

DIODE MODULE 50A/800V

PT50S8

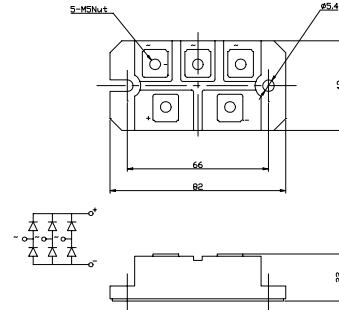
FEATURES

- * Isolated Base
- * 3 Phase Bridge Circuit
- * Designed Power Circuit Board
- * High Surge Capability
- * UL Recognized, File No. E187184

TYPICAL APPLICATIONS

- * Rectified For General Use

OUTLINE DRAWING



Maximum Ratings

Approx Net Weight:180g

| Parameter | Symbol | Type / Grade | Unit |
|--|-----------|--------------|------|
| | | PT50S8 | |
| Repetitive Peak Reverse Voltage *1 | V_{RRM} | 800 | V |
| Non Repetitive Peak Reverse Voltage *1 | V_{RSM} | 1000 | |

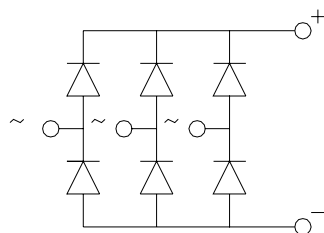
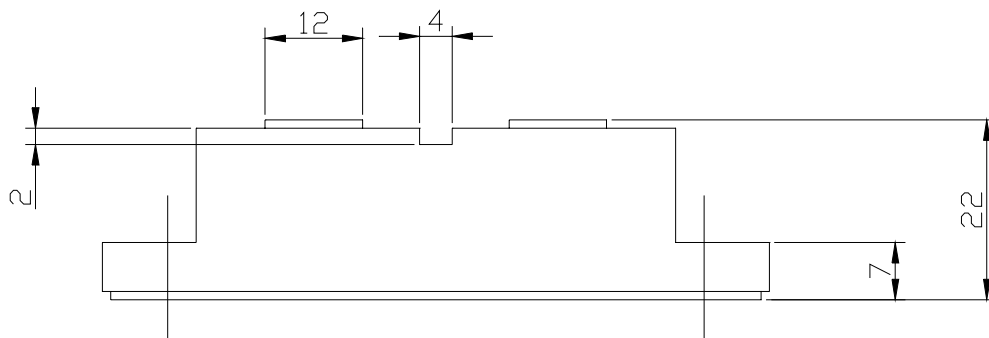
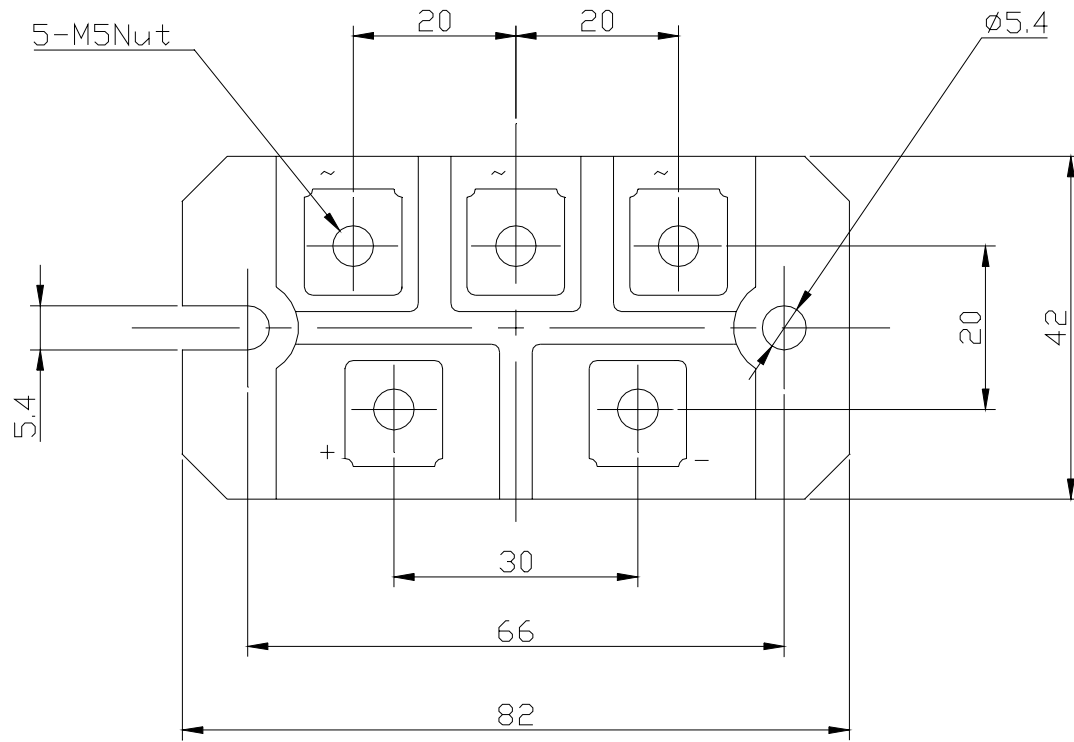
| Parameter | | Conditions | Max Rated Value | Unit |
|--------------------------------------|---------------|---|-----------------|------------------|
| Average Rectified Output Current | $I_{O(AV)}$ | 3-Phase Full Wave Rectified $T_c = T_t(\text{Terminal}) = 111^\circ\text{C}$ | 50 | A |
| Surge Forward Current *1 | I_{FSM} | 50 Hz Half Sine Wave, 1 Pulse Non-repetitive | 450 | A |
| I Squared t *1 | I^2t | 2msec to 10msec | 1000 | A ² s |
| Operating Junction Temperature Range | T_{jw} | | -40 to +150 | °C |
| Storage Temperature Range | T_{stg} | | -40 to +125 | °C |
| Isolation Voltage | Viso | Base Plate to Terminals, AC1min | 2000 | V |
| Mounting torque | Case mounting | Greased | M5 Screw | N.m |
| | Terminals | | | |
| | F_{tor} | M5 | 2.4 to 2.8 | |

Electrical • Thermal Characteristics

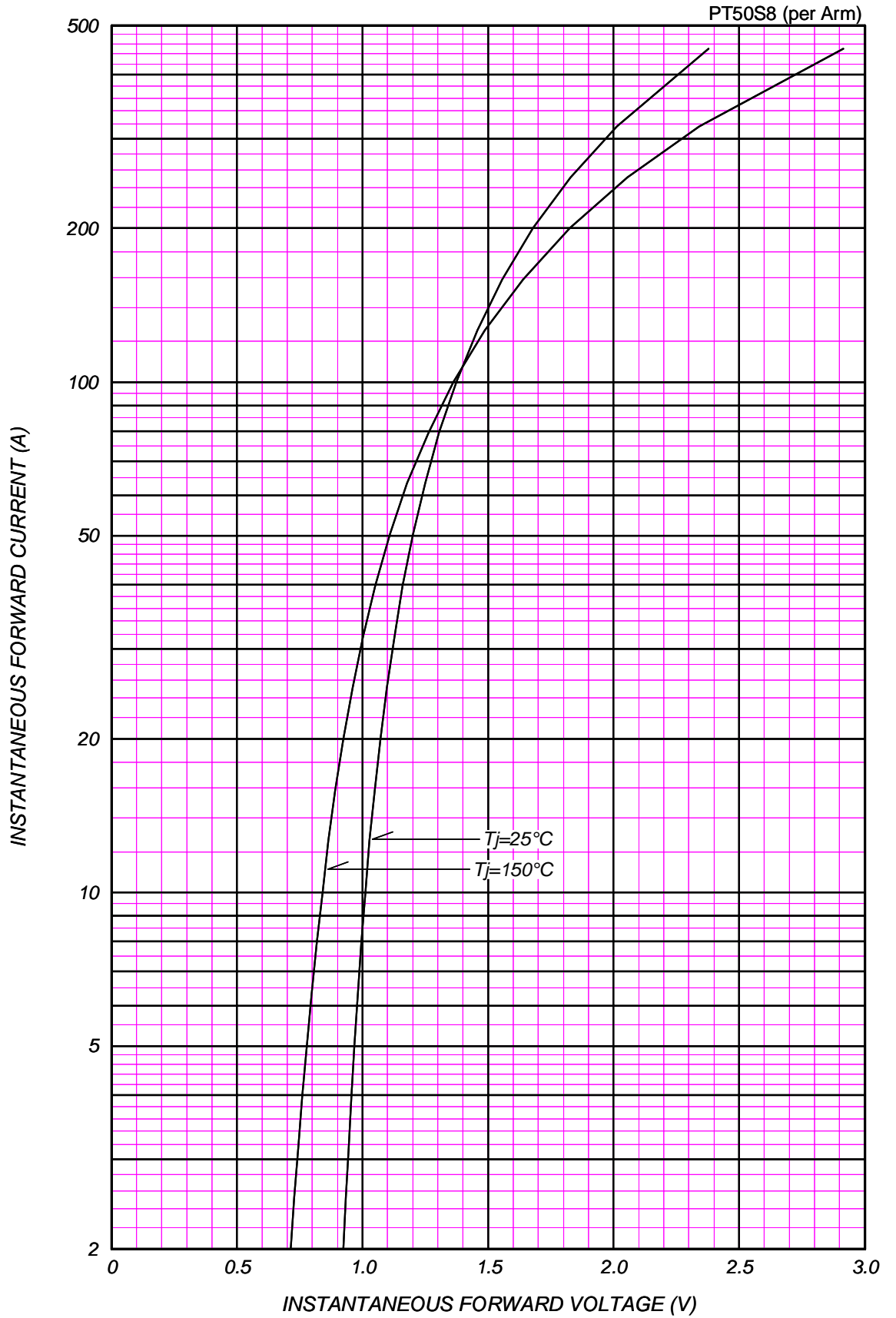
| Characteristics | Symbol | Test Conditions | Max. | Unit |
|-------------------------|---------------|---|------|------|
| Peak Reverse Current *1 | I_{RM} | $V_{RM} = V_{RRM}$, $T_j = 150^\circ\text{C}$ | 10 | mA |
| Peak Forward Voltage *1 | V_{FM} | $I_{FM} = 50\text{A}$, $T_j = 25^\circ\text{C}$ | 1.2 | V |
| Thermal Resistance | $R_{th(j-c)}$ | Junction to Case (Total) | 0.35 | °C/W |
| | $R_{th(c-f)}$ | Base Plate to Heat Sink with Thermal Compound (Total) | 0.06 | |

*1: Value Per 1Arm

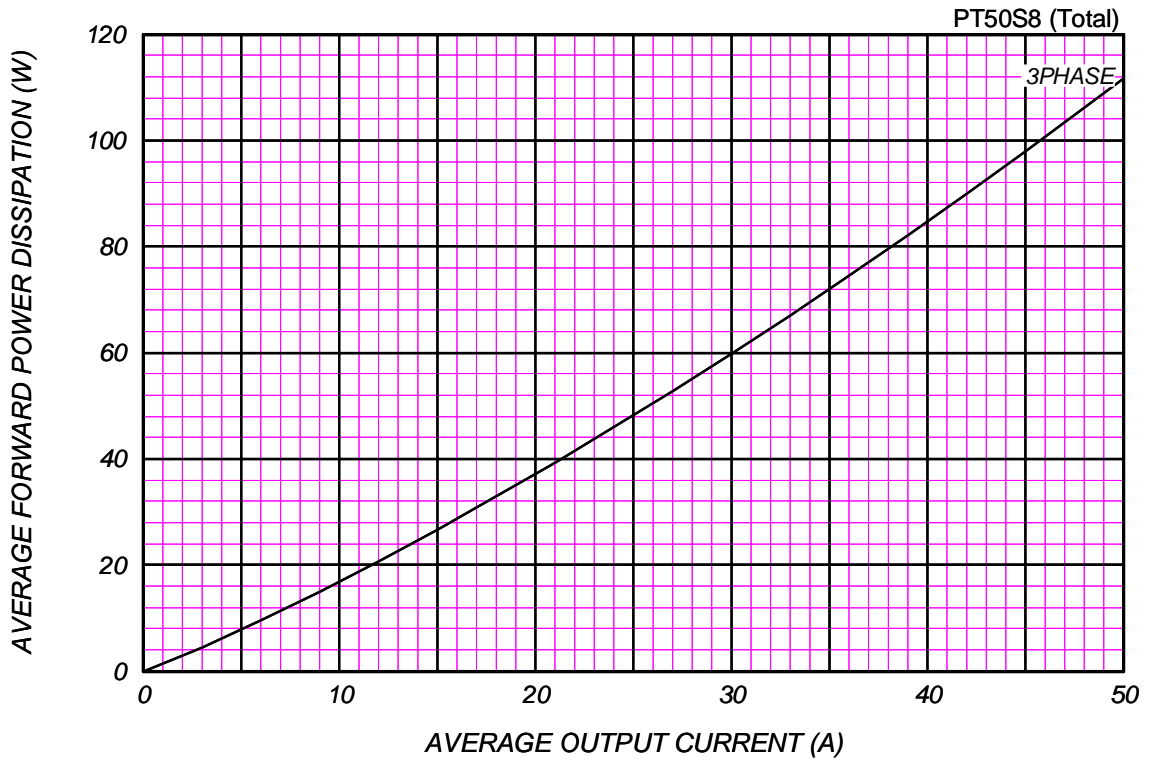
PT50S8 OUTLINE DRAWING (Dimensions in mm)



FORWARD CURRENT VS. VOLTAGE

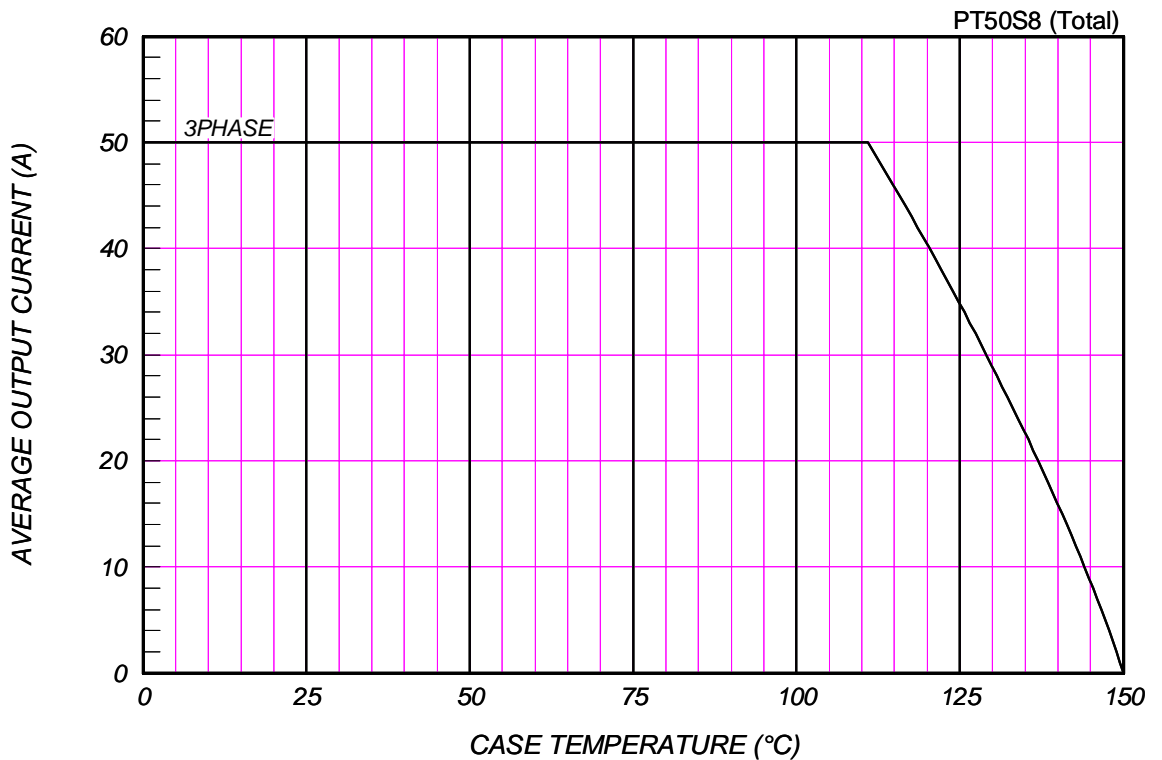


AVERAGE FORWARD POWER DISSIPATION



AVERAGE OUTPUT CURRENT VS. CASE TEMPERATURE

3-Phase Full Wave, Resistive or Inductive Load



SURGE CURRENT RATINGS

f=50Hz,Half Sine Wave,Non-Repetitive,T_j=150°C

PT50S8

