



Schottky Barrier Rectifiers

Reverse Voltage - 45V

Forward Current - 10 A

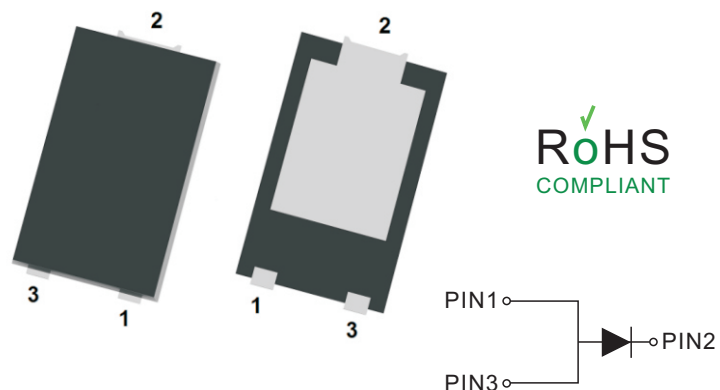
TO-277 (*Prefix :E)

Features

- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any

Applications

- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.



Maximum Ratings And Electrical Characteristics

Ratings At 25°C Ambient Temperature Unless Otherwise Specified

Characteristics	Symbols	MBR1045EY	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	V
Maximum RMS voltage	V_{RMS}	31.5	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	10	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)(Per leg)	I_{FSM}	250	A
Max Instantaneous Forward Voltage at 10 A DC per leg	V_F	0.46	V
Maximum DC Reverse Current $T_J = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_J = 100^\circ\text{C}$	I_R	0.12 12	mA
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JC}$ $R_{\theta JA}$	3.0 73	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ +150	$^\circ\text{C}$

(1) P.C.B. mounted with 10cmX10cmX1mm copper pad areas.



Fig.1 Typical Forward Current Derating Curve

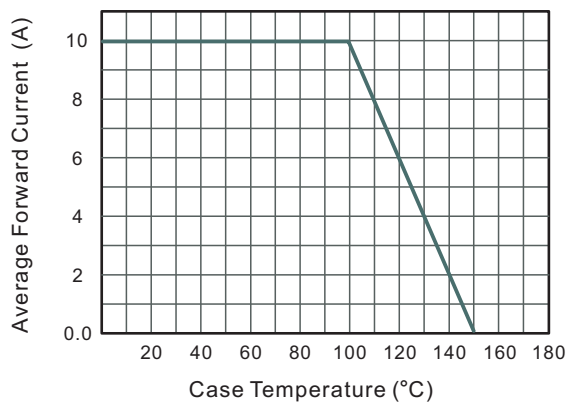


Fig.2 Typical Reverse Characteristics

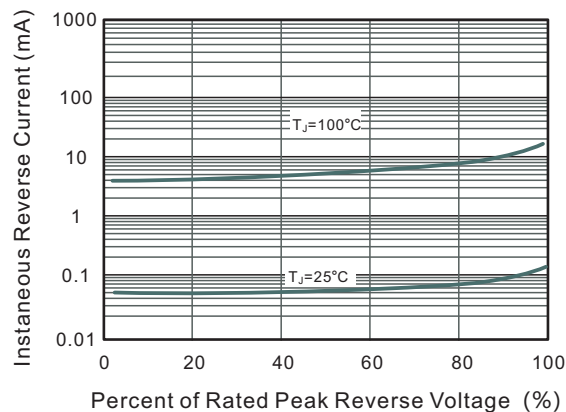


Fig.3 Typical Forward Characteristic(per leg)

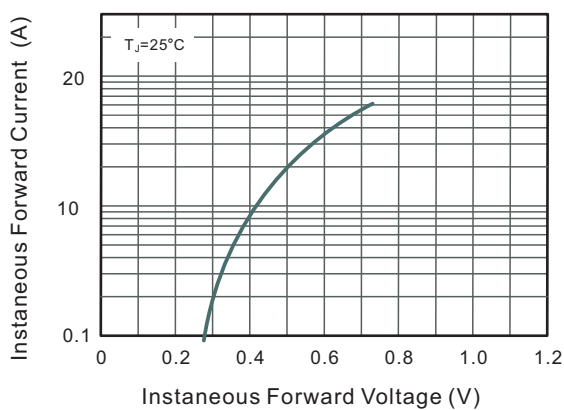
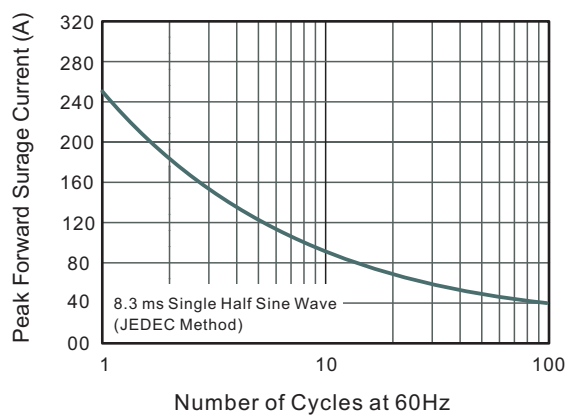
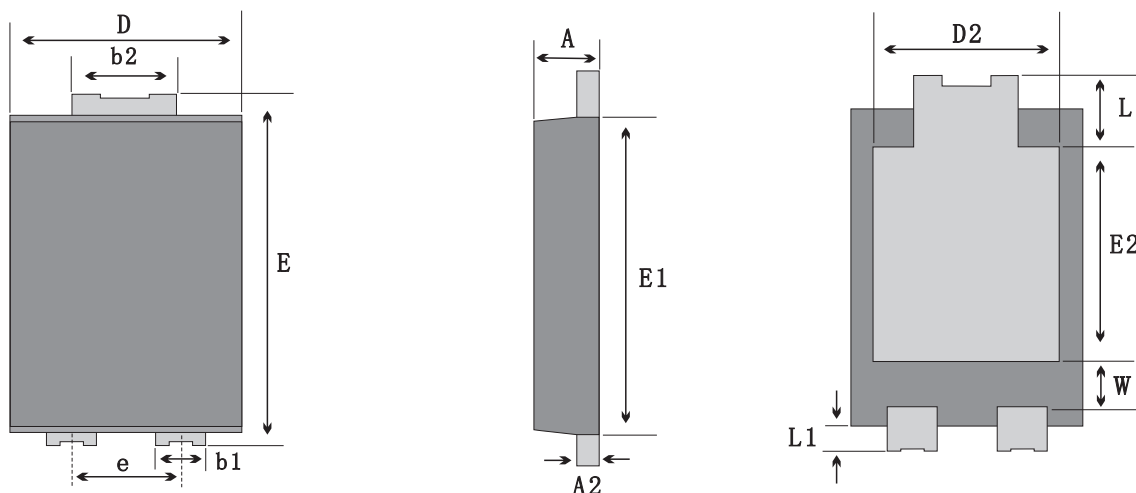


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current





TO-277 Package Outline Dimensions



TO-277 Mechanical data

UNIT		A	A2	b1	b2	D	D2	E	e	E1	E2	L	L1	W
mm	max	1.25	0.43	0.99	1.88	4.05	TYP	6.60	TYP	5.50	TYP	0.95	0.65	1.41
	min	1.05	0.33	0.80	1.70	3.90	3.054	6.40	1.84	5.30	3.549	0.75	0.45	1.10
mil	max	49	17	39	74	159	TYP	260	TYP	217	TYP	37	26	56
	min	41	13	31	67	154	120	252	72	209	140	30	18	43

Marking

Type number	Marking code
MBR1045EY	MBR1045EY



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