

GSDSS12FL Series

Surface Mount Glass Passivated Silicon Rectifier

Product Description

Reverse Voltage 20 to 200V Forward Current 1.0A

Features

- Low profile package
- Ideal for automated placement
- Ultrafast reverse recovery time
- Low power losses, high efficiency
- Low forward voltage drop
- High surge capability

Mechanical Data

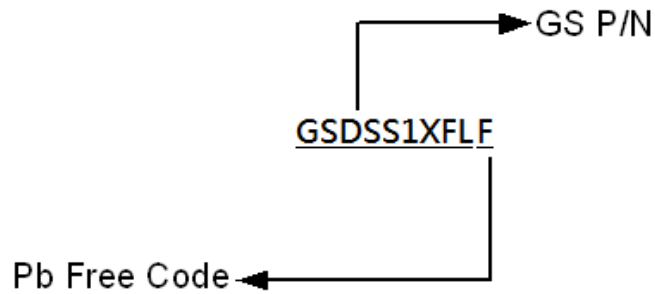
- Case : Molded plastic, SOD-123FL
- Terminals : Solder plated, solderable per MIL-STD-750, method 2026 guaranteed
- Polarity : Color band denotes cathode end

Package



SOD-123FL

Ordering Information



Part Number	Package	Quantity
GSDSS12FLF	SOD-123FL	3,000 PCS
GSDSS13FLF	SOD-123FL	3,000 PCS
GSDSS14FLF	SOD-123FL	3,000 PCS
GSDSS16FLF	SOD-123FL	3,000 PCS
GSDSS18FLF	SOD-123FL	3,000 PCS
GSDSS110FLF	SOD-123FL	3,000 PCS
GSDSS115FLF	SOD-123FL	3,000 PCS
GSDSS120FLF	SOD-123FL	3,000 PCS

Marking Information

P/N	Part Marking	Package
GSDSS12FLF	K12	SOD-123FL
GSDSS13FLF	K13	SOD-123FL
GSDSS14FLF	K14	SOD-123FL
GSDSS16FLF	K16	SOD-123FL
GSDSS18FLF	K18	SOD-123FL
GSDSS110FLF	K110	SOD-123FL
GSDSS115FLF	K115	SOD-123FL
GSDSS120FLF	K120	SOD-123FL

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60HZ, resistive or inductive load.

For capacitive load, derate current by 20%.

Conditions	Symbols	GSDSS12FLF	GSDSS13FLF	Units
Maximum Recerrent Peak Reverse Voltage	V_{RRM}	20	30	Volts
Maximum RMS Voltage	V_{RMS}	14	21	Volts
Maximum DC Blocking Voltage	V_{DC}	20	30	Volts
Maximum Forward Voltage at 1.0A(Note 1)	V_F	0.55		Volts
Conditions	Symbols	GSDSS14FLF	GSDSS16FLF	Units
Maximum Recerrent Peak Reverse Voltage	V_{RRM}	40	60	Volts
Maximum RMS Voltage	V_{RMS}	28	42	Volts
Maximum DC Blocking Voltage	V_{DC}	40	60	Volts
Maximum Forward Voltage at 1.0A(Note 1)	V_F	0.55	0.75	Volts
Conditions	Symbols	GSDSS18FLF	GSDSS110FLF	Units
Maximum Recerrent Peak Reverse Voltage	V_{RRM}	80	100	Volts
Maximum RMS Voltage	V_{RMS}	56	70	Volts
Maximum DC Blocking Voltage	V_{DC}	80	100	Volts
Maximum Forward Voltage at 1.0A(Note 1)	V_F	0.85		Volts
Conditions	Symbols	GSDSS115FLF	GSDSS120FLF	Units
Maximum Recerrent Peak Reverse Voltage	V_{RRM}	150	200	Volts
Maximum RMS Voltage	V_{RMS}	105	140	Volts
Maximum DC Blocking Voltage	V_{DC}	150	200	Volts
Maximum Forward Voltage at 1.0A(Note 1)	V_F	0.95		Volts
Maximum Average Forward Rectified Current @TA=50°C	$I_{(AV)}$	1.0		Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25.0		Amp
Maximum Reverse Current at at TA=25°C at Rated DC Blocking Voltage TA=100°C	I_R	1.0	20	mAmp
Typical Junction Capacitance (Note 1)	C_J	8		pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	88.0		°C/W
Operating and Storage Temperature Range	T_J	-50 to +125		°C
Storage Temperature Range	T_{stg}	-50 to +125		°C

NOTES:

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

2- Mounted on FR-4 P.C.B. With 0.9x1.5 mm copper pad areas (≈35 µm thick)

Typical Characteristics

Fig 1. Forward Current Derating Curve

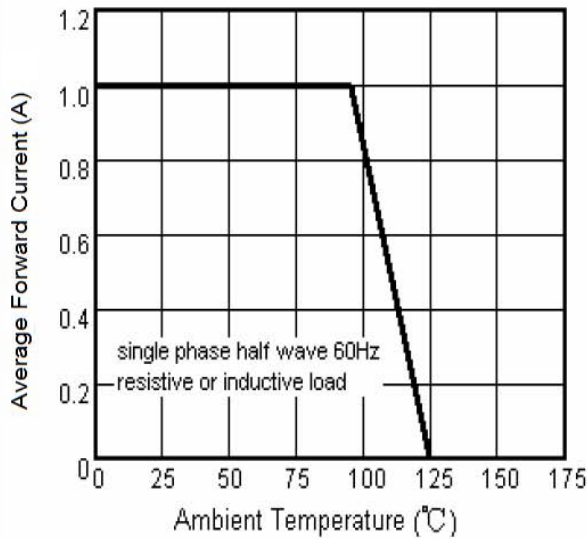


Fig 2. Maximum Non-Repetitive Peak Forward Surge Current

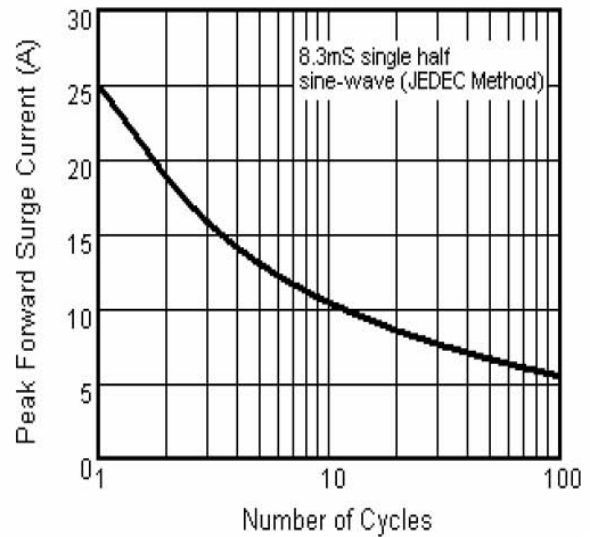


Fig. 3 Typical Instantaneous Forward Characteristics

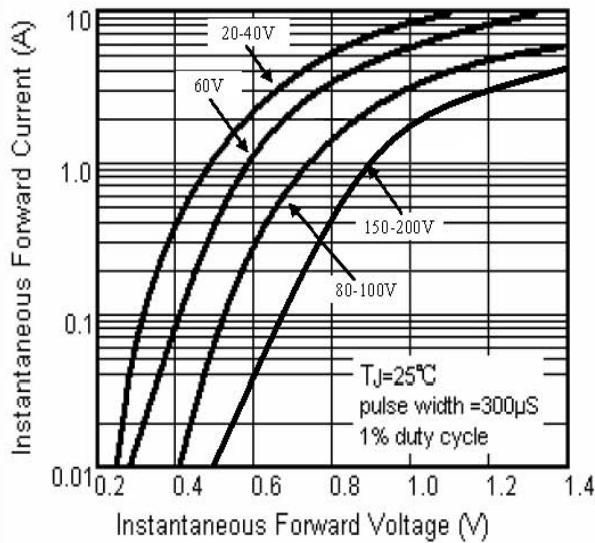
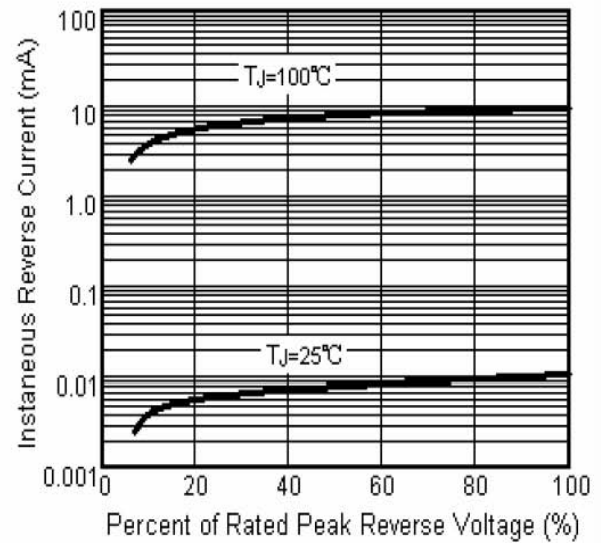
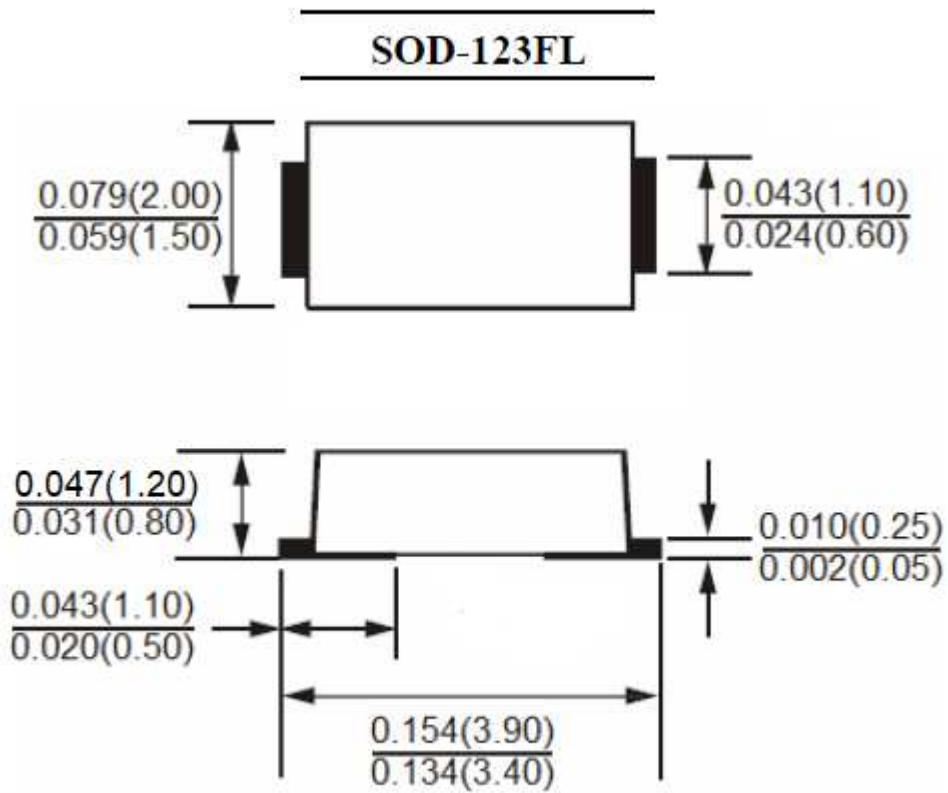


Fig. 4 Typical Reverse Characteristics



Package Dimension









Dimensions in inches and (millimeters)

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