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SPECIFICATION

SPEC NO. : SP03AB15731-0010

PART NO. : 03A56B640021120

PRODUCT NAME : DA 1573E

DESCRIPTION : Patch Antenna(18*18*4mm)
ROHS Compliant Product

REVISION STATUS

VERSION	DATE	PAGE	REVISION DESCRIPTION	PREPARED	DESIGNED	APPROVED
01	96.10.22	全	新制訂	游登貴	徐偉泓	楊才毅
02	97.01.17	全	修改 P5/9 I/O PIN 公差、P6/9 Layout Dimension	游登貴	徐偉泓	徐偉泓
03	97.02.04	全	修改 P5/9 特性圖、P7/9 Test Jig and Dimension	游登貴	徐偉泓	徐偉泓


Prepared By	Designed By	Approved By
游登貴	徐偉泓	徐偉泓

95.10.25



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B400-010.02

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CIROCOMM TECHNOLOGY CORP.

PART NUMBER :03A56B640021120

1 SCOPE

This specification covers the dielectric antenna for GPS.

2 Name of the product

This product is named "Dielectric Antenna" .

3 Electrical characteristics

3-1 Electrical characteristics of antenna

The antenna has the electrical characteristics given in Table 1 under the cirocomm standard installation conditions shown in the figure in Appendix


Table 1

No	Parameter	Specification	Notes
1	Range Of Receiving Frequency	1575.42MHz \pm 1.023MHz	
2	Center Frequency	1573MHz \pm 3MHz	With65*68mm GND Plane
3	Bandwidth	20 MHz min	Return Loss \leq -10dB
4	VSWR	1.5 max	Center Frequency
5	Gain at Zenith	1 dBic typically	
6	Gain at 10° Elevation	-4 dBic typically	
7	Axial Ratio	3 dB max	
8	Polarization	RHCP	Right Hand Circular Polarization
9	Impedance	50 Ohm	
10	Frequency Temperature Coefficient (tf)	0 \pm 20ppm / °C	-40°C to +105°C
11	Operating Temperature		-40°C to +105°C

4 Environmental conditions

4-1 Operating conditions



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/The antenna has the electrical characteristics given in Tables 1 in the temperature range of -40°C to $+105^{\circ}\text{C}$ and under the environmental conditions of $+40^{\circ}\text{C}$ and 0-95% r.h.

4-2 Storage temperature range

The storage temperature range of product is -40°C to $+105^{\circ}\text{C}$

5 Reliability tests

5-5-2 and 5-6 examination of enforced. Moreover, the decision standard of the movement confirmation is judged by 3 and 4 of the tables-1, and the decision standard of the appearance isn't thought function problem become defect be.

The decision standard of the confirmation of the movement is doing the characteristic electric standard of the antenna module. And, the decision standard of the appearance isn't thought function problem become defect be.

5-1. Low-temperature test

Expose the specimen to -45°C for 400 hours and then to normal temperature/humidity for 24 hours or more. After that examine the appearance and functions.

5-2 High-temperature test

Expose the specimen to $+105^{\circ}\text{C}$ for 400 hours and then to normal temperature/humidity for 24 hours or more. After that examine the appearance and functions.

5-3 High-temperature/high-humidity test

Subject the object to the environmental conditions of $+85^{\circ}\text{C}$ and 90-95% r.h. for 96 hours, then expose to normal temperature/humidity for 24 hours or more After this, check the appearance and functions.

5-4 Thermal shock test

Subject the object to cyclic temperature change (-30°C , 30 minutes \leftrightarrow $+80^{\circ}\text{C}$, 30 minutes) for 1500 cycles, the expose to normal temperature/humidity for 24 hours or more.

5-5 Vibration test


5-5-1 Sinusoidal vibration test

Subject the object to vibrations of 5 to 200 to 5Hz swept in 10 minutes, 4.5G at maximum (2mm amplitude), in X and Y directions for two hours each and in Z direction for four hours. After this, check the appearance functions.

5-5-2 Vibration test in packaged condition

Subject the object, which is packaged as illustrated, to vibrations of 15 to 60 to 15Hz swept in 6 minutes, 4G at maximum (2mm amplitude at maximum),



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applied in X, Y and Z directions for two hours each, i.e. six hours in total. After this, check the appearance and functions.

5-6 Free fall test in packaged condition

Drop the object, which is packaged as illustrated, to a concrete surface from the height of 90 cm, on one corner, three edges and six faces once each, i.e. 10 times in total. After this, check the appearance and functions.

6 Inspection

As for the examination in the mass production, the receiving character of the ratio wave sent in a shield box from the standard antenna and VSWR are confirmed in the picking out examination.

7 Test Record

A Copy of test record filled with following contents shall be provided at time of delivery.

7-1 Quantity of delivery

7-2 Measurement of electrical characteristics : following data at normal temperature obtained by the method described in section 8.

- Output VSWR

7-3 Temperature and humidity of test

Quantity for sampling inspection shall be $n=5$ for any lot. In case quantity per lot is less than 5, the whole lot shall be inspected.

8 Warranty

If any defect occurs from the product during proper use within a year after delivery, it will be repaired or replaced free of charge.


9 Other

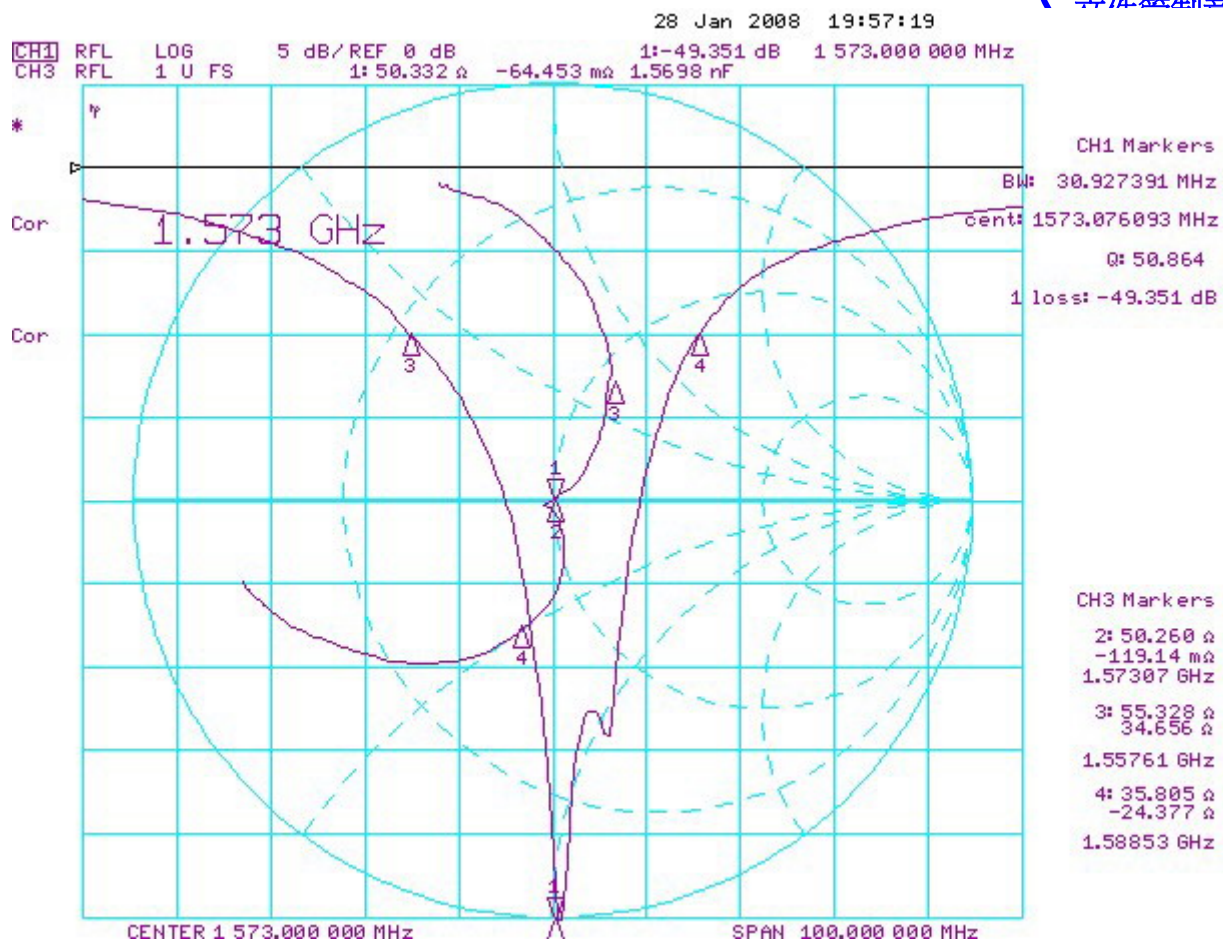
Any question arising from this specification manual shall be solved by arrangement made by both parties.

10 Precautions for use

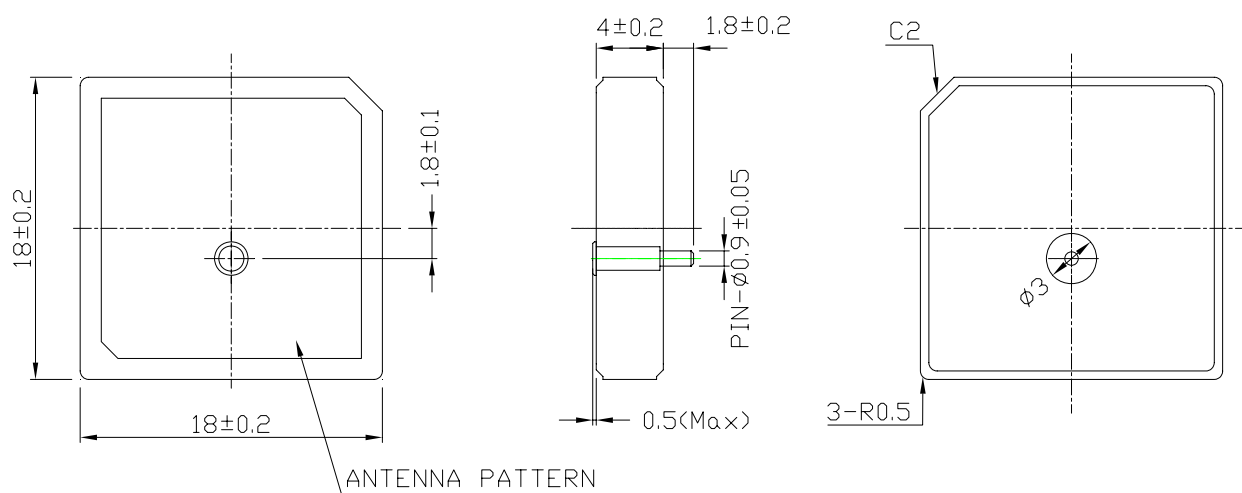
- Antenna pattern use a silver electrode.
- Please don't use the corrosion gas (sulfur gas, chlorine gas) in the atmosphere.
- Please don't direct solder onto the silver electrode of Antenna pattern.




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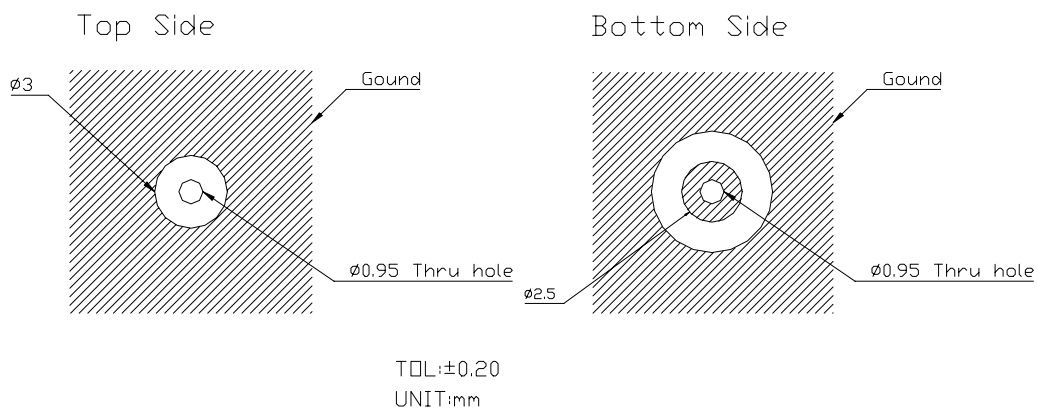


Shape and Dimension

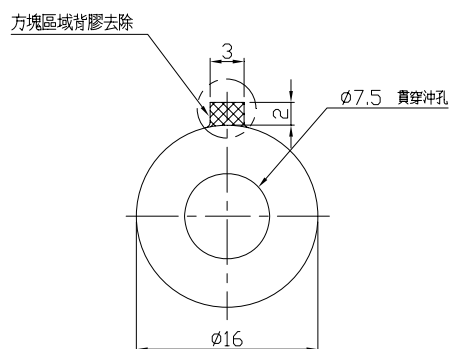


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Layout Dimension

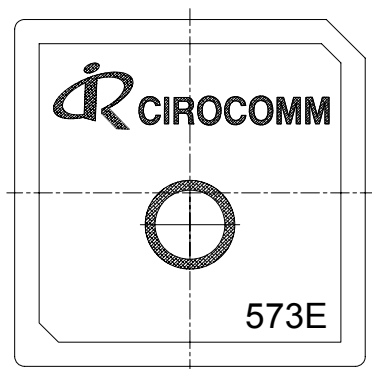



Tape Dimension



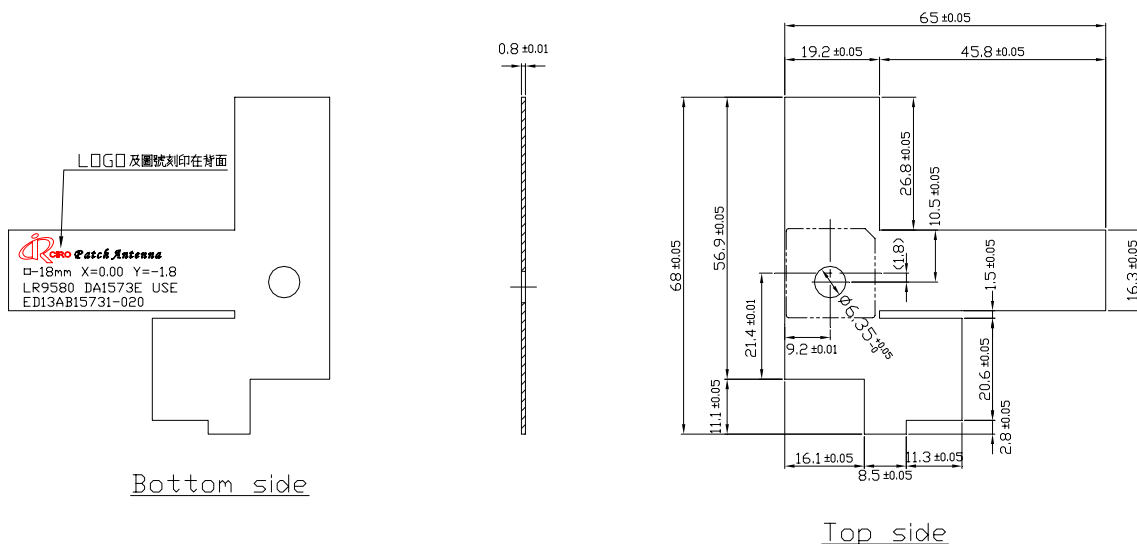
- 備註：
1. NITTO : NO.5015
 2. Double-coated adhesive tape for industrial use
 3. Thickness : 0.12mm
 4. 未標示公差為 ± 0.2

Mark



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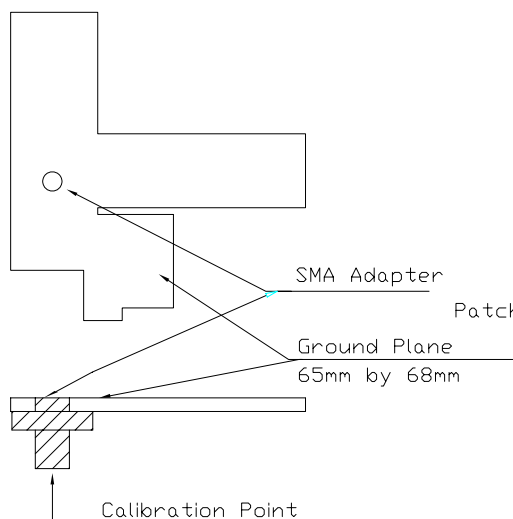
Test Jig and Dimension



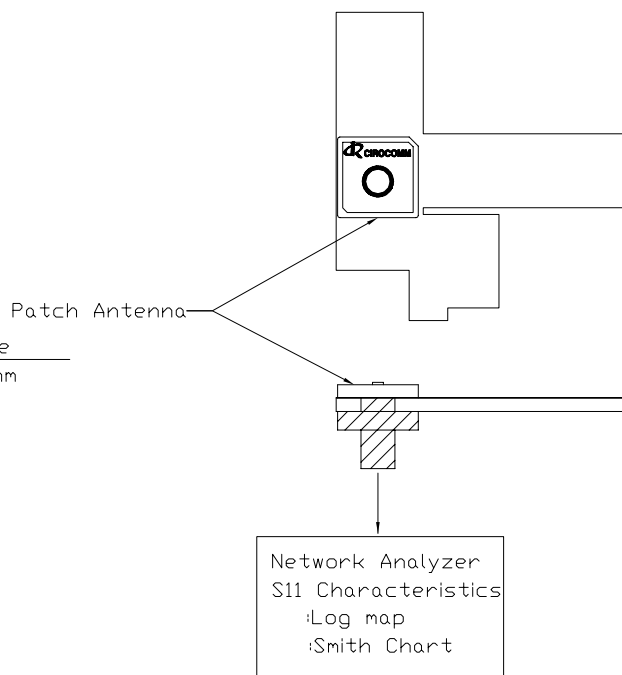
※ 註：未標示倒角處保持尖角 ※


Test Fixture Antenna Setup & Measurements

Test Fixture

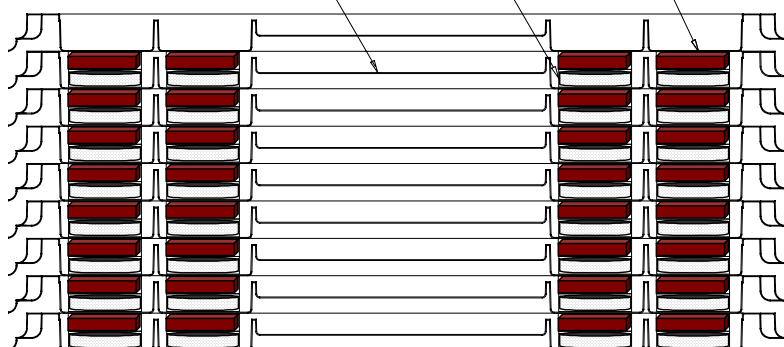
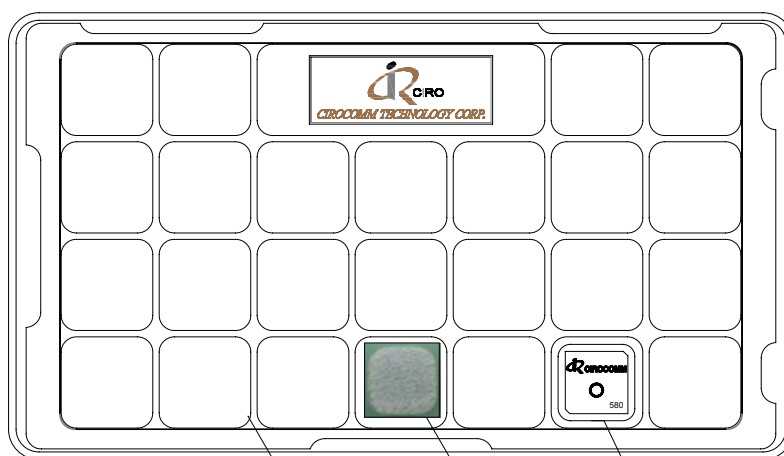



Antenna Setup & Measurements



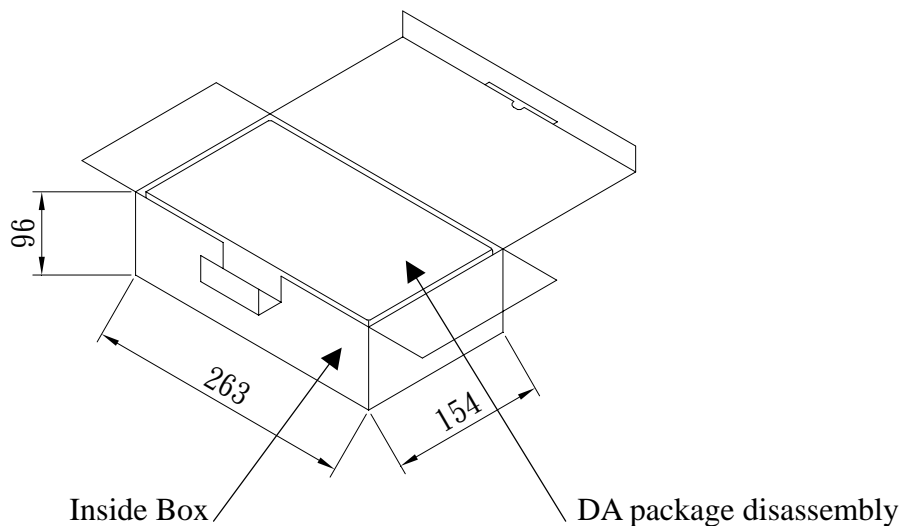
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DA package disassembly



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Packing



Inside Box

Outside Box

Shipping Label

客戶訂單 Cust P/O#		客戶 Cust		太盟料號 CIROCOMM P/N#		批號 LOT#	
客戶料號 Cust Item#				品名規格 Item SPEC			
廠商名稱 MANUFACTURER	太盟光電科技股份有限公司 CIROCOMM TECH. CORP.			出貨日期 DELIVERY DATE		數量 QTY.	



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