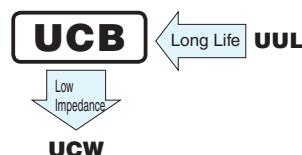


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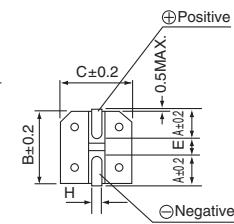
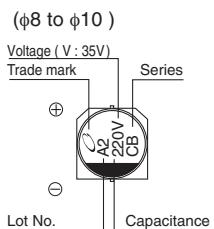
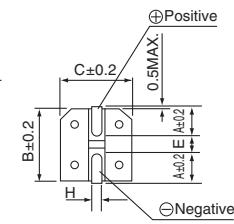
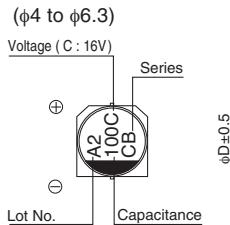
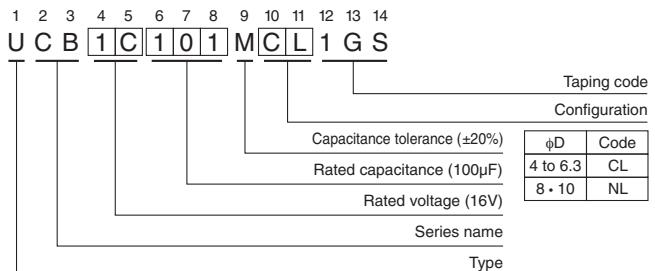
Chip Type, Long Life Assurance



- Chip type with load life of 7000 hours at +105°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).

**■ Specifications**

Item	Performance Characteristics																				
Category Temperature Range	-25 to +105°C																				
Rated Voltage Range	6.3 to 50V																				
Rated Capacitance Range	0.1 to 1000μF																				
Capacitance Tolerance	±20% at 120Hz, 20°C																				
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.03 CV or 4 (μA), whichever is greater.																				
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C <table border="1"> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> <tr> <th>tan δ (MAX.)</th> <td>0.32</td> <td>0.28</td> <td>0.26</td> <td>0.16</td> <td>0.14</td> <td>0.14</td> </tr> </table>							Rated voltage (V)	6.3	10	16	25	35	50	tan δ (MAX.)	0.32	0.28	0.26	0.16	0.14	0.14
Rated voltage (V)	6.3	10	16	25	35	50															
tan δ (MAX.)	0.32	0.28	0.26	0.16	0.14	0.14															
Stability at Low Temperature	Measurement frequency : 120Hz <table border="1"> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> <tr> <th>Impedance ratio ZT / Z20 (MAX.)</th> <td>Z-25°C / Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> </tr> </table>							Rated voltage (V)	6.3	10	16	25	35	50	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	4	3	2	2	2
Rated voltage (V)	6.3	10	16	25	35	50															
Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	4	3	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 7000 hours 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>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								
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																				
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.																				
Marking	Black print on the case top.																				

■ Chip Type**Type numbering system (Example : 16V 100μF)****Voltage**

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

φD × L	4 × 7	5 × 7	6.3 × 7	6.3 × 8.7	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	7.0	7.0	7.0	8.7	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

● Dimension table in next page.

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■Dimensions

Cap.(μ F)	V	6.3		10		16		25		35		50		
		Code	0J	1A	1C	1E	1V	1H	4x7	1.0	4x7	2.6	4x7	3.2
0.1	0R1								4x7	1.0				
0.22	R22								4x7	2.6				
0.33	R33								4x7	3.2				
0.47	R47								4x7	3.8				
1	010								4x7	6.2				
2.2	2R2								4x7	11				
3.3	3R3								4x7	14				
4.7	4R7								4x7	15				
10	100					4x7	18		5x7	25				
22	220	4x7	22			5x7	30		6.3x7	42				
33	330			5x7	35			6.3x7	48	6.3x8.7	57	8x10	77	
47	470	5x7	36			6.3x7	50	6.3x8.7	63			8x10	92	
100	101	6.3x7	60			6.3x8.7	81	8x10	116			10x10	151	
220	221	6.3x8.7	101	8x10	141					10x10	216			
330	331	8x10	160											
470	471					10x10	254							
1000	102	10x10	313									Case size ΦD × L (mm)	Rated ripple	

Rated ripple current (mA rms) at 105°C 120Hz

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

- 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.