

## isc N-Channel MOSFET Transistor

## STP34N65M5

## FEATURES

- Drain Current  $-I_D=28A@T_C=25^{\circ}C$
- Drain Source Voltage-  
:  $V_{DSS}=650V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)}=110m\Omega(\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

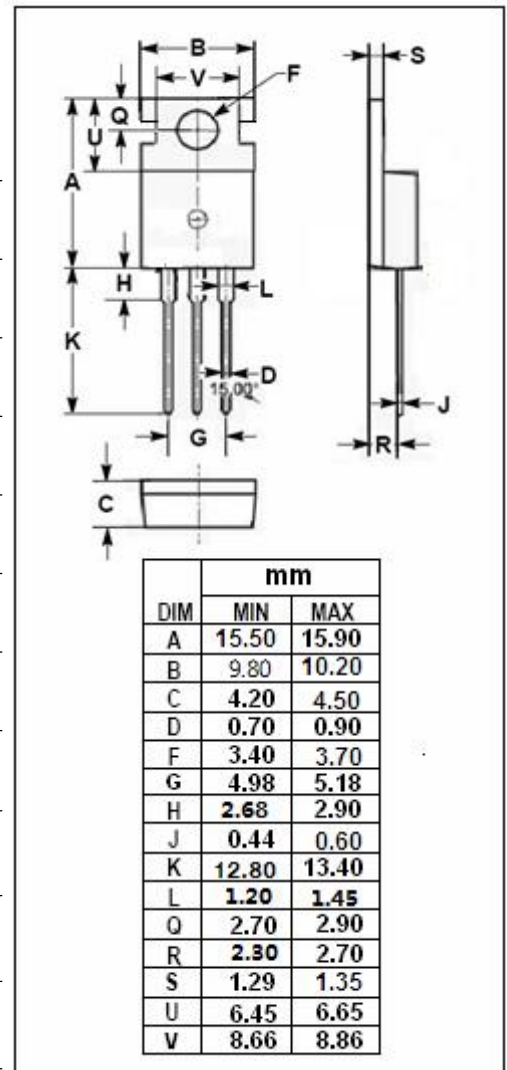
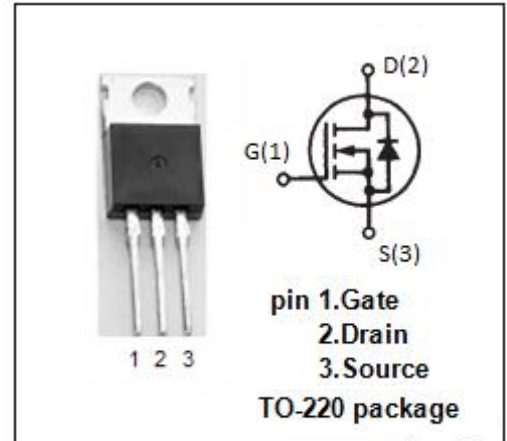
- Switching application

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

| SYMBOL    | PARAMETER                             | VALUE    | UNIT        |
|-----------|---------------------------------------|----------|-------------|
| $V_{DSS}$ | Drain-Source Voltage                  | 650      | V           |
| $V_{GS}$  | Gate-Source Voltage-Continuous        | $\pm 25$ | V           |
| $I_D$     | Drain Current-Continuous              | 28       | A           |
| $I_{DM}$  | Drain Current-Single Pluse            | 112      | A           |
| $P_D$     | Total Dissipation @ $T_C=25^{\circ}C$ | 190      | W           |
| $T_J$     | Max. Operating Junction Temperature   | 150      | $^{\circ}C$ |
| $T_{stg}$ | Storage Temperature                   | -55~150  | $^{\circ}C$ |

## THERMAL CHARACTERISTICS

| SYMBOL       | PARAMETER                            | MAX  | UNIT          |
|--------------|--------------------------------------|------|---------------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case | 0.66 | $^{\circ}C/W$ |



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## ELECTRICAL CHARACTERISTICS

 $T_c=25^{\circ}\text{C}$  unless otherwise specified

| SYMBOL        | PARAMETER                       | CONDITIONS                                                                                         | MIN | MAX       | UNIT             |
|---------------|---------------------------------|----------------------------------------------------------------------------------------------------|-----|-----------|------------------|
| $V_{(BR)DSS}$ | Drain-Source Breakdown Voltage  | $V_{GS}=0$ ; $I_D=1\text{mA}$                                                                      | 650 |           | V                |
| $V_{GS(th)}$  | Gate Threshold Voltage          | $V_{DS}=V_{GS}$ ; $I_D=0.25\text{mA}$                                                              | 3   | 5         | V                |
| $R_{DS(on)}$  | Drain-Source On-Resistance      | $V_{GS}=10\text{V}$ ; $I_D=14\text{A}$                                                             |     | 110       | $\text{m}\Omega$ |
| $I_{GSS}$     | Gate-Body Leakage Current       | $V_{GS}=\pm 25\text{V}$ ; $V_{DS}=0$                                                               |     | $\pm 100$ | nA               |
| $I_{DSS}$     | Zero Gate Voltage Drain Current | $V_{DS}=650\text{V}$ ; $V_{GS}=0$<br>$V_{DS}=650\text{V}$ ; $V_{GS}=0$ ; $T_j=125^{\circ}\text{C}$ |     | 1<br>100  | $\mu\text{A}$    |
| $V_{SD}$      | Forward On-Voltage              | $I_S=28\text{A}$ ; $V_{GS}=0$                                                                      |     | 1.5       | V                |

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