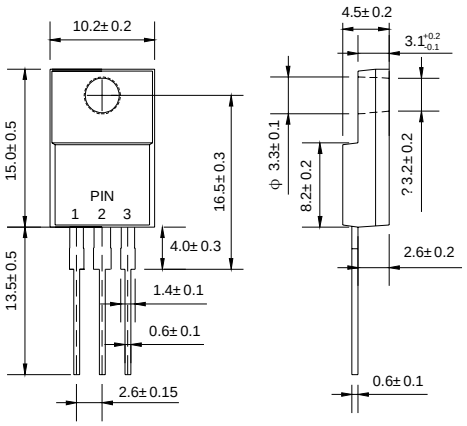
MBR20100FCT through MBR20200FCT

ITO-220AB



Dimensions in inches and (millimeters)

20A SCHOTTKY BARRIER DIODE
Dual High Voltage Schottky Rectifier

Specification Features:

- High Voltage Wide Range Selection, 100V, 150V & 200V
- High Switching Speed Device
- Low Forward Voltage Drop
- Low Power Loss and High Efficiency
- Guard Ring for Over-voltage Protection
- High Surge Capability
- RoHS Compliant
- Matte Tin(Sn) Lead Finish
- Terminal Leads Surface is Corrosion Resistant and can withstand to 260°C Wave Soldering or per MIL-STD-750, Method 2026.

MAXIMUM RATINGS (Per Leg, unless otherwise specified)

Symbol	Parameter	MBR20100FCT	MBR20150FCT	MBR20200FCT	Units
V_{RRM} V_{RWM} V_R	Maximum Repetitive Reverse Voltage Working Peak Reverse Voltage Maximum DC Reverse Voltage	100	150	200	V
$I_{F(AV)}$	Average Rectified Forward Current Per Leg Per Package		10 20		A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3mS Single Phase @ Rated Load		150		A
T_{STG}	Storage Temperature Range		-65 to +150		°C
T_J	Operating Junction Temperature		+150		°C

These ratings are limiting values above which the serviceability of the diode may be impaired.

THERMAL CHARACTERISTICS T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction-to-Case	2.0	°C/W
$R_{\theta JA}$	Maximum Thermal Resistance, Junction-to-Ambient (per leg)	60	°C/W

ELECTRICAL CHARACTERISTICS (Per Diode) T_A = 25°C unless otherwise noted

Symbol	Parameter	Test Condition (Note 1)	MBR20100CT		MBR20150CT		MBR20200CT		Units
			Min	Max	Min	Max	Min	Max	
I_R	Reverse Current	@ rated V_R	---	200	---	200	---	200	μA
V_F	Forward Voltage	I_F = 10A I_F = 20A	---	0.85 0.95	---	0.90 0.98	---	0.90 0.98	V

Note/s:

1. Tested under pulse condition of 300μS.

TYPICAL CHARACTERISTICS

Figure 1. Forward Current Derating Curve (Per Diode)

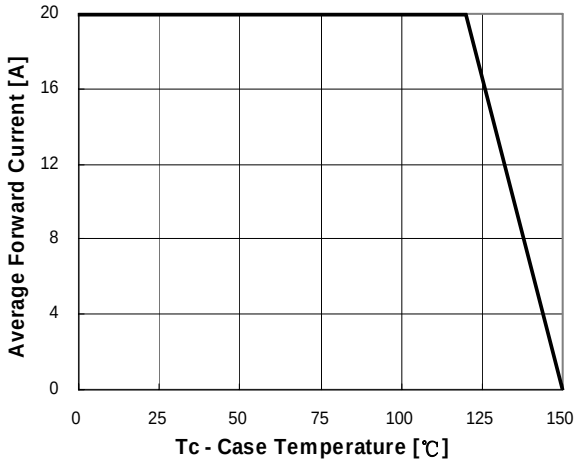


Figure 2. Junction Capacitance (Per Diode)

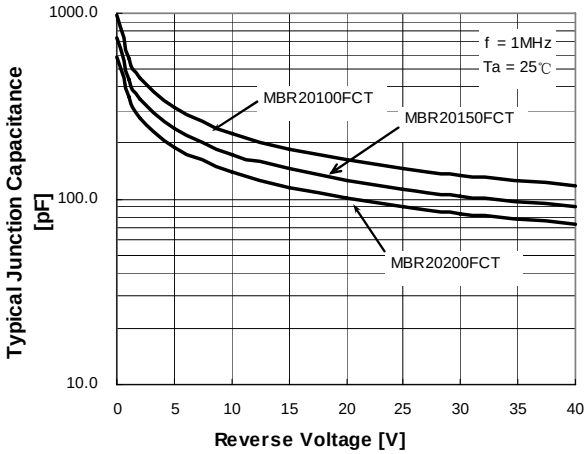


Figure 3. MBR20100CT Typical Reverse Current (Per Diode)

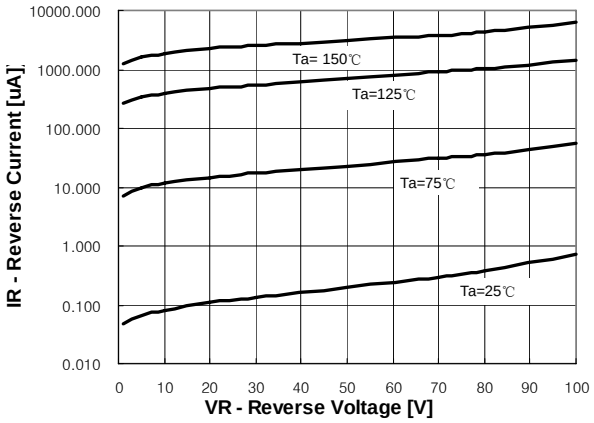


Figure 4. MBR20150CTTypical Reverse Current (Per Diode)

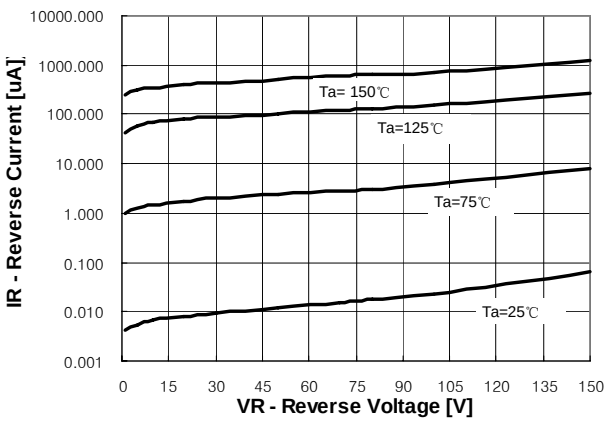


Figure 5. MBR20200CT Typical Reverse Current (Per Diode)

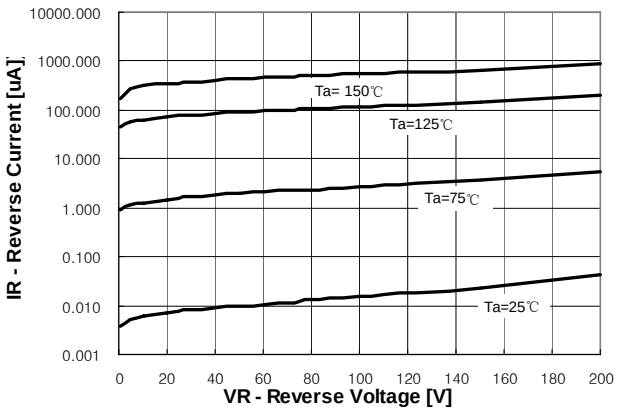


Figure 6. MBR20100CT Typical Forward Voltage (Per Diode)

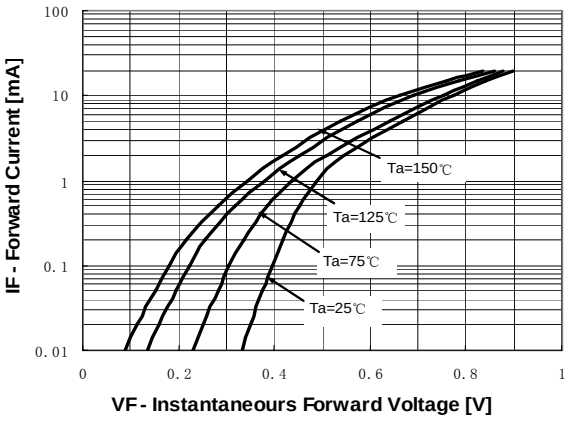


Figure 7. MBR20150CT Typical Forward Voltage (Per Diode)

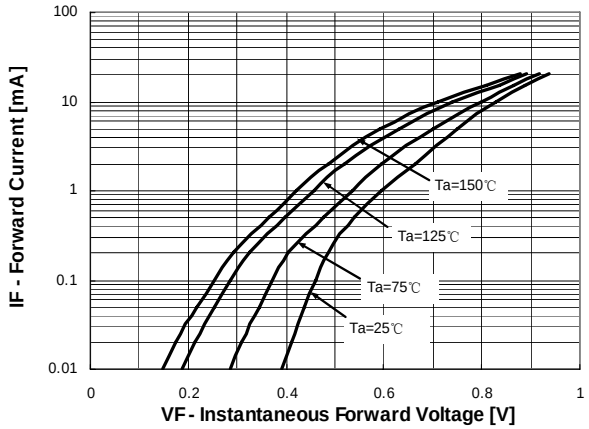


Figure 8. MBR20200CT Typical Forward Voltage (Per Diode)