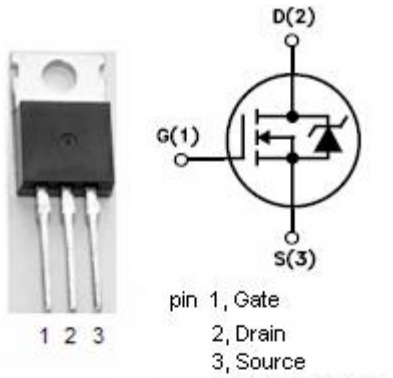
isc N-Channel MOSFET Transistor IRF820

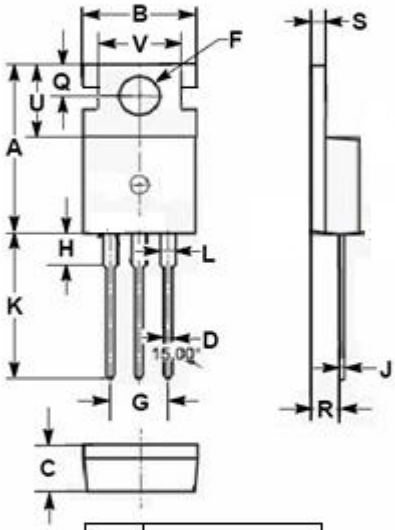
DESCRIPTION

- Drain Current –I_D= 2.5A@ T_C=25℃
- Drain Source Voltage-
  : V_{DSS}= 500V(Min)
- Static Drain-Source On-Resistance
  : $R_{DS(on)}$ = 3Ω (Max)
- Fast Switching Speed
- Simple Drive Requirements
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

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



DIM	mm MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	ARAMETER	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℃	2.5	A
P_D	Power Dissipation@T_C=25℃	80	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.56	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	62.5	℃/W

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• **ELECTRICAL CHARACTERISTICS (T_C=25℃)**

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