

**D1FS4A****40V 1.5A****特長**

- 小型SMD
- 低 $V_F=0.45V$
- PRISMアバランシェ保証

**Feature**

- Small SMD
- Low  $V_F=0.45V$
- PRISM Rating

**用途**

- スイッチング電源
- DC/DCコンバータ
- 家電、ゲーム、OA機器
- 通信、ポータブル機器

**Main Use**

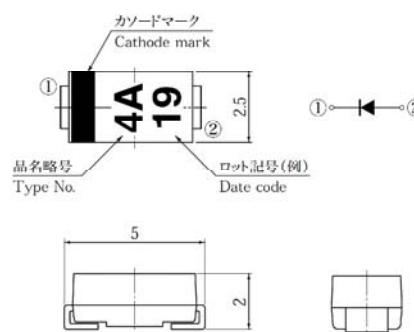
- Switching Regulator
- DC/DC Converter
- Home Appliance, Game, Office Automation
- Communication, Portable set

**■外観図 OUTLINE**

Package : 1F

Unit:mm

Weight 0.058g (Typ)



外形図については新電元Webサイト又は〈半導体製品一覧表〉をご参照下さい。捺印表示については捺印仕様をご確認下さい。

For details of the outline dimensions, refer to our web site or Semiconductor Short Form Catalog. As for the marking, refer to the specification "Marking, Terminal Connection".

**■定格表 RATINGS****●絶対最大定格 Absolute Maximum Ratings** (指定のない場合  $T_I = 25^\circ C$ )

| 項目<br>Item                                             | 記号<br>Symbol | 条件<br>Conditions                                                                                                      | 品名<br>Type No.                                                                                                 | D1FS4A     | 単位<br>Unit |
|--------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------|------------|
| 保存温度<br>Storage Temperature                            | $T_{stg}$    |                                                                                                                       |                                                                                                                | -55~150    | $^\circ C$ |
| 接合部温度<br>Operation Junction Temperature                | $T_j$        |                                                                                                                       |                                                                                                                | 150        | $^\circ C$ |
| せん頭逆電圧<br>Maximum Reverse Voltage                      | $V_{RM}$     |                                                                                                                       |                                                                                                                | 40         | V          |
| 繰り返しせん頭サージ逆電圧<br>Repetitive Peak Surge Reverse Voltage | $V_{RRSM}$   | パルス幅0.5ms, duty 1/40<br>Pulse width 0.5ms, duty 1/40                                                                  |                                                                                                                | 45         | V          |
| 出力電流<br>Average Rectified Forward Current              | $I_o$        | 50Hz 正弦波, 抵抗負荷<br>50Hz sine wave, Resistance load                                                                     | $T_a = 28^\circ C$ アルミナ基板実装<br>On alumina substrate<br>$T_a = 36^\circ C$ プリント基板実装<br>On glass-epoxy substrate | 1.5<br>1.1 | A          |
| せん頭サージ順電流<br>Peak Surge Forward Current                | $I_{FSM}$    | 50Hz 正弦波, 非繰り返し1サイクルせん頭値, $T_j = 25^\circ C$<br>50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j = 25^\circ C$ |                                                                                                                | 60         | A          |
| 繰り返しせん頭サージ逆電力<br>Repetitive Peak Surge Reverse Power   | $P_{RRSM}$   | パルス幅10 $\mu s$ , $T_j = 25^\circ C$<br>Pulse width 10 $\mu s$ , $T_j = 25^\circ C$                                    |                                                                                                                | 160        | W          |

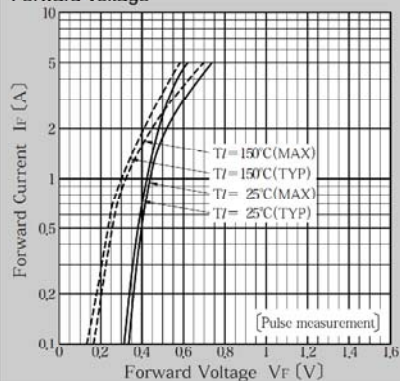
**●電氣的・熱的特性 Electrical Characteristics** (指定のない場合  $T_I = 25^\circ C$ )

|                              |               |                                                                          |          |              |
|------------------------------|---------------|--------------------------------------------------------------------------|----------|--------------|
| 順電圧<br>Forward Voltage       | $V_F$         | $I_F = 1.1A$ , パルス測定<br>Pulse measurement                                | MAX 0.45 | V            |
|                              |               | $I_F = 1.5A$ , パルス測定<br>Pulse measurement                                | MAX 0.48 |              |
| 逆電流<br>Reverse Current       | $I_R$         | $V_R = V_{RM}$ , パルス測定<br>Pulse measurement                              | MAX 2    | mA           |
| 接合容量<br>Junction Capacitance | $C_j$         | $f = 1MHz$ , $V_R = 10V$                                                 | TYP 95   | pF           |
| 熱抵抗<br>Thermal Resistance    | $\theta_{jl}$ | 接合部・リード間<br>Junction to lead                                             | MAX 23   | $^\circ C/W$ |
|                              | $\theta_{ja}$ | 接合部・周囲間<br>Junction to ambient                                           | MAX 108  |              |
|                              |               | アルミナ基板実装<br>On alumina substrate<br>プリント基板実装<br>On glass-epoxy substrate | MAX 157  |              |

## ■特性図 CHARACTERISTIC DIAGRAMS

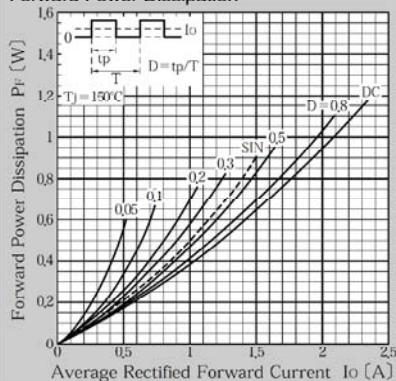
順方向特性

Forward Voltage



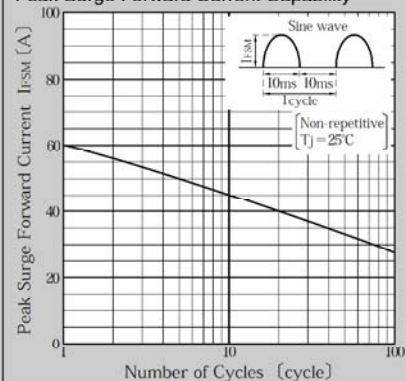
順電力損失曲線

Forward Power Dissipation



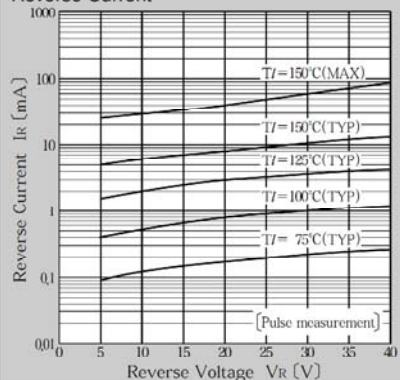
せん頭サージ順電流耐量

Peak Surge Forward Current Capability



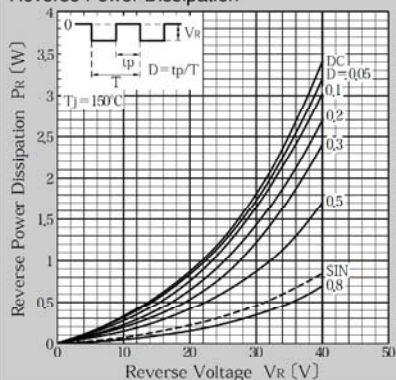
逆方向特性

Reverse Current



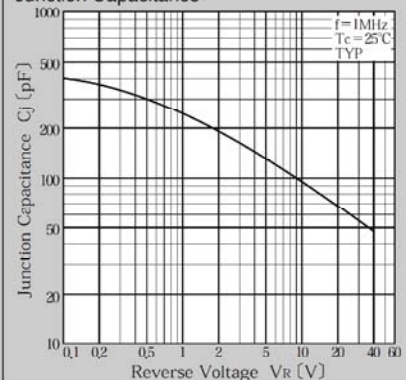
逆電力損失曲線

Reverse Power Dissipation



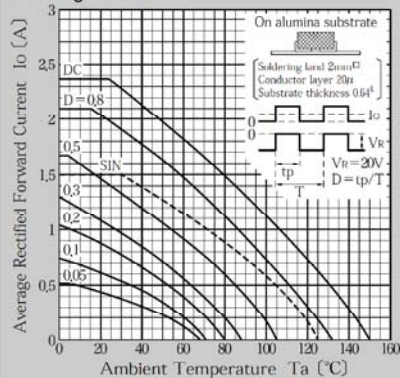
接合容量

Junction Capacitance



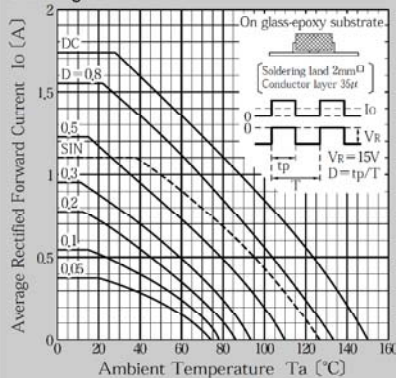
ディレーティングカーブ Ta-Io

Derating Curve Ta-Io



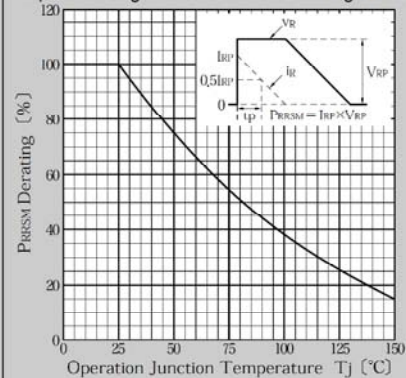
ディレーティングカーブ Ta-Io

Derating Curve Ta-Io



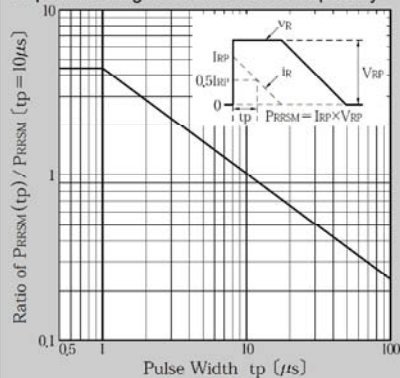
繰り返しせん頭サージ逆電力減少率

Repetitive Surge Reverse Power Derating Curve



繰り返しせん頭サージ逆電力耐量

Repetitive Surge Reverse Power Capability



- \* Sine waveは50Hzで測定しています。
- \* 50Hz sine wave is used for measurements.
- \* 半導体製品の特性は一般的にバラツキを持っています。
- \* Typical is a statistical average of the device's ability.
- \* Semiconductor products generally have characteristic variation.
- \* Typical is a statistical average of the device's ability.

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【特別用途】

輸送機器(車載、船舶等)、基幹用通信機器、交通信号機器、防災/防犯機器、各種安全機器、医療機器等

【特定用途】

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