

**Schottky Barrier Rectifiers**

Reverse Voltage - 40 to 200 V

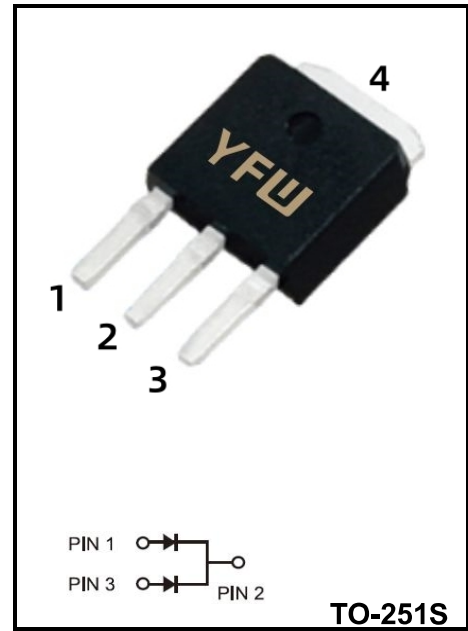
Forward Current - 20A

**FEATURES**

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

**MECHANICAL DATA**

- ◆Case :TO-251S
- ◆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

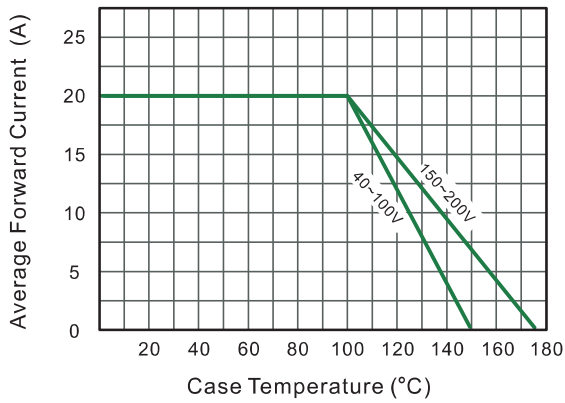


Fig.2 Typical Reverse Characteristics

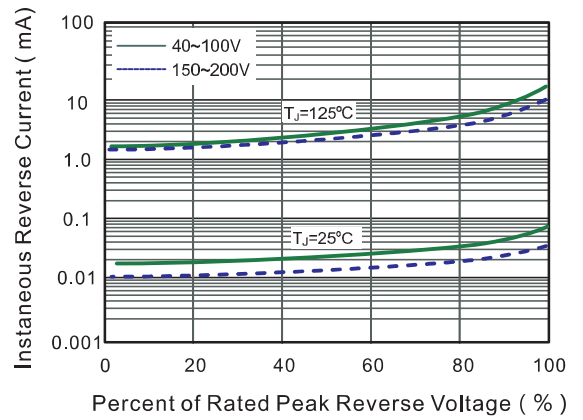


Fig.3 Typical Forward Characteristics

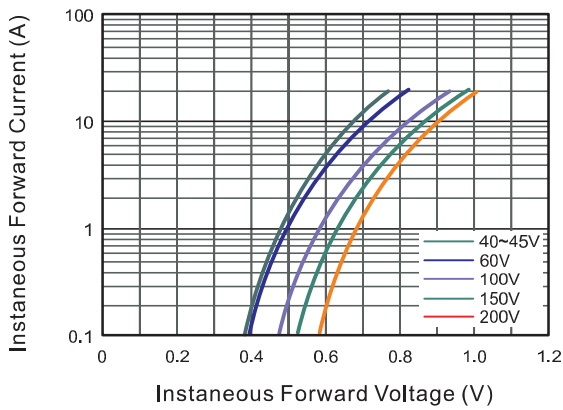


Fig.4 Typical Junction Capacitance

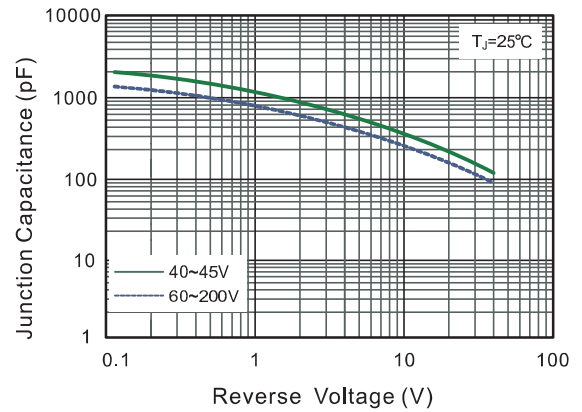


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

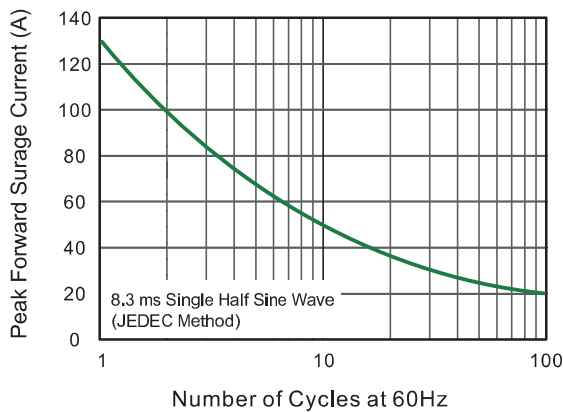
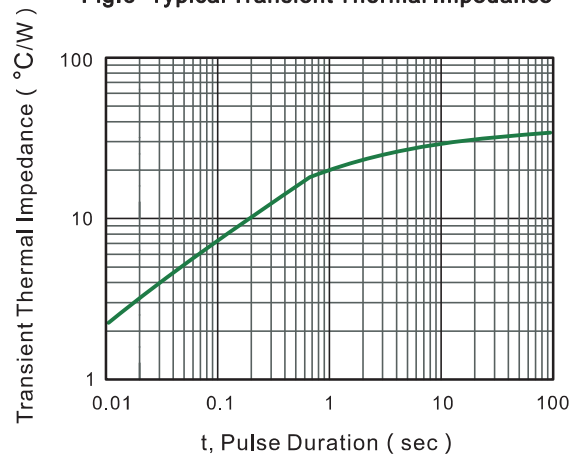
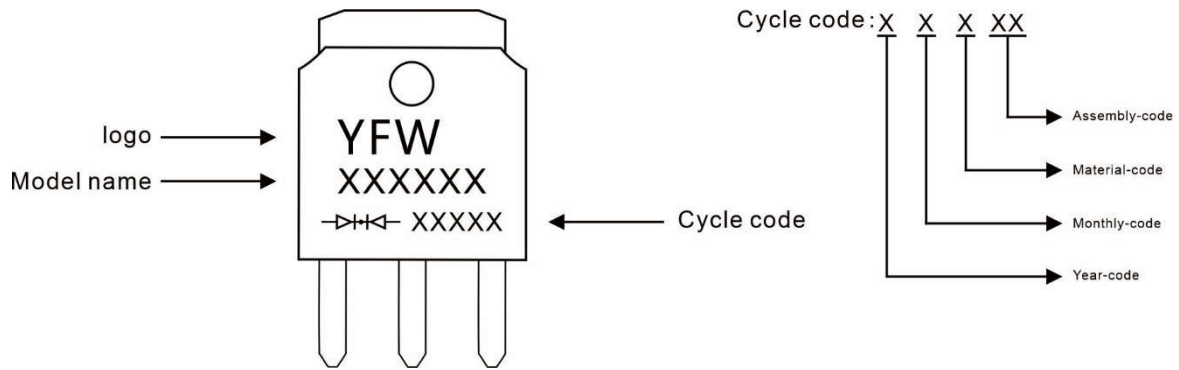


Fig.6- Typical Transient Thermal Impedance



**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

## Disclaimer

The information presented in this document is for reference only. Guangdong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <https://www.yfwdiode.com>, or consult YFW sales office for further assistance.