G270ZAN01.101 to 104
EC Notice

2023/08/31

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Summary

➢ Plan schedule:



Item	EC item	As is	To be	Background and Purpose
1	LED Driver IC	NT50172	BD9276	The LED driver IC (NT50172) will be EOL. In order to keep supply smoothly, we would like to adopt new PCBA circuit with new LED driver IC (BD9276).

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EC Item: LED Driver IC

Spec. Difference

- Due to LED Driver IC EC, dimming duty spec will be changed as below.

As Is

Symbol	Parameter	Min.	Typ.	Max.	Unit	Remark
VDD	Input Voltage	21.6	24.0	26.4	[Volt]	
I_{VDD}	Input Current		2.05	2.46	[A]	100% PWM Duty
P_{VDD}	Power Consumption		49.20	59.04	[Watt]	100% PWM Duty
Irush $_{LED}$	Inrush Current	-	-	6	[A]	at rising time=470us
F_{PWM}	Dimming Frequency		0.2	20	[kHz]	
	Swing Voltage	3.0	3.3	5.0	V	
	Dimming Duty Cycle	10	-	100	%	
$I_{F\ (one\ channel)}$	LED Forward Current		70		mA	Ta = 25°C
$V_{F\ (one\ channel)}$	LED Forward Voltage	-	-	-	Volt	
		-	33.0	37.4	Volt	I_F =70 mA, Ta = 25°C 10 channel/LB & 2 LB/Panel
		-	3.0	3.4		
$P_{LED\ (One\ LB)}$	LED Power Consumption	-	23.10	26.18	Watt	I_F =70 mA, Ta = 25°C LBx2 : 26.18x2=52.4(Max)
LED Lifetime		50,000			Hrs	I_F=70mA, Ta= 25°C

To Be

Symbol	Parameter	Min.	Typ.	Max.	Unit	Remark
VDD	Input Voltage	21.6	24.0	26.4	[Volt]	
I_{VDD}	Input Current		2.05	2.46	[A]	100% PWM Duty
P_{VDD}	Power Consumption		49.20	59.04	[Watt]	100% PWM Duty
Irush $_{LED}$	Inrush Current	-	-	6	[A]	at rising time=470us
F_{PWM}	Dimming Frequency		0.2	20	[kHz]	
	Swing Voltage	3.0	3.3	5.0	V	
	Dimming Duty	5	-	100	%	200Hz~5KHz
	Dimming Duty	15	-	100	%	5KHz~20KHz
$I_{F\ (one\ channel)}$	LED Forward Current		70		mA	Ta = 25°C
$V_{F\ (one\ channel)}$	LED Forward Voltage	-	-	-	Volt	
		-	33.0	37.4	Volt	I_F =70 mA, Ta = 25°C 10 channel/LB & 2 LB/Panel
		-	3.0	3.4		
$P_{LED\ (One\ LB)}$	LED Power Consumption	-	23.10	26.18	Watt	I_F =70 mA, Ta = 25°C LBx2 : 26.18x2=52.4(Max)
LED Lifetime		50,000			Hrs	I_F=70mA, Ta= 25°C

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EC Item: LED Driver IC RA

- RA Pass (Reference)

RA Test Summary Report

保管單位 Storage	RA
保存年限 Retention Period	依產品適用範圍保存(參照：AUOQP-05-002 紀錄管制流程)

Product No	G270ZAN01.2		Part No	97.27G01.200	Applicant/Dept	李海涛/RGMRB4			Judgement
Test Purpose	G270ZAN01.2 RA				Application Date	2021/12/27			PASS
					Input Date	2022/02/11			
RA No	R211229020		Product Stage	DVT	Issue Date	2022/02/11			
Test Item	Test Condition	Test Panel			Test Result				
High Temperature Operation	50°C 300h	No	Chip_Id	Shipping_No	T0★	T100★	T200★	T300★	Judgement
		R2112290200001		701B3DC73FZZZS0100	OK	OK	OK	OK	PASS
		R2112290200002		701B3DC72EZZZS0100	OK	OK	OK	OK	PASS
		R2112290200003		701B3DC7ZEZZZS0100	OK	OK	OK	OK	PASS
Low Temperature Operation	0°C 300h	No	Chip_Id	Shipping_No	T0★	T100★	T200★	T300★	Judgement
		R2112290200004		701B3DC73DZZZS0100	OK	OK	OK	OK	PASS
		R2112290200005		701B3DC74FZZZS0100	OK	OK	OK	OK	PASS
		R2112290200006		701B3DC7ZFZZZS0100	OK	OK	OK	OK	PASS
Temperature Humidity Bias	50°C 80% 300h	No	Chip_Id	Shipping_No	T0★	T100★	T200★	T300★	Judgement
		R2112290200007		701B3DC73BZZZS0100	OK	OK	OK	OK	PASS
		R2112290200008		701B3DC73EZZZS0100	OK	OK	OK	OK	PASS
		R2112290200009		701B3A59ABZZZS0100	OK	OK	OK	OK	PASS
Thermal Shock Test	(-20℃(0.5h)~60℃ (0.5h) 100cycles	No	Chip_Id	Shipping_No	C0★	C100★			Judgement
		R2112290200010		701B3DC72DZZZS0100	OK	OK			PASS
		R2112290200011		701B3DC71CZZZS0100	OK	OK			PASS
		R2112290200012		701B3DC7XAZZZS0100	OK	OK			PASS

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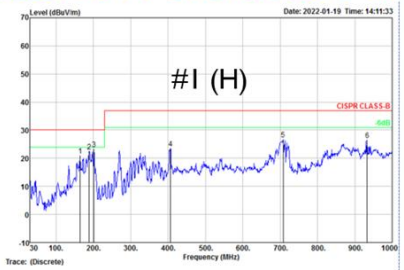
EC Item1 LED Driver IC EMI/ESD

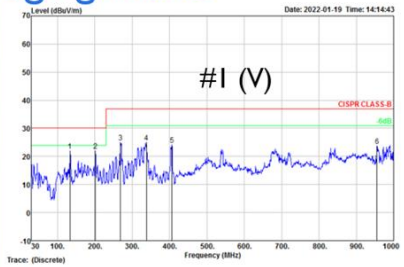
- EMI/ESD Pass (Reference)

G270ZAN01.2 EMI test Report

pattern: H characters in aging mode



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	
1	164.83	20.84	20.84	0.00	30.00	-9.16	Peak
2	189.08	22.52	22.52	0.00	30.00	-7.48	Peak
3 p	201.69	23.23	23.23	0.00	30.00	-6.77	Peak
4	406.36	23.44	23.44	0.00	37.00	-13.56	Peak
5	708.03	26.60	26.60	0.00	37.00	-10.40	Peak
6	933.07	26.58	26.58	0.00	37.00	-10.42	Peak



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	
1 p	133.79	22.03	22.03	0.00	30.00	-7.97	Peak
2	201.69	21.95	21.95	0.00	30.00	-8.05	Peak
3	268.62	24.93	24.93	0.00	37.00	-12.07	Peak
4	338.46	25.01	25.01	0.00	37.00	-11.99	Peak
5	406.36	24.18	24.18	0.00	37.00	-12.82	Peak
6	955.38	23.66	23.66	0.00	37.00	-13.34	Peak

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ESD Test Report Form

☐ Record ■ ESD check ☐ Customer check

File Name	20211228-5D21C0071-G270ZAN01.2			Test Ambient:	25 ℃ / 50% RH		
Application Sec.	PRSGA4	User	朱嘉昇	Ext.		Sample Received	2022/1/19
Model Name	G270ZAN01.2	Quantity (pcs)	3	Panel S/N	701B3DC7ZCZZ-ZS0100		(#1)
					701B3DC8JFZZ-ZS0100		(#2)
					701B3DC74EZZ-ZS0100		(#3)
Examiner	王溪源	Ext.	8600-4202	Date Tested	2022/1/20	Date Completed	2022/1/20
Test standard	■ AUO Fixed Point Position Rules ☐ AUO IC Nearly Point Position Rules ☐ Customer Rules						

Stage	DVT		Resolution	Frame rate (Hz)	Color depth (bit)	Pixel clock (MHz)	Level
			3840 X 2160	60	8	586	B
XPCB Part №		Layout №		PCB Vendor	健鼎		
YPCB Part №		Layout №		PCBA Vendor	台表		
C/B Part №	55.27G01.C19	Layout №	27G01-C0F	ASIC	AUO-1H507 V01		
Inverter Part №	NA	Inverter Vendor	NA	SOURCE IC	46.S1446.074		
				GATE IC	GOA		
Purposes	DVT , G270ZAN01.2						

Test Specification: Test Level Requirement: B		Results
Test Standard:	AUO Fixed Point Position Rules (8 points, 25 times/point)	PASS

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