ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

WF series
Chip Type, Low Impedance

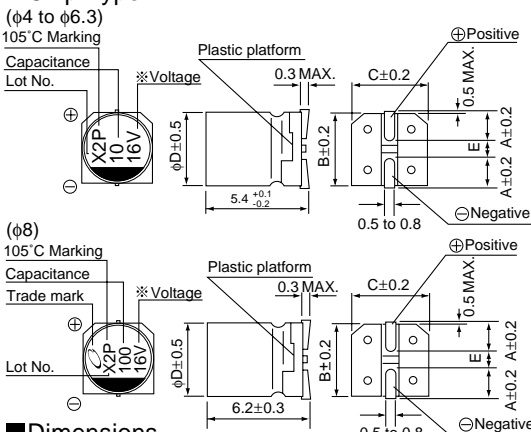For SMD | Z Low Impedance | Anti-Solvent Feature
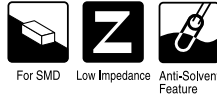
- Chip type, low impedance temperature range up to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
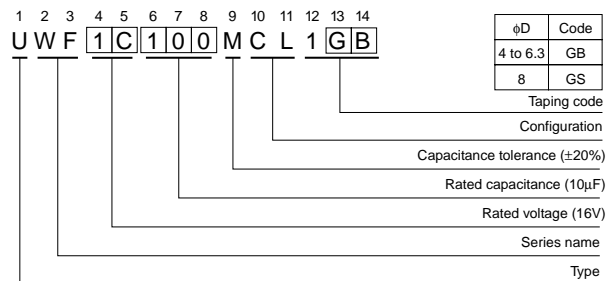- Compliant to the RoHS directive (2002/95/EC).

WG ← Low Impedance — **WF** ← Low Impedance → WT

■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
Capacitance
Lot No.
X2P / 10 / 16V

Plastic platform
0.3 MAX. — C±0.2 — Positive — 0.5 MAX.
φD±0.5 — B±0.2 — E — A±0.2 — A±0.2
5.4 +0.1/−0.2
0.5 to 0.8 — Negative

(φ8)

105°C Marking
Capacitance
Trade mark
Voltage
Lot No.
X2P / 100 / 16V

Plastic platform
0.3 MAX. — C±0.2 — Positive — 0.5 MAX.
φD±0.5 — B±0.2 — E — A±0.2 — A±0.2
6.2±0.3
0.5 to 0.8 — Negative

φD	4	5	6.3	8 (mm)
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)

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 1 2 3  4 5  6 7 8  9 10 11  12  13 14
 U W F  1 C  1 0 0  M  C  L   1  G  B
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φD	Code
4 to 6.3	GB
8	GS

- 14 Taping code
- 12 Configuration
- 9 Capacitance tolerance (±20%)
- 6 7 8 Rated capacitance (10µF)
- 4 5 Rated voltage (16V)
- 2 3 Series name
- 1 Type

■Dimensions

Cap. (µF)	Code	6.3 (0J) Case size φD (mm)	6.3 Impedance	6.3 Rated ripple	10 (1A) φD	10 Imp.	10 ripple	16 (1C) φD	16 Imp.	16 ripple	25 (1E) φD	25 Imp.	25 ripple	35 (1V) φD	35 Imp.	35 ripple
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												

Case size φD (mm) | Impedance | Rated ripple
Max. Impedance (Ω) at 20°C 100kHz
Rated ripple current (mArms) at 105°C 100kHz

●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.102) series if high C/V products are reqired.
- Please refer to page 3 for the minimum order quantity.

CAT.8100Y