

MBRF10150CT - MBRF10200CT(LS)

SCHOTTKY BARRIER RECTIFIER

REVERSE VOLTAGE – 150 to 200 Volts
FORWARD CURRENT – 10 Amperes

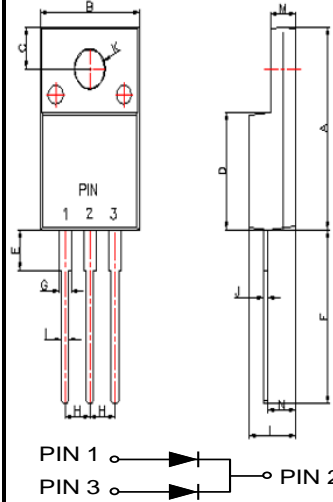
FEATURES

- 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
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Case: ITO-220AB
- Case Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free".
- Polarity: AS marked on the body
- Lead free finish, RoHS compliant
- Weight: 1.558 grams (Approximate)
- Max. mounting torque=0.5N.m(5.1Kgf.cm)

ITO-220AB



ITO-220AB		
DIM	MIN	MAX
A	15.50	16.50
B	10.00	10.40
C	3.00	3.50
D	9.00	9.50
E	2.90	3.60
F	13.46	14.22
G	1.15	1.70
H	2.40	2.70
I	0.75	1.00
J	0.45	0.70
K	3.00	3.30
L	4.36	4.77
M	2.48	2.80
N	2.50	2.80

All dimension in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	MBRF10150CT	MBRF10200CT	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	150	200	V
Maximum DC blocking voltage	V_{DC}	150	200	V
Maximum Average rectified output current	@ $T_C=135^\circ\text{C}$ $I_{(AV)}$	10		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	I_{FSM}	120		A
Peak Repetitive Reverse Current	@ $t_p=2\mu\text{s}$ @ $F=1\text{KHz}$ I_{RRM}	1		A
Voltage Rate of Change (Rated VR)	dV/dt	10000		V/us
Dielectric Strength from terminals to case, AC with $t=1\text{minute}$, $RH<30\%$	V_{dis}	2000		V
Operating junction and Storage Temperature range	T_J, T_{STG}	-65 ~ +175		°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	MAX	UNIT
Forward voltage (Note4)	$I_F=5\text{A}$ $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	V_F	0.92	V
			0.75	
	$I_F=10\text{A}$ $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$		1.00	
Maximum DC Reverse current at Rated DC Blocking voltage	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R	8	uA
			2	mA
Typical junction capacitance (Note 5)		C_J	120	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 6,7)	R_{thJC}	5	°C/W

Note :

REV.-5 , Sep-2021, KTHC38

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. 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.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. 300us pulse width, 2% duty cycle.
5. Measured at 1.0MHz and applied voltage of 4.0VDC.
6. Thermal resistance test performed in accordance with JESD-51.
7. The unit mounted on 135mm x 135mm x 8mm Aluminum Plate Heatsink.

RATING AND CHARACTERISTIC CURVES
MBRF10150CT - MBRF10200CT

FIG.1 FORWARD CURRENT DERATING CURVE

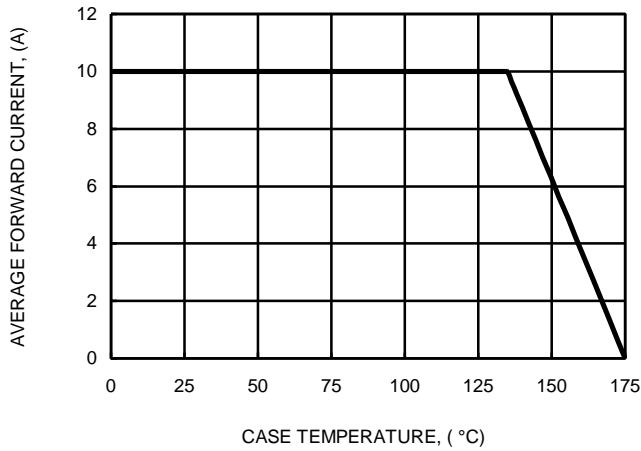


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

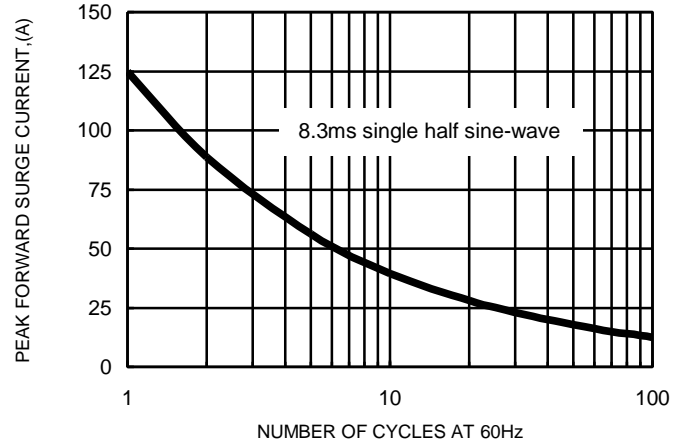


FIG.3 TYPICAL FORWARD CHARACTERISTICS

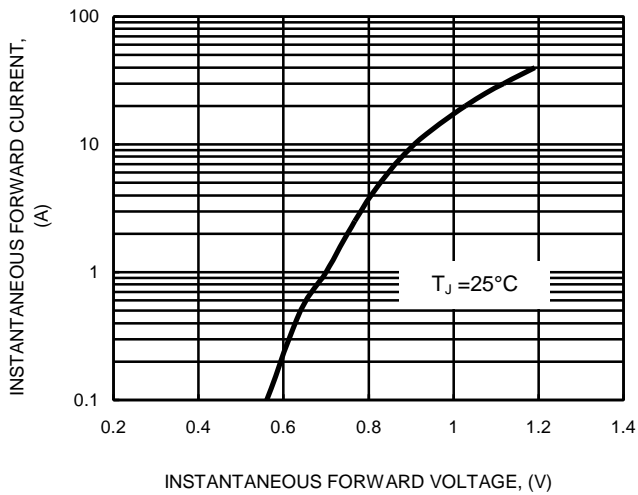


FIG.4 TYPICAL JUNCTION CAPACITANCE

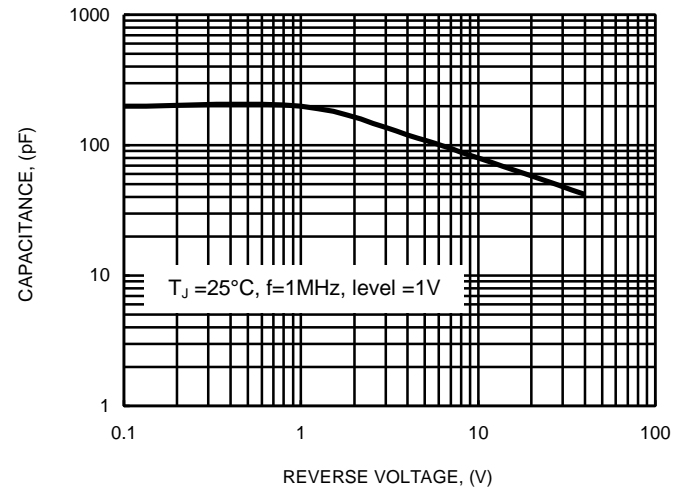
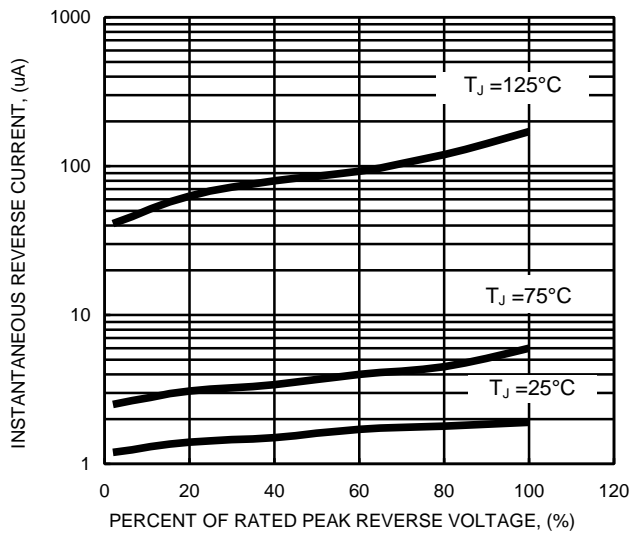


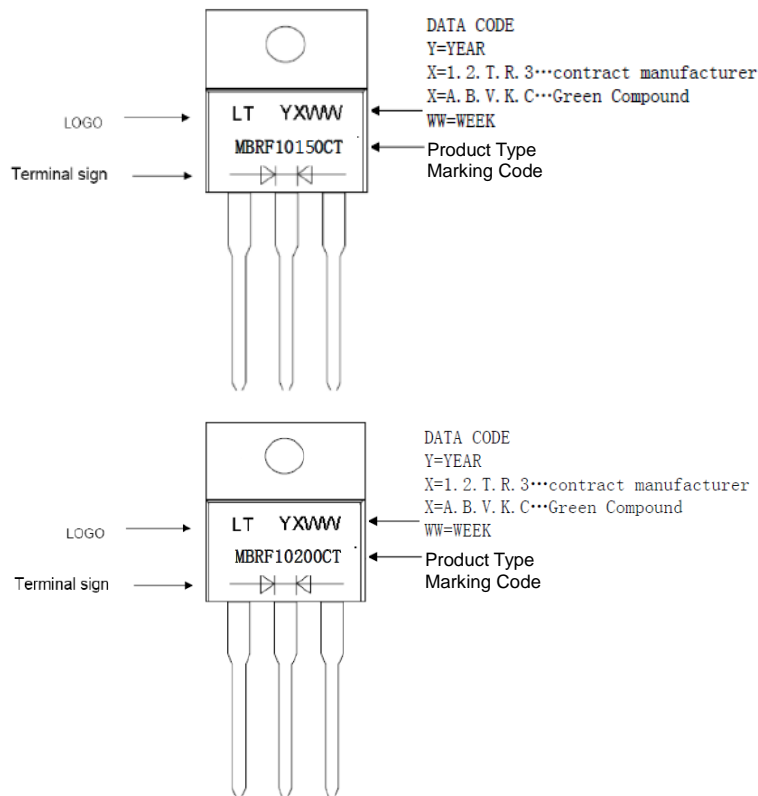
FIG.5 TYPICAL REVERSE CHARACTERISTICS



Ordering Information :

Part Number	Case	Packaging
MBRF10150CT-LS	ITO-220AB	50 Pieces/Tube
MBRF10200CT-LS	ITO-220AB	50 Pieces/Tube

Marking Information :



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