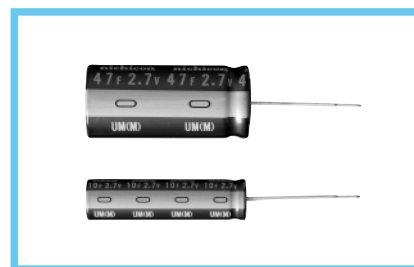
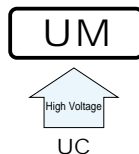


## UM series Radial Lead Type, High Voltage

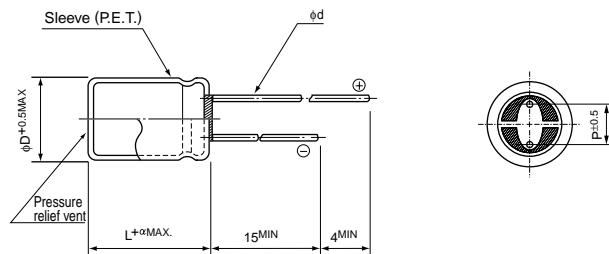
- High voltage type (2.7V).
- Suitable for quick charge and discharge.
- Wide temperature range (-25 to +70°C).
- Adapted to the RoHS directive (2002/95/EC).



### Specifications

Item	Performance Characteristics	
Category Temperature Range	-25 to +70°C	
Rated Voltage Range	2.7V	
Rated Capacitance Range	0.47 to 47F See Note	
Capacitance Tolerance	±20% , 20°C	
Leakage Current	0.5C (mA) [ C : Rated Capacitance(F)] (After 30 minutes' application of rated voltage, 2.7V)	
Stability at Low Temperature	Capacitance (-25°C) / Capacitance (+20°C) ×100 ≧ 70%	
ESR, DCR*	Refer to the list 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.	
	Capacitance change	Within ±30% of initial value
	ESR	300% or less of 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.	
	Capacitance change	Within ±30% of initial value
	ESR	300% or less of initial specified value
Marking	Printed with white color letter on black sleeve.	
	Leakage current	Less than or equal to the initial specified value
	Leakage current	Less than or equal to the initial specified value

### Drawing



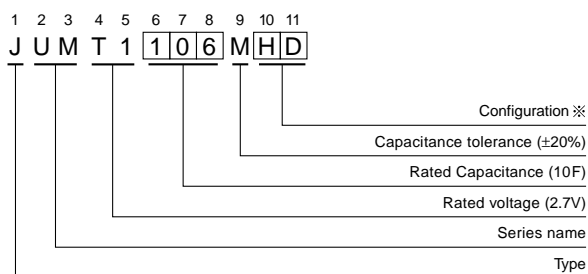
	(mm)					
φD	6.3	8	10	12.5	16	18
P	2.5	3.5	5.0	5.0	7.5	7.5
φd	0.5	0.6	0.6	0.6*	0.8	0.8

α	(φD < 10)
	1.5
α	(φD ≧ 10)
	2.0

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

• Please refer to page 20 for end seal configuration.

### Type numbering system (Example : 2.7V 10F)



※ Configuration	
φ D	Pb-free lead finishing Pb-free PET sleeve
6.3	ED
8 · 10	PD
12.5 to 18	HD

### Dimensions

Rated Voltage (Code)	Rated Capacitance (F)	Code	ESR (Ω) (at 1kHz)	DCR (Ω)	Case size φ D × L (mm)
2.7V (T1)	0.47	474	4	9	6.3 × 9
	1.0	105	2	5	8 × 11.5
	2.2	225	2	2	8 × 20
	3.3	335	1	1.5	10 × 20
	4.7	475	0.4	1	12.5 × 20
	10	106	0.2	0.3	12.5 × 31.5
	22	226	0.2	0.2	16 × 31.5
	33	336	0.1	0.1	18 × 31.5
	47	476	0.1	0.1	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 × F (rated capacitance).

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

The capacitance calculated below.

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