

SF12

SINTERED GLASS JUNCTION ULTRAFAST AVALANCHE RECTIFIER

VOLTAGE: 1200V

CURRENT: 1.0A



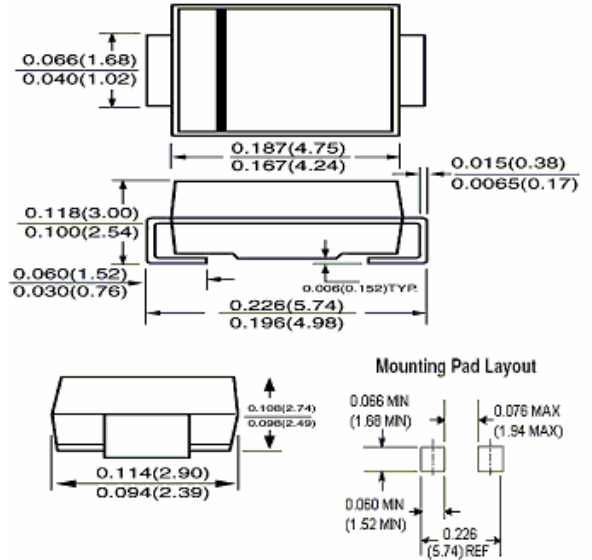
FEATURE

Very low switching losses
Glass passivated
Low reverse current
High reverse voltage
Hermetically sealed package

MECHANICAL DATA

Case: SOD-57 sintered glass case
Terminal: Plated axial leads solderable per J-STD-002
Polarity: color band denotes cathode end
Mounting position: any

GF1/DO-214BA



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	Symbol	SF12	units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1200	V
Maximum RMS Voltage	V_{RMS}	840	V
Maximum DC blocking Voltage	V_{DC}	1200	V
Minimum Reverse Breakdown Voltage $I_R = 100\mu A$	$V_{(BR)R}$	1250	V
Average Forward Rectified Current half-sinewave	I_{FAV}	1.0	A
Peak Forward Surge Current 10ms half sine-wave	I_{FSM}	30	A
Maximum Forward Voltage at 1.0A	V_F	3.4	V
Non-repetitive peak reverse avalanche energy at $I_{BR(R)}=0.4A$	E_R	10	mJ
Maximum DC Reverse Current $T_j = 25^\circ C$ at rated DC blocking voltage $T_j = 125^\circ C$	I_R	5.0 50.0	μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	75	nS
Typical Thermal Resistance (Note 2)	$R_{th(ja)}$ $R_{th(jc)}$	45 25	$^\circ C/W$
Typical Junction Capacitance (Note 3)	C_j	10.5	pF
Storage and Operating Junction Temperature	T_{stg}, T_j	-55 to +175	$^\circ C$

Note:

1. Reverse Recovery Condition $I_f = 0.5A$, $I_r = 1.0A$, $I_{rr} = 0.25A$
2. Lead length $l = 10mm$, $T_L = \text{constant}$
3. Measured at 1.0 MHz and applied $V_r = 4.0V$

RATINGS AND CHARACTERISTIC CURVES SF12

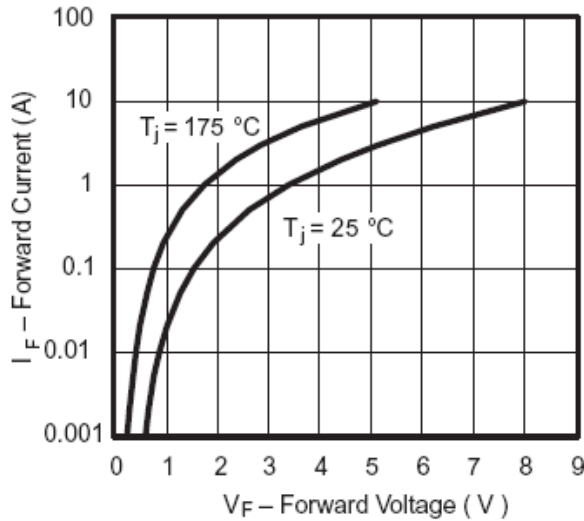


Figure 1. Max. Forward Current vs. Forward Voltage

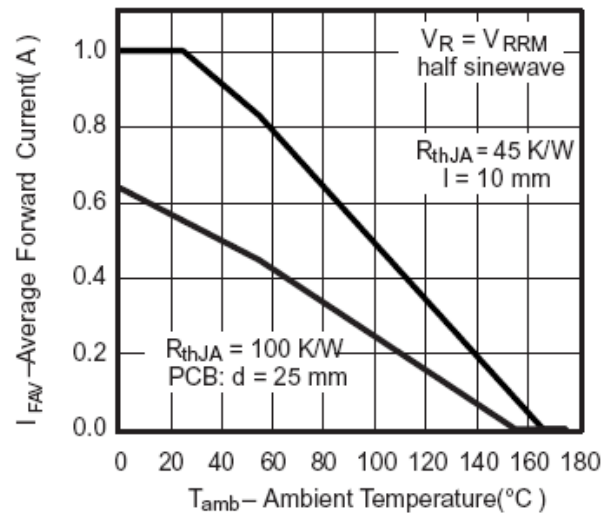


Figure 2. Max. Average Forward Current vs. Ambient Temperature

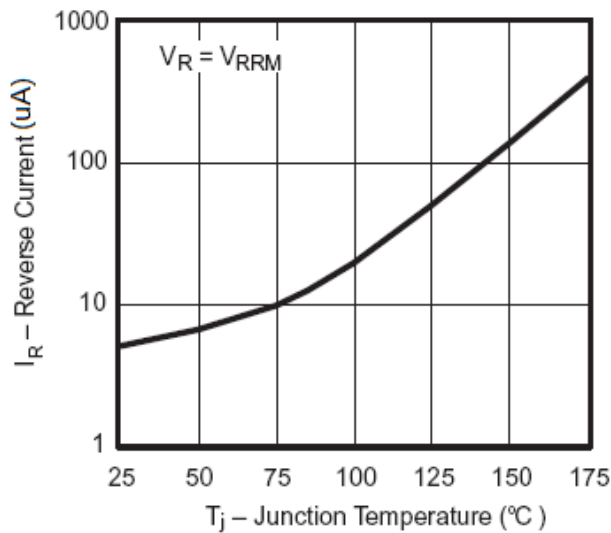


Figure 3. Reverse Current vs. Junction Temperature

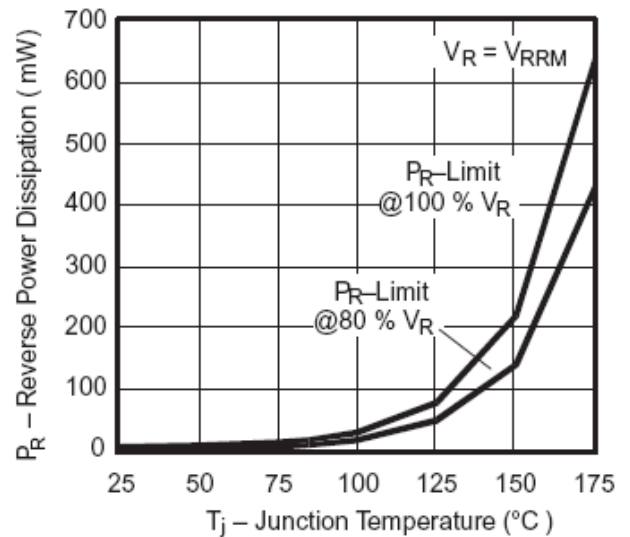


Figure 4. Max. Reverse Power Dissipation vs. Junction Temperature

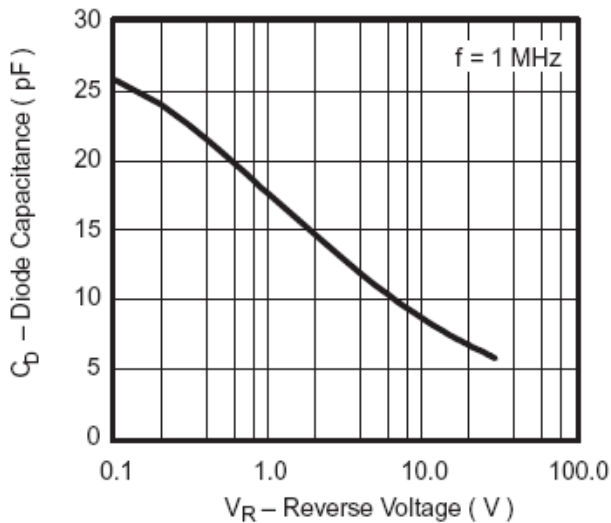


Figure 5. Diode Capacitance vs. Reverse Voltage