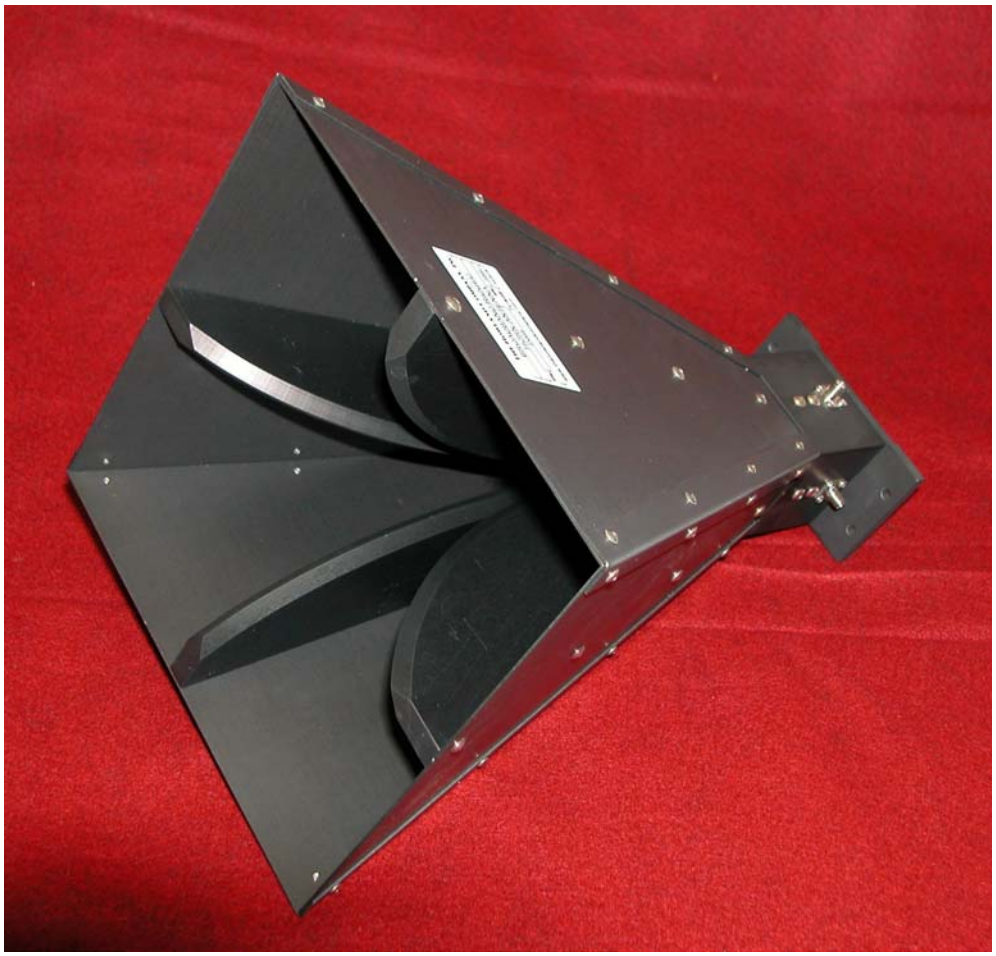
Model QR-1 Quad-ridged Horn

Reference Information



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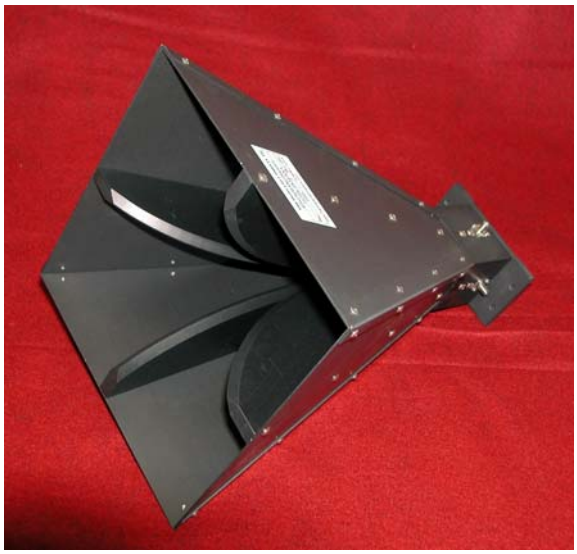
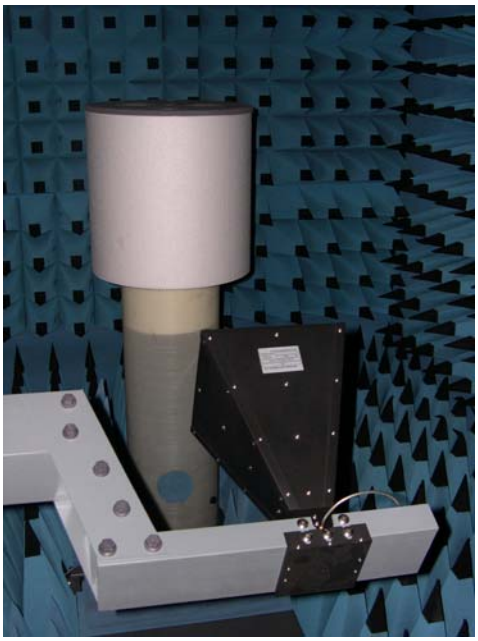
Data Sheet
Model QR-1 Quad Ridged Horn





Description

The Model QR-1 is a broad bandwidth, dual polarized horn antenna designed for wireless device measurements. It can be used as the measurement antenna in all Howland Wireless Test Labs. The QR-1 is designed with a minimum overall length in order to maximize the range length in the wireless test lab

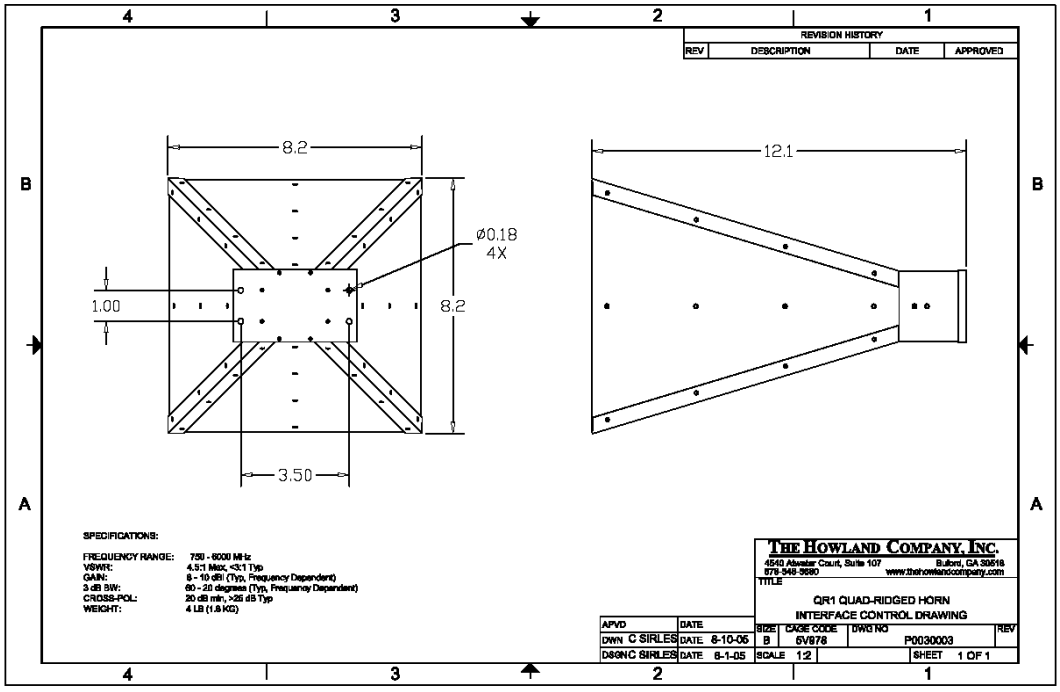
Features

- Frequency range of 700MHz to 6 GHz
- Light weight
- Small size
- Dual linear polarization
- High cross polarization isolation
- Low return loss

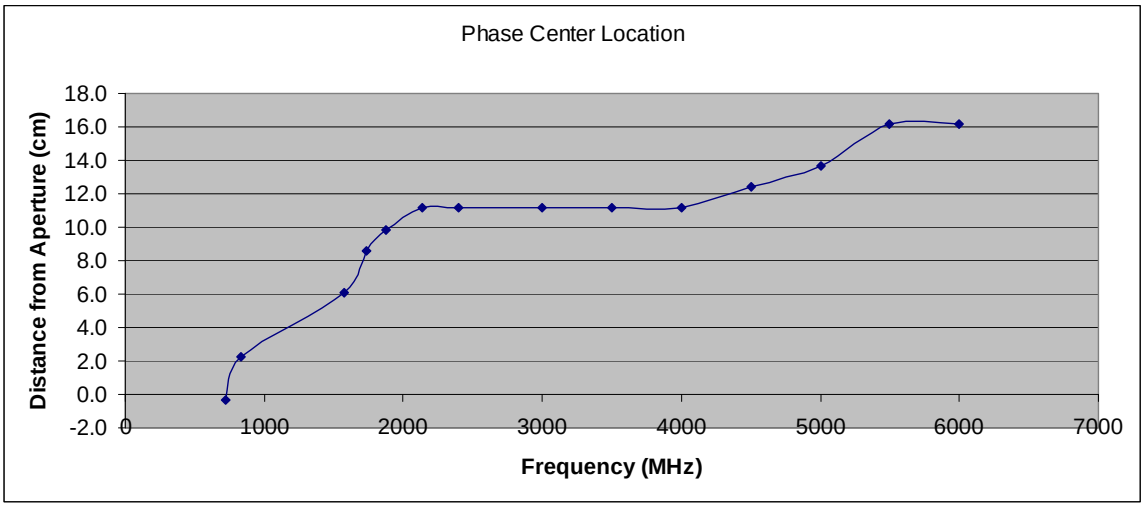
Specifications

Characteristic	Typical	Specification
Gain	6 dBi	Not specified
Efficiency	75%	Not specified
Cross Polarization Isolation	>20dB	>20dB
Return Loss	>10dB	>5dB
Maximum Power Input	30watts	30watts
Length	12 inches(30cm)	12 inches (30cm)
Weight	5 lbs	5 lbs

Model QR-1 Interface Control Drawing

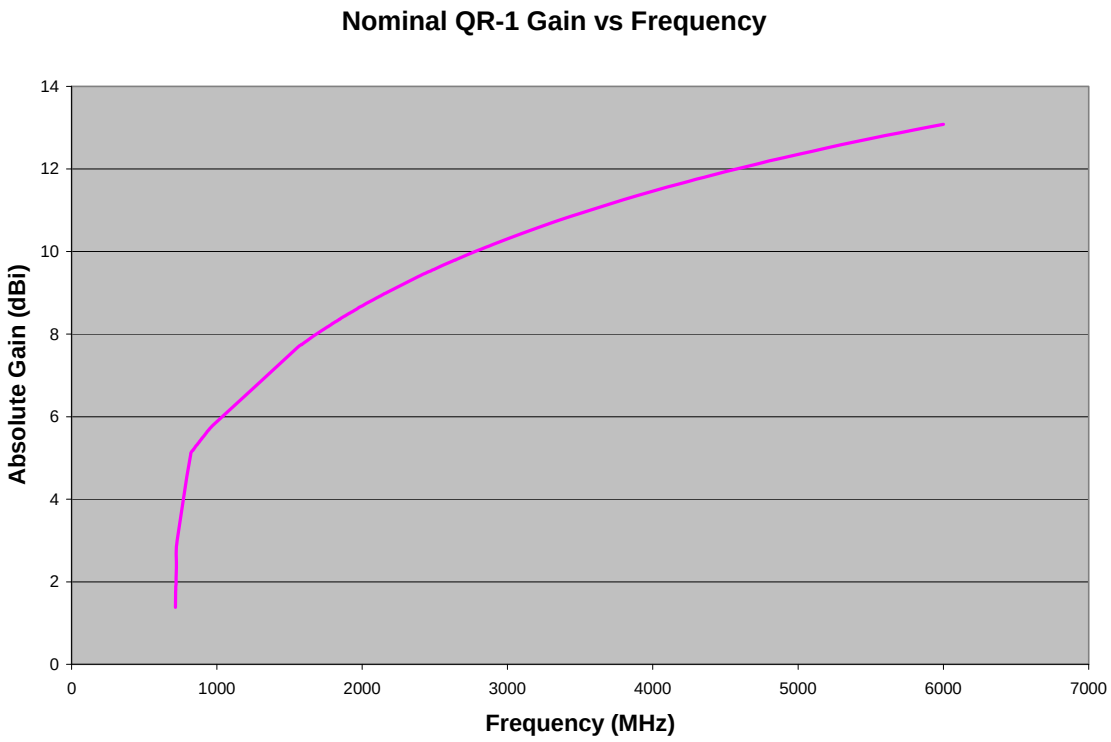


Model QR-1
Phase Center Location vs Frequency



Frequency (MHz)	Phase Center Distance from the Aperture (cm)
722	-0.3
836	2.2
1575	6.0
1732	8.6
1880	9.9
2132	11.1
2400	11.1
3000	11.1
3500	11.1
4000	11.1
4500	12.4
5000	13.7
5500	16.2
6000	16.2

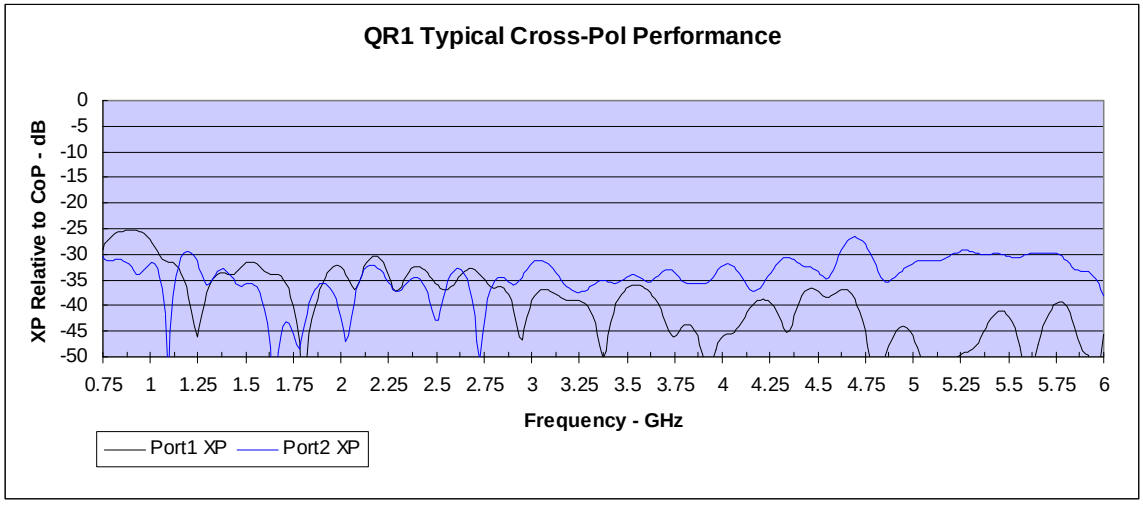
Model QR-1
Nominal Gain vs Frequency



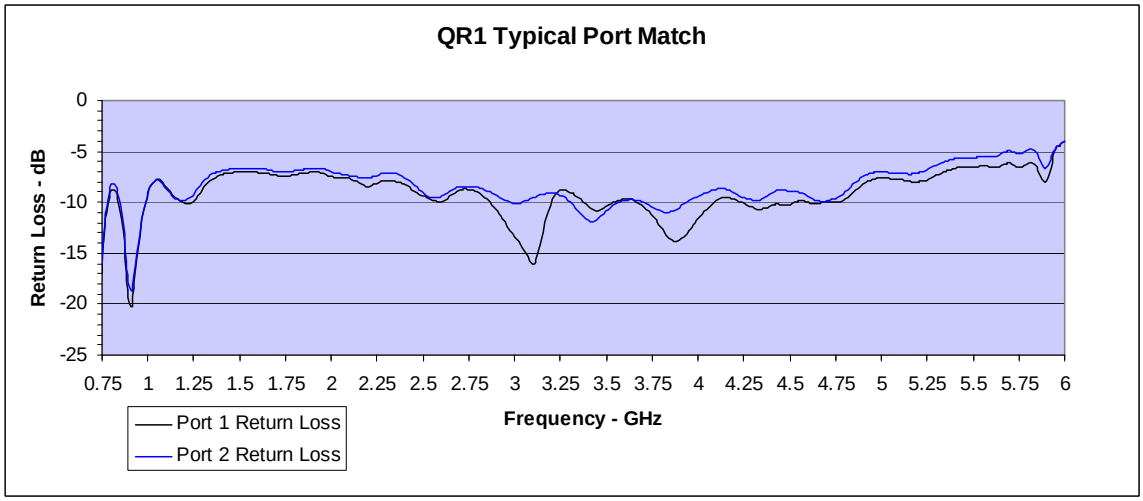
Model QR-1
Nominal Gain vs Frequency

Frequency (MHz)	Nominal Gain (dBi)	Frequency (MHz)	Nominal Gain (dBi)
714	1.4	2630	9.8
717	1.7	2642	9.8
719	2.0	2655	9.8
722	2.5	2800	10.0
724	2.9	2900	10.2
820	5.1	3000	10.3
835	5.2	3100	10.4
850	5.3	3200	10.6
869	5.3	3300	10.7
880	5.4	3400	10.8
882	5.4	3500	10.9
894	5.5	3600	11.0
898	5.5	3700	11.1
915	5.6	3800	11.3
925	5.6	3900	11.4
943	5.7	4000	11.5
960	5.7	4100	11.6
1559	7.7	4200	11.7
1585	7.8	4300	11.8
1610	7.8	4400	11.8
1710	8.1	4500	11.9
1748	8.1	4600	12.0
1785	8.2	4700	12.1
1805	8.3	4800	12.2
1842	8.4	4900	12.3
1850	8.4	5000	12.4
1880	8.4	5100	12.4
1910	8.5	5200	12.5
1930	8.5	5300	12.6
1960	8.6	5400	12.7
1990	8.7	5500	12.7
2110	8.9	5600	12.8
2140	9.0	5700	12.9
2170	9.0	5800	12.9
2400	9.4	5900	13.0
2442	9.5	6000	13.1
2484	9.6		

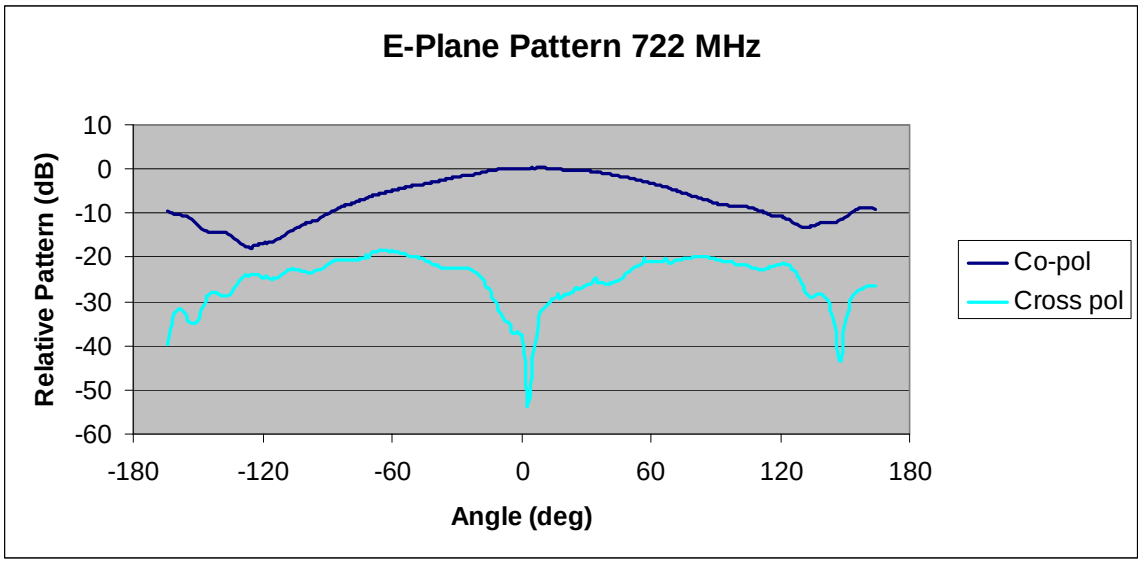
Model QR-1
Typical Cross Polarization

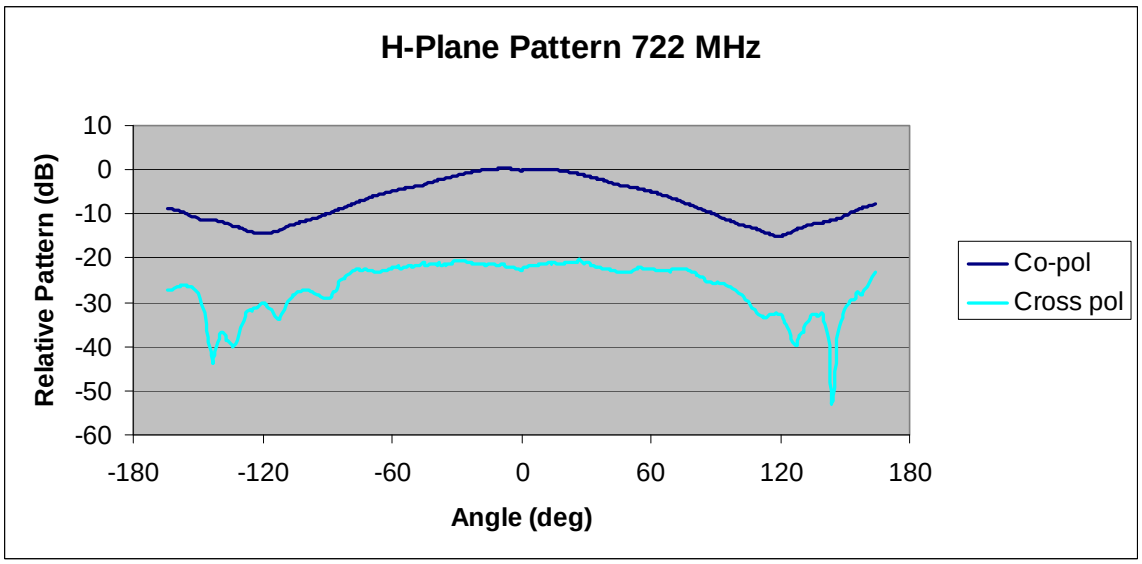


Model QR-1
Typical Return Loss

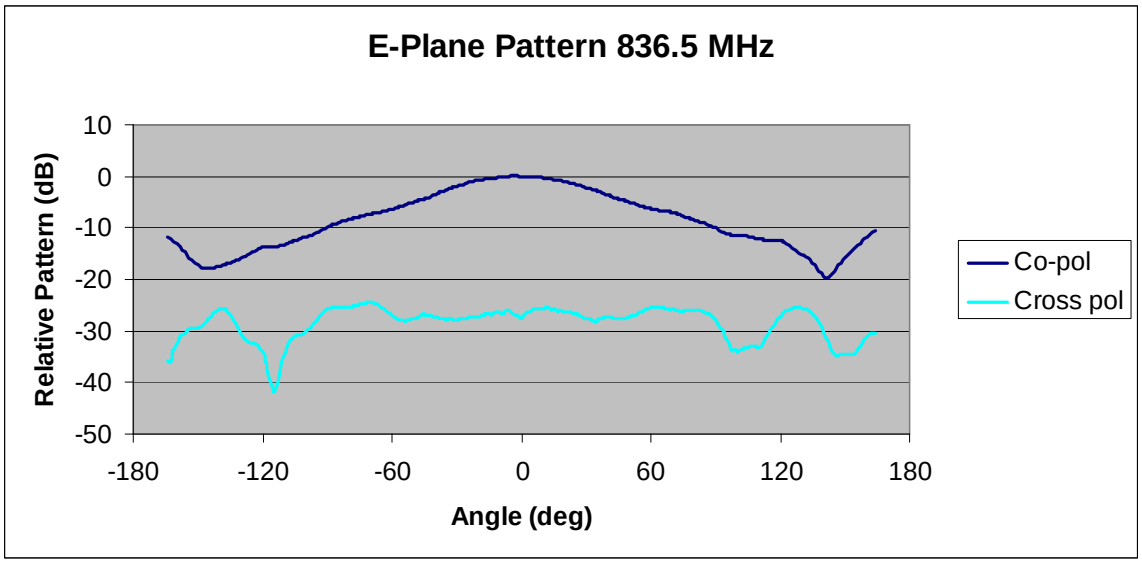


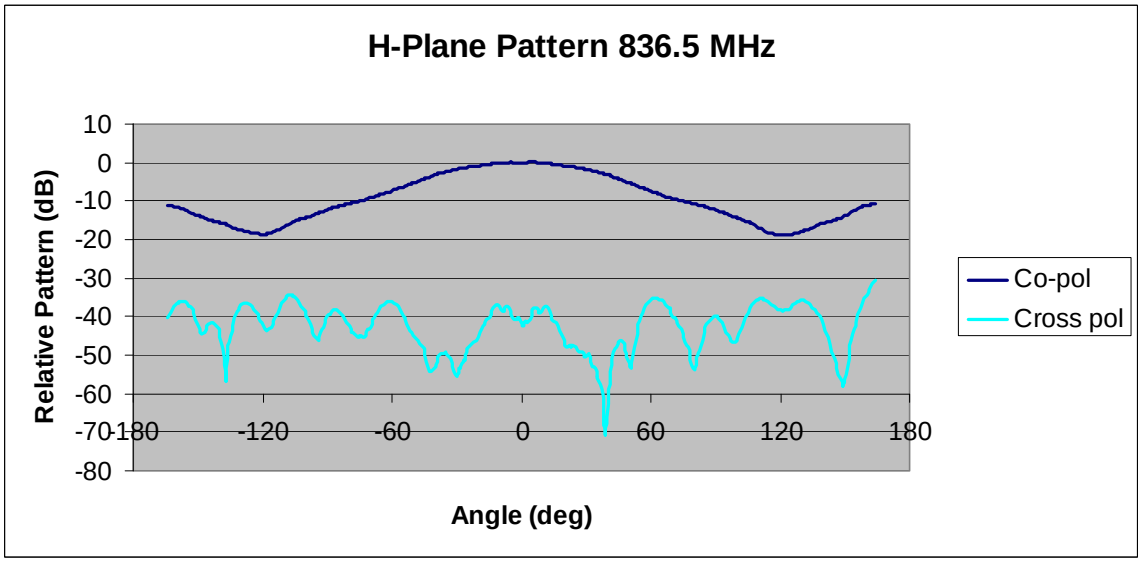
Model QR-1
Typical Radiation Pattern @ 722MHz



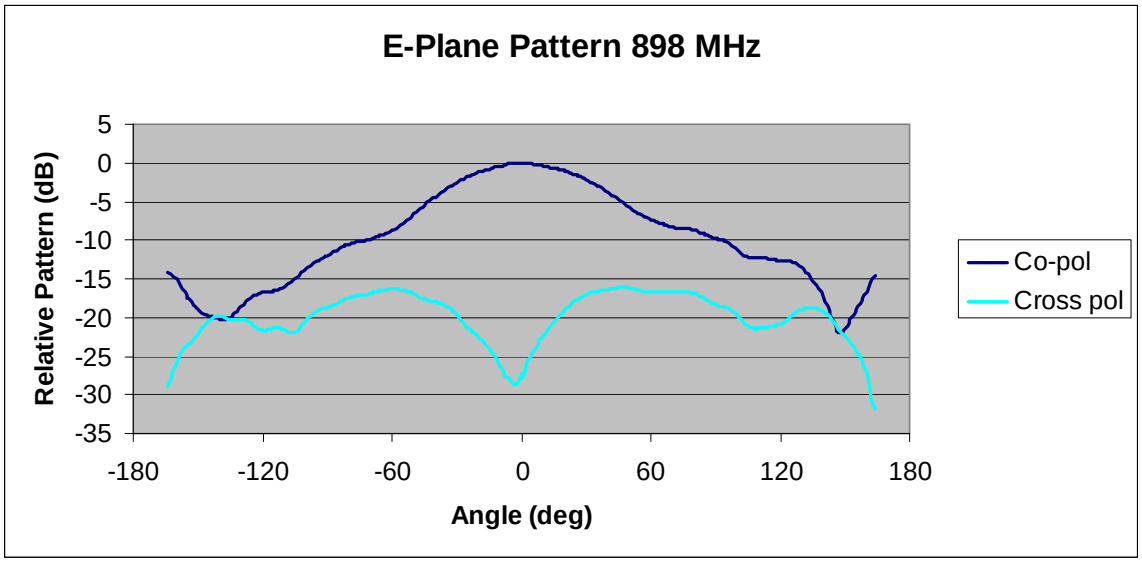


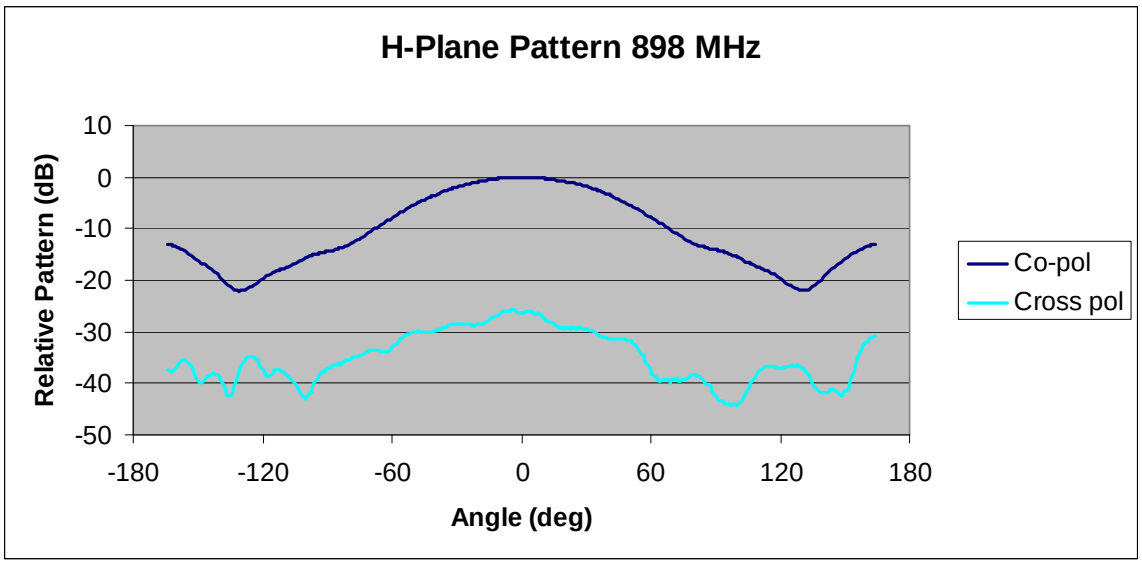
Model QR-1
Typical Radiation Pattern @ 836.5 MHz



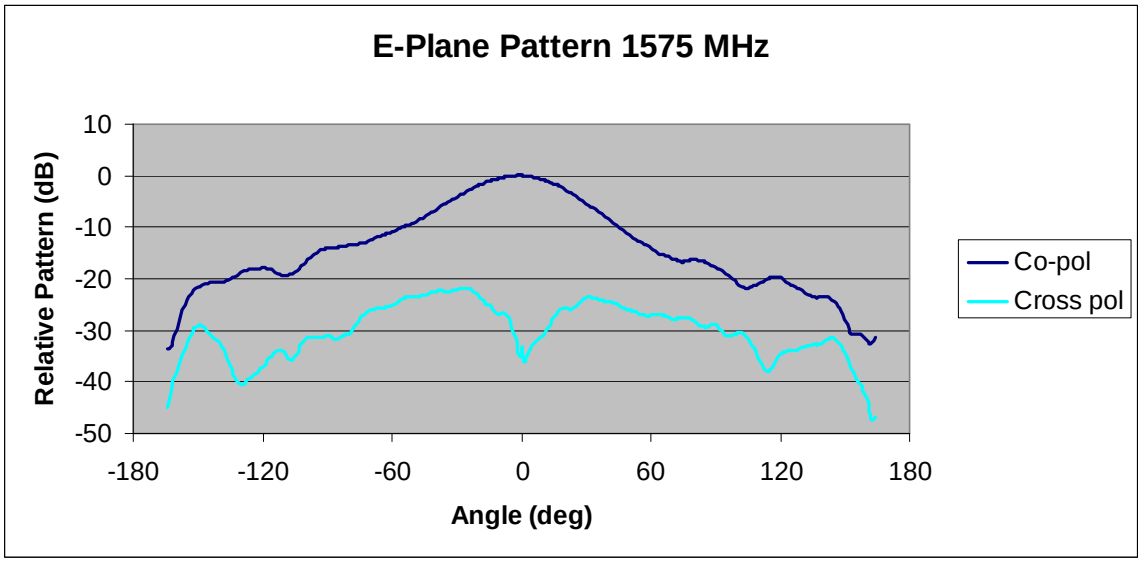


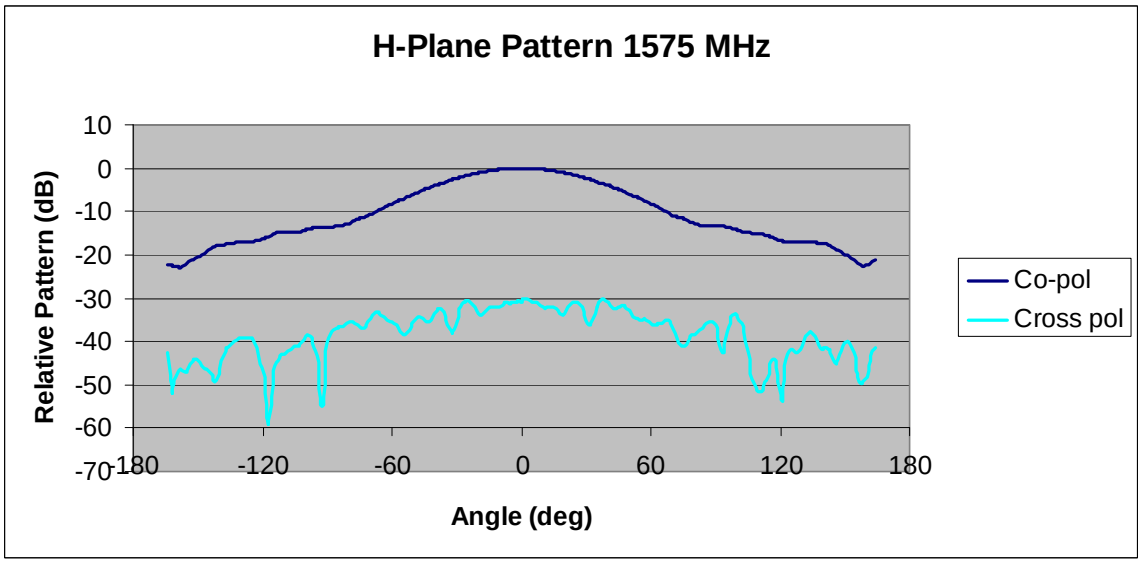
Model QR-1
Typical Radiation Pattern @ 898 MHz



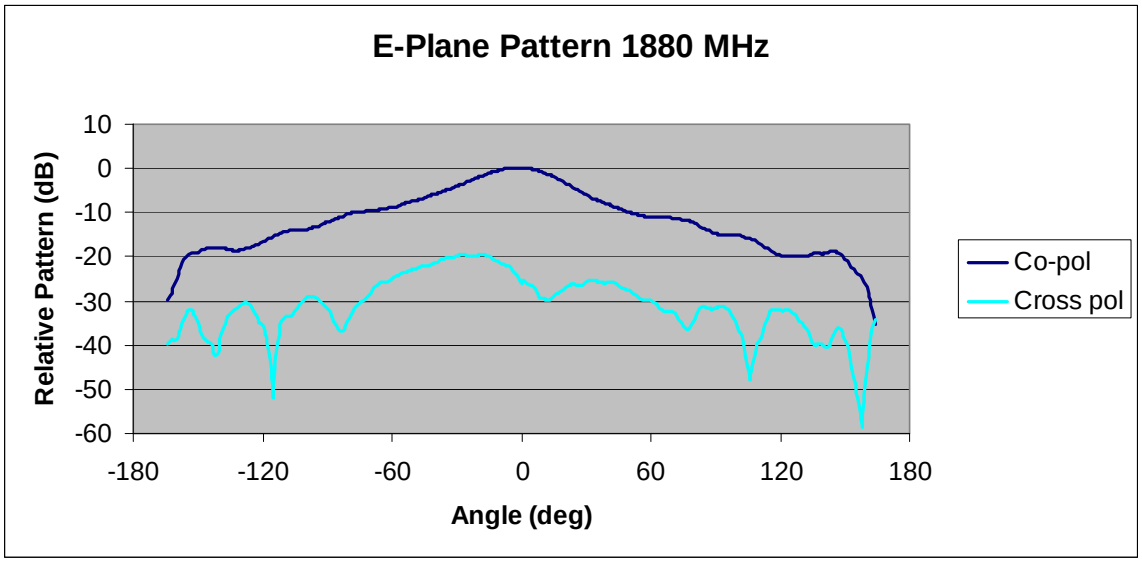


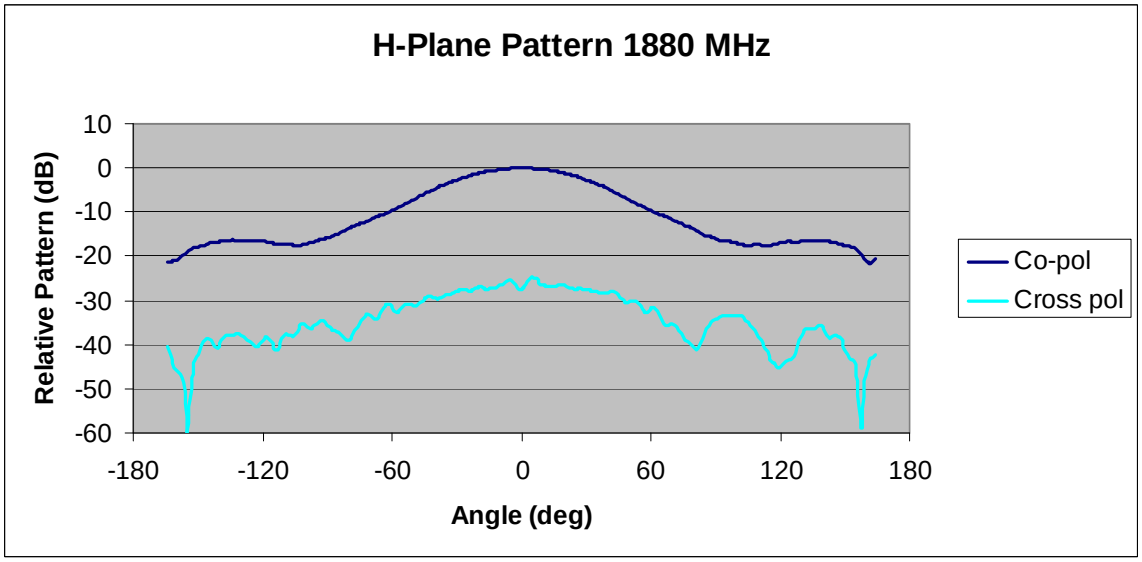
Model QR-1
Typical Radiation Pattern @ 1575 MHz



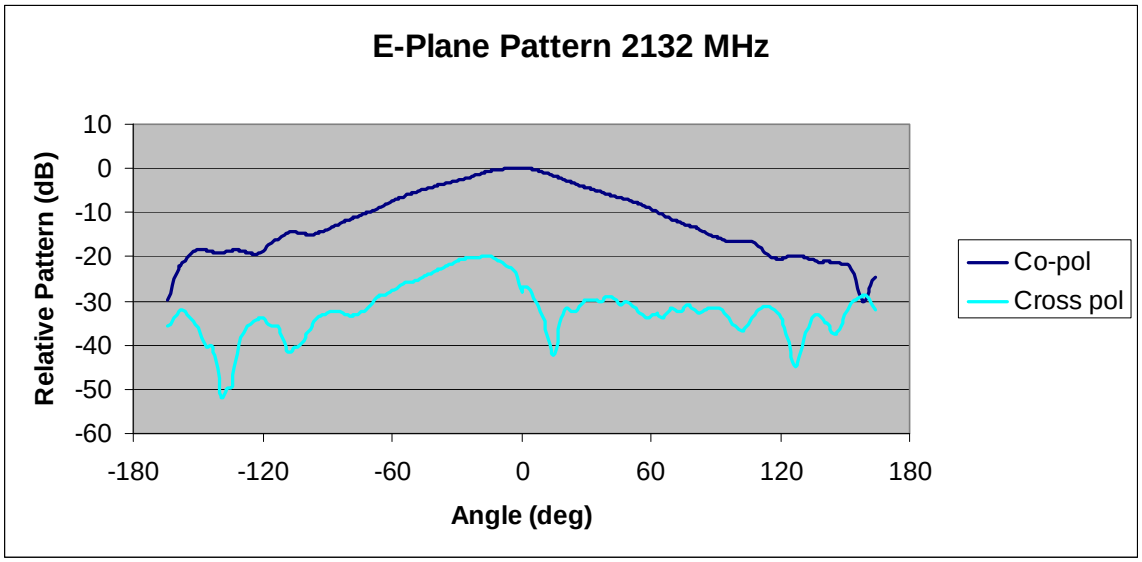


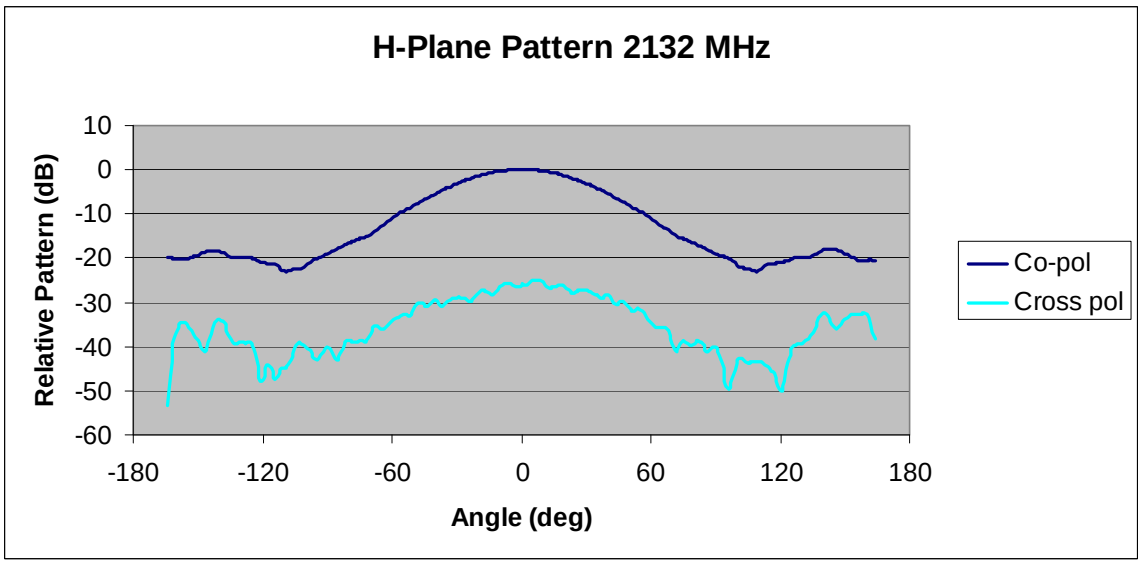
Model QR-1
Typical Radiation Pattern @ 1880 MHz



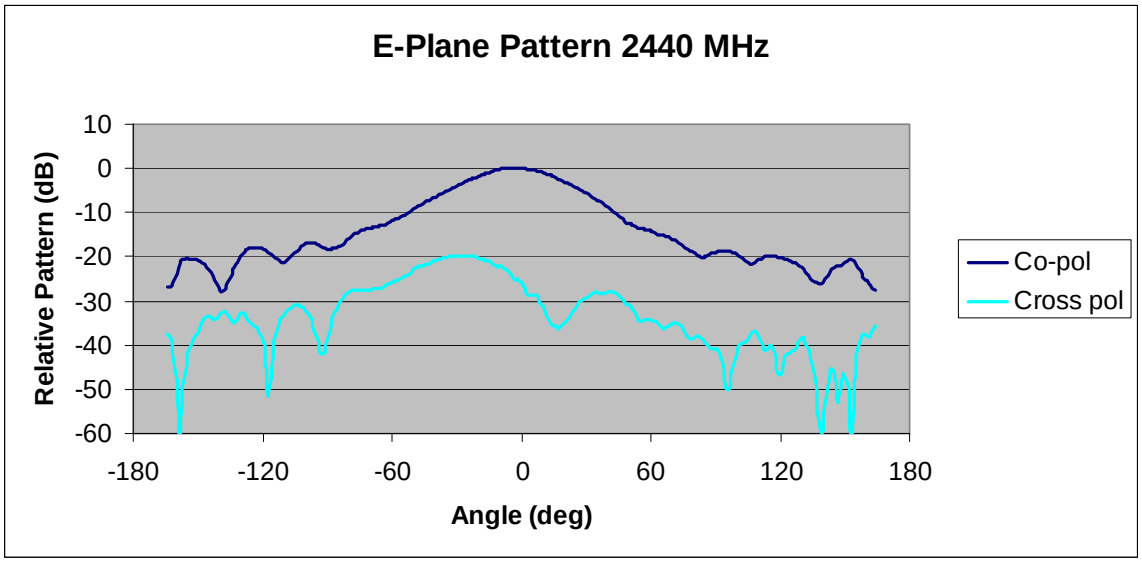


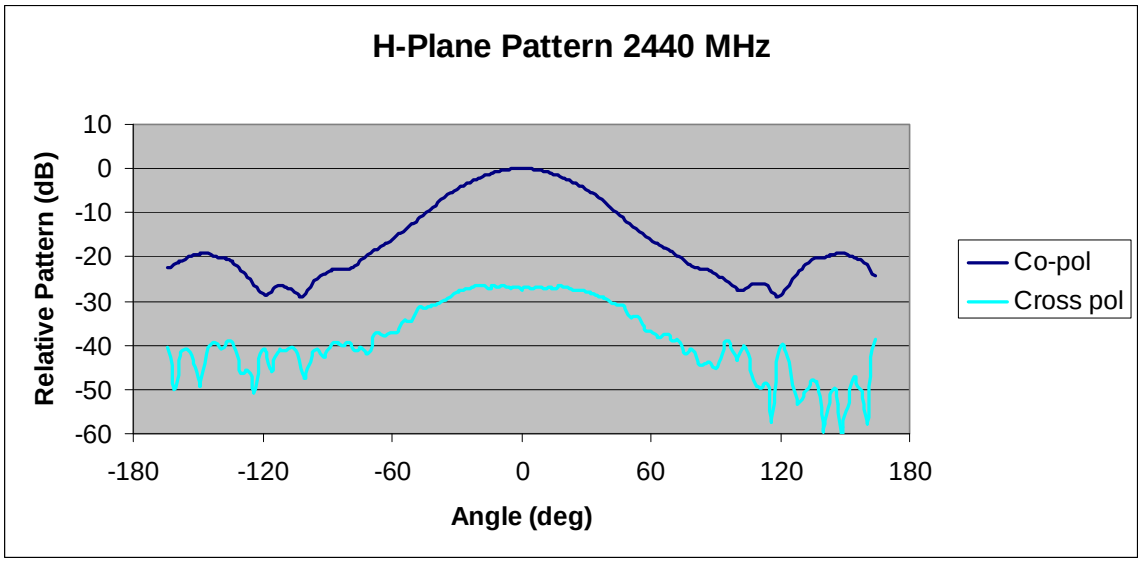
Model QR-1
Typical Radiation Pattern @ 2132 MHz



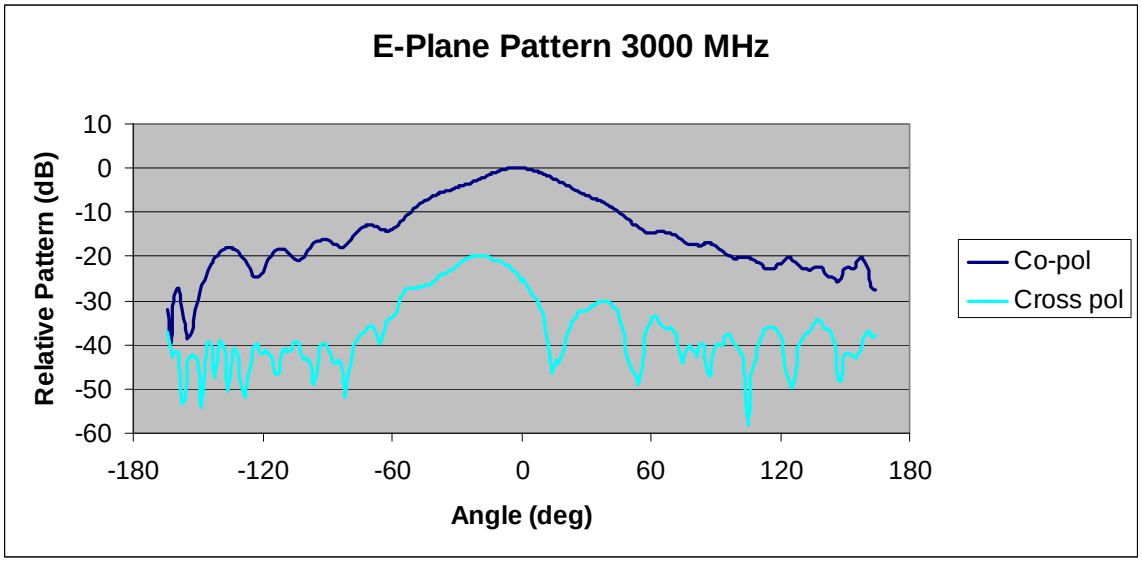


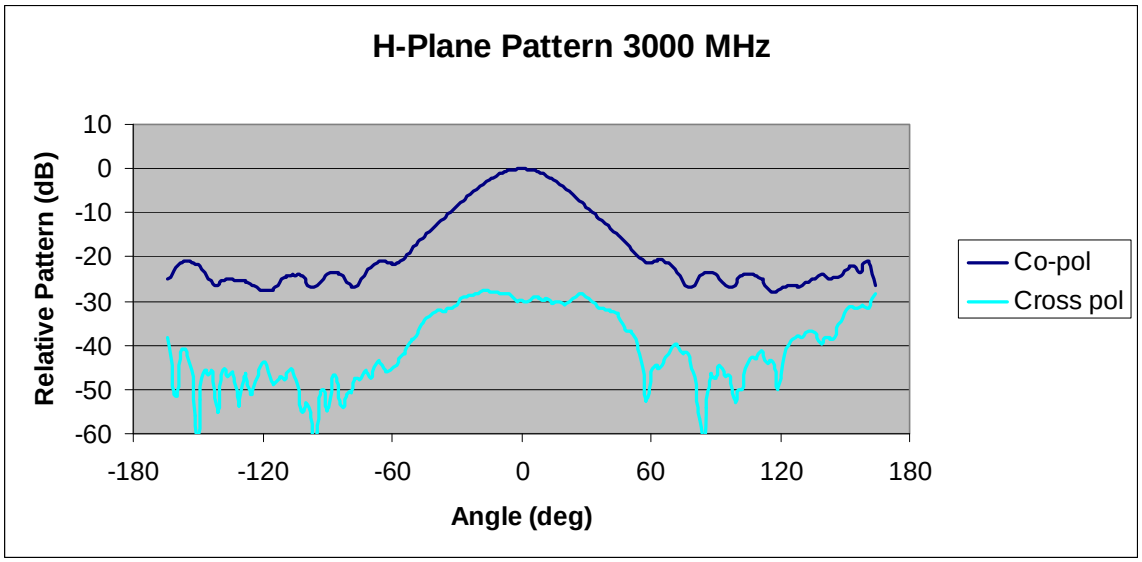
Model QR-1
Typical Radiation Pattern @ 2440 MHz



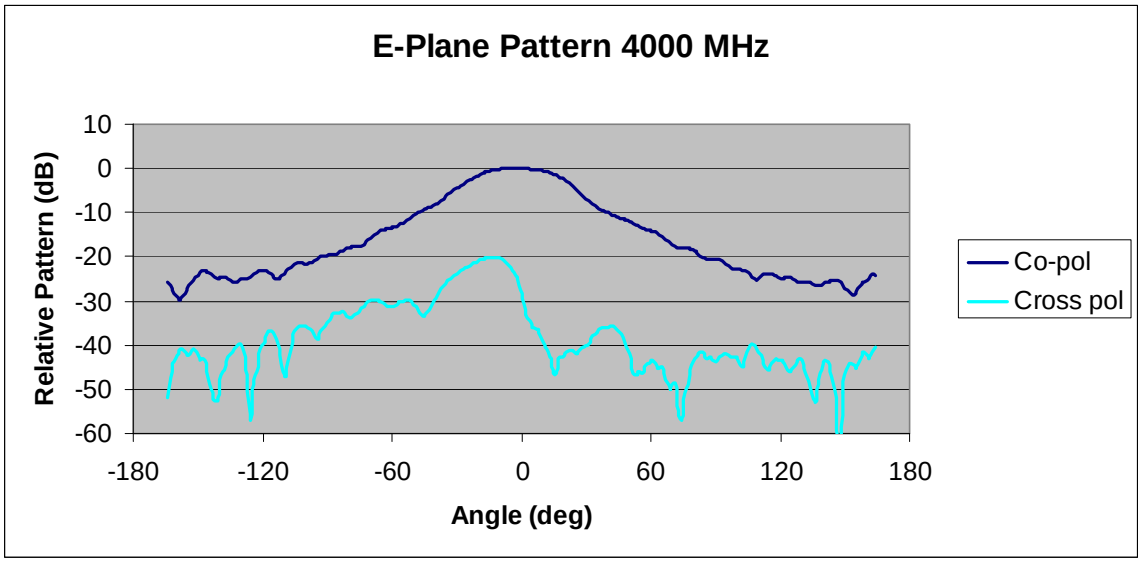


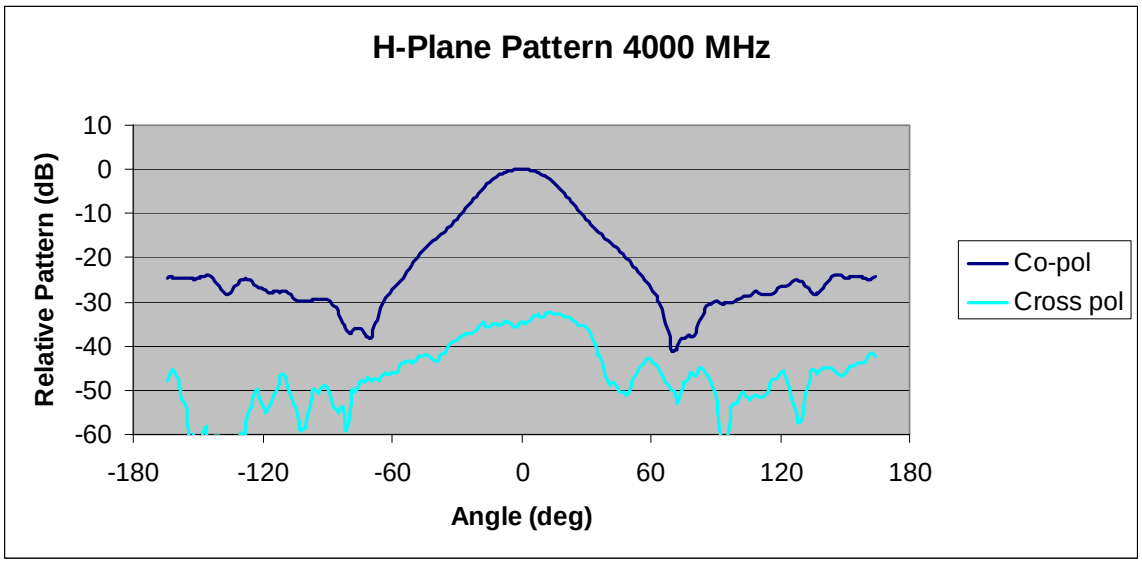
Model QR-1
Typical Radiation Pattern @ 3000 MHz



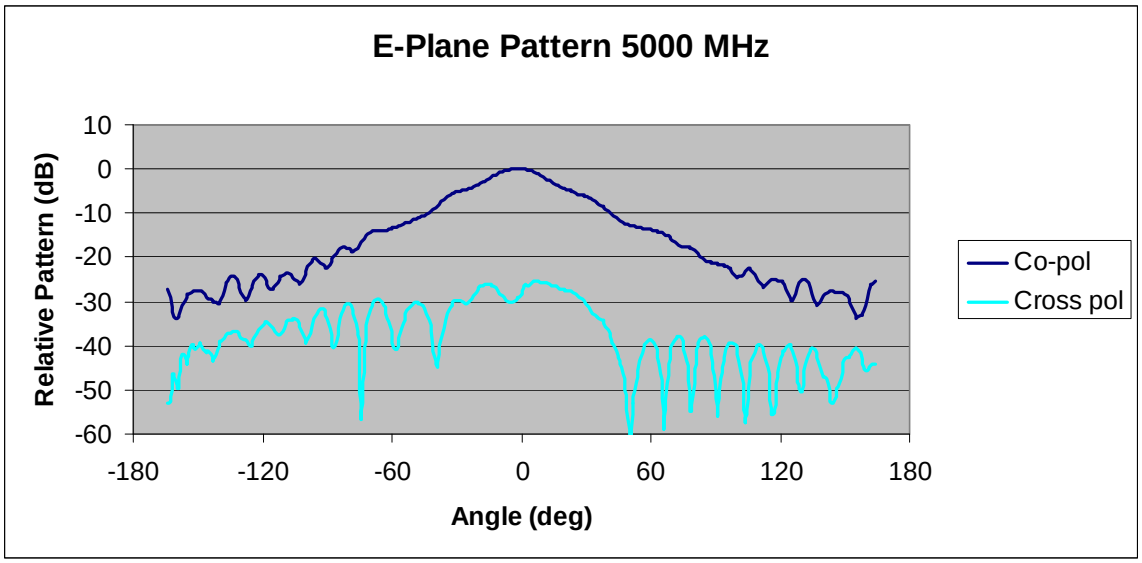


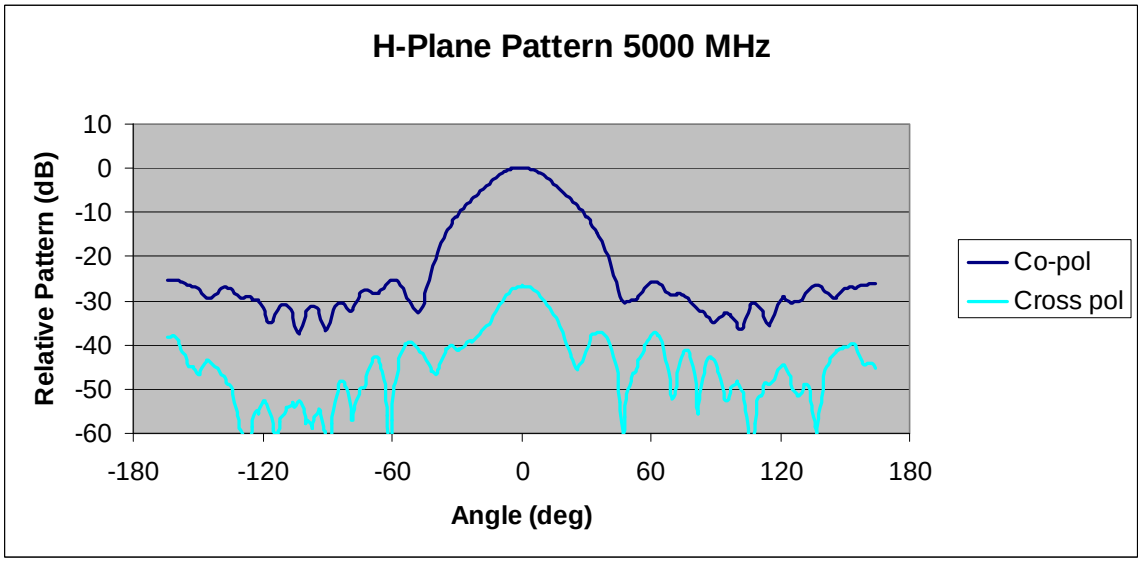
Model QR-1
Typical Radiation Pattern @ 4000 MHz





Model QR-1
Typical Radiation Pattern @ 5000 MHz





Model QR-1
Typical Radiation Pattern @ 6000 MHz