

TYPE TPL

GENERAL PURPOSE RADIAL LEAD ULTRACAPACITOR CELLS

FEATURES

- Small size and low resistance
- Quick charge and discharge
- RoHS compliant
- UL recognized
 Scaled for improved
- Sealed for improved performance in elevated humidity environments

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	22F								
Rated voltage	2.7 VDC / 2.3 VDC								
Surge voltage	2.85 VDC								
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	After 1000 hours:								
(At rated voltage & max. operating	Capacitance change: ±30% of initial rated value								
temp)	Internal resistance: Within 2 times of initial specified value								
Projected 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								
Projected cycle life	After 500,000 cycles:								
(From rated voltage to 1/2 rated Capacitance change: Within ±30 % of initial rated value									
voltage at 25°C)	Internal resistance: Within 2 times of initial specified value								
Shelf life	After 2 years at 25°C without load, the capacitor shall meet the specified endurance limits.								
Biased humidity life	3000 hours of continuous charging at VR, 60°C and 90%RH for mechanical integrity								



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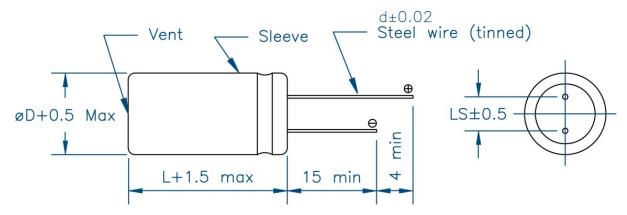


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DIMENSIONS



STANDARD PRODUCTS

Part Number	Nom. GMV Cap. (F) (F)*	ESR DC (mΩ)	ESR AC (mΩ) (1 KHz)	Leakage Current (mA) (72 hrs @ 25C)	Dimensions (mm)				Rated	Weight/Unit	
					D	L	d	LS	Current (A)	(grams)	
TPL-22/12X35F	22	19.8	45	30	0.055	12.5	35.5	0.8	5.3	14.92	6.5

*NOTE: GMV = Guaranteed Minimum Value.