

Dual Schottky Barrier Rectifiers Reverse Voltage 100 Volts Forward Current 30.0 Amperes

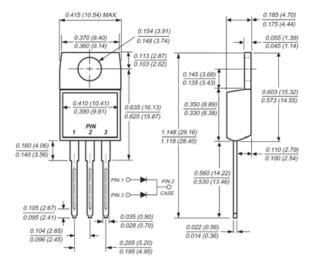
### **Features**

- 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

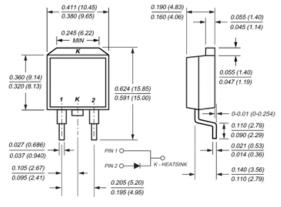
### **Mechanical Data**

- 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

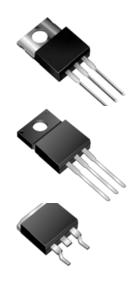
### **TO-220AB**



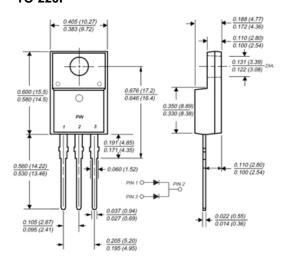
#### TO-263AB(D2PAK)



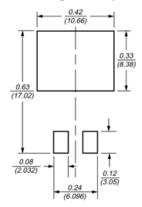
Dimensions in inches and (millimeters)



#### **TO-220F**



### **Mounting Pad Layout TO-263AB**





## MBR30100CT, MBRF30100CT, MBRB30100CT

## **Maximum Ratings and Electrical Characteristics**

(  $T_{\rm C}$  = 25°C unless otherwise noted )

MAXIMUM RATINGS and ELECTRICAL CHARACTERISTICS(TC=25°C unless otherwise moted)							
PARAMETER		ONDITIONS	SYMBOL		UNIT		
Maximum repetitive peak reverse voltage			VRRM	100	V		
Working peak reverse voltage			VRWM	100	V		
Maximum DC blocking voltage			VDC	100	V		
Maximum average forward rectified current at Tc=105°C total device per diode			lF(AV)	30 15	А		
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode			IFSM	250	А		
Peak repetitive reverse current per leg at tp=2.0us , 1KHz			IRRM	1.0	А		
Voltage rate of change (rated VR)			DV/dt	10000	V/us		
Operating junction temperature range			TJ	65 to+150	°C		
Storage temperature range			Tstg	65 to+150	°C		
Isolation voltage (ITO-220AB only) from terminal to heatsink t = 1 min			VAC	1500	V		
Maximum instantaneous forward voltage per leg	IF=15A IF=15A	TC=25℃ TC=125℃	VF	0.85 0.75	V		
Maximum reverse current per leg at working peak Reverse voltage		TJ=25°C TJ=100°C	IR	500 7	uA mA		

## Thermal Characteristics Ta=25°C unless otherwise noted

Symbol	Parameter	Max	Unit
Rejc	Thermal Resistance, Junction to Case per Leg	4.0	°C /W
RөJA	Thermal Resistance, Junction to Ambient per Leg	62.5	°C /W

### Note:

- 1. Screw mounting with 4-40 screw, where washer diameteris≤4.9mm(0.19 ")
- 2. Pulse test:300us pulse width,1% duty cycle





# **Rating and Characteristic Curves**

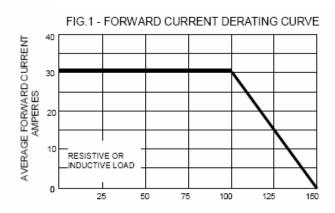
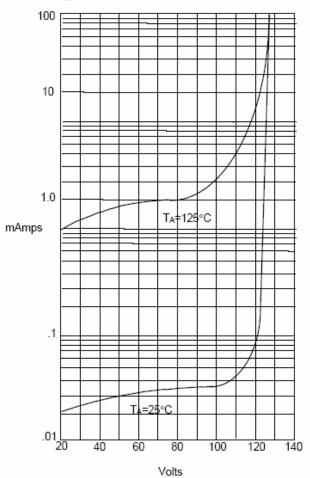
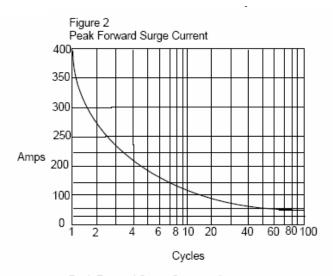


Figure 3 Typical Reverse Characteristics

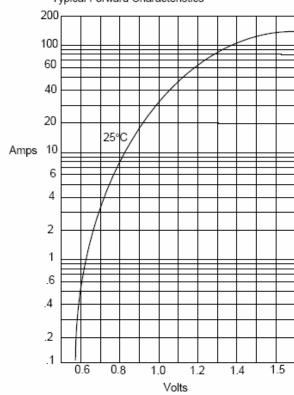


Instantaneous Reverse Leakage Current - MicroAmperes versus Percent Of Rated Peak Reverse Voltage - Volts



Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles

Figure 4
Typical Forward Characteristics



Instantaneous Forward Current - Amperes versus Instantaneous Forward Voltage - Volts