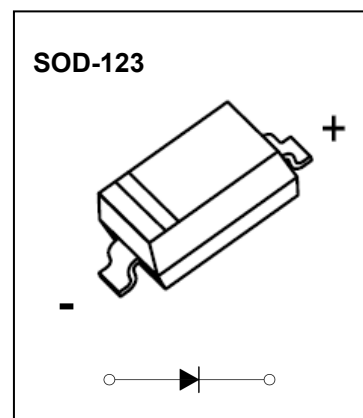


SOD-123 Plastic-Encapsulate Diodes

FEATURES

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



Maximum Ratings @T_a=25°C

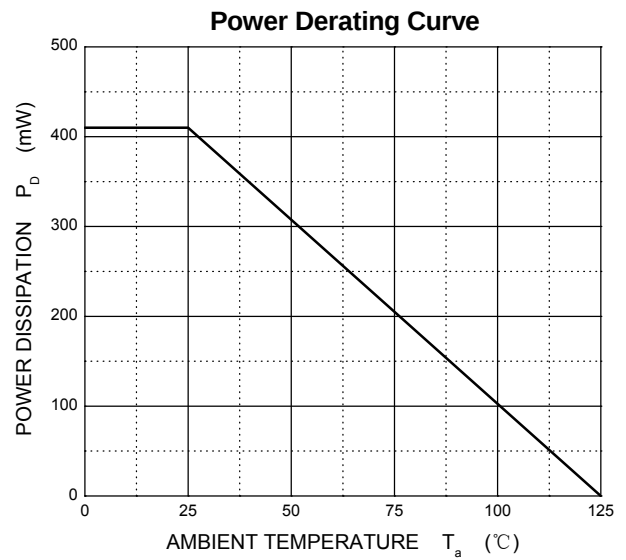
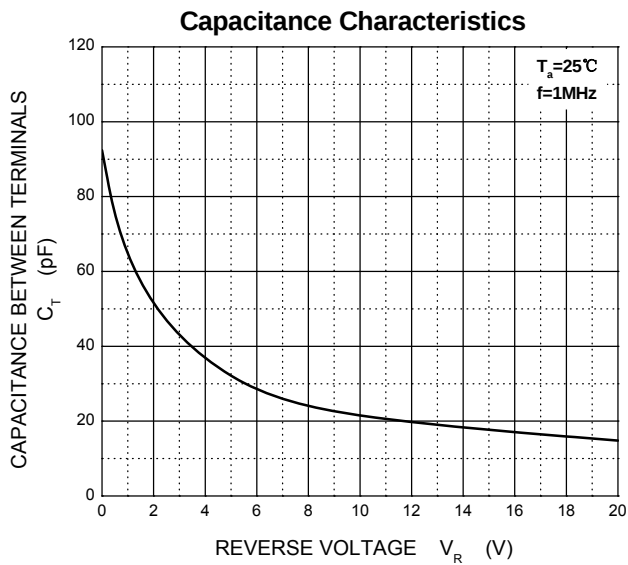
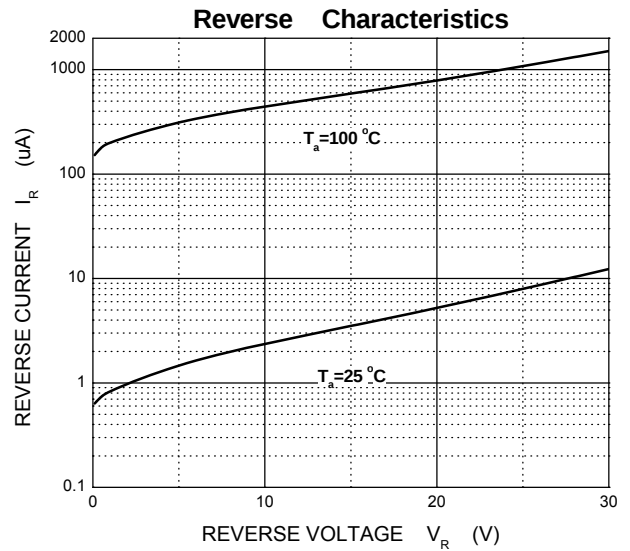
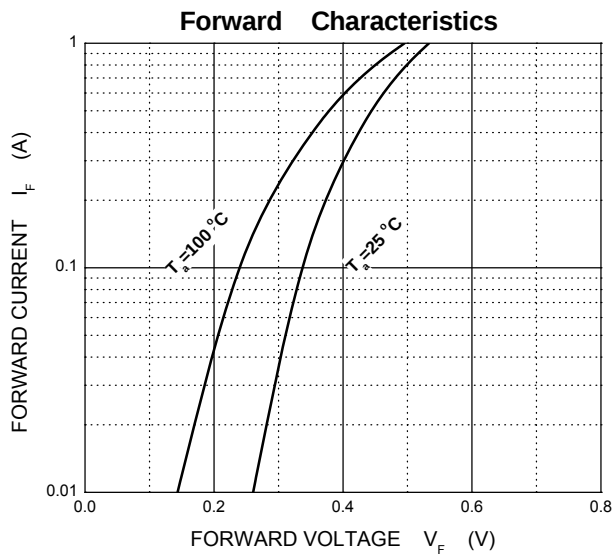
Parameter	Symbol	MBR 0520	MBR 0530	MBR 0540	MBR 0560	MBR 0580	Unit
Maximum recurrent peak reverse voltage	V _{RRM}	20	30	40	60	80	V
Maximum RMS voltage	V _{RMS}	14	21	28	42	56	
Mean rectifying current	I _O	0.5					A
Non-repetitive Peak forward surge current @t=8.3ms	I _{FSM}	5.5					A
Power Dissipation	P _D	410					mW
Thermal Resistance Junction to Ambient	R _{θJA}	244					°C/W
Junction temperature	T _j	125					°C
Storage temperature	T _{stg}	-55~+150					°C

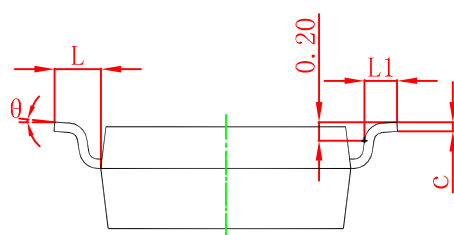
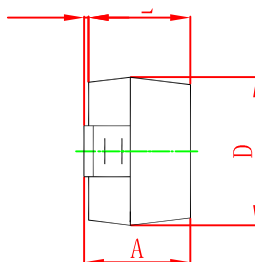
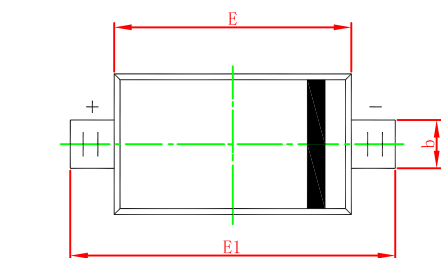
ELECTRICAL CHARACTERISTICS

$T_a=25\text{ }^{\circ}\text{C}$ unless otherwise specified

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

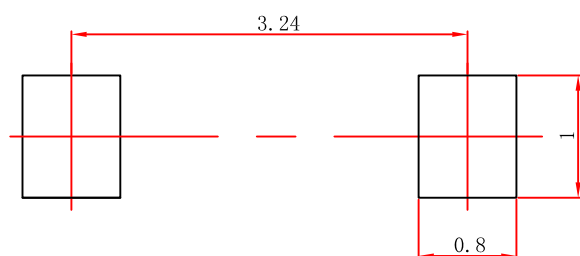
Typical Characteristics





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: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.