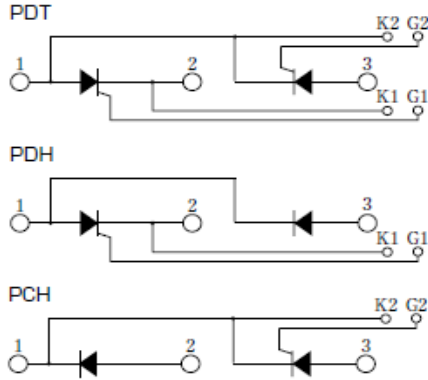


THYRISTOR

60A Avg 1600 Volts

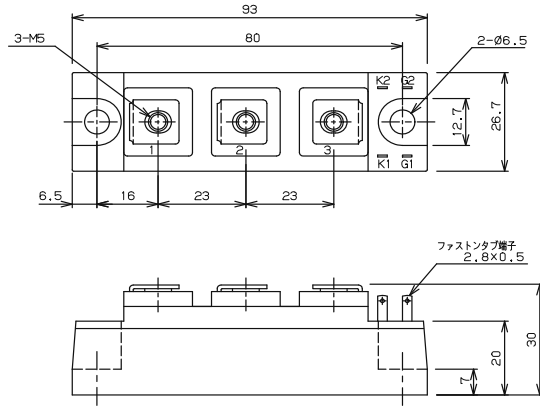
PDT6016
PDH6016
PCH6016

■回路図 CIRCUIT



■外形寸法図 OUTLINE DRAWING

Dimension: [mm]



■最大定格 Maximum Ratings

| 項目 Parameter | 記号 Symbol | 耐圧クラス Grade | | 単位 Unit |
|---|--------------|-------------------------|--|------------|
| | | PDT6016/PDH6016/PCH6016 | | |
| くり返しピークオフ電圧 Repetitive Peak Off-State Voltage | V_{DRM} | 1600 | | V |
| 非くり返しピークオフ電圧 Non Repetitive Peak Off-State Voltage | V_{DSM} | 1700 | | V |
| くり返しピーク逆電圧 Repetitive Peak Reverse Voltage | V_{RRM} | 1600 | | V |
| 非くり返しピーク逆電圧 Non Repetitive Peak Reverse Voltage | V_{RSM} | 1700 | | V |

| 項目 Parameter | 記号 Symbol | 条件 Conditions | 定格値 Max. Rated Value | 単位 Unit | | |
|---|------------------|--|-------------------------|------------------------|-----------|---------------------------|
| 平均オン電流 Average On-State Current | $I_{O(AV)}$ | 商用周波数 180° 通電 $T_c=82^\circ\text{C}$ Half Sine Wave | 60 | A | | |
| 実効オン電流 RMS On-State Current | I_{TRMS} | | 94 | A | | |
| サージオン電流 Surge On-State Current | I_{ISM} | 50Hz 正弦半波, 1サージ, 非くり返し Half Sine Wave, 1Pulse, Non-Repetitive | 1200 | A | | |
| 電流二乗時間積 I Squared t | I^2t | 2~10ms | 7200 | $\text{A}^2 \text{s}$ | | |
| 臨界オン電流上昇率 Critical Rate of Rise of Turned-On Current | di/dt | $V_D=2/3 V_{DRM}$, $I_{TM}=2 \cdot I_O$, $T_J=125^\circ\text{C}$ $I_G=200\text{mA}$, $di/dt=0.2\text{A}/\mu\text{s}$ | 100 | $\text{A}/\mu\text{s}$ | | |
| ピークゲート電力損失 Peak Gate Power | P_{GM} | | 5 | W | | |
| 平均ゲート電力損失 Average Gate Power | $P_{G(AV)}$ | | 1 | W | | |
| ピークゲート電流 Peak Gate Current | I_{GM} | | 2 | A | | |
| ピークゲート電圧 Peak Gate Voltage | V_{GM} | | 10 | V | | |
| ピークゲート逆電圧 Peak Gate Reverse Voltage | V_{RGM} | | 5 | V | | |
| 動作接合温度範囲 Operating Junction Temperature Range | T_{JW} | | -40 ~ +125 | $^\circ\text{C}$ | | |
| 保存温度範囲 Storage Temperature Range | T_{stg} | | -40 ~ +125 | $^\circ\text{C}$ | | |
| 絶縁耐圧 Isolation Voltage | V_{iso} | 端子-ベース間, AC 1分間 Terminal to Base, AC 1min. | 2500 | V | | |
| 締付トルク Mounting Torque | ベース部 Mounting | F | サマルコパッド 塗布 Greased | M6 | 2.4 ~ 3.5 | $\text{N} \cdot \text{m}$ |
| | 主端子部 Terminal | | | M5 | 2.4 ~ 2.8 | $\text{N} \cdot \text{m}$ |

■電気的特性 Electrical Characteristics

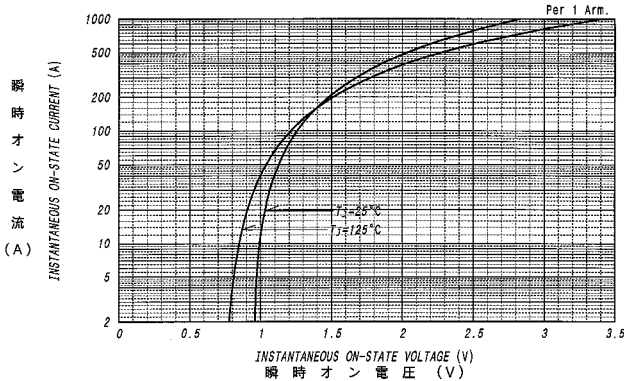
| 項目 Parameter | 記号 Symbol | 条件 Conditions | 特性値 (最大) Maximum Value | | | 単位 Unit |
|---|----------------------|---|---------------------------|------------|------------|------------|
| | | | 最小 Min. | 標準 Typ. | 最大 Max. | |
| ピークオフ電流 Peak Off-State Current | I _{DM} | T _j =125°C, V _{DM} =V _{DRM} | | | 15 | mA |
| ピーク逆電流 Peak Reverse Current | I _{RM} | T _j =125°C, V _{RM} =V _{RRM} | | | 15 | mA |
| ピークオン電圧 Peak On-State Voltage | V _{TM} | T _j =25°C, I _{TM} =180A | | | 1.45 | V |
| トリガゲート電流 Gate Current to Trigger | I _{GT} | V _D =6V, I _T =1A | T _j = -40°C | | 200 | mA |
| | | | T _j = 25°C | | 100 | mA |
| | | | T _j = 125°C | | 50 | mA |
| | | | T _j = -40°C | | 4 | V |
| トリガゲート電圧 Gate Voltage to Trigger | V _{GT} | V _D =6V, I _T =1A | T _j = -40°C | | 4 | V |
| | | | T _j = 25°C | | 2.5 | V |
| | | | T _j = 125°C | | 2 | V |
| | | | T _j = 125°C | | 2 | V |
| 非トリガゲート電圧 Gate Non-Trigger Voltage | V _{GD} | T _j =125°C, V _D =2/3V _{DRM} | 0.25 | | | V |
| 臨界オフ電圧上昇率 Critical Rate of Rise of Off-State Voltage | dv/dt | T _j =125°C, V _D =2/3V _{DRM} | 500 | | | V/μs |
| ターンオフ時間 Turn-Off Time | t _q | T _j =125°C, I _{TM} =I _O , V _D =2/3V _{DRM} dv/dt=20V/μs, V _R =100V, -di/dt=20A/μs | | 100 | | μs |
| ターンオン時間 Turn-On Time | t _{gt} | | | 6 | | μs |
| 遅れ時間 Delay Time | t _d | T _j =25°C, V _D =2/3V _{DRM} I _G =200mA, di _G /dt=0.2A/μs | | 2 | | μs |
| 立上がり時間 Rise Time | t _r | | | 4 | | μs |
| ラッチング電流 Latching Current | I _L | T _j =25°C | | 100 | | mA |
| 保持電流 Holding Current | I _H | T _j =25°C | | 50 | | mA |
| 熱抵抗 Thermal Resistance | R _{th(j-c)} | 接合部-ケース間 Junction to Case | | | 0.5 | °C/W |
| 接触熱抵抗 Thermal Resistance | R _{th(c-f)} | ケース-フィン間, サーマルコンパウンド塗布 Case to Fin, Greased | | | 0.2 | °C/W |

質量…約155g
Approximate Weight

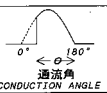
1アーム当りの値 Value Per 1 Arm.

■定格・特性曲線

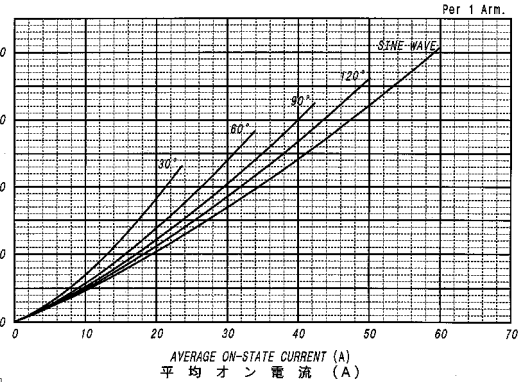
オン電圧特性
ON-STATE CURRENT VS. VOLTAGE



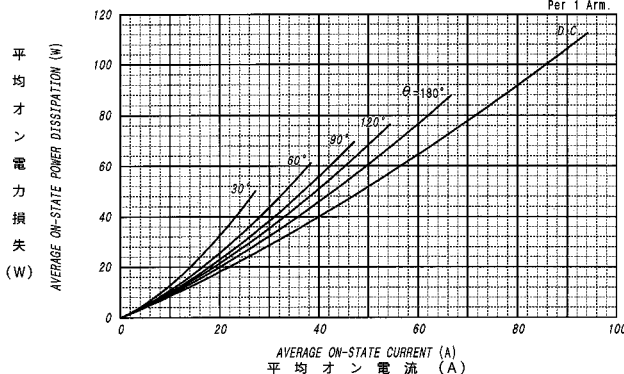
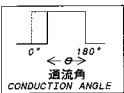
平均オン電力損失特性
AVERAGE ON-STATE POWER DISSIPATION
for SINUSOIDAL CURRENT WAVEFORM



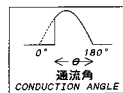
平均オン電力損失 (W)



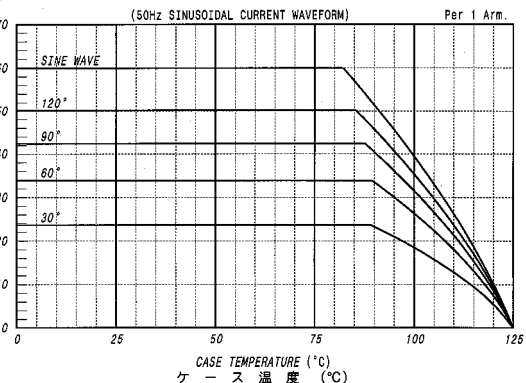
平均オン電力損失特性
AVERAGE ON-STATE POWER DISSIPATION
for RECTANGULAR CURRENT WAVEFORM

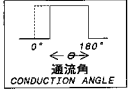


平均オン電流-ケース温度定格
AVERAGE ON-STATE CURRENT VS. CASE TEMPERATURE

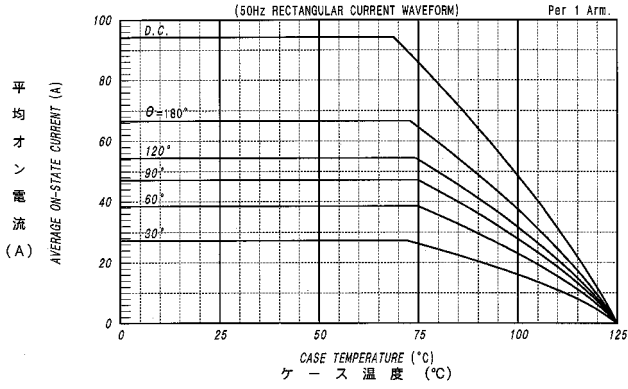


平均オン電流 (A)





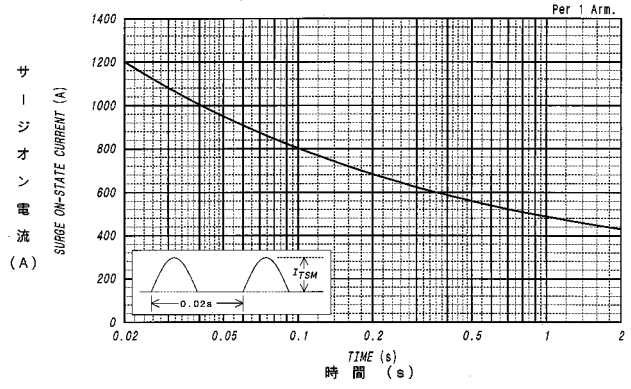
平均オン電流 - ケース温度定格
AVERAGE ON-STATE CURRENT VS. CASE TEMPERATURE



ゲート特性
GATE CHARACTERISTICS

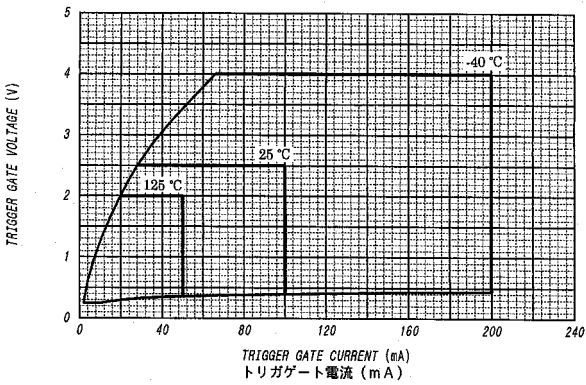
サージオン電流定格
SURGE CURRENT RATINGS

f=50Hz, Half Sine Wave, Non-Repetitive, Tj=125°C

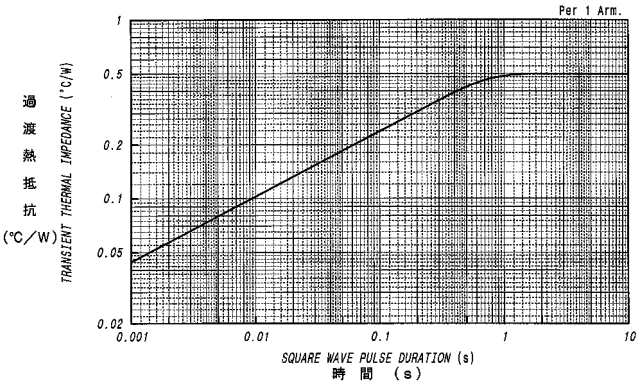


ゲート定格
GATE RATINGS

トリガゲート電圧 (V)



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



ゲート電圧 (V)

