

MMD-1x1

Series



OEM Piezo Motor Driver Reference Manual

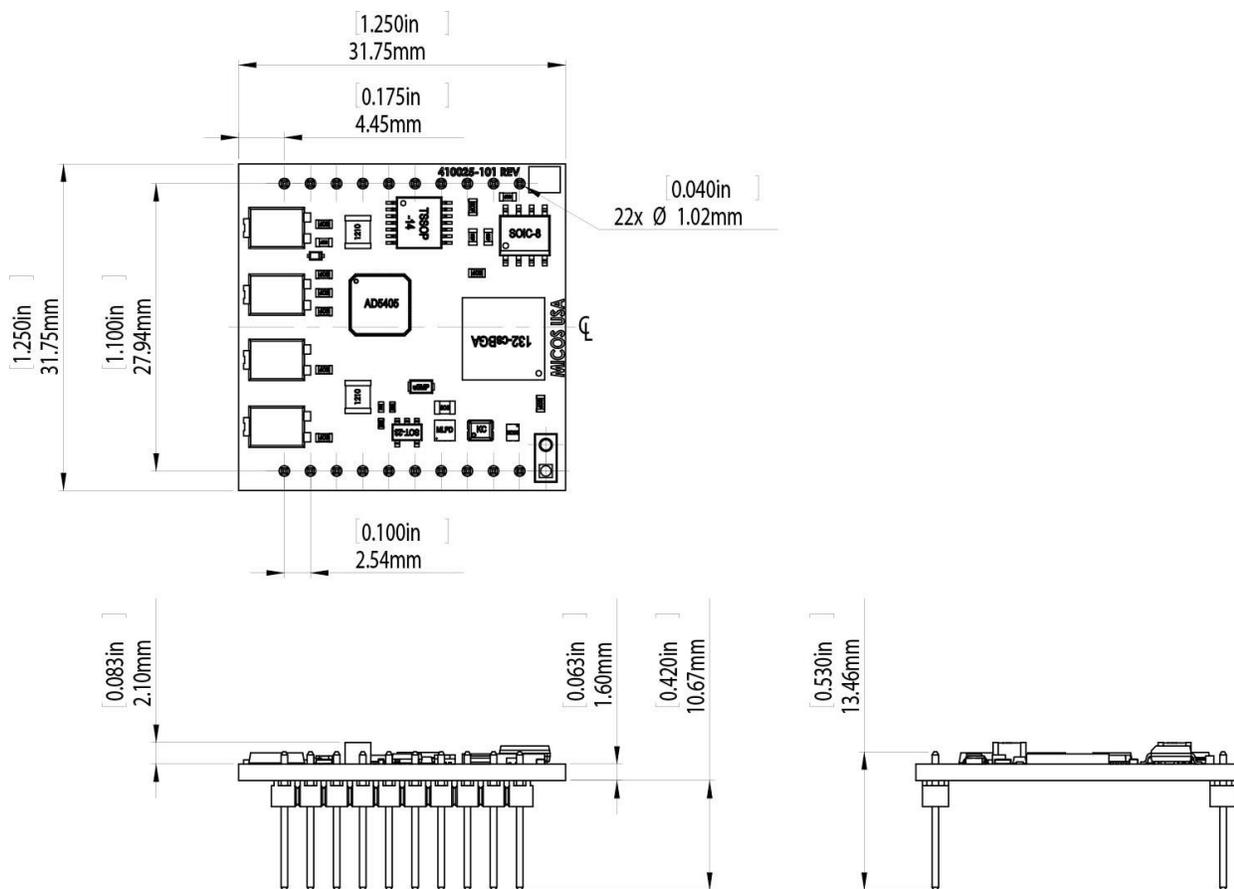
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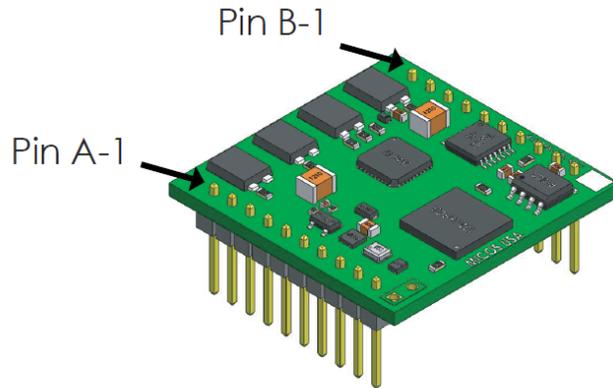
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1. Introduction

1.1 Product Description

The MMD 1x1 is a high performance piezo motor driver designed to be used in OEM designs that have space limitations. It is meant to be implemented into OEM boards as a plug-in PCB. The MMD 1x1 is capable of driving a piezo motor with a resolution < 1 nm in open loop (motor dependent). The closed loop resolution is dependent on the resolution of the encoder (currently 5 nm, 1.2 nm upon request).





Pin-Out:

Pin #	Function	I/O Spec	Pin #	Function	
A-1	GND		B-1	PH-1 ret	
A-2	GND		B-2	PH-2 ret	
A-3	24-48V 0.5A *		B-3	NC-key	
A-4	+3.3V 1A		B-4	PH-1 out	
A-5	Pulse	(LVTTTL)	B-5	PH-2 out	
A-6	Dir	(LVTTTL)	B-6	spare	
A-7	Reserved		B-7	Reserved	
A-8	Reserved		B-8	Reserved	
A-9	Reserved		B-9	Reserved	
A-10	Reserved		B-10	Reserved	

1.2 Features

- Driver for MICRONIX Multi-Phase Piezo Stages (1.25" x 1.25")
- Plug-in design suitable for easy integration into customer board
- Open Loop
- Closed Loop within customer controller/ Closed loop Internal upon request
- Simple Pulse and Direction inputs; 1 motor step/pulse.

1.3 Package Contents

If product is damaged or there are missing components, contact MICRONIX USA immediately. Do not discard product packaging in case of return shipment.

Package Contents:

- MMD-1x1 Driver
- User Manual

*Operating range needs to be factory configured for actual supply voltage

2. Technical Information

2.1 MMD-1x1 Specifications

Parameter	Description
Axes	1
Motor Type	Stick-slip piezo motor
Interface	LVTTTL Pulse & Direction
Max Input Frequency	2 MHz
Power Supply	3.3V and 24-48V* (motor supply)
Dimensions	1.25x1.25 in.

*Supply voltage must be agreed upon prior to shipping. Each MMD-1x1 must be tuned in factory for the desired supply voltage prior to shipment.