

MDL GPSGLONASS/N-3V0 I-PEX(A13) MHF Φ1.13 157mm LOW

LOSS GPS401N-S3-00-A

1. Application:

This application shall apply for antenna unit which shall be used with an engine for an automobile.
(For impedance 50Ω)

2. Appearance:

Antenna Unit (PCB, connector, and cable – refer to an attached drawing)

Dimensions 30.0*8.0*2.5 mm ; Connector I-PEX MHF(A13)
Weight 1.6 (typ) ; Cable Φ1.13 157mm low loss
PCB lead free

3. Electrical Specification:

■ Operating Condition

Temperature: - 40 to + 80°C

■ Storage Condition

Temperature: - 40 to + 80°C

Humidity : 65±20 % RH

■ GPS Antenna Specification

Parameter	Electrical Specifications
Frequency Range(MHz)	1575~1615
Center Frequency(MHz)	1593
Polarization	Linear
VSWR	< 2.0
Peak gain(dBi)	-0.74
Efficiency (%)	33.65
Pattern	Omni-Directional
Test Condition	Antenna gain is including the cable and the connector

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=N/A X.X=N/A X.XX =N/A

ANGLES=N/A HOLEDIA=N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : 趙彥年

CHECKED BY : 楊奇峯

DESIGNED BY : 莊意堂

APPROVED BY : 曾源標

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TITLE : MDL GPSGLONASS/N-3V0 I-PEX(A13) MHF Φ
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DOCUMENT
NO.

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■ Filter/LNA Specification

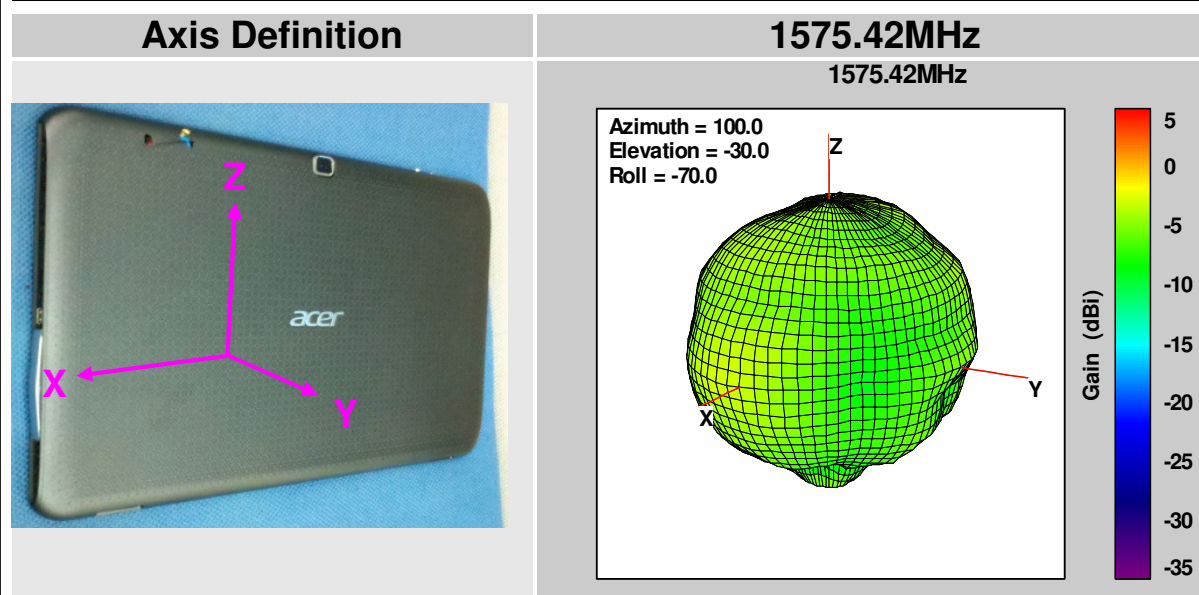
Parameter	Electrical Specifications
Frequency Range(MHz)	1575~1615
Center Frequency(MHz)	1593
Operation Voltage(V)	3.0±0.3
LNA DC Current(mA)	4±1.5
LNA Amplifier Gain(dB)	19±3
Noise figure including filter and LNA @ambient temperature	2 Typical

■ Overall Specification

Characteristics	Specification
Frequency Range(MHz)	1575~1615
Center Frequency(MHz)	1593
Output Impedance(ohm)	50
Operation Voltage(V)	3.0±0.3
Overall Average Gain(dBi)	14.27 Typical

4. GPSGLONASS Antenna Measurement Data:

3D Radiation Pattern



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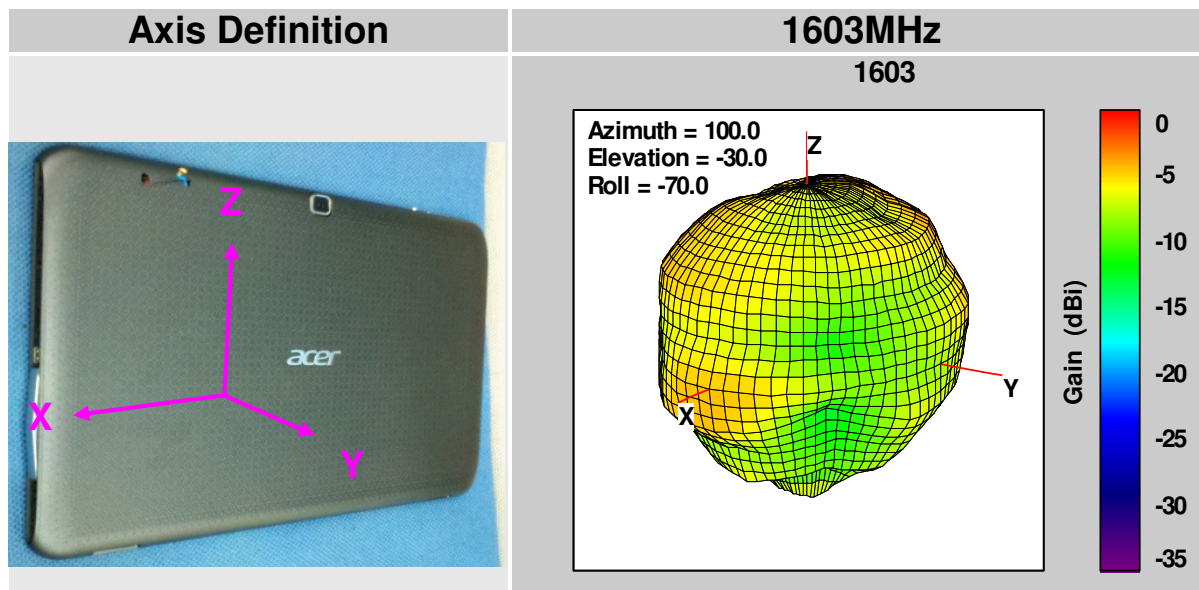
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3D Radiation Pattern



Test Results – GPS Efficiency & Peak Gain

Frequency (unit: MHz)	Gain (dBi)		Efficiency (%)
	Peak	Average	
1571.00	-1.05	-4.19	38.14
1572.00	-0.94	-4.21	37.97
1573.00	-0.84	-4.22	37.83
1574.00	-0.76	-4.24	37.68
1575.00	-0.71	-4.26	37.54
1575.42	-0.64	-4.26	37.51
1576.00	-0.60	-4.26	37.50
1577.00	-0.55	-4.27	37.40
1578.00	-0.53	-4.28	37.32
1579.00	-0.52	-4.30	37.12
1580.00	-0.48	-4.33	36.88
1590.00	-0.61	-4.54	35.13
1593.00	-0.74	-4.73	33.65
1595.00	-0.87	-4.86	32.63
1597.00	-0.96	-4.97	31.87
1599.00	-1.06	-5.07	31.09
1601.00	-1.15	-5.18	30.37
1603.00	-1.19	-5.28	30.06

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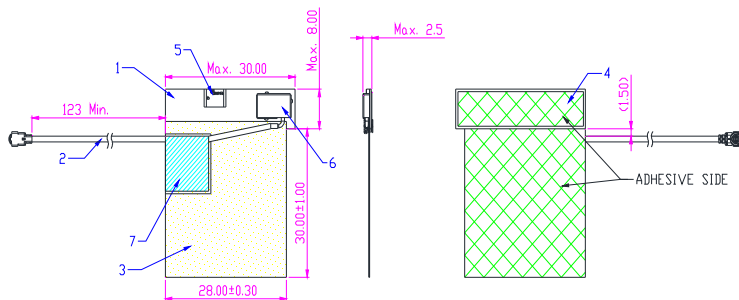
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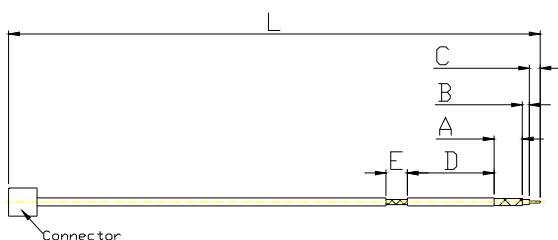
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5. Mechanical Specification:



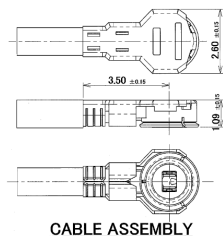
ITEM	DESCRIPTION	MATERIAL SPECIFICATION	QUANTITY	UNIT
1	PCB	T=0.4mm, 30*8mm ²	1	PCS
2	I-PEX(A13) 1.13 connector and Cable	phi 1.13mm, color Green	1	PCS
3	Copper foil conductive tape	31.5*28mm ²	1	PCS
4	TAP, 3M 9888T	29*7mm ²	1	PCS
5	CHIP	T=0.7mm, 5.0*3.6 mm ²	1	PCS
6	Shielding Case	T=1.5mm, 8*5mm ²	1	PCS
7	Conductive fabric	T=0.12mm, 15.5*10 mm ²	1	PCS

Cable Length



Cable : RF Cable φ1.13 LOW LOSS(Green)			
L	157+2/-0mm		
A	3.0±0.5mm	D	13±0.5mm
B	1.5±0.5mm	E	9±0.5mm
C	1.0±0.5mm		

Connector appearance: I-PEX(A13) MHF



CABLE ASSEMBLY

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