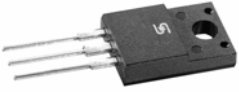
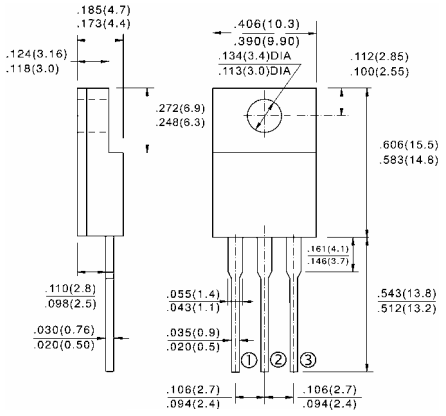
	<h2 style="margin: 0;">MBRF1030CT THRU MBRF10100CT</h2> <h3 style="margin: 0;">Isolation 10.0 AMPS. Schottky Barrier Rectifiers</h3>
	<p>Voltage Range 30 to 100 Volts Current 10.0 Amperes</p> <p><b>ITO-220AB</b></p>
<p><b>Features</b></p> <ul style="list-style-type: none"> <li>✦ Plastic material used carries Underwriters Laboratory Classifications 94V-0</li> <li>✦ Metal silicon junction, majority carrier conduction</li> <li>✦ Low power loss, high efficiency</li> <li>✦ High current capability, low forward voltage drop</li> <li>✦ High surge capability</li> <li>✦ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications</li> <li>✦ Guardring for overvoltage protection</li> <li>✦ High temperature soldering guaranteed: 260°C/10 seconds, 0.25"(6.35mm) from case</li> </ul> <p><b>Mechanical Data</b></p> <ul style="list-style-type: none"> <li>✦ Cases: ITO-220AB molded plastic</li> <li>✦ Terminals: Leads solderable per MIL-STD-750, Method 2026</li> <li>✦ Polarity: As marked</li> <li>✦ Mounting position: Any</li> <li>✦ Mounting torque: 5 in. - lbs. max</li> <li>✦ Weight: 0.08 ounce, 2.24 grams</li> </ul>	 <p style="text-align: center;">Dimensions in inches and (millimeters)</p>

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

Type Number	Symbol	MBRF	MBRF	MBRF	MBRF	MBRF	MBRF	MBRF	Units
		1030 CT	1035 CT	1040 CT	1045 CT	1050 CT	1060 CT	10100 CT	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	30	35	40	45	50	60	100	V
Maximum RMS Voltage	$V_{RMS}$	21	24	28	31	35	42	70	V
Maximum DC Blocking Voltage	$V_{DC}$	30	35	40	45	50	60	100	V
Maximum Average Forward Rectified Current at $T_C=133^\circ C$	$I_{(AV)}$	10							A
Peak Repetitive Forward Current (Rated $V_R$ , Square Wave, 20KHz) at $T_C=133^\circ C$	$I_{FRM}$	10.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	150							A
Peak Repetitive Reverse Surge Current (Note 1)	$I_{RRM}$	0.5							A
Maximum Instantaneous Forward Voltage at (Note 2) $I_F=5A, T_C=25^\circ C$ $I_F=5A, T_C=125^\circ C$ $I_F=10A, T_C=25^\circ C$ $I_F=10A, T_C=125^\circ C$	$V_F$		0.70 0.57			0.80 0.65		0.85 0.75 0.95 0.85	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage @ $T_C=25^\circ C$ @ $T_C=125^\circ C$	$I_R$			0.1 15				0.15 150	mA mA
Voltage Rate of Change, (Rated $V_R$ )	$dV/dt$	10,000							V/uS
RMS Isolation Voltage ( $t=1.0$ second, R.H. $\leq 30\%$ , $T_A=25^\circ C$ ) (Note 4) (Note 5) (Note 6)	$V_{ISO}$				4500 3500 1500				V
Typical Thermal Resistance Per Leg (Note 3) $R_{\theta JC}$	$R_{\theta JC}$	3.5							$^\circ C/W$
Operating Junction Temperature Range $T_J$	$T_J$	-65 to +150							$^\circ C$
Storage Temperature Range $T_{STG}$	$T_{STG}$	-65 to +150							$^\circ C$

- Notes: 1. 2.0us Pulse Width,  $f=1.0$  KHz  
 2. Pulse Test: 300us Pulse Width, 1% Duty Cycle  
 3. Thermal Resistance from Junction to Case Per Leg.  
 4. Clip Mounting (on case), where lead does not overlap heatsink with 0.110" offset.  
 5. Clip mounting (on case), where leads do overlap heatsink.  
 6. Screw mounting with 4-40 screw, where washer diameter is  $\leq 4.9$  mm (0.19")



## RATINGS AND CHARACTERISTIC CURVES (MBRF1030CT THRU MBRF10100CT)

FIG.1- FORWARD CURRENT DERATING CURVE

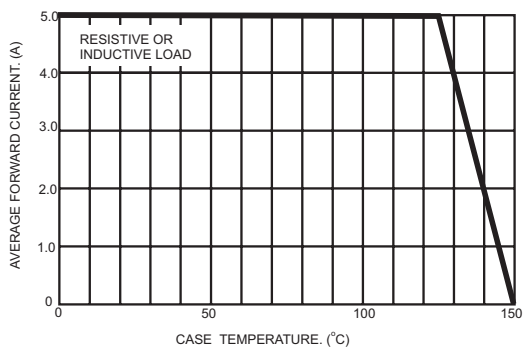


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

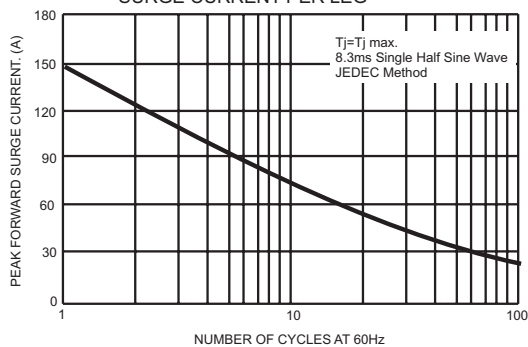


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

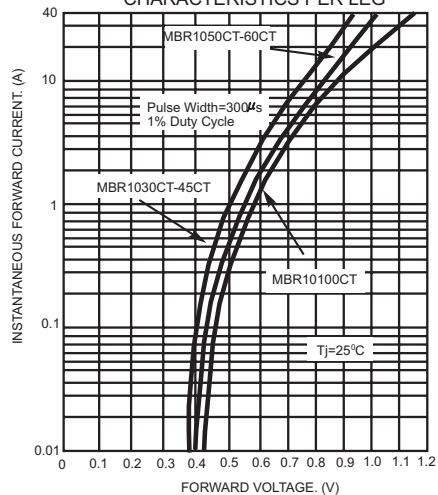


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

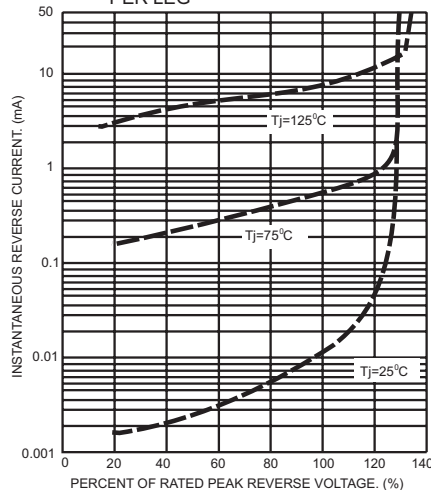


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

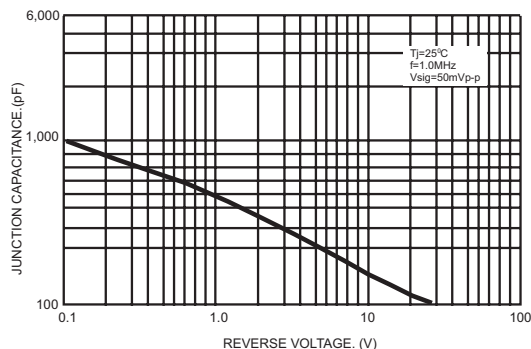


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG

