



Schottky Barrier Rectifiers

Reverse Voltage - 30 to 150 Volts
Forward Current - 20.0 Amperes

Features

- Low forward voltage drop
- High current capability
- High surge capability
- The plastic material carries UL recognition 94V-0

Mechanical Data

- Case: JEDEC TO-220AB molded plastic
- Polarity: As marked on the body

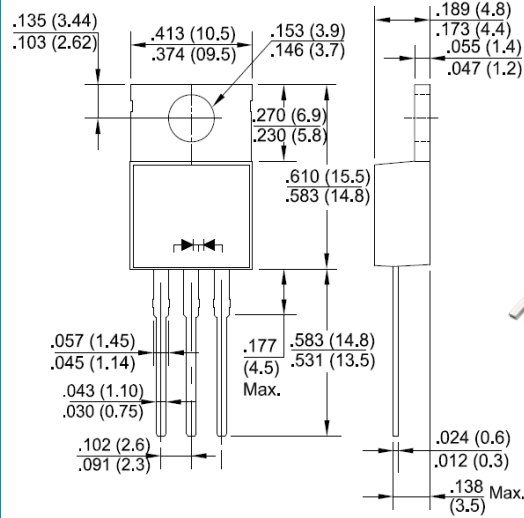
- Mounting position: Any

Note: Products with logo  or  are made by HY Electronic (Cayman) Limited.

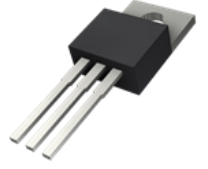
Applications

- For use in low voltage, high frequency inverters, polarity protection applications.

TO-220AB



RoHS COMPLIANT



Package Outline Dimensions in Inches (Millimeters)

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%.

Characteristic	Symbol	MBR	MBR	MBR	MBR	MBR	MBR	MBR	Unit	
		2030CT	2040CT	2050CT	2060CT	2080CT	20100CT	20150CT		
Maximum Repetitive 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	I <sub(av)< sub=""></sub(av)<>	20.0							A	
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I _{FSM}	150							A	
Peak Forward Voltage (Note1)	V _F	IF=10A @T _J =25°C		0.80		0.85		0.95		
		IF=10A @T _J =125°C		0.57		0.70		0.75		
		IF=20A @T _J =25°C		0.84		0.95		1.05		
		IF=20A @T _J =125°C		0.72		0.85		0.85		
Maximum DC Reverse Current @T _J =25°C	I _R	0.1		0.1		0.1		0.1		
at Rated DC Blocking Voltage @T _J =125°C		15		10		7.5		5.0		
Typical Junction Capacitance (Note2)	C _J	400			320				pF	
Typical Thermal Resistance Junction to Case	R _{θJC}	1.5				3.5				°C/W
Junction 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. The typical data above is for reference only.



Fig. 1 - Forward Current Derating Curve

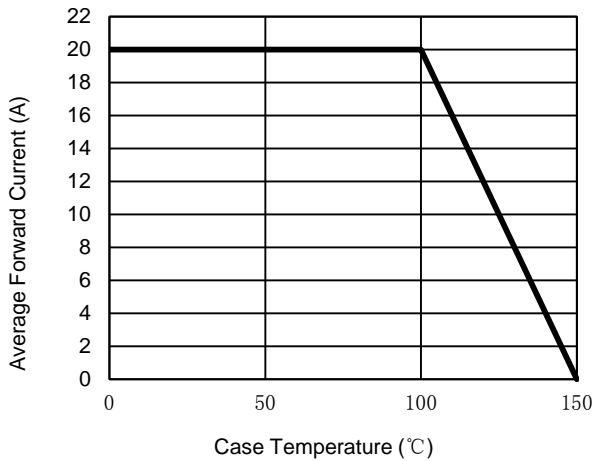


Fig. 2 - Maximum Non-Repetitive Surge Current

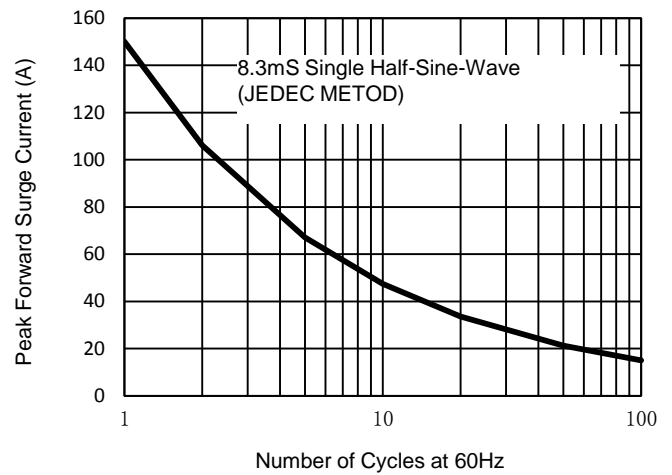


Fig. 3 - Typical Reverse Characteristics

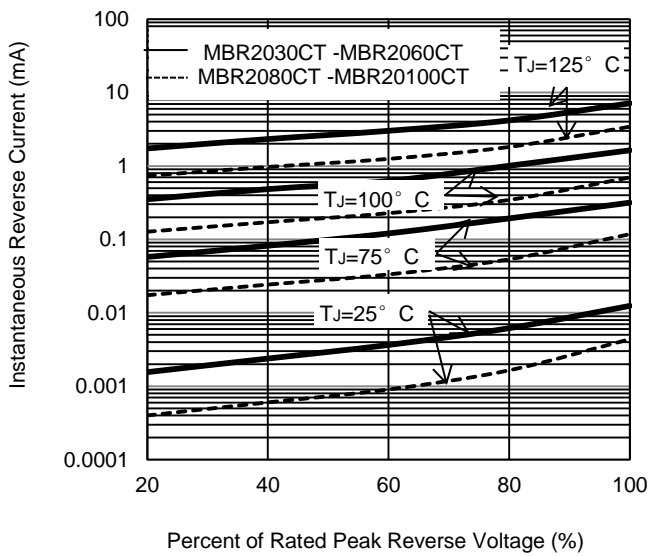


Fig. 4 - Typical Forward Characteristics

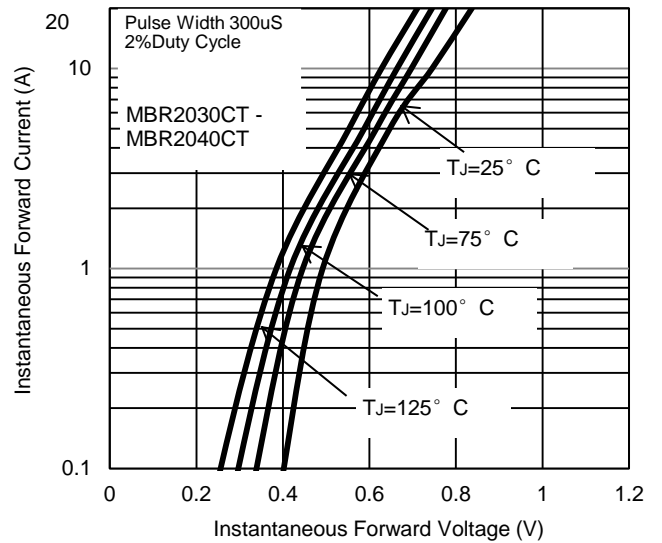


Fig. 5 - Typical Forward Characteristics

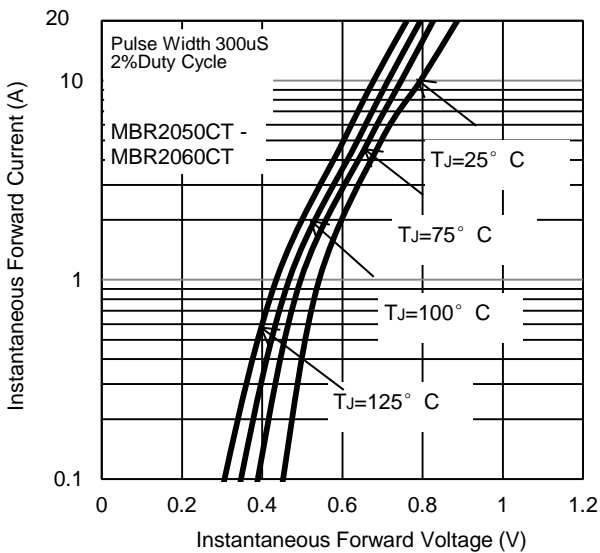
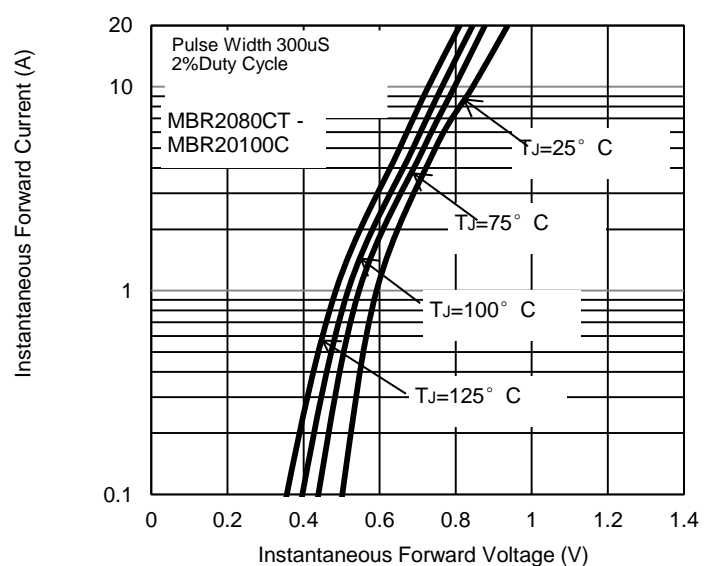


Fig. 6 - Typical Forward Characteristics



The curve above is for reference only.

Rating and Characteristic Curves

MBR2030CT THRU MBR20150CT



Fig. 7 - Typical Forward Characteristics

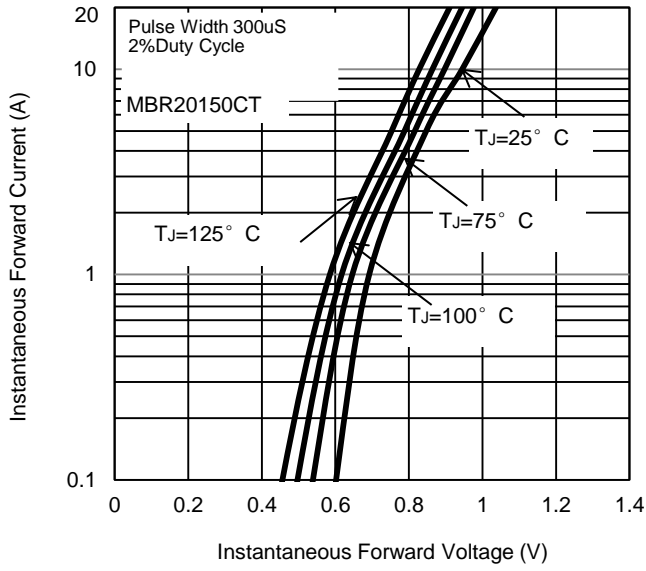
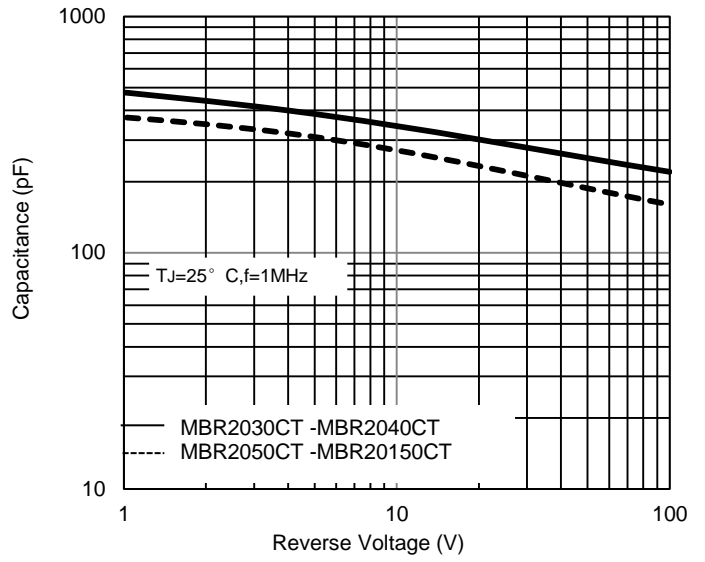


Fig. 8 - Typical Junction Capacitance



The curve above is for reference only.



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