

Surface Mount Schottky Barrier Rectifier  
 Reverse Voltage - 40V  
 Forward Current - 2.0A

### FEATURES

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### MECHANICAL DATA

- Case: SOD-323HE
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 5.4mg/0.00019oz

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### Absolute Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	MBR240E	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Maximum RMS voltage	$V_{RMS}$	28	V
Maximum DC Blocking Voltage	$V_{DC}$	40	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	2.0	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	25	A
Max Instantaneous Forward Voltage at 1 A at 2 A	$V_F$	0.39 ( Typ) 0.47(Max) 0.44 ( Typ) 0.53(Max)	V
Maximum DC Reverse Current at Rated DC Reverse Voltage $T_a = 25^\circ C$ $T_a = 100^\circ C$	$I_R$	0.3 15	mA
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	330	pF
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	130	°C/W
Operating Junction Temperature Range	$T_j$	-55 ~ +125	°C
Storage Temperature Range	$T_{stg}$	-55 ~ +150	°C

( 1 ) Measured at 1 MHz and applied reverse voltage of 4 V D.C

( 2 ) P.C.B. mounted with 3.81\*3.81cm copper pad areas.



# MBR240E

Fig.1 Forward Current Derating Curve

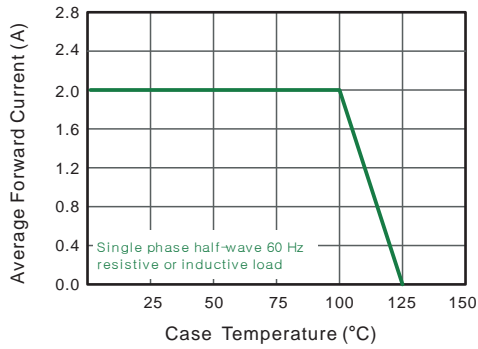


Fig.2 Typical Reverse Characteristics

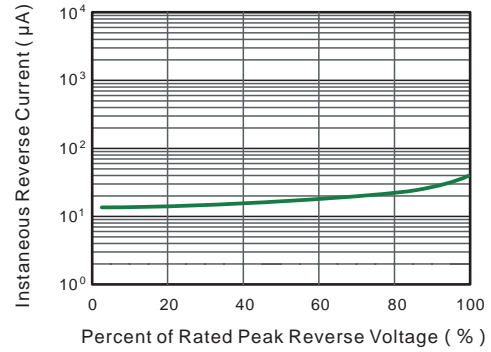


Fig.3 Typical Forward Characteristic

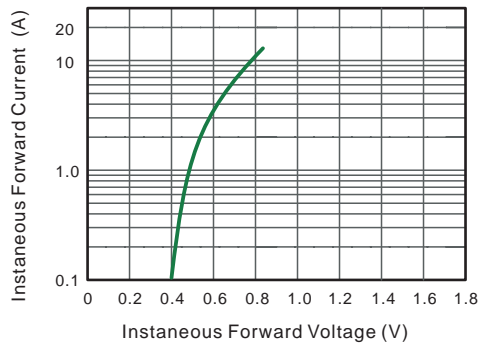


Fig.4 Typical Junction Capacitance

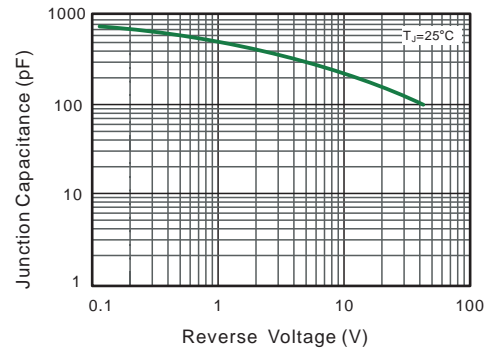


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

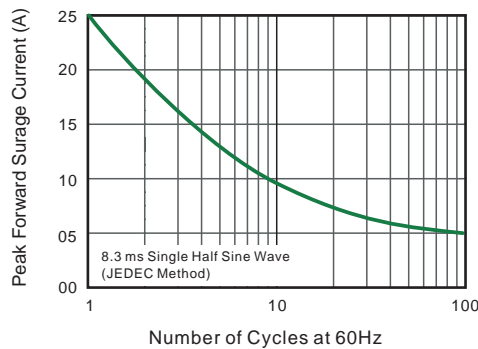
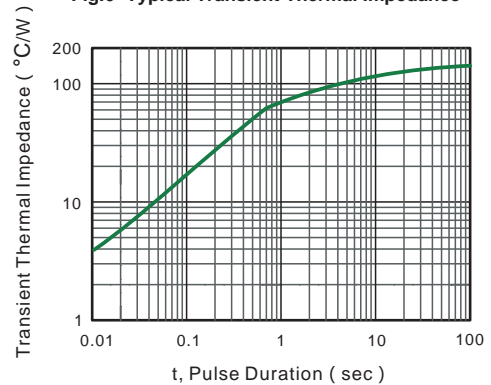


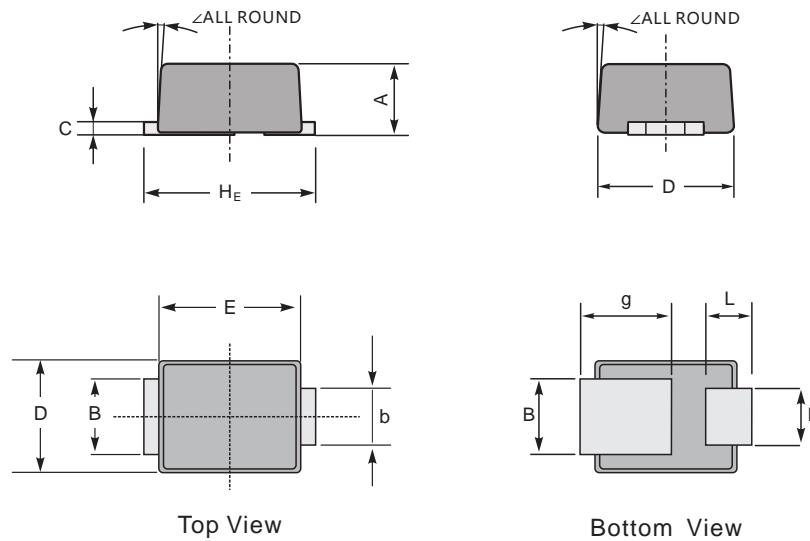
Fig.6- Typical Transient Thermal Impedance



## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

### SOD-323HE



UNIT		A	b	B	C	D	E	$H_E$	g	L	$\angle$
mm	max	0.77	0.75	0.95	0.20	1.45	2.3	2.7	1.55	0.50	12°
	min	0.57	0.45	0.65	0.10	1.25	2.1	2.3	1.1	0.25	
mil	max	30	30	37	8	57	91	106	61	20	
	min	22	18	26	4	49	83	91	43	10	

### The recommended mounting pad size

