

isc N-Channel MOSFET Transistor IPD110N12N3,IIPD110N12N3

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 11m\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

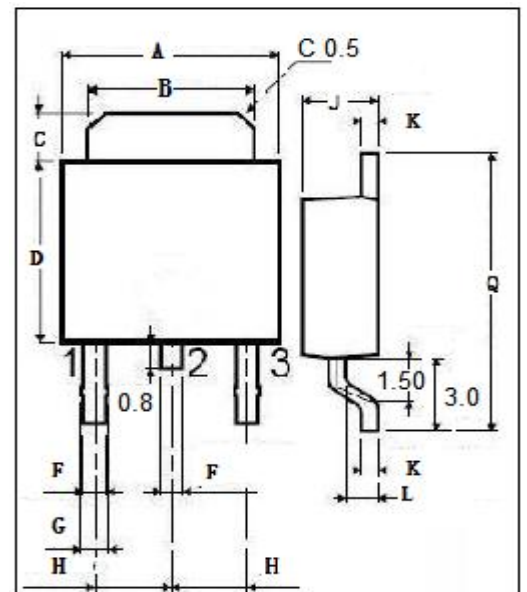
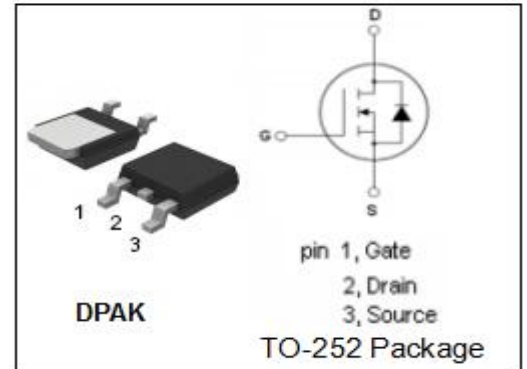
- Ideal for high-frequency switching and synchronous rectification

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|---|---------|------|
| V _{DSS} | Drain-Source Voltage | 120 | V |
| V _{GS} | Gate-Source Voltage | ±20 | V |
| I _D | Drain Current-Continuous | 75 | A |
| I _{DM} | Drain Current-Single Pulsed | 300 | A |
| P _D | Total Dissipation @T _c =25°C | 136 | W |
| T _j | Max. Operating Junction Temperature | 175 | °C |
| T _{stg} | Storage Temperature | -55~175 | °C |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|----------------------|---------------------------------------|-----|------|
| R _{th(j-c)} | Channel-to-case thermal resistance | 1.1 | °C/W |
| R _{th(j-a)} | Channel-to-ambient thermal resistance | 75 | °C/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 |
| Q | 9.90 | 10.1 |

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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------|--------------------------------|------------------------------|-----|-----|-----|-----------|
| BV_{DSS} | Drain-Source Breakdown Voltage | $V_{GS}=0V; I_D=1mA$ | 120 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}=V_{GS}; I_D=83\mu A$ | 2 | | 4 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}=10V; I_D=75A$ | | | 11 | $m\Omega$ |
| I_{GSS} | Gate-Source Leakage Current | $V_{GS}=20V; V_{DS}=0V$ | | | 0.1 | μA |
| I_{DSS} | Drain-Source Leakage Current | $V_{DS}=120V; V_{GS}=0V$ | | | 1 | μA |
| V_{SD} | Diode forward voltage | $I_F=75A, V_{GS}=0V$ | | | 1.2 | V |

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