



**THE DATASHEET OF  
GS1GWG\_R1\_00001**





# GS1AWG~GS1MWG

## SURFACE MOUNT GENERAL PURPOSE RECTIFIER

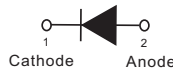
**VOLTAGE** 50 to 1000 Volt    **CURRENT** 1 Ampere

### FEATURES

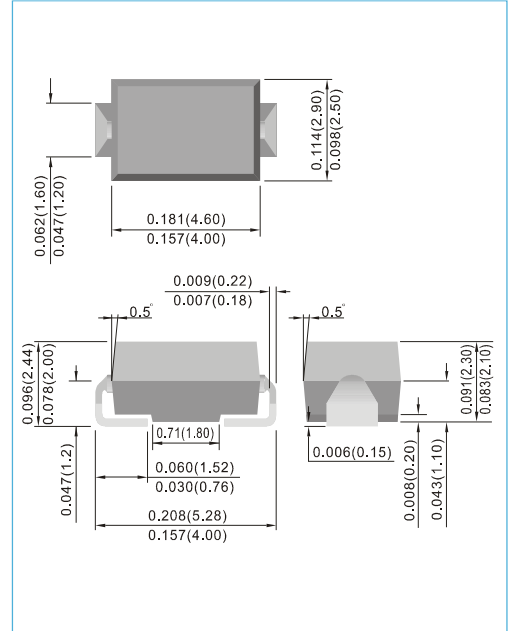
- For surface mounted applications in order to optimize board space
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low Forward Drop
- High temperature soldering : 260°C /10 seconds at terminals
- Glass Passivated Junction
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: SMA(W) molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Standard packaging: 12 mm tape (EIA-481)
- Weight: 0.002 ounces, 0.068 grams



### SMA(W) Unit : inch(mm)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

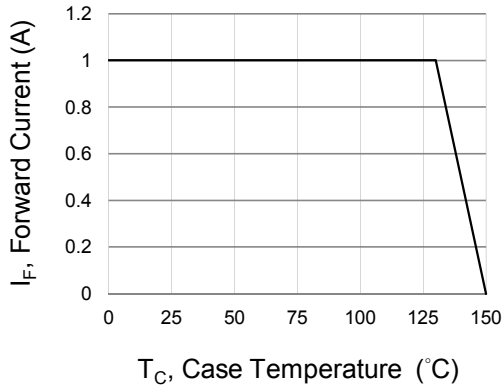
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	GS1AWG	GS1BWG	GS1DWG	GS1GWG	GS1JWG	GS1KWG	GS1MWG	UNITS
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	1000	V
Maximum Average Forward Current	$I_{F(AV)}$	1							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30							A
Maximum Forward Voltage at 1A DC	$V_F$	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	1							$\mu A$
Typical Junction Capacitance Measured at 1MHz and applied $V_R=4V$	$C_J$	7							pF
Typical Junction Resistance (Note 1)	$R_{\theta JA}$	150							°C / W
(Note 2)	$R_{\theta JL}$	15							
(Note 3)	$R_{\theta JC}$	4.4							
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							°C

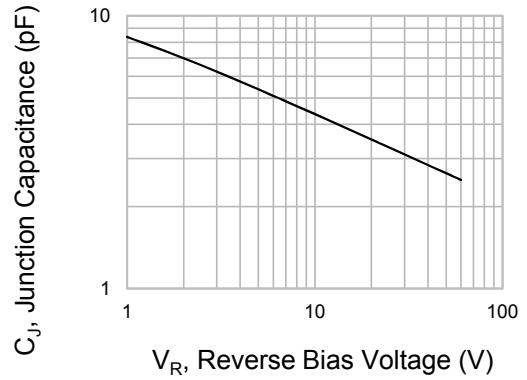
Notes: 1. Mounted on a FR4 PCB, single-sided copper, mini pad.  
2. Mounted on a FR4 PCB, single-sided copper, with 76.2 x 114.3mm copper pad area.  
3. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area.



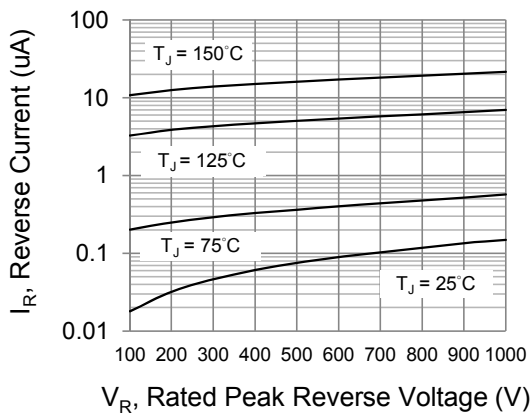
## GS1AWG~GS1MWG



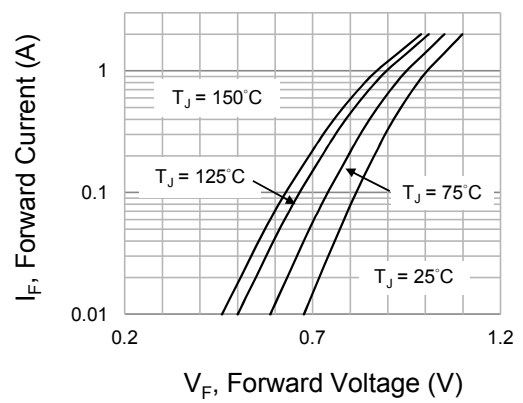
**Fig.1 Forward Current Derating Curve**



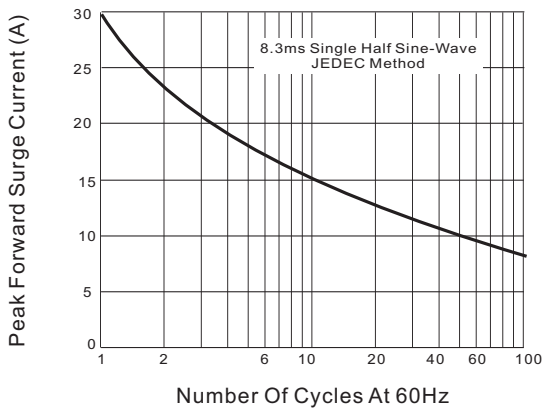
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**

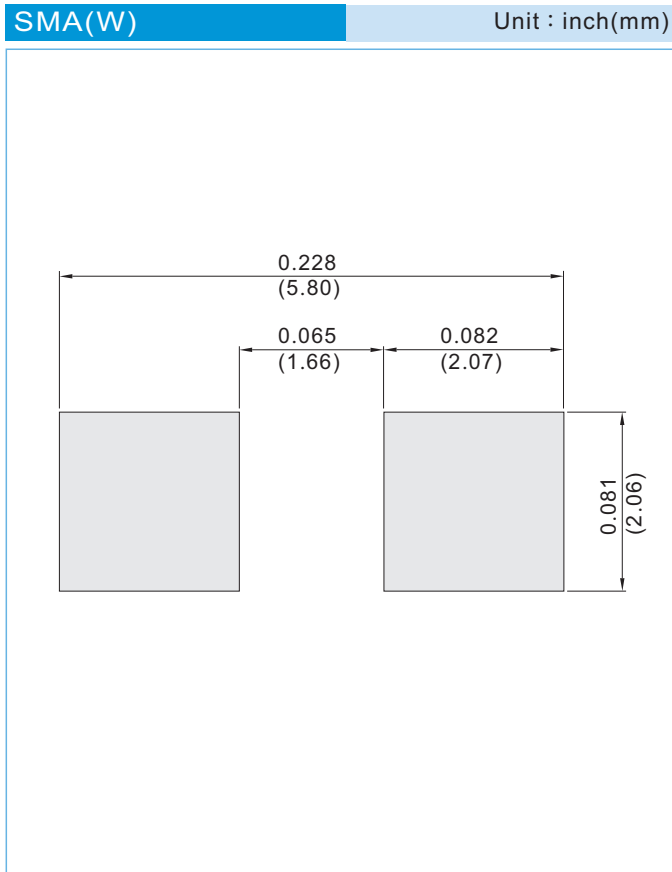


**Fig.5-Maximum Non-Repetitive Peak Forward Surge Current**



## GS1AWG~GS1MWG

### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information
  - T/R - 7.5K per 13" plastic Reel
  - T/R - 1.8K per 7" plastic Reel



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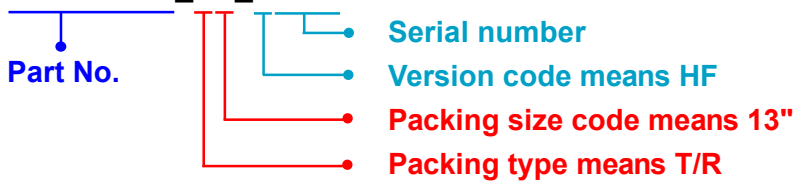
### Part No\_packing code\_Version

GS1AWG\_R1\_00001

GS1AWG\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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