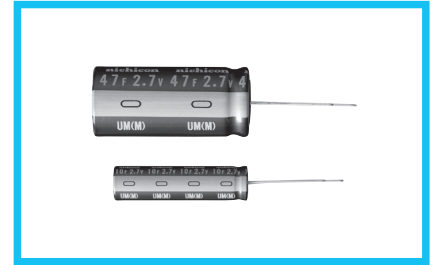
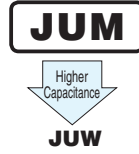


JUM

Radial Lead Type, Standard

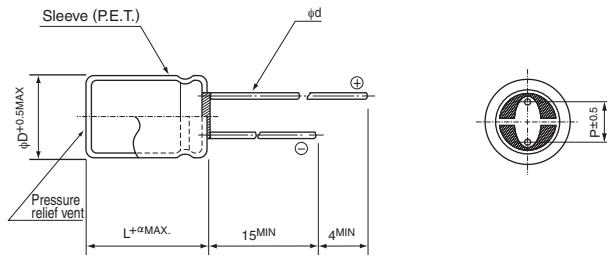
- Standard type (2.7V).
- Suitable for quick charge and discharge.
- Wide temperature range (-25 to +70°C).
- Compliant to the RoHS directive (2011/65/EU).



Specifications

Item	Performance Characteristics					
Category Temperature Range	-25 to +70°C					
Rated Voltage Range	2.7V					
Rated Capacitance Range	1 to 47F See Note					
Capacitance Tolerance	±20%, 20°C					
Stability at Low Temperature	Capacitance (-25°C) / Capacitance (+20°C) × 100 ≥ 70% ESR (-25°C) / ESR (+20°C) ≤ 4					
ESR, DCR*	Refer to the table below (20°C). *DC internal resistance					
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 70°C.	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±30% of the initial capacitance value</td> </tr> <tr> <td>ESR</td> <td>300% or less than the initial specified value</td> </tr> </table>	Capacitance change	Within ±30% of the initial capacitance value	ESR	300% or less than the initial specified value
	Capacitance change	Within ±30% of the initial capacitance value				
ESR	300% or less than the initial specified value					
Shelf Life	The specifications listed at right shall be met when the capacitors are restored to 20°C after storing the capacitors under no load for 1000 hours at 70°C.	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±30% of the initial capacitance value</td> </tr> <tr> <td>ESR</td> <td>300% or less than the initial specified value</td> </tr> </table>	Capacitance change	Within ±30% of the initial capacitance value	ESR	300% or less than the initial specified value
	Capacitance change	Within ±30% of the initial capacitance value				
ESR	300% or less than the initial specified value					
Humidity Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 500 hours at 40°C 90%RH.	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±30% of the initial capacitance value</td> </tr> <tr> <td>ESR</td> <td>300% or less than the initial specified value</td> </tr> </table>	Capacitance change	Within ±30% of the initial capacitance value	ESR	300% or less than the initial specified value
	Capacitance change	Within ±30% of the initial capacitance value				
ESR	300% or less than the initial specified value					
Marking	Printed with white color letter on black sleeve.					

Drawing

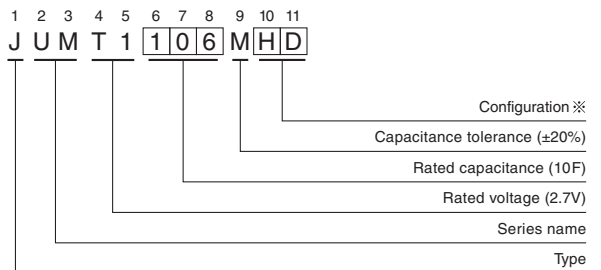


	(mm)				
φD	8	10	12.5	16	18
P	3.5	5.0	5.0	7.5	7.5
φd	0.6	0.6	0.6*	0.8	0.8

※ In case L>25 for the φ12.5 dia unit, lead dia φd=0.8

α	(φD < 10) 1.5
	(φD ≥ 10) 2.0

Type numbering system (Example : 2.7V 10F)



※ Configuration

φ D	Pb-free lead finishing Pb-free PET sleeve
8 - 10	PD
12.5 to 18	HD

• Please refer to page 20 for end seal configuration.

Dimensions

Rated Voltage (Code)	Rated Capacitance (F)	Code	ESR (Ω) (at 1kHz)	DCR※ (Typical (Ω))	Case size φ D × L (mm)
2.7V (T1)	1	105	1.8	3	8 × 11.5
	2.2	225	1.0	1.3	8 × 20
	3.3	335	0.6	1.0	10 × 20
	4.7	475	0.4	0.6	12.5 × 20
	10	106	0.2	0.25	12.5 × 31.5
	22	226	0.07	0.13	16 × 31.5
	33	336	0.06	0.08	18 × 31.5
	47	476	0.05	0.06	18 × 40

Note :

The capacitance calculated from discharge time (ΔT) with constant current (i) after 30minute charge with rated voltage (2.7V).

The discharge current (i) is 0.01 × rated capacitance (F).

The discharge time (ΔT) measured between 2V and 1V with constant current.

The capacitance calculated below.

$$\text{Capacitance (F)} = i \times \Delta T$$

※ The listed DCR value is typical and therefore not a guaranteed value.