

isc N-Channel MOSFET Transistor
NDU406AE
FEATURES

- Drain Current $-I_D = 15A @ T_C = 25^\circ C$
- Drain Source Voltage $-V_{DSS} = 60V(\text{Min})$
- Static Drain-Source On-Resistance
 $-R_{DS(on)} = 100m\Omega(\text{Max}) @ V_{GS} = 10V$

DESCRIPTION

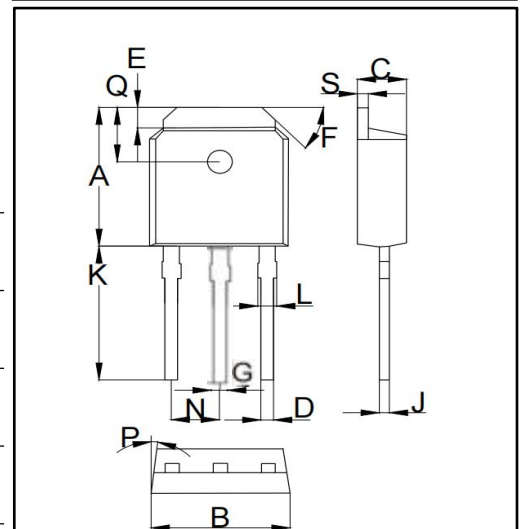
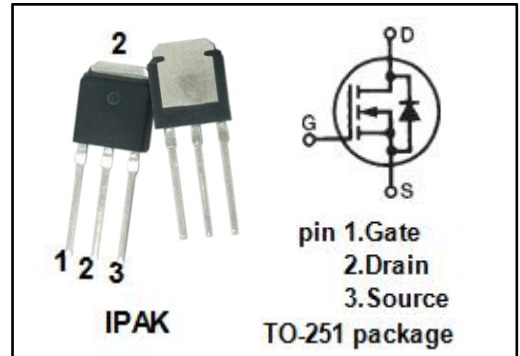
- Motor drive, DC-DC converter, power switch and solenoid drive.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|----------|------------|
| V_{DSS} | Drain-Source Voltage | 60 | V |
| V_{GS} | Gate-Source Voltage-Continuous | ± 30 | V |
| I_D | Drain Current-Continuous | 15 | A |
| I_{DM} | Drain Current-Single Pulse | 45 | A |
| P_D | Total Dissipation @ $T_C = 25^\circ C$ | 40 | 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 | 3.13 | $^\circ C/W$ |



| DIM | mm | | |
|-----|--------|------|------|
| | MIN | TYP. | MAX |
| A | 6.90 | 7.10 | 7.30 |
| B | 6.50 | 6.60 | 6.70 |
| C | 2.20 | 2.30 | 2.40 |
| D | 0.50 | 0.61 | 0.72 |
| E | 0.90 | 1.00 | 1.10 |
| F | 45°TYP | | |
| G | 0.50 | 0.61 | 0.72 |
| J | 0.40 | 0.50 | 0.60 |
| K | 9.50 | 9.60 | 9.70 |
| L | 0.70 | 0.80 | 0.90 |
| N | 2.20 | 2.28 | 2.35 |
| P | 7°TYP | | |
| Q | 2.75 | 2.80 | 2.85 |
| S | 0.40 | 0.50 | 0.60 |

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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 | 60 | -- | V |
| I _{DSS} | Zero Gate Voltage Drain Current | V _{DS} = 60V; V _{GS} = 0 | -- | 1 | uA |
| I _{GSS} | Gate-Body Leakage Current | V _{GS} = ±30V; V _{DS} = 0 | -- | ±100 | nA |
| 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 = 7.5A | -- | 100 | mΩ |
| V _{SD} | Forward On-Voltage | I _S = 15A; V _{GS} = 0 | -- | 1.6 | V |

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