



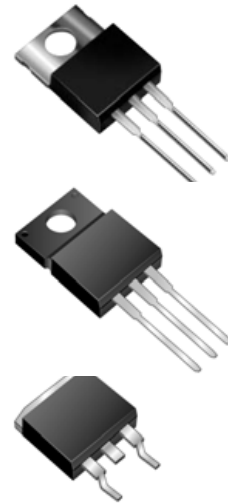
Dual Schottky Barrier Rectifiers  
Reverse Voltage 35 to 60 Volts Forward Current 25.0 Amperes

### Features

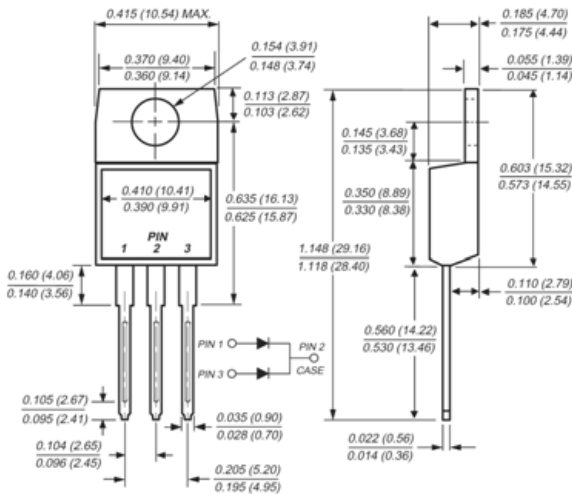
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Dual rectifier construction, positive center tap
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Guardring for overvoltage protection
- ◆ For use in low voltage, high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

### Mechanical Data

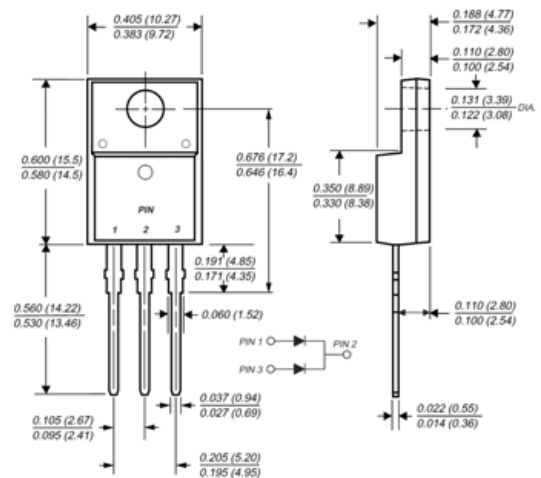
- ◆ Case: JEDEC TO-220AB, TO-220F, TO-263AB molded plastic body
- ◆ Terminals: Plated leads, solderable per MIL-STD-750, Method 2026
- ◆ Polarity: As marked
- ◆ Mounting Position: Any
- ◆ Mounting Torque: 10 in-lbs maximum
- ◆ Weight: 0.08 ounce, 2.24 grams



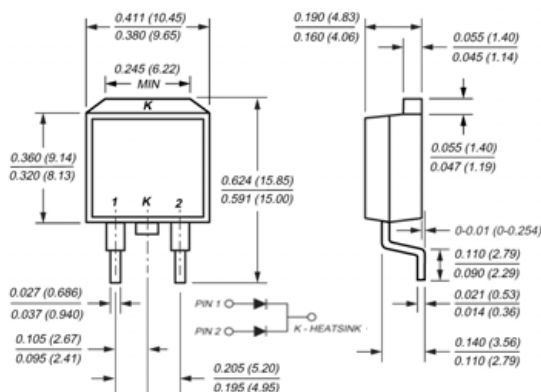
#### TO-220AB



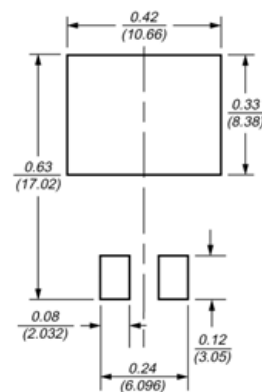
#### TO-220F



#### TO-263AB(D<sup>2</sup>PAK)



#### Mounting Pad Layout TO-263AB



Dimensions in inches and (millimeters)



## Maximum Ratings and Electrical Characteristics

(  $T_C = 25^\circ\text{C}$  unless otherwise noted )

Parameter	Symbol	MBR2535CT	MBR2545CT	MBR2550CT	MBR2560CT	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	35	45	50	60	Volts
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 $T_C=130^\circ\text{C}$ Total device Per leg	$I_{F(AV)}$	25 12.5				Amps
Peak repetitive forward current per leg (rated $V_R$ , sq. wave, 20KHz) at $T_C=130^\circ\text{C}$	$I_{FRM}$	30				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg	$I_{FSM}$	150				Amps
Peak repetitive reverse surge current per leg at $t_p = 2.0\mu\text{s}$ , 1KHz	$I_{RRM}$	1.0		0.5		Amp
Voltage rate of change (rated $V_R$ )	$dv/dt$	10,000				V/ $\mu\text{s}$
Maximum instantaneous forward voltage per leg (Note 4) at $I_F=12.5\text{A}$ , $T_C=25^\circ\text{C}$ at $I_F=12.5\text{A}$ , $T_C=125^\circ\text{C}$ at $I_F=25\text{A}$ , $T_C=25^\circ\text{C}$ at $I_F=25\text{A}$ , $T_C=125^\circ\text{C}$	$V_F$	-		0.75 0.65		Volt
		0.82		-		
		0.73		-		
Maximum instantaneous reverse current at rated DC blocking voltage per leg (Note 4) $T_C=25^\circ\text{C}$ $T_C=125^\circ\text{C}$	$I_R$	0.2 40		1.0 50		mA
Typical thermal resistance from junction to case per leg	$R_{\theta JC}$	MBR 1.5 / MBRF 4.5 / MBRB 1.5				$^\circ\text{C/W}$
RMS Isolation voltage (MBRF type only) from terminals to heatsink with $t = 1.0$ second, $RH \leq 30\%$	$V_{ISOL}$	4500 (Note 1) 3500 (Note 2) 1500 (Note 3)				Volts
Operating junction temperature range	$T_J$	-55 to +150				$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150				$^\circ\text{C}$

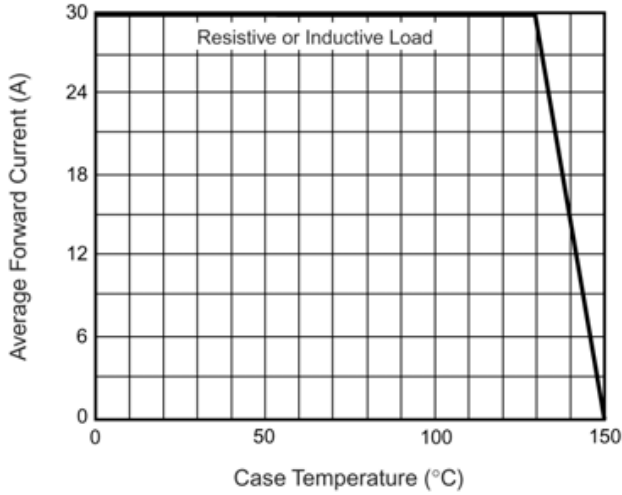
- Notes:**
1. Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset
  2. Clip mounting (on case), where leads do overlap heatsink
  3. Screw mounting with 4-40 screw, where washer diameter is < 4.9 mm (0.19")
  4. Pulse test: 300 $\mu\text{s}$  pulse width, 1% duty cycle



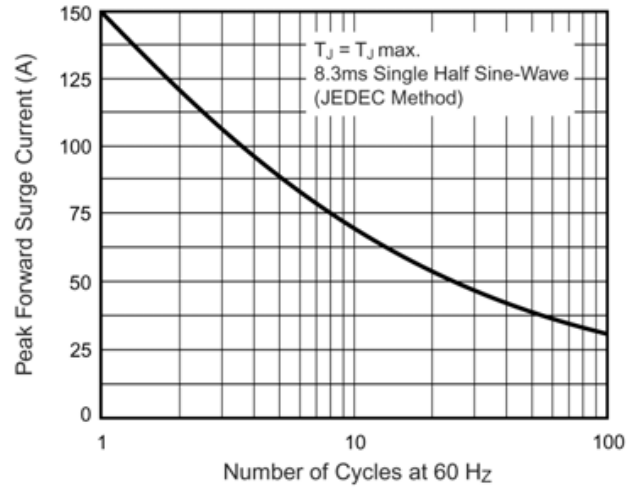
## RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

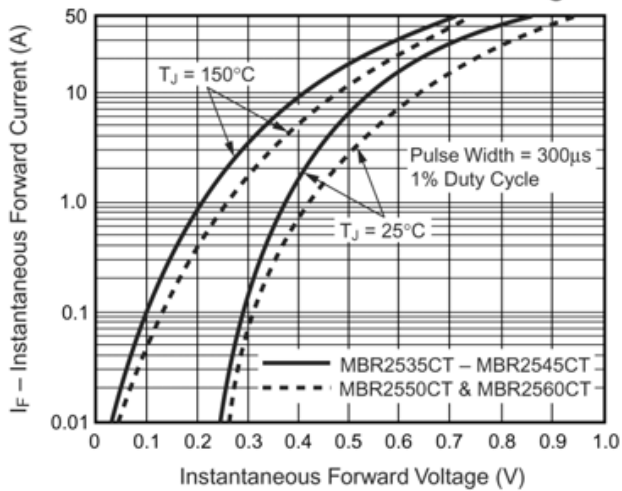
### Forward Current Derating Curve



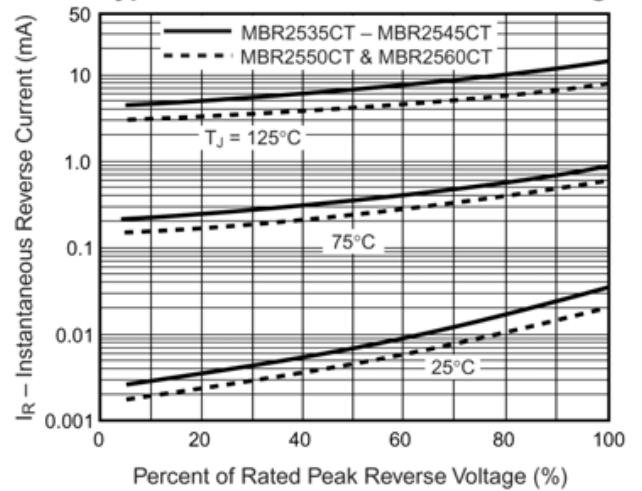
### Maximum Non-Repetitive Peak Forward Surge Current Per Leg



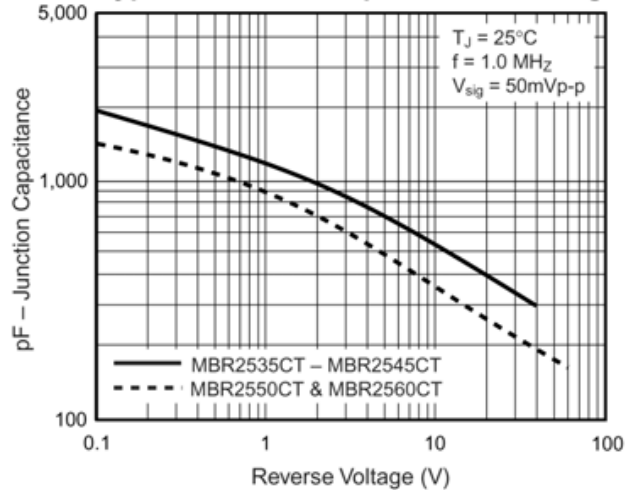
### Typical Instantaneous Forward Characteristics Per Leg



### Typical Reverse Characteristics Per Leg



### Typical Junction Capacitance Per Leg



### Typical Transient Thermal Impedance Per Leg

