

PAS2339MF4G-110-18M

Engineering Specification

1. Typical Electrical Properties

Symbol	Parameter	Test Condition	Limits			Unit	
			Min	Fc	Max		
f_i	Input Frequency	Note: (1)	2320	2332.5	2345	MHz	
G_{AE}	Antenna Passive Gain (G_{AE} is measured over the entire 25 MHz BW)	Elevation angle 90°	Average	5.71	5.59	4.67	dBic
			Max	5.78	5.69	4.87	
			Min	5.63	5.50	4.51	
			Ripl	0.15	0.19	0.36	
		Elevation angle 80°	Average	5.87	5.87	5.06	
			Max	6.07	6.01	5.20	
			Min	5.58	5.72	4.85	
			Ripl	0.49	0.29	0.35	
		Elevation angle 70°	Average	5.39	5.32	4.56	
			Max	5.73	5.66	4.95	
			Min	5.03	5.05	4.31	
			Ripl	0.70	0.61	0.64	
		Elevation angle 60°	Average	4.76	4.63	3.86	
			Max	5.20	5.04	4.36	
			Min	4.37	4.19	3.61	
			Ripl	0.83	0.85	0.75	
		Elevation angle 50°	Average	4.03	3.92	3.18	
			Max	4.60	4.44	3.89	
			Min	3.53	3.50	2.70	
			Ripl	1.07	0.94	1.19	
		Elevation angle 40°	Average	2.71	2.59	1.83	
			Max	3.16	3.12	2.53	
			Min	2.17	2.21	1.42	
			Ripl	0.99	0.91	1.11	
Elevation angle 30°	Average	1.44	1.34	0.69			
	Max	2.34	2.15	1.63			
	Min	0.65	0.70	0.10			
	Ripl	1.69	1.45	1.53			
Elevation angle 25°	Average	0.82	0.71	0.04			
	Max	1.84	1.67	1.25			
	Min	-0.04	0.05	-0.90			
	Ripl	1.88	1.62	2.15			
Elevation angle 20°	Average	0.19	0.08	-0.62			
	Max	1.33	1.18	0.86			
	Min	-0.73	-0.61	-1.90			
	Ripl	2.06	1.79	2.76			

Note: (1) Patch Antenna is Located on 1 m Ground

PAS2339MF4G-110-18M, G : Green parts (RoHS compliance)

-110 are the code of project number, -18M show of appendix

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±
 ANGLES=± HOLEDIA=±



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SCALE : UNIT : mm

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DESIGNED BY : 鄭大福 APPROVED BY : 曾源標

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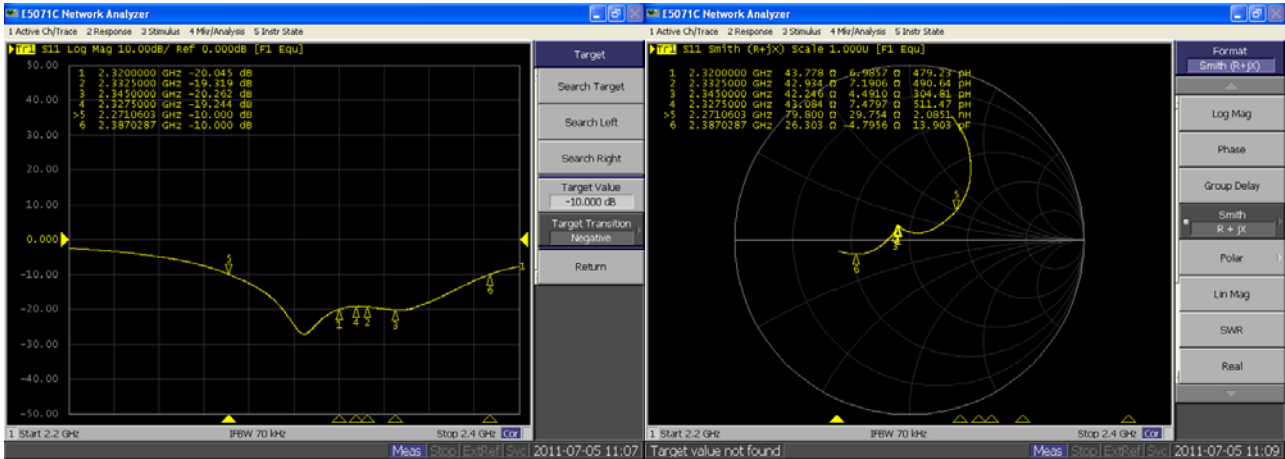
TITLE : PAS2339MF4G-110-18M
 Engineering Specification

DOCUMENT NO. **ENS000049480**

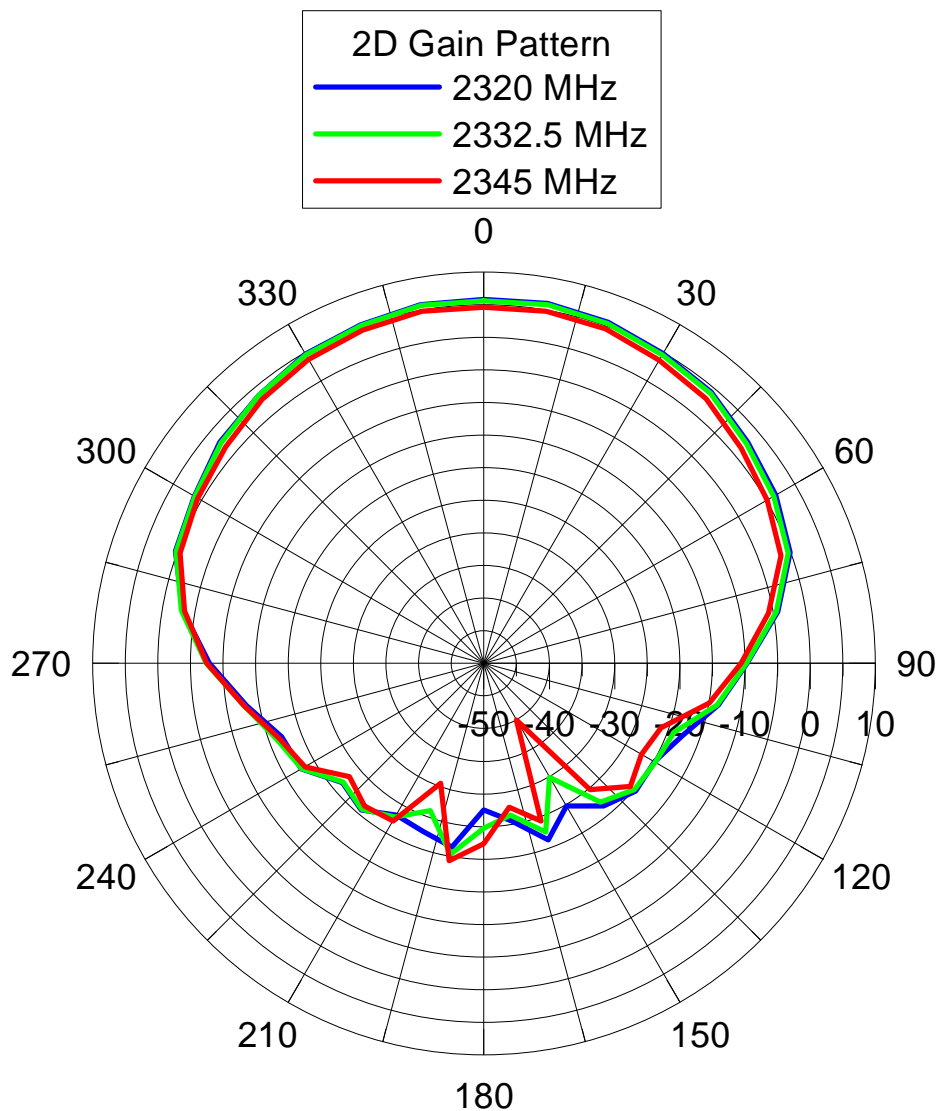
PAGE REV.
 P0

2. Patch Antenna Performance and Characteristic Data on 1 m Ground

2.1 Smith Chart/S₁₁



2.2 2D Circular Polarization Gain Pattern: LHCP (Unit : dBic)



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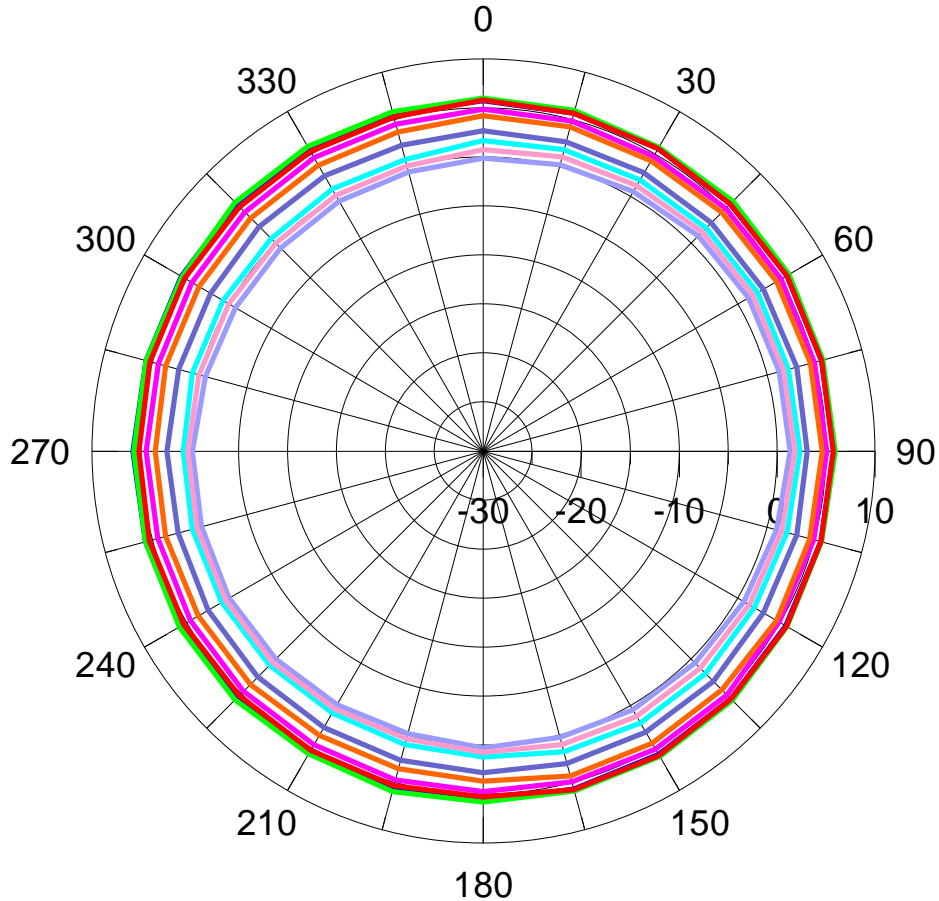
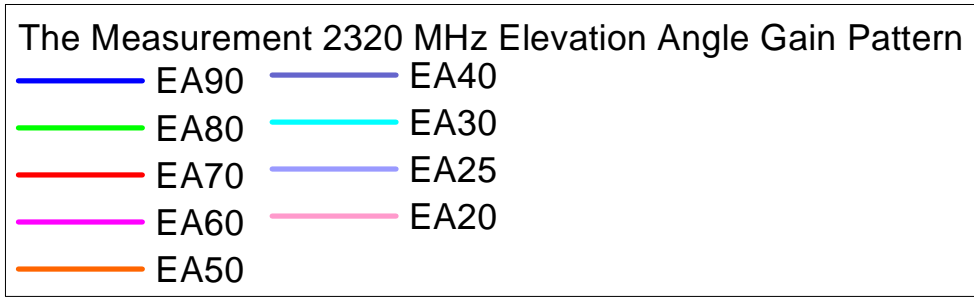
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 P0

2.3 Elevation Angle Gain Pattern (Unit : dBic)



2320 MHz	Average	Max	Min	Ripl
Elevation Angle 90°	5.71	5.78	5.63	0.15
Elevation Angle 80°	5.87	6.07	5.58	0.49
Elevation Angle 70°	5.39	5.73	5.03	0.70
Elevation Angle 60°	4.76	5.20	4.37	0.83
Elevation Angle 50°	4.03	4.60	3.53	1.07
Elevation Angle 40°	2.71	3.16	2.17	0.99
Elevation Angle 30°	1.44	2.34	0.65	1.69
Elevation Angle 25°	0.82	1.84	-0.04	1.88
Elevation Angle 20°	0.19	1.33	-0.73	2.06

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 ANGLES=± HOLEDIA=±

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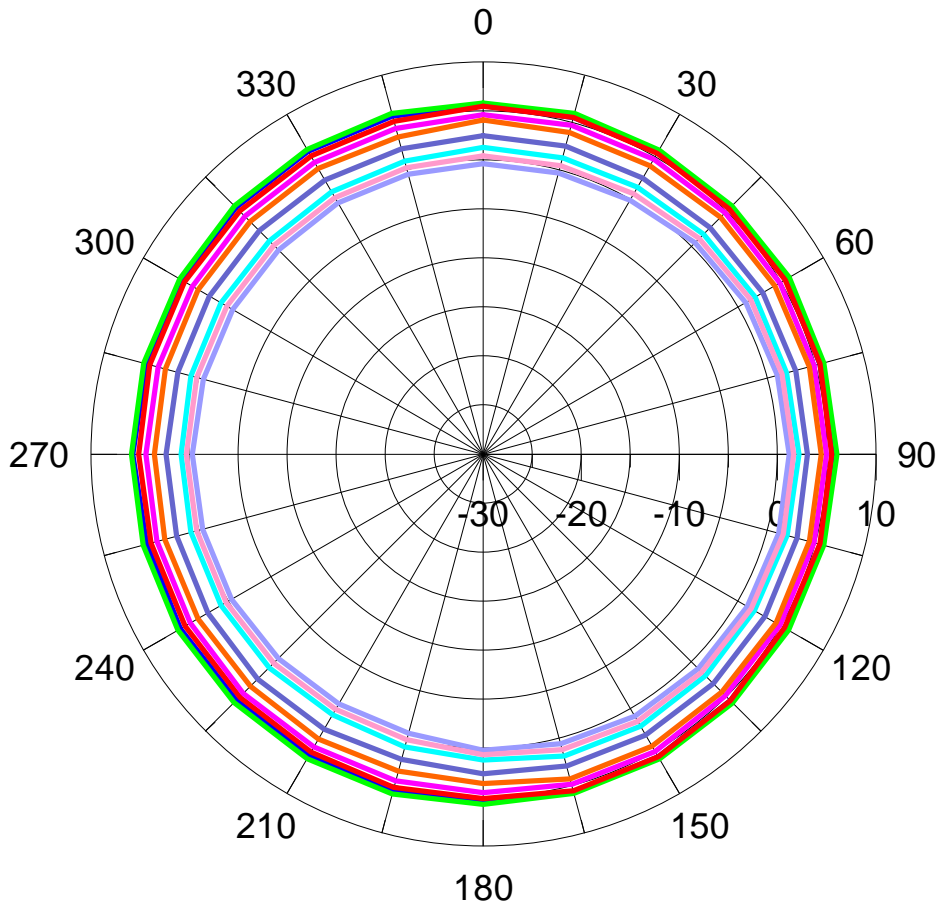
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The Measurement 2332.5 MHz Elevation Angle Gain Pattern

- EA90
- EA80
- EA70
- EA60
- EA50
- EA40
- EA30
- EA25
- EA20



2332.5 MHz	Average	Max	Min	Ripl
Elevation Angle 90°	5.59	5.69	5.50	0.19
Elevation Angle 80°	5.87	6.01	5.72	0.29
Elevation Angle 70°	5.32	5.66	5.05	0.61
Elevation Angle 60°	4.63	5.04	4.19	0.85
Elevation Angle 50°	3.92	4.44	3.50	0.94
Elevation Angle 40°	2.59	3.12	2.21	0.91
Elevation Angle 30°	1.34	2.15	0.70	1.45
Elevation Angle 25°	0.71	1.67	0.05	1.62
Elevation Angle 20°	0.08	1.18	-0.61	1.79

UNLESS OTHER SPECIFIED TOLERANCES ON :

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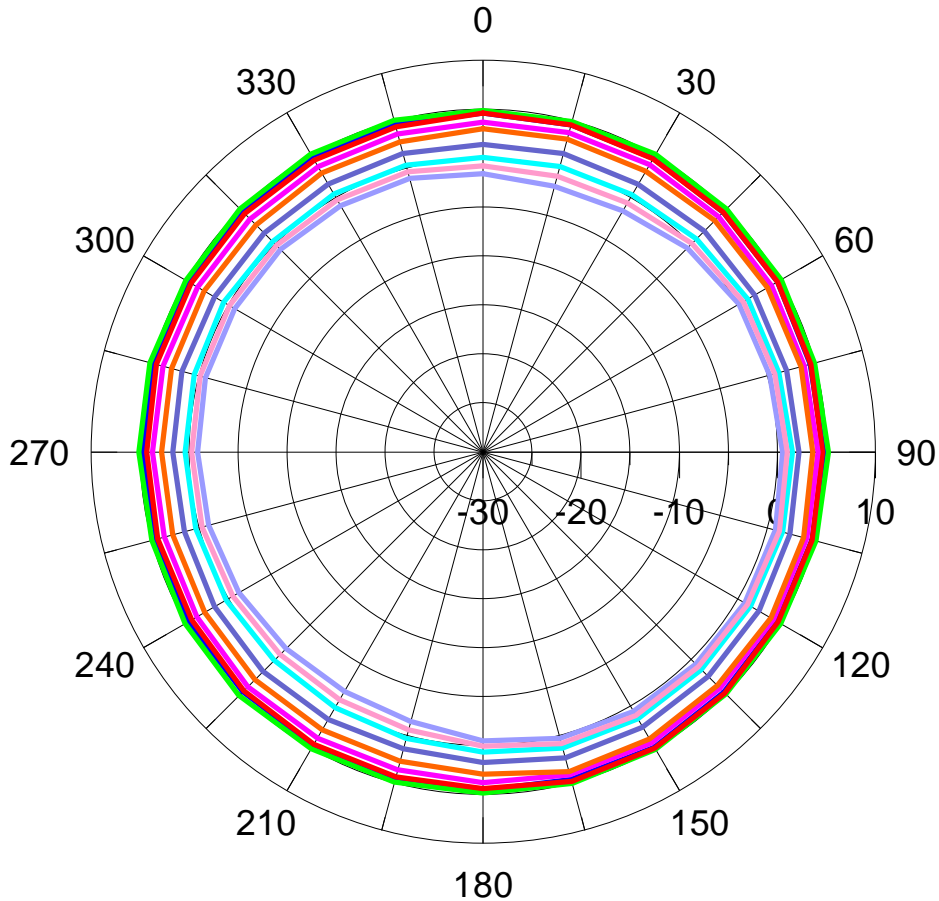
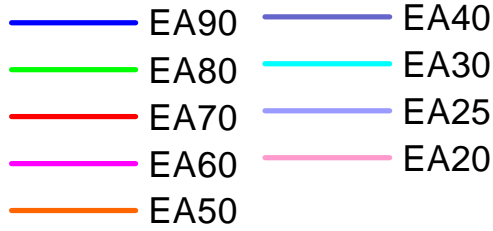
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The Measurement 2345 MHz Elevation Angle Gain Pattern



2345 MHz	Average	Max	Min	Ripl
Elevation Angle 90°	4.67	4.87	4.51	0.36
Elevation Angle 80°	5.06	5.20	4.85	0.35
Elevation Angle 70°	4.56	4.95	4.31	0.64
Elevation Angle 60°	3.86	4.36	3.61	0.75
Elevation Angle 50°	3.18	3.89	2.70	1.19
Elevation Angle 40°	1.83	2.53	1.42	1.11
Elevation Angle 30°	0.69	1.63	0.10	1.53
Elevation Angle 25°	0.04	1.25	-0.90	2.15
Elevation Angle 20°	-0.62	0.86	-1.90	2.76

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=±	X.X=±	X.XX=±
ANGLES=±	HOLEDIA=±	



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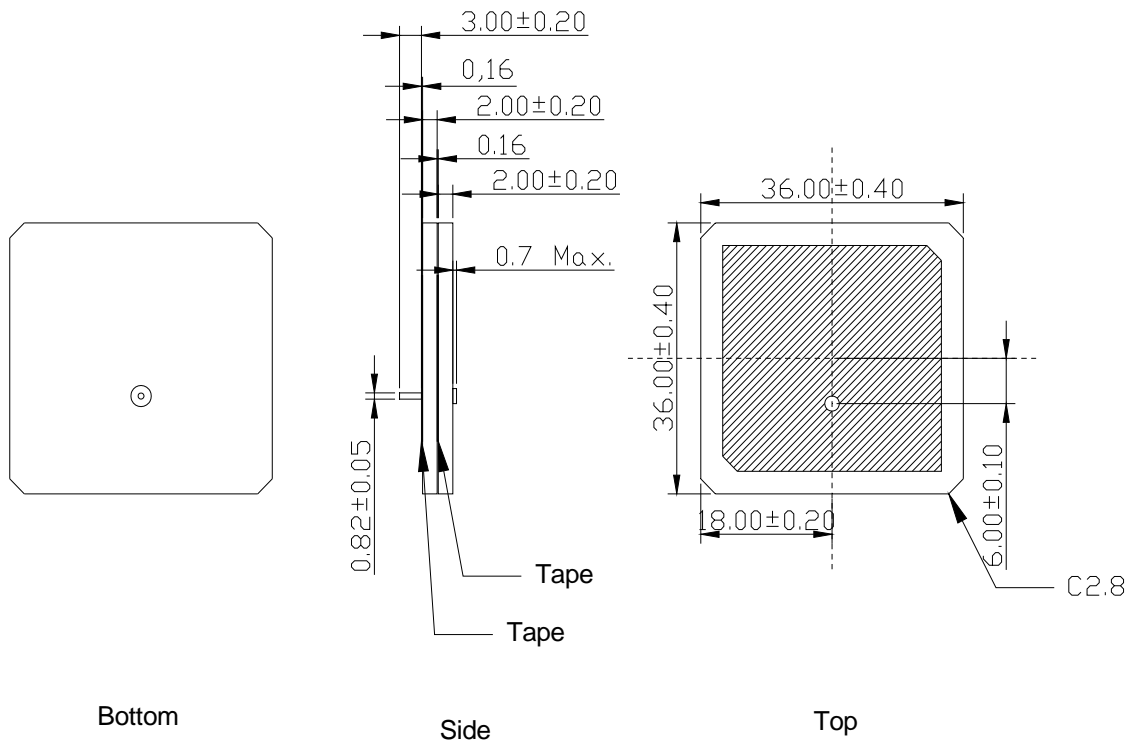
2.4 Antenna on 1 m Ground:



3. Typical Electrical Properties

Characteristics	Specification	Unit	Conditions
Center Frequency	2364.5±10	MHz	By Test Ground Plane
Polarization	LHCP		
Impedance	(45.93±8)+j(9.22±8)	dB	By Test Ground Plane
Frequency Temperature Coefficient	0±20	ppm/°C	-40°C to +85°C

4. Dimension



Unit : mm

UNLESS OTHER SPECIFIED TOLERANCES ON :

 $X = \pm$ $X.X = \pm$ $X.XX = \pm$

ANGLES = ± HOLEDIA = ±

SCALE : UNIT : mm

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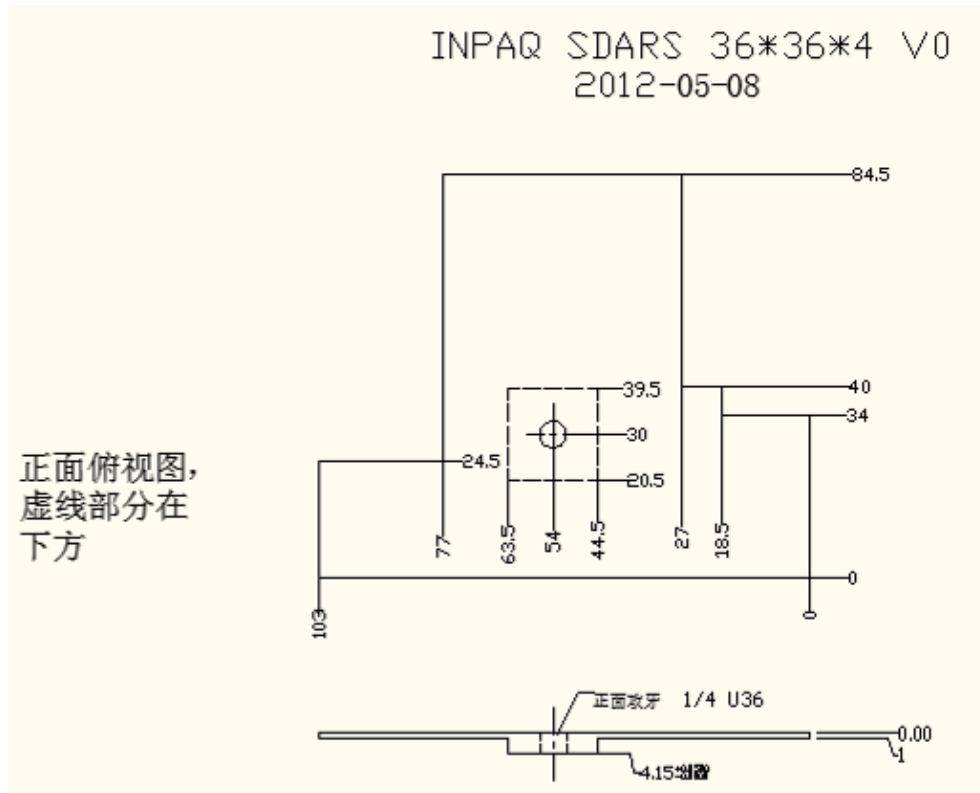
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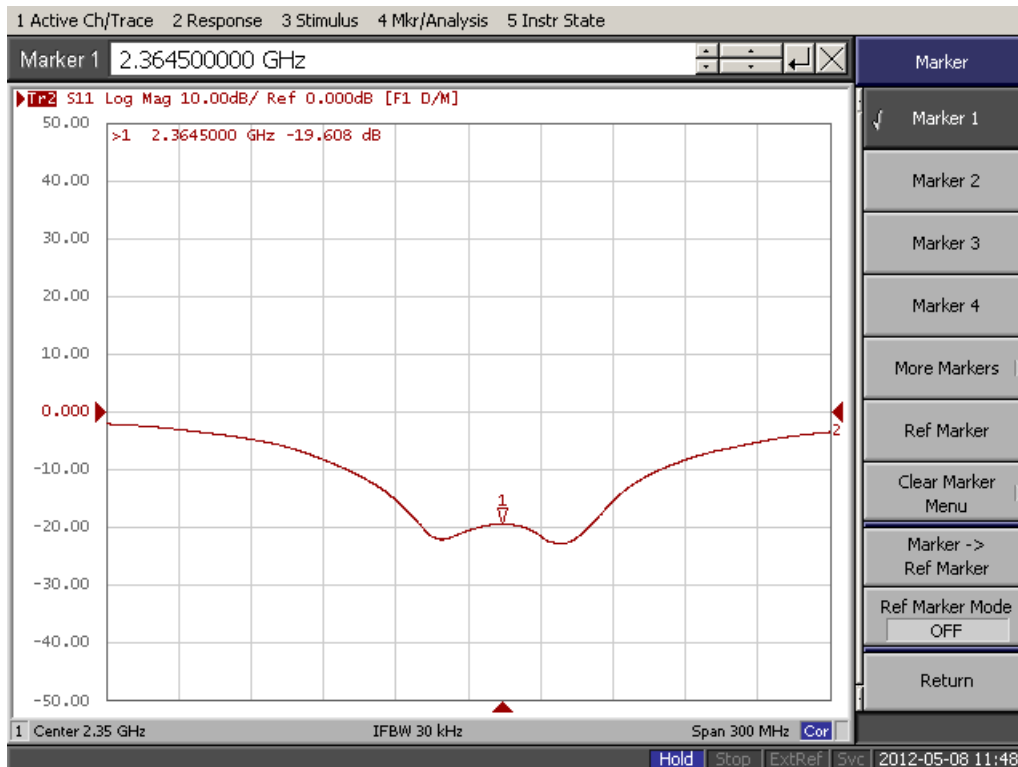
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5. The Test Ground Plane



6. Return Loss Characteristics



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 ANGLES=± HOLEDIA=±

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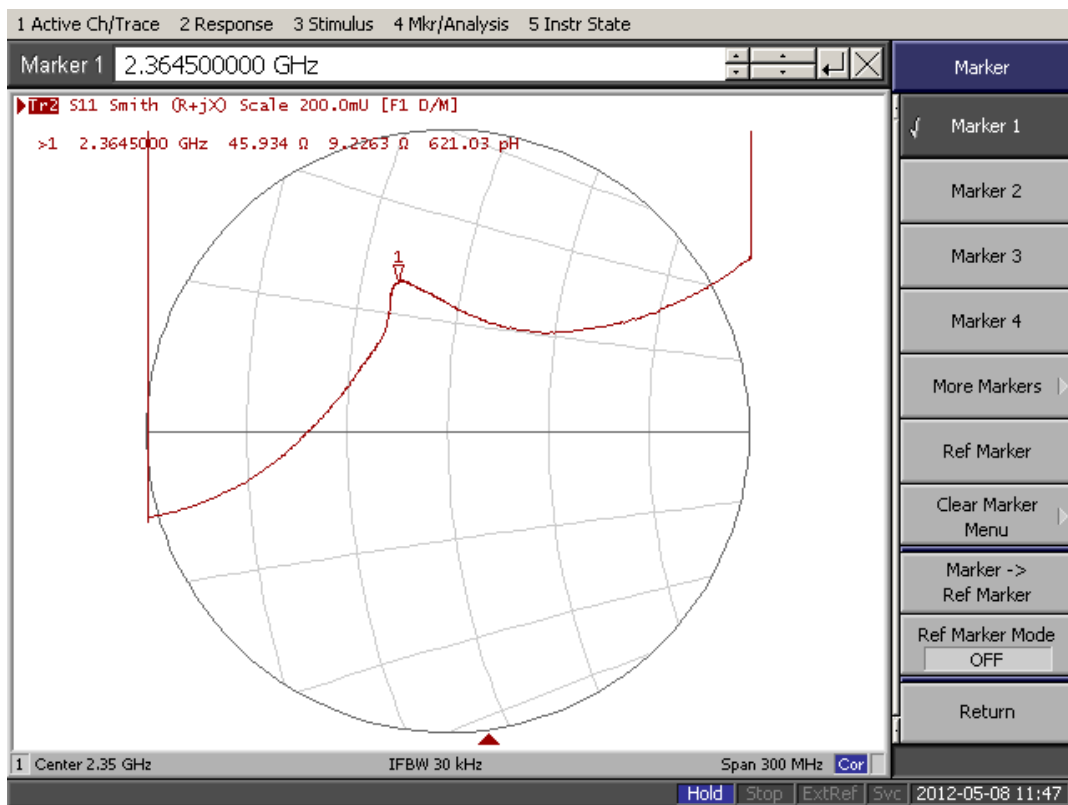
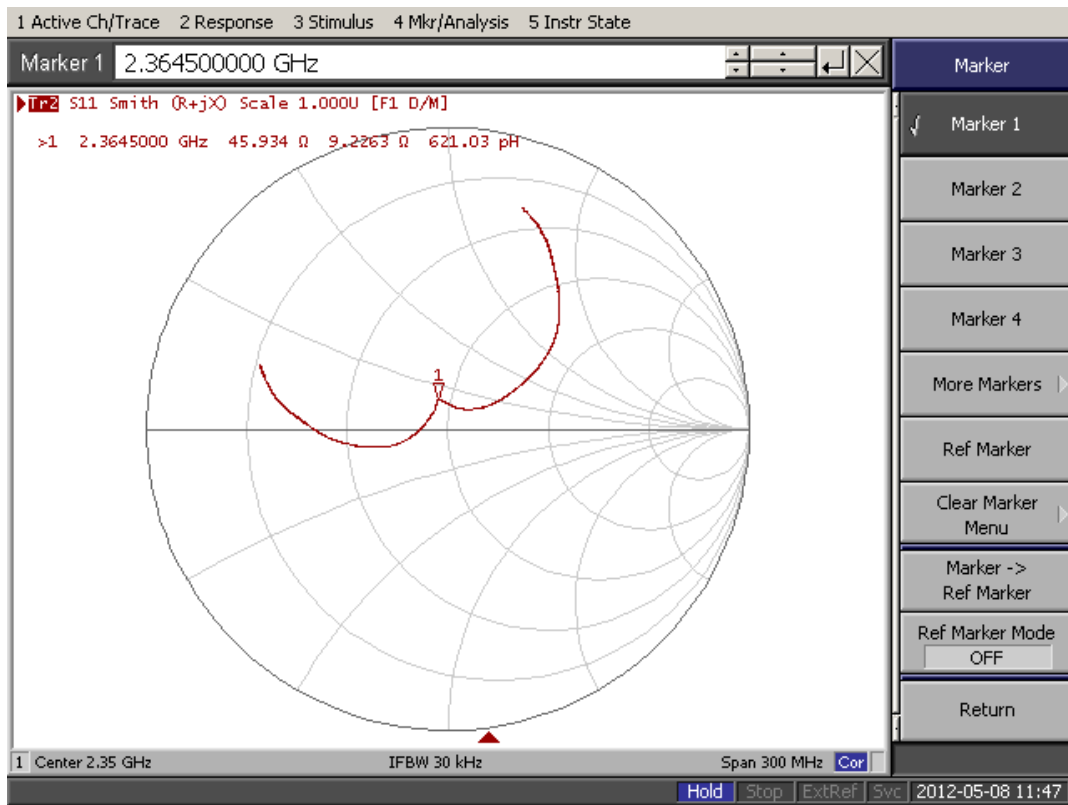
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7. Measured Input Impedance on a Smith Chart



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 ANGLES=± HOLEDIA=±

SCALE : UNIT : mm

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8. Explanation of Appendix

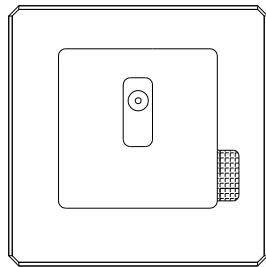
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 (1) (2) (3)

(1) Pin = 3 mm

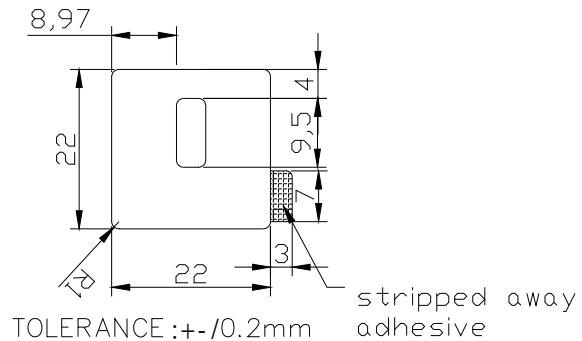
(2) Adhesive Tape for Customer **8** 22x22mm

Adhesive Transfer Tape Specification

- 2.1 TAPE : Nitto 5000NS 22x22x0.16mm
- 2.2 Thickness : 0.16 mm
- 2.3 Release Liner : 0.1mm (typ.) printed paper or paper
- 2.4 Dimension : mm



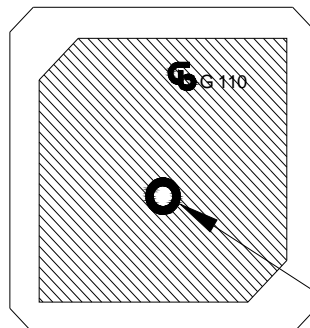
Unit:mm



(3) Option appendix **M** Marking

Marking configuration

- 3.1 Logo **G** for INPAQ Logo
- 3.2 Type **G** for green product antenna
- 3.3 Three digits are the code of our project number **110**



provide solder ring

UNLESS OTHER SPECIFIED TOLERANCES ON :	
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ANGLES=±	X.XX=±
	HOLEDIA=±
SCALE :	UNIT : mm
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			P0