

isc N-Channel MOSFET Transistor

IRF1404

FEATURES

- Drain Current $-I_D = 162A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 40V$ (Min)
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.004 \Omega$ (Max)
- Fast Switching

Description

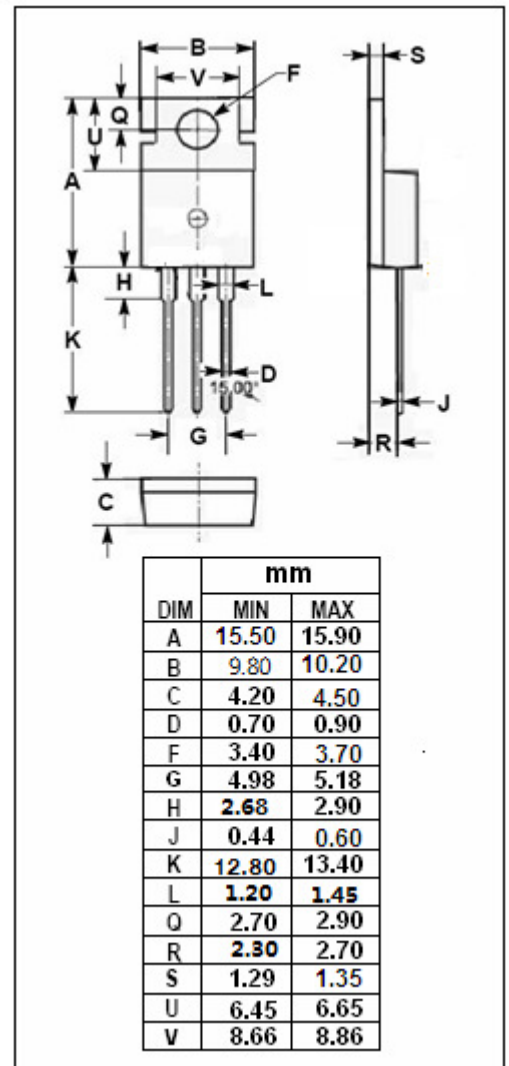
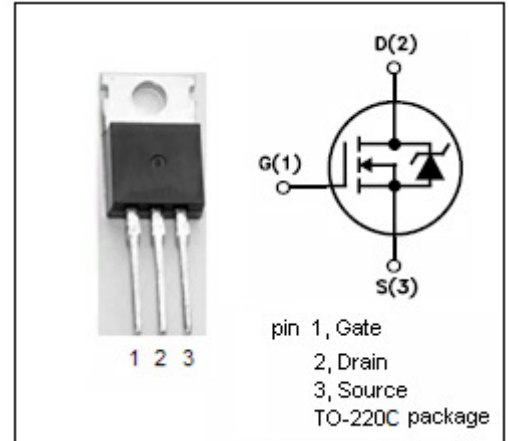
Seventh Generation HEXFET® Power MOSFETs from International Rectifier utilize advanced processing techniques to achieve extremely low on-resistance per silicon area. This benefit, combined with the fast switching speed and ruggedized device design that HEXFET power MOSFETs are well known for, provides the designer with an extremely efficient and reliable device for use in a wide variety of applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	40	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	162	A
I_{DM}	Drain Current-Single Pluse	650	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	200	W
T_J	Max. Operating Junction Temperature	175	$^\circ C$
T_{stg}	Storage Temperature	-55~175	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.75	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62	$^\circ C/W$



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SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=0.25\text{mA}$	40			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.25\text{mA}$	2		4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=95\text{A}$			0.004	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}; V_{DS}=0$			± 200	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=40\text{V}; V_{GS}=0$			20	μA
V_{SD}	Forward On-Voltage	$I_S=95\text{A}; V_{GS}=0$			1.3	V
Gfs	Forward Transconductance	$V_{DS}=25\text{V}; I_D=60\text{A}$	106			S