

isc N-Channel MOSFET Transistor

IPW65R041CFD

IIPW65R041CFD

• FEATURES

- Static drain-source on-resistance:
 $R_{ds(on)} \leq 41m\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

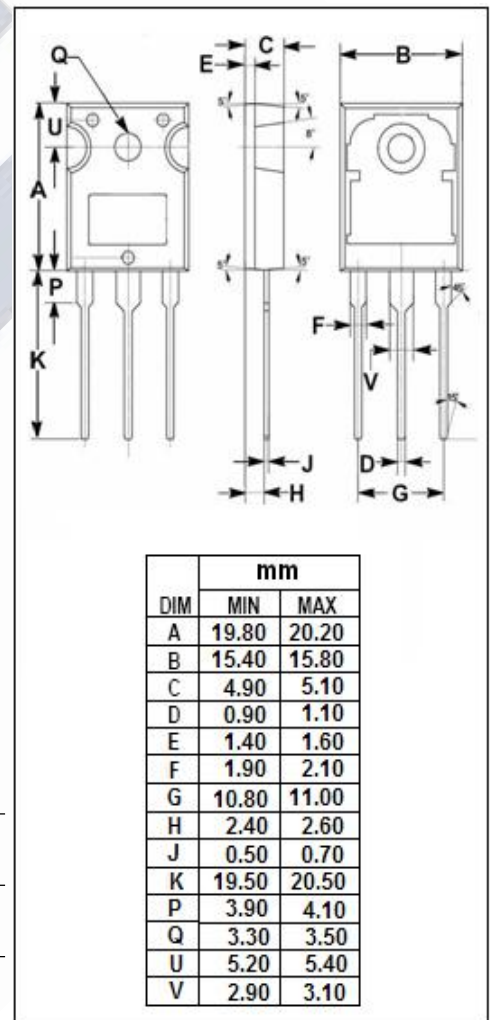
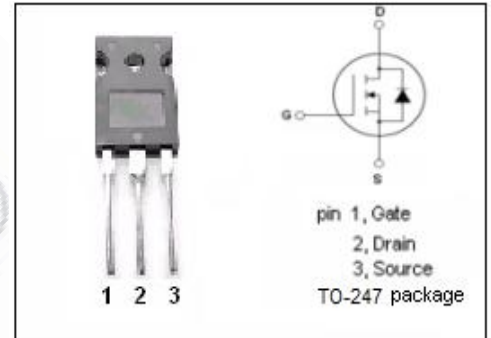
- Fast Switching

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|---|---------|------|
| V _{DSS} | Drain-Source Voltage | 650 | V |
| V _{GS} | Gate-Source Voltage | ±20 | V |
| I _D | Drain Current-Continuous | 68.5 | A |
| I _{DM} | Drain Current-Single Pulsed | 255 | A |
| P _D | Total Dissipation @T _c =25°C | 500 | W |
| T _j | Max. Operating Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature | -55~150 | °C |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|----------------------|---------------------------------------|------|------|
| R _{th(j-c)} | Channel-to-case thermal resistance | 0.25 | °C/W |
| R _{th(j-a)} | Channel-to-ambient thermal resistance | 62 | °C/W |



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ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|---------------------|--------------------------------|--|-----|-----|-----|------|
| B _{VDS} | Drain-Source Breakdown Voltage | V _{GS} =0V; I _D =1mA | 650 | | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} =V _{GS} ; I _D =3.3mA | 3.5 | | 4.5 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} =10V; I _D =33.1A | | | 41 | mΩ |
| I _{GSS} | Gate-Source Leakage Current | V _{GS} = 20V; V _{DS} =0V | | | 0.1 | mA |
| I _{DSS} | Drain-Source Leakage Current | V _{DS} =650V; V _{GS} = 0V | | | 3.5 | μA |
| V _{SD} | Diode forward voltage | I _F =49.6A, V _{GS} = 0V | | | | V |