

Product Name	Type	Rev.	Hutec	IR
CG890 Main2(Ant2)	PCB+CABLE		Franklin Technology	IR

APPROVAL SHEET

Customer Name : Franklin Technology

Company Name : Hutec

Product Name : CG890 Main2(Ant2)

Description ITEM : Main Ant 2

Customer P/N :

Franklin Technology	구 분	작성자	검토자	합 의	승 인 자
	소속/성명				
	서 명				
Hutec	구 분	작성자	검토자	합 의	승 인 자
	소속/성명	기구/유정석	회로/방구현	품질/권순흥	김영상 수석
	서 명	유정석	방구현	권순흥	김영상

PRODUCT PHOTO	T O P	
	B O T T O M	
Weight(g)	6.0g	

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1. Revision History of Product Specification

1.1 History List of Approval Sheet

[illegible]

Product Name	Type	Rev.	Hutec	IR
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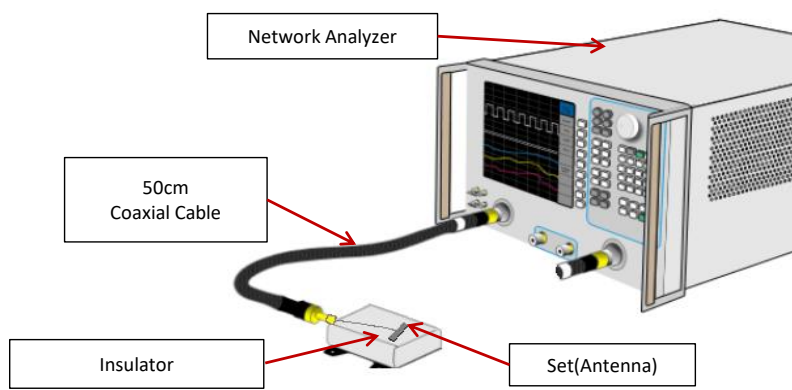
2. RF Specification

2.1 Test Condition

2.1.1 Test Environment (Condition/Method)

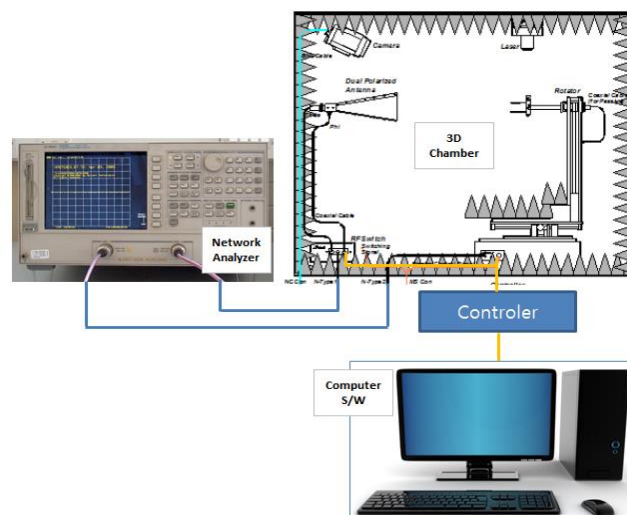
① Voltage Standing Wave Ratio(VSWR)

- Step 1. Set the frequency range after connect 50cm cable to Network analyzer.
- Step 2. Connect Calibration Kit to Network analyzer and calibrate.
- Step 3. Fix the cable and keep separation distance over 30cm for reducing effect by Network analyzer.
- Step 4. Fix insulator over 5cm on the bottom of measuring antenna.
- Step 5. Measure VSWR with setting marker of desired frequency.



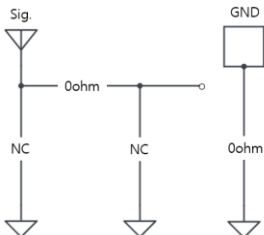
② Radiation Pattern & Gain

- Step 1. Calibrate the Chamber system using Horn antenna, and set up the software to control the Chamber system at the same time.
- Step 2. Keep the measuring antenna to holder.
- Step 3. Measure Gain & efficiency.



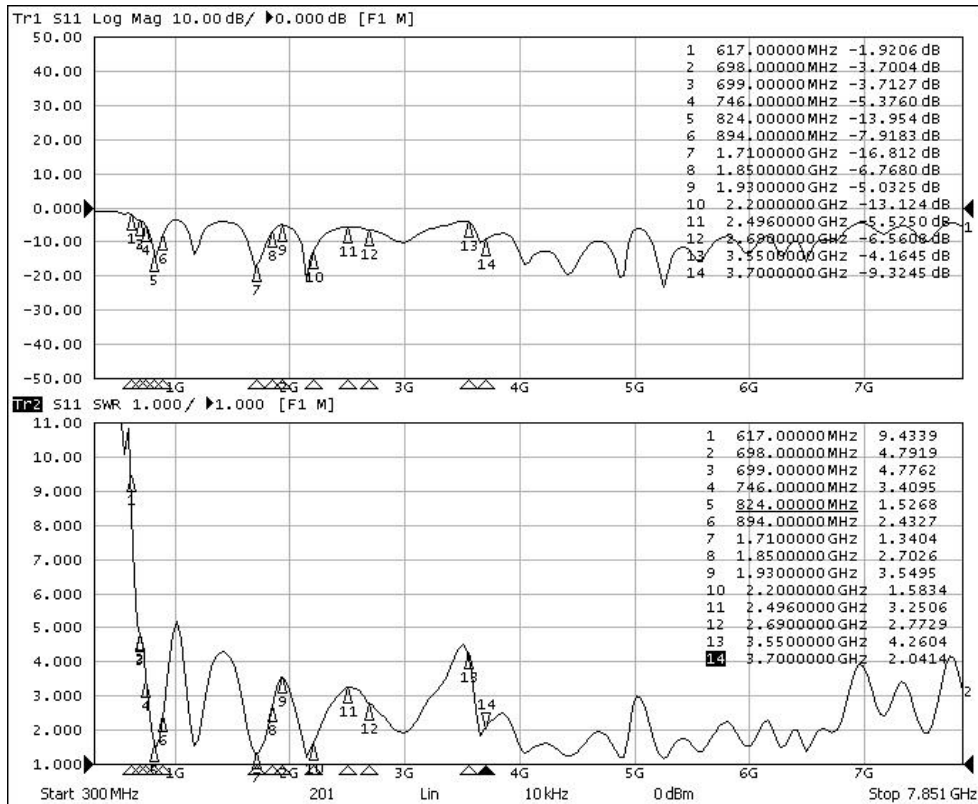
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2.2 Electrical Specification

Main2(Ant2) Antenna						
Frequency	B71(n71)	B12	B5	B66(B2,B4,n66)	B41(B7)	B48(n48)
	617MHz ~ 698MHz	699MHz ~ 746MHz	824MHz ~ 894MHz	1710MHz ~ 2200MHz	2496MHz ~ 2690MHz	3550MHz ~ 3700MHz
VSWR	≤ 10.4	≤ 5.7	≤ 3.4	≤ 4.5	≤ 3.2	≤ 5.2
Peak Gain[dBi]	+1.8	+3.3	+3.1	+3.6	-0.4	+1.4
Avg Gain[dBi]	-6.5	-3.2	-2.2	-3.1	-3.4	-3.5
Matching Value						
Directivity	Omni-directional					
Polarization	Linear					
Feed Impedance	50 Ohms					
Power Handling	2Watt					

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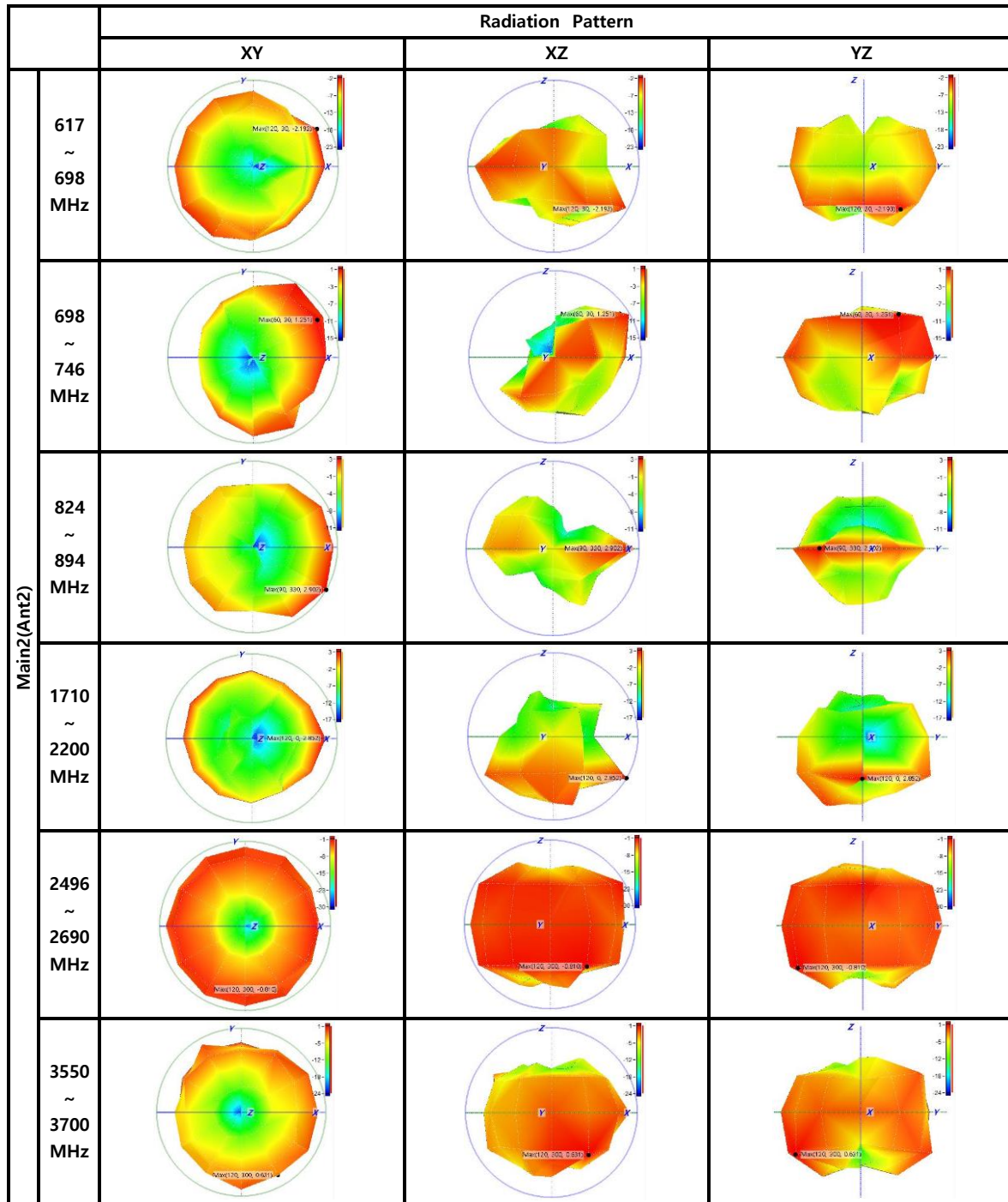
2.2.1 V.S.W.R



2.2.2 3D Gain & Radiation Pattern

Frequency	Peak Value		Minimum Value		Avg. Gain	Efficiency
[MHz]	Value[dBi]	Degree	Value[dBi]	Degree	[dBi]	[%]
617	-2.193	120 / 30	-22.881	30 / 0	-6.564	22.058
635	0.431	90 / 270	-20.943	0 / 150	-4.339	36.823
652	1.774	90 / 270	-18.622	0 / 120	-3.203	47.833
663	0.792	90 / 270	-18.431	0 / 300	-3.936	40.399
681	0.326	60 / 30	-20.099	30 / 270	-4.025	39.587
698	1.156	60 / 30	-16.356	0 / 0	-3.202	47.844
699	1.251	60 / 30	-15.447	30 / 180	-3.08	49.209
729	3.287	60 / 0	-15.261	90 / 120	-1.464	71.378
746	3.269	90 / 30	-14.069	60 / 270	-1.911	64.400
824	2.902	90 / 330	-11.49	30 / 30	-1.513	70.578
849	3.081	90 / 330	-11.455	150 / 180	-0.847	82.273
869	2.817	90 / 0	-11.741	150 / 180	-0.758	83.984
894	0.897	90 / 0	-11.919	150 / 180	-2.235	59.774
1710	2.852	120 / 0	-16.98	30 / 30	-2.252	59.538
1780	3.578	120 / 0	-20.887	0 / 300	-0.807	63.046
1850	1.894	120 / 270	-25.658	0 / 330	-2.19	60.394
1883	1.559	120 / 300	-28.342	60 / 180	-3.134	48.600
1915	1.877	120 / 300	-25.783	0 / 0	-2.894	51.360
1930	1.942	120 / 300	-29.789	0 / 90	-3.095	49.037
1995	3.16	120 / 300	-14.341	0 / 30	-2.186	60.448
2110	3.54	120 / 330	-10.977	90 / 210	-1.402	72.403
2200	2.159	150 / 180	-13.75	0 / 270	-1.799	66.089
2496	-0.81	120 / 300	-29.984	0 / 330	-3.363	46.104
2574	-0.459	60 / 270	-18.505	0 / 150	-3.11	48.867
2690	-1.071	60 / 240	-18.395	0 / 30	-3.479	44.883
3550	0.631	120 / 300	-23.831	0 / 150	-3.218	47.661
3650	-0.047	150 / 240	-23.253	0 / 120	-3.594	43.715
3700	1.373	150 / 240	-21.326	0 / 300	-2.842	51.973

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3. Mechanical Specification

3.1 Part List

PART LIST											SIGN	DRAWN	CHECK	APPROVE											
PRODUCT NAME		CG890 Main2(ANT2)										유정석													
PRODUCT SPECIFICATION		LTE&NR									ESTABLISH . DATE		2023.01.06.												
CUSTOMER		Franklin Technology									REVISION DATE		2023.01.06.	V10											
NO	LEVEL										PART NO.	PART NAME	Material & Description	Q'TY	VENDOR	REMARK									
	1	2	3	4	5	6	7	8	9																
0	0										HPC-PCB0024N-IR	CG890 0&2	FR4 / 1.0T	1	FMC	Main Ant0,1,2,3									
1	0										HIA-CAB0041B-IR	CABLE ASS'Y	MHF4L / Ø1.13	1	FMC	Main Ant2									
2	0																								
3	0																								
4																									
5																									
6																-									
7																-									
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15																-									
[REVISION HISTORY]																									
REV	DATE	DESCRIPTION										REMARKS	REV	DATE	DESCRIPTION										REMARKS
[REMARKS]																									

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3.2 Ass'y Drawing

