

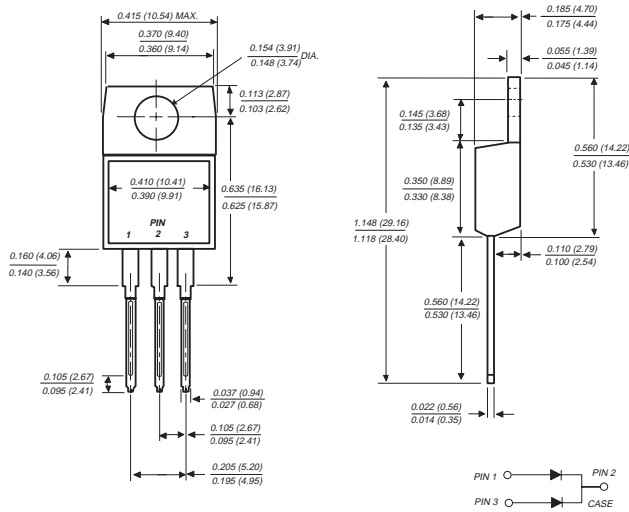
# MBR1535CT THRU MBR1560CT

## 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 $T_C=105^\circ\text{C}$	$I_{(AV)}$	15.0				Amps
Peak repetitive forward current at $T_C=105^\circ\text{C}$ 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)	$V_F$	$I_F=7.5A, T_C=25^\circ\text{C}$ $I_F=7.5A, T_C=125^\circ\text{C}$ $I_F=15A, T_C=25^\circ\text{C}$ $I_F=15A, T_C=125^\circ\text{C}$		0.75 0.65 - -		Volts
Maximum instantaneous reverse current at rated DC blocking voltage per leg (NOTE 2)	$I_R$	0.1 15.0		1.0 50.0		mA
Voltage rate of change, (rated $V_R$ )	$dv/dt$	10,000				V/ $\mu\text{s}$
Maximum thermal resistance per leg (NOTE 3)	$R_{\theta JA}$ $R_{\theta JC}$	60.0 3.0				$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_J$	-65 to +150				$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-65 to +175				$^\circ\text{C}$

#### NOTES:

- (1) 2.0 $\mu\text{s}$  pulse width, f=1.0 KHz
- (2) 300 $\mu\text{s}$ , 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

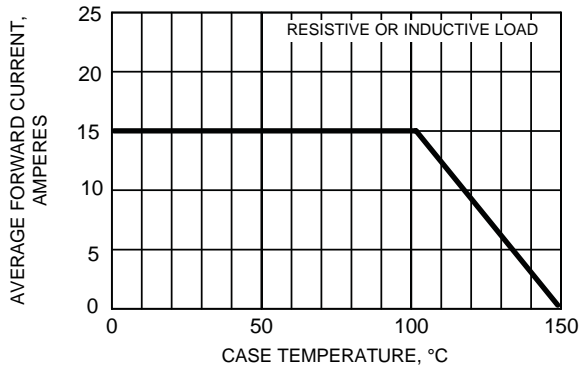


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

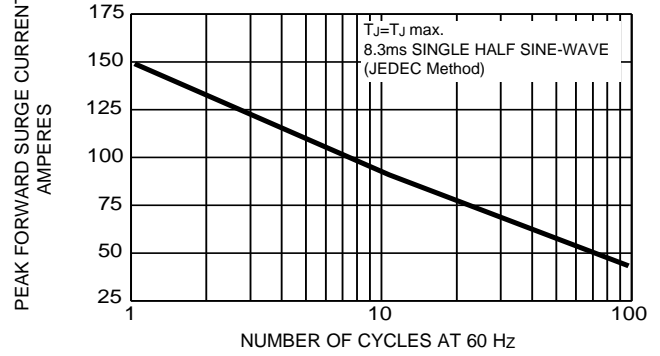


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

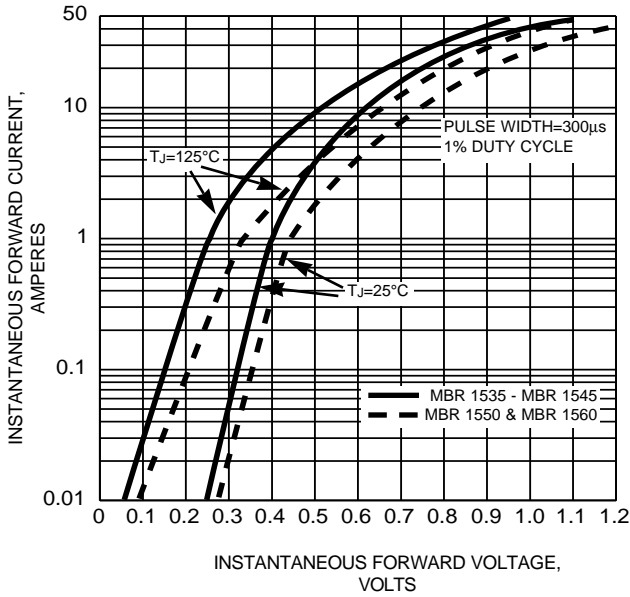


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

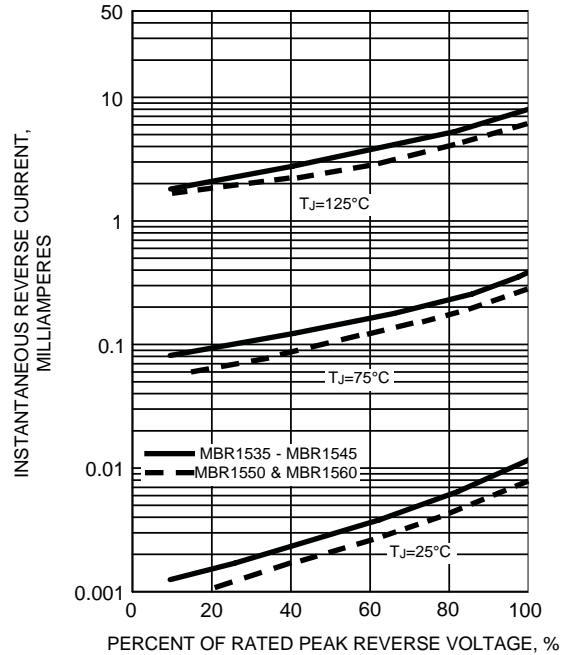


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

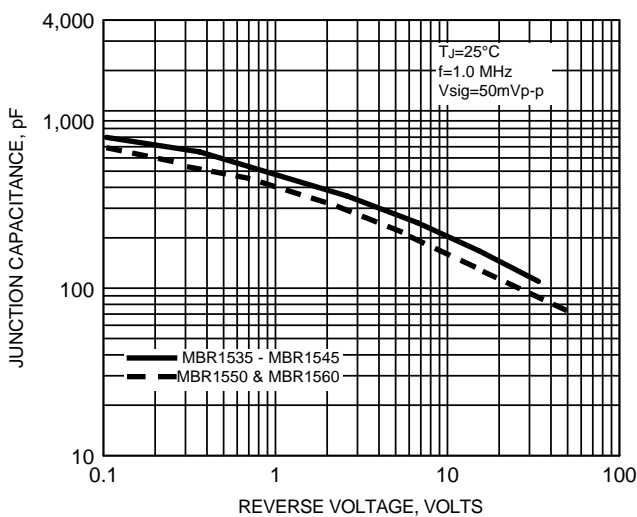


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

