

Product Specification

NHD-7.0-HDMI-HR-RSXP-xxx

TFT Liquid Crystal Display

NHD-	Newhaven Display
7.0-	7" Diagonal
HDMI-	HDMI Interface
HR-	1024 x 600 Resolution
RSXP-	IPS Display
xxx-	N/A - No Touch, CTU - Capacitive USB-HID

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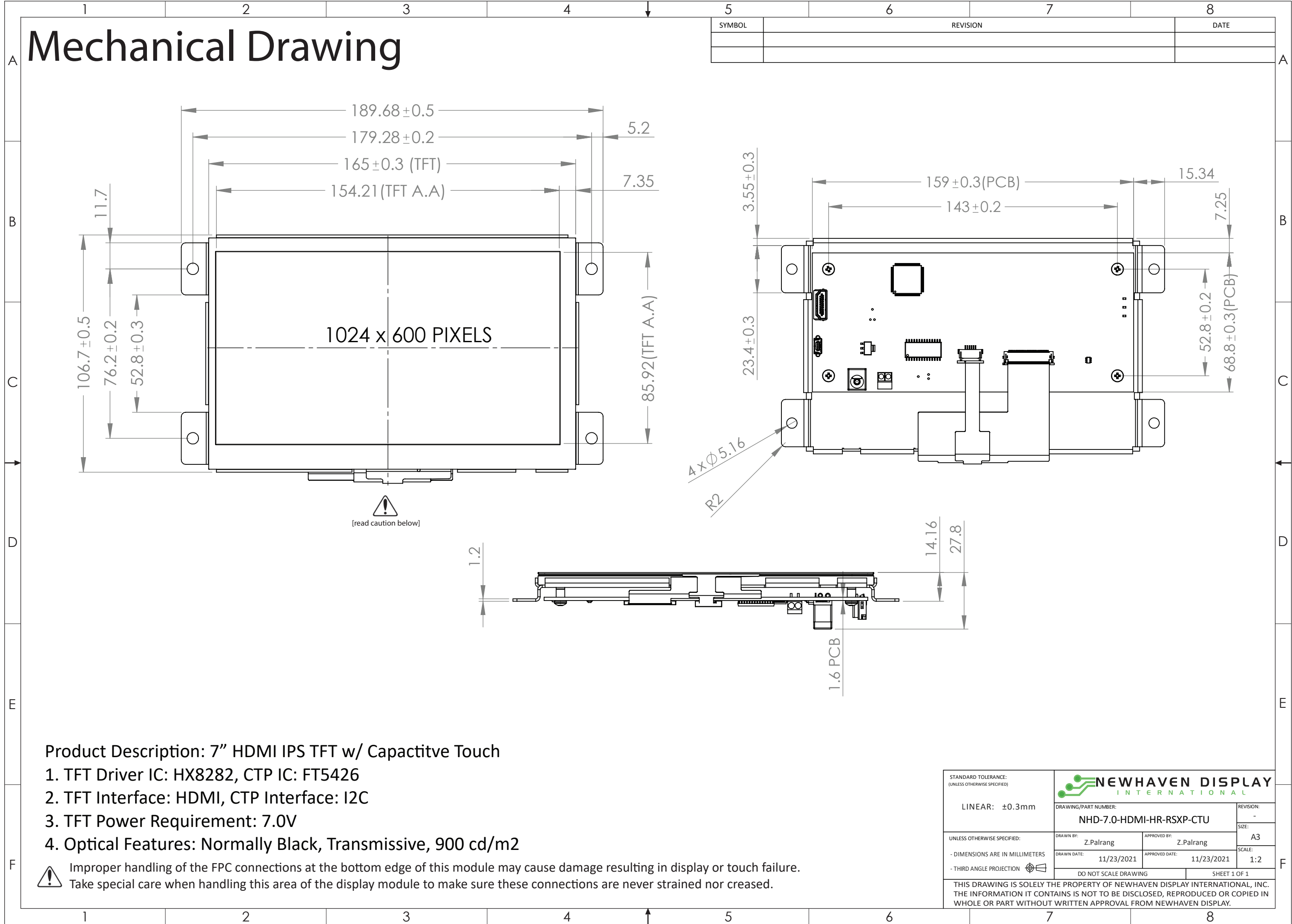
Additional Resources

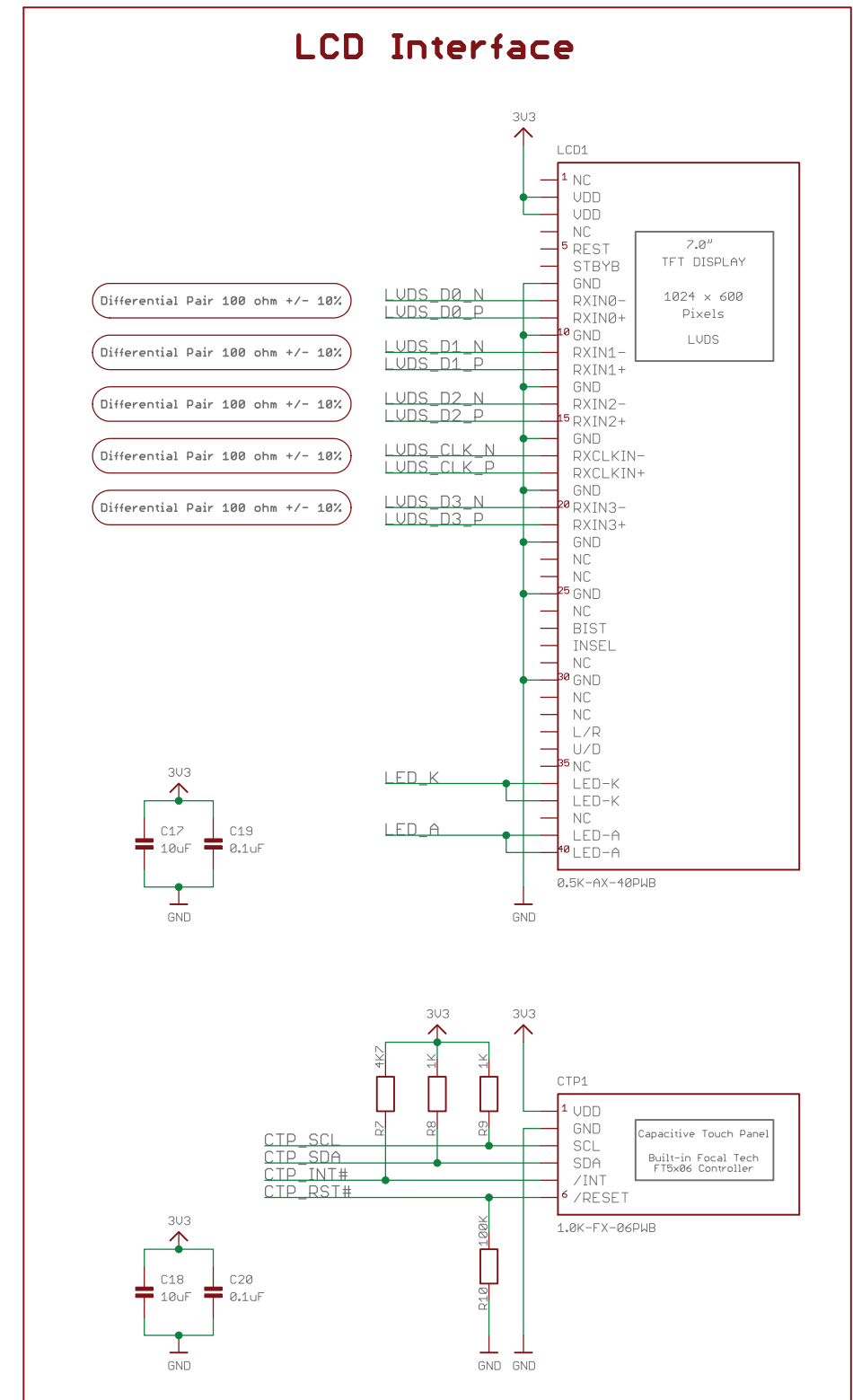
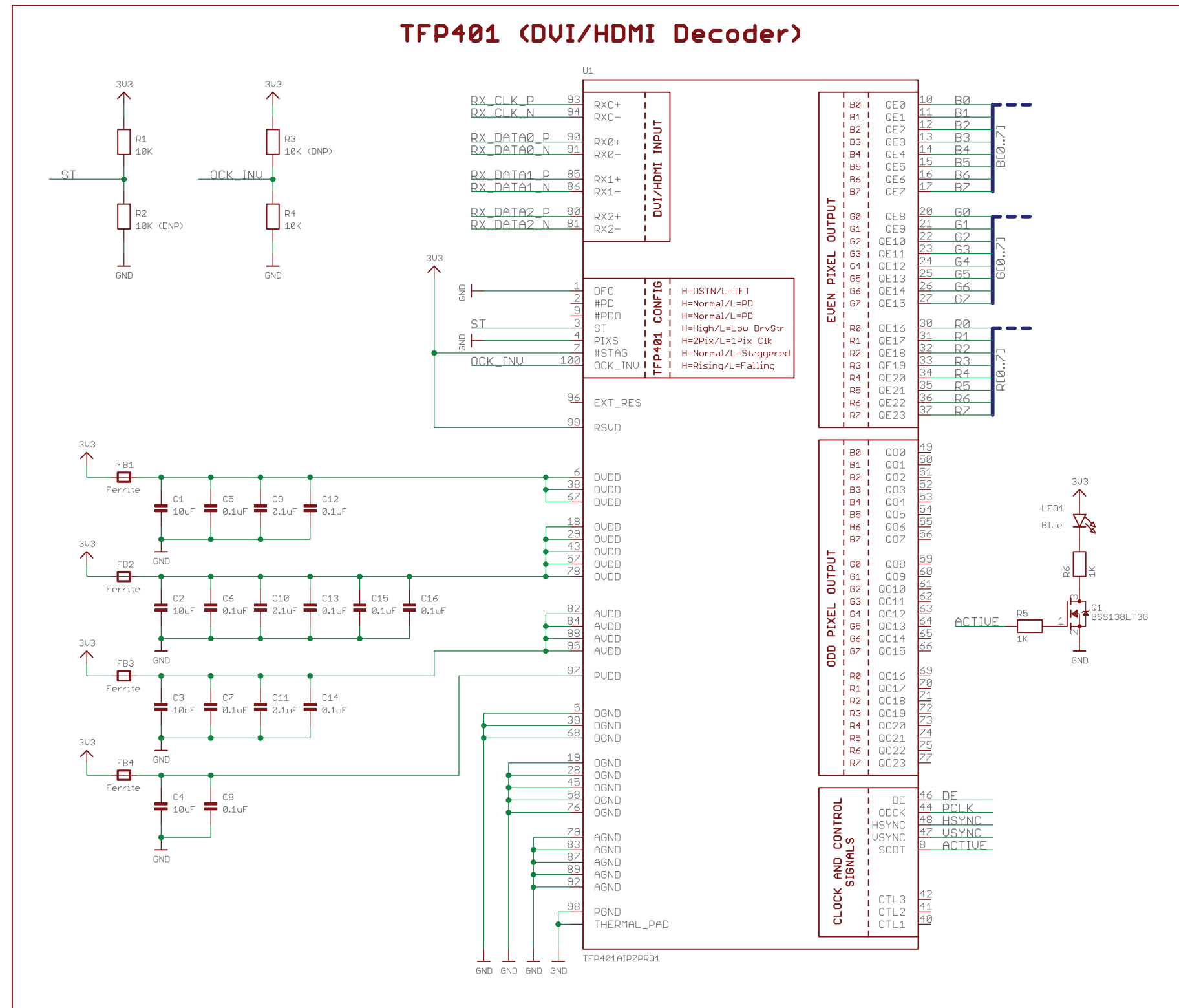
- **Support Forum:** <http://www.nhdforum.newhavendisplay.com>
- **GitHub:** <https://github.com/newhavendisplay>
- **Example Code:** https://www.newhavendisplay.com/example_code.html
- **Knowledge Center:** https://www.newhavendisplay.com/knowledge_center.html
- **Quality Center:** https://www.newhavendisplay.com/quality_center.html
- **Precautions for using LCDs/LCMs:** <https://www.newhavendisplay.com/specs/precautions.pdf>
- **Warranty / Terms & Conditions:** <https://www.newhavendisplay.com/terms.html>

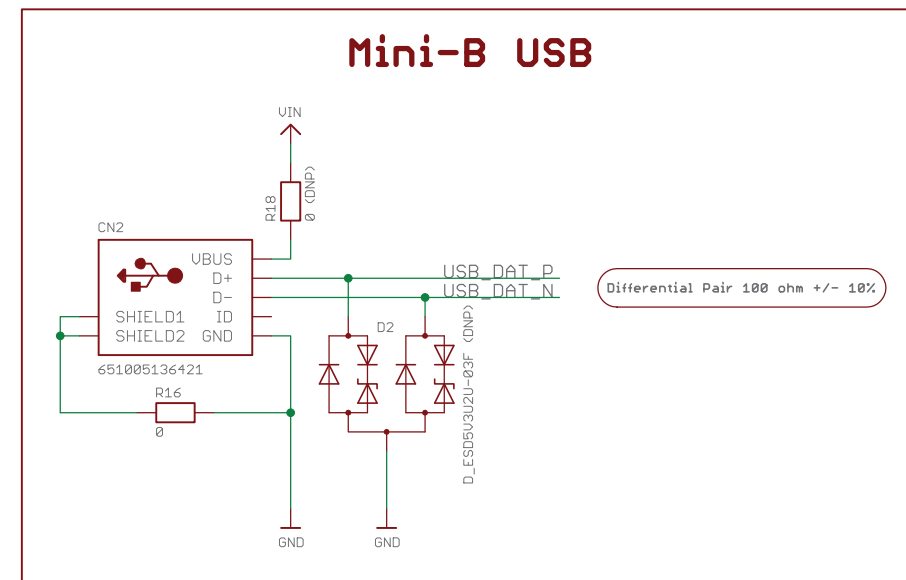
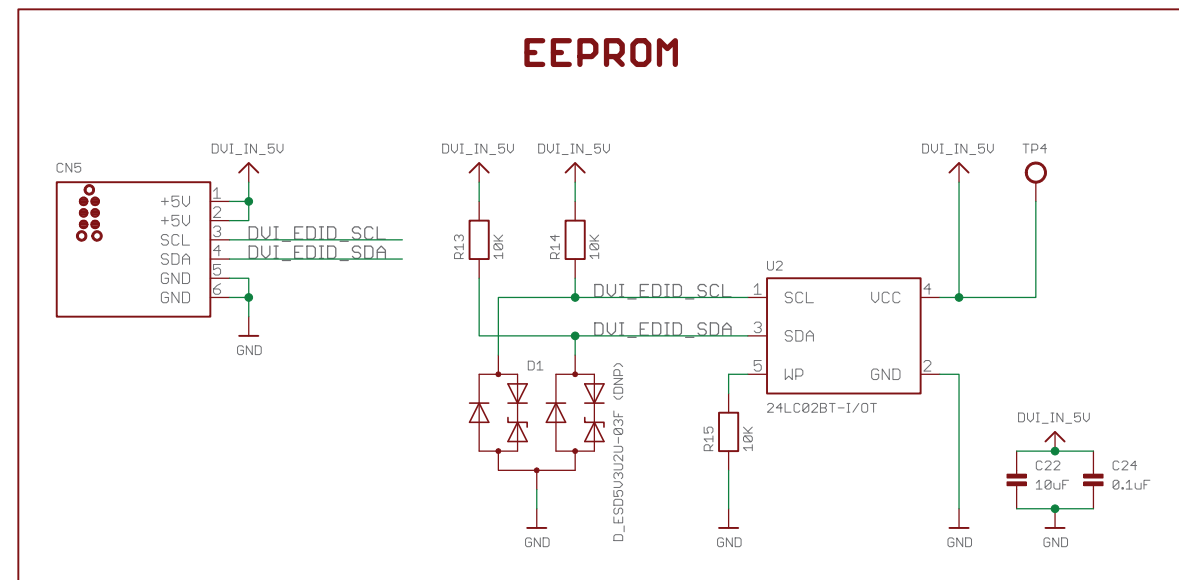
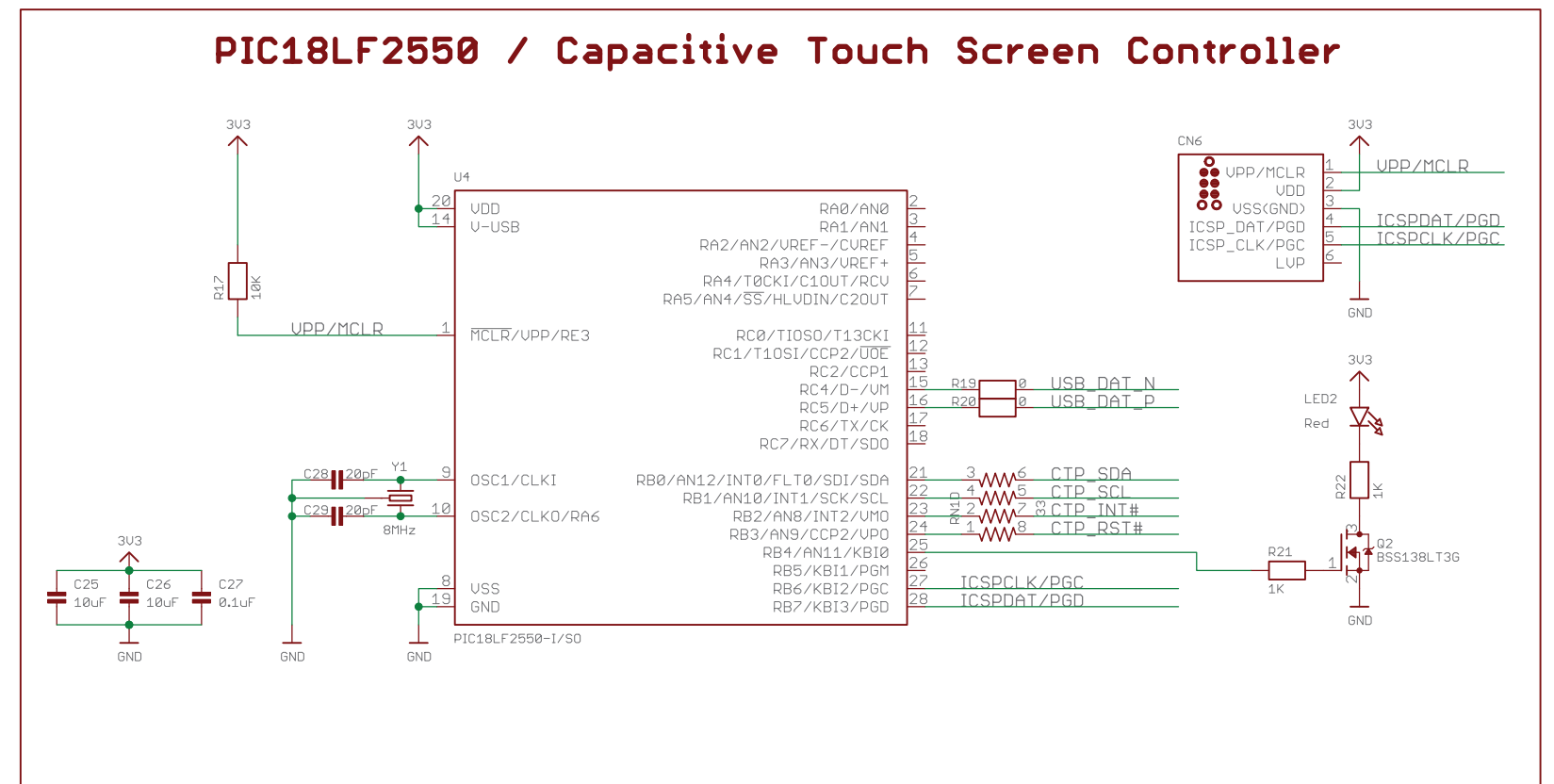
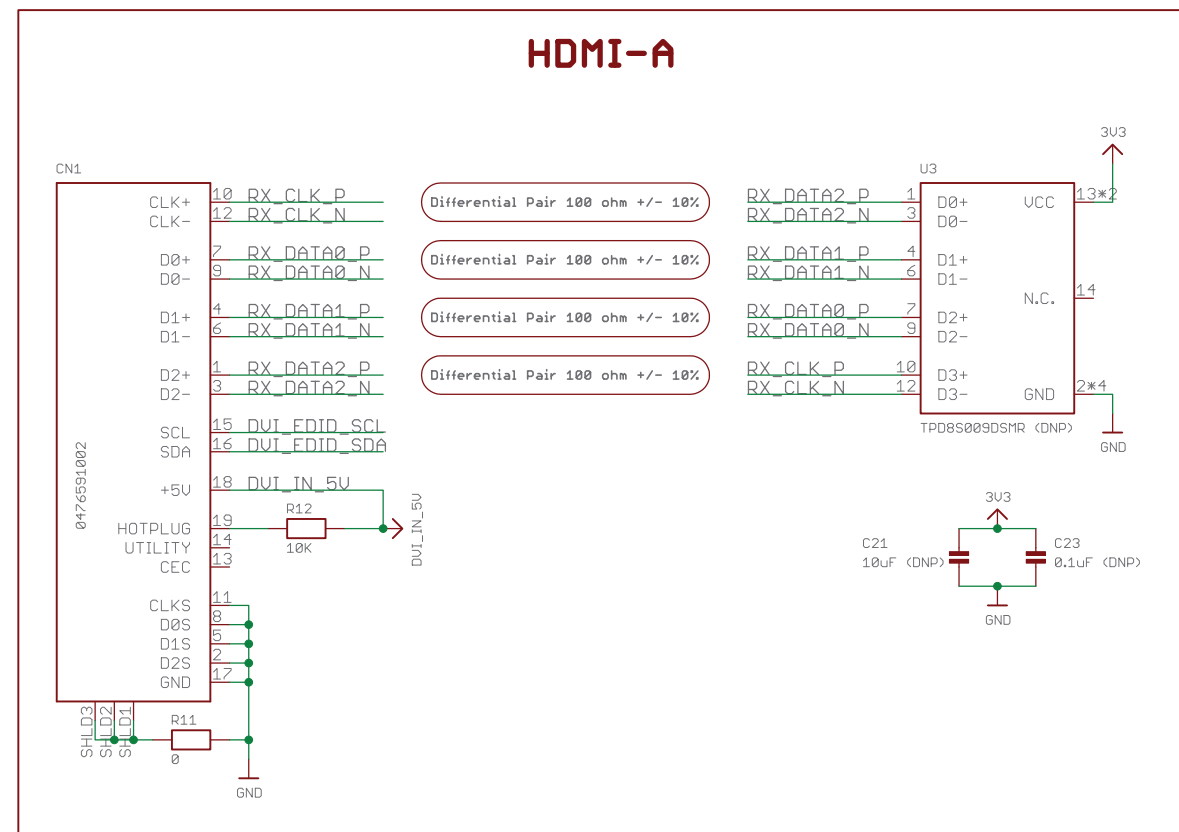


Document Revision History

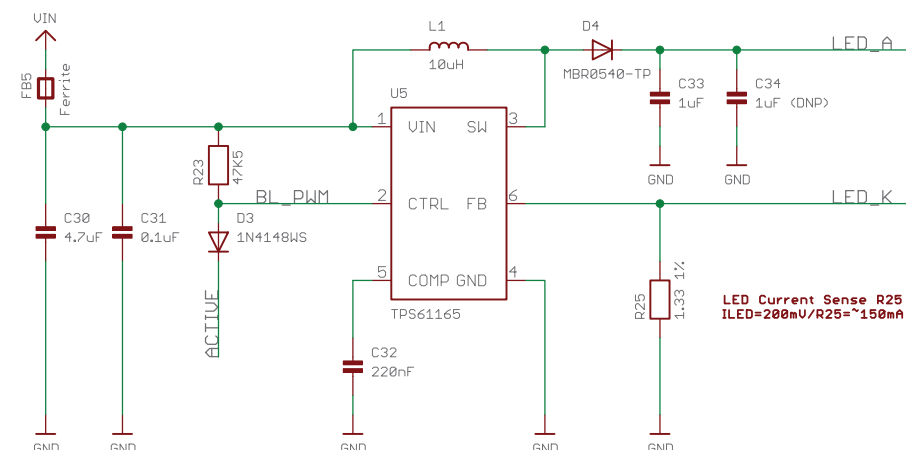
Revision	Date	Description	Changed By
0	04/22/2021	Initial Release	ZP
1	11/12/2021	CTP IC FT5426 Version Update	ZP



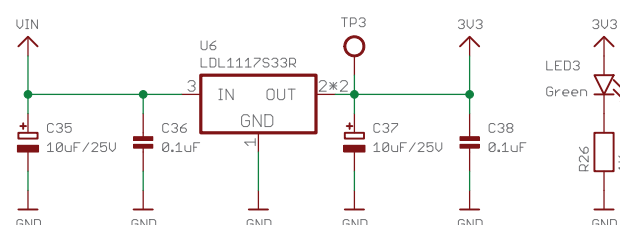




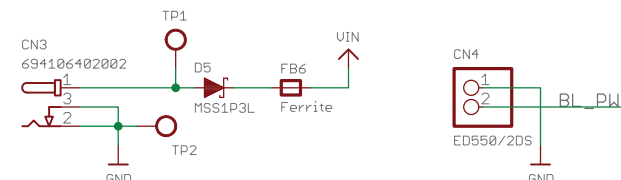
Backlight LED Driver



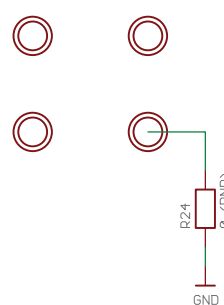
3.3V Regulator 1.2A



UIN / PWM



Mounting Holes 3.2mm Plated



BOARD VERSIONS

CTU Version: (DNP) - C21, C23, C34, CN5, CN6, D1, D2, R2, R3, R55, R18, R24, U3

Non-Touch Version: (DNP) - C18, C21, C25, C26, C20, C23, C27, C28, C29, C34, CN2, CN5, CN6, CTP1, D1, D2, LED2, Q2, R2, R3, R17, R55, R7, R8, R9, R21, R22, R10, R16, R19, R20, R24, R18, RN1, U3, U4, Y1

Electrical Characteristics

Item	Symbol	Condition	Min.	Typical	Max.	Unit
Operating Temperature Range	T _{OP}	Absolute Max	-20	-	+70	°C
Storage Temperature Range	T _{ST}	Absolute Max	-30	-	+80	°C
Backlight PWM Voltage	V _{PWM}	-	2.5	3.3	5.5	V
Backlight PWM Frequency	f _{PWM}	V _{PWM} = 3.3V	5	-	100	kHz
Module Supply Voltage	V _{DD}	-	5.0	-	7.0	V
Module Supply Current	I _{DD}	V _{DD} = 5V	-	1.2	1.5	A
		V _{DD} = 7V	-	0.9	1.2	A

HDMI Receiver Information

On-board Texas Instruments TFP401A Receiver. To view the full TFP401A specification, please download it by accessing the link: <http://www.ti.com/lit/ds/slds190a/slds190a.pdf>

Technical Resource

3D Model	TFT Panel Used	Display Type	Luminance Rating	Optimal Viewing Angle	Touch Panel
NHD-7.0-HDMI-HR-RSXP	NHD-7.0-1024600AF-LSXP	IPS, Sunlight Readable	1100 cd/m ²	85° all angles	No Touch
NHD-7.0-HDMI-HR-RSXP-CTU	NHD-7.0-1024600AF-LSXP-CTP	IPS, Sunlight Readable	900 cd/m ²	85° all angles	PCAP (USB-HID)

Quality Information

Test Item	Content of Test	Test Condition	Note
High Temperature storage	Endurance test applying the high storage temperature for a long time.	+80°C, 96 hrs.	2
Low Temperature storage	Endurance test applying the low storage temperature for a long time.	-30°C, 96 hrs.	1,2
High Temperature Operation	Endurance test applying the electric stress (voltage & current) and the high thermal stress for a long time.	+70°C, 96 hrs.	2
Low Temperature Operation	Endurance test applying the electric stress (voltage & current) and the low thermal stress for a long time.	-20°C, 96 hrs.	1,2
High Temperature / Humidity Operation	Endurance test applying the electric stress (voltage & current) and the high thermal with high humidity stress for a long time.	+60°C, 90% RH, 96 hrs.	1,2
Thermal Shock resistance	Endurance test applying the electric stress (voltage & current) during a cycle of low and high thermal stress.	-20°C, 30min->25°C, 5min -> 70°C, 30min = 1 Cycle 10 cycles	
Vibration test	Endurance test applying vibration to simulate transportation and use.	10-55Hz, 15mm amplitude. 60 sec in each of 3 directions X,Y,Z For 15 minutes	3
Static electricity test	Endurance test applying electric static discharge.	Air: $V_s=\pm 8KV$, Contact: $V_s=\pm 4KV$ 10 Times	

Note 1: No condensation to be observed.

Note 2: Conducted after 4 hours of storage at 25°C, 0%RH.

Note 3: Test performed on product itself, not inside a container.

