

## Schottky Barrier Rectifiers

**Reverse Voltage - 40 to 200 V**

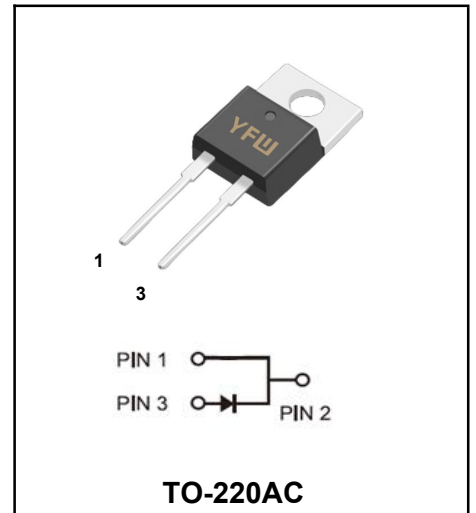
**Forward Current - 20 A**

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed  
250 °C/10 seconds at terminals

### MECHANICAL DATA

- ◆ Case : TO-220AC/AC
- ◆ Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ Polarity : Polarity symbol marking on body
- ◆ Mounting Position : Any



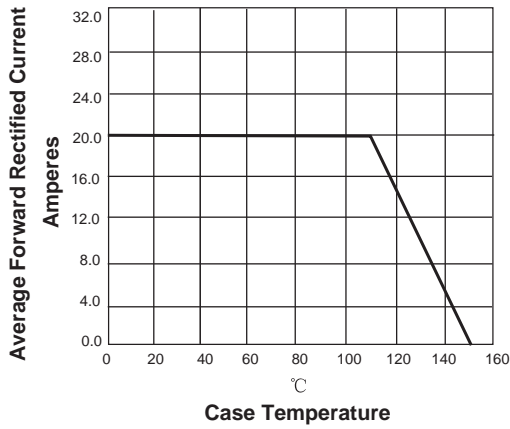
### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

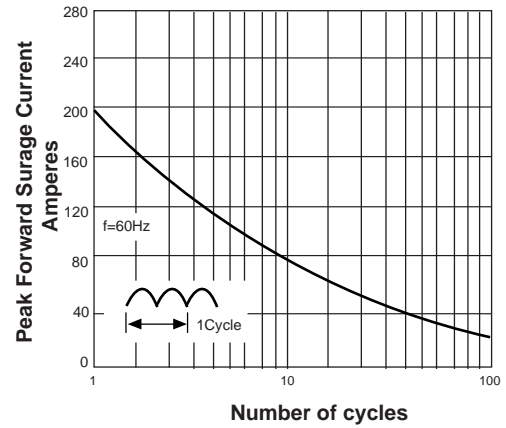
Parameter	Symbols	MBR2040AC	MBR2045AC	MBR2060AC	MBR20100AC	MBR20150AC	MBR20200AC	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	40	45	60	100	150	200	V
Maximum RMS voltage	$V_{RMS}$	28	31.5	42	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	40	45	60	100	150	200	V
Maximum average forward rectified current at $T_c=110^{\circ}C$	$I_{(AV)}$	20						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	200						A
Maximum instantaneous forward voltage per diode at 20.0A	$V_F$	0.65		0.75	0.85	0.95		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25^{\circ}C$ $T_a = 125^{\circ}C$	$I_R$	0.5 50			0.05 10			mA
Typical thermal resistance	$R_{\theta JC}$	35.0						°C/W
Operating Temperature Range	$T_J$	-55 to +150						°C
Storage Temperature Range	$T_{STG}$	-55 to +150						°C

**Ratings and Characteristic Curves**

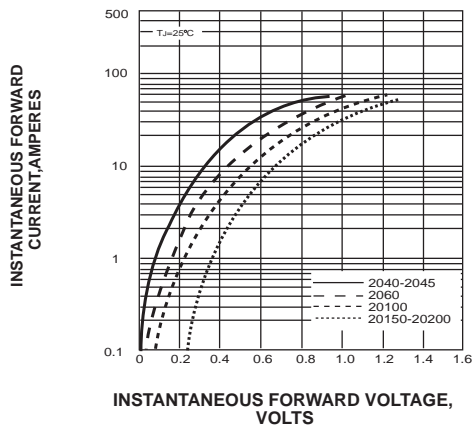
**FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT**



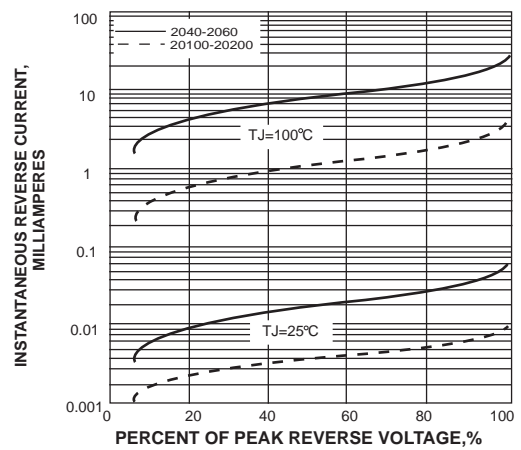
**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**



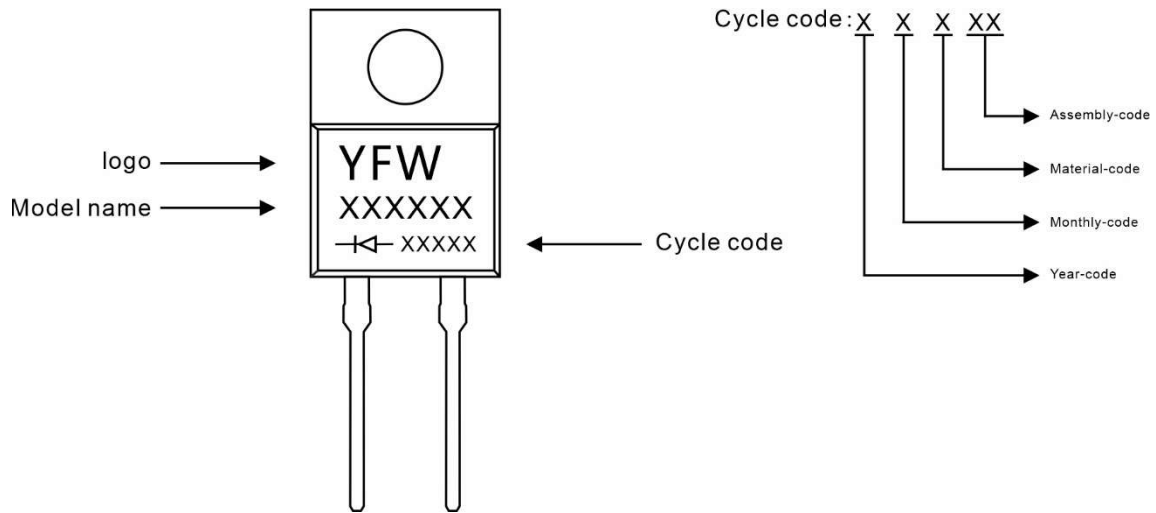
**FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS**



**FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS**



**Marking Diagram**



**Ordering information**

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MBRXXXXXAC	TO-220AC	0.067oz(1.9g)	50pcs/tube	1000PCS/Box 5000PCS/Carton

**Package Dimensions**

**TO-220AC**

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.34	4.67	0.171	0.184
A1	2.52	2.82	0.099	0.111
b	0.71	0.91	0.028	0.036
b1	1.17	1.37	0.046	0.054
c	0.30	0.50	0.012	0.020
c1	1.17	1.37	0.046	0.054
D	9.90	10.20	0.390	0.402
E	8.50	8.90	0.335	0.350
E1	12.00	12.50	0.472	0.492
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
F	2.60	2.80	0.102	0.110
L	13.20	13.80	0.520	0.543
L1	3.80	4.20	0.150	0.165
Φ	3.60	3.96	0.142	0.156

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