

Features

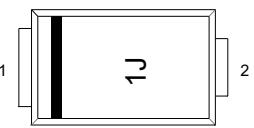
- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- Low Profile Package
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

1 Amp Surface Mount General Purpose Rectifier 600 Volts

Maximum Ratings @ 25°C (Unless Otherwise Specified)

| Parameter | Symbol | Value | Unit |
|---|-------------|-------|----------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | | |
| Working Peak Reverse Voltage | V_{RWM} | 600 | V |
| DC Blocking Voltage | V_R | | |
| RMS Reverse Voltage | V_{RMS} | 420 | V |
| Average Rectified Forward Current @ $T_L=115^\circ\text{C}$ | $I_{F(AV)}$ | 1 | A |
| Non-Repetitive Peak Surge Current @8.3ms Half Sine Wave | I_{FSM} | 18 | A |
| Current Squared Time @ 1ms $\leq t \leq$ 8.3ms | I^2t | 1.3 | A^2s |

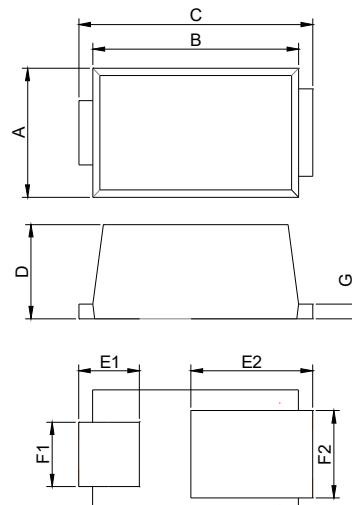
Internal Structure

| Pin | Description | Simplified Outline | Graphic Symbol |
|-----|-------------|---|---|
| 1 | Cathode | | |
| 2 | Anode |  |  |

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

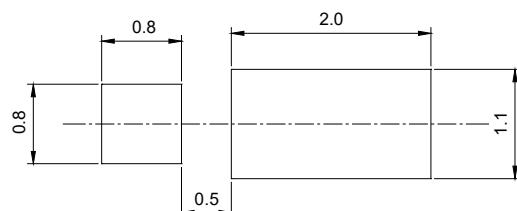
2. High temperature solder exemption applied, see EU directive annex 7a.

SOD-323HE-B



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.047 | 0.055 | 1.20 | 1.40 | |
| B | 0.083 | 0.091 | 2.10 | 2.30 | |
| C | 0.091 | 0.106 | 2.30 | 2.70 | |
| D | 0.035 | 0.039 | 0.90 | 1.00 | |
| E1 | 0.022 | 0.030 | 0.55 | 0.75 | |
| E2 | 0.043 | 0.059 | 1.10 | 1.50 | |
| F1 | 0.022 | 0.030 | 0.55 | 0.75 | |
| F2 | 0.031 | 0.039 | 0.78 | 0.98 | |
| G | 0.005 | 0.011 | 0.12 | 0.27 | |

Suggested Solder Pad Layout(mm)



Thermal characteristics

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---------------|---|------------|-----|-----|-----|------|
| T_J | Operating Junction Temperature Range | | -55 | | 150 | °C |
| T_{stg} | Storage Temperature Range | | -55 | | 150 | °C |
| $R_{th(J-A)}$ | Thermal Resistance from Junction to Ambient | Note 1 | | 130 | | °C/W |
| $R_{th(J-L)}$ | Thermal Resistance from Junction to Lead | Note 1 | | 30 | | °C/W |

Note:

1.Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 5mm*5mm copper pad areas. $R_{th(J-L)}$ is measured at the terminal of cathode band.

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|----------------------|--------|---|-----|-----|---------|------|
| Forward Voltage | V_F | $I_F=1A; T_J=25^\circ C$ | | | 1.10 | V |
| Reverse Current | I_R | at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$ | | | 5 50 | μA |
| Junction Capacitance | C_J | $V_R=4V; f=1MHz; T_J=25^\circ C$ | | 5 | | pF |

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

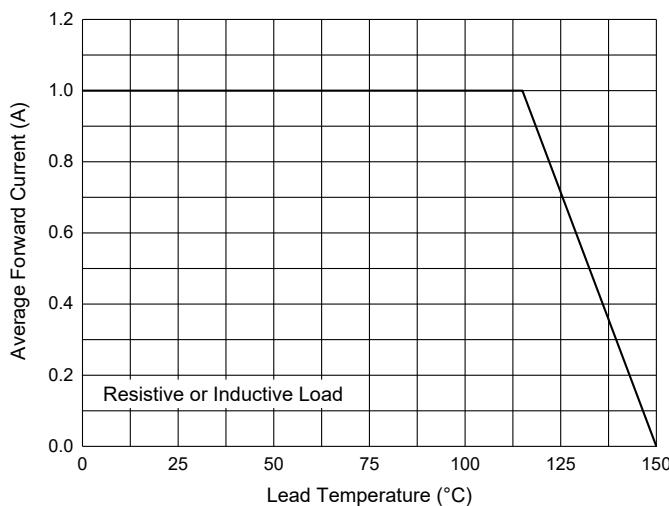


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

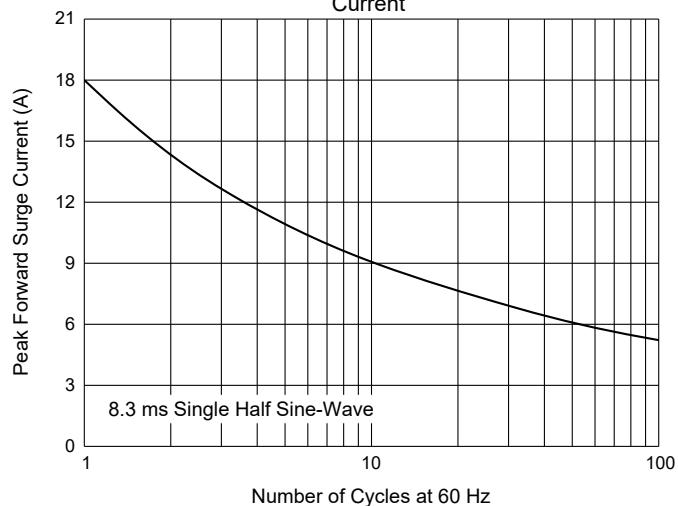


Fig. 3 - Typical Forward Characteristics

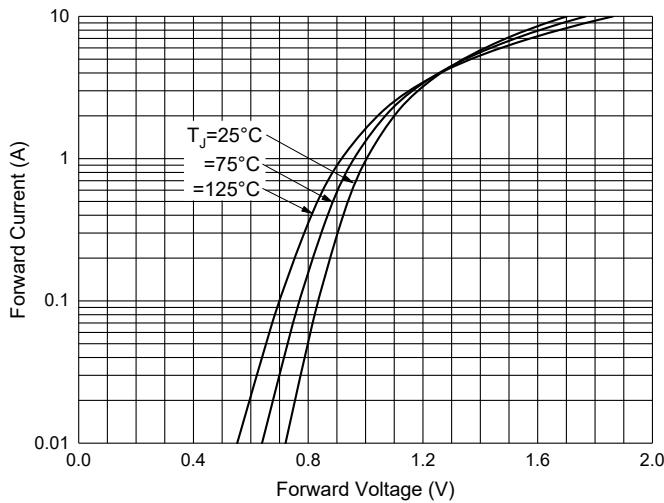


Fig. 4 - Typical Reverse Leakage Characteristics

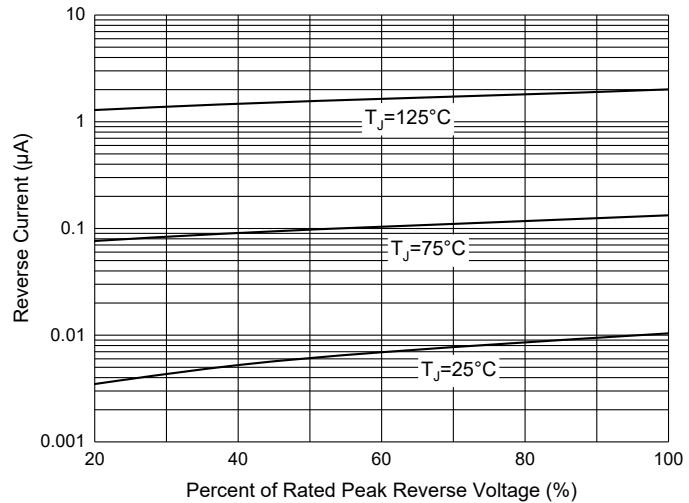
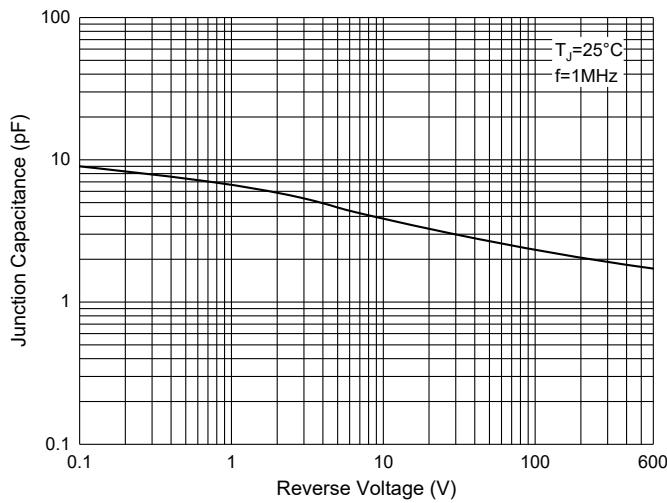


Fig. 5 - Typical Capacitance Characteristics



Ordering Information

| Device | Packing |
|-----------|------------------------|
| GS1JPB-TP | Tape&Reel:2.5Kpcs/Reel |

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