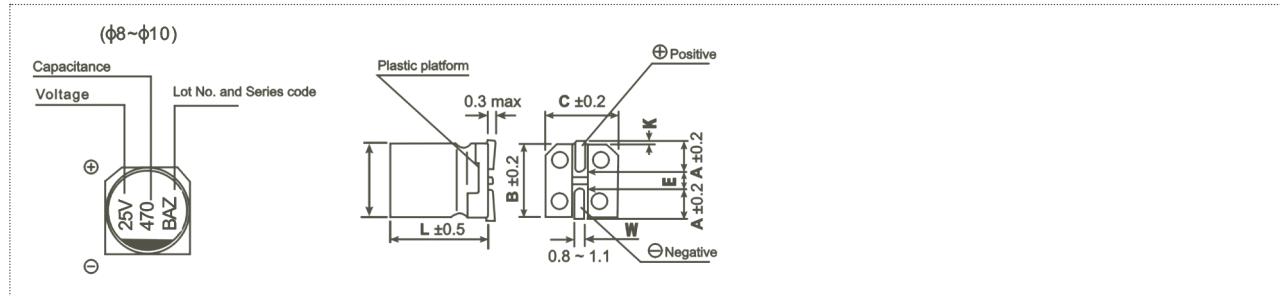


**FEATURES**

- Designed for surface mounting on high-density circuit board.
- Emboss carrier tape packing system is available for automatic insertion.

**SPECIFICATIONS**

Item	Performance Characteristics						
Operating Temperature Range	-40 to +105°C						
Rated Working Voltage Range	6.3 to 35V						
Nominal Capacitance Range	68 to 1500μF						
Capacitance Tolerance	±20% at 120Hz, +20°C						
Leakage Current	I ≤ 0.01CV or 3 (μA) whichever is greater measured after 2 minutes application of rated working voltage at +20°C						
tan δ (120Hz, +20°C)	Working Voltage (V)	6.3	10	16	25	35	
	tan δ (max.)	0.26	0.19	0.16	0.14	0.12	
Measurement frequency: 120Hz							
Low Temperature Characteristics	Working Voltage (V)	6.3	10	16	25	35	
	Z-25°C / Z+20°C	2	2	2	2	2	
	Z-40°C / Z+20°C	3	3	3	3	3	
After applying rated voltage for 1,000 hours at +105°C ±2°C and then being stabilized at +20°C, the capacitors shall meet the following limits							
Load Life	Cap. change	±20% of the initial measured value					
	tan δ	≤ 200% of the initial specified value					
	DC leakage current	≤ initial specified value					
Shelf Life	After 1,000 hours at +105°C ±2°C with no voltage applied and then being stabilized at +20°C, they meet the specified value in life characteristics listed above						
After reflow and then being stabilized at +20°C, the capacitors shall meet the following limits							
Resistance to Soldering Heat	Cap. change	±10% of the initial measured value					
	tan δ	≤ initial specified value					
	DC leakage current	≤ initial specified value					
Industrial Standard	JIS C - 5101-4 (IEC 60384-4)						

**CHIP TYPE****PART NUMBER SYSTEM (EXAMPLE : 6.3V 330μF)**

1 2 3	4 5 6	7	8 9	10	11 12	13 14
VZS	337	M	0J	F	T2	TR

Type (Taping Code)  
Case Length (10.2mm)  
Diameter (8mm)  
Voltage (6.3V)  
Tolerance (+20%)  
Capacitance (330μF)  
Series

## STANDARD RATINGS

D	L	B, C	A	W	E	K
8.0	10.2	8.3	2.95	0.90 ± 0.2	3.1	0.70-0.40 to +0.20
10.0	10.2	10.3	3.2	0.90 ± 0.2	4.6	0.70-0.40 to +0.20

Unit: mm

Voltage (Code)		6.3V (0J)			10V (1A)			16V (1C)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current
220	227				8 x 10.2	0.30	450	8 x 10.2	0.30	450
330	337	8 x 10.2	0.30	450				10 x 10.2	0.15	670
470	477				10 x 10.2	0.15	670	10 x 10.2	0.15	670
680	687							10 x 10.2	0.15	670
1000	108	10 x 10.2	0.15	670	10 x 10.2	0.15	670			
1500	158	10 x 10.2	0.15	670						

Maximum Allowable Ripple Current (mA rms) at 105°C 100kHz

Case Size  $\phi$  D x L (mm)Maximum Impedance ( $\Omega$ ) at 20°C 100kHz

Voltage (Code)		25V (1E)			35V (1V)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current
68	686	8 x 10.2	0.30	450			
100	107	8 x 10.2	0.30	450	8 x 10.2	0.30	450
150	157				8 x 10.2	0.30	450
220	227	8 x 10.2	0.30	450	10 x 10.2	0.15	670
330	337	10 x 10.2	0.15	670	10 x 10.2	0.15	670
470	477	10 x 10.2	0.15	670			

Maximum Allowable Ripple Current (mA rms) at 105°C 100kHz

Case Size  $\phi$  D x L (mm)Maximum Impedance ( $\Omega$ ) at 20°C 100kHz

\* Other voltage, capacitance, dimension are also available upon request.