

isc N-Channel MOSFET Transistor

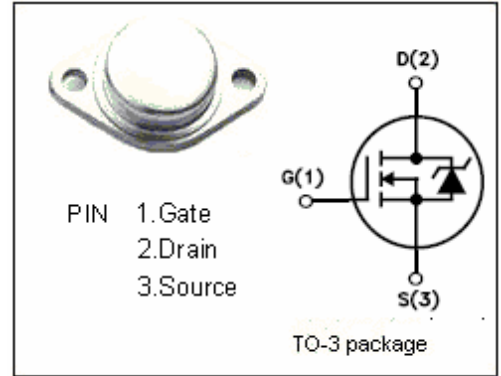
7N40

• DESCRIPTION

- Drain Current  $I_D = 7A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 400V(\text{Min})$
- Fast Switching Speed

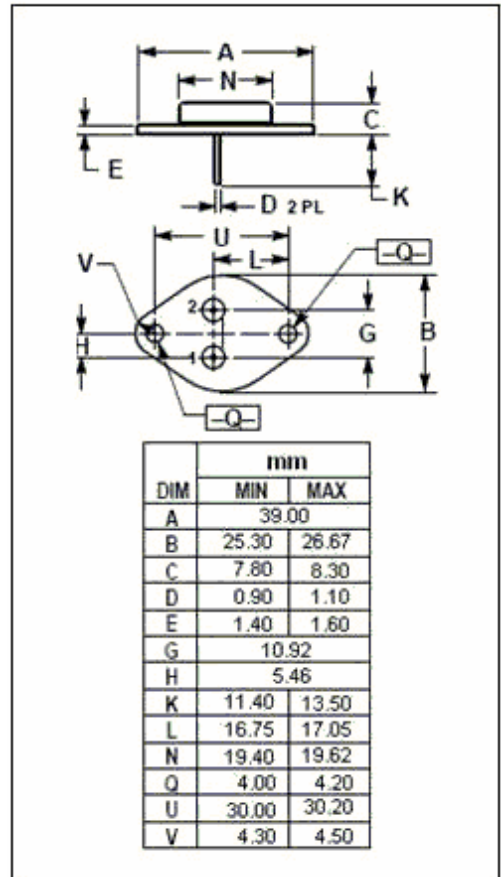
• APPLICATIONS

- General purpose power amplifier



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS} = 0$ )	400	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-continuous @ $T_C = 25^\circ C$	7	A
$I_{D(puls)}$	Pulse Drain Current	15	A
$P_{tot}$	Total Dissipation @ $T_C = 25^\circ C$	100	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	1.25	$^\circ C/W$

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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	$V_{GS}=0; I_D=1\text{mA}$	400			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=1\text{mA}$	2.0		4.0	V
$V_{SD}$	Diode Forward On-Voltage	$I_S=3.5\text{A}; V_{GS}=0$			1.4	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=3.5\text{A}$			0.75	$\Omega$
$I_{GSS}$	Gate-Body Leakage Current	$V_{GS}= \pm 20\text{V}; V_{DS}=0$			$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=400\text{V}; V_{GS}=0$			20	$\mu\text{A}$
$C_{iss}$	Input Capacitance	$V_{DS}=25\text{V};$		3300		pF
$C_{rss}$	Reverse Transfer Capacitance	$V_{GS}=0\text{V};$		80		
$C_{oss}$	Output Capacitance	$f_T=1\text{MHz}$		530		
$t_r$	Rise Time	$V_{GS}=10\text{V};$			75	ns
$t_{d(on)}$	Turn-on Delay Time	$I_D=3.5\text{A};$			45	
$t_f$	Fall Time	$V_{DD}=200\text{V};$			100	
$t_{d(off)}$	Turn-off Delay Time	$R_L=50\Omega$			250	