



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**TBR3500  
THRU  
TBR3516**

**TECHNICAL SPECIFICATIONS OF THREE-PHASE SILICON BRIDGE RECTIFIER**  
**VOLTAGE RANGE - 50 to 1600 Volts** **CURRENT - 35 Amperes**

**FEATURES**

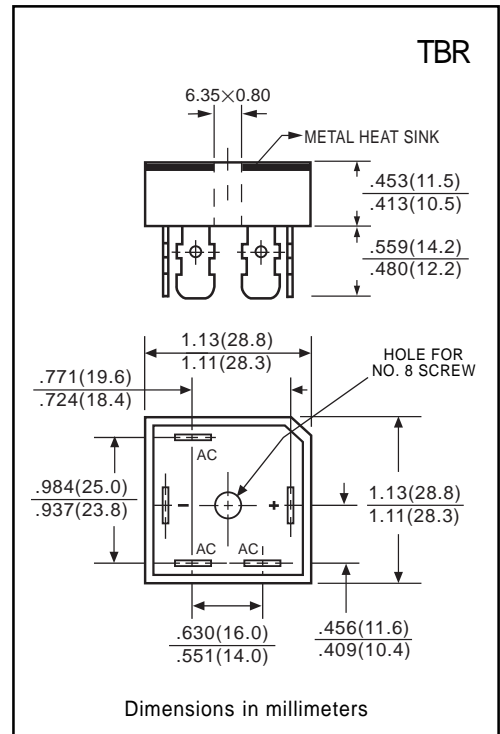
- \* Diffused Junction
- \* Low Forward Voltage Drop
- \* High Current Capability
- \* High Reliability
- \* High Surge Current Capability
- \* Ideal for Printed Circuit Boards

**MECHANICAL DATA**

- \* Case: Molded plastic with heatsink
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Plated .25"(6.35mm) Faston lugs, Solderable per MIL-STD-202E, Method 208 guaranteed
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 20 grams(approx.)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.



		SYMBOL	TBR 3500	TBR 3501	TBR 3502	TBR 3504	TBR 3506	TBR 3508	TBR 3510	TBR 3512	TBR 3514	TBR 3516	UNITS
Maximum Recurrent Peak Reverse Voltage & DC Blocking Voltage		$V_{RRM}, V_{DC}$	50	100	200	400	600	800	1000	1200	1400	1600	Volts
Maximum RMS Bridge Input Voltage		$V_{RMS}$	35	70	140	280	420	560	700	840	980	1120	Volts
Peak Non-Repitative Reverse Voltage		$V_{RSM}$	75	150	275	500	725	900	1100	1300	1500	1700	Volts
Maximum Average Forward Rectified Output Current at $T_c = 50^\circ C$		$I_o$	35									Amps	
Non-Repitative Peak Forward Surge Current	No Voltage Reapplied	$t=8.3ms$ at 60Hz	500									Amps	
		$t=10ms$ at 50Hz	475										
	100% $V_{RRM}$ Reapplied	$t=8.3ms$ at 60Hz	420										
		$t=10ms$ at 50Hz	400										
Forward Voltage(per element) @ $T_J=25^\circ C$ , @ $I_{FM}=40A_{pk}$ per single junction		$V_F$	1.19									Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage per element		@ $T_J = 25^\circ C$	10									$\mu$ Amps	
		@ $T_J = 125^\circ C$	5.0									mAmps	
$I^2t$ Rating for Fusing	No Voltage Reapplied	$t=8.3ms$ at 60Hz	1030									$A^2Sec$	
		$t=10ms$ at 50Hz	1130										
	100% $V_{RRM}$ Reapplied	$t=8.3ms$ at 60Hz	730										
		$t=10ms$ at 50Hz	800										
RMS Isolation Voltage from Case to Lead		$V_{ISO}$	2500									Volts	
Thermal Resistance Case to Heatsink Mounting Surface, Smooth, Flat and Greased		$R_{\theta CS}$	0.2									K/W	
Thermal Resistance Junction to Case at DC Operation per Bridge		$R_{\theta JC}$	1.16									K/W	
Operating and Storage Temperature Range		$T_J, T_{STG}$	-40 to +150									$^\circ C$	

# RATING AND CHARACTERISTIC CURVES ( TBR3500 THRU TBR3516 )

FIG. 1 - MAXIMUM NON-REPETITIVE SURGE CURRENT

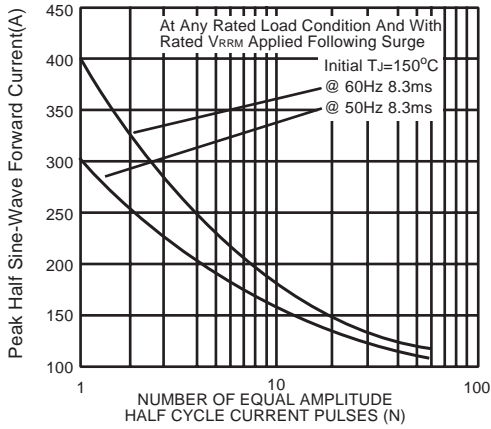


FIG. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

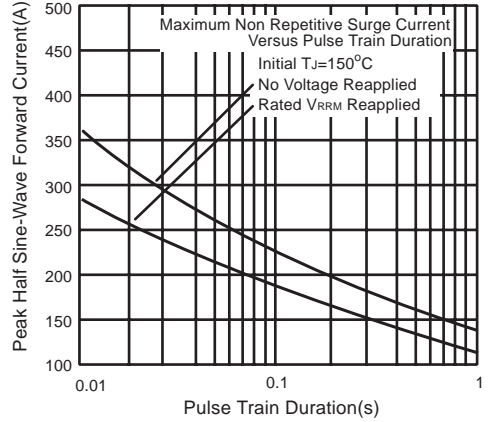


FIG. 3 - TOTAL POWER LOSS CHARACTERISTICS

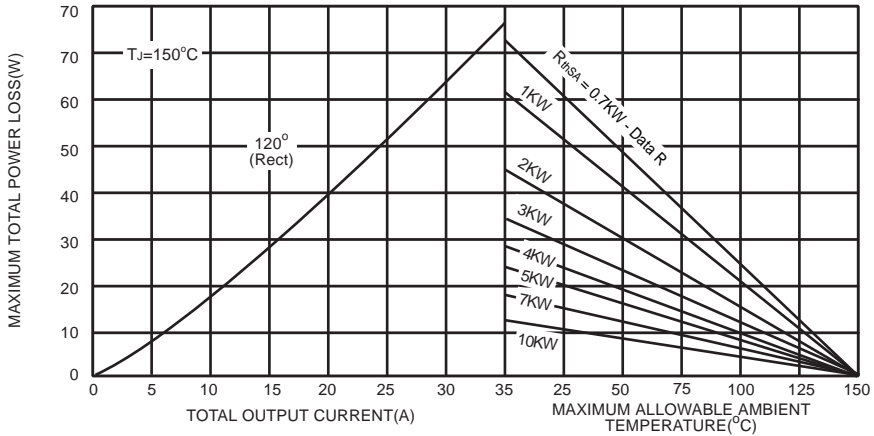


FIG. 4 - FORWARD VOLTAGE DROP CHARACTERISTICS

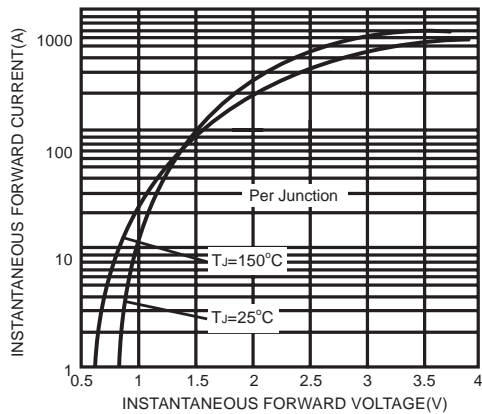
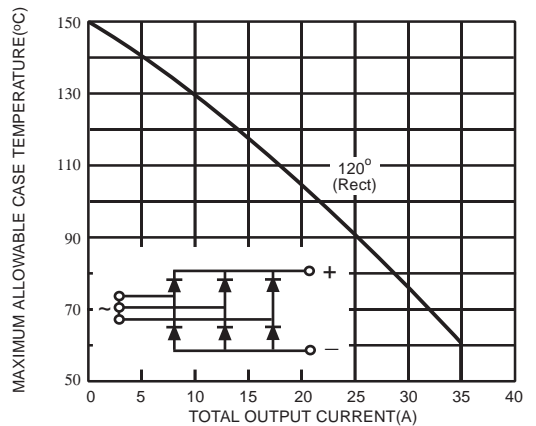


FIG. 5 - CURRENT RATINGS CHARACTERISTICS



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