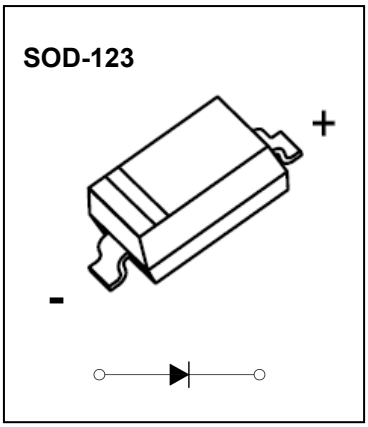
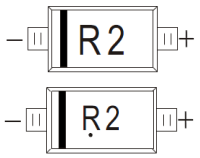
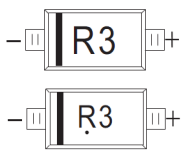
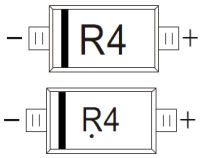
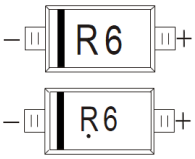
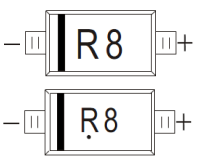
SOD-123 Plastic-Encapsulate Diodes



FEATURES

- Lead Free Finish/RoHS Compliant
- Extremely Low Thermal Resistance
- For Surface Mount Application and High Current Capability

MARKING:

MBR0520:R2	MBR0530:R3	MBR0540:R4	MBR0560:R6	MBR0580:R8
				

The marking bar indicates the cathode
Solid dot = Green molding compound device,if none, the normal device.

Maximum Ratings @T_a=25℃

Parameter	Symbol	MBR 0520	MBR 0530	MBR 0540	MBR 0560	MBR 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	
Mean rectifying current	I_O	0.5					A
Non-repetitive Peak forward surge current @t=8.3ms	I_{FSM}	5.5					A
Power Dissipation	P_D	410					mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	244					℃/W
Junction temperature	T_j	125					℃
Storage temperature	T_{stg}	-55~+150					℃

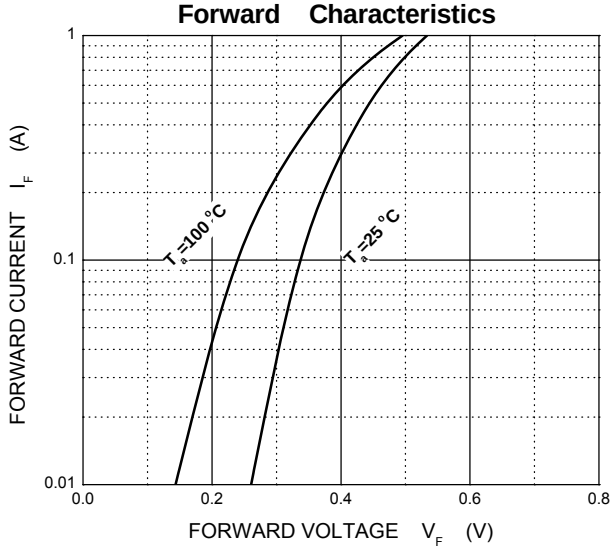
ELECTRICAL CHARACTERISTICS

T_a=25℃ unless otherwise specified

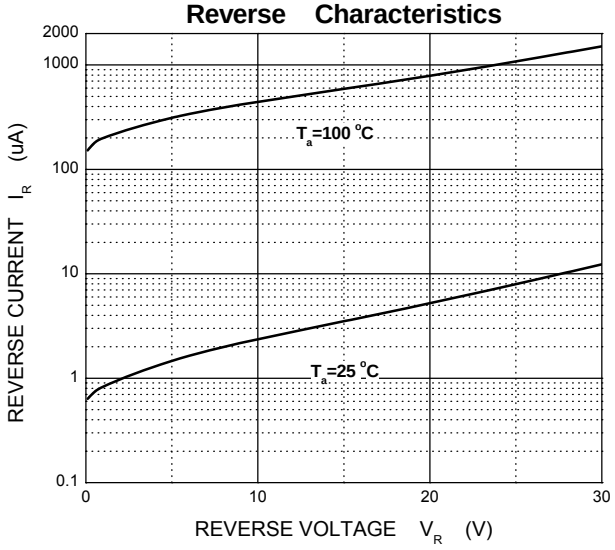
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage						
MBR0520				0.45		
MBR0530	V_F			0.55	V	I_F=500mA
MBR0540				0.55		
MBR0560				0.70		
MBR0580				0.80		
Reverse current						
MBR0520						V_R=20V
MBR0530						V_R=30V
MBR0540	I_R			80	μA	V_R=40V
MBR0560						V_R=60V
MBR0580						V_R=80V
Capacitance between terminals	C_T		30		pF	V_R=4V, f=1MHZ

Typical Characteristics

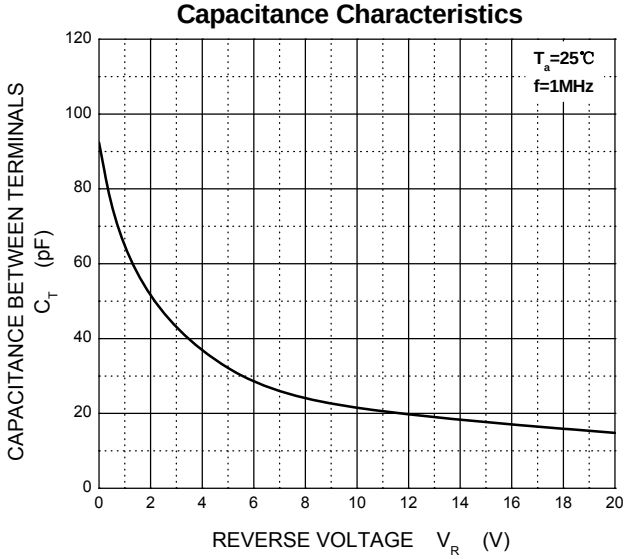
Forward Characteristics



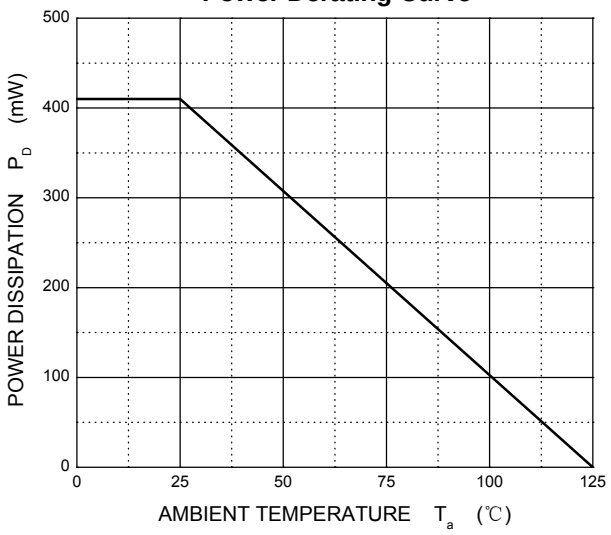
Reverse Characteristics

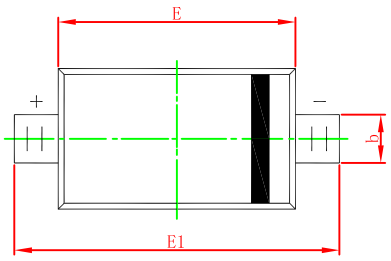


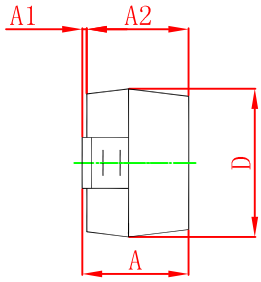
Capacitance Characteristics

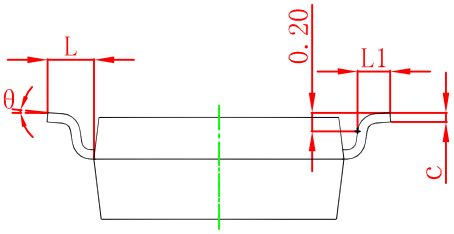


Power Derating Curve



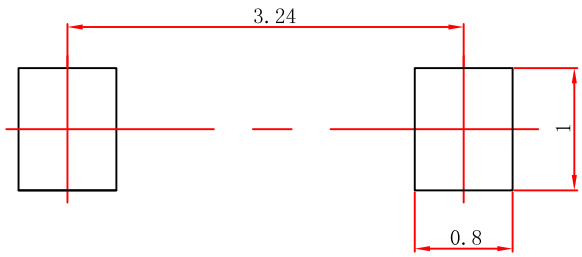






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020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

SOD-123 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.