

Specification For Approval

Date: 2019-04-09

File No.: 190409001

Version: 1.0

Customer : _____

Customer P/N : /

P/N : **AN115**

Description : Embedded Antenna

Checked By:

Customer Approved By:

Product Number:AN115

Product Name: Embedded Antenna

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Product Number:AN115

Product Name: Embedded Antenna

1. Revision History

Revision	Date	Change Notification	Description
1.0	2019-04-09	初版	

Product Number:AN115

Product Name: Embedded Antenna

2. Specification

Sample Photo	
A. Electrical Characteristics	
Frequency	880 ~ 960 MHz 1710 ~ 1880 MHz
V.S.W.R.	<= 6.0 @ 880 ~ 960 MHz <= 4.5 @ 1710 ~ 1880 MHz
Peak Gain	-4.0 dBi @ 880 ~ 960 MHz 1.0 dBi @ 1710 ~ 1880 MHz
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	PCB
Material of Plastic	IPEX
Cable Type	OD1.13 mm
Connector Type	Mini Connector
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C
Antenna Color Storage life	< 2 year

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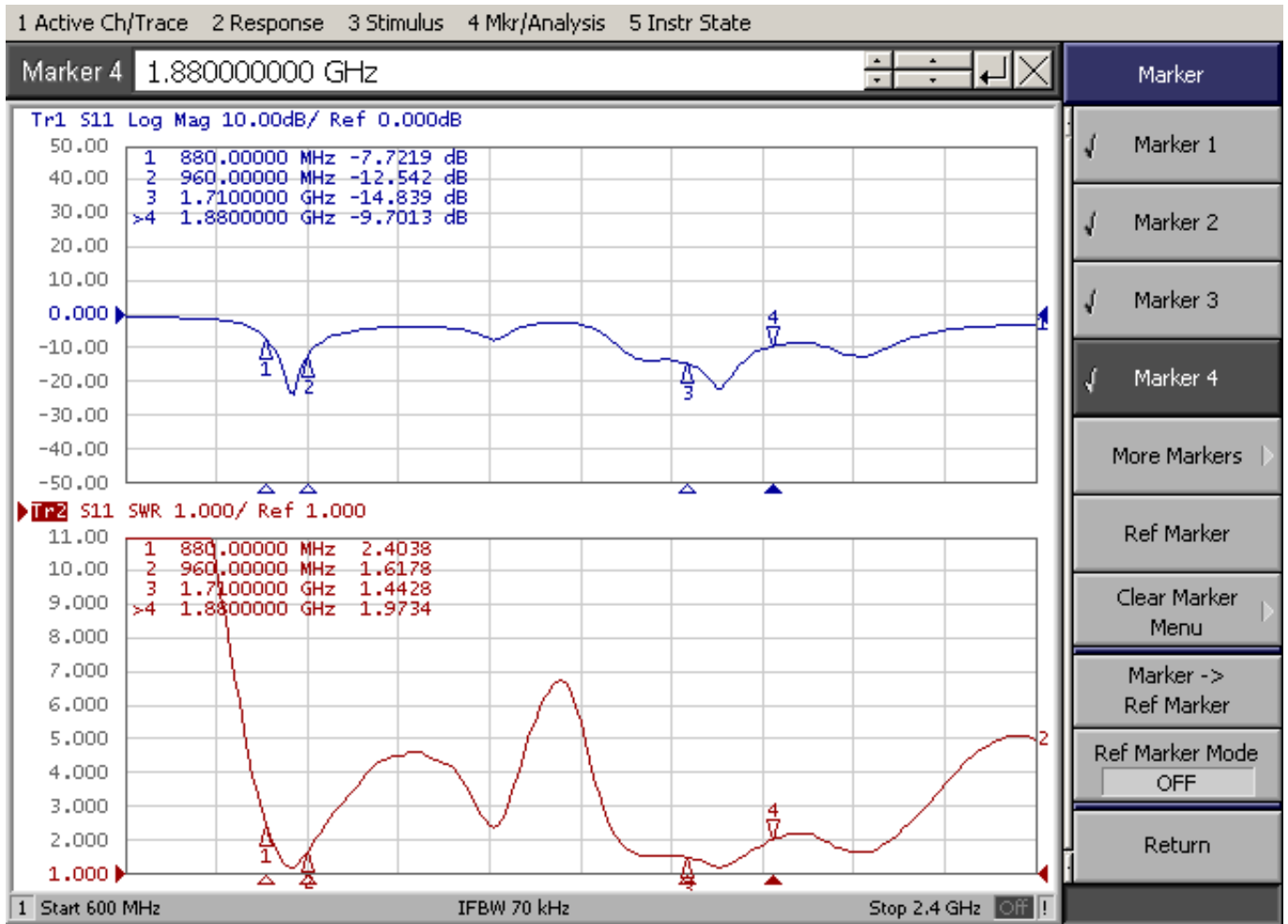
3. Characteristics and Reliability Test

Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	GB / T2423 . 48-1997 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol.<= 5%
M2	Random Drop	GB / T2423.8-1995 Height: 1.0 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.<= 5%
M3	Solderability	GB 2423 . 28- 82 Solder iron: 260±5°C; Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M4	Terminal-Pull Test	Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M5	Terminal-Torque Test	Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M6	Dimension	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	Salt Spray	GB / T 2423 . 17- 93 Temp: 35°C; RH: >= 95%; NaCl solution: >= 5%; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E2	Humidity	GB / T 2423 . 4 - 93 Temp: 80°C / 12 H; -40°C / 12H RH: >= 90%; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E3	Thermal Shock	GB / T 2423 . 22 - 87 1 Cycle: - 40°C (30 minutes) to + 80°C (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E4	Life (High Temp.)	GB /T 2423 . 2 - 89 Temp: 80°C; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2011/65/EU
R2	PFOS	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC
R3	PFOA	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC

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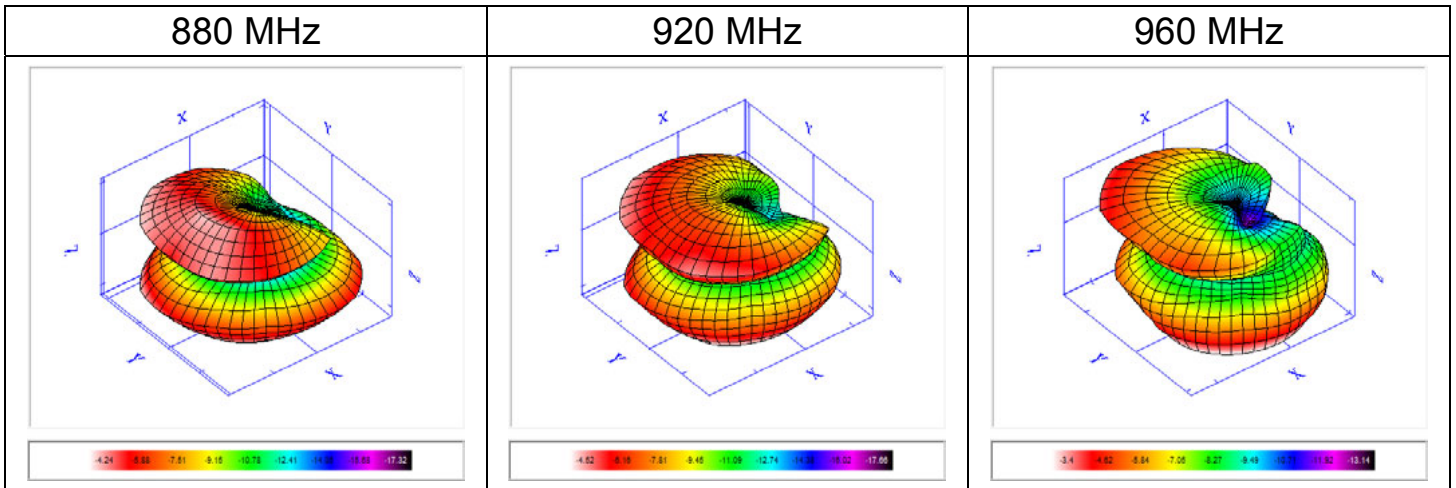
4. Antenna - S Parameter Test Data



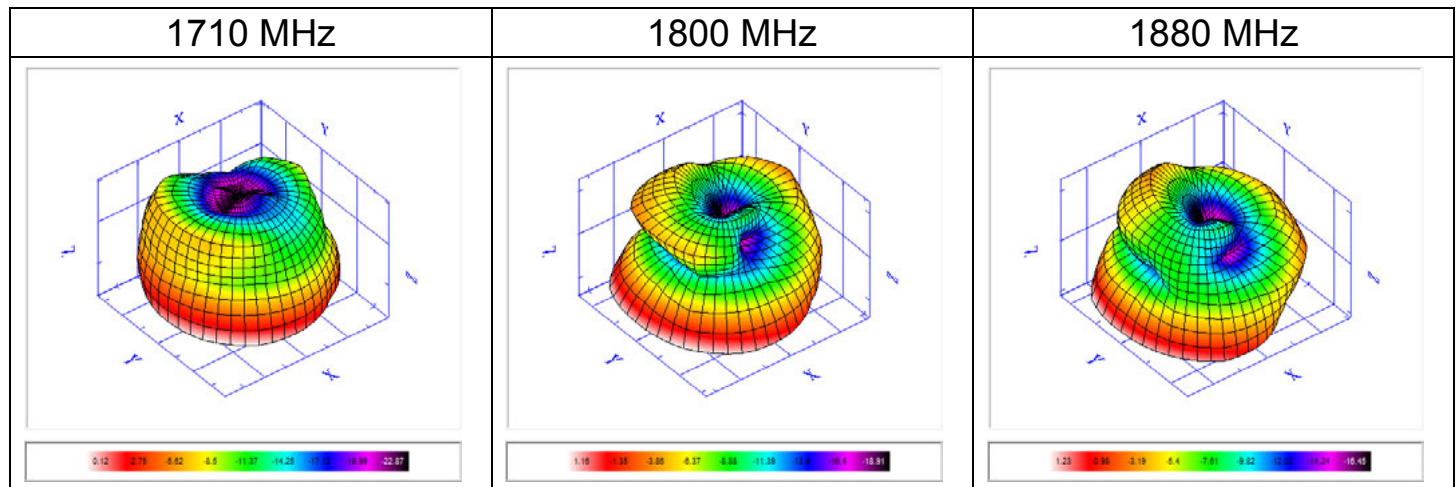
Product Number:AN115

Product Name: Embedded Antenna

5. Antenna - Radiation Pattern Test Data



Frequency	880	890	900	910	920	930	940	950	960
TRP (dBm)	-7.47	-7.92	-8.27	-8.38	-8.34	-8.15	-8.2	-7.99	-7.4
Peak EIRP (dBm)	-4.24	-4.62	-4.77	-4.86	-4.52	-4.2	-4.31	-4.14	-3.4
NHPRP +/- 45 (degree)	-7.67	-8.07	-8.4	-8.52	-8.52	-8.33	-8.35	-8.11	-7.51
NHPRP +/- 30 (degree)	-9.31	-9.63	-9.9	-10.01	-10.07	-9.91	-9.93	-9.71	-9.16
E-Theta Peak Gain (dBi)	-8.13	-7.97	-7.8	-7.73	-7.96	-8.13	-8.23	-7.93	-7.21
E-Phi Peak Gain (dBi)	-4.4	-4.75	-5.03	-4.95	-4.58	-4.24	-4.34	-4.18	-3.43
E-Total Peak Gain (dBi)	-4.24	-4.62	-4.77	-4.86	-4.52	-4.2	-4.31	-4.14	-3.4
Directivity (dBi)	3.23	3.29	3.5	3.51	3.82	3.95	3.89	3.84	4

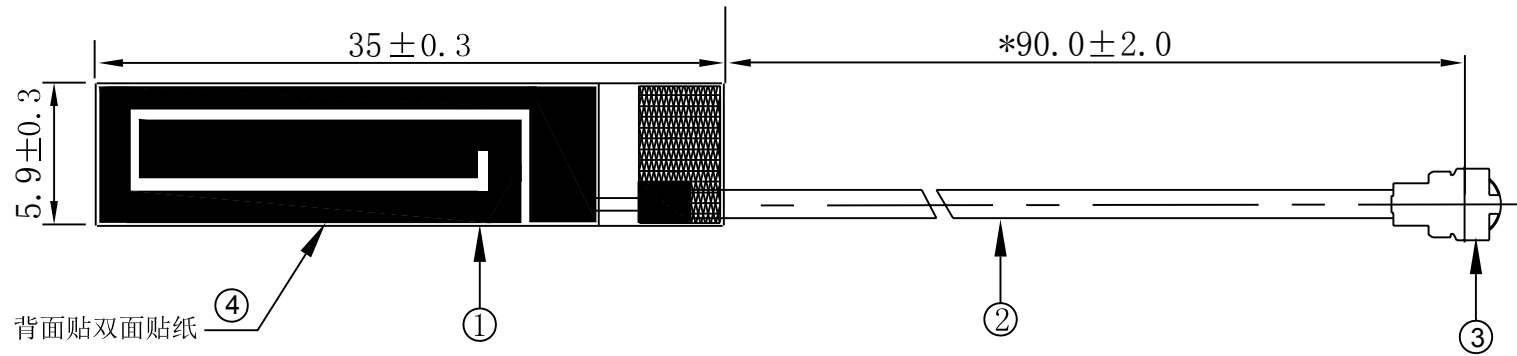


Frequency	1710	1760	1800	1850	1880
TRP (dBm)	-5.11	-4.84	-4.6	-4.24	-3.88
Peak EIRP (dBm)	0.12	0.78	1.16	1.04	1.23
NHPRP +/- 45 (degree)	-4.87	-4.73	-4.61	-4.4	-4.13
NHPRP +/- 30 (degree)	-5.73	-5.49	-5.38	-4.98	-4.66
E-Theta Peak Gain (dBi)	-4.24	-4.55	-4.76	-7.2	-8.28
E-Phi Peak Gain (dBi)	0.01	0.69	1.1	1.02	1.19
E-Total Peak Gain (dBi)	0.12	0.78	1.16	1.04	1.23
Directivity (dBi)	5.23	5.63	5.76	5.28	5.11
Efficiency (%)	30.85	32.79	34.64	37.64	40.88

RoHS

Compatible

SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			



序号	物料编号	物料名称规格	用量	单位
4	G-3505802	G9000 双面胶	1	PCS
3	CR-113	IPEX-1.13	1	PCS
2	R-CB-113B	RF1.13 OD1.13 铜镀锡 剋嚴	0.09	M
1	PB-3505906	内置 PCB天线 绿色 35.0*5.9mm	1	PCS

TITLE: PCB Embedded Antenna					
PART NO: AN115			DWG NAME:		
APPROVED BY	CHECKED BY	DESIGNED BY		Tolerance	
		DJC		UNITS: mm	X.X ±0.2
		2019-04-09		SCALE: 1/1	X.XX ±0.1
			REVISION: A	X° ±1°	

產品包裝規範

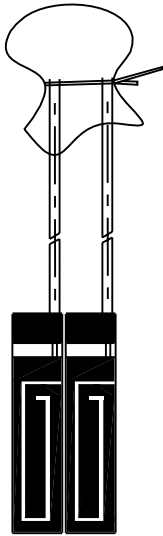
PACKING CRITERION

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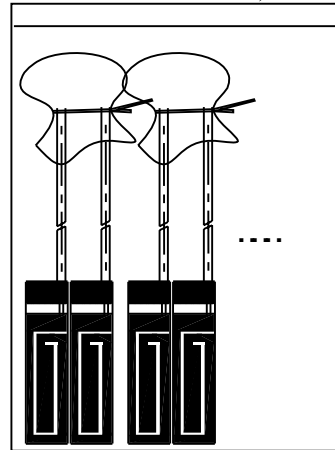
Part Number : AN115	Revision : A
Name: Embedded Antenna	Customer :

1. 25 PCS



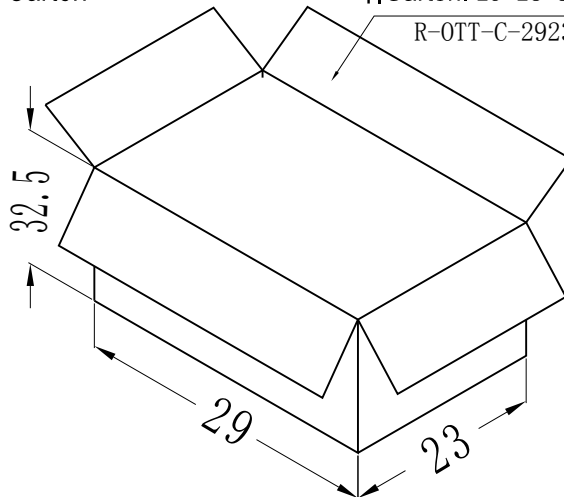
2. 200 PCS/per Bag

Bag: 220*150mm

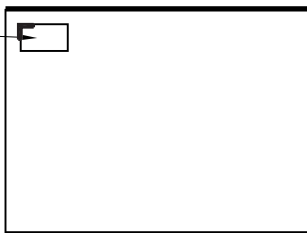


3. 6000 PCS/per Carton

4. Carton: 29*23*32.5CM
R-OTT-C-2923325



Carton Label:



APPROVED BY : LQ

CHECKED BY : DJC

DESIGNED BY : DJC