广 东 视 安 通 智 慧 显 控 股 份 有 限 公 司

Guangdong SAT Intelligent Display Control Co.,Ltd

产 品 规 格 书

Customer(客户):

Model (型号): SAT043R04FG025NO-105065

Mode(种类): Four- Multi wire Analog Touch Panel

Date(日期): 2023-05-04

Version(版本): A/0

Customer Approval 客 户 签 认

Checked Approve 检查 确认	Designed 设计
陈文勇	**AmorII.**邓

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SPECIFICATION REVISION RECORD

规 格 变 更 记 录

NO. [序号]	Version. [版本]	Date [变更发行日期]	Summary of Changes [变更内容摘要]	Page [变更页码]
1	A0		初次发行	
2				

＜Remarks＞[备注栏]

01. **Circumscription** The specification is for Four-Wire analog resistive touch panel.

[范围] [此规格适用于四线-模拟电阻式触控屏幕]

02. Features

[特性]

Item [项目]		**Specifications** [规格]
(1)	Type [型式]	Four-Multi Wire Analog Resistive [四线-多线模拟电阻式]
(2)	Input Mode [操作模式]	Stylus or Finger [笔触或手触]
(3)	Connector [连接方式]	FPC

03. General Specification

[规格总则]

Item [项目]		**Specifications** [规格]
	Product Structure [产品结构]	ITO胶片(0.188mm/ITO玻璃(玻璃)
(1)	ITO Glass [ITO 玻璃]	0.7普通玻璃
(2)	ITO Film [ITO 胶片]	雾面防牛防刮伤
(3)	Frame Size [外形尺寸]	104.8±0.2*65±0.2*1.15±0.15mm
(4)	Connector [连接方式]	FPC
(5)	Tail Length [出线长度]	25.0±0.5mm FPC型号: RXA-2713D

04.Environmental Characteristis

[环境特性]

Item [项目]		**Specifications** [规格]	
		Temperature [温度]	**Humidity** [湿度] **(Non Condensing)** [不可结雾]
(1)	Operation [操作]	-20°C ~ +70°C	20%RH ~ 85%RH
(2)	Storage [储存]	-30°C ~ +80°C	10%RH ~ 90%RH
(3)	F/D Protection film Storage 成品保护膜储存	(1) 保护膜贴于产品两面，边缘与产品对齐，保护膜超出产品边缘≦2mm OK (2)产品撕起保护膜后，目视检查TP表面有脏印	

Note: Note: 1) The environment is under normal atmosphere pressure.

[注1:于正常的1 大气压下]

2) TP Storage be focus on TP Function.

[注2:TP储存关注TP功能]

3) F/D Protection film Storage be focus on TP Cosmetic and Peeling .

[注3:成品保护膜储存关注TP外观和撕起]

05. Optical Characteristics
[光学特性]

	Item [项目]	Specifications [规格]
(1)	Transparency [透光率]	≧74%-550nm

06. Electrical Characteristics
[电子特性]

	Item [项目]	Specifications [规格]
(1)	Linearity [线性]	X : 1.5 %, Y : 1.5%
(2)	Terminal resistance [回路电阻]	Rx-x: 150-900Ω Ry-y: 150-900Ω
(3)	Insulation [绝缘阻抗]	≧20MΩ/25V(DC)
(4)	Chattering [触点抖动时间]	≦15ms

07. Mechanical Characteristics
[机械特性]

	Item [项目]	Specification [规格]	Condition [条件]
(1)	Operating Force [操作压力]	Stylus=R0.8 [笔式=R0.8]	Recommended Range at 50g～120g （注）
(2)	Impact [撞击]	20.0ψDIA. Steel Ball/30g Height=50cm [20ψ/30g 不锈钢球 高=30cm]	1 time, no damage [Impact at center area] [中央区域撞击1 次,不能破损]
(3)	Hardness [硬度]	3H pencil, pressure 1N/45 [铅笔3H,压力10N/45°(JIS K5400)]	≧3H
(4)	FPC Peeling [FPC拉力]	X>2.5Kg, Y>0.5Kg	X>2.5Kg, Y>0.5Kg
(5)	FPC Bending [FPC绕折]	180° 10 times left & right [180°角,左右来回10 次]	Satisfy (2) of Item 6 [符合6 项目(2)]
(6)	FPC Welding [FPC焊接]	TEM. 320±5℃,within3s, More than 2 times, Use below 60w flatiron	Satisfy (1)(2) of Item 6 [符合6 项目(1)(2)]

注:操作压力为50g~ 120g,意思为使用ABS笔，操作压力50g以上RTP能正常触摸，建议操作压力不大于120g，因为操作压力越大对RTP寿命影响越大。

08. Reliability

[信赖性]

	Item [项目]	**Specifications** [规格]	**Condition** [条件]
(1)	Constant Temperature /Humidity [恒温恒湿]	70°C /90%RH, 120 hrs and normalized for 24hrs [70°C /90%RH，120 小时，回常温24小时后始可测试]	Satisfy:(1),(2),(3)of Item 6; (1) of Item7 [符合6 项目(1)、(2)、(3) 及 7 项目(1)]
(2)	High Temperature Storage [高温储存]	70°C /120 hrs and normalized for 24 hrs [70°C /120 小时，回常温24 小时后始可测试]	Same as above [同上]
(3)	Low Temperature Storage [低温储存]	-20°C /120 hrs and normalized for 24 hrs [-20°C /120 小时，回常温24 小时后可测试]	Same as above [同上]
(4)	Temperature Cycle [冷热循环]	-20°C ~70°C [30 min./cycle] *10cycles and normalized for 24hrs [-20°C ~70°C，每循环30 分钟，共10次循环，回常温24 小时后始可测试]	Same as above [同上]

09. Durability

[耐久性]

Item [项目]	**Specifications** [规格]	**Condition** [条件]
Knock Test [敲击测试]	1,000,000 times [R8,hardness 60°,150gf]	Satisfy (2), (3) of Item 6; (1) of item 6 satisfies X≦2.0%, Y≦2.0% [符合6 项目(2)，(3)；6 项目(1)符合X≦2.0%,Y≦2.0%] **敲击位置必须离AA区边缘5mm以上**
Stroke Test [笔划测试]	50,000 times [R0.8mm,with 150gf]	Satisfy (2), (3) of Item 6; (1) of item 6 satisfies X≦2.0%, Y≦2.0% [符合 6 项目(2)、(3)；6 项目(1)符合X≦2.0%,Y≦2.0%] **划线区域必须离AA区边缘5mm以上，划线压力须均匀**

注意:由于 RTP 夹层内有空气，在做高温高湿试验时结雾属正常现象。
Cautions:since there is air in the RTP interlayer, fog formation is normal phenomenon in high temperature and high humidity test.

10. Appearance Inspection
[外观检查]

(1) The flaws and impurities are allowed outside viewing area except for those affecting electrical functions.

[(1) 只要不影响电器功能性，可视区外之外观暇疵是可以被允许的]

(2) The inspection was performed with one 30W fluorescent lamp lighting from side. The panel was placed 30cm away from eyes. (Figure 11-1).

[(2) 检测始用之灯光为一盏30W 白炽灯光，并于面板上侧照射，检测时须放置在离眼睛30cm 处(Figure11-1)]

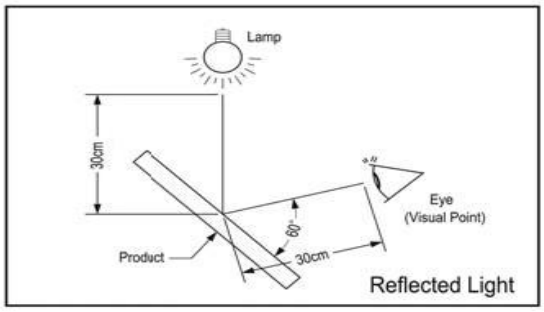
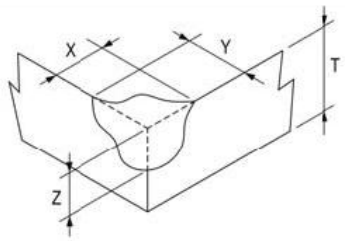
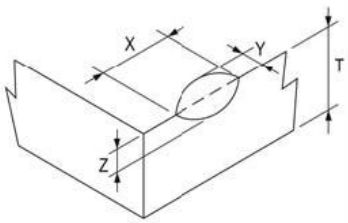
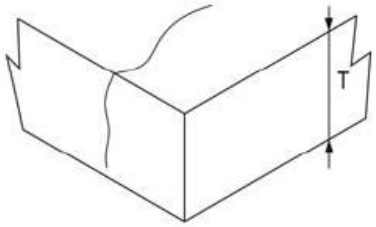


Figure 11-1

(3) Glass Flaw [玻璃瑕疵]

Item [项目]	**Picture** [图示]	**Specification**规格]
Corner Flaw [角瑕疵]		X≤1.0mm Y≤1.0mm Z≤1/2T 且不影响产品功能
Edge Flaw [边缘瑕疵]		X≤1.0mm Y≤1.0mm Z≤1/2T 且不影响产品功能
Progressive Flaw [裂纹瑕疵]		Not allowed [不允许]

Note: GT=Glass thickness

(4) Please refer to Appendix Ⅰ： Appearance Specification.

[(4)外观规格请详见(附注1)]

11. Attention of Mounting Condition

[装机注意事项]

(1) The gasket support of touch panel must be designed on the outside of Viewable area, as well as to avoid pressing on touch panel accidentally, the enclosure must be designed with enough clearance to panel surface.

To avoid pressing error on touch panel accidentally, please remain space between the surface of panel and the Bezel.

[请将固定触控屏用的支撑体(support)设计于可视区(Viewable area)之外。为避免不小心碰到触控屏而产生动作，请预留空间于面板与机体外壳之间]

(2) Bezel opening must be between Viewable area and Active area. Bezel opening must not touch Viewable area.

[外壳内缘(Bezel opening)应设计于可视区及动作区之间，并且不得碰到面板]

(3) We recommend elastic material made support.

[建议使用弹性物质制成的支撑体]

(4) Do not use adhesive to bond top surface (ITO Film) of touch panel with enclosure.

[请勿使用黏着剂固定触控屏面板和机体外壳]

(5) The edge of touch panel is conductive. Don't touch it with metal after mounting.

[触控屏面板四周有可能会导电，安装时后请勿与其它金属物质接触]

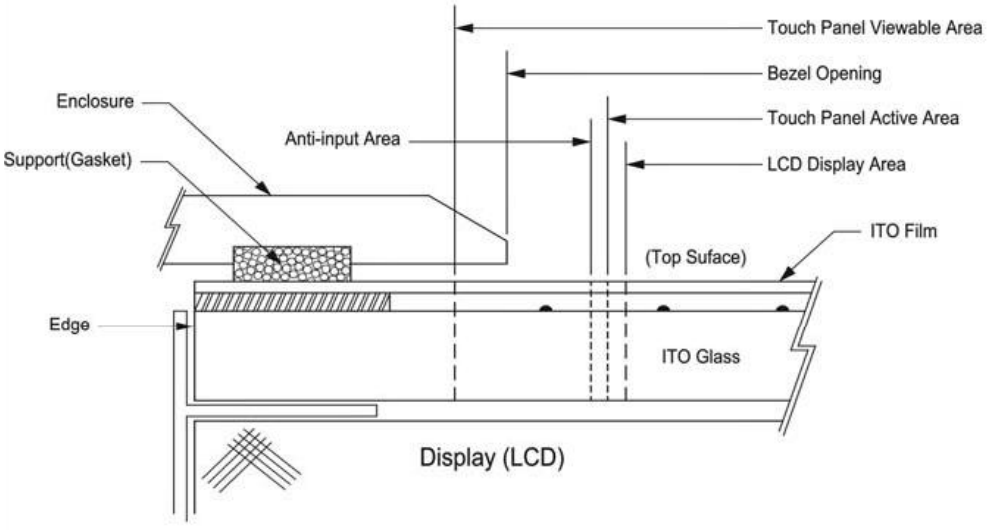


Figure 12-1

12. Guaranty

[保固]

RX comes with a 1-year guaranty on all RX products.
RX guaranty provide for repair and replacement without any charge during this period.

RX reserves the right in its sole discretion to determine the defects received, and will take the responsibility if there is any defect or damages.

[除了下列3 点所述外，瑞翔所生产制造的产品保固期限为1 年，若判定瑞翔为之责任，则产品更换。瑞翔保留判定责任归属之权益]

Notice: RX is not responsible for following situation:

1. Damages caused by improper handling from clients, such as the shipping period or manufacturing processes.
   [在客户的制程或运输中,因客户自身疏忽所造成对产品的伤害及破损]

2. Damages caused by either natural disaster or human factors after receiving the products.
   [在客户收到瑞翔之产品后,因为天灾人祸所造成的伤害及破损]

3. Damage caused by self-repairs, and modifications or disassembling of RX products from clients without prior notice.
   [没有知会瑞翔共同讨论，而自行变更、维修、拆卸产品所造成的伤害及破损]

13. Caution

[注意事项]

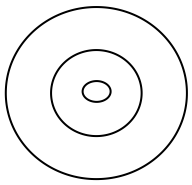
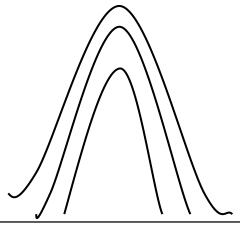
Storage [储存]	(1)Storage shall be under the temperature and humidity that mentioned in the specification. Do not expose the products to direct sunlight or piling caused damage on the surface. [储存要注意温/湿度条件，且不可直接暴露于阳光下，或堆栈造成直接加压面板]
Unpacking [拆装]	(1)Check for the correct vertical direction of the package before unpacking. [注意检查包装箱之垂直方向，以避免损坏]
Handing [握持]	(1) In order to prevent fingerprints or stain on the products, and get a cut by sharp edges of glass, clean finger sacks or glove and mask are required during handing. [配戴清洁的指套、手套、口罩，以避免造成指纹、脏污或不小心被玻璃边缘割伤] (2) Do not touch the viewing area of the panel. [手不能接触可视区] (3) Do not handle the tail (connector) of panel directly, when you handle the touch panel. It will cause the problem of combination and reliability [拿取面板时，不可直接拿取tail 部份，易造成结合度及信赖性问题]
Cleaning [清洁]	(1) Clean and soft clothes with neutral detergent or with isopropyl alcohol may be used for cleaning. [使用干净且柔软的布，沾中性清洁剂或酒精进行清洁] (2) Do not use any chemical solvent, acidic or alkali solution. [不能使用化学溶剂或酸碱液进行清洁] (3) Do not allow liquid soaking into the joint of film and glass, it may cause of peeling or malfunctioning. [避免让液体渗入至玻璃与薄膜之间，会造成剥离或功能失效]
Installing and Assembling [组合与装配]	(1) Excessive force or strain to the panel or the tail is prohibited. [注意避免加压或拉扯面板及tail] (2) Provide a clearance of at least 0.3mm between panel and display module. [最少保留0.3mm 的空间于面板及显示器之间] (3) The panel is designed with air groove. Insulation and cushioning pads should be designed around the edges of the panel to prevent water and dust. [在设计机构时，注意四周边缘需有缓冲垫，以避免渗水或聚集灰尘]
Operating [操作]	(1) Use a stylus (tip R0.8 or over) or finger. Sharp edged or hard articles are prohibited. [应用塑料笔(笔尖≧R0.8)或手指，不能使用尖锐、坚硬的物体书写输入] (2) The gathering of dew in the panel may occur with abrupt temperature or humidity changes. A stable environment condition is recommended. [急遽的温/湿度变化会有结露现象，易造成面板功能失效，所以稳定的环境条件是必要的]
Others [其它]	(1) Keep the surface clean. No adhesives should be applied. [请保持表面清洁，不要贴胶带于面板上] (2) Avoid high voltage and static charge. [避免高压与静电]

Appearance Specification

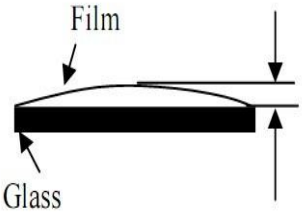
外观检验标准：

Item [项目]	**Specification** [规格]
Particle [颗粒异物]	(1) D<0.20　　可忽略 (2) 0.20≦D≦0.25 and total≦2➡OK (3) D>0.25➡NG
Linear Object [线状异物]	(1) W<0.05 可忽略 (2) 0.05≦W≦0.08 and L≦5.0, total≦2 ➡OK (3) W>0.08　or　L>5.0　➡NG Remark: the particle will be ignored when it is cleanable.
Scratch [刮痕]	同线状异物

Newton Ring/Rain-bow
[牛顿环/干涉纹]（此项仅限于使用亮面防刮胶片，如使用防牛顿环胶片不需检查此项）

Item [项目]	**Standard** [标准]	**Picture** [图示]
Rule [规则]	(1)当牛顿环>1/6时，➡NG (2)当牛顿环≦1/6 时，且不影响文字及直线失真➡OK	
Abnormity [不规则]	(1) 牛顿环不论大小，当亮灯后造成文字及直线失真➡NG (2) 当牛顿环≦1/6 时，且亮灯后不影响文字及直线失真➡ OK	

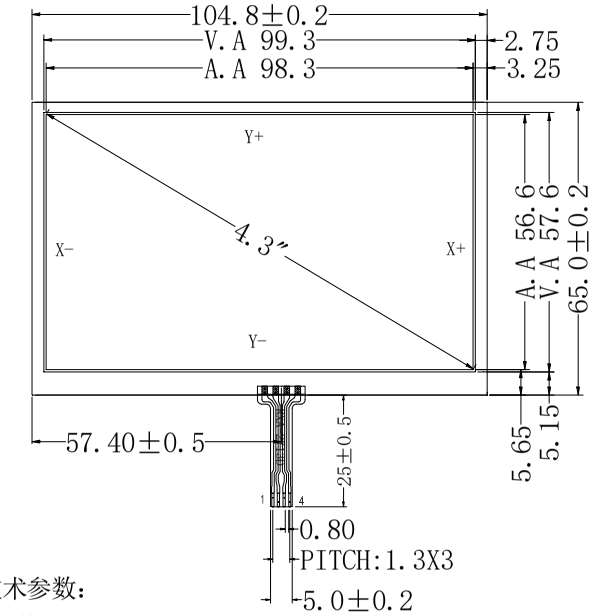
＜Remark＞[备注栏]
在荧光灯（40W，自然光）下目测，目测距离为40cm并且成60度-10度角检测 产品。

Film drum [膜鼓]	(1) FILM膜局部或全部鼓起＞0.3mm➡NG (2) FILM 膜局部或全部鼓起≤0.3mm ➡OK	

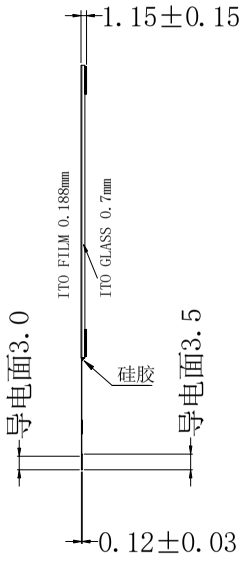
QC抽查 **抽样计划/质量允许水平**	MIL-STD-105D水平 II 抽样 AQL-Cr(严重缺点)0.00% ----安全性缺陷 AQL-Ma(主要缺点)0.45% ----功能异常缺陷 AQL-Ma(次要缺点)1.0% ----刮伤与异物及外观缺陷

REV.	DESCRIPTION	DATE

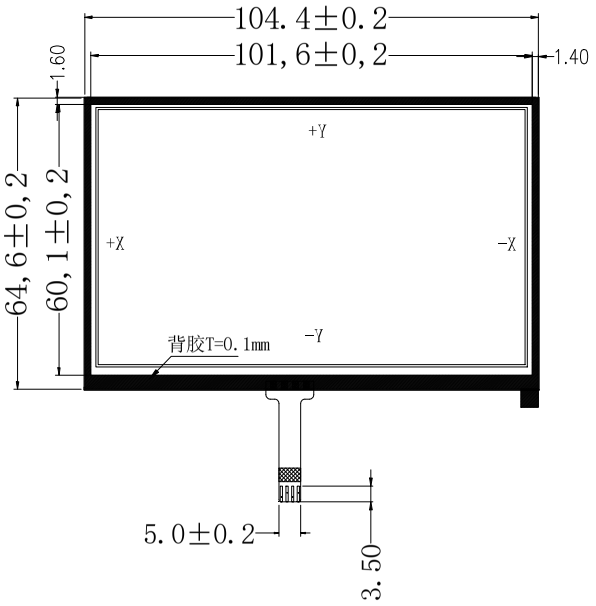
正面图



侧面图

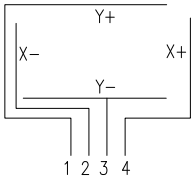


反面图



技术参数：

1.结构：film+glass+tail
　　film：雾面防牛（0.188mm）
　　glass：500Ω/□ 普通0.7mm
　　tail：FPC (pitch1.3)
　产品总厚度:触摸屏　1.15±0.15mm
2.电路等级：DC5V 1mA
3.绝缘阻抗：≥20MΩ(25V DC)
4.线性：≤1.5%
5.透光率：≥74%
6.操作压力：50-120g
7.使用寿命：≥1,000,000次
8.笔划寿命：≥50,000次：
9.工作环境：-20℃~+70℃，
10.储存环境：-30℃~+80℃，
11.X:150-900ΩY:150-900Ω.
12.未注尺寸公差按±0.50



逻辑图

PIN	OUT
1	Y+
2	X-
3	Y-
4	X+

SCALE: 1 : 1
NOT TO SCALE
PAGE: 1 OF 2
GENERAL TOL. 0.50mm
UNITS MM

APPROVALS		DATE
APP	Mychan	2014/04/18
CHK	Amorll	2014/04/18
DWN	Amorll	2014/04/18

广东视安通智慧显控股份有限公司

MODEL NUMBER :
SAT043R04FG025NO
-105065

PROJECTION

CUSTOMER P/N :

DATE:
2014/04/18