

# GS1A~GS1M

## SURFACE MOUNT GENERAL RECTIFIERS

Reverse Voltage – 50 to 1000 Volts

Forward Current – 1.0 Ampere

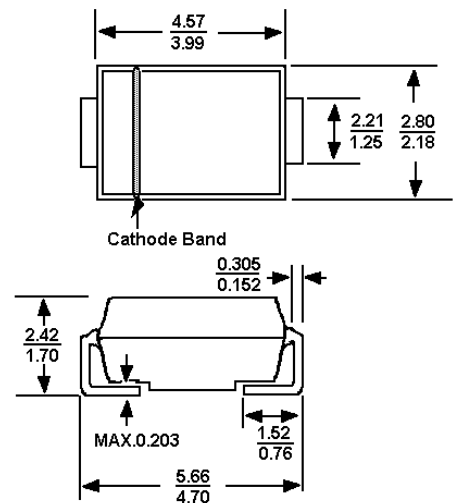
### Features

- For surface mounted applications
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering: 250°C/10sec at terminals

### Mechanical Data

- Case: JEDEC DO-214AC, molded plastic.
- Terminals: Solder plated, solderable per MIL-STD-750.Method 2026.
- Polarity: Color band denotes cathode band
- Mounting position: Any

SMA DO-214AC



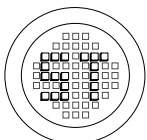
Dimensions in mm

### Absolute Maximum Ratings and 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%.

	Symbols	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M	Units
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current at $T_L = 110^{\circ}C$	$I_{(AV)}$	1.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							Amps
Maximum instantaneous forward voltage at 1A	$V_F$	1.1							Volts
Maximum DC reverse current @ $T_A = 25^{\circ}C$ at rated DC blocking voltage @ $T_A = 100^{\circ}C$	$I_R$	5 50							$\mu A$
Typical junction capacitance (Note 1)	$C_J$	15							pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	75							$^{\circ}C/W$
Operating and storage temperature range	$T_J, T_S$	-65 to +175							$^{\circ}C$

- Notes: (1) Measured at 1 MHz and applied  $V_r = 4$ volts.  
(2) P.C.B. mounted with 0.2x0.2(5x5mm) copper pad areas.



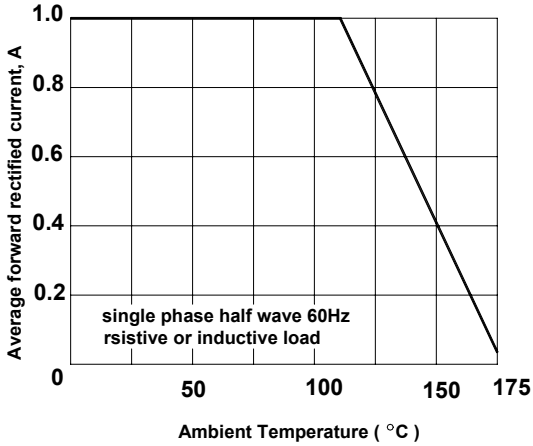
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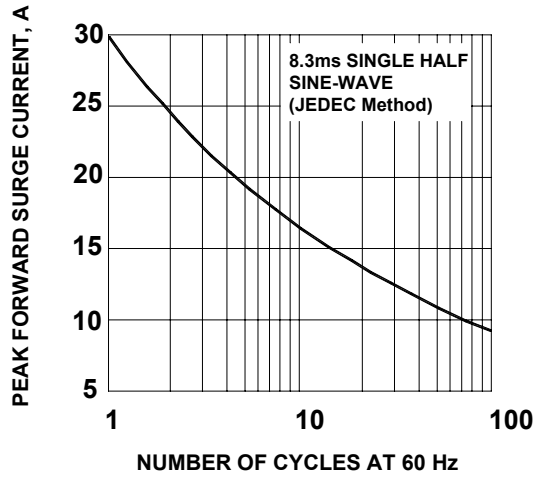
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# GS1A~GS1M

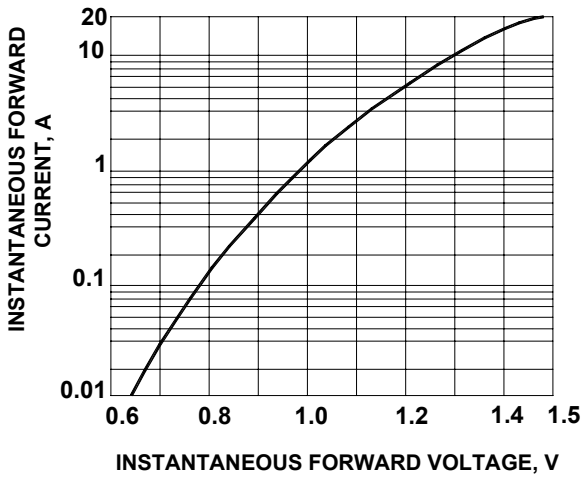
Forward current derating curve



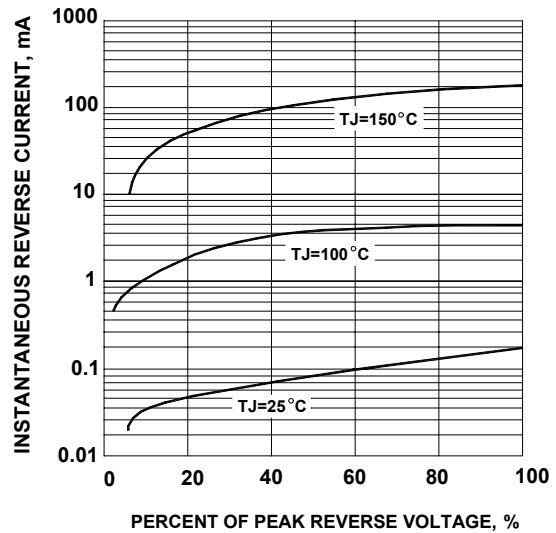
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



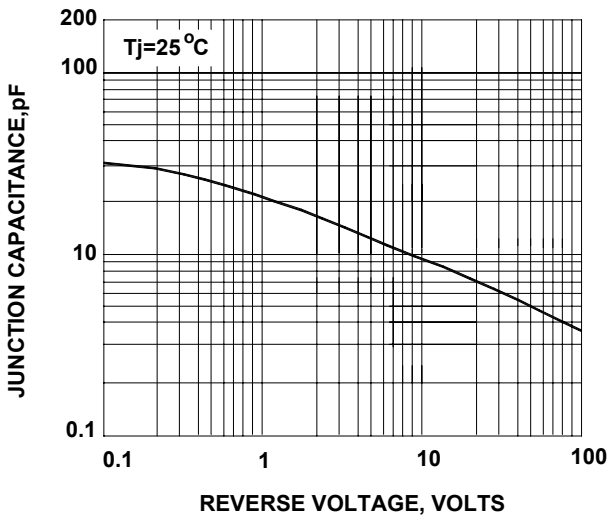
TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



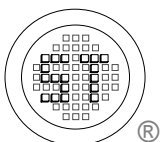
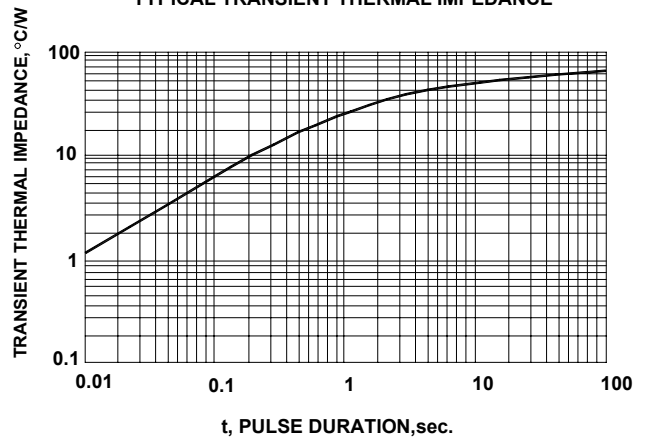
TYPICAL REVERSE CHARACTERISTICS



TYPICAL JUNCTION CAPACITANCE

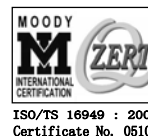


TYPICAL TRANSIENT THERMAL IMPEDANCE



## SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



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