

## POWER SCHOTTKY RECTIFIER

### MAIN PRODUCT CHARACTERISTICS

|             |         |
|-------------|---------|
| $I_{F(AV)}$ | 2 x 3 A |
| $V_{RRM}$   | 60 V    |
| $V_F$ (max) | 0.59 V  |

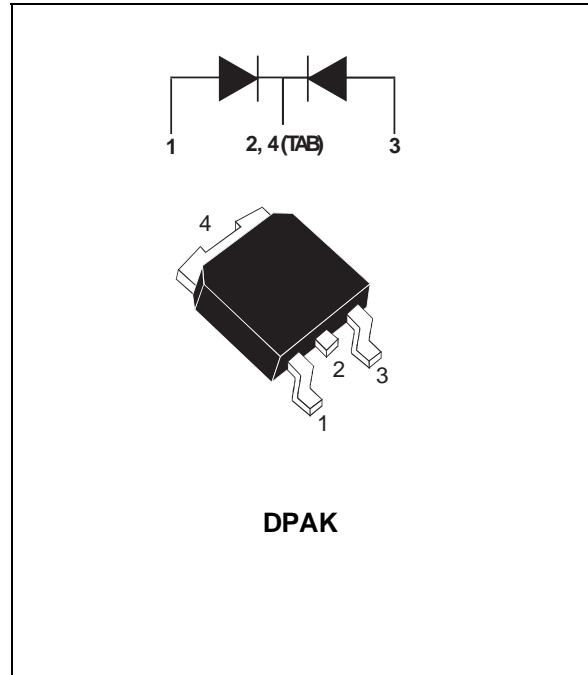
### FEATURES AND BENEFITS

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

### DESCRIPTION

High voltage dual 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 RATINGS (limiting values)

| Symbol       | Parameter                                |   | Value         | Unit        |
|--------------|--|---|---------------|-------------|
| $V_{RRM}$    | Repetitive peak reverse voltage          |   | 60            | 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                 | 50            | 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 | $^{\circ}C$ |
| $T_j$        | Maximum junction temperature             |   | 125           |             |
| dV/dt        | Critical rate of rise of reverse voltage |   | 10000         | V/ $\mu$ s  |

## STPS660CB(-TR)

### THERMAL RESISTANCES

| Symbol               | Parameter        | Value     | Unit |
|----------------------|------------------|-----------|------|
| R <sub>th(j-c)</sub> | Junction to case | Per diode | 3.5  |
|                      |                  | Total     | 2    |

### STATIC ELECTRICAL CHARACTERISTICS

| Symbol            | Tests Conditions        | Tests Conditions       | Min.                  | Typ. | Max. | Unit |
|-------------------|-------------------------|------------------------|-----------------------|------|------|------|
| I <sub>R</sub> *  | Reverse leakage current | T <sub>j</sub> = 25°C  | V <sub>R</sub> = 60 V |      | 30   | μA   |
|                   |                         | T <sub>j</sub> = 125°C |                       | 2.5  | 10   | mA   |
| V <sub>F</sub> ** | Forward voltage drop    | T <sub>j</sub> = 25°C  | I <sub>F</sub> = 3 A  |      | 0.65 | V    |
|                   |                         | T <sub>j</sub> = 125°C | I <sub>F</sub> = 3 A  | 0.55 | 0.59 |      |

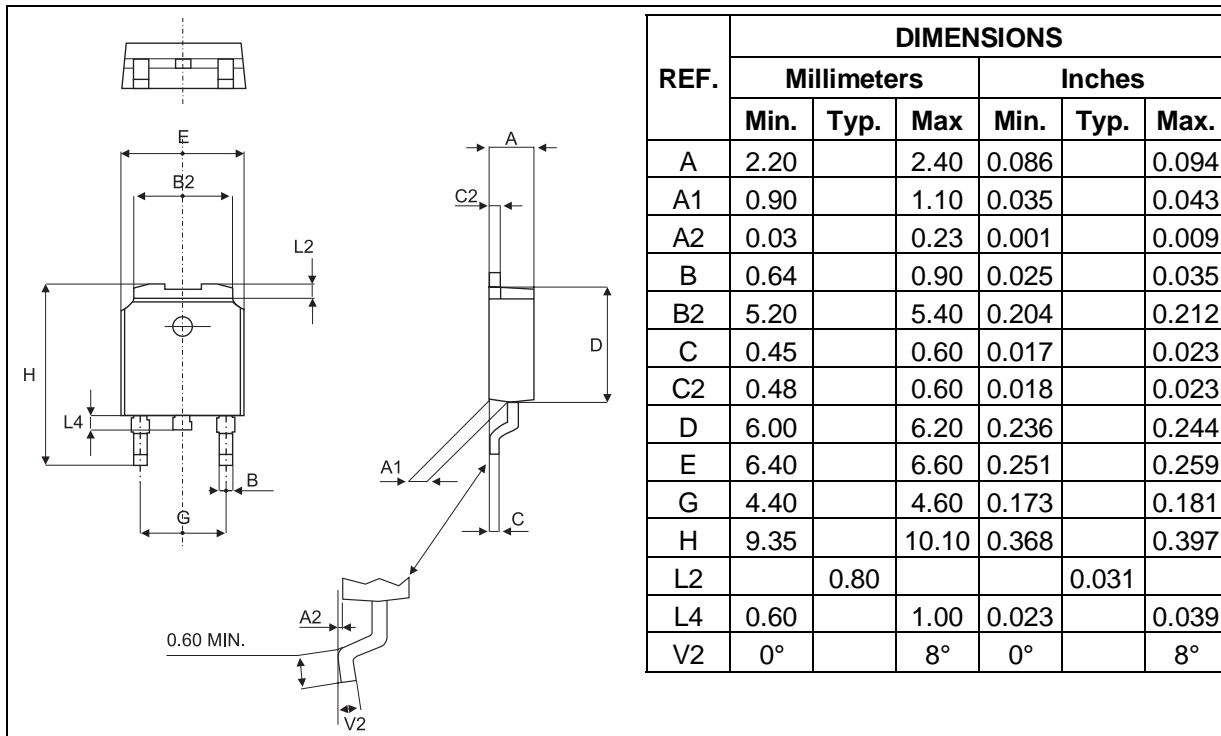
Pulse test : \* t<sub>p</sub> = 5 ms, δ < 2 %  
\*\* t<sub>p</sub> = 380 μs, δ < 2%

To evaluate the maximum conduction losses use the following equation :

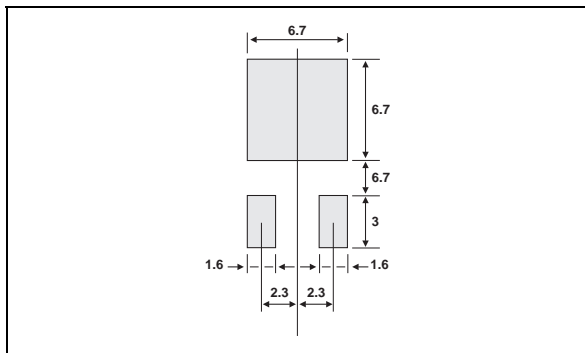
$$P = 0.49 \times I_{F(AV)} + 0.035 I_{F(RMS)}^2$$

Typical junction capacitance, V<sub>R</sub> = 0 V    F = 1MHz    T<sub>j</sub> = 25°C    C = 815pF

**PACKAGE MECHANICAL DATA**  
DPAK



**FOOT PRINT DIMENSIONS** (in millimeters)



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