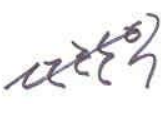
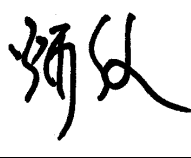


Approval Sheet

Products	Dielectric Chip Antenna		
Customer	MOVON		
Customer CODE			
Supplier	PARTRON		
Supplier CODE	ACS2450FBAMF2		
Pantech	By designed	By checked	By approved
PARTRON	By designed	By checked	By approved
			
	03/10	03/10	03/10

2006 . 03. 10

P A R T R O N

**33, BANWOL-RI, TAEAN-EUP,HWASEONG-SI,
KYOONGKI-DO, KOREA**

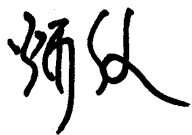
SPECIFICATION

MODEL : ACS2450FBAMF2

DIELECTRIC CHIP ANTENNA

P A R T R O N

33,Banwol-Ri,Taeon-Eup,Hwaseong-Si,
Gyeonggi-Do,Korea,445-973

By designed	By checked	By approved
		
03/10	03/10	03/10

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2. Electrical Characteristics

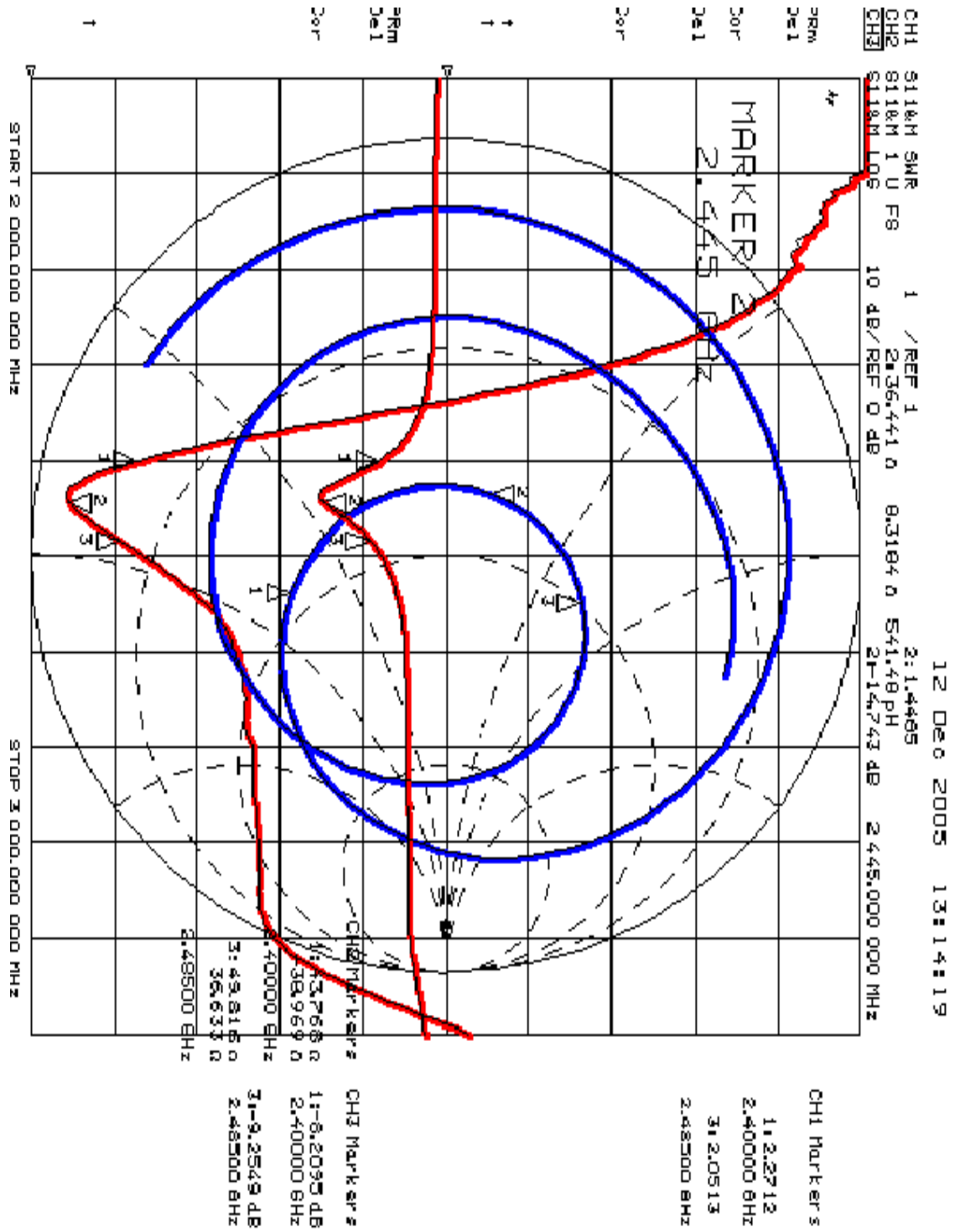
2.1 Set Condition

ITEM				SPEC
Frequency Range [MHz]				2400 ~ 2485
VSWR [Max]				2.5 : 1
Bandwidth [Mhz]				110
Polarization				Linear
Gain[dBi]	Azimuth	Theta	Peak	-0.49
			Average	-4.00
		Phi	Peak	-2.96
			Average	-8.18
	Elevation 1	Theta	Peak	-7.37
			Average	-10.94
		Phi	Peak	0.87
			Average	-2.50
	Elevation 2	Theta	Peak	-8.31
			Average	-13.17
		Phi	Peak	1.79
			Average	-2.21

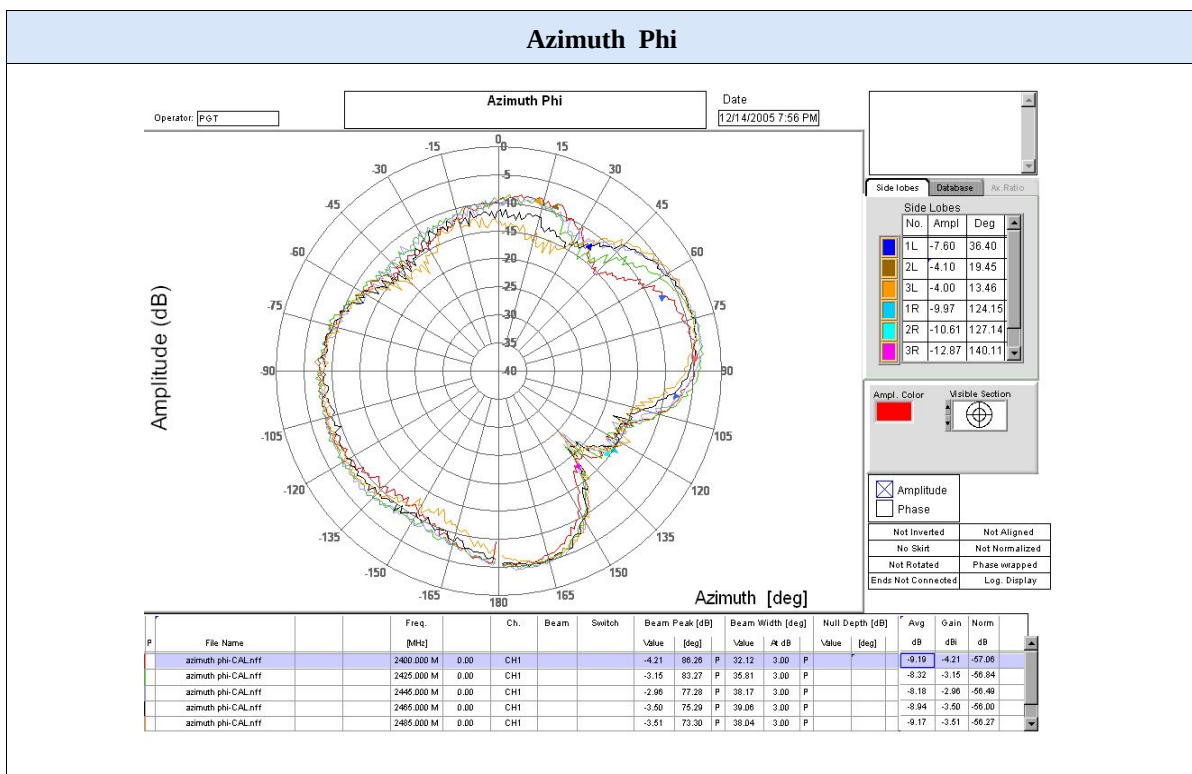
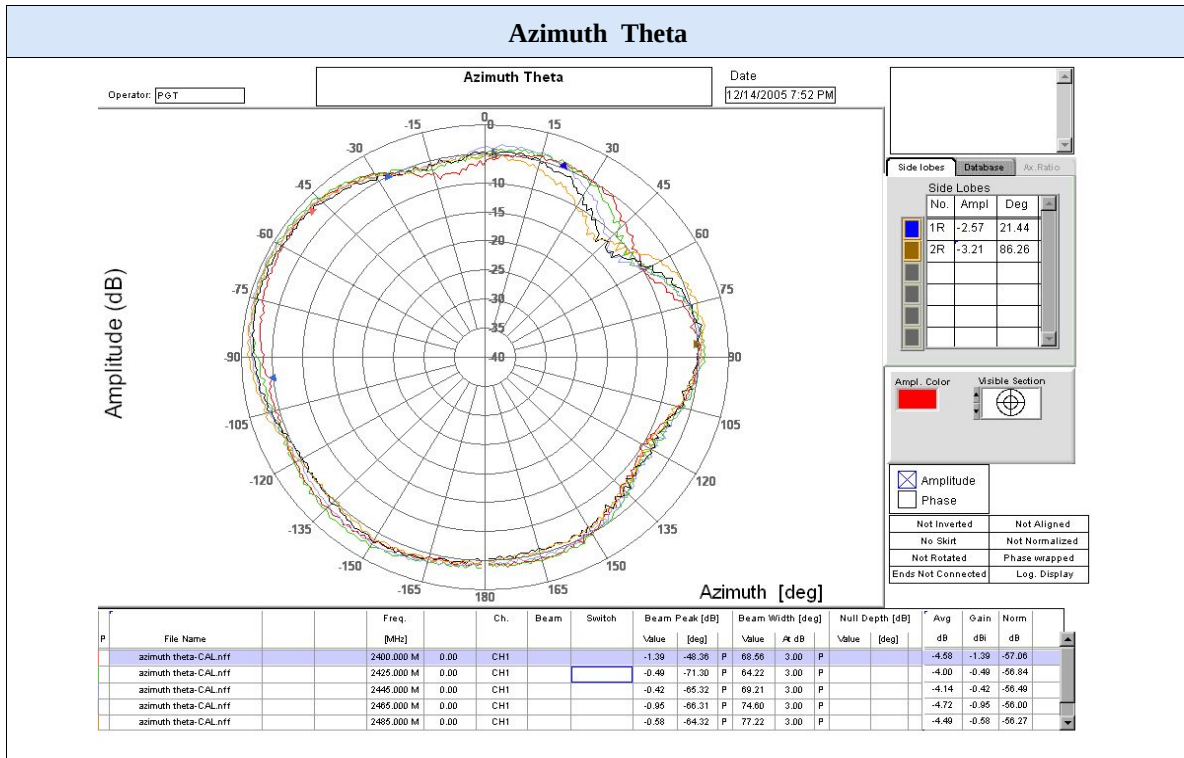
2.2 Test Fixture Condition

ITEM	SPEC
Frequency Range [MHz]	
SWR [Max]	
Bandwidth [MHz]	

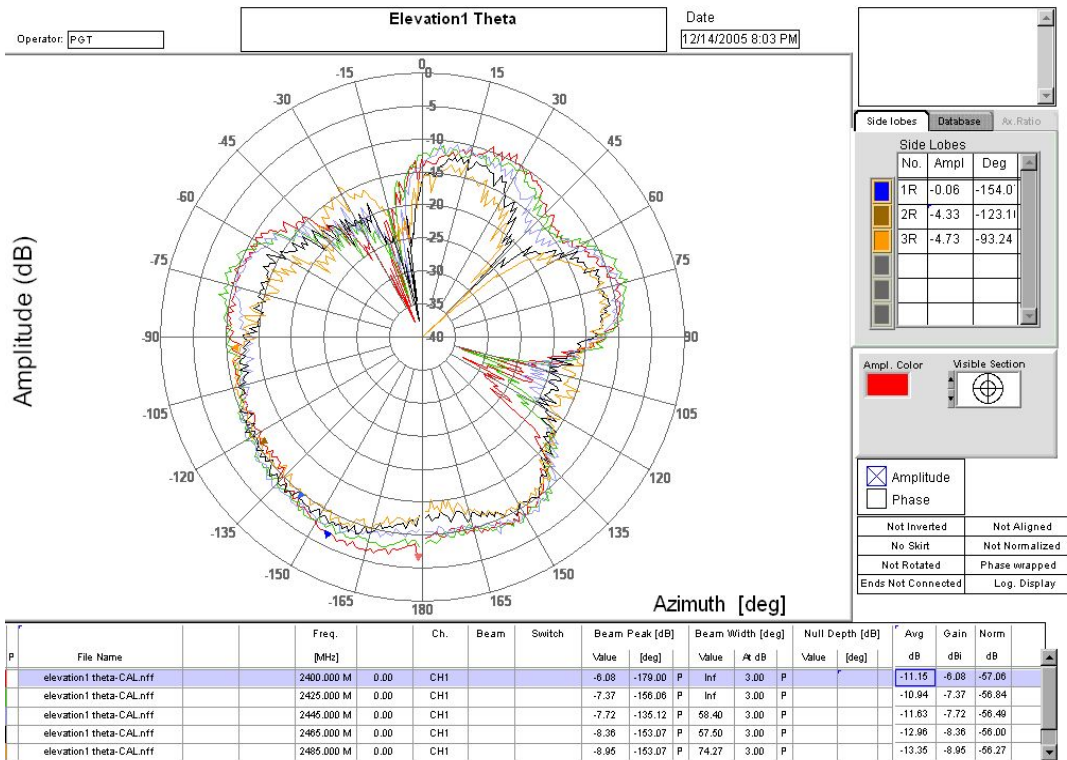
2.3 Graph of Set Condition



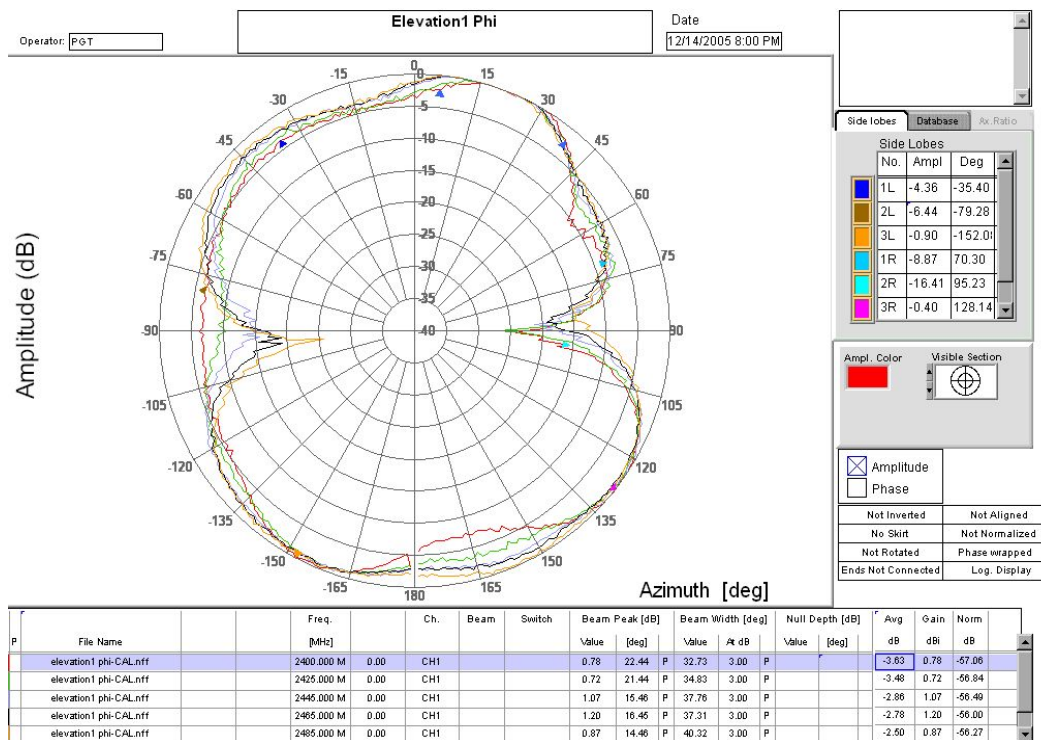
2.5 Radiation Pattern



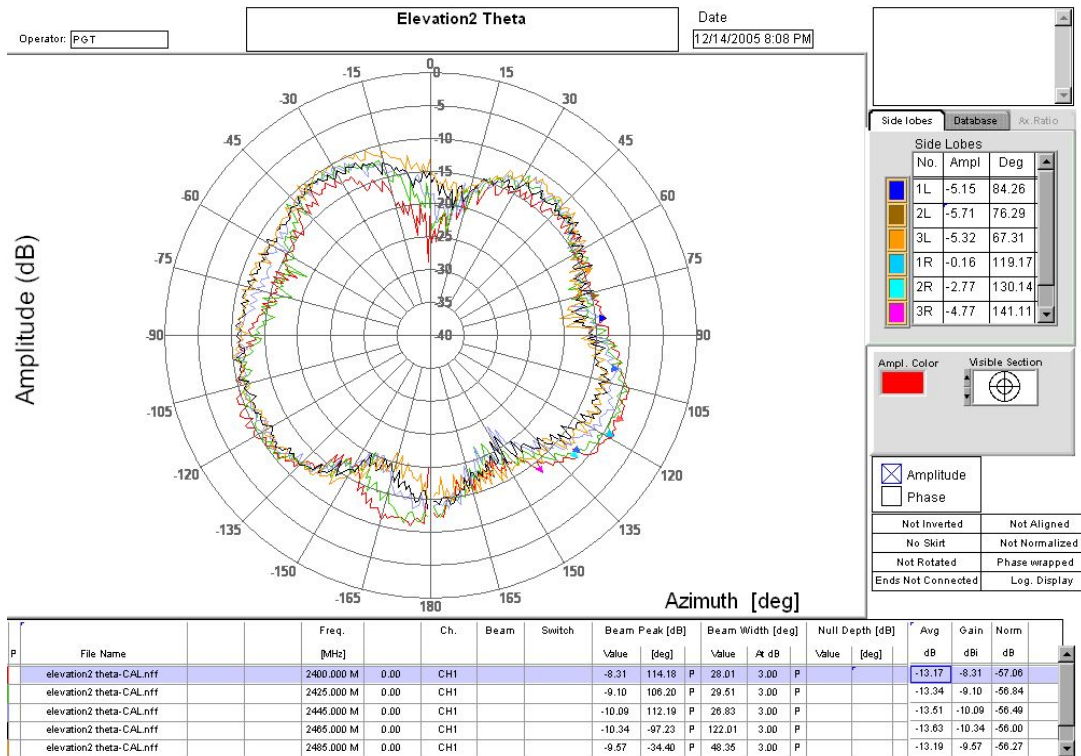
Elevation1 Theta



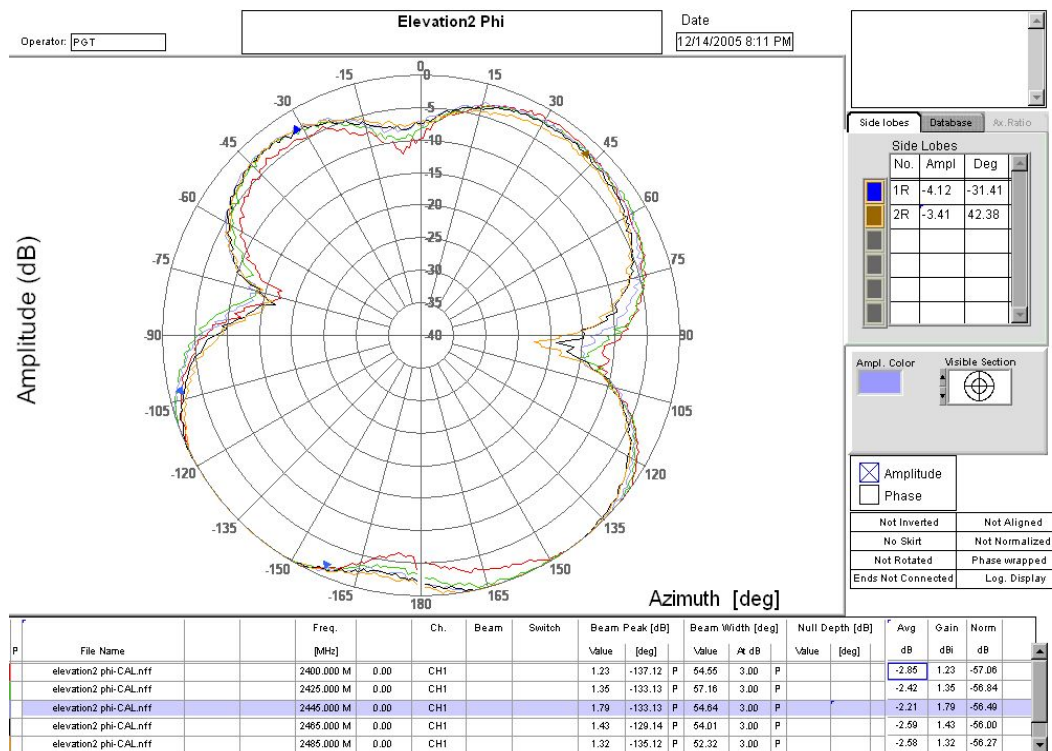
Elevation1 Phi



Elevation2 Theta



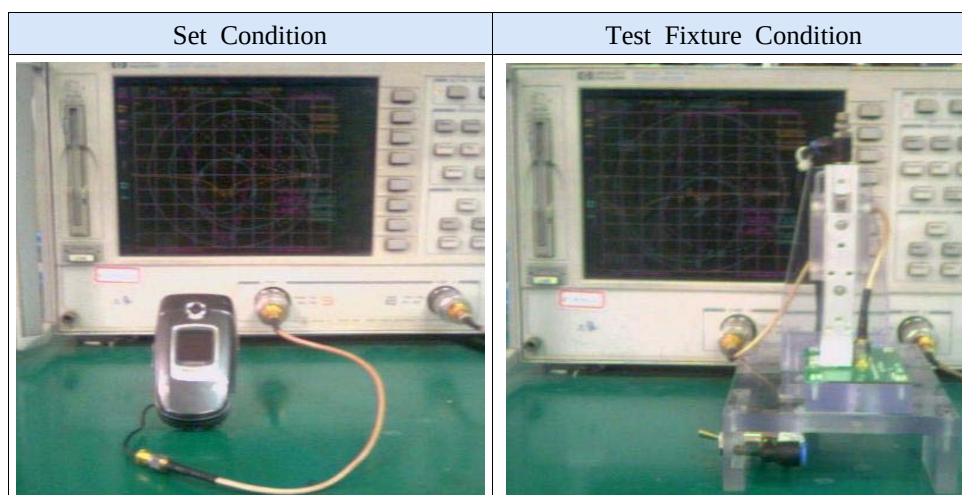
Elevation2 Phi



4. Measurement Process

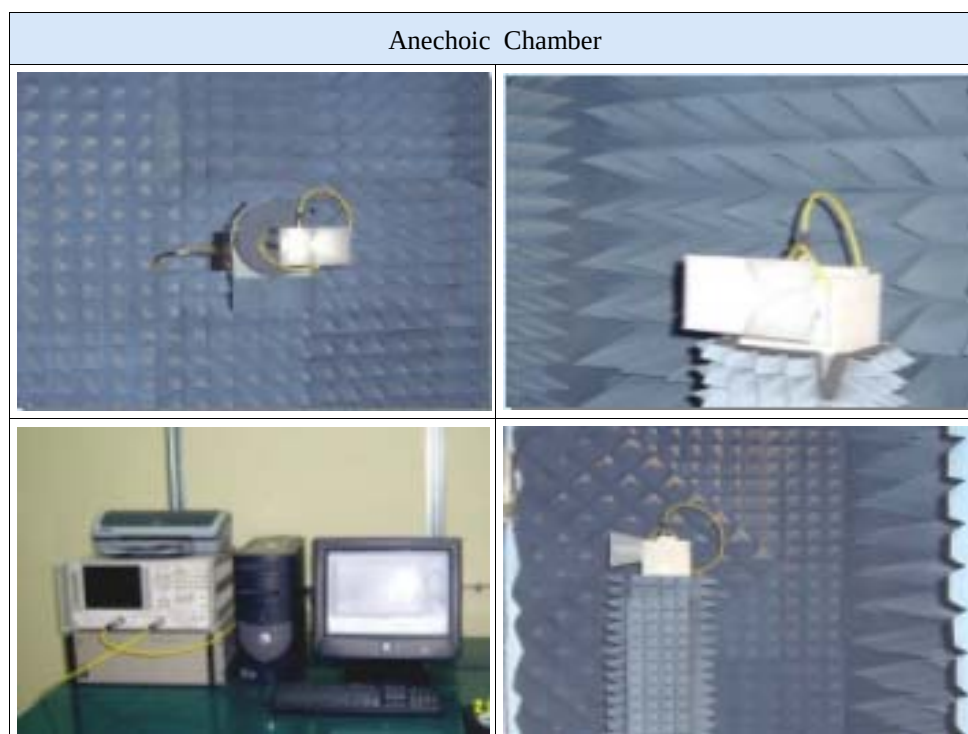
4.1 SWR/Returnloss

The SWR/Returnloss is measured by Network Analyzer



4.2 Gain

The Antenna Gain is measured using the set at Anechoic Chamber



5. Reliability Condition

5.1 ENVIRONMENT TEST

ITEM	TEST CONDITION	LIMIT
High Temperature Resistance	+85℃ ± 3℃, 120hr ± 2hr	*After the test, specimen would be kept at 25℃ ± 5℃ for 1 hours *specimen sheet meet the electrical specification
Low Temperature Resistance	-40℃ ± 3℃, 120hr ± 2hr	
Humidity Resistance	+60 ± 3℃, RH90~95%, 120hr ± 2hr	

5.2 Thermal Shock Test, Reflow Test

ITEM	TEST CONDITION	LIMIT
Thermal Shock	-40℃ ± 3℃ (2Hr) ↔ +85℃ ± 3℃ (2Hr) cycle : 15cycle recovery time : with in 5min	SAME as 5-1
Reflow	Pre Heating : 140 ± 10℃, 60 ~ 120 sec peak Heating : 240℃, 10sec Max	

5.3 Mechanical Test

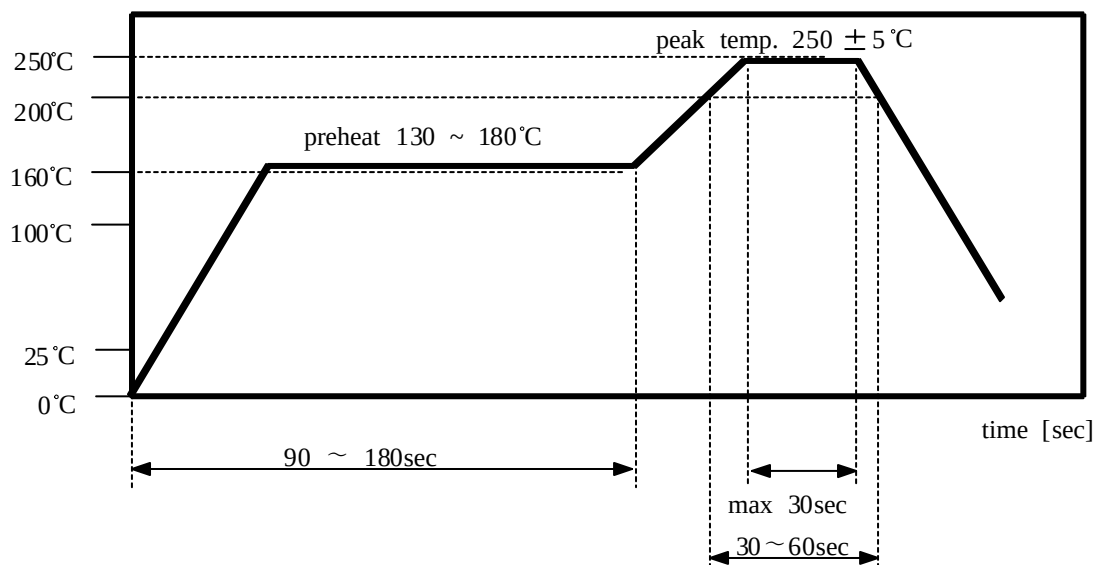
ITEM	TEST CONDITION	LIMIT
Random Vibration	Frequency 10~500Hz - 10 × 9.8m/s ² (G) Sweep time 15min, X.Y.Z each 5 times	*After the test, specimen sheet meet the electrical specification
Drop	Height 120cm, 12 times Height 152cm, 19 times	

6. Reliability Test Result

※ Appendix #1

7. Soldering Condon

7.1 Reflow Soldering



7.2 Manual Soldering

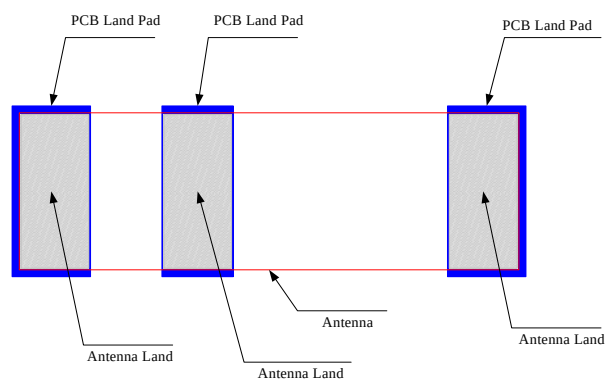
Pre-heating Temperature : 120°C , 60 ~ 300 sec.

Soldering Temperature : 340°C ± 5°C , 5sec max per each terminal

7.3 PCB Pattern Design

The soldering pad of PCB is about 0.1 mm larger than land pattern of antenna.

This figure shows the shape of PCB pad



8. Structure and Material

8.1 Materialization

The structure is materialized printing Ag paste at the dielectric block

8.2 Structure

8.3 Material

Items	Material	The manufacturer
Dielectric Block	POWDER	Fuji
PATTERN	Ag Paste	METECH

9. Attention

9.1 Temperature Condition

	Range of Temperature	unit
Application	-40 ~ +85	℃
Keeping	-40 ~ +85	℃

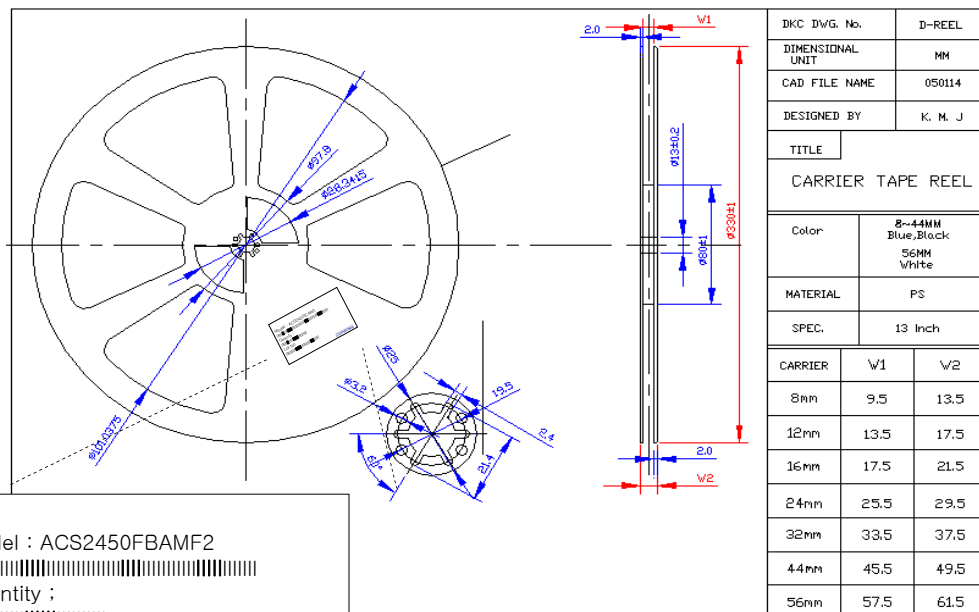
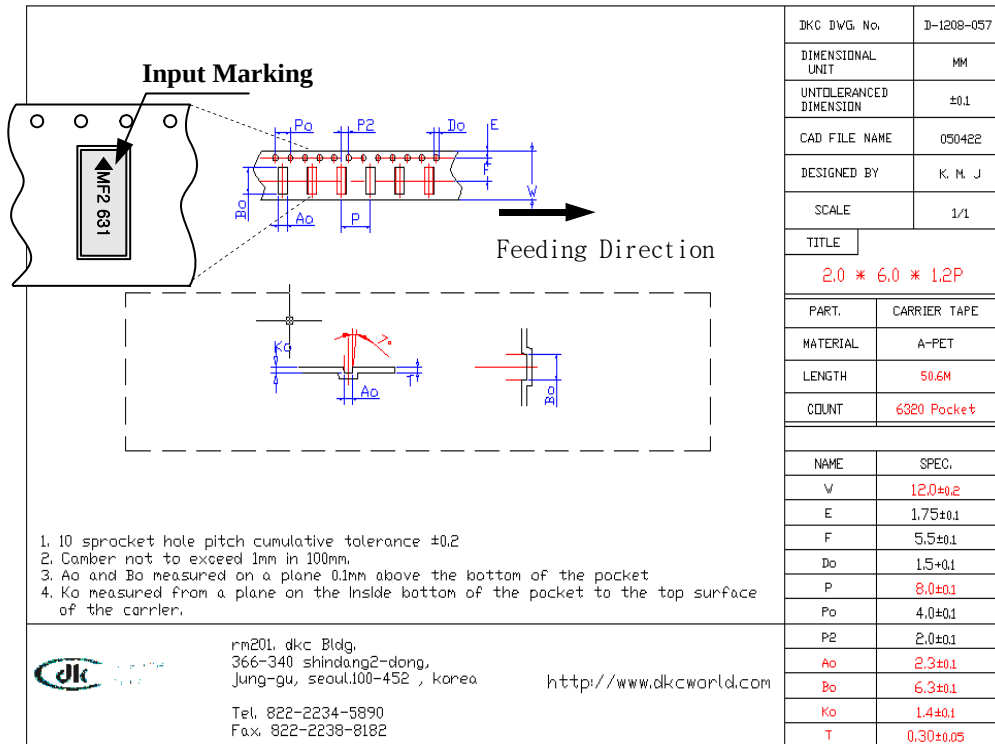
9.2 MSL LEVEL 1 (JEDEC J-STD-020C)

	Floor Life		Soak Requirements	
	Time	Conditions	Time	Conditions
1	Unlimited	= < 30℃/85%RH	168+5/-0	= < 85℃/85%RH

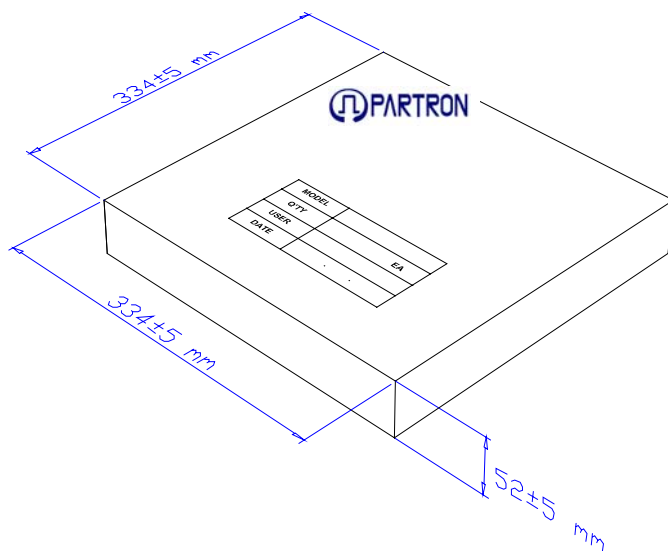
10. Packing

10.1 Carrier/Reel

Material	Surface Resistance	Method
A-PET	Typical $10^8 \Omega$	Heat Press



10.2 Box Specification



Material : SK/S/K-B
Cardboard box

