

Isc N-Channel MOSFET Transistor

SUD15N15-95

• FEATURES

- With To-252(DPAK) package
- Low input capacitance and gate charge
- Low gate input resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

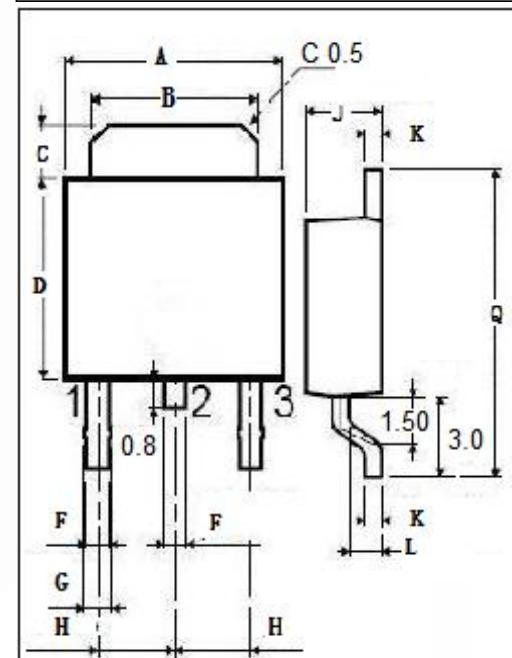
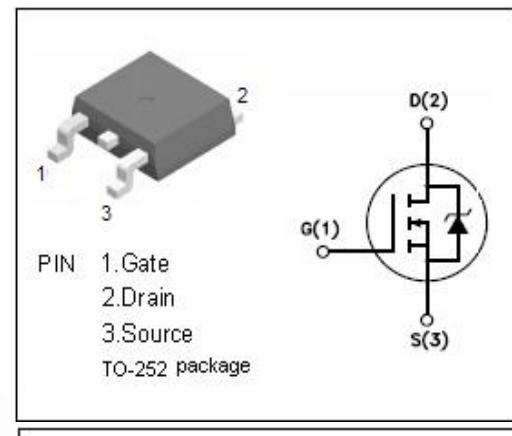
- Switching applications

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|-----------|------------------|
| V_{DSS} | Drain-Source Voltage | 150 | V |
| V_{GSS} | Gate-Source Voltage | ± 20 | V |
| I_D | Drain Current-Continuous | 15 8.7 | A |
| I_{DM} | Drain Current-Single Pulsed | 25 | A |
| P_D | Total Dissipation @ $T_c=25^\circ\text{C}$ | 62 | W |
| T_{ch} | Max. Operating Junction Temperature | 175 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -55~175 | $^\circ\text{C}$ |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|----------------|---------------------------------------|-----|---------------------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance | 2.4 | $^\circ\text{C}/\text{W}$ |
| $R_{th(ch-a)}$ | Channel-to-ambient thermal resistance | 55 | $^\circ\text{C}/\text{W}$ |



| DIM | mm | |
|-----|------|------|
| | MIN | MAX |
| A | 6.40 | 6.60 |
| B | 5.20 | 5.40 |
| C | 1.15 | 1.35 |
| D | 5.70 | 6.10 |
| F | 0.65 | |
| G | 0.75 | |
| H | 2.10 | 2.50 |
| J | 2.10 | 2.40 |
| K | 0.40 | 0.60 |
| L | 0.90 | 1.10 |
| O | 9.90 | 10.1 |

Isc N-Channel MOSFET Transistor**SUD15N15-95****ELECTRICAL CHARACTERISTICS** $T_c=25^\circ\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|----------------------------|--------------------------------|--|-----|-----|-----------|------------------|
| BV_{DSS} | Drain-Source Breakdown Voltage | $\text{V}_{\text{GS}}=0\text{V}; \text{I}_D= 0.25\text{mA}$ | 150 | | | V |
| $\text{V}_{\text{GS(th)}}$ | Gate Threshold Voltage | $\text{V}_{\text{DS}}= 10\text{V}; \text{I}_D=0.25\text{mA}$ | 2 | | 4 | V |
| $\text{R}_{\text{DS(on)}}$ | Drain-Source On-Resistance | $\text{V}_{\text{GS}}= 10\text{V}; \text{I}_D=15\text{A}$ | | 77 | 95 | $\text{m}\Omega$ |
| I_{GSS} | Gate-Source Leakage Current | $\text{V}_{\text{GS}}= \pm 20\text{V}; \text{V}_{\text{DS}}= 0\text{V}$ | | | ± 0.1 | μA |
| I_{DSS} | Drain-Source Leakage Current | $\text{V}_{\text{DS}}=120\text{V}; \text{V}_{\text{GS}}= 0\text{V}; \text{T}_j=25^\circ\text{C}$ $\text{T}_j=125^\circ\text{C}$ | | | 1 50 | μA |
| V_{SDF} | Diode forward voltage | $\text{I}_{\text{SD}}=15\text{A}, \text{V}_{\text{GS}} = 0 \text{ V}$ | | | 1.5 | V |