

ADVANTECH

Antenna

OPT1-ANT-GNS-20

Datasheet



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1 Product Description

Omnidirectional GPS and GLONASS antenna. The antenna operates in two bands 1575 MHz and 1602 MHz and reaches up to 26 dBi gain. Thanks to the built-in magnet, it is suitable for placement on a metal surface. The antenna is supplied with 2m cable terminated with SMA male connector.

2 Product Features

- GNSS
- High efficiency
- Excellent performance



3 Product Specifications

Electrical Specifications

Frequency Range	1575–1602 MHz
10 dB Bandwidth	≥ 20 MHz
Output VSWR	≤ 2.0
Efficiency	≥ 50 %
Gain	≤ 0.8 dBi
Polarization Type	RHCP
Axial Ratio	≤ 5
Impedance	50 Ω

LNA Electrical Properties

Frequency range	1575–1602 MHz
Gain	26 $\pm$ 2dB
Noise Figure	≤ 1.5 dB
Output VSWR	≤ 2.0
Passband Ripple	$\leq \pm 2$ dB
Voltage	DC 3.3 $\pm$ 0.3 V
Current	≤ 15 mA
Impedance	50 Ω

Mechanical Specifications

Antenna Size	45.7 mm $\times$ 38.3 mm $\times$ 12.99 mm
Casing	PC
Connector Type	SMA Male (Center Pin)
Working Temperature	-40 °C to +85 °C
Radom Color	Black
Mounting Type	Magnet
IP Rating	IP66
Cable length	2 m

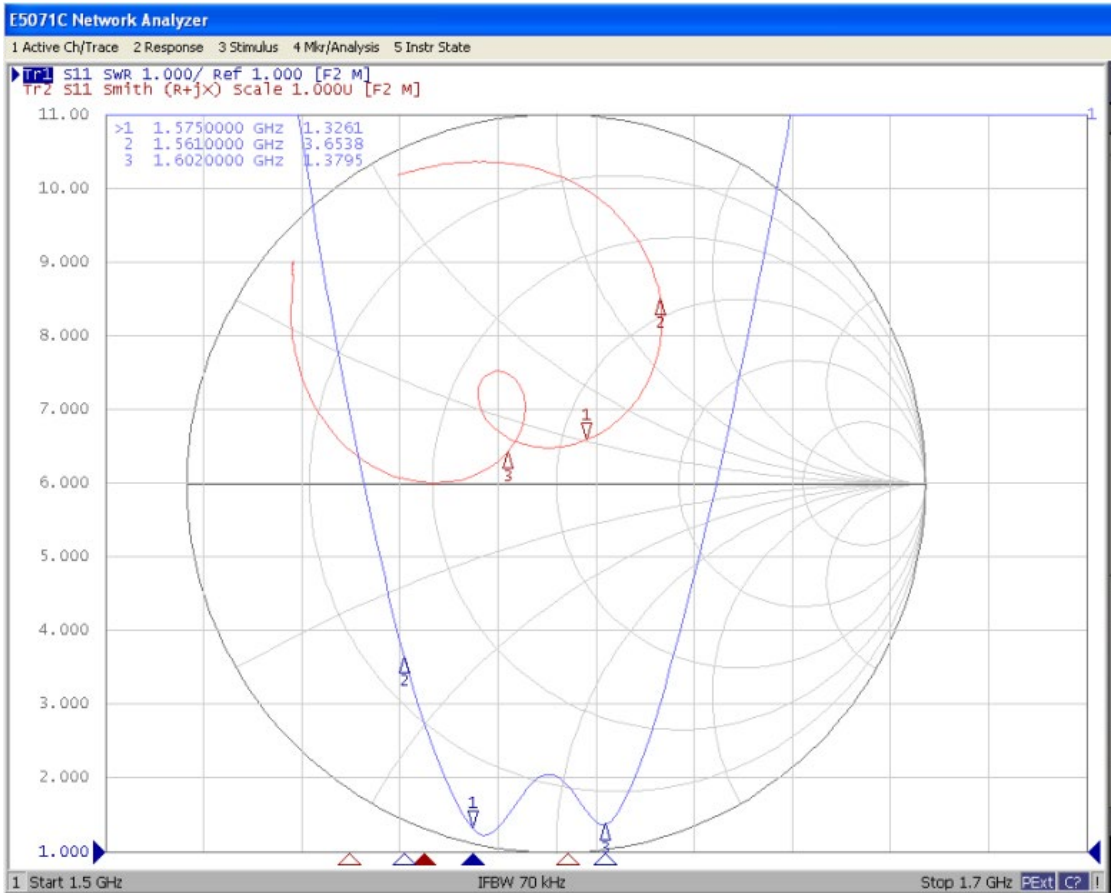
4 Overall Performance

4.1. Test Environment

- KEYSIGHT VNA Network Analyzer E5063A 100 kHz – 8.5 GHz.
- RayZone®2800 Chamber 5G(FR1) SISO/MIMO, 400 MHz – 8.0 GHz.

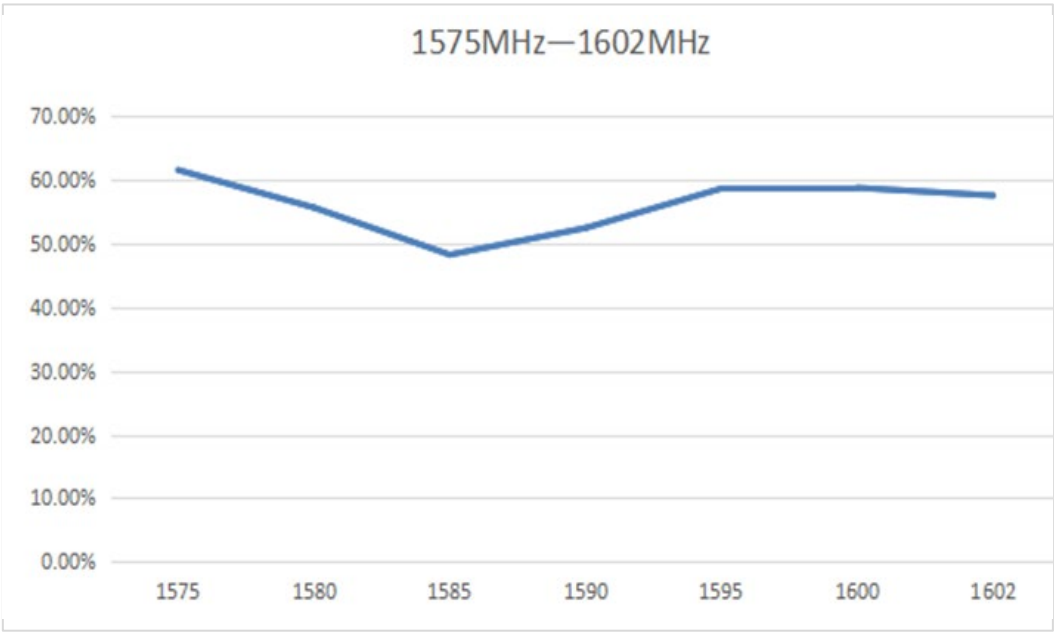


4.2. VSWR



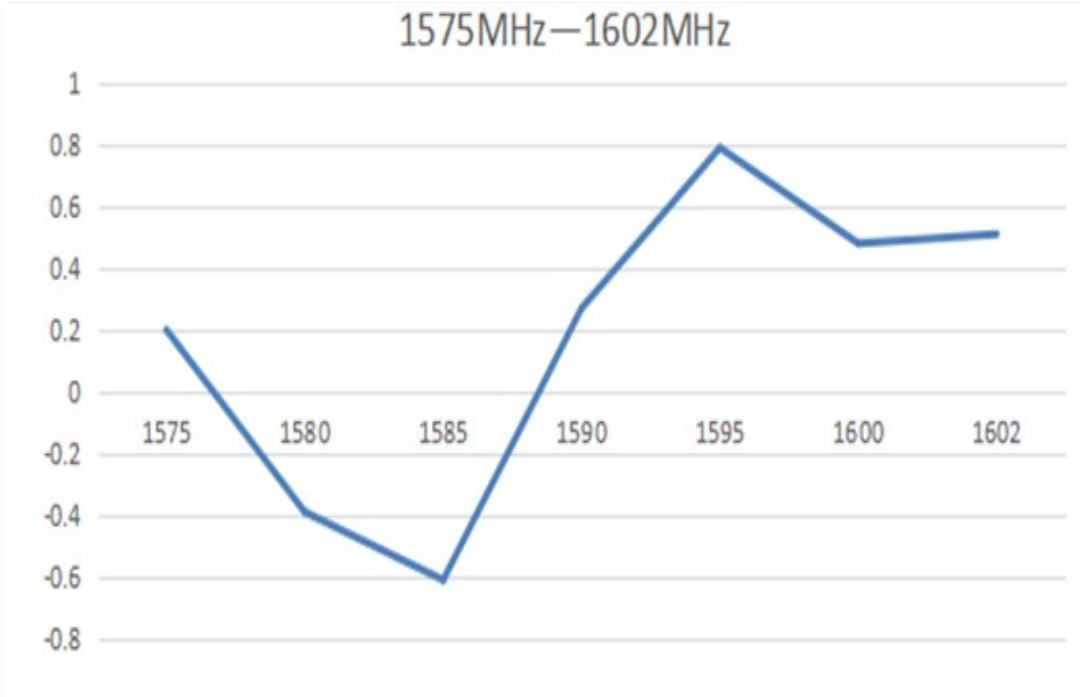
Frequency (MHz)	1575	1602
VSWR	1.72	1.60

4.3. Efficiency



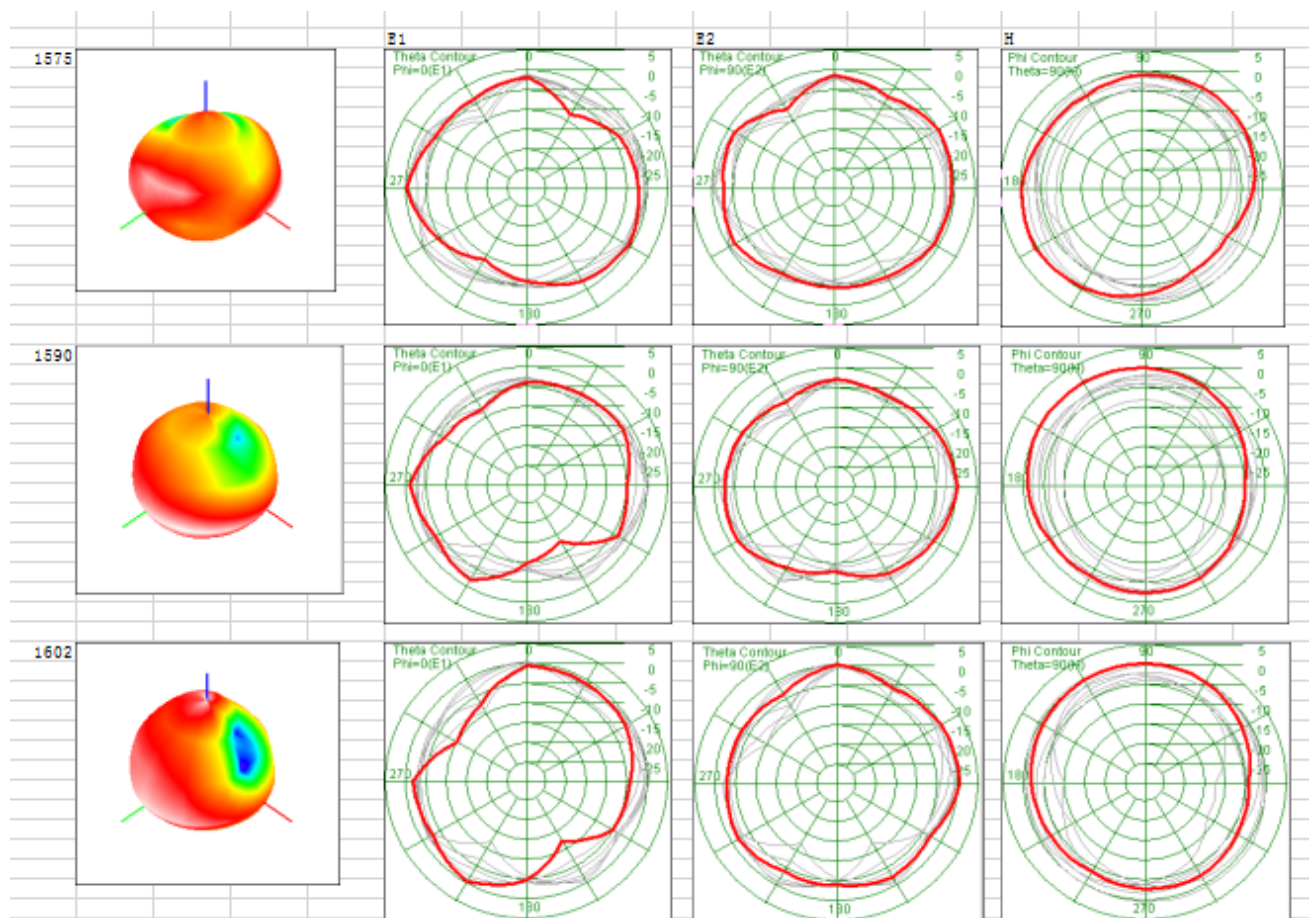
Frequency (MHz)	1575	1602
Efficiency (%)	61.5	57.5

4.4. Gain

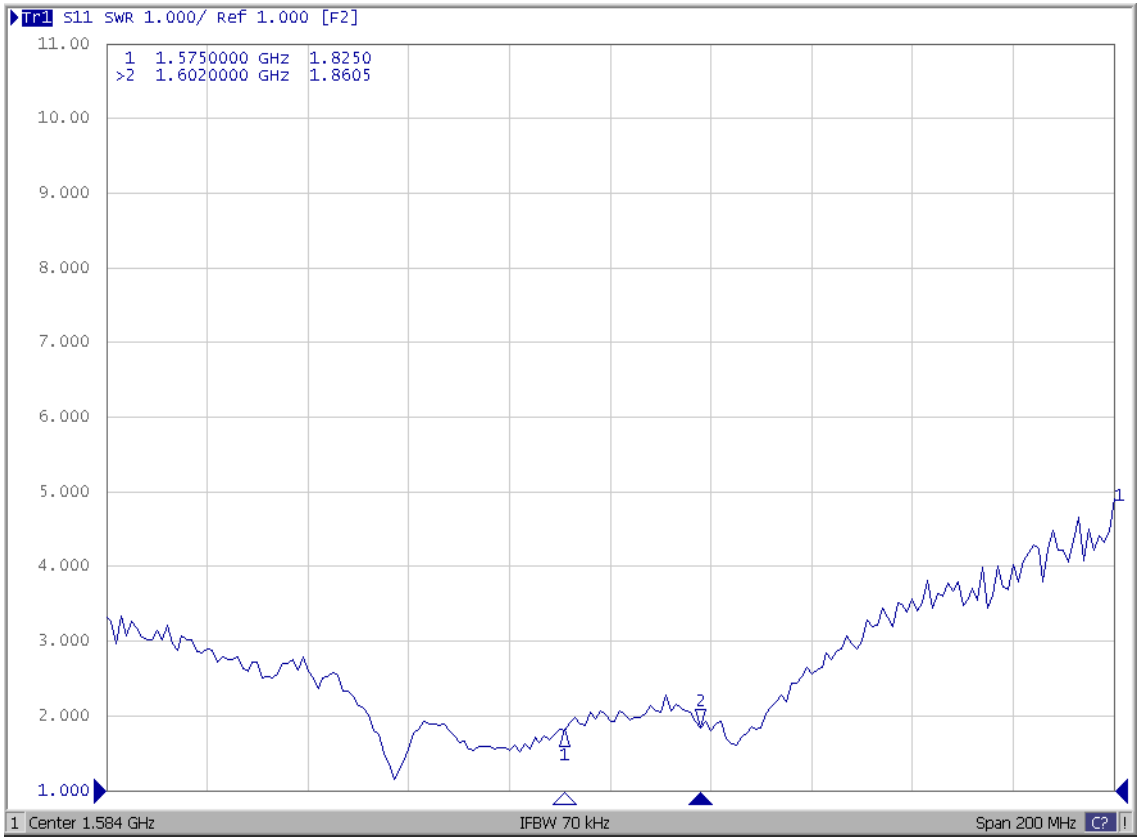


Frequency (MHz)	1575	1602
Gain (dBi)	0.20	0.51

4.5. Radiation Pattern

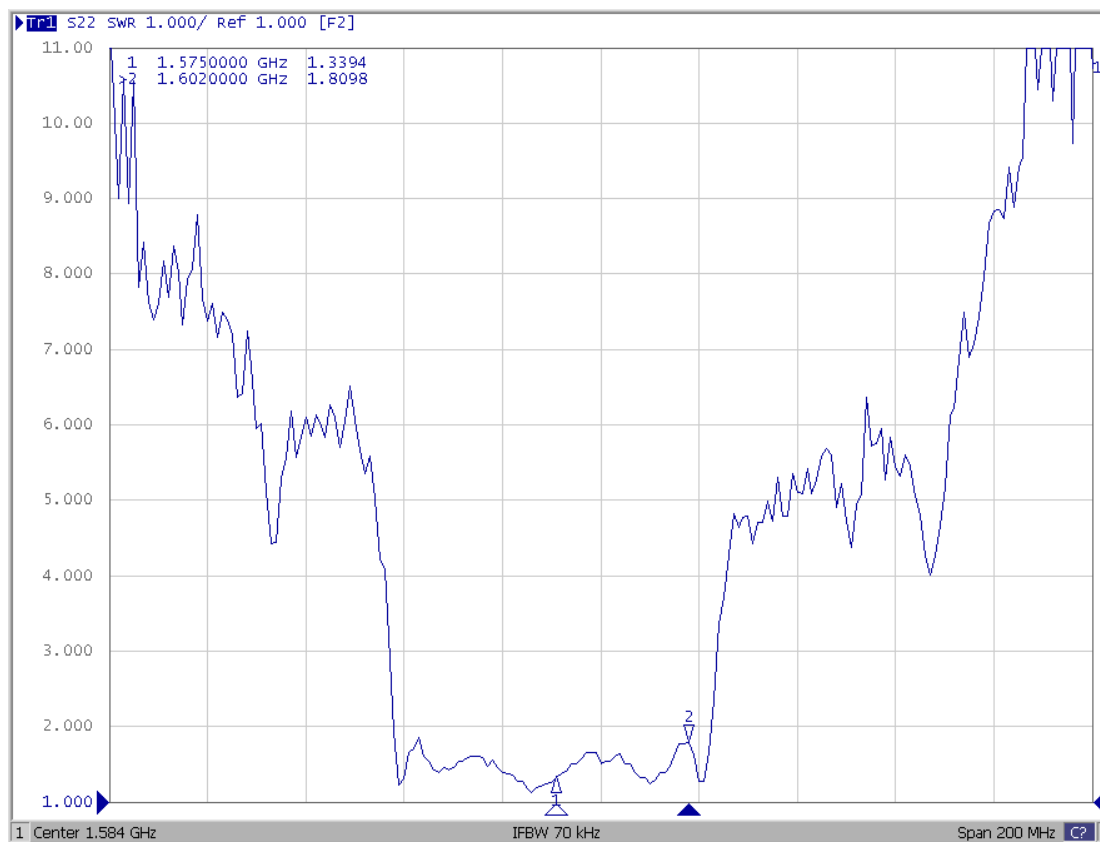


4.6. Input VSWR



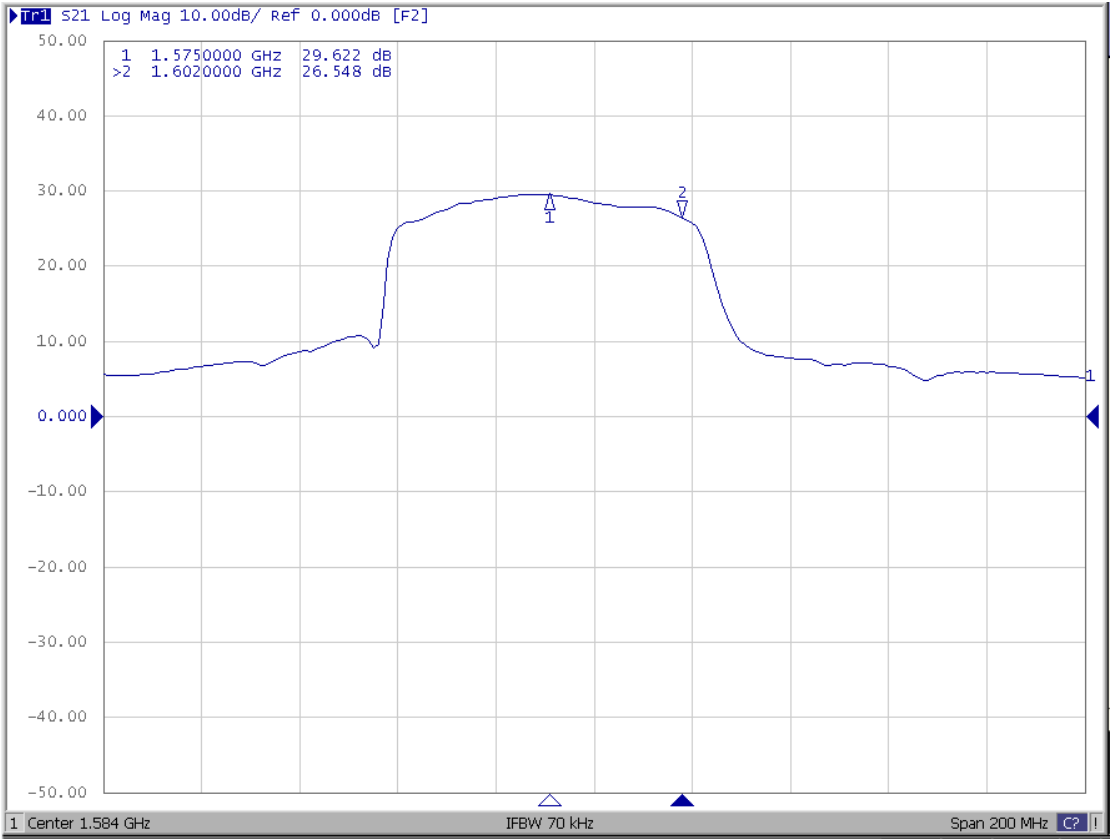
Frequency (MHz)	1575	1602
Input VSWR	1.83	1.86

4.7. Output VSWR



Frequency (MHz)	1575	1602
Input VSWR	1.34	1.81

4.8. Output Gain



Frequency (MHz)	1575	1602
Output Gain (dB)	29.6	26.5

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