

isc N-Channel MOSFET Transistor
IXFA130N10T
• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 9.1\text{m}\Omega @ V_{GS}=10\text{V}$
- Fully characterized avalanche voltage and current
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATION

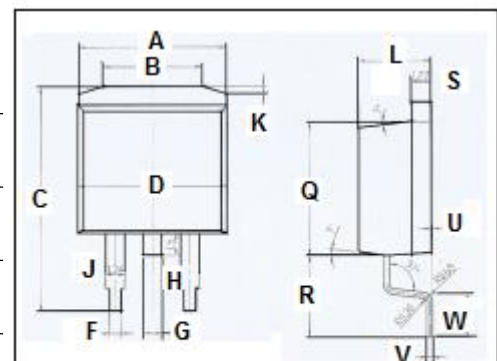
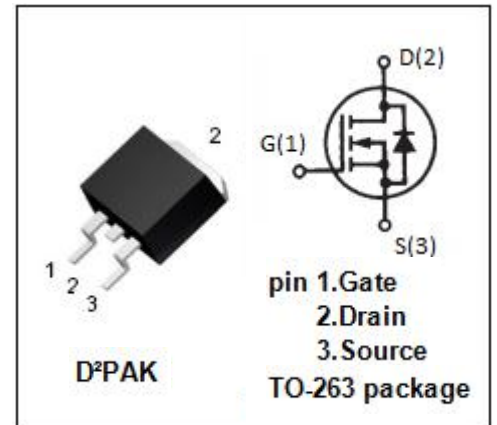
- DC/DC Converters
- High Current Switching Applications

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|----------|------------------|
| V_{DSS} | Drain-Source Voltage | 100 | V |
| V_{GS} | Gate-Source Voltage | ± 30 | V |
| I_D | Drain Current-Continuous | 130 | A |
| I_{DM} | Drain Current-Single Pulsed | 350 | A |
| P_D | Total Dissipation @ $T_c=25^\circ\text{C}$ | 360 | W |
| T_j | Operating Junction Temperature | -55~175 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -55~175 | $^\circ\text{C}$ |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|-------------------------------------|------|--------------------|
| $R_{th(j-c)}$ | Junction-to-case thermal resistance | 0.42 | $^\circ\text{C/W}$ |



| DIM | mm | |
|-----|-------|-------|
| | MIN | MAX |
| A | 10 | |
| B | 6.6 | 6.8 |
| C | 15.23 | 15.25 |
| D | 10.15 | 10.17 |
| F | 0.76 | 0.78 |
| G | 1.26 | 1.28 |
| H | 1.4 | 1.6 |
| J | 1.33 | 1.35 |
| K | 0.4 | 0.6 |
| L | 4.6 | 4.8 |
| Q | 8.69 | 8.71 |
| R | 5.28 | 5.30 |
| S | 1.26 | 1.28 |
| U | 0.0 | 0.2 |
| V | 0.37 | 0.39 |
| W | 2.80 | 2.82 |

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ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|---------------------|--------------------------------|---|-----|------|------|
| BV _{DSS} | Drain-Source Breakdown Voltage | V _{GS} = 0V; I _D = 250 μ A | 100 | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} = V _{GS} ; I _D = 1mA | 2.5 | 4.5 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} =10V; I _D = 25A | | 9.1 | mΩ |
| I _{GSS} | Gate-Source Leakage Current | V _{GS} = ±20V; V _{DS} =0V | | ±200 | nA |
| I _{DSS} | Drain-Source Leakage Current | V _{DS} = V _{DSS} ; V _{GS} = 0V | | 10 | μ A |
| | | V _{DS} = V _{DSS} ; V _{GS} = 0V; T _J = 150°C | | 500 | |
| V _{SD} | Diode forward voltage | I _F = 25A; V _{GS} = 0V | | 1.0 | V |

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