

# YIC



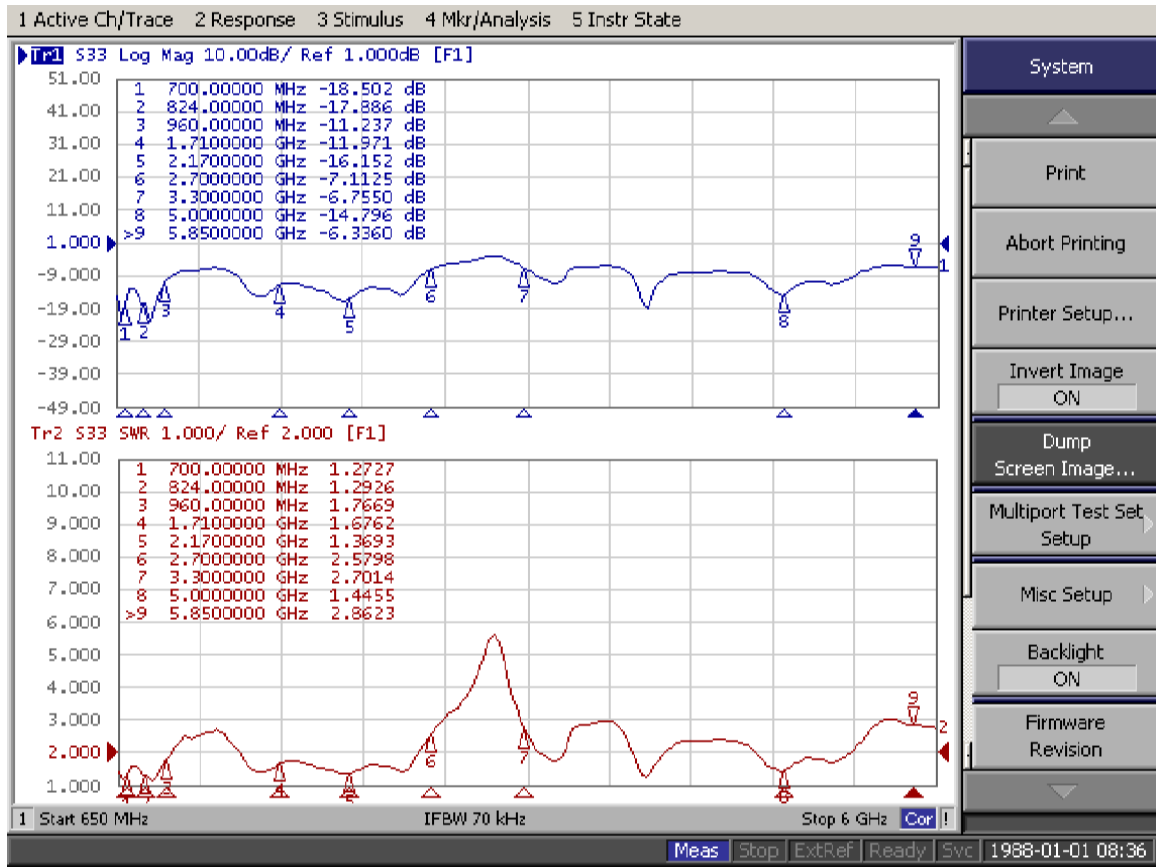
## **5G Sub-6GHz External Antenna AT5G-19170-3.0BT**

**Datasheet**

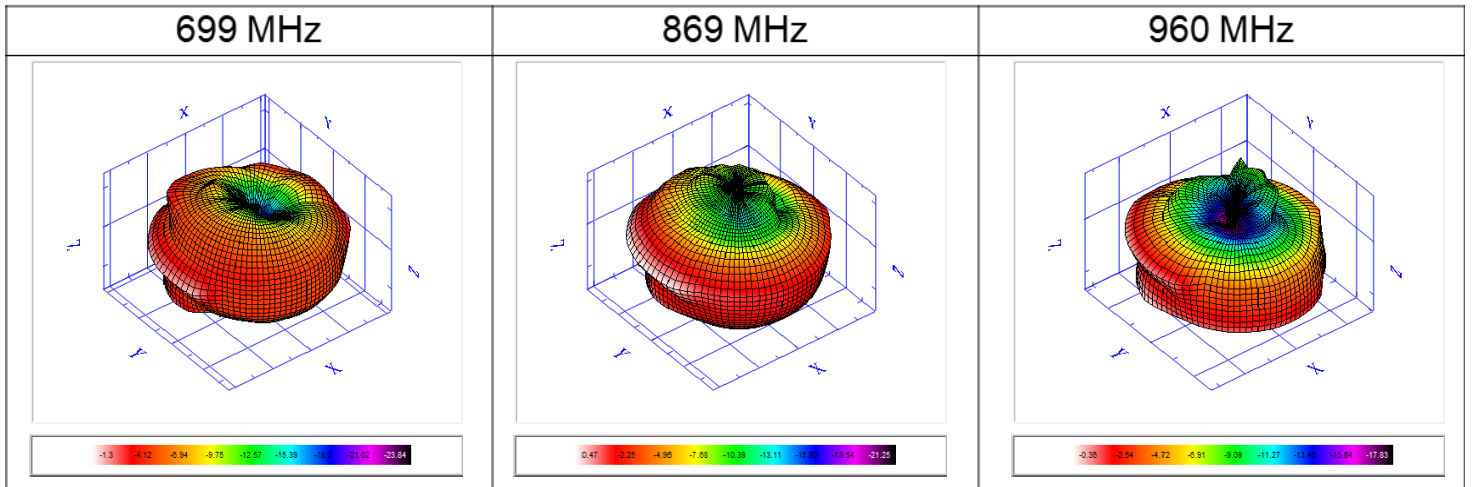
## 1. Specification

CHARACTERISTICS	SPEC
Center Frequency	704 ~ 960 MHz / 1710 ~ 2700 MHz 3300 ~ 5000 MHz / 5150 ~ 5850 MHz / 6000 MHz
V.S.W.R	<= 2.0 @ 704 ~ 960 MHz <= 2.0 @ 1710 ~ 2700 MHz <= 3.0 @ 3300 ~ 5000 MHz <= 3.0 @ 5150 ~ 5850 MHz <= 2.65 @ 6000 MHz
Peak Gain	1.78 dBi @ 699 ~ 960 MHz 2.95 dBi @ 1710 ~ 2700 MHz 5.21 dBi @ 3300 ~ 5000 MHz 3.07 dBi @ 5150 ~ 5850 MHz 2.85 dBi @ 6000 MHz
Polarization	Linear
Impedance	50Ω
Material of Radiator	PCB
Material of Plastic	ABS
Cable Type	RG-178
Connector Type	SMA Male Reverse
Operation Temperature	- 40 °C ~ + 85 °C
Storage Temperature	- 40 °C ~ + 85 °C

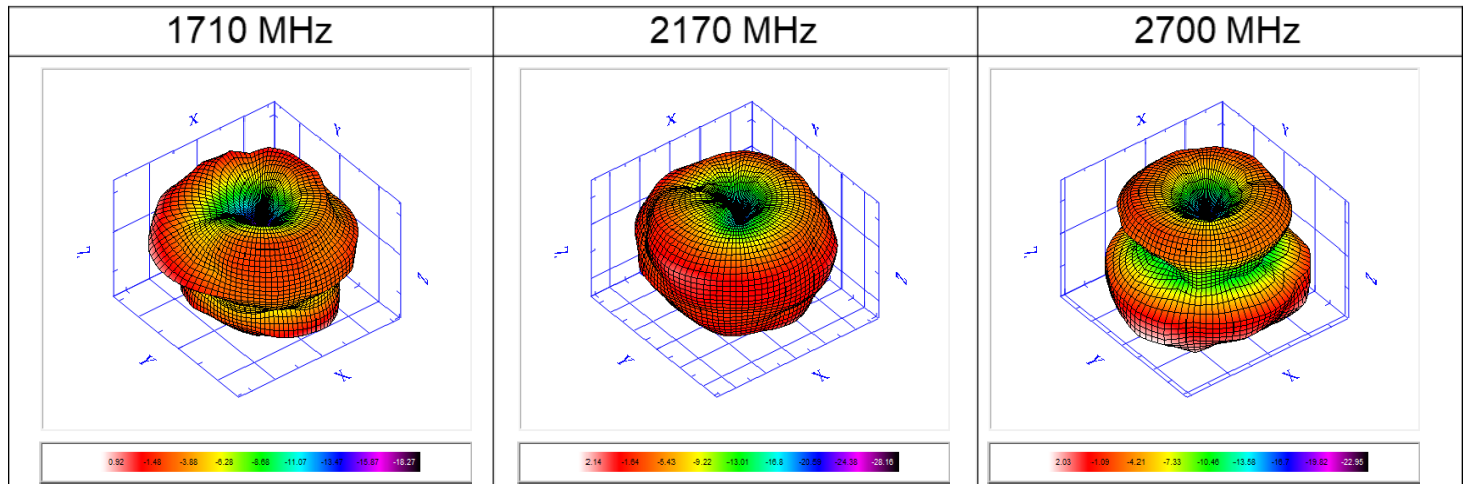
## 2. Antenna - S Parameter Test Data



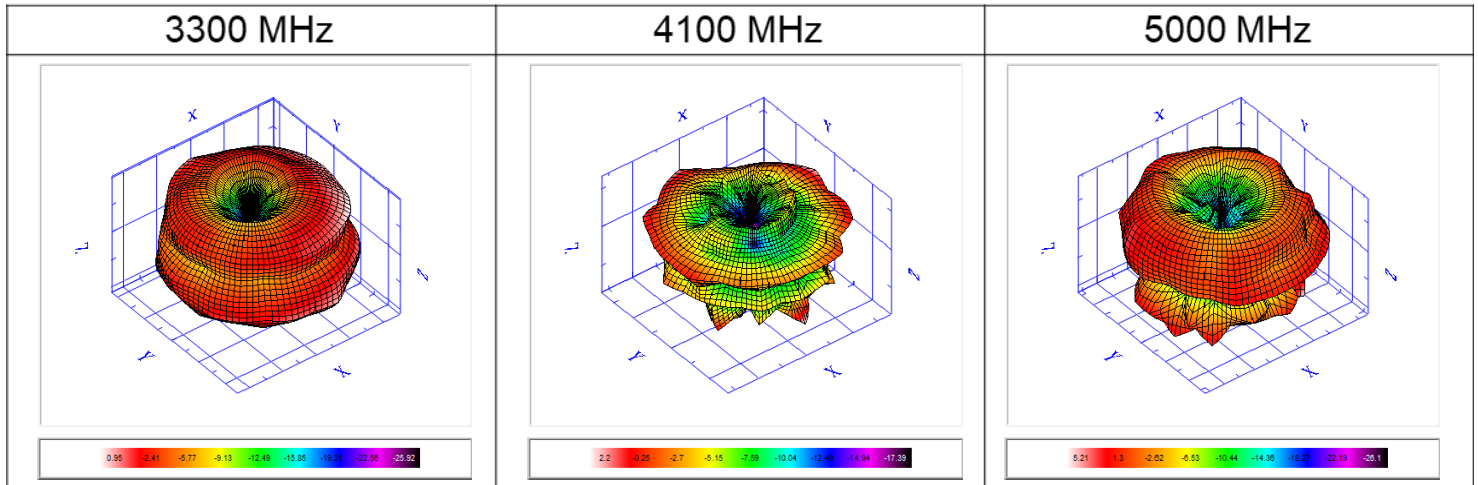
### 3. Antenna – Radiation Pattern Test Data



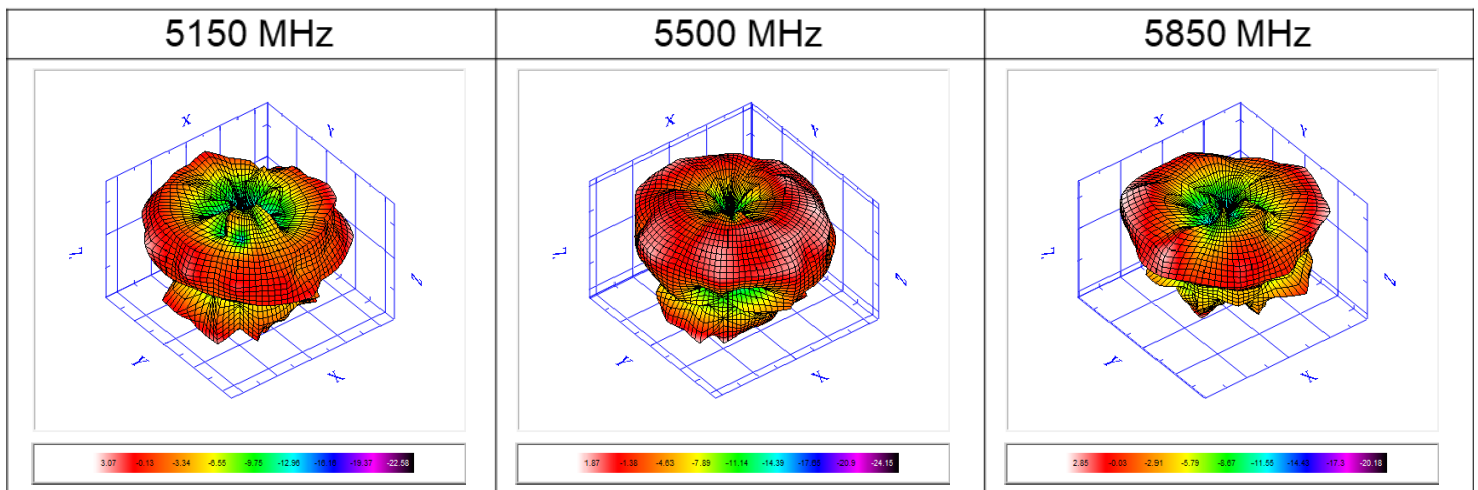
Frequency	699	724	782	824	839	854	869	884	899	914	929	944	960
E-Total Peak Gain (dBi)	-1.3	-1.31	-0.19	1.78	1	0.71	0.47	-0.47	-0.34	-0.07	-0.44	-0.8	-0.36
Efficiency (%)	24.43	24.61	32.49	48.83	43.99	46.05	39.1	28.38	30.14	33.4	31.82	30.63	31.94
Average Gain (dB)	-6.12	-6.09	-4.88	-3.11	-3.57	-3.37	-4.08	-5.47	-5.21	-4.76	-4.97	-5.14	-4.96



Frequency	1710	1880	1920	1990	2000	2100	2170	2200	2300	2400	2500	2600	2690	2700
E-Total Peak Gain (dBi)	0.92	1.78	2.03	2.5	2.53	2.31	2.14	1.9	2.68	2.82	2.95	2.41	1.97	2.03
Efficiency (%)	49.49	62.81	62.92	63.95	63.72	55.84	52.95	50.65	57.44	62.93	65.87	51.88	47.33	47.99
Average Gain (dB)	-3.05	-2.02	-2.01	-1.94	-1.96	-2.53	-2.76	-2.95	-2.41	-2.01	-1.81	-2.85	-3.25	-3.19



Frequency	3300	3500	3700	3900	4100	4300	4500	4700	4900	5000
E-Total Peak Gain (dBi)	0.95	2.18	2.39	3.53	2.2	1.98	2.26	0.91	3.79	5.21
Efficiency (%)	44.97	55.83	60.73	43.71	44.64	44.6	43.57	41.82	54.07	66.02
Average Gain (dB)	-3.47	-2.53	-2.17	-3.59	-3.5	-3.51	-3.61	-3.79	-2.67	-1.8



Frequency	5150	5250	5350	5400	5500	5550	5650	5700	5800	5850
E-Total Peak Gain (dBi)	3.07	2.66	1.83	0.8	1.87	1.89	1.43	2.55	2.55	2.85
Efficiency (%)	50.36	54.13	55.43	42.58	50.11	39.85	35.48	44.34	40.66	47.21
Average Gain (dB)	-2.98	-2.67	-2.56	-3.71	-3	-4	-4.5	-3.53	-3.91	-3.26

## 4. Characteristics and Reliability Test

Test Items		Test Condition and Procedure	Requirements
C1	V.S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C3	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
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%
M2	Random Drop	GB / T2423.8-1995 Single : Height: 1.0 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.<= 5%
M4	Pull Test	Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<=5%
M6	Dimension	Inspection of dimension, color, material, package, surface process	1. Directive DUT specification
E2	Salt Spray	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H	1. No parts separated 2. Frequency Tol.<= 5%
E3	Temperature and Humidity Chamber	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H	1. No parts separated 2. Frequency Tol.<= 5%
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%
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%
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2015/863/EU

## 5. Mechanical Drawing

