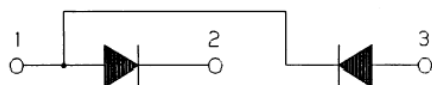


# DIODE

## 250A Avg 1600 Volts

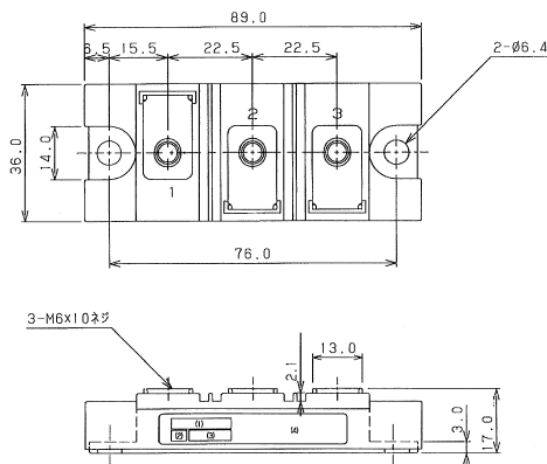
### PD250KN16A

#### ■回路図 CIRCUIT



#### ■外形寸法図 OUTLINE DRAWING

Dimension: [mm]



#### ■最大定格 Maximum Ratings

| 項目<br>Parameter                                    | 記号<br>Symbol    | 耐圧クラス Grade |  | 単位<br>Unit |
|----------------------------------------------------|-----------------|-------------|--|------------|
|                                                    |                 | PD250KN16A  |  |            |
| くり返しピーク逆電圧<br>Repetitive Peak Reverse Voltage      | *1<br>$V_{RRM}$ | 1600        |  | V          |
| 非くり返しピーク逆電圧<br>Non Repetitive Peak Reverse Voltage | *1<br>$V_{RSM}$ | 1700        |  | V          |

| 項 目<br>Parameter                                 |                  | 記 号<br>Symbol             | 条 件<br>Conditions                                                  |    | 定格値<br>Max. Rated Value                      | 単位<br>Unit       |   |
|--------------------------------------------------|------------------|---------------------------|--------------------------------------------------------------------|----|----------------------------------------------|------------------|---|
| 平均整流電流<br>Average Rectified Output Current       |                  | *1<br>I <sub>O (AV)</sub> | 商用周波数 180° 通電<br>Half Sine Wave                                    |    | T <sub>c</sub> =117℃<br>250                  | A                |   |
| 実効順電流<br>RMS Forward Current                     |                  | *1<br>I <sub>FRMS</sub>   |                                                                    |    | 390                                          | A                |   |
| サージ順電流<br>Surge Forward Current                  |                  | *1<br>I <sub>FSM</sub>    | 50Hz 正弦半波, 1 サイクル, 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                           |                  | *1<br>I <sup>2</sup> t    | 2～10ms                                                             |    | 80000                                        | A <sup>2</sup> s |   |
| 動作接合温度範囲<br>Operating Junction Temperature Range |                  |                           | T <sub>jw</sub>                                                    |    | -40 ～ +150                                   | ℃                |   |
| 保存温度範囲<br>Storage Temperature Range              |                  |                           | T <sub>stg</sub>                                                   |    | -40 ～ +125                                   | ℃                |   |
| 絶縁耐圧<br>Isolation Voltage                        |                  |                           | V <sub>iso</sub>                                                   |    | 端子—ベース間、AC 1 分間<br>Terminal to Base, AC 1min | 2500             | V |
| 締付トルク<br>Mounting Torque                         | ベース部<br>Mounting | F                         | サーマルコンパウンド塗布<br>Greased                                            | M6 | 2.5 ～ 3.5                                    | N・m              |   |
|                                                  | 主端子部<br>Terminal |                           |                                                                    | M6 | 2.5 ～ 3.5                                    | N・m              |   |

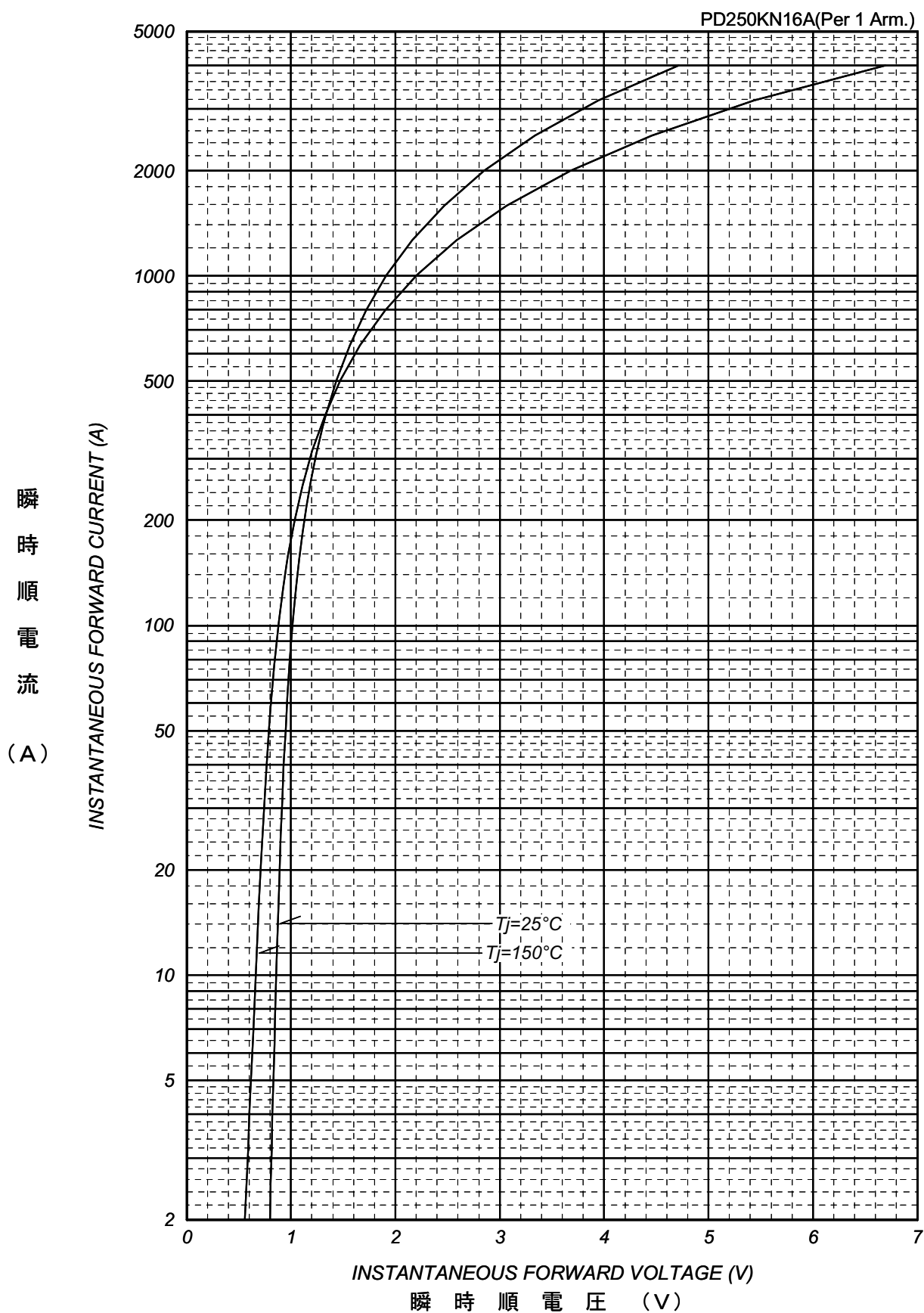
#### ■電気的特性 Electrical Characteristics

| 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>$I_{RM}$      | $T_j=150^{\circ}\text{C}$ , $V_{RM}=V_{RRM}$     | 17                        | mA         |
| ピーク順電圧<br>Peak Forward Voltage | *1<br>$V_{FM}$      | $T_j=25^{\circ}\text{C}$ , $I_{FM}=800\text{A}$  | 1.72                      | V          |
| 熱抵抗<br>Thermal Resistance      | *1<br>$R_{th(j-c)}$ | 接合部—ケース間 ( $T_c$ 測定点: チップ直下)<br>Junction to Case | 0.08                      | °C/W       |
| 接触熱抵抗<br>Thermal Resistance    | *1<br>$R_{th(c-f)}$ | ケースフィン間, サーマルコンパウンド塗布<br>Case to Fin, Greased    | 0.2                       | °C/W       |

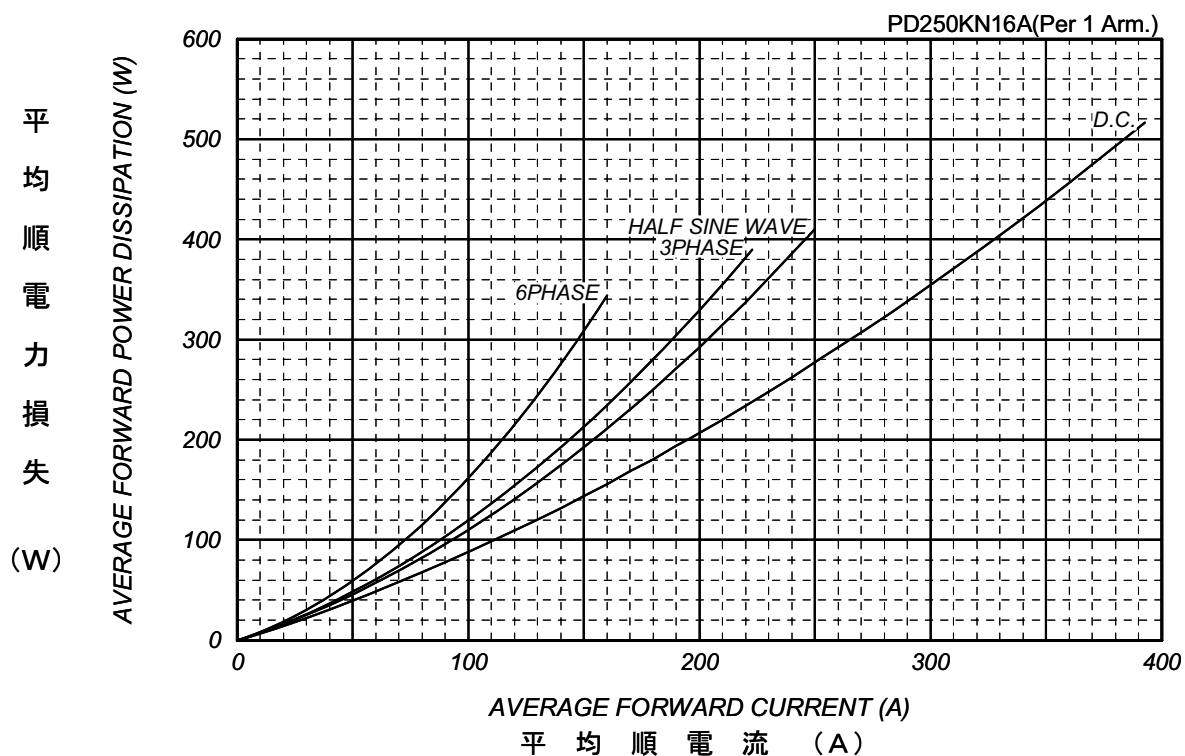
質量 --- 約 150g  
Approximate Weight

\*1: 1アーム当りの値 Value Per 1 Arm.

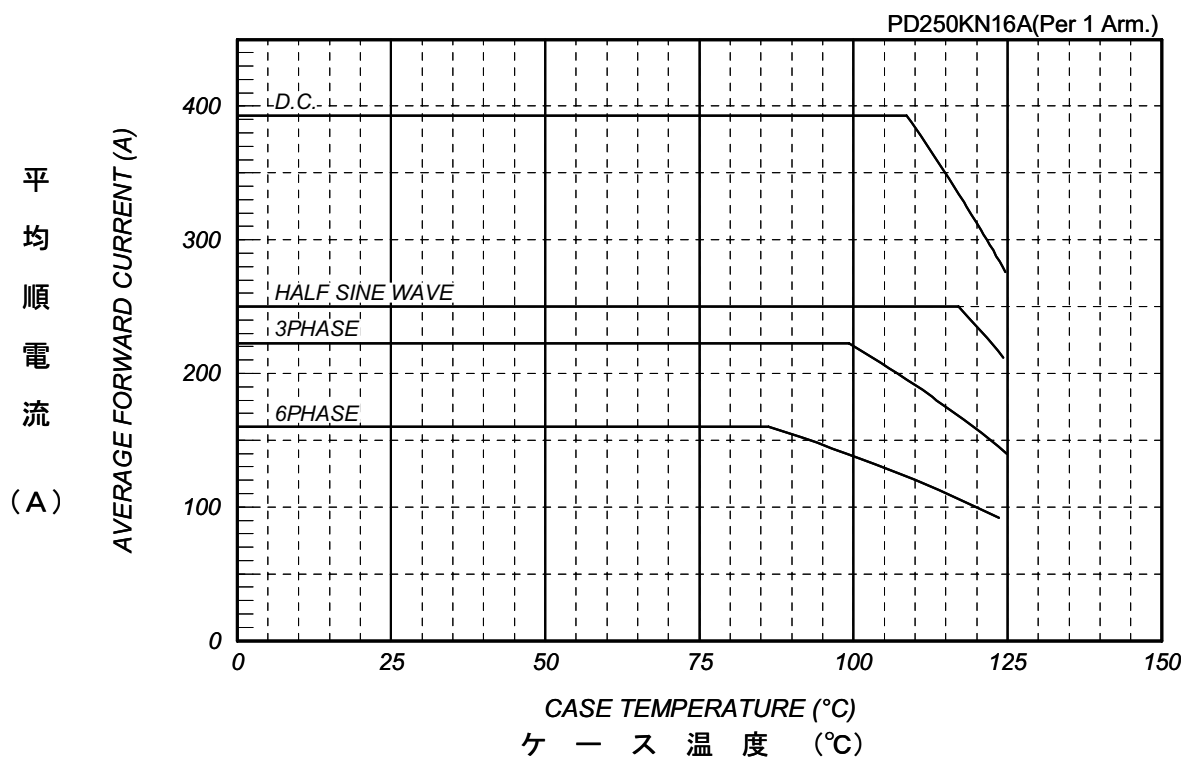
順電圧特性  
FORWARD CURRENT VS. VOLTAGE



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



平均順電流－ケース温度定格  
AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE



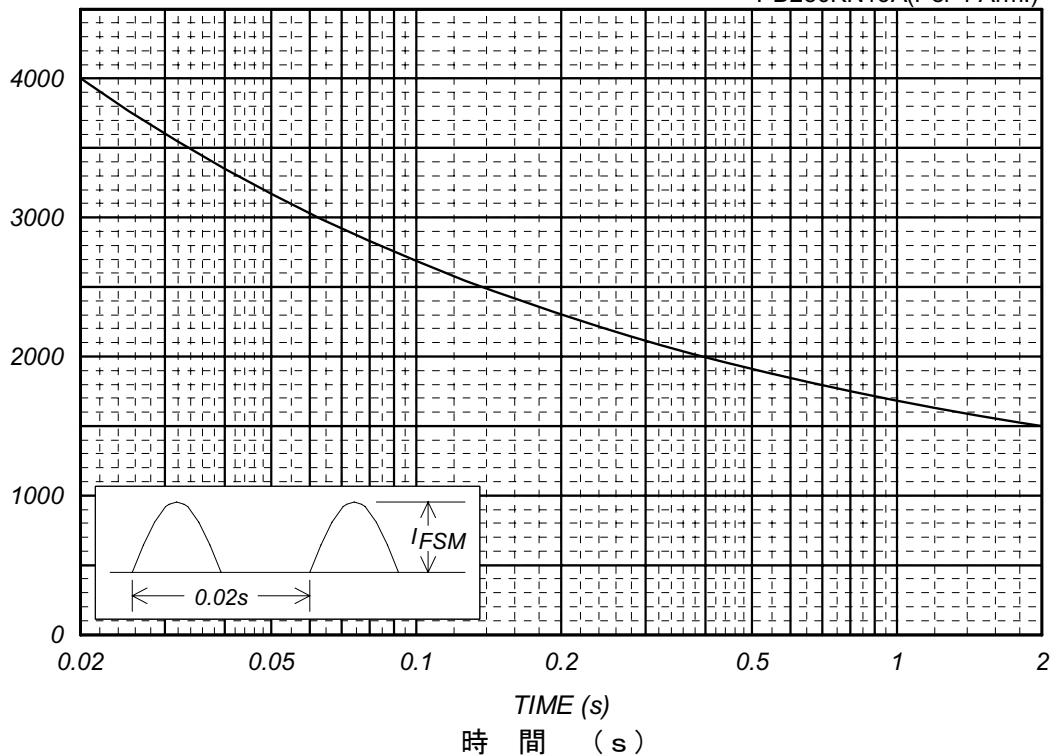
# サージ順電流定格 SURGE CURRENT RATINGS

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

PD250KN16A(Per 1 Arm.)

サ  
ー  
ジ  
順  
電  
流  
  
(A)

SURGE FORWARD CURRENT (A)



## 過渡熱抵抗特性 Transient Thermal Impedance

PD250KN16A(Per 1 Arm.)

過  
渡  
熱  
抵  
抗  
  
(°C/W)

Transient Thermal Impedance  $R_{th(j-c)}$  (°C/W)

