

Schottky Barrier Rectifiers

Reverse Voltage - 40 to 200 V

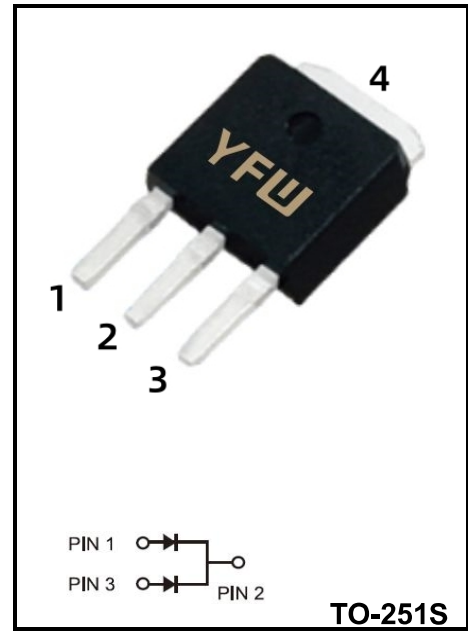
Forward Current - 10A

FEATURES

- ◆ High current capability
- ◆ Low forward voltage drop
- ◆ High surge capability
- ◆ High temperature soldering guaranteed
- ◆ Mounting position: any

MECHANICAL DATA

- ◆ Lead free finish, RoHS compliant
- ◆ Case Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free"



Maximum Ratings and Electrical Characteristics Ratings (Ta = 25°C) ambient temperature unless otherwise specified.

Parameter	Symbol	MBR1040AW	MBR1045AW	MBR1060AW	MBR10100AW	MBR10150AW	MBR10200AW	Units	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	45	60	100	150	200	V	
Maximum RMS voltage	V_{RMS}	28	32	42	70	105	140	V	
Maximum DC Blocking Voltage	V_{DC}	40	45	60	100	150	200	V	
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5 10						A	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC method)	I_{FSM}	100						A	
Maximum Instantaneous Forward Voltage at 10 A	V_F	0.70		0.75	0.85	0.90	0.92	v	
Maximum Instantaneous Reverse Current at Rated DC Reverse Voltage <small>TA = 25°C TA = 125°C</small>	I_R	0.1 20			0.05 20			mA	
Typical Junction Capacitance ⁽¹⁾	C_j	300		200				pF	
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	35						°C/W	
Operating Junction Temperature Range	T_j	-55 ~ +150				-55 ~ +175			°C
Storage Temperature Range	T_{stg}	-55 ~ +150				-55 ~ +175			°C

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

(2) P.C.B. mounted with 10cm X 10cmX1mm copper pad areas.

Typical Characteristics

Fig.1 Typical Forward Current Derating Curve

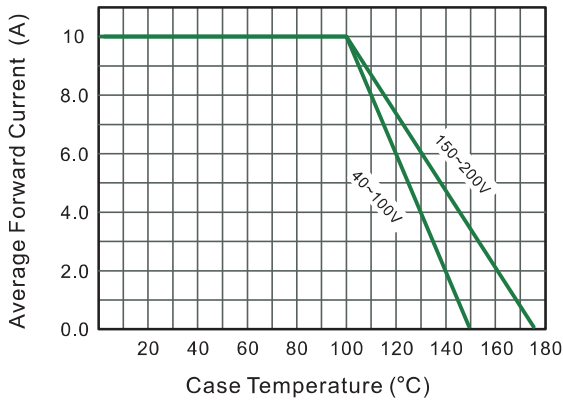


Fig.2 Typical Reverse Characteristics

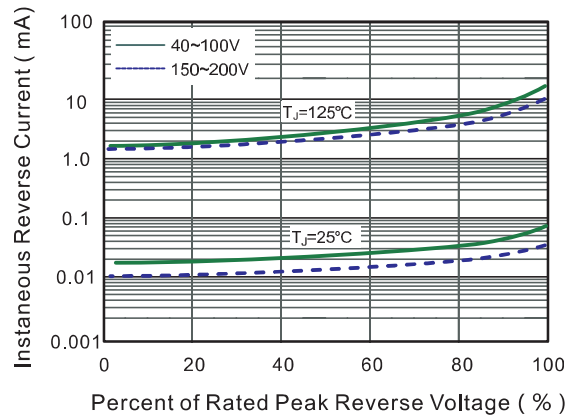


Fig.3 Typical Forward Characteristics

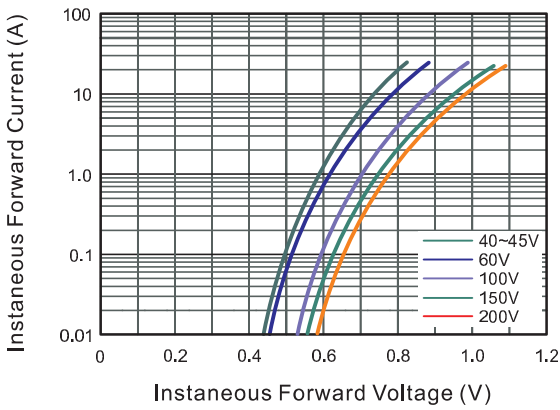


Fig.4 Typical Junction Capacitance

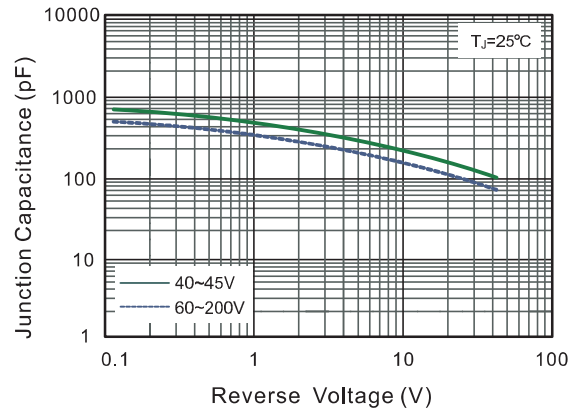


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

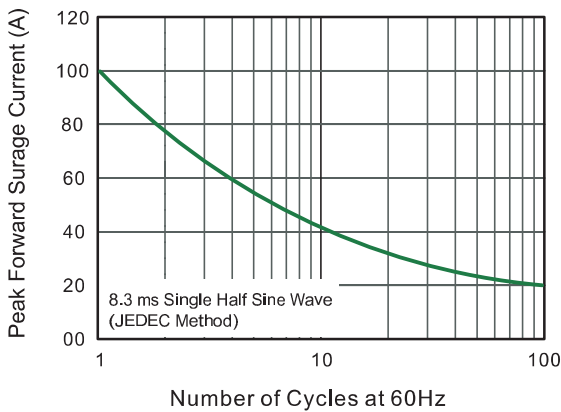
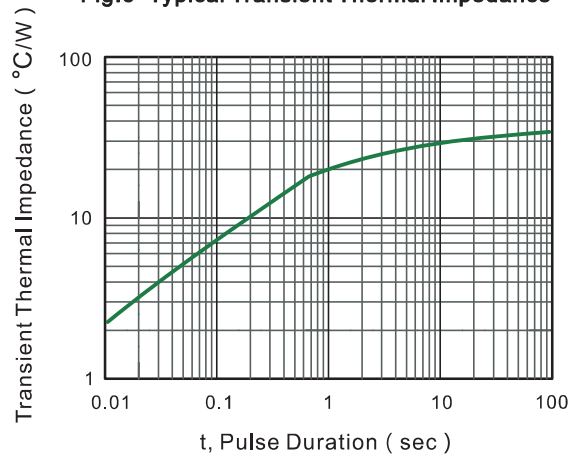
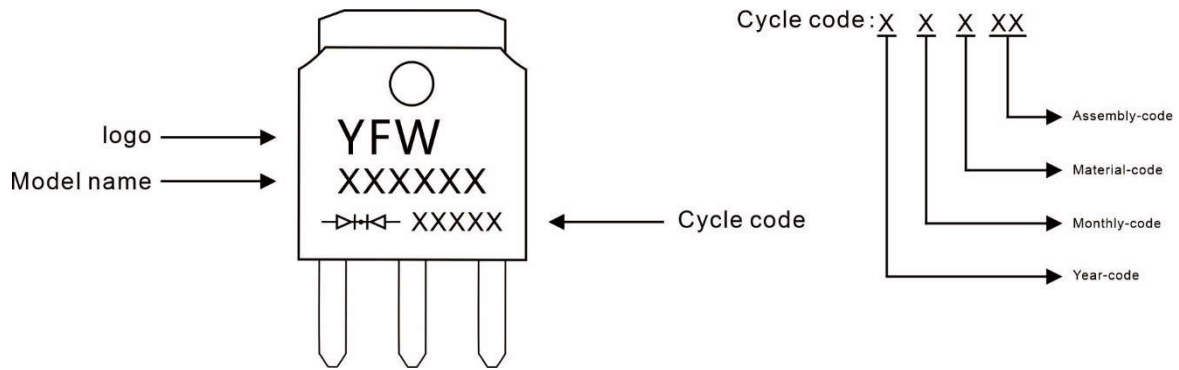


Fig.6 Typical Transient Thermal Impedance



Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MBRXXXXXAW	TO-251S	0.011oz(0.32g)	80pcs/tube	4000pcs/box 24000pcs/Carton

Package Dimensions

TO-251S

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.1	2.5	0.083	0.098
A1	6.3	6.9	0.248	0.271
A2	0.9	1.1	0.035	0.043
A3	TYP0.5		TYP0.019	
b	0.6	0.8	0.024	0.031
c	0.4	0.5	0.015	0.020
D	5.3	5.5	0.209	0.217
D2	3.65	4.05	0.144	0.159
E	5.8	6.4	0.228	0.252
E2	0.9	1.4	0.035	0.055
e	TYP2.29		TYP0.090	
e1	TYP4.58		TYP0.180	
L	3.7	4.3	0.146	0.169

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