



**THE DATASHEET OF
UCL1E221MCL6GS**



ALUMINUM ELECTROLYTIC CAPACITORS

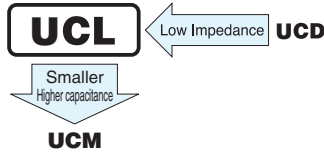
nichicon

UCL

Chip Type, Low Impedance



- Chip type, low impedance, temperature range up to +105°C.
- 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.

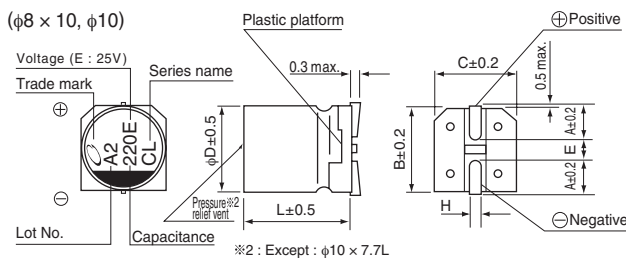
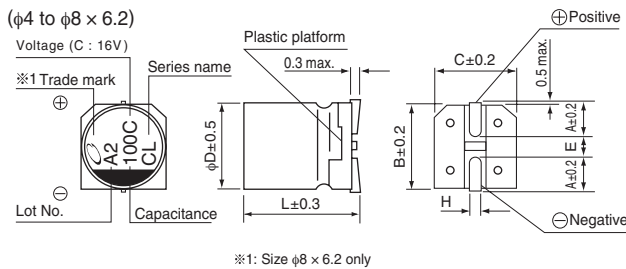


Specifications

Item	Performance Characteristics							
Category Temperature Range	- 55 to +105°C							
Rated Voltage Range	6.3 to 50V							
Rated Capacitance Range	10 to 2200μF							
Capacitance Tolerance	± 20% at 120Hz, 20°C							
Leakage Current ※	After 2 minutes' application of rated voltages at 20°C, leakage current is not more than 0.01 CV or 3 (μA), whichever is greater.							
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C							
	Rated voltage (V) tan δ (max.)	6.3 0.26	10 0.19	16 0.16	25 0.14	35 0.12	50 0.10	
Stability at Low Temperature	Measurement frequency : 120Hz							
	Rated voltage (V)	6.3	10	16	25	35	50	
	Impedance ratio ZT / Z20 (max.)	Z(-25°C) / Z(+20°C)	2	2	2	2	2	2
		Z(-40°C) / Z(+20°C)	3	3	3	3	3	3
Z(-55°C) / Z(+20°C)	4	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 2000 hours at 105°C.							
	Capacitance Change	Within ± 30% of the initial capacitance value						
	tan δ	200% or less than 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.							
	Capacitance Change	Within ± 10% of the initial capacitance value						
	tan δ	Less than or equal to the initial specified 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.							
	Capacitance Change	Within ± 10% of the initial capacitance value						
	tan δ	Less than or equal to the initial specified value						
Marking	Black print on the case top.							
	Leakage current	Less than or equal to the initial specified value						

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

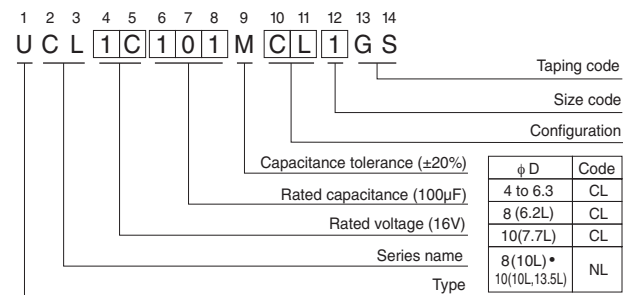
Chip Type



Voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

Type numbering system (Example : 16V 100μF)



φD × L	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8 × 6.2	8 × 10	10 × 7.7	10 × 10	10 × 13.5
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2	3.2	3.2
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	10.3
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	10.3
E	1.0	1.3	2.2	2.2	2.3	3.1	4.5	4.5	4.5
L	5.8	5.8	5.8	7.7	6.2	10	7.7	10	13.5
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1

Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

• Dimension table in next page.

CAT.8100M



■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20°C after 2 minutes)	Impedance (Ω) max. (20°C/100kHz)	Rated Ripple (mA rms) (105°C/100kHz)	Part Number
6.3 (0J)	22	4×5.8	0.26	3	0.85	160	UCL0J220MCL1GS
	47	4×5.8	0.26	3	0.85	160	UCL0J470MCL6GS
	47	5×5.8	0.26	3	0.36	240	UCL0J470MCL1GS
	100	5×5.8	0.26	6.3	0.36	240	UCL0J101MCL6GS
	100	6.3×5.8	0.26	6.3	0.26	300	UCL0J101MCL1GS
	220	6.3×5.8	0.26	13.86	0.26	300	UCL0J221MCL1GS
	330	6.3×7.7	0.26	20.79	0.16	600	UCL0J331MCL1GS
	330	8×6.2	0.26	20.79	0.18	500	UCL0J331MCL6GS
	470	8×10	0.26	29.61	0.08	850	UCL0J471MNL1GS
	470	10×7.7	0.26	29.61	0.10	850	UCL0J471MCL6GS
	1000	8×10	0.26	63	0.08	850	UCL0J102MNL1GS
	1500	10×10	0.26	94.5	0.06	1190	UCL0J152MNL1GS
	1800	10×10	0.26	113.4	0.08	850	UCL0J182MNL1GS
	2200	10×13.5	0.26	138.6	0.06	1190	UCL0J222MNL1GS
10 (1A)	22	4×5.8	0.19	3	0.85	160	UCL1A220MCL1GS
	33	4×5.8	0.19	3.3	0.85	160	UCL1A330MCL6GS
	33	5×5.8	0.19	3.3	0.36	240	UCL1A330MCL1GS
	47	6.3×5.8	0.19	4.7	0.26	300	UCL1A470MCL1GS
	100	6.3×5.8	0.19	10	0.26	300	UCL1A101MCL1GS
	150	6.3×5.8	0.19	15	0.26	300	UCL1A151MCL1GS
	220	6.3×7.7	0.19	22	0.16	600	UCL1A221MCL1GS
	220	8×6.2	0.19	22	0.18	500	UCL1A221MCL6GS
	330	8×10	0.19	33	0.08	850	UCL1A331MNL1GS
	330	10×7.7	0.19	33	0.10	850	UCL1A331MCL6GS
	470	8×10	0.19	47	0.08	850	UCL1A471MNL1GS
	470	10×7.7	0.19	47	0.10	850	UCL1A471MCL6GS
	680	8×10	0.19	68	0.08	850	UCL1A681MNL1GS
	1000	10×10	0.19	100	0.06	1190	UCL1A102MNL1GS
	1200	10×10	0.19	120	0.08	850	UCL1A122MNL1GS
1500	10×13.5	0.19	150	0.06	1190	UCL1A152MNL1GS	
16 (1C)	10	4×5.8	0.16	3	0.85	160	UCL1C100MCL1GS
	22	4×5.8	0.16	3.52	0.85	160	UCL1C220MCL6GS
	22	5×5.8	0.16	3.52	0.36	240	UCL1C220MCL1GS
	47	5×5.8	0.16	7.52	0.36	240	UCL1C470MCL6GS
	47	6.3×5.8	0.16	7.52	0.26	300	UCL1C470MCL1GS
	68	6.3×5.8	0.16	10.88	0.26	300	UCL1C680MCL1GS
	100	6.3×5.8	0.16	16	0.26	300	UCL1C101MCL1GS
	100	6.3×7.7	0.16	16	0.16	600	UCL1C101MCL6GS
	150	6.3×7.7	0.16	24	0.16	600	UCL1C151MCL1GS
	220	6.3×7.7	0.16	35.2	0.16	600	UCL1C221MCL1GS
	220	8×6.2	0.16	35.2	0.18	500	UCL1C221MCL6GS
	330	8×10	0.16	52.8	0.08	850	UCL1C331MNL1GS
	330	10×7.7	0.16	52.8	0.10	850	UCL1C331MCL6GS
	470	8×10	0.16	75.2	0.08	850	UCL1C471MNL1GS
	470	10×7.7	0.16	75.2	0.10	850	UCL1C471MCL6GS
	680	10×10	0.16	108.8	0.06	1190	UCL1C681MNL1GS
	820	10×10	0.16	131.2	0.08	850	UCL1C821MNL1GS
	1000	10×13.5	0.16	160	0.06	1190	UCL1C102MNL1GS





■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20°C after 2 minutes)	Impedance (Ω) max. (20°C/100kHz)	Rated Ripple (mArms) (105°C/100kHz)	Part Number
25 (1E)	10	4×5.8	0.14	3	0.85	160	UCL1E100MCL1GS
	22	5×5.8	0.14	5.5	0.36	240	UCL1E220MCL1GS
	33	5×5.8	0.14	8.25	0.36	240	UCL1E330MCL6GS
	33	6.3×5.8	0.14	8.25	0.26	300	UCL1E330MCL1GS
	47	6.3×5.8	0.14	11.75	0.26	300	UCL1E470MCL1GS
	68	6.3×5.8	0.14	17	0.26	300	UCL1E680MCL1GS
	100	6.3×7.7	0.14	25	0.16	600	UCL1E101MCL1GS
	100	8×6.2	0.14	25	0.18	500	UCL1E101MCL6GS
	150	8×10	0.14	37.5	0.08	850	UCL1E151MNL1GS
	150	10×7.7	0.14	37.5	0.10	850	UCL1E151MCL6GS
	220	8×10	0.14	55	0.08	850	UCL1E221MNL1GS
	220	10×7.7	0.14	55	0.10	850	UCL1E221MCL6GS
	330	8×10	0.14	82.5	0.08	850	UCL1E331MNL1GS
	470	10×10	0.14	117.5	0.06	1190	UCL1E471MNL1GS
	560	10×10	0.14	140	0.08	850	UCL1E561MNL1GS
680	10×13.5	0.14	170	0.06	1190	UCL1E681MNL1GS	
35 (1V)	10	4×5.8	0.12	3.5	0.85	160	UCL1V100MCL6GS
	10	5×5.8	0.12	3.5	0.36	240	UCL1V100MCL1GS
	22	5×5.8	0.12	7.7	0.36	240	UCL1V220MCL1GS
	33	6.3×5.8	0.12	11.55	0.26	300	UCL1V330MCL1GS
	47	6.3×5.8	0.12	16.45	0.26	300	UCL1V470MCL1GS
	68	6.3×7.7	0.12	23.8	0.16	600	UCL1V680MCL1GS
	100	6.3×7.7	0.12	35	0.16	600	UCL1V101MCL6GS
	100	8×10	0.12	35	0.08	850	UCL1V101MNL1GS
	150	8×10	0.12	52.5	0.08	850	UCL1V151MNL1GS
	150	10×7.7	0.12	52.5	0.10	850	UCL1V151MCL6GS
	220	8×10	0.12	77	0.08	850	UCL1V221MNL1GS
	220	10×7.7	0.12	77	0.10	850	UCL1V221MCL6GS
	330	10×10	0.12	115.5	0.06	1190	UCL1V331MNL1GS
	390	10×10	0.12	136.5	0.08	850	UCL1V391MNL1GS
	470	10×13.5	0.12	164.5	0.06	1190	UCL1V471MNL1GS
50 (1H)	100	8×10	0.10	50	0.18	670	UCL1H101MNL1GS
	220	10×10	0.10	110	0.12	900	UCL1H221MNL1GS

• 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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