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1. Revision History

Revision	Date	Change Notification	Description
1.0	2023.05.11	初版	

Product Number: AN2400-92158BRS-01

Product Name: Antenna



2. Specification

Sample Photo	
A photograph of a black, cylindrical antenna with a silver SMA connector. It is placed horizontally next to a metal ruler for scale. The ruler shows inches from 1 to 9 and centimeters from 2.5 to 22.5. The antenna is approximately 4.5 inches long.	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz
V.S.W.R	≤ 2.0
Peak Gain	4.55dBi / Max
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	CU
Material of Plastic	TPEE / ABS
Cable Type	RG-178U
Connector Type	SMA Male Reverse
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C
Antenna Color Storage life	< 2 year

Manufacturer : Netgear Incorporated

Add : 350 East Plumeria Drive, San Jose, California, United States

Product Number: AN2400-92158BRS-01

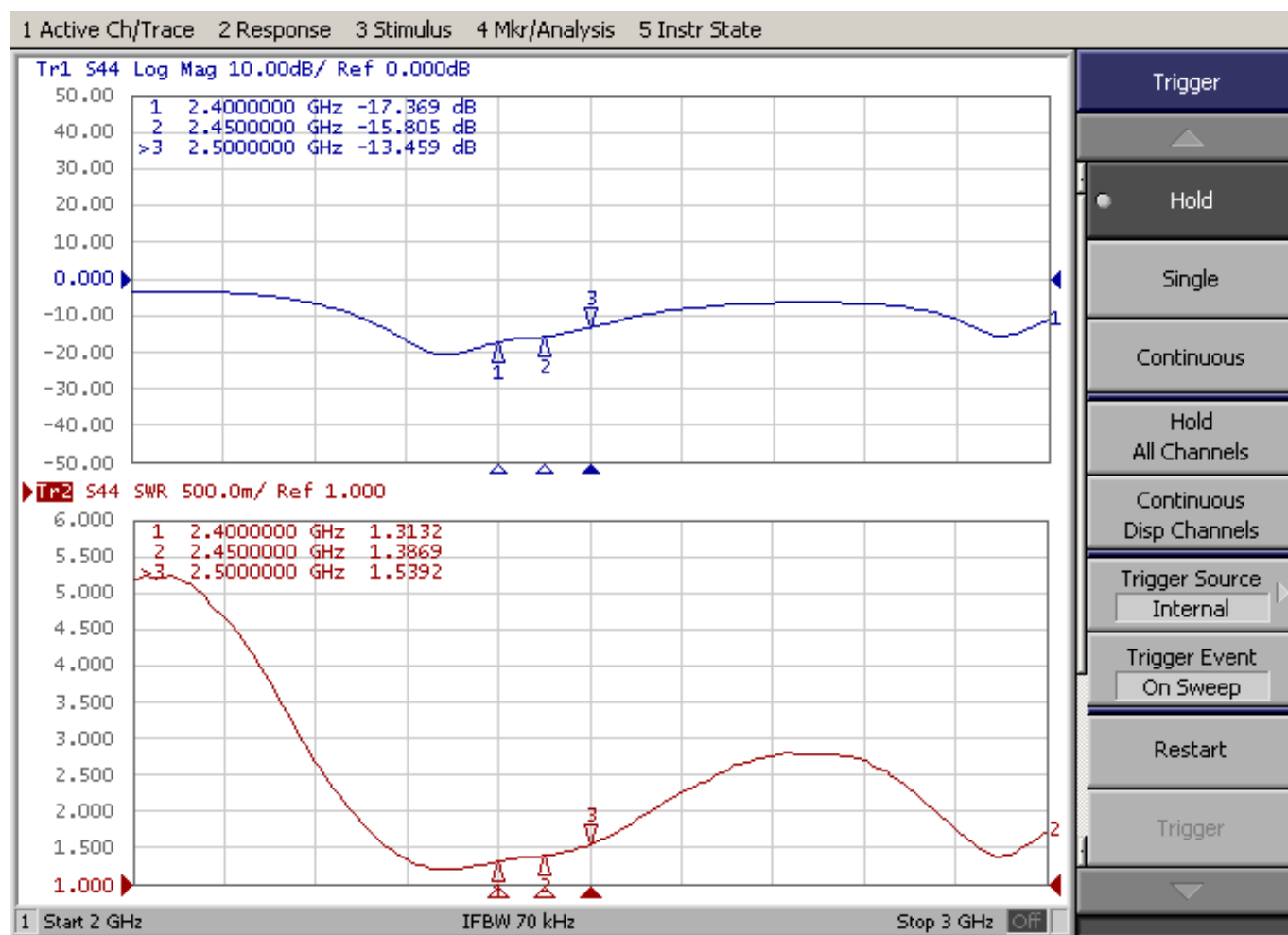
Product Name: Antenna



3. Characteristics and Reliability Test

Test Items 測試項目		Test Condition and Procedure 測試方法	Requirements 要求	Result 結果
C1	V.S.W.R. 電壓駐波比	Set DUT on Network Analyzer; make individual calibration to test 設置網路分析儀參數進行測試	Directive DUT specification 符合待測物規範	PASS
C3	Antenna Gain 天線增益	Set DUT on Antenna Chamber; make individual calibration to test 設置天線暗室參數進行測試	Directive DUT specification 符合待測物規範	PASS
M1	Vibration 震動	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction 振幅 1.5mm ; 頻率 20~80~20Hz ; 3 個方向各 2H	1. No Visual Damage 2. Frequency Tol.≤5% 無明顯外觀不良;頻率偏移≤5%	PASS
M2	Random Drop 跌落	GB / T2423.8-1995 Single : Height: 1.0 Meter; 3 directions; 1 time for each direction 單支天線, 高 1m ; 3 個方向各 1 次	1. No parts separated 、 fracture 2. Frequency Tol.≤5% 產品無脫落、斷裂;頻率偏移≤5%	PASS
		Packing : Height: 0.76 Meter; 1 corner, 3 edges, 6 surface 包裝 : 高 0.76m , 一角、三棱、六面各一次		PASS
M4	Pull Test 拉力	Holding with individual specification; force applied to axis of terminal .單獨定義產品端子拉力	1. Directive DUT specification 2. Frequency Tol.≤5% 符合待測物規範;頻率偏移≤5%	PASS
M6	Dimension 尺寸	Inspection of dimension, color, material, package, surface process.检查尺寸,颜色,材料,包装,表面處理	Directive DUT specification 符合待測物規範	PASS
E3	Temperature and Humidity Chamber 恒溫恒濕	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H 溫度 80°C 測試 12H 轉-40°C 測試 12H; 濕度 ≥ 90% ; 時間 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% 恢復 2H 后, 無明顯外觀不良;頻率偏移≤5%	PASS
E5	Aging test 老化	GB / T 2423.2 - 2008 Temp: 80°C; Time: 24 hours 溫度 80°C , 測試 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% 無明顯外觀不良;頻率偏移≤5%	PASS
R1	RoHS	With Reference to IEC 62321:2008 with flow chart 參考 IEC 62321 測試流程	Directive RoHS 2011/65/EU 符合 RoHS 2011/65/EU 標準	PASS
R2	PFOS	With Reference to USA EPA 3550C:1996 by LC/MS 參考 USA EPA 3550C 測試流程	Directive RoHS 2006/122/EC 符合 RoHS 2011/65/EU 標準	PASS

4. Antenna - S Parameter Test Data

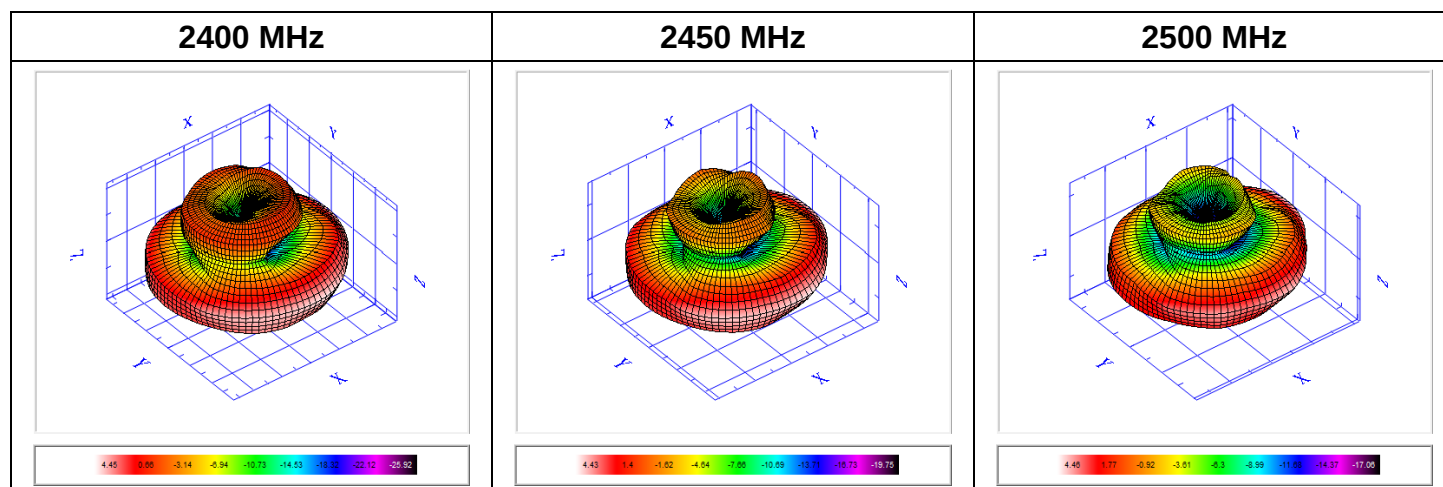


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5. Antenna - Radiation Pattern Test Data



Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
TRP (dBm)	-1.36	-1.34	-1.35	-1.33	-1.62	-1.34	-1.33	-1.26	-1.26	-1.36	-1.3
Peak EIRP (dBm)	4.45	4.46	4.49	4.43	4.23	4.43	4.55	4.52	4.48	4.32	4.46
NHPRP +/- 45 (degree)	-1.81	-1.79	-1.82	-1.8	-2.08	-1.78	-1.75	-1.67	-1.67	-1.77	-1.71
NHPRP +/- 30 (degree)	-2.32	-2.31	-2.33	-2.31	-2.57	-2.27	-2.25	-2.2	-2.23	-2.35	-2.3
E-Theta Peak Gain (dBi)	-6.88	-7.63	-8.35	-8.76	-9.5	-10.07	-9.93	-9.74	-10.85	-11.44	-11.31
E-Phi Peak Gain (dBi)	4.44	4.42	4.46	4.4	4.22	4.4	4.51	4.47	4.46	4.25	4.39
E-Total Peak Gain (dBi)	4.45	4.46	4.49	4.43	4.23	4.43	4.55	4.52	4.48	4.32	4.46
Directivity (dBi)	5.82	5.8	5.84	5.76	5.85	5.77	5.89	5.77	5.74	5.67	5.76
Efficiency (%)	73.08	73.51	73.35	73.61	68.8	73.38	73.55	74.9	74.86	73.18	74.07