

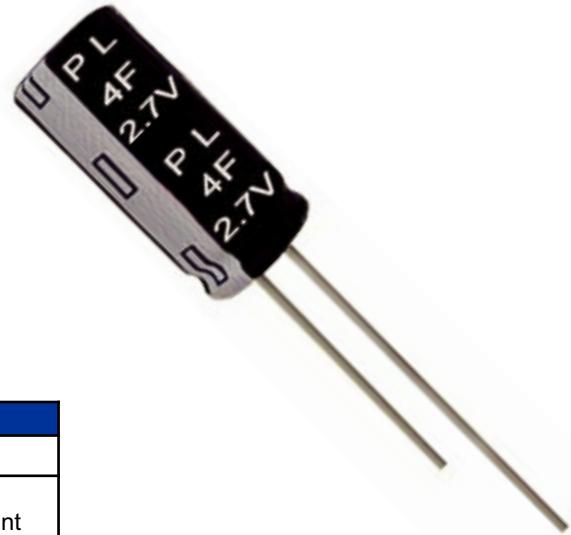
FEATURES

- Small size and low-resistance
- Quick charge & discharge
- RoHS compliant

POWERBURST[®]
ULTRACAPACITORS

APPLICATIONS

- Pulse power demand
- Hybrid battery packs
- Portable Electronic Devices



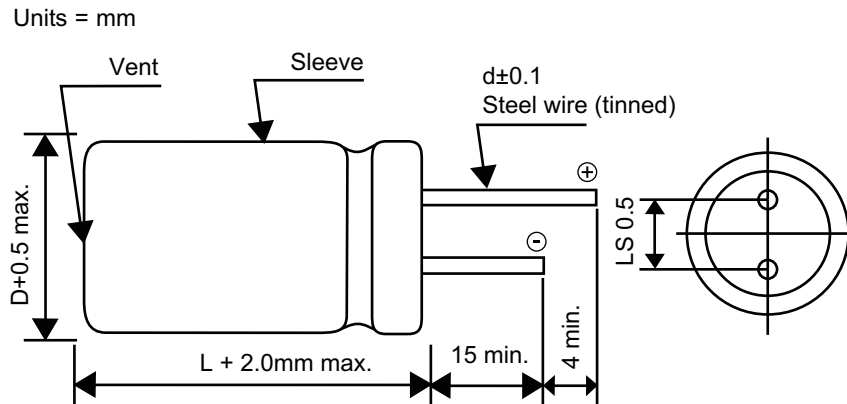
PART NUMBERING

Part Number Example: TPL-4.0/10X20F					
TPL	-	4.0	/	10X20	F
Type		Capacitance Code (F)		Size (D X L)	RoHs Compliant

SPECIFICATIONS

Item	Performance		
Operating Temperature	-40 to +65C		
Storage temperature	-40 to +70C		
Rated Voltage	2.7 VDC		
Surge voltage	2.85 VDC		
Capacitance Range	0.5F to 70.0F		
Capacitance tolerance	-10%, +20%		
Lifetime at 25C	10 years	Capacitance change	+/- 30 % of initial rated value
		Internal resistance	Within 2 times of initial specified value
Cycle life at 25C	500,000 cycles	Capacitance change	+/- 30 % of initial rated value
		Internal resistance	Within 2 times of initial specified value
Endurance	After 1000 hrs. application of 2.7V DC at 65C, the capacitor shall meet the following limits:		
	Capacitance change	+/- 30% of initial rated value	
	Internal resistance	Within 2 times of initial specified value	
Shelf life	After 1000 hrs storage, at 65C without load, the capacitor shall meet the specified endurance limits		
Humidity test	After 500 hrs storage at 40C+/-2C, 90 to 95% RH, the capacitor shall meet the specified endurance limits		

DIMENSIONS



STANDARD PRODUCTS

Part Numbers	CAP. (F)	ESR/DC (mΩ)	ESR/AC 1kHz (mΩ)	Leakage Current (mA) (72 hrs @ 25C)	Size (mm)				Rated Voltage (VDC)	Typical Pkg. Qty.	Weight/unit (grams)
					D	L	d	LS			
TPL-0.5/8X12F	0.5	1500	700	0.002	8	12	0.6	3.8	2.7	200	1
TPL-1.0/8X12F	1	550	250	0.006	8	12	0.6	3.8	2.7	200	1
TPL-1.5/8X14F	1.5	400	200	0.008	8	14	0.6	3.8	2.7	200	1.2
TPL-2.0/8X16F	2	350	150	0.010	8	16	0.6	3.8	2.7	200	1.3
TPL-3.3/8X20F	3.3	300	120	0.012	8	20	0.6	3.8	2.7	200	1.5
TPL-3.3/10X20F	3.3	300	120	0.012	10	20	0.6	5.3	2.7	100	1.8
TPL-4.0/10X20F	4	250	150	0.014	10	20	0.6	5.3	2.7	100	2
TPL-5.0/10X20F	5	150	90	0.015	10	20	0.6	5.3	2.7	100	2.2
TPL-6.0/10X20F	6	100	90	0.016	10	20	0.6	5.3	2.7	100	2.4
TPL-8.0/10X25F	8	80	70	0.020	10	25	0.6	5.3	2.7	100	3
TPL-10/10X30F	10	70	50	0.030	10	30	0.6	5.3	2.7	100	4
TPL-15/12X31F	15	60	40	0.035	12.5	31.5	0.8	5.5	2.7	50	5
TPL-22/12X35F	22	35	25	0.045	12.5	35.5	0.8	5.5	2.7	50	6.5
TPL-25/16X26F	25	30	18	0.045	16	26	0.8	7.8	2.7	60	7
TPL-30/16X31F	30	28	16	0.065	16	31.5	0.8	7.8	2.7	60	8.5
TPL-50/18X41F	50	16	10	0.075	18	41	1	8	2.7	60	14
TPL-60/18X45F	60	15	10	0.100	18	45	1	8	2.7	60	16
TPL-70/18X45F	70	15	10	0.100	18	45	1	8	2.7	60	16