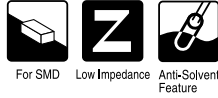


# ALUMINUM ELECTROLYTIC CAPACITORS

**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).

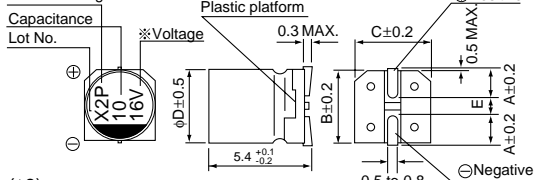


## Specifications

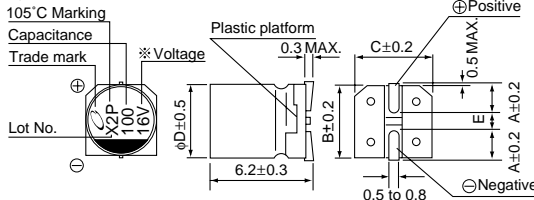
Item	Performance Characteristics						
Category Temperature Range	-55 to +105°C						
Rated Voltage Range	6.3 to 35V						
Rated Capacitance Range	1 to 220μF						
Capacitance Tolerance	±20% at 120Hz, 20°C						
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.						
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	After 1000 hours' application of rated voltage at 105°C, capacitors meet the characteristic requirements listed at right.						
	Capacitance change	Within ±20% of initial value					
	tan δ	200% or less of initial specified value					
	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.						
	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

(φ4 to 6.3)  
105°C Marking



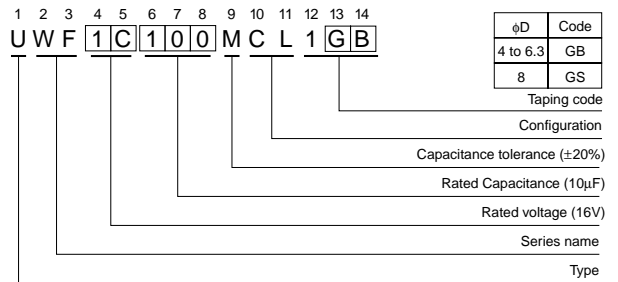
(φ8)



	φD	4	5	6.3	8
A		1.8	2.1	2.4	3.3
B		4.3	5.3	6.6	8.3
C		4.3	5.3	6.6	8.3
E		1.0	1.3	2.2	2.3

※ Voltage mark for 6.3V is 6V.

## Type numbering system (Example : 16V 10μF)



## Dimensions

Cap. (μF)	Code	6.3			10			16			25			35					
		Code	Case size φ D (mm)	Impedance	Rated ripple	Code	Case size φ D (mm)	Impedance	Rated ripple	Code	Case size φ D (mm)	Impedance	Rated ripple	Code	Case size φ D (mm)	Impedance	Rated ripple		
1	010																		
1.5	1R5																		
2.2	2R2																		
3.3	3R3																		
4.7	4R7																		
6.8	6R8																		
10	100							4	5.0	50	5	2.6	80	5	2.6	80	5	2.6	80
15	150							5	2.6	80	6.3	1.3	115	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	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	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 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.92) series if high C/V products are required.
- Please refer to page 3 for the minimum order quantity.