MODELNO:RST601108-V0

ISSUEDDATE:2023-03-20

VERSION:A0

■ **PreliminarySpecification**
□ **FinalProductSpecification**

Customer:

Approvedby	Notes

Confirmed:

Preparedby	Checkedby	Approvedby

Thistechnicalspecificationissubjectedtochangewithoutnotice.

TableofContents

RecordofRevision

Rev	IssueDate	Description	Editor
A0	2023-03-20	Draft	WuJiaWei

1GeneralSpecifications

Feature		Spec	Remark
DisplaySpec	Screen Size (inch)	6.01	
	DisplayMode	AMOLED	
	Resolution(dot)	1080(W)×2160(H)	
	ActiveArea(mm)	68.256(W)×136.512 (H)	
	PixelPitch (um)	63.2 (W)×63.2(H)	
	TechnologyType	LTPS	
	ColorDepth	16.7M	
	Interface	MIPI 4LANE	
	Surface Treatment	Hard Coating	
Mechanical Characteristics	TP Outline	76.40(W)x156.60(H)x2.0(D)	
	ModuleOutline Dimension(WxHxD)(mm)	70.066(W)x142.297(H)x0.773(D)	
	Weight (g)	TBD	
Electronic	DriverIC(Type)	CH13721C	
	TouchIC(Type)	CST148	

Note 1: Requirements on Environmental Protection: RoHS.

2Input/outputTerminals

2.1 Main FPC Pin Assignment

FPCconnector: FH26-39S-0.3SHW.

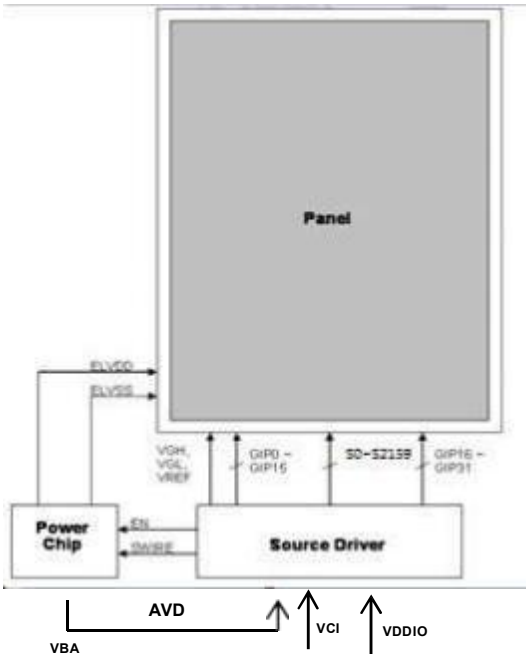
No	Symbol	I/O	Description
1	ELVDD	P	PositivePowersupplyforEL
2	ELVSS	P	NegativePowersupplyforEL
3	ELVDD	P	PositivePowersupplyforEL
4	ELVSS	P	NegativePowersupplyforEL
5	ELVDD	P	PositivePowersupplyforEL
6	ELVSS	P	NegativePowersupplyforEL
7	TP_INT	I	INTPinorTP
8	GND	GND	GND
9	TP_RST	I	Reset Pin for TP, Active
10	D3N	I/O	MIPIdatalane
11	TP_SCL	I	SCL PinforTP
12	D3P	I/O	MIPIdatalane
13	TP_SDA	I/O	SDA pinforTP
14	GND	GND	GND

15	TP3V3	P	AnalogPowerforTP
16	D0N	I/O	MIPIdatalane
17	NC		NC
18	D0P	I/O	MIPIdatalane
19	VCI	P	Power Supply for analogCircuit
20	GND	GND	GND
21	AVDD	P	External Power inputforAVDD
22	CLKN	I	MIPIclocklane
23	VDDIO	P	Power Supply for displaylogiccircuit
24	CLKP	I	MIPIclocklane
25	RESET	I	Display reset. Activelow
26	GND	GND	GND
27	ERR_FG	O	Error status of MIPI'sHSDT
28	D1N	I/O	MIPIdatalane
29	TE	I	Sync SignalforpreventingTearingEffect
30	D1P	I/O	MIPIdatalane

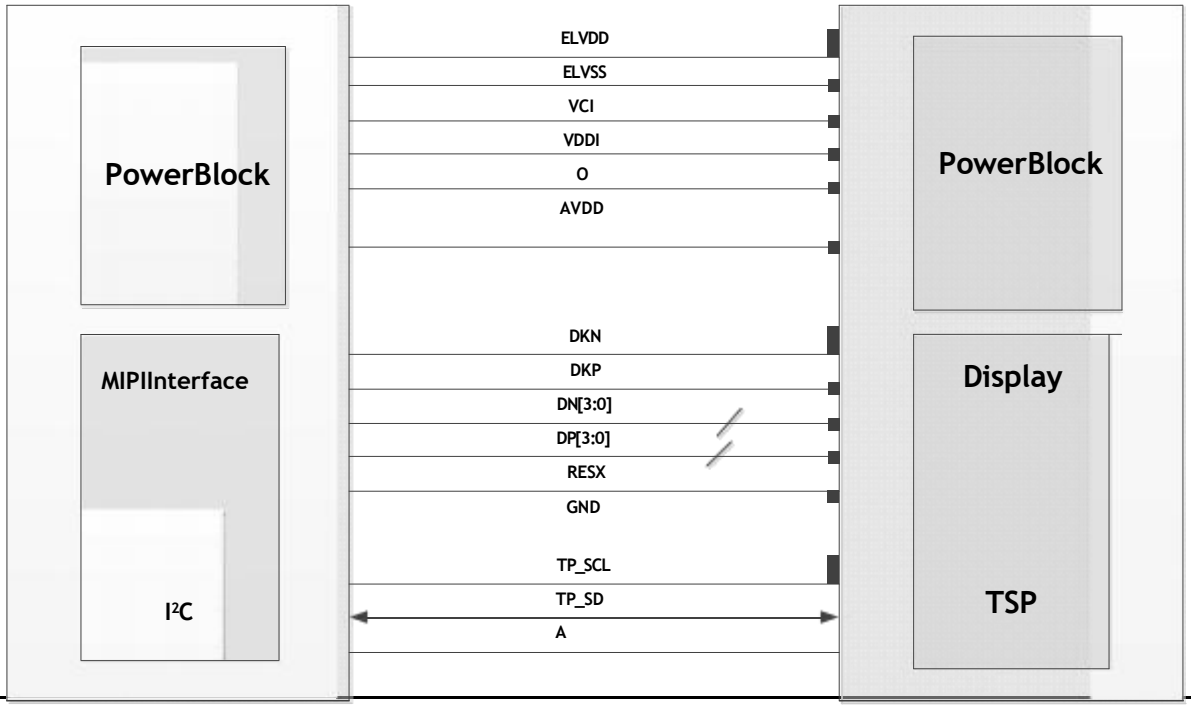
31	AVDD_EN	O	DC/DC Power EnablePin
32	GND	GND	GND
33	SWIRE	O	DC/DC Power IC S-WireCTRLPin
34	D2N	I/O	MIPIdatalane
35	NC		NC
36	D2P	I/O	MIPIdatalane
37	NC		NC
38	GND	GND	GND
39	MTP	P	Power supplyforMTPProgrammingorErase.If it is not used, pleaseletitopen

Note: I=Input; O=Output; P=Power; I/O=Input / Output

2.2 Circuitblock diagram (Display)



2.3 MCU and Display Module Interface Configuration



3AbsoluteMaximumRatings

3.1 DrivingAMOLEDPanel

MaximumRatings (VoltageReferencedtoVSS) Vss=0V, Ta=25℃

Item	Symbol	MIN	MAX	Unit
AnalogPowersupply	VCI	-0.3	+5.5	V
LogicPowersupply	VDDIO	-0.3	+5.5	V
Positive Power Input	ELVDD	-0.3	+6.6	V
Negative PowerInput	ELVSS	-6.6	+0.3	V
AnalogPowersupply	AVDD	4.5	6.5	V

Note: FunctionaloperationshouldsatisfythelimitsintheElectricalCharacteristicstablesorPin Descriptionsection. Ifthemoduleexceedstheabsolutemaximumratings, permanentdamagemayoccur. Besides, ifthemoduleisoperatedwiththeabsolutemaximumratingsforalongtime, thereliabilitymayalso drop.

4ElectricalCharacteristics

4.1 DrivingAMOLEDPanel

Item		Symbol	MIN	TYP	MAX	Unit
LogicPowersupply		VDDIO	1.65	1.80	3.3	V
AnalogPowersupply		VCI	2.75	3	3.30	V
ELVDDSupplyVoltage		ELVDD	4.3	4.4	4.5	V
ELVSSSupplyVoltage		ELVSS	-2.7	-2.6	-2.5	V
Interface operating voltage		AVDD	6.3	6.4	6.5	
InputSignal Voltage	HighLevel	VIH	0.80*VDDIO	-	VDDIO	V
	LowLevel	VIL	0.00	-	0.20*VDDIO	V
Output Signal Voltage	HighLevel	VOH	0.80*VDDIO	-	VDDIO	V
	LowLevel	VOL	0.00	-	0.20*VDDIO	V
Normal		I_{ELVDD}	-	-	147	mA
		I_{ELVSS}	-	-	114	mA
		I_{VCI}	-	-	3	mA
		I_{VDDIO}	-	-	27	mA
		I_{avdd}	-	-	12	mA
Stand-by		I_{VCI}	-	-	TBD	uA
		I_{VDDIO}	-	-	TBD	uA

Ta=25℃

Note1: The input digital voltage is the I/O reference voltage.

Note2: VDDIOusuallyrangesfrom 1.65Vto 3.3 V. If VDDIO is changed, the remaining voltage needstobechangedtothesame voltage as VDDIO.

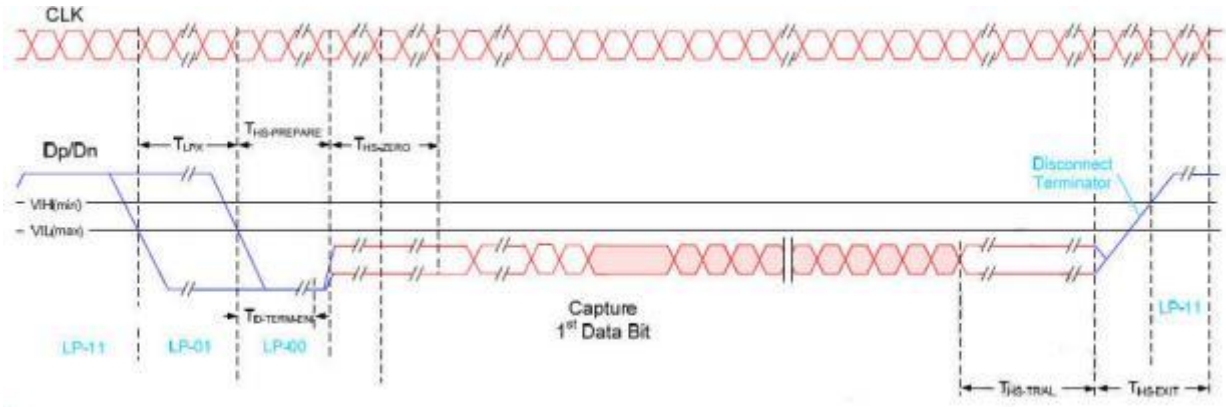
Note3: Under full white pattern, Video Mode 60.5Hz.

Note4: 60Hz command mode at 896 Mbps

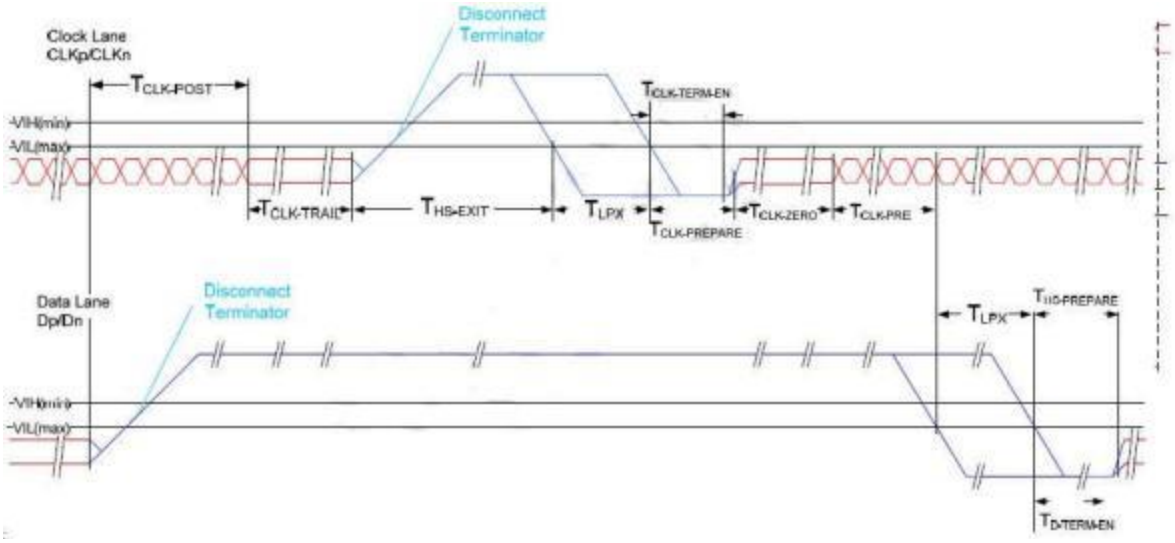
5ACCharacteristics

5.1 MIPIInterfaceCharacteristics

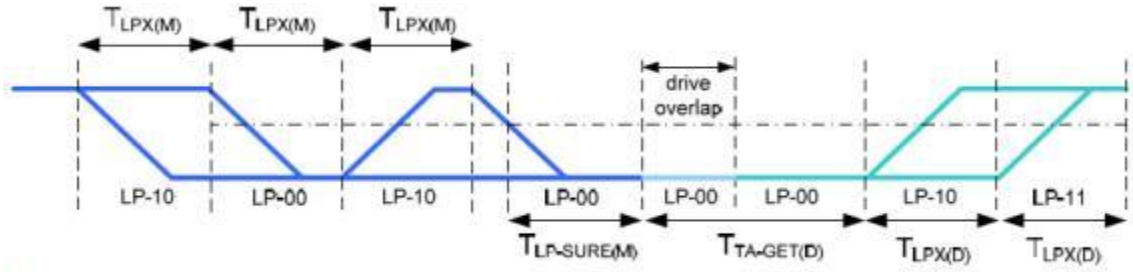
HS Data TransmissionBurst



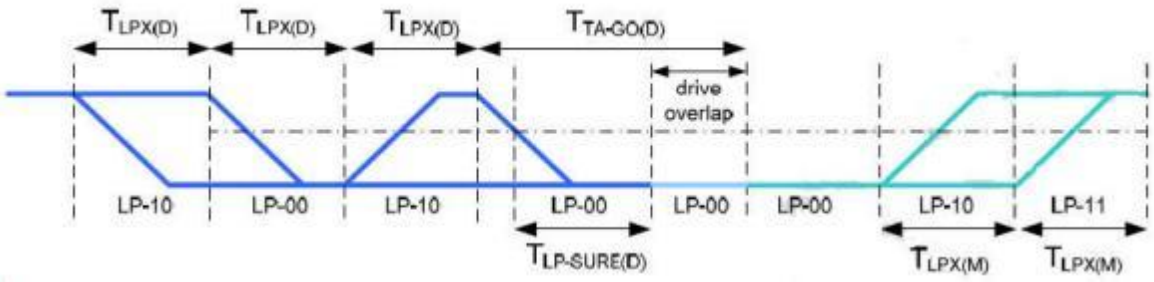
HSclocktransmission



TurnaroundProcedure



Bus turnaround (BAT) fromMPUtodisplaymoduletiming



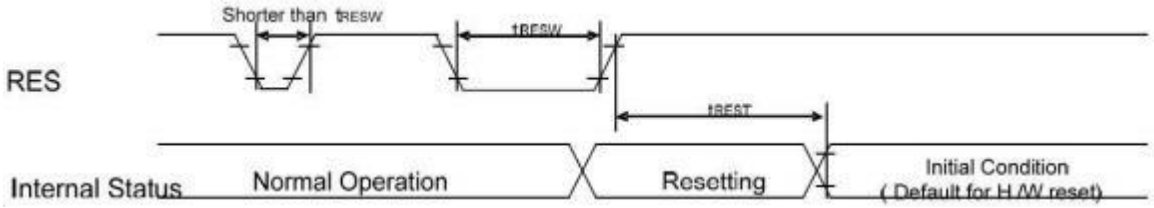
Timing Parameters：

Parameter	Description	Min	Typ	Max	Unit
$T_{CLK-POST}$	Time that the transmitter continues to send HS clock after the last associated Data Lane has transitioned to LP Mode. Interval is defined as the period from the end of $T_{HS-TRAIL}$ to the beginning of $T_{CLK-TRAIL}$.	60ns + 52*UI			ns
$T_{CLK-TRAIL}$	Time that the transmitter drives the HS-0 state after the last payload clock bit of a HS transmission burst.	60			ns
$T_{HS-EXIT}$	Time that the transmitter drives LP-11 following a HS burst.	**300**			ns
$T_{CLK-TERM-EN}$	Time for the Clock Lane receiver to enable the HS line termination, starting from the time point when Dn crosses $V_{IL,MAX}$.	Time for Dn to reach $V_{TERM-EN}$		38	ns
$T_{CLK-PREPARE}$	Time that the transmitter drives the Clock Lane LP-00 Line state immediately before the HS-0 Line state starting the HS transmission.	38		95	ns
$T_{CLK-PRE}$	Time that the HS clock shall be driven by the transmitter prior to any associated Data Lane beginning the transition from LP to HS mode.	8			UI
$T_{CLK-PREPARE}$ + $T_{CLK-ZERO}$	$T_{CLK-PREPARE}$ + time that the transmitter drives the HS-0 state prior to starting the Clock.	300			ns
$T_{D-TERM-EN}$	Time for the Data Lane receiver to enable the HS line termination, starting from the time point when Dn crosses $V_{IL,MAX}$.	Time for Dn to reach $V_{TERM-EN}$		35 ns +4*UI	
$T_{HS-PREPARE}$	Time that the transmitter drives the Data Lane LP-00 Line state immediately before the HS-0 Line state starting the HS transmission	40ns + 4*UI		85 ns + 6*UI	ns
$T_{HS-PREPARE}$ + $T_{HS-ZERO}$	**$T_{HS-PREPARE}$ + time that the transmitter drives the HS-0 state prior to transmitting the Sync sequence.**	**145ns + 10*UI**			**ns**
$T_{HS-TRAIL}$	Time that the transmitter drives the flipped differential state after last payload data bit of a HS transmission burst	60ns + 4*UI			ns

Parameter	Description	Min	Typ	Max	Unit	Notes
$T_{LPX(M)}$	Transmitted length of any Low-Power state period of MCU to display module	50		**150**	ns	1,2
$T_{TA-SURE(M)}$	Time that the display module waits after the LP-10 state before transmitting the Bridge state (LP-00) during a Link Turnaround.	$T_{LPX(M)}$		$2*T_{LPX(M)}$	ns	2
$T_{LPX(D)}$	Transmitted length of any Low-Power state period of display module to MCU	50		**150**	ns	1,2
$T_{TA-GET(D)}$	Time that the display module drives the Bridge state (LP-00) after accepting control during a Link Turnaround.		$5*T_{LPX(D)}$		ns	2
$T_{TA-GO(D)}$	Time that the display module drives the Bridge state (LP-00) before releasing control during a Link Turnaround.		$4*T_{LPX(D)}$		ns	2
$T_{TA-SURE(D)}$	Time that the MPU waits after the LP-10 state before transmitting the Bridge state (LP-00) during a Link Turnaround.	$T_{LPX(D)}$		$2*T_{LPX(D)}$	ns	2

5.2 Display RESETTimingCharacteristics

Resetinputtiming:



VDDIO=1.65 to 3.3V, VDD=2.7 to 3.6V, AGND=DGND=0V, Ta=-40 to 85℃

Timing Parameters

Symbol	Parameter	Related Pins	MIN	TYP	MAX	Note	Unit
t_{RESW}	*1) Reset low pulse width	RESX	10	-	-	-	μs
t_{REST}	*2) Reset complete time	-	-	-	5	When reset applied during Sleep in mode	ms
		-		-	120	When reset applied during Sleep out mode	ms

Note1. SpikecausedbyanelectrostaticdischargeonRESXlinedoesnotcauseirregularsystemresetaccordingtothetablebelow.

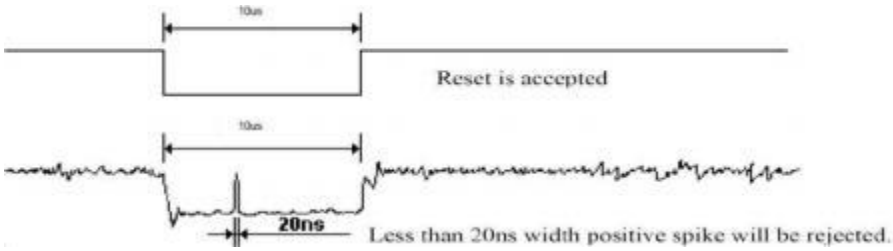
RESX Pulse	Action
Shorter than 5μs	Reset Rejected
Longer than 10μs	Reset
Between 5μs and 10μs	Reset starts (It depends on voltage and temperature condition.)

Note2. Duringtheresettingperiod,thedisplaywillbeblank(Thedisplayisenteringblankingsequence,

whosemaximumtimeis120ms,whenResetStartsinSleepOut–mode.Thedisplayremainsblankin SleepIn–mode)andthenreturntoDefaultconditionforH/Wreset.

Note3.DuringResetCompleteTime,datainOTPwillbelatchedtointernalregisterduringthisperiod.Thisloadingisdoneeverytimewhenthereis H/Wresetcompletetime(tREST)within5msafterarisingedgeofRESX.

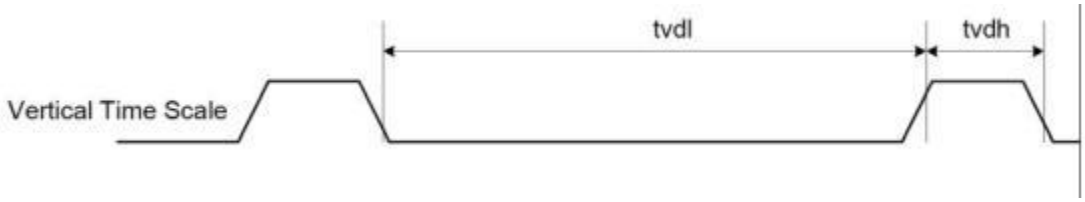
Note4 . SpikeRejectionalsoappliesduringavalidresetpulseasshownbelow:



Note5.Itisnecessarytowait5msecafterreleasingRESXbeforesendingcommands.AlsoSleepOutcommandcannotbesentfor120msec.

5.3 TETimingCharacteristics

Mode1， TheTearingEffectOutputlineconsistsofV- Blankinginformationonly.



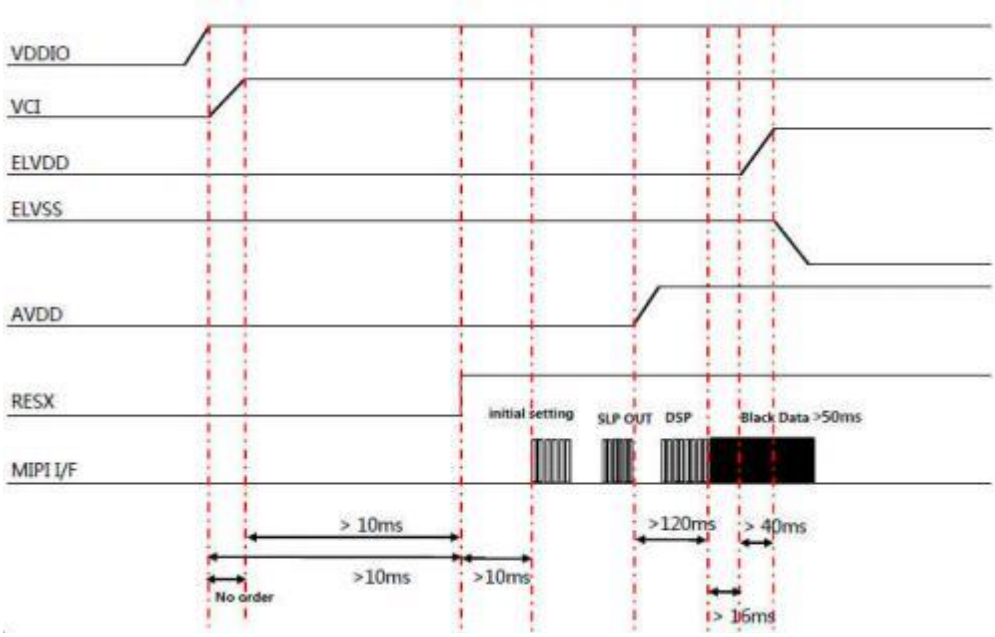
Tvdh = Thedisplayisnotupdatedfromtheframememory.

Tvdl= Thedisplayisupdatedfromtheframememory.

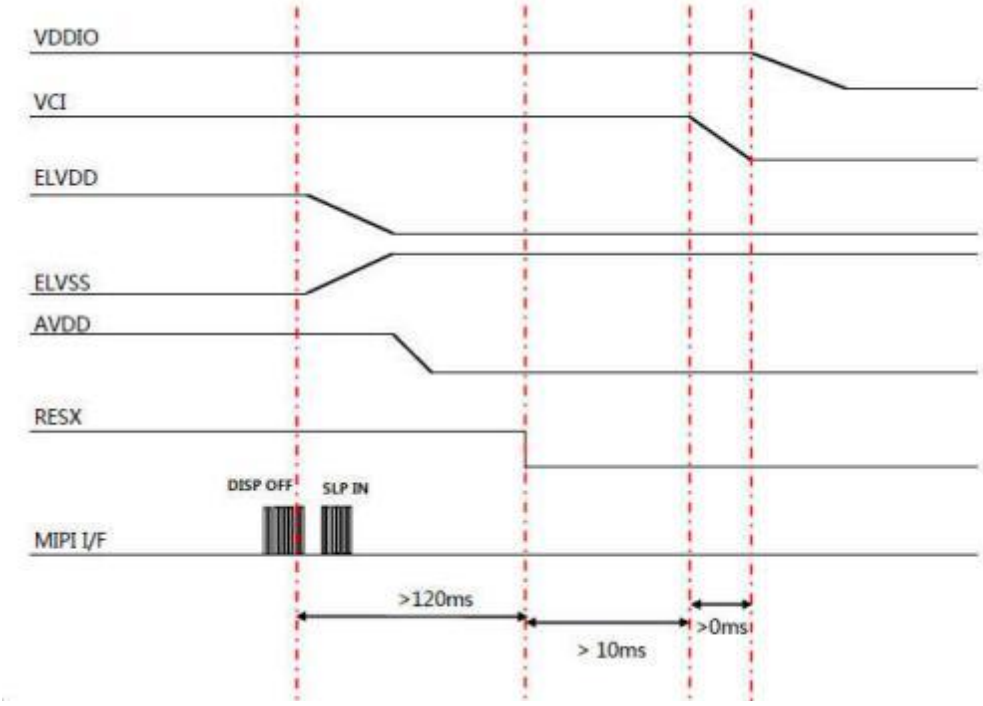
6RecommendedOperatingSequence

6.1Display Power on / off Sequence

6.1.1 PowerOnSequence



6.1.2 Power OffSequence



6.2 Brightnesscontrol

Use“ command5 1 0 0 h, dataxxh” toadjusttheManualBrightnessvalueofthedisplay:

Inprinciplerelationshipisthat 0 0 hvaluemeansthelowestbrightnessandFFhvalue meansthehighestbrightness.

Inst/Para	R/W	Address		Date Type	Description
		MIPI	Other		
BRTCTRL	W	51h	5100h	Hex	Valueform 0~255(FF)

7OpticalCharacteristicsOpticalSpecification

Item		Symbol	Condition	Min	Typ	Max	Unit	Remark
ViewAngle		θT	CR≥10	80	-		Degree	Note2 TestEquipment： CS2000A
		θB		80	-			
		θL		80	-			
		θR		80	-			
Contrast Ratio		CR	θ=0°	100000				Note1 Note3 Test Equipment： CS2000A
ResponseTime		T_{ON}	25℃			1	ms	Note1 Note4 TestEquipment： AdmesyMSE
		T_{OFF}						
Chromaticity	White	x		(0.280)	(0.305)	(0.320)		Test Equipment： CS2000A Note: Chromaticitycan be modified accordingtocustomer demand
		y		(0.295)	(0.315)	(0.335)		
	Red	x		(0.625)	(0.655)	(0.685)		
		y		(0.315)	(0.345)	(0.375)		
	Green	x		(0.210)	(0.250)	(0.290)		
		y		(0.670)	(0.710)	(0.750)		
	Blue	x		(0.105)	(0.135)	(0.165)		
		y		(0.030)	(0.060)	(0.090)		
Uniformity		U		75			%	Note1 Note6 Test Equipment： CS2000A
NTSC				90	100		%	Note5
Luminance		L	Normal	320	360		Cd/m^2	Note1 Note7 Test Equipment： CS2000A
Cross-talk						1.5	%	Note8 Test Equipment： CS2000A

Gamma			2.0	2.2	2.4		Gamma=2.2±0.2 TestEquipment： CS2000A

TestConditions:
theambienttemperatureis 25℃.

1. ThetestsystemsrefertoNote1 andNote2.

Note1: Definition of optical measurement system.

Theopticalcharacteristicsshouldbemeasuredindarkroom. The optical properties are measured atthecenterpointoftheAMOLEDscreen. All input terminals AMOLED panel must be ground when measuringthecenterareaofthepanel.

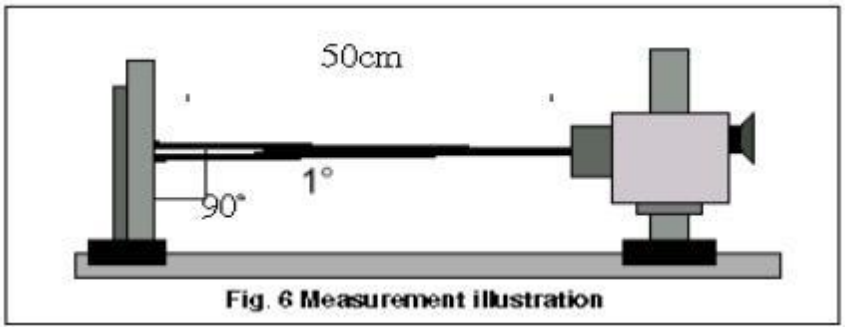


Fig. 6 Measurement illustration

Note 2: Definition of viewing angle range and measurement system.

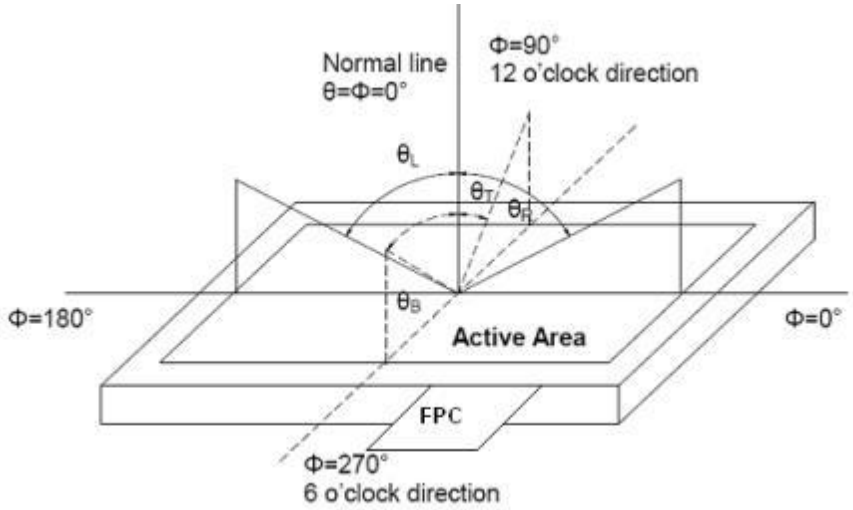


Fig. 1 Definitionofviewingangle

Note 3: Definitionofcontrastratio

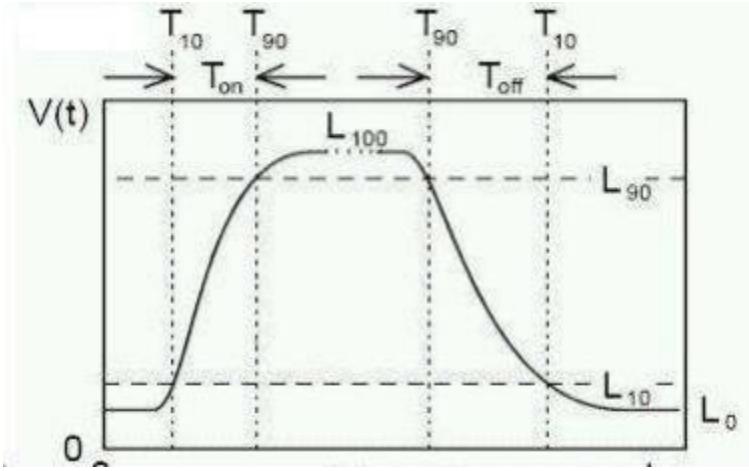
$$\text{Contrastratio(CR)} = \frac{\text{Luminance measured when LCD is on the "white" state}}{\text{Luminance measured when LCD is on the "Black" state}}$$

“Whitestate “:AstatewheretheAMOLEDshouldbedrivenbyVwhite.

“Blackstate”: AstatewheretheAMOLEDshouldbedrivenbyVblack.

Note 4: Definitionofresponsetime

TheresponsetimeisdefinedastheAMOLEDoptical switching time interval between “White” state and “Black” state. Risetime (T_{ON}) isthetimebetweenphotodetectoroutputintensitychangingfrom 10% to 90%. Andfalltime (T_{OFF}) isthetimebetweenphotodetectoroutputintensity changing from 90%to 10%.



Note 5: Definitionofcolorchromaticity (CIE1931)

Colorcoordinatesaremeasuredatthecenter point of AMOLED.

Note 6: Definitionofluminanceuniformity

Activearea is divided into 9 measuring areas (Refer Fig. 2). Every measuring point is placed at the centerofeachmeasuringarea.

LuminanceUniformity(U) = Lmin/ Lmax

L-------ActivearealengthW----- Activeareawidth

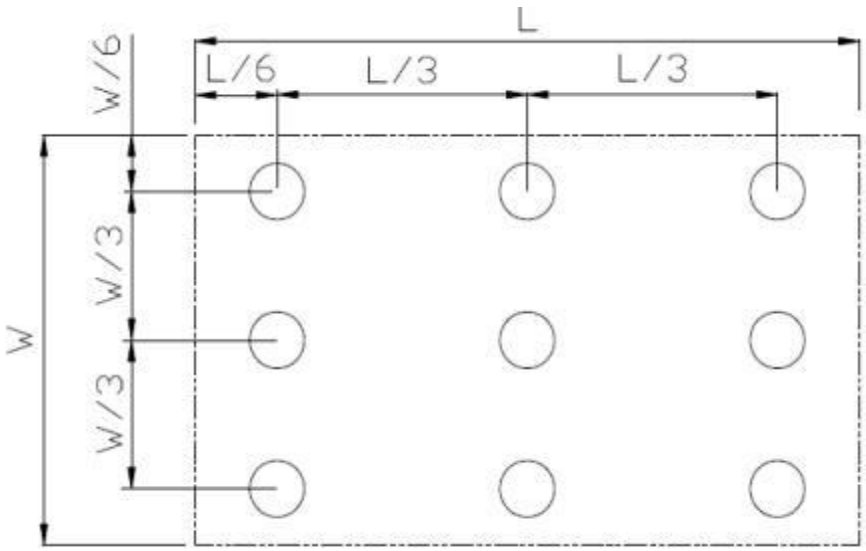


Fig. 2 Definitionofuniformity

Lmax: The measured maximum luminance of all measurement position.

Lmin: The measured minimum luminance of all measurement position.

Note 7: Definitionofluminance:

Measurethe luminance of white state at the center point.

Note 8: Cross Talk

A. Measureluminanceattheposition, P0.

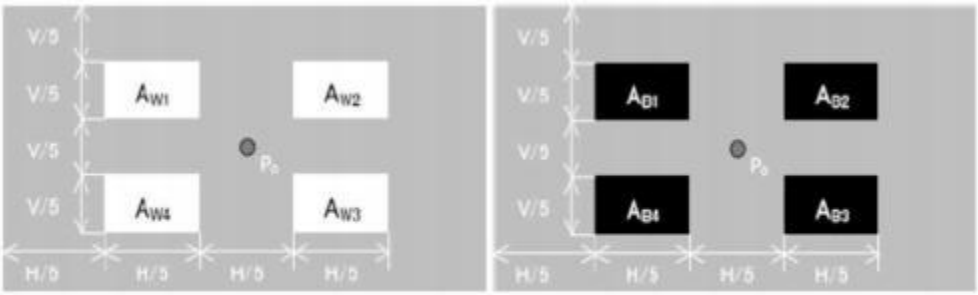
B. Calculatecrosstalkasbelowequation.

$$L_{\overline{W}\_OFF} = \frac{L_{W1} + L_{W2} + L_{W3} + L_{W4}}{4}$$

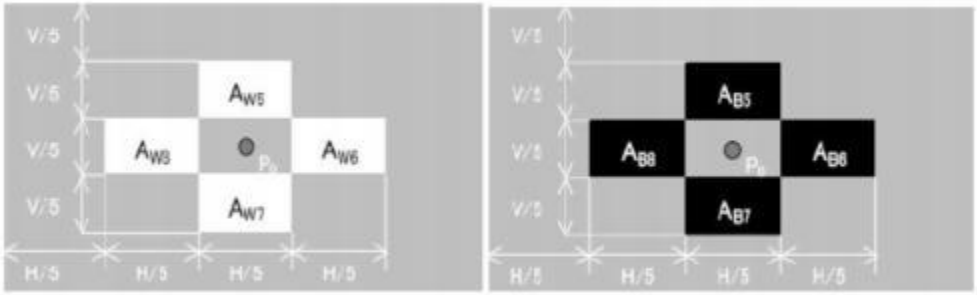
$$L_{\overline{B}\_OFF} = \frac{L_{B1} + L_{B2} + L_{B3} + L_{B4}}{4}$$

$$\text{crosstalk} = \frac{|L_{Wi\_ON} - L_{W\_OFF}|}{L_{W\_OFF}} \times 100\% \qquad (i = 5 \text{ to } 8)$$

$$\text{crosstalk} = \frac{|L_{Bi\_ON} - L_{B\_OFF}|}{L_{B\_OFF}} \times 100\% \qquad (i = 5 \text{ to } 8)$$

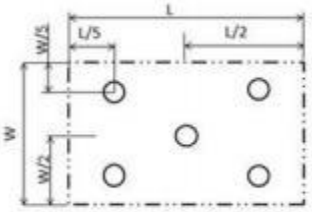


(a) L_{W_OFF}, L_{B_OFF} measuring pattern



(b) L_{W_ON}, L_{B_ON} measuring pattern

8Environmental/ReliabilityTest

No	TestItem	Condition	Remark
1	HighTemperature Operation	+70℃, 120hrs	Accordingto the customer request
2	Low TemperatureOperation	-20℃, 120hrs	Accordingto the customer request
3	HighTemperature Storage	+80℃, 120hrs	Accordingto the customer request
4	Low TemperatureStorage	-30℃, 120hrs	Accordingto the customer request
5	High Temperature &High Humidity Operation	60℃, 90% RH,120hrs	Accordingto the customer request
6	High Temperature &High Humidity Storage	60℃, 90% RH,120hrs	Accordingto the customer request
7	ThermalShock (Non-operation)	-30℃(30 min)~+70℃(30 min),Change time:10min, 30Cycles	Accordingto the customer request
8	ElectroStatic Discharge (Operation)	C=150pF, R=330Ω， 5points/panel Air:±8KV, 5times; Contact:±4 KV, 5 times; (Environment: 15℃~35℃, 30%~60%, 86Kpa~106Kpa) .  	IEC61000-4-2 GB/T17626.2

9QualityLevel

9.1 AMOLED Module of Characteristic Inspection

Theenvironmentalconditionandvisualinspectionshallbeconductedasbelow:

(1) Ambienttemperature: 23± 3℃

(2)Humidity: 55 ± 10%RH

(3) Ambientlightintensityofvisualinspection: 800 ~ 1200 lux

(4) Ambientlightintensityoffunctioninspection: ≤200lux

(5) ViewingDistance: 30 ± 5cm

(6) Viewingangle (tolerance): thefront side 45° (Z) ±15°

(7) Inspectiontime: 10 ±5 sec

9.2 SamplingProceduresforeachitemacceptancetable

Defect type	Sampling Procedures	AQL
Major defect	GB/T2828.1-2003 InspectionlevelⅡ normalinspection singlesampleinspection	0.65
Minor defect	GB/T2828.1-2003 InspectionlevelⅡ normalinspection singlesampleinspection	1.0

Majordefect:

Anydefectmayresultinfunctionalfailure, orreducetheusabilityofproductforitspurpose. Forexample, electricalfailure, deformationandetc.

Minordefect

Adefectdoesnotreducetheusabilityofproductforitsintendedpurposeandun-uniformity, suchasdotdefectandetc.

Thecriteriaon major and/or minor judgment will be according with the classification of defects.

9.3 InspectionItem

No.	Item	Area	Criterion ofDefect			Defecttype
1	Dot Defect	AA	Type	DS	Acceptablenumber	
			BrightDot	≥10mm	0	Minor
			DarkDot	≥10mm	4	
			DarkDot (≥two	≥10mm	2	

			connections）				
2	No Display	AA	/			Not allowed	Fatal
3	AbnormalDisplay	AA	/			Not allowed	Fatal
4	Normallywhite	AA	/			Not allowed	Fatal
5	LineDefect	AA	single line	Brightline		Not allowed	Fatal
				Dark line		Not allowed	
			Multiplelines	Brightline		Not allowed	
				Dark line		Not allowed	
			Half-Line	Brightline		Not allowed	
				Dark line		Not allowed	
6	Image sticking	AA	Switchtothenextscreenanddisplaytheimageofthe previous picture				Major
7	Color&Edge Mura	AA	Seelimitsample(under full white screen)				Major
8	Colorcrast	AA	Seelimitsample(underfullwhitescreen)				Major
9	WaterRipple	AA	Notallowed				Major
10	Othermura(Low gray- scalewhite spot、 S- Line Mura)	AA	Notallowed(underfullwhitescreen) orSeelimit sample(underlowgray- scalewhitescreen)				Major
11	TP	AA	TPfunctionNG			Not allowed	Fatal
12	Glass crack	AA、OA	/			Not allowed	Fatal
13	Screen bump	AA、OA	EncapsurfaceisnotallowedandLTPSdoesnotaffect assembly				Major
14	Linesefects（light visible)	AA	W（mm）	L（mm）	DS（mm）	Acceptablenumber	Minor
			W≤0.03	-	-	Ignore	
			0.03＜W≤0.05	L≤5.0	≥10	2	
			0.05＜W	-	-	0	
			-	L>5.0	-	0	
15	Pointsefects（lightvisible)	AA	D（mm）	DS（mm）		Acceptablenumber	Minor
			D≤0. 1	/		Ignore	

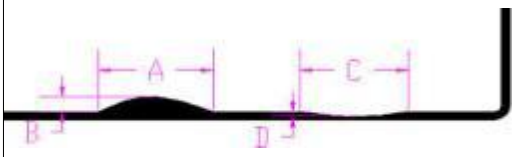
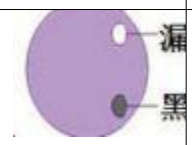
			0.1＜D≤0.25	≥10		2	
			0.25＜D	.		0	
16	Glass scratch	AA	W （mm）	L（mm）	DS（mm）	Acceptable number	Minor
			W≤0.03	L＜5.0	≥10	Ignore	
			0.03＜W≤0.05	L≤2.0	≥10	Ignore	
				2.0＜L≤5.0	≥10	2	
			0.05＜W	-	0	0	
				L>5.0	0	0	
17	FritEncapsulation	FA	Fritwidthuniformity. Itshouldnothavebubbleor breakage.				Major
18	Polarizercrease / indentation	AA	See limitsample				Minor
19	Protectivefilm starved/ overflow glue/ burr	Except AA	No control underW≤0.3mm				Minor
20	Polarizerbump point	Whole area	Bump:D≤0.25mm，dent ≤1mm orSeelimitsample		Allow 3		Minor
21	Polarizerbubble line	Outof AA，≤0.25mm	Encap surface		Not allowed		Minor
22	Scratchesonthe surfaceof polarizer	Whole area	No harm subject regardlessofcontrol				Minor
23	Concavedot、Blackandwhite dot、Polarizer Dent/ Bubble	AA	Front（Encap surface）	D（mm）	DS（mm）	Acceptable number	Minor
				D≤0.1	≥10	Ignore	
				0.1＜D≤0.2	≥10	3	
				0.2＜D	≥10	0	
		AA	Metalmaterial foreignmaterial	/	≥10	Not allowed	
24	PolarizerScratch/ Fiber(Linear)		W （mm）	L（mm）	DS（mm）	Acceptable number	Minor
			W≤0.03	L≤5.0	≥10	Ignore	
			0.03＜W≤0.05	L≤2.0	≥10	Ignore	
				2.0＜	≥10	3	

			0.05＜W	-	≥10	0	
				L>5.0	≥10	0	
25	Edge/Side breakage	OA	ThefollowingCriterionisapplicabletoanyside（unit：mm）				Minor
			Z	X	Y	Acceptable number	
			≤ T	≤2.0	not extendedto circuitArea orFrit	＜5	
26	UVglue	NotIC side	Over coating			Not allowed	Minor
		IC side	ThecoatingofICsideisnothigherthan POL.			Not allowed	
		IC side	ThecoatingofICsideisnothigherthan POL.			Not allowed	
27	Tuffy glue	ICand FPC bondin garea	ThecoatingshouldnothavebreakageorBubble.				Minor
			ThecoatingisnothigherthanPOL.				
		Other area	Tuffyglueisnotallowedtointerruptandthediameter ofBubbleisnotmorethan 0.5mm.				
			ThecoatingisnothigherthanPOL.				
		IC	Notallowed				
		FPC	Ribbonglue: thewidthisnotmorethan 1 mm. Dotglue: thediameterisnotmorethan 2 mm.				
28	Rear reinforcement glueofFPC	FPC	Thewidthisnotmorethan 1mm . TheheightislowerthanLTPS.				Minor
29	ACF	Bondin gArea	Thelengthofattachmentismorethanbothendsof FPC,whichshouldberangefrom 0.2 to 1mm. Don’tgobeyondtheedgeofpanel. EffectivelapwidthofwiringACFismorethan 2/3, whichiscomparedwiththewidthofthegoldfingerof FPC. Don’t have bubble or wrinkle.				Minor
30	FPCA	FPC	Thecomponentcannotreversepolarity				Minor
			Nowronginsertion				
			FPCshouldnothaveseriouscreasewhichdestroythe line,prickandspotsdamage. Scratchisnotallowedif Culayerisexposed.				
			Thegoldfingersshouldnotbeoxidized, scraped, folded, impressed, broken, spottedordissymmetry.				
			MakesureFPCisnotscalded, withitslocationholes nothavingdeficiencyorobviouslyshift.				
			ThecomponentofFPCshouldbethesameasBOM				

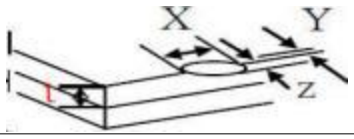
			list.	
			NoremainingsolderingSn	
			Novisualparticleonthepadline	
31	FPC bonding	Bondingarea	Bubble: Visiblebubbleisnotallowed	Minor
			Overhang：Thesizeabove 1/2 ofsolderingelectrode ofthepartsoverhangtotheLANDisprohibited. Thetilt heightlessthan 0.5 mmbetweenFPCandfoam.	
	FPCSkew		Notallowed	
32	Package	Other	Productsshouldputintotheanti-statictrays, with non-overlapping, andthetraysshouldbestaggered placed	Minor
			Differentproductscannotbemixedintothesameinner package.	
			Thepackageshouldnothaveobviousdeformationor breakage . Theprintinglabelstypeandquantityare correct.	
			ThepackageshouldhaveQCsignature. ROHSlabelis needediftheproductisunderROHScontrol.	

Inspectionstandardforcover

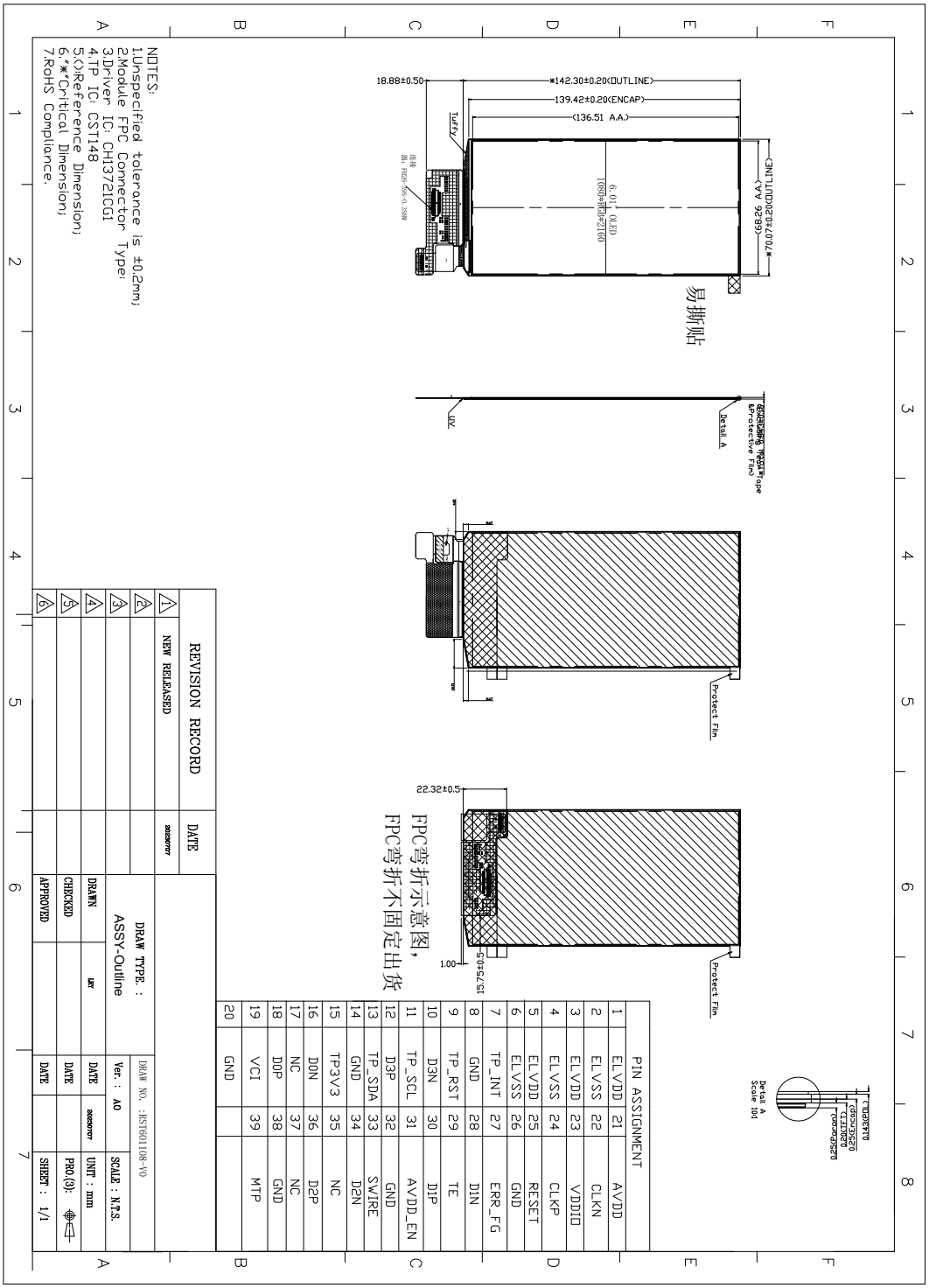
No.	Item	Area	Criterion ofDefect				Defecttype
33	Cover dot、Black and white dot、PolarizerDent/Bubble	Whole area	D(mm)		DS(mm)	Acceptable number	Minor
			D≤0.15mm		/	Ignore (specksis notallowed)	
			0.15mm＜D＜0.25mm		DS≥10mm	2	
			D＞0.25mm		/	Notallowed	
			Specks: D＜0.15mm，N＞5 in 10mm*10mmarea				
34	Cover Scratch/Fiber (Linear)	AA	W(mm)	L(mm)	DS(mm)	Acceptable number	Minor
			W≤0.03mm	L≤10mm	≥10	Ignore	
			0.03mm＜W≤0.05mm	L≤5.0mm	≥10	2	
			W＞0.05	/	/	Not allowed	
			/	L＞5.0mm	/	Not allowed	
			Notallowedtoscratch				
35	Edge pinhole	Edgeof cover	D（mm）	DS(mm)	Acceptable number		Minor
			D＜0.1mm	DS≥10mm	oneis allowedon eachside		

<table>
<tr><td rowspan="3">36</td><td rowspan="3">Uneven edgeof theink</td><td rowspan="3">Edgeof cover</td><td>W（BorD）</td><td>L(AorC)</td><td>Acceptable number</td><td rowspan="3">Minor</td></tr>
<tr><td>W≤0. 15mm</td><td>L≤3mm</td><td>≤2</td></tr>
<tr><td colspan="3">  </td></tr>
<tr><td rowspan="2">37</td><td rowspan="2">inksilk screenserr ated</td><td rowspan="2">OA area</td><td>D（mm）</td><td>DS（mm）</td><td>Acceptable number</td><td rowspan="2">Minor</td></tr>
<tr><td>D≤0.2</td><td>DS≥10mm</td><td>2</td></tr>
<tr><td>38</td><td>Camera Hole</td><td>OA area</td><td colspan="3">breakageorcrack: D≤0. 1mm
Holeisnotround: Refer tothelimitsample
DotDefect: D≤0 . 1mm, and N≤1, heterochrosis andlinedefectarenot allowed;
Camera holesmudge:not allowed
  </td><td>Minor</td></tr>
<tr><td>39</td><td>Printingdefect</td><td>OA area</td><td colspan="3">Wrongly、Missing、Ghostingandincompleteprinting：notallowed
Fontsconsistentwiththestandardcharacters, no significantdifferenceinvisualization
Penetratingscratchisnotallowed</td><td>Minor</td></tr>
<tr><td>40</td><td>IRHole/ Black spots/ Line scratchforeign matter/ Residue</td><td>OA area</td><td colspan="3">DS(mm) | Acceptable number
DS＜0.1 | Ignore
0.1≤DS≤0.15 | 1
 
Note: Notvisibleonblackbackground, don’taffectthe transmissionrate
Foreignbody, dirtyinIRhole: notallowed
Scratched\Linedefectsin IRhole: W≤0 . 0 3 mm, L≤1mm，N≤1, Not visibleonblackbackground, don’t affectthetransmissionrate.
ResidualglueinIRhole: notallowed</td><td>Minor</td></tr>
<tr><td rowspan="2">41</td><td rowspan="2">Coverlens deformation</td><td>OA area</td><td colspan="3">Raisedheight<0. 15mm, andtheareaislessthan 25% oftheentirenon- displayareainthecoverlens</td><td rowspan="2">Minor</td></tr>
<tr><td>AA area</td><td colspan="3">DeformationisnotallowedinAAarea</td></tr>
</table>

42	Poorpenetration oficons	OA area	DS≤0.15 and N≤1		Minor
43	Coverdirt	Whole area	Not allowed		Minor
44	Covercrack				Fatal flaw
45	Coverpaintchips				
46	Burr	Edgeof cover	L≤0.05mm，W＜0.2mmaccept（Thepremisedoesnot affecttheassemblyandfunctionanduseroperation）		Minor
47	colour difference	OA area	Nosignificantdifferenceinvisualization （ refertothe limitsampleifnecessary）		
48	Overfill	Whole area	NotallowedinAAarea Thevisiblepartofthe peripherycannotbe seenafterassembly, and cannotaffectthe assembly		Minor
49	Protectivefilm	Whole area	Filmpositiondeviation≤0. 15mm		Minor
			Scratch: nocontrolwhendon’ tdamagethebody		
			Overfill/ lackofplastic/ Burr: nocontrol		
			Notcontrolthebubbleinsidethecoverprotectionfilm		
50	Easytotear	Cover surface	Functionfailure\ damaged\ Missinglabel: notallowed		
			Wrinkle\ Convex- concavepoint\ dirty\ punching\ burr\ squeezeout: notcontrol		
51	Composite tape	LTPS	Don' tgobeyondtheedgeofpanel.		
			Folds\ Lightleakage\ Impactassemblyorthickness: notallowed		
			Damaged: notallowed		
			Bumpdoesnotaffecttheassembly: notcontrol		
			Punchingthebadsizemeetthedrawings requirements: notcontrol		
			Non- wipedirty\ foreignbody: notallowed Foreignobjectsinaccordancewiththestandard line/ point		
			Burrdoesnotexceedthescreenedge: notcontrol		
			Donothaveobviousbubbles		
			Gumflower\ Overfill: nocontrol		
52	Film warpage	Whole area	Warpage≤0.2mm		Minor
53	ICONhole	OA area	chromaticaberration、doubleimage、dotdefect、line defect： notallowed（orrefertolimitedsample）		Minor
54	Earpiecehole	OA area	left- rightasymmetry， HoleRatherlarge/ smalloroff normal(Outofspecification) Nochamfer, Uneven polishing: notallowed		
55	Ink bumps	OA area	Positivesidereferencepointdefects; Thebackside doesnotaffecttheassembly; Inkoverflowor		

<table>
<tr><td></td><td></td><td></td><td colspan="5">accumulation: notallowed</td><td></td></tr>
<tr><td rowspan="2">56</td><td rowspan="2">Coverconcave convexpoint</td><td rowspan="2">Whole area</td><td colspan="5">Front: Height&depth ≤ 0. 15mm, size ≤ 0.4mm, if necessaryreferencelimitsample</td><td rowspan="2"></td></tr>
<tr><td colspan="5">Back： Don’taffectthefitprocessisnotcontrolled</td></tr>
<tr><td rowspan="6">57</td><td rowspan="6">InsulationTape</td><td>Bondingarea</td><td colspan="5">Obvious wrinklesandbubbles: notallowed</td><td rowspan="6">Minor</td></tr>
<tr><td rowspan="5">Componentarea</td><td colspan="5">Scratch/ Gumflower: notcontrol</td></tr>
<tr><td colspan="5">Non- wipedirty: notallowed</td></tr>
<tr><td colspan="5">Offsetcannotexceedtheedgeoftheproduct, Others arerequiredtothedrawings</td></tr>
<tr><td colspan="5">Burr\ Overfill: notcontrol</td></tr>
<tr><td colspan="5">Damaged/ incomplete/ missingpaste: notallowed</td></tr>
<tr><td rowspan="7">58</td><td rowspan="7">Cover edge/side breakage</td><td rowspan="7">Edgeof cover</td><td>X</td><td>Y</td><td>Z</td><td>DS</td><td>Acceptable number</td><td rowspan="7">Minor</td></tr>
<tr><td>X<0.2mm</td><td>Y<0.2mm</td><td>Z≤1/2t</td><td>DS＞5mm</td><td>Unilateral ≤2</td></tr>
<tr><td>X>0.2mm</td><td>/</td><td>/</td><td colspan="2">notallowed</td></tr>
<tr><td>/</td><td>Y>0.2mm</td><td>/</td><td colspan="2">notallowed</td></tr>
<tr><td>/</td><td>/</td><td>Z>1/2T</td><td colspan="2">notallowed</td></tr>
<tr><td>Cracksare notallowed</td><td colspan="4"> 
</td></tr>
<tr><td></td><td></td><td></td><td colspan="4"></td></tr>
<tr><td>59</td><td>Blunt</td><td>Whole area</td><td colspan="5">Not allowed</td><td>Fatal flaw</td></tr>
<tr><td>60</td><td>Fitbubble</td><td>AA</td><td colspan="5">Accordingtothepunctatespecifications</td><td>Minor</td></tr>
<tr><td>61</td><td>Visionareaedge defect</td><td>OA</td><td colspan="5">D≤0.2mm，DS＞10,N≤2（hole saw tusk less than 2），ifnecessaryreferencelimitsample.</td><td>Minor</td></tr>
<tr><td>62</td><td>Cover heterochrosis</td><td>OA</td><td colspan="5">Heterochrosissideexecuteaccordingtopointdefect size, bulk/ stickrefertoLimitedsample</td><td>Minor</td></tr>
<tr><td></td><td></td><td></td><td colspan="5"></td><td></td></tr>
</table>

10MechanicalDrawing



11PrecautionsforUseofAMOLEDModules

11.1 HandlingPrecautions:

11.1.1 Thedisplaypanelismadeofglass. Donotsubjectittoamechanicalshockbydroppingit fromheight. Donotpressdownthescreenontheadjoiningareastoohardbecausethecolortonemay beshifted.

11.1.2 ThepolarizercoveringthedisplaysurfaceoftheAMOLEDmoduleissoftandeasily scratched. Handlethispolarizercarefully.

11.1.3 Ifthedisplaysurfaceiscontaminated, blowonthesurfaceandgentlywipeitwithasoftdry cloth. Ifitisstillnotcompletelyclear, moistentheclothwithethylalcohol.

11.1.4 Solventsmaydamagethepolarizer. Donotusewater, ketoneoraromaticsolventsexcept ethylalcohol. DonotattempttodisassembletheAMOLEDModule.

11.1.5 Ifthelogiccircuitpowerisoff, donotapplytheinputsignals. Topreventdestructionfromstaticelectricity, becarefultomaintainanoptimumworking environment. BesuretomakeyourselfincontactwiththegroundwhenhandlingwiththeAMOLED Modules.

11.1.6 Toolsrequiredforassembly, suchassolderingirons, mustbeproperlyground.

11.1.7 Toreducethegenerationofstaticelectricity, donotconductassemblyorotherwork

11.1.8 dryconditions.

Toprotectthedisplaysurface, theAMOLEDModuleiscoatedwithafilm. Becareful

11.1.9

11.1.10 peelingoffthisprotectivefilm, becausestaticelectricitymaygenerate.

under

11.2 Storage Precautions:

11.2.1 WhenstoringtheAMOLEDmodules, besurethattheyarenotdirectlyexposedtothe

11.1.11 sunlightorthelightoffluorescentlamps.

when

11.2.2 TheAMOLEDmodulesshouldbestoredunderthestoragetemperaturerange. Ifthe AMOLEDmoduleswillbestoredforalongtime, therecommendedconditionis: Temperature: 0℃~40℃Relativelyhumidity: ≤80%

11.2.3 TheAMOLEDmodulesshouldbestoredintheroomwithoutacid, alkaliorharmfulgas.

11.3 TransportationPrecautions:

11.3.1 TheAMOLEDmodulesshouldnotbesufferedfromfallingandviolentshockingduring transportation. Besides, excessivepress, water, dampandsunshine, shouldbeavoided.