

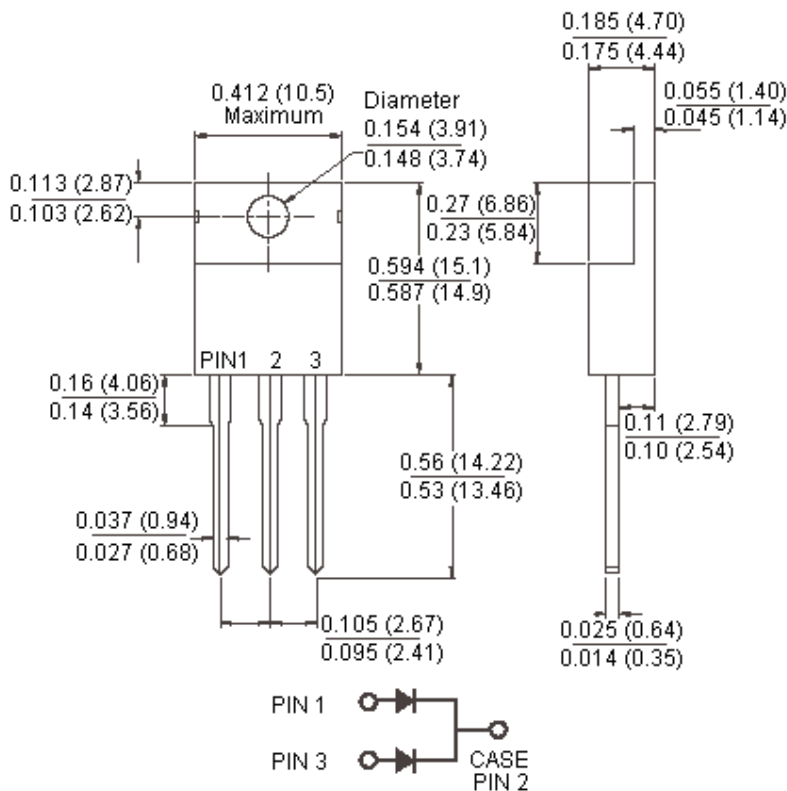
MBR25xCT Series



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.
Terminals	: Pure tin plated, lead free, solderable per MIL-STD-750, Method 2026.
Polarity	: As marked.
Mounting position	: Any.
Mounting torque	: 5in. - 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%.

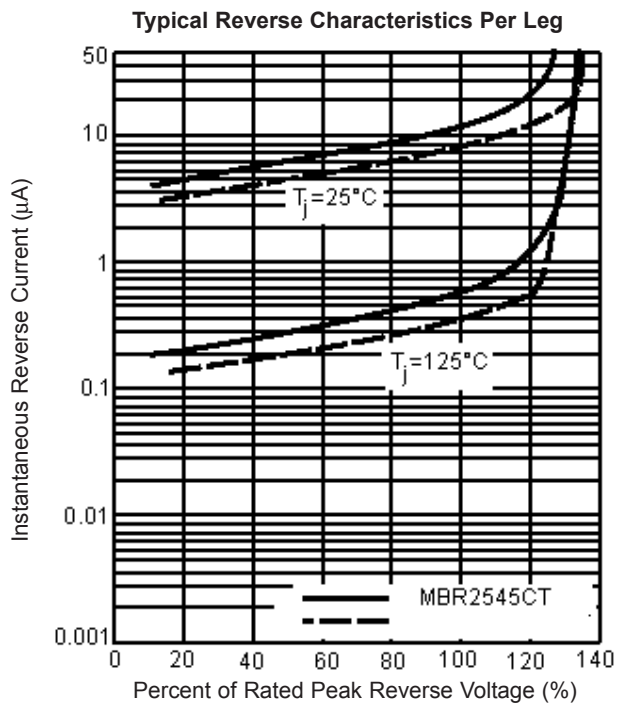
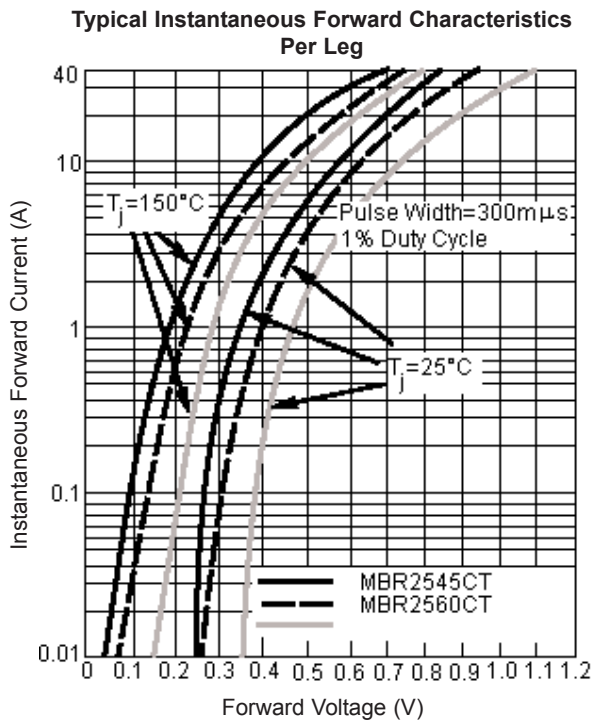
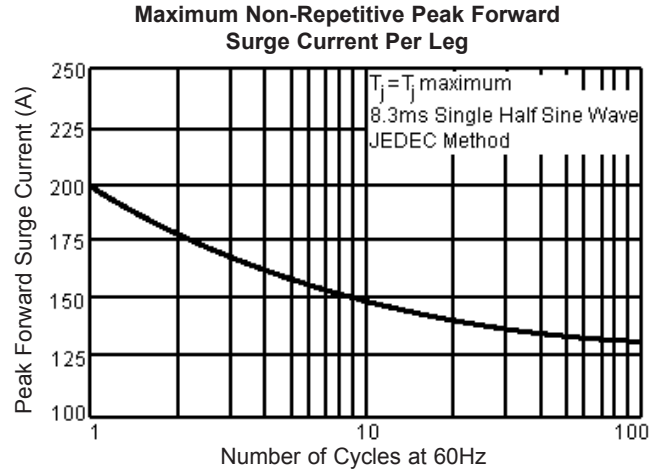
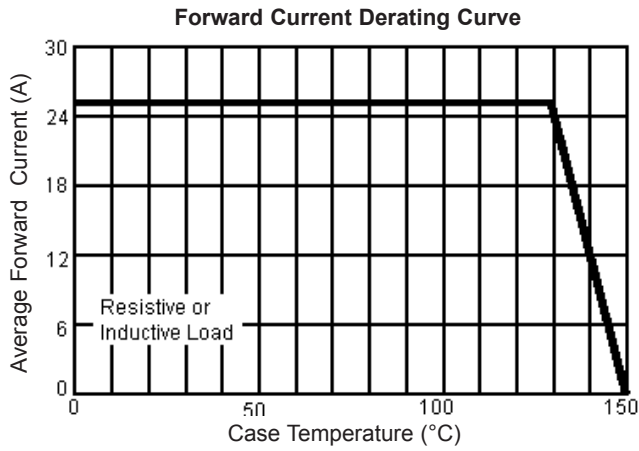
Type Number	Symbol	MBR2545CT	MBR2560CT	MBR25100CT	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	60	100	V
Maximum RMS Voltage	V_{RMS}	31	42	70	
Maximum DC Blocking Voltage	V_{DC}	45	60	100	
Maximum Average Forward Rectified Current at $T_C = 130^\circ\text{C}$	$I_{(AV)}$	25			A
Peak Repetitive 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			
Peak Repetitive Reverse Surge Current (Note 1)	I_{RRM}	1.0	0.5		
Maximum Instantaneous Forward Voltage at (Note 2) $I_F = 12.5\text{A}, T_C = 25^\circ\text{C}$ $I_F = 12.5\text{A}, T_C = 125^\circ\text{C}$ $I_F = 25\text{A}, T_C = 25^\circ\text{C}$ $I_F = 25\text{A}, T_C = 125^\circ\text{C}$	V_F	- - 0.82 0.73	0.75 0.65 - -	0.85 0.75 0.92 0.88	V
Maximum Instantaneous Reverse Current at $T_C = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_C = 125^\circ\text{C}$ (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/ μS
Typical Junction Capacitance	C_j	600	460		pF
Maximum Typical Thermal Resistance, (Note 3)	$R_{\theta JC}$	1.0			$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	-65 to +150			$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +175			

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

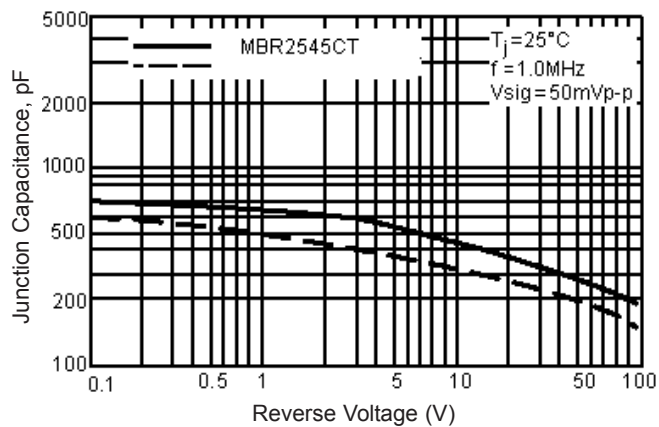
2. Pulse Test: 300 μs Pulse Width, 1% Duty Cycle.

3. Thermal Resistance from Junction to Case Per Leg, with Heatsink Size (4 x 6 x 0.25 inches) Al-Plate.

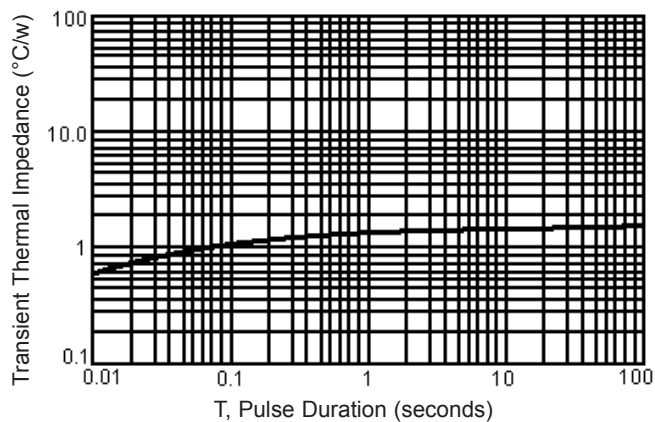
Ratings and Characteristic Curves (MBR25100CT, MBR2545CT and MBR2560CT)



Typical Junction Capacitance Per Leg



Typical Transient Thermal Impedance Per Leg



Part Number Table

Description	Part Number
Diode, Schottky, 30A, 100V	MBR25100CT
Diode, Schottky, 30A, 45V	MBR2545CT
Diode, Schottky, 30A, 60V	MBR2560CTLT

MBR25xCT Series



Notes:

International Sales Offices:

 AUSTRALIA – Farnell Tel No: ++61 1300 361 005 Fax No: ++61 1300 361 225	 FINLAND – Farnell Tel No: ++358 9 560 7780 Fax No: ++358 9 345 5411	 ITALY – Farnell Tel No: ++39 02 93 995 200 Fax No: ++39 02 93 995 300	 SPAIN – Farnell Tel No: 901 20 20 80 Fax No: 901 20 20 90
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