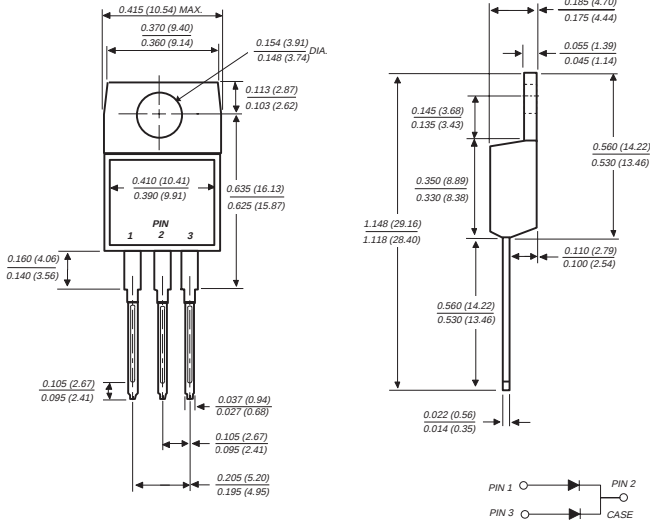


MBR2035CT THRU MBR2060CT

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 _{RRM}	35	45	50	60	Volts
Maximum working peak reverse voltage	V _{RWM}	35	45	50	60	Volts
Maximum DC blocking voltage	V _{DC}	35	45	50	60	Volts
Maximum average forward rectified current at T _C =135°C	I _(AV)	20.0				Amps
Peak repetitive forward current per leg at T _C =135°C (rated V _R , sq. wave 2.0 KHz)	I _{FRM}	20.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	150.0				Amps
Peak repetitive reverse surge current (NOTE 1)	I _{RRM}	1.0		0.5		Amps
Maximum instantaneous forward voltage per leg at I _F =10A, T _C =25°C (NOTE 2) I _F =10A, T _C =125°C I _F =20A, T _C =25°C I _F =20A, T _C =125°C	V _F	— 0.57 0.84 0.72		0.80 0.70 0.95 0.85		Volts
Maximum instantaneous reverse current at rated DC blocking voltage per leg T _C =25°C T _C =125°C	I _R	0.1 15.0		0.15 150.0		mA
Voltage rate of change, (rated V _R)	dv/dt	10,000				V/μs
Typical thermal resistance per leg (NOTE 3)	R _{θJC}	2.0				°C/W
Operating junction temperature range	T _J	-65 to +150				°C
Storage temperature range	T _{STG}	-65 to +175				°C

NOTES:

(1) 2.0 μs pulse width, $f=1.0\text{KHz}$

(2) Pulse test: 300 μs pulse width, 1% duty cycle

RATINGS AND CHARACTERISTIC CURVES MBR2035CT THRU MBR2060CT

FIG. 1 - FORWARD CURRENT DERATING CURVE

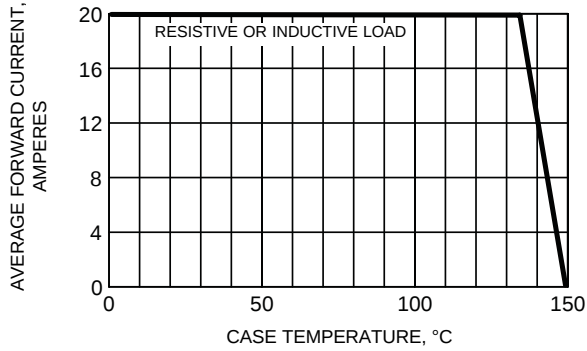


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

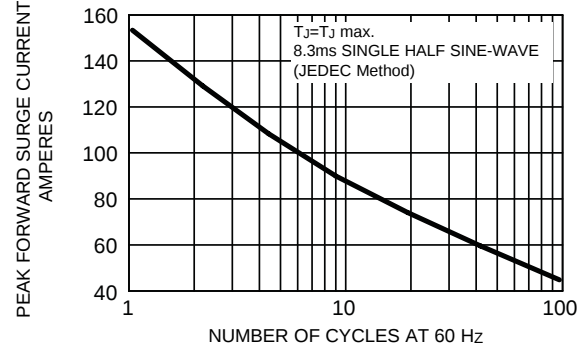


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

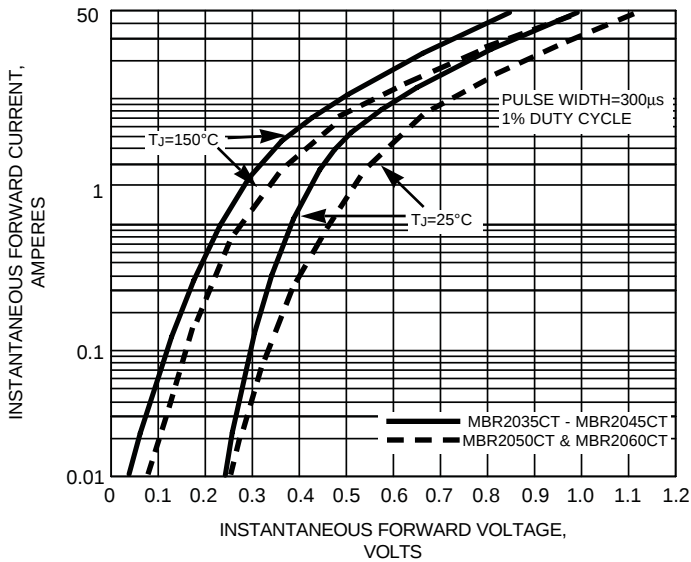


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

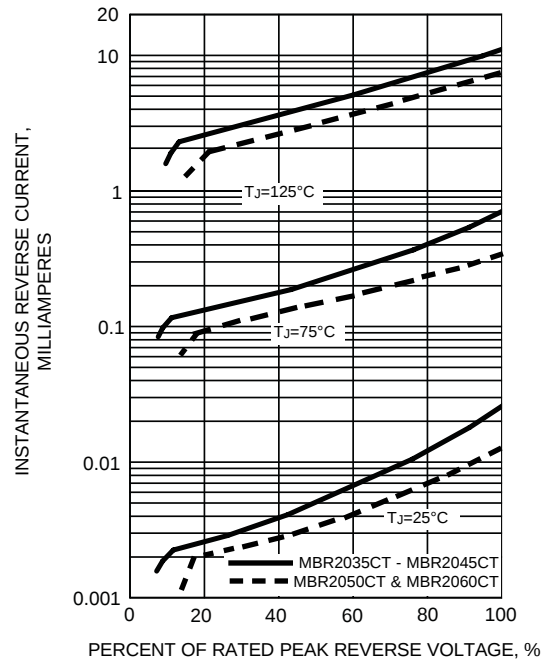


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

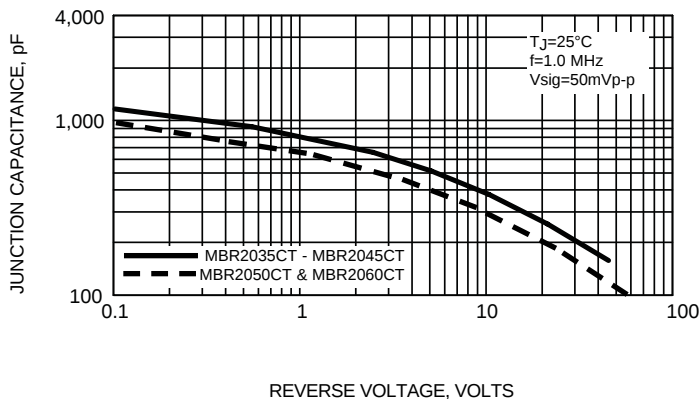


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

