



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

TBR2500
THRU
TBR2516

TECHNICAL SPECIFICATIONS OF THREE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1600 Volts

CURRENT - 25 Amperes

FEATURES

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

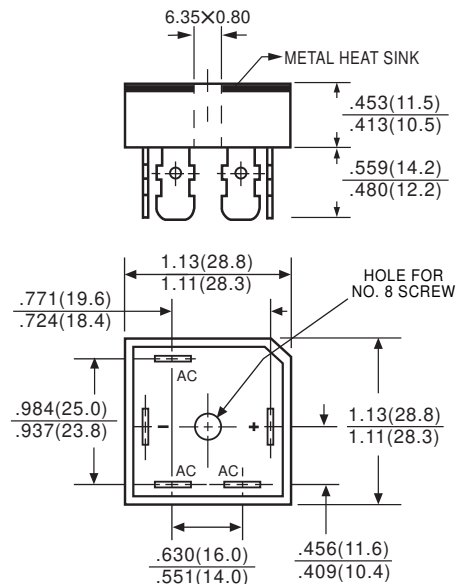
MECHANICAL DATA

- * 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%.

TBR



Dimensions in millimeters

			SYMBOL	TBR 2500	TBR 2501	TBR 2502	TBR 2504	TBR 2506	TBR 2508	TBR 2510	TBR 2512	TBR 2514	TBR 2516	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-Repetitive 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	25									Amps	
Non-Repetitive Peak Forward Surge Current	No Voltage Reapplied	$t=8.3ms$ at 60Hz	I_{FSM}	375									Amps	
		$t=10ms$ at 50Hz		360										
	100% V_{RRM} Reapplied	$t=8.3ms$ at 60Hz		314										
		$t=10ms$ at 50Hz		300										
Forward Voltage(per element) @ $T_J=25^{\circ}C$, @ $I_{FM}=40A_{PK}$ per single junction			V_F	1.26									Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage per element		@ $T_J = 25^{\circ}C$	I_R	10									μ Amps	
		@ $T_J = 125^{\circ}C$		5.0									mAmps	
I_{2t} Rating for Fusing	No Voltage Reapplied	$t=8.3ms$ at 60Hz	I_{2t}	580									A^2 Sec	
		$t=10ms$ at 50Hz		635										
	100% V_{RRM} Reapplied	$t=8.3ms$ at 60Hz		410										
		$t=10ms$ at 50Hz		450										
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			$R_{\theta JC}$	1.42									K/W	
Operating and Storage Temperature Range			T_J, T_{STG}	-40 to +150									$^{\circ}C$	

RATING AND CHARACTERISTIC CURVES (TBR2500 THRU TBR2516)

FIG. 1 - MAXIMUM NON-REPETITIVE SURGE CURRENT

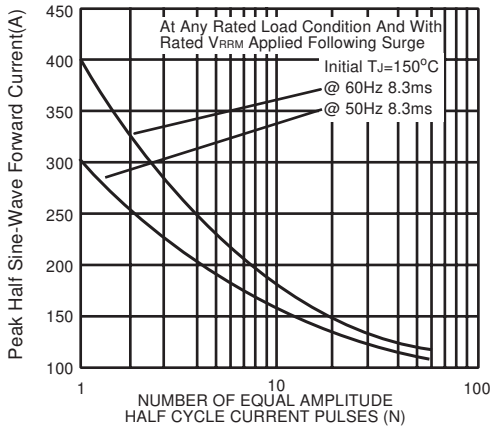


FIG. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

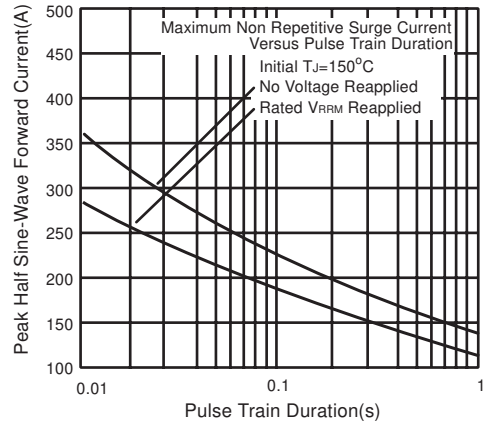


FIG. 3 - TOTAL POWER LOSS CHARACTERISTICS

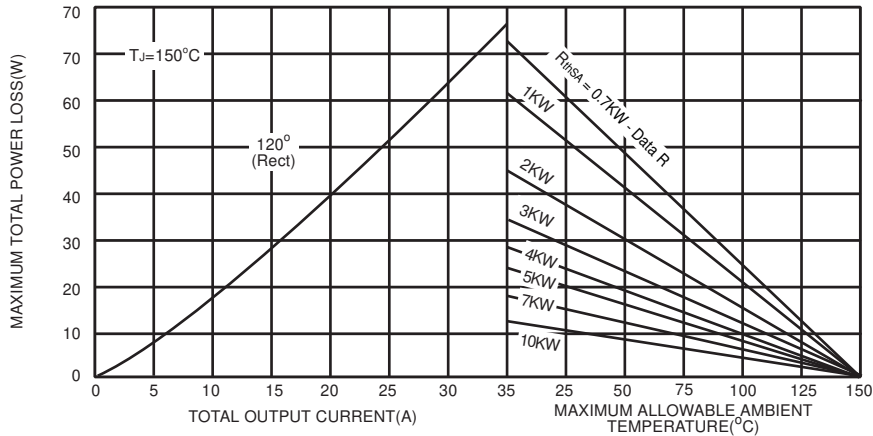


FIG. 4 - FORWARD VOLTAGE DROP CHARACTERISTICS

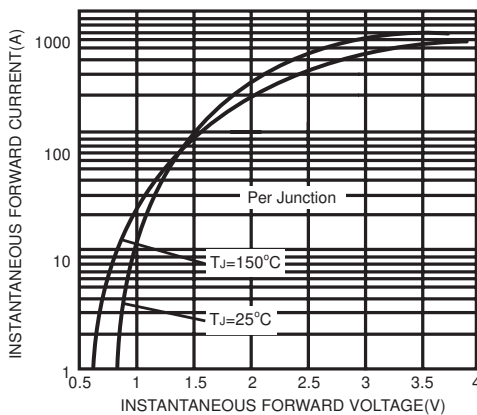
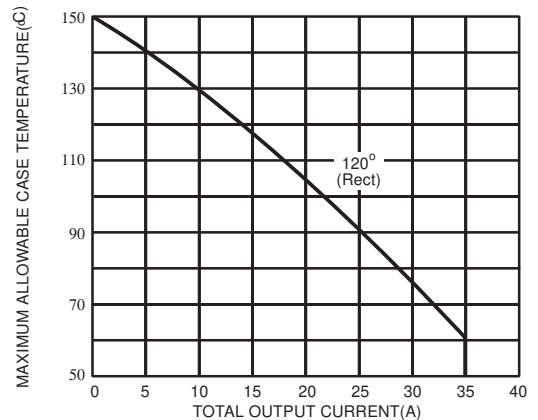


FIG. 5 - CURRET RATINGS CHARACTERISTICS



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