

GENERAL DESCRIPTION

The MDD050N151Q12A is a driver featuring high speed suited for driving high power PIN diode switches.

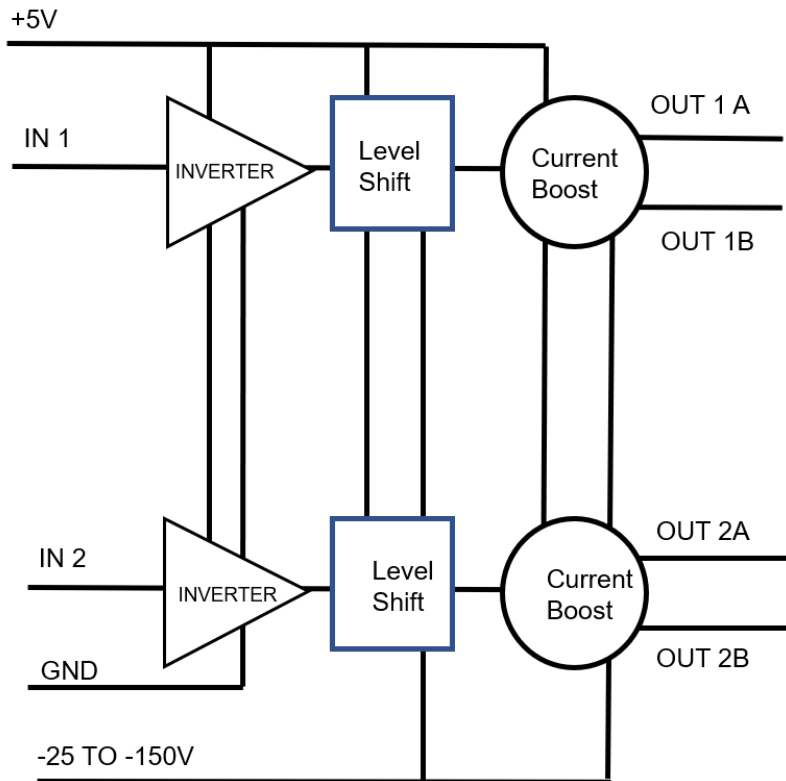
The driver is compatible with TTL logic and has 2 independent channels to supply output high and low up to +/-100 mA and +5v/-150v

External current limiting resistors are required to set current

FEATURES

- High speed <100 nS
- Drives high capacitive loads

FUNCTION BLOCK DIAGRAM



MECHANICAL

The MDD050N151Q12A consists of discrete components mounted on a laminate and sealed with a Dam and Fill process. This forms a .300" x .300" 16 pos QFN assembly designed for integration into an Integrated Microwave Assembly.



PIN CONNECTIONS

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

Un-used inputs must be tied to pin 7 Vref for proper operation

- | | |
|----|---------------|
| 1 | +5V |
| 2 | Output 1B |
| 3 | Output 1A |
| 4 | -20V to -150V |
| 5 | Ground |
| 6 | Ground |
| 7 | Input 1 |
| 8 | Ground |
| 9 | Input 2 |
| 10 | +5V |
| 11 | Ground |
| 12 | NC |
| 13 | +5V |
| 14 | Output 2B |
| 15 | Output 2A |
| 16 | Ground |

TRUTH TABLE

IN1	IN2	OUT1A	OUT1B	OUT2A	OUT2B
0	0	-V	-V	-V	-V
0	1	-V	-V	+V	+V
1	0	+V	+V	-V	-V
1	1	+V	+V	+V	+V

ELECTRICAL SPECIFICATIONS

Vpos +5V, Vneg -150V, TEMP 25C, PRR 50KHz

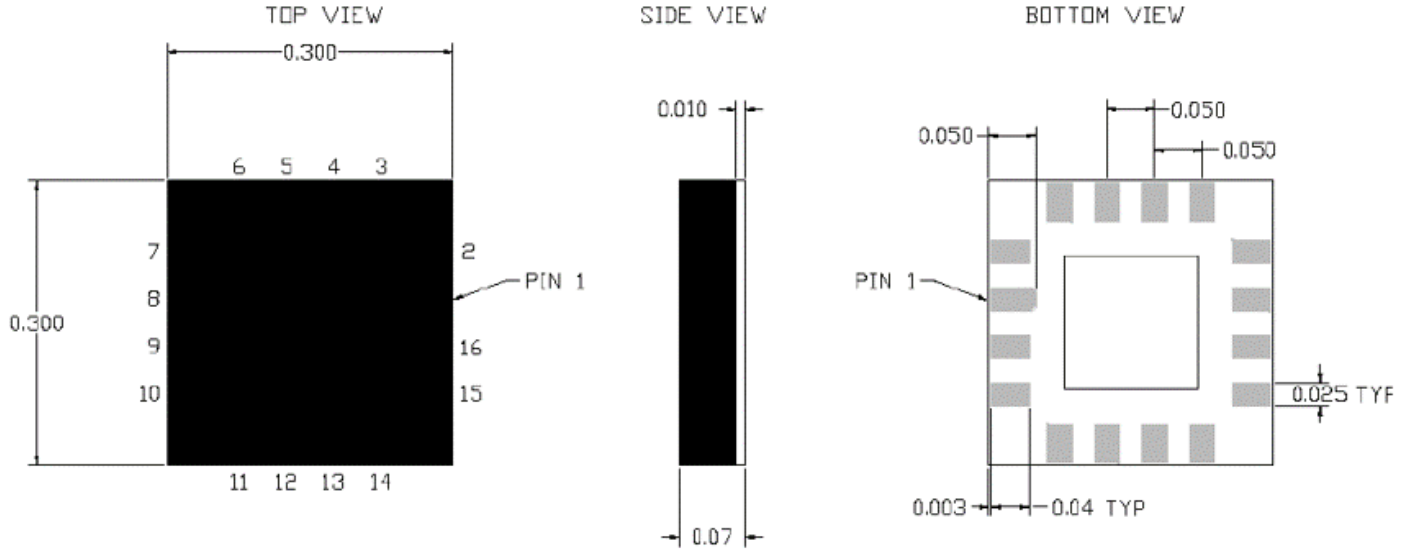
	SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
INPUT							
	VI_hi	Voltage Input High	TTL	2.5		5.0	V
	VI_low	Voltage Input Low	TTL	0	.2	.5	V
OUTPUT							
	VO_hi	Voltage Out High	open load	4.5	4.8	5.0	V
	VO_low	Voltage Out Low	open load	-149.5	-149.8	-150	V
	IO_hi	Current Out High	steady state into 1V diode load		100	125	mA
	IO_low	Current Out Low	steady state into 1V diode load common arm resistor		-100	-125	mA
	lopk	Current Peak Output	sink and source	+/-300			mA
SUPPLY							
	IQC_pos	Quiescent Current Positive	per driver		2		mA
	IQC_neg	Quiescent Current Negative	per driver		-2		mA
DYNAMIC							
	TSW_rise	Switching Speed Rise	opposed 1N4148 diode load		120		nS
	TSW_fall	Switching Speed Fall	opposed 1N4148 diode load		80		nS
	PRR	Pulse Repetition Rate	Max, 10pF load		50	5	KHz

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

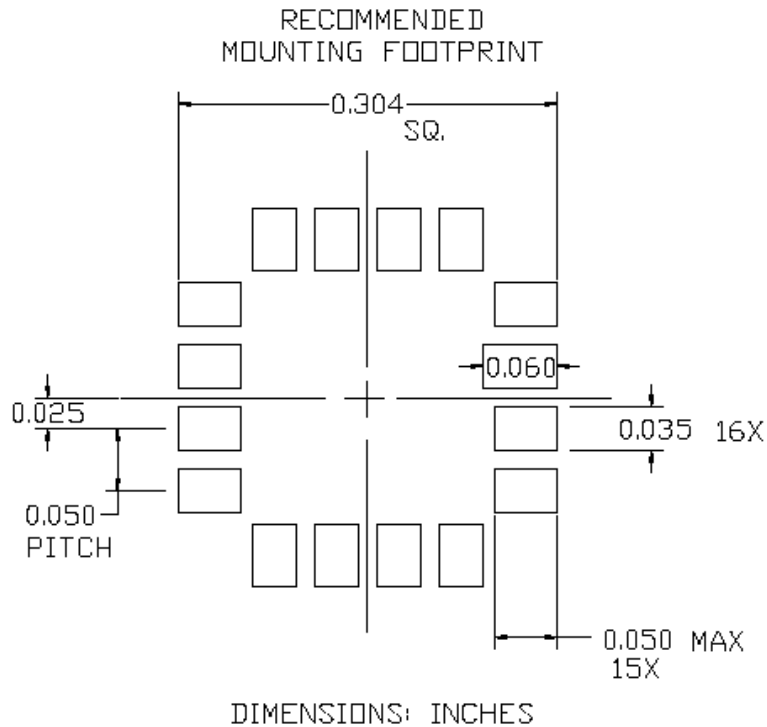
MARKING SPECIFICATIONS

Part Number: CNEX8

Date Code: YYWW



FOOTPRINT



TYPICAL APPLICATION

