

YIC



2.4 GHz / 5.8 GHz External Antenna

AT2458G-13224-7.0BT

Datasheet

www.yic.com.tw

1. Product Information

1.1 Product Description

This product can be used as various 2.4 GHz / 5.8 GHz External Antenna .

Antenna band : 2400 – 2500 MHz , 5150 – 5850 MHz

2. Part NO. : AT2458G-13224-7.0BT

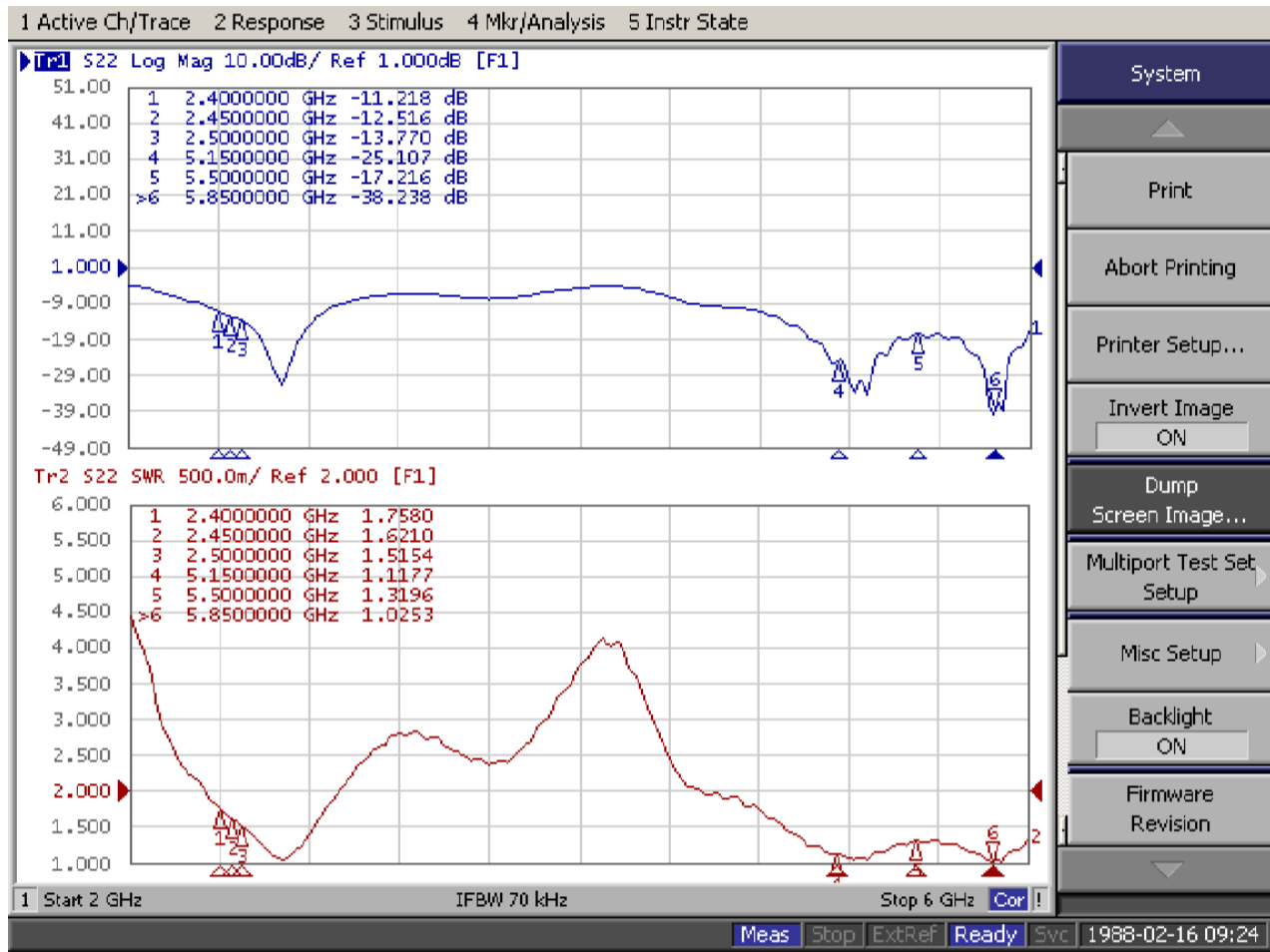
3. Overall Performance (Antenna Element & Cable)

Electrical Specifications	
Frequency Range	2400 ~ 2500 MHz 5150 ~ 5850 MHz
VSWR	≤2.0 @ 2400 ~ 2500 MHz ≤2.0 @ 5150 ~ 5850 MHz
Gain	2.84 dBi @ 2400 ~ 2500 MHz 6.98 dBi @ 5150 ~ 5850 MHz
Input Impedance	50 Ω
Polarization	Linear
Material & Mechanical Specifications	
Material of Radiator	CU
Material of Plastic	ABS / TPEE
Cable Type	RG178
Input connector	SMA Male
Operation Temperature	- 40°C ~+ 85°C
Storage Temperature	- 40°C ~+ 85°C

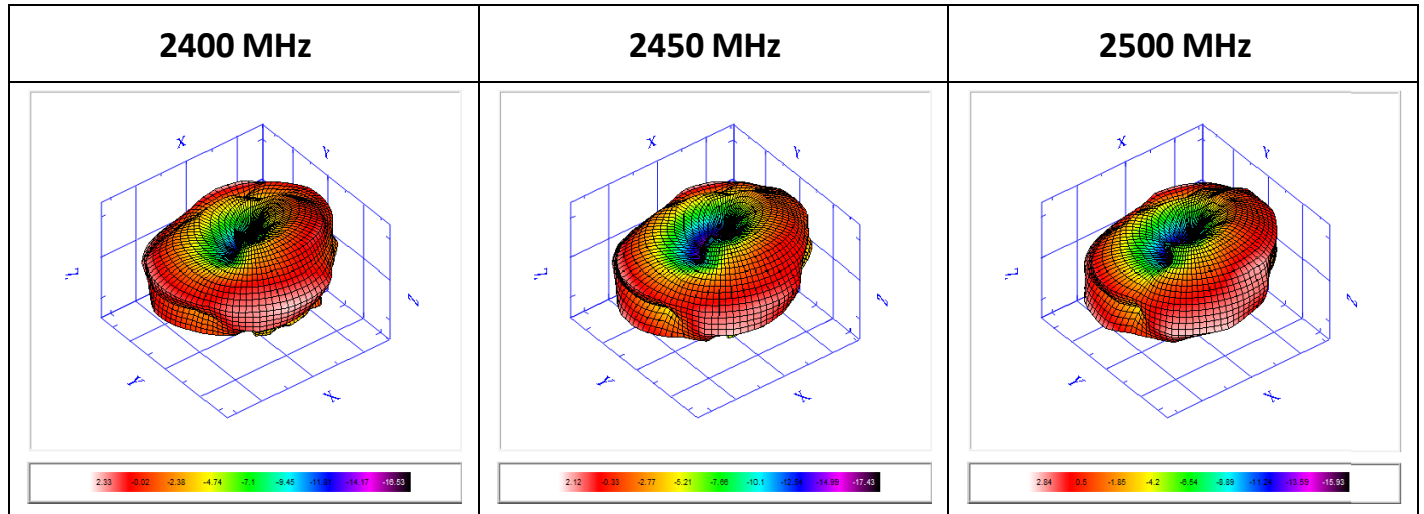
4. Test Item and Equipment

Test Items		Test Condition and Procedure	Requirements	Result
C1	V.S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification	PASS
C3	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification	PASS
M1	Vibration	GB / T2423.48-2008 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%	PASS
M2	Random Drop	GB / T2423.8-1995 Single Height: 1.0 Meter; 3 directions; 1 time for each direction	1. No parts separated 、 fracture 2. Frequency Tol.≤5%	PASS
M4	Pull Test	Holding with individual specification; force applied to axis of terminal .	1. Directive DUT specification 2. Frequency Tol.≤5%	PASS
M6	Dimension	Inspection of dimension, color, material, package, surface process.	Directive DUT specification	PASS
E2	Salt Spray	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H	1. No Visual Damage 2. Frequency Tol.≤5%	PASS
E3	Temperature and Humidity Chamber	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5%	PASS
E4	Thermal Shock	GB / T 2423.22 - 2008 - 40°C (30 minutes) to + 80°C (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5%	PASS
E5	Aging test	GB /T 2423.2 - 2008 Temp: 80°C; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5%	PASS
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	R1	RoHS

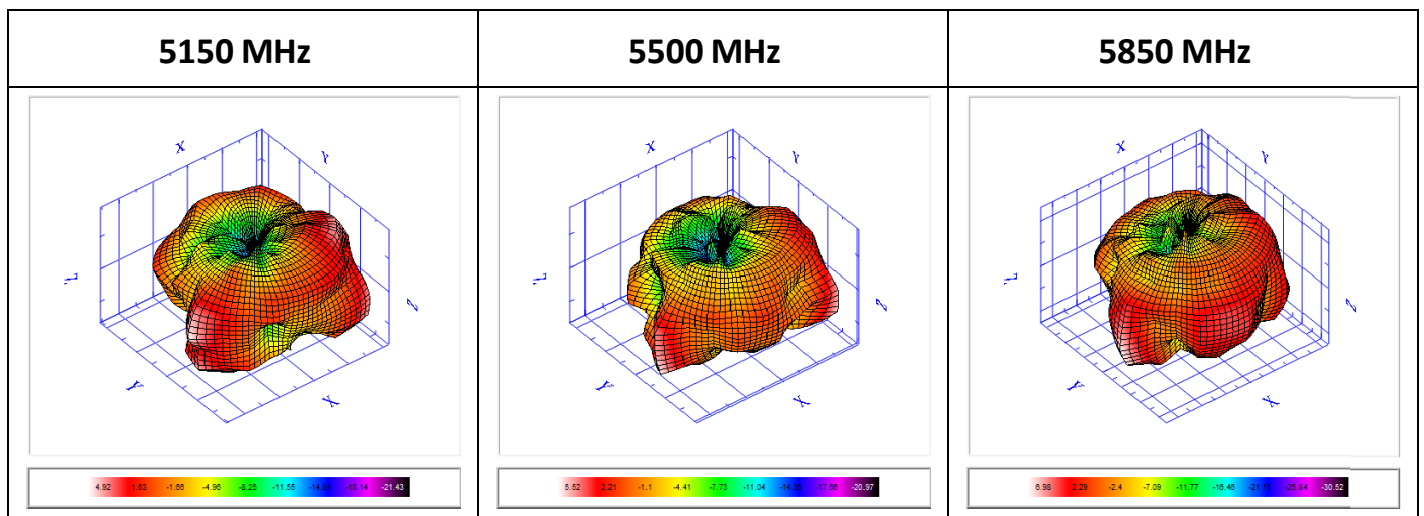
5. Antenna - S Parameter Test Data



6. Antenna - Radiation Pattern Test Data

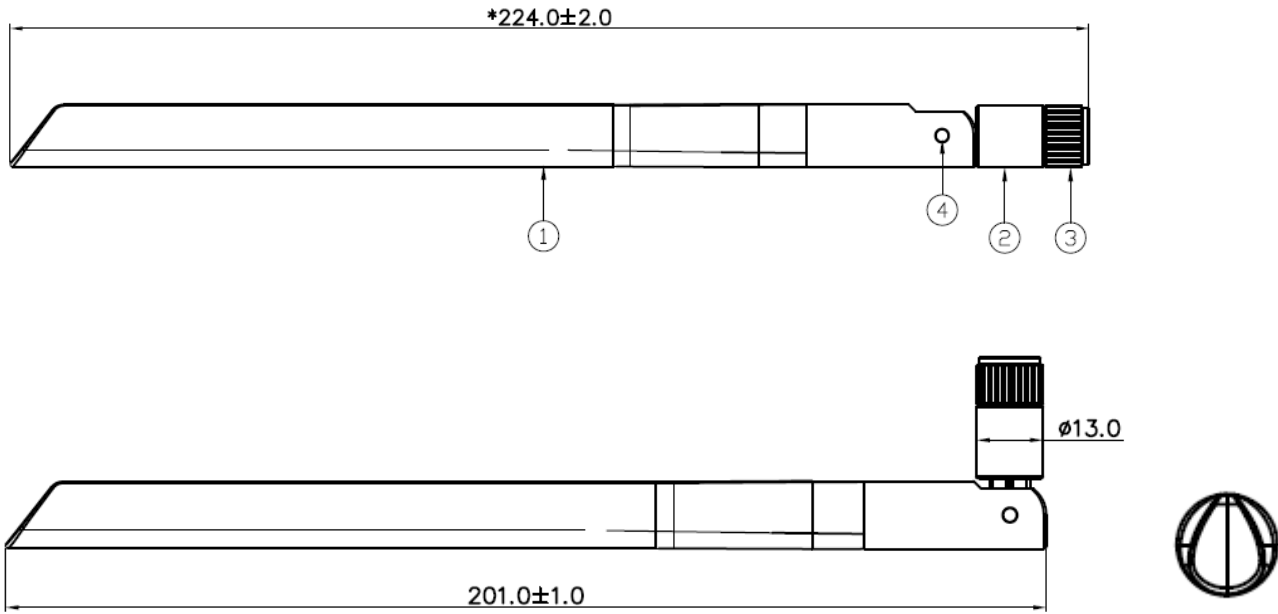


Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
E-Total Peak Gain (dBi)	2.33	1.98	2.29	2.53	2.46	2.12	2.39	2.5	2.78	2.7	2.84
Efficiency (%)	61.63	58.96	61.5	62.27	60.18	60.3	60.16	63.22	68.04	67.61	69.81
Average Gain (dB)	-2.1	-2.29	-2.11	-2.06	-2.21	-2.2	-2.21	-1.99	-1.67	-1.7	-1.56



Frequency	5150	5250	5350	5400	5500	5550	5650	5700	5800	5850
E-Total Peak Gain (dBi)	4.92	6.13	5.37	5.27	5.76	5.52	5.11	6.27	6.46	6.98
Efficiency (%)	68.4	67.13	75.58	60.95	70.48	65.17	54.88	66.17	74.29	85.63
Average Gain (dB)	-1.65	-1.73	-1.22	-2.15	-1.52	-1.86	-2.61	-1.79	-1.29	-0.67

7. Mechanical Drawing



1	Body	ABS
2	Connector	ABS
3	SMA Pin	Pom+Cu
4	Positioning Pin	POM