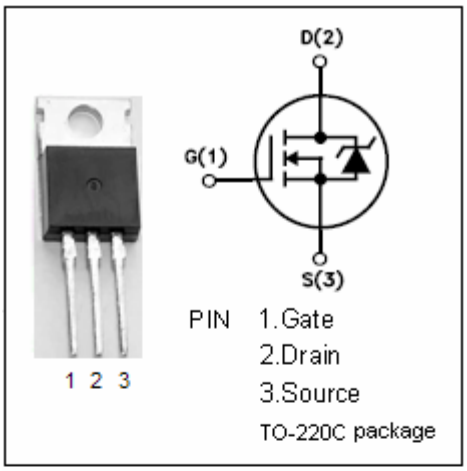
isc N-Channel MOSFET Transistor IRFZ44N



FEATURES

- Drain Current –I_D=49A@ T_C=25℃
- Drain Source Voltage-
  : V_{DSS}= 55V(Min)
- Static Drain-Source On-Resistance
  : $R_{DS(on)}$ = 0.032Ω(Max)
- Fast Switching

DESCRIPTION

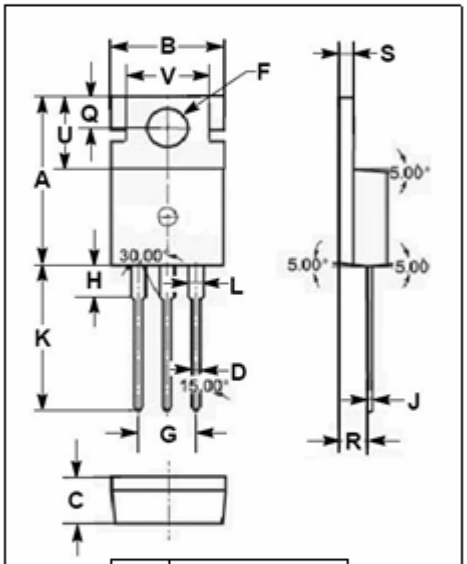
- Designed for low voltage, high speed switching applications in power supplies, converters and power motor controls, these devices are particularly well suited for bridge circuits where diode speed and commutating safe operating areas are critical and offer additional safety margin against unexpected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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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≤10μs)	160	A
P_D	Total Dissipation @T_C=25℃	94	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	1.5	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance, Junction to Ambient	62	℃/W



DIM	mm MIN	mm 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

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ELECTRICAL CHARACTERISTICS

T_C=25℃ 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℃		25 250	μA
V_{SD}	Forward On-Voltage	I_S= 25A; V_{GS}= 0		1.3	V