

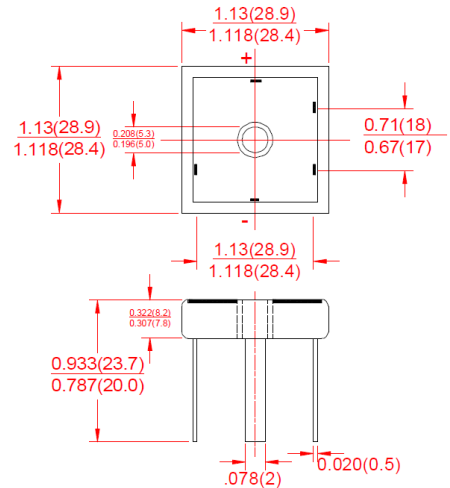
50A THREE-PHASE BRIDGE RECTIFIER

■ Features

- Integrally molding heatsinks provide very low thermal resistance for maximum heat dissipation
- Surge overload rating to 480 ampers
- High temperature soldering guaranteed: 260 °C/10 second, at 5 lbs. (2.3kg) tension.

■ Mechanical Data

- Case: Epoxy, molded plastic with heatsink integrally mounted in the bridge encapsulation.
- 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.
- Weight: 0.706 ounce, 20 grams



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load derate current by 20%.

| | SYMBOLS | XNDS5008 | XNDS5012 | XNDS5016 | UNITS |
|--|-------------------|-------------|----------|----------|------------------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 800 | 1200 | 1600 | Volts |
| Working Peak Reverse Voltage | V _{RWM} | 800 | 1200 | 1600 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 800 | 1200 | 1600 | Volts |
| Maximum Average Forward Rectified Output Current, at T _C =72°C (Note 2) | I _(AV) | 50 | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 480 | | | Amps |
| Rating for Fusing (t<8.3ms) | I ² T | 1500 | | | A ² S |
| Maximum Instantaneous Forward Voltage drop per Bridge element at 19.5A | V _F | 1.15 | | | Volts |
| Maximum DC Reverse Current at rated DC blocking voltage per element T _J =150°C | I _R | 5.0 | | | mA |
| Isolation Voltage from case to leads | V _{ISO} | 2500 | | | V _{AC} |
| Typical Thermal Resistance per Element | R _{θJC} | 1.6 | | | °C/W |
| Operating Temperature Range | T _J | -55 to +150 | | | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | | | °C |
| NOTES: | | | | | |
| 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts. | | | | | |
| 2. Unit mounted on 11.8"×11.8"×0.6" thick (300×300×15mm) Copper plate. | | | | | |

RATINGS AND CHARACTERISTIC CURVES

FIG.1—TYPICAL FORWARD CURRENT DERATING CURVE

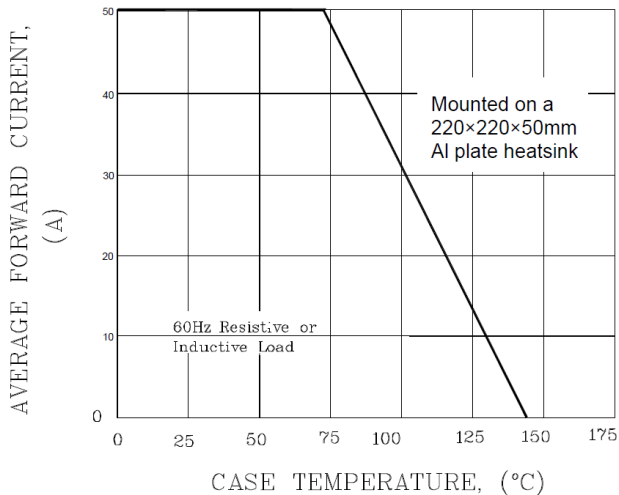


FIG.2—TYPICAL FORWARD CURRENT DERATING CURVE

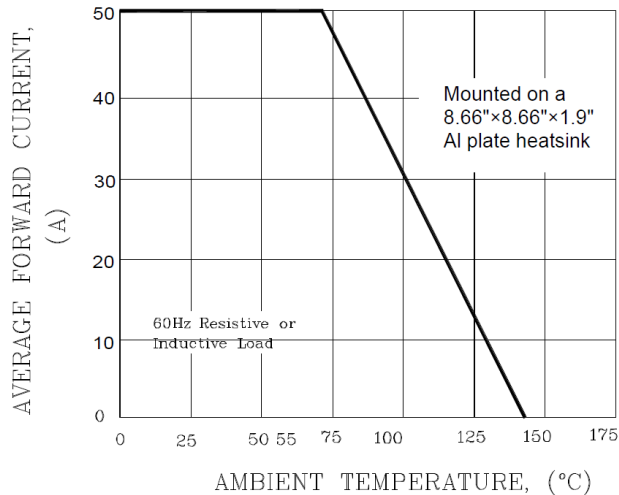


FIG.3—TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

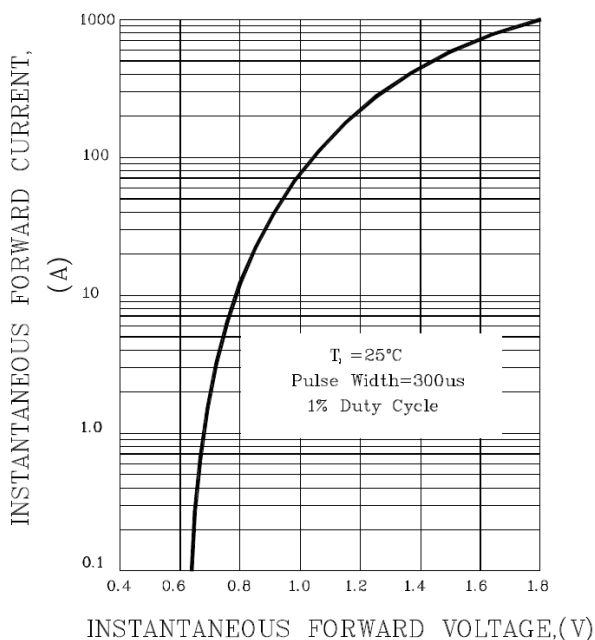
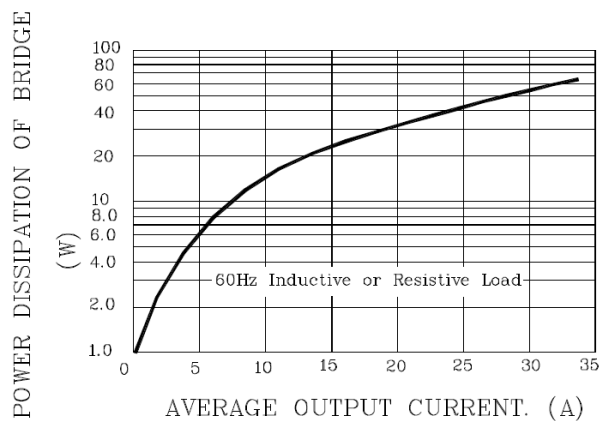


FIG.4—MAXIMUM POWER DISSIPATION



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