



MBR140E THRU MBR1200E

Surface Mount Schottky Barrier Rectifier
Reverse Voltage - 40 to 200 V
Forward Current - 1.0A

FEATURES

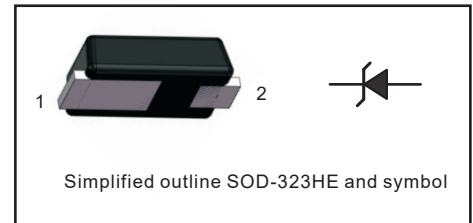
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

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



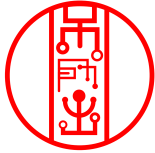
Absolute Maximum Ratings and Electrical characteristics

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	MBR140E	MBR160E	MBR1100E	MBR1150E	MBR1200E	Units
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	40	60	100	150	200	V
Maximum RMS voltage	V _{RMS}	28	42	70	105	140	V
Maximum DC Blocking Voltage	V _{DC}	40	60	100	150	200	V
Maximum Average Forward Rectified Current	I _{F(AV)}	1.0					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	V _F	0.55	0.70	0.85	0.95		V
Maximum DC Reverse Current T _a = 25°C at Rated DC Reverse Voltage T _a =100°C	I _R	0.5 20	0.3 15				mA
Typical Junction Capacitance ⁽¹⁾	C _j	60	40				pF
Typical Thermal Resistance ⁽²⁾	R _{θJA}	150					°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 8X 8 mm copper pad areas.



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Fig.1 Forward Current Derating Curve

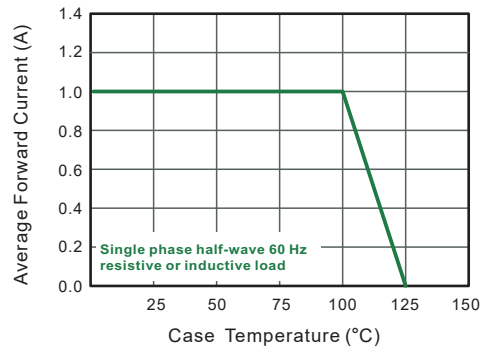


Fig.2 Typical Reverse Characteristics

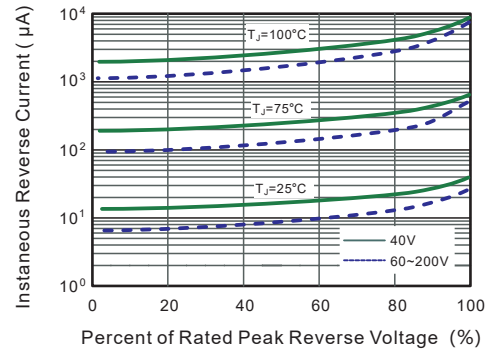


Fig.3 Typical Forward Characteristic

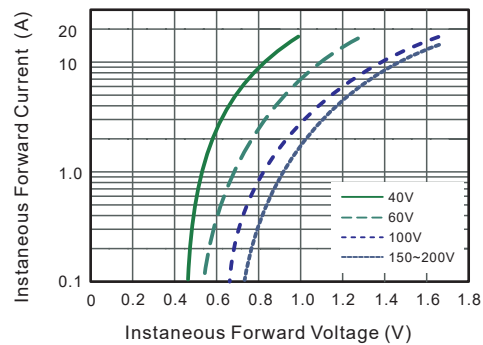


Fig.4 Typical Junction Capacitance

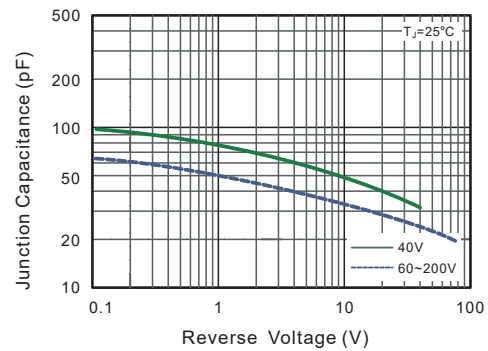


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

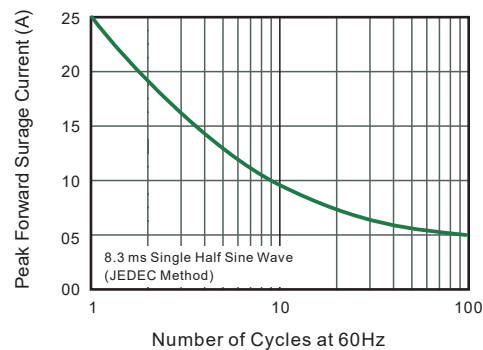
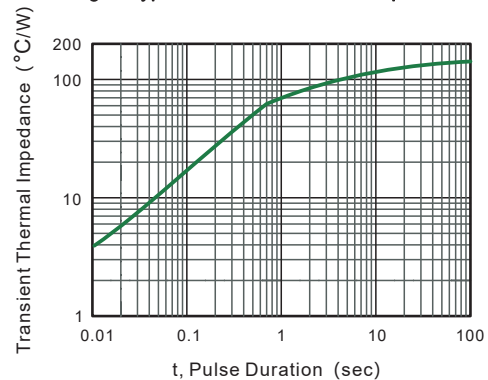
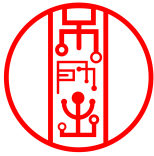


Fig.6- Typical Transient Thermal Impedance



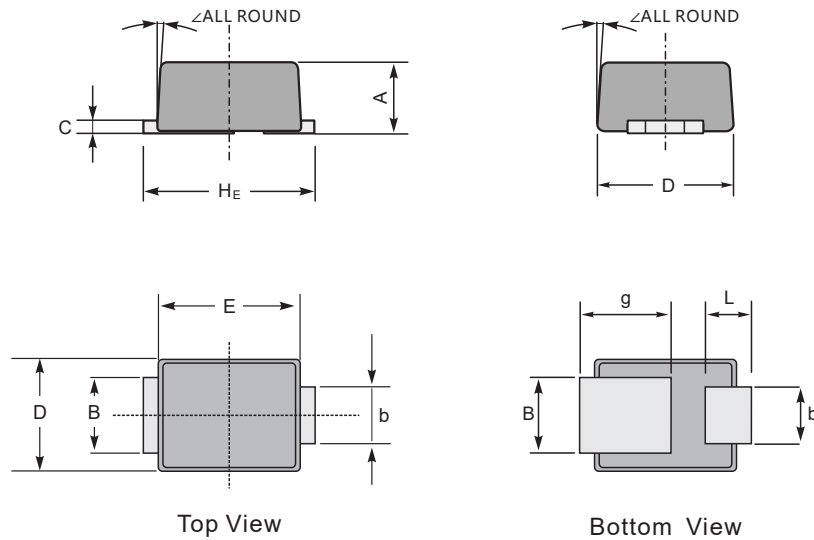


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PACKAGE OUTLINE

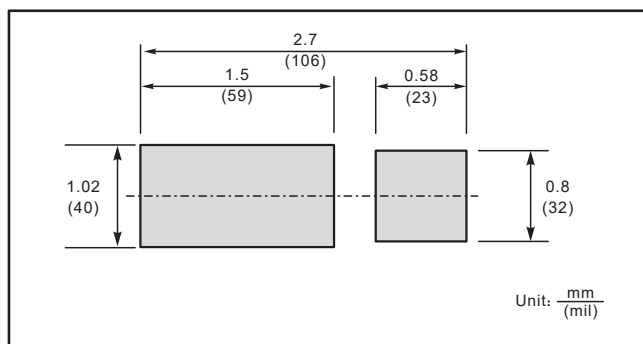
Plastic surface mounted package; 2 leads

SOD-323HE



UNIT		A	b	B	C	D	E	H _E	g	L	∠
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



Marking

Type number	Marking code
MBR140E	14S
MBR160E	16S
MBR1100E	110S
MBR1150E	115S
MBR1200E	120S