

PC10
PC10-90
PC10-270

PC10HT
PC10HT-90
PC10HT-270



Now containing Maxwell Technologies patented electrode

FEATURES AND BENEFITS

- Over 500,000 duty cycles with 10 year life capability
- Hermetically sealed, stainless steel construction
- Low profile prismatic design
- Higher energy vs electrolytic capacitors
- Higher power vs batteries
-  compliant 

TYPICAL APPLICATIONS

- Automatic meter readers
- Automatic subsystems
- Back up power for SSD and NV-DIMM
- Digital cameras and consumer electronics
- Wireless transmissions
- NASA space qualified

PRODUCT SPECIFICATIONS

	PC10, PC10-90, PC10-270	PC10HT, PC10HT-90, PC10HT-270
ELECTRICAL		
Capacitance		
Nominal Capacitance	10 F	10 F
Tolerance capacitance	-10% / +20%	-10% / +20%
Voltage		
Rated Voltage	2.5 V	2.2 V
Resistance		
ESR, DC (max., room temperature)	0.18 Ω	0.18 Ω
ESR, AC (max., room temperature, 1kHz)	130 m Ω	130 m Ω
Current		
Maximum continuous current	2.5 A	2.5 A
Maximum peak current, 1 sec.	12.5 A	12.5 A
Leakage current (After 72 hours at 25°C. Initial leakage current can be higher.)	0.04 mA	0.04 mA
TEMPERATURE		
Operating temperature range (Cell case temperature)	-40°C to +70°C	-40°C to +85°C
Storage temperature range (Stored uncharged)	-40°C to +85°C	-40°C to +85°C
POWER AND ENERGY		
Usable power density, Pd	660 W/kg	510 W/kg
Usable power	3.6 W	3.2 W
Impedance match power, Pmax	1,900 W/kg	1,470 W/kg
Gravimetric energy density, Emax	1.38 Wh/kg	1.07 Wh/kg
Energy available	8.7 mW	6.7 mW

PRODUCT SPECIFICATIONS (cont.)

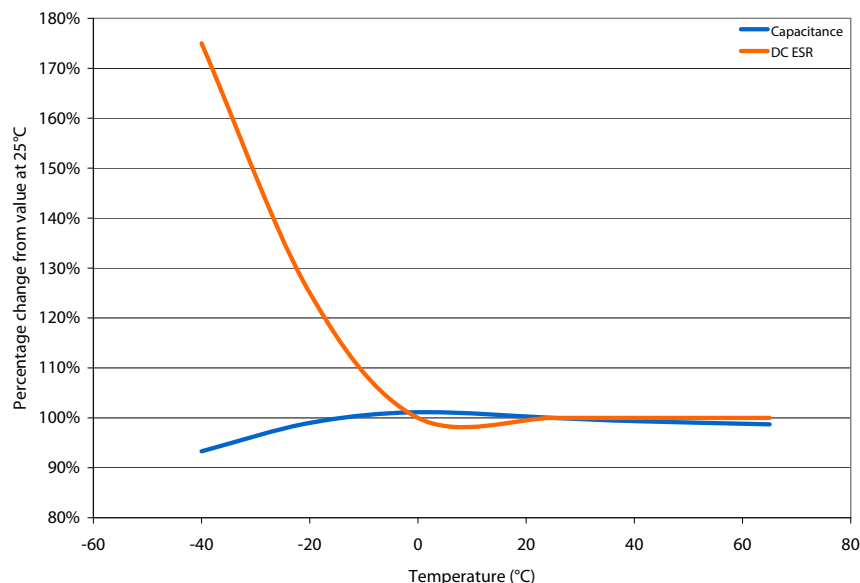
	PC10, PC10-90, PC10-270	PC10HT, PC10HT-90, PC10HT-270
DC LIFESPAN		
Endurance (at rated voltage and temperature)	3,000 hours	1,500 hours
Capacitance change (% decrease from rated value)	≤20%	≤20%
ESR change (% increase from rated value)	≤100%	≤100%
Life Test (at rated voltage and 20°C)	10 years	10 years
Capacitance change (% decrease from rated value)	≤20%	≤20%
ESR change (% increase from rated value)	≤100%	≤100%
Cycle Test (Number of cycles)	500,000	500,000
Capacitance change (% decrease from rated value)	≤20%	≤20%
ESR change (% increase from rated value)	≤100%	≤100%
Shelf Life	3 years	3 years
Capacitance change (% decrease change from rated value)	≤10%	≤10%
ESR change (% increase change from rated value)	≤50%	≤50%
CONNECTION		
Power output terminals	Straight lead (PC10) 90° bent lead (PC10-90) 270° bent lead (PC10-270)	Straight lead (PC10HT) 90° bent lead (PC10HT-90) 270° bent lead (PC10HT-270)
Monitoring and control	N/A	N/A
Cell management	N/A	N/A
PHYSICAL		
Dimensions	See drawings	See drawings
Weight	6.3g	6.3g
SAFETY		
Short circuit current (Current possible with short circuit from rated voltage. Do not use as an operating current.)	13.9 A	12.2 A
Certifications	UL810A	UL810A
Surge voltage (Voltage above this level can cause catastrophic failure.)	2.7 V	2.3 V

TYPICAL CHARACTERISTICS

PC10, PC10-90, PC10-270

PC10HT, PC10HT-90, PC10HT-270

THERMAL CHARACTERISTICS



ADDITIONAL TECHNICAL INFORMATION

Capacitance and ESR, DC measured per document no. 1007239 available at www.maxwell.com. Unless specified, all specifications are at 25°C.

$$\text{Short circuit current (Isc)} = \frac{V_{\text{RATED}}}{\text{ESR(DC)}}$$

$$\text{Emax} = \frac{\frac{1}{2} CV^2}{3,600 \times \text{mass}}$$

$$\text{Pmax} = \frac{V^2}{4 \times \text{ESR(DC)} \times \text{mass}}$$

$$\text{Pd} = \frac{0.12V^2}{\text{ESR(DC)} \times \text{mass}}$$

$$\text{Maximum peak current (1 sec)} = \frac{\frac{1}{2} CV}{C \times \text{ESR(DC)} + 1}$$

MOUNTING RECOMMENDATIONS

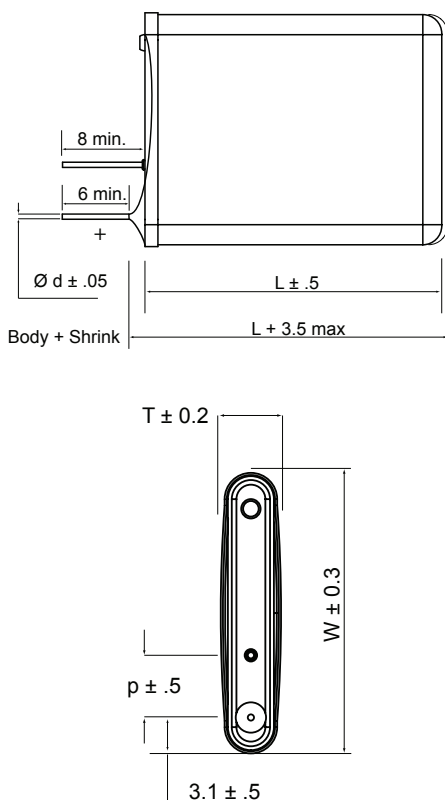
All leads are tinned from 1.5mm of capacitor body. It is recommended that parts stay within protective packaging until ready to use. Parts may be soldered or wave soldered. Request supplemental information related to mounting instructions if necessary. Components should not be operated outside recommended limits.

MARKINGS

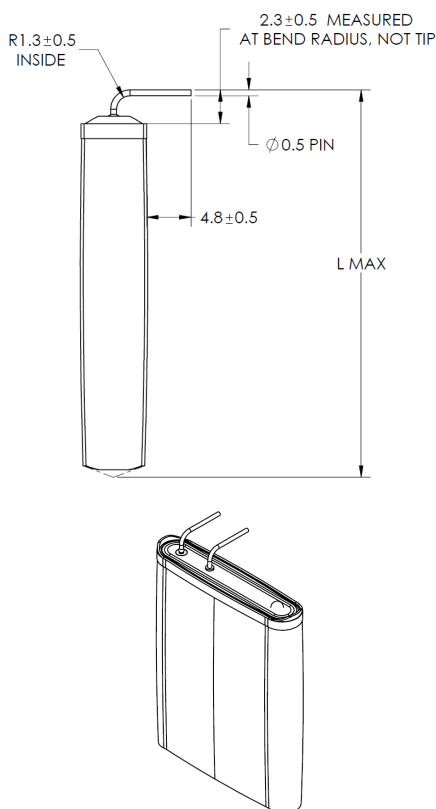
Products are marked with the following information: Rated capacitance, rated voltage, product number, name of manufacturer, positive and negative terminal, warning marking, serial number.

DIMENSIONS

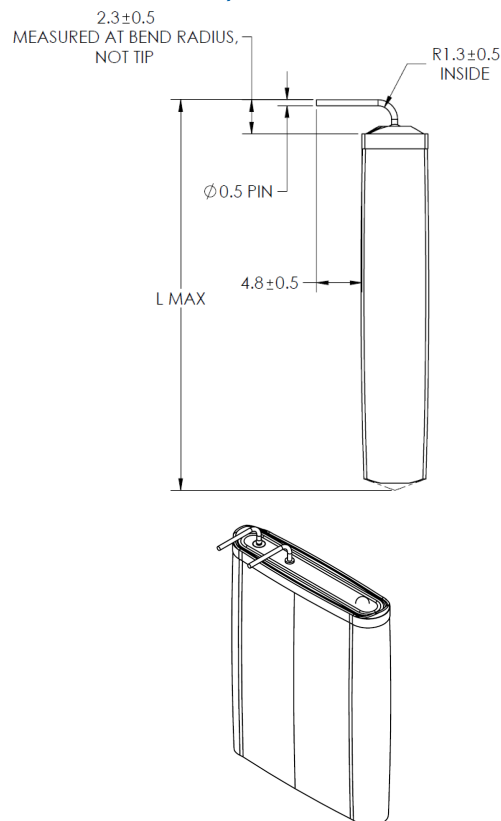
PC10, PC10HT



PC10-90, PC10HT-90



PC10-270, PC10HT-270



Part Description	Vol (l)	Dimensions (mm)					Package quantity
		L	W	T	d	p	
PC10, PC10HT	0.003	29.6	23.6	4.8	0.5	5.1	1920
PC10-90, PC10HT-90	0.003	35.9	23.6	4.8	0.5	5.1	1824
PC10-270, PC10HT-270	0.003	35.9	23.6	4.8	0.5	5.1	1824

Product dimensions are for reference only unless otherwise identified. Product dimensions and specifications may change without notice. Please contact Maxwell Technologies directly for any technical specifications critical to application.

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