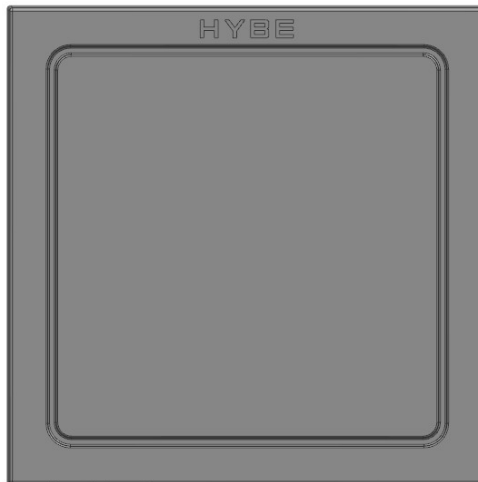


Datasheet

2.4GHz Band Circular-Polarization Patch Antenna

P/N : APTBTTH1CPOP



1. Application

- This product is a patch antenna that satisfies the 2.4GHz Band (Bluetooth, WiFi, Zigbee).

2. Part Number

A	PT	BT	H1CP	OP
①	②	③	④	⑤

- ① A : Partron Antenna
- ② PT : Patch Antenna
- ③ BT : 2.4GHz Band
- ④ H1CP : HYBE 1st Circular-Polarization Repeater Antenna
- ⑤ OP : Open

3. Temperature Condition

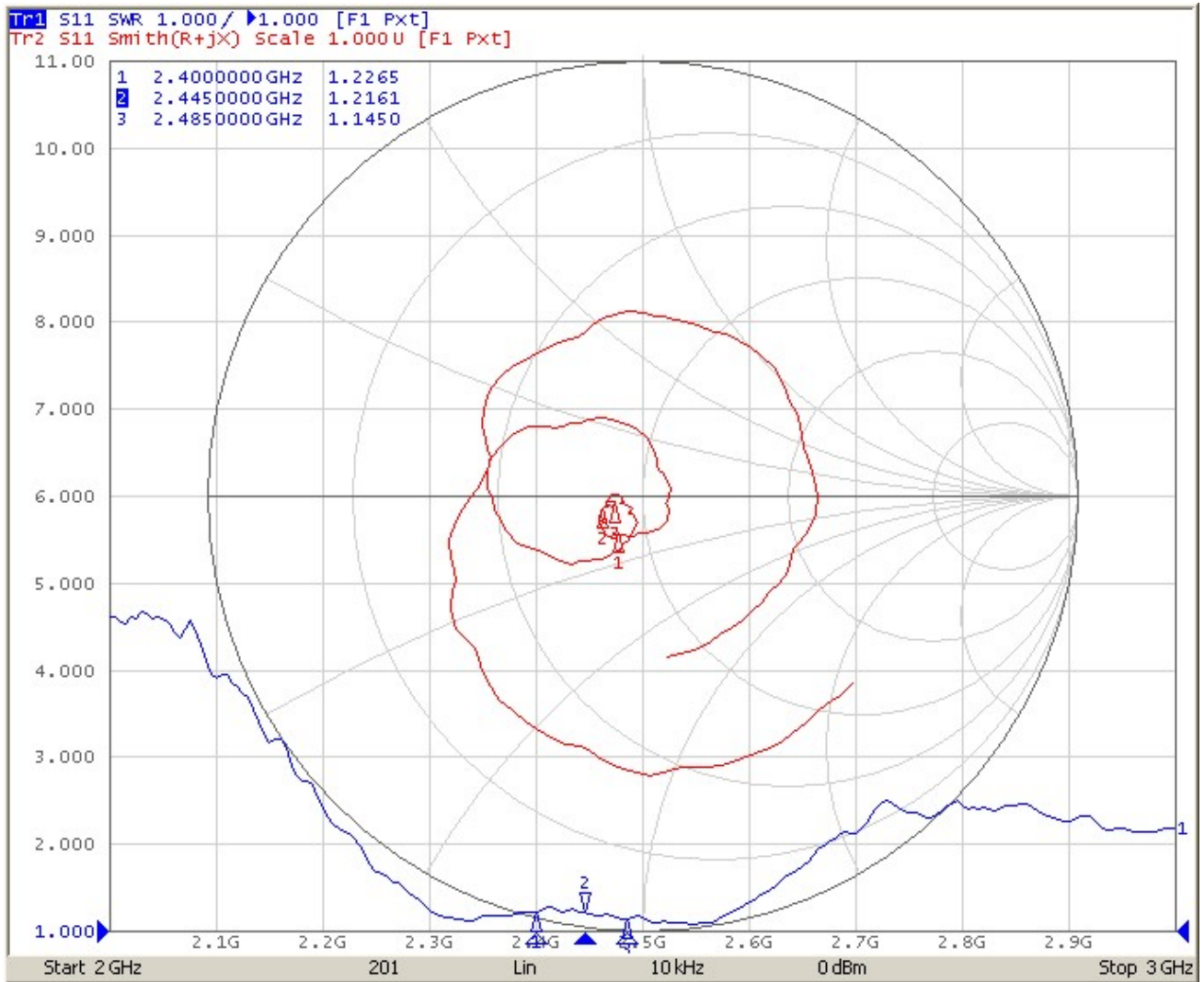
No	Item	Specification	Unit
1	Operating Temperature	-40 ~ +85	°C
2	Storage Temperature	-40 ~ +85	°C

4. Electrical Characteristics

4-1. Antenna Element

No	Item	Specification	Unit	
1	Operating Frequency	2400 ~ 2485	MHz	
2	Polarization	LHCP	-	
3	Antenna Gain	Typ. 8.8	dBi	@ 2480MHz & Zenith
4	Axial Ratio	Typ. 2.0	dB	@ 2480MHz & Zenith
5	Bandwidth	min 100	MHz	@ VSWR 2:1
6	Output Impedance	50	ohm	
7	HPBW @ E1-Plane	< 65	degree	
8	HPBW @ E2-Plane	< 63	degree	
9	Connector Type	SMA		

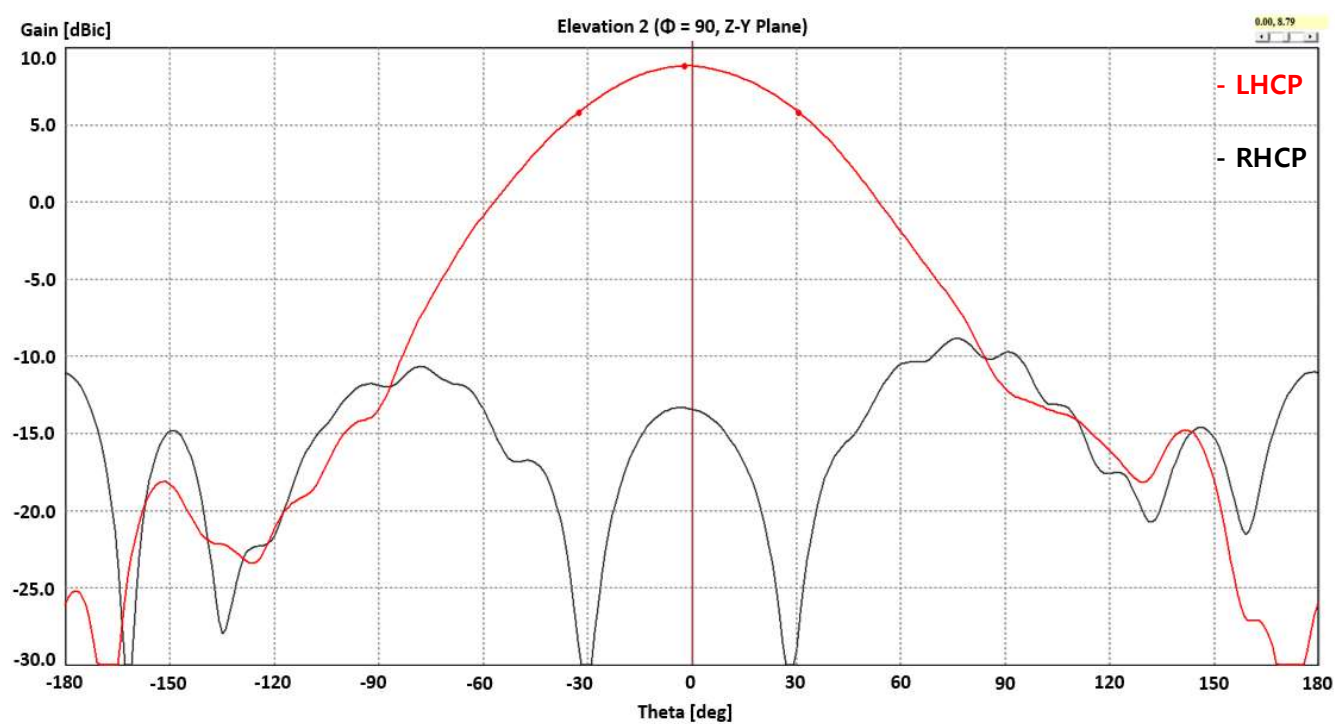
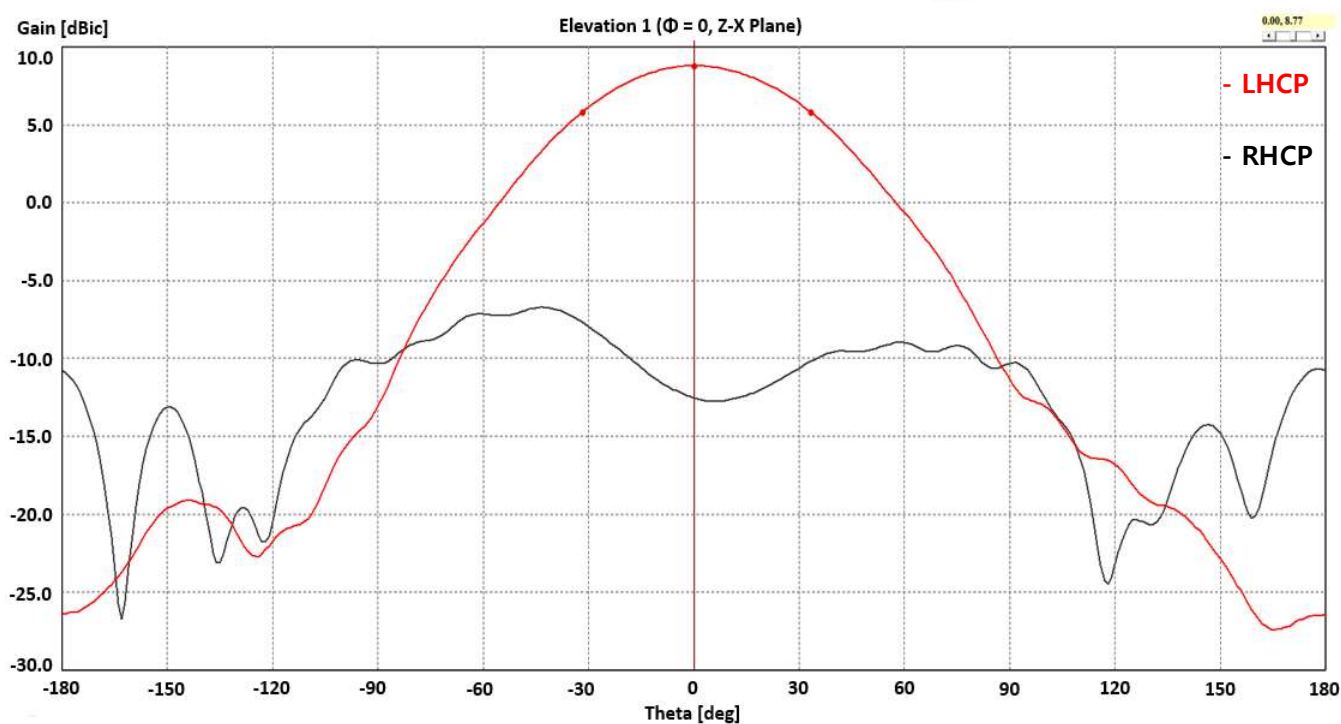
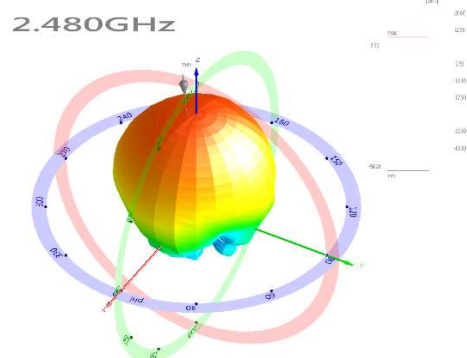
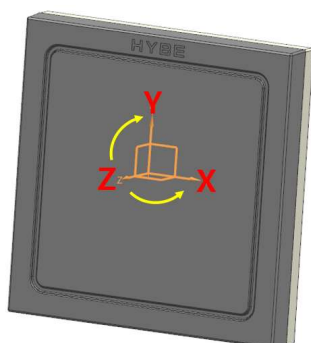
4-2. VSWR of Antenna Element



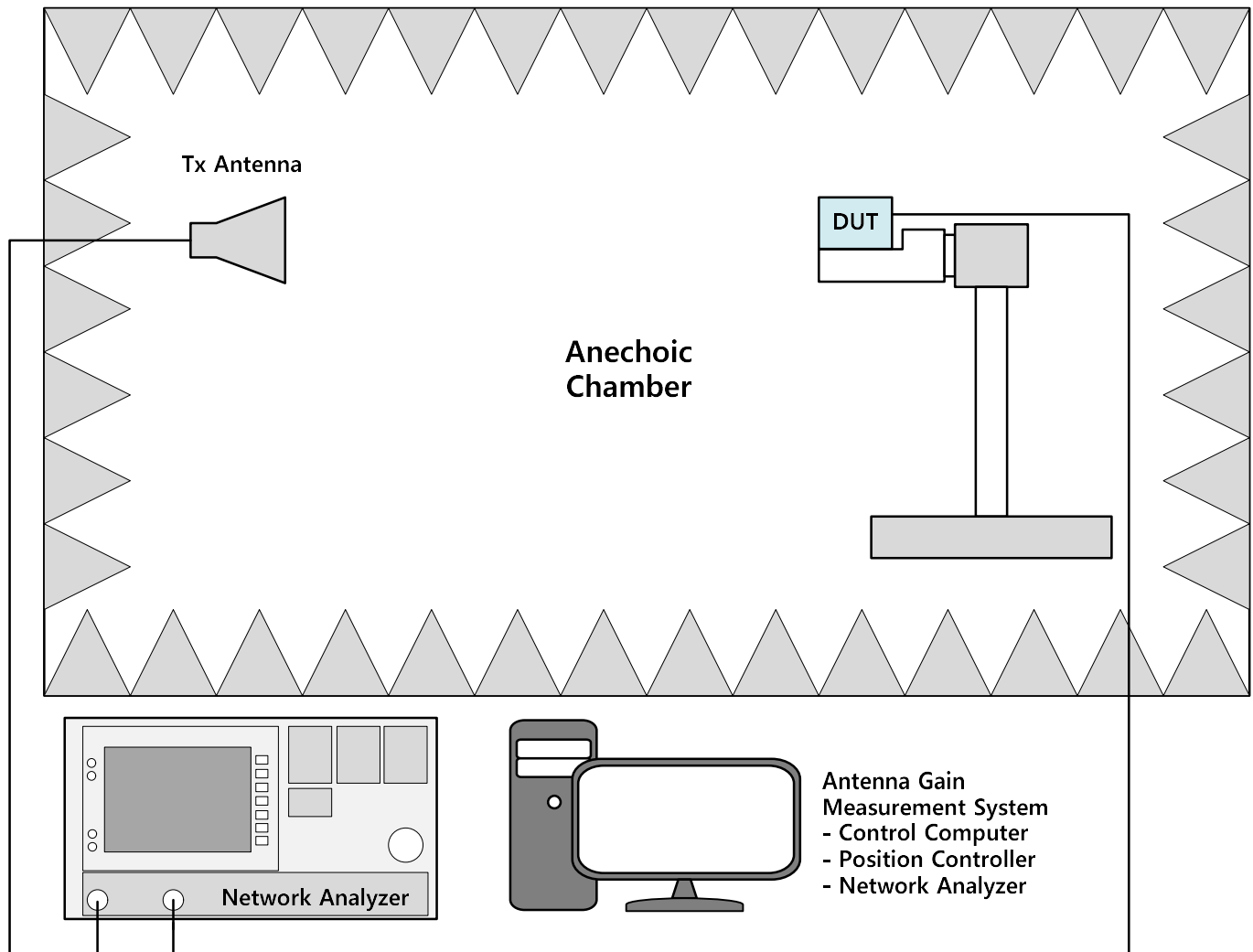
4-3. Gain Table

	LHCP					H(θ=90)					E1(φ=0)					E2(φ=90)				
Freq.	Eff.[%]	Avg.[dBi]	Peak[dBi]	θ[deg]	φ[deg]	Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]		Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]		Avg.[dBi]	Peak[dBi]	θ[deg]	BW[deg]	
2.400	72.92	-1.37	8.17	-5.00	165.00	-11.86	-7.69	360.00	999.00		1.29	8.17	5.00	67.54		1.04	8.14	0.00	65.76	
2.410	72.35	-1.41	8.21	-5.00	165.00	-12.29	-8.39	360.00	999.00		1.29	8.20	5.00	67.15		1.05	8.17	0.00	65.27	
2.420	71.62	-1.45	8.22	-5.00	165.00	-12.67	-8.82	360.00	999.00		1.27	8.18	0.00	67.25		1.03	8.16	0.00	65.01	
2.430	72.26	-1.41	8.29	-5.00	165.00	-12.60	-9.13	360.00	999.00		1.31	8.26	0.00	66.94		1.09	8.25	0.00	64.57	
2.440	74.56	-1.28	8.45	-5.00	165.00	-12.80	-9.66	360.00	999.00		1.46	8.41	0.00	66.98		1.26	8.41	0.00	64.40	
2.445	75.68	-1.21	8.55	-5.00	165.00	-13.05	-10.04	360.00	999.00		1.53	8.51	0.00	66.78		1.34	8.51	0.00	64.18	
2.450	76.44	-1.17	8.64	-5.00	165.00	-13.25	-10.35	345.00	999.00		1.59	8.60	0.00	66.32		1.41	8.60	0.00	63.86	
2.460	76.35	-1.17	8.69	-5.00	150.00	-13.62	-10.95	345.00	999.00		1.60	8.64	0.00	65.77		1.46	8.66	0.00	63.49	
2.470	77.88	-1.09	8.79	-5.00	165.00	-13.66	-10.90	15.00	999.00		1.68	8.74	0.00	65.61		1.57	8.75	0.00	63.50	
2.480	77.67	-1.10	8.82	-5.00	150.00	-13.97	-11.28	15.00	999.00		1.68	8.77	0.00	65.27		1.58	8.78	-5.00	63.36	
2.485	76.70	-1.15	8.78	-5.00	150.00	-14.27	-11.62	15.00	999.00		1.64	8.73	0.00	65.09		1.55	8.74	-5.00	63.36	

4-4 Radiation Pattern



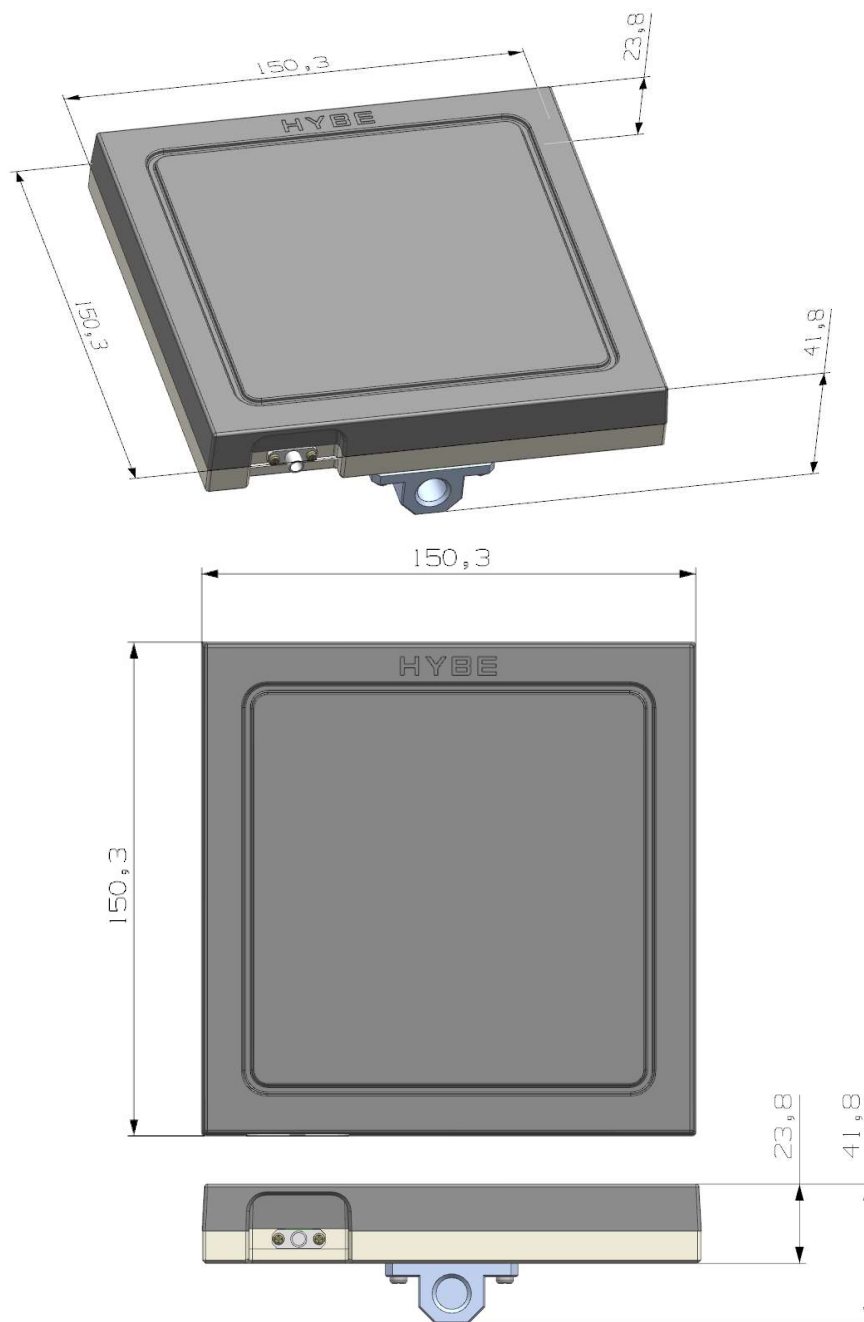
4-5 Test Method



No	Device Name	Manufacturer	Model Name	Serial Number
1	ZNA Network Analyzer	Rodhe & Schwarz	ZNA26	101268
2	Microwave System Amplifier	Keysight	83017A	MY53270141
3	Quad-Ridged Horn	MTG	QRH004060	-
4	Waveguide Horn	Schwarzbeck	BBHA9120	253

No	Division	Contents
1	Test Place	NIPA (National IT Industry Promotion Agency)
2	Test Standard	ANSI/IEEE Std 149-1979 IEEE Standard Test Procedures for Antennas

5. Product Drawing



No	Item	Specification	Unit
1	Size	150.3 x 150.3 x 41.8T	mm
2	Weight	830	g
3	Housing Upper - Color / Material	Black / PC+GF20%	
4	Housing Lower - Color / Material	Black / Aluminum	
5	Rigging Pin Hole Size	3/8	inch
6	RF Connector	SMA Female	

Revision History

No	Description of Change	Date	Revision
1	Ver. 1.0 First release of document	22.06.03	1.0
2	Test Method Update	22.12.07	2.0