

The LS4351 is an enhancement mode N-Channel Mosfet

The LS4351 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).

LS4351 Features:

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

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
@ 25°C (unless otherwise noted)

Maximum Temperatures

Storage Temperature -65°C to $+200^\circ\text{C}$

Operating Junction Temperature -55°C to $+150^\circ\text{C}$

Maximum Power Dissipation

Continuous Power Dissipation 375mW

MAXIMUM CURRENT

Drain to Source (Note 1) 100mA

MAXIMUM VOLTAGES

Drain to Body 25V

Drain to Source 25V

Peak Gate to Source (Note 2) $\pm 125\text{V}$

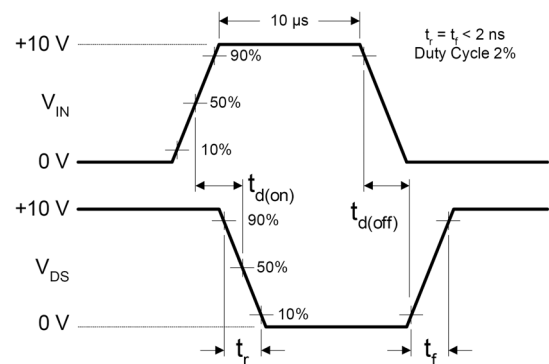
LS4351 ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

| SYMBOL | CHARACTERISTIC | MIN | TYP. | MAX | UNITS | CONDITIONS |
|--------------|-----------------------------------|------|------|-----|---------------|--|
| BV_{DSS} | Drain to Source Breakdown Voltage | 25 | -- | -- | V | $I_D = 10\mu\text{A}$, $V_{GS} = 0\text{V}$ |
| $V_{DS(on)}$ | 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 | $V_{GS} = 10\text{V}$, $V_{DS} = 10\text{V}$ |
| $I_{D(on)}$ | Drain Current "On" | 3 | -- | -- | mA | $V_{GS} = 10\text{V}$, $V_{DS} = 10\text{V}$ |
| g_{fs} | Forward Transconductance | 1000 | -- | -- | μS | $V_{DS} = 10\text{V}$, $I_D = 2\text{mA}$, $f = 1\text{MHz}$ |
| $r_{DS(on)}$ | Drain to Source "On" Resistance | -- | -- | 300 | Ω | $V_{GS} = 10\text{V}$, $I_D = 0\text{A}$, $f = 1\text{kHz}$ |
| 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 | | $V_{DS} = 10\text{V}$, $V_{GS} = 0\text{V}$, $f = 140\text{kHz}$ |
| C_{db} | Drain to Body Capacitance | -- | -- | 5.0 | | $V_{DS} = 10\text{V}$, $V_{GS} = 0\text{V}$, $f = 140\text{kHz}$ |

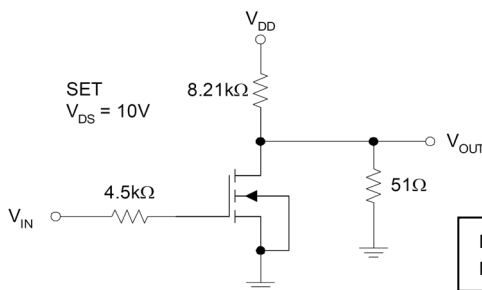
SWITCHING CHARACTERISTICS

| 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 | |

TIMING WAVEFORMS



SWITCHING TEST CIRCUIT



Note 1 - Absolute maximum ratings are limiting values above which LS4351 serviceability may be impaired.
Note 2 - Device must not be tested at $\pm 125\text{V}$ more than once or longer than 300ms.

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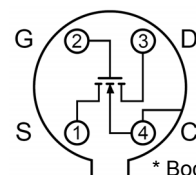
Web: <http://www.micross.com/distribution>

Available Packages:

LS4351 in TO-72

LS4351 in bare die.

TO-72 (Bottom View)



* Body tied to case

Please contact Micross for full package and die dimensions

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