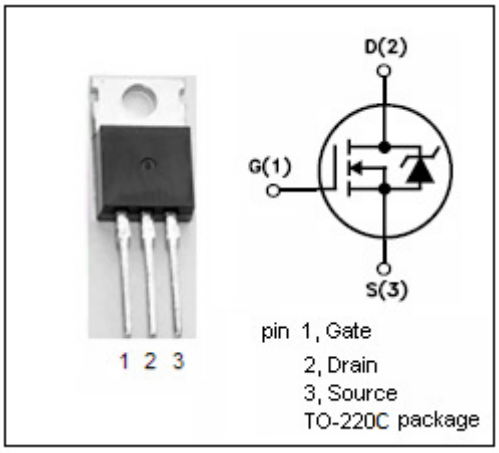
isc N-Channel MOSFET Transistor IRF1404

FEATURES

- Drain Current –I_D= 162A@ T_C=25℃
- Drain Source Voltage-
  : V_{DSS}= 40V(Min)
- Static Drain-Source On-Resistance
  : $R_{DS(on)}$ = 0.004Ω(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.

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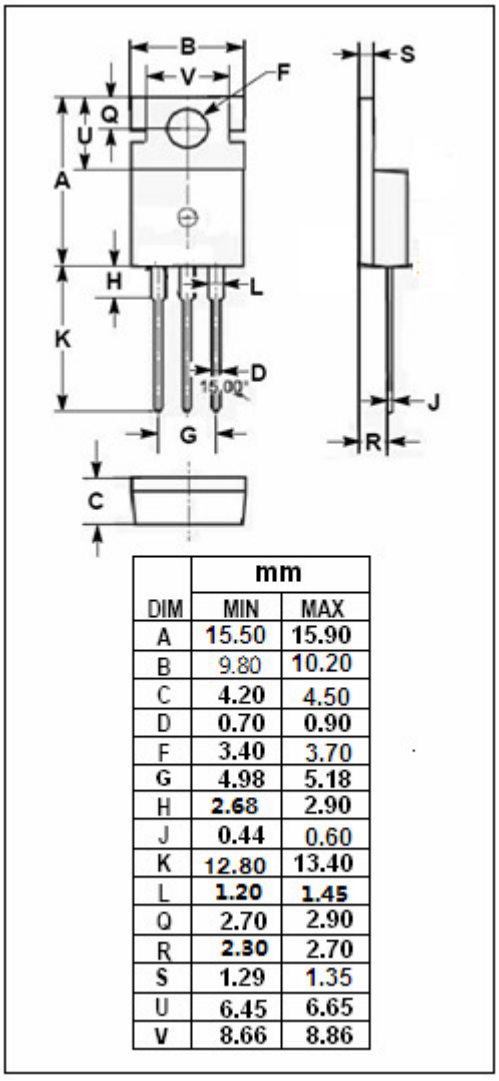
ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	200	W
T_J	Max. Operating Junction Temperature	175	℃
T_{stg}	Storage Temperature	-55~175	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	0.75	℃/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	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}= 0; I_D= 0.25mA	40			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= 95A			0.004	Ω
I_{GSS}	Gate-Body Leakage Current	V_{GS}= ±20V;V_{DS}= 0			±200	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}= 40V; V_{GS}= 0			20	μA
V_{SD}	Forward On-Voltage	I_S= 95A; V_{GS}=0			1.3	V
Gfs	Forward Transconductance	V_{DS}= 25V；I_D= 60A	106			S