LINEAR SYSTEMS

3N170
N-CHANNEL MOSFET

micross

The 3N170 is an enhancement mode N-Channel Mosfet

The 3N170 is an enhancement mode N-Channel Mosfet designed for use as a General Purpose amplifier or switch

The hermetically sealed TO-72 package is well suited for high reliability and harsh environment applications.

(See Packaging Information).

3N170 Features:

- Low ON Resistance
- Low Capacitance
- High Gain
- High Gate Breakdown Voltage
- Low Threshold Voltage

FEATURES	
DIRECT REPLACEMENT FOR INTERSIL 3N170	
LOW DRAIN TO SOURCE RESISTANCE	$r_{DS(on)} \leq 200\Omega$
FAST SWITCHING	$t_{d(on)} \leq 3.0$ns
ABSOLUTE MAXIMUM RATINGS @ 25°C (unless otherwise noted)	
Maximum Temperatures	
Storage Temperature	-65°C to +150°C
Operating Junction Temperature	-55°C to +135°C
Maximum Power Dissipation	
Continuous Power Dissipation	300mW
MAXIMUM CURRENT	
Drain to Source (Note 1)	30mA
MAXIMUM VOLTAGES	
Drain to Gate	±35V
Drain to Source	25V
Peak Gate to Source (Note 2)	±35V

3N170 ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTIC	MIN	TYP.	MAX	UNITS	CONDITIONS
BV_{DSS}	Drain to Source Breakdown Voltage	25	--	--	V	$I_D = 10\mu A$, $V_{GS} = 0V$
$V_{DS(on)}$	Drain to Source "On" Voltage	--	--	2.0		$I_D = 10mA$, $V_{GS} = 10V$
$V_{GS(th)}$	Gate to Source Threshold Voltage	1.0	--	2.0		$V_{DS} = 10V$, $I_D = 10\mu A$
I_{GSS}	Gate Leakage Current	--	--	10	pA	$V_{GS} = -35V$, $V_{DS} = 0V$
I_{DSS}	Drain Leakage Current "Off"	--	--	10	nA	$V_{GS} = 10V$, $V_{DS} = 10V$
$I_{D(on)}$	Drain Current "On"	10	--	--	mA	$V_{GS} = 10V$, $V_{DS} = 10V$
g_{fs}	Forward Transconductance	1000	--	--	µS	$V_{DS} = 10V$, $I_D = 2mA$, $f = 1kHz$
$r_{DS(on)}$	Drain to Source "On" Resistance	--	--	200	Ω	$V_{GS} = 10V$, $I_D = 0A$, $f = 1kHz$
C_{rss}	Reverse Transfer Capacitance	--	--	1.3	pF	$V_{DS} = 0V$, $V_{GS} = 0V$, $f = 1MHz$
C_{iss}	Input Capacitance	--	--	5		$V_{DS} = 10V$, $V_{GS} = 0V$, $f = 1MHz$
C_{db}	Drain to Body Capacitance	--	--	5.0		$V_{DB} = 10V$, $f = 1MHz$

SWITCHING CHARACTERISTICS

SYMBOL	CHARACTERISTIC	MAX	UNITS	CONDITIONS
$t_{d(on)}$	Turn On Delay Time	3	ns	$V_{DD} = 10V$, $I_{D(on)} = 10mA$, $V_{GS(on)} = 10V$, $V_{GS(off)} = 0V$, $R_G = 50\Omega$
t_r	Turn On Rise Time	10		
$t_{d(off)}$	Turn Off Delay Time	3		
t_f	Turn Off Fall Time	15		

Note 1 - Absolute maximum ratings are limiting values above which 3N170 serviceability may be impaired.

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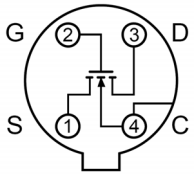
Available Packages:

3N170 in TO-72
3N170 in bare die.

Please contact Micross for full package and die dimensions

TO-72 (Bottom View)



* Body tied to case