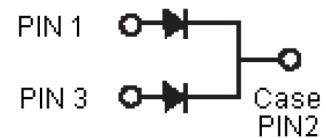
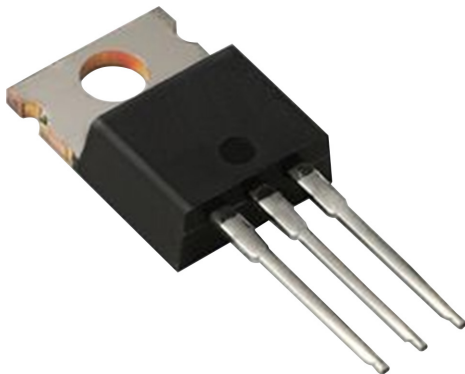


# Schottky Diode



## Features:

- Plastic material
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Guardring for over voltage protection
- High temperature soldering guaranteed: 260°C/10 seconds, 0.25 inch (6.35mm) from case.

## Mechanical Data:

Cases	: JEDEC TO-220 moulded plastic
Terminals	: Leads solderable per MIL-STD-750, Method 2026
Polarity	: As marked
Mounting position	: Any
Mounting torque	: 5in. - lbs. Max.
Weight	: 0.08oz, 2.24g

# Schottky Diode



## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

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

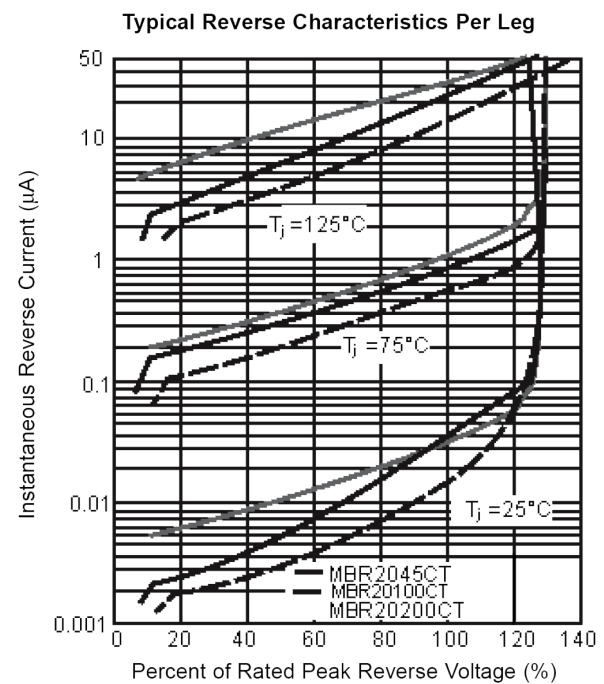
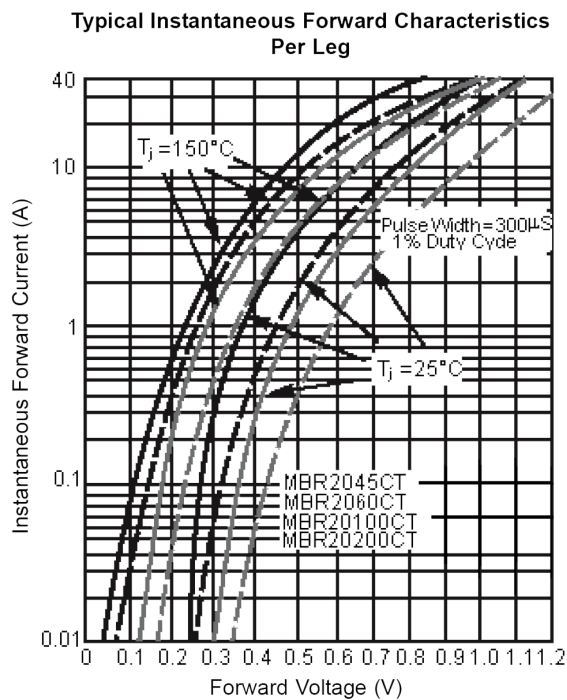
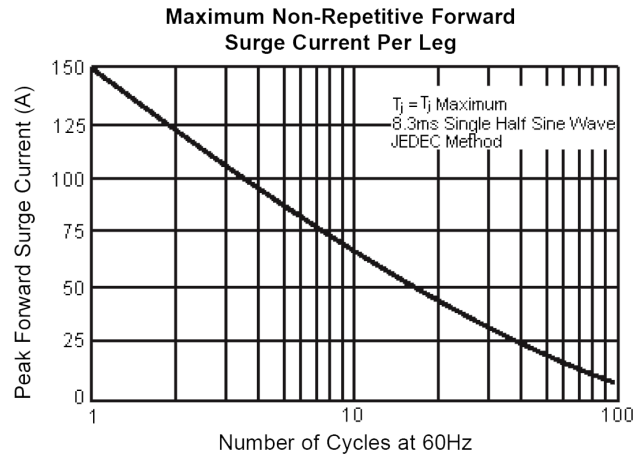
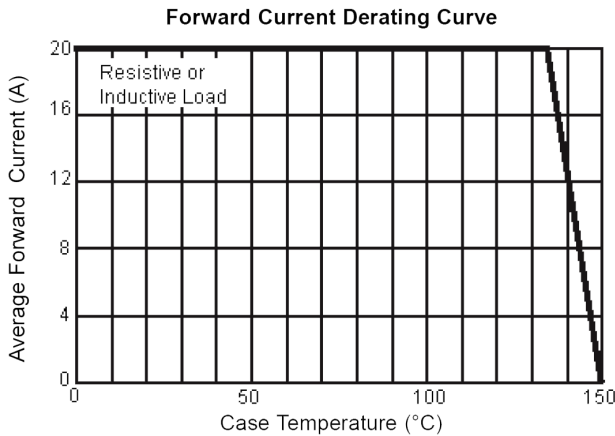
For capacitive load, derate current by 20%.

Type Number	Symbol	MBR 2045CT	MBR 20150CT	MBR 2060CT	MBR 20100CT	MBR 20200CT	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	45	150	60	100	200	V
Maximum RMS Voltage	V <sub>RMS</sub>	31	35	42	70	140	
Maximum DC Blocking Voltage	V <sub>DC</sub>	45	50	60	10	200	
Maximum Average Forward Rectified Current at TC = 135°C	I <sub>(AV)</sub>	20					A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20KHz) at TC = 135°C	I <sub>FRM</sub>	20					
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I <sub>FSM</sub>	150					
Peak Repetitive Reverse Surge Current (Note 1)	I <sub>RRM</sub>	10	0.5			1.0	
Maximum Instantaneous Forward Voltage at (Note 2) I <sub>F</sub> = 10A, T <sub>C</sub> = 25°C I <sub>F</sub> = 10A, T <sub>C</sub> = 125°C I <sub>F</sub> = 20A, T <sub>C</sub> = 25°C I <sub>F</sub> = 20A, T <sub>C</sub> = 125°C	V <sub>F</sub>	- 0.57 0.84 0.72	0.80 0.70 0.95 0.85	0.85 0.75 0.95 0.85	0.99 0.87 1.23 1.1		V
Maximum Instantaneous Reverse Current at TC = 25°C at Rated DC Blocking Voltage at TC = 125°C	I <sub>R</sub>	0.1 15	0.15 150			1 50	μA μA
Voltage Rate of Change, (Rated VR)	dV/dt	10,000					V/μS
Typical Junction Capacitance	C <sub>j</sub>	400	320				pF
Typical Thermal Resistance Per Leg (Note 3)	R <sub>θJC</sub>	1			2		°C/W
Operating Junction Temperature Range	T <sub>j</sub>	-65 to +150					°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +175					

- Notes: 1. 2μs Pulse Width, f = 1.0KHz  
 2. Pulse Test: 300μs Pulse Width, 1% Duty Cycle  
 3. Thermal Resistance from Junction to Case Per Leg, with Heatsink Size (4 × 6 × 0.25 inches) Al-Plate



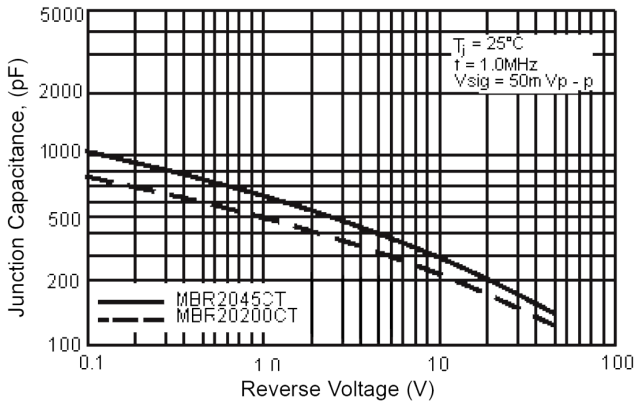
## Ratings and Characteristic Curves (MBR20100CT, 20150CT, 20200CT, 2045CT, 2060CT)



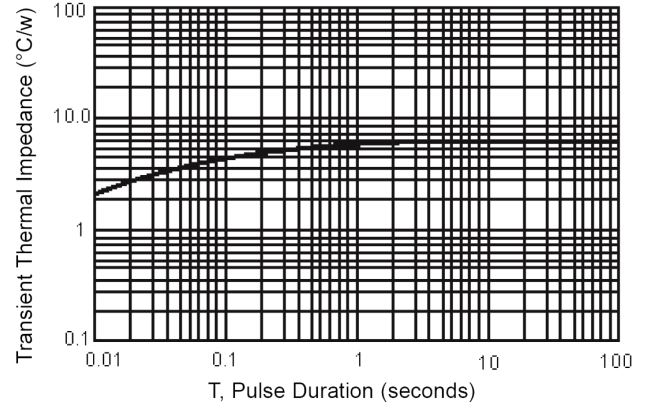
# Schottky Diode



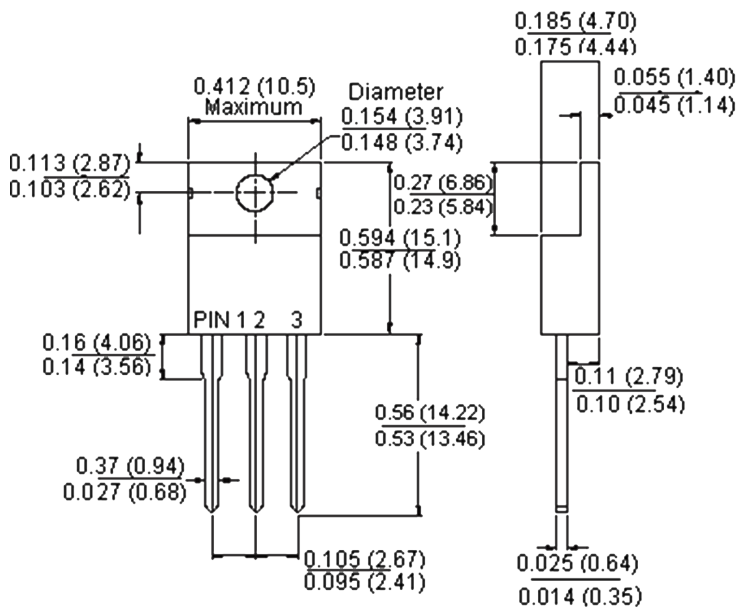
Typical Junction Capacitance Per Leg



Typical Transient Thermal Characteristics Per Leg



**TO-220**



Dimensions : Inches (Millimetres)

**Part Number Table**

Description	Part Number
Diode, Schottky, 20A, 100V	MBR20100CT
Diode, Schottky, 20A, 150V	MBR20150CT
Diode, Schottky, 20A, 200V	MBR20200CT
Diode, Schottky, 20A, 45V	MBR2045CT
Diode, Schottky, 20A, 60V	MBR2060CT

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