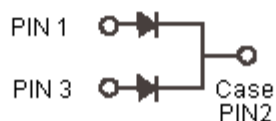
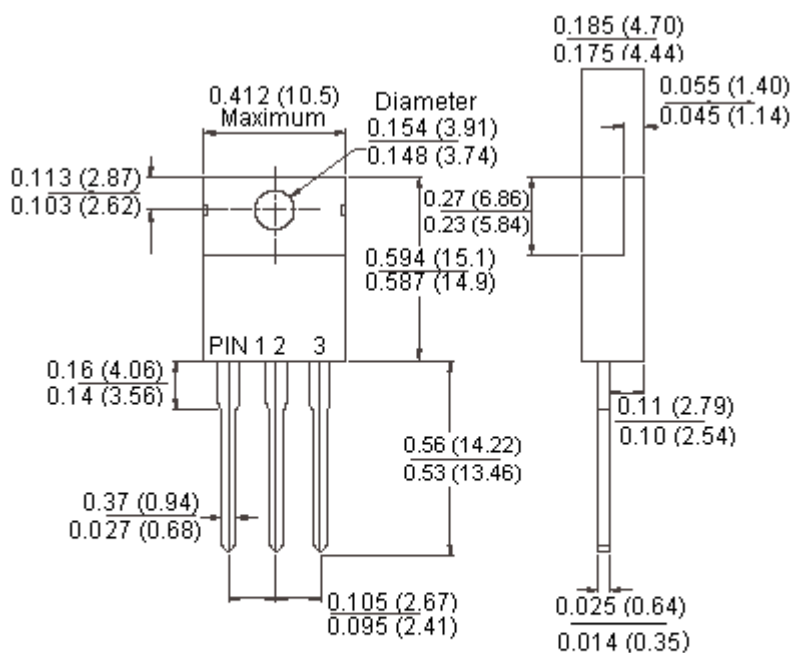




Features:

- 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.

TO-220AB



Dimensions : Inches (Millimetres)

Mechanical Data:

Cases	: JEDEC TO-220AB moulded 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. maximum.
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, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Type Number	Symbol	MBR 1045 CT	MBR 1060 CT	MBR 10100 CT	MBR 10150 CT	MBR 10200 CT	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	45	60	100	150	200	V
Maximum RMS Voltage	V _{RMS}	31	42	70	105	140	
Maximum DC Blocking Voltage	V _{DC}	45	60	100	150	200	
Maximum Average Forward Rectified Current at T _C = 125°C	I _(AV)	10					A
Peak Repetitive Forward Current (Rated V _R , Square Wave, 20KHz) at T _C = 125°C	I _{FRM}	32					
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	120					
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	1.0				0.5	
Maximum Instantaneous Forward Voltage at: (Note 2) I _F = 5A, T _C = 25°C I _F = 5A, T _C = 125°C I _F = 10A, T _C = 25°C I _F = 10A, T _C = 125°C	V _F	0.70 0.57 0.80 0.67	0.80 0.65 0.90 0.75	0.85 0.75 0.95 0.85	0.88 0.78 0.98 0.88		V
Maximum Instantaneous Reverse Current at T _C = 25°C at Rated DC Blocking Voltage at T _C = 125°C (Note 2)	I _R	0.1					μA
		15	10	2.0			
Voltage Rate of Change (Rated V _R)	dV/dt	10,000					V/μS
Maximum Thermal Resistance, (Note 3)	R _{θJC}	1.5					°C/W
Operating Junction Temperature Range	T _J	-65 to +150					°C
Storage Temperature Range	T _{STG}	-65 to +175					

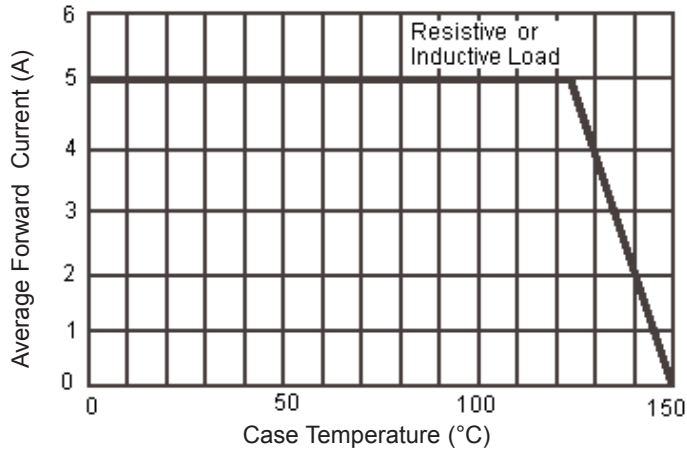
Notes: 1. 2.0 μs Pulse Width, $f = 1.0\text{KHz}$.

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

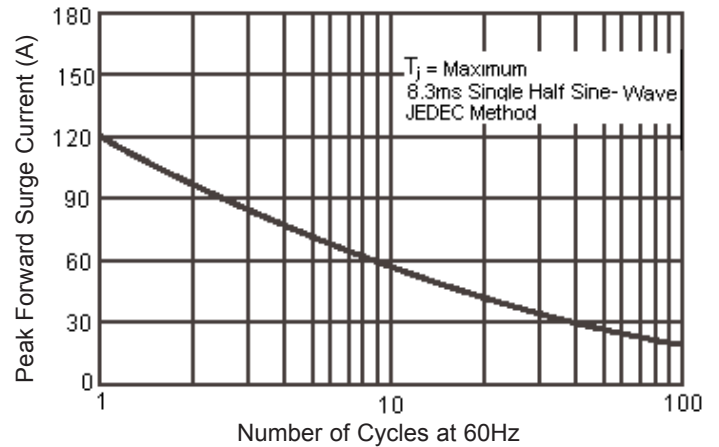
3. Thermal Resistance from Junction to Case Per Leg, Mount on Heatsink Size of 2 in x 3 in x 0.25in Al-Plate.

Ratings and Characteristic Curves (MBR10100CT, 10150CT, 10200CT, 1045CT, 1060CT)

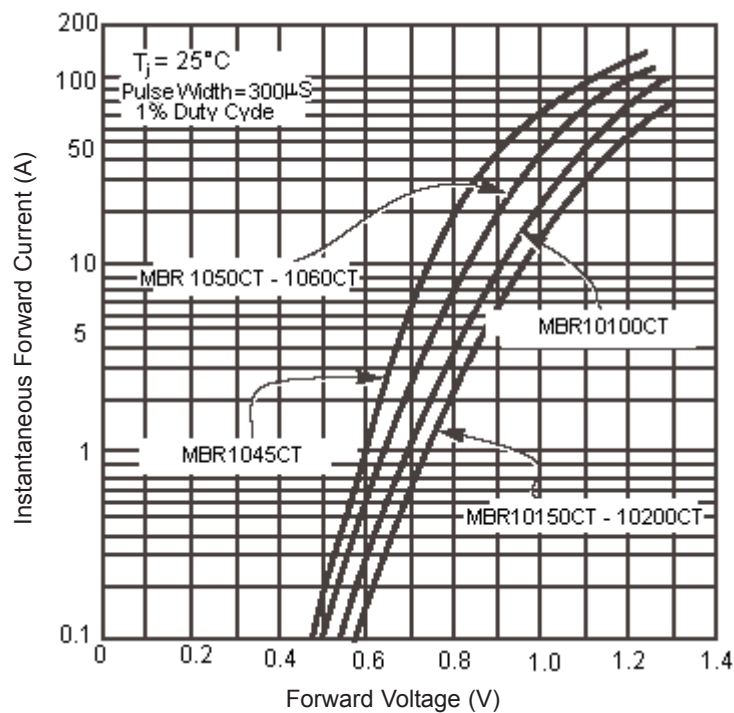
Forward Current Derating Curve



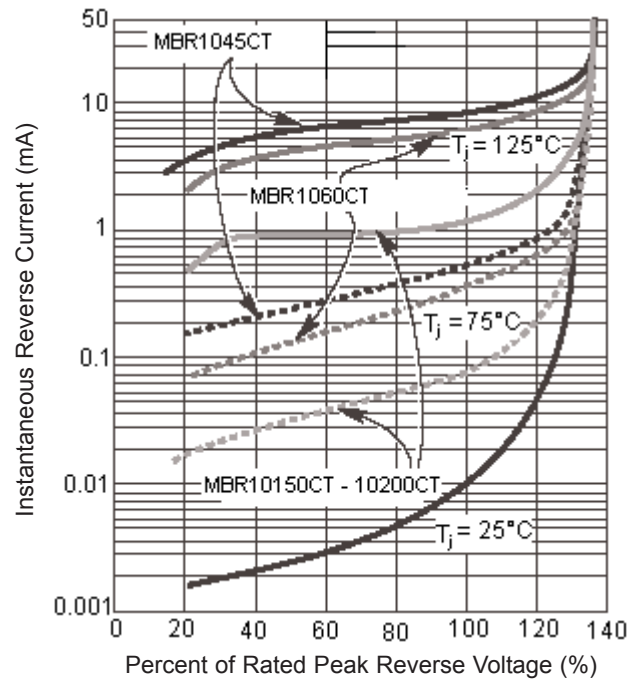
Maximum Non-Repetitive Peak Forward Surge Current



Typical Forward Characteristics



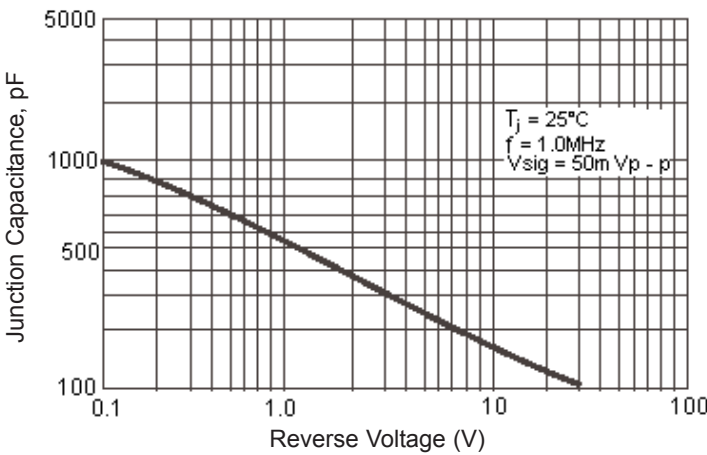
Typical Reverse Characteristics



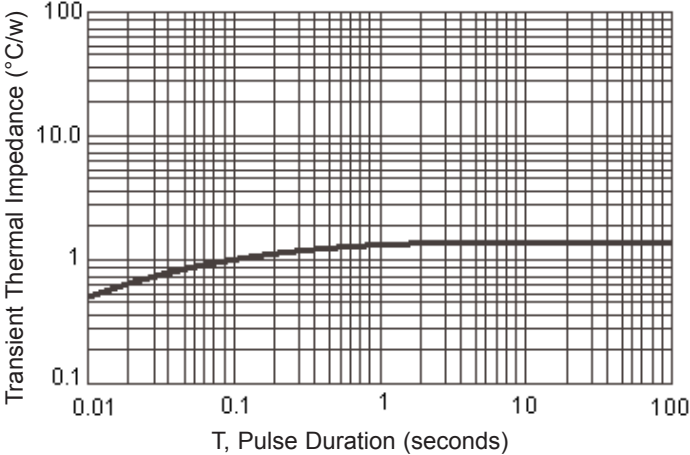
MBR10xCT Series



Typical Junction Capacitance



Typical Transient Thermal Characteristics Per Leg



Part Number Table

Description	Part Number
Diode, Schottky, 10A, 100V	MBR10100CT
Diode, Schottky, 10A, 150V	MBR10150CT
Diode, Schottky, 10A, 200V	MBR10200CT
Diode, Schottky, 10A, 45V	MBR1045CT
Diode, Schottky, 10A, 60V	MBR1060CT

MBR10xCT Series



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