

WF

Chip Type, Low Impedance
series

For SMD



Low Impedance

Anti-Solvent
Feature

- Chip type, low impedance temperature range up to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2002/95/EC).



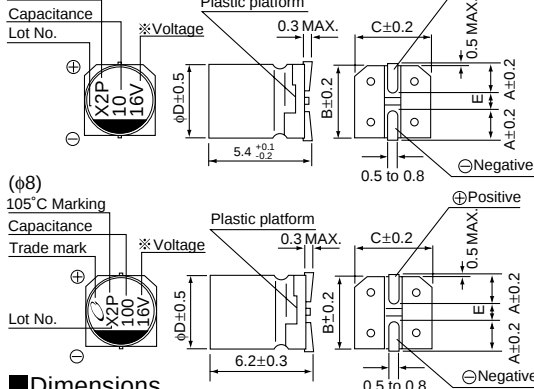
■ Specifications

Item	Performance Characteristics	
Category Temperature Range	-55 to +105°C	
Rated Voltage Range	6.3 to 35V	
Rated Capacitance Range	1 to 220μF	
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
	tan δ (MAX.)	0.22 0.19 0.16 0.14 0.12
Stability at Low Temperature	Measurement frequency : 120Hz	
	Rated voltage (V)	6.3 10 16 25 35
	Impedance ratio	Z-25°C / Z+20°C 2 2 2 2 2
	ZT / Z20 (MAX.)	Z-55°C / Z+20°C 4 4 3 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 ±20% of the initial capacitance value
	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.	

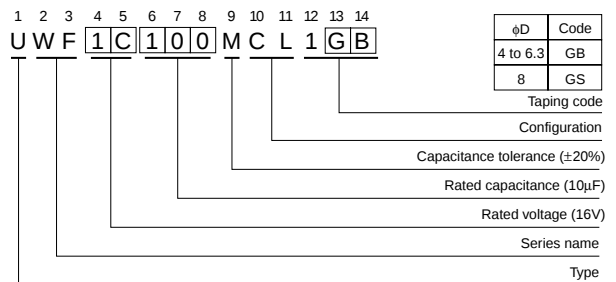
■ Chip Type

(φ4 to φ6.3)

105°C Marking



Type numbering system (Example : 16V 10μF)



■ Dimensions

V		6.3			10			16			25			35			
Cap. (μF)	Code	0J			1A			1C			1E			1V			
1	010													4	5.0	50	
1.5	1R5													4	5.0	50	
2.2	2R2													4	5.0	50	
3.3	3R3													4	5.0	50	
4.7	4R7											4	5.0	50	4	5.0	50
6.8	6R8											4	5.0	50	5	2.6	80
10	100							4	5.0	50	5	2.6	80	5	2.6	80	
15	150							5	2.6	80	6.3	1.3	115	6.3	1.3	115	
22	220	4	5.0	50	5	2.6	80	5	2.6	80	6.3	1.3	115	6.3	1.3	115	
33	330	5	2.6	80	5	2.6	80	6.3	1.3	115	6.3	1.3	115	8	0.8	150	
47	470	5	2.6	80	6.3	1.3	115	6.3	1.3	115	8	0.8	150	8	0.8	150	
68	680	6.3	1.3	115	6.3	1.3	115	8	0.8	150	8	0.8	150				
100	101	6.3	1.3	115	8	0.8	150	8	0.8	150							
150	151	8	0.8	150	8	0.8	150							Case size φ D (mm)	Impedance	Rated ripple	
220	221	8	0.8	150													

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please select UJ(p.108) series if high C/V products are required.
- Please refer to page 3 for the minimum order quantity.