

PAGS-I4F2P2G-100-1Z

Engineering Specification

1. Typical Electrical Properties

SDARS:

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	6.34	6.38	6.16	dBic
			Max	6.58	6.83	6.47	
			Min	5.97	6.00	5.88	
			Ripl	0.61	0.83	0.59	
		Elevation angle 80°	Average	6.56	6.88	6.67	
			Max	6.80	7.20	7.01	
			Min	6.31	6.59	6.39	
			Ripl	0.49	0.61	0.62	
		Elevation angle 70°	Average	5.96	6.13	6.01	
			Max	6.53	6.64	6.45	
			Min	5.40	5.62	5.57	
			Ripl	1.13	1.02	0.88	
		Elevation angle 60°	Average	5.50	5.62	5.51	
			Max	6.02	6.04	5.90	
			Min	4.99	5.28	5.02	
			Ripl	1.03	0.76	0.88	
		Elevation angle 50°	Average	4.48	4.66	4.50	
			Max	5.26	5.28	5.15	
			Min	3.81	3.98	3.81	
			Ripl	1.45	1.30	1.34	
		Elevation angle 40°	Average	3.34	3.40	3.23	
			Max	4.34	4.31	4.19	
			Min	2.17	2.32	2.50	
			Ripl	2.17	1.99	1.69	
Elevation angle 30°	Average	1.76	1.81	1.67			
	Max	3.02	3.20	3.15			
	Min	0.39	0.18	0.48			
	Ripl	2.63	3.02	2.67			
Elevation angle 25°	Average	1.10	1.19	1.04			
	Max	2.56	2.79	2.82			
	Min	-0.64	-0.61	-0.37			
	Ripl	3.20	3.39	3.19			
Elevation angle 20°	Average	0.44	0.56	0.40			
	Max	2.10	2.37	2.49			
	Min	-1.66	-1.39	-1.22			
	Ripl	3.76	3.76	3.71			

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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 Engineering Specification

DOCUMENT NO. ENS000057740 PAGE REV. P0

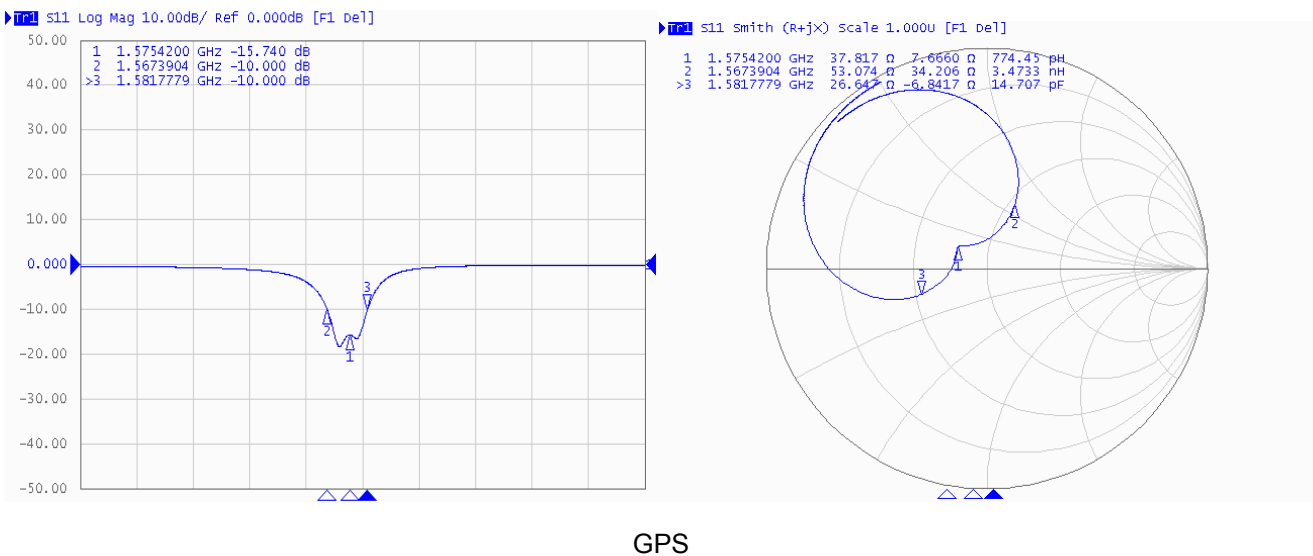
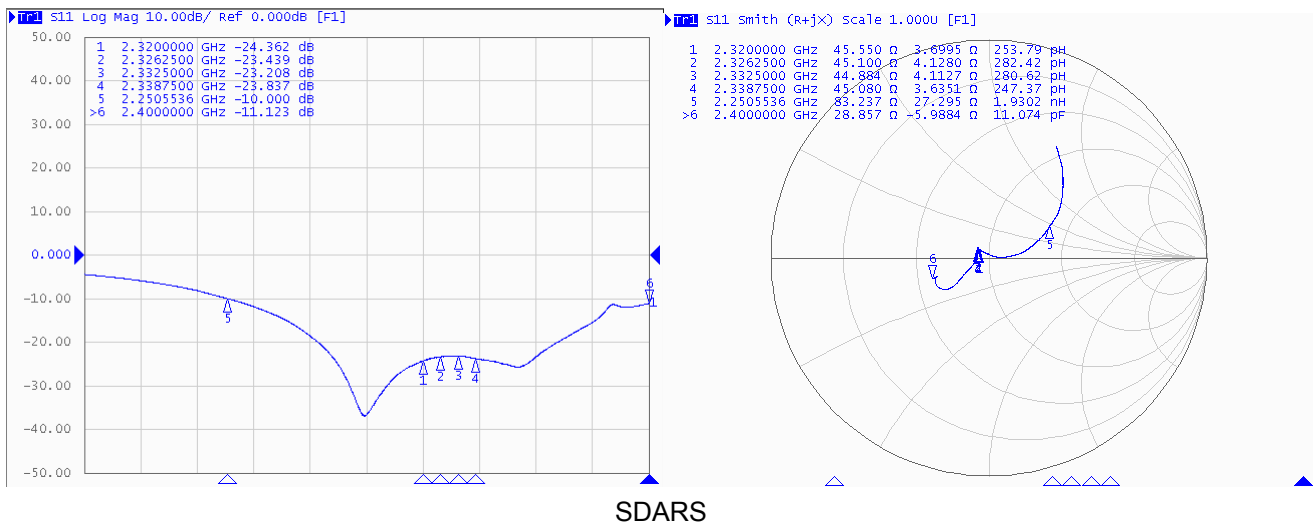
GPS:

Characteristics	Specification	Unit	Conditions
Patch Center Frequency	1575.42 ± 3	MHz	By Test on 1 m Ground
S ₁₁	≤ -10	dB	By Test on 1 m Ground
Polarization	RHCP		
Frequency Temperature Coefficient	0±20	ppm/°C	-40°C to +85°C

Note: (1) Patch Antenna is located on 1 m Ground
 PAGES-I4F2P2G-100-1Z, G : Green parts (RoHS compliance)
 -100 are the code of project number, -1Z show of appendix

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

2.1 Smith Chart/S₁₁



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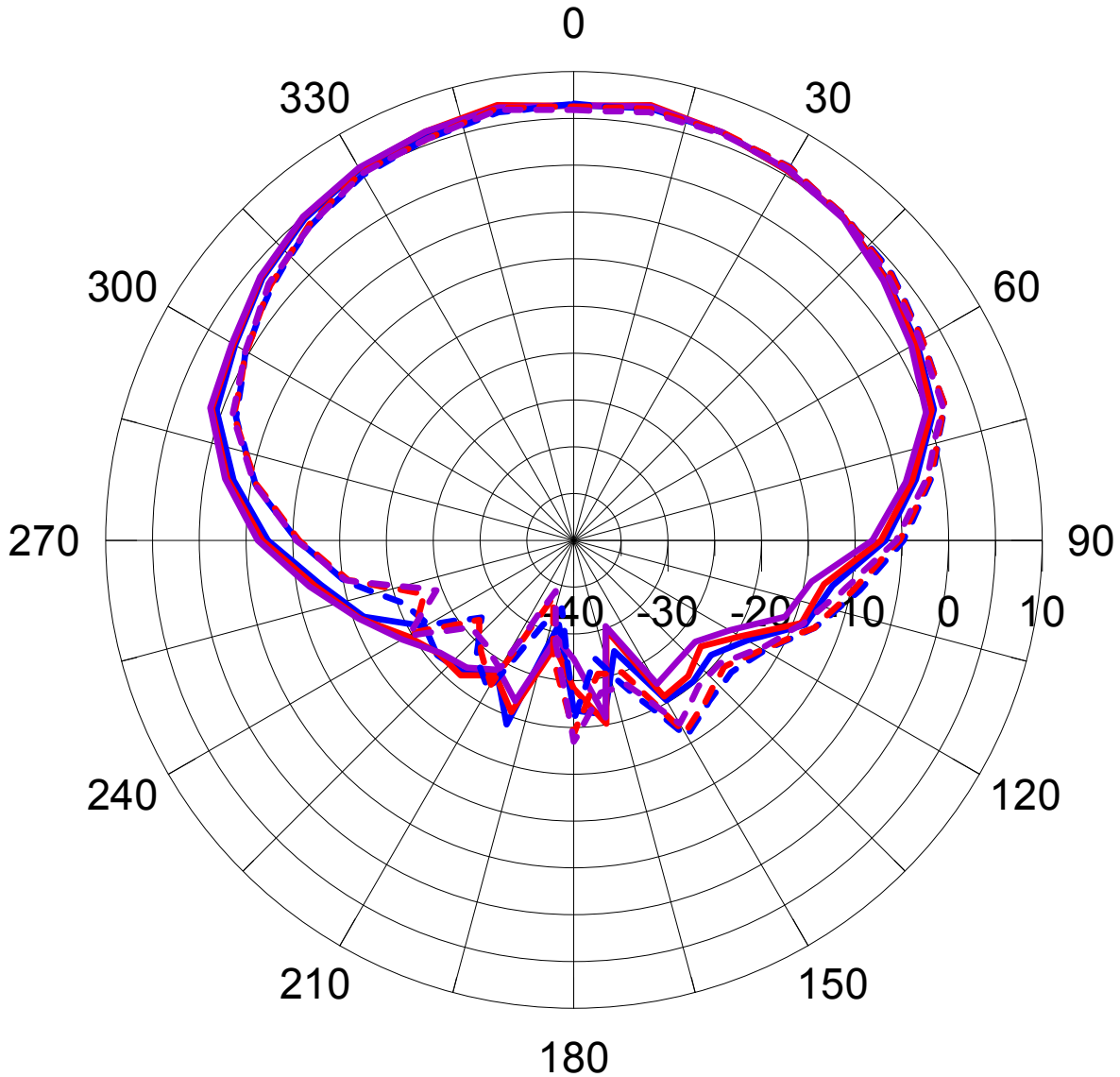
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2.2 2D Circular Polarization Gain Pattern: LHCP (Unit : dBic)

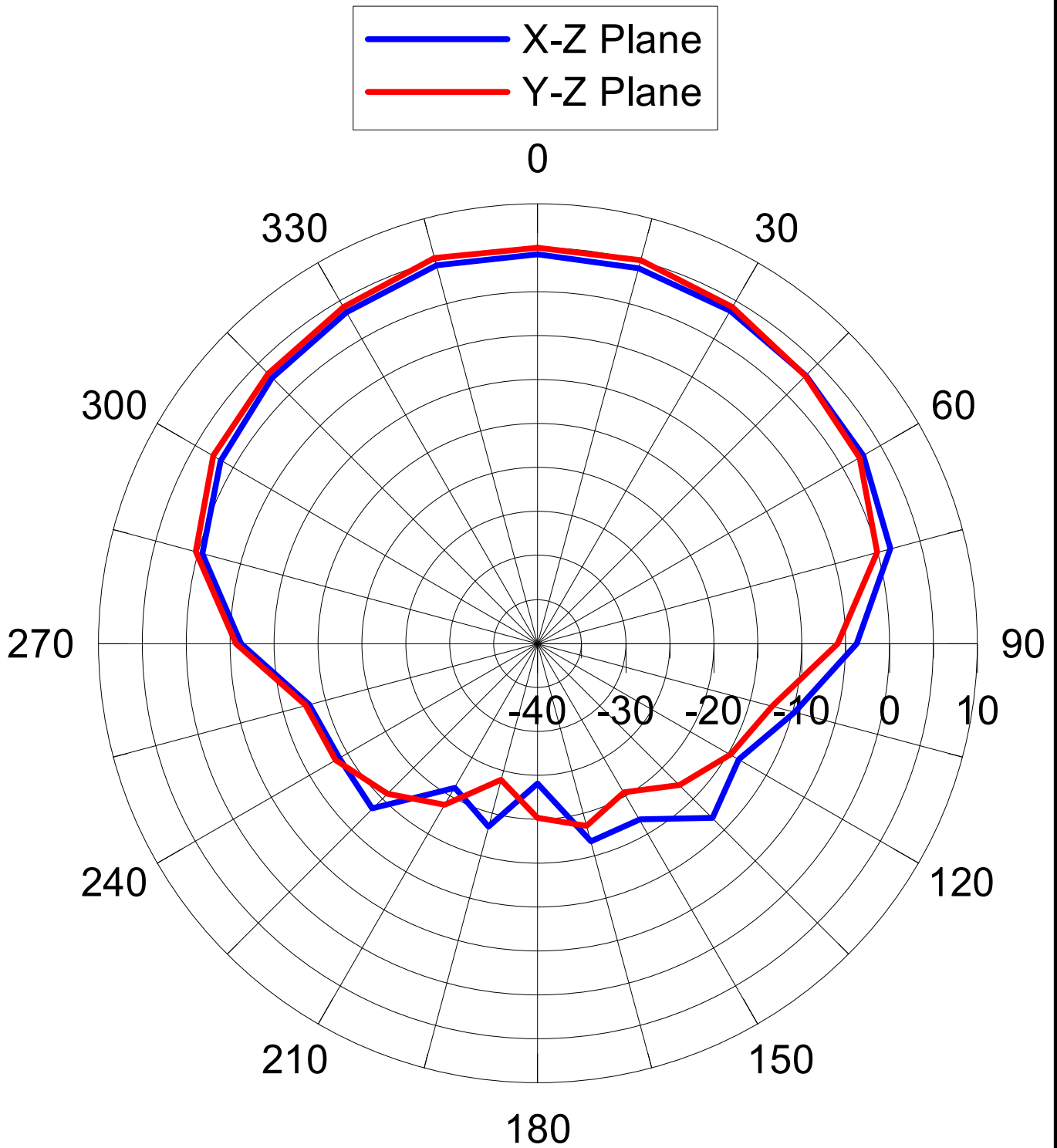
SDARS:

- 2320 MHz X-Z Plane - - - 2320 MHz Y-Z Plane
- 2332.5 MHz X-Z Plane - - - 2332.5 MHz Y-Z Plane
- 2345 MHz X-Z Plane - - - 2345 MHz Y-Z Plane



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GPS:



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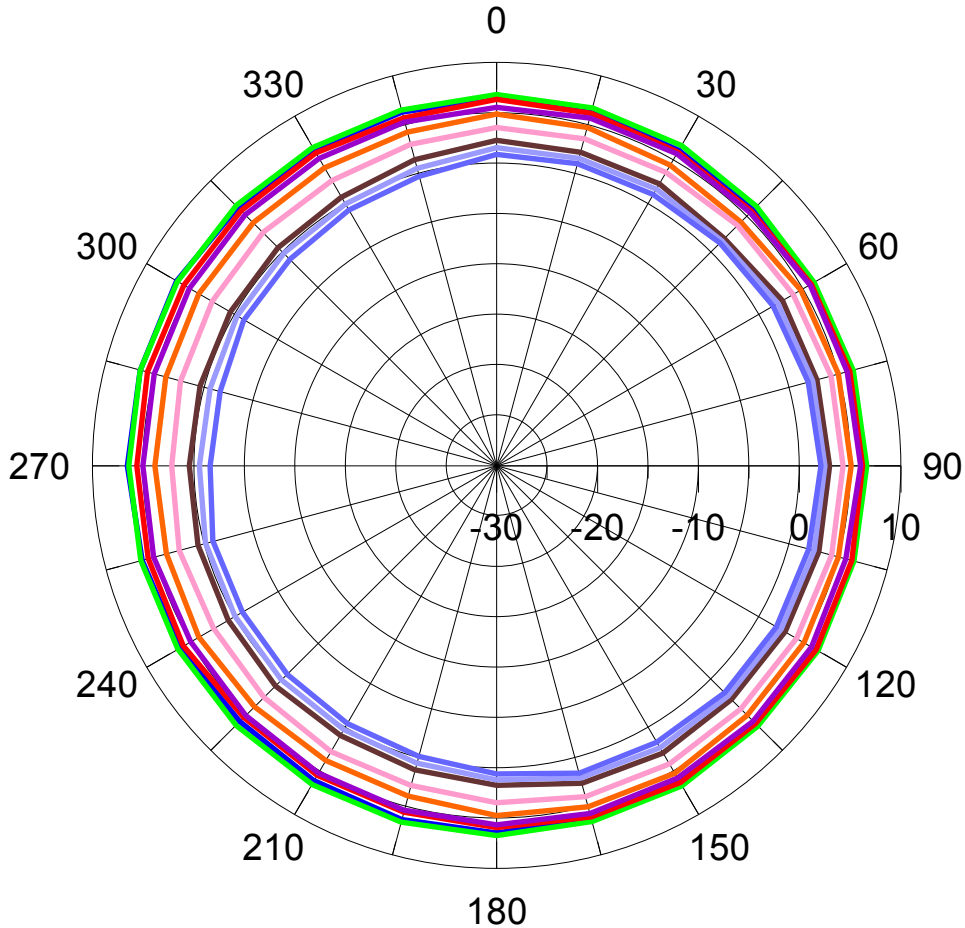
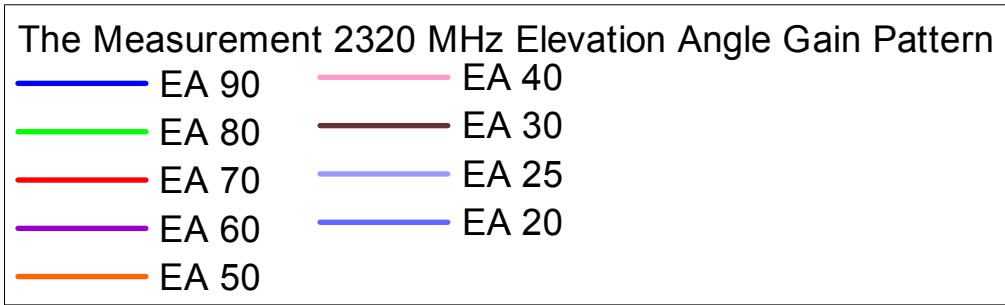


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2.3 SDARS Elevation Angle Gain Pattern (Unit : dBic)



2320 MHz	Average	Max	Min	Ripl
Elevation Angle 90°	6.34	6.58	5.97	0.61
Elevation Angle 80°	6.56	6.80	6.31	0.49
Elevation Angle 70°	5.96	6.53	5.40	1.13
Elevation Angle 60°	5.50	6.02	4.99	1.03
Elevation Angle 50°	4.48	5.26	3.81	1.45
Elevation Angle 40°	3.34	4.34	2.17	2.17
Elevation Angle 30°	1.76	3.02	0.39	2.63
Elevation Angle 25°	1.10	2.56	-0.64	3.20
Elevation Angle 20°	0.44	2.10	-1.66	3.76

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 ANGLES=± HOLEDIA=±

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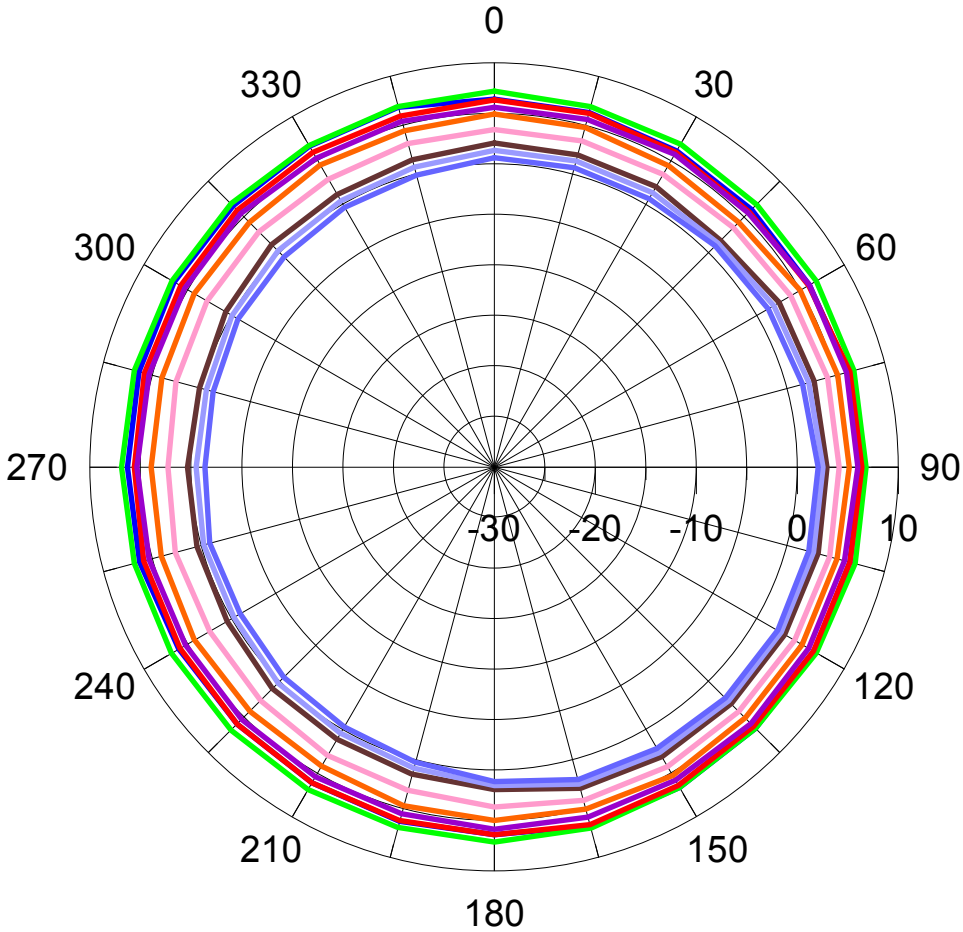
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The Measurement 2332.5 MHz Elevation Angle Gain Pattern

- EA 90
- EA 80
- EA 70
- EA 60
- EA 50
- EA 40
- EA 30
- EA 25
- EA 20



2332.5 MHz	Average	Max	Min	Ripl
Elevation Angle 90°	6.38	6.83	6.00	0.83
Elevation Angle 80°	6.88	7.20	6.59	0.61
Elevation Angle 70°	6.13	6.64	5.62	1.02
Elevation Angle 60°	5.62	6.04	5.28	0.76
Elevation Angle 50°	4.66	5.28	3.98	1.30
Elevation Angle 40°	3.40	4.31	2.32	1.99
Elevation Angle 30°	1.81	3.20	0.18	3.02
Elevation Angle 25°	1.19	2.79	-0.61	3.39
Elevation Angle 20°	0.56	2.37	-1.39	3.76

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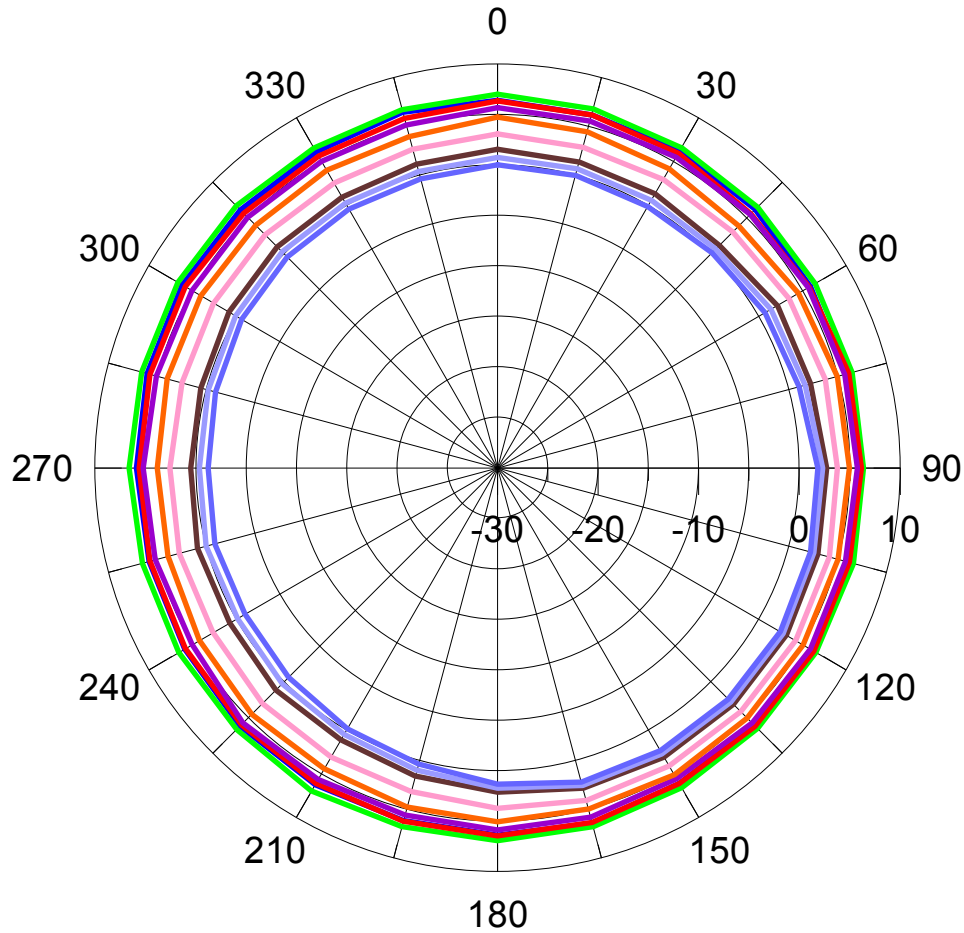
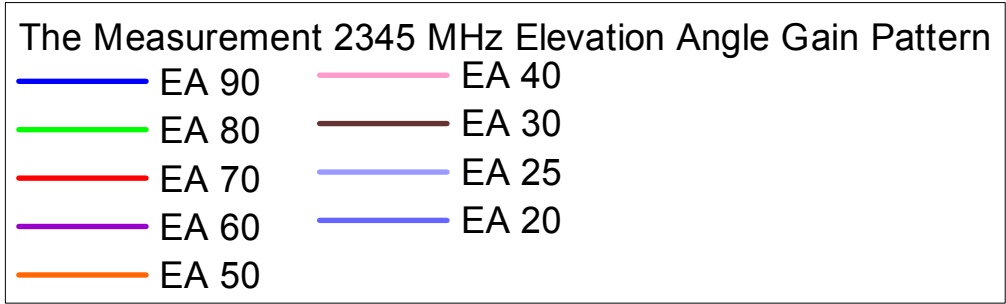
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2345 MHz	Average	Max	Min	Ripl
Elevation Angle 90°	6.16	6.47	5.88	0.59
Elevation Angle 80°	6.67	7.01	6.39	0.62
Elevation Angle 70°	6.01	6.45	5.57	0.88
Elevation Angle 60°	5.51	5.90	5.02	0.88
Elevation Angle 50°	4.50	5.15	3.81	1.34
Elevation Angle 40°	3.23	4.19	2.50	1.69
Elevation Angle 30°	1.67	3.15	0.48	2.67
Elevation Angle 25°	1.04	2.82	-0.37	3.19
Elevation Angle 20°	0.40	2.49	-1.22	3.71

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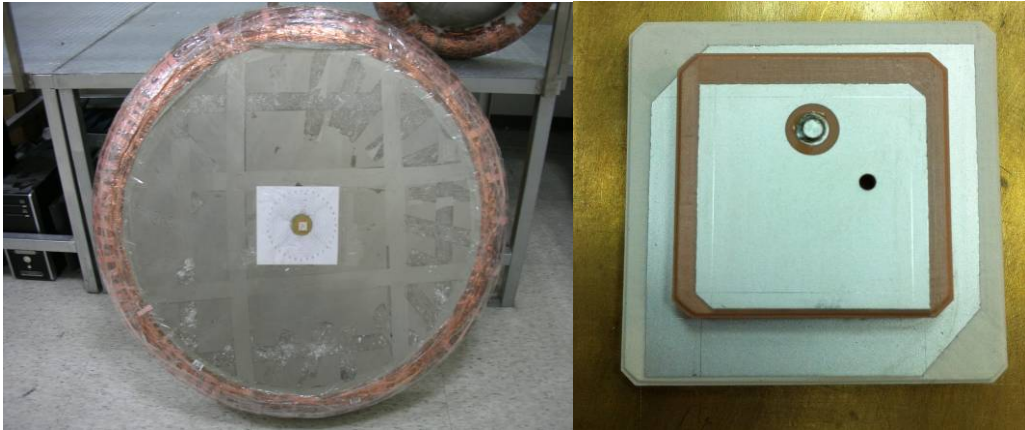
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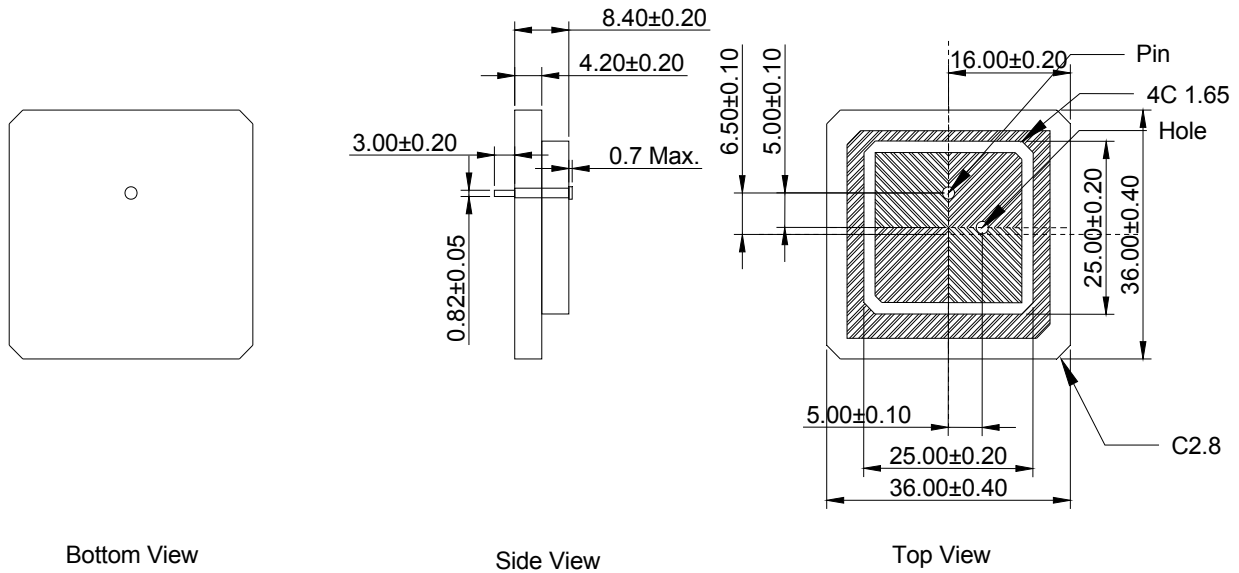
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2.4 Antenna on 1 m Ground:



3. Dimension

Unit : mm



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4. Explanation of Appendix

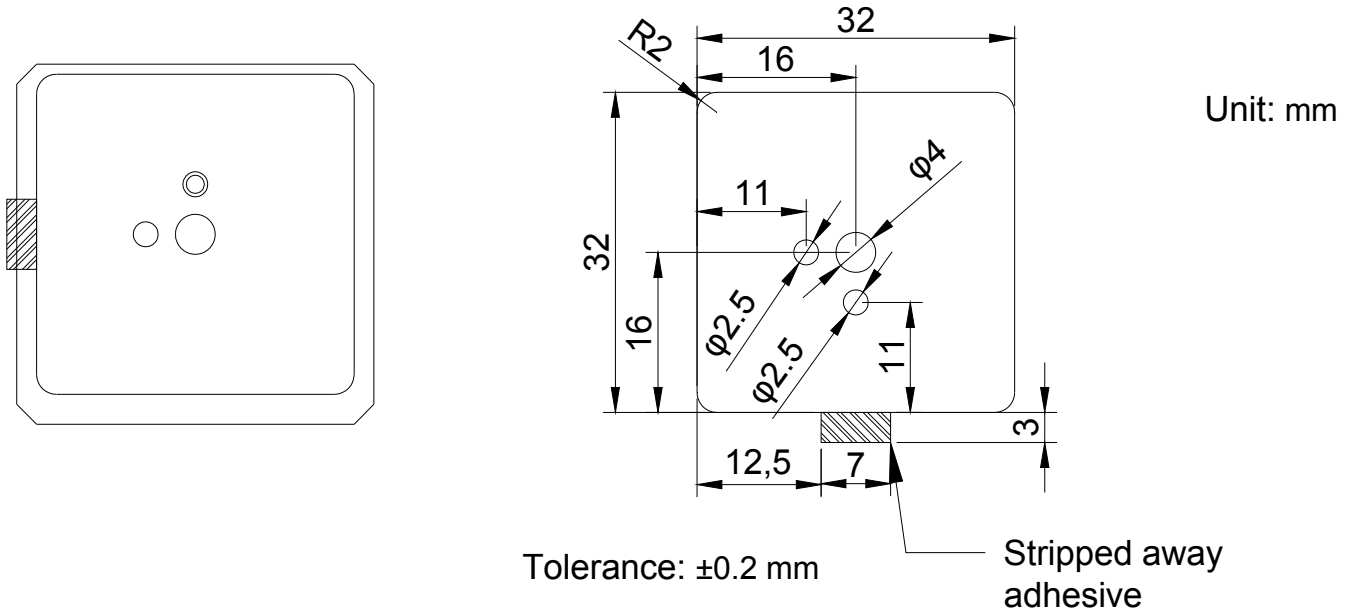
P A G S - I 4 F 2 P 2 G - 1 0 0 - 1 Z
 (1) (2)

(1) Pin = 3 mm

(2) Adhesive Tape for Customer **Z** 32x32mm

Adhesive Transfer Tape Specification

- 2.1 TAPE : Nitto 5000NS 32x32x0.16mm
- 2.2 Thickness : 0.16 mm
- 2.3 Release Liner : 0.1mm (typ.) printed paper or paper
- 2.4 Dimension : mm



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