

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 $t_{d(on)} \leq 3.0ns$

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 $\pm 35V$

Drain to Source 25V

Peak Gate to Source (Note 2) $\pm 35V$

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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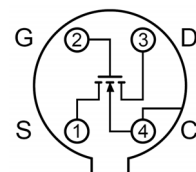
Available Packages:

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