



## MBR20100FCT thru 20200FCT

<b>SCHOTTKY BARRIER RECTIFIERS</b>	REVERSE VOLTAGE - <b>100 to 200</b> Volts FORWARD CURRENT - <b>20</b> Ampere																																													
<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• Metal of silicon rectifier, majority carrier conduction</li> <li>• Guard ring for transient protection</li> <li>• Low power loss, high efficiency</li> <li>• High current capability, low VF</li> <li>• High surge capacity</li> <li>• Plastic package has UL flammability classification 94V-0</li> <li>• For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>• Case : ITO-220AB molded plastic</li> <li>• Polarity : As marked on the body</li> <li>• Weight : 0.06 ounces, 1.7 grams</li> <li>• Mounting position : Any</li> </ul>	<p style="text-align: center;"><b>ITO-220AB</b></p> <table border="1" style="float: right;"> <thead> <tr> <th>Dim.</th> <th>Min.</th> <th>Max.</th> </tr> </thead> <tbody> <tr><td>A</td><td>----</td><td>10.50</td></tr> <tr><td>B</td><td>2.60</td><td>3.00</td></tr> <tr><td>C</td><td>6.30</td><td>6.70</td></tr> <tr><td>D</td><td>2.90</td><td>3.50</td></tr> <tr><td>E</td><td>13.10</td><td>13.90</td></tr> <tr><td>F</td><td>----</td><td>4.00</td></tr> <tr><td>G</td><td>1.11</td><td>1.45</td></tr> <tr><td>H</td><td>0.40</td><td>0.80</td></tr> <tr><td>I</td><td>5.00</td><td>5.40</td></tr> <tr><td>J</td><td>4.30</td><td>4.70</td></tr> <tr><td>K</td><td>2.90</td><td>3.30</td></tr> <tr><td>L</td><td>8.20</td><td>9.00</td></tr> <tr><td>M</td><td>2.50</td><td>2.80</td></tr> <tr><td>N</td><td>0.40</td><td>0.80</td></tr> </tbody> </table> <p style="text-align: center; font-size: small;">All Dimensions in millimeter</p>	Dim.	Min.	Max.	A	----	10.50	B	2.60	3.00	C	6.30	6.70	D	2.90	3.50	E	13.10	13.90	F	----	4.00	G	1.11	1.45	H	0.40	0.80	I	5.00	5.40	J	4.30	4.70	K	2.90	3.30	L	8.20	9.00	M	2.50	2.80	N	0.40	0.80
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**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	MBR 20100FCT	MBR 20150FCT	MBR 20200FCT	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	70	105		V
Maximum DC Blocking Voltage	$V_{DC}$	100	150	200	V
Maximum Average Forward Rectified Current at $T_c=120^\circ\text{C}$ (See Fig.1)	$I_{AV}$	20			A
Peak Forward Surge current 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD)	$I_{FSM}$	150	180		A
Voltage Rate of Change (Rated VR)	$dv/dt$	10000			$dv/\mu\text{s}$
Maximum forward Voltage (Note 1)	$V_F$				V
		@ $I_F=10\text{A } T_J=25^\circ\text{C}$		0.92	
		@ $I_F=10\text{A } T_J=125^\circ\text{C}$		0.75	
		@ $I_F=20\text{A } T_J=25^\circ\text{C}$		1.00	
		@ $I_F=20\text{A } T_J=125^\circ\text{C}$		0.86	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	@ $T_J=25^\circ\text{C}$ 0.01	@ $T_J=125^\circ\text{C}$ 0.008		mA
Typical Junction Capacitance (Note 2)	$C_j$	250			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	2.0			$^\circ\text{C}/\text{W}$
Operating Temperature Range	$T_J$	-55 to +150			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +175			$^\circ\text{C}$

NOTES : 1. 300us Pulse Width, 2% Duty Cycle.  
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
 3. Thermal Resistance Junction to Case.

REV.0, 01.-Oct-2013

**RATING AND CHARACTERISTIC CURVES**  
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