



Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Glass passivated chip junction
- This product is available in AEC-Q101 Qualified and PPAP Capable also.

For AEC-Q101 qualified products, please use suffix -AQ in the part number while ordering

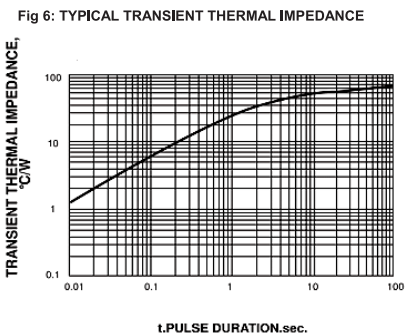
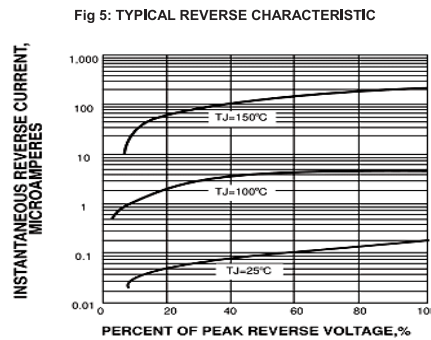
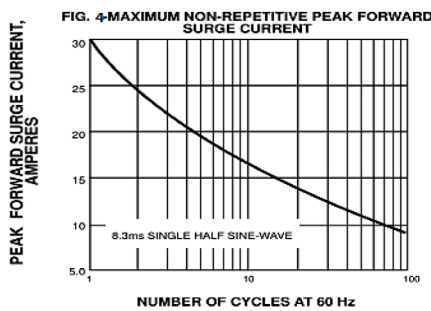
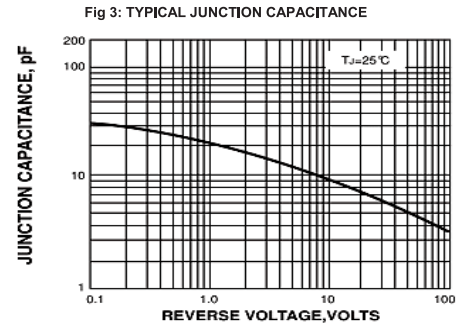
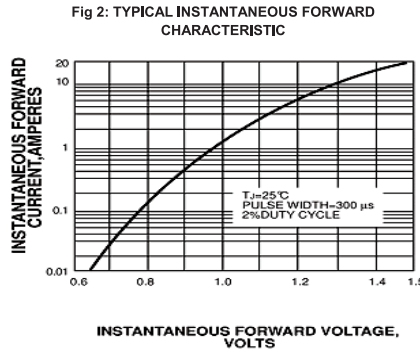
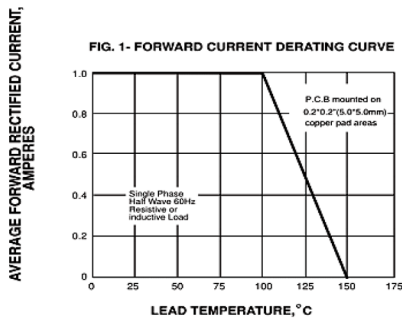
Absolute Maximum Ratings (T_A = 25°C Unless otherwise specified)

Parameter	Symbol	GS1A/ M1	GS1B/ M2	GS1D/ M3	GS1G/ M4	GS1J/ M5	GS1K/ M6	GS1M/ M7	Units
Marking Code		M1	M2	M3	M4	M5	M6	M7	-
Max. repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Max. RMS voltage	VRMS	35	70	140	280	420	560	700	
Max. DC blocking voltage	VDC	50	100	200	400	600	800	1000	
Max. average forward rectified current at T _L =100°C	I _(AV)	1							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	30							
Max. instantaneous forward voltage	V _F	1.1							
Max. DC reverse current at rated DC blocking voltage	I _R	5							
		50							
Maximum Reverse Recovery Time ³ T _J = 25°C	T _{RR}	2.5							
Typical junction capacitance ¹	C _J	15							
Typical thermal resistance ²	R _{θJA}	75							°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150							°C

Notes:

1. Measured at 1MHz and applied reverse voltage of 4V D.C.
2. P.C.B. mounted with 0.2"×0.2" (5mm×5mm) copper pad areas
3. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A

Typical Characteristics Curves



Recommended Reflow Solder Profiles

The recommended reflow solder profiles for Pb and Pb-free devices are shown below.

Figure 1

Shows the recommended solder profile for devices that have Pb-free terminal plating, and where a Pb-free solder is used.

Figure 2

Shows the recommended solder profile for devices with Pb-free terminal plating used with leaded solder, or for devices with leaded terminal plating used with a leaded solder.

Figure 1

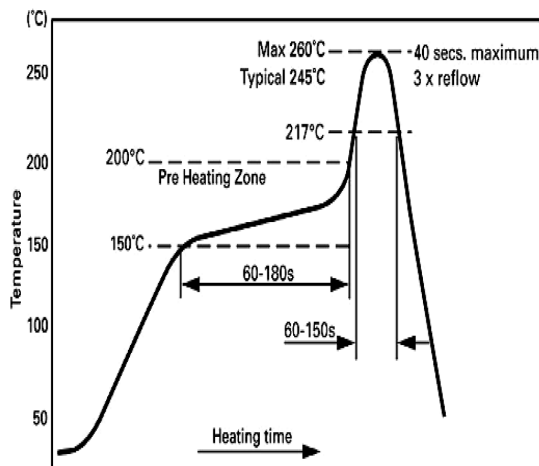
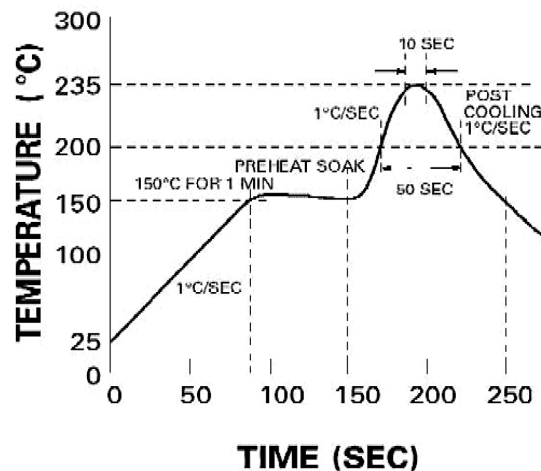


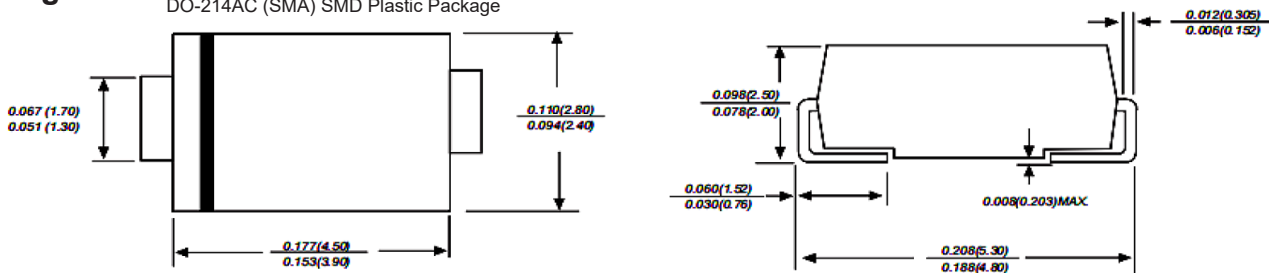
Figure 2



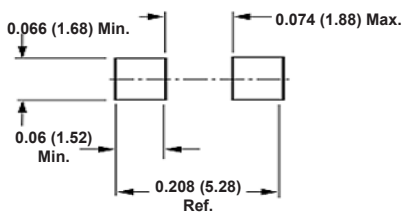
Reflow profiles in tabular form		
Profile Feature	Sn-Pb System	Pb-Free System
Average Ramp-Up Rate	~3°C/second	~3°C/second
Preheat		
– Temperature Range	150-170°C	150-170°C
– Time	60-180 seconds	60-180 seconds
Time maintained above:		
– Temperature	200°C	217°C
– Tim	30-50 seconds	60-150 seconds
Peak Temperature	235°C	260°C max.
Time within +0 -5°C of actual	10 seconds	40 seconds
Ramp-Down Rate	3°C/second max.	6°C/second max

Diagram

DO-214AC (SMA) SMD Plastic Package



Solder Pad Layout



Part Number Table

Description	Part Number
Standard Recovery Diode, 50V, 1A, Single, 1.1V, 2.5µs, 30A	GS1A/M1
Standard Recovery Diode, 100V, 1A, Single, 1.1V, 2.5µs, 30A	GS1B/M2
Standard Recovery Diode, 200V, 1A, Single, 1.1V, 2.5µs, 30A	GS1D/M3
Standard Recovery Diode, 400V, 1A, Single, 1.1V, 2.5µs, 30A	GS1G/M4
Standard Recovery Diode, 600V, 1A, Single, 1.1V, 2.5µs, 30A	GS1J/M5
Standard Recovery Diode, 800V, 1A, Single, 1.1V, 2.5µs, 30A	GS1K/M6
Standard Recovery Diode, 1kV, 1A, Single, 1.1V, 2.5µs, 30A	GS1M/M7

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