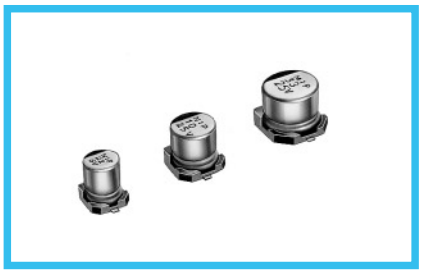
ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

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).

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.

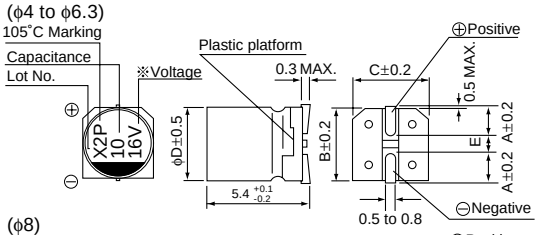
Capacitance change	Within ±10% of the initial capacitance value
tan δ	Less than or equal to the initial specified value
Leakage current	Less than or equal to the initial specified value

Marking

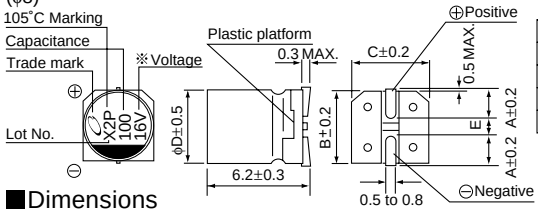
Black print on the case top.

■Chip Type

(φ4 to φ6.3)



(φ8)



(mm)

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)

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

φD	Code
4 to 6.3	GB
8	GS

Taping code
Configuration
Capacitance tolerance (±20%)
Rated capacitance (10µF)
Rated voltage (16V)
Series name
Type

■Dimensions

Cap. (µF) \ V	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												

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.