

**SILICON PASSIVATED THREE PHASE  
BRIDGE RECTIFIERS**

REVERSE VOLTAGE - **50 to 1600** Volts  
FORWARD CURRENT - **25/35** Amperes

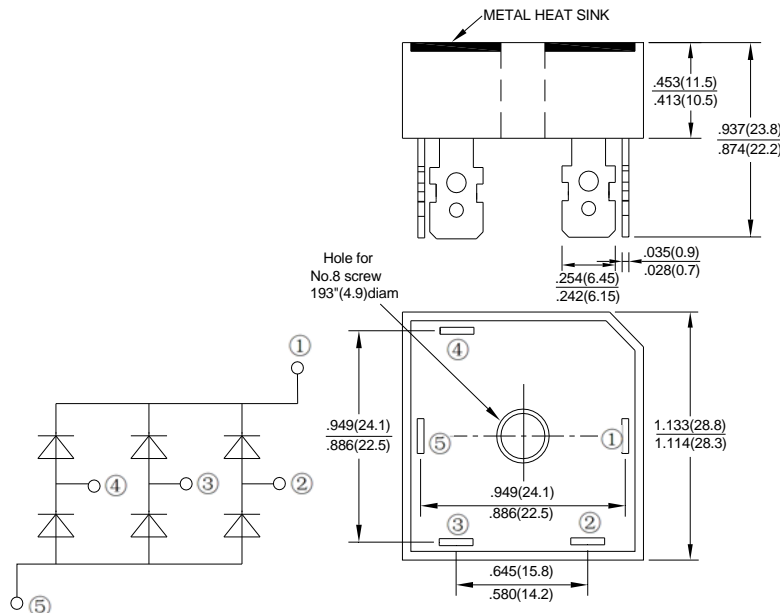
**Features**

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

**MECHANICAL DATA**

- Case: Epoxy Case with Heat Sink Internally Mounted in the Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 20 grams (approx.)
- Mounting Position: Bolt Down on Heatsink With Silicone Thermal Compound Between Bridge and Mounting Surface for Maximum Heat Transfer Efficiency
- Mounting Torque: 20 in lbs. Max.

**Dimensions In Inches and (millimeters)**



**SBR**

**Part Number Code**

<b>T</b>	<b>S</b>	<b>B</b>	<b>R</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>0</b>
1	2	3	4	5	6	7	8

Product Type	
TSK	TSBR series

Rectified Current	
15	15A
25	25A
35	35A

Peak Repetitive Reverse Voltage (V)	
00	50V
01	100V
02	200V

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

VOLTAGE RATINGS												
CHARACTERISTICS	SYMBOL	-00	-01	-02	-04	-06	-08	-10	-12	-14	-16	UNIT
Peak Repetitive Voltage	V <sub>R</sub> RM											
Working Peak Reverse Voltage	V <sub>R</sub> WM	50	100	200	400	600	800	1000	1200	1400	1600	V
DC Blocking Voltage	V <sub>R</sub>											
Peak Non-Repetitive Reverse Voltage	V <sub>R</sub> SM	75	150	275	500	725	900	1100	1300	1500	1700	V
RMS Reverse Voltage	V <sub>R</sub> (RMS)	35	70	140	280	420	560	700	840	980	1120	V
FORWARD CONDUCTION												
CHARACTERISTICS	SYMBOL	TSBR25					TSBR35					UNIT
Maximum Average Forward Rectified Current @TC=60°C	I <sub>o</sub>	25					35					A
Non-Repetitive Peak Forward Surge Current (No Voltage Reapplied t=8.3ms at 60HZ) (No Voltage Reapplied t=10ms at 50HZ) (100% VRRM Reapplied t=8.3ms at 60HZ) (100% VRRM Reapplied t=10ms at 50HZ)	I <sub>FSM</sub>	375 360 314 300					500 475 420 400					A
I <sup>2</sup> t Rating for fusing (No Voltage Reapplied t=8.3ms at 60HZ) (No Voltage Reapplied t=10ms at 50HZ) (100% VRRM Reapplied t=8.3ms at 60HZ) (100% VRRM Reapplied t=10ms at 50HZ)	I <sup>2</sup> t	580 635 410 450					1030 1130 730 800					A <sup>2</sup> S
Maximum Forward Voltage drop per element at 12.5A/17.5A Peak	V <sub>F</sub>	1.1					1.2					V
Peak Reverse Current (per leg) @T <sub>J</sub> =25°C At Rated DC Blocking Voltage @T <sub>J</sub> =125°C	I <sub>R</sub>	10 5.0										μA mA
RMS Isolation Voltage from Case to Lead	V <sub>ISO</sub>	2500										V
THERMAL CHARACTERISTICS												
Operating Temperature Range	T <sub>J</sub>	-55 to +150										°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150										°C
Thermal Resistance Junction to Case at DC Operation per Bridge	R <sub>JC</sub>	1.42					1.16					K/W
Thermal Resistance Case to Heatsink Mounting Surface, Smooth, Flat and Greased	R <sub>CS</sub>	0.2										K/W

RATING AND CHARACTERISTIC CURVES ( TSBR25A SERIES)

FIG.1-CURRENT RATING CHARACTERISTICS

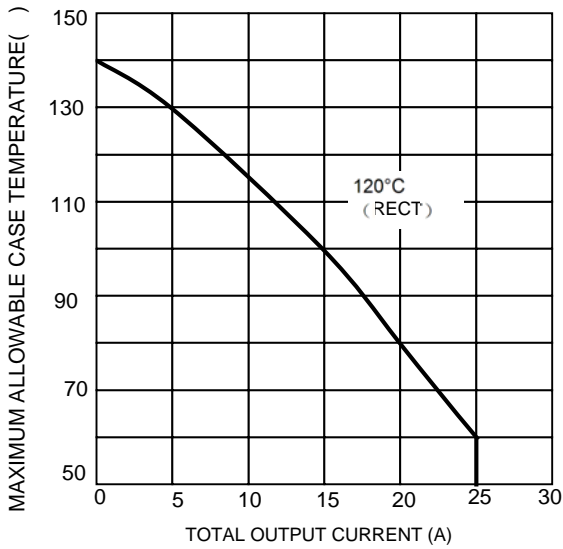


FIG.2-FORWARD VOLTAGE DROP CHARACTERISTICS

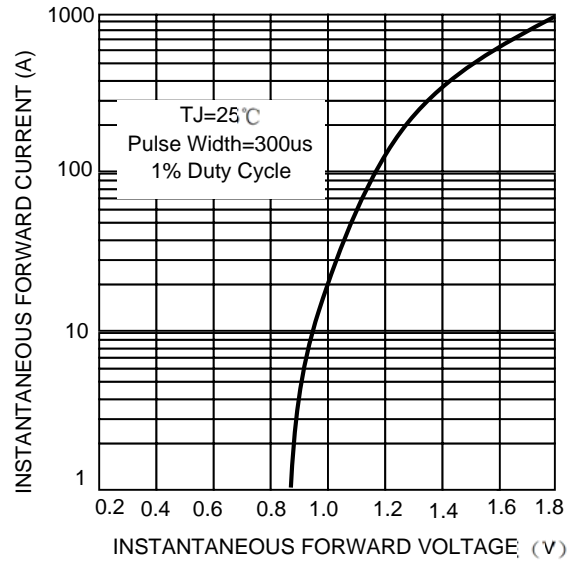


FIG.3-TOTAL POWWER LOSS CHARACTERISTICS

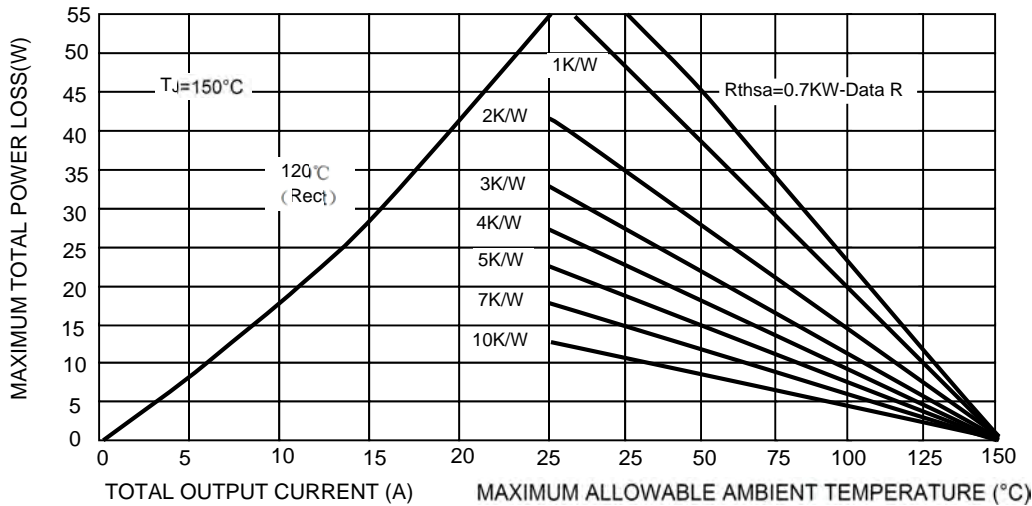


FIG.4-MAXIMUM NON-REPETITIVE SURGE CURRENT

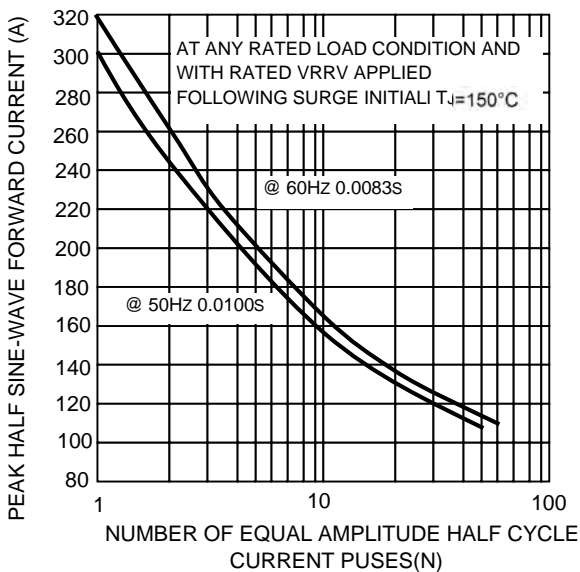
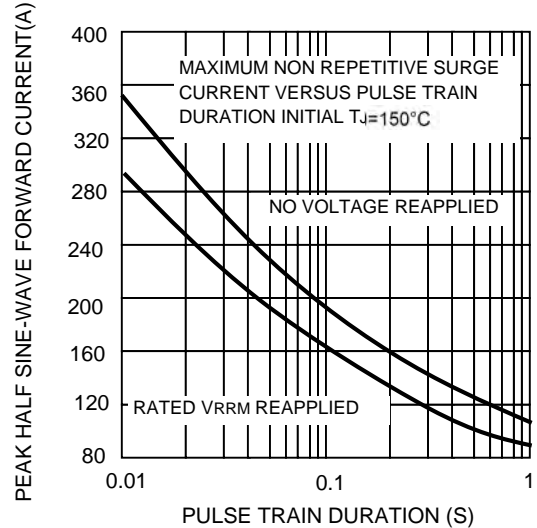


FIG.5-MAXIMUM NON-REPETITIVE SURGE CURRENT



RATING AND CHARACTERISTIC CURVES (TSBR35A SERIES)

FIG.6-CURRENT RATING CHARACTERISTICS

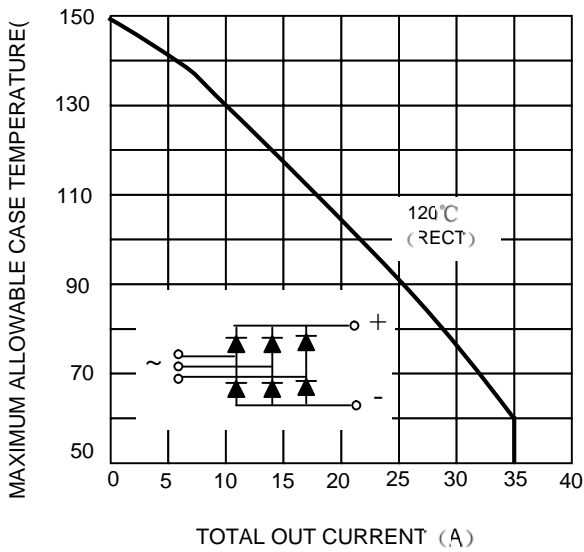


FIG.2-FORWARD VOLTAGE DROP CHARACTERISTICS

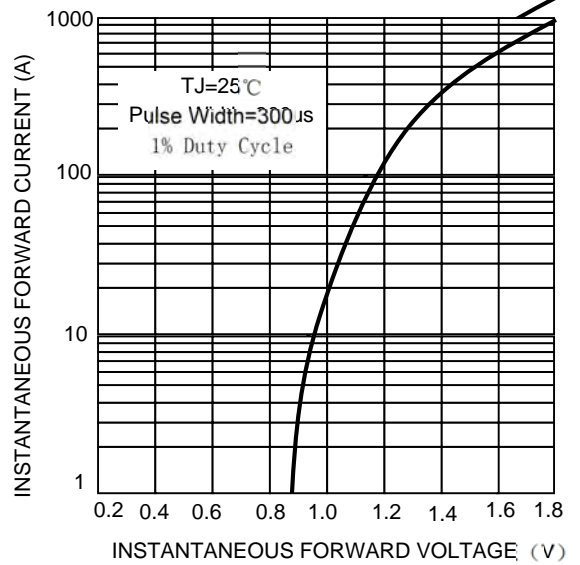


FIG.8-TOTAL POWER LOSS CHARACTERISTICS

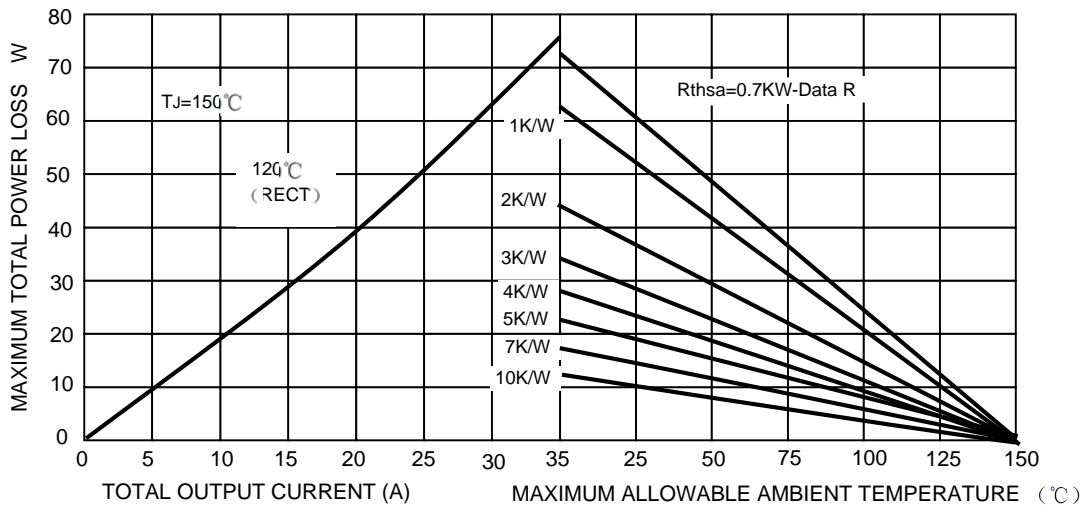


FIG.9-MAXIMUM NON-REPETITIVE SURGE CURRENT

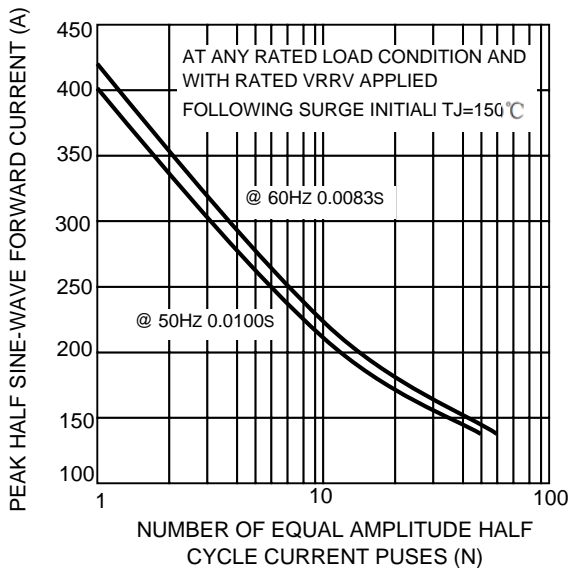
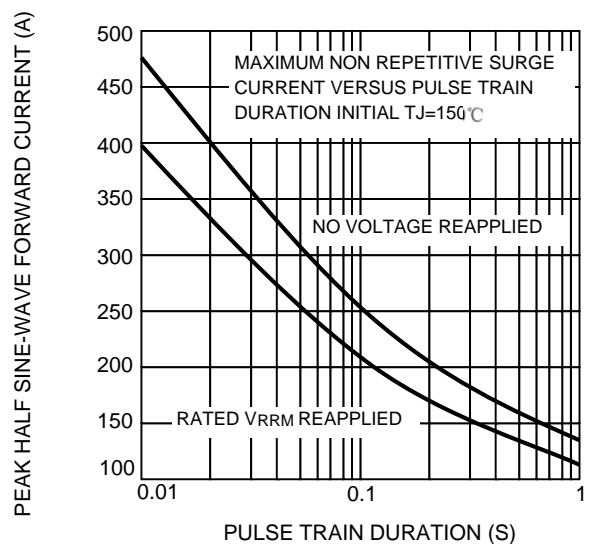


FIG.10-MAXIMUM NON-REPETITIVE SURGE CURRENT



RATING AND CHARACTERISTIC CURVES ( TSBR 25/35A SERIES)

FIG.11-THERMAL IMPEDANCE  $Z_{THJC}$  CHARACTERISTICS

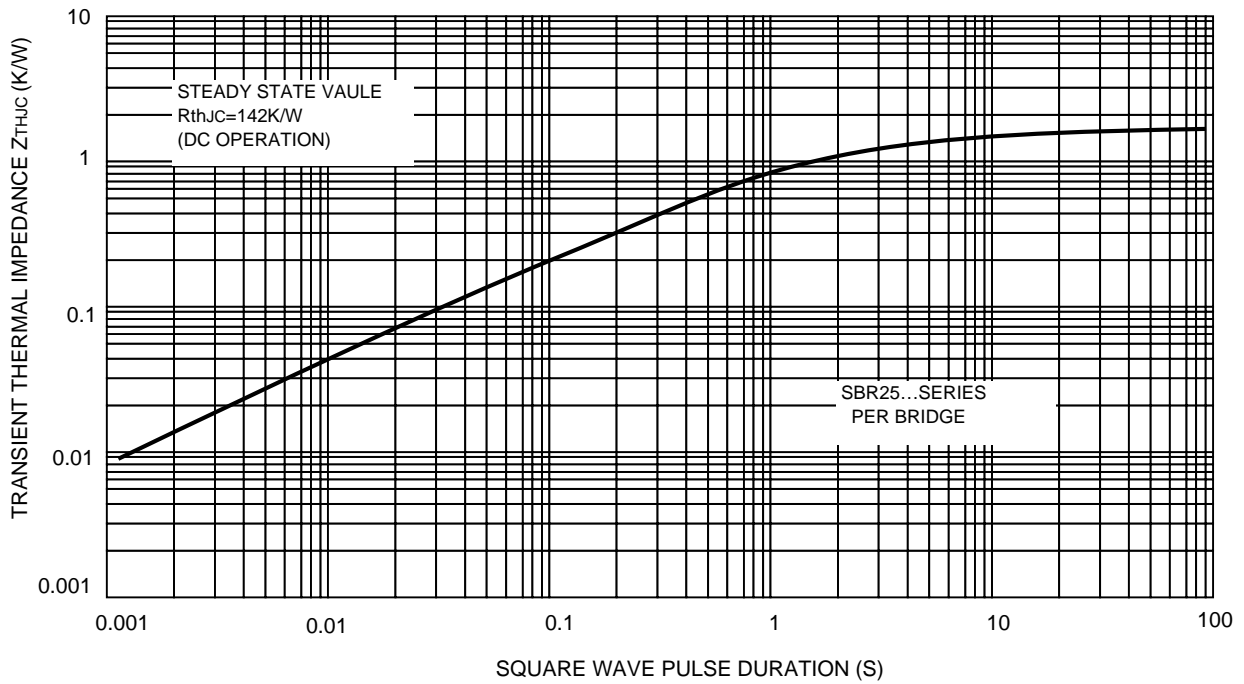


FIG.12-THERMAL IMPEDANCE  $Z_{THJC}$  CHARACTERISTICS

