

## isc N-Channel MOSFET Transistor IPD068N10N3,IIPD068N10N3

### • FEATURES

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 6.8m\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • DESCRIPTION

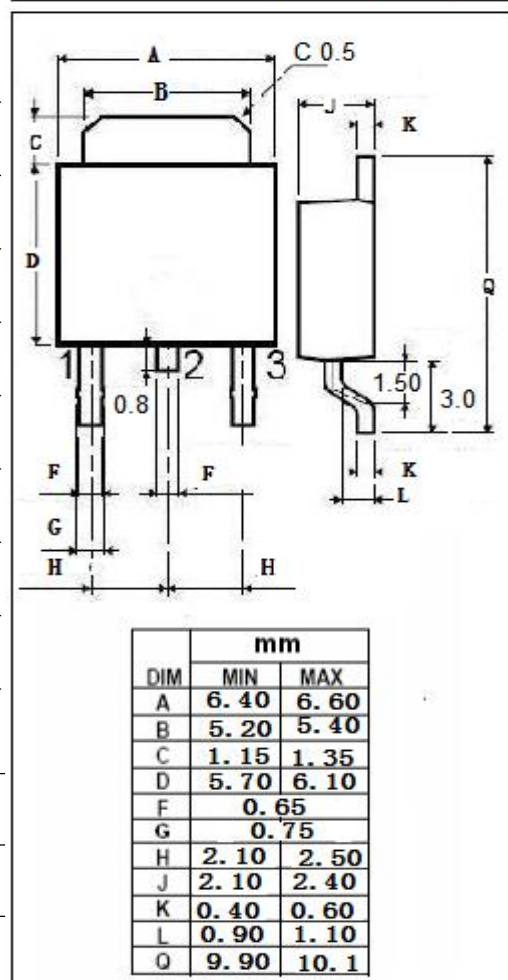
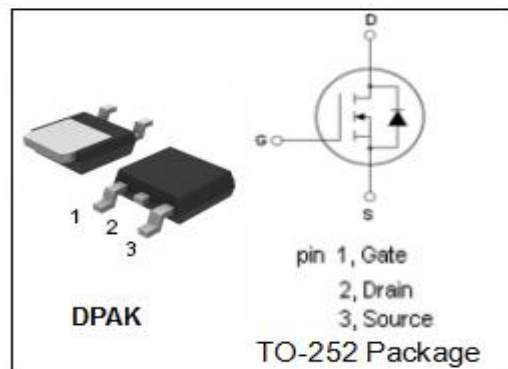
- High frequency switching

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

| SYMBOL    | PARAMETER                                  | VALUE    | UNIT             |
|-----------|--------------------------------------------|----------|------------------|
| $V_{DS}$  | Drain-Source Voltage                       | 100      | V                |
| $V_{GS}$  | Gate-Source Voltage                        | $\pm 20$ | V                |
| $I_D$     | Drain Current-Continuous                   | 90       | A                |
| $I_{DM}$  | Drain Current-Single Pulsed                | 360      | A                |
| $P_D$     | Total Dissipation @ $T_c=25^\circ\text{C}$ | 150      | W                |
| $T_j$     | Max. Operating Junction Temperature        | 175      | $^\circ\text{C}$ |
| $T_{stg}$ | Storage Temperature                        | -55~175  | $^\circ\text{C}$ |

### • THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                             | MAX | UNIT               |
|---------------|---------------------------------------|-----|--------------------|
| $R_{th(j-c)}$ | Channel-to-case thermal resistance    | 1   | $^\circ\text{C/W}$ |
| $R_{th(j-a)}$ | Channel-to-ambient thermal resistance | 62  | $^\circ\text{C/W}$ |



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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 | $V_{GS}=0V; I_D=1mA$         | 100 |     |     | V         |
| $V_{GS(th)}$ | Gate Threshold Voltage         | $V_{DS}=V_{GS}; I_D=90\mu A$ | 2   |     | 3.5 | V         |
| $R_{DS(on)}$ | Drain-Source On-Resistance     | $V_{GS}=10V; I_D=90A$        |     |     | 6.8 | $m\Omega$ |
| $I_{GSS}$    | Gate-Source Leakage Current    | $V_{GS}=20V$                 |     |     | 0.1 | $\mu A$   |
| $I_{DSS}$    | Drain-Source Leakage Current   | $V_{DS}=100V; V_{GS}=0V$     |     |     | 1   | $\mu A$   |
| $V_{SD}$     | Diode forward voltage          | $I_F=90A, V_{GS}=0V$         |     |     | 1.2 | V         |

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