

isc N-Channel MOSFET Transistor

IRFP451R

FEATURES

- Drain Current $-I_D = 13A @ T_C = 25^{\circ}C$
- Drain Source Voltage-
: $V_{DSS} = 450V (Min)$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.4 \Omega (Max)$
- Fast Switching

DESCRIPTION

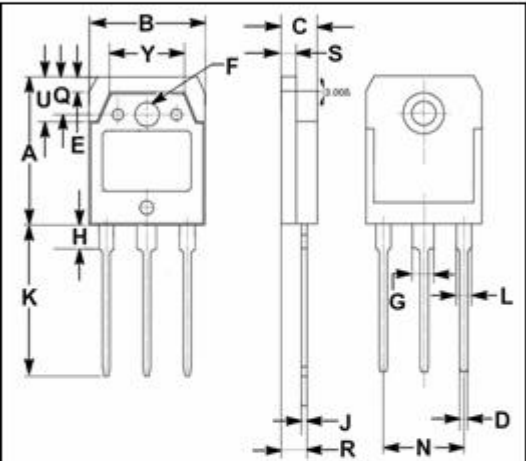
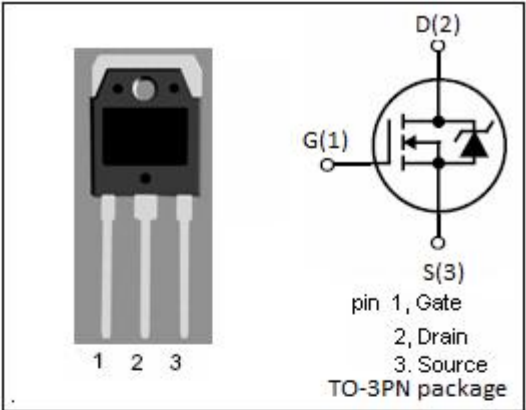
- Designed for use in switch mode power supplies and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	450	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	13	A
I_{DM}	Drain Current-Single Pluse	52	A
P_D	Total Dissipation @ $T_C = 25^{\circ}C$	150	W
T_J	Max. Operating Junction Temperature	-55~150	$^{\circ}C$
T_{stg}	Storage Temperature	-55~150	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.83	$^{\circ}C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	80	$^{\circ}C/W$



DIM	mm	
	MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

isc N-Channel MOSFET Transistor**IRFP451R****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0$; $I_D=0.25\text{mA}$	450		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	$V_{GS}=10\text{V}$; $I_D=7\text{A}$		0.4	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}$; $V_{DS}=0$		± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=450\text{V}$; $V_{GS}=0$ $V_{DS}=360\text{V}$; $V_{GS}=0$; $T_j=150^{\circ}\text{C}$		250 1000	μA
V_{SD}	Forward On-Voltage	$I_S=13\text{A}$; $V_{GS}=0$		1.4	V