



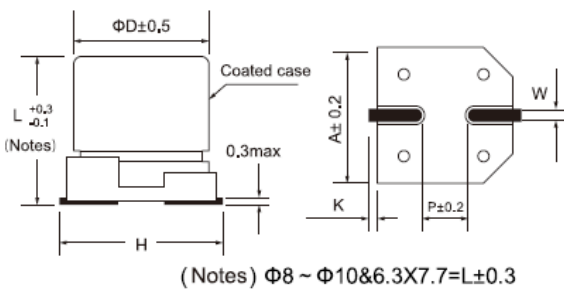
- Endurance: 105°C, 2000hrs
- Recommended Applications: Standard SMD type product
- Corresponding product to RoHS

**Specifications**

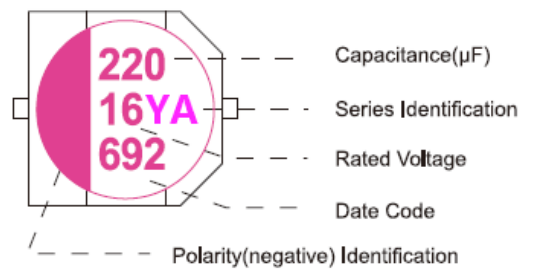
Item	Characteristics		
Category Temperature Range	-55 ~ +105°C		
Rated Voltage Range	16~25VDC		
Rated Capacitance Range	47~ 470 μF		
Capacitance Tolerance	± 20 % (120Hz , 20°C)		
Surge Voltage	Rated voltage ( V ) x 1.15		
Leakage Current ( 20°C )	I ≤ 0.01CV or 3 ( μ A ) whichever is greater (After rated 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	16	25
	tan δ	0.16	0.14
Temperature characteristic Impedance ratio (MAX)	WV	16~ 25V	
	Z(100KHz) 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	Φ D x L	A	H(Max)	W	P	K
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

**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

**YA** Standard Series  
New

■ 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)
16 ( 18.4 )	150	6.3X7.7	1600	45	24
	270	8X10.4	1800	40	43.2
	470	10X10.2	2000	30	75.2
25 ( 28.75 )	100	6.3X7.7	1600	45	25
	180	8X10.4	1800	40	45
	270	10X10.2	2000	30	67.5