

## Isc N-Channel MOSFET Transistor

## STB13NM60N

## • FEATURES

- Drain Current  $-I_D = 11A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 600V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 360m\Omega (\text{Max})$
- 100% avalanche tested
- Low input capacitance and gate charge
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • APPLICATIONS

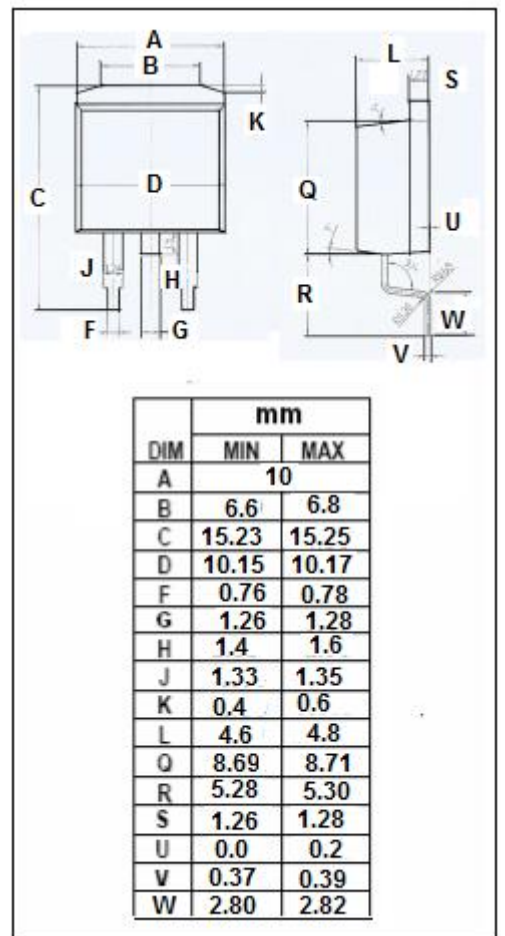
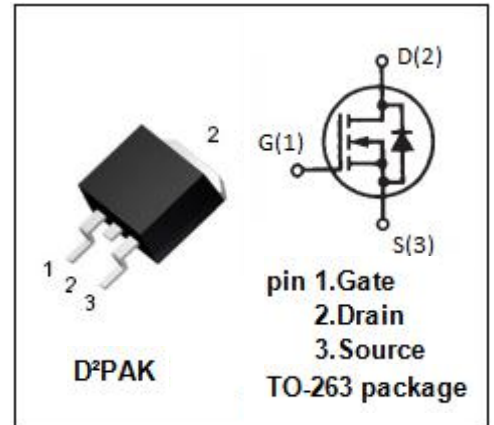
- Switching applications

• ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ C$ )

| SYMBOL    | PARAMETER                                                           | VALUE      | UNIT       |
|-----------|---------------------------------------------------------------------|------------|------------|
| $V_{DSS}$ | Drain-Source Voltage                                                | 600        | V          |
| $V_{GSS}$ | Gate-Source Voltage                                                 | $\pm 25$   | V          |
| $I_D$     | Drain Current-Continuous@ $T_C = 25^\circ C$<br>$T_C = 100^\circ C$ | 11<br>6.93 | A          |
| $I_{DM}$  | Drain Current-Single Pulsed                                         | 44         | A          |
| $P_D$     | Total Dissipation                                                   | 25         | W          |
| $T_j$     | Operating Junction Temperature                                      | -55~150    | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                                                 | -55~150    | $^\circ C$ |

## • THERMAL CHARACTERISTICS

| SYMBOL         | PARAMETER                          | MAX  | UNIT         |
|----------------|------------------------------------|------|--------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance | 1.39 | $^\circ C/W$ |



**Isc N-Channel MOSFET Transistor****STP13NM60N****ELECTRICAL CHARACTERISTICS****T<sub>c</sub>=25°C unless otherwise specified**

| SYMBOL              | PARAMETER                      | CONDITIONS                                                                                  | MIN | TYP | MAX      | UNIT |
|---------------------|--------------------------------|---------------------------------------------------------------------------------------------|-----|-----|----------|------|
| BV <sub>DSS</sub>   | Drain-Source Breakdown Voltage | V <sub>GS</sub> =0V; I <sub>D</sub> = 1mA                                                   | 600 |     |          | V    |
| V <sub>GS(th)</sub> | Gate Threshold Voltage         | V <sub>DS</sub> =±25V; I <sub>D</sub> =0.25mA                                               | 2   |     | 4        | V    |
| R <sub>DS(on)</sub> | Drain-Source On-Resistance     | V <sub>GS</sub> = 10V; I <sub>D</sub> =5.5A                                                 |     | 280 | 360      | mΩ   |
| I <sub>GSS</sub>    | Gate-Source Leakage Current    | V <sub>GS</sub> = ±25V; V <sub>DS</sub> = 0V                                                |     |     | ±0.1     | μA   |
| I <sub>DSS</sub>    | Drain-Source Leakage Current   | V <sub>DS</sub> = 600V; V <sub>GS</sub> = 0V; T <sub>J</sub> =25°C<br>T <sub>J</sub> =125°C |     |     | 1<br>100 | μA   |
| V <sub>SDF</sub>    | Diode forward voltage          | I <sub>SD</sub> =11A, V <sub>GS</sub> = 0 V                                                 |     |     | 1.5      | V    |

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