

**isc N-Channel MOSFET Transistor**

**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**

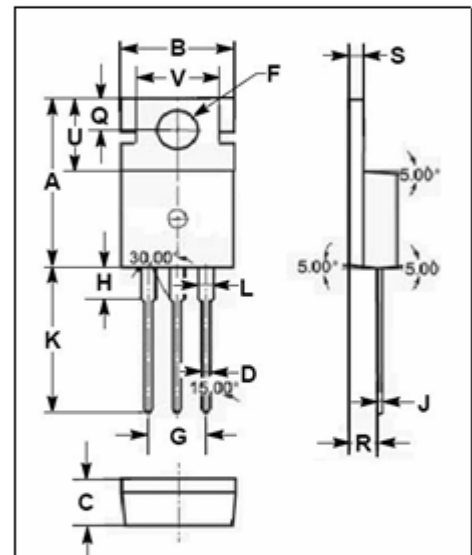
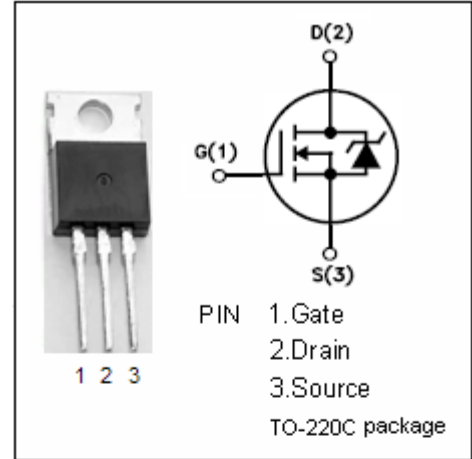
- Designed for low voltage, high speed switching applications in power supplies, converters and power motor controls, these devices are particularly well suited for bridge circuits where diode speed and commutating safe operating areas are critical and offer additional safety margin against unexpected 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	$\pm 20$	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	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

**isc N-Channel MOSFET Transistor****IRFZ44N****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=0.25\text{mA}$	55		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	$V_{GS}=10\text{V}; I_D=25\text{A}$		0.032	$\Omega$
$I_{GSS}$	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}; V_{DS}=0$		$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=55\text{V}; V_{GS}=0$ $V_{DS}=55\text{V}; V_{GS}=0; T_j=150^{\circ}\text{C}$		25 250	$\mu\text{A}$
$V_{SD}$	Forward On-Voltage	$I_S=25\text{A}; V_{GS}=0$		1.3	V