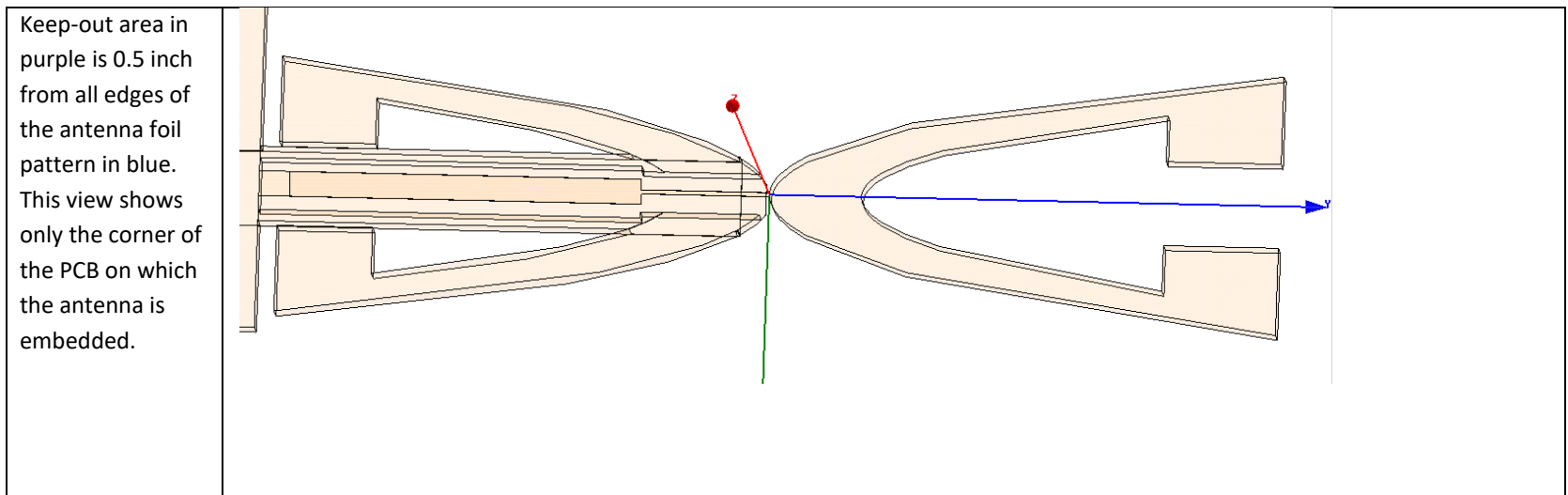

Embedded Element Specification

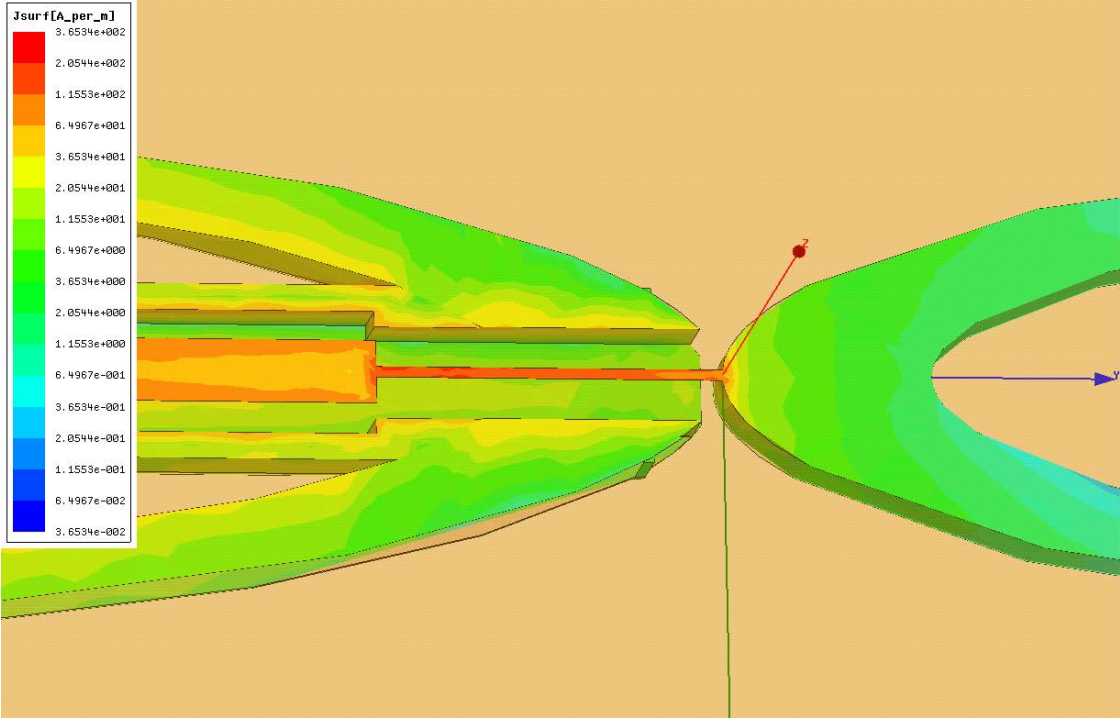
Part Number	31000003-01
Revision	A
Element Type	2.4 & 5.5 GHz balanced & compressed bow tie Antennae
Description	2.4 & 5.5 GHz diversity Antennae
Frequency	2400-2483 MHz & 5.15-5.85 GHz
Date	9/29/2011
Designer	Robert Ridgeway

integration

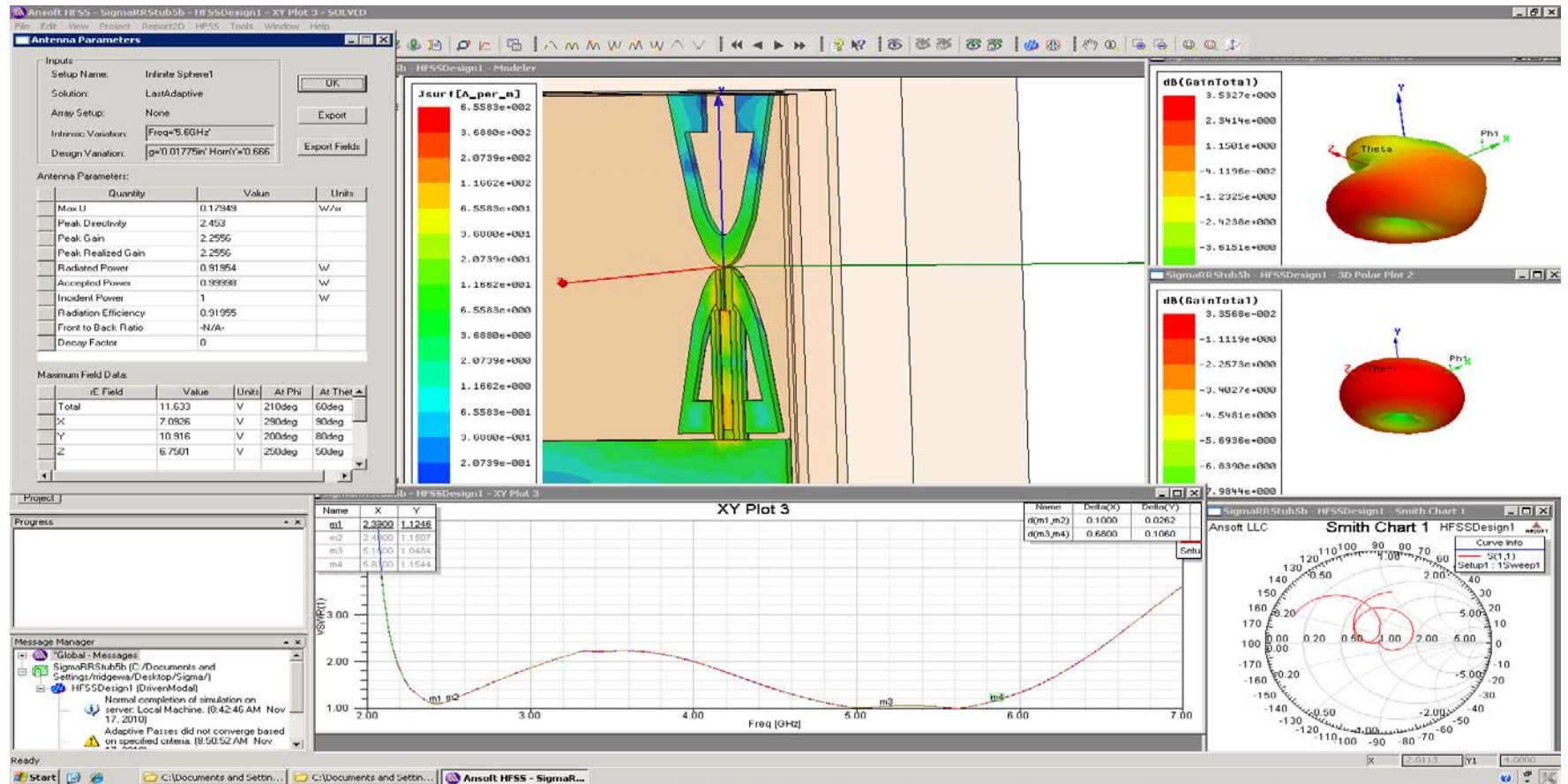
PCB	Material: ISOLA370HR, Dk = 3.7 @ 2.4GHz 38 mil thick dielectric yields 40 thick PCB with copper laminates. Copper: 1 oz all layers
Enclosure	Model assumes ABS plastic (Dk = 3. @ 2.4GHz) surface 0.5" from antenna on all sides.





	
Special Considerations	1) Designed for use with specific enclosure? (Digi PN?) 2) Ground plane requirements? There needs to be > 0.1" insulator gap between the pcb ground the two antenna arms at the bottom. 3) Other dependencies (This antenna requires a plastic enclosure for proper dielectric loading & correct frequency performance) 4) Special feed point requirements – The ground plane used here is made with the two outer layers for maximum thickness.

Simulation Results



Measured S11

Measured S11 Magnitude in Smith chart format all are with plastic cover.

3D radiation Pattern (and Gain) is similar to doughnut with maximum gain on the horizon.

2d-radiation patterns (E-field)

Change Log

Revision	Date	Author	Sections	Comment
A	9/29/2011	Robert Ridgeway	All	Initial Document