

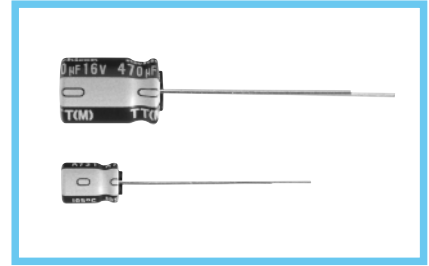
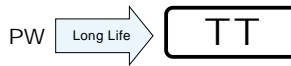
ALUMINUM ELECTROLYTIC CAPACITORS



Miniature Sized, Low Impedance,
High Reliability For Switching Power Supplies
series



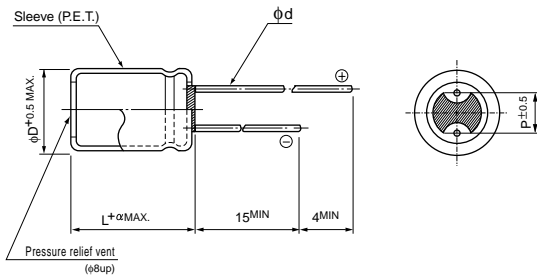
- Smaller case size and Long Life product.
- Adapted to the RoHS directive (2002/95/EC).



Specifications

Item	Performance Characteristics																						
Category Temperature Range	-40 to +105°C																						
Rated Voltage Range	6.3 to 50V																						
Rated Capacitance Range	1 to 470μF																						
Capacitance Tolerance	±20% at 120Hz, 20°C																						
Leakage Current	After 2 minutes' application of rated voltage, leakage current is less than 0.03CV or 3 (μA), whichever is greater.																						
tan δ	Measurement frequency : 120Hz, Temperature : 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> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.30</td> <td>0.28</td> <td>0.24</td> <td>0.18</td> <td>0.16</td> <td>0.14</td> </tr> </table>	Rated voltage (V)	6.3	10	16	25	35	50	tan δ (MAX.)	0.30	0.28	0.24	0.18	0.16	0.14								
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tan δ (MAX.)	0.30	0.28	0.24	0.18	0.16	0.14																	
Stability at Low Temperature	Measurement frequency : 120Hz																						
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Rated voltage (V)		6.3	10	16	25	35	50																
Impedance ratio	Z-25°C / Z+20°C	5	4	3	3	3	3																
	ZT / Z20 (MAX.)	10	10	8	6	4	4																
Endurance	After 5000 hours' application of rated voltage at 105°C, capacitors meet the characteristic requirements listed at right. <table border="1"> <tr> <td>Capacitance change</td> <td>Within ±30% of initial value</td> </tr> <tr> <td>tan δ</td> <td>300% or less of initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Initial specified value or less</td> </tr> </table>	Capacitance change	Within ±30% of initial value	tan δ	300% or less of initial specified value	Leakage current	Initial specified value or less																
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Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above.																						
Marking	Printed with white color letter on dark blown sleeve.																						

Radial Lead Type

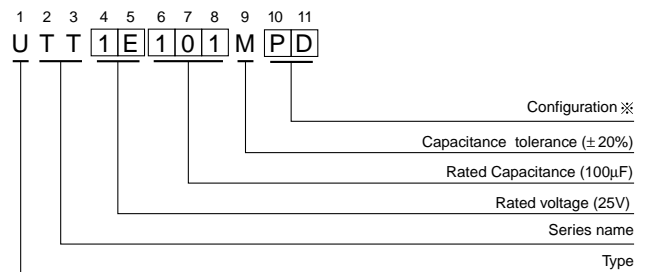


α	(L = 7) 1.0
	(L ≥ 9) 1.5

	(mm)			
φD	4	5	6.3	8
P	1.5	2.0	2.5	3.5
φd	0.45	0.45	0.5 (0.45)	0.6

() : Applied to 7mmL products

Type numbering system (Example : 25V 100μF)



※ Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
4	DD
5	
6.3	PD
8	

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

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

• Dimension table in next page.

■ Standard ratings

V (Code)		6.3 (0J)			10 (1A)			16 (1C)		
Cap. (μF)	Item Code	Case size φD × L (mm)	Impedance (Ω) MAX. 20°C / 100kHz	Rated ripple (mArms) 105°C / 100kHz	Case size φD × L (mm)	Impedance (Ω) MAX. 20°C / 100kHz	Rated ripple (mArms) 105°C / 100kHz	Case size φD × L (mm)	Impedance (Ω) MAX. 20°C / 100kHz	Rated ripple (mArms) 105°C / 100kHz
10	100							4 × 7	7.4	46
22	220	4 × 7	7.4	46				5 × 7	4	74
33	330				5 × 7	4	74			
47	470	5 × 7	4	74				6.3 × 7	2.1	120
100	101	6.3 × 7	2.1	120				6.3 × 9	1.1	163
150	151				6.3 × 9	1.1	163	8 × 9	0.68	230
220	221	6.3 × 9	1.1	163	8 × 9	0.68	230	8 × 9	0.68	230
330	331	8 × 9	0.68	230				8 × 9	0.68	230
470	471	8 × 9	0.68	230				8 × 11.5	0.40	298

V (Code)		25 (1E)			35 (1V)			50 (1H)		
Cap. (μF)	Item Code	Case size φD × L (mm)	Impedance (Ω) MAX. 20°C / 100kHz	Rated ripple (mArms) 105°C / 100kHz	Case size φD × L (mm)	Impedance (Ω) MAX. 20°C / 100kHz	Rated ripple (mArms) 105°C / 100kHz	Case size φD × L (mm)	Impedance (Ω) MAX. 20°C / 100kHz	Rated ripple (mArms) 105°C / 100kHz
1	010							4 × 7	30	23
2.2	2R2							4 × 7	23	26
3.3	3R3							4 × 7	20	29
4.7	4R7				4 × 7	7.4	37	5 × 7	14	37
10	100				5 × 7	4	74	6.3 × 7	4.4	84
22	220	5 × 7	4	74	6.3 × 7	2.1	120	6.3 × 9	2.4	112
33	330	6.3 × 7	2.1	120	6.3 × 9	1.1	163			
47	470	6.3 × 9	1.1	163	6.3 × 9	1.1	163	8 × 9	1.4	162
100	101	8 × 9	0.68	230						
150	151									
220	221	8 × 11.5	0.40	298						
330	331	8 × 11.5	0.40	298						

● Frequency coefficient of rated ripple current

Cap. (μF)	Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	100kHz
Less than 4.7		0.25	0.30	0.50	0.70	0.90	1.00
10 to 47		0.30	0.40	0.60	0.75	0.90	1.00
100 to 470		0.60	0.60	0.70	0.80	0.90	1.00