



**THE DATASHEET OF
UCJ1V221MCL1GS**



ALUMINUM ELECTROLYTIC CAPACITORS

UCJ

Chip Type, High Reliability.
Low temperature ESR specification.



- 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 Qualified.
- Please contact us for details.

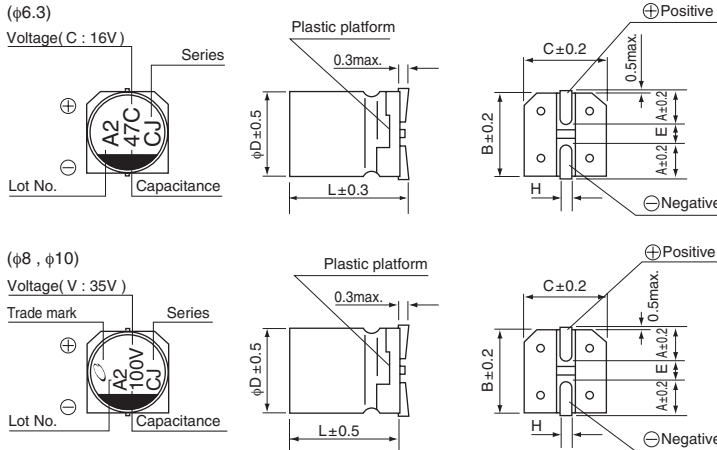


Specifications

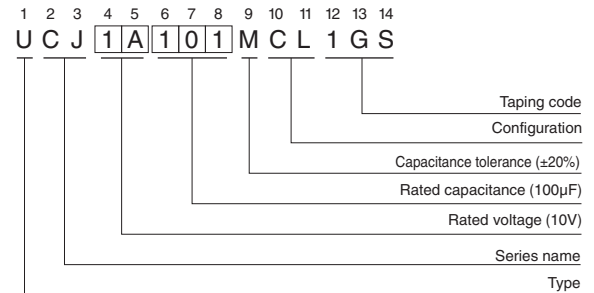
Item	Performance Characteristics													
Category Temperature Range	-40 to +125°C													
Rated Voltage Range	10 to 50V													
Rated Capacitance Range	10 to 470μF													
Capacitance Tolerance	±20% at 120Hz, 20°C													
Leakage Current ※	After 1 minute's application of rated 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													
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>tan δ (max.)</td> <td>0.32</td> <td>0.24</td> <td>0.21</td> <td>0.18</td> <td>0.18</td> </tr> </table>	Rated voltage (V)	10	16	25	35	50	tan δ (max.)	0.32	0.24	0.21	0.18	0.18	
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Stability at Low Temperature	Measurement frequency : 120Hz													
	<table border="1"> <tr> <td colspan="2">Rated voltage (V)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Impedance ratio ZT / Z20 (max.)</td> <td>Z(-40°C) / Z(+20°C)</td> <td>12</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> </tr> </table>	Rated voltage (V)		10	16	25	35	50	Impedance ratio ZT / Z20 (max.)	Z(-40°C) / Z(+20°C)	12	8	6	4
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Impedance ratio ZT / Z20 (max.)	Z(-40°C) / Z(+20°C)	12	8	6	4	4								
Endurance	<p>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.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>Within ±30% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>300% or less than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </table>	Capacitance change	Within ±30% of the initial capacitance value	tan δ	300% or less than the initial specified value	Leakage current	Less than or equal to the initial specified value							
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Shelf Life	<p>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.</p>													
Resistance to soldering heat	<p>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.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>Within ±10% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>Less than or equal to the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </table>	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							
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Leakage current	Less than or equal to the initial specified value													
Marking	Black print on the case top.													

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

Chip Type



Type numbering system (Example : 10V 100μF)



φD x L	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	10	16	25	35	50
Code	A	C	E	V	H

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

● Dimension table in next page.

UCJ

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μ F)	Case Size ϕ D \times L (mm)	tan δ	Leakage Current (μ A) (at 20°C after 1 minute)	ESR (Ω) max. (-40°C/100kHz)		Rated Ripple (mA _{rms}) (125°C/100kHz)	Part Number
					Initial	after endurance test		
10 (1A)	100	6.3 \times 8.7	0.32	30	14	—	95	UCJ1A101MCL1GS
	220	8 \times 10	0.32	66	2.0	6.0	250	UCJ1A221MCL1GS
	330	10 \times 10	0.32	99	1.5	4.5	400	UCJ1A331MCL1GS
	470	10 \times 10	0.32	141	1.5	4.5	400	UCJ1A471MCL1GS
16 (1C)	47	6.3 \times 8.7	0.24	22.56	14	—	95	UCJ1C470MCL1GS
	100	8 \times 10	0.24	48	2.0	6.0	250	UCJ1C101MCL1GS
	220	10 \times 10	0.24	105.6	1.5	4.5	400	UCJ1C221MCL1GS
	330	10 \times 10	0.24	158.4	1.5	4.5	400	UCJ1C331MCL1GS
25 (1E)	22	6.3 \times 8.7	0.21	16.5	14	—	95	UCJ1E220MCL1GS
	33	6.3 \times 8.7	0.21	24.75	14	—	95	UCJ1E330MCL1GS
	47	6.3 \times 8.7	0.21	35.25	14	—	95	UCJ1E470MCL1GS
	100	8 \times 10	0.21	75	2.0	6.0	250	UCJ1E101MCL1GS
	220	10 \times 10	0.21	165	1.5	4.5	400	UCJ1E221MCL1GS
	330	10 \times 10	0.21	247.5	1.5	4.5	400	UCJ1E331MCL1GS
35 (1V)	10	6.3 \times 8.7	0.18	10.5	14	—	95	UCJ1V100MCL1GS
	22	6.3 \times 8.7	0.18	23.1	14	—	95	UCJ1V220MCL1GS
	33	6.3 \times 8.7	0.18	34.65	14	—	95	UCJ1V330MCL1GS
	47	6.3 \times 8.7	0.18	49.35	14	—	95	UCJ1V470MCL1GS
	100	10 \times 10	0.18	105	1.5	4.5	400	UCJ1V101MCL1GS
	220	10 \times 10	0.18	231	1.5	4.5	400	UCJ1V221MCL1GS
50 (1H)	10	6.3 \times 8.7	0.18	15	14	—	95	UCJ1H100MCL1GS
	22	6.3 \times 8.7	0.18	33	14	—	95	UCJ1H220MCL1GS
	33	8 \times 10	0.18	49.5	2.0	6.0	200	UCJ1H330MCL1GS
	47	10 \times 10	0.18	70.5	1.5	4.5	330	UCJ1H470MCL1GS
	100	10 \times 10	0.18	150	1.5	4.5	330	UCJ1H101MCL1GS

• For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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