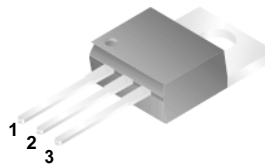


MBR2535CT - MBR2560CT

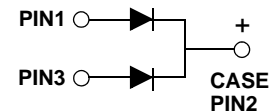
25 Ampere Schottky Barrier Rectifiers

Features

- Low power loss, high efficiency.
- High surge capability.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- Metal silicon junction, majority carrier conduction.
- High current capability, low forward voltage drop.
- Guardring for over voltage protection.



TO-220AB



Absolute Maximum Ratings* $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value				Units
		2535CT	2545CT	2550CT	2560CT	
V_{RRM}	Maximum Repetitive Reverse Voltage	35	45	50	60	V
$I_{F(AV)}$	Average Rectified Forward Current .375" lead length @ $T_A = 130^\circ\text{C}$	25				A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave	200				A
T_{STG}	Storage Temperature Range	-65 to +175				$^\circ\text{C}$
T_J	Operating Junction Temperature Range	-65 to +150				$^\circ\text{C}$

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	2.0	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	60	$^\circ\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	1.5	$^\circ\text{C}/\text{W}$

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Value				Units
		2535CT	2545CT	2550CT	2560CT	
V_F	Maximum Forward Voltage, per leg					V
	$I_F = 12.5\text{A}, T_C = 25^\circ\text{C}$	0.75				
	$I_F = 12.5\text{A}, T_C = 125^\circ\text{C}$	0.65				
	$I_F = 25\text{A}, T_C = 25^\circ\text{C}$	0.82				
	$I_F = 25\text{A}, T_C = 125^\circ\text{C}$	0.73				
I_R	Maximum Reverse Current at rated V_{RRM} , per leg					mA
	@ $T_A = 25^\circ\text{C}$	0.2	0.2			
	@ $T_A = 125^\circ\text{C}$	15.0	10.0			
I_{RRM}	Peak Repetitive Reverse Surge Current, per leg 2.0 μs Pulse Width, $f = 1.0\text{KHz}$	1.0	0.5			A
C_j	Typical Junction Capacitance, per leg	600	460			pF

Typical Performance Characteristics

Figure 1. Forward Current Derating Curve

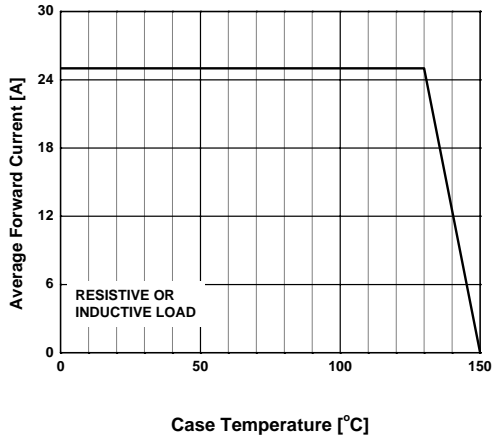


Figure 2. Non-Repetitive Surge Current, per leg

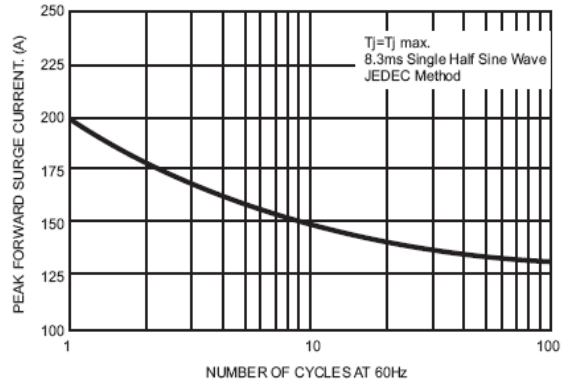


Figure 3. Forward Voltage Characteristics, per leg

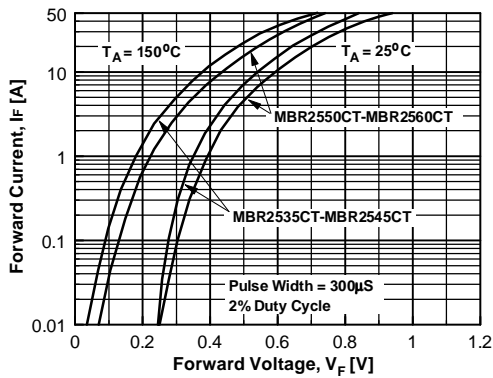


Figure 4. Reverse Current vs Reverse Voltage, per leg

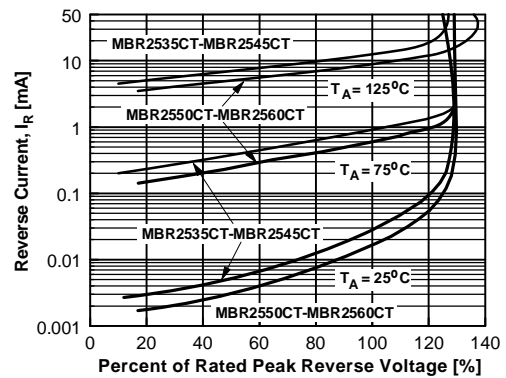


Figure 5. Total Capacitance, per leg

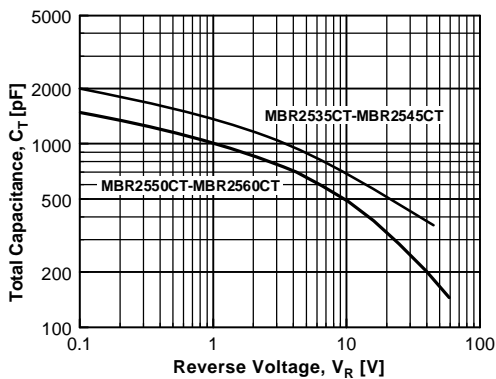
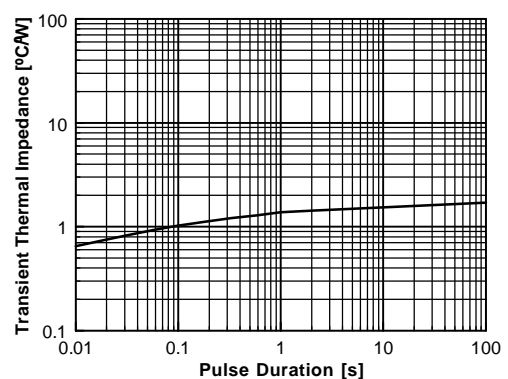







Figure 6. Thermal Impedance Characteristics





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