

SILICON PASSIVATED THREE PHASE BRIDGE RECTIFIERS

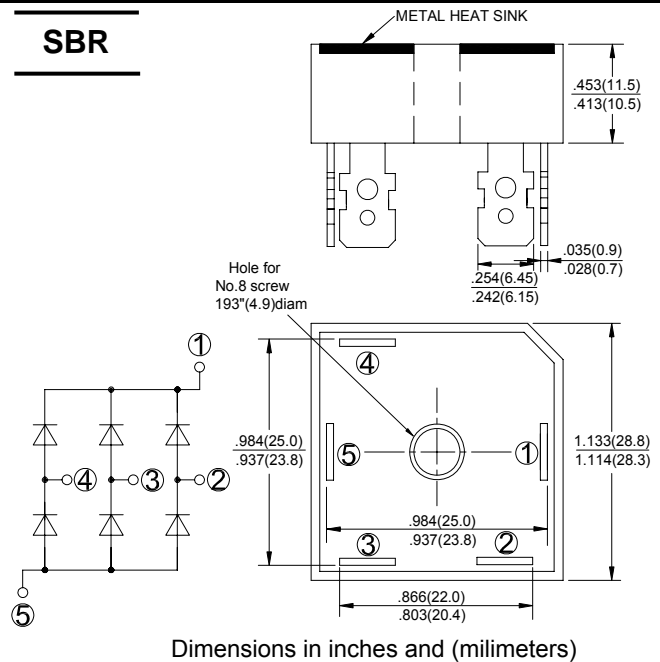
FEATURES

- 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.

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



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 | VRRM | | | | | | | | | | | |
| Working Peak Reverse Voltage | VRWM | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | V |
| DC Blocking Voltage | VR | | | | | | | | | | | |
| Peak Non-Repetitive Reverse Voltage | VRSM | 75 | 150 | 275 | 500 | 725 | 900 | 1100 | 1300 | 1500 | 1700 | V |
| RMS Reverse Voltage | VR(RMS) | 35 | 70 | 140 | 280 | 420 | 560 | 700 | 840 | 980 | 1120 | V |

FORWARD CONDUCTION

| CHARACTERISTICS | SYMBOL | SBR25 | SBR35 | UNIT |
|--|------------------|-------|-------|------------------|
| Maximum Average Forward Rectified Current @TC=60°C | Io | 25 | 35 | A |
| Non-Repetitive Peak Forward Surge Current (No Voltage Reapplied t=8.3ms at 60HZ) | IFSM | 375 | 500 | A |
| (No Voltage Reapplied t=10ms at 50HZ) | | 360 | 475 | |
| (100% VRRM Reapplied t=8.3ms at 60HZ) | | 314 | 420 | |
| (100% VRRM Reapplied t=10ms at 50HZ) | | 300 | 400 | |
| I ² t Rating for fusing (No Voltage Reapplied t=8.3ms at 60HZ) | I ² t | 580 | 1030 | A ² S |
| (No Voltage Reapplied t=10ms at 50HZ) | | 635 | 1130 | |
| (100% VRRM Reapplied t=8.3ms at 60HZ) | | 410 | 730 | |
| (100% VRRM Reapplied t=10ms at 50HZ) | | 450 | 800 | |
| Maximum Forward Voltage drop per element at 12.5A/17.5A Peak | VF | 1.1 | 1.2 | V |
| Peak Reverse Current (per leg) @Tj=25°C | IR | 10 | | μA |
| At Rated DC Blocking Voltage @Tj=125°C | | 5.0 | | |
| RMS Isolation Voltage from Case to Lead | Viso | 2500 | | V |

THERMAL CHARACTERISTICS

| | | | | |
|--|------|-------------|------|-----|
| Operating Temperature Range | TJ | -55 to +150 | °C | |
| Storage Temperature Range | TSTG | -55 to +150 | °C | |
| Thermal Resistance Junction to Case at DC Operation per Bridge | ReJC | 1.42 | 1.16 | K/W |
| Thermal Resistance Case to Heatsink Mounting Surface, Smooth, Flat and Greased | ReCS | 0.2 | | K/W |

FIG.1-CURRENT RATING CHARACTERISTICS

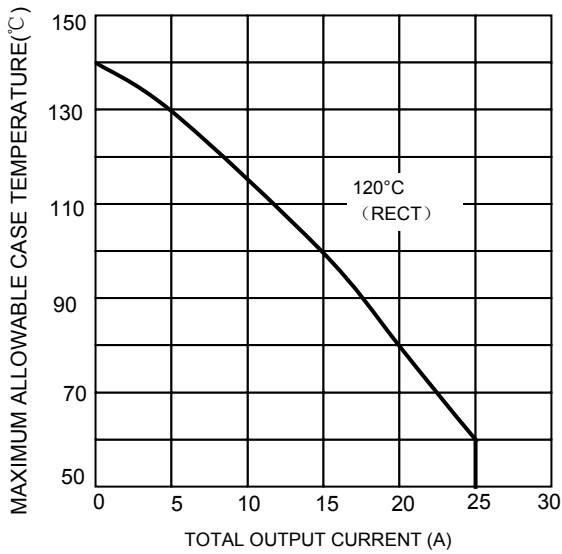


FIG.2-FORWARD VOLTAGE DROP CHARACTERISTICS

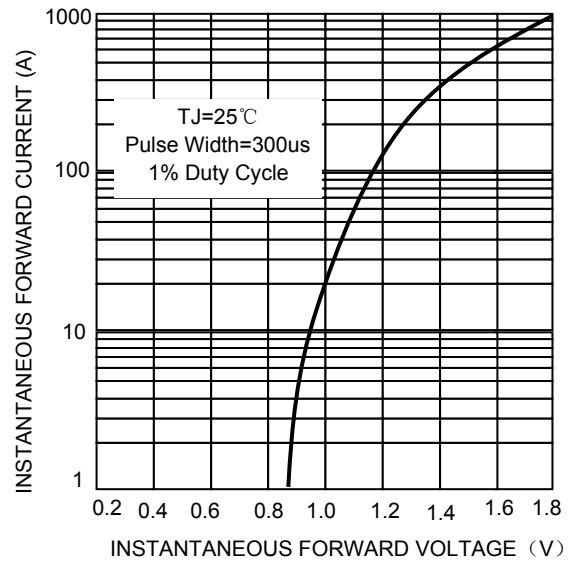


FIG.3-TOTAL POWER LOSS CHARACTERISTICS

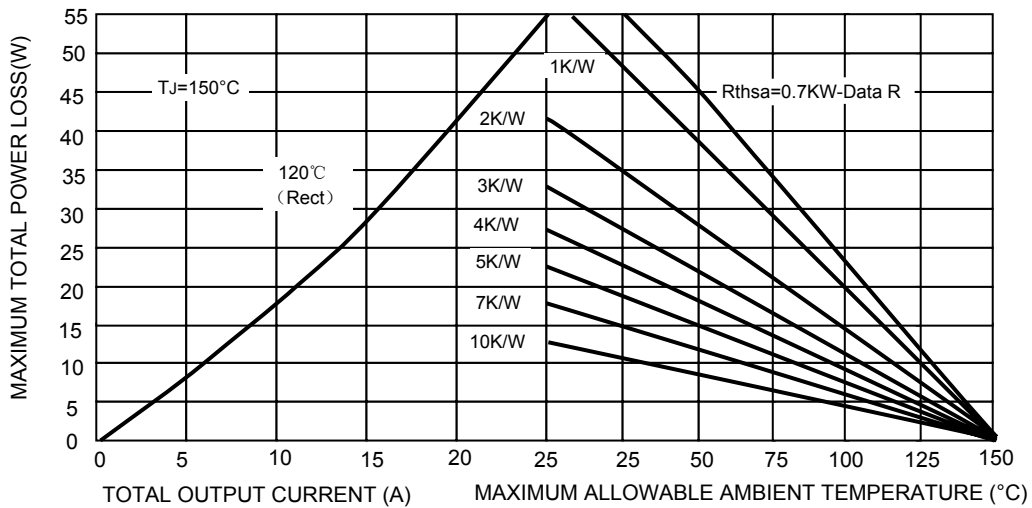


FIG.4-MAXIMUM NON-REPETITIVE SURGE CURRENT

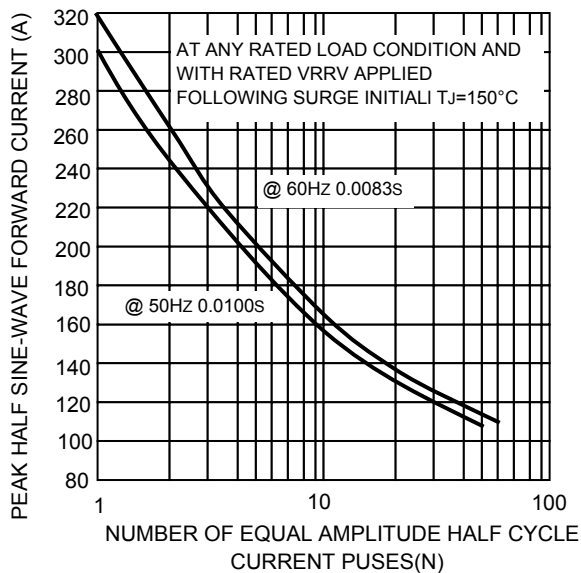


FIG.5-MAXIMUM NON-REPETITIVE SURGE CURRENT

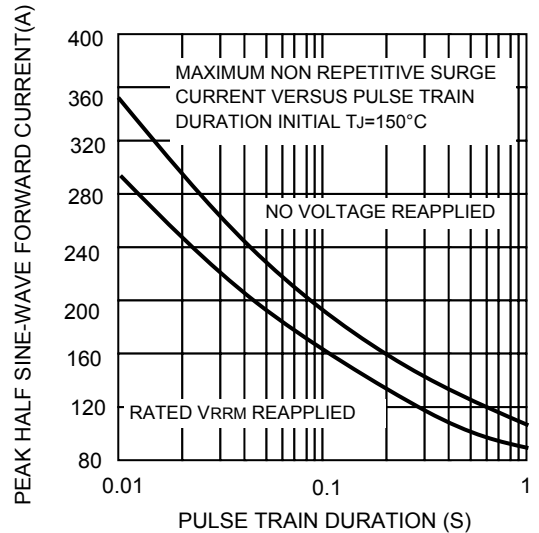


FIG.6-CURRENT RATING CHARACTERISTICS

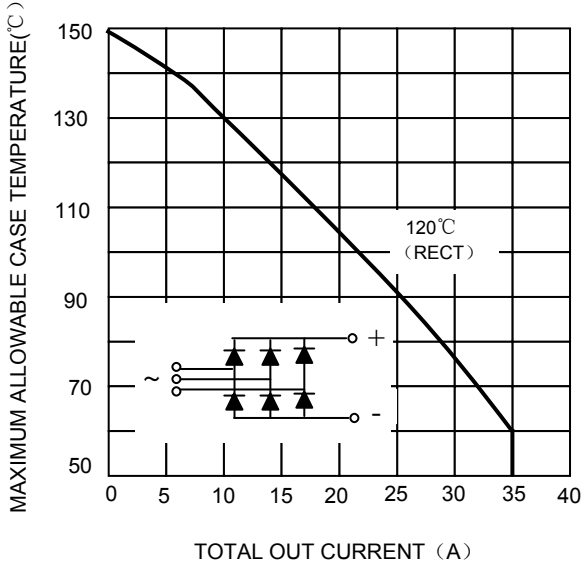


FIG.2-FORWARD VOLTAGE DROP CHARACTERISTICS

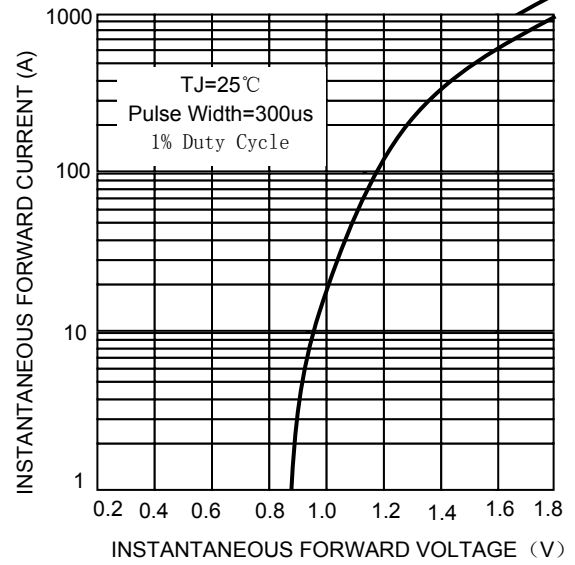


FIG.8-TOTAL POWER LOSS CHARACTERISTICS

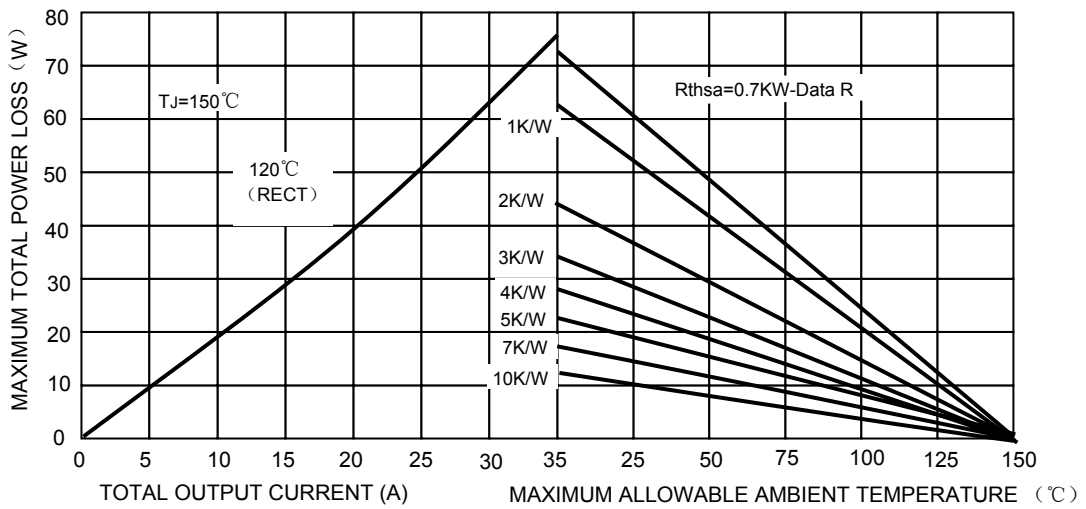


FIG.9-MAXIMUM NON-REPETITIVE SURGE CURRENT

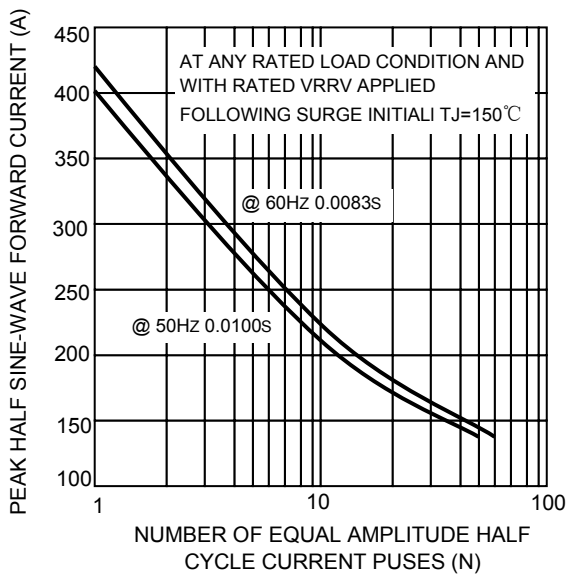


FIG.10-MAXIMUM NON-REPETITIVE SURGE CURRENT

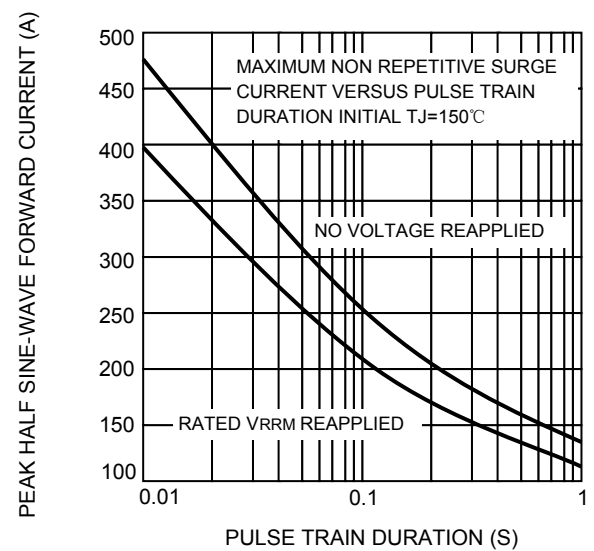


FIG.11-THERMAL IMPEDANCE Z_{ThjC} CHARACTERISTICS

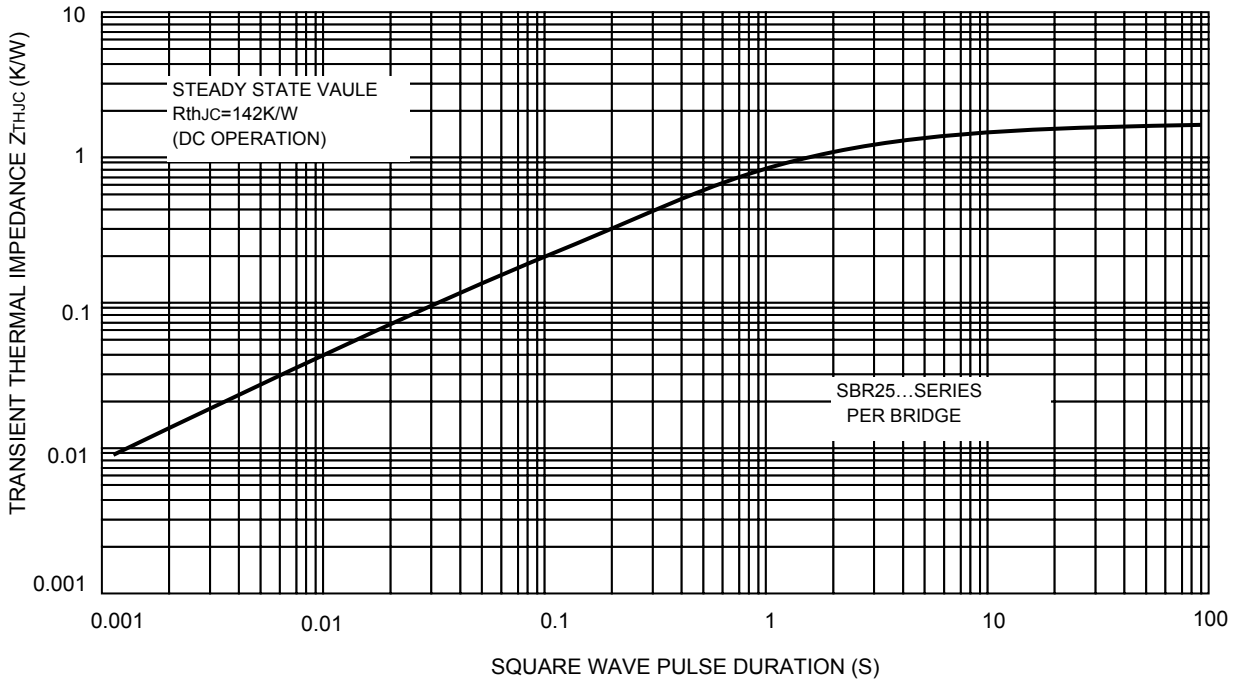


FIG.12-THERMAL IMPEDANCE Z_{ThjC} CHARACTERISTICS

