# SBYG20DG THRU SBYG20JG

## SURFACE MOUNT FAST SWITCHING RECTIFIER

**VOLTAGE：200 to 600V** **CURRENT：1.5A**

GULF SEMI

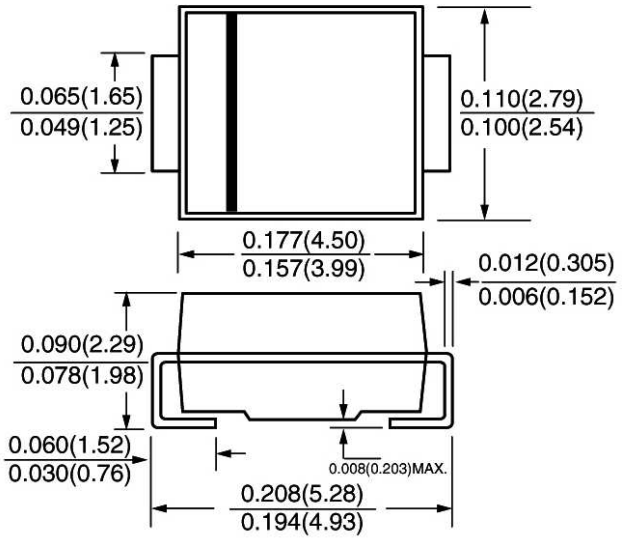
## FEATURE

Ideal for surface mount pick and place application
Low profile package
Built-in strain relief
Low reverse current
Soft recovery characteristics
High temperature soldering guaranteed
260℃/10sec/at terminals
Glass passivated chip
Fast reverse recovery time

## MECHANICAL DATA

Terminal：Plated axial leads solderable per MIL-STD 202E, method 208C
Case：Molded with UL-94 class V-0 recognized Flame Retardant Epoxy
Polarity：Color band denotes cathode
Marking：G20D G20G G20J

**SMA / DO-214AC**




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25℃, unless otherwise stated, for capacitive load, date current by 20%)

| | SYMBOL | SBYG20DG | SBYG20GG | SBYG20JG | units |
|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | Vrrm | 200 | 400 | 600 | V |
| Maximum RMS Voltage | Vrms | 140 | 280 | 420 | V |
| Maximum DC blocking Voltage | Vdc | 200 | 400 | 600 | V |
| Maximum Average Forward Rectified | If(av) | 1.5 | | | A |
| Peak Forward Surge Current 8.3ms single half sine- wave superimposed on rated load | Ifsm | 50.0 | | | A |
| Maximum Instantaneous Forward Voltage at rated forward current | Vf | 1.4 | | | V |
| Maximum DC Reverse Current Tj =25℃<br>at rated DC blocking voltage Tj =100℃ | Ir | 1.0<br>10.0 | | | μA |
| Maximum Reverse Recovery Time (Note1 ) | Trr | 75 | | | nS |
| Pulse energy in avalanche mode, non repetitive(inductive load switch off) (Note 2) | Ersm | 20 | | | mJ |
| Typical Thermal Resistance (Note 3)<br>(Note 4) | Rth(jl)<br>Rth(ja) | 25.0<br>150 | | | K/W |
| Storage and Operating Junction Temperature | Tstg, Tj | -50 to +150 | | | ℃ |

Note：
1. Reverse Recovery Condition If =0.5A, Ir =1.0A, Irr =0.25A
2. $I_{(BR)R}$=1.0A, Tj=25℃
3. TL=const.
3. Thermal Resistance from Junction to terminal mounted on epoxy-glass hard tissue

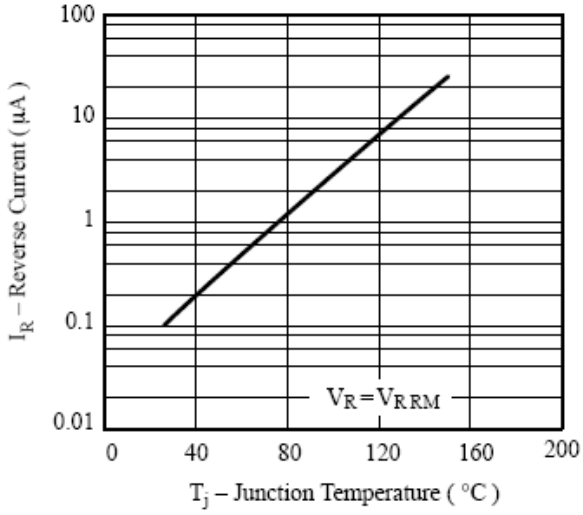



Figure 1. Typ. Reverse Current vs. Junction Temperature

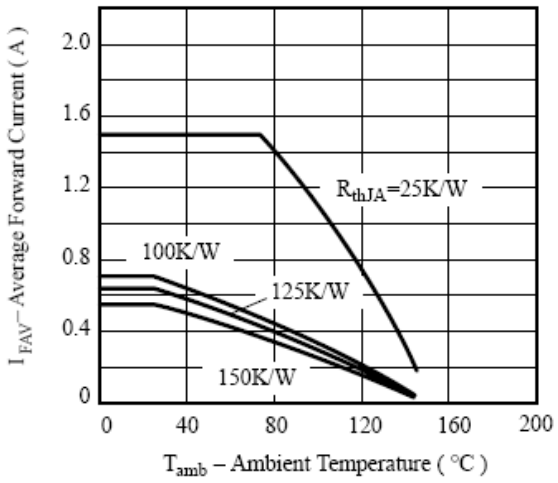



Figure 2. Max. Average Forward Current vs. Ambient Temperature

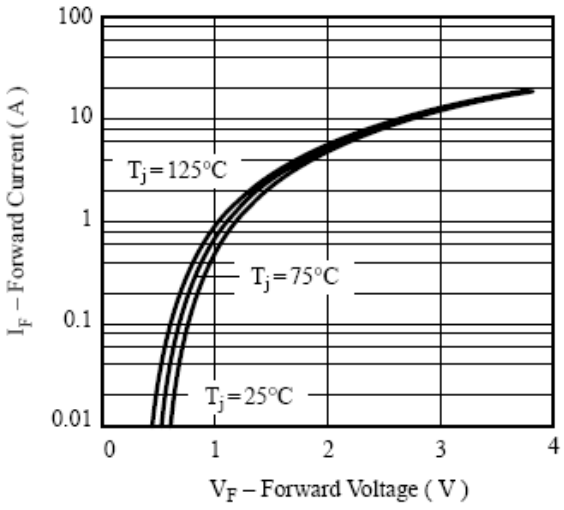



Figure 3. Max. Forward Current vs. Forward Voltage

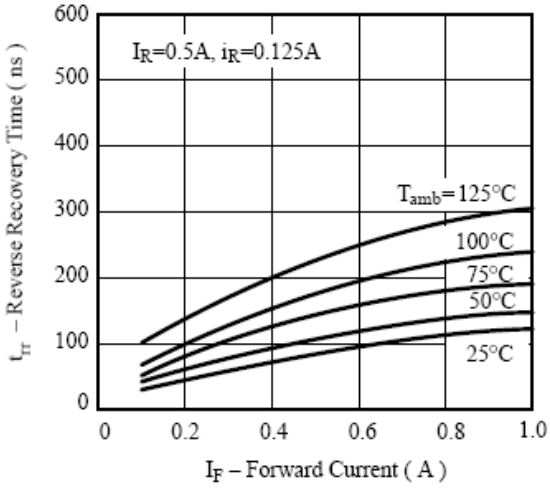



Figure 4. Max. Reverse Recovery Time vs. Forward Current

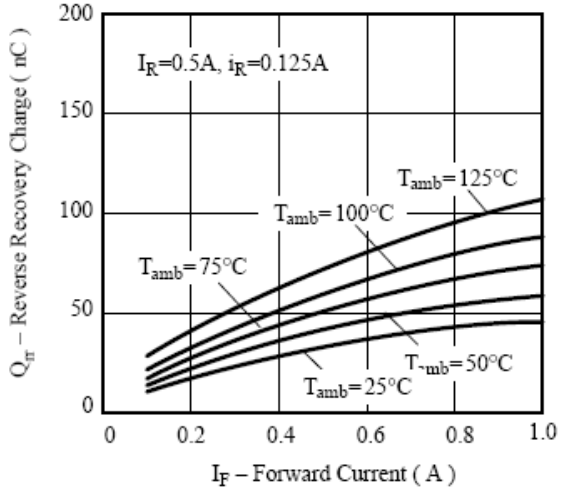



Figure 5. Max. Reverse Recovery Charge vs. Forward Current