DATA SHEET

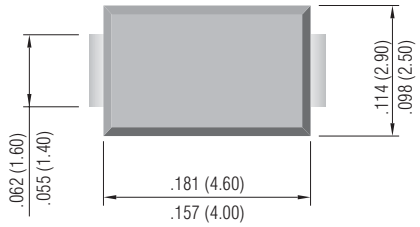
GS1A~GS1M

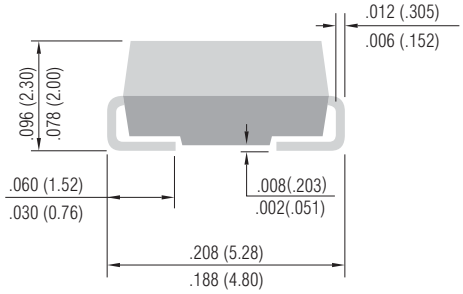
SURFACE MOUNT RECTIFIER

VOLTAGE- 50 to 1000 Volts CURRENT - 1.0 Ampere

Unit: inch (mm)

SMA / DO-214AC





FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated chip junction
- High temperature soldering : 260°C /10 seconds at terminals

MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Indicated by cathode band
Standard packaging: 12mm tape (EIA-481)
Weight: 0.002 ounce, 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%.

	SYMBOLS	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	100	V
Maximum Average Forward Rectified Current, at T_L=75°C	I(AV)	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30.0							A
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.10							V
Maximum DC Reverse Current T_A=25°C	I_R	5.0							µA
at Rated DC Blocking Voltage T_A=125°C		50.0							µA
Maximum Reverse Recovery Time(Note 1) T_J=25°C	T_{RR}	2.5							µs
Typical Junction Capacitance (Note 2)	C_J	12							pF
Maximum Thermal Resistance(Note 3) RθJA	RθJA	30.0							°C/ W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to +150							°C

NOTES:1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
2. Measured at 1 MHz and applied V_r = 4.0 volts.
3. 8.0 mm^2 (.013mm thick) land areas.

RATING AND CHARACTERISTIC CURVES

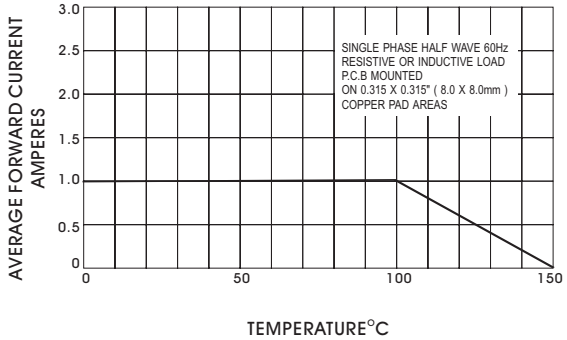


Fig. 1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

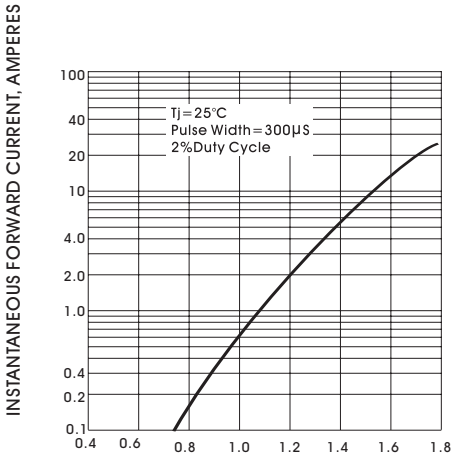


Fig. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISITCS PER ELEMENT

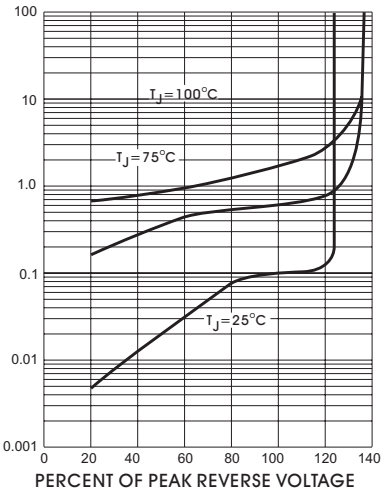


Fig. 3- TYPICAL REAK REVERSE CHARACTERISTICS

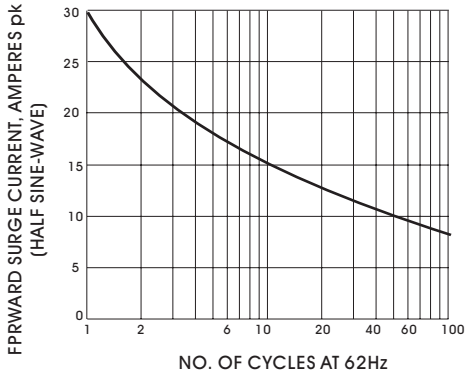


Fig. 4- MAXIMUM NON-REPETITEVE PEAK FORWARD SURGE CURRENT

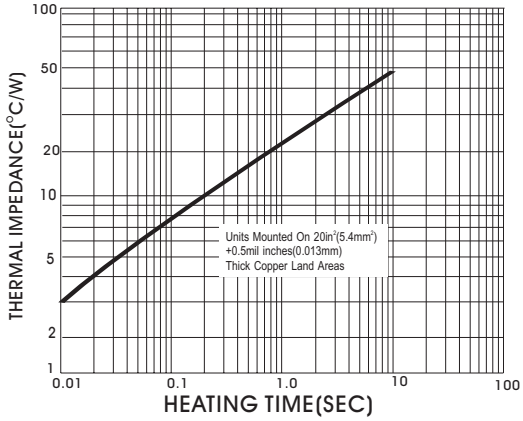


Fig. 5- TRANSIENT THERMAL IMPEDANCE

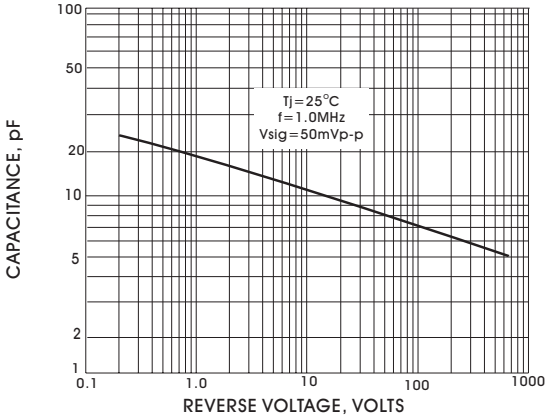


Fig. 6- TYPICL JUNCTION CAPACITANCE PER ELEMENT