Chatsworth, CA
Microsemi
Progress Powered by Technology

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

GS1A THRU GS1M

1 Amp Silicon Rectifier 50 to 1000 Volts

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

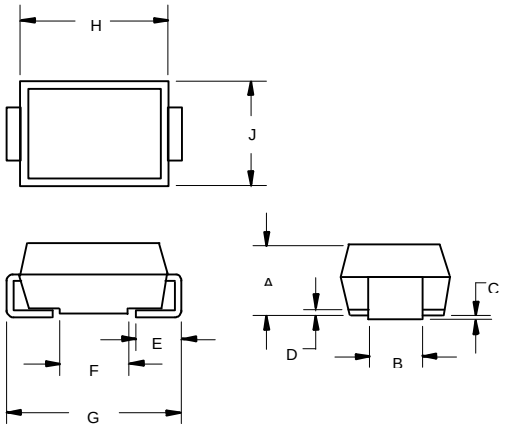
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
GS1A	GS1A	50V	35V	50V
GS1B	GS1B	100V	70V	100V
GS1D	GS1D	200V	140V	200V
GS1G	GS1G	400V	280V	400V
GS1J	GS1J	600V	420V	600V
GS1K	GS1K	800V	560V	800V
GS1M	GS1M	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward current	$I_{F(AV)}$	1.0A	T_J = 75°C
Peak Forward Surge Current	I_{FSM}	50A	8.3ms, half sine, T_J = 150°C
Maximum Instantaneous Forward Voltage	V_F	1.1V	I_{FM} = 1.0A; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 50µA	T_J = 25°C T_J = 125°C
Maximum Reverse Recovery Time	T_{rr}	1.8µs	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

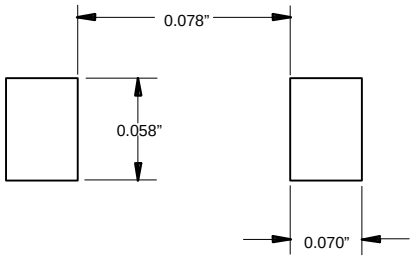
*Pulse test: Pulse width 300 µsec, Duty cycle 2%

DO-214AC (SMAJ)



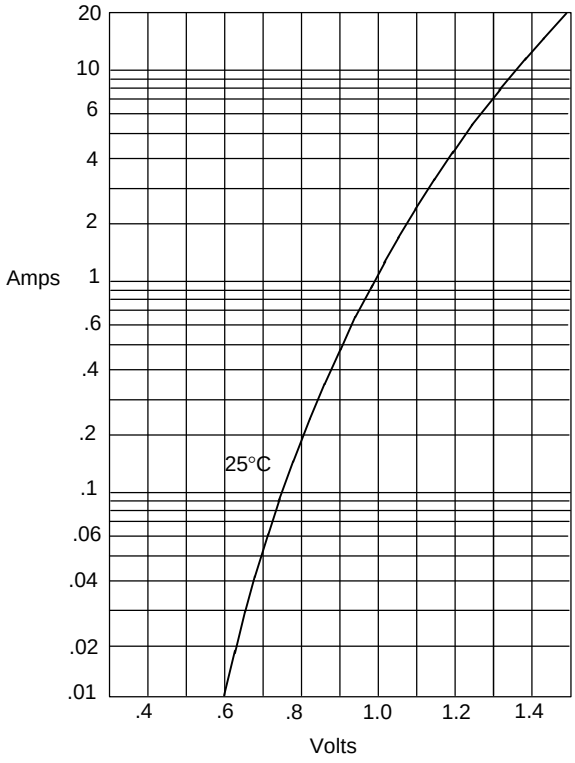
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.078	.115	1.98	2.92	1
B	.052	.058	1.32	1.47	
C	---	.005	---	.127	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.084	1.65	2.13	
G	.194	.216	4.93	5.48	
H	.157	.177	3.99	4.50	
J	.100	.110	2.57	2.79	

SUGGESTED SOLDER PAD LAYOUT



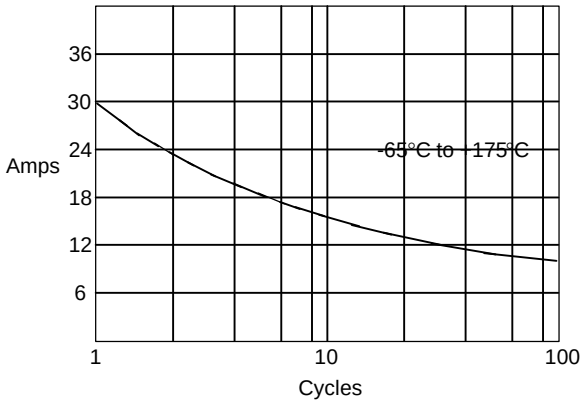
GS1A thru GS1M

Figure 1
Typical Forward Characteristics



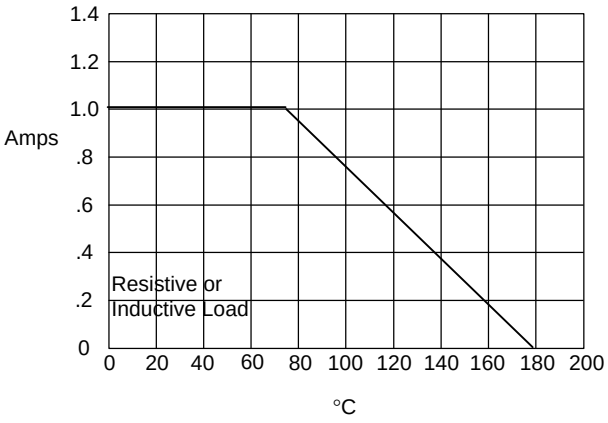
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 3
Maximum Overload Surge Current



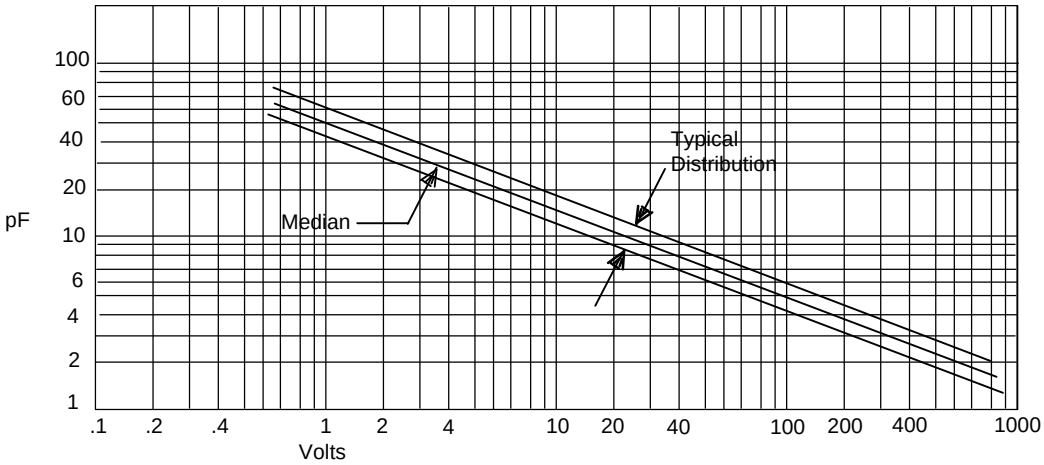
Peak Forward Current - Amperes *versus*
Number of Cycles at 60Hz

Figure 4
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature -°C

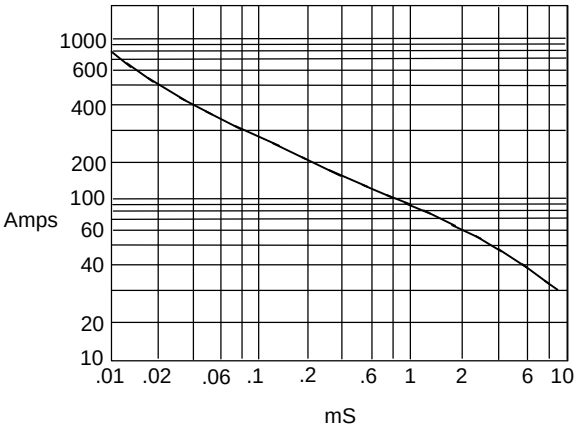
Figure 2
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Junction Potential (Applied V + 0.7 Volts) - Volts

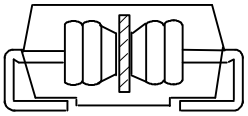
GS1A thru GS1M

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Pulse Duration - Milliseconds (mS)

Figure 6
New SMA Assembly



Round Lead
Process