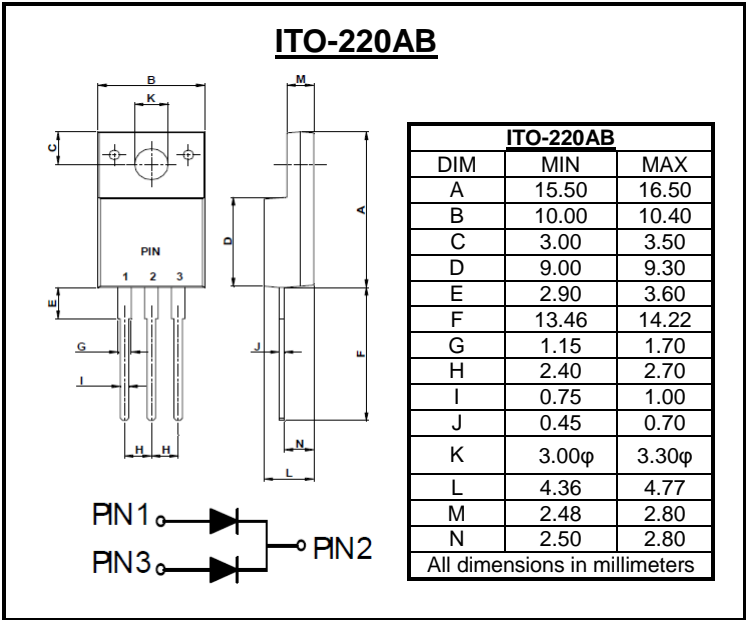


MBRF20100CT(LS)

SCHOTTKY BARRIER RECTIFIER

REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 20 Amperes

- FEATURES**
- Metal of silicon rectifier, majority carrier conduction
 - Guard ring for transient protection
 - Low power loss, high efficiency
 - High current capability, low V_F
 - High surge capacity
 - For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
 - **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
 - **Halogen and Antimony Free. "Green" Device (Note 3)**
- MECHANICAL DATA**
- Package: ITO-220AB molded plastic
 - Package Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.)
 - Polarity: As marked on the body
 - Weight: 1.649 grams (Approximate)
 - Mounting position: Any
 - Max. mounting torque = 0.5N.m (5.1Kgf.cm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum DC blocking voltage	V_{DC}	100	V
Maximum Average rectified output current @ $T_C = 120^\circ\text{C}$	$I_{(AV)}$	20	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	I_{FSM}	150	A
Voltage Rate of Change (Rated VR)	dV/dt	10000	V/ μS
Peak Repetitive Reverse Current, $t_p=2\mu\text{s}$, Square, $F=1\text{KHz}$ $T_J=25^\circ\text{C}$	I_{RRM}	1	A
Forward Power Dissipation (per diode)	P_D	8.5	W
Dielectric Strength from terminals to case, AC with $t=1$ minute, $RH<30\%$	V_{dis}	2000	V
Operating temperature range	T_J	-55 to +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +175	$^\circ\text{C}$

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Forward voltage (Note 4)	$I_F=10\text{A}$	V_F	$T_J=25^\circ\text{C}$	0.85
			$T_J=125^\circ\text{C}$	0.75
	$I_F=20\text{A}$	V_F	$T_J=25^\circ\text{C}$	0.95
			$T_J=125^\circ\text{C}$	0.85
Maximum DC reverse current at Rated Blocking voltage	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R	0.01 10	mA
Typical junction capacitance (Note 6)		C_j	350	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 5)	R_{thJc}	2.0	$^\circ\text{C/W}$

- Notes:**
- EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 - See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 - Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 - 300us pulse width, 2% duty cycle.
 - Device mounted on 135 mm x 135 mm x 8 mm Aluminum Plate Heatsink
 - Measured at 1.0MHz and applied reverse voltage of 4.0 DC.

RATING AND CHARACTERISTIC CURVES
MBRF20100CT

FIG.1- FORWARD CURRENT DERATING CURVE

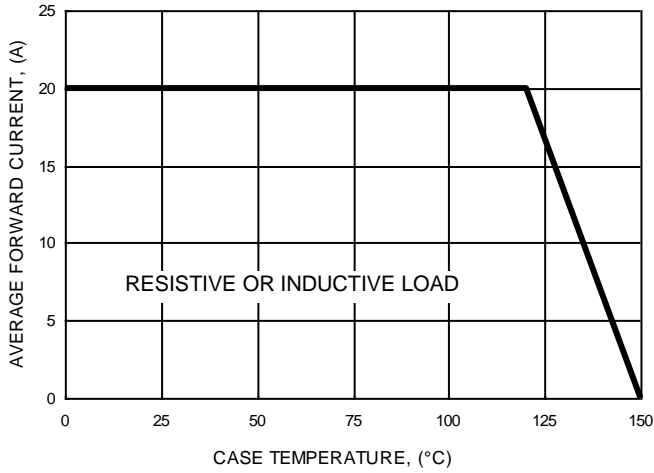


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

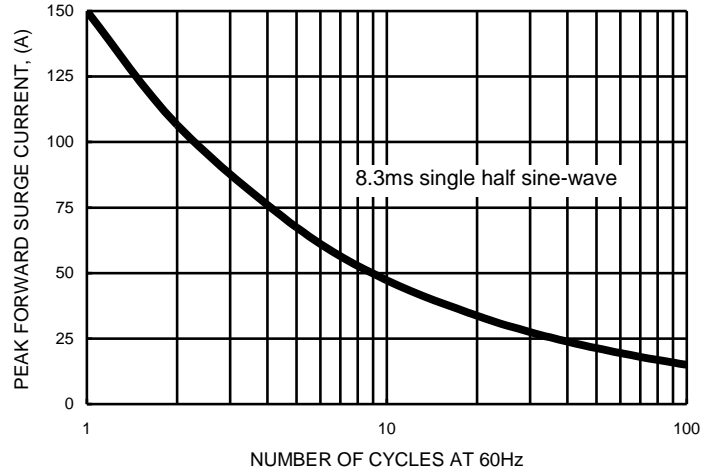


FIG.3- TYPICAL FORWARD CHARACTERISTICS

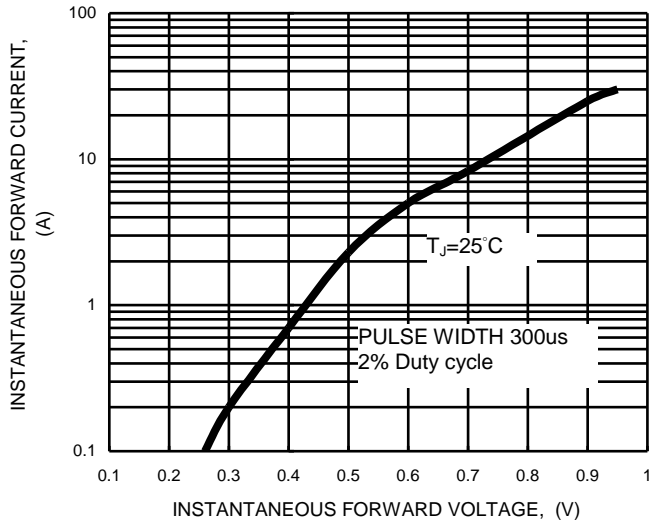


FIG.4- TYPICAL JUNCTION CAPACITANCE

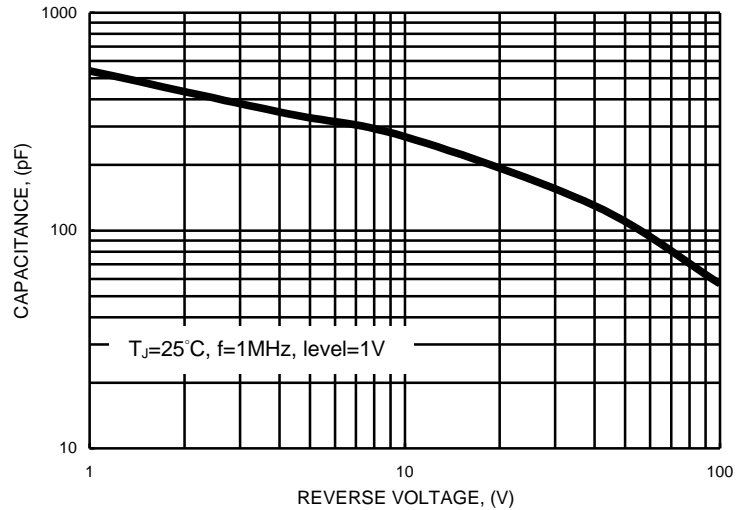


FIG.5- TYPICAL REVERSE CHARACTERISTICS

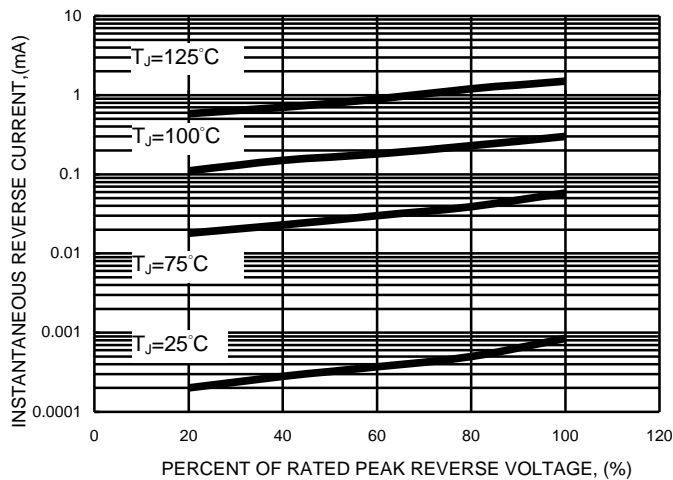
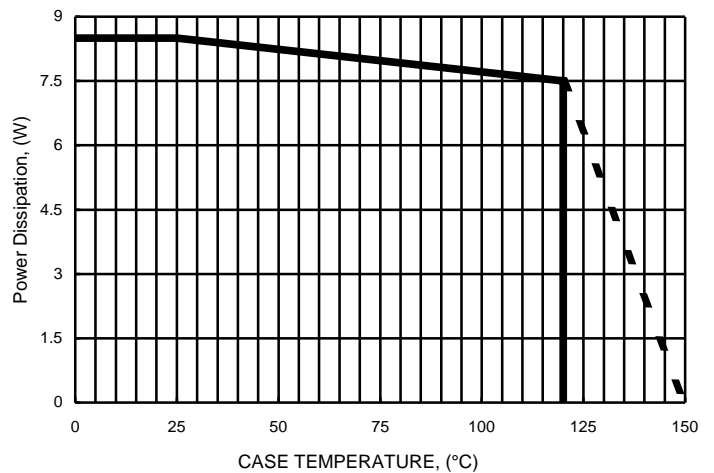


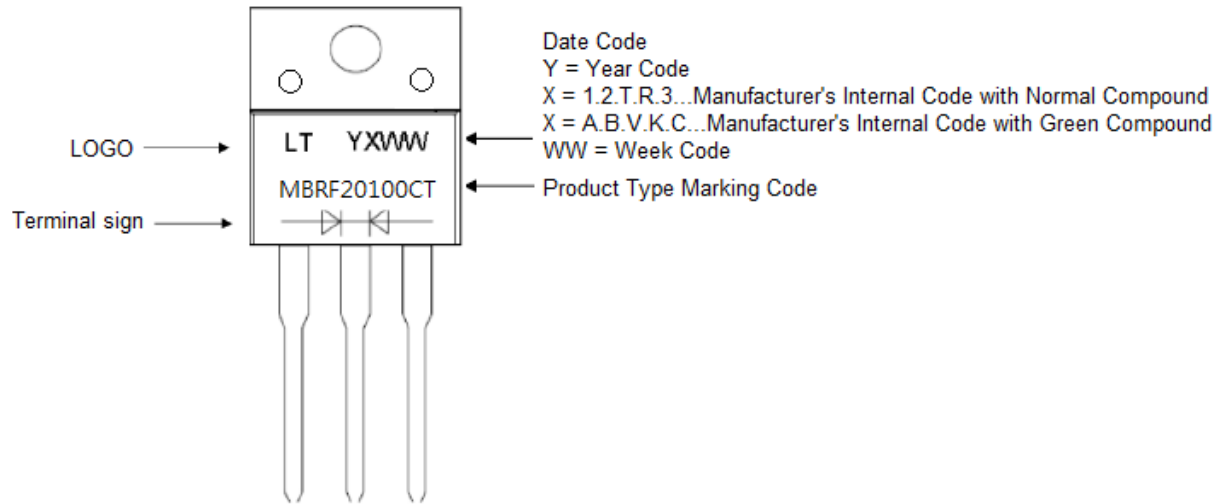
FIG.6- PD VS TEMPERATURE (per diode)



Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
MBRF20100CT-LS	ITO-220AB	50pcs	Tube

Marking Information :



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