

# 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

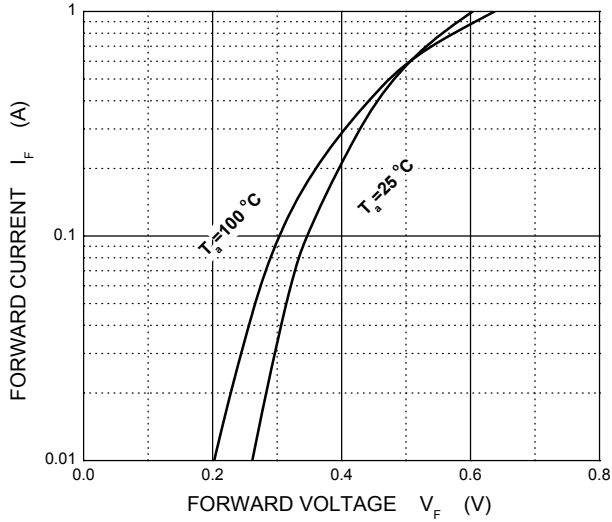
## Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)

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

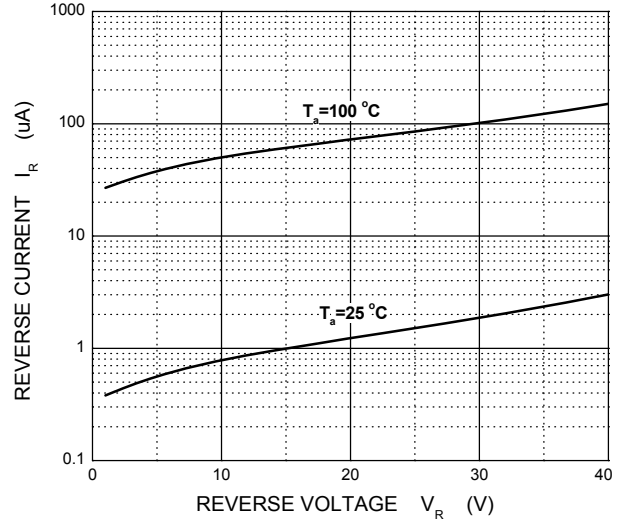
## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =500mA	-	0.45	V
			-	0.55	
			-	0.55	
			-	0.7	
			-	0.8	
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =20V	-	80	μA
		V <sub>R</sub> =30V	-		
		V <sub>R</sub> =40V	-		
		V <sub>R</sub> =60V	-		
		V <sub>R</sub> =80V	-		
Capacitance	C <sub>T</sub>	V <sub>R</sub> =4V, F=1MHz	30	-	pF

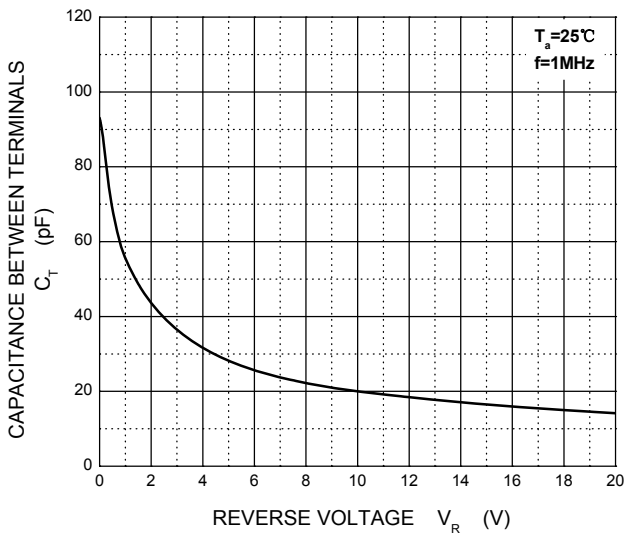
**Ratings and Characteristics Curves**



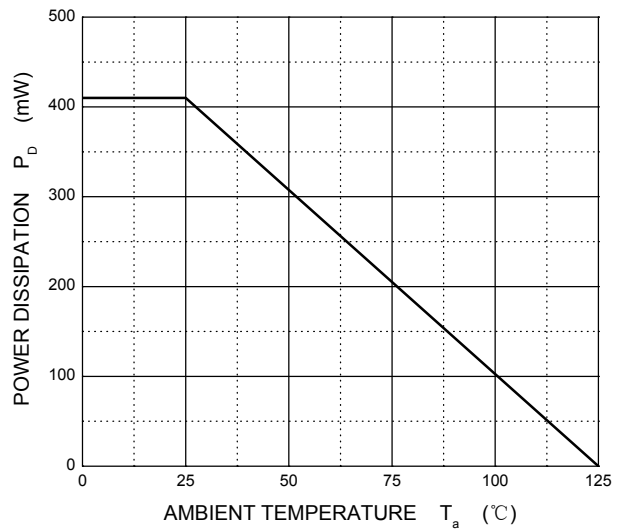
**Figure 1. Forward Characteristics**



**Figure 2. Reverse Characteristics**

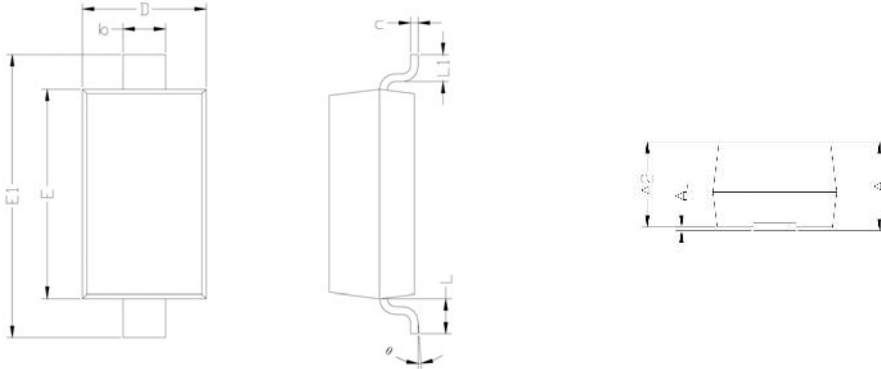


**Figure 3. Capacitance Characteristics**



**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
$\theta$	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