

# MBRS2035CT THRU MBRS2060CT



康比電子  
HORNBY ELECTRONIC

## SCHOTTKY BARRIER RECTIFIER

**REVERSE VOLTAGE:** 35 to 60 VOLTS  
**FORWARD CURRENT:** 20.0 AMPERE

### FEATURES

- For surface mounted application
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- For use in low voltage, high frequency inverters, free whelling, and polarity protection applications
- High temperature soldering guaranteed:  
250°C/10 seconds, 0.25" (6.35mm) from case

### MECHANICAL DATA

Case: Molded plastic, D<sup>2</sup>PAK

Epoxy: UL 94V-O rate flame retardant

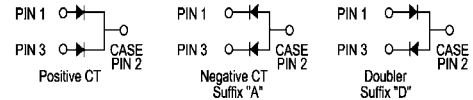
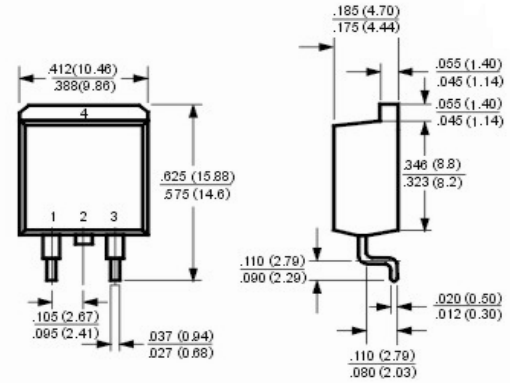
Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.06ounce, 1.70gram

### D<sup>2</sup>PAK



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	MBRS2035CT	MBRS2045CT	MBRS2050CT	MBRS2060CT	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	35	45	50	60	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	24	31	35	42	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	Volts
Maximum Average Forward Rectified Current at T <sub>C</sub> = 135°C	I <sub>(AV)</sub>	20.0				Amp
Peak repetitive forward current at T <sub>C</sub> = 135°C (rated V <sub>R</sub> , sq. wave, 20 KHz)	I <sub>FRM</sub>	20.0				Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	150				Amp
Peak repetitive reverse current at t <sub>p</sub> = 2.0μs, 1KHz	I <sub>RRM</sub>	1.0		0.5		Amp
Maximum Forward Voltage (Note 1)	V <sub>F</sub>					Volts
at I <sub>F</sub> = 10A, T <sub>C</sub> = 25°C		-		0.80		
at I <sub>F</sub> = 10A, T <sub>C</sub> = 125°C		0.57		0.70		
at I <sub>F</sub> = 20A, T <sub>C</sub> = 25°C		0.84		0.95		
at I <sub>F</sub> = 20A, T <sub>C</sub> = 125°C		0.72		0.85		
Maximum Reverse Current at T <sub>C</sub> =25°C at Rated DC Blocking Voltage T <sub>C</sub> =125°C	I <sub>R</sub>	0.1		0.15		mAmp
		15		150		
Voltage rate of change (rated V <sub>R</sub> )	dv/dt	10,000				V/μs
Typical Thermal Resistance	R <sub>θJC</sub>	2.0				°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150				°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +175				°C

### NOTES:

1- Pulse test: 300μs pulse width, 1% duty cycle

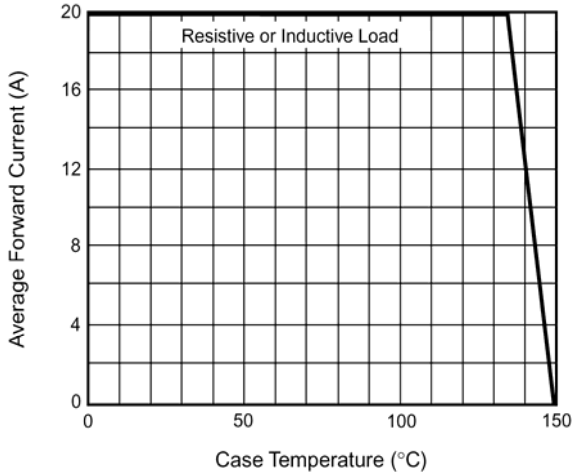
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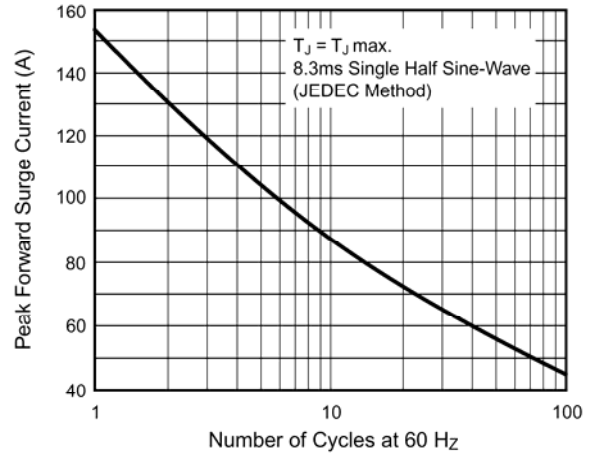


### RATINGS AND CHARACTERISTIC CURVES

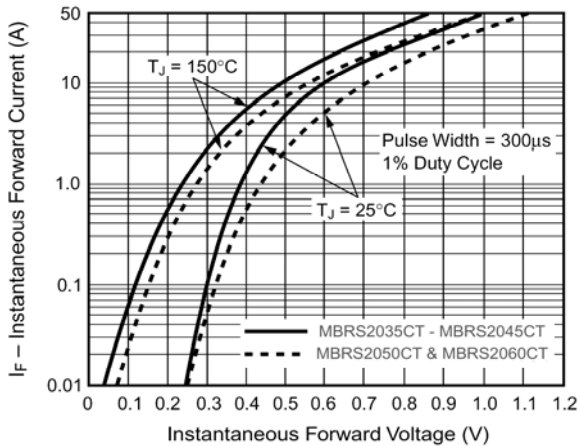
**Forward Current Derating Curve**



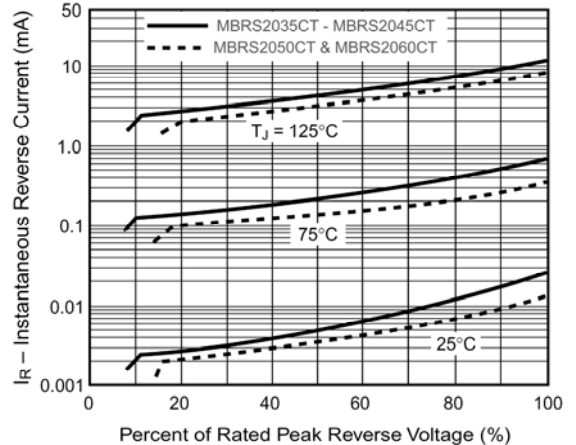
**Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



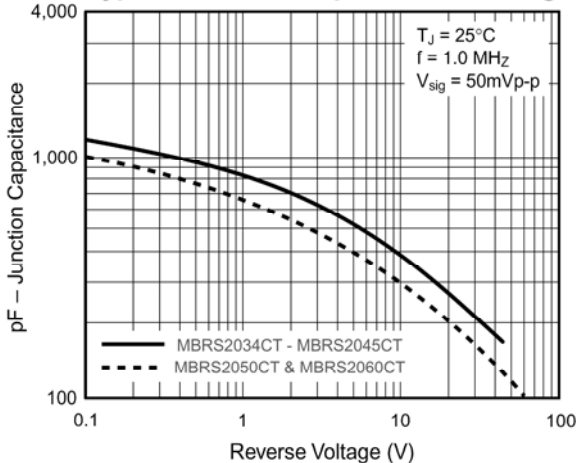
**Typical Instantaneous Forward Characteristics Per Leg**



**Typical Reverse Characteristics Per Leg**



**Typical Junction Capacitance Per Leg**



**Typical Transient Thermal Impedance Per Leg**

