Micro Commercial Components
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RoHS COMPLIANT

GS1AE THRU GS1ME

1.0 Amp Silicon Rectifier 50 to 1000 Volts

Features

- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Easy Pick And Place
- 260C for 10s and 230 for 45s of High Temp. Soldering
- Low Thermal Resistance
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead
  85°C/W Junction To Ambient

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
GS1AE	GS1A	50V	35V	50V
GS1BE	GS1B	100V	70V	100V
GS1DE	GS1D	200V	140V	200V
GS1GE	GS1G	400V	280V	400V
GS1JE	GS1J	600V	420V	600V
GS1KE	GS1K	800V	560V	800V
GS1ME	GS1M	1000V	700V	1000V

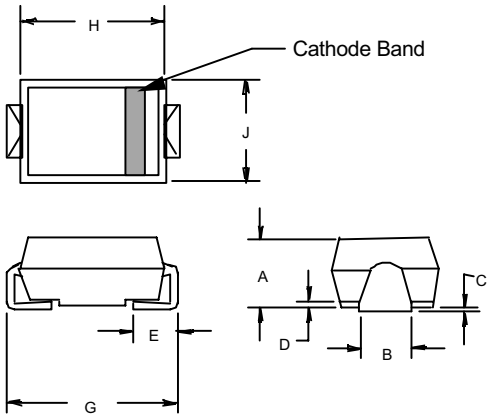
Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward current	$I_{F(AV)}$	1.0A	T_J = 75°C
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine,
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	5μA 50μA	T_J = 25°C T_J = 125°C
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V
Typical Reverse Recovery Time	T_{rr}	2000ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Rating for Fusing	I^2t	3.735A^2s	

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

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

DO-214AC
(SMAE)



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.079	.096	2.01	2.44	
B	.045	.071	1.15	1.80	
C	.002	.008	.05	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
G	.189	.208	4.80	5.30	
H	.157	.180	4.00	4.57	
J	.090	.115	2.29	2.92	

SUGGESTED SOLDER PAD LAYOUT

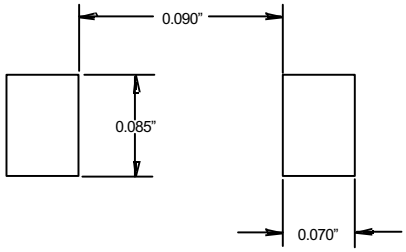
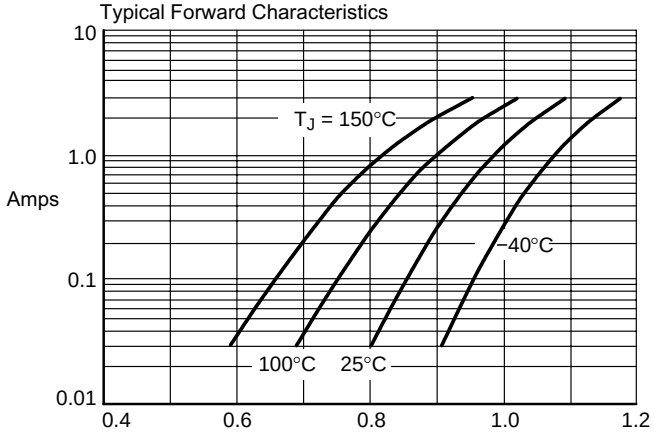
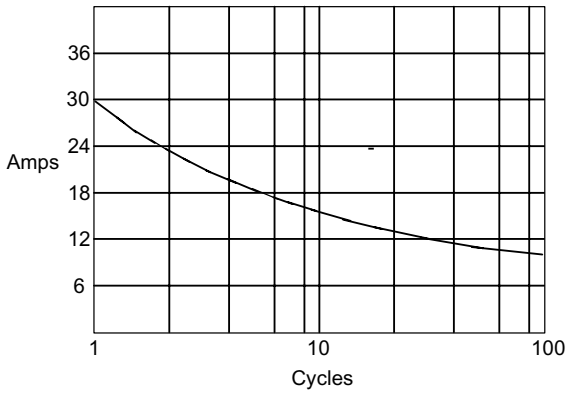


Figure 1
Typical Forward Characteristics



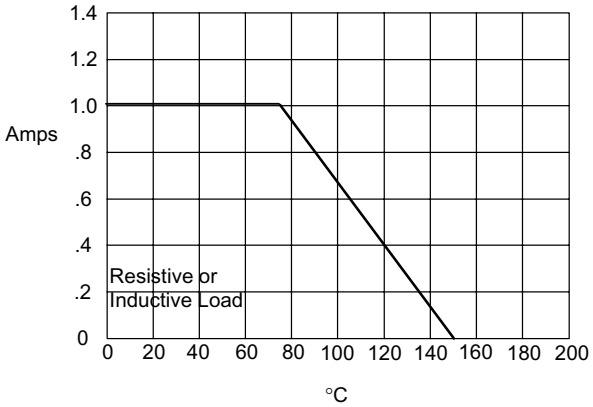
Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 2
Maximum Forward Surge Current



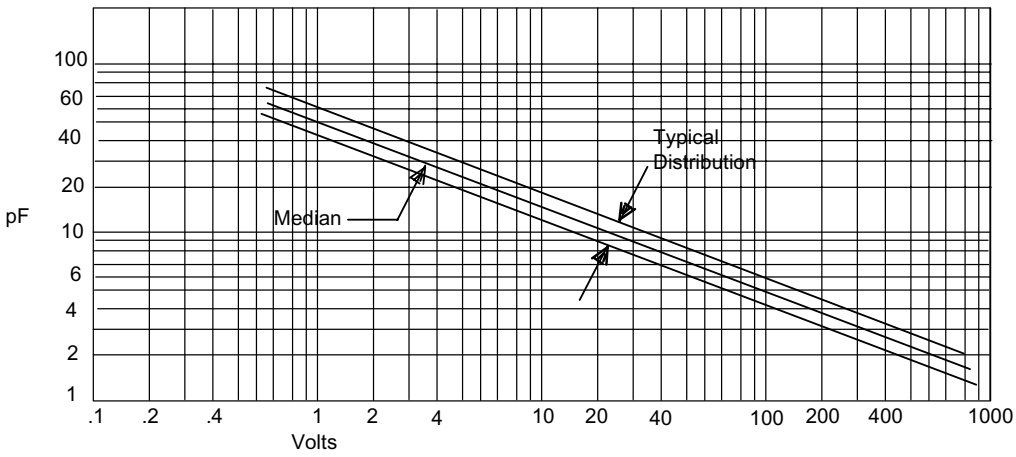
Peak Forward Current - Amperes*versus*
Number of Cycles at 60Hz

Figure 3
Forward Derating Curve



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

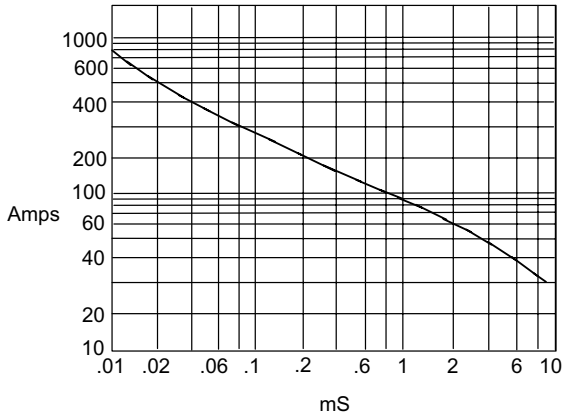
Figure 4
Junction Capacitance



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

GS1AE thru GS1ME

Figure 5
Peak Forward Surge Current



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

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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 6Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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