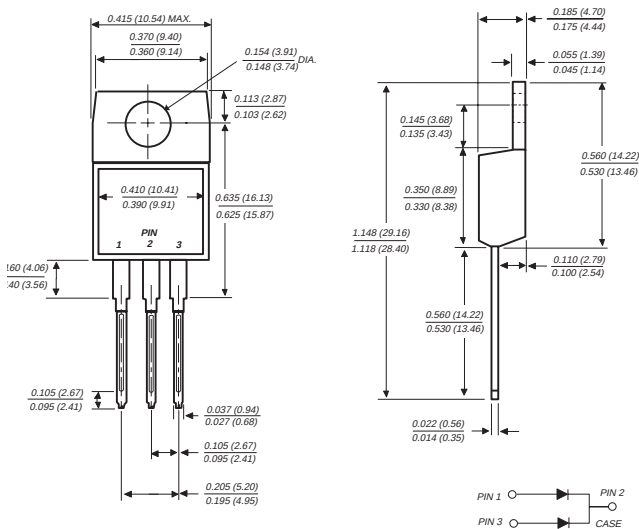


MBR2535CT THRU MBR2560CT

SCHOTTKY RECTIFIER

Reverse Voltage - 35 to 60 Volts Forward Current - 30.0 Amperes

TO-220AB



FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classifications 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
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ Guardring for overvoltage 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: Lead 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	MBR2535CT	MBR2545CT	MBR2550CT	MBR2560CT	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 =130°C	I _{AV}	30.0				Amps
Peak repetitive forward current per leg at T _C =130°C (rated V _R , square wave, 20 KHz)	I _{FRM}	30.0				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 I _F =15.0A, T _C =25°C per leg at: (NOTE 2) I _F =15.0A, T _C =25°C I _F = 30A, T _C =25°C I _F = 30A, T _C =125°C	V _F	- - 0.82 0.73		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	0.2 40.0		1.0 50.0		mA
Maximum thermal resistance (NOTE 3)	R _{θJC}	1.5				°C/W
Voltage rate of change (rated V _R)	dv/dt	10,000				V/μs
Operating junction temperature range	T _J	-65 to +150				°C
Storage temperature range	T _{STG}	-65 to +175				°C

NOTES:

(1) 2.0μs pulse width, f=1.0 KHz

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

(3) Thermal resistance from junction to case per leg

RATINGS AND CHARACTERISTIC CURVES MBR2535CT THRU MBR2560CT

FIG. 1 - FORWARD CURRENT DERATING CURVE

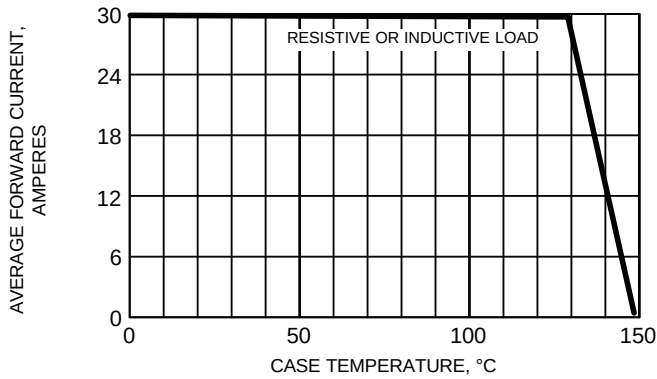


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

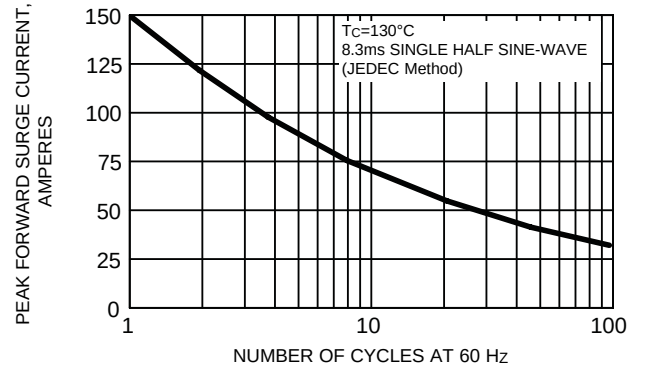


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

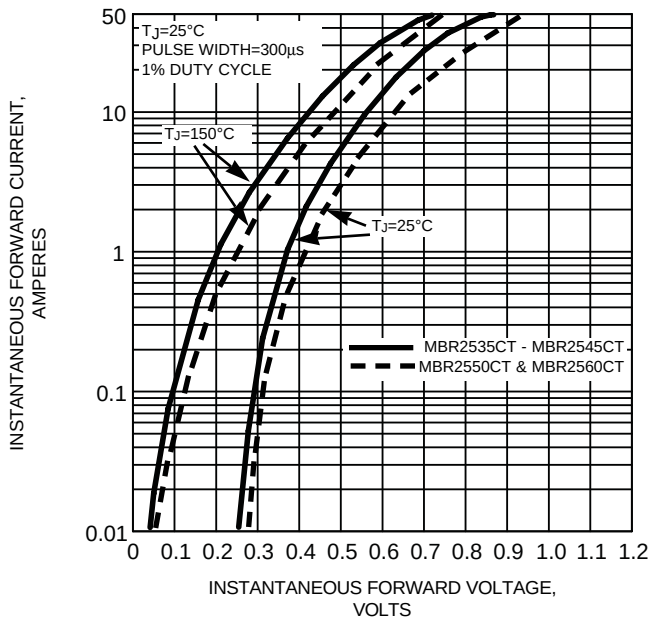


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

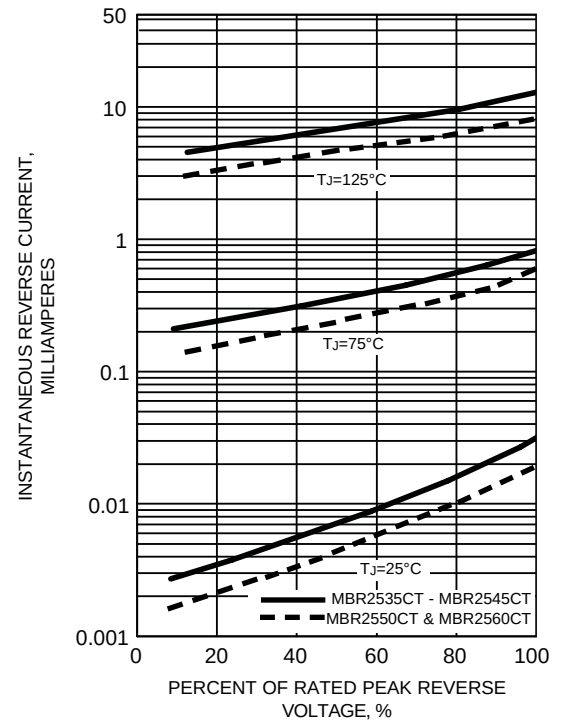


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

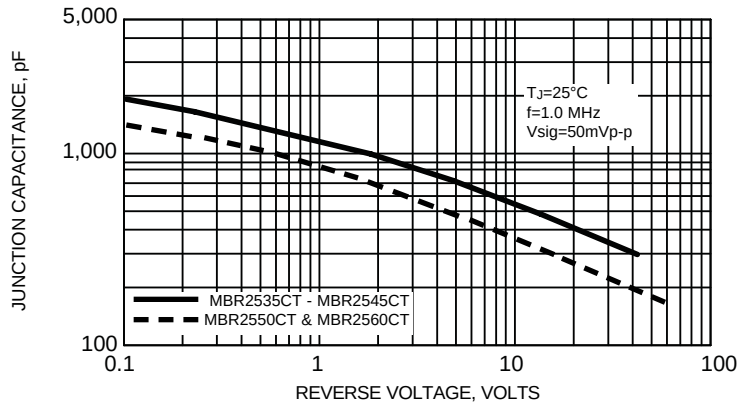


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

