

## General Purpose Surface Mount Rectifiers

**Reverse Voltage: 50 to 1000V**  
**Forward Current: 1.0 Amp**

### Features

- Low profile package
- For surface mounted applications
- Glass passivated chip junction
- High forward surge capability
- High temperature soldering guaranteed  
260°C/10 seconds at terminals

### Mechanical Data

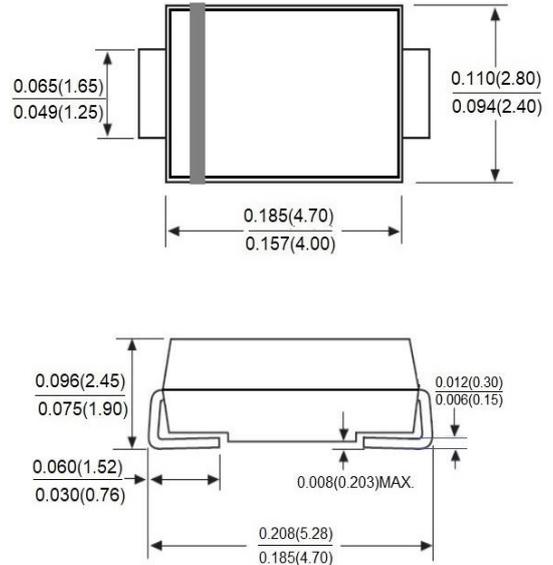
- **Package:** DO-214AC (SMA)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per MIL-STD-750, Method 2026
- **Polarity:** Cathode line denotes the cathode end

### Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer and telecommunication.

### DO-214AC (SMA)

**RoHS COMPLIANT**  
**HALOGEN FREE**



Package Outline Dimensions in Inches (Millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter&Test Conditions	SYM.	GS1AA	GS1BA	GS1DA	GS1GA	GS1JA	GS1KA	GS1MA	Unit
Device marking code		GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I <sub>O(AV)</sub>	1.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load	I <sub>FSM</sub>	30							A
Maximum Thermal Resistance, Junction To Ambient (Note1)	R <sub>θJA</sub>	70							°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

### Electrical Characteristics (Ta=25°C Unless otherwise specified)

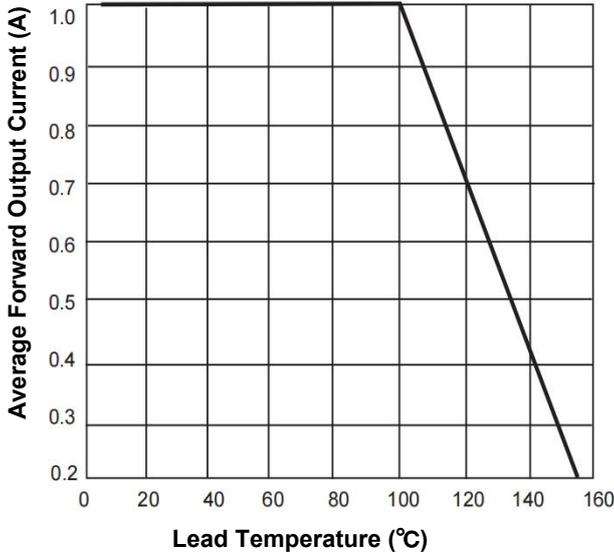
Parameter&Test Conditions	SYM.	GS1AA	GS1BA	GS1DA	GS1GA	GS1JA	GS1KA	GS1MA	Unit
Maximum Instantaneous Forward Voltage IFM = 1A	V <sub>FM</sub>	1.1							V
Maximum DC reverse current at rated DC blocking voltage	TA = 25°C	5							μA
	TA = 125°C	100							
Typical junction capacitance(Note2)	C <sub>J</sub>	8							pF

#### Notes:

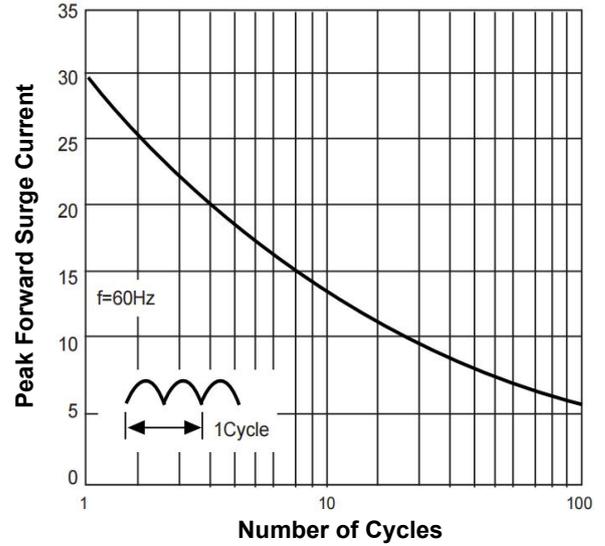
1. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. The typical data above is for reference only.

**Rating and Characteristic Curves**

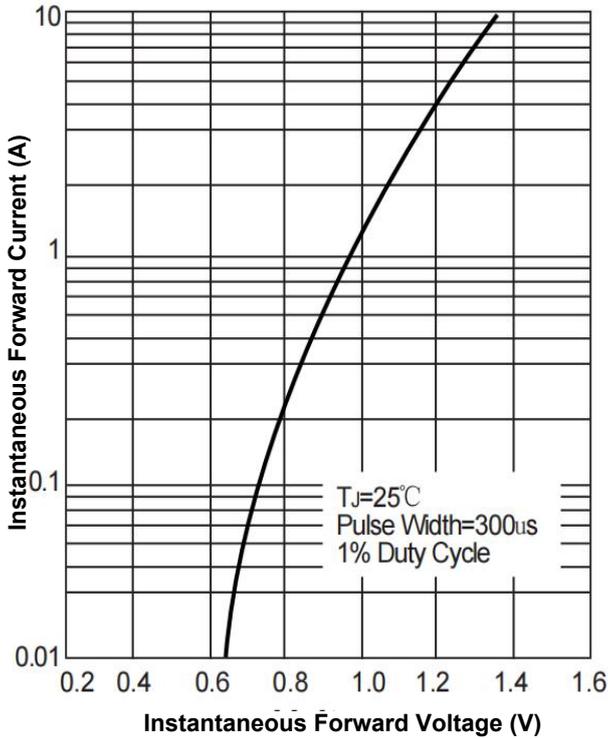
**FIG. 1- DERATING CURVE OUTPUT RECTIFIED**



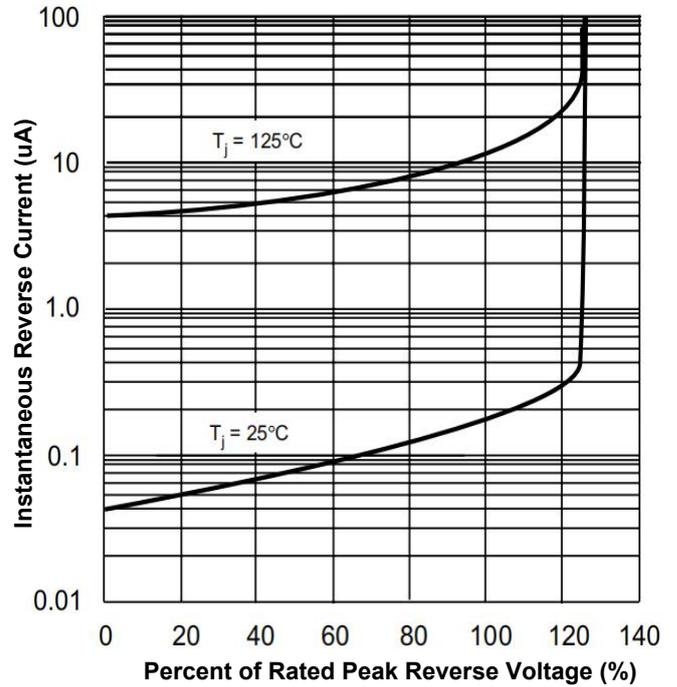
**FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG**



**FIG. 3- TYPICAL FORWARD VOLTAGE**

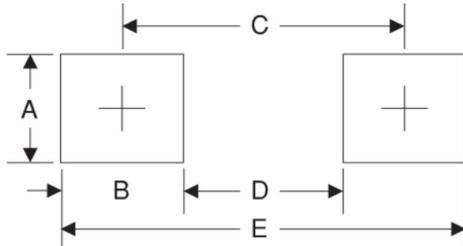


**FIG. 4- TYPICAL REVERSE LEAKAGE**



The curve above is for reference only.

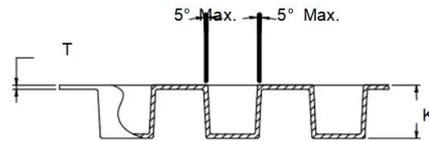
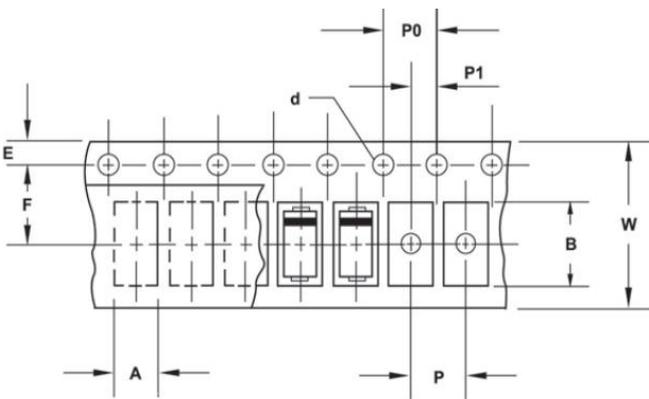
**Recommended Pad Layout**



SYMBOL	Millimeters
A	1.70
B	2.50
C	4.00
D	1.50
E	6.50

**Package Information**

**Carrier Dimension(mm)**



W	F	d	E
12.0	5.5	∅ 1.55	1.75
A	B	K	T
2.79	5.33	2.36	0.23
P0	P1	P	Tolerance
4.0	2.0	4.0	0.10

**Package Specifications**

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SMA	11'	278	5	290	10	400*310*310	100

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