

## Surface Mount Type **SP-Cap**

Series : **GX (Super Low ESR Products)**



### Features

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

### Specifications

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

### Marking

Mark	Rated Voltage
d	2 V.DC
e	2.5 V.DC

### Dimensions (not to scale)

2 terminals

Series	L $\pm 0.2$	W1 $\pm 0.2$	W2 $\pm 0.1$	H $\pm 0.1$	P $\pm 0.3$
GX	7.3	4.3	2.4	1.9	1.3

Unit : mm

\* Externals of figure are the reference.

3 terminals

Series	L $\pm 0.2$	W1 $\pm 0.2$	W2 $\pm 0.1$	H $\pm 0.1$	P1 $\pm 0.3$	P2 $\pm 0.1$	P3 $\pm 0.2$	P4 $\pm 0.2$
GX	7.3	4.3	2.4	1.9	1.3	1.1	0.7	1.4

Unit : mm

\* Externals of figure are the reference.

## Characteristics list

											Reflow *3	<Standard>
Series	Rated voltage (V.DC)	Capacitance (±20%) (μF)	Case size (mm)			Specification		The number of terminals		Part number	Min.*4 Packaging Q'ty (pcs)	
			L	W	H	Ripple current *1 (mA r.m.s.)	ESR *2 (mΩ max.)	2	3			
GX	2	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	NEW 330	7.3	4.3	1.9	10200	3	○		EEFGX0G331R	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

\*1: Ripple current (100 kHz/ +45°C), \*2: ESR (100 kHz/+20 °C)

\*3: Please refer to the page of "Mounting Specifications".

\*4: Please contact us when 500 pcs packing is necessary.

## Temperature compensation multipliers for ripple current

Temp.	$T \leq 45\text{ °C}$	$45\text{ °C} < T \leq 85\text{ °C}$	$85\text{ °C} < T \leq 105\text{ °C}$
Coefficient	1.0	0.7	0.25