FAIRCHILD
SEMICONDUCTOR®

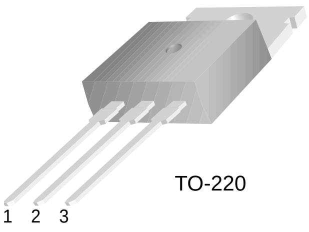
MBRP3010N

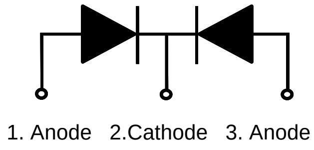
Features

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

Applications

- Switched mode power supply
- Freewheeling diodes





SCHOTTKY BARRIER RECTIFIER

Absolute Maximum Ratings T_C=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 = 105°C	30	A
I_{FSM}	Non-repetitive Peak Surge Current (per diode) 60Hz Single Half-Sine Wave	250	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)	1.7	°C/W

Electrical Characteristics (per diode)

Symbol	Parameter		Value	Units
V_{FM} *	Maximum Instantaneous Forward Voltage			V
	I_F = 15A	T_C = 25 °C	0.85	
	I_F = 15A	T_C = 125 °C	0.67	
	I_F = 30A	T_C = 25 °C	1.05(TYP.)	
	I_F = 30A	T_C = 125 °C	0.80	
I_{RM} *	Maximum Instantaneous Reverse Current			mA
	@ rated V_R	T_C = 25 °C	1	
		T_C = 125 °C	20	

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

Typical Characteristics

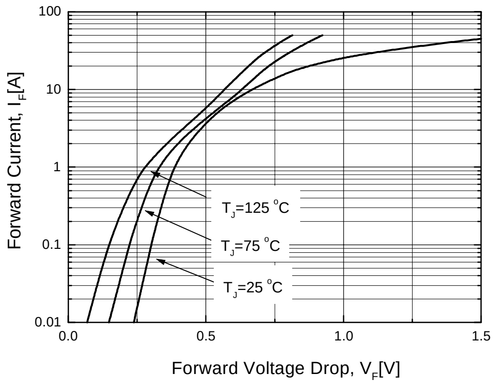


Figure 1. Typical Forward Voltage Characteristics (per diode)

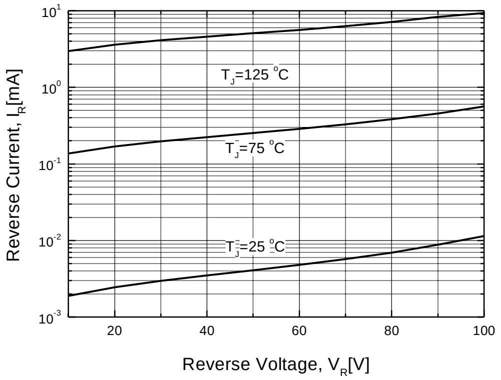


Figure 2. Typical Reverse Current vs. Reverse Voltage (per diode)

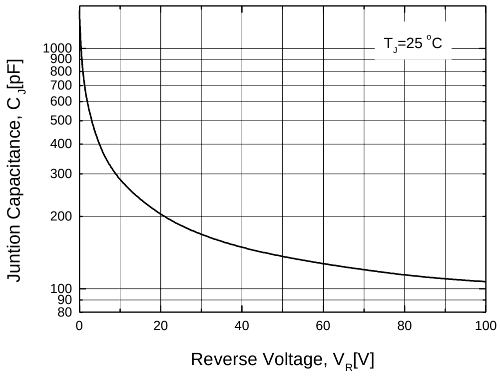


Figure 3. Typical Junction Capacitance (per diode)

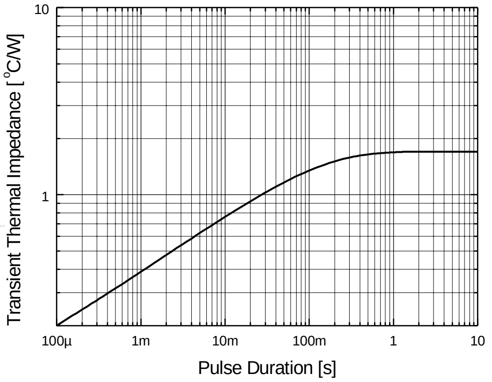


Figure 4. Thermal Impedance Characteristics (per diode)

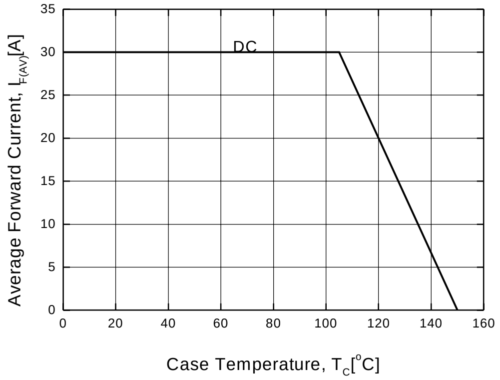


Figure 5. Forward Current Derating Curve

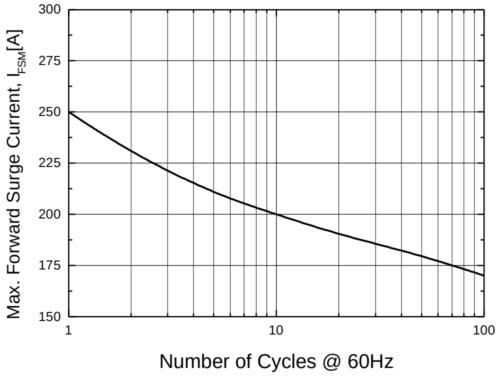
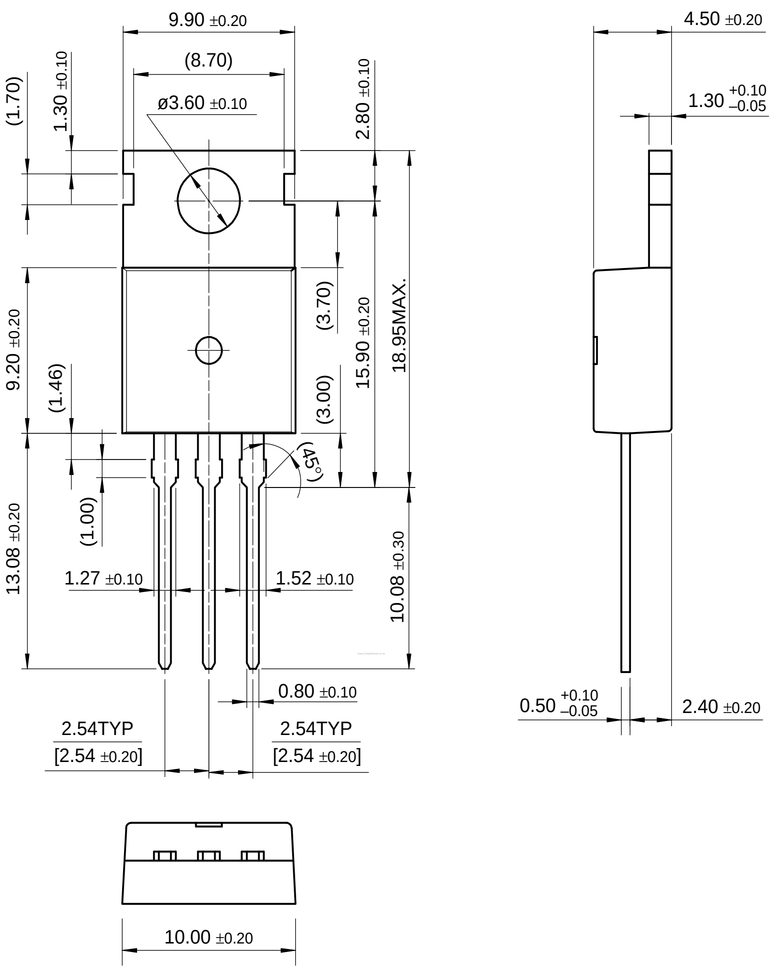


Figure 6. Non-Repetive Surge Current (per diode)

Package Dimensions

TO-220



Dimensions in Millimeters

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