

Features

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



SOD-123



Schematic Diagram



RoHS
COMPLIANT

Maximum Ratings ($T_A=25^{\circ}\text{C}$ 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	$R_{\theta JA}$	244					$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	125					$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to +150					$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward Voltage	V_F	$I_F=500\text{mA}$	-	0.45	V
			-	0.55	
			-	0.55	
			-	0.7	
			-	0.8	
Reverse Current	I_R	$V_R=20\text{V}$	-	80	μA
		$V_R=30\text{V}$	-		
		$V_R=40\text{V}$	-		
		$V_R=60\text{V}$	-		
		$V_R=80\text{V}$	-		
Capacitance	C_T	$V_R=4\text{V}, F=1\text{MHz}$	30	-	pF

Ratings and Characteristics Curves

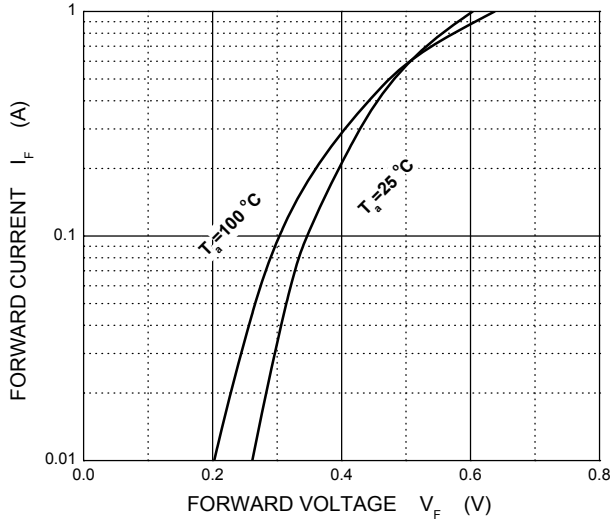


Figure 1. Forward Characteristics

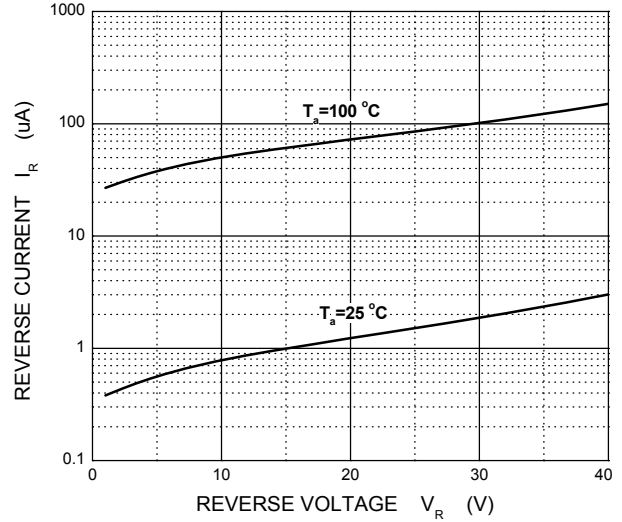


Figure 2. Reverse Characteristics

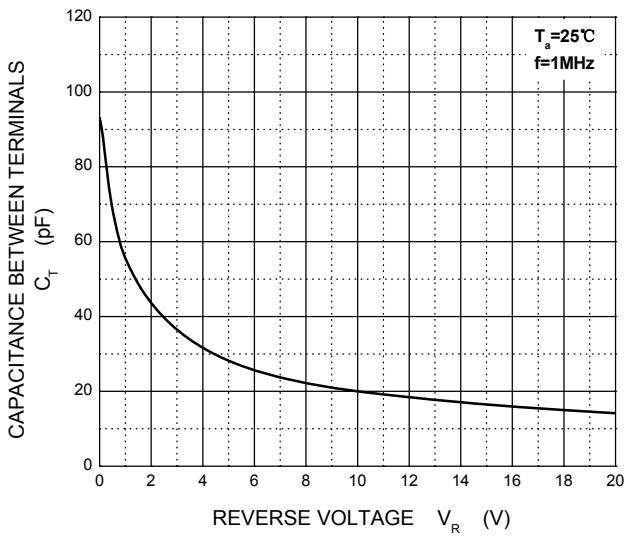


Figure 3. Capacitance Characteristics

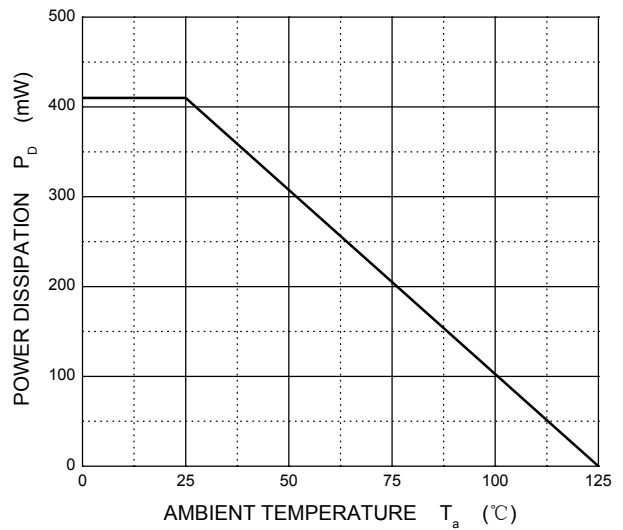
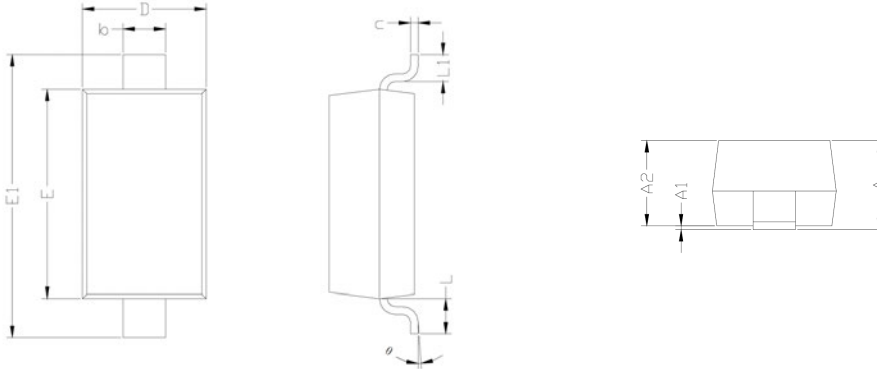


Figure 4. Power Derating Curve

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