

Surface Mount Type

GX/GX-L series

[Super low ESR products]



SP-Cap

Features

- Large capacitance (560 μF max.)
- Super Low ESR (3 $\text{m}\Omega$ max.)
- Low ESL (3-terminals : 50 % less than 2-terminals) [Suffix : L]
- High ripple current (10200 mA r.m.s. max.)
- RoHS compliance, Halogen free

Specifications

Series	GX	
Category temp. range	-55 $^{\circ}\text{C}$ to +105 $^{\circ}\text{C}$	
Rated voltage range	2.0 V.DC to 2.5 V.DC	
Nominal cap. range	330 μF to 560 μF	
Capacitance tolerance	$\pm 20\%$ (120 Hz / +20 $^{\circ}\text{C}$)	
DC leakage current	$I \leq 0.1 \text{ CV}$ (μA) 2 minutes	
Dissipation factor (tan δ)	≤ 0.06 (120 Hz / +20 $^{\circ}\text{C}$)	
Surge voltage (V.DC)	Rated voltage $\times 1.25$ (15 $^{\circ}\text{C}$ to 35 $^{\circ}\text{C}$)	
Endurance	+105 $^{\circ}\text{C}$ ± 2 $^{\circ}\text{C}$, 2000 h, rated voltage applied	
	Capacitance change	Within $\pm 20\%$ of the initial value
	Dissipation factor (tan δ)	≤ 2 times of the initial limit
	DC leakage current	≤ 3 times of the initial limit
Damp heat (Steady state)	+60 $^{\circ}\text{C}$, 90 %, 500 h, No-applied voltage	
	Capacitance change of initial measured value	2.0 V.DC to 2.5 V.DC +70 %, -20 %
	Dissipation factor (tan δ)	≤ 2 times of the initial limit
	DC leakage current	Within the initial limit

Marking

Capacitance (μF)

Polarity bar (Positive)

Lot No.

R. voltage code

R. voltage code	Unit : V.DC
d	2.0
e	2.5

Dimensions (not to scale)

2 terminals

Unit : mm					
Series	L ± 0.2	W1 ± 0.2	W2 ± 0.1	H ± 0.1	P ± 0.3
GX	7.3	4.3	2.4	1.9	1.3

3 terminals

Unit : mm								
Series	L ± 0.2	W1 ± 0.2	W2 ± 0.1	H ± 0.1	P1 ± 0.3	P2 ± 0.1	P3 ± 0.2	P4 ± 0.2
GX-L	7.3	4.3	2.4	1.9	1.3	1.1	0.7	1.4

* Externals of figure are the reference.

Characteristics list

Series	Rated voltage (V.DC)	Capacitance (μF)	Case size (mm)			Specification		The number of terminals		Part number	Min. Packaging Q'ty ^{*3} (pcs)
			L	W	H	Ripple current ^{*1} (mA r.m.s.)	ESR ^{*2} (mΩ max.)	2	3		
GX	2.0	330	7.3	4.3	1.9	10200	3	○		EEFGX0D331R	3500
		470	7.3	4.3	1.9	10200	3	○		EEFGX0D471R	3500
			7.3	4.3	1.9	10200	3		○	EEFGX0D471L	3500
		560	7.3	4.3	1.9	10200	3	○		EEFGX0D561R	3500
			7.3	4.3	1.9	10200	3		○	EEFGX0D561L	3500
	2.5	330	7.3	4.3	1.9	10200	3	○		EEFGX0E331R	3500
		470	7.3	4.3	1.9	10200	3	○		EEFGX0E471R	3500
			7.3	4.3	1.9	10200	3		○	EEFGX0E471L	3500
			7.3	4.3	1.9	10200	3		○	EEFGX0E471L	3500

*1: Ripple current (100 kHz / +45 °C)

*2: ESR (100 kHz / +20 °C)

*3: Please contact us when 500 pcs packing is necessary.

◆ Please refer to each page in this catalog for "Reflow conditions" and "Taping specifications".

Temperature coefficient of ripple current

Temperature		T ≤ 45 °C	45 °C < T ≤ 85 °C	85 °C < T ≤ 105 °C
2.0 V.DC to 2.5 V.DC	Coefficient	1.0	0.7	0.25

◆ Ripple current should be controlled so that surface temperature of capacitor does not exceed the category temperature.

Guidelines and precautions regarding the technical information and use of our products described in this online catalog.

- If you want to use our products described in this online catalog for applications requiring special qualities or reliability, or for applications where the failure or malfunction of the products may directly jeopardize human life or potentially cause personal injury (e.g. aircraft and aerospace equipment, traffic and transportation equipment, combustion equipment, medical equipment, accident prevention, anti-crime equipment, and/or safety equipment), it is necessary to verify whether the specifications of our products fit to such applications. Please ensure that you will ask and check with our inquiry desk as to whether the specifications of our products fit to such applications use before you use our products.
- The quality and performance of our products as described in this online catalog only apply to our products when used in isolation. Therefore, please ensure you evaluate and verify our products under the specific circumstances in which our products are assembled in your own products and in which our products will actually be used.
- If you use our products in equipment that requires a high degree of reliability, regardless of the application, it is recommended that you set up protection circuits and redundancy circuits in order to ensure safety of your equipment.
- The products and product specifications described in this online catalog are subject to change for improvement without prior notice. Therefore, please be sure to request and confirm the latest product specifications which explain the specifications of our products in detail, before you finalize the design of your applications, purchase, or use our products.
- The technical information in this online catalog provides examples of our products' typical operations and application circuits. We do not guarantee the non-infringement of third party's intellectual property rights and we do not grant any license, right, or interest in our intellectual property.
- If any of our products, product specifications and/or technical information in this online catalog is to be exported or provided to non-residents, the laws and regulations of the exporting country, especially with regard to security and export control, shall be observed.

<Regarding the Certificate of Compliance with the EU RoHS Directive/REACH Regulations>

- The switchover date for compliance with the RoHS Directive/REACH Regulations varies depending on the part number or series of our products.
- When you use the inventory of our products for which it is unclear whether those products are compliant with the RoHS Directive/REACH Regulation, please select "Sales Inquiry" in the website inquiry form and contact us.

We do not take any responsibility for the use of our products outside the scope of the specifications, descriptions, guidelines and precautions described in this online catalog.
