

Flexible passive antenna for GNSS applications (1558-1610 MHz)

contents:

1-specifications

2-drawing

3-measurements/simulations

Revision: 1.1

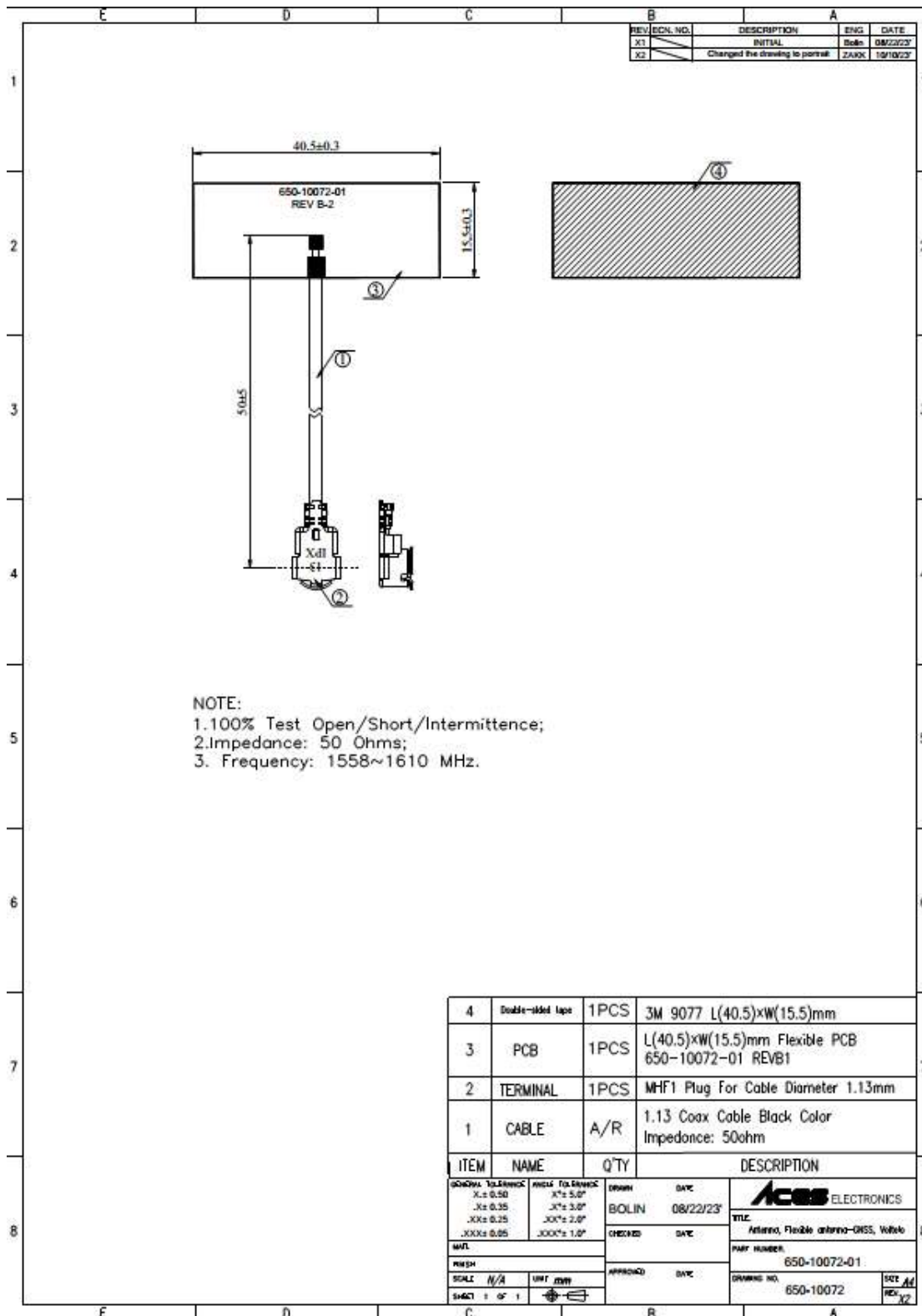


1- Specifications:

Part number	650-10072-01 REVB-2
Frequency range	1558-1610 MHz
board type	Flexible PCB
Adhesive mount	3M9077 on the bottom
Recommended support sheet	ABS (1mm thick)
Connector type	MHF1 (female)
Feed point	Mid of the plane
Cable type	1.13 mm – 50 ohms
Cable length	50 mm
Polarization	linear
Antenna Impedance	50 ohms
Return-loss	> ~ 7.5 dB
VSWR	< ~ 2.5
Application	GNSS



2- Drawing:



3-1- Measurements:

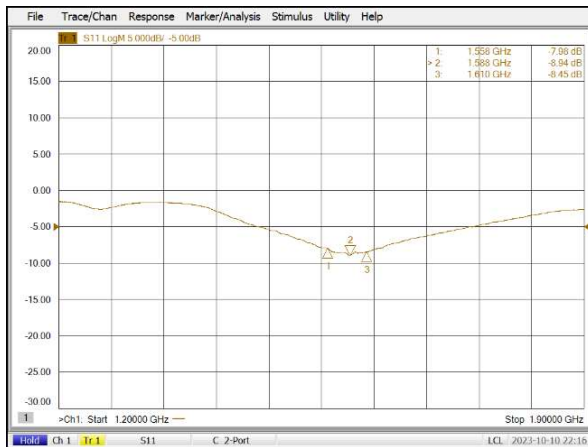
3-1-1- Experiment setup:

Antenna is mounted on 20 cm x 25 cm ABS sheet and at least 1m far from the ground plane.

(Note: VNA: Keysight N5222A, other test elements: FLC-2FT SMSM+ cable, SMA to U.FL ADP-UFLM-SMAM)



Return loss:



VSWR

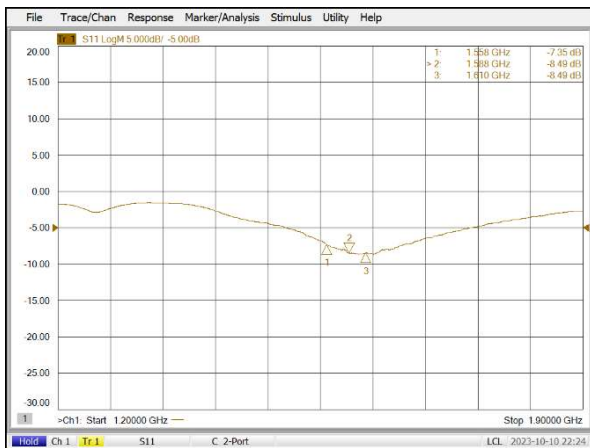


3-1-2- Bend test:

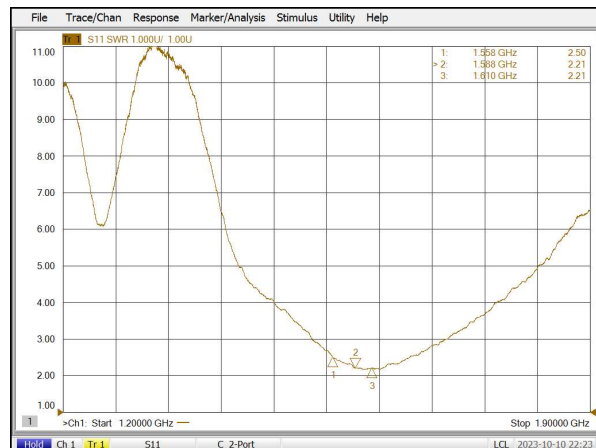
Antenna is mounted on 20 cm x 25 cm ABS sheet and bent by the radius of 15 cm (± 2 cm) and at least 1m far from the ground plane.



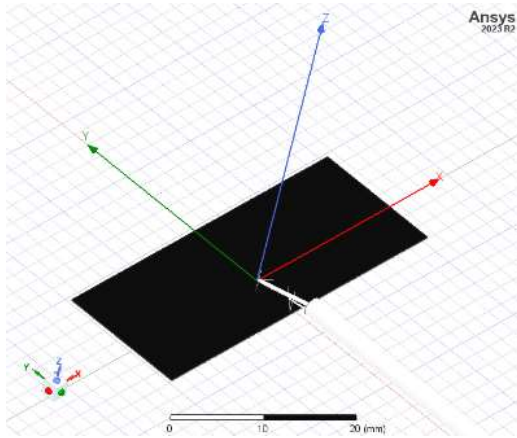
Return loss:



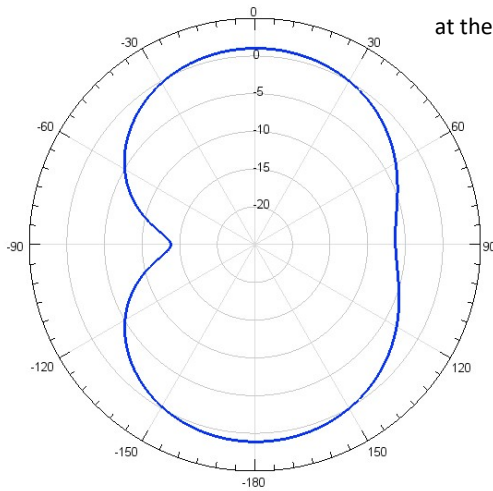
VSWR:



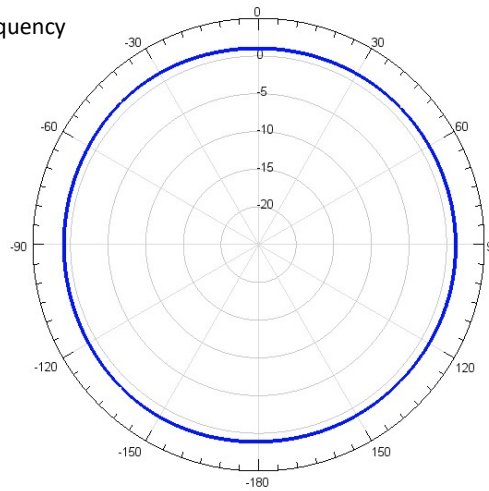
3-2- Simulated far-field pattern (dBi):



Gain Plot (Phi=0)



Gain Plot (Phi=90)



Simulated total efficiency: > 80%

Simulated peak gain: 1.4 dBi

Disclaimers:

- All test are performed in the lab environment (no anechoic chamber).
- Depending on the sheet and parts around the antenna, results may vary.
- All tests and results are with 50 mm cable length.



Part Number	Cable Length
650-10072-01 REVB-2	50 mm
650-10072-02 REVB-2	100 mm

Sales Contact:

Email: conner.thomason@acesconn.com

R&D Contact:

Email: Mickey.felton@acesconn.com

Office: 404-874-4474

