

isc N-Channel Mosfet Transistor

IRF710

• FEATURES

- Low $R_{DS(on)}$
- V_{GS} Rated at $\pm 20V$
- Silicon Gate for Fast Switching Speed
- Rugged
- Low Drive Requirements
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

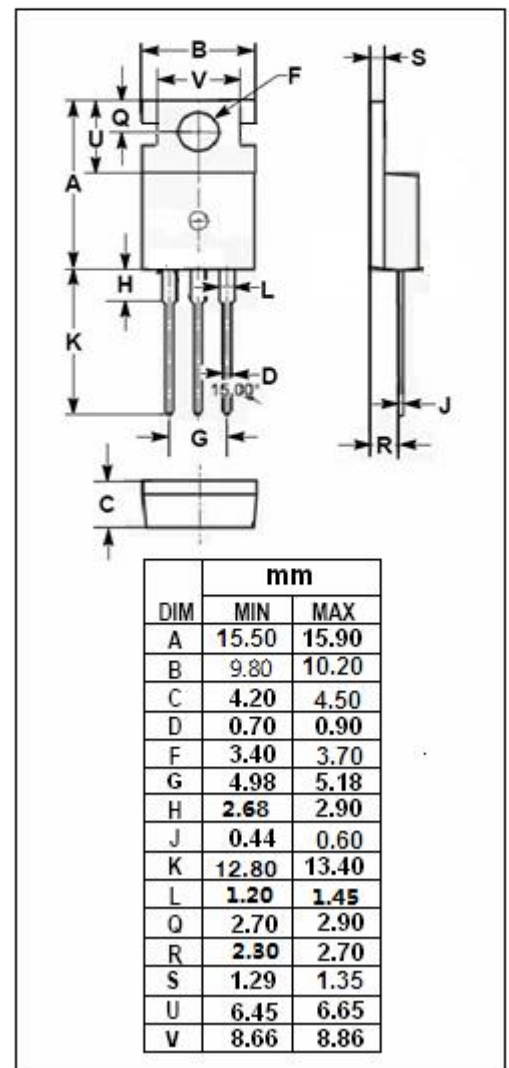
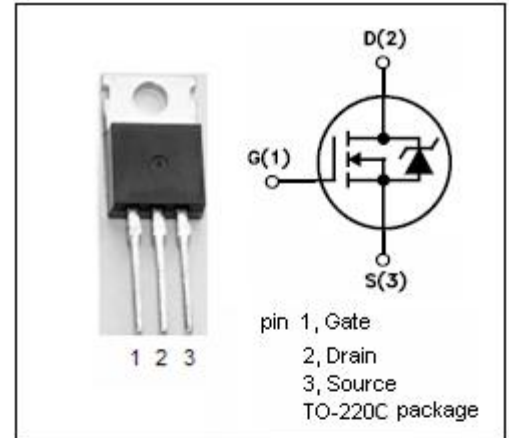
- Designed especially for high voltage, high speed applications, such as off-line switching power supplies, UPS, AC and DC motor controls, relay and solenoid drivers.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	400	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	2	A
I_{DM}	Drain Current-Single Pulsed	5	A
P_D	Total Dissipation @ $T_c=25^\circ C$	36	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	3.5	$^\circ C/W$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	80	$^\circ C/W$



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D = 0.25mA	400			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 = 1.1A			3.6	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V; V _{DS} = 0			± 500	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 400V; V _{GS} =0			250	uA
V _{SD}	Forward On-Voltage	I _S = 2.0A; V _{GS} =0			1.6	V
C _{iss}	Input Capacitance	V _{DS} =25V, V _{GS} =0V, F=1.0MHz		135		pF
C _{oss}	Output Capacitance			35		pF
C _{rss}	Reverse Transfer Capacitance			8		pF

• SWITCHING CHARACTERISTICS (T_c=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
T _{d(on)}	Turn-on Delay Time	V _{DD} =50V, I _D =5.6A V _{GS} =10V, R _{GEN} =24Ω R _{GS} =24Ω		8	12	ns
T _r	Rise Time			10	15	ns
T _{d(off)}	Turn-off Delay Time			21	32	ns
T _f	Fall Time			11	17	ns

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