# Diode Module

## K80DD300P160BAA / K80DD300P180BAA

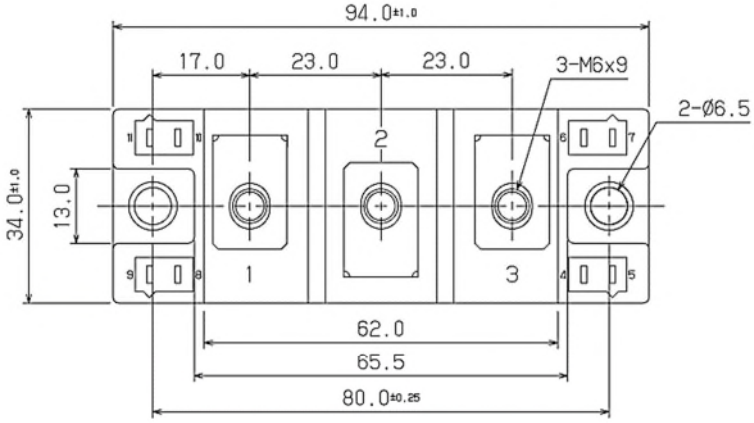
特徴
**Feature**

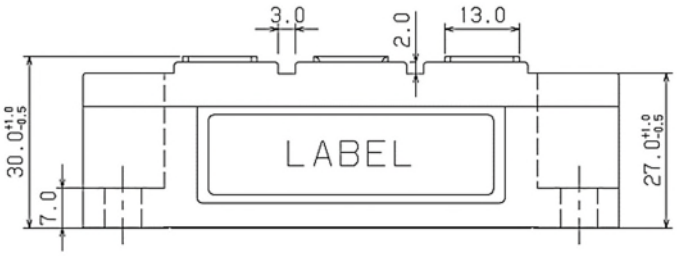
- **RoHS 指令準拠**
  **RoHS Compliant**

用途
**Application**

- 一般整流用
  **For General Use**

外形図
**Outline Drawing**



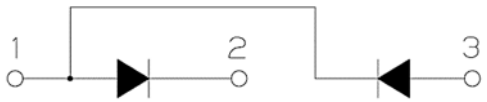




指定無き寸法公差

| 0.5以下 | 0.5～ 3以下 | 3～ 6以下 | 6～ 30以下 | 30～ 120以下 | 120～ 400以下 |
|---|---|---|---|---|---|
| ±0.1 | ±0.2 | ±0.3 | ±0.5 | ±0.8 | ±1.2 |

【単位：mm】

回路構成
**Circuit Schematic**

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最大定格　Maximum Ratings

| 項　目<br>Parameter | 記号<br>Symbol | 耐圧クラス　Grade | | 単位<br>Unit |
|---|---|---|---|---|
| | | K80DD300P160BAA | K80DD300P180BAA | |
| くり返しピーク逆電圧　*1<br>Repetitive Peak Reverse Voltage | $V_{RRM}$ | 1600 | 1800 | V |
| 非くり返しピーク逆電圧　*1<br>Non Repetitive Peak Reverse Voltage | $V_{RSM}$ | 1700 | 1900 | 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　*1<br>Average Rectified Output Current | | $I_{O(AV)}$ | 商用周波数 180°　通電　Tc=109℃<br>Half Sine Wave | | 300 | A |
| 実効順電流　*1<br>RMS Forward Current | | $I_{F(RMS)}$ | | | 471 | A |
| サージ順電流　*1<br>Surge Forward Current | | $I_{FSM}$ | 50Hz 正弦半波，1 ｻｲｸﾙ，非くり返し<br>Half Sine Wave, 1Pulse, Non-Repetitive | | 9000 | A |
| 電流二乗時間積　*1<br>I Squared t | | $I^2t$ | 2～10ms | | 405000 | $A^2$ s |
| 動作接合温度範囲<br>Operating Junction Temperature Range | | Tjw | | | -40 ～ +150 | ℃ |
| 保存温度範囲<br>Storage Temperature Range | | Tstg | | | -40 ～ +125 | ℃ |
| 絶縁耐圧<br>Isolation Voltage | | Viso | 端子ーﾍﾞｰｽ間，AC 1 分間 / 1 秒<br>Terminal to Base, AC 1min / 1s. | | 3000 / 3600 | V |
| 締付トルク<br>Mounting Torque | ベース部<br>Base | F | ｻｰﾏﾙｺﾝﾊﾟｳﾝﾄﾞ塗布<br>Greased | M5 / M6 | 2.5～5.75 | N･m |
| | 主端子部<br>Terminal | | | M6 | 2.5～5.75 | 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　*1<br>Peak Reverse Current | $I_{RM}$ | Tj=150℃，$V_{RM}=V_{RRM}$ | | 10 | mA |
| ピーク順電圧　*1<br>Peak Forward Voltage | $V_{FM}$ | Tj= 25℃ | $I_{FM}$= 620A | 1.26 | V |
| | | | $I_{FM}$= 750A | 1.33 | |
| | $V_{(F0)}$ *2 | Tj=150℃ | | 0.78 | V |
| | $r_f$ *2 | Tj=150℃ | | 0.68 | mΩ |
| 熱抵抗　*1<br>Thermal Resistance | $R_{th(j-c)}$ | 接合部-ｹｰｽ間<br>Junction to Case | | 0.09 | ℃/W |
| 接触熱抵抗　*1<br>Thermal Resistance | $R_{th(c-f)}$ | ｹｰｽ-ﾌｨﾝ間，ｻｰﾏﾙｺﾝﾊﾟｳﾝﾄﾞ塗布<br>Case to Fin, Greased | | 0.10 | ℃/W |

質　量 ――― 約 145g　　*1：１アーム当りの値　Value Per 1 Arm.

Approximate Weight　　*2：$V_F \fallingdotseq V_{(F0)}+I_F \times r_f$　For power-loss calculation only

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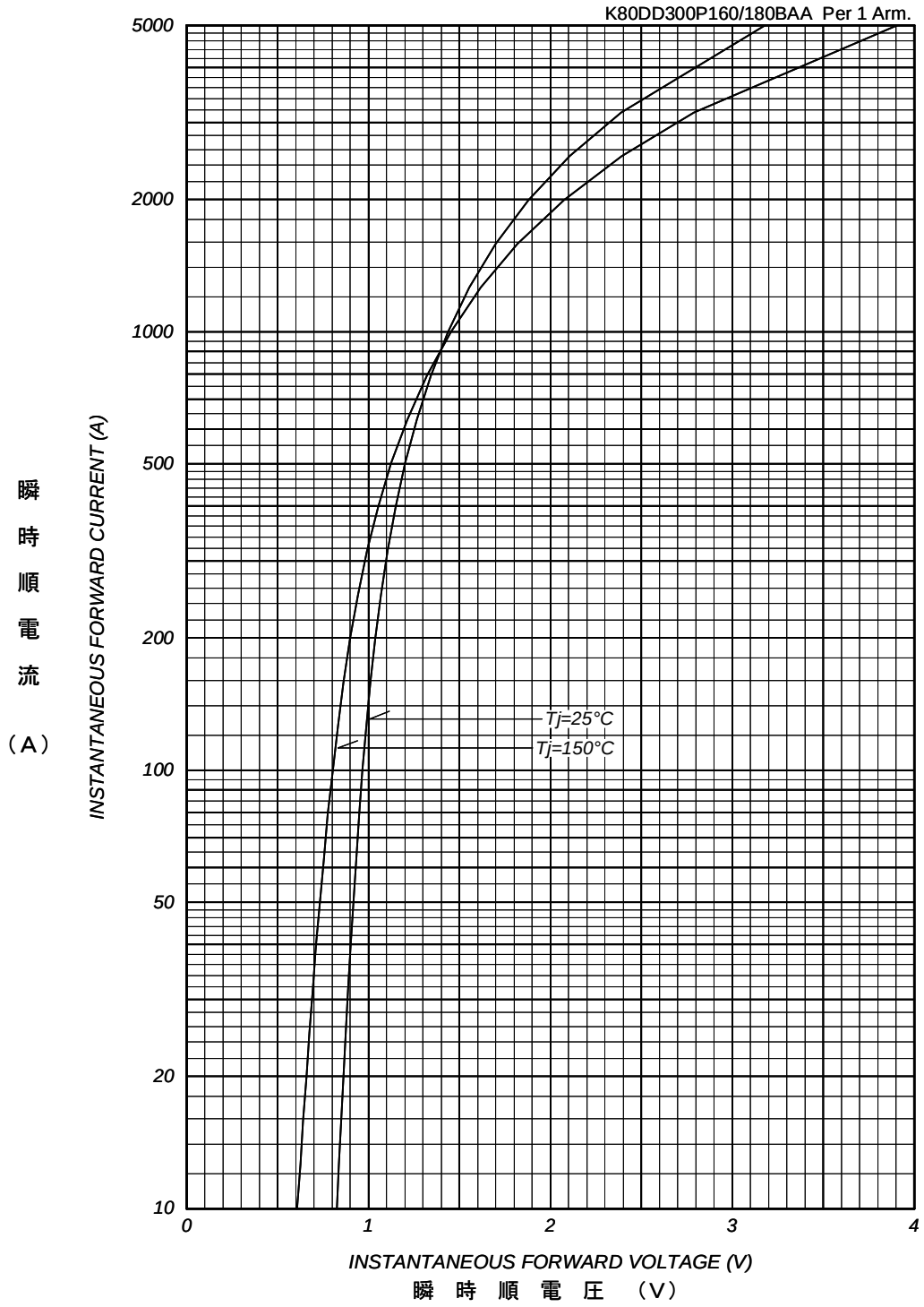
順 電 圧 特 性
*FORWARD CURRENT VS. VOLTAGE*

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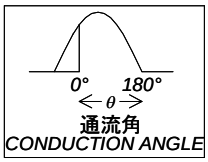
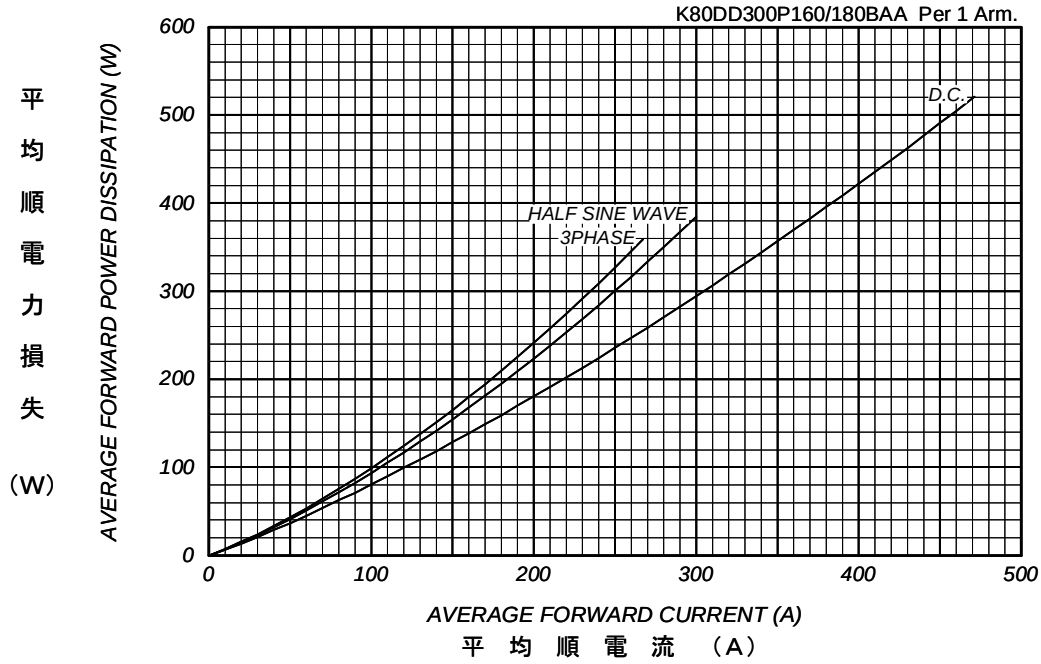
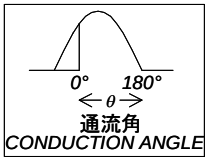
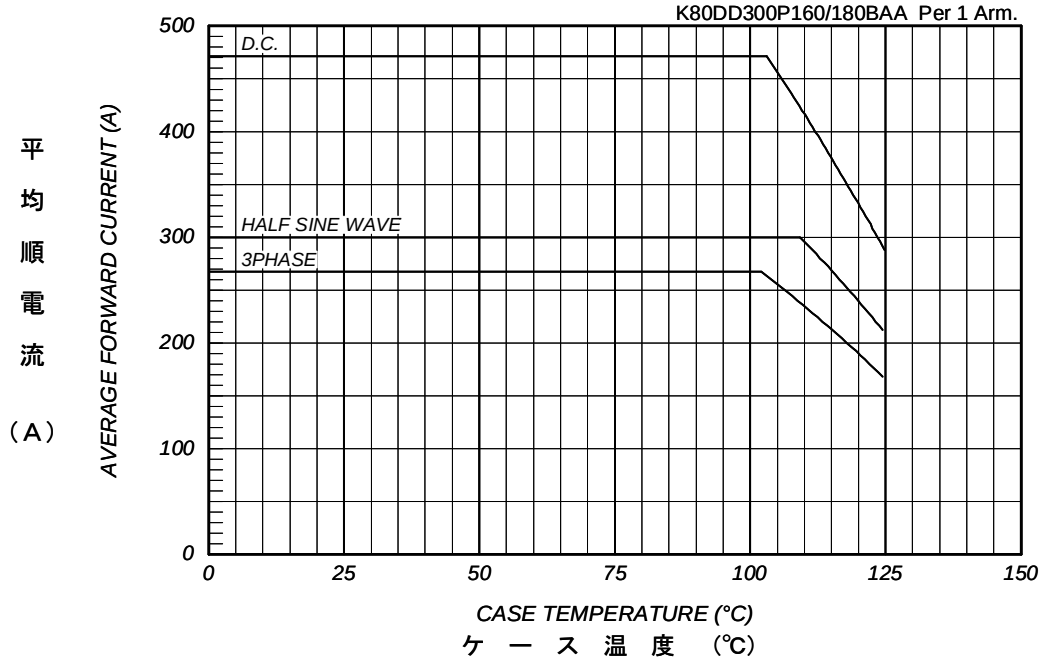



## 平 均 順 電 力 損 失 特 性
## AVERAGE FORWARD POWER DISSIPATION




## 平 均 順 電 流 － ケ ー ス 温 度 定 格
## AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE

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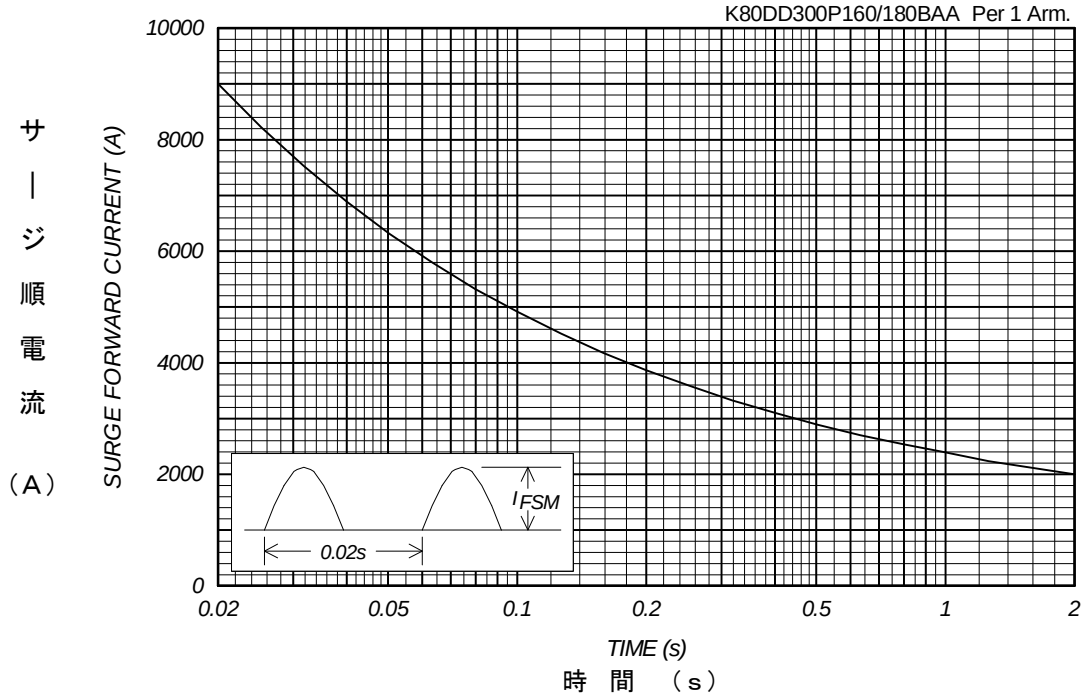
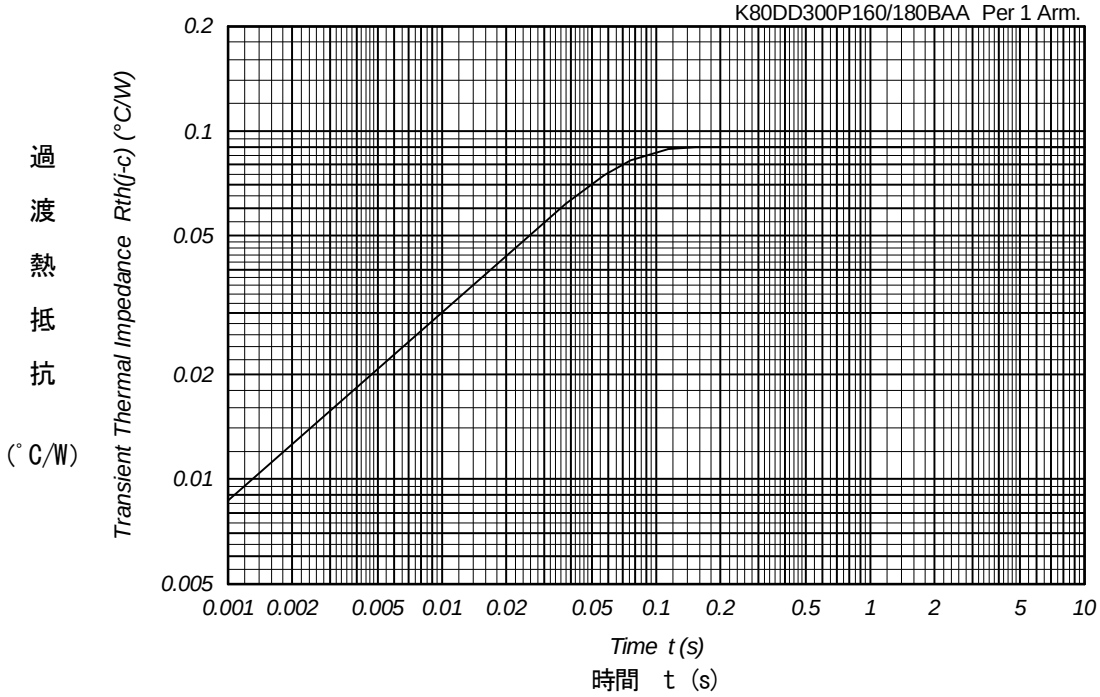
## サ ー ジ 順 電 流 定 格
*SURGE CURRENT RATINGS*

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




## 過 渡 熱 抵 抗 特 性
*Transient Thermal Impedance*

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