

isc N-Channel MOSFET Transistor

FDP20AN06A0

FEATURES

- Drain Current : $I_D = 45A @ T_C = 25^\circ C$
- Drain Source Voltage
: $V_{DSS} = 60V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.02 \Omega (\text{Max}) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

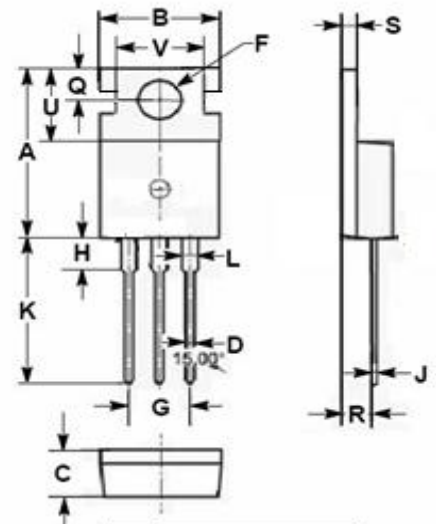
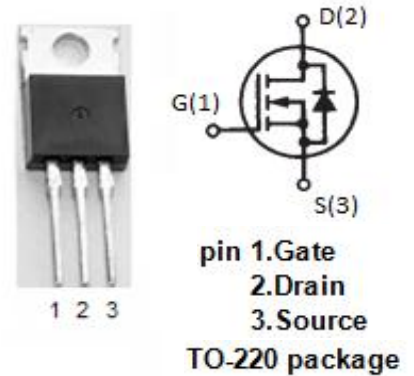
- motor drive, DC-DC converter, power switch and solenoid drive.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|----------|------------|
| V_{DSS} | Drain-Source Voltage | 60 | V |
| V_{GS} | Gate-Source Voltage-Continuous | ± 20 | V |
| I_D | Drain Current-Continuous | 45 | A |
| I_{DM} | Drain Current-Single Pluse | 180 | A |
| P_D | Total Dissipation @ $T_C = 25^\circ C$ | 90 | W |
| T_J | Max. Operating Junction Temperature | -55~175 | $^\circ C$ |
| T_{stg} | Storage Temperature | -55~175 | $^\circ C$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|--------------|--------------------------------------|------|--------------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case | 1.67 | $^\circ C/W$ |



| DIM | mm | |
|-----|-------|-------|
| | MIN | MAX |
| A | 15.50 | 15.90 |
| B | 9.80 | 10.20 |
| C | 4.20 | 4.50 |
| D | 0.70 | 0.90 |
| F | 3.40 | 3.70 |
| G | 4.98 | 5.18 |
| H | 2.68 | 2.90 |
| J | 0.44 | 0.60 |
| K | 12.80 | 13.40 |
| L | 1.20 | 1.45 |
| Q | 2.70 | 2.90 |
| R | 2.30 | 2.70 |
| S | 1.29 | 1.35 |
| U | 6.45 | 6.65 |
| V | 8.66 | 8.86 |

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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 |
| 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 = 45A | - | 0.02 | Ω |
| I _{GSS} | Gate-Body Leakage Current | V _{GS} = ±20V; V _{DS} = 0 | - | ±100 | nA |
| I _{DSS} | Zero Gate Voltage Drain Current | V _{DS} = 50V; V _{GS} = 0 | - | 1 | uA |
| V _{SD} | Forward On-Voltage | I _S = 45A; V _{GS} = 0 I _S = 22A; V _{GS} = 0 | - | 1.25 1.0 | V |

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