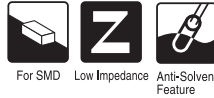


# ALUMINUM ELECTROLYTIC CAPACITORS

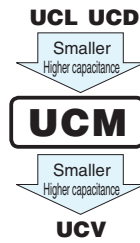
# UCM

Chip Type, Low Impedance



Expanded

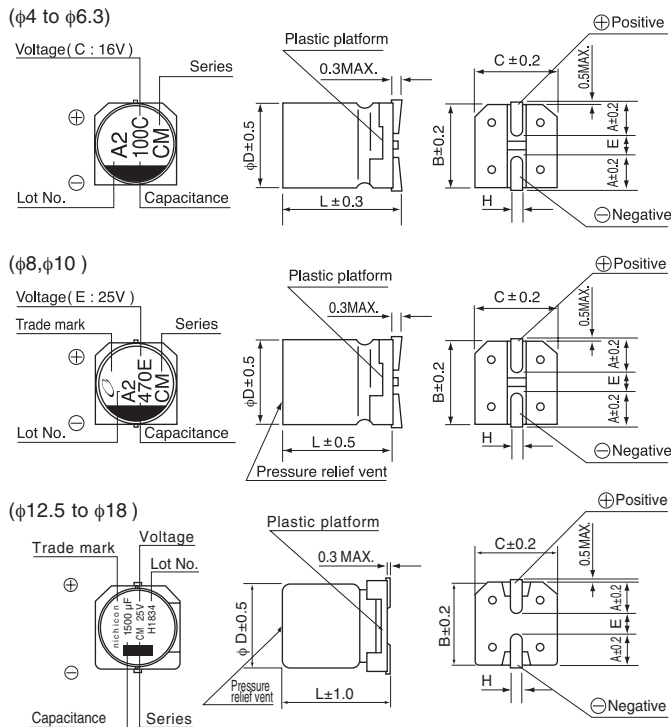
- Chip type, low impedance temperature range up to +105°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.



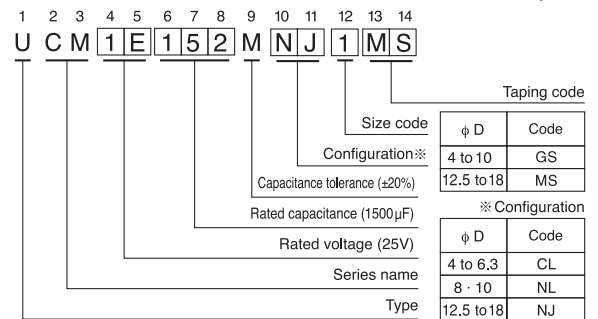
## Specifications

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																																						
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.26</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.08</td> <td>0.08</td> <td>0.07</td> </tr> </table> <p>For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. (φ12.5 to φ18)</p>	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																		
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Stability at Low Temperature	Measurement frequency : 120Hz																																						
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> </tr> <tr> <td rowspan="3">Impedance ratio ZT / Z20 (MAX.)</td> <td>Z-25°C / Z+20°C</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> <tr> <td>Z-55°C / Z+20°C</td> <td>4</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	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	Z-40°C / Z+20°C	3	3	3	3	3	3	3	3	Z-55°C / Z+20°C	4	4	4	3	3	3	3	3
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Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	2	2	2	2	2	2	2	2																														
	Z-40°C / Z+20°C	3	3	3	3	3	3	3	3																														
	Z-55°C / Z+20°C	4	4	4	3	3	3	3	3																														
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 5000 hours (2000 hours for φD ≤ 10) at 105°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>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																																
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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.																																						
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.																																						

## Chip Type



## Type numbering system (Example : 25V 1500μF)



φD x L	(mm)											
	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
Code	j	A	C	E	V	H	

● Dimension table in next page.

## UCM

### ■ Dimensions

Cap. ( $\mu$ F)	V Code	6.3			10			16			25			35			50		
		0J			1A			1C			1E			1V			1H		
10	100																	● 4□5.8   2.30   85 5□5.8   0.88   165	
22	220									4□5.8   1.00   160		4□5.8   1.00   160						5□5.8   0.88   165	
33	330									4□5.8   1.00   160		5□5.8   0.36   240							
47	470							4□5.8   1.00   160		5□5.8   0.36   240		5□5.8   0.36   240						6.3□5.8   0.68   195	
68	680					4□5.8   1.00   160		5□5.8   0.36   240		5□5.8   0.36   240		6.3□5.8   0.26   300							
100	101	4□5.8   1.00   160						5□5.8   0.36   240		6.3□5.8   0.26   300		6.3□5.8   0.26   300						6.3□7.7   0.34   350	
150	151					5□5.8   0.36   240		6.3□5.8   0.26   300		6.3□7.7   0.16   600		6.3□7.7   0.16   600							
220	221	5□5.8   0.36   240				6.3□5.8   0.26   300		6.3□5.8   0.26   300		6.3□7.7   0.16   600								8□10   0.18   670	
330	331	6.3□5.8   0.26   300				6.3□7.7   0.16   600		6.3□7.7   0.16   600										8□10   0.08   850	
470	471	6.3□7.7   0.16   600				6.3□7.7   0.16   600				8□10   0.08   850								10□10   0.12   900	
560	561																	12.5□13.5   0.12   1340	
680	681	6.3□7.7   0.16   600						8□10   0.08   850										10□10   0.06   1190	
750	751																	12.5□21   0.08   1970	
820	821									10□10   0.06   1190								16□16.5   0.08   1820	
910	911																	12.5□13.5   0.058   1420	
1000	102					8□10   0.08   850		10□10   0.06   1190											
1100	112																	18□16.5   0.078   1980	
1200	122																	16□21.5   0.05   2440	
1500	152	8□10   0.08   850				10□10   0.06   1190				12.5□13.5   0.058   1420									
1600	162																	12.5□21   0.046   2080	
1800	182																	16□16.5   0.047   1910	
2200	222	10□10   0.06   1190																18□16.5   0.045   2060	
2400	242									12.5□21   0.046   2080									
2700	272									16□16.5   0.047   1910		16□21.5   0.034   2540							
3600	362									18□16.5   0.045   2060		18□21.5   0.032   2640							
3900	392									16□21.5   0.034   2540									
5100	512									18□21.5   0.032   2640							Case size $\phi$ D□L (mm)   Impedance   Rated ripple		

● In this case, □ will be put at 12th digit of type numbering system.

Cap. ( $\mu$ F)	V Code	63			80			100		
		1J			1K			2A		
130	131							12.5□13.5   0.18   1050		
220	221					12.5□13.5   0.18   1050		12.5□21   0.11   1580		
240	241							16□16.5   0.10   1500		
330	331							18□16.5   0.098   1670		
360	361	12.5□13.5   0.14   1250				12.5□21   0.11   1580				
390	391					16□16.5   0.10   1500		16□21.5   0.066   2040		
510	511					18□16.5   0.098   1670		18□21.5   0.063   2140		
560	561	12.5□21   0.086   1850				16□21.5   0.066   2040				
620	621	16□16.5   0.082   1740								
750	751					18□21.5   0.063   2140				
820	821	18□16.5   0.08   1880								
910	911	16□21.5   0.055   2330								
1200	122	18□21.5   0.054   2430								Case size $\phi$ D□L (mm)   Impedance   Rated ripple

MAX. Impedance ( $\Omega$ ) at 20°C 100kHz, Rated ripple current(mArms) at 105°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.

### ● 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

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