

GSMBR0520-GSMBR0580 Schottky Barrier Diodes

Features

- Lead free finish, RoHS compliant
- Extremely low thermal resistance
- Small surface mount package



Package: SOD-123



Schematic Diagram



RoHS
COMPLIANT

Maximum Ratings (T_A=25°C unless otherwise noted)

| Parameter | Symbol | GSMBR 0520 | GSMBR 0530 | GSMBR 0540 | GSMBR 0560 | GSMBR 0580 | Unit |
|--|------------------|-------------|------------|------------|------------|------------|------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 20 | 30 | 40 | 60 | 80 | V |
| Maximum RMS Voltage | V _{RMS} | 14 | 21 | 28 | 42 | 56 | V |
| Mean Rectifying Current | I _O | 0.5 | | | | | A |
| Peak Forward Surge Current (8.3ms Single Half Sine-Wave) | I _{FSM} | 5.5 | | | | | A |
| Power Dissipation | P _D | 410 | | | | | mW |
| Thermal Resistance Junction to Ambient | R _{θJA} | 244 | | | | | °C/W |
| Junction Temperature | T _J | 125 | | | | | °C |
| Storage Temperature | T _{STG} | -55 to +150 | | | | | °C |

Electrical Characteristics (T_A=25°C unless otherwise noted)

| Parameter | Symbol | Test Conditions | Typ | Max | Unit |
|-----------------|----------------|----------------------------|-----|------|------|
| Forward Voltage | V _F | I _F =500mA | - | 0.45 | V |
| | | | - | 0.55 | |
| | | | - | 0.55 | |
| | | | - | 0.7 | |
| | | | - | 0.8 | |
| Reverse Current | I _R | V _R =20V | - | 80 | μA |
| | | V _R =30V | - | | |
| | | V _R =40V | - | | |
| | | V _R =60V | - | | |
| | | V _R =80V | - | | |
| Capacitance | C _T | V _R =4V, F=1MHz | 30 | - | pF |

Ratings and Characteristics Curves

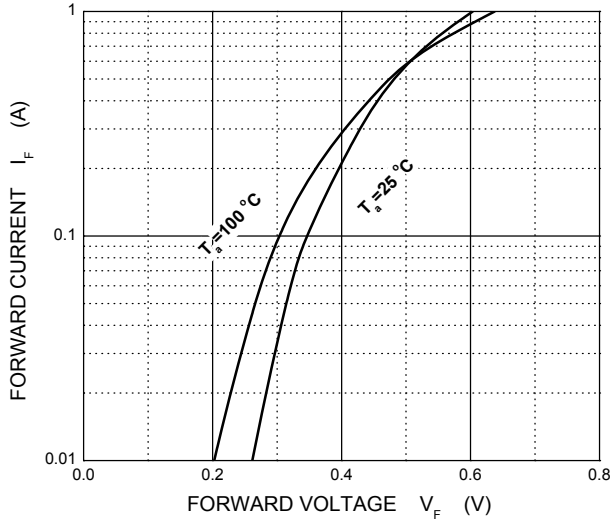


Figure 1. Forward Characteristics

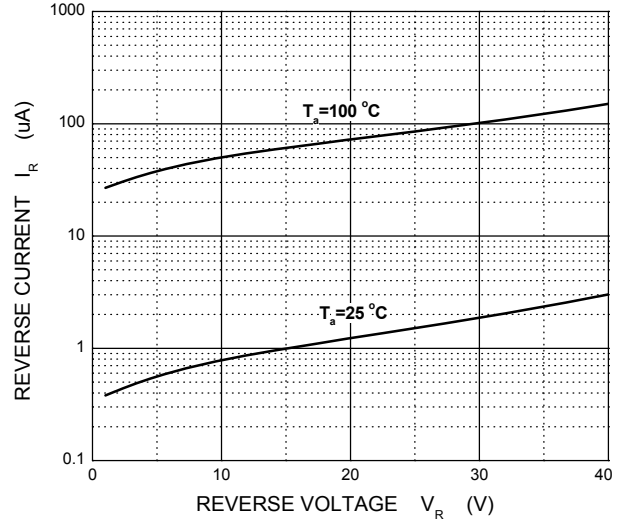


Figure 2. Reverse Characteristics

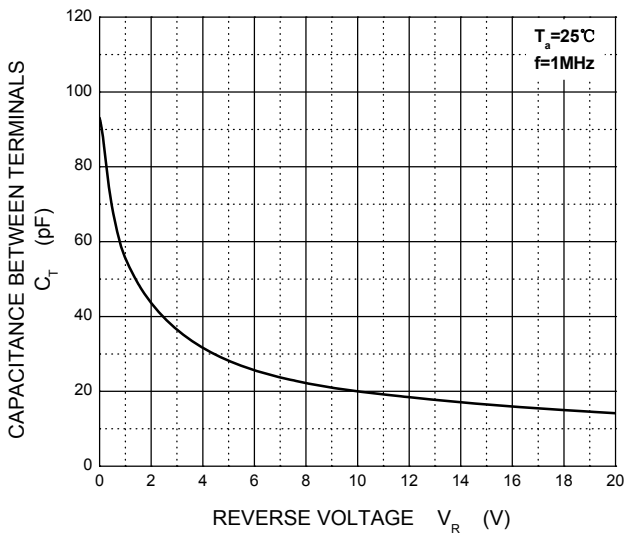


Figure 3. Capacitance Characteristics

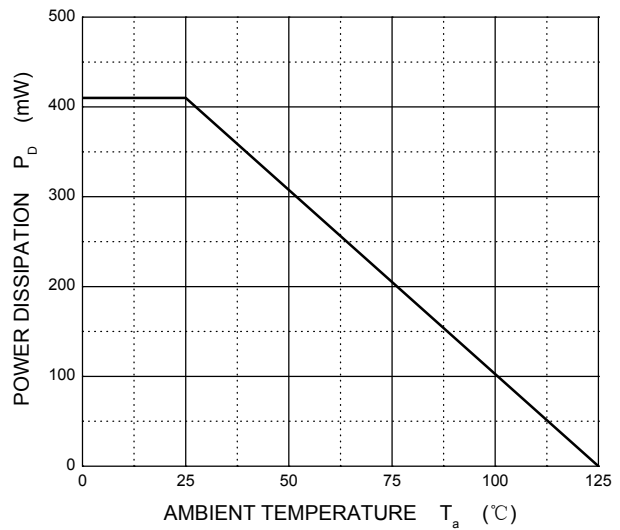
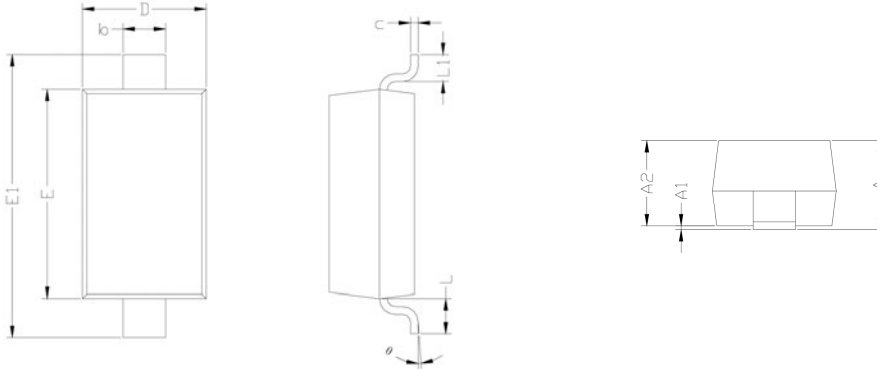


Figure 4. Power Derating Curve

Package Outline Dimensions (SOD-123)



| Symbol | Dimensions in Millimeters | | Dimensions in Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 1.050 | 1.250 | 0.041 | 0.049 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 1.050 | 1.150 | 0.041 | 0.045 |
| b | 0.450 | 0.650 | 0.018 | 0.026 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 1.500 | 1.700 | 0.059 | 0.067 |
| E | 2.600 | 2.800 | 0.102 | 0.110 |
| E1 | 3.550 | 3.850 | 0.140 | 0.152 |
| L | 0.500 REF | | 0.020 REF | |
| L1 | 0.250 | 0.450 | 0.010 | 0.018 |
| θ | 0° | 8° | 0° | 8° |

Order information

| Device | Package | Marking | Carrier | Quantity |
|-----------|---------|---------|-------------|------------------|
| GSMBR0520 | SOD-123 | R2 | Tape & Reel | 3,000 pcs / Reel |
| GSMBR0530 | SOD-123 | R3 | Tape & Reel | 3,000 pcs / Reel |
| GSMBR0540 | SOD-123 | R4 | Tape & Reel | 3,000 pcs / Reel |
| GSMBR0560 | SOD-123 | R6 | Tape & Reel | 3,000 pcs / Reel |
| GSMBR0580 | SOD-123 | R8 | Tape & Reel | 3,000 pcs / Reel |