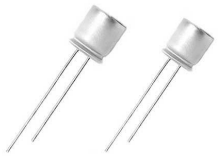
GPT Series, Radial Lead, 105°C Standard



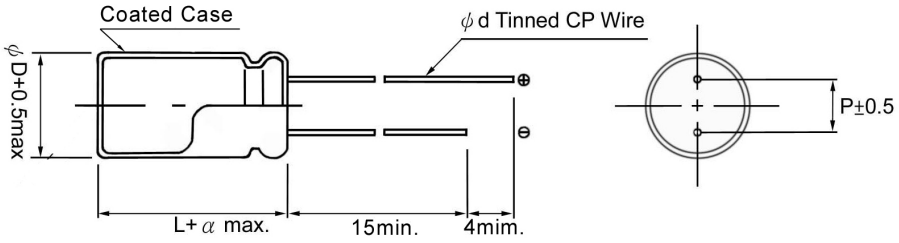
- Low ESR & high ripple current capability
- Endurance: 2,000 hours at 105°C
- Compliant to the RoHS directive
- Suitable for DC-DC converter & variety of power unit applications.

• Specifications

Item	Performance Characteristics	
Operating Temperature range	-55 + 105°C	
Rated Voltage Range	2.5V ~ 35V	
Capacitance Tolerance	± 20% (at 120 Hz / 20°C)	
Surge Voltage	Rated Voltage x 1.15	
Leakage Current	Within the specified value as in standard rating	
Dissipation Factor (tan δ)	Less than or equal to the specified value at 20°C, 120 Hz	
Temperature Characteristics (Impedance ratio at 100 KHz)	Z (-25°C) / Z (+20°C)	≤ 1.15
	Z (-55°C) / Z (+20°C)	≤ 1.25
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2,000 hours at 105°C.	
	Capacitance change	≤ ± 20% of the initial value
	D. F. (Tan δ)	≤ 150% of initial specified value
	ESR	≤ 150% of initial specified value
	Leakage current	Initial specified value or less
Bias Humidity Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them at 60°C, 90 to 95% RH for 1,000 hours.	
	Capacitance change	≤ ± 20% of the initial value
	D. F. (Tan δ)	≤ 150% of initial specified value
	ESR	≤ 150% of initial specified value
	Leakage current	Initial specified value or less
Surge Voltage Test	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltage specified At 105°C for 30 seconds through a protective resistor (R=1KΩ) and discharge for 5 minutes 30 seconds.	
	Capacitance change	≤ ± 20% of the initial value
	D. F. (Tan δ)	≤ 150% of initial specified value
	ESR	≤ 150% of initial specified value
	Leakage current	Initial specified value or less
Failure Rate	0.5% per 1,000 hours maximum (Confidence level 60% at 105°C)	

∗ In case of any doubt arises, measure the leakage current after voltage applied for 120 minutes at 105°C.

• Dimension



(mm)

φD +0.5max	5	6.3	8	10
φd ± 0.05	0.50	0.50	0.60	0.60
P	2.0	2.5	3.5	5.0
α (max)	1.0	1.0	1.5	1.5

- **Standard Products Table**

Rated voltage (V.DC)	Rated Capacitance (μF)	Case Size D x L (mm)	tan δ	Leakage Current (μA)	ESR mΩ max./ 20°C 100 KHz to 300 KHz	Rated ripple current mA rms / 105°C at 100 KHz	Part Number
2.5V	560	6.3 x 6	0.10	500	10	3,870	GPT560M2.5-0606B
	820	6.3 x 8	0.10	500	7	3,500	GPT820M2.5-0608B
	820	8 x 8	0.10	410	7	6,100	GPT820M2.5-0808B
	1,500	8 x 8	0.10	750	7	6,100	GPT152M2.5-0808B
	2,700	10 x 12	0.10	1,350	10	5,560	GPT272M2.5-1012B
4V	560	8 x 12	0.10	448	7	6,100	GPT560M004-0812B
	1,000	10 x 12	0.10	800	7	6,640	GPT102M004-1012B
6.3V	220	6.3 x 6	0.10	300	15	3,160	GPT220M6.3-0606B
	270	5 x 8	0.10	700	11	3,700	GPT270M6.3-0508B
	330	6.3 x 6	0.10	592	17	3,160	GPT330M6.3-0606B
	470	6.3 x 6	0.10	592	8	3,700	GPT470M6.3-0606B
	560	6.3 x 8	0.10	706	7	3,500	GPT560M6.3-0608B
	560	8 x 8	0.10	706	7	5,700	GPT560M6.3-0808B
	680	6.3 x 8	0.10	857	8	4,700	GPT680M6.3-0608B
	820	6.3 x 8	0.10	1,033	8	4,700	GPT820M6.3-0608B
	820	8 x 8	0.10	1,033	7	5,700	GPT820M6.3-0808B
	1,000	8 x12	0.10	1,260	7	5700	GPT102M6.3-0812B
	1,500	10 x 12	0.10	1,890	10	6,100	GPT152M6.3-1012B
10V	470	8 x 8	0.10	940	11	5,100	GPT470M010-0808B
	680	8 x 12	0.10	1,360	20	5,700	GPT680M010-0812B
16V	100	6.3 x 6	0.10	320	25	2490	GPT100M016-0606B
	180	8 x 8	0.10	576	13	5,000	GPT180M016-0808B
	270	6.3 x 8	0.10	864	15	3,800	GPT270M016-0608B
	270	8 x 8	0.10	864	11	4,520	GPT270M016-0808B
	330	8 x 8	0.10	1,056	11	4,520	GPT330M016-0808B
	470	8 x 12	0.10	1,504	11	5,400	GPT470M016-0812B
	470	10 x 12	0.10	1,504	10	6,100	GPT470M016-1012B
	820	10 x 12	0.10	2,624	11	6,100	GPT820M016-1012B
25V	10	6.3 x 6	0.10	125	60	1,450	GPT010M025-0606B
	22	6.3 x 6	0.10	275	50	1,600	GPT022M025-0606B
	47	6.3 x 6	0.10	300	40	2,600	GPT047M025-0606B
	100	8 x 8	0.10	500	30	2,500	GPT100M025-0808B
	220	10 x 10	0.10	1,100	25	3,800	GPT220M025-1010B
35V	47	8 x 8	0.10	329	30	2600	GPT047M035-0808B

- Frequency coefficient of allowable ripple current

Frequency	120 Hz ≤ f ＜1 KHz	1 KHz ≤ f ＜10 KHz	10 KHz ≤ f ＜100 KHz	100 KHz ≤ f ≤ 300 KHz
Coefficient	0.05	0.30	0.70	1.00