

isc N-Channel MOSFET Transistor

2SK631

FEATURES

- Drain Current $-I_D=10A@ T_C=25^{\circ}C$
- Drain Source Voltage-
: $V_{DSS}= 160V(\text{Min})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

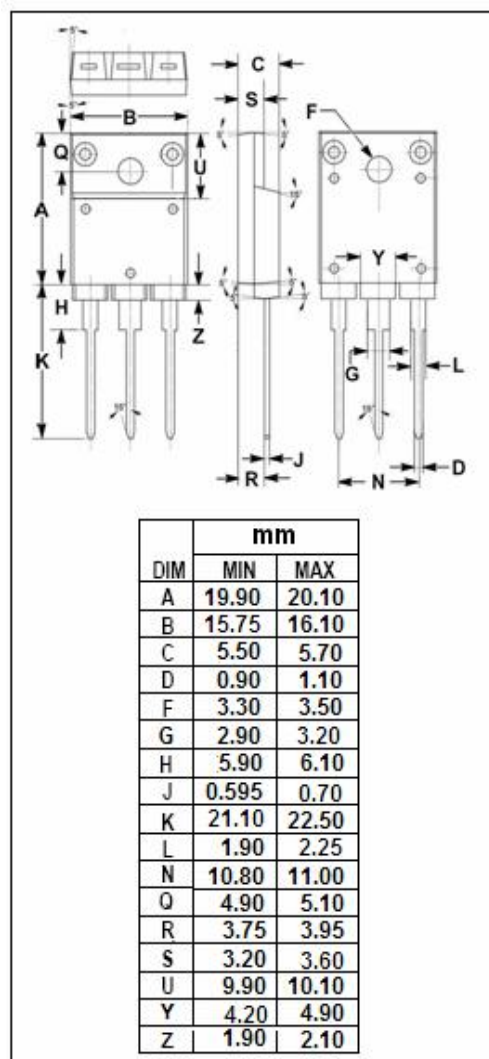
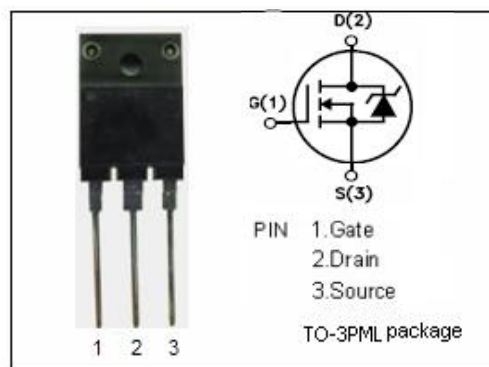
- Designed for high voltage, high speed power switching applications such as switching regulators, converters, solenoid and relay drivers.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---------------------------------------|----------|-------------|
| V_{DSS} | Drain-Source Voltage | 160 | V |
| V_{GS} | Gate-Source Voltage-Continuous | ± 20 | V |
| I_D | Drain Current-Continuous | 10 | A |
| P_D | Total Dissipation @ $T_C=25^{\circ}C$ | 80 | 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 | 1.25 | $^{\circ}C/W$ |
| $R_{th j-a}$ | Thermal Resistance, Junction to Ambient | 62.5 | $^{\circ}C/W$ |



isc N-Channel MOSFET Transistor**2SK631****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|----------------------|---------------------------------|--|-----|-----|-------|------|
| V _{(BR)DSS} | Drain-Source Breakdown Voltage | V _{GS} = 0; I _D = 1mA | 160 | | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} = V _{GS} ; I _D = 1mA | 1.0 | | 5.0 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} = 15V; I _D = 5A | | | 0.2 | Ω |
| I _{GSS} | Gate-Body Leakage Current | V _{GS} = ±20V; V _{DS} = 0 | | | ± 100 | nA |
| I _{DSS} | Zero Gate Voltage Drain Current | V _{DS} =120V; V _{GS} =0 | | | 1 | μ A |

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