

Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- High Current Capability
- Guard Ring Protection
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 1)("P" Suffix Designates RoHS Compliant. See Ordering Information)

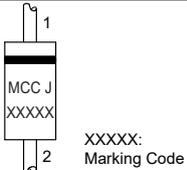
Maximum Ratings @ 25°C (Unless Otherwise Specified)

| Parameter | Symbol | Value | | | | Unit |
|--|-------------|--------|---------|---------|---------|------------------|
| | | SB 280 | SB 2010 | SB 2150 | SB 2200 | |
| Peak Repetitive Reverse Voltage | V_{RRM} | | | | | V |
| Working Peak Reverse Voltage | V_{RWM} | 80 | 100 | 150 | 200 | |
| DC Blocking Voltage | V_R | | | | | |
| RMS Reverse Voltage | V_{RMS} | 56 | 70 | 105 | 140 | V |
| Average Rectified Forward Current | $I_{F(AV)}$ | 2 | | | | A |
| Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave | I_{FSM} | 50 | | | | A |
| Current Squared Time @ 1ms ≤ t ≤ 8.3ms | I^2t | 10.375 | | | | A ² s |

Marking code

| Part Number | Marking Code |
|-------------|--------------|
| SB280 | SB280 |
| SB2010 | SB2010 |
| SB2150 | SB2150 |
| SB2200 | SB2200 |

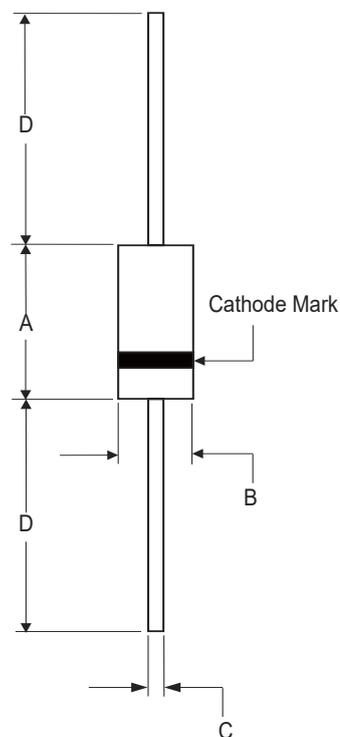
Internal Structure

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

Note: 1. High temperature solder exemption applied, see EU directive annex 7a.

& Amp
'GW ch_mIF YWJZYf
80 to 200 Volts

DO-15



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.230 | 0.300 | 5.80 | 7.60 | |
| B | 0.104 | 0.140 | 2.60 | 3.60 | |
| C | 0.026 | 0.035 | 0.70 | 0.90 | |
| D | 1.000 | ----- | 25.40 | ----- | |

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 |
| $R_{th(J-L)}$ | Thermal Resistance from Junction to Lead | | | 15 | | °C/W |
| $R_{th(J-A)}$ | Thermal Resistance from Junction to Ambient | | | 45 | | °C/W |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|--------|---|-----|----------|-----------|------|
| Forward Voltage | V_F | $I_F=2A; T_J=25^\circ C$ | | | 0.85 | V |
| Reverse Current | I_R | at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$ | | | 0.01 5 | mA |
| Junction Capacitance SB280~SB2010 SB2150~SB2200 | C_J | $V_R=4V; f=1MHz; T_J=25^\circ C$ | | 60 50 | | pF |

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

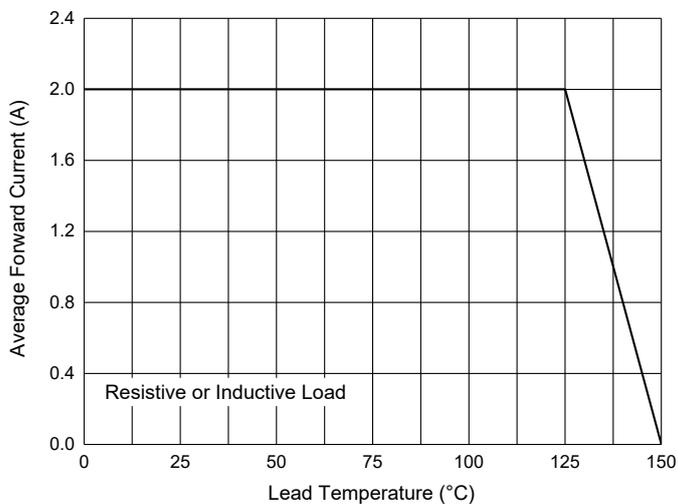


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

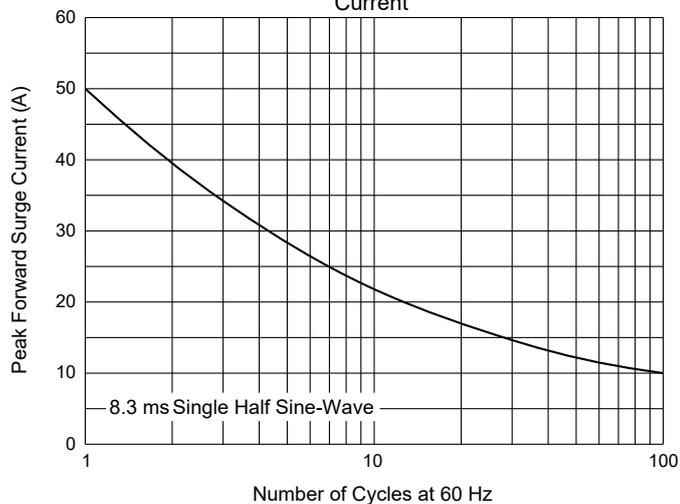


Fig. 3 - Typical Forward Characteristics

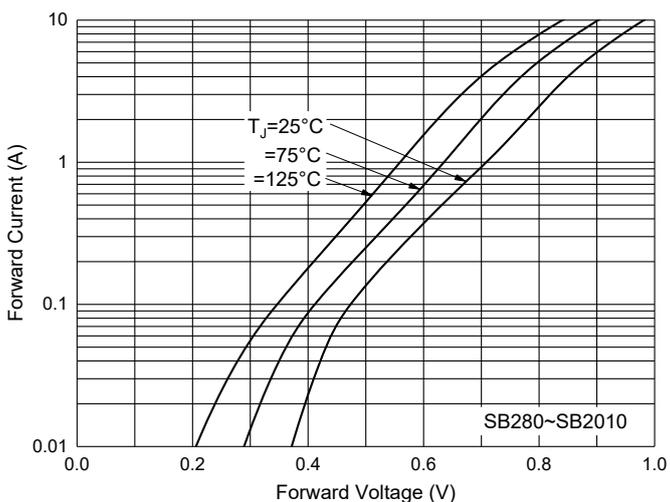


Fig. 4 - Typical Reverse Leakage Characteristics

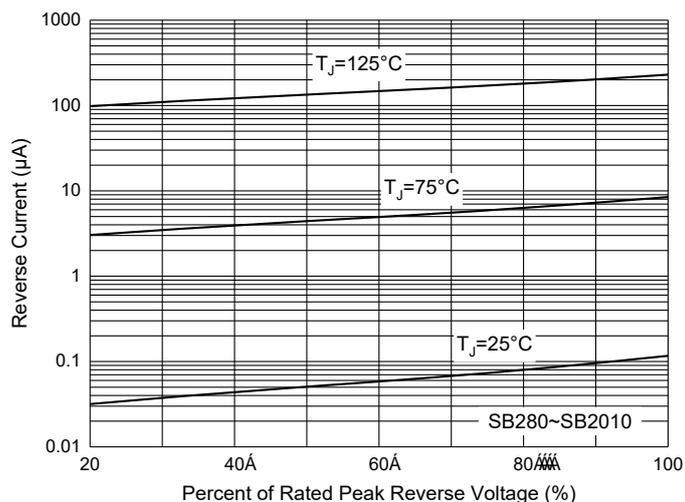


Fig. 5 - Typical Forward Characteristics

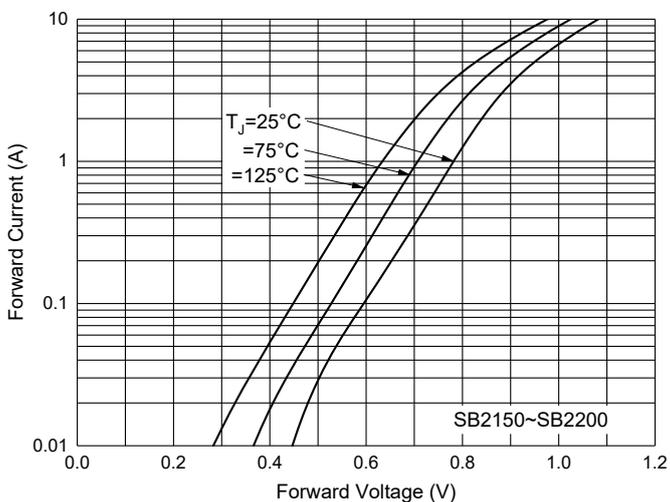
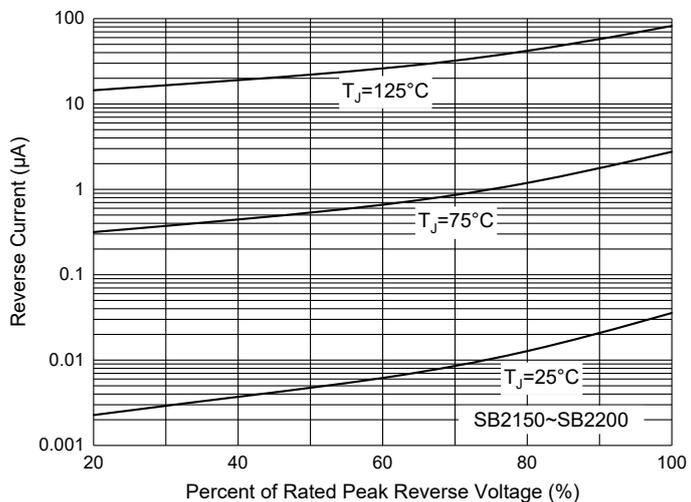
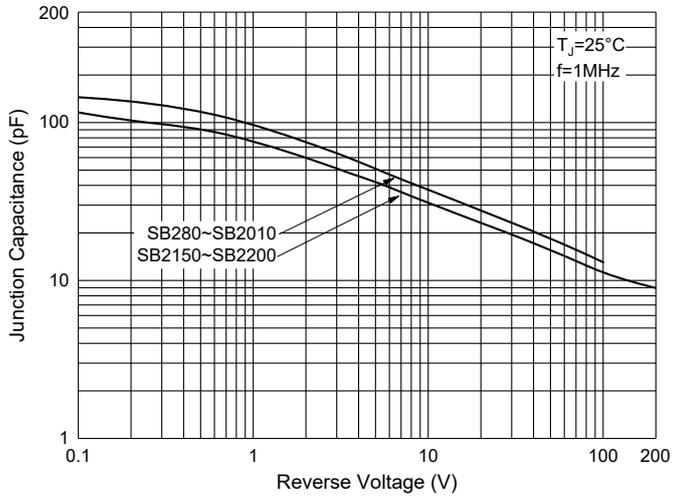


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Capacitance Characteristics



Ordering Information

| Device | Packing |
|----------------|-------------------------------|
| Part Number-TP | Tape&Reel:4Kpcs/Reel |
| Part Number-AP | Ammo Packing: 3Kpcs/Ammo Box |
| Part Number-BP | Bulk:500pcs/Box,25Kpcs/Carton |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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