

Product Number: SM-NB1309-01TM
Product Name: 2.4GHz Antenna

Specification For Approval

Date: 2016 / 11 / 02

File No.: 161102005

Version: 1.0

Customer :

Customer P/N :

GX P/N :

Description : 2.4GHz Antenna

Checked By:
Customer Approved By:

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1. Revision History

Revision	Date	Change Notification	Description
1.0	2016.11.02	初版	

Product Number: SM-NB1309-01TM

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2. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz
V.S.W.R.	<= 2.0 @ 2400 ~ 2500 MHz Test data from the model test
Peak Gain	2.78dBi
Efficiency	52 %
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	SPTE
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C

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3. Characteristics and Reliability Test

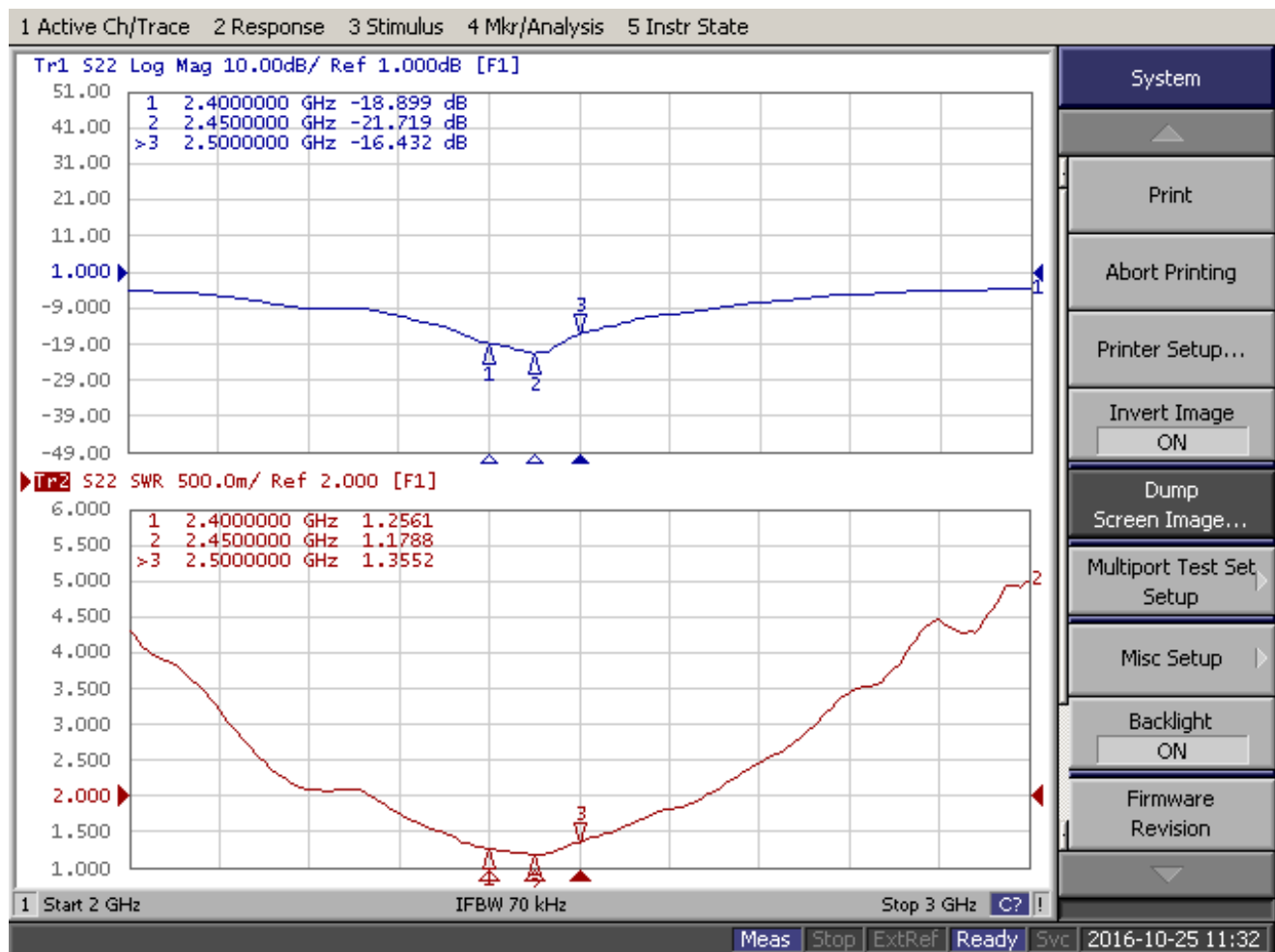
Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	GB / T2423 . 48-1997 Amplitude: 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

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4. Antenna - S Parameter Test Data

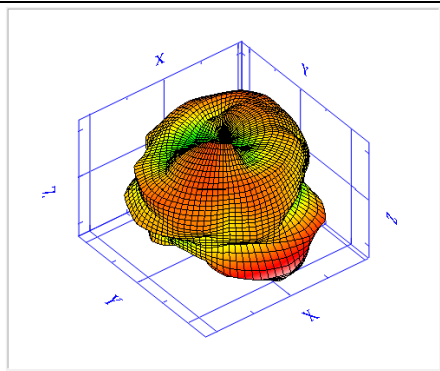
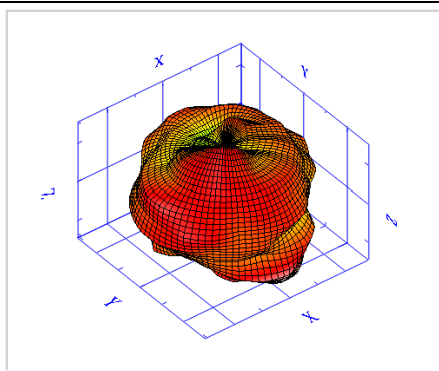
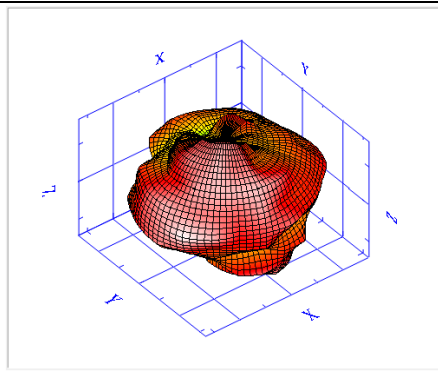
Test data from the model test



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5. Antenna - Radiation Pattern Test Data

2400 MHz		2450 MHz					2500 MHz				
											
Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
E-Total Peak Gain (dBi)	2.78	2.7	2.72	2.58	1.84	1.17	1.57	1.51	1.91	1.98	2.3
Efficiency (%)	49.12	50.15	50.29	51.24	48.37	47.84	52.81	53.13	54.04	54.29	55.94
Average Gain (dB)	-3.09	-3	-2.98	-2.9	-3.15	-3.2	-2.77	-2.75	-2.67	-2.65	-2.52

1	2	3	4	5	6	7	8	
RoHS Compatible					SIGN	DATE	DESCRIPTION	APPROVER
					△			42221
					△			
					△			

備注:

1.材質: C7521 T=0.4mm

2.表面處理: 鍍鎳80U"

3.帶*為重點尺寸

4.未標注尺寸公差, 請參照標準公差.

5.毛邊一致向內, 未標注R0.3mm

6.粗糙度: 表面未注粗糙度按 1.6▽, 切面 12.5▽

7.孔及相關配合尺寸以實配為準

8.環境等檢驗請參照《天線檢驗標準》及《承認書》.

TITLE: 金屬片							
PART NO.: SM-NB1309-01TM				CUSTOMER P/N: /			
APP BY		CHK BY		RF BY		DES BY	
ZS		Jack				WD	
2016/11/02		2016/11/02				2016/11/02	
						REVISION: A	
				Tolerance			
				X.X		±0.1	
				X.XX		±0.0	
				X°		±5°	

E

E

D

D

C

C

B

B

A

A