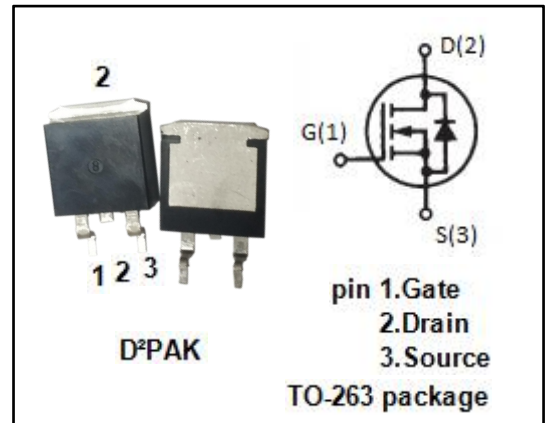


isc N-Channel MOSFET Transistor
2SK3688-01S
FEATURES

- Drain Current : $I_D = 16A @ T_C = 25^\circ C$
- Drain Source Voltage
: $V_{DSS} = 600V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.57 \Omega (\text{Max}) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

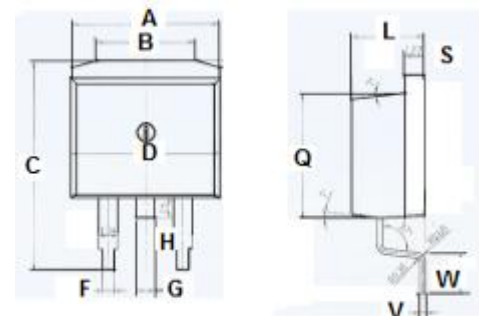
- motor drive, DC-DC converter, power switch and solenoid drive.


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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|----------|------------|
| V_{DSS} | Drain-Source Voltage | 600 | V |
| V_{GS} | Gate-Source Voltage-Continuous | ± 30 | V |
| I_D | Drain Current-Continuous | 16 | A |
| I_{DM} | Drain Current-Single Pulse | 64 | A |
| P_D | Total Dissipation @ $T_C = 25^\circ C$ | 270 | W |
| T_J | Max. Operating Junction Temperature | -55~150 | $^\circ C$ |
| T_{stg} | Storage Temperature | -55~150 | $^\circ C$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|--------------------------------------|-------|--------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 0.463 | $^\circ C/W$ |



| DIM | mm | |
|-----|------|------|
| | MIN | MAX |
| A | 9.8 | 10.2 |
| B | 6.6 | 6.8 |
| C | 15.1 | 15.3 |
| D | 9.6 | 10 |
| F | 0.7 | 0.9 |
| G | 1.26 | 1.3 |
| H | 1.2 | 1.45 |
| L | 4.4 | 4.6 |
| Q | 9.2 | 9.3 |
| S | 1.25 | 1.35 |
| V | 0.4 | 0.6 |
| W | 2.6 | 2.8 |

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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 | 600 | -- | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} = 10V; I _D = 0.25mA | 3.0 | 5.0 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} = 10V; I _D = 8.0A | -- | 0.57 | Ω |
| I _{GSS} | Gate-Body Leakage Current | V _{GS} = ±30V; V _{DS} = 0 | -- | ±0.1 | uA |
| I _{DSS} | Zero Gate Voltage Drain Current | V _{DS} = 600V; V _{GS} = 0 | -- | 25 | uA |
| V _{SD} | Forward On-Voltage | I _S = 16A; V _{GS} = 0 | -- | 1.5 | V |

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