

GENERAL DESCRIPTION

The MDD050N181D06A is a driver featuring high speed suited for driving high power PIN diode switches.

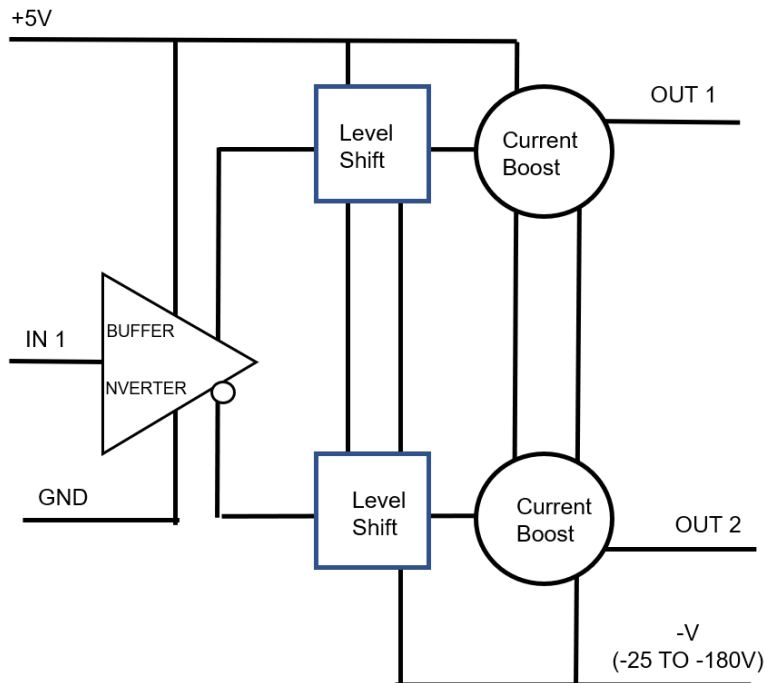
The driver is compatible with TTL logic and has single input with complementary outputs to supply output high and low up to +/-100 mA and +5v/-180v

External current limiting resistors are required to set current

FEATURES

- High speed <100 nS
- Drives high capacitive loads

FUNCTION BLOCK DIAGRAM

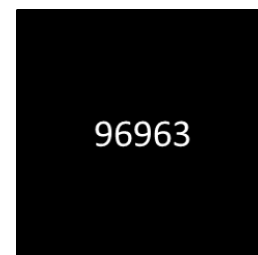


MECHANICAL

The MDD050N181D06A consists of discrete components mounted on a laminate and sealed with a Dam and Fill process. This forms a 6mm x 6mm 6 pos DFN assembly designed for integration into an Integrated Microwave Assembly.

ECCN Code EAR99

MDD050N181D06A is RoHS 3 (EU 2015/863) compliant.



PIN CONNECTIONS

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

- 1 Input
- 2 Ground
- 3 +5V
- 4 Output B
- 5 Output A
- 6 -V (-25V to -180V)

TRUTH TABLE

IN	OUTA	OUTB
0	-V	+V
1	+V	-V

ELECTRICAL SPECIFICATIONS

Vpos +5V, Vneg -180V, 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	-179.5	-179.8	-180	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	1KHz 50% duty cycle		2		mA
	IQC_neg	Quiescent Current Negative	1KHz 50% duty cycle		-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	100pF load		50	75	KHz

ESD Sensitivity HBM Class 1B

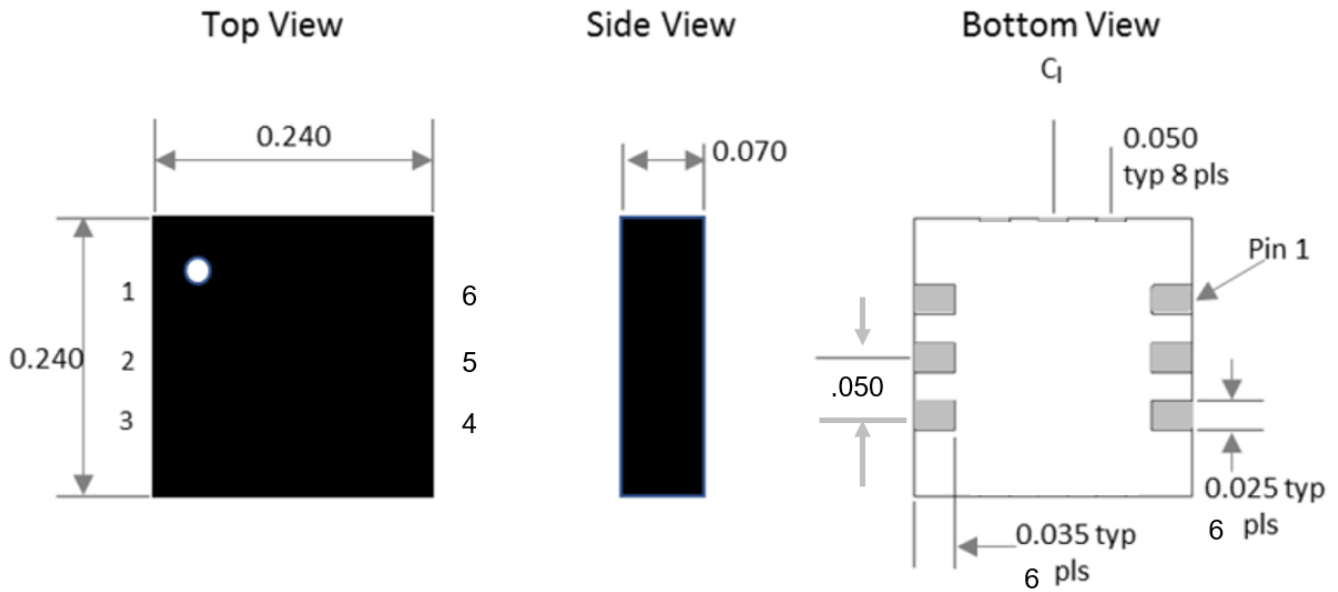
MECHANICAL SPECIFICATIONS

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

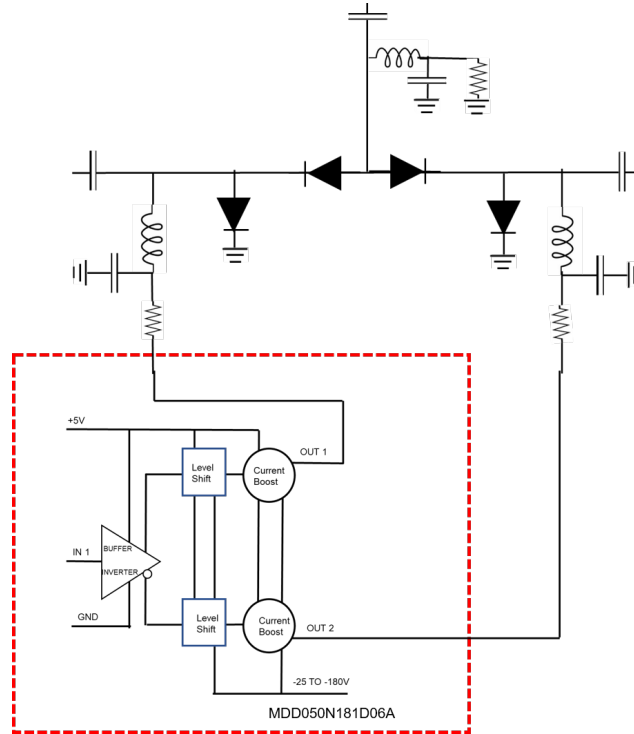
MSL RATING 4 (refer to JEDEC STD 033B)
Shipping Packaging
Waffle Packs/trays
Length .240 in NOM; Width .240 in NOM

MARKING SPECIFICATIONS

Part Number: 96963
Date Code: YYWW

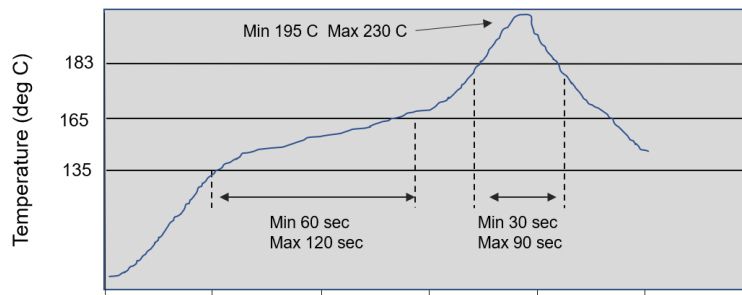


TYPICAL APPLICATION



SOLDER PROFILE

SnPb Temperature Profile example



Pb-Free Temperature Profile example

