

## 2N4351

### N-CHANNEL MOSFET ENHANCEMENT MODE

#### FEATURES

DIRECT REPLACEMENT FOR INTERSIL 2N4351

HIGH DRAIN CURRENT  $I_D = 100\text{mA}$

HIGH GAIN  $g_{fs} = 1000\mu\text{S}$

#### ABSOLUTE MAXIMUM RATINGS<sup>1</sup>

@ 25 °C (unless otherwise stated)

#### Maximum Temperatures

Storage Temperature -65 to +200 °C

Operating Junction Temperature -55 to +150 °C

#### Maximum Power Dissipation

Continuous Power Dissipation 375mW

#### Maximum Current

Drain to Source 100mA

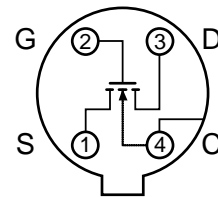
#### Maximum Voltages

Drain to Body 25V

Drain to Source 25V

Peak Gate to Source<sup>2</sup>  $\pm 125\text{V}$

TO-72  
BOTTOM VIEW



\* Body tied to Case.

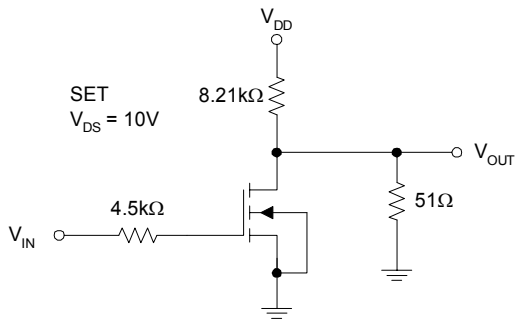
#### ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated) ( $V_{SB} = 0\text{V}$ unless otherwise stated)

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

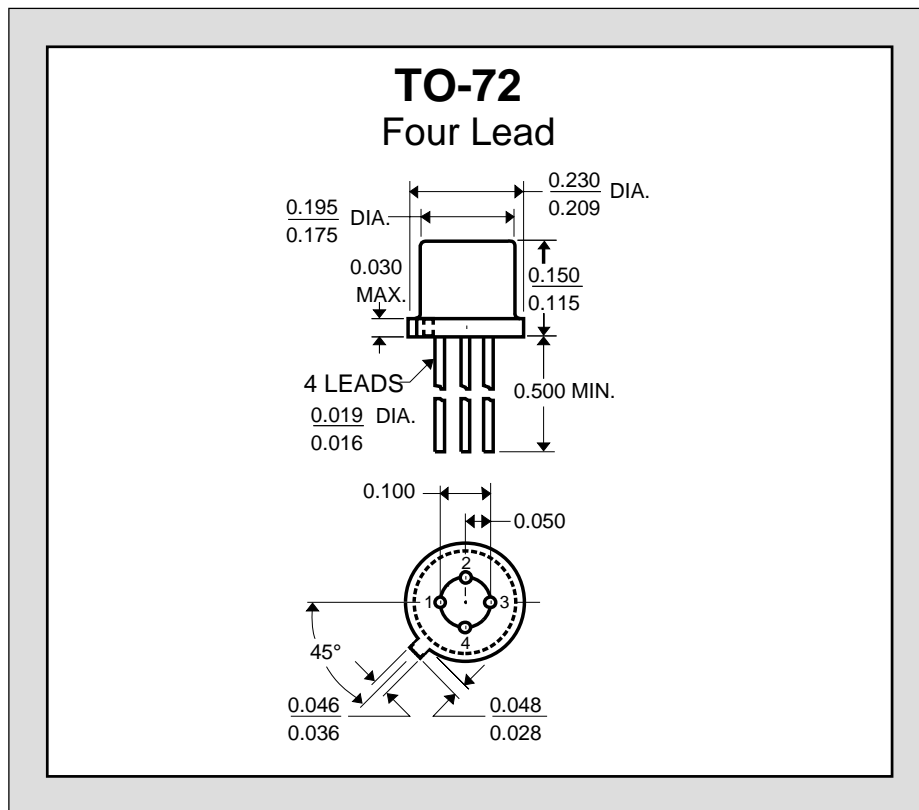
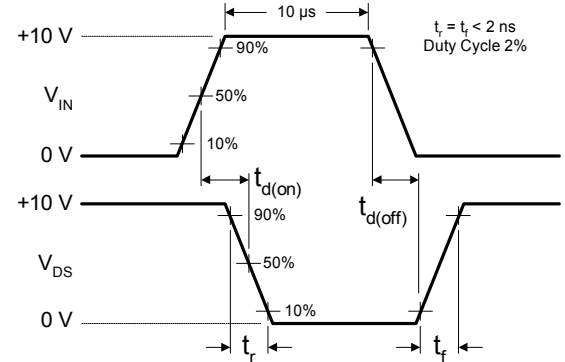
### SWITCHING CHARACTERISTICS

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

### SWITCHING TEST CIRCUIT



### TIMING WAVEFORMS



1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. Device must not be tested at  $\pm 125V$  more than once or longer than 300ms.

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.



LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

[LittleDiode.com](http://LittleDiode.com)

Looking forward to providing you with the best possible service.