

### PW SERIES ▀ LOW HEIGHT TYPE

#### KEY FEATURES

- **SOLID CONDUCTIVE POLYMER** ▀ THT type
- Low height for space critical applications
- Endurance: 105°C ▀ 2 000 hours
- Large permissible ripple current
- No dry-out effect guarantees extremely long life

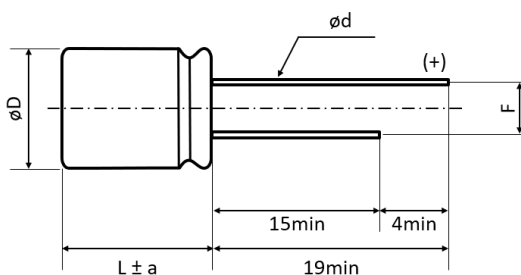


#### SPECIFICATIONS

Items		Performance Characteristics
Operating Temperature Range		-55 ~ +105°C
Rated Voltage Range	$V_R$	2.5 ~ 25V DC
Surge Voltage	$V_S$	( $V_R \leq 20V$ ): $V_S = 1.15 \cdot V_R$ ( $V_R \geq 25V$ ): $V_S = 1.10 \cdot V_R$
Capacitance Range	$C_R$	39 ~ 2500 $\mu$ F
Cap. Tolerance	$\Delta C$	$\pm 20\%$ (120Hz ▀ 20°C)
Leakage Current (20°C ▀ $V_R$ applied)	$I_{LEAK}$	Not to exceed the values shown in standard ratings After 2 minutes
Dissipation Factor % (20°C ▀ 120Hz)	$\tan\delta$	Not to exceed the values shown in standard ratings
Equivalent Series Resistance (20°C ▀ 100kHz)	ESR	Not to exceed the values shown in standard ratings

Lifetime Test		
Endurance 105°C ( $V_R$ applied)	Test	<b>2 000 hours</b>
	$\Delta C/C_R$	Within $\pm 20\%$ of the initial value
	$\tan\delta$	Not to exceed 150% of the value specified
	ESR	Not to exceed 150% of the value specified
	$I_{Leak}$	Less than the specified value
Moisture Resistance stored at 60°C (RH 90 ~ 95%)	Test	<b>1 000 hours</b>
	$\Delta C/C_R$	Within $\pm 20\%$ of the initial value
	$\tan\delta$	Not to exceed 150% of the value specified
	ESR	Not to exceed 150% of the value specified
	$I_{Leak}$	Less than the specified value

#### DIMENSIONS ▀ All dimensions in mm



$\phi D$	L	$\phi D+0.5max$	a	F $\pm 0.5$	$\phi d \pm 0.05$
8	7	8	1	3.5	0.6
10	7	10	1.5	5	0.6
10	10	10	1.5	5	0.6

**STANDARD RATINGS**

Part number shows tape version with straight leads

$V_R$ (V)	$C_R$ ( $\mu$ F)	$\phi$ D (mm)	L (mm)	$I_{LEAK}$ ( $\mu$ A, 2min)	$\tan\delta$ +20°C • 120Hz (%)	Max. ESR +20°C • 100kHz (m $\Omega$ )	$I_R$ - Max. Ripple Current +105°C • 100kHz (mA rms)	CapXon Part Number
2.5	820	8	7	410	8	20	3700	PW821M2R5F070PTD
	1000	8	7	500	8	20	3700	PW102M2R5F070PTD
	1200	10	7	600	8	15	4200	PW122M2R5G070PTA
	1500	10	7	750	10	15	4200	PW152M2R5G070PTA
	1800	10	7	900	10	15	4200	PW182M2R5G070PTA
	1800	10	10	900	10	12	4500	PW182M2R5G100PTA
	2000	10	7	1000	10	15	4200	PW202M2R5G070PTA
	2000	10	10	1000	10	12	4500	PW202M2R5G100PTA
	2500	10	10	1250	10	12	4500	PW252M2R5G100PTA
4	560	8	7	448	8	20	3700	PW561M004F070PTD
	680	8	7	544	8	20	3700	PW681M004F070PTD
	820	8	7	656	8	20	3700	PW821M004F070PTD
	820	10	7	656	8	15	4200	PW821M004G070PTA
	1000	10	7	800	10	15	4200	PW102M004G070PTA
	1200	10	7	960	10	15	4200	PW122M004G070PTA
	1200	10	10	960	10	12	4500	PW122M004G100PTA
	1500	10	7	1200	10	15	4200	PW152M004G070PTA
	1500	10	10	1200	10	12	4500	PW152M004G100PTA
6.3	1800	10	10	1440	10	12	4500	PW182M004G100PTA
	470	8	7	592	8	20	3700	PW471M6R3F070PTD
	560	8	7	706	8	20	3700	PW561M6R3F070PTD
	680	8	7	857	8	20	3700	PW681M6R3F070PTD
	820	8	7	1033	10	20	3700	PW821M6R3F070PTD
	820	10	7	1033	10	15	4200	PW821M6R3G070PTA
	1000	10	7	1260	10	15	4200	PW102M6R3G070PTA
	1000	10	10	1260	10	12	4500	PW102M6R3G100PTA
	1200	10	7	1512	10	15	4200	PW122M6R3G070PTA
10	1200	10	10	1512	10	12	4500	PW122M6R3G100PTA
	1500	10	10	1890	10	12	4500	PW152M6R3G100PTA
	330	8	7	660	8	20	3700	PW331M010F070PTD
	390	8	7	780	8	20	3700	PW391M010F070PTD
	470	8	7	940	8	20	3700	PW471M010F070PTD
	470	10	7	940	8	15	4200	PW471M010G070PTA
	560	10	7	1120	8	15	4200	PW561M010G070PTA
	560	10	10	1120	8	12	4500	PW561M010G100PTA
	680	10	7	1360	10	15	4200	PW681M010G070PTA
16	680	10	10	1360	10	12	4500	PW681M010G100PTA
	820	10	7	1640	10	15	4200	PW821M010G070PTA
	820	10	10	1640	10	12	4500	PW821M010G100PTA
	1000	10	10	2000	10	12	4500	PW102M010G100PTA
	180	8	7	576	8	20	3300	PW181M016F070PTD
	220	8	7	704	8	20	3300	PW221M016F070PTD
	270	8	7	864	8	20	3300	PW271M016F070PTD
	270	10	7	864	8	20	3700	PW271M016G070PTA

See "PACKAGING INFORMATION" for pin treatment options.

**STANDARD RATINGS**

Part number shows tape version with straight leads

$V_R$ (V)	$C_R$ ( $\mu$ F)	$\phi$ D (mm)	L (mm)	$I_{LEAK}$ ( $\mu$ A, 2min)	$\tan\delta$ +20°C • 120Hz (%)	Max. ESR +20°C • 100kHz (m $\Omega$ )	$I_R$ - Max. Ripple Current +105°C • 100kHz (mA rms)	CapXon Part Number
16	330	8	7	1056	10	20	3300	PW331M016F070PTD
	330	10	7	1056	10	20	3700	PW331M016G070PTA
	330	10	10	1056	10	15	4200	PW331M016G100PTA
	390	10	7	1248	10	20	3700	PW391M016G070PTA
	390	10	10	1248	10	20	4200	PW391M016G100PTA
	470	10	7	1504	10	20	3700	PW471M016G070PTA
	470	10	10	1504	10	15	4200	PW471M016G100PTA
20	560	10	10	1792	10	15	4200	PW561M016G100PTA
	56	8	7	224	8	25	3000	PW560M020F070PTD
	68	8	7	272	8	25	3000	PW680M020F070PTD
	82	8	7	328	8	25	3000	PW820M020F070PTD
	82	10	7	328	8	25	3400	PW820M020G070PTA
	100	8	7	400	8	25	3000	PW101M020F070PTD
	100	10	7	400	8	25	3400	PW101M020G070PTA
	100	10	10	400	8	20	3800	PW101M020G100PTA
	150	8	7	600	8	25	3000	PW151M020F070PTD
	150	10	7	600	8	25	3400	PW151M020G070PTA
	150	10	10	600	8	20	3800	PW151M020G100PTA
	180	8	7	720	8	25	3000	PW181M020F070PTD
	180	10	7	720	8	25	3400	PW181M020G070PTA
	180	10	10	720	8	20	3800	PW181M020G100PTA
	220	10	7	880	10	25	3400	PW221M020G070PTA
	220	10	10	880	10	20	3800	PW221M020G100PTA
	270	10	7	1080	10	25	3400	PW271M020G070PTA
270	10	10	1080	10	20	3800	PW271M020G100PTA	
330	10	10	1320	10	20	3800	PW331M020G100PTA	
25	39	8	7	195	8	25	3000	PW390M025F070PTD
	47	8	7	235	8	25	3000	PW470M025F070PTD
	56	8	7	280	8	25	3000	PW560M025F070PTD
	68	8	7	340	8	25	3000	PW680M025F070PTD
	68	10	7	340	8	25	3400	PW680M025G070PTA
	82	8	7	410	8	25	3000	PW820M025F070PTD
	82	10	7	410	8	25	3400	PW820M025G070PTA
	82	10	10	410	8	20	3800	PW820M025G100PTA
	100	10	7	500	10	25	3400	PW101M025G070PTA
	100	10	10	500	10	20	3800	PW101M025G100PTA
	120	10	7	600	10	25	3400	PW121M025G070PTA
	120	10	10	600	10	20	3800	PW121M025G100PTA
	150	10	7	750	10	25	3400	PW151M025G070PTA
	150	10	10	750	10	20	3800	PW151M025G100PTA
180	10	10	900	10	20	3800	PW181M025G100PTA	

See "PACKAGING INFORMATION" for pin treatment options.

**MULTIPLIER  $K_f$  for RIPPLE CURRENT vs. FREQUENCY**

Frequency (Hz)	$120 \leq \text{Freq.} < 1k$	$1k \leq \text{Freq.} < 10k$	$10k \leq \text{Freq.} < 100k$	$100k \leq \text{Freq.} < 300k$
Coefficient $K_f$	0.05	0.3	0.7	1

**PRECAUTIONS, GUIDELINES AND PACKAGING INFORMATION**

Unless otherwise agreed in individual specifications, all products are subject to our “General Precautions and Guidelines” as well as our “Packaging Information”. Please refer to the following links in the table.

		
<a href="#">General Precautions &amp; Guidelines</a>	<a href="#">Packaging Information</a>	<a href="#">3D Models</a>

**DISCLAIMER**

All product related data (e.g. specification, statements and general information) are subject to change without any notice. It is necessary that the customer observes all product related technical / application information and handling instructions.

CapXon products are designed and manufactured according to severe quality and safety standards. Under no circumstance, CapXon warrants that any CapXon product is suitable for the purposes intended for your application, even CapXon knows the application. It is customer's duty and obligation to check and make sure that CapXon products are suitable for the purposes intended and select the correct and proper CapXon product. Customers are requested to perform a sufficient validation and reliability evaluation to assure needed safety level and reliability performance by suitable designs and to apply proper safeguards (e.g. redundancies, protective circuits).

Particular operating conditions (ambient temperature, ripple current, voltage, thermal resistance, etc.) as well as storage, production or assembly may affect the performance and the lifetime of the capacitor. Please consult CapXon for lifetime estimation, failure mode considerations or worst-case scenarios according to the product technology, product tolerances / deviations or change of the characteristics of the capacitor due to shipment, storage, handling, production and usage.

For aerospace or military application, life-saving, life-sustaining, safety critical applications or any application where failure may cause severe personal injury or death, please consult us before design-in the capacitor in your application.

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