星合电子
XINGHE ELECTRONICS

# SF1600

## SINTERED GLASS JUNCTION ULTRAFAST AVALANCHE RECTIFIER

**VOLTAGE: 1600 CURRENT: 1.0A**

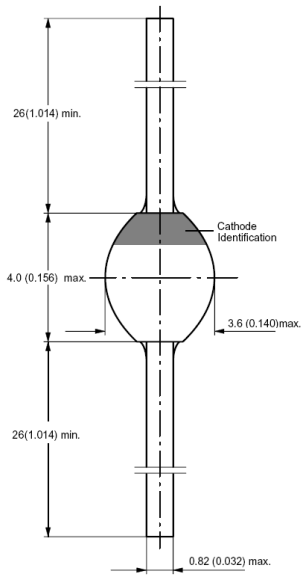
## FEATURE

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 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<br>at rated DC blocking voltage Ta =125°C | $I_R$ | 5.0<br>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



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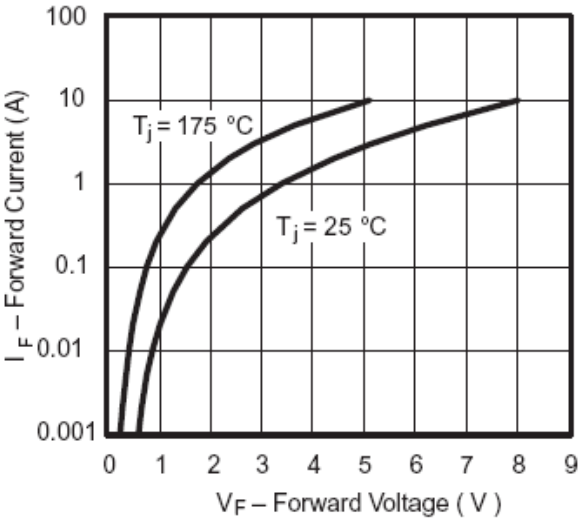



Figure 1. Max. Forward Current vs. Forward Voltage

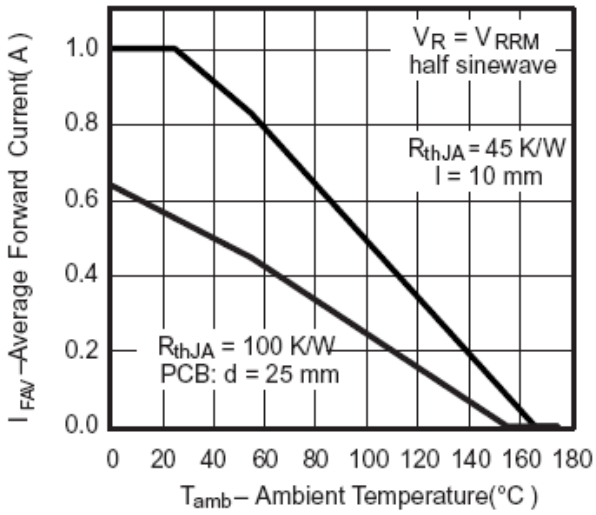



Figure 2. Max. Average Forward Current vs. Ambient Temperature

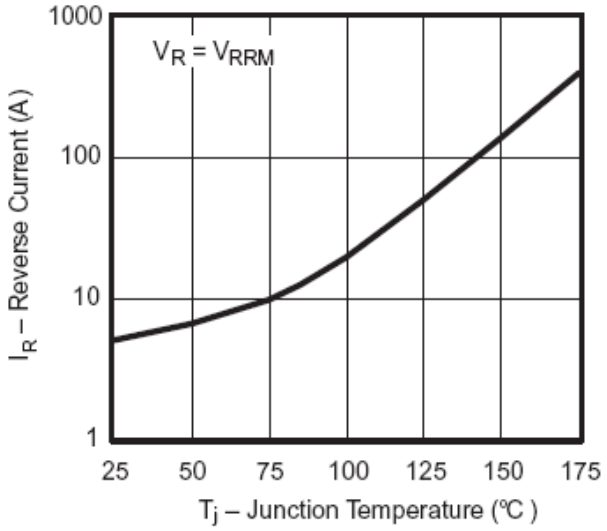



Figure 3. Reverse Current vs. Junction Temperature

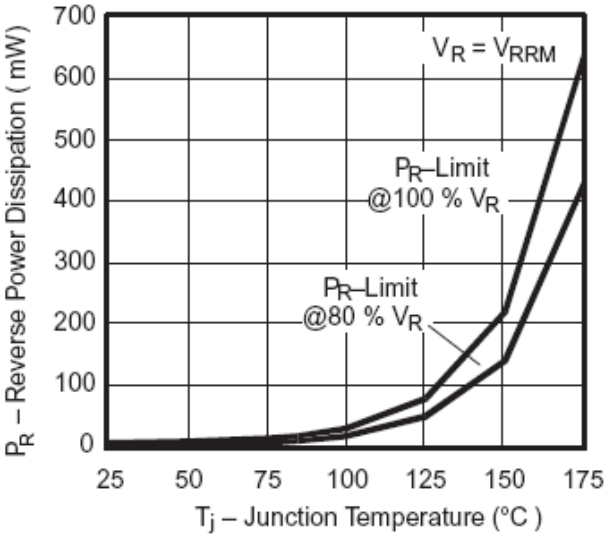



Figure 4. Max. Reverse Power Dissipation vs. Junction Temperature

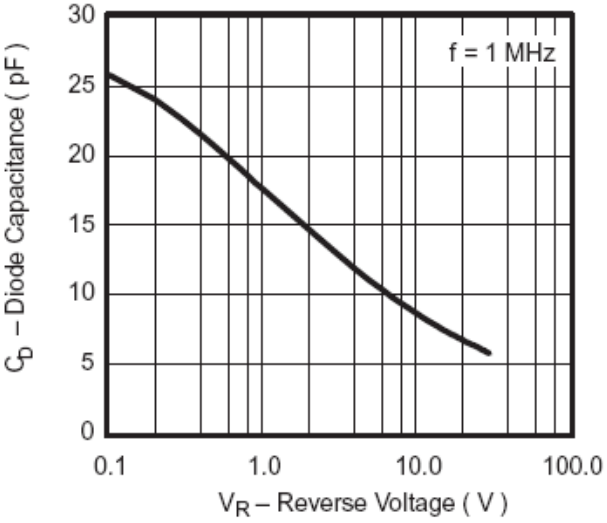



Figure 5. Diode Capacitance vs. Reverse Voltage