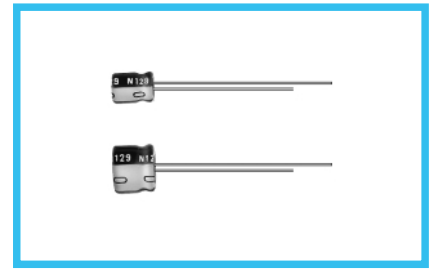
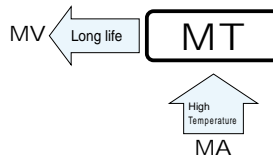


# ALUMINUM ELECTROLYTIC CAPACITORS

**MT** series 5mmL, Wide Temperature Range



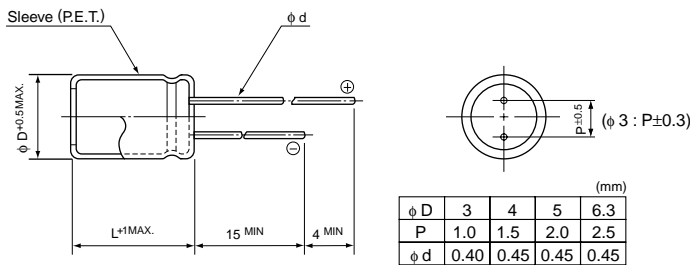
- Wide temperature range of -55 to +105°C, with 5mm height.
- Compliant to the RoHS directive (2002/95/EC).



## Specifications

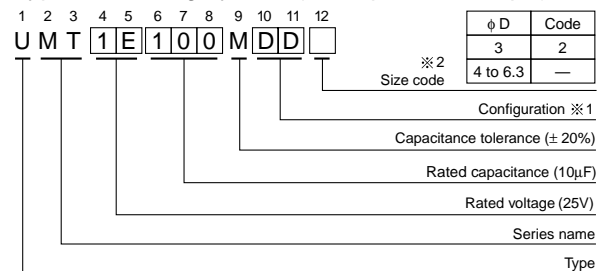
Item	Performance Characteristics																							
Category Temperature Range	-55 to +105°C																							
Voltage Range	4 to 50V																							
Rated Capacitance Range	0.1 to 100μF																							
Rated Capacitance Tolerance	±20% at 120Hz, 20°C																							
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.																							
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz, Temperature : 20°C																							
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>4</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.37</td> <td>0.28</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.13 (0.14)</td> <td>0.12 (0.14)</td> </tr> </table> Figures in ( ) are for φ 3 product.	Rated voltage (V)	4	6.3	10	16	25	35	50	tan δ (MAX.)	0.37	0.28	0.24	0.20	0.16	0.13 (0.14)	0.12 (0.14)							
Rated voltage (V)	4	6.3	10	16	25	35	50																	
tan δ (MAX.)	0.37	0.28	0.24	0.20	0.16	0.13 (0.14)	0.12 (0.14)																	
Stability at Low Temperature	Measurement frequency : 120Hz																							
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>4</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Impedance ratio</td> <td>Z-25°C / Z+20°C</td> <td>6</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>ZT / Z20 (MAX.)</td> <td>Z-40°C / Z+20°C</td> <td>12</td> <td>8</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table>	Rated voltage (V)	4	6.3	10	16	25	35	50	Impedance ratio	Z-25°C / Z+20°C	6	3	3	2	2	2	ZT / Z20 (MAX.)	Z-40°C / Z+20°C	12	8	5	4	3
Rated voltage (V)	4	6.3	10	16	25	35	50																	
Impedance ratio	Z-25°C / Z+20°C	6	3	3	2	2	2																	
ZT / Z20 (MAX.)	Z-40°C / Z+20°C	12	8	5	4	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 1000 hours at 105°C.																							
	Capacitance change	Within ±25% of the initial capacitance value (φ 3mm unit, and ≤ 16V) Within ±20% of the initial capacitance value (≥ 25V)																						
	tan δ	200% or less than the initial specified value																						
Shelf Life	Leakage current	Less than or equal to the initial specified value																						
	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.																							
Marking	Printed with white color letter on black sleeve.																							

## Radial Lead Type



• Please refer to page 20 about the end seal configuration.

## Type numbering system (Example : 25V 10μF)



※1 Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
3	CD
4 to 6.3	DD

※2 For φ 3mm unit, place size code of [2] to 12th digit.

## Dimensions

Cap. (μF)	Code	4		6.3		10		16		25		35		50	
		0G		0J		1A		1C		1E		1V		1H	
0.1	0R1													• 4×5	1.0
0.22	R22													• 4×5	2.6
0.33	R33													• 4×5	3.2
0.47	R47													• 4×5	3.8
1	010													• 4×5	6.2 (5.9)
2.2	2R2											3×5	7.5	• 4×5	11 (9)
3.3	3R3											• 4×5	11 (9)	4×5	14
4.7	4R7									• 4×5	13 (10)	4×5	15	5×5	19
10	100							• 4×5	18 (14)	5×5	23	5×5	25	6.3×5	30
22	220	4×5	22	4×5	22	5×5	27	5×5	30	6.3×5	38	6.3×5	48		
33	330	5×5	30	5×5	30	5×5	35	6.3×5	40	6.3×5	48				
47	470	5×5	36	5×5	36	6.3×5	46	6.3×5	50						
100	101	6.3×5	60	6.3×5	60									Case size φD×L (mm)	Rated ripple

Size φ3×5 is available for capacitors marked "•".  
Figures in ( ) are for φ 3 product.

Rated ripple current (mArms) 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

Please refer to page 20, 21, 22 about the formed or taped product spec.  
Please refer to page 4 for the minimum order quantity.