

# isc N-Channel MOSFET Transistor

# IRF450

## DESCRIPTION

- 13A,500V
- $R_{DS(on)}=0.4\ \Omega$
- SOA is Power Dissipation Limited
- Linear Transfer Characteristics
- Related Literature

## APPLICATIONS

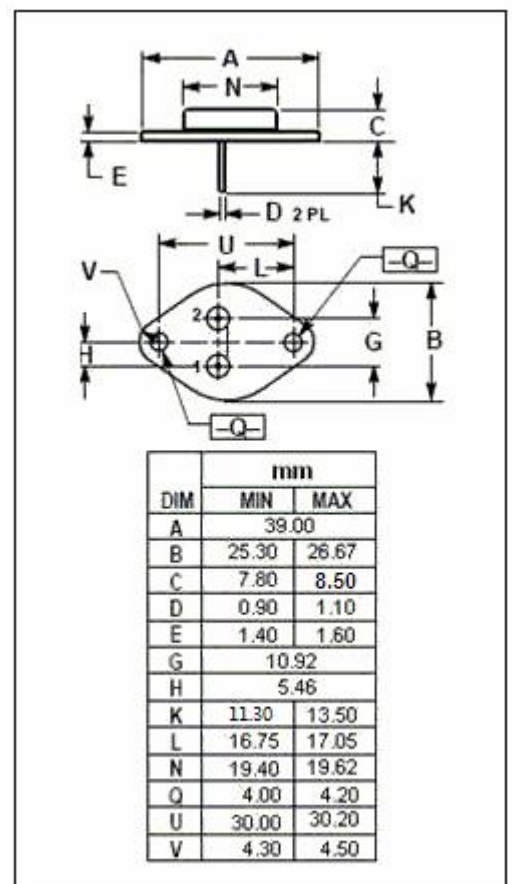
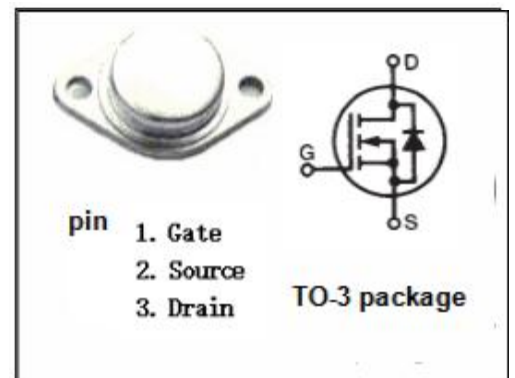
- Designed for applications such as switching regulators, switching convertors ,motor drivers ,relay driver ,and drivers for high power bipolar switching transistors requiring high speed and low gate drive power.

## ABSOLUTE MAXIMUM RATINGS(TA=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS}=0$ )	500	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-continuous@ TC=25°C	13	A
$P_{tot}$	Total Dissipation@TC=25°C	125	W
$T_j$	Max. Operating Junction Temperature	-55~150	°C
$T_{stg}$	Storage Temperature Range	-55~150	°C

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance,Junction to Case	0.83	°C/W



**isc N-Channel MOSFET Transistor****IRF450****ELECTRICAL CHARACTERISTICS (TC=25°C)**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	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-stage Resistance	$V_{GS}=10V$ ; $I_D=7.2A$			0.4	$\Omega$
$I_{GSS}$	Gate Source Leakage Current	$V_{GS}=\pm 20V$ ; $V_{DS}=0$			$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=500V$ ; $V_{GS}=0$			250	$\mu A$
$V_{SD}$	Diode Forward Voltage	$I_F=13A$ ; $V_{GS}=0$			1.4	V

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