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PSAS Propagation Test of the "WiFi" Reference Dipole

Design frequency: 2.422 GHz
Actual frequency: TBD
Scan Frequency: 2.422 GHz
Polarization: Horizontal

Plots included in this PDF file:

Test Run #	Receive Antenna Height	Rec. Ant. Polarization
30	Same height as dipole	V
29	Same height as dipole	H
31	Maximized signal strength	V
32	Maximized signal strength	H

ABSOLUTE GAIN DATA SHEET

EUT:	2.422GHz Reference Dipole	Work Order:	PTLD0001
Serial Number:		Date:	12/09/03
Customer:	Portland State Aerospace Society / PSU AESS	Temperature:	73
Attendees:	none	Humidity:	32%
Cust. Ref. No.:		Barometric Pressure:	30.18
Tested by:	Holly Ashkannejhad	Power:	N/A
		Job Site:	EV01

SAMPLE CALCULATIONS

COMMENTS

2.422GHz. Antenna height = Reference dipole height = 1.75m

EUT OPERATING MODES

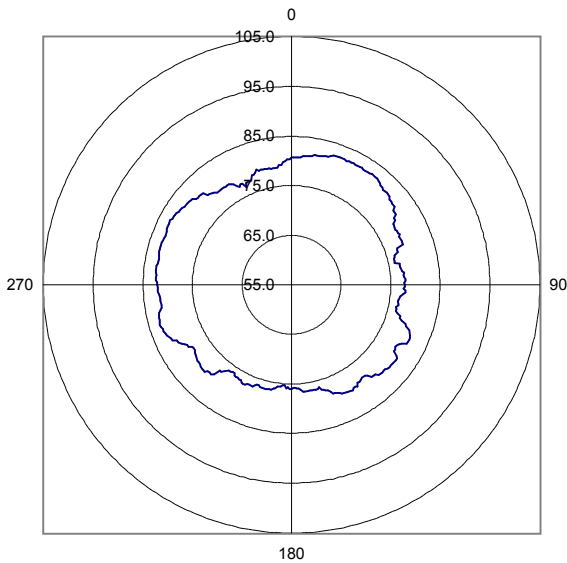
10dBm input power

	Test Distance (m)	Run #
	3	30

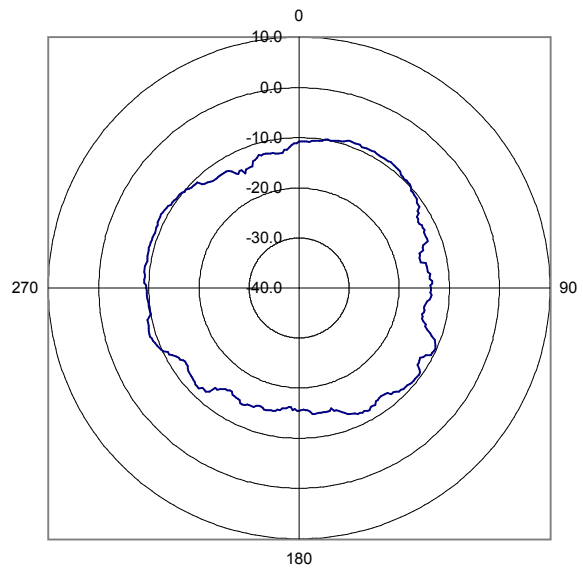
Other

Tested By:

**Relative
Gain of AUT**



**Absolute
Gain of AUT**



Frequency	2422.00
Absolute Gain of Reference Antenna (dBi)	10.01
Reference Antenna Relative Gain Max (dBuV/m)	101.50
AUT Relative Gain Max (dBuV/m)	82.70
Difference (Reference Antenna - AUT) (dB)	18.80
AUT Setup Loss (dB)	0.00
Maximum Absolute Gain of AUT (dBi)	-8.79
Correction Factor (Convert From Relative to Absolute Gain) (dB)	91.49
Measurement Antenna Polarity	Vertical
Antenna Under Test (AUT) Polarity	Horizontal

ABSOLUTE GAIN DATA SHEET

EUT:	2.422GHz Reference Dipole	Work Order:	PTLD0001
Serial Number:		Date:	12/09/03
Customer:	Portland State Aerospace Society / PSU AESS	Temperature:	73
Attendees:	none	Humidity:	32%
Cust. Ref. No.:		Barometric Pressure:	30.18
Tested by:	Holly Ashkannejhad	Power:	N/A
		Job Site:	EV01

SAMPLE CALCULATIONS

COMMENTS

2.422GHz. Antenna height = Reference dipole height = 1.75m

EUT OPERATING MODES

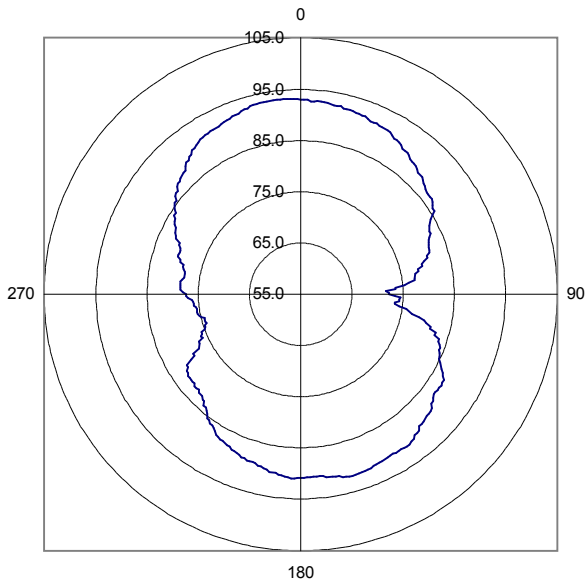
10dBm input power

	Test Distance (m)	Run #
	3	29

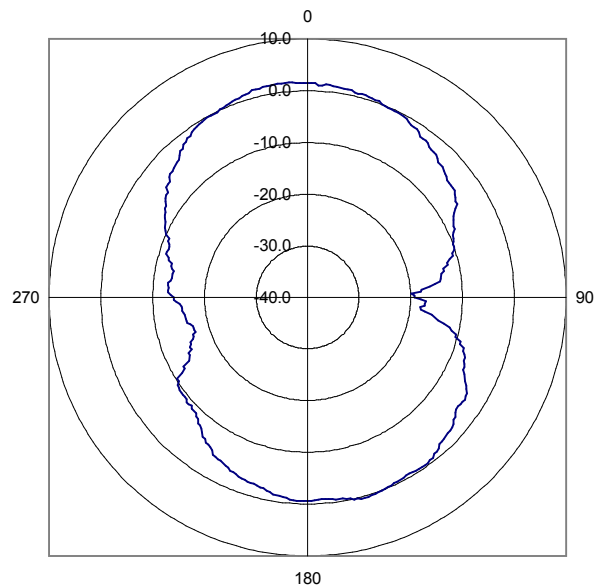
Other

Tested By: _____

Relative Gain of AUT



Absolute Gain of AUT



Frequency	2422.00
Absolute Gain of Reference Antenna (dBi)	10.01
Reference Antenna Relative Gain Max (dBuV/m)	101.50
AUT Relative Gain Max (dBuV/m)	93.20
Difference (Reference Antenna - AUT) (dB)	8.30
AUT Setup Loss (dB)	0.00
Maximum Absolute Gain of AUT (dBi)	1.71
Correction Factor (Convert From Relative to Absolute Gain) (dB)	91.49
Measurement Antenna Polarity	Horizontal
Antenna Under Test (AUT) Polarity	Horizontal

ABSOLUTE GAIN DATA SHEET

EUT:	2.422GHz Reference Dipole	Work Order:	PTLD0001
Serial Number:		Date:	12/09/03
Customer:	Portland State Aerospace Society / PSU AESS	Temperature:	73
Attendees:	none	Humidity:	32%
Cust. Ref. No.:		Barometric Pressure:	30.18
Tested by:	Holly Ashkannejhad	Power:	N/A
		Job Site:	EV01

SAMPLE CALCULATIONS

COMMENTS

2.422GHz. Antenna height =Maximized = 1.05m

EUT OPERATING MODES

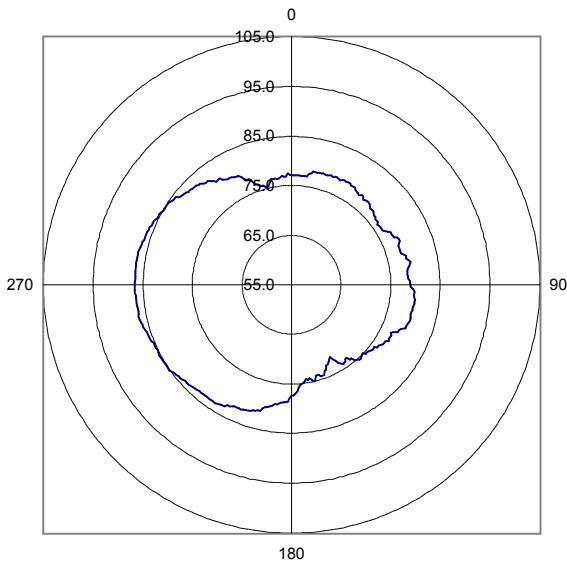
10dBm input power

	Test Distance (m)	Run #
	3	31

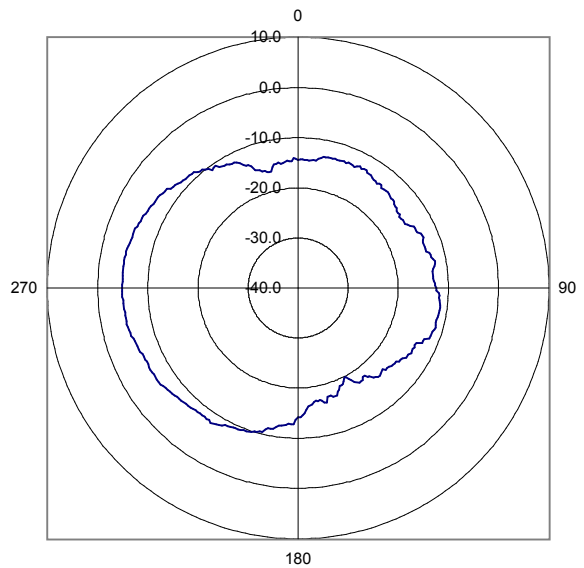
Other

Tested By: _____

Relative Gain of AUT



Absolute Gain of AUT



Frequency	2422.00
Absolute Gain of Reference Antenna (dBi)	10.01
Reference Antenna Relative Gain Max (dBuV/m)	101.50
AUT Relative Gain Max (dBuV/m)	86.60
Difference (Reference Antenna - AUT) (dB)	14.90
AUT Setup Loss (dB)	0.00
Maximum Absolute Gain of AUT (dBi)	-4.89
Correction Factor (Convert From Relative to Absolute Gain) (dB)	91.49
Measurement Antenna Polarity	Vertical
Antenna Under Test (AUT) Polarity	Horizontal

ABSOLUTE GAIN DATA SHEET

EUT: 2.422GHz Reference Dipole	Work Order: PTLD0001
Serial Number:	Date: 12/09/03
Customer: Portland State Aerospace Society / PSU AESS	Temperature: 73
Attendees: none	Humidity: 32%
Cust. Ref. No.:	Barometric Pressure: 30.18
Tested by: Holly Ashkannejhad	Power: N/A
	Job Site: EV01

SAMPLE CALCULATIONS

COMMENTS

2.422GHz. Antenna height =Maximized = 1.8m

EUT OPERATING MODES

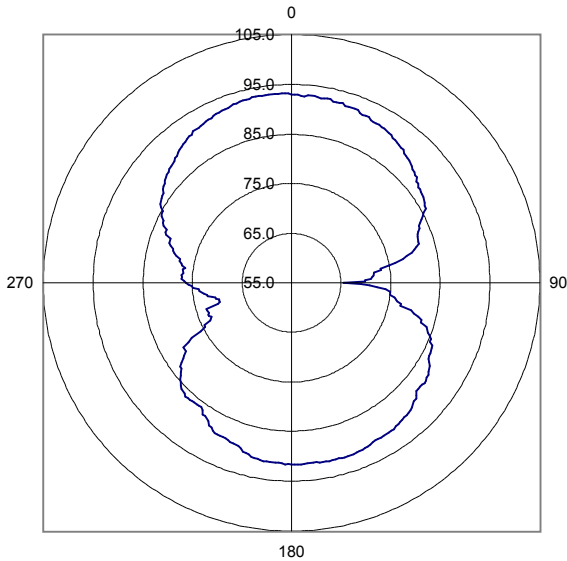
10dBm input power

	Test Distance (m)	Run #
	3	32

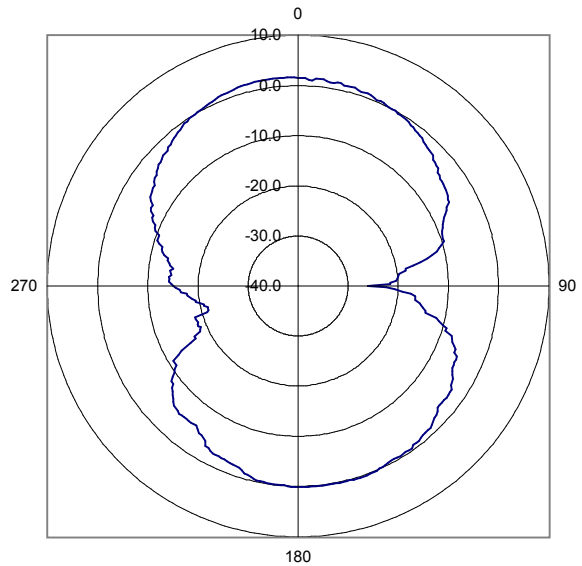
Other

Tested By:

Relative Gain of AUT



Absolute Gain of AUT



Frequency	2422.00
Absolute Gain of Reference Antenna (dBi)	10.01
Reference Antenna Relative Gain Max (dBuV/m)	101.50
AUT Relative Gain Max (dBuV/m)	93.10
Difference (Reference Antenna - AUT) (dB)	8.40
AUT Setup Loss (dB)	0.00
Maximum Absolute Gain of AUT (dBi)	1.61
Correction Factor (Convert From Relative to Absolute Gain) (dB)	91.49
Measurement Antenna Polarity	Horizontal
Antenna Under Test (AUT) Polarity	Horizontal