



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

GS1A / M1  
THRU  
GS1M / M7

**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SILICON RECTIFIER**

VOLTAGE RANGE 50 to 1000 Volts

CURRENT 1.0 Ampere

**FEATURES**

- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Glass passivated junction

**MECHANICAL DATA**

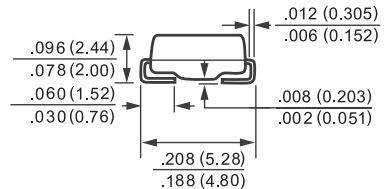
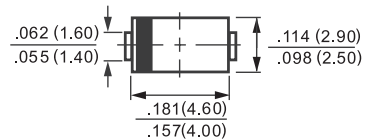
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 0.064 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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



SMA (DO-214AC)



Dimensions in inches and (millimeters)

	SYMBOL	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M	UNITS	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	M1	M2	M3	M4	M5	M6	M7	Volts	
Maximum RMS Voltage	V <sub>RMS</sub>	50	100	200	400	600	800	1000	Volts	
Maximum DC Blocking Voltage	V <sub>DC</sub>	35	70	140	280	420	560	700	Volts	
Maximum Average Forward Rectified Current at TA = 75°C	I <sub>O</sub>	50	100	200	400	600	800	1000	Volts	
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	1.0							Amps	
Maximum Forward Voltage at 1.0A DC	V <sub>F</sub>	30							Amps	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	1.1							Volts	
		@TA = 25°C							5.0	uAmps
		@TA = 125°C							50	uAmps
Maximum Reverse Recovery Time (Note 3)	t <sub>rr</sub>	2.5							uSec	
Typical Thermal Resistance (Note 2)	R <sub>θJL</sub>	30							°C/W	
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	15							pF	
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to + 175							°C	

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC  
2. Thermal Resistance (Junction to Ambient), .24in<sup>2</sup> (6.0mm<sup>2</sup>) copper pads to each terminal.  
3. Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A.

RATING AND CHARACTERISTIC CURVES

( GS1A THRU GS1M )  
 ( M1 M7 )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

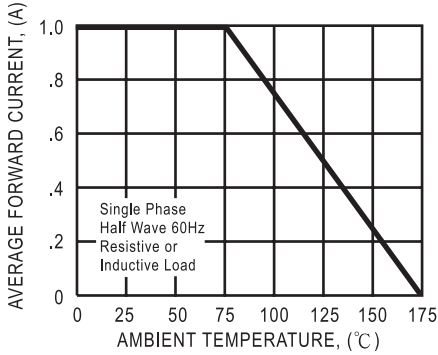


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

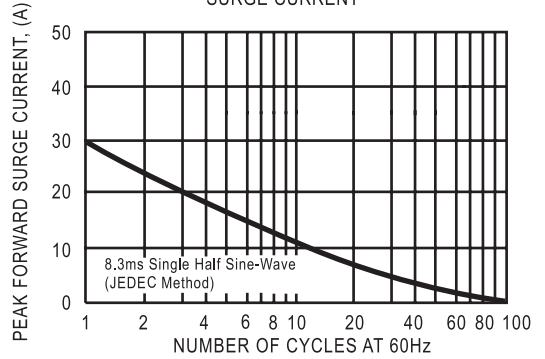


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

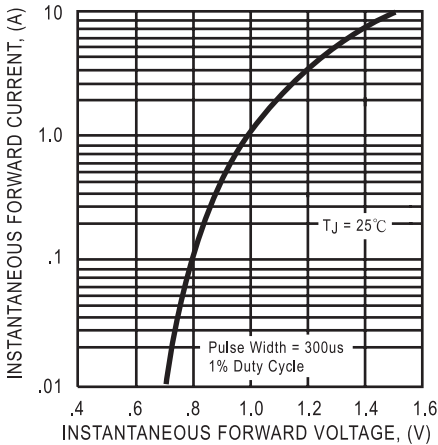


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

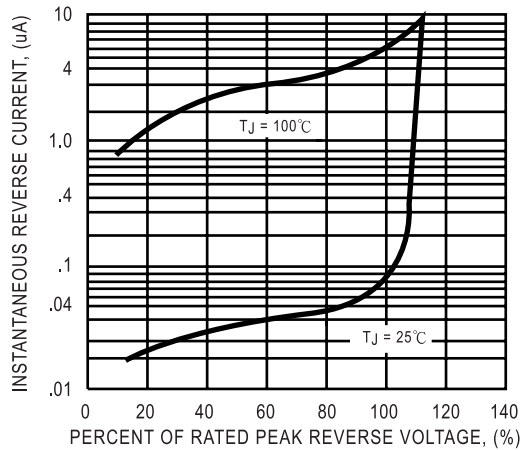
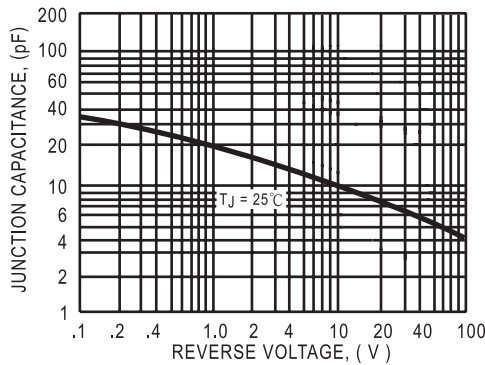


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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