

**DE3S4M****40V 3A****特長**

- SMD
- PRISM アバランシェ保証
- 小型大電流容量

**Feature**

- SMD
- PRISM Rating
- High Io Rating・Small-PKG

**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**

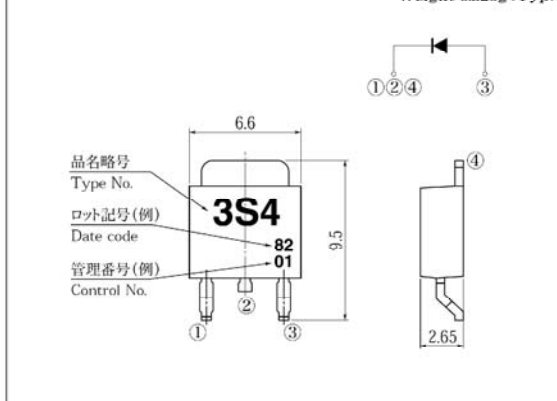
- Switching Regulator
- DC/DC Converter
- Home Appliance, Game, Office Automation
- Communication, Portable set

**■外観図 OUTLINE**

Package : E-pack

Unit:mm

Weight 0.326g (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  $T_c = 25^\circ\text{C}$ )**

| 項目<br>Item                                             | 記号<br>Symbol | 条件<br>Conditions                                                                                                                    | 品名<br>Type No.                                            | DE3S4M    | 単位<br>Unit       |
|--------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------|------------------|
| 保存温度<br>Storage Temperature                            | $T_{stg}$    |                                                                                                                                     |                                                           | -40 ~ 150 | $^\circ\text{C}$ |
| 接合部温度<br>Operation Junction Temperature                | $T_j$        |                                                                                                                                     |                                                           | 150       | $^\circ\text{C}$ |
| 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                                                                                   | $T_a = 40^\circ\text{C}$ アルミナ基板実装<br>On alumina substrate | 2.6       | A                |
|                                                        |              |                                                                                                                                     | $T_c = 121^\circ\text{C}$                                 | 3         |                  |
| 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, $T_j = 125^\circ\text{C}$<br>50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j = 125^\circ\text{C}$ |                                                           | 70        | 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 $\mu\text{s}$ , $T_j = 25^\circ\text{C}$<br>Pulse width 10 $\mu\text{s}$ , $T_j = 25^\circ\text{C}$                          |                                                           | 330       | W                |

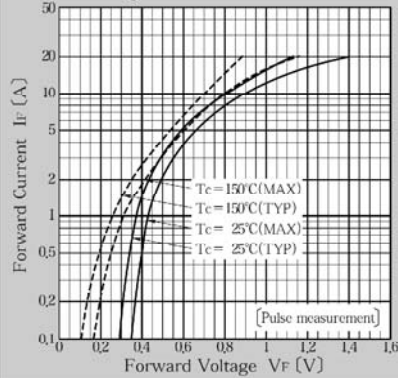
**●電氣的・熱的特性 Electrical Characteristics (指定のない場合  $T_c = 25^\circ\text{C}$ )**

|                              |               |                                                                |          |                    |
|------------------------------|---------------|----------------------------------------------------------------|----------|--------------------|
| 順電圧<br>Forward Voltage       | $V_F$         | $I_F = 3\text{A}$ , パルス測定<br>Pulse measurement                 | MAX 0.55 | V                  |
| 逆電流<br>Reverse Current       | $I_R$         | $V_R = V_{RM}$ , パルス測定<br>Pulse measurement                    | MAX 2.5  | mA                 |
| 接合容量<br>Junction Capacitance | $C_j$         | f = 1MHz, $V_R = 10\text{V}$                                   | TYP 150  | pF                 |
| 熱抵抗<br>Thermal Resistance    | $\theta_{jc}$ | 接合部・ケース間<br>Junction to case                                   | MAX 12   | $^\circ\text{C/W}$ |
|                              | $\theta_{ja}$ | 接合部・周囲間, アルミナ基板実装<br>Junction to ambient, On alumina substrate | MAX 55   |                    |

## ■特性図 CHARACTERISTIC DIAGRAMS

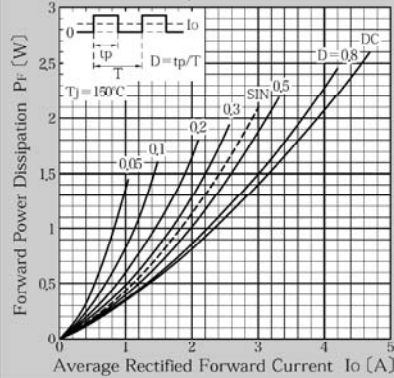
順方向特性

Forward Voltage



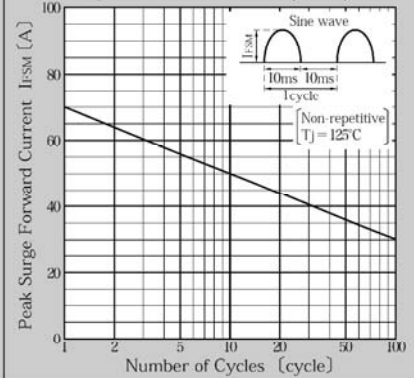
順電力損失曲線

Forward Power Dissipation



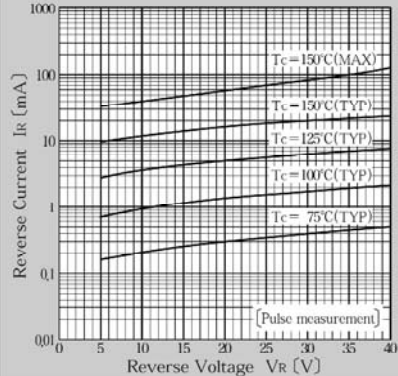
せん頭サーージ順電流耐量

Peak Surge Forward Current Capability



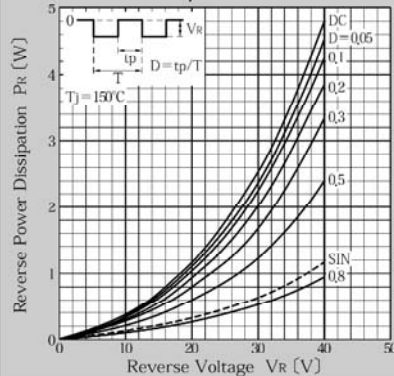
逆方向特性

Reverse Current



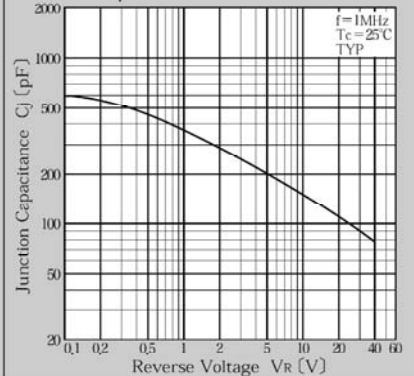
逆電力損失曲線

Reverse Power Dissipation



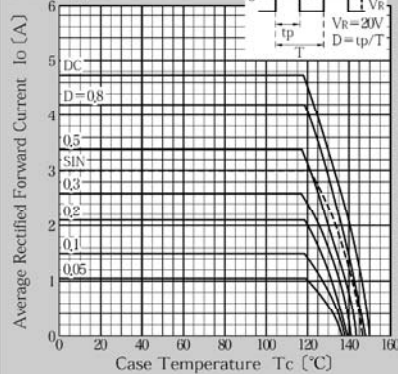
接合容量

Junction Capacitance



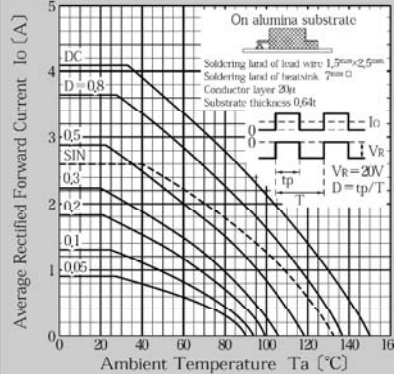
ディレーティングカーブ Tc-Io

Derating Curve Tc-Io



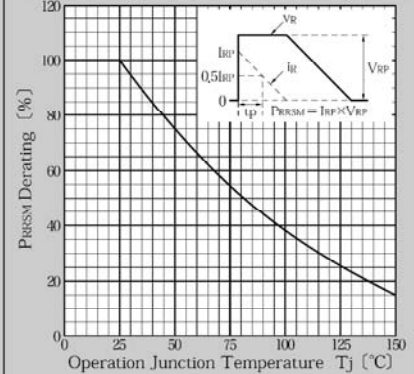
ディレーティングカーブ Ta-Io

Derating Curve Ta-Io



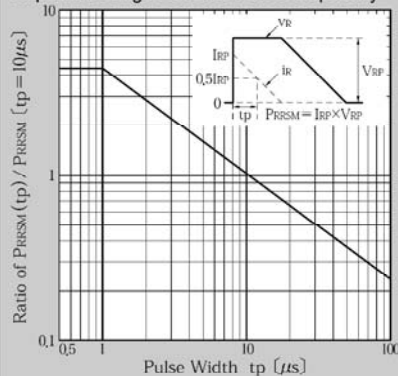
繰り返しせん頭サーージ逆電力減少率

Repetitive Surge Reverse Power Derating Curve



繰り返しせん頭サーージ逆電力耐量

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.