



Specification

SPECIFICATION

Part No.	:	AA.105.301111
Product Name	:	Titan GPS Antenna AA-105 3M RG174 GPS- SMA (M) Straight
Features	:	Magnetic Mount Covert stylish design Wide band input voltage Gain can be adjusted for your application (10dB~31dB) IP-67 Waterproof Custom designed antennas available upon request

Photos :





Specification

1.0 Electrical Specifications

Ceramic Patch Specification	
Outline Dimension	25*25*4mm
Ground Size	25*25*4mm
Center Frequency	1575.42±3MHz
Bandwidth	10MHz
VSWR	1.92 Max
Axial ratio	3dB Typ.
Gain @ Zenith	2dBi Typ.
Impedance	50Ω
Polarization	RHCP

LNA Specification	
Frequency	1575.42MHz
Impedance	50Ω
VSWR	1.92 Max.
Gain	30dB Typ.
Gain at Connector*	28.4dB
DC Power Input	2.7~5.5V
Noise Figure	1.5dB Typ.
Power Consumption	4.7mA @2.7V
	6mA @3.3V
	10.3mA @5V
Operating temp	-40°C ~ +85°C
Storage Temp	-40°C ~ +90°C

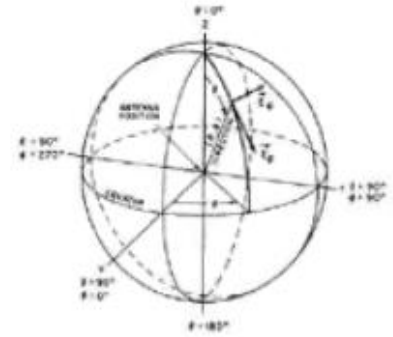
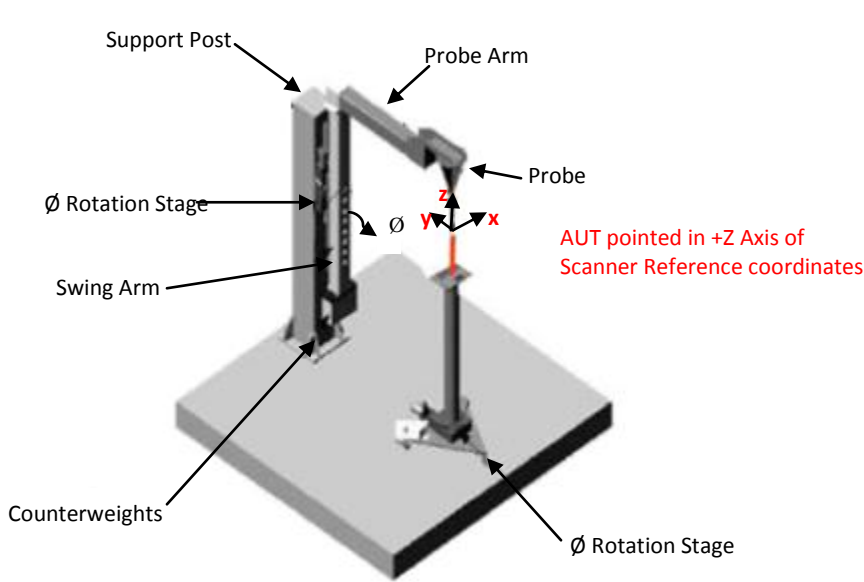
***Formula** = Patch Antenna Average Gain + LNA typical gain – RG174 cable loss @1.2dB per meter = Gain at connector

Gain at the Connector - Patch Gain 2dB + LNA Gain 30dB – Cable loss of 1.2dB per metre (@3m = 3.6dB) = 28.4dB approx.

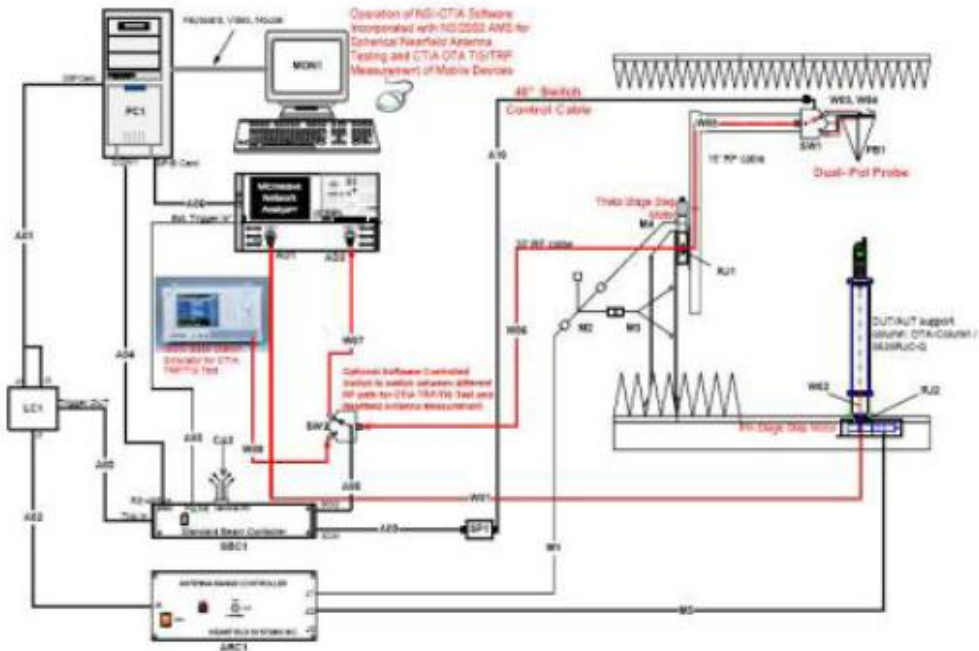


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2.0 Performance Measurement – Test Setup



NFT-500S 3D Chamber Coordinate System Definition



Configuration of NFT-500S 3D Chamber



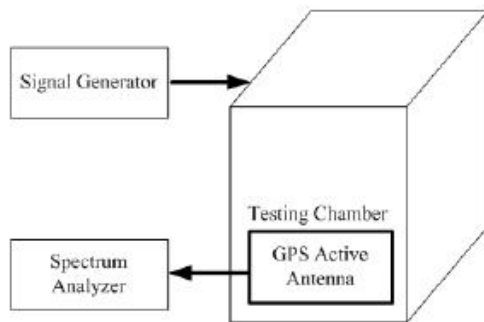
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Agilent E5071B Network Analyzer



Anritsu 68147C Signal Generator



Testing Chamber

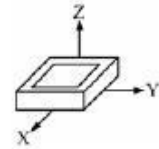
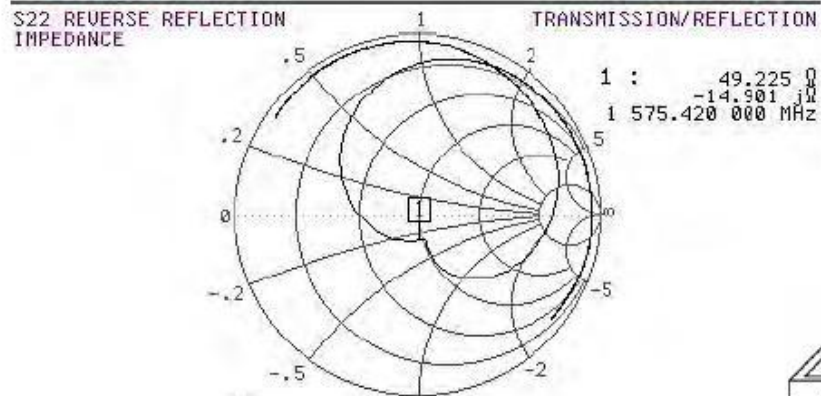
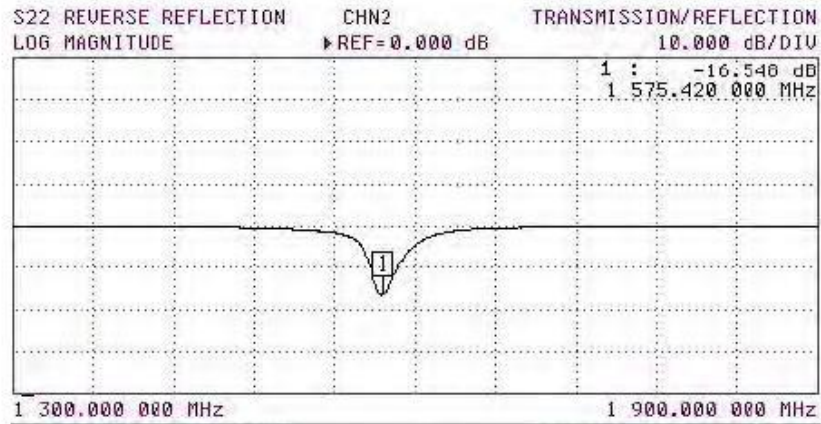


Anritsu MS2721A Spectrum



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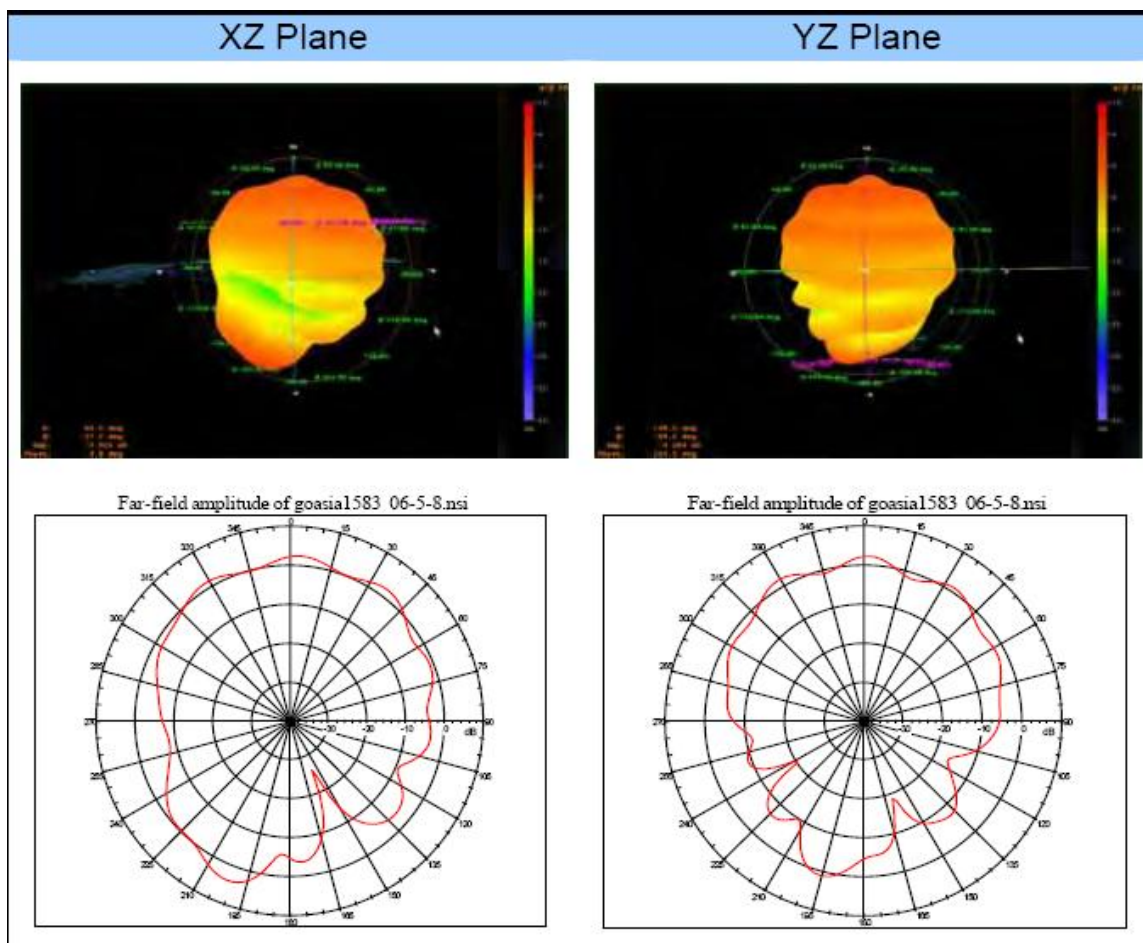
3.0 Ceramic Antenna S11 (with housing)





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4.0 Ceramic Antenna Radiation Pattern (with housing)





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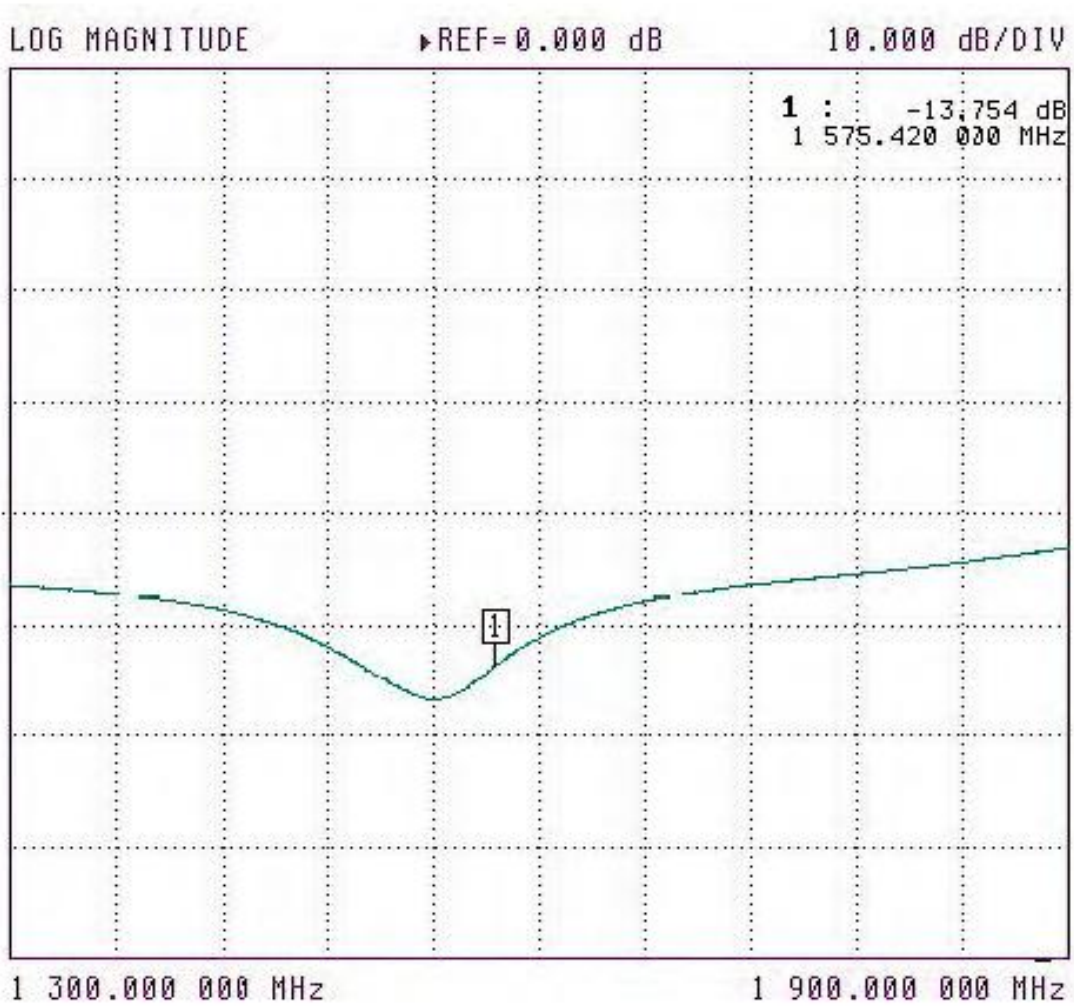
5.0 LNA gain





Specification

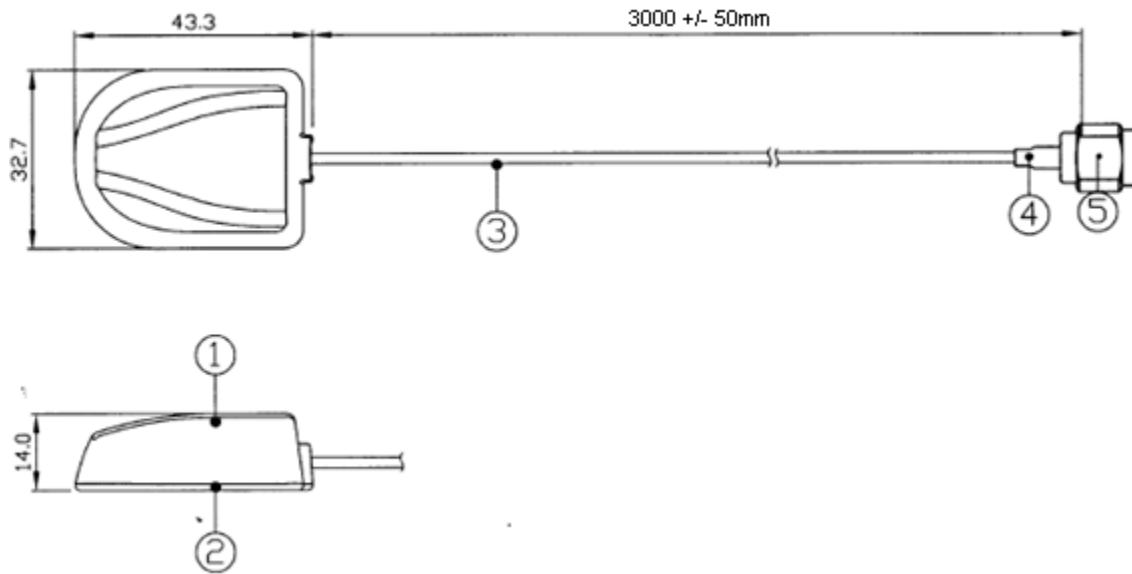
6.0 LNA S22





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7.0 Drawing



- 1. GPS Antenna top: PC; Colour:Black
- 2. GPS Antenna bottom: PC; Colour:Black
- 3. Cable: RG174
- 4. Tube: Heat shrink tube
- 5. Connector: SMA plug standard
- 6. Cable length and connector are fully customizable

RG-174 cable attenuation(dB/100mm)												
GHz	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
RG-174	67	110	127	153	168	183	207	229	252	272	291	311