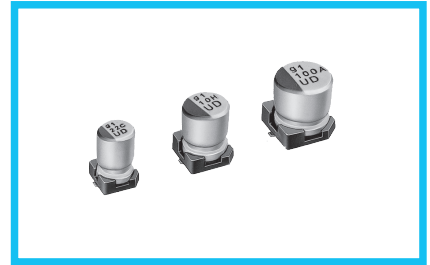
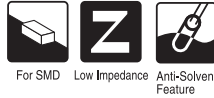


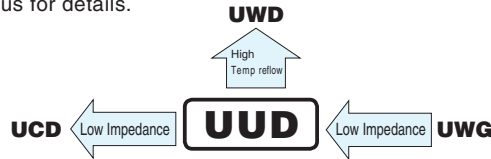
ALUMINUM ELECTROLYTIC CAPACITORS

UUD

Chip Type, Low Impedance



- 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 (2011/65/EU,(EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.

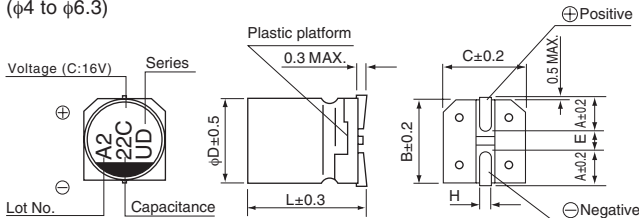


Specifications

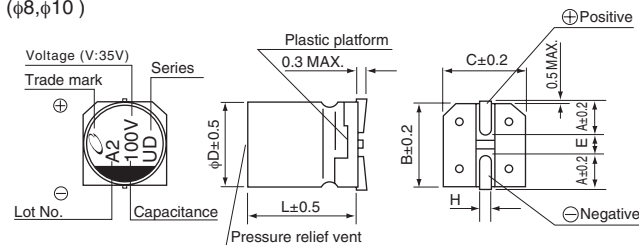
Item	Performance Characteristics													
Category Temperature Range	-55 to +105°C													
Rated Voltage Range	6.3 to 50V													
Rated Capacitance Range	1 to 1500μF													
Capacitance Tolerance	±20% at 120Hz, 20°C													
Leakage Current	After 2 minutes' application of rated voltage 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							() is φ8 over						
	Rated voltage (V)	6.3	10	16	25	35	50							
Stability at Low Temperature	Measurement frequency : 120Hz													
	Impedance ratio	Z-25°C / Z+20°C	3	2	2	2	2		2					
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours (2000 hours for φD = 4, 5 and 6.3) at 105°C.							<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±30% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>200% 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	200% or less than the initial specified value	Leakage current	Less than or equal to the initial specified value
	Capacitance change	Within ±30% 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.							<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
	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													
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.							<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
	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

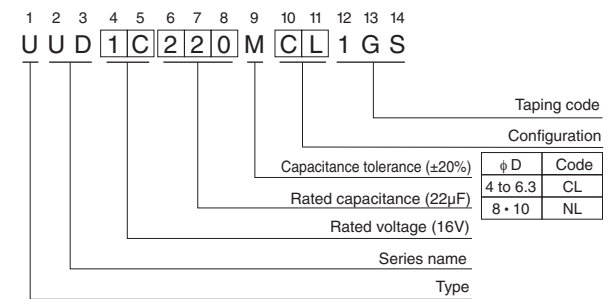
(φ4 to φ6.3)



(φ8, φ10)



Type numbering system (Example : 16V 22μF)



φD × L	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.8	5.8	5.8	7.7	10	10
H	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

Voltage

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

● Dimension table in next page.

● 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

UUD

■ 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
6.3 (0J)	27	4×5.8	0.26	3	1.80	80	UUD0J270MCL1GS
	33	5×5.8	0.26	3	0.76	150	UUD0J330MCL1GS
	47	5×5.8	0.26	3	0.76	150	UUD0J470MCL1GS
	56	5×5.8	0.26	3.528	0.76	150	UUD0J560MCL1GS
	68	6.3×5.8	0.26	4.284	0.44	230	UUD0J680MCL1GS
	100	6.3×5.8	0.26	6.3	0.44	230	UUD0J101MCL1GS
	150	6.3×5.8	0.26	9.45	0.44	230	UUD0J151MCL1GS
	220	6.3×5.8	0.26	13.86	0.44	230	UUD0J221MCL1GS
	330	6.3×7.7	0.26	20.79	0.34	280	UUD0J331MCL1GS
	470	8×10	0.28	29.61	0.17	450	UUD0J471MNL1GS
	680	8×10	0.28	42.84	0.17	450	UUD0J681MNL1GS
	1000	8×10	0.28	63	0.17	450	UUD0J102MNL1GS
	1500	10×10	0.28	94.5	0.09	670	UUD0J152MNL1GS
10 (1A)	22	4×5.8	0.20	3	1.80	80	UUD1A220MCL1GS
	27	5×5.8	0.20	3	0.76	150	UUD1A270MCL1GS
	33	5×5.8	0.20	3.3	0.76	150	UUD1A330MCL1GS
	47	6.3×5.8	0.20	4.7	0.44	230	UUD1A470MCL1GS
	56	6.3×5.8	0.20	5.6	0.44	230	UUD1A560MCL1GS
	68	6.3×5.8	0.20	6.8	0.44	230	UUD1A680MCL1GS
	100	6.3×5.8	0.20	10	0.44	230	UUD1A101MCL1GS
	150	6.3×5.8	0.20	15	0.44	230	UUD1A151MCL1GS
	220	6.3×7.7	0.20	22	0.34	280	UUD1A221MCL1GS
	330	8×10	0.24	33	0.17	450	UUD1A331MNL1GS
	470	8×10	0.24	47	0.17	450	UUD1A471MNL1GS
	680	10×10	0.24	68	0.09	670	UUD1A681MNL1GS
	1000	10×10	0.24	100	0.09	670	UUD1A102MNL1GS
16 (1C)	15	4×5.8	0.16	3	1.80	80	UUD1C150MCL1GS
	22	5×5.8	0.16	3.52	0.76	150	UUD1C220MCL1GS
	27	5×5.8	0.16	4.32	0.76	150	UUD1C270MCL1GS
	33	6.3×5.8	0.16	5.28	0.44	230	UUD1C330MCL1GS
	47	6.3×5.8	0.16	7.52	0.44	230	UUD1C470MCL1GS
	56	6.3×5.8	0.16	8.96	0.44	230	UUD1C560MCL1GS
	68	6.3×5.8	0.16	10.88	0.44	230	UUD1C680MCL1GS
	100	6.3×5.8	0.16	16	0.44	230	UUD1C101MCL1GS
	150	6.3×7.7	0.16	24	0.34	280	UUD1C151MCL1GS
	220	6.3×7.7	0.16	35.2	0.34	280	UUD1C221MCL1GS
	330	8×10	0.20	52.8	0.17	450	UUD1C331MNL1GS
	470	8×10	0.20	75.2	0.17	450	UUD1C471MNL1GS
	680	10×10	0.20	108.8	0.09	670	UUD1C681MNL1GS

UUD

■ 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	1.80	80	UUD1E100MCL1GS
	15	5×5.8	0.14	3.75	0.76	150	UUD1E150MCL1GS
	22	5×5.8	0.14	5.5	0.76	150	UUD1E220MCL1GS
	27	6.3×5.8	0.14	6.75	0.44	230	UUD1E270MCL1GS
	33	6.3×5.8	0.14	8.25	0.44	230	UUD1E330MCL1GS
	47	6.3×5.8	0.14	11.75	0.44	230	UUD1E470MCL1GS
	56	6.3×5.8	0.14	14	0.44	230	UUD1E560MCL1GS
	68	6.3×5.8	0.14	17	0.44	230	UUD1E680MCL1GS
	100	6.3×7.7	0.14	25	0.34	280	UUD1E101MCL1GS
	150	8×10	0.16	37.5	0.17	450	UUD1E151MNL1GS
	220	8×10	0.16	55	0.17	450	UUD1E221MNL1GS
	330	8×10	0.16	82.5	0.17	450	UUD1E331MNL1GS
	470	10×10	0.16	117.5	0.09	670	UUD1E471MNL1GS
35 (1V)	4.7	4×5.8	0.12	3	1.80	80	UUD1V47MCL1GS
	10	5×5.8	0.12	3.5	0.76	150	UUD1V100MCL1GS
	15	5×5.8	0.12	5.25	0.76	150	UUD1V150MCL1GS
	22	5×5.8	0.12	7.7	0.76	150	UUD1V220MCL1GS
	27	6.3×5.8	0.12	9.45	0.44	230	UUD1V270MCL1GS
	33	6.3×5.8	0.12	11.55	0.44	230	UUD1V330MCL1GS
	47	6.3×5.8	0.12	16.45	0.44	230	UUD1V470MCL1GS
	56	6.3×7.7	0.12	19.6	0.34	280	UUD1V560MCL1GS
	68	6.3×7.7	0.12	23.8	0.34	280	UUD1V680MCL1GS
	100	8×10	0.14	35	0.17	450	UUD1V101MNL1GS
	150	8×10	0.14	52.5	0.17	450	UUD1V151MNL1GS
	220	8×10	0.14	77	0.17	450	UUD1V221MNL1GS
	330	10×10	0.14	115.5	0.09	670	UUD1V331MNL1GS
50 (1H)	1	4×5.8	0.12	3	5.00	30	UUD1H010MCL1GS
	2.2	4×5.8	0.12	3	5.00	30	UUD1H2R2MCL1GS
	3.3	4×5.8	0.12	3	5.00	30	UUD1H3R3MCL1GS
	4.7	5×5.8	0.12	3	1.52	85	UUD1H47MCL1GS
	10	6.3×5.8	0.12	5	0.88	165	UUD1H100MCL1GS
	15	6.3×5.8	0.12	7.5	0.88	165	UUD1H150MCL1GS
	22	6.3×5.8	0.12	11	0.88	165	UUD1H220MCL1GS
	27	6.3×7.7	0.12	13.5	0.68	185	UUD1H270MCL1GS
	33	6.3×7.7	0.12	16.5	0.68	185	UUD1H330MCL1GS
	47	6.3×7.7	0.12	23.5	0.68	185	UUD1H470MCL1GS
	56	8×10	0.14	28	0.34	300	UUD1H560MNL1GS
	68	8×10	0.14	34	0.34	300	UUD1H680MNL1GS
	100	8×10	0.14	50	0.34	300	UUD1H101MNL1GS
	150	10×10	0.14	75	0.18	670	UUD1H151MNL1GS
220	10×10	0.14	110	0.18	670	UUD1H221MNL1GS	

- Taping specifications are given in page 20.
- Recommended land size, soldering by reflow are given in page 16, 17.
- Please refer to page 3 for the minimum order quantity.