



DESCRIPTION

The MBR140E is available in SOD-323HE Package.

TYPICAL APPLICATION:

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, an polarity protection applications.

FEATURES

- Very Low Profile: 0.67mm
- Low Forward Voltage Drop, Low Power Losses
- High Efficiency

MECHANICAL DATA

Case: SOD-323HE

Molding compound meets UL 94 V-0

Terminals: matte tin plated leads

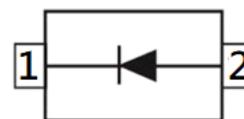
solderable per J-STD-002

Polarity: Color band denotes the cathode end

ORDERING INFORMATION

Package Type	Part Number
SOD-323HE	MBR140E
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION



PIN#	DESCRIPTION
1	Cathode
2	Anode

**ABSOLUTE MAXIMUM RATINGS** $T_A = 25^\circ\text{C}$

V_{RRM} , Maximum Repetitive Peak Reverse Voltage	40V
V_{RMS} , Maximum RMS Voltage	28V
V_{DC} , Maximum DC Blocking Voltage	40V
$I_{F(AV)}$, Maximum Average Forward Rectified Current at $T_C = 75^\circ\text{C}$	1A
I_{FSM} , Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	22A
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JA}$ 210°C/W
	$R_{\theta JL}$ 70°C/W
T_J , Operating Junction Temperature Range	-55 ~ +150°C
T_{STG} , Storage Temperature Range	-55 ~ +150°C

Stress beyond above listed "Absolute Maximum Ratings" may lead permanent damage to the device. These are stress ratings only and operations of the device at these or any other conditions beyond those indicated in the operational sections of the specifications are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS $T_A = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward	V_F	$I_F=0.7A, T_J=25^\circ\text{C}$	-	-	0.48	V
		$I_F=1.0A, T_J=25^\circ\text{C}$	-	-	0.55	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_A=25^\circ\text{C}$	-	5	30	μA
		$T_J=125^\circ\text{C}$	-	2.5	10	mA
Typical Junction Capacitance at 4.0V, 1MHz	C_J		-	50	-	pF



TYPICAL CHARACTERISTICS

Fig.1 I_F vs. V_F

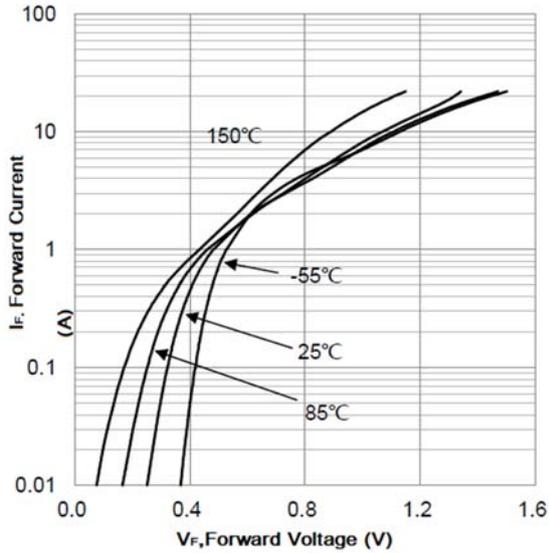


Fig.2 I_R vs. V_R

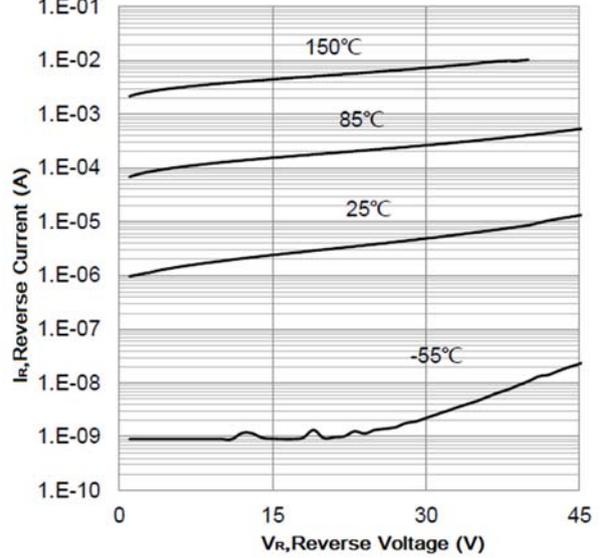


Fig.3 Capacitance

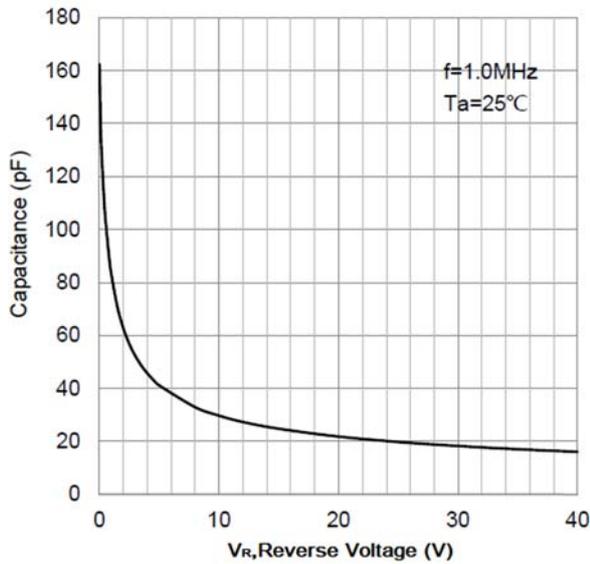
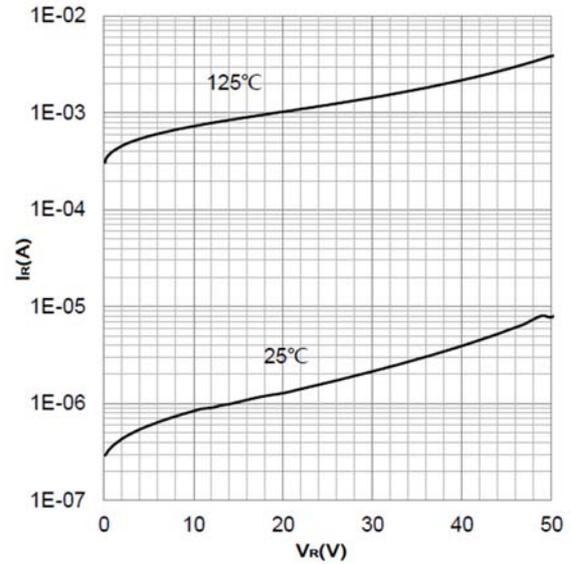


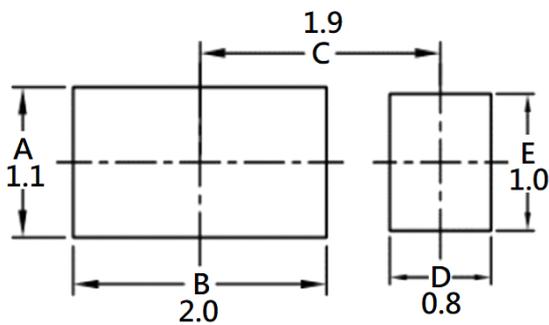
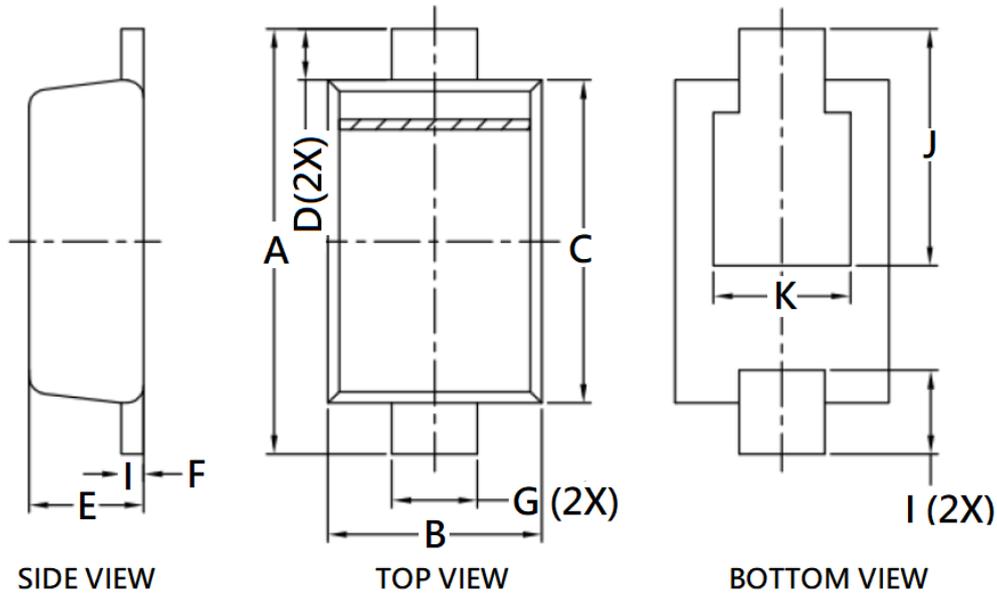
Fig.4 I_R vs. V_R



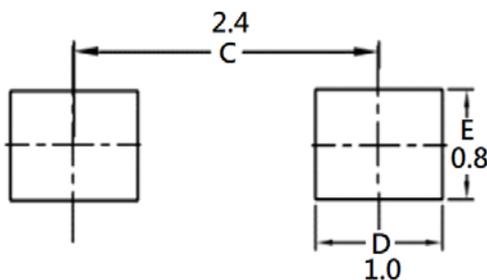


PACKAGE INFORMATION

Dimension in SOD-323HE Package (Unit: mm)



RECOMMENDED PAD (mm)



COMPATIBLE PAD (mm)

SYMBOL	MIN	MAX
A	2.300	2.550
B	1.200	1.250
C	1.750	1.900
D	0.300 TYP	
E	0.550	0.670
F	0.100	0.150
G	0.450	0.500
I	0.400	0.500
J	1.150	1.400
K	0.800 TYP	



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