

Schottky Barrier Rectifiers

Reverse Voltage - 40 to 200 V

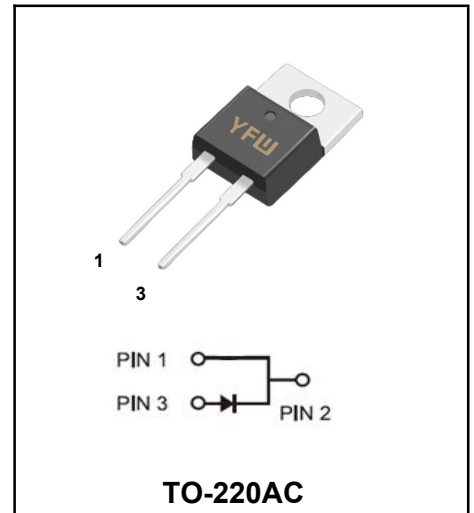
Forward Current - 20 A

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 : Molded plastic body
- ◆ Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ Polarity : Polarity symbol marking on body
- ◆ Mounting Position : Any



Primary Characteristic

$I_{(AV)}$	20A
V_{RRM}	40 to 200V
I_{FSM}	200A
V_F	0.55/0.7/0.85/0.95V
$T_J \text{ Max}$	150°C

Maximum Ratings (Per Leg) at $T_a=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbols	MBR 2040AC	MBR 2045AC	MBR 2060AC	MBR 20100AC	MBR 20150AC	MBR 20200AC	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	45	60	100	150	200	V
Working Peak Reverse Voltage	V_{RW}	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 $T_c=110^\circ\text{C}$	$I_{(AV)}$	20						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	200						A
Operating Temperature Range	T_J	-55 to +150						°C
Storage Temperature Range	T_{STG}	-55 to +150						°C
Typical thermal resistance	$R_{\theta JC}$	3.5						°C/W

Electrical Characteristics (Per Leg) unless otherwise specified

Characteristics	Symbols	Value				Units
Maximum instantaneous forward voltage per diode at 20.0A	V_F	0.55	0.7	0.85	0.95	V
Maximum DC reverse current at rated DC blocking voltage	$T_A=25^\circ\text{C}$	I_R		0.05		mA
	$T_A=125^\circ\text{C}$	50		10		

Ratings and Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

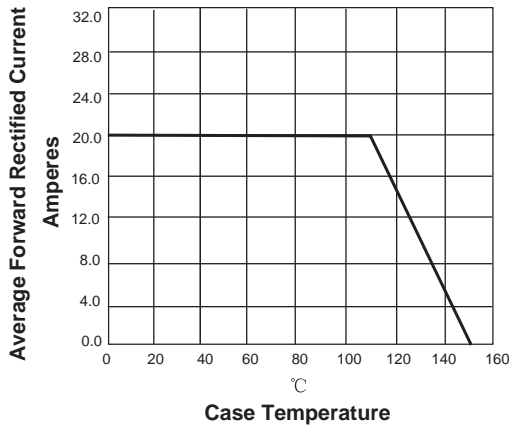


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

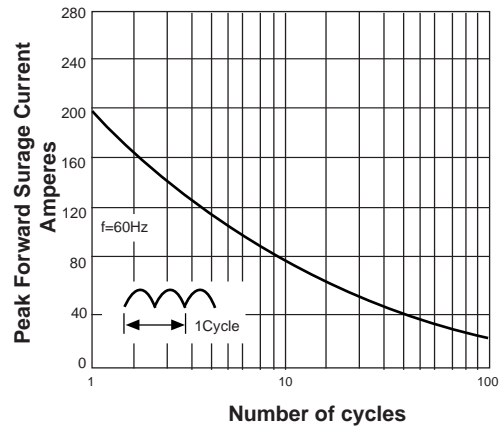


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

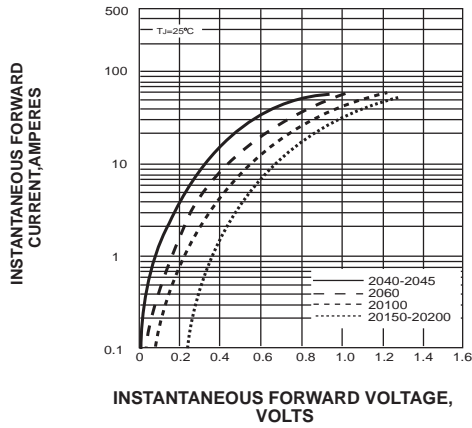
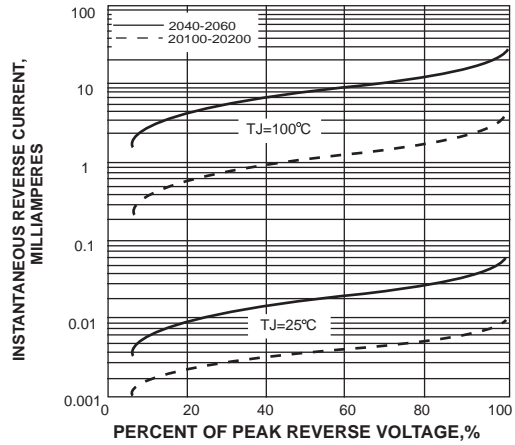
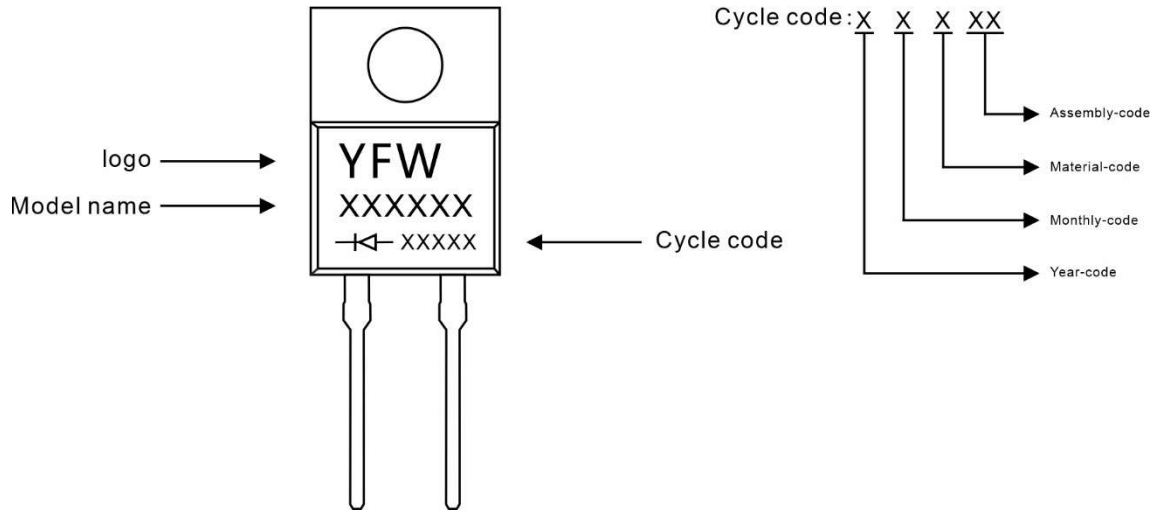


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



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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