H330M0607	1000
	47	6.3	7.7	185	0.68	0.10	AFZ1H470M0607	1000
		8	6.5	185	0.68	0.10	AFZ1H470M0806	1000
		8	10.5	369	0.34	0.10	AFZ1H470M0810	500
	68	8	10.5	369	0.34	0.10	AFZ1H680M0810	500
	100	8	10.5	369	0.34	0.10	AFZ1H101M0810	500
		10	10.5	553	0.18	0.10	AFZ1H101M1010	500
	150	10	10.5	553	0.18	0.10	AFZ1H151M1010	500
	220	10	10.5	553	0.18	0.10	AFZ1H221M1010	500
		12.5	13.5	650	0.12	0.10	AFZ1H221M1313	200
	330	12.5	13.5	650	0.12	0.10	AFZ1H331M1313	200

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end. ⑤ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
63	4.7	5	5.7	70	2.9	0.08	AFZ1J4R7M0506	1000
	10	6.3	5.7	130	1.5	0.08	AFZ1J100M0606	1000
	22	6.3	7.7	150	0.9	0.08	AFZ1J220M0607	1000
	33	8	10.5	280	0.5	0.08	AFZ1J330M0810	500
	47	8	10.5	280	0.5	0.08	AFZ1J470M0810	500
	100	10	10.5	450	0.35	0.08	AFZ1J101M1010	500
	150	12.5	13.5	700	0.16	0.08	AFZ1J151M1313	200
	220	12.5	13.5	700	0.16	0.08	AFZ1J221M1313	200
80	4.7	6.3	5.7	40	3.0	0.08	AFZ1K4R7M0606	1000
	10	6.3	7.7	60	2.4	0.08	AFZ1K100M0607	1000
		8	6.5	60	2.4	0.08	AFZ1K100M0806	1000
	22	8	10.5	130	1.3	0.08	AFZ1K220M0810	500
	33	8	10.5	130	1.3	0.08	AFZ1K330M0810	500
	47	10	10.5	200	0.70	0.08	AFZ1K470M1010	500
	68	10	13	350	0.40	0.08	AFZ1K680M1013	400
		12.5	13.5	450	0.32	0.08	AFZ1K680M1313	200
	100	10	10.5	200	0.70	0.08	AFZ1K101M1010	500
		10	13	350	0.40	0.08	AFZ1K101M1013	400
		12.5	13.5	450	0.32	0.08	AFZ1K101M1313	200
	150	12.5	13.5	450	0.32	0.08	AFZ1K151M1313	200
100	22	8	10.5	130	1.3	0.08	AFZ2A220M0810	500
	33	10	10.5	200	0.70	0.08	AFZ2A330M1010	500
	47	10	10.5	200	0.70	0.08	AFZ2A470M1010	500
		10	13	350	0.40	0.08	AFZ2A470M1013	400
		12.5	13.5	450	0.32	0.08	AFZ2A470M1313	200
	68	12.5	13.5	450	0.32	0.08	AFZ2A680M1313	200
	100	12.5	13.5	450	0.32	0.08	AFZ2A101M1313	200

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end. ⑤ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

AJZ Series

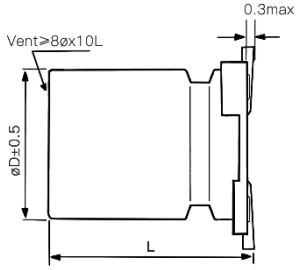
Features

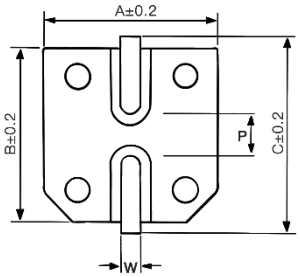
- φ5 ~ φ10, 105℃, 7000 hours assured
- Low impedance capacitors , Long life assured
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

Specifications								
Category temp. range	–25℃ ~ +105℃							
Capacitance tolerance	±20% (120 Hz / +20 ℃)							
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)							
Tan δ	Please see the attached characteristics list							
Characteristics at low temperature	Rated voltage (V)	6.3	10	16	25	35	50	Impedance ratio at 120 Hz
	Z(-25 ℃) / Z(+20 ℃)	4	3	2	2	2	2	
Endurance	After applying rated working voltage for 7000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±30% of the initial value						
	Dissipation factor (tan δ)	Less than 300% of the initial value						
	Leakage current	Within the initial limit						
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.							
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±10% of the initial value						
	Dissipation factor (tan δ)	Within the initial limit						
	Leakage current	Within the initial limit						
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	1kHz	10kHz≦			
	Correction Factor	0.35	0.5	0.8	1.0			

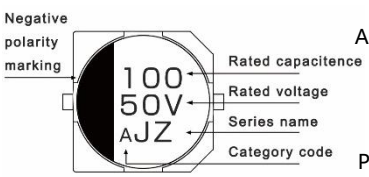
Dimensions:





Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
5	7±0.3	5.3	5.3	6.1	0.5~0.8	1.4
6.3	7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
6.3	8.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4

Marking:



Part Number System:

Aluminum E-Caps	JZ series	16V	100μF	±20 %	6.3 φ x7L
A	**JZ**	**1C**	**101**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
6.3	47	5	7	95	2.2	0.32	AJZ0J470M0507	1000
	100	6.3	7	140	1.1	0.32	AJZ0J101M0607	1000
	220	6.3	8.7	230	1.0	0.32	AJZ0J221M0608	800
	330	6.3	8.7	230	1.0	0.32	AJZ0J331M0608	800
	470	8	10.5	600	0.22	0.32	AJZ0J471M0810	500
10	33	5	7	95	2.2	0.28	AJZ1A330M0507	1000
	150	6.3	7	140	1.1	0.28	AJZ1A151M0607	1000
16	22	5	7	95	2.2	0.26	AJZ1C220M0507	1000
	47	6.3	7	140	1.1	0.26	AJZ1C470M0607	1000
	100	6.3	7	140	1.1	0.26	AJZ1C101M0607	1000
	150	6.3	8.7	230	1.0	0.26	AJZ1C151M0608	800
	220	6.3	8.7	230	1.0	0.26	AJZ1C221M0608	800
	330	8	10.5	600	0.22	0.26	AJZ1C331M0810	500
	470	8	10.5	600	0.22	0.26	AJZ1C471M0810	500
25	22	5	7	95	2.2	0.16	AJZ1E220M0507	1000
	33	6.3	7	140	1.1	0.16	AJZ1E330M0607	1000
	47	6.3	7	140	1.1	0.16	AJZ1E470M0607	1000
	100	6.3	8.7	230	1.0	0.16	AJZ1E101M0608	800
	220	8	10.5	600	0.22	0.16	AJZ1E221M0810	500
	330	8	10.5	600	0.22	0.16	AJZ1E331M0810	500
	470	10	10.5	850	0.16	0.16	AJZ1E471M1010	500
35	10	5	7	95	2.2	0.14	AJZ1V100M0507	1000
	22	5	7	95	2.2	0.14	AJZ1V220M0507	1000
	33	6.3	8.7	230	1.0	0.14	AJZ1V330M0608	800
	47	6.3	8.7	230	1.0	0.14	AJZ1V470M0608	800
	220	8	10.5	600	0.22	0.14	AJZ1V221M0810	500
	330	10	10.5	850	0.16	0.14	AJZ1V331M1010	500
50	47	8	10.5	350	0.53	0.14	AJZ1H470M0810	500
	100	8	10.5	350	0.53	0.14	AJZ1H101M0810	500
	220	10	10.5	670	0.35	0.14	AJZ1H221M1010	500

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end.

※Please refer to the page of reflow conditions for reflow profile.

AKZ Series

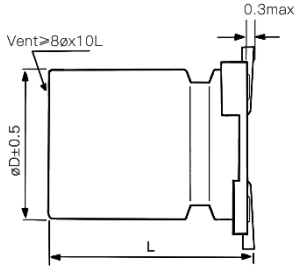
Features

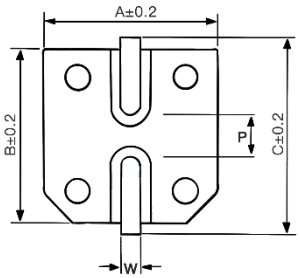
- φ4 ~ φ10, 105℃, 2000 hours assured
- Extra low impedance capacitors (5% ~ 20% lower than AFZ Series)
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- Vibration resistant structure
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

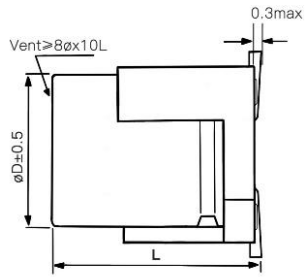
Specifications								
Category temp. range	–55℃ to +105℃							
Capacitance tolerance	±20% (120 Hz / +20 ℃)							
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)							
Tan δ	Please see the attached characteristics list							
Characteristics at low temperature	Rated voltage (V)	6.3	10	16	25	35	50	Impedance ratio at 120 Hz
	Z(-25 ℃) / Z(+20 ℃)	4	3	2	2	2	2	
	Z(-55 ℃) / Z(+20 ℃)	8	5	4	3	3	3	
Endurance	After applying rated working voltage for 2000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±30% of the initial value						
	Dissipation factor (tan δ)	Less than 300% of the initial value						
	Leakage current	Within the initial limit						
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.							
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±10% of the initial value						
	Dissipation factor (tan δ)	Within the initial limit						
	Leakage current	Within the initial limit						
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	1kHz	10kHz≦			
	Correction Factor	0.6	0.7	0.85	1.0			

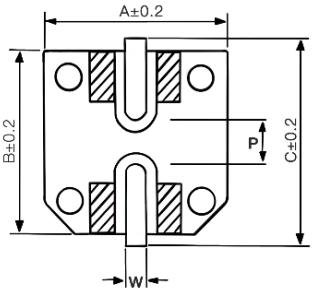
Dimensions:





Vibration resistant structure:

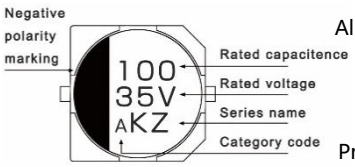




Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
4	5.8±0.4	4.3	4.3	5.1	0.5~0.8	1.0
5	5.8±0.4	5.3	5.3	6.0	0.5~0.8	1.4
6.3	5.8±0.4	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.4	6.6	6.6	7.3	0.5~0.8	2.0
8	6.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4

: Aid electrode

Marking:



Part Number System:

Aluminum E-Caps	KZ series	16V	220μF	±20 %	6.3 φ x7.7L
A	**KZ**	**1C**	**221**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
6.3	22	4	5.8	90	1.35	0.26	AKZ0J220M0406	2000
	33	4	5.8	90	1.35	0.26	AKZ0J330M0406	2000
	47	5	5.8	160	0.70	0.26	AKZ0J470M0506	1000
	68	6.3	5.8	240	0.36	0.26	AKZ0J680M0606	1000
	100	6.3	5.8	240	0.36	0.26	AKZ0J101M0606	1000
	150	6.3	5.8	240	0.36	0.26	AKZ0J151M0606	1000
	220	6.3	5.8	240	0.36	0.26	AKZ0J221M0606	1000
	330	6.3	7.7	290	0.32	0.26	AKZ0J331M0607	1000
		8	6.5	300	0.26	0.26	AKZ0J331M0806	1000
		8	10.5	600	0.16	0.26	AKZ0J331M0810	500
	470	8	10.5	600	0.16	0.26	AKZ0J471M0810	500
	680	8	10.5	600	0.16	0.26	AKZ0J681M0810	500
	1000	8	10.5	600	0.16	0.26	AKZ0J102M0810	500
	1500	10	10.5	850	0.08	0.26	AKZ0J152M1010	500
10	22	4	5.8	90	1.35	0.19	AKZ1A220M0406	2000
	33	5	5.8	160	0.70	0.19	AKZ1A330M0506	1000
	47	6.3	5.8	240	0.36	0.19	AKZ1A470M0606	1000
	68	6.3	5.8	240	0.36	0.19	AKZ1A680M0606	1000
	100	6.3	5.8	240	0.36	0.19	AKZ1A101M0606	1000
	150	6.3	5.8	240	0.36	0.19	AKZ1A151M0606	1000
	220	6.3	7.7	290	0.32	0.19	AKZ1A221M0607	1000
		8	6.5	300	0.26	0.19	AKZ1A221M0806	1000
	330	8	10.5	600	0.16	0.19	AKZ1A331M0810	500
	470	8	10.5	600	0.16	0.19	AKZ1A471M0810	500
	680	10	10.5	850	0.08	0.19	AKZ1A681M1010	500
	1000	10	10.5	850	0.08	0.19	AKZ1A102M1010	500
16	10	4	5.8	90	1.35	0.16	AKZ1C100M0406	2000
	22	5	5.8	160	0.70	0.16	AKZ1C220M0506	1000
	33	6.3	5.8	240	0.36	0.16	AKZ1C330M0606	1000
	47	6.3	5.8	240	0.36	0.16	AKZ1C470M0606	1000
	68	6.3	5.8	240	0.36	0.16	AKZ1C680M0606	1000
	100	6.3	5.8	240	0.36	0.16	AKZ1C101M0606	1000
	150	6.3	7.7	290	0.32	0.16	AKZ1C151M0607	1000
	220	6.3	7.7	290	0.32	0.16	AKZ1C221M0607	1000
		8	6.5	300	0.26	0.16	AKZ1C221M0806	1000
	330	8	10.5	600	0.16	0.16	AKZ1C331M0810	500
	470	8	10.5	600	0.16	0.16	AKZ1C471M0810	500
		10	10.5	850	0.08	0.16	AKZ1C471M1010	500
	680	10	10.5	850	0.08	0.16	AKZ1C681M1010	500

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end. ⑤ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
25	10	4	5.8	90	1.35	0.14	AKZ1E100M0406	2000
	22	5	5.8	160	0.70	0.14	AKZ1E220M0506	1000
	33	6.3	5.8	240	0.36	0.14	AKZ1E330M0606	1000
	47	6.3	5.8	240	0.36	0.14	AKZ1E470M0606	1000
	68	6.3	5.8	240	0.36	0.14	AKZ1E680M0606	1000
	100	6.3	7.7	290	0.32	0.14	AKZ1E101M0607	1000
		8	6.5	330	0.26	0.14	AKZ1E101M0806	1000
	150	8	10.5	600	0.16	0.14	AKZ1E151M0810	500
	220	8	10.5	600	0.16	0.14	AKZ1E221M0810	500
	330	8	10.5	600	0.16	0.14	AKZ1E331M0810	500
	680	10	10.5	850	0.08	0.14	AKZ1E681M1010	500
35	4.7	4	5.8	90	1.35	0.12	AKZ1V4R7M0406	2000
	10	5	5.8	160	0.70	0.12	AKZ1V100M0506	1000
	22	6.3	5.8	240	0.36	0.12	AKZ1V220M0606	1000
	33	6.3	5.8	240	0.36	0.12	AKZ1V330M0606	1000
	47	6.3	5.8	240	0.36	0.12	AKZ1V470M0606	1000
	68	6.3	7.7	290	0.32	0.12	AKZ1V680M0607	1000
		8	6.5	300	0.26	0.12	AKZ1V680M0806	1000
	100	6.3	7.7	290	0.32	0.12	AKZ1V101M0607	1000
		8	10.5	600	0.16	0.12	AKZ1V101M0810	500
	150	8	10.5	600	0.16	0.12	AKZ1V151M0810	500
	220	10	10.5	850	0.08	0.12	AKZ1V221M1010	500
	330	10	10.5	850	0.08	0.12	AKZ1V331M1010	500
50	150	8	10.5	350	0.34	0.10	AKZ1H151M0810	500
	330	10	10.5	670	0.18	0.10	AKZ1H331M1010	500

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end. ⑤ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

ARZ Series

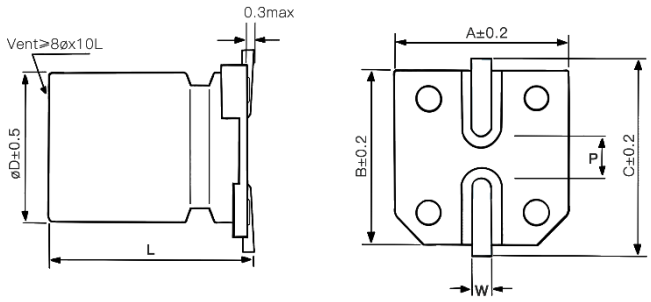
Features

- φ5 ~ φ10, 105℃, 2000 hours assured
- Impedance 30% ~ 50% lower than AFZ Series
- High rated ripple current, Ultra low impedance capacitors
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

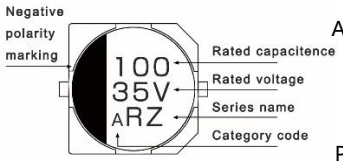
Specifications								
Category temp. range	–55℃ to +105℃							
Capacitance tolerance	±20% (120 Hz / +20 ℃)							
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)							
Tan δ	Please see the attached characteristics list							
Characteristics at low temperature	Rated voltage (V)	6.3	10	16	25	35	50	Impedance ratio at 120 Hz
	Z(-25 ℃)/Z(+20 ℃)	4	3	2	2	2	2	
	Z(-55 ℃)/Z(+20 ℃)	8	5	4	3	3	3	
Endurance	After applying rated working voltage for 2000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±30% of the initial value						
	Dissipation factor (tan δ)	Less than 300% of the initial value						
	Leakage current	Within the initial limit						
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.							
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±10% of the initial value						
	Dissipation factor (tan δ)	Within the initial limit						
	Leakage current	Within the initial limit						
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	1kHz	10kHz≦			
	Correction factor	0.6	0.7	0.85	1.0			

Dimensions:



Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
5	5.8±0.4	5.3	5.3	6.0	0.5~0.8	1.4
6.3	5.8±0.4	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.4	6.6	6.6	7.3	0.5~0.8	2.0
8	6.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	13±0.5	10.3	10.3	11.1	0.7~1.3	4.4

Marking:



Part Number System:

Aluminum E-Caps	RZ series	16V	220μF	±20 %	6.3Φx7.7L
A	**RZ**	**1C**	**221**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
6.3	47	5	5.8	240	0.36	0.30	ARZ0J470M0506	1000
	100	5	5.8	240	0.36	0.30	ARZ0J101M0506	1000
		6.3	5.8	300	0.26	0.30	ARZ0J101M0606	1000
	220	6.3	5.8	300	0.26	0.30	ARZ0J221M0606	1000
	330	6.3	7.7	600	0.16	0.30	ARZ0J331M0607	1000
		8	6.5	500	0.18	0.30	ARZ0J331M0806	1000
	470	8	10.5	850	0.08	0.30	ARZ0J471M0810	500
	680	8	10.5	850	0.08	0.30	ARZ0J681M0810	500
	1500	10	10.5	1190	0.06	0.30	ARZ0J152M1010	500
	2200	10	13	1190	0.06	0.32	ARZ0J222M1013	400
10	33	5	5.8	240	0.36	0.26	ARZ1A330M0506	1000
	100	5	5.8	240	0.36	0.26	ARZ1A101M0506	1000
	150	6.3	5.8	300	0.26	0.26	ARZ1A151M0606	1000
	220	6.3	7.7	600	0.16	0.26	ARZ1A221M0607	1000
		8	6.5	500	0.18	0.26	ARZ1A221M0806	1000
	330	8	10.5	850	0.08	0.26	ARZ1A331M0810	500
	470	8	10.5	850	0.08	0.26	ARZ1A471M0810	500
	680	8	10.5	850	0.08	0.26	ARZ1A681M0810	500
	1000	10	10.5	1190	0.06	0.26	ARZ1A102M1010	500
	1500	10	13	1190	0.06	0.26	ARZ1A152M1013	400
16	22	5	5.8	240	0.36	0.22	ARZ1C220M0506	1000
	47	5	5.8	240	0.36	0.22	ARZ1C470M0506	1000
		6.3	5.8	300	0.26	0.22	ARZ1C470M0606	1000
	68	6.3	5.8	300	0.26	0.22	ARZ1C680M0606	1000
	100	6.3	5.8	300	0.26	0.22	ARZ1C101M0606	1000
		6.3	7.7	600	0.16	0.22	ARZ1C101M0607	1000
	150	6.3	7.7	600	0.16	0.22	ARZ1C151M0607	1000
	220	6.3	7.7	600	0.16	0.22	ARZ1C221M0607	1000
		8	6.5	500	0.18	0.22	ARZ1C221M0806	1000
		8	10.5	850	0.08	0.22	ARZ1C221M0810	500
	330	8	10.5	850	0.08	0.22	ARZ1C331M0810	500
	470	8	10.5	850	0.08	0.22	ARZ1C471M0810	500
	680	10	10.5	1190	0.06	0.22	ARZ1C681M1010	500
	820	10	10.5	1190	0.06	0.22	ARZ1C821M1010	500
	1000	10	10.5	1190	0.06	0.22	ARZ1C102M1013	500

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end.

※Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
25	22	5	5.8	240	0.36	0.16	ARZ1E220M0506	1000
	33	5	5.8	240	0.36	0.16	ARZ1E330M0506	1000
		6.3	5.8	300	0.26	0.16	ARZ1E330M0606	1000
	47	6.3	5.8	300	0.26	0.16	ARZ1E470M0606	1000
	68	6.3	5.8	300	0.26	0.16	ARZ1E680M0606	1000
	100	6.3	7.7	600	0.16	0.16	ARZ1E101M0607	1000
		8	6.5	500	0.18	0.16	ARZ1E101M0806	1000
	150	8	10.5	850	0.08	0.16	ARZ1E151M0810	500
	220	8	10.5	850	0.08	0.16	ARZ1E221M0810	500
	470	10	10.5	1190	0.06	0.16	ARZ1E471M1010	500
	560	10	10.5	1190	0.06	0.16	ARZ1E561M1010	500
35	22	5	5.8	240	0.36	0.13	ARZ1V220M0506	1000
	33	6.3	5.8	300	0.26	0.13	ARZ1V330M0606	1000
	47	6.3	5.8	300	0.26	0.13	ARZ1V470M0606	1000
	68	6.3	7.7	600	0.16	0.13	ARZ1V680M0607	1000
	100	6.3	7.7	600	0.16	0.13	ARZ1V101M0607	1000
		8	10.5	850	0.08	0.13	ARZ1V101M0810	500
	150	8	10.5	850	0.08	0.13	ARZ1V151M0810	500
	330	10	10.5	1190	0.06	0.13	ARZ1V331M1010	500
	390	10	10.5	1190	0.06	0.13	ARZ1V391M1010	500
50	100	8	10.5	670	0.18	0.10	ARZ1H101M0810	500
	220	10	10.5	900	0.12	0.10	ARZ1H221M1010	500

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end.

※Please refer to the page of reflow conditions for reflow profile.

ARX Series

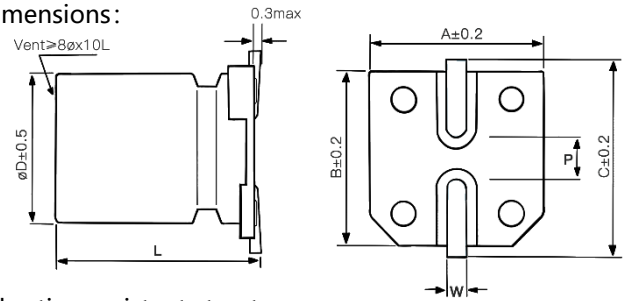
Features

- φ4 ~ φ10, 105℃, 2000 hours assured
- Miniaturized, Ultra Low Impedance (Capacitance more than ARZ Series)
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- Vibration resistant structure
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

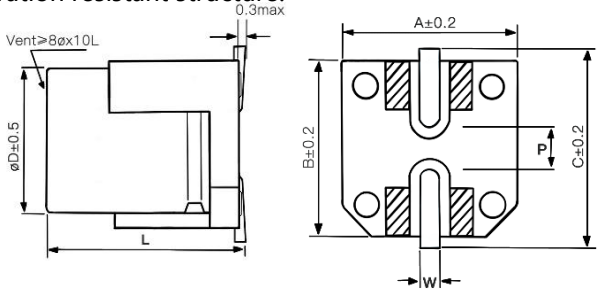
Marking color: Black

Specifications								
Category temp. range	–55℃ to +105℃							
Capacitance tolerance	±20% (120 Hz / +20 ℃)							
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)							
Tan δ	Please see the attached characteristics list							
Characteristics at low temperature	Rated voltage (V)	6.3	10	16	25	35	50	Impedance ratio at 120 Hz
	Z (-25 ℃) / Z (+20 ℃)	4	3	2	2	2	2	
	Z (-55 ℃) / Z (+20 ℃)	8	5	4	3	3	3	
Endurance	After applying rated working voltage for 2000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±30% of the initial value						
	Dissipation factor (tan δ)	Less than 200% of the initial value						
	Leakage current	Within the initial limit						
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.							
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±10% of the initial value						
	Dissipation factor (tan δ)	Within the initial limit						
	Leakage current	Within the initial limit						
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	1kHz	10kHz≦			
	C ≦ 470μF	0.5	0.65	0.85	1.0			
	C > 470μF	0.55	0.7	0.9	1.0			

Dimensions:



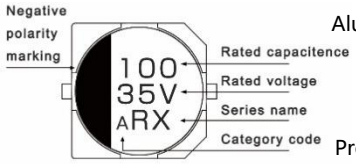
Vibration resistant structure:



Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
4	5.8±0.4	4.3	4.3	5.1	0.5~0.8	1.0
5	5.8±0.4	5.3	5.3	6.0	0.5~0.8	1.4
6.3	5.8±0.4	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.4	6.6	6.6	7.3	0.5~0.8	2.0
8	6.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4

: Aid electrode

Marking:



Part Number System:

Aluminum E-Caps	RX series	25V	220μF	±20 %	6.3Φx7.7L
A	**RX**	**1E**	**221**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
6.3	100	4	5.8	160	0.85	0.26	ARX0J101M0406	2000
	220	5	5.8	240	0.36	0.26	ARX0J221M0506	1000
	330	6.3	5.8	300	0.26	0.26	ARX0J331M0606	1000
	470	6.3	7.7	600	0.16	0.26	ARX0J471M0607	1000
	680	6.3	7.7	600	0.16	0.26	ARX0J681M0607	1000
	1500	8	10.5	850	0.08	0.28	ARX0J152M0810	500
	2200	10	10.5	1190	0.06	0.32	ARX0J222M1010	500
10	68	4	5.8	160	0.85	0.19	ARX1A680M0406	2000
	150	5	5.8	240	0.36	0.19	ARX1A151M0506	1000
	220	6.3	5.8	300	0.26	0.19	ARX1A221M0606	1000
	330	6.3	7.7	600	0.16	0.19	ARX1A331M0607	1000
	470	6.3	7.7	600	0.16	0.19	ARX1A471M0607	1000
	1000	8	10.5	850	0.08	0.21	ARX1A102M0810	500
	1500	10	10.5	1190	0.06	0.21	ARX1A152M1010	500
16	47	4	5.8	160	0.85	0.16	ARX1C470M0406	2000
	68	5	5.8	240	0.36	0.16	ARX1C680M0506	1000
	100	5	5.8	240	0.36	0.16	ARX1C101M0506	1000
	150	6.3	5.8	300	0.26	0.16	ARX1C151M0606	1000
	220	6.3	5.8	300	0.26	0.16	ARX1C221M0606	1000
	330	6.3	7.7	600	0.16	0.16	ARX1C331M0607	1000
	470	8	6.5	600	0.16	0.16	ARX1C471M0806	1000
	680	8	10.5	850	0.08	0.16	ARX1C681M0810	500
	820	8	10.5	850	0.08	0.16	ARX1C821M0810	500
	1000	10	10.5	1190	0.06	0.18	ARX1C102M1010	500
	1200	10	10.5	1190	0.06	0.18	ARX1C122M1010	500
25	22	4	5.8	160	0.85	0.14	ARX1E220M0406	2000
	33	4	5.8	160	0.85	0.14	ARX1E330M0406	2000
	47	5	5.8	240	0.36	0.14	ARX1E470M0506	1000
	68	5	5.8	240	0.36	0.14	ARX1E680M0506	1000
	100	6.3	5.8	300	0.26	0.14	ARX1E101M0606	1000
	150	6.3	7.7	600	0.16	0.14	ARX1E151M0607	1000
	220	6.3	7.7	600	0.16	0.14	ARX1E221M0607	1000
	390	8	10.5	850	0.08	0.14	ARX1E391M0810	500
	470	8	10.5	850	0.08	0.14	ARX1E471M0810	500
	560	8	10.5	850	0.08	0.14	ARX1E561M0810	500
	820	10	10.5	1190	0.06	0.14	ARX1E821M1010	500
	1000	10	10.5	1190	0.06	0.16	ARX1E102M1010	500

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end. ⑤ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
35	22	4	5.8	160	0.85	0.12	ARX1V220M0406	2000
	33	5	5.8	240	0.36	0.12	ARX1V330M0506	1000
	47	5	5.8	240	0.36	0.12	ARX1V470M0506	1000
	68	6.3	5.8	300	0.26	0.12	ARX1V680M0606	1000
	100	6.3	5.8	300	0.26	0.12	ARX1V101M0606	1000
	150	6.3	7.7	600	0.16	0.12	ARX1V151M0607	1000
	330	8	10.5	850	0.08	0.12	ARX1V331M0810	500
	390	8	10.5	850	0.08	0.12	ARX1V391M0810	500
	470	10	10.5	1190	0.06	0.12	ARX1V471M1010	500
	560	10	10.5	1190	0.06	0.12	ARX1V561M1010	500
	680	10	10.5	1190	0.06	0.12	ARX1V681M1010	500
50	10	4	5.8	85	2.30	0.10	ARX1H100M0406	2000
		5	5.8	165	0.88	0.10	ARX1H100M0506	1000
	22	5	5.8	165	0.88	0.10	ARX1H220M0506	1000
	47	6.3	5.8	195	0.68	0.10	ARX1H470M0606	1000
	100	6.3	7.7	350	0.34	0.10	ARX1H101M0607	1000
	220	8	10.5	670	0.18	0.10	ARX1H221M0810	500
	330	10	10.5	900	0.12	0.10	ARX1H331M1010	500

① Rated ripple current (100kHz / +105℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end. ⑤ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

AVH Series

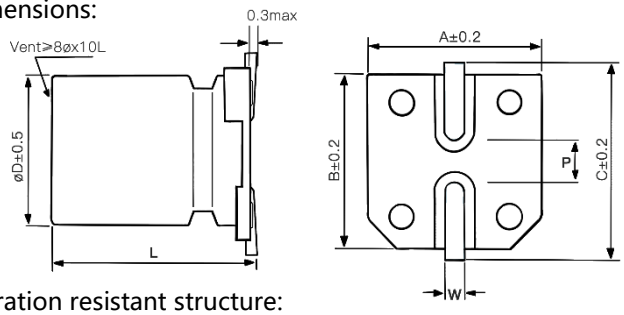
Features

- φ6.3 ~ φ12.5, 125℃, 1000~2000 hours assured
- For automobile modules and other high temperature applications
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- Vibration resistant structure
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

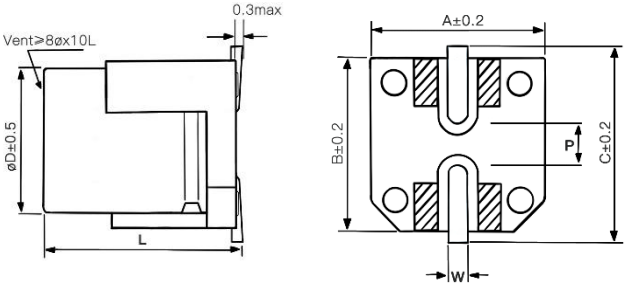
Marking color: Black

Specifications							
Category temp. range	–40℃ to +125℃						
Capacitance tolerance	±20% (120 Hz / +20 ℃)						
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)						
Tan δ	Please see the attached characteristics list						
Characteristics at low temperature(Impedance ratio at 120 Hz)	Rated voltage (V)	10	16	25	35	50	63
	Z (-25 ℃) / Z (+20 ℃)	6	5	4	3	3	3
	Z (-40 ℃) / Z (+20 ℃)	12	8	6	4	4	4
Endurance	After applying rated working voltage for 1000/2000 hours at +125 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.						
	Test Time	φD ≦ 8x6.5mm: 1000H , φD ≧ 8mm: 2000H					
	Capacitance change	Within ±30% of the initial value					
	Dissipation factor (tan δ)	Less than 300% of the initial value					
	Leakage current	Within the initial limit					
Shelf life	After storage for 1000 h at +125 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.						
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.						
	Capacitance change	Within ±10% of the initial value					
	Dissipation factor (tan δ)	Within the initial limit					
	Leakage current	Within the initial limit					
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	1kHz	10kHz≦		
	Correction Factor	0.5	0.65	0.85	1.0		

Dimensions:



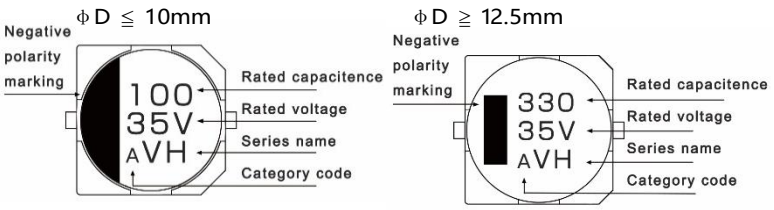
Vibration resistant structure:



Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
6.3	5.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
8	6.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
12.5	13.5±0.5	13.0	13.0	14.0	1.1~1.4	4.4
12.5	16±0.5	13.0	13.0	14.0	1.1~1.4	4.4

: Aid electrode

Marking:



Part Number System:

SMD Aluminum E-Caps	VH series	16V	220μF	±20 %	10Φx10.5L
A	**VH**	**1C**	**221**	**M**	**1010**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
10	47	6.3	5.7	70	1.60	0.30	AVH1A470M0606	1000
	68	6.3	5.7	70	1.60	0.30	AVH1A680M0606	1000
	100	6.3	7.7	100	1.00	0.30	AVH1A101M0607	1000
		8	6.5	100	1.00	0.30	AVH1A101M0806	1000
	220	8	10.5	200	0.50	0.30	AVH1A221M0810	500
	330	8	10.5	200	0.50	0.30	AVH1A331M0810	500
	470	10	10.5	280	0.30	0.30	AVH1A471M1010	500
	680	12.5	13.5	750	0.12	0.30	AVH1A681M1313	200
	1000	12.5	13.5	750	0.12	0.30	AVH1A102M1313	200
	1500	12.5	13.5	750	0.12	0.32	AVH1A152M1313	200
16	33	6.3	5.7	70	1.60	0.23	AVH1C330M0606	1000
	47	6.3	7.7	100	1.00	0.23	AVH1C470M0607	1000
	68	6.3	7.7	100	1.00	0.23	AVH1C680M0607	1000
		8	6.5	100	1.00	0.23	AVH1C680M0806	1000
	100	6.3	7.7	100	1.00	0.23	AVH1C101M0607	1000
		8	6.5	100	1.00	0.23	AVH1C101M0806	1000
	220	8	10.5	200	0.50	0.23	AVH1C221M0810	500
		10	10.5	280	0.30	0.23	AVH1C221M1010	500
	330	10	10.5	280	0.30	0.23	AVH1C331M1010	500
		12.5	13.5	750	0.12	0.23	AVH1C331M1313	200
	470	12.5	13.5	750	0.12	0.23	AVH1C471M1313	200
	680	12.5	13.5	750	0.12	0.23	AVH1C681M1313	200
	1000	12.5	13.5	750	0.12	0.23	AVH1C102M1313	200
25	33	6.3	5.7	70	1.60	0.18	AVH1E330M0606	1000
	47	6.3	7.7	100	1.00	0.18	AVH1E470M0607	1000
		8	6.5	100	1.00	0.18	AVH1E470M0806	1000
	100	8	6.5	100	1.00	0.18	AVH1E101M0806	1000
		8	10.5	200	0.50	0.18	AVH1E101M0810	500
	220	8	10.5	200	0.50	0.18	AVH1E221M0810	500
		10	10.5	280	0.30	0.18	AVH1E221M1010	500
	330	10	10.5	280	0.30	0.18	AVH1E331M1010	500
		12.5	13.5	750	0.12	0.18	AVH1E331M1313	200
	470	12.5	13.5	750	0.12	0.18	AVH1E471M1313	200
	680	12.5	13.5	750	0.12	0.18	AVH1E681M1313	200

① Rated ripple current (100kHz / +125℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive, the Part Number is appended with "a" at the end. ⑤ For Vibration resistant structure, the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
35	22	6.3	5.7	70	1.60	0.16	AVH1V220M0606	1000
	33	6.3	7.7	100	1.00	0.16	AVH1V330M0607	1000
		8	6.5	100	1.00	0.16	AVH1V330M0806	1000
	47	8	6.5	100	1.00	0.16	AVH1V470M0806	1000
		8	10.5	200	0.50	0.16	AVH1V470M0810	500
	68	8	10.5	200	0.50	0.16	AVH1V680M0810	500
	100	10	10.5	280	0.30	0.16	AVH1V101M1010	500
	220	10	10.5	280	0.30	0.16	AVH1V221M1010	500
		12.5	13.5	750	0.12	0.16	AVH1V221M1313	200
	330	12.5	13.5	750	0.12	0.16	AVH1V331M1313	200
	470	12.5	13.5	750	0.12	0.16	AVH1V471M1313	200
50	10	6.3	7.7	85	1.60	0.15	AVH1H100M0607	1000
		8	6.5	85	1.60	0.15	AVH1H100M0806	1000
	22	6.3	7.7	85	1.60	0.15	AVH1H220M0607	1000
		8	6.5	85	1.60	0.15	AVH1H220M0806	1000
	33	8	6.5	85	1.60	0.15	AVH1H330M0806	1000
		8	10.5	160	0.75	0.15	AVH1H330M0810	500
	47	8	10.5	160	0.75	0.15	AVH1H470M0810	500
		10	10.5	240	0.50	0.15	AVH1H470M1010	500
	68	10	10.5	240	0.50	0.15	AVH1H680M1010	500
	100	10	10.5	240	0.50	0.15	AVH1H101M1010	500
		12.5	13.5	550	0.23	0.15	AVH1H101M1313	200
	220	12.5	13.5	550	0.23	0.15	AVH1H221M1313	200
	330	12.5	13.5	550	0.23	0.15	AVH1H331M1313	200
63	10	6.3	7.7	60	2.20	0.13	AVH1J100M0607	1000
		8	6.5	60	2.20	0.13	AVH1J100M0806	1000
	22	8	10.5	100	1.00	0.13	AVH1J220M0810	500
	33	8	10.5	100	1.00	0.13	AVH1J330M0810	500
		10	10.5	150	0.80	0.13	AVH1J330M1010	500
	47	8	10.5	100	1.00	0.13	AVH1J470M0810	500
		10	10.5	150	0.80	0.13	AVH1J470M1010	500
	68	10	10.5	150	0.80	0.13	AVH1J680M1010	500
	100	10	10.5	150	0.80	0.13	AVH1J101M1010	500
		12.5	13.5	450	0.26	0.13	AVH1J101M1313	200
	220	12.5	13.5	450	0.26	0.13	AVH1J221M1313	200

① Rated ripple current (100kHz / +125℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end. ⑤ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

AWH Series

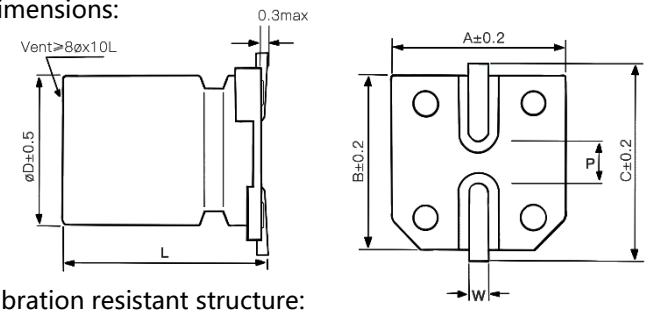
Features

- φ6.3 ~ φ12.5, 125℃, 2000~3000 hours assured
- Low impedance capacitors
- For automobile modules and other high temperature applications
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- Vibration resistant structure
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

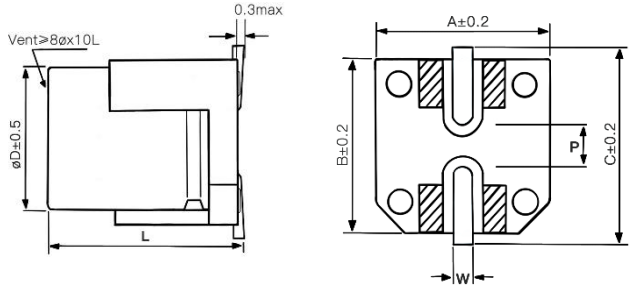
Marking color: Black

Specifications							
Category temp. range	–40℃ to +125℃						
Capacitance tolerance	±20% (120 Hz / +20 ℃)						
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)						
Tan δ	Please see the attached characteristics list						
Characteristics at low temperature	Rated voltage (V)	10	16	25	35	50	Impedance ratio at 120 Hz
	Z(-40 ℃) / Z(+20 ℃)	12	8	6	4	4	
Endurance	After applying rated working voltage for 2000/3000 hours at +125 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.						
	Test Time	φD = 6.3mm: 2000H φD = 8~12.5mm: 3000H					
	Capacitance change	Within ±30% of the initial value					
	Dissipation factor (tan δ)	Less than 300% of the initial value					
	Leakage current	Within the initial limit					
Shelf life	After storage for 1000 h at +125 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.						
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.						
	Capacitance change	Within ±10% of the initial value					
	Dissipation factor (tan δ)	Within the initial limit					
	Leakage current	Within the initial limit					
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	300Hz	1kHz	10kHz≦	
	Correction Factor	0.35	0.5	0.64	0.83	1.0	

Dimensions:



Vibration resistant structure:

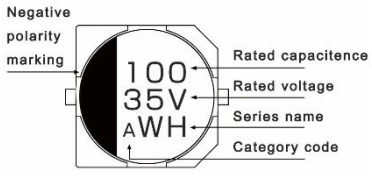


: Aid electrode

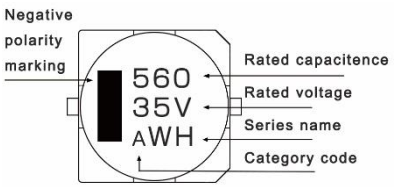
Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
6.3	7.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
12.5	13.5±0.5	13.0	13.0	14.0	1.1~1.4	4.4

Marking:

ΦD ≦ 10mm



ΦD ≧ 12.5mm



Part Number System:

SMD Aluminum E-Caps	WH series	16V	220μF	±20 %	8Φx10.5L
A	**WH**	**1C**	**221**	**M**	**0810**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
10	220	8	10.5	270	0.20	0.30	AWH1A221M0810	500
	330	8	10.5	270	0.20	0.30	AWH1A331M0810	500
		10	10.5	500	0.15	0.30	AWH1A331M1010	500
	470	10	10.5	500	0.15	0.30	AWH1A471M1010	500
16	100	6.3	7.7	197	0.50	0.23	AWH1C101M0607	1000
		8	10.5	270	0.20	0.23	AWH1C101M0810	500
	220	8	10.5	270	0.20	0.23	AWH1C221M0810	500
	330	10	10.5	500	0.15	0.23	AWH1C331M1010	500
	470	10	10.5	500	0.15	0.23	AWH1C471M1010	500
25	100	6.3	7.7	197	0.50	0.18	AWH1E101M0607	1000
		8	10.5	270	0.20	0.18	AWH1E101M0810	500
	220	8	10.5	270	0.20	0.18	AWH1E221M0810	500
		10	10.5	500	0.15	0.18	AWH1E221M1010	500
	330	10	10.5	500	0.15	0.18	AWH1E331M1010	500
	820	12.5	13.5	1700	0.08	0.18	AWH1E821M1313	200
	1000	12.5	13.5	1700	0.08	0.18	AWH1E102M1313	200
35	33	6.3	7.7	197	0.50	0.16	AWH1V330M0607	1000
	47	6.3	7.7	197	0.50	0.16	AWH1V470M0607	1000
		8	10.5	270	0.20	0.16	AWH1V470M0810	500
	100	8	10.5	270	0.20	0.16	AWH1V101M0810	500
	220	10	10.5	500	0.15	0.16	AWH1V221M1010	500
	330	10	10.5	500	0.15	0.16	AWH1V331M1010	500
	470	12.5	13.5	1700	0.08	0.16	AWH1V471M1313	200
	560	12.5	13.5	1700	0.08	0.16	AWH1V561M1313	200
	680	12.5	13.5	1700	0.08	0.16	AWH1V681M1313	200
50	22	6.3	7.7	197	0.50	0.16	AWH1H220M0607	1000
	33	6.3	7.7	197	0.50	0.16	AWH1H330M0607	1000
		8	10.5	270	0.25	0.16	AWH1H330M0810	500
	47	8	10.5	270	0.25	0.16	AWH1H470M0810	500
	82	10	10.5	500	0.20	0.16	AWH1H820M1010	500
	100	10	10.5	500	0.20	0.16	AWH1H101M1010	500
	220	12.5	13.5	1000	0.15	0.16	AWH1H221M1313	200

① Rated ripple current (100kHz / +125℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end. ⑤ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

AXH Series

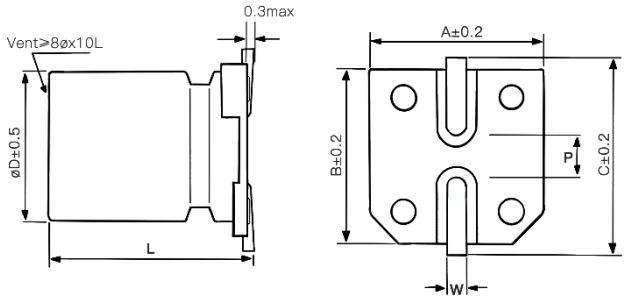
Features

- φ8 ~ φ12.5, 135℃, 2000 hours assured
- Low impedance capacitors
- For automobile modules and other high temperature applications
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- Vibration resistant structure
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

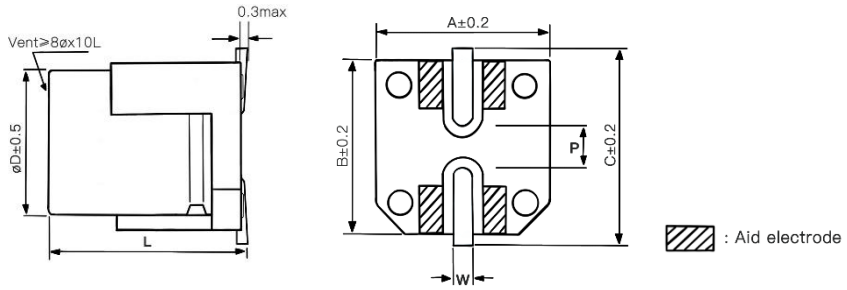
Specifications							
Category temp. range	–40℃ to +135℃						
Capacitance tolerance	±20% (120 Hz / +20 ℃)						
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)						
Tan δ	Please see the attached characteristics list						
Characteristics at low temperature	Rated voltage (V)	10	16	25	35	50	Impedance ratio at 120 Hz
	Z (-40 ℃) / Z (+20 ℃)	12	8	6	4	4	
Endurance	After applying rated working voltage for 2000 hours at +135 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.						
	Capacitance change	Within ±30% of the initial value					
	Dissipation factor (tan δ)	Less than 300% of the initial value					
	Leakage current	Within the initial limit					
Shelf life	After storage for 1000 h at +125 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.						
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.						
	Capacitance change	Within ±10% of the initial value					
	Dissipation factor (tan δ)	Within the initial limit					
	Leakage current	Within the initial limit					
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	300Hz	1kHz	10kHz≦	
	Correction Factor	0.35	0.5	0.64	0.83	1.0	

Dimensions:



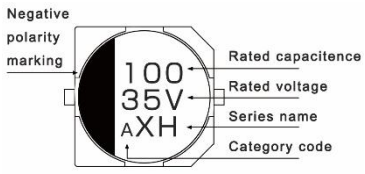
Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
12.5	13.5±0.5	13.0	13.0	14.0	1.1~1.4	4.4

Vibration resistant structure:

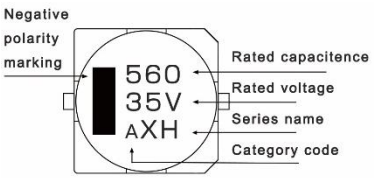


Marking:

ΦD ≦ 10mm



ΦD ≧ 12.5mm



Part Number System:

SMD Aluminum E-Caps	XH series	16V	220μF	±20 %	8 φ x10.5L
A	**XH**	**1C**	**221**	**M**	**0810**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
10	220	8	10.5	270	0.20	0.30	AXH1A221M0810	500
	330	8	10.5	270	0.20	0.30	AXH1A331M0810	500
		10	10.5	500	0.15	0.30	AXH1A331M1010	500
	470	10	10.5	500	0.15	0.30	AXH1A471M1010	500
16	100	8	10.5	270	0.20	0.23	AXH1C101M0810	500
	220	8	10.5	270	0.20	0.23	AXH1C221M0810	500
	330	10	10.5	500	0.15	0.23	AXH1C331M1010	500
	470	10	10.5	500	0.15	0.23	AXH1C471M1010	500
25	100	8	10.5	270	0.20	0.18	AXH1E101M0810	500
	220	10	10.5	500	0.15	0.18	AXH1E221M1010	500
	330	10	10.5	500	0.15	0.18	AXH1E331M1010	500
	820	12.5	13.5	750	0.08	0.18	AXH1E821M1313	200
	1000	12.5	13.5	750	0.08	0.18	AXH1E102M1313	200
35	47	8	10.5	270	0.20	0.16	AXH1V470M0810	500
	100	8	10.5	270	0.20	0.16	AXH1V101M0810	500
	220	10	10.5	500	0.15	0.16	AXH1V221M1010	500
	330	12.5	13.5	750	0.08	0.16	AXH1V331M1313	200
	470	12.5	13.5	750	0.08	0.16	AXH1V471M1313	200
	560	12.5	13.5	750	0.08	0.16	AXH1V561M1313	200
50	47	8	10.5	270	0.30	0.16	AXH1H470M0810	500
	100	10	10.5	500	0.25	0.16	AXH1H101M1010	500
	220	12.5	13.5	750	0.18	0.16	AXH1H221M1313	200

① Rated ripple current (100kHz / +135℃) ② Impedance (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For automotive，the Part Number is appended with "a" at the end. ⑤ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

AVN Series

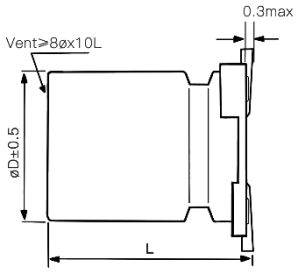
Features

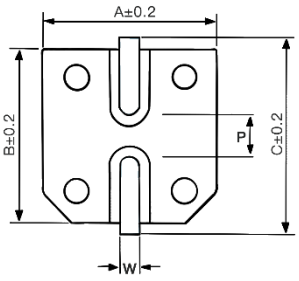
- φ4 ~ φ12.5, 105℃, 2000 hours assured
- Bi-polarized capacitors
- Designed for reflow soldering
- Designed for surface mounting on high-density PCB
- RoHS 2.0 compliant, 247 REACH&SVHC compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information.

Marking color: Black

Specifications									
Category temp. range	–55℃ to +105℃								
Capacitance tolerance	±20% (120 Hz / +20 ℃)								
Leakage current	I ≦ 0.03 CV or 10 μA whichever is greater (after 2 minutes)								
Tan δ	Please see the attached characteristics list								
Characteristics at low temperature	Rated voltage (V)	6.3	10	16	25	35	50	63	100	Impedance ratio at 120 Hz
	Z (-25 ℃) / Z (+20 ℃)	5	4	3	2	2	2	2	2	
	Z (-55 ℃) / Z (+20 ℃)	10	8	6	4	3	3	3	3	
Endurance	After applying rated working voltage for 2000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.									
	Capacitance change	Within ±30% of the initial value								
	Dissipation factor (tan δ)	Less than 300% of the initial value								
	Leakage current	Within the initial limit								
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.									
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.									
	Capacitance change	Within ±10% of the initial value								
	Dissipation factor (tan δ)	Within the initial limit								
	Leakage current	Within the initial limit								
Frequency correction factor for ripple current	Frequency	50Hz	120Hz	1kHz	10kHz≦					
	C ≦ 470μF	0.80	1.00	1.30	1.50					
	C > 470μF	0.85	1.00	1.13	1.15					

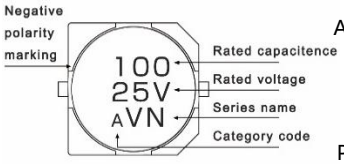
Dimensions:





Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
4	5.7±0.3	4.3	4.3	5.1	0.5~0.8	1.0
5	5.7±0.3	5.3	5.3	6.0	0.5~0.8	1.4
6.3	5.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.3	6.6	6.6	7.3	0.5~0.8	2.0
8	10.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
12.5	13.5±0.5	13.0	13.0	14.0	1.1~1.4	4.4
12.5	16±0.5	13.0	13.0	14.0	1.1~1.4	4.4

Marking:



Part Number System:

Aluminum E-Caps	VN series	16V	22μF	±20 %	6.3 φ x5.7L
A	**VN**	**1C**	**220**	**M**	**0606**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
6.3	22	5	5.7	28	0.32	AVN0J220M0506	1000
	33	6.3	5.7	37	0.32	AVN0J330M0606	1000
	47	6.3	5.7	45	0.32	AVN0J470M0606	1000
	100	6.3	7.7	82	0.32	AVN0J101M0607	1000
	220	8	10.5	120	0.32	AVN0J221M0810	500
	330	10	10.5	170	0.32	AVN0J331M1010	500
	470	12.5	13.5	270	0.32	AVN0J471M1313	200
	1000	12.5	16	500	0.32	AVN0J102M1316	200
10	10	4	5.7	17	0.26	AVN1A100M0406	2000
	22	6.3	5.7	33	0.26	AVN1A220M0606	1000
	33	6.3	5.7	41	0.26	AVN1A330M0606	1000
	47	6.3	7.7	60	0.26	AVN1A470M0607	1000
	100	8	10.5	100	0.26	AVN1A101M0810	500
	220	10	10.5	150	0.26	AVN1A221M1010	500
	330	10	10.5	170	0.26	AVN1A331M1010	500
	470	12.5	13.5	340	0.26	AVN1A471M1313	200
16	4.7	4	5.7	12	0.24	AVN1C4R7M0406	2000
	10	5	5.7	23	0.24	AVN1C100M0506	1000
	22	6.3	5.7	37	0.24	AVN1C220M0606	1000
	33	6.3	5.7	49	0.24	AVN1C330M0606	1000
	47	6.3	7.7	55	0.24	AVN1C470M0607	1000
	100	8	10.5	100	0.24	AVN1C101M0810	500
	220	10	10.5	150	0.24	AVN1C221M1010	500
	330	12.5	13.5	310	0.24	AVN1C331M1313	200
25	3.3	5	5.7	12	0.22	AVN1E3R3M0506	1000
	4.7	5	5.7	16	0.22	AVN1E4R7M0506	1000
	10	6.3	5.7	27	0.22	AVN1E100M0606	1000
	22	6.3	7.7	35	0.22	AVN1E220M0607	1000
	33	8	10.5	50	0.22	AVN1E330M0810	500
	47	8	10.5	60	0.22	AVN1E470M0810	500
	100	10	10.5	110	0.22	AVN1E101M1010	500
	220	12.5	13.5	270	0.22	AVN1E221M1313	200

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive，the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification		Part Number③	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	tan δ②		MPQ (pcs/reel)
35	2.2	4	5.7	8	0.20	AVN1V2R2M0406	2000
	3.3	5	5.7	16	0.20	AVN1V3R3M0506	1000
	4.7	5	5.7	18	0.20	AVN1V4R7M0506	1000
	10	6.3	5.7	29	0.20	AVN1V100M0606	1000
	22	6.3	7.7	35	0.20	AVN1V220M0607	1000
	33	8	10.5	50	0.20	AVN1V330M0810	500
	47	10	10.5	70	0.20	AVN1V470M1010	500
	100	12.5	13.5	180	0.20	AVN1V101M1313	200
50	1	4	5.7	8	0.20	AVN1H010M0406	2000
	2.2	5	5.7	13	0.20	AVN1H2R2M0506	1000
	3.3	5	5.7	17	0.20	AVN1H3R3M0506	1000
	4.7	6.3	5.7	20	0.20	AVN1H4R7M0606	1000
	10	6.3	7.7	30	0.20	AVN1H100M0607	1000
	22	8	10.5	40	0.20	AVN1H220M0810	500
	33	10	10.5	60	0.20	AVN1H330M1010	500
	47	12.5	13.5	130	0.20	AVN1H470M1313	200
	100	12.5	16	230	0.20	AVN1H101M1316	200
63	33	10	10.5	65	0.20	AVN1J330M1010	500
	47	12.5	13.5	140	0.20	AVN1J470M1313	200
100	22	12.5	13.5	100	0.20	AVN2A220M1313	200
	33	12.5	16	150	0.20	AVN2A330M1316	200

① Rated ripple current (120Hz / +105℃) ② tan δ (120Hz / +20℃) ③ For automotive，the Part Number is appended with "a" at the end.

※ Please refer to the page of reflow conditions for reflow profile.

Part Number System - Conductive Polymer Hybrid Capacitors

e.g.: Product 100μF /35V，±20%，6.3x7.7，HMR series（P/N：HMR1V101M0607）

Conductive Polymer Hybrid Capacitors	HMR series	35V	100μF	±20 %	6.3 φ X7.7L
H	**MR**	**1V**	**101**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Series name	Rated voltage (V)	Code	Cap. (μF)	Code	Capacitance tolerance	Code	Case Size (φ x L)	Code
HMV	10	1A	10	100	±20%	M	5x6	0506
HMR	16	1C	22	220	±10%	K	6.3x6	0606
HME	25	1E	27	270			6.3x7.7	0607
HMG	35	1V	33	330			8x6.5	0806
HMY	50	1H	47	470			8x10	0810
HMW	63	1J	56	560			10x10.5	1010
	80	1K	68	680			10x12.5	1013
			82	820			10x16.5	1016
			100	101				
			150	151				
			180	181				
			220	221				
			270	271				
			330	331				
			470	471				
			560	561				
			680	681				
			820	821				

※For Vibration resistant structure，the Part Number is appended with "v" at the end.

HMV Series

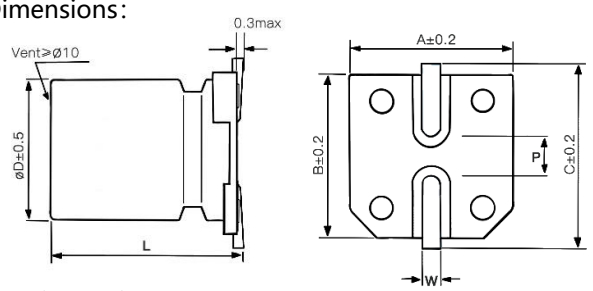
Features

- φ5 ~ φ10, 105℃, 5000~10000 hours assured
- Low ESR and high ripple current
- Designed for reflow soldering
- Vibration resistant structure
- RoHS 2.0 compliant, 247 SVHC & REACH compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

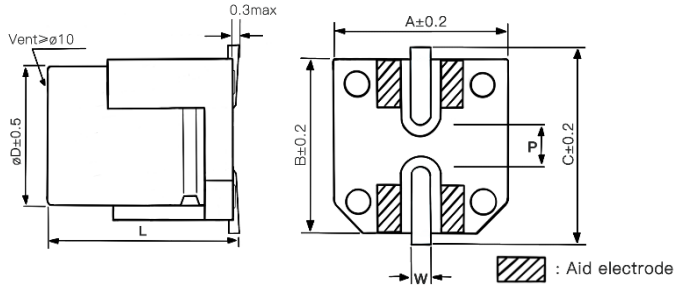
Specifications									
Category temp. range	–55℃ to +105℃								
Capacitance tolerance	±20% (120 Hz / +20 ℃)								
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)								
Tan δ	Please see the attached characteristics list								
Characteristics at low temperature	Rated voltage (V)	10	16	25	35	50	63	80	Impedance ratio at 120 Hz
	Z (-25 ℃) / Z (+20 ℃)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
	Z (-55 ℃) / Z (+20 ℃)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
Endurance	After applying rated working voltage and rated ripple current for 5000/10000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.								
	Test Time	5 φ x6 L , 6.3 φ x6 L ,: 5000H 6.3 φ x7.7L , φ D ≧ 8mm: 10000H							
	Capacitance change	Within ±30% of the initial value							
	Dissipation factor (tan δ)	Less than 200% of the initial value							
	ESR	Less than 200% of the initial value							
	Leakage current	Within the initial limit							
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.								
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.								
	Capacitance change	Within ±10% of the initial value							
	Dissipation factor (tan δ)	Within the initial limit							
	ESR	Within the initial limit							
	Leakage current	Within the initial limit							
Frequency correction factor for ripple current	Frequency	120≤ f < 1k		1k≤ f < 10k		10k≤ f < 100k		100k≤ f < 500k	
	Correction Factor	0.1		0.3		0.6		1.0	

Dimensions:

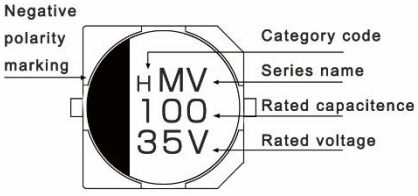


Dimensions						Unit: mm
φ D	L	A	B	C	W	P±0.2
5	6±0.5	5.3	5.3	6.0	0.5~0.8	1.4
6.3	6±0.5	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.5	6.6	6.6	7.3	0.5~0.8	2.0
8	10±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4

Vibration resistant structure:



Marking:



Part Number System:

Conductive Polymer Hybrid Capacitors	HMV series	25V	100μF	±20 %	6.3 ϕ x7.7L
H	**MV**	**1E**	**101**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
10	100	5	6	800	80	0.18	HMV1A101M0506	1000
16	22	5	6	800	80	0.16	HMV1C220M0506	1000
	47	6.3	6	1300	50	0.16	HMV1C470M0606	1000
	82	6.3	6	1300	50	0.16	HMV1C820M0606	1000
	100	6.3	6	1300	50	0.16	HMV1C101M0606	1000
	150	6.3	7.7	2000	30	0.16	HMV1C151M0607	1000
	180	6.3	7.7	2000	30	0.16	HMV1C181M0607	1000
	270	8	10	2300	27	0.16	HMV1C271M0810	500
	330	8	10	2300	27	0.16	HMV1C331M0810	500
	470	10	10.5	2500	20	0.16	HMV1C471M1010	500
	560	10	10.5	2500	20	0.16	HMV1C561M1010	500
25	22	5	6	800	80	0.14	HMV1E220M0506	1000
	33	5	6	800	80	0.14	HMV1E330M0506	1000
	47	6.3	6	1300	50	0.14	HMV1E470M0606	1000
	56	6.3	6	1300	50	0.14	HMV1E560M0606	1000
	68	6.3	7.7	2000	30	0.14	HMV1E680M0607	1000
	100	6.3	7.7	2000	30	0.14	HMV1E101M0607	1000
	150	8	10	2300	27	0.14	HMV1E151M0810	500
	220	8	10	2300	27	0.14	HMV1E221M0810	500
	330	10	10.5	2500	20	0.14	HMV1E331M1010	500
	470	10	12.5	2900	16	0.14	HMV1E471M1013	400
35	10	5	6	800	80	0.12	HMV1V100M0506	1000
	22	5	6	800	80	0.12	HMV1V220M0506	1000
	27	6.3	6	1300	60	0.12	HMV1V270M0606	1000
	33	6.3	6	1300	60	0.12	HMV1V330M0606	1000
	47	6.3	6	1300	60	0.12	HMV1V470M0606	1000
		6.3	7.7	2000	35	0.12	HMV1V470M0607	1000
	68	6.3	7.7	2000	35	0.12	HMV1V680M0607	1000
	100	8	10	2300	27	0.12	HMV1V101M0810	500
	150	8	10	2300	27	0.12	HMV1V151M0810	500
	220	10	10.5	2500	20	0.12	HMV1V221M1010	500
	270	10	10.5	2500	20	0.12	HMV1V271M1010	500
	330	10	12.5	2900	16	0.12	HMV1V331M1013	400

① Rated ripple current (100kHz / +105℃) ② ESR (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
50	10	6.3	6	1100	80	0.10	HMV1H100M0606	1000
	22	6.3	6	1100	80	0.10	HMV1H220M0606	1000
		6.3	7.7	1600	40	0.10	HMV1H220M0607	1000
	33	6.3	7.7	1600	40	0.10	HMV1H330M0607	1000
		8	10	1800	30	0.10	HMV1H330M0810	500
	47	8	10	1800	30	0.10	HMV1H470M0810	500
	68	8	10	1800	30	0.10	HMV1H680M0810	500
	100	10	10.5	2000	28	0.10	HMV1H101M1010	500
63	10	6.3	6	1000	120	0.08	HMV1J100M0606	1000
		6.3	7.7	1500	80	0.08	HMV1J100M0607	1000
	22	6.3	7.7	1500	80	0.08	HMV1J220M0607	1000
		8	10	1700	40	0.08	HMV1J220M0810	500
	27	8	10	1700	40	0.08	HMV1J270M0810	500
	33	8	10	1700	40	0.08	HMV1J330M0810	500
	47	8	10	1700	40	0.08	HMV1J470M0810	500
	56	10	10.5	1800	30	0.08	HMV1J560M1010	500
	68	10	10.5	1800	30	0.08	HMV1J680M1010	500
	82	10	10.5	1800	30	0.08	HMV1J820M1010	500
	100	10	12.5	2000	27	0.08	HMV1J101M1013	400
80	22	8	10	1550	45	0.08	HMV1K220M0810	500
	33	10	10.5	1700	36	0.08	HMV1K330M1010	500
	47	10	10.5	1700	36	0.08	HMV1K470M1010	500

① Rated ripple current (100kHz / +105℃) ② ESR (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

HMR Series

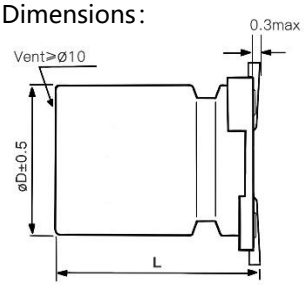
Features

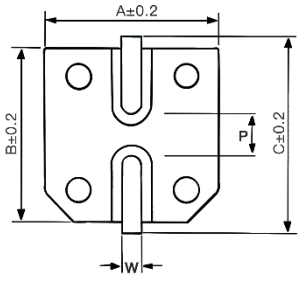
- φ6.3 ~ φ10, 125℃, 4000 hours assured
- Low ESR and high ripple current
- Designed for reflow soldering
- Vibration resistant structure
- RoHS 2.0 compliant, 247 SVHC & REACH compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

Specifications								
Category temp. range	−55℃ to +125℃							
Capacitance tolerance	±20% (120 Hz / +20 ℃)							
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)							
Tan δ	Please see the attached characteristics list							
Characteristics at low temperature	Rated voltage (V)	16	25	35	50	63	80	Impedance ratio at 120 Hz
	Z (-25 ℃) / Z (+20 ℃)	2.0	2.0	2.0	2.0	2.0	2.0	
	Z (-55 ℃) / Z (+20 ℃)	2.5	2.5	2.5	2.5	2.5	2.5	
Endurance	After applying rated working voltage and rated ripple current for 4000 hours at +125 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±30% of the initial value						
	Dissipation factor (tan δ)	Less than 200% of the initial value						
	ESR	Less than 200% of the initial value						
	Leakage current	Within the initial limit						
Shelf life	After storage for 1000 h at +125 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.							
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±10% of the initial value						
	Dissipation factor (tan δ)	Within the initial limit						
	ESR	Within the initial limit						
	Leakage current	Within the initial limit						
Frequency correction factor for ripple current	Frequency	120≤ f < 1k		1k≤ f < 10k		10k≤ f < 100k		100k≤ f < 500k
	Correction Factor	0.1		0.3		0.6		1.0

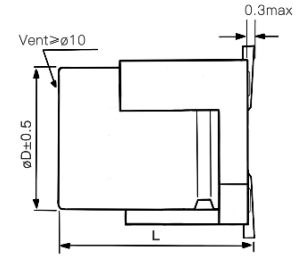
Dimensions:

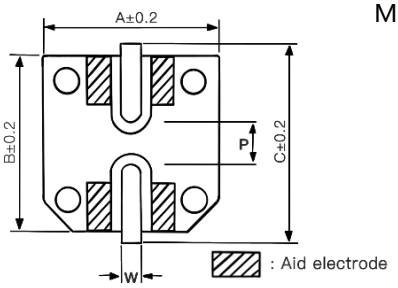




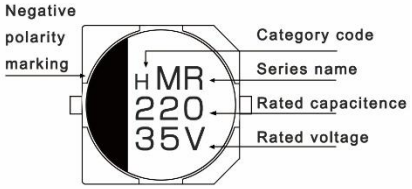
Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
6.3	6±0.5	6.6	6.6	7.3	0.5~0.8	2.0
6.3	7.7±0.5	6.6	6.6	7.3	0.5~0.8	2.0
8	6.5±0.5	8.3	8.3	9.1	0.7~1.3	3.1
8	10±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	12.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4

Vibration resistant structure:





Marking:



Part Number System:

Conductive Polymer Hybrid Capacitors	HMR series	35V	100μF	±20 %	6.3 ϕ x7.7L
H	**MR**	**1V**	**101**	**M**	**0607**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
16	82	6.3	6	900	50	0.16	HMR1C820M0606	1000
	100	6.3	6	900	50	0.16	HMR1C101M0606	1000
	150	6.3	7.7	1400	30	0.16	HMR1C151M0607	1000
	220	6.3	7.7	1400	30	0.16	HMR1C221M0607	1000
	270	8	10	1600	27	0.16	HMR1C271M0810	500
	470	10	10.5	2000	20	0.16	HMR1C471M1010	500
	560	10	10.5	2000	20	0.16	HMR1C561M1010	500
		10	12.5	2550	18	0.16	HMR1C561M1013	400
	820	10	10.5	2000	20	0.16	HMR1C821M1010	500
		10	12.5	2800	18	0.16	HMR1C821M1013	400
25	33	6.3	6	900	50	0.14	HMR1E330M0606	1000
	47	6.3	6	900	50	0.14	HMR1E470M0606	1000
	56	6.3	6	900	50	0.14	HMR1E560M0606	1000
	68	6.3	6	900	50	0.14	HMR1E680M0606	1000
		6.3	7.7	1400	30	0.14	HMR1E680M0607	1000
	100	6.3	7.7	1400	30	0.14	HMR1E101M0607	1000
	150	6.3	7.7	1400	30	0.14	HMR1E151M0607	1000
		8	10	1600	27	0.14	HMR1E151M0810	500
	220	8	10	1600	27	0.14	HMR1E221M0810	500
	270	8	10	1600	27	0.14	HMR1E271M0810	500
	330	8	10	1600	27	0.14	HMR1E331M0810	500
		10	10.5	2000	20	0.14	HMR1E331M1010	500
	470	10	10.5	2000	20	0.14	HMR1E471M1010	500
	680	10	12.5	2800	15	0.14	HMR1E681M1013	400
35	33	6.3	6	900	60	0.12	HMR1V330M0606	1000
	47	6.3	6	900	60	0.12	HMR1V470M0606	1000
	68	6.3	7.7	1400	35	0.12	HMR1V680M0607	1000
	100	6.3	7.7	1400	35	0.12	HMR1V101M0607	1000
		8	6.5	1400	35	0.12	HMR1V101M0806	1000
		8	10	1600	27	0.12	HMR1V101M0810	500
	150	8	10	1600	27	0.12	HMR1V151M0810	500
	180	8	10	1600	27	0.12	HMR1V181M0810	500
	220	10	10.5	2000	20	0.12	HMR1V221M1010	500
	270	10	10.5	2000	20	0.12	HMR1V271M1010	500
	330	10	10.5	2000	20	0.12	HMR1V331M1010	500
	470	10	12.5	2800	16	0.12	HMR1V471M1013	400

① Rated ripple current (100kHz / +125℃) ② ESR (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For Vibration resistant structure, the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
50	22	6.3	6	750	80	0.10	HMR1H220M0606	1000
	33	6.3	7.7	1100	40	0.10	HMR1H330M0607	1000
	47	8	10	1250	30	0.10	HMR1H470M0810	500
	68	8	10	1250	30	0.10	HMR1H680M0810	500
	100	8	10	1250	30	0.10	HMR1H101M0810	500
		10	10.5	1600	28	0.10	HMR1H101M1010	500
	120	10	10.5	1600	28	0.10	HMR1H121M1010	500
	150	10	10.5	1600	28	0.10	HMR1H151M1010	500
	220	10	12.5	1800	23	0.10	HMR1H221M1013	400
63	10	6.3	6	700	120	0.08	HMR1J100M0606	1000
	22	6.3	7.7	900	80	0.08	HMR1J220M0607	1000
	33	8	10	1100	40	0.08	HMR1J330M0810	500
	47	8	10	1100	40	0.08	HMR1J470M0810	500
	56	10	10.5	1400	30	0.08	HMR1J560M1010	500
	68	10	10.5	1400	30	0.08	HMR1J680M1010	500
	82	10	10.5	1400	30	0.08	HMR1J820M1010	500
	100	10	10.5	1400	30	0.08	HMR1J101M1010	500
	120	10	12.5	1600	26	0.08	HMR1J121M1013	400
80	22	8	10	1050	45	0.08	HMR1K220M0810	500
	33	8	10	1050	45	0.08	HMR1K330M0810	500
		10	10.5	1350	36	0.08	HMR1K330M1010	500
	47	10	10.5	1350	36	0.08	HMR1K470M1010	500
	56	10	12.5	1550	32	0.08	HMR1K560M1013	400

① Rated ripple current (100kHz / +105℃) ② ESR (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For Vibration resistant structure，the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

HME Series

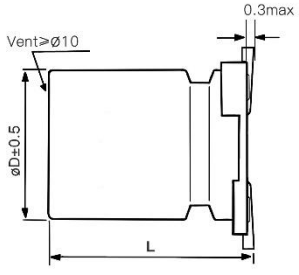
Features

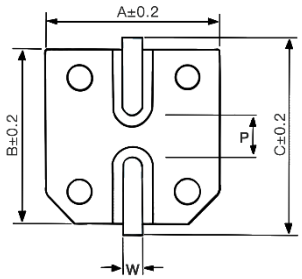
- φ6.3 ~ φ10, 125℃, 4000 hours assured
- Low ESR and high ripple current
- Designed for reflow soldering
- Vibration resistant structure
- RoHS 2.0 compliant, 247 SVHC & REACH compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

Specifications						
Category temp. range	–55℃ to +125℃					
Capacitance tolerance	±20% (120 Hz / +20 ℃)					
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)					
Tan δ	Please see the attached characteristics list					
Characteristics at low temperature	Rated voltage (V)	25	35	50	63	Impedance ratio at 120 Hz
	Z (-25 ℃) / Z (+20 ℃)	2.0	2.0	2.0	2.0	
	Z (-55 ℃) / Z (+20 ℃)	2.5	2.5	2.5	2.5	
Endurance	After applying rated working voltage and rated ripple current for 4000 hours at +125 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.					
	Capacitance change	Within ±30% of the initial value				
	Dissipation factor (tan δ)	Less than 200% of the initial value				
	ESR	Less than 200% of the initial value				
	Leakage current	Within the initial limit				
Shelf life	After storage for 1000 h at +125 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.					
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.					
	Capacitance change	Within ±10% of the initial value				
	Dissipation factor (tan δ)	Within the initial limit				
	ESR	Within the initial limit				
	Leakage current	Within the initial limit				
Frequency correction factor for ripple current	Frequency	120≤ f < 1k	1k≤ f < 10k	10k≤ f < 100k	100k≤ f < 500k	
	Correction Factor	0.1	0.3	0.6	1.0	

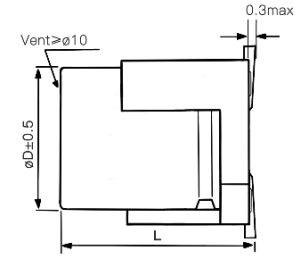
Dimensions:

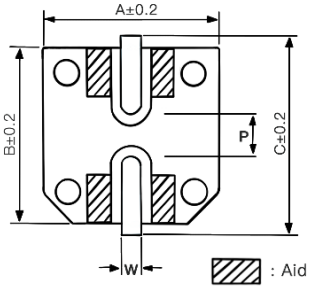




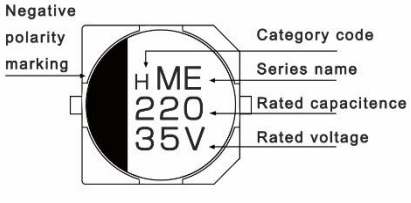
Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
6.3	7.7±0.5	6.6	6.6	7.3	0.5~0.8	2.0
8	10±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	12.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4

Vibration resistant structure:





Marking:



Part Number System:

Conductive Polymer Hybrid Capacitors	HME series	25V	220μF	±20 %	8φx10L
H	**ME**	**1E**	**221**	**M**	**0810**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
25	150	6.3	7.7	1800	30	0.14	HME1E151M0607	1000
	220	8	10	2900	22	0.14	HME1E221M0810	500
	330	10	10.5	3500	16	0.14	HME1E331M1010	500
	470	10	12.5	4000	14	0.14	HME1E471M1013	400
35	100	6.3	7.7	1700	35	0.12	HME1V101M0607	1000
	150	8	10	2900	22	0.12	HME1V151M0810	500
	220	10	10.5	3400	20	0.12	HME1V221M1010	500
	270	10	10.5	3500	16	0.12	HME1V271M1010	500
50	68	8	10	2700	25	0.10	HME1H680M0810	500
	100	10	10.5	2900	23	0.10	HME1H101M1010	500
	120	10	10.5	2900	23	0.10	HME1H121M1010	500
	150	10	12.5	3500	17	0.10	HME1H151M1013	400
63	33	8	10	2400	32	0.08	HME1J330M0810	500
	47	8	10	2400	32	0.08	HME1J470M0810	500
	68	10	10.5	2800	25	0.08	HME1J680M1010	500
	82	10	10.5	2800	25	0.08	HME1J820M1010	500
	100	10	12.5	3200	20	0.08	HME1J101M1013	400

① Rated ripple current (100kHz / +125℃) ② ESR (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For Vibration resistant structure, the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

HMG Series

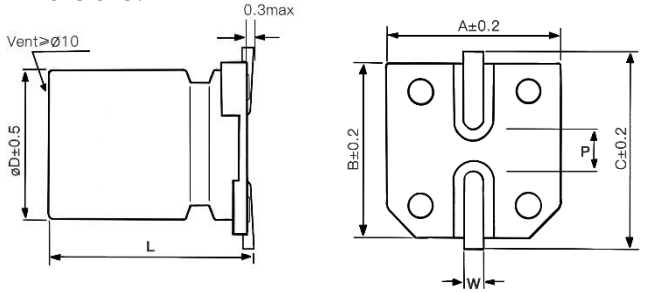
Features

- φ8 ~ φ10, 135℃, 4000 hours assured
- Low ESR and high ripple current
- Designed for reflow soldering
- Vibration resistant structure
- RoHS 2.0 compliant, 247 SVHC & REACH compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

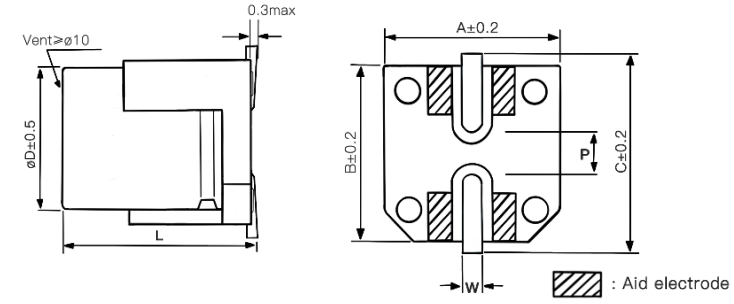
Specifications						
Category temp. range	−55℃ to +135℃					
Capacitance tolerance	±20% (120 Hz / +20 ℃)					
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)					
Tan δ	Please see the attached characteristics list					
Characteristics at low temperature	Rated voltage (V)	25	35	50	63	Impedance ratio at 120 Hz
	Z (-25 ℃) / Z (+20 ℃)	2.0	2.0	2.0	2.0	
	Z (-55 ℃) / Z (+20 ℃)	2.5	2.5	2.5	2.5	
Endurance	After applying rated working voltage and rated ripple current for 4000 hours at +135 ℃/+125 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.					
	Capacitance change	Within ±30% of the initial value				
	Dissipation factor (tan δ)	Less than 200% of the initial value				
	ESR	Less than 200% of the initial value				
	Leakage current	Within the initial limit				
Shelf life	After storage for 1000 h at +135 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.					
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.					
	Capacitance change	Within ±10% of the initial value				
	Dissipation factor (tan δ)	Within the initial limit				
	ESR	Within the initial limit				
	Leakage current	Within the initial limit				
Frequency correction factor for ripple current	Frequency	120≤ f < 1k	1k≤ f < 10k	10k≤ f < 100k	100k≤ f < 500k	
	Correction Factor	0.1	0.3	0.6	1.0	

Dimensions:

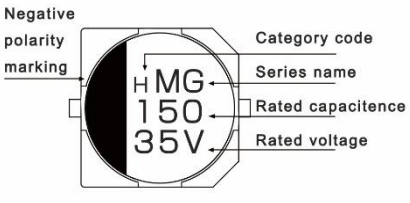


Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
8	10±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	12.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4
10	16.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4

Vibration resistant structure:



Marking:



Part Number System:

Conductive Polymer Hybrid Capacitors	HMG series	25V	220μF	±20 %	8 φ x10L
H	**MG**	**1E**	**221**	**M**	**0810**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification				Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)		ESR② (mΩ)	tan δ③		MPQ (pcs/reel)
				Endurance1 (+135℃)	Endurance2 (+145℃)				
25	220	8	10	2900	1600	27	0.14	HMG1E221M0810	500
	330	10	10.5	3300	2000	20	0.14	HMG1E331M1010	500
	470	10	12.5	3500	2300	16	0.14	HMG1E471M1013	400
	560	10	16.5	4000	2900	11	0.14	HMG1E561M1016	250
35	150	8	10	2900	1600	27	0.12	HMG1V151M0810	500
	220	10	10.5	3300	2000	20	0.12	HMG1V221M1010	500
	270	10	10.5	3300	2000	20	0.12	HMG1V271M1010	500
	330	10	12.5	3500	2300	16	0.12	HMG1V331M1013	400
	470	10	16.5	4000	2900	11	0.12	HMG1V471M1016	250
50	33	8	10	2200	1250	30	0.10	HMG1H330M0810	500
	47	8	10	2200	1250	30	0.10	HMG1H470M0810	500
	68	8	10	2200	1250	30	0.10	HMG1H680M0810	500
	100	10	10.5	2600	1600	28	0.10	HMG1H101M1010	500
	120	10	10.5	2600	1600	28	0.10	HMG1H121M1010	500
	150	10	12.5	3200	2000	18	0.10	HMG1H151M1013	400
	220	10	16.5	3700	2600	13	0.10	HMG1H221M1016	250
63	22	8	10	1900	1100	40	0.08	HMG1J220M0810	500
	33	8	10	1900	1100	40	0.08	HMG1J330M0810	500
	47	8	10	1900	1100	40	0.08	HMG1J470M0810	500
	56	10	10.5	2300	1400	30	0.08	HMG1J560M1010	500
	68	10	10.5	2300	1400	30	0.08	HMG1J680M1010	500
	82	10	10.5	2300	1400	30	0.08	HMG1J820M1010	500
	100	10	12.5	3000	1900	20	0.08	HMG1J101M1013	400
	150	10	16.5	3500	2400	15	0.08	HMG1J151M1016	250

① Rated ripple current (100kHz / +135℃) ② ESR (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For Vibration resistant structure, the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

HMY Series

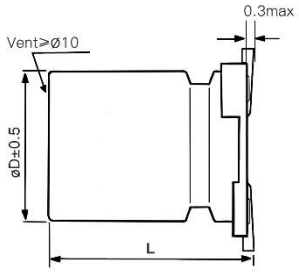
Features

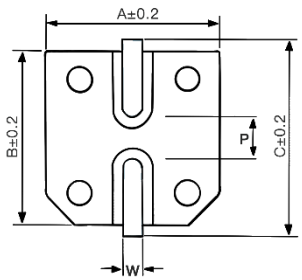
- φ8 ~ φ10, 145℃, 2000 hours assured
- Low ESR and high ripple current
- Designed for reflow soldering
- Vibration resistant structure
- RoHS 2.0 compliant, 247 SVHC & REACH compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

Specifications						
Category temp. range	−55℃ to +145℃					
Capacitance tolerance	±20% (120 Hz / +20 ℃)					
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)					
Tan δ	Please see the attached characteristics list					
Characteristics at low temperature	Rated voltage (V)	25	35	50	63	Impedance ratio at 120 Hz
	Z (-25 ℃) / Z (+20 ℃)	2.0	2.0	2.0	2.0	
	Z (-55 ℃) / Z (+20 ℃)	2.5	2.5	2.5	2.5	
Endurance	After applying rated working voltage and rated ripple current for 2000 hours at +145 ℃/+135 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.					
	Capacitance change	Within ±30% of the initial value				
	Dissipation factor (tan δ)	Less than 200% of the initial value				
	ESR	Less than 200% of the initial value				
	Leakage current	Within the initial limit				
Shelf life	After storage for 1000 h at +145 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.					
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.					
	Capacitance change	Within ±10% of the initial value				
	Dissipation factor (tan δ)	Within the initial limit				
	ESR	Within the initial limit				
	Leakage current	Within the initial limit				
Frequency correction factor for ripple current	Frequency	120≤ f < 1k	1k≤ f < 10k	10k≤ f < 100k	100k≤ f < 500k	
	Correction Factor	0.1	0.3	0.6	1.0	

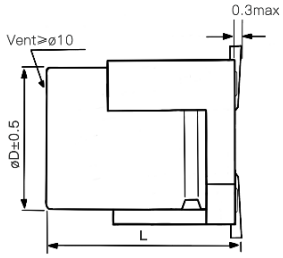
Dimensions:

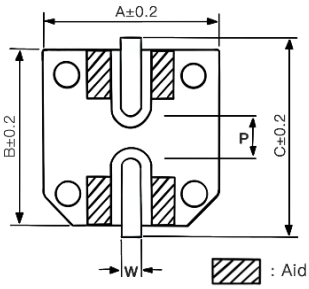




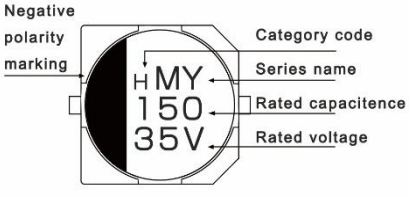
Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
8	10±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4

Vibration resistant structure:





Marking:



Part Number System:

Conductive Polymer Hybrid Capacitors	HMY series	25V	220μF	±20 %	8φx10L
H	**MY**	**1E**	**221**	**M**	**0810**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification				Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)		ESR② (mΩ)	tan δ③		MPQ (pcs/reel)
				Endurance1 (+135℃)	Endurance2 (+145℃)				
25	220	8	10	1600	700	27	0.14	HMY1E221M0810	500
	330	10	10.5	2000	900	20	0.14	HMY1E331M1010	500
35	150	8	10	1600	700	27	0.12	HMY1V151M0810	500
	220	10	10.5	2000	900	20	0.12	HMY1V221M1010	500
	270	10	10.5	2000	900	20	0.12	HMY1V271M1010	500
50	68	8	10	1250	600	30	0.10	HMY1H680M0810	500
	100	10	10.5	1600	800	28	0.10	HMY1H101M1010	500
63	33	8	10	1100	600	40	0.08	HMY1J330M0810	500
	56	10	10.5	1400	800	30	0.08	HMY1J560M1010	500
	82	10	10.5	1400	800	30	0.08	HMY1J820M1010	500

① Rated ripple current (100kHz / +145℃) ② ESR (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For Vibration resistant structure, the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

HMW Series

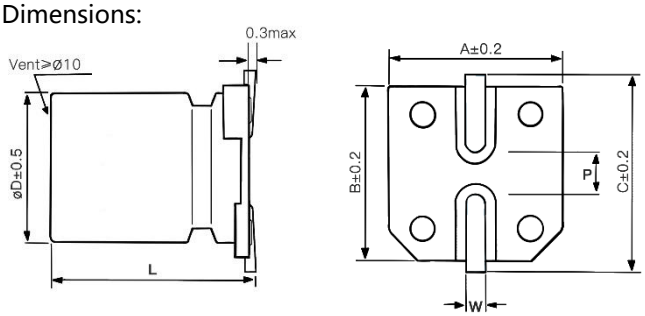
Features

- φ8 ~ φ10, 150℃, 1000 hours assured
- Low ESR and high ripple current
- Designed for reflow soldering
- Vibration resistant structure
- RoHS 2.0 compliant, 247 SVHC & REACH compliant
- AEC-Q200 compliant, Please contact Jarson for more details, test data, information

Marking color: Black

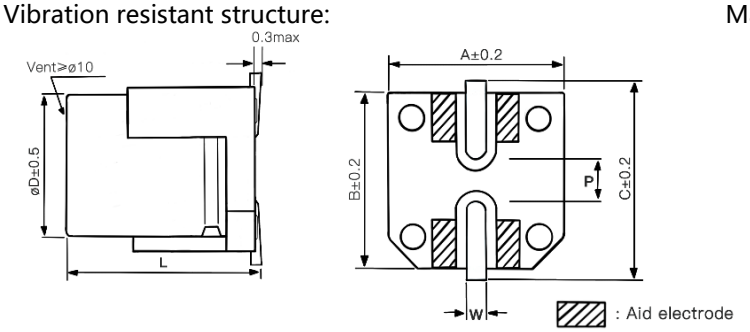
Specifications						
Category temp. range	−55℃ to +150℃					
Capacitance tolerance	±20% (120 Hz / +20 ℃)					
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)					
Tan δ	Please see the attached characteristics list					
Characteristics at low temperature	Rated voltage (V)	25	35	50	63	Impedance ratio at 120 Hz
	Z (-25 ℃) / Z (+20 ℃)	2.0	2.0	2.0	2.0	
	Z (-55 ℃) / Z (+20 ℃)	2.5	2.5	2.5	2.5	
Endurance	After applying rated working voltage and rated ripple current for 1000 hours at +150 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.					
	Capacitance change	Within ±30% of the initial value				
	Dissipation factor (tan δ)	Less than 200% of the initial value				
	ESR	Less than 200% of the initial value				
	Leakage current	Within the initial limit				
Shelf life	After storage for 1000 h at +150 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.					
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.					
	Capacitance change	Within ±10% of the initial value				
	Dissipation factor (tan δ)	Within the initial limit				
	ESR	Within the initial limit				
	Leakage current	Within the initial limit				
Frequency correction factor for ripple current	Frequency	120≤ f < 1k	1k≤ f < 10k	10k≤ f < 100k	100k≤ f < 500k	
	Correction Factor	0.1	0.3	0.6	1.0	

Dimensions:

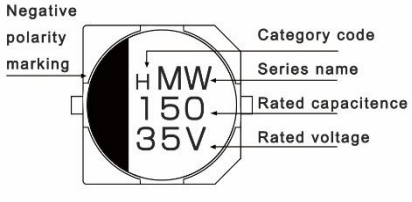


Dimensions						Unit: mm
φD	L	A	B	C	W	P±0.2
8	10±0.5	8.3	8.3	9.1	0.7~1.3	3.1
10	10.5±0.5	10.3	10.3	11.1	0.7~1.3	4.4

Vibration resistant structure:



Marking:



Part Number System:

Conductive Polymer Hybrid Capacitors	HMW series	25V	150μF	±20 %	8φx10L
H	**MW**	**1E**	**151**	**M**	**0810**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④	Taping&Reel
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③		MPQ (pcs/reel)
25	150	8	10	800	27	0.14	HMW1E151M0810	500
	270	10	10.5	1000	20	0.14	HMW1E271M1010	500
35	100	8	10	770	30	0.12	HMW1V101M0810	500
	150	10	10.5	950	23	0.12	HMW1V151M1010	500
50	56	8	10	700	35	0.10	HMW1H560M0810	500
	100	10	10.5	900	28	0.10	HMW1H101M1010	500
63	33	8	10	650	40	0.08	HMW1J330M0810	500
	56	10	10.5	840	30	0.08	HMW1J560M1010	500

① Rated ripple current (100kHz / +150℃) ② ESR (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

④ For Vibration resistant structure, the Part Number is appended with "v" at the end.

※Please refer to the page of reflow conditions for reflow profile.

HPV Series

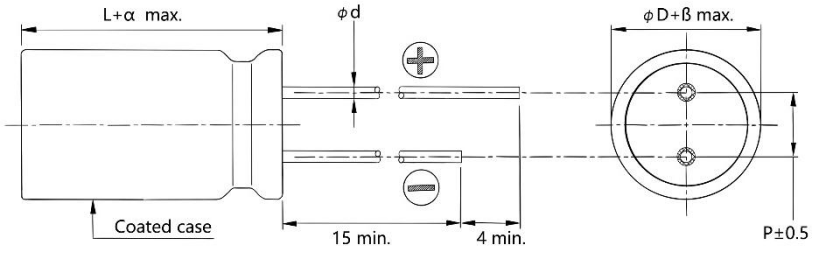
Features

- φ8 ~ φ10, 105℃, 10000 hours assured
- Low ESR and high ripple current
- RoHS 2.0 compliant,
- 247 SVHC & REACH compliant

Marking color: Black

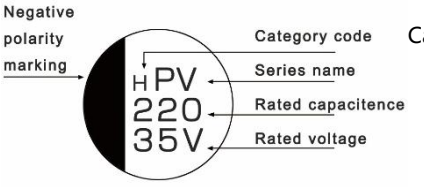
Specifications								
Category temp. range	–55℃ to +105℃							
Capacitance tolerance	±20% (120 Hz / +20 ℃)							
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)							
Tan δ	Please see the attached characteristics list							
Characteristics at low temperature	Rated voltage (V)	16	25	35	50	63	80	Impedance ratio at 120 Hz
	Z(-25 ℃)/Z(+20 ℃)	2.0	2.0	2.0	2.0	2.0	2.0	
	Z(-55 ℃)/Z(+20 ℃)	2.5	2.5	2.5	2.5	2.5	2.5	
Endurance	After applying rated working voltage and rated ripple current for 10000 hours at +105 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±30% of the initial value						
	Dissipation factor (tan δ)	Less than 200% of the initial value						
	ESR	Less than 200% of the initial value						
	Leakage current	Within the initial limit						
Shelf life	After storage for 1000 h at +105 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.							
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±10% of the initial value						
	Dissipation factor (tan δ)	Within the initial limit						
	ESR	Within the initial limit						
	Leakage current	Within the initial limit						
Frequency correction factor for ripple current	Frequency	120≤ f<1k		1k≤ f<10k		10k≤ f<100k		100k≤ f<500k
	Correction Factor	0.1		0.3		0.6		1.0

Dimensions:



Dimensions			Unit: mm
φD	8	10	10
L	9	10	12
P	3.5	5.0	5.0
φd	0.6		
α	1.0		
β	0.5		

Marking:



Part Number System:

Hybrid Capacitors	HPV series	35V	220μF	±20 %	10φx10L
H	**PV**	**1V**	**221**	**M**	**1010**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③	
16	270	8	9	2300	27	0.16	HPV1C271M0809
	330	8	9	2300	27	0.16	HPV1C331M0809
	470	10	10	2500	20	0.16	HPV1C471M1010
	560	10	12	2500	20	0.16	HPV1C561M1012
25	150	8	9	2300	27	0.14	HPV1E151M0809
	220	8	9	2300	27	0.14	HPV1E221M0809
	330	10	10	2500	20	0.14	HPV1E331M1010
	470	10	12	2900	16	0.14	HPV1E471M1012
35	100	8	9	2300	27	0.12	HPV1V101M0809
	150	8	9	2300	27	0.12	HPV1V151M0809
	220	10	10	2500	20	0.12	HPV1V221M1010
	270	10	10	2500	20	0.12	HPV1V271M1010
	330	10	12	2900	16	0.12	HPV1V331M1012
50	33	8	9	1800	30	0.10	HPV1H330M0809
	47	8	9	1800	30	0.10	HPV1H470M0809
	68	8	9	1800	30	0.10	HPV1H680M0809
	100	10	10	2000	28	0.10	HPV1H101M1010
	120	10	12	2300	25	0.10	HPV1H121M1012
63	22	8	9	1700	40	0.08	HPV1J220M0809
	33	8	9	1700	40	0.08	HPV1J330M0809
	47	8	9	1700	40	0.08	HPV1J470M0809
	56	10	10	1800	30	0.08	HPV1J560M1010
	68	10	10	1800	30	0.08	HPV1J680M1010
	82	10	10	1800	30	0.08	HPV1J820M1010
	100	10	12	2000	27	0.08	HPV1J101M1012
80	22	8	9	1550	45	0.08	HPV1K220M0809
	33	10	10	1700	36	0.08	HPV1K330M1010
	47	10	10	1700	36	0.08	HPV1K470M1010

① Rated ripple current (100kHz / +105℃) ② ESR (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

※Please refer to the page of reflow conditions for reflow profile.

HPR Series

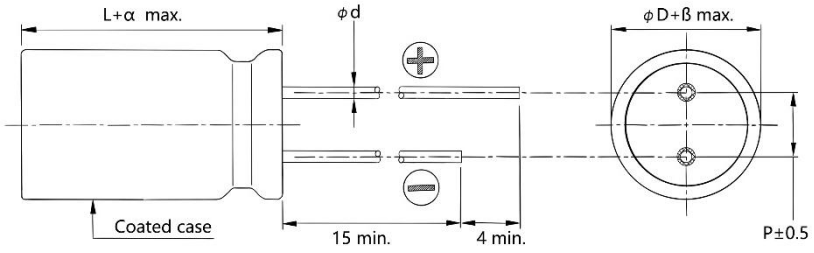
Features

- φ8 ~ φ10, 125℃, 4000 hours assured
- Low ESR and high ripple current
- RoHS 2.0 compliant,
- 247 SVHC & REACH compliant

Marking color: Black

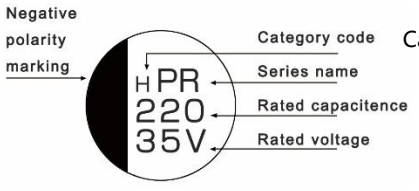
Specifications								
Category temp. range	–55℃ to +125℃							
Capacitance tolerance	±20% (120 Hz / +20 ℃)							
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)							
Tan δ	Please see the attached characteristics list							
Characteristics at low temperature	Rated voltage (V)	16	25	35	50	63	80	Impedance ratio at 120 Hz
	Z(-25 ℃)/Z(+20 ℃)	2.0	2.0	2.0	2.0	2.0	2.0	
	Z(-55 ℃)/Z(+20 ℃)	2.5	2.5	2.5	2.5	2.5	2.5	
Endurance	After applying rated working voltage and rated ripple current for 4000 hours at +125 ℃ ± 2 ℃, and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±30% of the initial value						
	Dissipation factor (tan δ)	Less than 200% of the initial value						
	ESR	Less than 200% of the initial value						
	Leakage current	Within the initial limit						
Shelf life	After storage for 1000 h at +125 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance.							
Resistance to soldering heat	After reflow soldering and then being stabilized at +20 ℃, capacitors shall meet the following limits.							
	Capacitance change	Within ±10% of the initial value						
	Dissipation factor (tan δ)	Within the initial limit						
	ESR	Within the initial limit						
	Leakage current	Within the initial limit						
Frequency correction factor for ripple current	Frequency	120≤ f<1k		1k≤ f<10k		10k≤ f<100k		100k≤ f<500k
	Correction Factor	0.1		0.3		0.6		1.0

Dimensions:



Dimensions			Unit: mm
φD	8	10	10
L	9	10	12
P	3.5	5.0	5.0
φd	0.6		
α	1.0		
β	0.5		

Marking:



Part Number System:

Hybrid Capacitors	HPR series	35V	220μF	±20 %	10φx10L
H	**PR**	**1V**	**221**	**M**	**1010**
Product category	Series name	Rated voltage	Capacitance	Capacitance tolerance	Case Size

Characteristics list

Rated voltage (V)	Capacitance (±20%) (μF)	Case size		Specification			Part Number④
		øD (mm)	L (mm)	Rated ripple current① (mA rms)	Imp.② (Ω)	tan δ③	
16	270	8	9	1600	27	0.16	HPR1C271M0809
	470	10	10	2000	20	0.16	HPR1C471M1010
25	220	8	9	1600	27	0.14	HPR1E221M0809
	330	8	9	1600	27	0.14	HPR1E331M0809
		10	10	2000	20	0.14	HPR1E331M1010
	470	10	10	2000	20	0.14	HPR1E471M1010
	680	10	12	2800	15	0.14	HPR1E681M1012
35	100	8	9	1600	27	0.12	HPR1V101M0809
	150	8	9	1600	27	0.12	HPR1V151M0809
	220	10	10	2000	20	0.12	HPR1V221M1010
	330	10	10	2000	20	0.12	HPR1V331M1010
	470	10	12	2800	16	0.12	HPR1V471M1012
50	47	8	9	1250	30	0.10	HPR1H470M0809
	68	8	9	1250	30	0.10	HPR1H680M0809
	100	10	10	1600	28	0.10	HPR1H101M1010
	150	10	10	1600	28	0.10	HPR1H151M1010
	220	10	12	1800	23	0.10	HPR1H221M1012
63	33	8	9	1100	40	0.08	HPR1J330M0809
	47	8	9	1100	40	0.08	HPR1J470M0809
	68	10	10	1400	30	0.08	HPR1J680M1010
	100	10	10	1400	30	0.08	HPR1J101M1010
	120	10	12	1600	26	0.08	HPR1J121M1012
80	22	8	9	1050	45	0.08	HPR1K220M0809
	33	10	10	1350	36	0.08	HPR1K330M1010
	47	10	10	1350	36	0.08	HPR1K470M1010
	56	10	12	1550	32	0.08	HPR1K560M1012

① Rated ripple current (100kHz / +105℃) ② ESR (100kHz / +20℃) ③ tan δ (120Hz / +20℃)

※Please refer to the page of reflow conditions for reflow profile.

JARSON

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