

## 1.0 Ampere Silicon Rectifier

### Features:

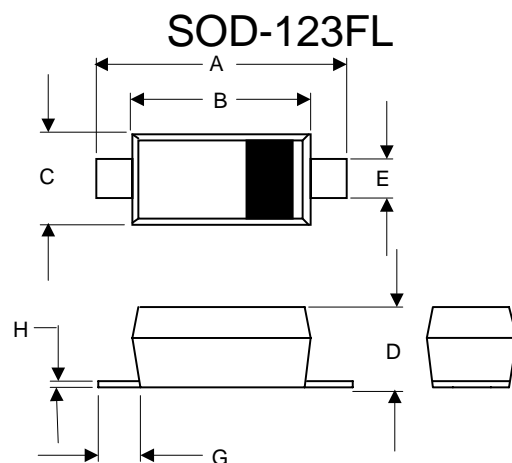
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Low Leakage Current
- Glass Passivated Junction
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating 1

### Maximum Ratings:

- Operating Temperature( $T_J$ ):  $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$
- Storage Temperature( $T_{STG}$ ):  $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$
- Typical Thermal Resistance( $R_{thJA}$ ):  $50^{\circ}\text{C}/\text{W}$

Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
GS1AS	A1	50V	35V	50V
GS1BS	A2	100V	70V	100V
GS1DS	A3	200V	140V	200V
GS1GS	A4	400V	280V	400V
GS1JS	A5	600V	420V	600V
GS1KS	A6	800V	560V	800V
GS1MS	A7	1000V	700V	1000V

## 1.0 Ampere Silicon Rectifier 50 to 1000 Volts

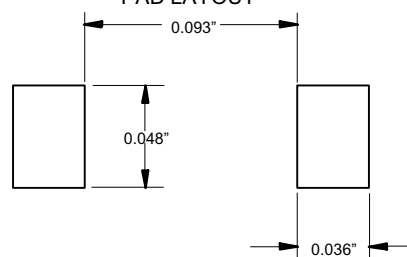


### Electrical Characteristics @ $25^{\circ}\text{C}$ Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0 A	$T_A = 75^{\circ}\text{C}$
Peak Forward Surge Current	$I_{FSM}$	30.0 A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	1.1V	$T_A = 25^{\circ}\text{C}$ $I_F = 1\text{A}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5.0 $\mu\text{A}$ 50 $\mu\text{A}$	$T_A = 25^{\circ}\text{C}$ $T_A = 100^{\circ}\text{C}$
Maximum Full Load Reverse Current Average, Full Cycle 9.5mm Lead Length	$I_R$	30 $\mu\text{A}$	$T_L = 75^{\circ}\text{C}$
Typical Junction Capacitance	$C_J$	15pF	Measured at 1.0MHz, $V_R = 4.0\text{V}$

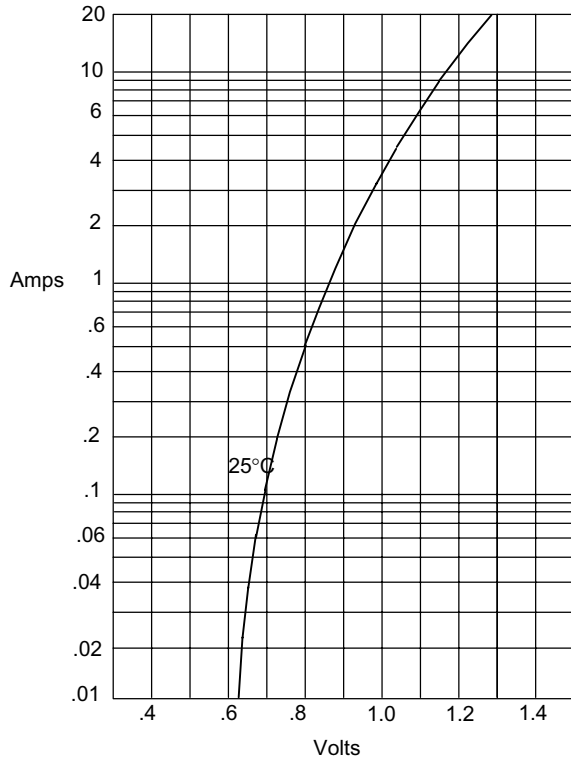
DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.140	.152	3.55	3.85	
B	.100	.112	2.55	2.85	
C	.055	.071	1.40	1.80	
D	.037	.053	0.95	1.35	
E	.020	.039	0.50	1.00	
G	.010	-----	0.25	-----	
H	-----	.008	-----	.20	

### SUGGESTED SOLDER PAD LAYOUT



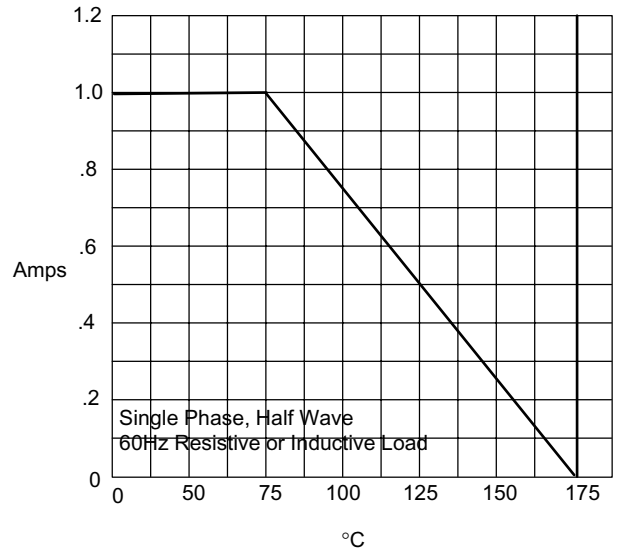
Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

Figure 1  
 Typical Forward Characteristics



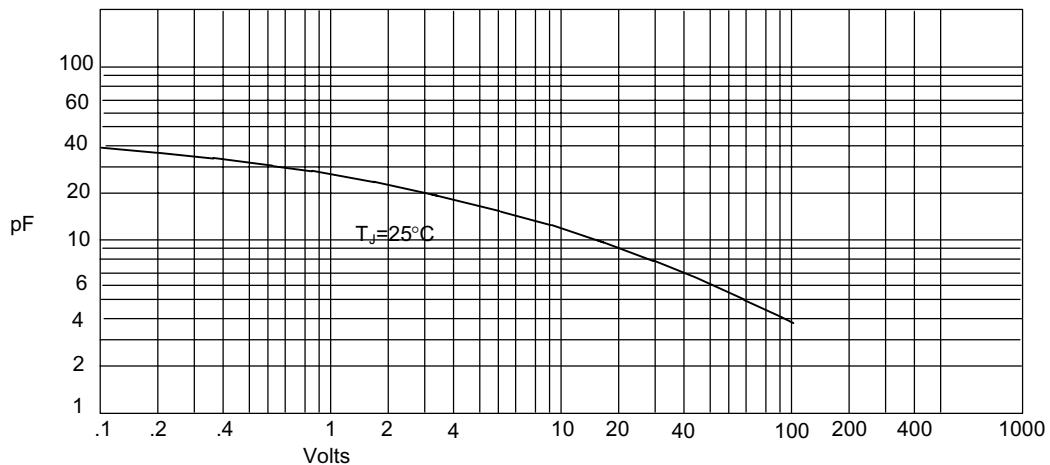
Instantaneous Forward Current - Amperes *versus*  
 Instantaneous Forward Voltage - Volts

Figure 2  
 Forward Derating Curve



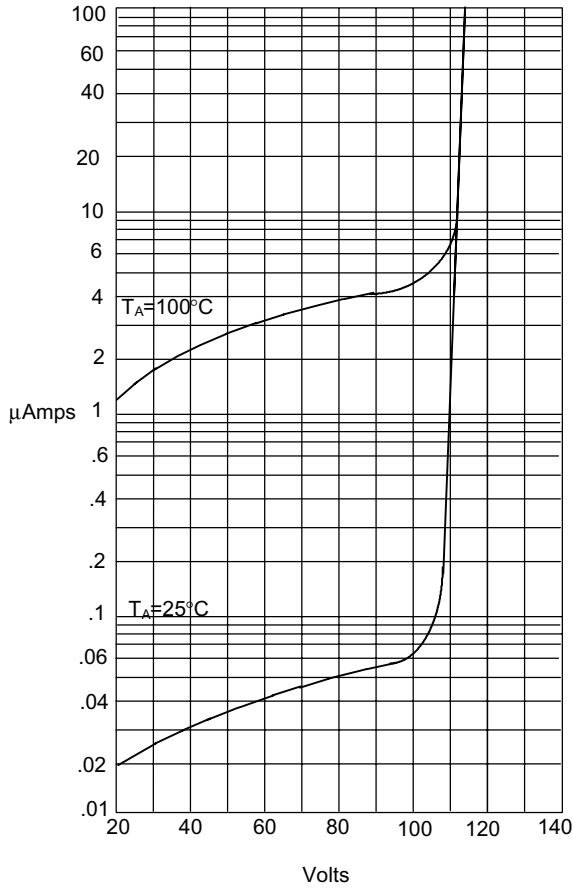
Average Forward Rectified Current - Amperes *versus*  
 Ambient Temperature - °C

Figure 3  
 Junction Capacitance



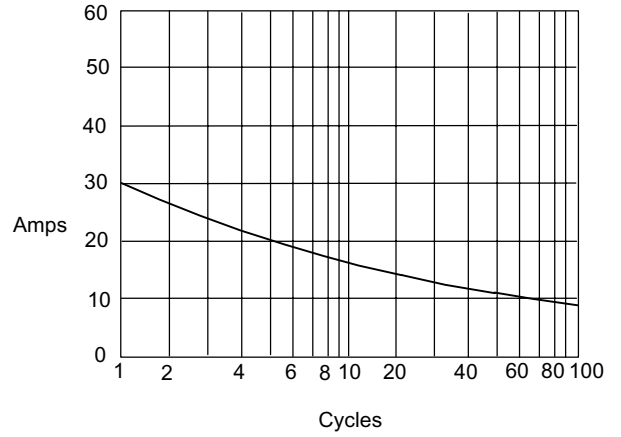
Junction Capacitance - pF *versus*  
 Reverse Voltage - Volts

Figure 4  
 Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes versus  
 Percent Of Rated Peak Reverse Voltage - Volts

Figure 5  
 Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus  
 Number Of Cycles At 60Hz - Cycles