

## POWER SCHOTTKY RECTIFIER

### MAIN PRODUCT CHARACTERISTICS

|             |        |
|-------------|--------|
| $I_{F(AV)}$ | 3 A    |
| $V_{RRM}$   | 40 V   |
| $V_F (max)$ | 0.57 V |

### PRELIMINARY DATASHEET

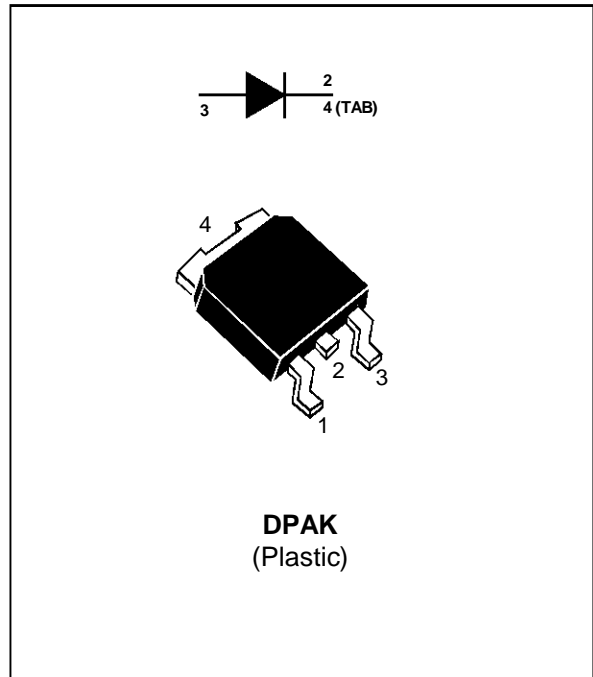
### FEATURES AND BENEFITS

- NEGLIGIBLE SWITCHING LOSSES
- LOW FORWARD VOLTAGE DROP
- LOW CAPACITANCE
- HIGH REVERSE AVALANCHE SURGE CAPABILITY
- TAPE AND REEL OPTION: -TR

### DESCRIPTION

High voltage Schottky rectifier suited to Switch Mode Power Supplies and other Power Converters.

Packaged in DPAK, this device is intended for use in medium voltage operation, and particularly, in high frequency circuitries where low switching losses are required.



### ABSOLUTE MAXIMUM RATINGS

| Symbol       | Parameter                                |   | Value         | Unit        |
|--------------|--|---|---------------|-------------|
| $V_{RRM}$    | Repetitive Peak Reverse Voltage          |   | 40            | V           |
| $I_{F(RMS)}$ | RMS Forward Current                      |   | 6             | A           |
| $I_{F(AV)}$  | Average Forward Current                  | $T_{case} = 120^{\circ}C$<br>$\delta = 0.5$ | 3             | A           |
| $I_{FSM}$    | Surge Non Repetitive Forward Current     | $t_p = 10\ ms$<br>Sinusoidal                | 75            | A           |
| $I_{RRM}$    | Repetitive Peak Reverse Current          | $t_p = 2\ \mu s$<br>$F = 1\ KHz$            | 1             | A           |
| $T_{stg}$    | Storage Temperature Range                |   | - 65 to + 150 | $^{\circ}C$ |
| $T_j$        | Max. Junction Temperature                |   | 150           | $^{\circ}C$ |
| dV/dt        | Critical Rate of Rise of Reverse Voltage |   | 1000          | V/ $\mu s$  |

## STPS340B-(TR)

### THERMAL RESISTANCES

| Symbol        | Parameter                           | Value | Unit |
|---------------|-------------------------------------|-------|------|
| $R_{TH(j-c)}$ | Junction to Case Thermal Resistance | 5.5   | °C/W |

### STATIC ELECTRICAL CHARACTERISTICS

| Symbol     | Tests Conditions        | Tests Conditions          | Min.               | Typ. | Max. | Unit          |
|------------|-------------------------|---------------------------|--------------------|------|------|---------------|
| $I_R^*$    | Reverse leakage Current | $T_j = 25^\circ\text{C}$  | $V_R = 40\text{V}$ |      | 100  | $\mu\text{A}$ |
|            |                         | $T_j = 125^\circ\text{C}$ |                    | 2    | 10   | mA            |
| $V_F^{**}$ | Forward Voltage drop    | $T_j = 25^\circ\text{C}$  | $I_F = 6\text{ A}$ |      | 0.84 | V             |
|            |                         | $T_j = 125^\circ\text{C}$ | $I_F = 3\text{ A}$ | 0.5  | 0.57 |               |

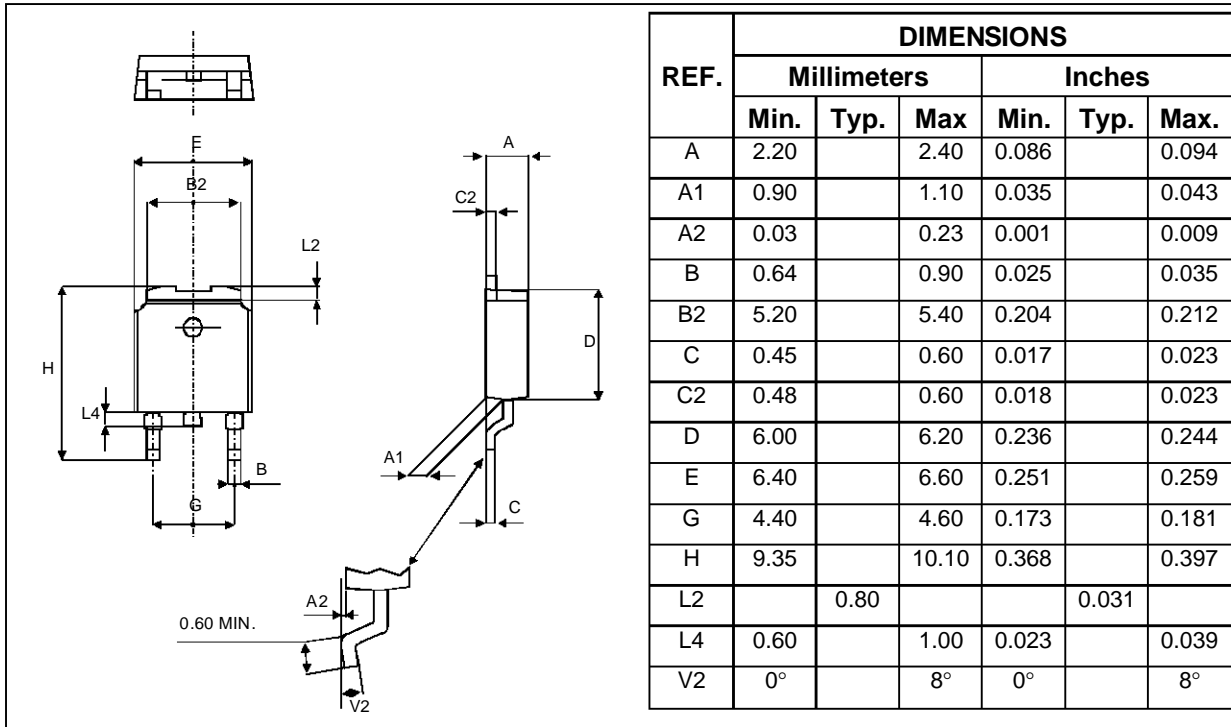
Pulse test : \*  $t_p = 380\ \mu\text{s}$ , duty cycle < 2 %  
\*\*  $t_p = 5\ \text{ms}$ , duty cycle < 2%

To evaluate the maximum conduction losses use the following equation :

$$P = 0.42 \times I_{F(AV)} + 0.050 I_{F(RMS)}^2$$

Typical junction capacitance,  $V_R = 0\text{V}$      $F = 1\text{MHz}$      $T_j = 25^\circ\text{C}$     : 130pF

**PACKAGE MECHANICAL DATA**  
DPAK



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