FAIRCHILD
SEMICONDUCTOR®

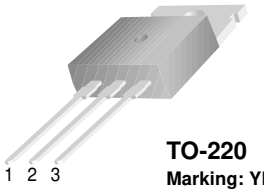
MBR20S100CT
Schottky Barrier Rectifier

Features

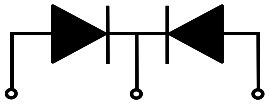
- Low forward voltage drop
- High frequency properties and switching speed
- Guard ring for over-voltage protection

Applications

- Switched mode power supply
- Freewheeling diodes



TO-220
Marking: YM20S100CT



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 = 135°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
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case (per diode)	1.54	°C/W

Electrical Characteristics T_C = 25°C unless otherwise noted

Symbol	Parameter		Value	Units
V_{FM*}	Maximum Instantaneous Forward Voltage			
	I_F = 10A	T_C = 25°C	-	V
	I_F = 10A	T_C = 125°C	0.70	V
	I_F = 20A	T_C = 25°C	0.95	V
	I_F = 20A	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)

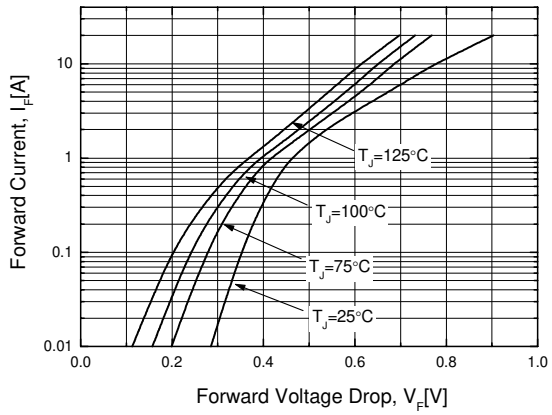


Figure 2. Typical Reverse Current vs. Reverse Voltage (per diode)

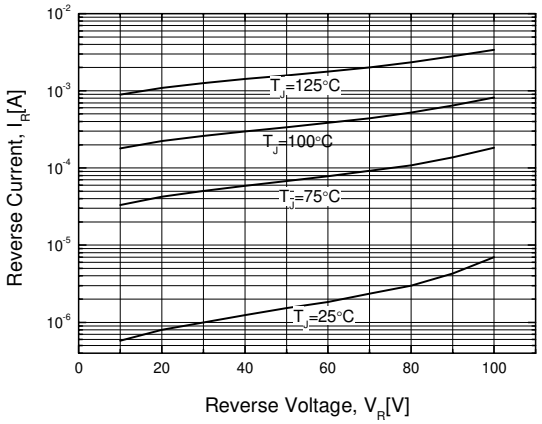


Figure 3. Typical Junction Capacitance (per diode)

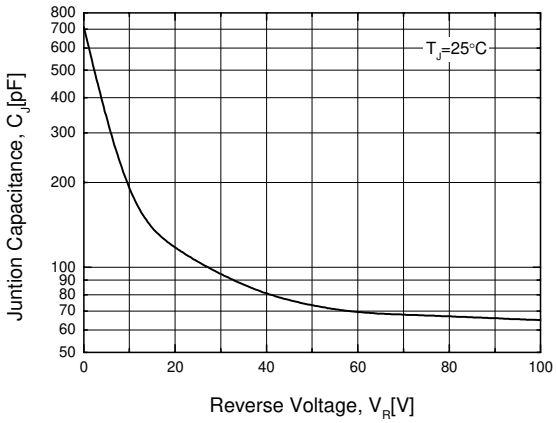


Figure 4. Forward Current Derating Curve

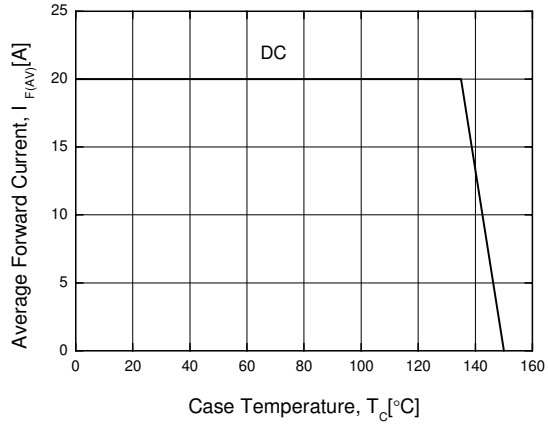
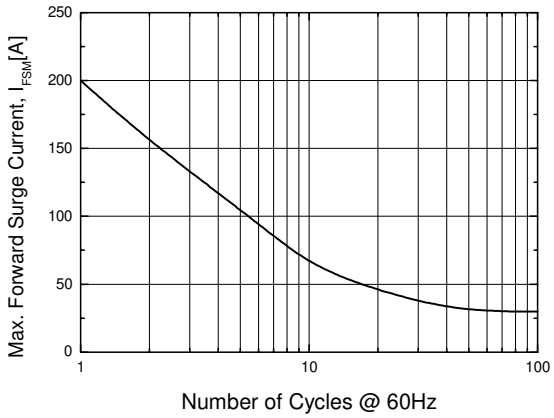
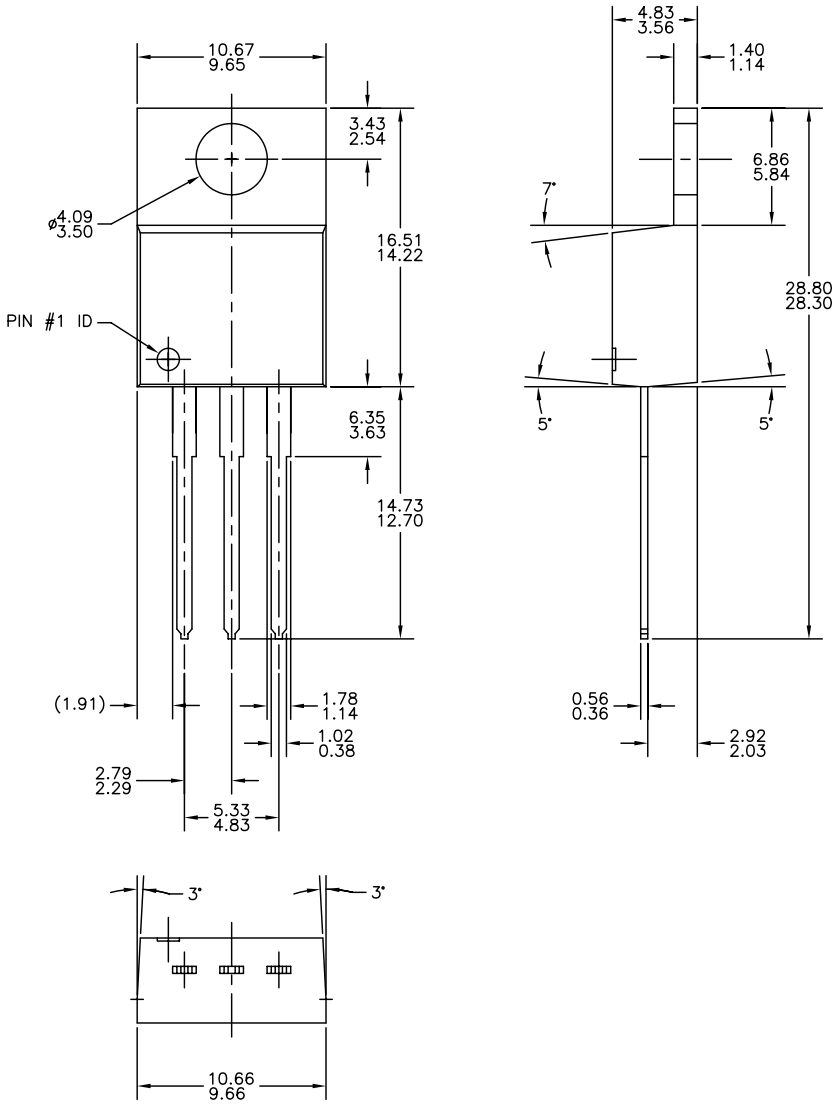


Figure 5. Non-Repetive Surge Current (per diode)



Mechanical Dimensions

TO-220



NOTES: UNLESS OTHERWISE SPECIFIED

A) STANDARD LEAD FINISH: 200 MICROINCHES / 5.08 MICROMETERS MIN. LEAD/TIN 15/85 ON COPPER.

B) REFERENCE JEDEC, TO−220, ISSUE J, VARIATION AB, DATED MARCH 24, 1987.

C) ALL DIMENSIONS ARE IN MILLIMETERS.

D) DIMENSIONING AND TOLERANCING PER ANSI Y14.5 − 1973

Dimensions in Millimeters

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