

GENERAL DESCRIPTION

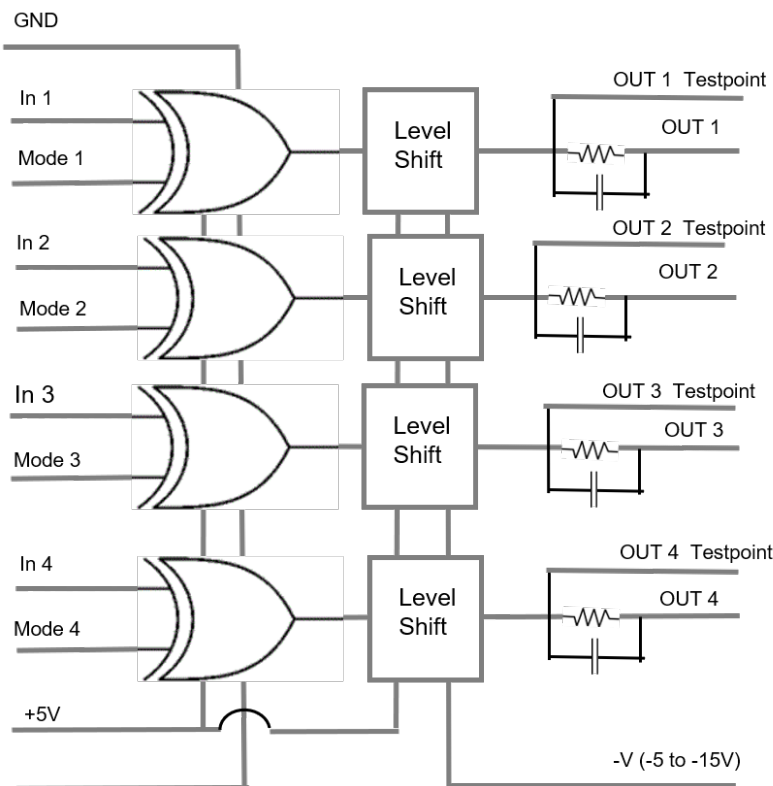
The 9431 is a driver featuring high speed suited for driving high speed PIN diode switches.

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 +12 mA and -30 mA at +5V and -15V input.

FEATURES

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

FUNCTION BLOCK DIAGRAM

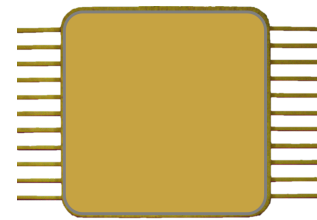


MECHANICAL

The 9431 consists of discrete BJT mounted on a laminate with discrete thin film AIN passive components epoxy sealed in a glass to metal .625" square package.

ECCN Code EAR99

9431 is RoHS 3 (EU 2015/863) compliant.



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 5MHz

	SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
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		12		mA
	IO_low	Current Out Low	steady state into 1V diode load common arm resistor		-30		mA
	lopk	Current Peak Output	sink and source	+/-300			mA
SUPPLY							
	IQC_pos	Quiescent Current Positive			25	32	mA
	IQC_neg	Quiescent Current Negative			-25	-32	mA
DYNAMIC							
	TSW_rise	Switching Speed On	opposed 1N4148 diode load		10	12	nS
	TSW_fall	Switching Speed Off	opposed 1N4148 diode load		12	15	nS
	PRR	Pulse Repetition Rate	Max, 10pF load		.5	1	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 .135 in MAX

MARKING SPECIFICATIONS

Logo: IMPELLIMAX

Part Number: 9431

Date Code: YYWW

