

**RoHS
Compliant**

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" (6.35mm) from case

Specifications:

Mechanical Data:

Cases	: JEDEC TO-220AB moulded plastic
Terminals	: Pure tin plated, lead free, solderable per MIL-STD-750, Method 2026
Polarity	: As marked
Mounting Position	: Any
Mounting Torque	: 5in. - lbs. Max.
Weight	: 0.08oz, 2.24g

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%.

Parameter	Symbol	MBR2545CT	MBR2560CT	MBR25100CT	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	60	100	V
Maximum RMS Voltage	V_{RMS}	31	42	70	
Maximum DC Blocking Voltage	V_{DC}	45	60	100	
Maximum Average Forward Rectified Current at $T_C = 130^\circ\text{C}$	$I_{(AV)}$	25			A
Peak Repetitive Forward Current (Rated V_R , Square Wave, 20kHz) at $T_C = 130^\circ\text{C}$	I_{FRM}	25			
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	200			

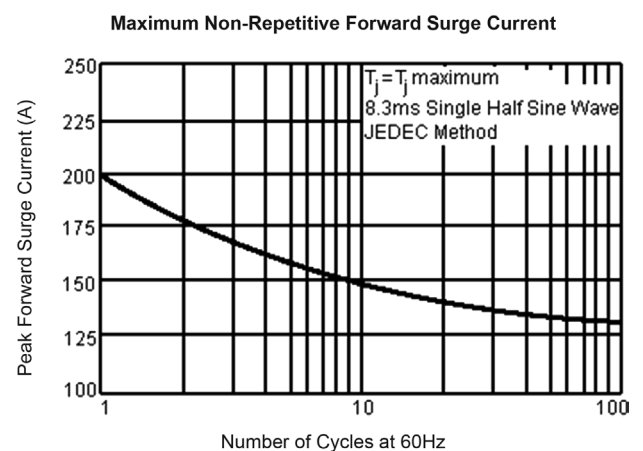
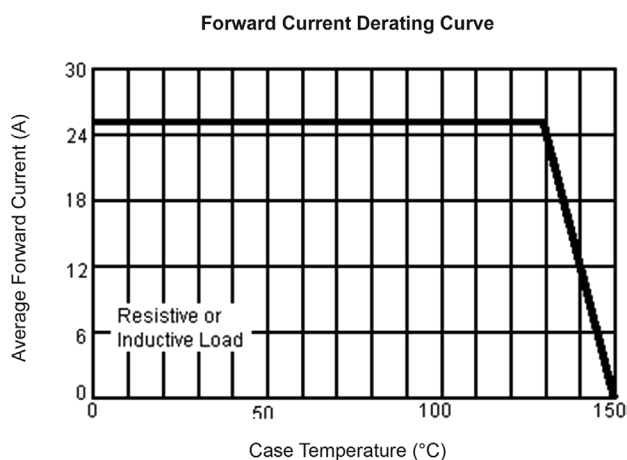
Parameter	Symbol	MBR2545CT	MBR2560CT	MBR25100CT	Units
Peak Repetitive Reverse Surge Current (Note 1)	I_{RRM}	1	0.5		A
Maximum Instantaneous Forward Voltage at: (Note 2) $I_F = 12.5A, T_C = 25^\circ C$ $I_F = 12.5A, T_C = 125^\circ C$ $I_F = 25A, T_C = 25^\circ C$ $I_F = 25A, T_C = 125^\circ C$	V_F	- - 0.82 0.73	0.75 0.65 - -	0.85 0.75 0.92 0.88	V
Maximum Instantaneous Reverse Current at $T_C = 25^\circ C$ at Rated DC Blocking Voltage at $T_C = 125^\circ C$ (Note 2)	I_R	0.2 15	0.2 10	0.1 7.5	μA μA
Voltage Rate of Change (Rated V_R)	dV/dt	10,000			$V/\mu S$
Typical Junction Capacitance	C_j	600	460		pF
Maximum Typical Thermal Resistance, (Note 3)	$R_{\theta JC}$	1			$^\circ C/W$
Operating Junction Temperature Range	T_J	-65 to +150			$^\circ C$
Storage Temperature Range	T_{STG}	-65 to +175			

Note: 1. 2 μs Pulse Width, $f = 1kHz$.

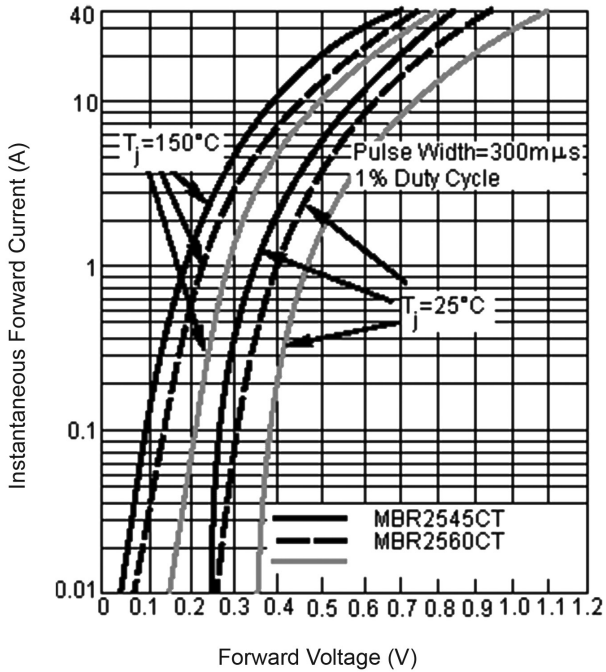
Note: 2. Pulse Test: 300 μs Pulse Width, 1% Duty Cycle.

Note: 3. Mount on Heatsink Size of 2" x 3" x 0.25" Al-Plate.

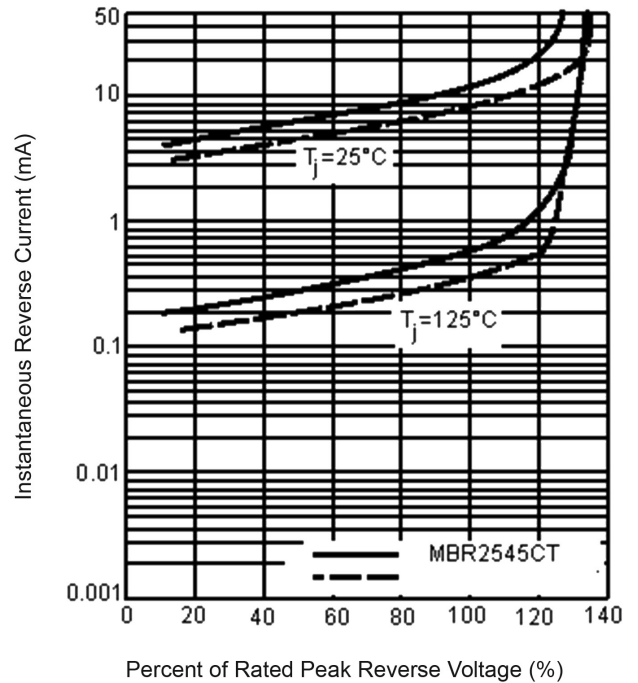
Ratings and Characteristic Curves (MBR15100CT, MBR1545CT and MBR1560CT)



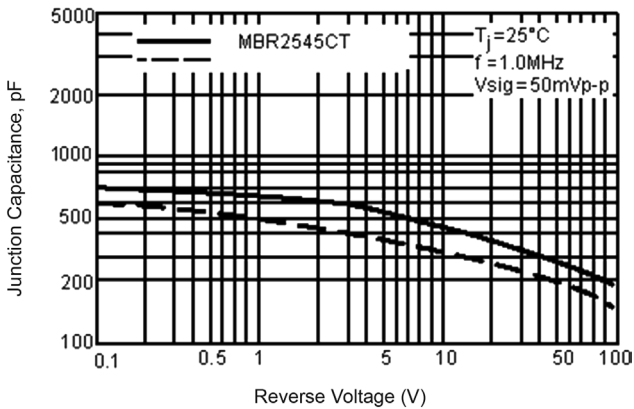
Typical Instantaneous Forward Characteristics Per Leg



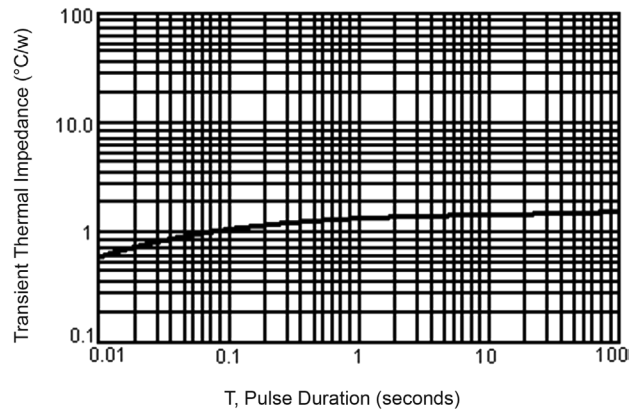
Typical Reverse Characteristics Per Leg



Typical Junction Capacitance Per Leg



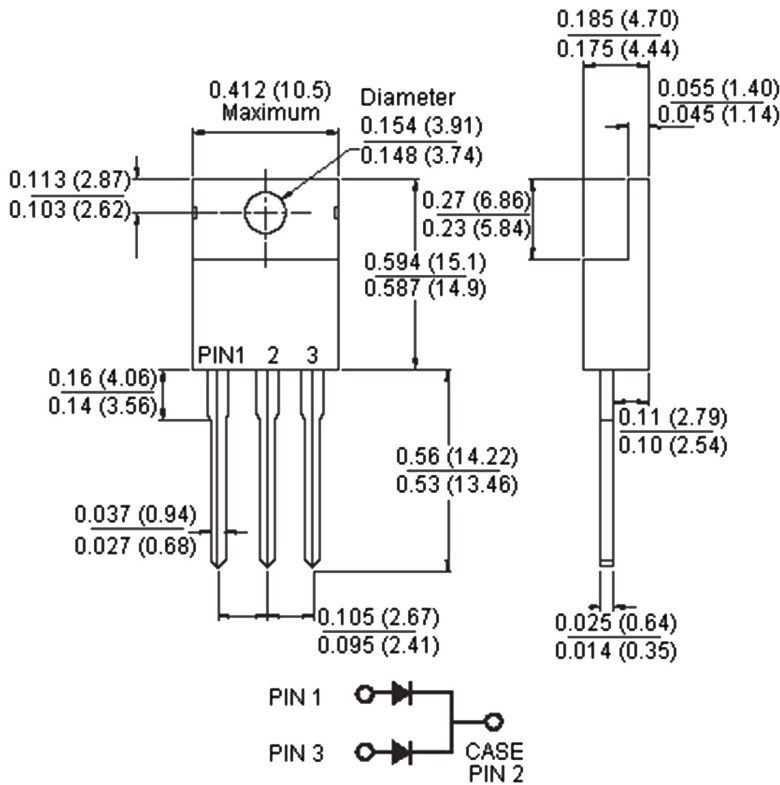
Typical Transient Thermal Characteristics Per Leg



Diode Schottky



TO-220AB



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Diode, Schottky, 30A, 100V	MBR25100CT
Diode, Schottky, 30A, 45V	MBR2545CT
Diode, Schottky, 30A, 60V	MBR2560CT

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