

GPX Series, Radial Lead, 105°C Long Life



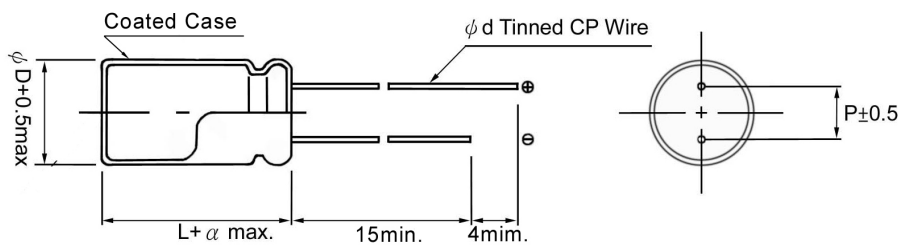
- Low ESR & high ripple current capability
- Endurance: 5,000 hours at 105°C
- Compliant to the RoHS directive

• Specifications

Item	Performance Characteristics	
Operating Temperature range	-55 + 105°C	
Rated Voltage Range	2.5V ~ 16V	
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 5,000 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	6.3	8	10
φ d ± 0.05	0.50	0.60	0.60
P	2.5	3.5	5.0
α (max)	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	8	4,000	GPX560M2.5-0606B
	820	6.3 x 8	0.10	500	7	3,500	GPX820M2.5-0608B
	1,500	8 x 8	0.10	750	7	6,100	GPX152M2.5-0808B
	2,700	10 x 12	0.10	1,350	10	5,560	GPX272M2.5-1012B
4V	1200	8 x 8	0.10	960	7	6,100	GPX122M004-0808B
6.3V	470	6.3 x 8	0.10	592	7	3,500	GPX470M6.3-0608B
	560	6.3 x 8	0.10	706	7	3,500	GPX560M6.3-0608B
	820	8 x 8	0.10	1,033	7	5,700	GPX820M6.3-0808B
	1,500	10 x 12	0.10	1,890	10	5,560	GPX152M6.3-1012B
10V	150	6.3 x 8	0.10	300	27	3,500	GPX150M010-0608B
	560	10 x 12	0.10	1,120	13	5,230	GPX560M010-1012B
16V	100	6.3 x 6	0.10	320	24	2,490	GPX100M016-0606B
	270	6.3 x 8	0.10	864	15	3,800	GPX270M016-0608B
	270	8 x 8	0.10	864	11	4,520	GPX270M016-0808B
	330	8 x 8	0.10	1,056	11	4,520	GPX330M016-0808B
	470	10 x 12	0.10	1,504	10	6,100	GPX470M016-1012B
	680	10 x 12	0.10	2,176	12	5,400	GPX680M016-1012B
	820	10 x 12	0.10	2,624	11	5,100	GPX820M016-1012B

• 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