

# THYRISTOR MODULE

# PAT1508 PAH1508

## 150A / 800V

### FEATURES

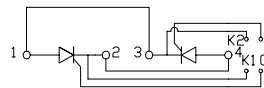
- \* Isolated Base
- \* Dual Thyristors or Thyristor and Diode Anti-Parallel Circuit
- \* High Surge Capability
- \* UL Recognized, File No. E187184

### TYPICAL APPLICATIONS

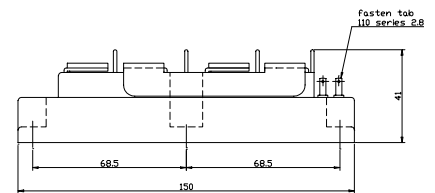
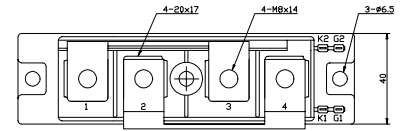
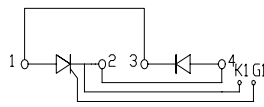
- \* Rectified For General Use

OUTLINE DRAWING

PAT



PAH



### Maximum Ratings

Approx Net Weight:500g

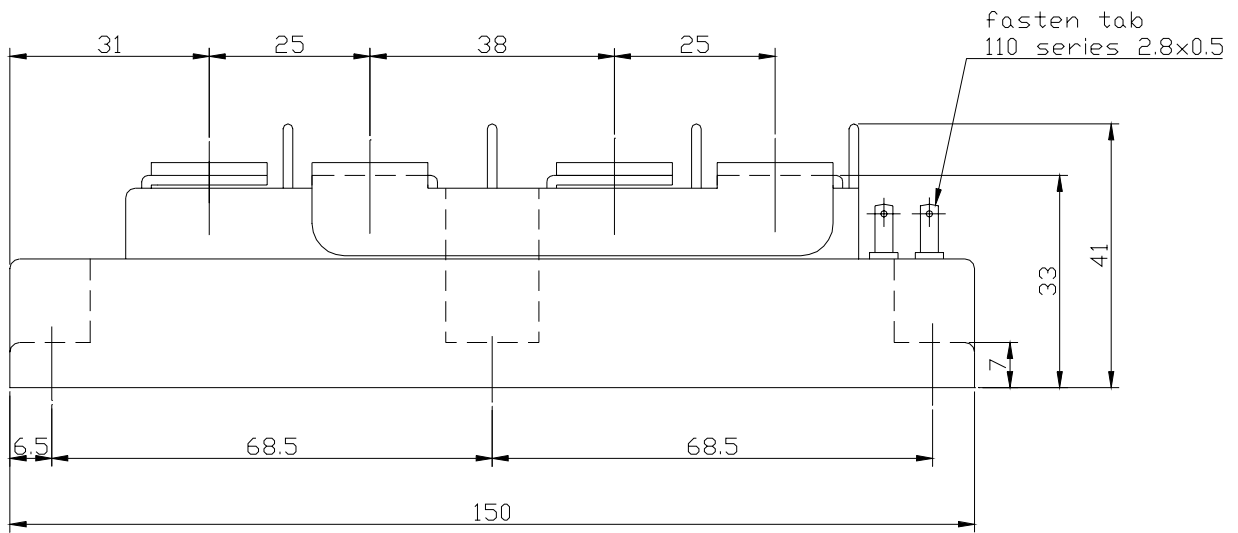
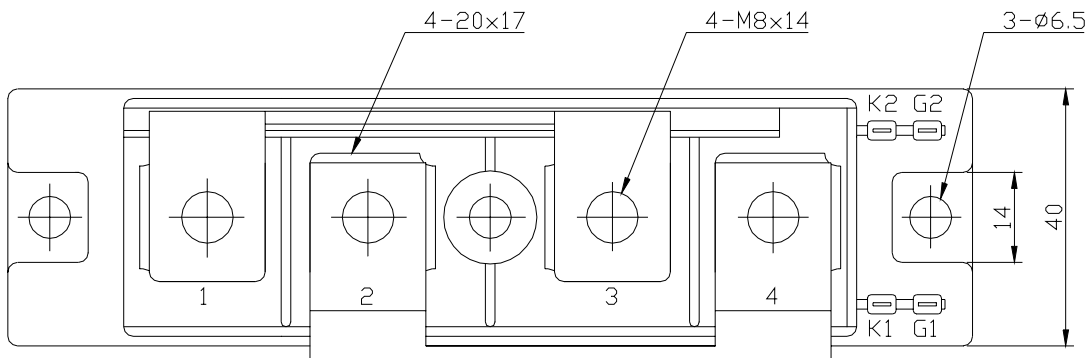
| Parameter                             | Symbol    | Grade       | Unit |
|---------------------------------------|-----------|-------------|------|
|                                       |           | PAT/PAH1508 |      |
| Repetitive Peak Off-State Voltage     | $V_{DRM}$ | 800         | V    |
| Non Repetitive Peak Off-State Voltage | $V_{DSM}$ | 900         |      |
| Repetitive Peak Reverse Voltage       | $V_{RRM}$ | 800         | V    |
| Non Repetitive Peak Reverse Voltage   | $V_{RSM}$ | 900         |      |

| Parameter                            |               | Conditions  | Max Rated Value | Unit       |
|--------------------------------------|---------------|---|-----------------|------------|
| Average Rectified Output Current     | $I_{O(AV)}$   | 50Hz Half Sine Wave condition<br>$T_c=78^\circ C$   | 150             | A          |
| RMS On-State Current                 | $I_{T(RMS)}$  |   | 235             | A          |
| Surge On-State Current               | $I_{TSM}$     | 50 Hz Half Sine Wave, 1Pulse<br>Non-Repetitive  | 3200            | A          |
| I Squared t                          | $I^2t$        | 2msec to 10msec   | 51200           | $A^2s$     |
| Critical Rate of Turned-On Current   | di/dt         | $V_D=2/3V_{DRM}$ , $I_{TM}=2 \cdot I_o$ , $T_j=125^\circ C$<br>$I_G=300mA$ , $di/dt=0.2A/\mu s$ | 100             | $A/\mu s$  |
| Peak Gate Power                      | $P_{GM}$      |   | 5               | W          |
| Average Gate Power                   | $P_{G(AV)}$   |   | 1               | W          |
| Peak Gate Current                    | $I_{GM}$      |   | 2               | A          |
| Peak Gate Voltage                    | $V_{GM}$      |   | 10              | V          |
| Peak Gate Reverse Voltage            | $V_{RGM}$     |   | 5               | V          |
| Operating Junction Temperature Range | $T_{jw}$      |   | -40 to +125     | $^\circ C$ |
| Storage Temperature Range            | $T_{stg}$     |   | -40 to +125     | $^\circ C$ |
| Isolation Voltage                    | Viso          | Base Plate to Terminals, AC1min   | 2000            | V          |
| Mounting torque                      | Case mounting | Ftor  | M6 Screw        | N.m        |
|                                      | Terminals     |   | M8 Screw        |            |

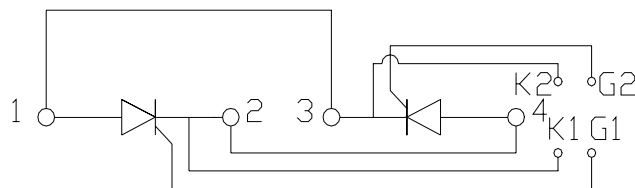
Value per 1 Arm



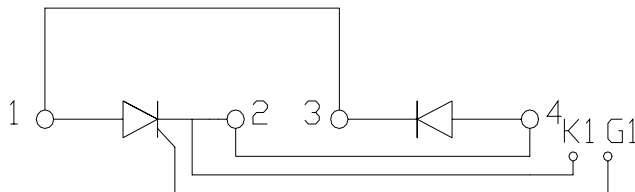
PAT/PAH1508 OUTLINE DRAWING (Dimensions in mm)



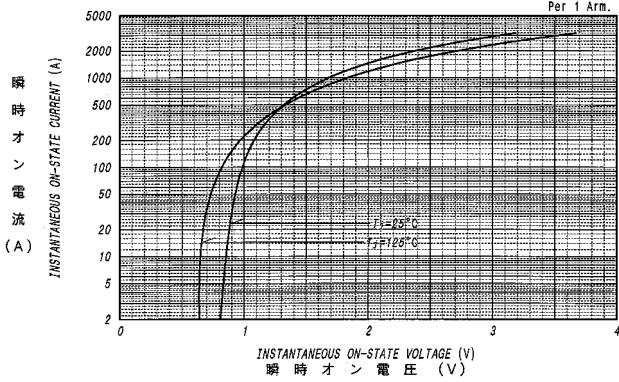
PAT



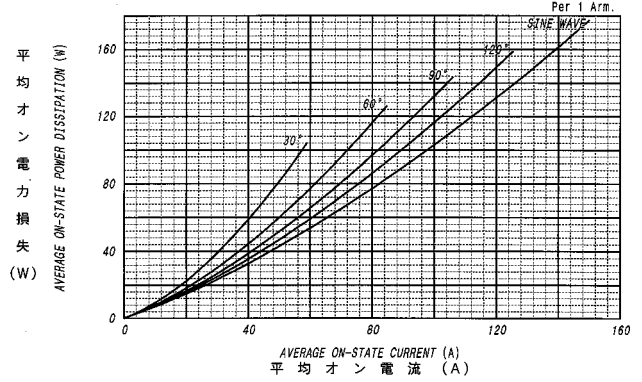
PAH



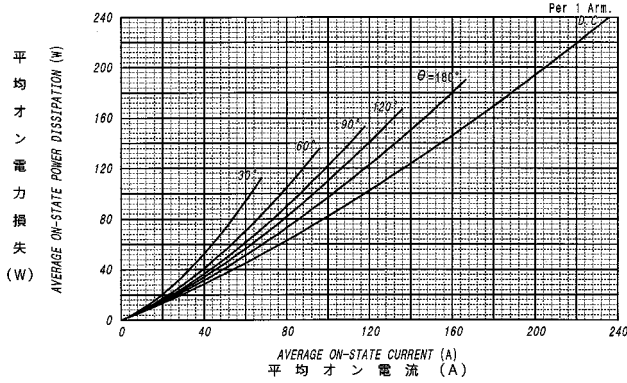
オン電圧特性  
ON-STATE CURRENT VS. VOLTAGE



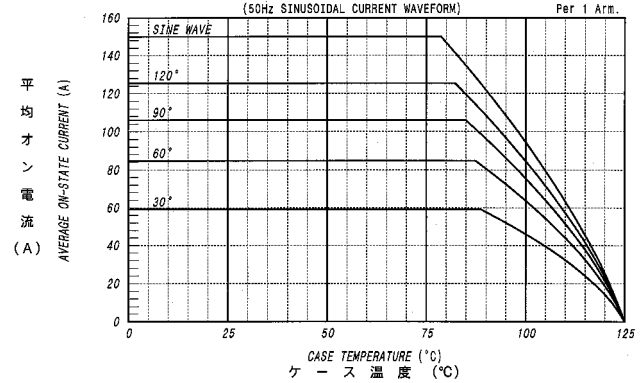
平均オン電力損失特性  
AVERAGE ON-STATE POWER DISSIPATION  
for SINUSOIDAL CURRENT WAVEFORM



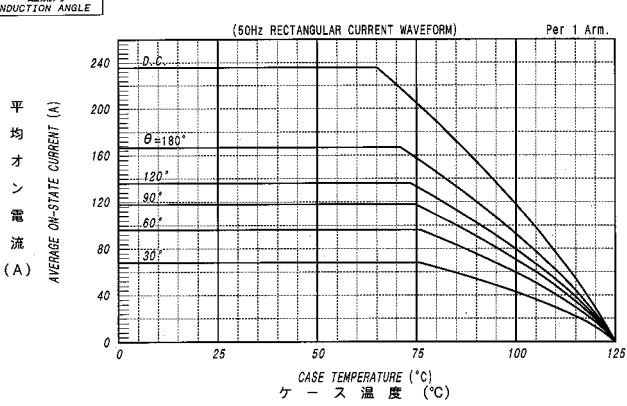
平均オン電力損失特性  
AVERAGE ON-STATE POWER DISSIPATION  
for RECTANGULAR CURRENT WAVEFORM



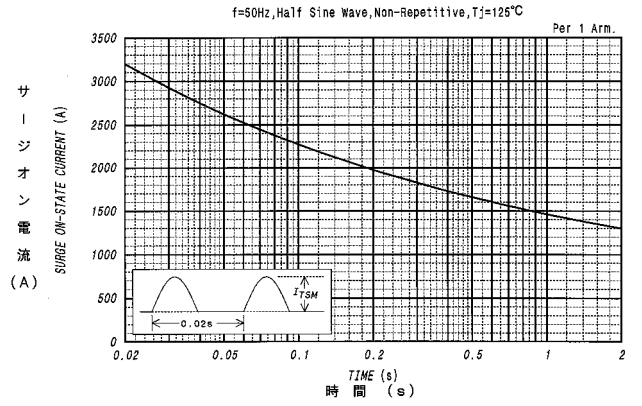
平均オン電流 - ケース温度定格  
AVERAGE ON-STATE CURRENT VS. CASE TEMPERATURE



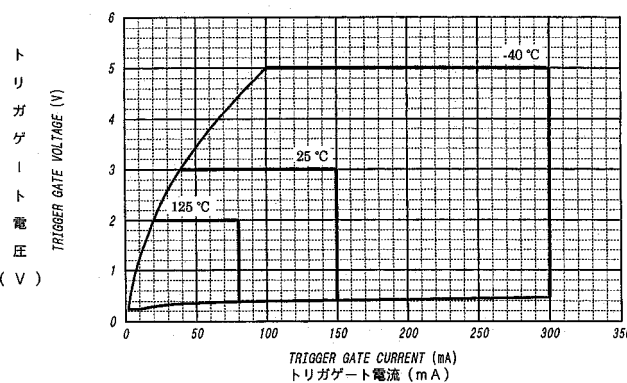
平均オン電流 - ケース温度定格  
AVERAGE ON-STATE CURRENT VS. CASE TEMPERATURE



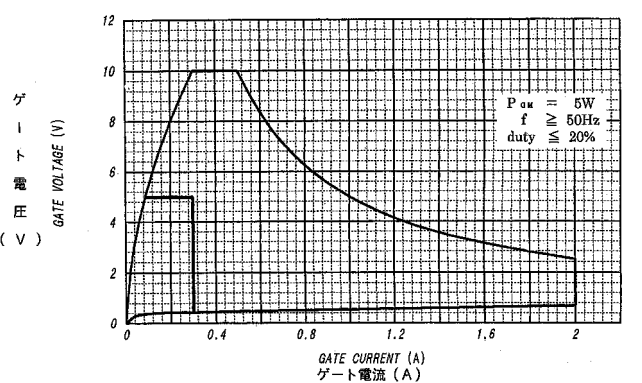
サージオン電流定格  
SURGE CURRENT RATINGS



ゲート特性  
GATE CHARACTERISTICS



ゲート定格  
GATE RATINGS



過渡熱抵抗特性  
 MAXIMUM TRANSIENT THERMAL IMPEDANCE  
 Junction to Case

