

IRFZ44N

FEATURES

- Drain Current $-I_D=49A@ T_C=25^\circ C$
- Drain Source Voltage-
: $V_{DSS}= 55V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.032 \Omega (\text{Max})$
- Fast Switching

DESCRIPTION

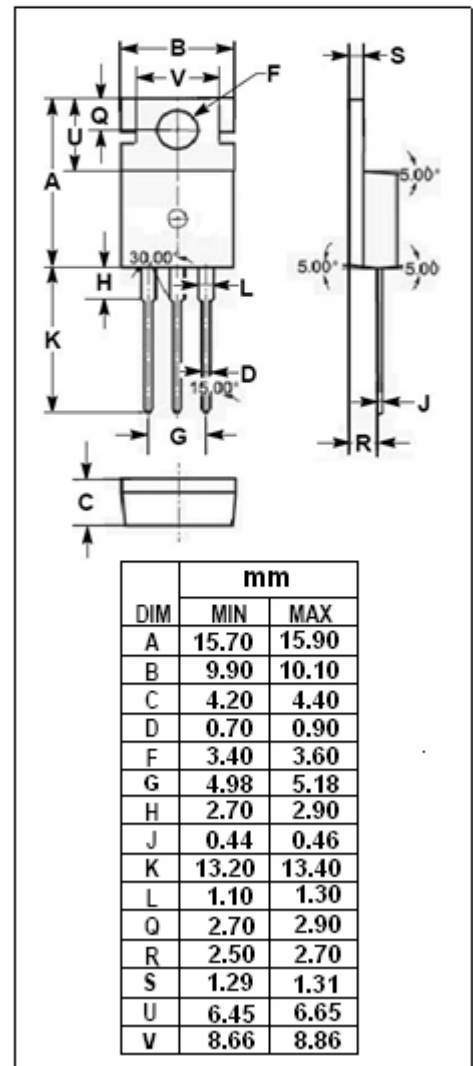
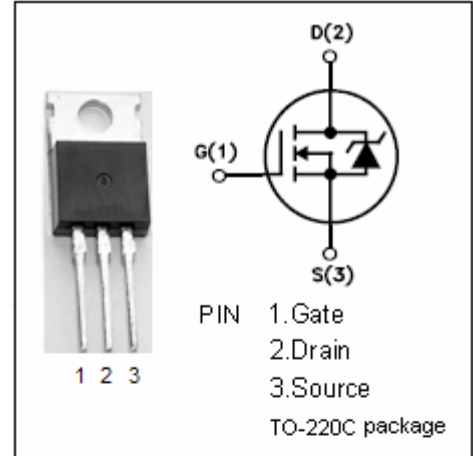
- Designed for low voltage, high speed switching applications in power supplies, converters and power motor controls, these devices are particularly well suited for bridge circuits where diode speed and commutating safe operating areas are critical and offer additional safety margin against unexpected voltage transients.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	55	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	49	A
I_{DM}	Drain Current-Single Pluse ($t_p \leq 10 \mu s$)	160	A
P_D	Total Dissipation @ $T_C=25^\circ C$	94	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	1.5	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62	$^\circ C/W$



ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D = 0.25mA	55		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 = 25A		0.032	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V; V _{DS} = 0		±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 55V; V _{GS} = 0 V _{DS} = 55V; V _{GS} = 0; T _j = 150°C		25 250	μ A
V _{SD}	Forward On-Voltage	I _S = 25A; V _{GS} = 0		1.3	V