

SCHOTTKY BARRIER RECTIFIERS

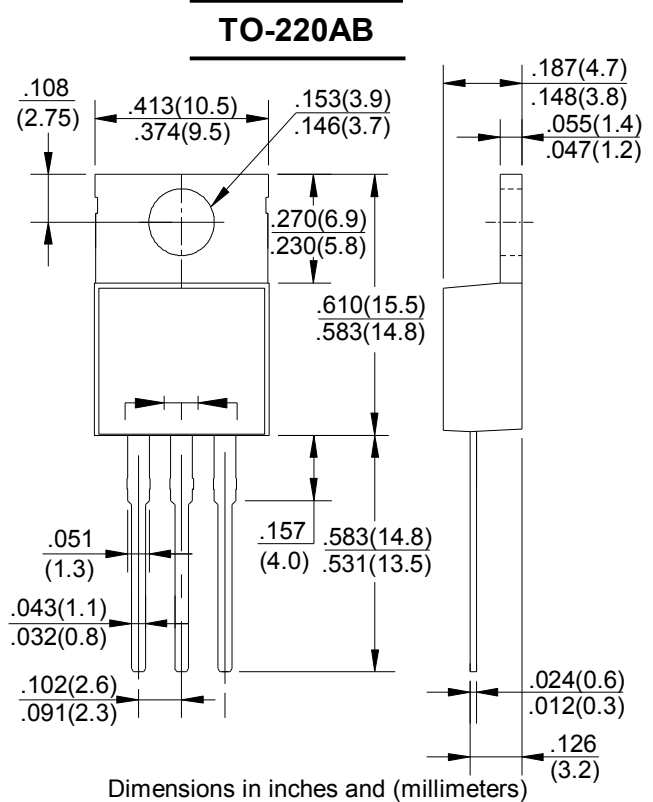
REVERSE VOLTAGE - 30 to 150Volts
FORWARD CURRENT - 16.0 Amperes

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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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 1630CT	MBR 1640CT	MBR 1650CT	MBR 1660CT	MBR 1680CT	MBR 16100CT	MBR 16150CT	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 <sub(av)< sub=""></sub(av)<>	16.0							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=8A @T _J =25°C IF=8A @T _J =125°C IF=16A @T _J =25°C IF=16A @T _J =125°C	V _F	0.84 0.57 0.72 -		0.75 0.65 -		0.85 0.75 0.95 0.85		1.05 0.92 -	V	
Maximum DC Reverse Current @T _J =25°C at Rated DC Bolcking Voltage @T _J =125°C	I _R		0.3 10				0.1 5.0		mA	
Typical Junction Capacitance (Note2)	C _J		400				200		pF	
Typical Thermal Resistance (Note3)	R _{θJC}		3.0							°C/W
Operating Temperature Range	T _J		-55 to +150							°C
Storage Temperature Range	T _{STG}		-55 to +175							°C

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 CHARACTERISTIC CURVES

MBR1630CT thru MBR16150CT

FIG. 1 – FORWARD CURRENT DERATING CURVE

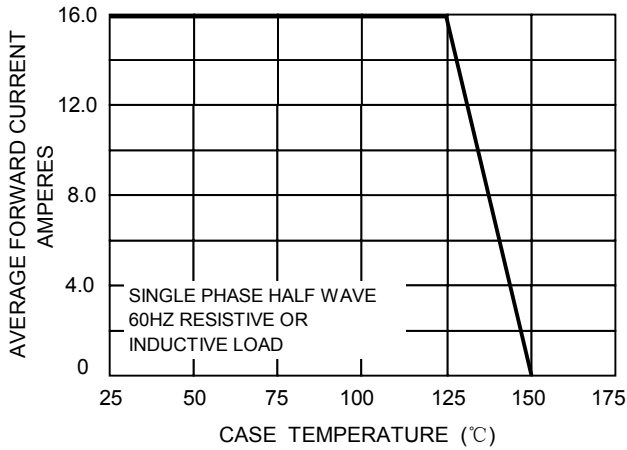


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

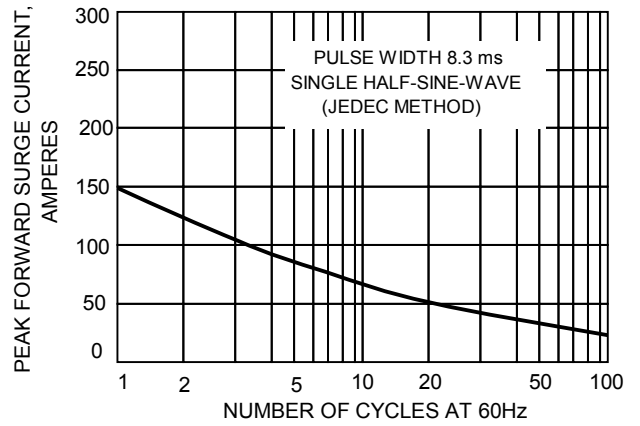


FIG.3-TYPICAL REVER CHARACTERISTICS

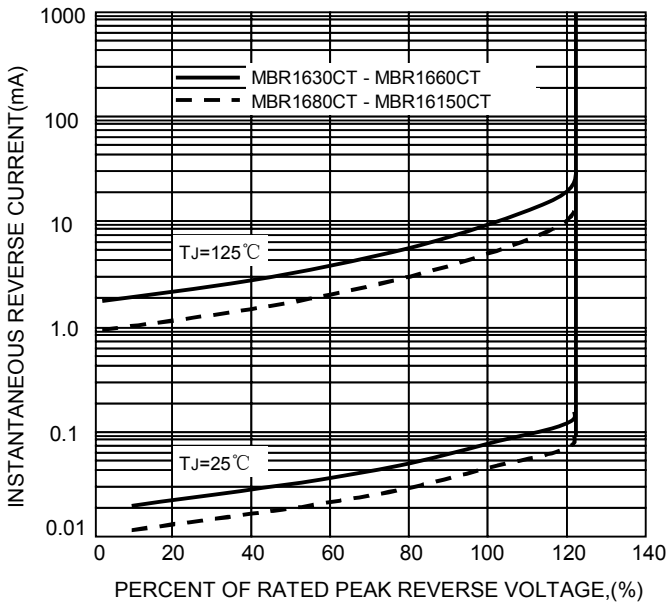


FIG.4-TYPICAL FORWARD CHARACTERISTICS

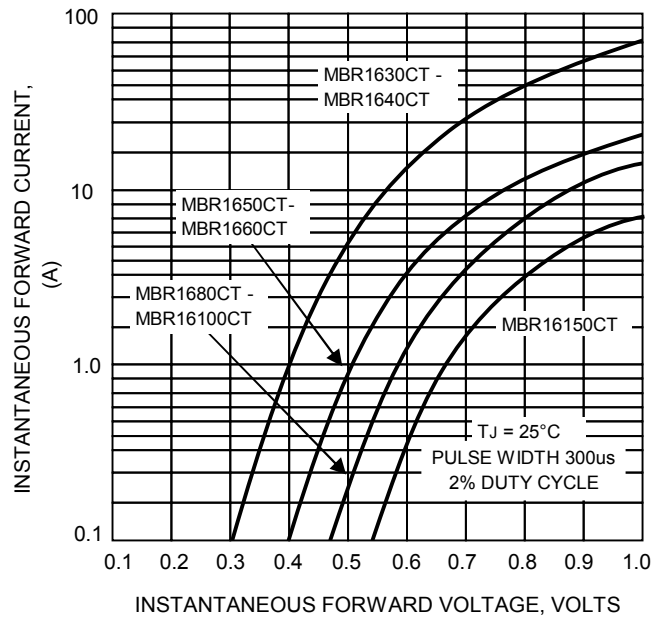


FIG.5 – TYPICAL JUNCTION CAPACITANCE

