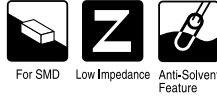


# ALUMINUM ELECTROLYTIC CAPACITORS

**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).

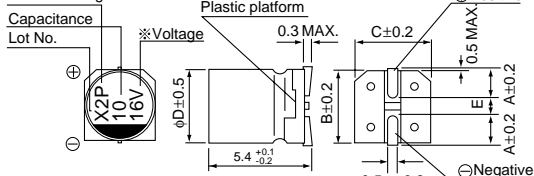


## Specifications

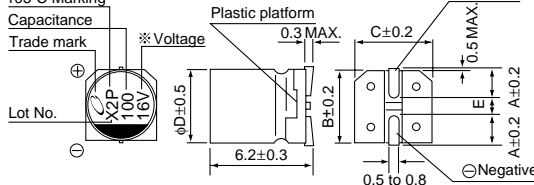
Item	Performance Characteristics						
Category Temperature Range	-55 to +105°C						
Rated Voltage Range	6.3 to 35V						
Rated Capacitance Range	1 to 220μF						
Capacitance Tolerance	±20% at 120Hz, 20°C						
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more 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
						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



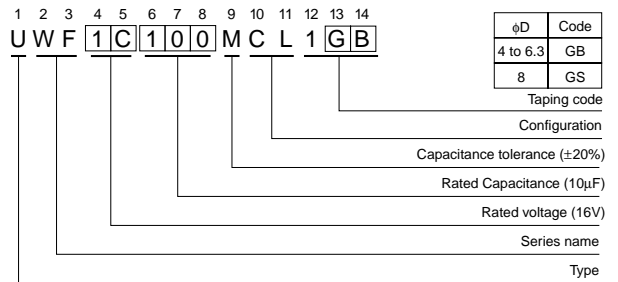
(φ8)  
105°C Marking



	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		
		Case size φD (mm)	Impedance	Rated ripple	Case size φD (mm)	Impedance	Rated ripple	Case size φD (mm)	Impedance	Rated ripple	Case size φD (mm)	Impedance	Rated ripple	Case size φD (mm)	Impedance	Rated ripple
1	010															
1.5	1R5															
2.2	2R2															
3.3	3R3															
4.7	4R7															
6.8	6R8															
10	100															
15	150															
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 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.