

EXHIBIT 2

ANTENNA BEAM PATTERN

X-band Communications Payload Transmit Antenna

Peak Gain: 19.7dBi

Half power beam width: 18 x 5 degs

Orientation in horizontal plane: N/A

Orientation in vertical plane N/A

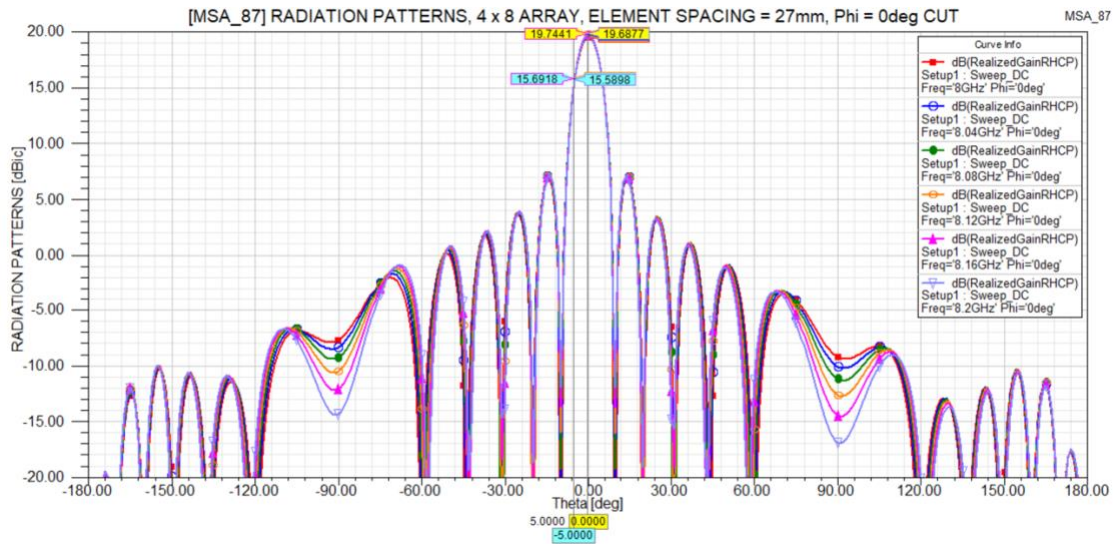


Figure 1. X-band Antenna Radiation Pattern: 0deg cut

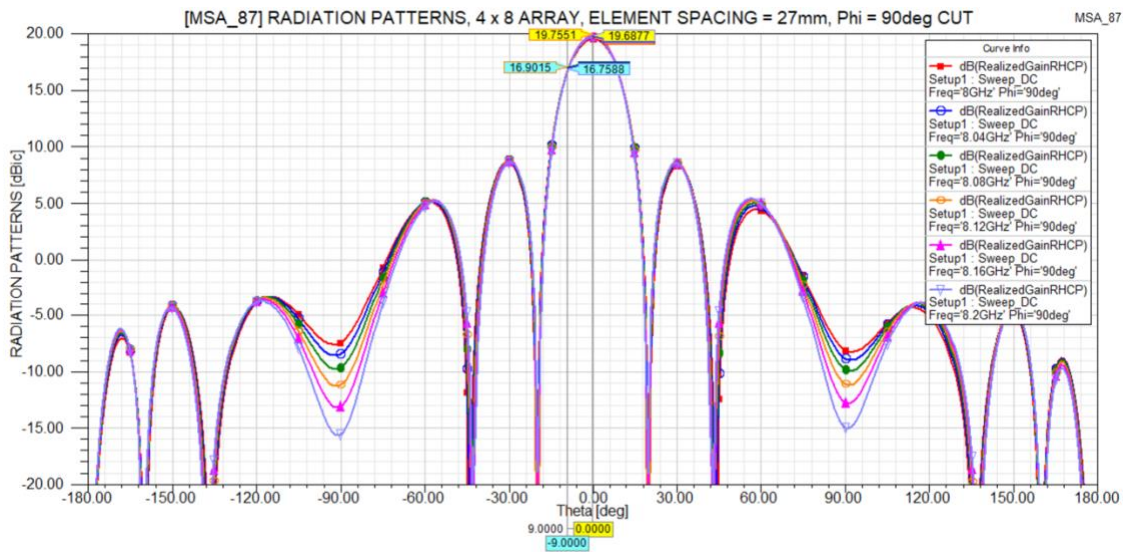


Figure 2. X-band Payload Antenna Radiation Pattern: 90deg cut

X-band Communications TTnC Transmit Antenna

Peak Gain: 6.09 dBi

Half power beam width: 98 degs

Orientation in horizontal plane: N/A

Orientation in vertical plane N/A

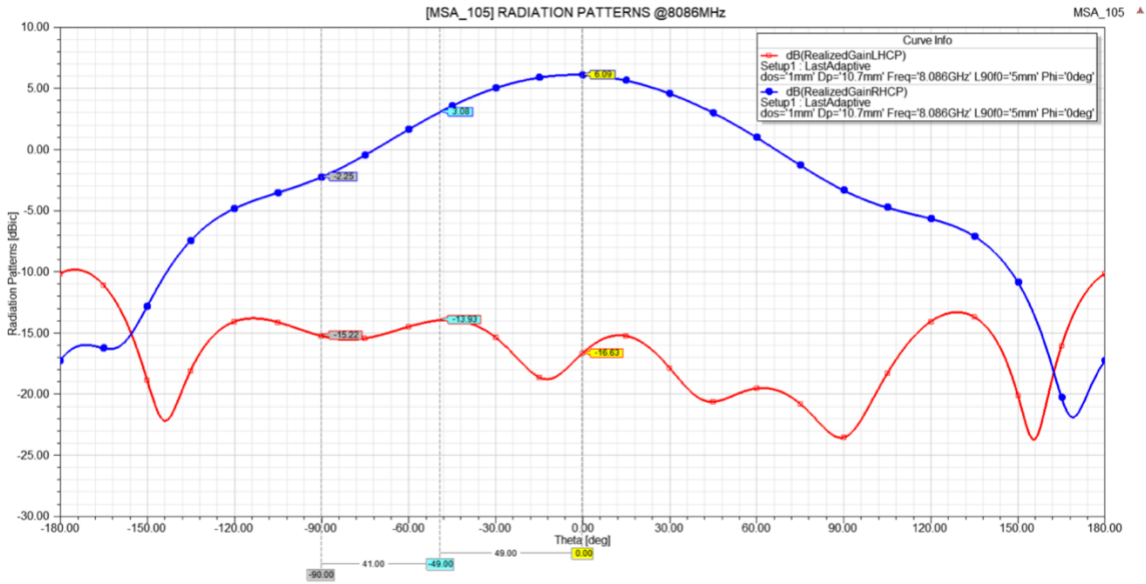


Figure 3. X-band TTnC Antenna Radiation Pattern

S-band Communications TTnC Receive Antenna

Peak Gain: 4.38dBi

Half power beam width: 102 degs

Orientation in horizontal plane: N/A

Orientation in vertical plane N/A

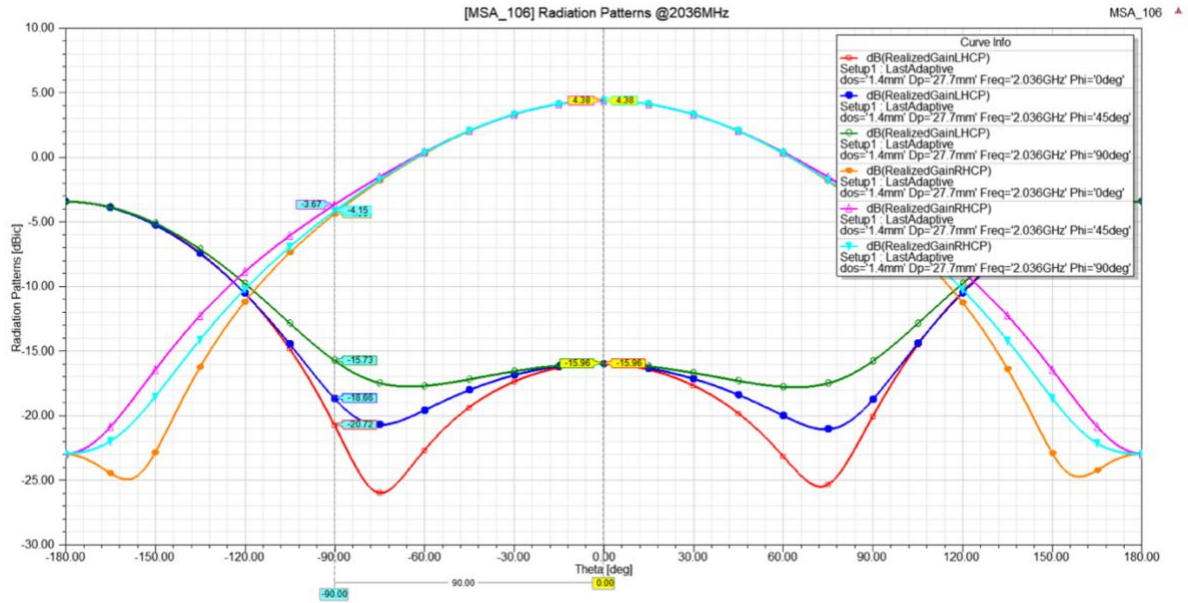


Figure 4. S-band TTnC Antenna Radiation Pattern