

CAPACITIVE TOUCH PANEL SPECIFICATION

电容式触摸屏规格书

CUSTOMER NAM	WE 客户名称:			
PRODUCT MODI	EL 产品型号:	CT9018-DA	GGFS-70-E-M	
		REVISION	变更记录	
Revision NO. 版本号	Date 日期		vision 巨内容	Reason 变更原因
А	2009-09-10		er 1 1 版	
REMARK/备注				
WRITTEN	BY / DATE 审批人	/时间	APPROV	'ED BY / DATE 审批人/时间



CONTENT:目录

1. GENERAL SPECIFICATION 产品规格

- 1-1. Product name 产品名称
- 1-2. Product No. 产品编号
- 1-3. Drawing No. 图纸版本
- 1-4. Code No. 样品编号

2. BASIC FEATURES 基本特征

- 2-1 Dimension 尺寸
- 2-2 Construction 结构
- 2-3 Surface Hardness 表面硬度
- 2-4 Scope 应用方式
- 2-5 Application 应用范围

3. MECHANICAL CHARACTERISTICS 机械性能

- 3-1 Operation distance 操作距离
- 3-2 Package drop 包装后跌落测试
- 3-3 FPC bending test FPC弯折测试

4. ELECTRICAL CHARACTERISTICS 电气特性

- 4-1 Insulation 绝缘性
- 4-2 Supply voltage for logic 电压
- 4-3 Supply current for logic 电流

5. OPTICS CHARACTERISTICS 光学特性

5-1 Light transmissivity 光透过率

6. RELIABILITY 可靠性

- 6-1 Operating temperature and humidity 操作温度和湿度
- 6-2 Storage Temperature and humidity 存储温度和湿度
- 6-3 Humidity resistance 湿度抗性
- 6-4 Heat resistance 抗热性
- 6-5 Cold resistance 抗低温性
- 6-6 Thermal shock 热冲击
- 6-7 Vibration resistance 抗振动

7. BLOCK DIAGRAM 原理框图

- 7-1 IC Pin Configuration IC 脚定义
- 7-2 Flow Chart 流程图
- 7-3 BLOCK DIAGRAM 原理框图
- 7-4 IIC DATA PACKAGES IIC 数据包:

8. DRAWING 图纸



1. General Specification 产品规格

Item 项目	Specification 规格	Remarks 备注
1-1 Product name 产品名称	Transparent touch panel 透明触摸屏	
1-2 Product No. 产品编号	CT9018-DAGGFS-70-E-M	
1-3 Drawing No. 图纸编号	TP2708	REV A 版本
1-4 Code No. 样品编号		

2.Basic features 基本特性

Item 项目	Specification 规格	Remarks 备注
2-1. Dimension 尺寸		
2-1-1Outline Dimension 外形尺寸	105.2×164.8	Unit 单位: mm
2-1-2 Viewing Area 可视区	94.7×155.7	Unit 单位: mm
2-1-3 Active Area 动作区	92.24×153.2	Unit 单位: mm
2-2. Construction 结构	Materials used 所用材料	
2-2-1 First Layer 第一层	ITO glass ITO 玻璃	Thickness: 0.4mm 厚度: 0.4mm
2-2-2 Second Layer 第二层	ITO glass ITO 玻璃	Thickness: mm 厚度: 1.1mm
2-2-3 Third Later 第三层	double adhesive 双面粘	Thickness: 0.5mm 厚度: 0.5mm
2-3 Surface Hardness 表面硬度	3H- pressure 500 gf , 45 deg	
2-4 Scope 应用方式	This specification applies for finger input transparent touch panels. (Those mentioned in the individual specification shall be given priority.)	
	此规格适用在手指输入型透明触摸屏 (此 处以提到的有特殊要求应优先考虑)	
2-5 Application 应用范围	The product is touch panels used as the input devices for general electric appliances and OA equipment.	
	此产品是透明触摸屏,常作为常用的电子器件和 OA 设备的输入装置	



3. Mechanical characteristics 机械特性

Item 项目	Specification 规格	Remarks 备注
3-1 Diagonal of contact area	More than 7mm	
手指接触面对角线	大于 7 mm	
3-2 Package drop	No damage to the product.(drop from 50 cm height)	
包装跌落测试	包装从 50 cm 高处跌落无损伤	
3-3 FPC bending test	≥3 times bending (by R1 mm), Electrical performance	
FPC 弯折测试	should be OK。 FPC弯折3次以上,电气性能OK。	

4. Electric characteristics 电气参数

Item 项目	Specification	Specification 规格									
4-1 Insulation 绝缘性	20M Ω or ov	20M Ω or over(Dc 25V)									
4-2 Supply voltage for	Symbol	min	type	max	unit						
logic 电压	vdd	3.0v	3.3v	3.8v	V						
4-3 Supply current	Symbol	min	type	max	unit						
for logic 电流	idd		8	12	mA						

5. Optics characteristics 光学特性

Item 项目	Specification 规格	Remarks 备注
5-1 Light transmissivity 光透过率	>90%	total light test 白光测试

6. Reliability 可靠性

Item 项目	Specification 规格	Remarks 备注
6-1 Operating temperature and humidity 操作温度和湿度	-20~70°C, 20~85% RH	Except for dew gathering 无结露
6-2 storage temperature and humidity 存储温度和湿度	-30~80°C, 20~85% RH	Except for dew gathering 无结露
6-3 Humidity resistance 高温高湿	The requirement in 4 shall be satisfied after exposing at 60℃, 90% RH for 240 hours and at normal temperature and humidity for 24 hours. 在 60℃, 90% RH 条件下存放 240 小时,取出在常温常湿下再存放 24 小时后,满足第 4 点所要求的各项电气参数。	Except for dew gathering 无结露
6-4 Heat resistance 高温存储	The requirements in 4 shall be satisfied after exposing at 80℃, for 240 hours and at normal temperature and humidity for 24 hours. 在 80℃条件下存放 240 小时,取出在常温常湿下再存放 24	Except for dew gathering 无结露



TRULY SEMICONDUCTORS LTD. 信利半导体有限公司

	小时后,满足第 4 点所要求的各项电气参数。	
6-5 Cold resistance 低温存储	The requirements in 4 shall be satisfied after exposing at -30℃, for 240 hours and at normal temperature and humidity for 24 hours 在-30℃条件下存放 240 小时,取出在常温常湿下再存放 24 小时后,满足第 4 点所要求的各项电气参数。	Except for dew gathering 无结露
6-6 Thermal shock 冷热冲击	The requirements in 4 shall be satisfied after exposing under the conditions of $-20^{\circ}\text{C}(0.5\text{hour}) \rightarrow 70^{\circ}\text{C}(0.5\text{hour})$ by 50 cycles ,and at normal temperature and humidity for 24 hours。	Except for dew gathering 无结露
6-7 Vibration resistance 抗振动	The requirements in "Operation force" of the item 3-1 Mechanical Characteristics and 6 Electric characteristics shall be satisfied after sweep vibration. of 20 m/s2, 10 Hz to 55 Hz (1 min) is given for 30 min. each in the directions of X, Y, Z.	

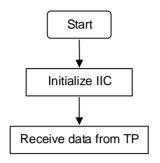
7.Block diagram 原理框图

7-1 IC Pin Configuration(IIC interface) IC 脚定义(IIC 接口)

PIN No.	PIN Name	Description
1	VDD	Supply voltage. VDD: 3.3V
2	GND	Ground Connection
3	NC	No connection (only used for test by TRULY)
4	SCL	IIC Clock, add a pull-up resistor (reference resistor: 4.7k).
5	SDA	IIC DATA, add a pull-up resistor (reference resistor: 4.7k).
6	I2CINT	Falling edge is active
7	NC	No connection (only used for test by TRULY)
8	NC	No connection (only used for test by TRULY)

TRULY®

7-2 Flow Chart 流程图



NOTE:

①IIC clock frequency: 100KHZ ②IIC 7BIT ADDRESS:0X0A

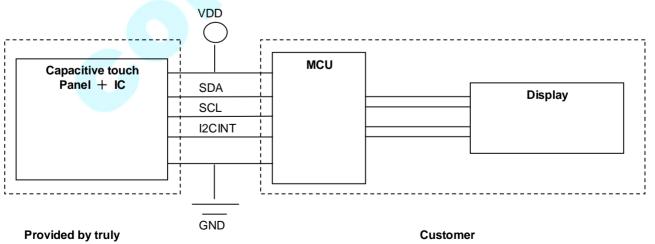
3 Different combination of

bGestureCode and bGesturePara represents different gesture. Please see below table for details:

bGestureCode	bGesturePara	Gesture
0x02	0x01	rotate left
0x02	0x02	rotate right
0x03	0x01	zoom out
0x03	0x02	zoom in
0x04	0x01	pan left
0x04	0x02	pan right
0x04	0x03	pan up
0x04	0x04	pan down

Power on Wait several ms No If single-touch Yes Send data package: 0Xaa+X(16 bits)+Y(16bits)+0X00+0X00 No If gesture Yes Send data package: 0Xaa+X (16 bits)+Y (16 bits)+ bGestureCode (8bits)+ bGesturePara(8 bits) No If hand-up Yes Send data package: 0Xaa+0xffff+0xffff+0X00+0x00

7-3 Block diagram 原理框图





7-4 IIC DATA PACKAGES IIC 数据包: Data Format:

STAT 0	X0A ACK	0Xaa	ACK	Xh	ACK	ΧI	ACK	Yh	ACK	ΥI	ACK	BGestureCode(8BIT)	ACK	BGesturePara(8BIT)	NACK	STOP

8. DRAWING 图纸



TRULY SEMICONDUCTORS LTD. 信利半导体有限公司

