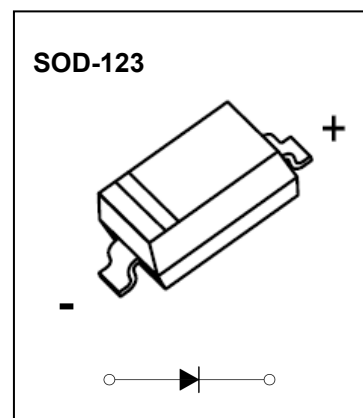


SOD-123 Plastic-Encapsulate Diodes
FEATURES

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

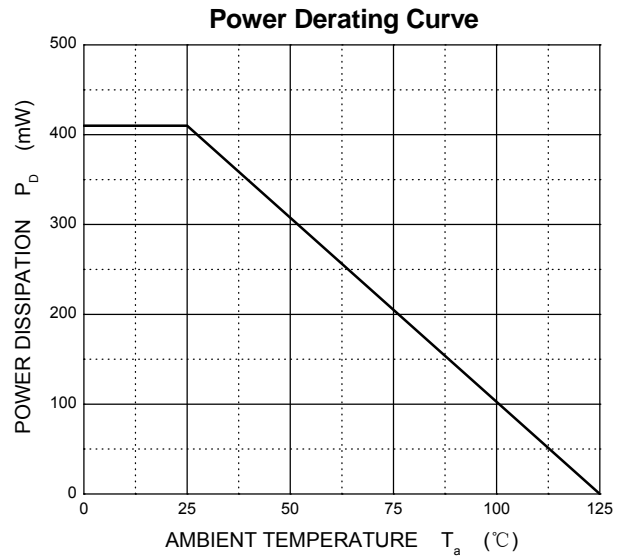
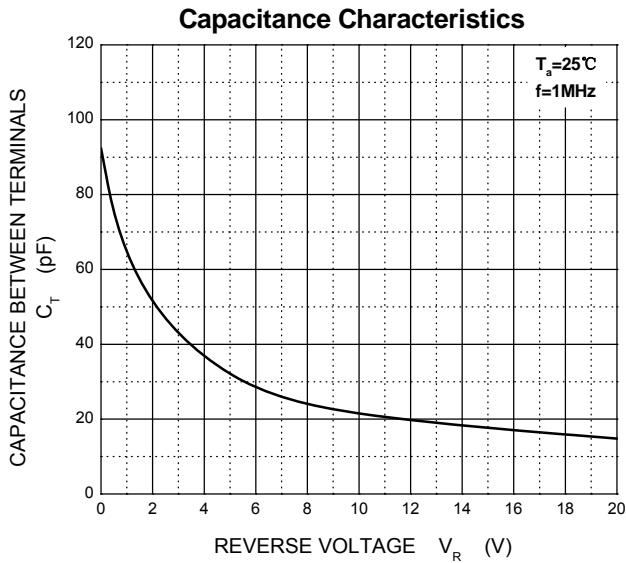
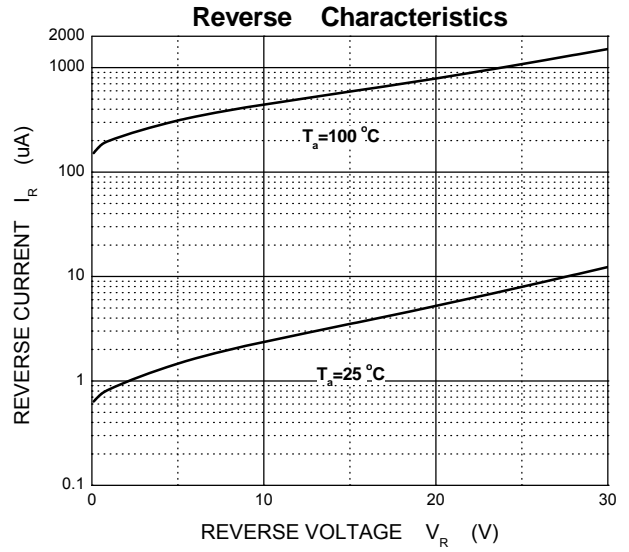
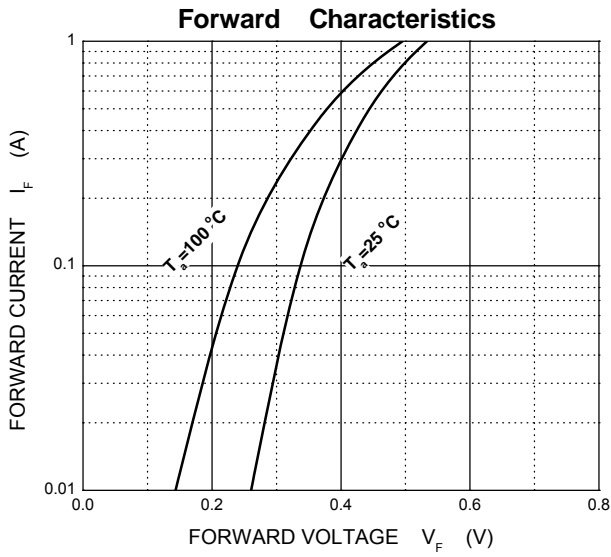

Maximum Ratings @T_a=25°C

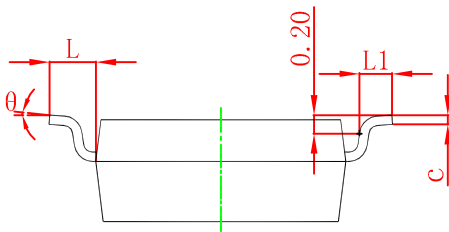
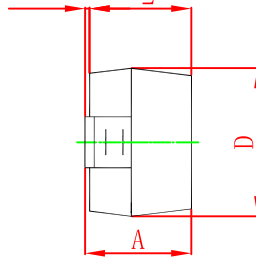
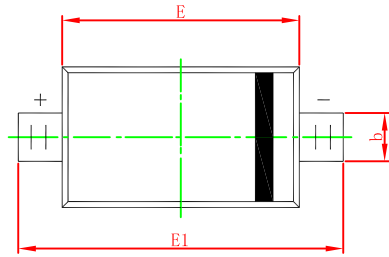
Parameter	Symbol	MBR	MBR	MBR	MBR	MBR	Unit
		0520	0530	0540	0560	0580	
Maximum recurrent peak reverse voltage	V_{RRM}	20	30	40	60	80	V
Maximum RMS voltage	V_{RMS}	14	21	28	42	56	
Mean rectifying current	I_O	0.5					A
Non-repetitive Peak forward surge current @t=8.3ms	I_{FSM}	5.5					A
Power Dissipation	P_D	410					mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	244					°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	V_F			0.45	V	$I_F=500\text{mA}$
MBR0530				0.55		
MBR0540				0.55		
MBR0560				0.70		
MBR0580				0.80		
Reverse current						
MBR0520	I_R			80	μA	$V_R=20\text{V}$
MBR0530						$V_R=30\text{V}$
MBR0540						$V_R=40\text{V}$
MBR0560						$V_R=60\text{V}$
MBR0580						$V_R=80\text{V}$
Capacitance between terminals	C_T		30		pF	$V_R=4\text{V}, f=1\text{MHZ}$

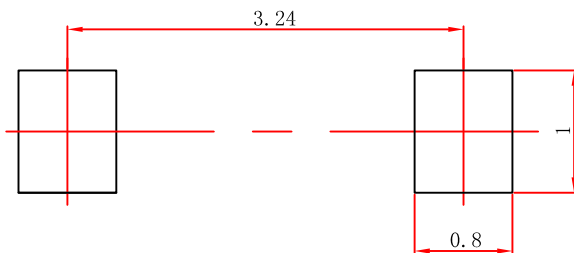
Typical Characteristics





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.

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