SF1600

SINTERED GLASS JUNCTION
ULTRAFAST AVALANCHE RECTIFIER

VOLTAGE：1600V **CURRENT: 1.0A**

GULF SEMI

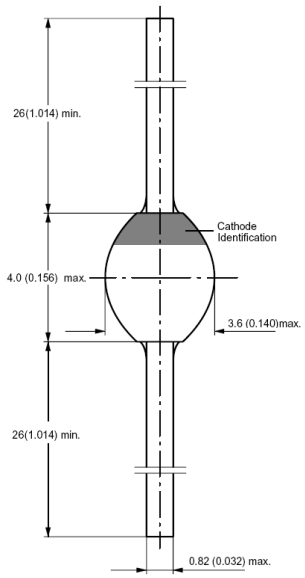
FEATURE

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 MIL-STD 202E, method 208C
Polarity: color band denotes cathode end
Mounting position: any

SOD-57



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	SF1600	units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1600	V
Maximum RMS Voltage	V_{RMS}	1120	V
Maximum DC blocking Voltage	V_{DC}	1600	V
Minimum Reverse Breakdown Voltage IR = 100μA	$V_{(BR)R}$	1650	V
Average Forward Rectified Current half-sinewave, Rth(ja)=45K/W, Ta=25°C	I_{FAV}	1.0	A
Peak Forward Surge Current at tp=10ms, half sinewave	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 Ta =25°C at rated DC blocking voltage Ta =125°C	I_R	5.0 50.0	μA
Maximum Reverse Recovery Time (Note 1)	Trr	75	nS
Typical Thermal Resistance (Note 2)	Rth(ja)	45	K/W
Storage and Operating Junction Temperature	Tstg, Tj	-55 to +175	°C

Note:
1. Reverse Recovery Condition If =0.5A, Ir =1.0A, Irr =0.25A
2. Lead length l =10mm, T_L= constant

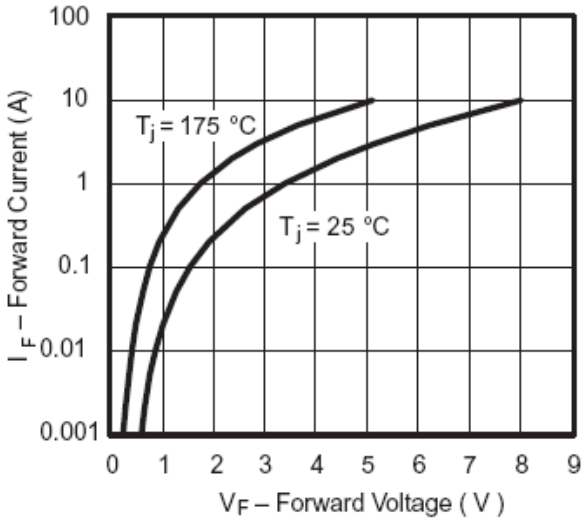


Figure 1. Max. Forward Current vs. Forward Voltage

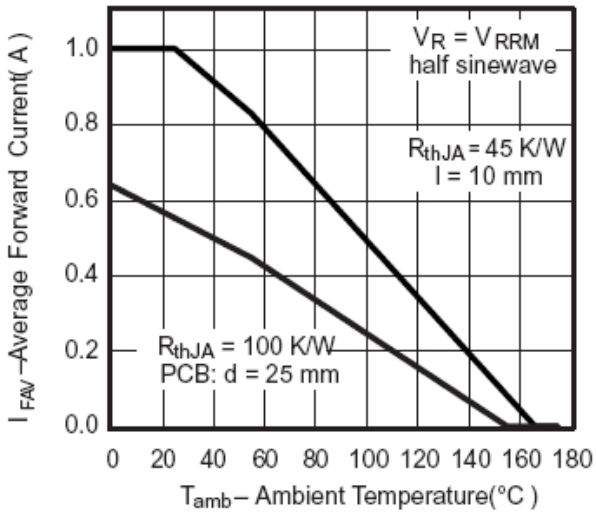


Figure 2. Max. Average Forward Current vs. Ambient Temperature

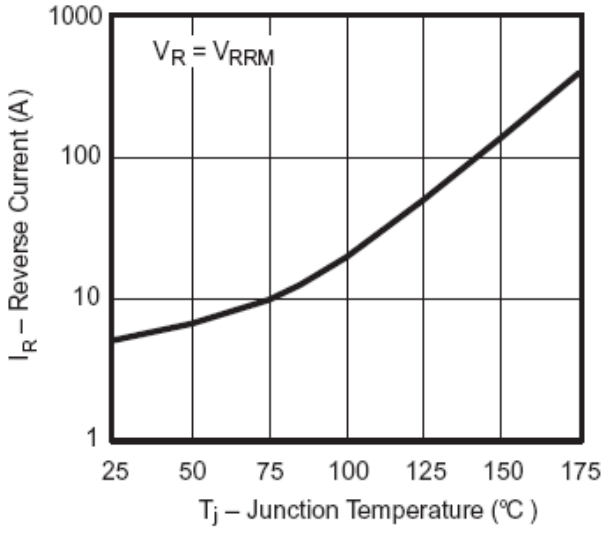


Figure 3. Reverse Current vs. Junction Temperature

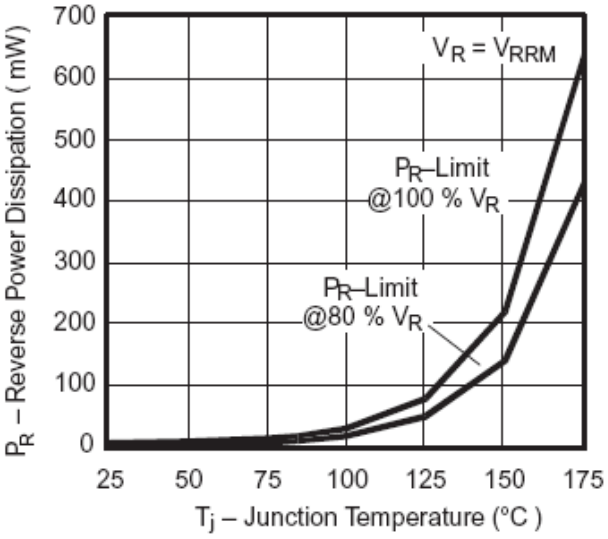


Figure 4. Max. Reverse Power Dissipation vs. Junction Temperature

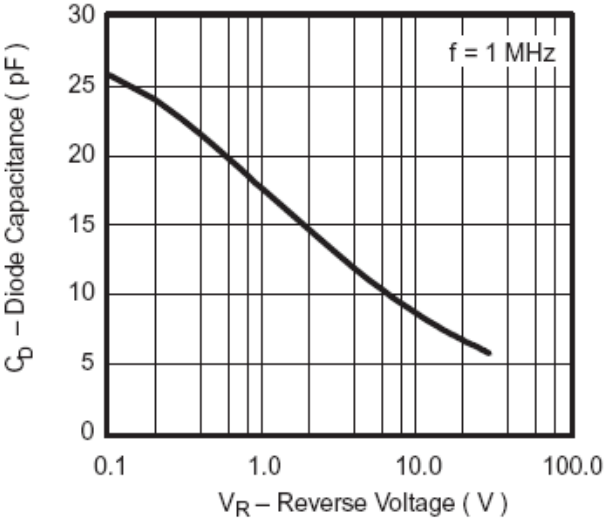


Figure 5. Diode Capacitance vs. Reverse Voltage