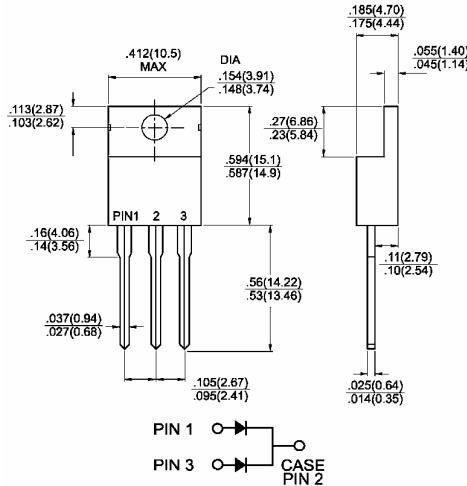




TO-220AB



Dimensions in inches and (millimeters)

Features

- Plastic material used carries Underwriters Laboratory Classifications 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- For use in power supply – output rectification, power management, instrumentation
- Guarding for overvoltage protection
- High temperature soldering guaranteed: 260°C/10 seconds, 0.25"(6.35mm) from case

Mechanical Data

- Cases: JEDEC TO-220AB molded plastic body
- Terminals: Pure tin plated, lead free, solderable per MIL-STD-750, Method 2026
- Polarity: As marked
- Mounting position: Any
- Mounting torque: 5 in. - lbs. max
- Weight: 0.08 ounce, 2.24 grams

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

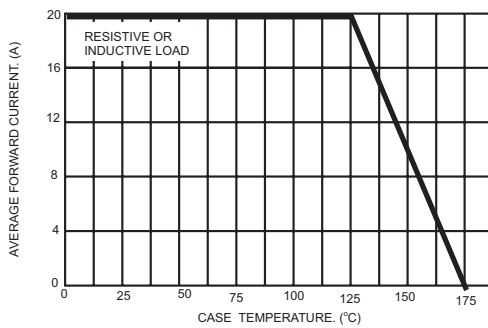
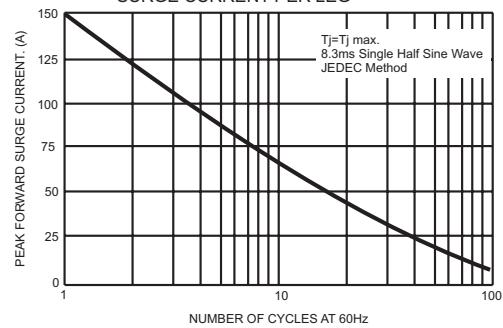
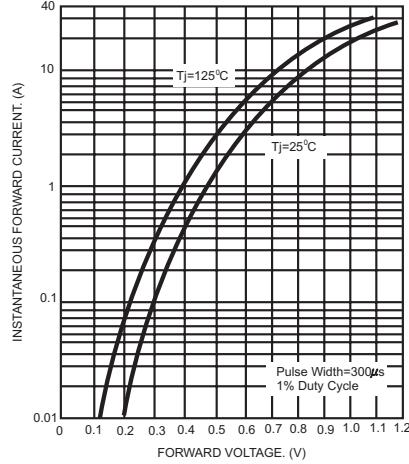
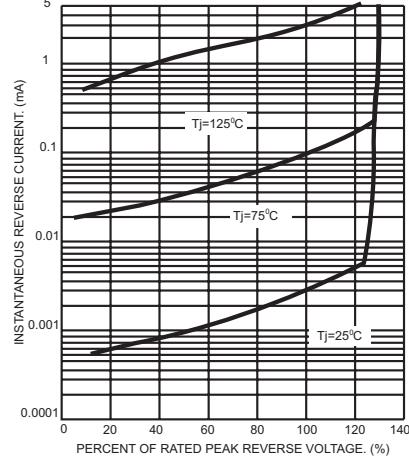
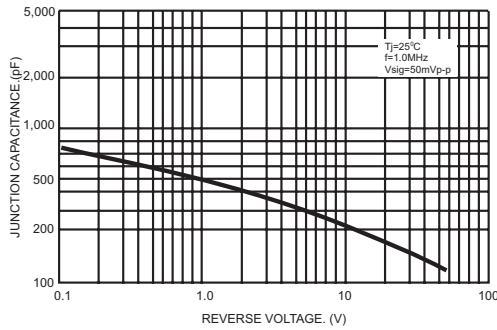
For capacitive load, derate current by 20%

Type Number	Symbol	MBR 20H100CT	MBR 20H150CT	MBR 20H200CT	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	150	200	V
Maximum RMS Voltage	V_{RMS}	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	100	150	200	V
Maximum Average Forward Rectified Current at $T_c=125^\circ C$	$I_{(AV)}$		20		A
Peak Repetitive Forward Current (Rated V_R , Square Wave, 20KHz) at $T_c=125^\circ C$	I_{FRM}		20		A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}		150		A
Peak Repetitive Reverse Surge Current (Note 1)	I_{RRM}		1.0	0.5	A
Maximum Instantaneous Forward Voltage at: (Note 2)					
$I_F=10A, T_c=25^\circ C$	V_F	0.85		0.88	
$I_F=10A, T_c=125^\circ C$		0.75		0.75	
$I_F=20A, T_c=25^\circ C$		0.95		0.97	
$I_F=20A, T_c=125^\circ C$		0.85		0.85	
Maximum Instantaneous Reverse Current @ $T_c = 25^\circ C$ at Rated DC Blocking Voltage @ $T_c=125^\circ C$ (Note 2)	I_R		5		uA
			2.0		mA
Voltage Rate of Change (Rated V_R)	dV/dt		10,000		V/uS
Maximum Typical Thermal Resistance (Note 3)	$R_{\theta JC}$		1.5		°C/W
Operating Junction Temperature Range	T_J		-65 to +175		°C
Storage Temperature Range	T_{STG}		-65 to +175		°C

Notes: 1. 2.0us Pulse Width, f=1.0 KHz

2. Pulse Test: 300us Pulse Width, 1% Duty Cycle

3. Thermal Resistance from Junction to Case Per Leg, Mount on Heatsink Size of 2 in x 3 in x 0.25in Al-Plate.

RATINGS AND CHARACTERISTIC CURVES (MBR20H100CT - MBR20H200CT)
FIG.1- FORWARD CURRENT DERATING CURVE

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

FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG
