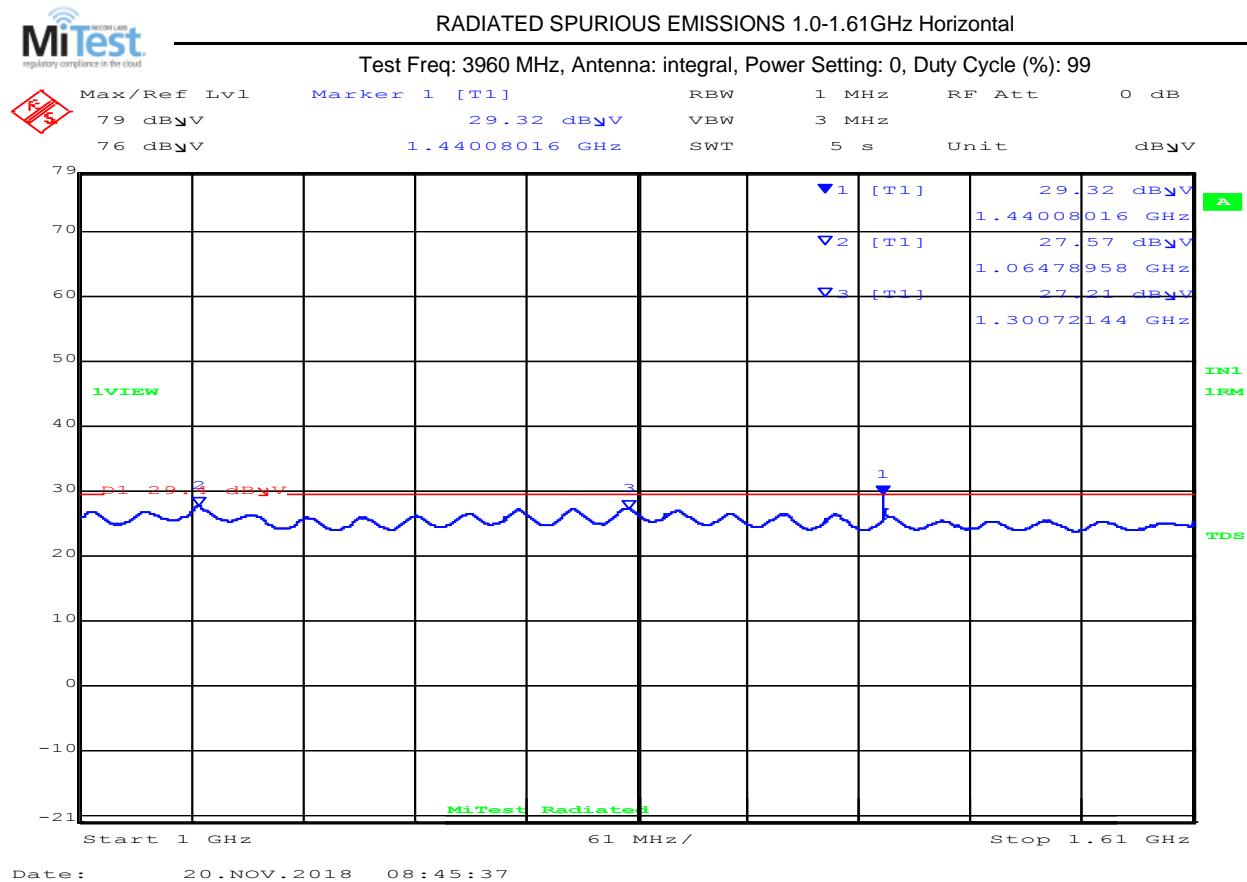


3960 MHz

Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1000.00– 1610.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1440.1	28.2	Average	Horizontal	150	0	29.4	-1.2	Pass
2	1064.8	25.8	Average	Horizontal	150	0	29.4	-3.6	Pass
2	1300.7	24.5	Average	Horizontal	150	0	29.4	-4.9	Pass

Test Notes:

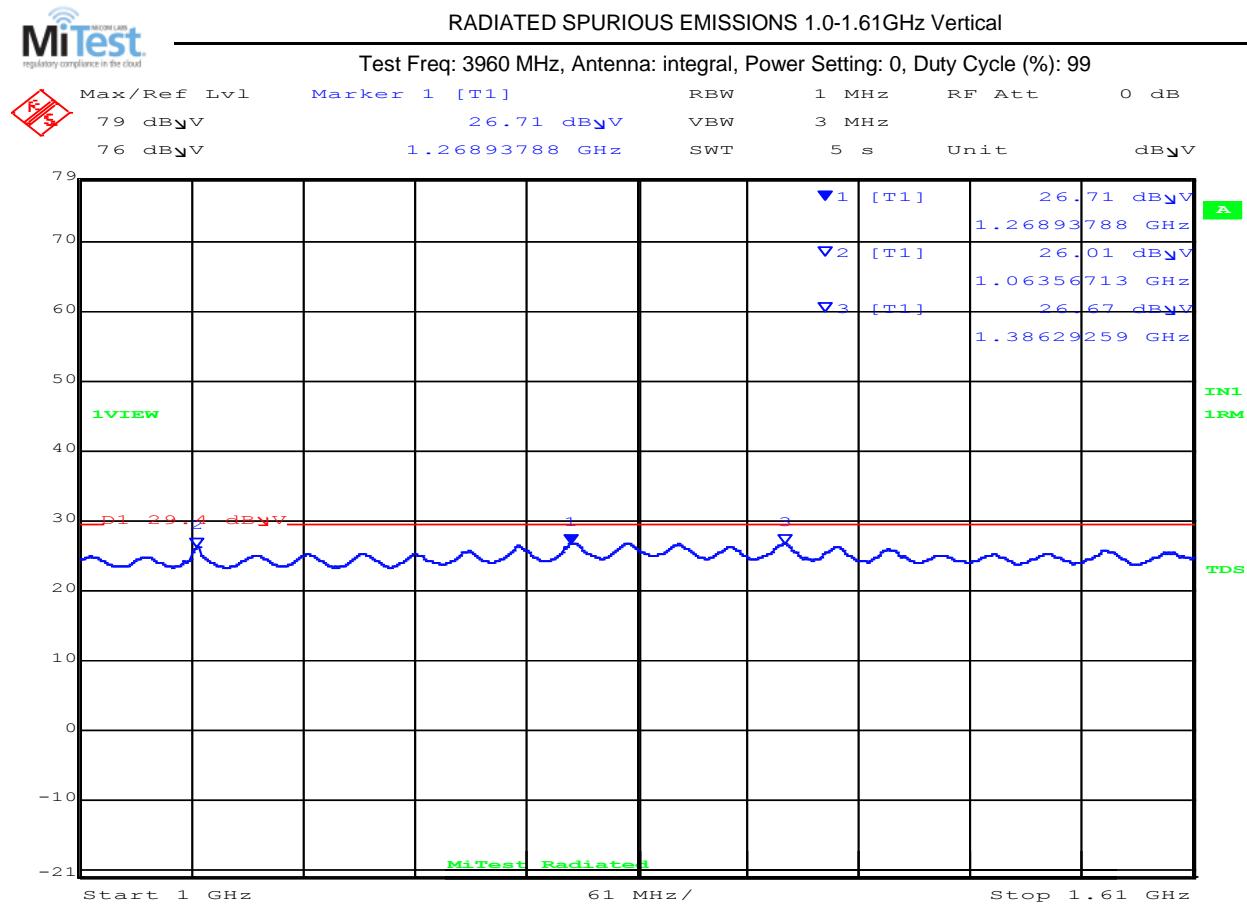
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



Date: 20.NOV.2018 08:52:30

1000.00– 1610.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1268.9	24.6	Average	Vertical	150	0	29.4	-4.80	Pass
2	1063.6	23.8	Average	Vertical	150	0	29.4	-5.60	Pass
2	1386.3	24.1	Average	Vertical	150	0	29.4	-5.30	Pass

Test Notes:

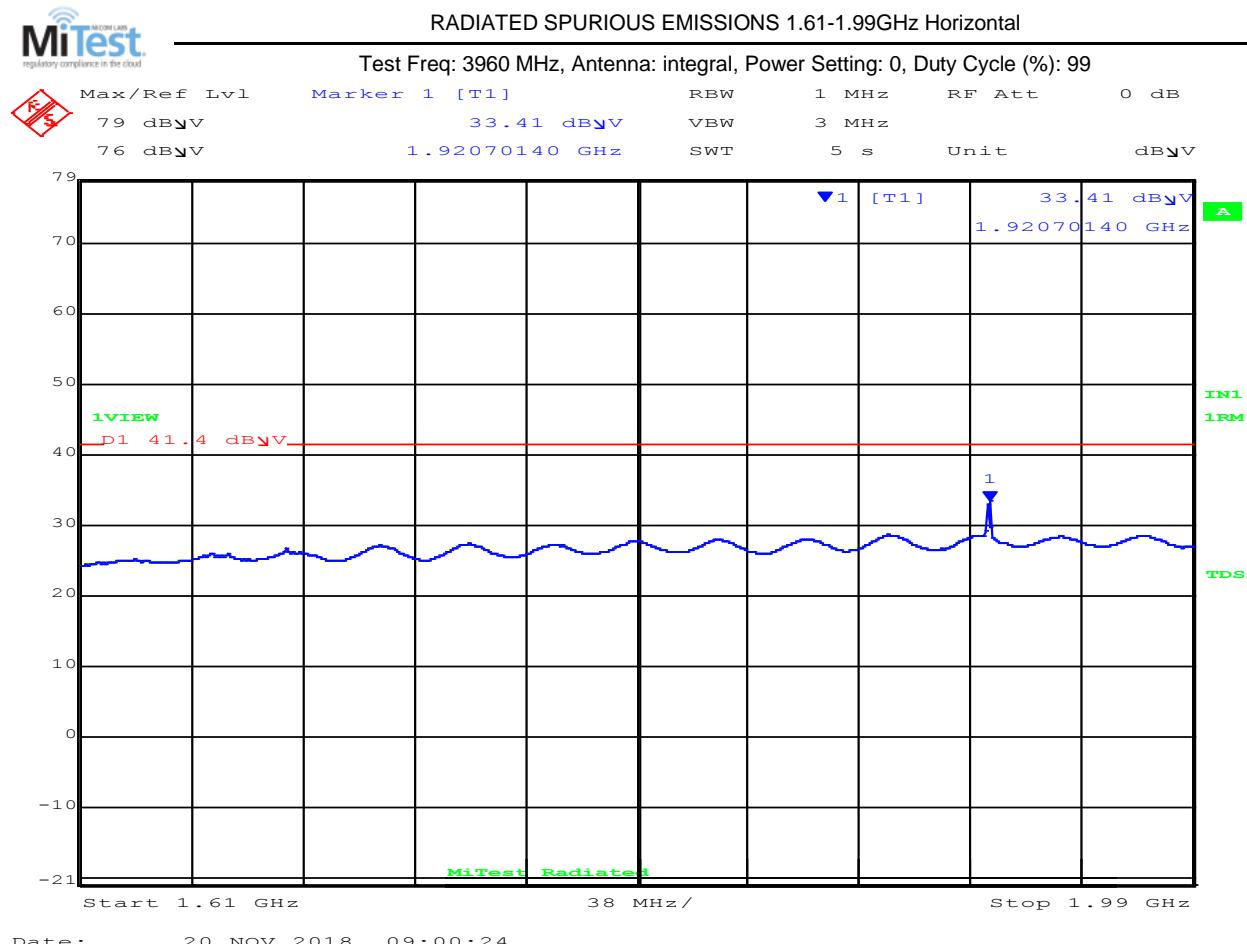
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



Date: 20.NOV.2018 09:00:24

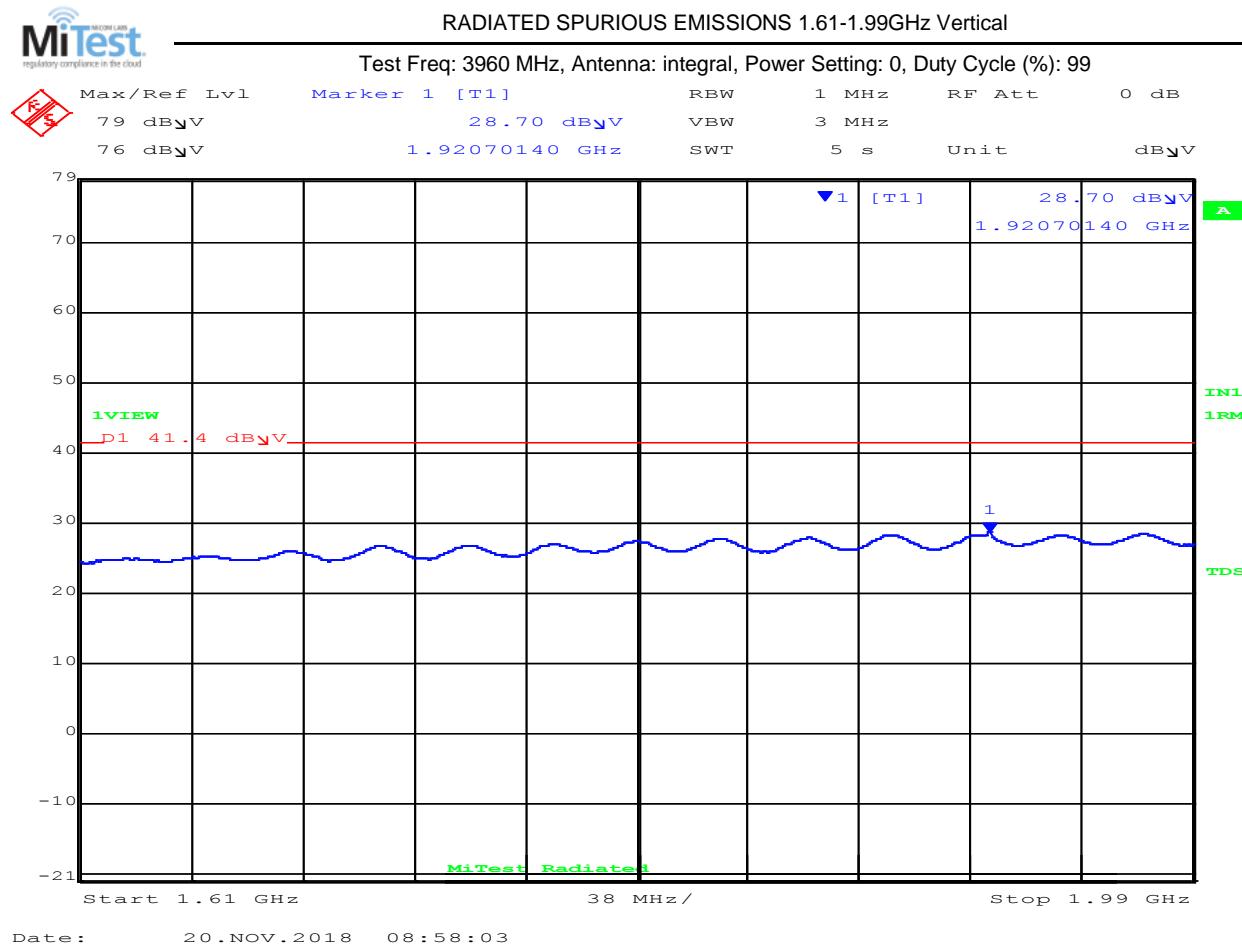
1610.00 – 1990.00 MHz										
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
No Signals found within 6 dB of limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1610.00 – 1990.00 MHz										
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
No Signals found within 6 dB of limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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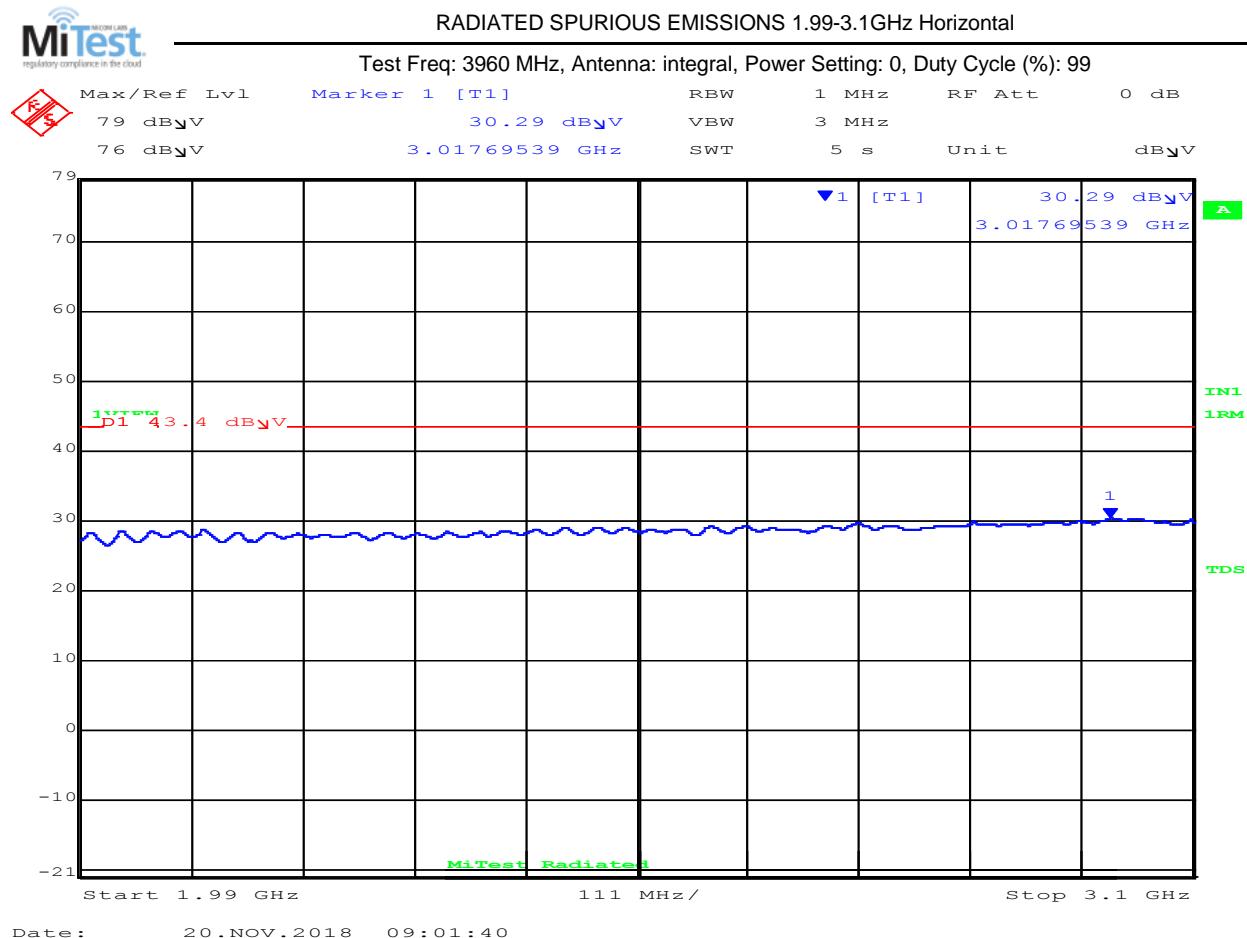


Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1990.00 – 3100.00 GHz										
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail	
No Signals found within 6 dB of limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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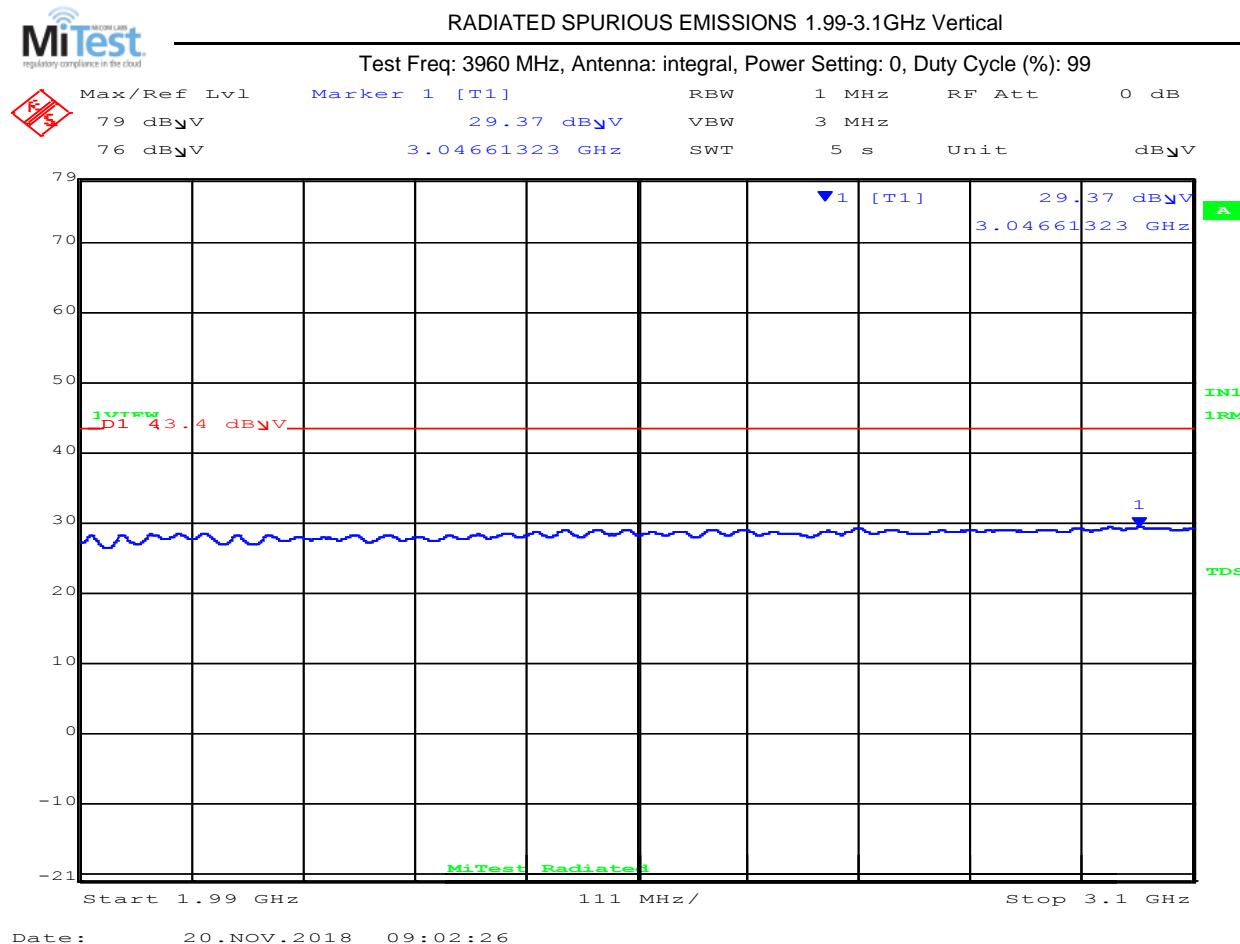


Title: Alereon AL5955, AL5930, AL5934
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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



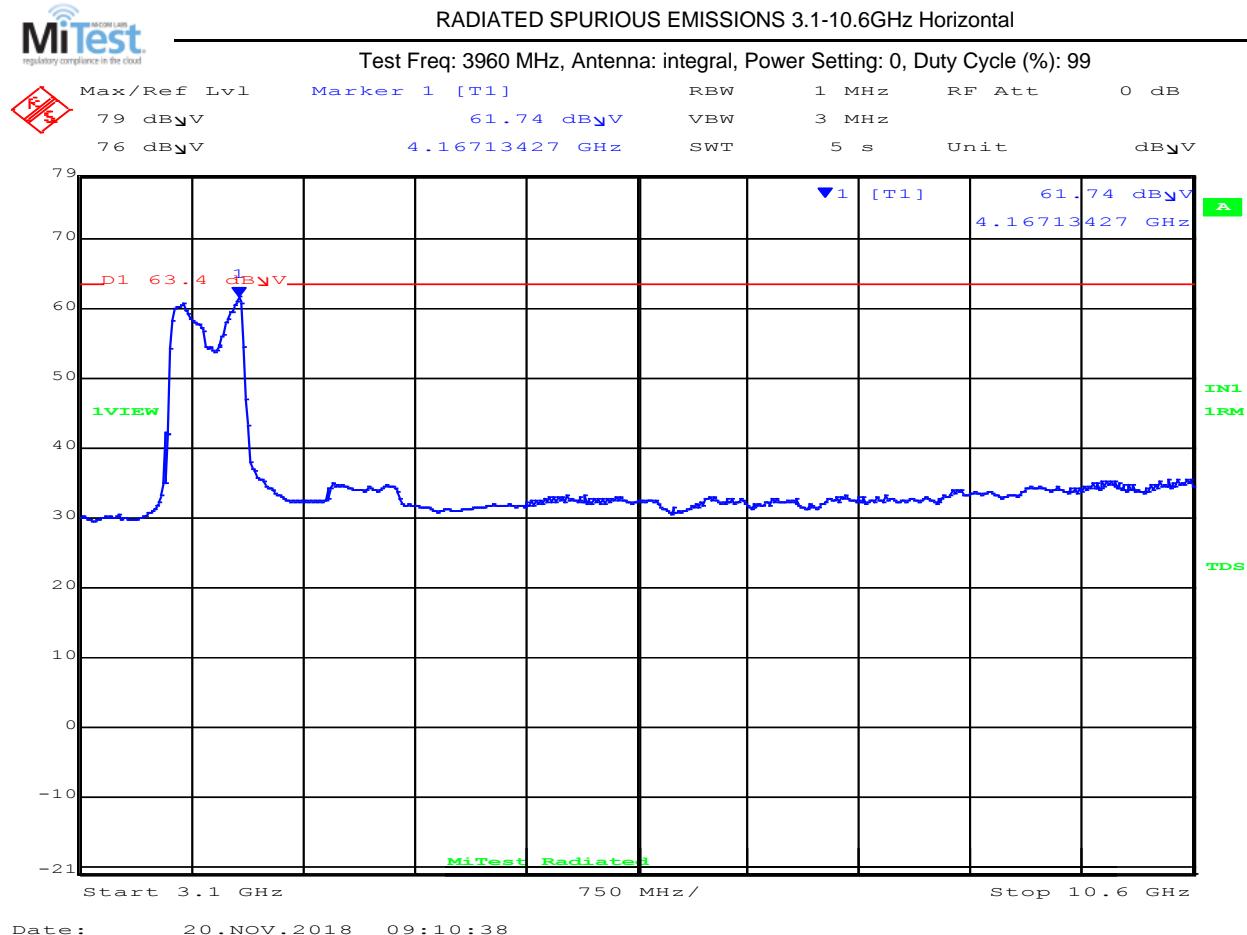
1990.00 – 3100.00 GHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals found within 6 dB of limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



3100.00 - 10600.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	4167.1	61.5	Average	Horizontal	150	0	63.4	-1.90	Pass

Test Notes:

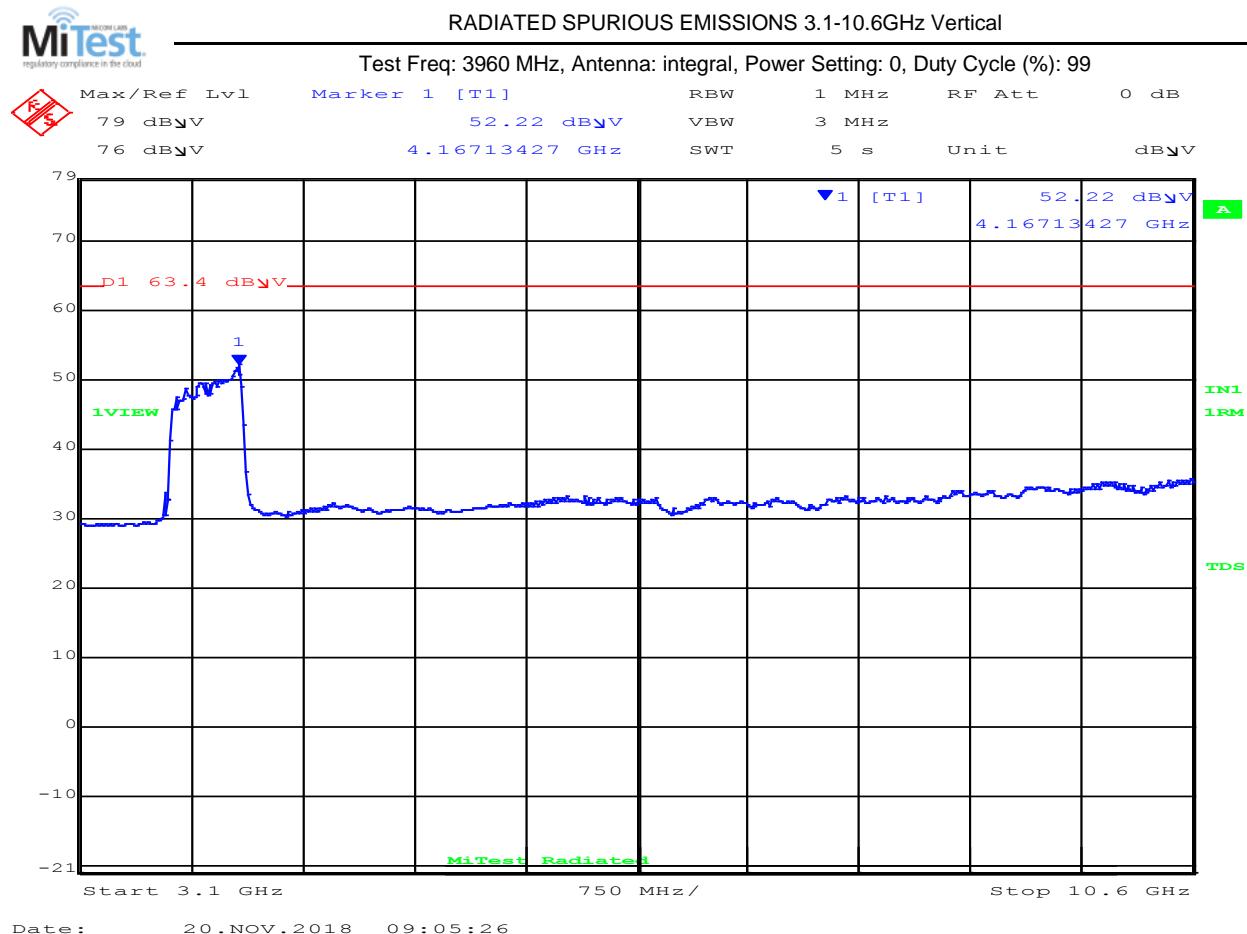
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



3100.00 - 10600.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals found within 6 dB of limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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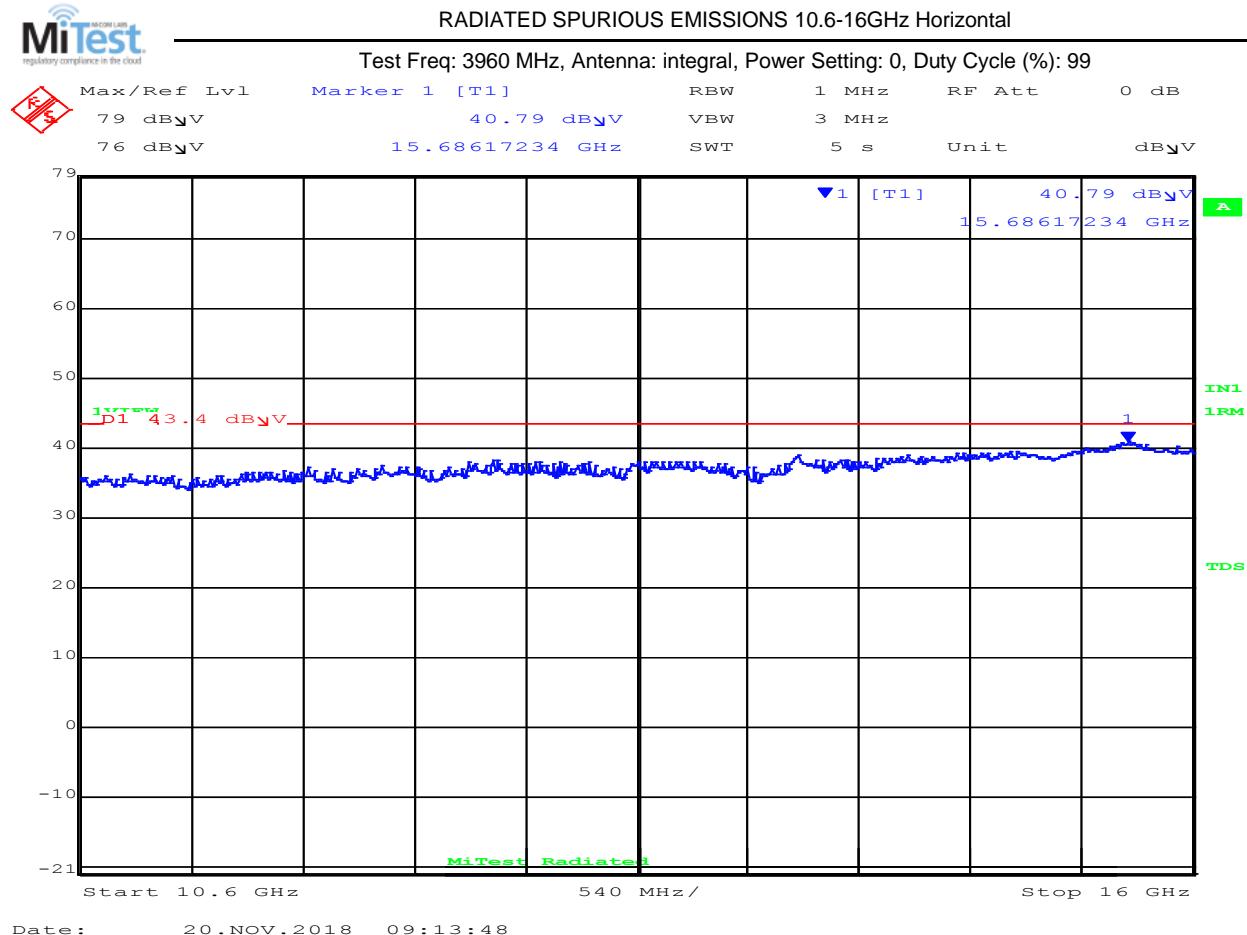


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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



10600.00 – 16000.00 GHz

Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
1	15686.2	39.7	Average	Horizontal	150	0	43.4	-3.70	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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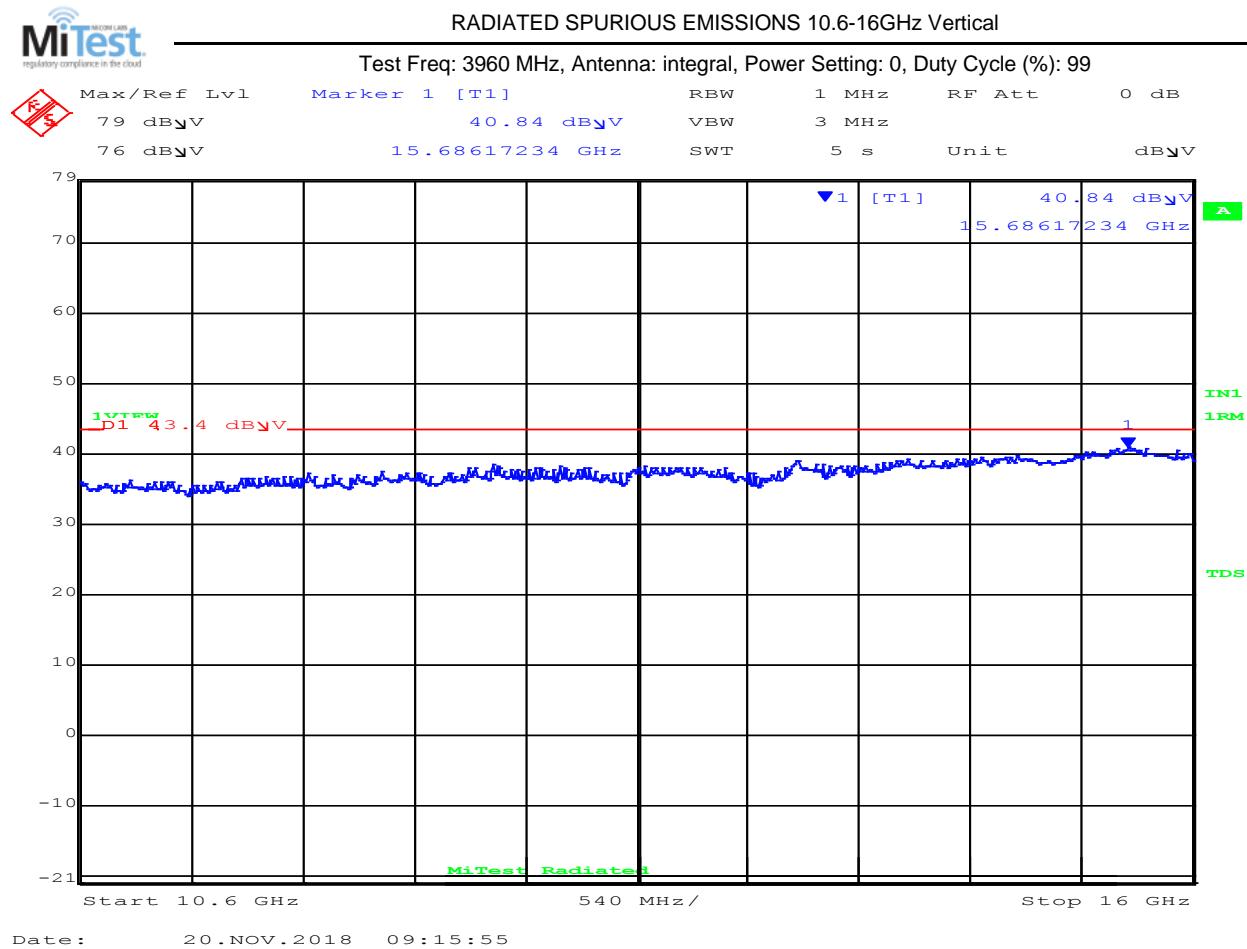


Title: Alereon AL5955, AL5930, AL5934
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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



10600.00 – 16000.00 GHz									
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	15686.2	39.8	Average	Vertical	150	0	43.4	-3.60	Pass

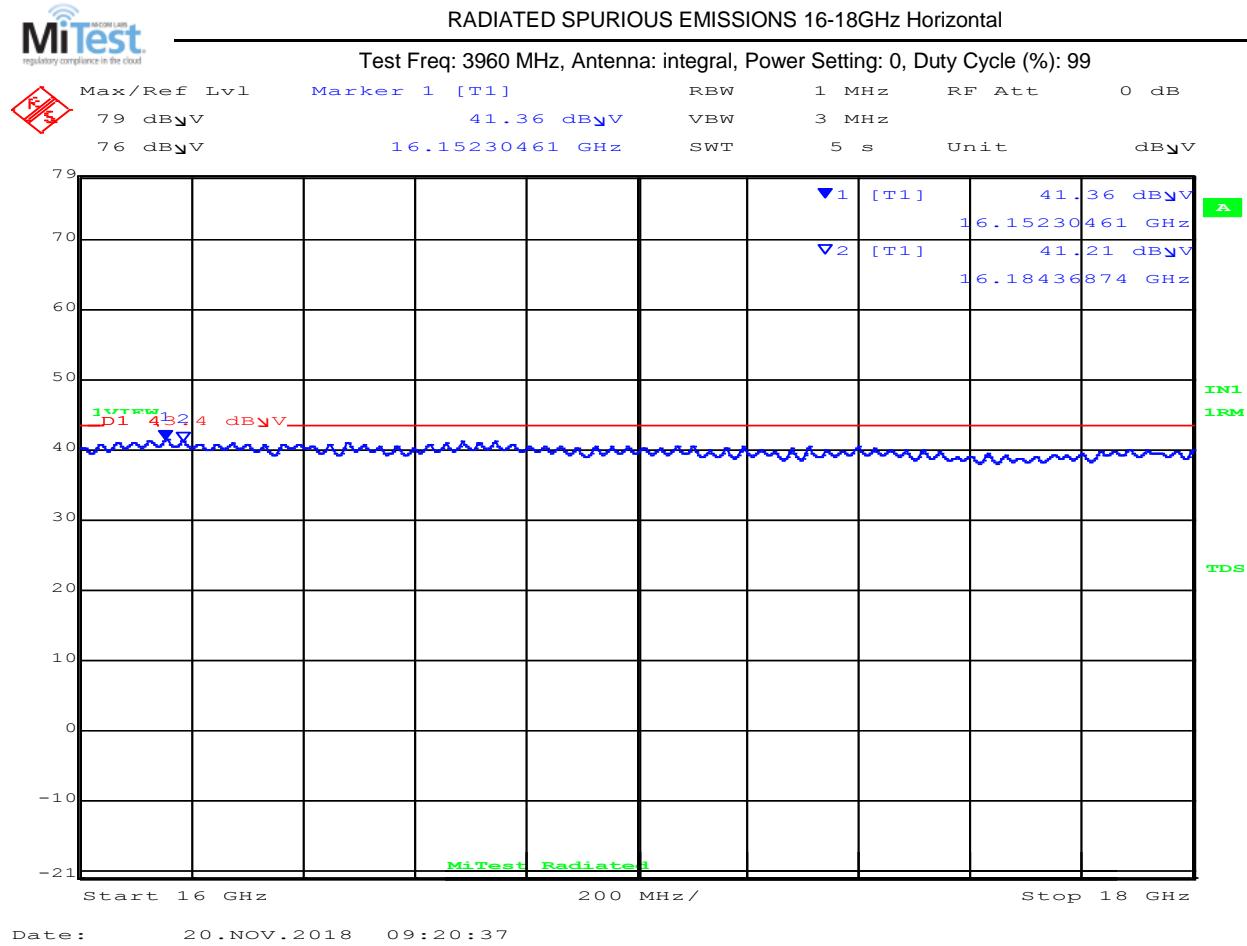
Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	16152.3	40.3	Average	Horizontal	150	0	43.4	-3.1	Pass
	16184.4	40.2	Average	Horizontal	150	0	43.4	-3.2	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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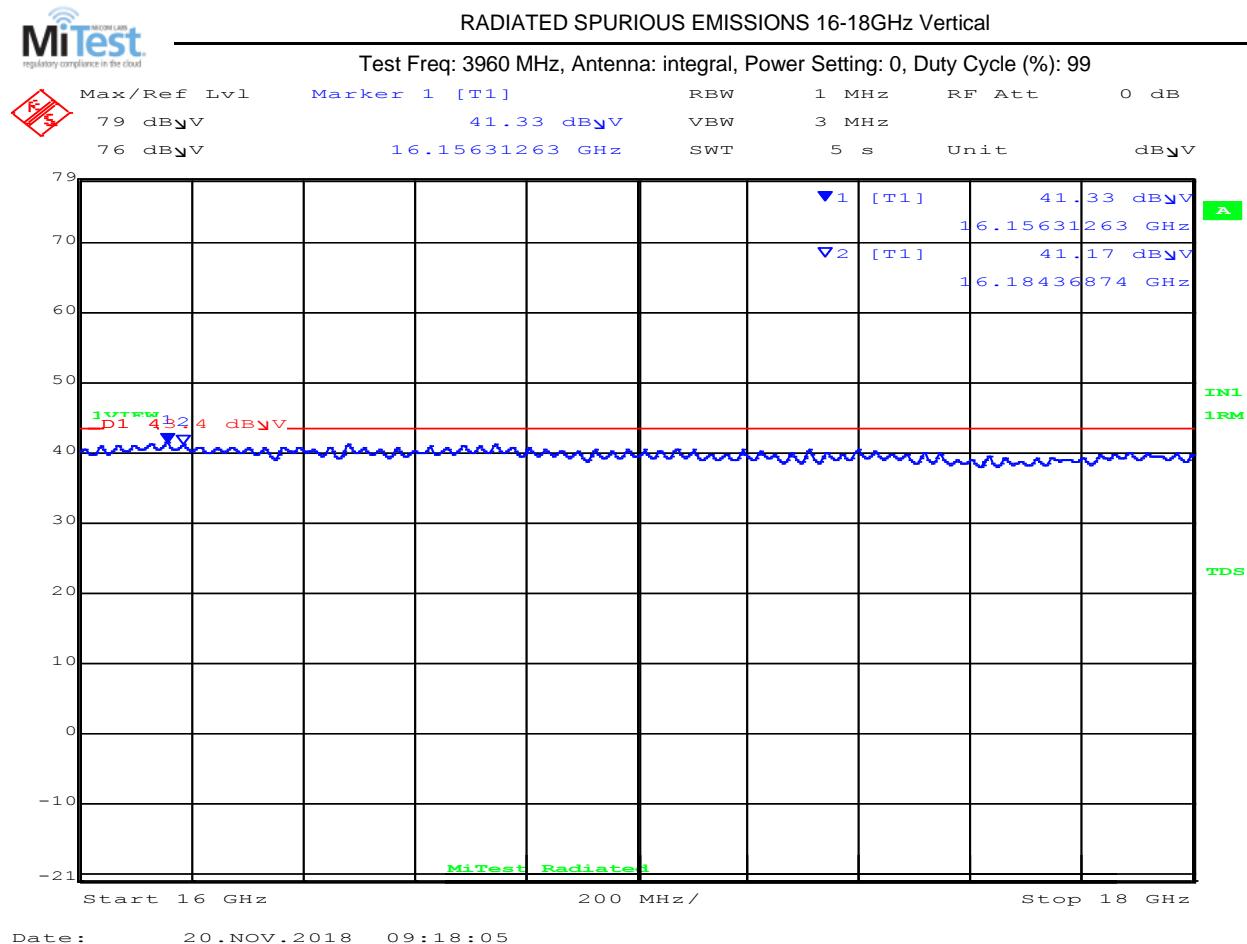


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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz									
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail
1	16156.3	40.4	Average	Vertical	150	0	43.4	-3.00	Pass
2	16184.4	40.3	Average	Vertical	150	0	43.4	-3.10	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

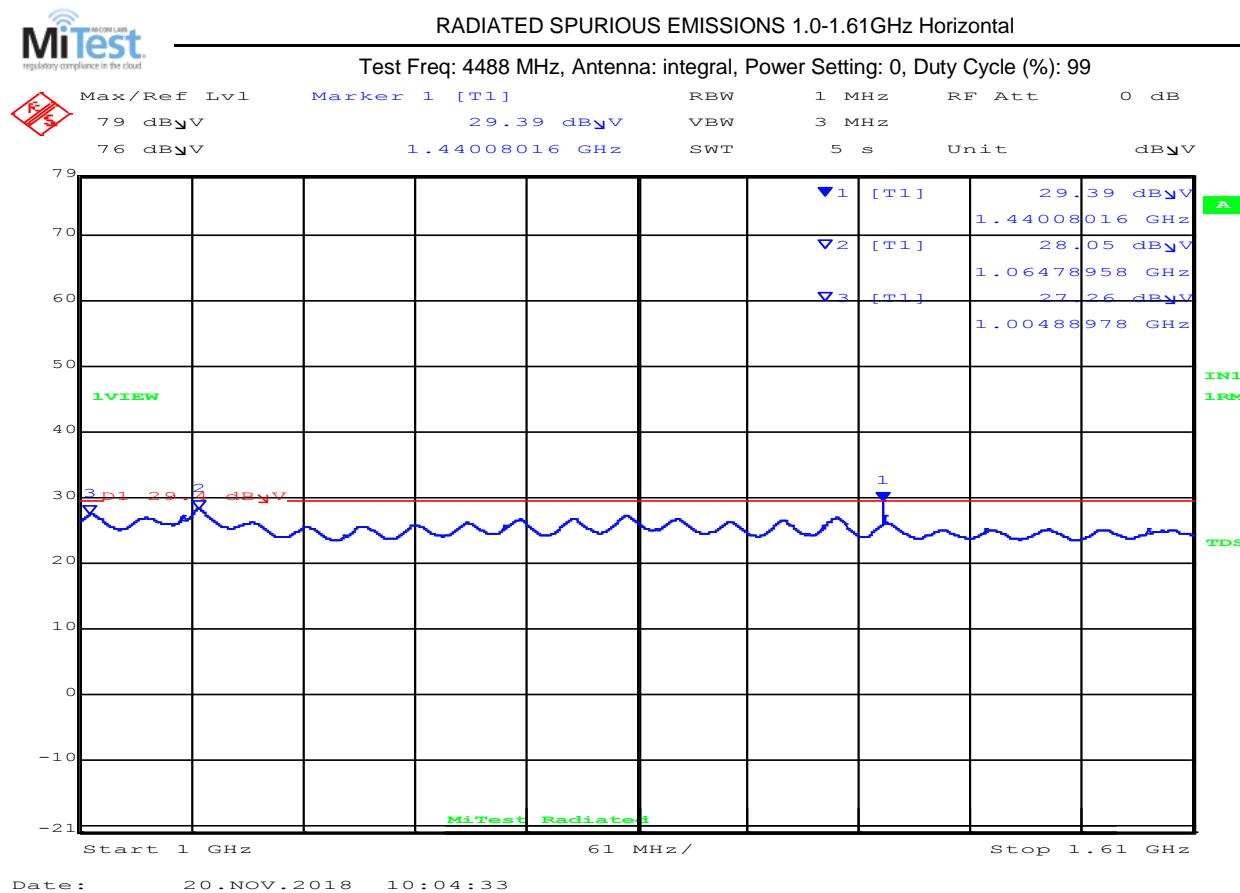
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4488 MHz

Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1000.00– 1610.00MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1440.1	28.9	Average	Horizontal	150	0	29.4	-0.5	Pass
2	1064.8	26.1	Average	Horizontal	150	0	29.4	-3.3	Pass
3	1004.9	25.2	Average	Horizontal	150	0	29.4	-4.2	Pass

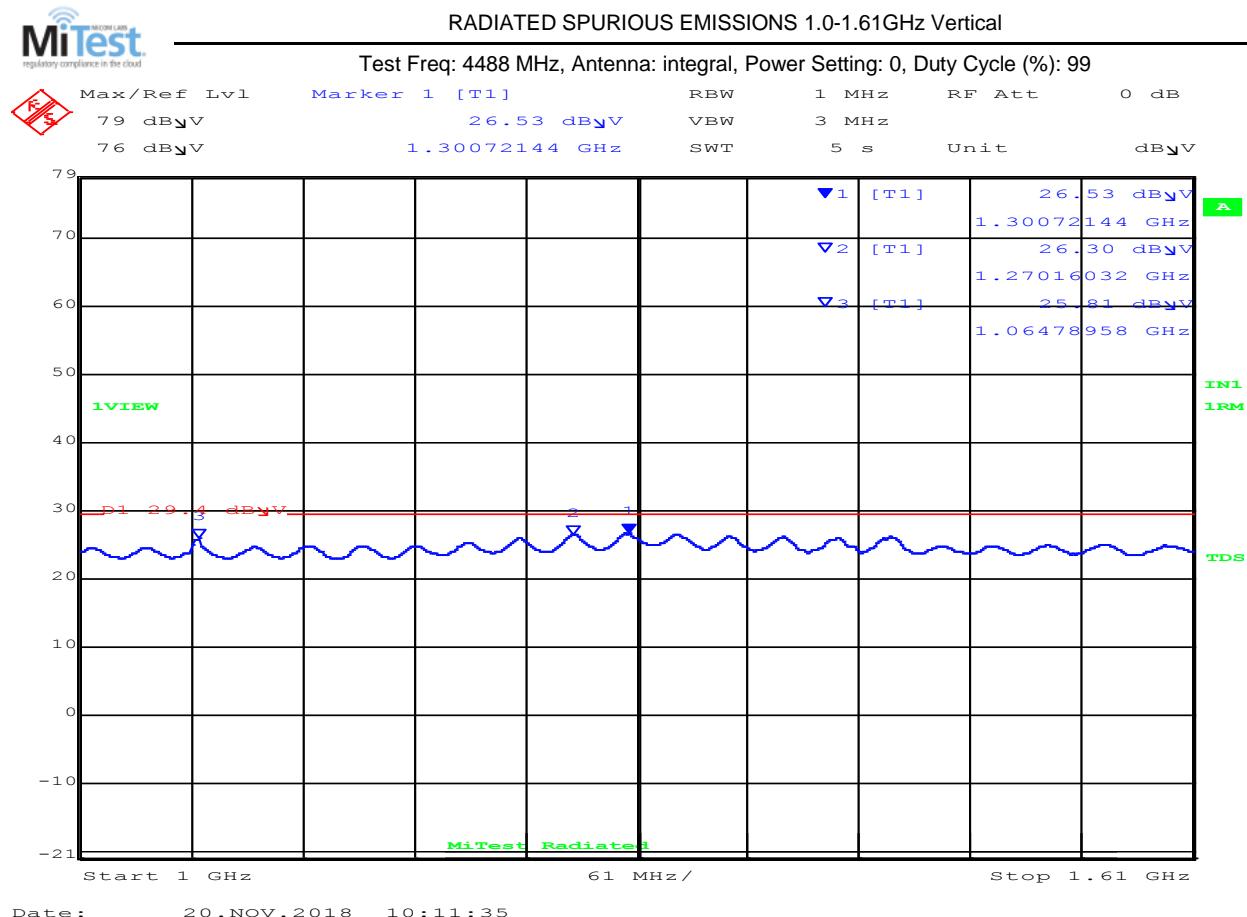
Test Notes:
 Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1000.00– 1610.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1300.7	24.1	Average	Vertical	150	0	29.4	-5.3	Pass
2	1270.2	24.1	Average	Vertical	150	0	29.4	-5.3	Pass
3	1064.8	23.8	Average	Vertical	150	0	29.4	-5.6	Pass

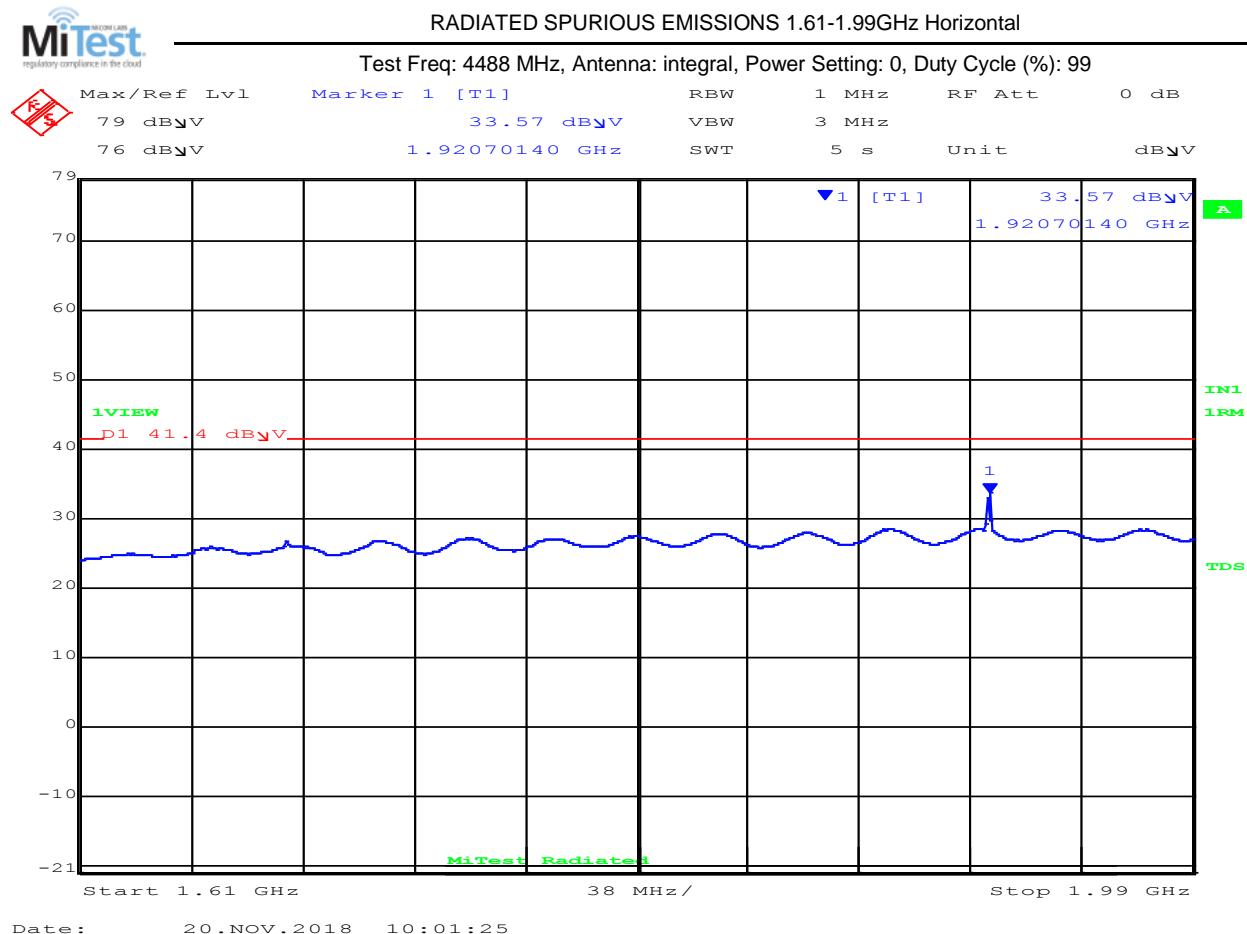
Test Notes:
 Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



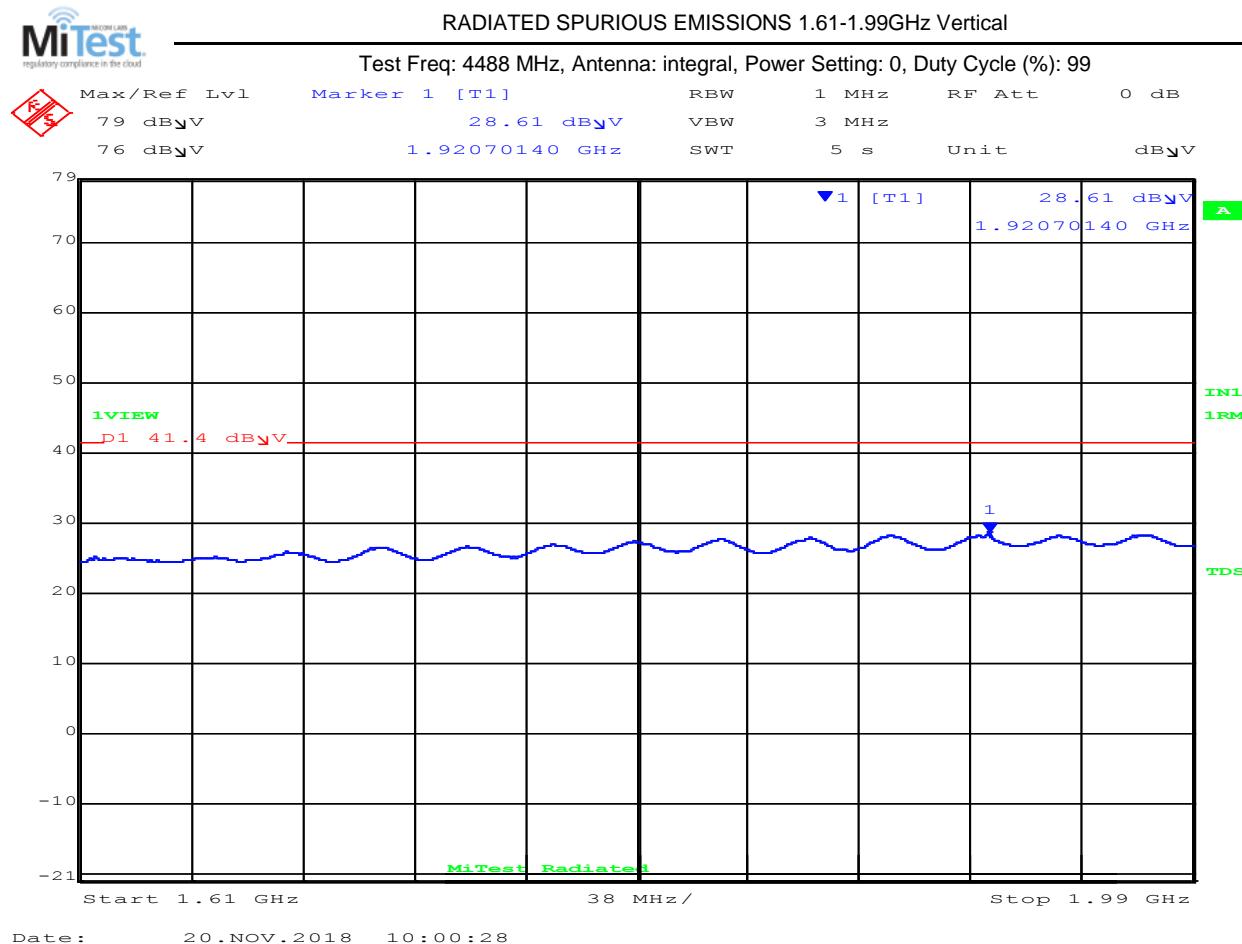
1610.00 – 1990.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals found within 6 dB of limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1610.00 – 1990.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals found within 6 dB of limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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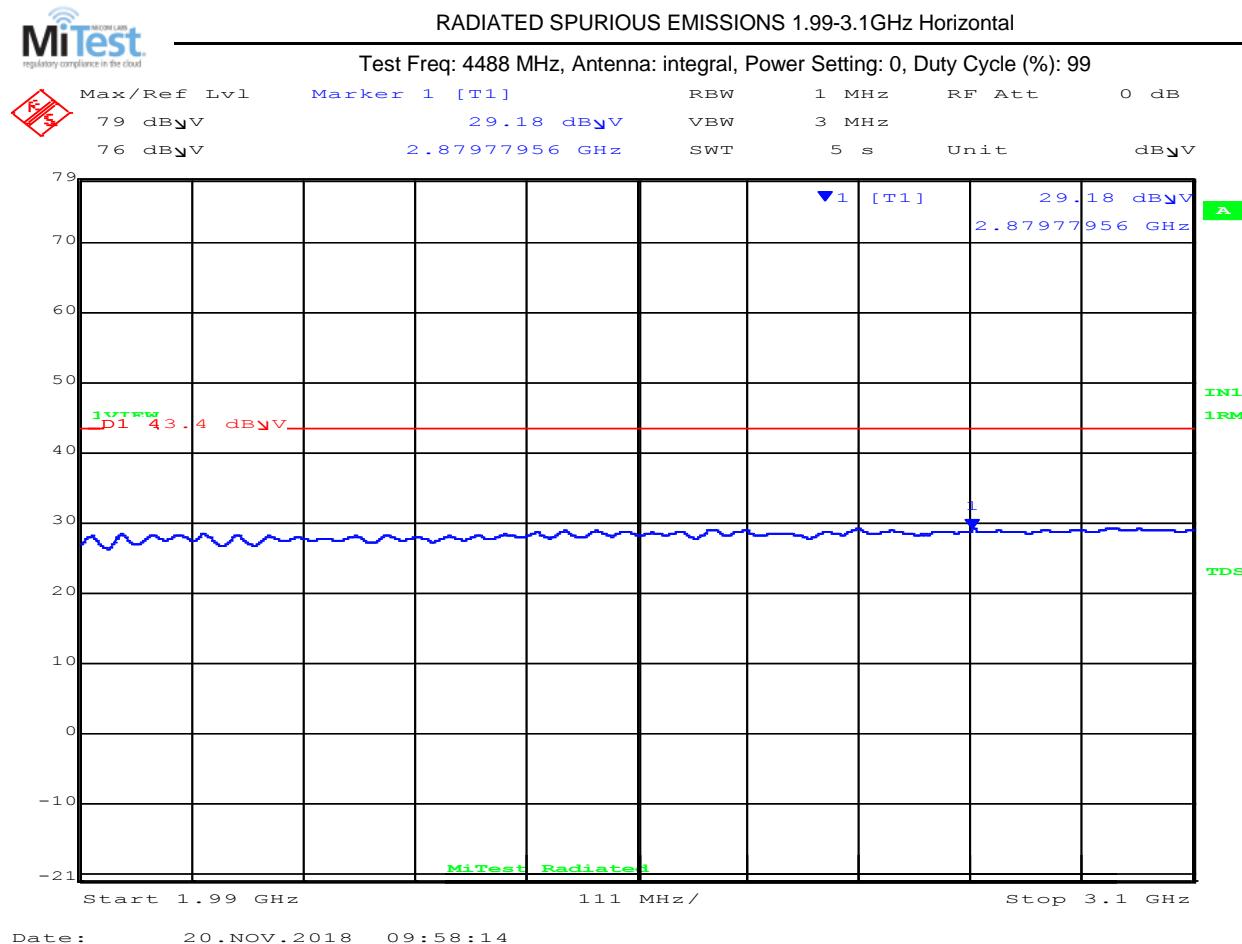


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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1990.00 – 3100.00 GHz										
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail	
No Signals found within 6 dB of limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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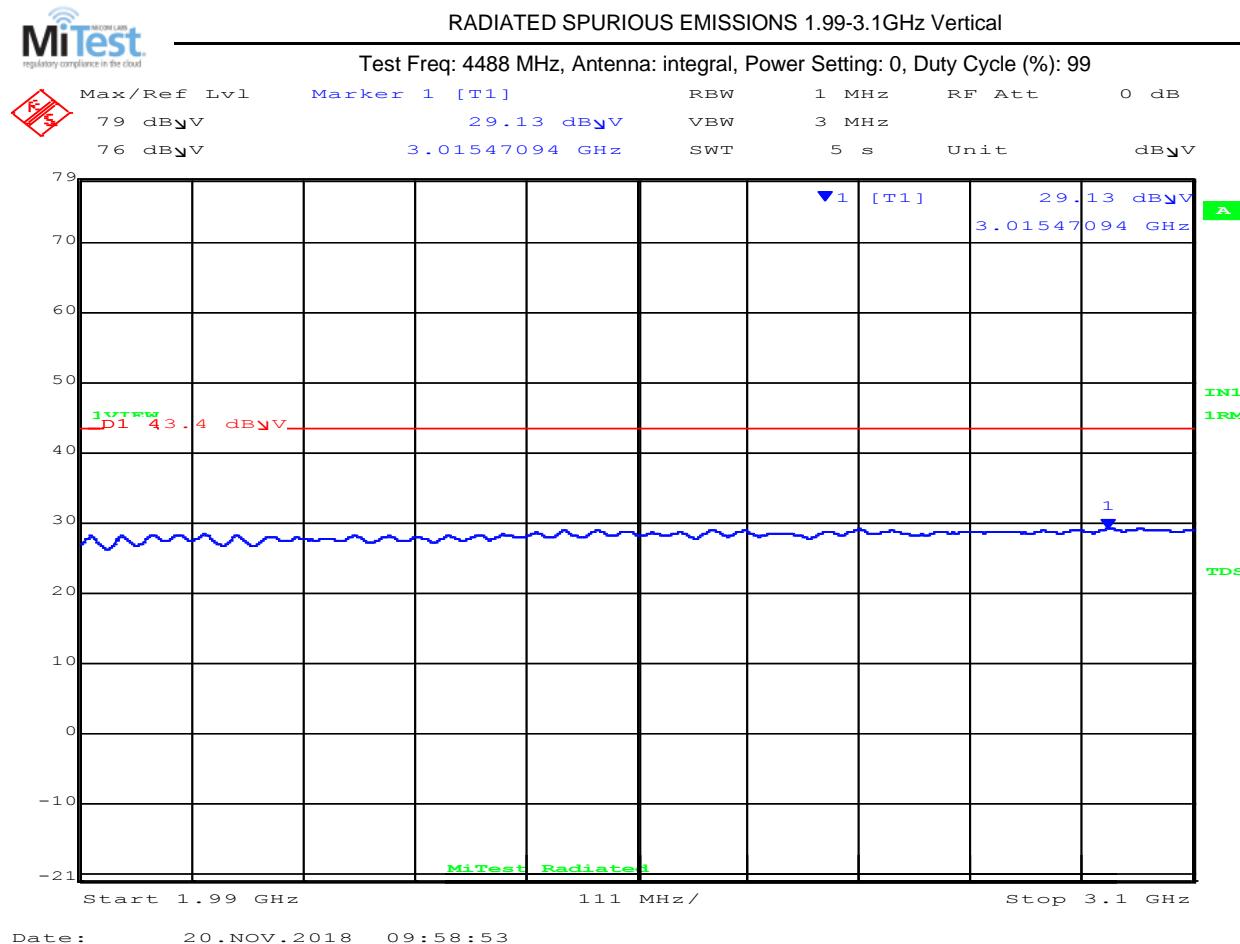


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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



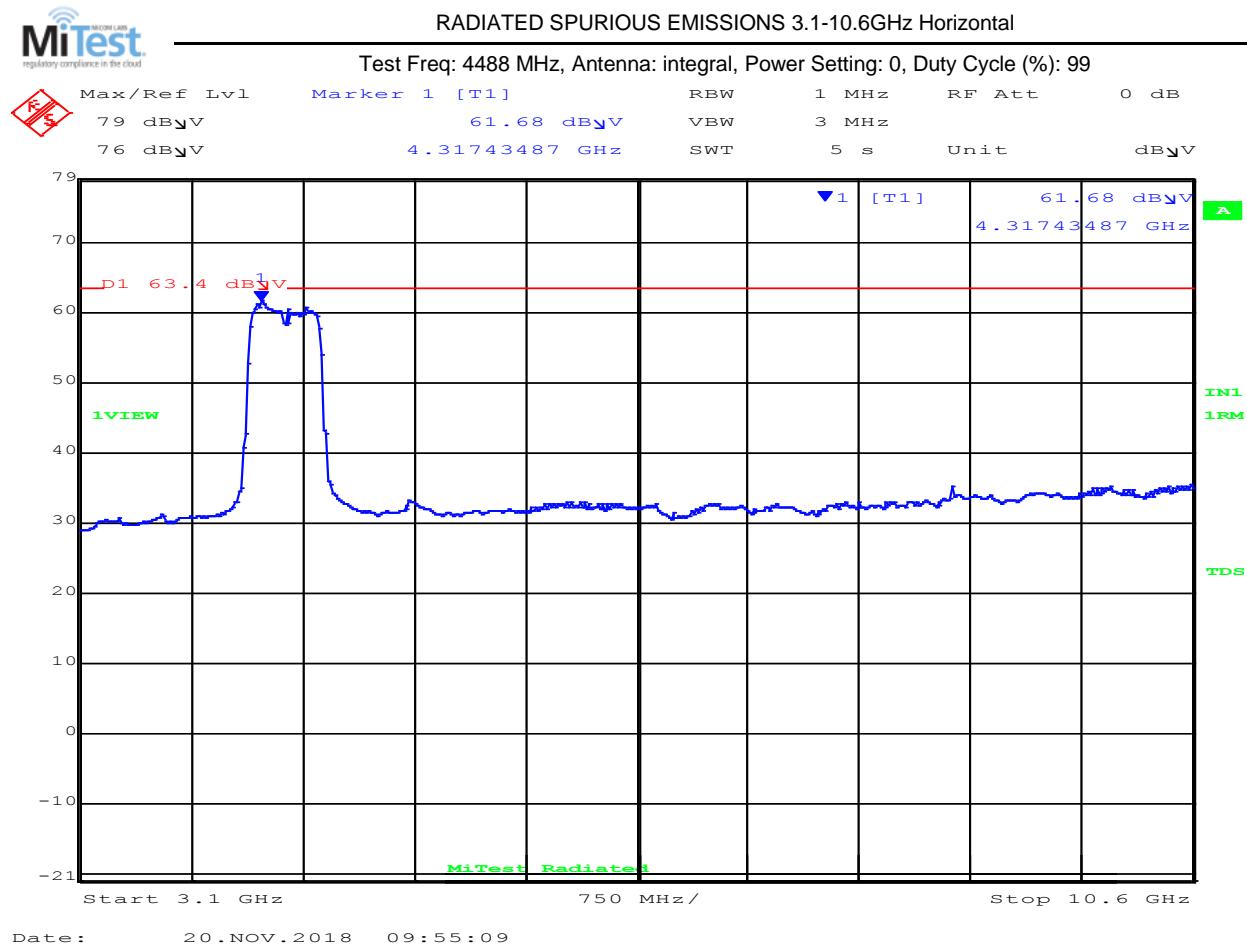
1990.00 – 3100.00 GHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals found within 6 dB of limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



3100.00 - 10600.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	4317.4	59.4	Average	Horizontal	150	0	63.4	-4.0	Pass

Test Notes:

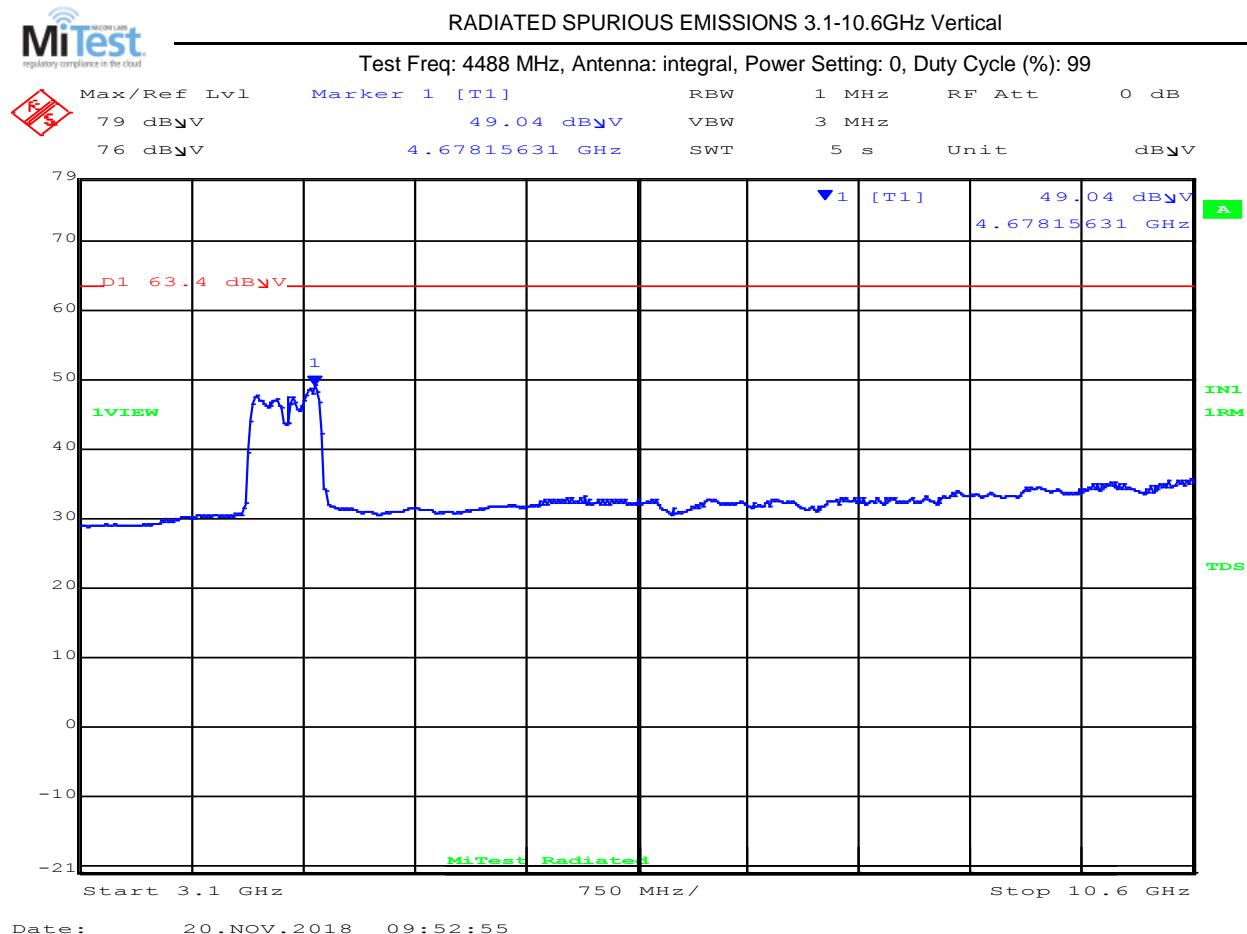
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



3100.00 - 10600.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals found within 6 dB of limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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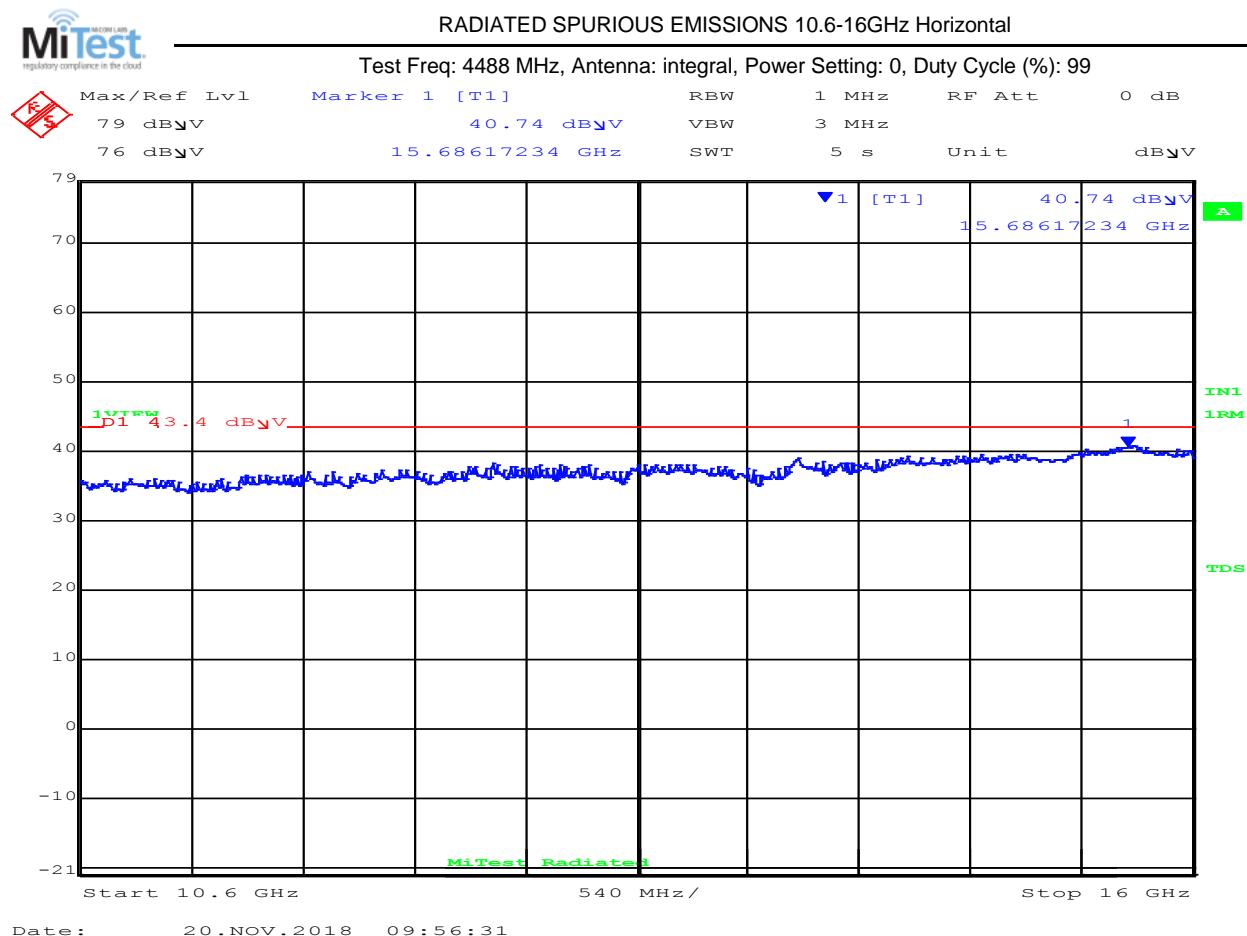


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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



10600.00 – 16000.00 GHz

Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
1	15686.2	39.6	Average	Horizontal	150	0	43.4	-3.8	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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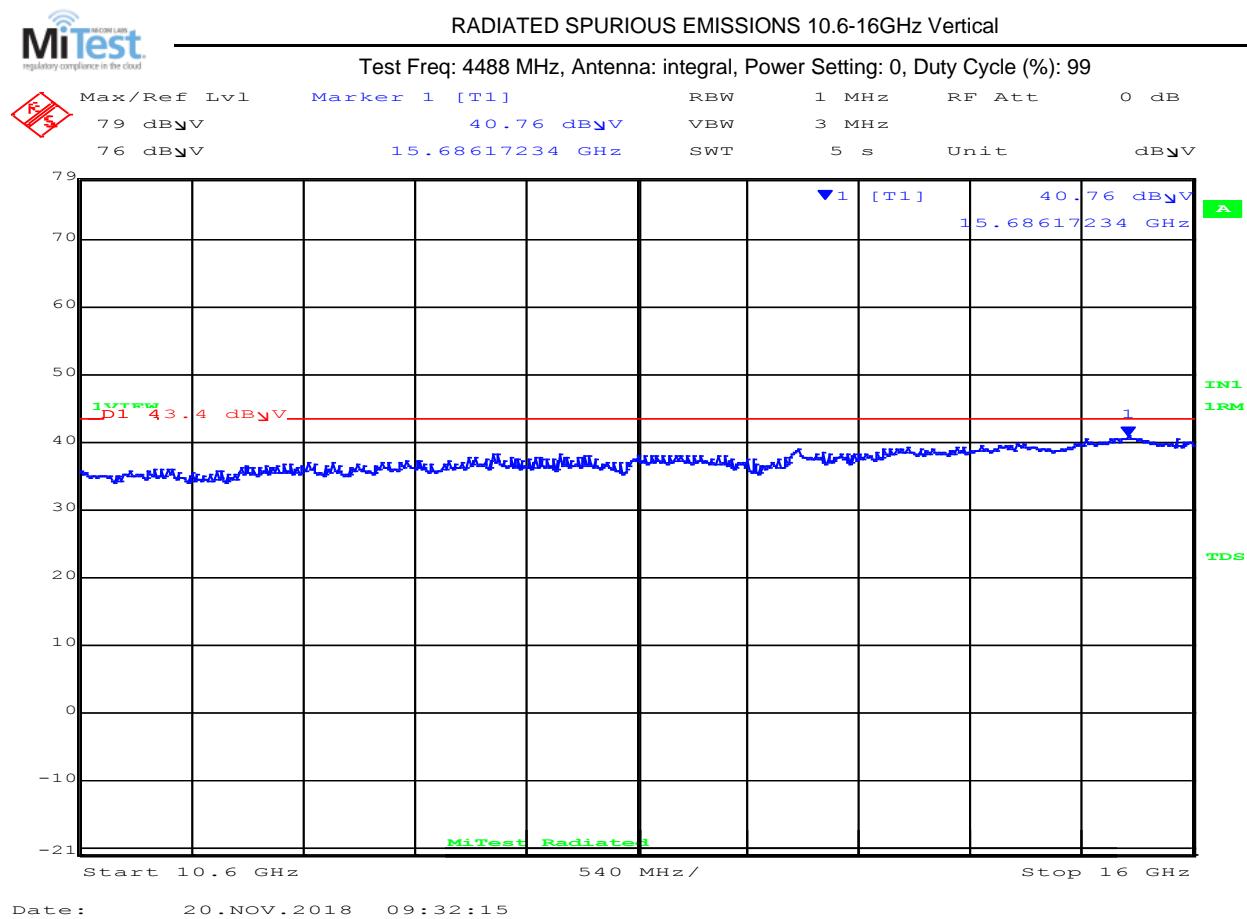


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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



10600.00 – 16000.00 GHz

Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
1	15686.2	39.5	Average	Vertical	150	0	43.4	-3.5	Pass

Test Notes:

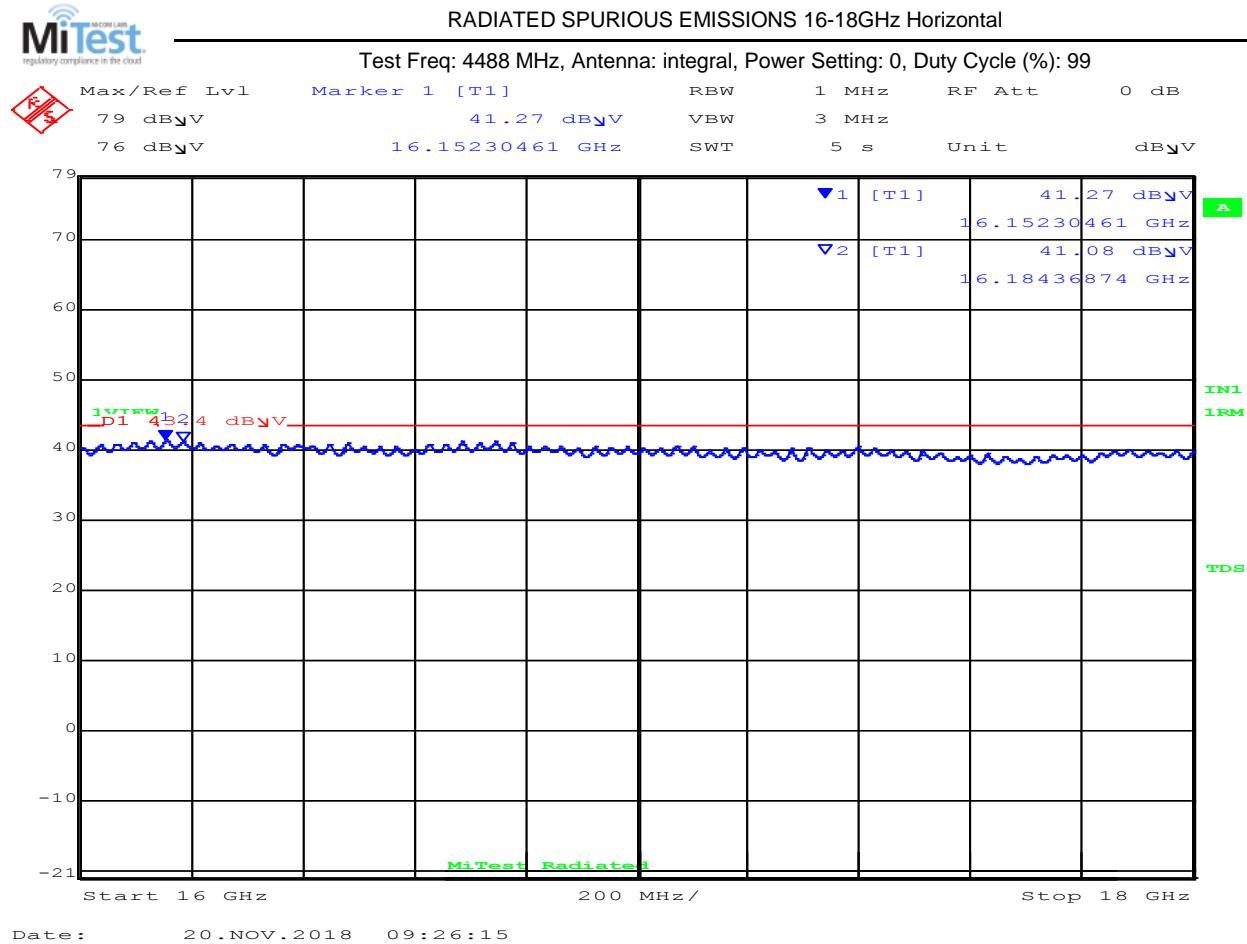
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	16152.3	40.2	Average	Horizontal	150	0	43.4	-3.2	Pass
2	16184.4	40.2	Average	Horizontal	150	0	43.4	-3.2	Pass

Test Notes:

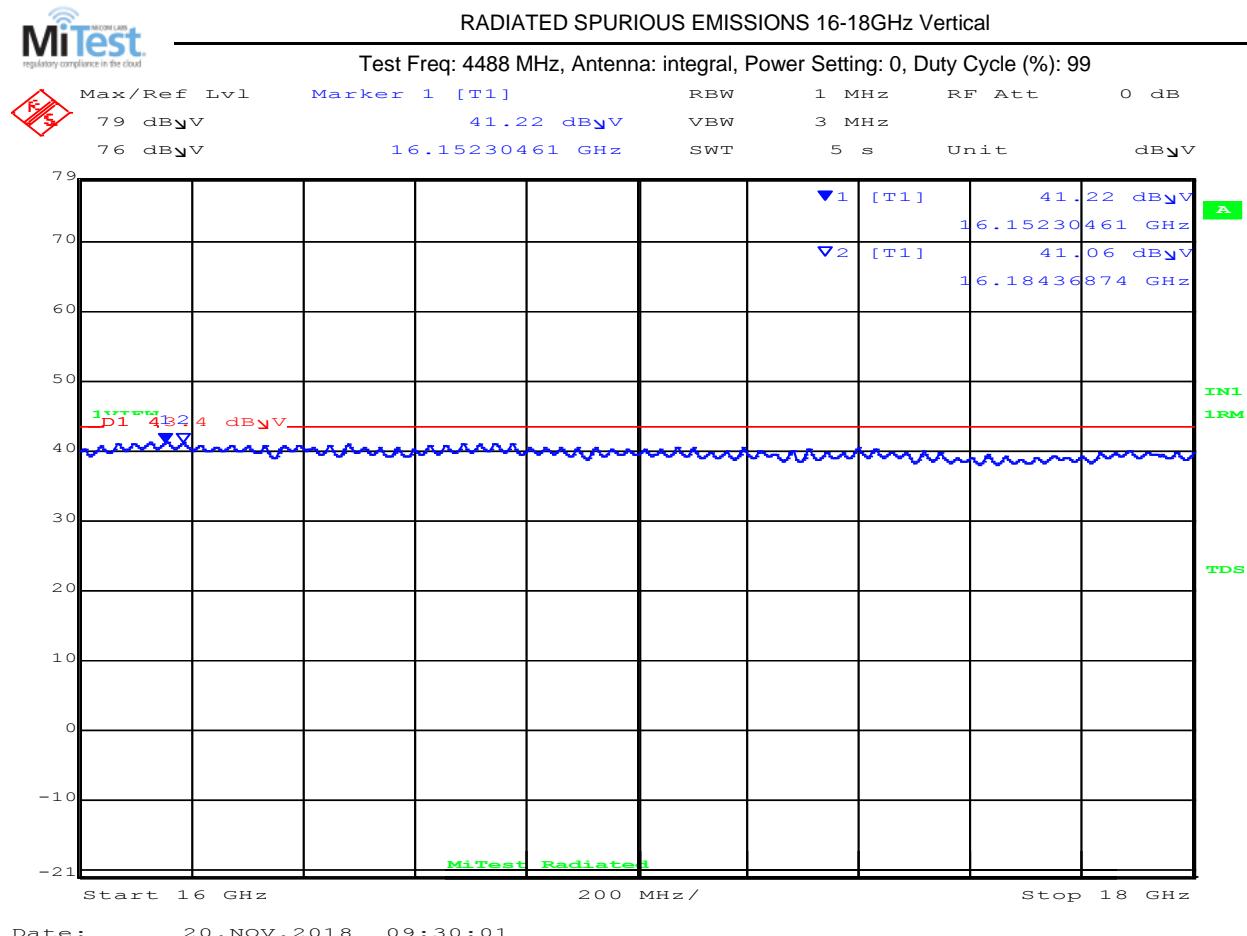
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	16152.3	40.2	Average	Vertical	150	0	43.4	-3.2	Pass
2	16184.4	40.1	Average	Vertical	150	0	43.4	-3.3	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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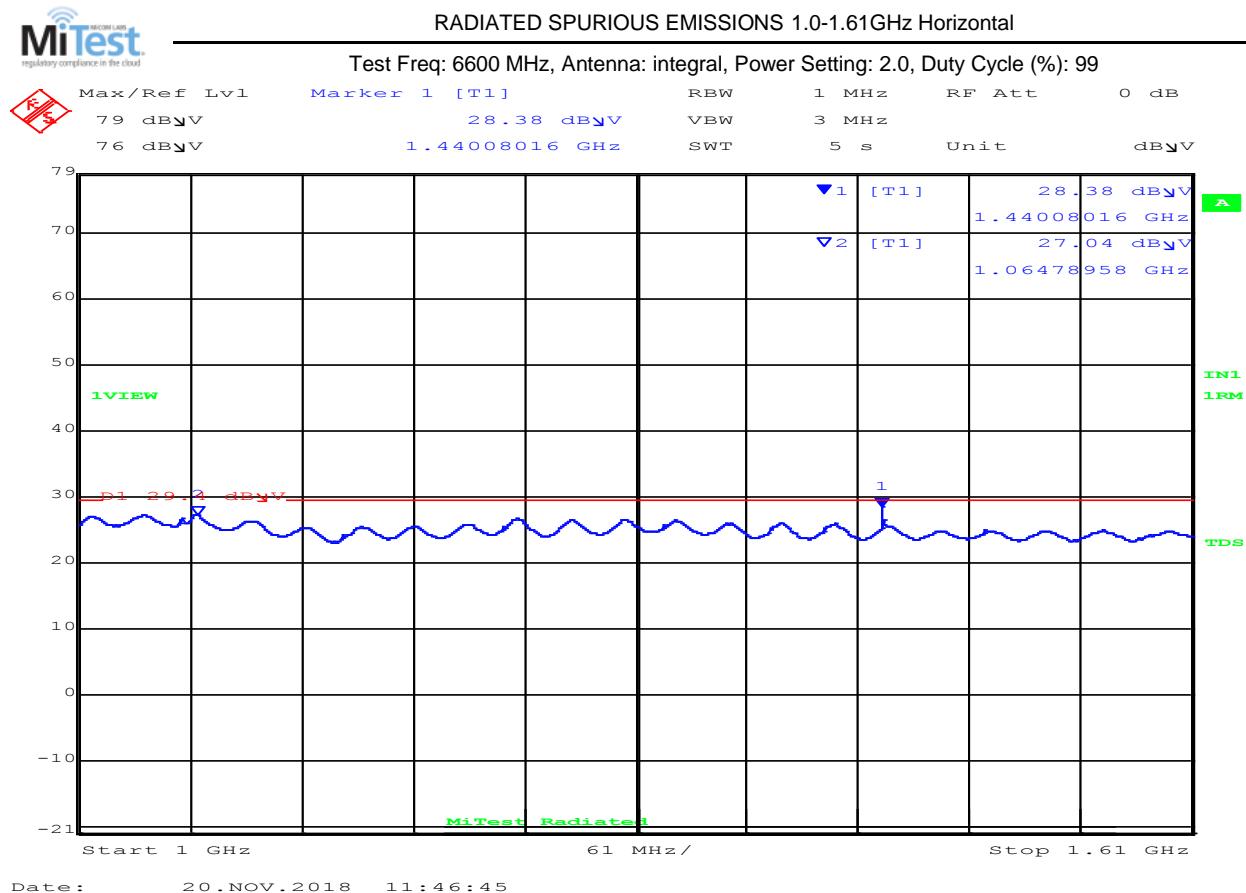
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6600 MHz

Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1000.00– 1610.00 MHz

Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
1	1440.1	28.9	Average	Horizontal	150	0	29.4	-0.5	Pass
2	1064.8	25.9	Average	Horizontal	150	0	29.4	-3.5	Pass

Test Notes:

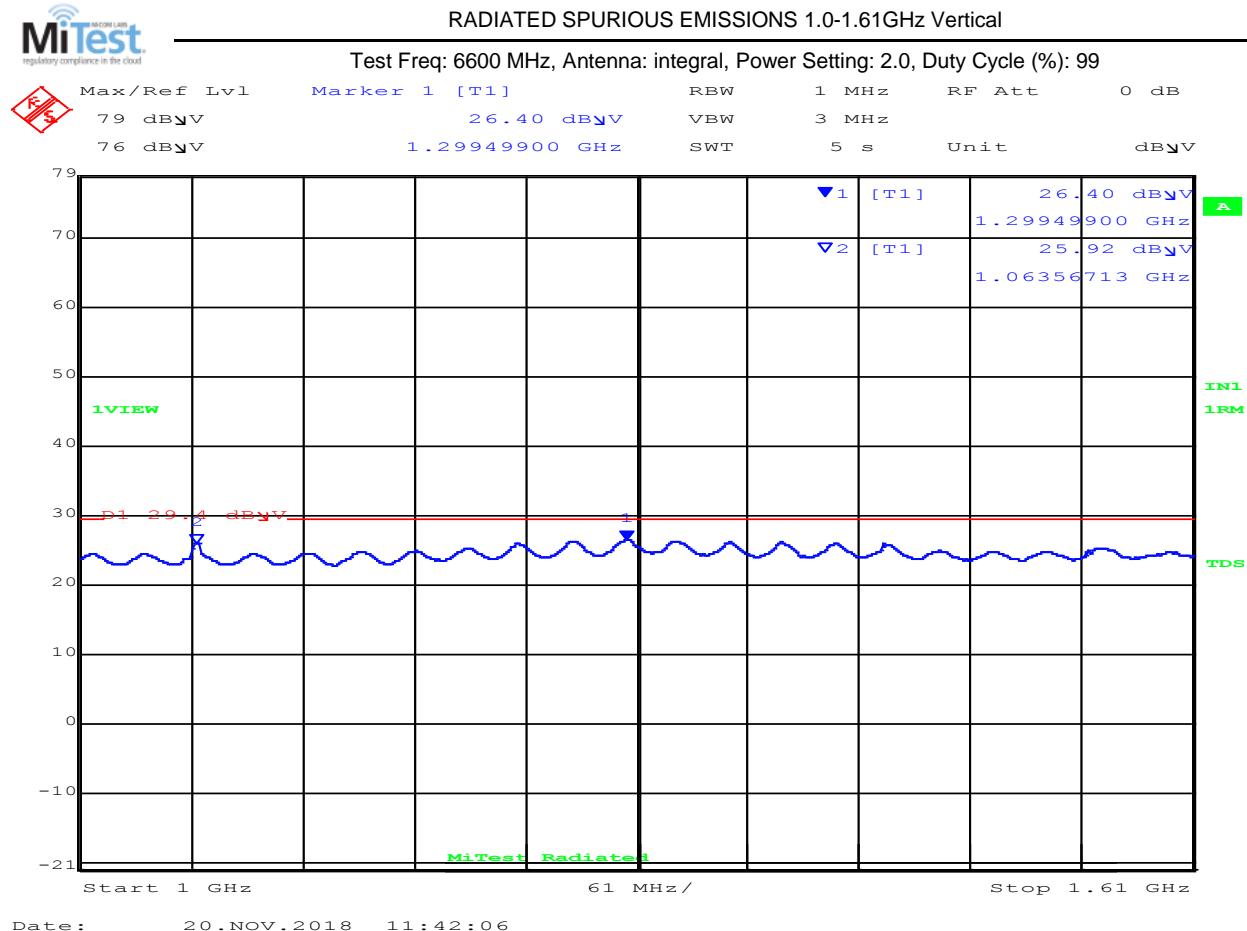
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1000.00– 1610.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1299.9	24.1	Average	Vertical	150	0	29.4	-5.30	Pass
2	1063.6	23.9	Average	Vertical	150	0	29.4	-5.50	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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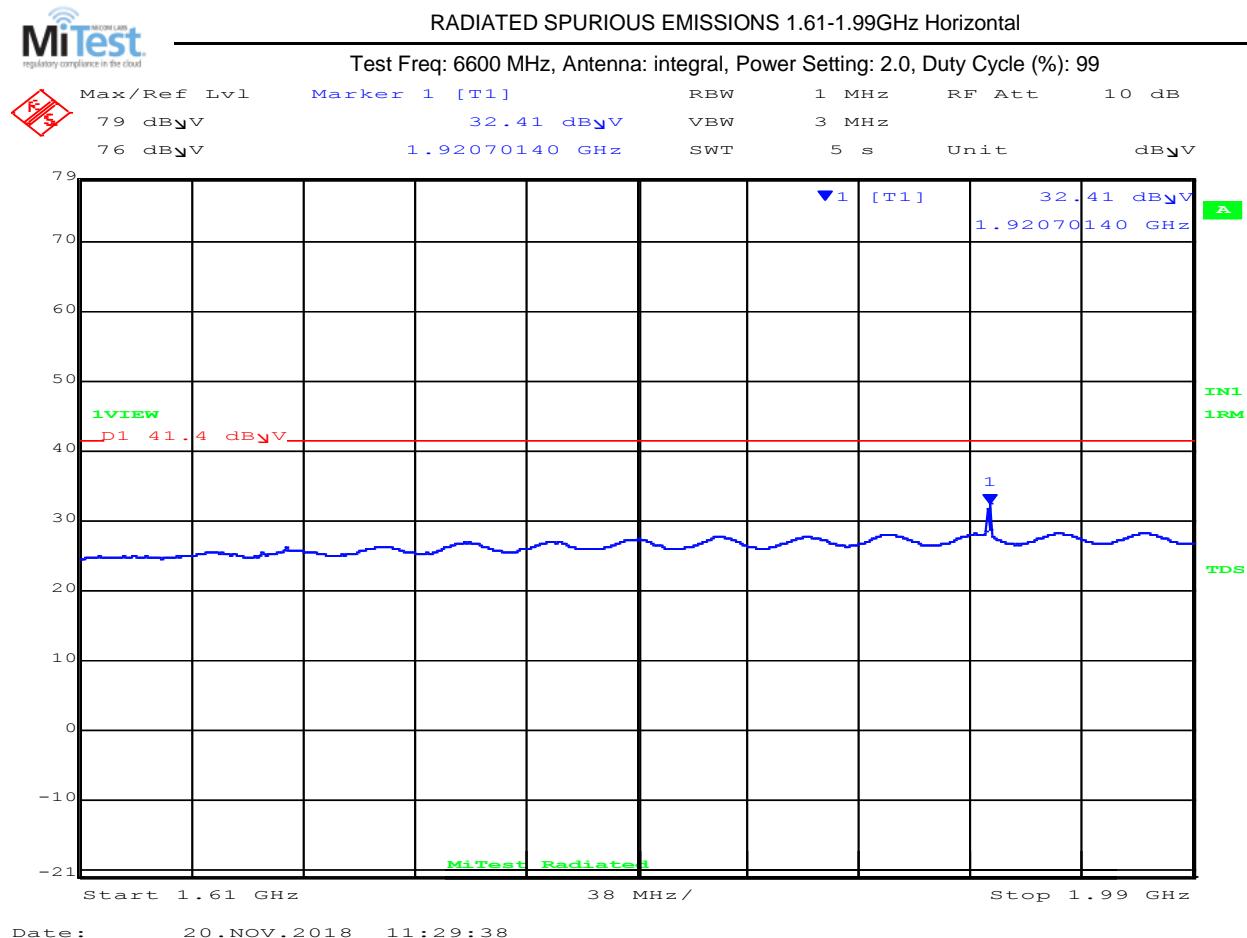


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Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1610.00 – 1990.00 MHz										
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail	
No Signals found within 6 dB of limit.										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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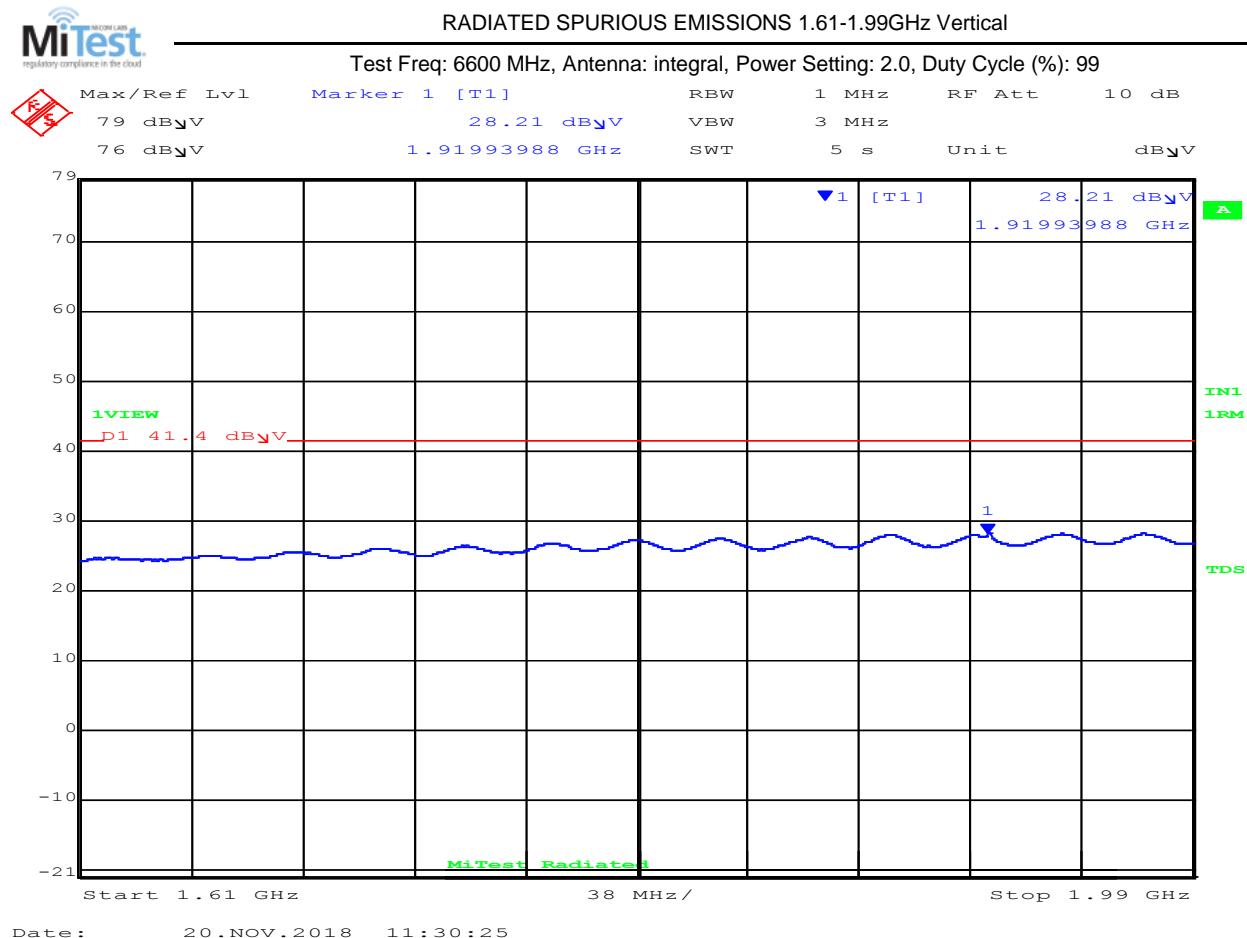


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Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1610.00 – 1990.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals found within 6 dB of limit.									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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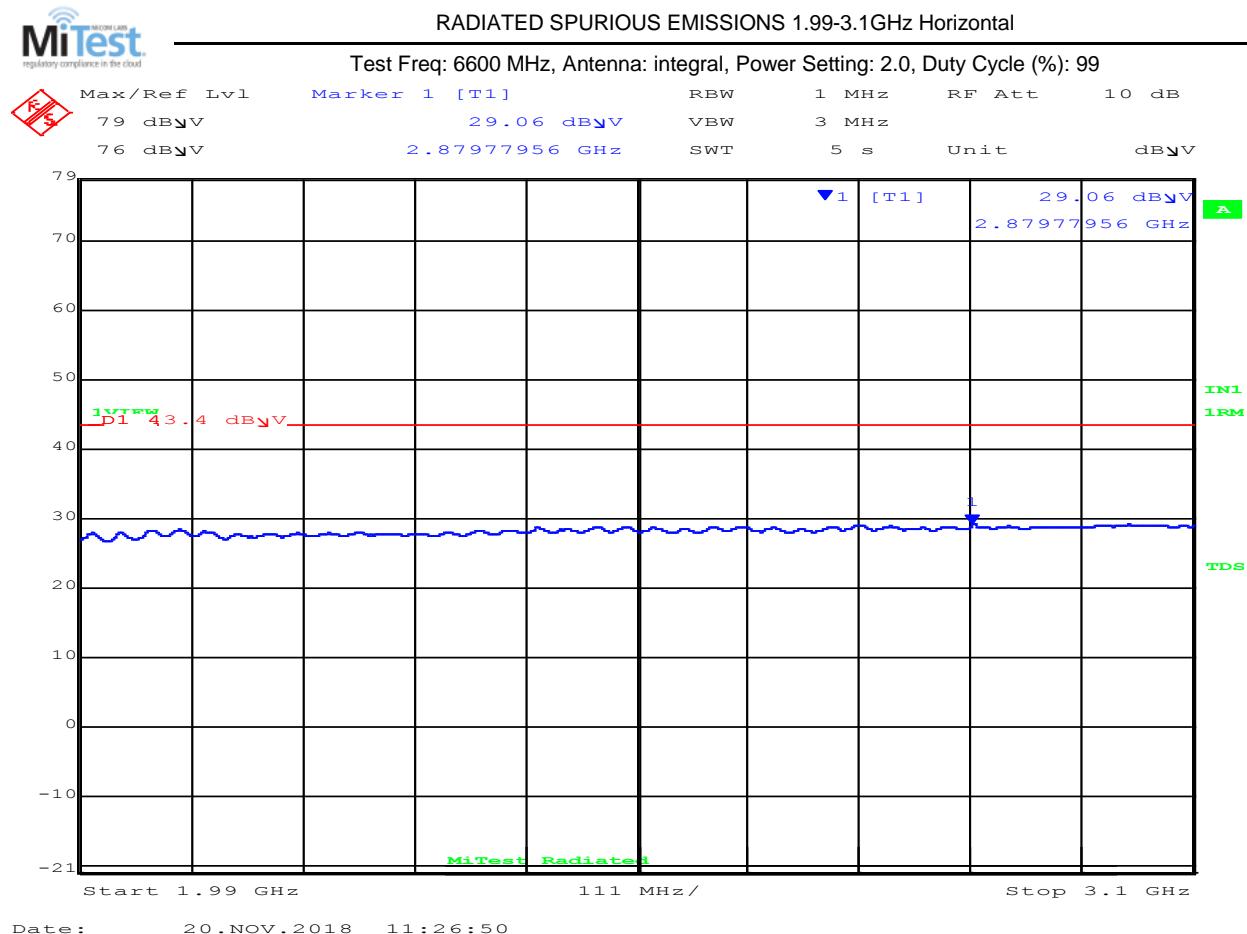


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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1990.00 – 3100.00 GHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals found within 6 dB of limit.									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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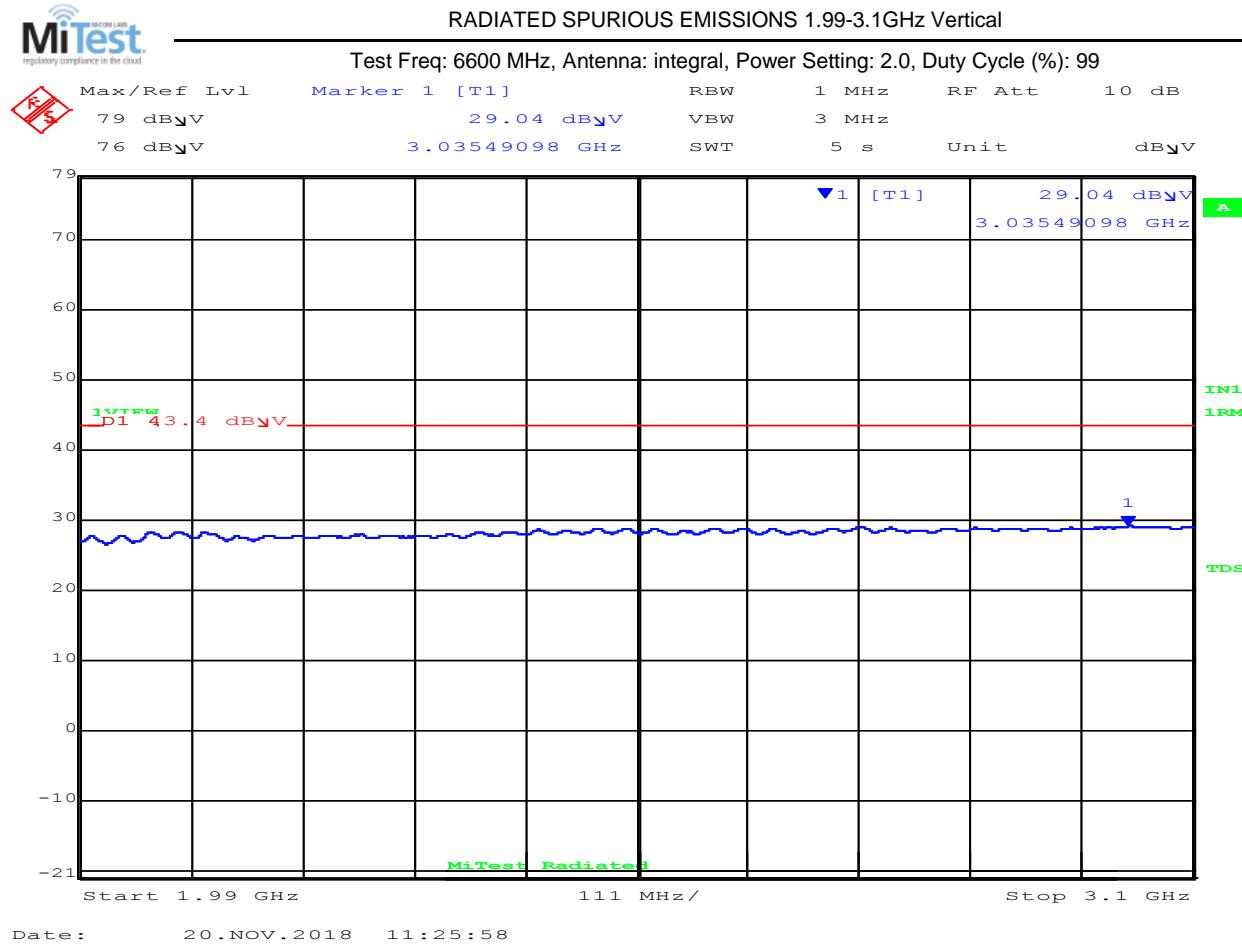


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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



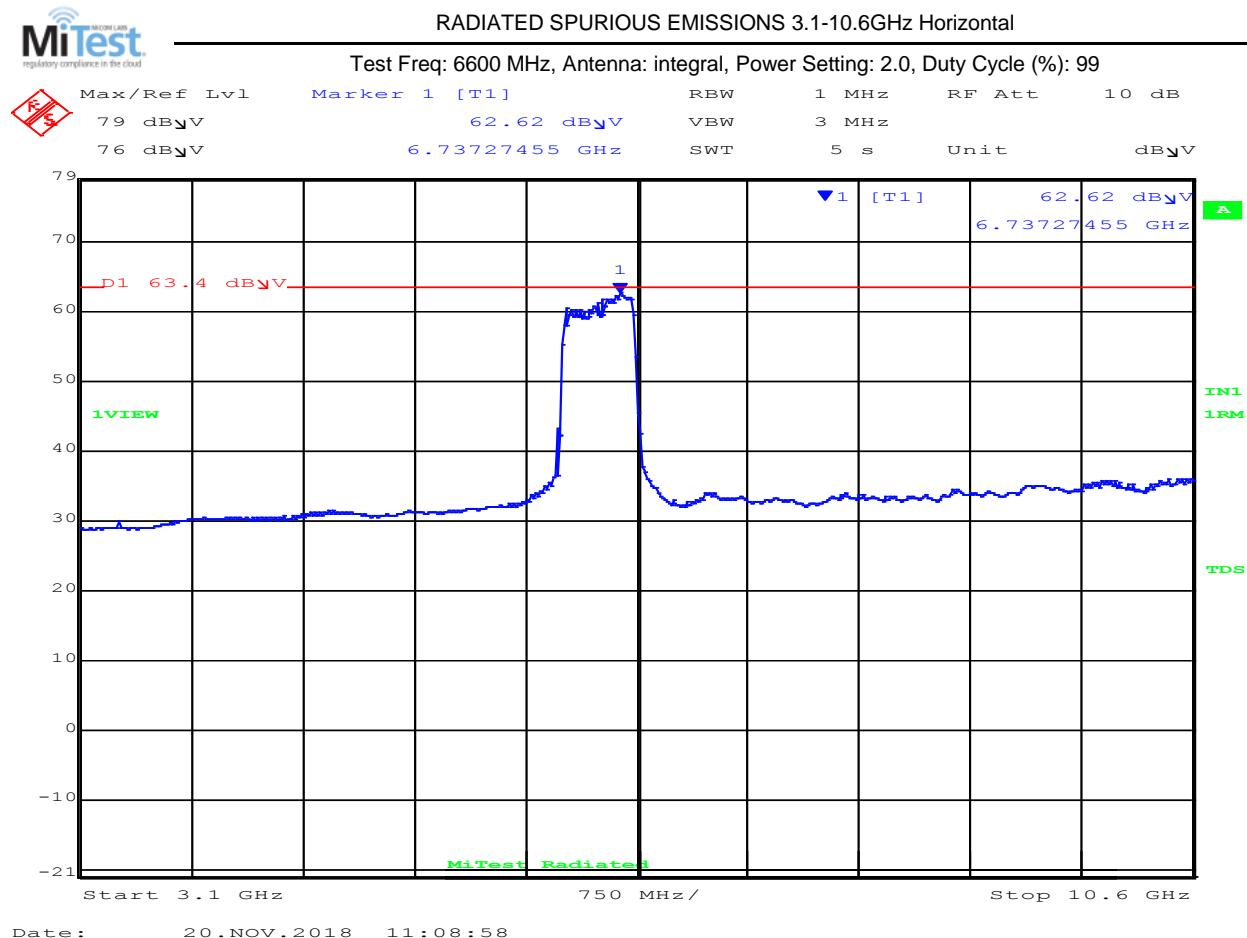
1990.00 – 3100.00 GHz									
Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail
No Signals found within 6 dB of limit.									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



3100.00 - 10600.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	6737.3	60.5	Average	Horizontal	150	0	63.4	-2.9	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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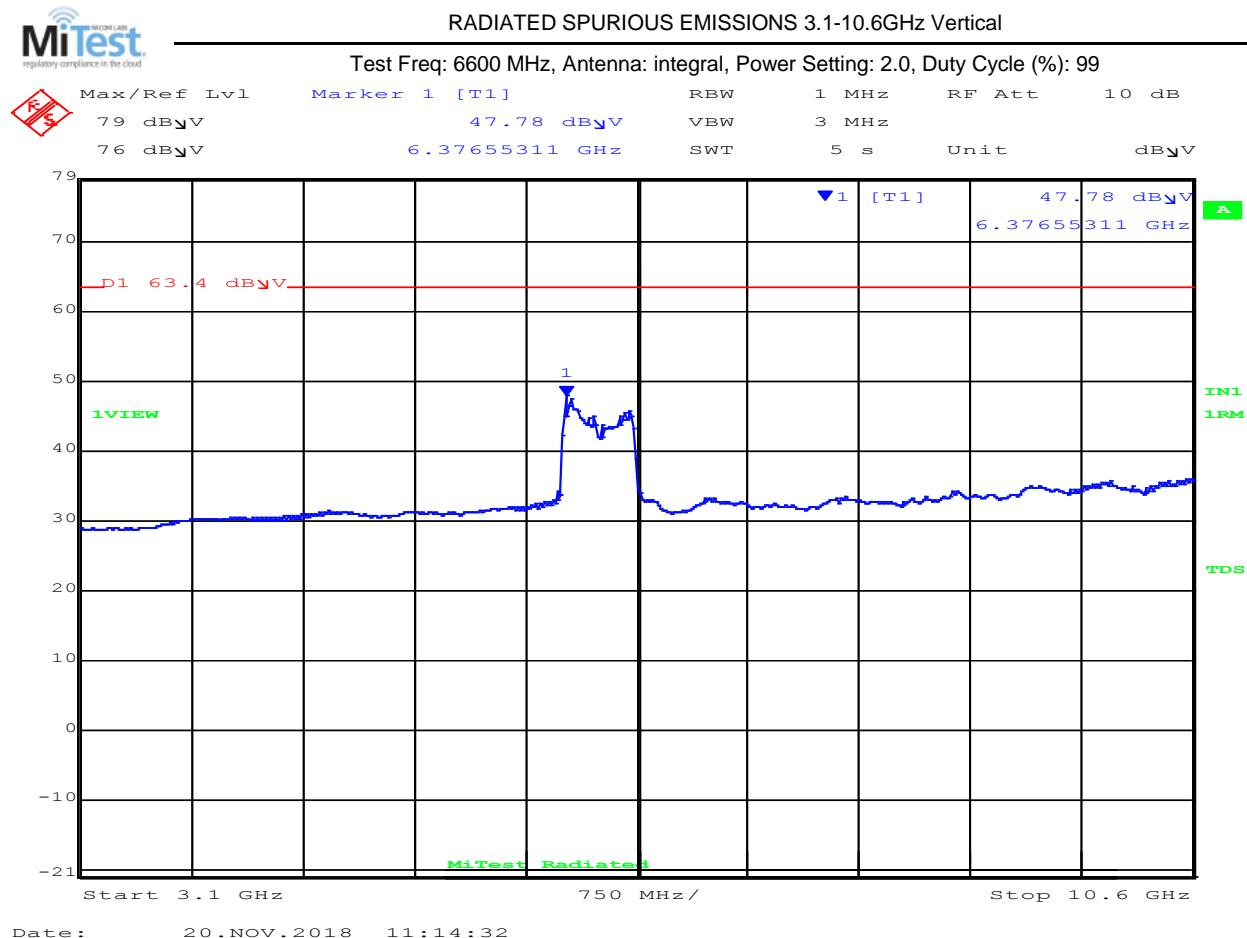


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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



3100.00 - 10600.00 MHz

Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals found within 6 dB of limit.									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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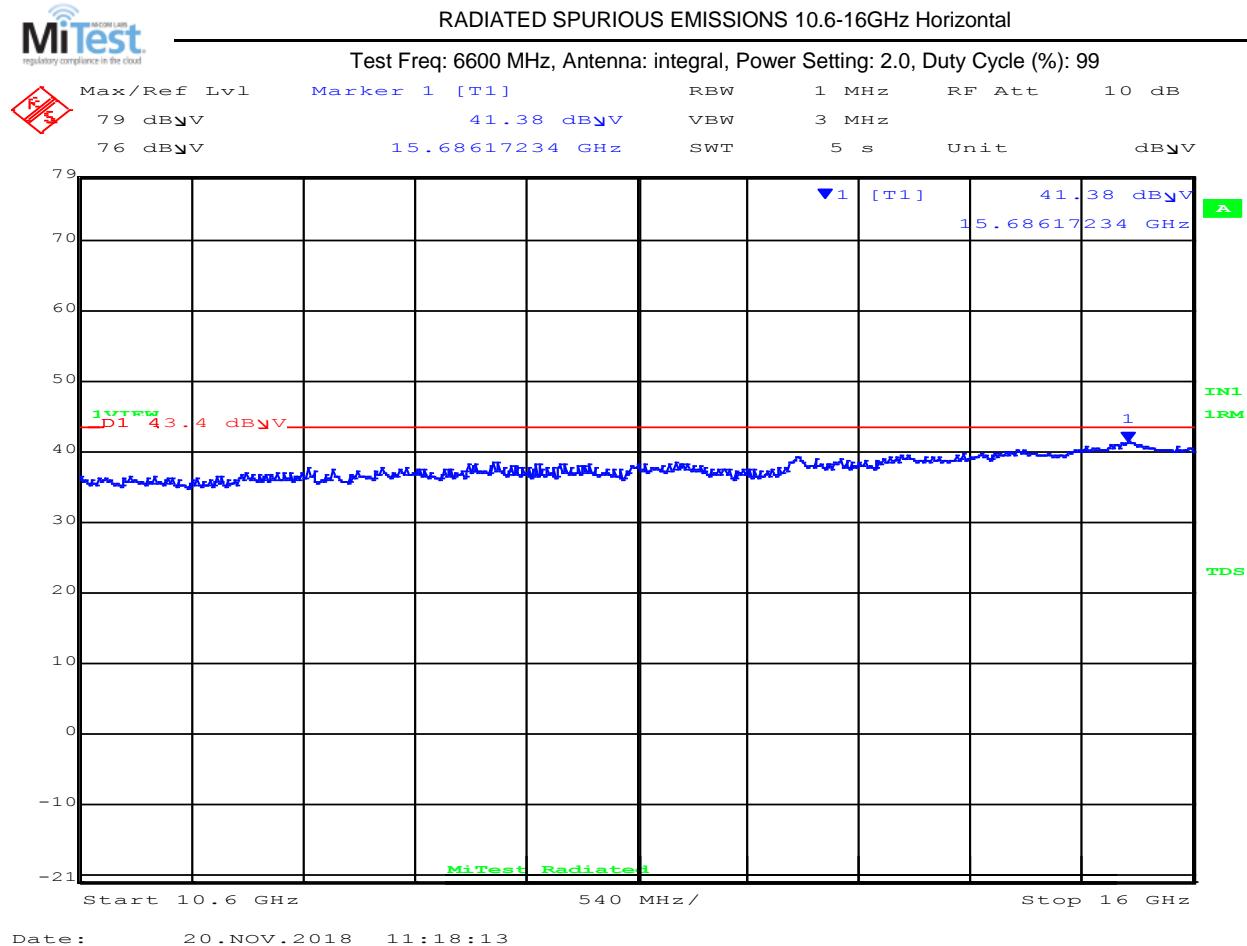


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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



10600.00 – 16000.00 GHz									
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	15686.2	40.1	Average	Horizontal	150	0	43.4	-3.3	Pass

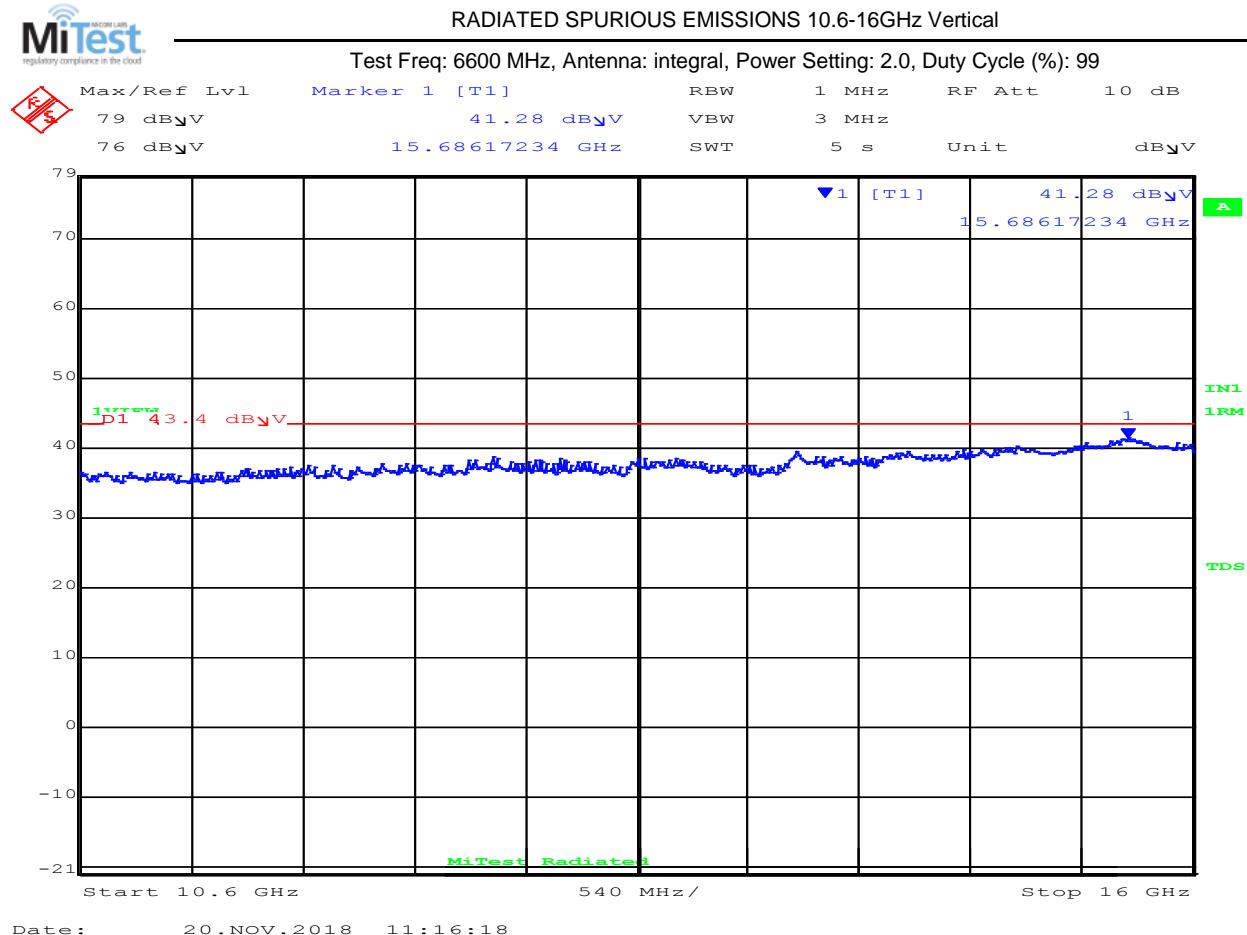
Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



10600.00 – 16000.00 GHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	15686.2	40.2	Average	Vertical	150	0	43.4	-3.2	Pass

Test Notes:

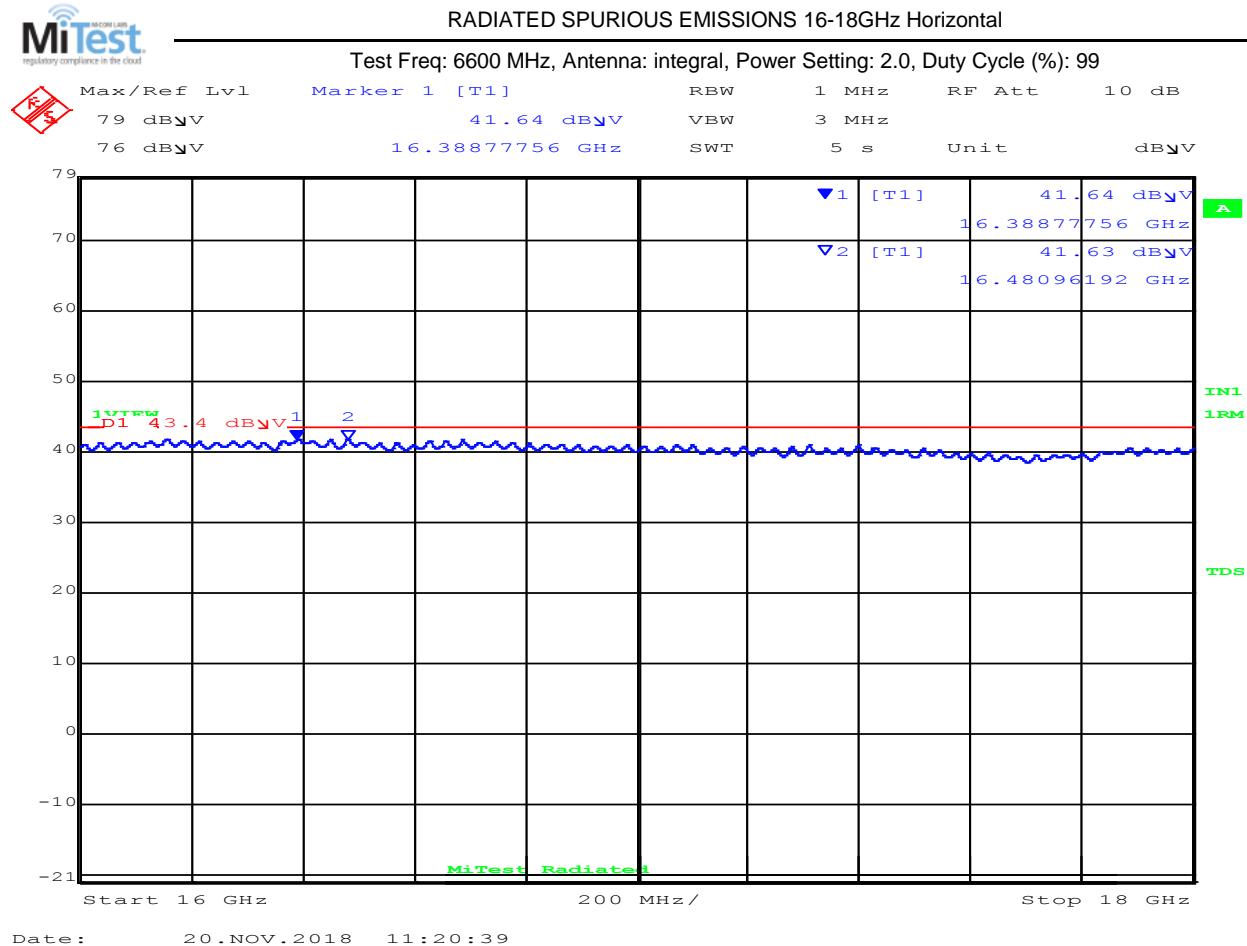
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	16388.8	40.6	Average	Horizontal	150	0	43.4	-2.80	Pass
2	16481.0	40.5	Average	Horizontal	150	0	43.4	-2.90	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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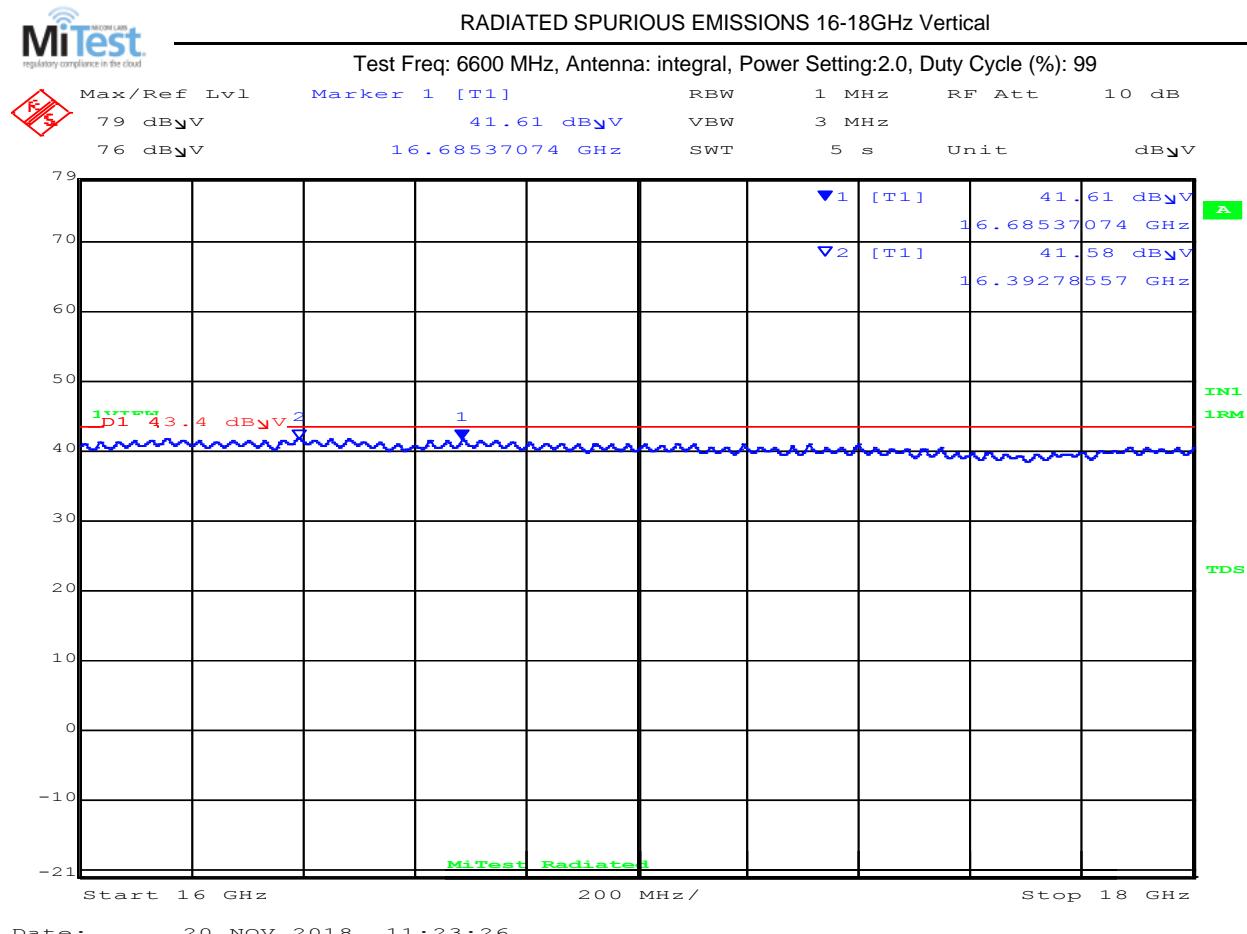


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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	16685.4	40.1	Average	Vertical	150	0	43.4	-3.3	Pass
2	16392.8	40.6	Average	Vertical	150	0	43.4	-2.8	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

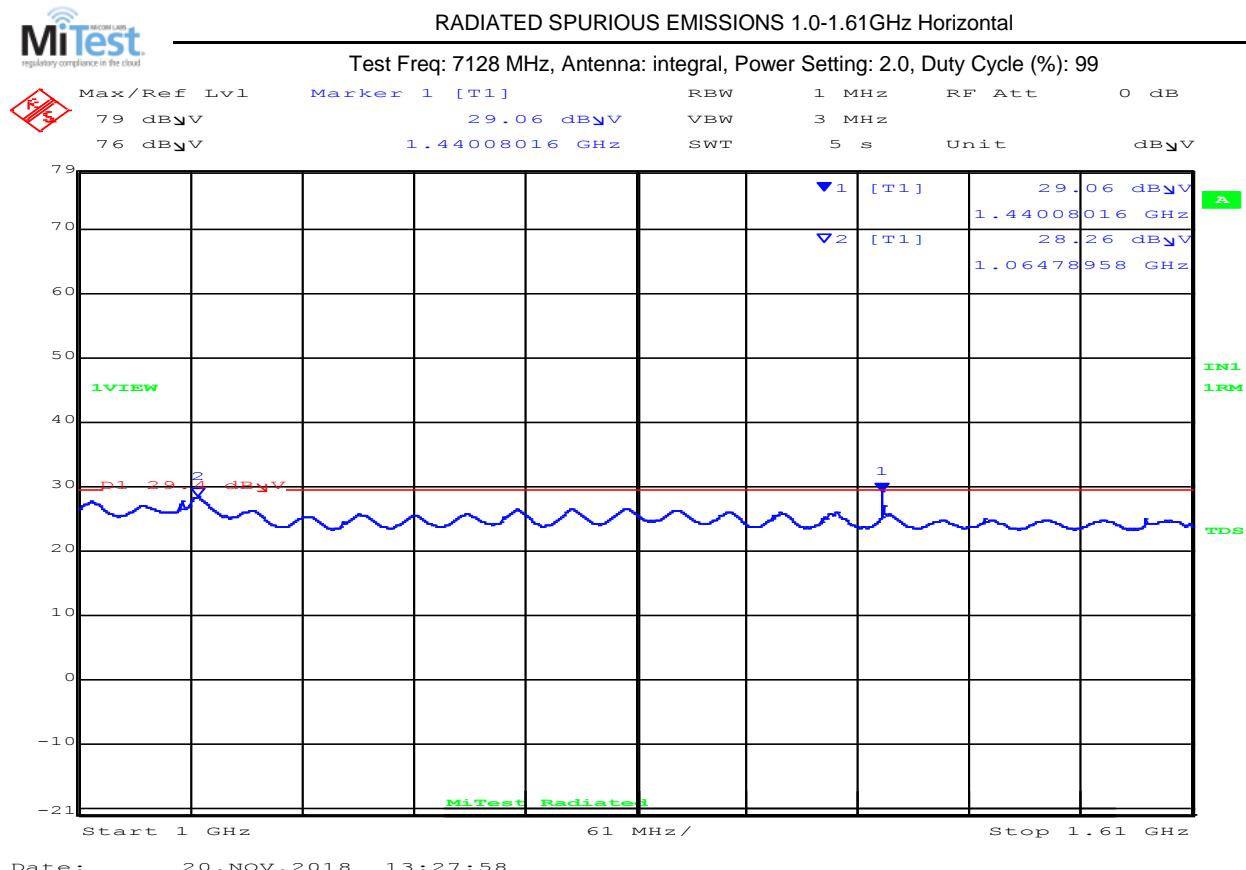
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7128 MHz

Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1000.00– 1610.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1440.1	28.8	Average	Horizontal	150	0	29.4	-0.6	Pass
2	1064.8	25.9	Average	Horizontal	150	0	29.4	-3.5	Pass

Test Notes:

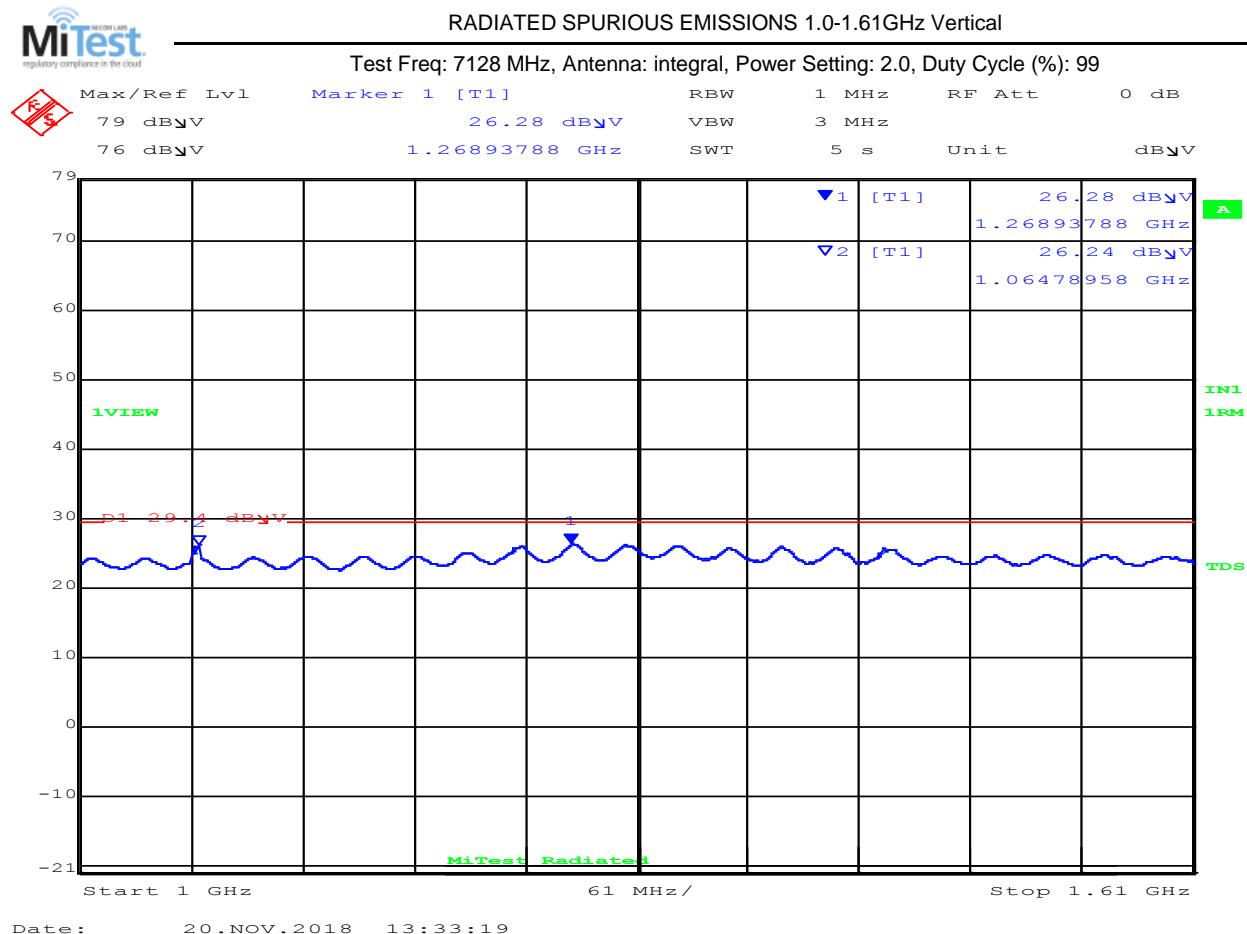
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1000.00– 1610.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1268.9	23.9	Average	Vertical	150	0	29.4	-5.5	Pass
2	1064.8	23.9	Average	Vertical	150	0	29.4	-5.5	Pass

Test Notes:
 Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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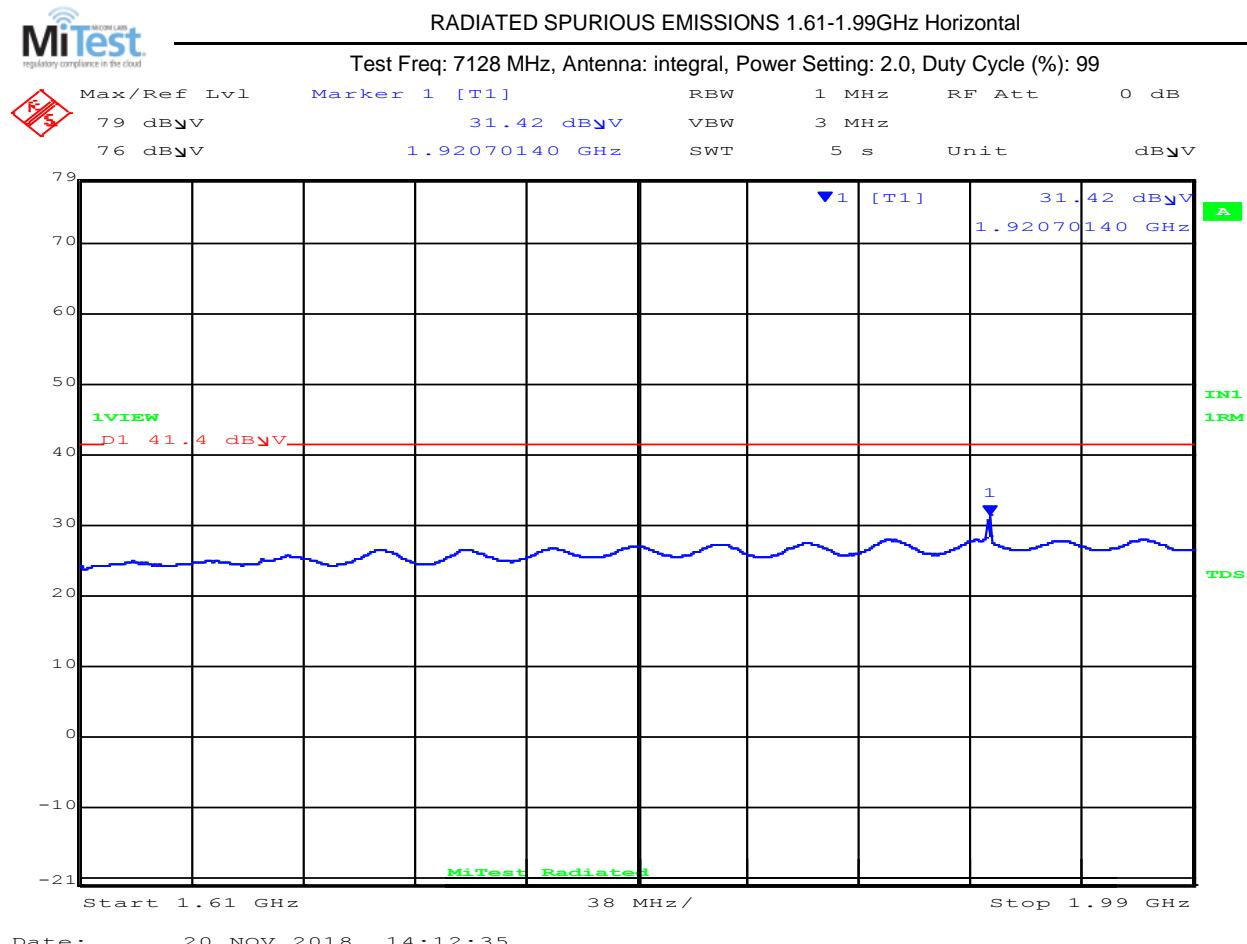


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Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1610.00 – 1990.00 MHz										
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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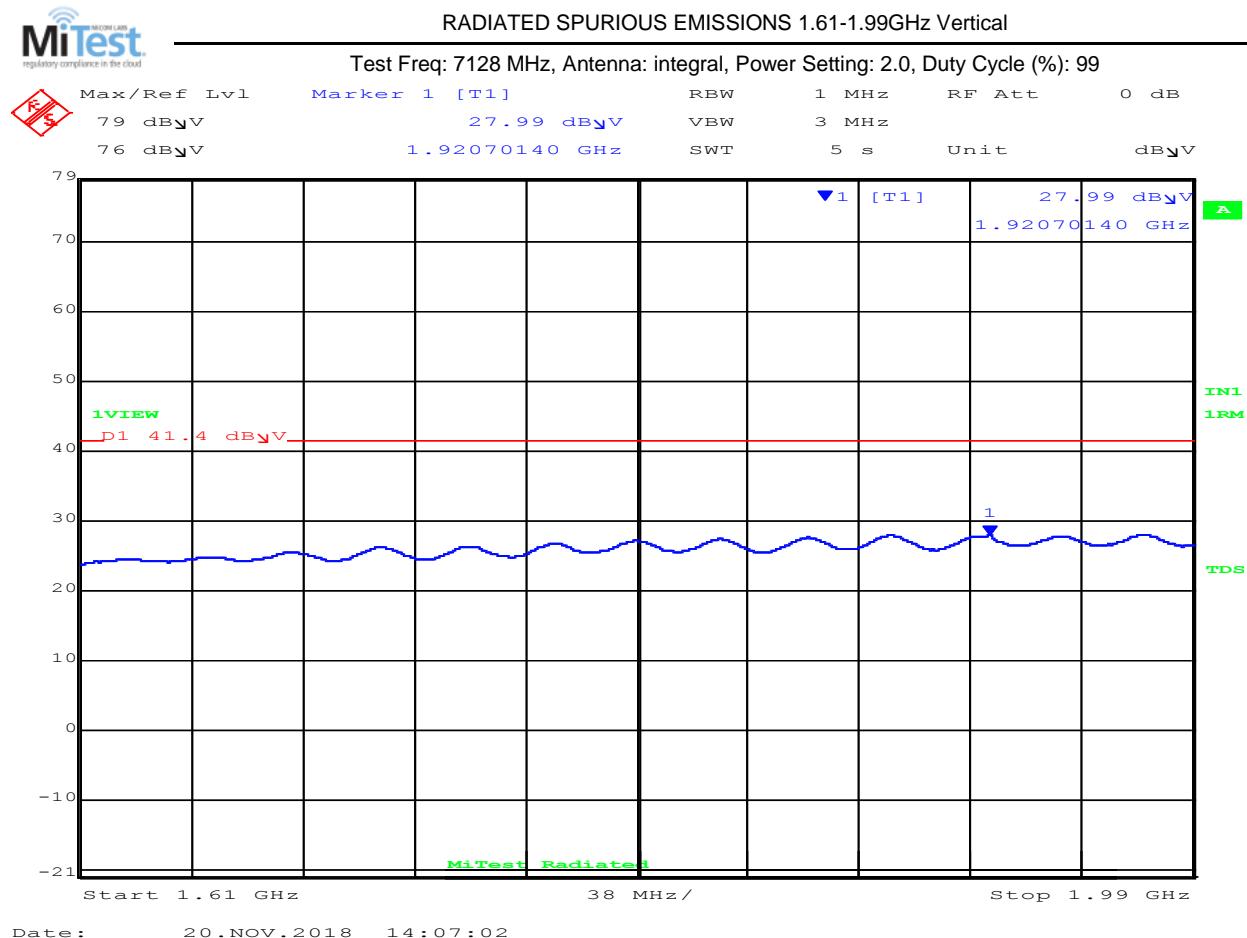


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Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1610.00 – 1990.00 MHz

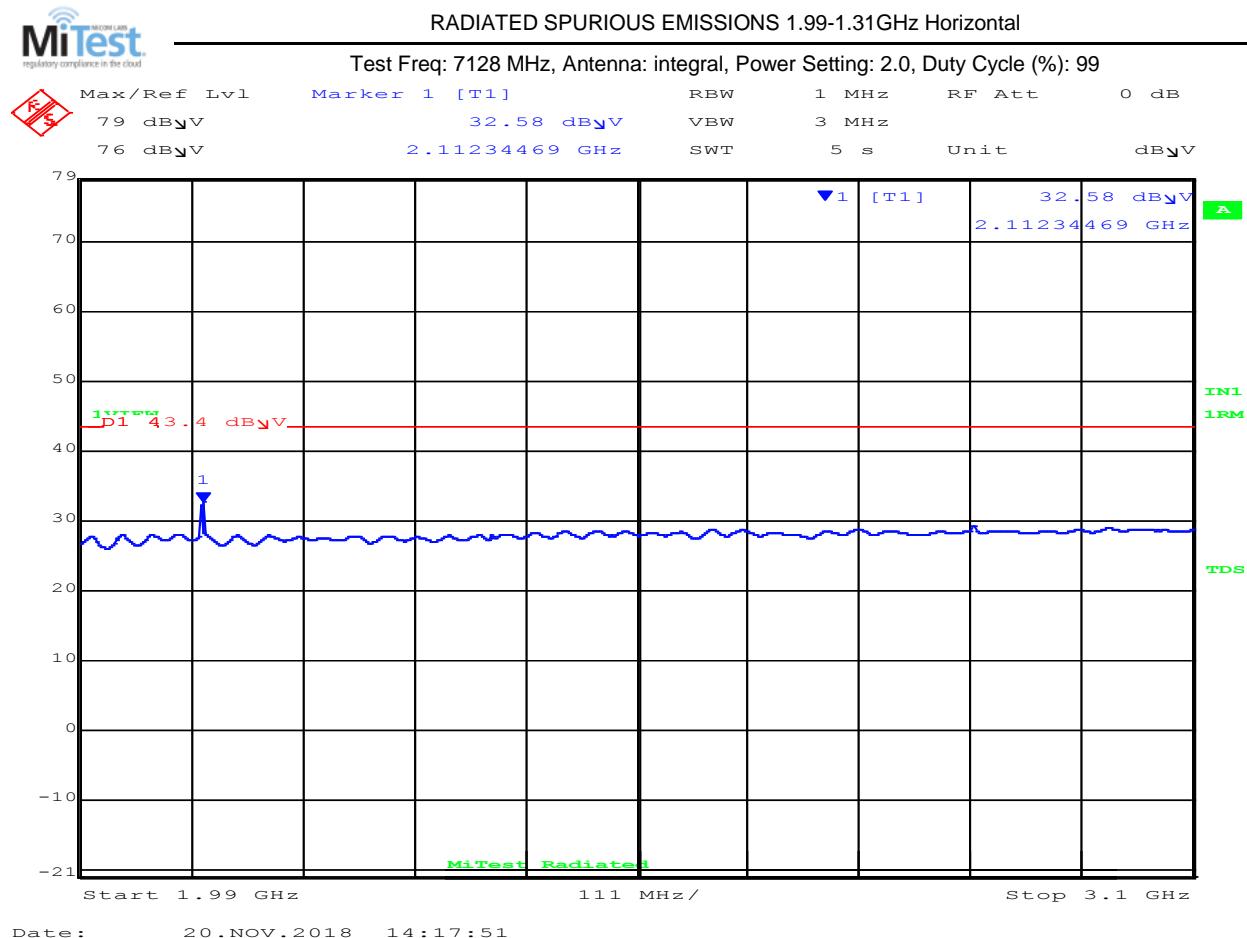
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail
No Signals found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1990.00 – 3100.00 GHz										
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
No Signals found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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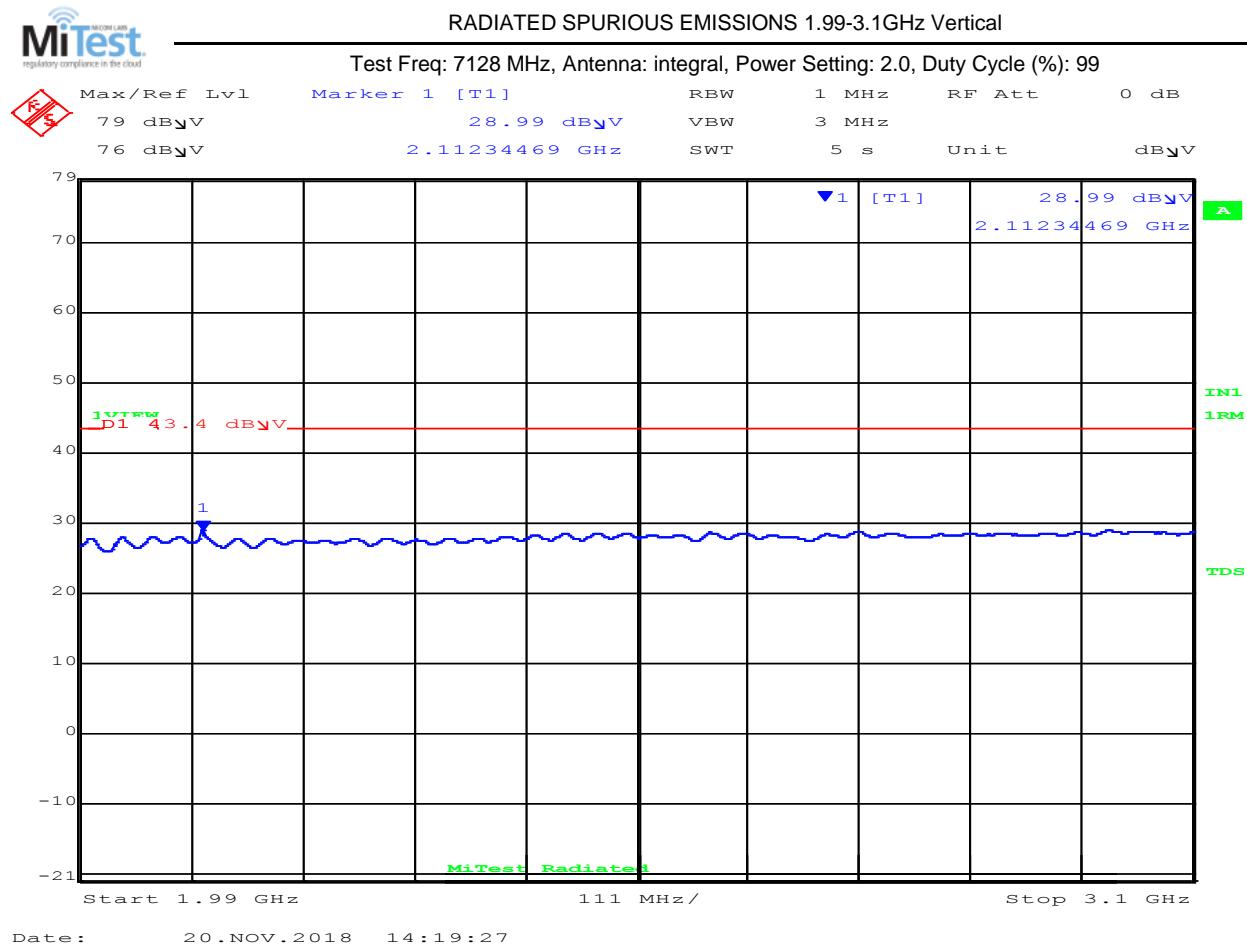


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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



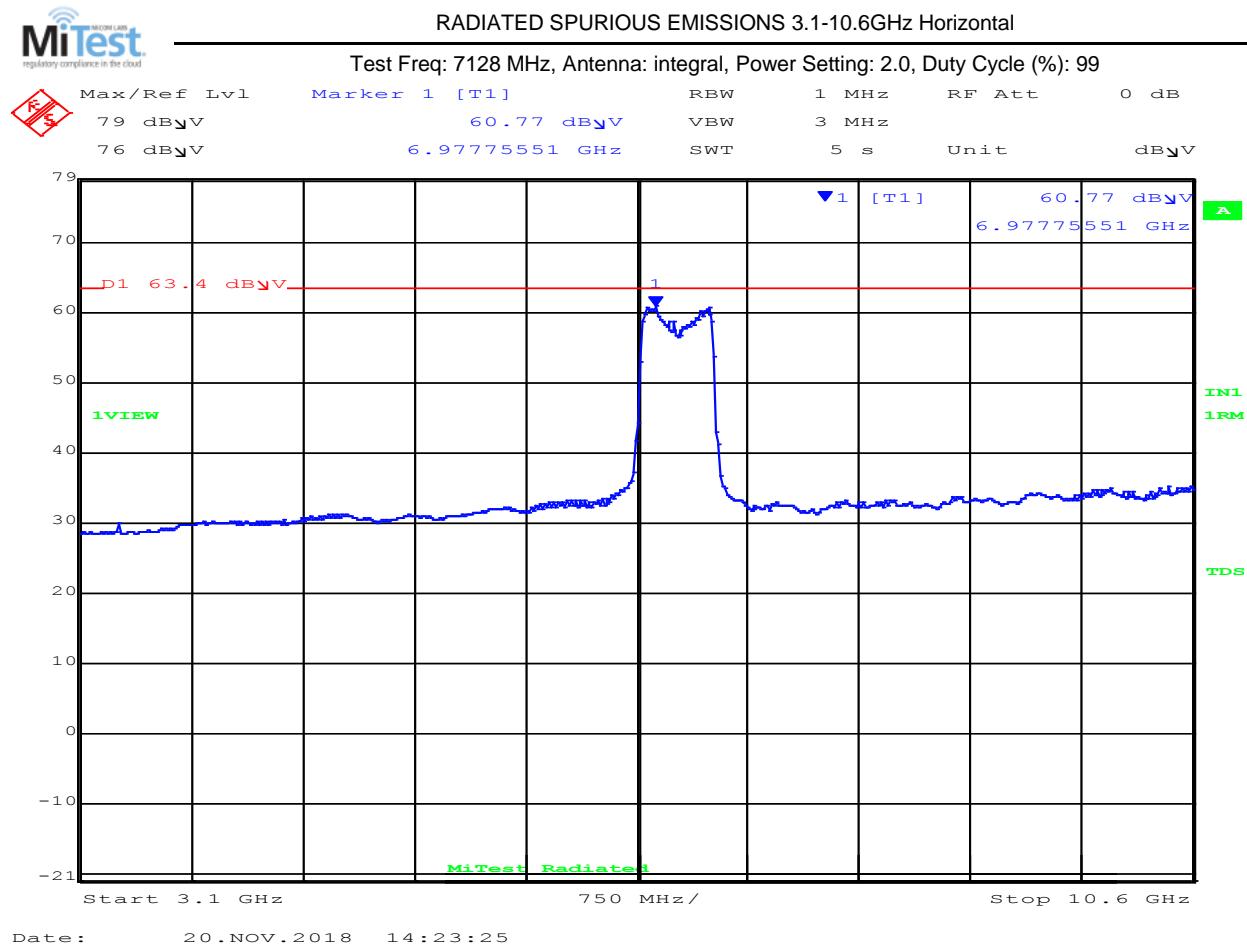
1990.00 – 3100.00 GHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



3100.00 - 10600.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	6977.8	58.9	Average	Horizontal	150	0	63.4	-4.5	Pass
Test Notes:									
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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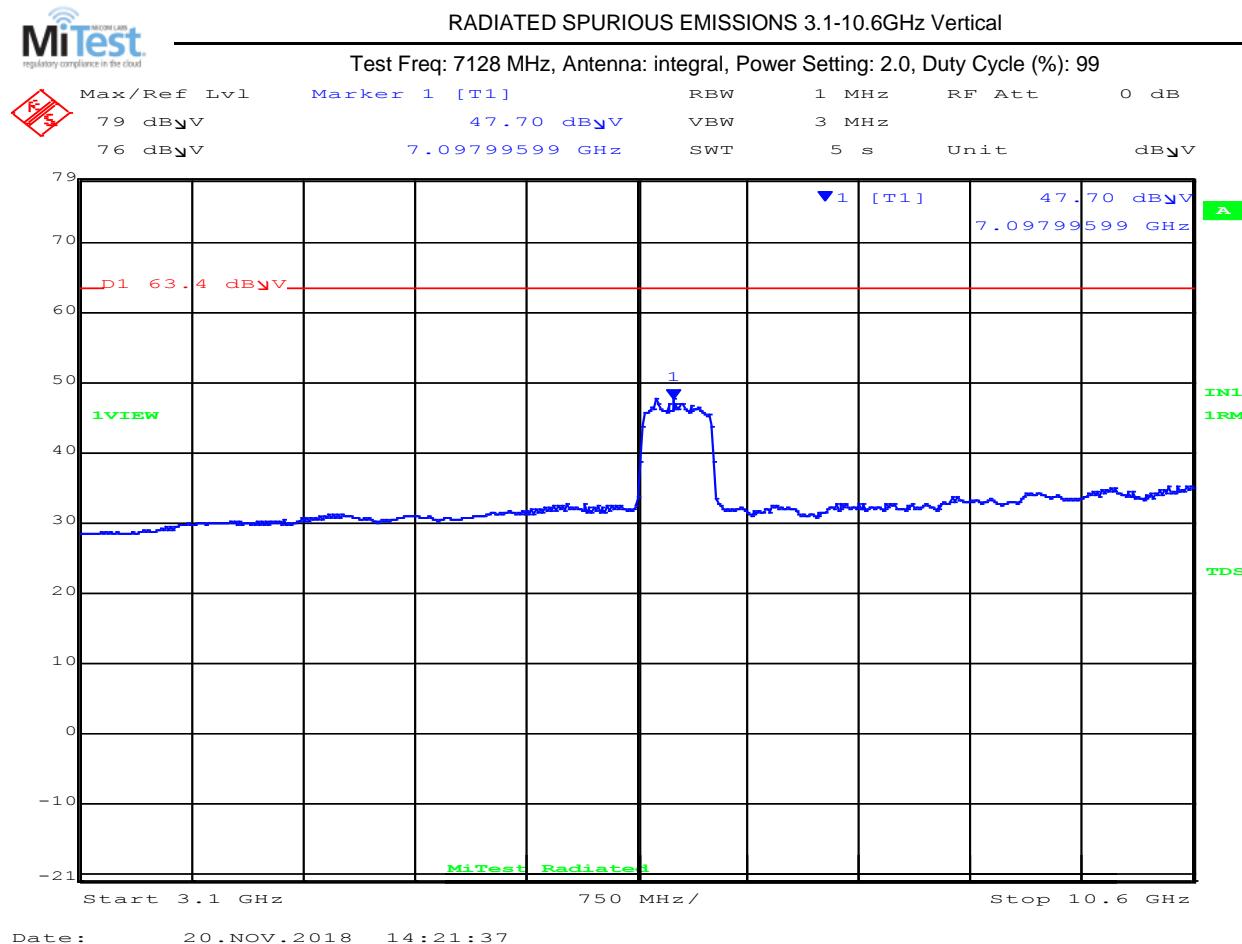


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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



3100.00 - 10600.00 MHz									
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail
No Signals found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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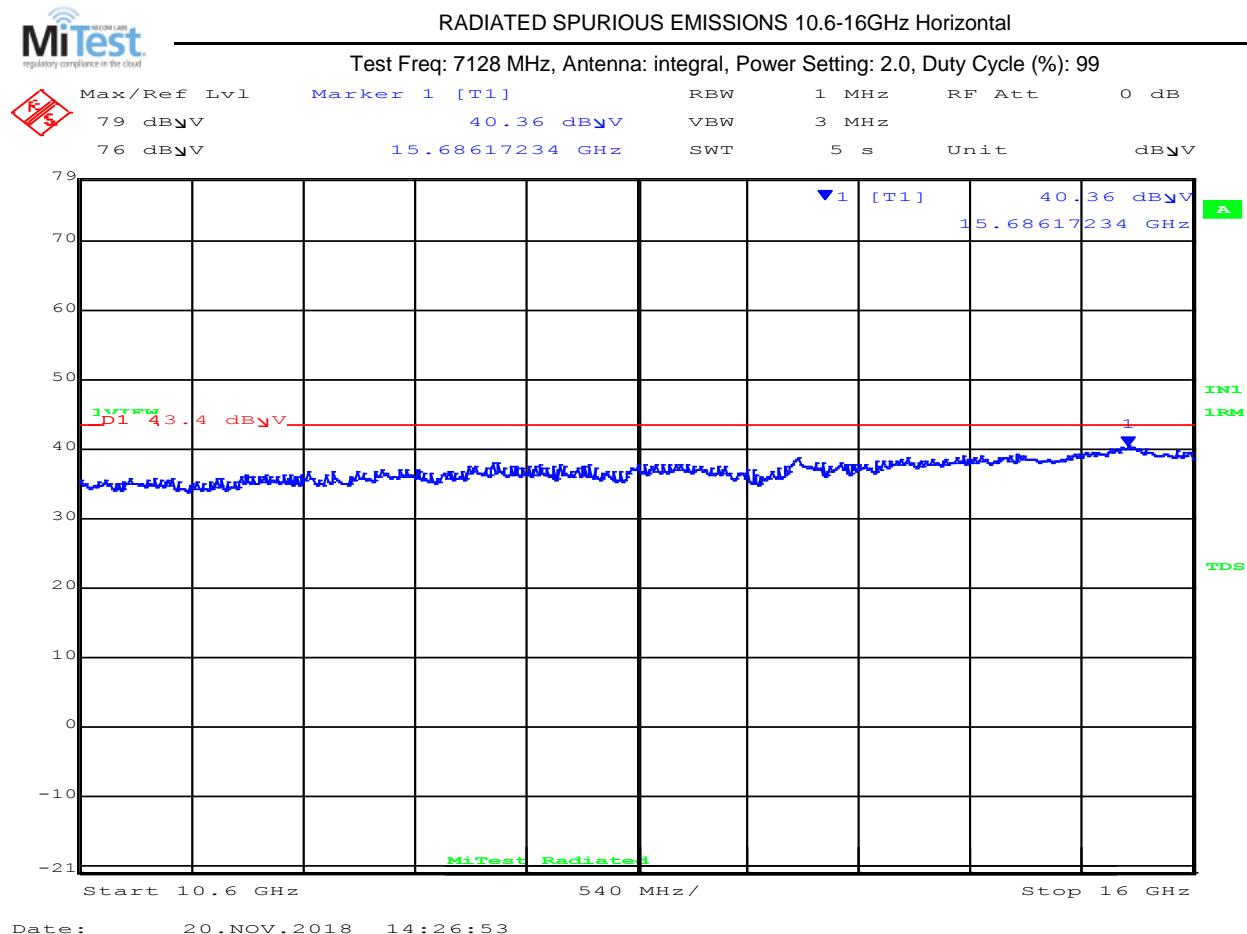


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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



10600.00 – 16000.00 GHz

Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
1	15686.2	39.4	Average	Horizontal	150	0	43.4	-4.0	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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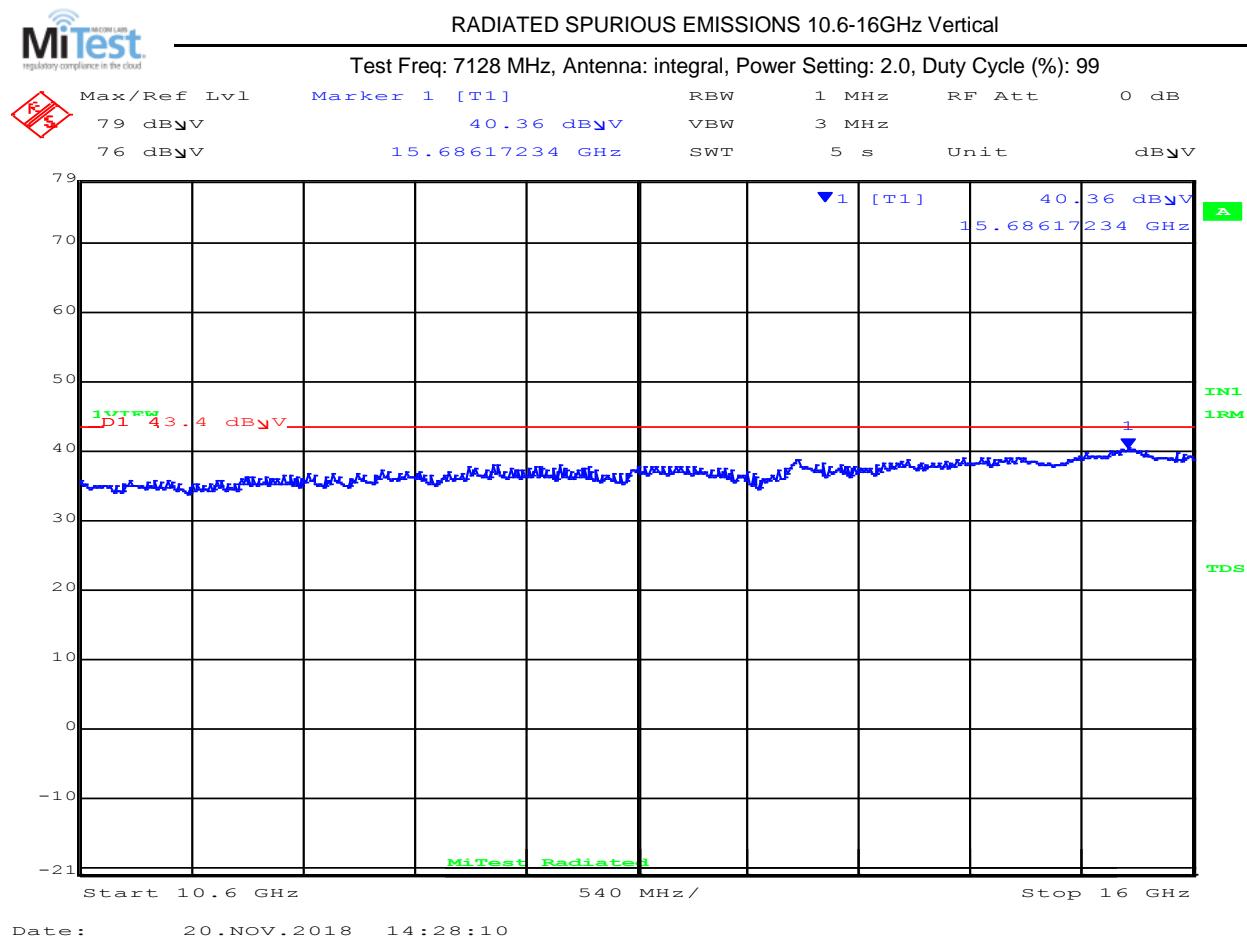


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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



Date: 20.NOV.2018 14:28:10

10600.00 – 16000.00 GHz

Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
1	15686.2	39.3	Average	Vertical	150	0	43.4	-4.1	Pass

Test Notes:

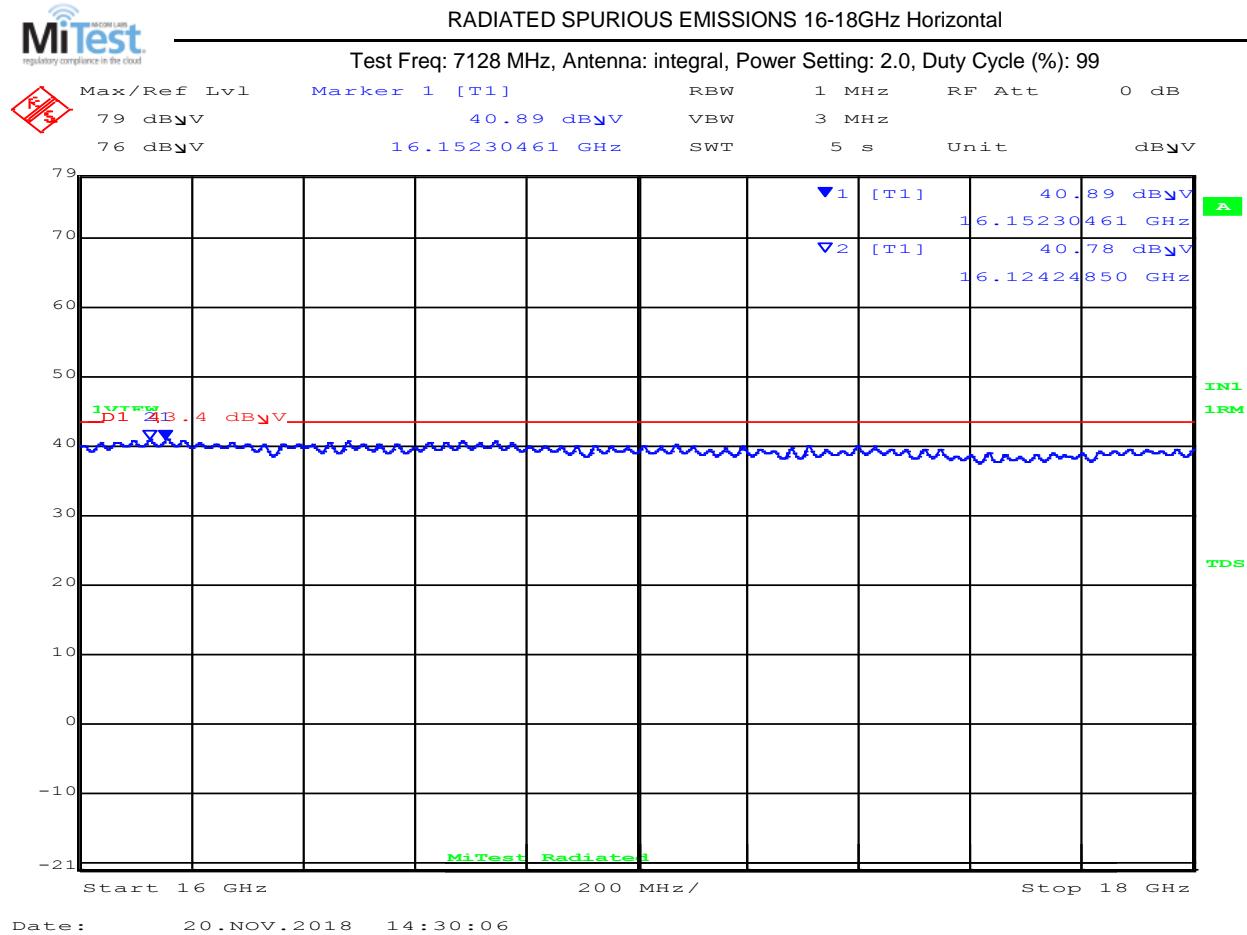
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	16152.3	39.9	Average	Horizontal	150	0	43.4	-3.5	Pass
2	16124.2	39.8	Average	Horizontal	150	0	43.4	-3.6	Pass

Test Notes:

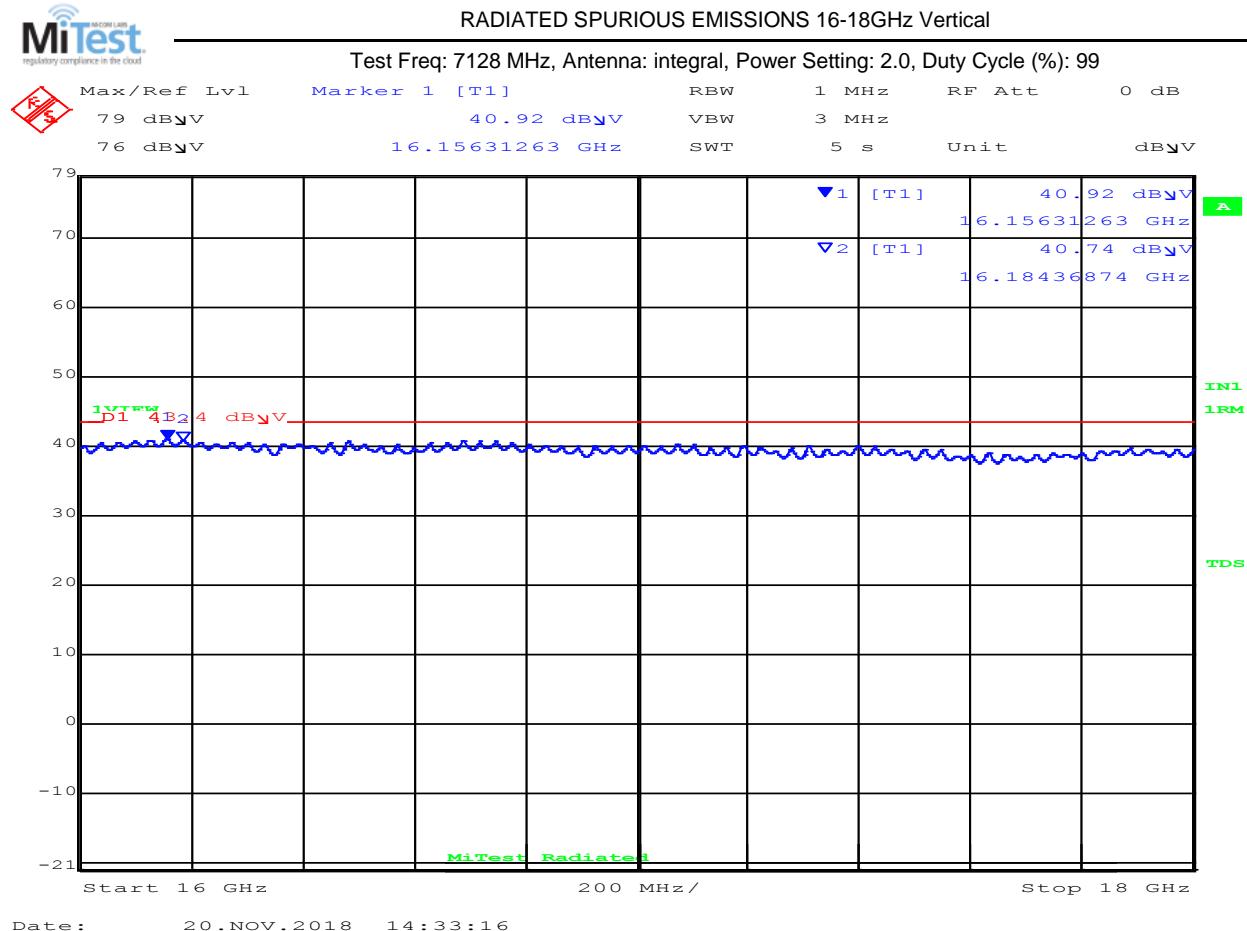
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	16156.3	39.9	Average	Vertical	150	0	43.4	-3.5	Pass
2	16184.4	39.8	Average	Vertical	150	0	43.4	-3.6	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

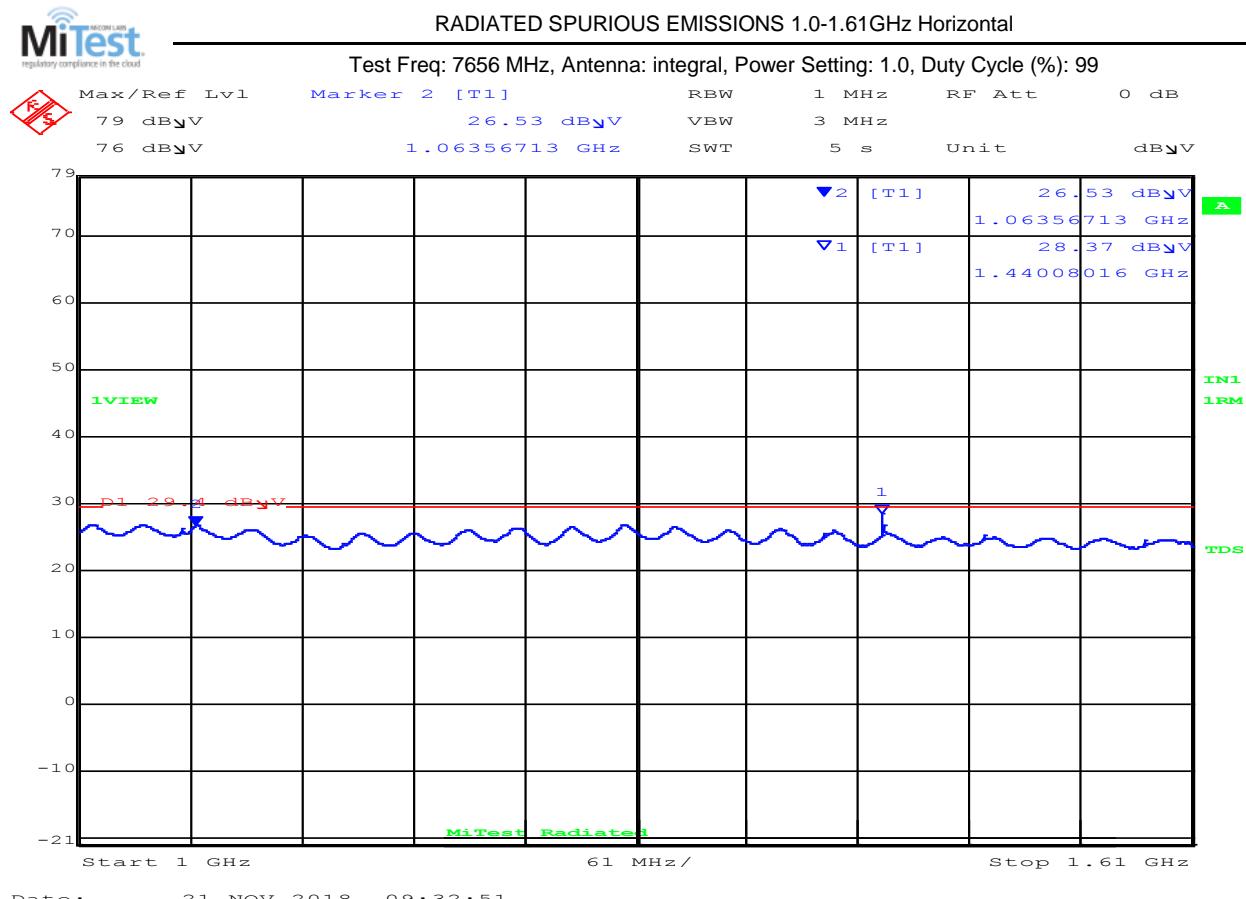
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7656 MHz (Covers Band Group 3 TFC 7 and Band Group 6 TFC 5

Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



1000.00– 1610.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1440.1	28.2	Average	Horizontal	150	0	29.4	-1.2	Pass
2	1063.6	24.5	Average	Horizontal	150	0	29.4	-4.5	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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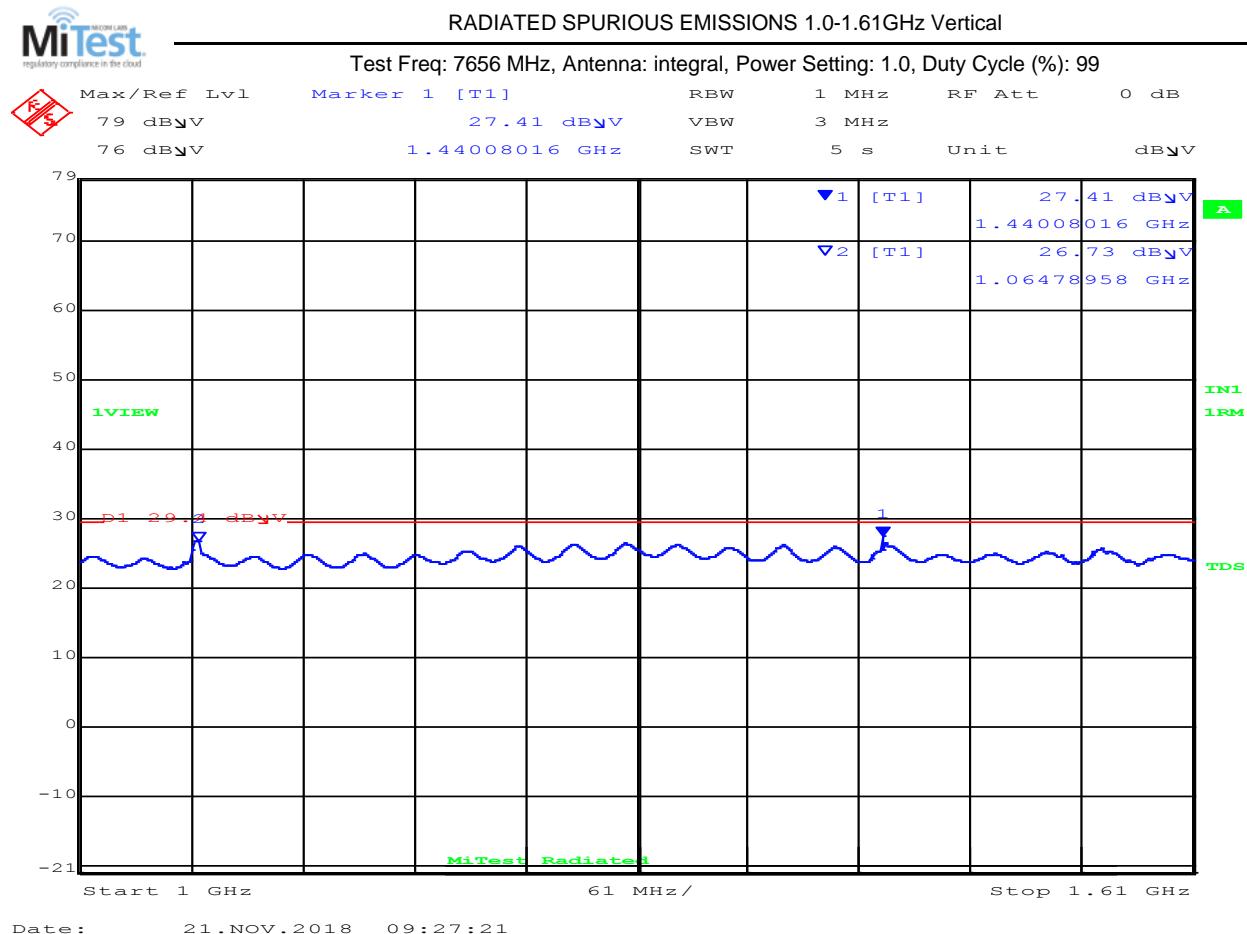


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Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



1000.00– 1610.00 MHz									
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail
1	1440.1	26.4	Average	Vertical	150	0	29.4	-3.0	Pass
2	1064.8	24.5	Average	Vertical	150	0	29.4	-4.9	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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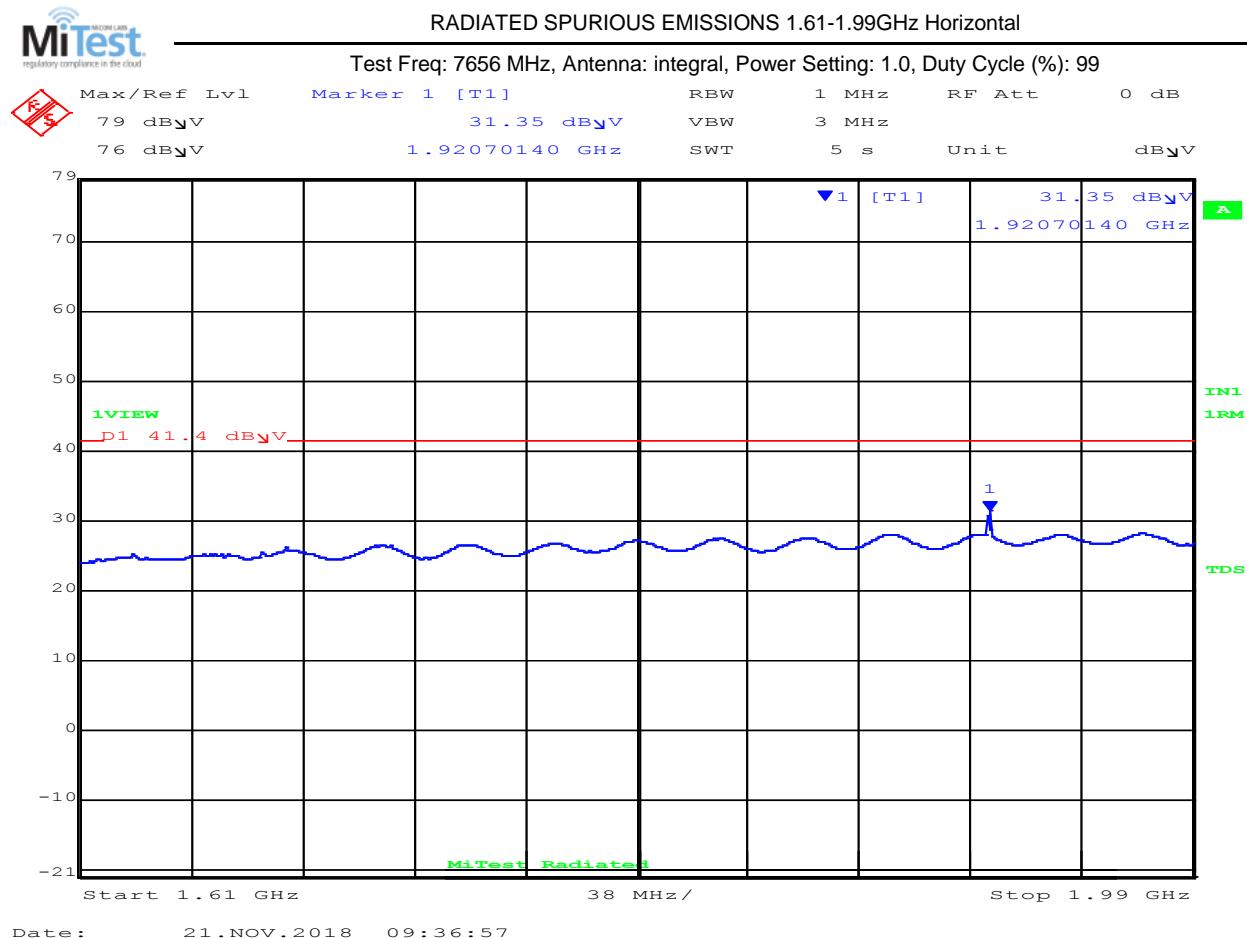


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Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



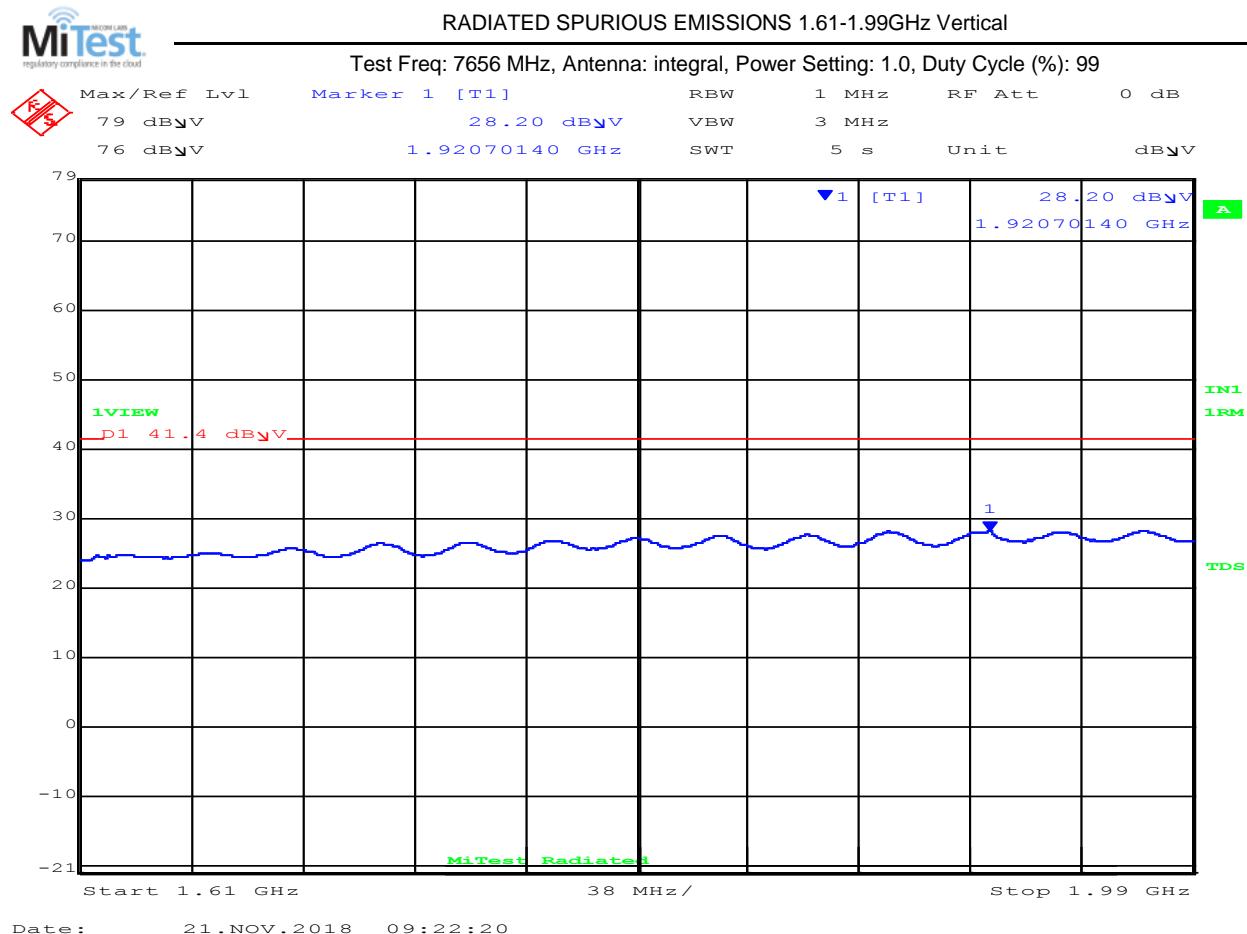
1610.00 – 1990.00 MHz										
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail	
No Signals found within 6 dB of limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



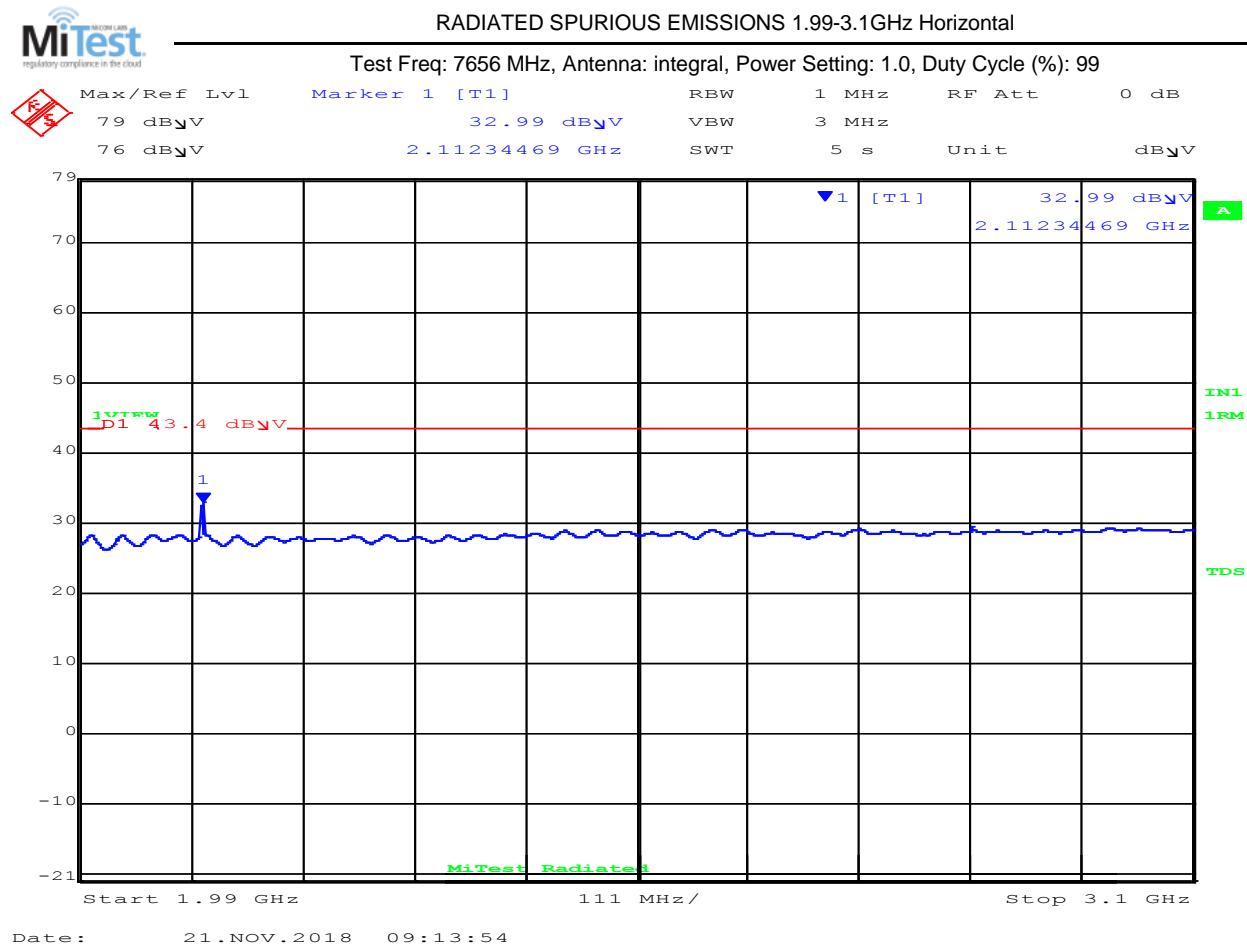
1610.00 – 1990.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals found within 6 dB of limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



1990.00 – 3100.00 GHz										
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
No Signals found within 6 dB of limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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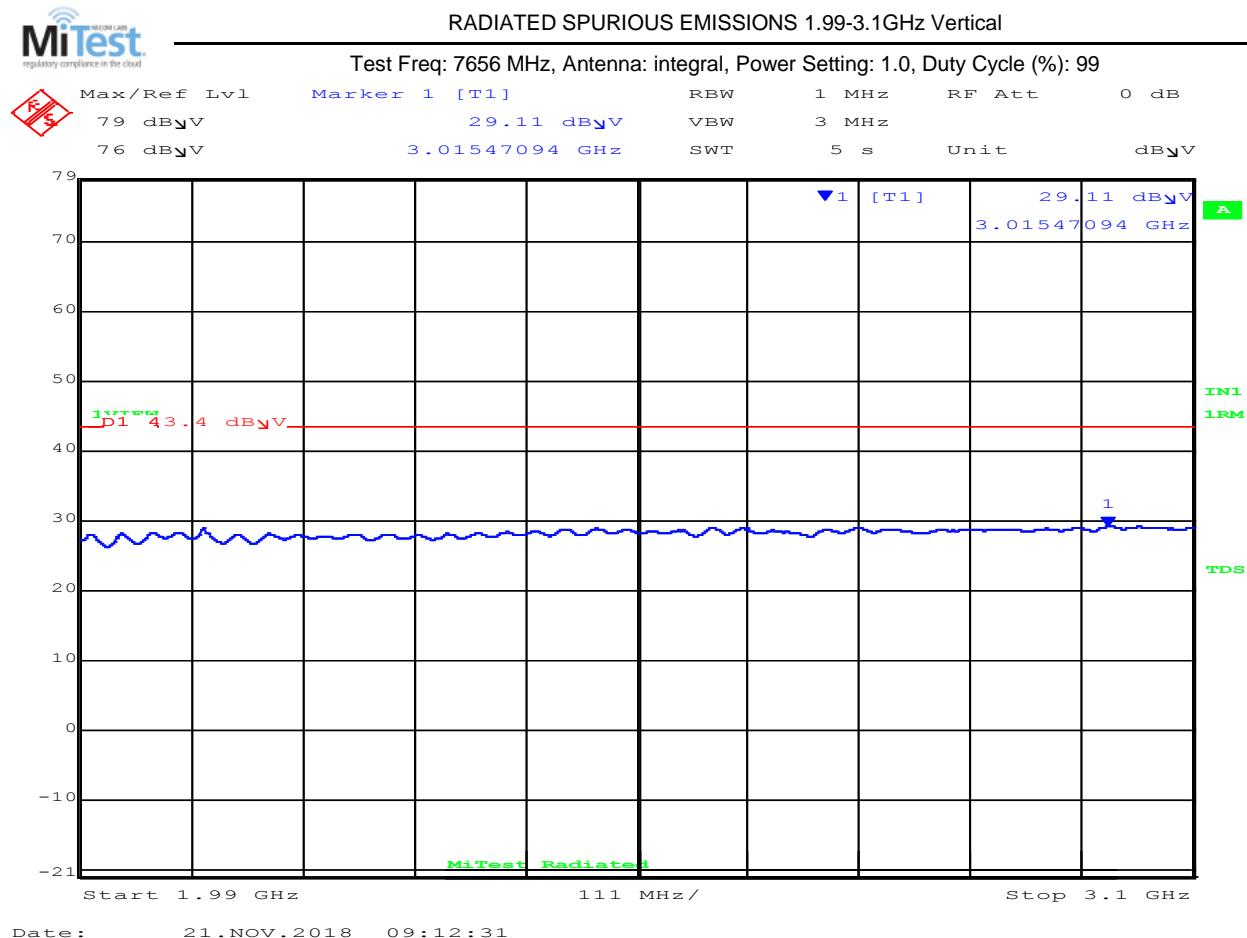


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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



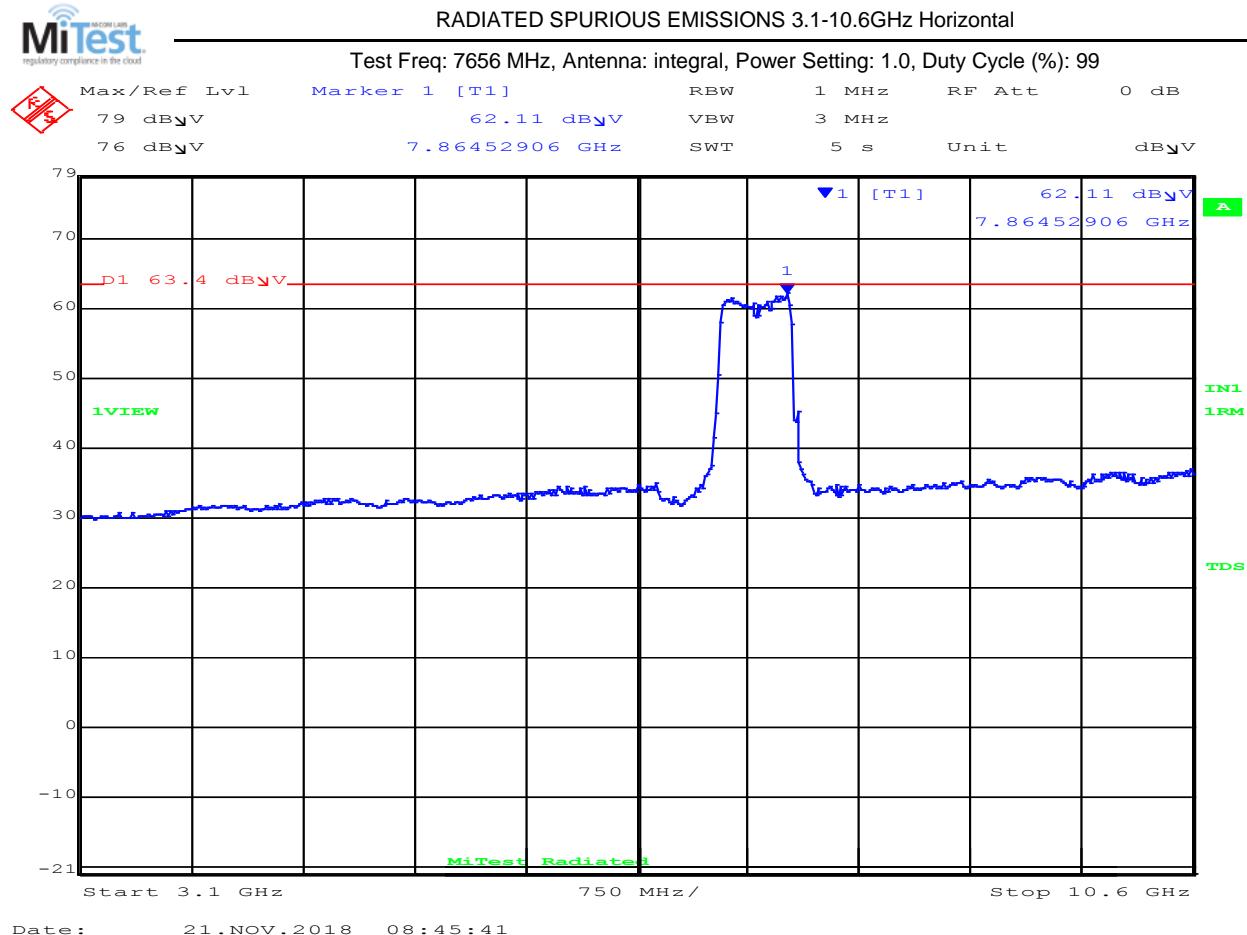
1990.00 – 3100.00 GHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals found within 6 dB of limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



3100.00 - 10600.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	7864.5	60.5	Average	Horizontal	150	0	63.4	-2.9	Pass

Test Notes:

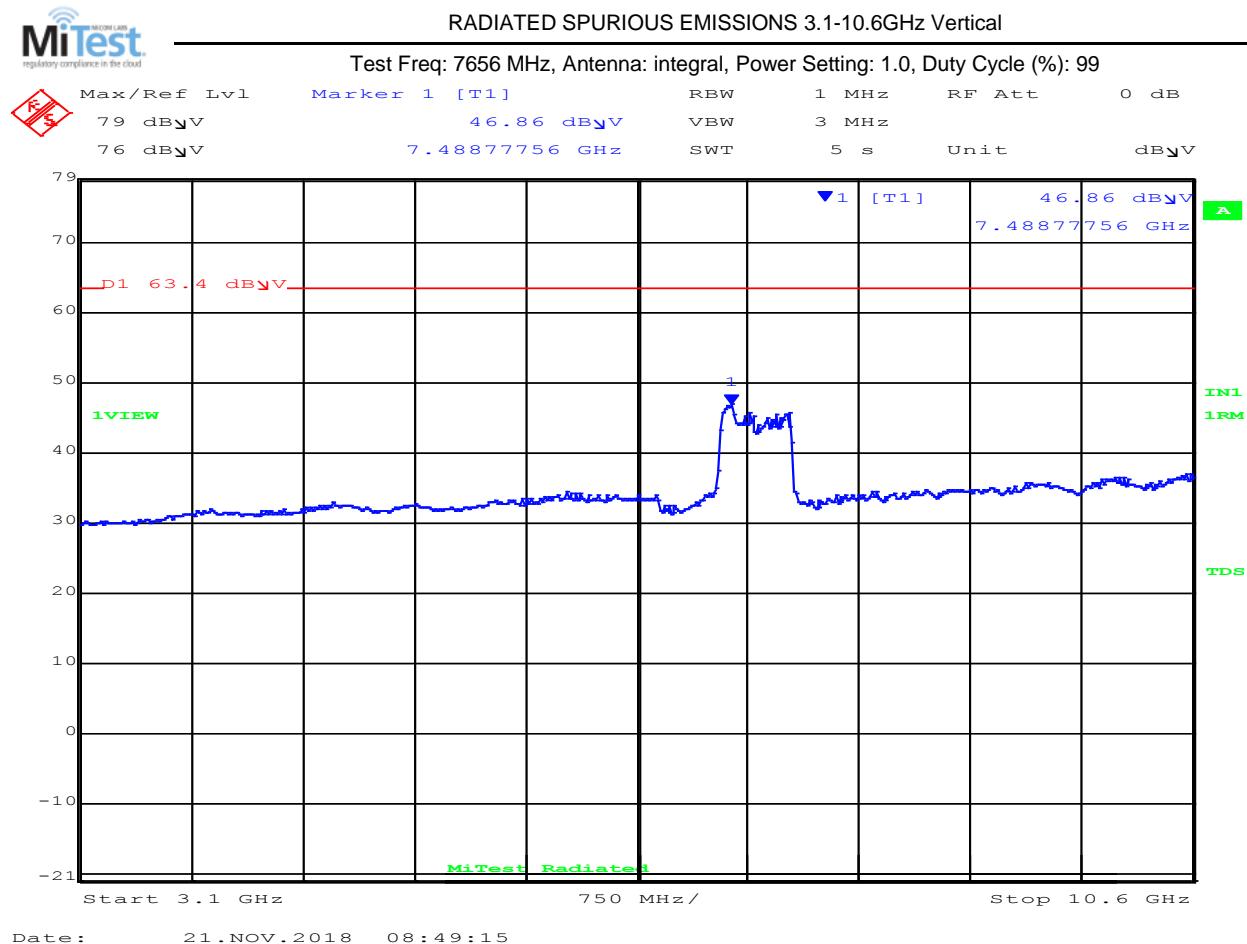
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



3100.00 - 10600.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals found within 6 dB of limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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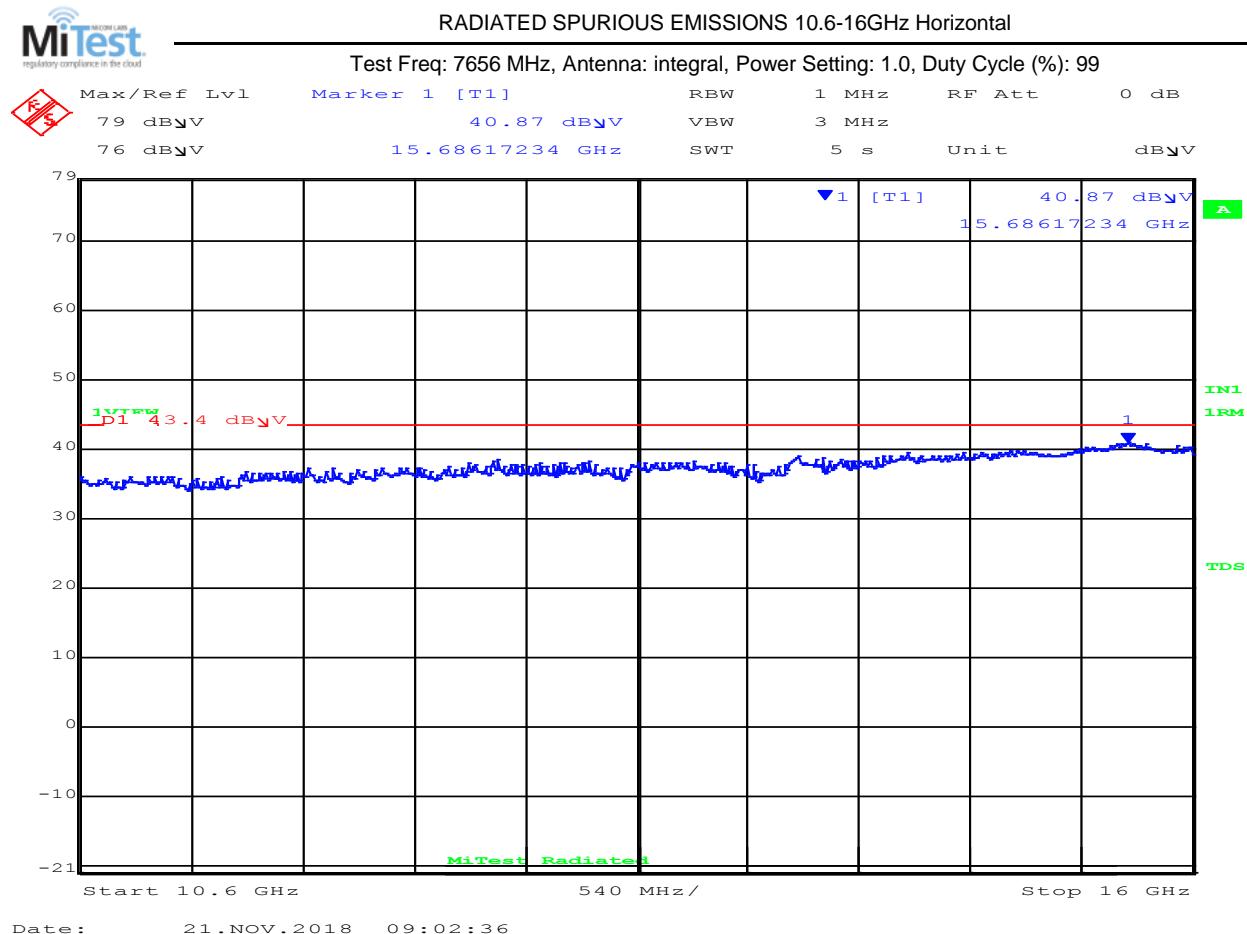


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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



10600.00 – 16000.00 GHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	15686.2	39.7	Average	Horizontal	150	0	43.4	-3.70	Pass

Test Notes:

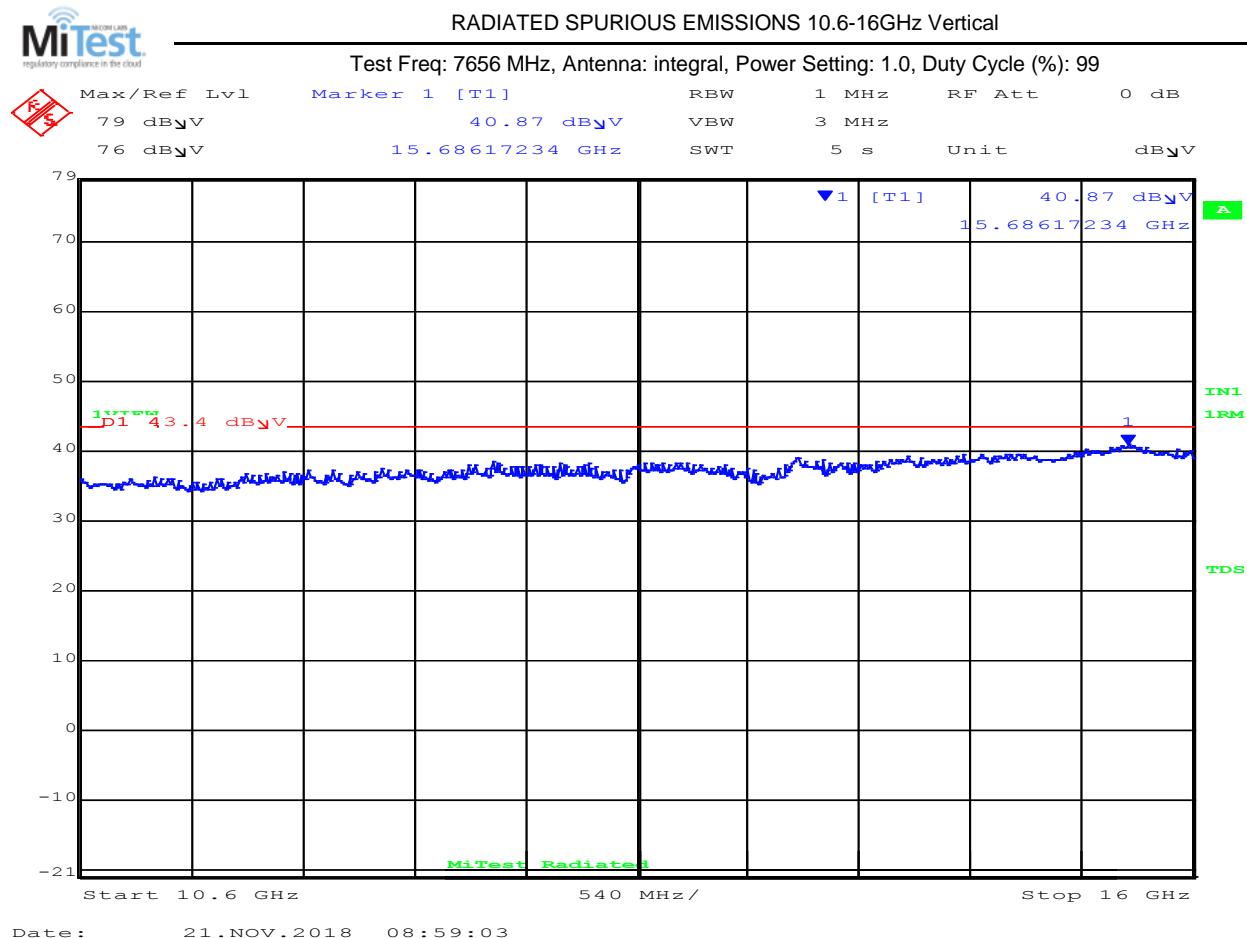
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



10600.00 – 16000.00 GHz

Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail
1	15686.2	39.6	Average	Vertical	150	0	43.4	-3.8	Pass

Test Notes:

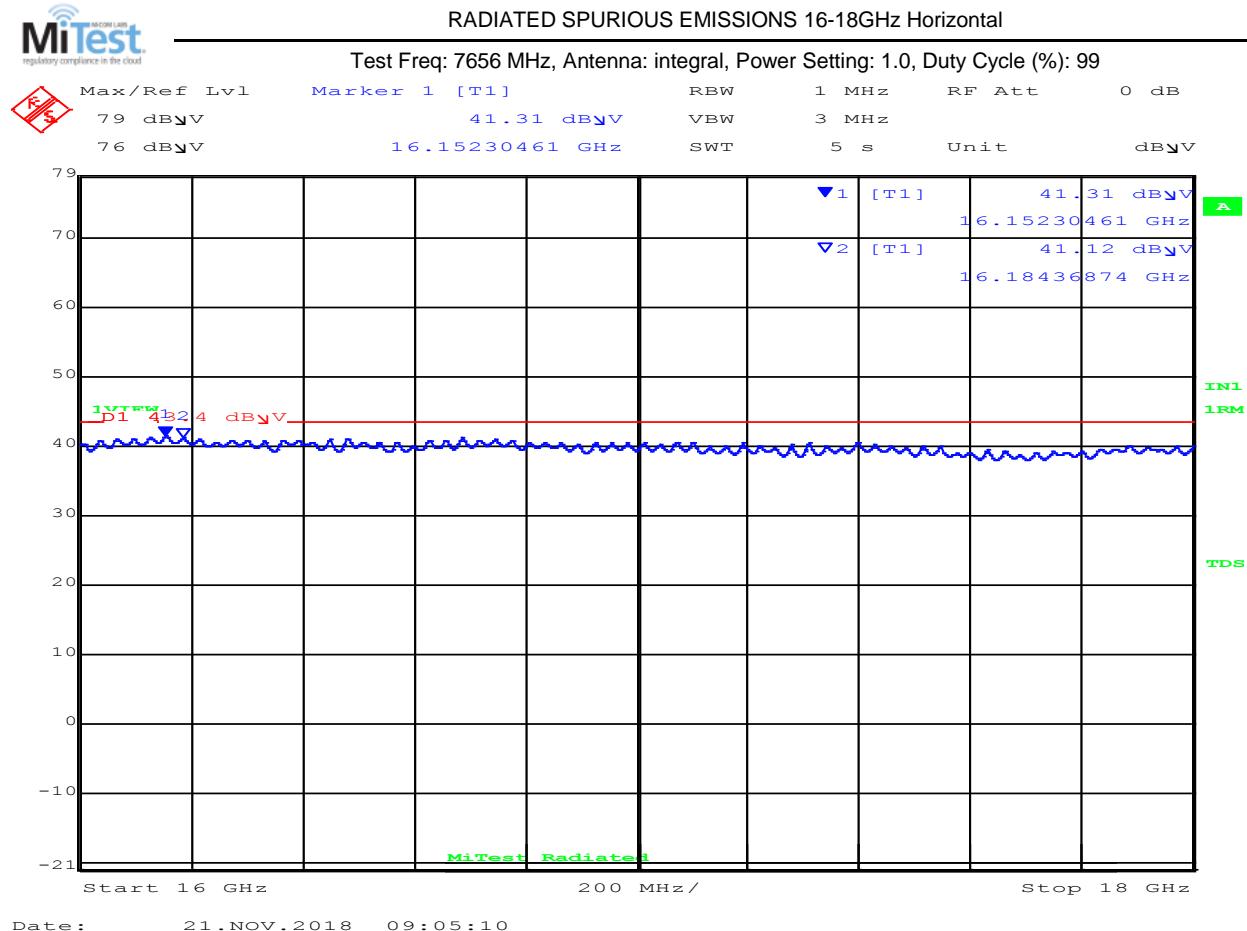
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	16152.3	40.3	Average	Horizontal	150	0	43.4	-3.1	Pass
2	16184.4	40.2	Average	Horizontal	150	0	43.4	-3.2	Pass

Test Notes:

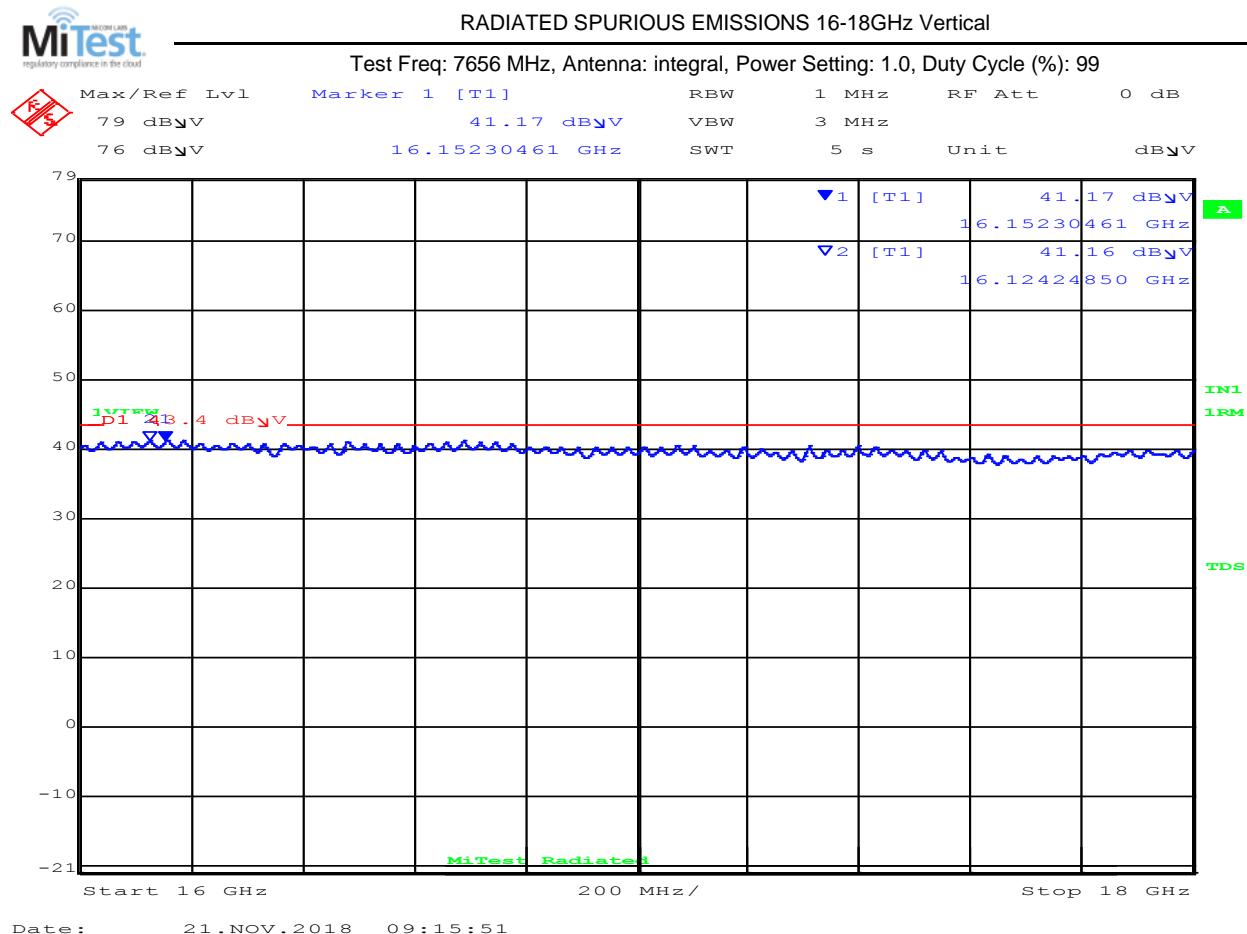
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	16152.3	40.2	Average	Vertical	150	0	43.4	-3.2	Pass
2	16124.2	40.1	Average	Vertical	150	0	43.4	-3.3	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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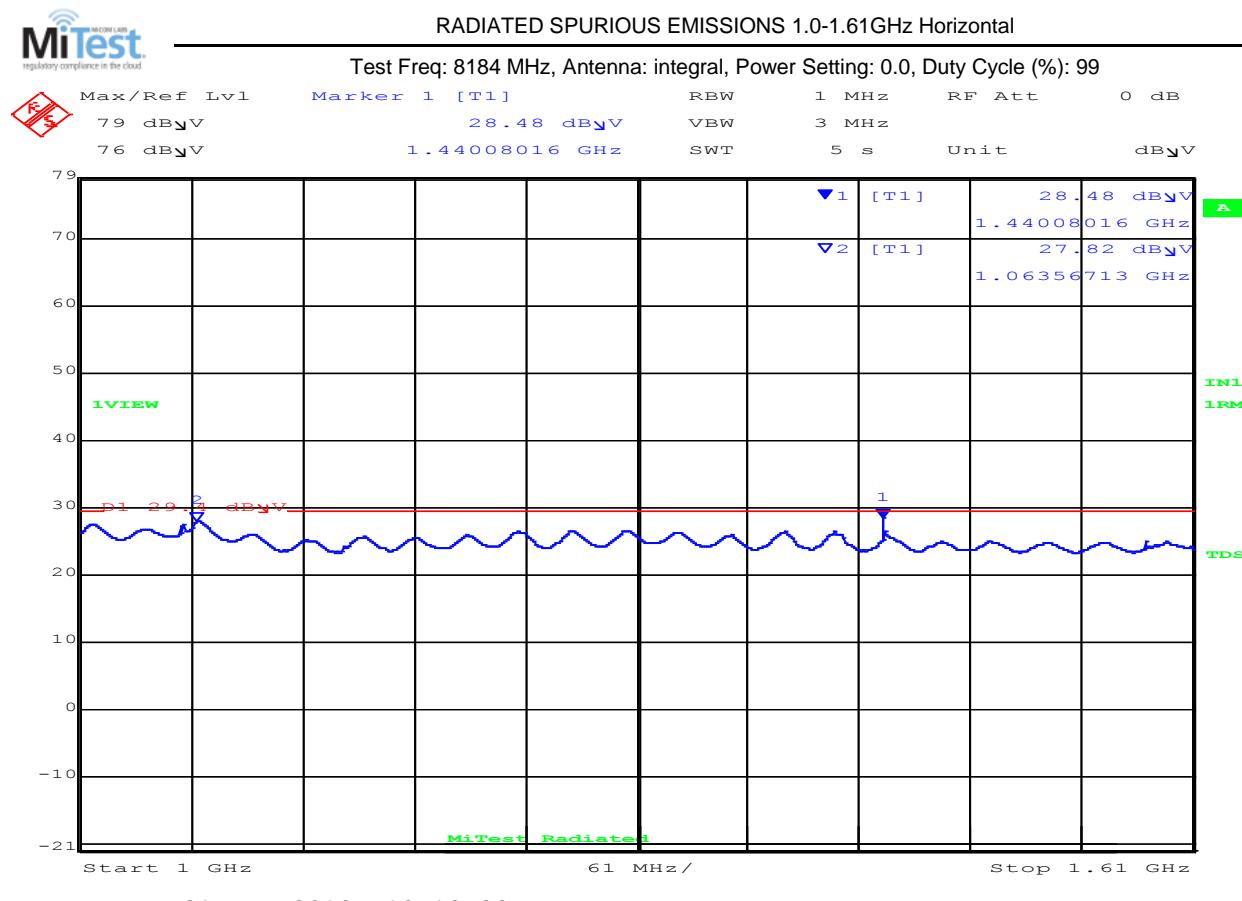
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8184 MHz

Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1000.00– 1610.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1440.1	24.2	Average	Horizontal	150	0	29.4	-5.2	Pass
2	1063.6	25.4	Average	Horizontal	150	0	29.4	-4.0	Pass

Test Notes:

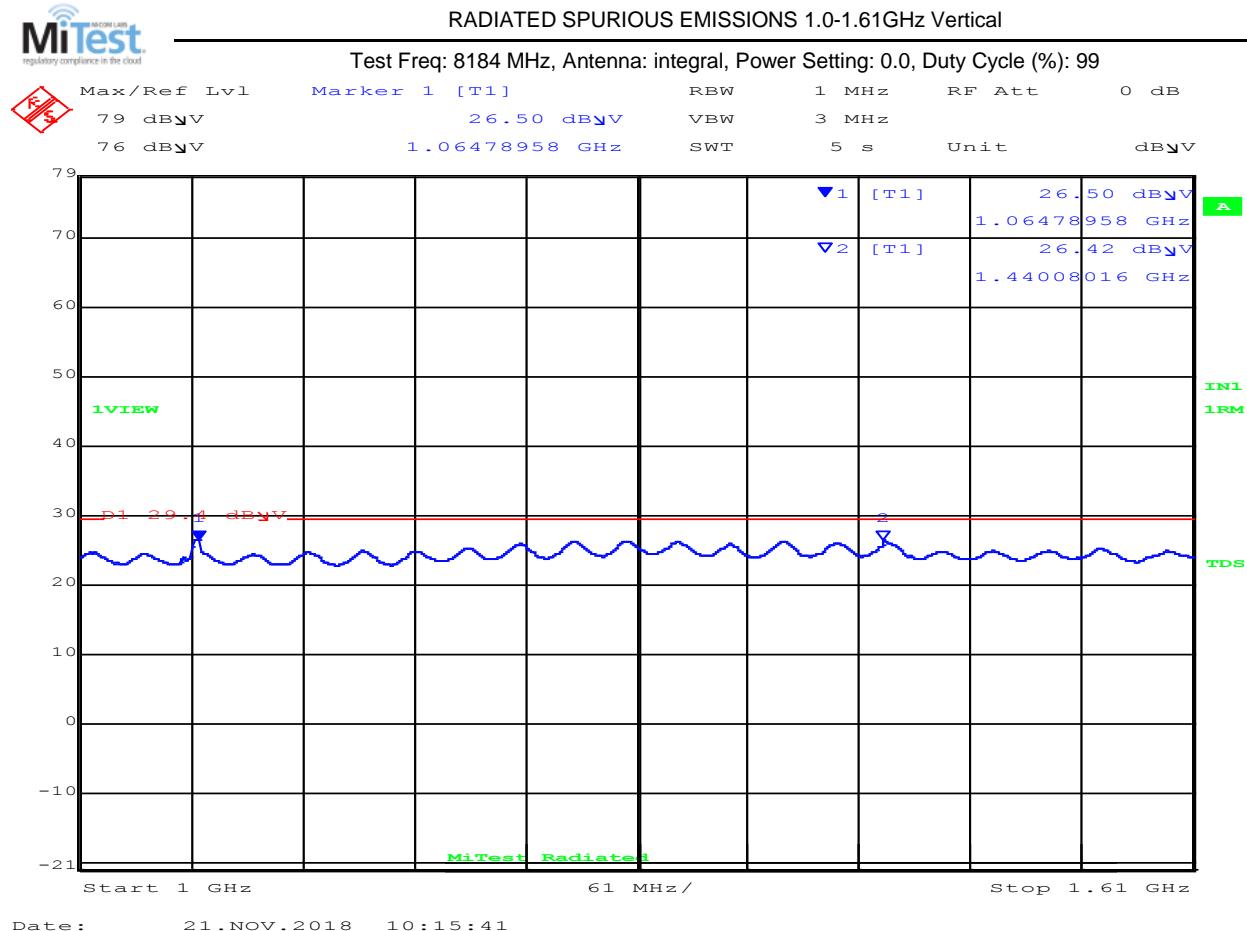
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1000.00– 1610.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1064.8	24.3	Average	Vertical	150	0	29.4	-5.1	Pass
2	1440.1	25.3	Average	Vertical	150	0	29.4	-4.1	Pass

Test Notes:
 Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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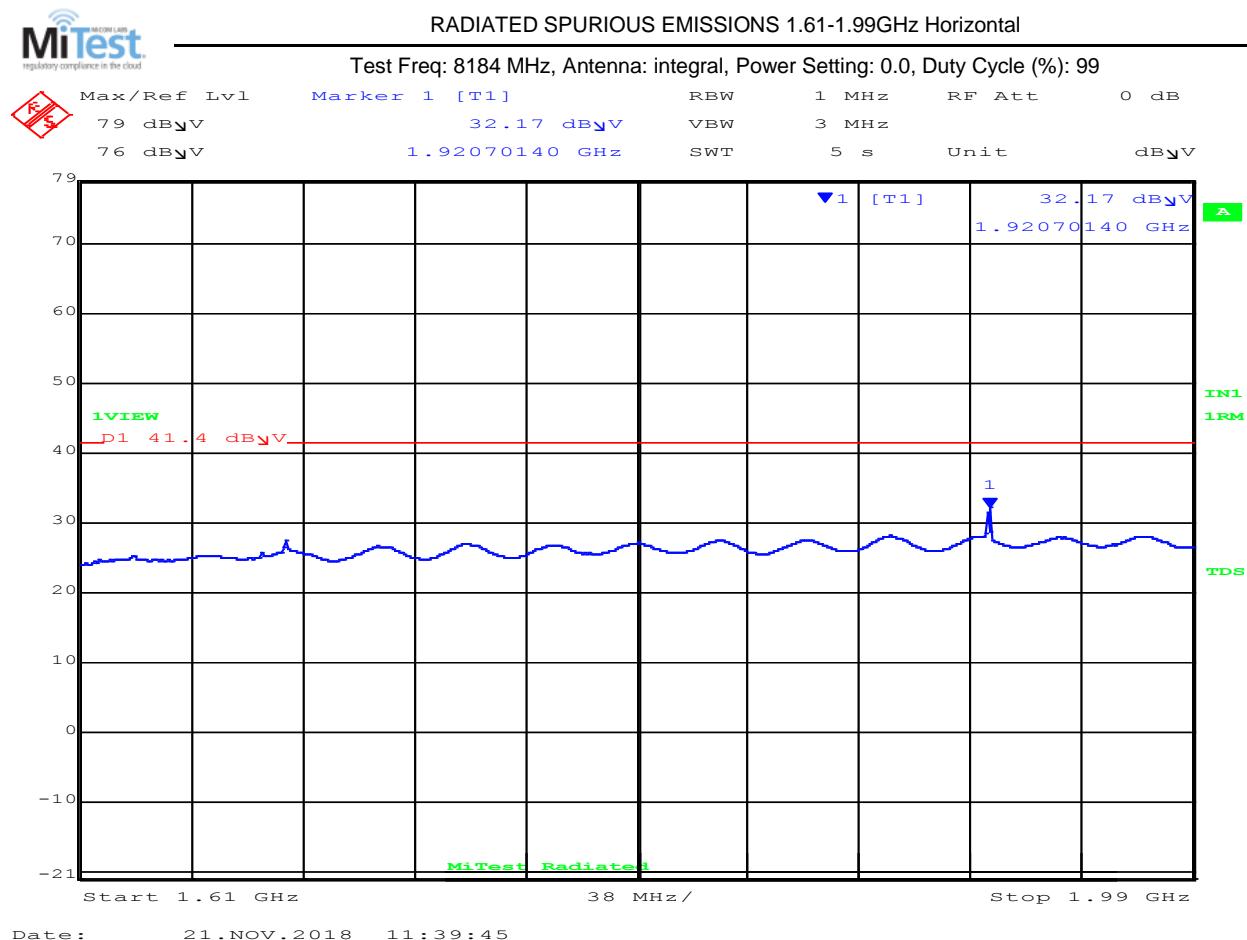


Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
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Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



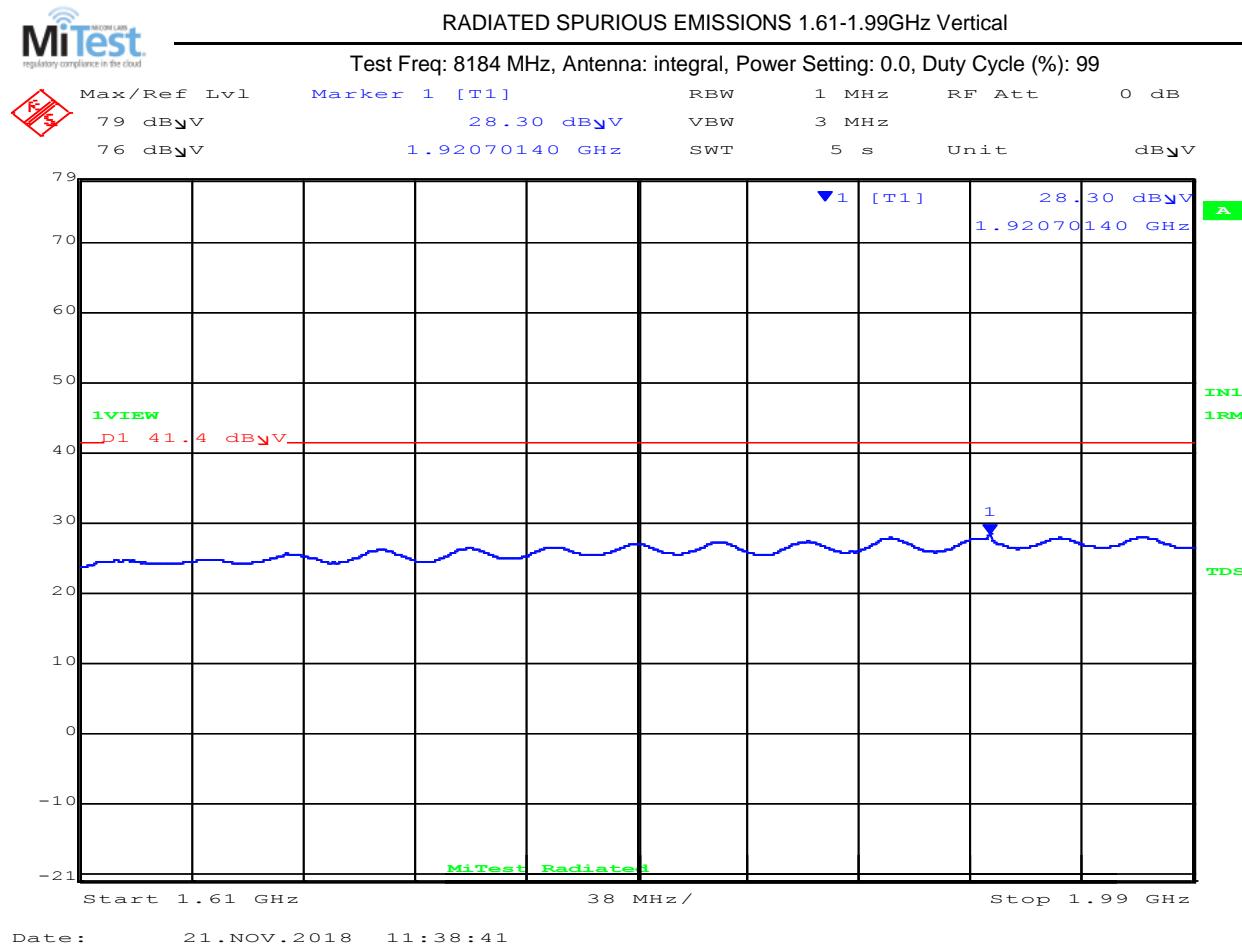
1610.00 – 1990.00 MHz										
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail	
No Signals found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1610.00 – 1990.00 MHz										
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
No Signals found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

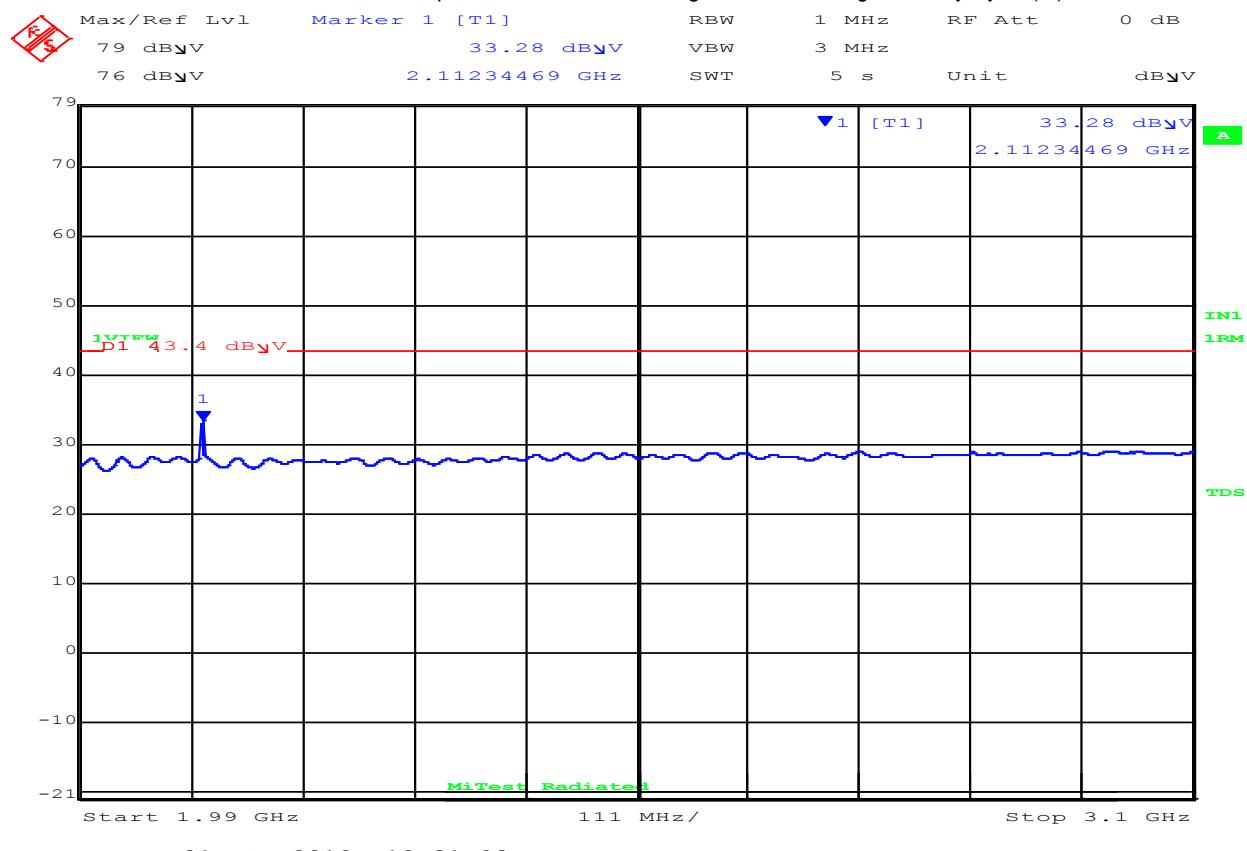
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 21.NOV.2018 10:31:03

1990.00 – 3100.00 GHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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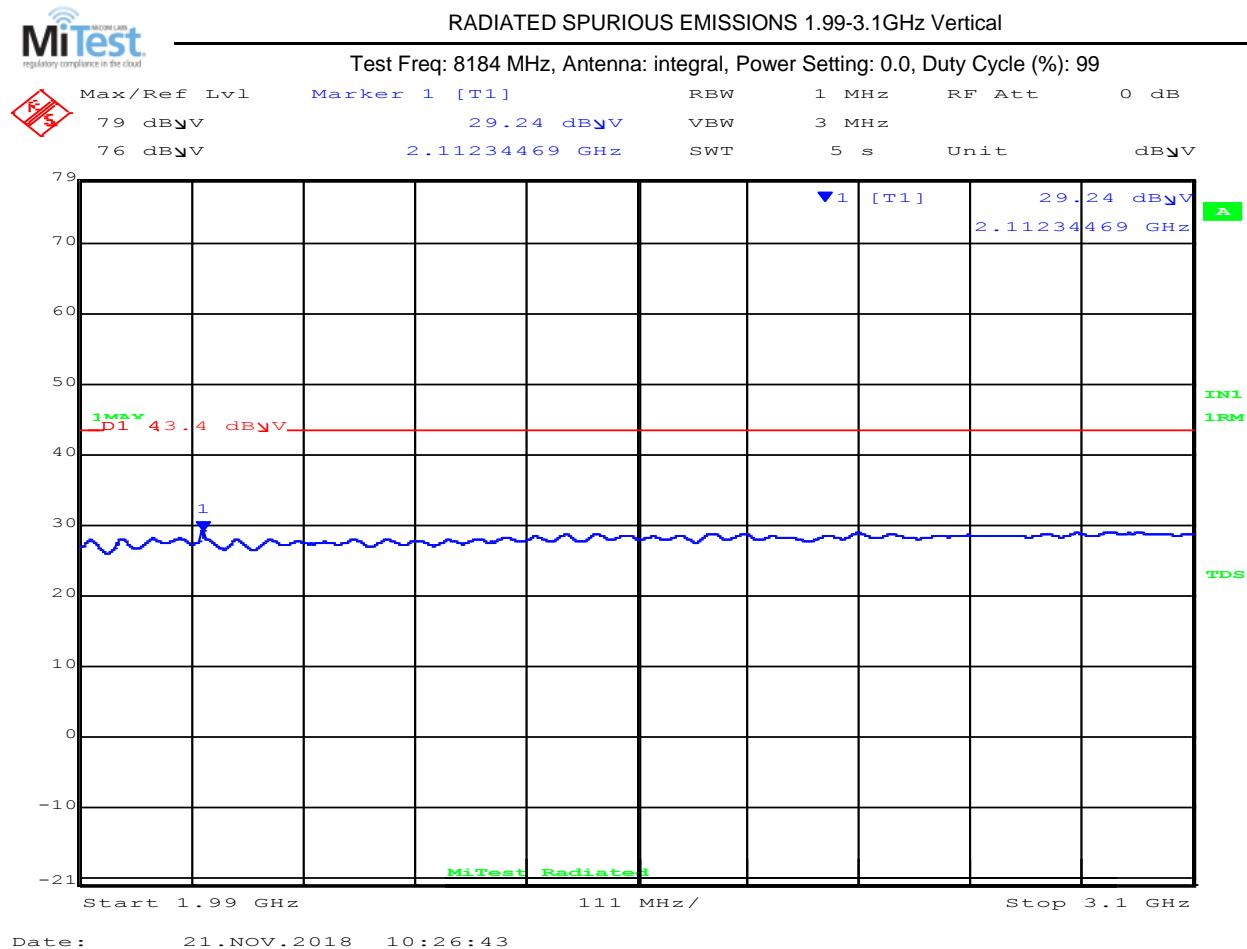


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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1990.00 – 3100.00 GHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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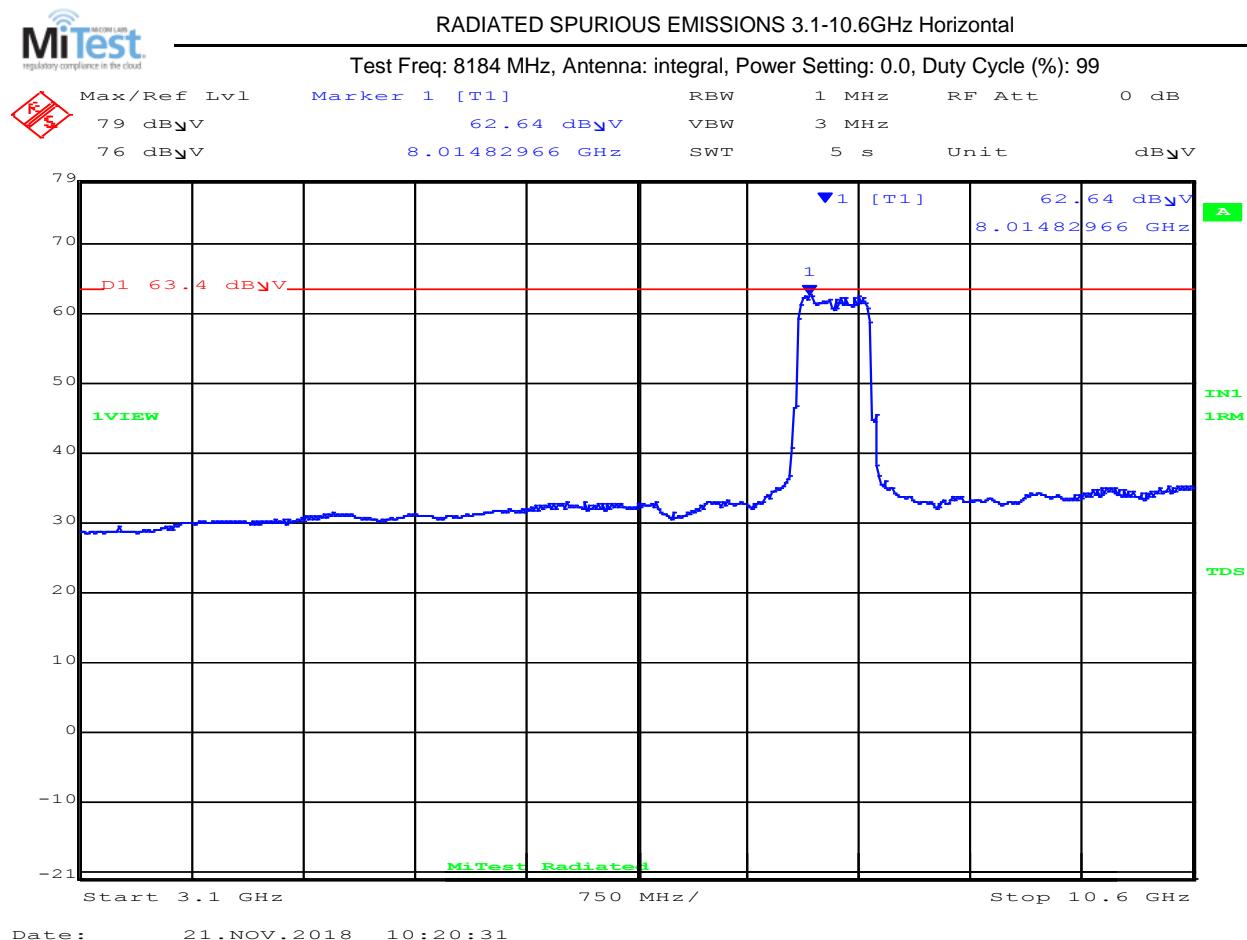


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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



Date: 21.NOV.2018 10:20:31

3100.00 - 10600.00 MHz

Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
1	8014.8	62.2	Average	Horizontal	150	0	63.4	-1.2	Pass

Test Notes:

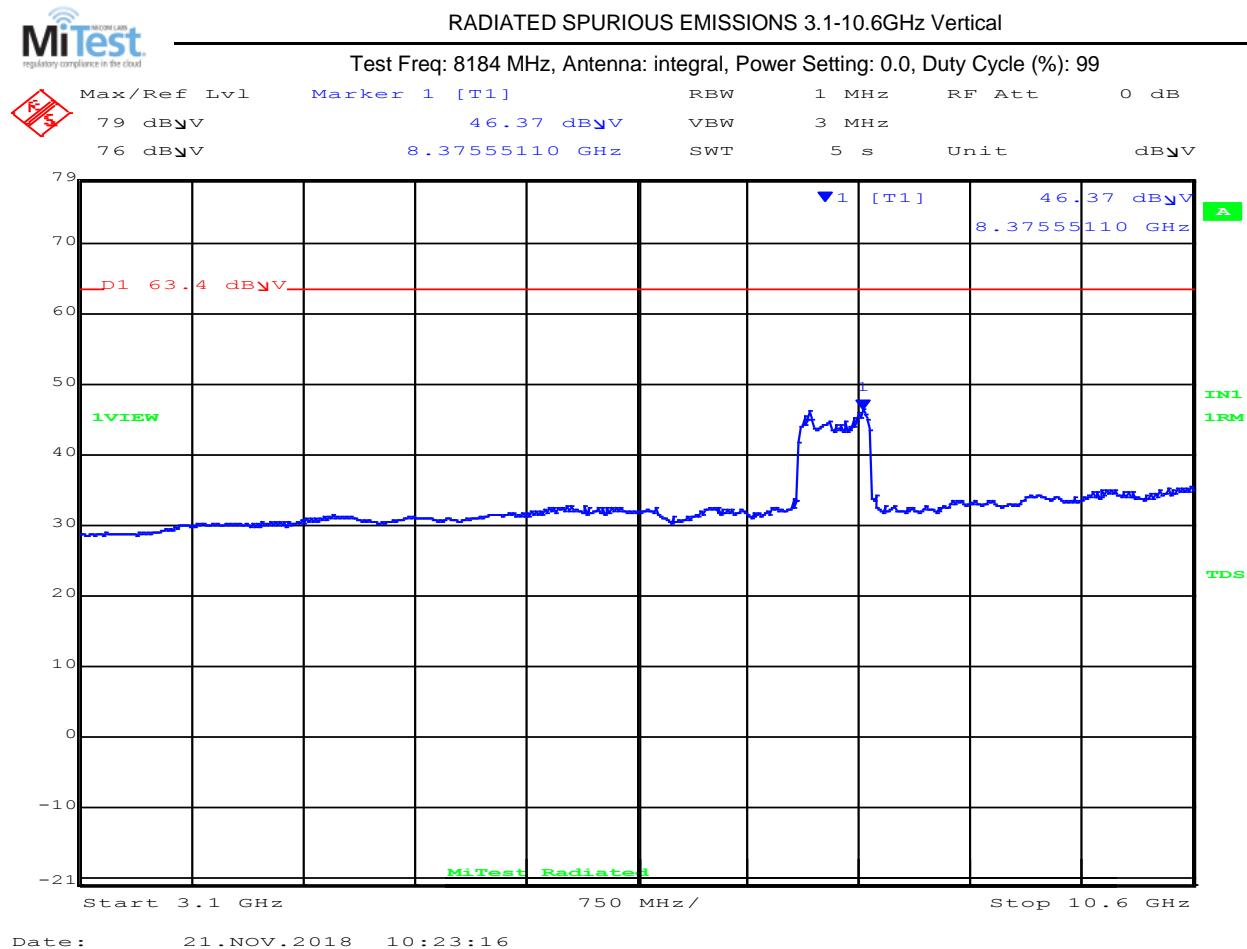
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



3100.00 - 10600.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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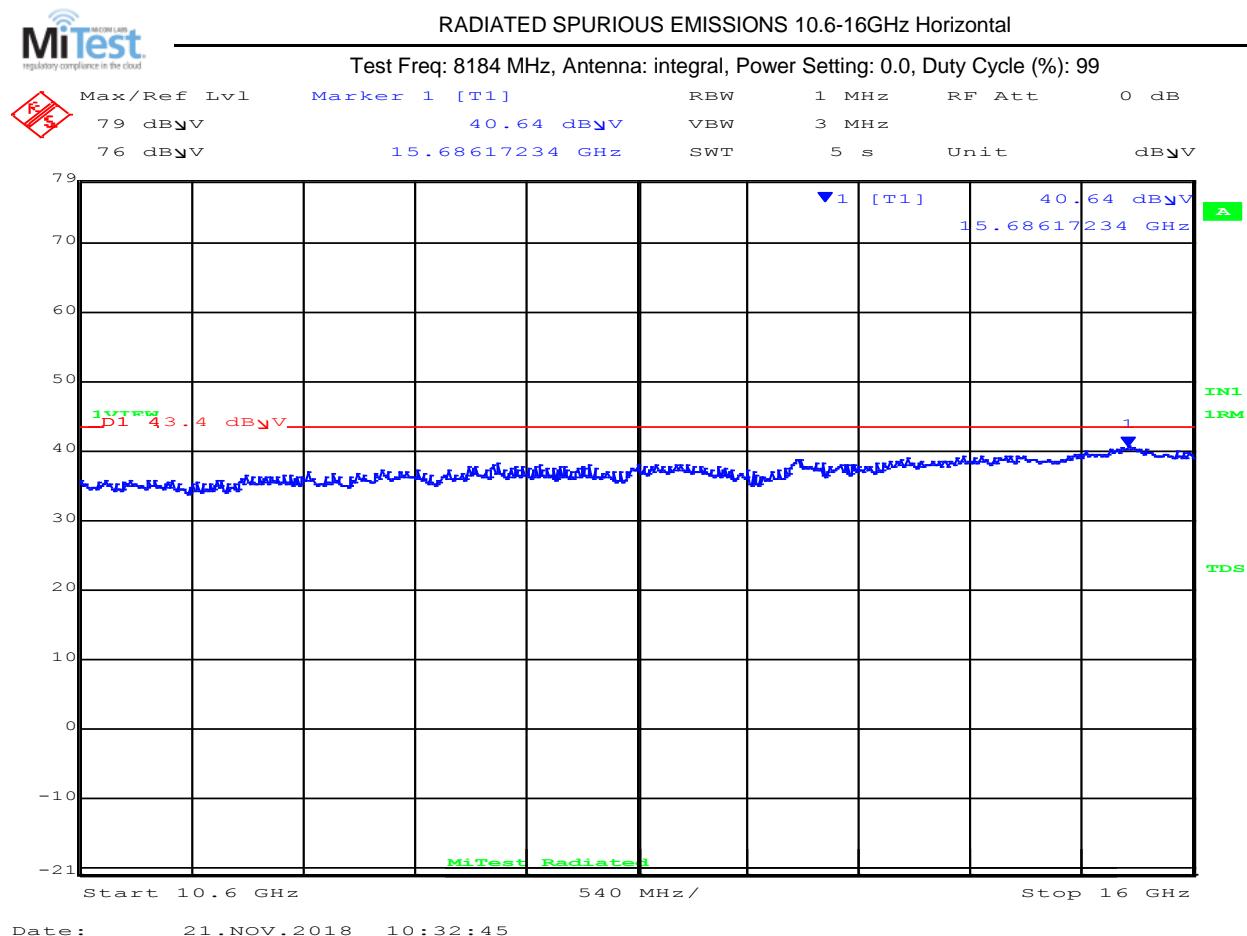


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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



Date: 21.NOV.2018 10:32:45

10600.00 – 16000.00 GHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	15686.2	39.5	Average	Horizontal	150	0	43.4	-3.9	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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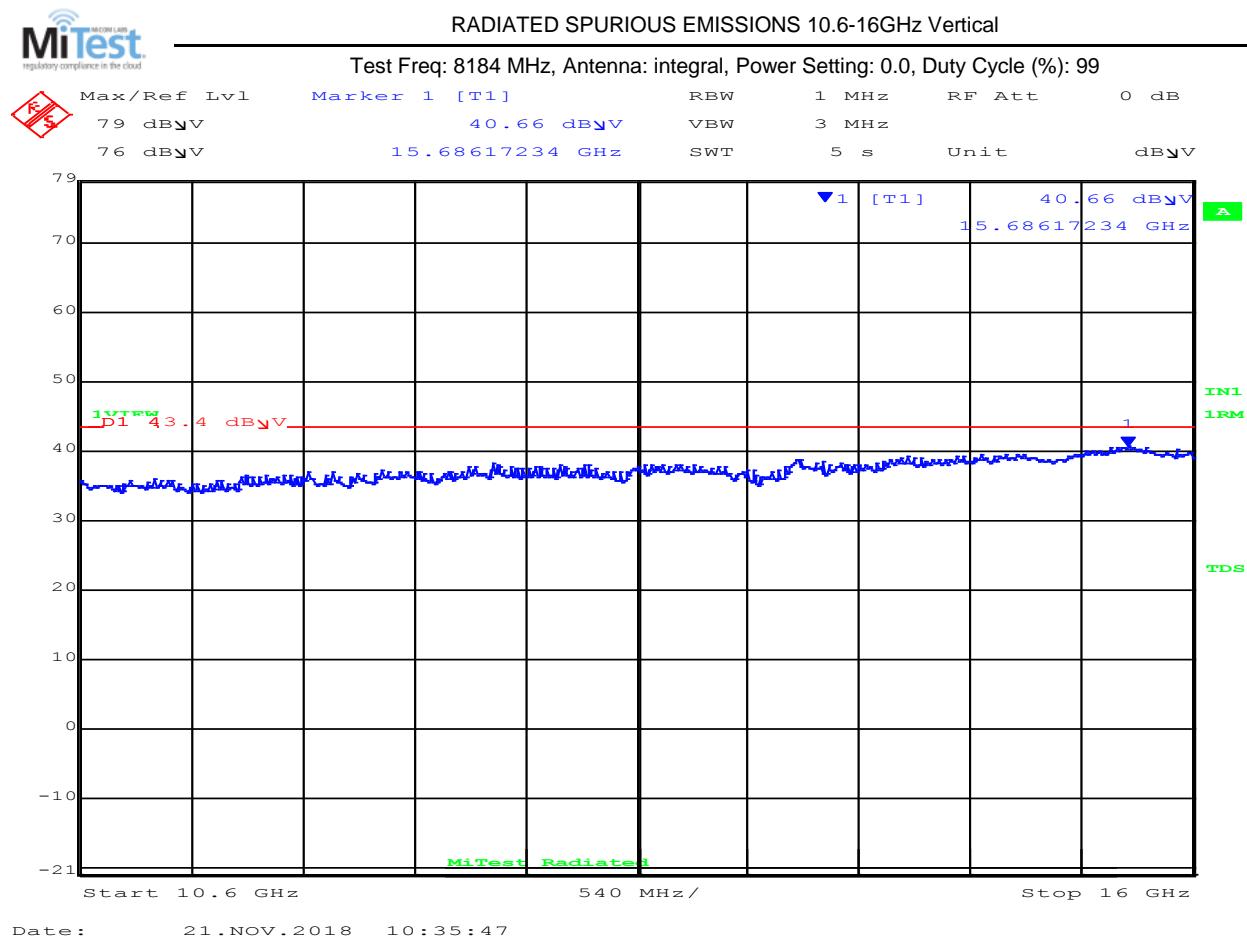


Title: Alereon AL5955, AL5930, AL5934
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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



Date: 21.NOV.2018 10:35:47

10600.00 – 16000.00 GHz

Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
1	15686.2	39.6	Average	Vertical	150	0	43.4	-3.8	Pass

Test Notes:

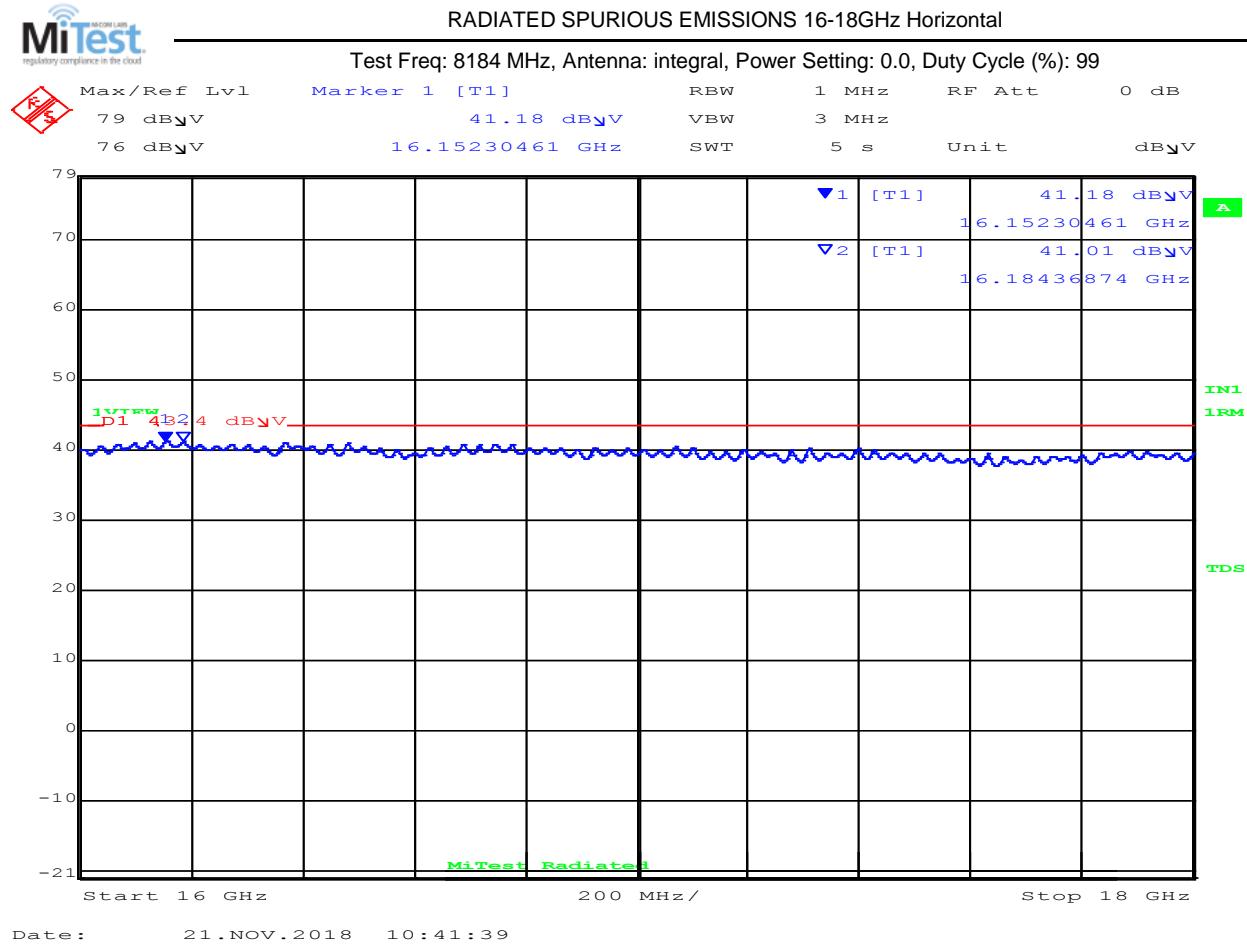
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	16152.3	40.3	Average	Horizontal	150	0	43.4	-3.1	Pass
2	16184.4	40.1	Average	Horizontal	150	0	43.4	-3.3	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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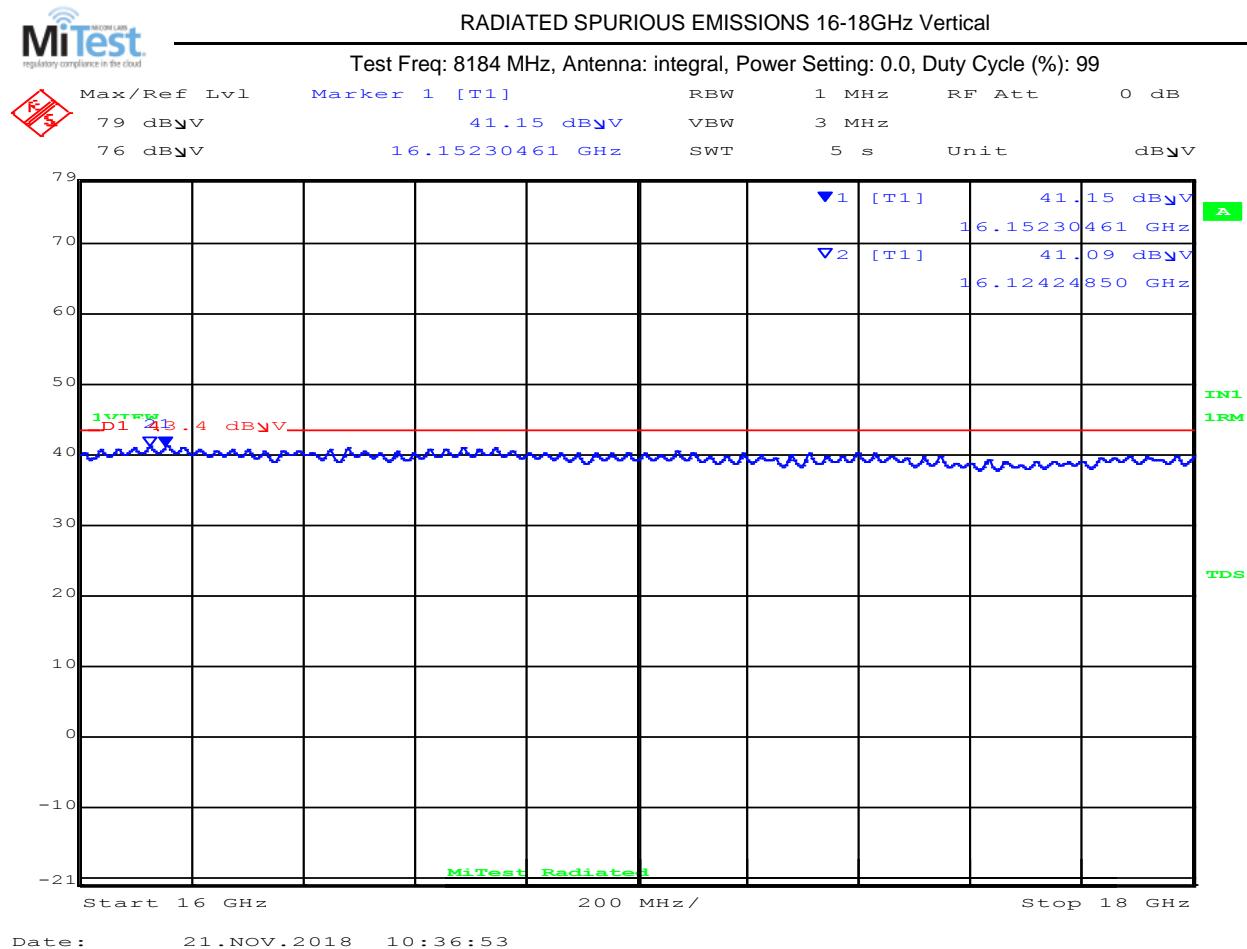


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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	16152.3	40.1	Average	Vertical	150	0	43.4	-3.3	Pass
2	16124.2	40.1	Average	Vertical	150	0	43.4	-3.3	Pass

Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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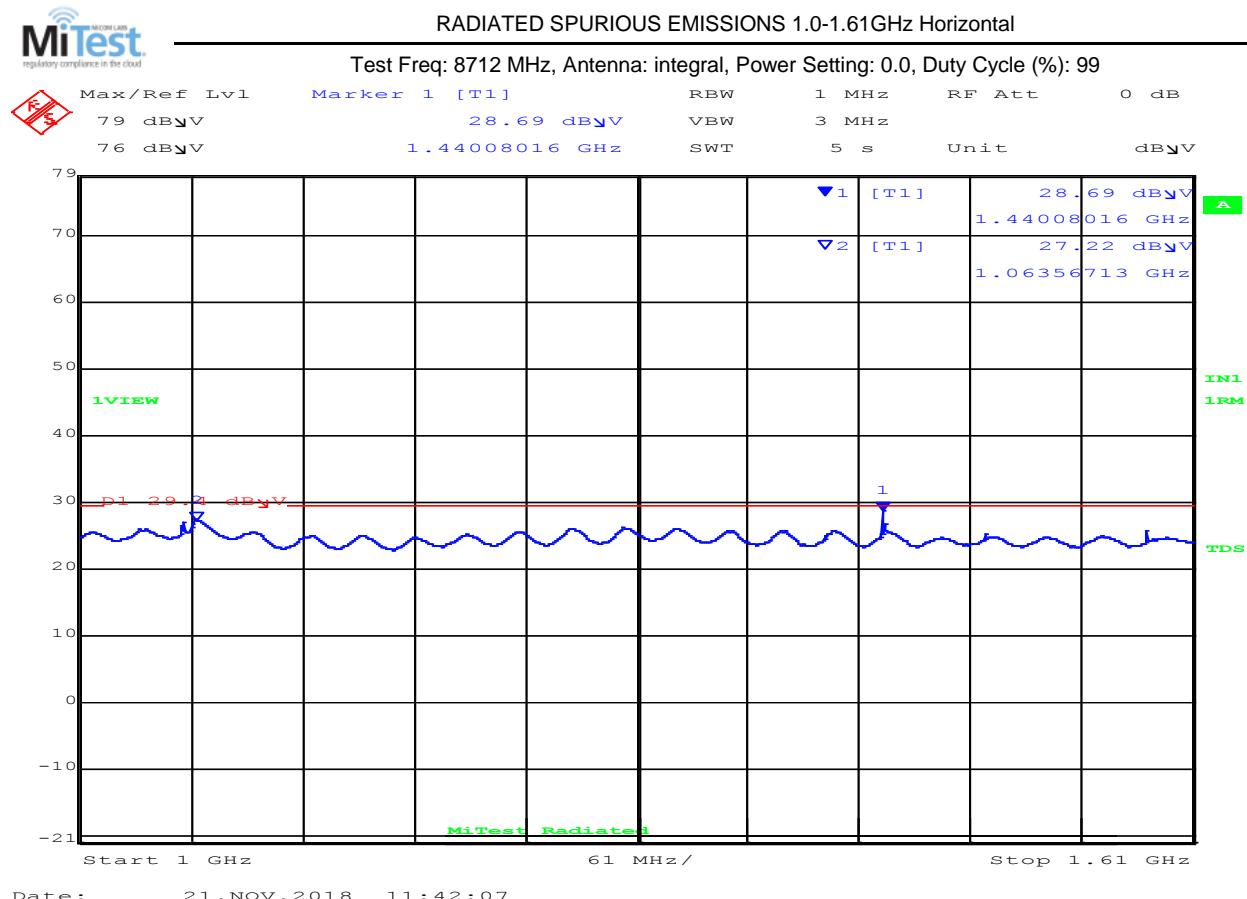
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8712 MHz

Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1000.00– 1610.00 MHz									
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	1440.1	28.8	Average	Horizontal	150	0	29.4	-0.6	Pass
2	1063.6	25.6	Average	Horizontal	150	0	29.4	-3.8	Pass

Test Notes:

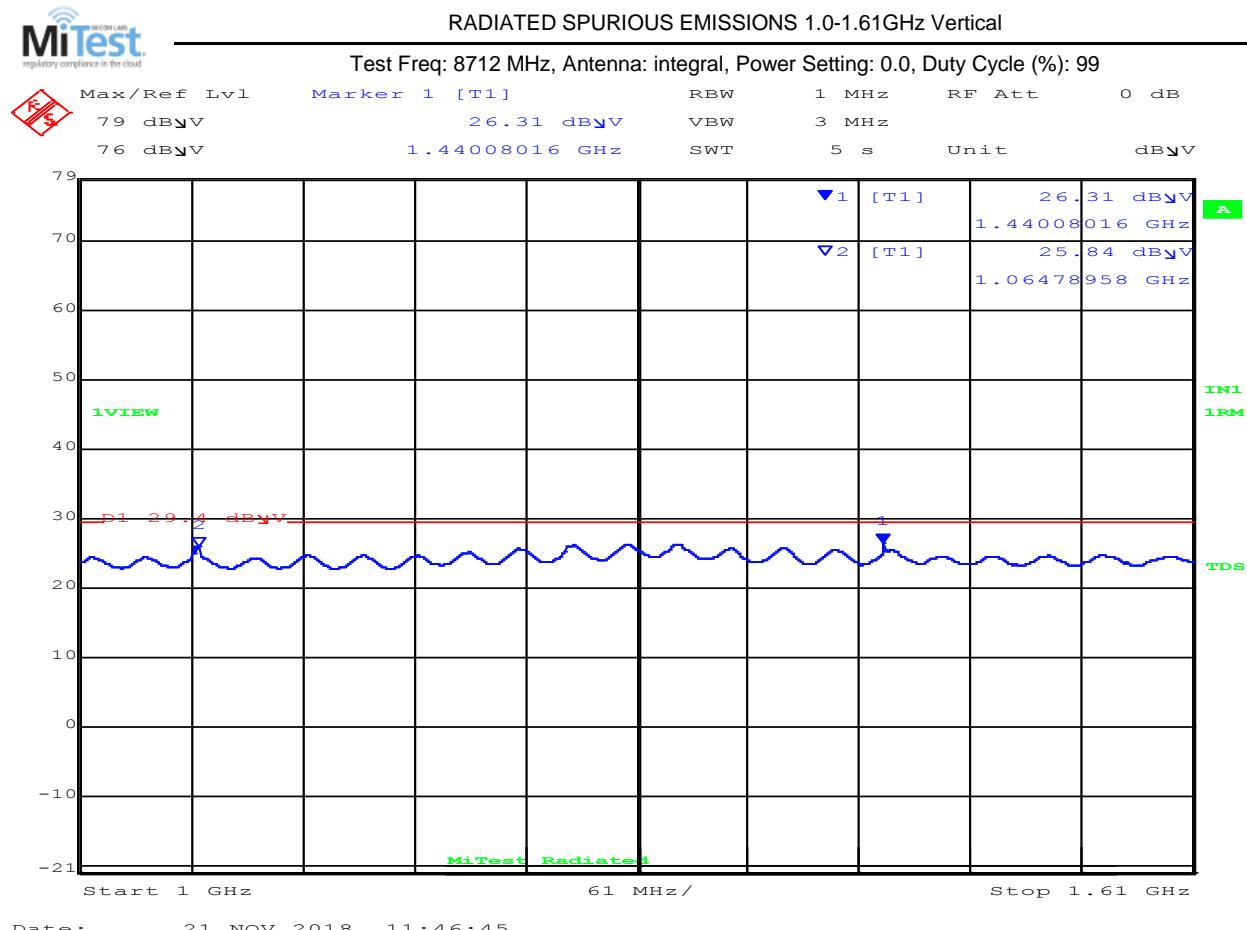
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



Date: 21.NOV.2018 11:46:45

1000.00– 1610.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1440.1	25.2	Average	Vertical	150	0	29.4	-4.2	Pass
2	1064.8	23.9	Average	Vertical	150	0	29.4	-5.5	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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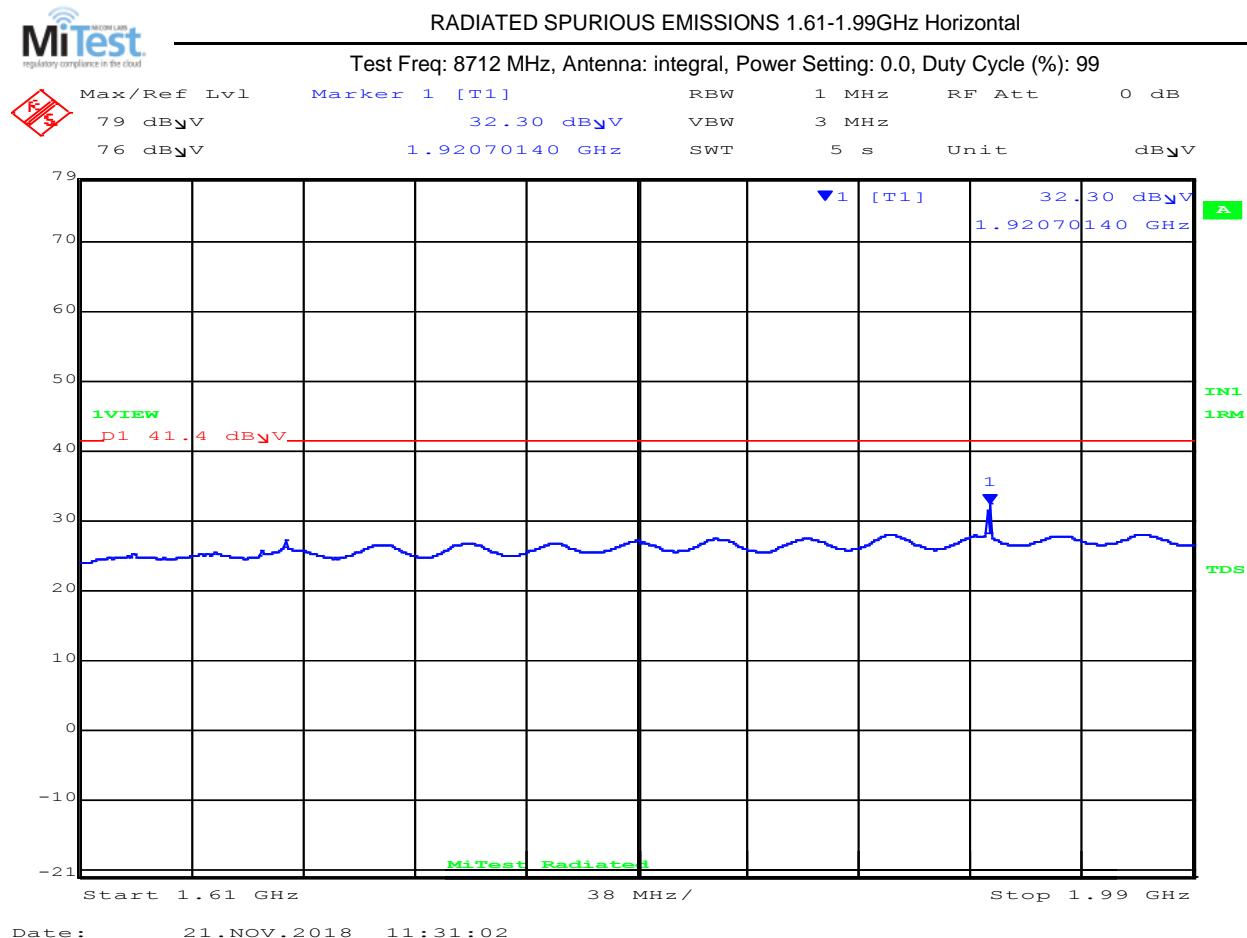


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Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



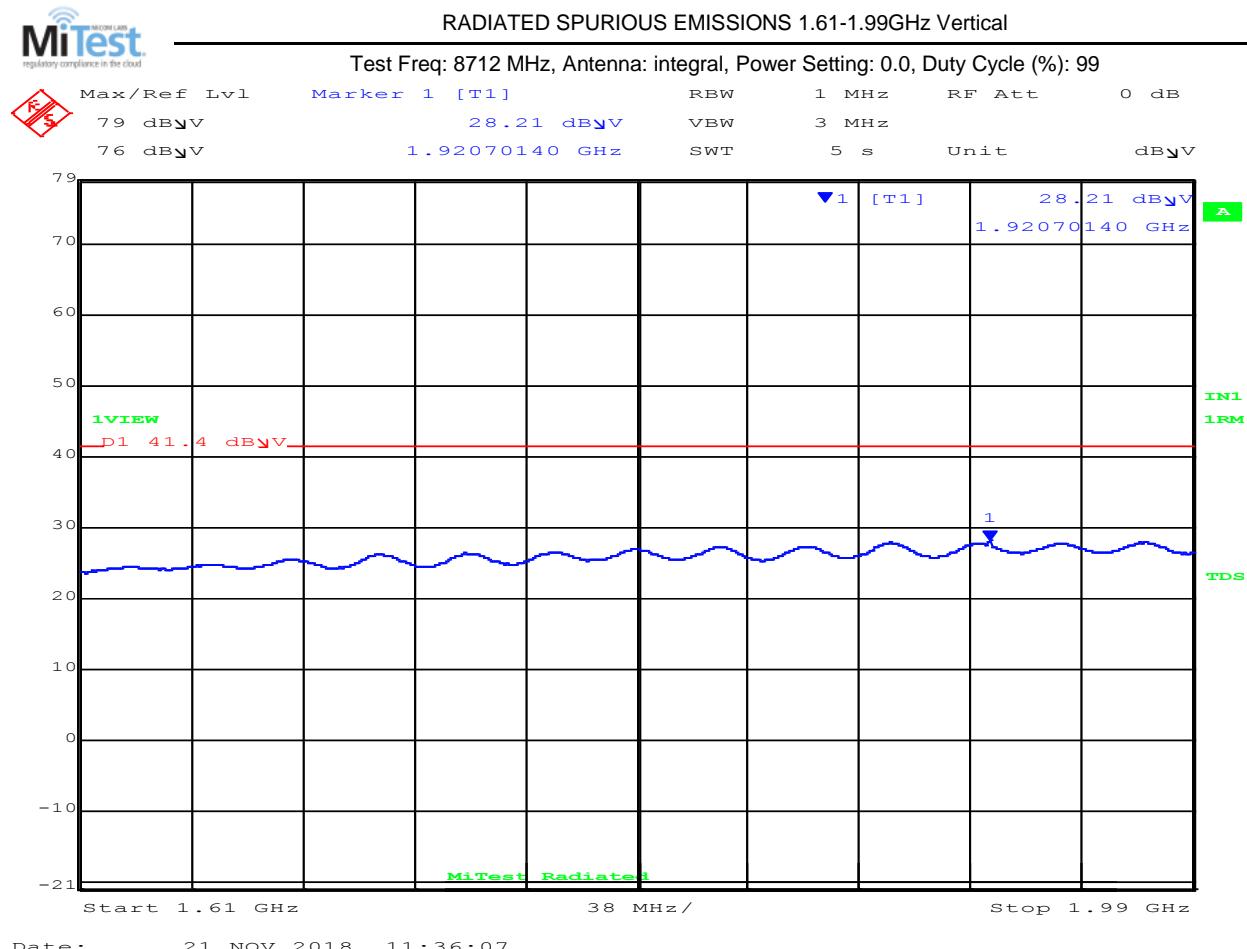
1610.00 – 1990.00 MHz										
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail	
No Signals found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1610.00 – 1990.00 MHz										
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
No Signals found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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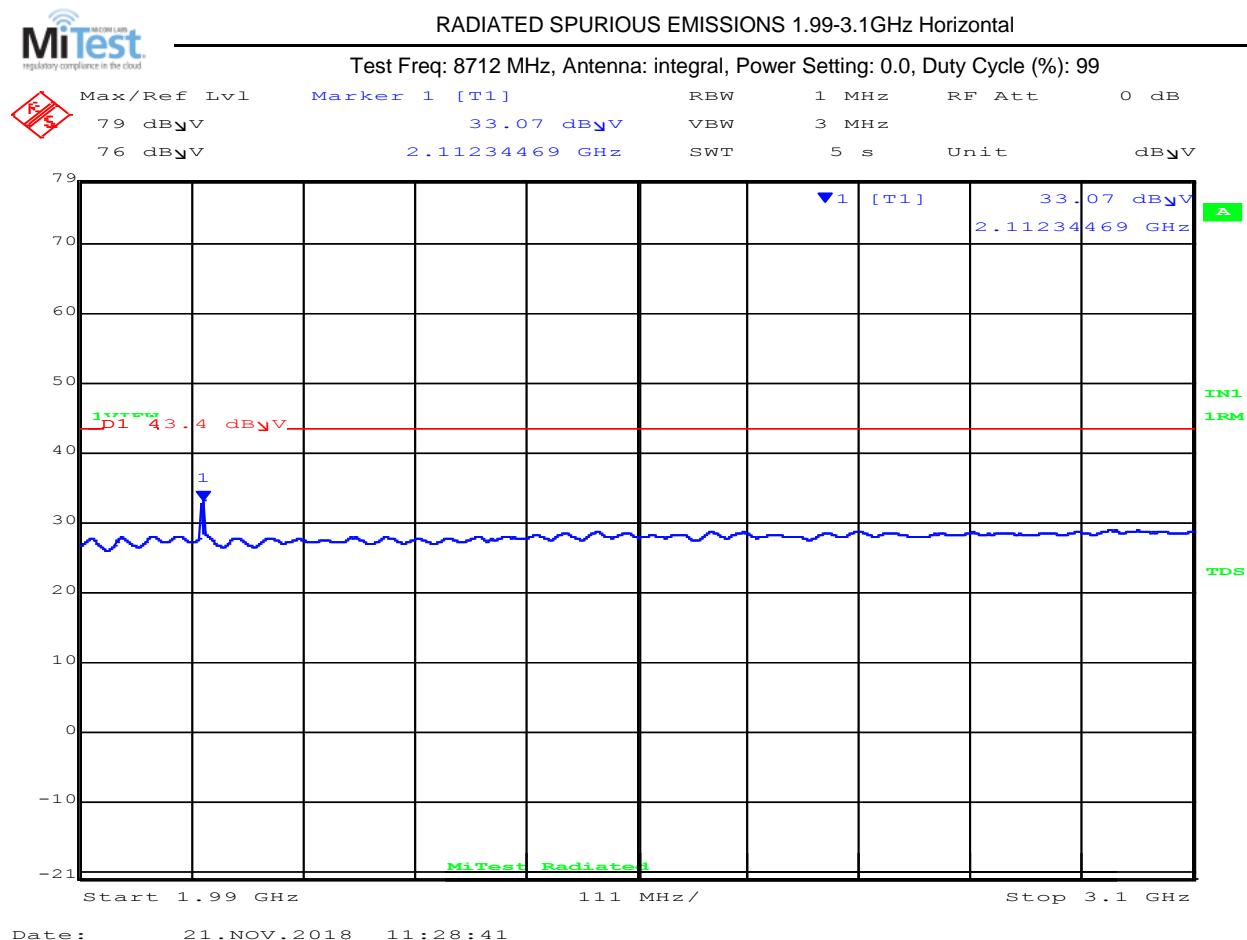


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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1990.00 – 3100.00 GHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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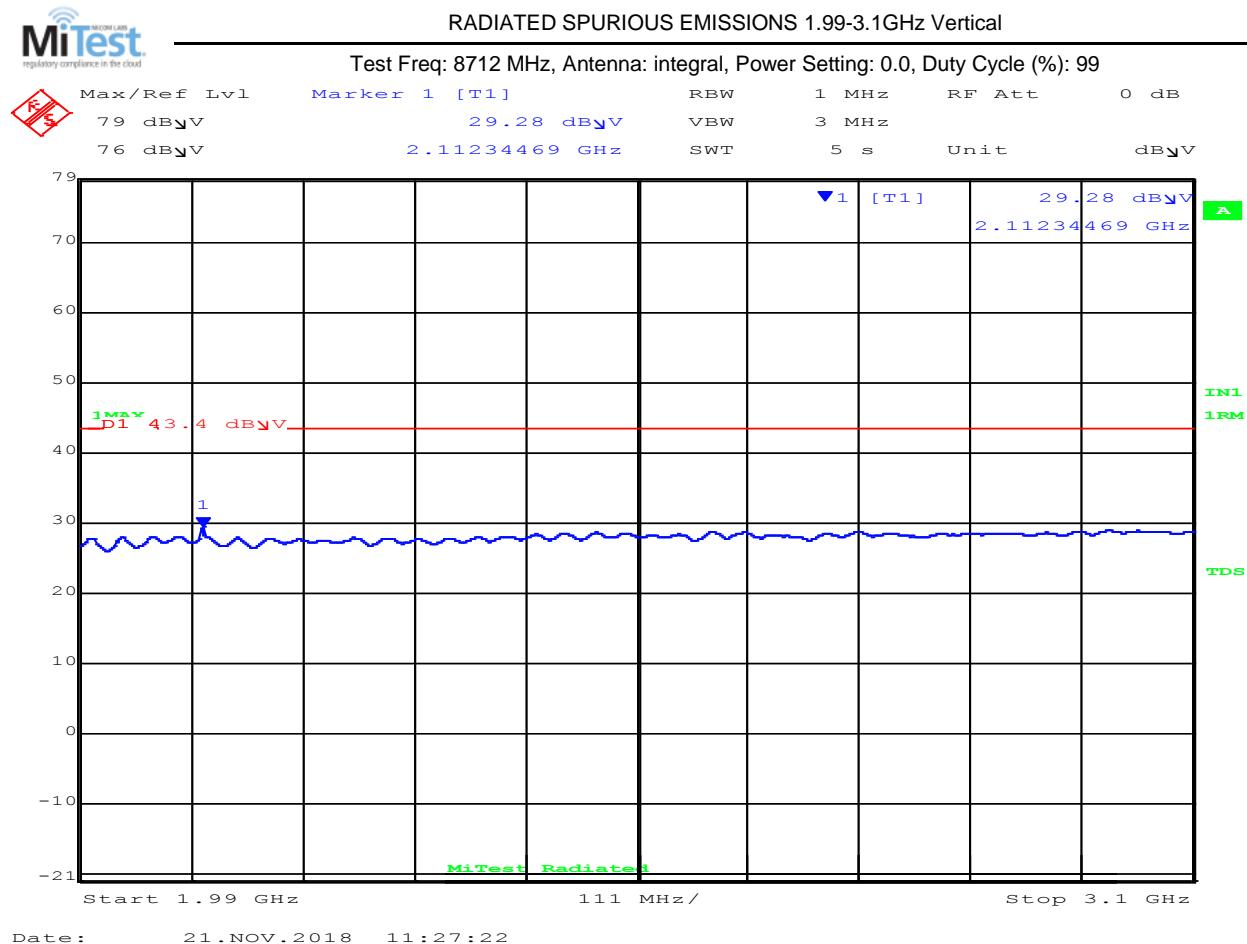


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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



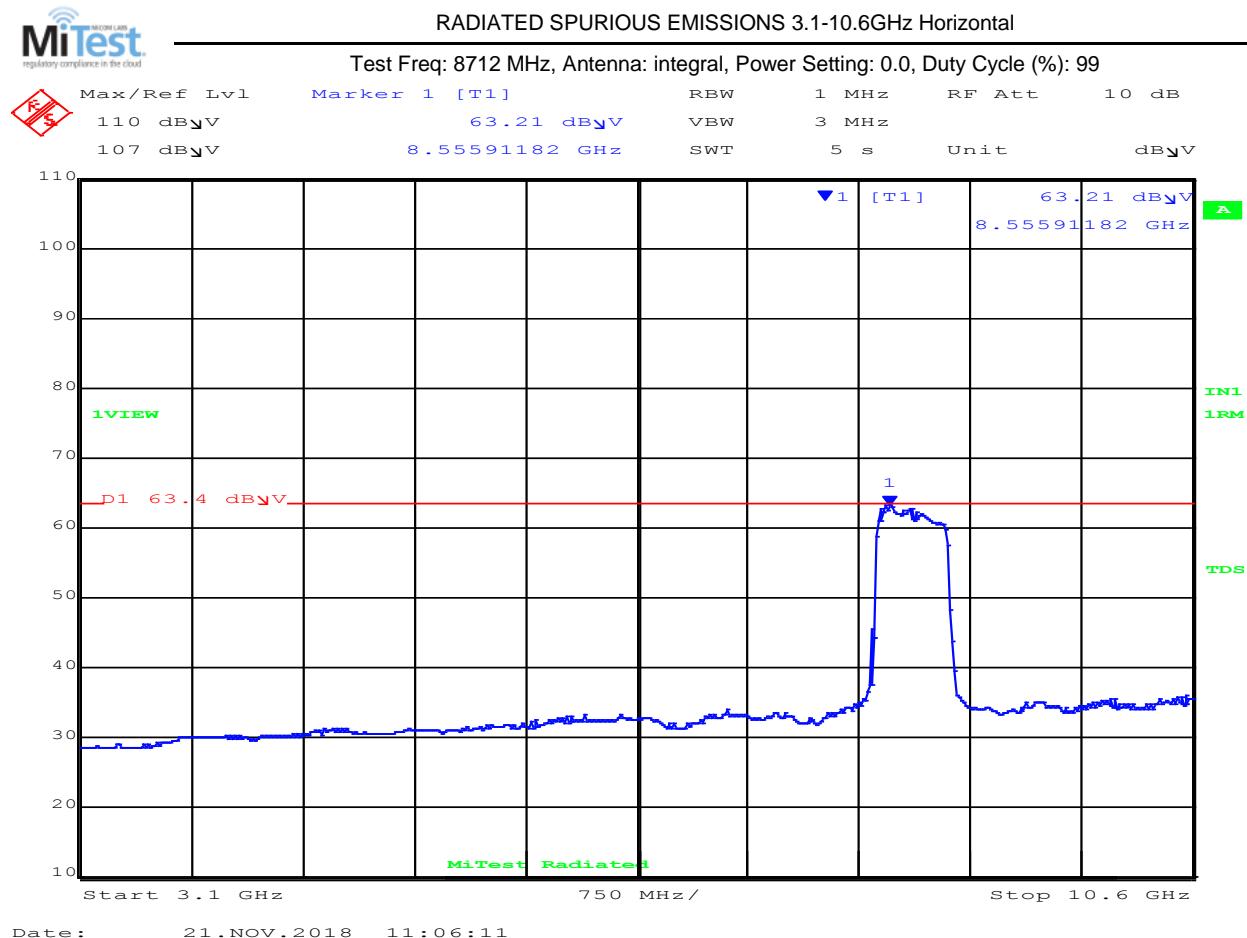
1990.00 – 3100.00 GHz									
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail
No Signals found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



3100.00 - 10600.00 MHz

Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail
1	8555.9	62.9	Average	Horizontal	150	0	63.4	-0.5	Pass

Test Notes:

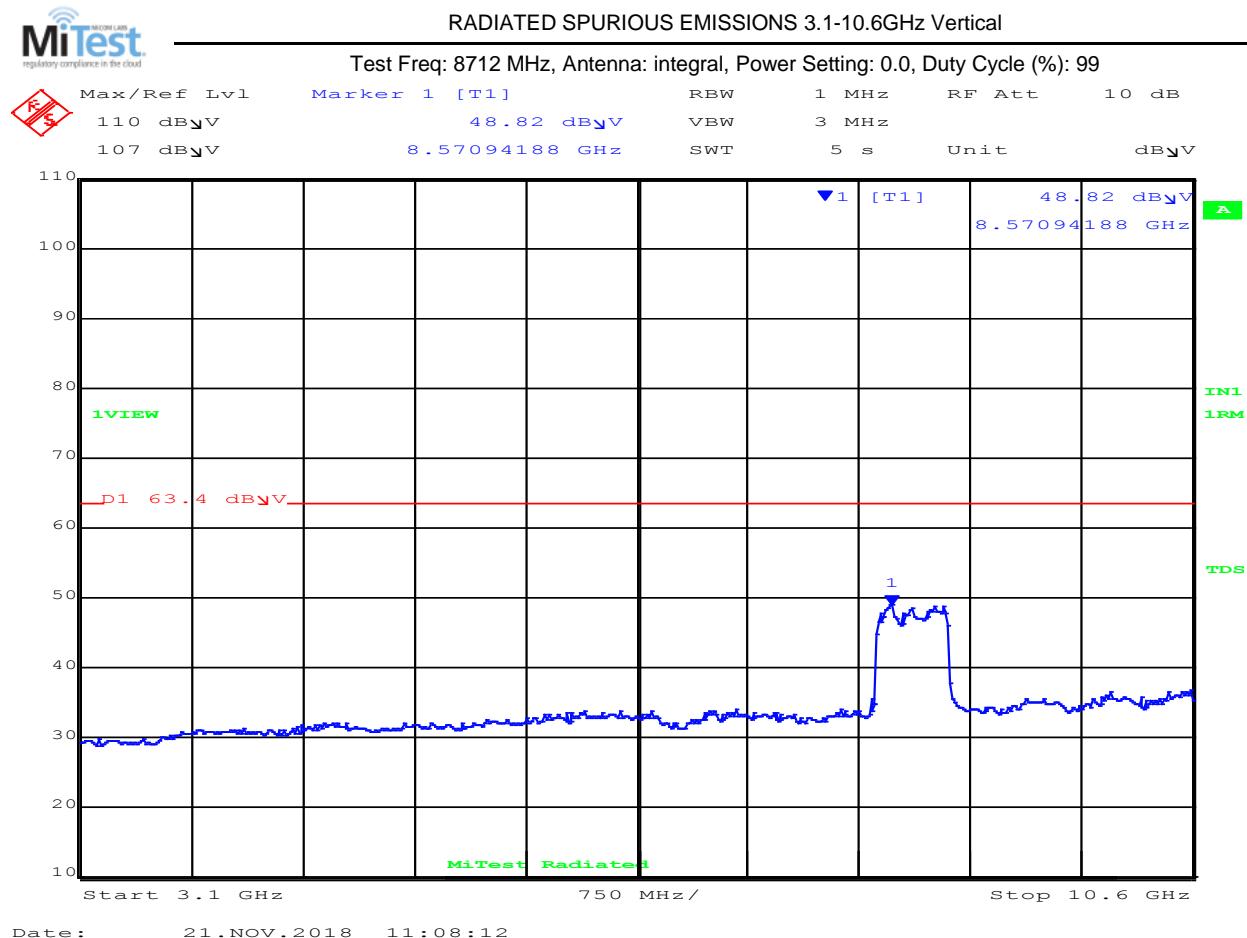
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



3100.00 - 10600.00 MHz

Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail
No Signals found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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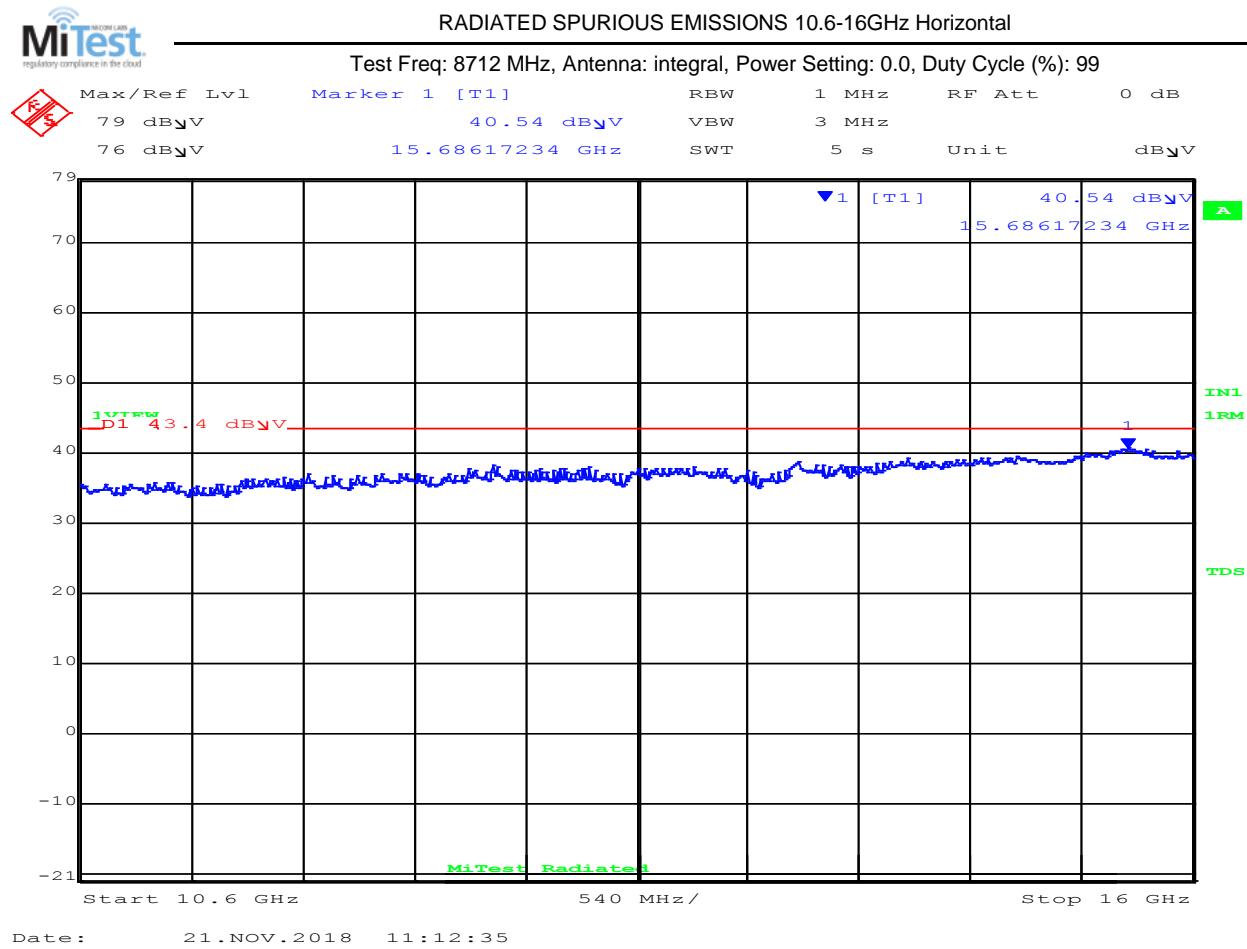


Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



10600.00 – 16000.00 GHz

Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
1	15686.2	39.6	Average	Horizontal	150	0	43.4	-3.80	Pass

Test Notes:

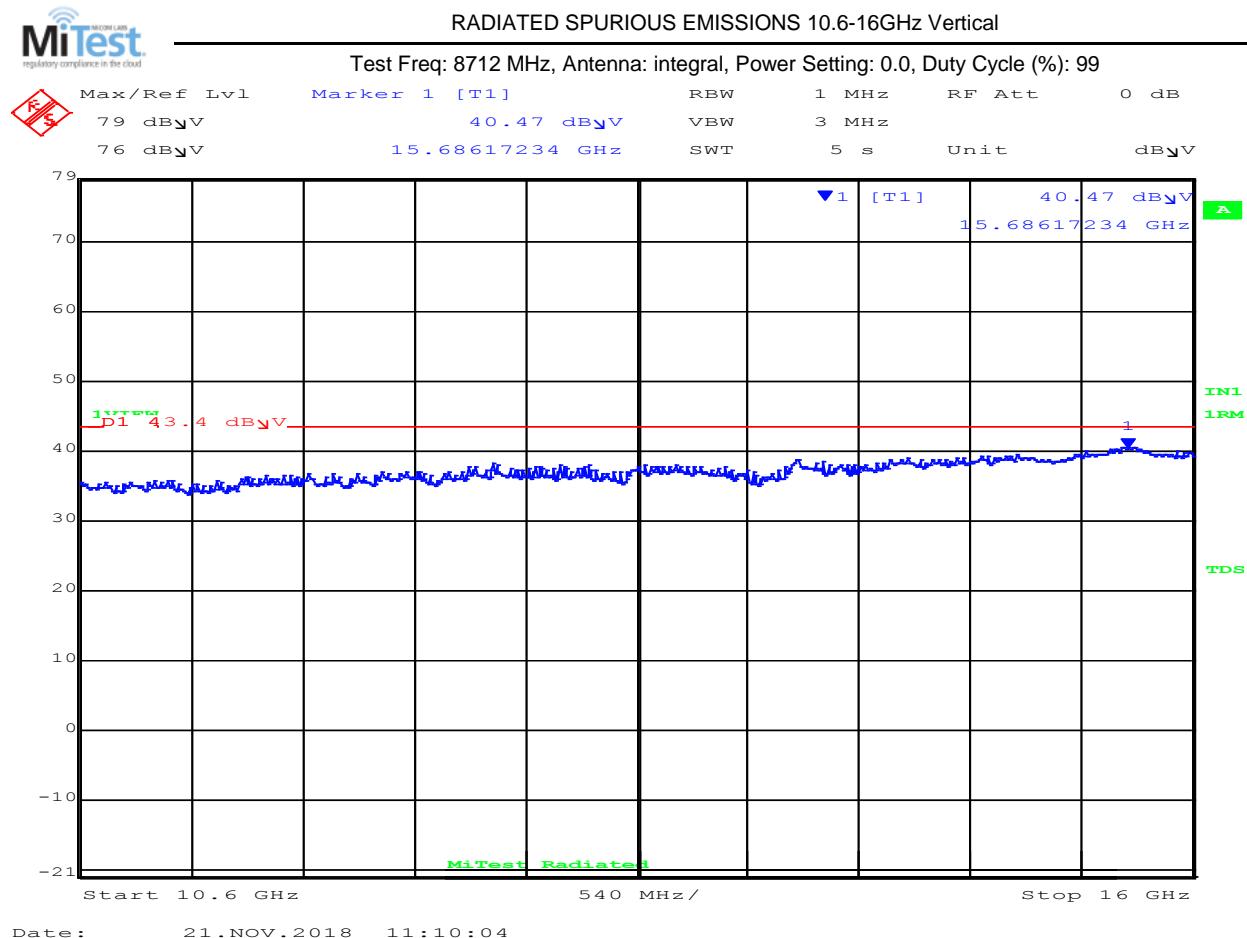
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



10600.00 – 16000.00 GHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	15686.2	39.6	Average	Vertical	150	0	43.4	-3.8	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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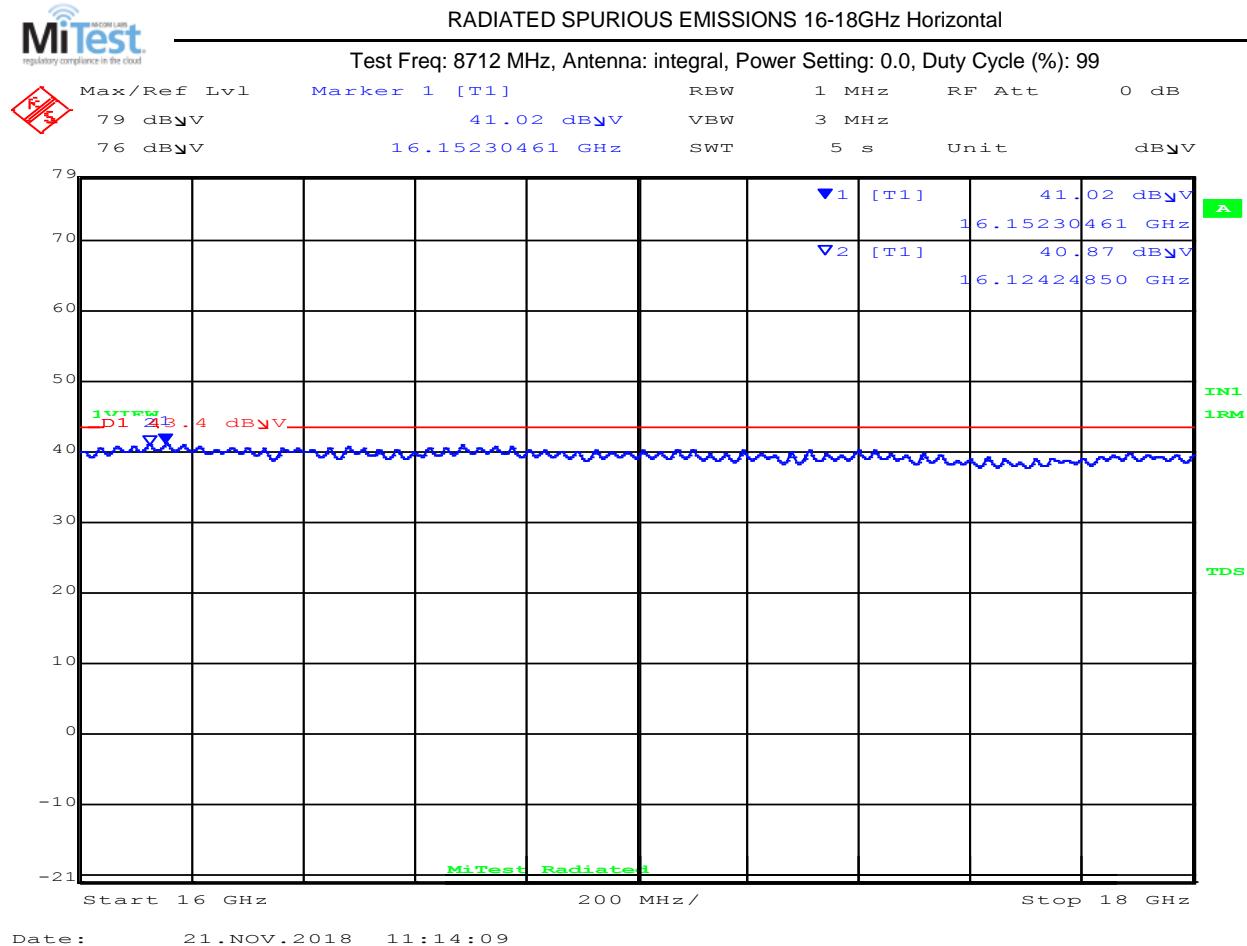


Title: Alereon AL5955, AL5930, AL5934
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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	16152.3	40.1	Average	Horizontal	150	0	43.4	-3.3	Pass
2	16124.2	39.9	Average	Horizontal	150	0	43.4	-3.5	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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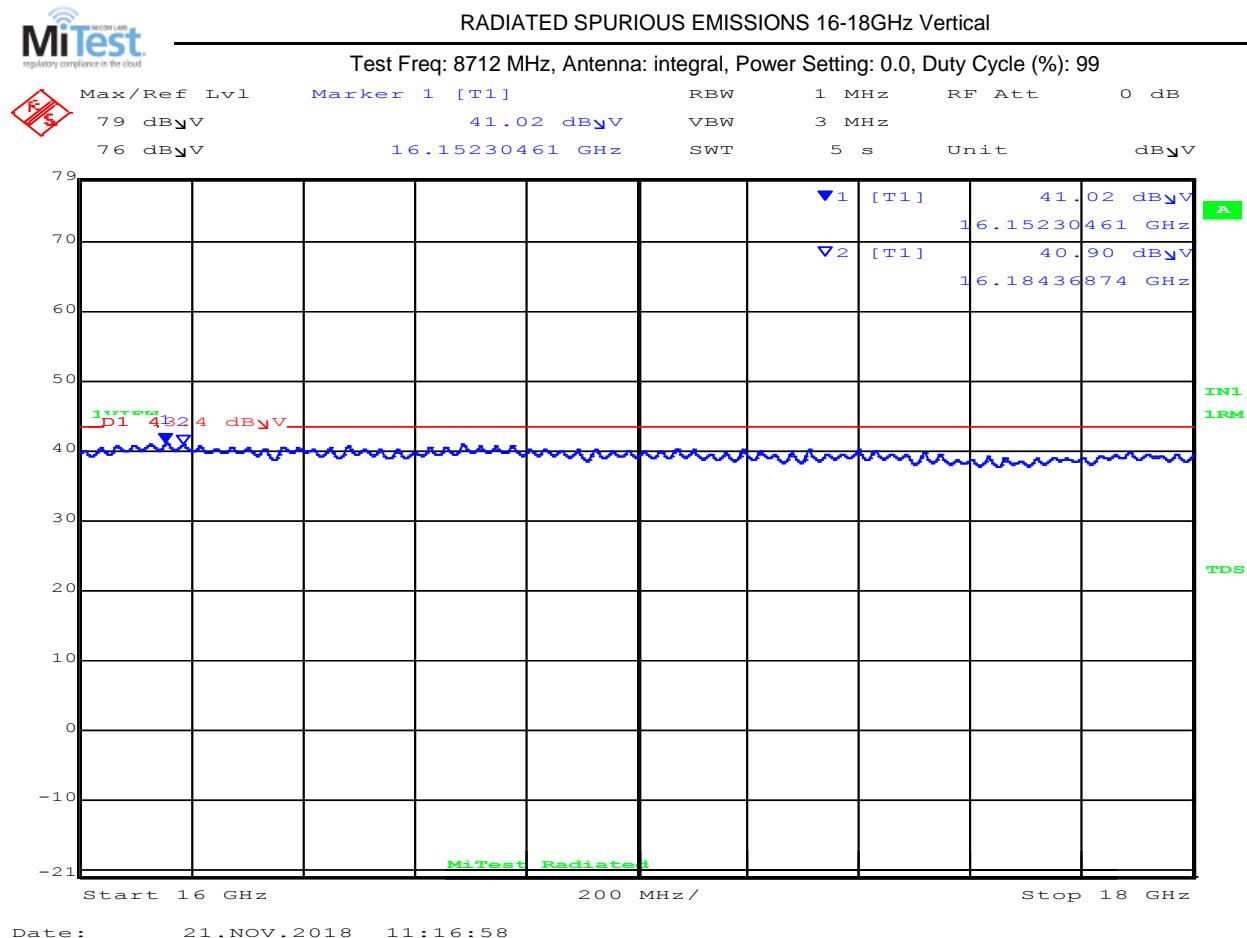


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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



16000.00 – 18000.00 GHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	16152.3	40.1	Average	Horizontal	150	0	43.4	-3.3	Pass
2	16184.4	39.9	Average	Horizontal	150	0	43.4	-3.5	Pass

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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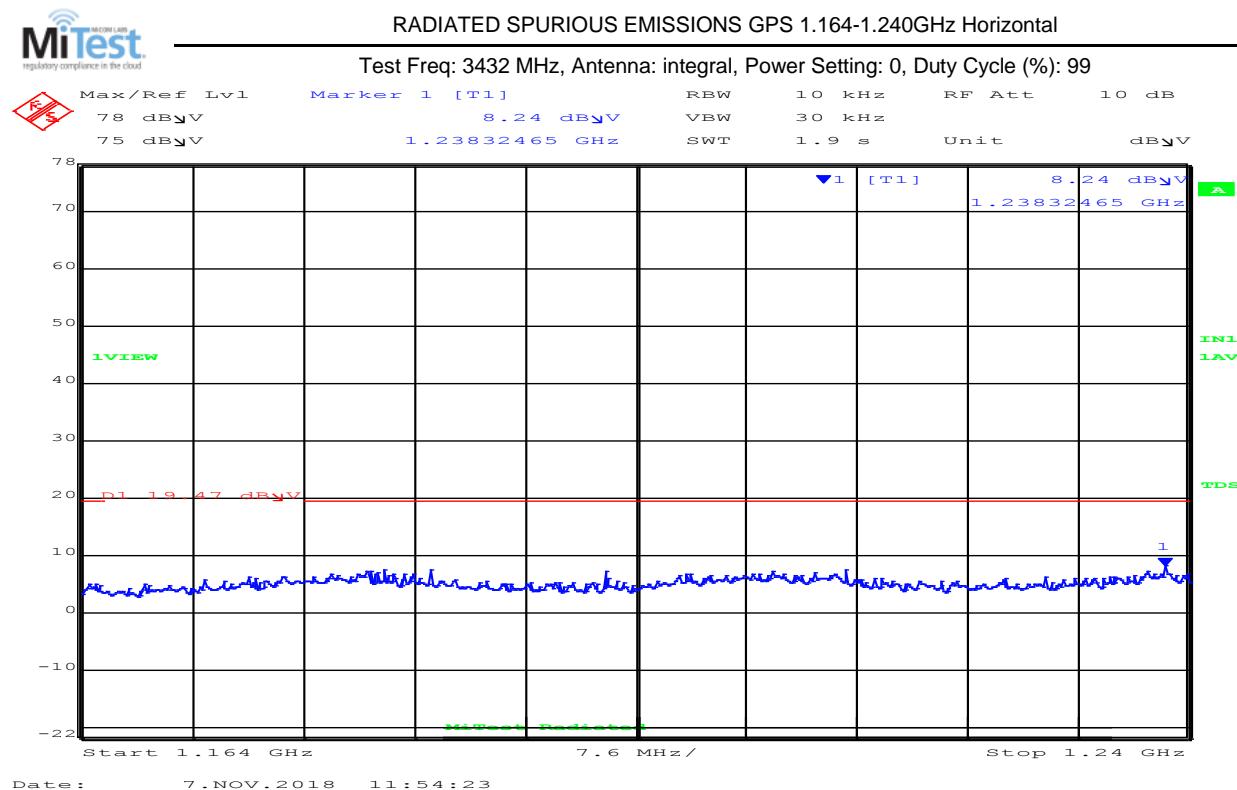
9.4.2. GPS Band Emissions

9.4.2.1. Commander AL5930

3432 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal			
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz									
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

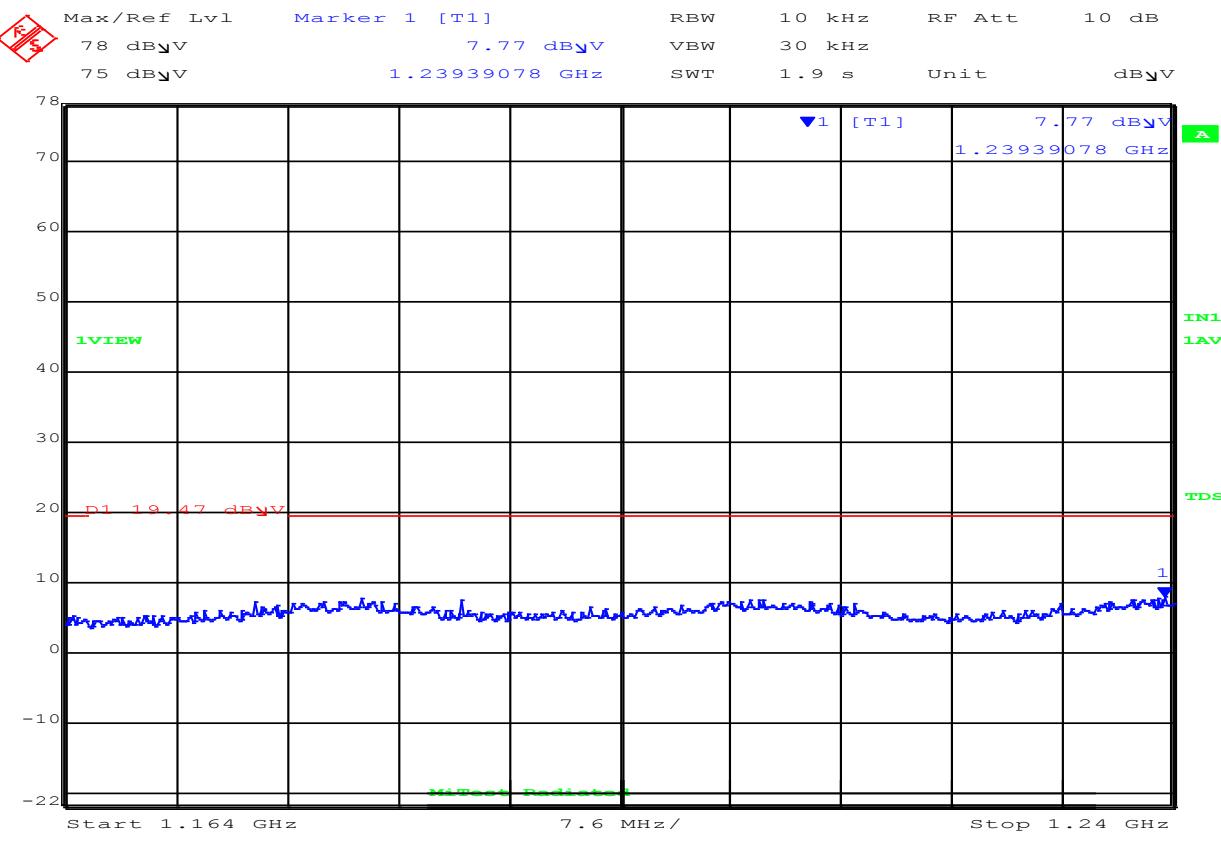
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 7.NOV.2018 11:53:15

1164.00-1240.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

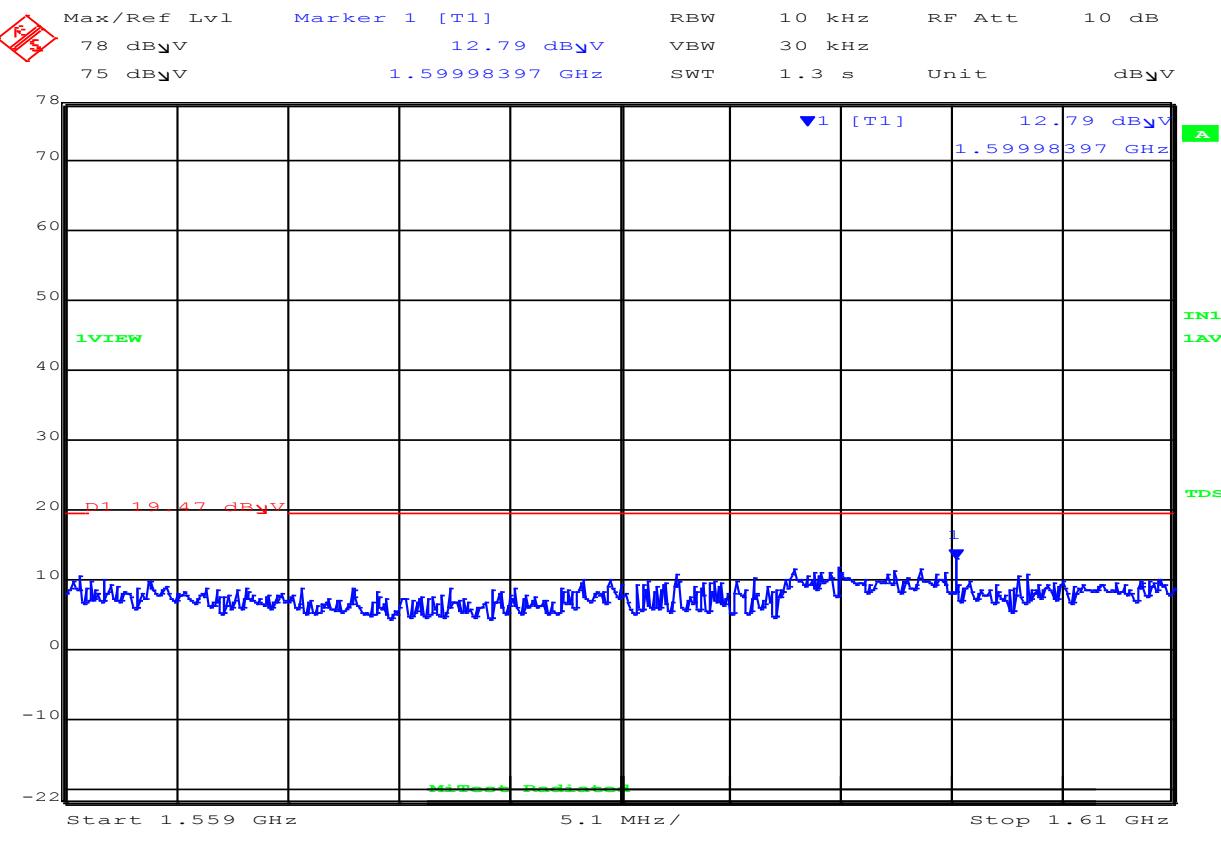
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1559.00-1610.00 MHz

Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

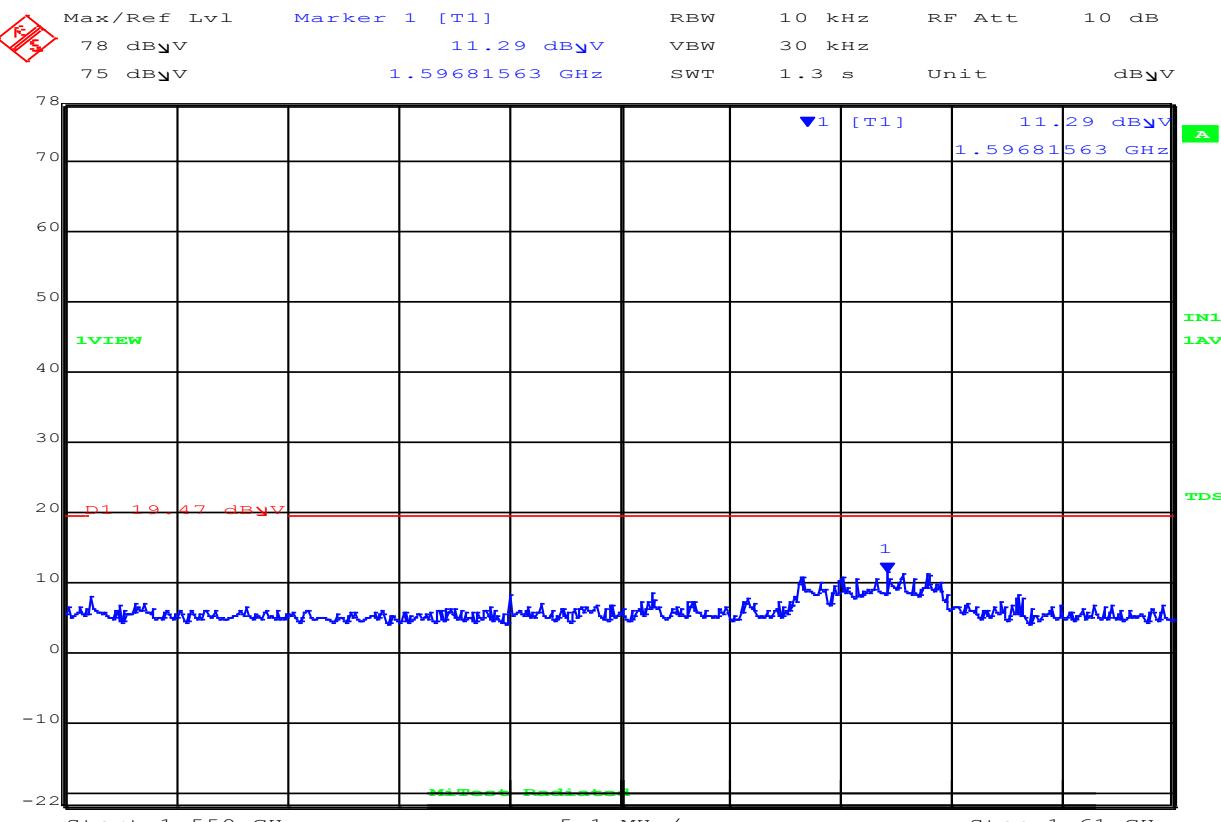
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 7.NOV.2018 11:56:51

1559.00-1610.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

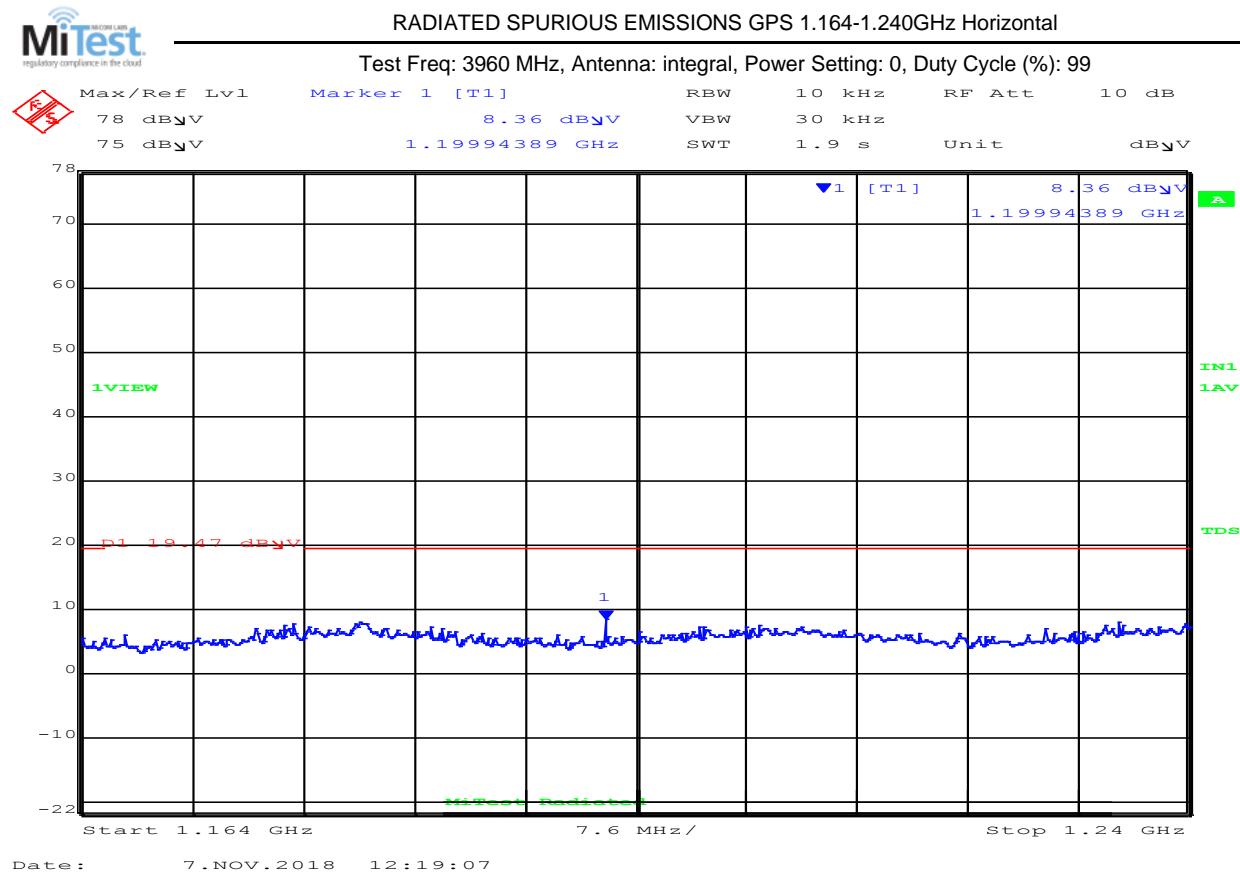
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3960 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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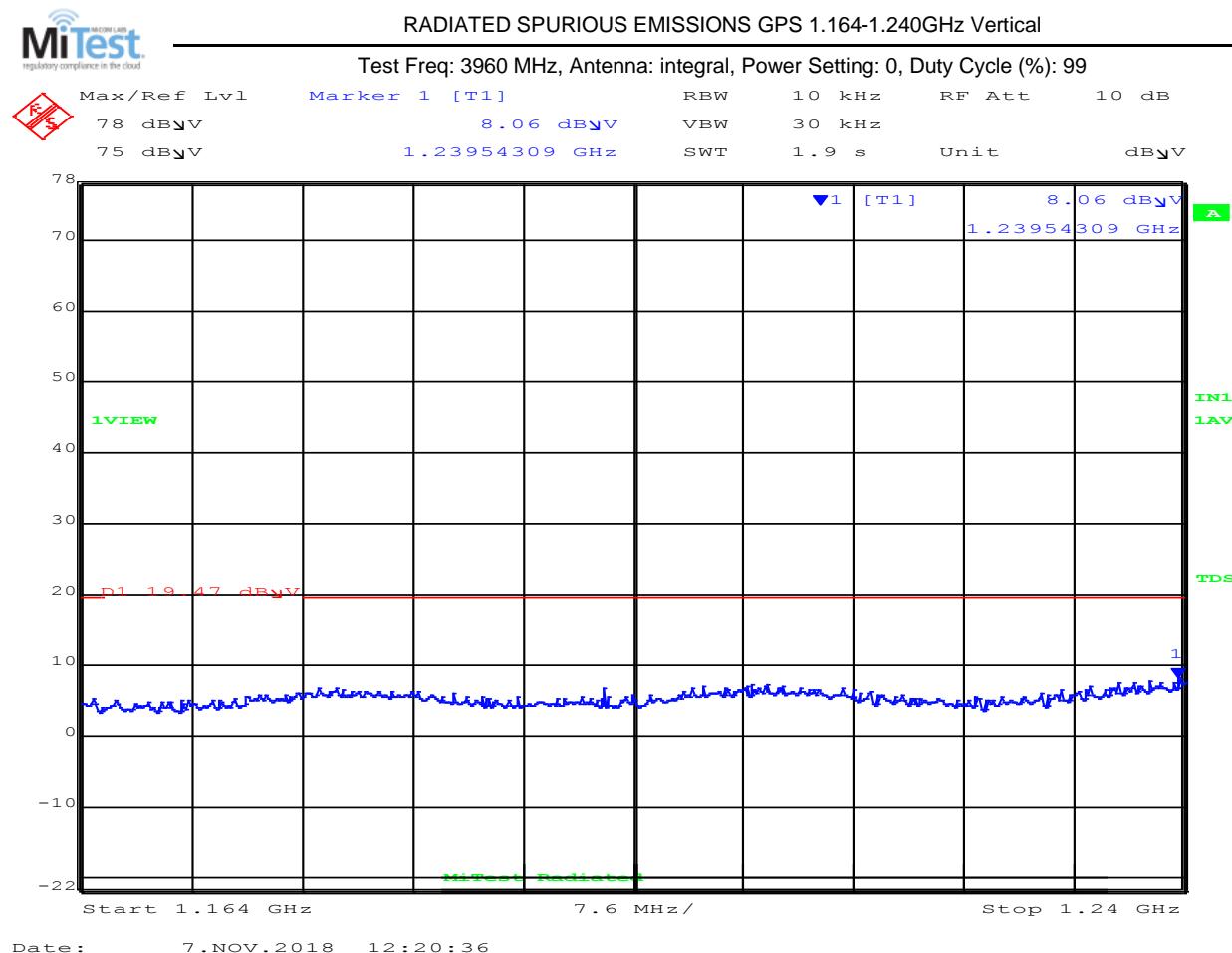


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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



Date: 7.NOV.2018 12:20:36

1164.00-1240.00 MHz

Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

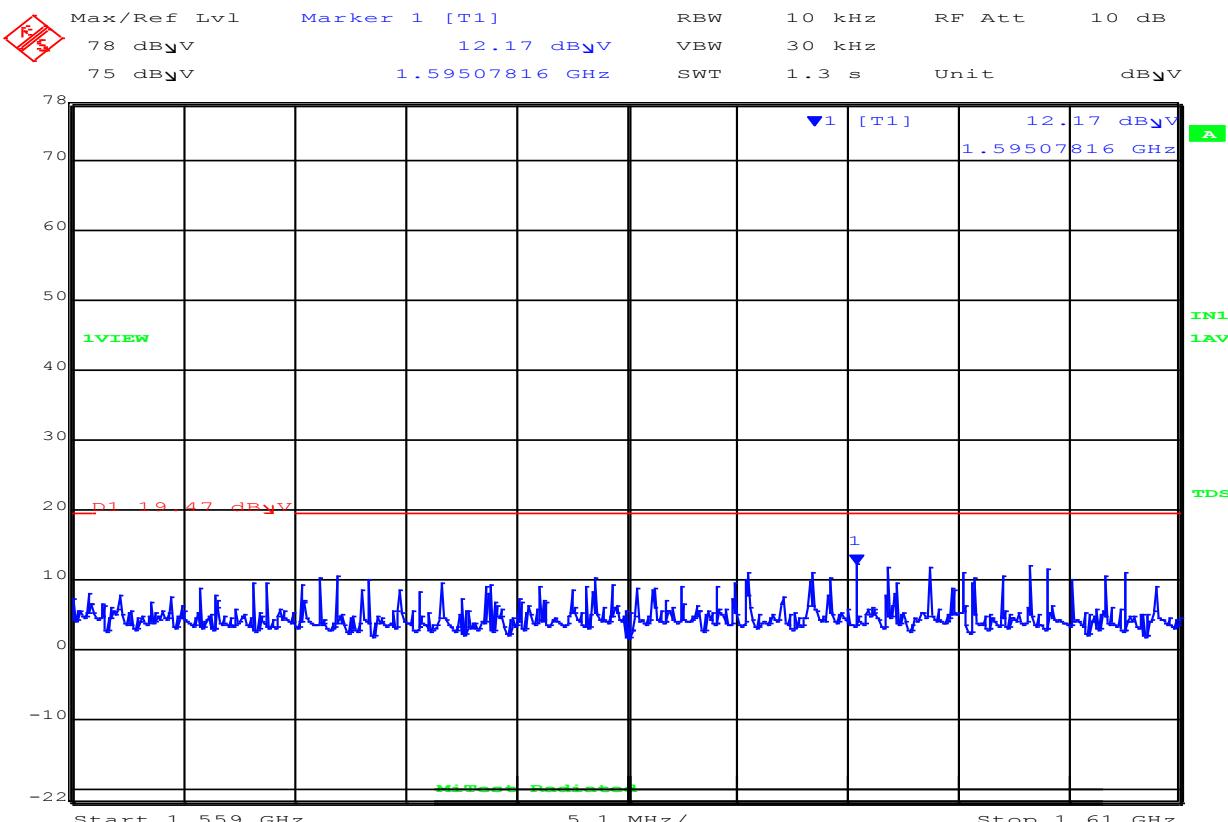
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1559.00-1610.00 MHz

Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

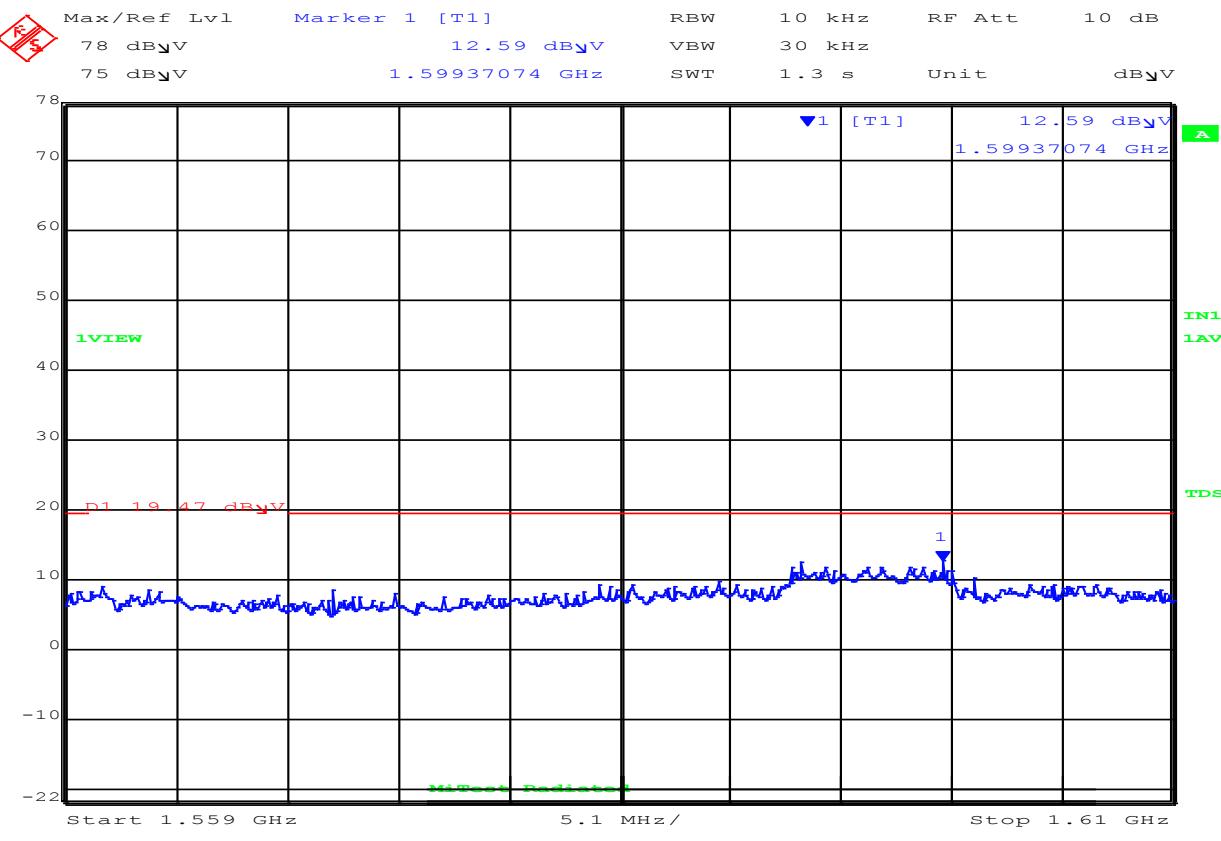
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1559.00-1610.00 MHz

Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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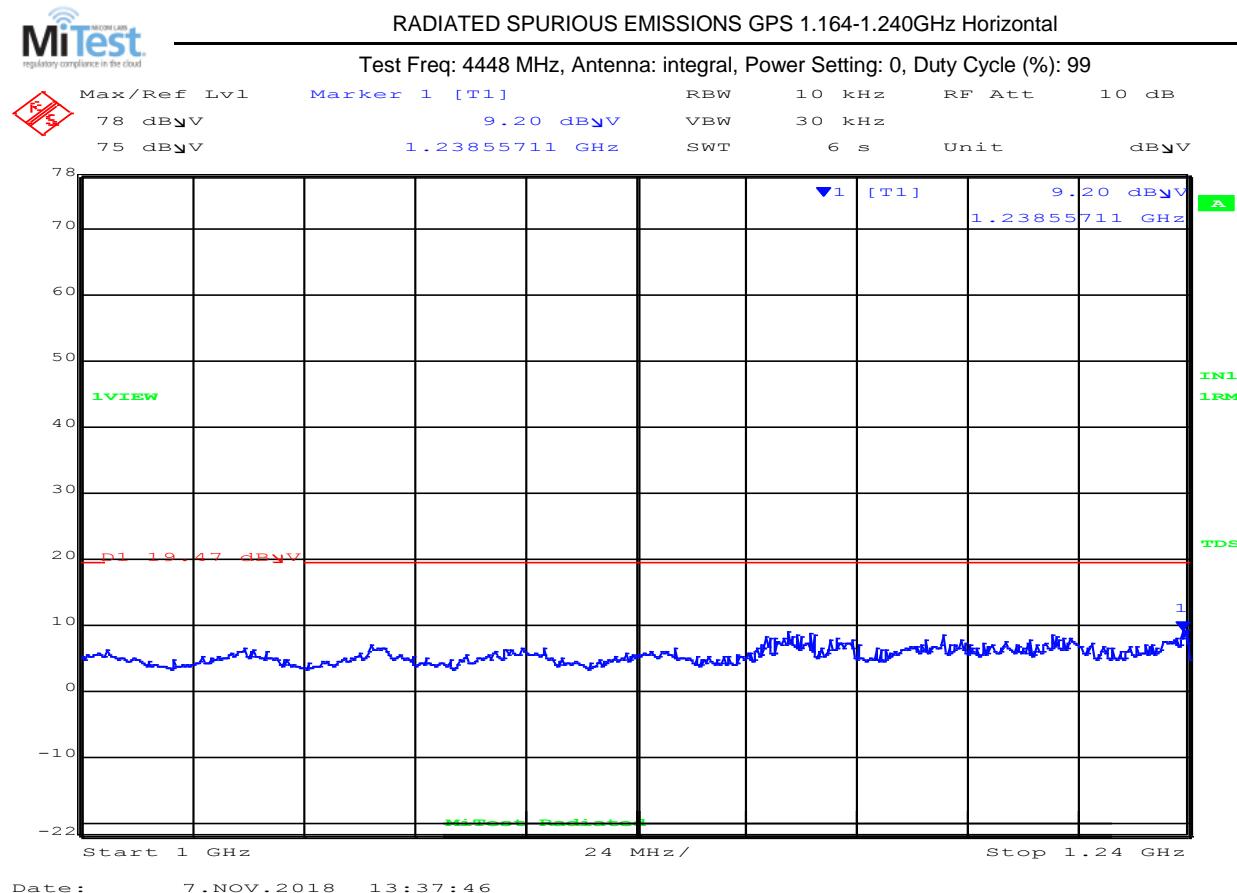
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4488 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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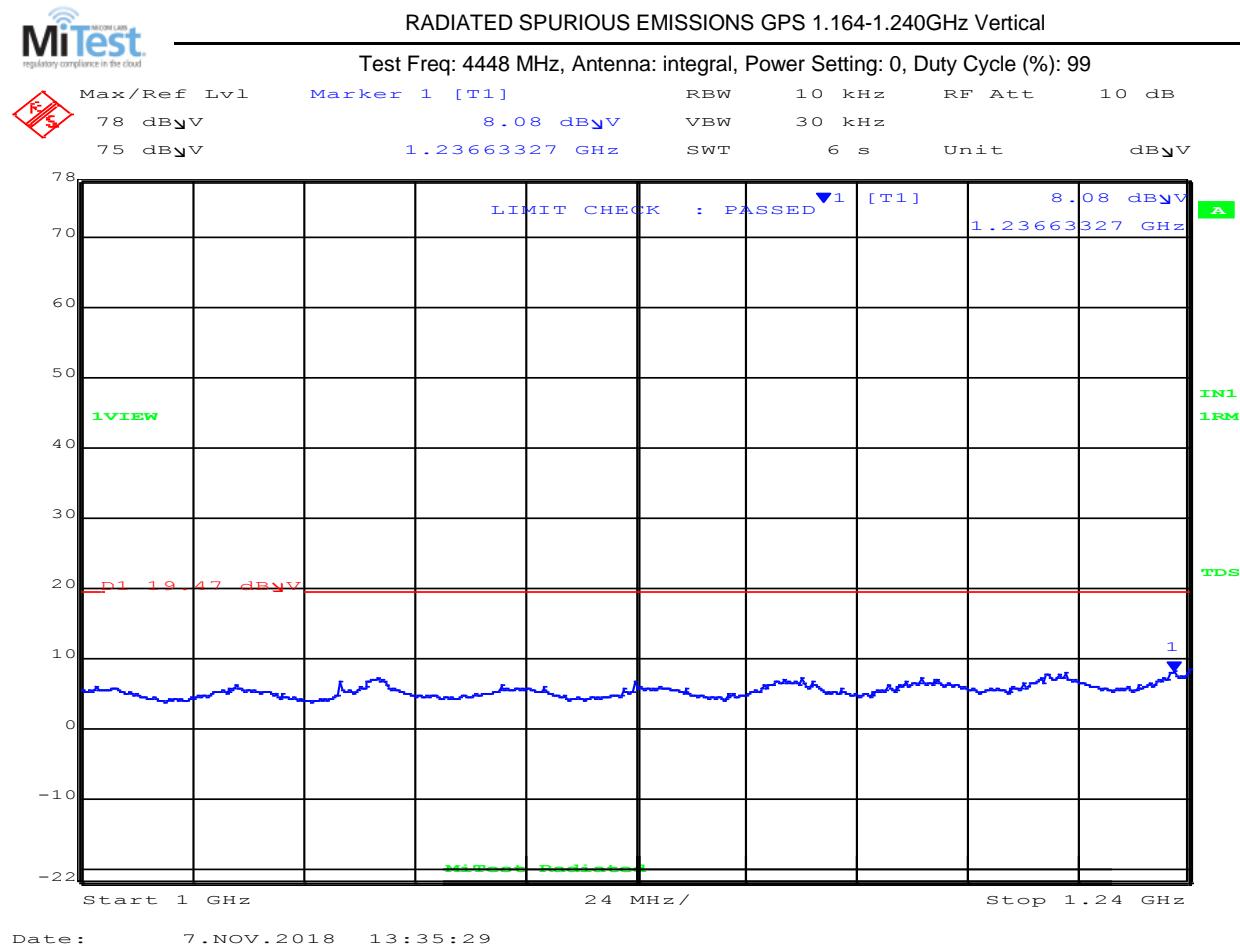


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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



Date: 7.NOV.2018 13:35:29

1164.00-1240.00 MHz									
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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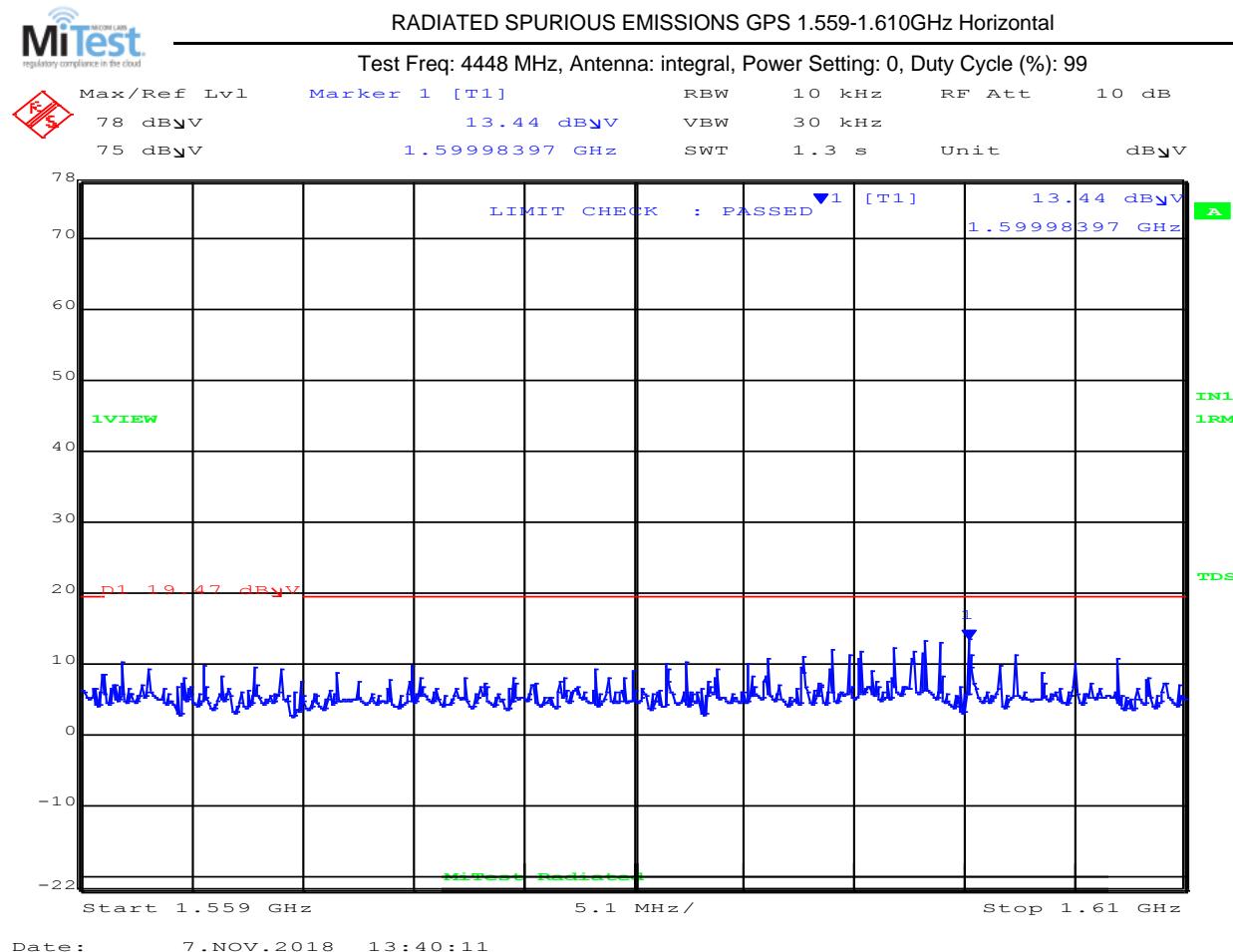


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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz										
Num	Frequency MHz	Level dB _P U/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _P U/m	Margin dB	Pass /Fail	
2	1599.98	1.9*	Average	Horizontal	150	0	19.47	-17.6	Pass	

Test Notes:
Final Average measurements done with 1 KHz Receiver Bandwidth per standard

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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

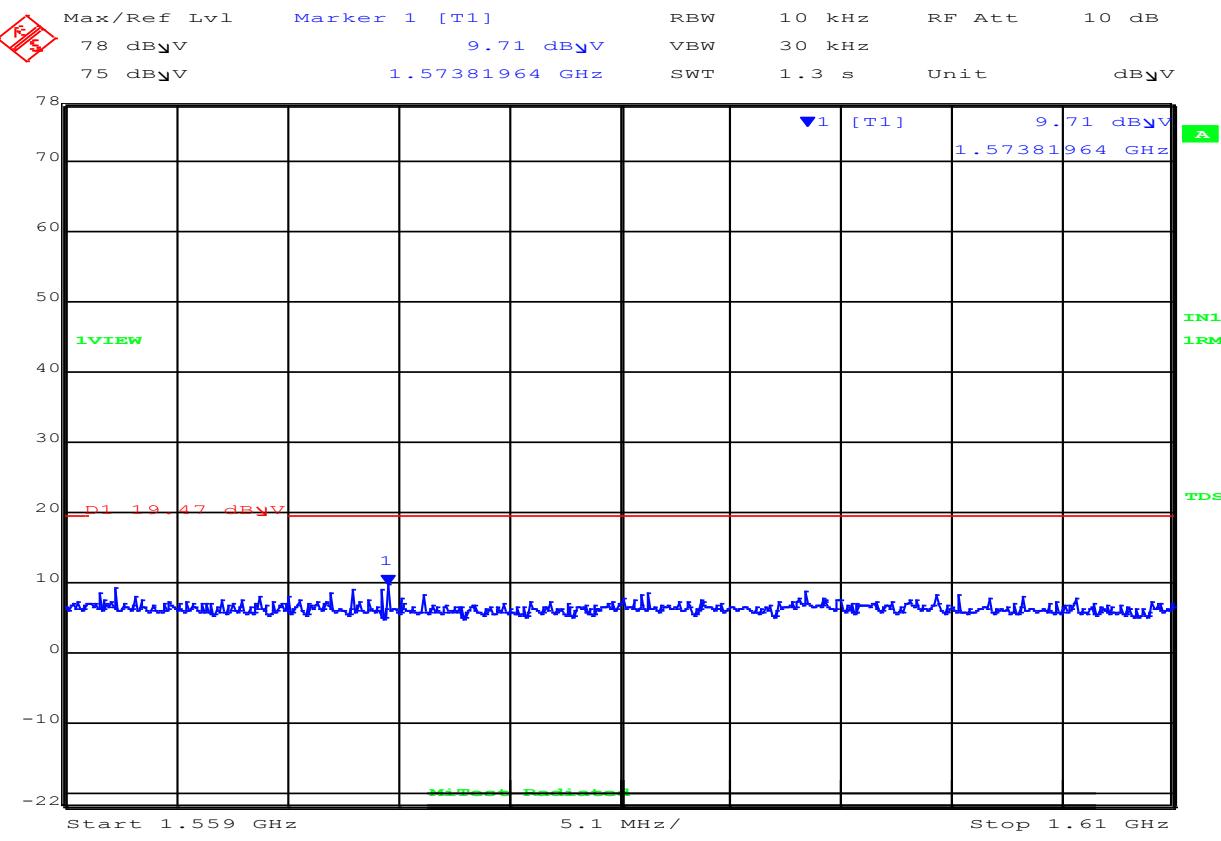
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 7.NOV.2018 13:42:06

1559.00-1610.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

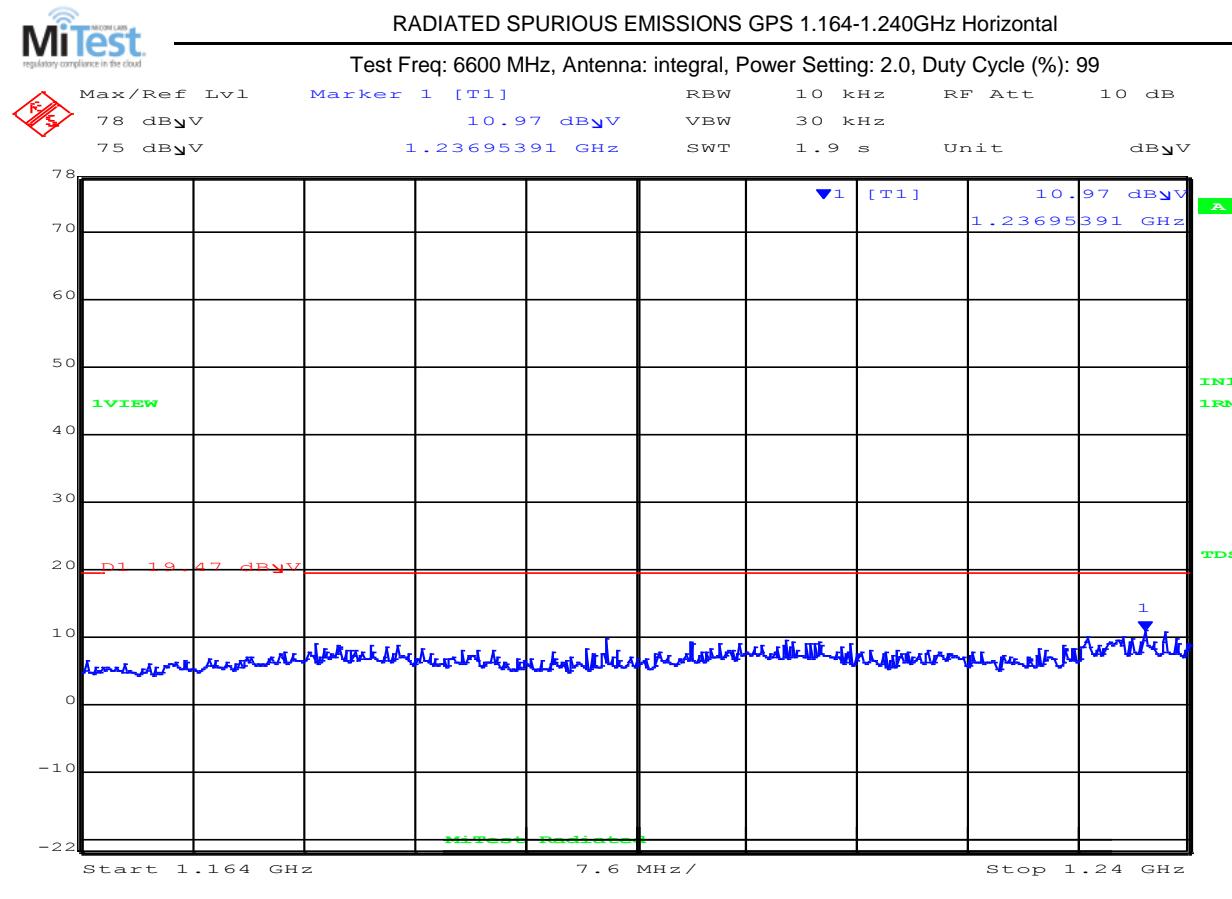
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6600 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									

Test Notes:
 Laptop Removed

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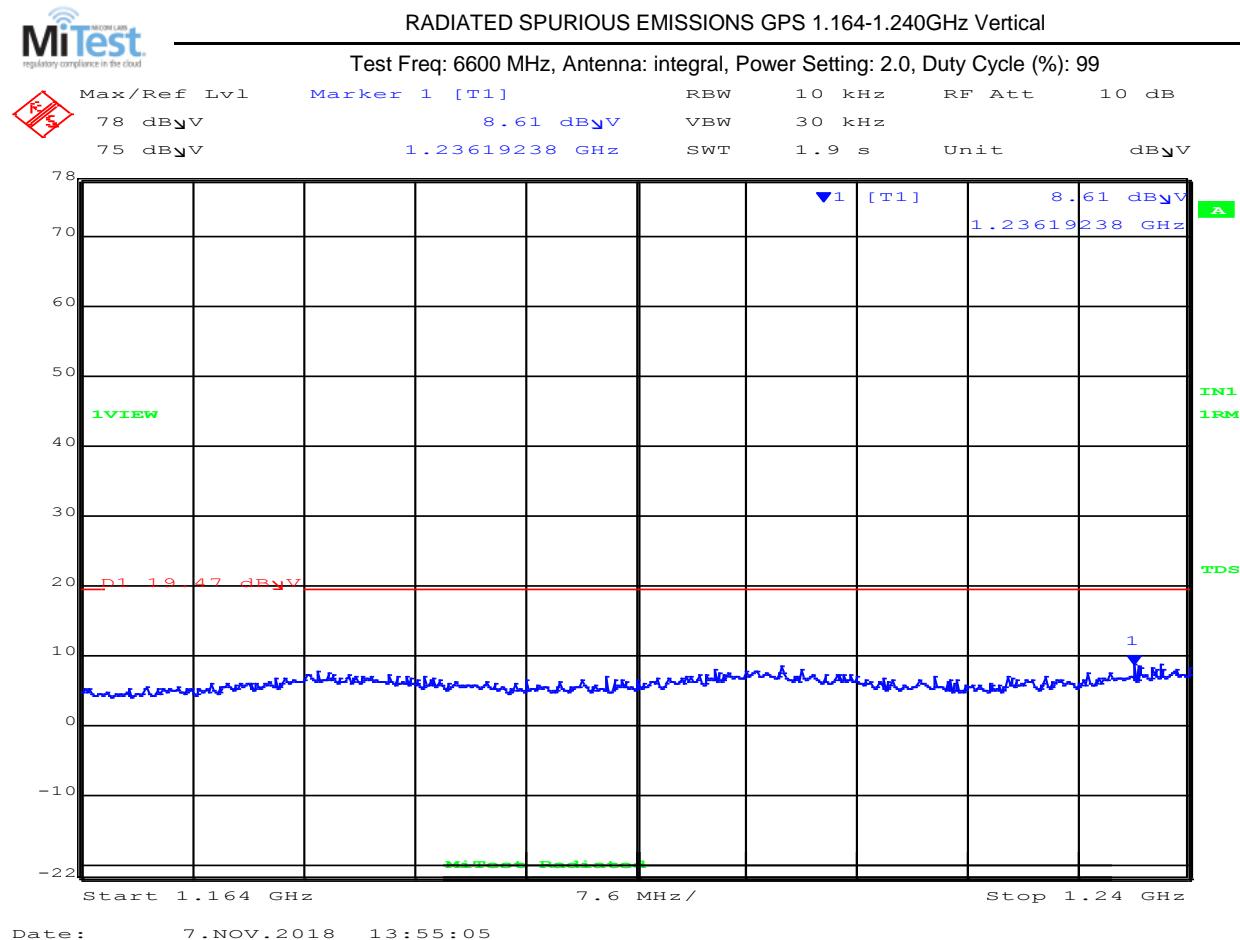


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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz										
Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop Removed										

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

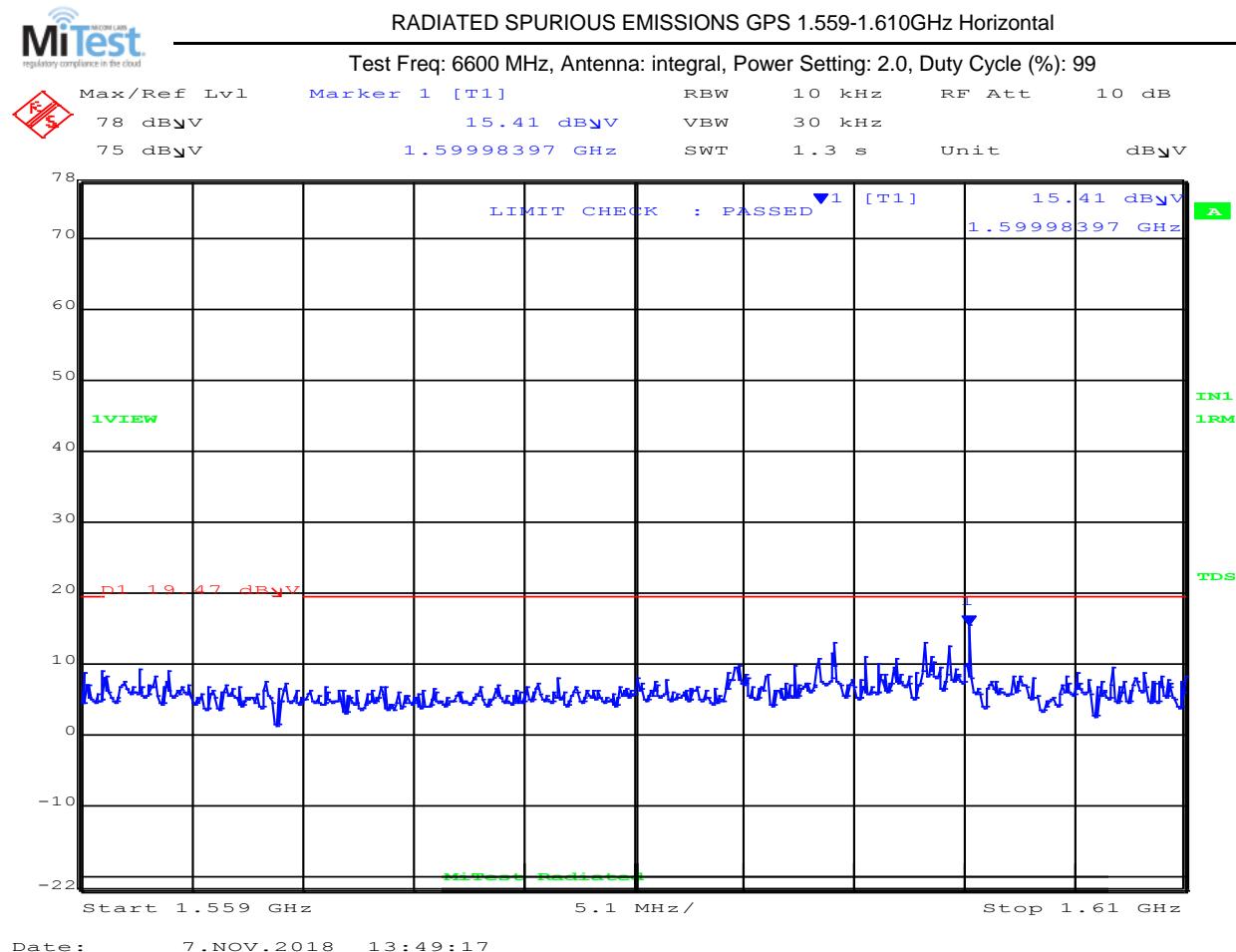


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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



Date: 7.NOV.2018 13:49:17

1559.00-1610.00 MHz

Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail
2	1599.98	2.0*	Average	Horizontal	150	0	19.47	-17.5	Pass

Test Notes:

Final Average measurements done with 1 KHz Receiver Bandwidth per standard

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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

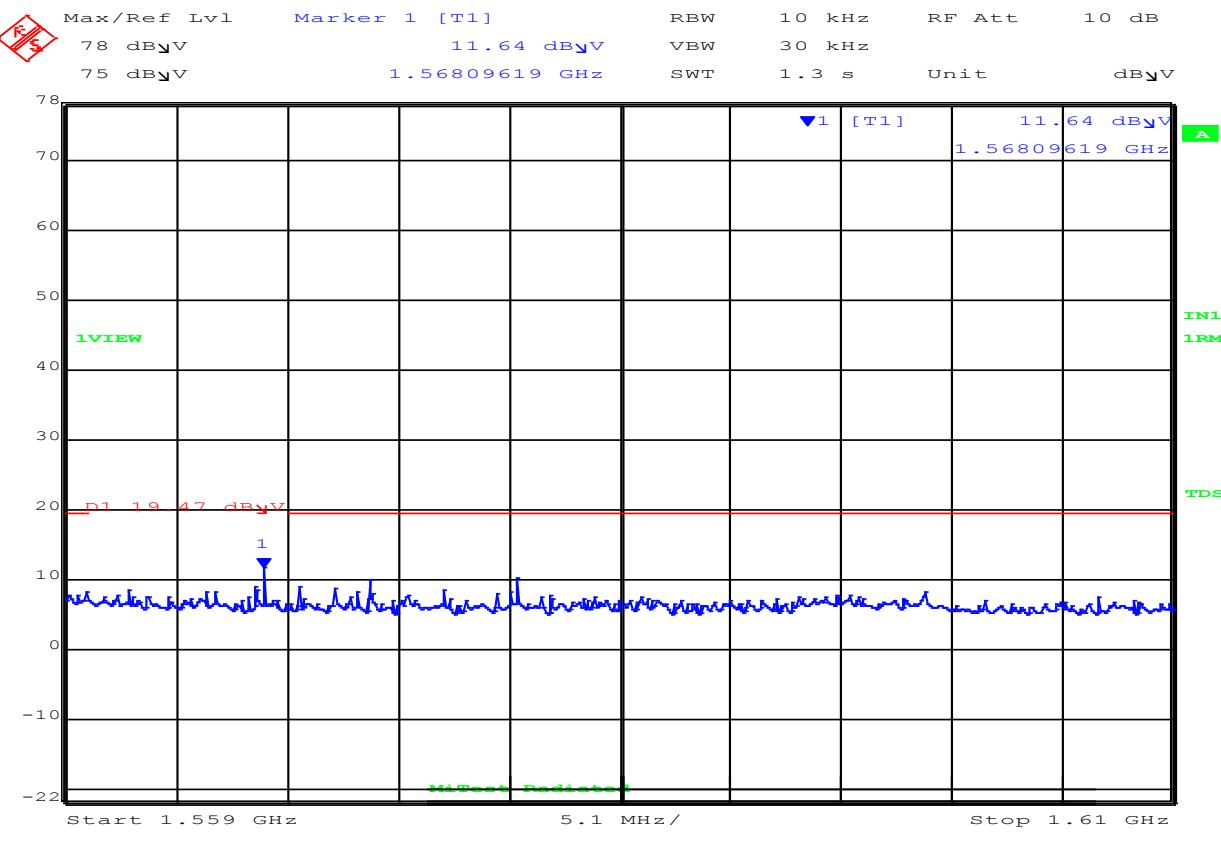
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 7.NOV.2018 13:46:34

1559.00-1610.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

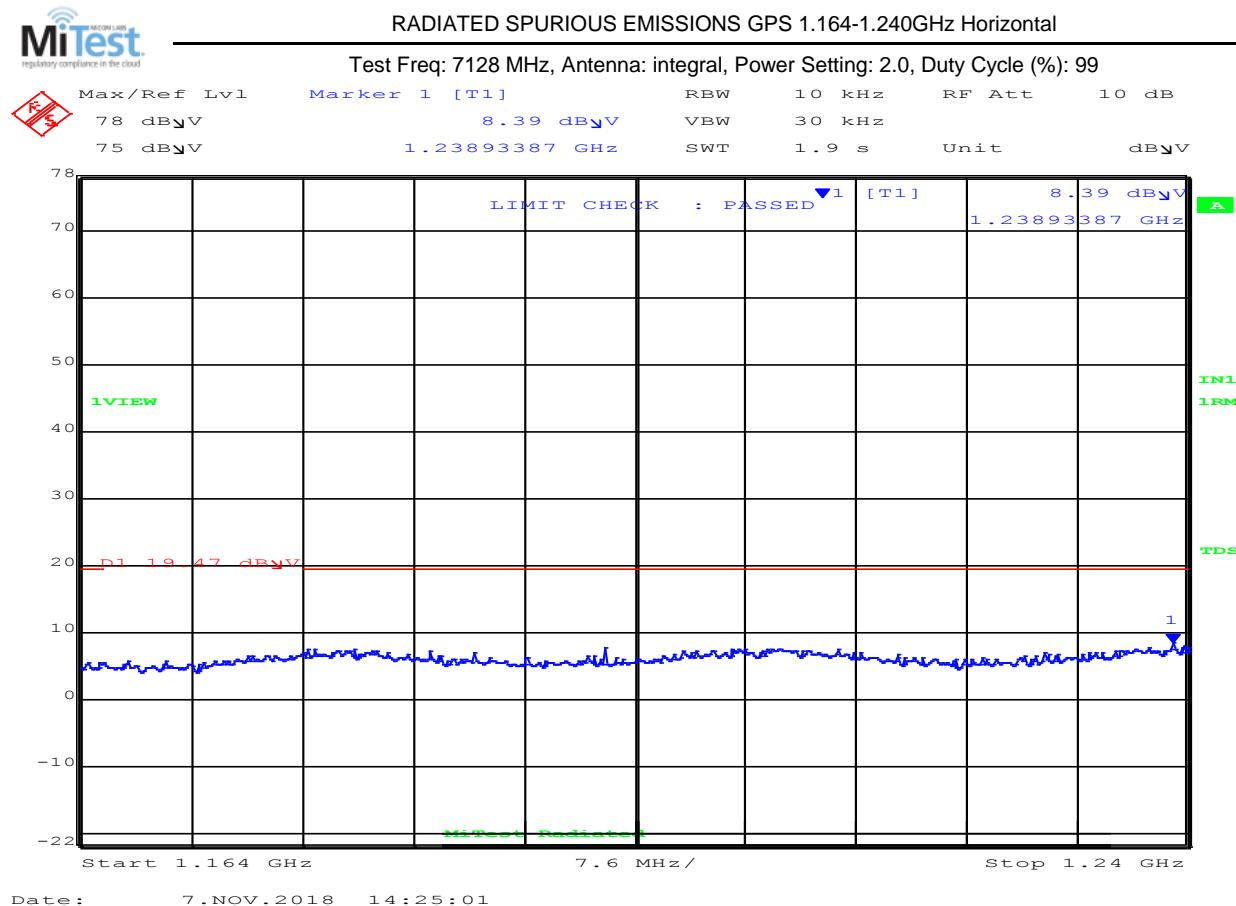
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7128 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

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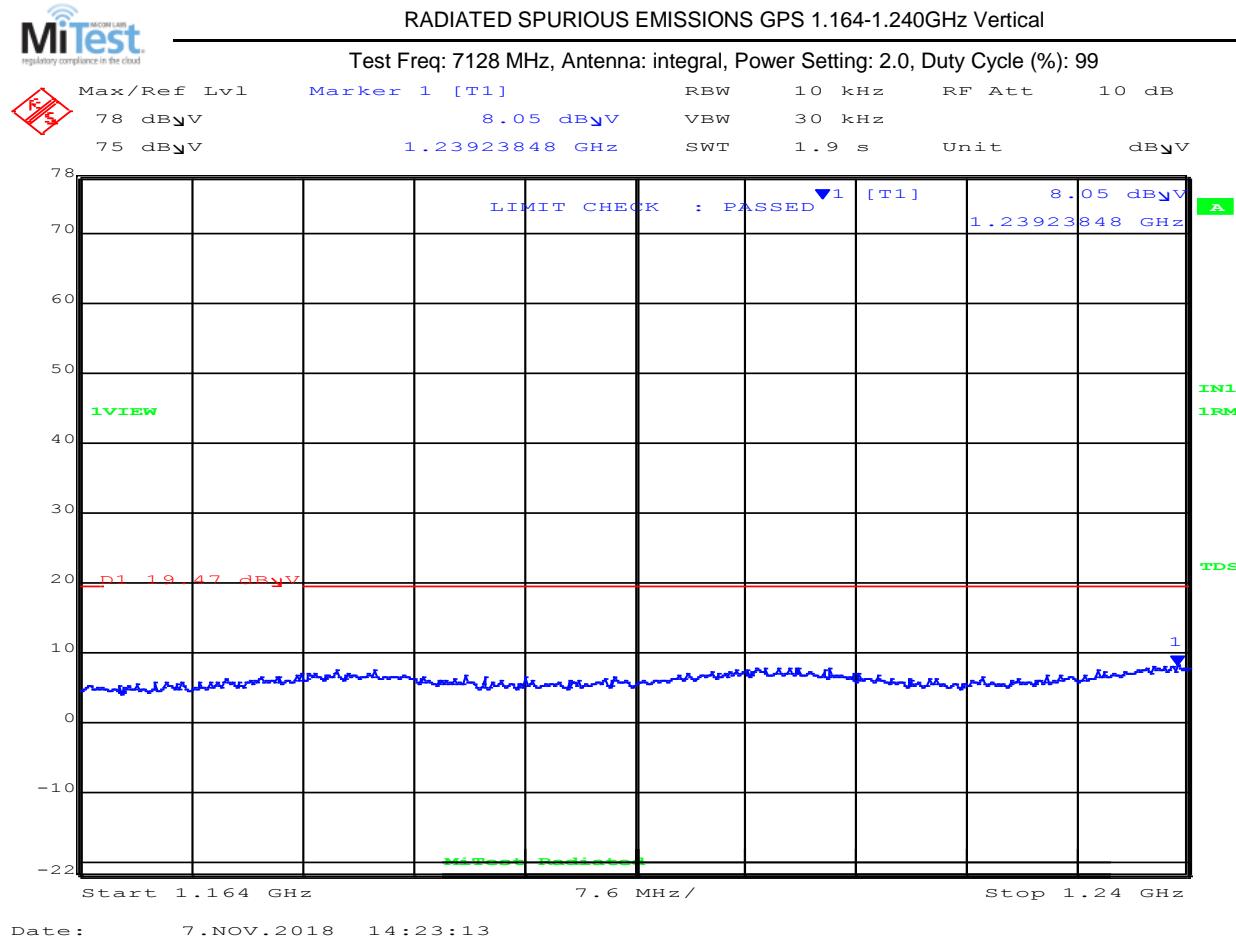


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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

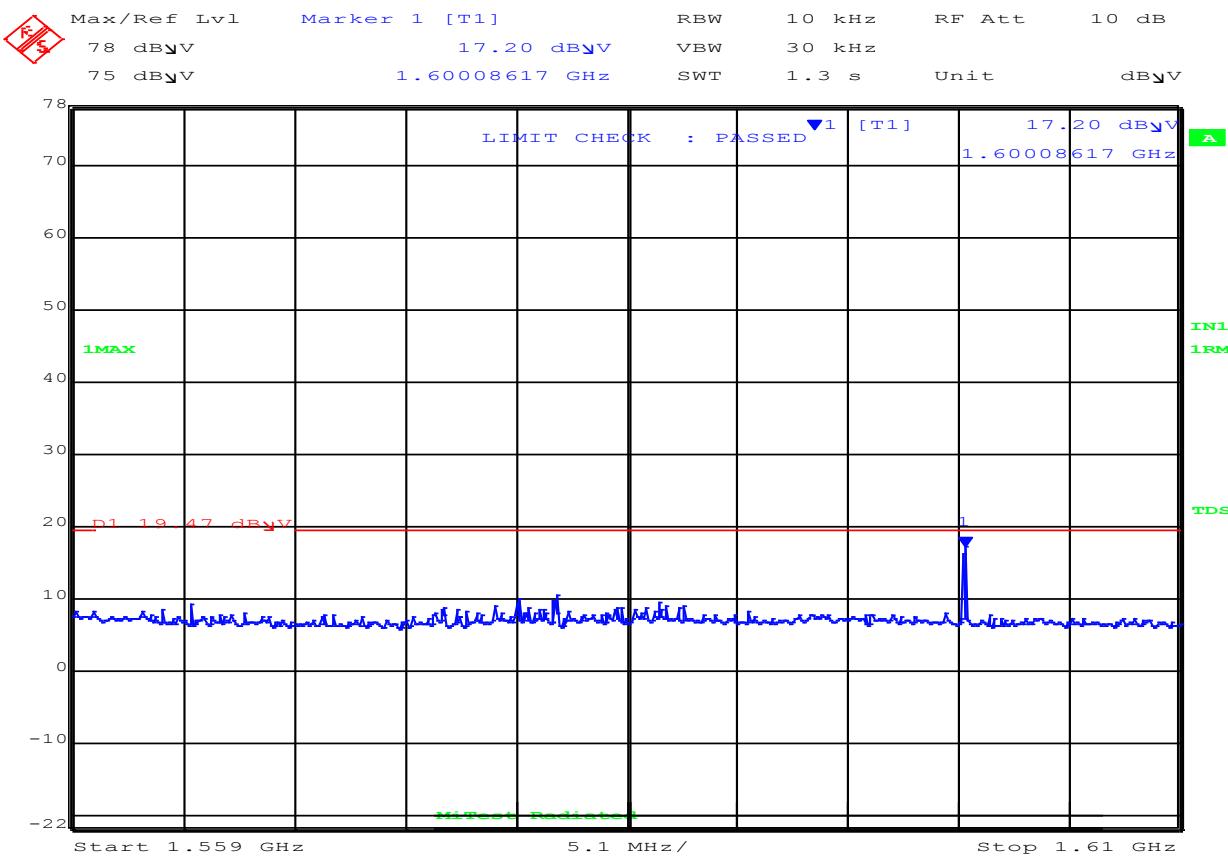
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1559.00-1610.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
2	1600.08	16.5	Average	Horizontal	150	0	19.47	-3.0	Pass

Test Notes:

Final Average measurements done with 1 KHz Receiver Bandwidth per standard

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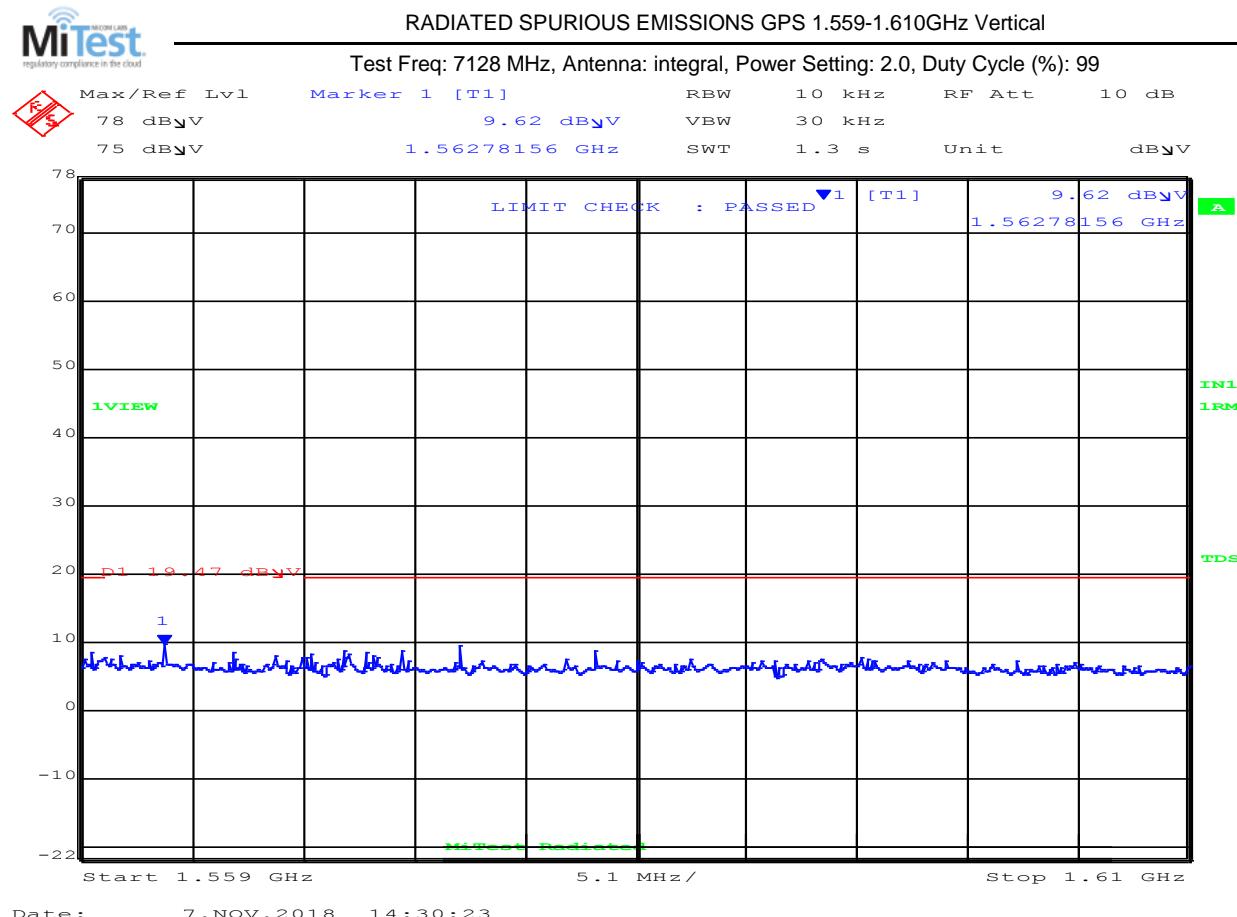


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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



Date: 7.NOV.2018 14:30:23

1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

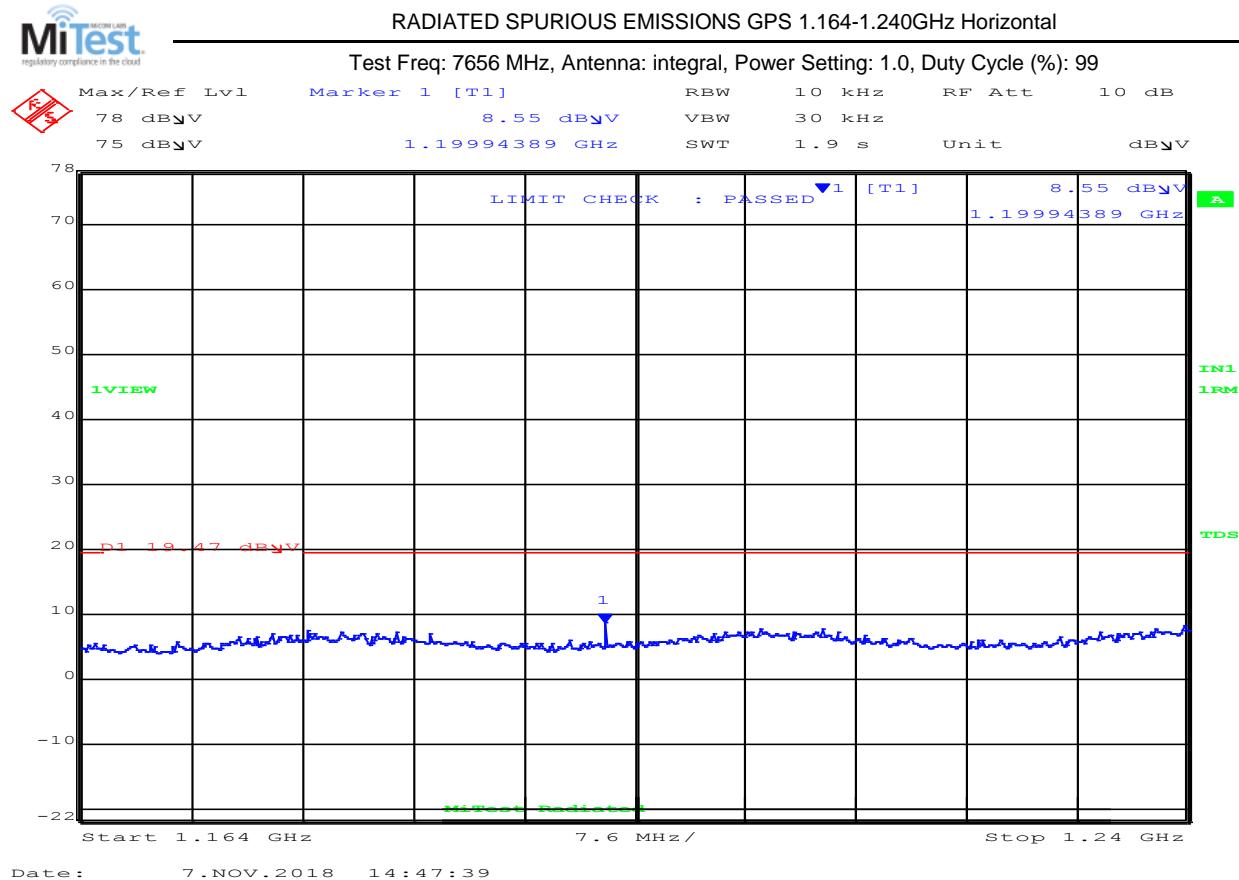
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7656 MHz (Covers Band Group 3 TFC 7 and Band Group 6 TFC 5)

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz										
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop Removed										

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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

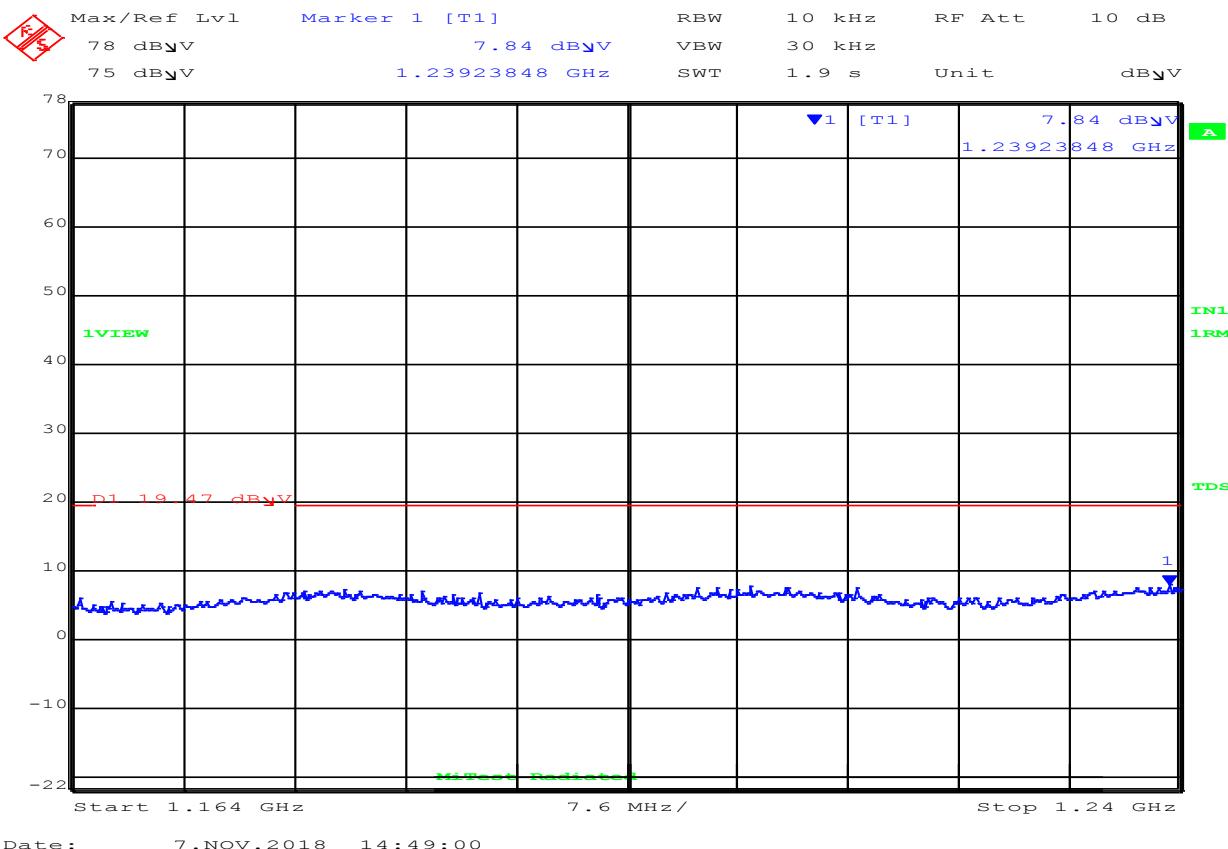
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



1164.00-1240.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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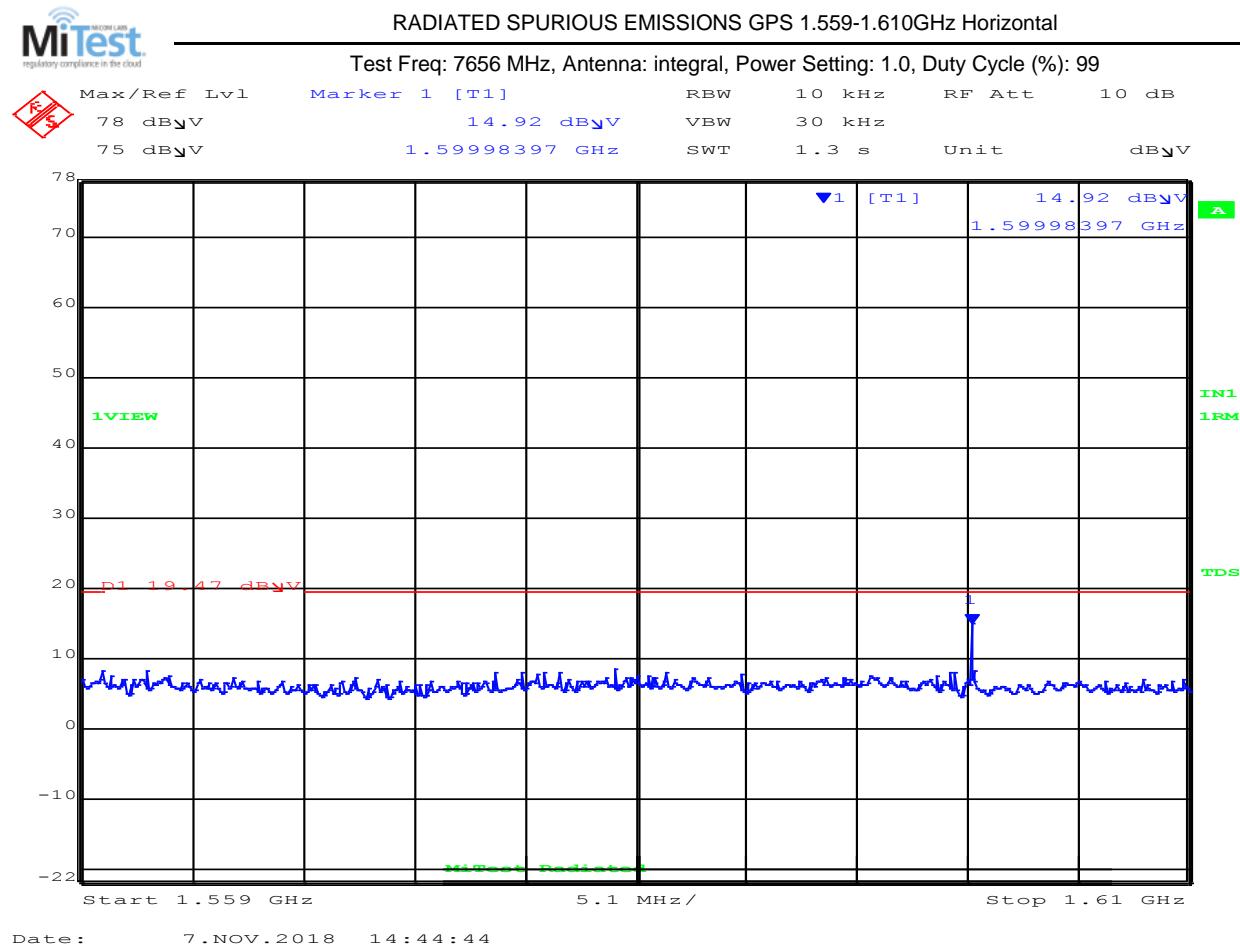


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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
2	1599.98	4.8	Average	Horizontal	150	0	19.47	-14.7	Pass

Test Notes:
Final Average measurements done with 1 KHz Receiver Bandwidth per standard

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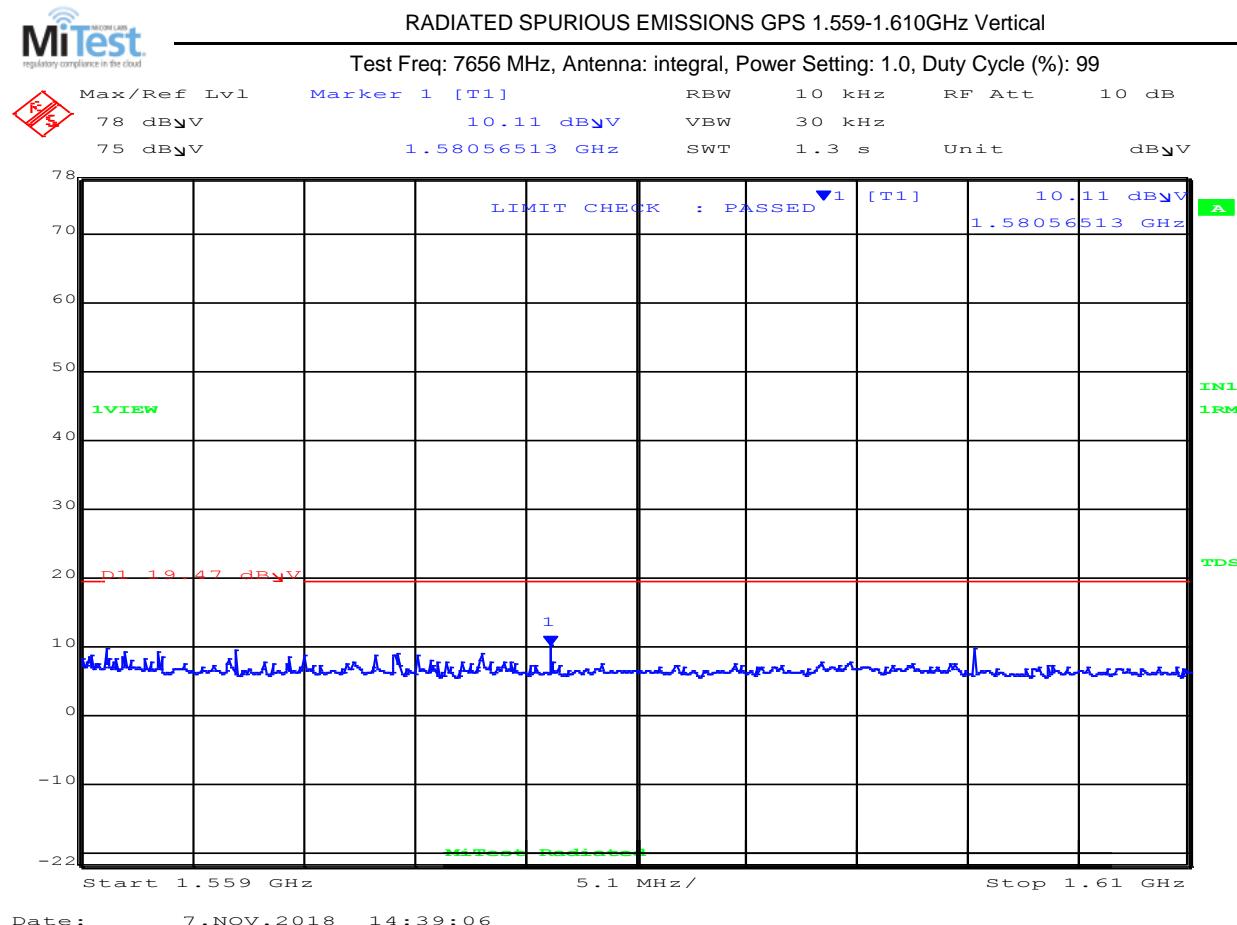


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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

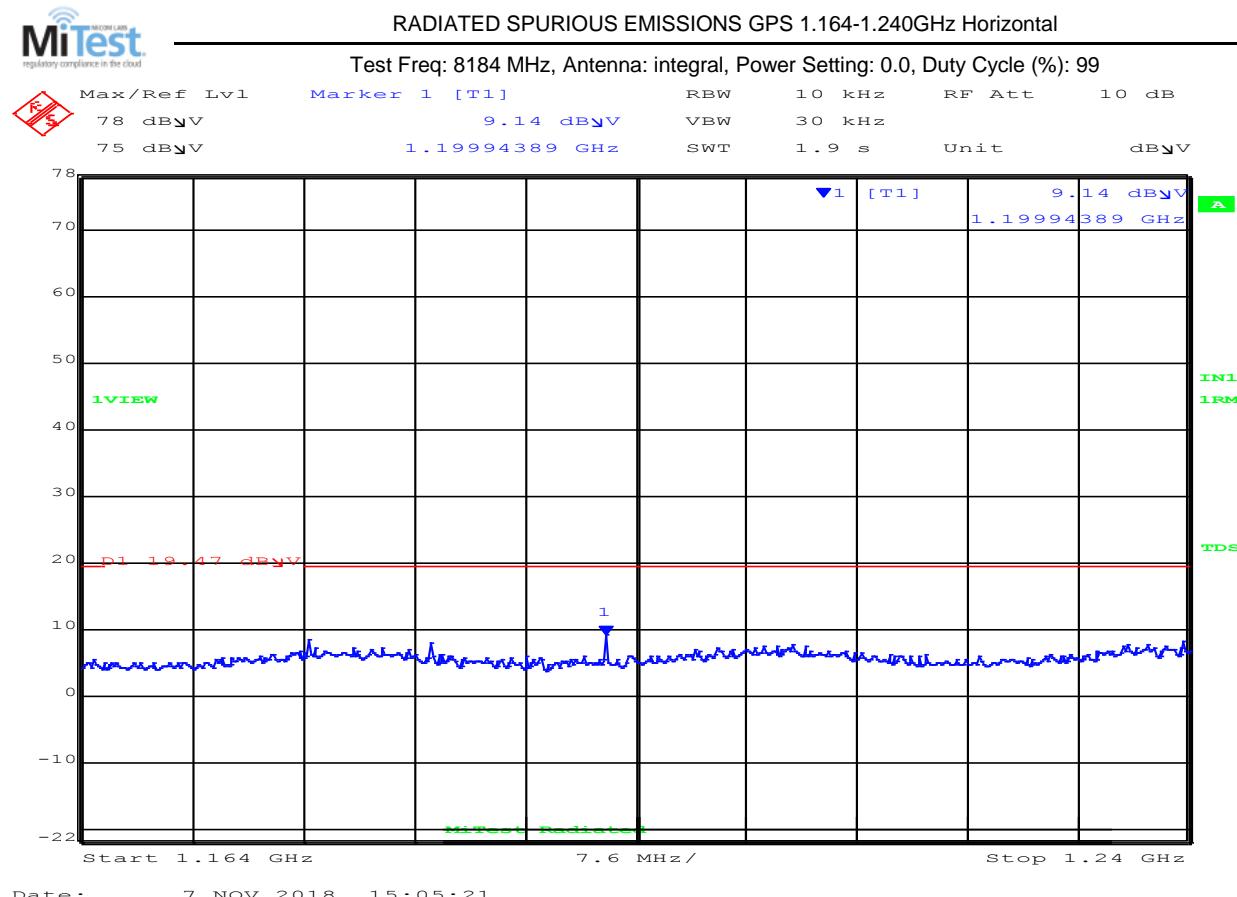
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8184 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz									
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

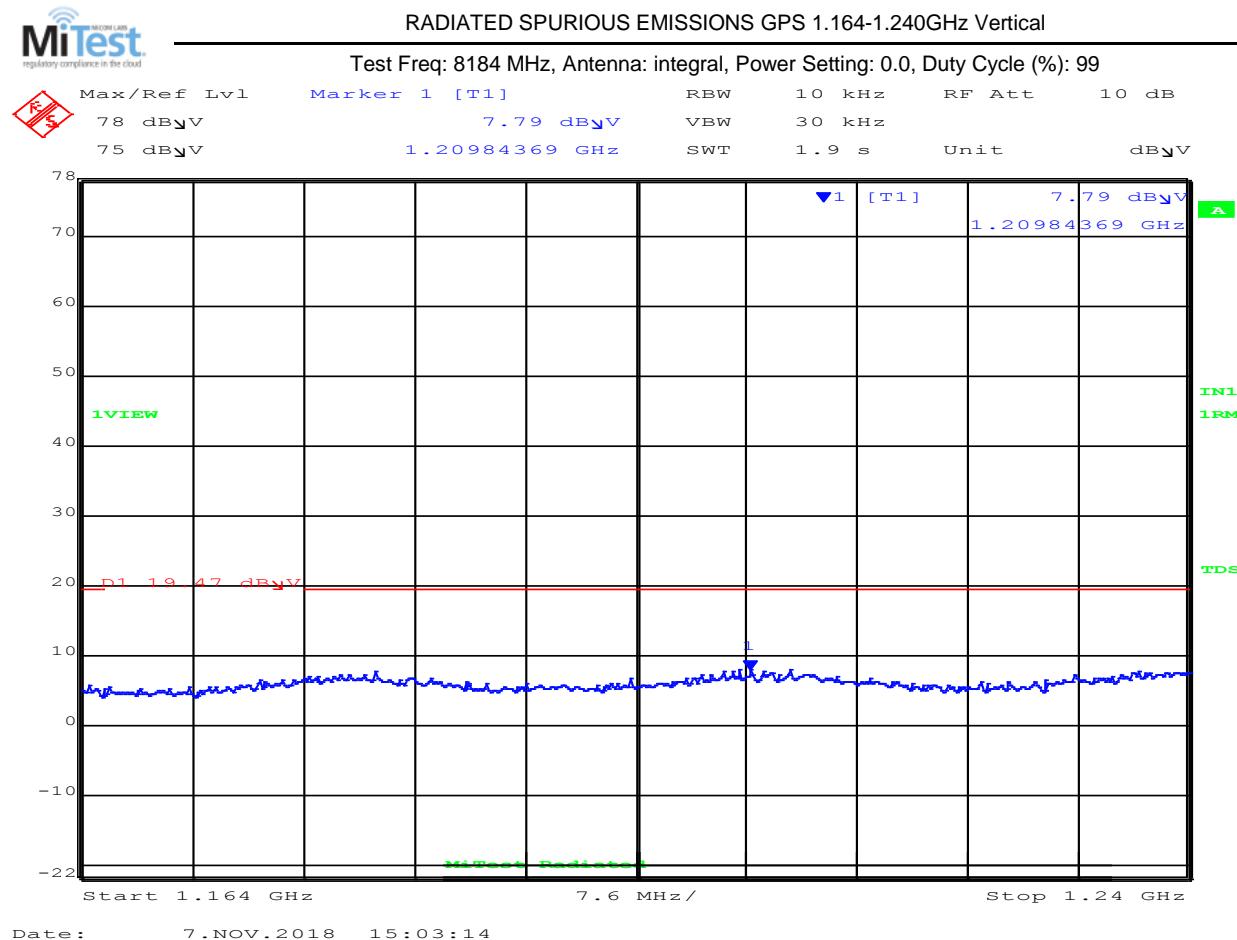


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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz										
Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop Removed										

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

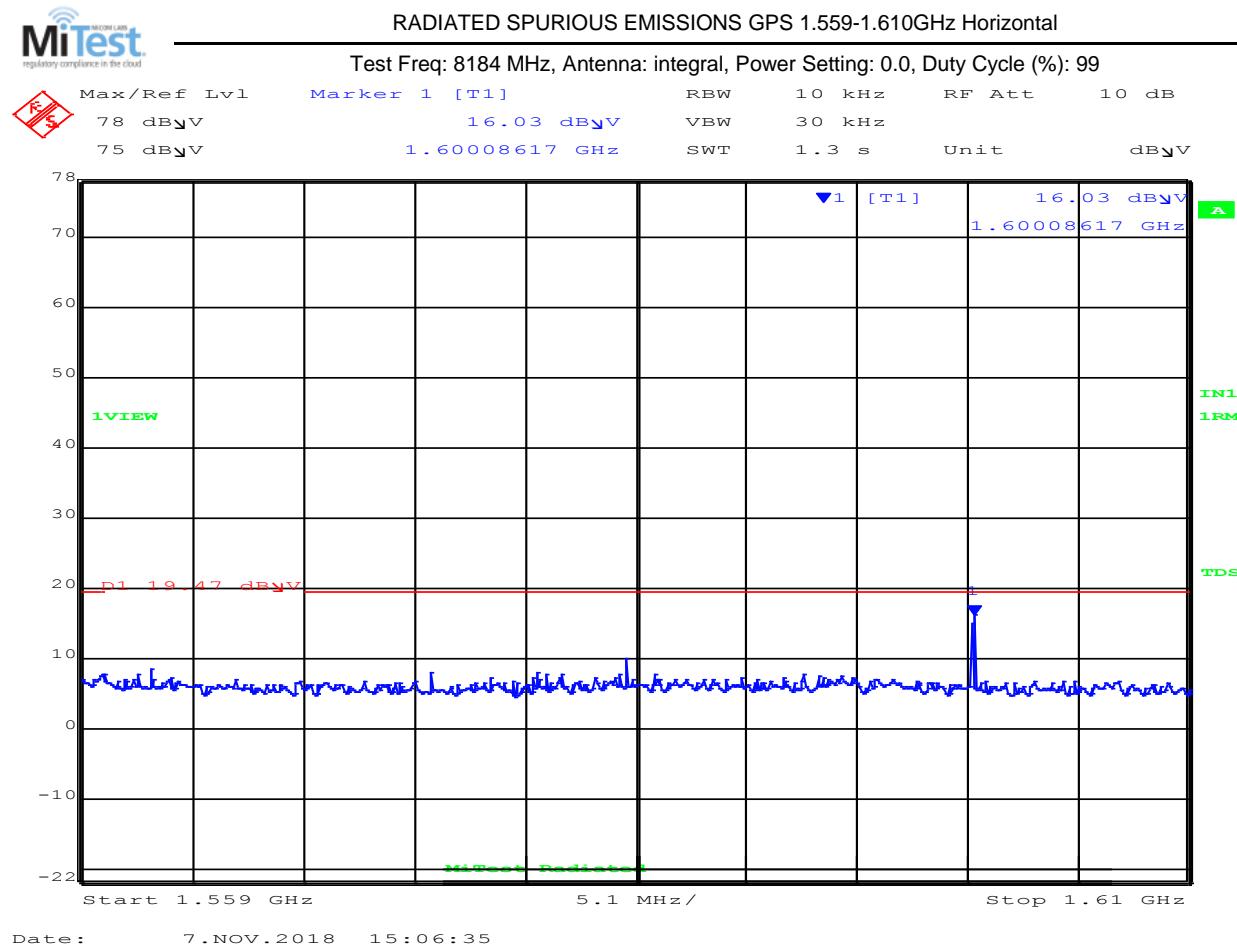


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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
2	1600.08	5.6*	Average	Horizontal	150	0	19.47	-13.9	Pass

Test Notes:
Final Average measurements done with 1 KHz Receiver Bandwidth per standard

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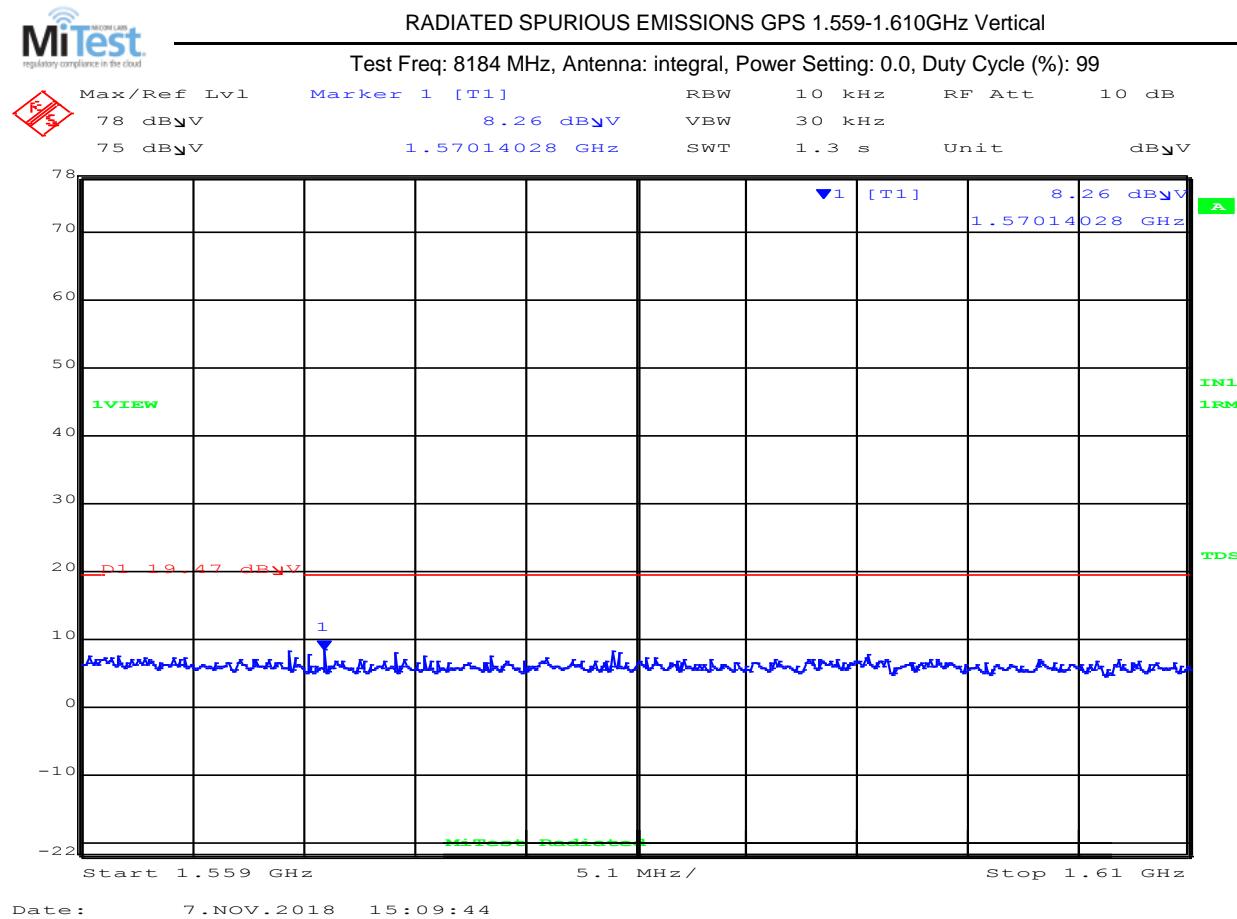


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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

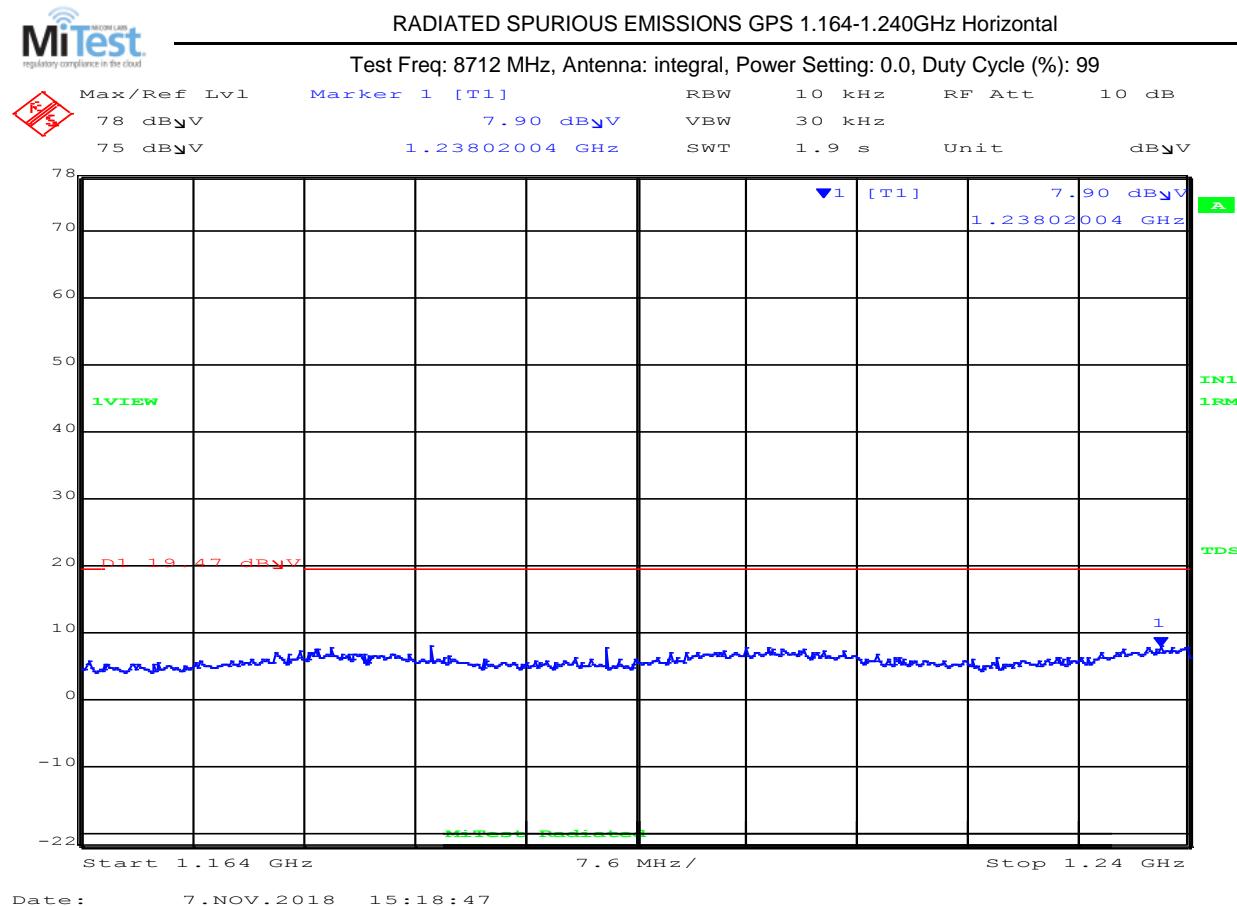
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8712 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

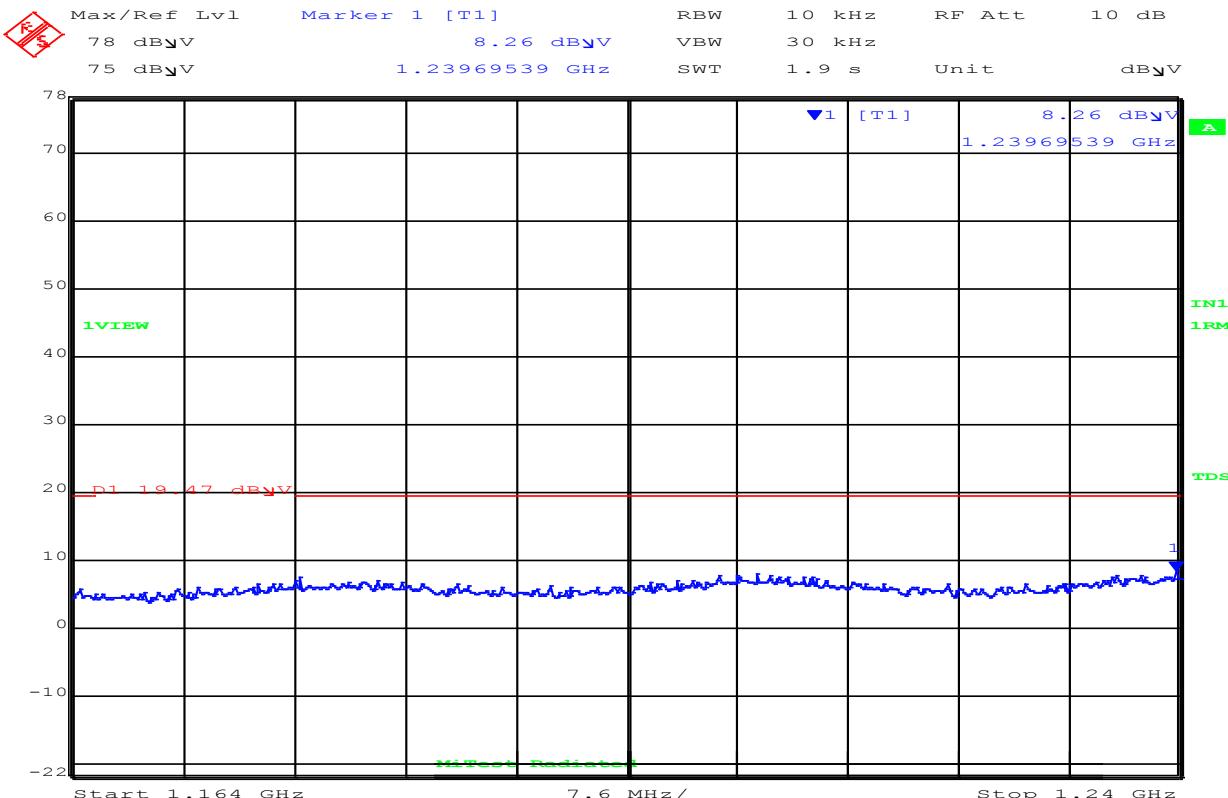
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 7.NOV.2018 15:20:30

1164.00-1240.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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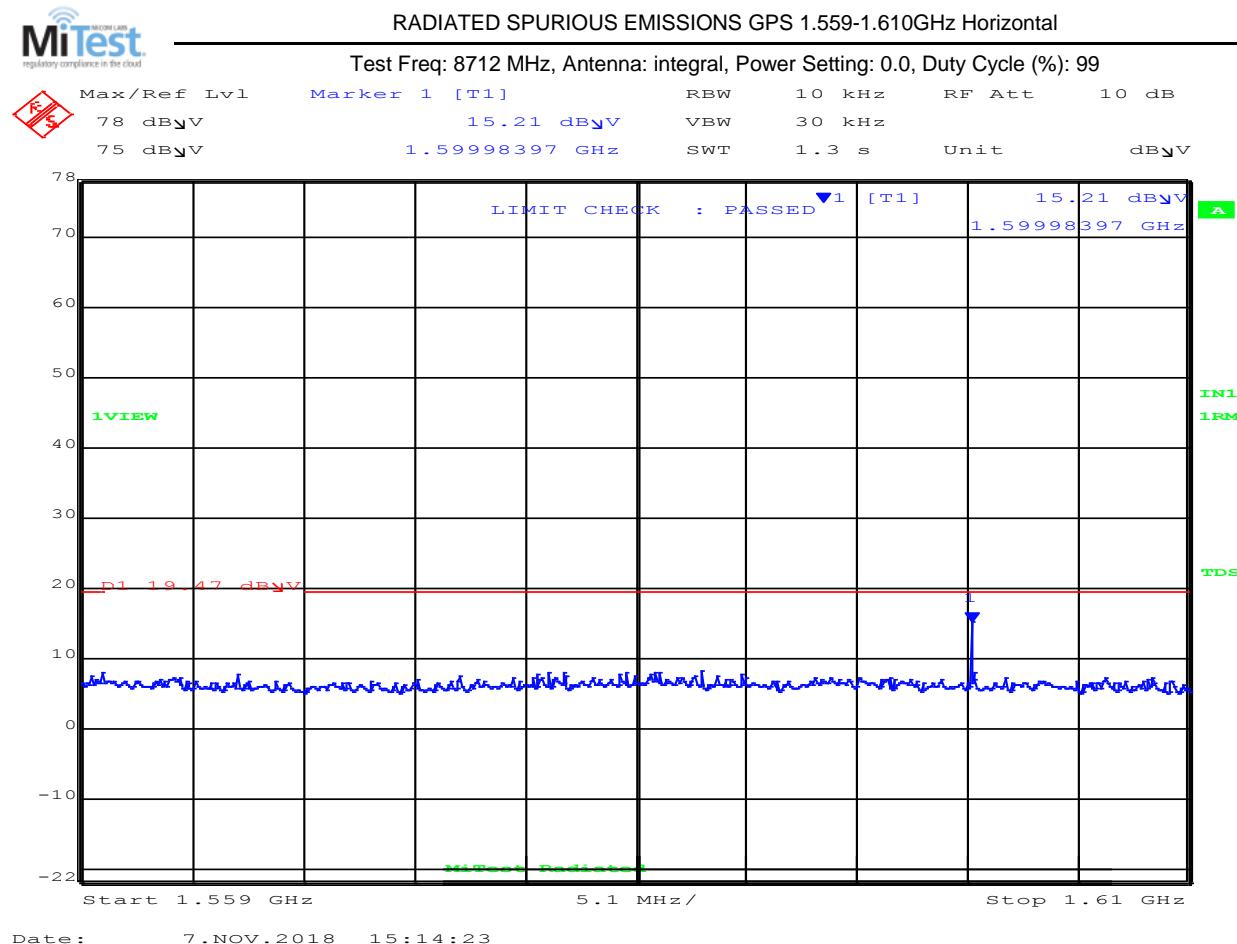


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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
2	1599.98	12.2*	Average	Horizontal	150	0	19.47	-7.3	Pass

Test Notes:
Final Average measurements done with 1 KHz Receiver Bandwidth per standard

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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

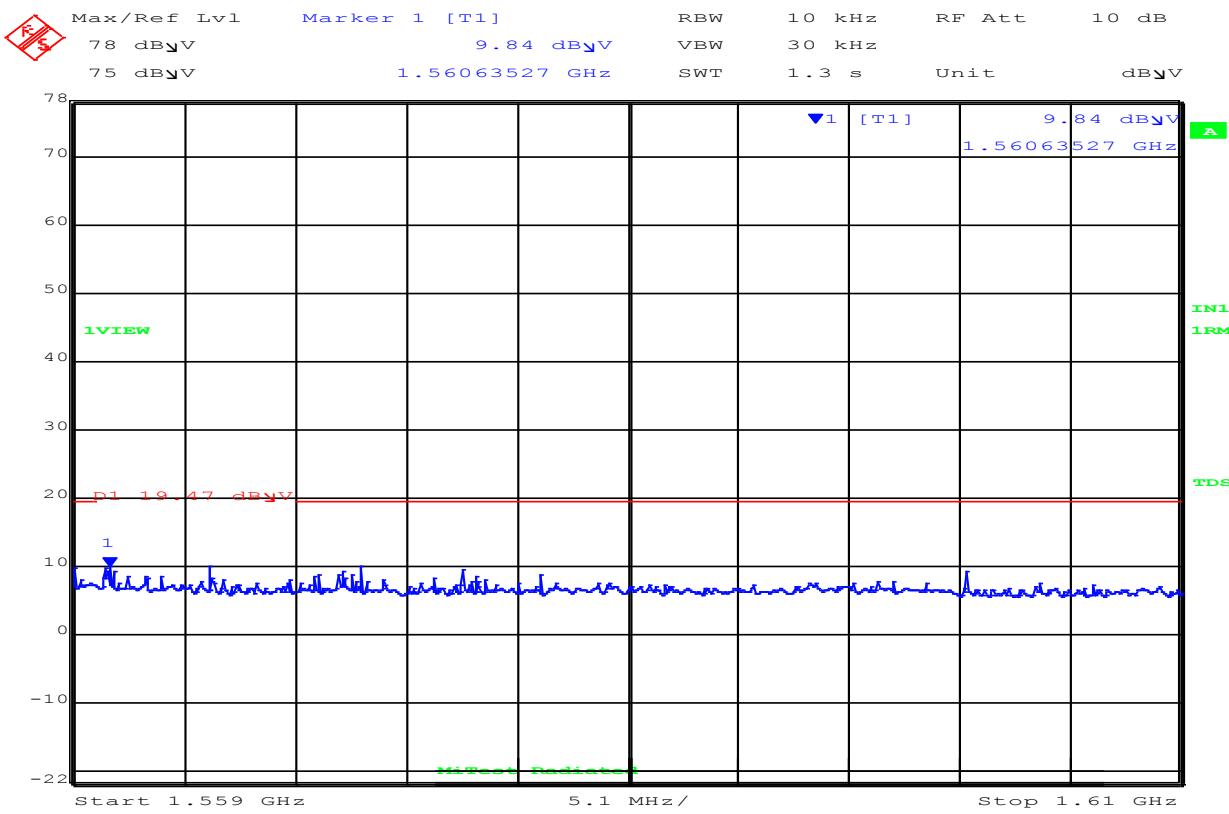
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 7.NOV.2018 15:13:09

1559.00-1610.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

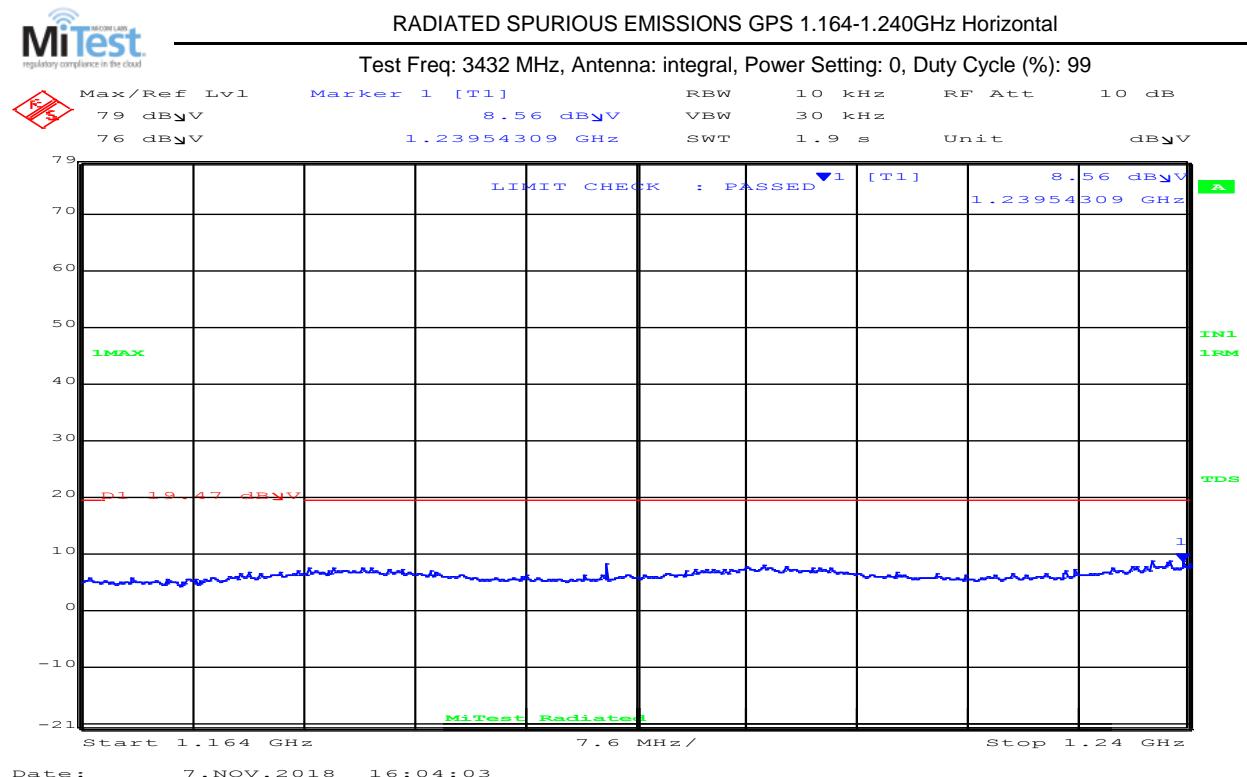
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9.4.2.2. Camouflage AL5955

3432 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal	
Antenna:	Chip
Antenna Gain (dBi):	1.0
Beam Forming Gain (Y):	Not Applicable
Channel Frequency (MHz):	3432.00
Power Setting:	Max
Variant:	500 MHz Bandwidth
Modulation:	BPM/BPSK
Duty Cycle (%):	99%
Data Rate:	
Tested By:	JMH

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH



Test Measurement Results										
1164.00-1240.00 MHz										
Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop Removed										

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

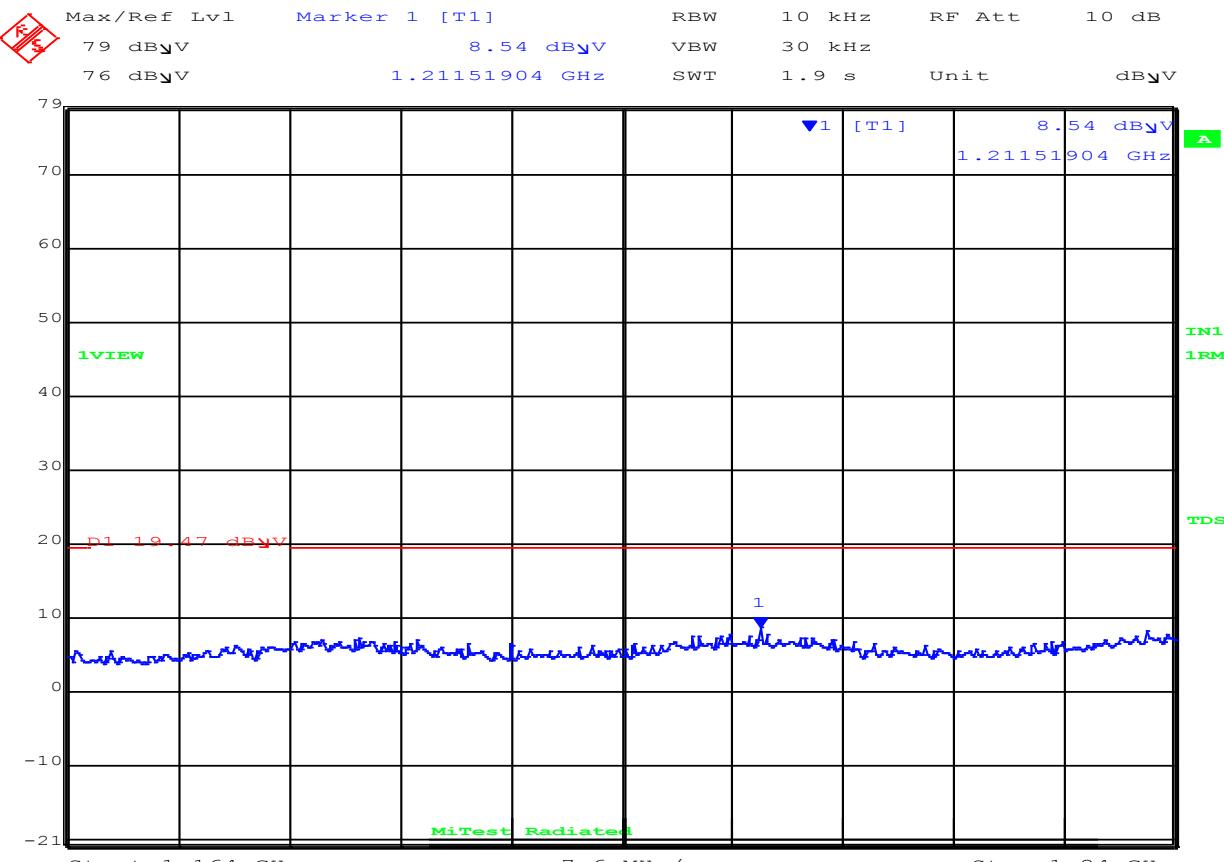
Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 7.NOV.2018 16:02:00

Test Measurement Results

1164.00-1240.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									

Test Notes:
Laptop Removed

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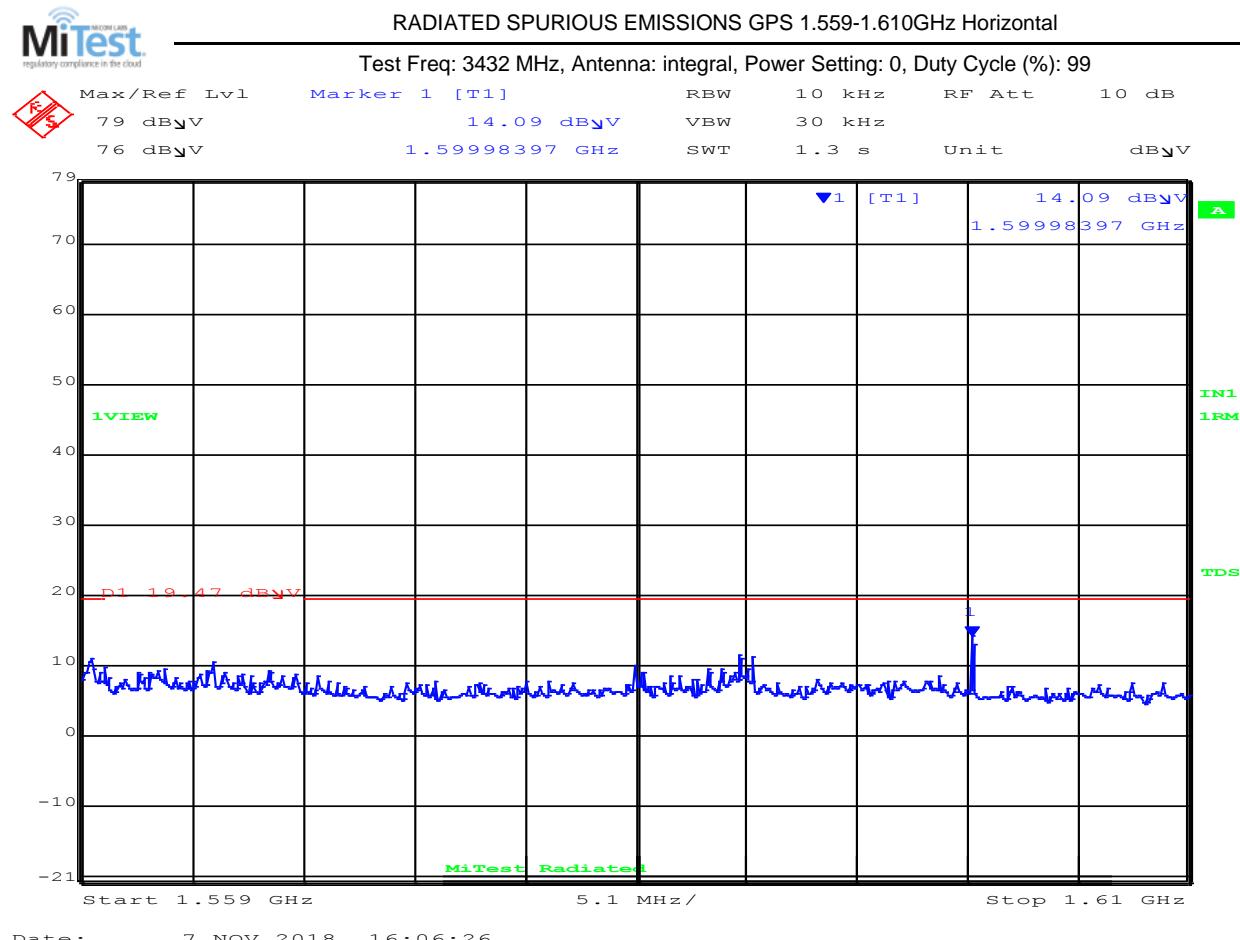


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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB _{µV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{µV/m}	Margin dB	Pass /Fail
1	1599.98	3.2*	Average	Horizontal	150	0	19.47	-16.27	Pass

Test Notes:
Final Average measurements done with 1 KHz Receiver Bandwidth per standard.

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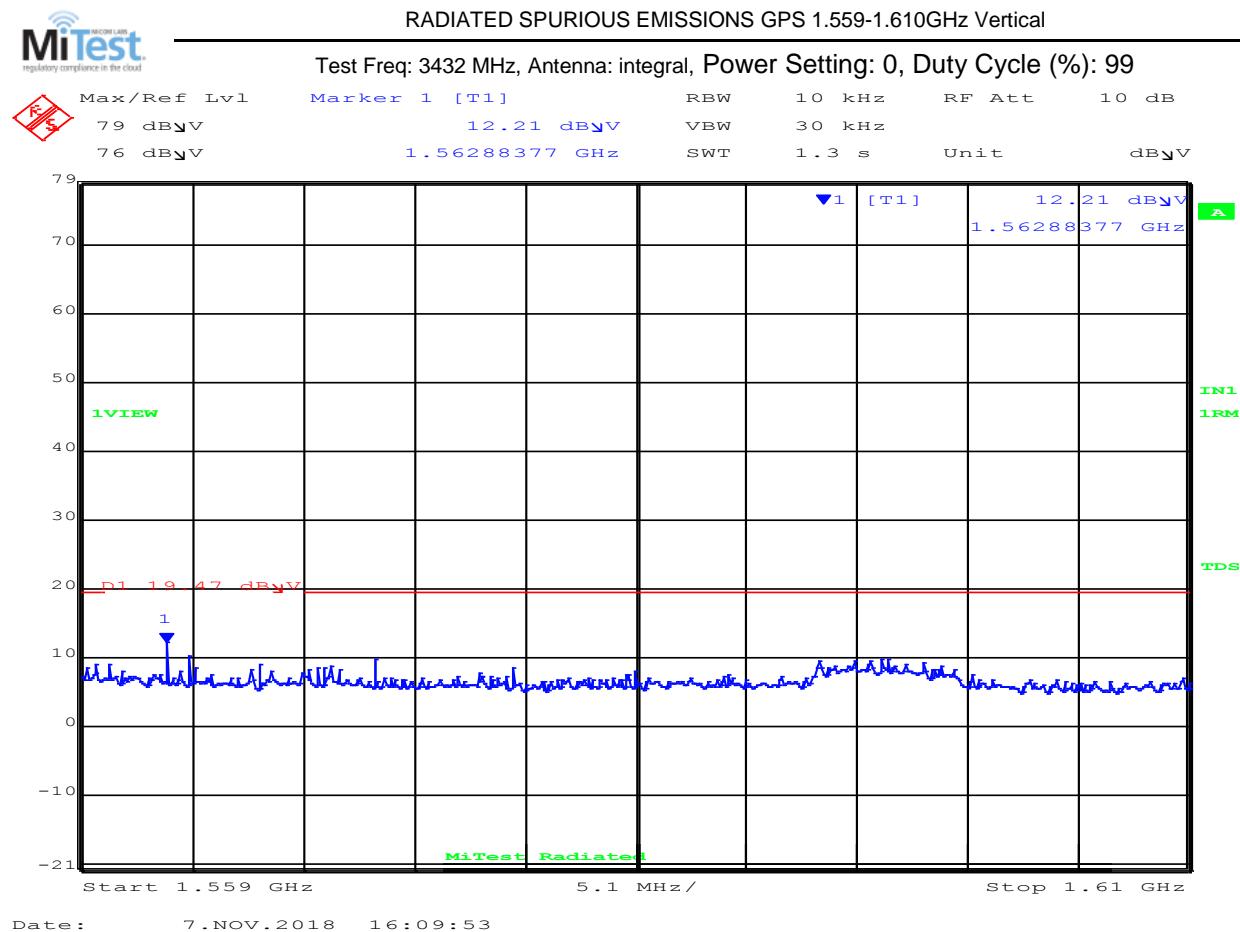


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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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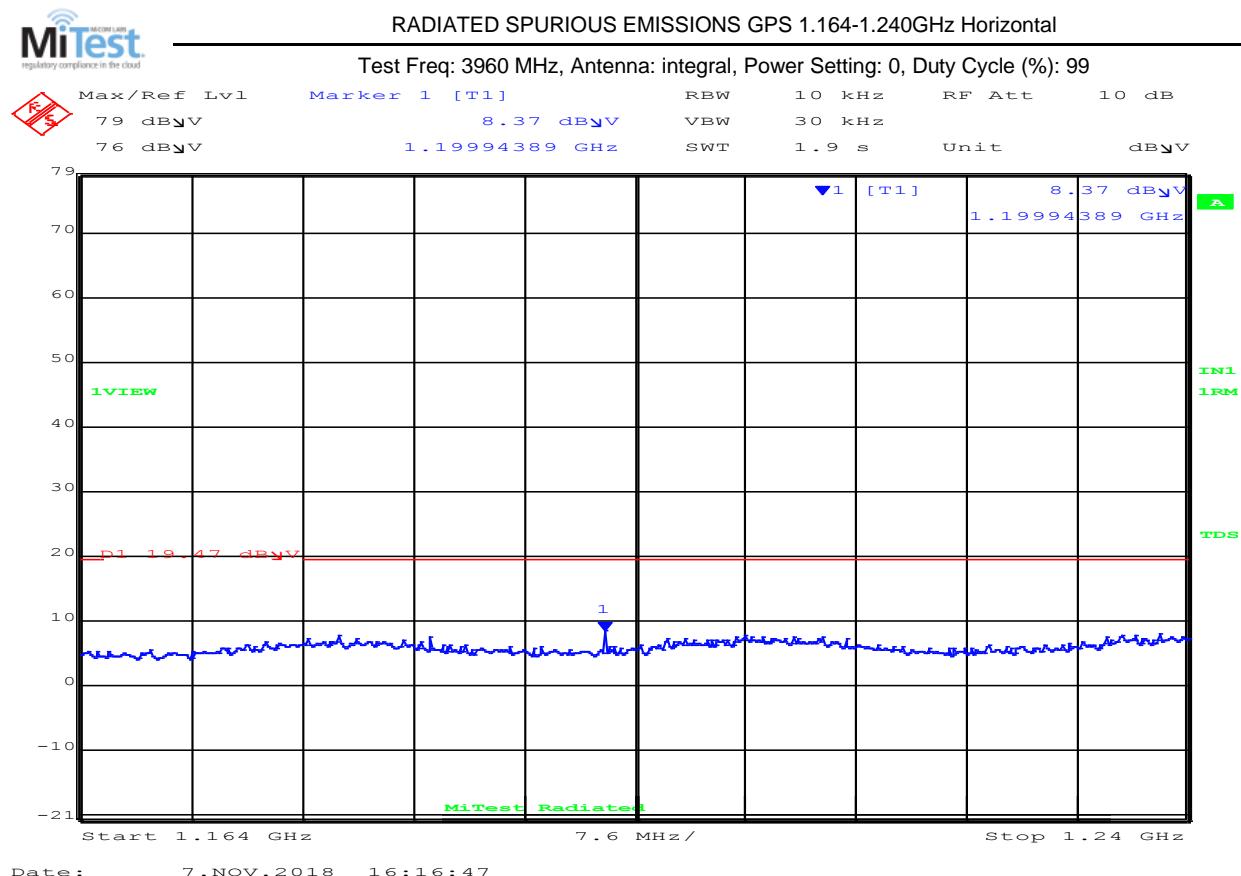
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3960 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz									
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

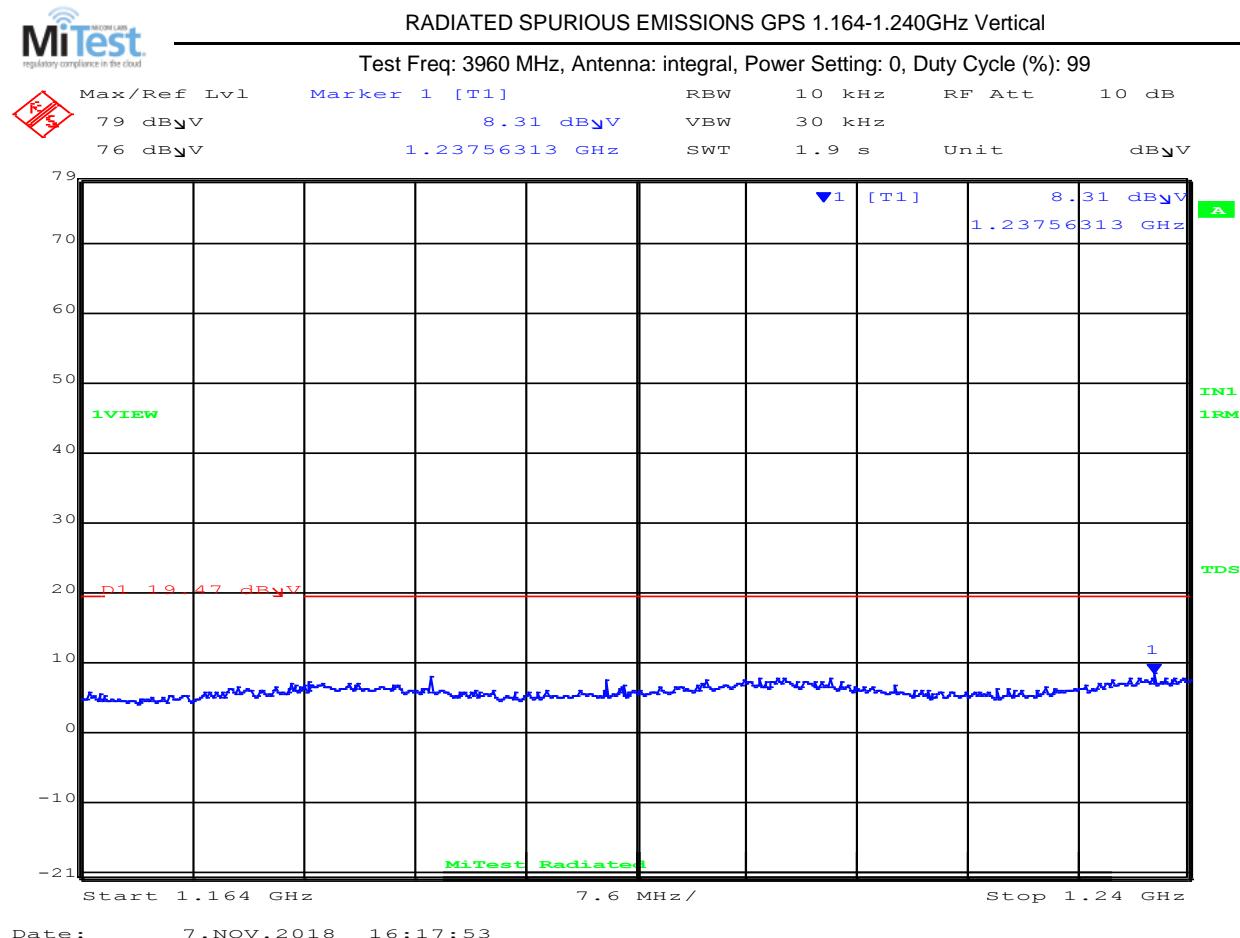


Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz										
Num	Frequency MHz	Level dB _{µV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{µV/m}	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop Removed										

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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

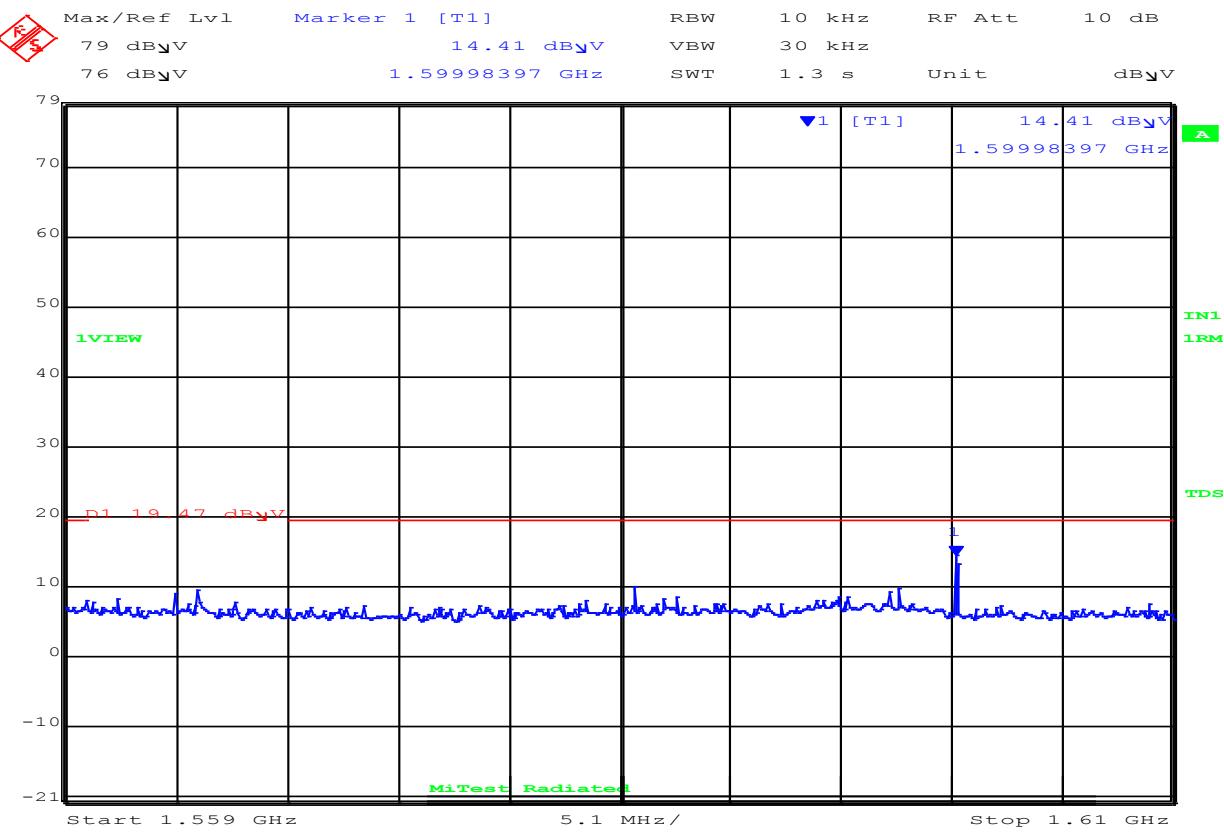
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1559.00-1610.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
2	1599.99	2.8*	Average	Horizontal	150	0	19.47	-16.67	Pass

Test Notes:

Final Average measurements done with 1 KHz Receiver Bandwidth per standard

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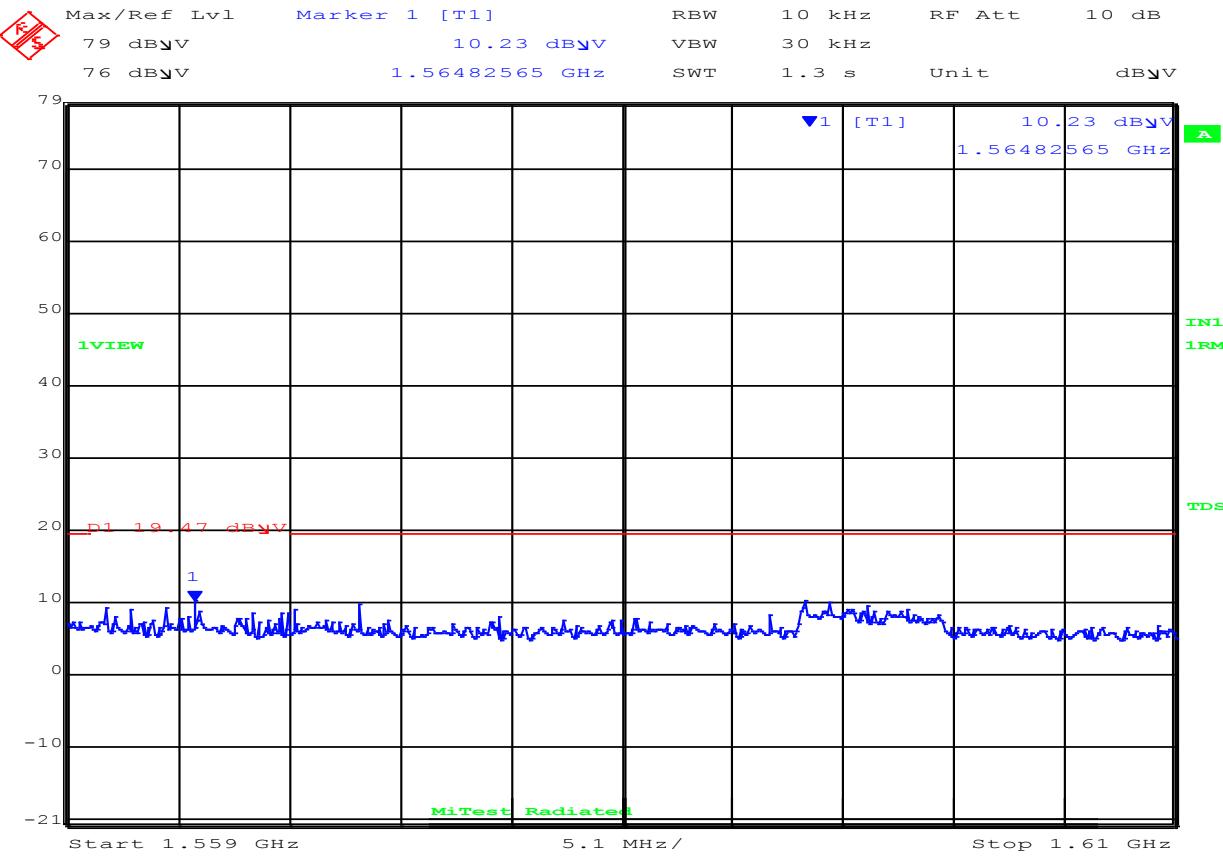
Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 7.NOV.2018 16:12:47

Test Measurement Results									
1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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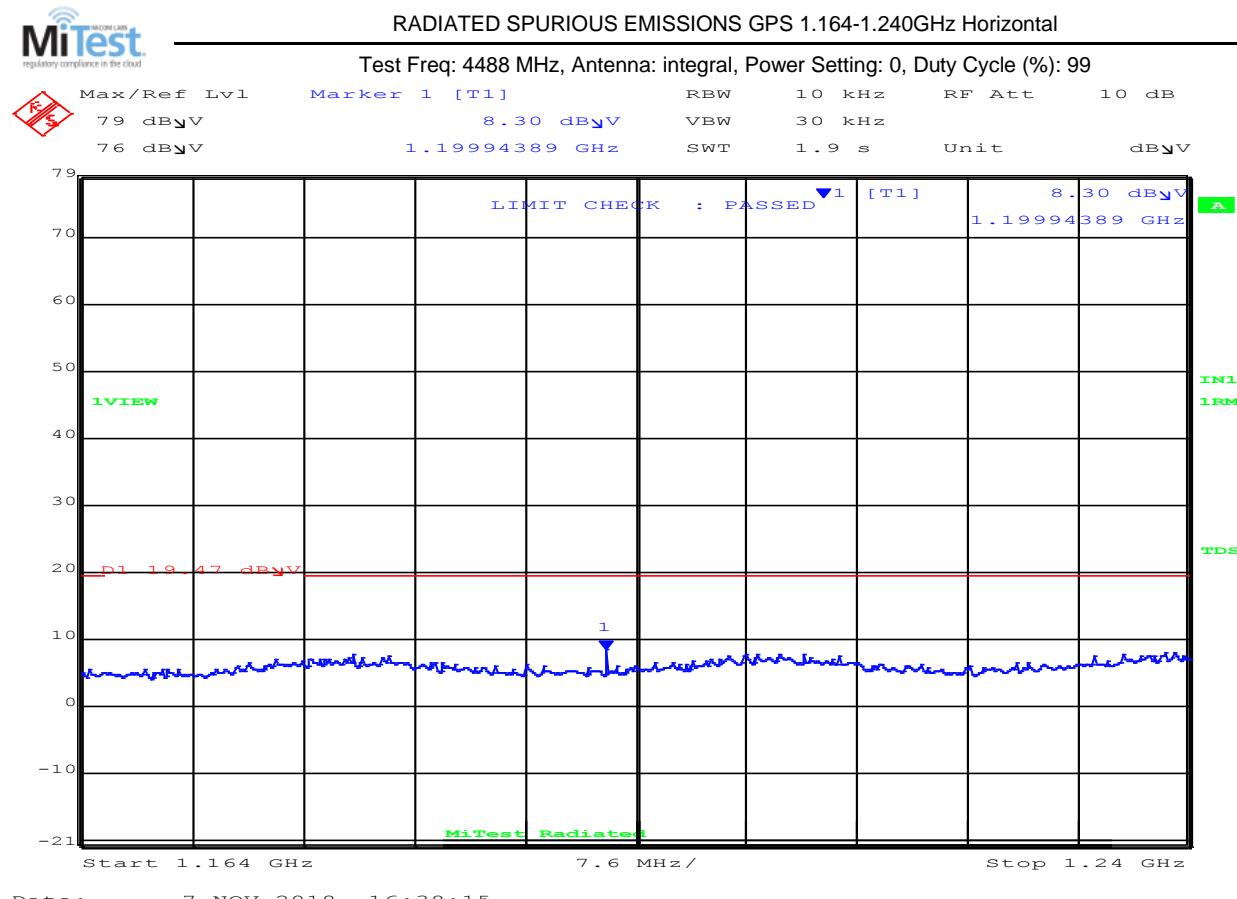
Title: Alereon AL5955, AL5930, AL5934
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4488 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz										
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop Removed										

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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

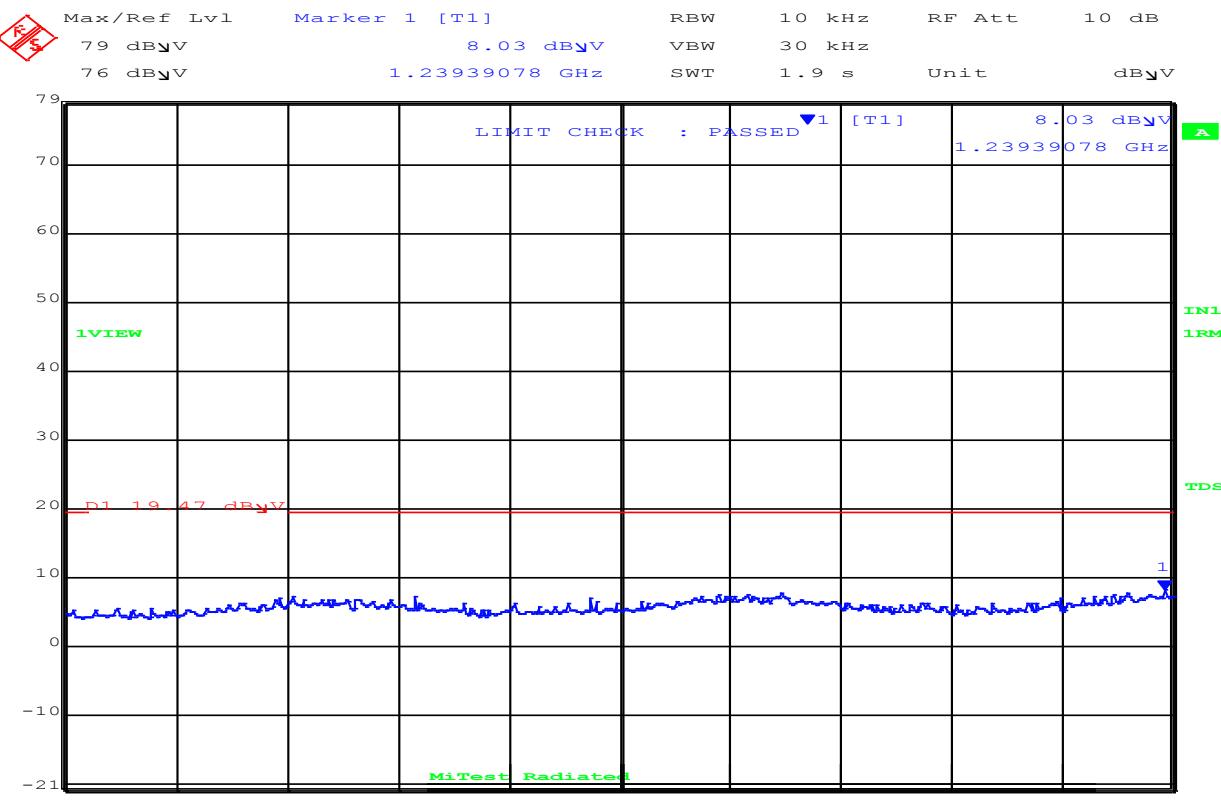
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 7.NOV.2018 16:36:37

1164.00-1240.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

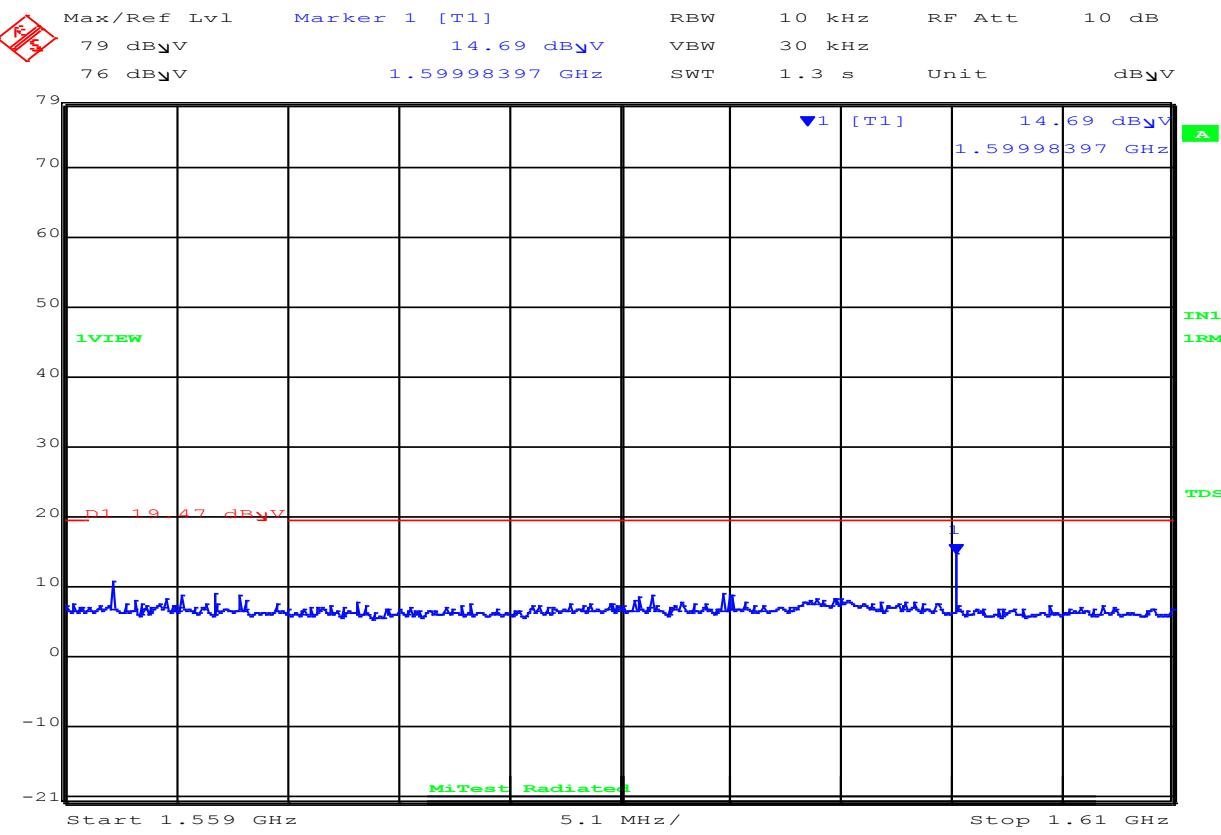
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1559.00-1610.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
2	1599.98	2.1*	Average	Horizontal	150	0	19.47	-17.4	Pass

Test Notes:

Final Average measurements done with 1 KHz Receiver Bandwidth per standard

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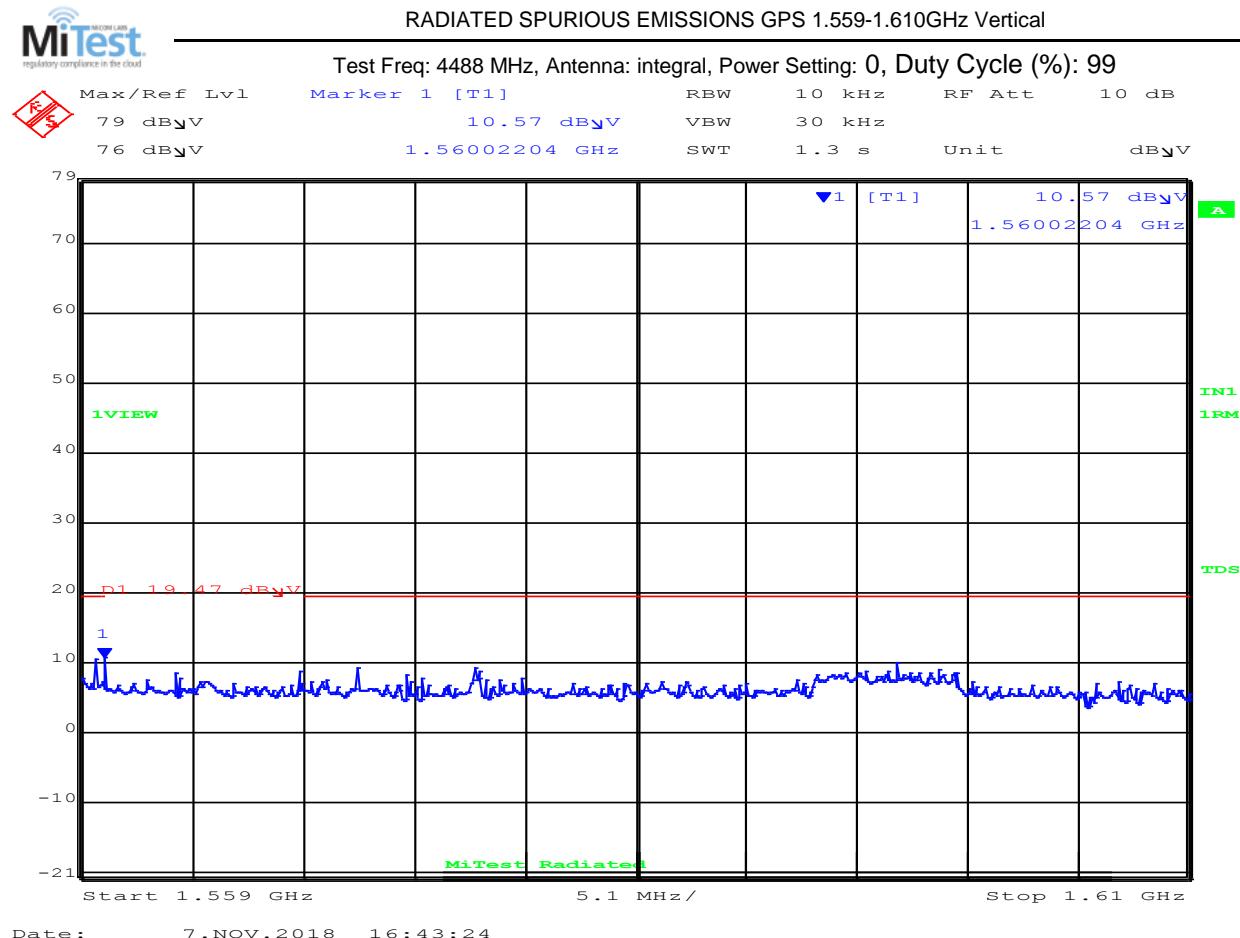


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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz										
Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop Removed										

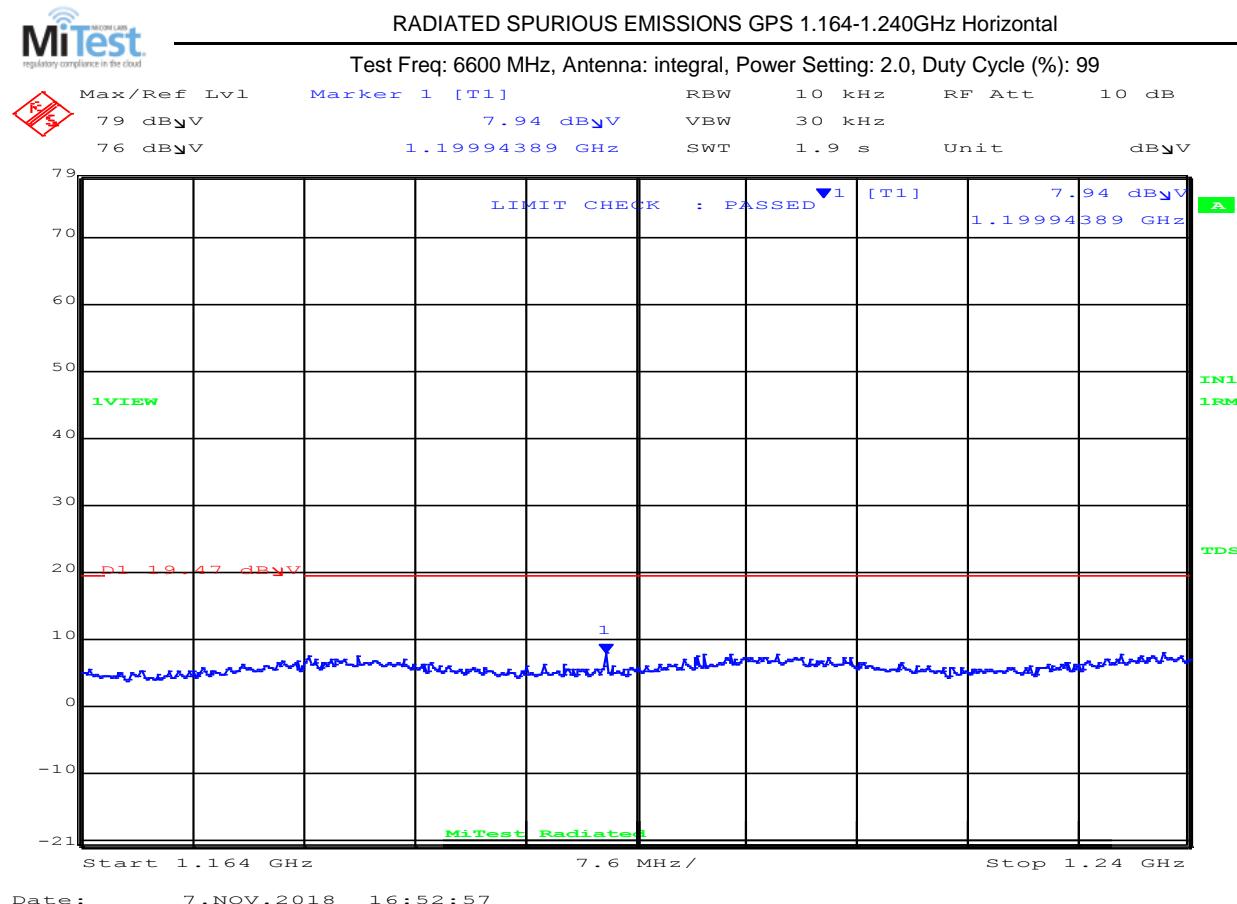
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6600 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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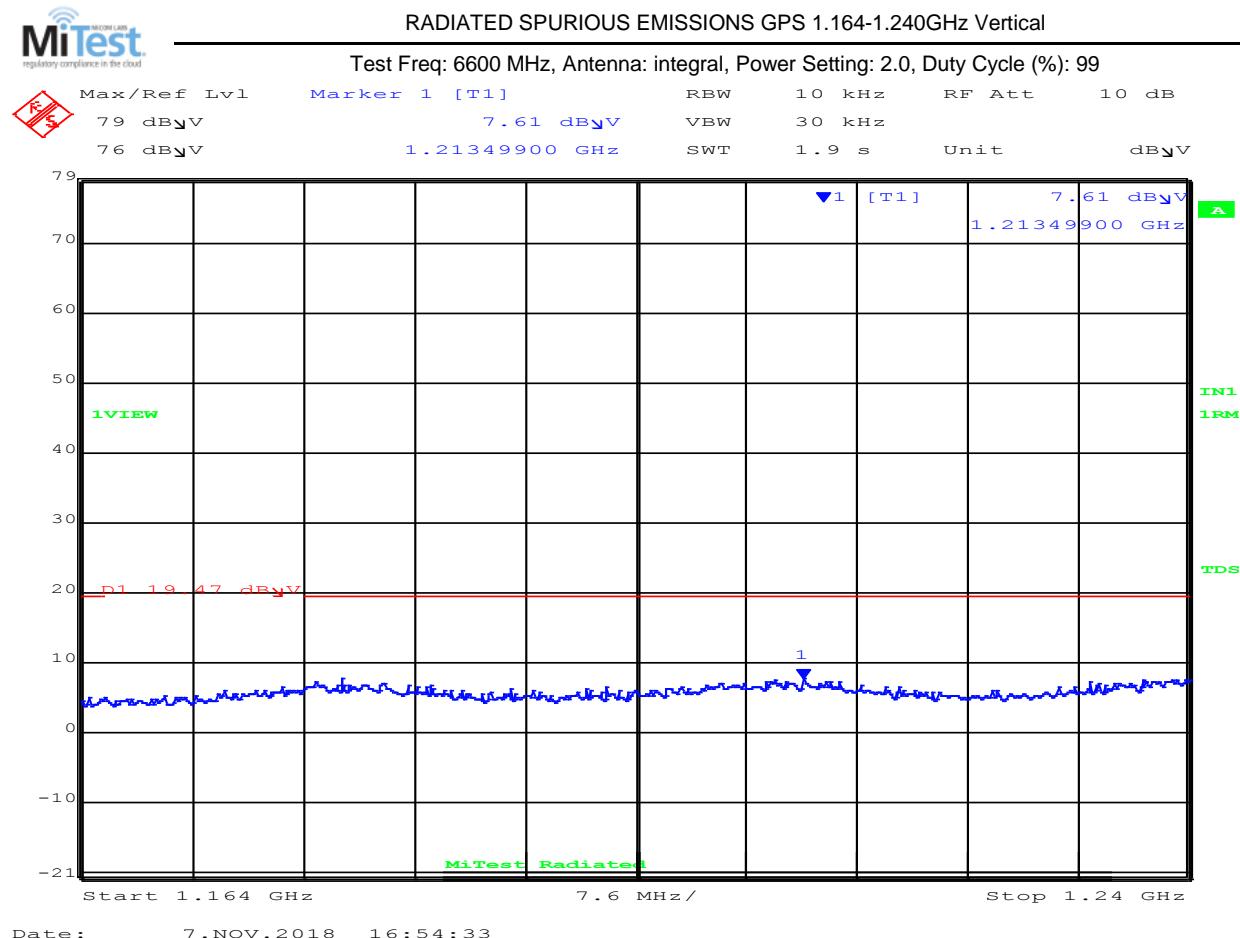


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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz										
Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop Removed										

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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

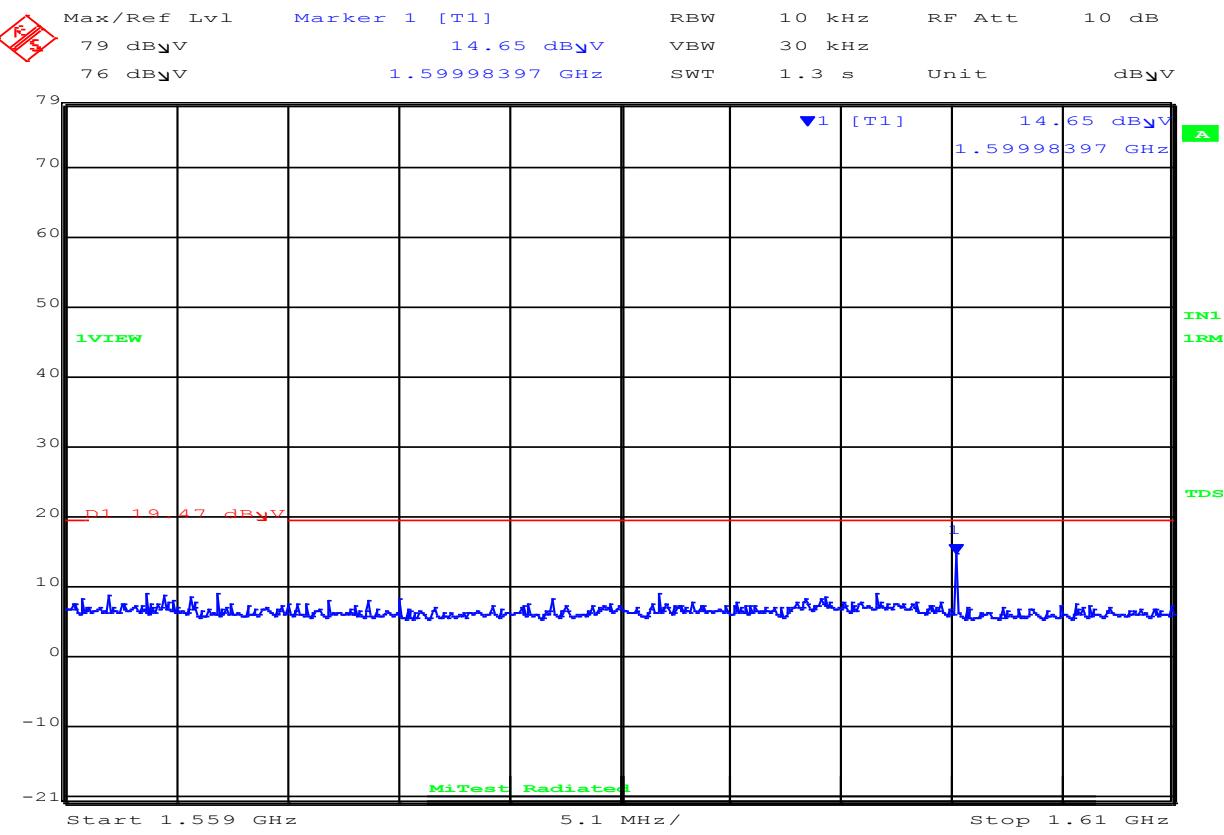
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 7.NOV.2018 16:49:03

1559.00-1610.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
2	1599.98	1.9*	Average	Horizontal	150	0	29.4	-3.8	Pass

Test Notes:

Final Average measurements done with 1 KHz Receiver Bandwidth per standard

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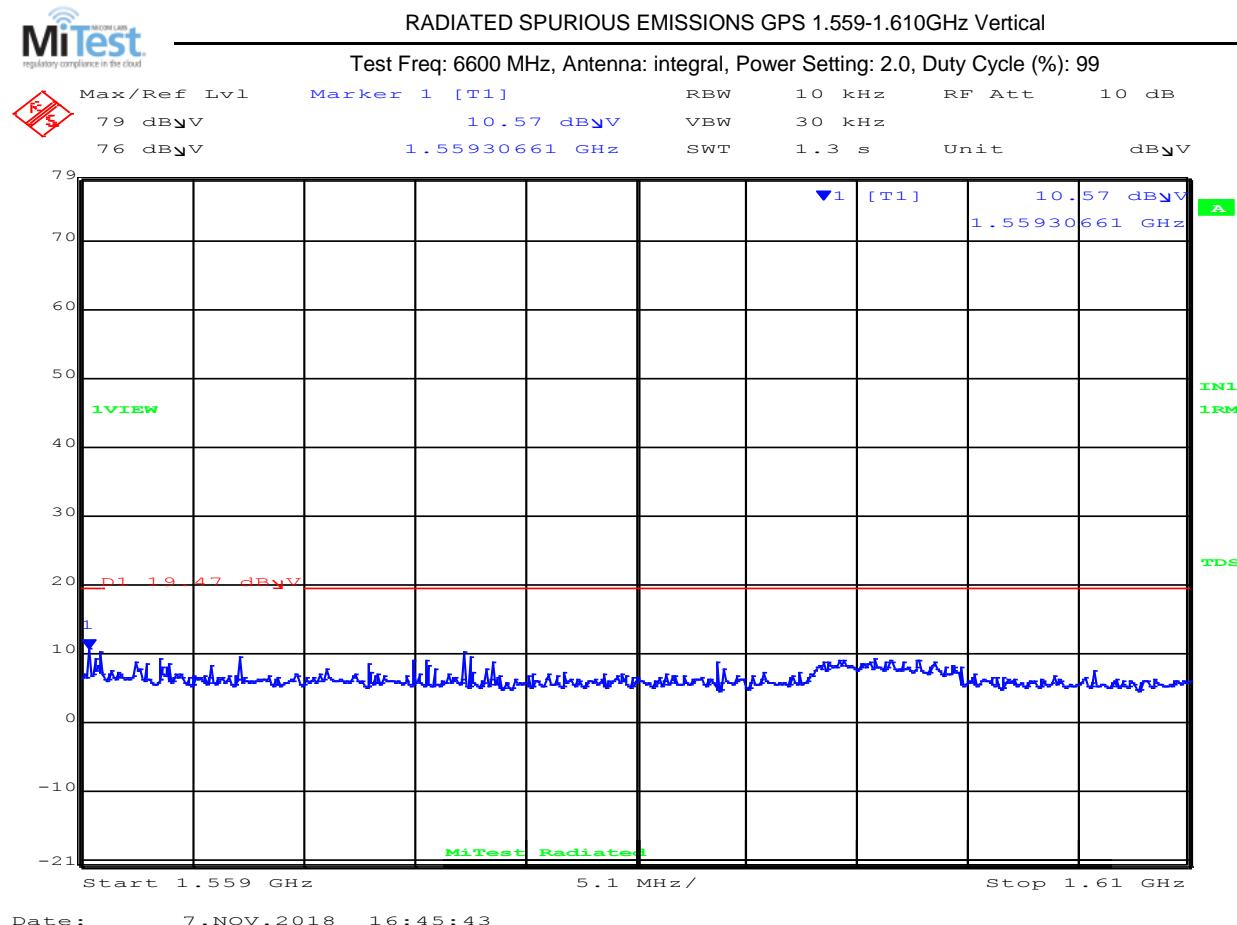


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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



Date: 7.NOV.2018 16:45:43

1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

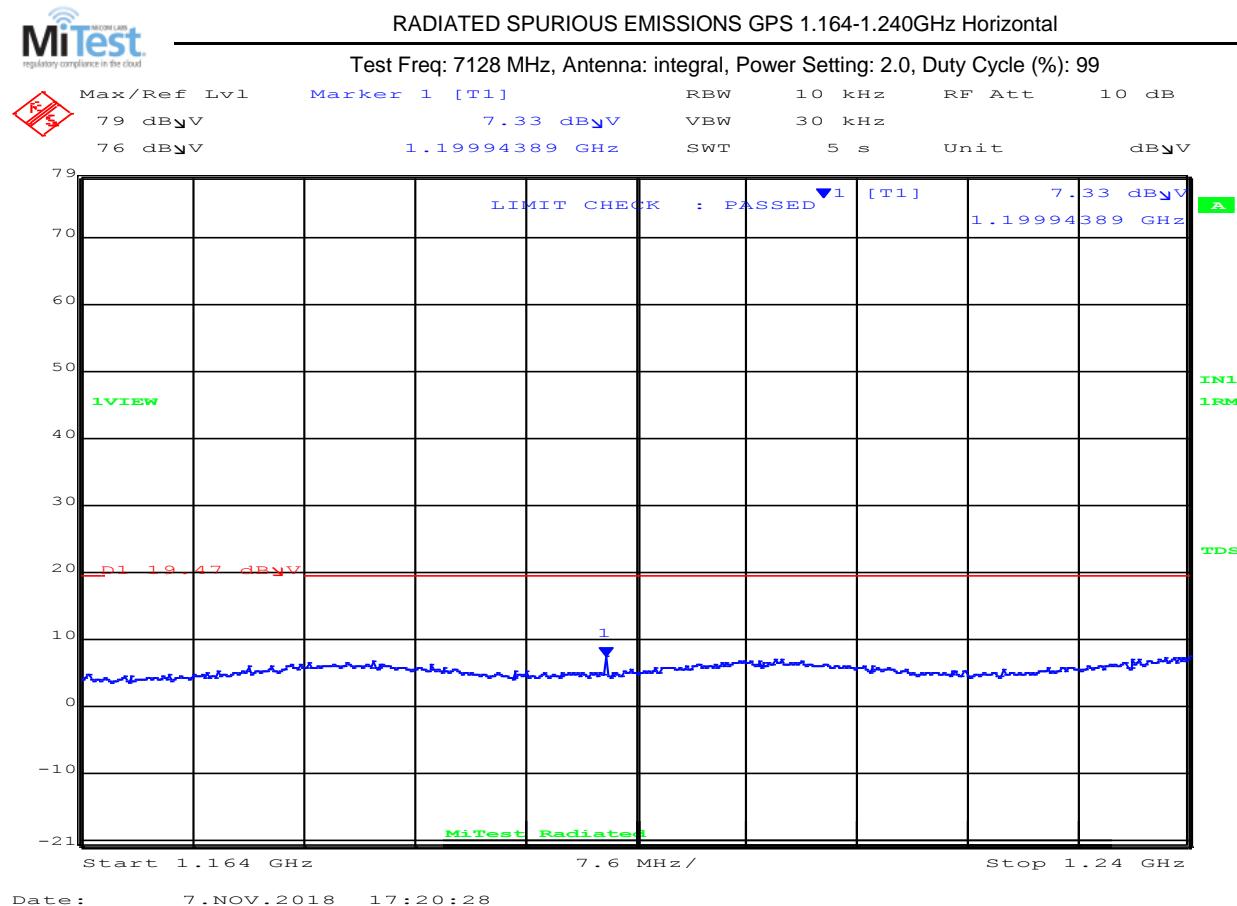
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7128 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz										
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop Removed										

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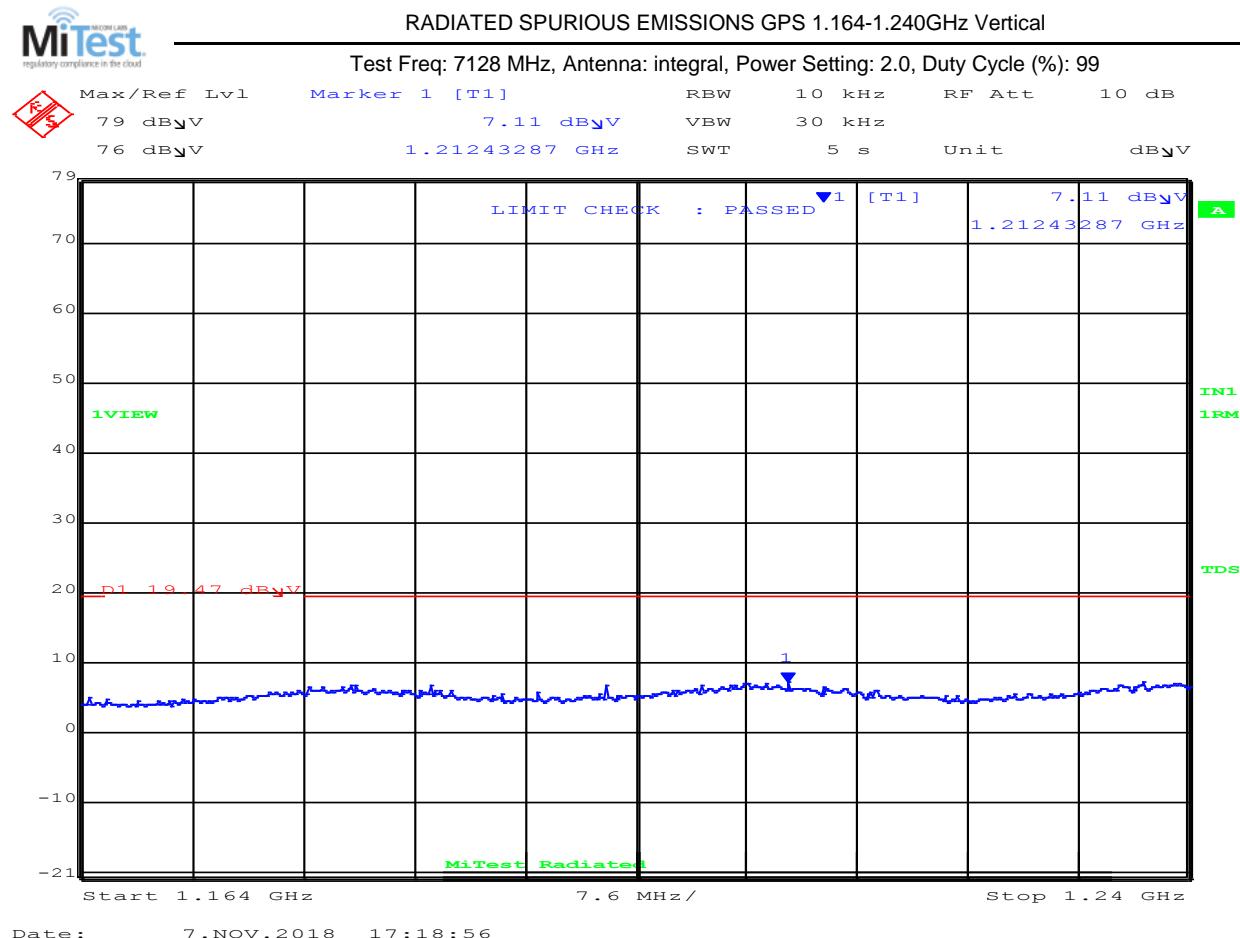


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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz										
Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop Removed										

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

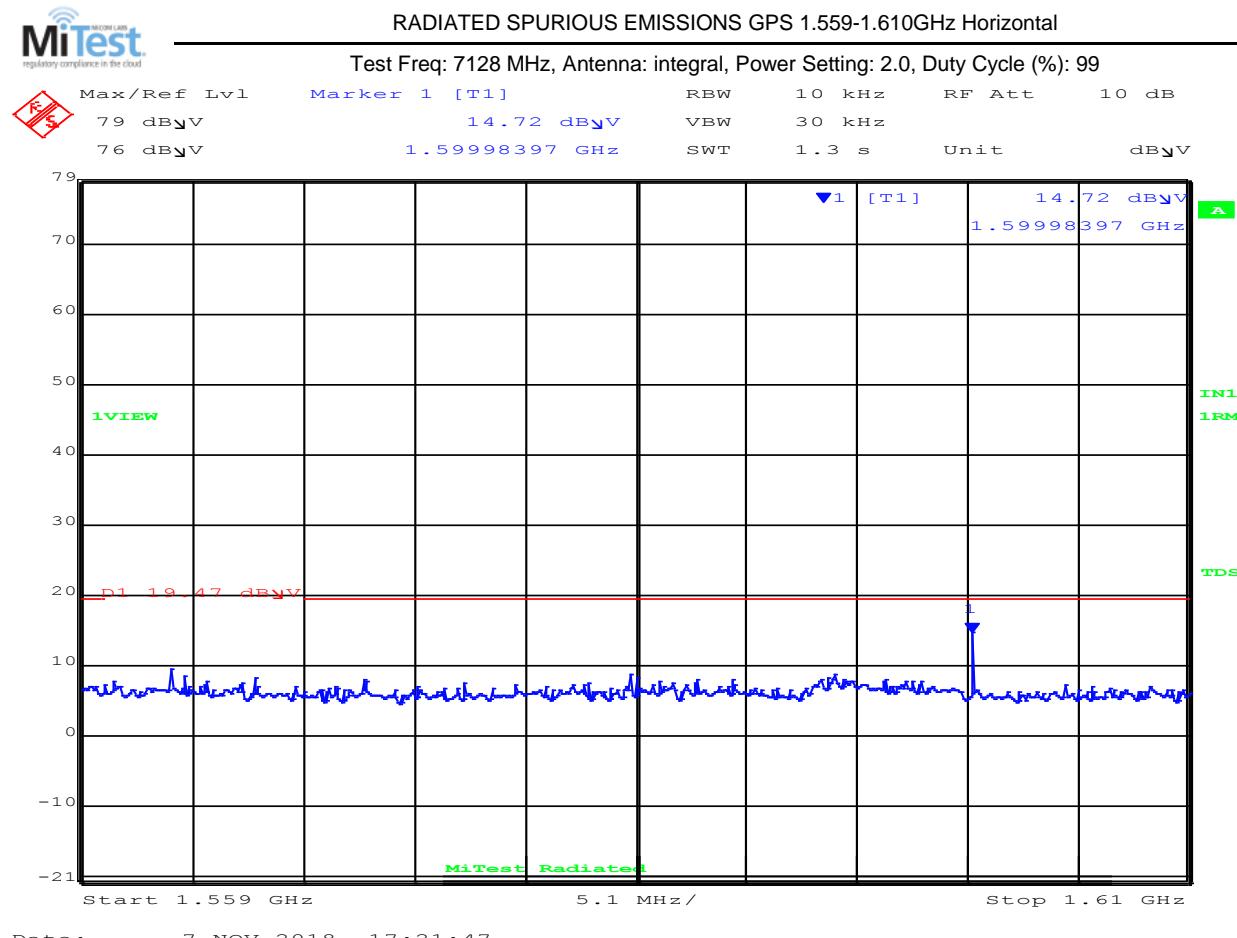


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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



Date: 7.NOV.2018 17:21:47

1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail
2	1599.98	1.8*	Average	Horizontal	150	0	19.47	-3.8	Pass
Test Notes:									
Final Average measurements done with 1 KHz Receiver Bandwidth per standard									

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

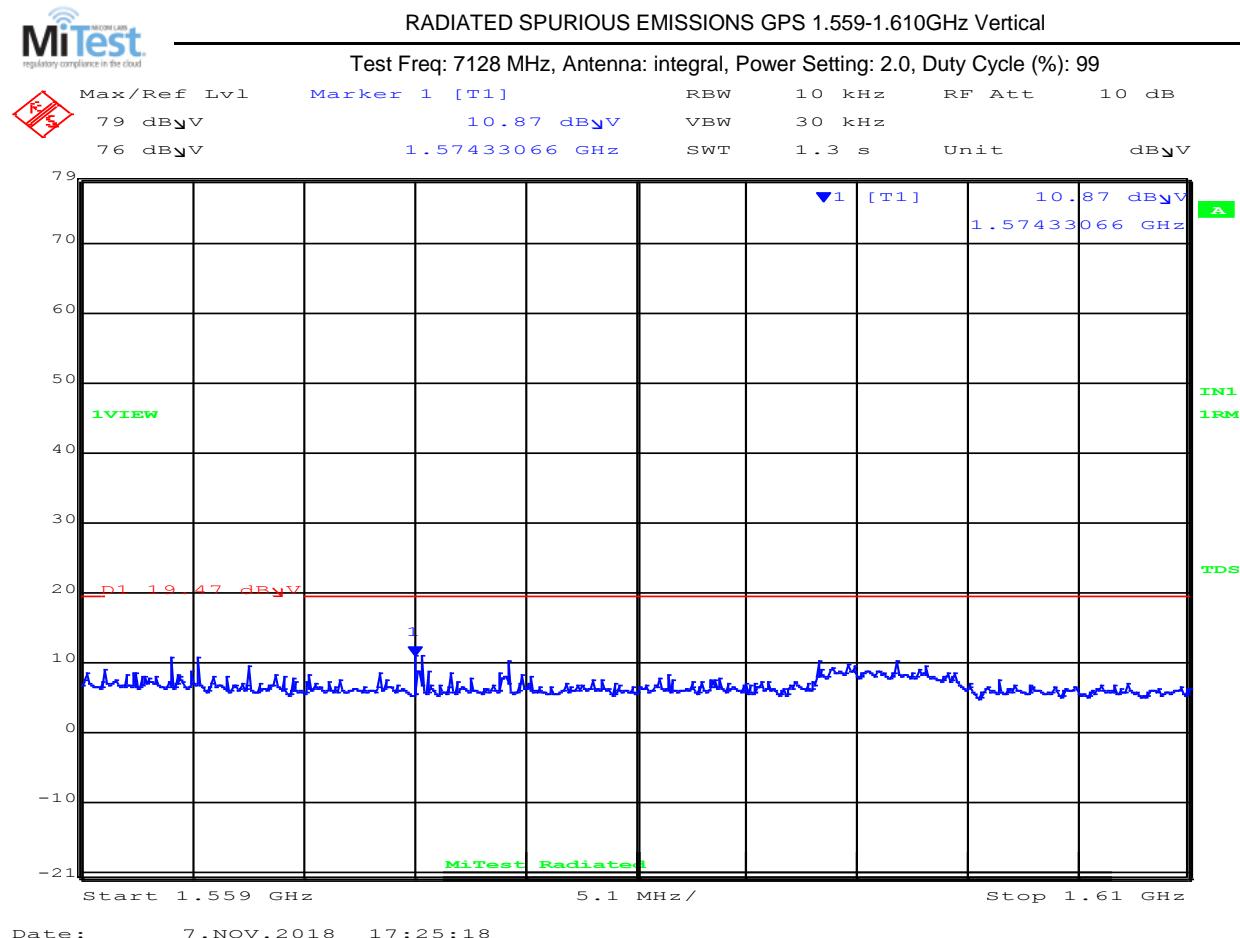


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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz										
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop Removed										

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.



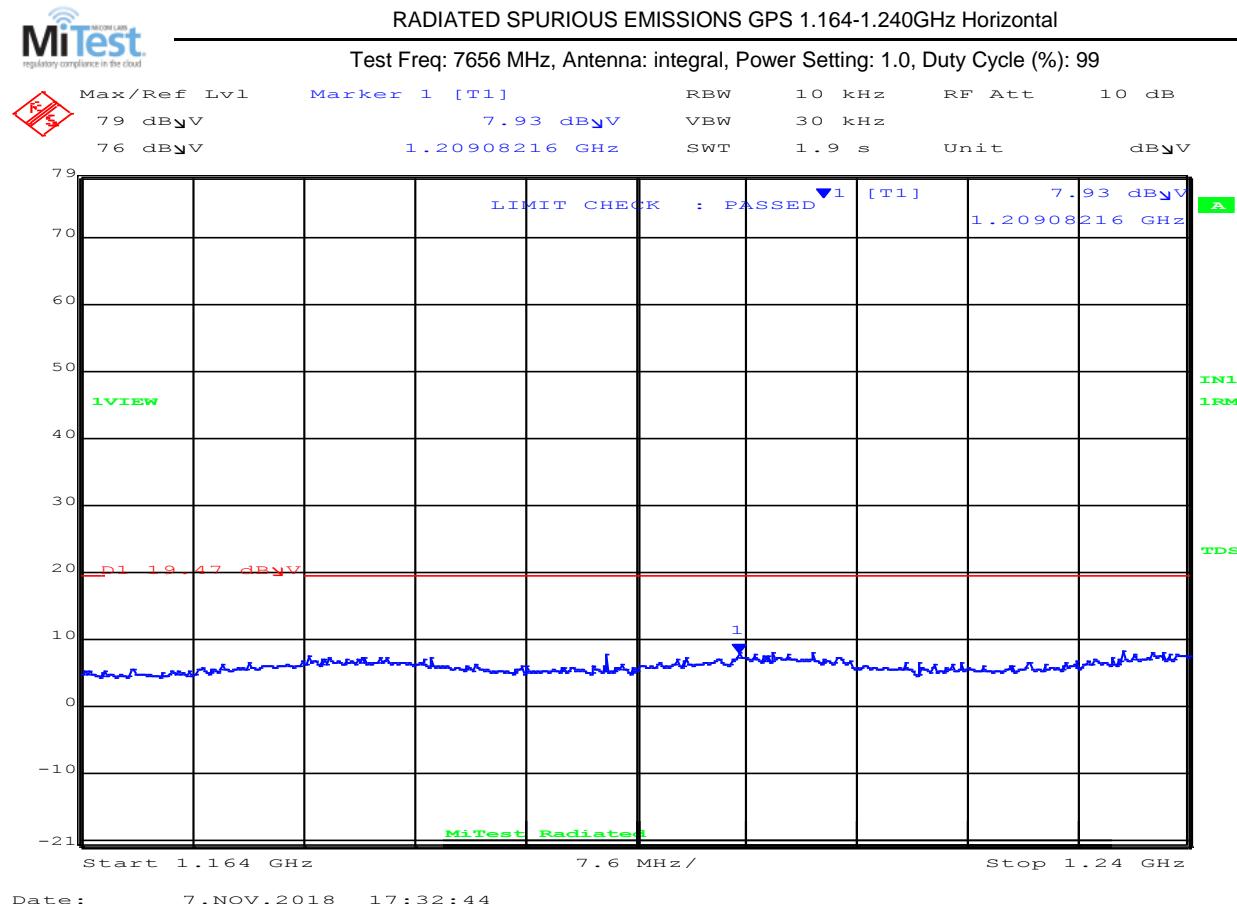
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7656 MHz (Covers Band Group 3 TFC 7 and Band Group 6 TFC 5

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

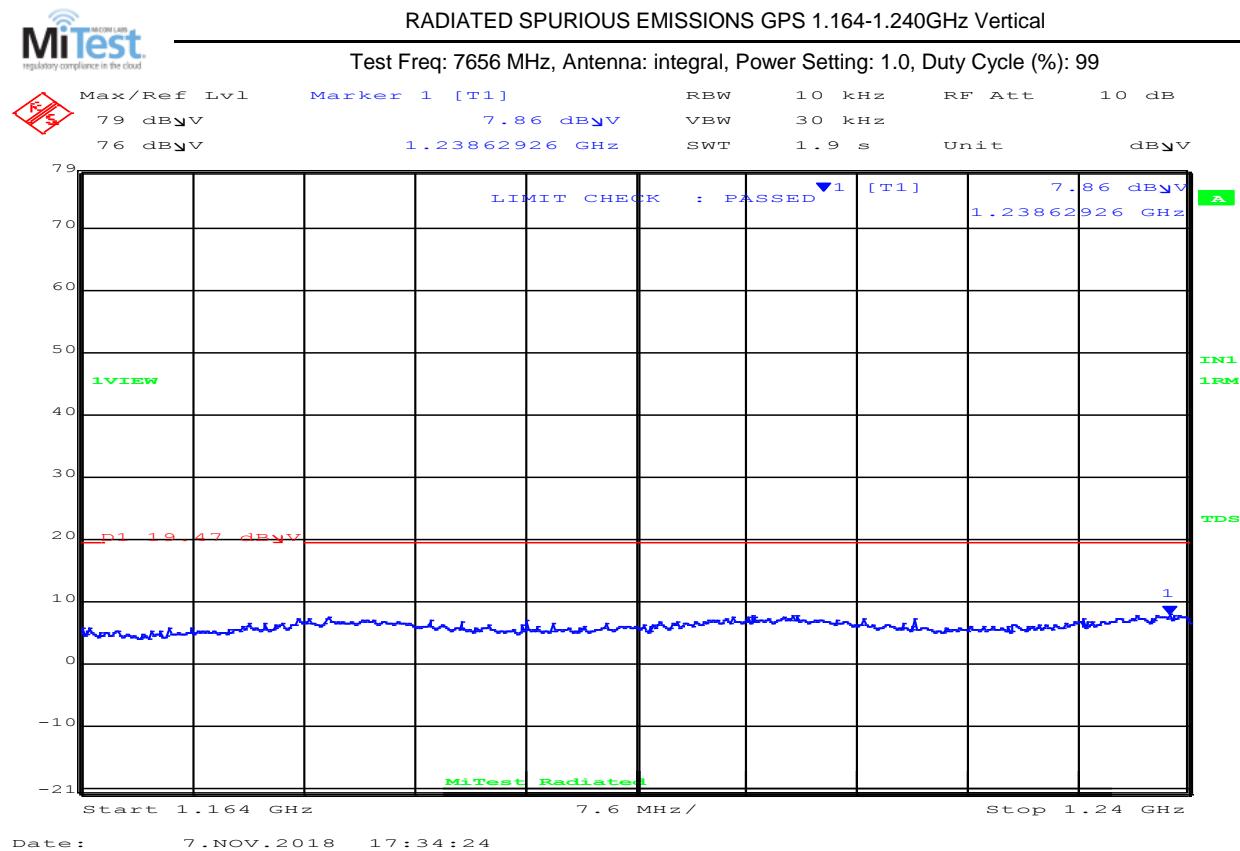


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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

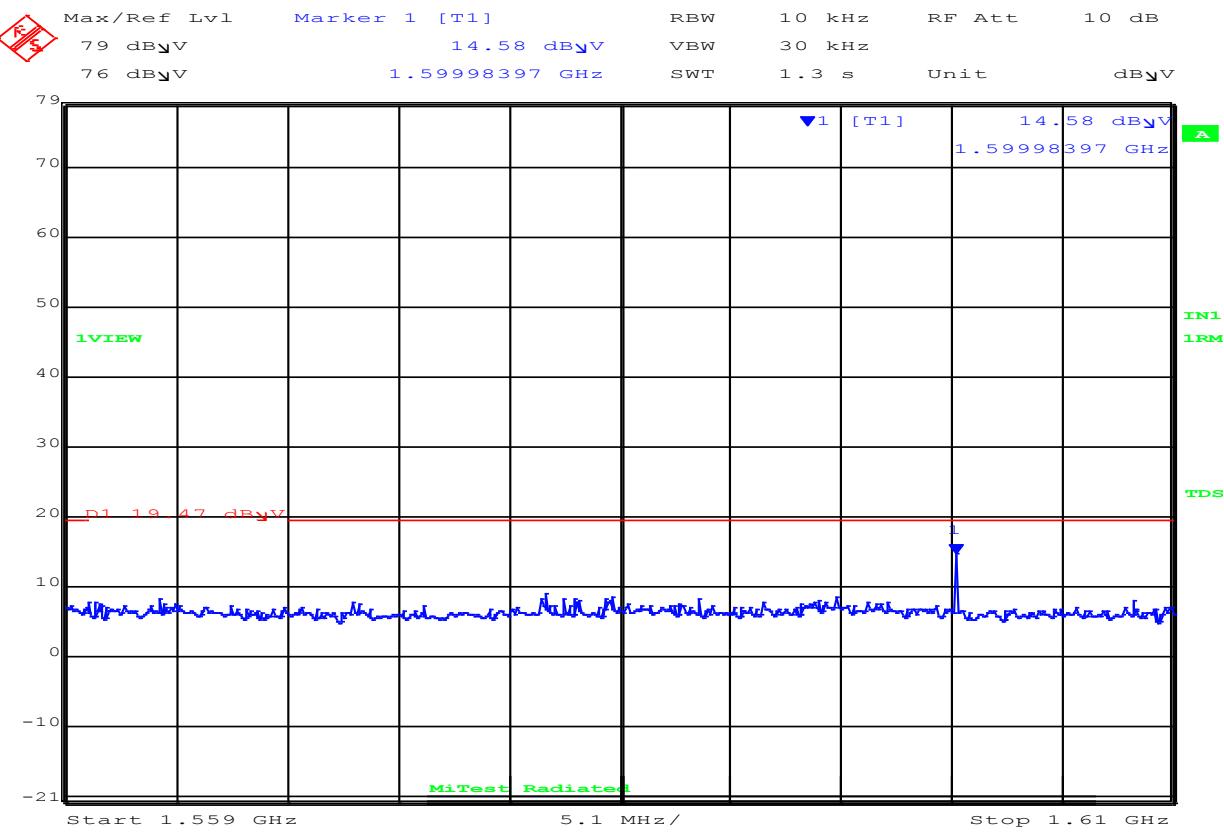
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



Date: 7.NOV.2018 17:30:23

1559.00-1610.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
2	1599.98	1.7*	Average	Horizontal	150	0	29.4	-3.8	Pass

Test Notes:

Final Average measurements done with 1 KHz Receiver Bandwidth per standard

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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

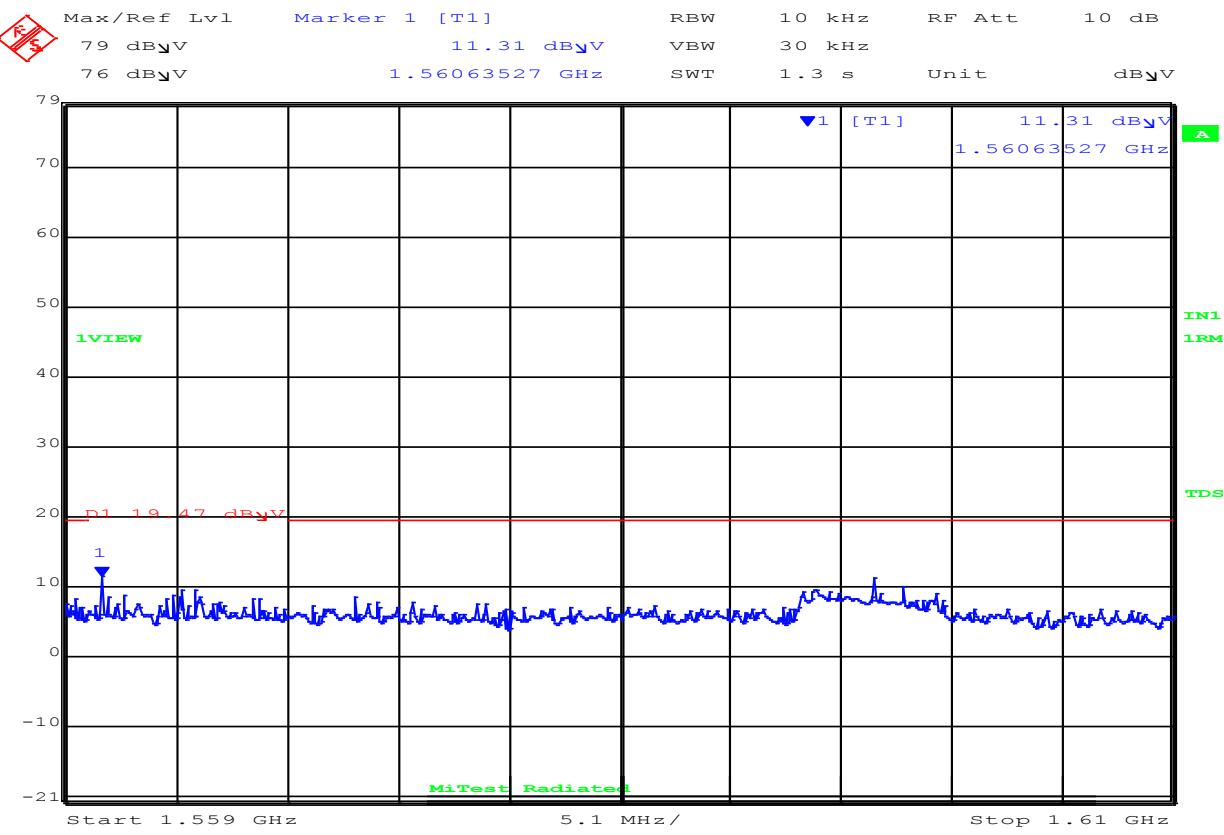
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



Date: 7.NOV.2018 17:28:31

1559.00-1610.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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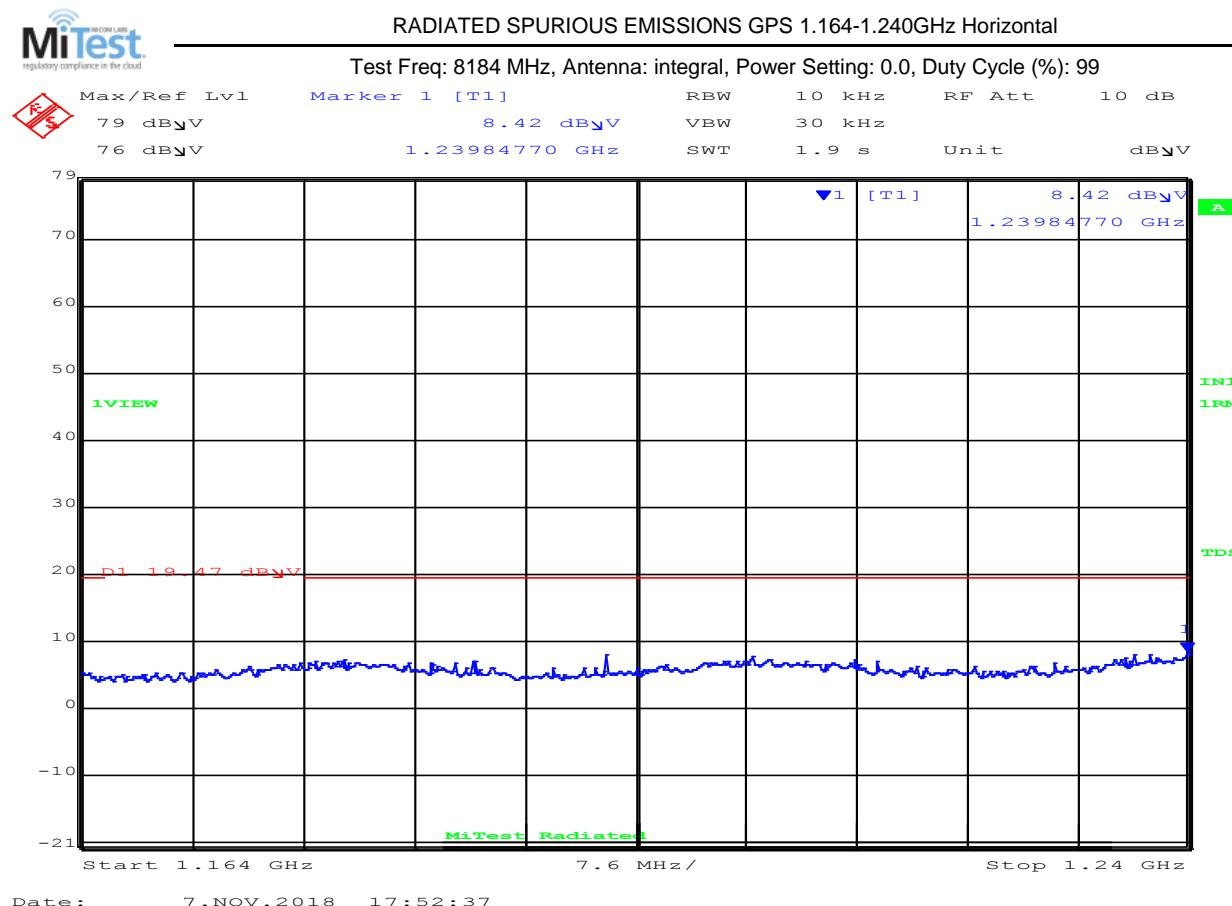
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8184 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz										
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop Removed										

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To: FCC Part 15.519
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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

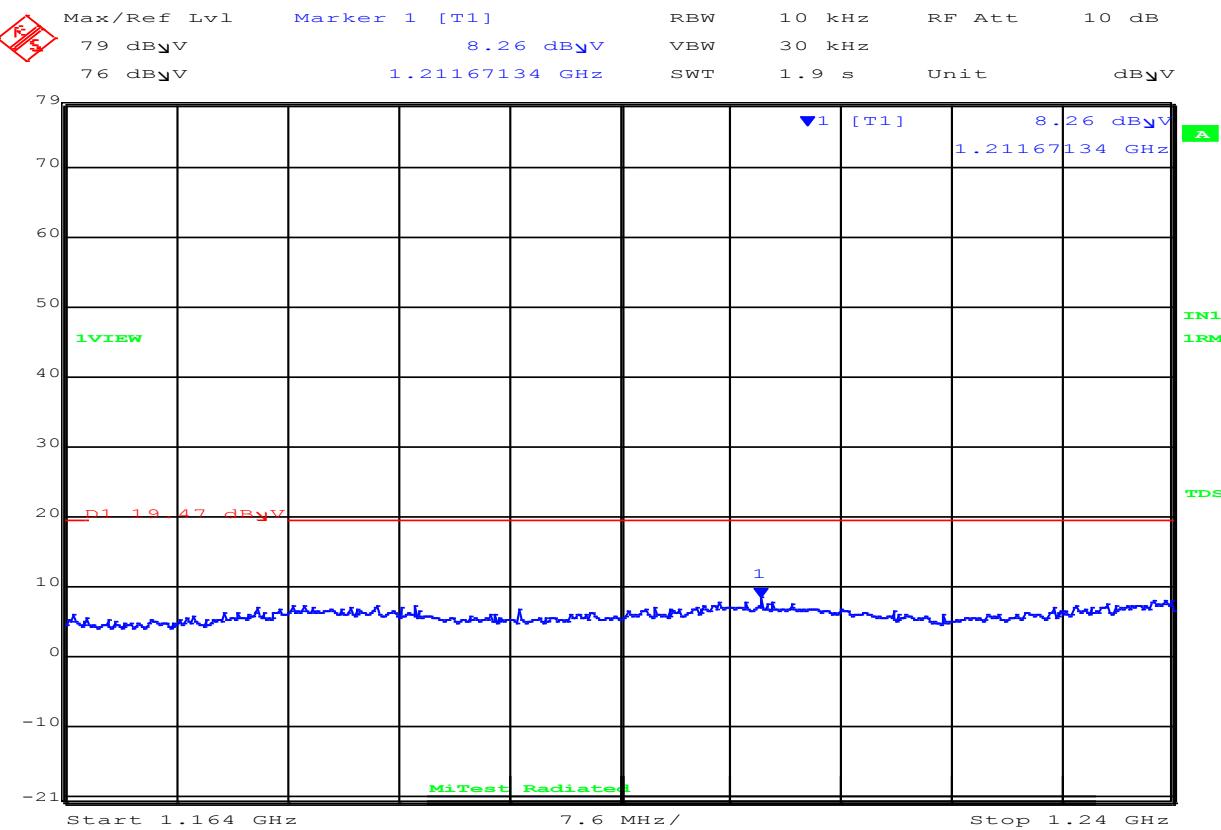
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1164.00-1240.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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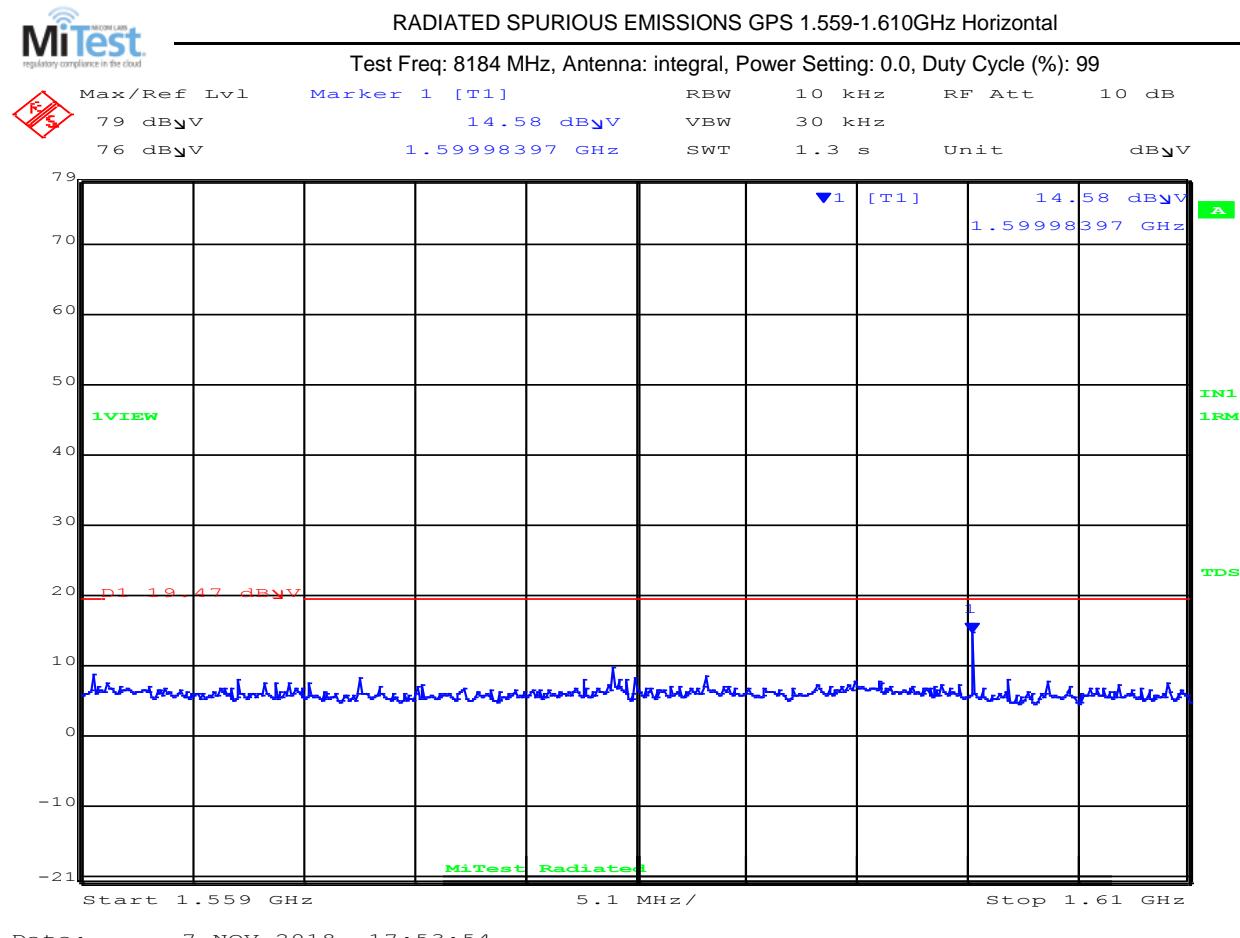


Title: Alereon AL5955, AL5930, AL5934
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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
2	1599.98	2.0*	Average	Horizontal	150	0	19.47	-17.5	Pass

Test Notes:
Final Average measurements done with 1 KHz Receiver Bandwidth per standard

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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

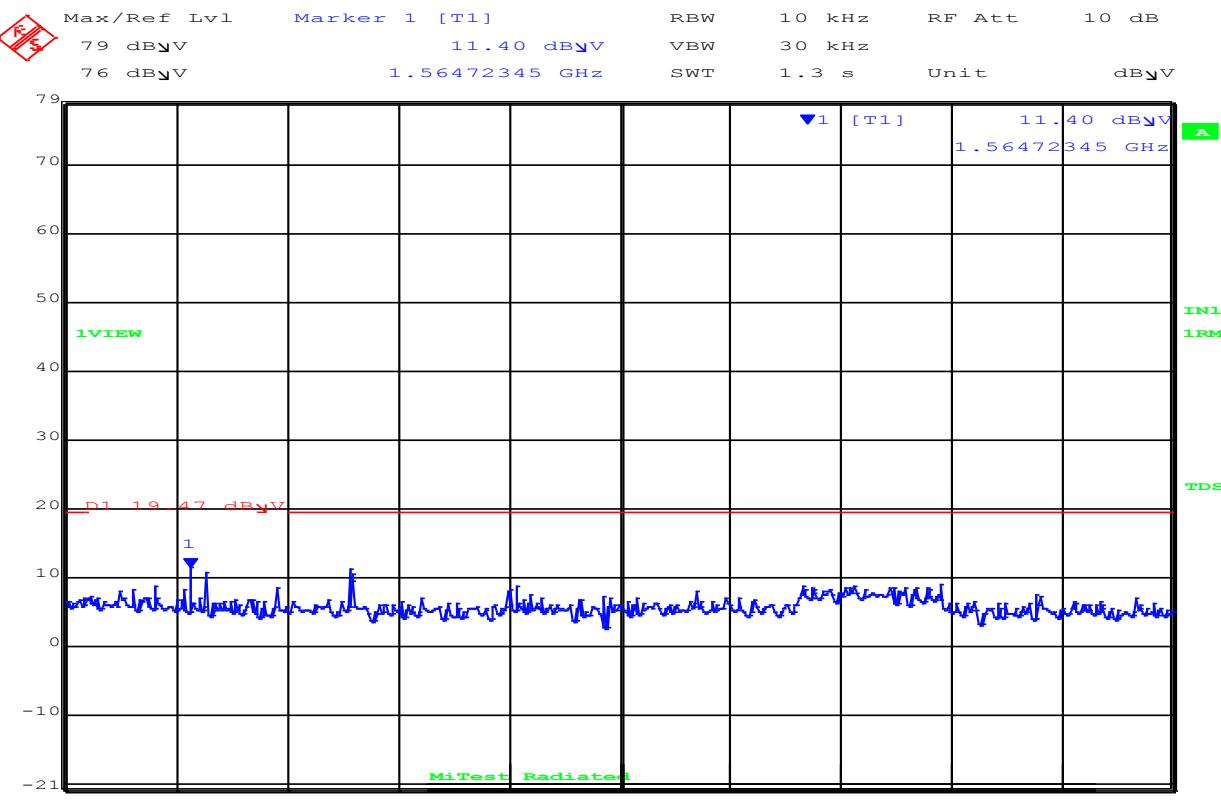
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 7.NOV.2018 17:56:15

1559.00-1610.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

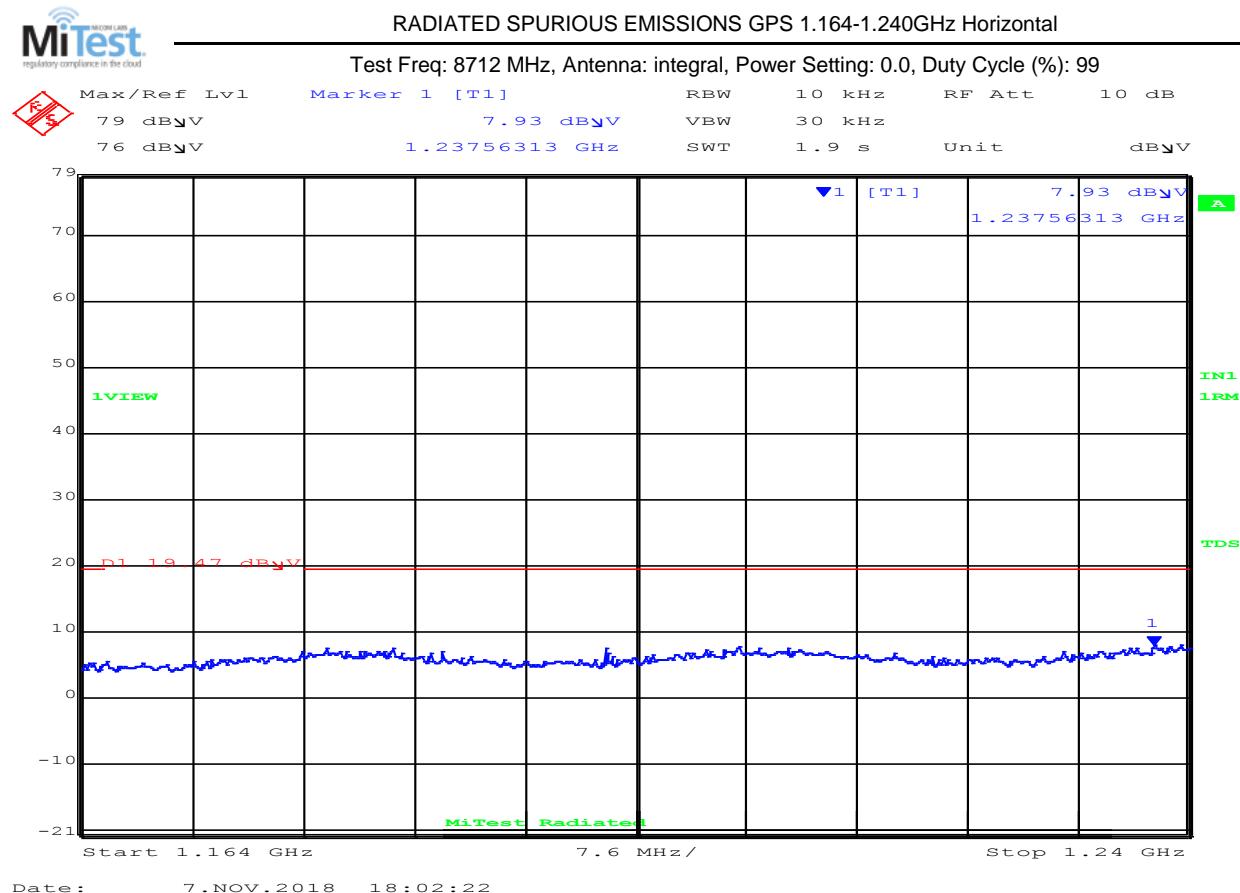
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8712 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

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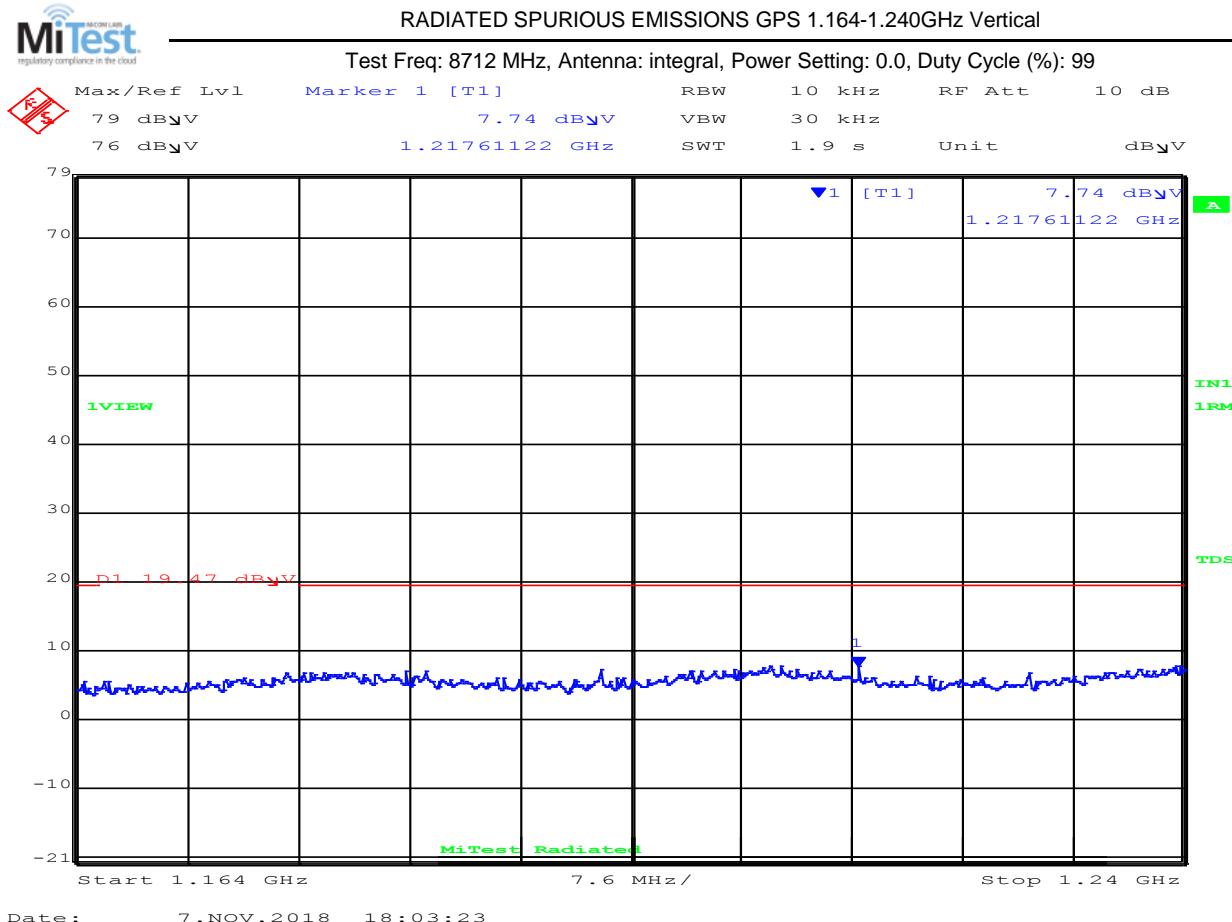


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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



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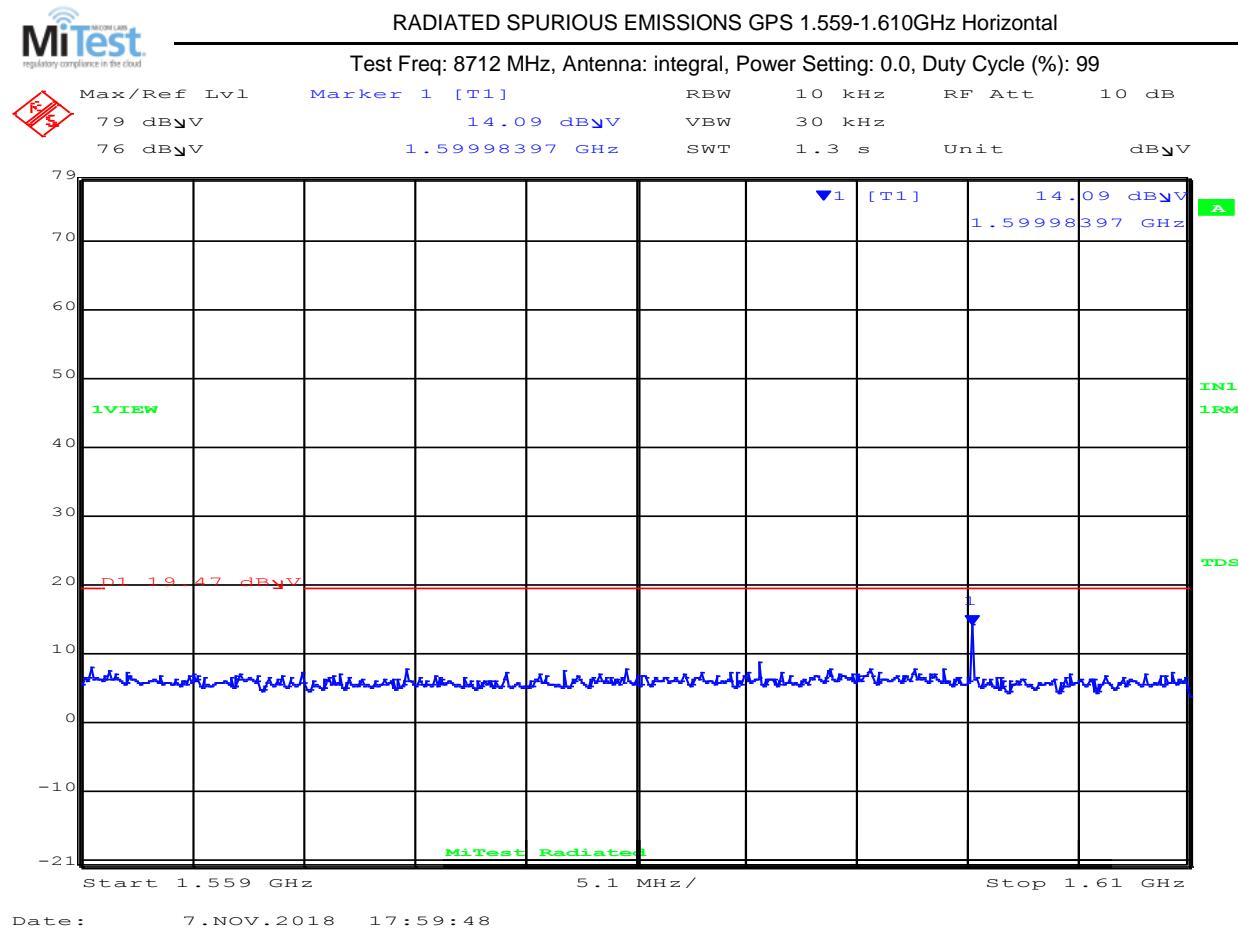


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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz										
Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail	
2	1599.98	2.1*	Average	Horizontal	150	0	19.47	-17.4	Pass	
Test Notes:										
Final Average measurements done with 1 KHz Receiver Bandwidth per standard										

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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

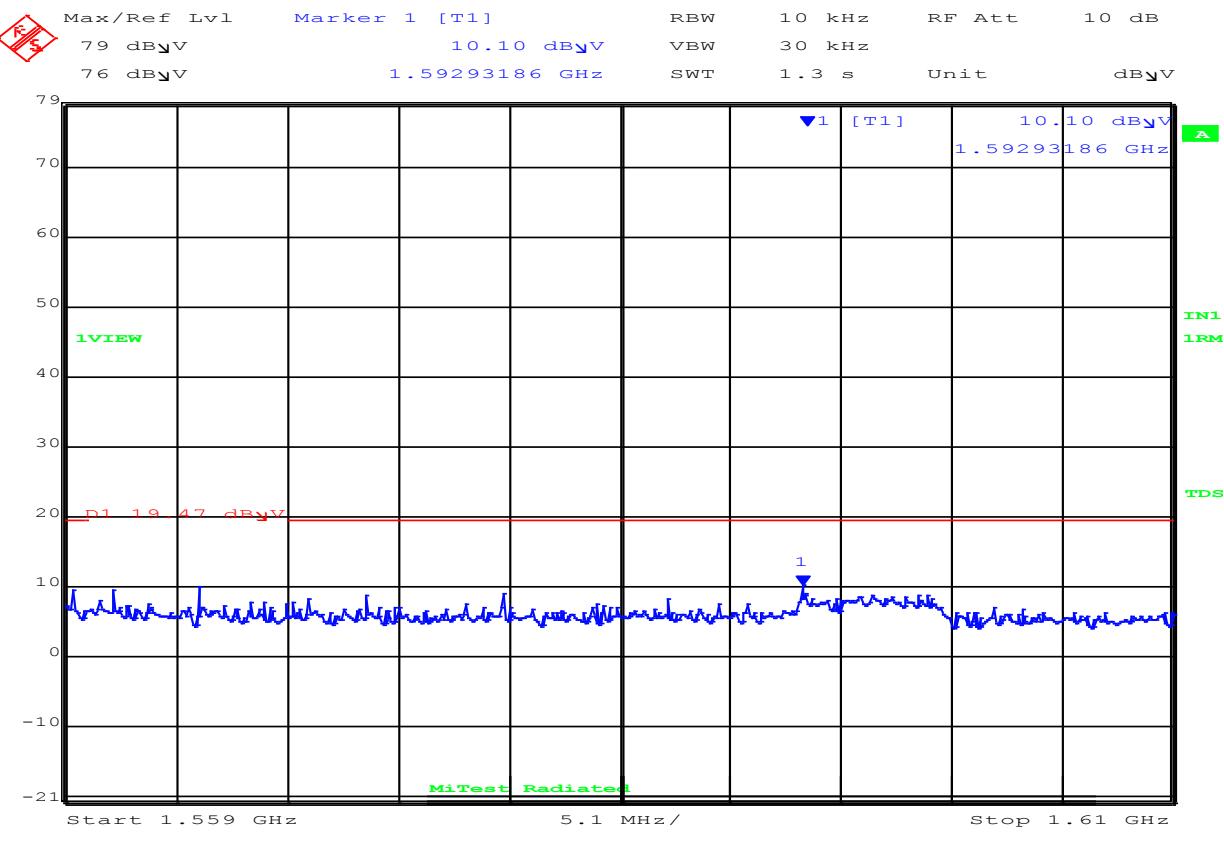
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1559.00-1610.00 MHz

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop Removed									

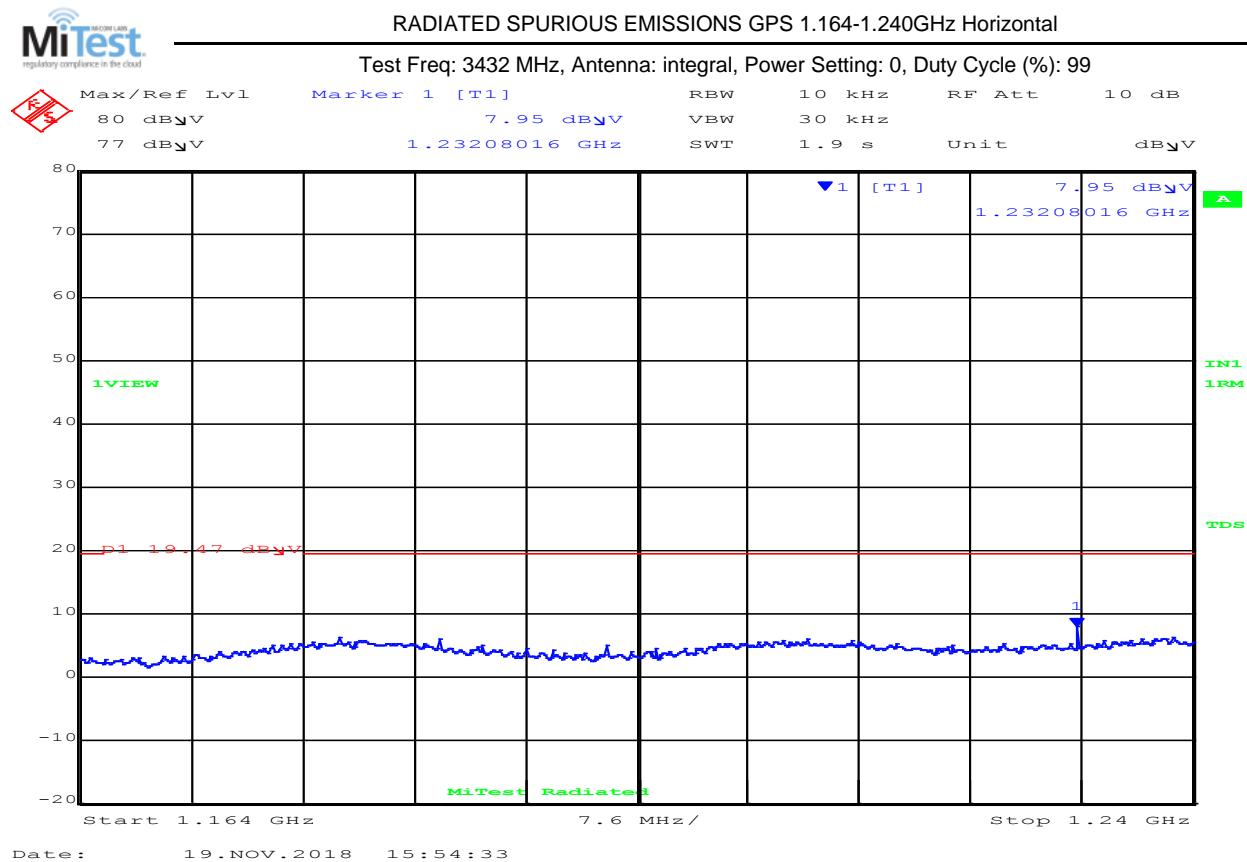
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9.4.2.3. Combat AL5934

3432 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal	
Antenna:	Chip
Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0
Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable
Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00
Data Rate:	
Power Setting:	Max
Tested By:	JMH

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal	
Antenna:	Chip
Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0
Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable
Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00
Data Rate:	
Power Setting:	Max
Tested By:	JMH



Test Measurement Results										
1164.00-1240.00 MHz										
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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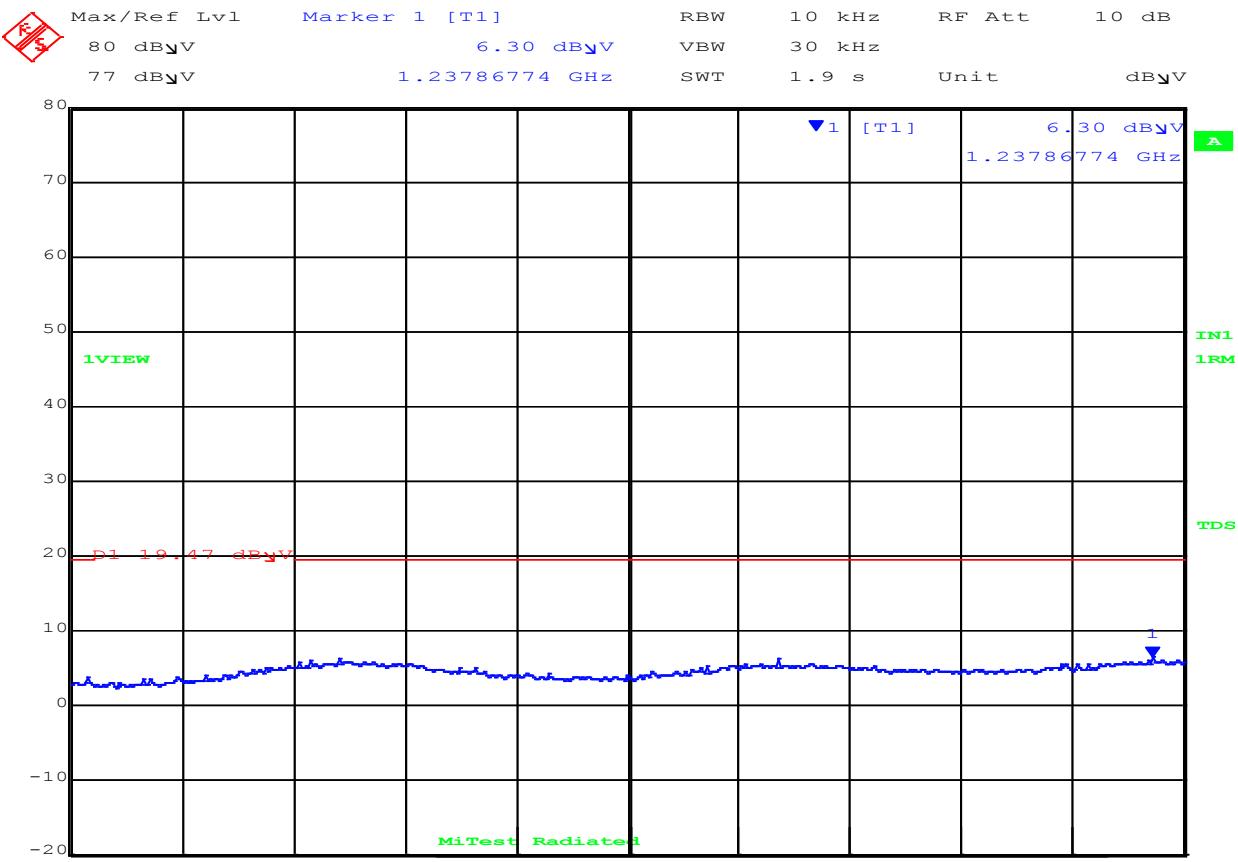
Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 19.NOV.2018 16:06:00

Test Measurement Results

1164.00-1240.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									

Test Notes:

Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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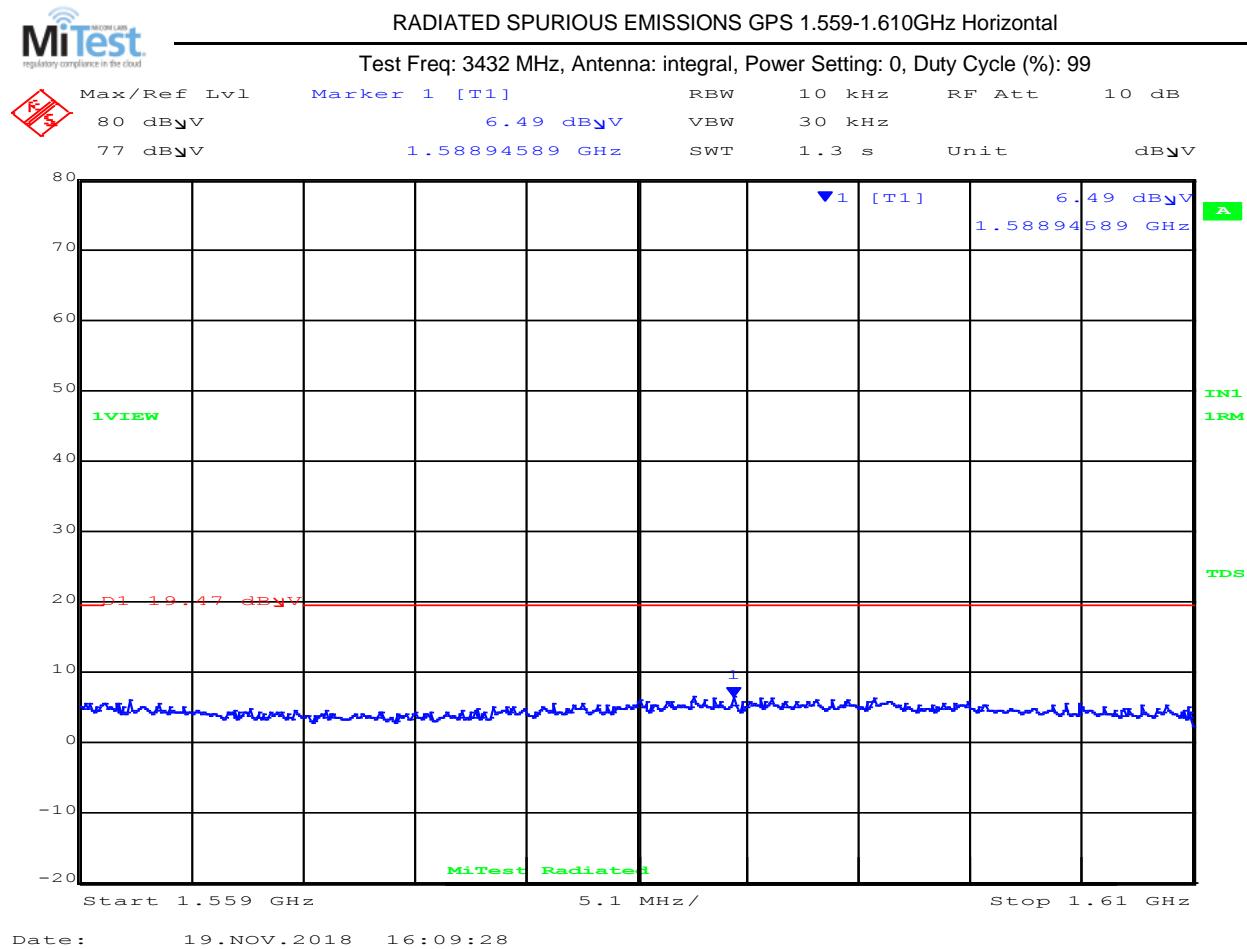


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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



Date: 19.NOV.2018 16:09:28

1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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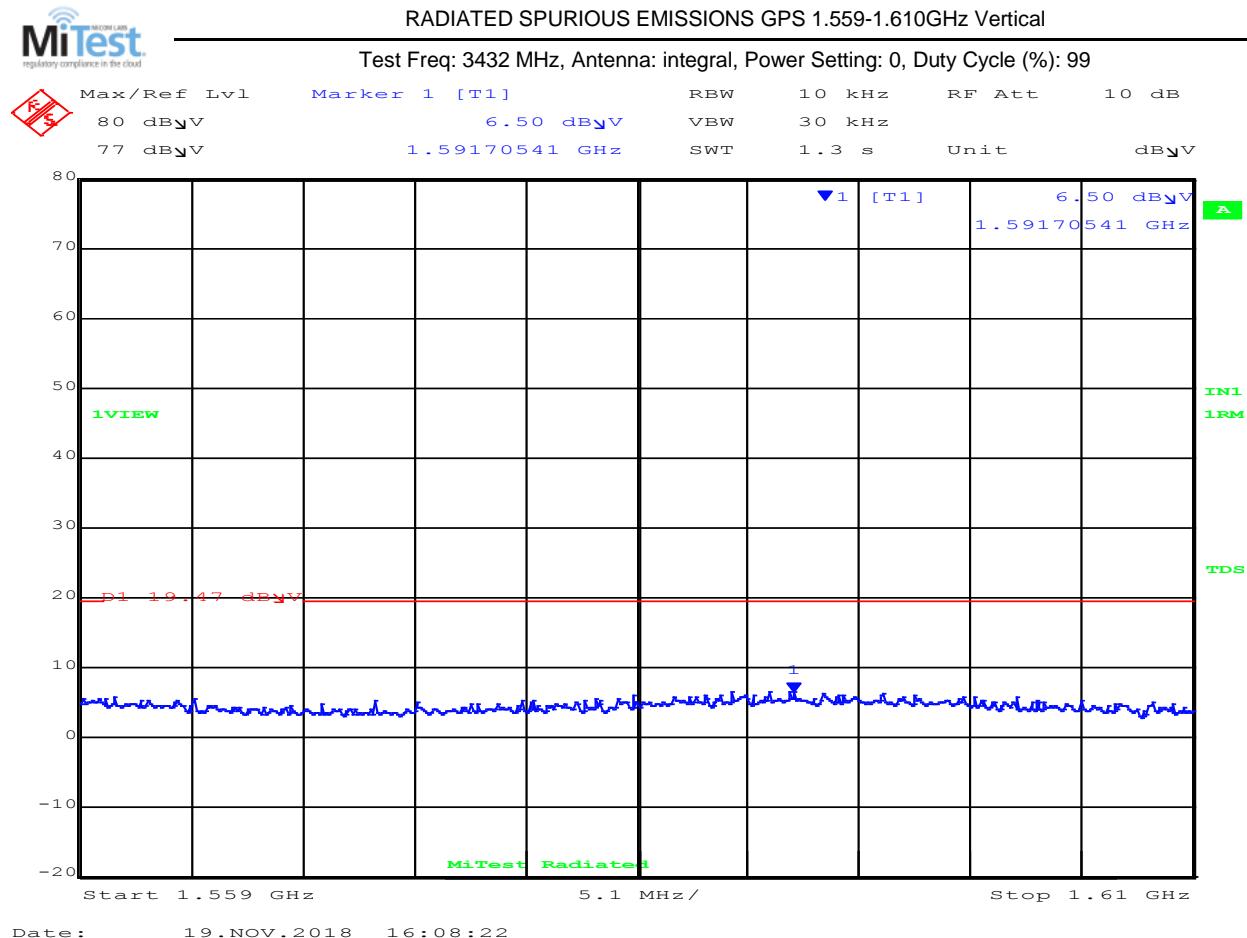


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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz

Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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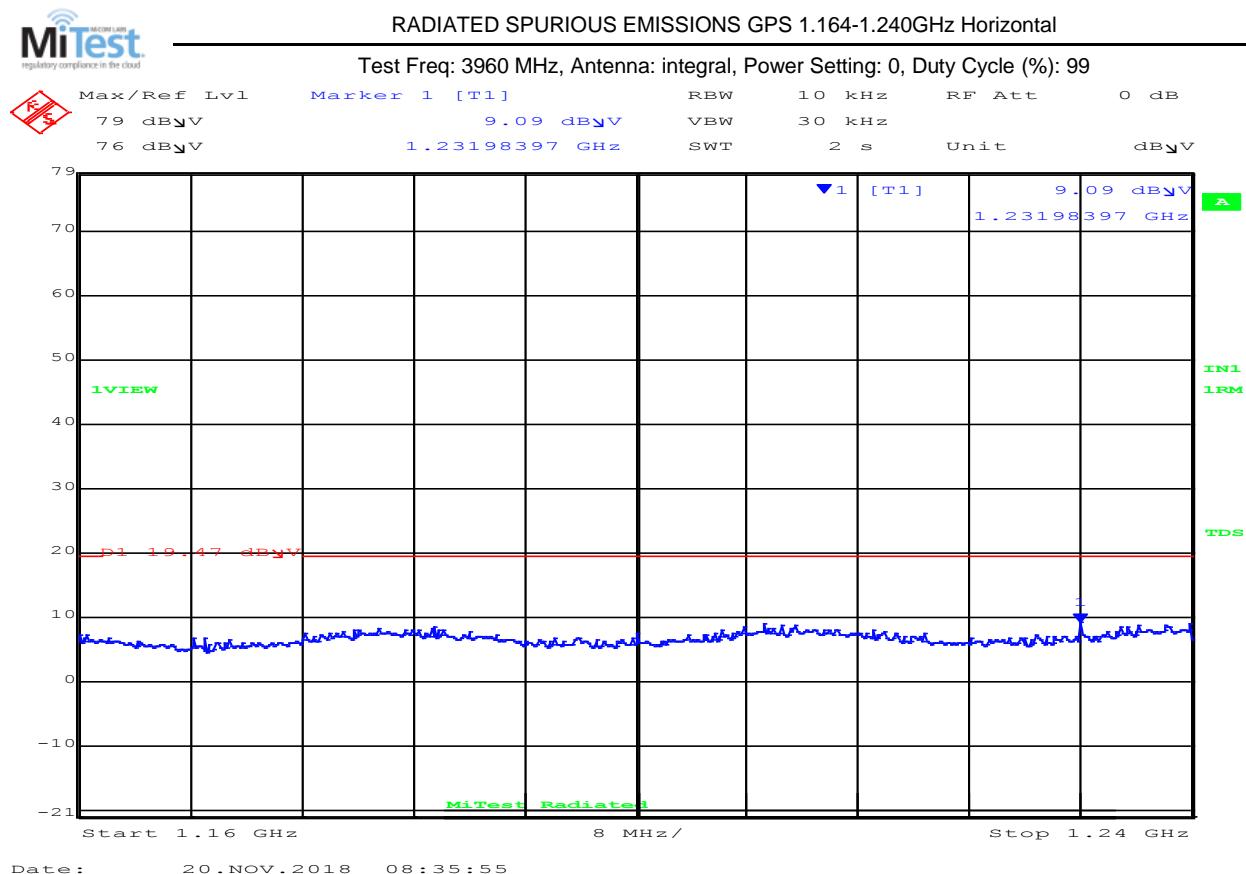
Title: Alereon AL5955, AL5930, AL5934
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3960 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



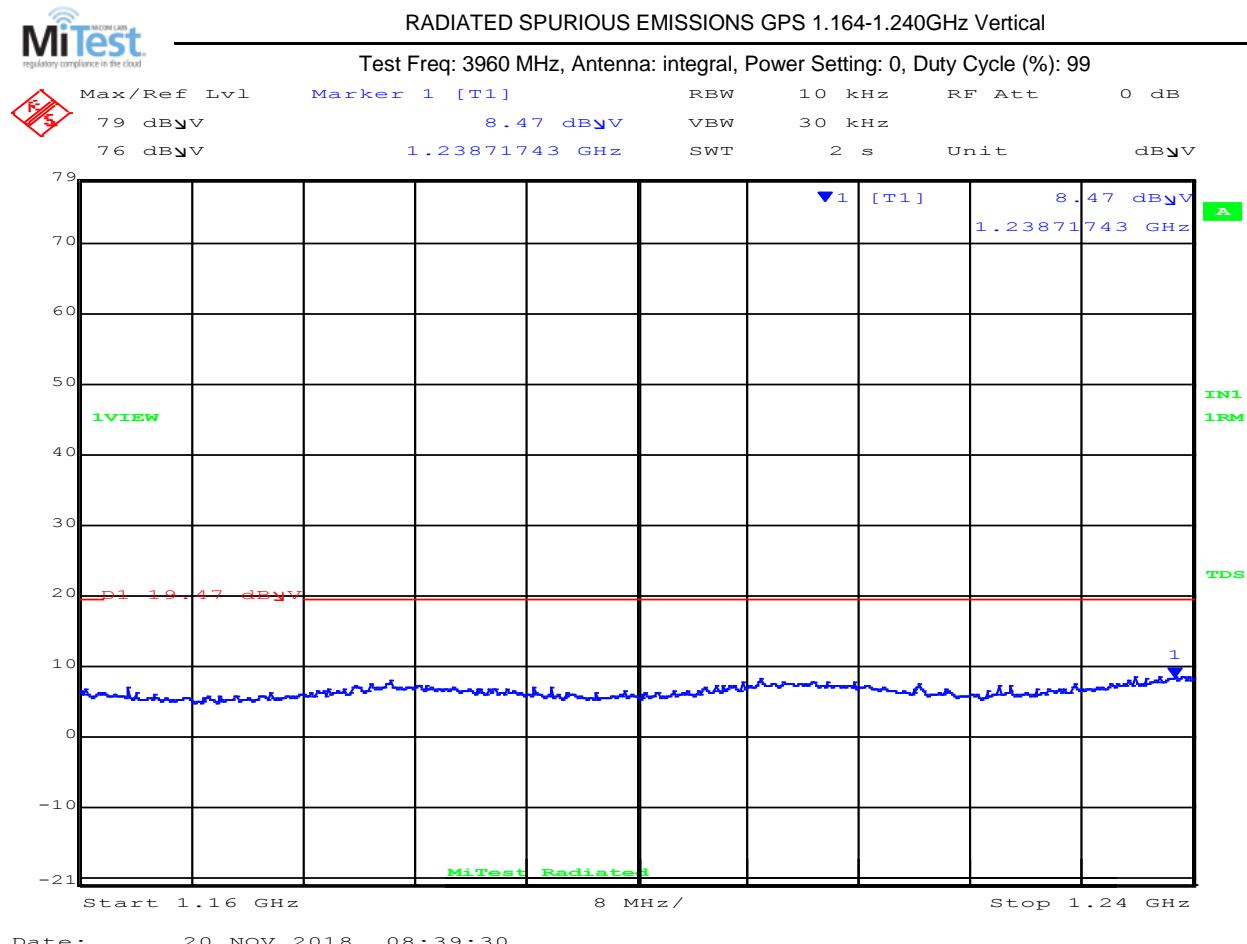
1164.00-1240.00 MHz									
Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz										
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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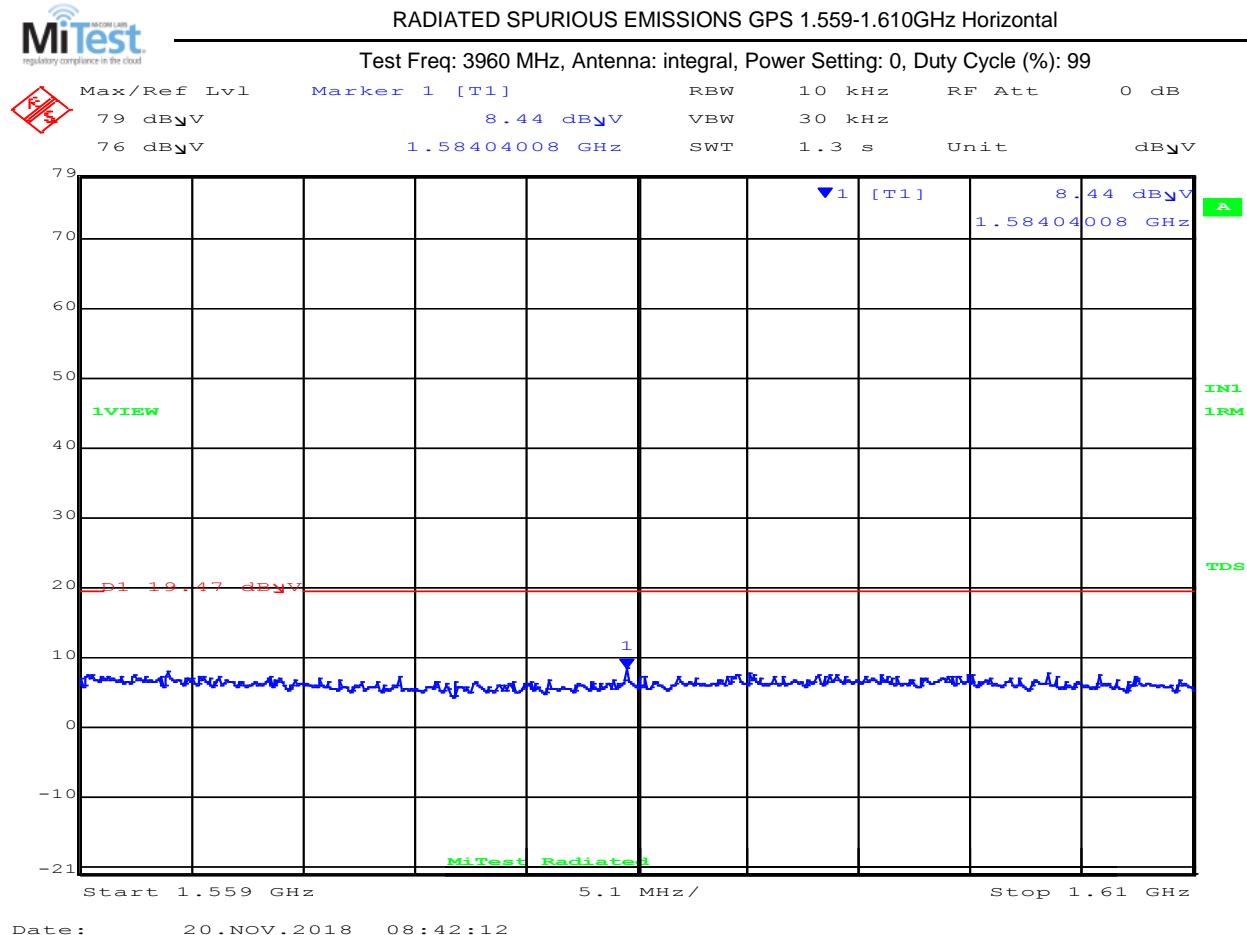


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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz										
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

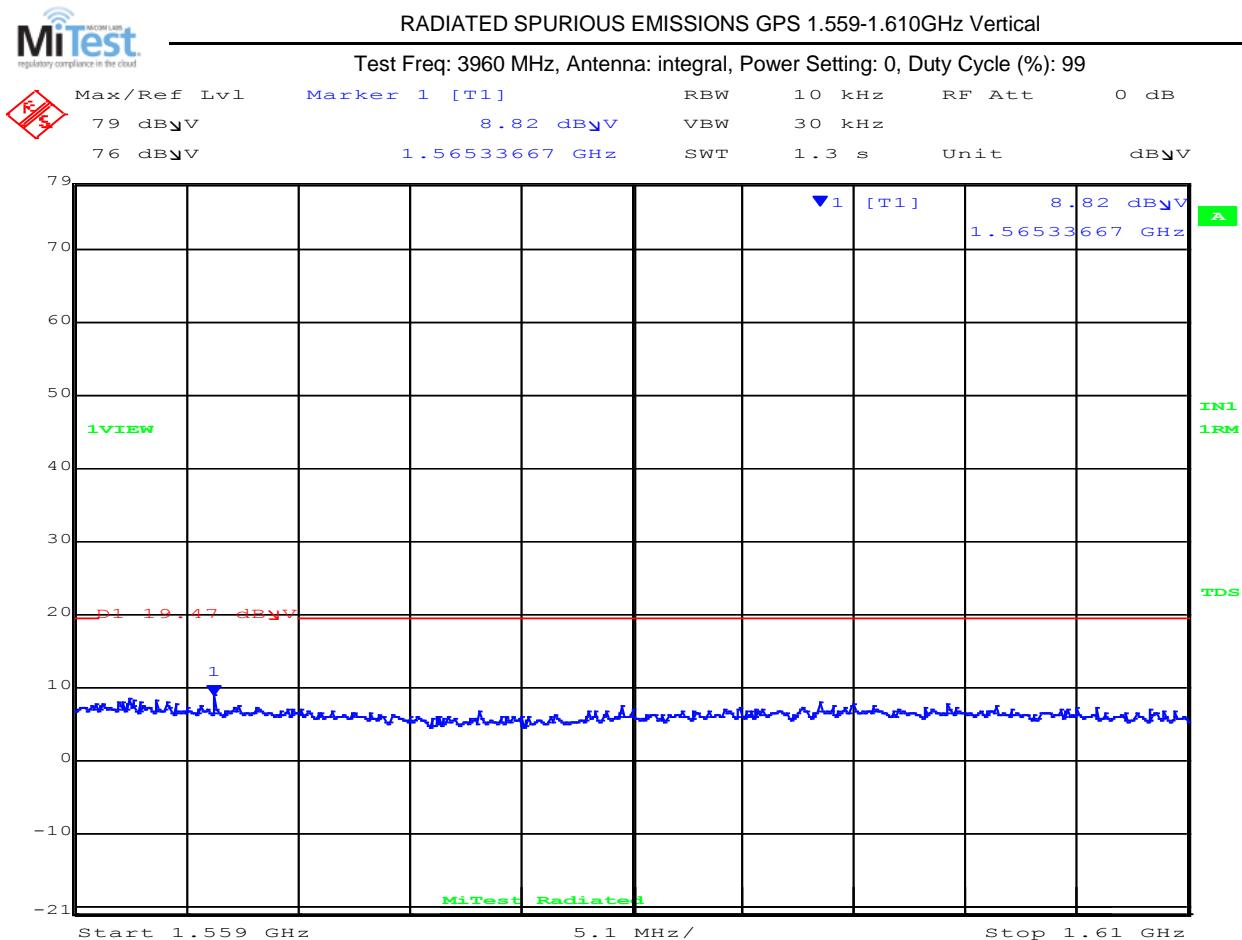
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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH



Date: 20.NOV.2018 08:41:07

Test Measurement Results

1559.00-1610.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
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No Signals Found within 6 dB of Limit

Test Notes:

Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

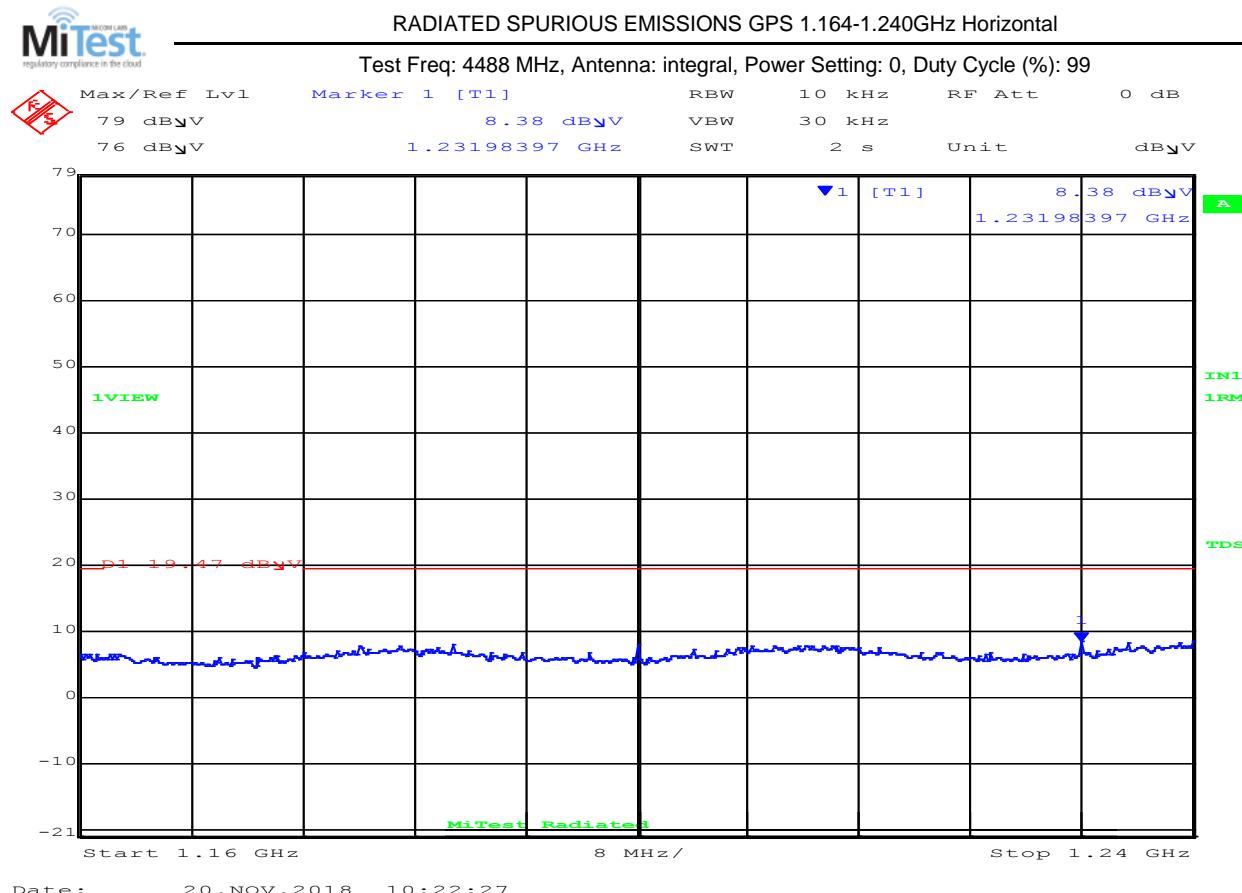
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4488 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz

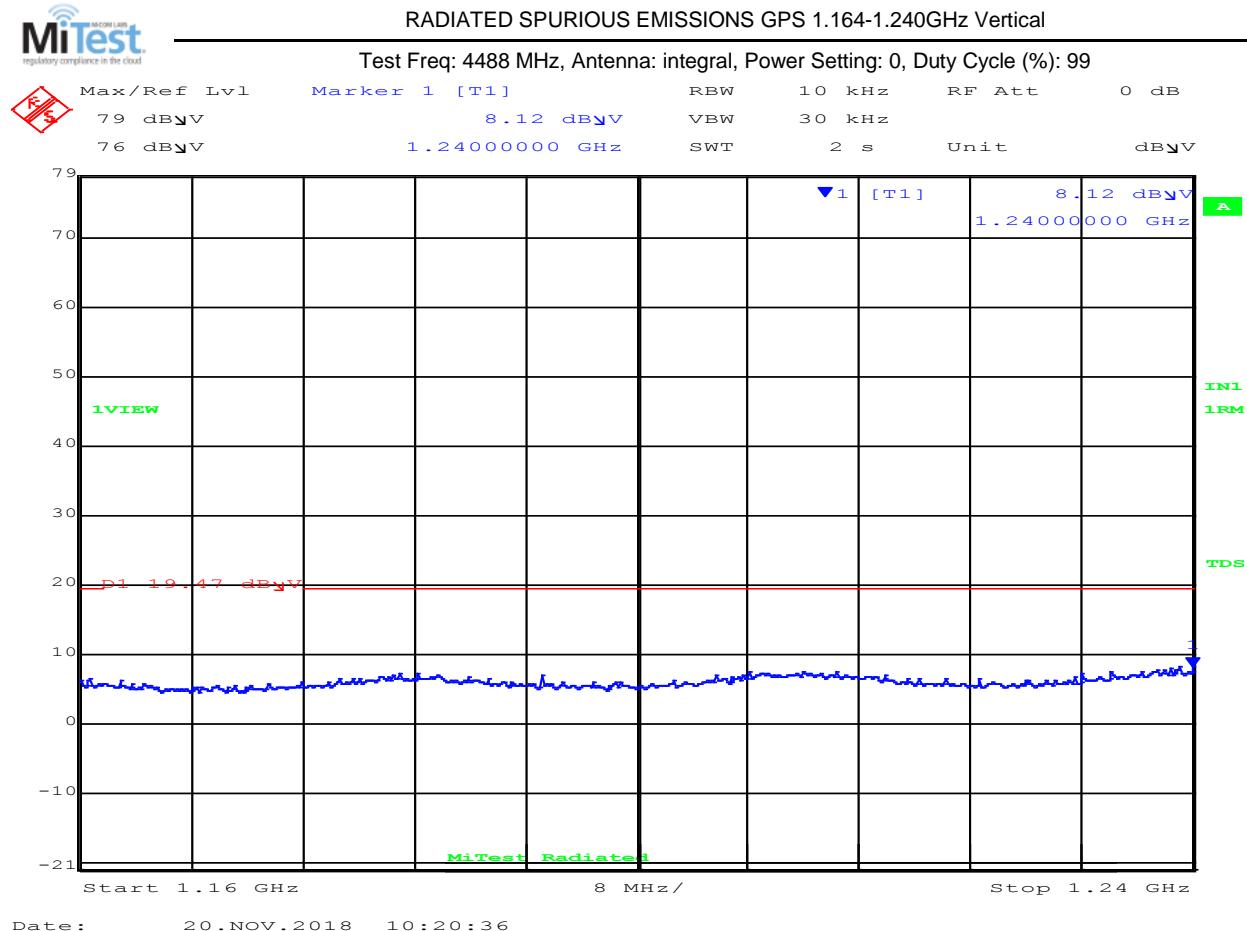
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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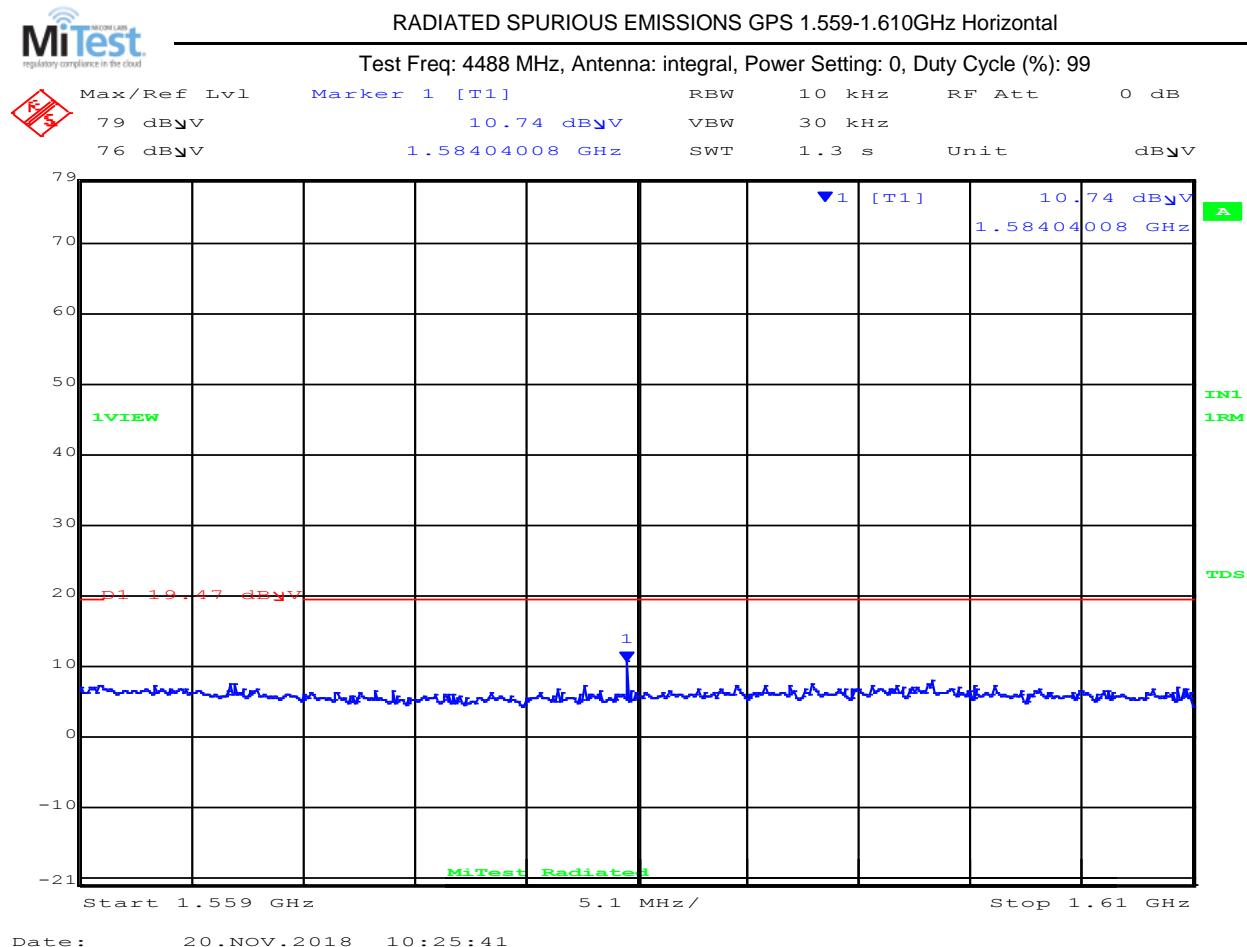


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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz										
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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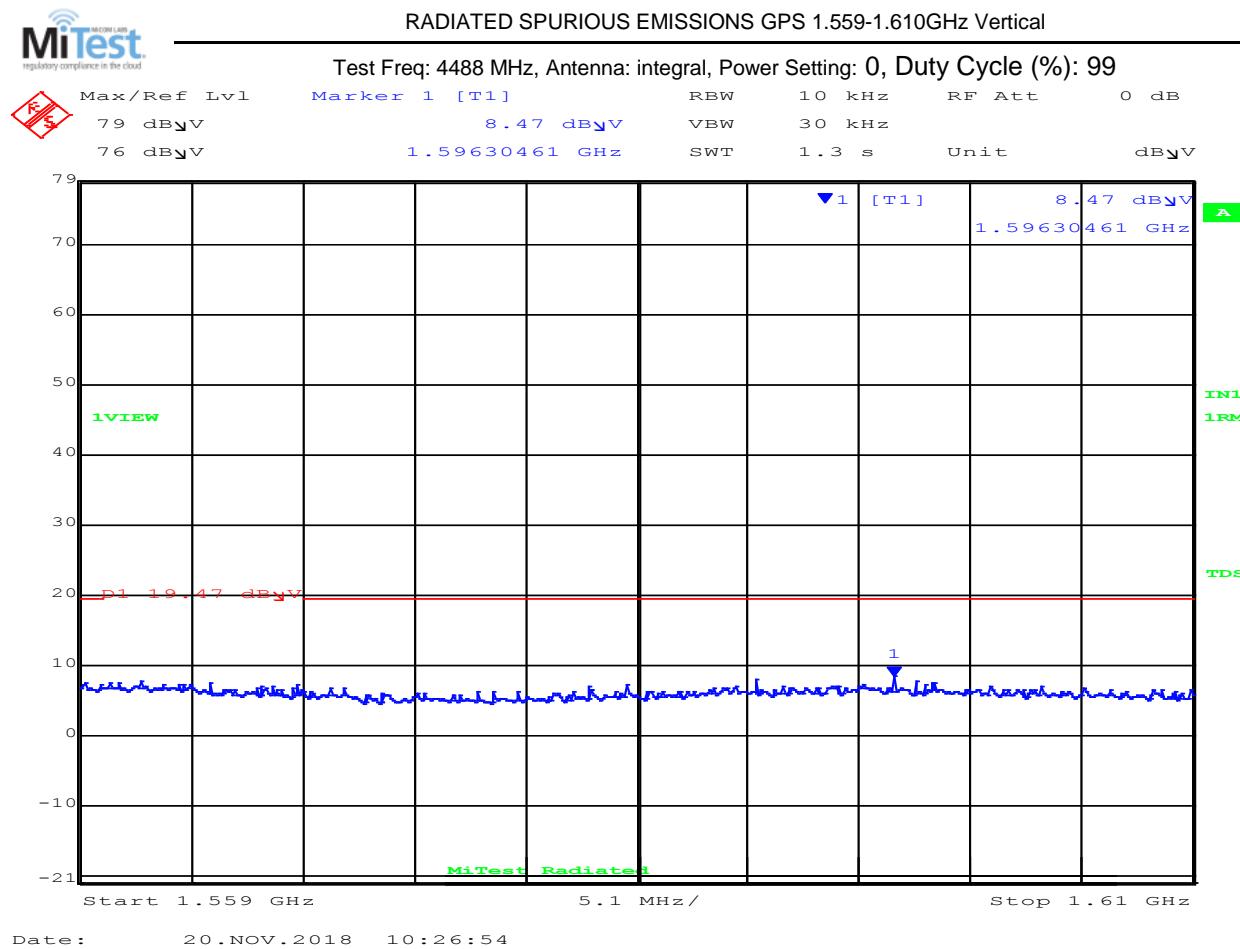


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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

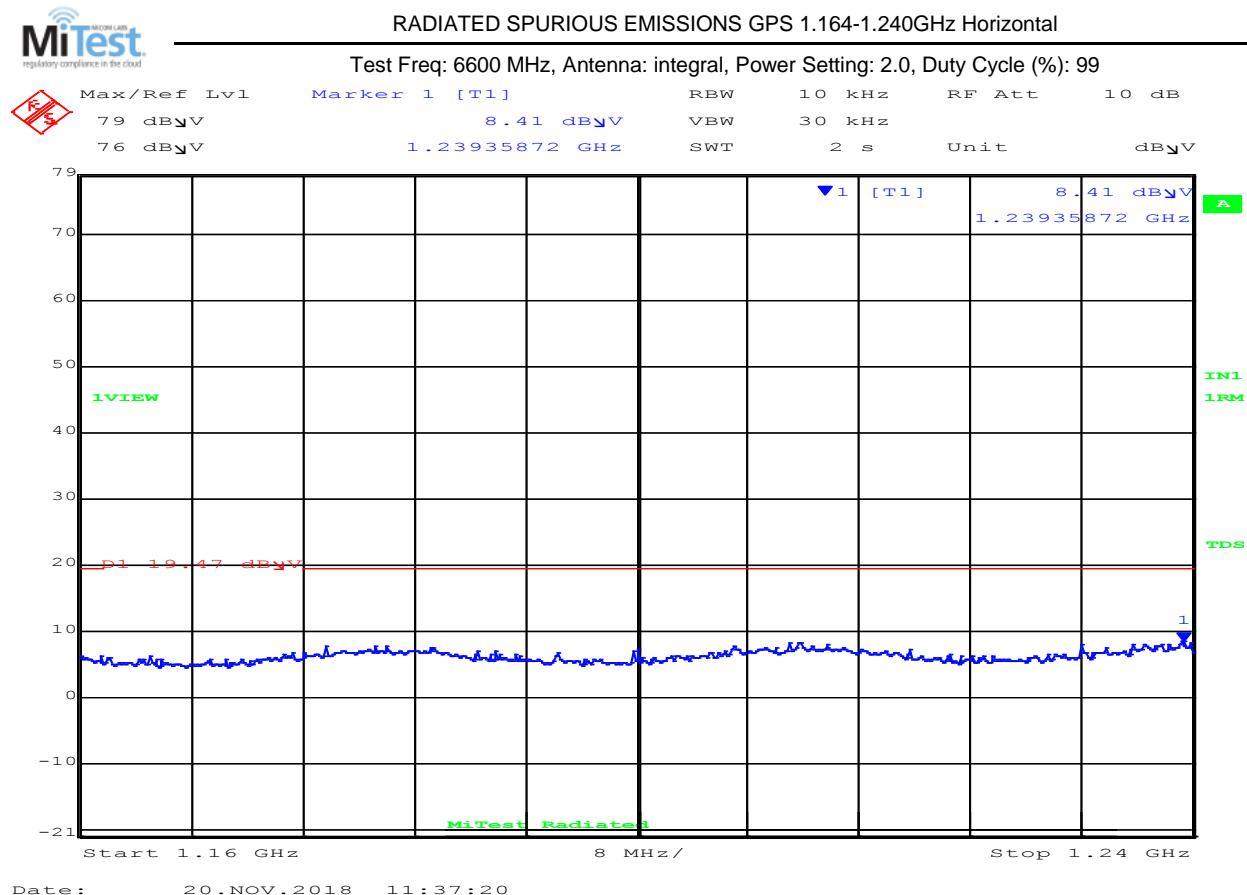
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6600 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz

Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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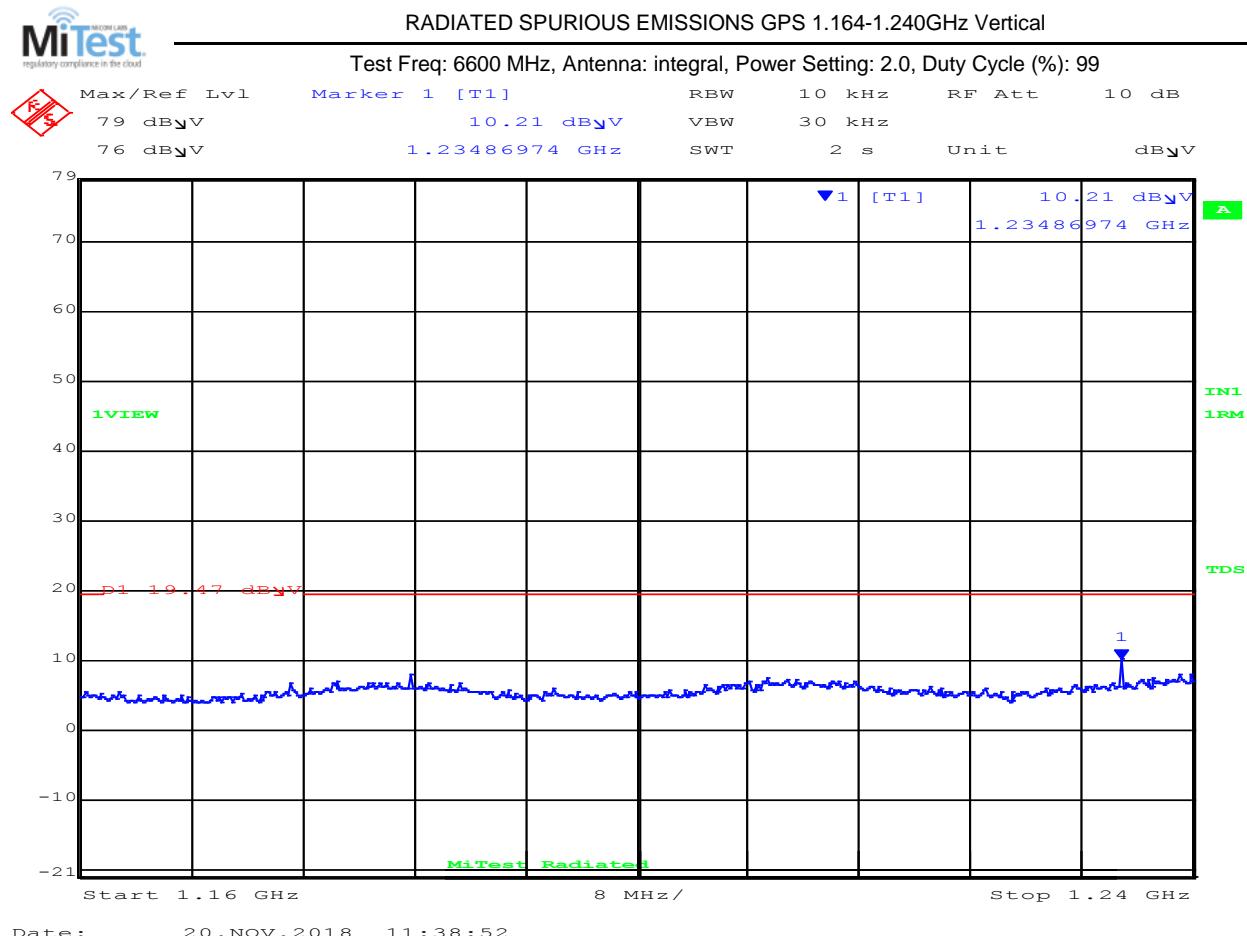


Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz

Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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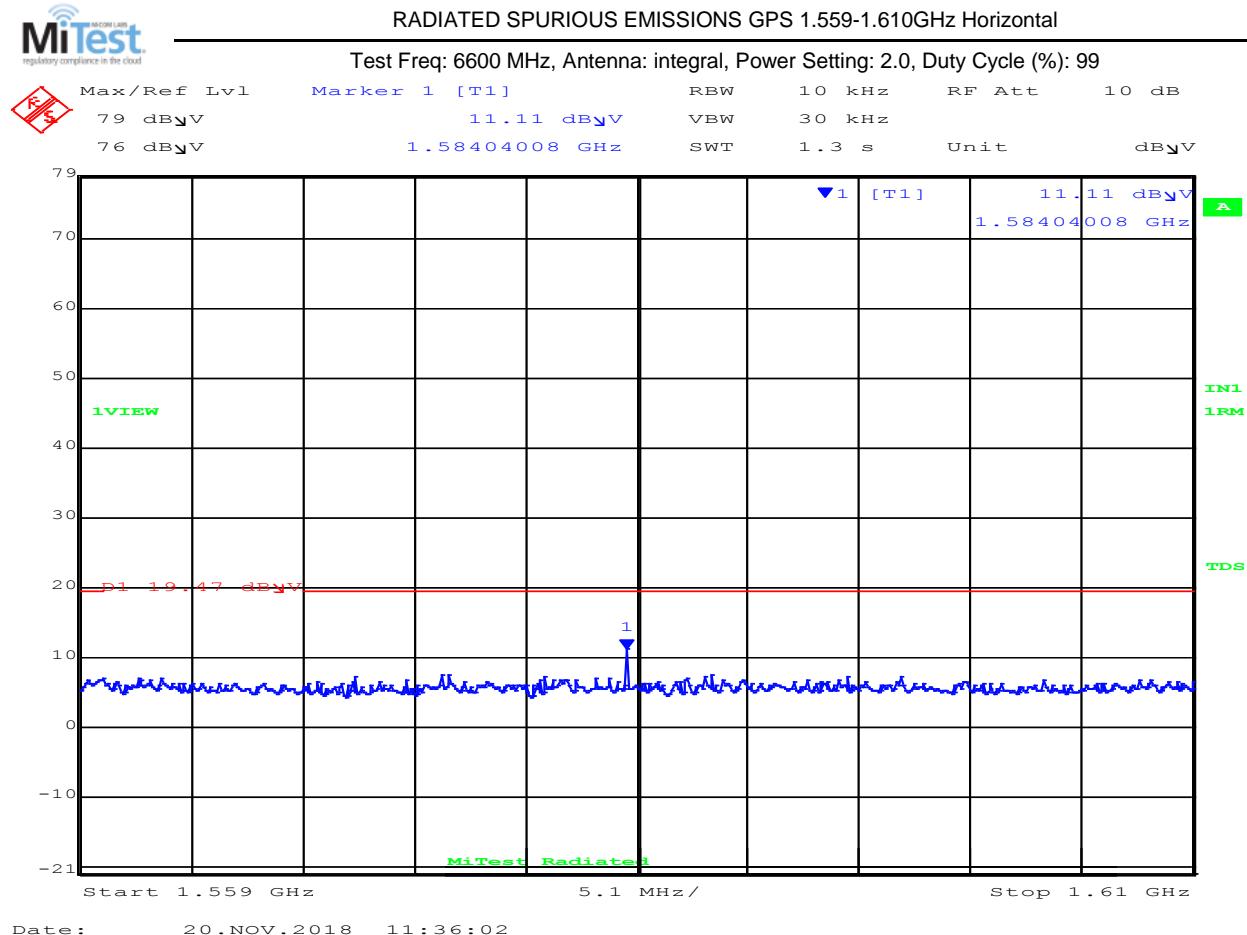


Title: Alereon AL5955, AL5930, AL5934
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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz										
Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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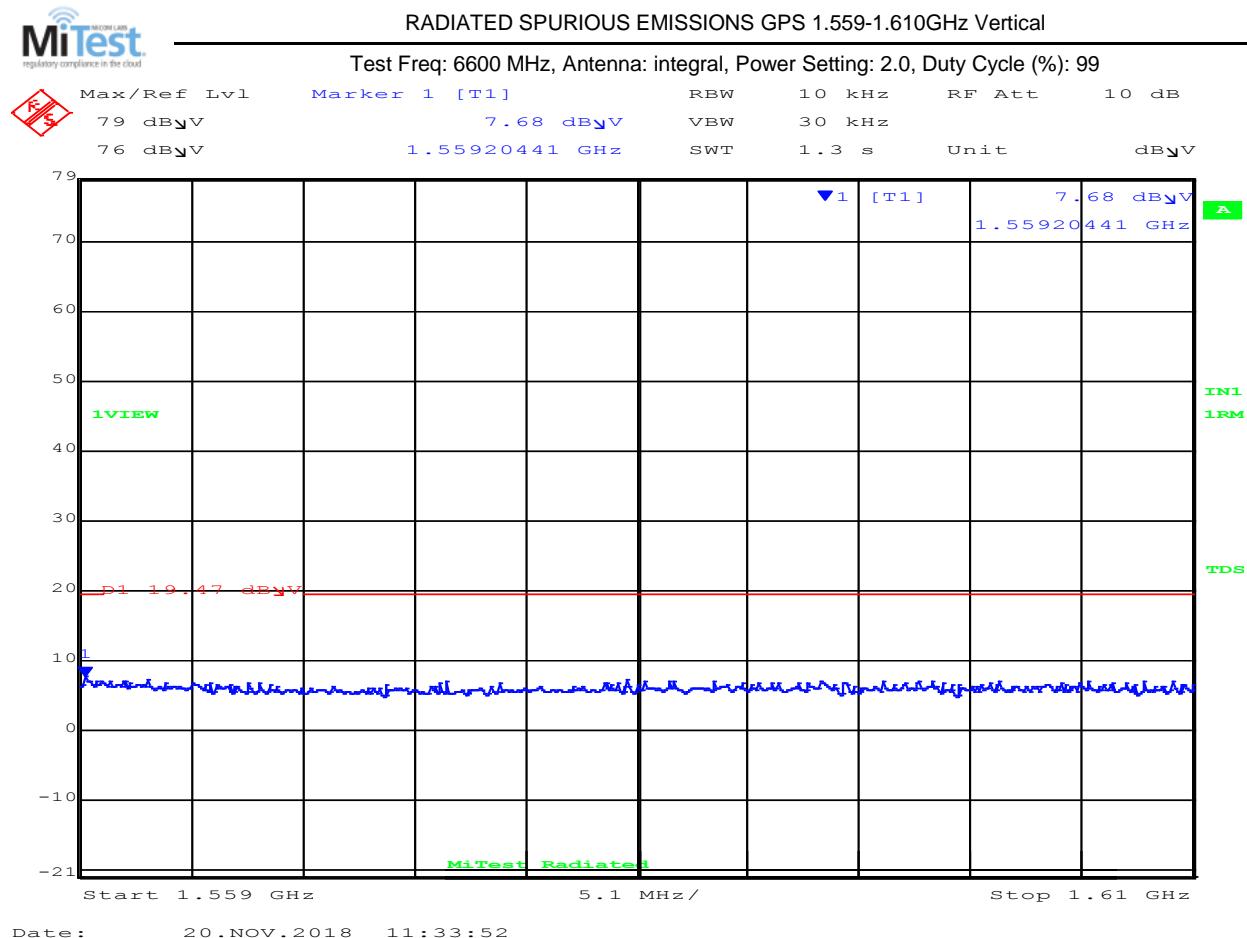


Title: Alereon AL5955, AL5930, AL5934
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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz										
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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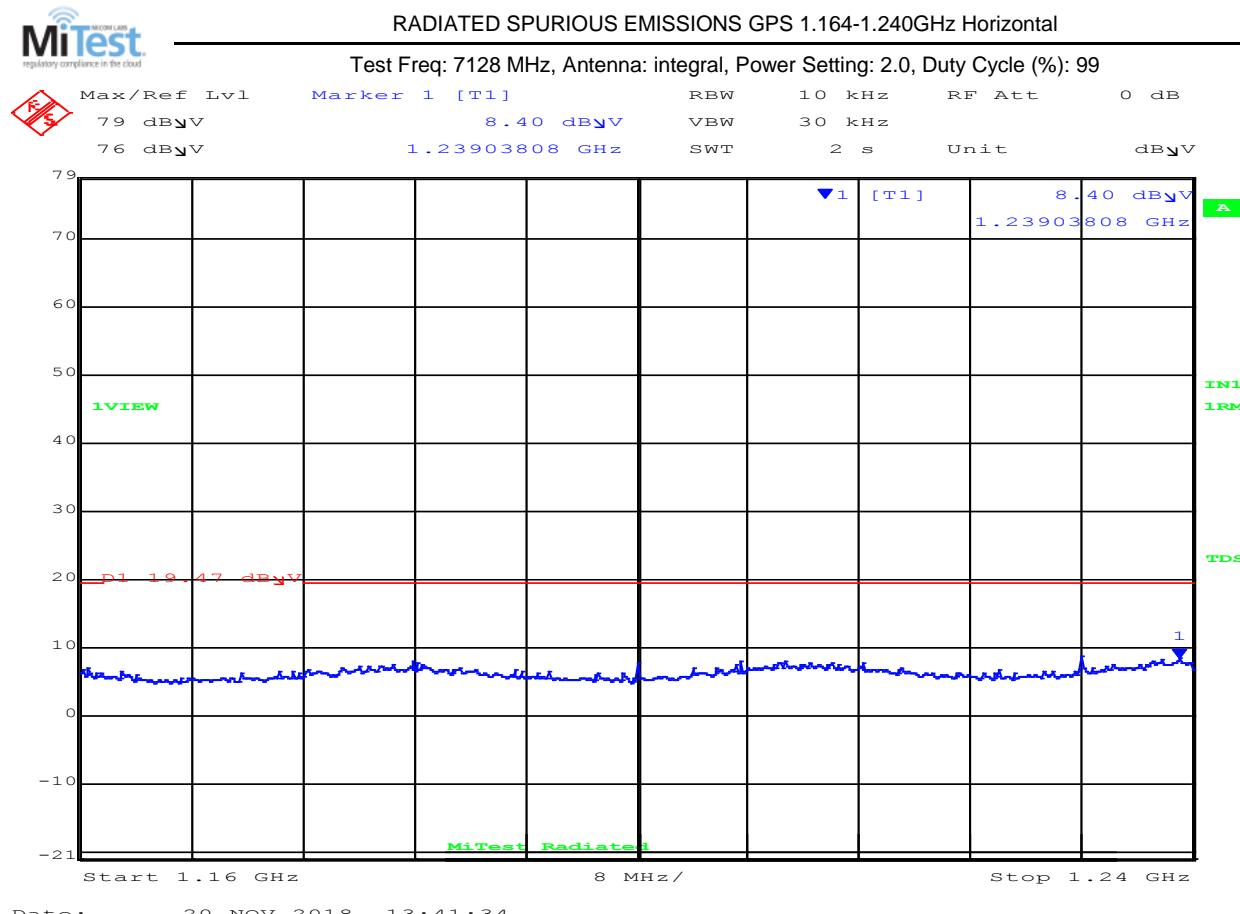
Title: Alereon AL5955, AL5930, AL5934
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7128 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



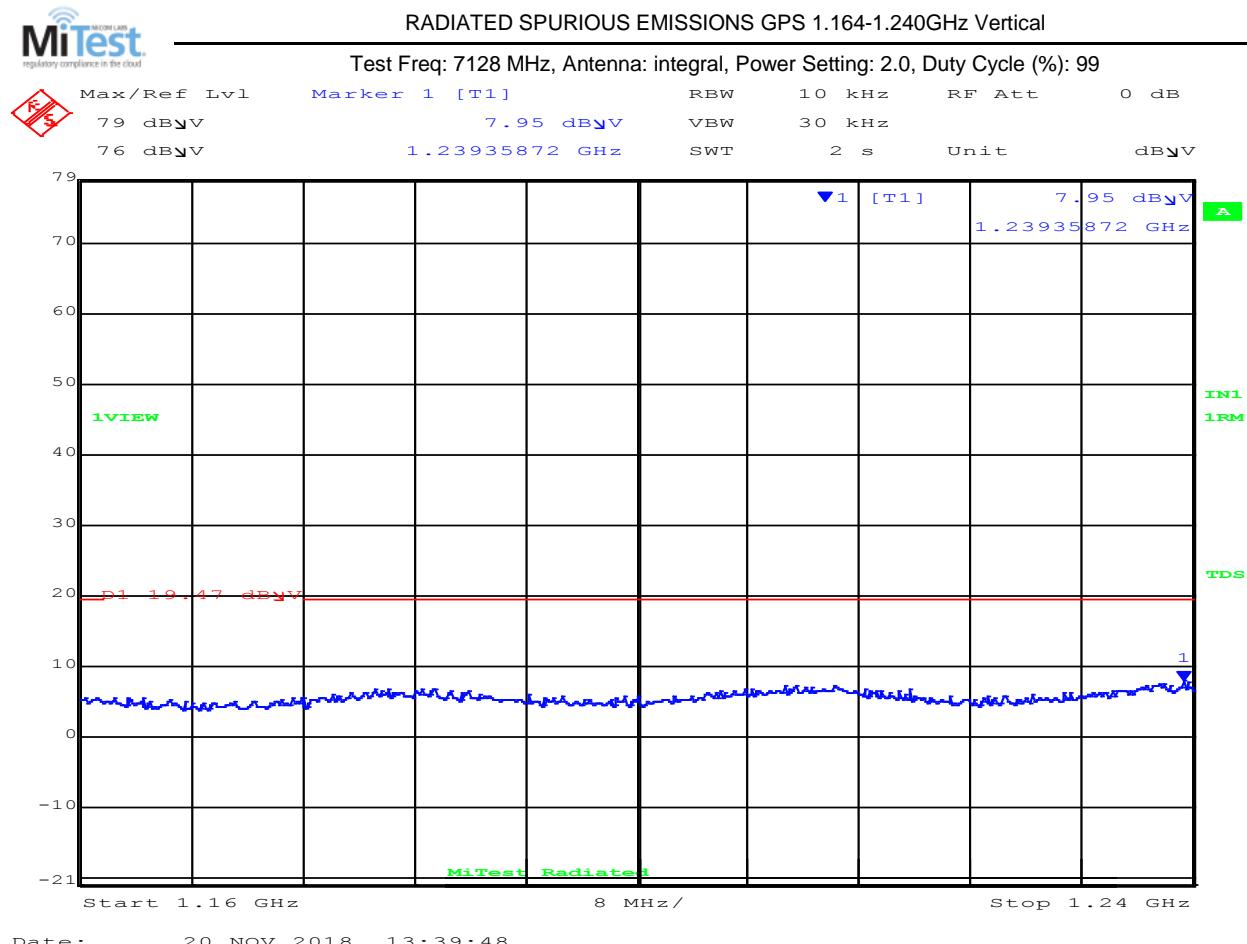
1164.00-1240.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz										
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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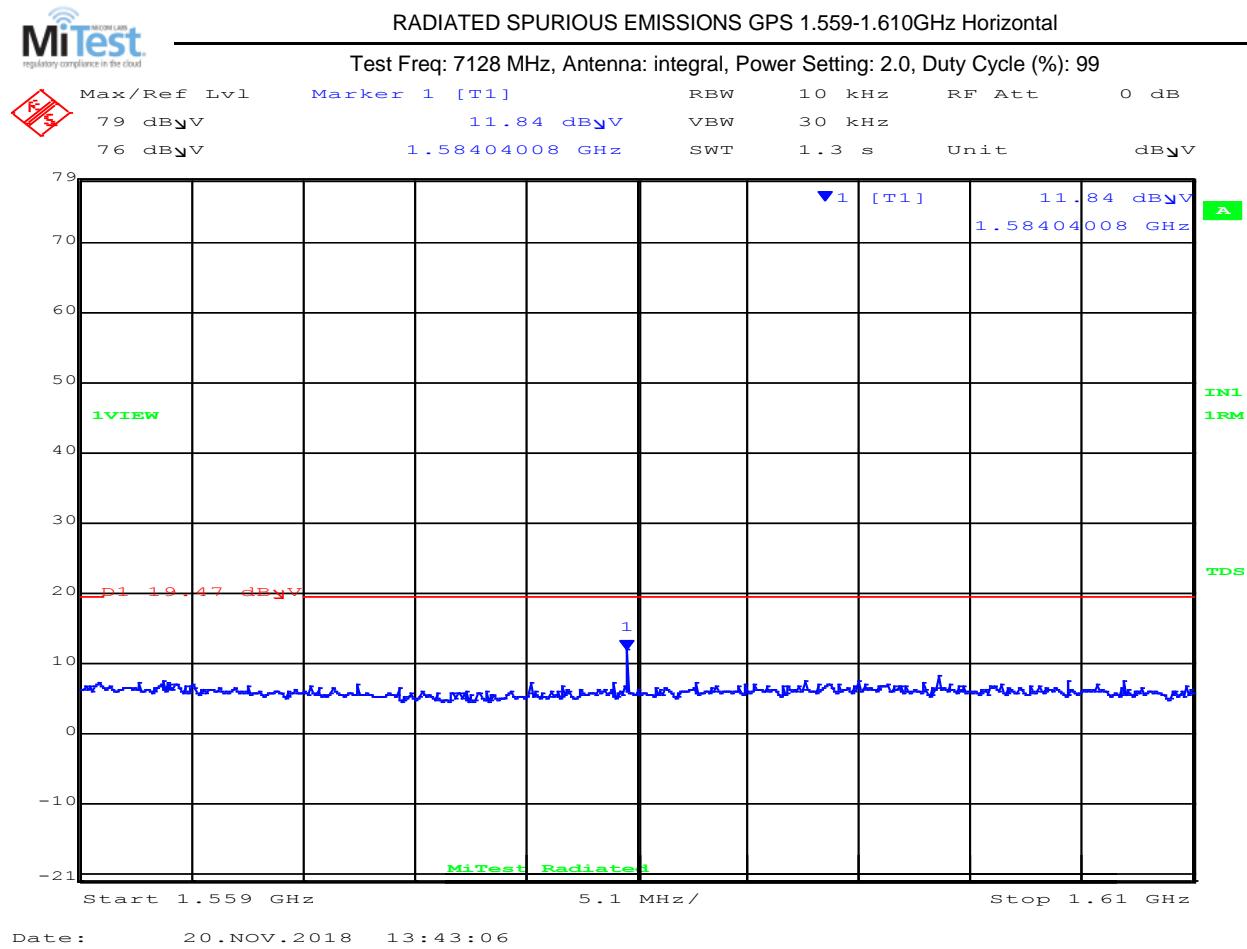


Title: Alereon AL5955, AL5930, AL5934
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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



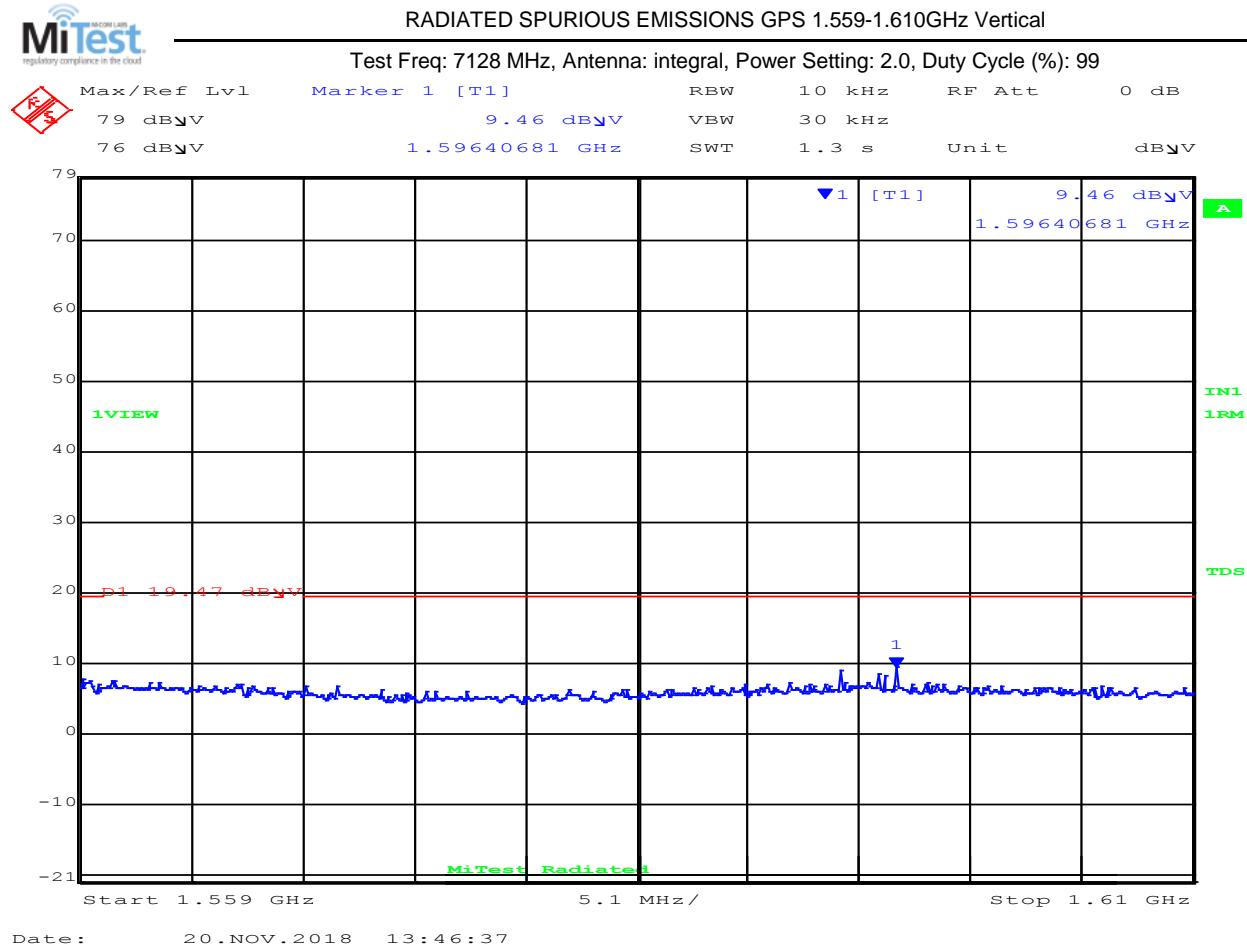
1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz										
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

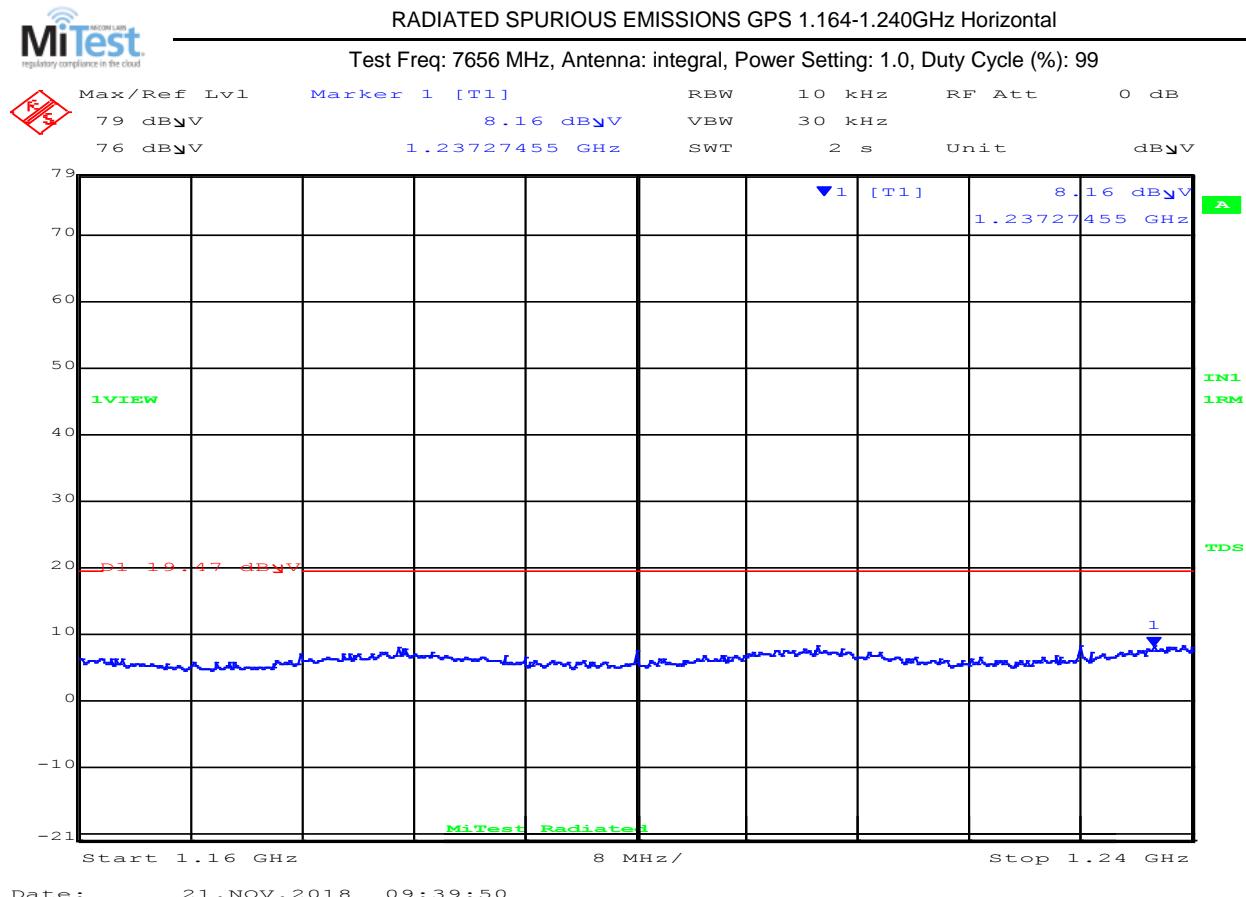
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7656 MHz (Covers Band Group 3 TFC 7 and Band Group 6 TFC 5)

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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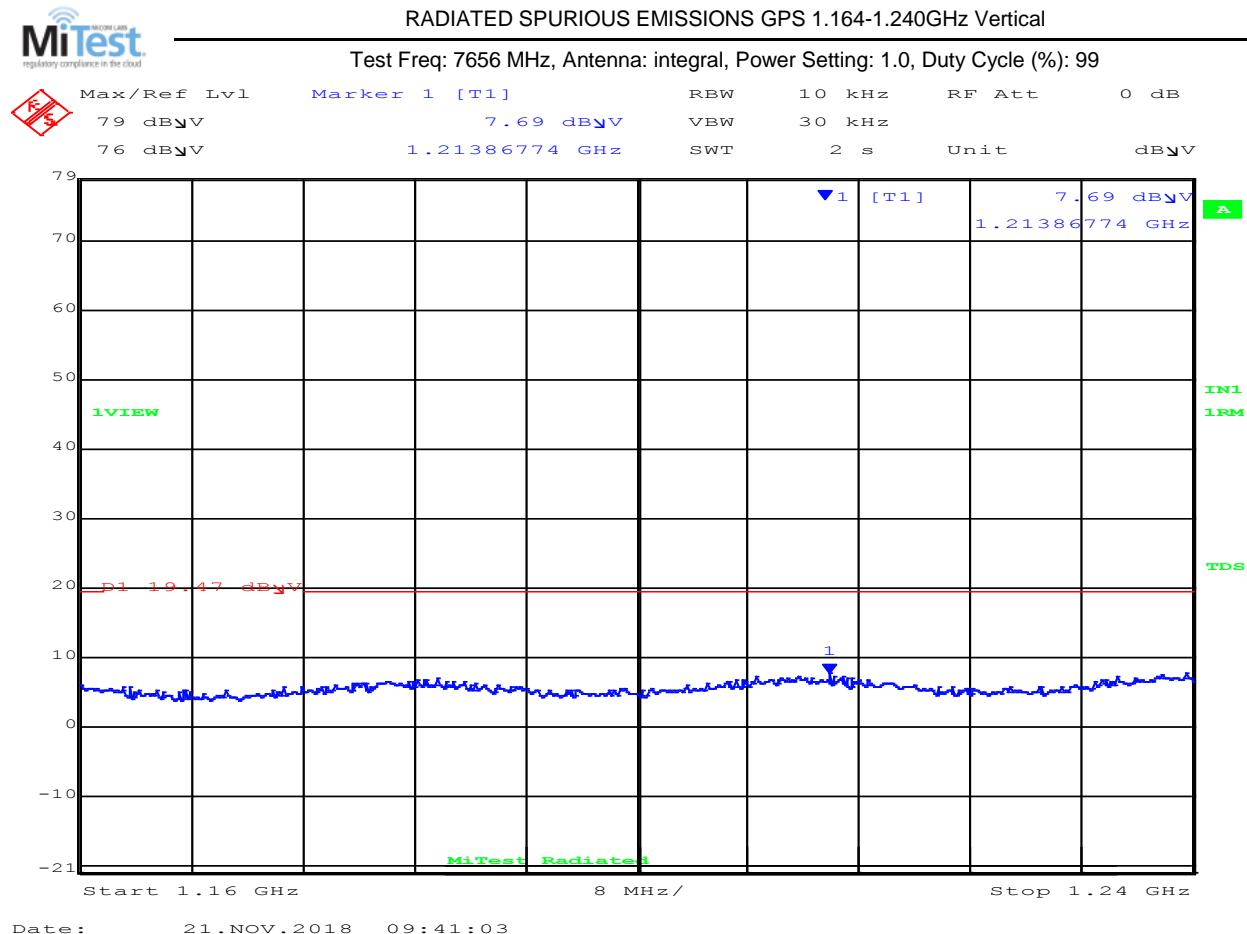


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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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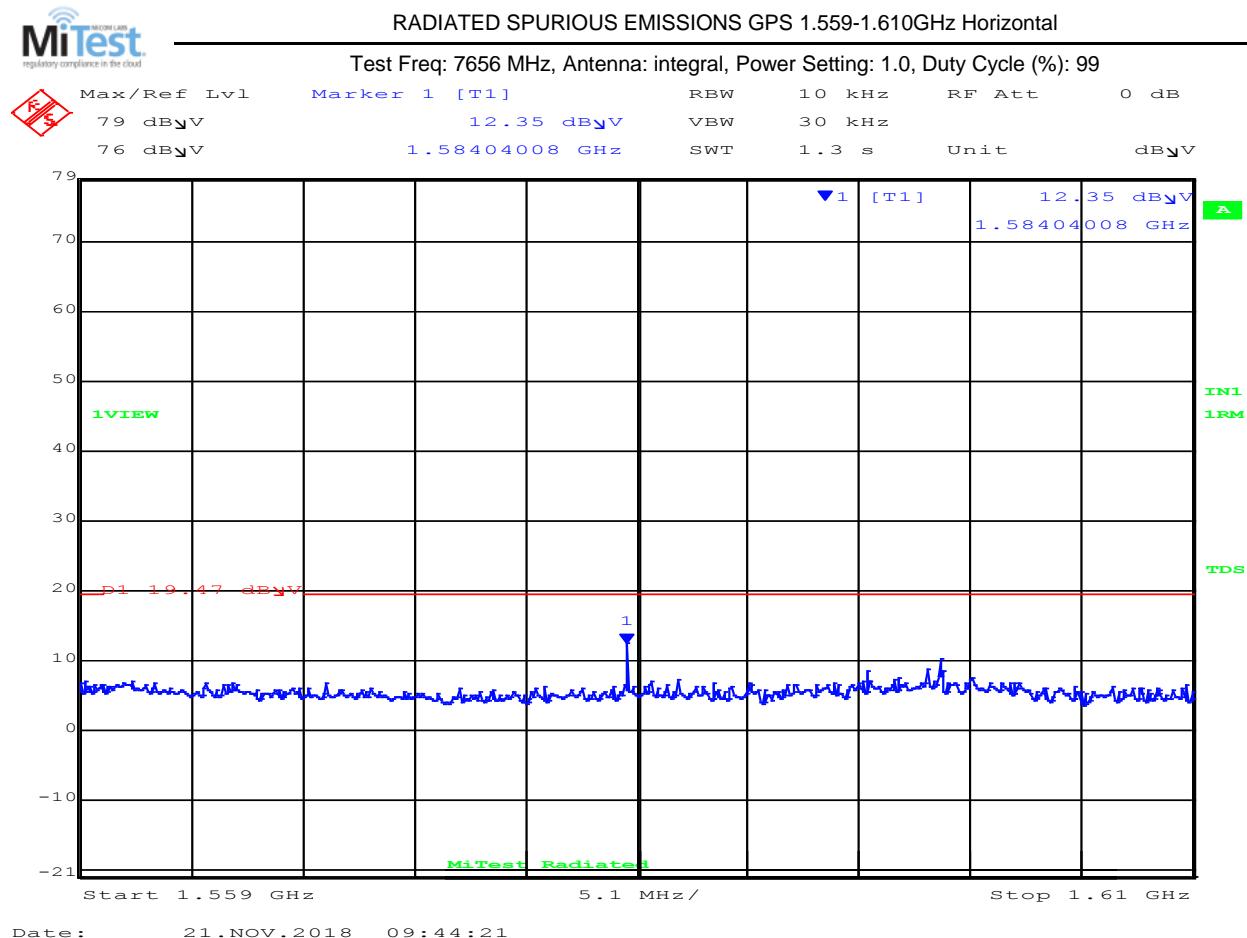


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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz										
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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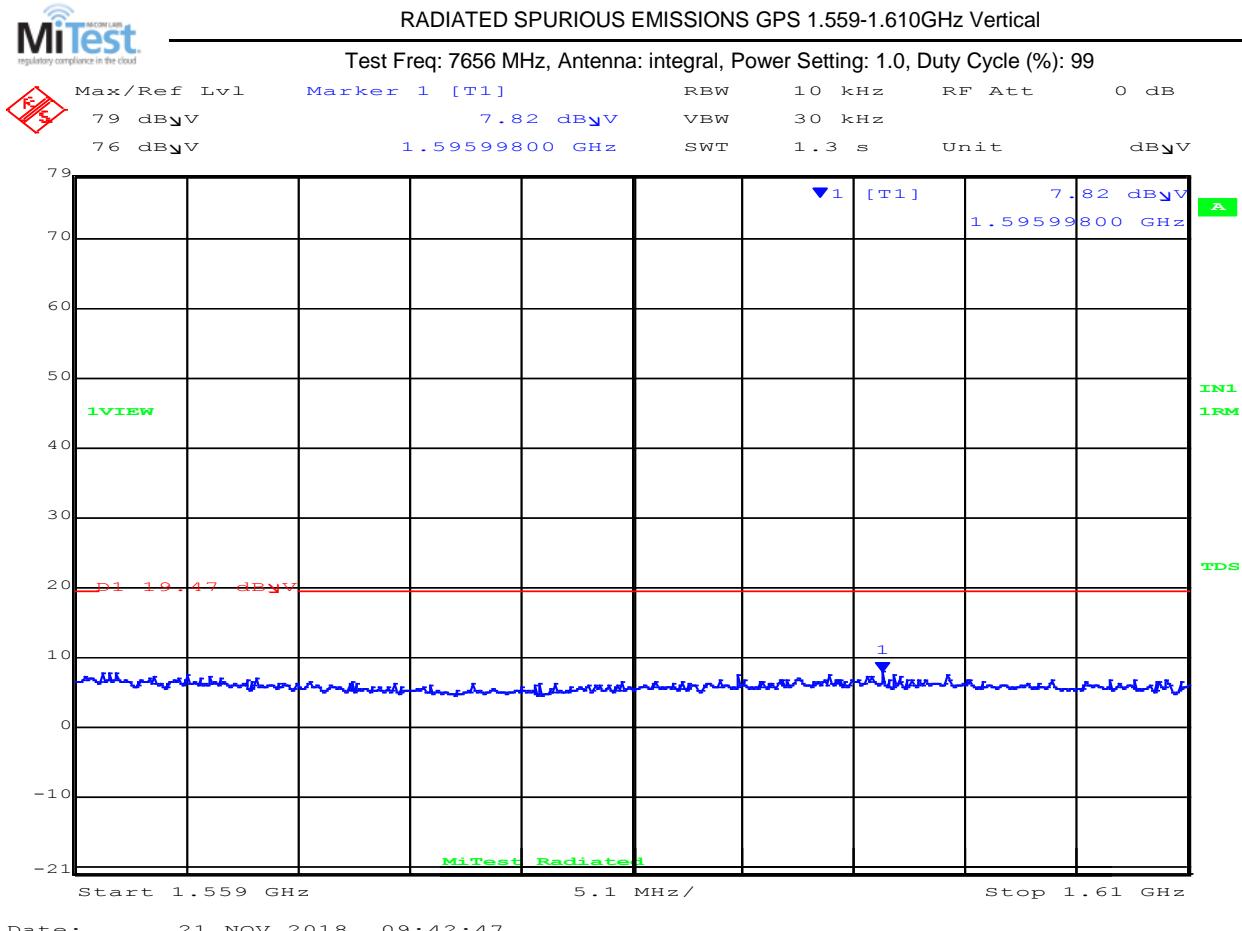


Title: Alereon AL5955, AL5930, AL5934
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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



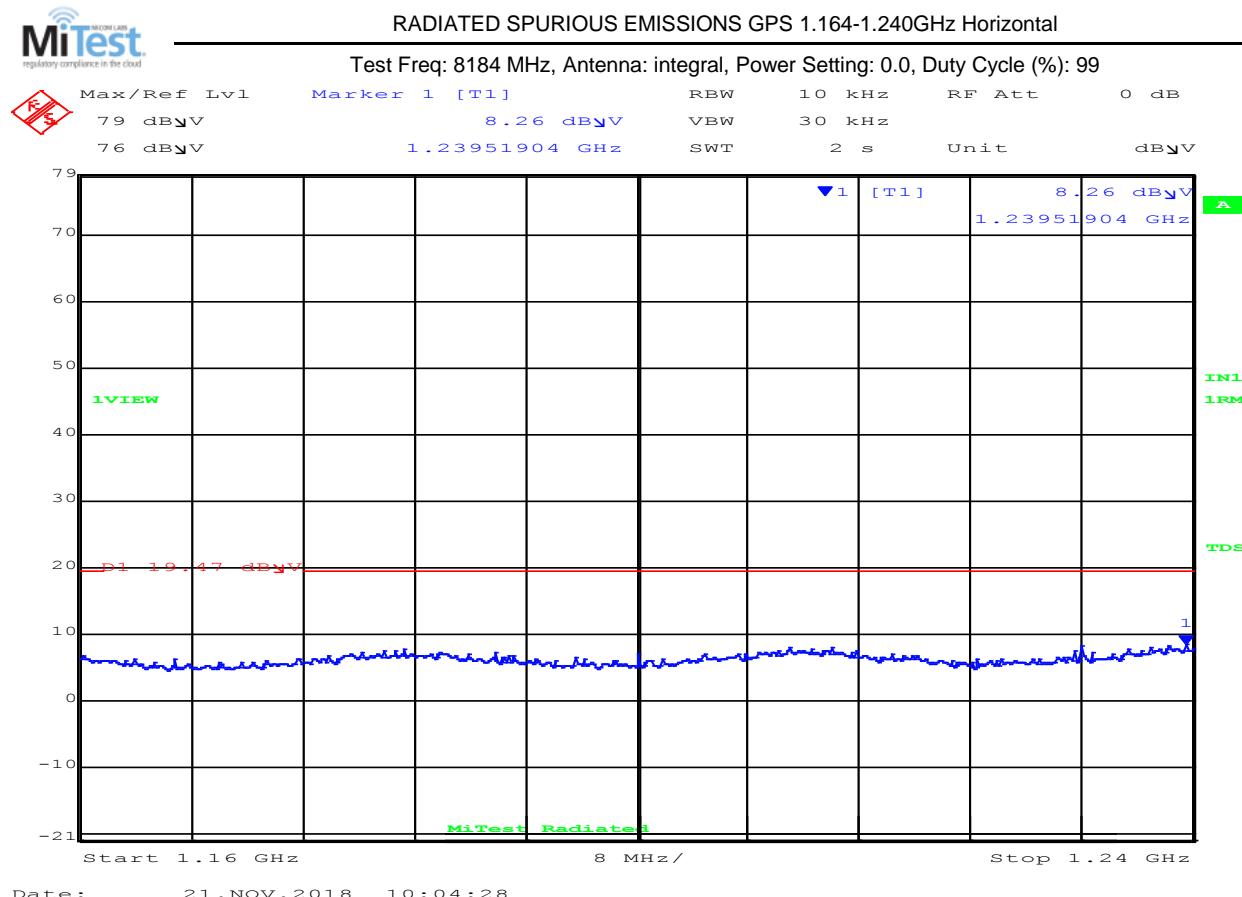
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8184 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz									
Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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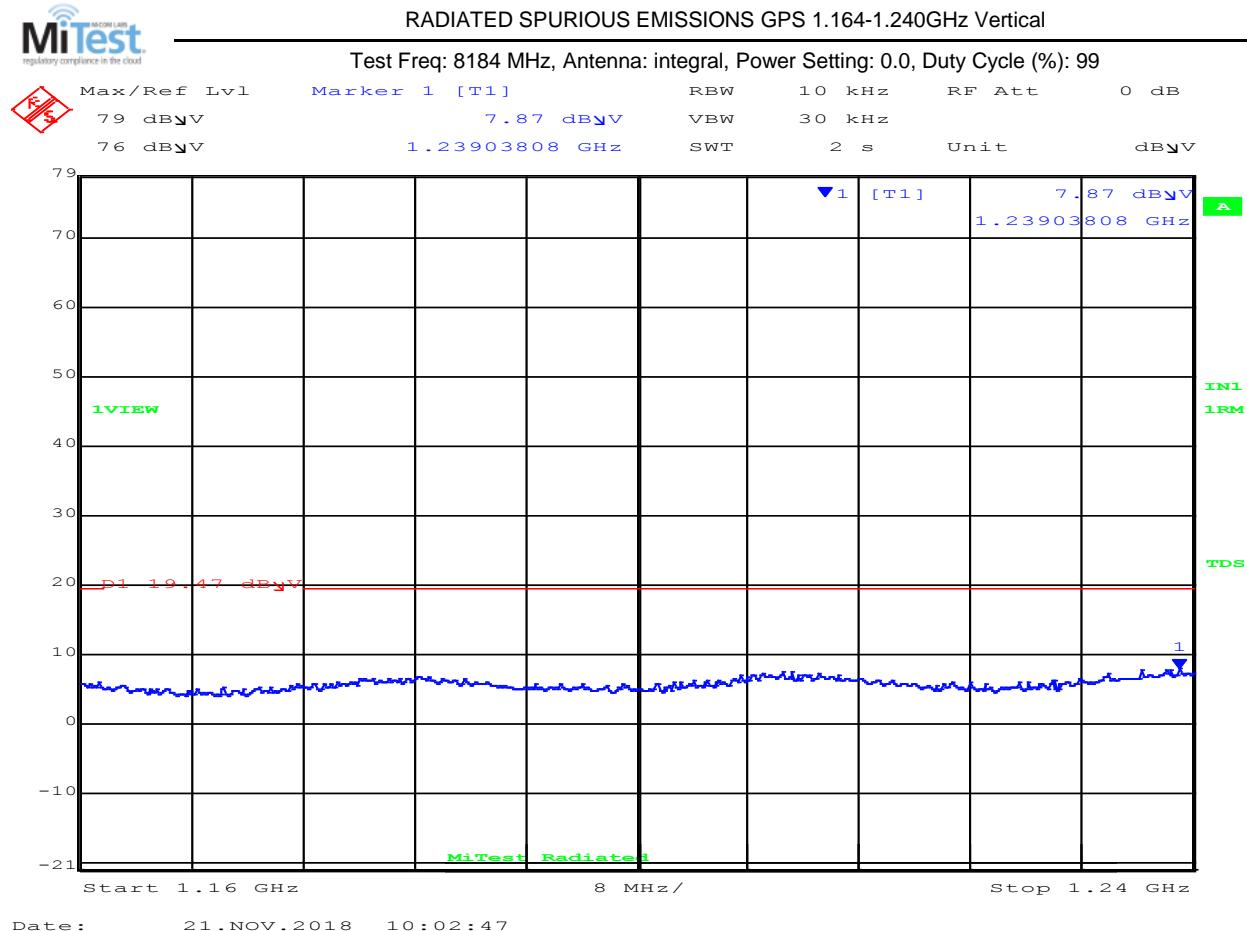


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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



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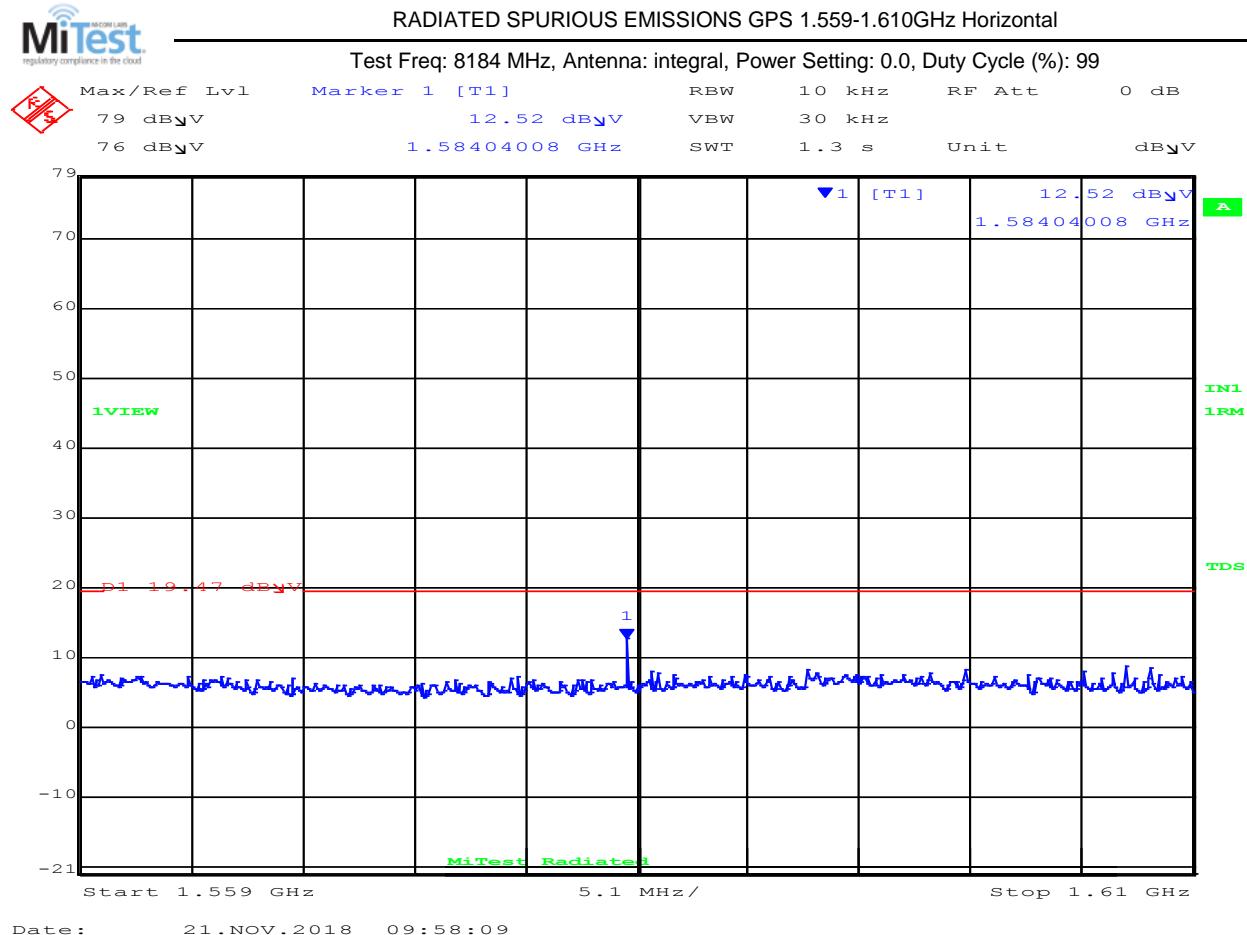


Title: Alereon AL5955, AL5930, AL5934
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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



Date: 21.NOV.2018 09:58:09

1559.00-1610.00 MHz

Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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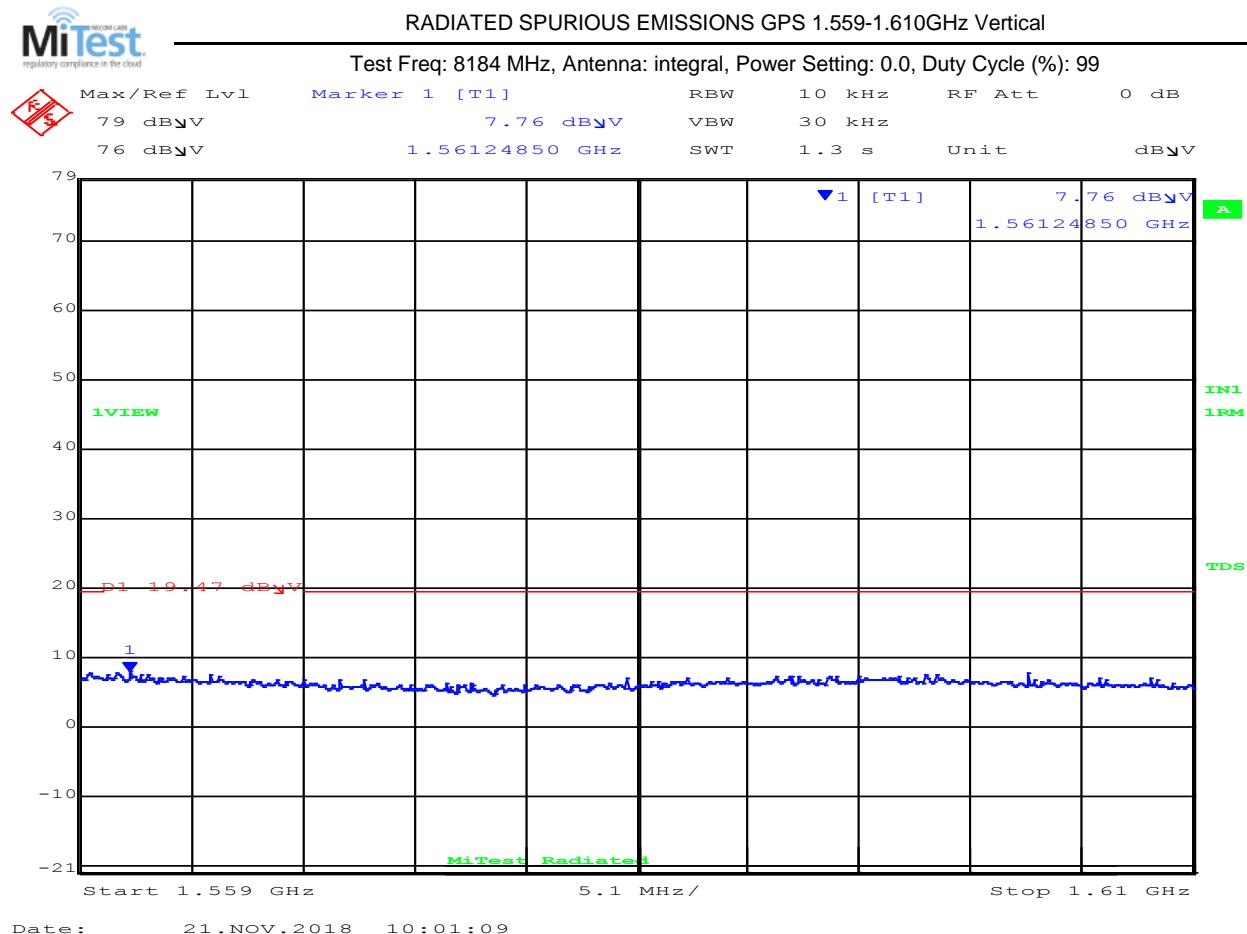


Title: Alereon AL5955, AL5930, AL5934
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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

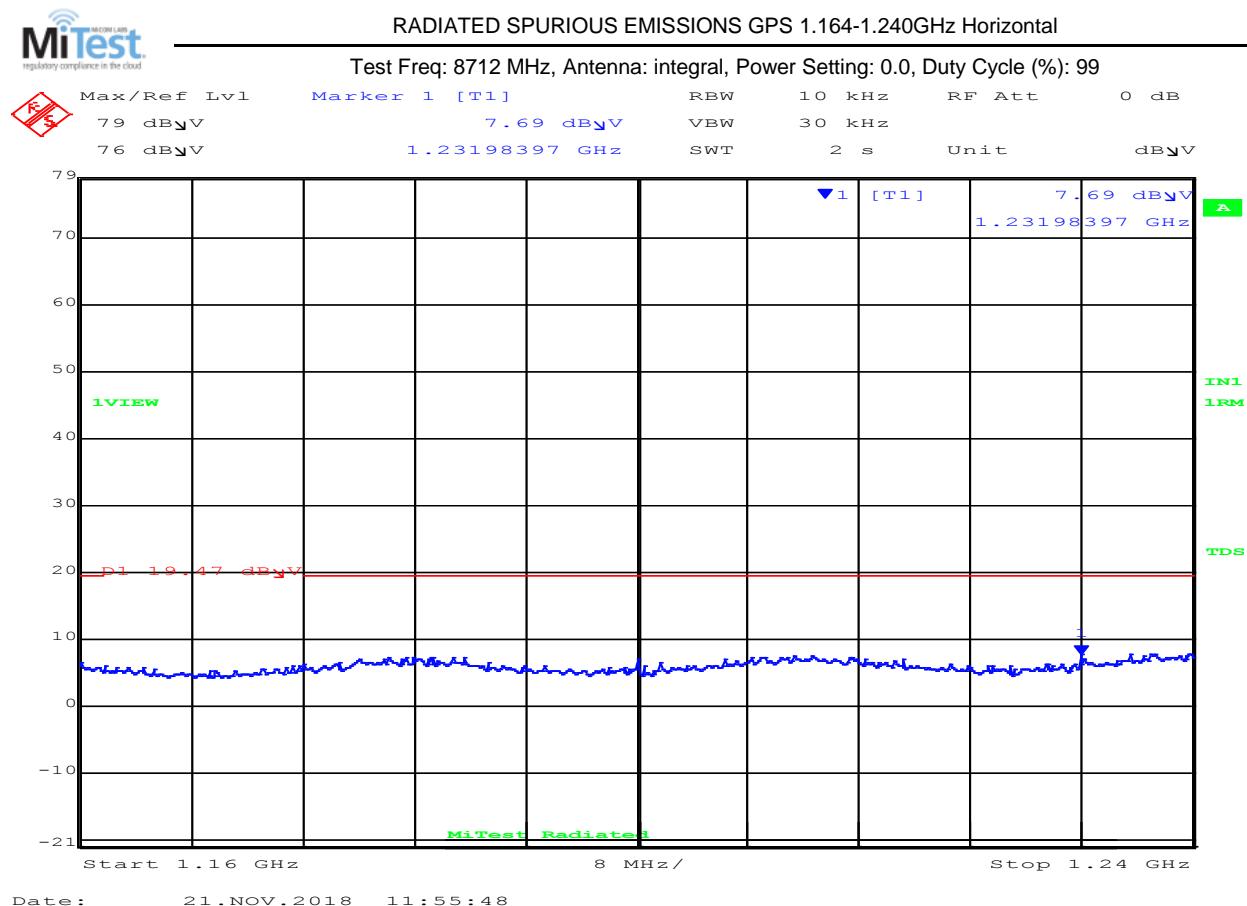
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8712 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									

Test Notes:
 Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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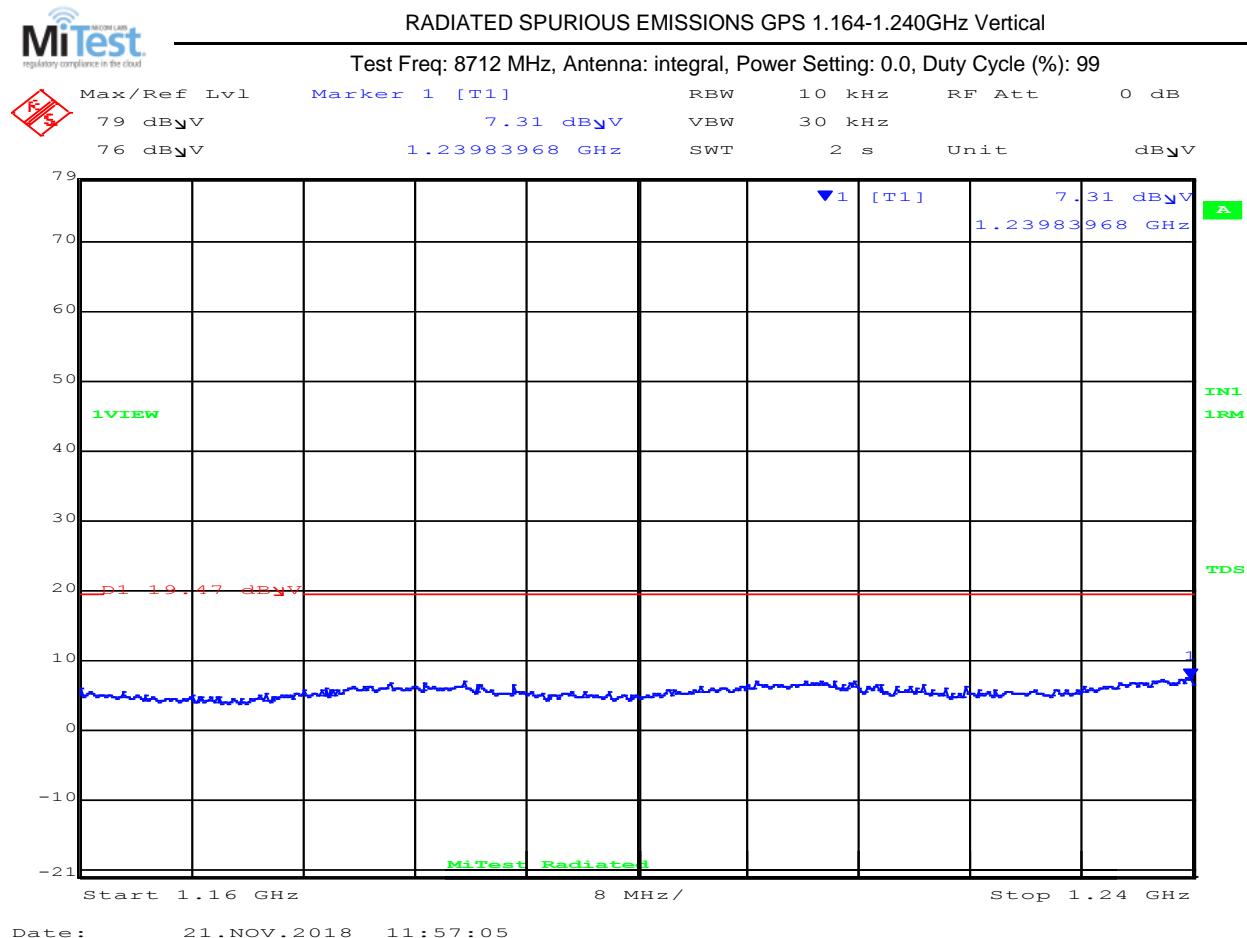


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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1164.00-1240.00 MHz										
Num	Frequency MHz	Level dB _{μV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{μV/m}	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)										

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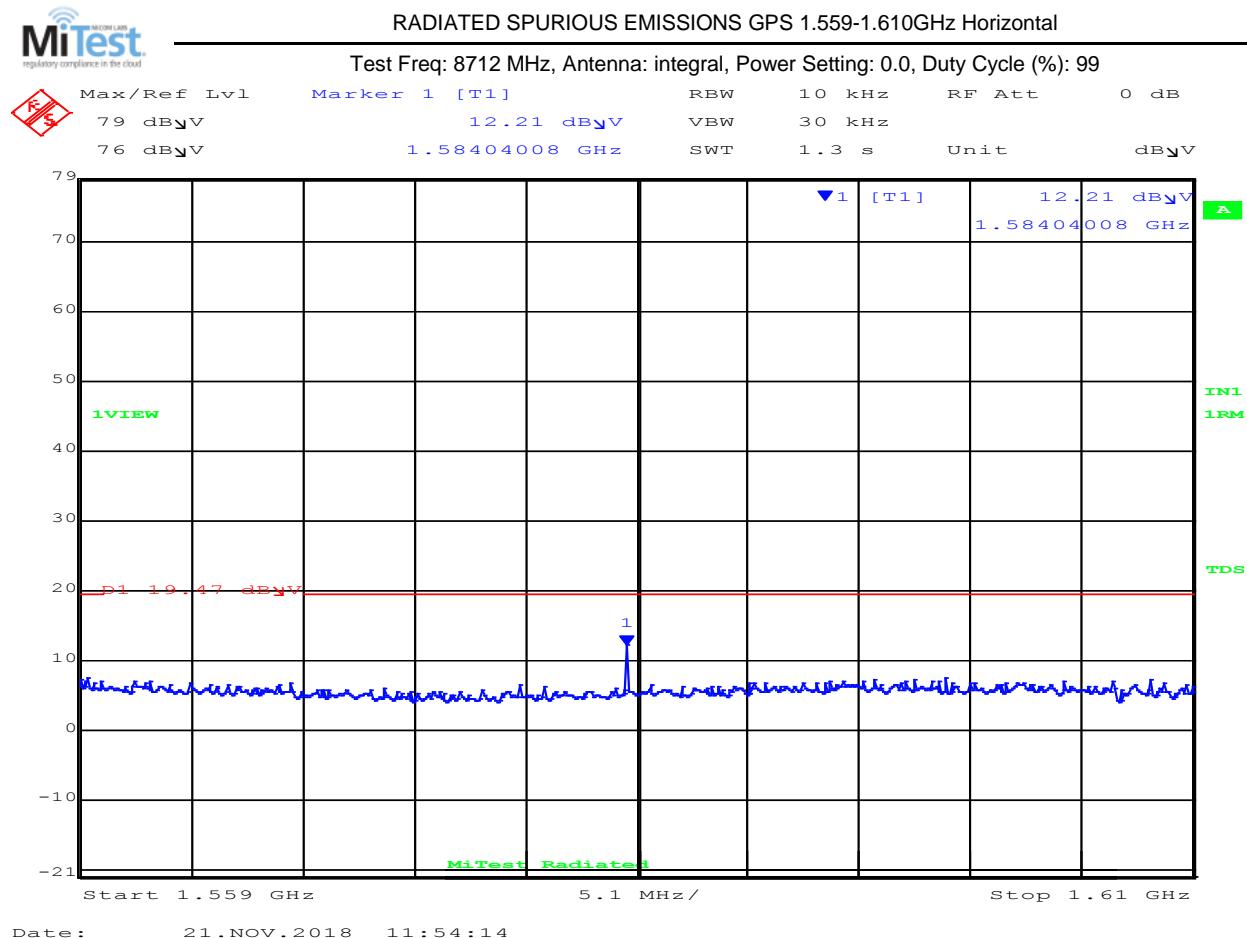


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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz

Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

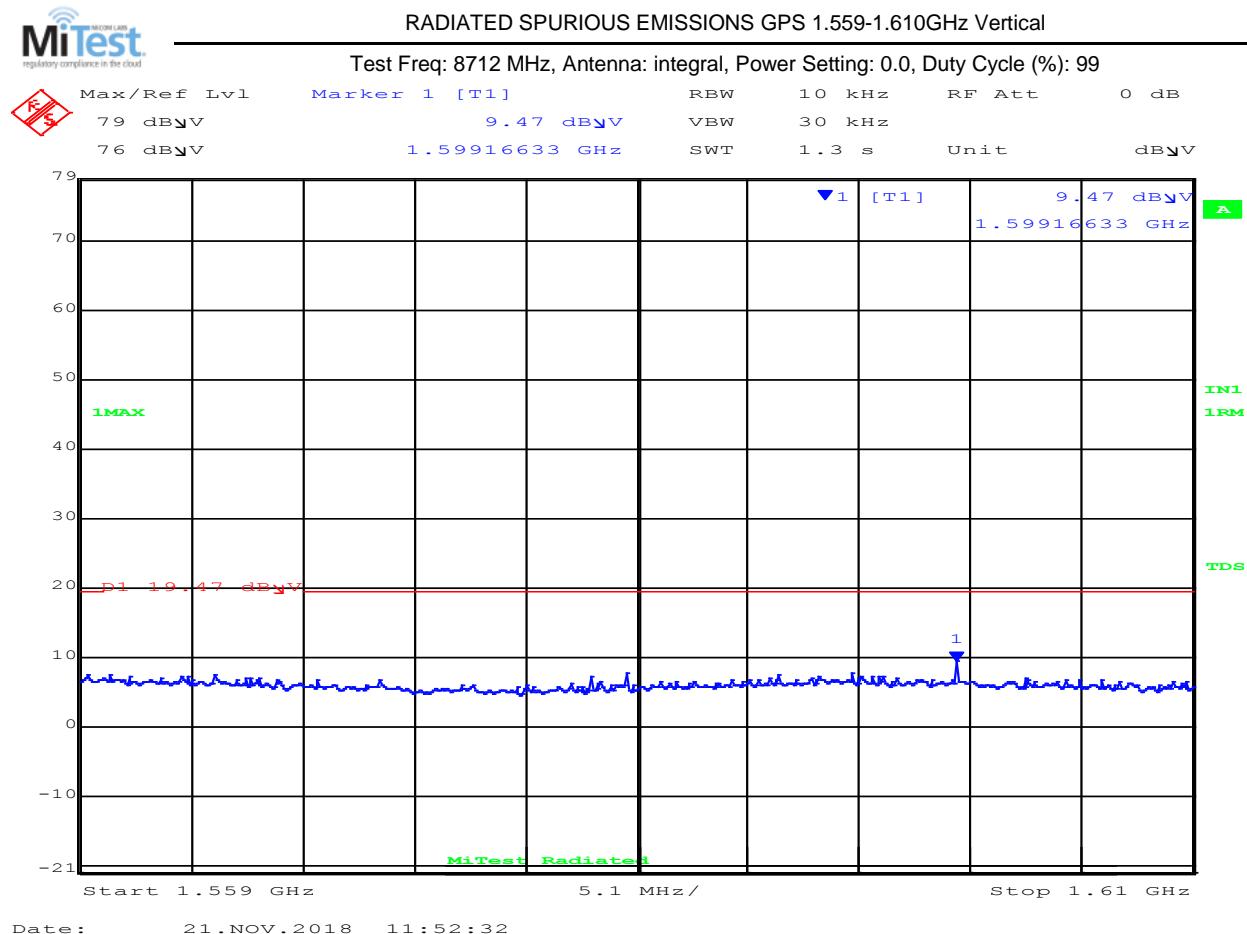


Title: Alereon AL5955, AL5930, AL5934
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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



1559.00-1610.00 MHz									
Num	Frequency MHz	Level dB _μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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9.4.3. 50 MHz Bandwidth Peak Emissions

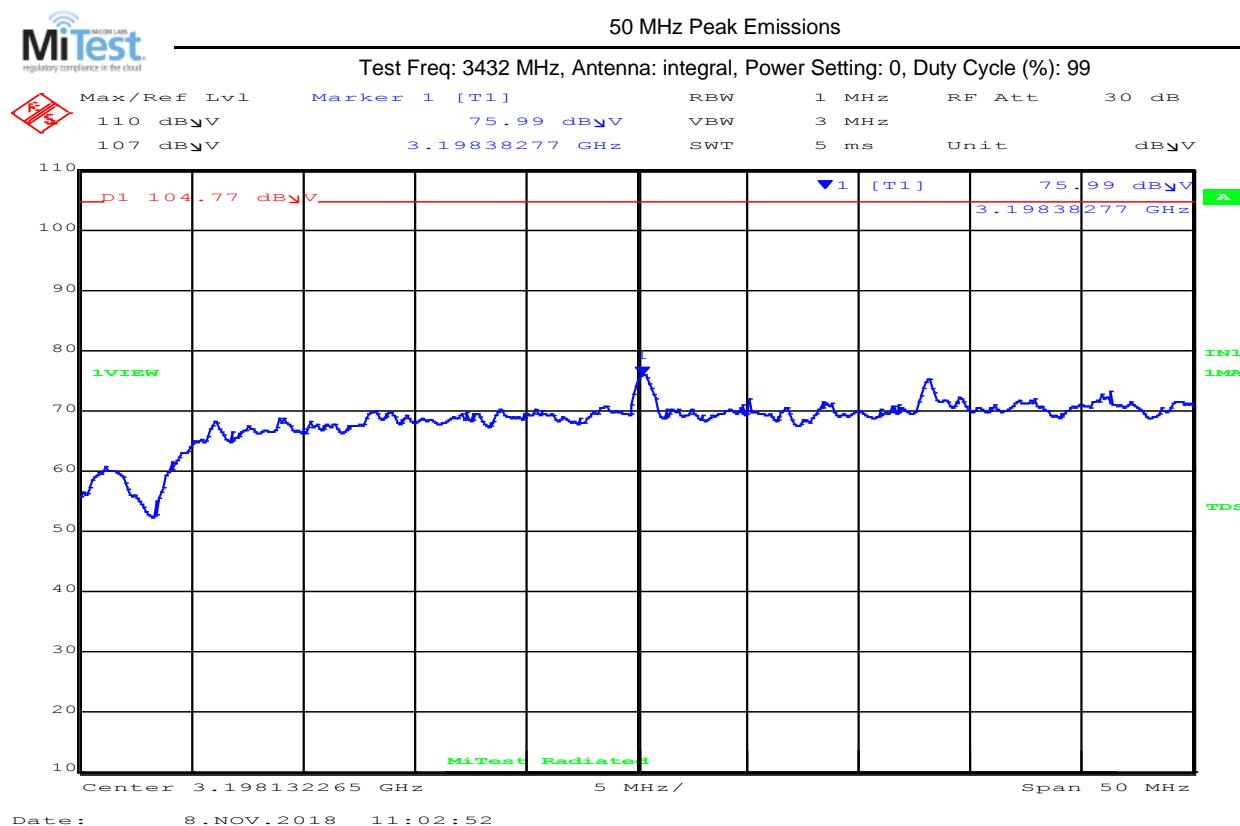
9.4.3.1. Commander AL5930

3432 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions										
Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes:										

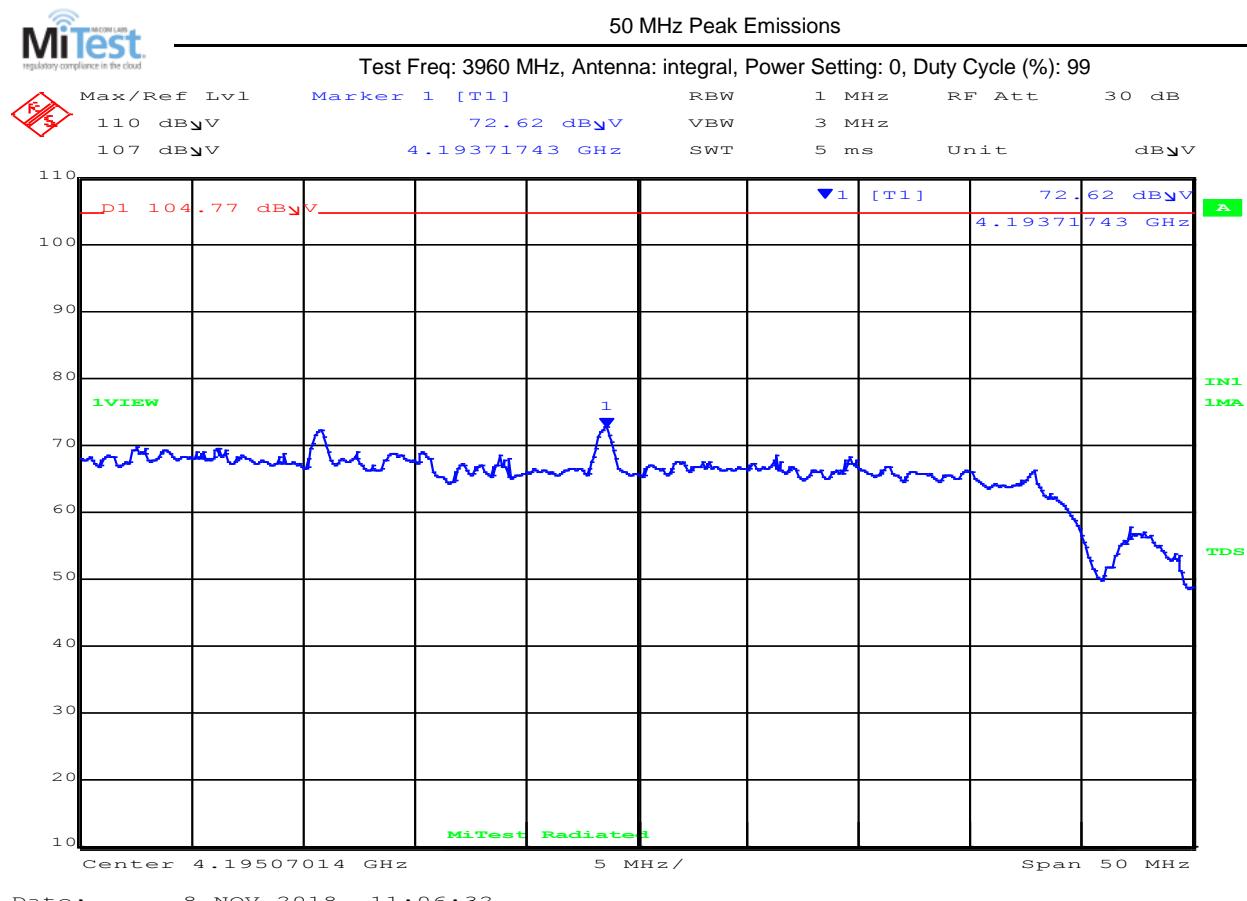
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3960 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

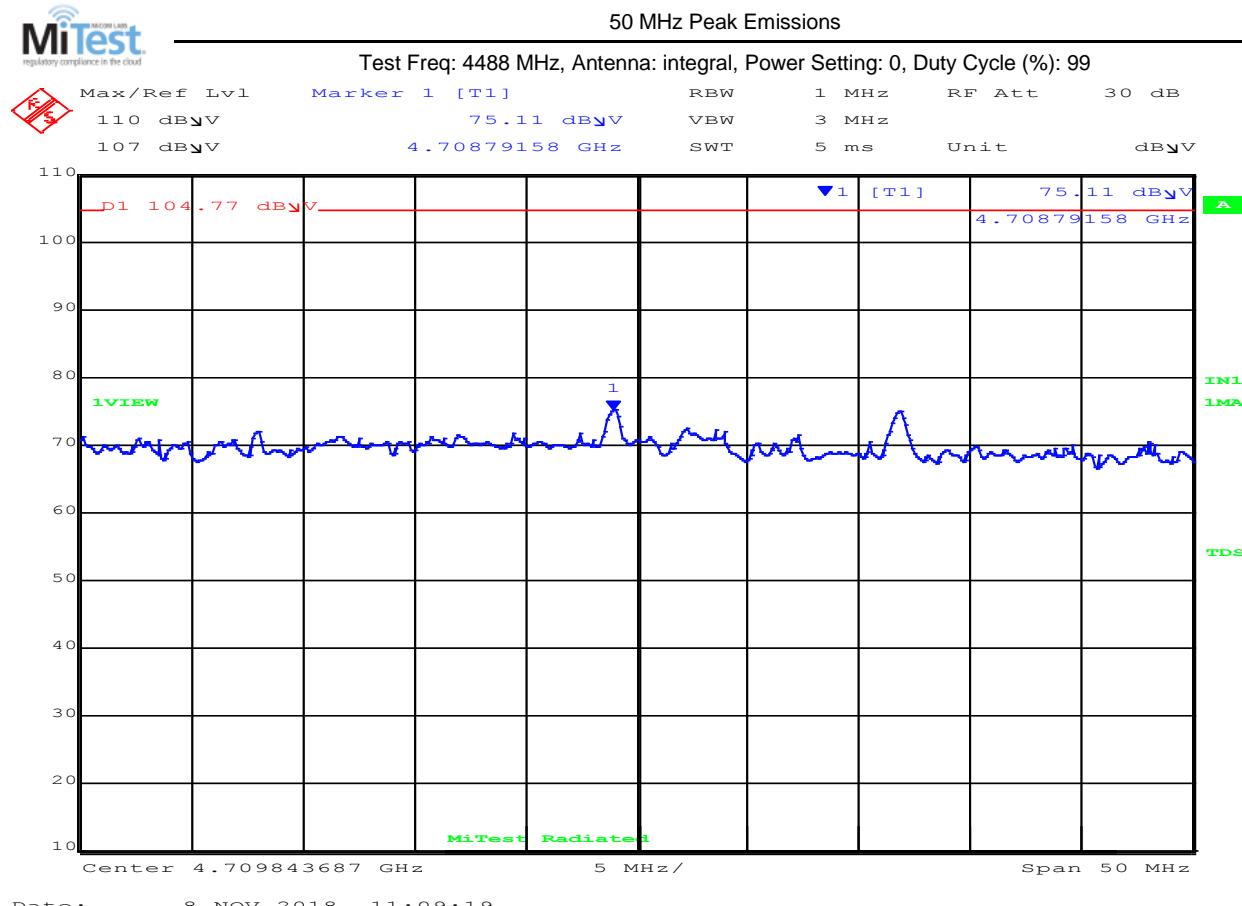
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

4488 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

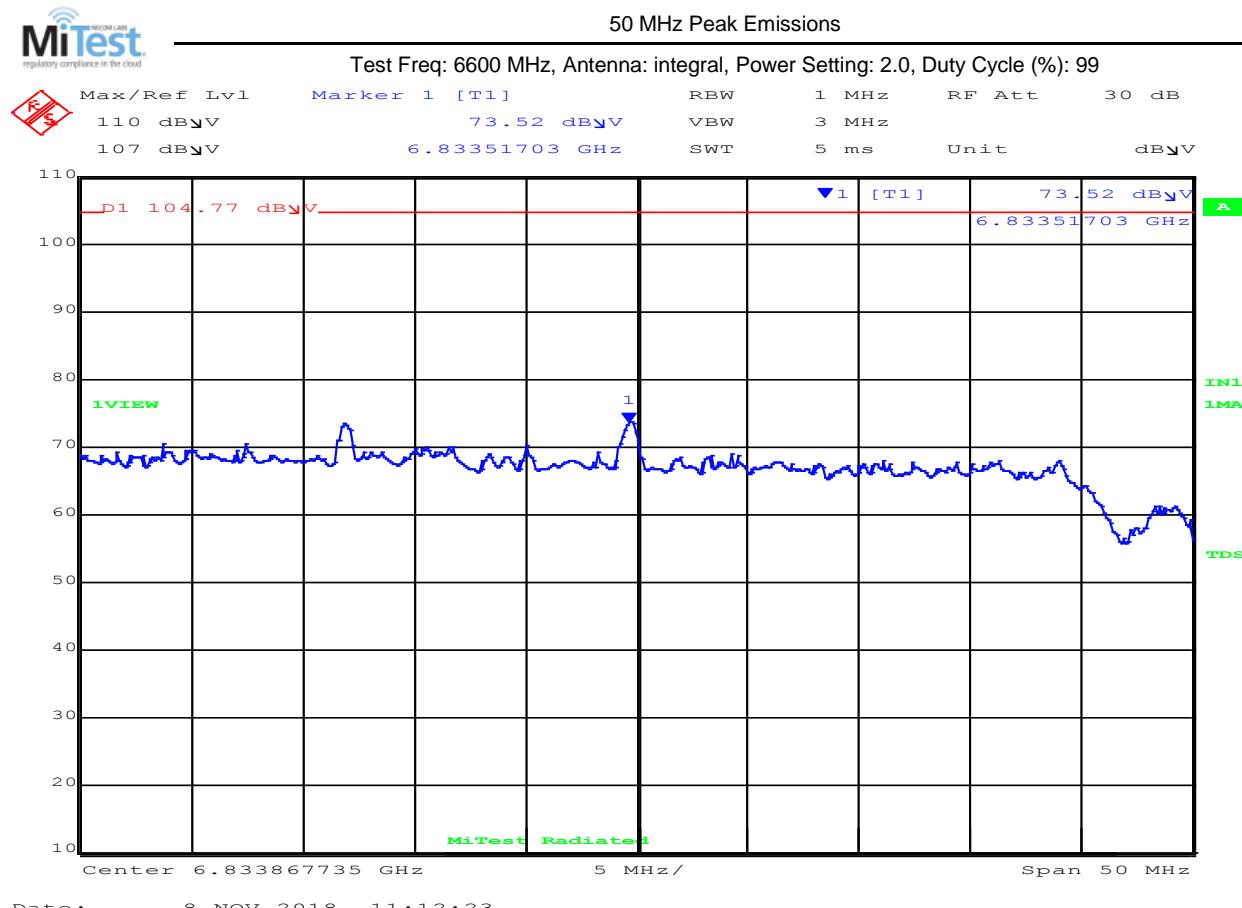
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

6600 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.



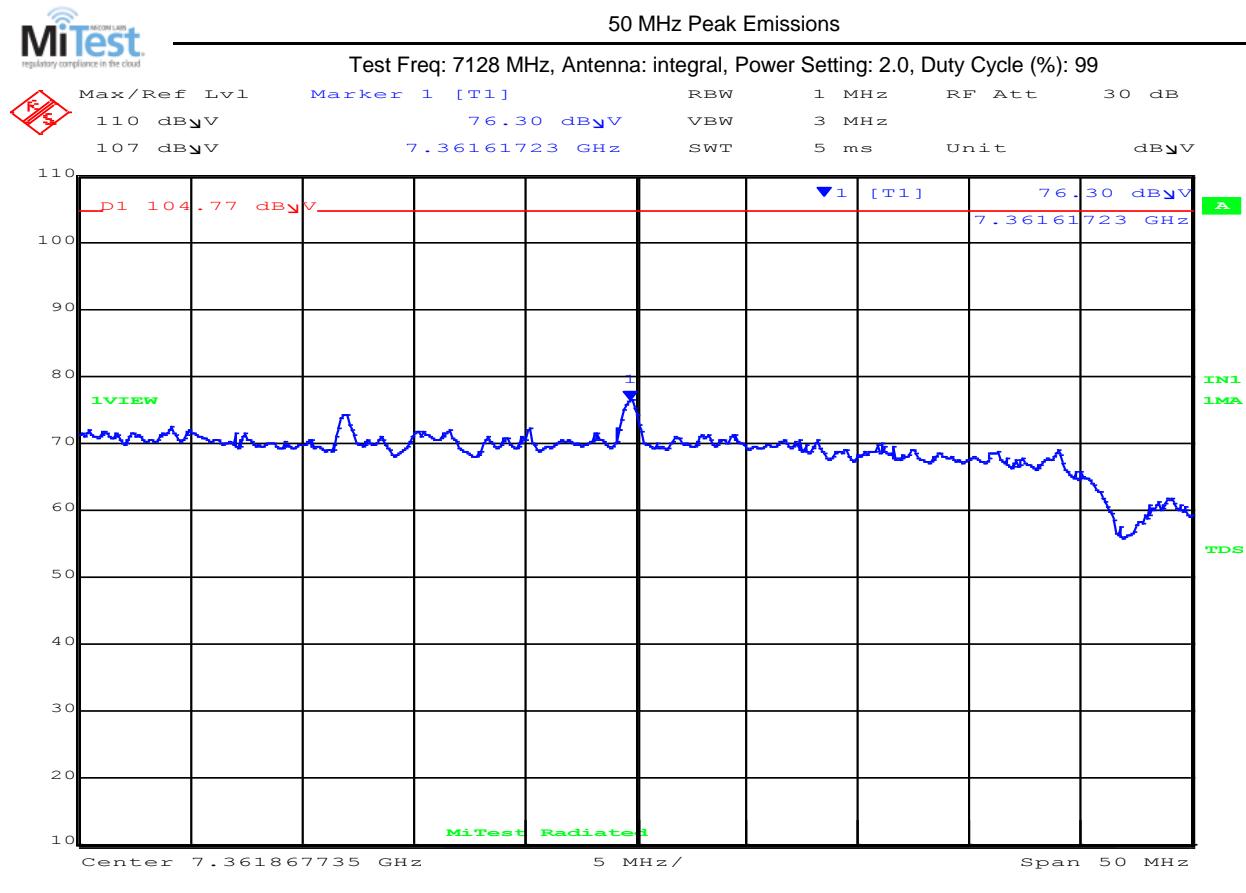
Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
Serial #: ALER01-U2C Rev A
Issue Date: 12th December 2018
Page: 423 of 466

7128 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

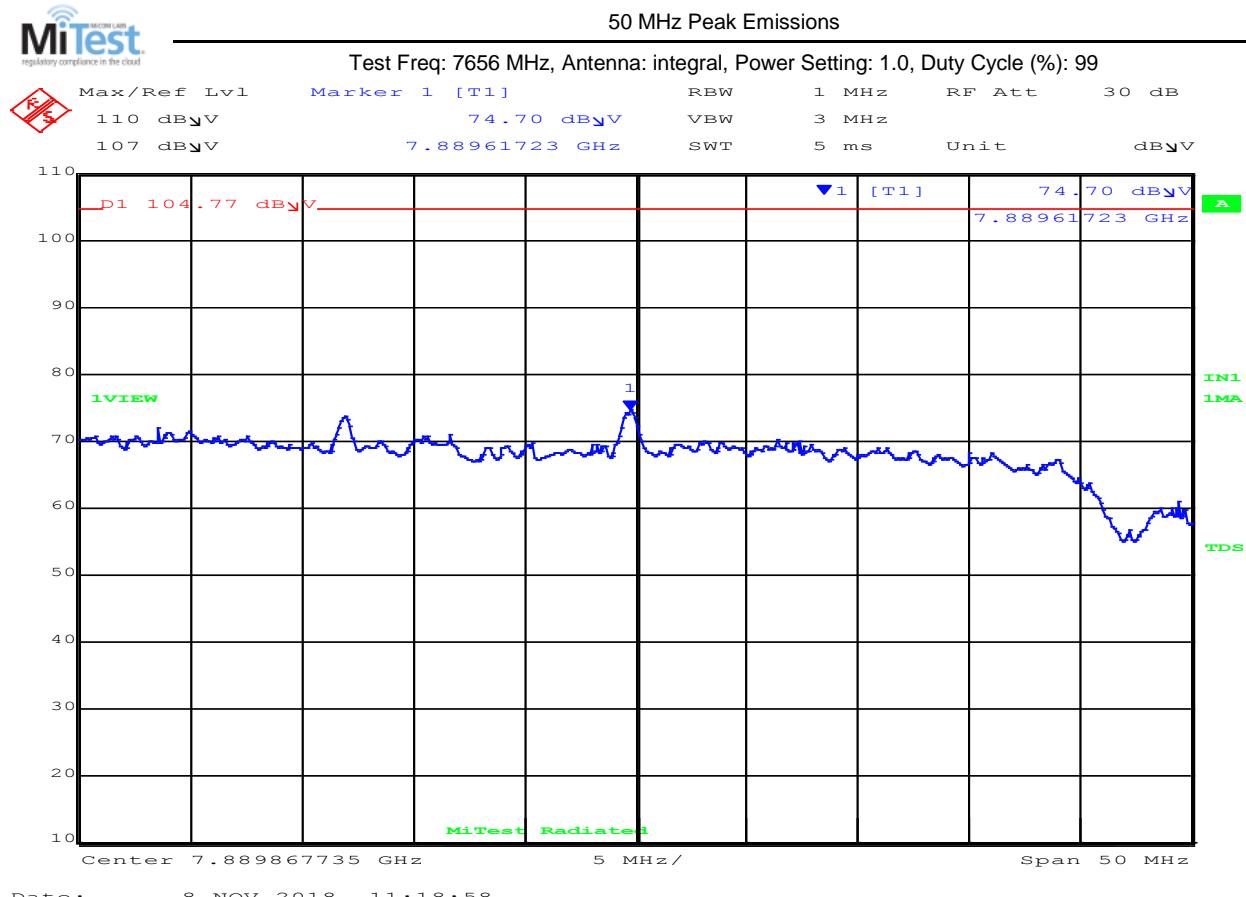
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

7656 MHz (Covers Band Group 3 TFC 7 and Band Group 6 TFC 5)

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.



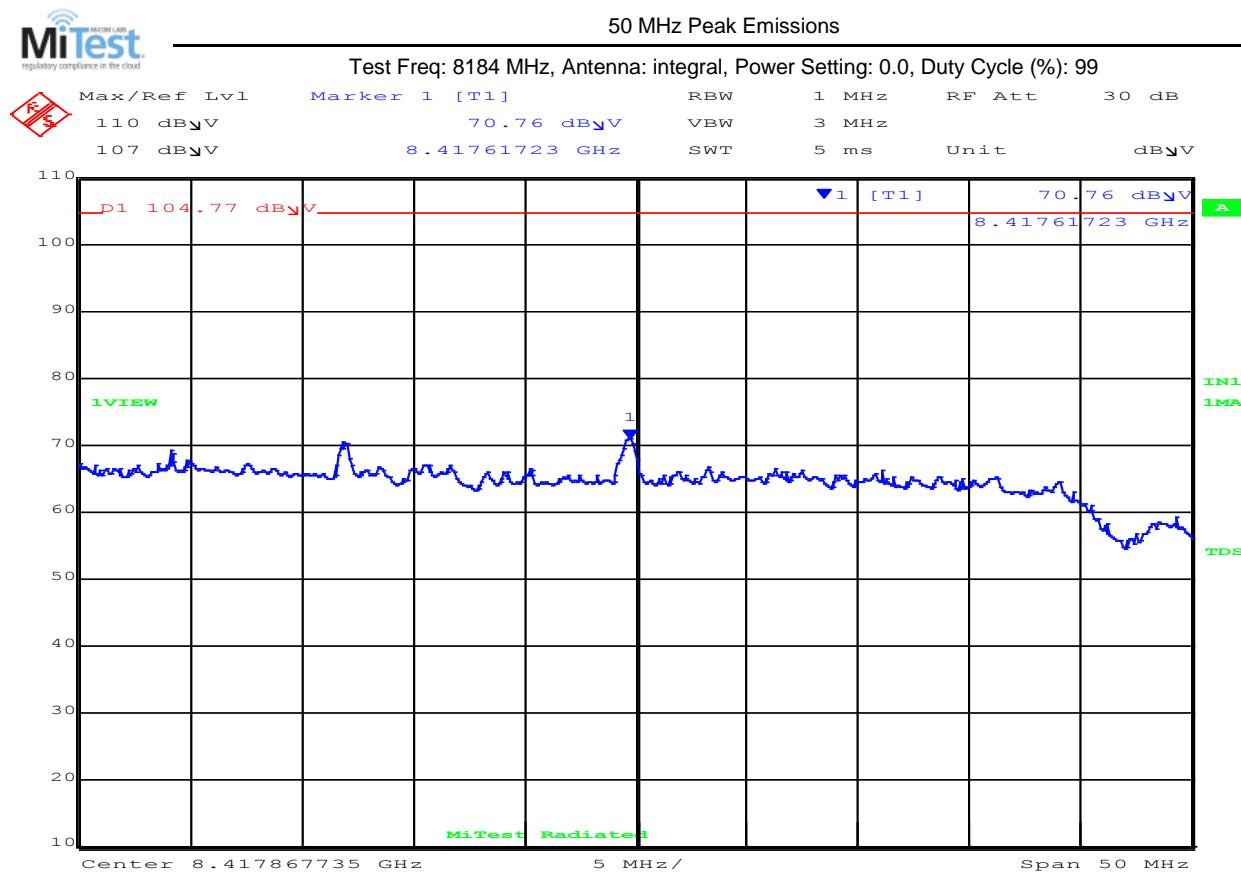
Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
Serial #: ALER01-U2C Rev A
Issue Date: 12th December 2018
Page: 425 of 466

8184 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



Date: 8.NOV.2018 11:22:41

50 MHz Peak Emissions

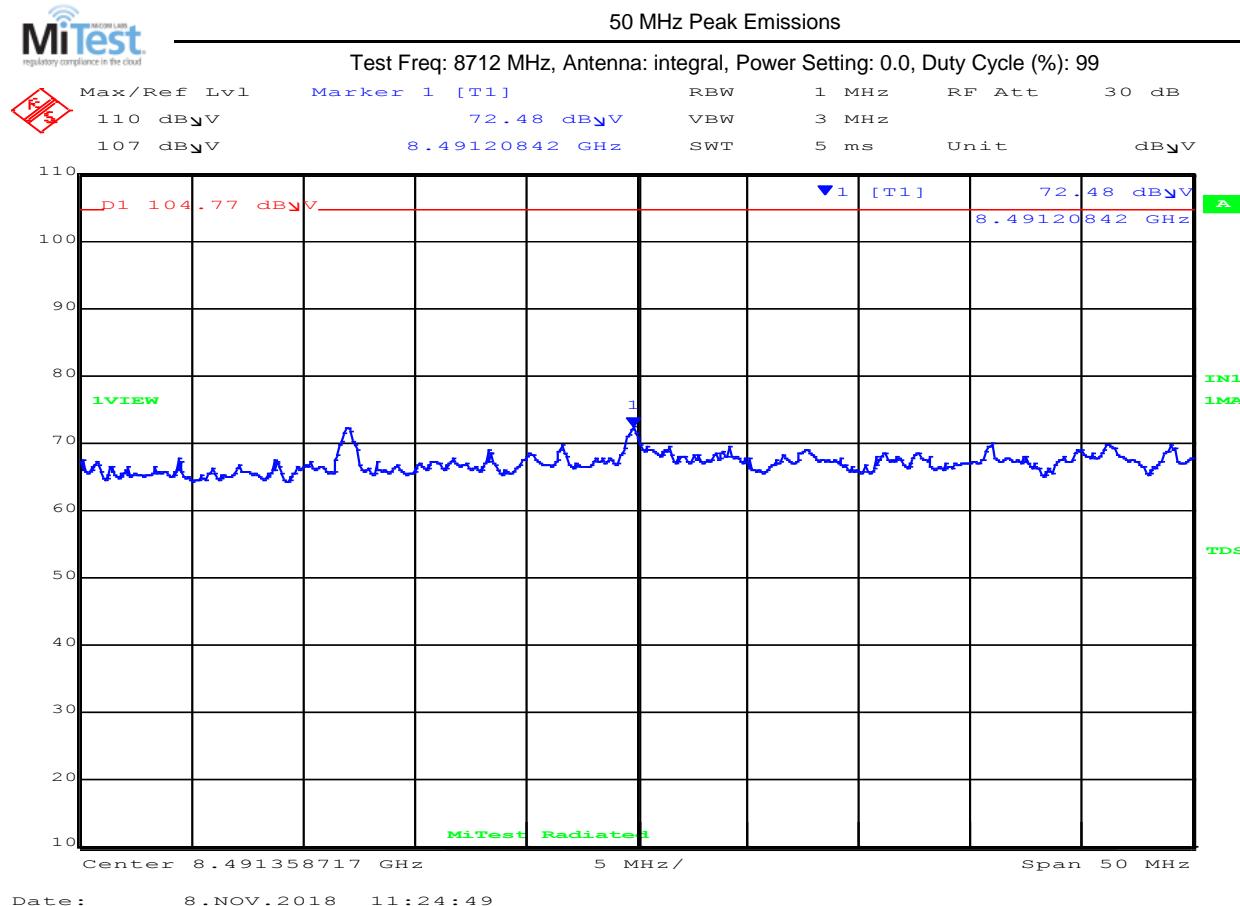
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8712 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dB _u V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _u V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

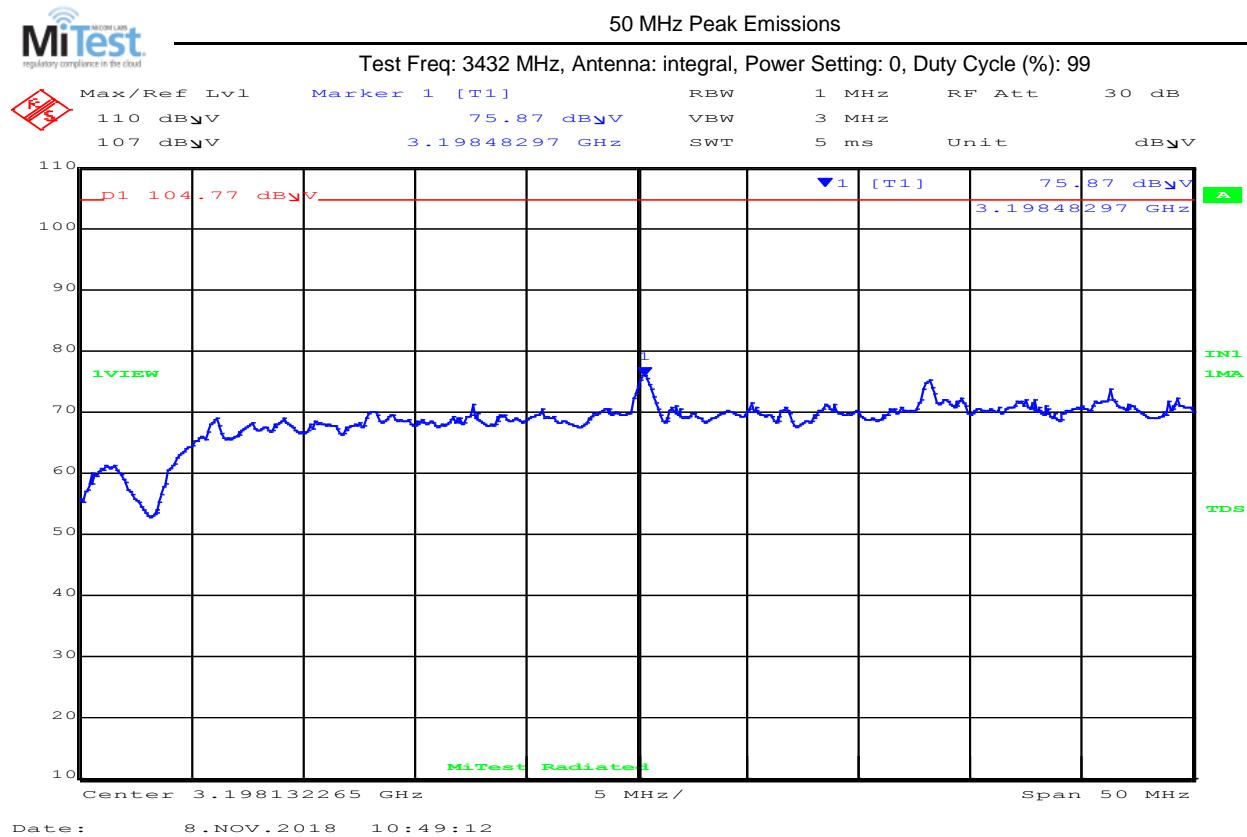
9.4.3.2. Camouflage AL5955

3432 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

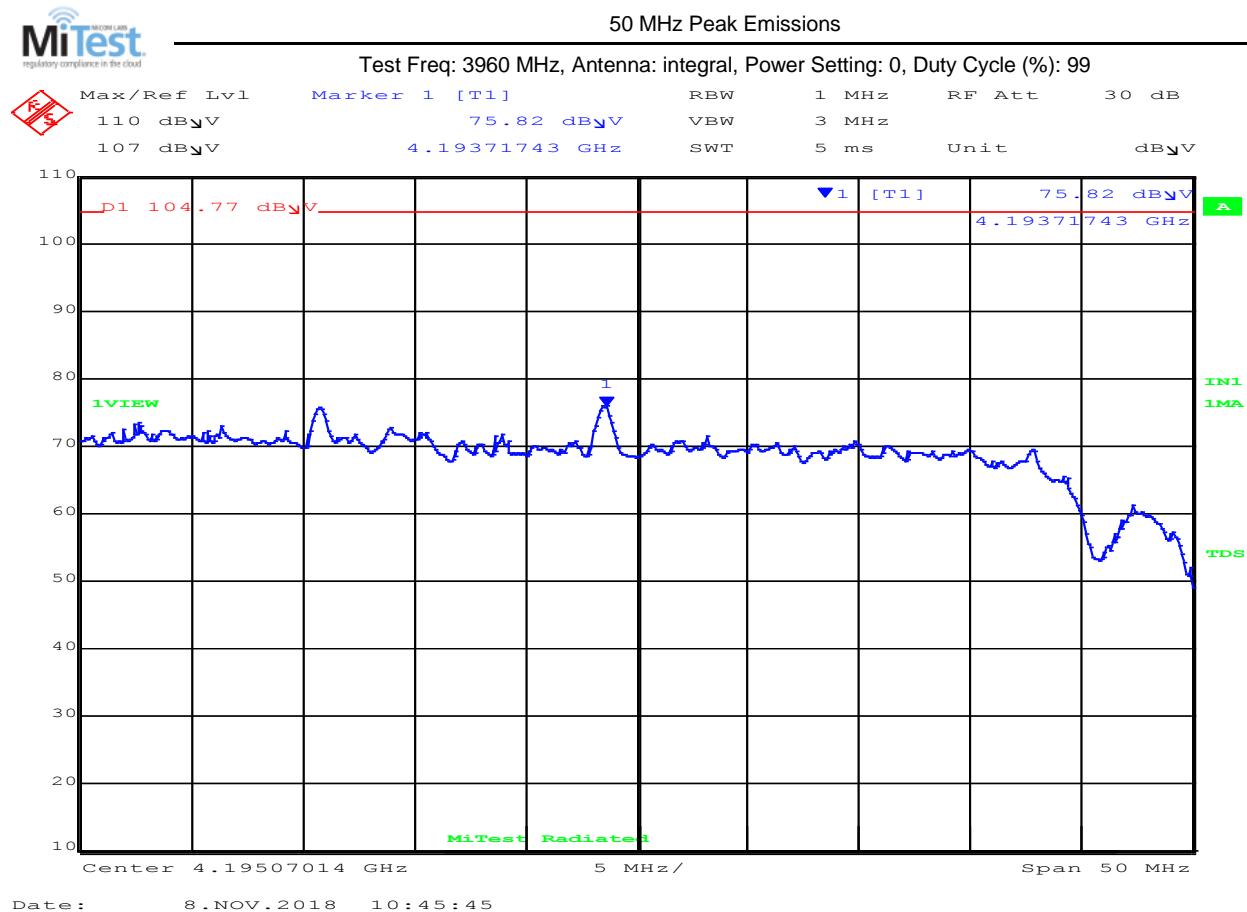
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

3960 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									

Test Notes:

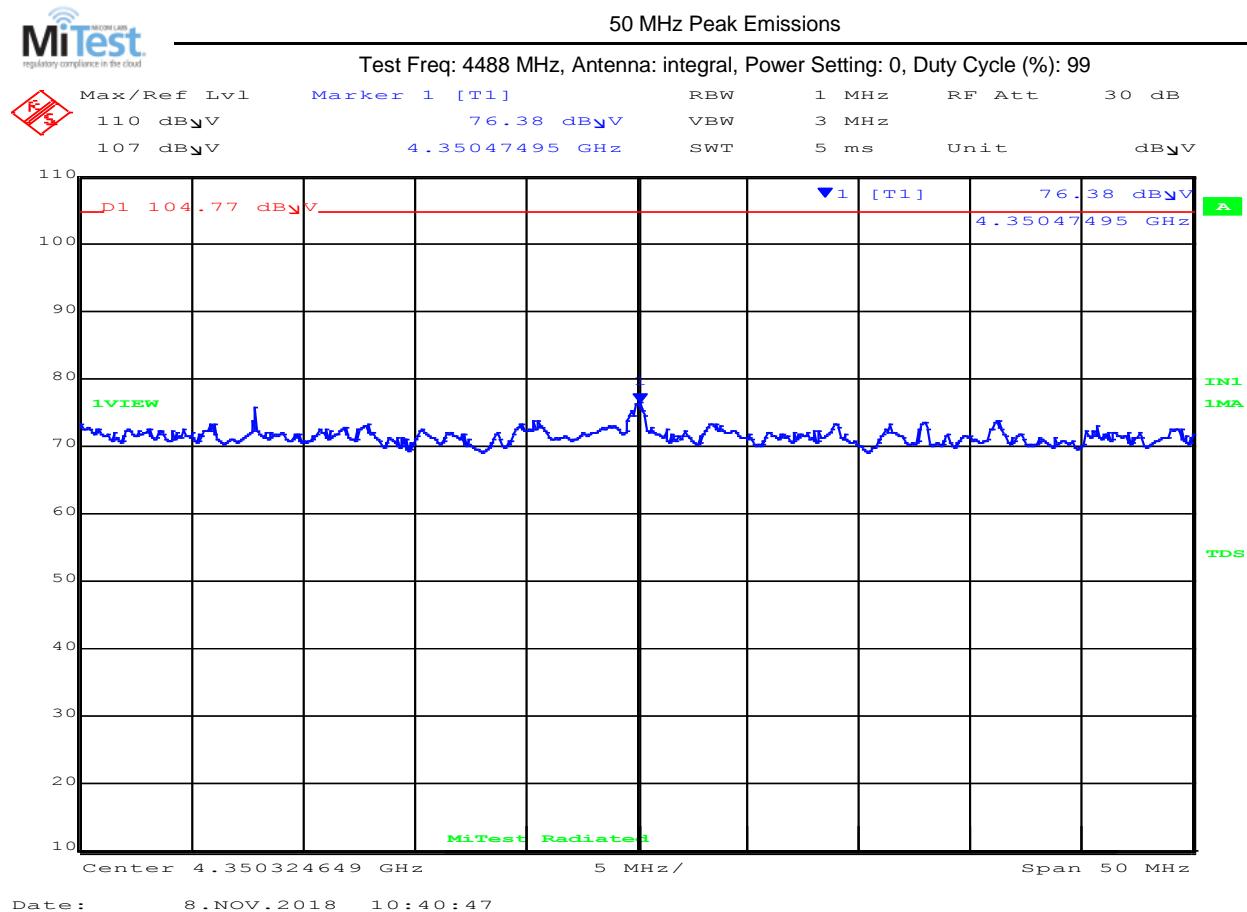
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

4488 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									

Test Notes:

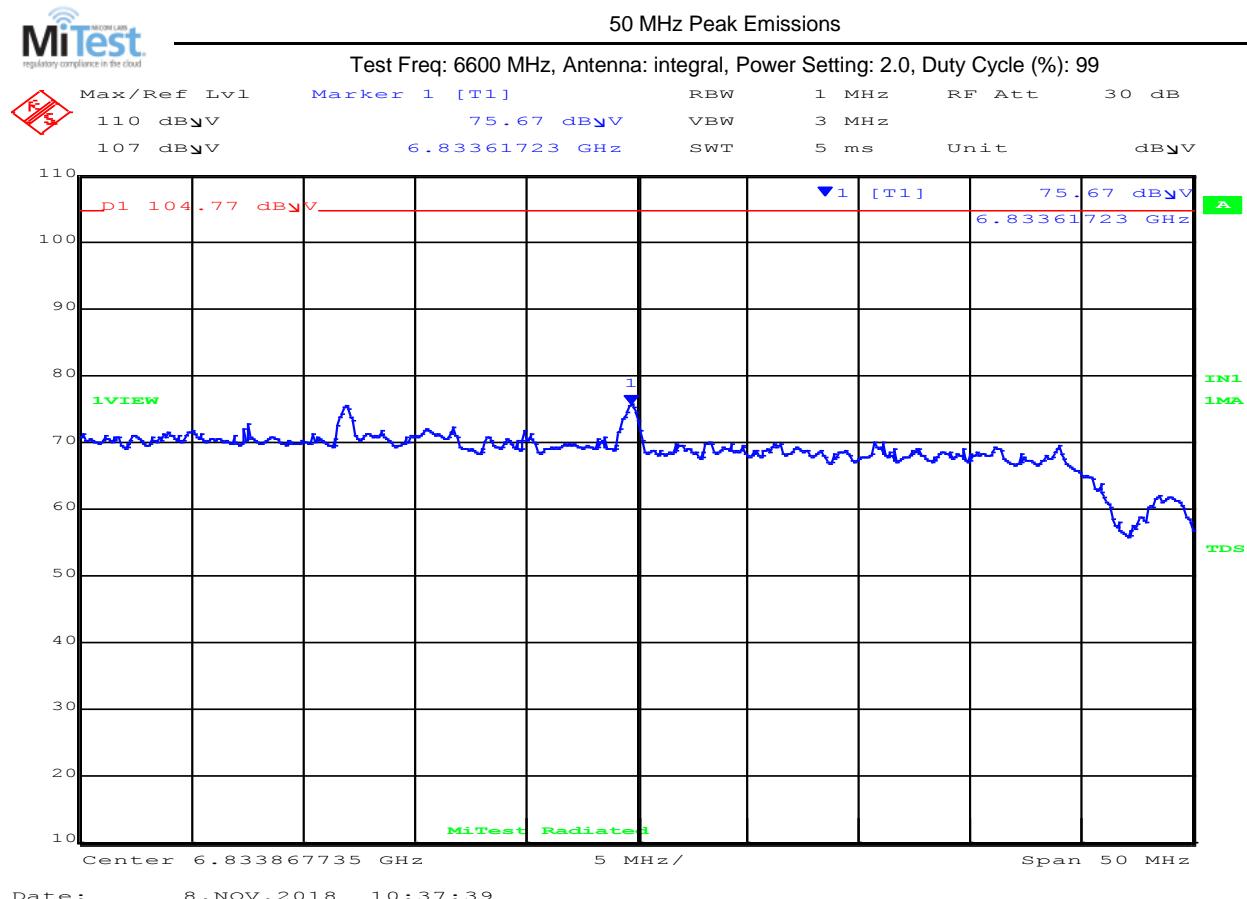
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

6600 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

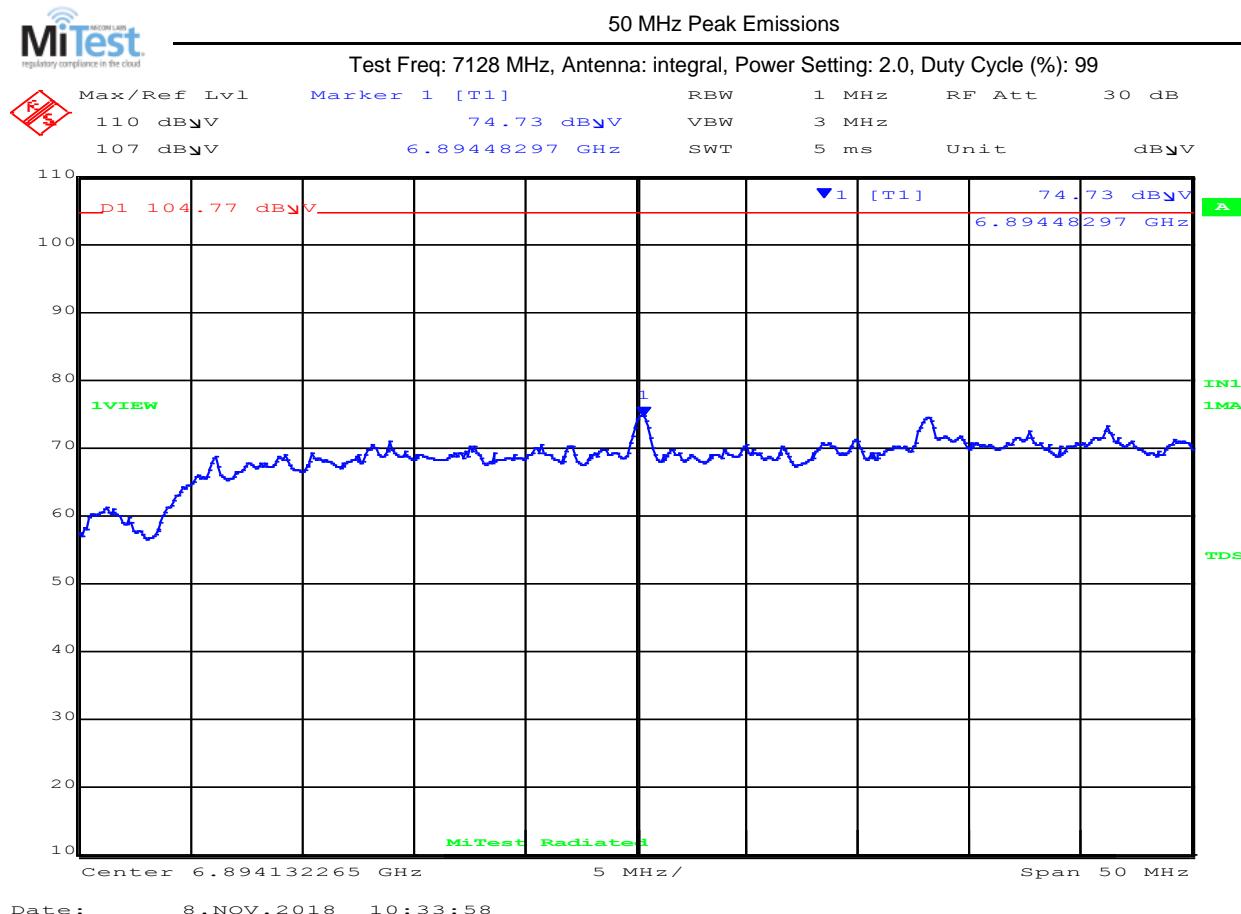
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

7128 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions										
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes:										

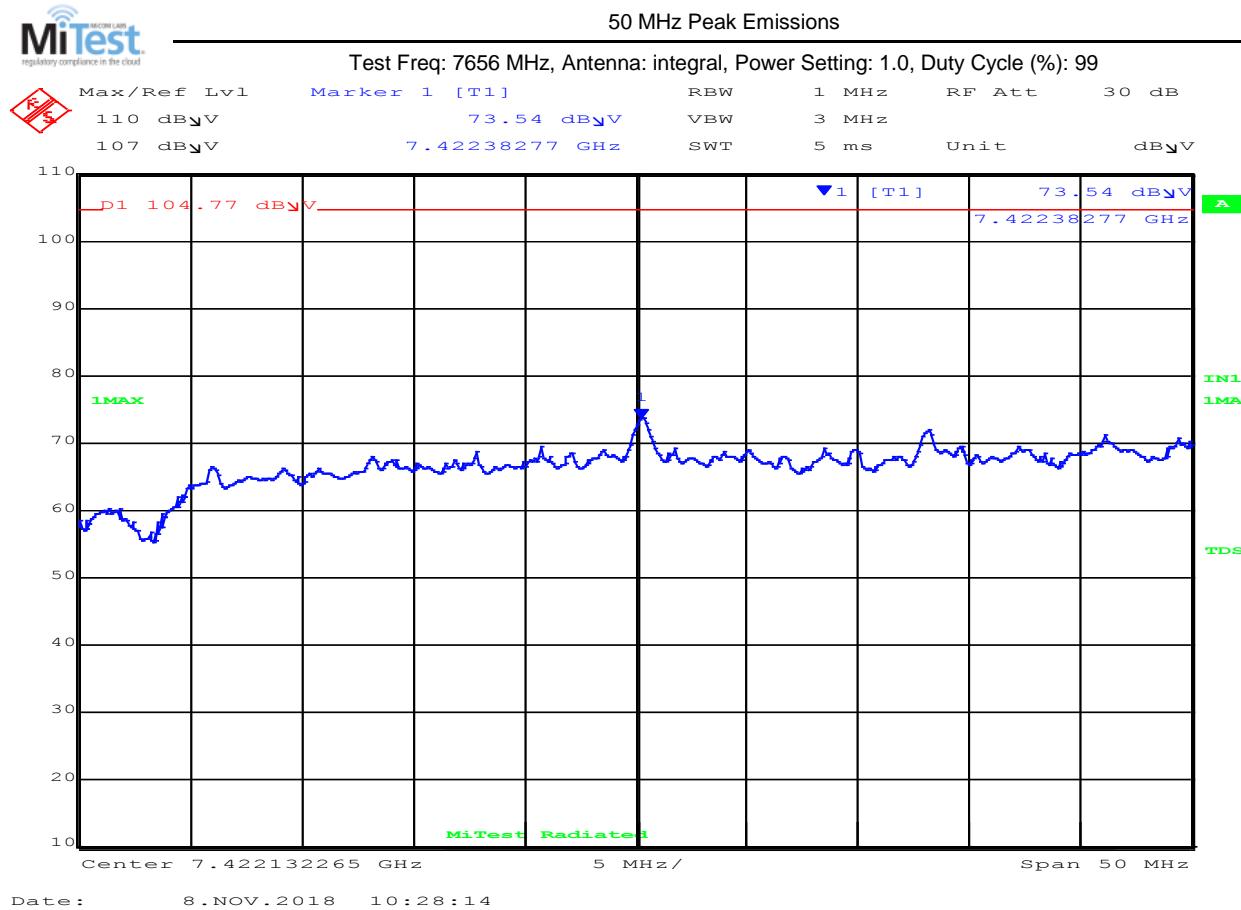
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

7656 MHz (Covers Band Group 3 TFC 7 and Band Group 6 TFC 5)

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions										
Num	Frequency MHz	Level dB _u V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _u V/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes:										

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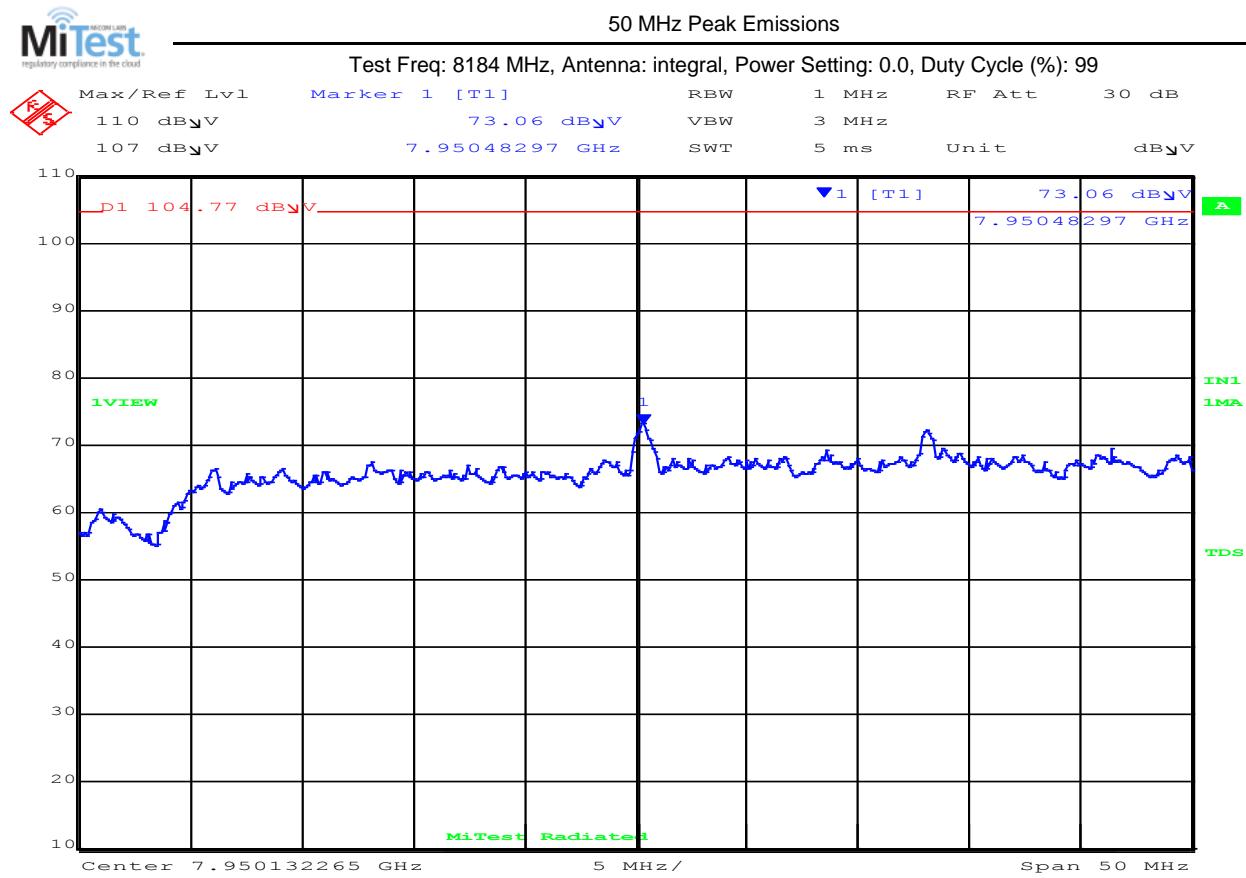
Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
Serial #: ALER01-U2C Rev A
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8184 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



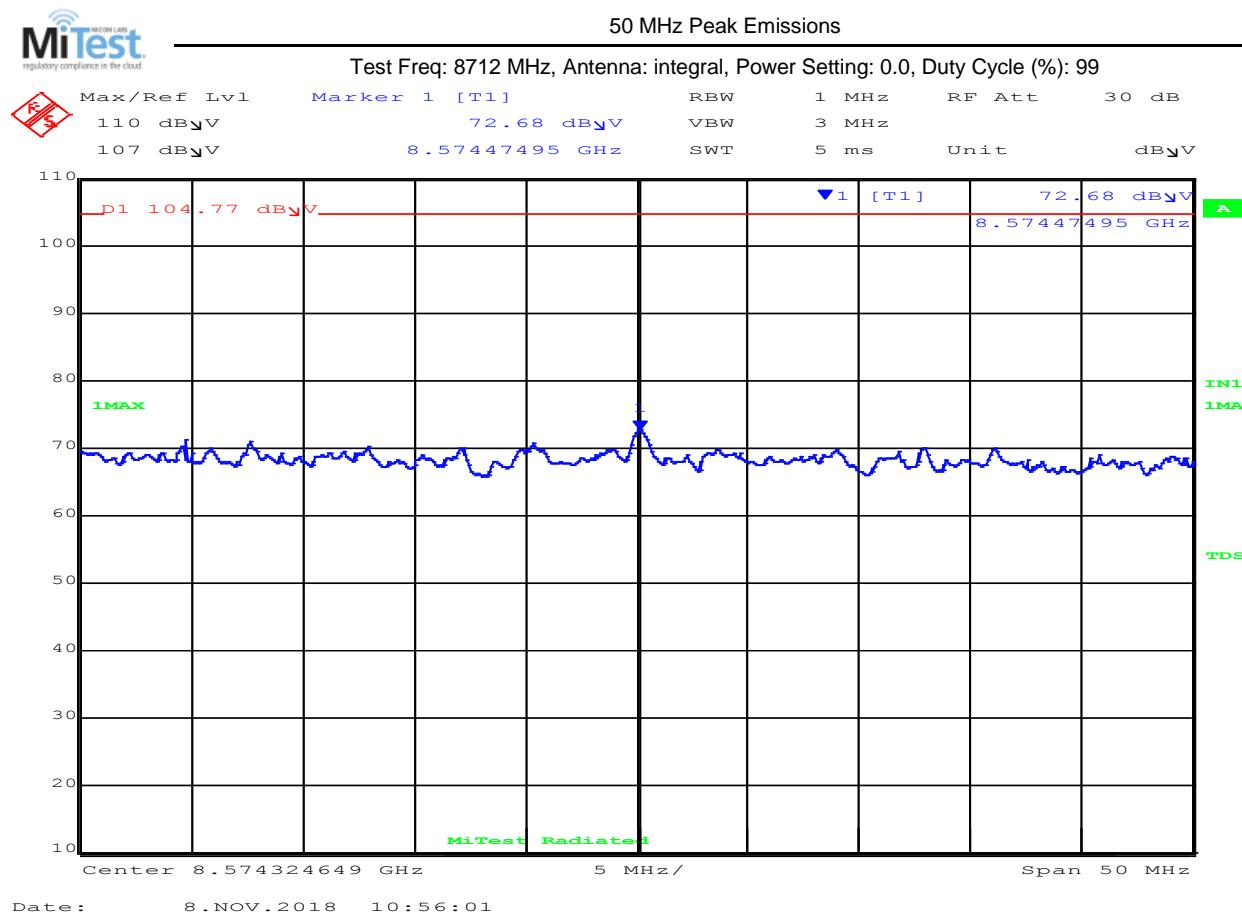
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8712 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									

Test Notes:

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

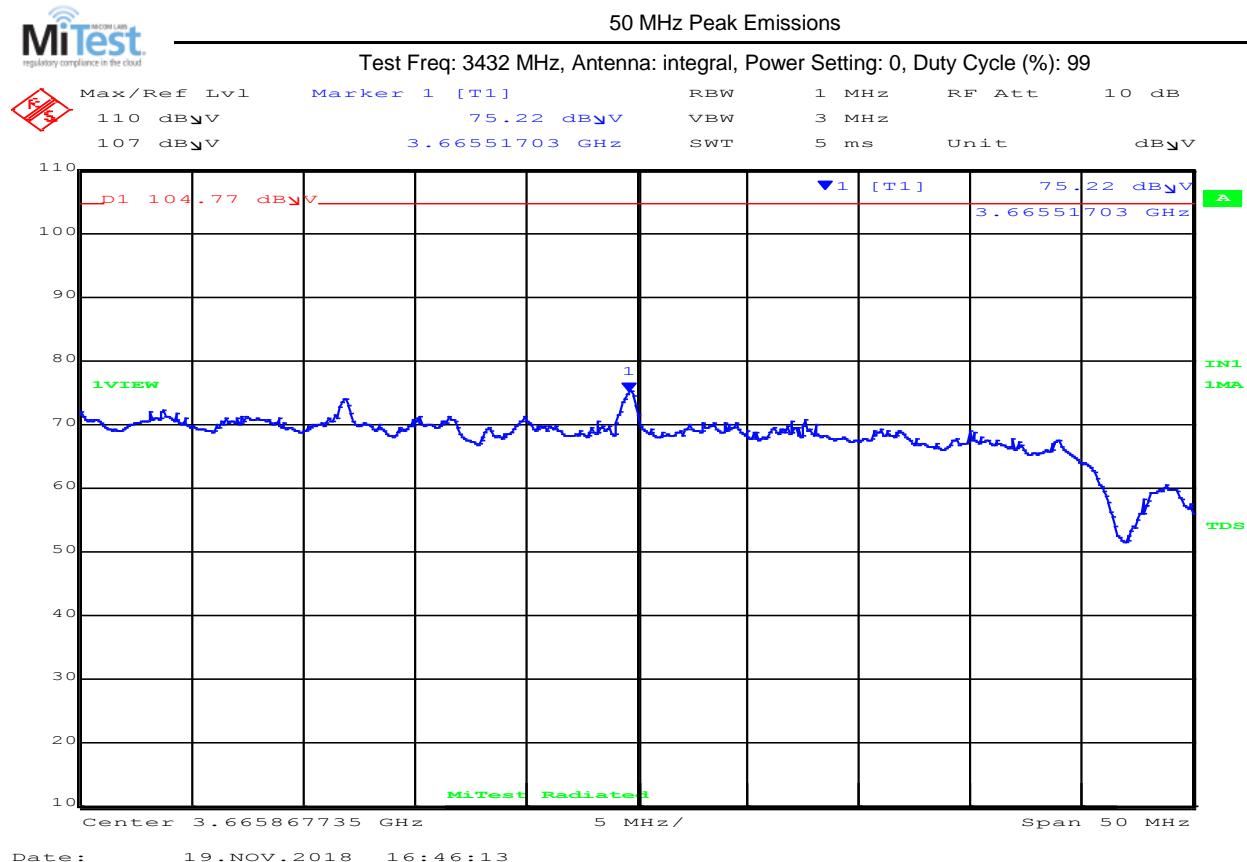
9.4.3.3. Combat AL5934

3432 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

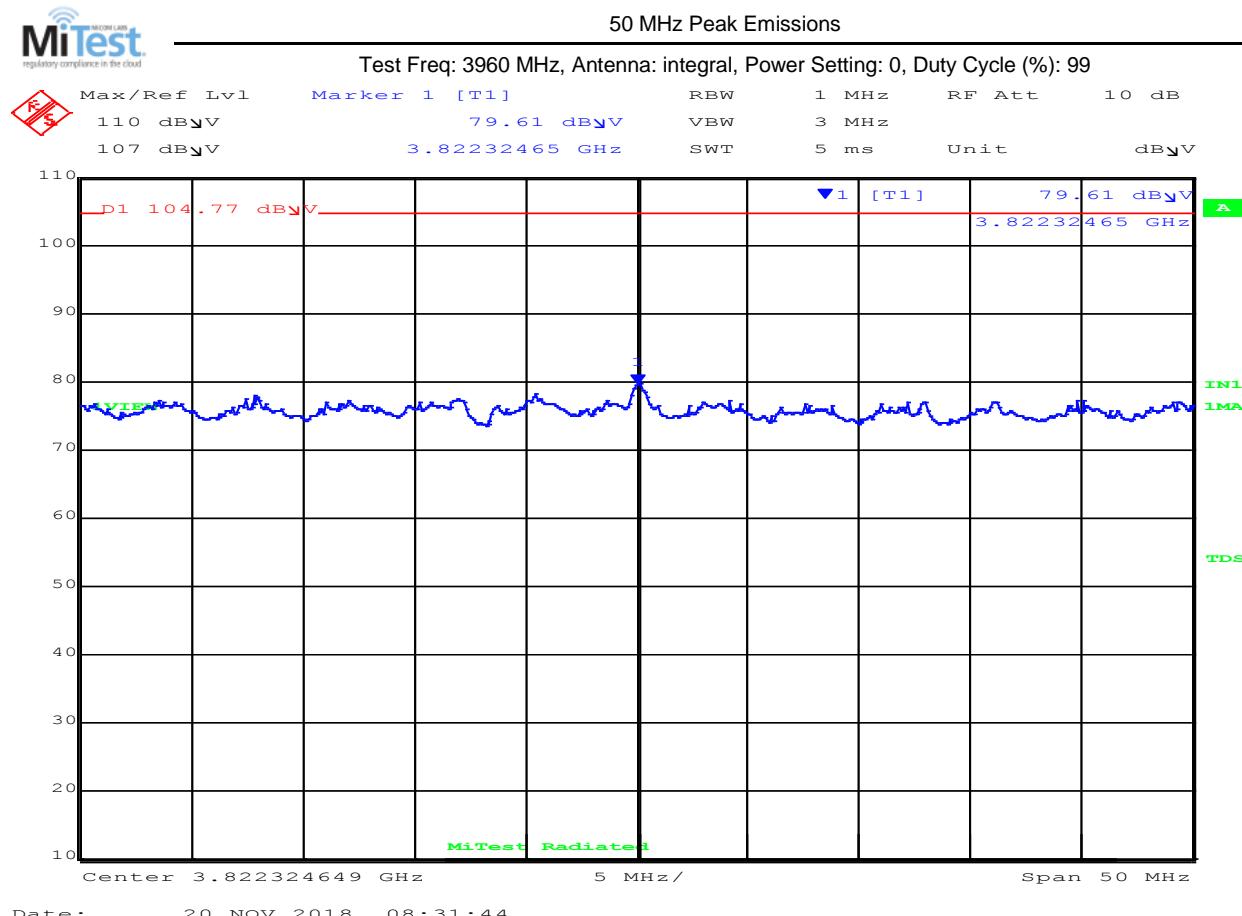
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

3960 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

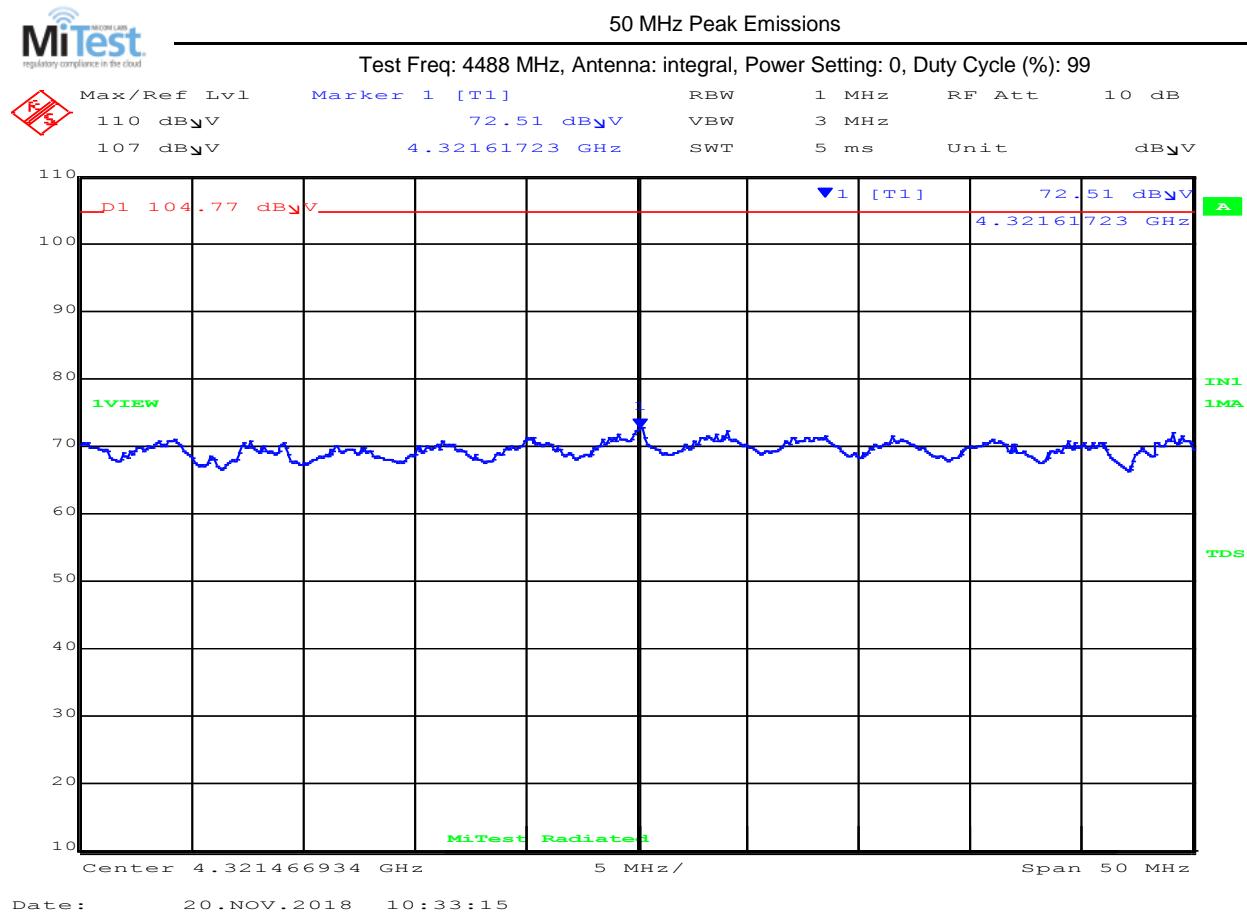
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

4488 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

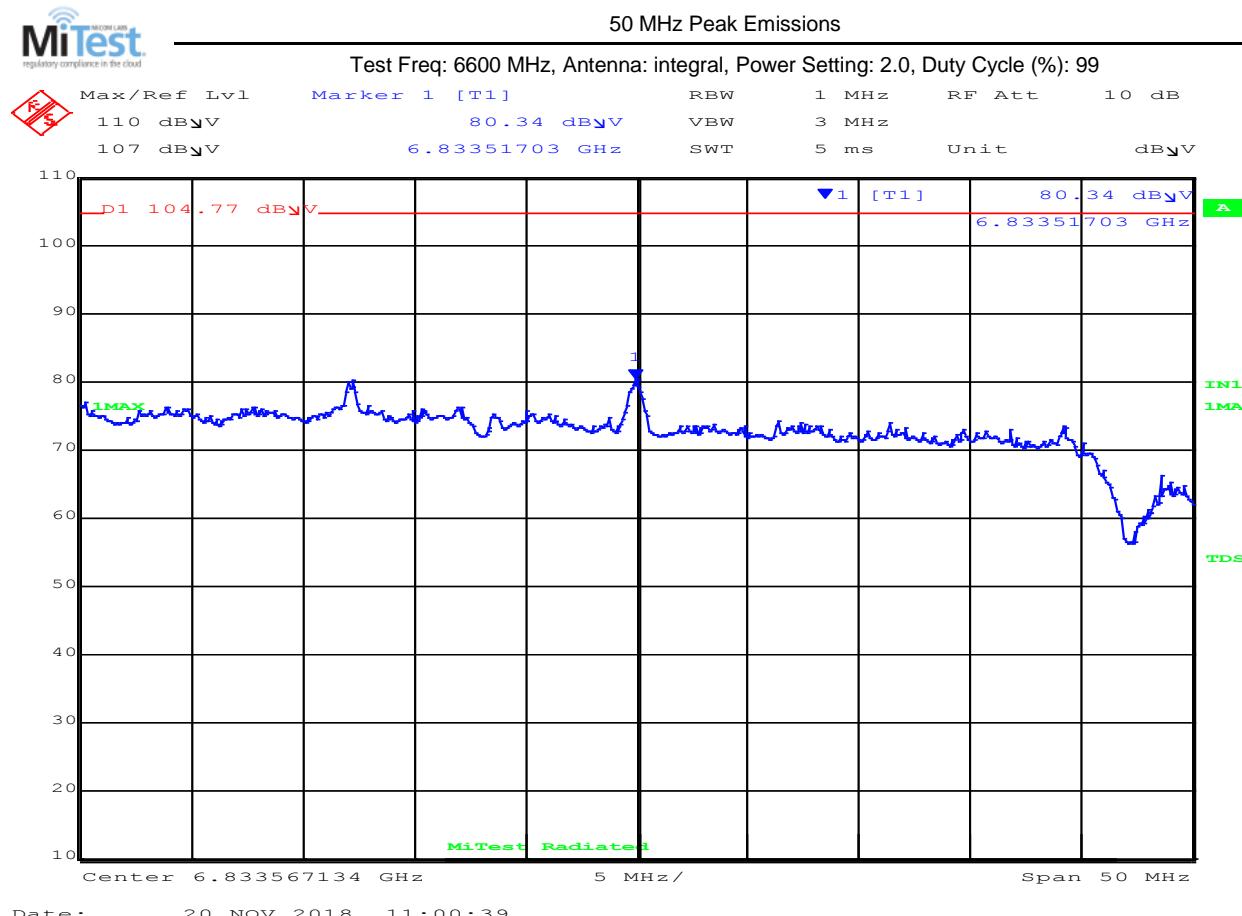
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

6600 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

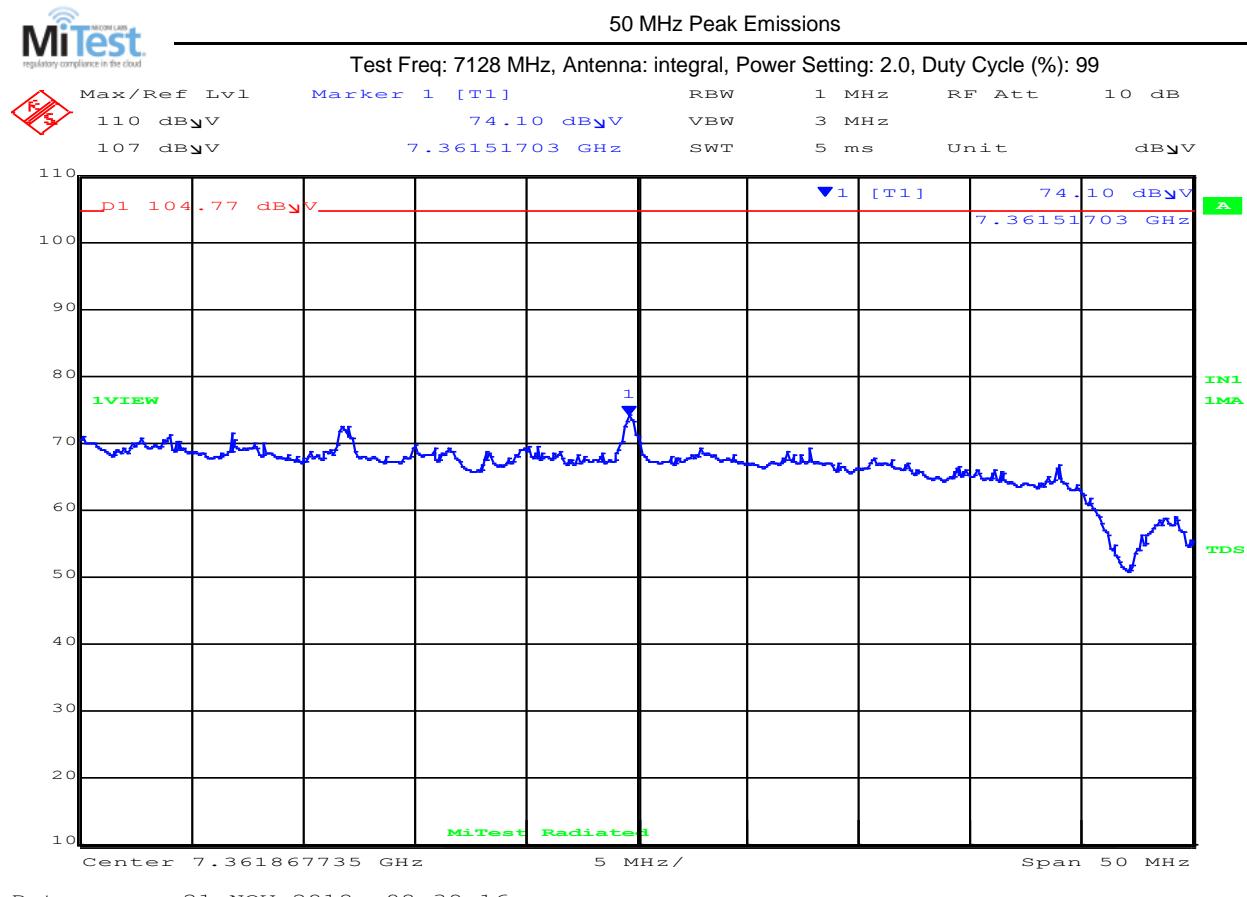
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

7128 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

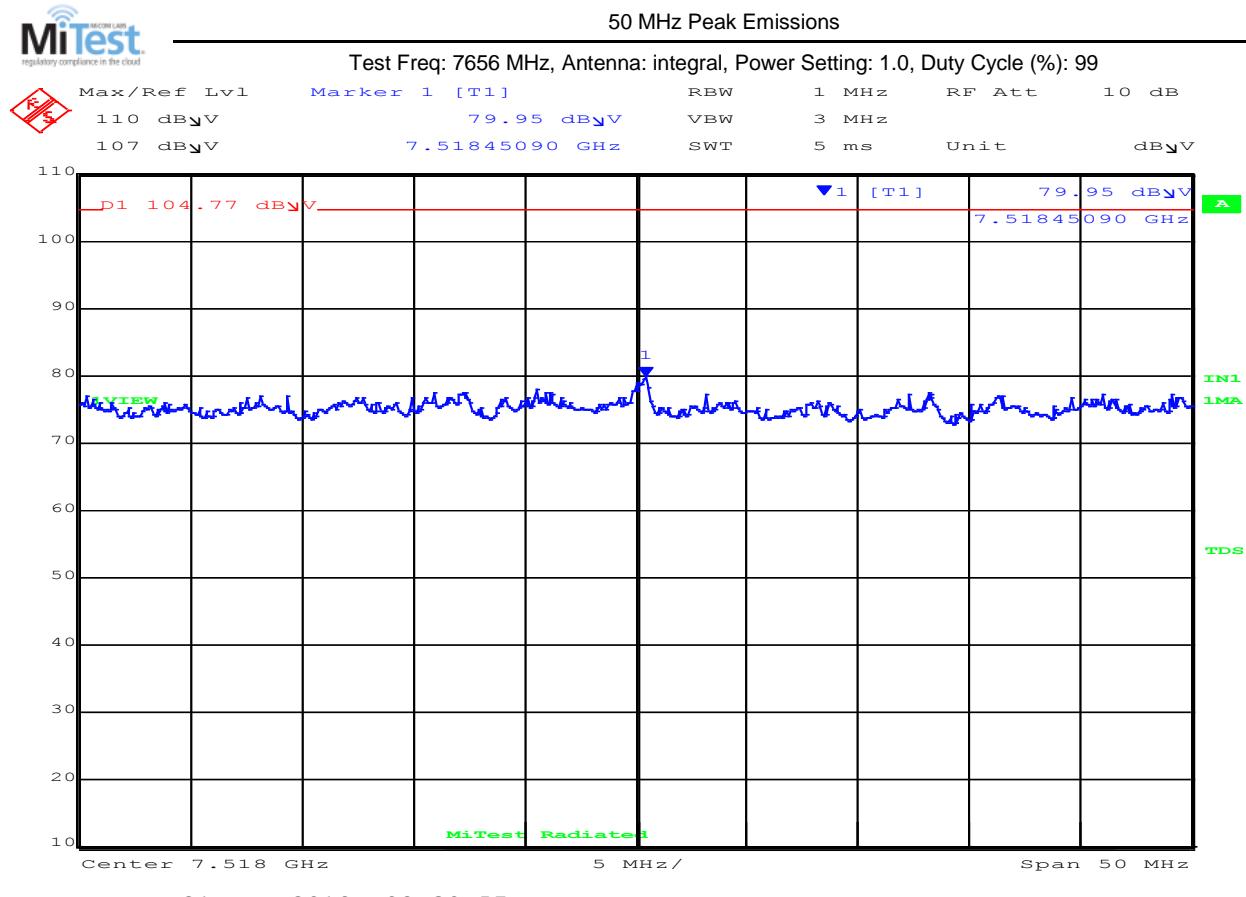
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

7656 MHz (Covers Band Group 3 TFC 7 and Band Group 6 TFC 5)

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions										
Num	Frequency MHz	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	
No Signals Found within 6 dB of Limit										
Test Notes:										

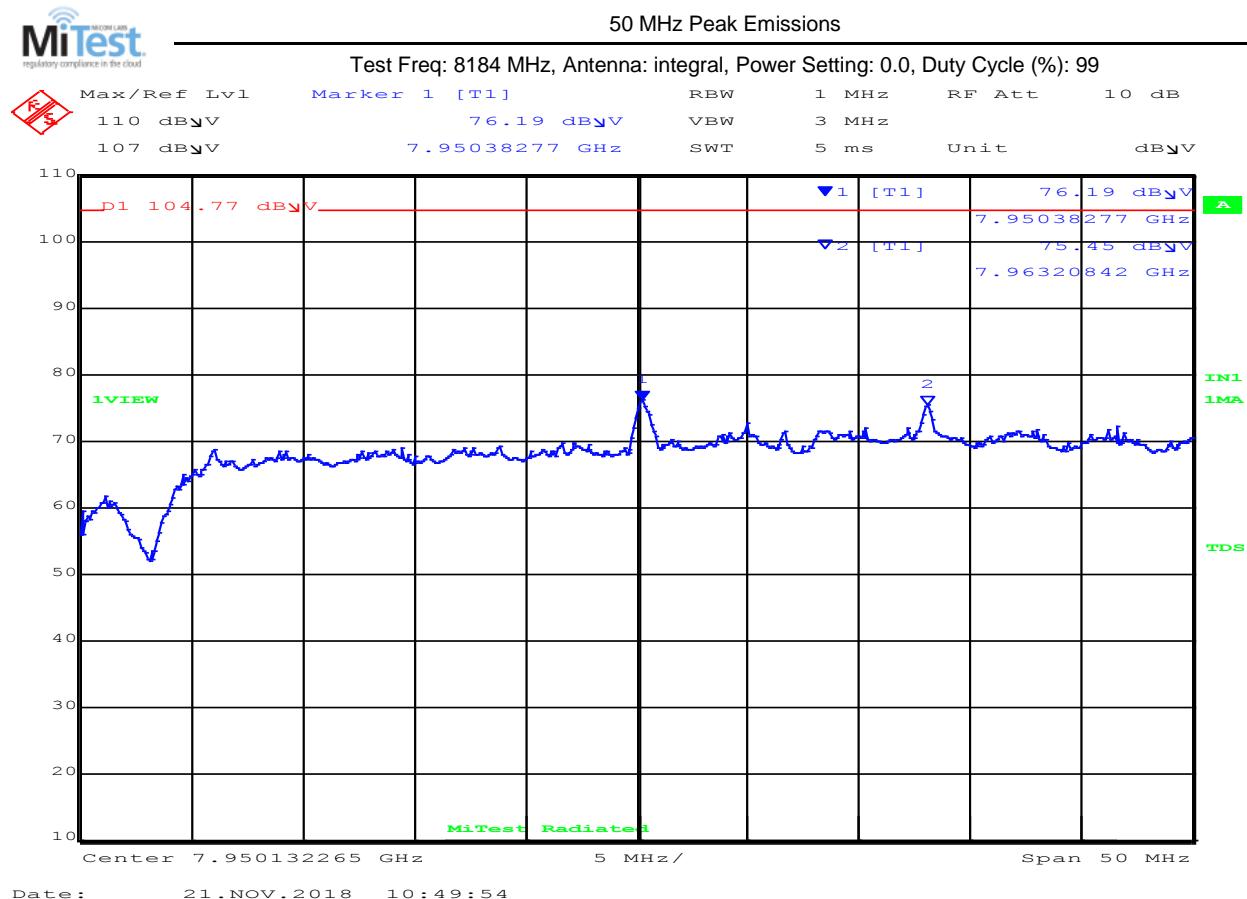
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

8184 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

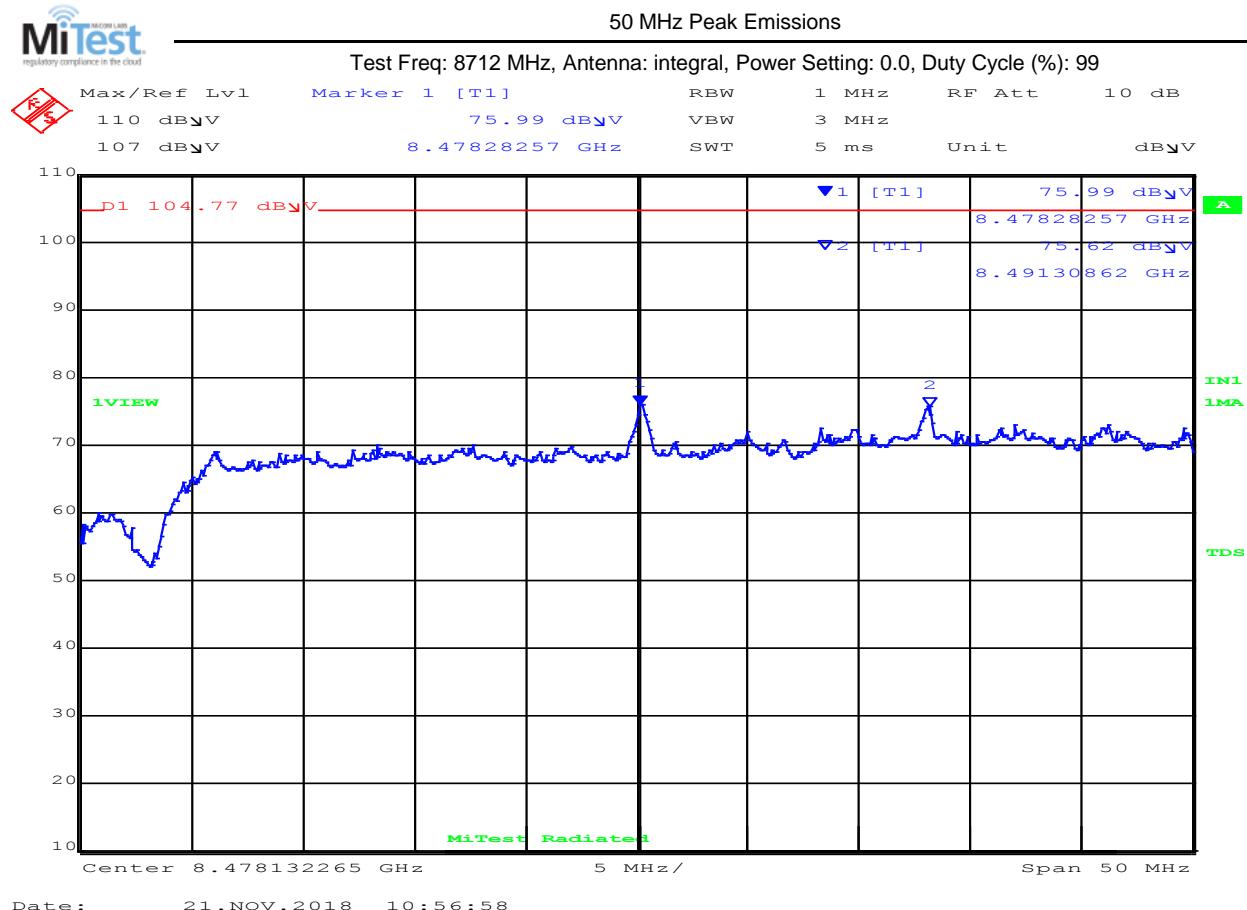
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8712 MHz

Equipment Configuration for 50 MHz Peak Emissions

Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

Num	Frequency MHz	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes:									

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Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
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9.5. Shutoff Timing Requirements

Radiated Test Conditions for Shutoff Timing Requirements			
Standard:	FCC CFR 47:15.519 (a)(1)	Ambient Temp. (°C):	24.0 - 27.5
Test Heading:	Shutoff Timing Requirements	Rel. Humidity (%):	32 - 45
Standard Section(s):	ANSI C63.10 Section 10.3.6	Pressure (mBars):	999 - 1001
Reference Document(s):	None		

Test Procedure for UWB Transmission

Testing was performed under ambient conditions at nominal voltage.

Test configuration and setup used for the measurement was per the Radiated Test Set-up section specified in this document.

Operating Frequency Band:

3100-10600 MHz

Limits

The UWB intentional radiator shall cease transmission within 10 seconds unless it receives an acknowledgement from the associated receiver that its transmission is being received.

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Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
Serial #: ALER01-U2C Rev A
Issue Date: 12th December 2018
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Equipment Configuration for Shutdown Timing Requirements

Variant:	Band Group 6	Duty Cycle (%):	99
Data Rate:	-	Antenna Gain (dBi):	Client Info Required
Modulation:	BPM/BPSK	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:	1. Timing behavior is identical in all 3 models. Testing performed on the USB variant and is representative of all 3 models.		

Test Measurement Results

Frequency (MHz)	Shutdown Time	Limit	Margin	EUT Power Setting
	(s)	(s)	(s)	Numeric
8712.00	<u>2.120</u>	10	-7.88	1

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Uncertainty:	±1.33 dB

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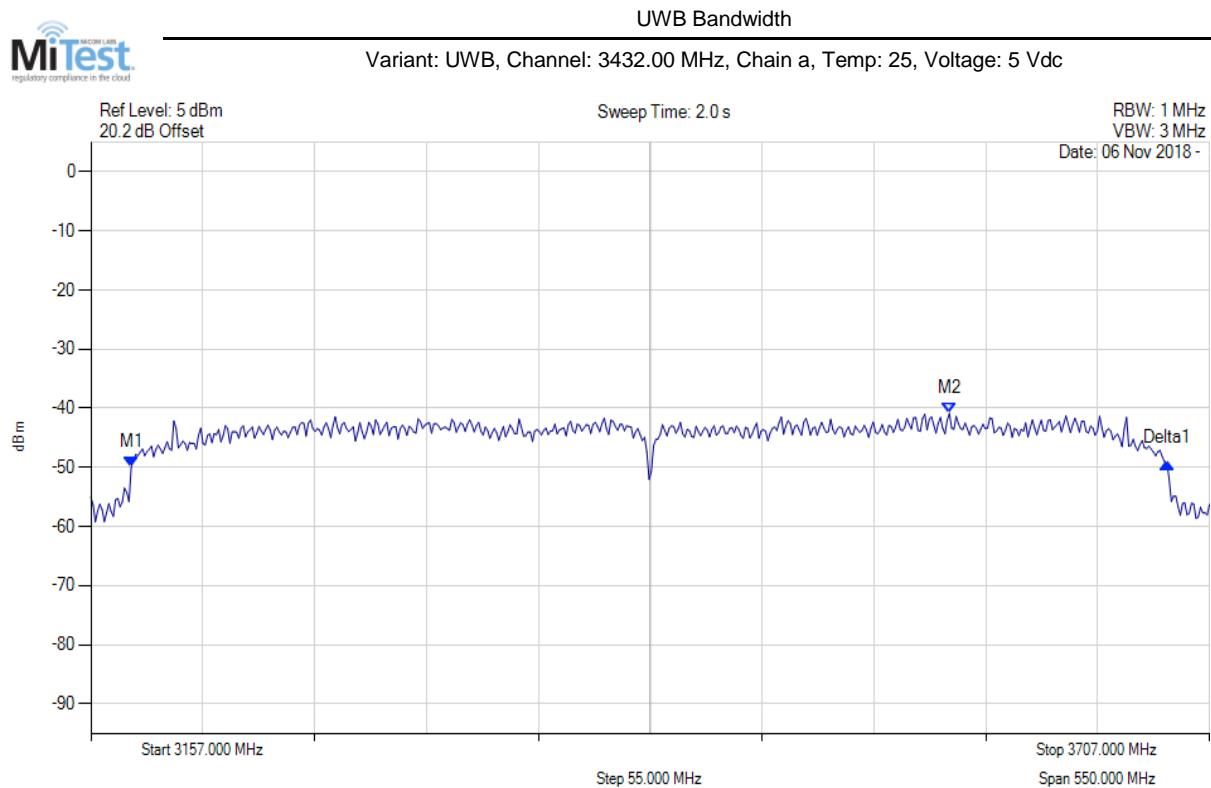


Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
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A. APPENDIX - GRAPHICAL IMAGES

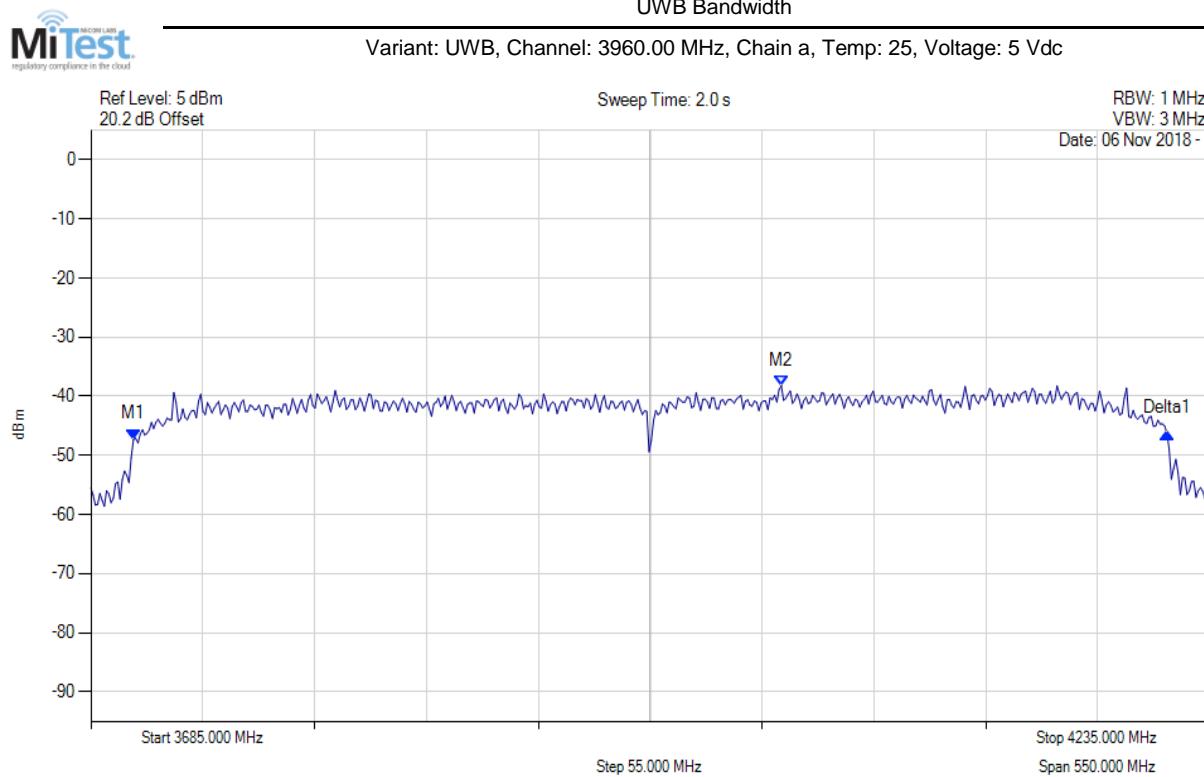
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.

A.1. UWB Bandwidth



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 3176.884 MHz : -49.962 dBm M2 : 3579.144 MHz : -40.865 dBm Delta1 : 509.174 MHz : 0.787 dB	Channel Frequency: 3432.00 MHz

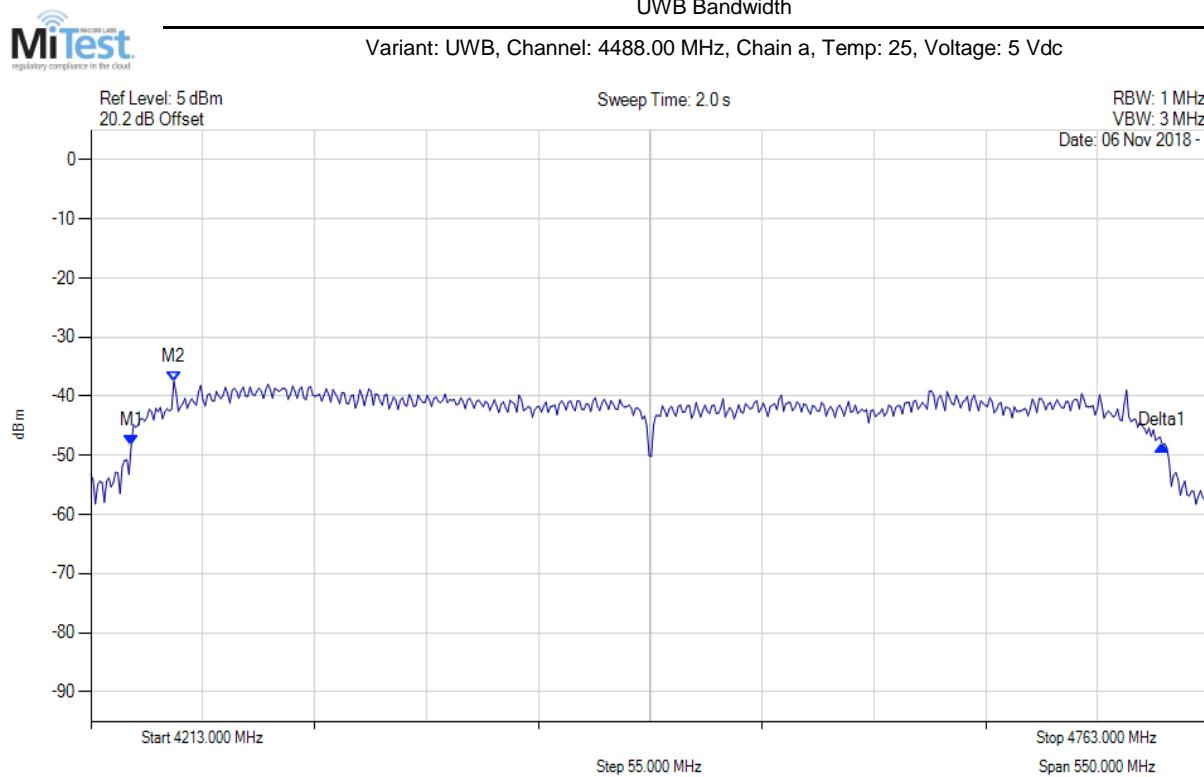
[back to matrix](#)



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 3705.942 MHz : -47.255 dBm M2 : 4024.479 MHz : -38.193 dBm Delta1 : 508.116 MHz : 1.092 dB	Channel Frequency: 3960.00 MHz

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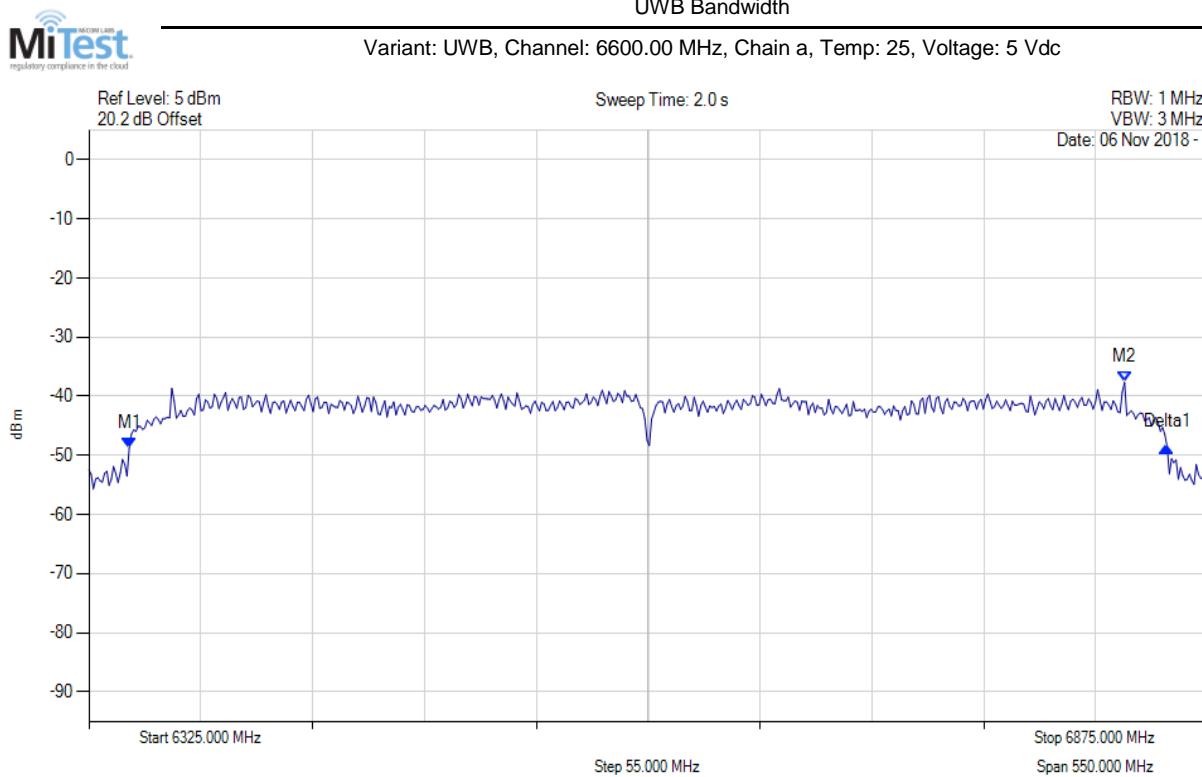
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 4232.840 MHz : -48.343 dBm M2 : 4253.782 MHz : -37.497 dBm Delta1 : 507.014 MHz : 0.014 dB	Channel Frequency: 4488.00 MHz

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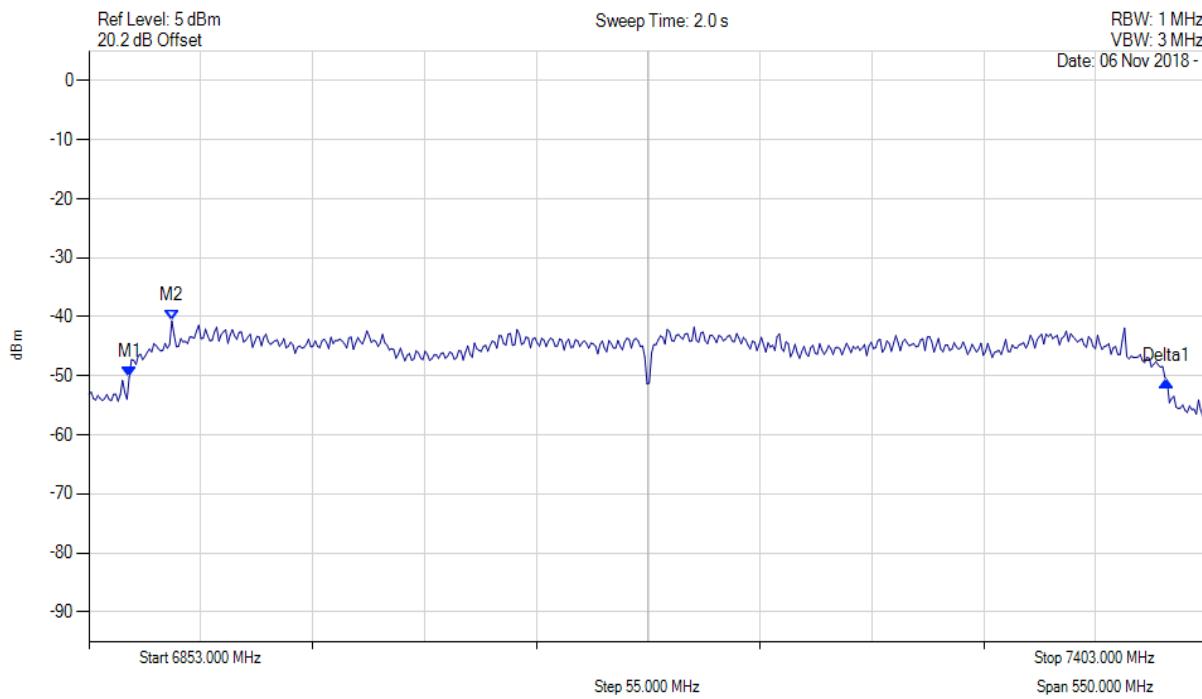


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 6344.840 MHz : -48.727 dBm M2 : 6834.218 MHz : -37.625 dBm Delta1 : 510.321 MHz : 0.205 dB	Channel Frequency: 6600.00 MHz

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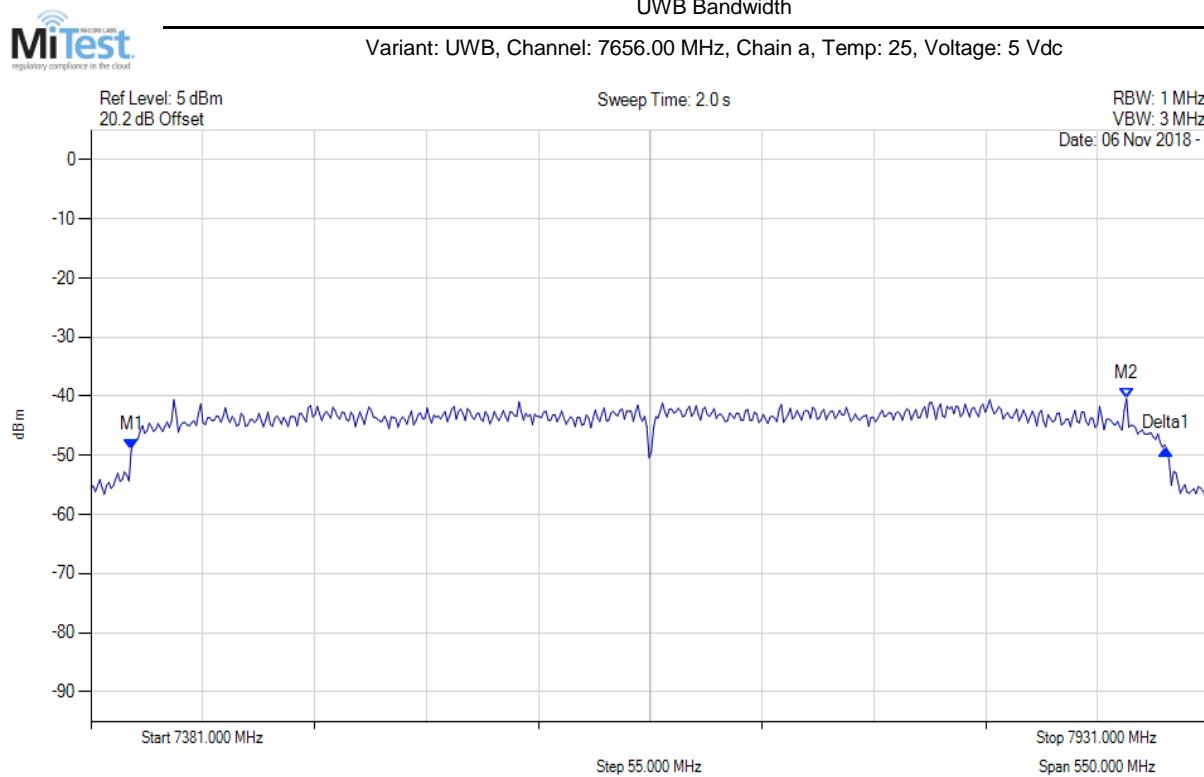
Variant: UWB, Channel: 7128.00 MHz, Chain a, Temp: 25, Voltage: 5 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 6872.840 MHz : -50.171 dBm M2 : 6893.782 MHz : -40.658 dBm Delta1 : 509.920 MHz : -0.687 dB	Channel Frequency: 7128.00 MHz

[back to matrix](#)

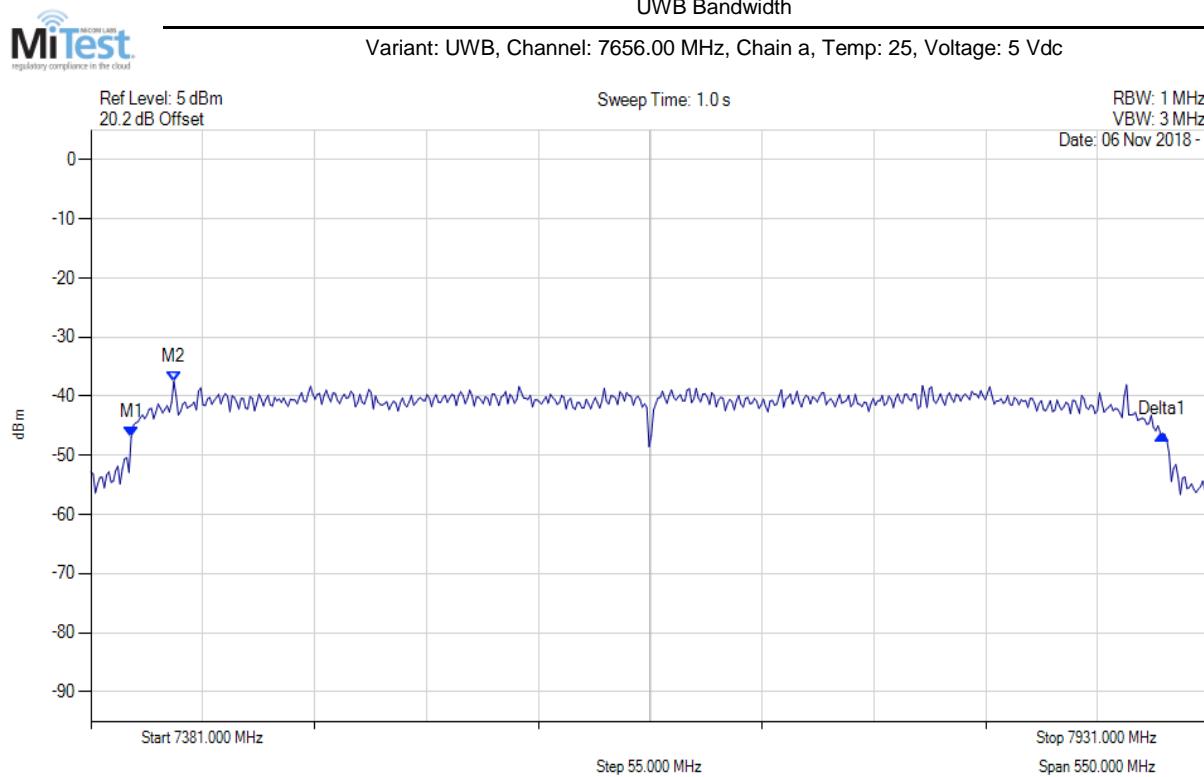
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 7400.840 MHz : -49.106 dBm M2 : 7890.218 MHz : -40.409 dBm Delta1 : 508.818 MHz : 0.214 dB	Channel Frequency: 7656.00 MHz

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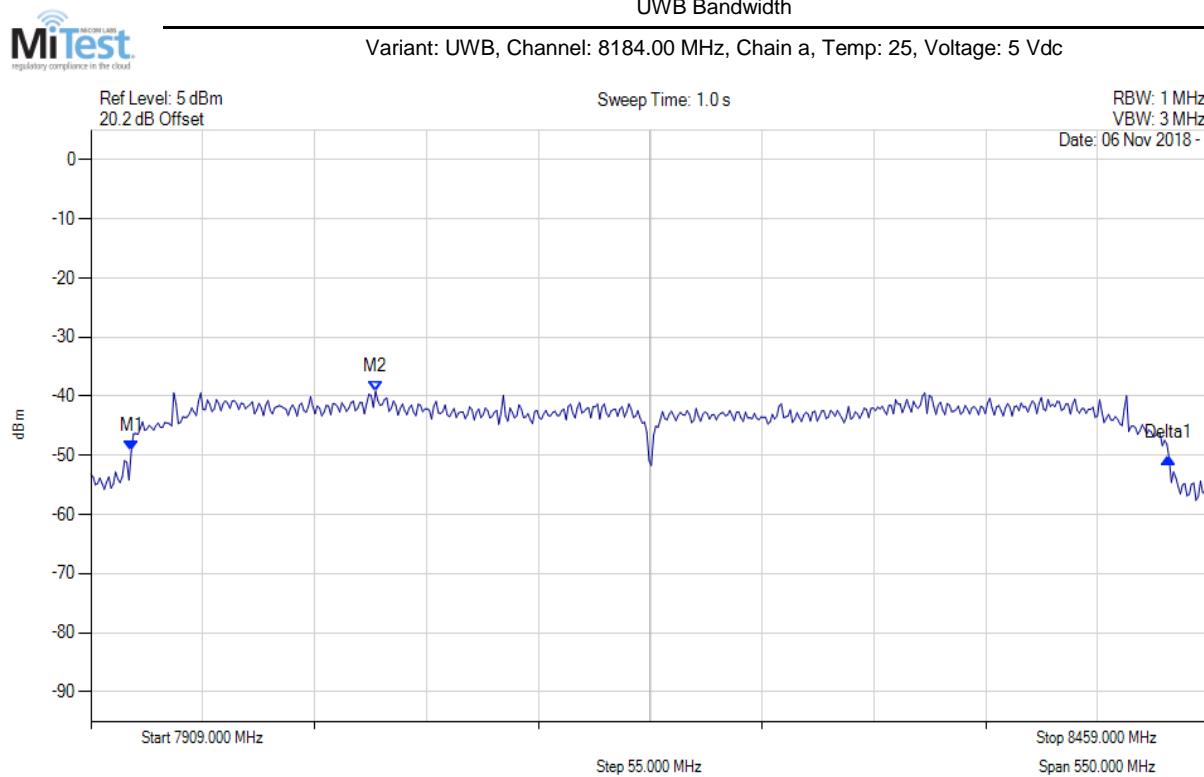
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 7400.840 MHz : -46.810 dBm M2 : 7421.782 MHz : -37.489 dBm Delta1 : 506.613 MHz : 0.307 dB	Channel Frequency: 0 Hz

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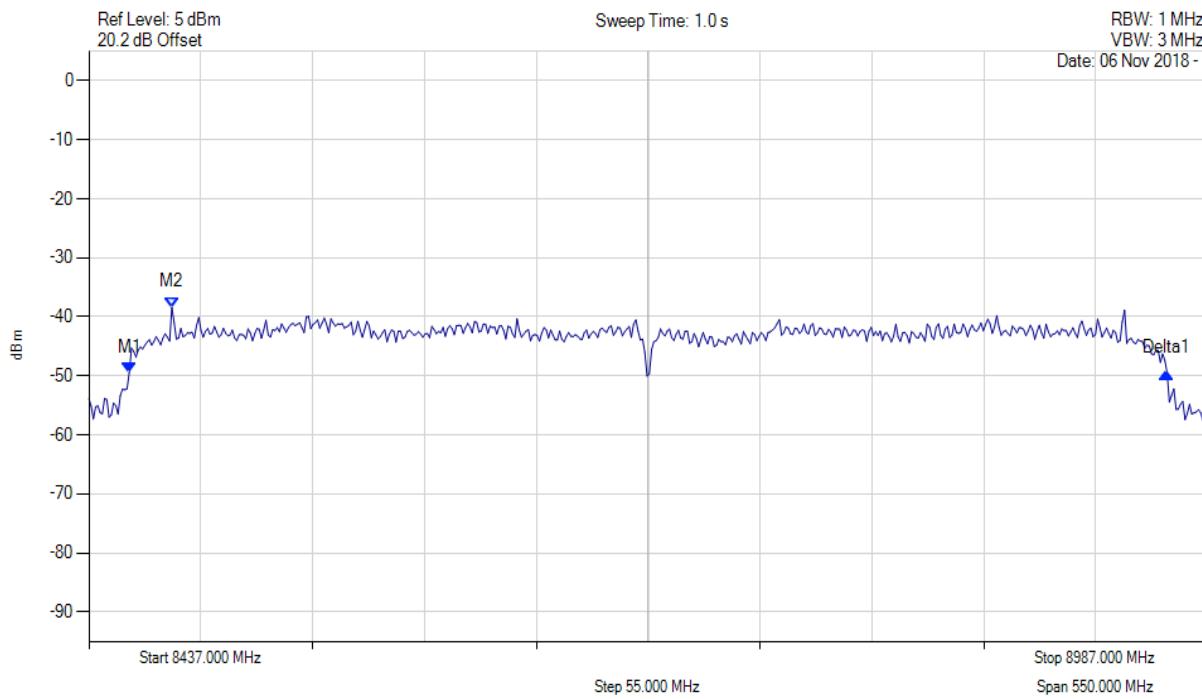
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 7928.840 MHz : -49.315 dBm M2 : 8048.980 MHz : -39.169 dBm Delta1 : 509.920 MHz : -1.074 dB	Channel Frequency: 8184.00 MHz

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Variant: UWB, Channel: 8712.00 MHz, Chain a, Temp: 25, Voltage: 5 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 8456.840 MHz : -49.468 dBm M2 : 8477.782 MHz : -38.388 dBm Delta1 : 509.920 MHz : -0.057 dB	Channel Frequency: 8712.00 MHz

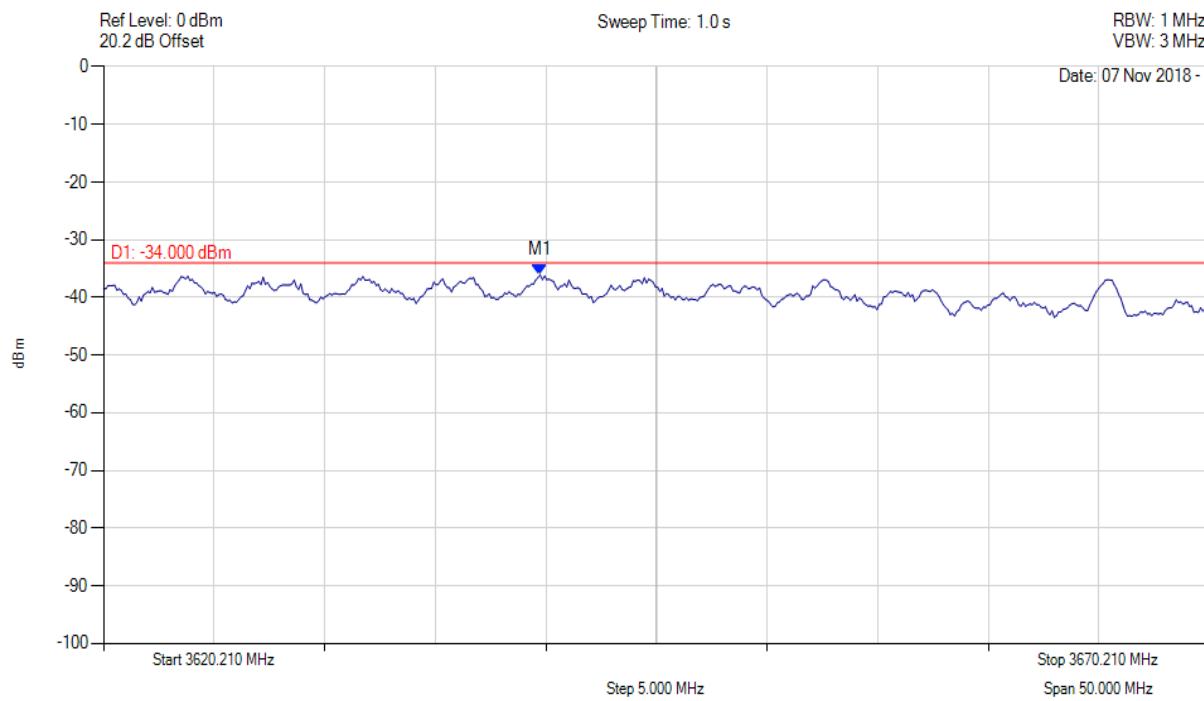
[back to matrix](#)

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A.2. Peak Power Density



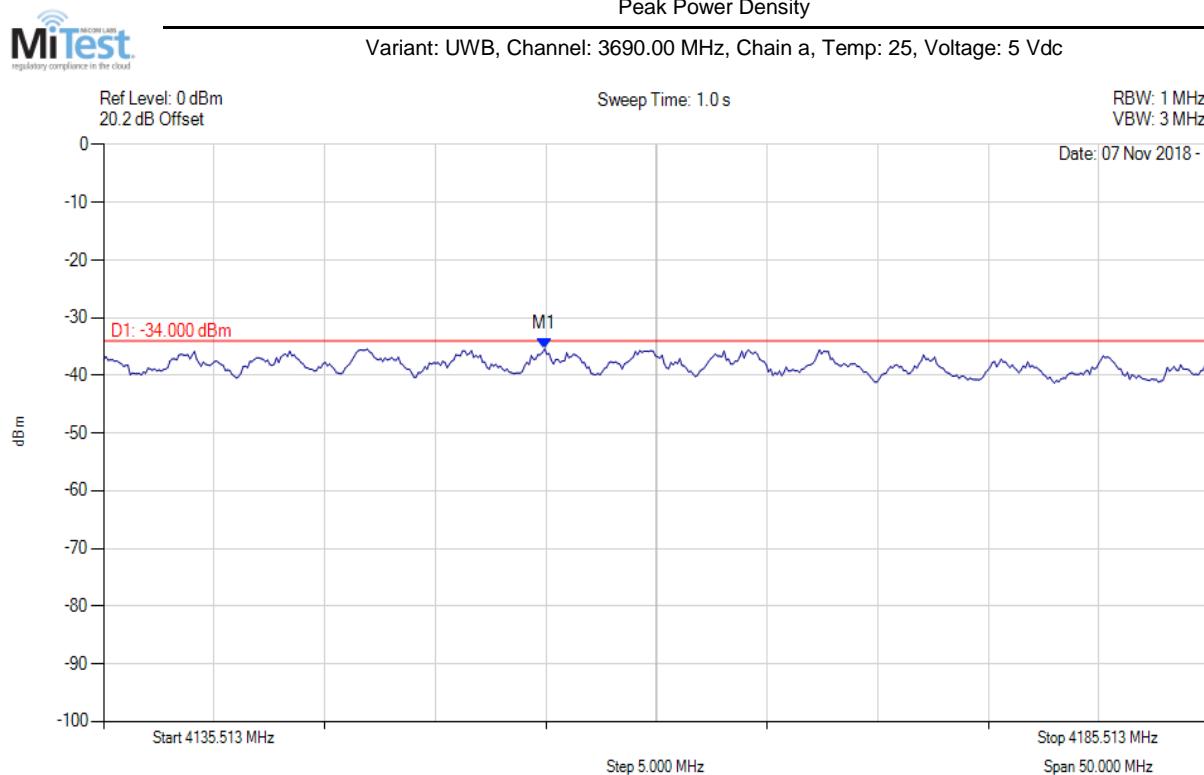
Peak Power Density
Variant: UWB, Channel: 3432.00 MHz, Chain a, Temp: 25, Voltage: 5 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 3639.950 MHz : -36.101 dBm	Channel Frequency: 3432.00 MHz

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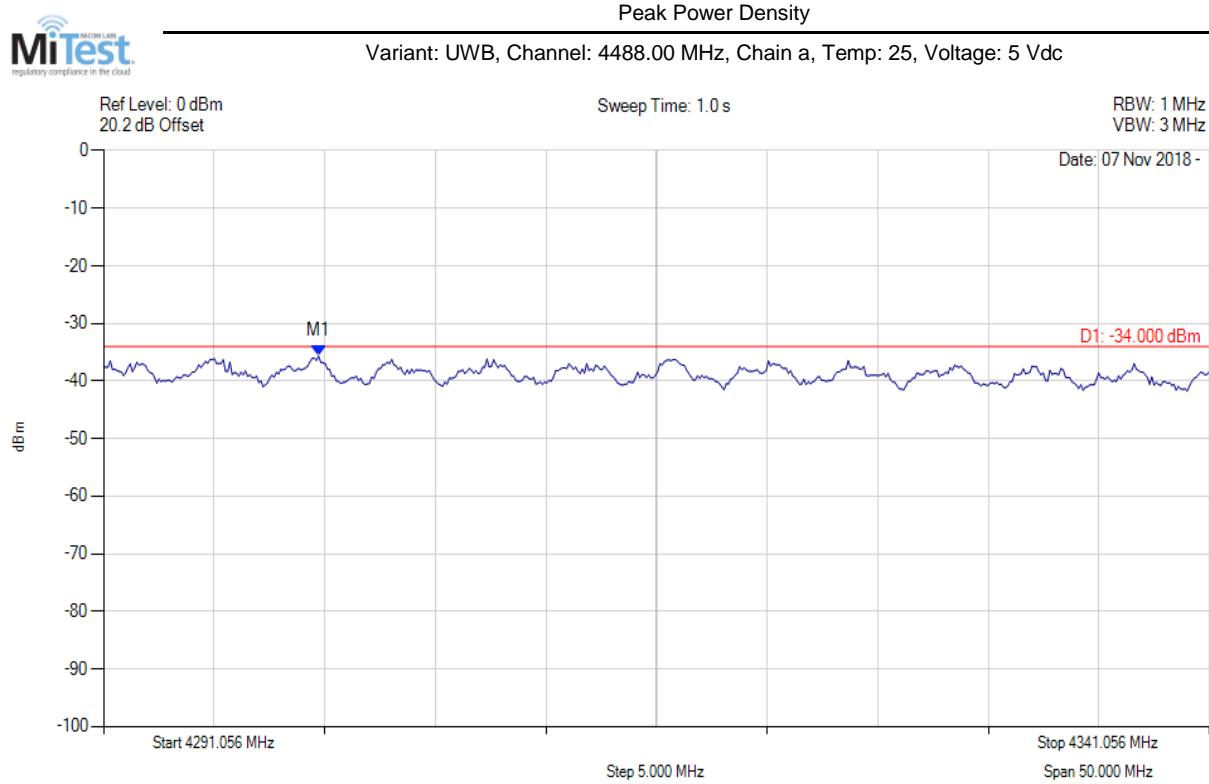
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 4155.453 MHz : -35.379 dBm	Channel Frequency: 3690.00 MHz

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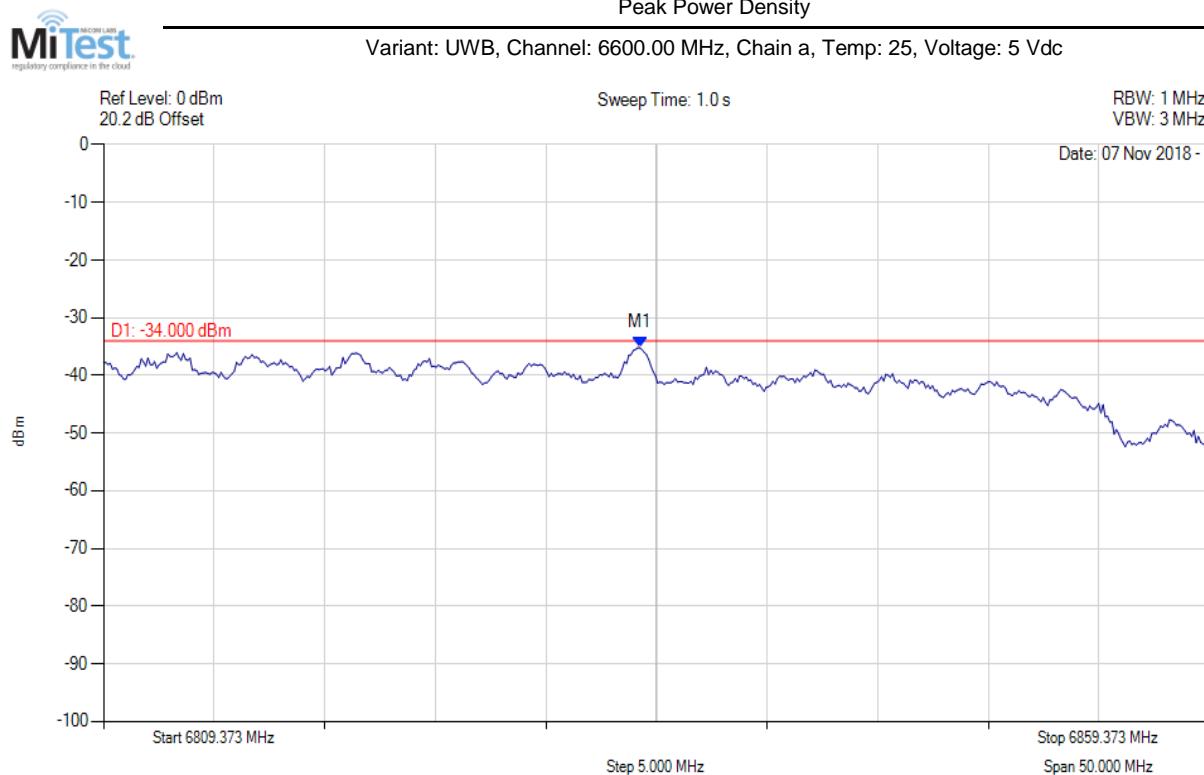
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Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 4300.776 MHz : -35.635 dBm	Channel Frequency: 4488.00 MHz

[back to matrix](#)

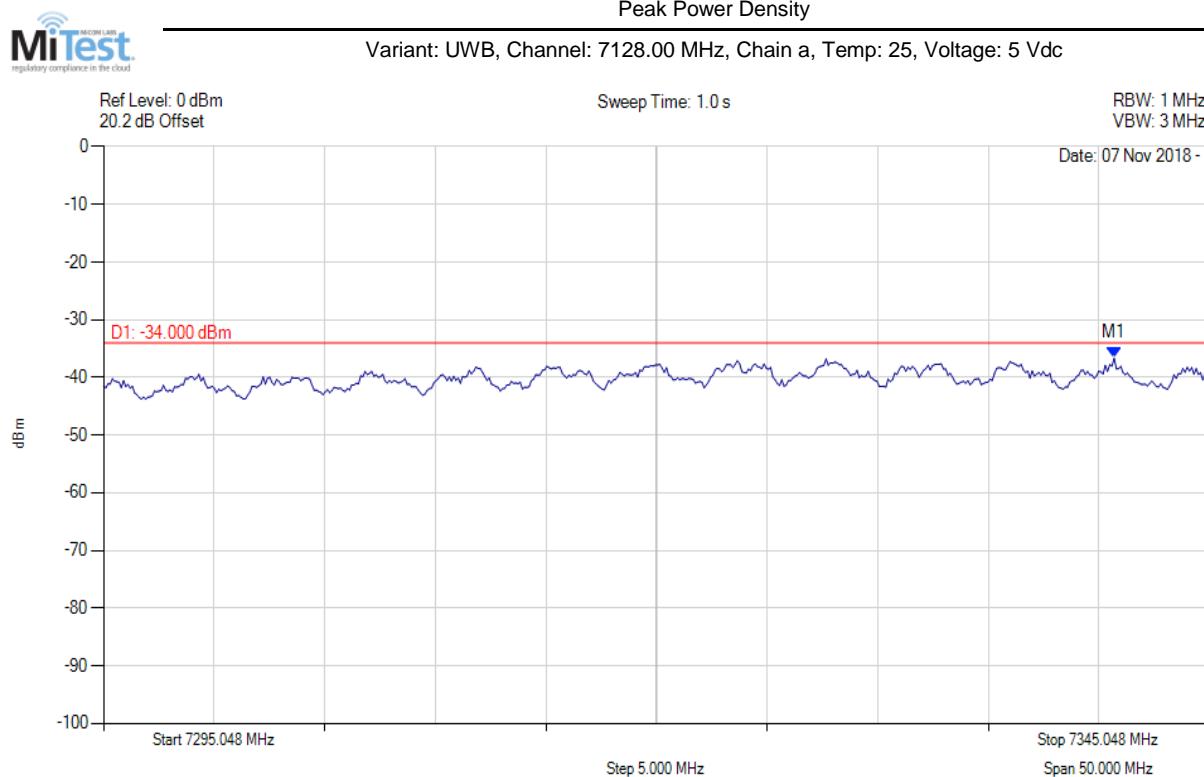
This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 6833.621 MHz : -35.220 dBm	Channel Frequency: 6600.00 MHz

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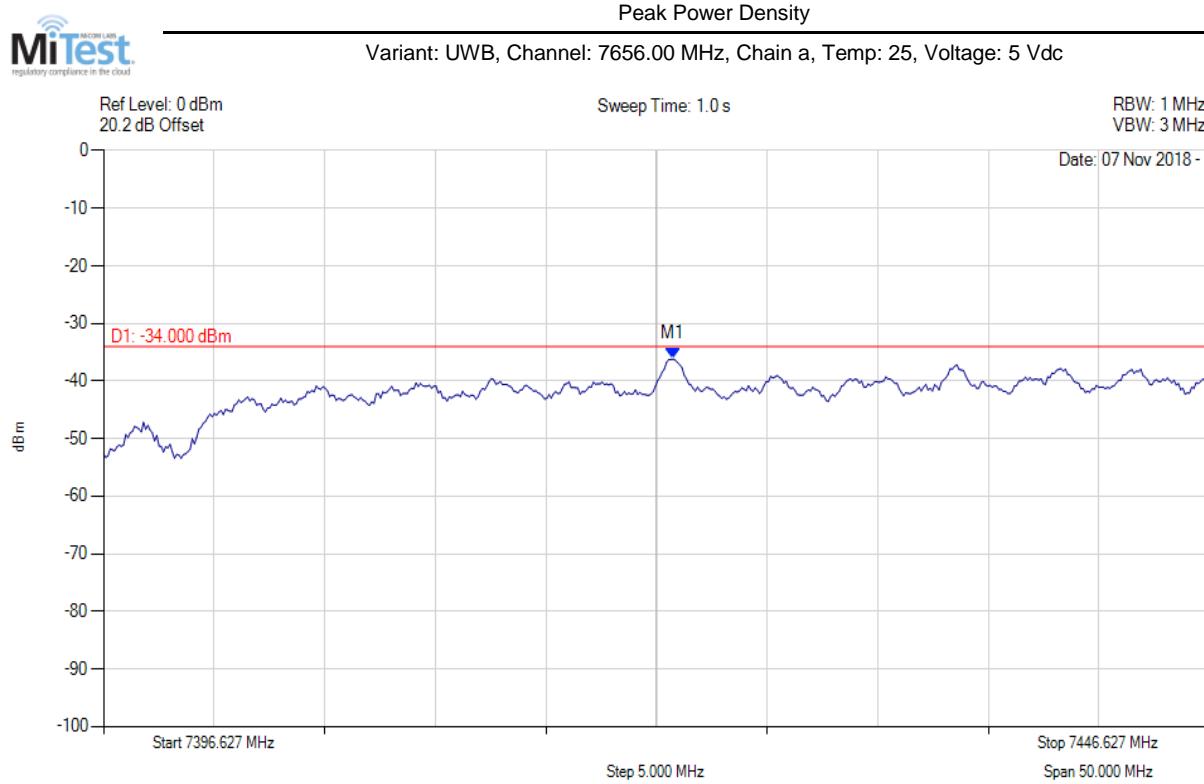
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Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 7340.739 MHz : -36.648 dBm	Channel Frequency: 7128.00 MHz

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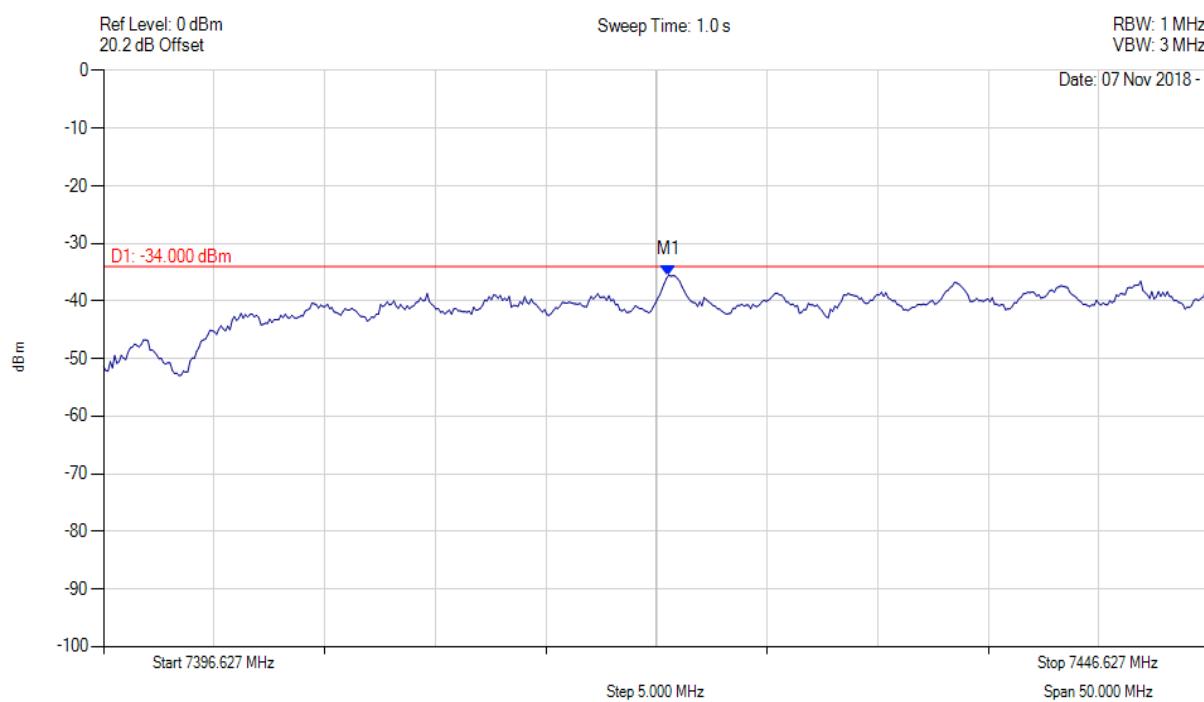
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 7422.379 MHz : -36.188 dBm	Channel Frequency: 7656.00 MHz

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Peak Power Density
Variant: UWB, Channel: 7656 Hz, Chain a, Temp: 25, Voltage: 5 Vdc



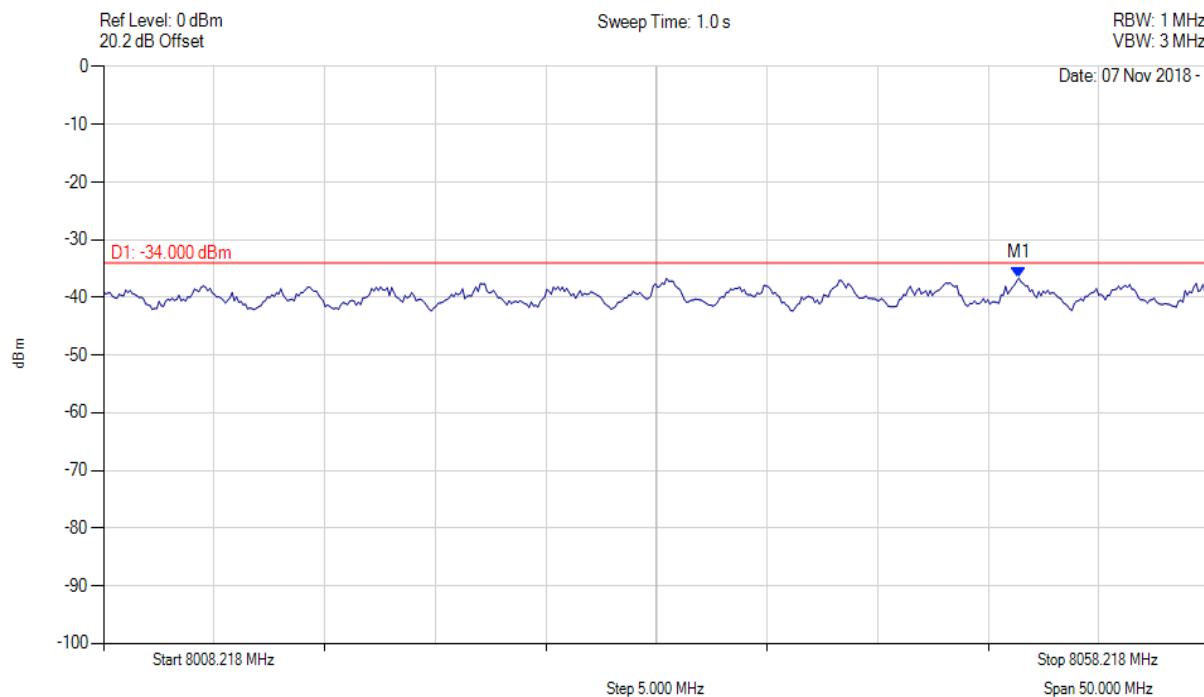
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 7422.178 MHz : -35.495 dBm	Channel Frequency: 0 Hz

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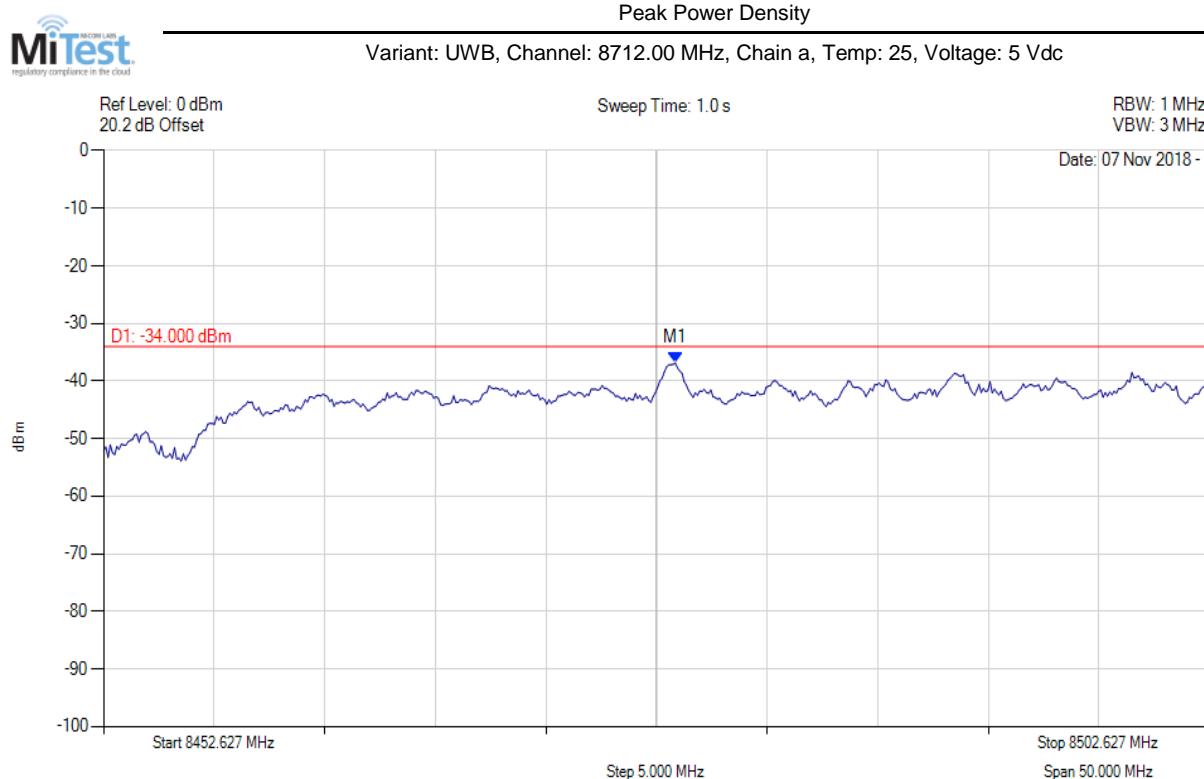
Peak Power Density
Variant: UWB, Channel: 8184.00 MHz, Chain a, Temp: 25, Voltage: 5 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 8049.601 MHz : -36.648 dBm	Channel Frequency: 8184.00 MHz

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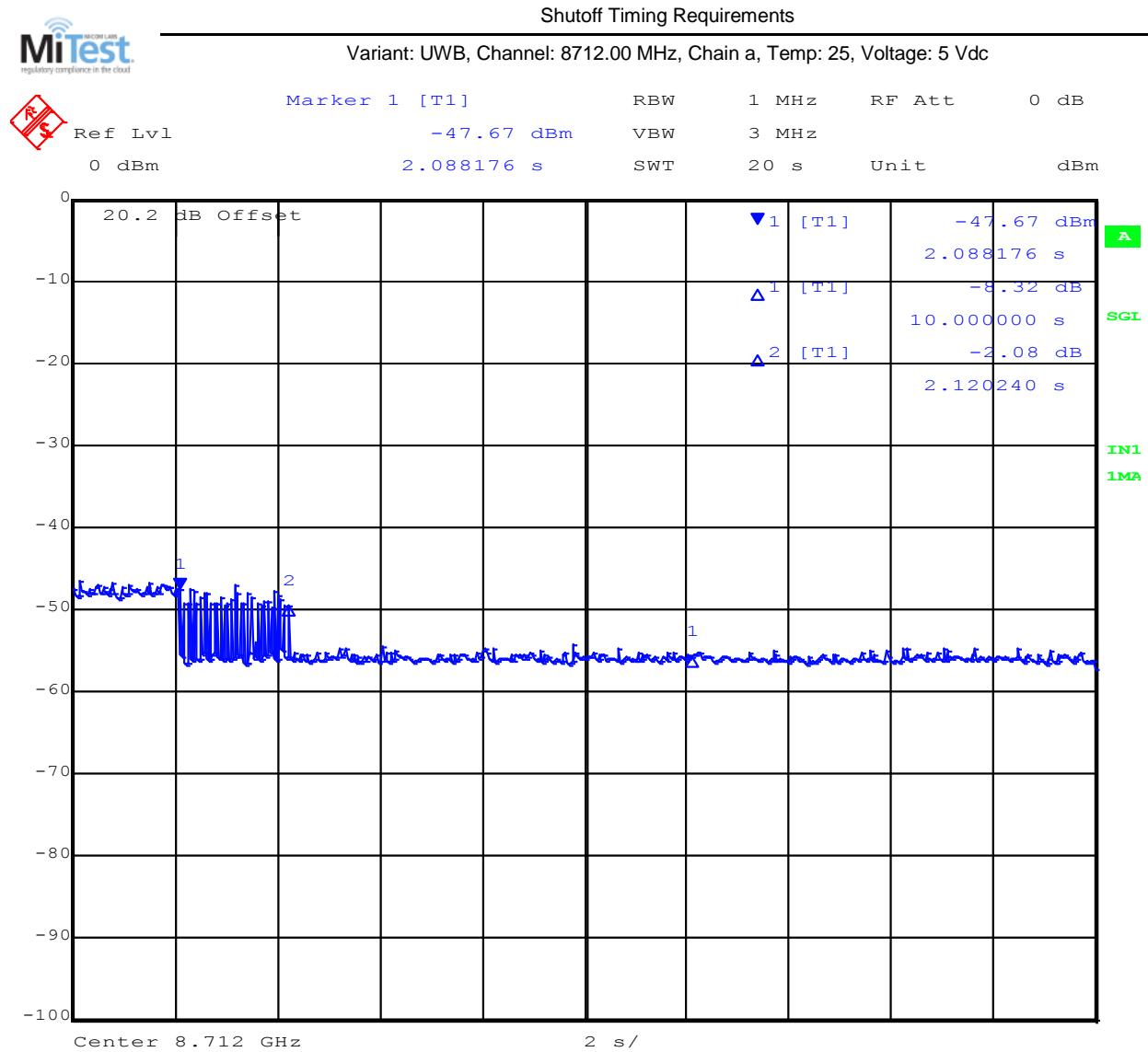


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 8478.479 MHz : -36.858 dBm	Channel Frequency: 8712.00 MHz

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A.3. Shutoff Timing Requirements



Date: 7.NOV.2018 15:35:53

Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 8712.00 MHz : 2.088 s Delta 1 : 8712.00 MHz : -10 s Delta 2 : 8712.00 MHz : 2.120 s	Channel Frequency: 8712.00 MHz

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Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
Serial #: ALER01-U2C Rev A
Issue Date: 12th December 2018
Page: 465 of 466

B. APPENDIX – Manufacturer Declaration on Similarity of Models



www.alercon.com | 10900 Preston Park Blvd. | Suite 100 | Austin, TX 78750 | 512.345.4200 | 512.345.4201

To whom it may concern,

The AL5934 Combat, AL5930 Commander and the AL5955 Camouflage all use the exact same Alercon radio chipset (AL5100 and AL5350). The only difference between the boards is the interface connector, so for the conducted tests, testing just the AL5934 Combat should be adequate.

Thanks,

David Shoemaker
CEO
Alercon, Inc.

12/6/2018

12/6/2018

CONFIDENTIAL

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