

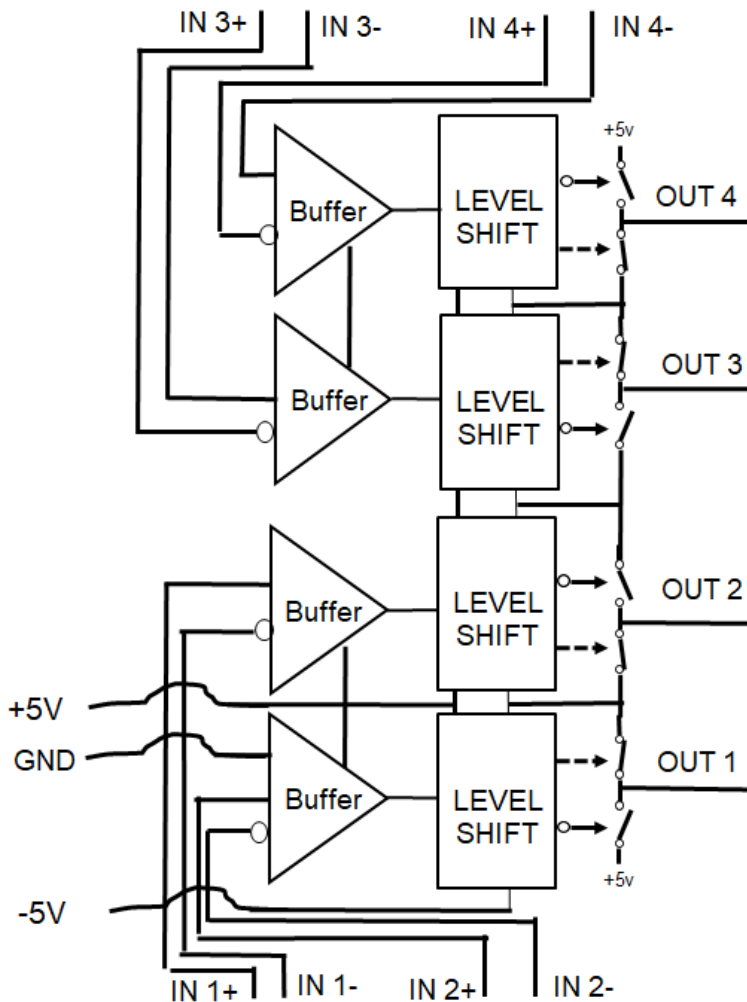
GENERAL DESCRIPTION

The 9913 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 to supply output high and low up to +/-120 mA at +/-4V output.
External current limiting resistors are required to set current

FEATURES

- high speed <8 nS
- Inverting or Non-Inverting operation

FUNCTION BLOCK DIAGRAM

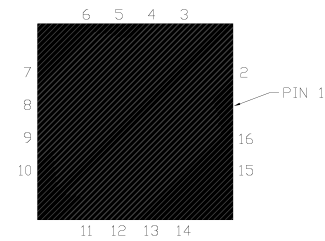


MECHANICAL

The 9913 consists of discrete MOSFETS mounted on a Alumina substrate 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.

ECCN Code EAR99

9913 is RoHS 3 (EU 2015/863) compliant.



PIN CONNECTIONS

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

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

TRUTH TABLE

IN1+	IN1-	IN2+	IN2-	IN3+	IN3-	IN4+	IN4-	OUT1	OUT2	OUT3	OUT4
0	ref	0	ref	0	ref	0	ref	-V	-V	-V	-V
1	ref	1	ref	1	ref	1	ref	+V	+V	+V	+V
ref	0	ref	0	ref	0	ref	0	+V	+V	+V	+V
ref	1	ref	1	ref	1	ref	1	-V	-V	-V	-V

ELECTRICAL SPECIFICATIONS

Vpos +5V, Vneg -5V, TEMP 25C, PRR 500KHz

	SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
INPUT							
	VI_hi	Voltage Input High	TTL	4.5	4.8	5.0	V
	VI_low	Voltage Input Low	TTL	0	.2	.5	V
OUTPUT							
	VO_hi	Voltage Out High	open load	3.0	4.0	4.9	V
	VO_low	Voltage Out Low	open load	-3.0	-4.0	-4.9	V
	IO_hi	Current Out High	steady state into 1V diode load	120			mA
	IO_low	Current Out Low	steady state into 1V diode load common arm resistor	-120			mA
	lopk	Current Peak Output	sink and source	+/-300			mA
SUPPLY							
	IQC_pos	Quiescent Current Positive	per driver		25	32	mA
	IQC_neg	Quiescent Current Negative	per driver		-25	-32	mA
DYNAMIC							
	TSW_rise	Switching Speed Rise	opposed 1N4148 diode load		5	8	nS
	TSW_fall	Switching Speed Fall	opposed 1N4148 diode load		7	8	nS
	PRR	Pulse Repetition Rate	Max, 10pF load		.5	1	MHz

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

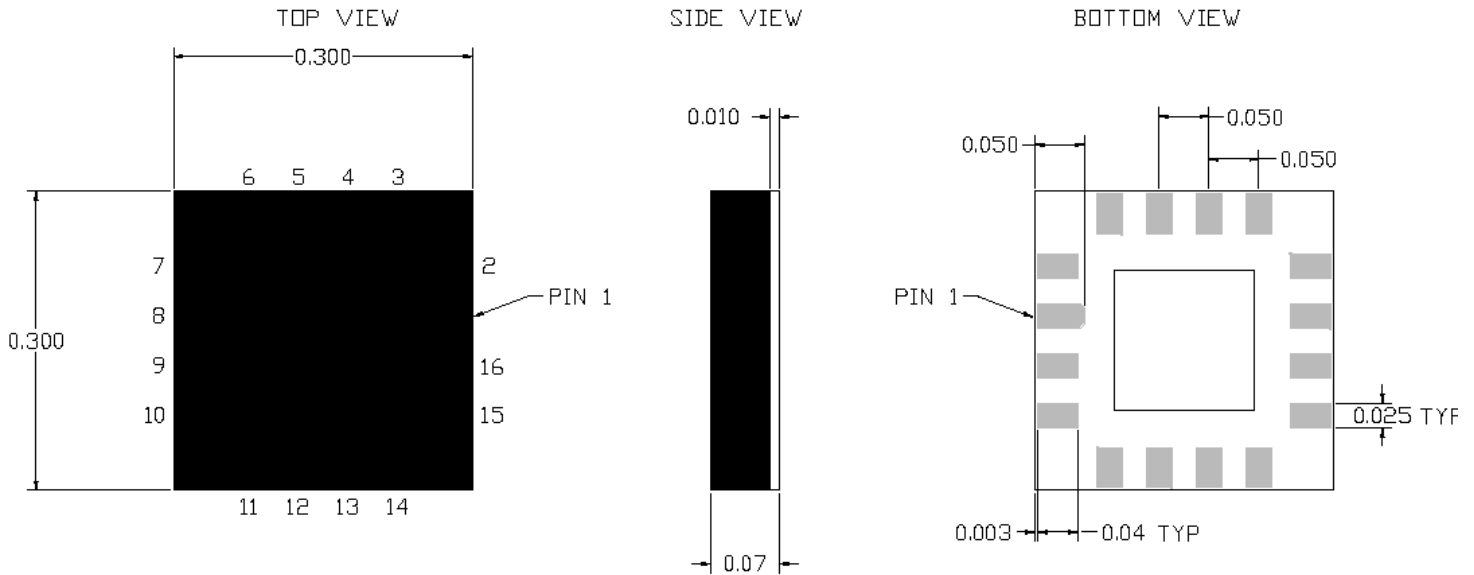
Waffle Packs/trays

Type: Board

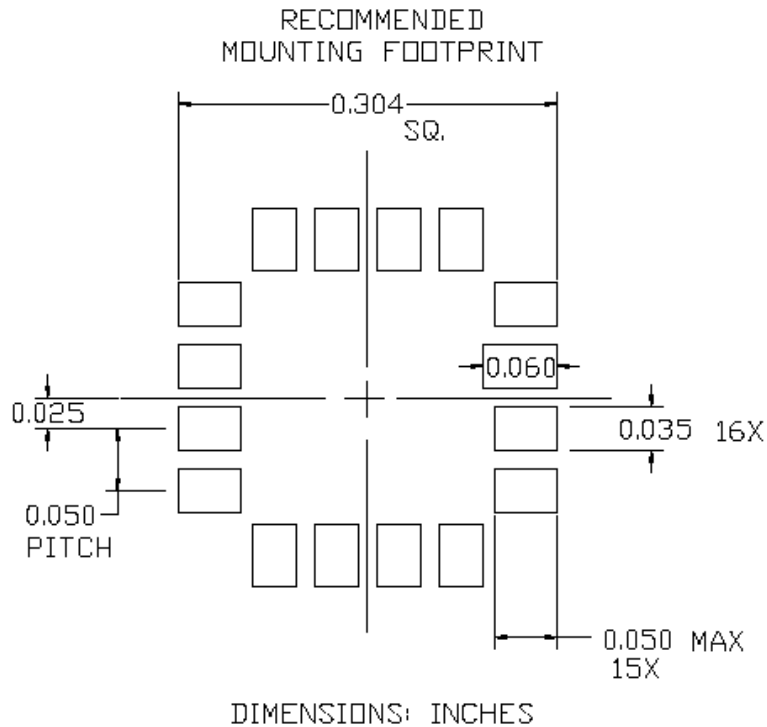
Length .300 in NOM; Width .300 in NOM; Height .07 in NOM

MARKING SPECIFICATIONS

Dot Only Marking

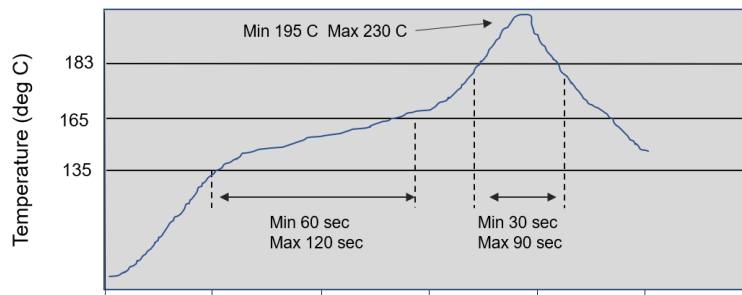


FOOTPRINT



SOLDER PROFILE

SnPb Temperature Profile example



Pb-Free Temperature Profile example

