

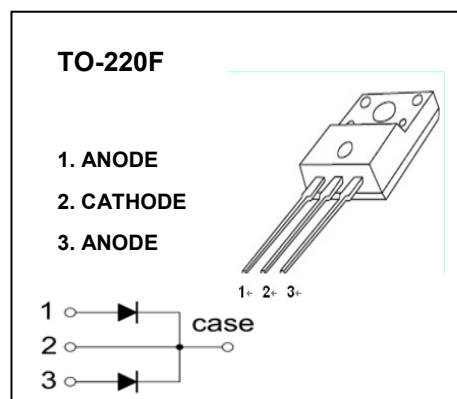
## TO-220F Plastic-Encapsulate Diodes

### MBR20100FCT, 150FCT, 200FCT

SCHOTTKY BARRIER RECTIFIER

#### FEATURES

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications



#### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ unless otherwise noted )

Symbol	Parameter	Value			Unit
		MBR20100FCT	MBR20150FCT	MBR20200FCT	
$V_{RRM}$	Peak repetitive reverse voltage	100	150	200	V
$V_{RWM}$	Working peak reverse voltage				
$V_R$	DC blocking voltage				
$V_{R(RMS)}$	RMS reverse voltage	70	105	140	V
$I_O$	Average rectified output current	20			A
$I_{FSM}$	Non-Repetitive peak forward surge current 8.3ms half sine wave	150			A
$P_D$	Power dissipation	2			W
$R_{\theta JA}$	Thermal resistance from junction to ambient	50			$^\circ\text{C}/\text{W}$
$T_j$	Junction temperature	125			$^\circ\text{C}$
$T_{stg}$	Storage temperature	-55~+150			$^\circ\text{C}$

#### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ unless otherwise specified)

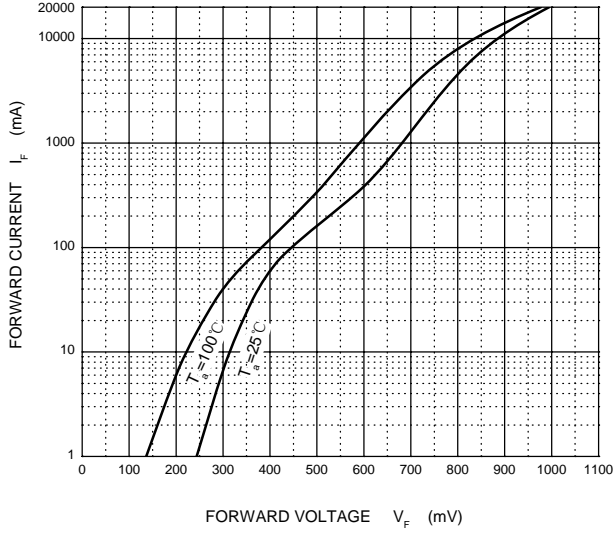
Parameter	Symbol	Device	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	MBR20100FCT	$I_R=1\text{mA}$	100			V
		MBR20150FCT		150			
		MBR20200FCT		200			
Reverse current	$I_R$	MBR20100FCT	$V_R=100\text{V}$			0.1	mA
		MBR20150FCT	$V_R=150\text{V}$			0.1	
		MBR20200FCT	$V_R=200\text{V}$			0.1	
Forward voltage	$V_{F1}$	MBR20100FCT	$I_F=10\text{A}$			1	V
		MBR20150FCT				1	
		MBR20200FCT				1	
	$V_{F2}^*$	MBR20100FCT	$I_F=20\text{A}$			1.2	V
		MBR20150FCT				1.2	
		MBR20200FCT				1.2	
Typical total capacitance	$C_{tot}$	MBR20100FCT	$V_R=4\text{V}, f=1\text{MHz}$		230		pF
		MBR20150FCT- 20200FCT	$V_R=4\text{V}, f=1\text{MHz}$		100		pF

\*Pulst test

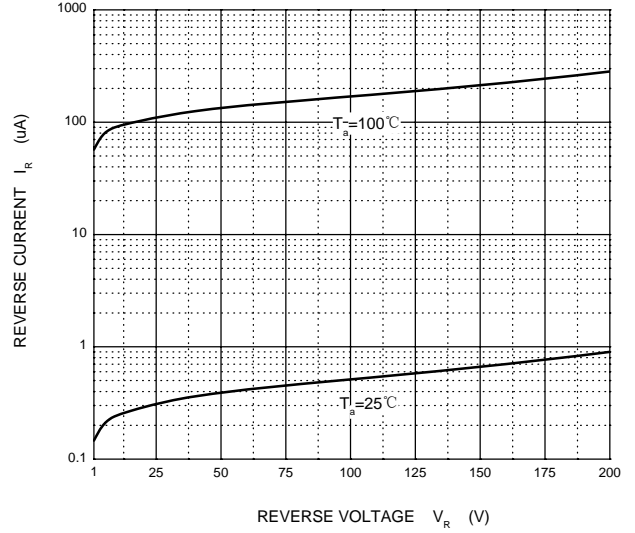


# MBR2020FCT

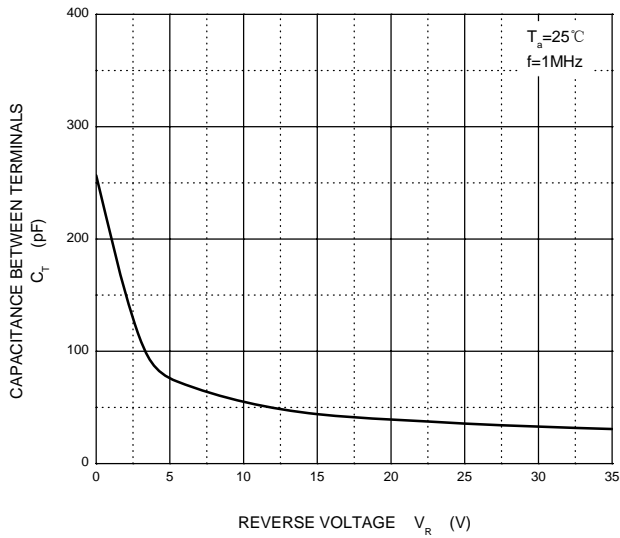
Forward Characteristics



Reverse Characteristics



Capacitance Characteristics



Power Derating Curve

