GS1010FL

Product profile

Surface Mount High Current Density Diode

General description

Rectifiers 1.0 Amp 1000V

Features

Low forward voltage

Reverse energy tested

High current capability

Extremely low thermal resistance

Mechanical data

Case: SOD-123S Molded plastic

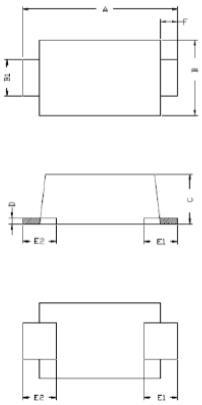
Epoxy: UL94V-O rate flame retardant

Lead: Lead Formed for Surface Mount

Polarity: Color band denotes cathode end

Mounting position: Any

SOD123S



Dimension	Millimeters		Inches	
	Min	Max	Min	Max
A	3.50	3.90	0.138	0.154
B	1.60	2.00	0.063	0.079
B1	0.80	1.00	0.031	0.039
C	1.00	1.40	0.039	0.055
D	0.12	0.20	0.005	0.008
E1	0.60	1.00	0.024	0.039
E2	0.60	1.00	0.024	0.039
F	0.20	0.60	0.008	0.024

Maximum Ratings (Tc=25°C unless otherwise noted)

Parameter	Symbol	GS1010FL	Unit
Maximum repetitive peak reverse voltage	VRRM	1000	V
RMS Voltage (Max.)	VRMS	700	V
Working peak reverse voltage	VRWM	1000	V
Maximum average forward rectified current	IF(AV)	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	30	A
Operating junction temperature range	TJ	-55 to +150	°C
Storage temperature range	TSTG	-55 to +150	°C

THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Typical thermal resistance	RθJA	42	°C/W

Notes:

(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

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Electrical characteristics (Tc=25°C unless otherwise noted)

OFF CHARACTERISTICS

Parameter	Symbol	Value		Unit
		Typical	Max	
Instantaneous forward voltage at IF=1A, Tj=25°C	VF	0.94	1.0	V
Maximum reverse current Tj=25°C	IR	2		u'A
at working peak reverse voltage Tj=125°C		2		m'A
Junction Capacitance @ DC 5V	CJ	4		pF

DEVICE MARK

GS1010FL

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■ Characteristic Curves

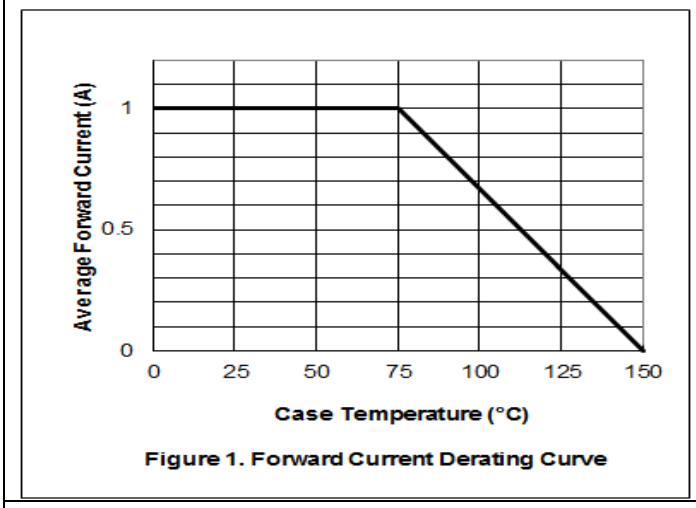

Figure 1. Forward Current Derating Curve

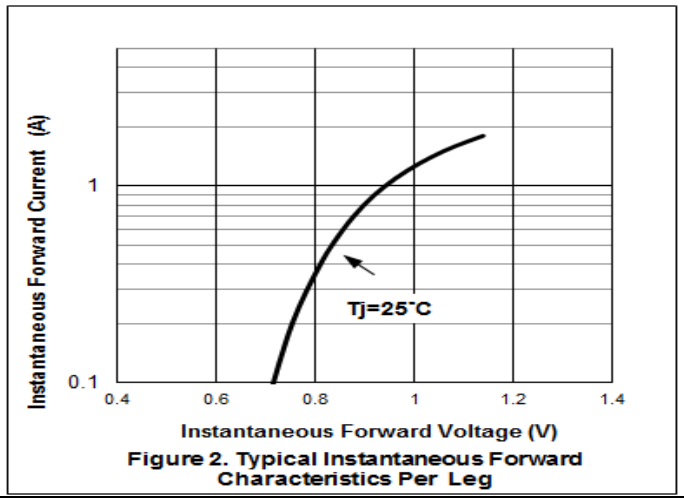

Figure 2. Typical Instantaneous Forward Characteristics Per Leg

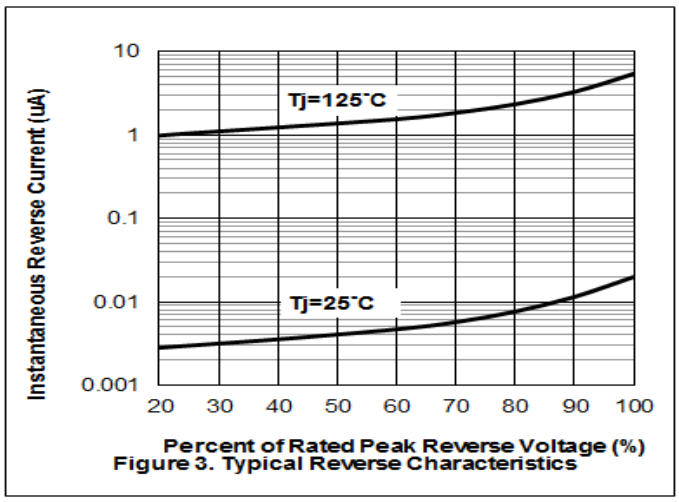

Figure 3. Typical Reverse Characteristics

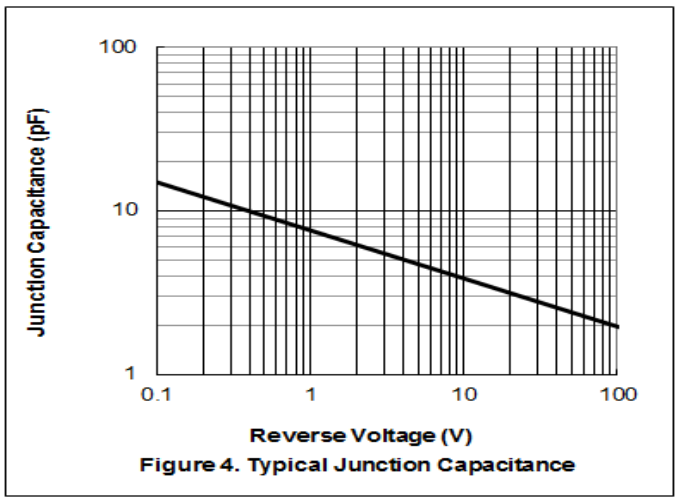

Figure 4. Typical Junction Capacitance

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