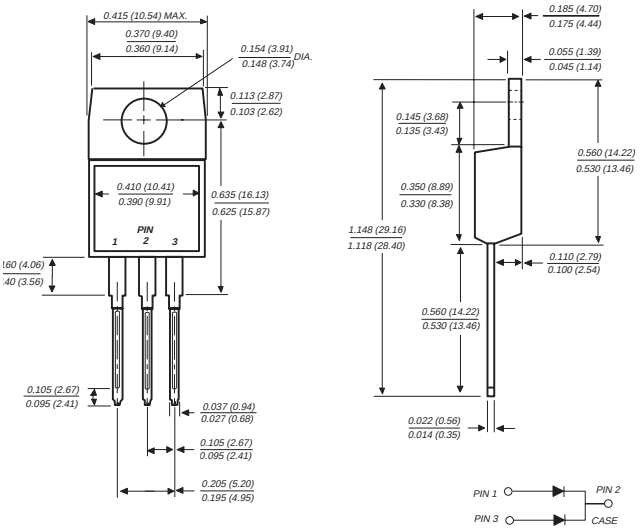
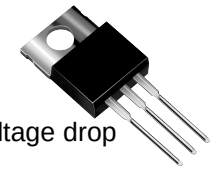
MBR2535CT THRU MBR2560CT

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 per leg at: (NOTE 2) I_F=15.0A, T_C=25°C	V_F	-		0.75		Volts
I_F=15.0A, T_C=25°C		-		0.65		
I_F= 30A, T_C=25°C		0.82		-		
I_F= 30A, T_C=125°C		0.73		-		
Maximum instantaneous reverse current at rated DC blocking voltage per leg (NOTE 2) T_C=25°C	I_R	0.2		1.0		mA
T_C=125°C		40.0		50.0		
Maximum thermal resistance (NOTE 3)	$R_{\Theta JC}$	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

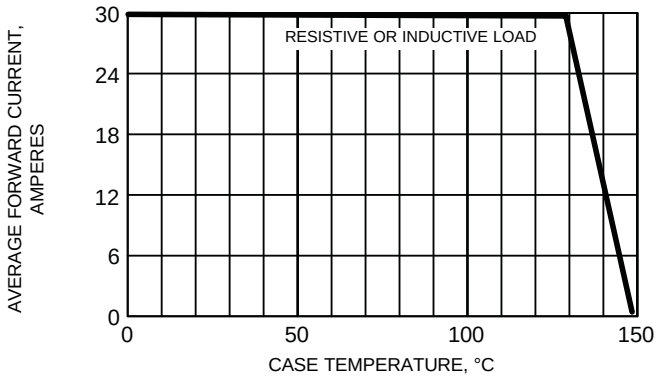


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

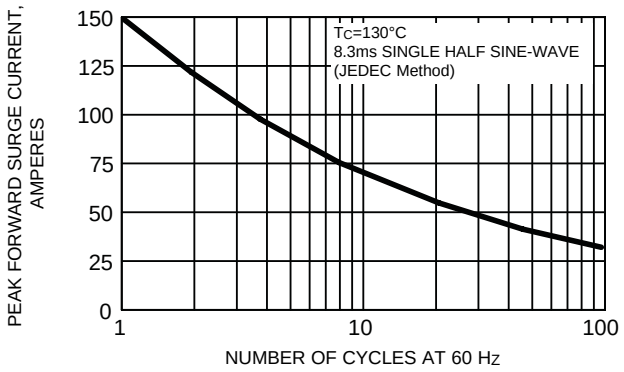


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

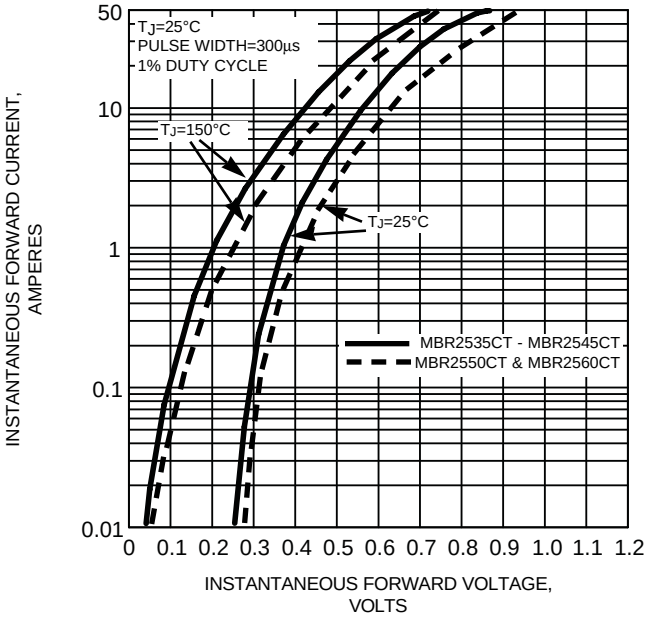


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

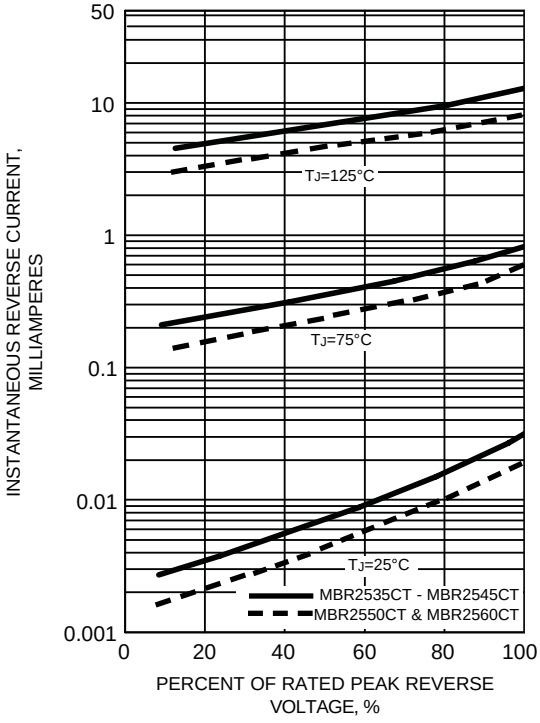


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

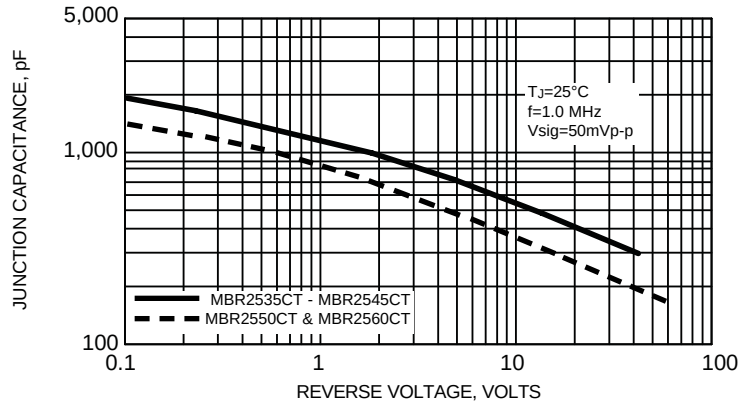


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG