

## Schottky Barrier Rectifiers

Reverse Voltage - 40 to 200 V

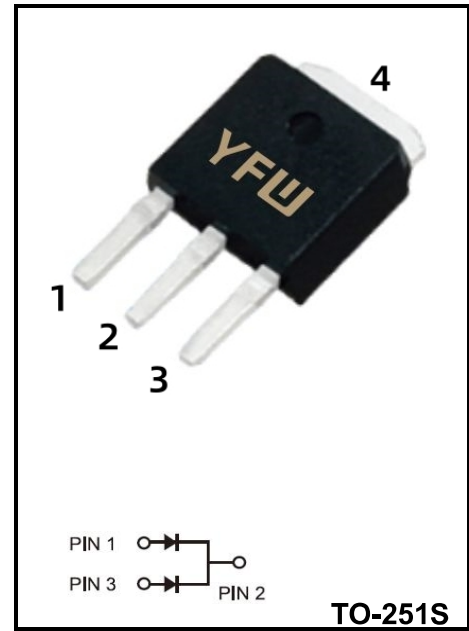
Forward Current - 20A

### FEATURES

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

### MECHANICAL DATA

- ◆Case: TO-251W
- ◆Approx. Weight: 0.342g ( 0.012oz)
- ◆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	MBR2040AW	MBR2045AW	MBR2060AW	MBR20100AW	MBR20150AW	MBR20200AW	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	$I_{F(AV)}$	10 20						A	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC method)	$I_{FSM}$	130						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 <sup>(1)</sup>	$C_j$	600	400					pF	
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	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

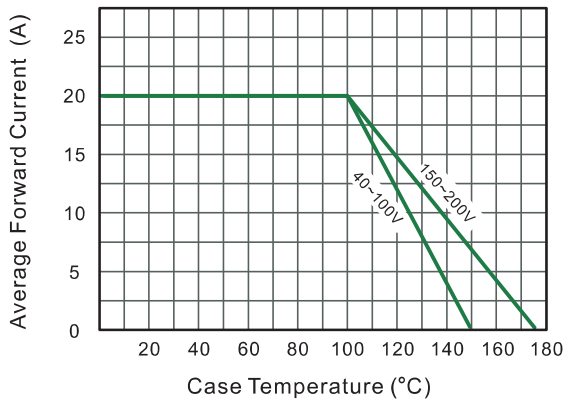


Fig.2 Typical Reverse Characteristics

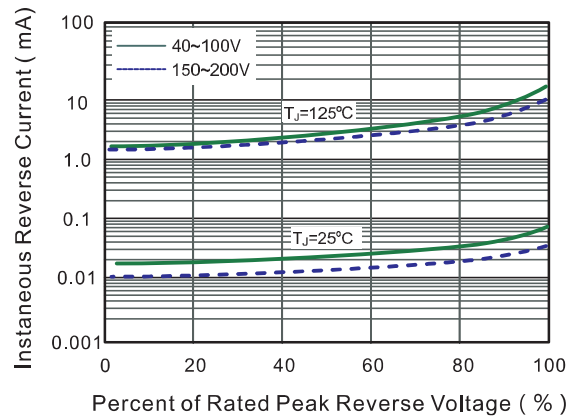


Fig.3 Typical Forward Characteristics

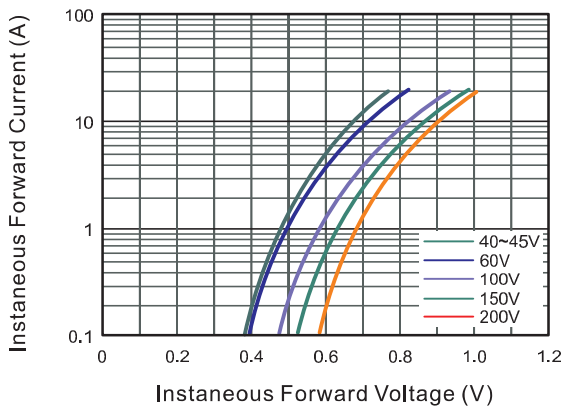


Fig.4 Typical Junction Capacitance

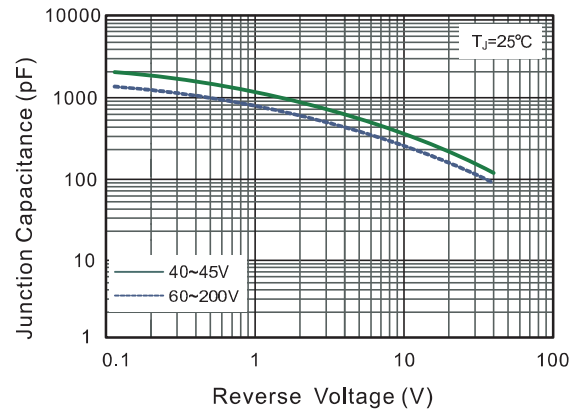


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

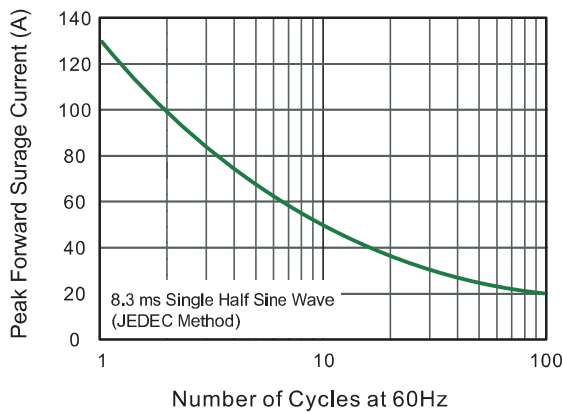
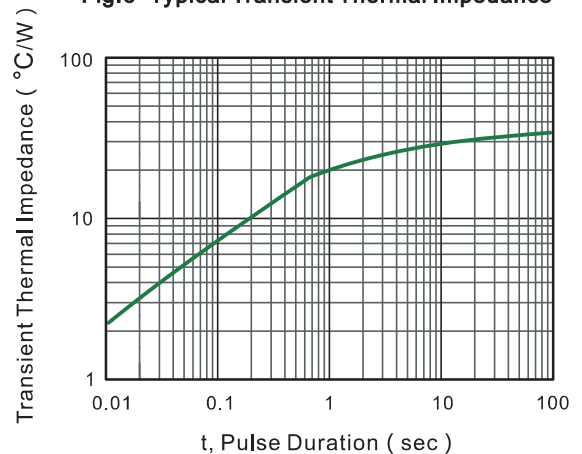
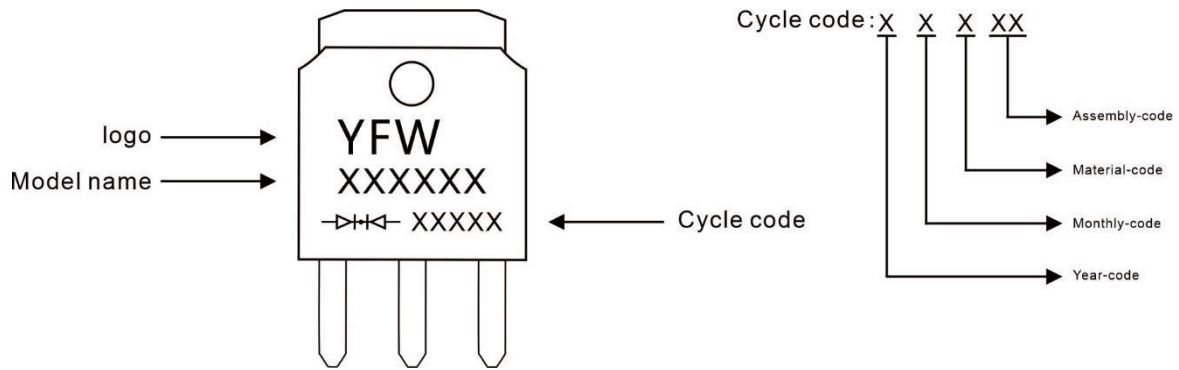


Fig.6- Typical Transient Thermal Impedance



**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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