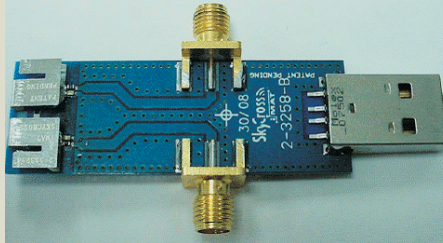


iMAT-1114
Antenna element

iMAT-1114-A

Assembly including antenna element, PCB,
and connectors as shown



iMAT
2.4-2.5 GHz
WiFi Antenna

Features

- Single antenna structure with multiple feeds behaves like multiple antennas
- Ready-made diversity or MIMO antenna system
- High isolation, low correlation, and high efficiency in a very small footprint
- Surface mount technology & common materials translate to cost effective manufacturing

Mechanical Specifications

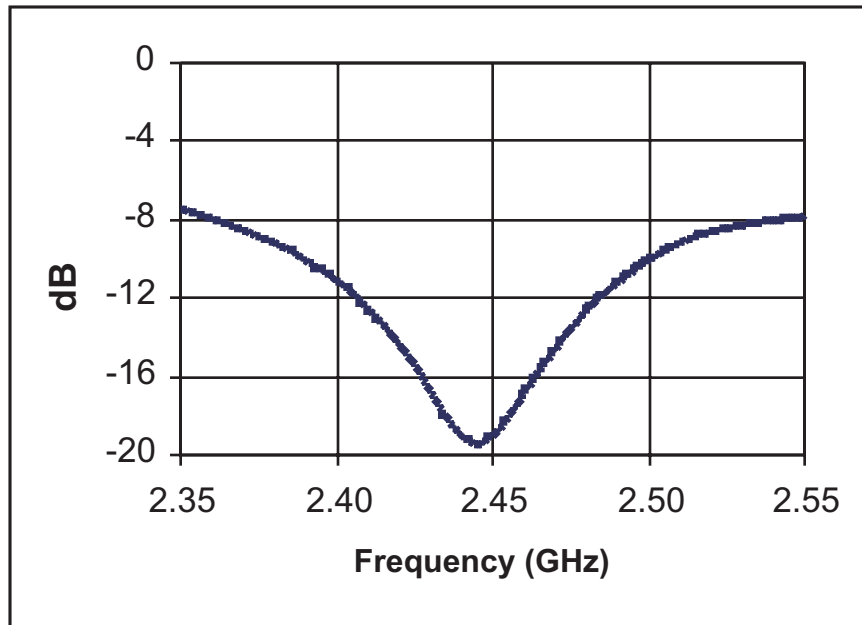
| | |
|----------------------------|--|
| Antenna Element | 0.32 x 0.71 x 0.10 in 8.2 x 18 x 2.6 mm |
| Assembly PCB | 2.12 x 0.75 in 54.0 x 19.0 mm |
| Area of PCB that is Ground | 1.7 x 0.75 in 43.0 x 19.0 mm |
| Antenna Element Weight | 0.4 g |

Electrical Specifications

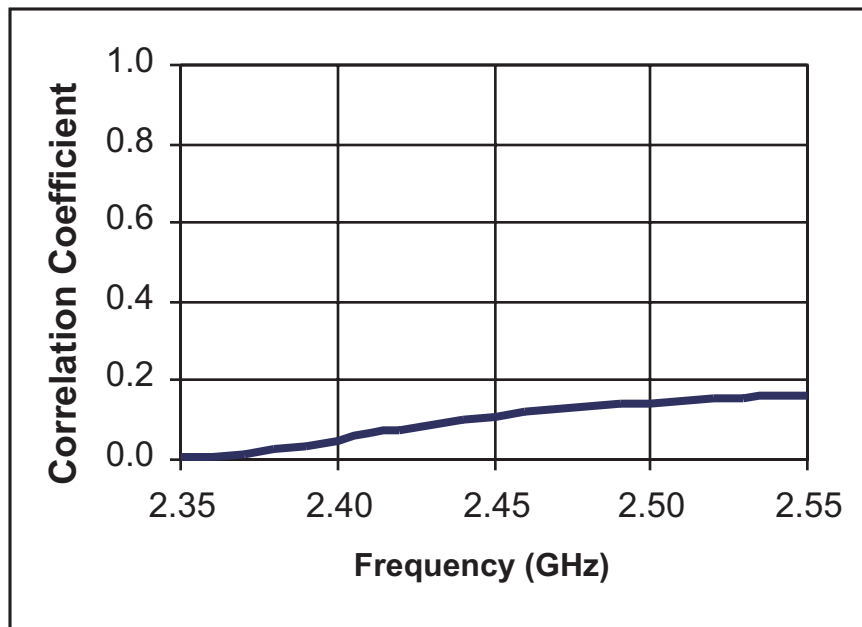
| | |
|----------------------------------|----------------------------|
| Frequency Range | 2.4-2.5 GHz |
| Gain | >1.5 dBi at 2.45 GHz |
| VSWR | <2.2:1 across band |
| Isolation | < -8 dB across band |
| Envelope Correlation Coefficient | <0.3 across band |
| Polarization | Linear |
| Radiation Pattern | Elevation omni-directional |
| Feed Impedance | 50 Ohms Unbalanced |

All antenna measurements are taken in free space. Antenna will need to be customized (tuned and/or trimmed) to achieve similar performance when fitted in a plastic enclosure. Results may vary depending on the particular implementation.

Isolation: S21 (1 to 2)



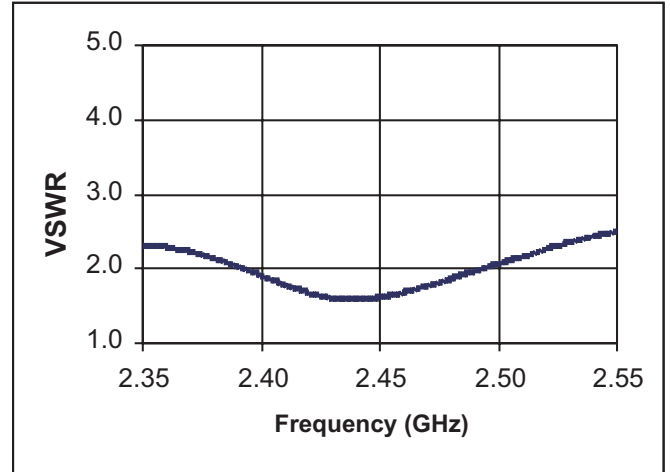
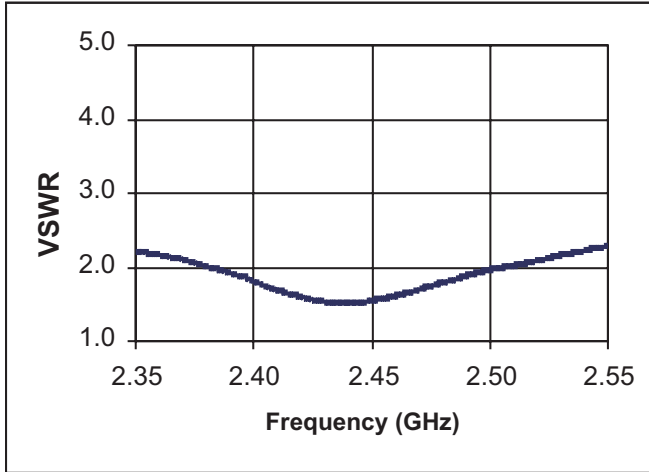
Envelope Correlation Coefficient



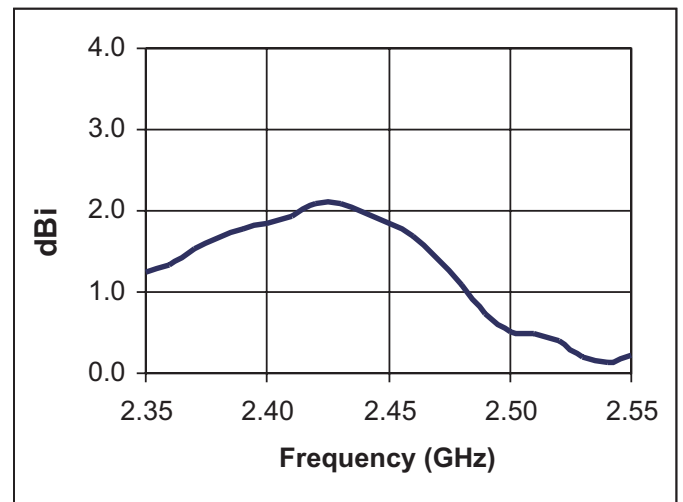
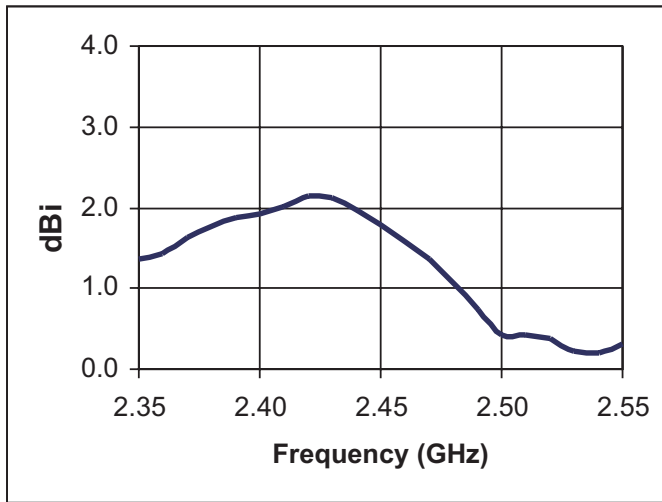
Port 1

Port 2

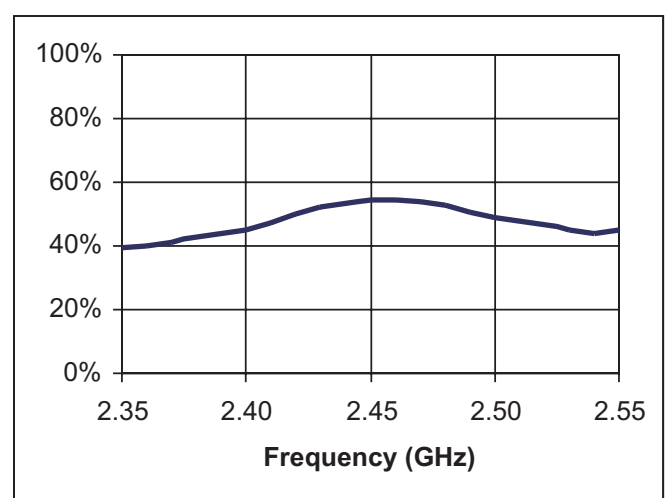
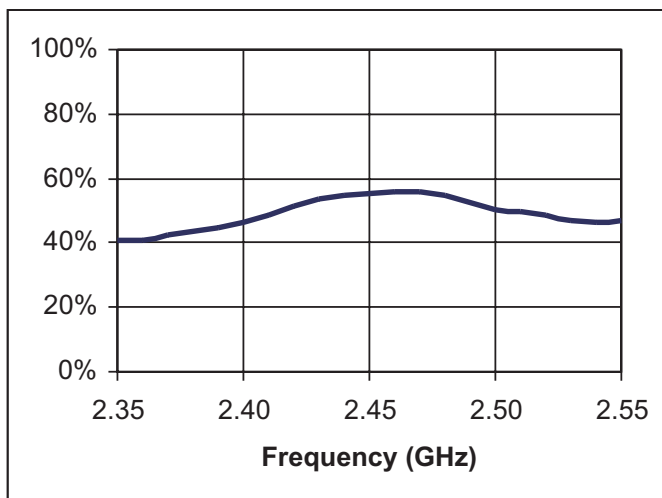
VSWR



Peak Gain



Efficiency

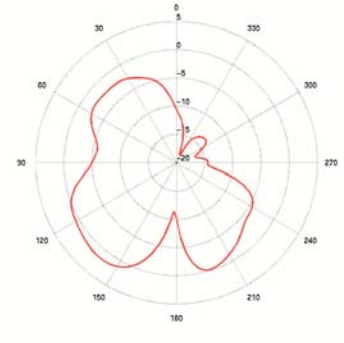
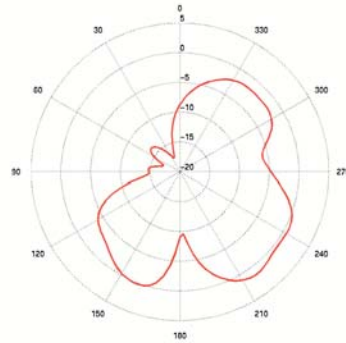


Diagrams Below are at 2.45 GHz

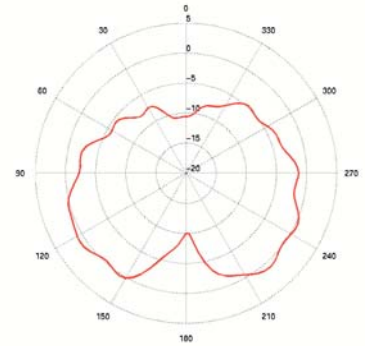
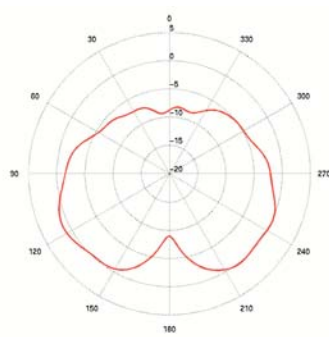
Port 1

Port 2

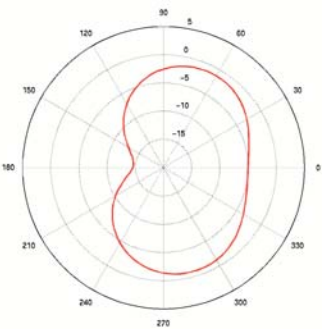
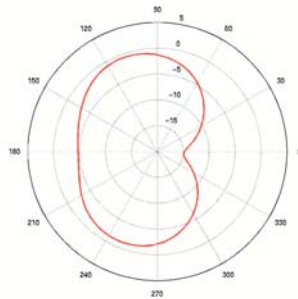
Elevation Cut **Phi=0 Degrees**



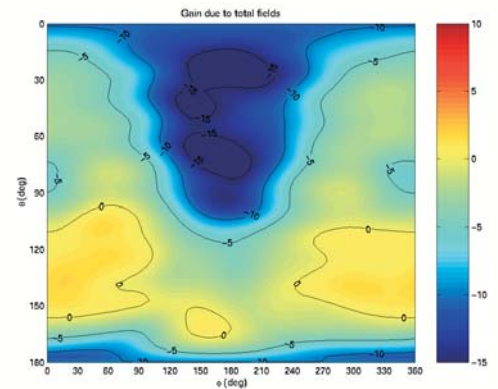
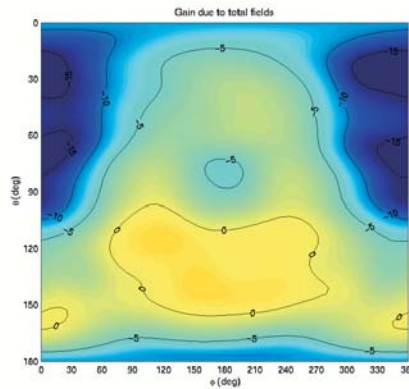
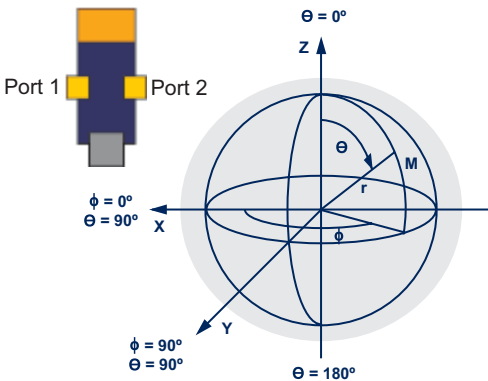
Elevation Cut **Phi=90 Degrees**



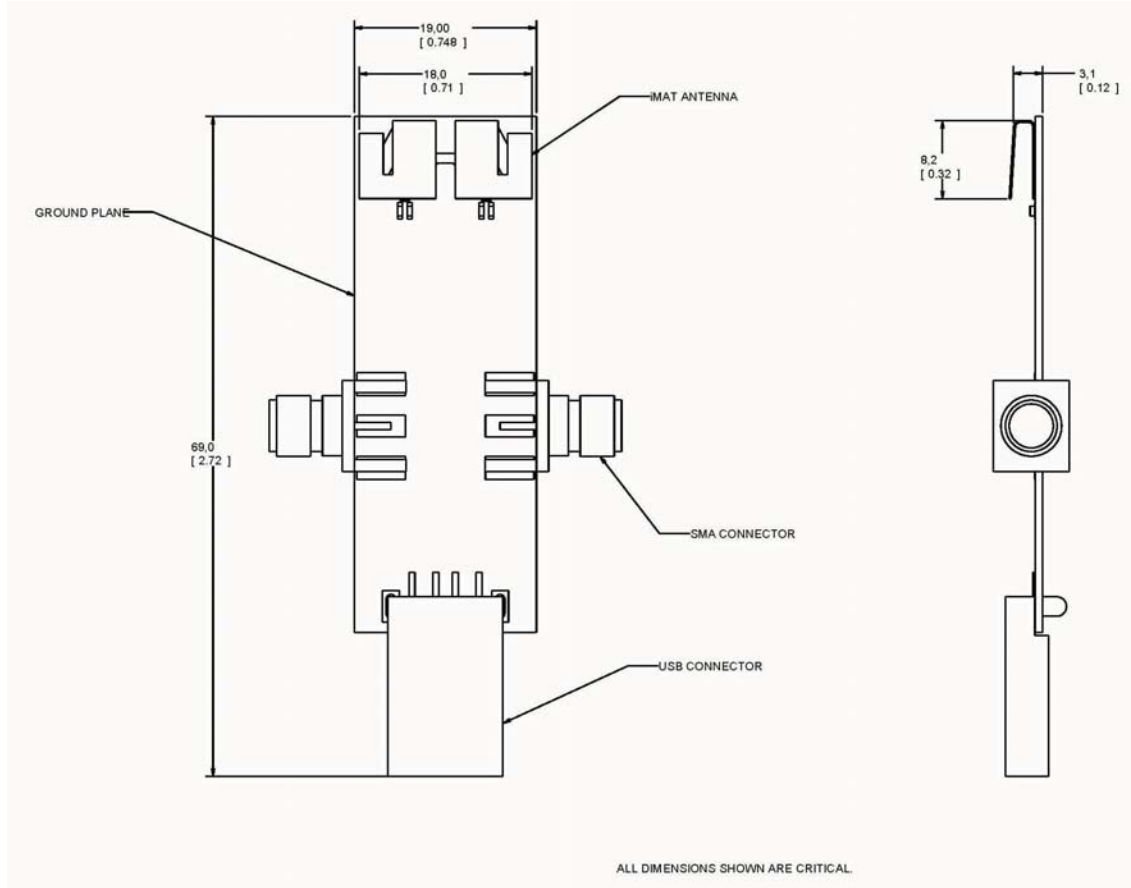
Azimuth Cut **Theta=90 Degrees**



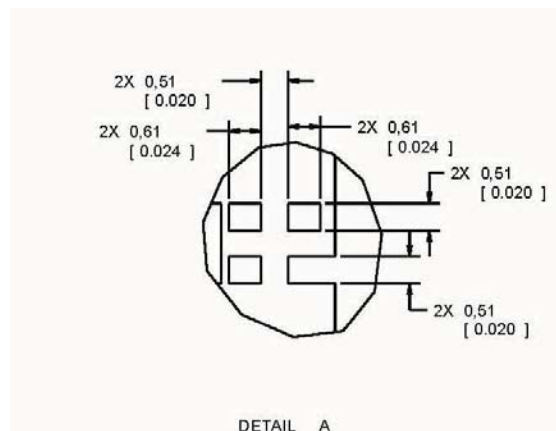
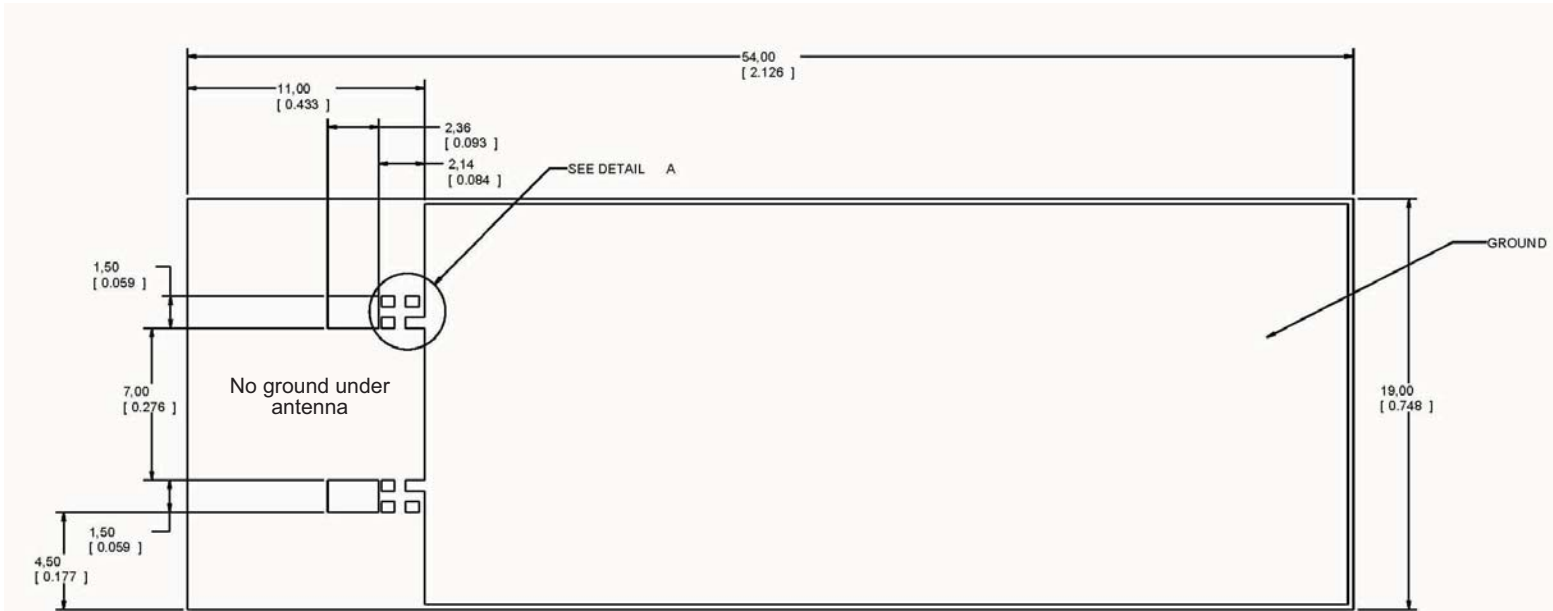
Spherical Gain Contour Map



Footprint



Footprint



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