



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**TBR1500  
THRU  
TBR1516**

**TECHNICAL SPECIFICATIONS OF THREE-PHASE SILICON BRIDGE RECTIFIER**

**VOLTAGE RANGE - 50 to 1600 Volts**

**CURRENT - 15 Amperes**

**FEATURES**

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

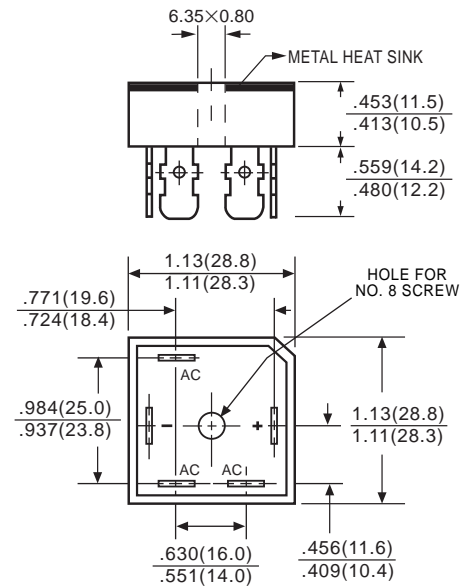
**MECHANICAL DATA**

- \* 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

**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 1500	TBR 1501	TBR 1502	TBR 1504	TBR 1506	TBR 1508	TBR 1510	TBR 1512	TBR 1514	TBR 1516	UNITS
Maximum Recurrent Peak Reverse Voltage & DC Blocking Voltage		V <sub>RRM</sub> , V <sub>DC</sub>	50	100	200	400	600	800	1000	1200	1400	1600	Volts
Maximum RMS Bridge Input Voltage		V <sub>RRMS</sub>	35	70	140	280	420	560	700	840	980	1120	Volts
Peak Non-Repetitive Reverse Voltage		V <sub>RSM</sub>	75	150	275	500	725	900	1100	1300	1500	1700	Volts
Maximum Average Forward Rectified Output Current at T <sub>c</sub> = 50°C		I <sub>o</sub>	15										Amps
Non-Repetitive Peak Forward Surge Current	No Voltage Reapplied	t=8.3ms at 60Hz	375										Amps
		t=10ms at 50Hz	360										
	100% V <sub>RRM</sub> Reapplied	t=8.3ms at 60Hz	314										
		t=10ms at 50Hz	300										
Forward Voltage(per element) @T <sub>J</sub> =25°C, @I <sub>FM</sub> =40A <sub>PK</sub> per single junction		V <sub>F</sub>	1.4										Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element		@T <sub>J</sub> = 25°C	10										μAmps
		@T <sub>J</sub> = 125°C	5.0										mAmps
I <sup>2</sup> t Rating for Fusing		I <sup>2</sup> t	580										A <sup>2</sup> Sec
			635										
			410										
			450										
RMS Isolation Voltage from Case to Lead		V <sub>ISO</sub>	2500										Volts
Thermal Resistance Case to Heatsink Mounting Surface, Smooth, Flat and Greased		R <sub>θCS</sub>	0.2										K/W
Thermal Resistance Junction to Case at DC Operation per Bridge		R <sub>θJC</sub>	1.6										K/W
Operating and Storage Temperature Range		T <sub>J</sub> , T <sub>STG</sub>	-40 to +150										°C

# RATING AND CHARACTERISTIC CURVES ( TBR1500 THRU TBR1516 )

FIG. 1 - MAXIMUM NON-REPETITIVE SURGE CURRENT

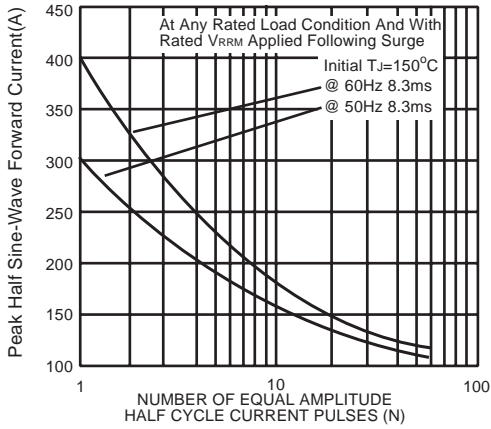


FIG. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

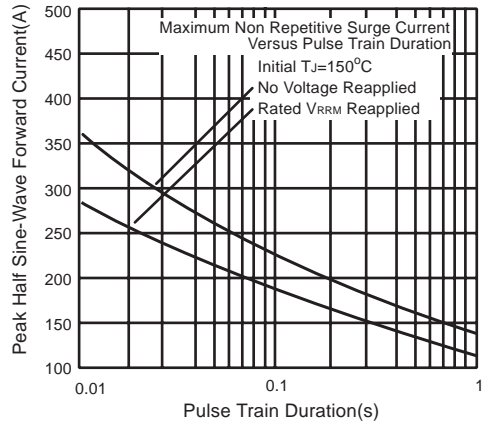


FIG. 3 - TOTAL POWER LOSS CHARACTERISTICS

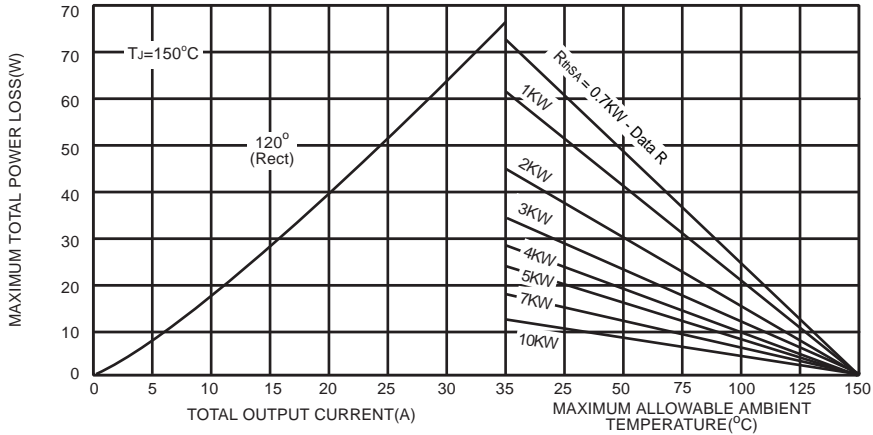


FIG. 4 - FORWARD VOLTAGE DROP CHARACTERISTICS

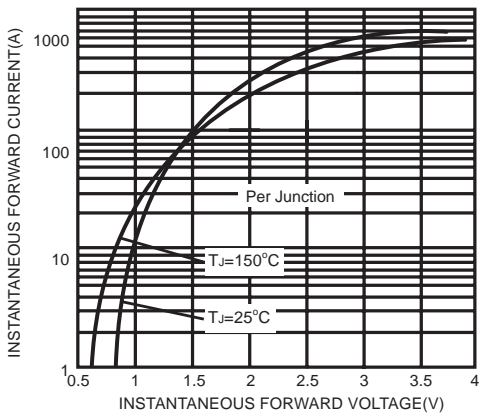
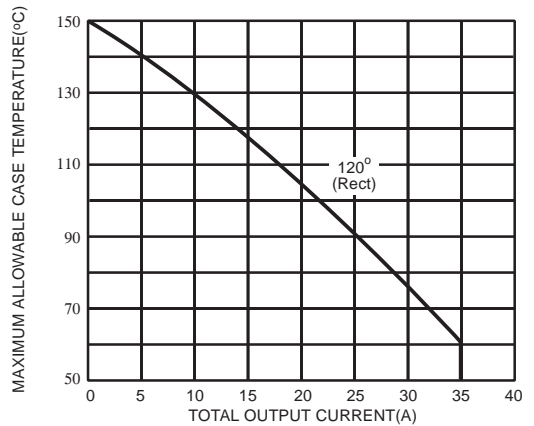


FIG. 5 - CURENT RATINGS CHARACTERISTICS



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