

isc N-Channel MOSFET Transistor

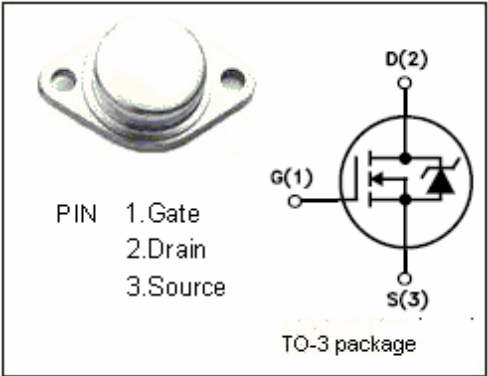
7N45

DESCRIPTION

- Drain Current $I_D = 7A @ T_C = 25^{\circ}C$
- Drain Source Voltage-
: $V_{DSS} = 450V (Min)$
- Fast Switching Speed

APPLICATIONS

- General purpose power amplifier

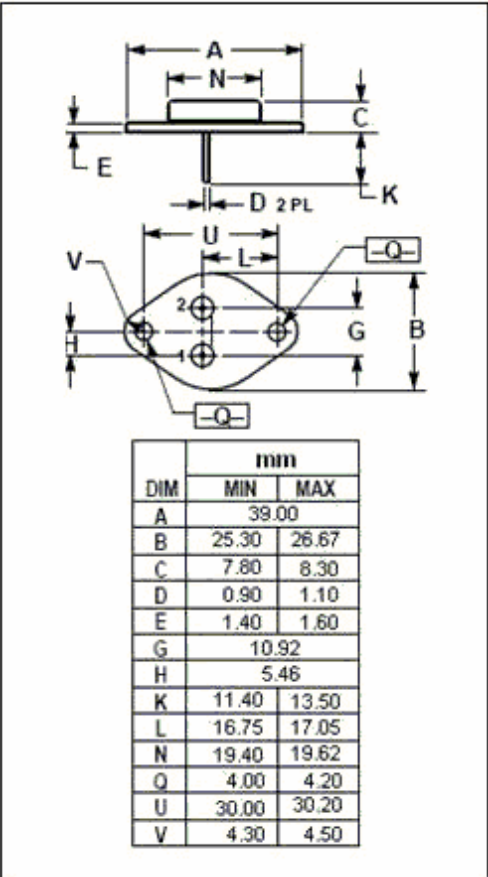


ABSOLUTE MAXIMUM RATINGS($T_C = 25^{\circ}C$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS} = 0$)	450	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-continuous@ $T_C = 25^{\circ}C$	7	A
$I_{D(puls)}$	Pulse Drain Current	40	A
P_{tot}	Total Dissipation@ $T_C = 25^{\circ}C$	125	W
T_j	Max. Operating Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}C$

THERMAL CHARACTERISTICS

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



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• ELECTRICAL CHARACTERISTICS ($T_C=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=0.25\mu\text{A}$	450			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.25\mu\text{A}$	2.0		4.0	V
V_{SD}	Diode Forward On-Voltage	$I_S=7\text{A}; V_{GS}=0$			1.8	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=4\text{A}$			1.1	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	$V_{DS}=450\text{V}; V_{GS}=0$			20	μA
C_{iss}	Input Capacitance	$V_{DS}=25\text{V};$ $V_{GS}=0\text{V};$ $f_T=1\text{MHz}$			1600	pF
C_{rss}	Reverse Transfer Capacitance				100	
C_{oss}	Output Capacitance				350	
t_r	Rise Time	$V_{GS}=10\text{V};$ $I_D=4\text{A};$ $V_{DD}=220\text{V};$ $R_L=4.7\Omega$			15	ns
$t_{d(on)}$	Turn-on Delay Time				35	
t_f	Fall Time				30	
$t_{d(off)}$	Turn-off Delay Time				90	