

isc N-Channel MOSFET Transistor

IRFP440A

FEATURES

- Drain Current $-I_D = 8.5A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 500V (Min)$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.85 \Omega (Max)$
- Fast Switching
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

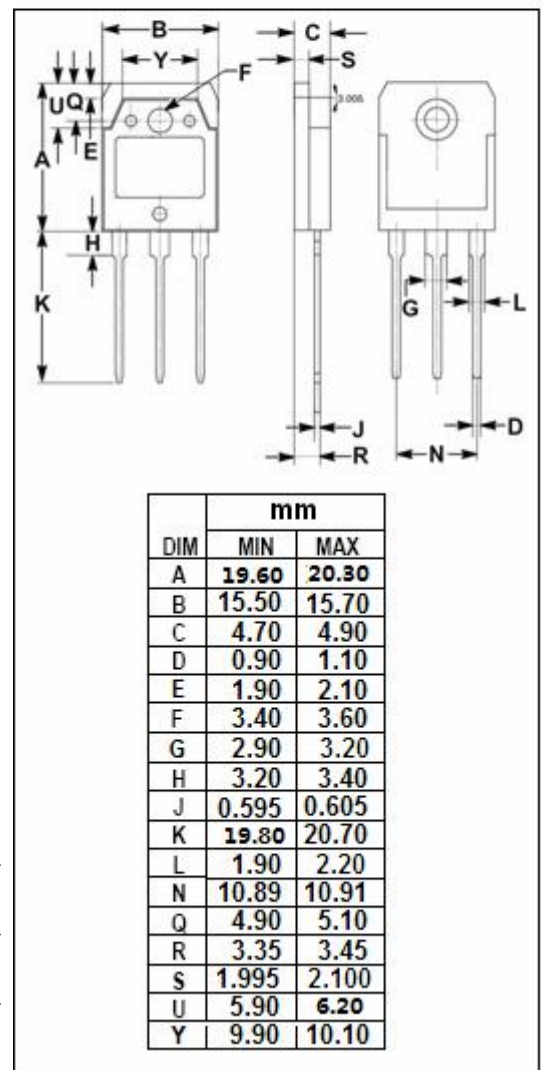
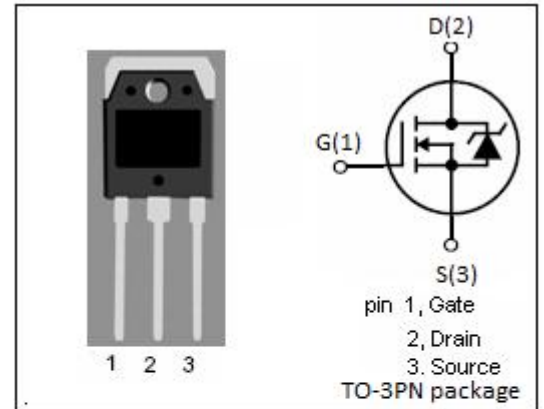
- Designed for use in switch mode power supplies and general purpose applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|----------|------------|
| V_{DSS} | Drain-Source Voltage | 500 | V |
| V_{GS} | Gate-Source Voltage-Continuous | ± 30 | V |
| I_D | Drain Current-Continuous | 8.5 | A |
| I_{DM} | Drain Current-Single Pulse | 34 | A |
| P_D | Total Dissipation @ $T_C = 25^\circ C$ | 162 | W |
| T_J | Max. Operating Junction Temperature | -55~150 | $^\circ C$ |
| T_{stg} | Storage Temperature | -55~150 | $^\circ C$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|--------------|---|------|--------------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case | 0.83 | $^\circ C/W$ |
| $R_{th j-a}$ | Thermal Resistance, Junction to Ambient | 30 | $^\circ C/W$ |



isc N-Channel MOSFET Transistor**IRFP440A****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|----------------------|---------------------------------|---|-----|------|------|
| V _{(BR)DSS} | Drain-Source Breakdown Voltage | V _{GS} = 0; I _D = 0.25mA | 500 | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} = V _{GS} ; I _D = 0.25mA | 2 | 4 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} = 10V; I _D = 4.25A | | 0.85 | Ω |
| I _{GSS} | Gate-Body Leakage Current | V _{GS} = ±30V; V _{DS} = 0 | | ±100 | nA |
| I _{DSS} | Zero Gate Voltage Drain Current | V _{DS} = 500V; V _{GS} = 0 | | 250 | μA |
| V _{SD} | Forward On-Voltage | I _S = 8.5A; V _{GS} = 0 | | 1.4 | V |

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