

MBRF20S100CT Schottky Barrier Rectifier

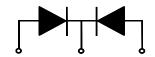
Features

- · Low forward voltage drop
- High frequency properties and switching speed
- · Guard ring for over-voltage protection

Applications

- Switched mode power supply
- · Freewheeling diodes





1. Anode 2. Cathode 3. Anode

Absolute Maximum Ratings T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	100	V
V_R	Maximum DC Reverse Voltage	100	V
I _{F(AV)}	Average Rectified Forward Current @T _C = 125°C	20	А
I _{FSM}	Non-Repetitive Peak Surge Current (per diode) 60Hz Single Half-Sine Wave	200	A
T _J , T _{STG}	Operating Junction and Storage Temperature	-65 to +150	°C

Thermal Characteristics

Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case (per diode)	2.8	°C/W

Electrical Characteristics T_C = 25°C unless otherwise noted

Symbol	Parameter		Value	Units
V _{FM} *	$\label{eq:maximum Instantaneous Forward Voltage} $$I_F = 10A$$$I_F = 10A$$$I_F = 20A$$$I_F = 20A$$$$	$T_{C} = 25^{\circ}C$ $T_{C} = 125^{\circ}C$ $T_{C} = 25^{\circ}C$ $T_{C} = 25^{\circ}C$	- 0.70 0.95 0.85	V V V
I _{RM*}	Maximum Instantaneous Reverse Current @ rated V _R	$T_{C} = 25^{\circ}C$ $T_{C} = 125^{\circ}C$	0.1 20	mA mA

^{*} Pulse Test: Width = 300μ s, Duty Cycle = 2%

Typical Performance Characteristics

Figure 1. Typical Forward Voltage Characteristics (per diode)

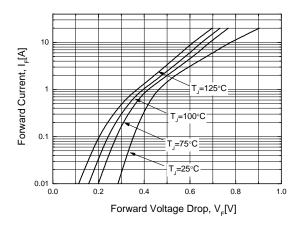


Figure 2. Typical Reverse Current vs. Reverse Voltage (per diode)

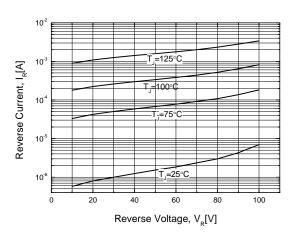
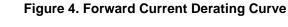
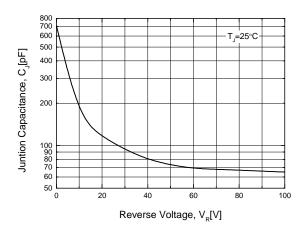


Figure 3. Typical Junction Capacitance (per diode)





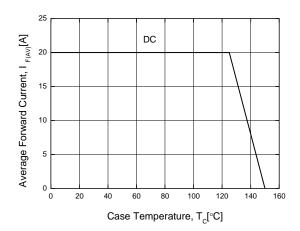
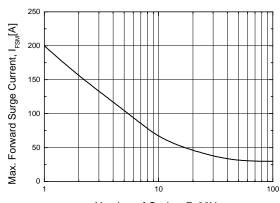


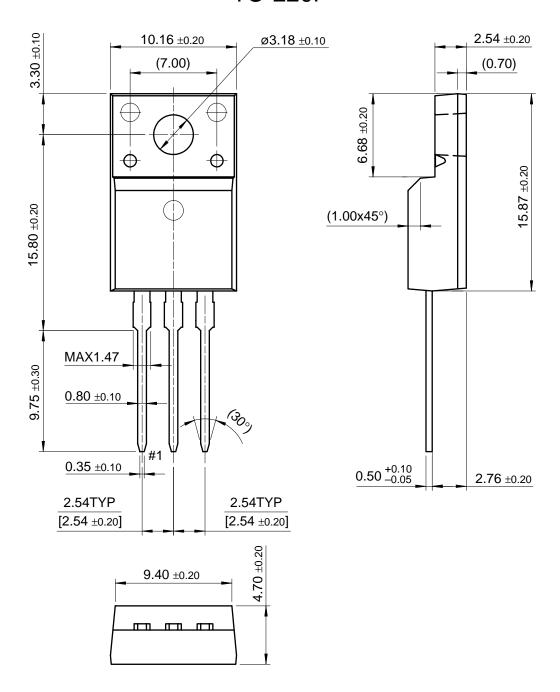
Figure 5. Non-Repetive Surge Current (per diode)



Number of Cycles @ 60Hz

Mechanical Dimensions

TO-220F



Dimensions in Millimeters

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