PADGPS-I4H10G-101-17

Engineering Specification

1. Typical Electrical Properties

GPS L1:

Characteristics	Specification	Unit	Conditions
Patch Center Frequency	1575.42 ± 3	MHz	By Test on 70x70 mm Ground
Zenith Gain	5 Typ.	dBic	By Test on 70x70 mm Ground
S_{11}	≦-10	dB	By Test on 70x70 mm Ground
Polarization	RHCP		
Frequency Temperature Coefficient	0±20	ppm/°C	-40°C to +85°C

GPS L2:

Characteristics	Specification	Unit	Conditions
Patch Center Frequency	1227.6 ± 3	MHz	By Test on 70x70 mm Ground
Zenith Gain	4.5 Typ.	dBic	By Test on 70x70 mm Ground
S_{11}	≦-10	dB	By Test on 70x70 mm Ground
Polarization	RHCP		
Frequency Temperature Coefficient	0±20	ppm/°C	-40°C to +85°C

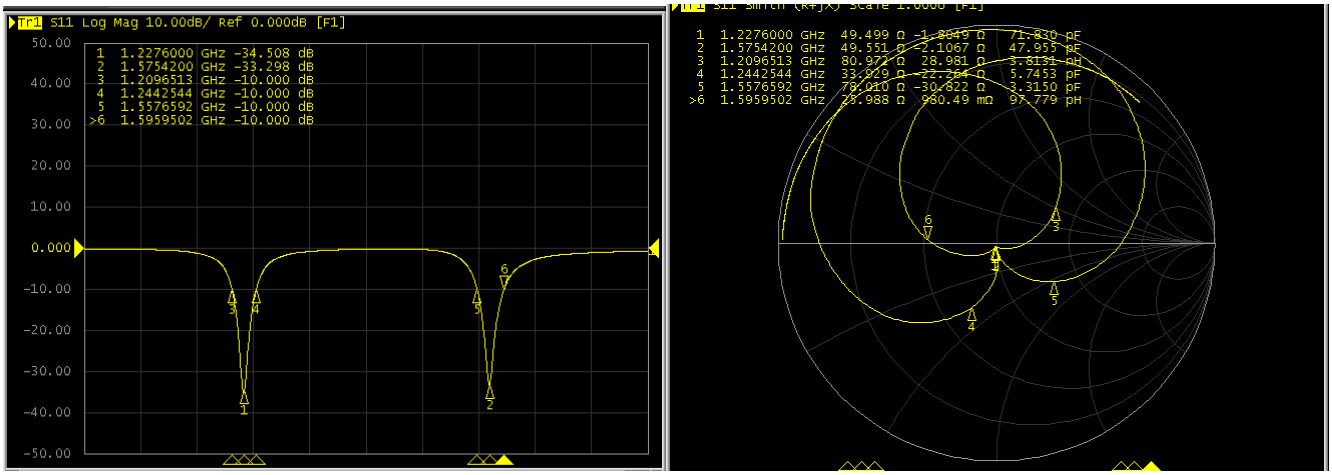
Note: (1) Patch Antenna is located on 70x70 mm Ground

PADGPS-I4H10G-101-17, G : Green parts (RoHS compliance)

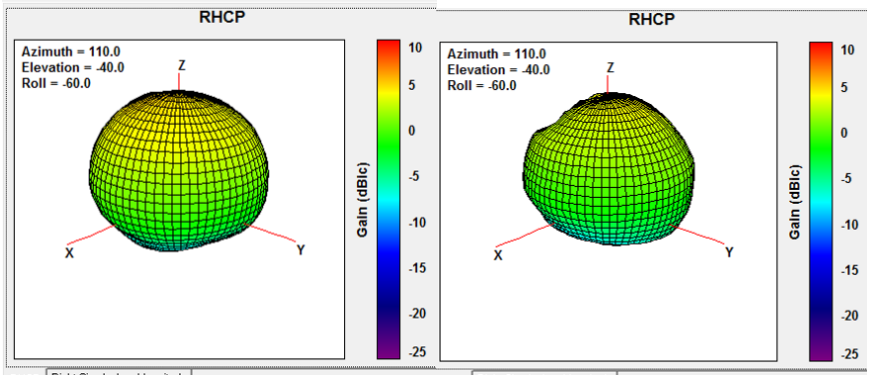
-101 are the code of project number, -17 show of appendix

2. Patch Antenna Performance and Characteristic Data on 70x70 mm Ground

2.1 Smith Chart/S_{11}

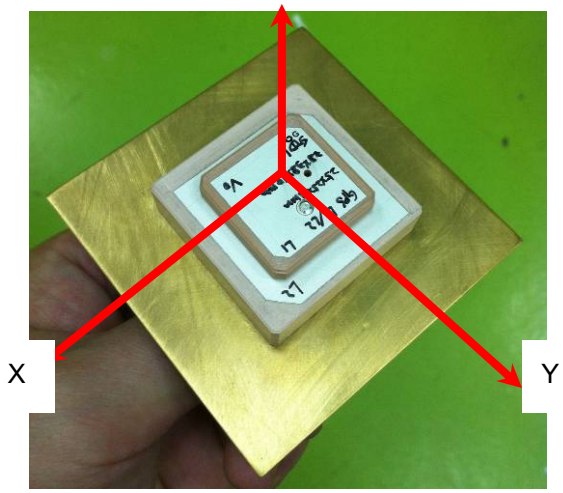


2.2 3D Circular Polarization Gain Pattern: RHCP (Unit : dBic)



GPS L1 GPS L2

Z



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DESIGNED BY：鄭大福	APPROVED BY：曾源標		
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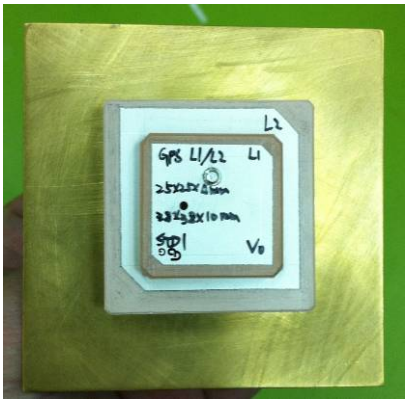
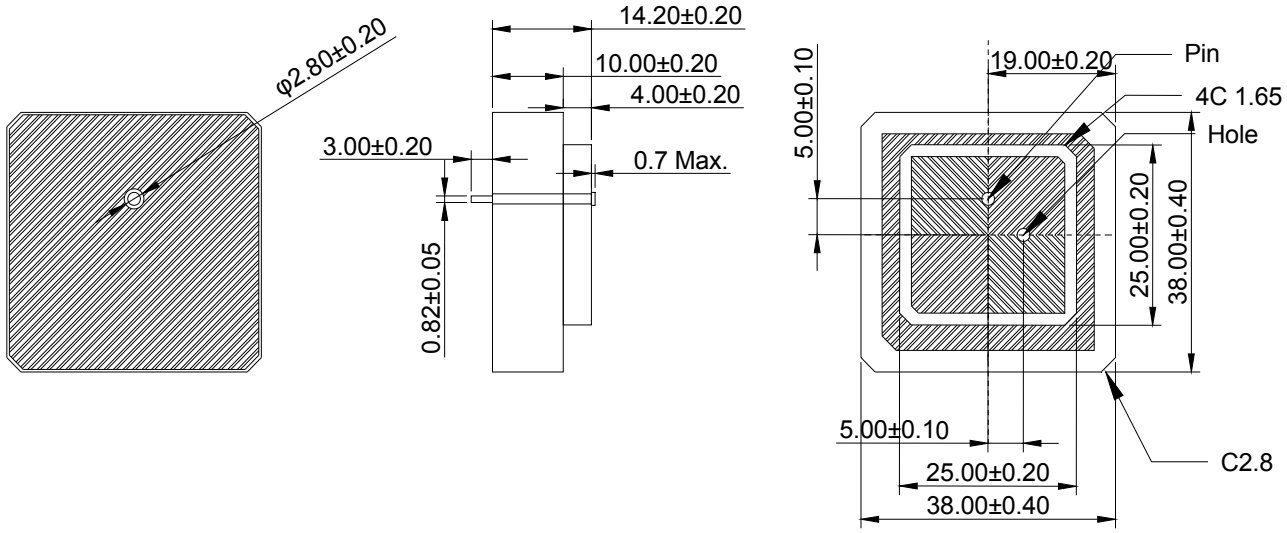
2.3 Antenna on 70x70 m Ground:



3. Dimension

Unit : mm



Bottom View Side View Top View

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4. Typical Electrical Properties on INPAQ Test Ground

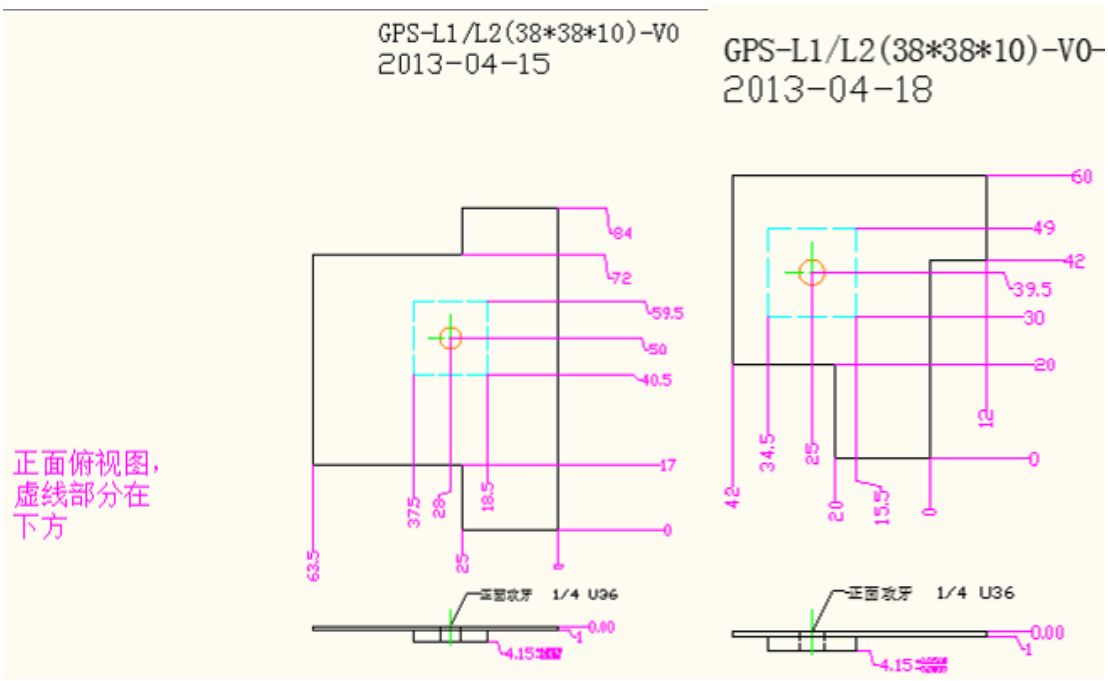
GPS L1:

Characteristics	Specification	Unit	Conditions
Center Frequency	1577.8 ± 3	MHz	By Test Ground Plane
Polarization	RHCP		By Test Housing
S11	< -20	dB	By Test Ground Plane
Frequency Temperature Coefficient	0±20	ppm/°C	-40°C to +85°C

GPS L2:

Characteristics	Specification	Unit	Conditions
Center Frequency	1212.2 ± 3	MHz	By Test Ground Plane
Polarization	RHCP		By Test Housing
S11	< -20	dB	By Test Ground Plane
Frequency Temperature Coefficient	0±20	ppm/°C	-40°C to +85°C

5. Test Condition Ground Plane



GPS L1 GPS L2

Unit: mm

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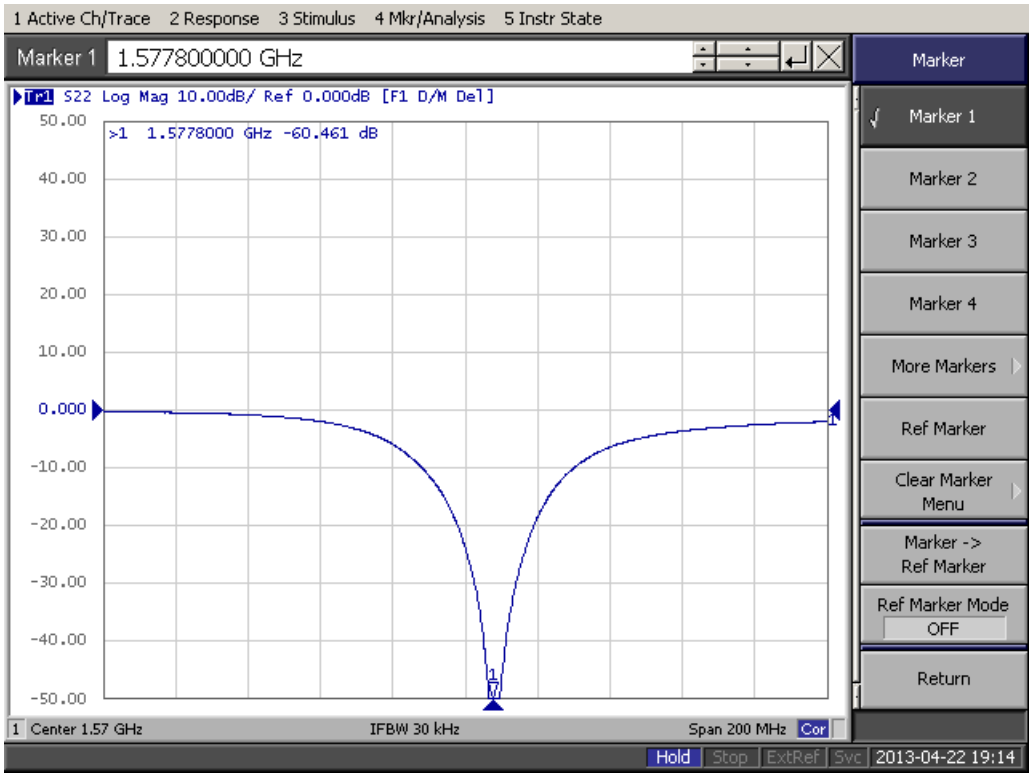
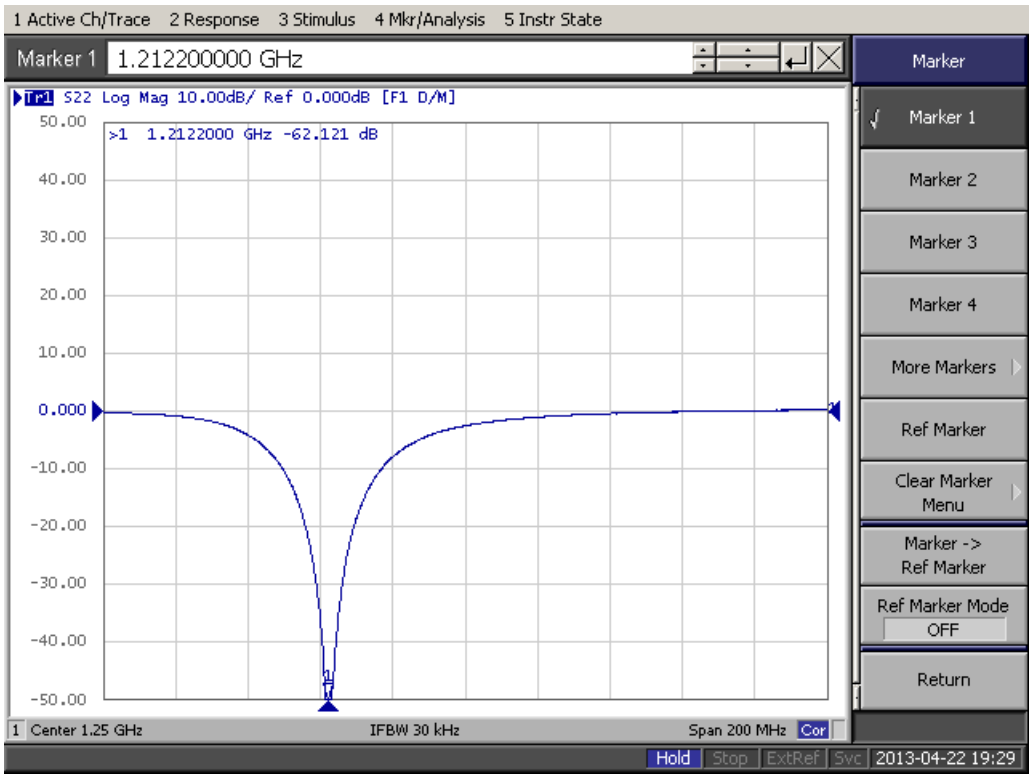
6. Return Loss Characteristics

GPS L1:

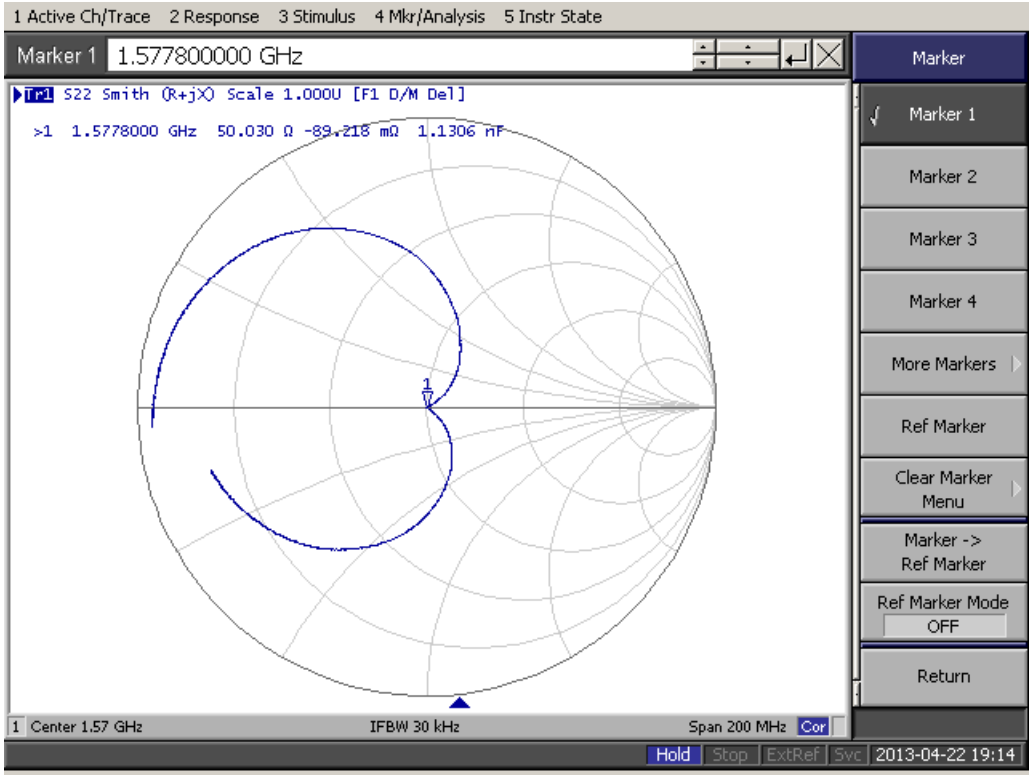


GPS L2:



7. Measured Input Impedance on a Smith Chart

GPS L1:



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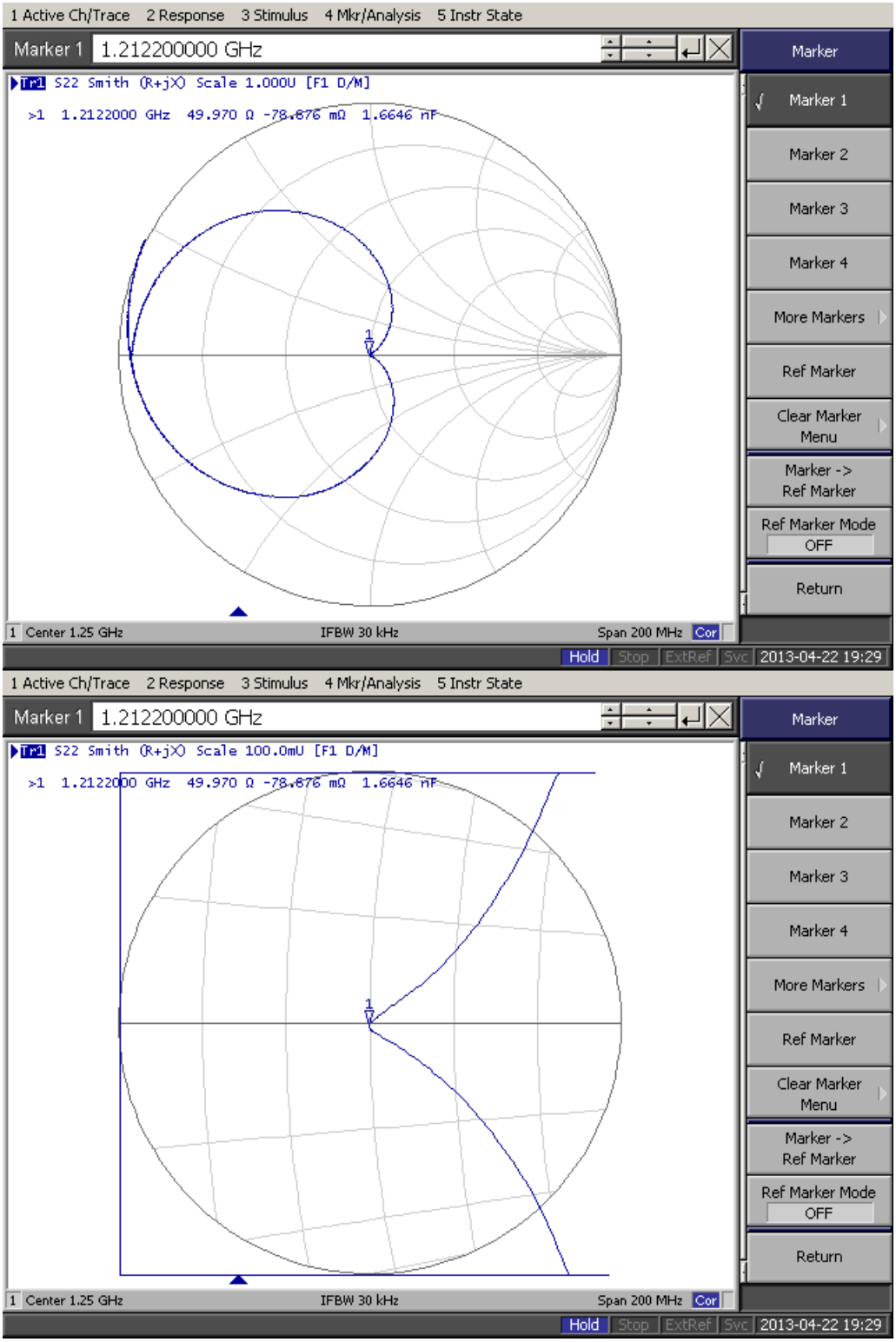
GPS L2: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Marker 1 1.212200000 GHz
Tr1 S22 Smith (R+jX) Scale 1.000U [F1 D/M]
>1 1.2122000 GHz 49.970 Ω -78.676 mΩ 1.6646 nF
Marker
Marker 1
Marker 2
Marker 3
Marker 4
More Markers
Ref Marker
Clear Marker Menu
Marker -> Ref Marker
Ref Marker Mode OFF
Return
1 Center 1.25 GHz
IFBW 30 kHz
Span 200 MHz
Cor
Hold Stop ExtRef Svc 2013-04-22 19:29
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State
Marker 1 1.212200000 GHz
Tr1 S22 Smith (R+jX) Scale 100.0mU [F1 D/M]
>1 1.2122000 GHz 49.970 Ω -78.676 mΩ 1.6646 nF
Marker
Marker 1
Marker 2
Marker 3
Marker 4
More Markers
Ref Marker
Clear Marker Menu
Marker -> Ref Marker
Ref Marker Mode OFF
Return
1 Center 1.25 GHz
IFBW 30 kHz
Span 200 MHz
Cor
Hold Stop ExtRef Svc 2013-04-22 19:29

8. Explanation of Appendix

P A D G P S - I 4 H 1 0 G - 1 0 1 - 1 7
(1) (2)

(1) Pin = 3 mm

(2) Adhesive Tape for Customer [7] 22×22mm

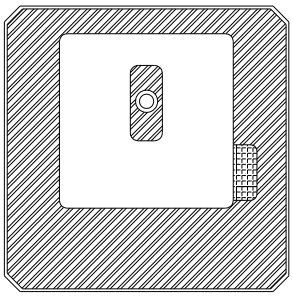
Adhesive Transfer Tape Specification

2.1 TAPE：Nitto 5000NS 22x22x0.16mm

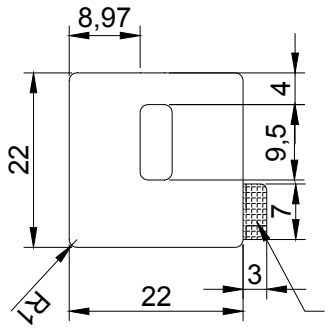
2.2 Thickness : 0.16 mm

2.3 Release Liner : 0.1mm (typ.) printed paper or paper

2.4 Dimension : mm



Unit:mm



stripped away adhesive

TOLERANCE :+-/0.2mm

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