HPV Series

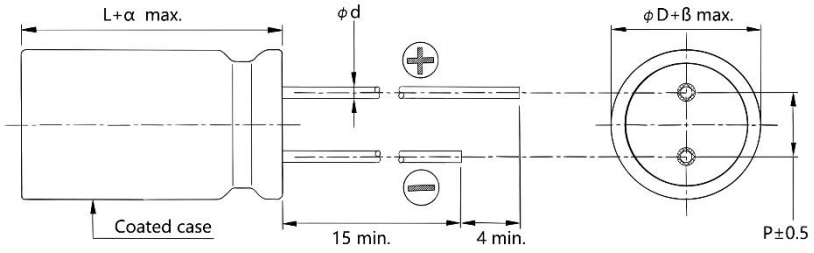
Features

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

Marking color: Black

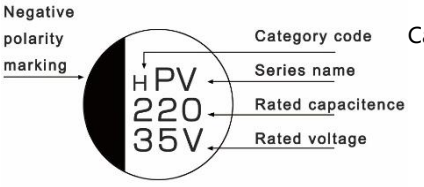
Specifications								
Category temp. range	–55℃ to +105℃							
Capacitance tolerance	±20% (120 Hz / +20 ℃)							
Leakage current	I ≦ 0.01 CV or 3 μA whichever is greater (after 2 minutes)							
Tan δ	Please see the attached characteristics list							
Characteristics at low temperature	Rated voltage (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.