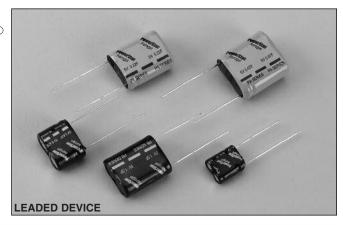




## Description

The PowerStor® Aerogel Capacitor is a unique, ultra-high capacitance device based on a novel type of carbon foam, known as carbon aerogel. Aerogel capacitors are similar to supercapacitors, ultracapacitors and electrochemical double layer capacitors (EDLCs) with the added benefit of low ESR (Equivalent Series Resistance).

The P Series is available in an ultra-low ESR version, PA or a low ESR but higher energy density version, PB.



SERIES	FEATURES A	APPLICATIONS			
	Generic	Specific	AFFLICATIONS		
PA	5.0 volts	Ultra-low ESR	Pulse power		
PA	Low ESR	Oilla-low ESH	Bridge or hold up power		
	High capacitance	Low ESR with higher	Bridge or hold up power		
РВ	Long cycle life	energy density	Memory backup		
	Low leakage currents	energy density	Battery swap out		

SPECIFICATIONS						
Working Voltage	5.0 volts					
Surge Voltage	6.0 volts					
Nominal Capacitance Range	0.1 to 1.0 F					
Capacitance Tolerance	-20% to +80% (20°C)					
Operating Temperature Range	-25°C to 70°C					

STANDARD PRODUCTS										
LOW ESR (PB SERIES)										
Nominal	Part	Nominal ESR	Nominal Dimensions	Typical Mass						
Capacitance	Number	(Equivalent Series Resistance)		(grams/1 piece)						
(F)		Measured @ 1kHz ( $\Omega$ )								
0.1	PB-5R0V104-R	10	5.5 x 10.8 x 12.5 mm	1.06						
	PB-5R0H104-R									
0.47	PB-5R0V474-R	2	8.5 x 16.8 x 14.0 mm	2.43						
	PB-5R0H474-R									
1.0	PB-5R0V105-R	1	8.5 x 16.8 x 21.5 mm	3.542						
	PB-5R0H105-R									
	ULTRA-LOW ESR (PA SERIES)									
0.22	PA-5R0V224-R	0.30	8.5 x 16.8 x 21.5 mm	3.462						
	PA-5R0H224-R									
0.47	PA-5R0V474-R	0.20	10.5 x 20.8 x 22.5 mm	5.41						
	PA-5R0H474-R									

PERFORMANCE							
Parameter	Capacitance Change (% of initial measured value)	ESR (% of initial specified value)					
Life (1000 hrs @ 70°C @ 5.0 volts DC)	≤ 30	≤ 300					
Storage - Low and High Temperature (1000 hrs @ -25°C and 70°C)	≤ 30	≤ 300					

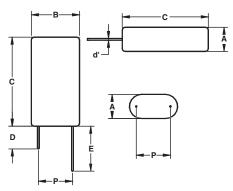


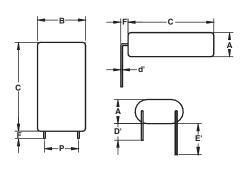


# Aerogel Supercapacitors P Series

DIMENSIONS (mm)										
Part Number	Α	В	C	ď	D	D'	Е	E'	F	Р
PB-5R0V104-R	6.0	11.3	13.0	0.5	20	15	25	20	2.0	7.3
PB-5R0H104-R	0.0	11.3	13.0	0.5	20	15	20	20	2.0	7.5
PB-5R0V474-R	9.0	17.3	14.5	0.5	20	15	25	20	2.0	11.8
PB-5R0H474-R	3.0	17.0	17.5	0.5	20	10	25	20	2.0	11.0
PB-5R0V105-R	9.0	17.3	22.0	0.5	20	15	25	20	2.0	11.8
PB-5R0H105-R	3.0	17.0	22.0	0.5	20	10	20	20	2.0	11.0
PA-5R0V224-R	9.0	17.3	22.0	0.5	20	15	25	20	2.0	11.8
PA-5R0H224-R	3.0	17.0	22.0	0.5	20	10	25	20	2.0	11.0
PA-5R0V474-R	11.0	21.3	23.0	0.6	20	15	25	20	2.0	5.3
PA-5R0H474-R	11.0	21.0	20.0	0.0	20	15	23	20	2.0	5.5
Tolerances	Maximum		± 0.02		Minir	mum		± (	0.5	

Note: Longer lead is positive





#### **VERTICAL**

#### **HORIZONTAL**

PART NUMBERING SYSTEM									
P		-	5	R	0				
Series Code	Version		Voltage (V) R is decimal		,	Configuration	Capacitance (µF)		
P = Pack	A = Ultra-low ESR - or - B = High Capacitance		5R0 = 5.0V		ΟV	V = Vertical - or - H = Horizontal	Value Multiplier  Example:  474 = 47 x 10 <sup>4</sup> µ F or 0.47		•

## PACKAGING INFORMATION

Standard packaging: Bulk, 100 units per package.

Larger bulk packages available upon request.

## **PART MARKING**

Manufacturer Capacitance (F) Max. Operating Voltage (V) Polarity Marking



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