

## Features

- Fast Speed <10 nS
- Single and Complementary Designs
- Inverting and Non-Inverting
- Low Quiescent Current
- Low Cost Design

## Description

MDT's product line of PIN Diode Switch Drivers is designed for use in applications where GaAs or fast speed Si PIN diodes are utilized.

External negative supply voltages may be as high as -18 volts. Inputs are compatible with standard logic families.

MDT Switch Drivers contain internal spiking and decoupling capacitors.

MSD7800 Switch Drivers are assembled on FR4 circuit boards. All components are conformal coated and meet RoHS lead free requirements. Packaged Switch Drivers are available upon request.

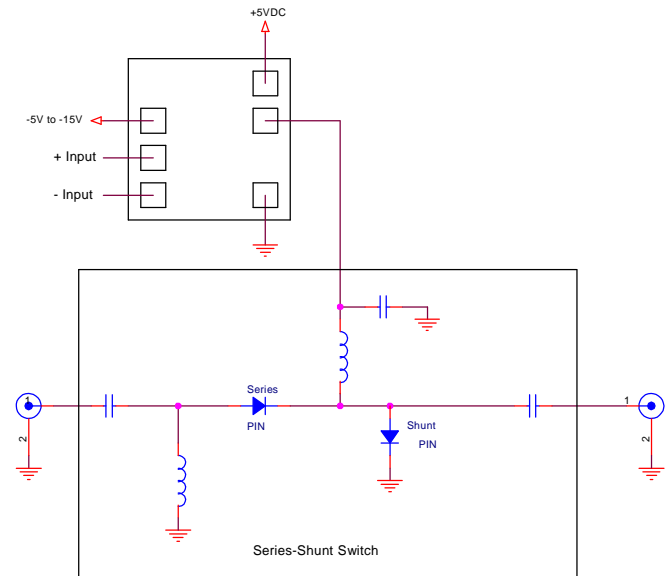
## Model Designations

MSD7801	SPST
MSD7802	SP2T Complementary
MSD7804	4PST

Model MSD7801 is a driver for series, shunt or series-shunt SPDT switches. Models MSD 7804 is a 4 port version of the MSD7801. Model MSD 7802 has complementary outputs. Other configurations are available on request.

Specifications at 25C  $V_{cc}=+5V$ ,  $V_{ss}=-5V$

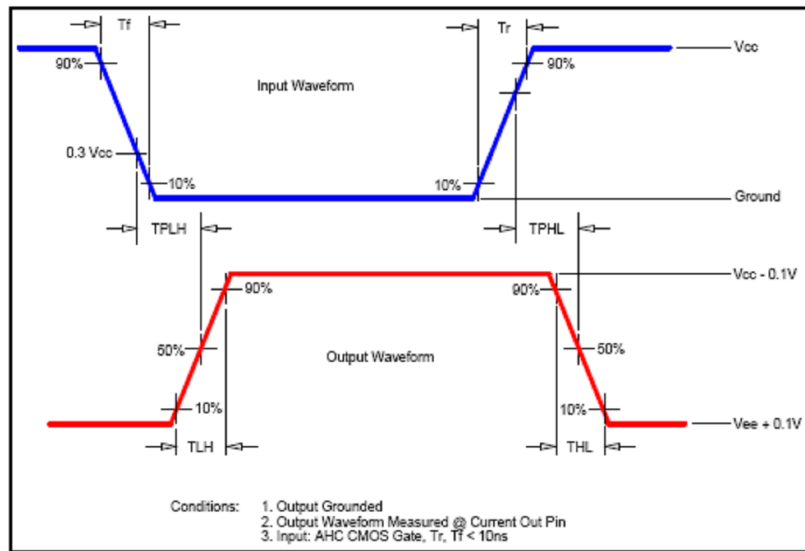
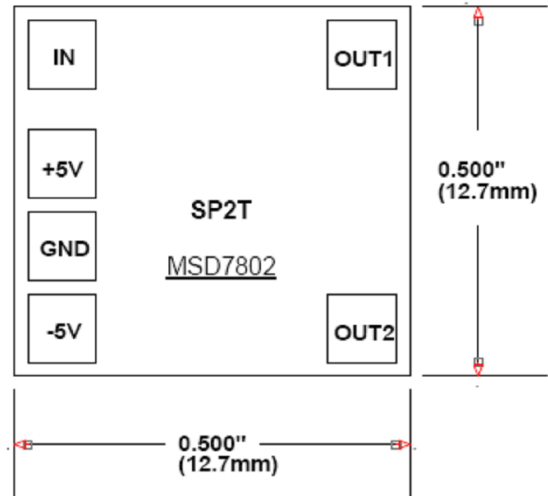
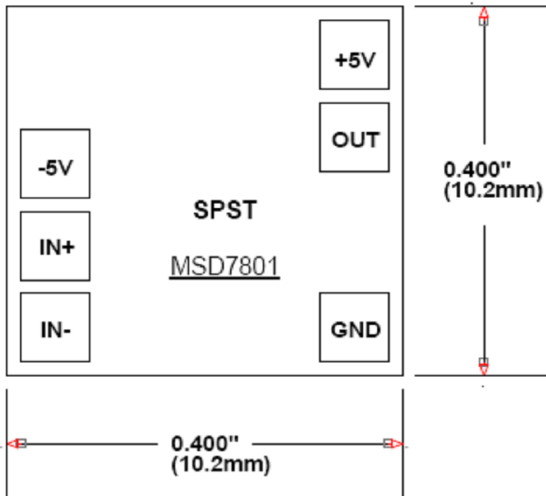
Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
V <sub>IH</sub>	Input High Voltage	-	3.5	-	-	V
V <sub>IL</sub>	Input Low Voltage	-	-	-	1.5	V
Z <sub>IN</sub>	Input Impedance	-	99	100	101	K $\Omega$
I <sub>OH</sub>	Positive Output Current	V <sub>o</sub> = +1V	18	20	22	ma
I <sub>OH</sub>	Negative Output Current	V <sub>o</sub> = -1V	-18	-20	-22	ma
I <sub>CCL</sub>	Quiescent Current	V <sub>IN</sub> = 0V, No Load	-	100	500	ua
I <sub>CCH</sub>	Quiescent Current	V <sub>IN</sub> = +5V, No Load	-	5.0	5.5	ma
T <sub>PHL</sub> , T <sub>PLH</sub>	Propagation Delay	See Waveform Diagram	-	5	10	ns
T <sub>LH</sub> , T <sub>HL</sub>	Rise & Fall Times	See Waveform Diagram	-	5	10	ns



## Typical MSD7801 SPST Application

## Maximum Ratings

V <sub>cc</sub>	- 0.5 to +6.0 Volts
V <sub>ss</sub>	-5 to -18 Volts
V <sub>in</sub>	-0.5 to 6.0 Volts I <sub>out</sub>
	+100 mA, -50 mA
Storage Temp.	-65C to +150 C
Operating Temp.	-55C to +125 C

**Switching Waveform Diagram**

**0.100" (2.54mm) Thick Max**
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