

X-NUCLEO-GFX02Z1

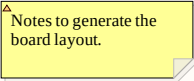
MB1818

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- Sheet 2: Top

Legend

- General comment such as function title, configuration, ...
- Text to be added to silkscreen.
- Warning text.



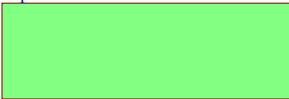
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U_Top
Top.SchDoc



Title: Schematic sheet title to update		
Project: X-NUCLEO-GFX02Z1		
Variant: DT022CTFT		
Revision: B-01		Reference: MB1818
Size: A4	Date: 16-July-21	Sheet: 1 of 2



QSPI Flash Memory

The diagram shows the connection of a QSPI Flash Memory (U1) to a 3V3 supply. The connections are as follows:

- CS#** (Pin 1) is connected to **QSPI_NCS** and a 10K resistor (R12) to 3V3.
- VCC** (Pin 8) is connected to 3V3 and a 100nF capacitor (C6) to ground.
- SO/SIO1** (Pin 2) is connected to **QSPI_IO1**.
- HOLD#/SIO3** (Pin 7) is connected to **QSPI_IO3**.
- WP#/SIO2** (Pin 3) is connected to **QSPI_IO2**.
- SCLK** (Pin 6) is connected to **QSPI_CLK**.
- GND** (Pin 4) is connected to ground.
- SI/SIO0** (Pin 5) is connected to **QSPI_IO0**.

The flash memory is identified as **MX25L6433FM2I-08G**.

LCD Display

The diagram illustrates the electrical connections for the LCD1 (DT022CTFT) module. The module has 45 pins, with pins 1 through 45 labeled. The connections are as follows:

- Power and Ground:**
 - VCC (Pin 37) is connected to 3V3.
 - GND (Pin 38) is connected to ground.
 - LED_K1 (Pin 40), LED_K2 (Pin 41), and LED_K3 (Pin 42) are connected to ground.
- Data Bus:**
 - DB0 (Pin 29) through DB17 (Pin 12) are connected to the corresponding pins on the CN1 connector.
- Control Signals:**
 - RESET (Pin 7) is connected to the CN1 connector.
 - HSYNC (Pin 8) is connected to the CN1 connector.
 - VSYNC (Pin 9) is connected to the CN1 connector.
 - DOTCLK (Pin 10) is connected to the CN1 connector.
 - ENABLE (Pin 11) is connected to the CN1 connector.
- Display Signals:**
 - DISP_D0 (Pin 28) through DISP_D7 (Pin 21) are connected to the corresponding pins on the CN1 connector.
 - DISP_NOE (Pin 31) is connected to the CN1 connector.
 - DISP_DCX (Pin 32) is connected to the CN1 connector.
 - DISP_NWE (Pin 33) is connected to the CN1 connector.
 - DISP_NE1 (Pin 34) is connected to the CN1 connector.
 - DISP_TE (Pin 35) is connected to the CN1 connector.
- Other Connections:**
 - IM0 (Pin 2) through IM3 (Pin 5) are connected to the CN1 connector.
 - IM4 (Pin 6) is connected to the CN1 connector.
 - IM5 (Pin 7) is connected to the CN1 connector.
 - IM6 (Pin 8) is connected to the CN1 connector.
 - IM7 (Pin 9) is connected to the CN1 connector.
 - IM8 (Pin 10) is connected to the CN1 connector.
 - IM9 (Pin 11) is connected to the CN1 connector.
 - IM10 (Pin 12) is connected to the CN1 connector.
 - IM11 (Pin 13) is connected to the CN1 connector.
 - IM12 (Pin 14) is connected to the CN1 connector.
 - IM13 (Pin 15) is connected to the CN1 connector.
 - IM14 (Pin 16) is connected to the CN1 connector.
 - IM15 (Pin 17) is connected to the CN1 connector.
 - IM16 (Pin 18) is connected to the CN1 connector.
 - IM17 (Pin 19) is connected to the CN1 connector.
 - IM18 (Pin 20) is connected to the CN1 connector.
 - IM19 (Pin 21) is connected to the CN1 connector.
 - IM20 (Pin 22) is connected to the CN1 connector.
 - IM21 (Pin 23) is connected to the CN1 connector.
 - IM22 (Pin 24) is connected to the CN1 connector.
 - IM23 (Pin 25) is connected to the CN1 connector.
 - IM24 (Pin 26) is connected to the CN1 connector.
 - IM25 (Pin 27) is connected to the CN1 connector.
 - IM26 (Pin 28) is connected to the CN1 connector.
 - IM27 (Pin 29) is connected to the CN1 connector.
 - IM28 (Pin 30) is connected to the CN1 connector.
 - IM29 (Pin 31) is connected to the CN1 connector.
 - IM30 (Pin 32) is connected to the CN1 connector.
 - IM31 (Pin 33) is connected to the CN1 connector.
 - IM32 (Pin 34) is connected to the CN1 connector.
 - IM33 (Pin 35) is connected to the CN1 connector.
 - IM34 (Pin 36) is connected to the CN1 connector.
 - IM35 (Pin 37) is connected to the CN1 connector.
 - IM36 (Pin 38) is connected to the CN1 connector.
 - IM37 (Pin 39) is connected to the CN1 connector.
 - IM38 (Pin 40) is connected to the CN1 connector.
 - IM39 (Pin 41) is connected to the CN1 connector.
 - IM40 (Pin 42) is connected to the CN1 connector.
 - IM41 (Pin 43) is connected to the CN1 connector.
 - IM42 (Pin 44) is connected to the CN1 connector.
 - IM43 (Pin 45) is connected to the CN1 connector.

The CN1 connector is labeled with pins 1 through 45. The connections are as follows:

- Pin 1: IM0
- Pin 2: IM1
- Pin 3: IM2
- Pin 4: IM3
- Pin 5: IM4
- Pin 6: IM5
- Pin 7: IM6
- Pin 8: IM7
- Pin 9: IM8
- Pin 10: IM9
- Pin 11: IM10
- Pin 12: IM11
- Pin 13: IM12
- Pin 14: IM13
- Pin 15: IM14
- Pin 16: IM15
- Pin 17: IM16
- Pin 18: IM17
- Pin 19: IM18
- Pin 20: IM19
- Pin 21: IM20
- Pin 22: IM21
- Pin 23: IM22
- Pin 24: IM23
- Pin 25: IM24
- Pin 26: IM25
- Pin 27: IM26
- Pin 28: IM27
- Pin 29: IM28
- Pin 30: IM29
- Pin 31: IM30
- Pin 32: IM31
- Pin 33: IM32
- Pin 34: IM33
- Pin 35: IM34
- Pin 36: IM35
- Pin 37: IM36
- Pin 38: IM37
- Pin 39: IM38
- Pin 40: IM39
- Pin 41: IM40
- Pin 42: IM41
- Pin 43: IM42
- Pin 44: IM43
- Pin 45: IM44

The diagram also shows the connection of the CN1 connector to the LCD1 module. The connections are as follows:

- Pin 1: IM0
- Pin 2: IM1
- Pin 3: IM2
- Pin 4: IM3
- Pin 5: IM4
- Pin 6: IM5
- Pin 7: IM6
- Pin 8: IM7
- Pin 9: IM8
- Pin 10: IM9
- Pin 11: IM10
- Pin 12: IM11
- Pin 13: IM12
- Pin 14: IM13
- Pin 15: IM14
- Pin 16: IM15
- Pin 17: IM16
- Pin 18: IM17
- Pin 19: IM18
- Pin 20: IM19
- Pin 21: IM20
- Pin 22: IM21
- Pin 23: IM22
- Pin 24: IM23
- Pin 25: IM24
- Pin 26: IM25
- Pin 27: IM26
- Pin 28: IM27
- Pin 29: IM28
- Pin 30: IM29
- Pin 31: IM30
- Pin 32: IM31
- Pin 33: IM32
- Pin 34: IM33
- Pin 35: IM34
- Pin 36: IM35
- Pin 37: IM36
- Pin 38: IM37
- Pin 39: IM38
- Pin 40: IM39
- Pin 41: IM40
- Pin 42: IM41
- Pin 43: IM42
- Pin 44: IM43
- Pin 45: IM44

The diagram also shows the connection of the CN1 connector to the LCD1 module. The connections are as follows:

- Pin 1: IM0
- Pin 2: IM1
- Pin 3: IM2
- Pin 4: IM3
- Pin 5: IM4
- Pin 6: IM5
- Pin 7: IM6
- Pin 8: IM7
- Pin 9: IM8
- Pin 10: IM9
- Pin 11: IM10
- Pin 12: IM11
- Pin 13: IM12
- Pin 14: IM13
- Pin 15: IM14
- Pin 16: IM15
- Pin 17: IM16
- Pin 18: IM17
- Pin 19: IM18
- Pin 20: IM19
- Pin 21: IM20
- Pin 22: IM21
- Pin 23: IM22
- Pin 24: IM23
- Pin 25: IM24
- Pin 26: IM25
- Pin 27: IM26
- Pin 28: IM27
- Pin 29: IM28
- Pin 30: IM29
- Pin 31: IM30
- Pin 32: IM31
- Pin 33: IM32
- Pin 34: IM33
- Pin 35: IM34
- Pin 36: IM35
- Pin 37: IM36
- Pin 38: IM37
- Pin 39: IM38
- Pin 40: IM39
- Pin 41: IM40
- Pin 42: IM41
- Pin 43: IM42
- Pin 44: IM43
- Pin 45: IM44

The diagram also shows the connection of the CN1 connector to the LCD1 module. The connections are as follows:

- Pin 1: IM0
- Pin 2: IM1
- Pin 3: IM2
- Pin 4: IM3
- Pin 5: IM4
- Pin 6: IM5
- Pin 7: IM6
- Pin 8: IM7
- Pin 9: IM8
- Pin 10: IM9
- Pin 11: IM10
- Pin 12: IM11
- Pin 13: IM12
- Pin 14: IM13
- Pin 15: IM14
- Pin 16: IM15
- Pin 17: IM16
- Pin 18: IM17
- Pin 19: IM18
- Pin 20: IM19
- Pin 21: IM20
- Pin 22: IM21
- Pin 23: IM22
- Pin 24: IM23
- Pin 25: IM24
- Pin 26: IM25
- Pin 27: IM26
- Pin 28: IM27
- Pin 29: IM28
- Pin 30: IM29
- Pin 31: IM30
- Pin 32: IM31
- Pin 33: IM32
- Pin 34: IM33
- Pin 35: IM34
- Pin 36: IM35
- Pin 37: IM36
- Pin 38: IM37
- Pin 39: IM38
- Pin 40: IM39
- Pin 41: IM40
- Pin 42: IM41

Joystick

The diagram shows a joystick circuit. A 3V3 supply is connected to a network of resistors (R1-R5, 10K) and capacitors (C1-C5, 10nF). The resistors are connected to the joystick's pins: R1 to pin 5 (COMMON), R2 to pin 2 (CENTER), R3 to pin 1 (LEFT), R4 to pin 3 (DOWN), and R5 to pin 6 (RIGHT). The capacitors are connected to the joystick's pins: C1 to pin 4 (UP), C2 to pin 3 (DOWN), C3 to pin 6 (RIGHT), C4 to pin 1 (LEFT), and C5 to pin 2 (CENTER). The joystick is labeled B1 and MT-008A. A joystick symbol is shown below the circuit, labeled HW1 and JOYSTICK BLUE HAT.

CN8

1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16

Header 8x2

CN7

1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20

Header 10x2

CN9

1	2	DISP_NE1
3	4	
5	6	DISP_NWE
7	8	DISP_NOE
9	10	
11	12	
13	14	
15	16	DISP_DCX
17	18	INT
19	20	
21	22	KEY_LEFT
23	24	KEY_DOWN
25	26	KEY_RIGHT
27	28	KEY_UP
29	30	

Header 15x2

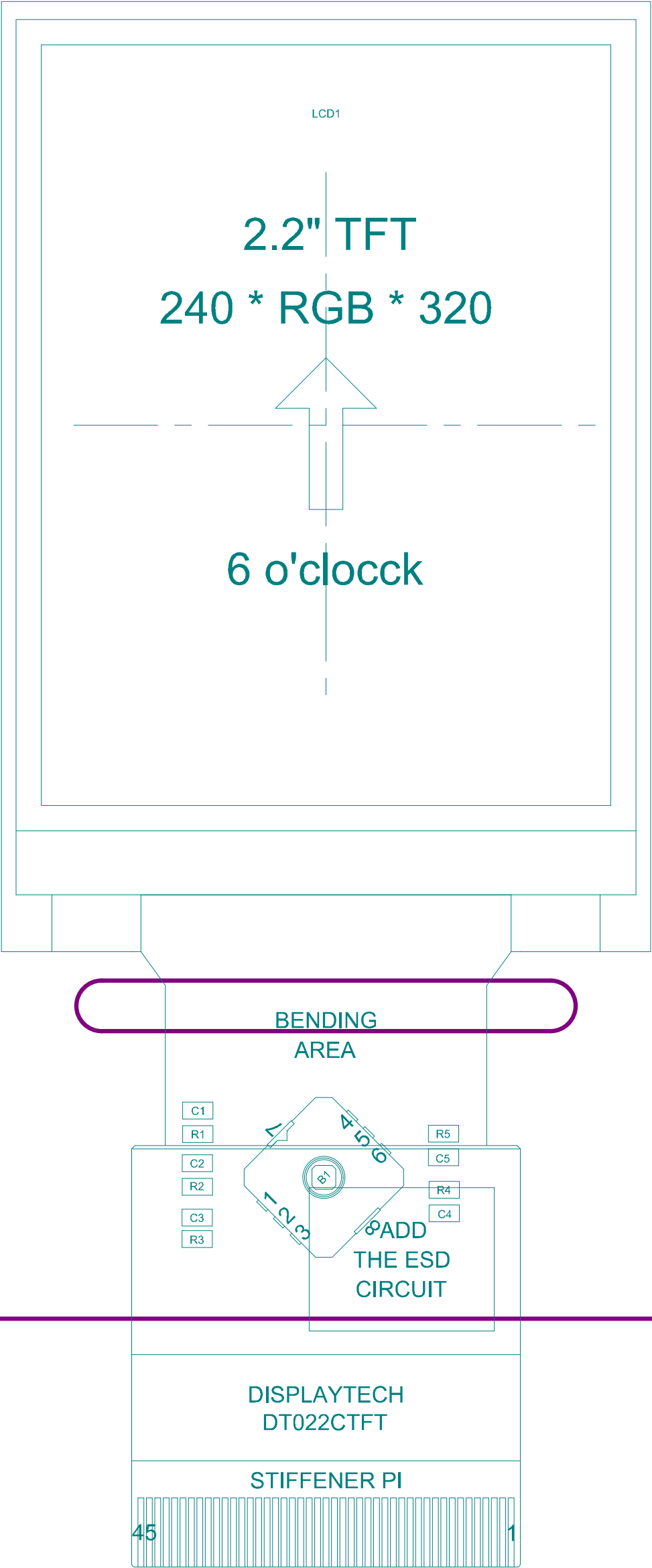
CN10

1	2	
3	4	DISP_D6
5	6	DISP_NRESET
7	8	
9	10	DISP_TE
11	12	
13	14	
15	16	
17	18	DISP_D5
19	20	DISP_D4
21	22	
23	24	DISP_D7
25	26	
27	28	
29	30	
31	32	
33	34	

Header 17x2

HW2
Product 25x5 sticker

HW3
Board 25x5 sticker



Project: X-NUCLEO-GFX02Z1

Layer: M14-Top Assembly

Gerber: .GM14

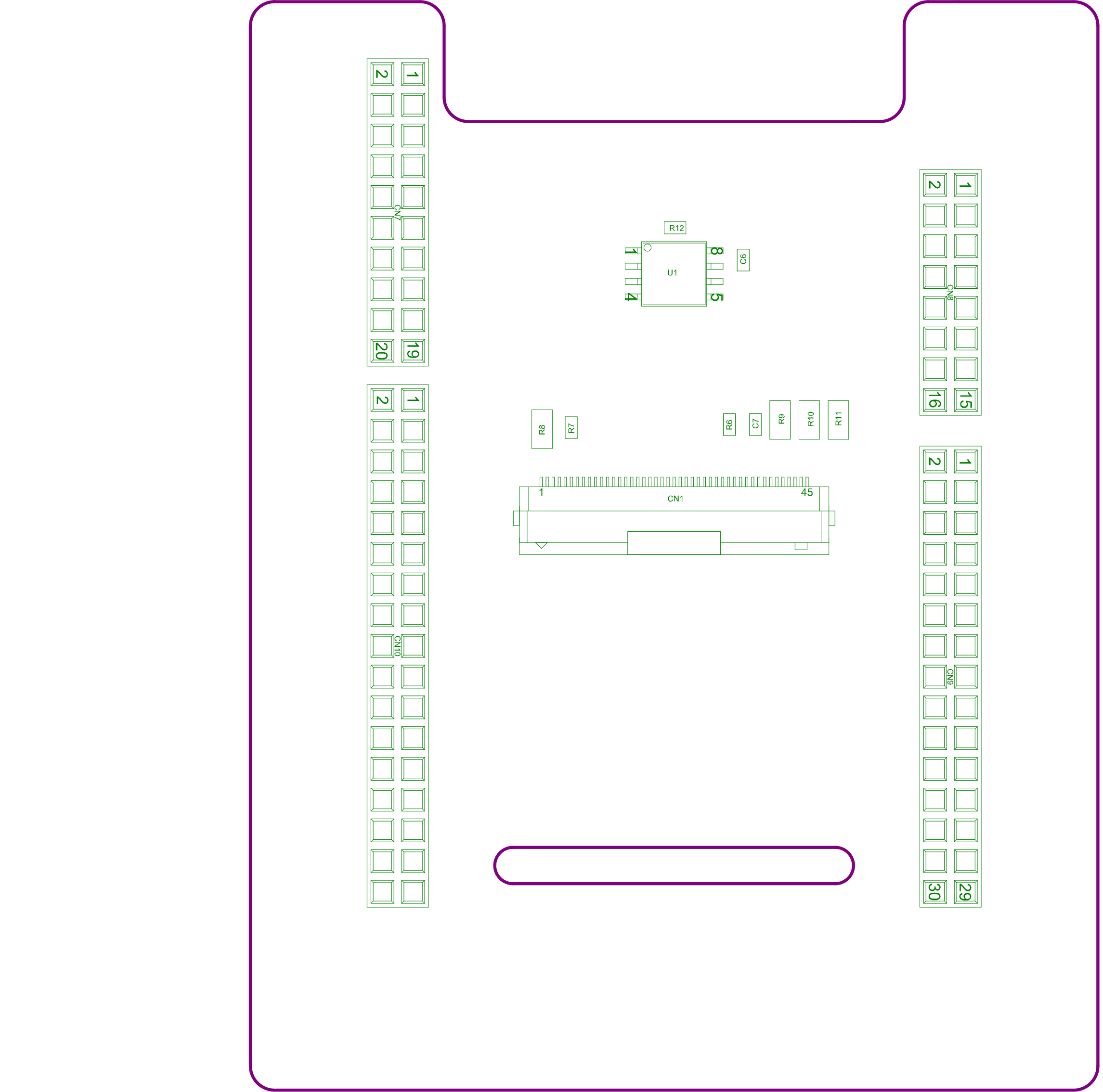
Variant: DT022CTFT

Ref: MB1818

Date: 16-July-21

Rev: B





Project: X-NUCLEO-GFX02Z1		
Layer: M15-Bottom Assembly	Gerber:.GM15	
Variant: DT022CTFT	Ref: MB1818	
Date: 16-July-21	Rev: B	



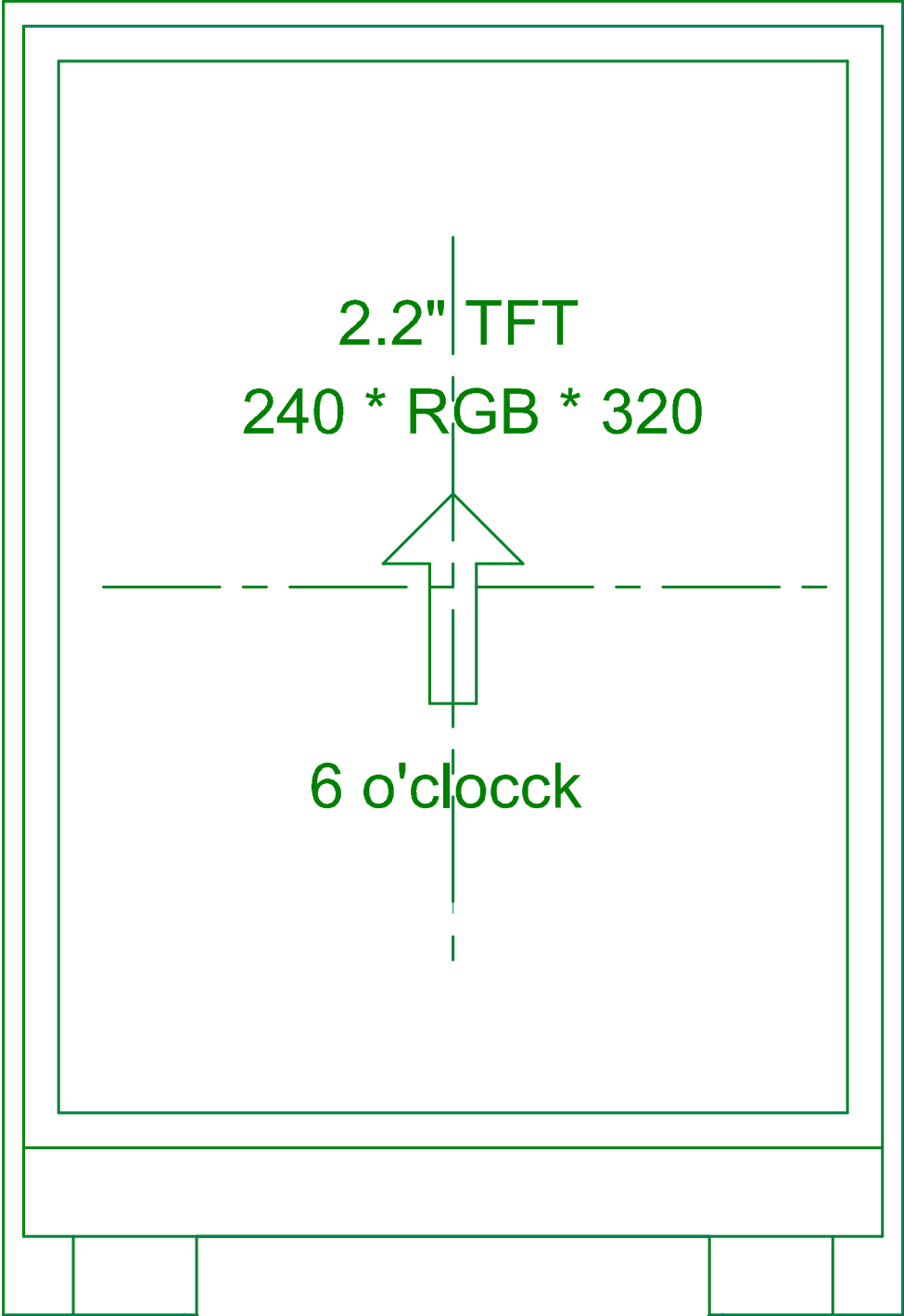
HW2

Product 25x5 sticker

HW3

Board 25x5 sticker

LCD1



BENDING

