

Product Name	Type	Rev.	Hutec	IR
CG890 Main1(Ant1)	PCB+CABLE		Franklin Technology	IR

APPROVAL SHEET

Customer Name : Franklin Technology

Company Name : Hutec

Product Name : CG890 Main1(Ant1)

Description ITEM : Main Ant 1

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)	5.4g	

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1. Revision History of Product Specification

1.1 History List of Approval Sheet

[illegible]

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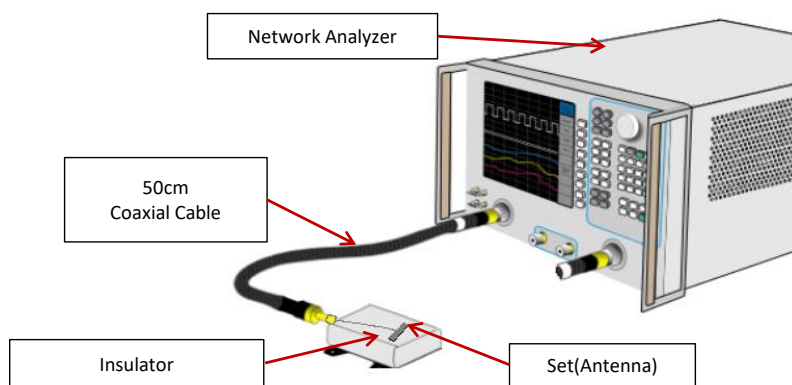
2. RF Specification

2.1 Test Condition

2.1.1 Test Environment (Condition/Method)

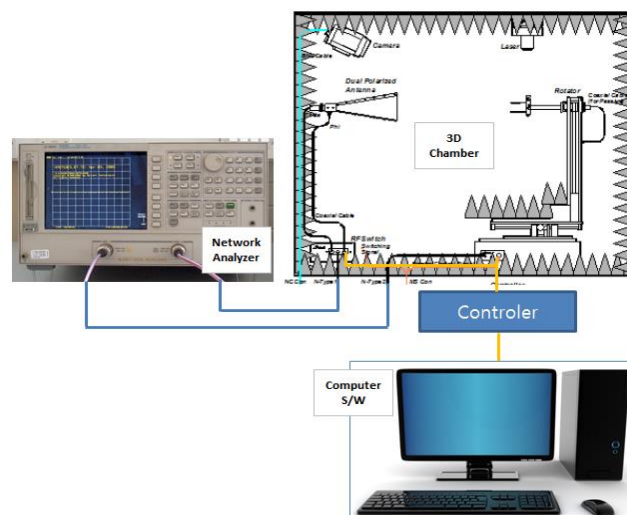
① Voltage Standing Wave Ratio(VSWR)

- 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.



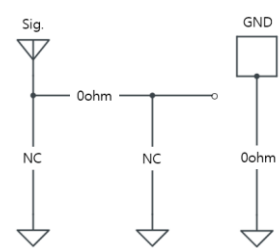
② Radiation Pattern & Gain

- 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.



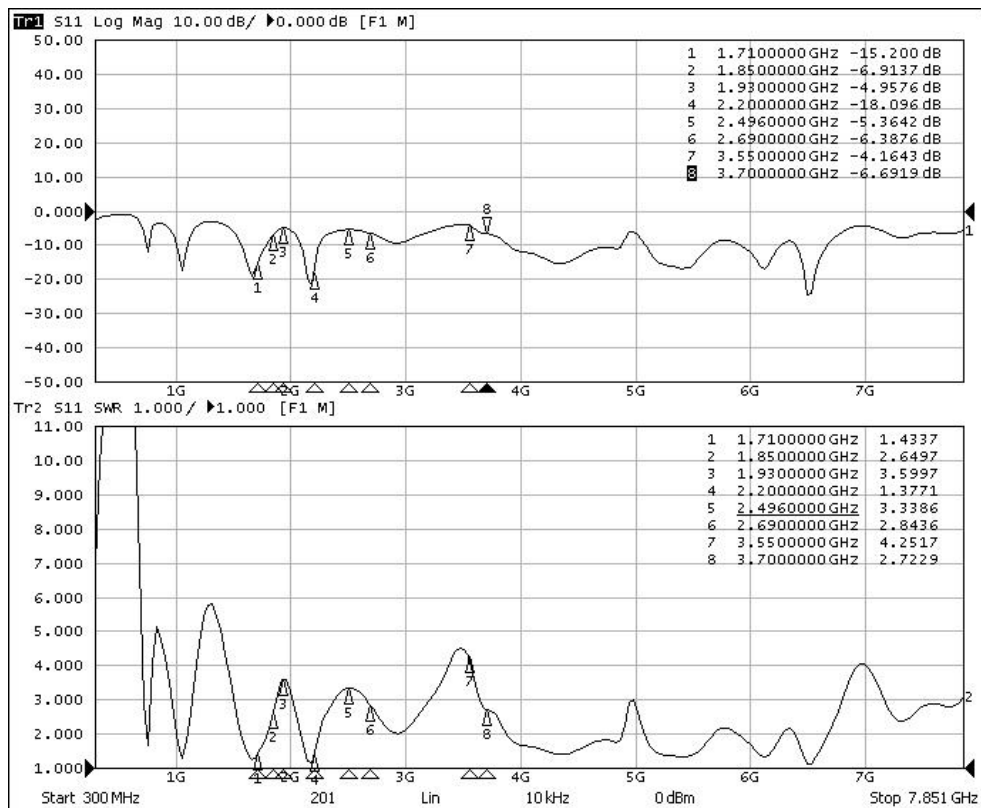
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2.2 Electrical Specification

Main1(Ant1) Antenna				
Frequency	B66(B2,B4,n66)	B41(B7)	B48(n48)	
	1710MHz ~ 2200MHz	2496MHz ~ 2690MHz	3550MHz ~ 3700MHz	
VSWR	≤ 4.5	≤ 3.4	≤ 5.2	
Peak Gain[dBi]	+3.8	+0.6	-0.7	
Avg Gain[dBi]	-2.6	-3.3	-5.7	
Matching Value				
Directivity	Omni-directional			
Polarization	Linear			
Feed Impedance	50 Ohms			
Power Handling	2Watt			

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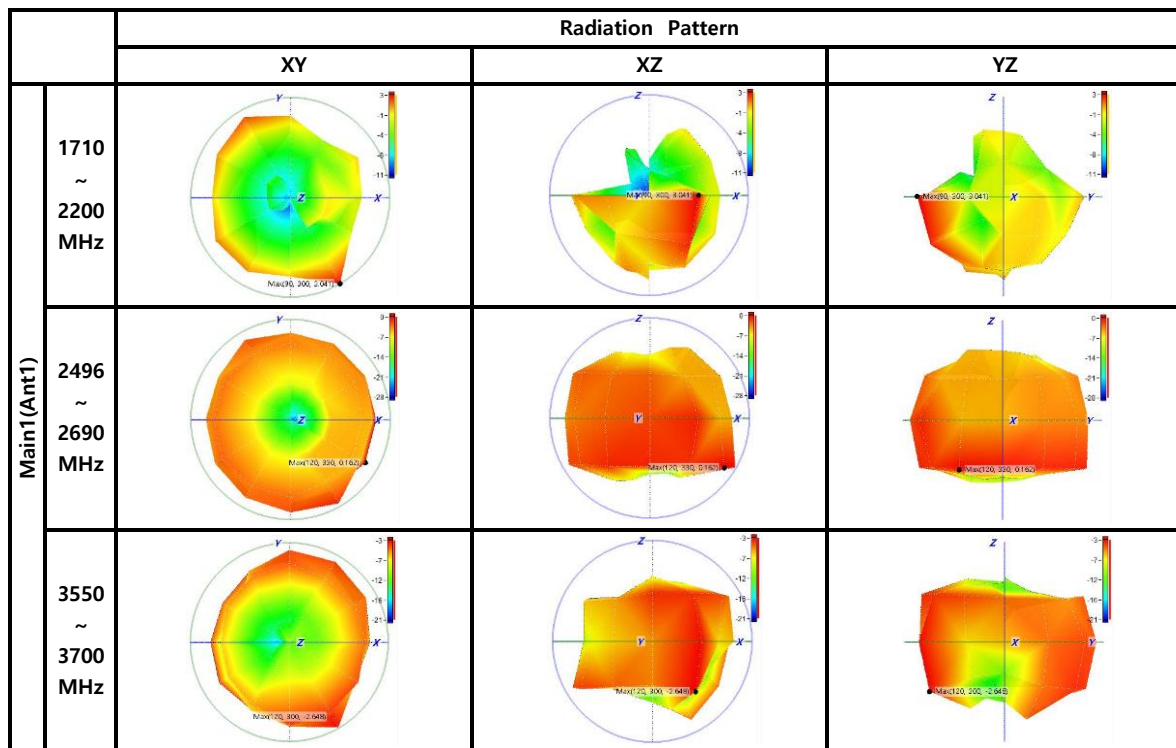
2.2.1 V.S.W.R



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2.2.2 3D Gain & Radiation Pattern

Frequency [MHz]	Peak Value		Minimum Value		Avg. Gain	Efficiency
	Value[dBi]	Degree	Value[dBi]	Degree	[dBi]	[%]
1710	3.041	90 / 300	-11.271	60 / 240	-1.182	76.174
1780	3.35	90 / 300	-12.303	60 / 150	-0.255	76.058
1850	3.792	120 / 150	-17.753	60 / 150	-1.305	74.052
1883	3.095	120 / 300	-24.792	60 / 60	-2.278	59.178
1915	3.771	120 / 300	-15.427	60 / 330	-2.371	57.934
1930	3.566	120 / 300	-17.385	60 / 60	-2.609	54.839
1995	2.342	120 / 210	-21.96	180 / 240	-2.495	56.297
2110	2.055	60 / 300	-17.656	0 / 150	-1.144	76.848
2200	2.611	120 / 300	-16.841	0 / 180	-1.632	68.672
2496	0.162	120 / 330	-28.18	180 / 30	-3.348	46.26
2574	0.575	120 / 330	-21.343	180 / 210	-2.469	56.632
2690	-0.766	120 / 90	-24.605	180 / 240	-3.069	49.331
3550	-2.648	120 / 300	-20.581	180 / 0	-5.771	26.481
3650	-0.901	60 / 90	-13.203	180 / 0	-3.752	42.154
3700	-0.766	60 / 120	-13.747	180 / 210	-3.551	44.147



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3. Mechanical Specification

3.1 Part List

PART LIST											SIGN	DRAWN	CHECK	APPROVE	
												유정석			
PRODUCT NAME				CG890 Main1(ANT1)							ESTABLISH . DATE		2023.01.06.		
PRODUCT SPECIFICATION				LTE&NR							REVISION DATE		2023.01.06. V10		
CUSTOMER				Franklin Technology											
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	PCB	CG890 0&2	1	FMC	Main Ant0,1,2,3
1	0									HIA-CAB0042B-IR	CABLE	MHF4/ Ø0.81	1	FMC	BLACK
2	0														
3	0														
4															
5															
6															-
7															-
8															-
9															-
10															-
11															-
12															-
13															-
14															-
15															-
[REVISION HISTORY]															
REV	DATE	DESCRIPTION				REMARKS	REV	DATE	DESCRIPTION				REMARKS		
[REMARKS]															

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3.2 Ass'y Drawing

