

# DATASHEET DS499ASM

## Decoded 4 Channel Driver for miniature PIN Switches

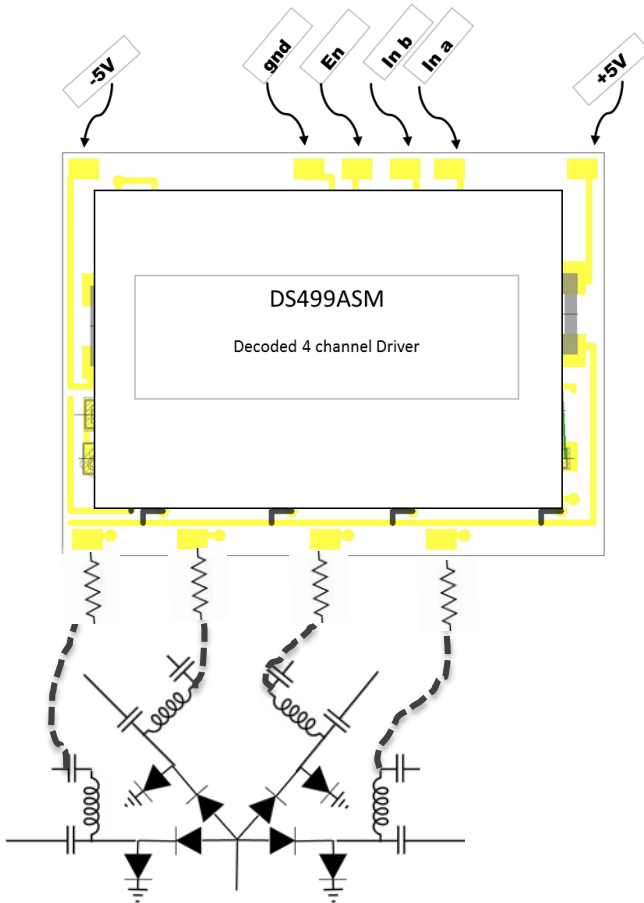
### GENERAL DESCRIPTION

The DS499ASM is a decoded with Enable 4 channel output driver suitable for multi-throw PIN diode switches.

The DS499ASM accepts TTL or CMOS logic. It was designed to supply current both from positive and negative supply as is needed in series shunt configuration. It is also usable for all series or all shunt switching. Driver is capable of driving up to +/- 50 ma.

### MECHANICAL

The DS499ASM is a .200"x.270" alumina substrate assembly with gold bond pads for integration into a chip & wire construction, either open or optionally covered with alumina cover. It is designed for integration into a hermetic module which operates in harsh environments of high temperature and vibration.



TYPICAL APPLICATION

### ORDERING INFORMATION

DS499ASM	Open substrate
DS499ASM-C	Open substrate w cover

PAD	Connection
1	-5
2	Gnd
3	Enable
4	In b
5	In a
6	+5V
7	Out 0
8	Out 1
9	Out 2
10	Out 3

+V = +5v -V= -5v TTL In

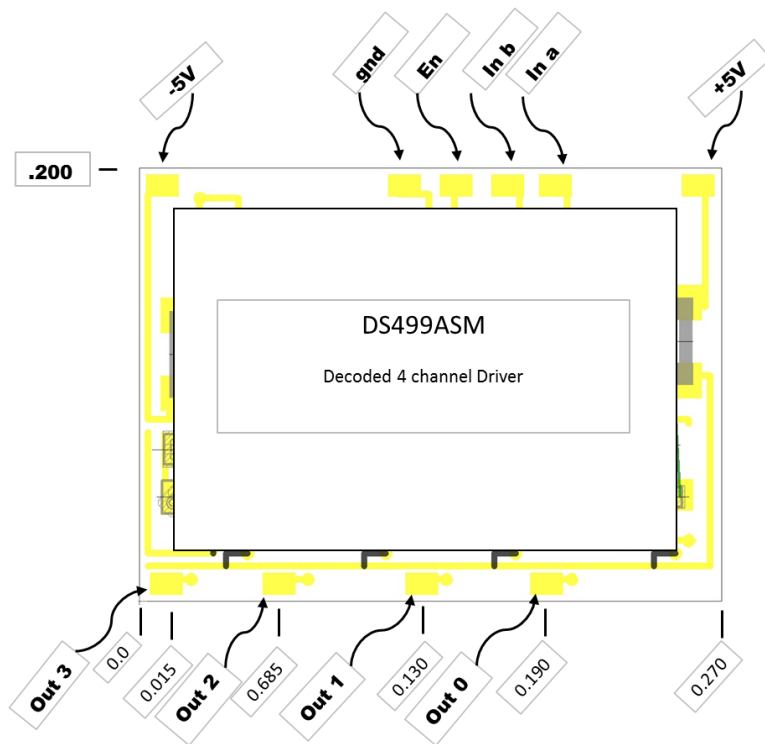
### TRUTH TABLE

INPUTS			OUTPUTS			
In a	In b	En	Out0	Out1	Out2	Out3
0	0	1	-ma	+ma	+ma	+ma
0	1	1	-ma	-ma	+ma	+ma
1	0	1	+ma	+ma	-ma	+ma
1	1	1	+ma	+ma	+ma	-ma
x	x	0	+ma	+ma	+ma	+ma

ABSOLUTE MAXIMUMS				
Symbol	Parameter	Min	Max	Units
+V	Supply Voltage Positive	0	+7	Volts
V <sub>ee</sub>	Supply Voltage Negative	-12	0	Volts
To	Operating Temperature	-54	+ 125	Deg C
Ts	Storage Temperature	-65	+ 150	Deg C

MECHANICAL SPECIFICATIONS					
Parameter	Conditions	Min	Typ	Max	Units
Size	Width		.270		inch
Size	Length		.200		inch
Thickness			.045		inch
Weight				.1	grams
Substrate	Electro-less Gold				
Pad finish	Bondable Gold				

ELECTRICAL SPECIFICATIONS V <sub>+</sub> = +5V, V <sub>-</sub> = -5V, 25 C 5 MHz PRR						
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
<b>Input</b>						
V <sub>IH</sub>	Logic 1 Input Voltage	TTL	2.8	3.5	5	V
V <sub>IL</sub>	Logic 0 Input Voltage	TTL	0	.8	1.8	V
<b>Output</b>						
V <sub>OH</sub>	Voltage Out High	Open load	4.2	4.5	4.8	V
V <sub>OL</sub>	Voltage Out Low	Open load	-4.8	-4.5	-4.2	V
I <sub>OH</sub>	Current Out High	Steady State into 1v diode load		20		mA
I <sub>OL</sub>	Current Out Low	Steady State into 1v diode load		-20		mA
I <sub>OPK</sub>	Peak Output Current	Sink		-80		mA
<b>Supply</b>						
+I <sub>QC</sub>	+ Quiescent Current	10 MHz 50% duty cycle		30		mA
-I <sub>QC</sub>	- Quiescent Current	10 MHz 50% duty cycle		10		mA
<b>Dynamic</b>						
t <sub>R</sub>	Rise Time			15		nsec
t <sub>F</sub>	Fall Time			15		nsec
T <sub>DoFF</sub>	Turn Off Delay			35		nsec
T <sub>DoN</sub>	Turn On Delay			35		nsec
T <sub>SWoFF</sub>	Switching Speed Off	5 pf load		50		nsec
T <sub>SWoN</sub>	Switching Speed On	5 pf load		50		nsec
PRR	Pulse repetition Rate	Max, 5 pF loads		5		MHz



**Impellimax** Line of Drivers