

SILICON PASSIVATED THREE PHASE BRIDGE RECTIFIERS

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

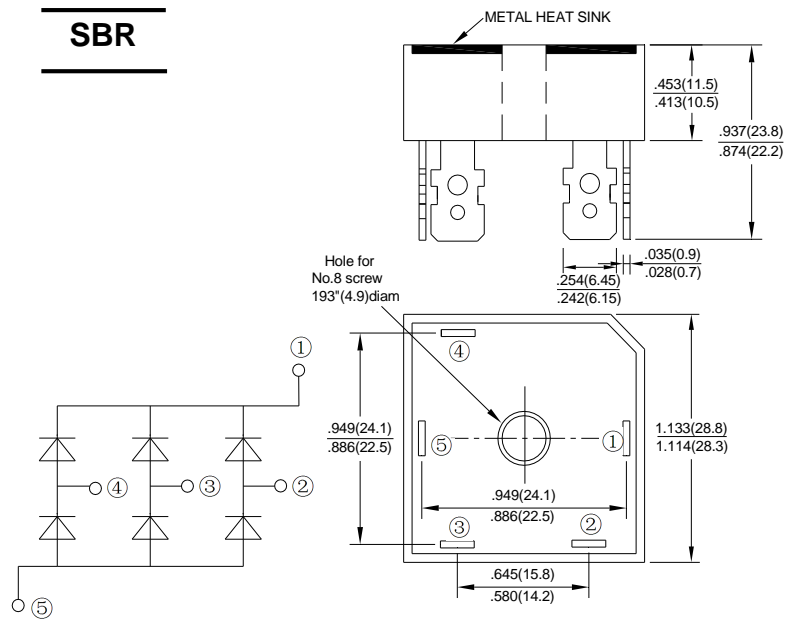
FEATURES

- 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.

SBR



Dimensions in inches and (millimeters)

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 _{RRM}											
Working Peak Reverse Voltage	V _{RWM}	50	100	200	400	600	800	1000	1200	1400	1600	V
DC Blocking Voltage	V _R											
Peak Non-Repetitive Reverse Voltage	V _{RSM}	75	150	275	500	725	900	1100	1300	1500	1700	V
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	560	700	840	980	1120	V

FORWARD CONDUCTION

CHARACTERISTICS	SYMBOL	SBR25	SBR35	UNIT
Maximum Average Forward Rectified Current @ T _C =60°C	I _o	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 _{FSM}	375 360 314 300	500 475 420 400	A
I ² 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 ² t	580 635 410 450	1030 1130 730 800	A ² S
Maximum Forward Voltage drop per element at 12.5A/17.5A Peak	V _F	1.1	1.2	V
Peak Reverse Current (per leg) @ T _J =25°C	I _R		10	μA
At Rated DC Blocking Voltage @ T _J =125°C			5.0	mA
RMS Isolation Voltage from Case to Lead	V _{iso}		2500	V

THERMAL CHARACTERISTICS

Operating Temperature Range	T _J	-55 to +150	°C	
Storage Temperature Range	T _{STG}	-55 to +150	°C	
Thermal Resistance Junction to Case at DC Operation per Bridge	R _{JC}	1.42	1.16	K/W
Thermal Resistance Case to Heatsink Mounting Surface, Smooth, Flat and Greased	R _{CS}	0.2	K/W	

FIG.1-CURRENT RATING CHARACTERISTICS

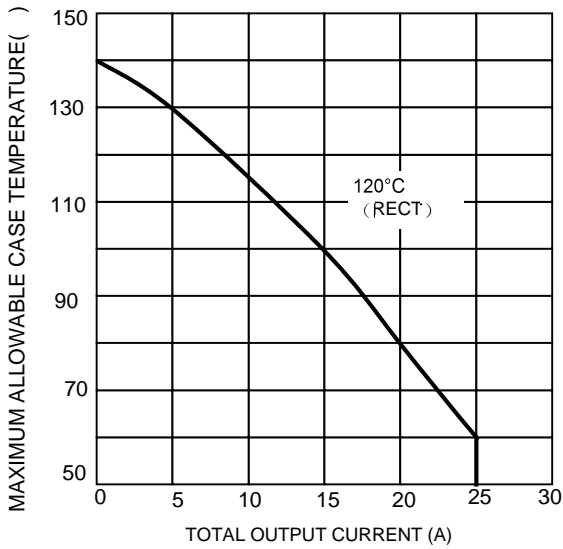


FIG.2-FORWARD VOLTAGE DROP CHARACTERISTICS

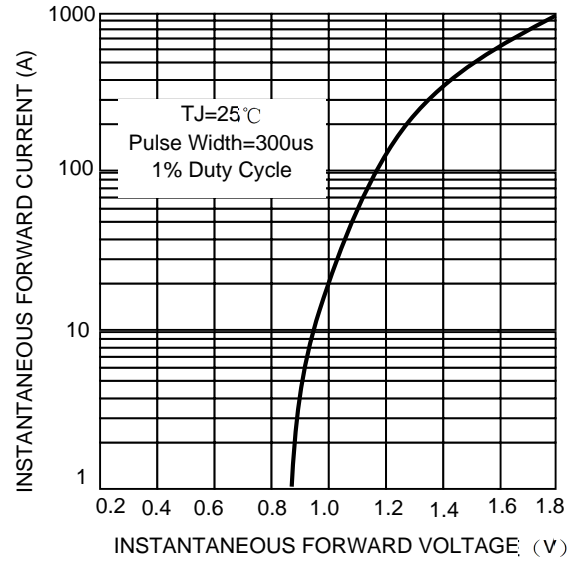


FIG.3-TOTAL POWER LOSS CHARACTERISTICS

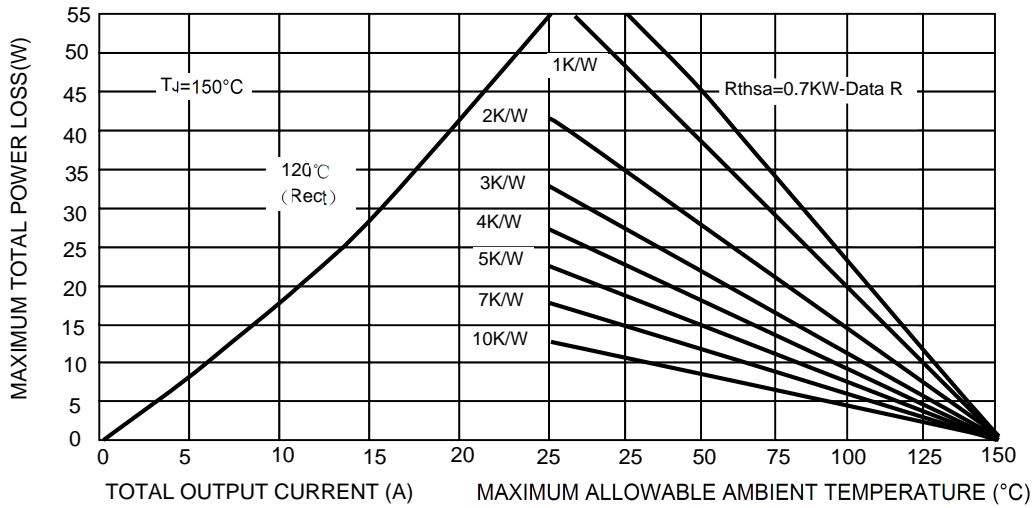


FIG.4-MAXIMUM NON-REPETITIVE SURGE CURRENT

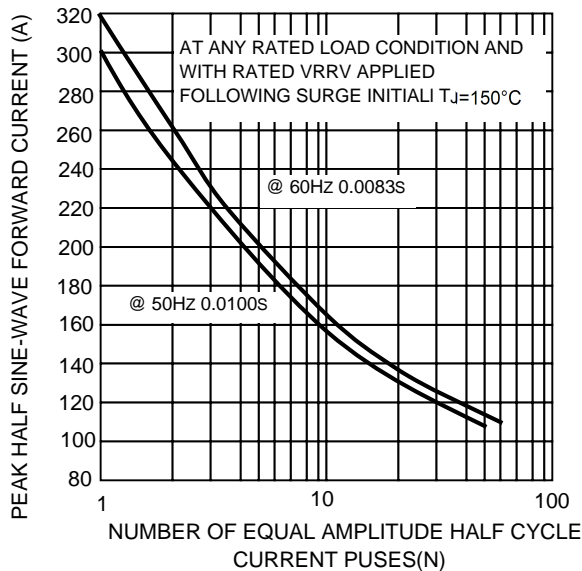


FIG.5-MAXIMUM NON-REPETITIVE SURGE CURRENT

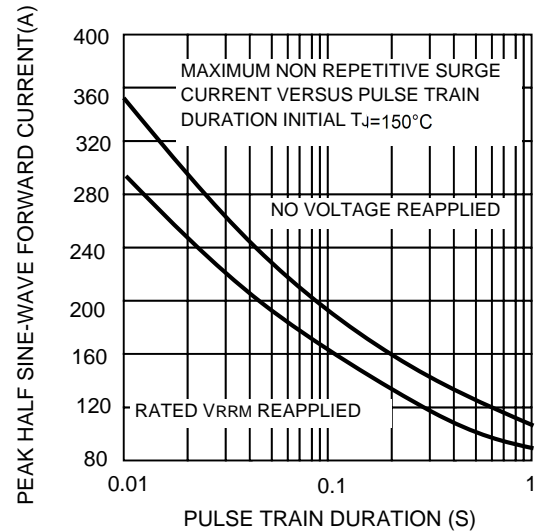


FIG.6-CURRENT RATING CHARACTERISTICS

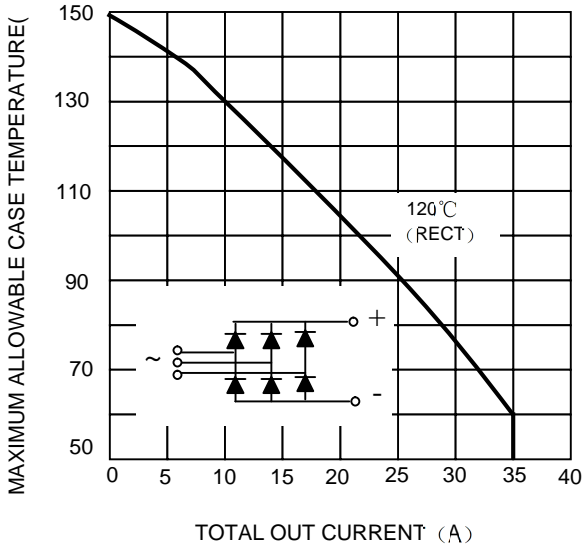


FIG.2-FORWARD VOLTAGE DROP CHARACTERISTICS

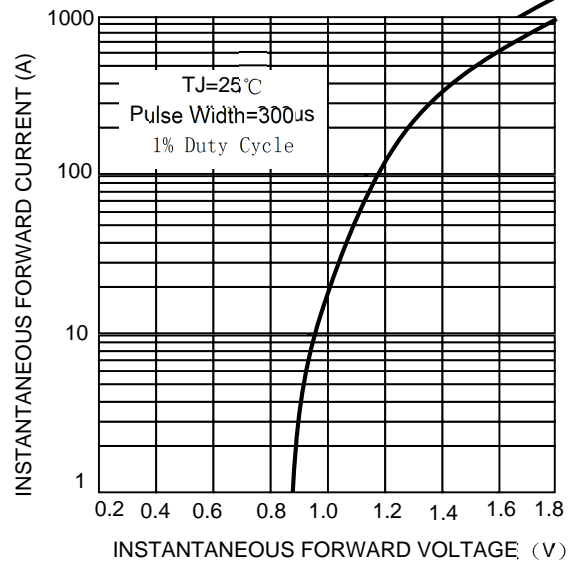


FIG.8-TOTAL POWER LOSS CHARACTERISTICS

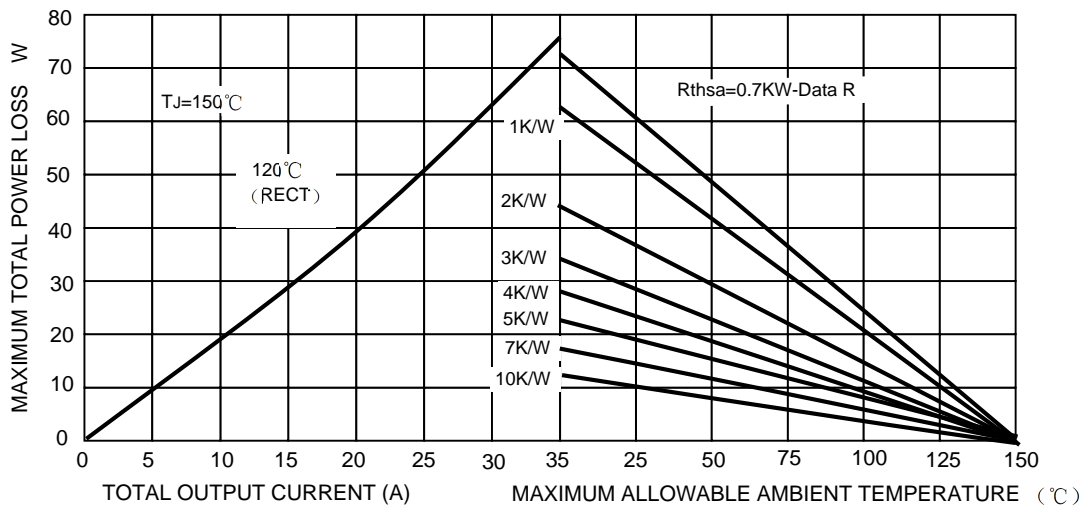


FIG.9-MAXIMUM NON-REPETITIVE SURGE CURRENT

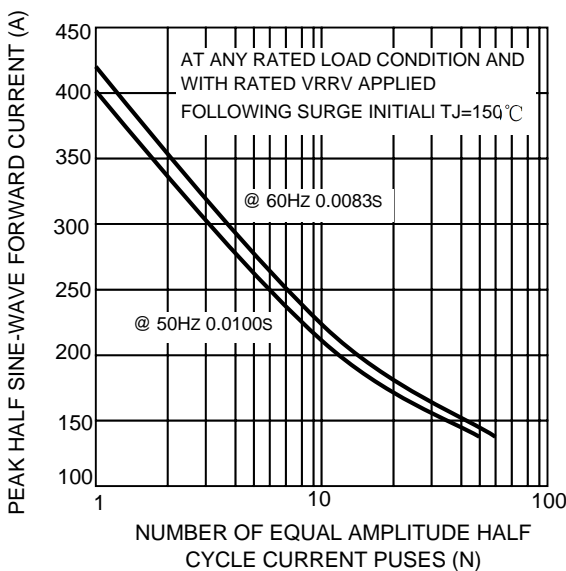


FIG.10-MAXIMUM NON-REPETITIVE SURGE CURRENT

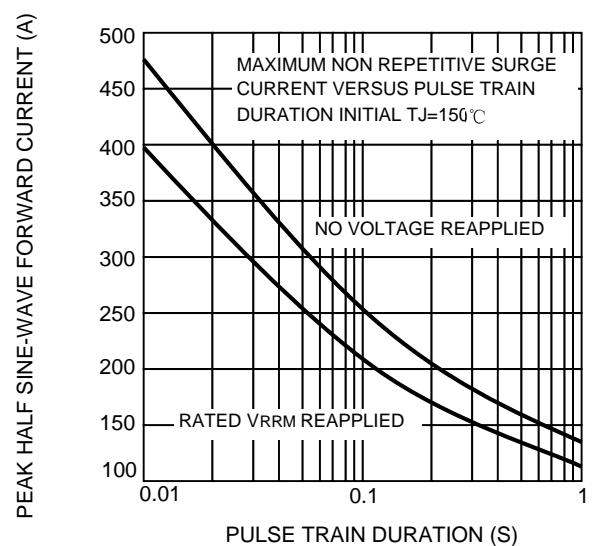


FIG.11-THERMAL IMPEDANCE Z_{ThJC} CHARACTERISTICS

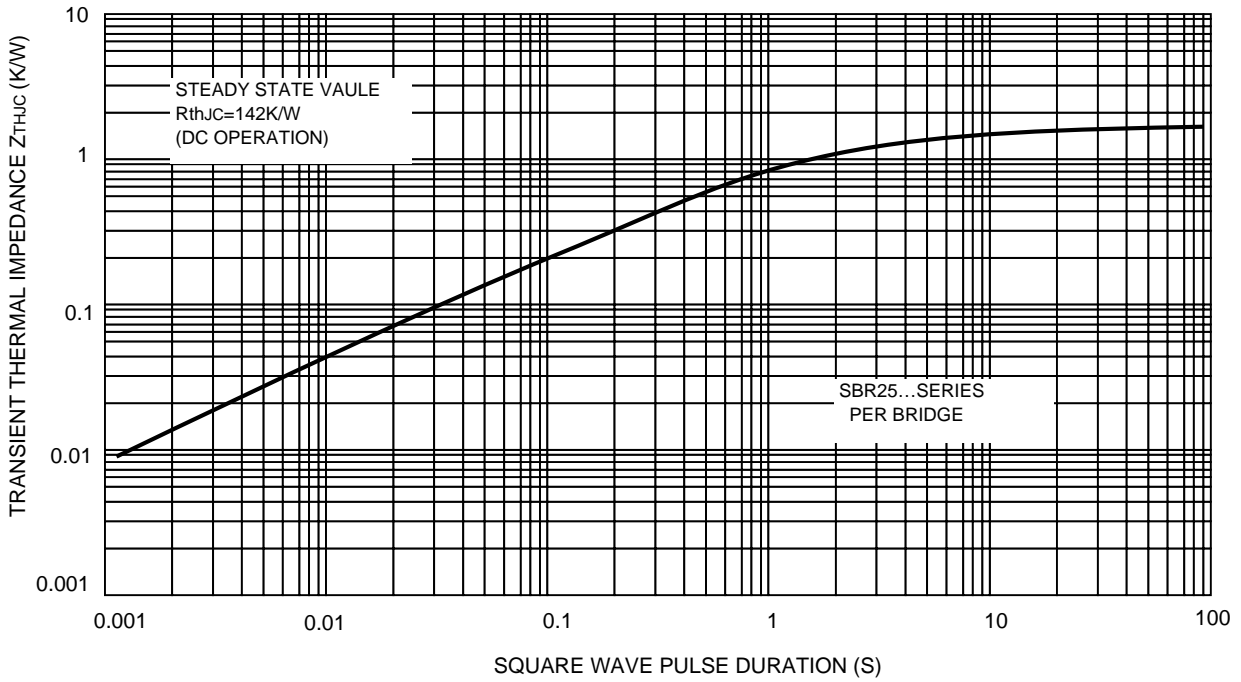


FIG.12-THERMAL IMPEDANCE Z_{ThJC} CHARACTERISTICS

