

Product Name	Type	Rev.	Hutec	IR
CG890 Main3(Ant3)	PCB+CABLE		Franklin Technology	IR

APPROVAL SHEET

Customer Name : Franklin Technology

Company Name : Hutec

Product Name : CG890 Main3(Ant3)

Description ITEM : Main Ant 3

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)	5.5g	

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1. Revision History of Product Specification

1.1 History List of Approval Sheet

[illegible]

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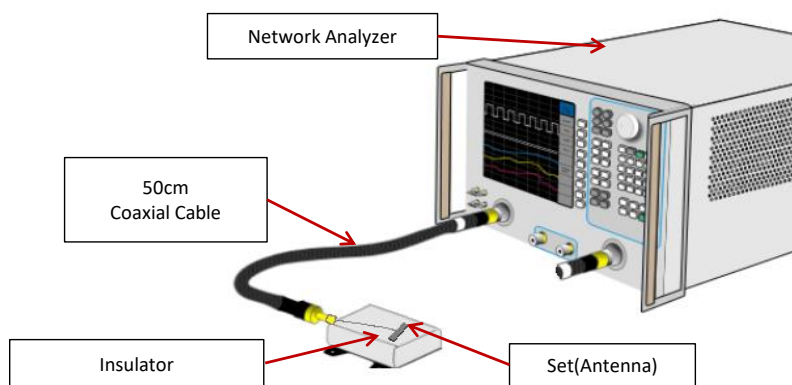
2. RF Specification

2.1 Test Condition

2.1.1 Test Environment (Condition/Method)

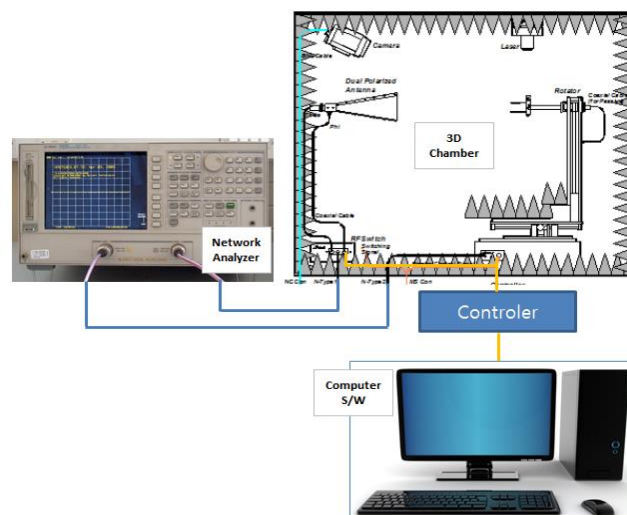
① Voltage Standing Wave Ratio(VSWR)

- 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.



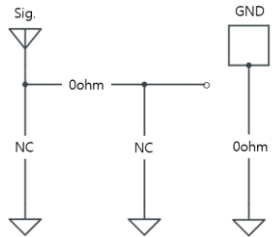
② Radiation Pattern & Gain

- 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.



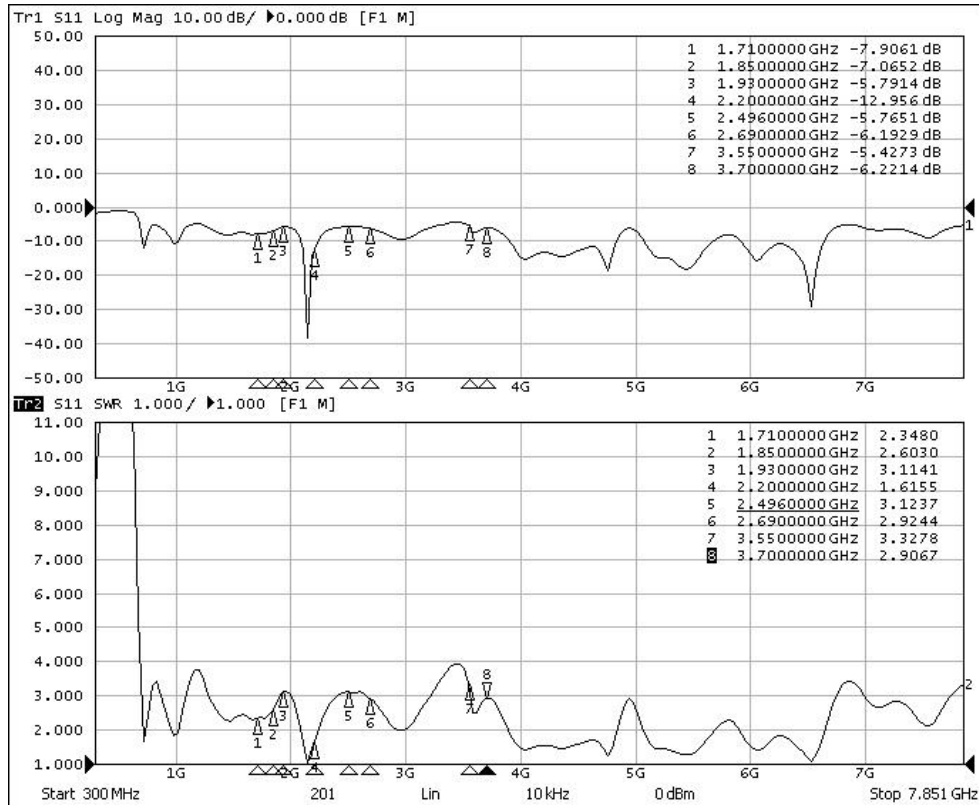
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2.2 Electrical Specification

Main3(Ant3) Antenna				
Frequency	B66(B2,B4,n66)	B41(B7)	B48(n48)	
	1710MHz ~ 2200MHz	2496MHz ~ 2690MHz	3550MHz ~ 3700MHz	
VSWR	≤ 4.1	≤ 4.1	≤ 4.3	
Peak Gain[dBi]	+3.7	+0.4	-0.4	
Avg Gain[dBi]	-3.0	-3.0	-4.78	
Matching Value				
Directivity	Omni-directional			
Polarization	Linear			
Feed Impedance	50 Ohms			
Power Handling	2Watt			

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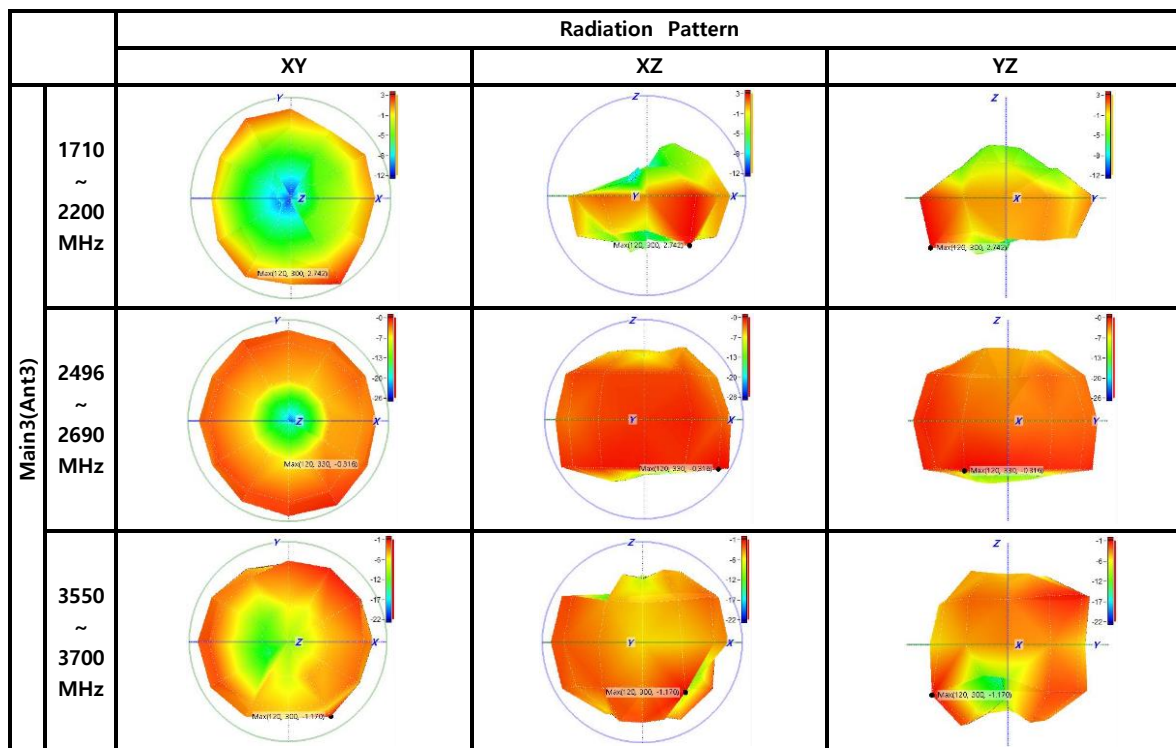
2.2.1 V.S.W.R



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2.2.2 3D Gain & Radiation Pattern

Frequency	Peak Value		Minimum Value		Avg. Gain	Efficiency
[MHz]	Value[dBi]	Degree	Value[dBi]	Degree	[dBi]	[%]
1710	2.742	120 / 300	-11.807	0 / 150	-1.588	69.38
1780	3.347	90 / 300	-14.026	60 / 240	-0.908	81.126
1850	3.726	120 / 150	-19.97	60 / 120	-1.835	65.539
1883	3.66	120 / 300	-18.972	60 / 210	-2.2	60.251
1915	3.134	120 / 300	-17.181	60 / 210	-3.142	48.509
1930	3.303	120 / 300	-16.304	60 / 120	-3.019	49.898
1995	1.828	120 / 300	-24.495	180 / 330	-3.088	49.112
2110	1.982	120 / 300	-19.69	0 / 150	-1.732	67.108
2200	2.658	120 / 300	-16.451	90 / 30	-2.055	62.301
2496	-0.316	120 / 330	-26.196	180 / 30	-3.042	49.637
2574	-0.307	120 / 330	-22.307	180 / 210	-2.799	52.488
2690	0.409	90 / 330	-25.054	180 / 270	-2.974	50.414
3550	-1.17	120 / 300	-21.86	180 / 330	-4.12	38.722
3650	-1.23	150 / 150	-19.928	180 / 210	-4.848	32.749
3700	-0.483	150 / 180	-30.222	180 / 210	-4.244	37.636



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3. Mechanical Specification

3.1 Part List

PART LIST											SIGN	DRAWN	CHECK	APPROVE									
PRODUCT NAME		CG890 Main3(ANT3)																					
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	PCB	FR4 / 1.0T	1	FMC	Main Ant0,1,2,3								
1	0									HPC-CAB0043B-IR	CABLE	MHF4 / Ø0.81	1	FMC	Main Ant3								
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

