

UWZ

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



- Corresponding with 260°C peak reflow soldering
Recomend reflow condition : 260°C peak 5 sec 230°C over 60 sec 2 times
(φ8 × 6.2, φ10 × 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 (2011/65/EU).

Values marked with an * in the dimension table
are scheduled to be discontinued and are not
recommended for new designs.

UWZ

High
Temperature
Reflow
UWT

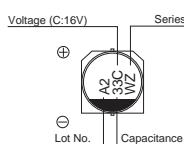
**■ Specifications**

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 at 20°C <table border="1"> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> <tr> <th>tan δ (MAX.)</th> <td>0.30</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.14</td> </tr> </table>							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							
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Stability at Low Temperature	Measurement frequency : 120Hz <table border="1"> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> <tr> <th>Impedance ratio Z-25°C / Z+20°C</th> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <th>ZT / Z20 (MAX.)</th> <td>8</td> <td>8</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table>							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.)	8	8	4	4	3	3
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Impedance ratio Z-25°C / Z+20°C	4	3	2	2	2	2																						
ZT / Z20 (MAX.)	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																							
Marking	Black print on the case top.																											

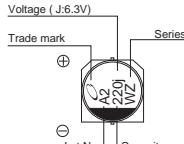
■ Chip Type

Type numbering system (Example : 6.3V 33μF)

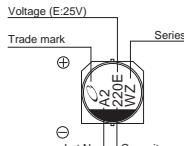
(φ4 to φ6.3)



(φ8 × 6.2)



(φ8 × 10, φ10×10)



U W Z 0 J 3 3 0 M C L 1 G B

φD	code
4 to 6.3 (5.4L)	GB
6.3 to 10 (L=5.8L)	GS

Package code

Configuration

Capacitance tolerance (±20%)

Rated capacitance (33μF)

Rated voltage (6.3V)

Series name

Type

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	(mm)
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	0.8 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.

UWZ

■ Dimensions

Cap. (μF)	V	6.3		10		16		25		35		50	
		Code	0J	Code	1A	Code	1C	Code	1E	Code	1V	Code	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.