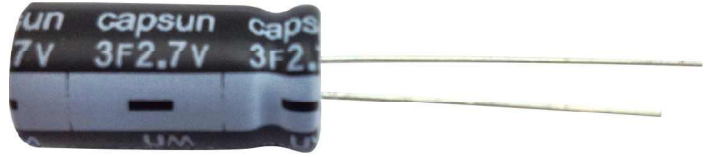


UM Series

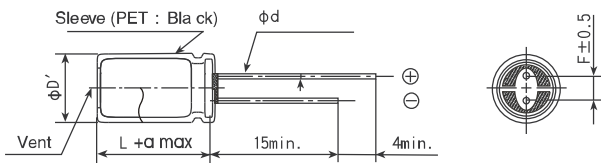
- High voltage type (2.7V).
- Suitable for quick charge and discharge.
- Wide temperature range (- 25 to +70° C).
- Compliant to the RoHS directive (2002/95/EC).



◆ Main Technology Performance

Item	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%		
Endurance	Refer to the table below (20°C). *DC internal resistance		
Shelf Life	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 the initial capacitance value
		ESR	300% or less than the initial specified value
		Leakage current	Less than or equal to the initial specified value
Marking	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 the initial capacitance value
		ESR	300% or less than the initial specified value
		Leakage current	Less than or equal to the initial specified value
ESR, DCR*	Printed with white color letter on black sleeve.		

◆ DIMENSIONS [mm]

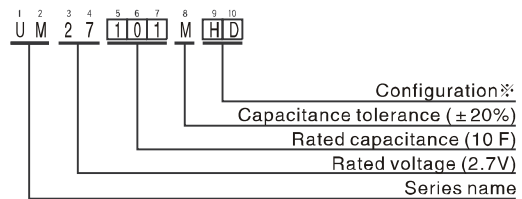


		(mm)					
φD	6.3	8	10	12.5	16	18	
P	2.5	3.5	5.0	5.0	7.5	7.5	
φD	0.5	0.6	0.6	※0.6	0.8	0.8	

a	(φD < 10)	(φD ≥ 10)
	1.5	2.0

※In case L>25 for the φ 12.5 dia unit, lead dia φ d=0.8

◆ PART NUMBERING SYSTEM (Example : 2.7V 10F)



※ Configuration

φD	Pb-free lead finishing Pb-free PET sleeve
6.3	ED
8.10	PD
12.5~18	HD

◆ Dimensions

Rated Voltage (Code)	Rated Capacitance (F)	Code	ESR (Ω) (at 1kHz)	DCR※ Typical (Ω)	Case size φ D × L (mm)
2.7V (T1)	0.47	R47	4	6	6.3 × 9
	1.0	1R0	2	3	8 × 11.5
	2.2	2R2	2	1.3	8 × 20
	3.3	3R3	1	1.0	10 × 20
	4.7	4R7	0.4	0.3	12.5 × 20
	10	101	0.2	0.25	12.5 × 31.5
	22	220	0.2	0.13	16 × 31.5
	33	330	0.1	0.08	18 × 31.5
	47	470	0.1	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.