

isc N-Channel MOSFET Transistor

IRFP450

FEATURES

- Drain Current $-I_D = 14A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 500V (Min)$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.4 \Omega (Max)$
- Fast Switching
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

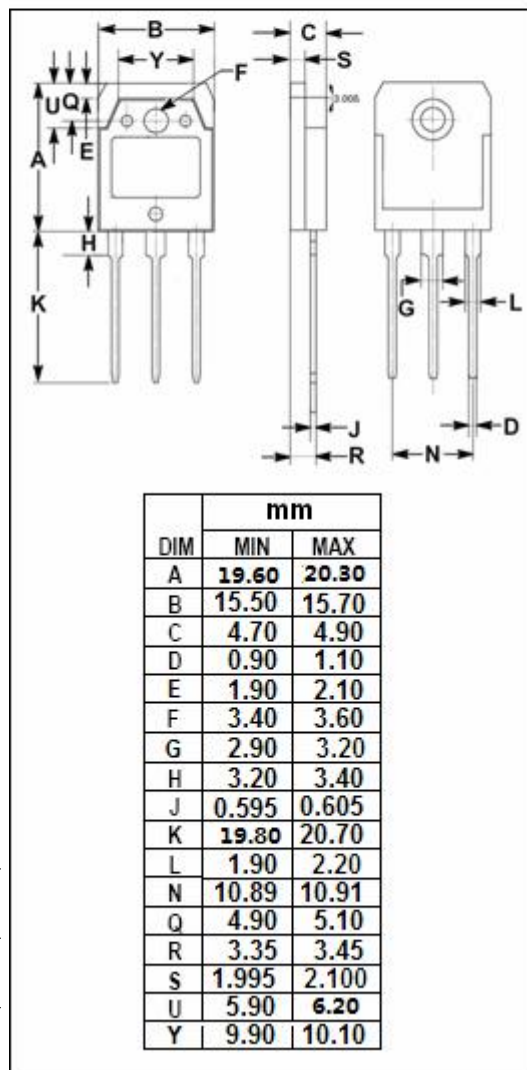
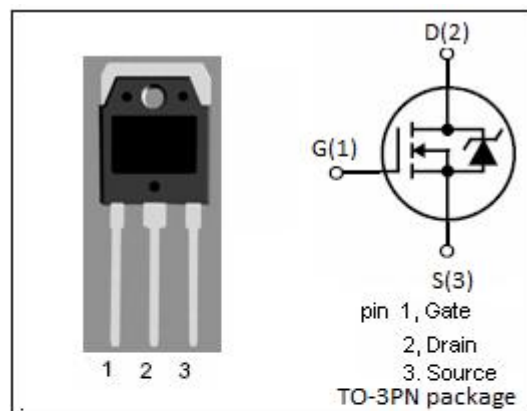
- Designed for use in switch mode power supplies and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	500	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	14	A
I_{DM}	Drain Current-Single Pluse	56	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	180	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	0.7	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	30	$^\circ C/W$



isc N-Channel MOSFET Transistor**IRFP450****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D = 0.25mA	500			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 = 8.4A			0.4	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V; V _{DS} = 0			± 100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 500V; V _{GS} = 0			250	μ A
V _{SD}	Forward On-Voltage	I _S = 14A; V _{GS} = 0			1.4	V
t _{rr}	Reverse Recovery Time	I _S =18A; V _{GS} = 0V; dI _F /dt=100A/ μ s		583		ns
g _{fs}	Forward Transconductance	V _{DS} = 10V; I _D = 8.4A	9.3			S

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