



### ダイオードブリッジ部(6素子) Part of Diode Bridge(6 Arm.)

#### ■電気的特性 Electrical Characteristics

| 項目<br>Parameter                | 記号<br>Symbol | 条件<br>Conditions                          | 特性値(最大)<br>Maximum Value | 単位<br>Unit |
|--------------------------------|--------------|---|--------------------------|------------|
| ピーク逆電流<br>Peak Reverse Current | *1<br>IRM    | Tj = 125°C, VRM = VRRM                    | 20                       | mA         |
| ピーク順電圧<br>Peak Forward Voltage | *1<br>VFM    | Tj = 25°C, IFM = 200A                     | 1.26                     | V          |
| 熱抵抗<br>Thermal Resistance      | Rth(j-c)     | 接合部-ケース間(トータル)<br>Junction to Case, Total | 0.07                     | °CW        |

\*1 : 1アーム当たりの値 Value Per 1 Arm.

### サイリスタ部(1素子) Part of Thyristor(1 Arm.)

#### ■最大定格 Maximum Rating

| 項目<br>Parameter                                       | 記号<br>Symbol | 定格値<br>Max. Rated Value | 単位<br>Unit |
|---|--------------|-------------------------|------------|
| くり返しピークオフ電圧<br>Repetitive Peak Off State Voltage      | *2<br>VDRM   | 1600                    | V          |
| 非くり返しピークオフ電圧<br>Non-Repetitive Peak Off State Voltage | *2<br>VDSM   | 1700                    | V          |

\*2 : 逆電圧を印加しないこと Can not be Biased for Thyristor

| 項目<br>Parameter   | 記号<br>Symbol       | 条件<br>Conditions   | 定格値<br>Max. Rated Value | 単位<br>Unit |
|---|--------------------|--|-------------------------|------------|
| サージオン電流<br>Surge On-State Current                       | I1SM               | 50Hz 正弦半波, 1パルス, 非くり返し<br>Half Sine Wave, 1Pulse, Non-Repetitive   | 4000                    | A          |
| 電流二乗時間積<br>I Squared t                                  | I²t                | 2~10ms   | 80000                   | A² s       |
| 臨界オン電流上昇率<br>Critical Rate of Rise of Turned-On Current | di/dt              | V <sub>D</sub> = 2/3 V <sub>DRM</sub> , I <sub>TM</sub> = 2 · I <sub>O</sub> , Tj = 125°C<br>I <sub>G</sub> = 300mA, di <sub>G</sub> /dt = 0.2A/μs | 100                     | A/μs       |
| ピークゲート電力損失<br>Peak Gate Power                           | P <sub>GM</sub>    |  | 5                       | W          |
| 平均ゲート電力損失<br>Average Gate Power                         | P <sub>G(AV)</sub> |  | 1                       | W          |
| ピークゲート電流<br>Peak Gate Current                           | I <sub>GM</sub>    |  | 2                       | A          |
| ピークゲート電圧<br>Peak Gate Voltage                           | V <sub>GM</sub>    |  | 10                      | V          |
| ピークゲート逆電圧<br>Peak Gate Reverse Voltage                  | V <sub>RGM</sub>   |  | 5                       | V          |

#### ■電気的特性 Electrical Characteristics

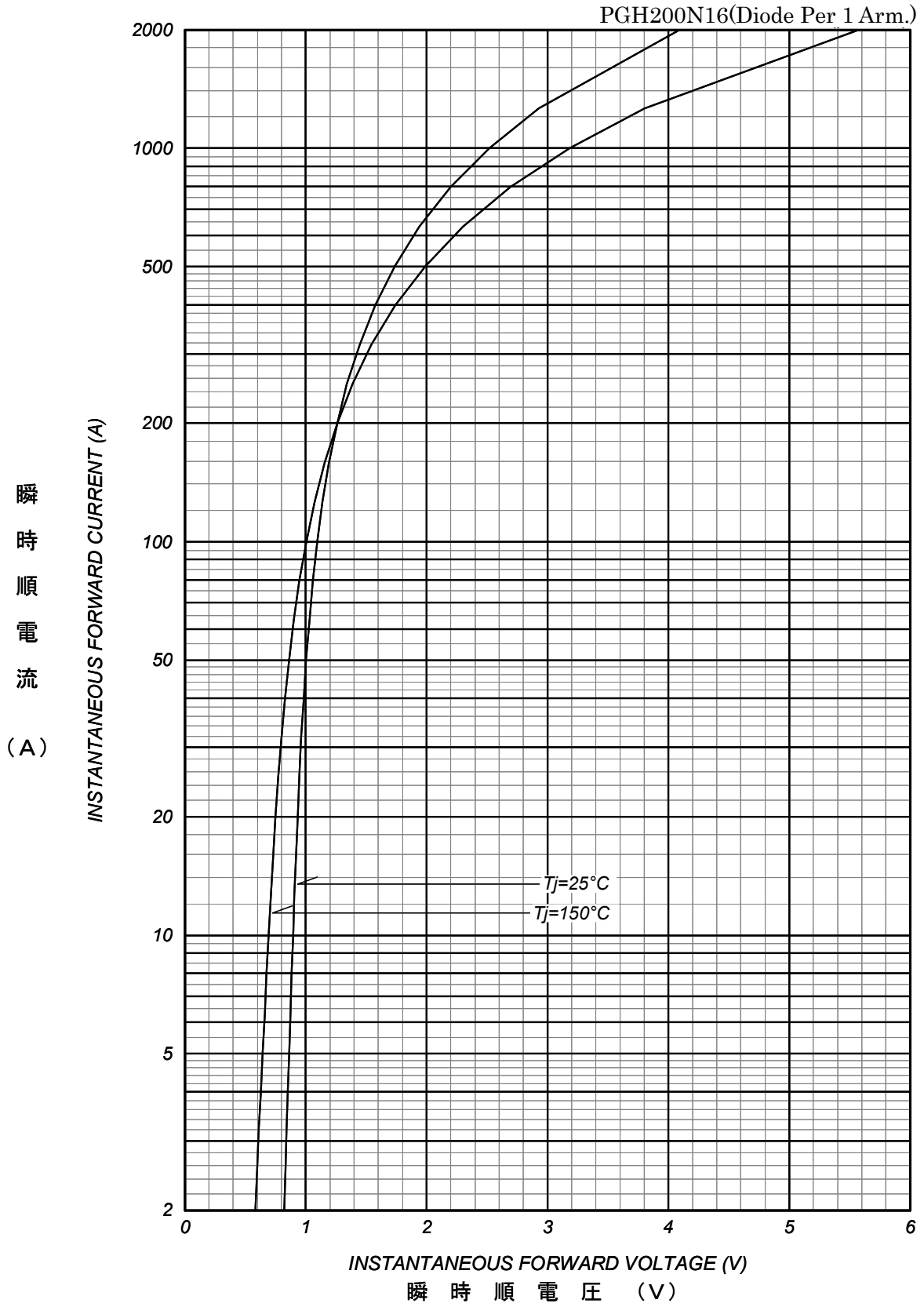
| 項目<br>Parameter   | 記号<br>Symbol    | 条件<br>Conditions   | 特性値(最大)<br>Maximum Value |           |           | 単位<br>Unit |
|---|-----------------|--|--------------------------|-----------|-----------|------------|
|   |                 |  | 最小<br>Min                | 標準<br>Typ | 最大<br>Max |            |
| ピークオフ電流<br>Peak Off State Current                       | IDM             | Tj = 125°C, V <sub>DM</sub> = V <sub>DRM</sub>   |                          |           | 50        | mA         |
| ピークオン電圧<br>Peak Off State Voltage                       | V <sub>TM</sub> | Tj = 25°C, I <sub>TM</sub> = 200A  |                          |           | 1.15      | V          |
| トリガゲート電流<br>Gate Current to Trigger                     | I <sub>GT</sub> | V <sub>D</sub> = 6 V, I <sub>T</sub> = 1A  | Tj = -40°C               |           | 300       | mA         |
|   |                 |  | Tj = 25°C                |           | 150       |            |
|   |                 |  | Tj = 125°C               |           | 80        |            |
| トリガゲート電圧<br>Gate Voltage to Trigger                     | V <sub>GT</sub> | V <sub>D</sub> = 6 V, I <sub>T</sub> = 1A  | Tj = -40°C               |           | 5.0       | V          |
|   |                 |  | Tj = 25°C                |           | 3.0       |            |
|   |                 |  | Tj = 125°C               |           | 2.0       |            |
| 非トリガゲート電圧<br>Gate Non-Trigger Voltage                   | V <sub>GD</sub> | Tj = 125°C, V <sub>D</sub> = 2/3 V <sub>DRM</sub>  | 0.25                     |           |           | V          |
| 臨界オフ電圧上昇率<br>Critical Rate of Rise of Off State Voltage | dv/dt           | Tj = 125°C, V <sub>D</sub> = 2/3 V <sub>DRM</sub>  | 500                      |           |           | V/μs       |
| ターンオフ時間<br>Turn-Off Time                                | t <sub>q</sub>  | Tj = 125°C, I <sub>TM</sub> = I <sub>O</sub> , V <sub>D</sub> = 2/3 V <sub>DRM</sub><br>dv/dt = 20V/μs, V <sub>R</sub> = 100V, -di/dt = 20A/μs |                          | 150       |           | μs         |

| 項目<br>Parameter             | 記号<br>Symbol  | 条件<br>Conditions   | 特性値 (最大)<br>Maximum Value |           |           | 単位<br>Unit                  |
|-----------------------------|---------------|--|---------------------------|-----------|-----------|-----------------------------|
|                             |               |  | 最小<br>Min                 | 標準<br>Typ | 最大<br>Max |                             |
| ターンオン時間<br>Turn-On Time     | $t_{gt}$      | $T_j=25^{\circ}\text{C}$ , $V_D=2/3 V_{DRM}$ , $I_T=3 \cdot I_O$<br>$I_G=300\text{mA}$ , $di_G/dt=0.2\text{A}/\mu\text{s}$ |                           | 6         |           | $\mu\text{s}$               |
| 遅れ時間<br>Delay Time          | $t_d$         |  |                           | 2         |           | $\mu\text{s}$               |
| 立ち上がり時間<br>Rise Time        | $t_r$         |  |                           | 4         |           | $\mu\text{s}$               |
| ラッチング電流<br>Latching Current | $I_L$         | $T_j=25^{\circ}\text{C}$   |                           | 150       |           | mA                          |
| 保持電流<br>Holding Current     | $I_H$         | $T_j=25^{\circ}\text{C}$   |                           | 100       |           | mA                          |
| 熱抵抗<br>Thermal Resistance   | $R_{th(j-c)}$ | 接合部-ケース間<br>Junction to Case   |                           |           | 0.20      | $^{\circ}\text{C}/\text{W}$ |

質量 … 約 450g

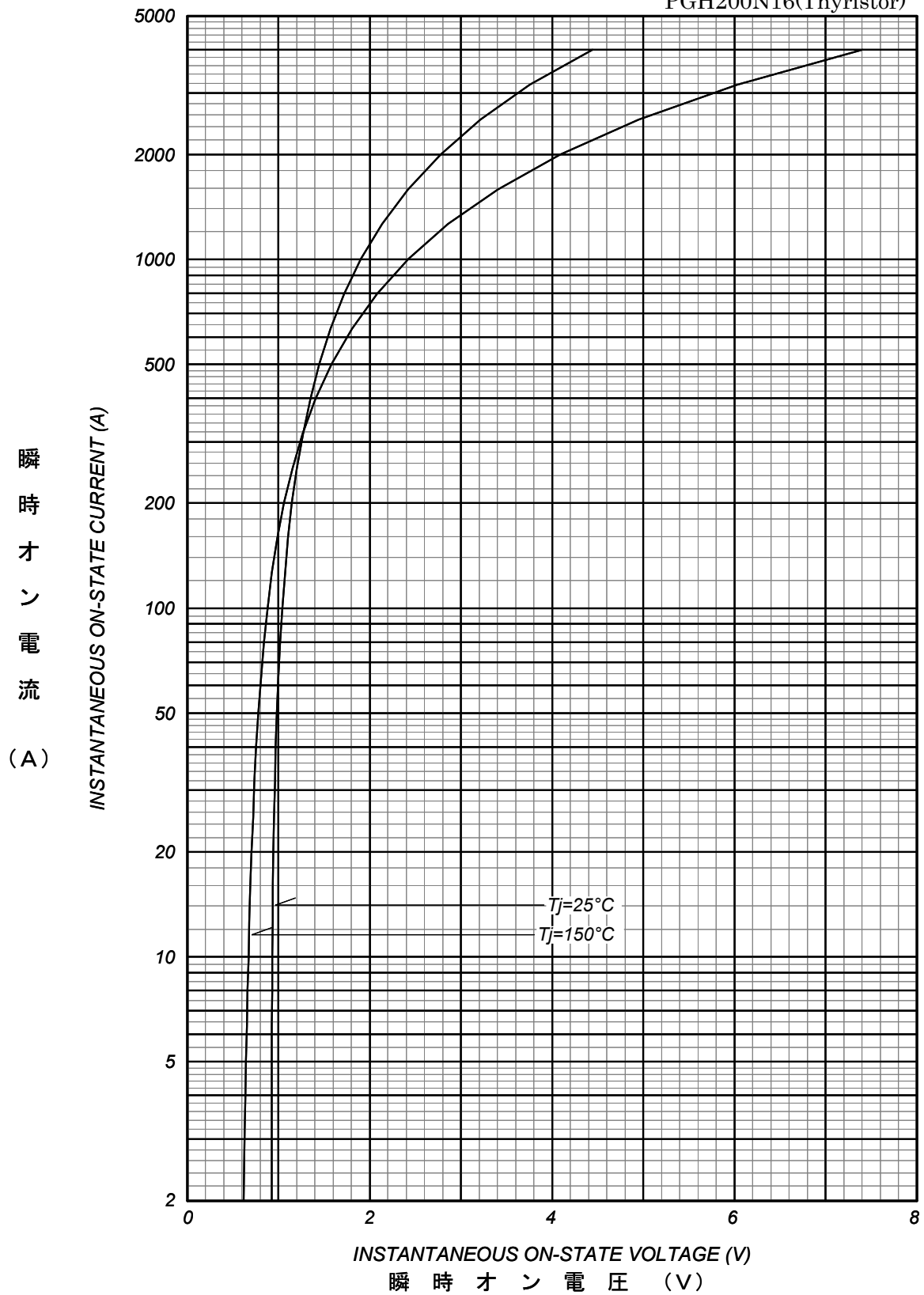
Approximate Weight

順電圧特性  
FORWARD CURRENT VS. VOLTAGE

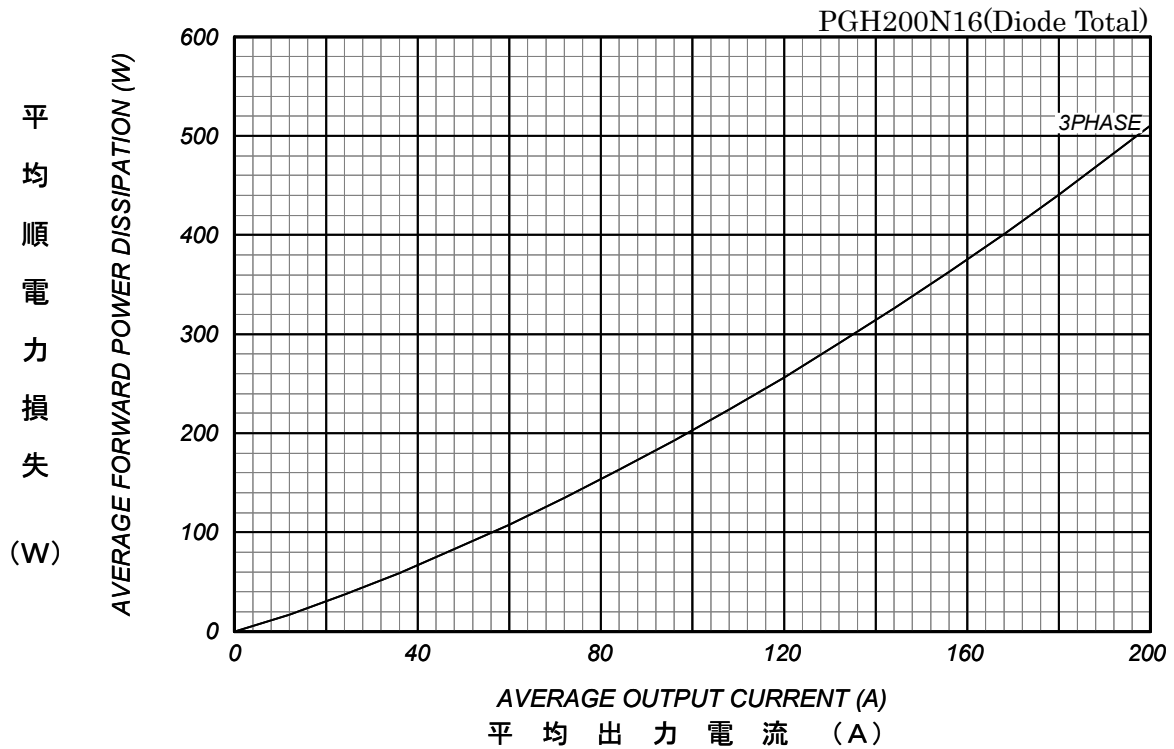


オン電圧特性  
ON-STATE CURRENT VS. VOLTAGE

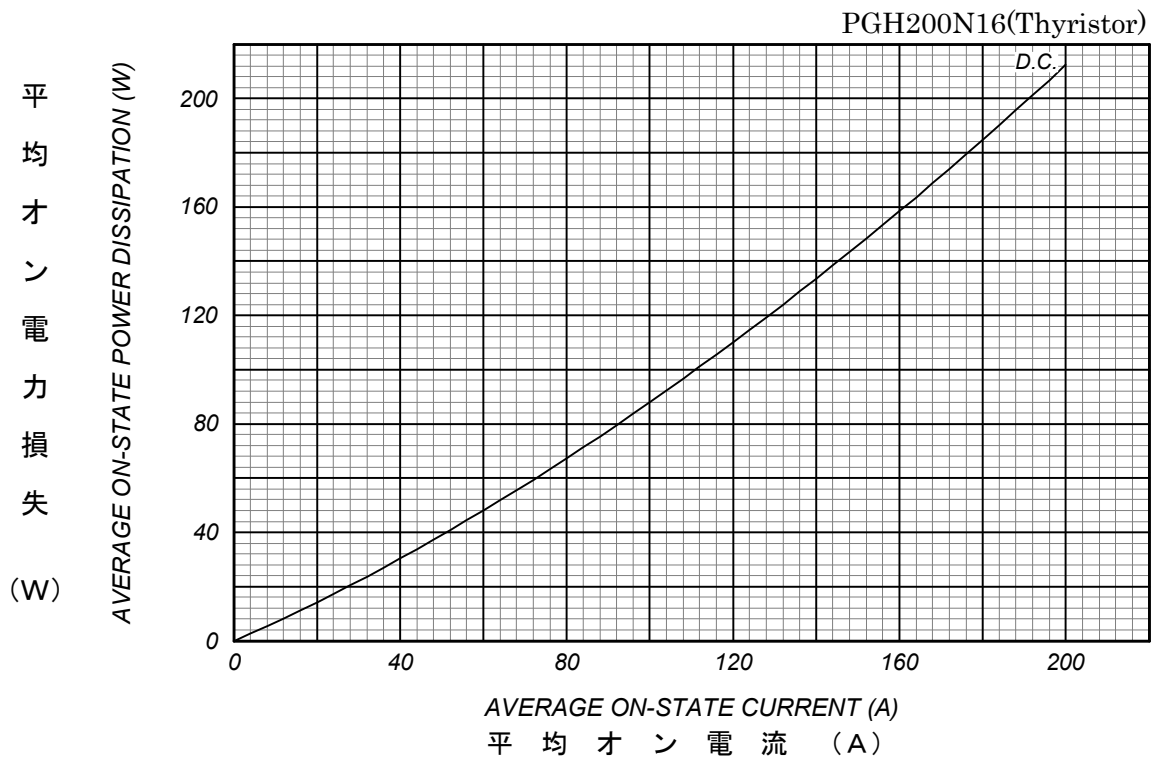
PGH200N16(Thyristor)



平均順電力損失特性  
AVERAGE FORWARD POWER DISSIPATION



平均オン電力損失特性  
AVERAGE ON-STATE POWER DISSIPATION



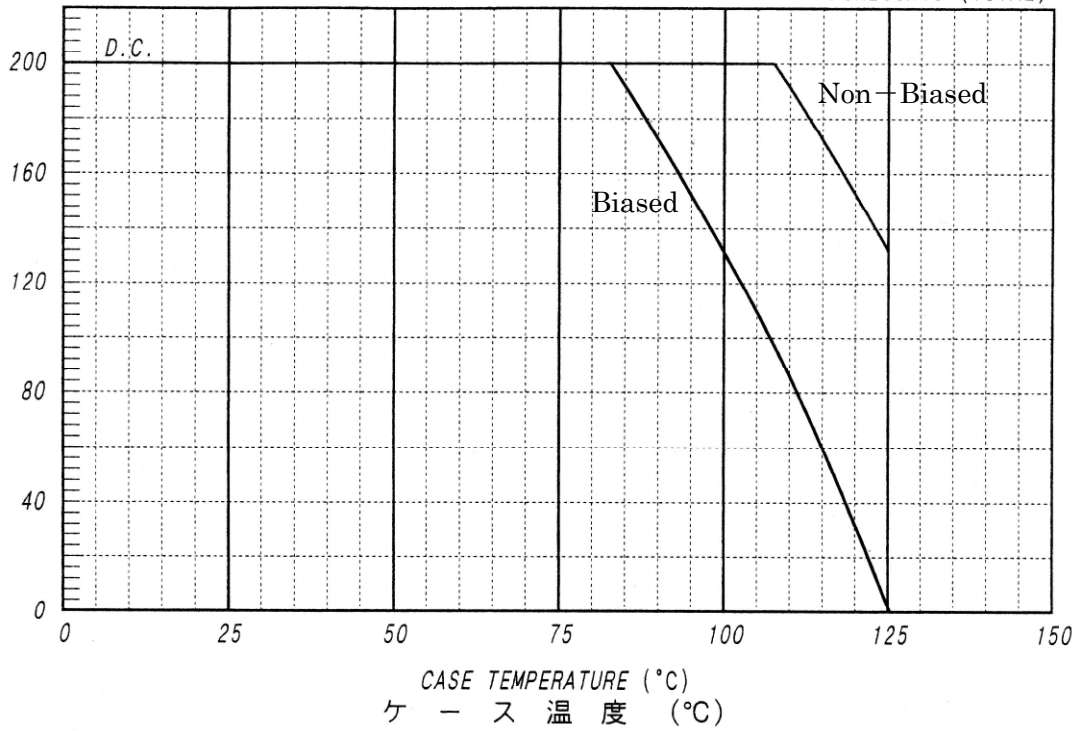
平均出力電流 - ケース温度定格  
 AVERAGE OUTPUT CURRENT VS. CASE TEMPERATURE

3-Phase Full Wave, Resistive or Inductive Load

PGH200N16 (TOTAL)

平均出力電流 (A)

AVERAGE OUTPUT CURRENT (A)



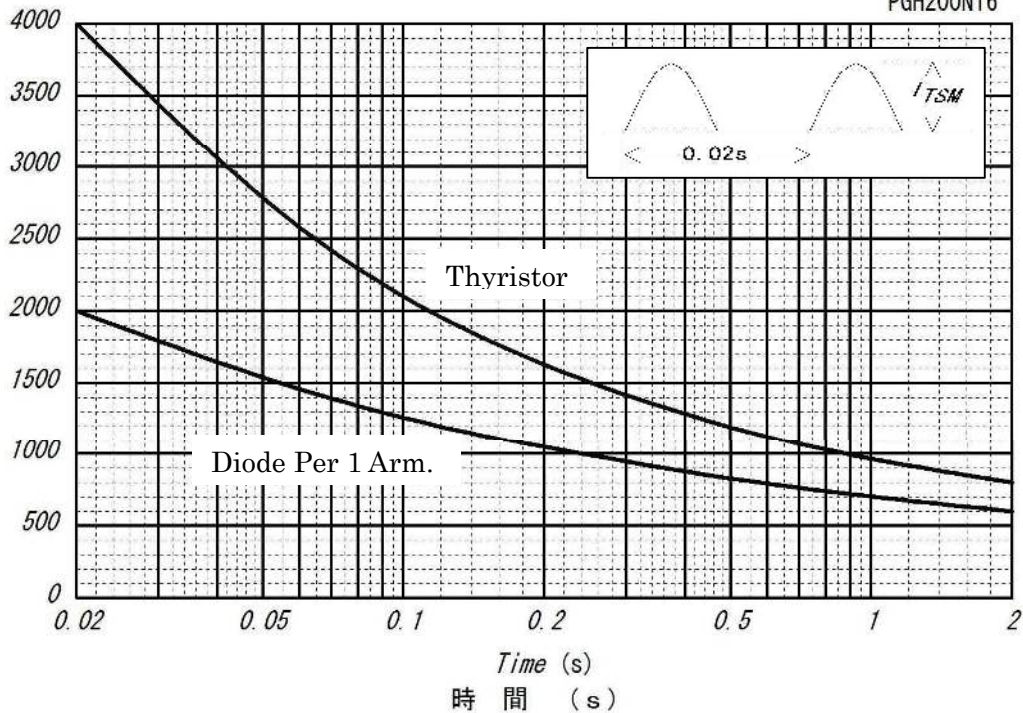
サージ電流定格  
 SURGE CURRENT RATINGS

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

PGH200N16

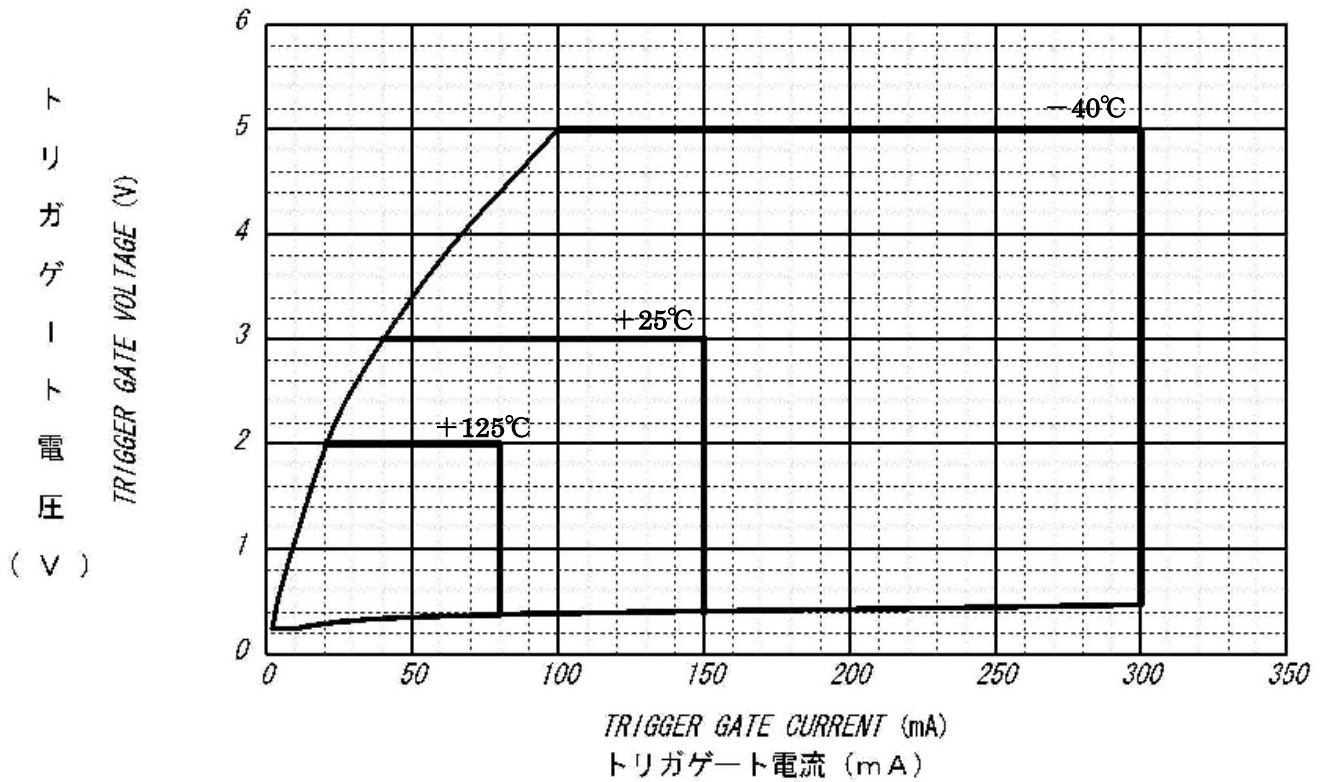
サージ電流 (A)

SURGE CURRENT (A)

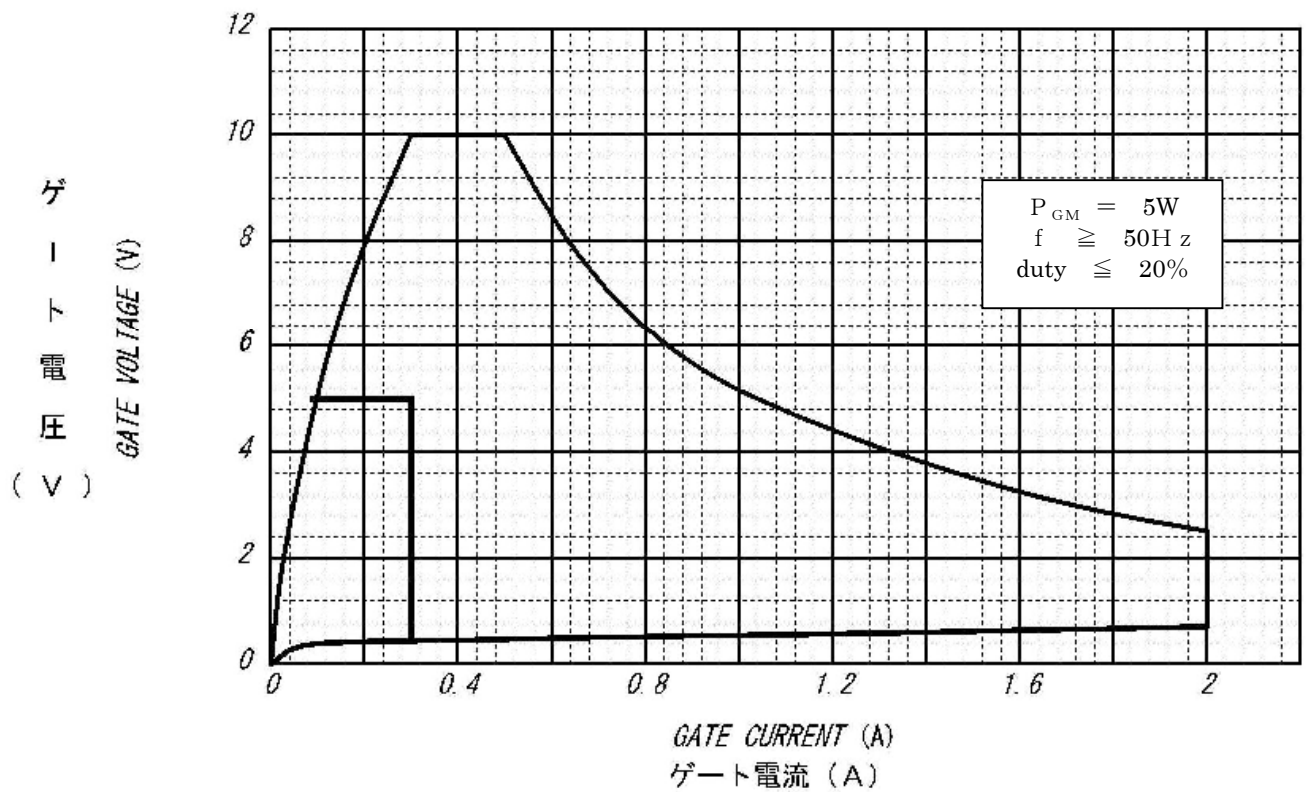




### ゲート特性 GATE CHARACTERISTICS

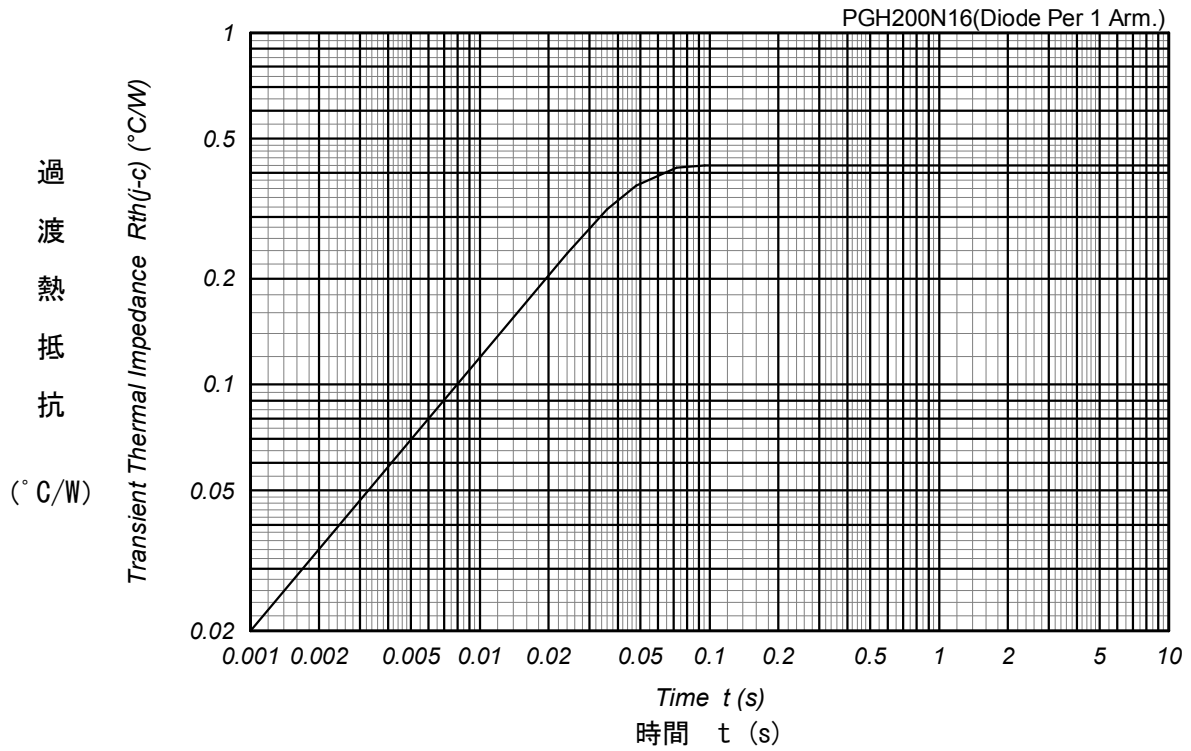


### ゲート定格 GATE RATINGS





過渡熱抵抗特性  
Transient Thermal Impedance



過渡熱抵抗特性  
Transient Thermal Impedance

