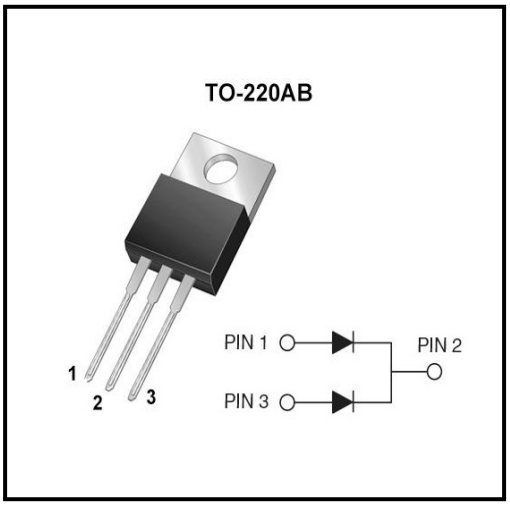
BORN SEMICONDUCTOR

MBR3040CT-MBR30200CT Schottky Barrier Rectifiers

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
- Flame Retardant Epoxy Molding Compound.
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency.
- High current capability
- For use in low voltage, high frequency inverters free wheeling, and polarlity protection applications.
- Lead free in comply with EU RoHS

Package



Mechanical Data

- Case: TO-220AB molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any

Maximum Ratings and Electrical Characteristics

Symbol	Characteristics	MBR30 40CT	MBR30 45CT	MBR30 50CT	MBR30 60CT	MBR30 80CT	MBR30 90CT	MBR30 100CT	MBR30 150CT	MBR30 200CT	Unit
V_{RRM}	Max. Recurrent Peak Reverse Voltage	40	45	50	60	80	90	100	150	200	V
V_{RMS}	Max. RMS Voltage	28	31.5	35	42	56	63	70	105	140	V
V_{DC}	Max. DC Blocking Voltage	40	45	50	60	80	90	100	150	200	V
$I_{F(AV)}$	Max.Average Forward Current	30									A
I_{FSM}	Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Loadd(JEDEC)	280							250		A
V_F	Max.Forward Voltage at 10A	0.7		0.8		0.85			0.92		V
I_R	Max. DC Reverse Current at Rated DC Blocking Voltage	0.05 (T_J = 25 °C)									mA
		20 (T_J = 125 °C)									
$R_{\theta JC}$	Typical Thermal Resistance	1.4									°C/W
T_J,T_{STG}	Operating Junction and Storage Temperature Range	-55 to +150									°C

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Typical Performance Characteristics(T_A = 25 °C, unless otherwise noted)

Figure 1:MAX. Forward Current Derating Curve

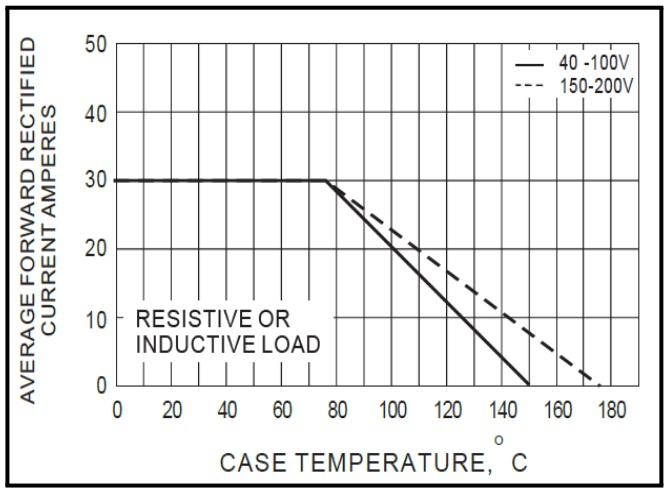


Figure 2:MAX. Non-Repetitive Forward Surge Current

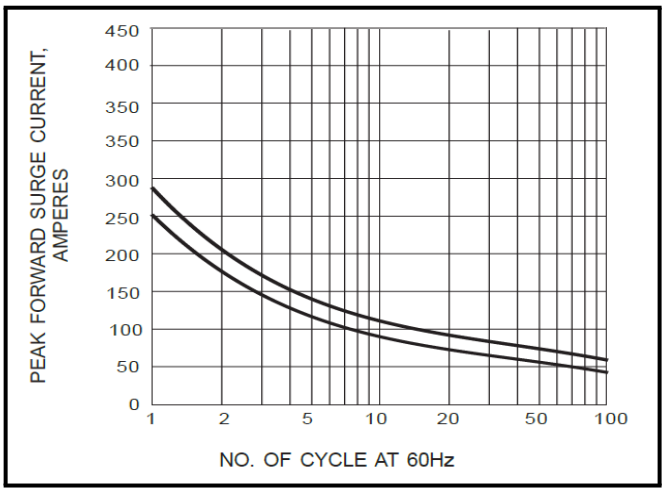


Figure 3:Typical Forward Characteristics

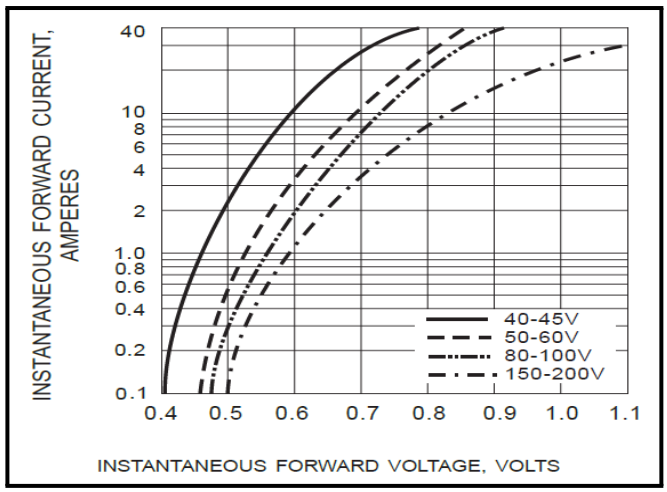
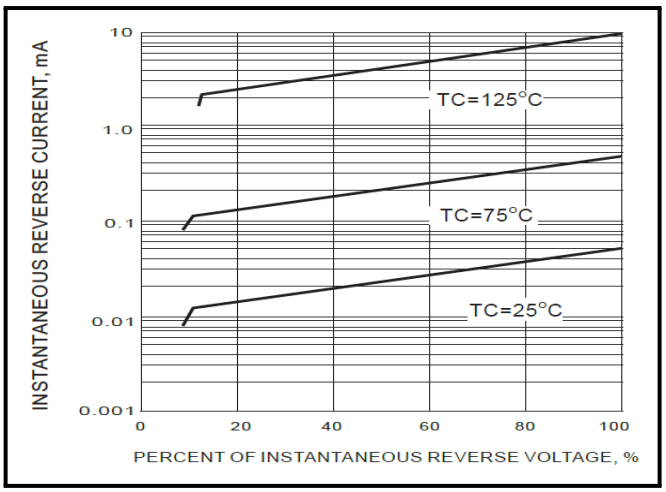


Figure 4:Typical Reverse Characteristics



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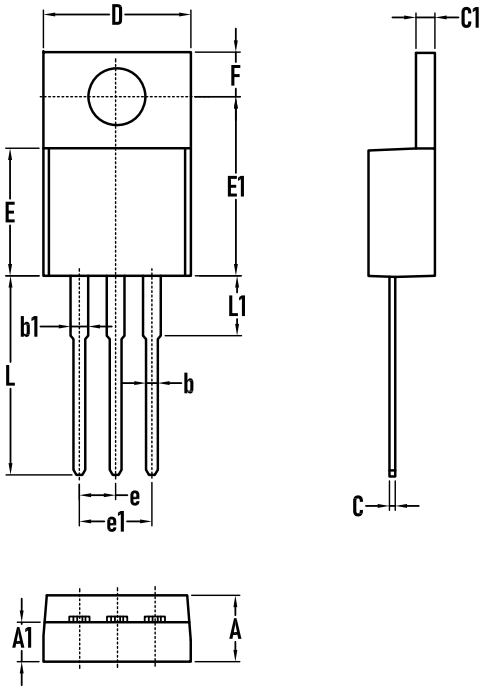
Packaging Tape - TO-220AB



Symbol	Millimeters		
	MIN.	TYP.	MAX.
A	4.30	4.50	4.70
A1	2.52	2.67	2.82
b	0.71	0.81	0.91
b1	1.17	1.27	1.37
C	0.30	0.40	0.50
C1	1.17	1.27	1.37
D	9.90	10.00	10.20
E	8.50	8.70	8.90
E1	12.00	12.25	12.50
e	2.44	2.54	2.64
e1	4.88	5.08	5.26
F	2.60	2.75	2.80
L	13.00	13.50	14.00
L1	3.80	4.00	4.20