



Report of Measurements

Antenna performance measurements

Project No.: 1027041

Prepared for: Traxxas
1100 Klein Rd.
Plano, TX 75074

Prepared by: Nemko USA, Inc.
802 N. Kealy St.
Lewisville, TX 75057

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Report Summary
Nemko USA, Dallas Lab

Customer Representative: Chris Russell

EUT Description	Manufacturer
The EUT is a PCB antenna	Traxxas

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Test Summary

The following parameters were measured on the device.

- 1) Gain vs. Azimuth in 360 degrees at 2.4 GHz, 2.45 GHz, and 2.4835 GHz
- 2) Gain vs. Elevation in 360 degrees at 2.4 GHz, 2.45 GHz, and 2.4835 GHz
- 3) Return Loss across frequency band 2.4 – 2.4835 GHz

This is to certify that the preceding report is true and correct to the best of my knowledge.



Brian Boyea, EMC Test Engineer



Tom Tidwell, Director Nemko Direct for Telecom

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1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this document is to present antenna performance data for a pcb antenna design provided by Traxxas.

2.0 EUT DESCRIPTION

2.1 CONFIGURATION

Description of EUT

Frequency Range	2.4 – 2.4835 GHz
Antenna type	<input checked="" type="checkbox"/> PCB
Nominal antenna gain (dBi)	-2.45 dBi
Functional Description	The EUT is designed as a resonant ¼ wave dipole

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APPENDICES



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APPENDIX A: ANTENNA GAIN

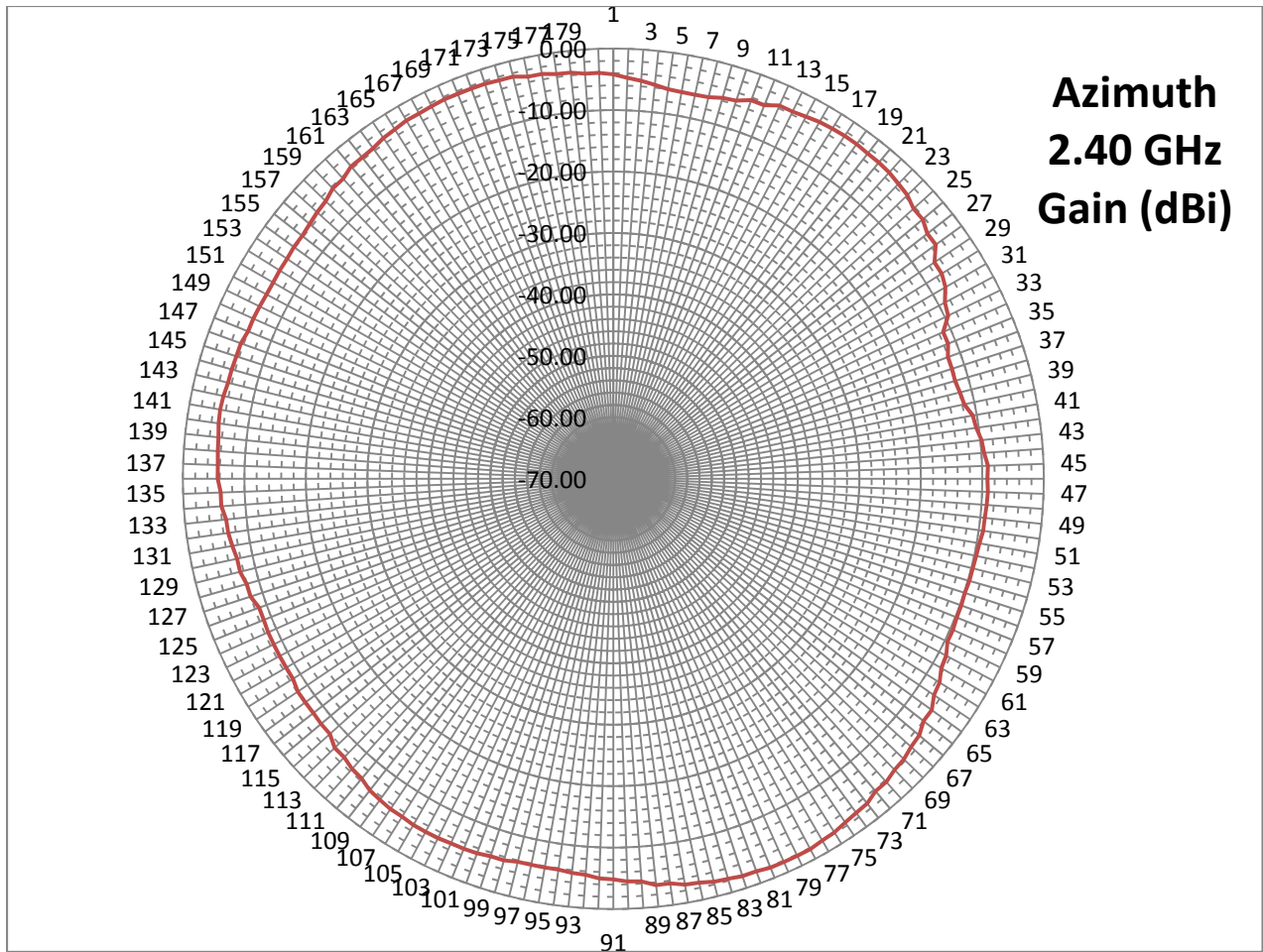


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Azimuth 2.40 GHz

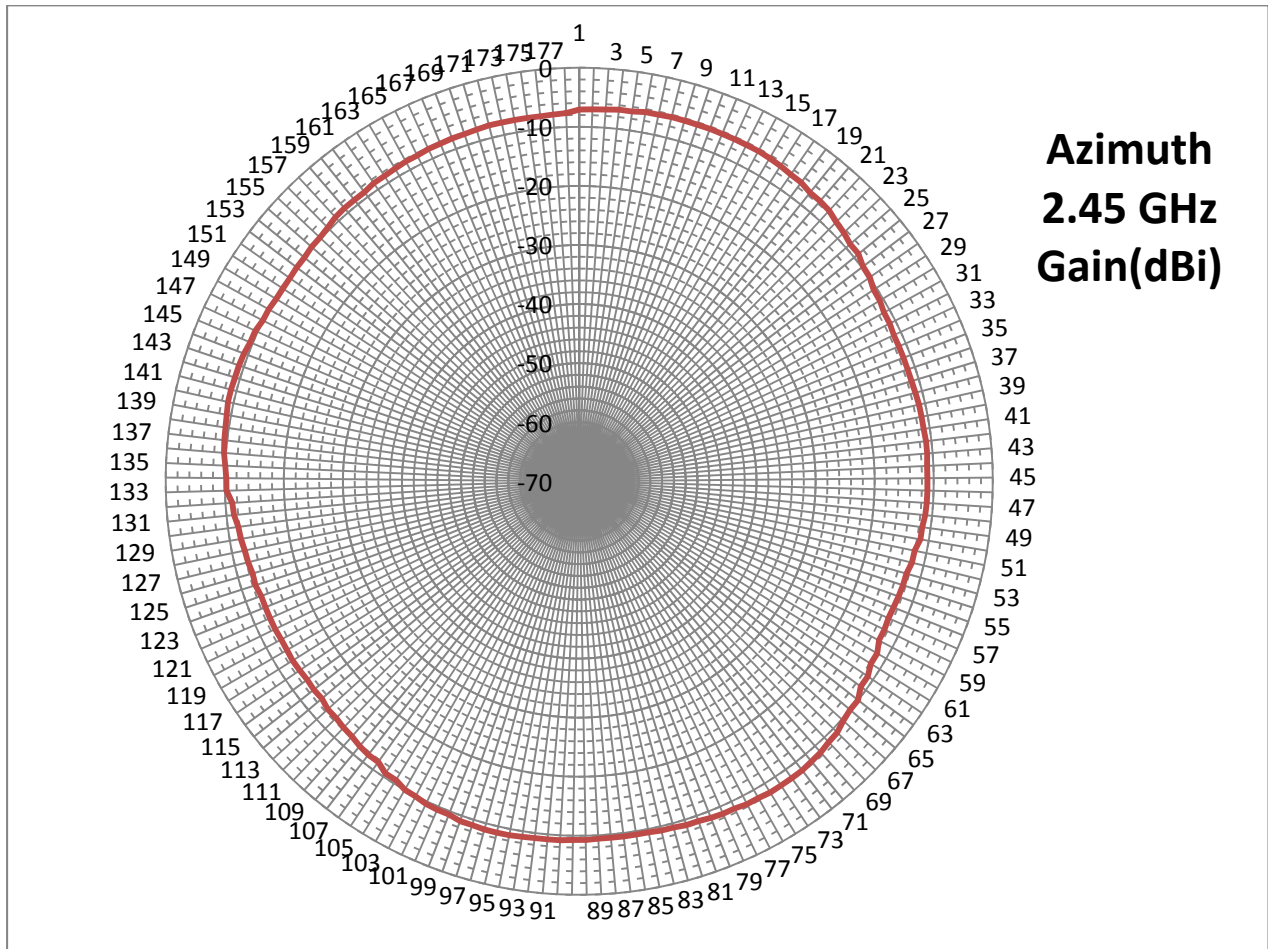


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Azimuth 2.45 GHz

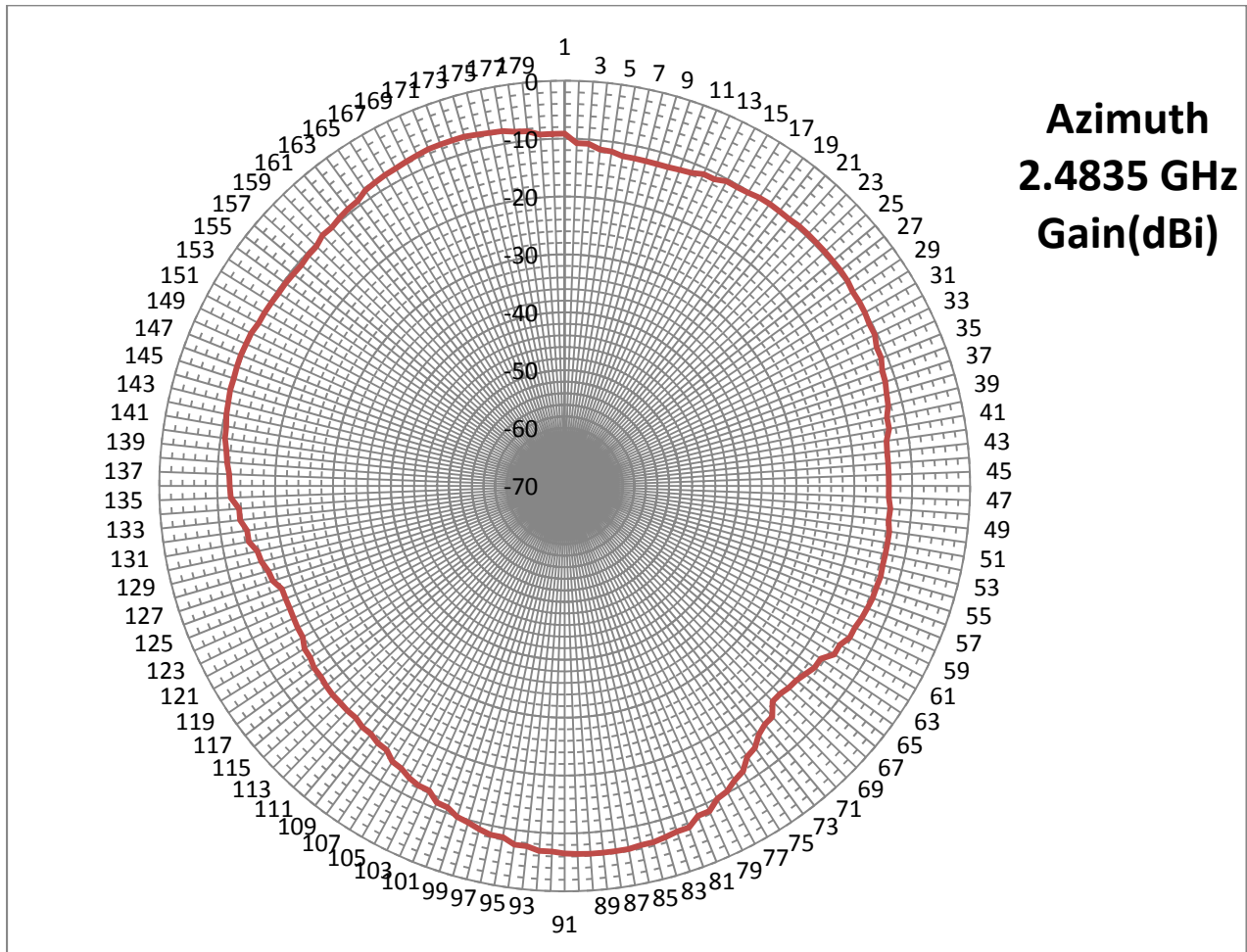


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Azimuth 2.4835 GHz



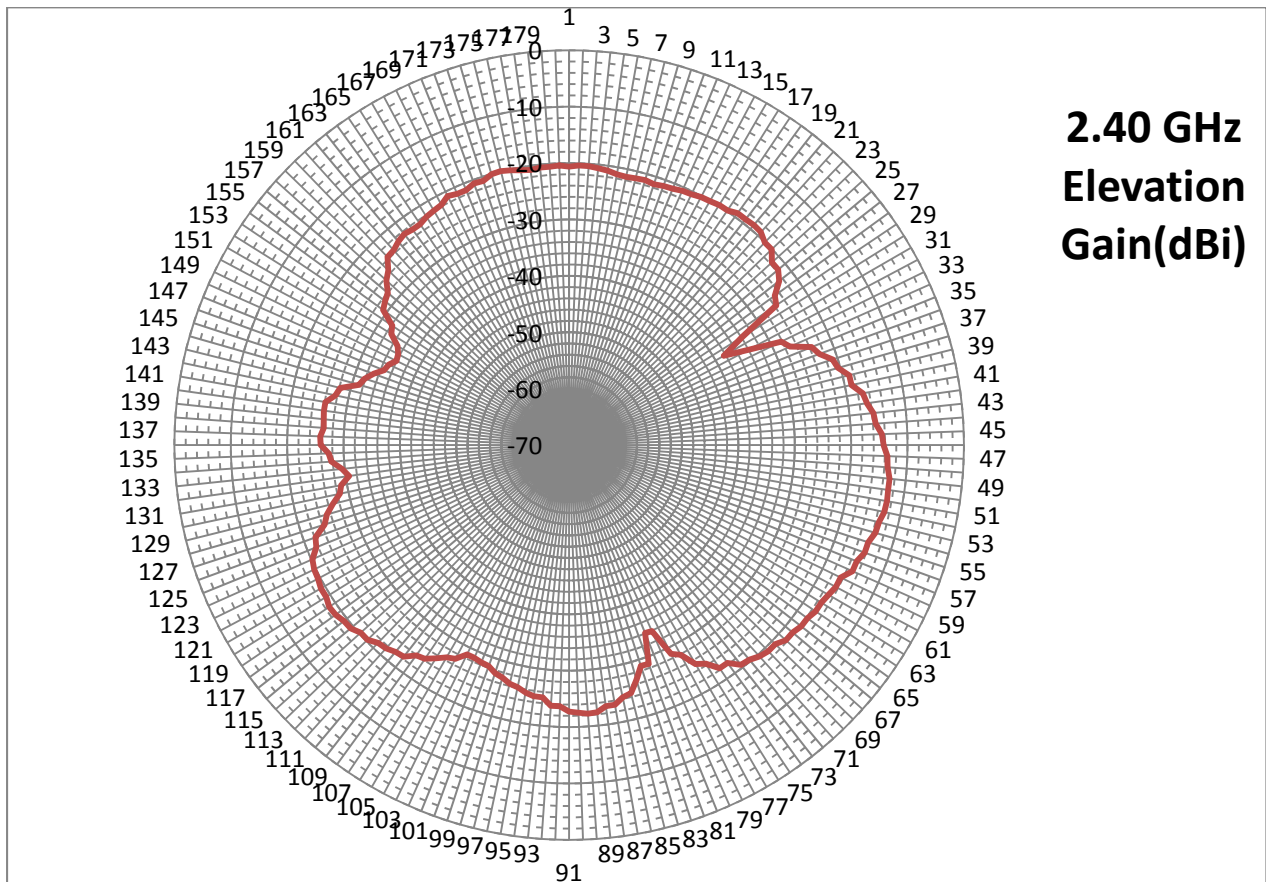
A.1.

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Elevation 2.40 GHz

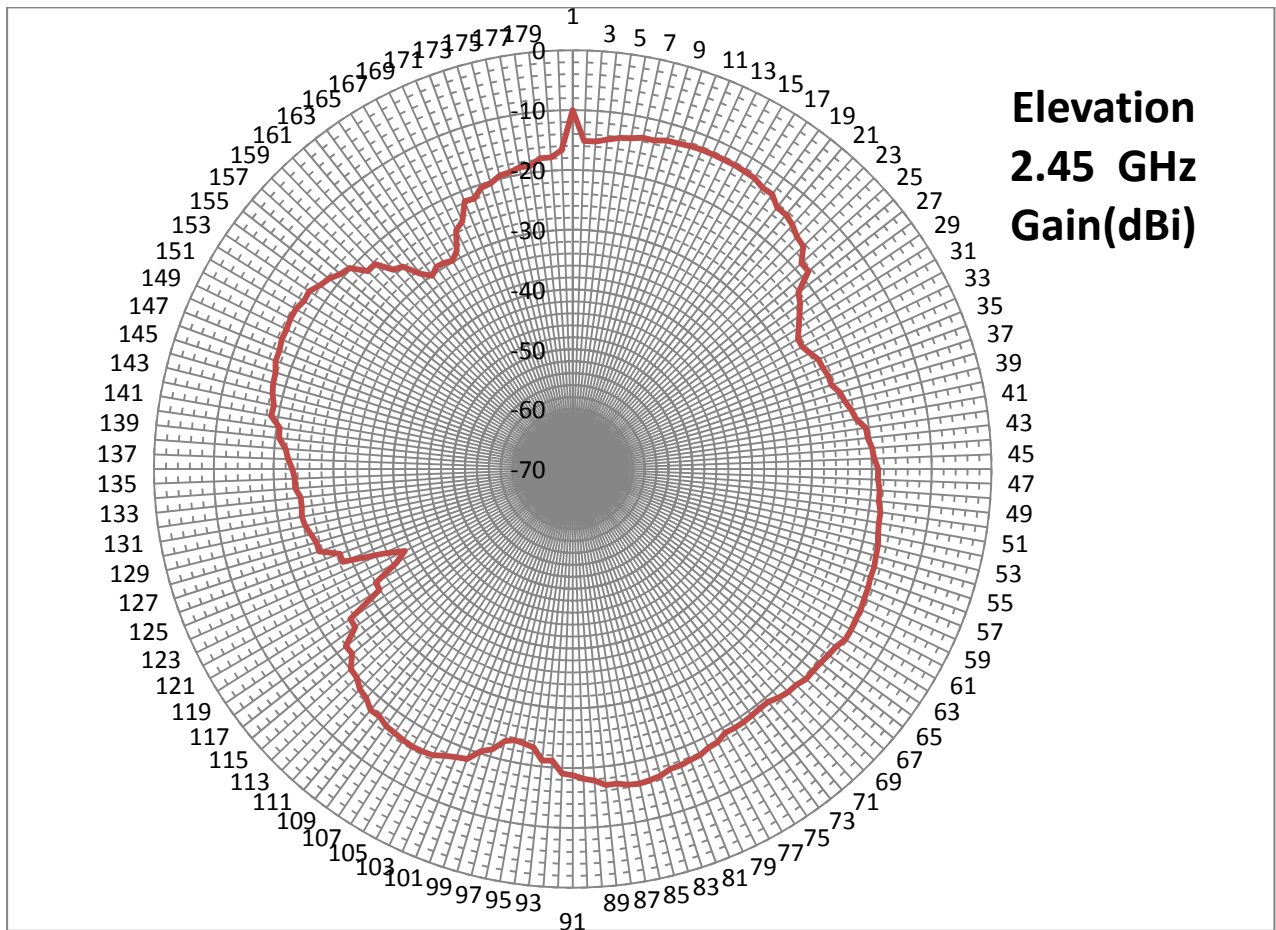


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Elevation 2.45 GHz

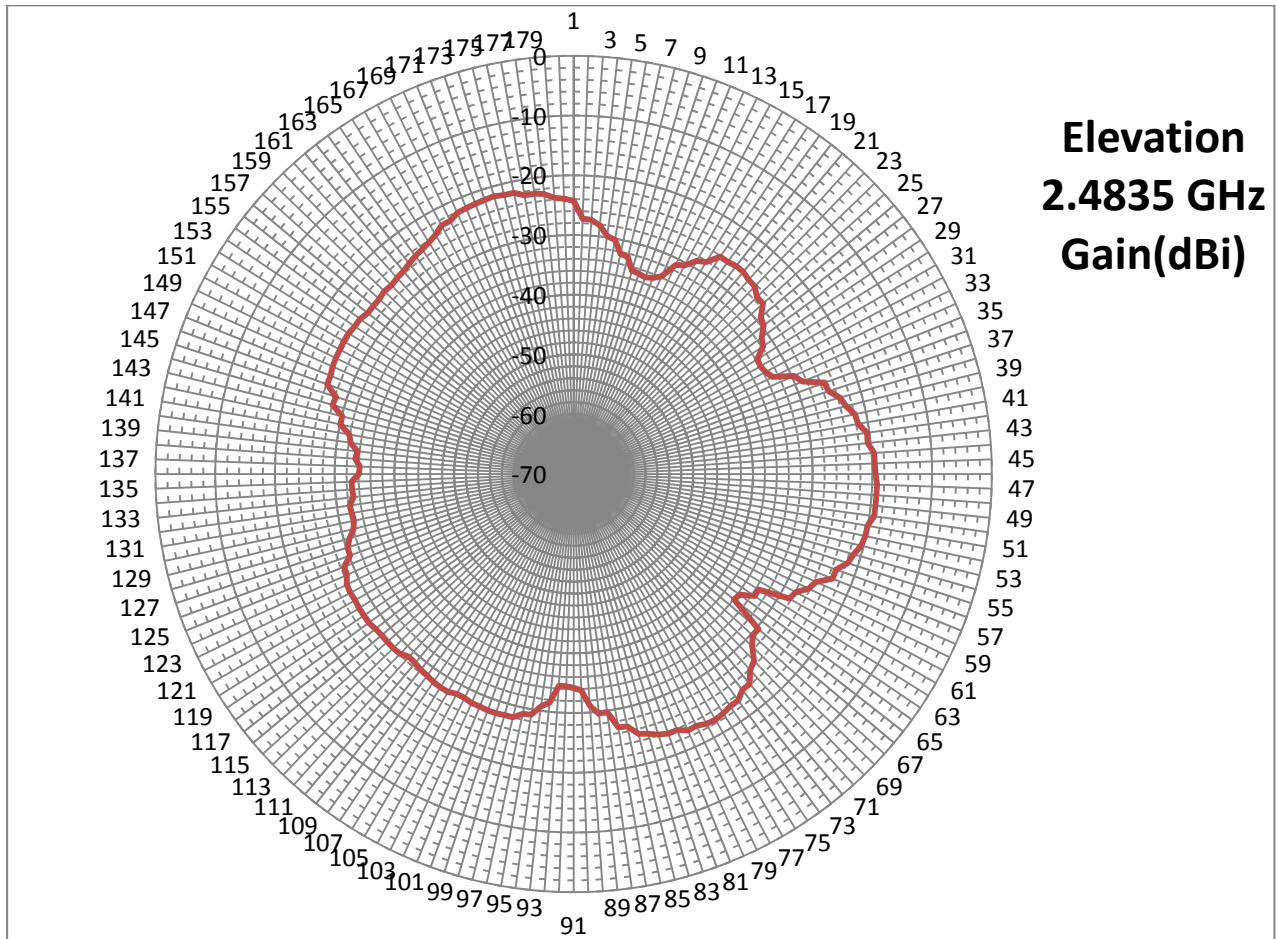


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Elevation 2.4835 GHz



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APPENDIX B: RETURN LOSS CHARACTERISTICS



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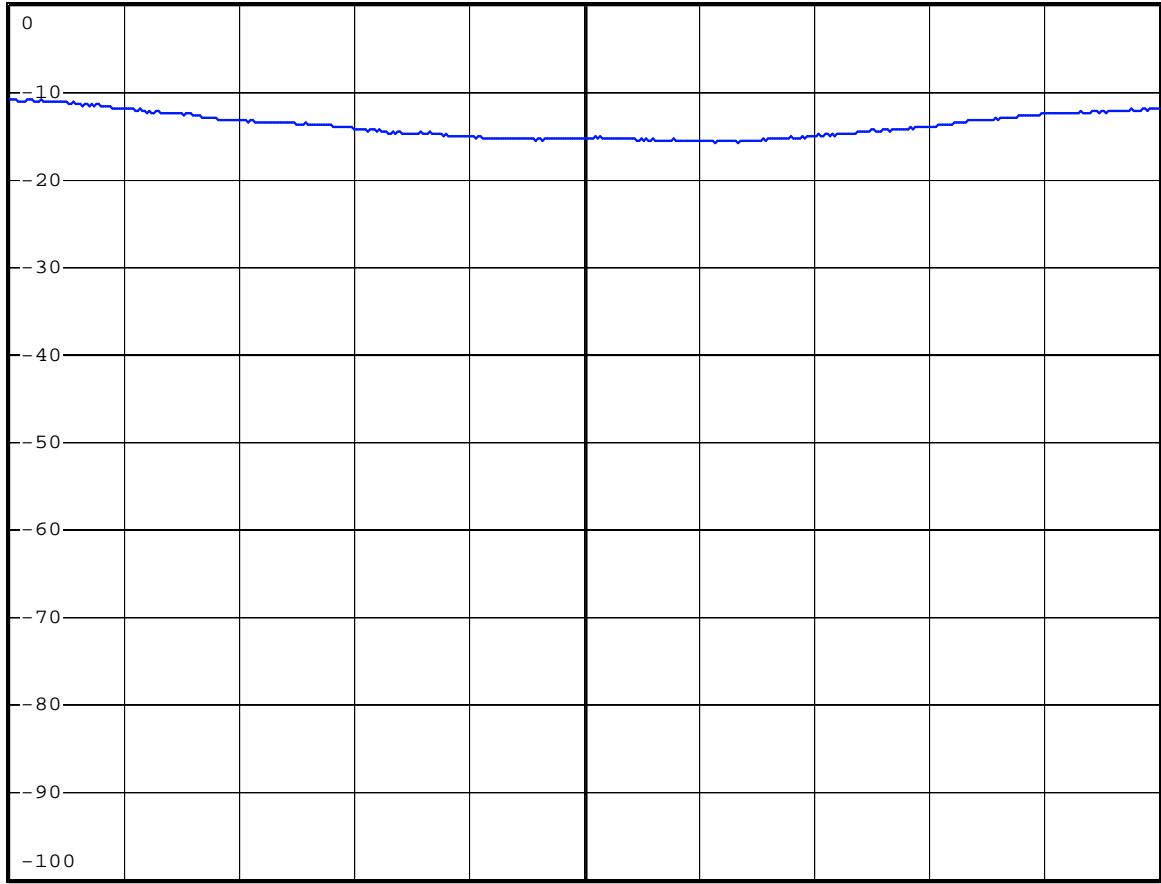
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Return Loss
Serial #1



Ref -20 dBm TG 0 dBm RBW 3 MHz
Att 10 dB VBW 10 MHz
SWT 100 ms

LSA
VIEW



Center 2.45 GHz 10 MHz/ Span 100 MHz

Date: 22.MAR.2011 09:02:31

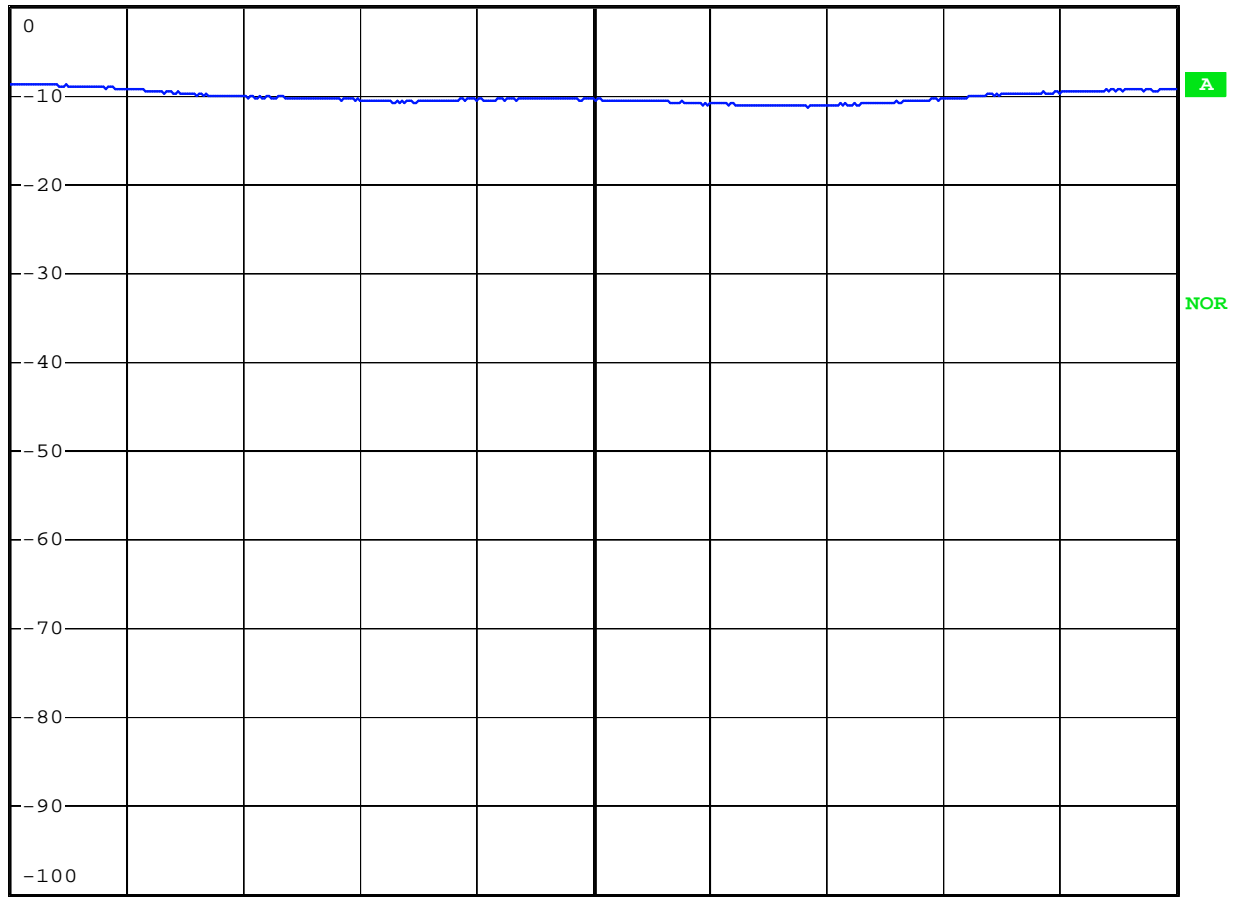
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Serial #9



Ref -20 dBm TG 0 dBm RBW 3 MHz
Att 10 dB VBW 10 MHz
SWT 100 ms

1 SA
VIEW



Start 2.4 GHz 10 MHz/ Stop 2.5 GHz

Date: 22.MAR.2011 09:07:22

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APPENDIX C: TEST EQUIPMENT LIST

Asset Tag	Description	Manufacturer	Model	Serial #	Last Cal	Next Cal
993	Antenna, Horn	A.H. Systems	SAS- 200/571	162	09-Sep- 2009	09-Sep- 2011
1033	Antenna, Horn	EMCO	3115	8812-3035	09-Sep- 2008	09-Sep- 2010
1663	Spectrum Analyzer	Rohde & Schwartz	FSP3	100073	23-Aug- 2010	23-Aug- 2011
1767	Receiver, EMI Test 20Hz - 26.5 GHz - 150 - +30 dBm LCD	Rohde & Schwartz	ESIB26	837491/0002	01-Dec- 2010	01-Dec- 2011
1783	Cable Assy, 3m Chamber	Nemko	Chamber		04-Oct-2010	04-Oct-2011

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