MBRF2030CT thru MBRF20150CT

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **150**Volts
FORWARD CURRENT - **20.0** Amperes

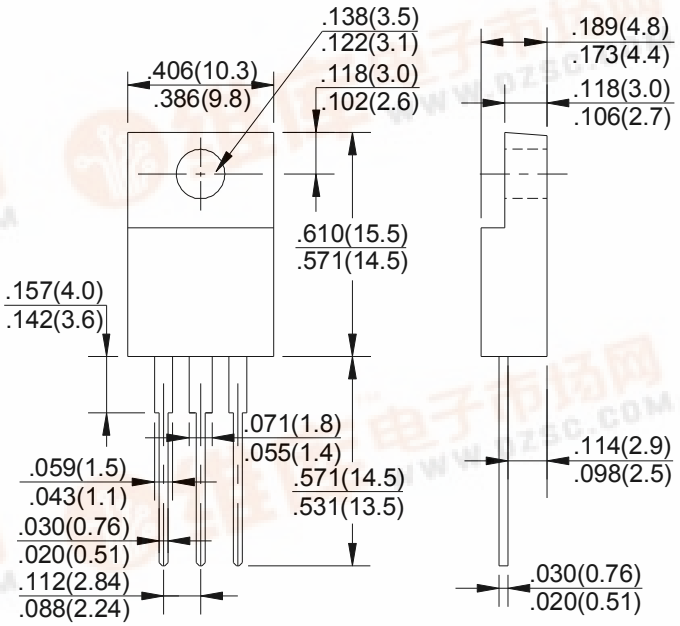
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss,high efficiency
- High current capability,low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MECHANICAL DATA

- Case: ITO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

ITO-220AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

CHARACTERISTICS	SYMBOL	MBRF 2030CT	MBRF 2040CT	MBRF 2050CT	MBRF 2060CT	MBRF 2080CT	MBRF 20100CT	MBRF 20150CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1)	$I_{(AV)}$	20.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	150							A
Peak Forward Voltage (Note1) IF=10A @T_J=25℃	V_F	-		0.80		0.85		0.95	V
IF=10A @T_J=125℃		0.57		0.70		0.75		0.85	
IF=20A @T_J=25℃		0.84		0.95		0.95		1.05	
IF=20A @T_J=125℃		0.72		0.85		0.85		0.95	
Maximum DC Reverse Current @T_J=25℃	I_R	0.1		0.1		0.1		0.1	mA
at Rated DC Bolcking Voltage @T_J=125℃		15		10		7.5		5.0	
Typical Junction Capacitance (Note2)	C_J	400		320					pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	1.5				3.5			℃/W
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +175							℃

NOTES:1.300us pulse width,2% duty cycle.
2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
3.Thermal resistance junction to case.

RATING AND CHARACTERTIC CURVES
MBRF2030CT thru MBRF20150CT

FIG. 1 – FORWARD CURRENT DERATING CURVE

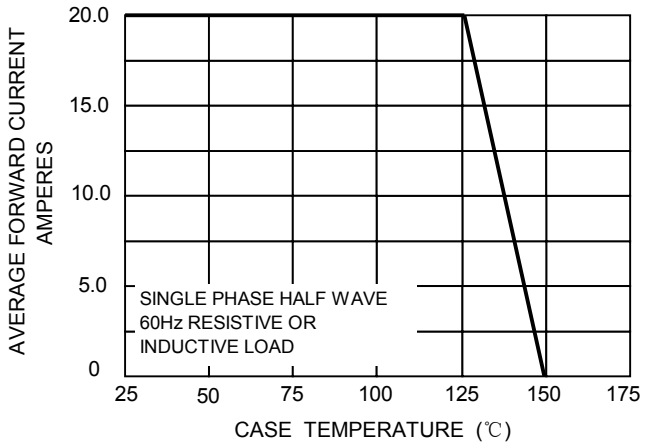


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

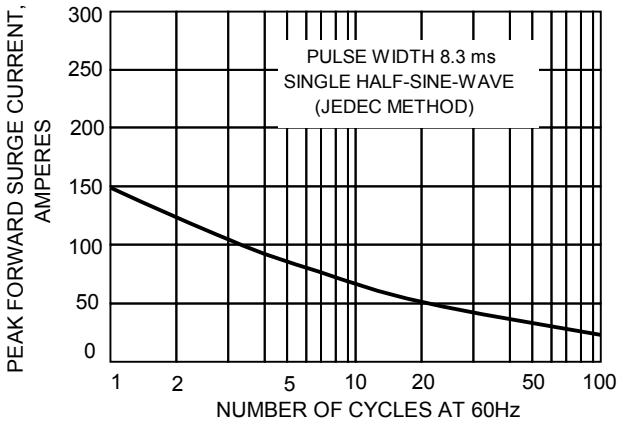


FIG.3-TYPICAL REVER CHARACTERISTICS

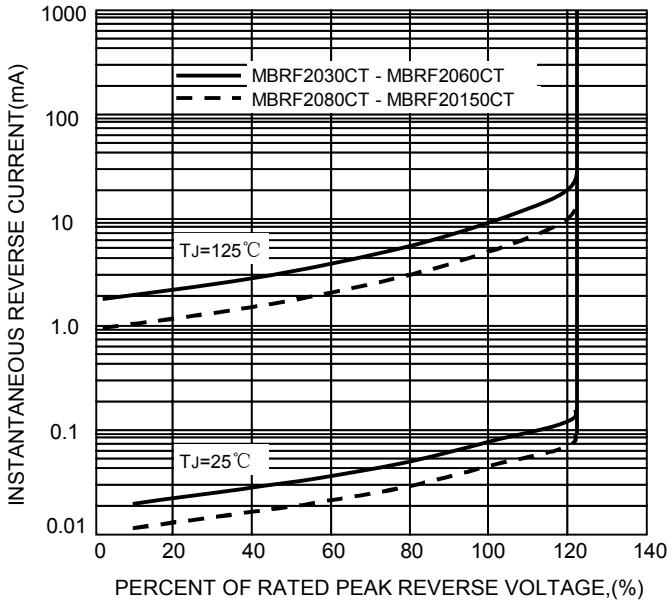


FIG.4-TYPICAL FORWARD CHARACTERISTICS

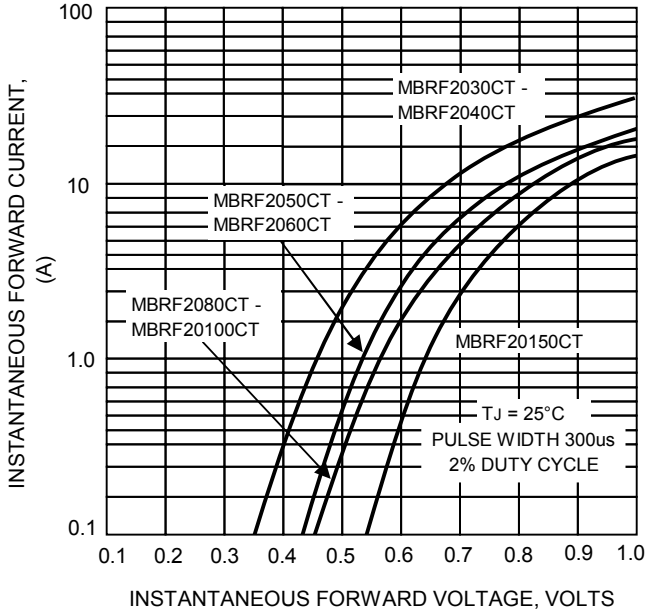


FIG.5 – TYPICAL JUNCTION CAPACITANCE