

isc N-Channel Mosfet Transistor

IRF840A

• FEATURES

- Drain Source Voltage-
: $V_{DSS} = 500V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.85 \Omega (\text{Max})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

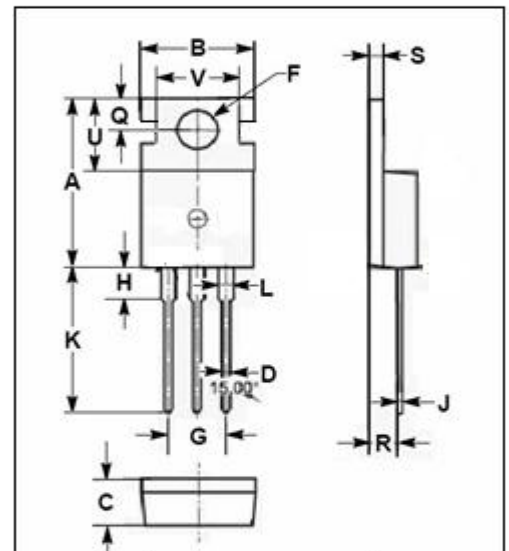
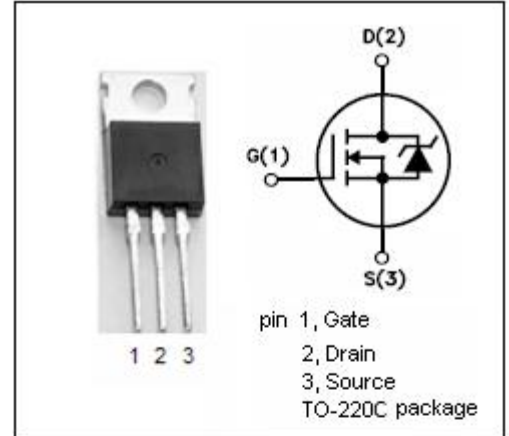
- Switch mode power supply
- Uninterruptable power supply
- High speed power switching

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS}=0$)	500	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-continuous@ $TC=25^\circ\text{C}$	8	A
I_{DM}	Drain Current-Single Pulsed	32	A
P_{tot}	Total Dissipation@ $TC=25^\circ\text{C}$	125	W
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.0	$^\circ\text{C/W}$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62	$^\circ\text{C/W}$



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°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	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	2.0		4.0	V
V _{SD}	Diode Forward On-voltage	I _S = 8A ;V _{GS} = 0			2.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 4.8A			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			25	μA
G _{fs}	Forward Transconductance	V _{DS} = 50V; I _D =4.8A	3.7			S
t _{d(on)}	Turn-on Delay Time	I _D =8A; V _{DD} =250V; R _G =9.1 Ω		11		ns
t _r	Rise Time			23		
t _{d(off)}	Turn-off Delay Time			26		
t _f	Fall Time			19		

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