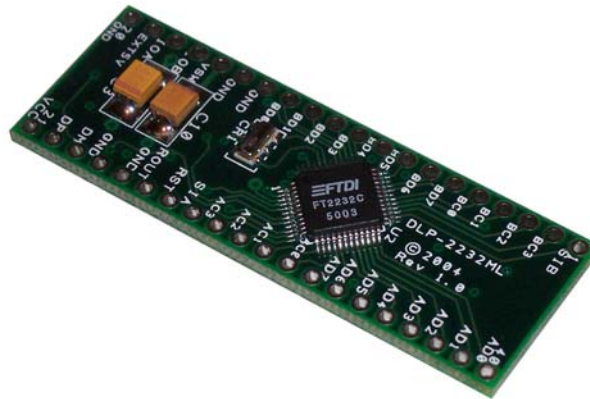




## DLP-2232ML-G LOW-PROFILE USB MODULE

\* Lead Free \*



### 1.0 Introduction

The DLP-2232ML-G utilizes FTDI's third-generation USB UART/FIFO I.C., the FT2232D. This low-cost, RoHS compliant development tool features two Multi-Purpose UART/FIFO controllers that can be configured individually in several different modes.

In addition to the UART interface, FIFO interface, and Bit-Bang IO modes of the second-generation FT232BM and FT245BM devices, the FT2232D offers a variety of additional modes of operation including a Multi-Protocol Synchronous Serial Engine interface designed specifically for synchronous serial protocols such as JTAG and SPI bus.

The DLP-2232ML-G features a quality four-layer printed circuit board with a solid ground plane, an integral 93C56 EEPROM on board for easy OEM customization and a standard 40-pin, 0.6in wide footprint. Integral power control and on-board MOSFET power switch make the DLP-2232ML-G a perfect choice for USB bus-powered, high-power designs as well as self- and low-powered products.

NOTE: With the exception of the mechanical connectors, mechanical dimensions and the host connection interface signals, the DLP-2232ML-G and DLP-2232M-G are the same product. The supporting electronics for the USB connector are already on the DLP-2232ML-G board, just add a type B connector to your design and you're ready to go.

For a complete list of features and specifications please refer to the datasheet for the DLP-2232M-G.

## 2.0 Module Pin-Out

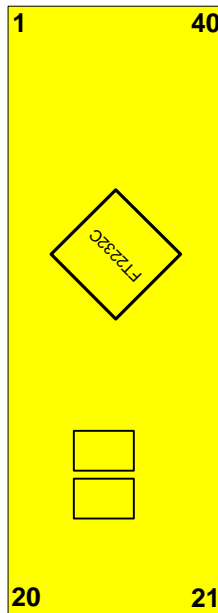
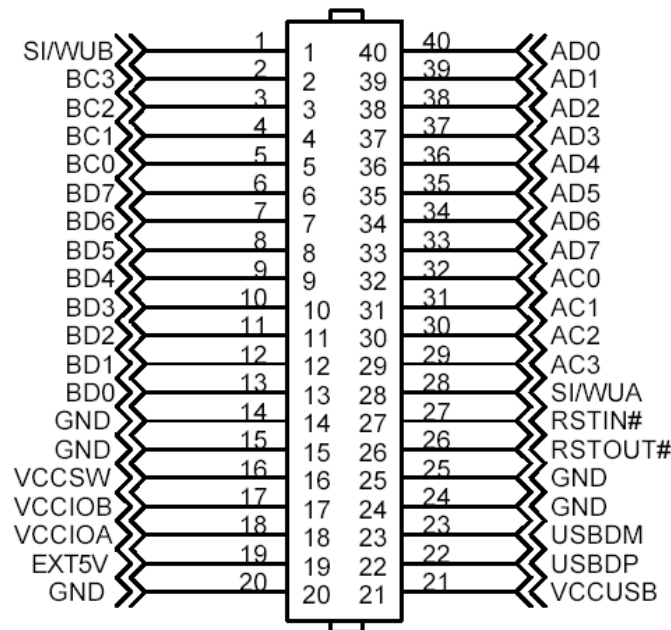


Figure 2. Pin-Out (40 Pin DIP Header )

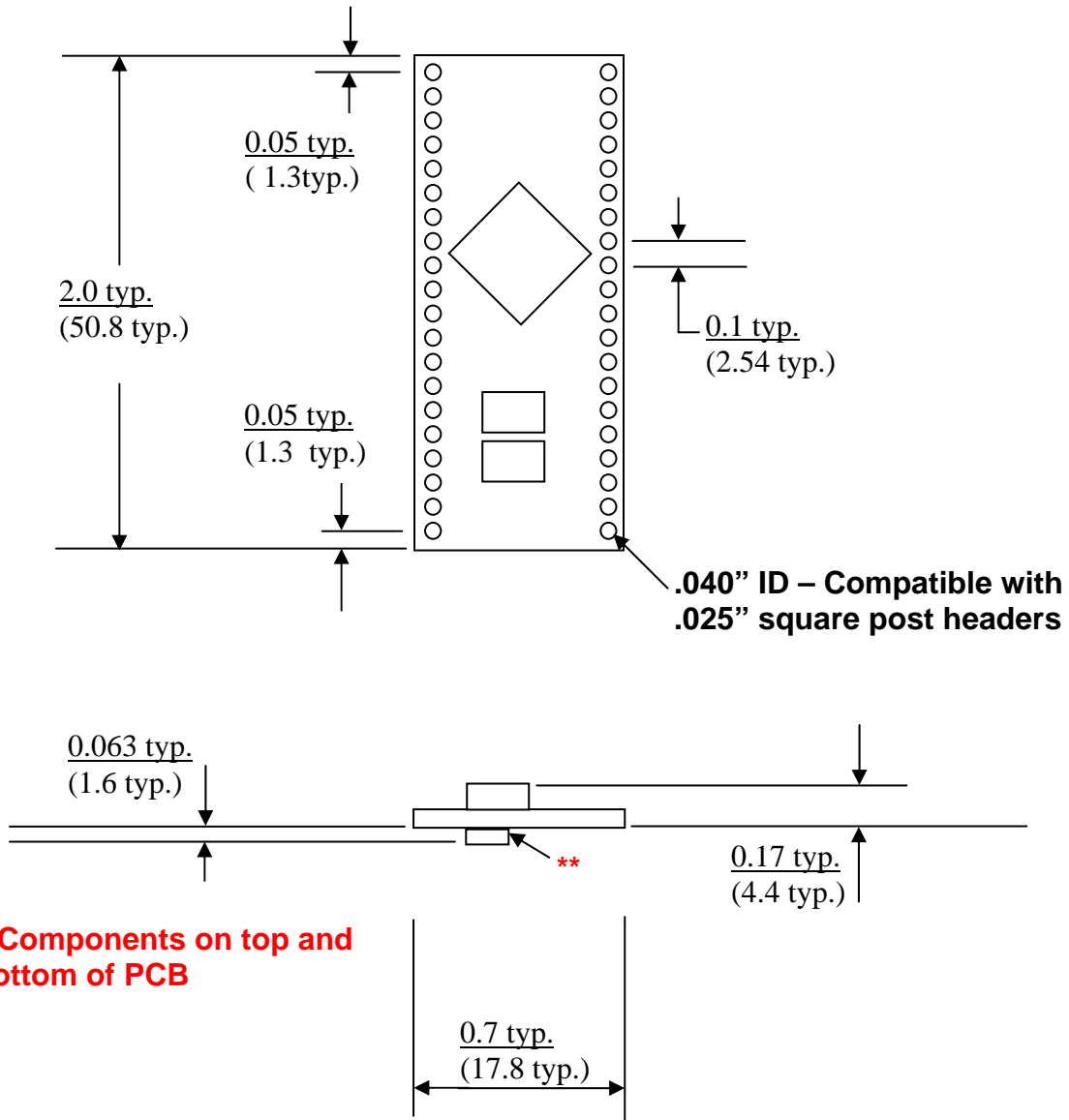
### 2.1 Pin Definitions

Since the DLP-2232ML-G does not have a USB connector, the USBDM and USBDP signal lines are brought out on pins 23 and 22 as shown here.



With the exception of the 2 USB communications lines (USBDM and USBDP) and pin 20, the pinout for the DLP-2232ML-G is the same as the DLP-2232M-G module. Please refer to the datasheet for the DLP-2232M-G for a complete description of the pinout.

**3.0 Mechanical Dimensions Inches (mm)**



## 4.0 Disclaimer

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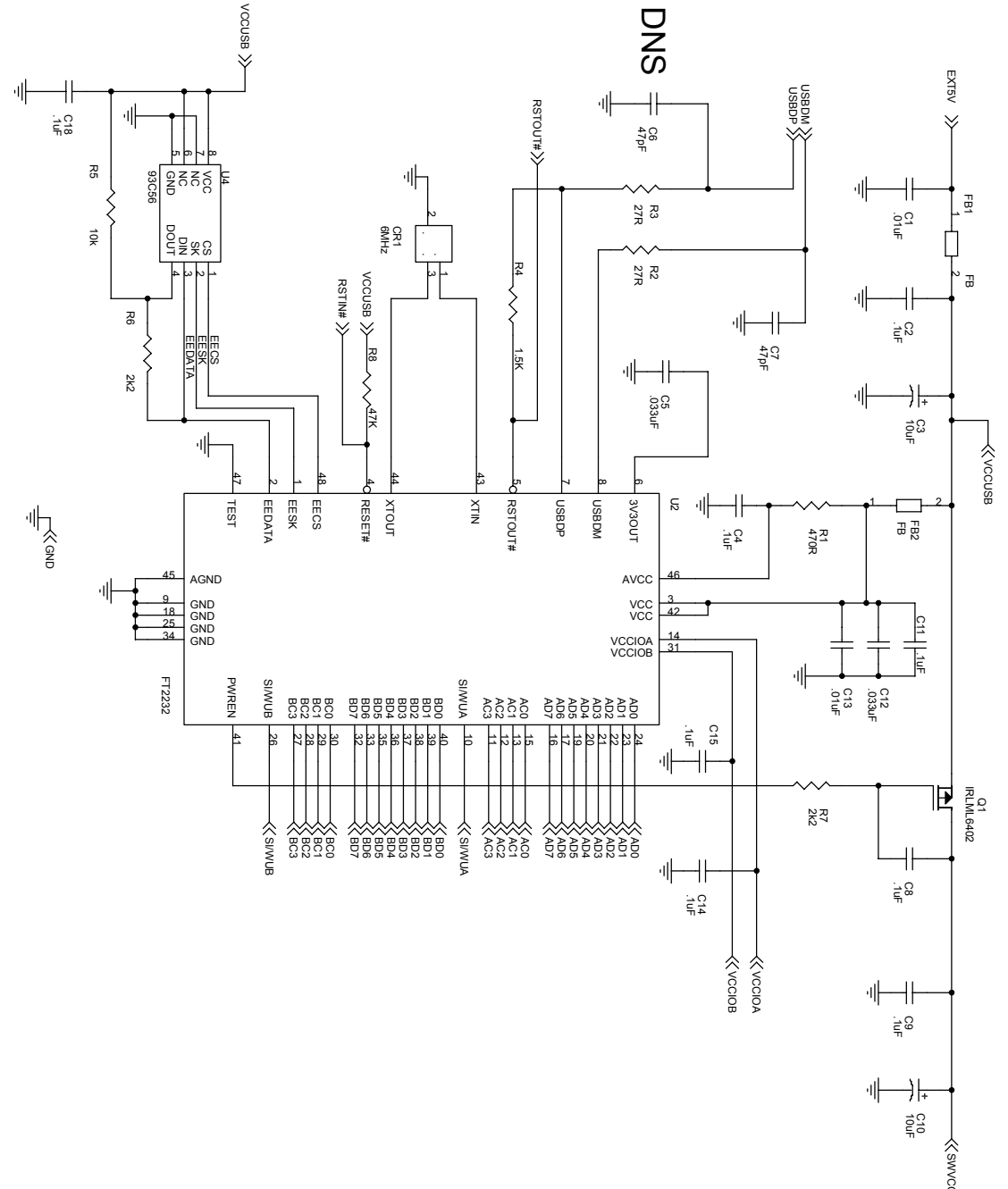
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This document provides preliminary information that may be subject to change without notice.

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# DLP-2232ML MODULE



CONN PCB 20X2

Pin	Signal	Value/Component
1	AD0	AD0
2	AD1	AD1
3	AD2	AD2
4	AD3	AD3
5	AD4	AD4
6	AD5	AD5
7	AD6	AD6
8	AD7	AD7
9	AC0	AC0
10	AC1	AC1
11	AC2	AC2
12	AC3	AC3
13	BD0	BD0
14	BD1	BD1
15	BD2	BD2
16	BD3	BD3
17	BD4	BD4
18	BD5	BD5
19	BD6	BD6
20	BD7	BD7
21	BC0	BC0
22	BC1	BC1
23	BC2	BC2
24	BC3	BC3
25	SIWUB	SIWUB
26	SIWUB	SIWUB
27	SIWUB	SIWUB
28	SIWUB	SIWUB
29	SIWUB	SIWUB
30	SIWUB	SIWUB
31	SIWUB	SIWUB
32	SIWUB	SIWUB
33	SIWUB	SIWUB
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