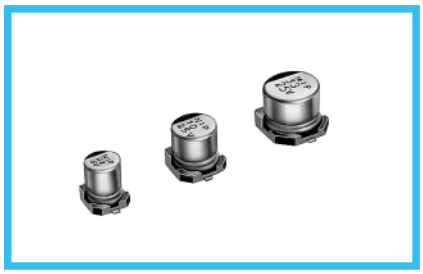
ALUMINUM ELECTROLYTIC CAPACITORS

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 at 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.

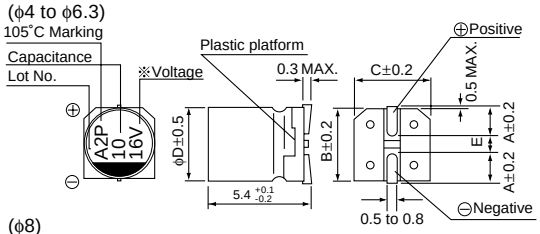
Capacitance change	Within ±10% of the initial capacitance value
tan δ	Less than or equal to the initial specified value
Leakage current	Less than or equal to the initial specified value

Marking

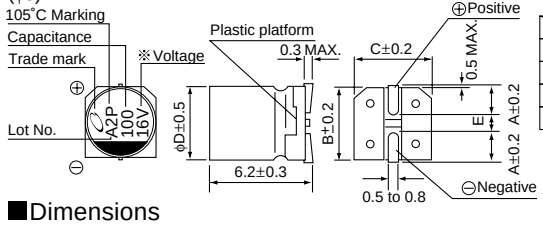
Black print on the case top.

■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	6.3			10			16			25			35		
Code	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							Case size φD (mm)	Impedance	Rated ripple
220	221	8	0.8	150												

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

Mouser Electronics

Authorized Distributor

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Nichicon:

UWF0J221MBR1GS UWF1A101MBR1GS UWF1A151MBR1GS UWF1A470MCR1GB UWF1C100MCR1GB UWF1C101MBR1GS UWF1C220MCR1GB UWF1C470MCR1GB UWF1E100MCR1GB UWF1E150MCR1GB UWF1E220MCR1GB UWF1E330MCR1GB UWF1E470MBR1GS UWF1E4R7MCR1GB UWF1E680MBR1GS UWF1V100MCR1GB UWF1V220MCR1GB UWF1V470MBR1GS UWF0J101MCR1GB UWF1V470MCL1GS UWF0J221MCL1GS UWF0J101MCL1GB UWF1C100MCL1GB UWF1E680MCL1GS UWF1V100MCL1GB UWF1A101MCL1GS UWF1C220MCL1GB UWF1C470MCL1GB UWF1E330MCL1GB UWF1V2R2MCL1GB UWF0J330MCL1GB UWF0J470MCL1GB UWF0J680MCL1GB UWF0J151MCL1GS UWF1A220MCL1GB UWF1A330MCL1GB UWF1A470MCL1GB UWF1A680MCL1GB UWF1A151MCL1GS UWF1C150MCL1GB UWF1C330MCL1GB UWF1C680MCL1GS UWF1E150MCL1GB UWF1E470MCL1GS UWF1V010MCL1GB UWF1V1R5MCL1GB UWF1V3R3MCL1GB UWF1V4R7MCL1GB UWF1V6R8MCL1GB UWF1V150MCL1GB UWF1V330MCL1GS UWF1C101MBL1GS UWF1C101MCL1GS UWF1E100MCL1GB UWF1E220MCL1GB UWF1E4R7MCL1GB UWF1E6R8MCR1GB UWF1V220MCL1GB UWF1V330MBR1GS UWF0J220MCL1GB UWF1E6R8MCL1GB