

isc N-Channel MOSFET Transistor
2SK3615I
FEATURES

- Drain Current : $I_D = 12A @ T_C = 25^\circ C$
- Drain Source Voltage : $V_{DSS} = 60V(\text{Min})$
- Static Drain-Source On-Resistance : $R_{DS(on)} = 60m\Omega (\text{Max}) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

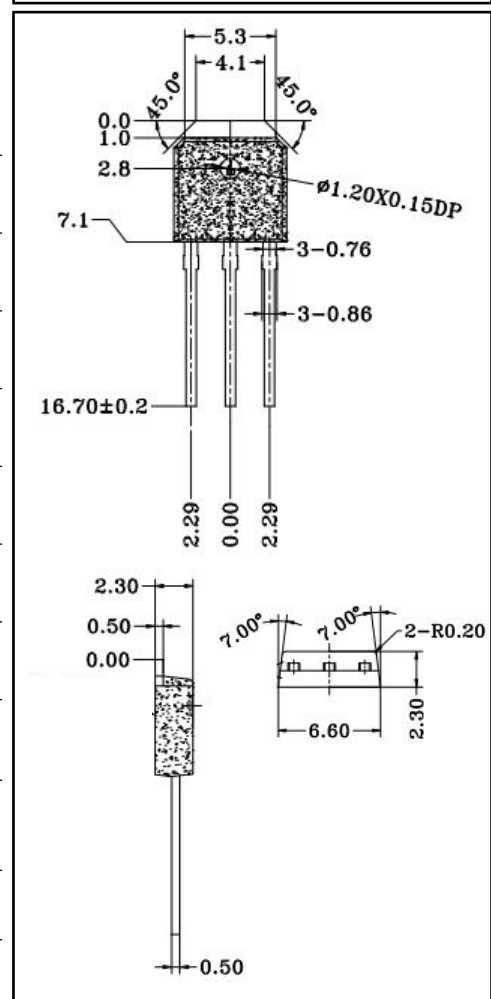
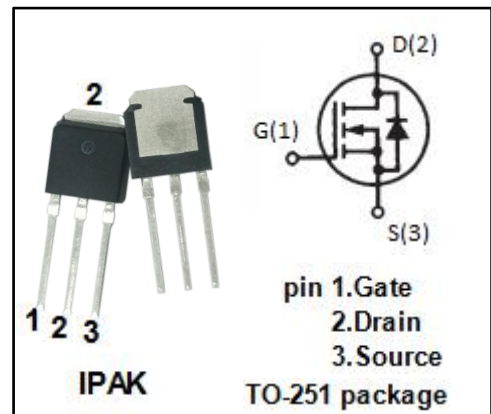
- motor drive, DC-DC converter, power switch and solenoid drive.

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 | 12 | A |
| I_{DM} | Drain Current-Single Pluse | 48 | A |
| P_D | Total Dissipation @ $T_C = 25^\circ C$ | 20 | 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 | 6.25 | $^\circ C/W$ |



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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 = 1mA | 60 | -- | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} = 10V; I _D = 1mA | 1.2 | 2.6 | V |
| R _{DS(on)1} | Drain-Source On-Resistance | V _{GS} = 10V; I _D = 6A | -- | 60 | mΩ |
| R _{DS(on)2} | Drain-Source On-Resistance | V _{GS} = 4V; I _D = 6A | -- | 85 | mΩ |
| I _{GSS} | Gate-Body Leakage Current | V _{GS} = ±16V; V _{DS} = 0 | -- | ±10 | uA |
| I _{DSS} | Zero Gate Voltage Drain Current | V _{DS} = 60V; V _{GS} = 0 | -- | 1 | uA |
| V _{SD} | Forward On-Voltage | I _S = 12A; V _{GS} = 0 | -- | 1.2 | V |

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