

ALUMINUM ELECTROLYTIC CAPACITORS



Chip Type, High Reliability.
Low temperature ESR specification.



For SMD



Long Life



Anti-Solvent Feature

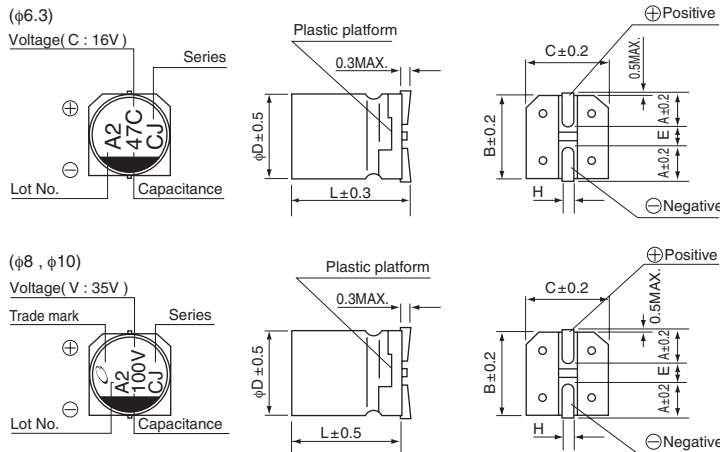
- Chip type, high temperature range, for +125°C use.
 - Added ESR specification after the test at -40°C (φ6.3 sizes provide only for the first stage.)
 - Applicable to automatic mounting machine fed with carrier tape.
 - Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).
 - AEC-Q200 compliant.
- Please contact us for details.



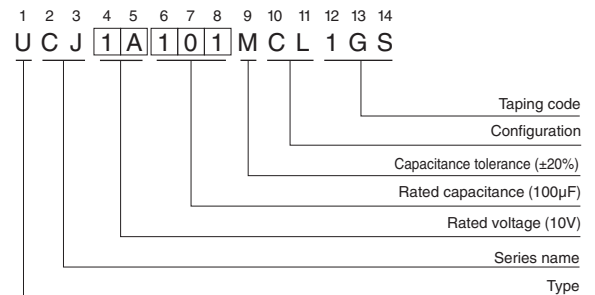
Specifications

Item	Performance Characteristics						
Category Temperature Range	-40 to +125°C						
Rated Voltage Range	10 to 50V						
Rated Capacitance Range	10 to 470μF						
Capacitance Tolerance	±20% at 120Hz, 20°C						
Leakage Current	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV or 4(μA), whichever is greater.						
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C						
	Rated voltage (V)	10	16	25	35	50	
Stability at Low Temperature	Measurement frequency : 120Hz						
	Impedance ratio ZT / Z20 (MAX.)	Z-40°C / Z+20°C	12	8	6	4	4
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 125°C.					Capacitance change	Within ±30% of the initial capacitance value
						tan δ	300% or less than the initial specified value
Shelf Life	After storing the capacitors under no load at 125°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.					Leakage current	Less than or equal to the initial specified value
						Capacitance change	Within ±10% of the initial capacitance value
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.					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



Type numbering system (Example : 10V 100μF)



φD x L (mm)	6.3 x 8.7	8 x 10	10 x 10
A	2.4	2.9	3.2
B	6.6	8.3	10.3
C	6.6	8.3	10.3
E	2.2	3.1	4.5
L	8.7	10	10
H	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Voltage (V)	10	16	25	35	50
Code	A	C	E	V	H

Dimensions

Cap. (μF)	Code	10			16			25			35			50							
		1A			1C			1E			1V			1H							
10	100										6.3 x 8.7	14	-	95	6.3 x 8.7	14	-	95			
22	220							6.3 x 8.7	14	-	95	6.3 x 8.7	14	-	95	6.3 x 8.7	14	-	95		
33	330							6.3 x 8.7	14	-	95	6.3 x 8.7	14	-	95	8 x 10	2.0	6.0	200		
47	470				6.3 x 8.7	14	-	95	6.3 x 8.7	14	-	95	6.3 x 8.7	14	-	95	10 x 10	1.5	4.5	330	
100	101	6.3 x 8.7	14	-	95	8 x 10	2.0	6.0	250	8 x 10	2.0	6.0	250	10 x 10	1.5	4.5	400	10 x 10	1.5	4.5	330
220	221	8 x 10	2.0	6.0	250	10 x 10	1.5	4.5	400	10 x 10	1.5	4.5	400	10 x 10	1.5	4.5	400	Case size φD x L (mm)	Initial test	after endurance test	Rated ripple
330	331	10 x 10	1.5	4.5	400	10 x 10	1.5	4.5	400	10 x 10	1.5	4.5	400								
470	471	10 x 10	1.5	4.5	400																

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

Max. ESR (Ω) at -40°C 100kHz, Rated ripple current (mArms) at 125°C 100kHz

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please refer to page 3 for the minimum order quantity.