

GPB Series, 105°C Low Profile

- Low ESR & high ripple current capability
- 4.2mm height for compact application
- Endurance: 2,000 hours at 105°C
- Compliant to the RoHS directive

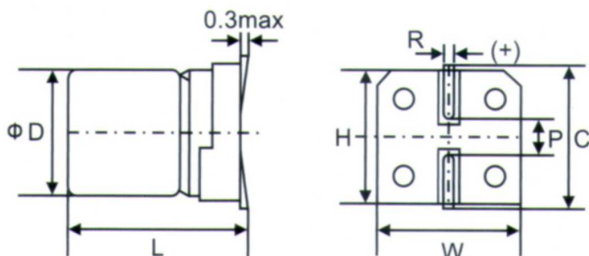


• Specifications

Item	Performance Characteristics	
Operating Temperature range	-55 + 105°C	
Rated Voltage Range	2.5V ~ 25V	
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
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
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



Dφ ±0.5	L ±0.3	W ±0.2	H ±0.2	C ±0.2	R	P ±0.2
6.3	4.2	6.6	6.6	7.3	0.6-0.8	2.1

• **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 100KHz to 300KHz	Rated ripple current (mArms/105°C,100 KHz)	Part Number
2.5V	330	6.3x4.2	0.10	500	17	2,300	GPB330M2.5-0604TR
6.3V	220	6.3x4.2	0.10	700	17	2,300	GPB220M6.3-0604TR
25V	15	6.3x4.2	0.10	300	55	1,650	GPB015M025-0604TR

• 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