

isc N-Channel MOSFET Transistor
STP14NF10
FEATURES

- Drain Current $-I_D = 15A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 100V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.13 \Omega (\text{Max}) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

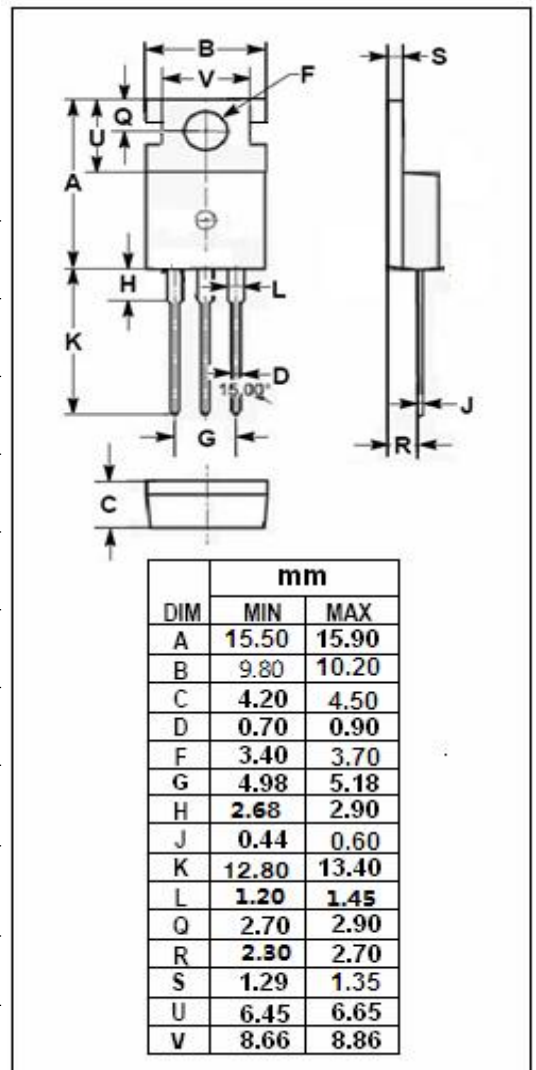
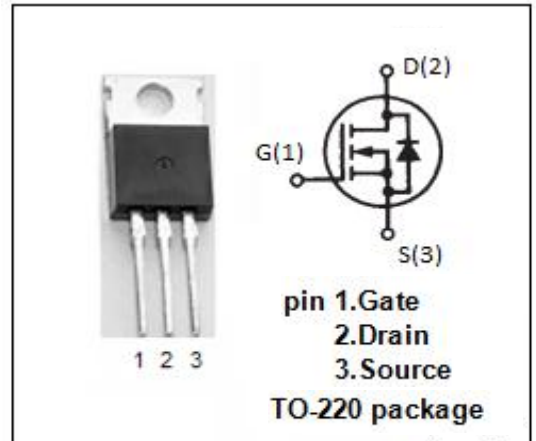
- motor drive, DC-DC converter, power switch and solenoid drive.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|----------|------------|
| V_{DSS} | Drain-Source Voltage | 100 | V |
| V_{GS} | Gate-Source Voltage-Continuous | ± 20 | V |
| I_D | Drain Current-Continuous | 15 | A |
| I_{DM} | Drain Current-Single Pluse | 60 | A |
| P_D | Total Dissipation @ $T_C = 25^\circ C$ | 60 | W |
| T_J | Max. Operating Junction Temperature | 175 | $^\circ C$ |
| T_{stg} | Storage Temperature | -55~175 | $^\circ C$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|--------------|--------------------------------------|-----|--------------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case | 2.5 | $^\circ C/W$ |



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|----------------------|---------------------------------|---|-----|------|------|
| V _{(BR)DSS} | Drain-Source Breakdown Voltage | V _{GS} = 0; I _D = 0.25mA | 100 | -- | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} = V _{GS} ; I _D = 0.25mA | 2.0 | 4.0 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} = 10V; I _D = 7A | -- | 0.13 | Ω |
| I _{GSS} | Gate-Body Leakage Current | V _{GS} = ±20V; V _{DS} = 0 | -- | ±100 | nA |
| I _{DSS} | Zero Gate Voltage Drain Current | V _{DS} = 100V; V _{GS} = 0 | -- | 1 | uA |
| V _{SD} | Forward On-Voltage | I _S = 14A; V _{GS} = 0 | -- | 1.5 | V |

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