

MBRF20S100CT

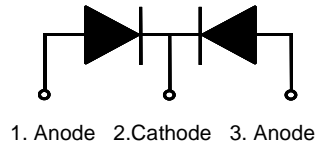
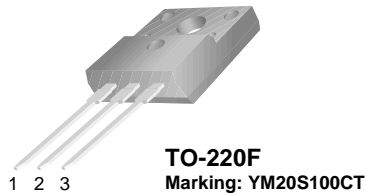
Schottky Barrier Rectifier

Features

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

Applications

- Switched mode power supply
- Freewheeling diodes



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	A
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 _{θJC}	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} *	Maximum Instantaneous Forward Voltage I _F = 10A I _F = 10A I _F = 20A I _F = 20A	T _C = 25°C	-	V
		T _C = 125°C	0.70	V
		T _C = 25°C	0.95	V
		T _C = 125°C	0.85	V
I _{RM} *	Maximum Instantaneous Reverse Current @ rated V _R	T _C = 25°C	0.1	mA
		T _C = 125°C	20	mA

* Pulse Test: Width = 300μs, Duty Cycle = 2%

Typical Performance Characteristics

Figure 1. Typical Forward Voltage Characteristics (per diode)

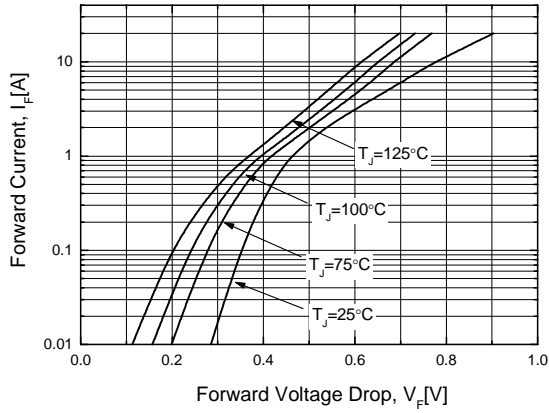


Figure 2. Typical Reverse Current vs. Reverse Voltage (per diode)

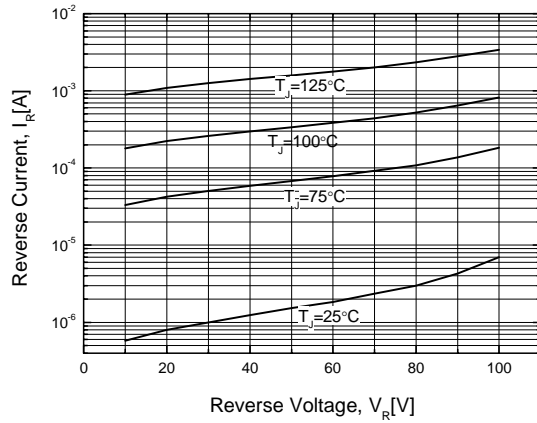


Figure 3. Typical Junction Capacitance (per diode)

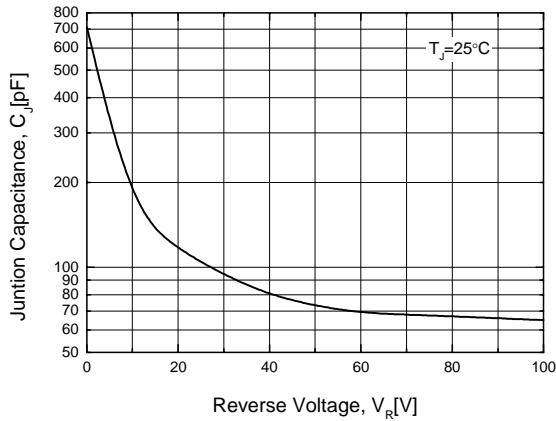


Figure 4. Forward Current Derating Curve

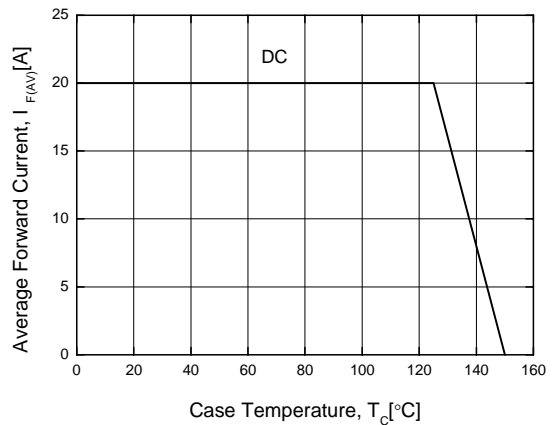
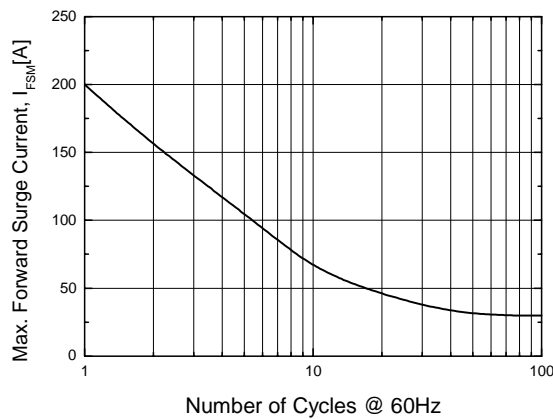
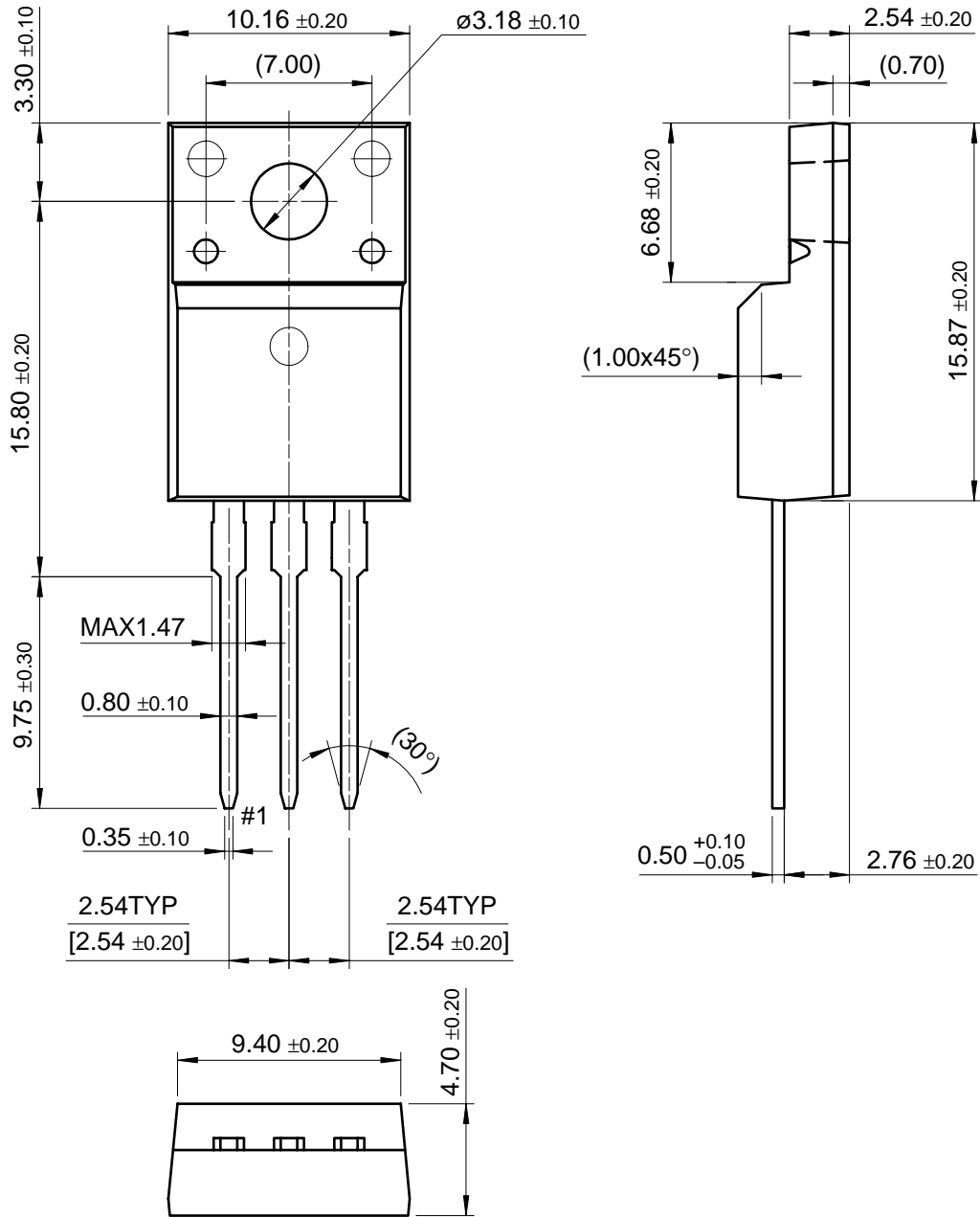


Figure 5. Non-Repetitive Surge Current (per diode)



Mechanical Dimensions

TO-220F



Dimensions in Millimeters

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EcoSPARK™	I ² C™	MSXPro™	RapidConnect™	UniFET™
E ² CMOST™	<i>i-Lo</i> ™	OCX™	μSerDes™	VCX™
EnSigna™	ImpliedDisconnect™	OCXPro™	SILENT SWITCHER [®]	Wire™
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		PowerEdge™	SuperSOT™-6	

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Rev. I16