

VP series

- Super low ESR, High ripple current capability
- Rated voltage :6.3~35V.
- Endurance:2,000hours at 125°C
- Applications:Lamps Power, LED Driver, Serving Equipment
- ROHS compliant
- Halogen Free compliant



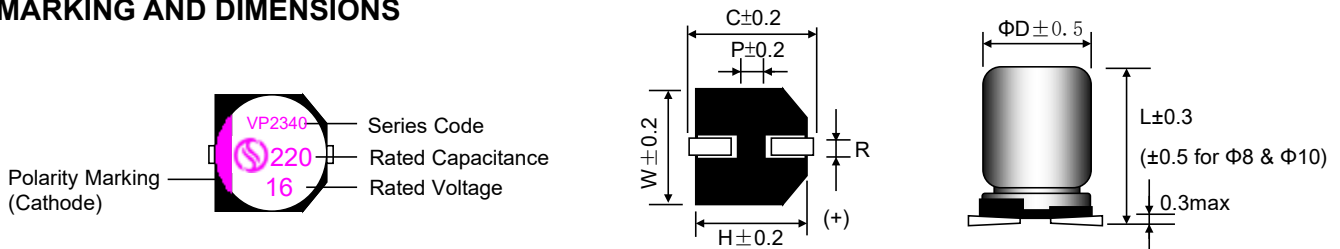
VP

SPECIFICATIONS

Items	Conditions	Characteristics	
Category Temperature Range	—	-55 to +125°C	
Rated Voltage Range	—	6.3 ~ 35V	
Capacitance Tolerance	at 20°C, 120Hz	±20%(M)	
Surge Voltage	at 125°C	Rated voltage ×1.15V	
Leakage Current	at 20°C after 2 minutes	I ≤ 0.2CV or 300(μA) Whichever is greater measured, after 2 minutes application of rated working voltage at +20°C. Please see the attached characteristics list	
Dissipation Factor (tan δ)	at 20°C, 120Hz	Please see the attached characteristics list	
Low Temperature Characteristics (Max. Impedance Ratio)	at -55°C, 100kHz	Z(-55°C)/Z(+20°C)	≤ 1.25
	at -25°C, 100kHz	Z(-25°C)/Z(+20°C)	≤ 1.15
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2,000 hours at 125°C.	Appearance	No significant damage.
		Capacitance change	≤ ±20% of the initial value.
		DF (tan δ)	≤ 150% of the initial specified value.
		ESR	≤ 150% of the initial specified value.
		Leakage current	≤ The initial specified value.
Damp Heat (Steady State)	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to 60°C, 90 to 95% RH for 1,000 hours, without DC applied.	Appearance	No significant damage.
		Capacitance change	≤ ±20% of the initial value.
		DF (tan δ)	≤ 150% of the initial specified value.
		ESR	≤ 150% of the initial specified value.
		Leakage current	≤ The initial specified value.
Surge Voltage	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages specified at 105°C for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30 seconds.	Appearance	No significant damage.
		Capacitance change	≤ ±20% of the initial value.
		DF (tan δ)	≤ 150% of the initial specified value.
		ESR	≤ 150% of the initial specified value.
		Leakage current	≤ The initial specified value.

※ Note: If any doubt arises, measure the leakage current after following voltage treatment.
Voltage treatment : DC rated voltage are applied to the capacitors for 120 minutes at 125°C.

MARKING AND DIMENSIONS



(Unit:mm)

ΦDxL	ΦD	L	W	H	C	R	P
6.3×5.8	6.3	5.8	6.6	6.6	7.3	0.6~0.9	2.1
6.3×9.5	6.3	9.5	6.6	6.6	7.3	0.6~0.9	2.1
8×9.5	8.0	9.5	8.3	8.3	9.0	0.8~1.1	3.2
8×12	8.0	12.0	8.3	8.3	9.0	0.8~1.1	3.2
10×10.5	10.0	10.5	10.3	10.3	11.0	0.8~1.1	4.6
10×12.5	10.0	12.5	10.3	10.3	11.0	0.8~1.1	4.6

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STANDARD RATINGS

Rated Voltage (S.V.)	Cap (μF)	Size Code DxL	Leakage current (μA) max.	ESR (mΩ) max. 100k to 300kHz / 20°C	Rated Ripple Current (mA rms/100kHz)		D.F. (tanδ) max. 120Hz / 20°C
					105°C 100kHz	125°C 100kHz	
6.3 (7.2)	470	6.3x9.5	592	25	3800	1267	0.12
	680	8x9.5	857	25	4000	1333	0.12
	1000	8x12	1260	20	4200	1400	0.12
	1200	10x10.5	1512	25	5500	1833	0.12
	1800	10x12.5	2268	20	6100	2033	0.12
10 (11.5)	330	6.3x9.5	660	25	3700	1233	0.12
	560	8x9.5	1120	25	4000	1333	0.12
	680	8x12	1360	20	4500	1500	0.12
	820	10x10.5	1640	25	4200	1400	0.12
	1000	10x10.5	2000	25	4500	1500	0.12
	1200	10x12.5	2400	20	5600	1867	0.12
16 (18.4)	220	6.3x5.8	704	25	2850	950	0.12
	330	6.3x9.5	1056	25	4000	1333	0.12
	470	8x9.5	1504	20	4500	1500	0.12
	680	8x12	2176	25	5100	1700	0.12
	820	10x12.5	2624	20	5600	1867	0.12
20 (23.0)	120	6.3x5.8	480	25	2510	837	0.12
	220	6.3x9.5	880	25	2750	917	0.12
	270	8x12	1080	20	2950	983	0.12
	330	10x10.5	1320	25	4700	1567	0.12
	470	10x12.5	1880	20	4950	1650	0.12
25 (28.8)	100	6.3x5.8	500	40	2380	793	0.12
	180	6.3x9.5	900	30	2900	967	0.12
	220	8x12	1100	28	3500	1167	0.12
	330	10x10.5	1650	30	4250	1417	0.12
	470	10x12.5	2350	28	4500	1500	0.12
35 (40.3)	56	6.3x5.8	392	60	2300	767	0.12
	100	6.3x9.5	700	50	2500	833	0.12
	120	8x9.5	840	30	2950	983	0.12
	150	10x10.5	1050	30	2950	983	0.12
	220	10x12.5	1540	28	3400	1133	0.12

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FREQUENCY COEFFICIENT FOR RIPPLE CURRENT

Frequency	120Hz ≤ f < 1kHz	1kHz ≤ f < 10kHz	10kHz ≤ f < 100kHz	100kHz ≤ f < 500kHz
Coefficient	0.05	0.3	0.7	1.0