



**5G Sub-6GHz External Antenna
AT5G-25167-4.0BT**

Datasheet

1. Product Information

1.1 Product Description

This product can be used as various 5G Sub-6GHz External Antenna .

Antenna band : 700 - 5850MHz.

2. Part NO. : AT5G-25167-4.0BT

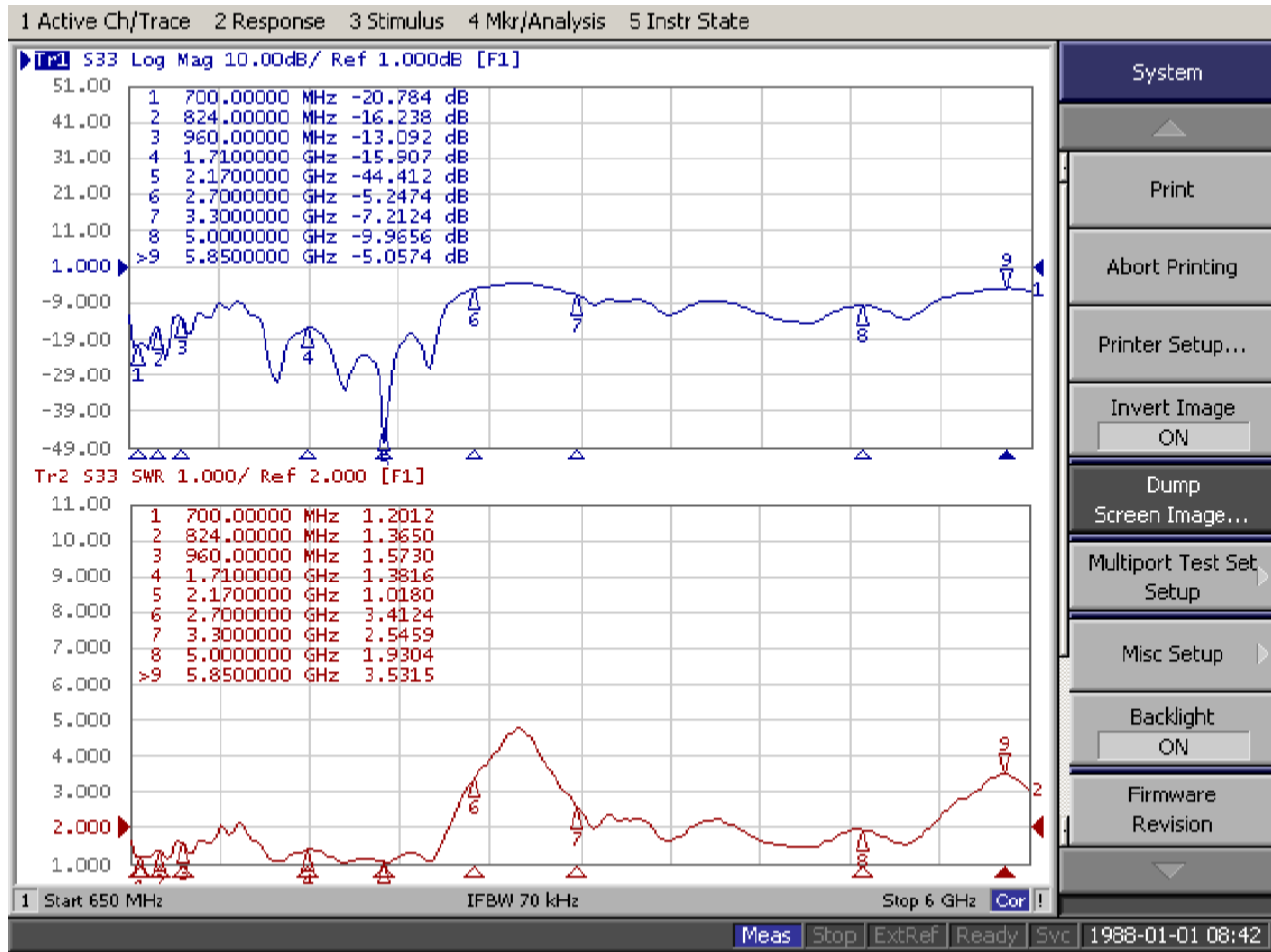
3. Overall Performance (Antenna Element & Cable)

Electrical Specifications	
Frequency Range	704 – 960 MHz / 1710 – 2700 MHz 3300 MHz / 5000 – 5850 MHz
VSWR	≤2.0 @ 704 – 960 MHz ≤3.5 @ 1710 – 2700 MHz ≤3.0 @ 3300 MHz ≤4.0 @ 5000 – 5850 MHz With 1M cable
Gain	1.78 dBi @ 704 – 960 MHz 3.27 dBi @ 1710 – 2700 MHz 0.18 dBi @ 3300 MHz 4.02 dBi @ 5000 – 5850 MHz
Input Impedance	50 Ω
Polarization	Linear
Material & Mechanical Specifications	
Material of Radiator	PCB
Material of Plastic	ABS
Cable Type	RG178
Input connector	SMA Male
Operation Temperature	-40°C ~+85°C
Storage Temperature	-40°C ~+85°C

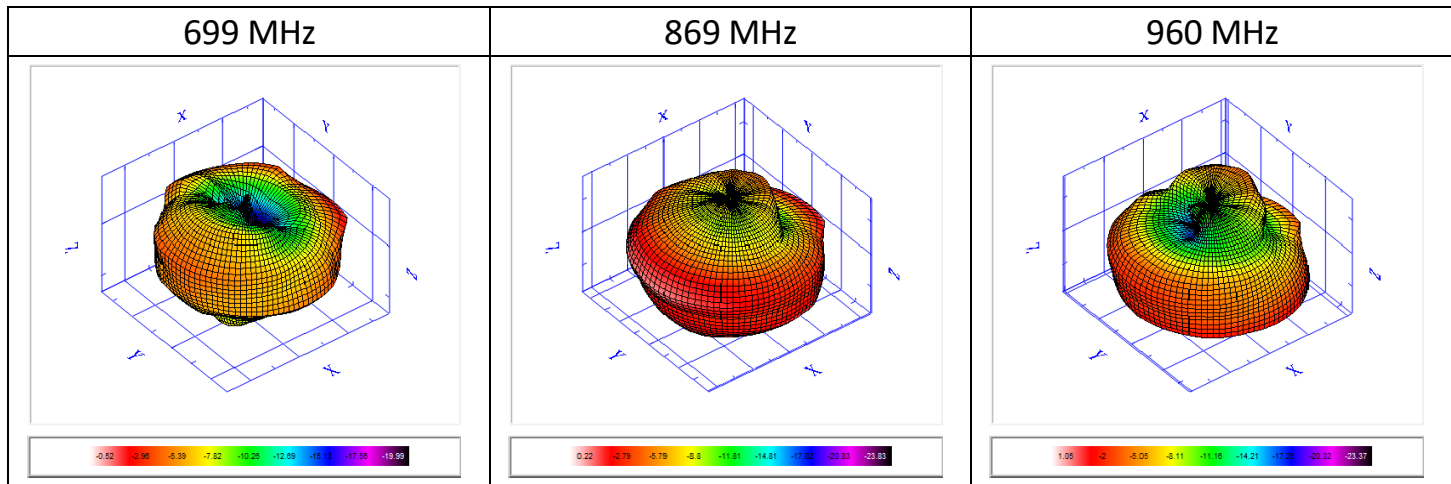
4. Test Item and Equipment

Test Item		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 or fractured 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	Directive RoHS 2015/863/EU	PASS

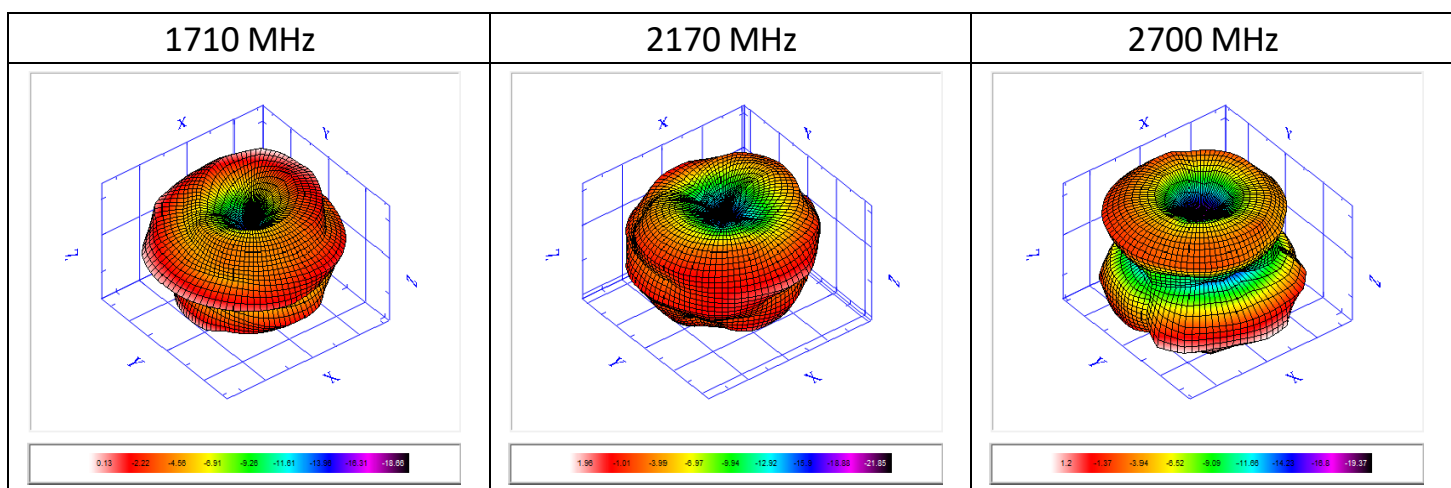
5. Antenna - S Parameter Test Data



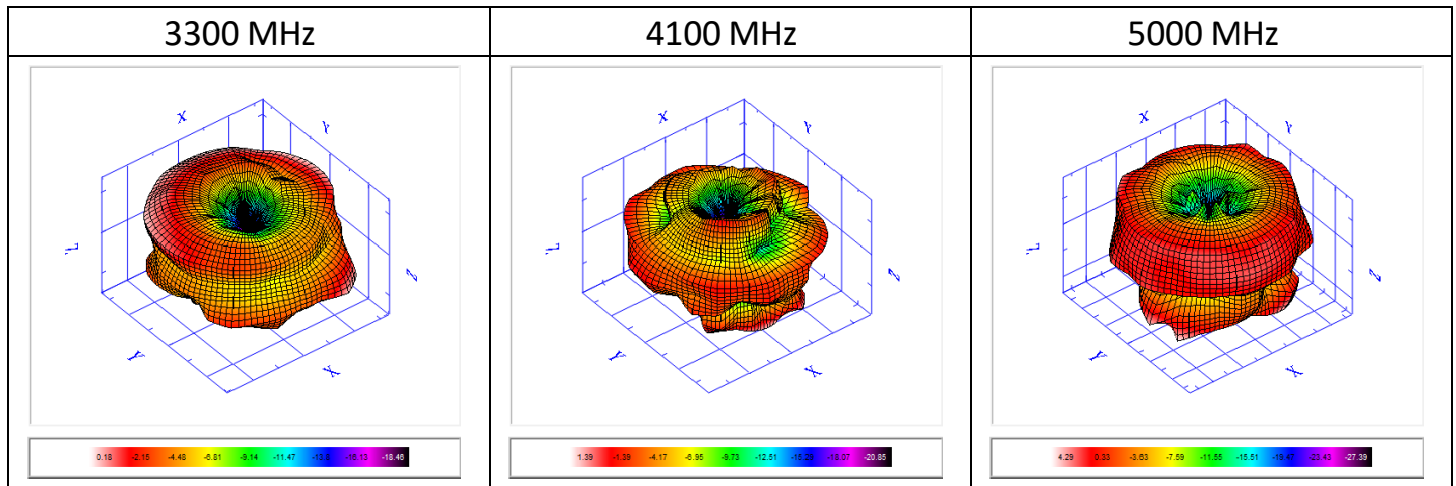
6. Antenna - Radiation Pattern Test Data



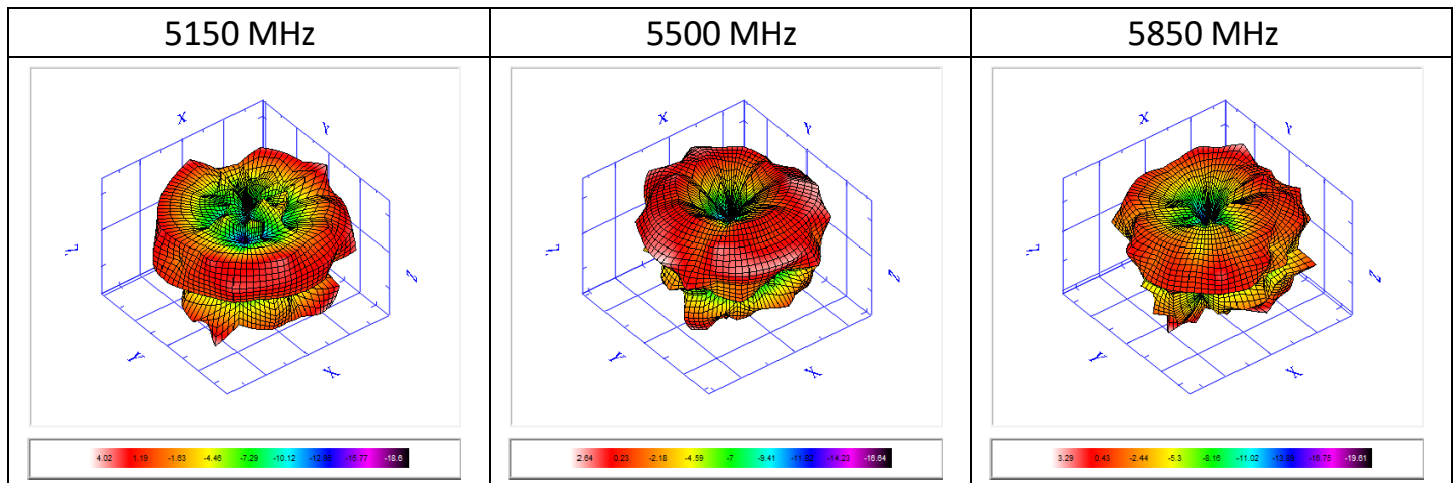
Frequency	699	724	782	824	839	854	869	884	899	914	929	944	960
E-Total Peak Gain (dBi)	-0.52	-0.55	-0.34	1.78	1.12	0.76	0.22	-0.89	-0.66	-0.12	0.01	0.34	1.05
Efficiency (%)	24.37	24.1	32.54	52.03	47.72	50.88	42.25	30.03	32.56	36.54	34.97	33.4	34.26
Average Gain (dB)	-6.13	-6.18	-4.88	-2.84	-3.21	-2.93	-3.74	-5.22	-4.87	-4.37	-4.56	-4.76	-4.65



Frequency	1710	1880	1920	1990	2000	2100	2170	2200	2300	2400	2500	2600	2690	2700
E-Total Peak Gain (dBi)	0.13	1.46	1.62	1.78	1.87	1.65	1.96	1.94	2.3	3.1	3.27	2.15	1.23	1.2
Directivity (dBi)	3.34	3.47	3.63	3.53	3.61	3.97	4.6	4.82	4.66	4.97	5.06	5.11	4.58	4.5
Efficiency (%)	47.84	62.86	63.03	66.9	67.03	58.58	54.5	51.52	58.07	65	66.21	50.65	46.22	46.74

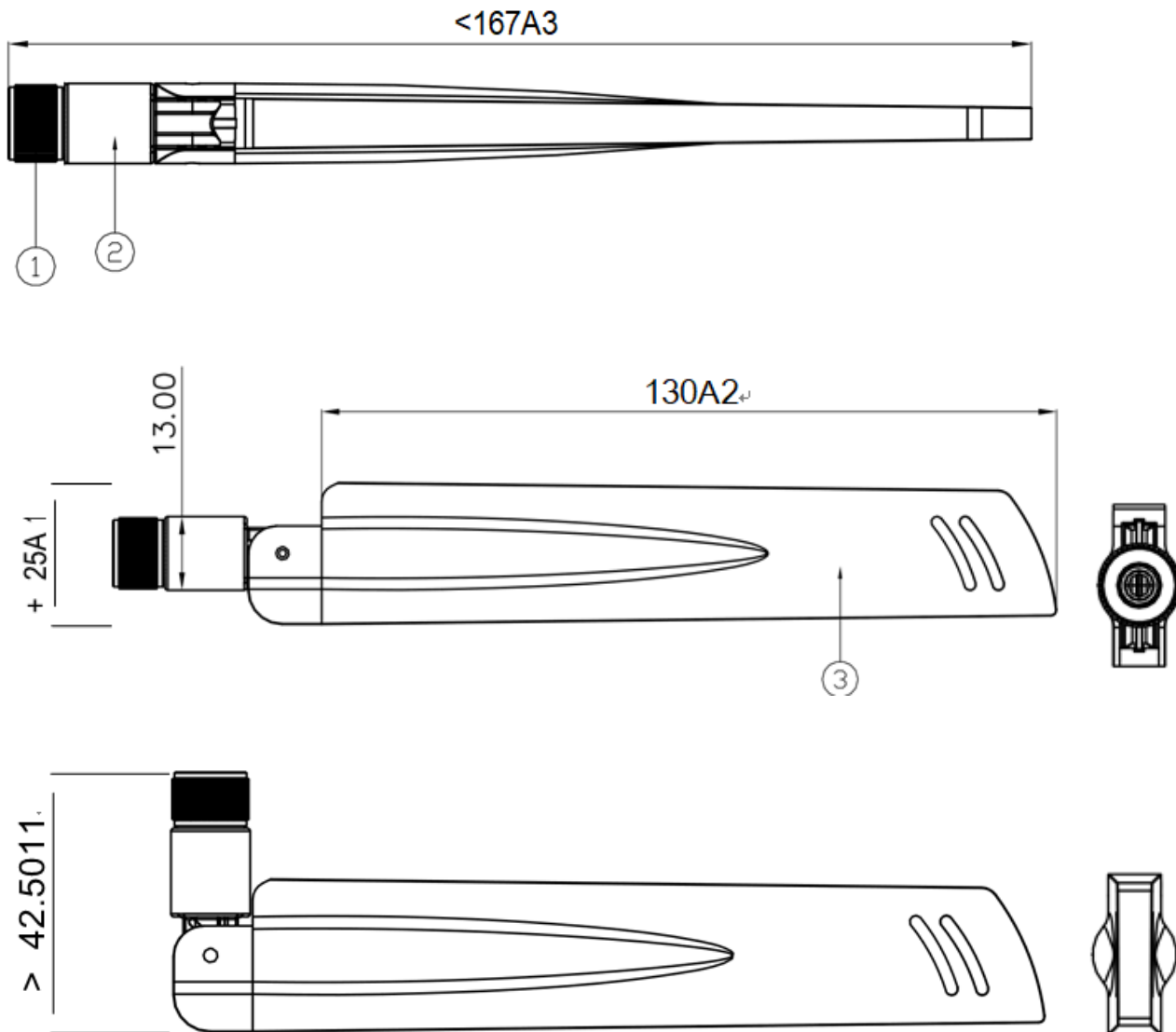


Frequency	3300	3500	3700	3900	4100	4300	4500	4700	4900	5000
E-Total Peak Gain (dBi)	0.18	2.05	2.45	2.31	1.39	2.3	2.65	0.44	3.23	4.29
Efficiency (%)	44.75	56.04	64.18	42.49	40.63	42.76	41.67	39.36	51.27	63.32
Average Gain (dB)	-3.49	-2.51	-1.93	-3.72	-3.91	-3.69	-3.8	-4.05	-2.9	-1.98



Frequency	5150	5250	5350	5400	5500	5550	5650	5700	5800	5850
E-Total Peak Gain (dBi)	4.02	2.84	1.77	1.53	2.64	2.25	1.39	3.13	1.67	3.29
Efficiency (%)	65.77	59.01	51.63	41.71	54.85	45.22	35.71	41.27	33.57	47.42
Average Gain (dB)	-1.82	-2.29	-2.87	-3.8	-2.61	-3.45	-4.47	-3.84	-4.74	-3.24

7. Mechanical Drawing



1	SMA Pin	Cu+POM
2	Connector	ABS
3	Body	ABS