

# ***SVG-1202 ver. R0C*** ***antenna test report***

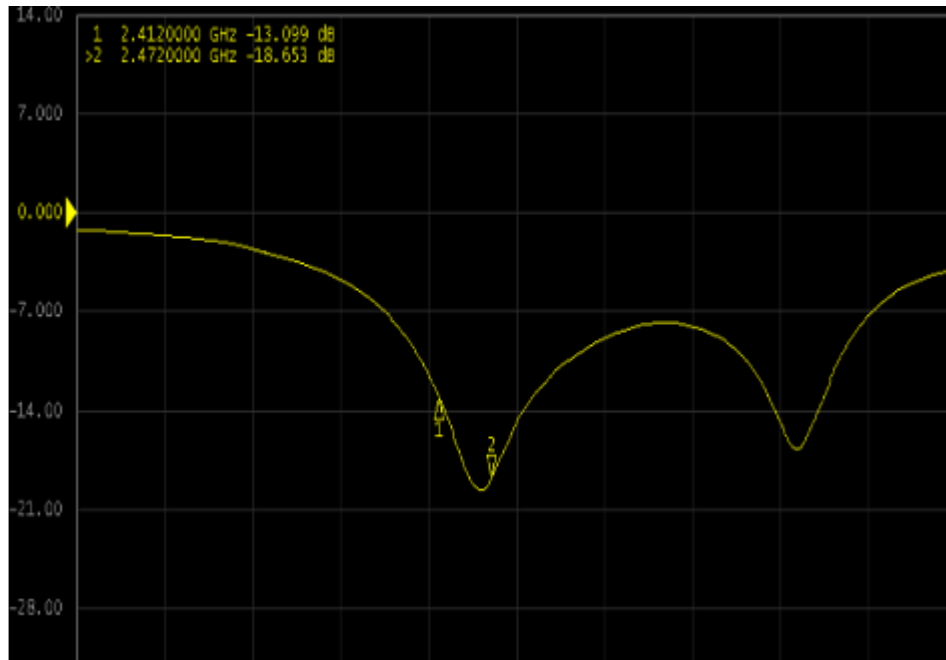
***Ver. 1.2***

# Electrical Properties-1

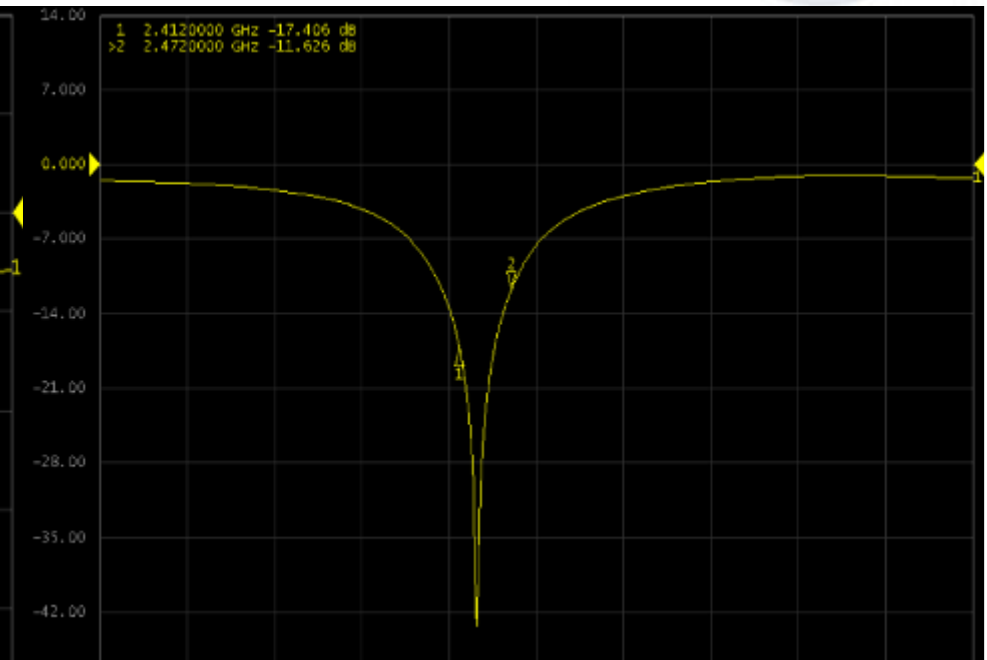
Compal Broadband Networks, Inc.

Return Loss(<-10dB)

## ANT1



## ANT2



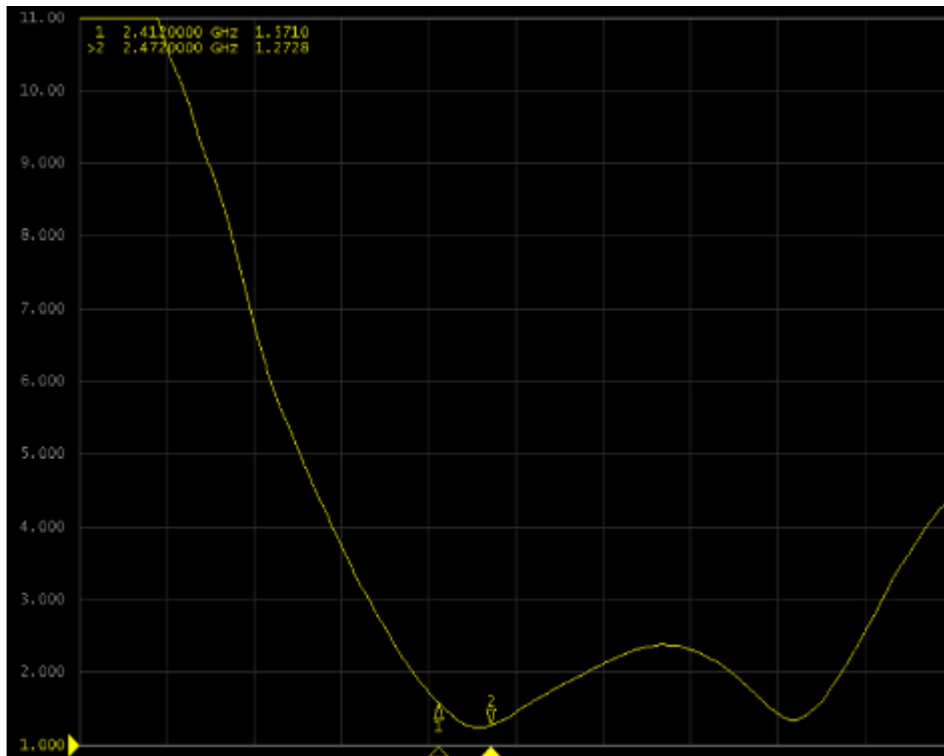
Compal Confidential and Proprietary

# Electrical Properties-2

Compal Broadband Networks, Inc.

V.S.W.R(<2.0)

## ANT1



## ANT2

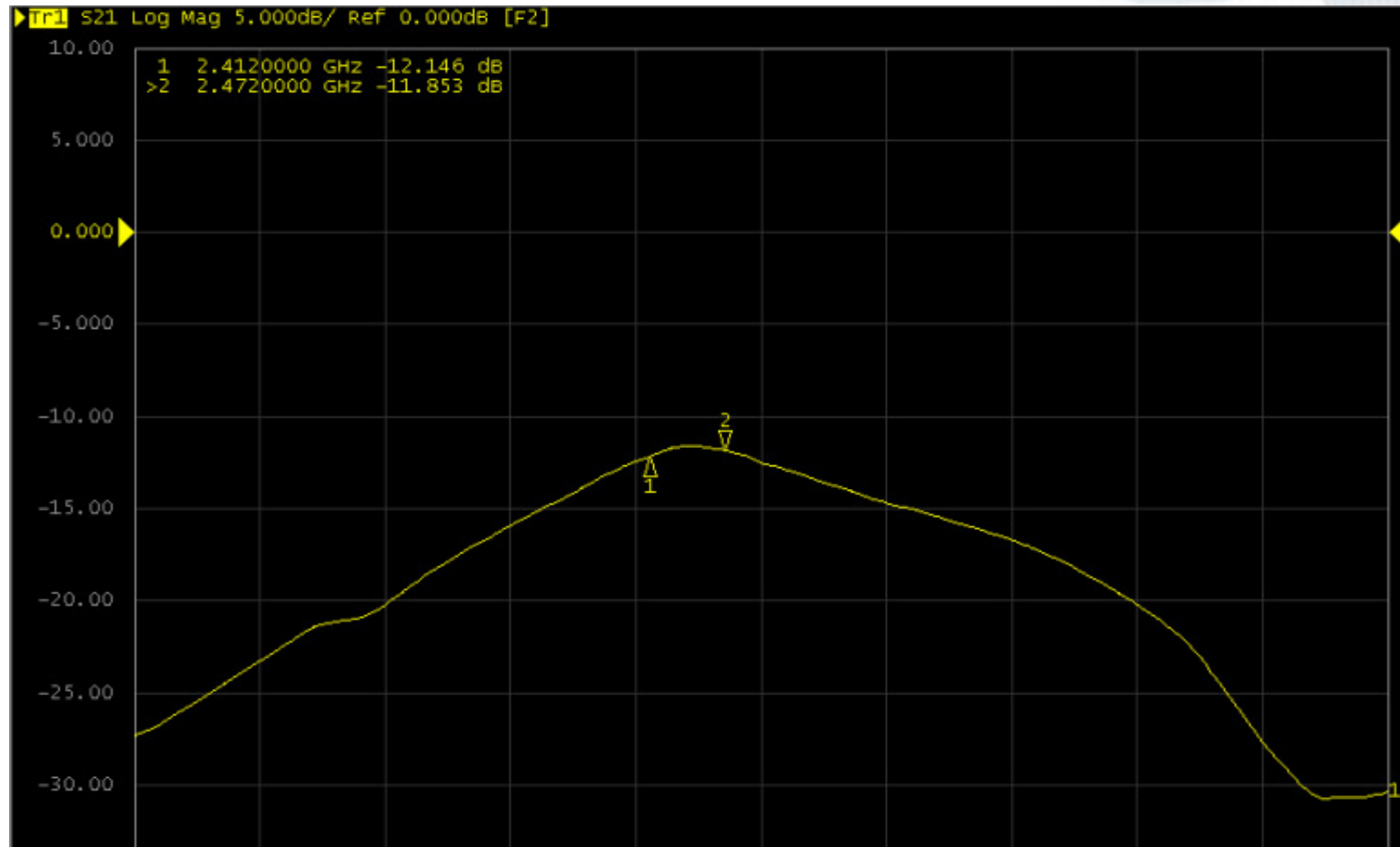


Compal Confidential and Proprietary

# Electrical Properties-3

Compal Broadband Networks, Inc.

Isolation between ANT1 and ANT2(<-10dB)

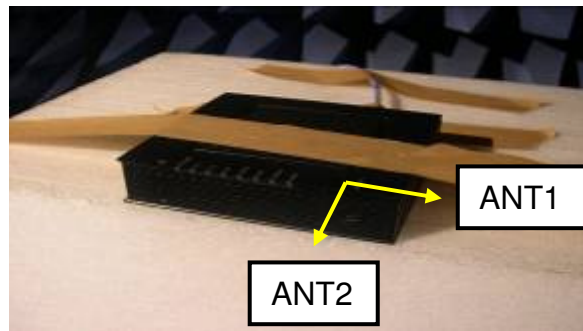


Compal Confidential and Proprietary

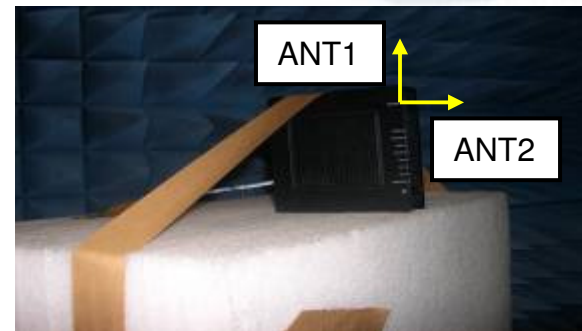
# Antenna Patterns Measurement Setup

Compal Broadband Networks, Inc.

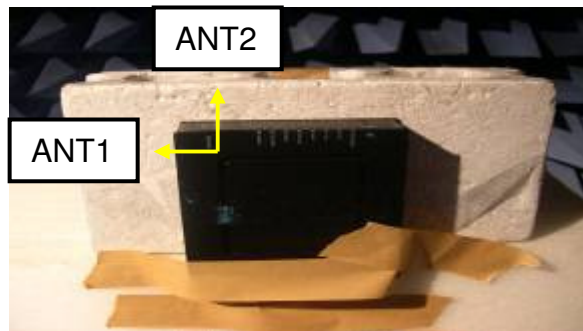
**Placing the modem horizontally**



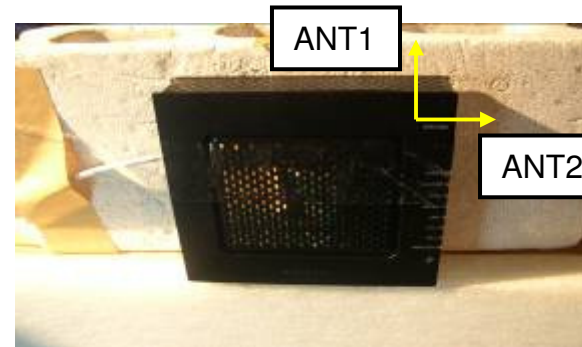
**Placing the modem vertically**



**Horizontal wall-mount**



**Vertical wall-mount**



# Antenna Radiation Patterns-1

Compal Broadband Networks, Inc.

- Ant1 for placing the modem vertically

Antenna Polarity	2412MHz	2472MHz
Vertical	<p> <b>2412MHz</b>                  Frequency (MHz): 2412.000    Antenna Polarity: Vertical    Average Value (dB): 1.84                  Minimum Value (dB): -0.26    Maximum Value (dBS): 3.00                  Minimum Value (dBS): -0.56    Maximum Value (dBS): 3.00                  © 2009 Zentara Networks, Inc. (http://www.zentara.com)             </p>	<p> <b>2472MHz</b>                  Frequency (MHz): 2472.000    Antenna Polarity: Vertical    Average Value (dB): 0.86                  Minimum Value (dB): -1.16    Maximum Value (dBS): 0.00                  Minimum Value (dBS): -0.56    Maximum Value (dBS): 3.00                  © 2009 Zentara Networks, Inc. (http://www.zentara.com)             </p>
Horizontal	<p> <b>2412MHz</b>                  Frequency (MHz): 2412.000    Antenna Polarity: Horizontal    Average Value (dB): 0.84                  Minimum Value (dB): -0.88    Maximum Value (dBS): 3.00                  Minimum Value (dBS): -0.56    Maximum Value (dBS): 3.00                  © 2009 Zentara Networks, Inc. (http://www.zentara.com)             </p>	<p> <b>2472MHz</b>                  Frequency (MHz): 2472.000    Antenna Polarity: Horizontal    Average Value (dB): 4.31                  Minimum Value (dB): -0.88    Maximum Value (dBS): 3.00                  Minimum Value (dBS): -0.56    Maximum Value (dBS): 3.00                  © 2009 Zentara Networks, Inc. (http://www.zentara.com)             </p>

# Antenna Radiation Patterns-2

Compal Broadband Networks, Inc.

- Ant2 for placing the modem vertically

Antenna Polarity	2412MHz	2472MHz
Vertical		
Horizontal		



# Antenna Radiation Patterns-3

Compal Broadband Networks, Inc.

- Ant1 for placing the modem horizontally

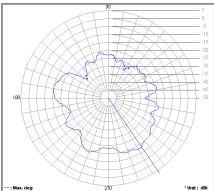
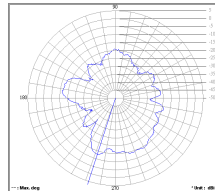
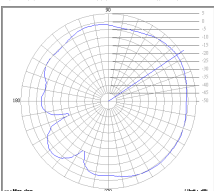
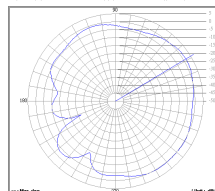
Antenna Polarity	2412MHz	2472MHz
Vertical	<p> <b>2412MHz Radiation Pattern (Vertical)</b>                      Frequency: 2412MHz, Antenna Polarity: Vertical, Average Value (dB): 15.20, Minimum Value (dB): 8.20, Maximum Value (dB): 20.00                 </p>	<p> <b>2472MHz Radiation Pattern (Vertical)</b>                      Frequency: 2472MHz, Antenna Polarity: Vertical, Average Value (dB): 15.40, Minimum Value (dB): 8.40, Maximum Value (dB): 20.00                 </p>
Horizontal	<p> <b>2412MHz Radiation Pattern (Horizontal)</b>                      Frequency: 2412MHz, Antenna Polarity: Horizontal, Average Value (dB): 14.80, Minimum Value (dB): 7.80, Maximum Value (dB): 19.00                 </p>	<p> <b>2472MHz Radiation Pattern (Horizontal)</b>                      Frequency: 2472MHz, Antenna Polarity: Horizontal, Average Value (dB): 14.90, Minimum Value (dB): 7.90, Maximum Value (dB): 19.00                 </p>



# Antenna Radiation Patterns-4

Compal Broadband Networks, Inc.

- Ant2 for placing the modem horizontally

Antenna Polarity	2412MHz	2472MHz
Vertical		
Horizontal		

# Antenna Radiation Patterns-5

Compal Broadband Networks, Inc.

- Ant1 for vertical wall-mount

Antenna Polarity	2412MHz	2472MHz
Vertical		
Horizontal		

# Antenna Radiation Patterns-6

Compal Broadband Networks, Inc.

- Ant2 for vertical wall-mount

Antenna Polarity	2412MHz	2472MHz
Vertical		
Horizontal		

# Antenna Radiation Patterns-7

Compal Broadband Networks, Inc.

- Ant1 for horizontal wall-mount

Antenna Polarity	2412MHz	2472MHz
Vertical	<p>Vertical radiation pattern for Ant1 at 2412MHz. The plot shows a main lobe pointing upwards and a smaller lobe pointing downwards, with a null at 0 degrees. The scale is in dBm, ranging from -100 to -20.</p>	<p>Vertical radiation pattern for Ant1 at 2472MHz. The plot shows a main lobe pointing upwards and a smaller lobe pointing downwards, with a null at 0 degrees. The scale is in dBm, ranging from -100 to -20.</p>
Horizontal	<p>Horizontal radiation pattern for Ant1 at 2412MHz. The plot shows a main lobe pointing to the right and a smaller lobe pointing to the left, with a null at 0 degrees. The scale is in dBm, ranging from -100 to -20.</p>	<p>Horizontal radiation pattern for Ant1 at 2472MHz. The plot shows a main lobe pointing to the right and a smaller lobe pointing to the left, with a null at 0 degrees. The scale is in dBm, ranging from -100 to -20.</p>

# Antenna Radiation Patterns-8

Compal Broadband Networks, Inc.

- Ant2 for horizontal wall-mount

Antenna Polarity	2412MHz	2472MHz
Vertical	<p> <b>2412MHz</b>                  Location: # Channel C Date: 08/15/09 Test: T# 010308                  Temperature (C): 28 Humidity (%): 76 Approver(s):                  Frequency (MHz): 2412.00 Antenna Polarity: Vertical Average Value (dB): 0.46                  Minimum Value (dB): -6.36 Maximum Value (dB): 1.78                  Minimum Value (deg): 87 Maximum Value (deg): 87                  © 2009 Zentara Networks, Inc. 10/26/07/00000003.jpg             </p>	<p> <b>2472MHz</b>                  Location: # Channel C Date: 08/15/09 Test: T# 010308                  Temperature (C): 28 Humidity (%): 76 Approver(s):                  Frequency (MHz): 2472.00 Antenna Polarity: Vertical Average Value (dB): 0.44                  Minimum Value (dB): -6.36 Maximum Value (dB): 1.78                  Minimum Value (deg): 87 Maximum Value (deg): 87                  © 2009 Zentara Networks, Inc. 10/26/07/00000003.jpg             </p>
Horizontal	<p> <b>2412MHz</b>                  Location: # Channel C Date: 08/15/09 Test: T# 010308                  Temperature (C): 28 Humidity (%): 76 Approver(s):                  Frequency (MHz): 2412.00 Antenna Polarity: Horizontal Average Value (dB): 0.44                  Minimum Value (dB): -6.36 Maximum Value (dB): 1.78                  Minimum Value (deg): 306 Maximum Value (deg): 306                  © 2009 Zentara Networks, Inc. 10/26/07/00000003.jpg             </p>	<p> <b>2472MHz</b>                  Location: # Channel C Date: 08/15/09 Test: T# 010308                  Temperature (C): 28 Humidity (%): 76 Approver(s):                  Frequency (MHz): 2472.00 Antenna Polarity: Horizontal Average Value (dB): 0.48                  Minimum Value (dB): -6.36 Maximum Value (dB): 1.78                  Minimum Value (deg): 306 Maximum Value (deg): 306                  © 2009 Zentara Networks, Inc. 10/26/07/00000003.jpg             </p>

# Gain Table

*Compal Broadband Networks, Inc.*

Placing the CM	Antenna	Antenna Polarity	Frequency (MHz)	2412	2472
Vertically	Ant1	Vertical	Peak Gain (dBi)	0.76	1.4
			Average Gain (dBi)	-1.02	-0.46
Vertically	Ant2	Vertical	Peak Gain (dBi)	1.28	1.04
			Average Gain (dBi)	-1.55	-1.88
Horizontally	Ant1	Horizontal	Peak Gain (dBi)	2.47	1.93
			Average Gain (dBi)	-1.51	-1.75
Horizontally	Ant2	Vertical	Peak Gain (dBi)	1.76	1.51
			Average Gain (dBi)	-1.99	-2.21

Wall-mount	Antenna	Antenna Polarity	Frequency (MHz)	2412	2472
Vertical	Ant1	Vertical	Peak Gain (dBi)	0.76	1.4
			Average Gain (dBi)	-1.02	-0.46
Vertical	Ant2	Vertical	Peak Gain (dBi)	1.28	1.04
			Average Gain (dBi)	-1.55	-1.88
Horizontal	Ant1	Vertical	Peak Gain (dBi)	1.55	1.68
			Average Gain (dBi)	-1.3	-1.99
Horizontal	Ant2	Vertical	Peak Gain (dBi)	0.3	1.33
			Average Gain (dBi)	-3.42	-2.84



# Conclusion

*Compal Broadband Networks, Inc.*

- ANT1
- The average gain is -1.75dBi at least when the Cable Modem,SVG-1202, is placed horizontally.
- The average gain is -1.02dBi at least when the Cable Modem,SVG-1202, is placed vertically.
- The average gain is -1.99dBi at least when the Cable Modem,SVG-1202, is horizontally wall-mounted installation.
- The average gain is -1.02dBi at least when the Cable Modem,SVG-1202, is vertically wall-mounted installation.



# Conclusion

*Compal Broadband Networks, Inc.*

- ANT2
- The average gain is -2.21dBi at least when the Cable Modem,SVG-1202, is placed horizontally.
- The average gain is -1.88dBi at least when the Cable Modem,SVG-1202, is placed vertically.
- The average gain is -3.42dBi at least when the Cable Modem,SVG-1202, is horizontally wall-mounted installation.
- The average gain is -1.88dBi at least when the Cable Modem,SVG-1202, is vertically wall-mounted installation.