

**VOLTAGE RANGE: 100 Volts**

**CURRENT: 10.0 Ampere**

### Features

- \* Low forward voltage drop
- \* Excellent High Temperature Stability.
- \* Fast Switching Capability.
- \* Suffix "G" Indicates Halogen-free Part, ex. CP10S45SG.
- \* Lead-free Parts meet environmental standards of MIL-STD-19500 / 228

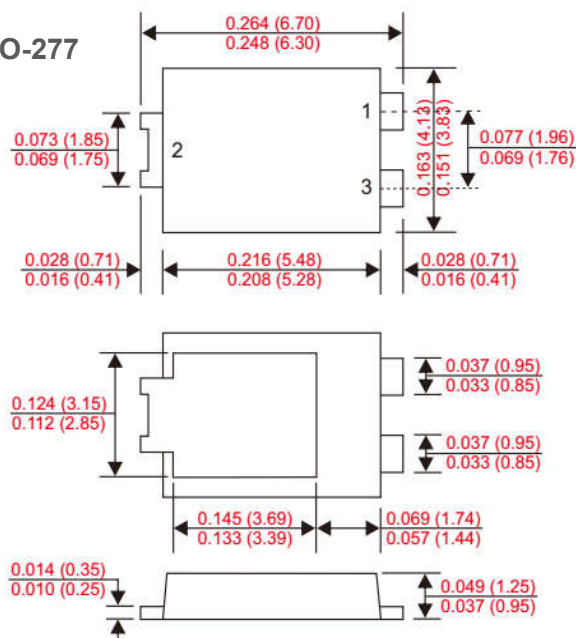
### Mechanical Data

- \* Case: Molded Plastic, TO-277.
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Solder Plated, Solderable per MIL-STD-750, Method 2026.
- \* Polarity: Indicated by cathode band.
- \* Mounting position: Any
- \* Weight: 0.098 grams



Bottom View of TO-277 and Schematic

PKG:TO-277



### Maximum Ratings and Electrical Characteristics

Rating 25°C ambient temperature unless otherwise specified.

Single phase half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| TYPE NUMBER                                                                                       |          | SB10100L     | units |
|---------------------------------------------------------------------------------------------------|----------|--------------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                            |          | 100          | V     |
| Maximum RMS Voltage                                                                               |          | 75           | V     |
| Maximum DC Blocking Voltage                                                                       |          | 100          | V     |
| Maximum Average Forward Rectified Current See Fig.1                                               |          | 10.0         | A     |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) |          | 200          | A     |
| Maximum Instantaneous Forward Voltage at 10.0A                                                    |          | 0.65         | V     |
| Maximum DC Reverse Current at Rate DC Blocking Voltage                                            | Ta=25°C  | 0.15         | mA    |
|                                                                                                   | Ta=100°C | 3.2          | mA    |
| Typical Junction Capacitance <sup>Note1</sup>                                                     |          | 650          | pF    |
| Typical Thermal Resistance R JA <sup>Note2</sup>                                                  |          | 30           | °C/W  |
| Operating Temperature Range T J                                                                   |          | - 65 ~ + 125 | °C    |
| Storage Temperature Range T STG                                                                   |          | - 65 ~ + 125 | °C    |

Note: 1 FR-4 PCB, 2oz. Copper

2 Ployimide PCB, 2oz. Copper. Cathode pad dimensions 18.8mmX14.4mm. Anode pad dimensions 5.6mm X 14.4mm .

Typical Characteristics (T<sub>J</sub> = 25°C unless otherwise noted )

Fig. 1 - Forward Power Dissipation

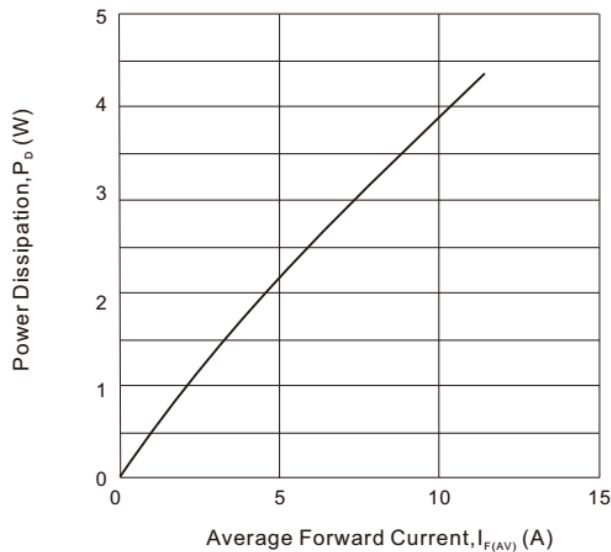


Fig. 2 - Instantaneous Forward Characteristics

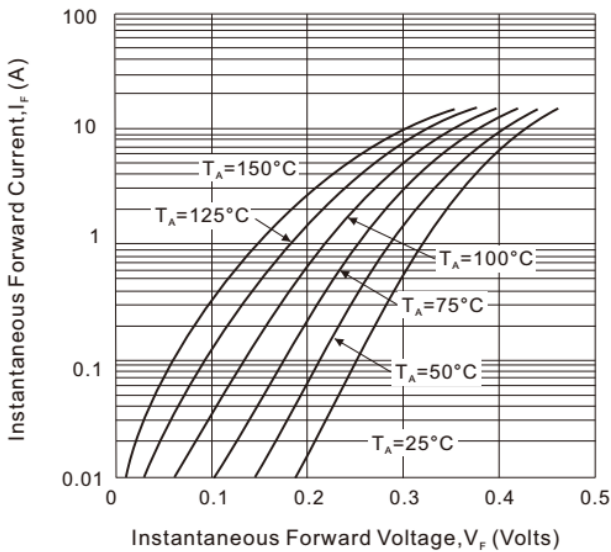


Fig. 3 - Reverse Characteristics

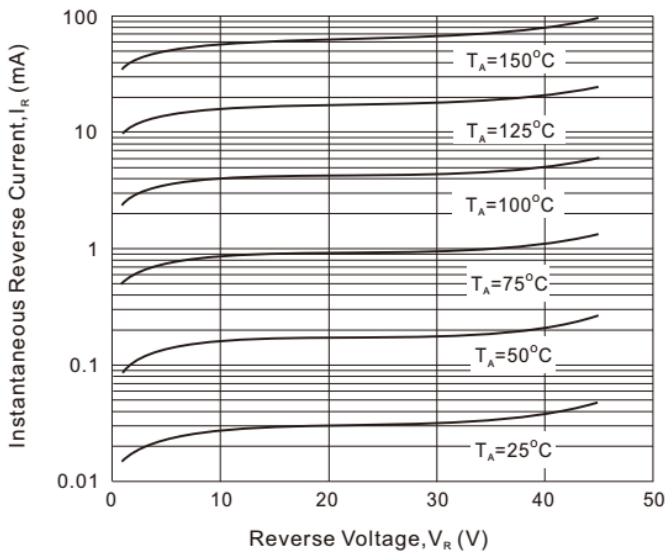


Fig. 4 - Forward Current Derating Curve

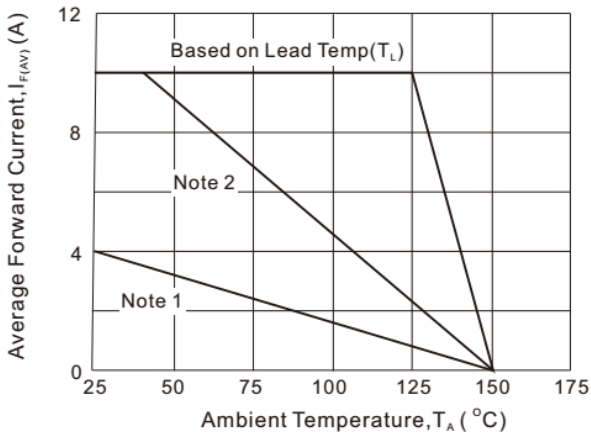


Fig. 5 - Total Capacitance VS. Reverse Voltage

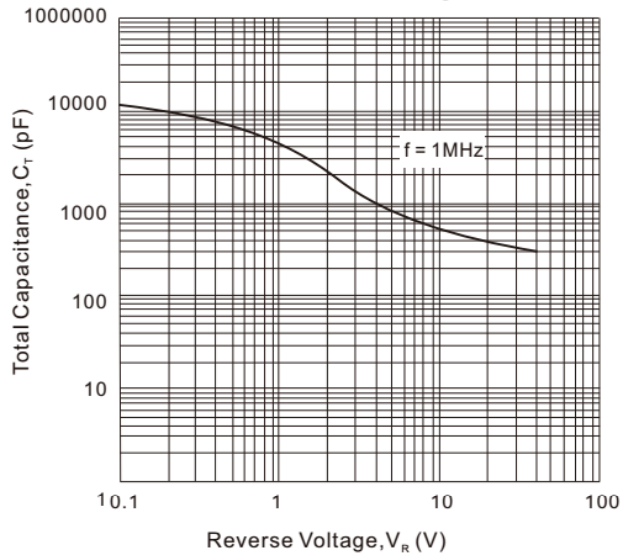


Fig. 6 - Maximum Avalanche Power Curve

