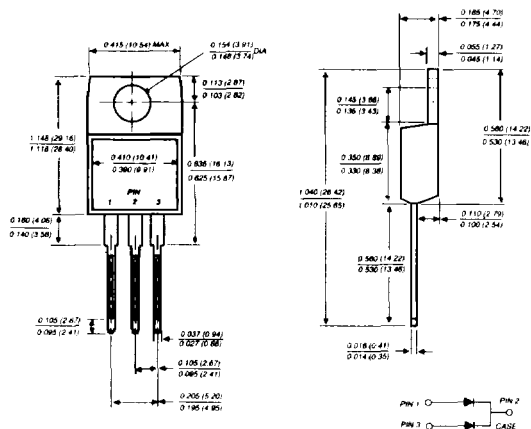


# MBR2035CT THRU MBR2060CT

## SCHOTTKY RECTIFIER

Reverse Voltage - 35 to 60 Volts Forward Current - 20.0 Amperes

### TO-220AB



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Dual rectifier construction, positive center tap
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ High surge capability
- ◆ Guardring for overvoltage protection
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.25" (6.35mm) from case



### MECHANICAL DATA

Case: JEDEC TO-220AB molded plastic

Terminals: Leads solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any

Mounting Torque: 5 in. - lbs.max.

Weight: 0.08 ounce, 2.24 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	MBR2035CT	MBR2045CT	MBR2050CT	MBR2060CT	UNITS
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	35	45	50	60	Volts
Maximum working peak reverse voltage	V <sub>RWM</sub>	35	45	50	60	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	35	45	50	60	Volts
Maximum average forward rectified current at T <sub>C</sub> =135°C	I <sub>(AV)</sub>	20.0				Amps
Peak repetitive forward current per leg at T <sub>C</sub> =135°C (rated V <sub>R</sub> , sq. wave 2.0 KHz)	I <sub>FRM</sub>	20.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150.0				Amps
Peak repetitive reverse surge current (NOTE 1)	I <sub>RRM</sub>	1.0		0.5		Amps
Maximum instantaneous forward voltage per leg at (NOTE 2)	V <sub>F</sub>			0.80		Volts
		0.57		0.70		
		0.84		0.95		
		0.72		0.85		
Maximum instantaneous reverse current at rated DC blocking voltage per leg	I <sub>R</sub>	0.1		0.15		mA
		15.0		150.0		
Voltage rate of change, (rated V <sub>R</sub> )	dv/dt	10,000				V/μs
Typical thermal resistance per leg (NOTE 3)	R <sub>θJC</sub>	2.0				°C/W
Operating junction temperature range	T <sub>J</sub>	-65 to +150				°C
Storage temperature range	T <sub>STG</sub>	-65 to +175				°C

#### NOTES:

- (1) 2.0μs pulse width, I=1.0KHz
- (2) Pulse test: 300μs pulse width, 1% duty cycle
- (3) Thermal resistance from junction to case per leg

# RATINGS AND CHARACTERISTIC CURVES MBR2035CT THRU MBR2060CT

FIG. 1 - FORWARD CURRENT DERATING CURVE

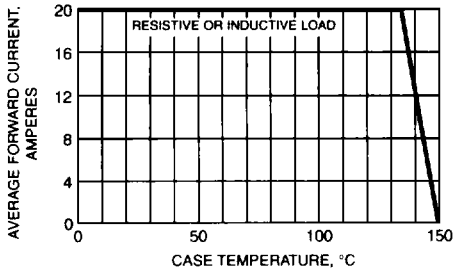


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

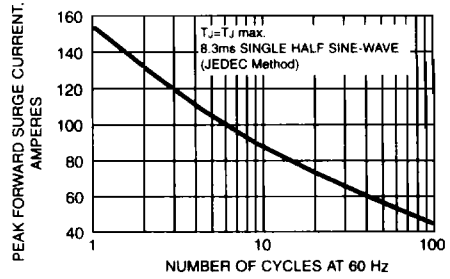


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

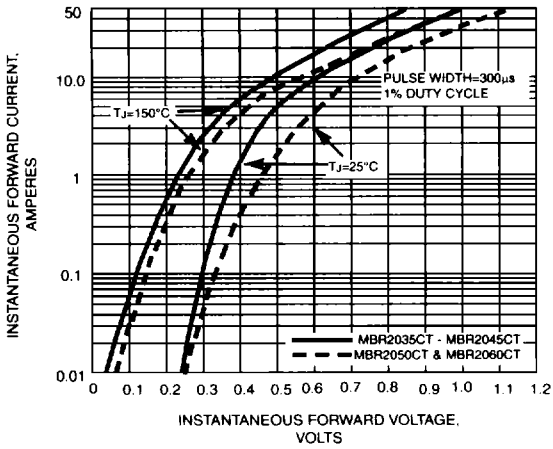


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

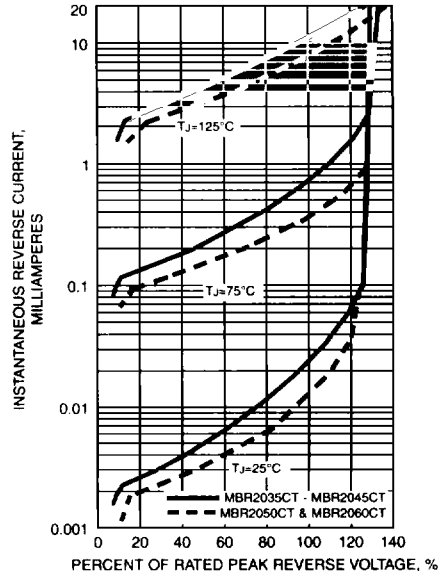


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

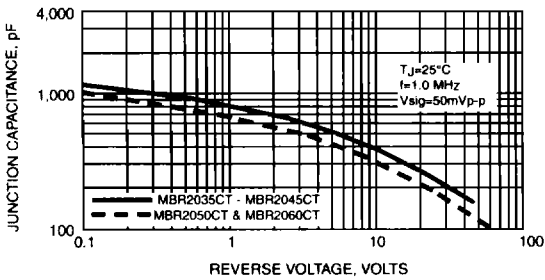


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

