

isc N-Channel MOSFET Transistor

IRF820

DESCRIPTION

- Drain Current $-I_D = 2.5A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 500V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 3 \Omega (\text{Max})$
- Fast Switching Speed
- Simple Drive Requirements

APPLICATIONS

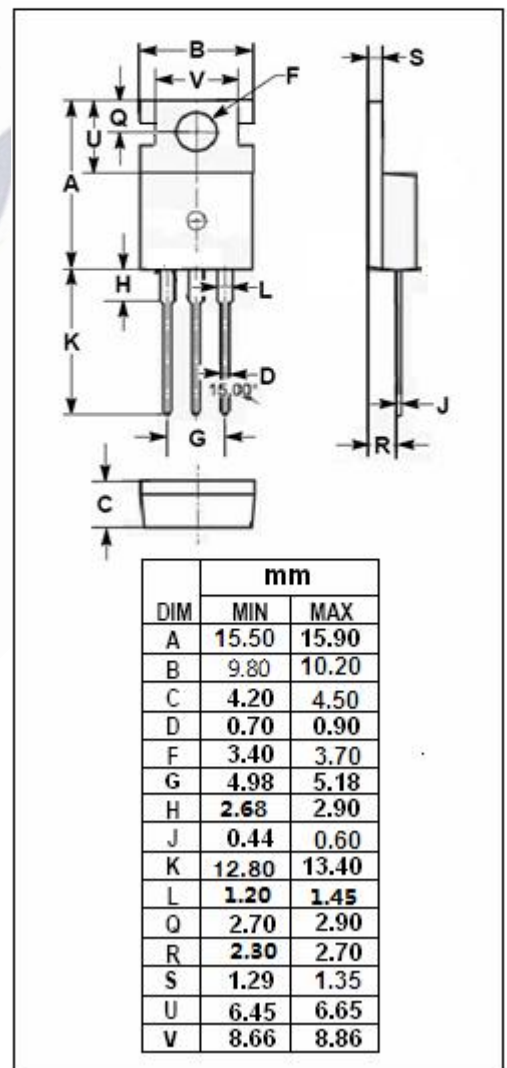
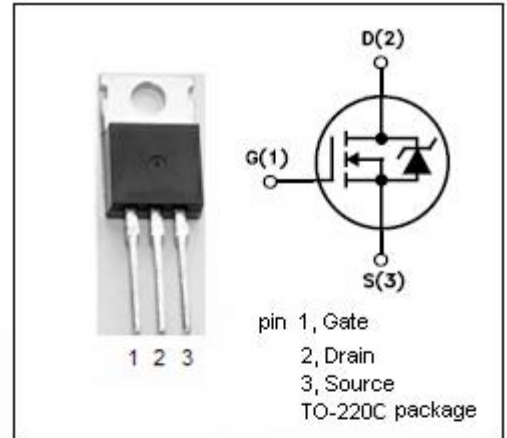
- High current, high speed switching
- Switch mode power supplies (smps)
- DC-AC converters for welding equipment and uninterruptible power supplies and motor driver

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS} = 0$)	500	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-continuous @ $T_C = 25^\circ C$	2.5	A
P_D	Power Dissipation @ $T_C = 25^\circ C$	80	W
T_j	Max. Operating Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-65~150	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Thermal Resistance, Junction to Case	1.56	$^\circ C/W$
$R_{th(j-a)}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$



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• ELECTRICAL CHARACTERISTICS (T_c=25°C)

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-stage Resistance	V _{GS} = 10V; I _D = 1.5A		3	Ω
I _{GSS}	Gate Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0		±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 500V; V _{GS} = 0		1	uA
V _{SD}	Diode Forward Voltage	I _F = 2.5A; V _{GS} = 0		1.6	V