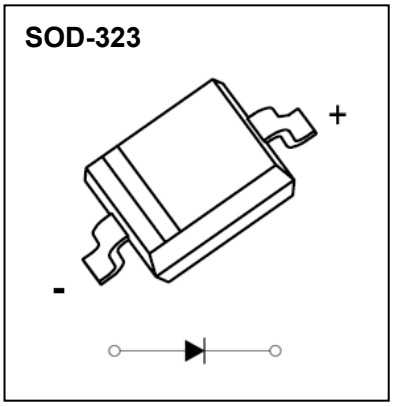
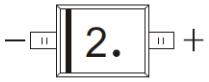
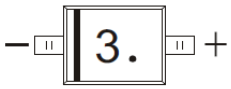
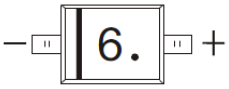
SOD-323 Plastic-Encapsulate Diodes

FEATURES

- Low Forward Voltage
- Lead Free Finish/RoHS Compliant
- For Surface Mount Application and High Current Capability



MARKING

MBRX0520:2.	MBRX0530:3.	MBRX0540:4.	MBRX0560:6.
			

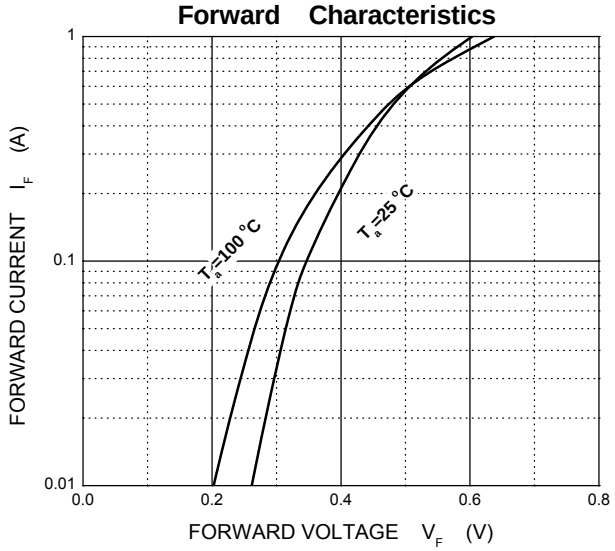
The marking bar indicates the cathode

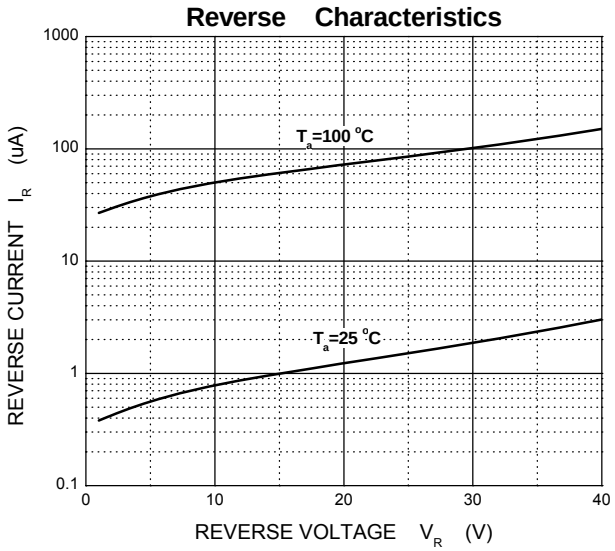
MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

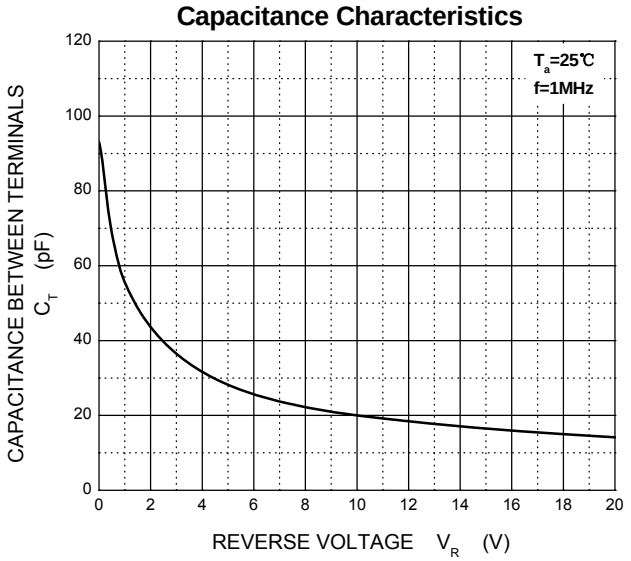
Symbol	Parameter	MBRX 0520	MBRX 0530	MBRX 0540	MBRX 0560	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	20	30	40	60	V
$V_{R(RMS)}$	RMS Reverse Voltage	14	21	28	42	V
I_O	Average Rectified Output Current	0.5				A
I_{FSM}	Non-repetitive Peak Forward Surge Current@t=8.3ms	5				A
P_D	Power Dissipation	250				mW
$R_{\Theta JA}$	Thermal Resistance from Junction to Ambient	400				℃/W
T_j	Junction Temperature	125				℃
T_{stg}	Storage Temperature	-55~+150				℃

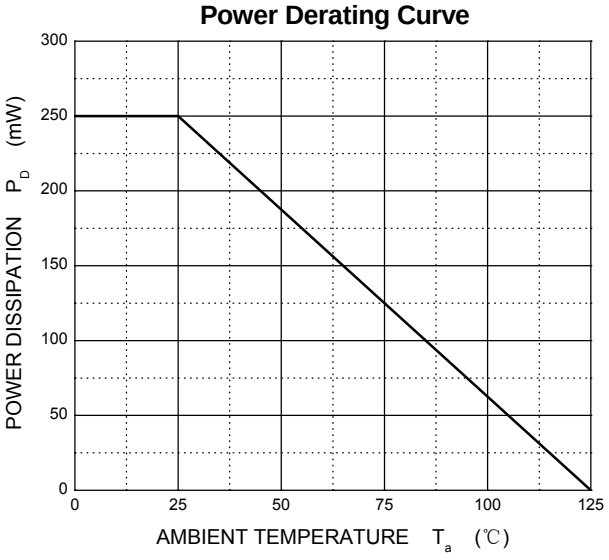
T_a=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage						
MBRX0520			20			
MBRX0530	$V_{(BR)}$	I_R=1mA	30			V
MBRX0540			40			
MBRX0560			60			
Reverse current						
MBRX0520		V_R=20V				
MBRX0530	I_R	V_R=30V			0.08	mA
MBRX0540		V_R=40V				
MBRX0560		V_R=60V				
Forward voltage						
MBRX0520					0.45	
MBRX0530	V_F	I_F=0.5A			0.55	V
MBRX0540					0.55	
MBRX0560					0.70	
Total capacitance	C_T	V_R=4V,f=1MHz		30		pF

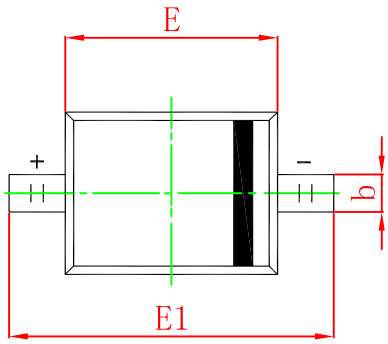

Forward Characteristics
FORWARD CURRENT I_F (A)
1
0.1
0.01
0.0
0.2
0.4
0.6
0.8
T_a=100 °C
T_a=25 °C
FORWARD VOLTAGE V_F (V)

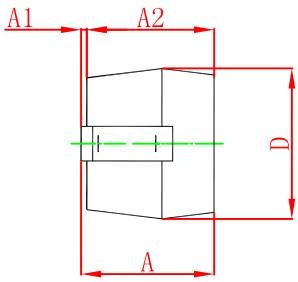

Reverse Characteristics
REVERSE CURRENT I_R (uA)
1000
100
10
1
0.1
0
10
20
30
40
T_a=100 °C
T_a=25 °C
REVERSE VOLTAGE V_R (V)

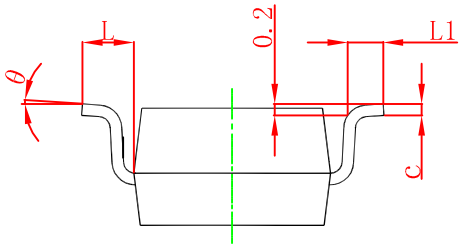

Capacitance Characteristics
CAPACITANCE BETWEEN TERMINALS C_T (pF)
120
100
80
60
40
20
0
0
2
4
6
8
10
12
14
16
18
20
T_a=25℃
f=1MHz
REVERSE VOLTAGE V_R (V)


Power Derating Curve
POWER DISSIPATION P_D (mW)
300
250
200
150
100
50
0
0
25
50
75
100
125
AMBIENT TEMPERATURE T_a (℃)

SOD-323 Package Outline Dimensions







Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°