



YEA SHIN TECHNOLOGY CO., LTD MBR120HE THRU MBR1200HE

SMD Schottky Barrier Rectifier

Voltage - 20 to 200Volts Current - 1 Amp



Features

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * Low power loss,high efficiency
- * For use in low voltage high frequency inverters, free wheeling,and polarity protection applications
- * Guardring for over voltage protection
- * High temperature soldering guaranteed: 260°C/10 seconds at terminals

Mechanical data

Case: SOD-323HE

molded plastic over sky die

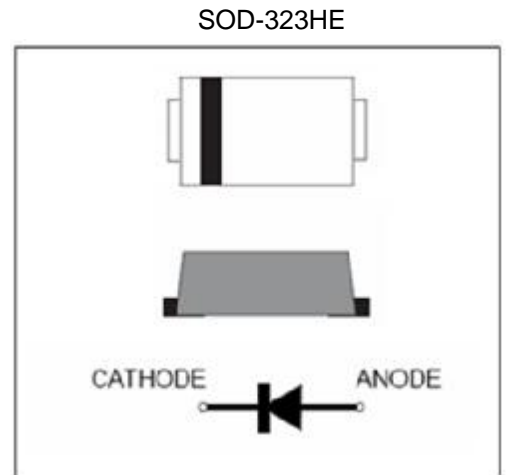
Terminals: Tin Plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.011 g

Handling precautin:None



Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	MBR	MBR	MBR	MBR	MBR	MBR	MBR	MBR	MBR	UNIT
		120HE	130HE	140HE	150HE	160HE	180HE	1100HE	1150HE	1200HE	
Marking		12	13	14	15	16	18	110	115	120	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	150	200	V
Maximum Average Forward Current $T_c=75^\circ\text{C}$	$I_{F(AV)}$	1									A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	22									A
Maximum Instantaneous Forward Voltage, $I_F=1\text{A}$	V_F	0.55		0.7		0.85		0.9		0.92	V
Maximum DC Reverse Current at $T_A=25^\circ\text{C}$ at Raged DC Blocking Voltage $T_A=125^\circ\text{C}$	I_R	0.02									mA
		10									
Typical Junction Capacitance at 4.0V, 1MHz	C_J	160									pF
Typical Thermal Resistance (Note1)	$R_{\theta JA}$	220									$^\circ\text{C/W}$
	$R_{\theta JL}$	50									$^\circ\text{C/W}$
Operating Temperature Range	T_J	-55 to +150									$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150									$^\circ\text{C}$

Note: 1. 8.0mm² (.013mm thick) land areas.

DEVICE CHARACTERISTICS

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Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

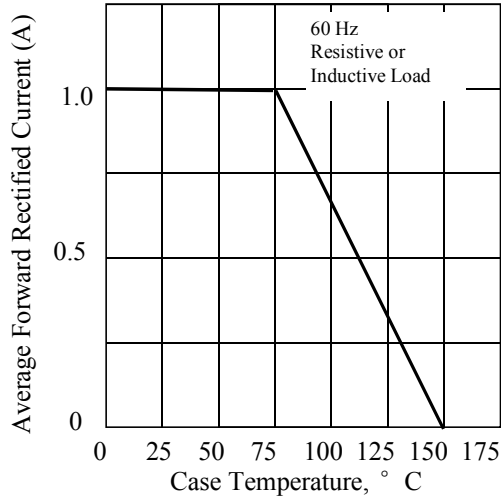


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

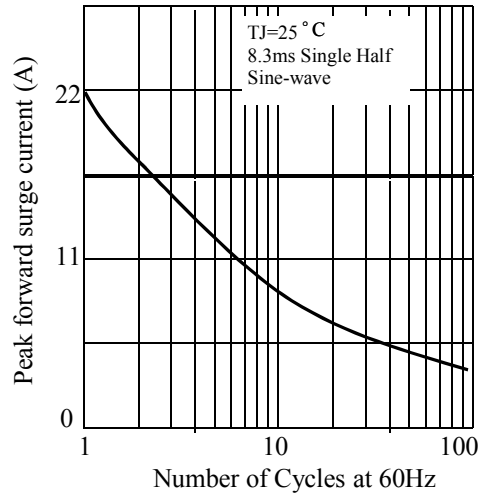


Fig 3. - Typical Instantaneous Forward Characteristics

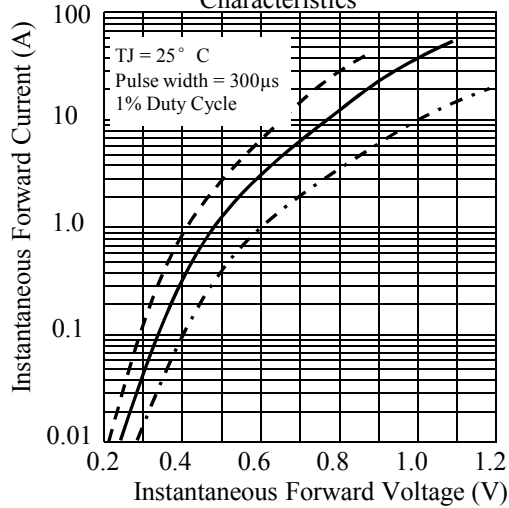


Fig 4. - Typical Reverse Characteristics

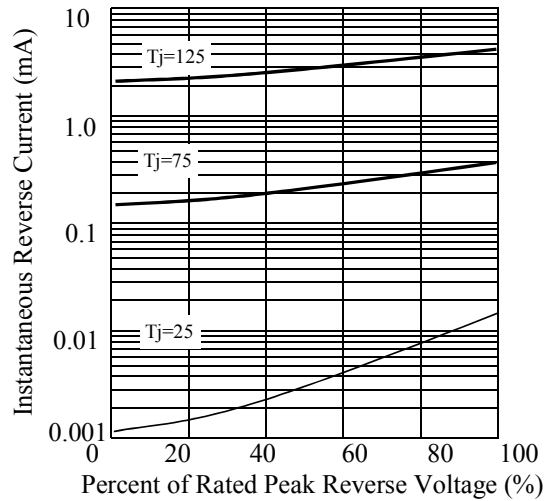


Fig 5. - typical transient thermal impedance

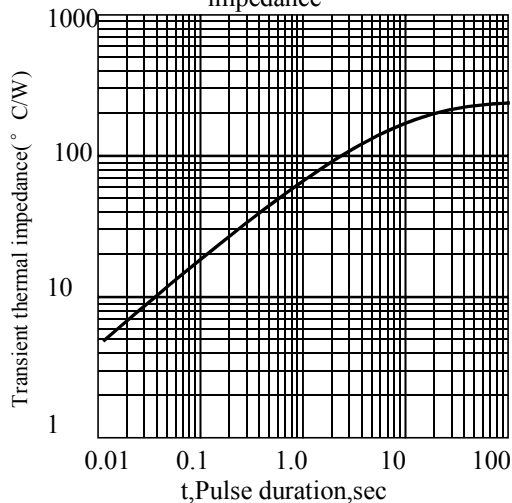
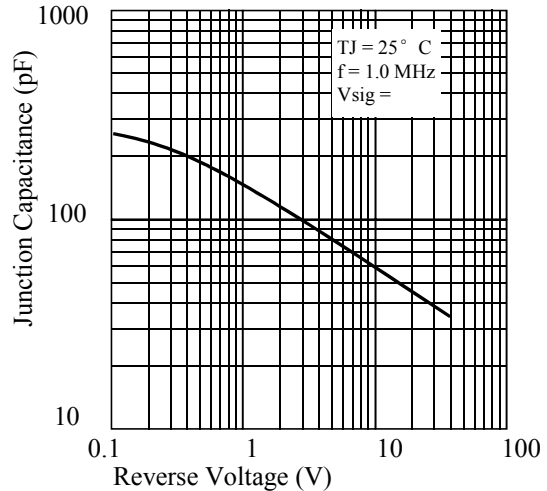


Fig 6. - Typical Junction Capacitance

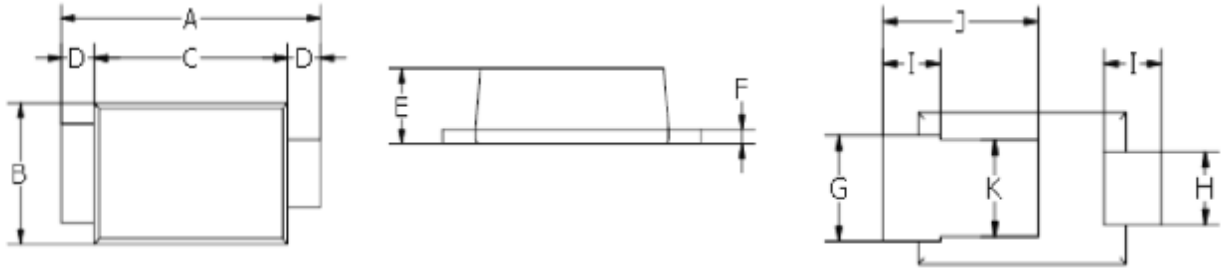


PACKAGE OUTLINE & DIMENSIONS

MBR120HE THRU MBR1200HE

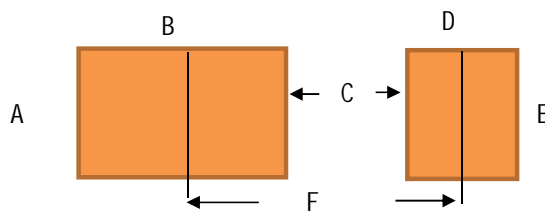
Dimension:

SOD-323HE



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.30	2.70	0.091	0.106
B	1.20	1.40	0.047	0.055
C	1.75	1.95	0.069	0.077
D	0.30Typ		0.012Typ	
E	0.55	0.75	0.030	0.022
F	0.10	0.20	0.004	0.008
G	0.65	0.95	0.026	0.037
H	0.50	0.70	0.020	0.028
I	0.40	0.80	0.016	0.031
J	1.15	1.55	0.045	0.061
K	0.8Typ		0.032Typ	

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C	D	E	F
SOD123-FL	0.044(1.10)	0.079(2.00)	0.019(0.5)	0.032(0.8)	0.04(1.00)	0.075(1.90)