

GENERAL DESCRIPTION

The 9731-T is a driver featuring high speed suited for driving high speed PIN diode switches.

The driver is compatible with TTL logic and has 4 independent channels with mode control. Inputs are inverting when mode control has logic low input. each driver nominally supplies +10 mA and -35 mA @ +5V -15V. Test point outputs are available to drive up to +/-110 mA

FEATURES

- high speed <8 nS
- Inverting or Non-Inverting operation with mode control
- * internal current limit and spiking outputs

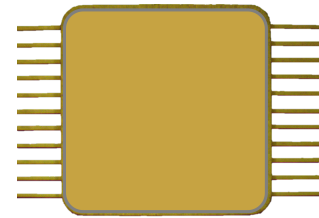
MECHANICAL

The 9731-T consists of discrete BJT mounted on a laminate with discrete thin film AlN passive components epoxy sealed in a glass to metal .625" square package.

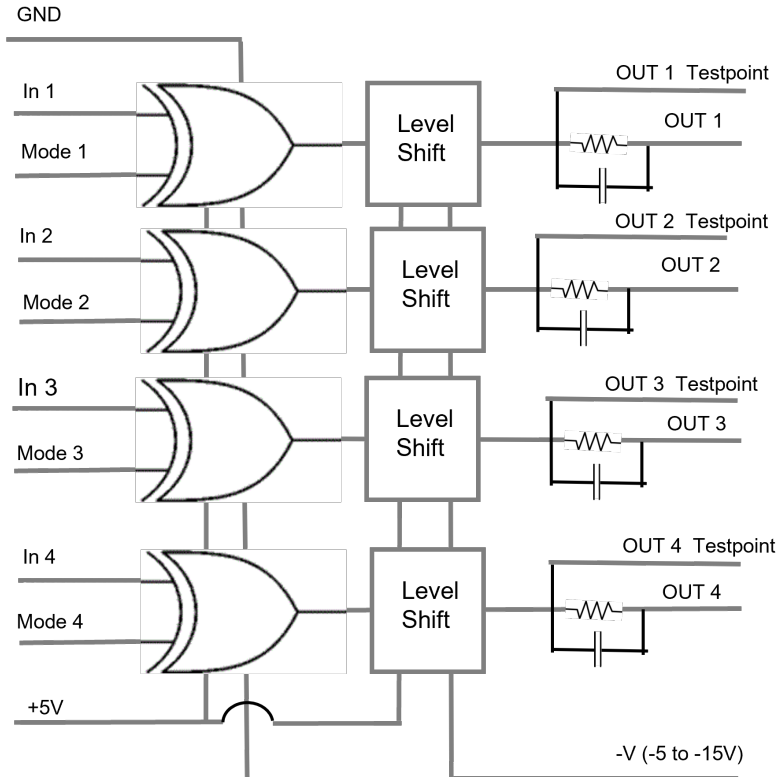
ECCN Code EAR99

9731 is RoHS 3 (EU 2015/863) compliant.

Screened per MIL-PRF-38534 Table C-IX 100%



FUNCTION BLOCK DIAGRAM



PIN CONNECTIONS

Recommend bypassing Vpos and Vneg with .1 uf capacitor minimum.

Mode control and input pins are interchangeable within one channel

- | | |
|----|-------------|
| 1 | Ground |
| 2 | Input 1 |
| 3 | Mode 1 |
| 4 | Input 2 |
| 5 | Mode 2 |
| 6 | Input 3 |
| 7 | Mode 3 |
| 8 | Input 4 |
| 9 | Mode 4 |
| 10 | +5V |
| 11 | Ground |
| 12 | -5 to -15V |
| 13 | NC |
| 14 | Output 4 |
| 15 | Testpoint 4 |
| 16 | Output 3 |
| 17 | Testpoint 3 |
| 18 | NC |
| 19 | Output 2 |
| 20 | Testpoint 2 |
| 21 | Output 1 |
| 22 | Testpoint 1 |

TRUTH TABLE

IN1	Mode 1	IN 2	Mode 2	IN 3	Mode 3	IN 4	Mode 4	OUT 4	OUT 3	OUT 2	OUT 1
0	1	0	1	0	1	0	1	-V	-V	-V	-V
1	1	1	1	1	1	1	1	+V	+V	+V	+V
0	0	0	0	0	0	0	0	+V	+V	+V	+V
1	0	1	0	1	0	1	0	-V	-V	-V	-V

ELECTRICAL SPECIFICATIONS

Vpos +5V, Vneg -15V, TEMP 25C, PRR 20MHz

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
ENVIRONMENTAL						
To	Operating Temperature	Operating Temp range in degrees Celsius	-55		125	Deg C
INPUT						
VI_hi	Voltage Input High	TTL	2.5	3.5	5.0	V
VI_low	Voltage Input Low	TTL	0	.8	1.8	V
OUTPUT						
VO_hi	Voltage Out High	open load	4.0	4.3	4.9	V
VO_low	Voltage Out Low	open load -V -12	-14.0	-14.3	-15.0	V
IO_hi	Current Out High	steady state into 1V diode load	8	10	12	mA
IO_low	Current Out Low	steady state into 1V diode load common arm resistor	29	-35	42	mA
lopk	Current Peak Output	sink and source	+/-300			mA
SUPPLY						
IQC_pos	Quiescent Current Positive	100KHz 50% duty cycle		15		mA
IQC_neg	Quiescent Current Negative	100KHz 50% duty cycle		-15		mA
DYNAMIC						
TSW_rise	Switching Speed On	opposed 1N4148 diode load		6	10	nS
TSW_fall	Switching Speed Off	opposed 1N4148 diode load		8	12	nS
PRR	Pulse Repetition Rate	Max, 10pF load		1	20	MHz

ESD Sensitivity HBM Class1B

MECHANICAL SPECIFICATIONS

DRAWING NOT TO SCALE. DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE NOTED.

Package Code 5

Type: Housing; Lead Finish: Gold

Length .645 in MAX; Width .645 in MAX; Height .138 in MAX

MARKING SPECIFICATIONS

Logo: IMPELLIMAX

Part Number: 9731

Date Code: YYWW

