

Dual Schottky Barrier Rectifiers

FEATURES

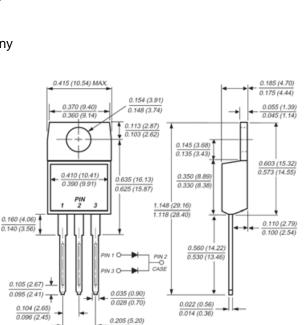
- Reverse voltage 35 to 45 V
- Forward current 3.0 A
- Plastic package has Underwriters Laboratory
 Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guard ring for over voltage protection
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case: JEDEC TO-220AB, ITO-220AB, TO-263AB molded plastic body
- Terminals: Plated leads, solder-able per MIL-STD-750, Method 2026
- High temperature soldering guaranteed: 250°C/10 seconds, 0.25" (6.35mm) from case (TO-220AB, ITO-220AB) at terminals (TO-236AB)
- Polarity: As marked Mounting Position: Any
- Mounting Torque: 10 in-lbs maximum
- Weight: 0.08 ounce, 2.24 grams

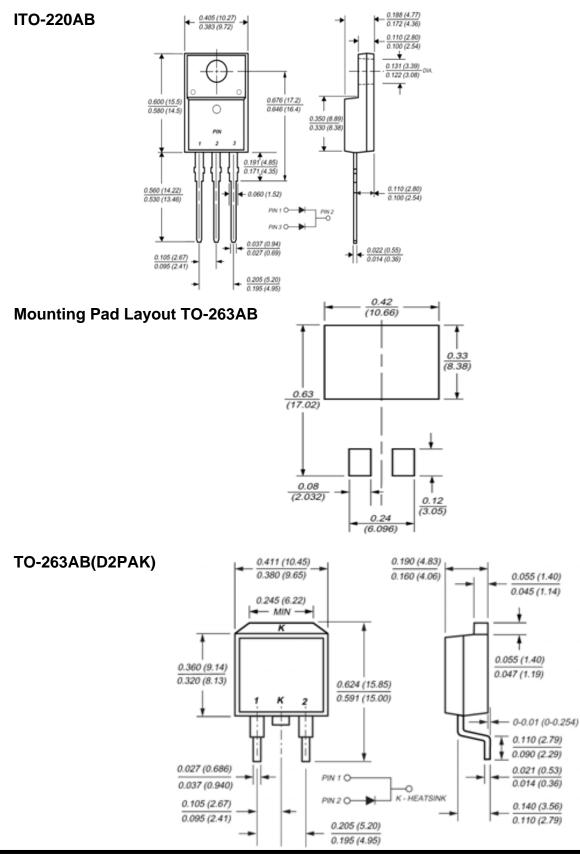
PACKAGE DIMENSIONS

TO-220AB



0.195 (4.95)







ELECTRICAL CHARACTERISTICS AND MAXIMUM RATINGS

Unless otherwise specified, these specifications apply over the operating ambient temperature of 25° C.

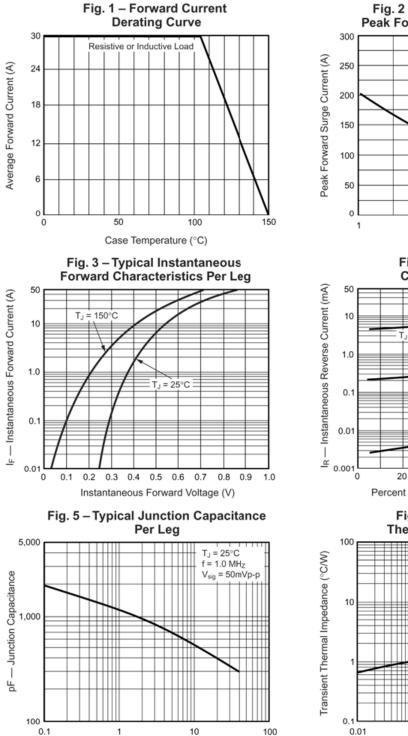
Parameter	Symbol	MBR3035CT	MBR3045CT	Unit
Maximum repetitive peak reverse voltage	$V_{\rm RRM}$	35	45	Volts
Working peak reverse voltage	$V_{\rm RWM}$	35	45	Volts
Maximum DC blocking voltage	V _{DC}	35	45	Volts
Maximum average forwardTotal devicerectified current (See Fig. 1)Per leg	l _{F(AV)}	30 15		Amps
Peak repetitive forward current (rated $\rm V_{R^{\prime}}$ sq. wave, 20KHz) at $\rm T_{c}{=}105^{o}\rm C$	I _{FRM}	30		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg	I _{FSM}	200		Amps
Peak repetitive reverse surge current per leg at $t_{\rm p}$ = 2.0 us, 1KHz	I RRM	2.0		Amps
Voltage rate of change (rated $V_{\rm R}$)	dv/dt	10,000		V/uS
Maximum instantaneous forward voltage per leg (Note 4) at I _F =15A, T _c =125°C at I _F =30A, T _c =25°C at I _F =30A, T _c =125°C	V _F	0.60 0.76 0.72		Volt
Maximum instantaneous reverse current at rated DC blocking voltage per leg (Note 4) T_=25°C T_=125°C	I _R		1.0 60	
Typical thermal resistance per leg	R _{euc}	MBR 1.5 / MBR	R 1.5 / MBRF 4.5 / MBRB 1.5	
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,	-55 to +150		۰C
Storage temperature range	Τ _{stg}	-55 to	-55 to +150	

Notes:

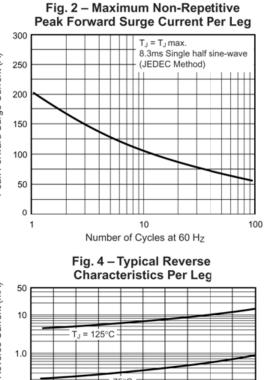
- 1. Clip mounting (on case), where lead does not overlap heat sink with 0.110" offset
- Clip mounting (on case), where leads do overlap heat sink Screw mounting with 4-40 screw, where washer diameter is < 4.9 mm (0.19")
- 3. Pulse test: 300us pulse width, 1% duty cycle



RATINGS AND CHARACTERISTIC CURVES (TA = 25° C unless otherwise specified)



Reverse Voltage (V)



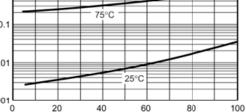
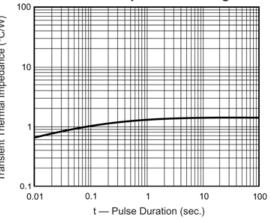




Fig. 6 – Typical Transient Thermal Impedance Per Leg





Disclaimer

Information furnished by Silicon Standard Corporation is believed to be accurate and reliable. However, Silicon Standard Corporation makes no guarantee or warranty, expressed or implied, as to the reliability, accuracy, timeliness or completeness of such information and assumes no responsibility for its use, or for infringement of any patent or other intellectual property rights of third parties that may result from its use. Silicon Standard reserves the right to make changes as it deems necessary to any products described herein for any reason, including without limitation enhancement in reliability, functionality or design. No license is granted, whether expressly or by implication, in relation to the use of any products described herein or to the use of any information provided herein, under any patent or other intellectual property rights of Silicon Standard Corporation or any third parties.