承　　認　　書

APPROVAL SHEET

CUSTOMER:　MAP ELECTRONICS CO., LTD

CUSTOMER MODEL NO.:　MEGAF-121XSAXX-920

DESCRIPTION #121X Mini-Magnetic Antenna

DATE 2013/6/25

Customer Approval	

MAP electronics co., ltd.
Material All Procurement

for reference only

Index.

Item

1. Drawing

2. Test report

· Electrical test

3. Specification

· Cable

· Connector

4. Packing

· PE Bag

· Carton

5. 可靠度測試報告

· 高溫實驗

Modification History:

Rev.	Date	Content
00	2012/8/30	
01	2012/9/20	Operating Temp:－20℃～＋65℃→－20℃～＋80℃
02	2012/10/11	新增可靠度測試報告
03	2012/11/12	新增規格
04	2013/2/1	新增生產地&材料成分表
05	2013/6/25	增加Pattern

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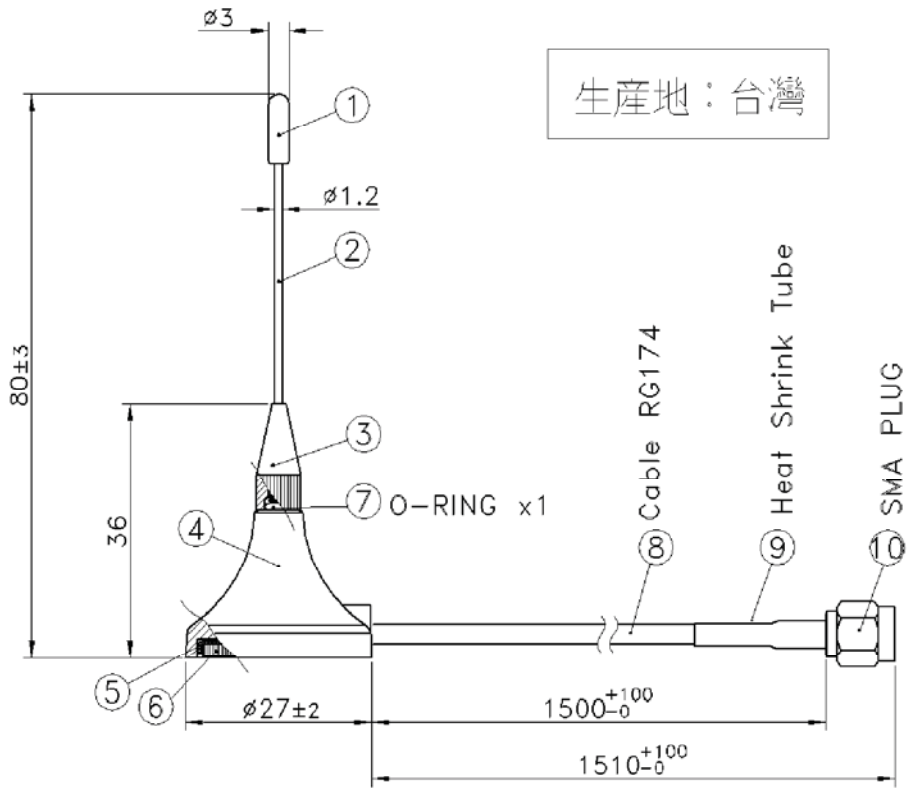
REV	ZONE	DESCRIPTION	ECN NO.	ENG	APPROVED	DATE
1	3A	Operating Temp:-20℃~+65℃→-20℃~+80℃	101091803	曾方昱	KYLIU	2012/9/20
2	4A	增加測試方法	102011801	CXLIU	KYLIU	2013/1/21
3	1B	N40改N35	102012901	CXLIU	KYLIU	2013/2/1



生產地：台灣

Electrical Properties	
Frequency Range	900~940 MHz
Impedance	50 Ω
V.S.W.R.	≤2.0
Radiation	Omni
Gain	2 dBi
Polarization	Vertical
Mechanical Properties	
Body Material	SUS
Connector	Brass
Water Proof	IP66
Weight	39 g(est.)
Operating Temp	−20℃ ~ +80℃

P/N	Part Name	Material	Finish	Q'ty
①	Top	Brass	Black	1
②	Mast	SUS304	Black	1
③	Copper cylinder	Brass	Black	1
④	Holder	ABS	Black	1
⑤	Magnet cover	Tin Plate	Ni	1
⑥	Magnet	N35	Ni	1
⑦	O-Ring	Compound rubber	Black	1
⑧	Cable	RG174	Black	1
⑨	Heat shrink tube	F32/F34	Black	1
⑩	Connector	Brass	Glod	1

UNLESS OTHERWISE SPECIFIED TOLERANCES ON:
X ± 1
X.X ± 0.5
X.XX ± 0.25
ANG. ± 2.0°
THIRD ANGLE PROJECTION

DRAWN BY: JANE
DESIGNED BY: 曾方昱
CHECKED BY:
APPOVED BY: IRENE

MATERIAL:
FINISH:
SCALE:1/1;UNIT:mm
DATE:2012/08/31
REV: 03

TITLE : #121X Mini-Magnetic Antenna
DRAW NO. :
PART NO. : MEGAF-121XSAXX-920

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FM0414-02

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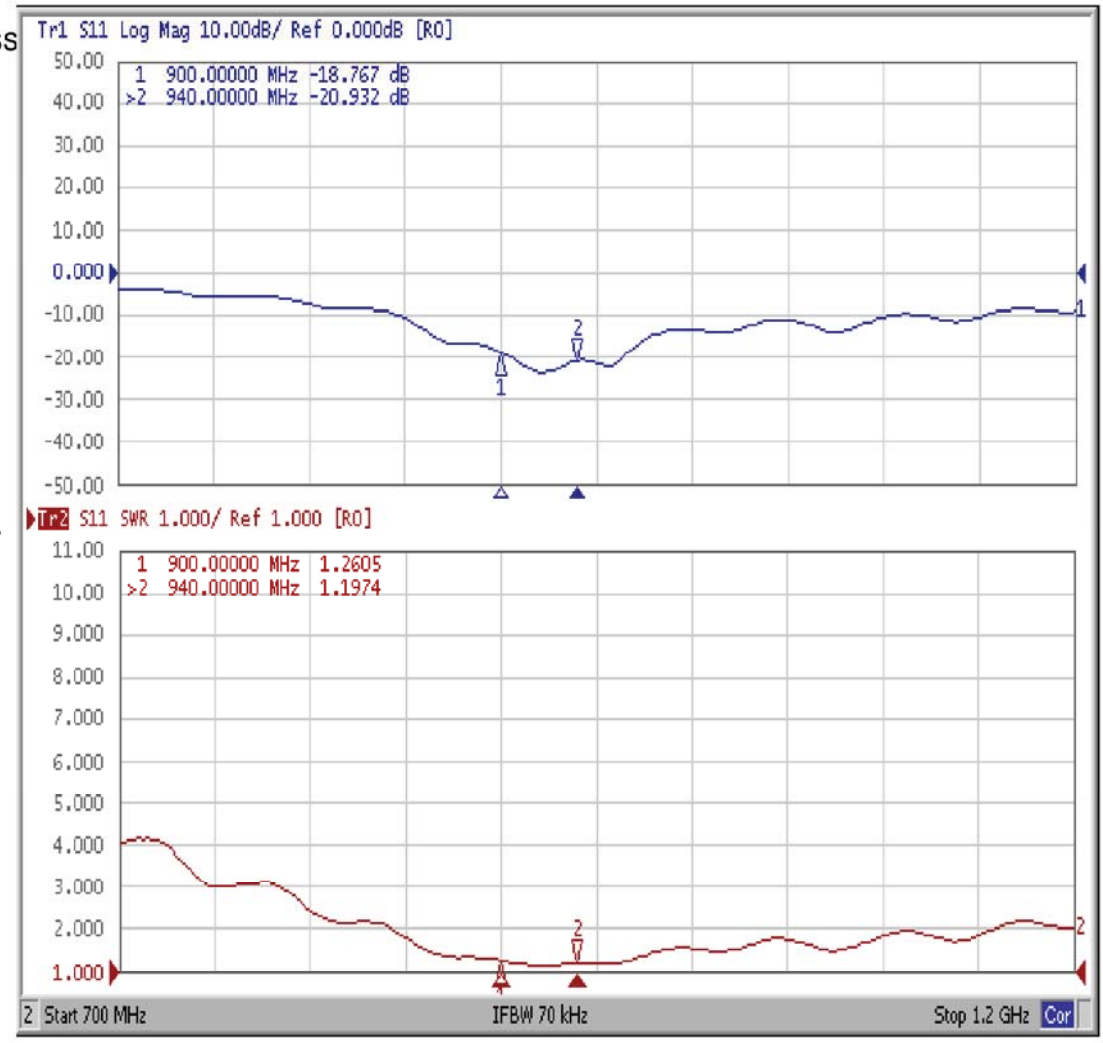
Model. MEGAF-121XSAXX-920

Test Report **Return loss/V.S.W.R**

Return loss



V.S.W.R.

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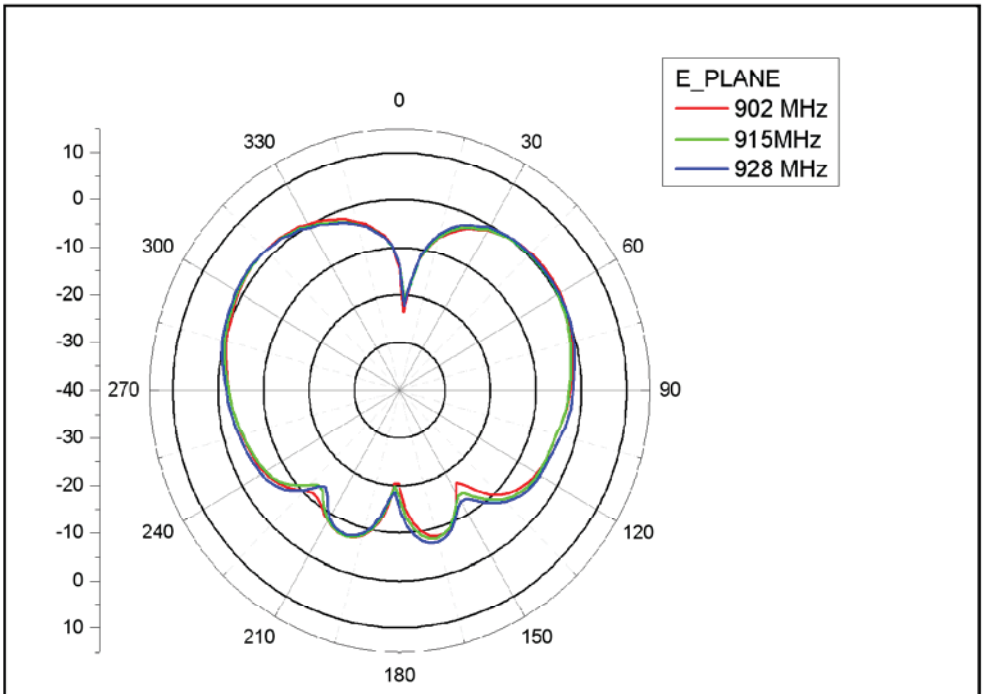
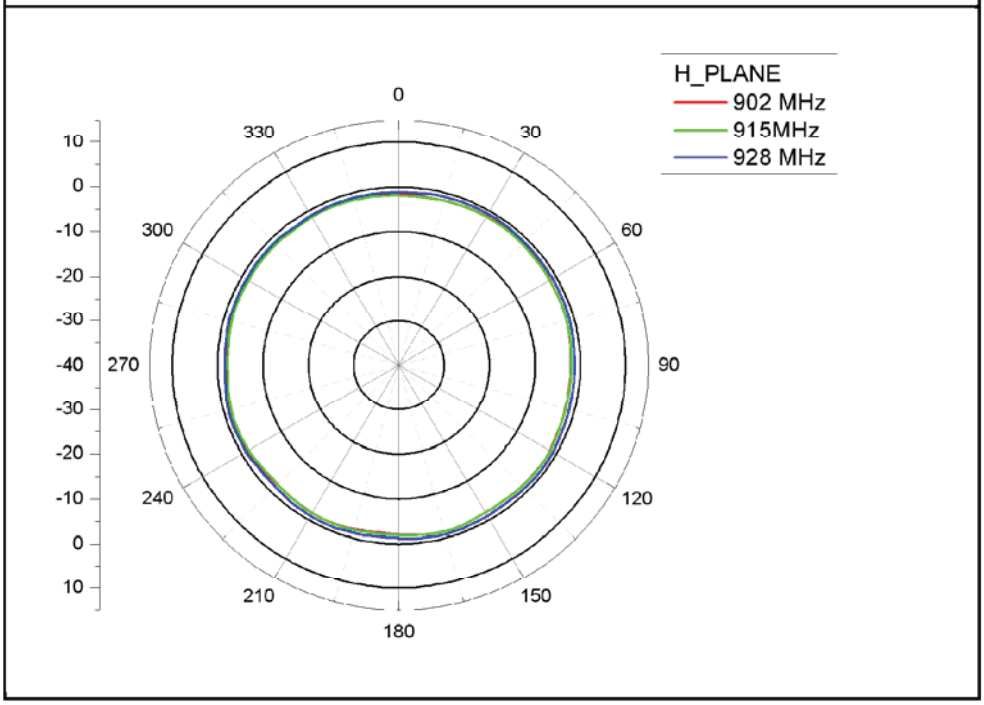
2D Patterns **Pattern Test**

E-plane



H-plane



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Construction:

A) Center Conductor:
Compositon 7/0.16mm
Copper Covered Steel Wire
OD 0.49mm
B) Dielectric:
Solid Polyethylene
OD 1.48±0.02mm
C) Shield:
Tinned Copper Wire
Construction 16x5/0.1mm
Coverage 95%
OD 1.58±0.008mm
D) Jacket:
PVC
OD 2.8±0.05mm

Electricals:

Impedance:	50±3 Ohms
Insulation Resistance:	1000↑MΩ/km
Capacitance:	101±3 pF/M

Physical Properties:

Weight:	1.15kg/100m (egt)
Mininum Bend Radius:	30mm
Operating Temperature Range:	60℃
Conductor BRead Strength	40kg

Nom. Attenuation

Frequency	dB/100m
100MHz	29.46
400MHz	63.09
800MHz	92.17
1GHz	103.97
2GHz	153.81
3GHz	194.88
4GHz	232.83
5GHz	273.13
6GHz	312.42

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Connector		SMA
Specification Data	1） Impedance	50 ohm
	2） Frequency Range	0~6GHz
	3） V.S.W.R.	≦1.5
	4） Working Voltage	≦250 Vrms
	5） Dielectric Withstanding	≦670Vrms
	6） Voltage Insulation Resistance	≧2000 Mega ohm
	7） Contact Resistance	Center contact: 3.0 Milliohms (Max.) Outer contact: 2.0 Milliohms (Max.)
	8） Recommended coupling nut torque	4.0~8.8 in. lbs (0.45~0.99Nm)
	9） Coupling nut retention force	≧50 lbs (222N)
	10） Contact captivation force	≧5 lbs (22.2N)
	11） Durability (mating)	≧500 cycles
Environmental Data	1） Operating Temperature	−65℃～+165℃
	2） Thermal Shock	MIL-STD-202,Method 107, Condition E
	3） Corrosion	MIL-STD-202,Method 101, Condition E
	4） Shock	MIL-STD-202,Method 213, Condition I
	5） Vibration	MIL-STD-202,Method 204, Condition D
	6） Moisture Resistance	MIL-STD-202,Method 106
Material Specifications	Material Data	Material
	1） Body	Brass
	2） Contact	Brass
	3） Insulator	Teflon or Delrin

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Model. MEGAF-121XSAXX-920 **Specification**

Temperature	-20°C ~ 80°C
Storage Temperature	-40°C ~ 70°C
Use humidity	10~85%
Save humidity	5~95%
Customer assembly conditions	The magnet mount must adsorption on a clean and flat metal
Reliability test items	
-Thermal Shock Test	A.Temperature range: -30~70℃
	B.Temperature conversion: high and low temperature conversion need to be completed within
	C.Time: 1 hour each stay, a total of 7 cycles
-Temperature and humidity cycling test	A.Temperature range: -30~70℃
	B.Humidity: high temperature95~98%
	C.Temperature conversion: high and low temperature conversion completed in 60 minutes
	D.Time: 1 hour high and low temperature each stop, a total of 7 cycle
-Swing test	Test conditions: on-line load from the joint 30CM 200g, will be fixed after the swing joint test, swing around the 60 degree angle, swing after the 1000 time review and testing of electrical characteristics of the appearance
-Tensile testing	Test conditions: a connector fixed on the tension meter, the Hand wire, pull to 7kgf, view the connector and the cables and testing electrical characteristics
-Magnets strength test	Test Conditions :
	Magnets power required＞1 kgf
	Magnets strength test for 5 times, the magnet can not fall off
Producer	Company:SMART SHOW GROUP L.L.C. Address: Yong Town, Shenzhen, Guangdong Road, Hing Wai Industrial Zone II

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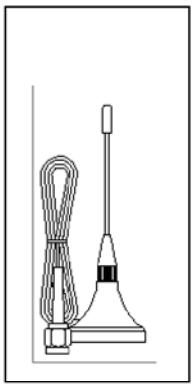
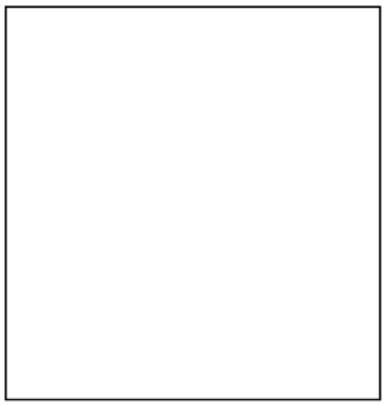
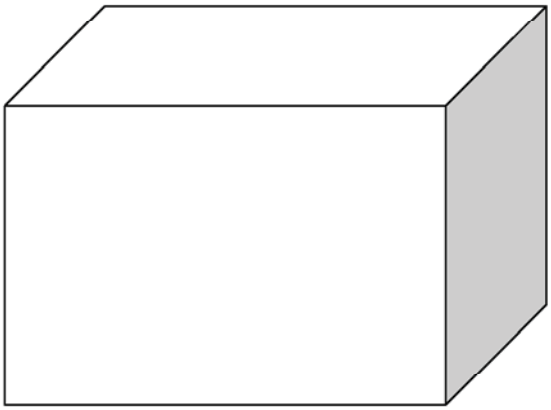
Model. MEGAF-121XSAXX-920 **PACKING**



1 1PCS ANT/1 PE
PE size 7*17 cm



2 50PCS ANT/1 PE
PE size 28*45 cm



3 200PCS ANT/1 Carton
Carton size 390*260*330mm

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報告編號：QE120917-03
日　　期：2012/09/17
頁　　次：4/4

可靠度測試報告
RELIABILITY TEST REPORT

產品名稱：Antenna
產品型號：GAF-121XSA1X-350
測試數量：2 PCS
測試時間：2012/09/13　14：30　　完成時間：2012/09/14 14：30
測試項目：高溫實驗
測試條件：高溫測試 80°C，歷時 24 小時

測試標準
外觀無變形、電氣 VSWR≦2.0

測試結果
PASS

附記:

1. 測試報告係提供表列機種相關測試執行之條件與過程，藉以提出客觀數據化結果，作為客戶(廠商)憑證。
2. 本測試報告共 4 頁(含附件)，分開使用無效。
3. 檢附相關過程相片及圖表

Approving by:劉冠纓　　Test Engineer:鄭隆和

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測試報告

1. 試驗設備：

1-1. 電氣熱風循環式乾燥機(型號: **RHD-452**)

2. 試驗環境：

2-1. 試驗溫度 80±5℃

3. 實驗條件:

3-1. 高溫測試 80°C，歷時 24 小時

4. 實驗結果：

4-1. 高溫測試 80°C，歷時 24 小時，外觀無變形、電氣 VSWR VSWR≦2.0

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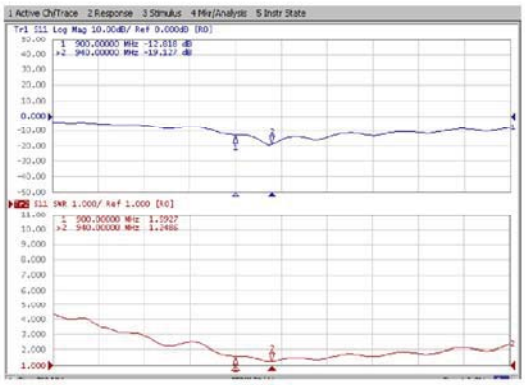
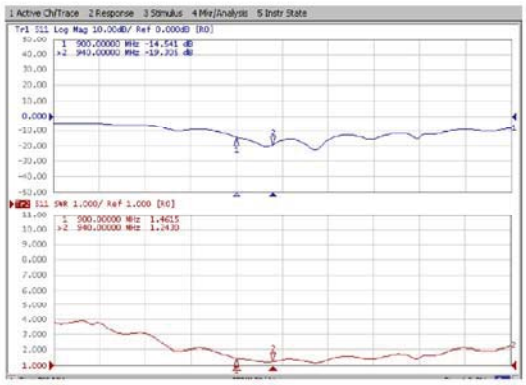
5. 附圖：

5-1. 實驗前外觀、電氣：

NO:1

NO:2





5-1. 實驗中：

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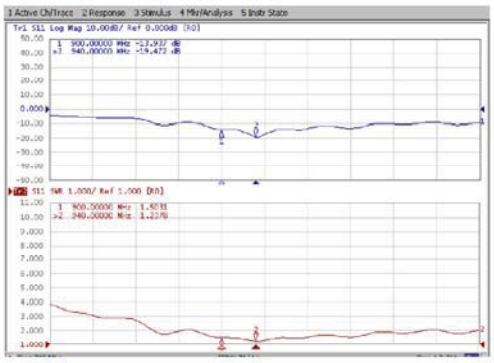
5-2. 實驗後外觀無變形、電氣 VSWR≦2.0，判定 PASS

NO:1



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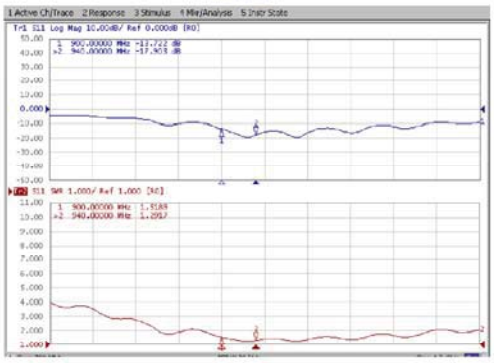

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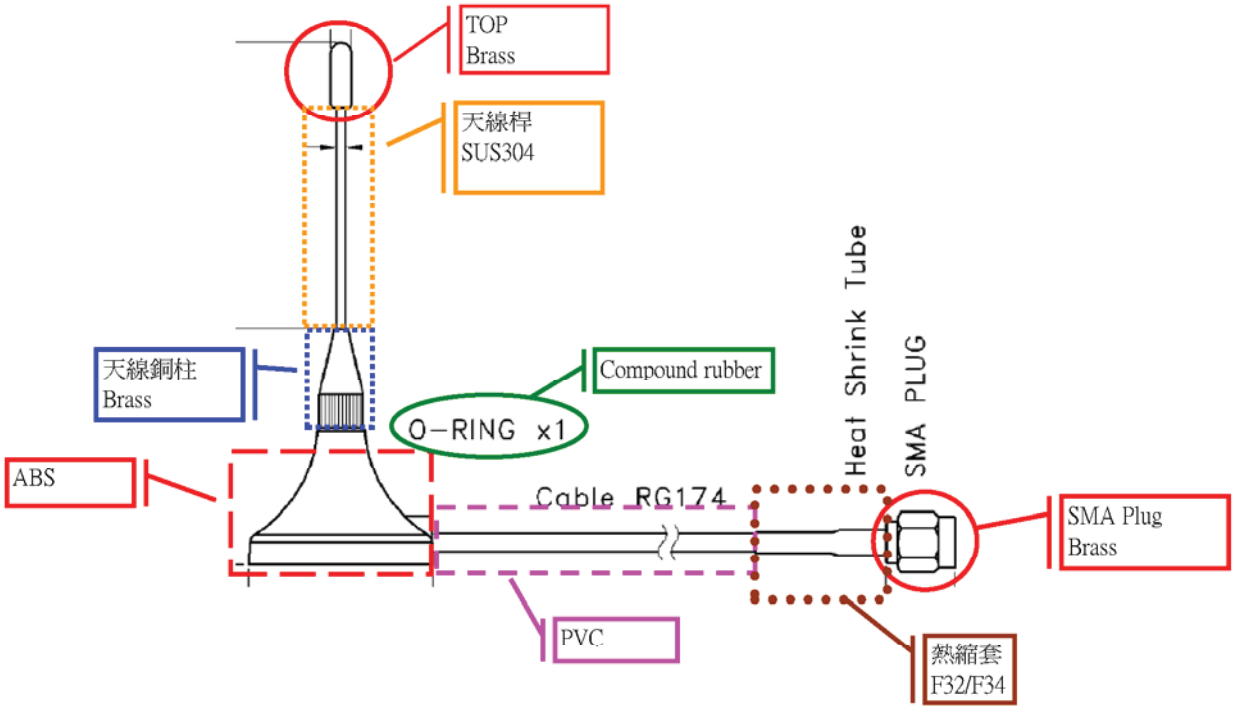

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