永裕泰 YONGYUTAI

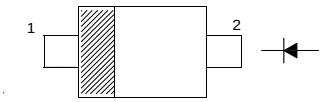
FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Also Available in Lead Free Version

MARKING: MBR0520:SD
MBR0530:SE
MBR0540:SF

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View

Simplified outline SOD-123 and symbol

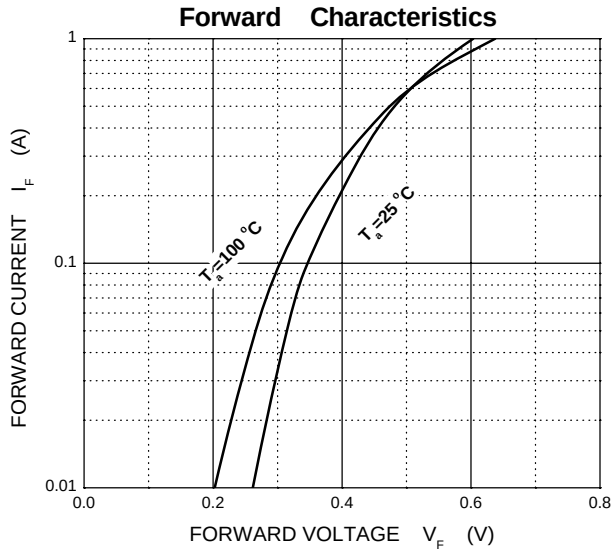
Maximum Ratings @Ta=25℃

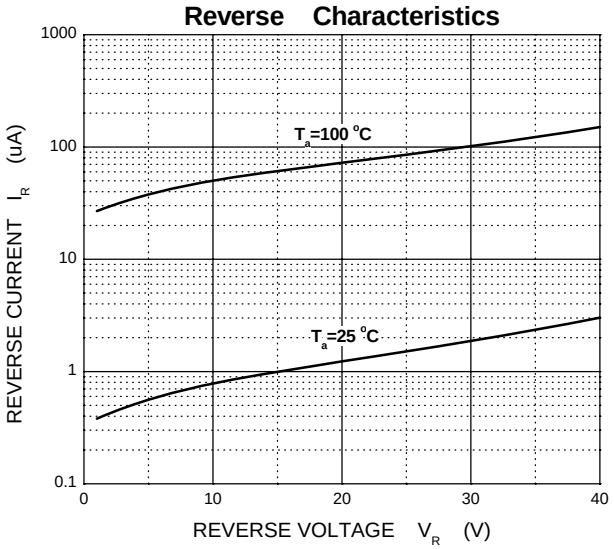
Parameter	Symbol	MBR0520	MBR0530	MBR0540	Unit
Peak repetitive peak reverse voltage **Working peak reverse voltage** **DC Blocking voltage**	V_{RRM} V_{RWM} V_R	20	20	40	V
RMS reverse voltage reverse voltage (DC)	$V_{R(RMS)}$	14	20	28	V
Average rectified output current	I_o	0.5			A
Forward surge current peak	I_{FSM}	5.5			A
Power dissipation	P_D	500			mW
Thermal resistance junction to ambient	$R_{\theta JA}$	250			℃/W
Junction temperature	T_j	150			℃
Storage temperature	T_{STG}	-55~+150			℃
Voltage rate of change	dv/dt	1000			V/μS

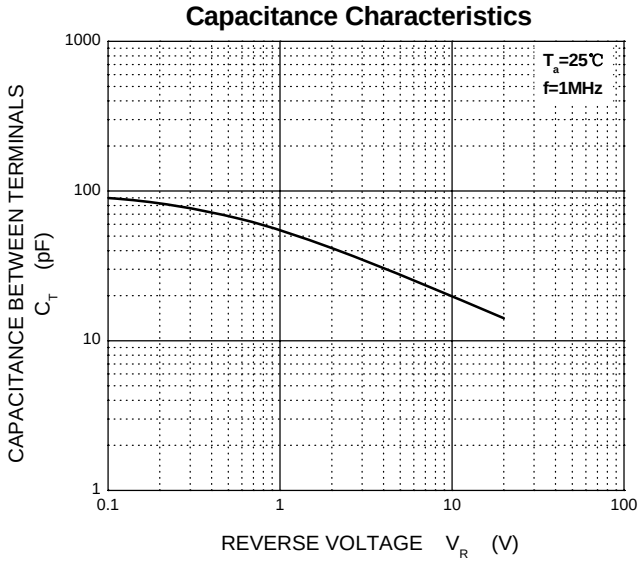
Electrical Characteristics @Ta=25℃

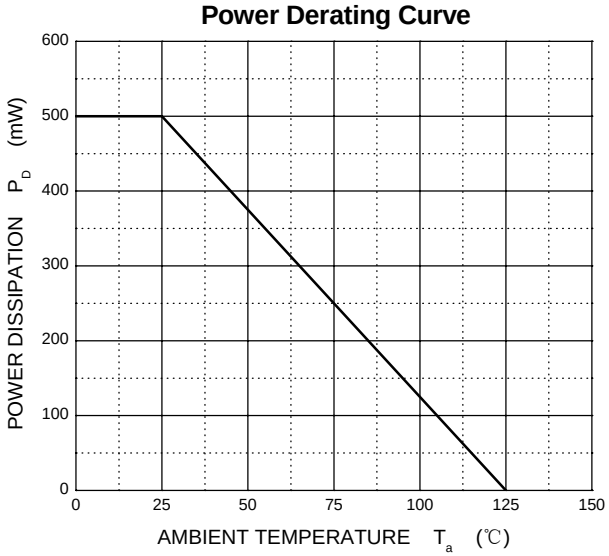
Parameter	Symbol	MBR0520	MBR0530	MBR0540	Unit	Conditions
Minimum reverse breakdown voltage	$V_{(BR)R}$	20	--	--	V	I_R=250μA
		--	30	--		I_R=200μA
		--	--	40		I_R=20μA
Forward voltage	V_{F1}	0.32	0.375	--	V	I_F=0.1A
	V_{F2}	0.385	0.430	0.510		I_F=0.5A
	V_{F3}	--	--	0.62		I_F=1A
Reverse current	I_{R1}	75	--	--	μA	V_R=10V
	I_{R2}	--	20	--		V_R=15V
Reverse current	I_{R3}	250	--	10	μA	V_R=20V
	I_{R4}	--	130	--		V_R=30V
	I_{R5}	--	--	20		V_R=40V
Capacitance between terminals	C_T	--	--	170	pF	V_R=0,f=1MHz

Typical Characteristics



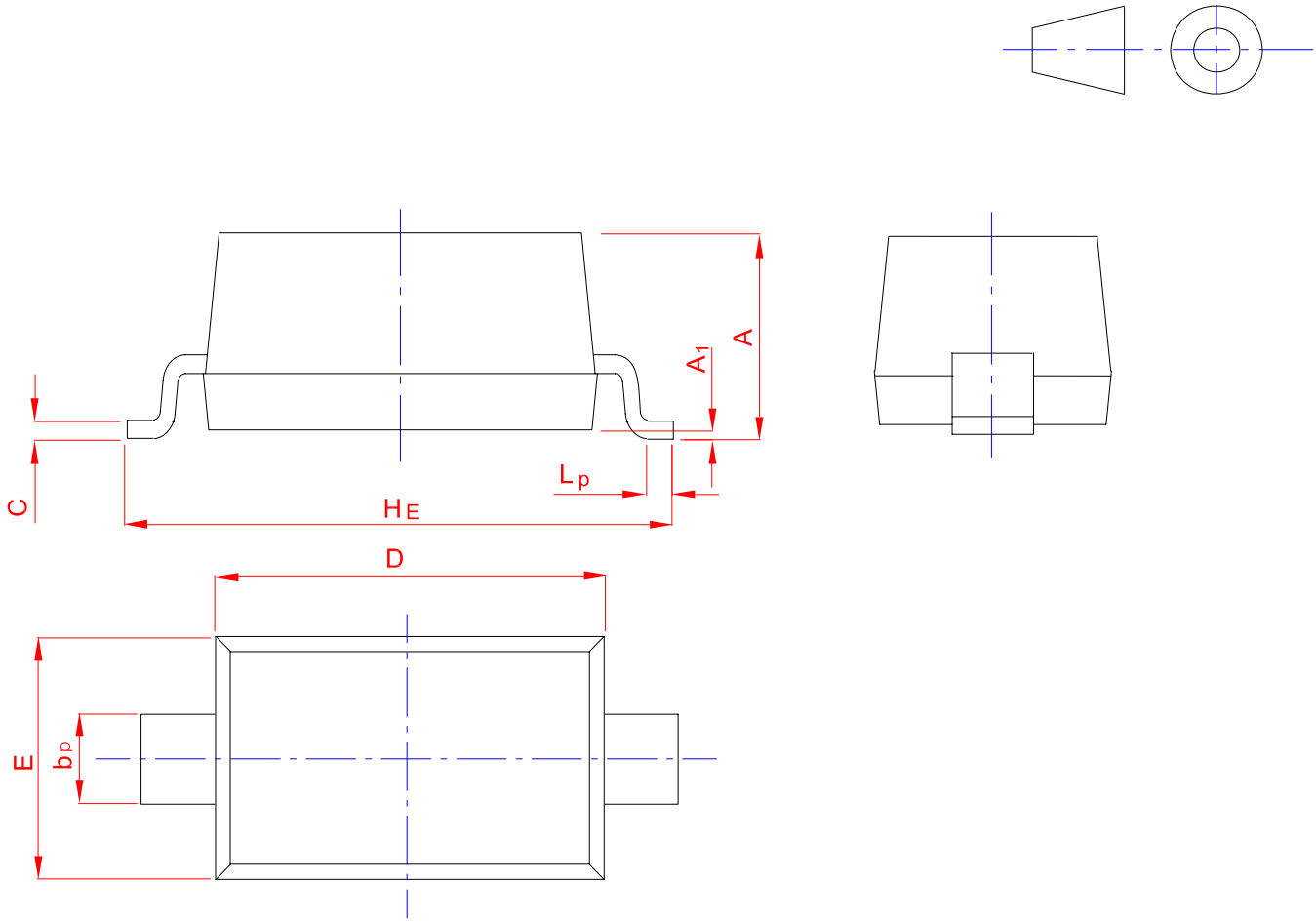






PACKAGE OUTLINE

Plastic surface mounted package; 2 leads **SOD-123**



UNIT	A	b_p	C	D	E	H_E	A_1	L_p
mm	1.20 0.90	0.60 0.50	0.135 0.100	2.75 2.55	1.65 1.55	3.85 3.55	0.10 0.01	0.50 0.20