

Ethertronics Antenna Performance Verification

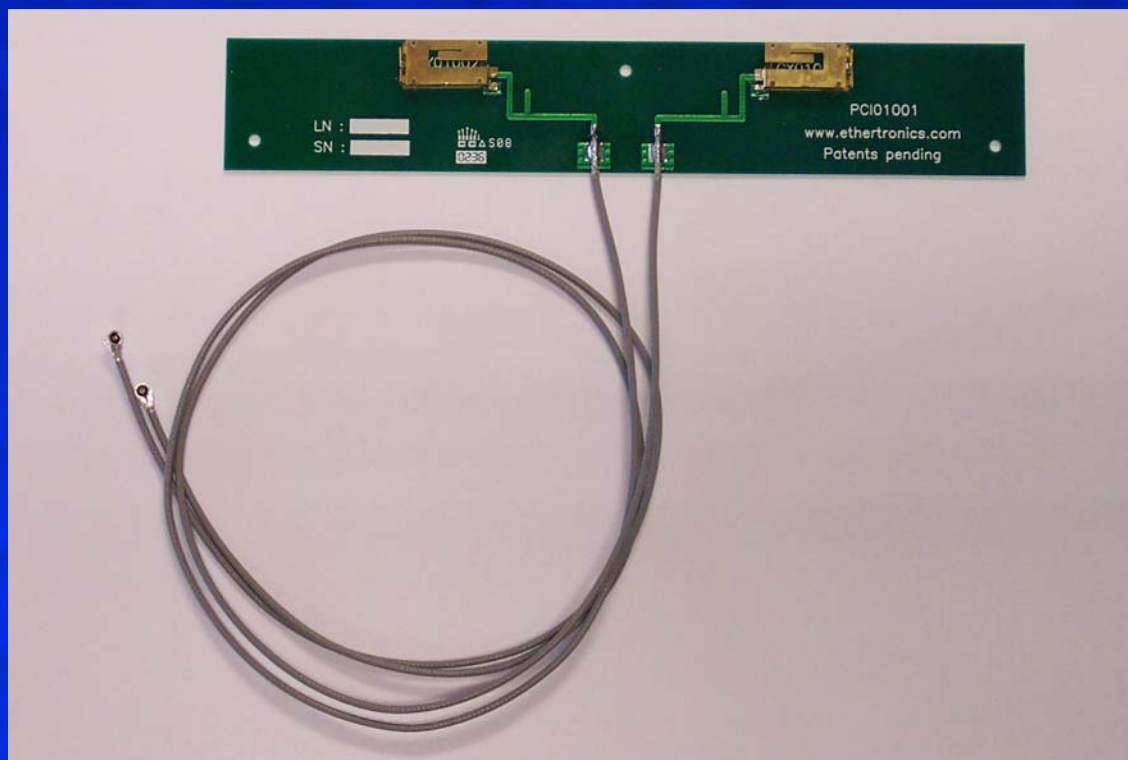
**Intel Corporation
Mobile Communications Division**

**San Diego, CA
13 September 2002**



Measurements

- 10 Units (2 antennas per unit)
 - Return Loss / VSWR
- Antenna Patterns
 - 1 unit (SN4)
 - Measured on Intel Certification Vehicle



Gain Measurements

Intel Confidential

Ethertronic Diversity Test Results SN4

Main

Azimuth	Polarization	802.1B			802.11A		
		Max	Min	Ave	Max	Min	Ave
	Vert	0.53	-9.78	-4.96	-4.12	-20.48	-12.80
	Horiz	-7.65	-27.19	-13.28	-0.53	-17.85	-5.72
	PolSel	0.54	-9.30	-4.72	-0.33	-10.33	-4.31
Elevation 1	Polarization	802.1B			802.11A		
		Max	Min	Ave	Max	Min	Ave
	Vert	0.87	-27.40	-8.00	0.96	-27.07	-10.49
	Horiz	1.18	-20.91	-7.84	-4.31	-29.65	-15.48
	PolSel	1.18	-11.36	-3.96	0.97	-21.96	-8.89
Elevation 2	Polarization	802.1B			802.11A		
		Max	Min	Ave	Max	Min	Ave
	Vert	0.00	-23.25	-8.95	-6.40	-28.92	-15.29
	Horiz	-6.93	-24.94	-15.23	-0.01	-26.88	-9.34
	PolSel	0.00	-18.12	-8.06	-6.61	-24.34	-8.49

Auxiliary

Azimuth	Polarization	802.1B			802.11A		
		Max	Min	Ave	Max	Min	Ave
	Vert	0.78	-17.92	-5.96	-3.73	-22.79	-12.59
	Horiz	1.88	-23.58	-8.16	0.49	-24.21	-10.00
	PolSel	1.91	-11.85	-3.70	0.49	-17.73	-7.71
Elevation 1	Polarization	802.1B			802.11A		
		Max	Min	Ave	Max	Min	Ave
	Vert	1.83	-25.19	-8.71	2.02	-25.72	-10.03
	Horiz	0.42	-19.86	-6.56	-3.68	-25.72	-12.74
	PolSel	2.14	-13.46	-4.28	2.05	-20.14	-7.90
Elevation 2	Polarization	802.1B			802.11A		
		Max	Min	Ave	Max	Min	Ave
	Vert	-1.00	-22.82	-9.32	-6.47	-23.66	-13.97
	Horiz	-7.27	-32.47	-17.30	0.00	-27.86	-9.53
	PolSel	-0.98	-17.21	-8.93	0.64	-21.45	-8.08

- Positive gain values
- Good coverage



Intel Communications Group

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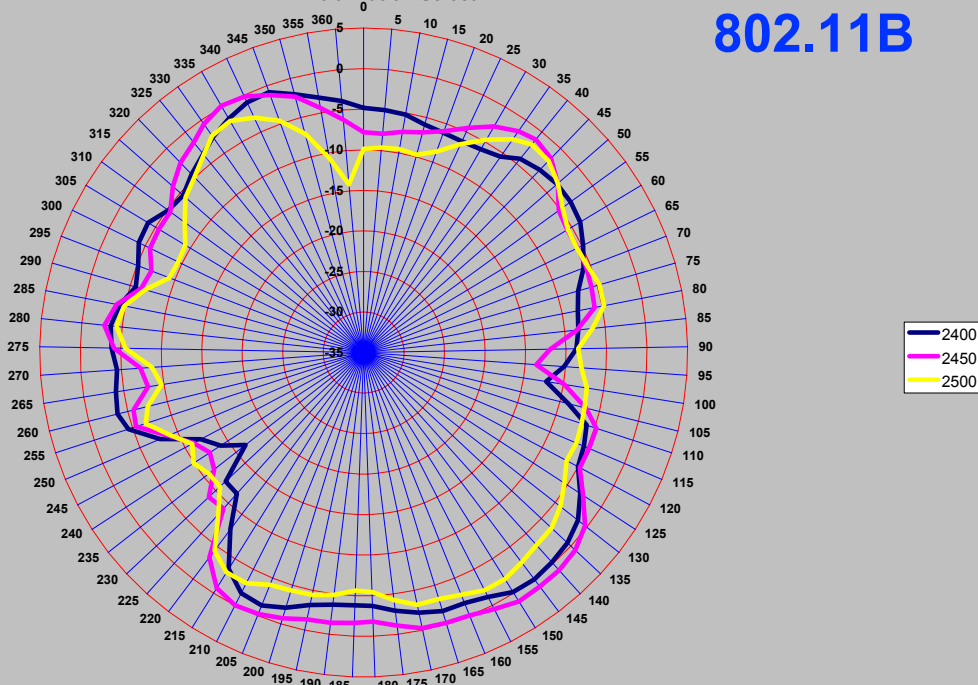
David.C.Wittwer@Intel.com



Antenna Patterns – Azimuth Plane

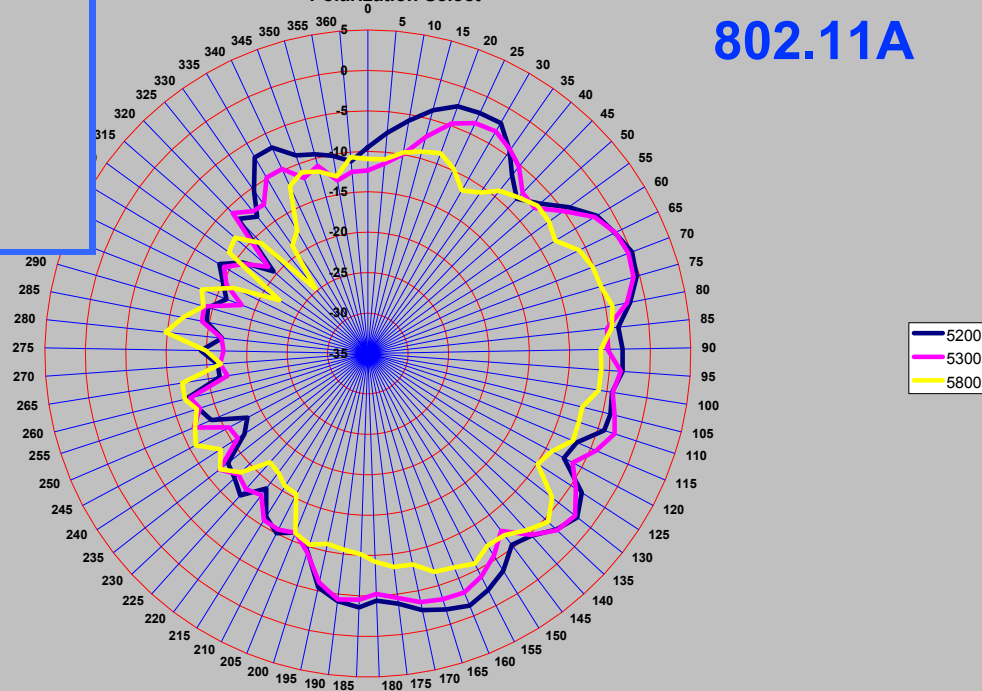
Polarization Select

802.11B



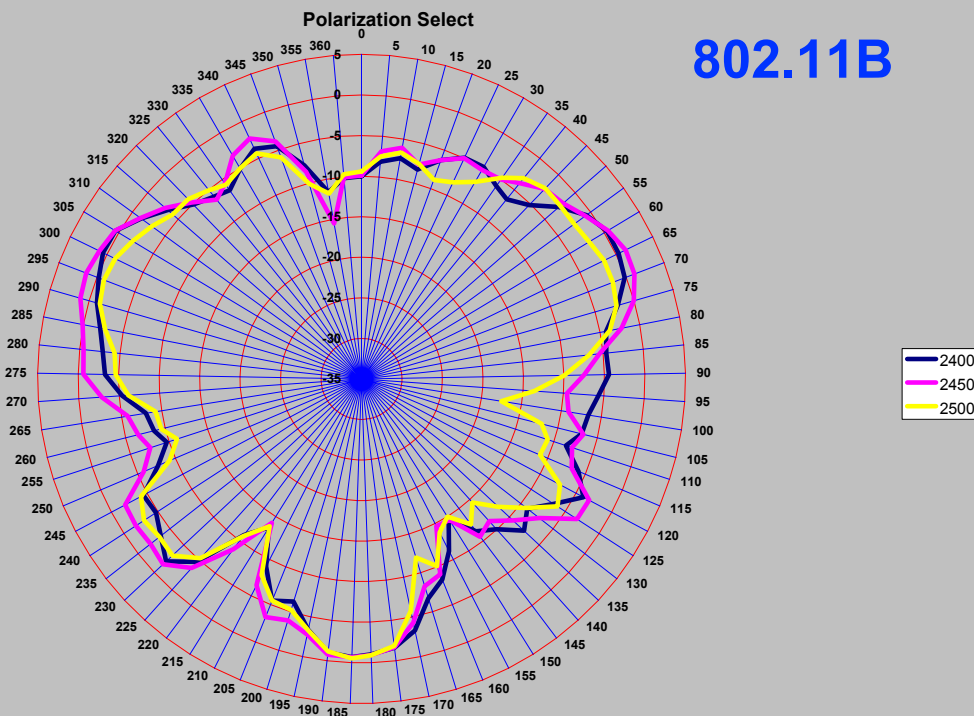
Polarization Select

802.11A

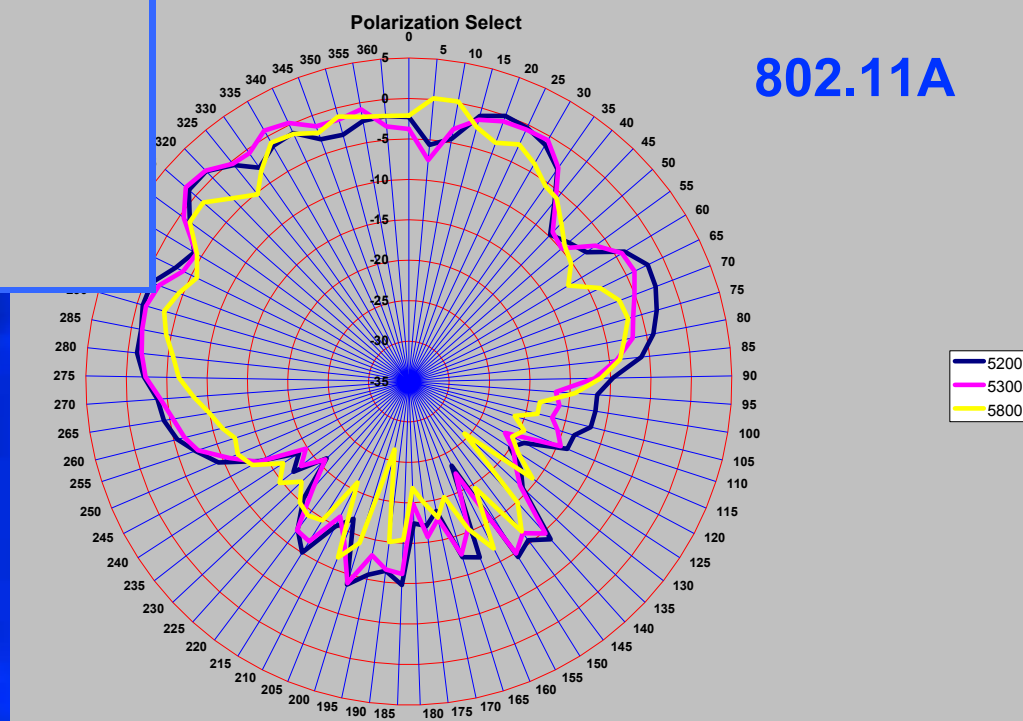


Antenna Patterns – Elevation 1 Plane

802.11B



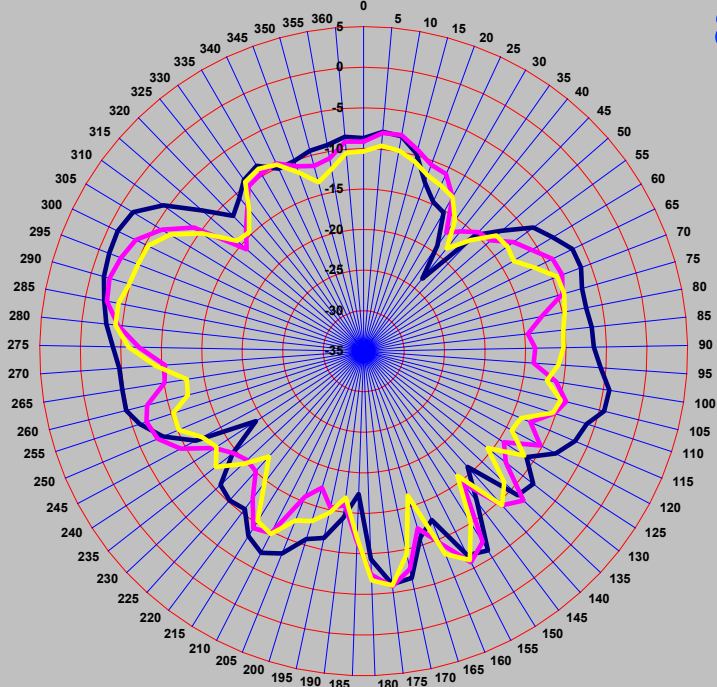
802.11A



Antenna Patterns – Elevation 2 Plane

Polarization Select

802.11B



Polarization Select

802.11A

