

Antenna datasheet

Specification For Approval

Application	Wireless System
Model Name	RC-433H – ANT
Part No	
Issued Date	2023. 08. 22

Model Name	Application	Rev	Page
RC-433H-ANT	Wireless System	0.0	2 / 9

CONTENTS

1. Revision History	3
2. Specification	 4
3. Electrical Specification Test	
3.1 V.S.W.R	5
3.2 Beam Pattern	7
4. Drawing	9

Model Name	Application	Rev	Page
RC-433H-ANT	Wireless System	0.0	4 / 9

2. Specification

2.1. Electrical Specification

Item	Spec	Remarks
Center Frequency	433MHz	
Frequency Range	430MHz – 436MHz	
V.S.W.R	Less Than 2.0	
Peak Gain(dBi)	-10.6dBi (Max)	
Radiation pattern	Omni-directional	
Polarization	Linear Vertical	
Impedance	Nominal 50Ω	

2.2. Mechanical Specification

Item	Spec	Remarks
Dimensions(L)	26 mm x 21.4Turns	mm(Drawing reference)
Connector	Soldering	
Color	Black	
Operating Temperature	-45℃ ~ +85℃	
Weight	1g ± 0.2g	

2.3. Major Materials of Parts

Item	Type	Remarks
Element	SWC	
Plate	Cu	
Tube	POLYOLEFIN	Black

Model Name	Application	Rev	Page
RC-433H-ANT	Wireless System	0.0	5 / 9

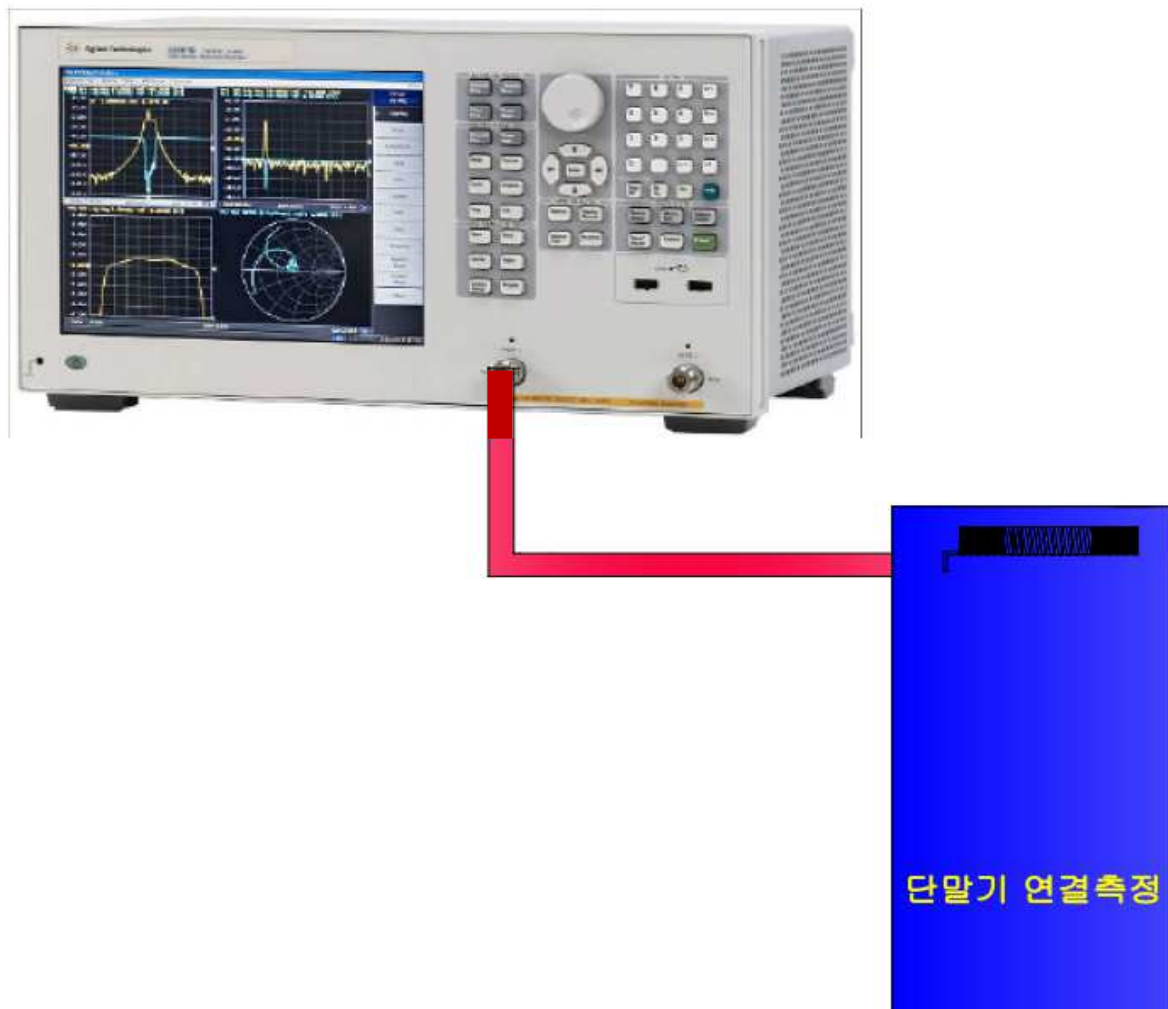
3. V.S.W.R Test

3.1.1 Test method

① Network Analyzer Spec

Equipment	Model	Specification
Network Analyzer	HP8753ES	· Freq. Range : 300KHz ~ 6GHz
Calibration Kit	HP85032B	· DC ~ 6GHz (SMA-Type)

② Network Analyzer test method

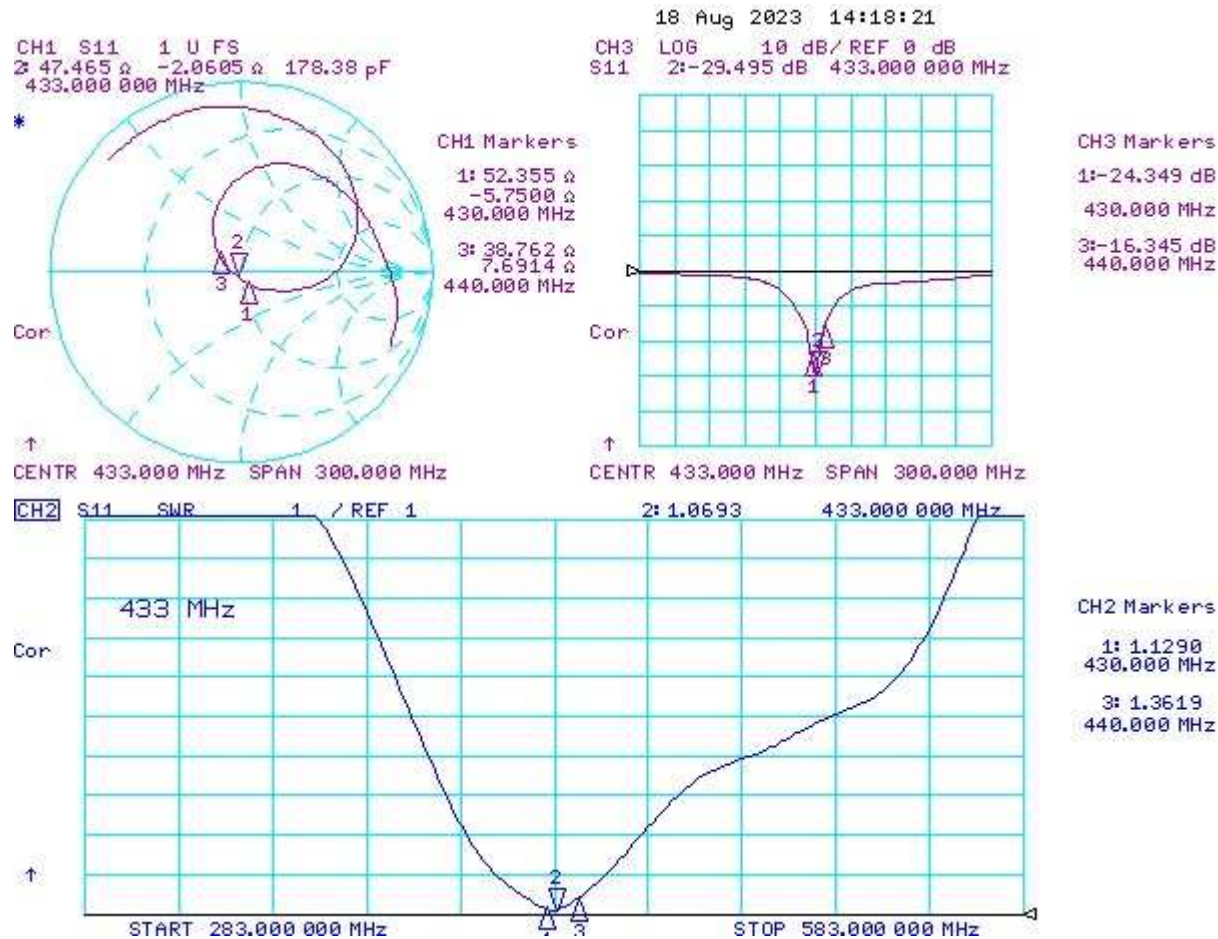


Model Name	Application	Rev	Page
RC-433H-ANT	Wireless System	0.0	6 / 9

3. Electrical Specification

3.1.2 V.S.W.R

DATA



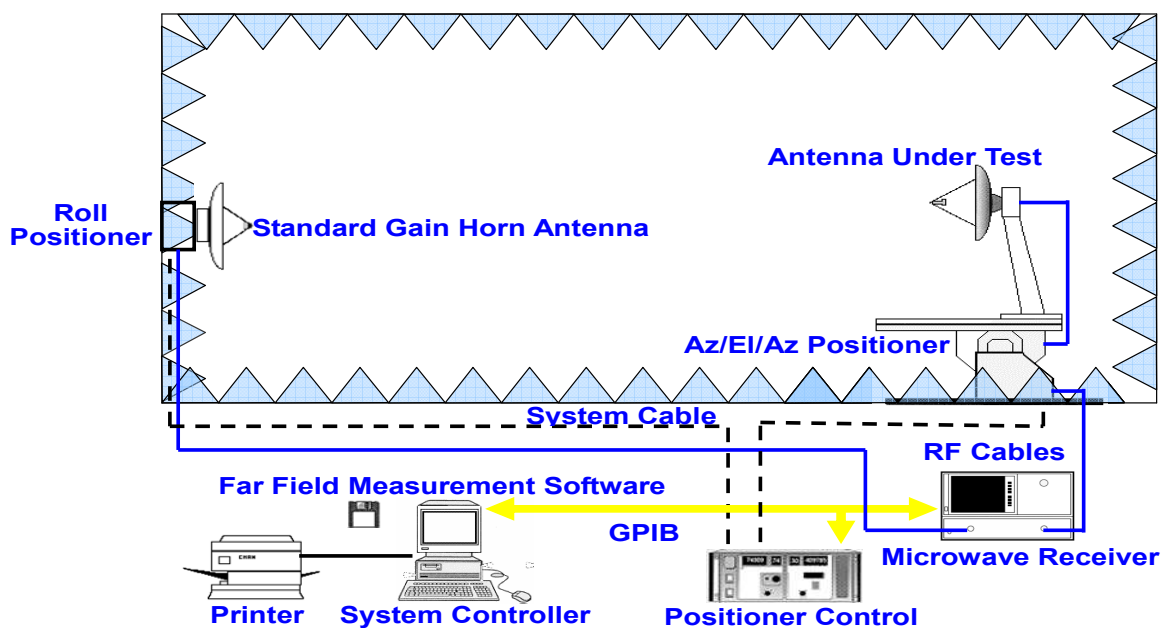
Model Name	Application	Rev	Page
RC-433H-ANT	Wireless System	0.0	7 / 9

3.2.1 Gain & Beam Pattern Test

① Chamber Spec

Section	Specification
Chamber Size	6(L)m X 3(W)m X 3(H)m
Frequency Range	400MHz – 6GHz (Far Field)
Quiet Zone	1m X 1 m @ 1GHz
Type	Rectangular
Antenna weight	< 50 kg

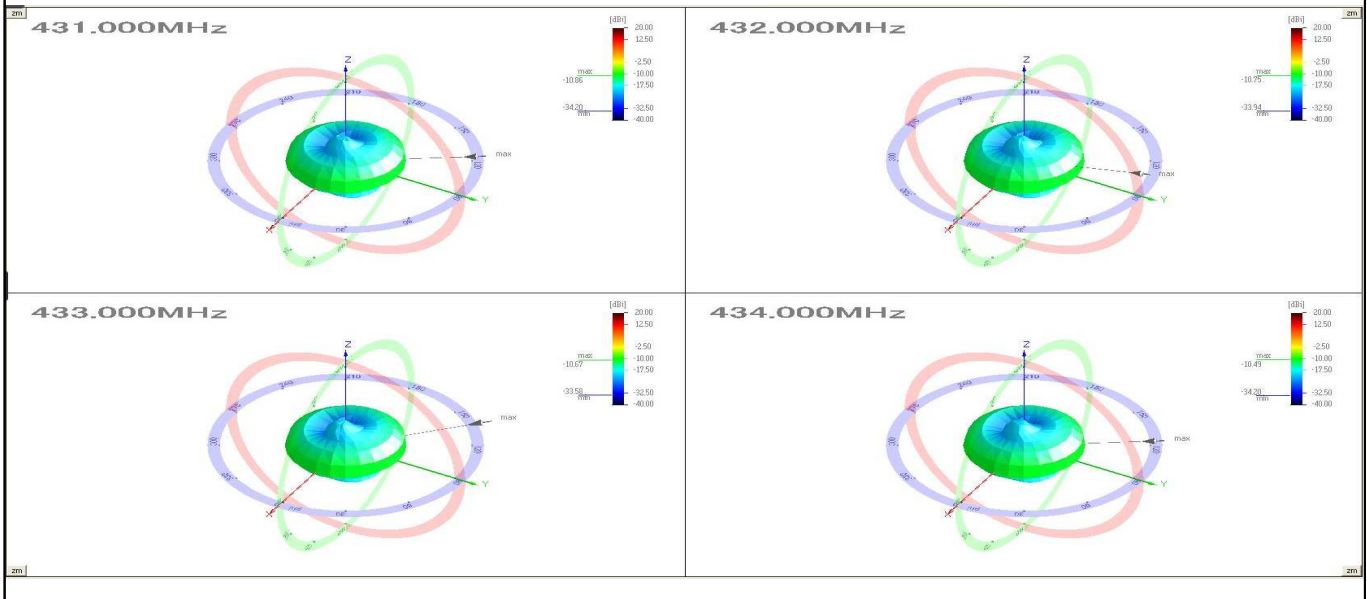
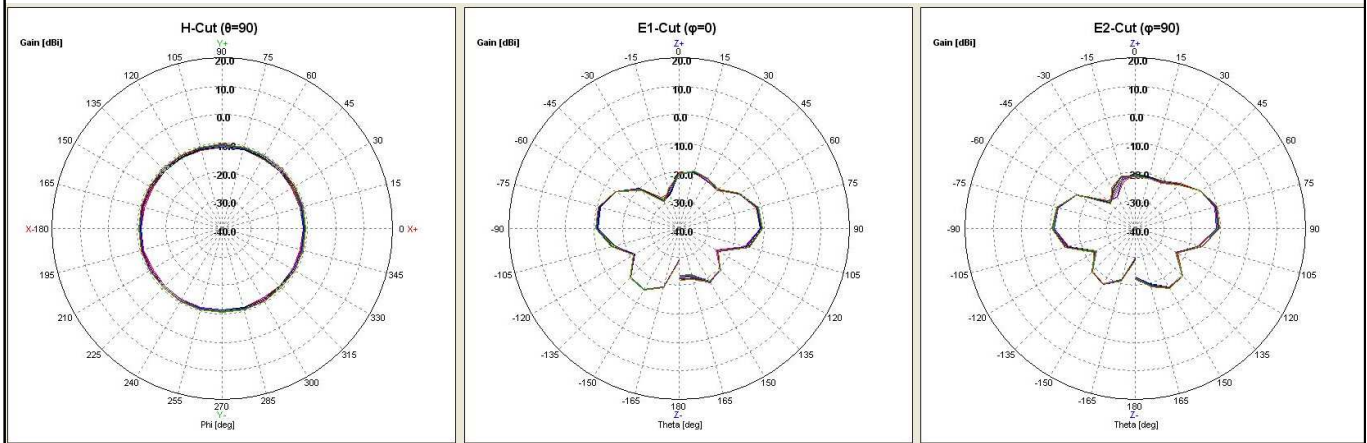
② Chamber Test method



	Model Name	Application	Rev	Page
	RC-433H-ANT	Wireless System	0.0	8 / 9

3.2.2 Gain & Beam Pattern

No.	Freq.	PwrSum					H($\theta=90$)					E1($\varphi=0$)					E2($\varphi=90$)				
		Eff.[%]	Avg.[dBi]	Peak[dBi]	θ [deg]	φ [deg]	Avg.[dBi]	Peak[dBi]	θ [deg]	φ [deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ [deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	θ [deg]	BW[deg]	Avg.[dBi]	Peak[dBi]
1	427.000	3.02	-15.20	-11.02	75.00	105.00	-11.52	-11.42	285.00	999.00		-16.37	-11.27	-75.00	38.40	-16.38	-11.11	75.00	38.92		
2	428.000	3.06	-15.14	-10.90	75.00	120.00	-11.43	-11.33	285.00	999.00		-16.28	-11.18	-75.00	38.17	-16.32	-11.09	75.00	39.25		
3	429.000	3.09	-15.10	-10.87	75.00	120.00	-11.36	-11.30	225.00	999.00		-16.29	-11.21	-75.00	38.16	-16.29	-11.02	75.00	38.93		
4	430.000	3.12	-15.06	-10.88	75.00	105.00	-11.28	-11.19	300.00	999.00		-16.26	-11.12	-75.00	37.91	-16.24	-10.89	75.00	38.34		
5	431.000	3.14	-15.02	-10.86	75.00	105.00	-11.22	-11.14	75.00	999.00		-16.23	-11.16	-75.00	38.27	-16.24	-10.92	75.00	38.20		
6	432.000	3.20	-14.95	-10.75	75.00	90.00	-11.11	-11.05	345.00	999.00		-16.16	-11.04	-75.00	37.57	-16.18	-10.75	75.00	37.86		
7	433.000	3.26	-14.87	-10.67	75.00	120.00	-10.99	-10.91	105.00	999.00		-16.09	-11.01	-75.00	38.15	-16.09	-10.72	75.00	37.89		
8	434.000	3.35	-14.75	-10.49	75.00	105.00	-10.84	-10.76	270.00	999.00		-15.96	-10.80	90.00	35.34	-15.98	-10.52	75.00	37.35		
9	435.000	3.44	-14.63	-10.34	75.00	120.00	-10.72	-10.65	60.00	999.00		-15.84	-10.67	90.00	35.19	-15.86	-10.46	75.00	38.38		
10	436.000	3.53	-14.53	-10.28	75.00	105.00	-10.58	-10.50	90.00	999.00		-15.78	-10.60	-90.00	36.64	-15.78	-10.33	75.00	37.74		
11	437.000	3.58	-14.46	-10.26	75.00	105.00	-10.50	-10.41	105.00	999.00		-15.68	-10.45	90.00	35.14	-15.72	-10.32	75.00	38.18		
12	438.000	3.61	-14.42	-10.16	75.00	90.00	-10.44	-10.32	120.00	999.00		-15.65	-10.46	-90.00	36.93	-15.68	-10.16	75.00	36.71		



Model Name	Application	Rev	Page
RC-433H-ANT	Wireless System	0.0	9 / 9

4. Drawing

