

# DIODE MODULE 150A/800V

# PT151S8

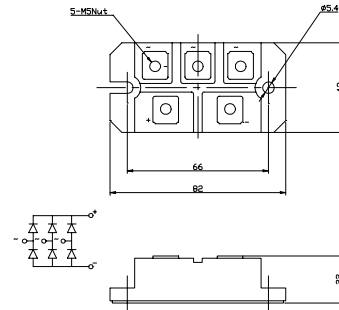
## FEATURES

- \* 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 |
|--|-----------|--------------|------|
|  |           | PT151S8      |      |
| Repetitive Peak Reverse Voltage *1     | $V_{RRM}$ | 800          | V    |
| Non Repetitive Peak Reverse Voltage *1 | $V_{RSM}$ | 1000         |      |

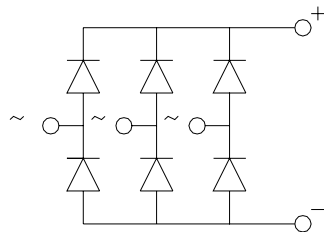
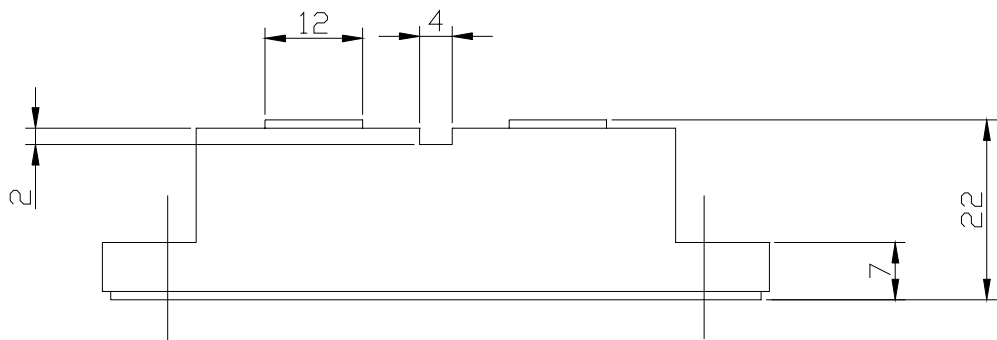
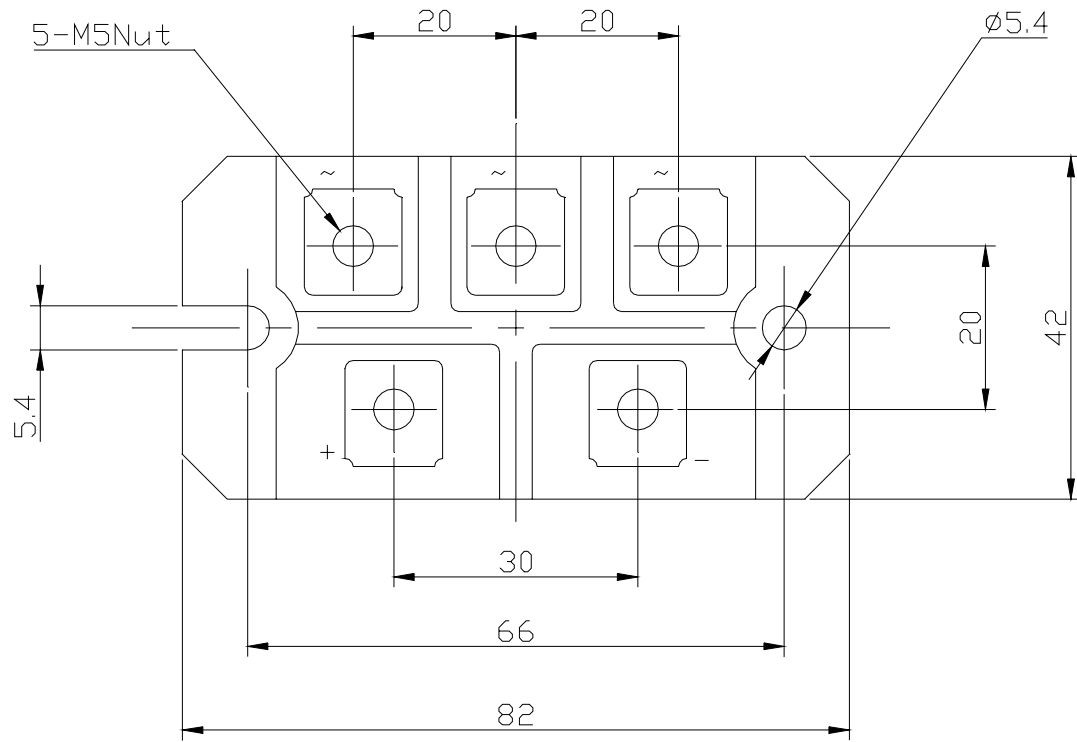
| Parameter                            |               | Conditions   | Max Rated Value | Unit             |
|--------------------------------------|---------------|--|-----------------|------------------|
| Average Rectified Output Current     | $I_{O(AV)}$   | 3-Phase Full Wave Rectified<br>$T_c = T_t(\text{Terminal}) = 92^\circ\text{C}$ | 150             | A                |
| Surge Forward Current *1             | $I_{FSM}$     | 50 Hz Half Sine Wave, 1Pulse<br>Non-repetitive                                 | 1200            | A                |
| I Squared t *1                       | $I^2t$        | 2msec to 10msec  | 7200            | A <sup>2</sup> 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  | 2500            | V                |
| Mounting torque                      | Case mounting | Greased  | 2.4 to 2.8      | N.m              |
|                                      | Terminals     | M5 Screw   |                 |                  |
|                                      | $F_{tor}$     | M5   | 2.4 to 2.8      |                  |

## Electrical • Thermal Characteristics

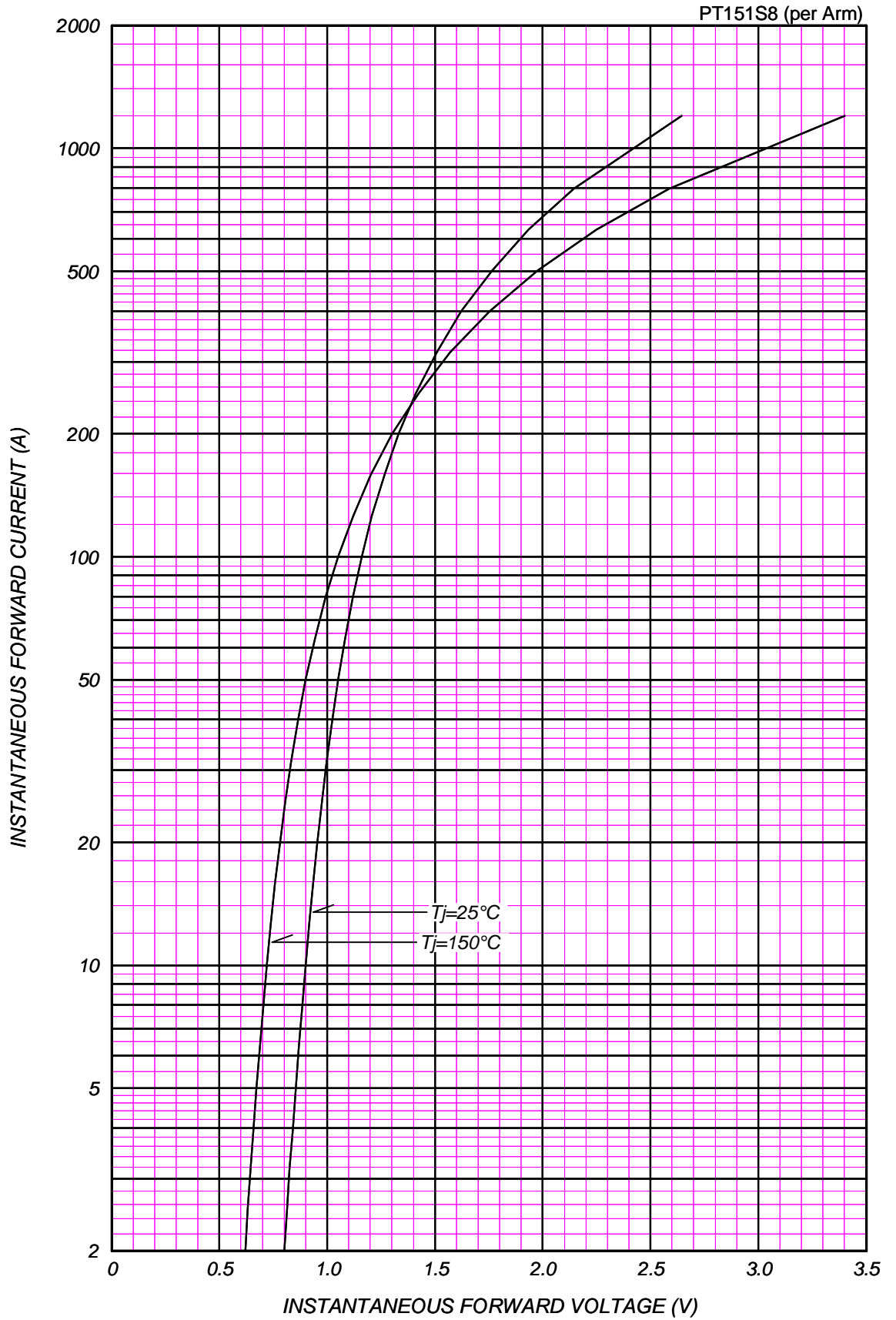
| Characteristics         | Symbol        | Test Conditions                                       | Max. | Unit |
|-------------------------|---------------|---|------|------|
| Peak Reverse Current *1 | $I_{RM}$      | $V_{RM} = V_{RRM}$ , $T_j = 150^\circ\text{C}$        | 10   | mA   |
| Peak Forward Voltage *1 | $V_{FM}$      | $I_{FM} = 100\text{A}$ , $T_j = 25^\circ\text{C}$     | 1.25 | V    |
| Thermal Resistance      | $R_{th(j-c)}$ | Junction to Case (Total)                              | 0.16 | °C/W |
|                         | $R_{th(c-f)}$ | Base Plate to Heat Sink with Thermal Compound (Total) | 0.06 |      |

\*1: Value Per 1Arm

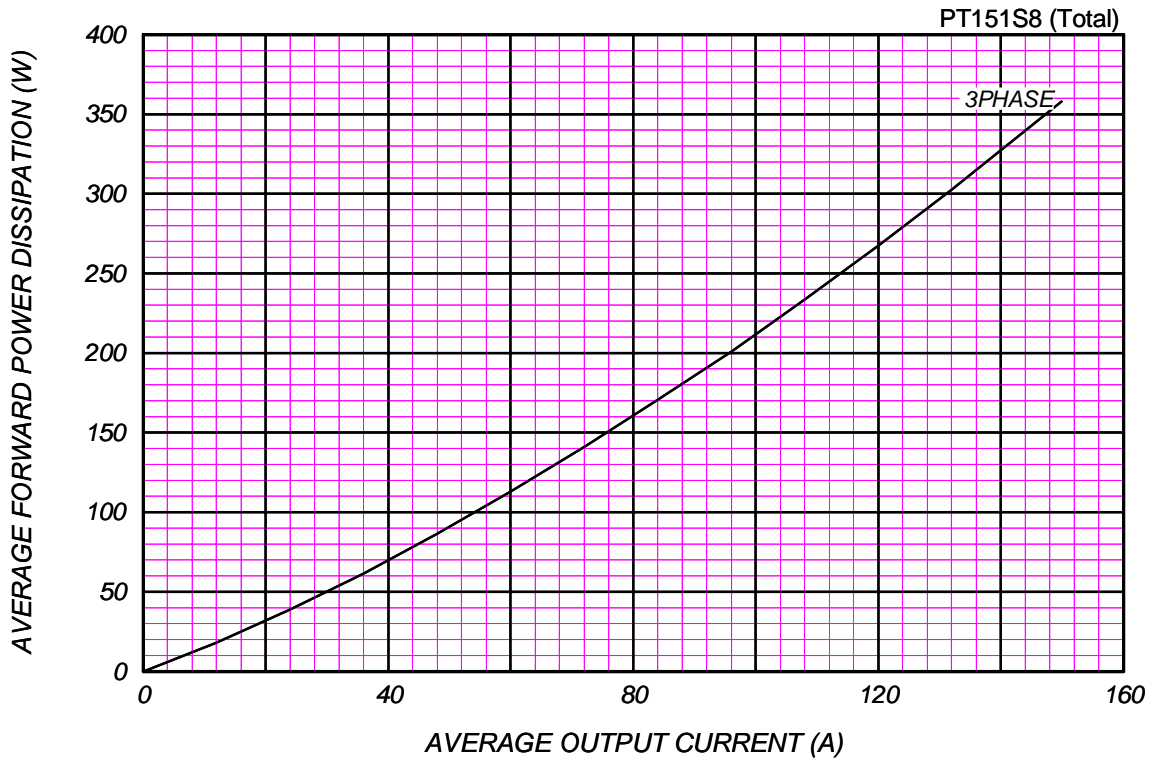
PT151S8 OUTLINE DRAWING (Dimensions in mm)



# FORWARD CURRENT VS. VOLTAGE

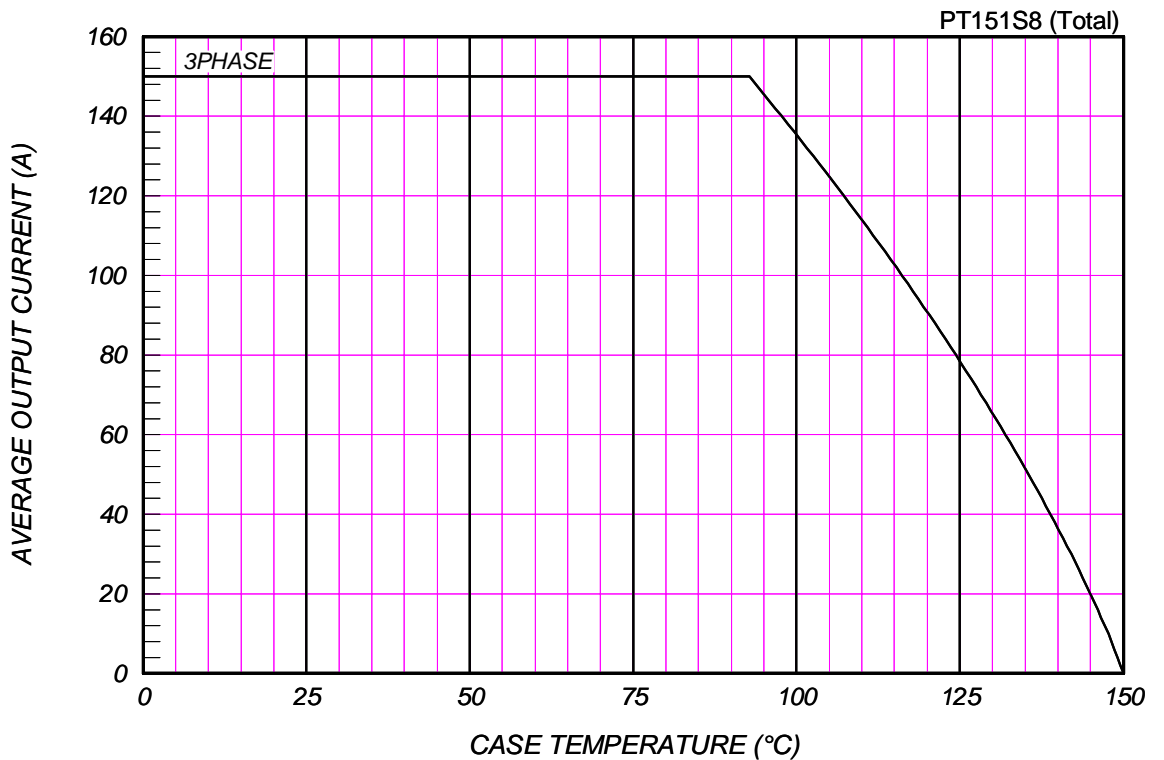


### AVERAGE FORWARD POWER DISSIPATION



### 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<sub>j</sub>=150°C

PT151S8

