

GENERAL DESCRIPTION

1) Channels are independent and provide Exclusive-Or logic function. Apply logic low to one input to cause the remaining input to be noninverting. Allow one input to float hi (or pull high) to cause the remaining input to be inverting.

2) Switching speed is 100 nsec max into resistive loads. Outputs are not spiked.

3) Negative supply voltage can be in the range of -5 to -15 Volts. Negative output current increases with increasing negative voltage, and is nominally 50 mA per output when operated at +/-5V into a 1V load.

4) Unit is reverse bias protected and contains internal .01uF bypass capacitors on both power supplies.

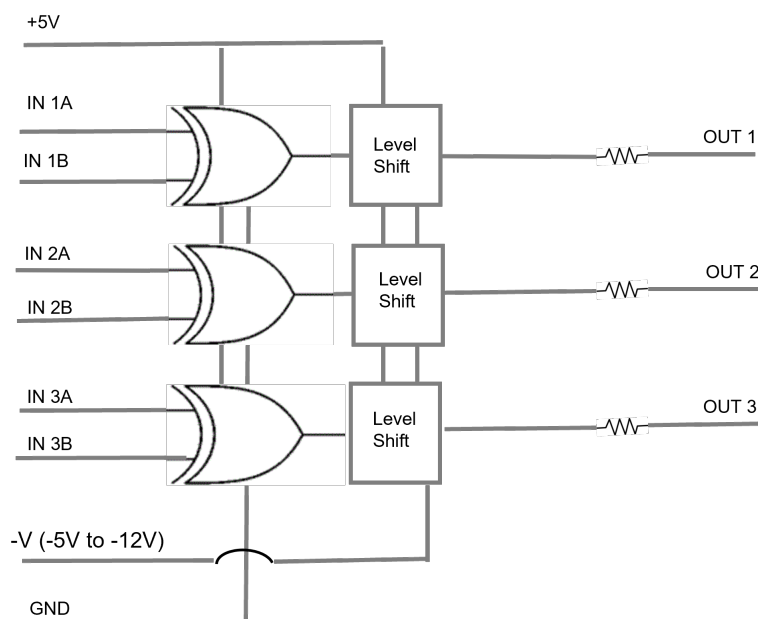
5) Ground pins are internally connected.

6) Outputs are true current source and sink, +/-50 mA nominal.

7) Input pins are protected from shorts to negative voltage.

8) Worst case unloaded quiescent current is +50 mA / -18 mA.
ITAR RESTRICTIONS APPLY

FUNCTION BLOCK DIAGRAM

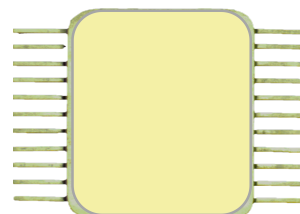


MECHANICAL

The 9935 consists of discrete BJT mounted on a laminate with discrete thin film AIN passive components epoxy sealed in a glass to metal .625" x .625" package.

ECCN Code EAR99

9935 is RoHS 3 (EU 2015/863) compliant.



PIN CONNECTIONS

Input pins are interchangeable within one channel

1	+5 VDC
2	OUT 1
3	Input 1A
4	Input 1B
5	OUT 2
6	Input 2A
7	Input 2B
8	OUT 3
9	Input 3A
10	Input 3B
11	Ground
12	Ground
13	NC
14	NC
15	NC
16	NC
17	NC
18	NC
19	NC
20	NC
21	NC
22	-5V

TRUTH TABLE

IN1A	IN1B	IN2A	IN2B	IN3A	IN3B	OUT3	OUT2	OUT1
0	1	0	1	0	0	+V	+V	+V
1	1	1	1	1	0	-V	-V	-V
0	0	0	0	0	1	-V	-V	-V
1	0	1	0	1	1	+V	+V	+V

ELECTRICAL SPECIFICATIONS

Vpos +5V, Vneg -15V, TEMP 25C, PRR 2MHz

	SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
INPUT							
	VI_hi	Voltage Input High	TTL	2.4	3.5	5.0	V
	VI_low	Voltage Input Low	TTL	0	.8	1.5	V
OUTPUT							
	VO_hi	Voltage Out High	open load	4.0	4.3	4.9	V
	VO_low	Voltage Out Low	open load -V	-11.0	-14	-15	V
	IO_hi	Current Out High	steady state into 1V diode load +/-5V		50		mA
	IO_low	Current Out Low	steady state into 1V diode load +/-5V		-50		mA
SUPPLY							
	IQC_pos	Quiescent Current Positive			25	50	mA
	IQC_neg	Quiescent Current Negative			-10	-18	mA
DYNAMIC							
	TSW_rise	Switching Speed On	opposed 1N4148 diode load		80	100	nS
	TSW_fall	Switching Speed Off	opposed 1N4148 diode load		70	100	nS
	PRR	Pulse Repetition Rate	Max, 10pF load		2	2	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: 9935

Date Code: YYWW

