nichicon

UCM

Chip Type, Low Impedance

For SMD | Low Impedance | Anti-Solvent Feature

- 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 compliant. Please contact us for details.

UCL UCD
Smaller
Higher capacitance
UCM
Smaller
Higher capacitance
UCV

■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	6.3 to 100V
Rated Capacitance Range	10 to 5100μF
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

Rated voltage (V)	6.3	10	16	25	35	50	63	80	100
tan δ (MAX.)	0.26	0.19	0.16	0.14	0.12	0.10	0.08	0.08	0.07

For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.(φ12.5 to φ18)

Stability at Low Temperature — Measurement frequency : 120Hz

Rated voltage (V)		6.3	10	16	25	35	50	63	80	100
Impedance ratio ZT / Z20 (MAX.)	Z−25°C / Z+20°C	2	2	2	2	2	2	2	2	2
	Z−40°C / Z+20°C	3	3	3	3	3	3	3	3	3
	Z−55°C / Z+20°C	4	4	4	3	3	3	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 5000 hours (2000 hours for φD ≦ 10) at 105°C.

Capacitance change	Within ±30% of the initial capacitance value
tan δ	200% or less than the initial specified value (For 63V or more : 300% 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.

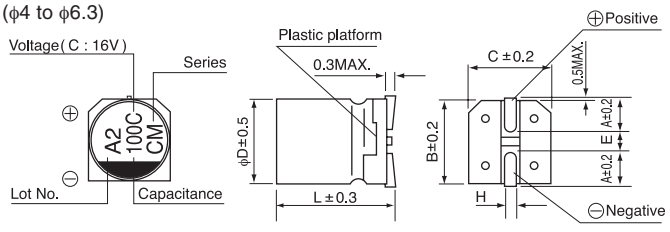
Capacitance change	Within ±10% of the initial capacitance value
tan δ	Less than or equal to the initial specified value
Leakage current	Less than or equal to the initial specified value

Marking

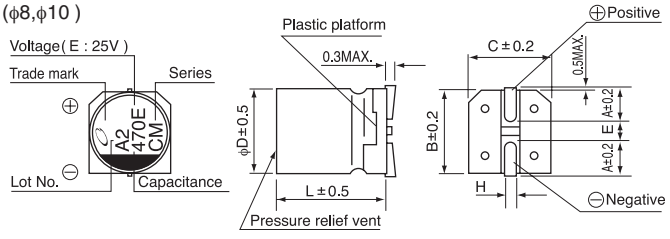
Black print on the case top.

■Chip Type

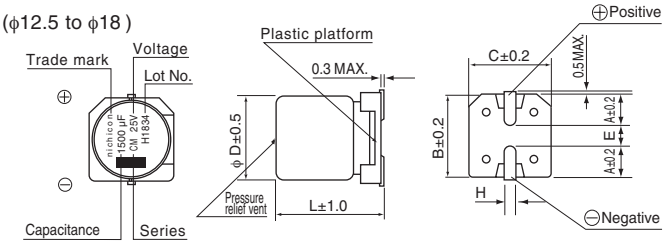
(φ4 to φ6.3)



(φ8,φ10)



(φ12.5 to φ18)



●Dimension table in next page.

Type numbering system (Example : 25V 1500μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	C	M	1	E	1	5	2	M	N	J	1	M	S

- 1 2 3 : Type
- 4 5 : Series name
- 6 7 8 : Rated voltage (25V)
- 9 : Rated capacitance (1500μF)
- 10 11 : Capacitance tolerance (±20%)
- 12 : Configuration※
- 13 14 : Size code
- Taping code

φ D	Code
4 to 10	GS
12.5 to 18	MS

※Configuration

φ D	Code
4 to 6.3	CL
8 · 10	NL
12.5 to 18	NJ

(mm)

φDxL	4 x 5.8	5 x 5.8	6.3 x 5.8	6.3 x 7.7	8 x 10	10 x 10	12.5 x 13.5	12.5 x 21	16 x 16.5	16 x 21.5	18 x 16.5	18 x 21.5
A	1.8	2.1	2.4	2.4	2.9	3.2	5.15	5.15	5.65	5.65	6.65	6.65
B	4.3	5.3	6.6	6.6	8.3	10.3	13.6	13.6	17.1	17.1	19.1	19.1
C	4.3	5.3	6.6	6.6	8.3	10.3	13.6	13.6	17.1	17.1	19.1	19.1
E	1	1.3	2.2	2.2	3.1	4.5	3.3	3.3	5.8	5.8	5.8	5.8
L	5.8	5.8	5.8	7.7	10	10	13.5	21	16.5	21.5	16.5	21.5
H	0.5 to 0.8	0.5 to 0.8	0.5 to 5.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

Voltage

V	6.3	10	16	25	35	50	63	80	100
Code	j	A	C	E	V	H	J	K	2A

● 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

UCM

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance (Ω) MAX. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
6.3 (0J)	100	4×5.8	0.26	6.3	1.00	160	UCM0J101MCL1GS
	220	5×5.8	0.26	13.86	0.36	240	UCM0J221MCL1GS
	330	6.3×5.8	0.26	20.79	0.26	300	UCM0J331MCL1GS
	470	6.3×7.7	0.26	29.61	0.16	600	UCM0J471MCL1GS
	680	6.3×7.7	0.26	42.84	0.16	600	UCM0J681MCL1GS
	1500	8×10	0.26	94.5	0.080	850	UCM0J152MNL1GS
	2200	10×10	0.26	138.6	0.060	1190	UCM0J222MNL1GS
10 (1A)	68	4×5.8	0.19	6.8	1.00	160	UCM1A680MCL1GS
	150	5×5.8	0.19	15	0.36	240	UCM1A151MCL1GS
	220	6.3×5.8	0.19	22	0.26	300	UCM1A221MCL1GS
	330	6.3×7.7	0.19	33	0.16	600	UCM1A331MCL1GS
	470	6.3×7.7	0.19	47	0.16	600	UCM1A471MCL1GS
	1000	8×10	0.19	100	0.080	850	UCM1A102MNL1GS
	1500	10×10	0.19	150	0.060	1190	UCM1A152MNL1GS
16 (1C)	47	4×5.8	0.16	7.52	1.00	160	UCM1C470MCL1GS
	68	5×5.8	0.16	10.88	0.36	240	UCM1C680MCL1GS
	100	5×5.8	0.16	16	0.36	240	UCM1C101MCL1GS
	150	6.3×5.8	0.16	24	0.26	300	UCM1C151MCL1GS
	220	6.3×5.8	0.16	35.2	0.26	300	UCM1C221MCL1GS
	330	6.3×7.7	0.16	52.8	0.16	600	UCM1C331MCL1GS
	680	8×10	0.16	108.8	0.080	850	UCM1C681MNL1GS
	1000	10×10	0.16	160	0.060	1190	UCM1C102MNL1GS
25 (1E)	22	4×5.8	0.14	5.5	1.00	160	UCM1E220MCL1GS
	33	4×5.8	0.14	8.25	1.00	160	UCM1E330MCL1GS
	47	5×5.8	0.14	11.75	0.36	240	UCM1E470MCL1GS
	68	5×5.8	0.14	17	0.36	240	UCM1E680MCL1GS
	100	6.3×5.8	0.14	25	0.26	300	UCM1E101MCL1GS
	150	6.3×7.7	0.14	37.5	0.16	600	UCM1E151MCL1GS
	220	6.3×7.7	0.14	55	0.16	600	UCM1E221MCL1GS
	470	8×10	0.14	117.5	0.080	850	UCM1E471MNL1GS
	820	10×10	0.14	205	0.060	1190	UCM1E821MNL1GS
	1500	12.5×13.5	0.14	375	0.058	1420	UCM1E152MNJ1MS
	2400	12.5×21	0.16	600	0.046	2080	UCM1E242MNJ1MS
	2700	16×16.5	0.16	675	0.047	1910	UCM1E272MNJ1MS
	3600	18×16.5	0.18	900	0.045	2060	UCM1E362MNJ1MS
	3900	16×21.5	0.18	975	0.034	2540	UCM1E392MNJ1MS
	5100	18×21.5	0.22	1275	0.032	2640	UCM1E512MNJ1MS
35 (1V)	22	4×5.8	0.12	7.7	1.00	160	UCM1V220MCL1GS
	33	5×5.8	0.12	11.55	0.36	240	UCM1V330MCL1GS
	47	5×5.8	0.12	16.45	0.36	240	UCM1V470MCL1GS
	68	6.3×5.8	0.12	23.8	0.26	300	UCM1V680MCL1GS
	100	6.3×5.8	0.12	35	0.26	300	UCM1V101MCL1GS
	150	6.3×7.7	0.12	52.5	0.16	600	UCM1V151MCL1GS
	330	8×10	0.12	115.5	0.080	850	UCM1V331MNL1GS
	560	10×10	0.12	196	0.060	1190	UCM1V561MNL1GS
	910	12.5×13.5	0.12	318.5	0.058	1420	UCM1V911MNJ1MS
	1600	12.5×21	0.12	560	0.046	2080	UCM1V162MNJ1MS
	1800	16×16.5	0.12	630	0.047	1910	UCM1V182MNJ1MS
	2200	18×16.5	0.14	770	0.045	2060	UCM1V222MNJ1MS
	2700	16×21.5	0.14	945	0.034	2540	UCM1V272MNJ1MS
	3600	18×21.5	0.16	1260	0.032	2640	UCM1V362MNJ1MS

UCM

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance (Ω) MAX. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
50 (1H)	10	4×5.8	0.10	5	2.30	85	UCM1H100MCL6GS
	10	5×5.8	0.10	5	0.88	165	UCM1H100MCL1GS
	22	5×5.8	0.10	11	0.88	165	UCM1H220MCL1GS
	47	6.3×5.8	0.10	23.5	0.68	195	UCM1H470MCL1GS
	100	6.3×7.7	0.10	50	0.34	350	UCM1H101MCL1GS
	220	8×10	0.10	110	0.18	670	UCM1H221MNL1GS
	330	10×10	0.10	165	0.12	900	UCM1H331MNL1GS
	470	12.5×13.5	0.10	235	0.12	1340	UCM1H471MNJ1MS
	750	12.5×21	0.10	375	0.080	1970	UCM1H751MNJ1MS
	820	16×16.5	0.10	410	0.080	1820	UCM1H821MNJ1MS
	1100	18×16.5	0.10	550	0.078	1980	UCM1H112MNJ1MS
	1200	16×21.5	0.10	600	0.050	2440	UCM1H122MNJ1MS
	1600	18×21.5	0.10	800	0.050	2550	UCM1H162MNJ1MS
63 (1J)	47	6.3×7.7	0.08	29.61	0.80	190	UCM1J470MCL1GS
	100	8×10	0.08	63	0.40	300	UCM1J101MNL1GS
	220	10×10	0.08	138.6	0.25	500	UCM1J221MNL1GS
	360	12.5×13.5	0.08	226.8	0.14	1250	UCM1J361MNJ1MS
	560	12.5×21	0.08	352.8	0.086	1850	UCM1J561MNJ1MS
	620	16×16.5	0.08	390.6	0.082	1740	UCM1J621MNJ1MS
	820	18×16.5	0.08	516.6	0.080	1880	UCM1J821MNJ1MS
	910	16×21.5	0.08	573.3	0.055	2330	UCM1J911MNJ1MS
	1200	18×21.5	0.08	756	0.054	2430	UCM1J122MNJ1MS
80 (1K)	33	6.3×7.7	0.08	26.4	0.80	190	UCM1K330MCL1GS
	68	8×10	0.08	54.4	0.40	300	UCM1K680MNL1GS
	100	10×10	0.08	80	0.25	500	UCM1K101MNL1GS
	220	12.5×13.5	0.08	176	0.18	1050	UCM1K221MNJ1MS
	360	12.5×21	0.08	288	0.11	1580	UCM1K361MNJ1MS
	390	16×16.5	0.08	312	0.10	1500	UCM1K391MNJ1MS
	510	18×16.5	0.08	408	0.098	1670	UCM1K511MNJ1MS
	560	16×21.5	0.08	448	0.066	2040	UCM1K561MNJ1MS
	750	18×21.5	0.08	600	0.063	2140	UCM1K751MNJ1MS
100 (2A)	130	12.5×13.5	0.07	130	0.18	1050	UCM2A131MNJ1MS
	220	12.5×21	0.07	220	0.11	1580	UCM2A221MNJ1MS
	240	16×16.5	0.07	240	0.10	1500	UCM2A241MNJ1MS
	330	18×16.5	0.07	330	0.098	1670	UCM2A331MNJ1MS
	390	16×21.5	0.07	390	0.066	2040	UCM2A391MNJ1MS
	510	18×21.5	0.07	510	0.063	2140	UCM2A511MNJ1MS

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