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CAPACITIVE TOUCH PANEL
PRODUCT SPECIFICATION

ModelNo.: CTP-T350GF-08

☐Preliminary Specification

☐Final Specification

CUSTOMER:

Made By: **Checked By:** **Approved By:** **Quality:** **Date:** **Note:**	**Approved By:** **Date:** **Note:**

Records of Revision

DATE	REF.PAGE PARAGRAPH DRAWING No.	REVISED No.	SUMMARY	REMARK
2018-04-13		V01	First Issue	

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1.Purpose and scope of application

1.1 Define the test standard for capacitive touch panel.to ensure that our products exactly meet our customers' requirements.
1.2 This specification applies to appearance inspection and performance testing of capacitive touch panel
1.3 If customer has special requirements, both parties should discuss and formulate standards.

2.General Specification

Item	Contents	Unit
Structure	G+F	
Outline dimension	90.44±0.1*57.06±0.1	mm
Outline dimension of sensor	90.04±0.1*56.66±0.1	mm
View area	73.44±0.1*48.96±0.1	mm
Drive IC	FT6336U	
Interface type	IIC	
IIC Address	0x70	
Supply voltage	2.8-3.3	V
I/O voltage	2.8-3.3	V
Number of touch point	1	point
Connector type	ZIF	
Transmittance of view area	≧85%	
Hardness	≧6H	

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3.Interface pin function

PIN No.	Symbol
1	VDD
2	INT
3	SDA
4	SCL
5	RST
6	GND

4.Absolute maximum ratings

Item	Symbol	Value	Unit
Power supply voltage	VDD	2.7~3.6	V
I/O digital voltage	IOVCC	1.71~3.6	V
Operating temperature	Topr	-20 ~ +70	℃
Storage temperature	Tstg	-30 ~ +80	℃

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5.Product structure and materials

Structure	Materials used	Remarks
1.Cover lens	Toughened glass	Thickness: 1.1mm
2.Bonding layer	OCA	Thickness: 0.1mm
3.Sensor	ITO Film	Thickness: 0.125mm
4.Lead-out wire	FPC	Thickness: 1.3mm(Max)
5.Drive IC	FT6236U	Package type: QFN5X5_48L
6.Auxiliary materials	Double side tape	Thickness: 0.15mm

6.Standard specification for reliability

No.	Item	Description	Criterion
1	High Temperature storage	The sample should be allowed to stand at 80℃ for 240 hours under no-load Condition, and then returning it to normal temperature condition,and allowing it stand for 2 hours.	Appearance and function OK
2	Low Temperature storage	The sample should be allowed to stand at -30℃ for 240 hours under no-load Condition, and then returning it to normal temperature condition, and allowing it Stand for 2 hours.	Appearance and function OK
3	Moisture storage	The sample should be allowed to stand at 60℃,90%RH MAX for 240 hours under no-load condition, then taking it out and drying it at normal temperature for 2 hours	Appearance and function OK
4	Thermal Shock Storage	The sample should be allowed to stand the following 48 cycles: -30℃ for 30 minutes → normal temperature for 5 minutes → +80℃ for 30 minute → normal temperature for 5 minutes, as one cycle	Appearance and function OK

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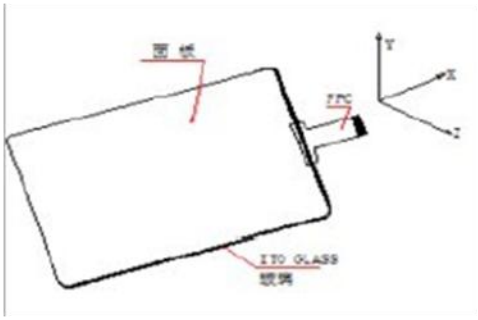
5	Surface hardness	**Glass materials:** Use MITSUBISHI 6H pencil,45 degrees angle,load force 750g force, marking speed 10mm/s,in the sample surface horizontal and vertical direction each draw 5 3-5cm lines,use the eraser for pencil marks. **PMMA/PET materials:** Use MITSUBISHI 3H pencil,45 degrees angle,load force 750g force, marking speed 10mm/s,in the sample surface horizontal and vertical direction each draw 5 3-5cm lines,use the eraser for pencil marks.	No scratches on the surface of product
6	FPC tensile test	Fix the touch panel horizontally on the table, FPC is perpendicular to the surface of the screen and the FPC is fixed to the tension meter.Rotate the tension meter at 50mm/min to stretch the FPC until the tensile value reaches the test requirement **Requirement:** X:2000g Y:500g Z:150g  	Appearance and function OK
7	Ball drop	**Glass thickness:0.5/0.55mm** Experimental condition:With 64g steel ball from 40cm free fall hit the middle of touch panel 3 times. Description:impact energy of 0.25J,height and weight of steel ball can be adjusted. **Glass thickness:0.7mm** Experimental condition:With 64g steel ball from 50cm free fall hit the middle of touch panel 3 times. Description:impact energy of 0.32J,height and weight of steel ball can be adjusted. **Glass thickness:≧1.0mm** Experimental condition:With 64g steel ball from 60cm free fall hit the middle of touch panel 3 times. Description:impact energy of 0.38J,height and weight of steel ball can be adjusted.	No broken

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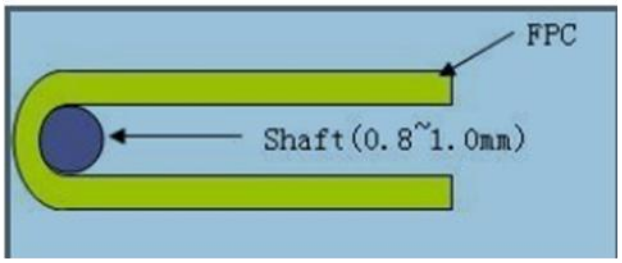
8	FPC bending test	The FPC bends 180 degrees around the cylinder(⌀ 0.8-⌀ 1mm) and bends back to its original position.Total bending 18 times 	Function OK
9	ESD test	Air: ± 8KV 150pF/330Ω	Function OK
		Contact:± 2KV 150pF/330Ω	

*Sample size for each test item is 2~5pcs

7.Specification of quality assurance

This standard of quality assurance confirms to the quality of capacitive touch panel products supplied by Victronix.

7.1 Quality Test

Before delivering, the supplier should conduct the following tests to confirm the quality of products.

7.1.1 Electrical-Optical Characteristics: According to the individual specification to test the product.

7.1.2 Appearance Characteristics: According to the individual specification to test the product.

7.1.3 Reliability Characteristics: According to the definition of reliability on the specification for testing products.

7.2 Delivery Test

Before delivering, the supplier should conduct the delivery test.

7.2.1 Test method: According to MIL-STD-105E.General Inspection Level Ⅱ take a single Time.

7.2.2 The defects classify of AQL as following:

Major defect: AQL = 0.65

Minor defect: AQL = 2.5

Total defects: AQL = 2.5

7.3 Non-conforming Analysis & Deal With Manners

7.3.1 Non-conforming Analysis

Purchaser should provide the data detail of non-conforming sample and thenon-conforming.

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- After receiving the data detail from purchaser, the analysis of non-conforming should be finished within two weeks.
- If the analysis can't be finished on time, supplier must notice purchaser 3 days in advance.

7.3.2 Disposition of non-conforming

- If any product defect be found during assembling, supplier must change the good for every defect after confirmation.
- Both supplier and customer should analyze the reason and discuss the disposition of non-conforming when the reason of nonconforming is not sure.

7.4 Agreement items

Both parties should negotiate together when the following problems happen.

7.4.1 There is any problem of standard of quality assurance, and both sides should agree that it must be modified.

7.4.2 There is any argument item which does not record in the standard of quality assurance.

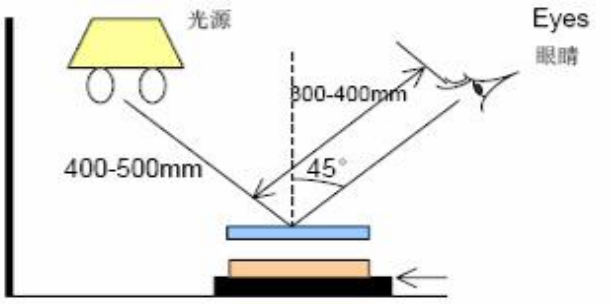
7.4.3 Any other special problem.

7.5 Standard of the product appearance test

7.5.1 Manner of appearance test

Test conditions:

- Light source:A white fluorescent lamp of 40 watts.
- Observation angle: In the inspection process, the observation surface is rotated 45 degrees ~90 degrees.
- Observation distance: The distance between the human eye and the observed surface is 300-400mm.
- environment: In the dust-free workshop under 10,000 grade.
- Eyesight of Testing personnel: Testing personnel has good eyesight and is not achromatopsia.
- Use black and white plates as background



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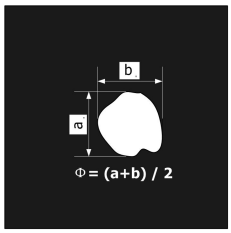
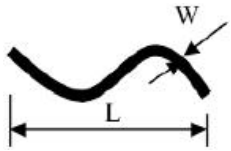
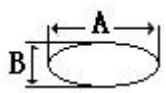
7.5.2Basic principle

- When the standard can not be described, AQL will be applied.
- The sample of the lowest acceptable quality level must be negotiated by both
- supplier and customer when any dispute happened.
- New item must be added on time when it is necessary

7.6 Inspection specification

No.	Item	Criterion		Acceptable Q'ty		AQL
1	Function			Not accept		0.64
2	Dimension	According to the dimensions of the Mechanical drawings		Not accept		0.64
3	Spot defect	Spot type:As following drawing  Densely spaced: No more than 2 spots within 5mm	Less than 5 inch (contain 5 inch)	Size(mm)	Acceptable Q'ty	2.5
				ϕ≤0.1	Accept no dense	
				0.1＜ϕ≤0.15	2	
				0.15＜ϕ≤0.2	1	
				0.2＜ϕ	0	
			Greater than 5 inch	ϕ≤0.1	Accept no dense	
				0.1＜ϕ≤0.2	2	
				0.2＜ϕ≤0.25	1	
				0.25＜ϕ	0	
4	Line defect	Line type: As following drawing  Densely spaced: No more than 2 lines within 5mm	Less than 5 inch (contain 5 inch)	W≤0.03	Accept no dense	2.5
				0.03＜ W≤0.05;L≤3	2	
				0.05＜W	0	
			Greater than 5 inch	W≤0.03	Accept no dense	
				0.03＜ W≤0.08;L≤3	2	
				0.08＜W	0	
5	Dent, Bubble	Bubble type: As following drawing  ϕ=(A+B)/2 Densely spaced: No more than 2 bubbles within 5mm		ϕ≤0.1	Accept no dense	2.5
				0.1＜ϕ≤0.2	2	
				0.2＜ϕ	0	
6	Scratches	Follow No.4				

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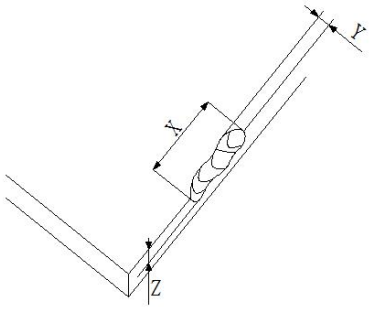
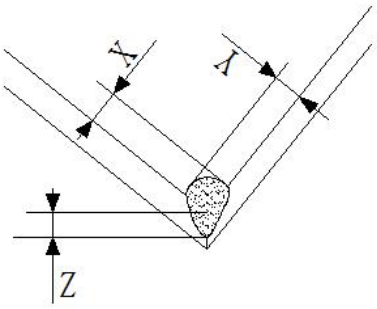
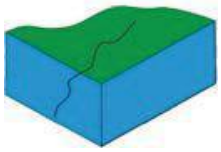
7	Cover glass edge breakage		X<0.3 Y<0.3 Z<0.3	2.5
8	Cover glass corner breakage		X<0.3 Y<0.3 Z<0.3	2.5
9	Cracked glass		Not accept	0.64
10	Surface contamination	With a Non-dust cloth can be removed within 5 times	Accept	2.5
11	Edge overflow glue	Assembling Touch panel on the main case dose not affect the appearance	Accept	2.5
12	The color of cover	Within the Customer approved that the upper and lower limits of sample	Accept	0.64

8.Packing method

--TBD

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9.Mechanical drawing