



Website: www.displaytech-us.com

Embedded Demonstration Board Product Specification

EMB024TFTDEMO

2.4" Color TFT Display Demonstration Board

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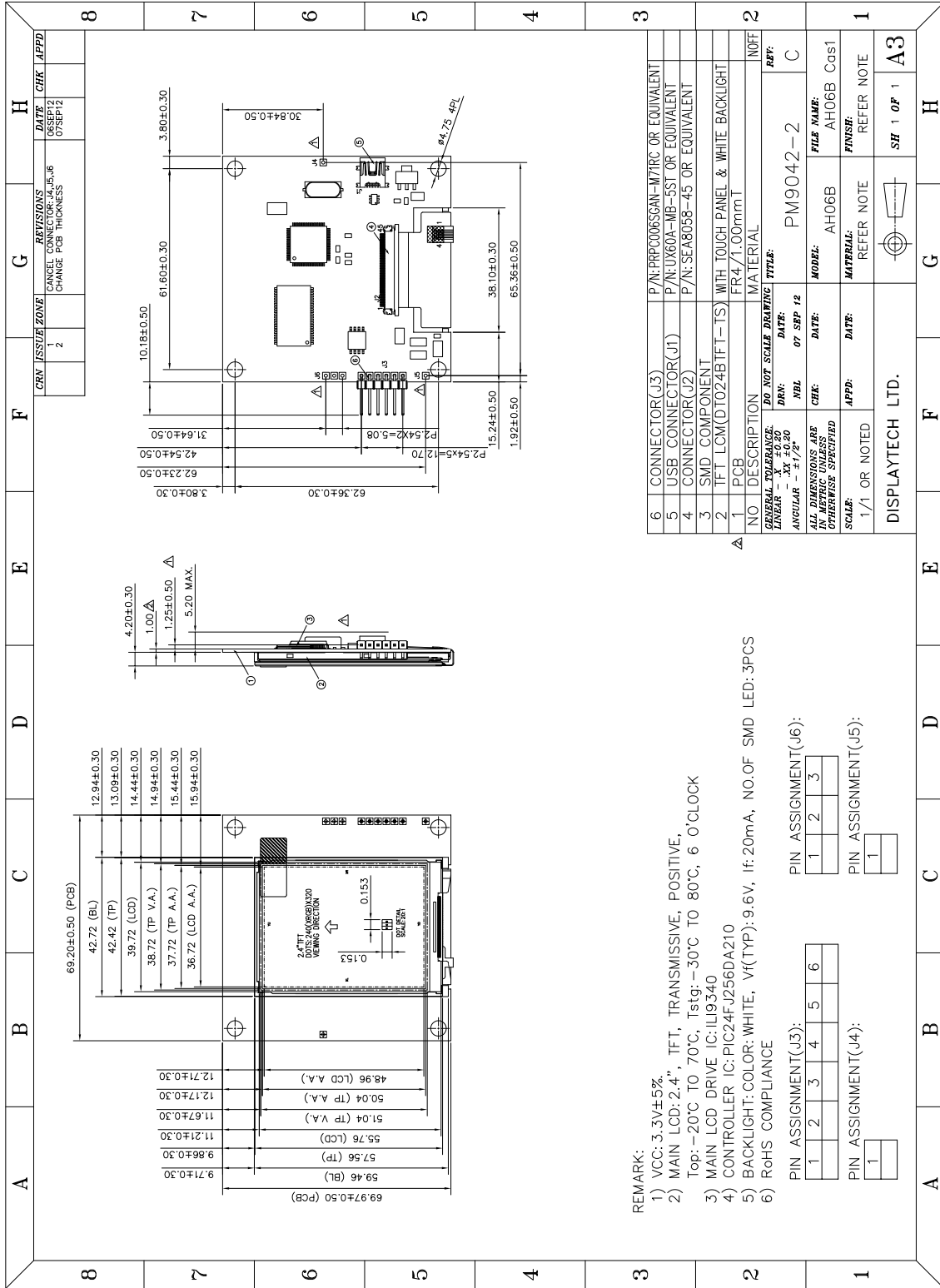
1. Introduction

The Displaytech EMB024TFTDEMO is a demonstration and development board for the Displaytech DT024BTFT 2.4" color TFT display. The display is controlled by a Microchip PIC24FJ256DA210 microcontroller with integrated graphics controller. Furthermore, the demonstration board includes on-board external SRAM for extra frame-buffer memory as well as SPI flash for storing fonts and images.

2. General Specifications

Item	Specification	Unit
LCD Resolution (Horizontal)	240	Line
LCD Resolution (Vertical)	320	Line
PCB Size (Horizontal)	2.72	Inch
PCB Size (Vertical)	2.75	Inch
Interface	USB and PICKit	---
TFT Driver IC	Ilitek ILI9340	---
Microcontroller/Graphics Controller	PIC24FJ256DA210	---
SRAM Size	512	KB
External SPI Flash Size	2	MB
Power Supply	5 (from USB)	V

3. Mechanical Drawing



NO	DESCRIPTION	MATERIAL	NOFF
1	PCB	FR4/1.00mmT	
2	TFT LCM(OT024BTF-TS)	WITH TOUCH PANEL & WHITE BACKLIGHT	
3	SMD COMPONENT		
4	CONNECTOR(U2)	P/N:SEA8058-45 OR EQUIVALENT	
5	USB CONNECTOR(U1)	P/N:UX60A-MB-5ST OR EQUIVALENT	
6	CONNECTOR(U3)	P/N:PRP006SCAN-M7RC OR EQUIVALENT	

NO	SCALE	DATE	REV
1	1/1 OR NOTED <td>07 SEP 12 <td>C</td> </td>	07 SEP 12 <td>C</td>	C

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED

ANGULAR - ±1/2°

NO. NOT SCALE DRAWING TITLE: PM9042-2

FILE NAME: AH06B Cgs1

MODEL: AH06B

MATERIAL: REFER NOTE

PIN ASSIGNMENT(J6):

1	2	3
---	---	---

PIN ASSIGNMENT(J5):

1

PIN ASSIGNMENT(J3):

1	2	3	4	5	6
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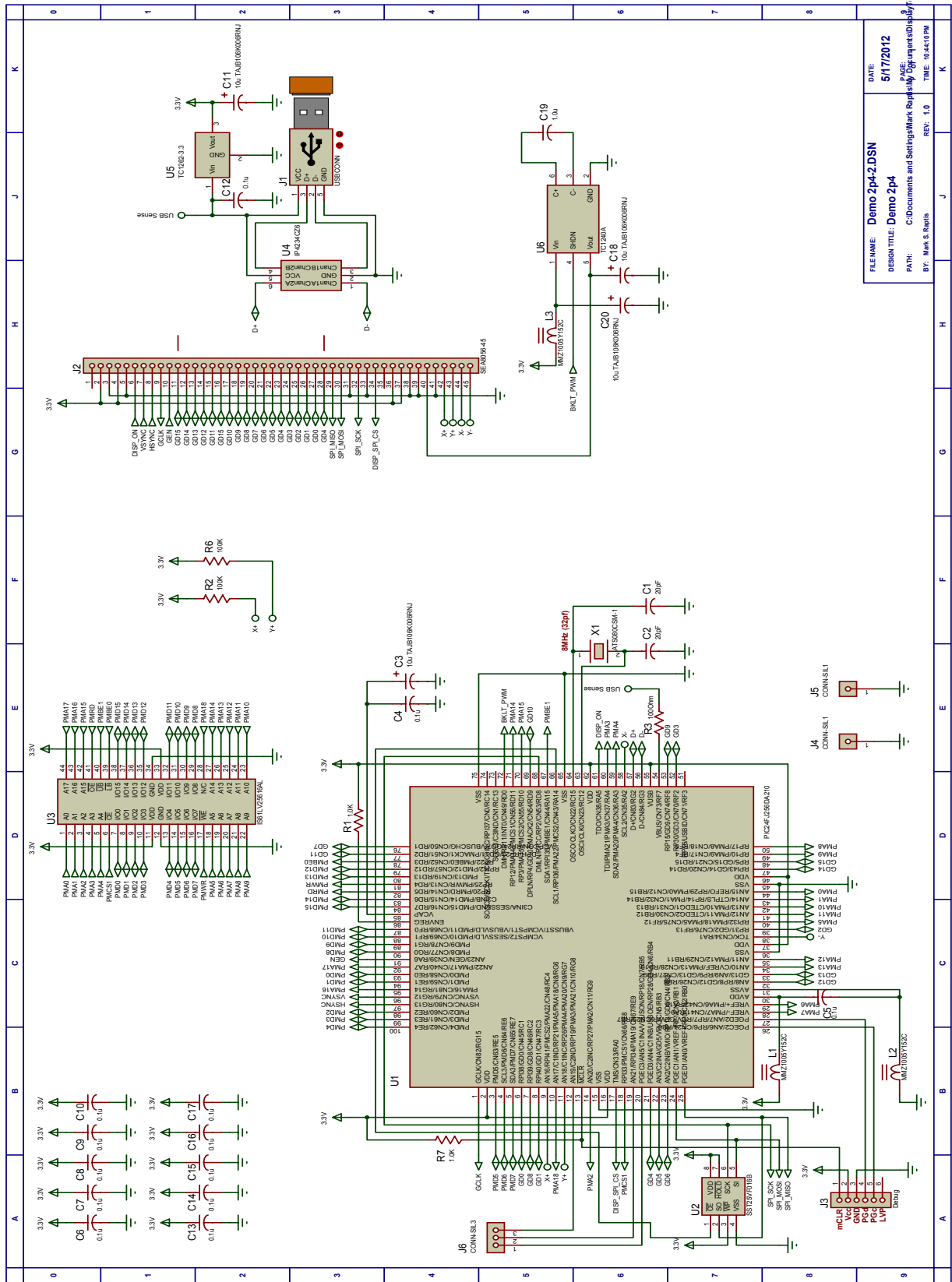
PIN ASSIGNMENT(J4):

1

REMARK:

- VCC: 3.3V±5%
- MAIN LCD: 2.4", TFT, TRANSMISSIVE, POSITIVE, Top: -20°C TO 70°C, Tstg: -30°C TO 80°C, 6 O'CLOCK
- MAIN LCD DRIVE IC: ILI9340
- CONTROLLER IC: PIC24FJ256DA210
- BACKLIGHT: COLOR: WHITE, Vf(TYP): 9.6V, If: 20mA, NO.OF SMD LED: 3PCS
- RoHS COMPLIANCE

4. Schematic



FILENAME: Demo 2p4-2.DSN	DATE: 5/17/2012
DESIGN TITLE: Demo 2p4	PAGE: 1
PATH: C:\Documents and Settings\Mark Reilly\My Documents\Display	REV: 1.0
BY: Mark S. Reilly	TIME: 10:41:09 AM

5. Example Firmware

Example firmware running the Microchip Graphics Object Layer demonstration can be obtained from the Displaytech forum, at:

https://www.dropbox.com/s/bhdsbfcwqc780gm/SEA_EMB024TFTDEMO_FW_SRC_REV1.0.zip

Note: Microchip's MPLABX IDE and X16 compiler will be required to run the demo. Both are available at <http://www.microchip.com>.

5.1. Programming

To program the EMB024TFTDEMO, connect a Microchip Pickit3 programmer (available at <http://www.microchipdirect.com>) to the 6-pin header and the supplied USB cable to the USB-Mini connector.

Open the firmware package in MPLAB and build the project in release mode. Select the PICKit3 as the programmer and program the device.

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