

isc N-Channel MOSFET Transistor

IPD65R190C7, IIPD65R190C7

• FEATURES

- Static drain-source on-resistance: $R_{DS(on)} \leq 0.19\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

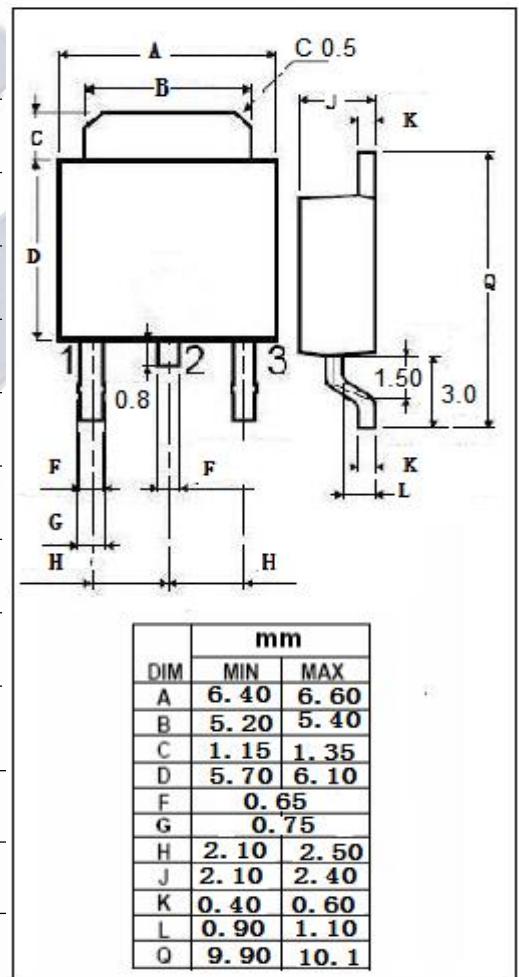
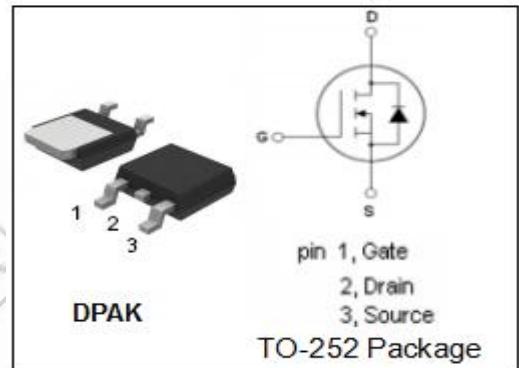
- Fast switching

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--------------------------------------|----------|------------|
| V_{DSS} | Drain-Source Voltage | 650 | V |
| V_{GS} | Gate-Source Voltage | ± 20 | V |
| I_D | Drain Current-Continuous | 13 | A |
| I_{DM} | Drain Current-Single Pulsed | 49 | A |
| P_D | Total Dissipation @ $T_c=25^\circ C$ | 72 | W |
| T_j | Max. Operating Junction Temperature | 150 | $^\circ C$ |
| T_{stg} | Storage Temperature | -55~150 | $^\circ C$ |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|---------------------------------------|------|--------------|
| $R_{th(j-c)}$ | Channel-to-case thermal resistance | 1.73 | $^\circ C/W$ |
| $R_{th(j-a)}$ | Channel-to-ambient thermal resistance | 62 | $^\circ C/W$ |



isc N-Channel MOSFET Transistor**IPD65R190C7,IIPD65R190C7****ELECTRICAL CHARACTERISTICS** $T_c=25^\circ\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|----------------------------|--------------------------------|---|-----|-----|------|---------------|
| BV_{DSS} | Drain-Source Breakdown Voltage | $\text{V}_{\text{GS}}=0\text{V}; \text{I}_D=1\text{mA}$ | 650 | | | V |
| $\text{V}_{\text{GS(th)}}$ | Gate Threshold Voltage | $\text{V}_{\text{DS}}=\text{V}_{\text{GS}}; \text{I}_D=0.29\text{mA}$ | 3 | | 4 | V |
| $\text{R}_{\text{DS(on)}}$ | Drain-Source On-Resistance | $\text{V}_{\text{GS}}=10\text{V}; \text{I}_D=5.7\text{A}$ | | | 0.19 | Ω |
| I_{GSS} | Gate-Source Leakage Current | $\text{V}_{\text{GS}}=20\text{V}; \text{V}_{\text{DS}}=0\text{V}$ | | | 0.1 | μA |
| I_{DSS} | Drain-Source Leakage Current | $\text{V}_{\text{DS}}=650\text{V}; \text{V}_{\text{GS}}=0\text{V}$ | | | 1 | μA |
| V_{SD} | Diode forward voltage | $\text{I}_F=5.7\text{A}, \text{V}_{\text{GS}}=0\text{V}$ | | 0.9 | | V |