
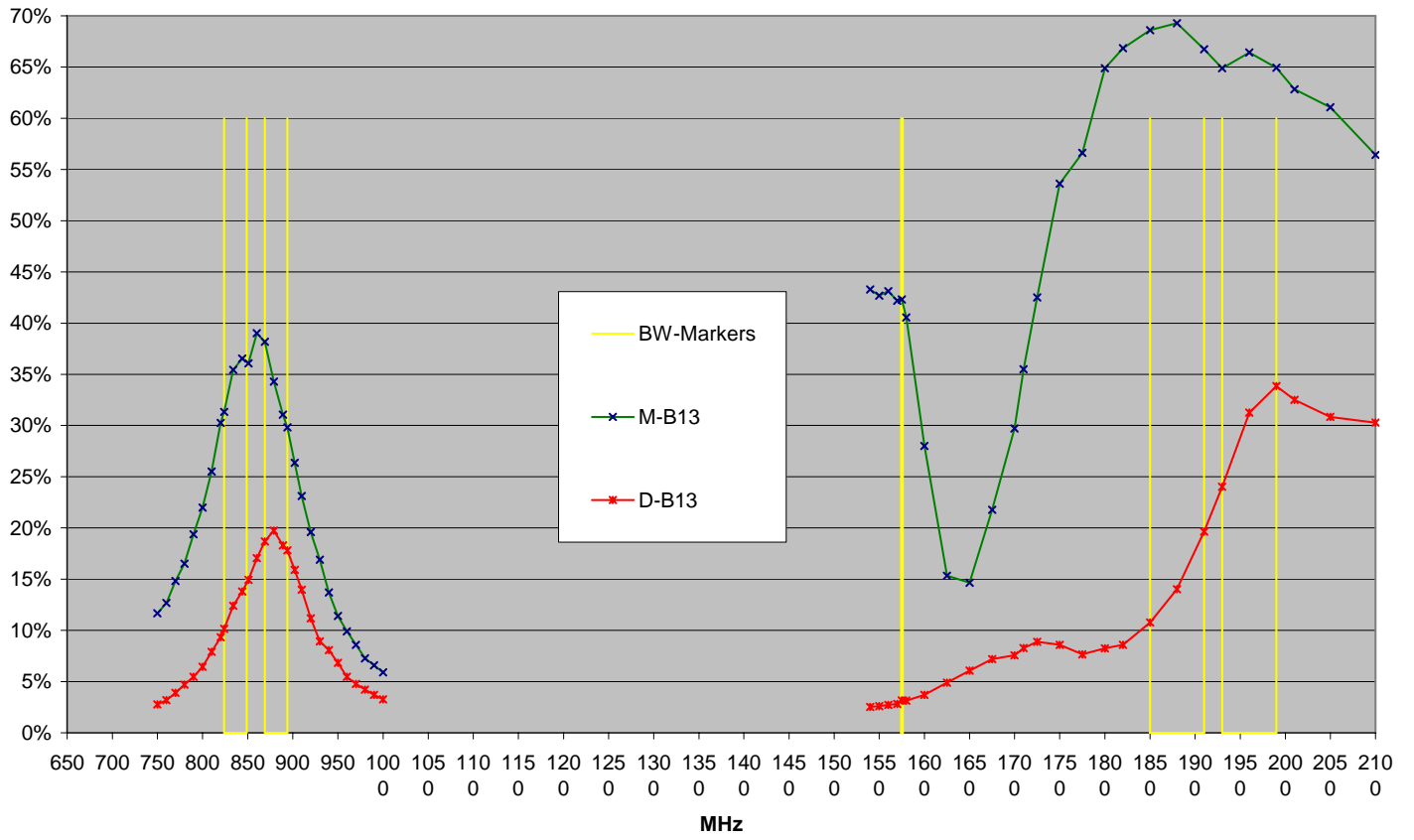


<u>Thomas Liu</u> <u>10/23/2006</u> AUTHOR DATE	 Laird Product Engineering	REPORT NUMBER: <u>P5167-CN3-CDMA-004</u>
TO: Requester: <u>Intermec</u> Manager: ___ COPY:		
<p><u>EXECUTIVE SUMMARY:</u> Performance of Intermec CN3 CDMA Antennas were measured, provide for Intermec FCC filings.</p> <p><u>SCOPE:</u> Performance of CN3 CDMA Diversity antennas</p> <p><u>DESIGN OF EXPERIMENT:</u> Return Loss, Efficiency and Gain Patterns were measured on a CN3 CDMA PROTO-C fixture.</p> <p><u>CONCLUSIONS:</u> The Return Loss, Efficiency, Peak Gain, Average Gain and Gain Patterns are provided.</p>		
KEY WORDS: Intermec, CN3, CDMA, Diversity antennas, gain, radiation patterns, return loss, impedance.		

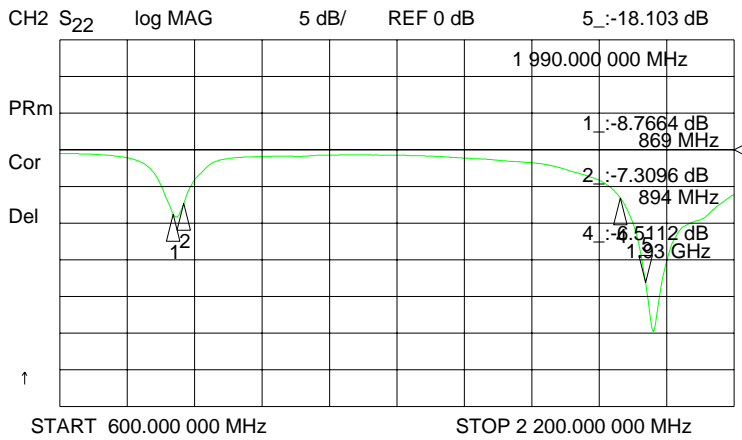
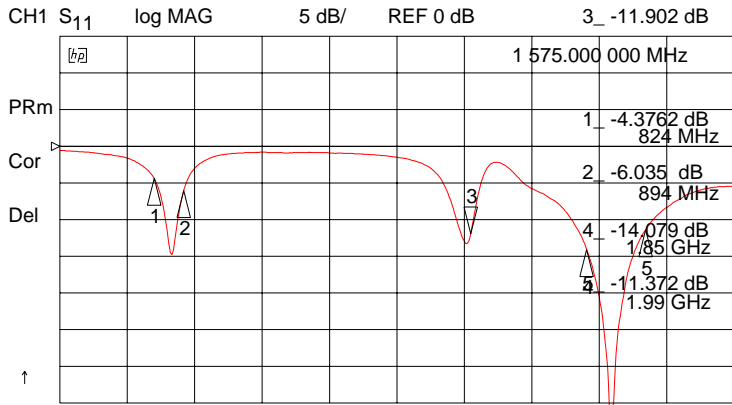
Efficiency in Free Space

10-23-2006 CDMA Antennas



Return Loss, Free Space

23 Oct 2006 05:54:56

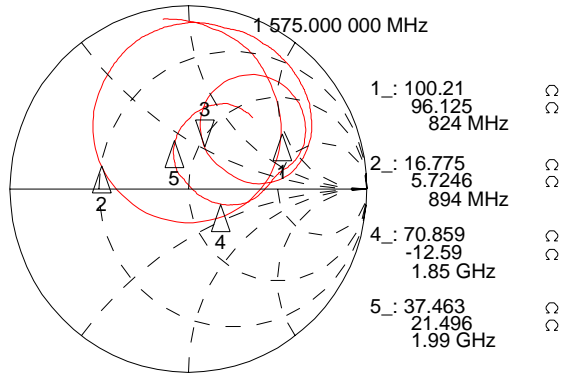


23 Oct 2006 05:55:25

CH1 S₁₁ 1 U FS
[62]

3_ : 53.602 Ω 26.307 Ω 2.6583 nH

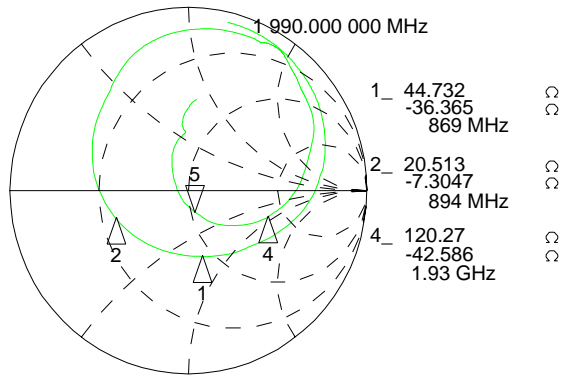
PRm
Cor
Del



CH2 S₂₂ 1 U FS

5_ 52.268 Ω -12.641 Ω 6.327 pF

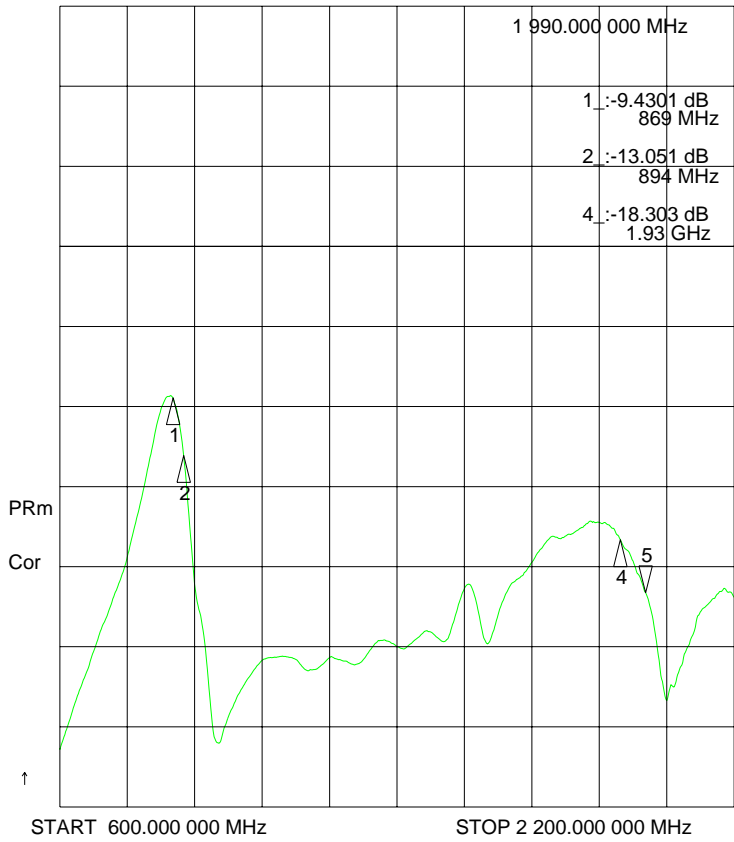
PRm
Cor
Del



START 600.000 000 MHz

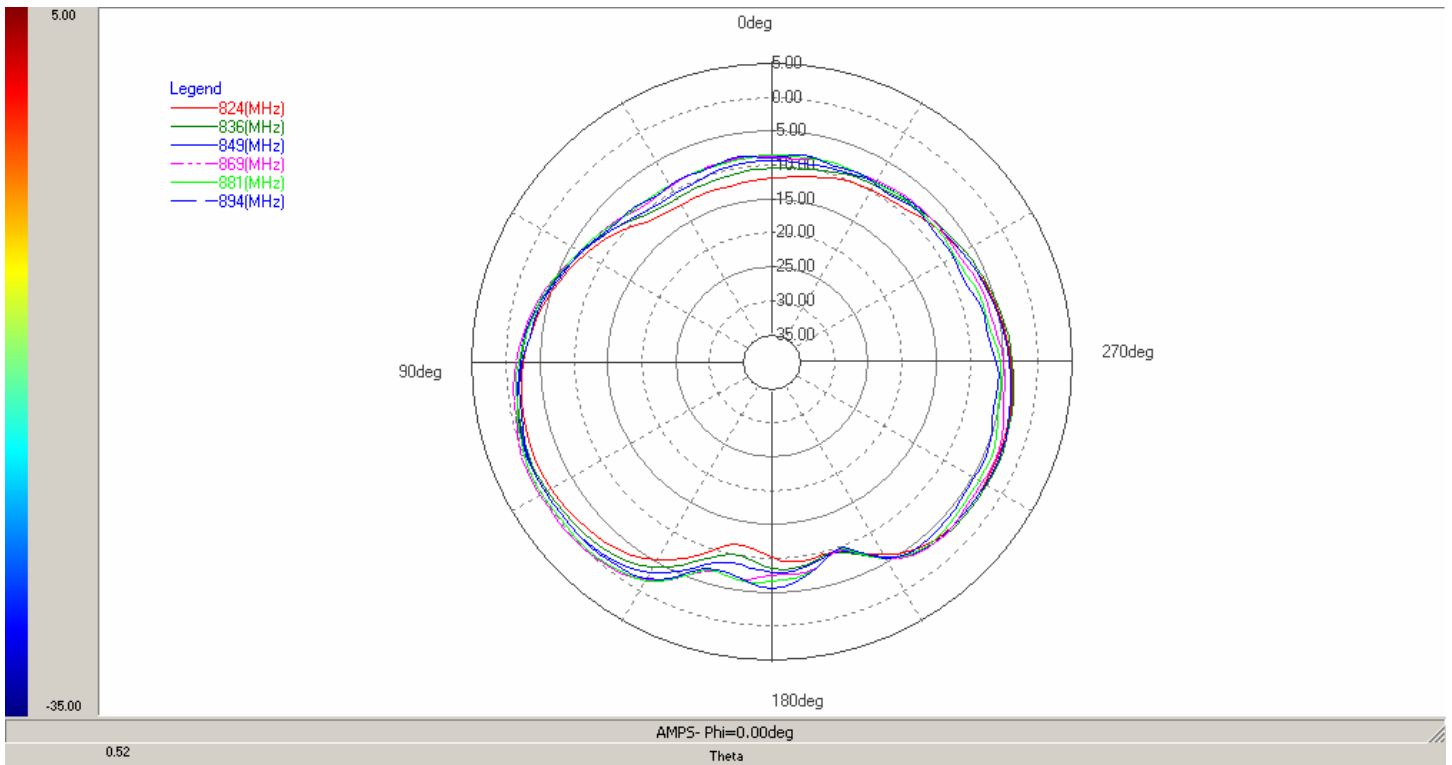
STOP 2 200.000 000 MHz

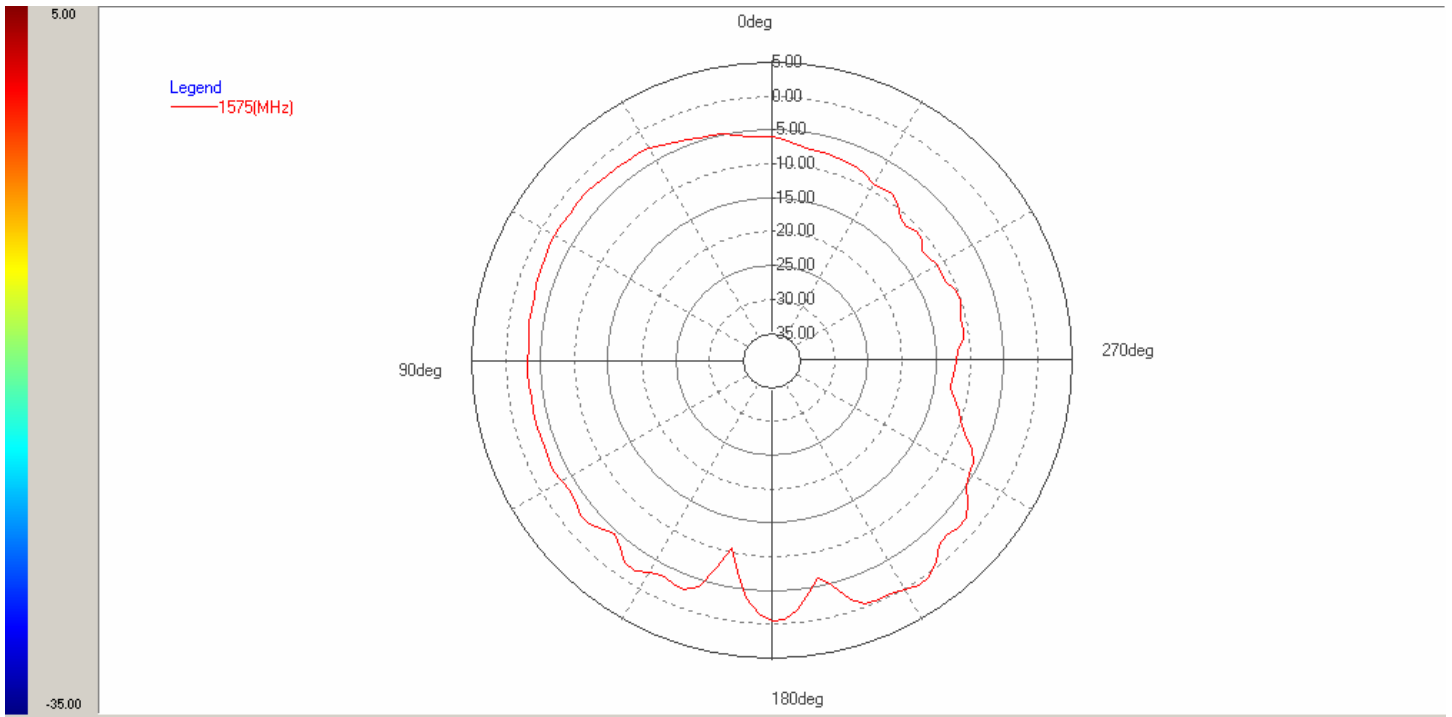
CH2 S₁₂ log MAG 5 dB/ REF 0 dB 5_:-21.635 dB



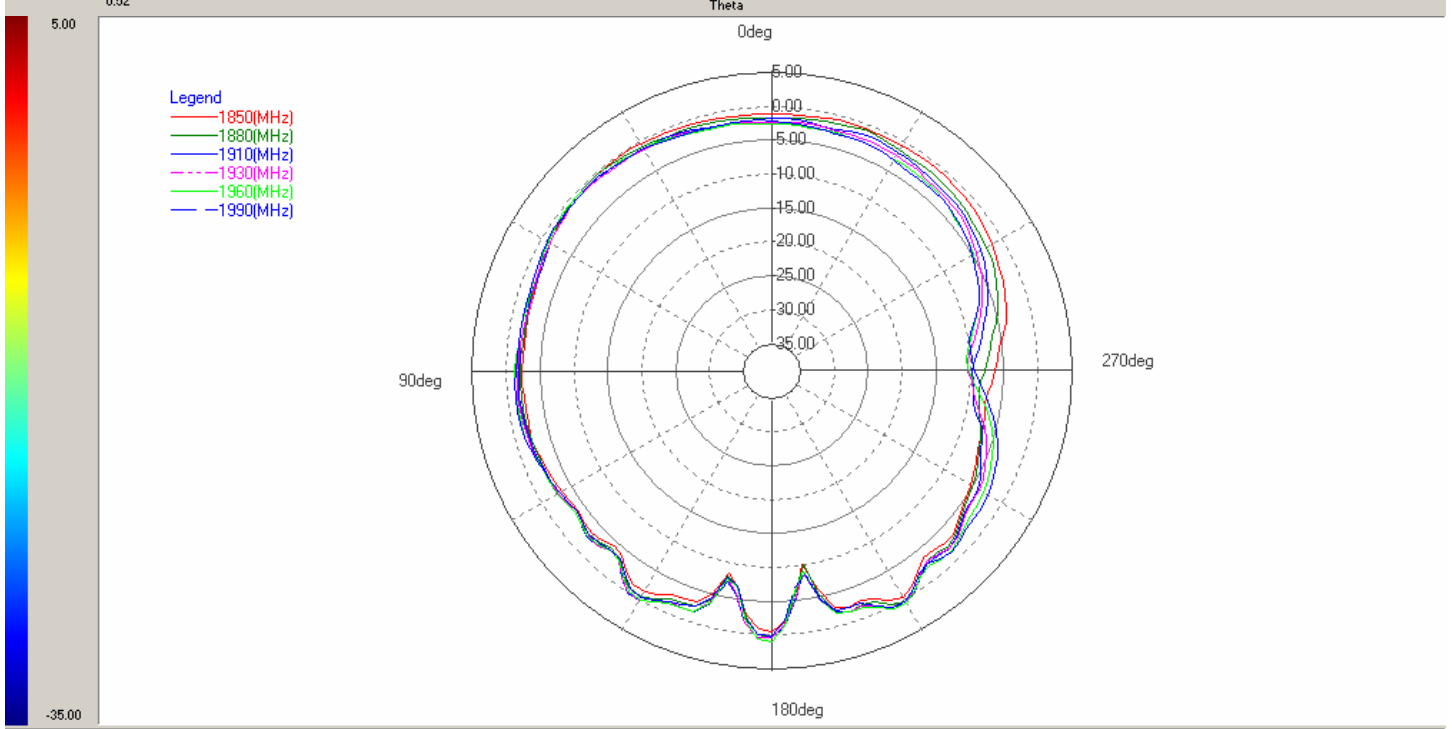
M-Antenna: Gain Patterns, Phi=0, Free Space

freq(MHz)	Peak Gain . dBi	Ave Gain. dBi
824	-1.4	-5.6
836	-0.7	-4.9
849	-0.4	-4.8
869	0.4	-4.4
881	0.1	-4.7
894	-0.5	-5.1
1575	0.5	-4.2
1850	-0.4	-2.4
1880	0.2	-2.4
1910	0.3	-2.5
1930	0.2	-2.6
1960	0.7	-2.5
1990	0.1	-2.6





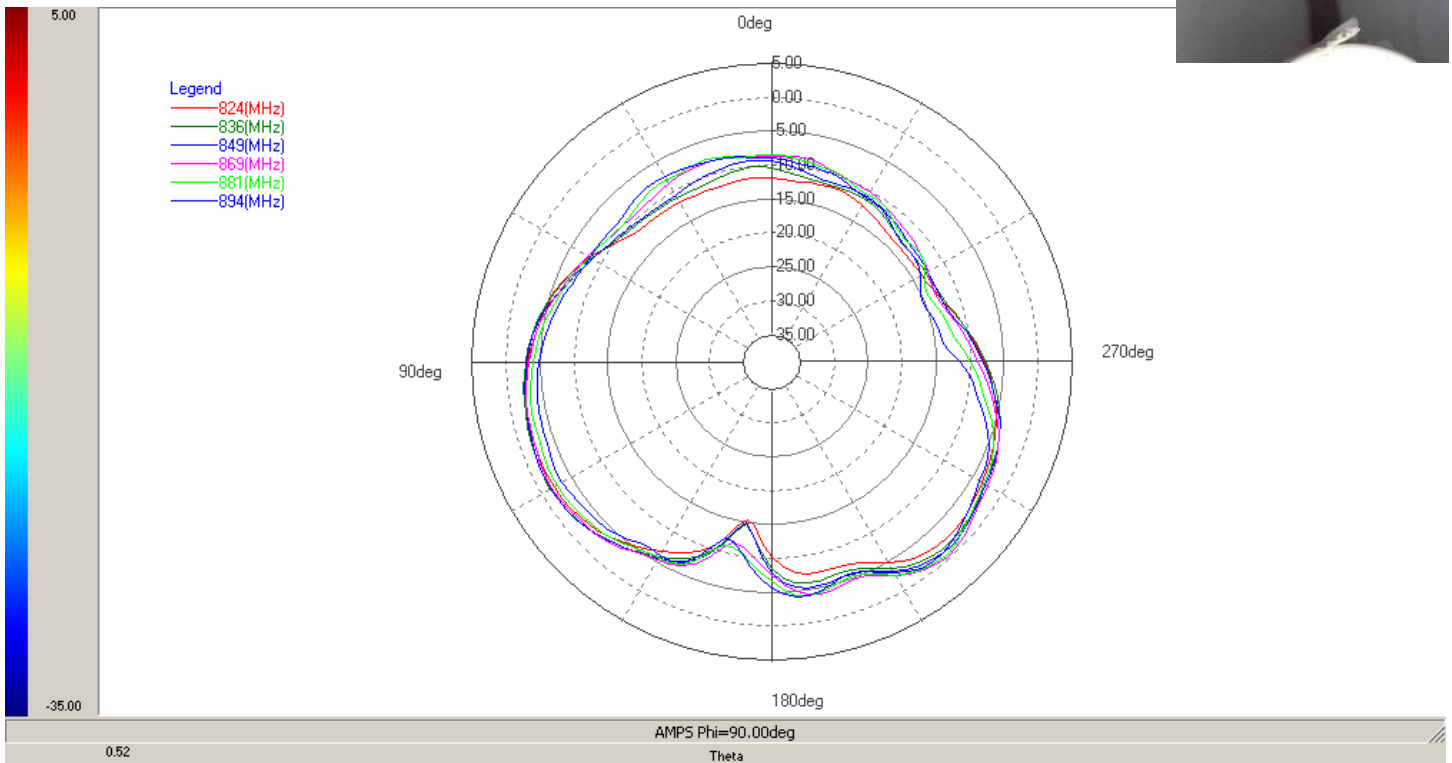
[2741] 1D view / Phi=0.00deg

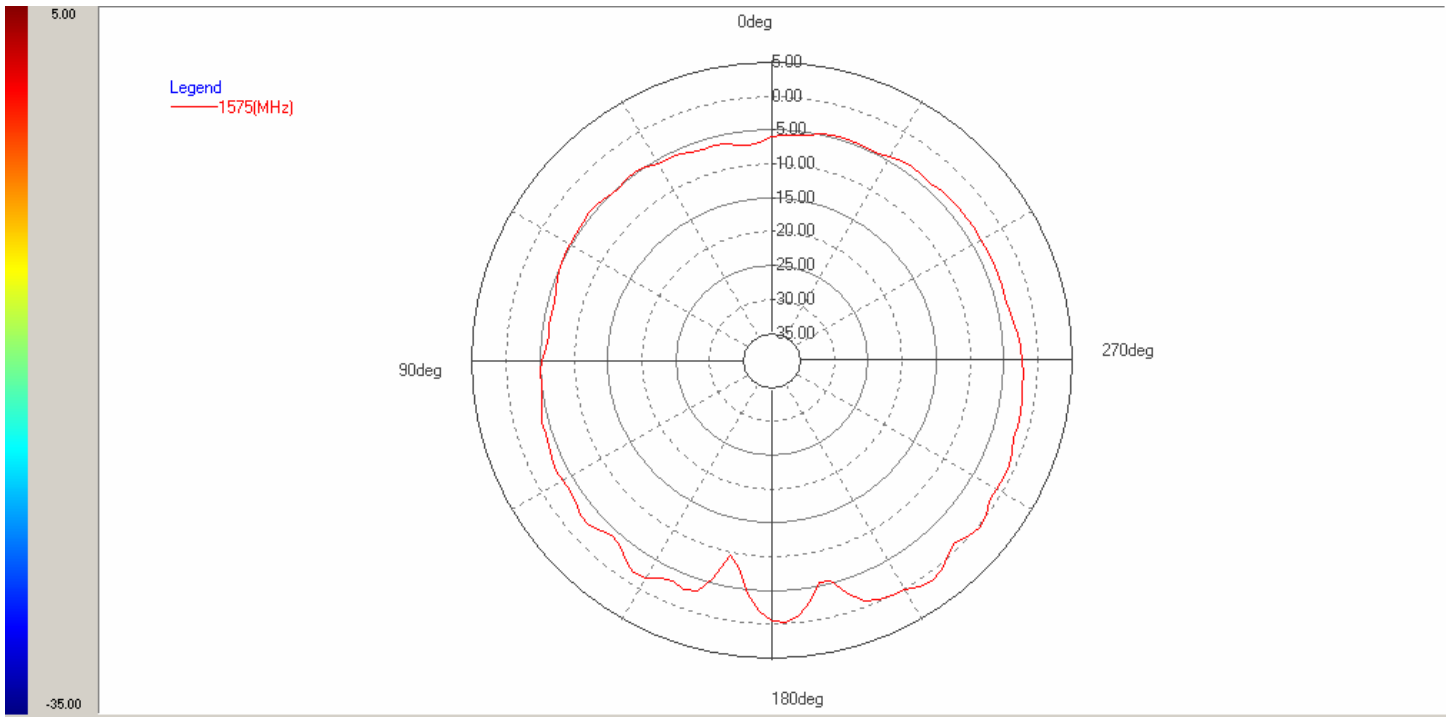


PCS Phi=0.00deg

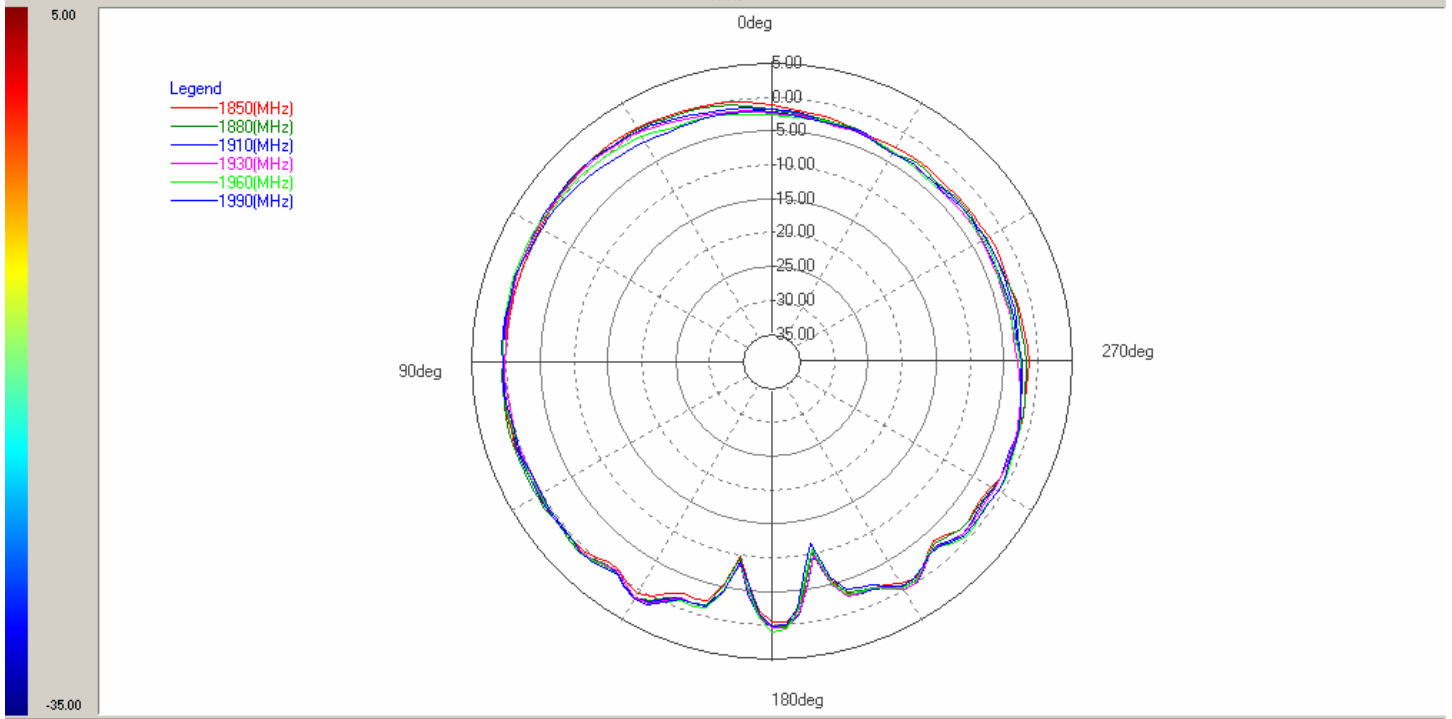
M-Antenna: Gain Patterns, EL at plane Phi=90, Free Space

freq(MHz)	Phi=90deg.	
	Peak Gain . dBi	Ave Gain. dBi
824	-2.1	-6.5
836	-1.5	-5.9
849	-1.3	-5.7
869	-0.5	-5.5
881	-0.8	-5.8
894	-1.4	-6.4
1575	1.1	-3.2
1850	0.8	-1.1
1880	1.1	-1.0
1910	1.1	-1.1
1930	1.1	-1.2
1960	1.4	-1.2
1990	1.4	-1.3





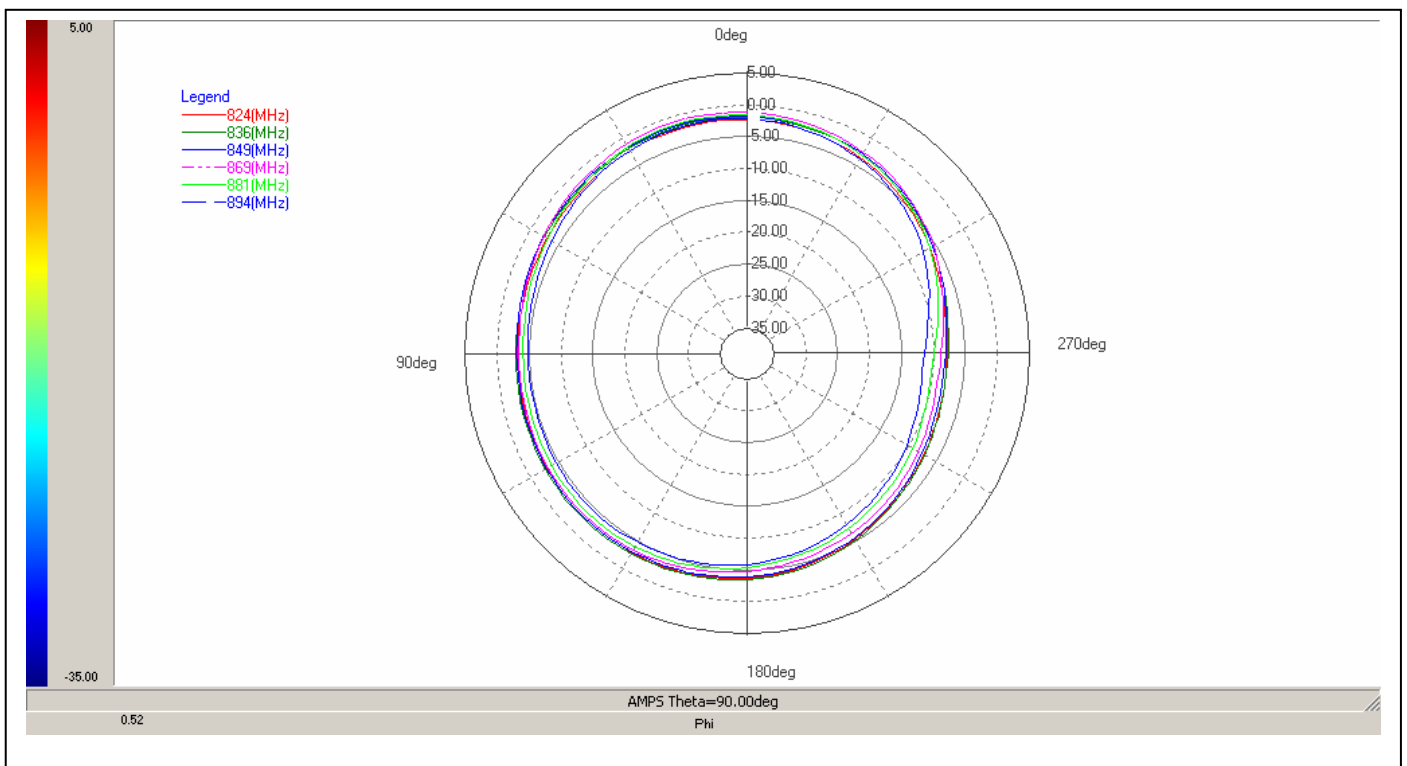
GPS Phi=90.00deg
Theta

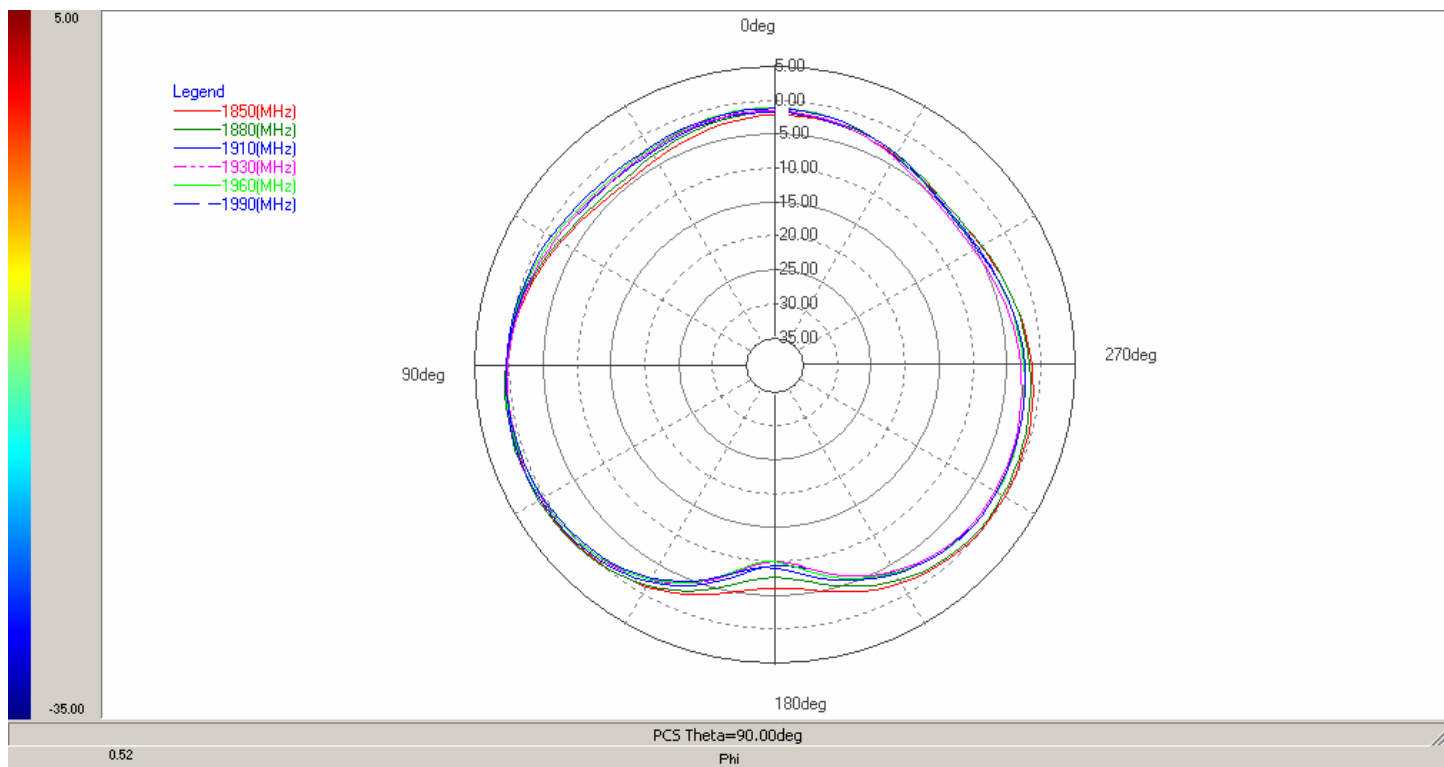
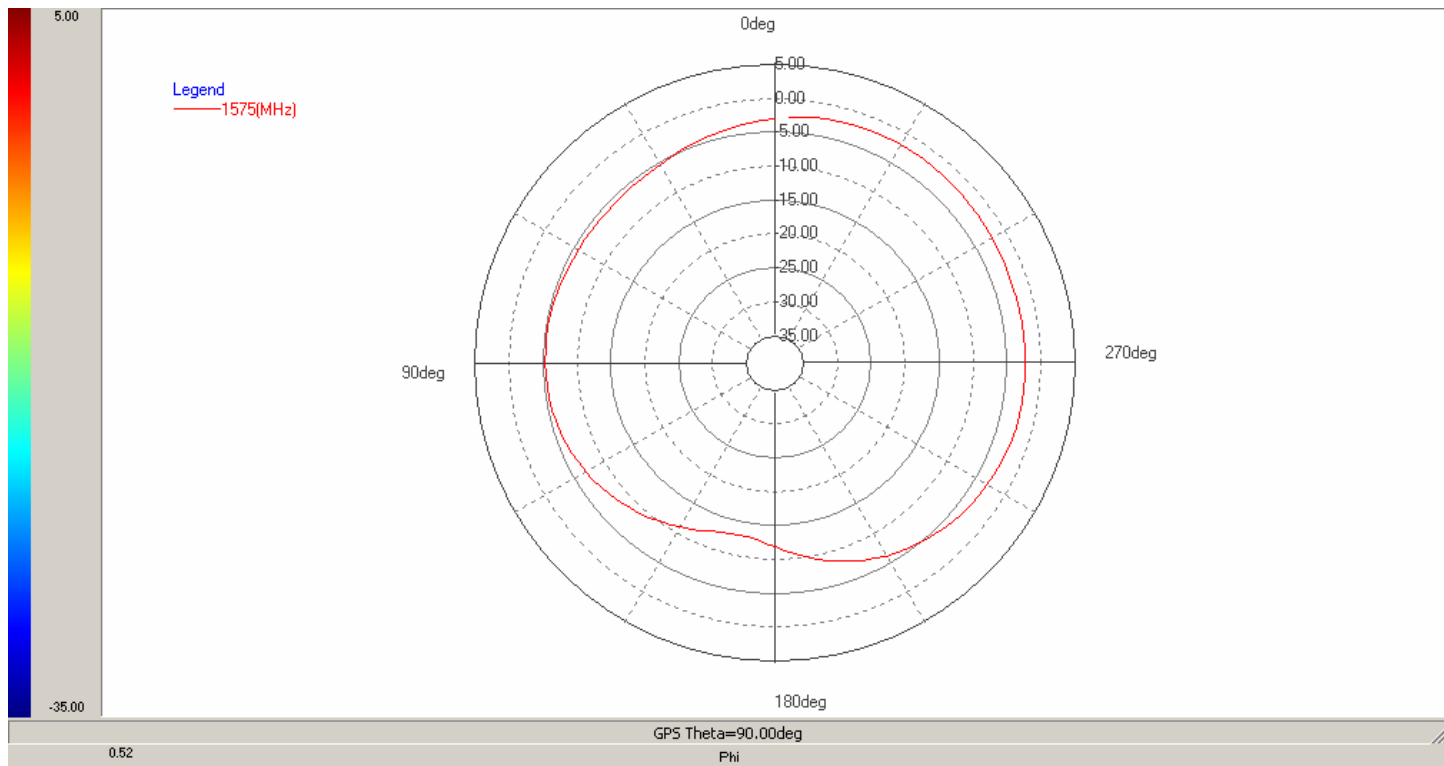


PCS Phi=90.00deg
Theta

M-Antenna Gain Patterns, at Plane Theta=90deg, Free Space

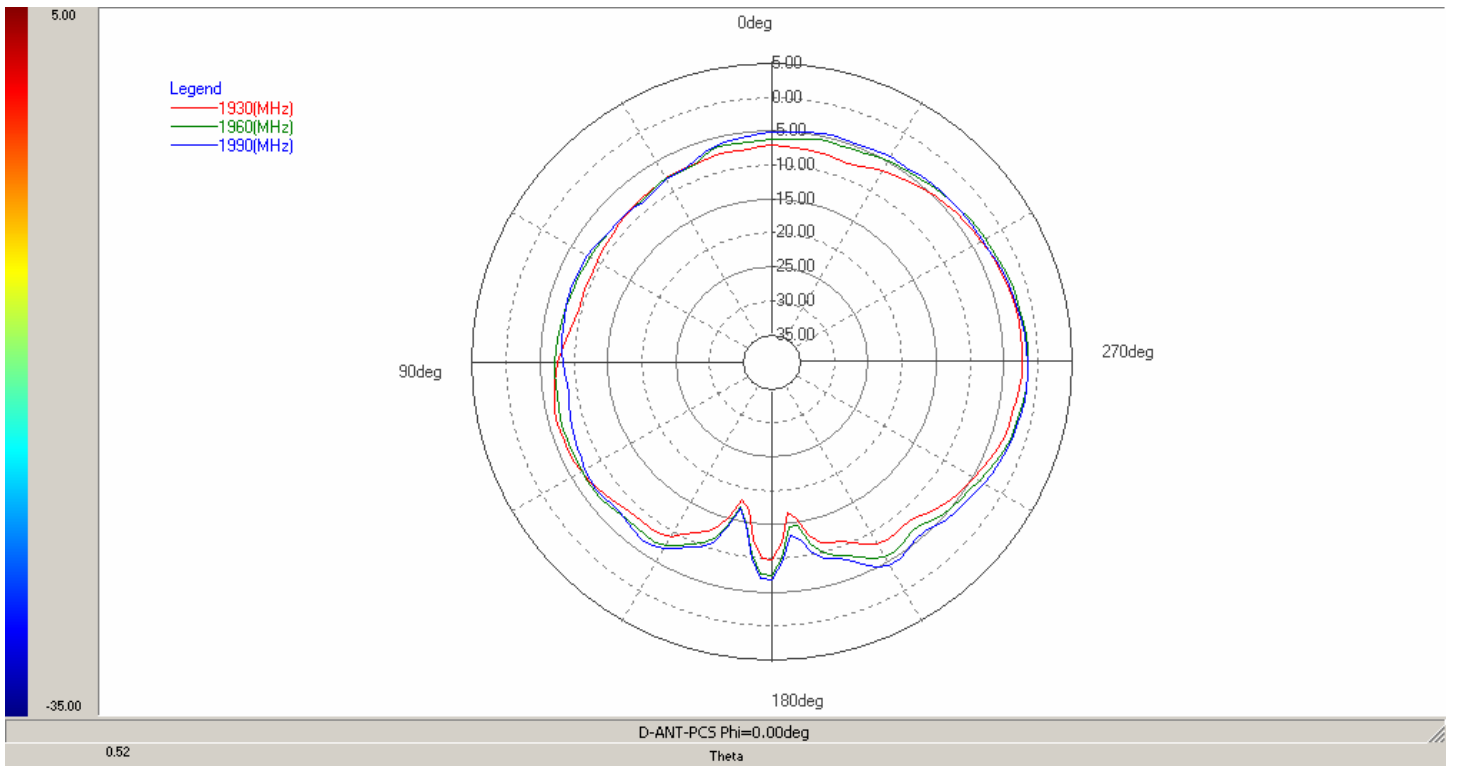
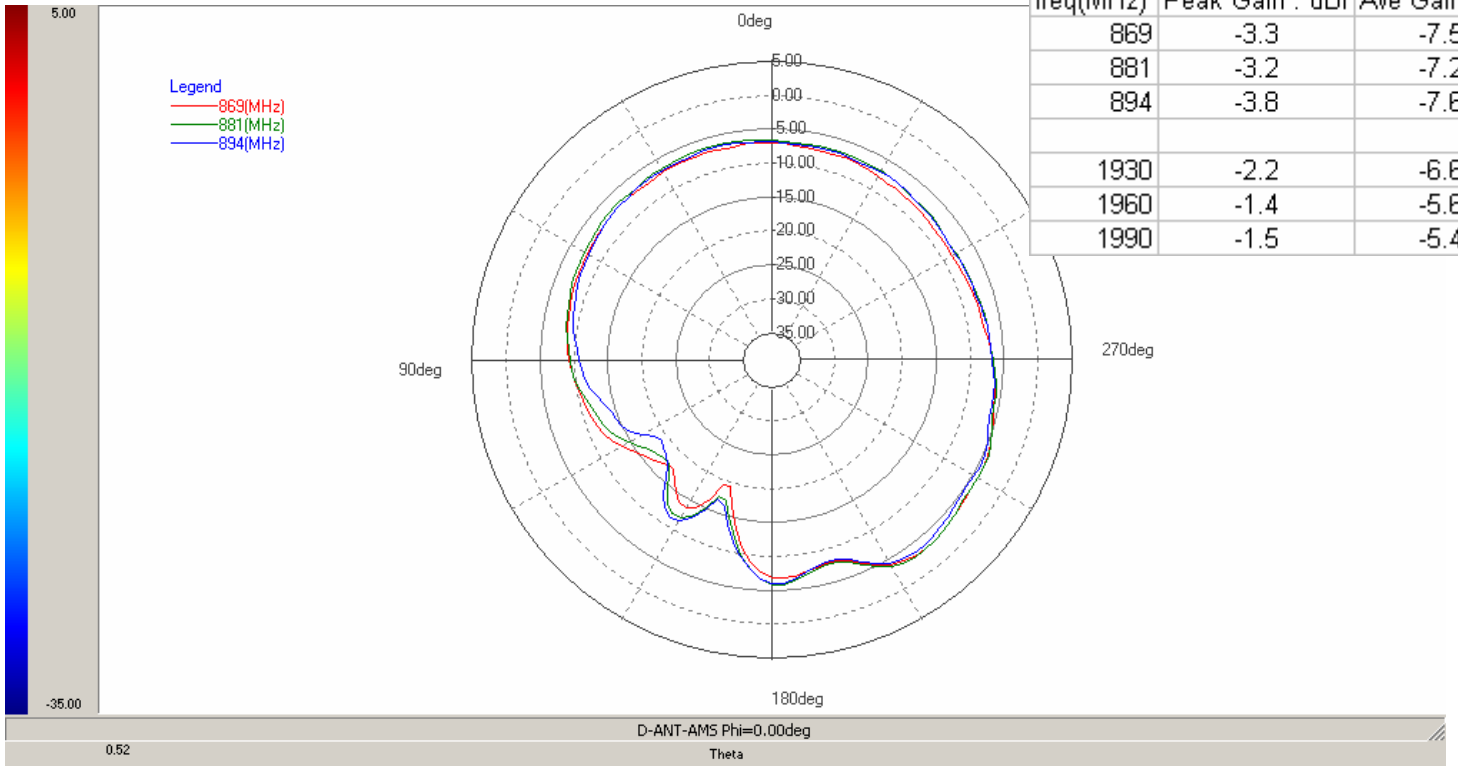
Theta=90deg.		
freq(MHz)	Peak Gain . dBi	Ave Gain. dBi
824	-2.4	-4.0
836	-2.1	-3.6
849	-1.8	-3.7
869	-1.2	-3.7
881	-1.6	-4.4
894	-2.2	-5.1
1575	-2.1	-4.6
1850	0.9	-1.9
1880	1.1	-1.8
1910	0.9	-2.2
1930	0.6	-2.4
1960	0.7	-2.2
1990	0.6	-2.1





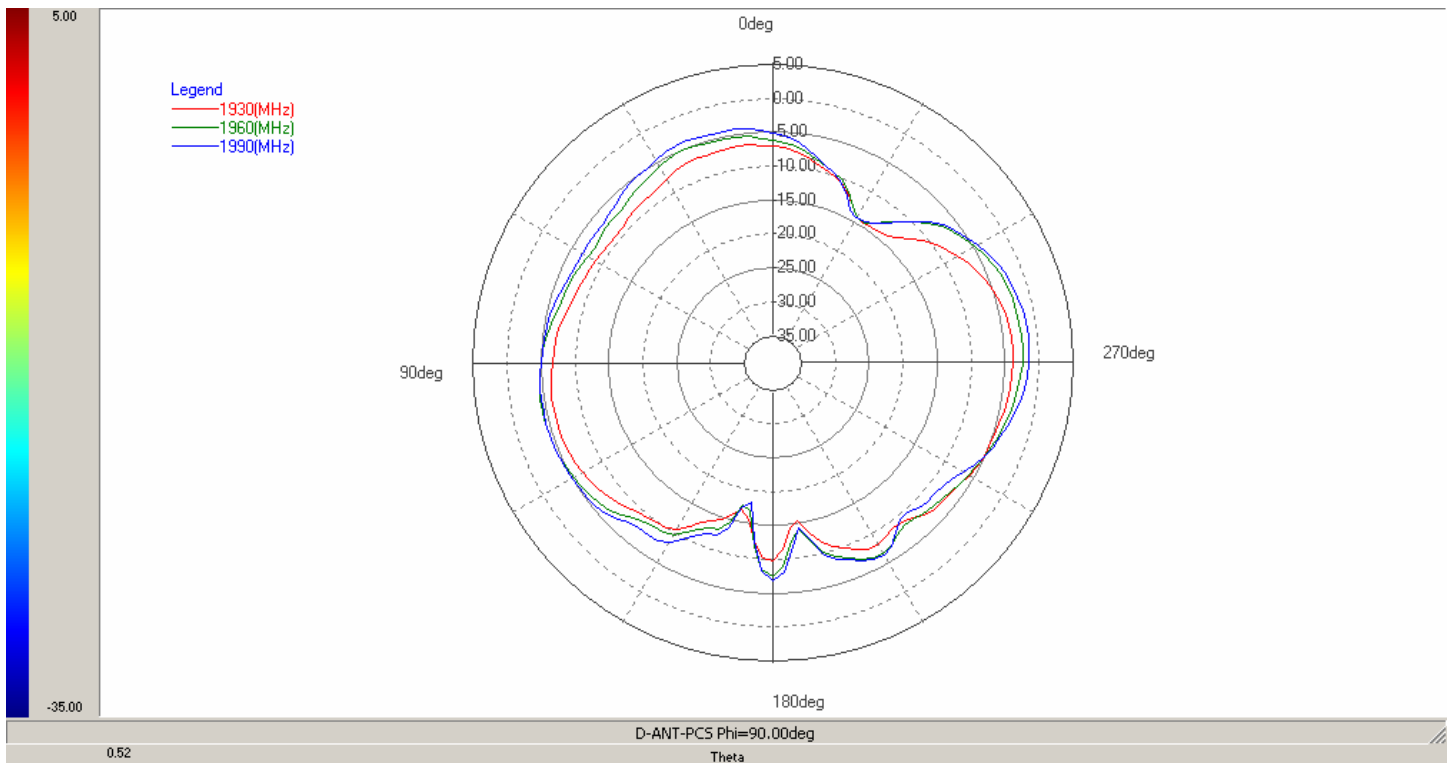
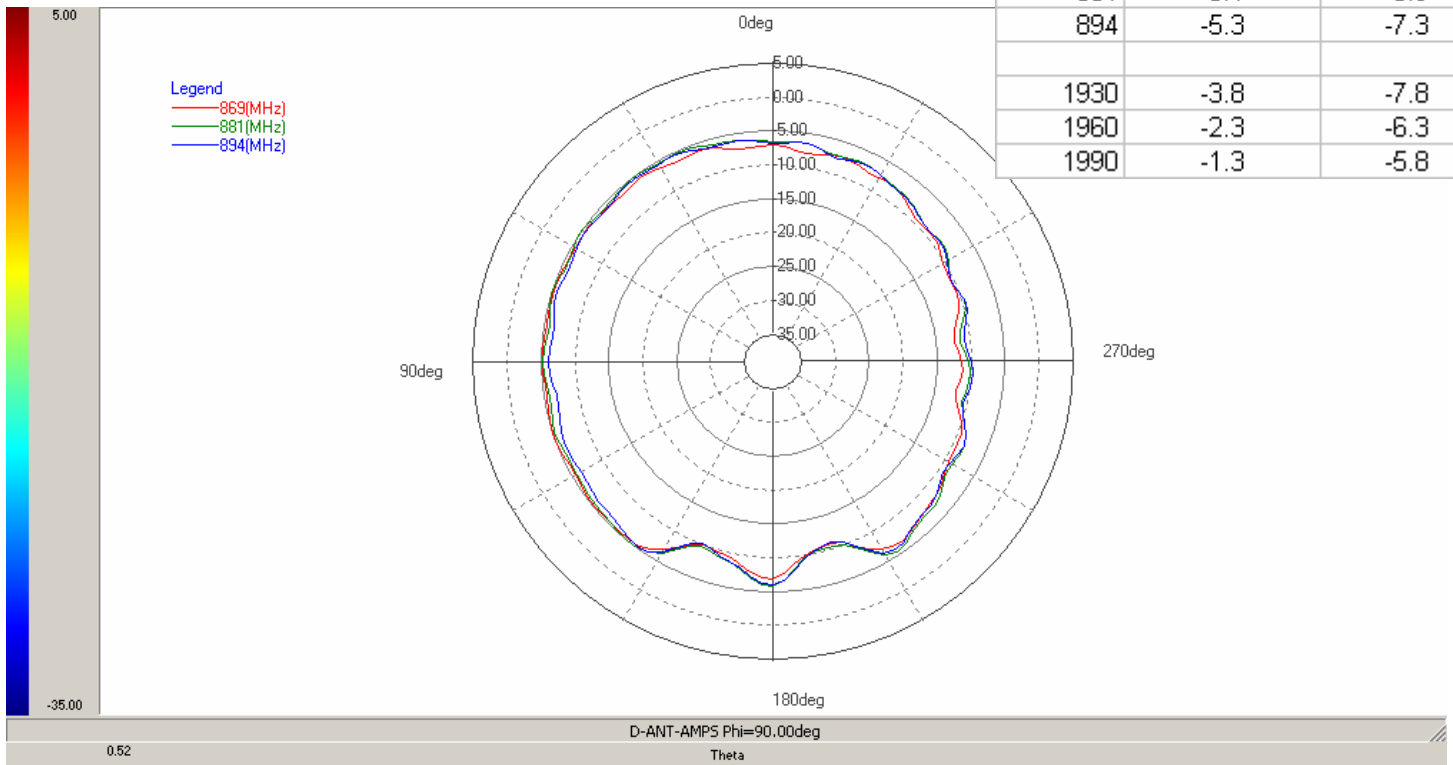
Diversity Antenna
Phi=0deg cut:

freq(MHz)	Peak Gain . dBi	Ave Gain. dBi
869	-3.3	-7.5
881	-3.2	-7.2
894	-3.8	-7.6
1930	-2.2	-6.6
1960	-1.4	-5.6
1990	-1.5	-5.4



Phi=90deg cut:

		Phi=90deg.	
freq(MHz)		Peak Gain . dBi	Ave Gain. dBi
869		-5.0	-7.3
881		-5.1	-6.9
894		-5.3	-7.3
1930		-3.8	-7.8
1960		-2.3	-6.3
1990		-1.3	-5.8



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		Theta=90deg.	
freq(MHz)		Peak Gain . dBi	Ave Gain. dBi
869		-4.5	-7.4
881		-4.6	-7.3
894		-5.1	-7.9

Theta=90 cut

