

Product Name	Type	Rev.	Hutec	IR
CG890 Main0(Ant0)	PCB+CABLE		Franklin Technology	IR

APPROVAL SHEET

Customer Name : Franklin Technology

Company Name : Hutec

Product Name : CG890 Main0(Ant0)

Description ITEM : Main Ant0

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)	5.8g	

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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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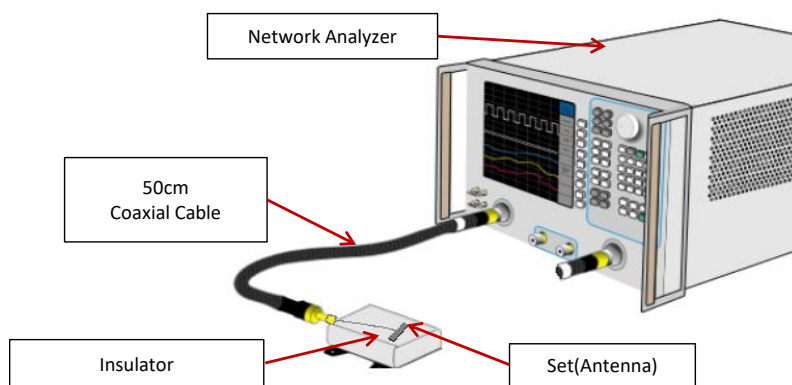
2. RF Specification

2.1 Test Condition

2.1.1 Test Environment (Condition/Method)

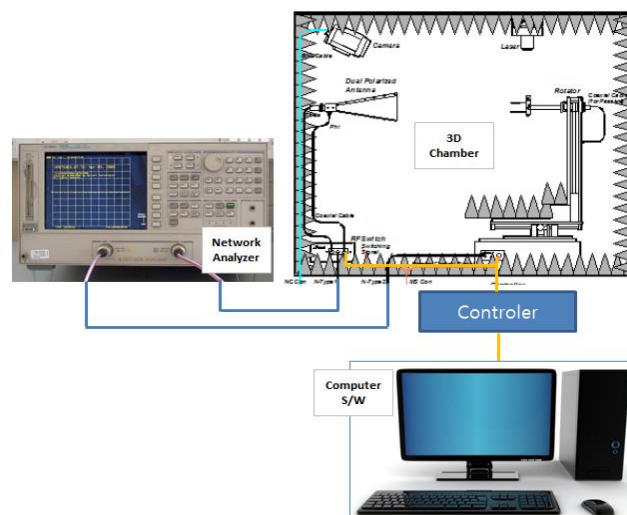
① Voltage Standing Wave Ratio(VSWR)

- 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.



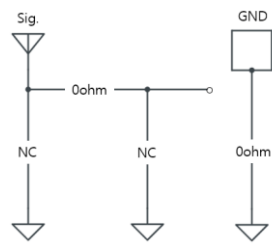
② Radiation Pattern & Gain

- 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.



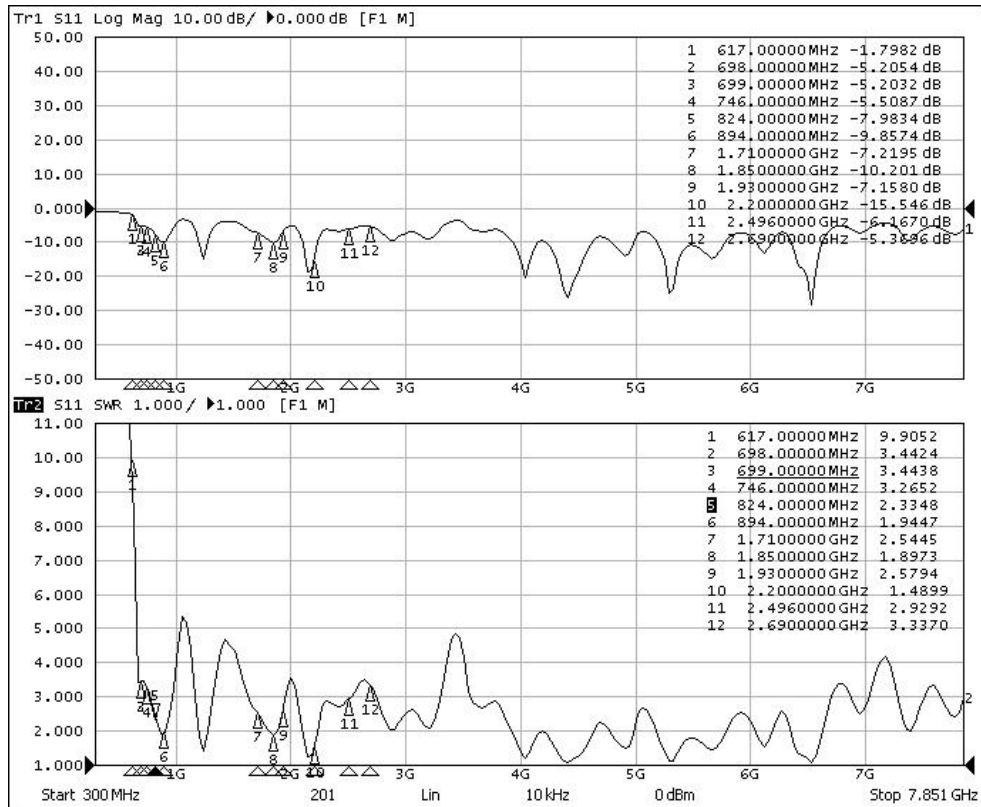
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2.2 Electrical Specification

Main0(Ant0) Antenna					
Frequency	B71(n71)	B12	B5	B66(B2,B4,n66)	B41(B7)
	617MHz ~ 698MHz	699MHz ~ 746MHz	824MHz ~ 894MHz	1710MHz ~ 2200MHz	2496MHz ~ 2690MHz
VSWR	≤ 10.9	≤ 4.4	≤ 3.3	≤ 3.5	≤ 4.3
Peak Gain[dBi]	+1.8	+2.1	+2.0	+3.5	+0.3
Avg Gain[dBi]	-8.0	-3.2	-2.7	-3.2	-3.0
Matching Value					
Directivity	Omni-directional				
Polarization	Linear				
Feed Impedance	50 Ohms				
Power Handling	2Watt				

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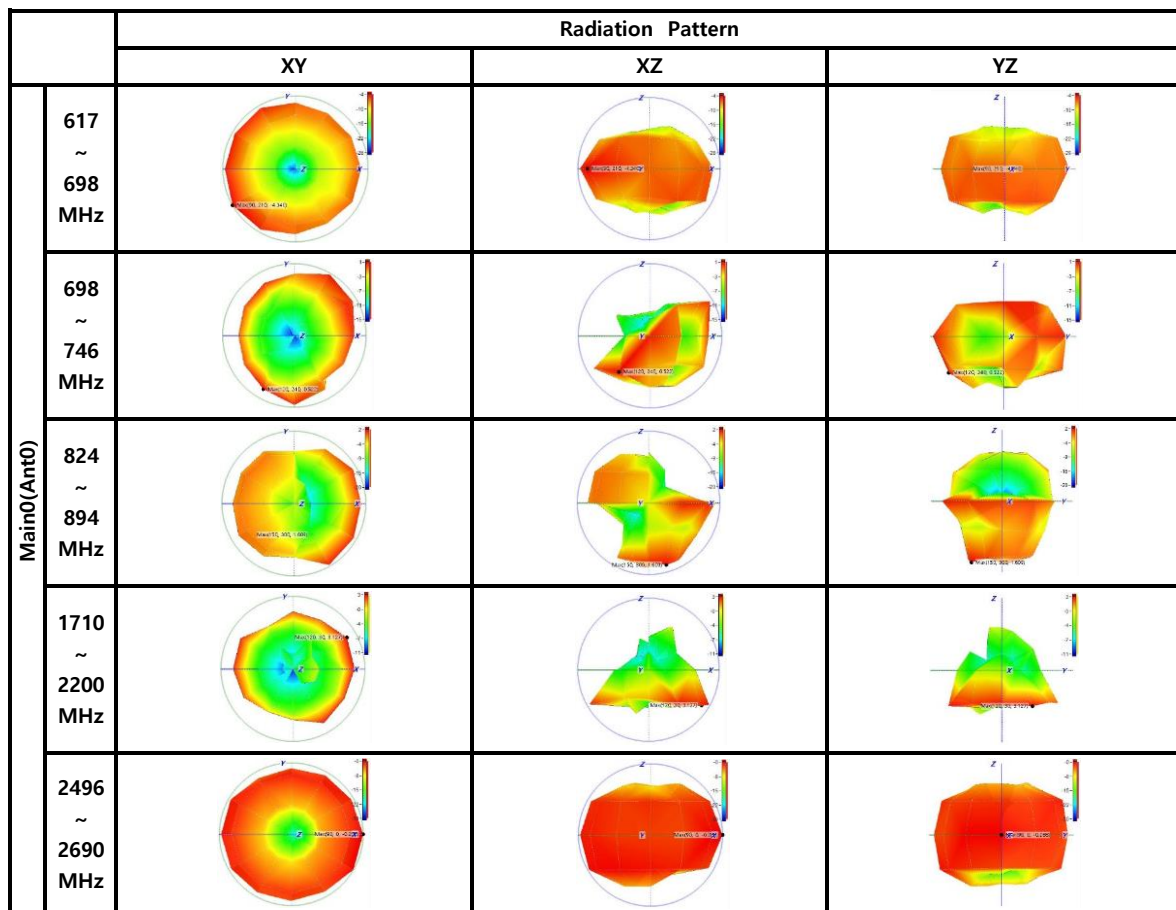
2.2.1 V.S.W.R



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2.2.2 3D Gain & Radiation Pattern

Frequency [MHz]	Peak Value		Minimum Value		Avg. Gain [dBi]	Efficiency [%]
	Value[dBi]	Degree	Value[dBi]	Degree		
617	-4.34	90 / 210	-27.843	0 / 150	-8.002	15.842
635	-1.614	120 / 30	-22.914	0 / 150	-5.879	25.826
652	1.754	90 / 270	-17.879	0 / 330	-2.61	54.823
663	1.107	120 / 210	-18.913	0 / 330	-3.146	48.459
681	0.011	120 / 210	-19.025	30 / 270	-3.854	41.175
698	0.45	120 / 240	-15.218	30 / 300	-3.29	46.881
699	0.522	120 / 240	-14.985	30 / 300	-3.225	47.591
729	2.079	120 / 120	-13.635	90 / 150	-1.615	68.945
746	2.105	120 / 120	-14.618	60 / 270	-1.331	73.607
824	1.609	150 / 300	-20.164	60 / 30	-2.663	54.162
849	1.998	150 / 300	-14.567	60 / 330	-1.624	68.796
869	1.501	90 / 30	-11.465	30 / 0	-1.75	66.836
894	0.668	90 / 30	-14.684	30 / 0	-2.71	53.574
1710	3.127	120 / 30	-10.793	30 / 270	-1.835	65.544
1780	3.524	120 / 150	-12.28	150 / 150	-0.473	69.679
1850	3.262	120 / 330	-19.578	60 / 210	-2.233	59.806
1883	2.954	120 / 330	-21.75	60 / 210	-2.7	53.706
1915	2.046	120 / 330	-15.911	180 / 240	-3.284	46.945
1930	1.932	120 / 330	-16.894	180 / 120	-3.134	48.596
1995	0.207	120 / 270	-22.941	0 / 60	-3.272	47.072
2110	3.094	120 / 330	-22.219	0 / 150	-1.452	71.575
2200	3.004	120 / 330	-25.128	0 / 210	-1.587	69.384
2496	-0.288	90 / 0	-29.877	180 / 30	-2.451	56.873
2574	-1.114	60 / 300	-27.053	0 / 90	-3.043	49.628
2690	0.276	60 / 30	-25.519	180 / 60	-2.946	50.74



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3. Mechanical Specification

3.1 Part List

PART LIST											SIGN	DRAWN	CHECK	APPROVE			
PRODUCT NAME		CG890 Main0(ANT0)										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-CAB0040B-IR	CABLE ASS'Y	MHF4L / Ø1.13	1	FMC	Main Ant0		
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

