

PT SERIES ■ HIGH TEMPERATURE 125°C TYPE

KEY FEATURES



- **SOLID CONDUCTIVE POLYMER** ■ THT type
- Especially for high temperature environments
- Endurance: 125°C ■ 2 000 hours
- Very large permissible ripple current
- No dry-out effect guarantees extremely long life

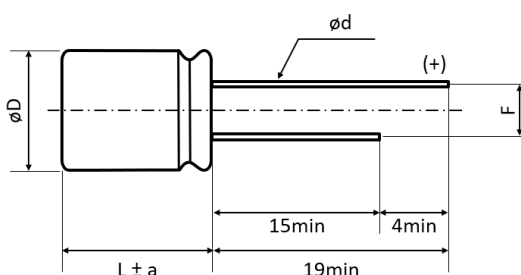


SPECIFICATIONS

Items		Performance Characteristics
Operating Temperature Range		-55 ~ +125°C
Rated Voltage Range	V_R	2.5 ~ 50V 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	22 ~ 2700 μ F
Cap. Tolerance	ΔC	$\pm 20\%$ (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 125°C (V_R applied)	Test	2 000 hours
	$\Delta C/C_R$	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	1 000 hours
	$\Delta C/C_R$	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



ϕD	L	$\phi D+0.5\text{max}$	a	F ± 0.5	$\phi d \pm 0.05$
6.3	5.2	6.3	1	2.5	0.45
6.3	11	6.3	1	2.5	0.6
8	7	8	1	3.5	0.6
8	8	8	1	3.5	0.6
8	11.5	8	1.5	3.5	0.6
10	8	10	1.5	5	0.6
10	10	10	1.5	5	0.6
10	12.5	10	1.5	5	0.6

STANDARD RATINGS

Part number shows tape version with straight leads

V _R (V)	C _R (μF)	ø D (mm)	L (mm)	I _{LEAK} (μA, 2min)	tanδ +20°C • 120Hz (%)	Max. ESR +20°C • 100kHz (mΩ)	I _R • Max. Ripple Cur- rent+105°C • 100kHz (mA rms)	I _R • Max. Ripple Cur- rent+125°C • 100kHz (mA rms)	CapXon Part Number
2.5	820	8	8	410	8	9	5500	1741	PT821M2R5F080PTD
	1000	8	11.5	500	8	9	6100	1929	PT102M2R5F115PTD
	1500	8	11.5	750	8	9	6100	1929	PT152M2R5F115PTD
	2000	10	12.5	1000	8	9	6640	2100	PT202M2R5G125PTA
	2700	10	12.5	1350	8	9	6640	2100	PT272M2R5G125PTA
4	150	6.3	5.2	300	8	40	1810	572	PT151M004E052PTC
	330	8	7	264	8	30	3000	949	PT331M004F070PTD
	560	8	8	224	8	9	5500	1741	PT561M004F080PTD
	560	8	11.5	224	8	9	6100	1929	PT561M004F115PTD
	680	10	8	544	8	25	3700	1170	PT681M004G080PTA
	820	8	8	328	8	9	5500	1741	PT821M004F080PTD
	1200	8	11.5	960	8	9	6100	1929	PT122M004F115PTD
	1500	10	12.5	1200	8	9	6640	2100	PT152M004G125PTA
	2500	10	12.5	2000	8	9	6640	2100	PT252M004G125PTA
6.3	82	6.3	5.2	258	8	40	1800	569	PT820M6R3E052PTC
	150	8	7	473	8	30	3000	949	PT151M6R3F070PTD
	330	10	8	416	8	25	3700	1170	PT331M6R3G080PTA
	390	8	8	491	8	9	5500	1741	PT391M6R3F080PTD
	470	8	11.5	592	8	9	6100	1929	PT471M6R3F115PTD
	680	8	8	428	8	9	5500	1741	PT681M6R3F080PTD
	680	10	12.5	428	8	9	6100	1929	PT681M6R3G125PTA
	820	10	12.5	517	10	9	6100	1929	PT821M6R3G125PTA
	1000	8	11.5	630	10	9	6100	1929	PT102M6R3F115PTD
	1500	10	12.5	945	10	9	6640	2100	PT152M6R3G125PTA
	2000	10	12.5	1260	10	9	6640	2100	PT202M6R3G125PTA
10	56	6.3	5.2	280	8	40	1800	569	PT560M010E052PTC
	120	8	7	240	8	30	3000	949	PT121M010F070PTD
	220	8	11.5	220	8	9	6100	1929	PT221M010F115PTD
	270	10	8	270	8	25	3700	1170	PT271M010G080PTA
	330	8	11.5	330	8	9	6100	1929	PT331M010F115PTD
	560	10	12.5	560	10	9	6100	1929	PT561M010G125PTA
	680	8	11.5	680	10	9	6100	1929	PT681M010F115PTD
	1000	10	12.5	1000	10	9	6640	2100	PT102M010G125PTA
16	39	6.3	5.2	312	8	40	1800	569	PT390M016E052PTC
	82	8	7	300	8	30	2700	854	PT820M016F070PTD
	100	6.3	11	160	8	12	4800	1518	PT101M016E110PTC
	150	8	8	240	8	18	3600	1140	PT151M016F080PTD
	150	10	8	240	8	25	3300	1044	PT151M016G080PTA
	180	8	11.5	288	8	10	5600	1771	PT181M016F115PTD
	220	8	11.5	352	8	10	5600	1771	PT221M016F115PTD
	270	8	11.5	432	8	10	5600	1771	PT271M016F115PTD
	330	8	11.5	528	8	10	5600	1771	PT331M016F115PTD
	470	10	12.5	752	10	10	6100	1929	PT471M016G125PTA
	560	10	12.5	896	10	10	6100	1929	PT561M016G125PTA

See "PACKAGING INFORMATION" for pin treatment options.

STANDARD RATINGS

Part number shows tape version with straight leads

V _R (V)	C _R (μF)	ø D (mm)	L (mm)	I _{LEAK} (μA, 2min)	tanδ +20°C - 120Hz (%)	Max. ESR +20°C - 100kHz (mΩ)	I _R - Max. Ripple Current +105°C - 100kHz (mA rms)	I _R - Max. Ripple Current +125°C - 100kHz (mA rms)	CapXon Part Number
20	22	6.3	5.2	220	12	60	1450	458	PT220M020E052PTC
	47	8	7	300	12	30	2700	854	PT470M020F070PTD
	68	10	8	272	12	30	3000	949	PT680M020G080PTA
	100	8	11.5	400	12	22	3900	1234	PT101M020F115PTD
	120	8	8	480	12	25	3100	981	PT121M020F080PTD
	150	8	11.5	600	12	22	3900	1234	PT151M020F115PTD
	150	10	12.5	600	12	20	4500	1424	PT151M020G125PTA
	270	10	12.5	1080	12	20	4900	1550	PT271M020G125PTA
25	68	8	11.5	340	12	24	3500	1108	PT680M025F115PTD
	82	8	8	410	12	25	3100	981	PT820M025F080PTD
	100	10	12.5	500	12	20	4500	1424	PT101M025G125PTA
	120	8	11.5	600	12	22	3900	1234	PT121M025F115PTD
	180	10	12.5	900	12	20	4500	1424	PT181M025G125PTA
35	39	8	8	273	12	32	2600	823	PT390M035F080PTD
	56	8	11.5	392	12	25	3200	1013	PT560M035F115PTD
	100	10	12.5	700	12	22	4000	1266	PT101M035G125PTA
50	22	8	8	220	12	35	2500	790	PT220M050F080PTD
	27	8	11.5	270	12	32	2700	854	PT270M050F115PTD
	33	10	10	330	12	30	3476	1100	PT330M050G100PTA
	47	10	12.5	470	12	25	4100	1297	PT470M050G125PTA

See "PACKAGING INFORMATION" for pin treatment options.

MULTIPLIER K_f for RIPPLE CURRENT vs. FREQUENCY

Frequency (Hz)	120 ≤ Freq. < 1k	1k ≤ Freq. < 10k	10k ≤ Freq. < 100k	100k ≤ 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.

General Precautions & Guidelines	Packaging Information	3D Models	Reliability Tests

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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