LINEAR SYSTEMS

Twenty-Five Years Of Quality Through Innovation

2N4351

N-CHANNEL MOSFET ENHANCEMENT MODE

FEATURES	
DIRECT REPLACEMENT FOR INTERSIL 2N4351	
HIGH DRAIN CURRENT	I_D = 20mA
HIGH GAIN	g_{fs} = 1000µS

| ABSOLUTE MAXIMUM RATINGS[1] @ 25 °C (unless otherwise stated)	
Maximum Temperatures	
Storage Temperature	-55 to +150 °C
Operating Junction Temperature	-55 to +150 °C
Maximum Power Dissipation, T_A=25°C	
Continuous Power Dissipation[3]	350mW
Maximum Current	
Drain to Source	20mA
Maximum Voltages	
Drain to Body	25V
Drain to Source	25V
Gate to Source	±30V

TO-72
TOP VIEW

D ③ ② G

Case & Body ④ ① S
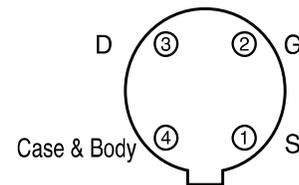
**ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated) (V_{SB} = 0V unless otherwise stated)**

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
BV_{DSS}	Drain to Source Breakdown Voltage	25				I_D = 10µA, V_{GS} = 0V
$V_{DS(on)}$	Drain to Source "On" Voltage			1	V	I_D = 2mA, V_{GS} = 10V
$V_{GS(th)}$	Gate to Source Threshold Voltage	1		5		V_{DS} = 10V, I_D = 10µA
I_{GSS}	Gate Leakage Current			10	pA	V_{GS} = ±30V, V_{DS} = 0V
I_{DSS}	Drain Leakage Current "Off"			10	nA	V_{DS} = 10V, V_{GS} = 0V
$I_{D(on)}$	Drain Current "On"	3			mA	V_{GS} = 10V, V_{DS} = 10V
g_{fs}	Forward Transconductance	1000			µS	V_{DS} = 10V, I_D = 2mA, f = 1MHz
$r_{ds(on)}$	Drain to Source "On" Resistance			300	Ω	V_{GS} = 10V, I_D = 100uA, f = 1kHz
C_{rss}	Reverse Transfer Capacitance[2]			1.3		V_{DS} = 0V, V_{GS} = 0V, f = 140kHz
C_{iss}	Input Capacitance[2]			5.0	pF	V_{DS} = 10V, V_{GS} = 0V, f = 140kHz
C_{db}	Drain to Body Capacitance[2]			5.0		V_{DB} = 10V, f = 140kHz

Linear Integrated Systems

SYMBOL	CHARACTERISTIC	MAX	UNITS
$t_{d(on)}$	Turn On Delay Time[2]	45	
t_r	Turn On Rise Time[2]	65	ns
$t_{d(off)}$	Turn Off Delay Time[2]	60	
t_f	Turn Off Fall Time[2]	100	

SWITCHING TEST CIRCUIT

TIMING WAVEFORMS

TO-72
Four Lead
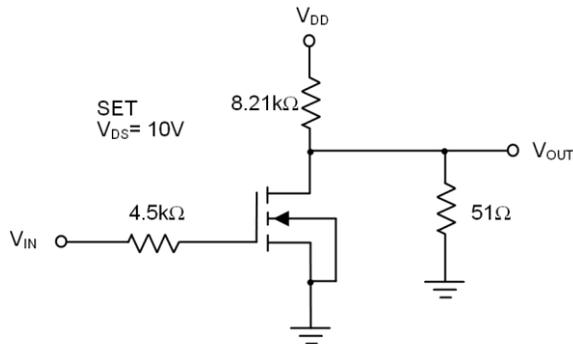
Dimensions in inches
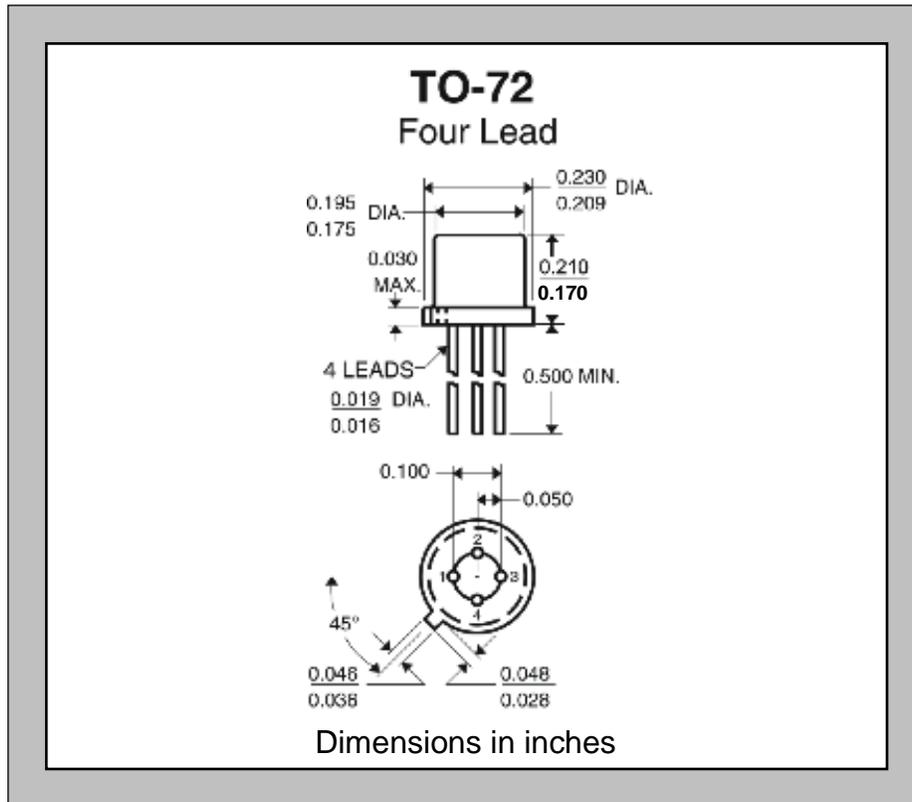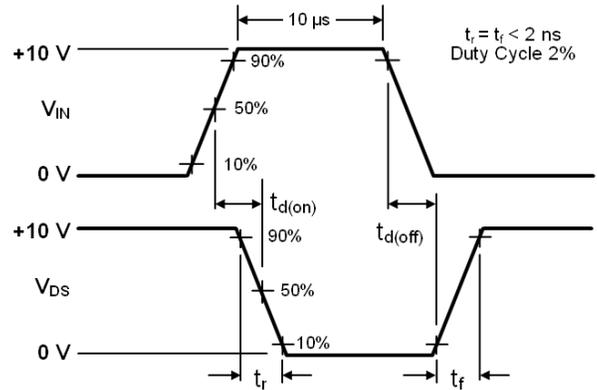
1. Absolute maximum ratings are limiting values above which serviceability may be impaired.

    Information furnished by Linear Integrated Systems is believed to be accurate and reliable. However, no responsibility is assumed for its use; nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Linear Integrated Systems.

2. Not a production test. Guaranteed by design.

3. Derate 2.8 mW ºC above 25 ºC.

Linear Integrated Systems (LIS) is a 25-year-old, third-generation precision semiconductor company providing high-quality discrete components. Expertise brought to LIS is based on processes and products developed at Amelco, Union Carbide, Intersil and Micro Power Systems by company President John H. Hall. Hall, a protégé of Silicon Valley legend Dr. Jean Hoerni, was the director of IC Development at Union Carbide, co-founder and vice president of R&D at Intersil, and founder/president of Micro Power Systems.

Linear Integrated Systems