

isc N-Channel MOSFET Transistor

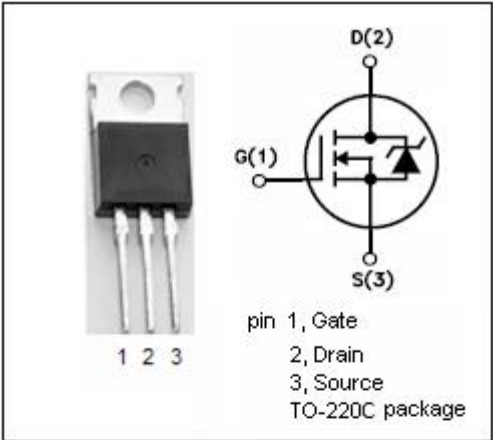
5N50

DESCRIPTION

- Drain Current $I_D = 5A @ T_C = 25^{\circ}C$
- Drain Source Voltage-
: $V_{DSS} = 500V (Min)$
- Fast Switching Speed

APPLICATIONS

- General purpose power amplifier

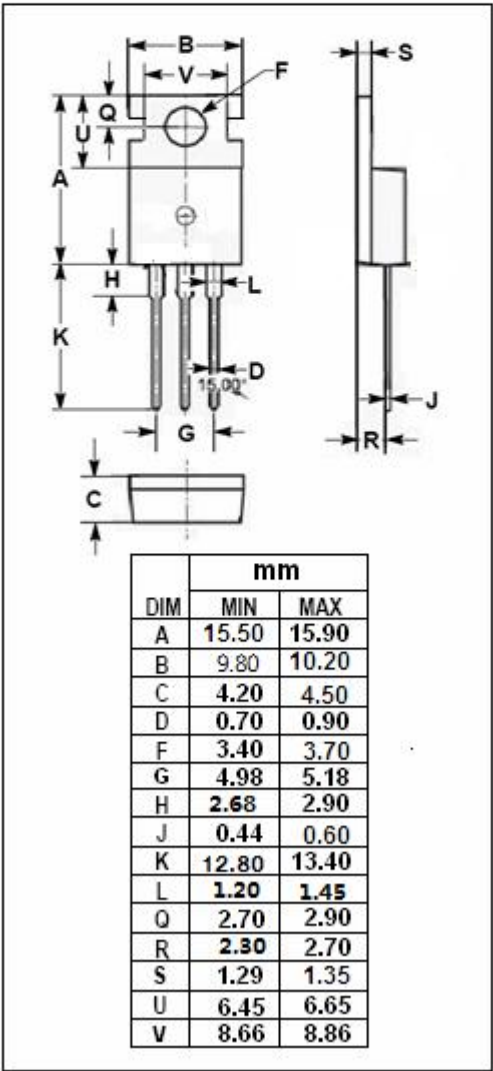


ABSOLUTE MAXIMUM RATINGS($T_C = 25^{\circ}C$)

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS} = 0$)	500	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-continuous@ $T_C = 25^{\circ}C$	5	A
$I_{D(puls)}$	Pulse Drain Current	18	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	1.67	$^{\circ}C/W$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^{\circ}C/W$



isc N-Channel MOSFET Transistor**5N50****• ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$)**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS} = 0; I_D = 250\mu\text{A}$	500			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}; I_D = 250\mu\text{A}$	2.0		4.0	V
V_{SD}	Diode Forward On-Voltage	$I_S = 5\text{A}; V_{GS} = 0$			1.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS} = 10\text{V}; I_D = 2.5\text{A}$			1.6	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS} = \pm 30\text{V}; V_{DS} = 0$			± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = 500\text{V}; V_{GS} = 0$			10	μA

SWITCHING CHARACTERISTICS ($T_c=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$T_d(on)$	Turn-on Delay Time	$V_{DD} = 250\text{V}, I_D = 5\text{A}$ $R_G = 9.1\Omega$			10	ns
T_r	Rise Time				20	ns
$T_d(off)$	Turn-off Delay Time				40	ns
T_f	Fall Time				20	ns