



REGULATORY TESTING FROM START TO CERTIFICATE

Intro

Antenna gain documentation required for all FCC Part 15 devices. Must provide either an antenna datasheet/ specification or a test report with gain measurements and plots. This Information cannot be held confidential. Additionally, proprietary information of the design itself can remain confidential in either the ' operational description' or 'schematic'.

Flipper Handheld Antenna Specifications

1. **Company:** Commcrete Ltd
2. **Product name:** Flipper Handheld Antenna
HTS-110 (Pole Mounted) / HTS-111 (Gooseneck Mounted)
3. **RF module/chip:** N/A (Passive Antenna)
4. **Antenna description**

Antenna type	Omni Directional Single Patch
Antenna manufacturer	PN: PA45-1592-175SA Manufacturer: API – Spectrum Control Antennas
Antenna datasheet	Attached
Frequency range	Tx: 1626.5-1660.5 MHz Rx: 1525-1559 MHz
Modulation	N/A
Antenna gain max (peak)	0dBi max -0.5dBi average
Cable loss	0.5dB
Connector type	TNC

5. Antenna layout

PCB:

3D:



6. Antenna radiation pattern

Please refer to [appendix A >>](#)

7. Antenna photos

PCB antenna



Omnidirectional single patch commercial antenna for Inmarsat Satellite Applications.
The PCB is the ground plane for the antenna (~30mm sq) and the feeder is soldered to a TNC connector.
The antenna is finally covered with a thin skin of Polycarbonate radome.

8. RF Auxiliaries

The antenna is mechanically mounted on the side pole of the Flipper and connected to it with a short coaxial cable.



Appendix A - Radiation Pattern

RP – Rx & Tx (similar)

**35 mm sq.
Ground plane**
Ground plane
thickness is minimal

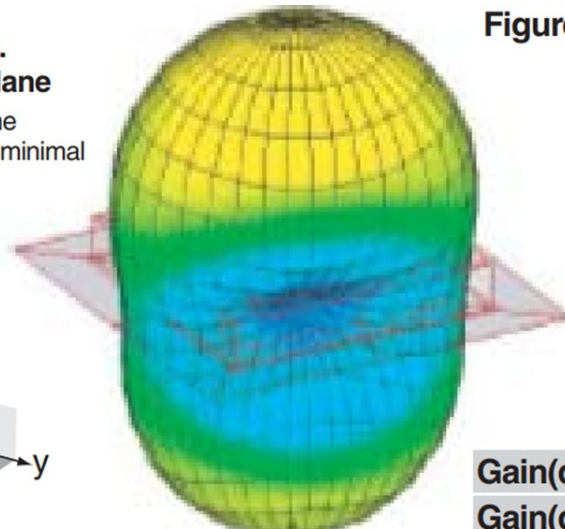
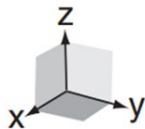


Figure 1



Gain(dB) 1.640GHz

Gain(dB) 1.540GHz

Having the antenna covered with a radome, the peak gain is 0dBi.