

isc N-Channel MOSFET Transistor

2SK3579-01MR

FEATURES

- Drain Current : $I_D = 23A @ T_C = 25^\circ C$
- Drain Source Voltage
: $V_{DS} = 150V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 90m\Omega (\text{Max}) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

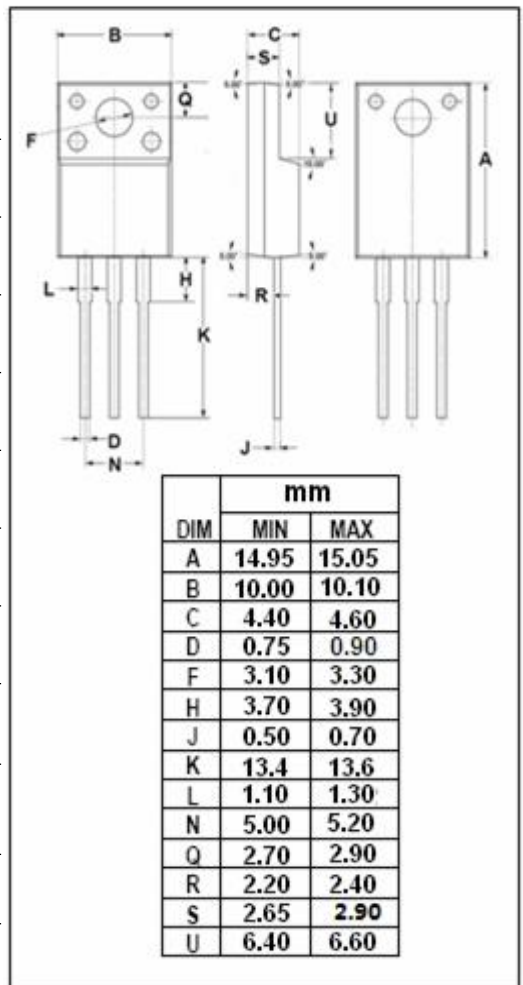
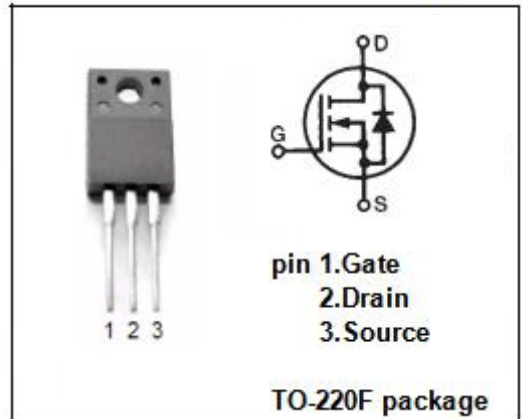
- motor drive, DC-DC converter, power switch and solenoid drive.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|----------|------------|
| V_{DS} | Drain-Source Voltage | 150 | V |
| V_{GS} | Gate-Source Voltage-Continuous | ± 20 | V |
| I_D | Drain Current-Continuous | 23 | A |
| I_{DM} | Drain Current-Single Pluse | 96 | A |
| P_D | Total Dissipation @ $T_C = 25^\circ C$ | 40 | 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 | 3.13 | $^\circ C/W$ |



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ELECTRICAL CHARACTERISTICS

 $T_c=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|---------------|---------------------------------|---|-----|-----------|------------------|
| $V_{(BR)DSS}$ | Drain-Source Breakdown Voltage | $V_{GS}=0$; $I_D=0.25\text{mA}$ | 150 | -- | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}=10\text{V}$; $I_D=0.25\text{mA}$ | 1.0 | 2.5 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}=10\text{V}$; $I_D=11.5\text{A}$ | -- | 90 | $\text{m}\Omega$ |
| I_{GSS} | Gate-Body Leakage Current | $V_{GS}=\pm 20\text{V}$; $V_{DS}=0$ | -- | ± 0.1 | μA |
| I_{DSS} | Zero Gate Voltage Drain Current | $V_{DS}=150\text{V}$; $V_{GS}=0$ | -- | 25 | μA |
| V_{SD} | Forward On-Voltage | $I_S=23\text{A}$; $V_{GS}=0$ | -- | 1.65 | V |

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