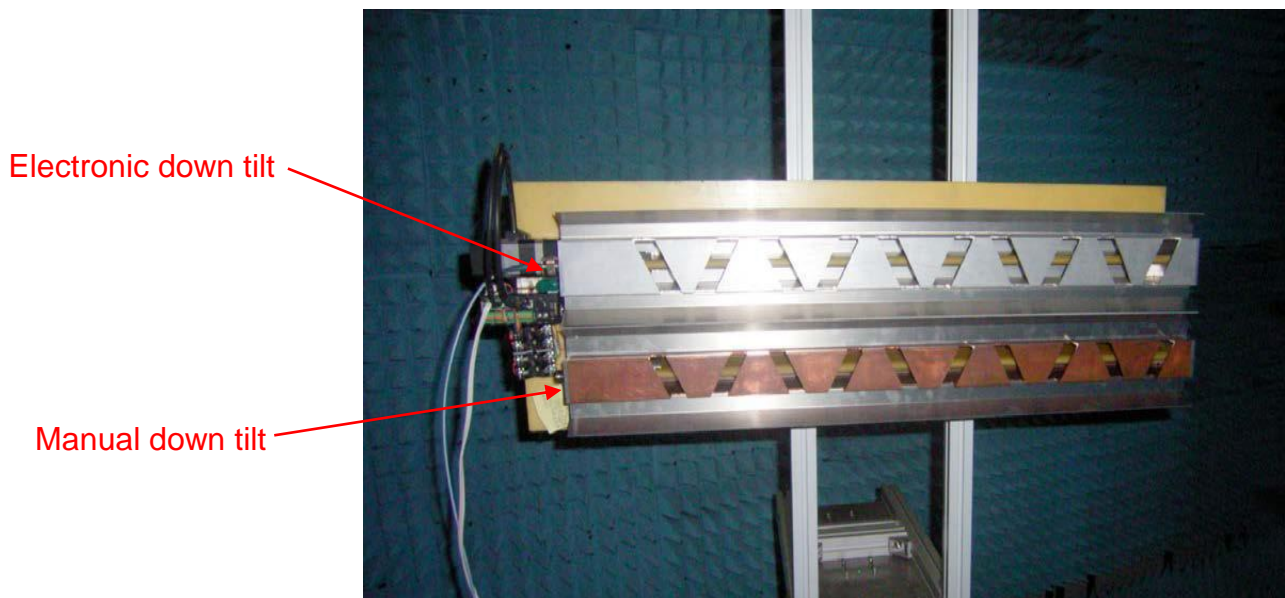




VICTORY MICROWAVE CORPORATION

Base Station Sector Antenna With Downtilt Capability

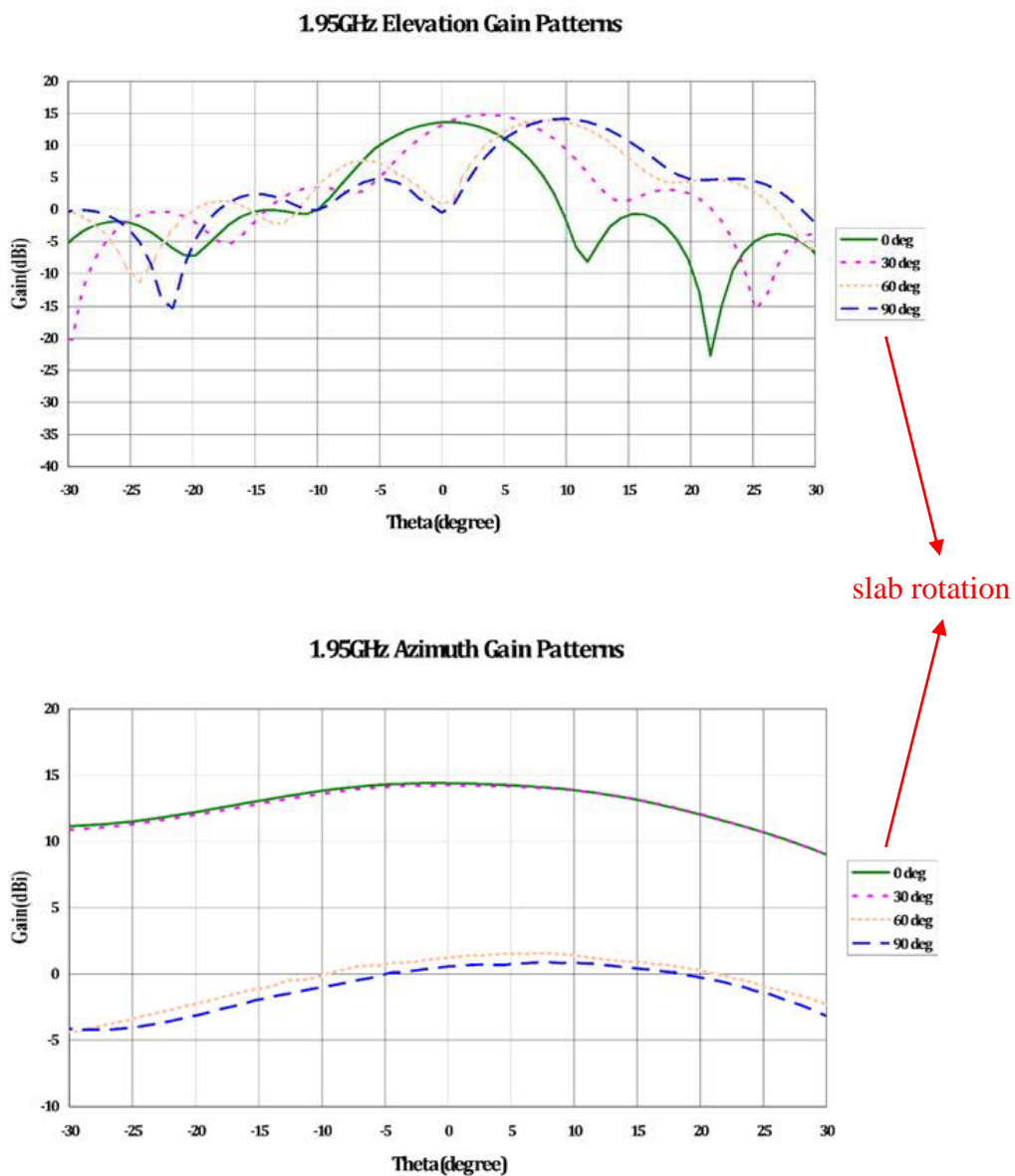


- **Transmit + receive antennas, attached together to a single structure.**



Results (1.95GHz, 0° DownTilt)

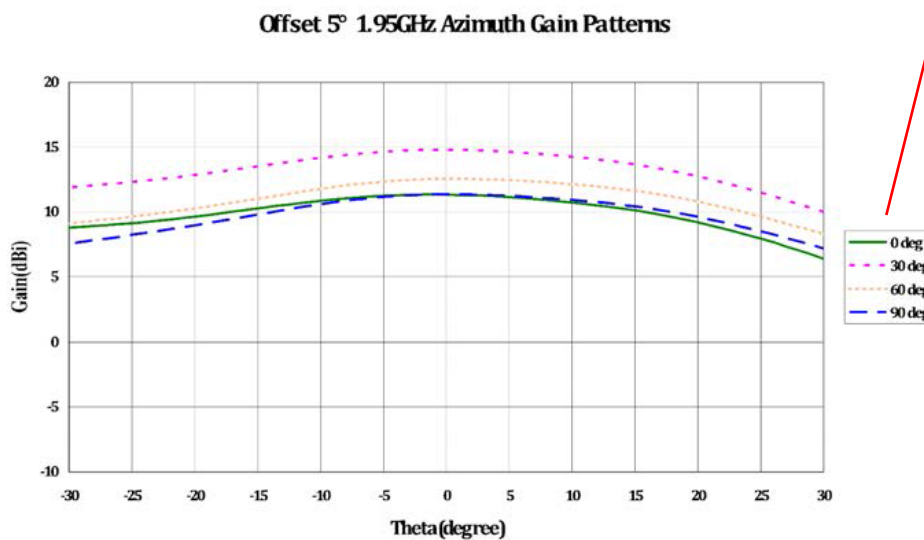
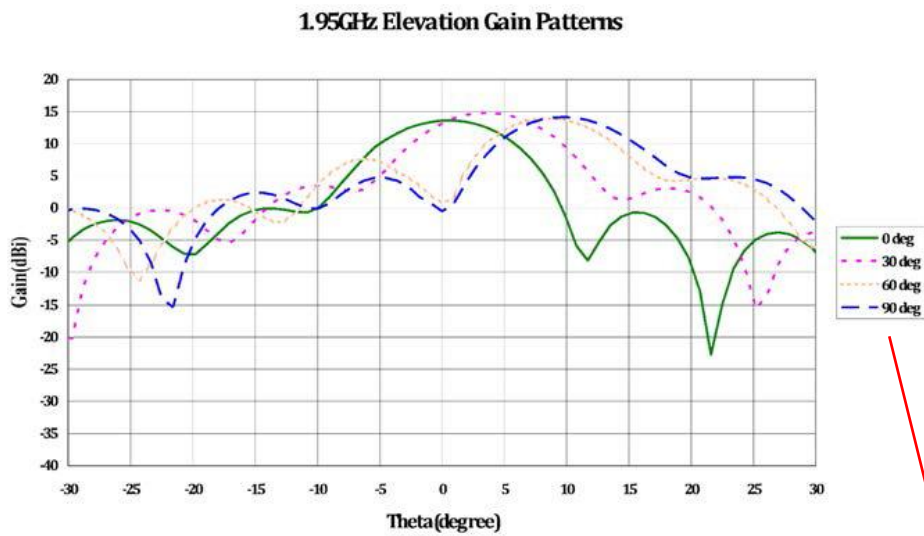
- Elevation of peak a function of slab orientation
90° slab orientation corresponds to a 10° downtilt
- Azimuth pattern at 0° for different downtilts (slab orientation) retains relatively same shape





Results (1.95GHz, 5° DownTilt)

- Elevation of peak a function of slab orientation
90° slab orientation corresponds to a 10° downtilt
- Azimuth pattern at 5° offset remains relatively the same across different offsets.

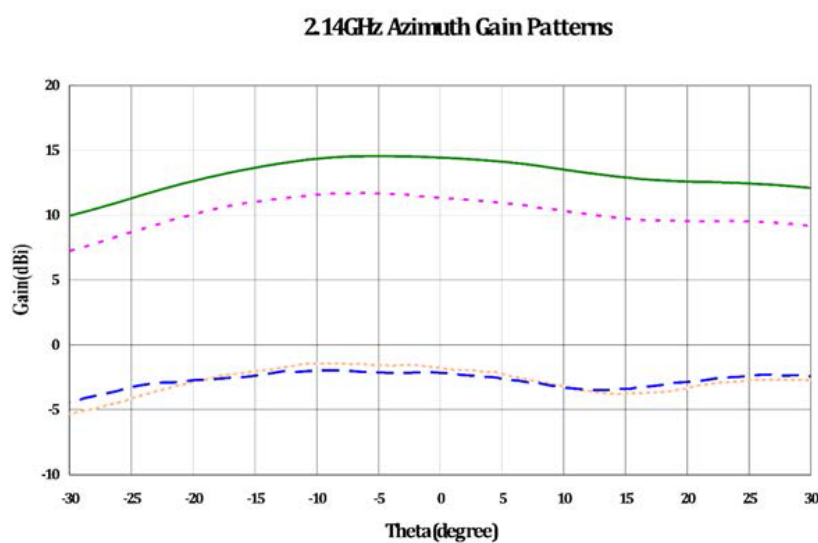
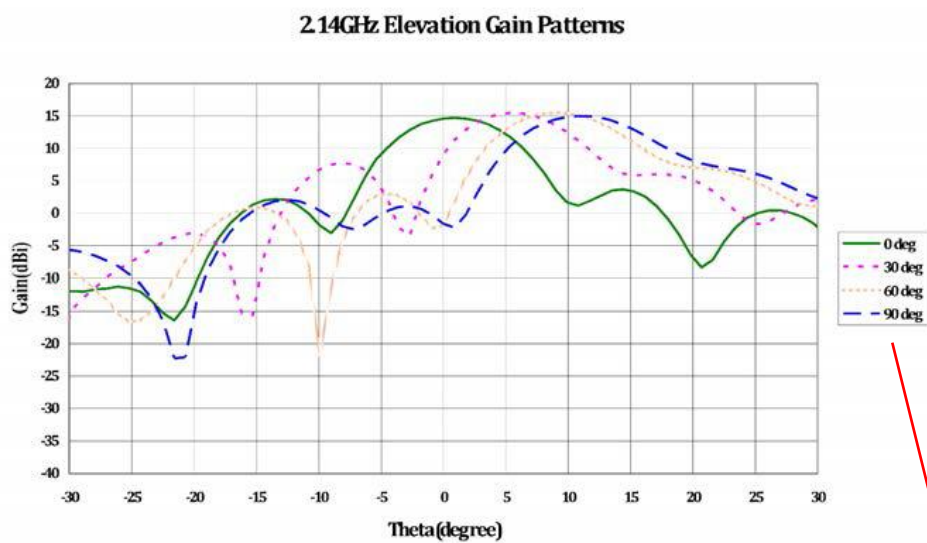


slab rotation



Results (2.14GHz, 0° DownTilt)

- Elevation of peak a function of slab orientation
90° slab orientation corresponds to a 10° downtilt
- Azimuth pattern at 0° for different downtilts (slab orientation) retains relatively same shape



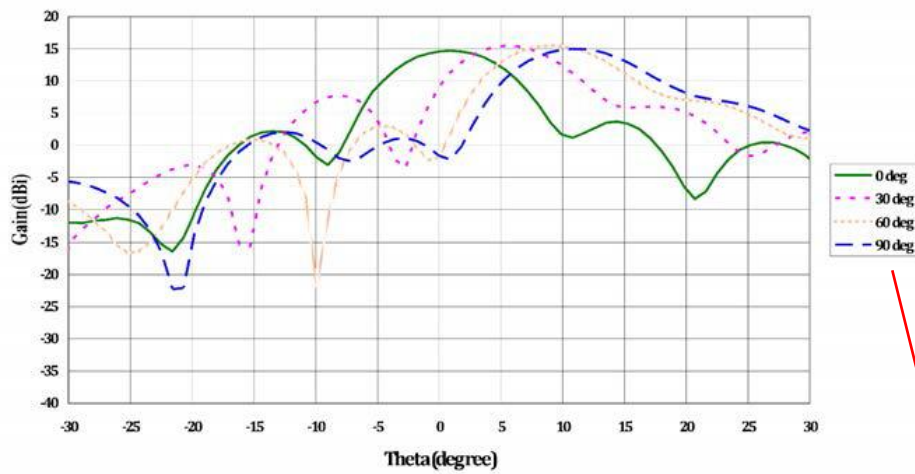
slab rotation



Results (2.14GHz, 5° DownTilt)

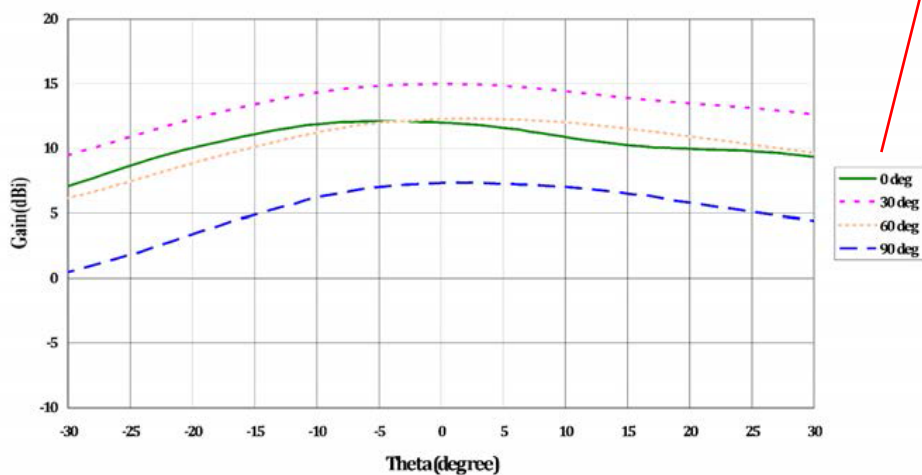
- Elevation of peak a function of slab orientation
90° slab orientation corresponds to a 10° downtilt
- Azimuth pattern at 5° offset relatively constant for a given slab orientation

2.14GHz Elevation Gain Patterns



slab rotation

Offset 5° 2.14GHz Azimuth Gain Patterns

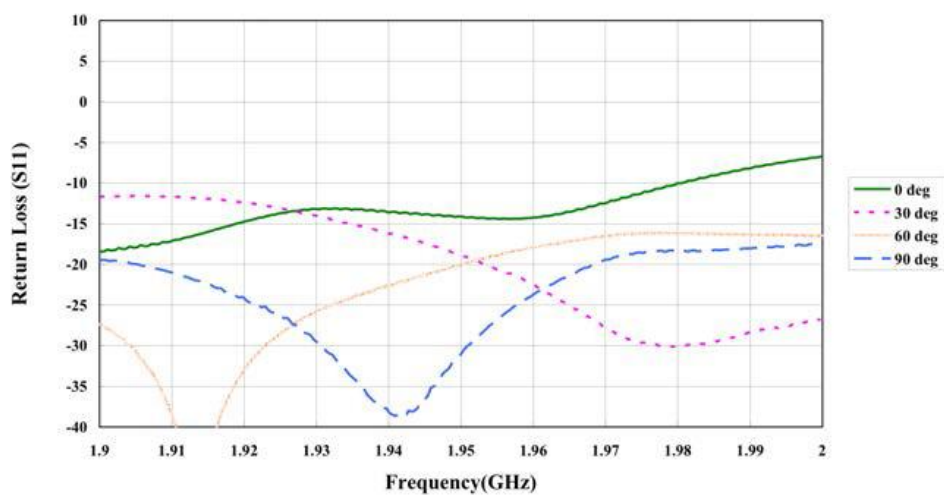




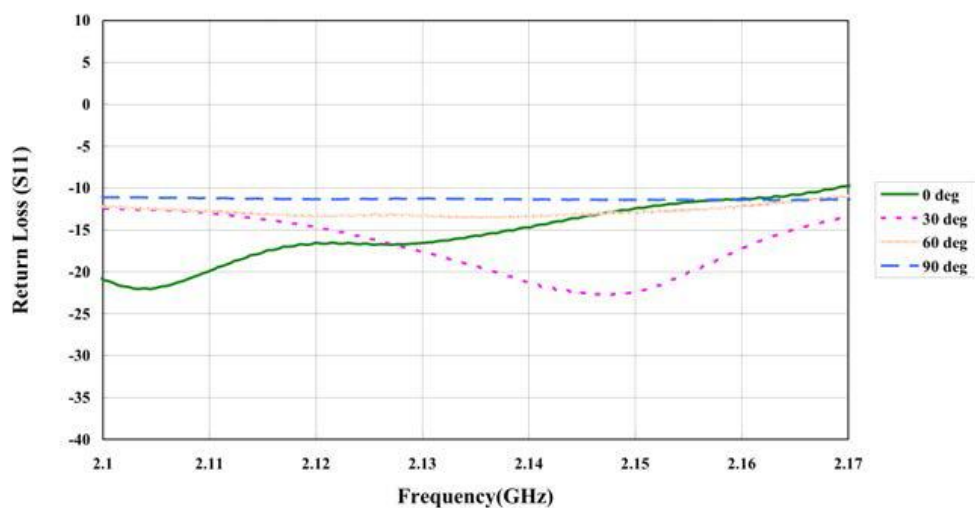
Return Loss

- Return loss varied with the slab orientation
- Over all conditions, the return loss was under 10 db which is acceptable for antenna designs.

1. 92-1.98GHz Antenna



2. 11-2.17GHz Antenna





Isolation

- Isolation is better than -25dB, indicating little interference between the two antennas.
- If additional isolation is needed between Tx and Rx bands, a band-pass filter can be used.

