

# GPJ Series, 125°C Standard

- Low ESR & high ripple current capability
- Endurance: 2,000 hours at 125°C
- Compliant to the RoHS directive

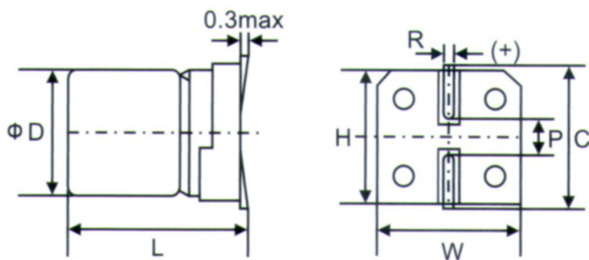


## • Specifications

Item	Performance Characteristics	
Operating Temperature range	-55 + 125°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 2,000 hours, at 125°C.( 6.3x7.7 : 1500hrs;6.3x5.7 : 1000hrs)	
	Capacitance change	≤ ± 30% of the initial value
	D. F. (Tan δ)	≤ 300% of initial specified value
	ESR	≤ 300% 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 125°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 125°C)	

\* In case of any doubt arises, measure the leakage current after voltage applied for 120 minutes at 125°C.

## • Dimension



Dφ±0.5	L±0.5	W±0.2	H±0.2	C±0.2	R	P±0.2
6.3	5.7	6.6	6.6	7.3	0.5~0.8	2.1
6.3	7.7	6.6	6.6	7.3	0.5~0.8	2.1
6.3	9.0	6.6	6.6	7.3	0.5~0.8	2.1
6.3	10.5	6.6	6.6	7.3	0.5~0.8	2.1
8	10.5	8.3	8.3	9	0.8~1.1	3.2
8	11.5	8.3	8.3	9	0.8~1.1	3.2
8	12.1	8.3	8.3	9	0.8~1.1	3.2
10	11.5	10.3	10.3	11	0.8~1.1	4.6
10	12.5	10.3	10.3	11	0.8~1.1	4.6

• 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, 100 KHz)		Part Number
						Tx ≤ 105°C	105°C < Tx ≤ 125°C	
6.3	1500	8 x 11.5	0.12	1,890	12	5,100	1,700	GPJ152M6.3-0811TR
16	100	6.3 x 5.7	0.12	320	33	1,000	390	GPJ100M016-0605TR
	100	6.3 x 7.7	0.12	320	33	1,500	460	GPJ100M016-0607TR
35	150	8 x 12.1	0.12	1,050	27	2,720	906	GPJ150M035-0812TR
	270	10 x 12.5	0.12	1,890	21	3,120	1,040	GPJ270M035-1012TR
50	100	8 x 12.1	0.12	1,000	32	2,100	700	GPJ100M050-0812TR
	180	10 x 12.5	0.12	1,800	25	2,480	826	GPJ180M050-1012TR
63	22	6.3 x 7.7	0.12	277	50	1,500	500	GPJ022M063-0607TR
	47	8 x 12.1	0.12	593	32	1,850	616	GPJ047M063-0812TR
	68	8 x 12.1	0.12	857	32	1,850	616	GPJ068M063-0812TR
	100	10 x 11.5	0.12	1,312	38	2,100	700	GPJ100M063-1011TR
85	10	6.3 x 9.5	0.12	300	95	920	300	GPJ010M085-0609TR
	22	8x10.5	0.12	374	47	1,590	530	GPJ022M085-0810TR
	47	10 x 12.5	0.12	799	43	1,800	600	GPJ047M085-1012TR

• 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