

GENERAL DESCRIPTION

The MDD125N000Q16A 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 +125V/0V up to +/-100 mA External current limiting resistors are required to set current

FEATURES

- High speed <100 nS
- Drives high capacitive loads

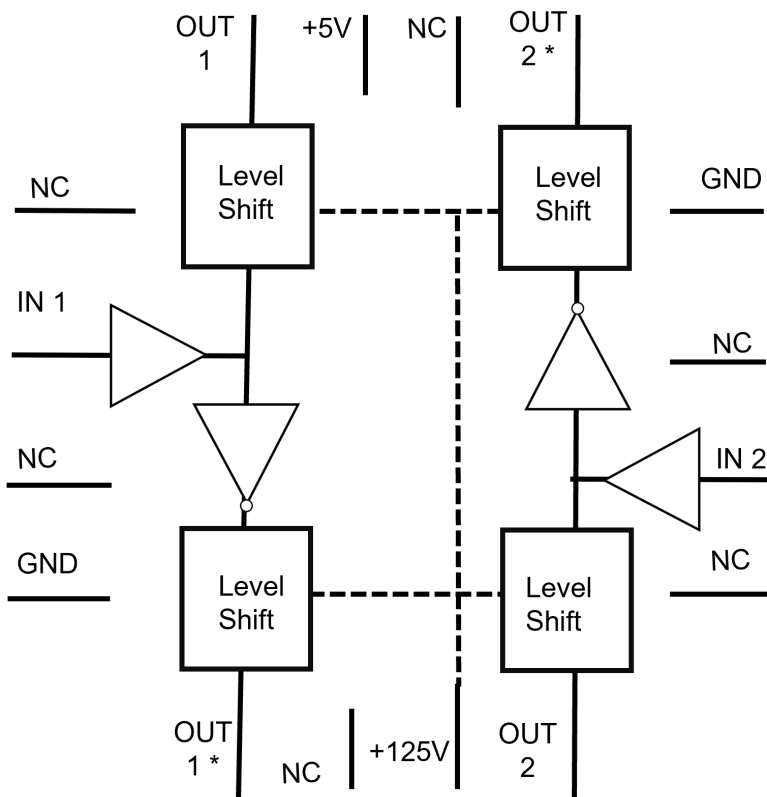
MECHANICAL

The MDD125N000Q16A consists of discrete components mounted on a laminate and sealed with a Dam and Fill process. This forms a .350" x .350" 16 pos QFN assembly designed for integration into an Integrated Microwave Assembly.

ECCN Code EAR99

MDD125N000Q16A is RoHS 3 (EU 2015/863) compliant.

FUNCTION BLOCK DIAGRAM



PIN CONNECTIONS

Recommend bypassing Vpos and V+ with .1 uf capacitor minimum spaced maximum .10" from device.

- | | |
|----|-----------------------|
| 1 | NC |
| 2 | Ground |
| 3 | Output 2 Inverting |
| 4 | NC |
| 5 | +5V |
| 6 | Output 1 Noninverting |
| 7 | NC |
| 8 | Input 1 |
| 9 | NC |
| 10 | Ground |
| 11 | Output 1 Inverting |
| 12 | NC |
| 13 | +125V |
| 14 | Output 2 Noninverting |
| 15 | NC |
| 16 | Input 2 |

TRUTH TABLE

IN1	IN2	OUT1	OUT1*	OUT2	OUT2*
0	0	0V	+V	0V	+V
0	1	0V	+V	+V	0V
1	0	+V	0V	0V	+V
1	1	+V	0V	+V	0V

ELECTRICAL SPECIFICATIONS

Vpos +125V, V+ +5V, 0V, TEMP 25C, PRR 5KHz

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
ENVIRONMENTAL						
Enviro	Operating Temperature		-45		115	Deg C
Enviro	Storage Temperature		-55		150	Deg C
INPUT						
VI_hi	Logic Input High	3.3V LOGIC	2.5		5.0	V
VI_low	Logic Input Low	3.3V LOGIC	0		.8	V
OUTPUT						
VO_hi	Voltage Out High	125 mA	122.5		125	V
VO_low	Voltage Out Low	-125 mA	0		-.6	V
IO_hi	Current Out High	forward bias PIN diode			125	mA
IO_low	Current Out Low	forward bias PIN diode			-125	mA
lopk	Current Peak Output	sink and source	+/-300			mA
SUPPLY						
Vpos	Supply Voltage Positive		10		125	
V+	Supply Voltage logic Vcc		4.5	5	6.5	V
IQC_pos	Quiescent Current Positive	1KHz 50% duty cycle		2		mA
IV+	V+ supply current				4	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	KHz

ESD Sensitivity HBM Class 1B

MECHANICAL SPECIFICATIONS

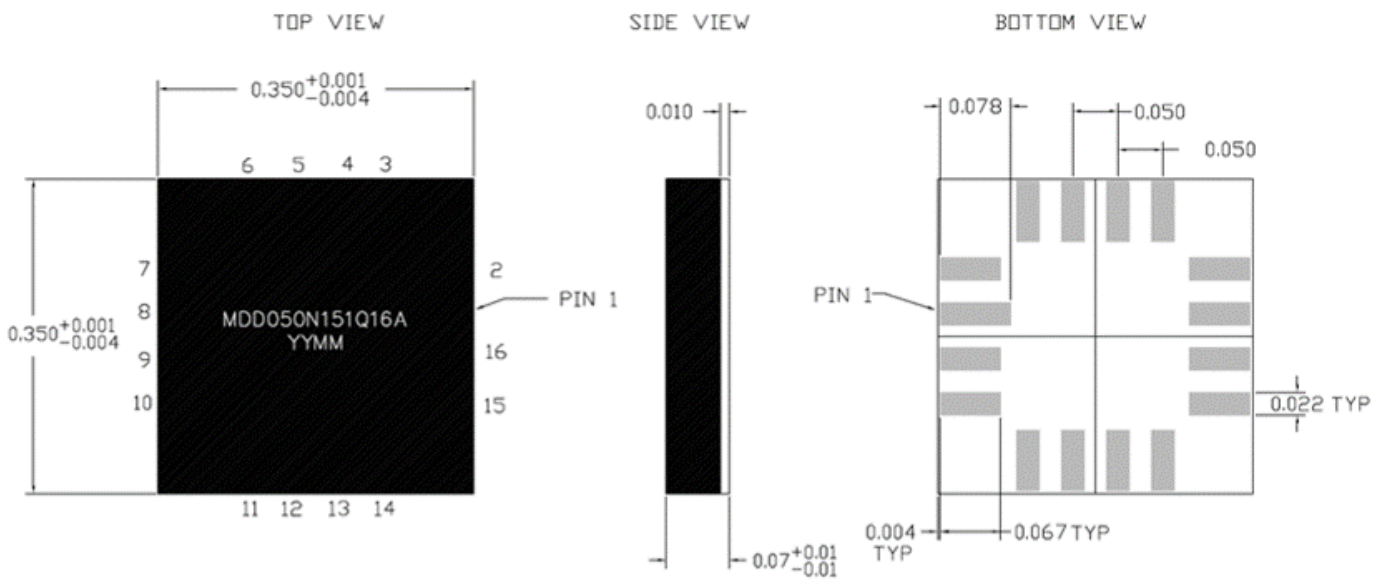
DRAWING NOT TO SCALE. DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE NOTED.

MSL RATING 4 (refer to JEDEC STD 033B)

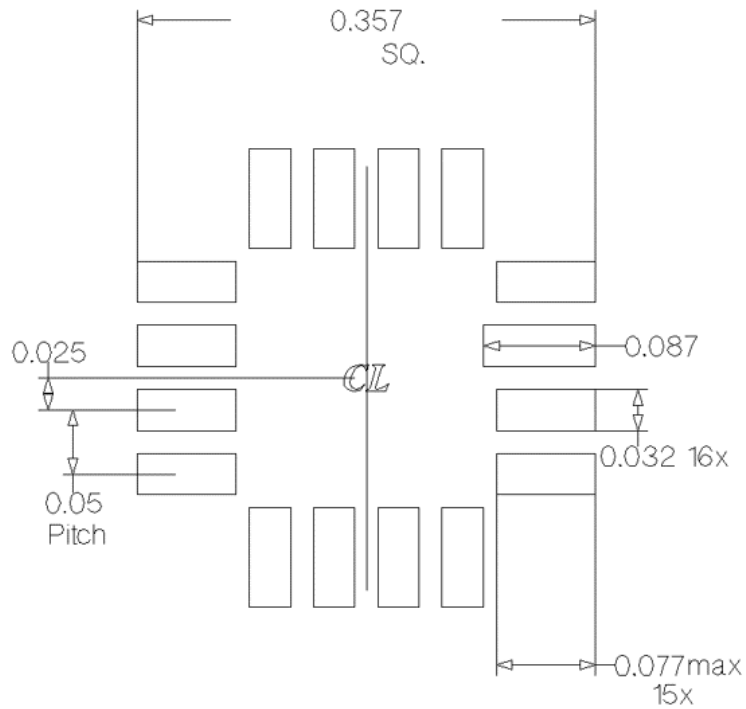
Shipping Packaging
Waffle Packs/trays

MARKING SPECIFICATIONS

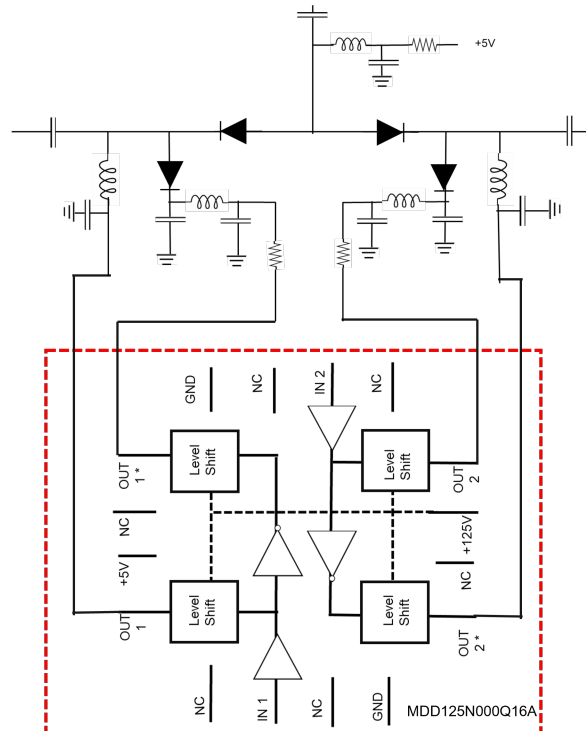
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Date Code: YYWW



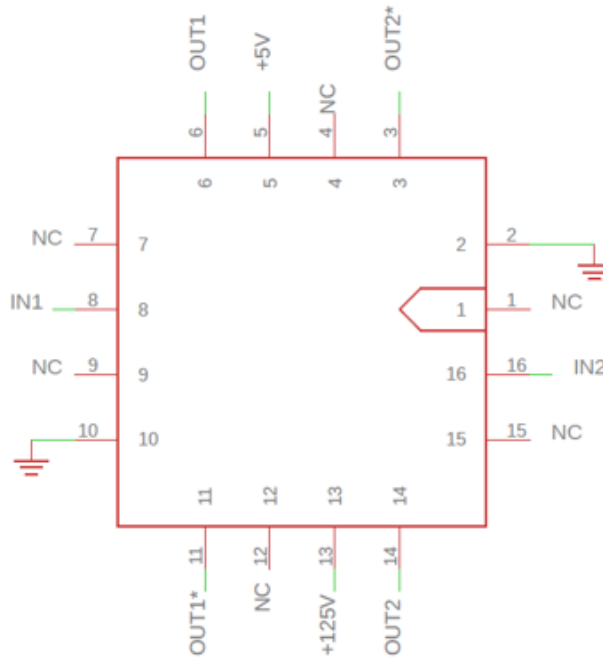
FOOTPRINT



TYPICAL APPLICATION

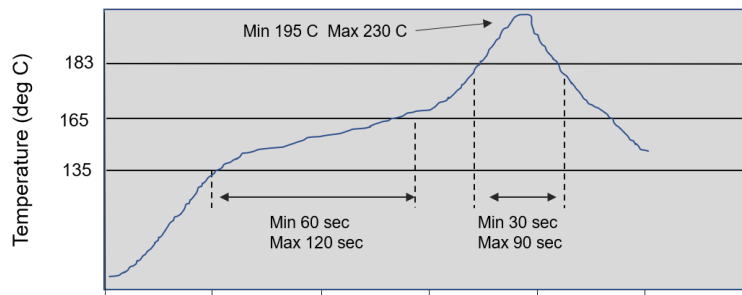


PIN ASSIGNMENT



SOLDER PROFILE

SnPb Temperature Profile example



Pb-Free Temperature Profile example

