

CG6640A antenna test report



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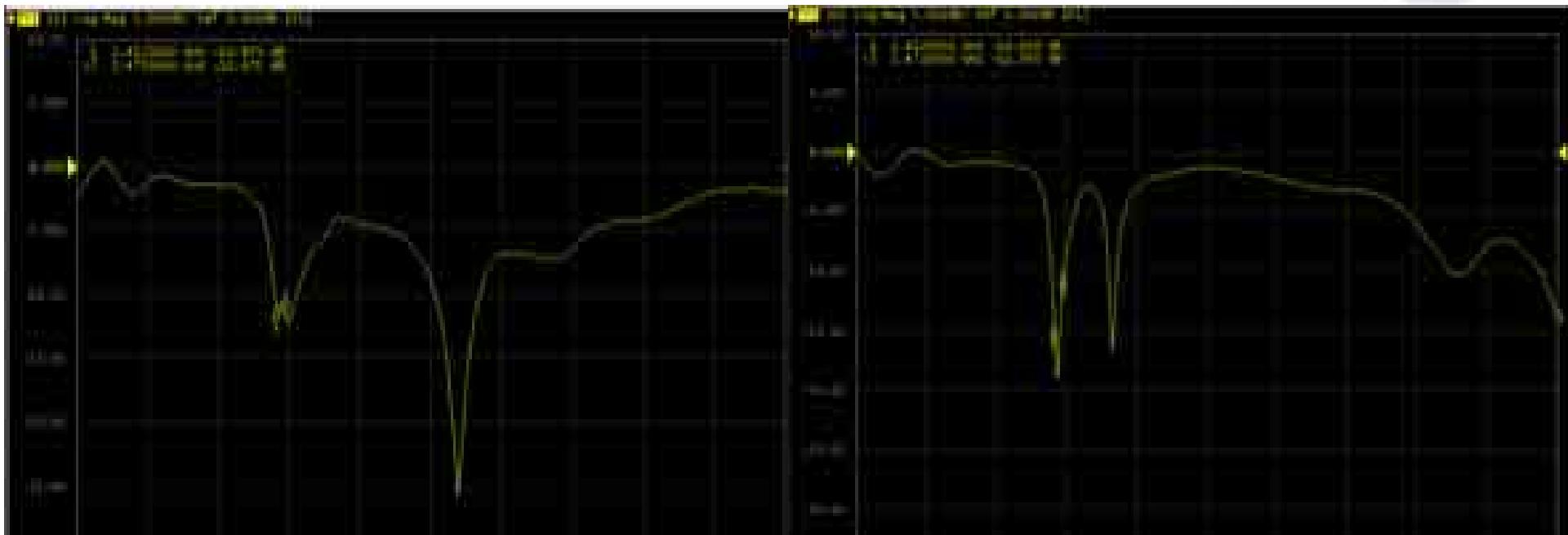
Electrical Properties-1

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Return Loss(<-10dB)

ANT1

ANT2



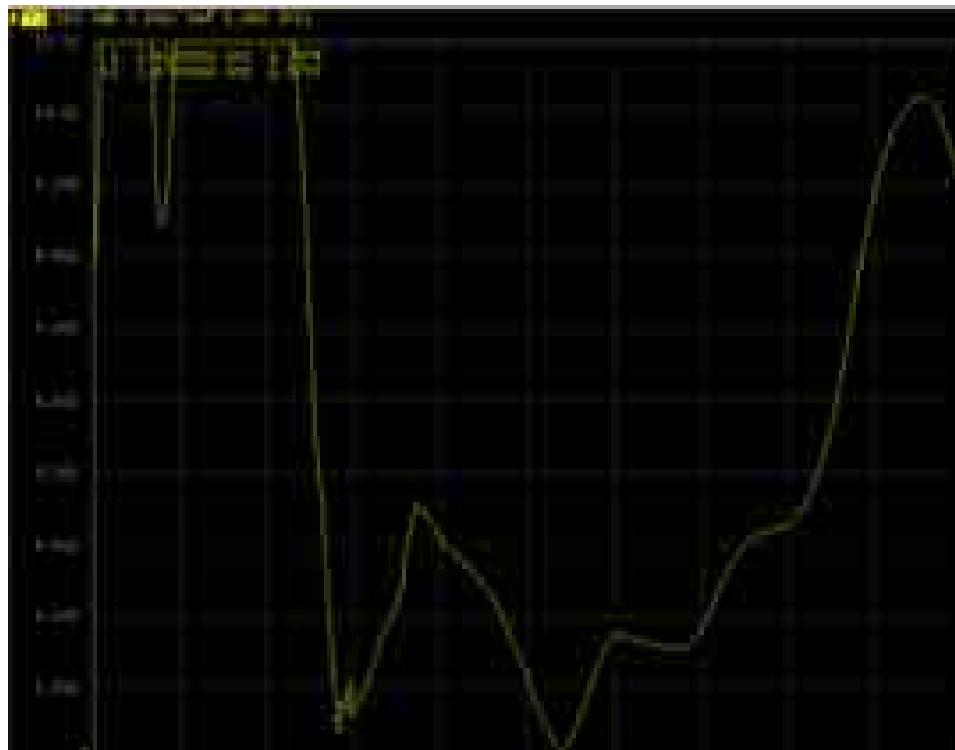
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Electrical Properties-2

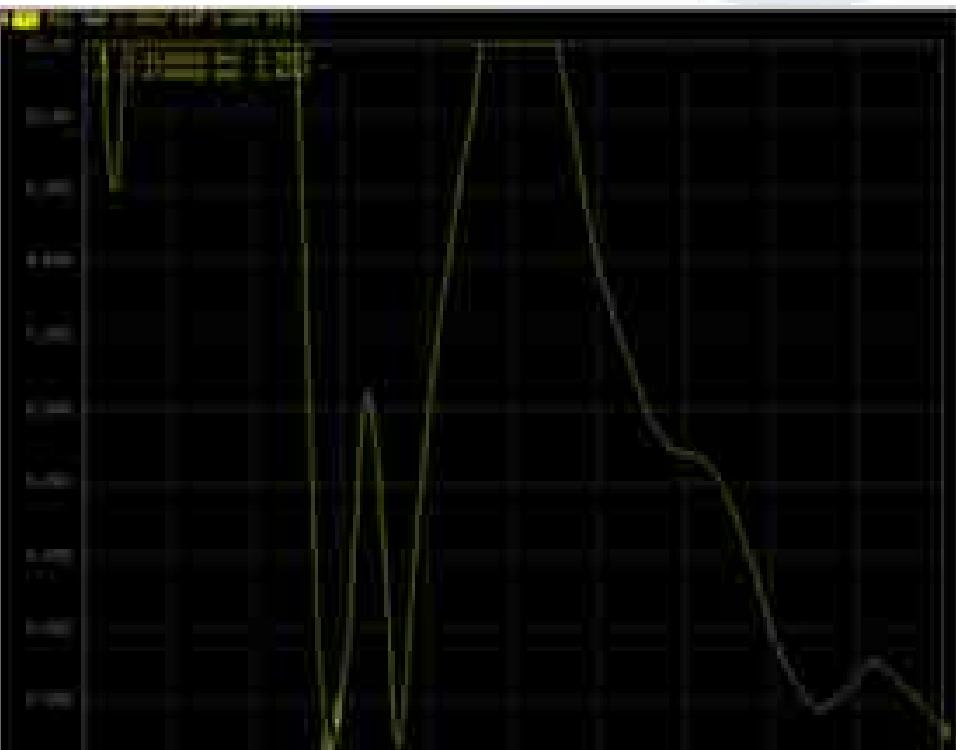
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V.S.W.R(<2.0)

ANT1



ANT2

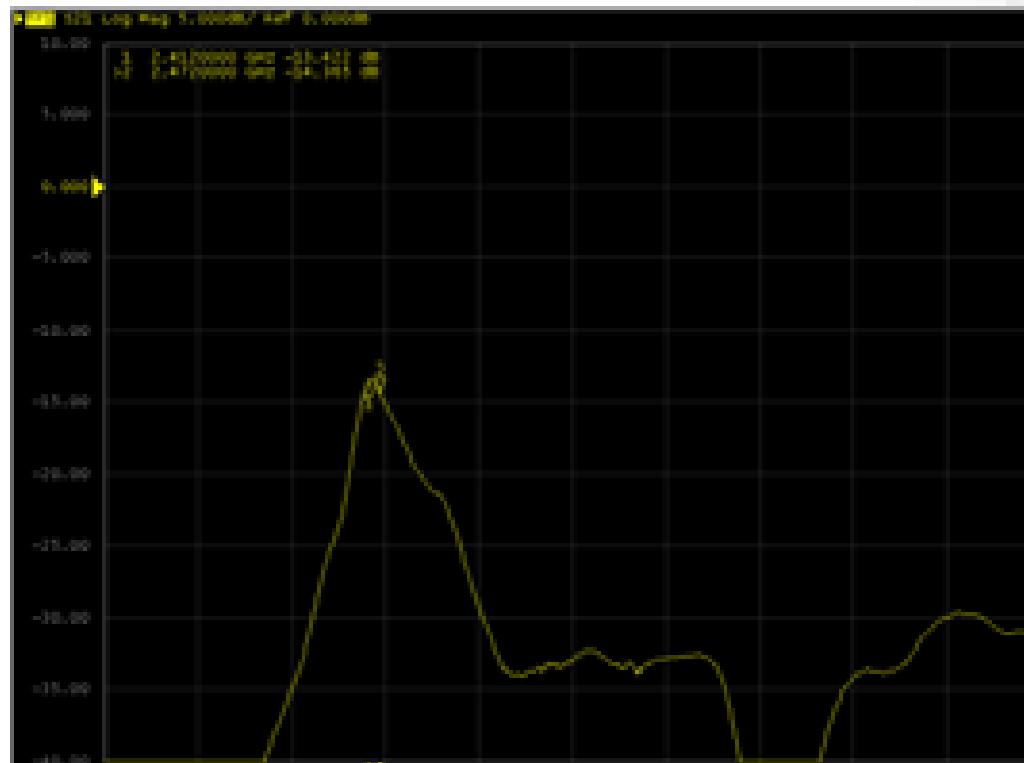


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Electrical Properties-3

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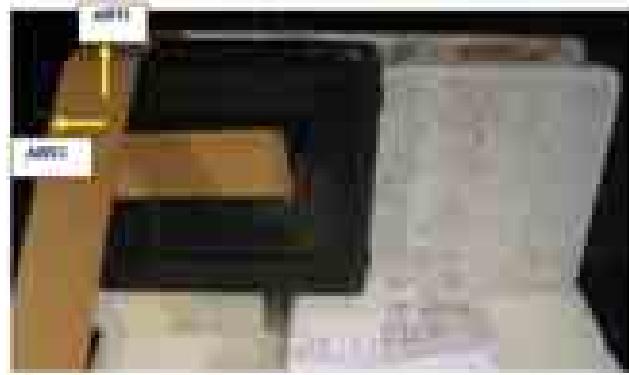
Isolation between ANT1 and ANT2(<-10dB)



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Antenna Patterns Measurement Setup

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<i>Placing the modem horizontally</i>	<i>Placing the modem vertically</i>
 A photograph showing a black modem unit mounted horizontally on a light-colored wall. A yellow line on the wall indicates the horizontal placement of the modem.	 A photograph showing a black modem unit mounted vertically on a wall, positioned above a white electrical outlet. A yellow line on the wall indicates the vertical placement of the modem.
<i>Horizontal wall-mount</i>	<i>Vertical wall-mount</i>
 A photograph showing a black modem unit mounted horizontally on a wall using a mounting bracket. A yellow line on the wall indicates the horizontal placement of the modem.	 A photograph showing a black modem unit mounted vertically on a wall using a mounting bracket, positioned above a white electrical outlet. A yellow line on the wall indicates the vertical placement of the modem.

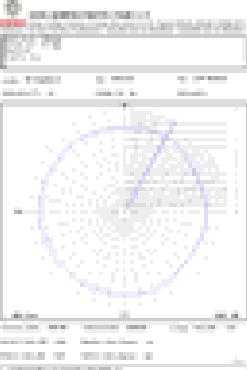
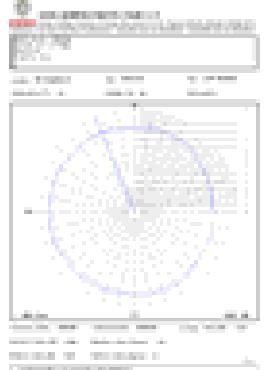
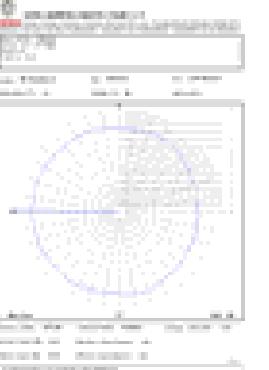
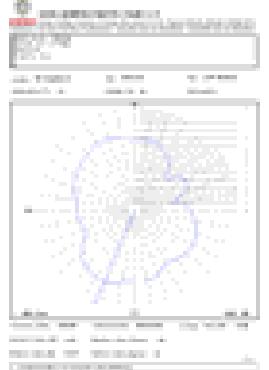
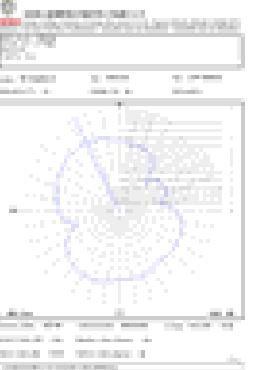


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Antenna Radiation Patterns-1

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- Ant1 for placing the modem vertically

Antenna Polarity	2412MHz	2442MHz	2472MHz
Vertical			
Horizontal			

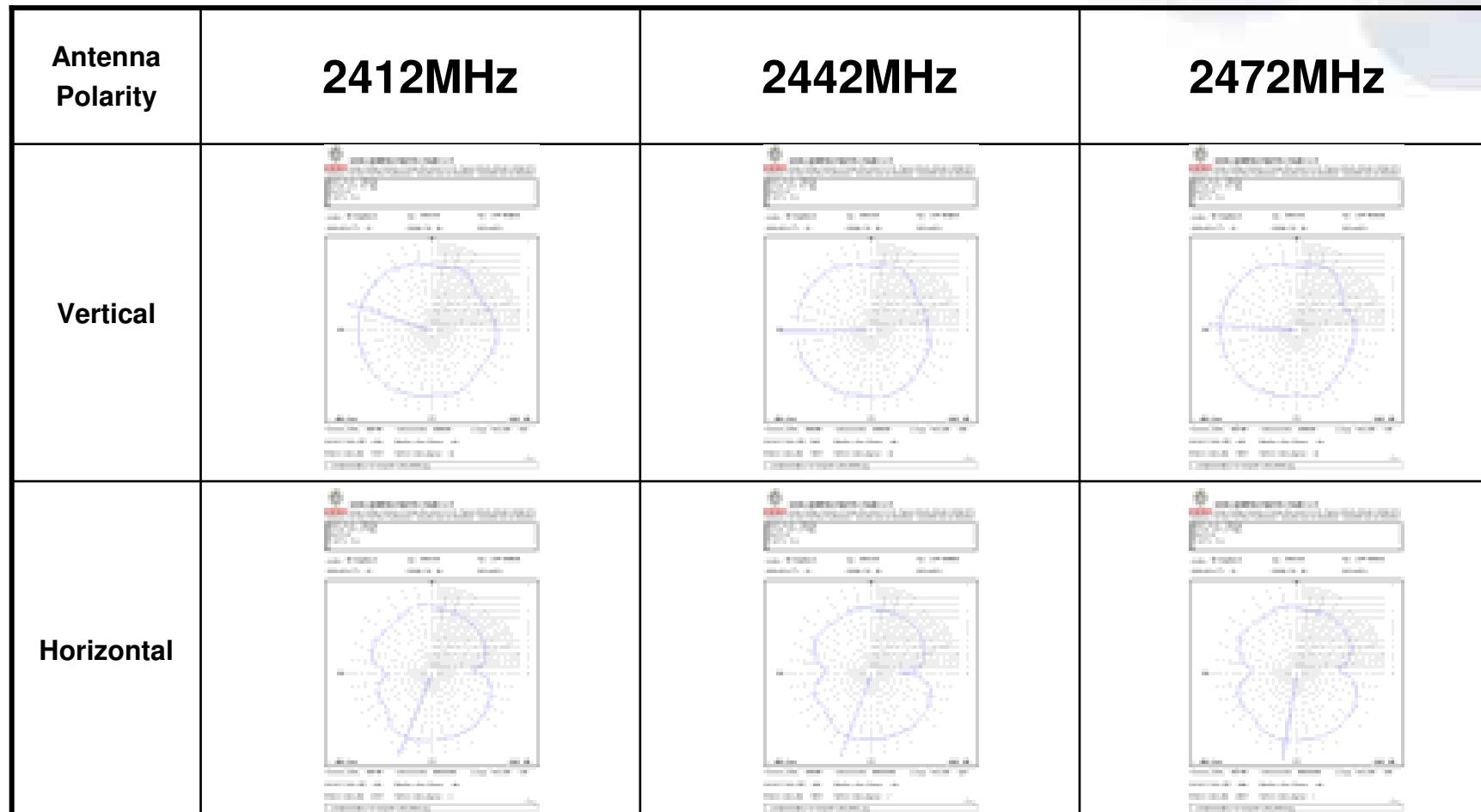


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Antenna Radiation Patterns-2

Compal Broadband Networks, Inc.

- Ant2 for placing the modem vertically

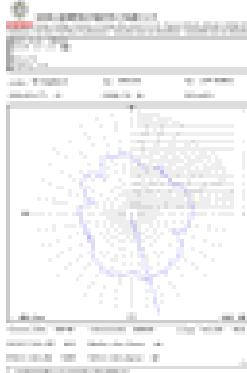
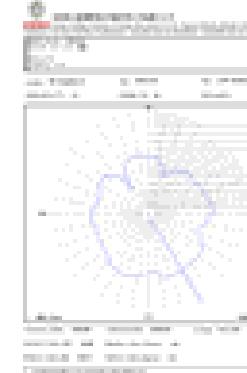
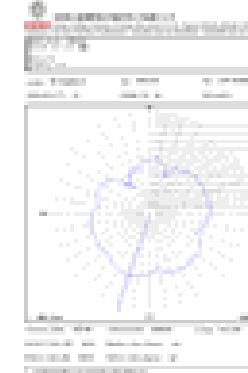
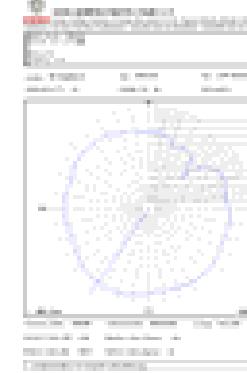


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Antenna Radiation Patterns-3

Compal Broadband Networks, Inc.

- Ant1 for placing the modem horizontally

Antenna Polarity	2412MHz	2442MHz	2472MHz
Vertical			
Horizontal			



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Antenna Radiation Patterns-4

Compal Broadband Networks, Inc.

- Ant2 for placing the modem horizontally

Antenna Polarity	2412MHz	2442MHz	2472MHz
Vertical			
Horizontal			

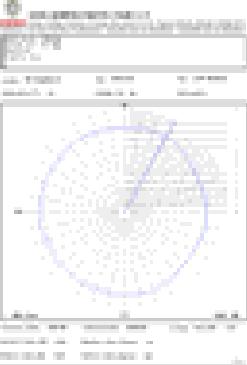
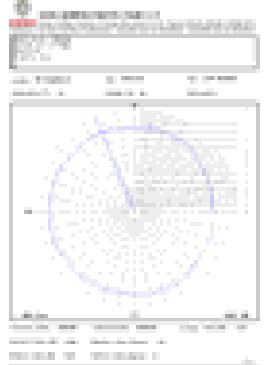
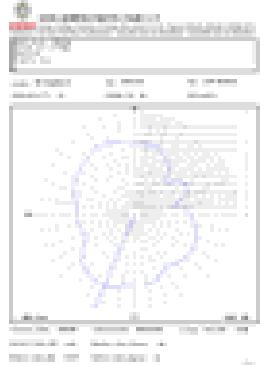


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Antenna Radiation Patterns-5

Compal Broadband Networks, Inc.

- Ant1 for vertical wall-mount

Antenna Polarity	2412MHz	2442MHz	2472MHz
Vertical			
Horizontal			

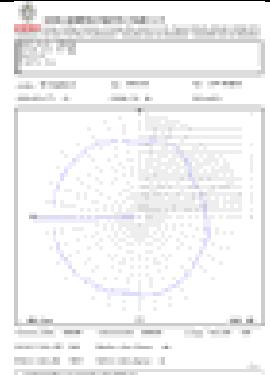
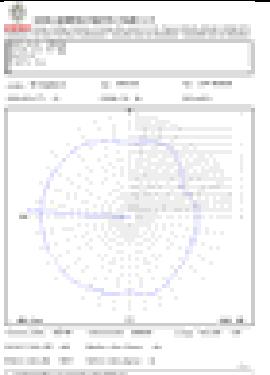
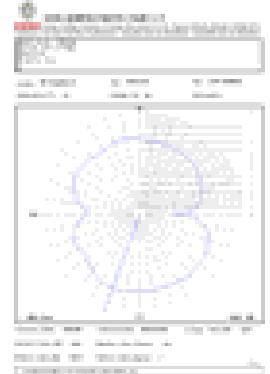
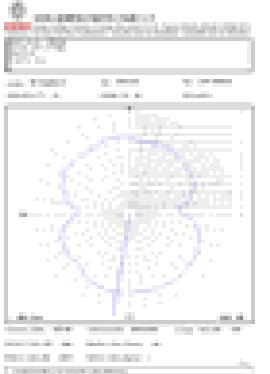


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Antenna Radiation Patterns-6

Compal Broadband Networks, Inc.

- Ant2 for vertical wall-mount

Antenna Polarity	2412MHz	2442MHz	2472MHz
Vertical			
Horizontal			



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Antenna Radiation Patterns-7

Compal Broadband Networks, Inc.

- Ant1 for horizontal wall-mount

Antenna Polarity	2412MHz	2442MHz	2472MHz
Vertical			
Horizontal			

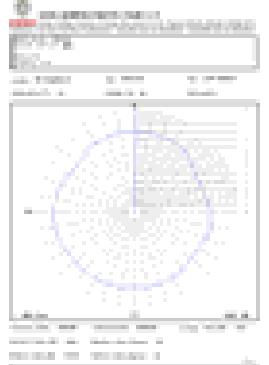
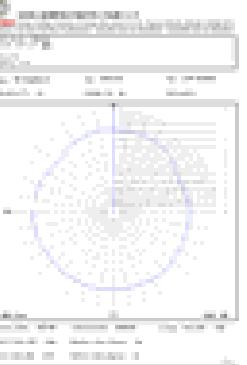
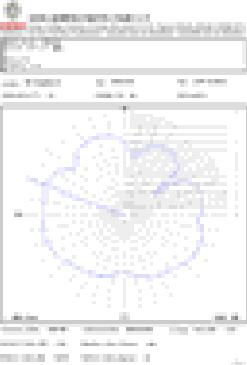
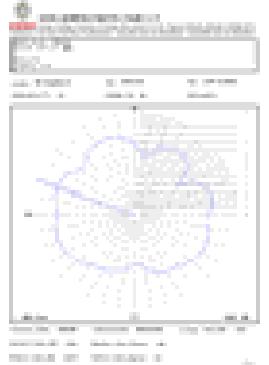
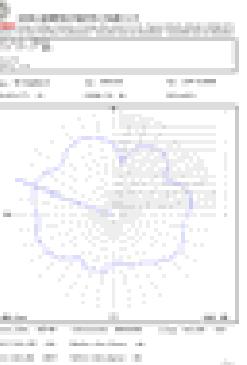


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Antenna Radiation Patterns-8

Compal Broadband Networks, Inc.

- Ant2 for horizontal wall-mount

Antenna Polarity	2412MHz	2442MHz	2472MHz
Vertical			
Horizontal			



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Gain Table

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Placing the CM	Antenna	Antenna Polarity	Frequency (MHz)	2412	2442	2472
Vertically	Ant1	Vertical	Peak Gain (dBi)	-0.91	-0.9	0.33
			Average Gain (dBi)	-2.55	-2.54	-2.11
Vertically	Ant2	Vertical	Peak Gain (dBi)	0.5	1.36	2.1
			Average Gain (dBi)	-2.47	-2.39	-2.15
Horizontally	Ant1	Horizontal	Peak Gain (dBi)	2.51	2.38	1.34
			Average Gain (dBi)	-2.23	-2.15	-2.61
Horizontally	Ant2	Horizontal	Peak Gain (dBi)	2.82	2.31	2.73
			Average Gain (dBi)	-1.36	-1.82	-1.54

Wall-mount	Antenna	Antenna Polarity	Frequency (MHz)	2412	2442	2472
Vertical	Ant1	Vertical	Peak Gain (dBi)	-0.91	-0.9	0.33
			Average Gain (dBi)	-2.55	-2.54	-2.11
Vertical	Ant2	Vertical	Peak Gain (dBi)	0.5	1.36	2.1
			Average Gain (dBi)	-2.47	-2.39	-2.15
Horizontal	Ant1	Vertical	Peak Gain (dBi)	-0.05	0.63	0.11
			Average Gain (dBi)	-4.48	-3.83	-4.42
Horizontal	Ant2	Vertical	Peak Gain (dBi)	-0.84	-1.46	-1.06
			Average Gain (dBi)	-2.92	-3.64	-3.58



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Conclusion

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- The average gain is -2.61dBi at least when the Cable Modem,CG6640A, is placed horizontally.
- The average gain is -2.55dBi at least when the Cable Modem,CG6640A, is placed vertically.
- The average gain is -4.48dBi at least when the Cable Modem,CG6640A, is horizontally wall-mounted installation.
- The average gain is -2.55dBi at least when the Cable Modem,CG6640A, is vertically wall-mounted installation.



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