

**VB**

High capacitance & low ESR Series

Upgrade

50V LINEUP



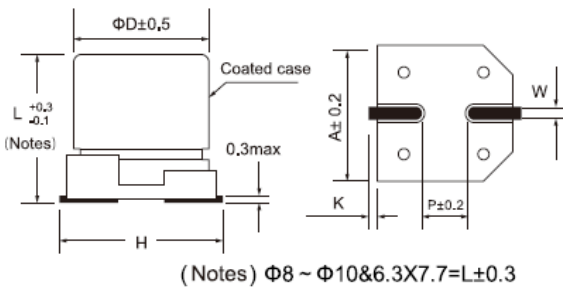
- Endurance: 105°C, 2000hrs
- Recommended Applications: High capacitance & Ultra low ESR Series
- Corresponding product to RoHS

**Specifications**

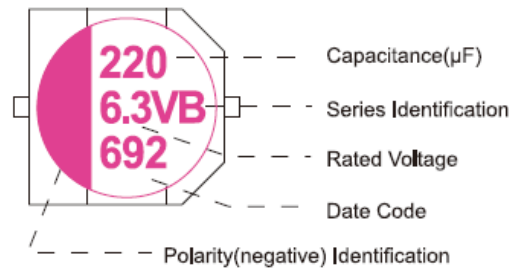
Item	Characteristics	
Category Temperature Range	-55 ~ +105°C	
Rated Voltage Range	2.5~50VDC	
Rated Capacitance Range	33~ 1200 μF	
Capacitance Tolerance	± 20 % (120Hz , 20°C)	
Surge Voltage	Rated voltage ( V ) x 1.15	
Leakage Current ( 20°C )	Less than or equal to the value of Table , (After rated voltage applied for 2 minutes ) I : Leakage Current ( μ A ) C : Capacitance( μ F ) V : Rated Voltage Range(VDC)	
Dissipation Factor (MAX) (tan δ ) (120Hz , 20°C)	WV	2.5~50
	tan δ	0.12
Temperature characteristic Impedance ratio (MAX)	Z(100KHz) / WV	2.5 ~ 50V
	Z-25°C / Z+20°C	≤ 1.15
	Z-55°C / Z+20°C	≤ 1.25
Endurance	After applying rated voltage for 2000 hours at 105°C , the capacitor shall meet the following requirement °	
	Appearance	No significant damage
	Capacitance Change	Within ±20% of the initial value
	Dissipation Factor	Not more than 150% of the initial specified value
	Equivalent Series Resistance	Not more than 150% of the initial specified value
Humidity Test	after subjecting 90 to 95% RH for 1000 hours at 60°C , the capacitors shall meet the requirement as Endurance °	
	Capacitance Change	Within ±10% of the initial value
	Dissipation Factor	Not more than 130% of the initial specified value
	Equivalent Series Resistance	Not more than 130% of the initial specified value
	Leakage Current	Not more than the initial specified value
Resistance to Soldering Heat *	Capacitance Change	Within ±10% of the initial value
	Dissipation Factor	Not more than 130% of the initial specified value
	Equivalent Series Resistance	Not more than 130% of the initial specified value
	Leakage Current	Not more than the initial specified value

\* For any doubt about measured values, measure the leakage current again after the following voltage treatment °  
Voltage treatment: Applying DC rated voltage to the capacitors for 2 hours at 105°C °

**Diagram of Dimensions**



**Marking : case with red printing**



SIZE	ΦD x L	A	H(Max)	W	P	K
EA1	6.3x5.8	6.6	7.8	0.65±0.15	1.8±0.2	0.35+0.15/-0.2
EA4	6.3x7.7	6.6	7.8	0.65±0.15	1.8±0.2	0.35+0.15/-0.2
GA6	8x10.4	8.3	10	0.9±0.2	3.1±0.2	0.7±0.2
HA5	10x10.2	10.3	12	0.9±0.2	4.6±0.2	0.7±0.2
HA8	10x12.2	10.3	12	0.9±0.2	4.6±0.2	0.7±0.2

**Multiplier for Ripple Current**

Frequency(HZ)	120 ≤ F < 1K	1K ≤ F < 10K	10K ≤ F < 100K	100K ≤ F ≤ 500K
Coefficient	0.05	0.30	0.70	1.00

■Dimensions, Rated Ripple Current, Equivalent Series Resistance

Rated ( Surge ) Voltage(V)	Capacitance ( $\mu$ F)	SIZE $\Phi$ DxL(mm)	RIPPLE (mA/rms, 105 °C 100KHz)	ESR (m $\Omega$ , 20°C 100KHz)	LC ( $\mu$ A max/2min)
2.5 (2.88)	330	6.3x5.8	3160	15	300
	390	6.3x5.8	3160	15	300
	470	6.3x5.8	3160	15	300
	560	6.3x5.8	3500	16	300
		6.3x7.7	3600	13	300
	820	8x10.4	4210	12	410
4(4.6)	270	6.3x5.8	3160	15	300
	330	6.3x5.8	3160	15	300
	470	8x10.4	4520	15	376
	560	8x10.4	4520	15	448
6.3(7.25)	100	6.3x5.8	2500	24	300
	120	6.3x5.8	2500	24	300
	150	6.3x5.8	3160	22	300
	220	6.3x5.8	3160	22	300
		6.3x5.8	3390	22	415
		6.3x7.7	3500	18	415
	330	8x10.4	4210	15	415
		6.3x7.7	3500	18	592
		8x10.4	4210	15	592
	470	8x10.4	4210	15	705
		10x10.2	5025	12	705
		820	8x10.4	4210	15
	10x10.2		5025	12	1033
	1200	10x10.2	5025	12	1512

Rated ( Surge ) Voltage(V)	Capacitance ( $\mu$ F)	SIZE $\Phi$ DxL(mm)	RIPPLE (mA/rms, 105 °C 100KHz)	ESR (m $\Omega$ , 20°C 100KHz)	LC ( $\mu$ A max/2min)
10(11.5)	120	6.3x5.8	2600	22	300
	150	6.3x7.7	2880	21	300
	330	8x10.4	4000	17	660
	470	10x10.2	5025	12	940
		6.3x5.8	2440	25	300
16(18.4)	68	6.3x7.7	2700	24	300
		6.3x5.8	2440	25	320
	100	6.3x7.7	2700	24	320
		6.3x7.7	3320	22	576
	180	8x10.4	3890	18	576
		8x10.4	3890	18	704
	220	8x10.4	3890	18	864
		10x10.2	4350	16	1056
		10x12.2	6100	10	1504
	25(28.8)	33	6.3x7.7	2500	45
47		6.3x7.7	2500	45	300
35(40.25)	22	6.3x5.8	1800	55	300
	47	6.3x7.7	2200	50	329
	100	8x10.4	2600	35	700
	150	10x10.2	2800	35	1050
50(57.50)	100	10x12.2	2500	50	1000