

WZ

Chip Type, Wide Temperature Range
High Temperature (260°C) Reflow
series

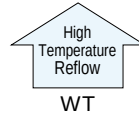


For SMD

Anti-Solvent
Feature

- Corresponding with 260°C peak reflow soldering
Recommended reflow condition : 260°C peak 5 sec 230°C over 60 sec 2 times
($\phi 8 \times 6.2$, $\phi 10 \times 10$: 1 time)
- Chip type operating over wide temperature range of to -55 to +105°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2002/95/EC).

WZ

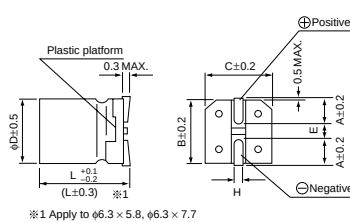
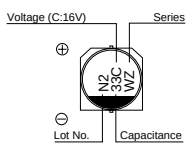


Specifications

Item	Performance Characteristics							
Category Temperature Range	-55 to +105°C							
Rated Voltage Range	6.3 to 50V							
Rated Capacitance Range	0.1 to 1500μF							
Capacitance Tolerance	±20% at 120Hz, 20°C							
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (μA) , whichever is greater.							
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz, Temperature : 20°C							
	Rated voltage (V)	6.3	10	16	25	35	50	
	tan δ (MAX.)	0.30	0.24	0.20	0.16	0.14	0.14	
Stability at Low Temperature	Measurement frequency : 120Hz							
	Rated voltage (V)		6.3	10	16	25	35	50
	Impedance ratio	Z-25°C / Z+20°C	4	3	2	2	2	2
	ZT / Z20 (MAX.)	Z-40°C / Z+20°C	8	8	4	4	3	3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C.			Capacitance change	Within ±25% of the initial capacitance value for capacitors of 16V or less. Within ±20% of the initial capacitance value for capacitors of 25V or more.			
				tan δ	200% or less than the initial specified value			
				Leakage current	Less than or equal to the initial specified value			
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.							
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.			Capacitance change	Within ±10% of the initial capacitance value			
tan δ				Less than or equal to the initial specified value				
Leakage current				Less than or equal to the initial specified value				
Marking	Black print on the case top.							

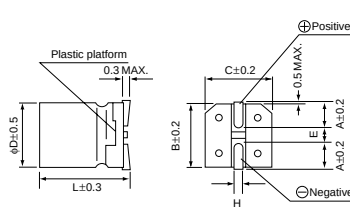
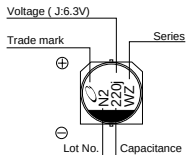
Chip Type

(φ4 to φ6.3)

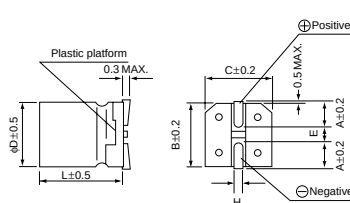
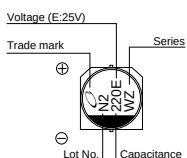


※1 Apply to φ6.3 × 5.8, φ6.3 × 7.7

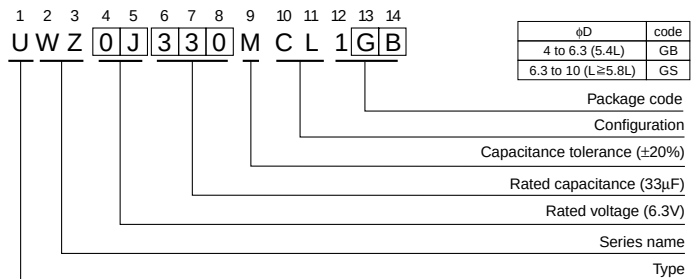
(φ8 × 6.2)



(φ8 × 10, φ10 × 10)



Type numbering system (Example : 6.3V 33μF)



	(mm)							
φD × L	4 × 5.4	5 × 5.4	6.3 × 5.4	6.3 × 5.8	6.3 × 7.7	8 × 6.2	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.4	3.3	2.9	3.2
B	4.3	5.3	6.6	6.6	6.6	8.3	8.3	10.3
C	4.3	5.3	6.6	6.6	6.6	8.3	8.3	10.3
E	1.0	1.3	2.2	2.2	2.2	2.3	3.1	4.5
L	5.4	5.4	5.4	5.4	7.7	6.2	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

• Dimension table in next page.

■Dimensions

Cap. (μF)	V Code	6.3		10		16		25		35		50	
		0J		1A		1C		1E		1V		1H	
0.1	0R1											4×5.4	1.0
0.22	R22											4×5.4	2.6
0.33	R33											4×5.4	3.2
0.47	R47											4×5.4	3.8
1	010											4×5.4	6.3
2.2	2R2											4×5.4	11
3.3	3R3											4×5.4	14
4.7	4R7							4×5.4	13	4×5.4	15	5×5.4	19
10	100					4×5.4	18	5×5.4	23	5×5.4	25	6.3×5.4	30
22	220	4×5.4	22	5×5.4	27	5×5.4	30	6.3×5.4	38	6.3×5.4	42	8×6.2	51
33	330	5×5.4	30	5×5.4	35	6.3×5.4	40	6.3×5.4	48	8×6.2	59	6.3×7.7	60
47	470	5×5.4	36	6.3×5.4	46	6.3×5.4	50	8×6.2	66	6.3×5.8	63	6.3×7.7	63
100	101	6.3×5.4	60	6.3×5.4	60	6.3×5.4	60	6.3×7.7	91	6.3×7.7	84	8×10	140
150	151	6.3×5.8	86	6.3×5.8	86	6.3×7.7	95	8×10	140	8×10	155	10×10	180
220	221	8×6.2	102	6.3×7.7	105	6.3×7.7	105	8×10	155	10×10	190	10×10	220
330	331	6.3×7.7	105	8×10	195	8×10	195	10×10	190	10×10	300		
470	471	8×10	210	8×10	210	8×10	210	10×10	300				
680	681	8×10	210	10×10	310	10×10	310						
1000	102	10×10	230	10×10	310							Case size φ D×L (mm)	Rated ripple
1500	152	10×10	310										

Rated ripple current (mA_{RMS}) at 105°C 120Hz

●Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please refer to page 3 for the minimum order quantity.