

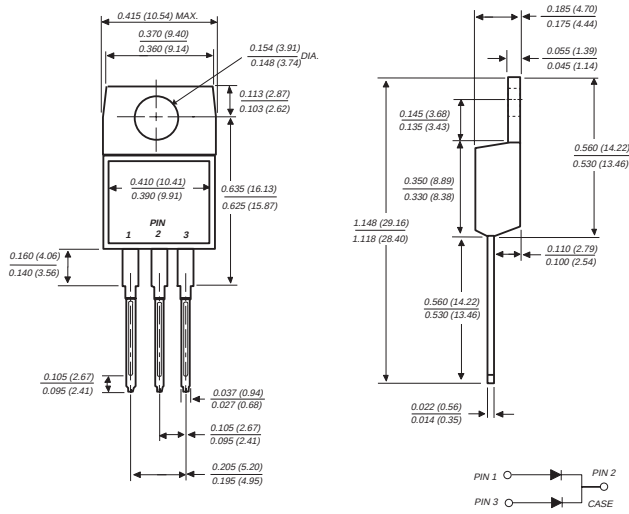
MBR1535CT THRU MBR1560CT

SCHOTTKY RECTIFIER

Reverse Voltage - 35 to 60 Volts

Forward Current - 15.0 Amperes

TO-220AB



Dimensions in inches and (millimeters)

FEATURES

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



MECHANICAL DATA

Case: JEDEC TO-220AB molded plastic body

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

Polarity: As marked

Mounting Position: Any

Mounting Torque: 5 in. - lbs. max.

Weight: 0.08 ounces, 2.24 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	MBR1535CT	MBR1545CT	MBR1550CT	MBR1560CT	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 =105°C	I _(AV)	15.0				Amps
Peak repetitive forward current at T _C =105°C per leg (rated V _R , 20KHz sq.wave)	I _{FRM}	15.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per leg (JEDEC method)	I _{FSM}	150.0				Amps
Peak repetitive reverse surge current per leg (NOTE 1)	I _{RRM}	1.0		0.5		Amps
Maximum instantaneous forward voltage per leg at (NOTE 2) I _F =7.5A, T _C =25°C I _F =7.5A, T _C =125°C I _F =15A, T _C =25°C I _F =15A, T _C =125°C	V _F	— 0.57 0.84 0.72		0.75 0.65 — —		Volts
Maximum instantaneous reverse current at rated DC blocking voltage per leg (NOTE 2) T _C =25°C T _C =125°C	I _R	0.1 15.0		1.0 50.0		mA
Voltage rate of change, (rated V _R)	dv/dt	10,000				V/μs
Maximum thermal resistance per leg (NOTE 3)	R _{θJA} R _{θJC}	60.0 3.0				°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) 300 μs , pulse width, 1% duty cycle

(3) Thermal resistance from junction to case and thermal resistance from junction to ambient

RATINGS AND CHARACTERISTIC CURVES MBR1535CT THRU MBR1560CT

FIG. 1 - FORWARD CURRENT DERATING CURVE

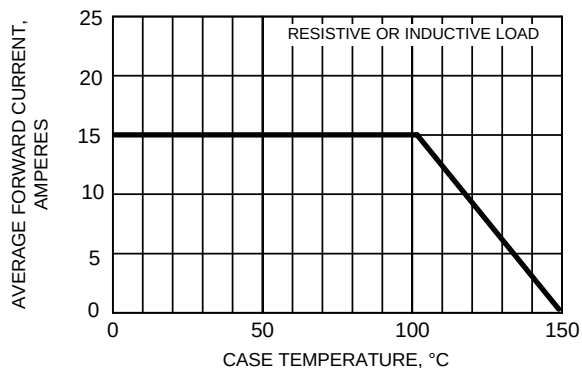


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

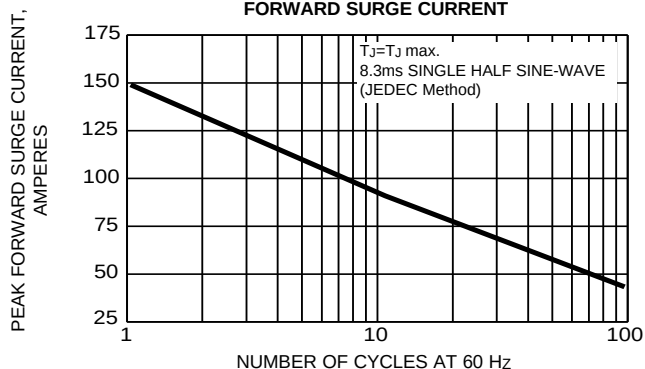


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

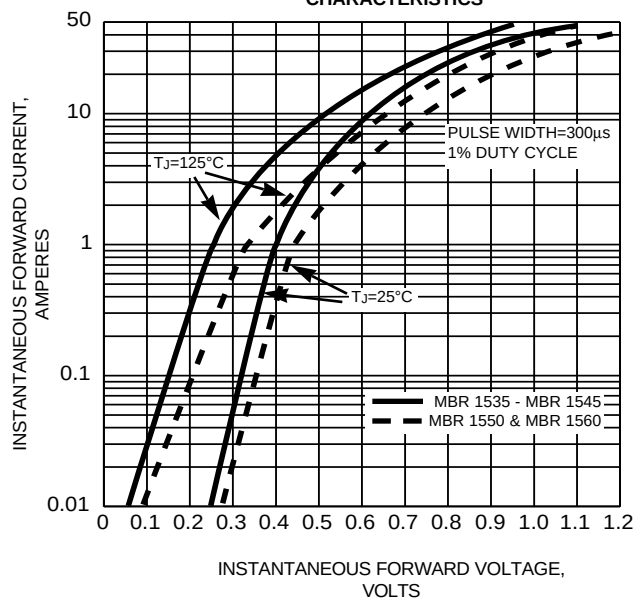


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

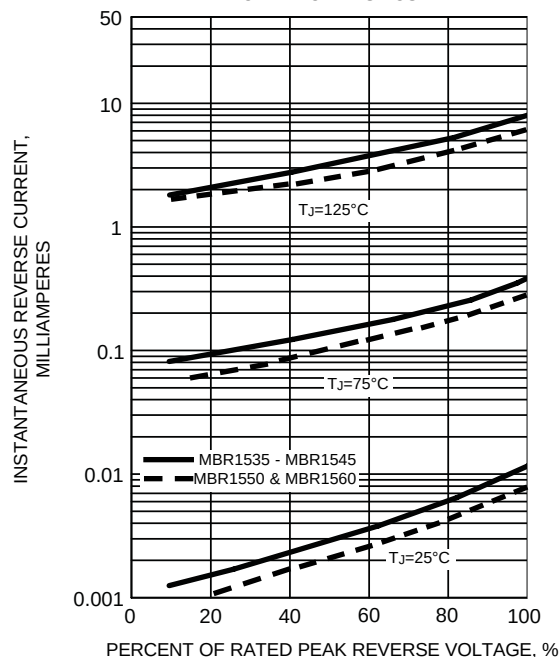


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

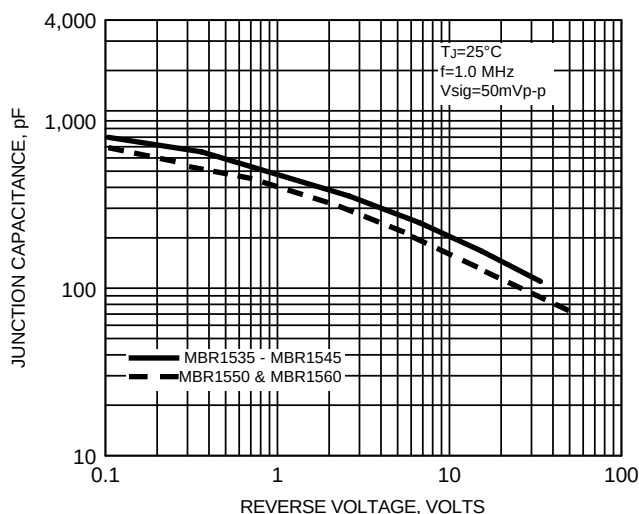


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

