

# 承 认 书

## SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER	立创商城
品 名 PART NAME	开关
型 号 MODE	TAC-32W-V-T/R
品 牌 BRANDS	DIPTRONICS
最小包装 Minimum Pack Quantity	900 PCS 货期: 4-6 周
最小供应量 Minimum Order Quantity	4500 PCS

链接地址: ①

② 供应商承认栏:			客户承认栏:		
检 验	审 核	批 准	接 收	审 核	批 准
INSPECT	CHECK	APPROVE	RECEIVE	CHECK	APPROVE

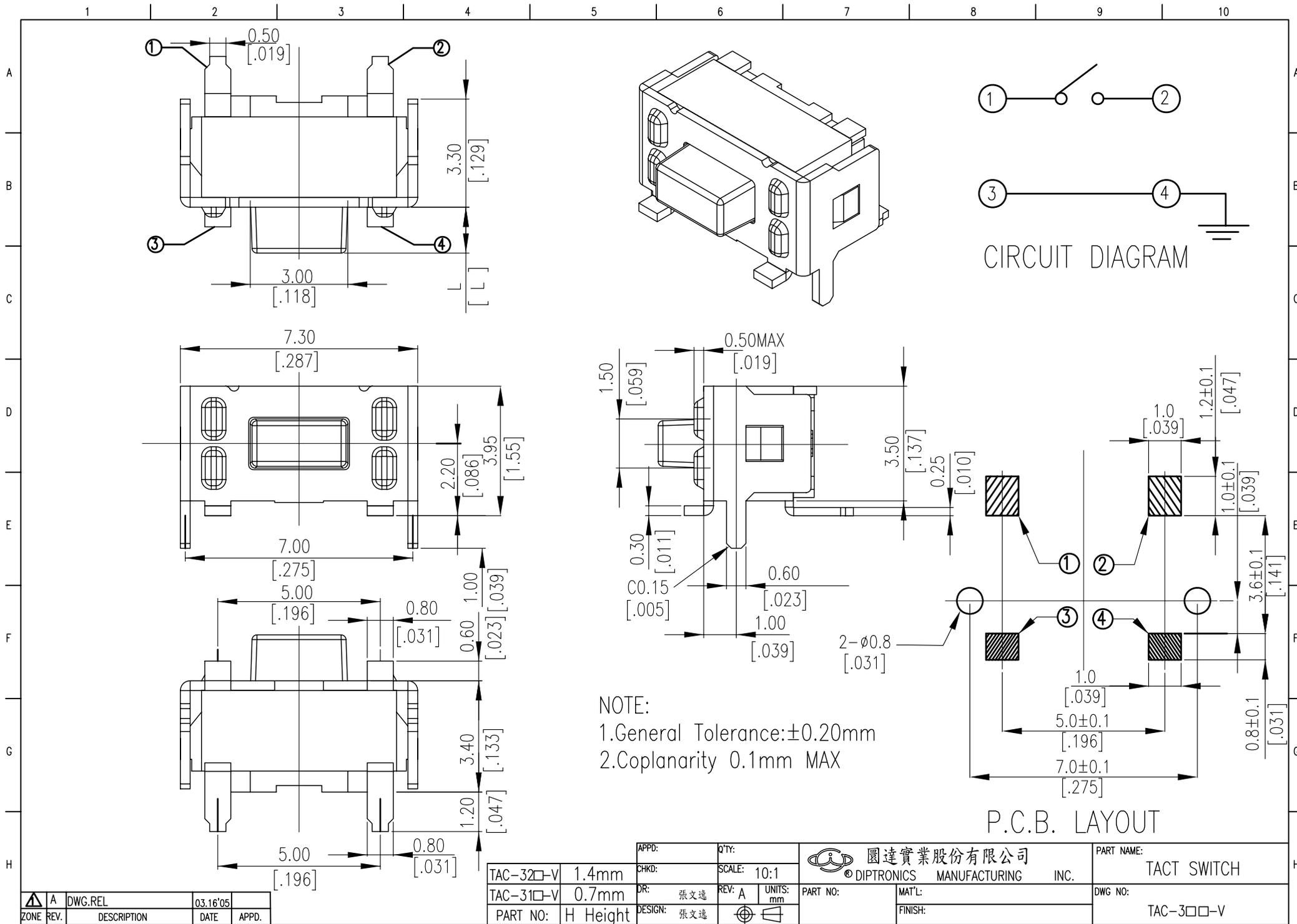
③ 公司 COMPANY: 深圳市力卡科技有限公司  
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盖章 Seal:

2019 年 02 月 27 日





△ A	DWG.REL	03.16'05	
ZONE REV.	DESCRIPTION	DATE	APPD.

TAC-32□-V	1.4mm	APPD:	QTY:	圓達實業股份有限公司 © DIPTRONICS MANUFACTURING INC.	PART NAME:	TACT SWITCH
TAC-31□-V	0.7mm	CHKD:	SCALE: 10:1		DWG NO:	TAC-3□□-V
PART NO: H Height	DESIGN: 張文逸	DR: 張文逸	REV: A	UNITS: mm	MAT'L:	
					FINISH:	



# TA□□-3□-V SPECIFICATION

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## 1. Style

This specification describes "TACTILE SWITCH", mainly used as signal switch of electric devices, with the general requirements of mechanical and electrical characteristic.

1.1 Operating Temperature Range : -25 °C~+70°C

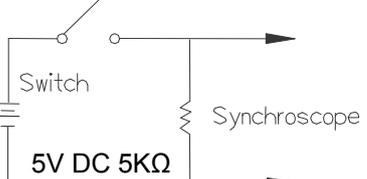
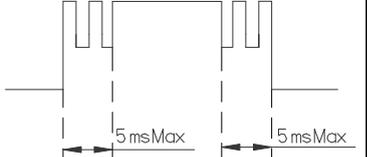
1.2 Storage Temperature Range : -40°C~+80°C

1.3 The shelf life of product is within 6 months.

2. **Current Range:** 50mA, 12V DC

3. **Type of Actuation:** Tactile feedback

4. **Test Sequence:**

	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
APPEARANCE	1	Visual Examination	By visual examination check without any out pressure & testing	There shall be no defects that affect the serviceability of the product.
ELECTRIC PERFORMANCE	2	Contact Resistance	Applying a static load 1.5-2 times the operating force to the center of the stem, measurements shall be made with a 1 kHz small current contact resistance meter	100mΩ Max
	3	Insulation Resistance	Measurements shall be made following application of 500 V DC potential across terminals and cover for 1 minute ± 5 seconds	100MΩ min
	4	Dielectric Withstanding Voltage	250 V AC(50Hz or 60Hz) shall be applied across terminals and cover for 1 minute	There shall be no breakdown or flashover
	5	Capacitance	1 MHz ±10 kHz	5 pF max.
	6	Bounce	3 to 4 operations at a rate of 1 cycles per second 	5 m seconds max. 



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MECHANICAL PERFORMANCE

MECHANICAL PERFORMANCE	7	Operating Force	Applied in the direction of operation 	OF	160±50 [1.568±.49N]	320±80 [3.136±.784N]
	8	Stroke	Placing the switch such that the direction of switch operation is vertical and then gradually increasing the load applied to the stem, the stroke distance for the stem to come to a stop shall be measured	0.25+0.2/-0.1mm		
	9	Stop Strength	Placing the switch such that the direction of switch operation is vertical, a static load of 3 kgf (29.4N) shall be applied in the direction of stem operation for a period of 15 seconds	1)As shown in item 4~7 2)Contact Resistance: 200mΩ Max 3)Insulation Resistance: 10MΩ min		
	10	Solder Heat Resistance	<ul style="list-style-type: none"> <li>■ Through Hole Type</li> <li>1)Soldering Temperature: 260±5°C</li> <li>2)Duration of Solder Immersion: 5±1 seconds</li> <li>3)Frequency of Soldering Process 1 times max. (PCB is 1.6 mm in thickness)</li> <li>■ SMT Type 4 of 4 Series</li> </ul>	<ul style="list-style-type: none"> <li>① Shall be free from pronounced backlash and falling-off or breakage terminals</li> <li>② As shown in item 4、5</li> <li>③ Contact Resistance: 200mΩ Max</li> <li>④ Insulation Resistance: 10MΩ Min</li> </ul>		
	11	Vibration	Shall be vibrated in accordance with Method 201A of MIL-STD-202F <ul style="list-style-type: none"> <li>1)Frequency: 10-55-10Hz in 1-min/cycle.</li> <li>2)Direction:3 vertical directions including the directions of operation</li> <li>3)Test time:2 hours each direction</li> <li>4)Swing distance=1.5mm</li> </ul>	1)As shown in item 4~7 2)Contact Resistance: 200mΩ Max 3)Insulation Resistance: 10MΩ min		



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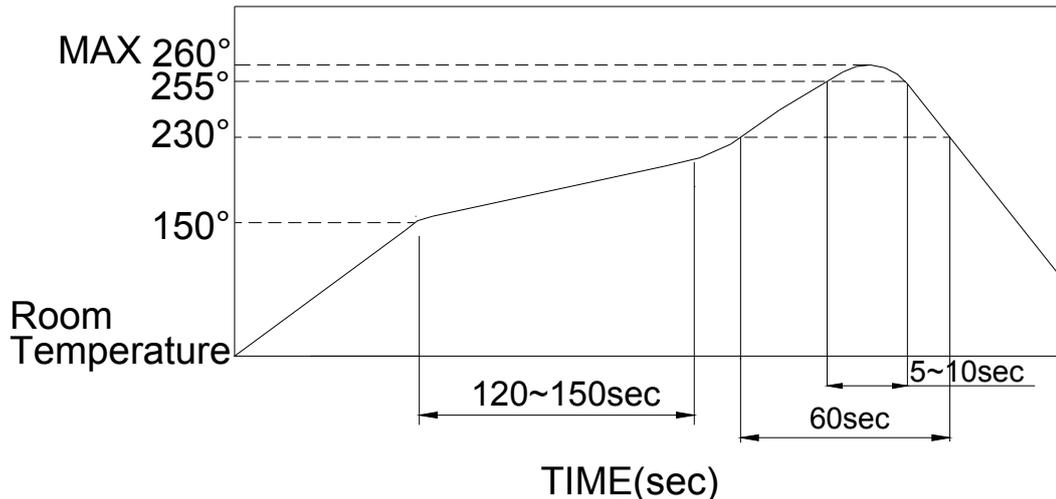
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MECHANICAL PERFORMANCE	12	Shock	<p>Shall be shocked in accordance with Method 213B condition A of MIL-STD-202F</p> <p>1)Acceleration; 50G          2)Action time:11±1m seconds          3)Testing Direction:6 sides          4)Test Cycle: 3 times in each direction</p>	<p>1)As shown in item 4~7          2)Contact Resistance: 200mΩ Max          3)Insulation Resistance: 10MΩ min</p>
	DURABILITY	13	Operating Life	<p>Measurements shall be made following the test forth below:</p> <p>1)5mA,5 VDC resistive load          2) Applying a static load the operating force to the center of the stem in the direction of operation          Static Load = OF Max.          3) Cycle of Operation:          4)50,000 cycles min. For 160,320gf</p>
WEATHER-PROOF	14	Resistance Low Temperature	<p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made:</p> <p>1)Temperature:-40±3℃          2)Time:96 hours</p>	<p>1)As shown in item 4~7          2)Contact Resistance: 200mΩ Max          3)Insulation Resistance: 10MΩ min</p>
	15	Resistance High Temperature	<p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made:</p> <p>1)Temperature:80±2℃          2)Time:96 hours</p>	<p>1)As shown in item 4~7          2)Contact Resistance: 200mΩ Max          3)Insulation Resistance: 10MΩ min</p>
WEATHER-PROOF	16	Resistance Humidity	<p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made:</p> <p>1)Temperature:40±2℃          2)Relative Humidity:90~95%          3)Time:96 hours</p>	<p>1)As shown in item 4~7          2)Contact Resistance: 200mΩ Max          3)Insulation Resistance: 10MΩ min</p>



**5. SOLDERING CONDITIONS:**

■ Condition for Soldering TA□□-3□□-V Series



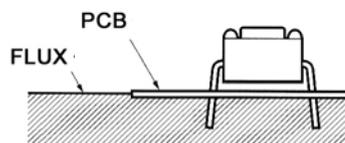
- The condition mentioned above is the temperature on the Cu foil of the PCB surface. There are cases where board's temperature greatly differs from switch's surface be used not to allow switch's surface temperature to exceed 260°C.

■ Manual Soldering

Soldering Temperature	Max.350°C
Continuous Soldering Time	Max. 5 seconds

■ Precautions in Handling

1. Care should be exercised so that flux from the upper part of the printed circuit board does not adhere to the switch.
2. Except for washable type do not wash the switch body.
3. Please make sure that there is no flux rose over the surface of the PCB





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## ■ Notes on storage conditions:

Do not store in the following environment or it may affect product's function and solderability:

1. temperature of -10 (max) ~ +40 (min) °C & humidity at 85% (min)
2. environment with corrosive gas
3. storage over 6 months
4. place of direct sunlight

Store with proper packaging conditions and to avoid loading heavy force

We suggest to use the products within 3 months or at least 6 months.

After opening the package, the rest products must be stored in the appropriate moisture-proof & airtight environment.