G240HW01 V100 Engineering Change Request

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2023/09

AUO Display+

G240HW01 V100 EC Notice

Purpose :

Since Tcon IC (12304 Z03) will be EOL. In order to keep supply smoothly, ADP will Change Original Tcon IC (12304 Z03) to new Tcon IC (12303 Z09), for longevity support.

Replacement model :

G240HW01 V100=> G240HW01 V104, new product specification need to be changed as below.

- Display Characteristics: Only the Model Name would be changed, the other part of spec would not be different.
- EC Change

Items	Before (G240HW01 V100)	After (G240HW01 V104)
Tcon IC	AUO 12304 Z03	AUO 12303 Z09
Protection Film	Hard Protection Film	Soft Protection Film

Verification schedule:

1. Verification samples will come out at the 2023/07.
2. RA / EMI / ESD all test passed
3. Phase in => 2024/Q1

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General Display Characteristics

Panel supplier	MP (now)	EC model
Mode	VA	VA
Model name	G240HW01 V100	G240HW01 V104
Resolution	1920 x 1080	1920 x 1080
Active Area(mm)	531.36 x 298.89	531.36 x 298.89
Outline dimension(mm) (W x H x D)	430.4 x 254.6 x 12	430.4 x 254.6 x 12
Treatment	Anti-Glare, 3H	Anti-Glare, 3H
Contrast Ratio (Typ.)	5000: 1	5000: 1
Viewing Angle (CR≥10) (Typ.)	89/89/89/89	89/89/89/89
Response Time (Tr+Td) (Typ.)	25ms	25ms
Brightness (cd/m²) (Typ.)	300	300
NTSC	72%	72%
Weight (g)	2,130	2,130
Interface	Dual channel LVDS	Dual channel LVDS
Operating Temperature	-20~70 °C	-20 to +70
Storage Temperature	-30 to +80	-30 to +80
LED life time	50K	50K
LED driver board	Y	Y
Color Coordinates	x:0.313 ; Wy:0.329	x:0.313 ; Wy:0.329

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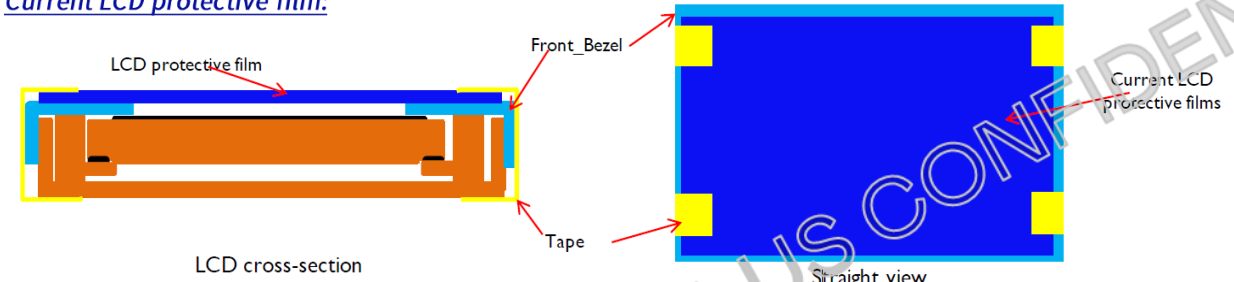
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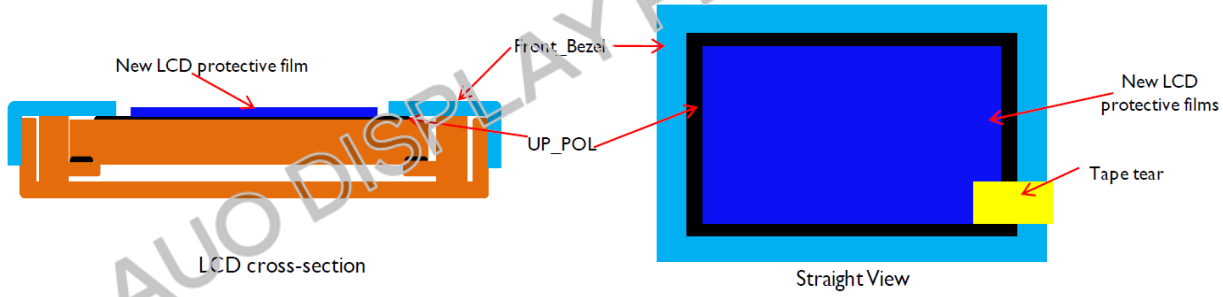
Hard Protection Film Changed to Soft Protection Film

- Soft Protection Film could decrease particle effect and scratch rate.,

Current LCD protective film:



New LCD protective film





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RA report

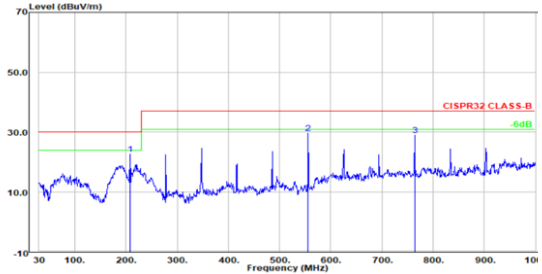
Product No	G240HW01 V1		Part No	97.24G01.104	Applicant/Dept	郑习习/RRPBF3			Judgement	
Test Purpose	G240HW01 V104 RA				Application Date	2023/08/15			PASS	
					Input Date	2023/08/16				
RA No	D230816001		Product Stage	DVT	Issue Date	2023/08/16				
Test Item	Test Condition	Test Panel			Test Result					
THB	50°C 80% 500h	No	Chip_Id	Shipping_No	T0★	T100★	T200★	T300★	T500	Judgement
		D2308160010001		U13A6EX3TKZZZS0104	OK	OK	OK	OK	OK	PASS
		D2308160010002		U13A6EX3TFZZZS0104	OK	OK	OK	OK	OK	PASS
		D2308160010003		U13A6EX32DZZZS0104	OK	OK	OK	OK	OK	PASS
THB	60°C 90% 500h	No	Chip_Id	Shipping_No	T0★	T100★	T200★	T300★	T500	Judgement
		D2308160010004		U13A6EX4YGZZZS0104	OK	OK	OK	OK	OK	PASS
		D2308160010005		U13A6EX61GZZZS0104	OK	OK	OK	OK	OK	PASS
		D2308160010006		U13A6EX3ZEZZZS0104	OK	OK	OK	OK	OK	PASS
HTO	70°C 500h	No	Chip_Id	Shipping_No	T0★	T100★	T200★	T300★	T500	Judgement
		D2308160010007		U13A6EX4YFZZZS0104	OK	OK	OK	OK	OK	PASS
		D2308160010008		U13A6EX4YJZZZS0104	OK	OK	OK	OK	OK	PASS
		D2308160010009		U13A6EX3PCZZZS0104	OK	OK	OK	OK	OK	PASS
LTO	-20°C 500h	No	Chip_Id	Shipping_No	T0★	T100★	T200★	T300★	T500	Judgement
		D2308160010010		U13A6EX3TMZZZS0104	OK	OK	OK	OK	OK	PASS
		D2308160010011		U13A6EX3ZHZZZS0104	OK	OK	OK	OK	OK	PASS
		D2308160010012		U13A6EX32CZZZS0104	OK	OK	OK	OK	OK	PASS
TST	-20°C(30min) ~ 60°C(30min), 100 cycles judge, 200 cycles reference, 200cycles	No	Chip_Id	Shipping_No	C0★	C100★	C200★			Judgement
		D2308160010013		U13A6EX32AZZZS0104	OK	OK	OK			PASS
		D2308160010014		U13A6EX32BZZZS0104	OK	OK	OK			PASS
		D2308160010015		U13A6EX3HKZZZS0104	OK	OK	OK			PASS
HTS	80°C 300h	No	Chip_Id	Shipping_No	T0★	T100★	T200★	T300★		Judgement
		D2308160010016		u13a6ex3nhzzzs0104	OK	OK	OK	OK		PASS
		D2308160010017		u13a6ex3thzzzs0104	OK	OK	OK	OK		PASS
		D2308160010018		u13a6ex2lezzzs0104	OK	OK	OK	OK		PASS
LTS	-30°C 300h	No	Chip_Id	Shipping_No	T0★	T100★	T200★	T300★		Judgement
		D2308160010019		u13a5jv0qbzzzs0104	OK	OK	OK	OK		PASS
		D2308160010020		u13a6ex4ykzzzs0104	OK	OK	OK	OK		PASS
		D2308160010021		u13a6ex3zfzzzs0104	OK	OK	OK	OK		PASS

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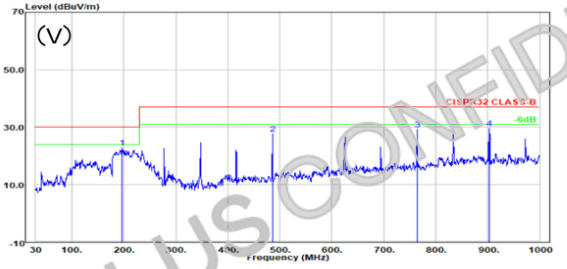
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EMI/ESD Report



	Freq	Read Level	Level	Over Limit	Limit Line	Remark
	MHz	dBuV	dBuV/m	dB	dBuV/m	
1	208.480	21.89	22.76	-7.24	30.00	
2 PP	555.740	17.04	29.76	-7.24	37.00	
3	764.290	13.72	28.95	-8.05	37.00	



	Freq	Read Level	Level	Over Limit	Limit Line	Remark
	MHz	dBuV	dBuV/m	dB	dBuV/m	
1 PP	195.870	15.71	22.84	-7.16	30.00	
2	485.900	16.14	27.75	-9.25	37.00	
3	764.290	14.19	29.25	-7.75	37.00	
4	903.000	12.44	29.70	-7.30	37.00	

☐ Record ☒ ESD check ☐ Customer check

File Name	20230901-5D2390002-G240HW01 V1			Test Ambient:	26 ℃ / 49% RH		
Application Sec.	RRCAC3	User	黃泓儒	Ext.	86-503004	Sample Received	2023/9/19
Model Name	G240HW01 V1	Quantity (pcs)	3	Panel S/N	U13A6EX34KZZ-ZS0104		(#1)
					U13A6EX32FZZ-ZS0104		(#2)
					U13A6EX34KZZ-ZS0104		(#3)
Examiner	王淑源	Ext.	504202	Date Tested	2023/9/20	Date Completed	2023/9/20
Test standard	■ AUO Fixed Point Position Rules ☐ AUO IC Nearly Point Position Rules ☐ Customer Rules						
Stage	TEST		Resolution	Frame rate (Hz)	Color depth (bit)	Pixel clock (MHz)	Level
			1920 X 1080				B
XPCB Part №		Layout №		PCB Vendor	N/A		
YPCB Part №		Layout №		PCBA Vendor	N/A		
C/B Part №		Layout №		ASIC			
Inverter Part №	NA	Inverter Vendor	NA	SOURCE IC			
				GATE IC			
Purposes	其他，新產品驗證						
Test Specification: Test Level Requirement: B						Results	PASS
Test Standard:	AUO Fixed Point Position Rules (8 points, 25 times/point)						

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