

SKBPC25005/SBR25005 THRU SKBPC2516/SBR2516

SILICON/GLASS PASSIVATED THREE PHASE BRIDGE RECTIFIERS

Voltage Range 50 to 1600 Volts Current 25 Amperes

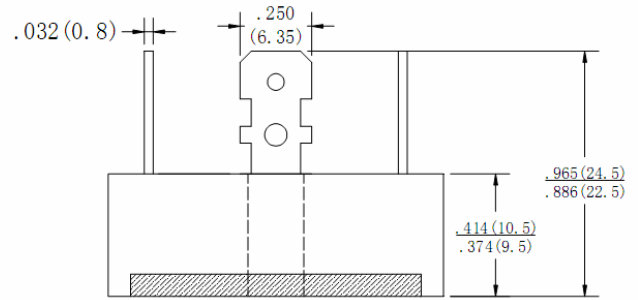
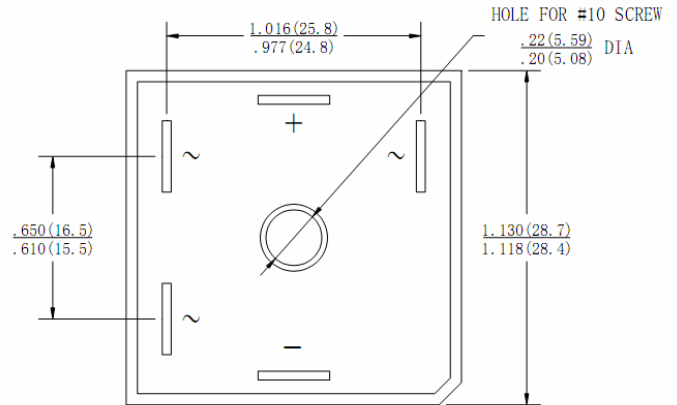
FEATURES

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

Mechanical Data

- ◆ Case: 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
- ◆ Marking: Type Number

SKBPC



METAL HEAT SINK

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%

| Type Number | | SKBPC /SBR 25005 | SKBPC /SBR 2501 | SKBPC /SBR 2502 | SKBPC /SBR 2504 | SKBPC /SBR 2506 | SKBPC /SBR 2508 | SKBPC /SBR 2510 | SKBPC /SBR 2512 | SKBPC /SBR 2514 | SKBPC /SBR 2516 | UNITS |
|---|-----------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | 840 | 980 | 1120 | V |
| Maximum DC blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | V |
| Maximum Average Forward Rectified Current @ $T_C = 100^\circ C$ | $I(AV)$ | 25 | | | | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current (No Voltage Reapplied $t=8.3ms$ at 60HZ) | I_{FSM} | 375 | | | | | | | | | | A |
| (No Voltage Reapplied $t=10ms$ at 50HZ) | | 360 | | | | | | | | | | |
| (100% VRRM Reapplied $t=8.3ms$ at 60HZ) | | 410 | | | | | | | | | | |
| (100% VRRM Reapplied $t=10ms$ at 50HZ) | | 450 | | | | | | | | | | |

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|--|------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|------------------|
| | /SBR | /SBR | /SBR | /SBR | /SBR | /SBR | /SBR | /SBR | /SBR | /SBR | |
| | 25005 | 2501 | 2502 | 2504 | 2506 | 2508 | 2510 | 2512 | 2514 | 25005 | |
| 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 | | | | | | | | | A ² S |
| | | 635 | | | | | | | | | |
| | | 410 | | | | | | | | | |
| | | 450 | | | | | | | | | |
| Forward Voltage (per element) @T _J =25°C, @IFM=40APK per single junction | V _F | 1.26 | | | | | | | | | V |
| Peak Reverse Current (per leg) @T _J =25°C uA At Rated DC Blocking Voltage @T _J =125°C | I _R | 10 | | | | | | | | | μ A |
| | | 5.0 | | | | | | | | | mA |
| RMS Isolation Voltage from Case to Lead | V _{ISO} | 2500 | | | | | | | | | V |
| Thermal Resistance Junction to Case at DC Operation per Bridge | R _{θJC} | 1.42 | | | | | | | | | K/W |
| Thermal Resistance Case to Heatsink Mounting Surface, Smooth, Flat and Greased | R _{θCS} | 0.2 | | | | | | | | | K/W |
| Operating Temperature Range | T _J | -55 to +150 | | | | | | | | | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | | | | | | | | | °C |

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FIG.1-CURRENT RATING CHARACTERISTICS

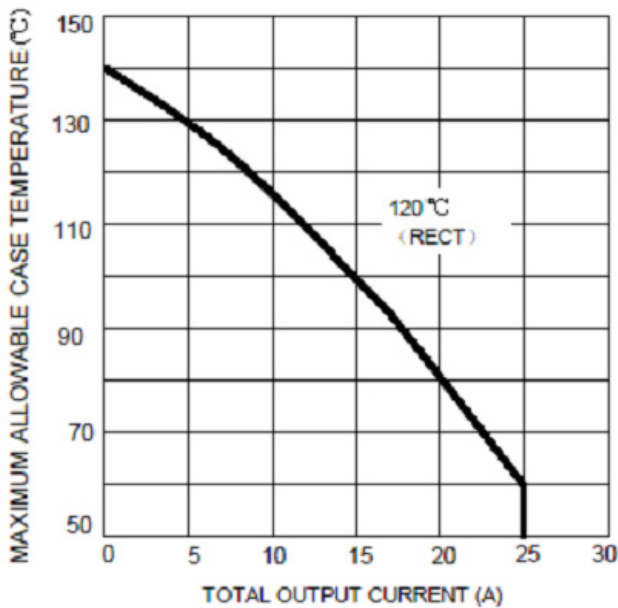


FIG.2-FORWARD VOLTAGE DROP CHARACTERISTICS

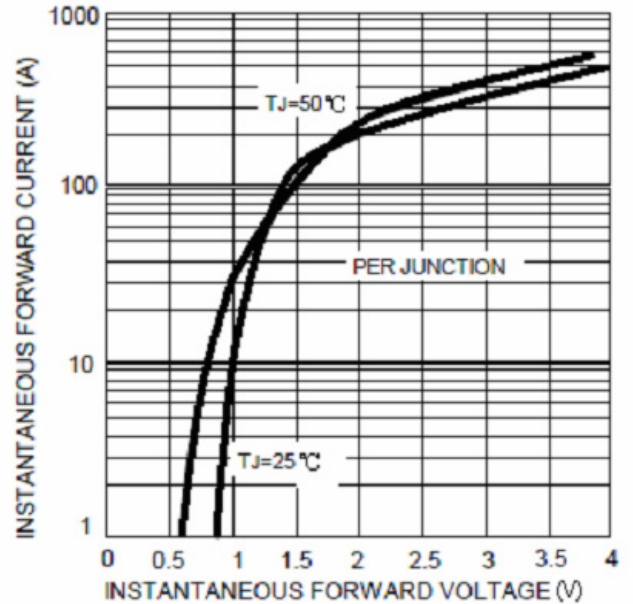


FIG.3-MAXIMUM NON-REPETITIVE SURGE CURRENT

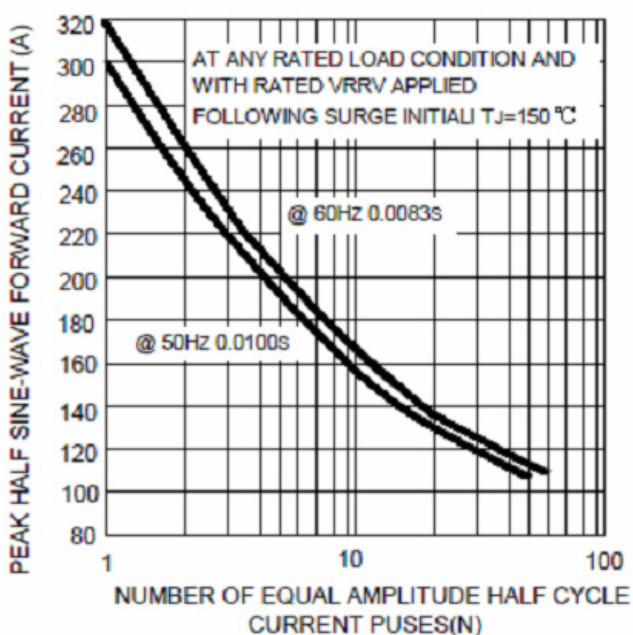
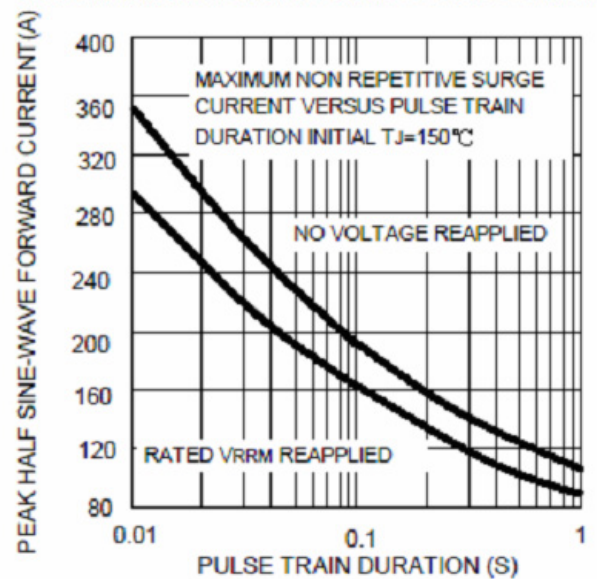


FIG.4-MAXIMUM NON-REPETITIVE SURGE CURRENT



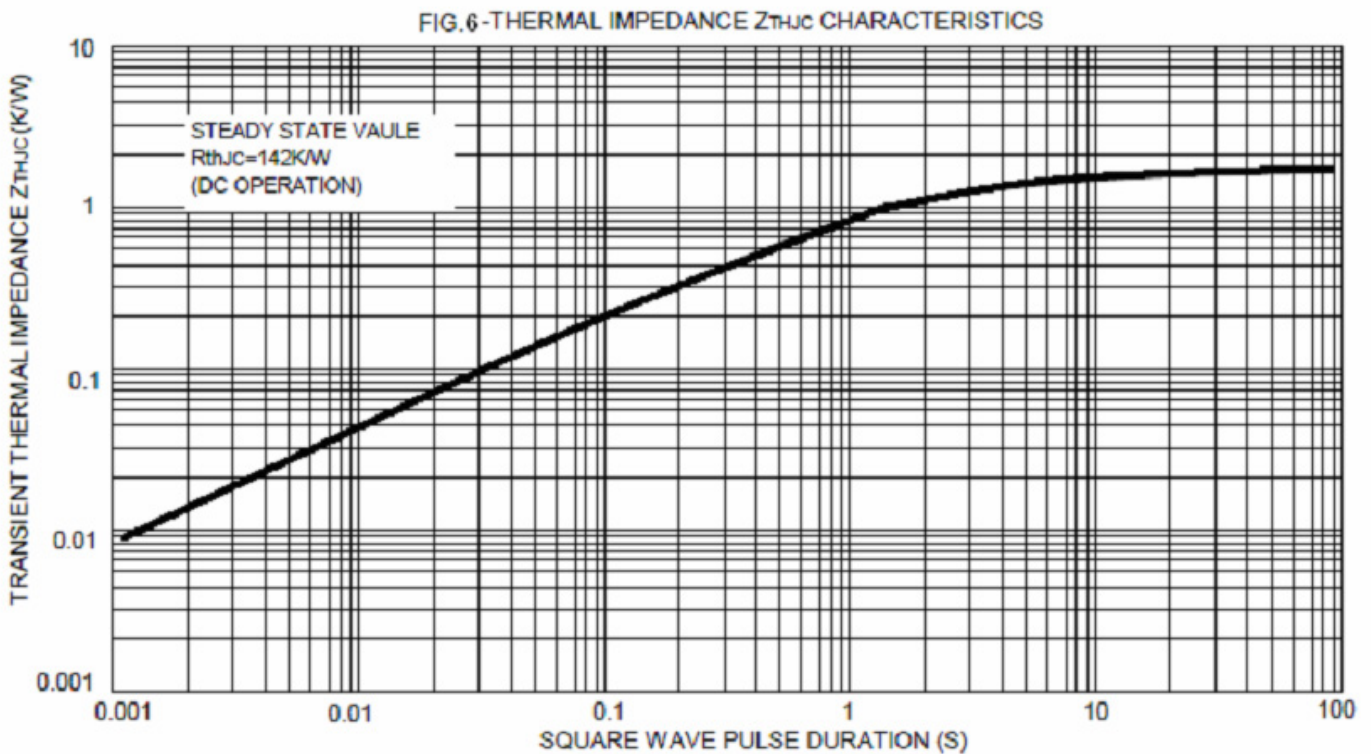
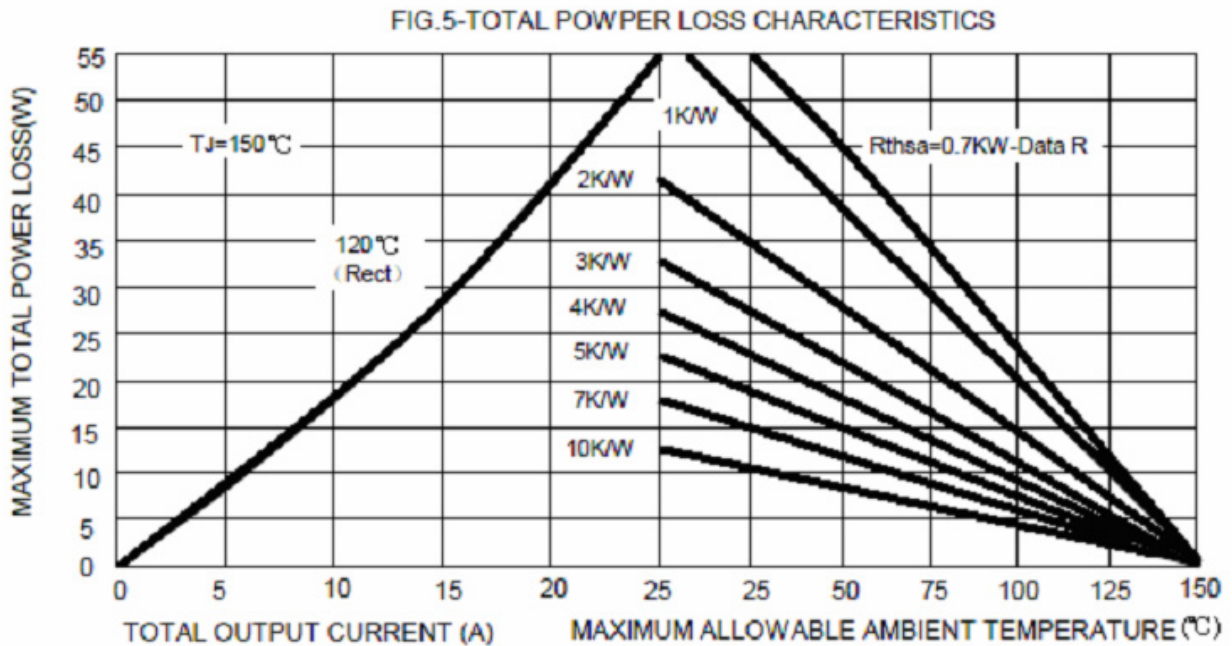
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Note: Specification are subject to change without notice. For more detail and update, please visit our website.