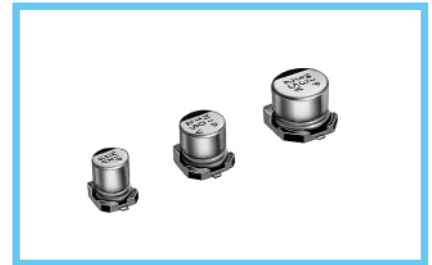
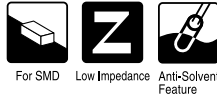


ALUMINUM ELECTROLYTIC CAPACITORS

WF series Chip Type, Low Impedance



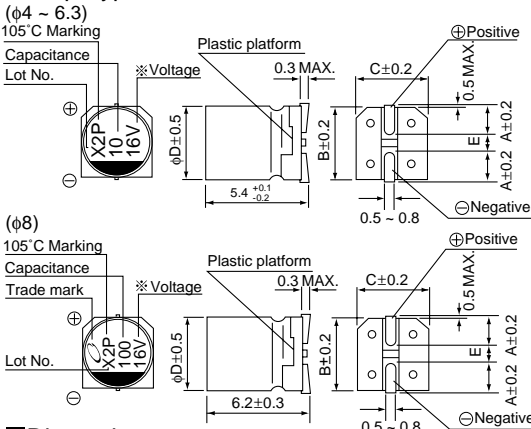
- Chip type, low impedance temperature range up to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine using carrier tape.
- Adapted to the RoHS directive (2002/95/EC).



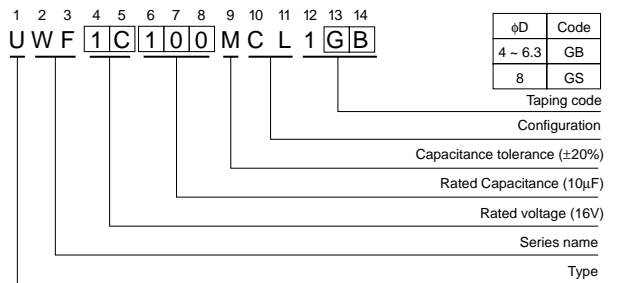
Specifications

Item	Performance Characteristics											
Category Temperature Range	-55 ~ +105°C											
Rated Voltage Range	6.3 ~ 35V											
Rated Capacitance Range	1 ~ 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.											
tan δ	Measurement frequency : 120Hz, Temperature : 20°C											
	Rated voltage (V)	6.3	10	16	25	35						
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					
Endurance	After 1000 hours' application of rated voltage at 105°C, capacitors meet the characteristic requirements listed at right.		<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>tan δ</td> <td>200% or less of initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Initial specified value or less</td> </tr> </table>				Capacitance change	Within ±20% of initial value	tan δ	200% or less of initial specified value	Leakage current	Initial specified value or less
	Capacitance change	Within ±20% of initial value										
	tan δ	200% or less of initial specified value										
Leakage current	Initial specified value or less											
Resistance to soldering heat	After storing the capacitors under no load at 105°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above.		<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±10% of initial value</td> </tr> <tr> <td>tan δ</td> <td>Initial specified value or less</td> </tr> <tr> <td>Leakage current</td> <td>Initial specified value or less</td> </tr> </table>				Capacitance change	Within ±10% of initial value	tan δ	Initial specified value or less	Leakage current	Initial specified value or less
	Capacitance change	Within ±10% of initial value										
	tan δ	Initial specified value or less										
Leakage current	Initial specified value or less											
Marking	The capacitors shall be kept on the hot plate maintained at 250°C, for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the characteristic requirements listed at right.		<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±10% of initial value</td> </tr> <tr> <td>tan δ</td> <td>Initial specified value or less</td> </tr> <tr> <td>Leakage current</td> <td>Initial specified value or less</td> </tr> </table>				Capacitance change	Within ±10% of initial value	tan δ	Initial specified value or less	Leakage current	Initial specified value or less
	Capacitance change	Within ±10% of initial value										
	tan δ	Initial specified value or less										
Leakage current	Initial specified value or less											
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above.											
Resistance to soldering heat	The capacitors shall be kept on the hot plate maintained at 250°C, for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the characteristic requirements listed at right.		<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±10% of initial value</td> </tr> <tr> <td>tan δ</td> <td>Initial specified value or less</td> </tr> <tr> <td>Leakage current</td> <td>Initial specified value or less</td> </tr> </table>				Capacitance change	Within ±10% of initial value	tan δ	Initial specified value or less	Leakage current	Initial specified value or less
Capacitance change	Within ±10% of initial value											
tan δ	Initial specified value or less											
Leakage current	Initial specified value or less											
Marking	Black print on the case top.											

Chip Type



Type numbering system (Example : 16V 10μF)



Dimensions

Cap. (μF)	Code	6.3			10			16			25			35		
		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									
220	221	8	0.8	150												

Frequency coefficient of rated ripple current

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

Max. Impedance (Ω) at 20°C 100kHz
 Rated Ripple (mArms) at 105°C 100kHz

- Taping specifications are given in page 24.
- Recommended land size, soldering by reflow are given in page 25, 26.
- Please select UJ(p.76) series if high C/V products are required.
- Please refer to page 3 for the minimum order quantity.