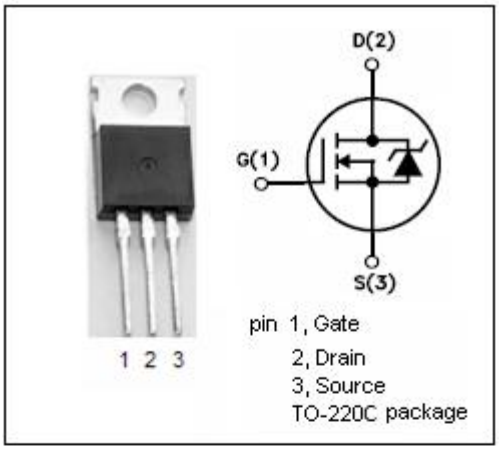
isc N-Channel Mosfet Transistor IRF830A

FEATURES

- Drain Current –I_D=5A@ T_C=25℃
- Drain Source Voltage-
  : V_{DSS}= 500V(Min)
- Fast Switching Speed
- Low Drive Requirement
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

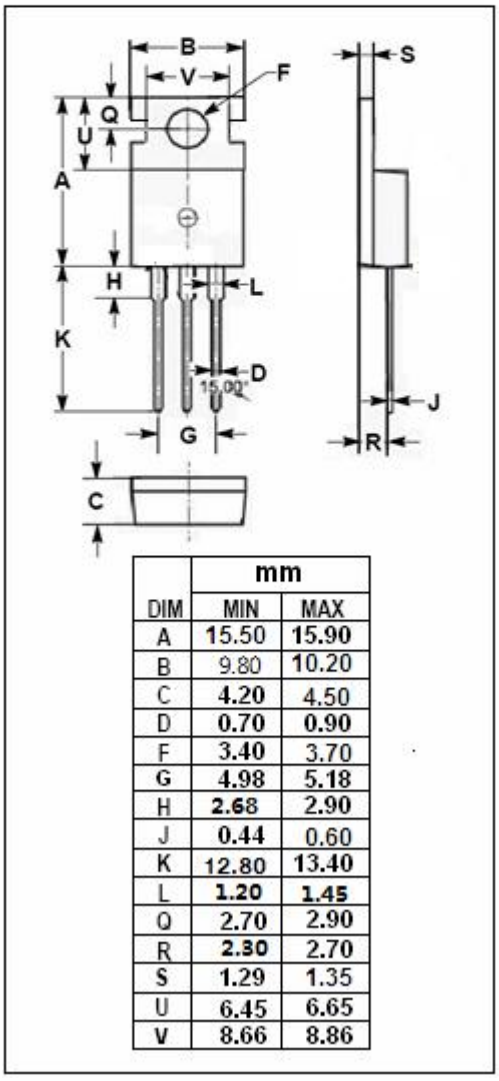
- Switch Mode Power Supply
- Uninterruptable Power Supply
- High speed power switching

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	500	V
V_{GS}	Gate-Source Voltage-Continuous	±30	V
I_D	Drain Current-Continuous@ TC=25℃	5	A
	Drain Current-continuous@ TC=100℃	3.2	
I_{DM}	Drain Current-Single Plused	20	A
P_D	Total Dissipation @T_C=25℃	74	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.7	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	62	℃/W



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

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	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		4.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D= 3A			1.4	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			25	uA
V_{SD}	Forward On-Voltage	I_S= 5A; V_{GS}=0			1.5	V
Gfs	Forward Transconductance	V_{DS}= 50V； I_D=3A	2.8			S
$t_{d(on)}$	Turn-on Delay Time	V_{DD}=250V; I_D=5A; R_G=14Ω		10		ns
t_r	Rise Time			21		
$t_{d(off)}$	Turn-off Delay Time			21		
t_f	Fall Time			15		

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