

A letter of recognition

DESCRIBE: JENESIS (SHEN ZHEN) CO., LTD
(**VUEVO Microphones**)

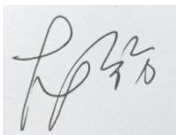
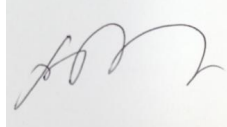
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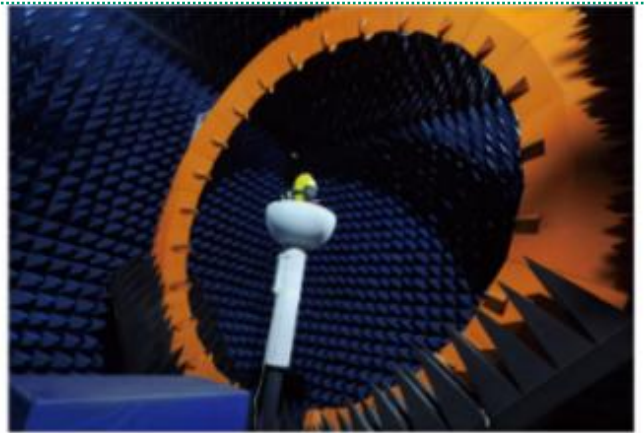
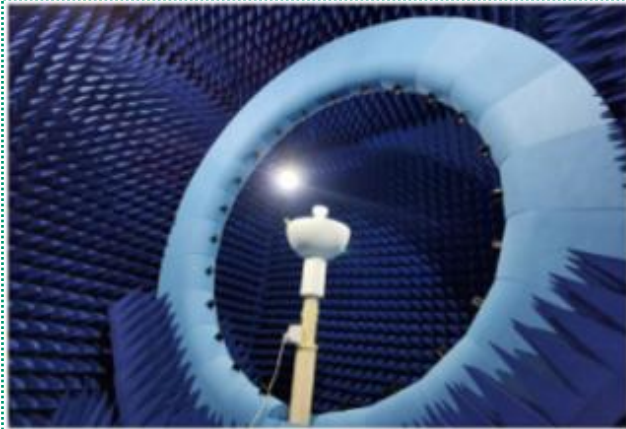
PART NO: ATC1358-CS003B70RB

Antenna type: WIFI/BT ANT ASM

DATE: 2023. 09. 21

PROVIDER: AT&C TECHNOLOGIES(SHENZHEN) CO. LTD

Customer Admit	confirm	ID Department	Test department	Structure section	Quality department
Supplier Admit	confirm	confirm	Proofreading	To examine	Approval
			Zhangwanshe	Xuliyang	



We have RF equipments as below

Anechoic Chamber

- Satimo 1ea
- SY24 1ea
- SAR 1ea
- KSS 2ea

Measurement

- 2G, 3G, 4G
- GPS
- Wifi
- Bluetooth(3.0) OTA
- NFC & WPC



Ant

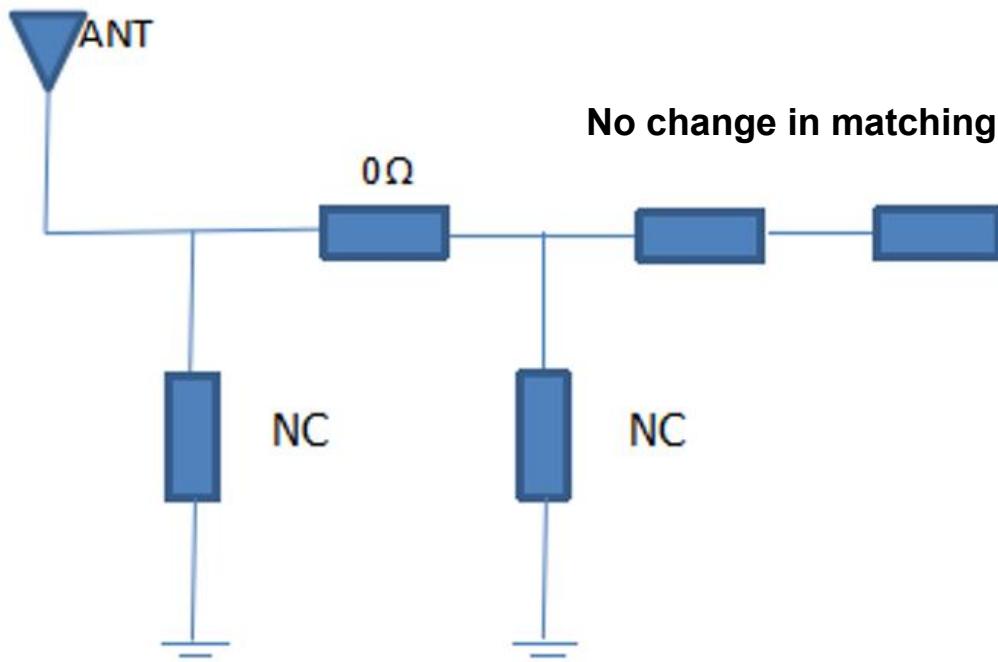
BOM

Customer	JENESIS	Written By	LNF	Orig. Date	2023.09.21
part Number	ATC1358-CS003B70RB	Revised By	SHIN	Revised Date	2023.09.21
Description	WIFI/BT ANT	Approved By	HJ	Approved Date	2023.09.21

Customer number	ATC number	Part name
	ATC1358-CS003B70RB	FPC +CABLE 55mm-MHF-2

Matching circuit

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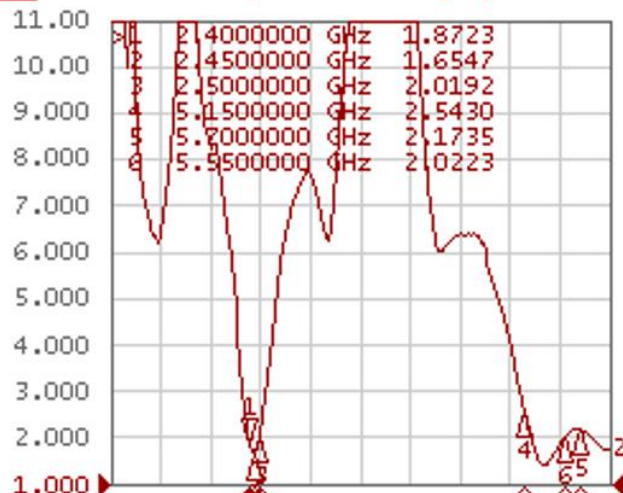
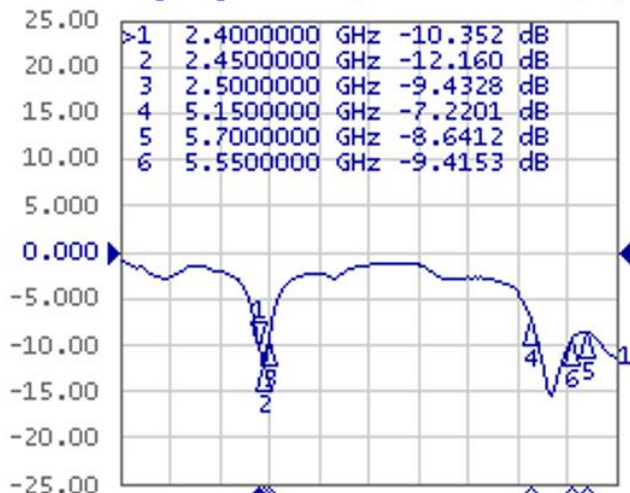


Antenna S11

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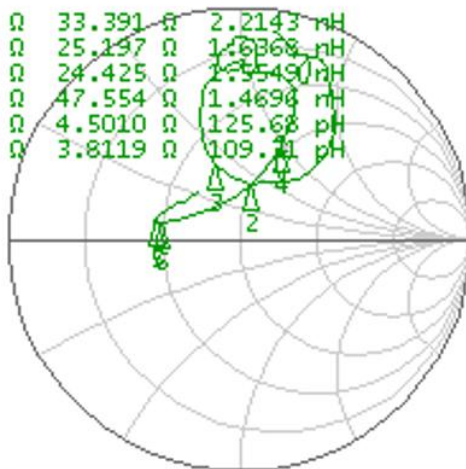
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

Tr1 S11 Log Mag 5.000dB/ Ref 0.000dB [F1] ▶ Tr2 S11 SWR 1.000/ Ref 1.000 [F1]



Tr3 S11 Smith (R+jX) Scale 1.000U [F1]

>1	2.400000 GHz	62.201 Ω	33.391 Ω	2.2143 nH
2	2.450000 GHz	49.083 Ω	25.197 Ω	1.6368 nH
3	2.500000 GHz	33.622 Ω	24.425 Ω	1.5549 nH
4	5.150000 GHz	48.364 Ω	47.554 Ω	1.4698 nH
5	5.700000 GHz	23.242 Ω	4.5010 Ω	125.68 pH
6	5.550000 GHz	24.915 Ω	3.8119 Ω	109.21 pH



Antenna *Efficiency

Customer	JENESIS	Written By	LNF	Orig. Date	2023.09.21
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Frequency/Mhz	Efficiency / %	MaxGain/dBi	Frequency/Mhz	Efficiency / %	MaxGain/dBi
2400	52.35	3.53	5150	53.58	4.47
2410	54.98	3.20	5200	56.62	4.62
2420	53.75	3.47	5250	56.89	4.09
2430	52.17	3.09	5300	53.09	4.14
2440	52.36	2.75	5350	53.97	4.46
2450	53.41	2.42	5400	52.52	4.28
2460	53.26	2.68	5450	54.71	4.62
2470	51.19	2.37	5500	52.95	4.84
2480	52.99	2.38	5550	53.26	4.49
2490	51.08	2.22	5600	53.02	4.5
2500	51.58	2.14	5650	52.1	4.66
AVG	52.65	2.75	5700	53.46	4.44
			AVG	53.85	4.47

Antenna OTA TEST

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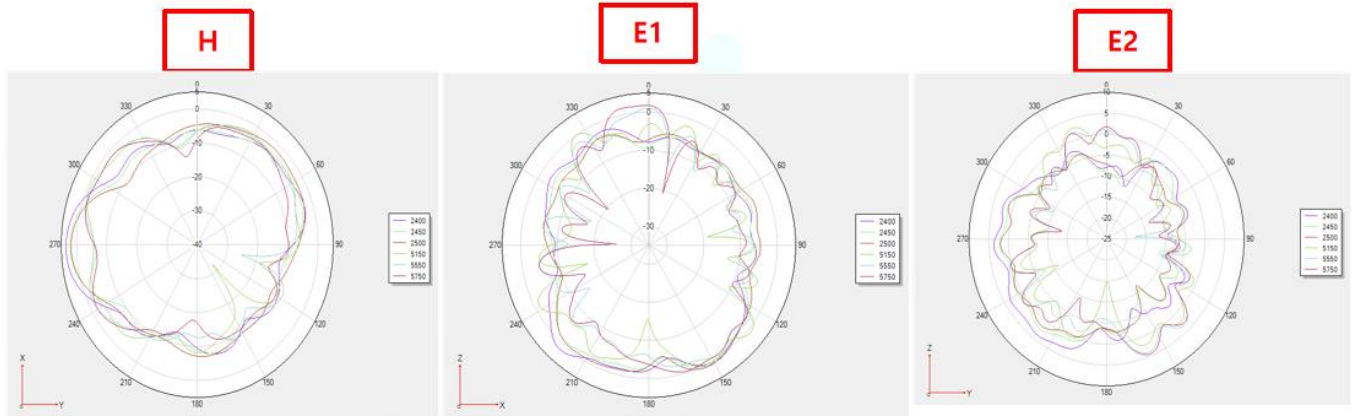
Tester	Band	Channel	TRP	TIS
Cmw500	WIFI_B (11M)	1	12.83	-70.12
Cmw500	WIFI_B (11M)	6	12.96	-70.35
Cmw500	WIFI_B (11M)	11	12.78	-70.13

Cmw500	WIFI_A (54M)	36	13.22	-70.76
Cmw500	WIFI_A (54M)	100	12.82	-71.89
Cmw500	WIFI_A (54M)	140	13.58	-71.98

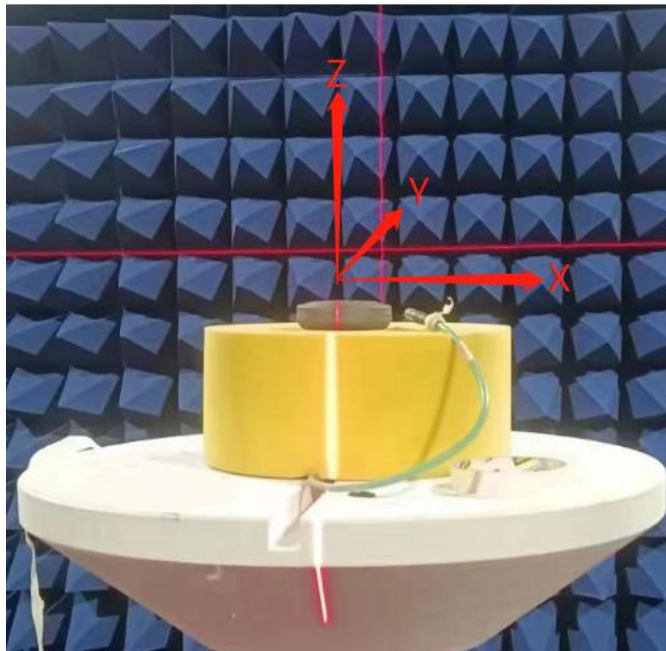
Cmw500	BT	0	2.56	-73.29
Cmw500	BT	39	2.63	-73.37
Cmw500	BT	78	2.52	-73.43

Directional pattern TEST

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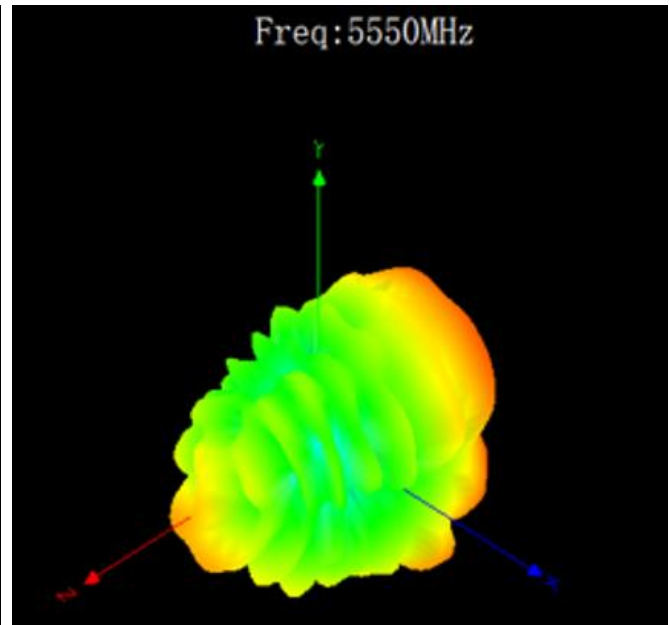
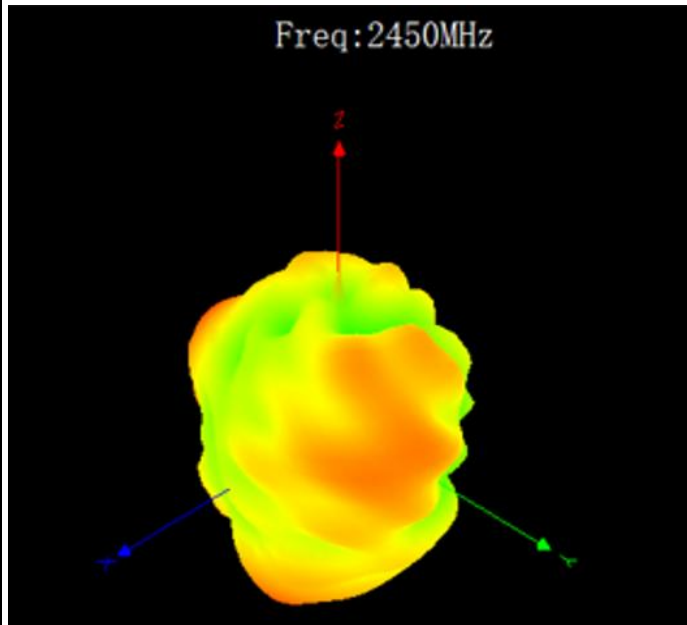


1. Azimuth Pattern H-Plane (: “H”, X-Y plane
2. Elevation Pattern E1, E2-Plane: “E1”, “E2”, X-Z plane(E1), Y-Z plane(E2)
3. It is a structure that supplements the distortion of the horizontal plane in the vertical plane and has a gentle sphere shape in three dimensions.

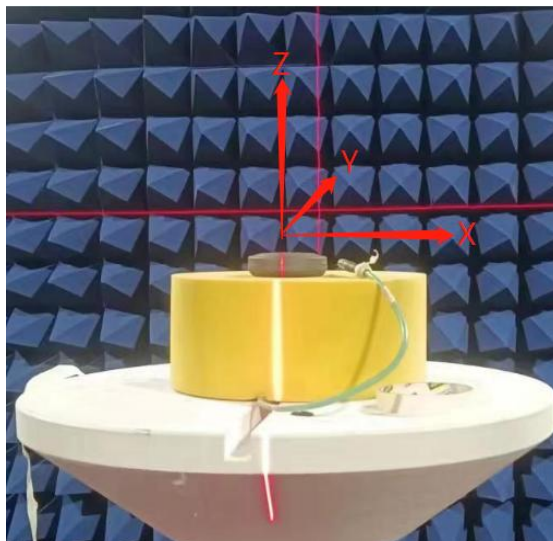


Active 3D diagram

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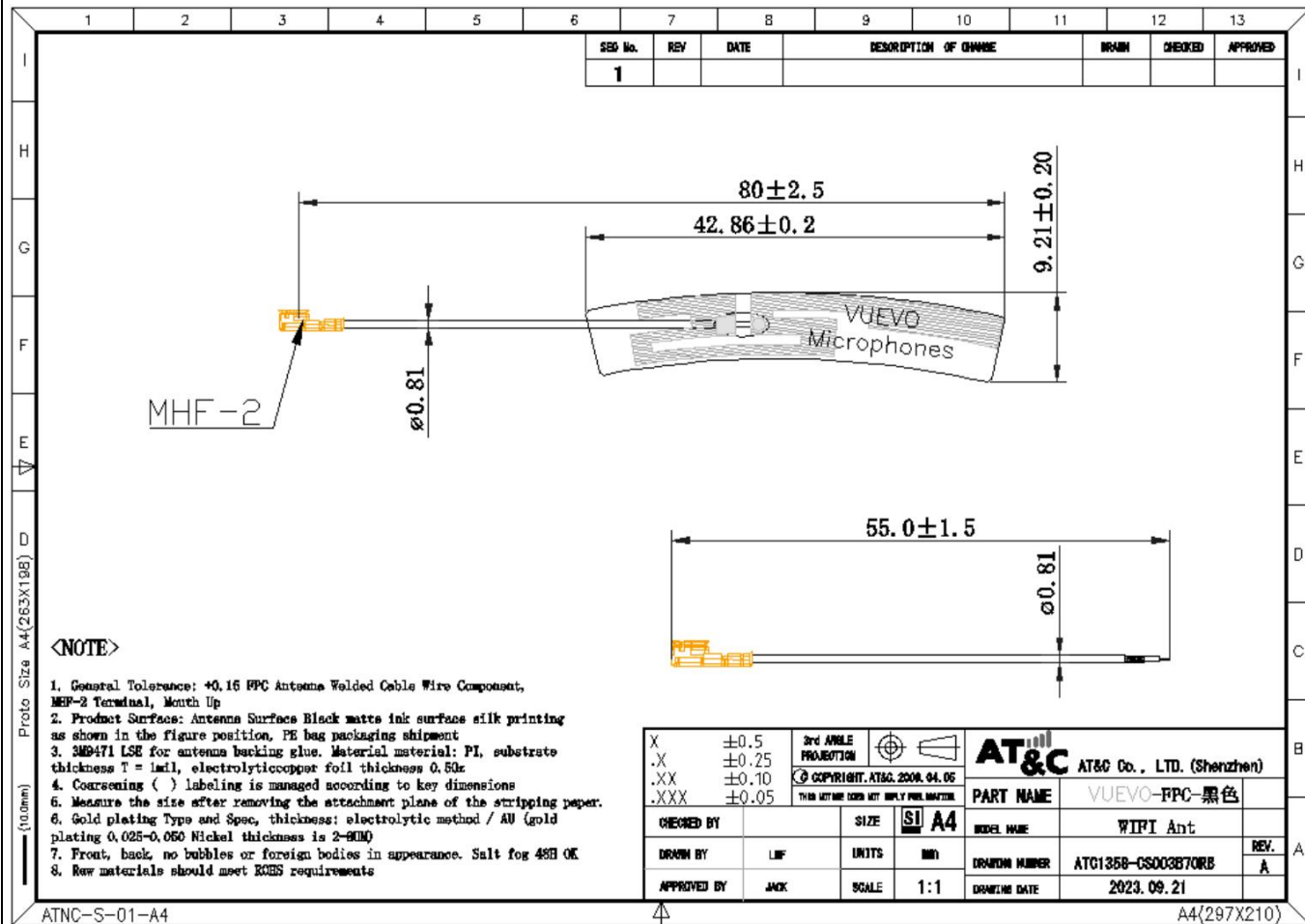


- 1: This 3D Radiation Pattern shows the response of each angle antenna gain on the sphere.
- 2: The objects corresponding to the X-Y-Z axes are shown in the left picture.



BT Antenna Draw

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Antenna DrawDimension report

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Size information					Measuring sample			% Tolerance		Handling opinions			
number	Dimension property	Dimension	Lower tolerance	Upper tolerance	1	2	3	Upper	Lower	determine	Supplier review comments	Customer review comments	Measuring tool
1	key point	80.0	-2.5	2.5	81.1	80.7	80.5			PASS			PJ
2	key point	42.86	-0.20	0.20	42.75	42.79	42.73			PASS			PJ
3	key point	9.21	-0.15	0.15	9.18	9.19	9.25			PASS			PJ
4	key point	0.81	-0.05	0.05	0.81	0.81	0.81			PASS			PJ

Production process

Production process flow chart

Product Name: antenna assembly

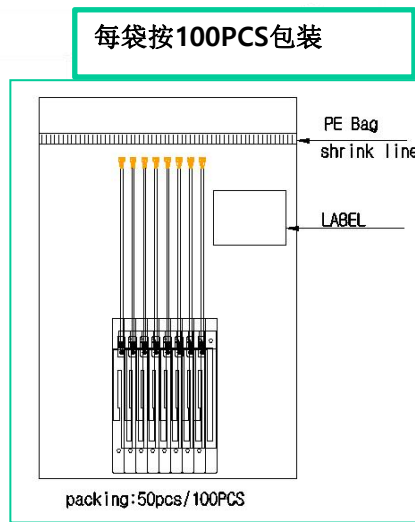
No	Process name	Use of equipment, fixture and tooling	Inspection items	Control factor	Reference standard	Inspection frequency
1	FPC incoming	Quadratic element or caliper	Key dimensions		Reference drawings	1
			Common appearance defects of FPC components		Refer to relevant inspection specifications	AQL0.65
			Black oil stripping		≥ 5Kg/f	2
			Material type, ROHS compliance		Reference drawings	Once
2	Cable incoming	Quadratic element or caliper	Key dimensions		Reference drawings	1
			Common appearance defects of coaxial line components		Refer to relevant inspection specifications	AQL0.65
			Wire end welding		Easy to weld, no oxidation, poor welding	2
			Material type, ROHS compliance		Reference drawings	Once
3	Cable welding	Soldering iron and tin wire	Soldering with iron	welding temperature	320±10℃	1
			Welding appearance		Do not short circuit, connect tin, wire skin scald	100%Self inspection
					False welding and false welding are not allowed	100%Self inspection
					Solder joint should not be less tin, more tin (large solder joint)	100%Self inspection
4	Network test	network analyzer	Test waveform compliance	Network parameters	The test waveform parameters of the product are consistent with the set waveform parameters, and the display of	100%
5	100% Appearance inspection And packaging	Cartons, pallets, labels, finished products to be packed	appearance		Refer to t8010 antenna inspection specification	100%
			Number of packages		Refer to relevant inspection specifications	100%
			Correct marking		Correct product name, quantity and related information	Once
6	OQC Delivery inspection	Quadratic element / caliper 3M glue	Key size and position of antenna		Reference drawings	Once
			Thickness and drawing adhesion		Refer to product drawing and PCB welding antenna inspection specification	Once
			Pull out force test of coaxial line		Refer to product drawing force test standard	Once
			Salt spray test		Refer to product salt spray test standard	Monthly / time
			Antenna appearance, packaging and labeling		Refer to T8600 antenna inspection specification	AQL0.65

Test items

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Serial number	Test items	Specifications	Testing equipment	The measured data				
				SAMPLE # 1	SAMPLE # 2	SAMPLE # 3	SAMPLE # 4	SAMPLE # 5
1	Appearance	① 重点管理项目（主要不良类型） ② 不能有漏铜切断现像区域 ③ 公差±0.15mm 以内 ④ 不多胶铜短路胶 ⑤ 产品不能有划伤，脏污，印刷掉落 等	Visual inspection	OK	OK	OK	OK	OK
2	Color	① 要在颜色限度样本范围内 ② 时颜色不能有明显差异（上~下）	Visual inspection	OK	OK	OK	OK	OK
3	Packaging	Production date, Part No, etc incoming/outgoing daily check for consistency	Visual inspection	OK	OK	OK	OK	OK
4	Dimension measurement	Recognize the importance of drawing management dimension measurement	Second dimension, measuring instrument	OK	OK	OK	OK	OK
5	Thickness of copper layer	cu: 0.50z Pl1mial	Thickness gauge					
6	Harmful substances	要达到 Rohs 6大物质及Halogen物质基准 ※ 参照 XRF 分析日志	XRF Measuring instrument	OK	OK	OK	OK	OK
7	Performance	Test fixture performance to confirm	Network analyzer	OK	OK	OK	OK	OK

Packaging method



PART LIST

*包装图为示意图，不代表图片为实际产品

NO	DESCRIPTION	Q'TY	MATERIAL	REMARKS	REV.
1	ANTENNA	1/1000	PET	N/A	A
2	PAD OUT	1/4	SW A 5T	N/A	A
4	CARTOON BOX	-	SW A 5T	N/A	A
5	PACKING TAPE	-	PP	N/A	A