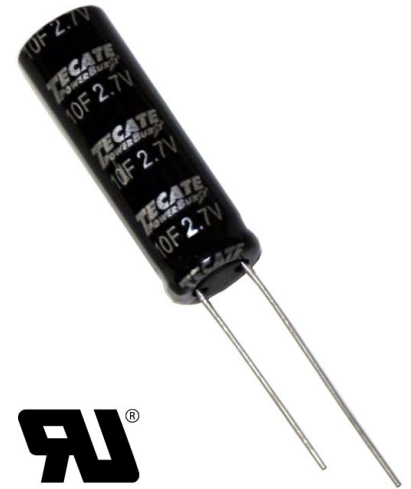


FEATURES

- Small size and low resistance
- Quick charge and discharge
- RoHS compliant
- UL recognized

APPLICATIONS

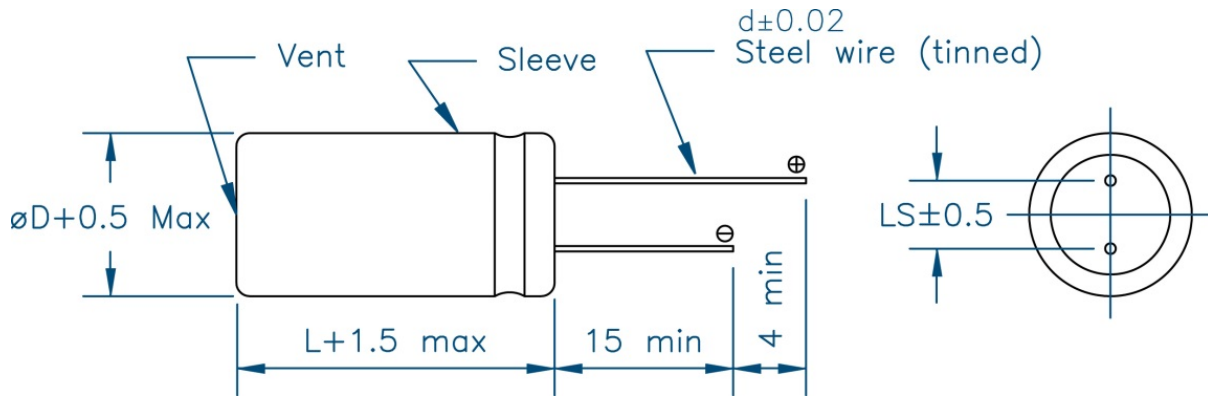
- Pulse power demand
- Hybrid battery packs
- Portable electronic devices



GENERAL SPECIFICATIONS

Item	Performance
Operating temperature	-40°C to +65°C @ 2.7V -40°C to +85°C @ 2.3V
Storage temperature	-40°C to +70°C
Capacitance	3.3F
Capacitance tolerance	-10/+20%
Rated voltage	2.7V/2.3V
Surge voltage	2.85V
Temperature characteristics	Capacitance change: Within ±5% of initial measured value at +25°C (-40°C to +65°C) Internal resistance: Within ±50% of initial measured value at +25°C (at -40°C)
Endurance (At rated voltage & max. operating temp)	After 1000 hours: Capacitance change: ±30% of initial rated value Internal resistance: Within 2 times of initial specified value
Load life (At rated voltage & 25°C)	After 10 years: Capacitance change: Within ±30 % of initial rated value Internal resistance: Within 2 times of initial specified value
Cycle life (From rated voltage to 1/2 rated voltage at 25°C)	After 500,000 cycles: Capacitance change: Within ±30 % of initial rated value Internal resistance: Within 2 times of initial specified value
Shelf life	After 1000 hours storage, at 70°C without load, the capacitor shall meet the specified endurance limits.

DIMENSIONS (mm)



STANDARD PRODUCTS

Part Number	Cap. (F)	ESR DC (mΩ)	ESR AC (mΩ) (1 KHz)	Leakage Current (mA) (72 hrs @ 25C)	Dimensions (mm)				Max Peak Current (A)	Weight/Unit (grams)
					D	L	d	LS		
TPL-3.3/10X20F	3.3	290	150	0.012	10	20	0.6	5	2.28	2

PART NUMBER EXAMPLE

TPL	-	3.3	/	10X20	F
Type		Capacitance Code (F)		Size (DxL)	RoHS Compliant