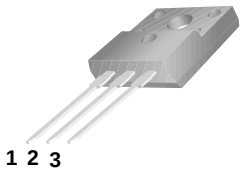
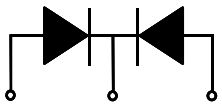
Wisdom Technologies Int'l

MBRF30100CT





1. Anode 2.Cathode 3. Anode

TO-220F

Features

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

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
$I_{F(AV)}$	Maximum Average Rectified Current @ T_C = 120°C	30	A
I_{FSM}	Maximum Forward Surge Current (per diode) 60Hz Single Half-Sine Wave	150	A
T_J, T_{STG}	Operating Junction and Storage Temperature	-40 to +175	°C

Thermal Characteristics

Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case (per diode)	2.0	°C/W

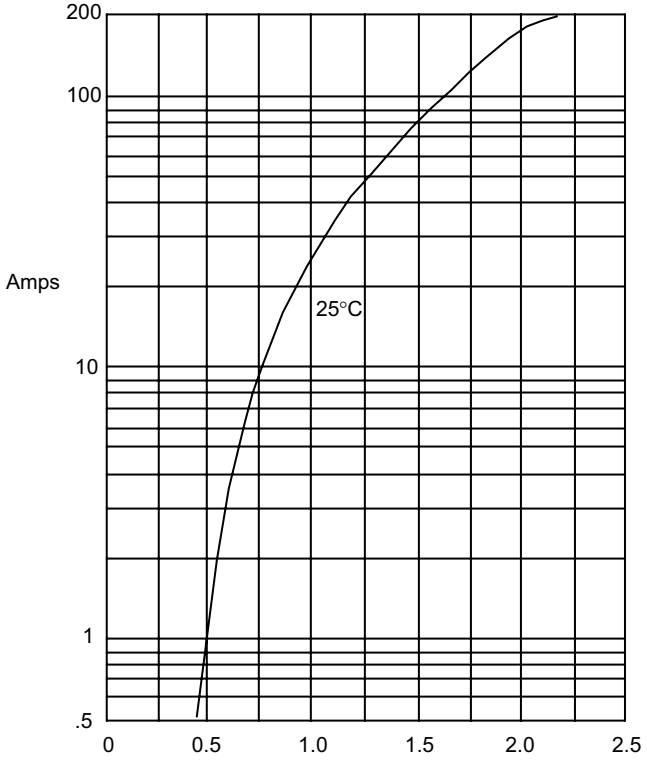
Electrical Characteristics (per diode)

Symbol	Parameter		Value	Units
V_{FM} *	Maximum Instantaneous Forward Voltage I_F = 15A	T_C = 25 °C	0.9	V
I_{RM} *	Maximum Instantaneous Reverse Current @ rated V_R	T_C = 25 °C T_C = 125 °C	0.2 5	mA

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

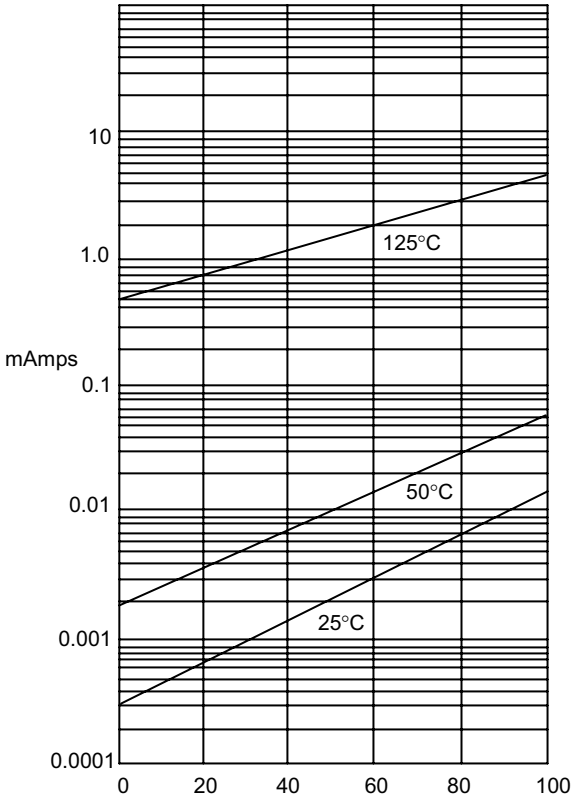
Typical Characteristics

Figure 1
Typical Forward Characteristics



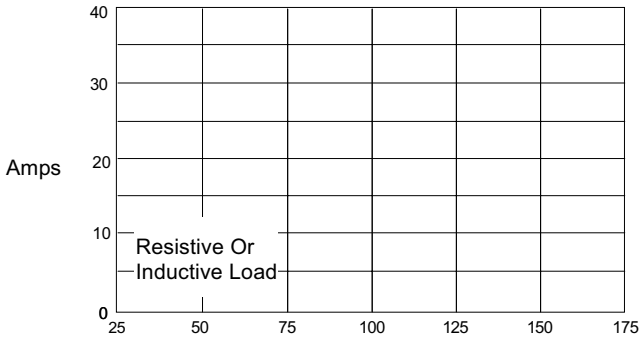
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



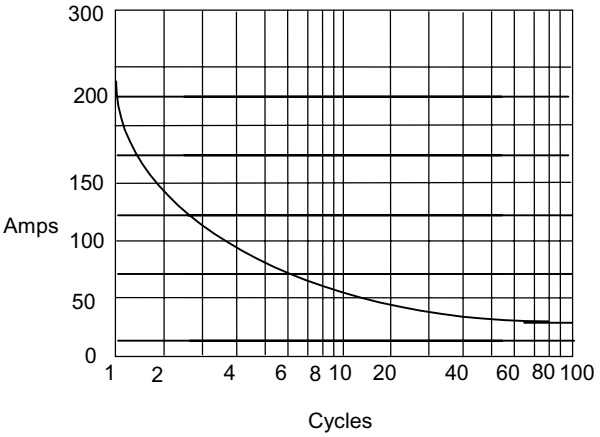
Instantaneous Reverse Leakage Current - MicroAmperes versus
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Current Derating Curve



Average Forward Rectified Current - Amperes versus
Ambient Temperature - °C

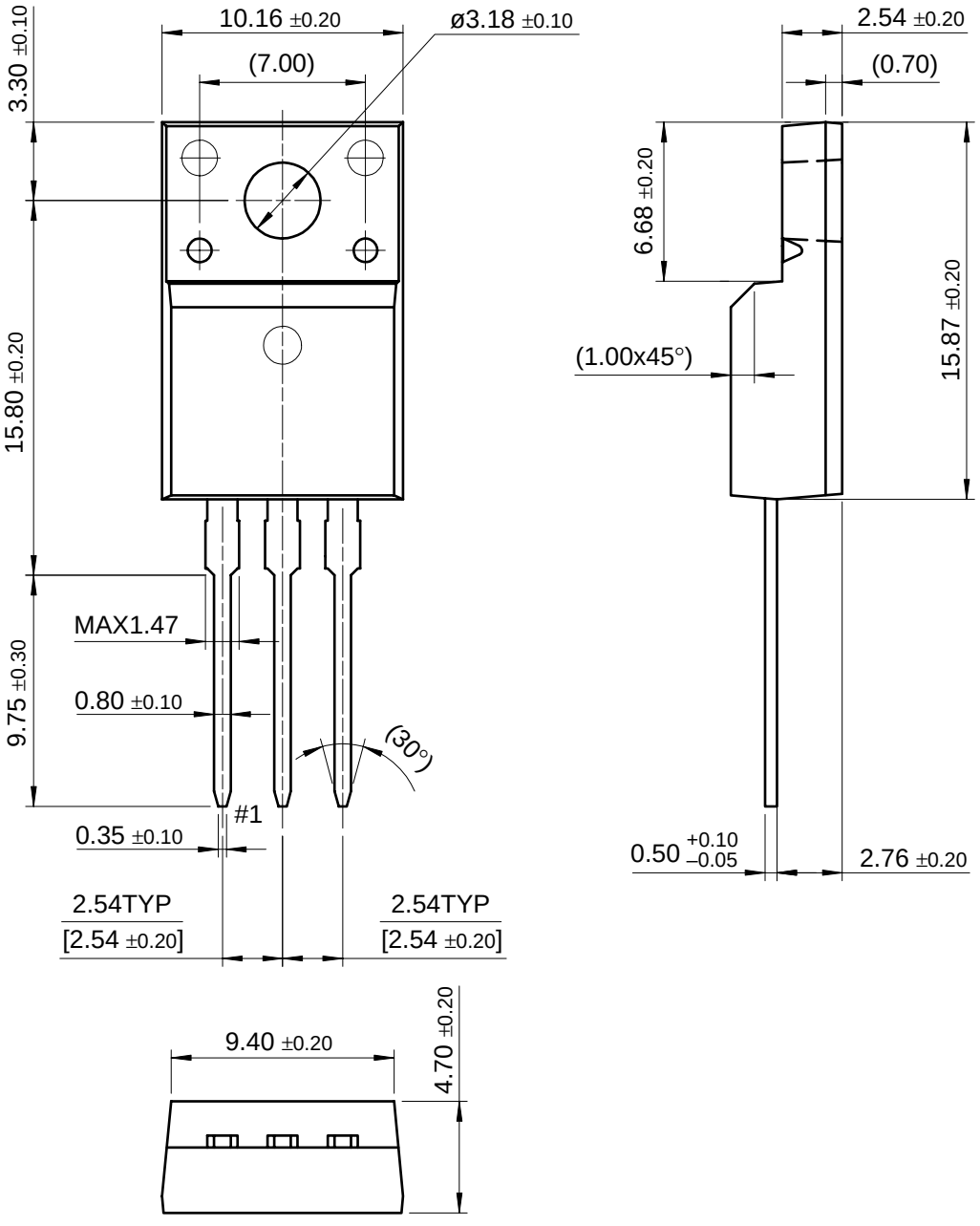
Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Package Dimension

TO-220F



Dimensions in Millimeters