

## isc N-Channel MOSFET Transistor

## DMG7N65SJ3

## FEATURES

- Drain Current  $-I_D = 5.5A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 650V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 1.4 \Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## DESCRIPTION

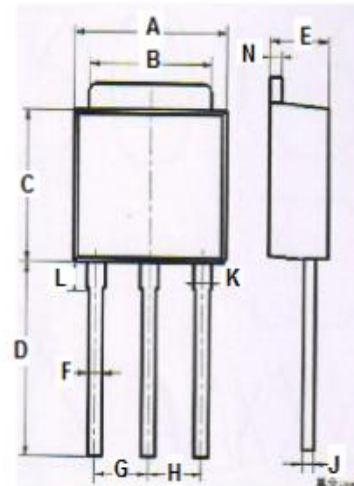
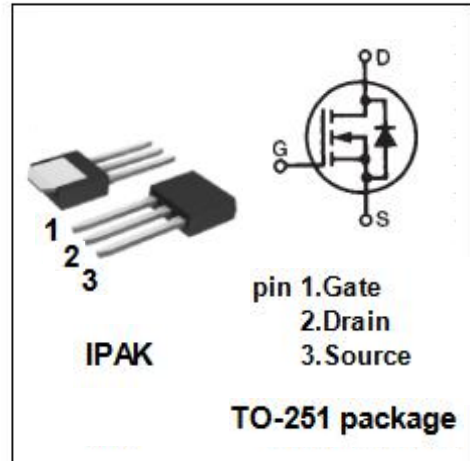
- Designed for use in switch mode power supplies and general purpose applications.

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

| SYMBOL    | PARAMETER                              | VALUE    | UNIT       |
|-----------|--|----------|------------|
| $V_{DSS}$ | Drain-Source Voltage                   | 650      | V          |
| $V_{GS}$  | Gate-Source Voltage-Continuous         | $\pm 30$ | V          |
| $I_D$     | Drain Current-Continuous               | 5.5      | A          |
| $I_{DM}$  | Drain Current-Single Pulse             | 10       | A          |
| $P_D$     | Total Dissipation @ $T_C = 25^\circ C$ | 125      | 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 | 1.0 | $^\circ C/W$ |



| DIM | mm   |      |
|-----|------|------|
|     | MIN  | MAX  |
| A   | 6.40 | 6.48 |
| B   | 5.10 | 5.50 |
| C   | 5.80 | 6.20 |
| D   | 9.20 | 9.60 |
| E   | 2.20 | 2.40 |
| F   | 0.50 | 0.70 |
| G   | 2.09 | 2.49 |
| H   | 2.09 | 2.49 |
| J   | 0.40 | 0.60 |
| K   | 0.70 | 0.90 |
| L   | 1.60 | 2.00 |
| N   | 0.40 | 0.60 |

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## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

| SYMBOL               | PARAMETER                       | CONDITIONS  | MIN | MAX | UNIT |
|----------------------|---------------------------------|---|-----|-----|------|
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage  | V <sub>GS</sub> = 0; I <sub>D</sub> = 0.25mA                | 650 |     | V    |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage          | V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 0.25mA | 2.0 | 4.0 | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V; I <sub>D</sub> = 2.5A                |     | 1.4 | Ω    |
| I <sub>GSS</sub>     | Gate-Body Leakage Current       | V <sub>GS</sub> = ±24V; V <sub>DS</sub> = 0                 |     | ±10 | uA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current | V <sub>DS</sub> = 650V; V <sub>GS</sub> = 0                 |     | 1.0 | μ A  |
| V <sub>SD</sub>      | Forward On-Voltage              | I <sub>S</sub> = 5A; V <sub>GS</sub> = 0                    |     | 1.5 | V    |

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