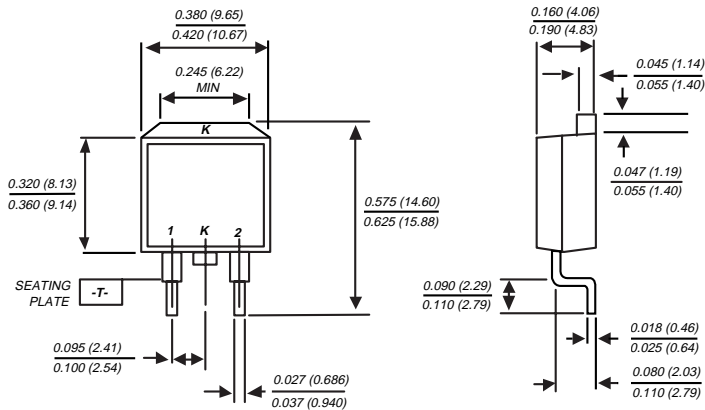


MBRB2535CT THRU MBRB2560CT

SCHOTTKY RECTIFIER

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

TO-263AB



Dimensions in inches and (millimeters)

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 in accordance with CECC 802 / Reflow guaranteed



MECHANICAL DATA

Case: JEDEC TO-263AB molded plastic body
Terminals: Lead solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any
Weight: 0.08 ounce, 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	MBRB2535CT	MBRB2545CT	MBRB2550CT	MBRB2560CT	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 $T_C=130^\circ\text{C}$	$I_{(AV)}$	30.0				Amps
Peak repetitive forward current per leg at $T_C=130^\circ\text{C}$ (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 $I_F=15.0\text{A}, T_C=25^\circ\text{C}$ per leg at: (NOTE 2)	V_F	-		0.75		Volts
$I_F=15.0\text{A}, T_C=25^\circ\text{C}$		-		0.65		
$I_F=30\text{A}, T_C=25^\circ\text{C}$		0.82		-		
$I_F=30\text{A}, T_C=125^\circ\text{C}$		0.73		-		
Maximum instantaneous reverse current at rated DC blocking voltage per leg (NOTE 2)	I_R	$T_C=25^\circ\text{C}$		$T_C=25^\circ\text{C}$		mA
		0.2		1.0		
		$T_C=125^\circ\text{C}$		$T_C=125^\circ\text{C}$		
		40.0		50.0		
Maximum thermal resistance (NOTE 3)	$R_{\theta JC}$	1.5				$^\circ\text{C}/\text{W}$
Voltage rate of change (rated V_R)	dv/dt	10,000				$\text{V}/\mu\text{s}$
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 μs pulse width, $f=1.0$ KHz
(2) Pulse test: 300 μs pulse width, 1% duty cycle
(3) Thermal resistance from junction to case per leg

RATINGS AND CHARACTERISTIC CURVES MBRB2535CT THRU MBRB2560CT

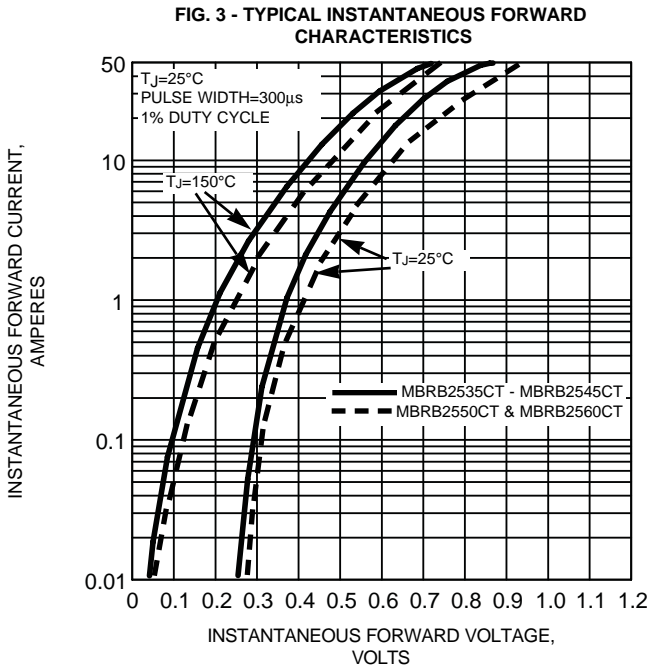
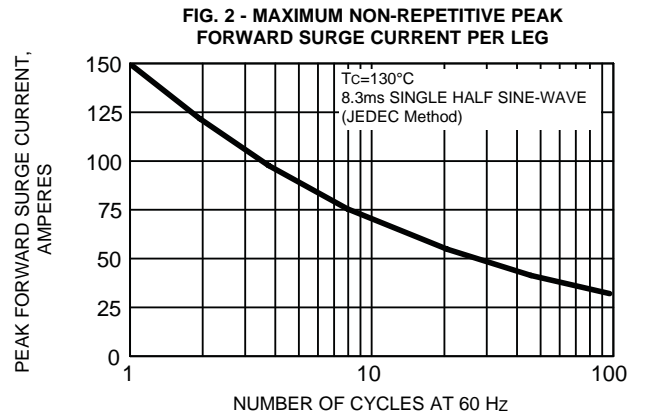
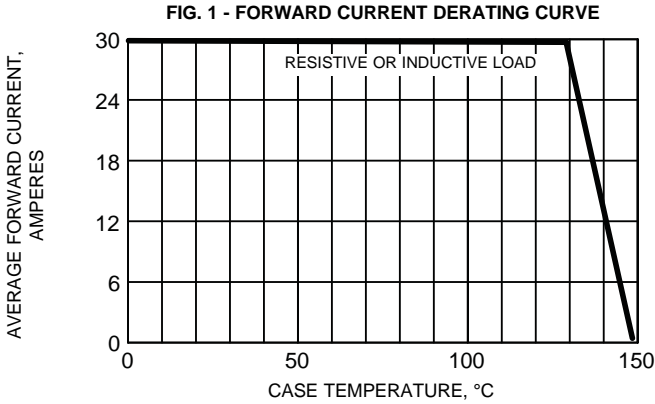


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

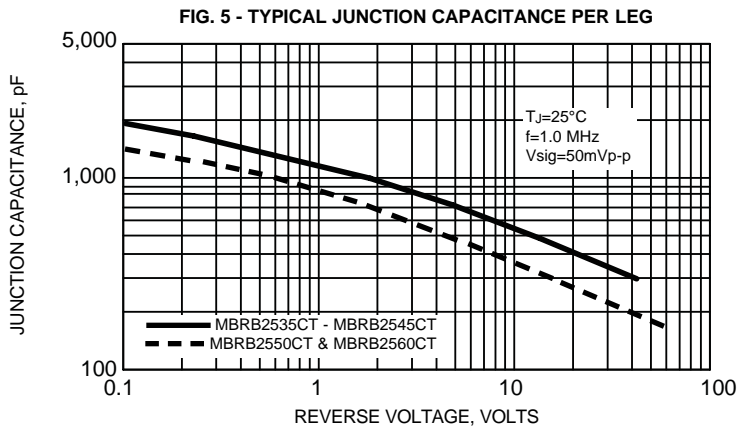
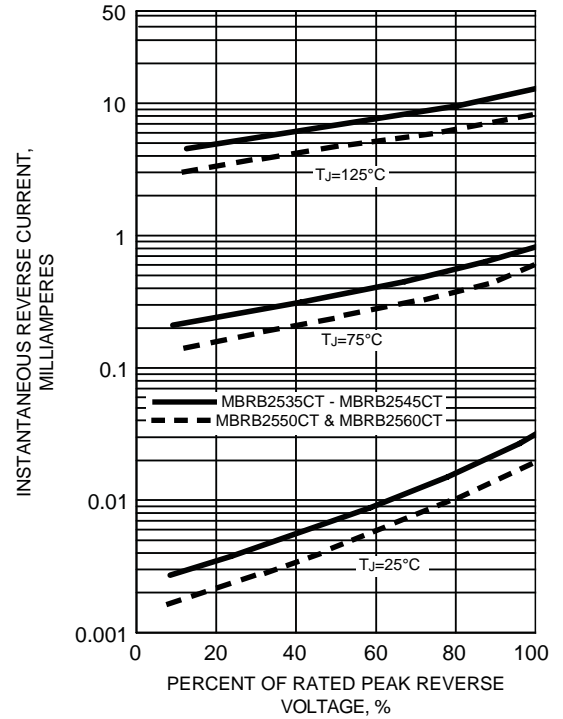


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

