



Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
Serial #: ALER01-U2C Rev A
Issue Date: 12th December 2018
Page: 239 of 466

3960 MHz

Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

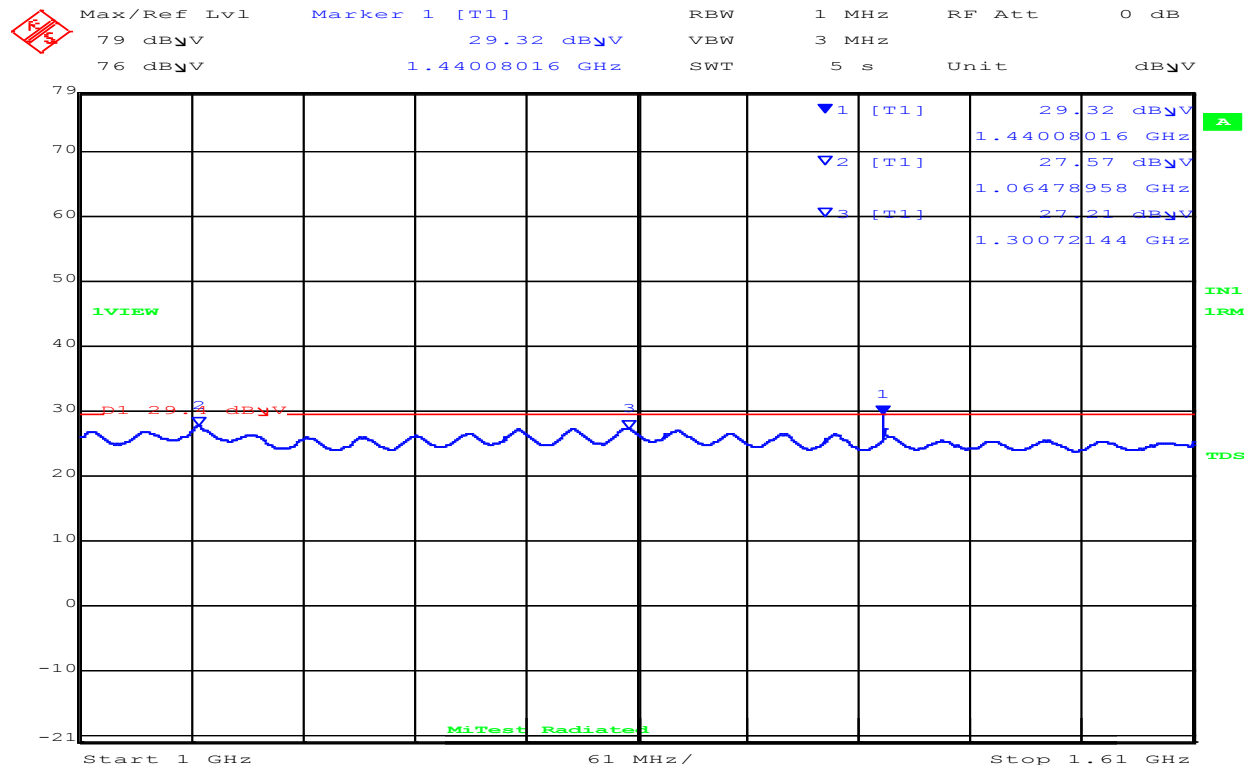
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

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



Date: 20.NOV.2018 08:45:37

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

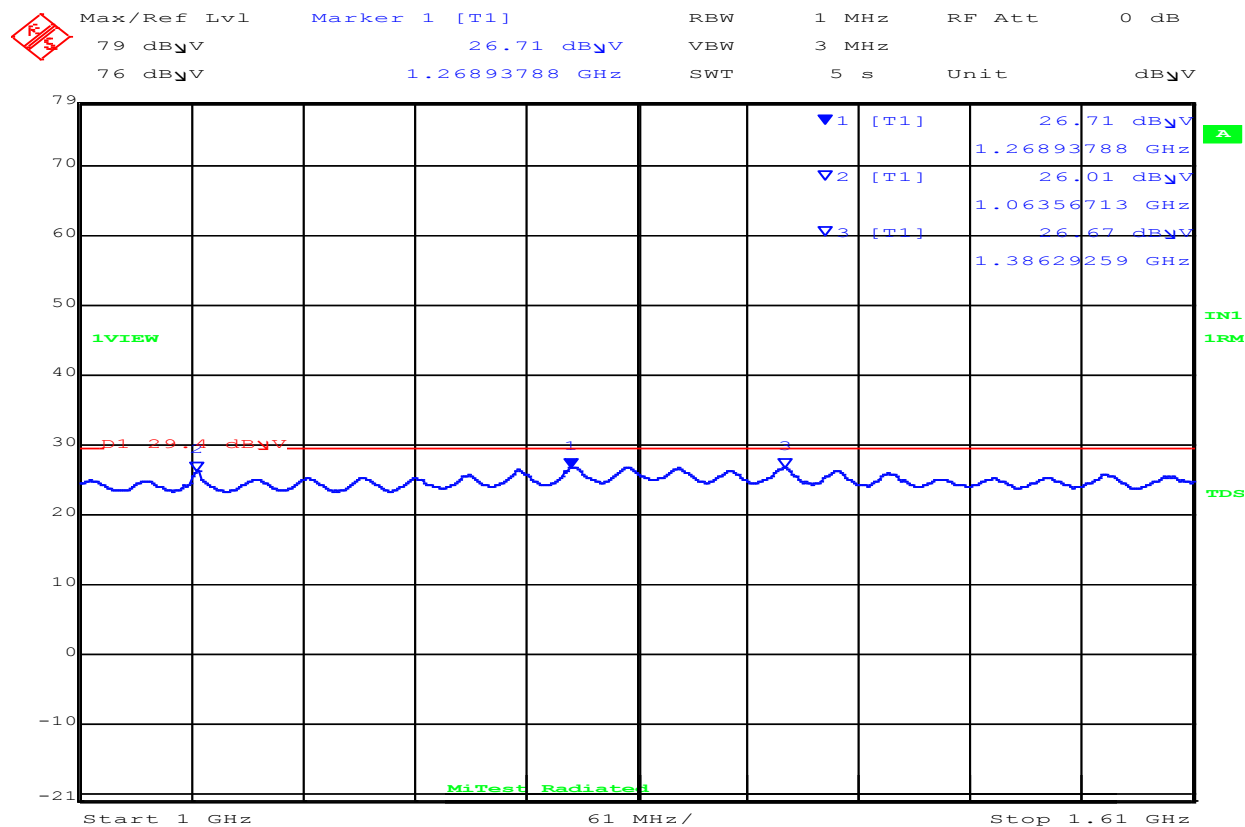
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

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



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

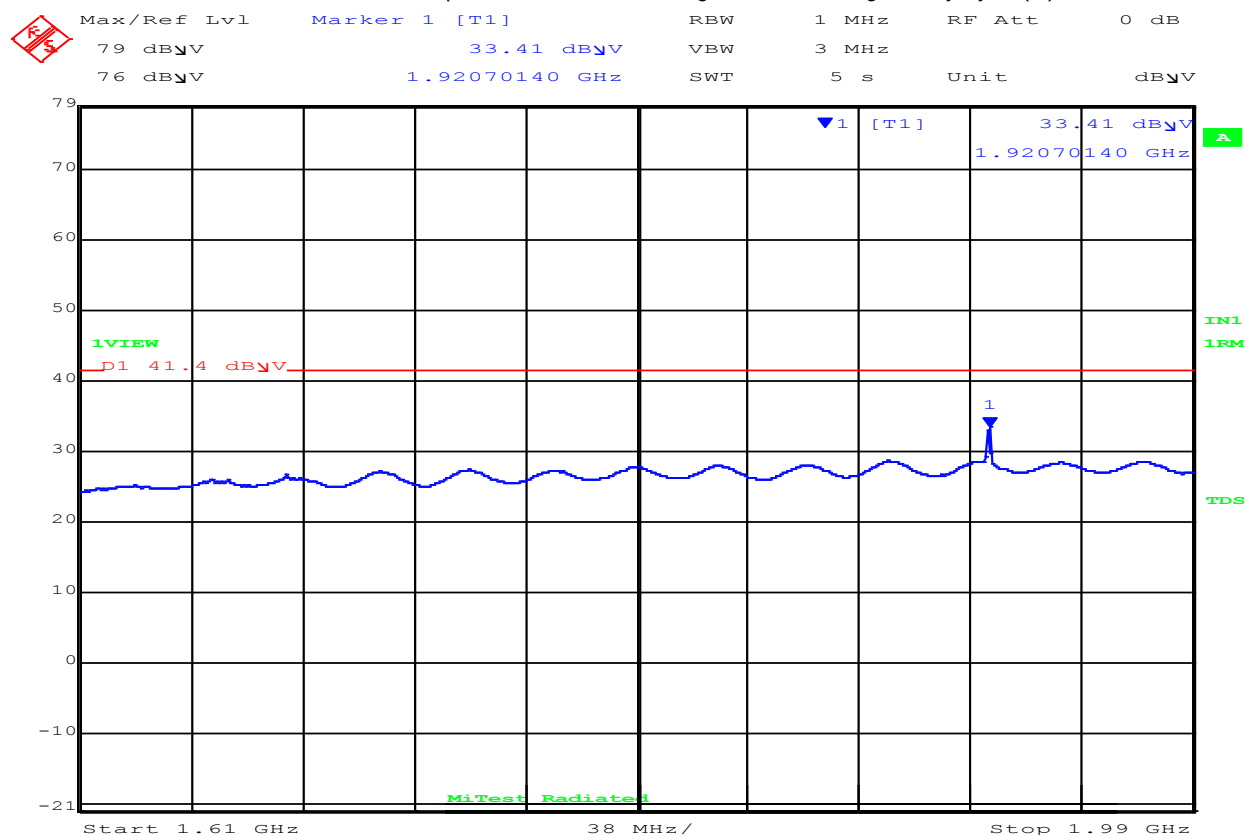
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

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



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

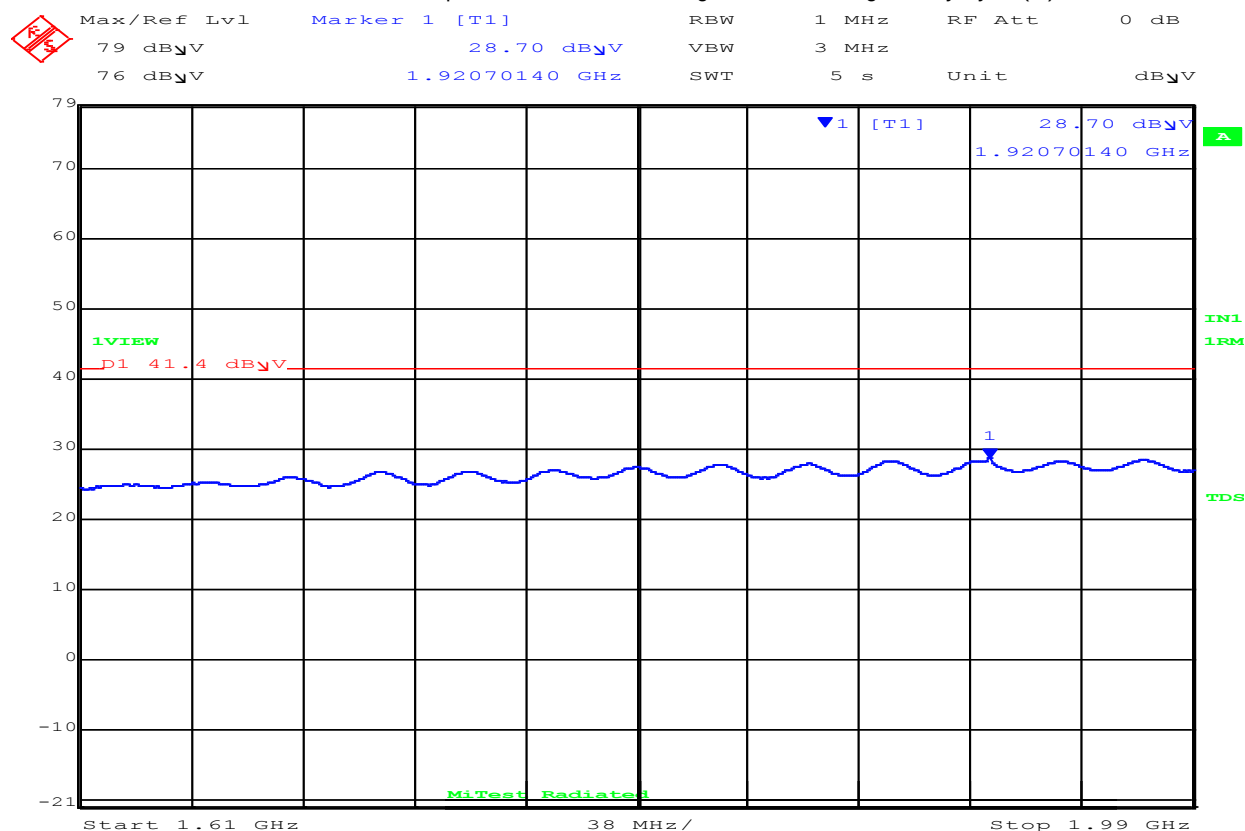
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

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



Date: 20.NOV.2018 08:58:03

1610.00 – 1990.00 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 1.99 – 3.1 GHz Horizontal

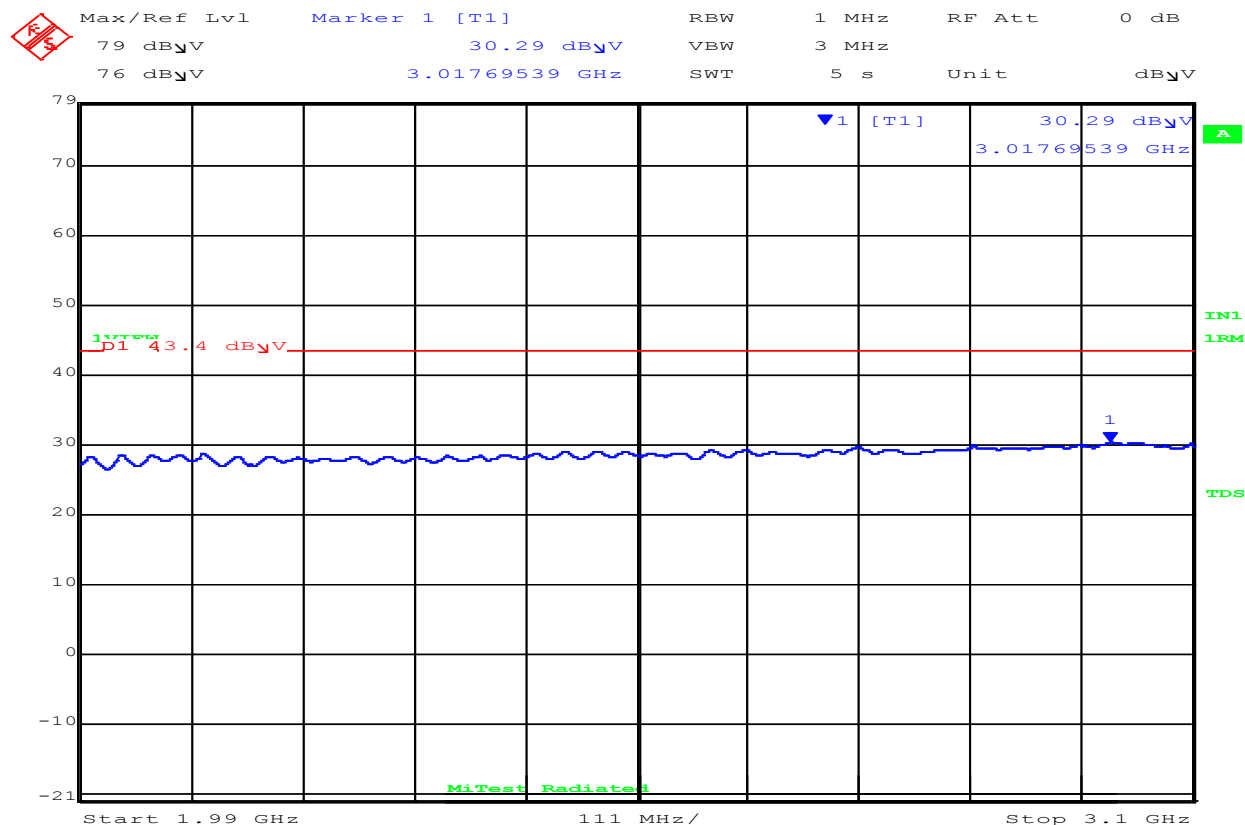
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

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



Date: 20.NOV.2018 09:01:40

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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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

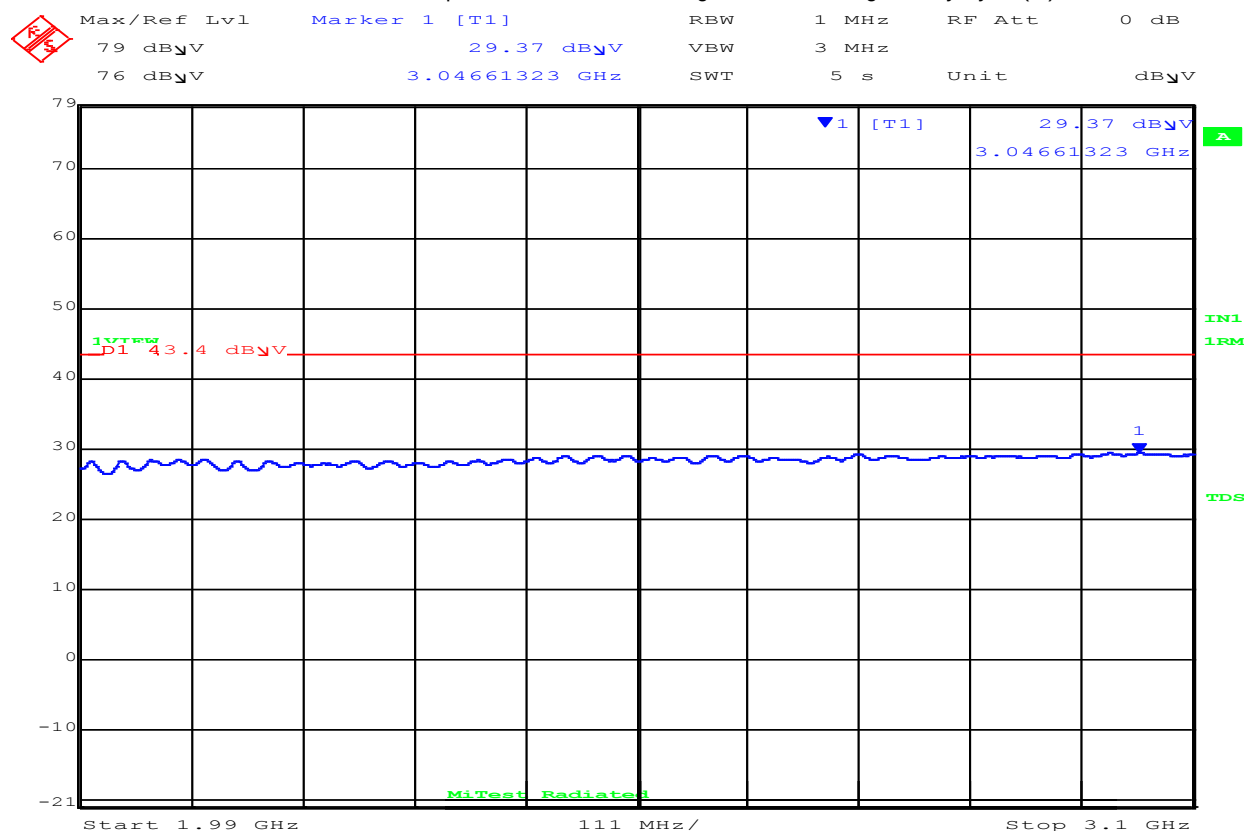
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

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



Date: 20.NOV.2018 09:02:26

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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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

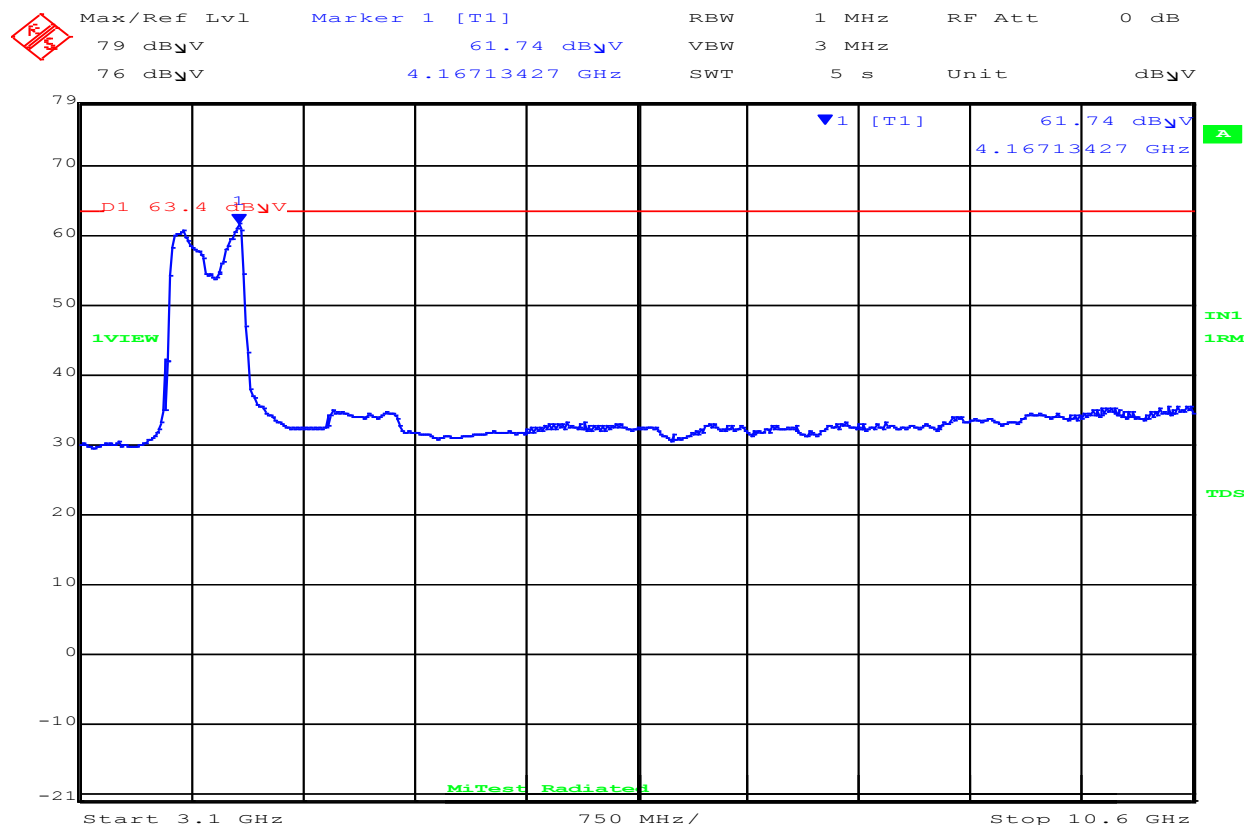
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

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



Date: 20.NOV.2018 09:10:38

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	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

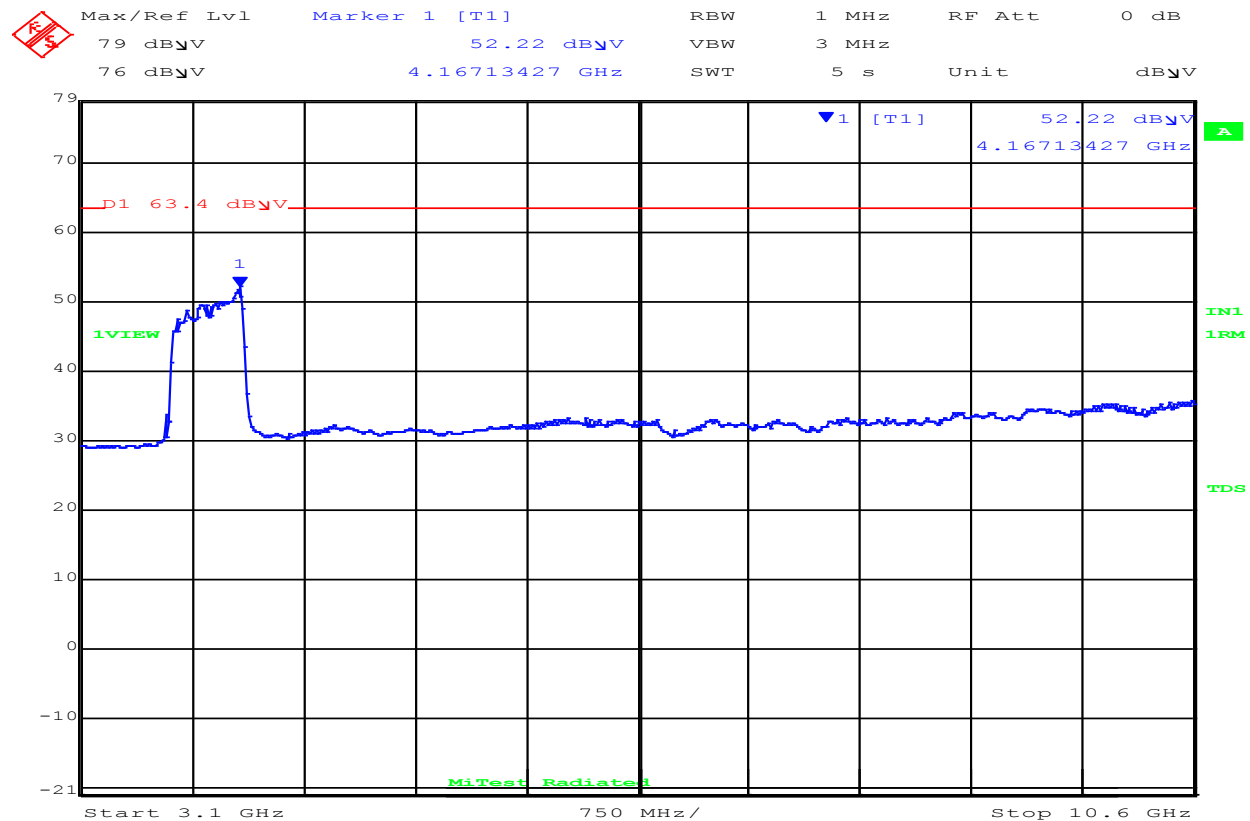
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

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

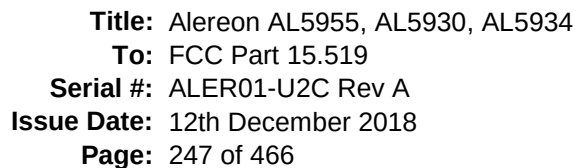


Date: 20.NOV.2018 09:05:26

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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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

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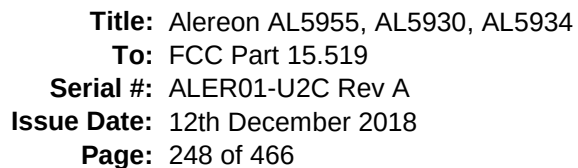
Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99

Date: 20.NOV.2018 09:13:48

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)

MiCOM Labs, 575 Boulder Court, Pleasanton, California 94566 USA, Phone: +1 (925) 462 0304, Fax: +1 (925) 462 0306, www.micomlabs.com



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



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

MiCOM Labs, 575 Boulder Court, Pleasanton, California 94566 USA, Phone: +1 (925) 462 0304, Fax: +1 (925) 462 0306, www.micomlabs.com



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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

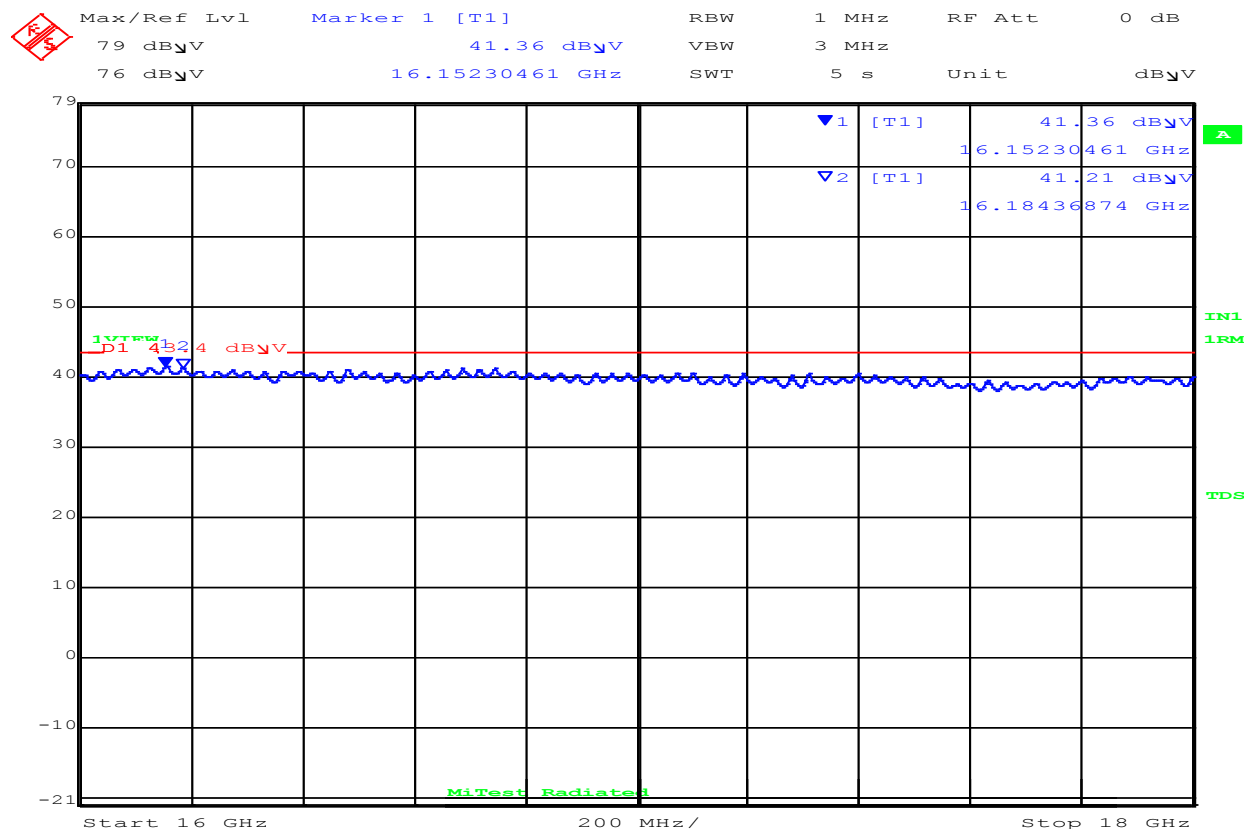
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

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



Date: 20.NOV.2018 09:20:37

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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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

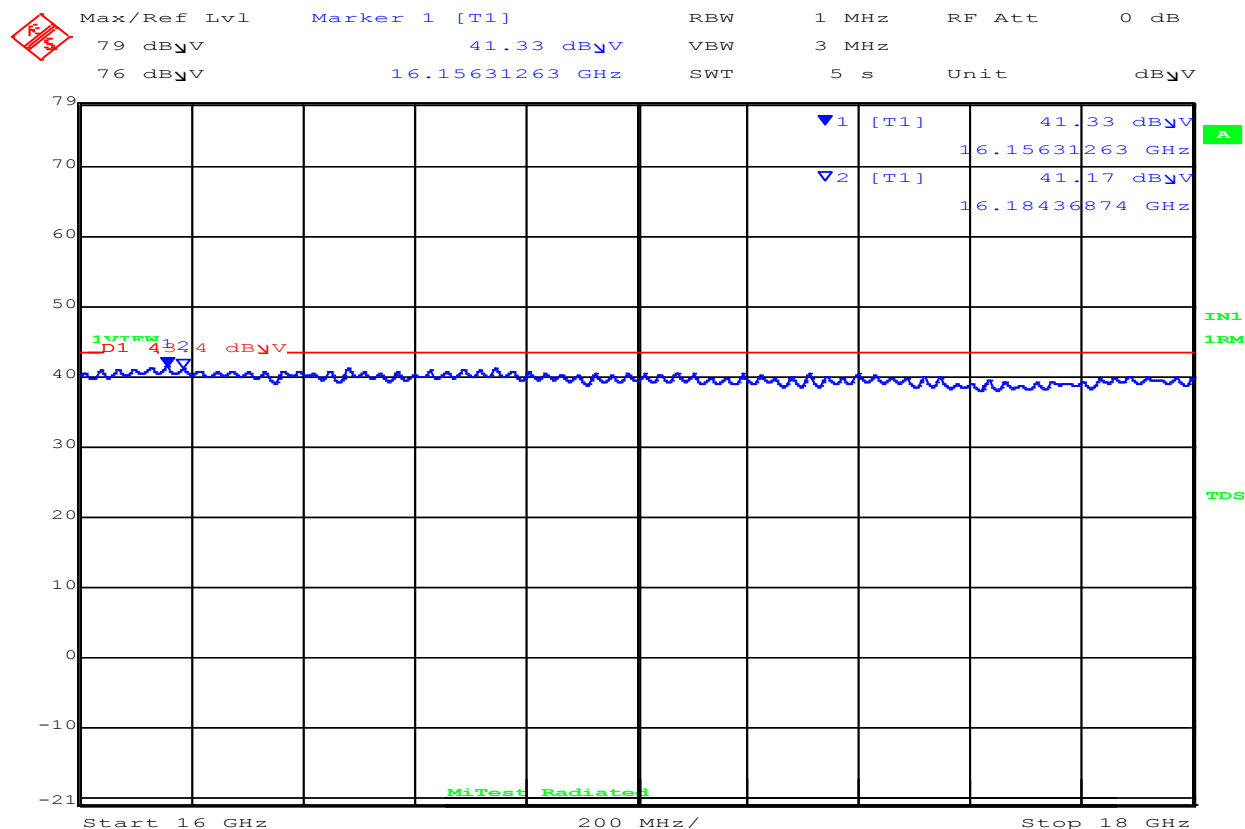
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

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



Date: 20.NOV.2018 09:18:05

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	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

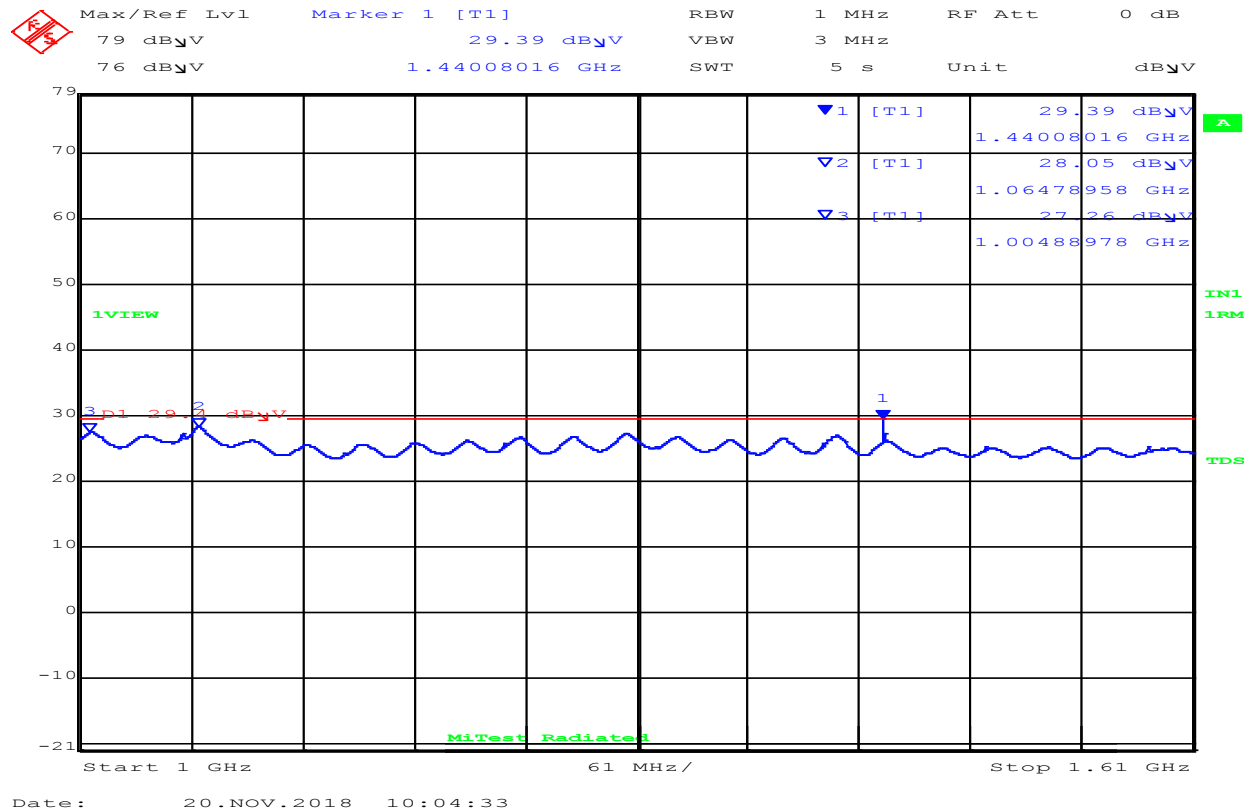
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

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



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

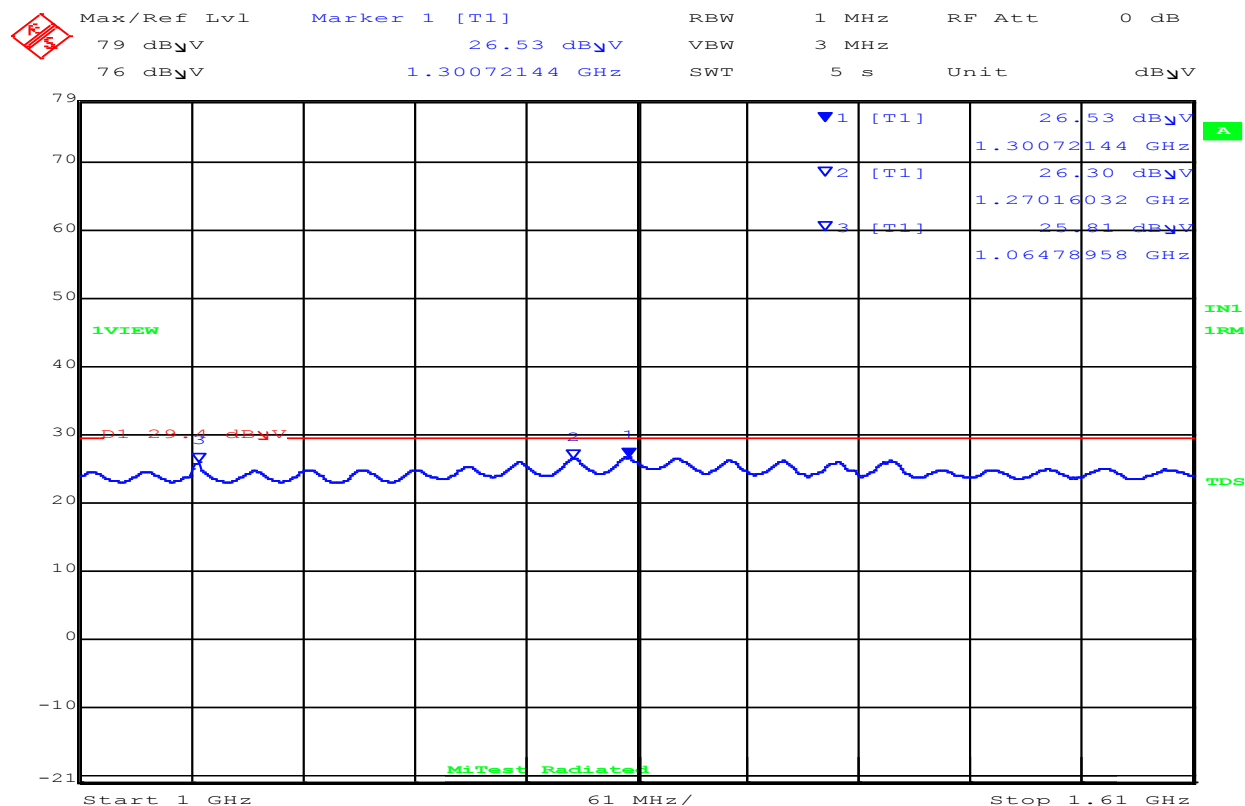
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

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



Date: 20.NOV.2018 10:11:35

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

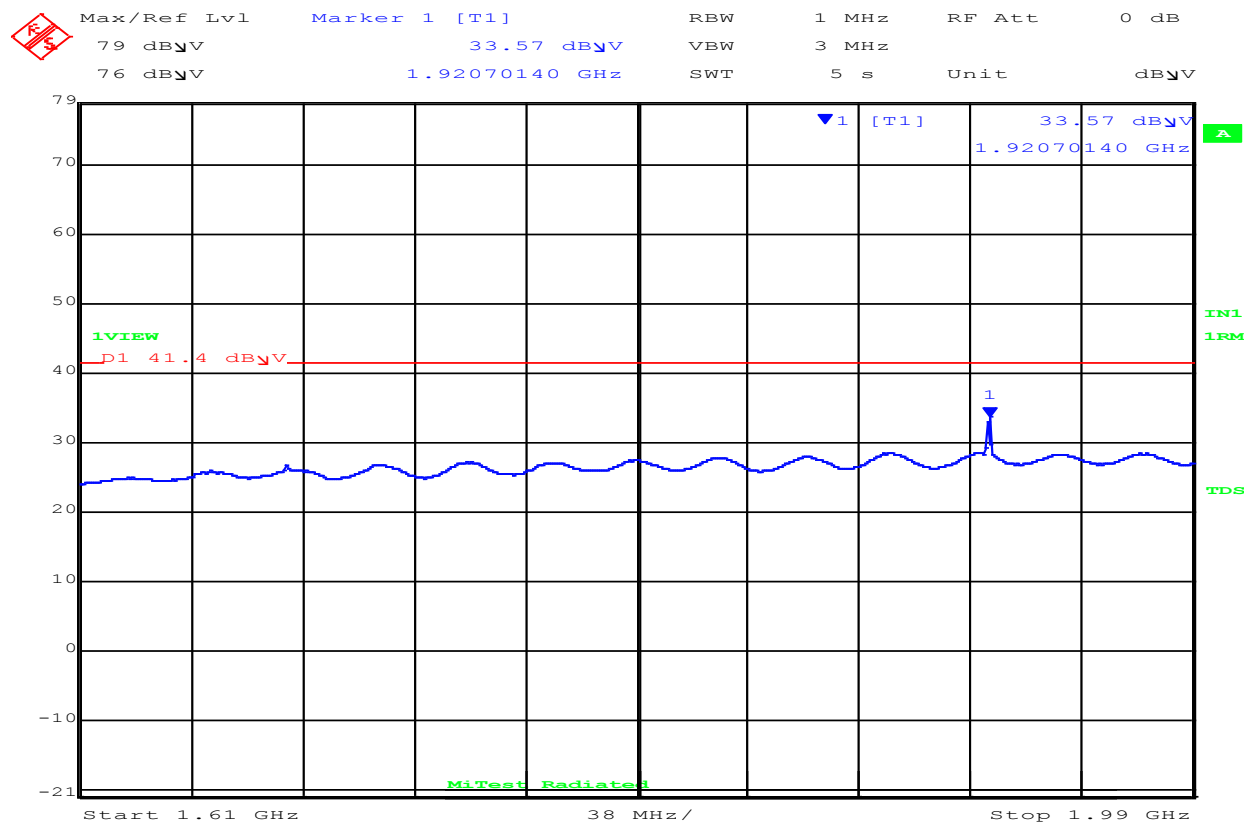
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

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



Date: 20.NOV.2018 10:01:25

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

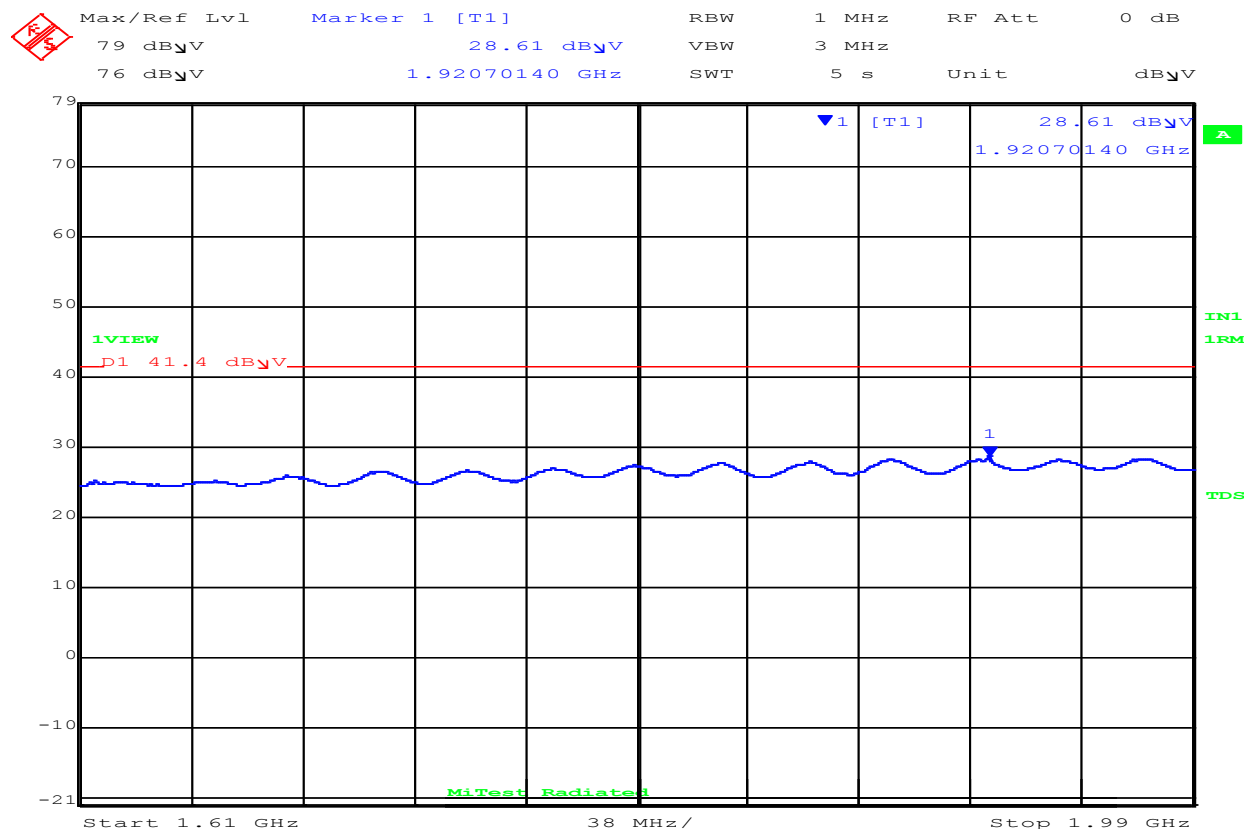
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

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



Date: 20.NOV.2018 10:00:28

1610.00 – 1990.00 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 1.99 – 3.1 GHz Horizontal

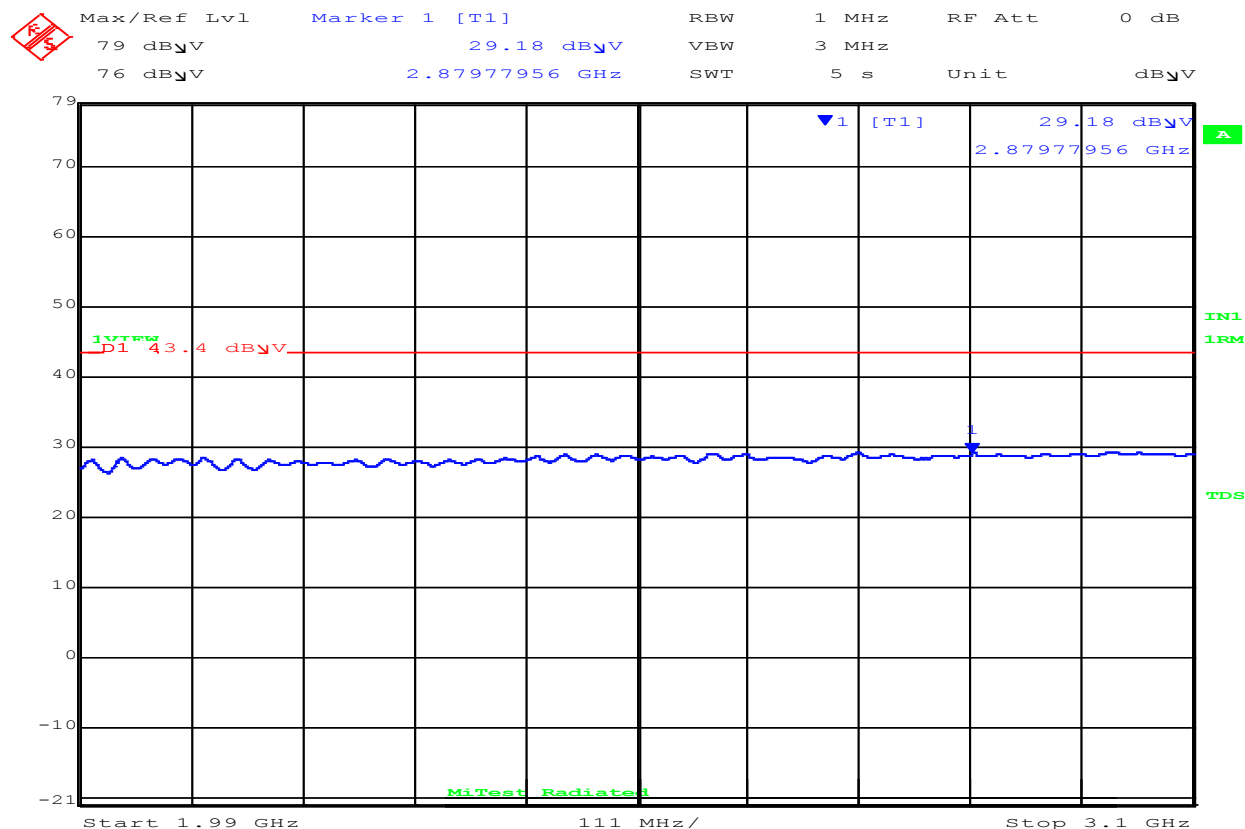
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

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



Date: 20.NOV.2018 09:58:14

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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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

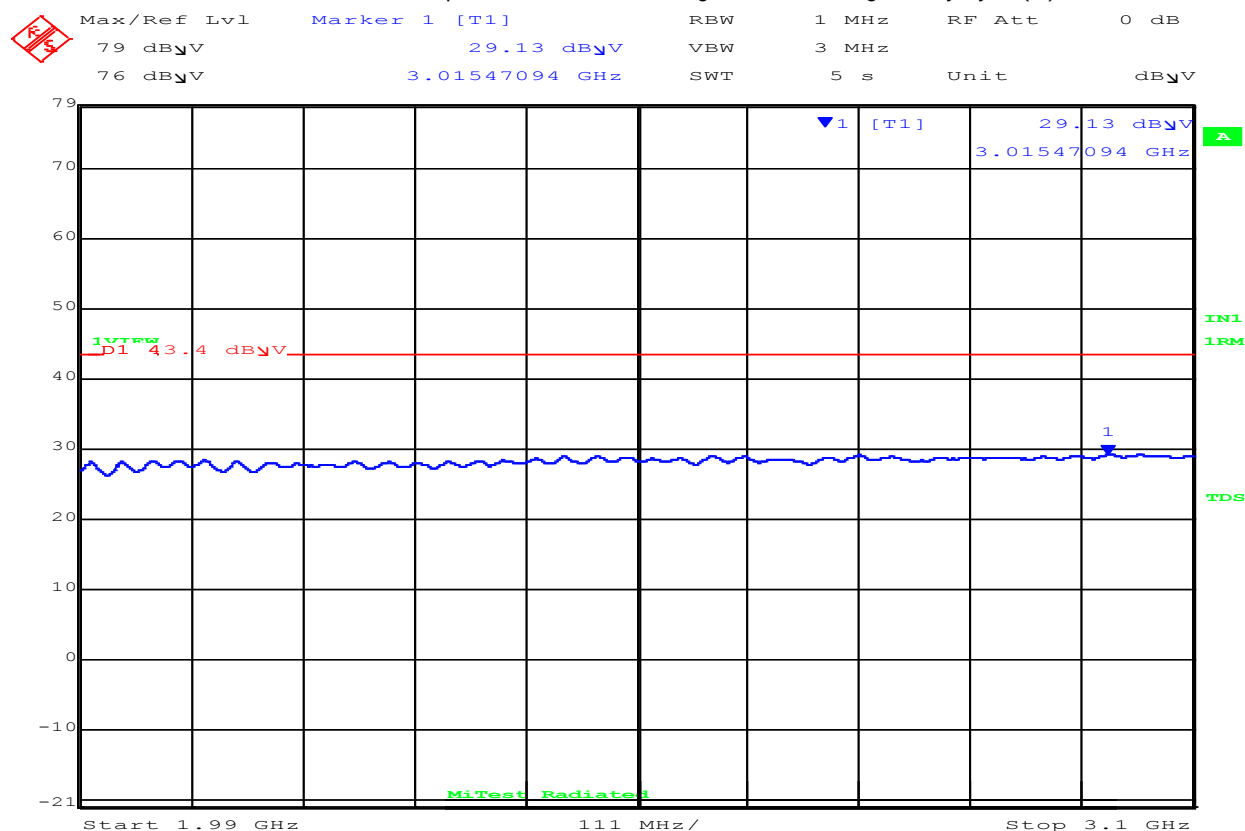
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

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



Date: 20.NOV.2018 09:58:53

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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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

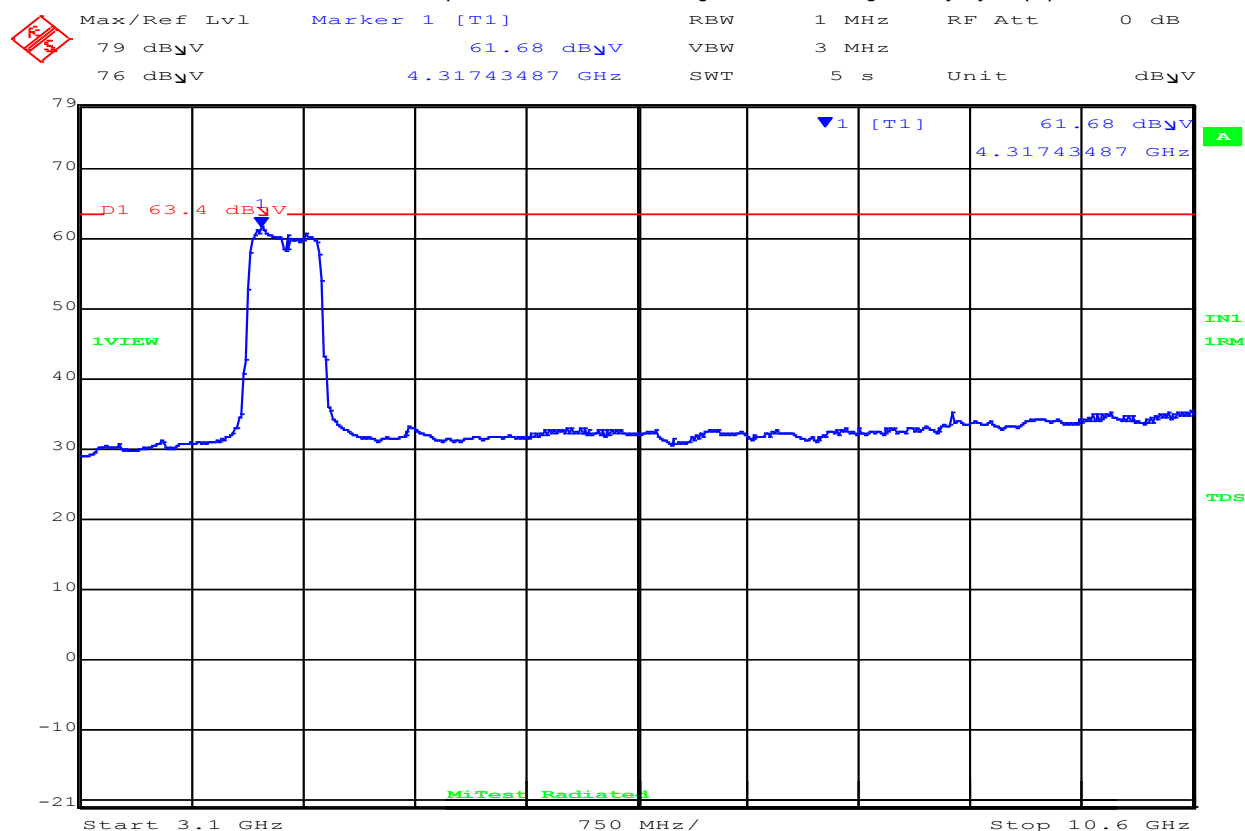
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

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



Date: 20.NOV.2018 09:55:09

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

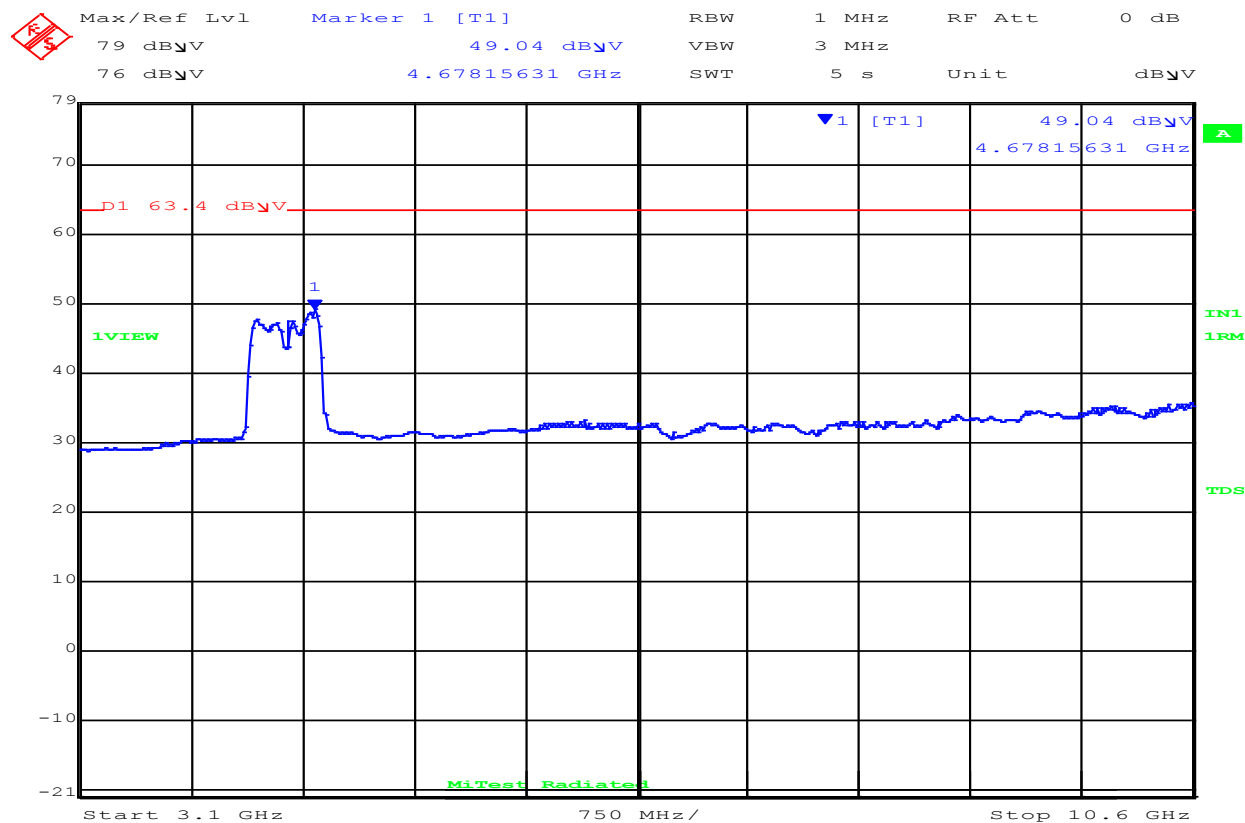
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

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



Date: 20.NOV.2018 09:52:55

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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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

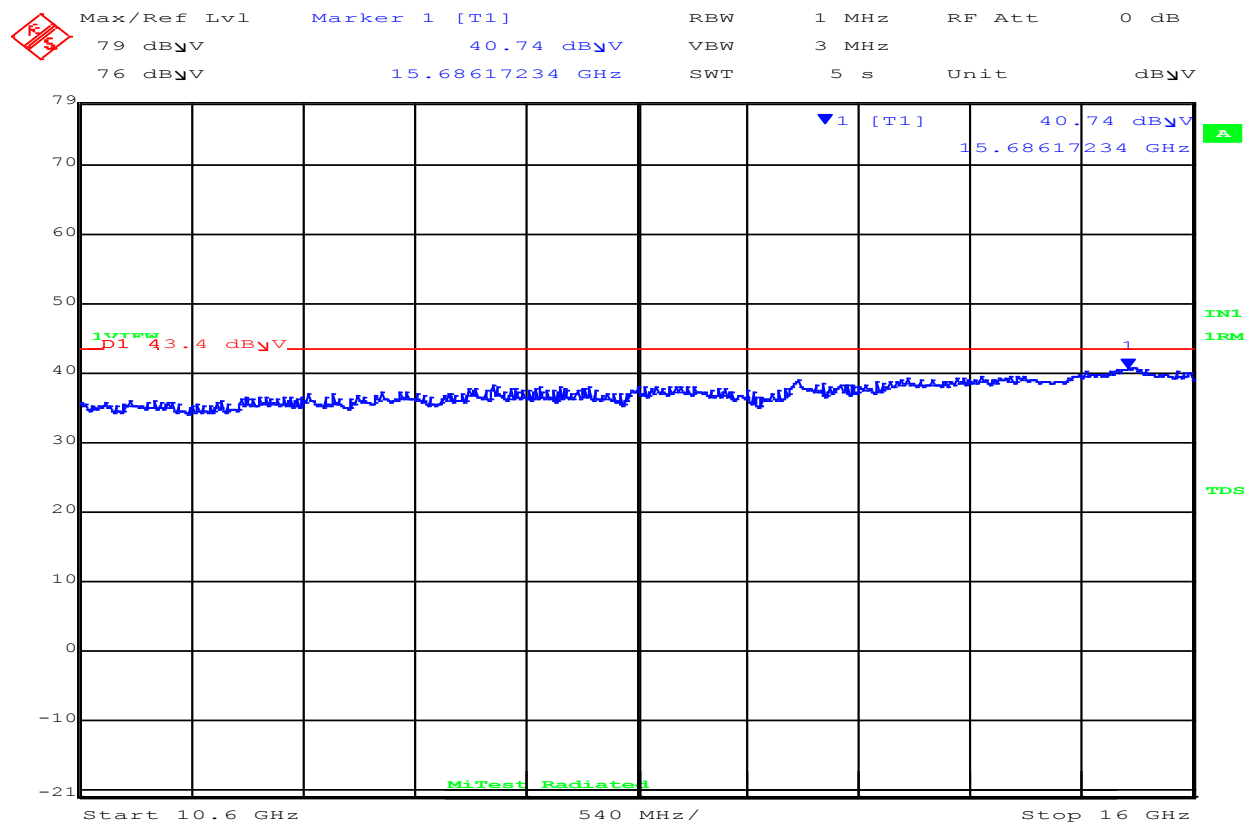
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

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



Date: 20.NOV.2018 09:56:31

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	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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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

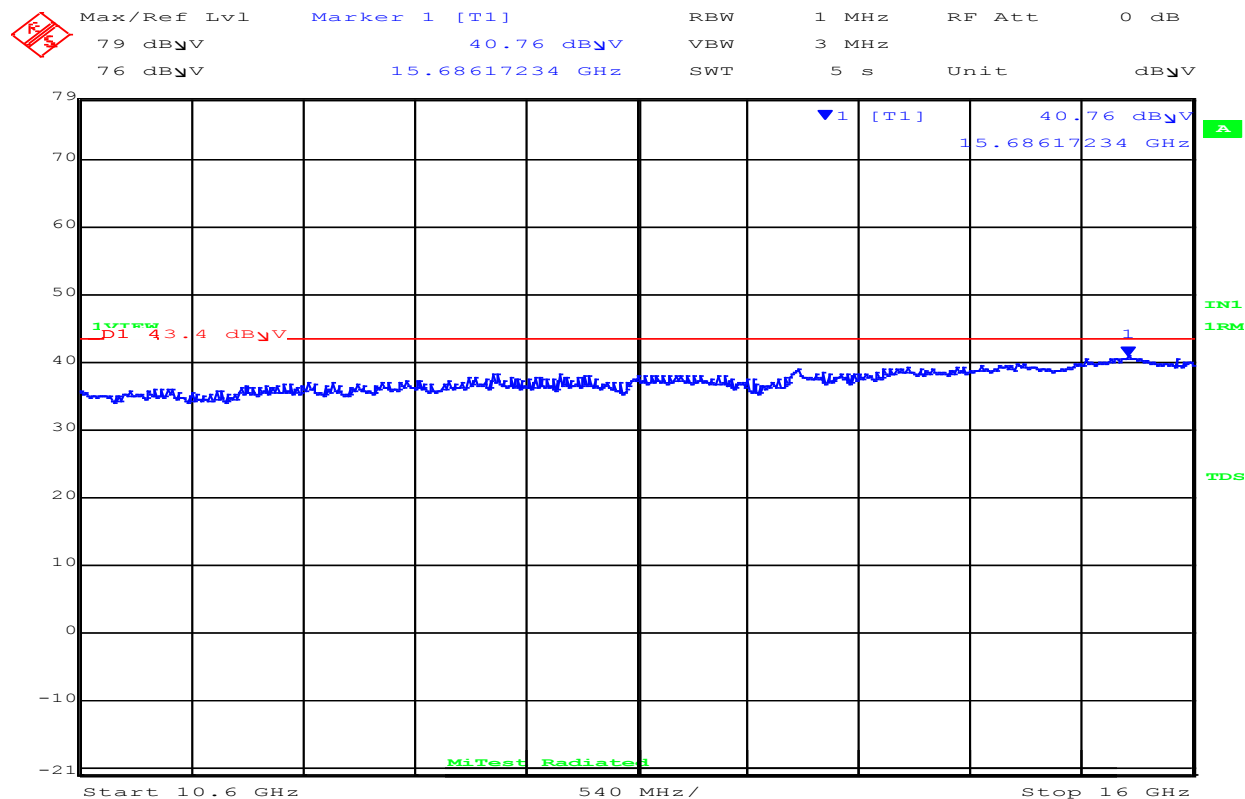
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

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



Date: 20.NOV.2018 09:32:15

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	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

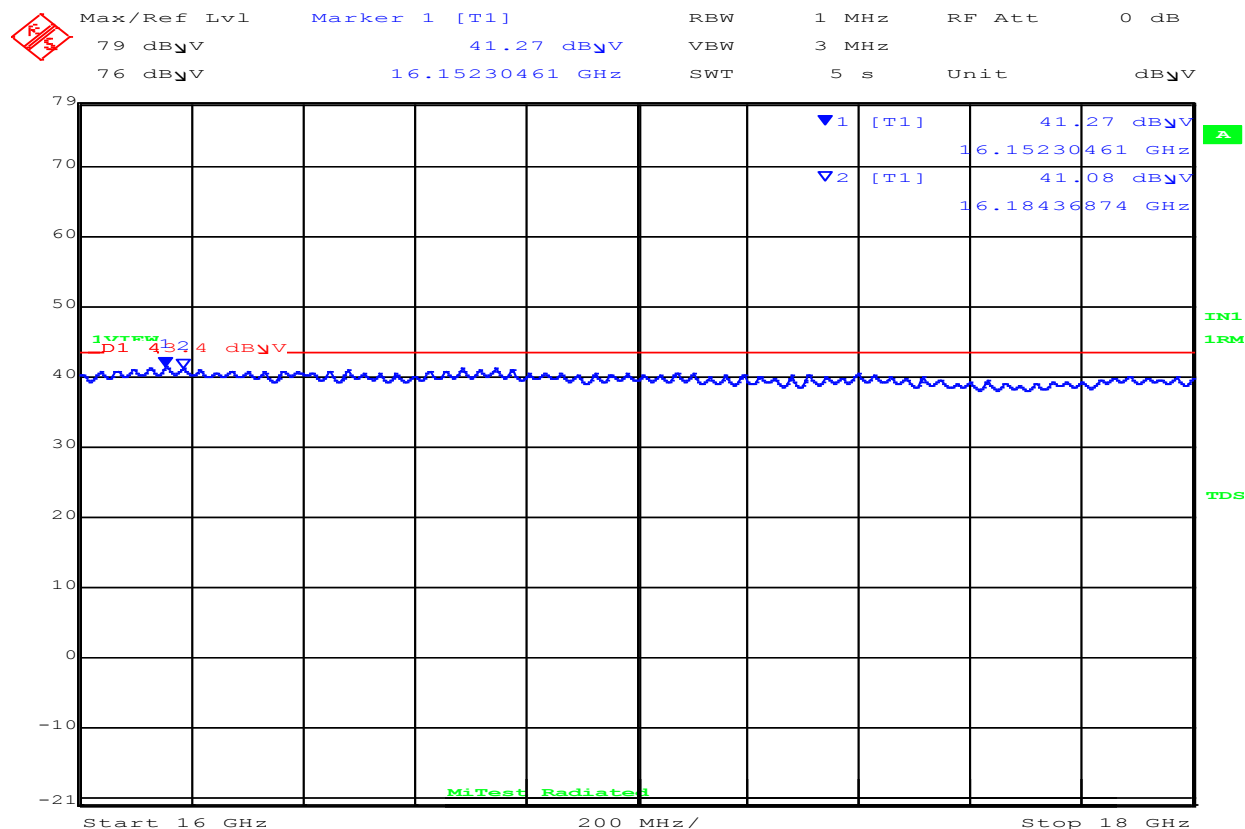
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

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



Date: 20.NOV.2018 09:26:15

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

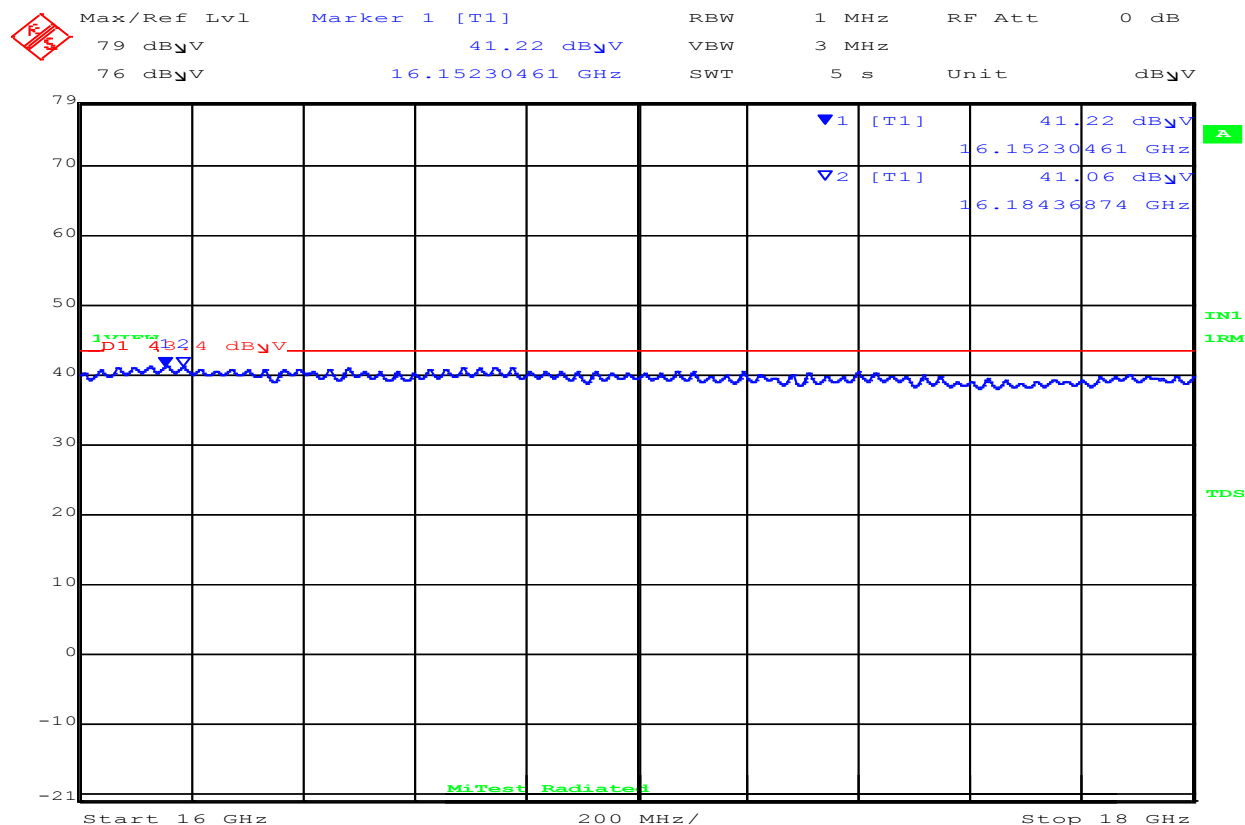
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

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



Date: 20.NOV.2018 09:30:01

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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6600 MHz

Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

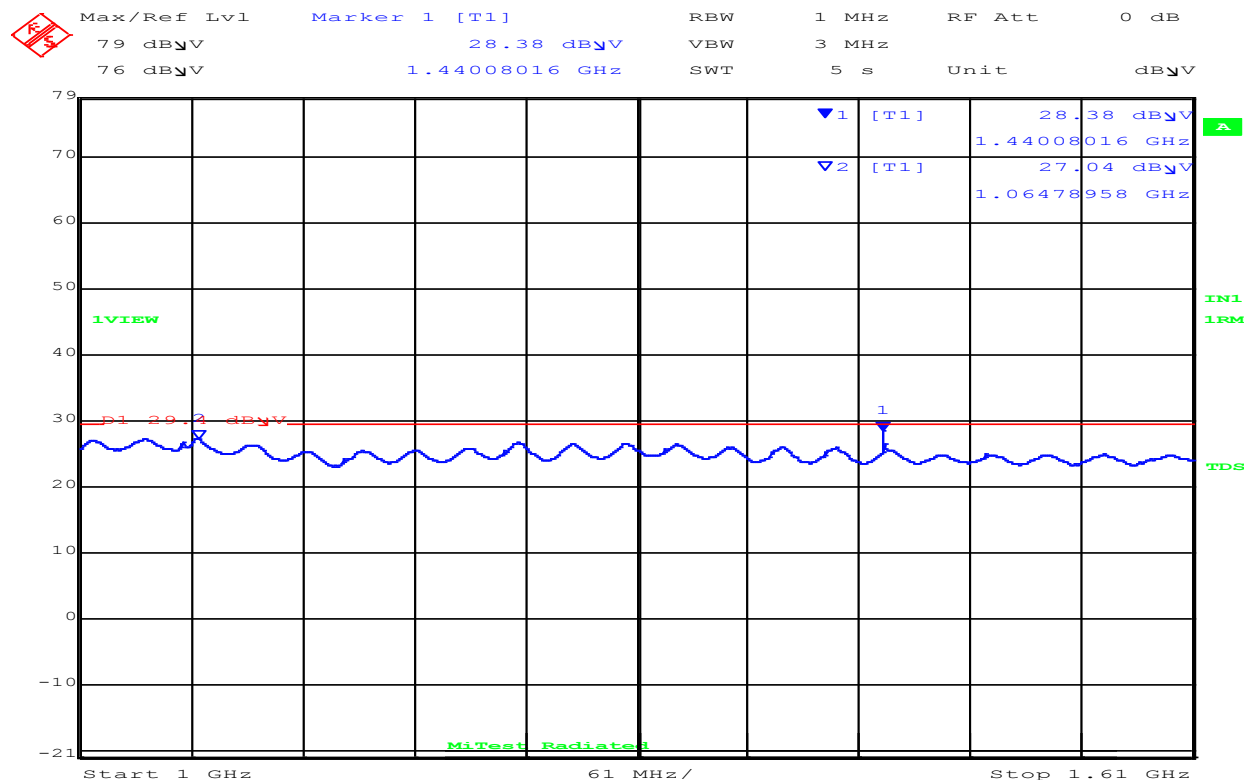
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

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



Date: 20.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	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

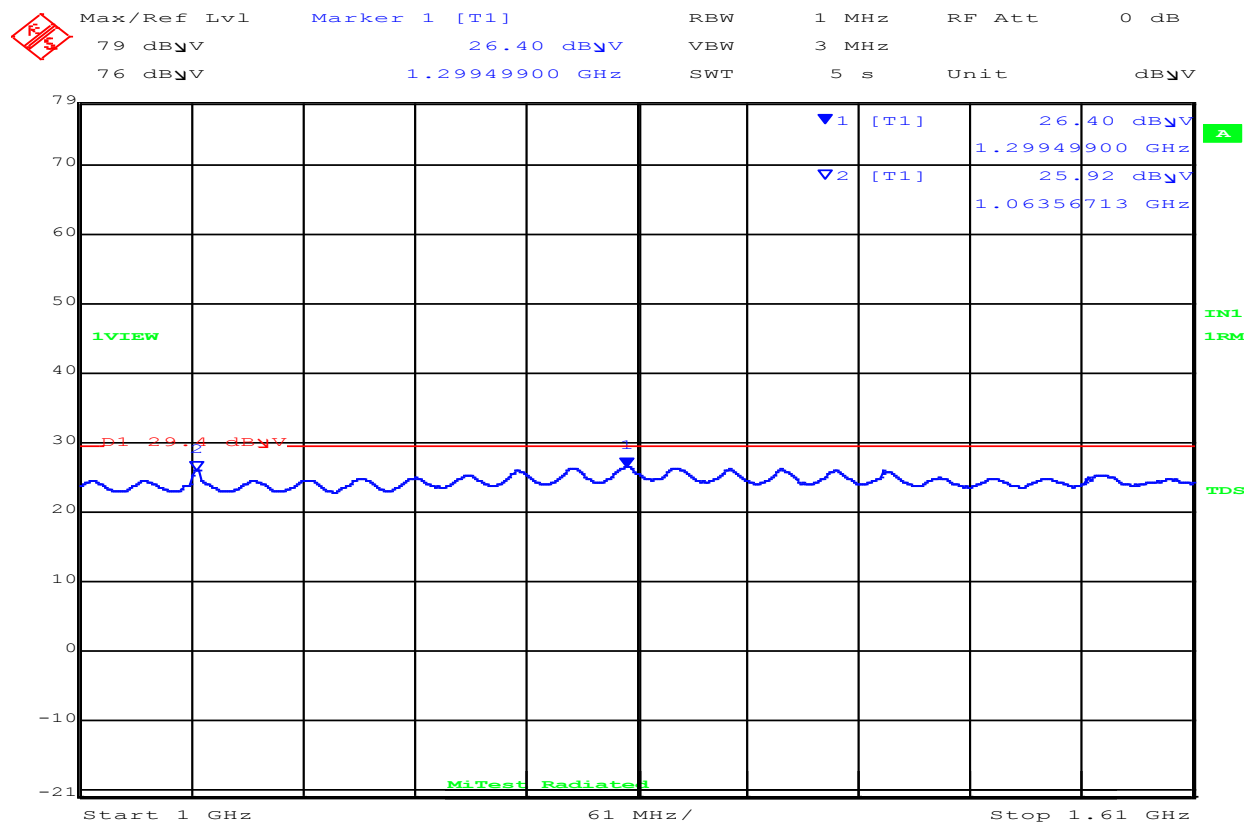
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

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



Date: 20.NOV.2018 11:42:06

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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Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

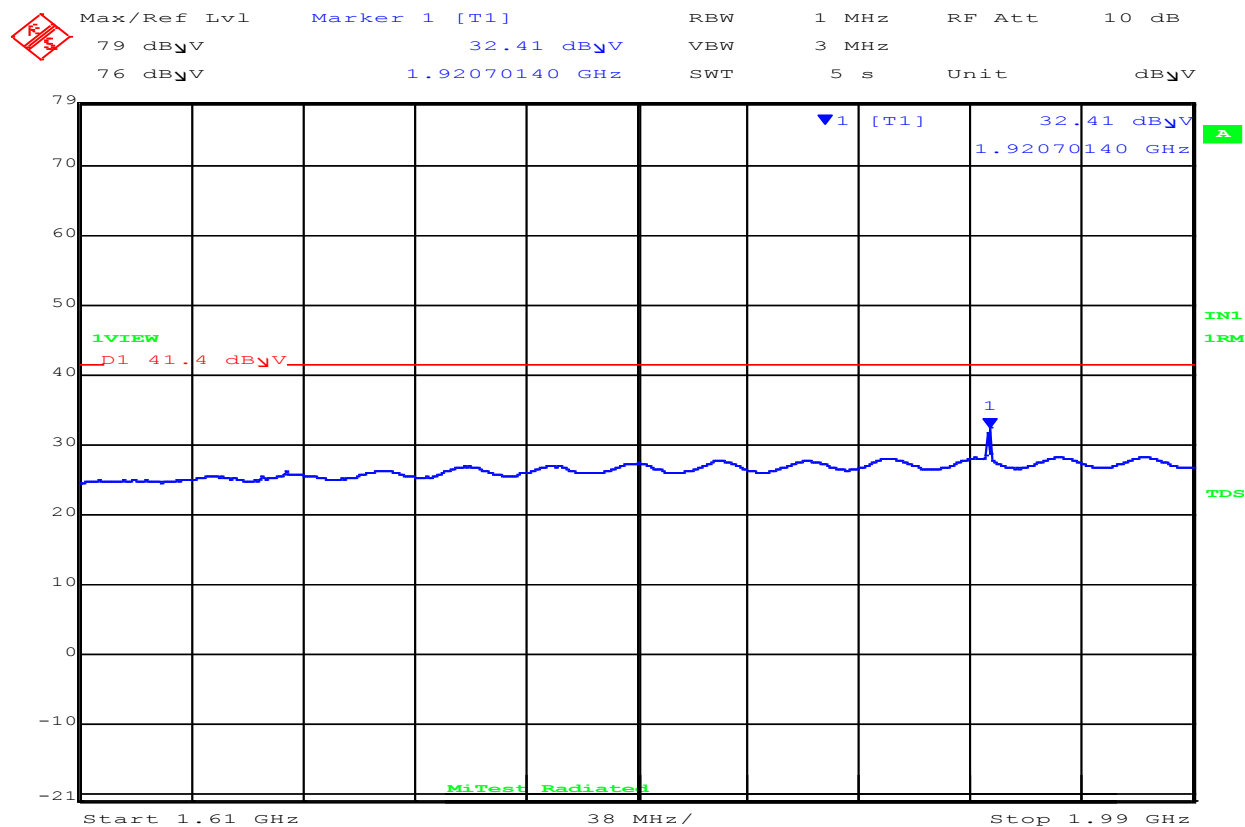
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

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



Date: 20.NOV.2018 11:29:38

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

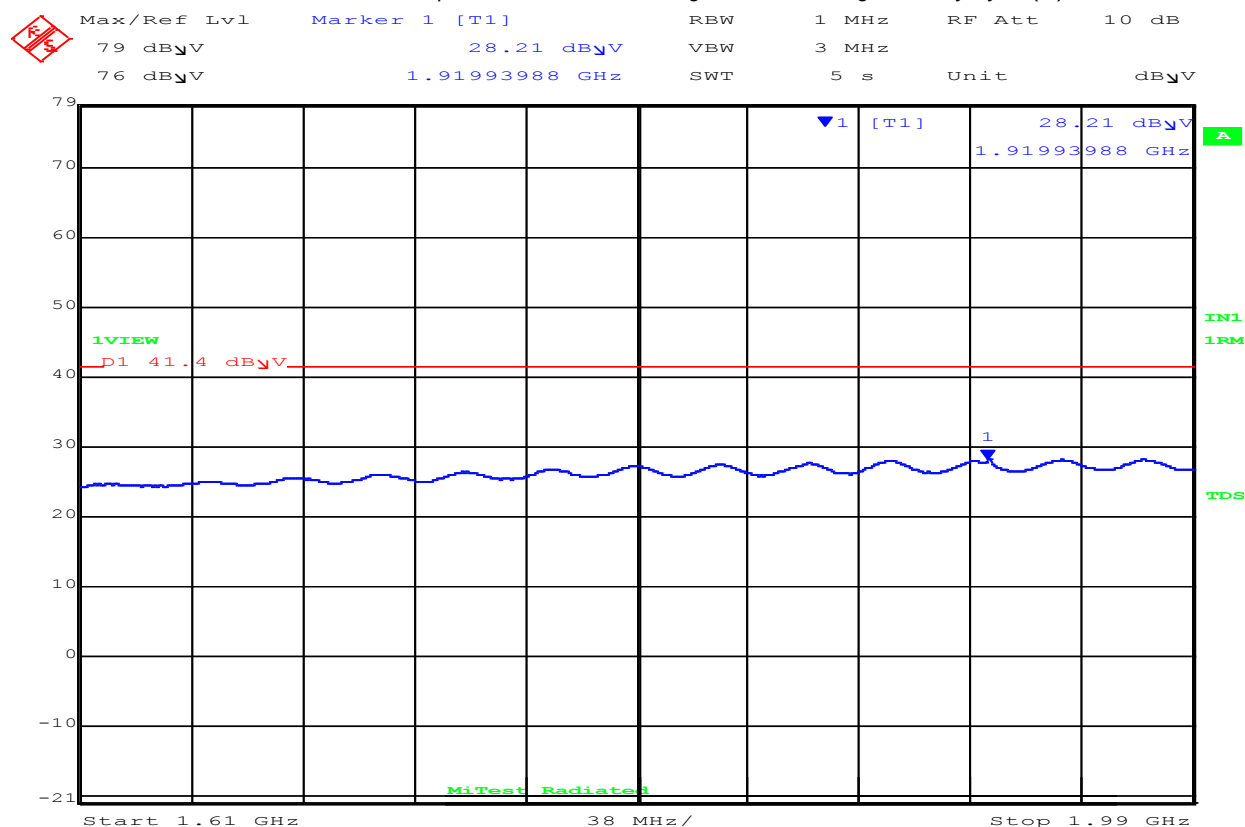
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

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



Date: 20.NOV.2018 11:30:25

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

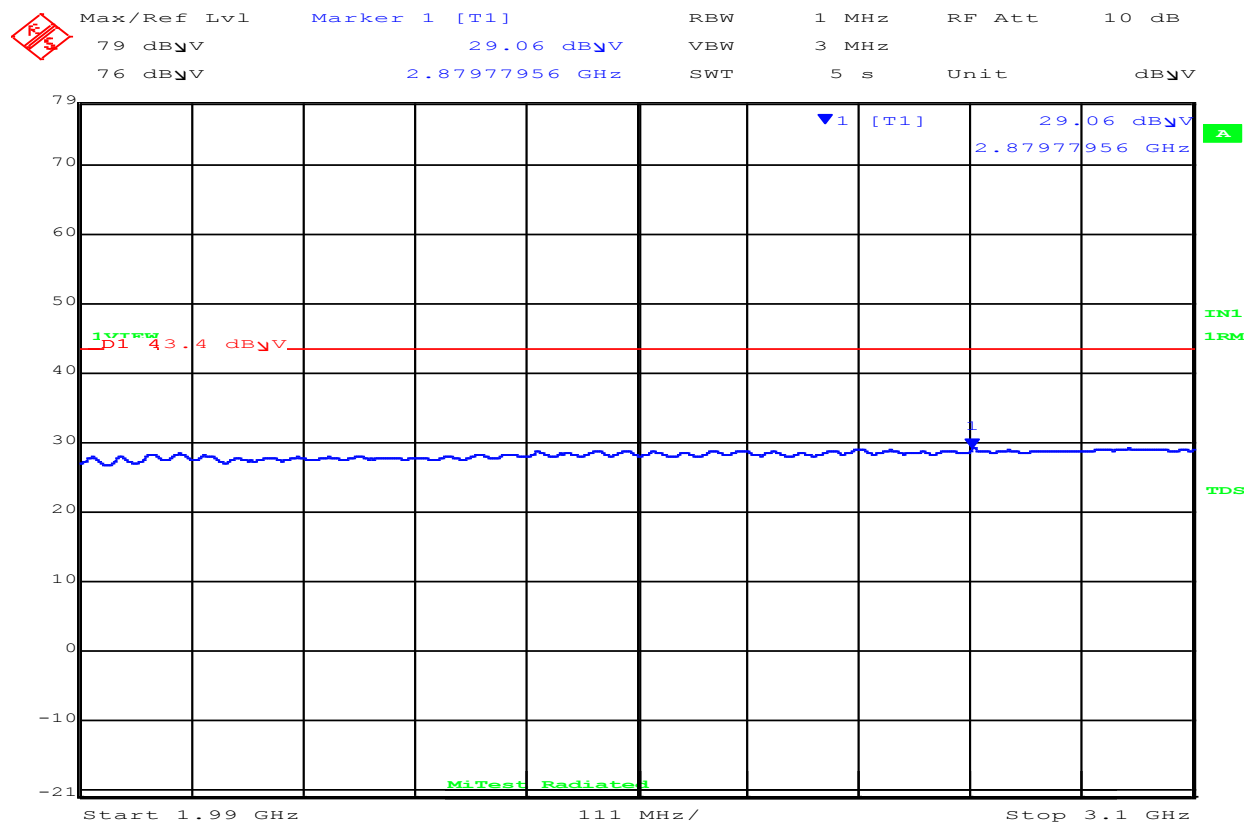
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

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



Date: 20.NOV.2018 11:26:50

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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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

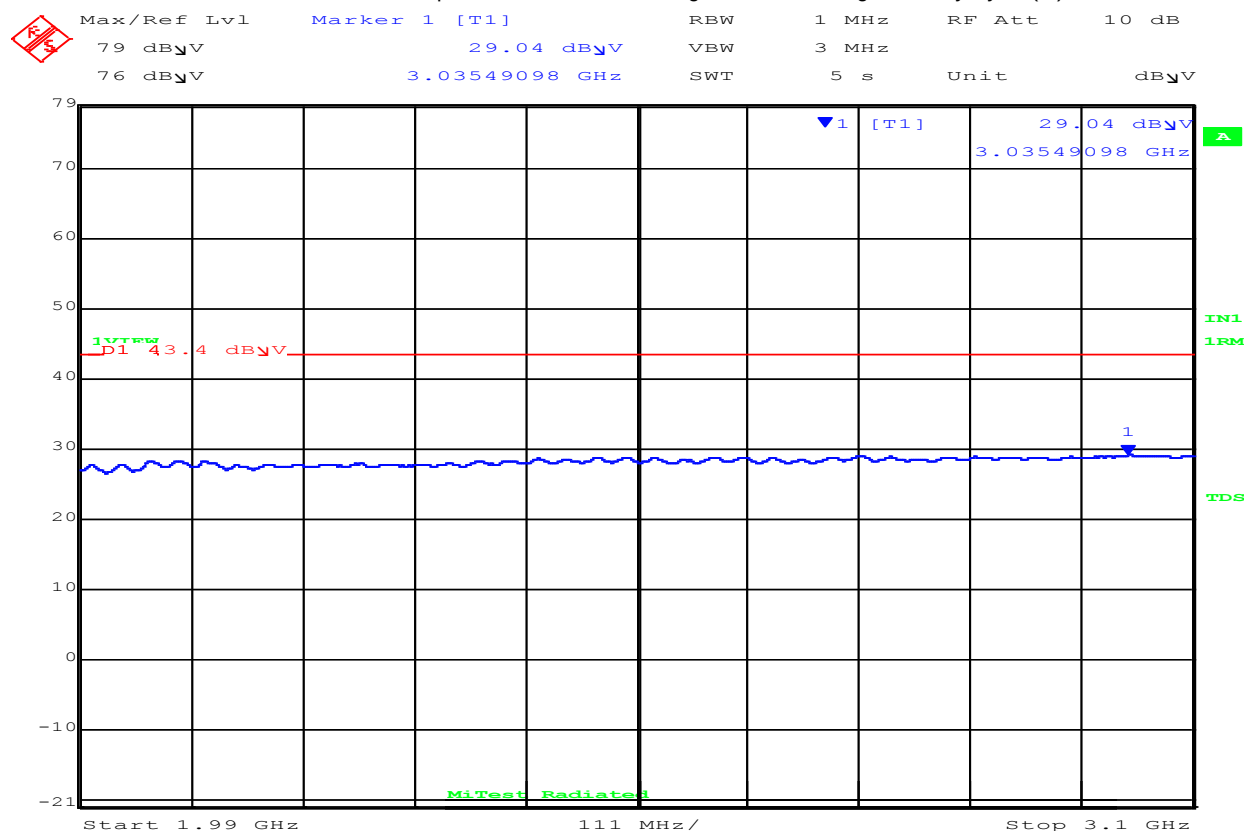
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

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



Date: 20.NOV.2018 11:25:58

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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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

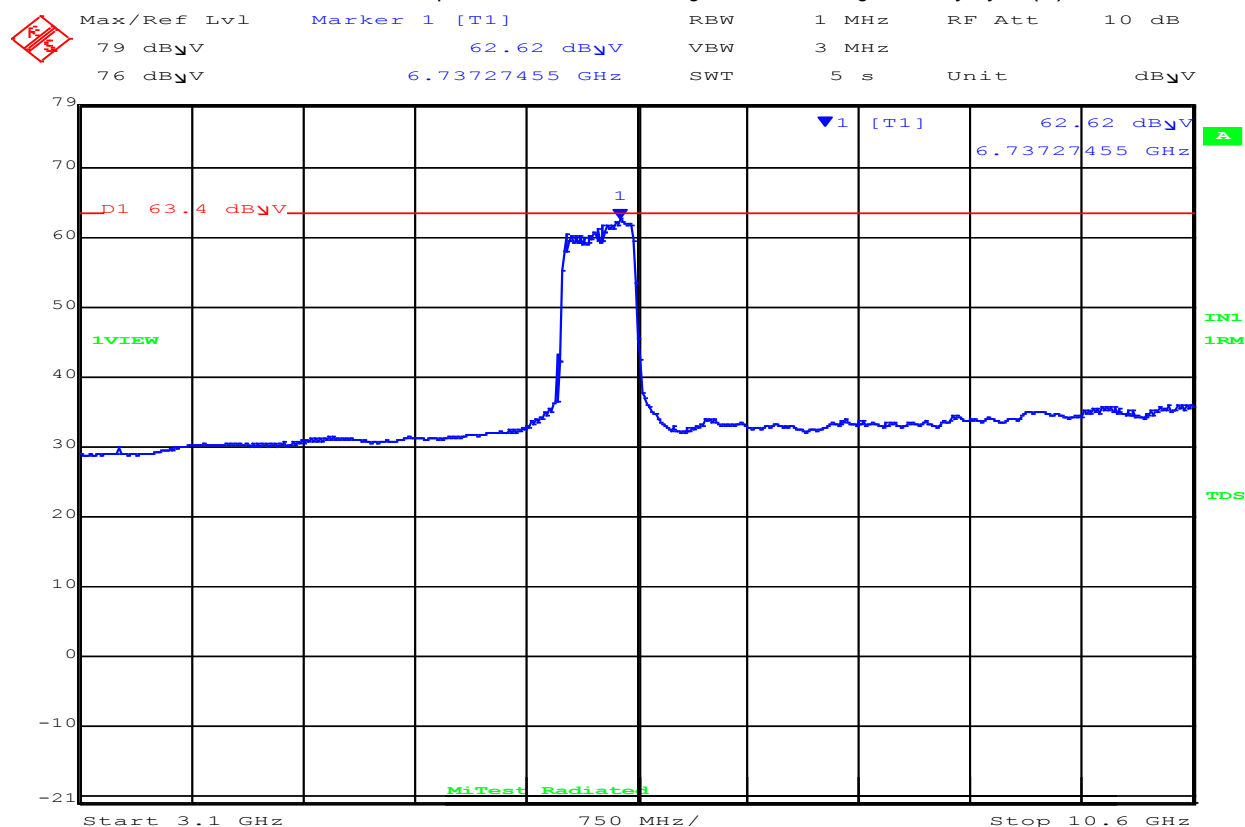
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

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



Date: 20.NOV.2018 11:08:58

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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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

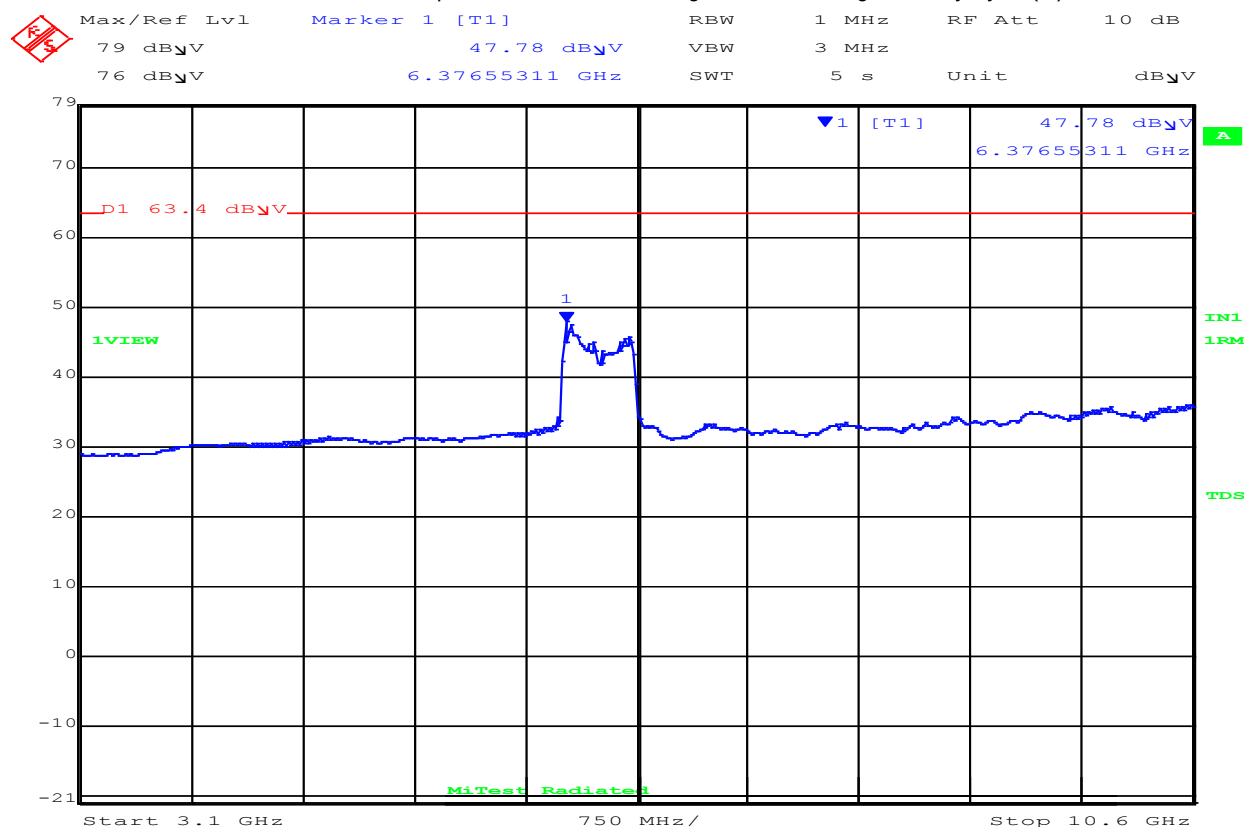
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

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



Date: 20.NOV.2018 11:14:32

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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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

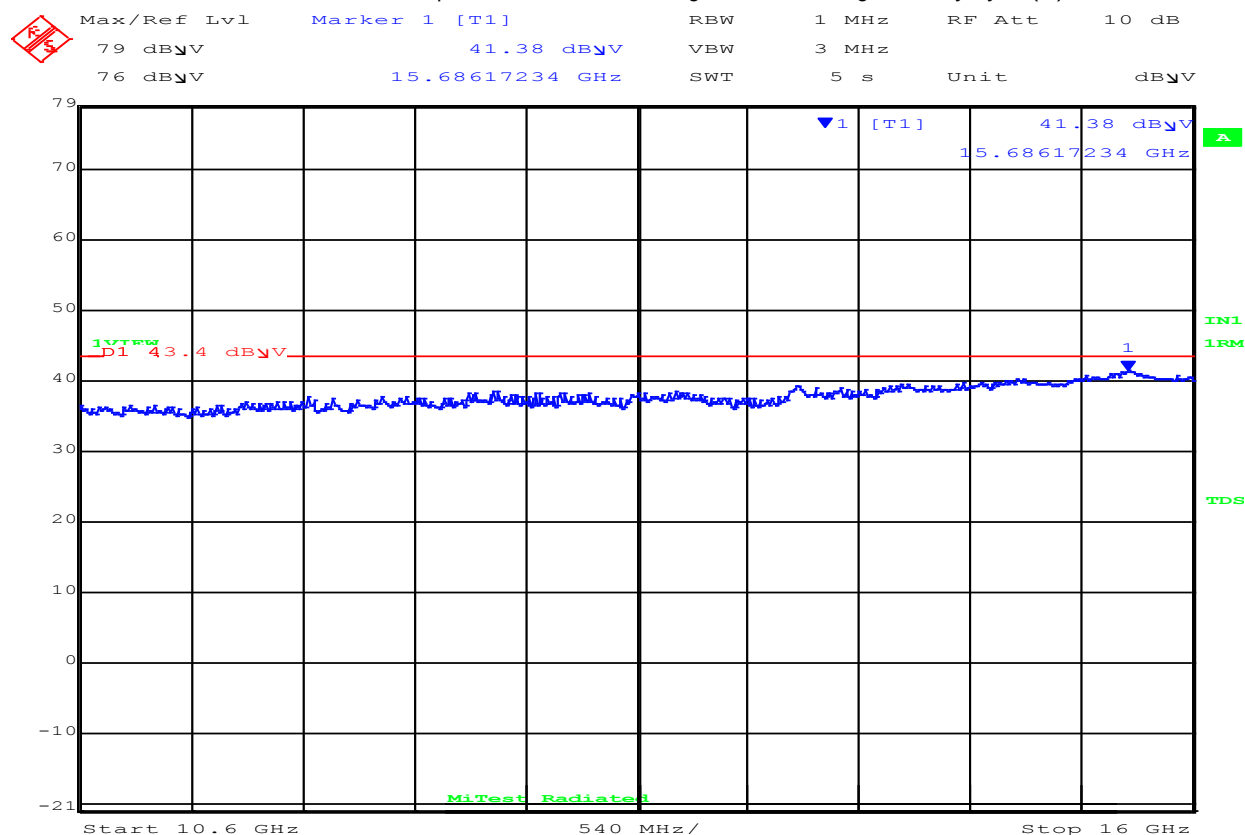
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

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



Date: 20.NOV.2018 11:18:13

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	40.1	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

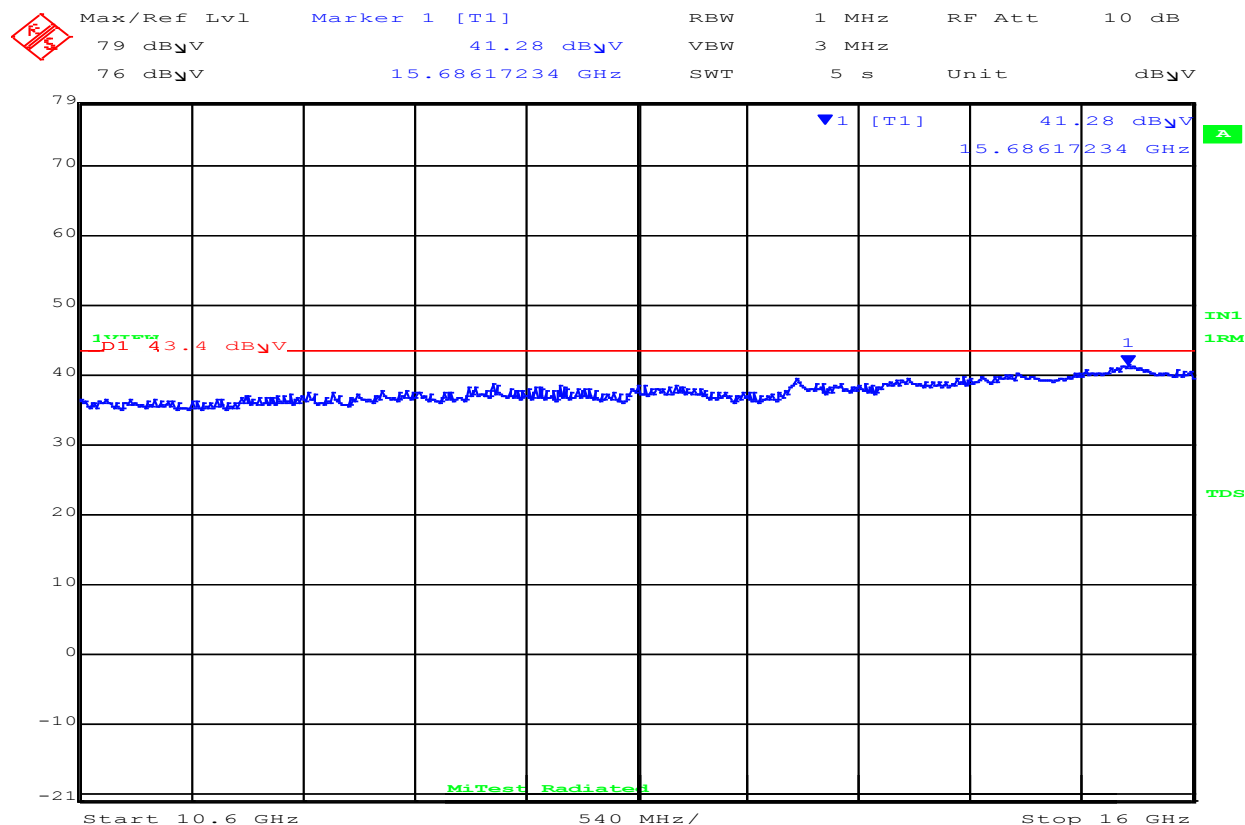
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

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



Date: 20.NOV.2018 11:16:18

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	40.2	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

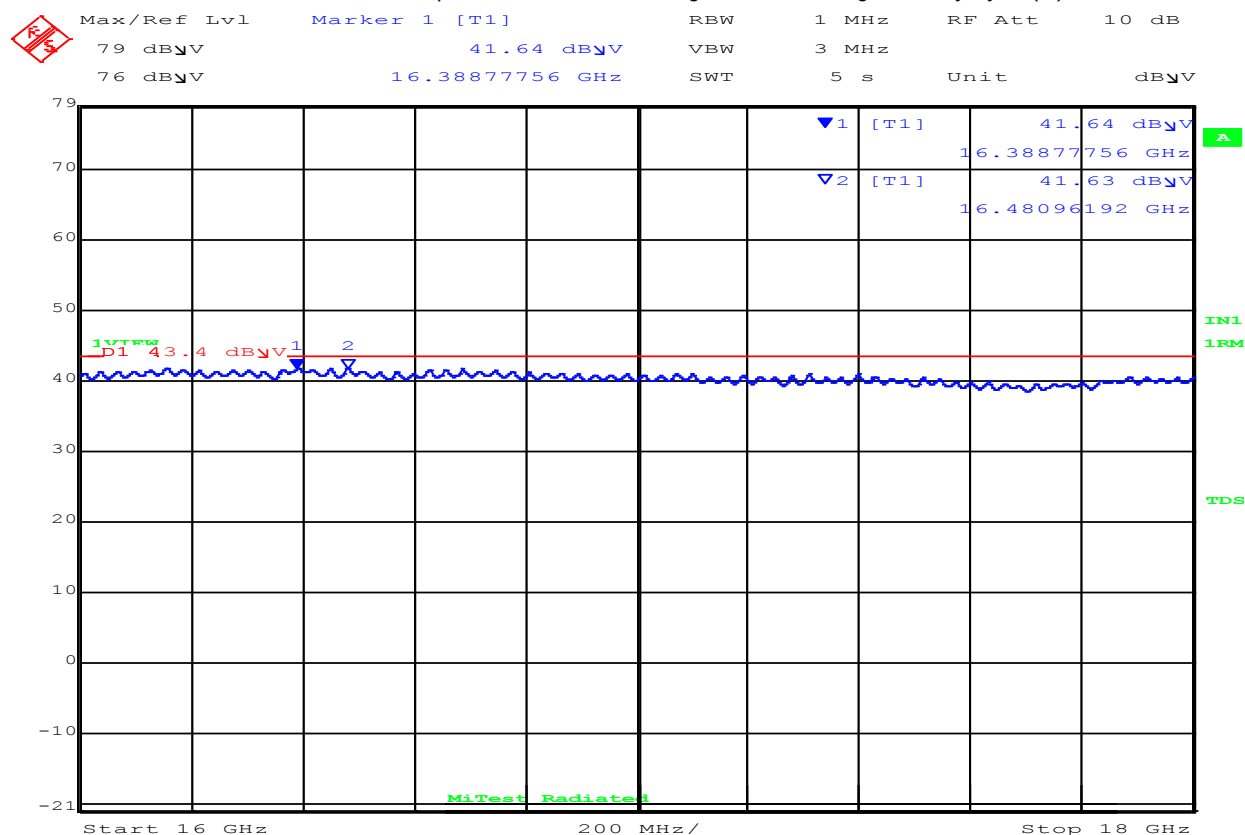
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

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



Date: 20.NOV.2018 11:20:39

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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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

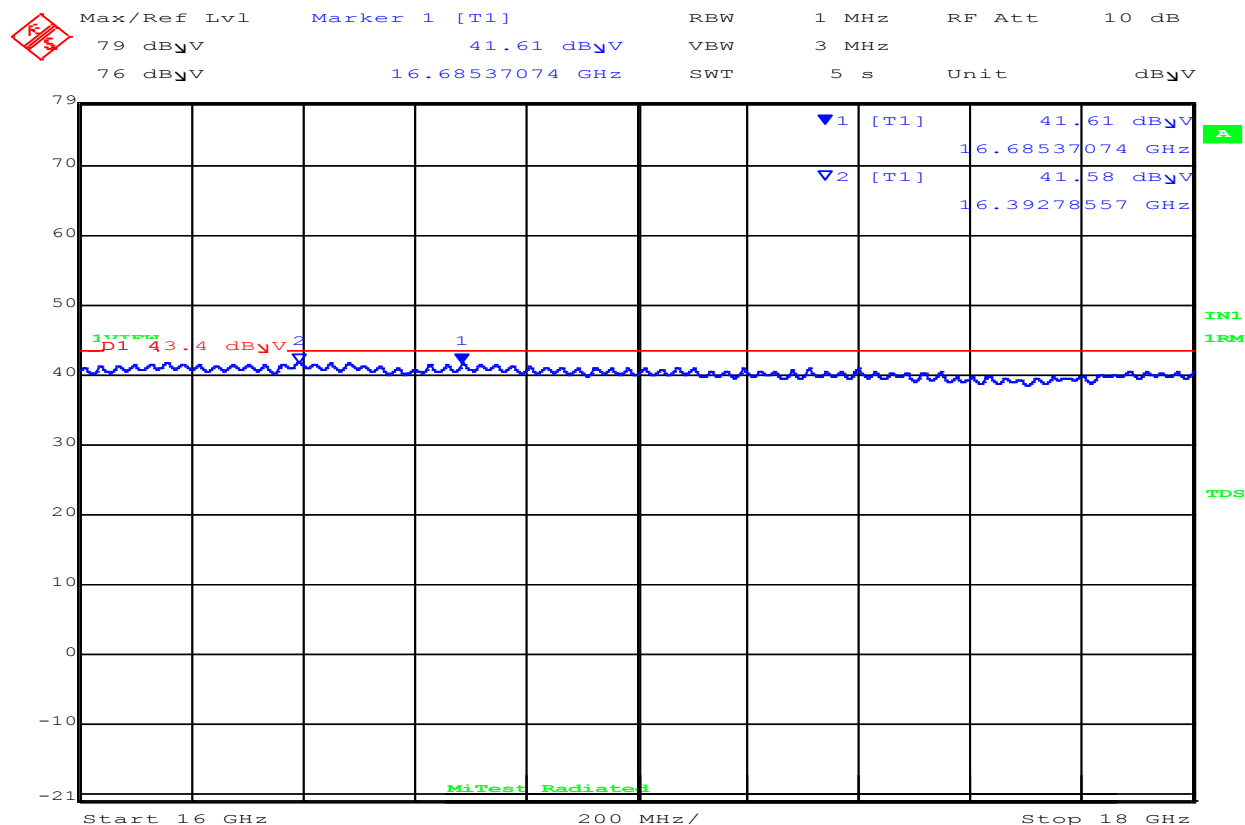
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

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



Date: 20.NOV.2018 11:23:26

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	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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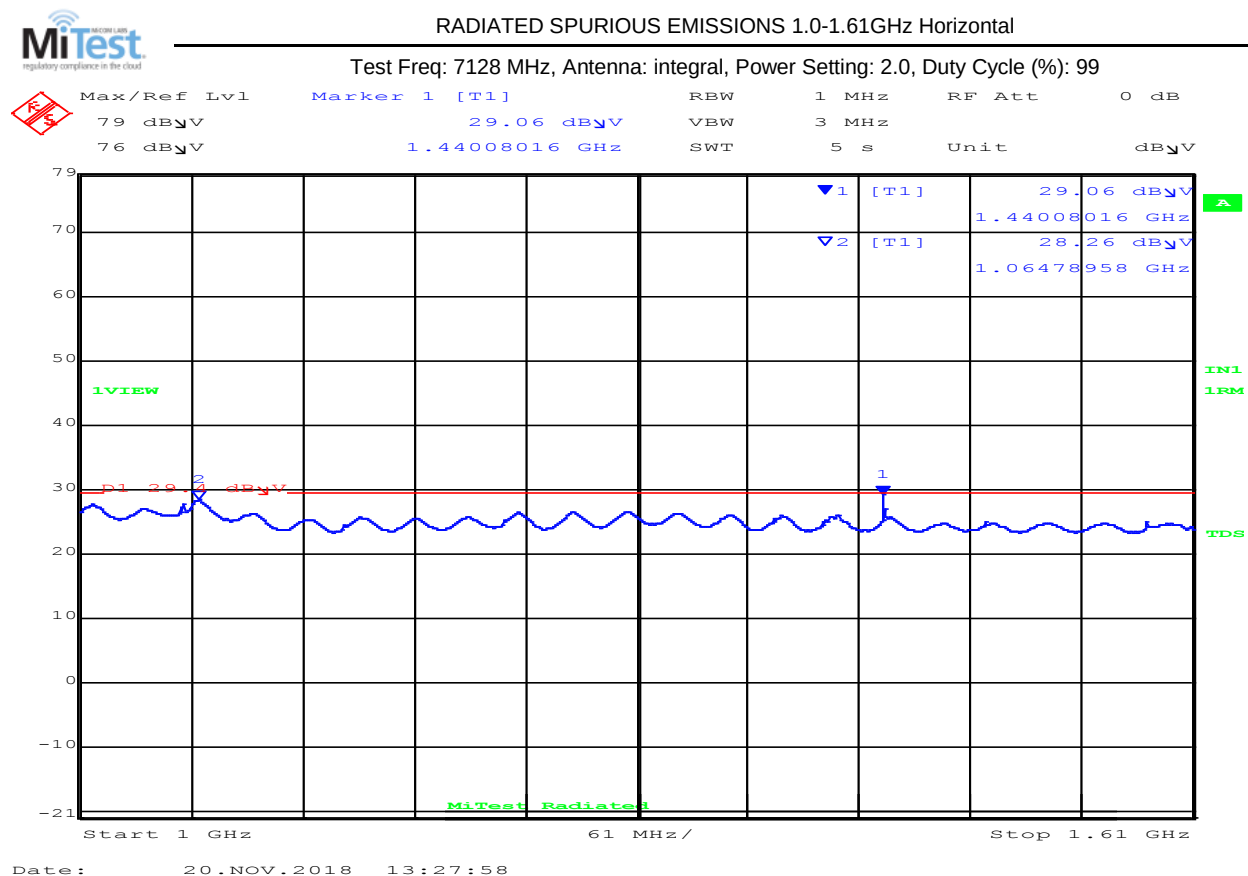
Title: Alereon AL5955, AL5930, AL5934
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7128 MHz

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

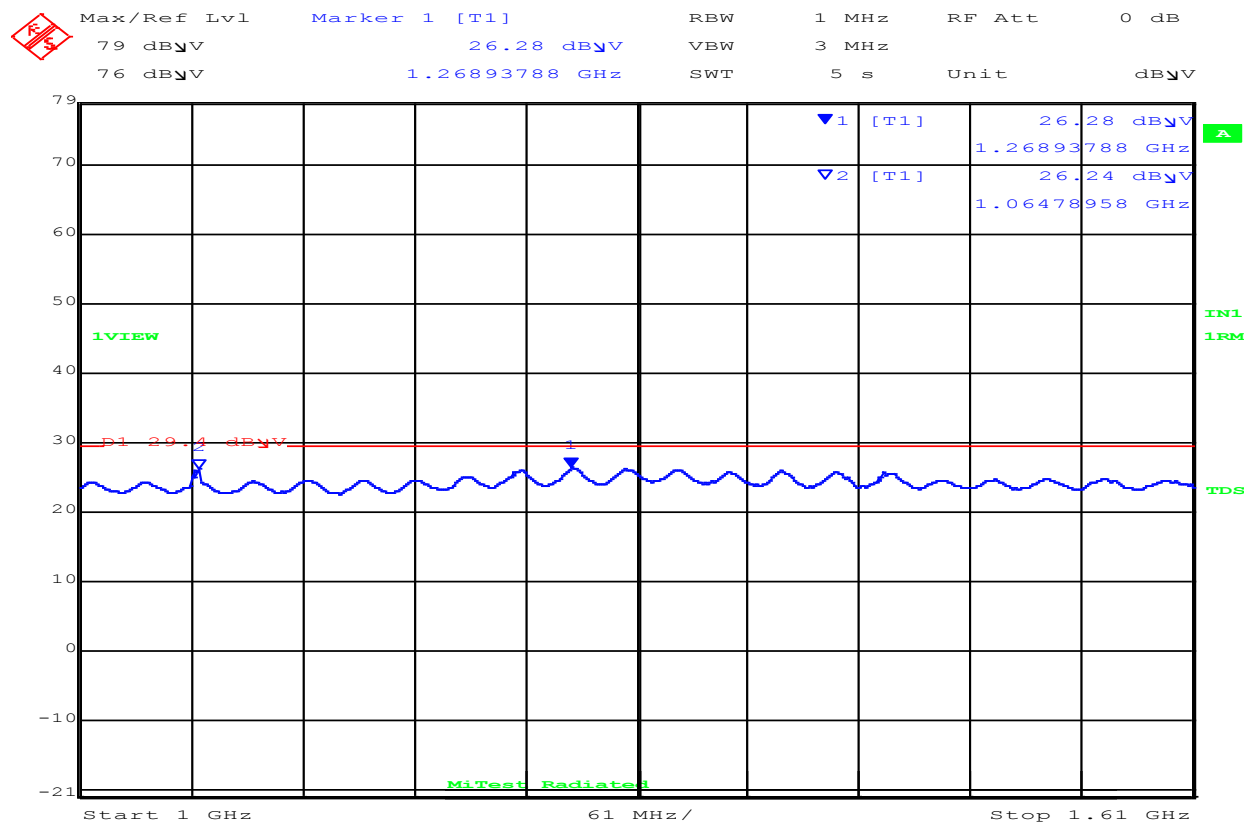
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

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



Date: 20.NOV.2018 13:33:19

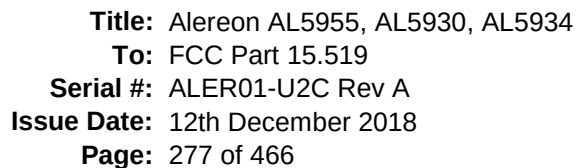
1000.00– 1610.00 MHz

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



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Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

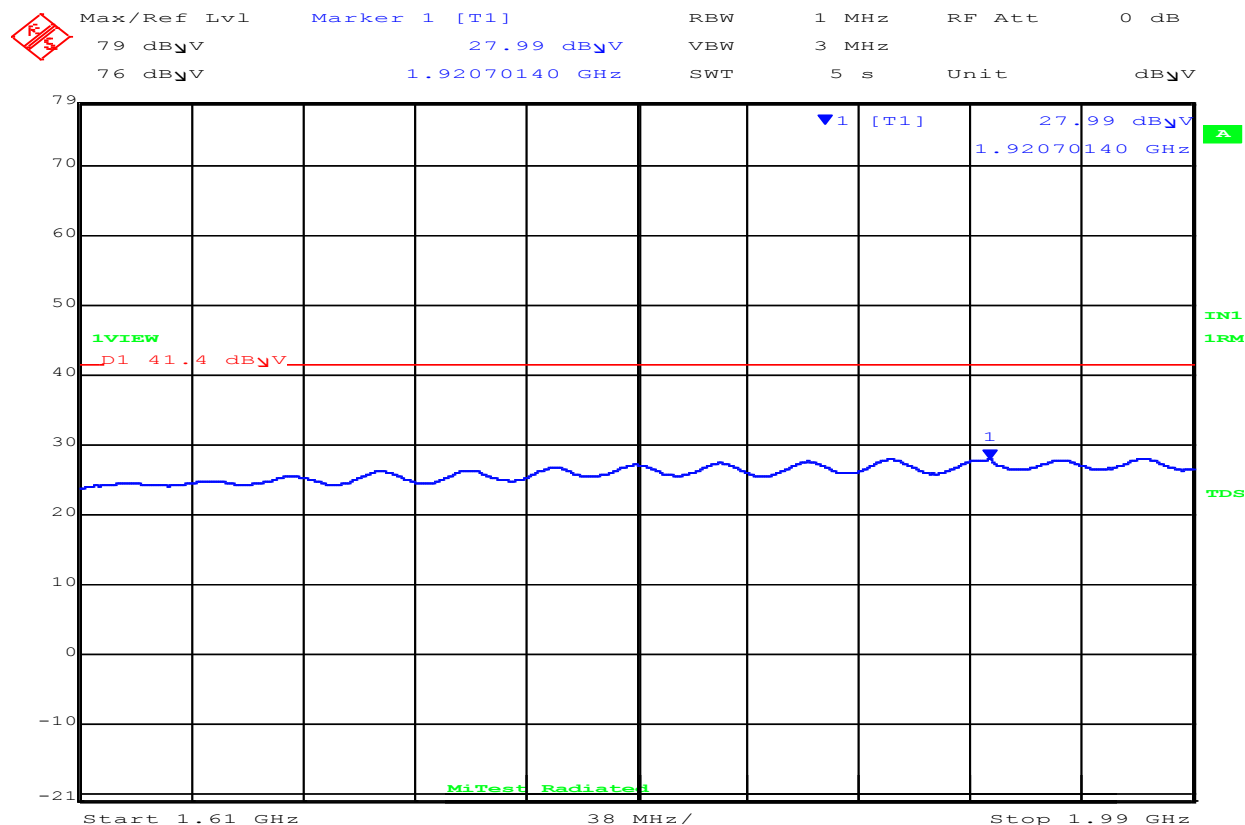
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

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



Date: 20.NOV.2018 14:07:02

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

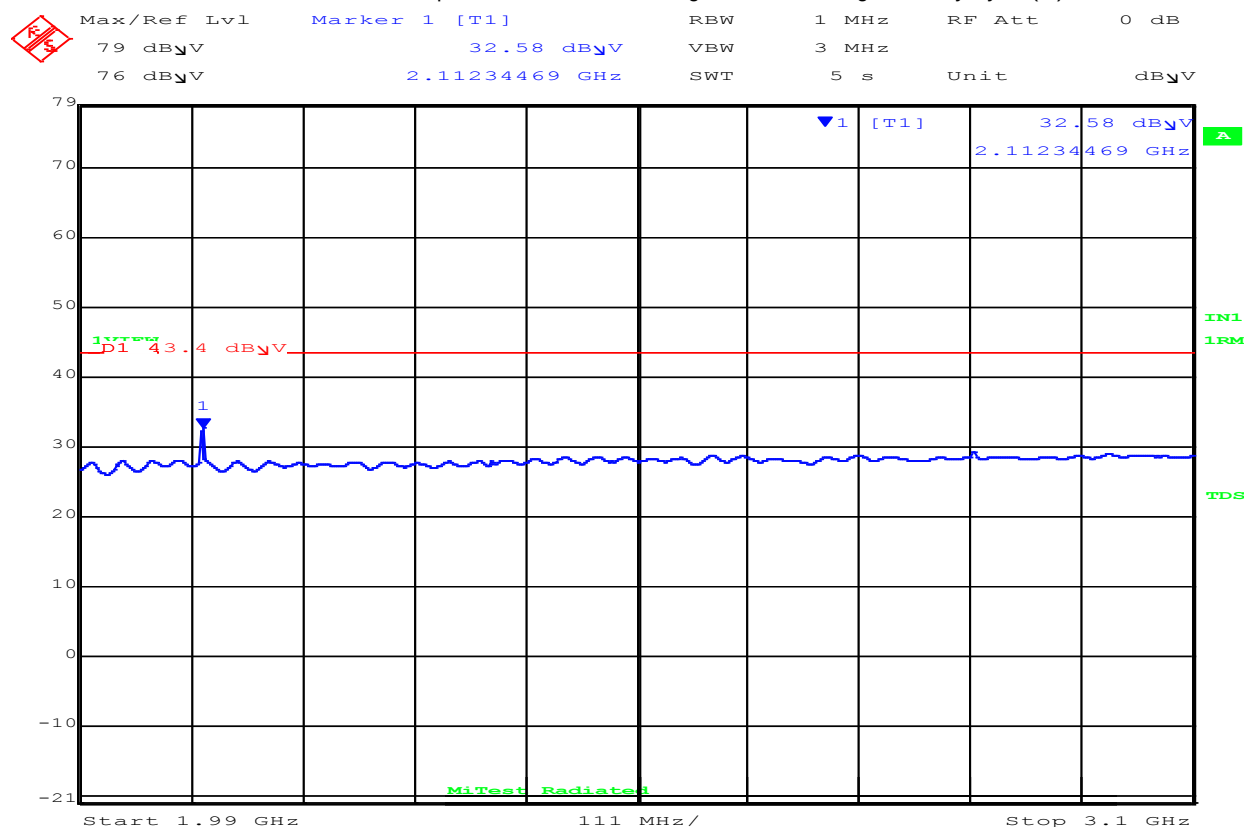
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.99-1.31GHz Horizontal

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



Date: 20.NOV.2018 14:17:51

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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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

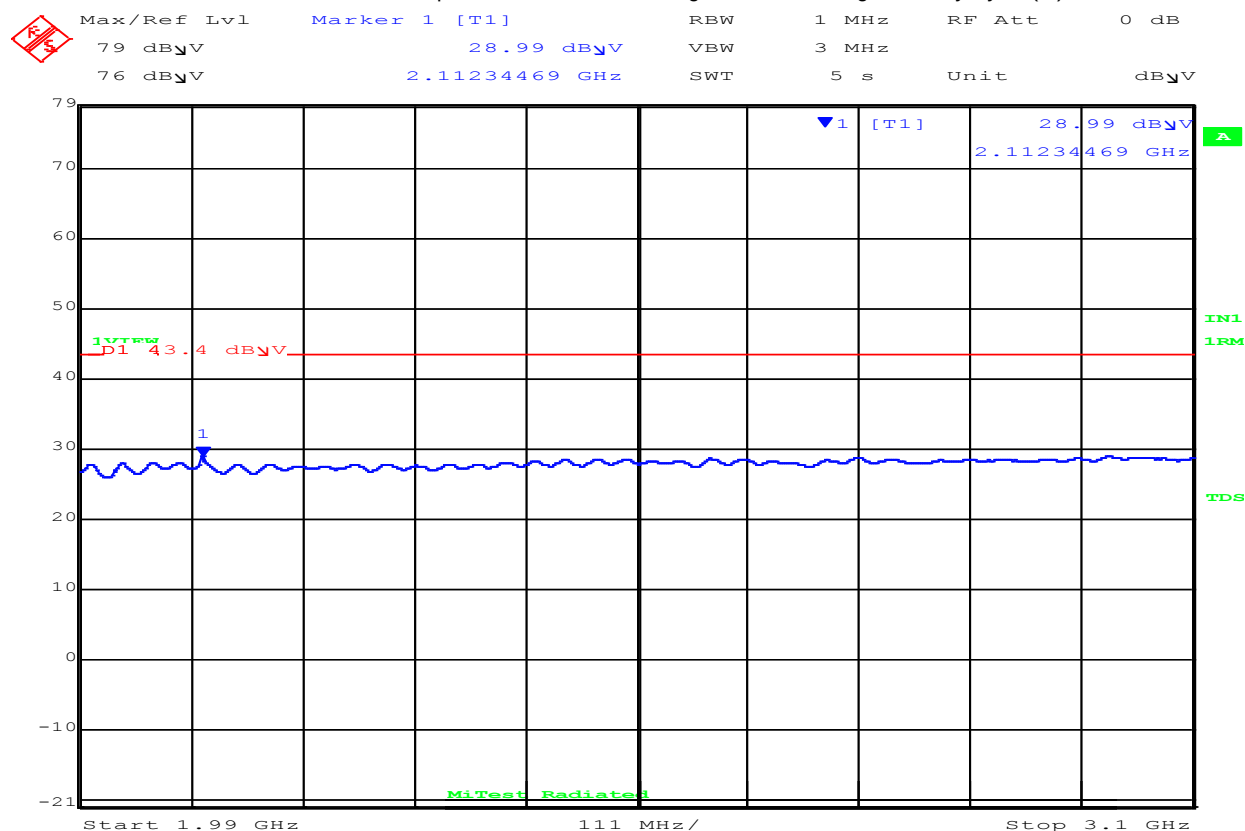
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

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



Date: 20.NOV.2018 14:19:27

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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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

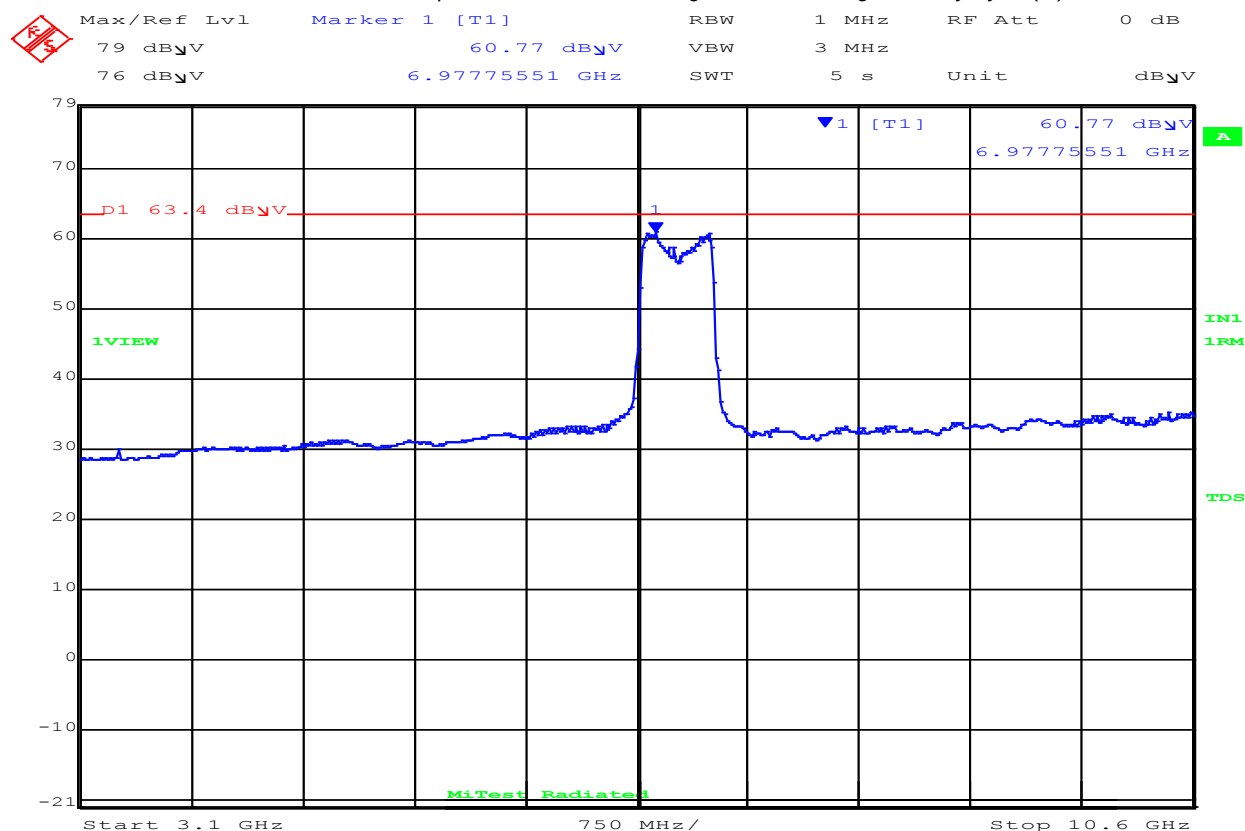
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

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



Date: 20.NOV.2018 14:23:25

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	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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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

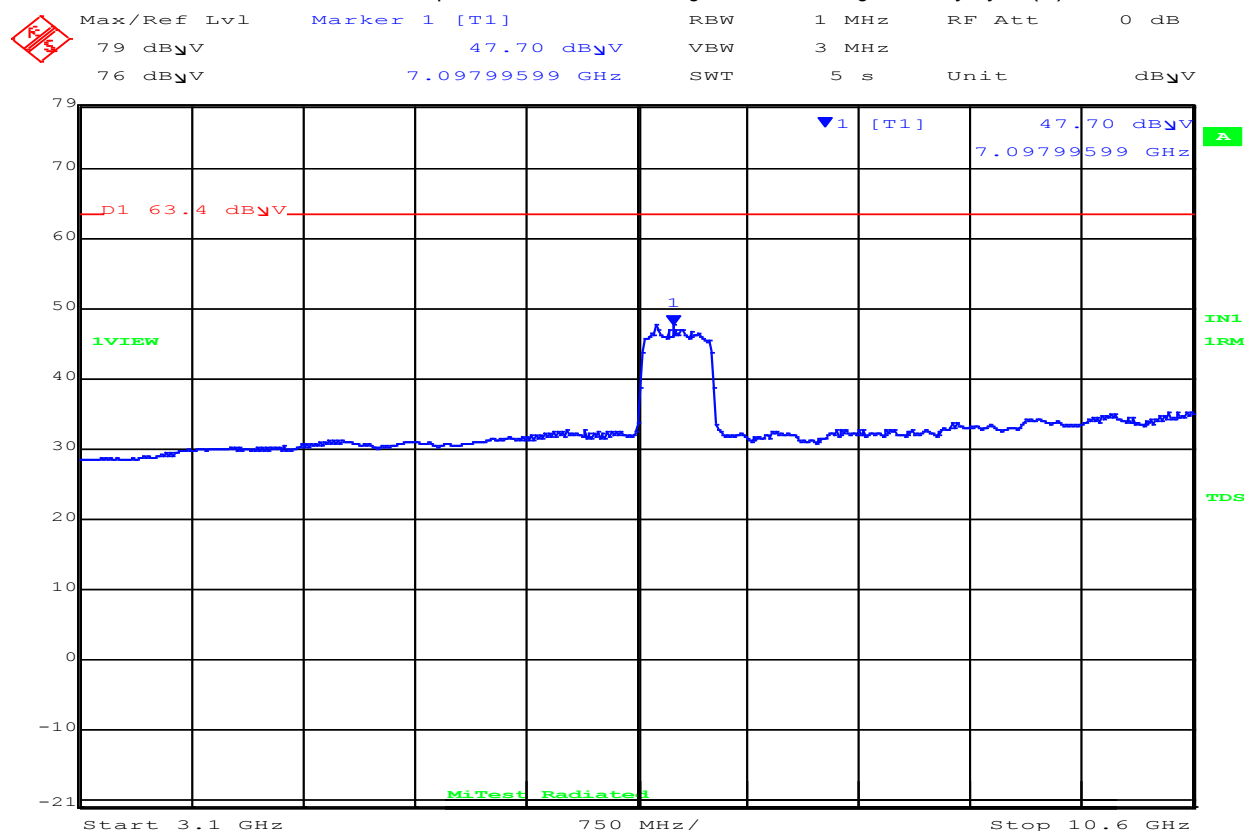
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

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



Date: 20.NOV.2018 14:21:37

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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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

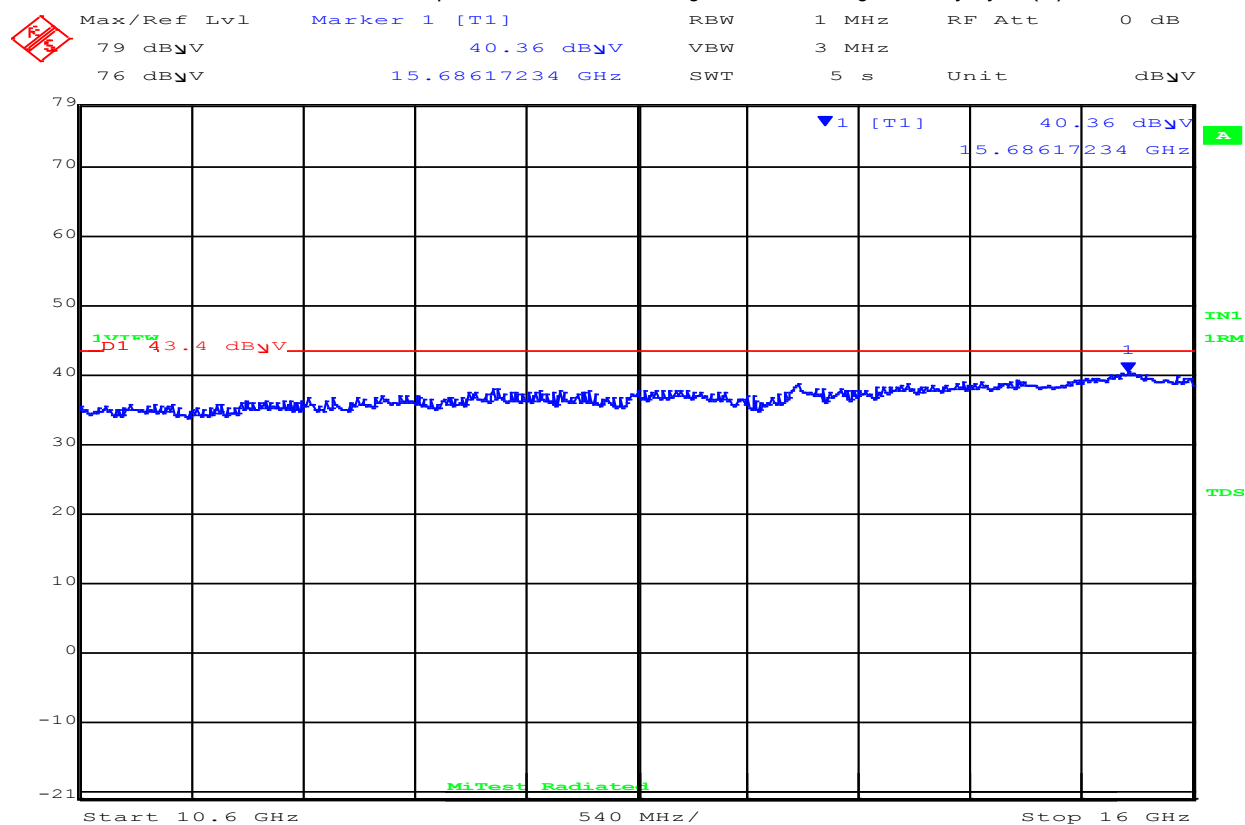
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

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



Date: 20.NOV.2018 14:26:53

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	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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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

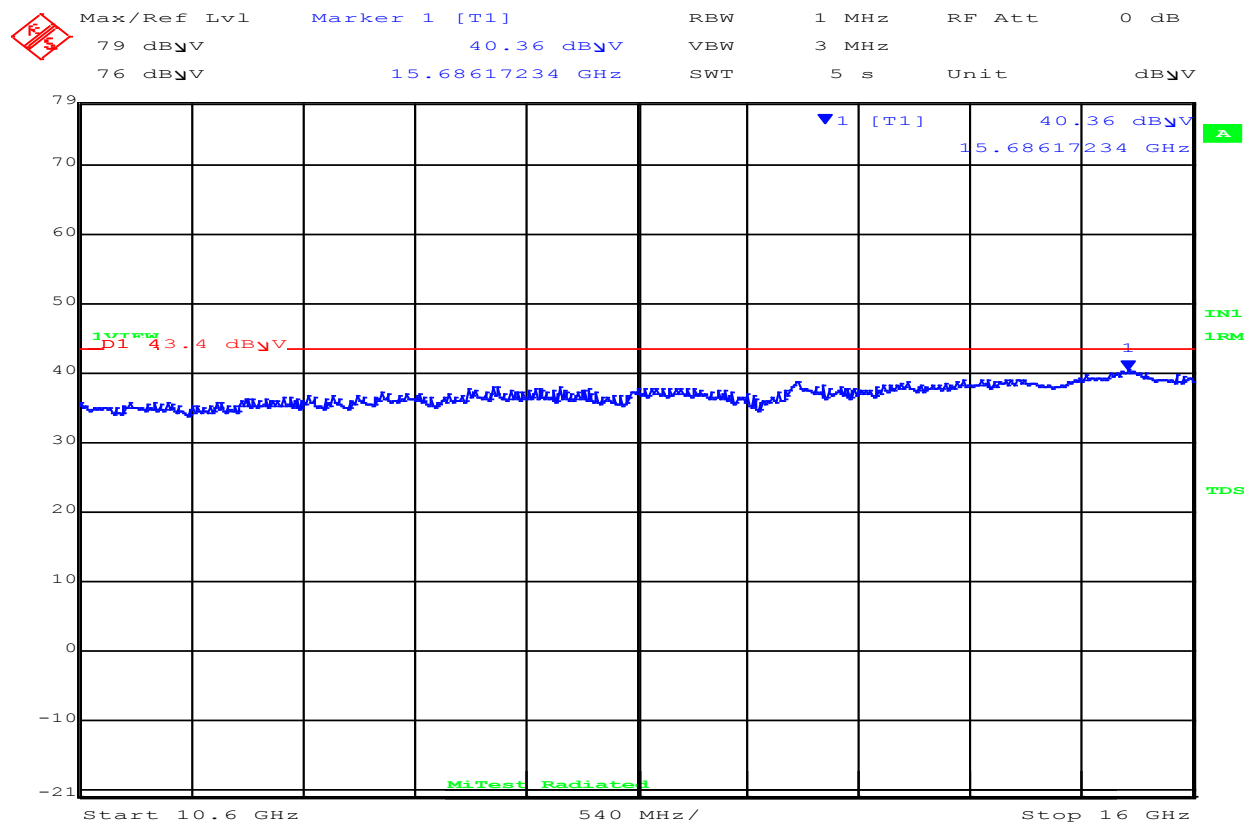
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

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



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

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	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

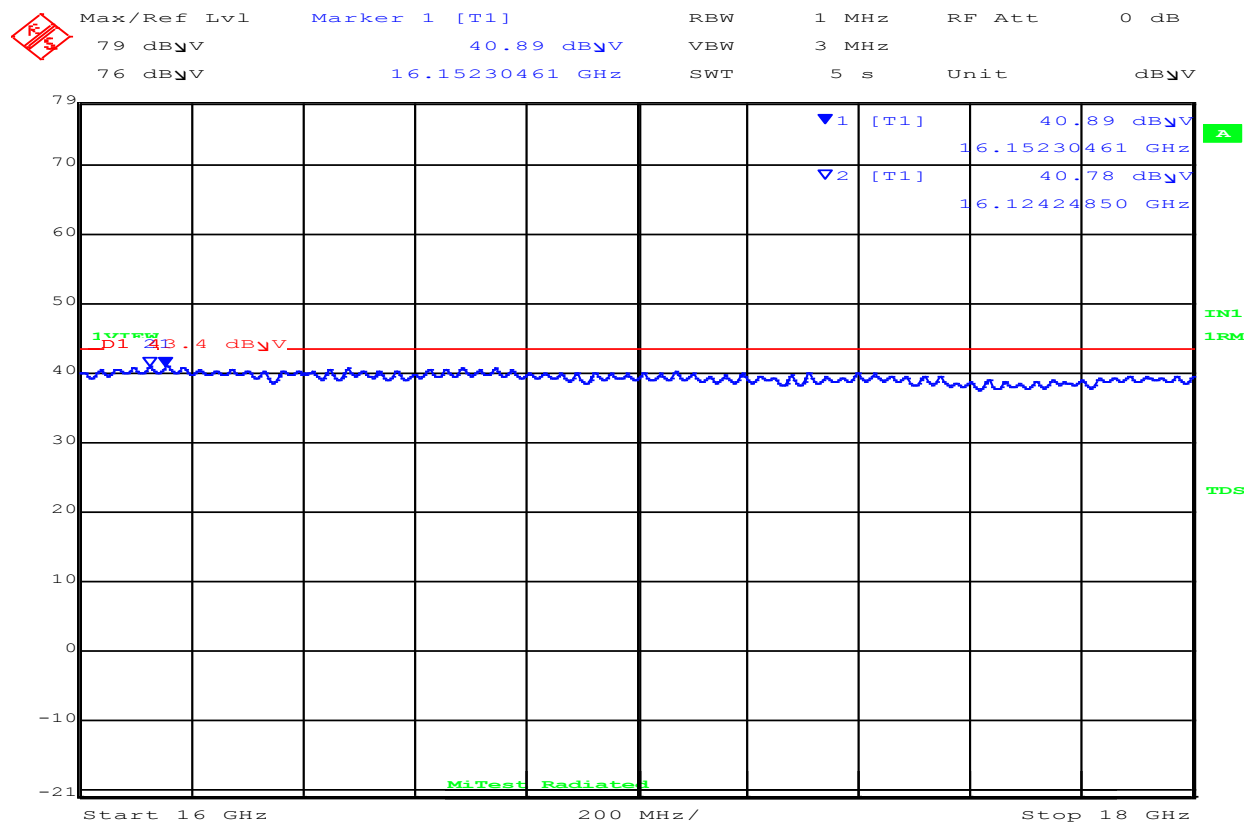
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

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



Date: 20.NOV.2018 14:30:06

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

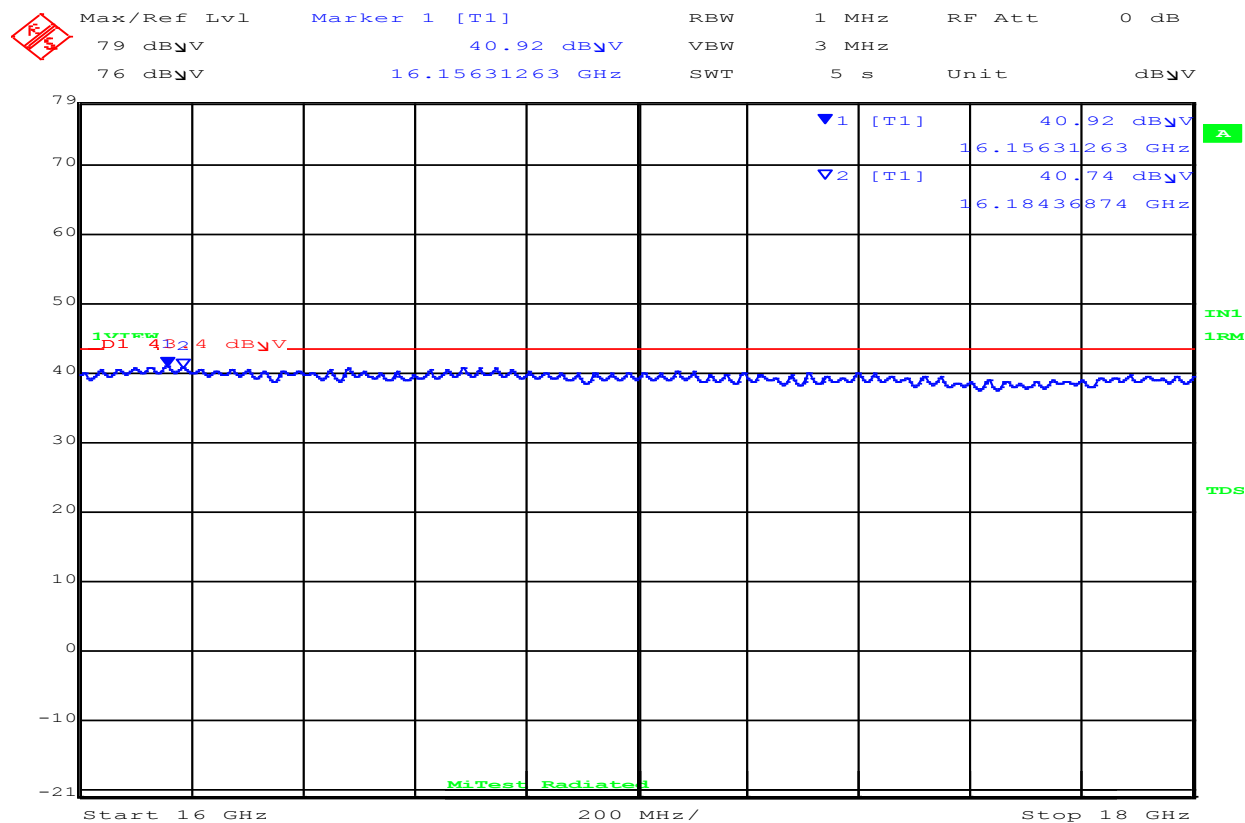
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

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



Date: 20.NOV.2018 14:33:16

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

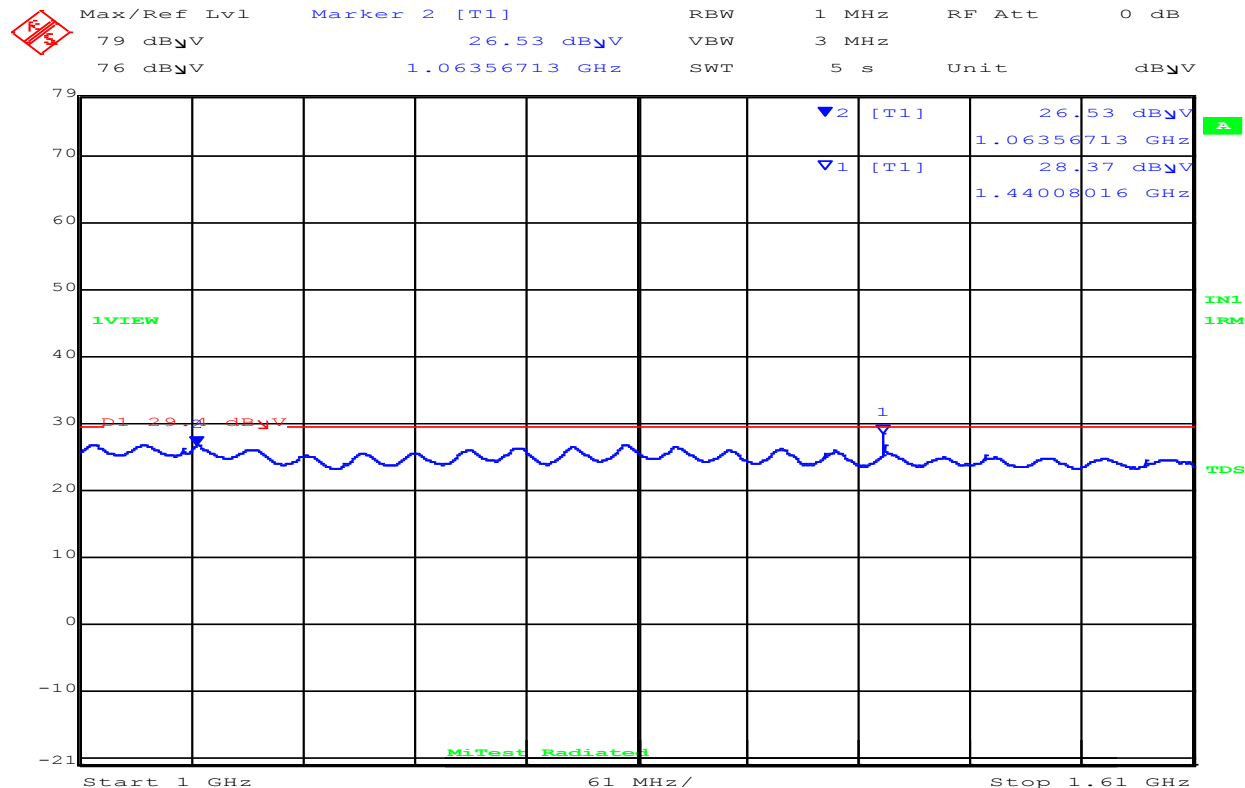
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

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



Date: 21.NOV.2018 09:32:51

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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Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

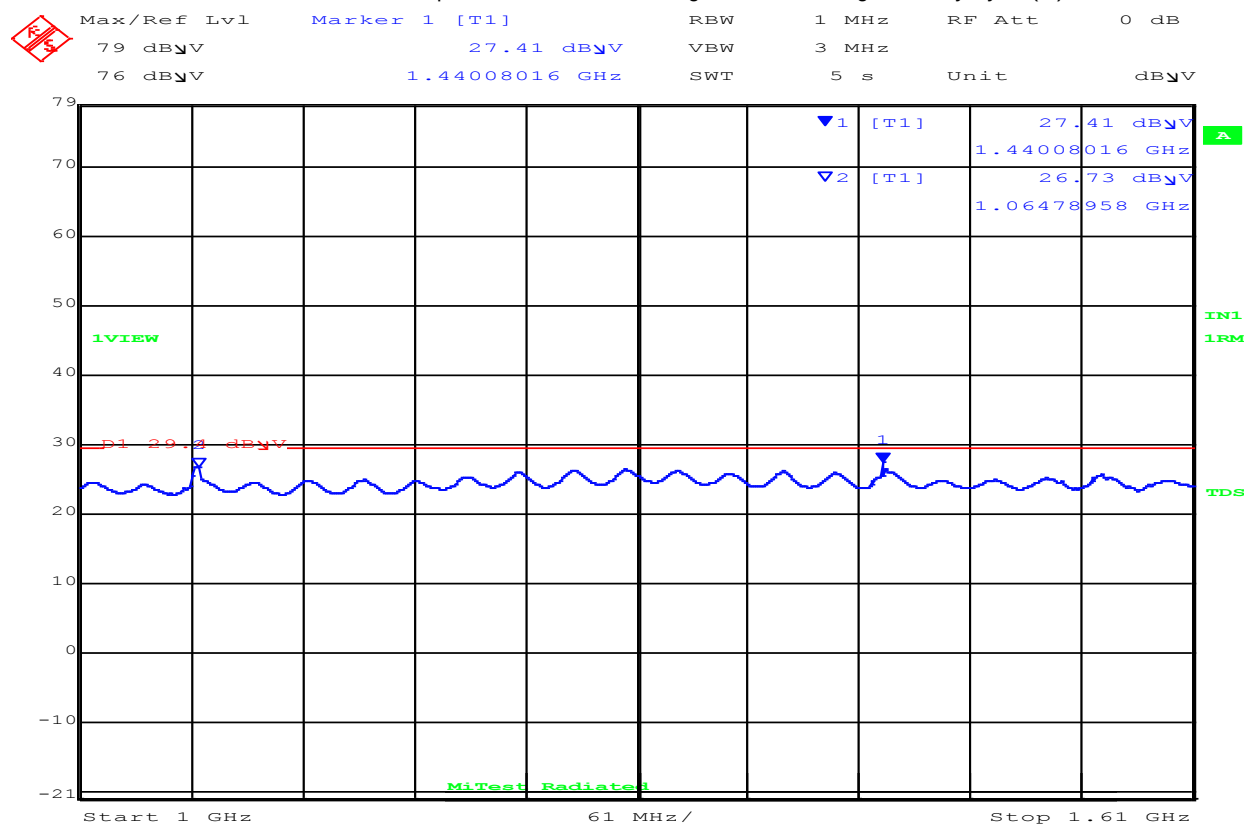
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

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



Date: 21.NOV.2018 09:27:21

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	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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Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

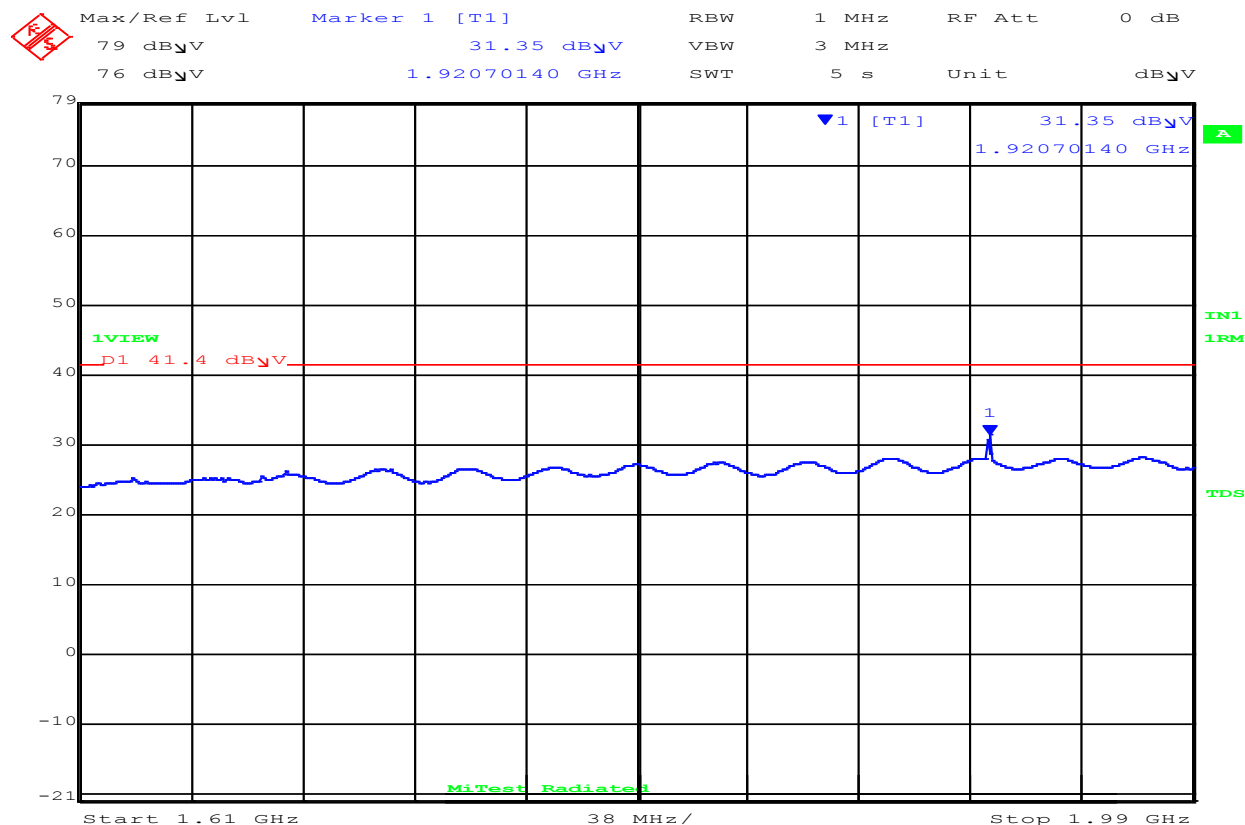
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

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



Date: 21.NOV.2018 09:36:57

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

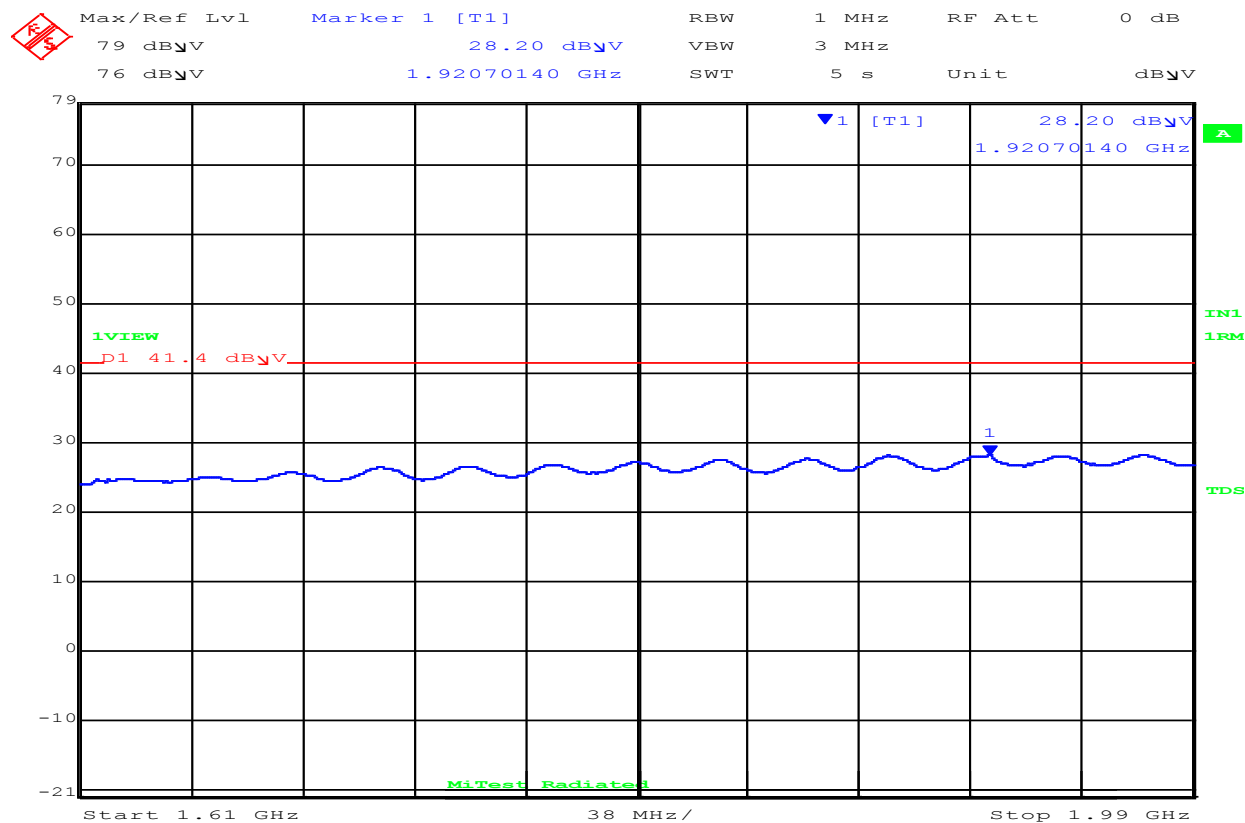
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

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



Date: 21.NOV.2018 09:22:20

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

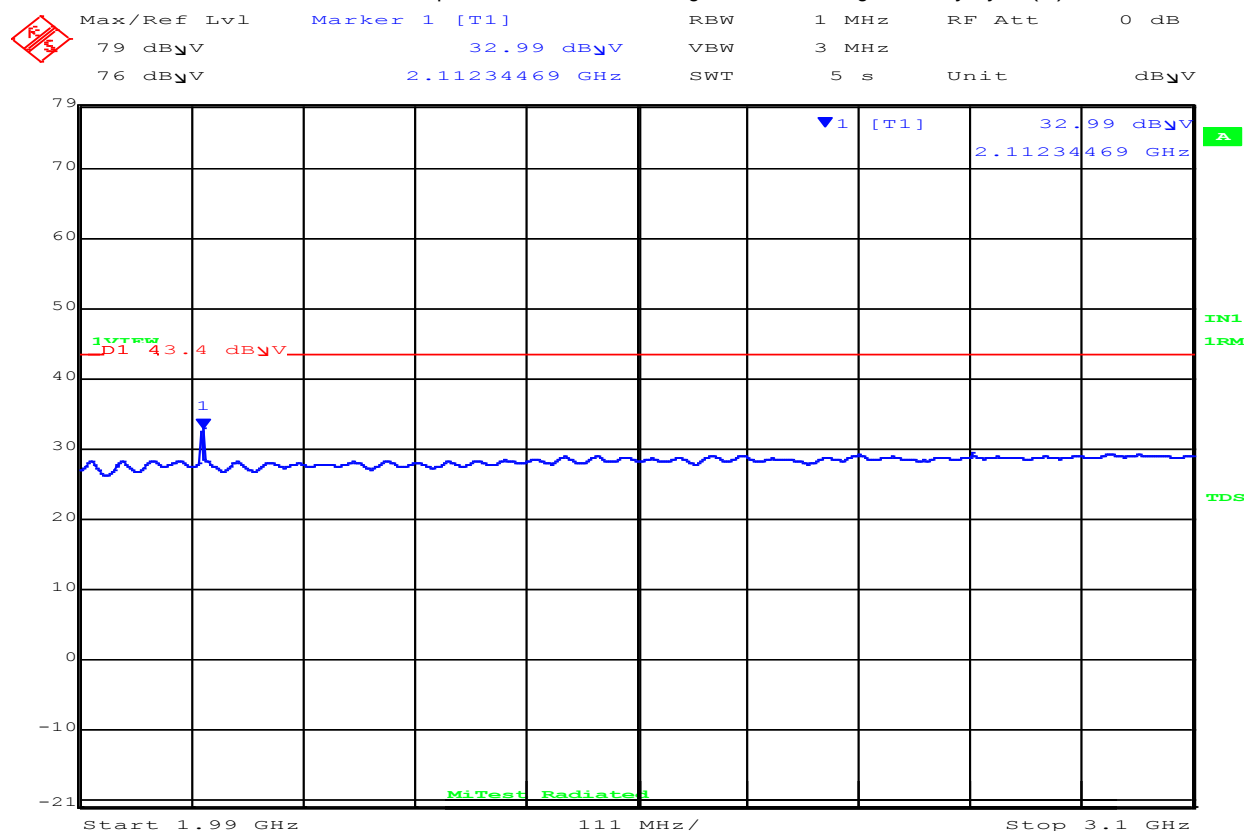
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

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



Date: 21.NOV.2018 09:13:54

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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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

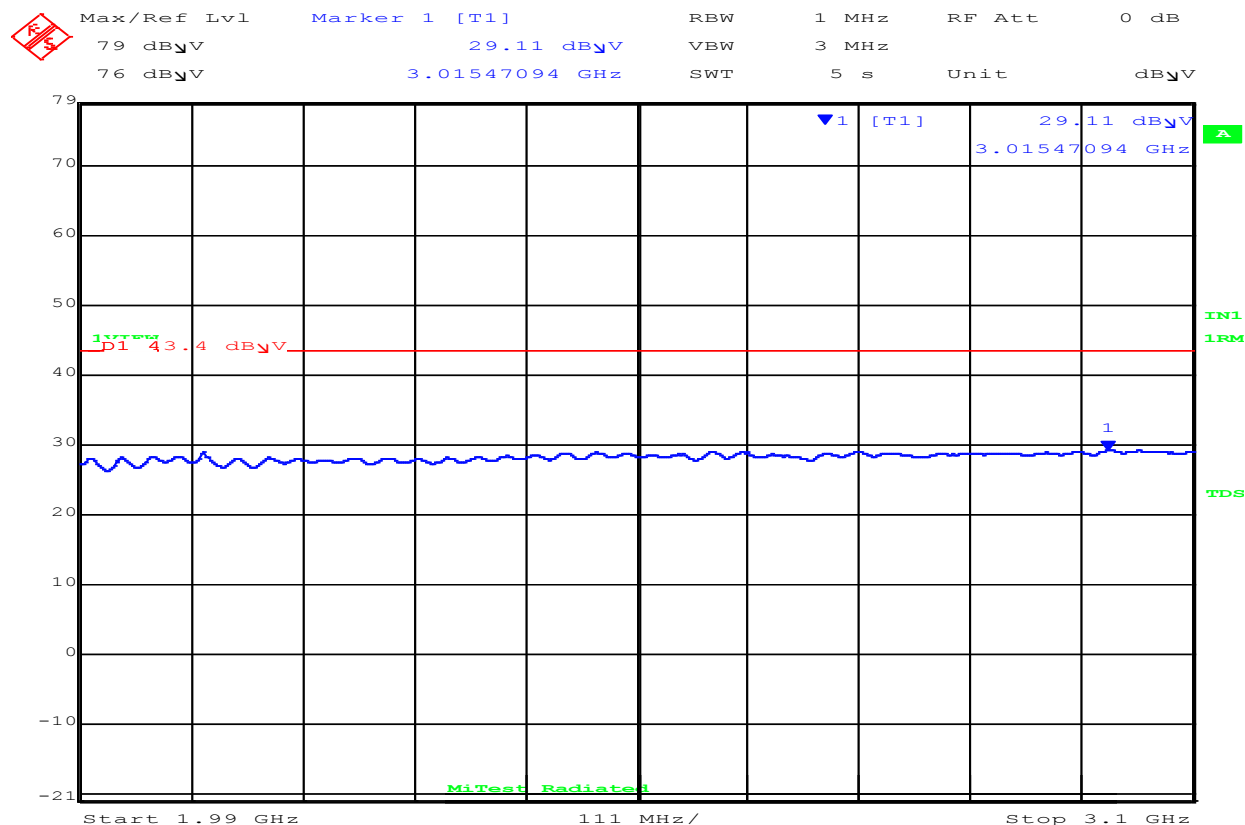
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

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



Date: 21.NOV.2018 09:12:31

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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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

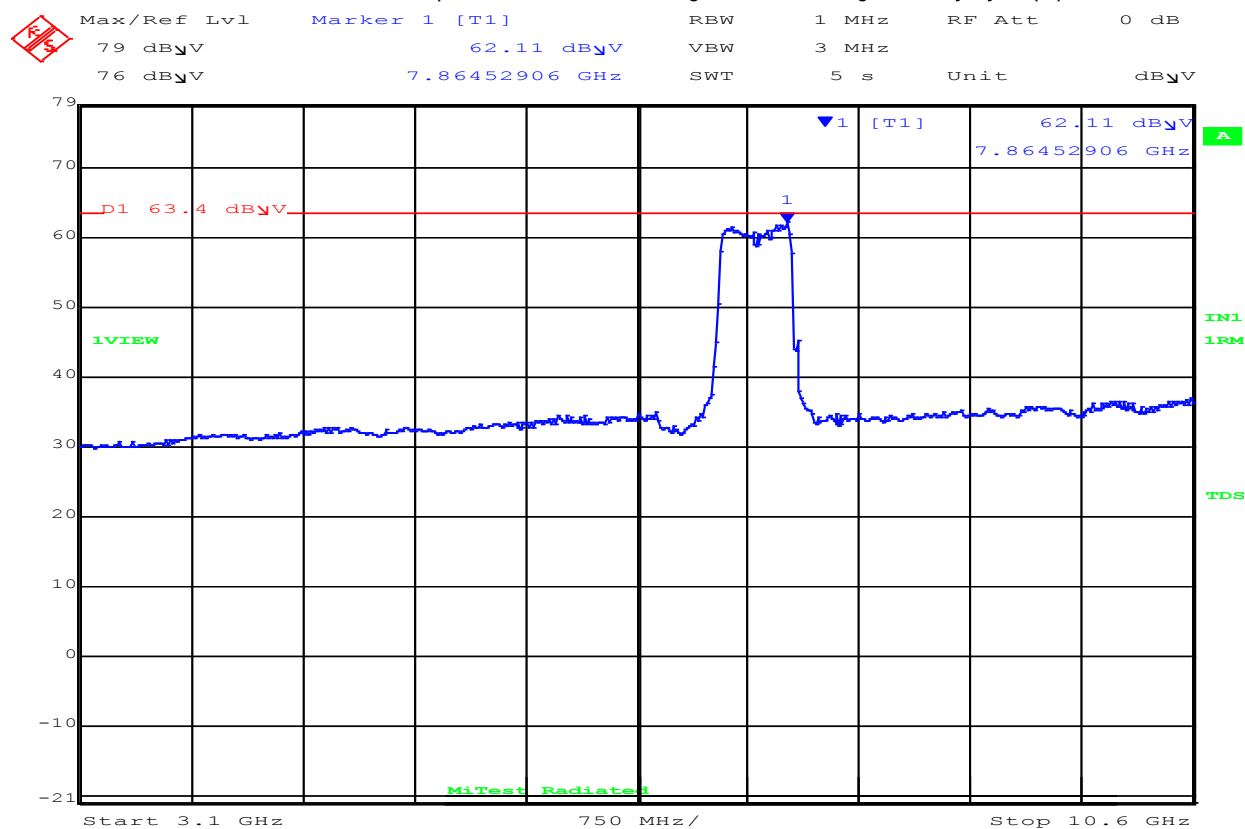
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

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



Date: 21.NOV.2018 08:45:41

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

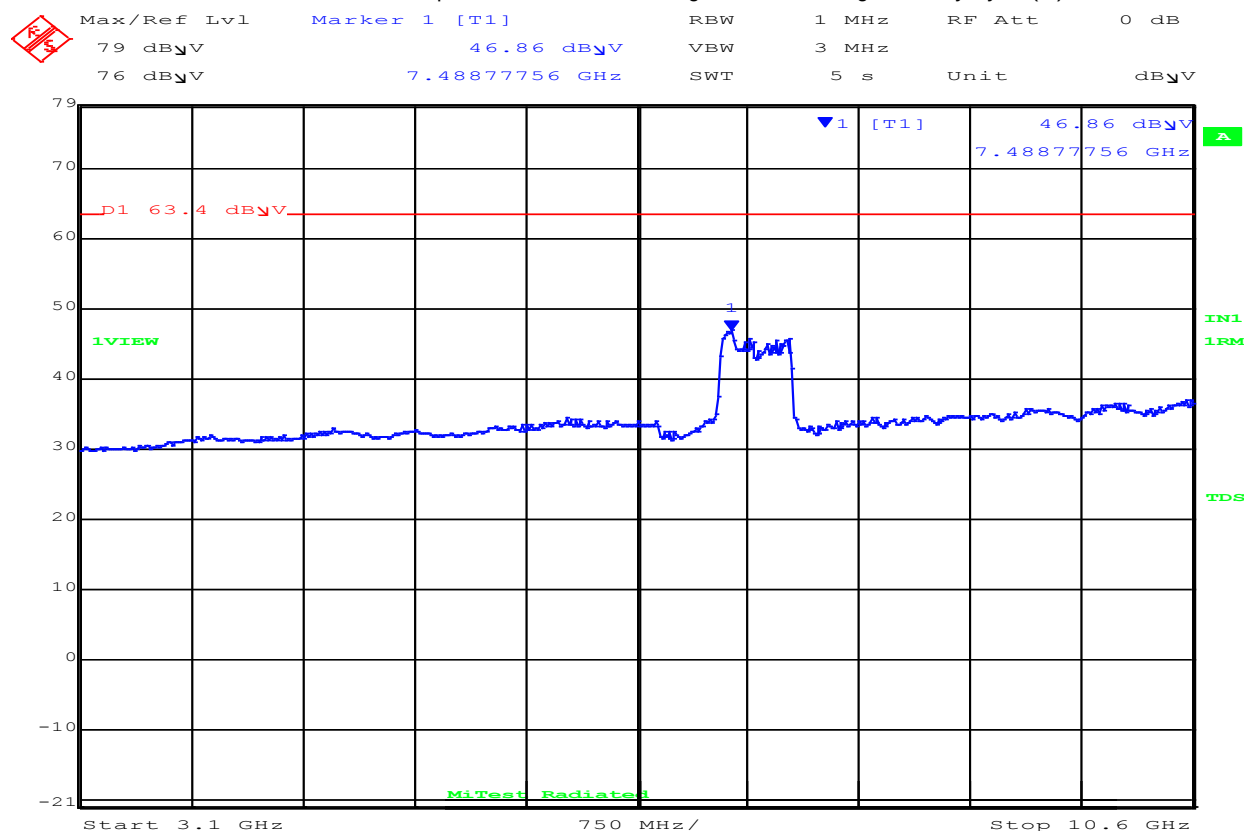
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

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



Date: 21.NOV.2018 08:49:15

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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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

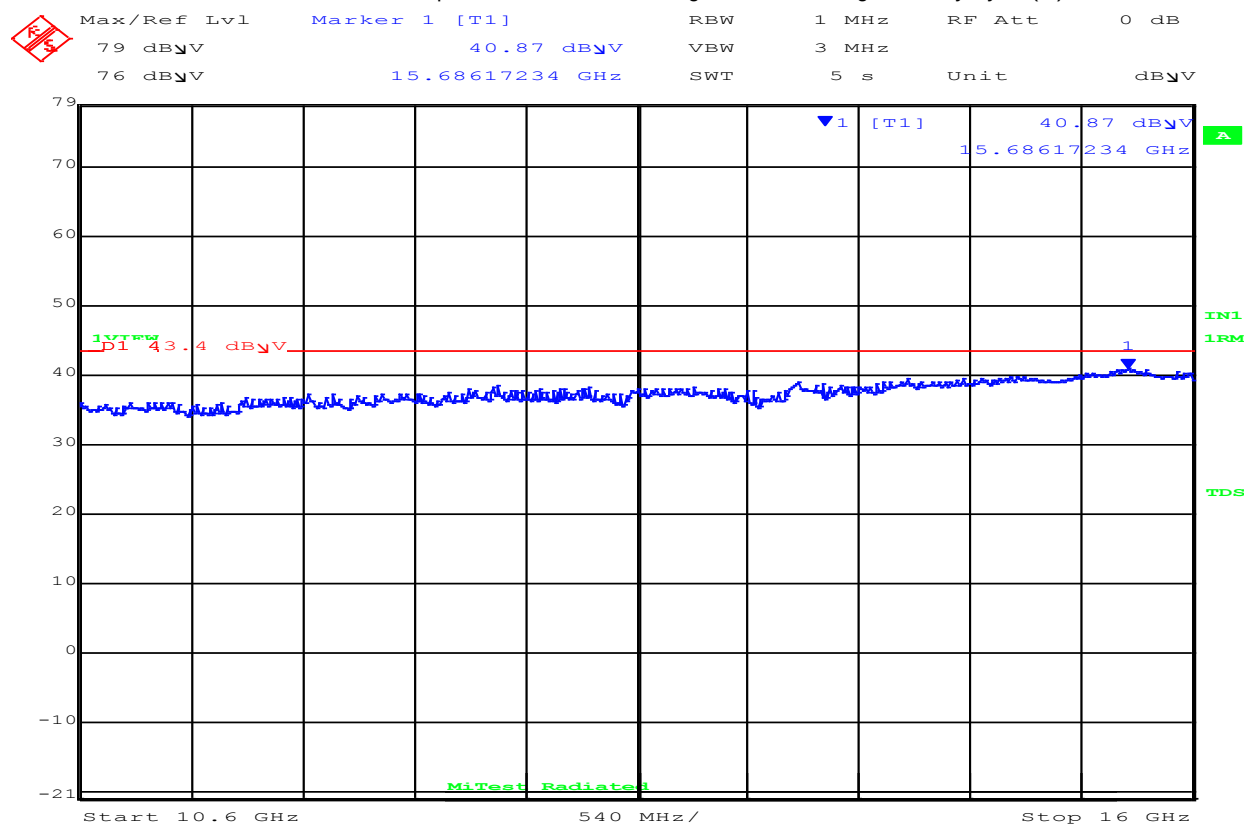
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

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



Date: 21.NOV.2018 09:02:36

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	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

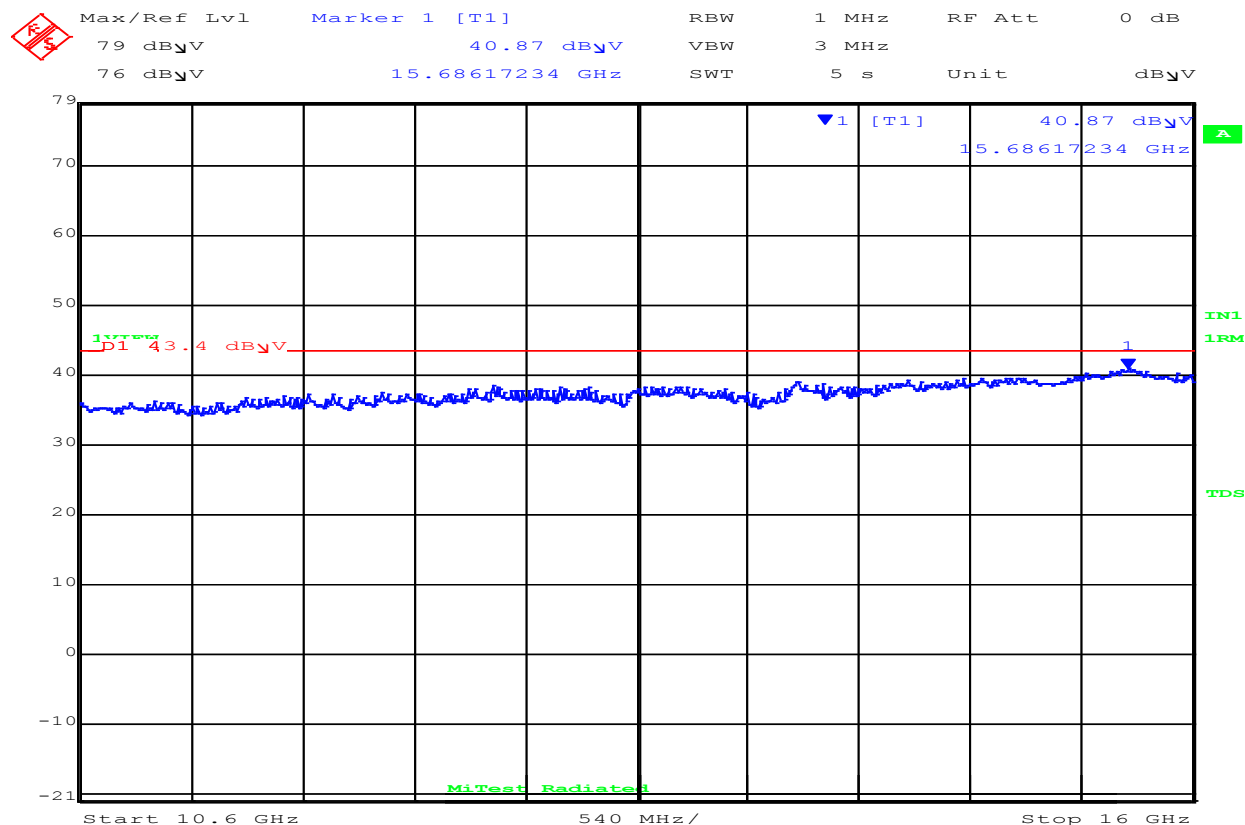
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

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



Date: 21.NOV.2018 08:59:03

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	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

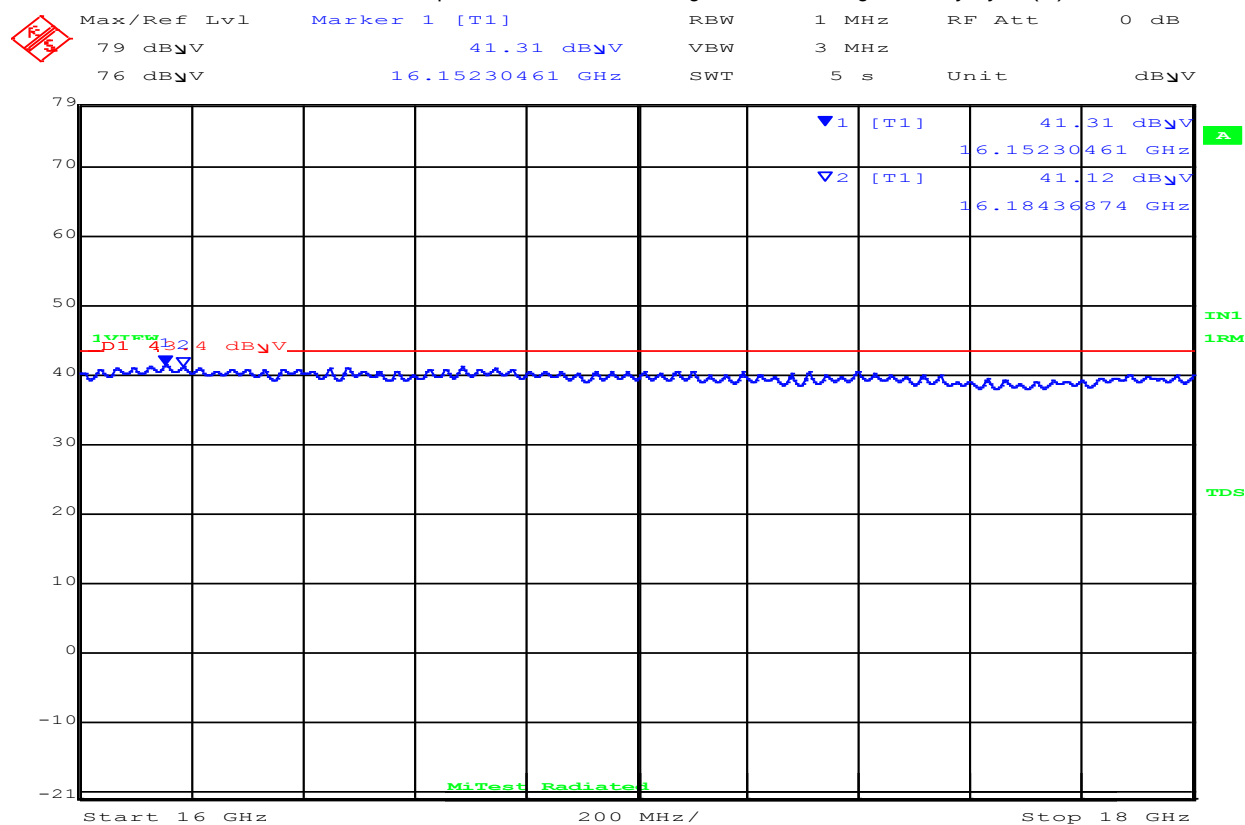
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

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



Date: 21.NOV.2018 09:05:10

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

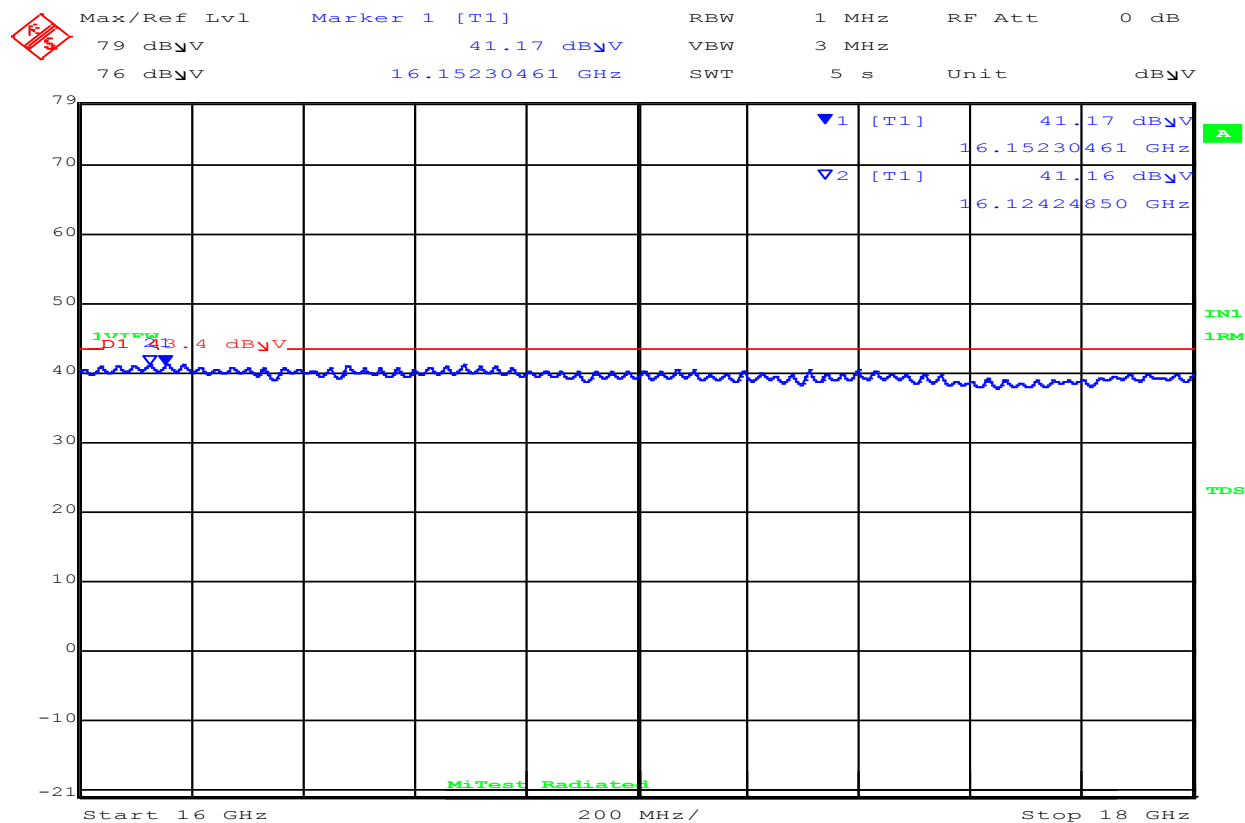
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

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



Date: 21.NOV.2018 09:15:51

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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8184 MHz

Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

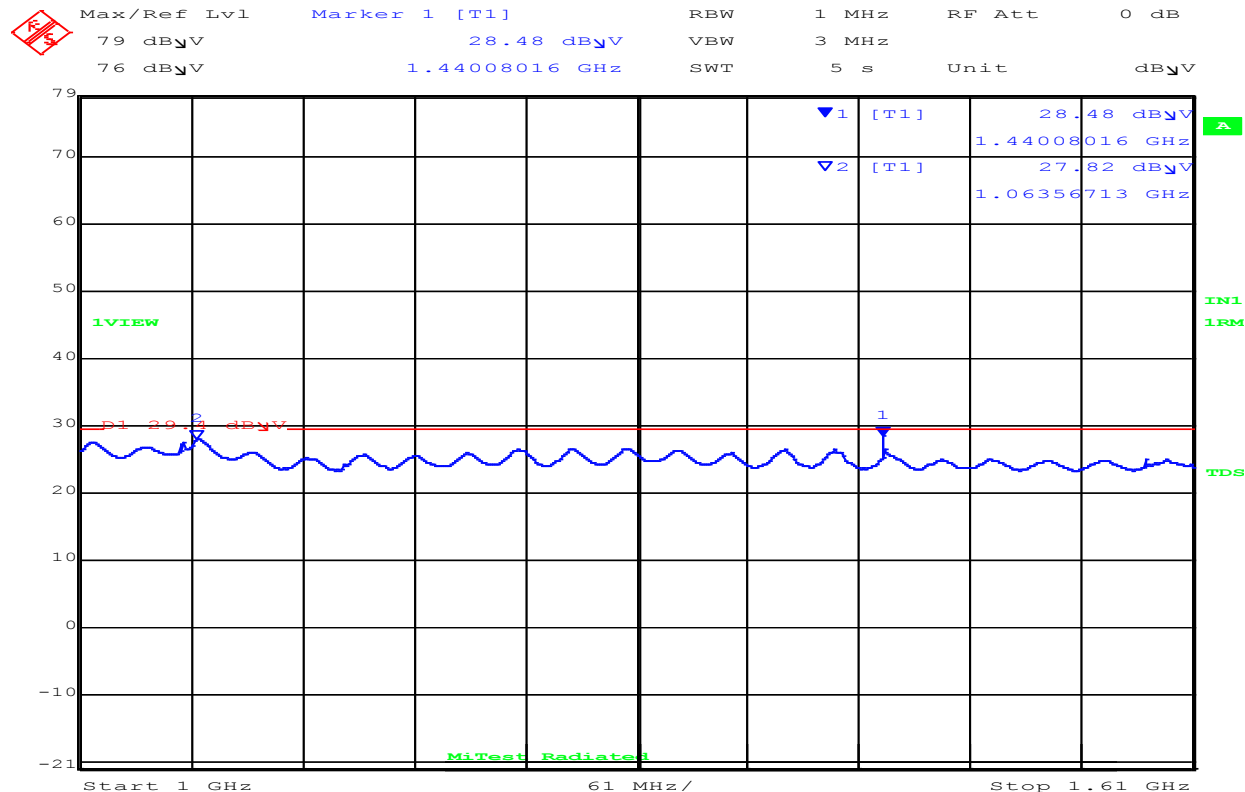
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

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



Date: 21.NOV.2018 10:10:29

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

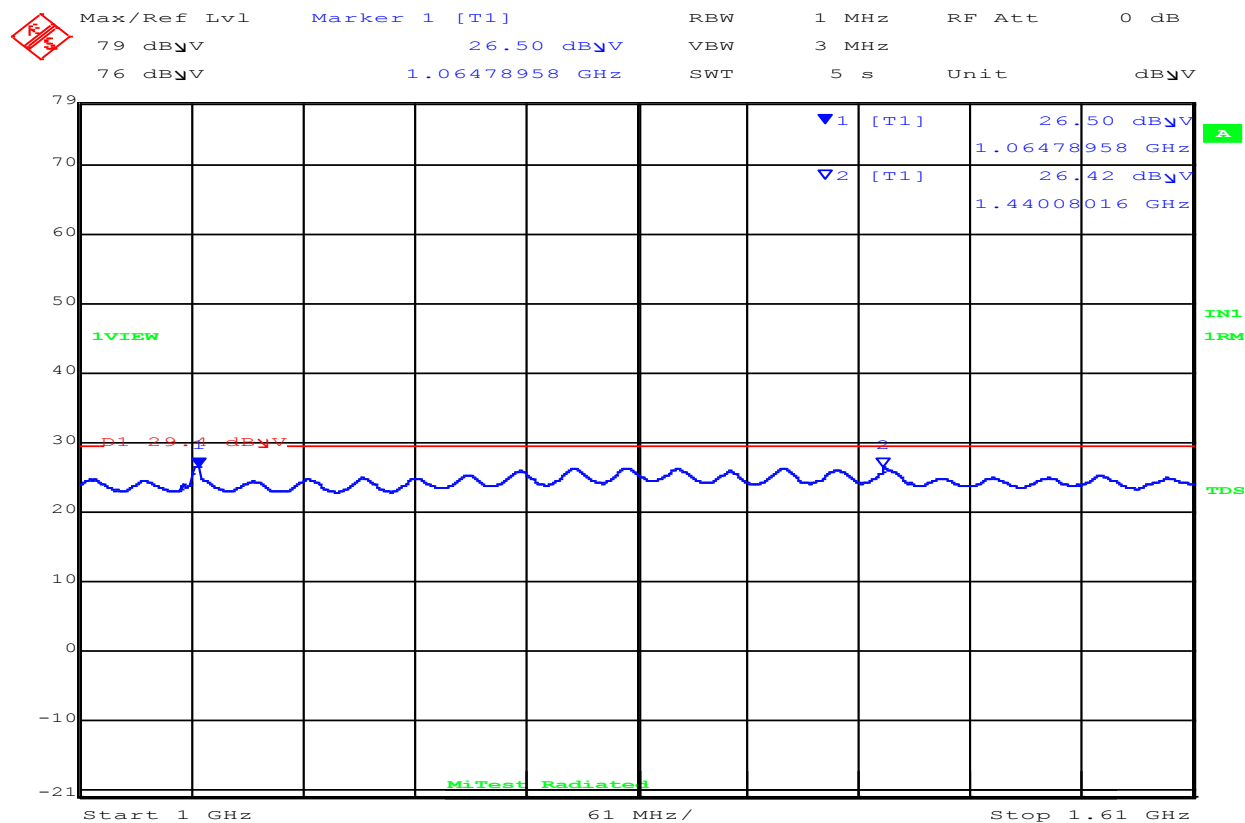
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

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



Date: 21.NOV.2018 10:15:41

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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Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

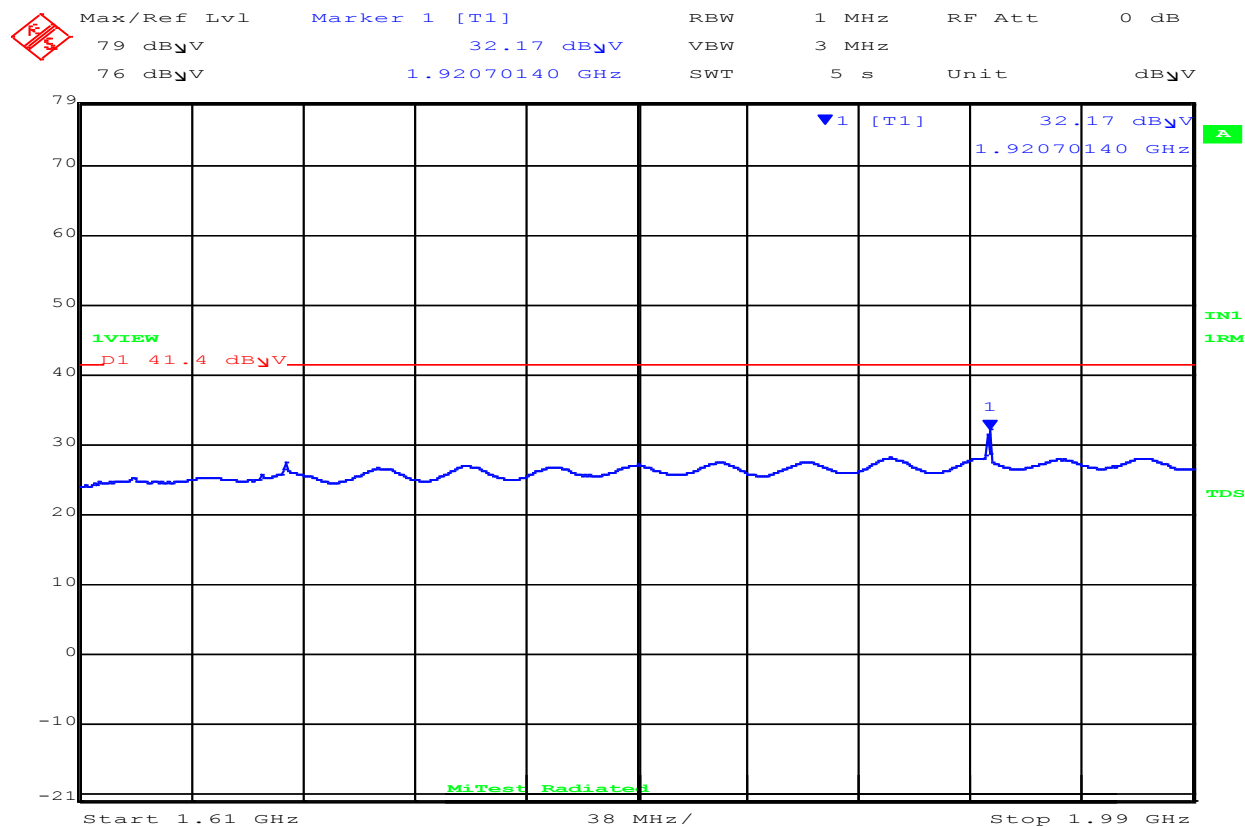
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

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



Date: 21.NOV.2018 11:39:45

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

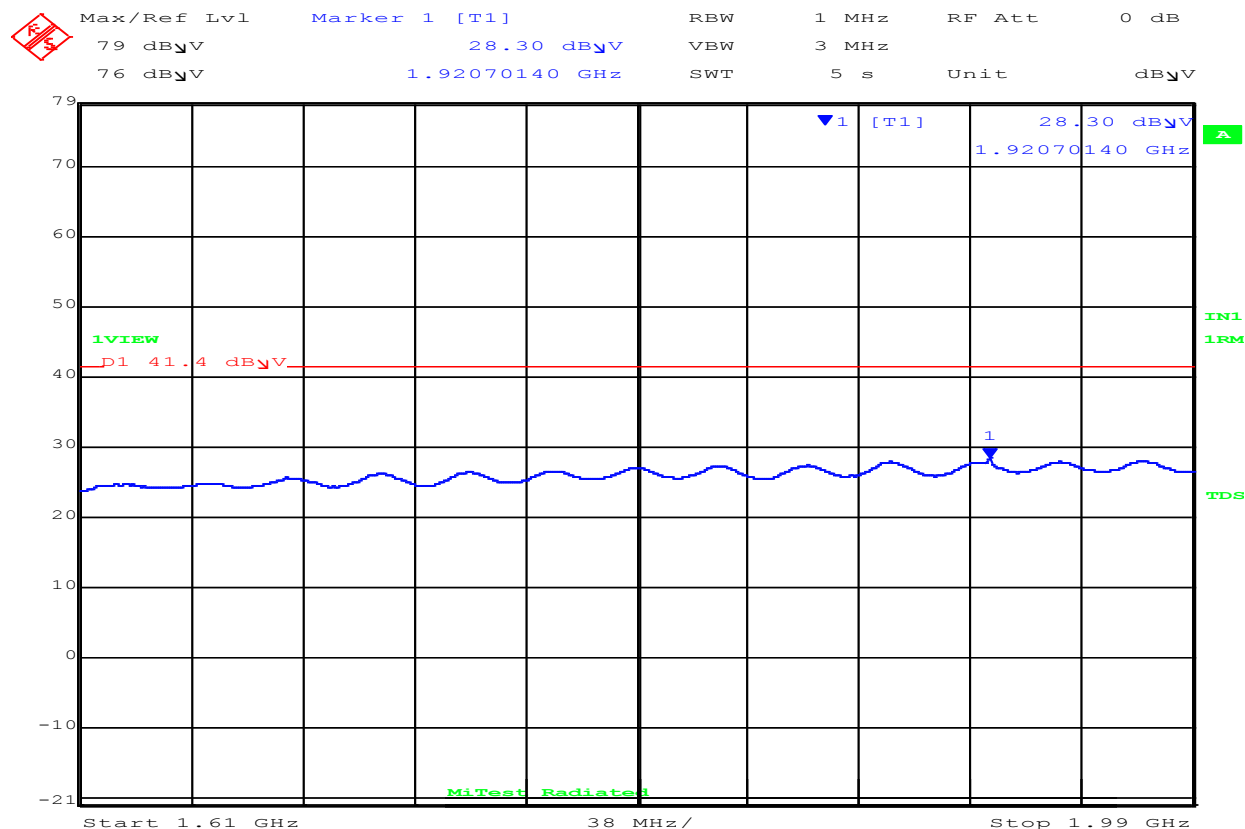
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

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



Date: 21.NOV.2018 11:38:41

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

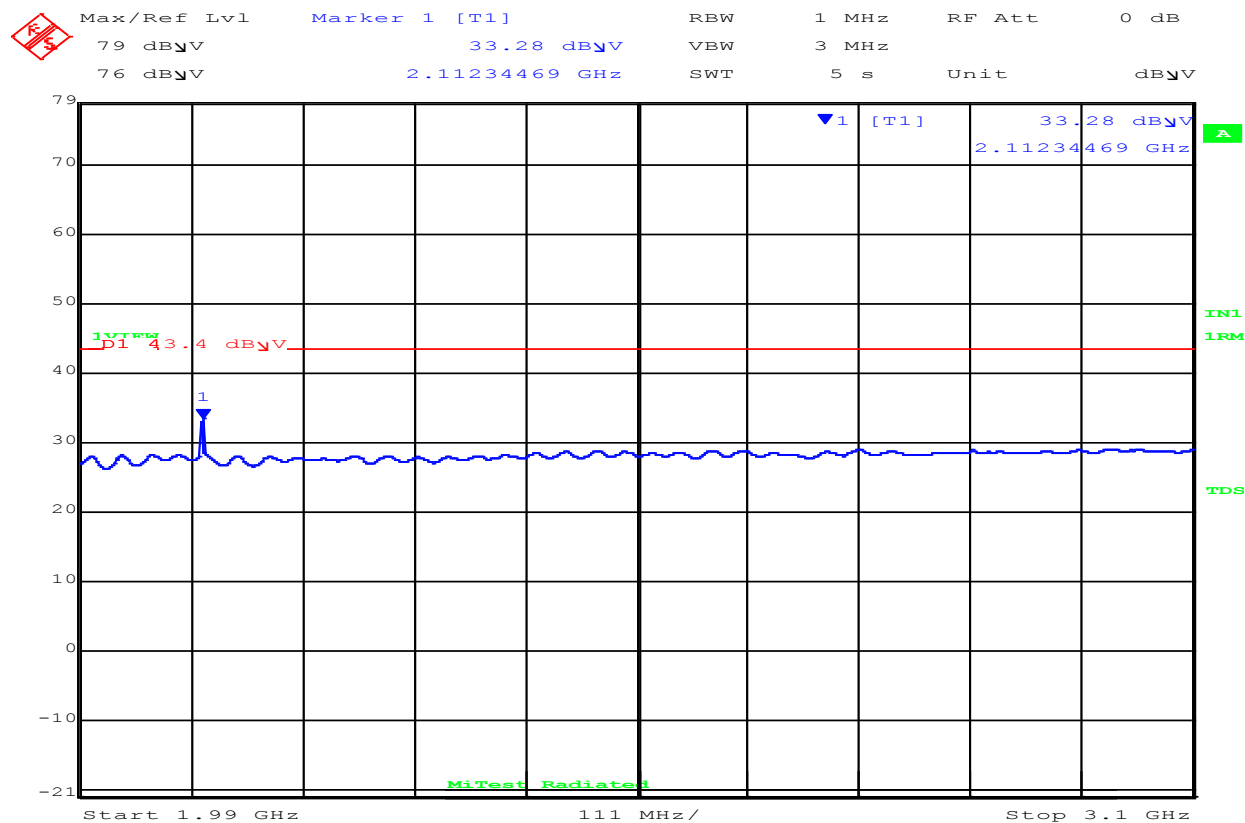
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

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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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

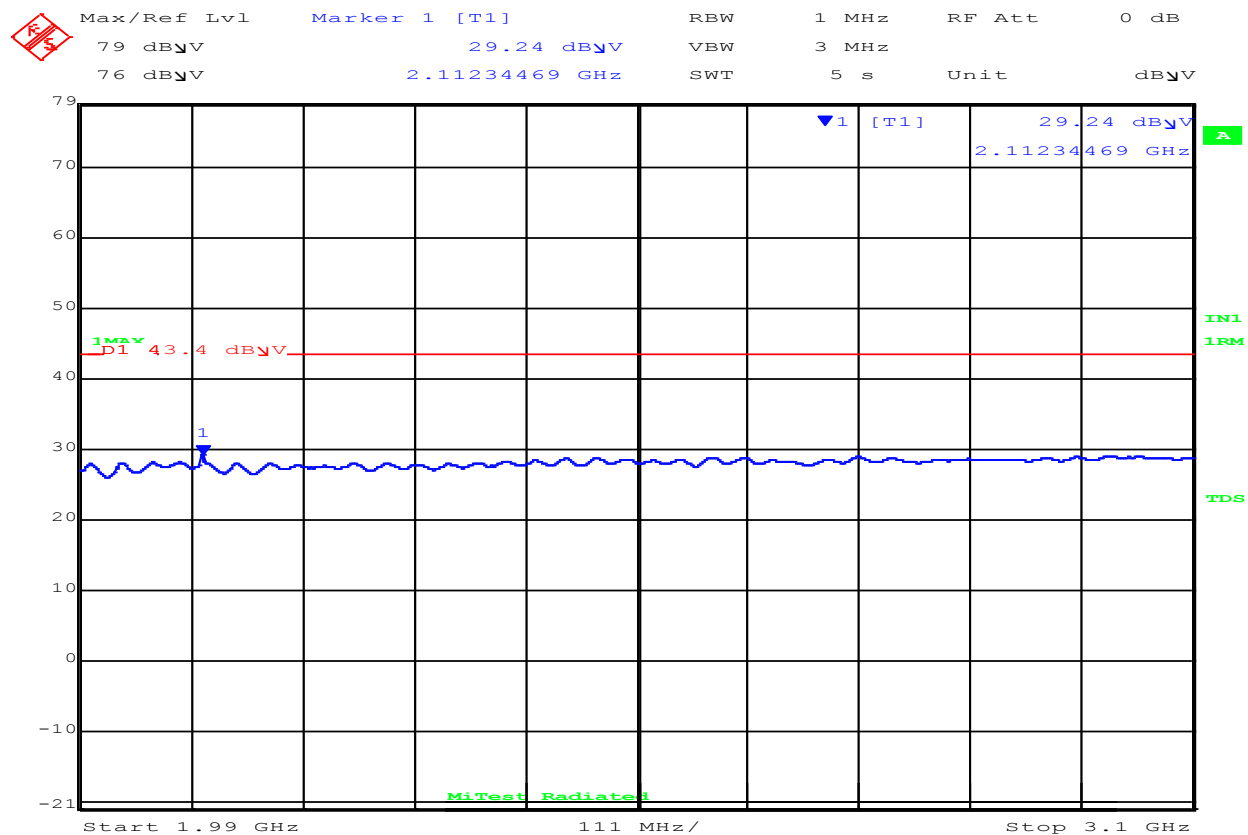
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

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



Date: 21.NOV.2018 10:26:43

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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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

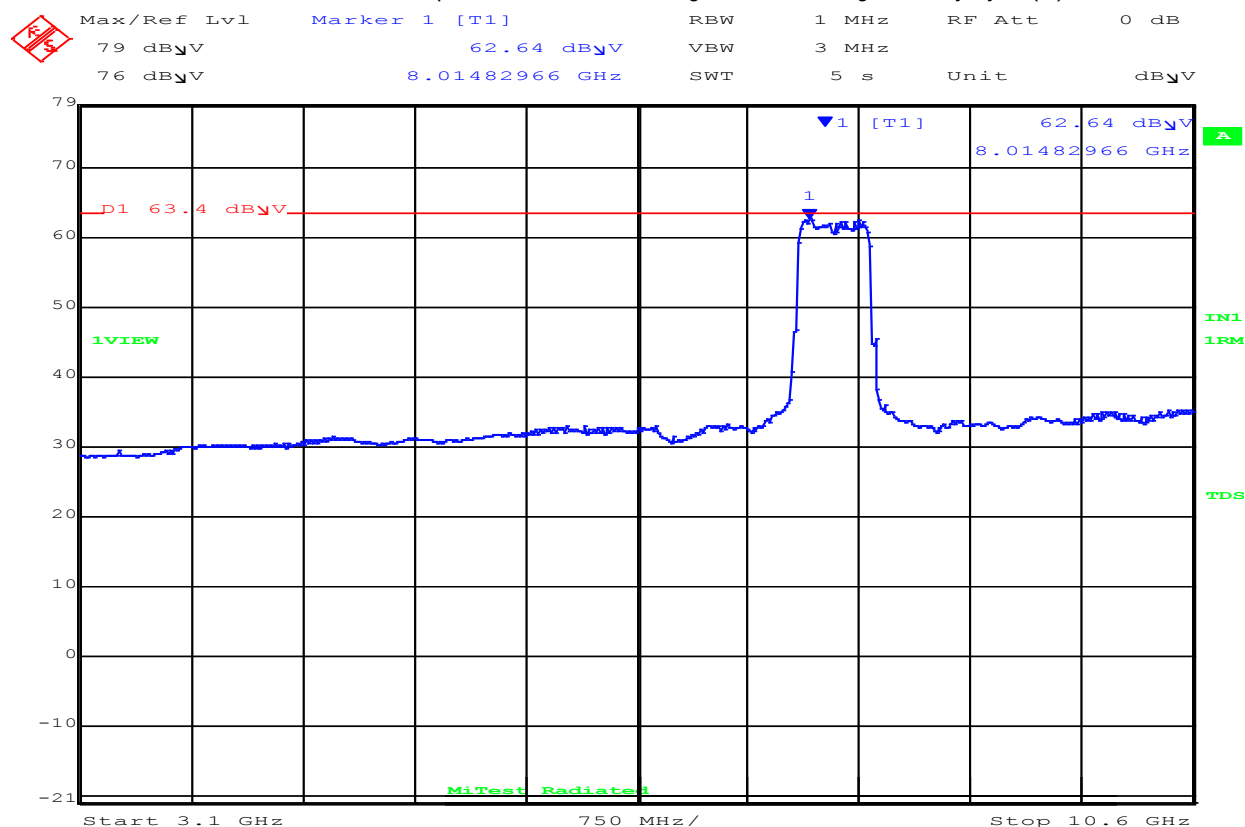
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

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



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

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	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

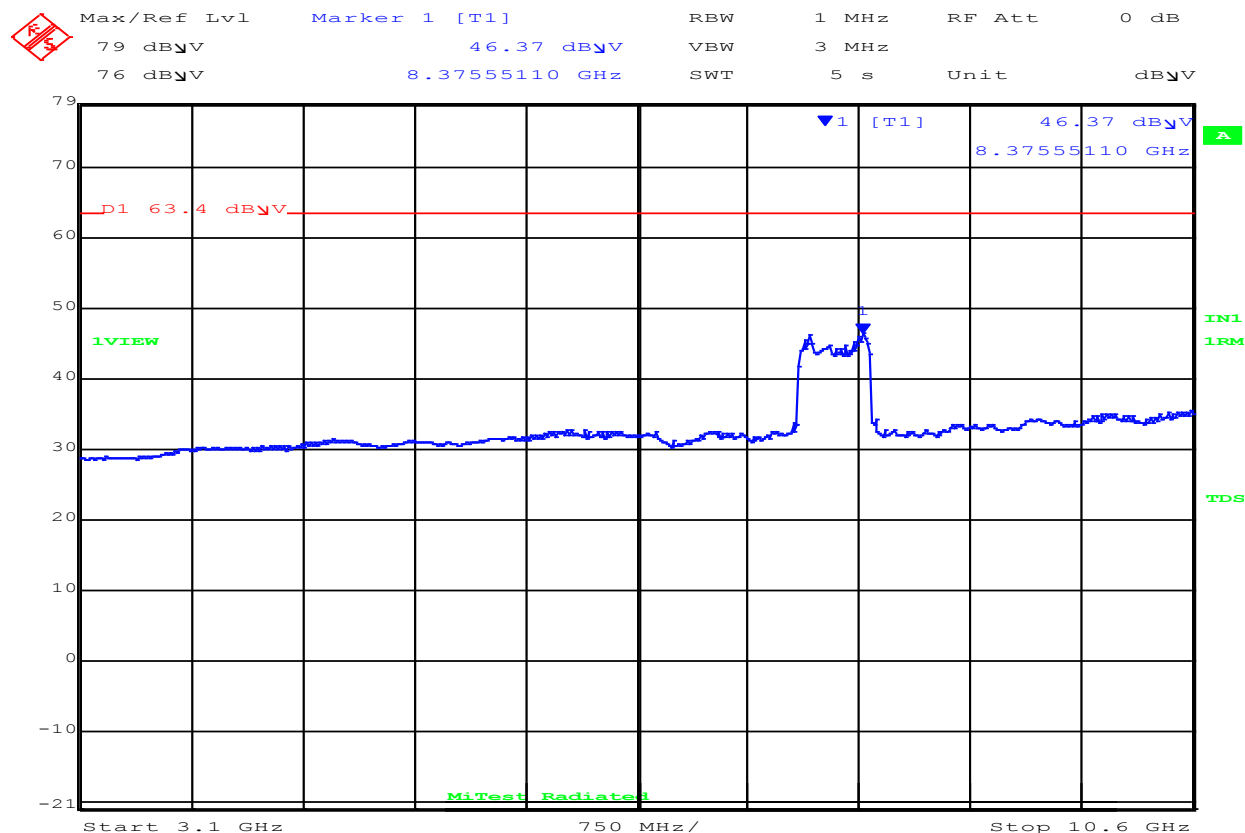
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

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



Date: 21.NOV.2018 10:23:16

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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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

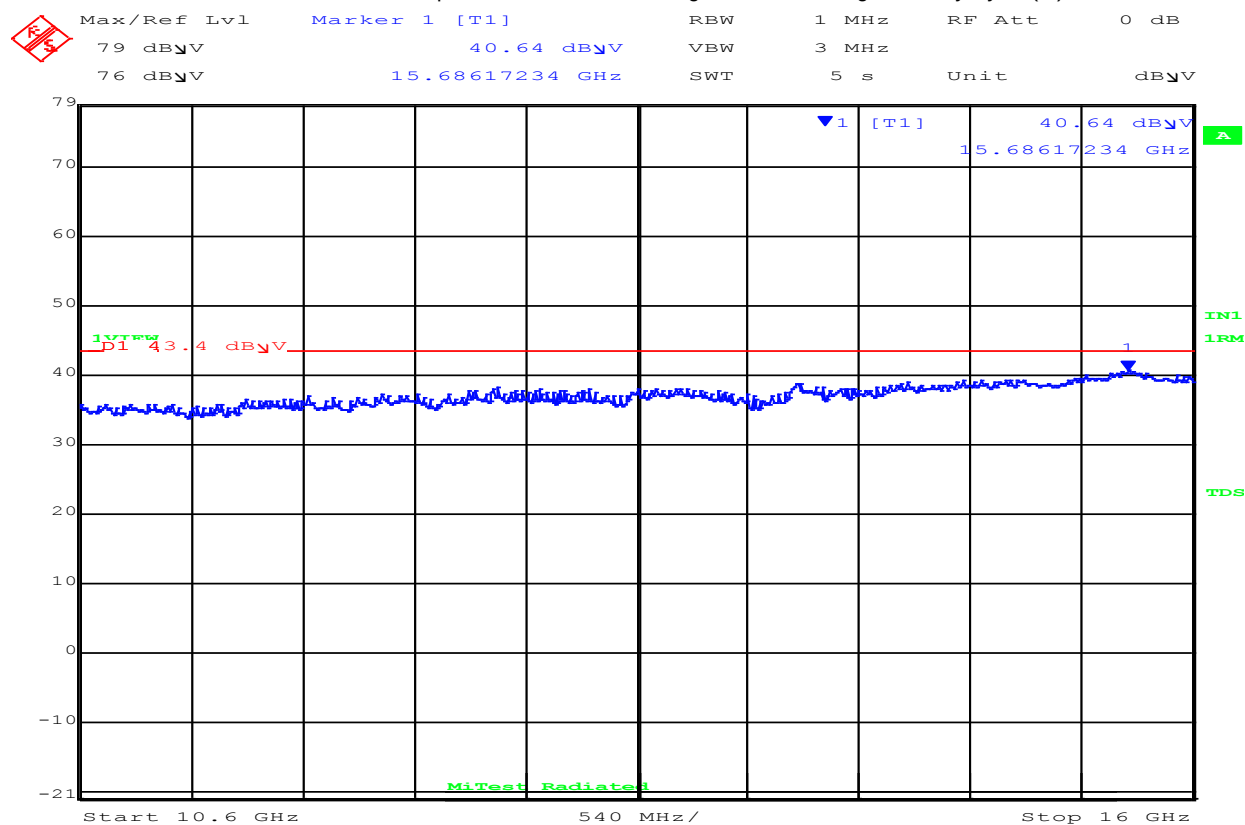
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

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



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

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	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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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

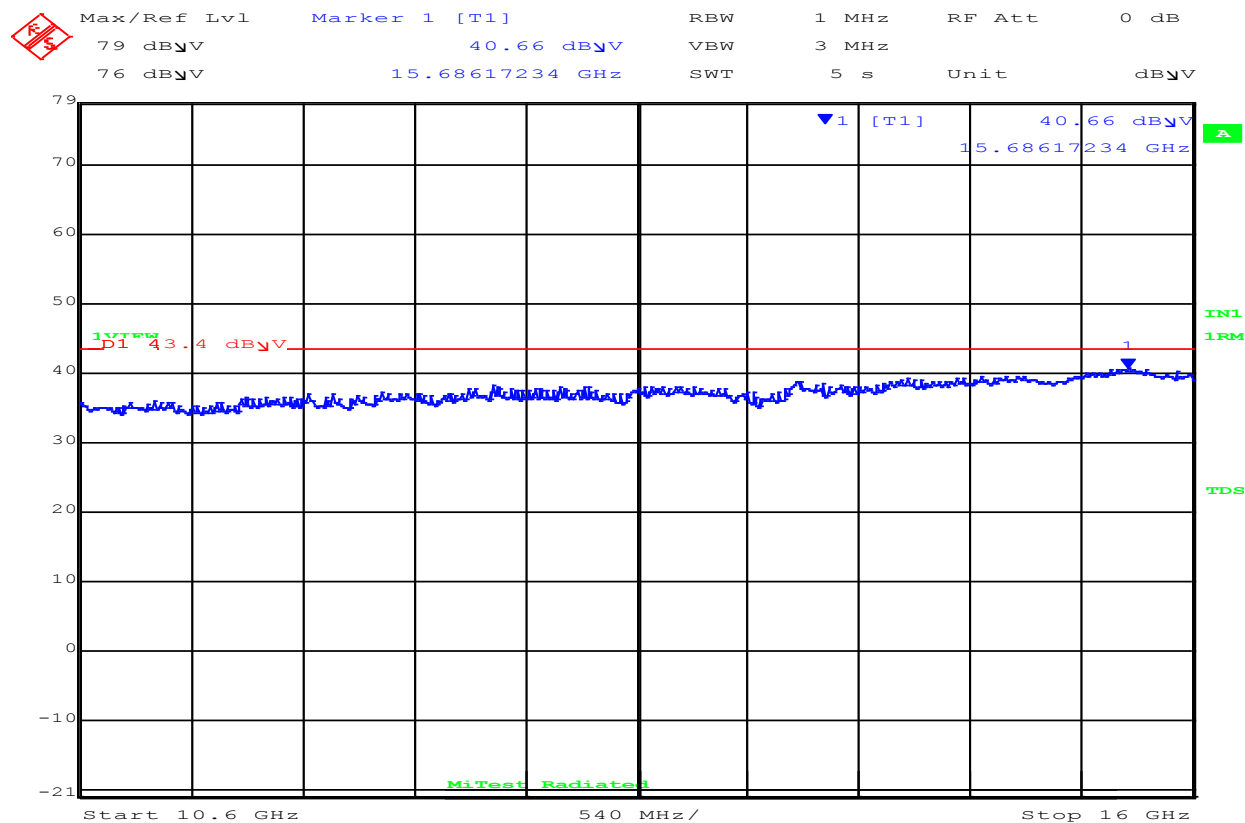
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

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



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

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	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

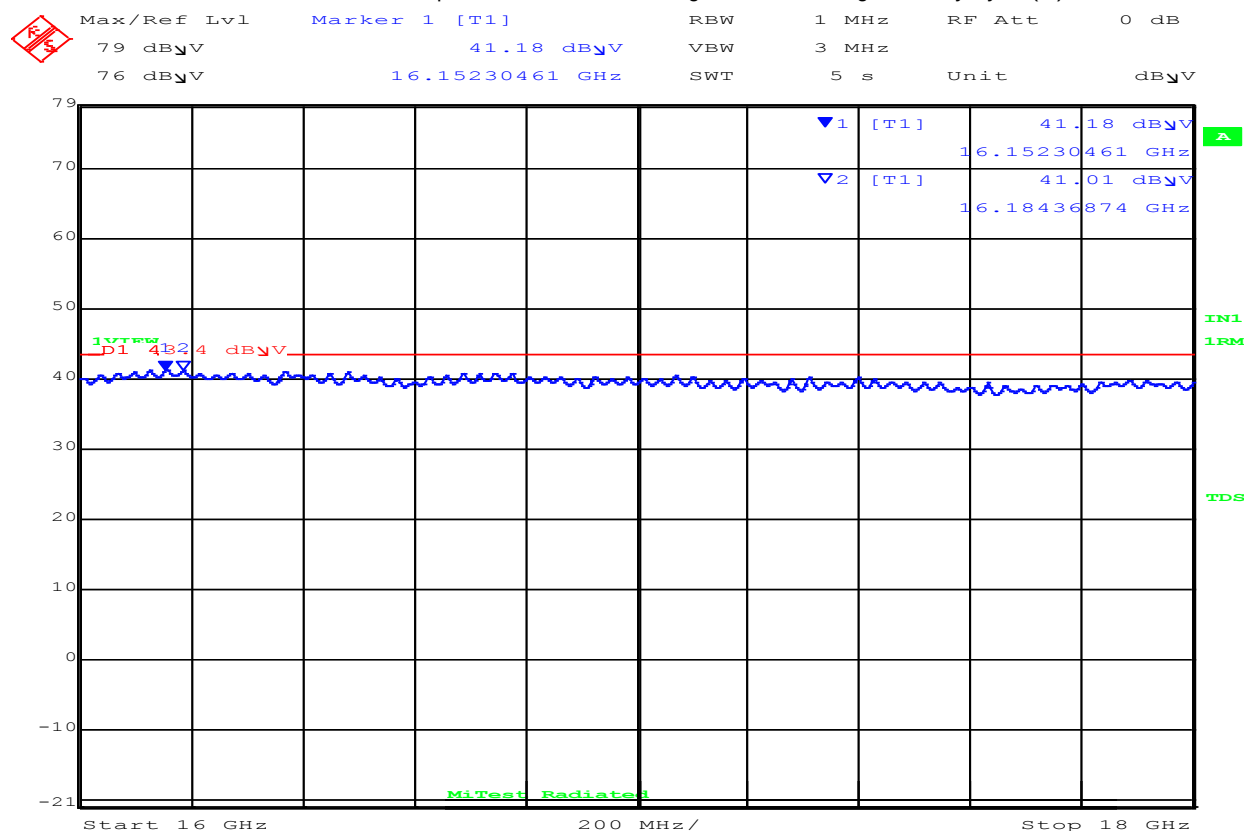
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

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



Date: 21.NOV.2018 10:41:39

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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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

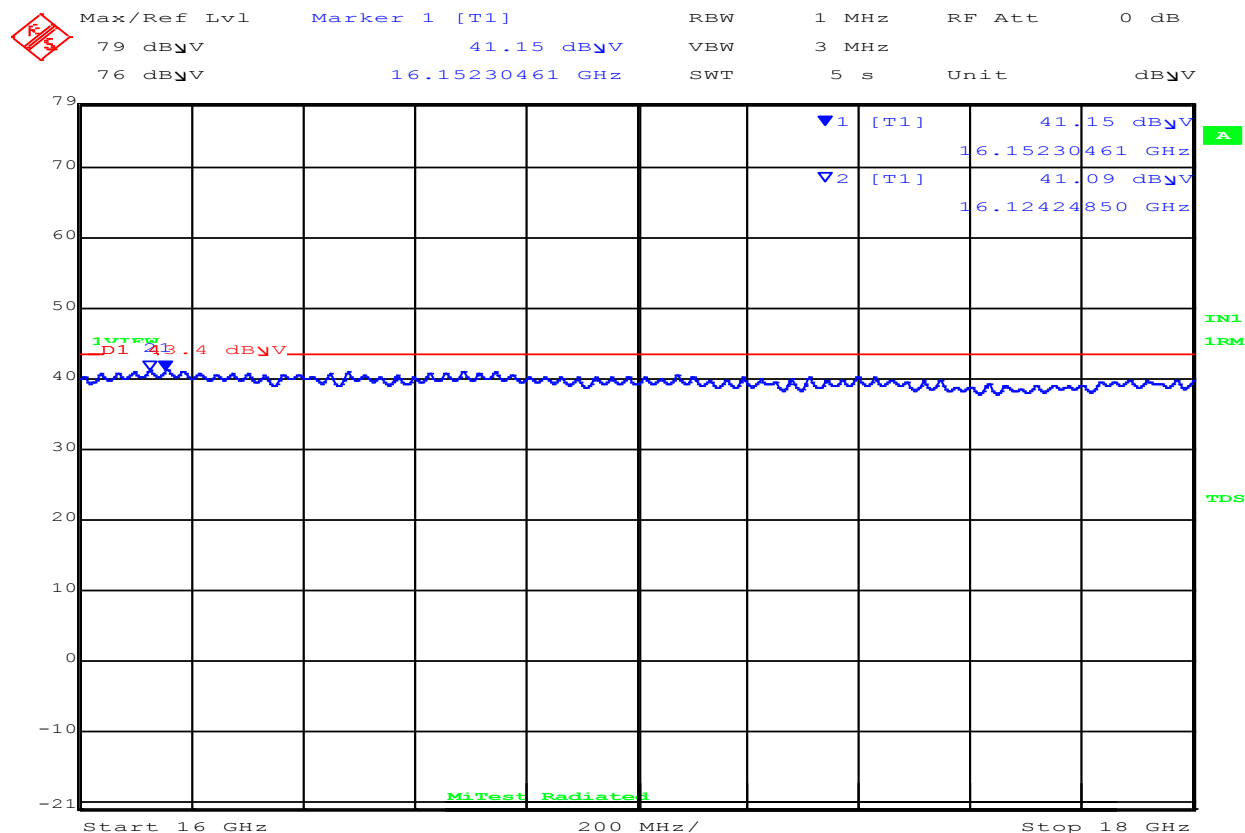
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

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



Date: 21.NOV.2018 10:36:53

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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8712 MHz

Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

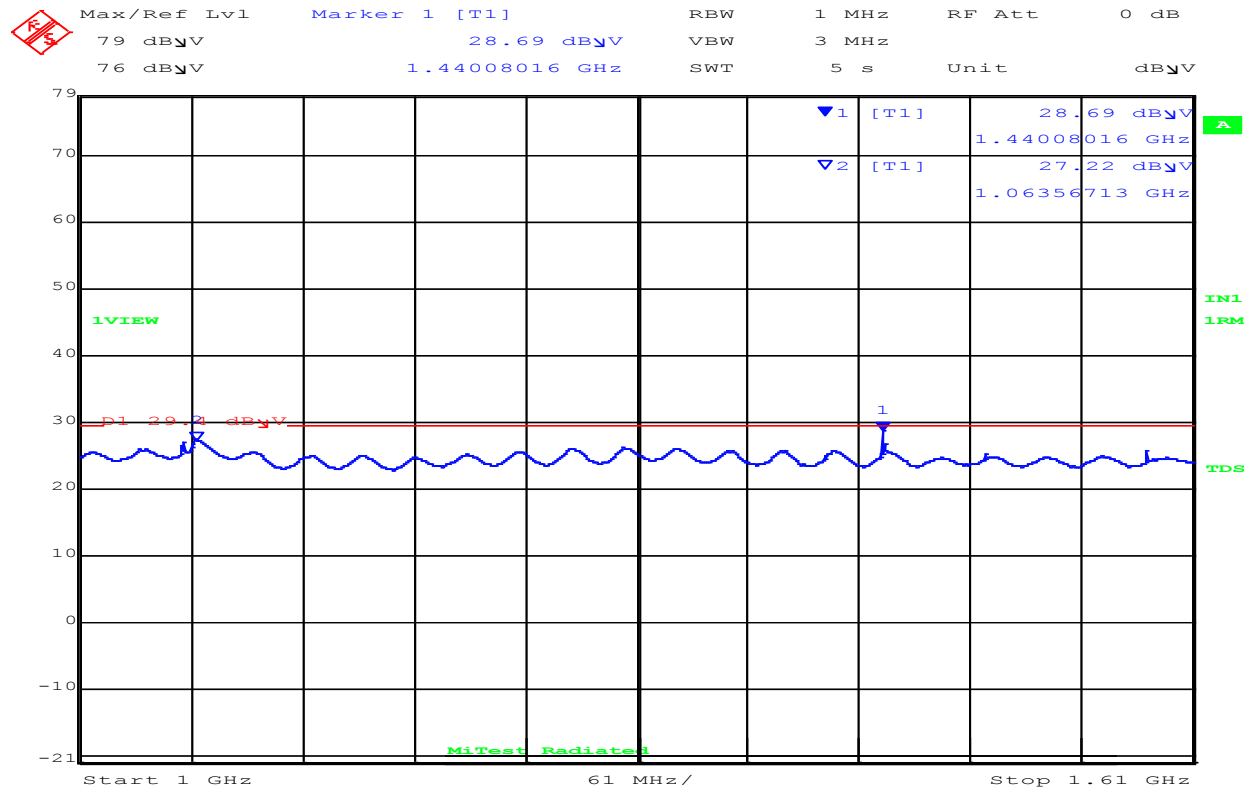
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

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



Date: 21.NOV.2018 11:42:07

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	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

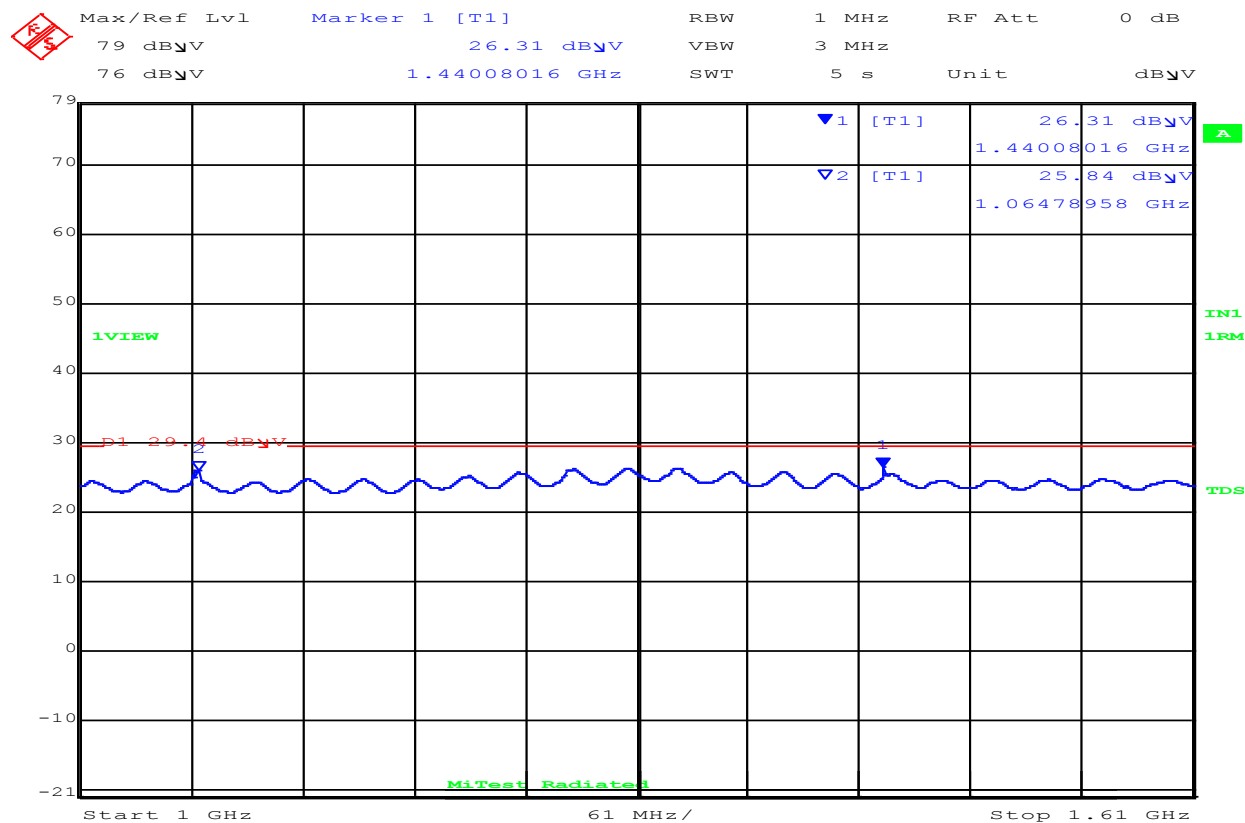
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

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



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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Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

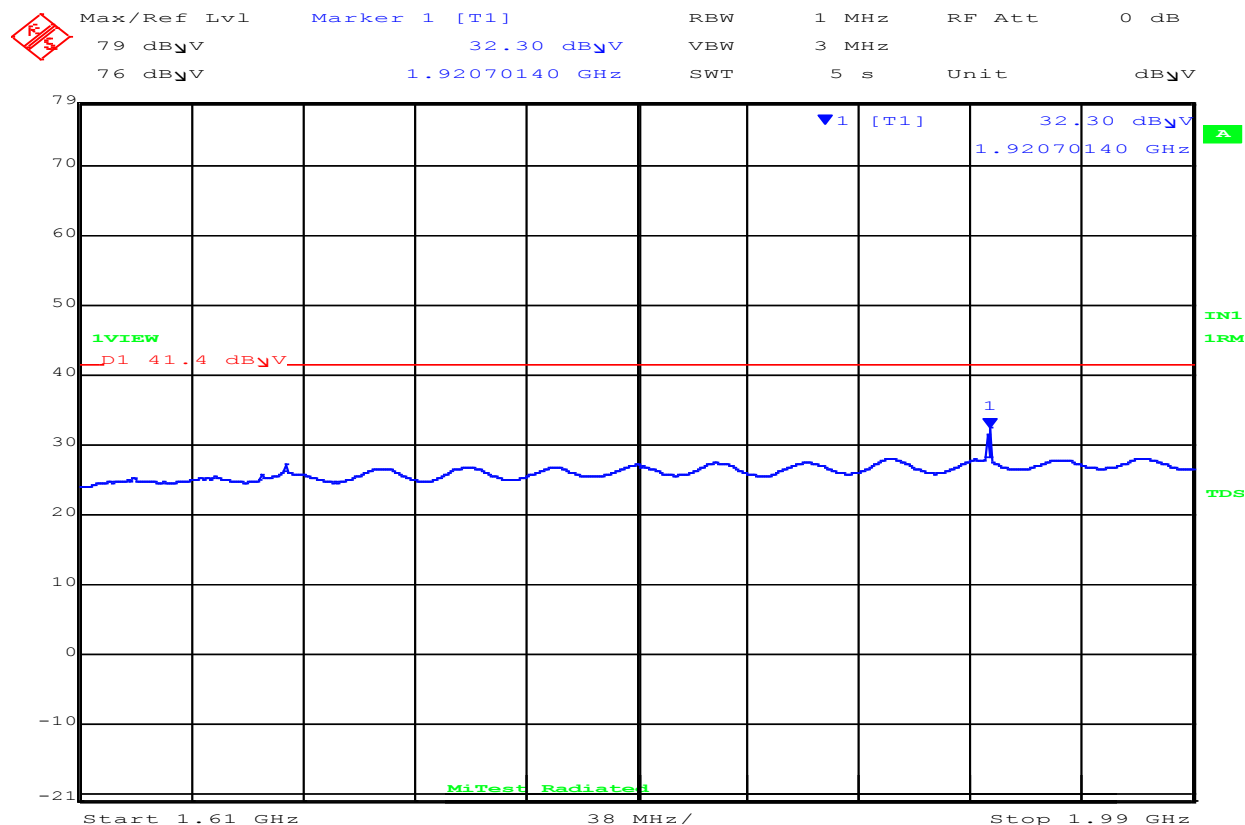
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

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



Date: 21.NOV.2018 11:31:02

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

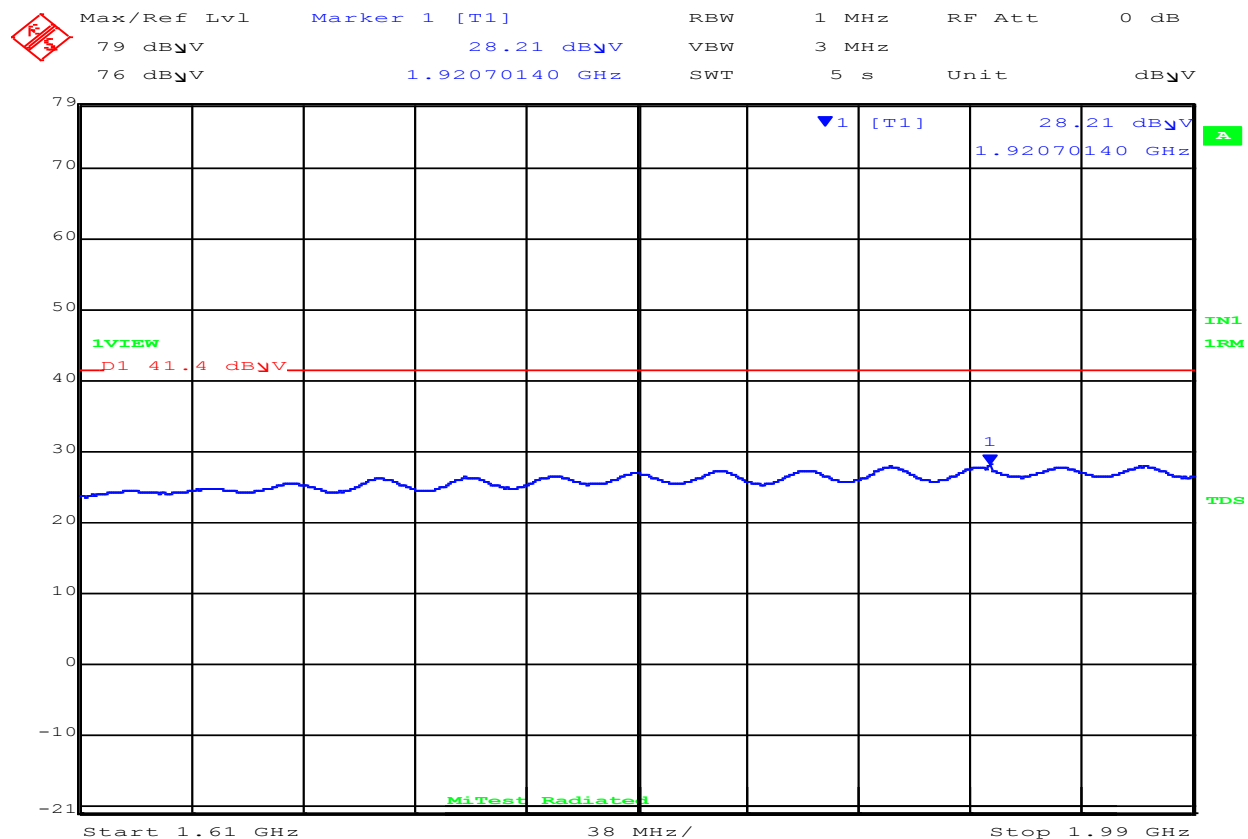
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

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



Date: 21.NOV.2018 11:36:07

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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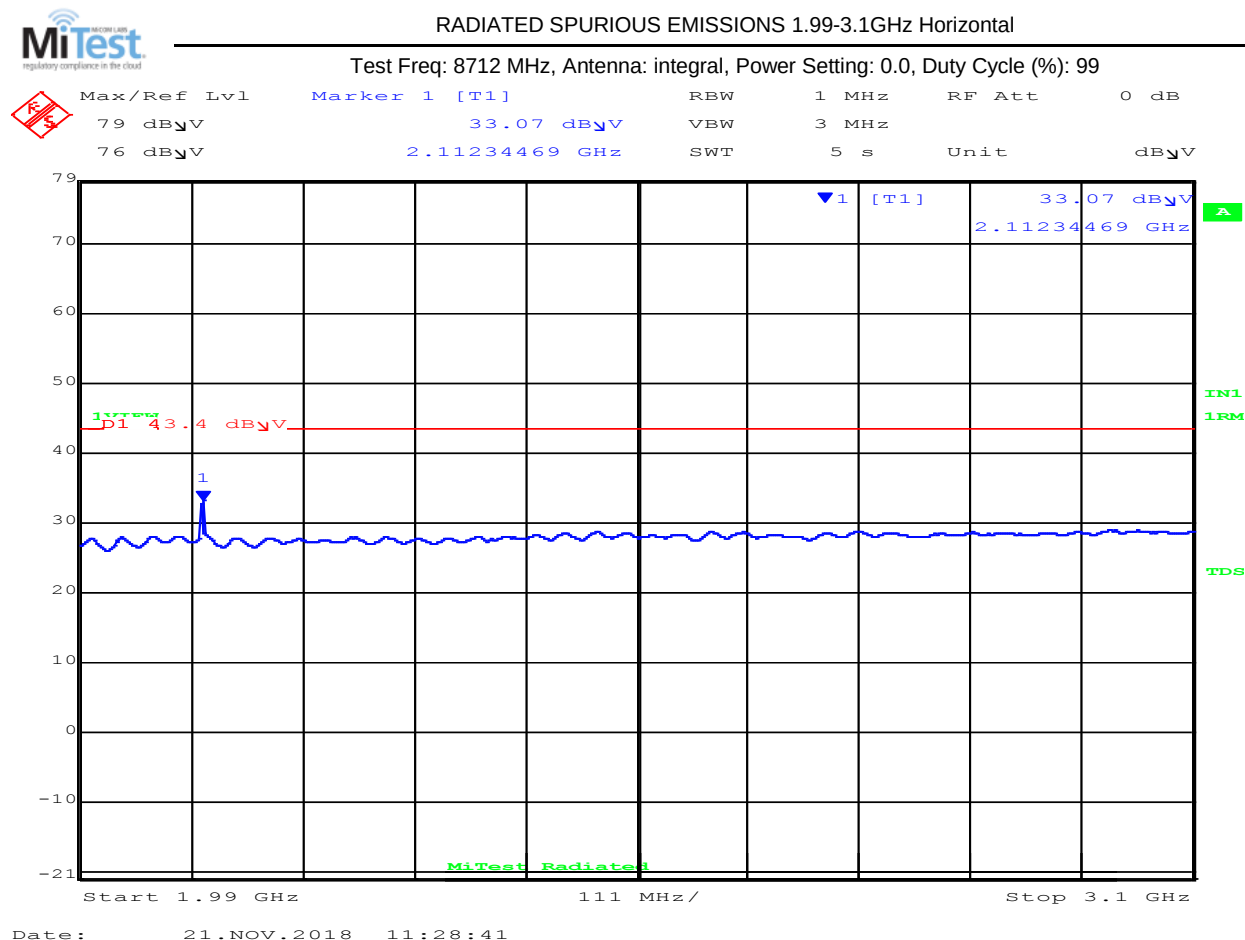


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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

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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Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

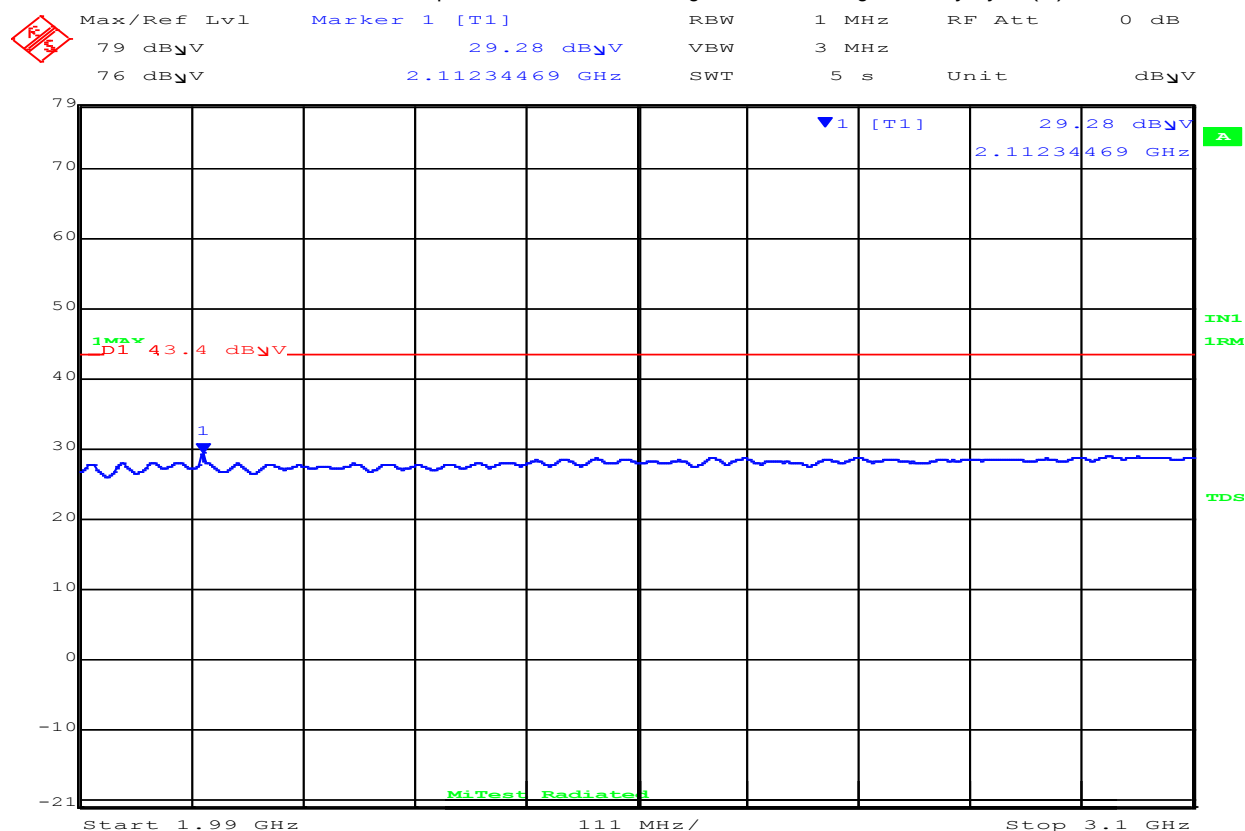
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

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



Date: 21.NOV.2018 11:27:22

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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Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

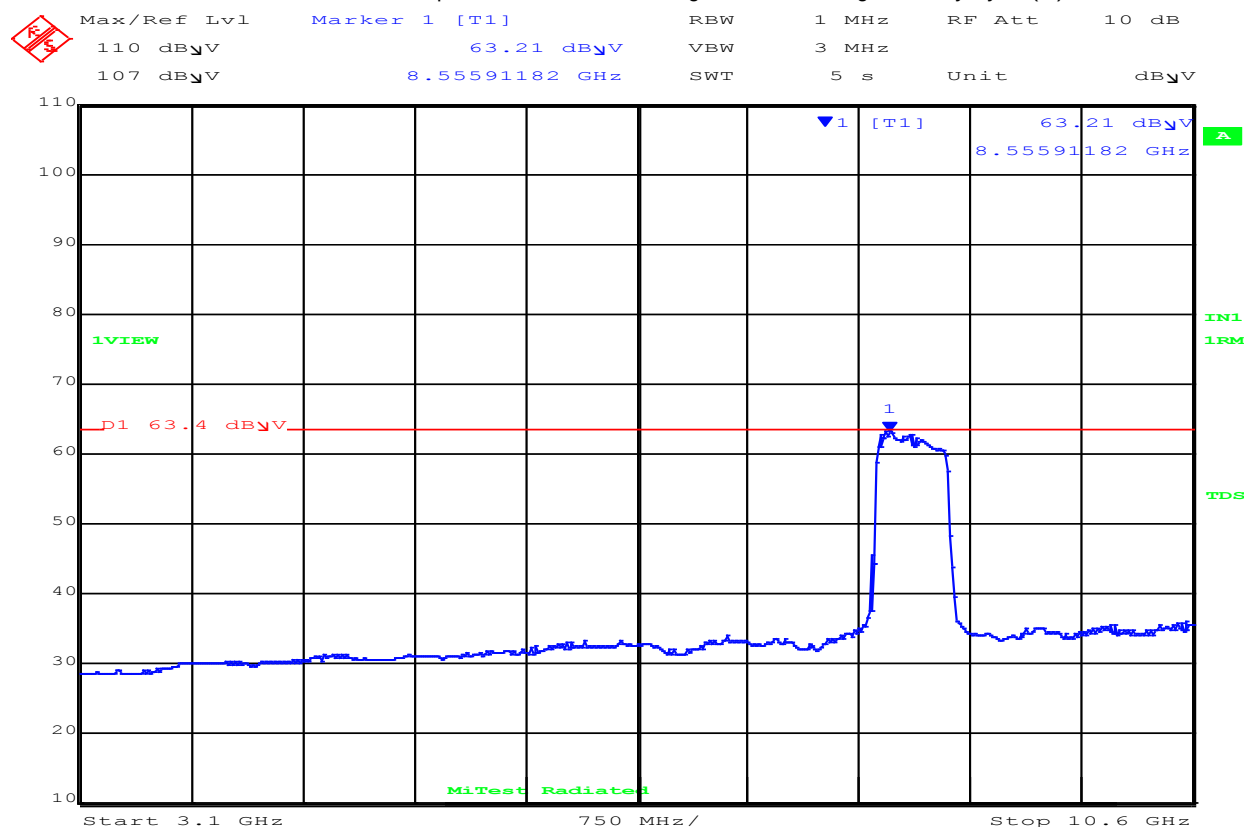
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

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



Date: 21.NOV.2018 11:06:11

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

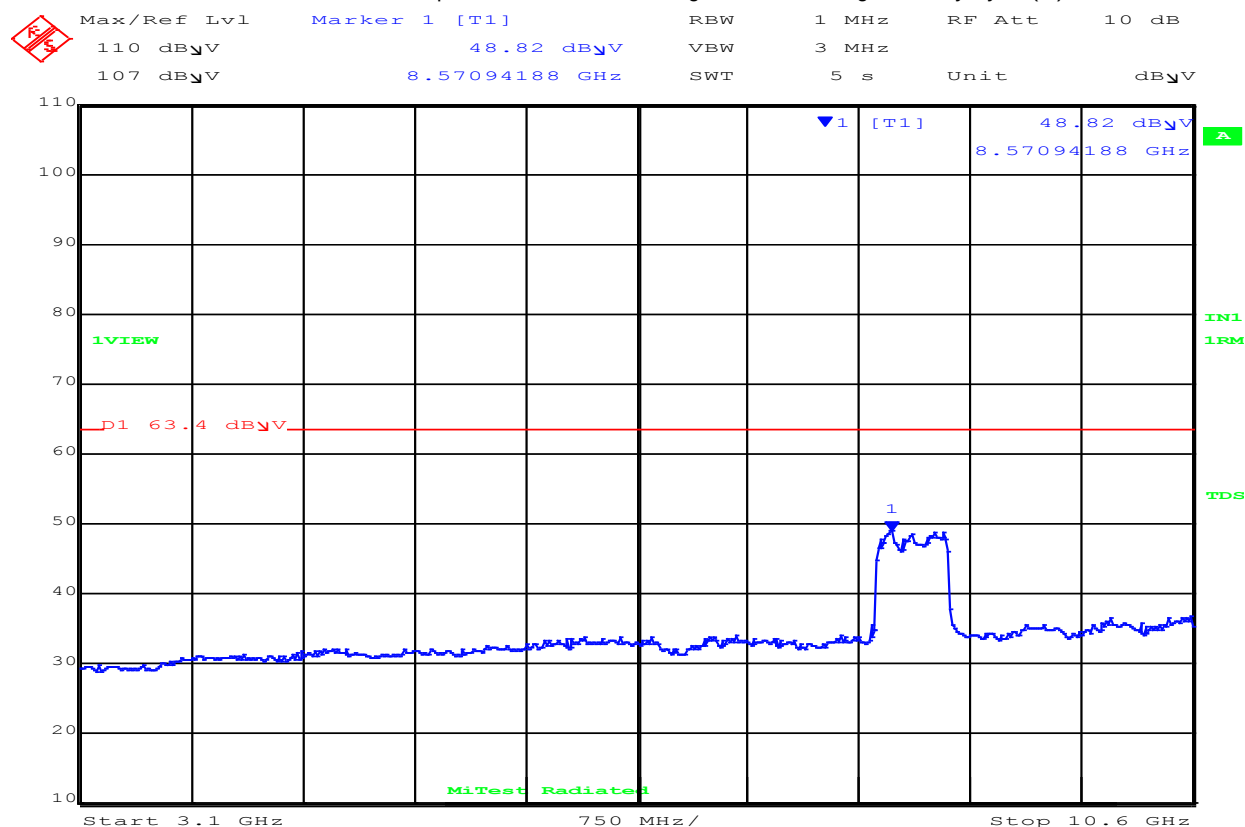
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

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



Date: 21.NOV.2018 11:08:12

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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Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

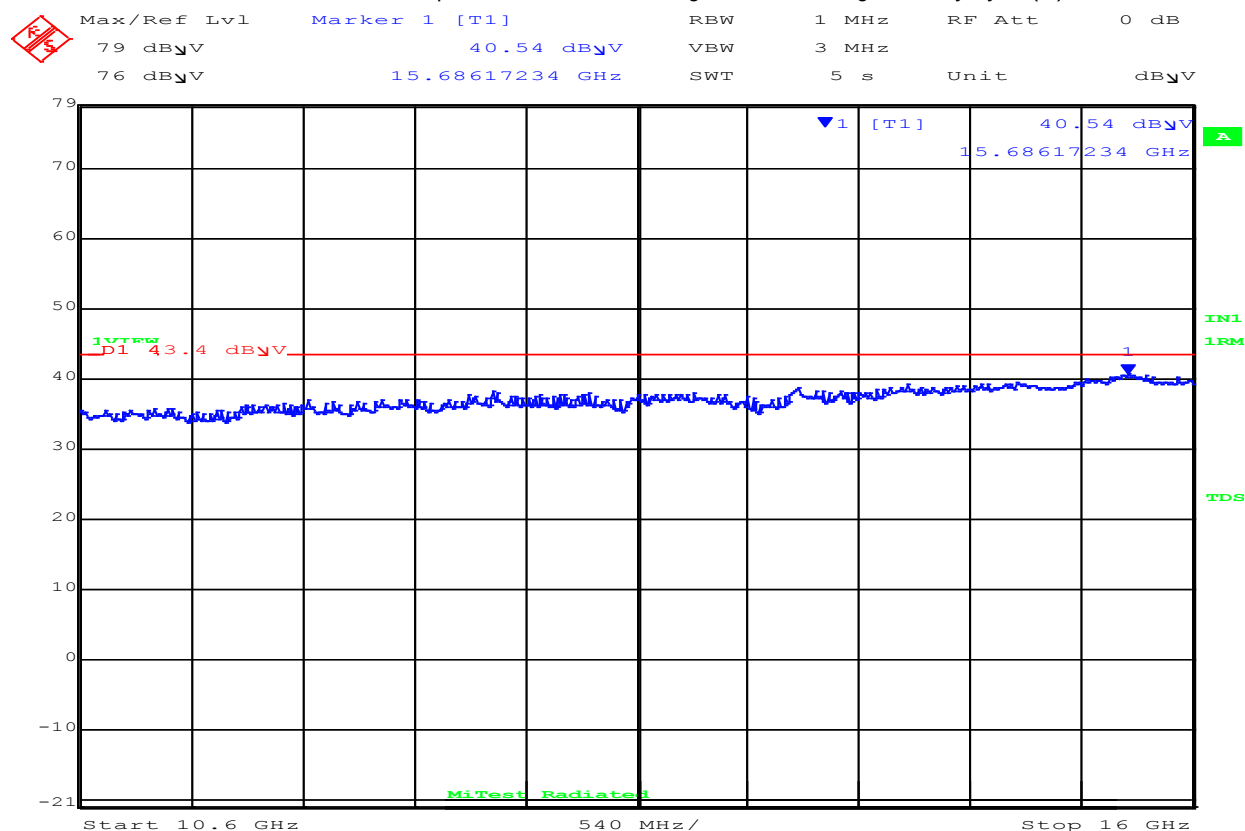
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

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



Date: 21.NOV.2018 11:12:35

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	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

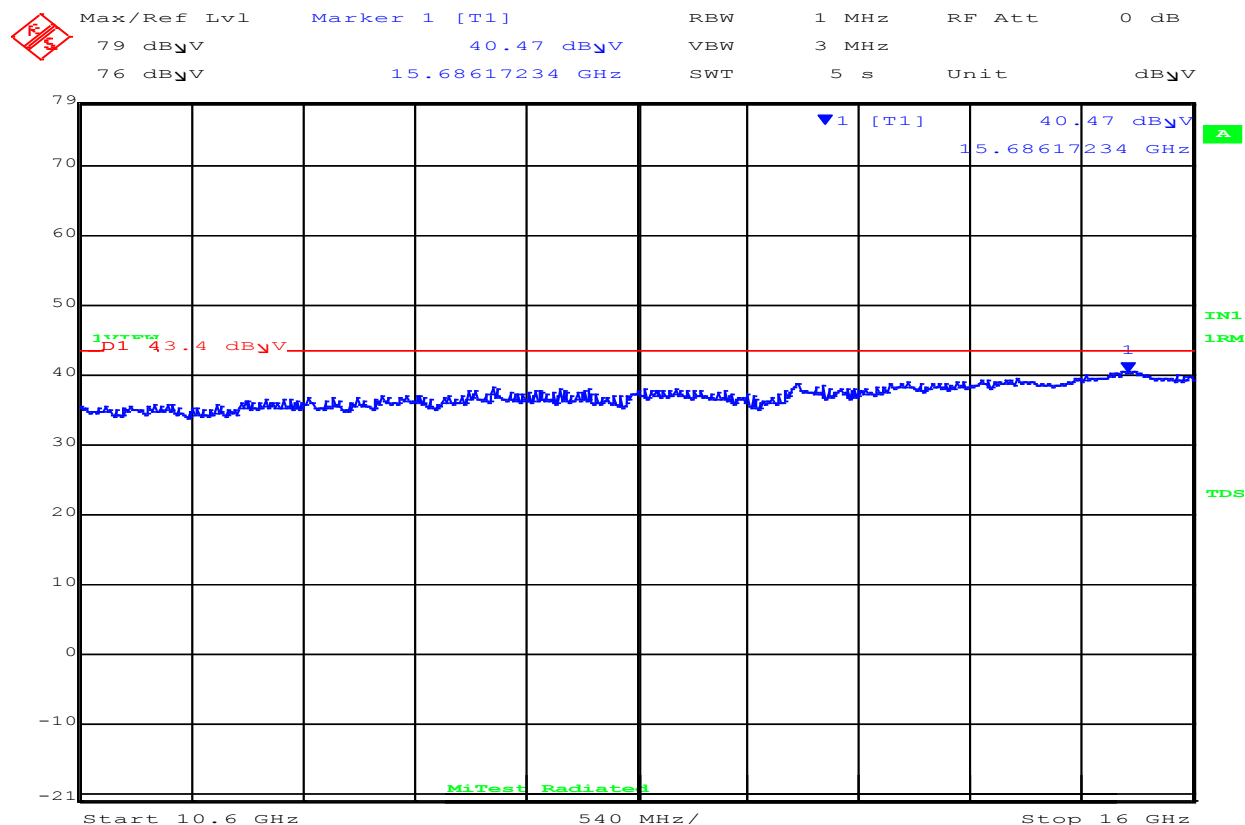
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

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



Date: 21.NOV.2018 11:10:04

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	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

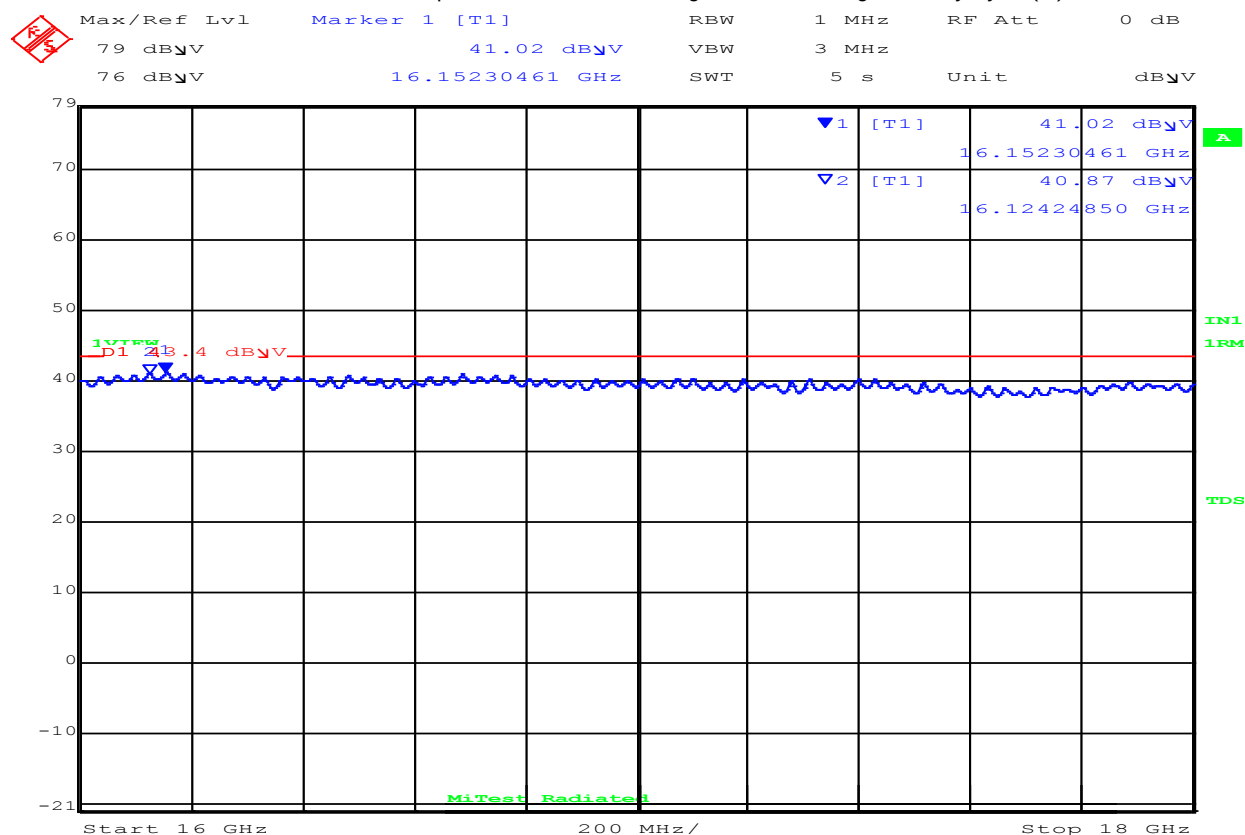
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

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



Date: 21.NOV.2018 11:14:09

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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Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

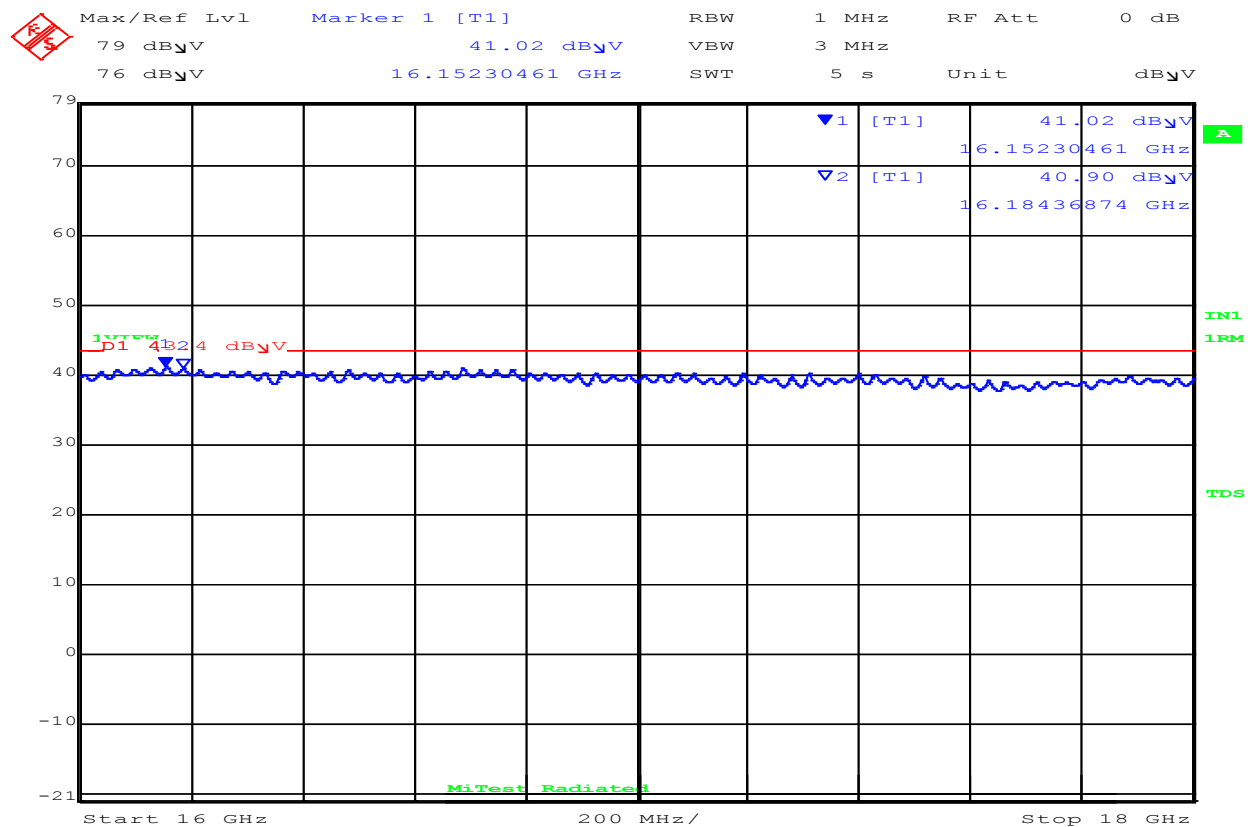
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

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



Date: 21.NOV.2018 11:16:58

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	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

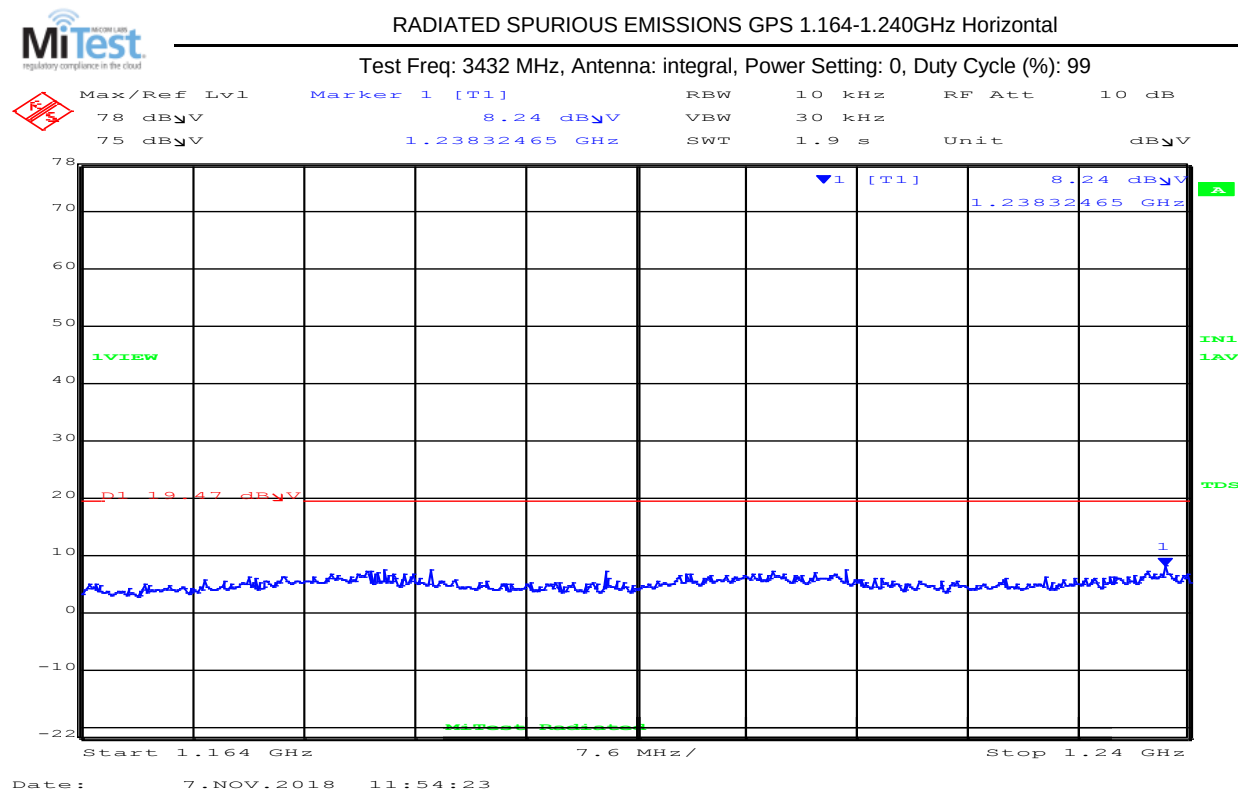
9.4.2.1. Commander AL5930

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 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

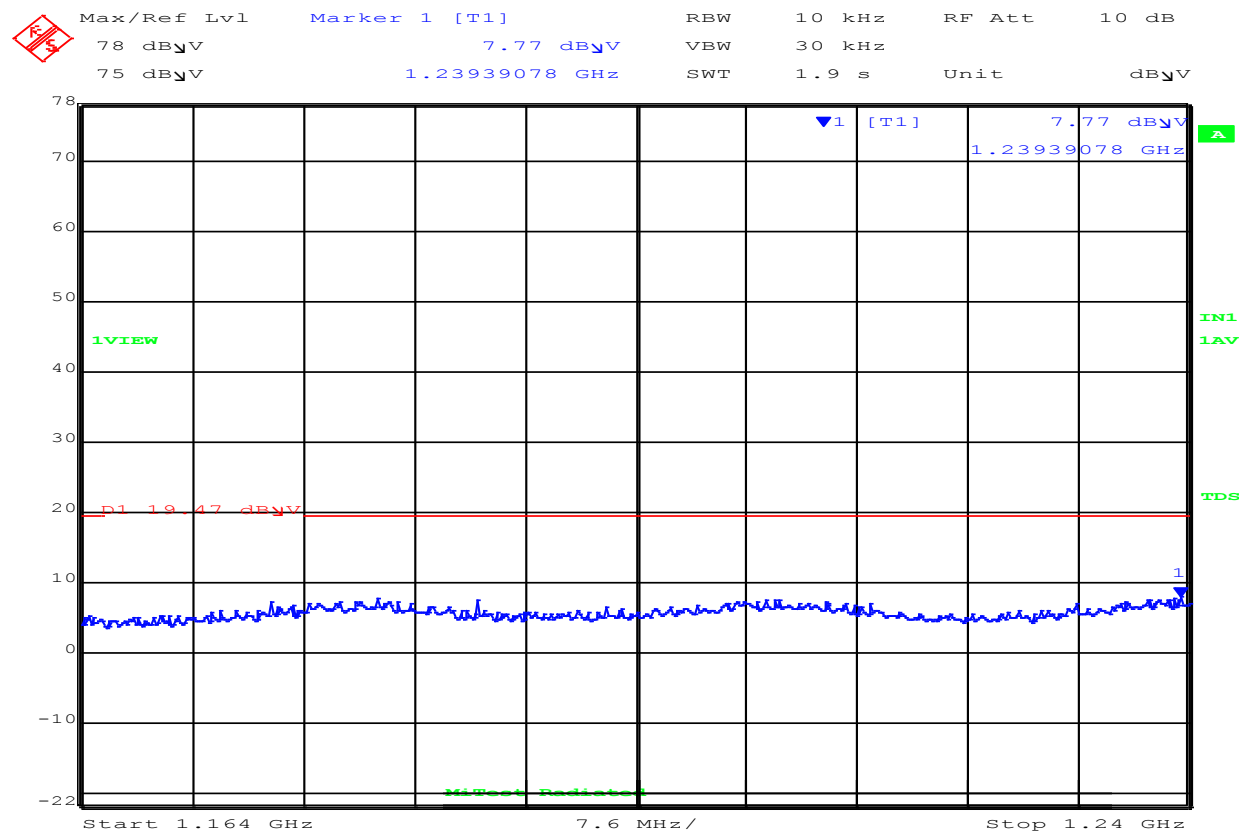
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

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 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 1.559-1.610 GHz Horizontal

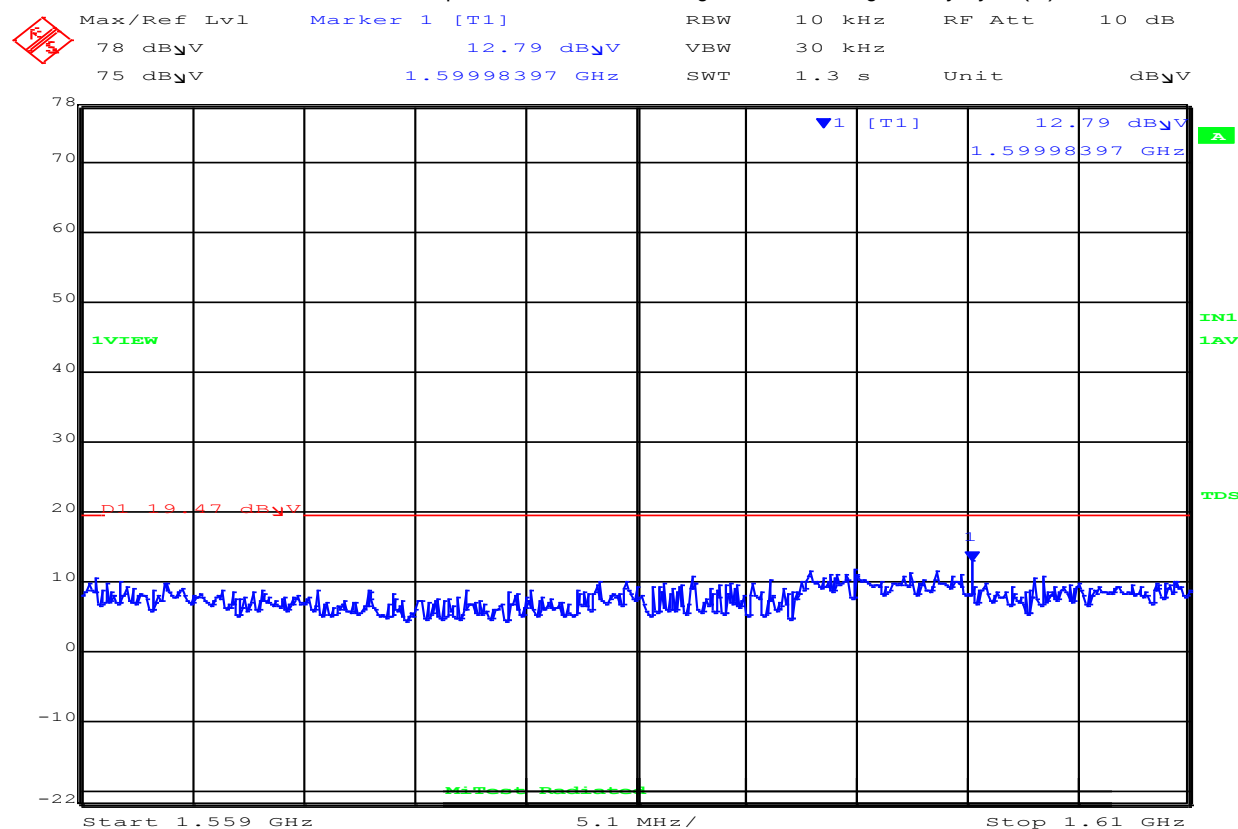
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

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



Date: 7.NOV.2018 11:55:49

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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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Vertical

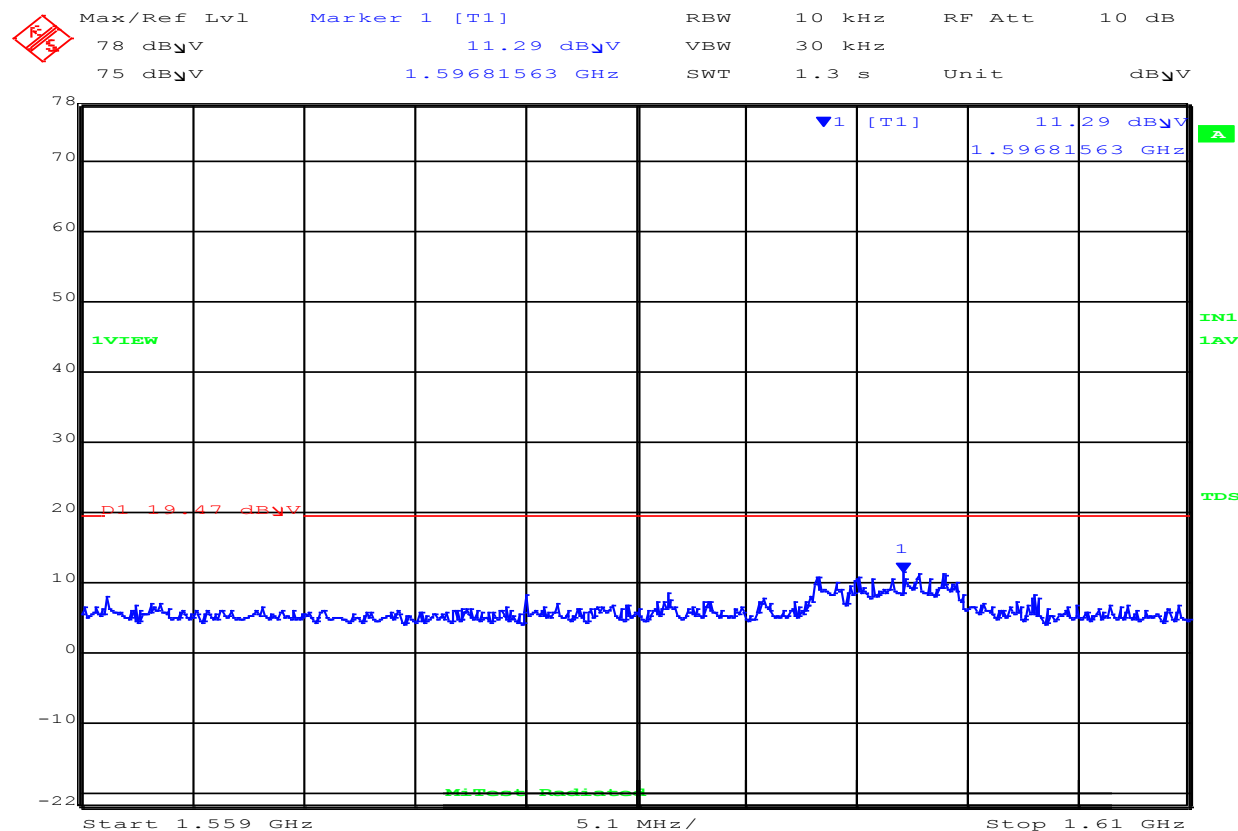
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610 GHz Vertical

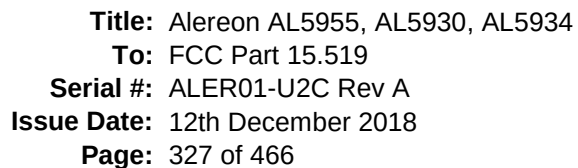
Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



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

1559.00-1610.00 MHz									
Num	Frequency MHz	Level 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 Horizontal

Test Measurement Results



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



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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

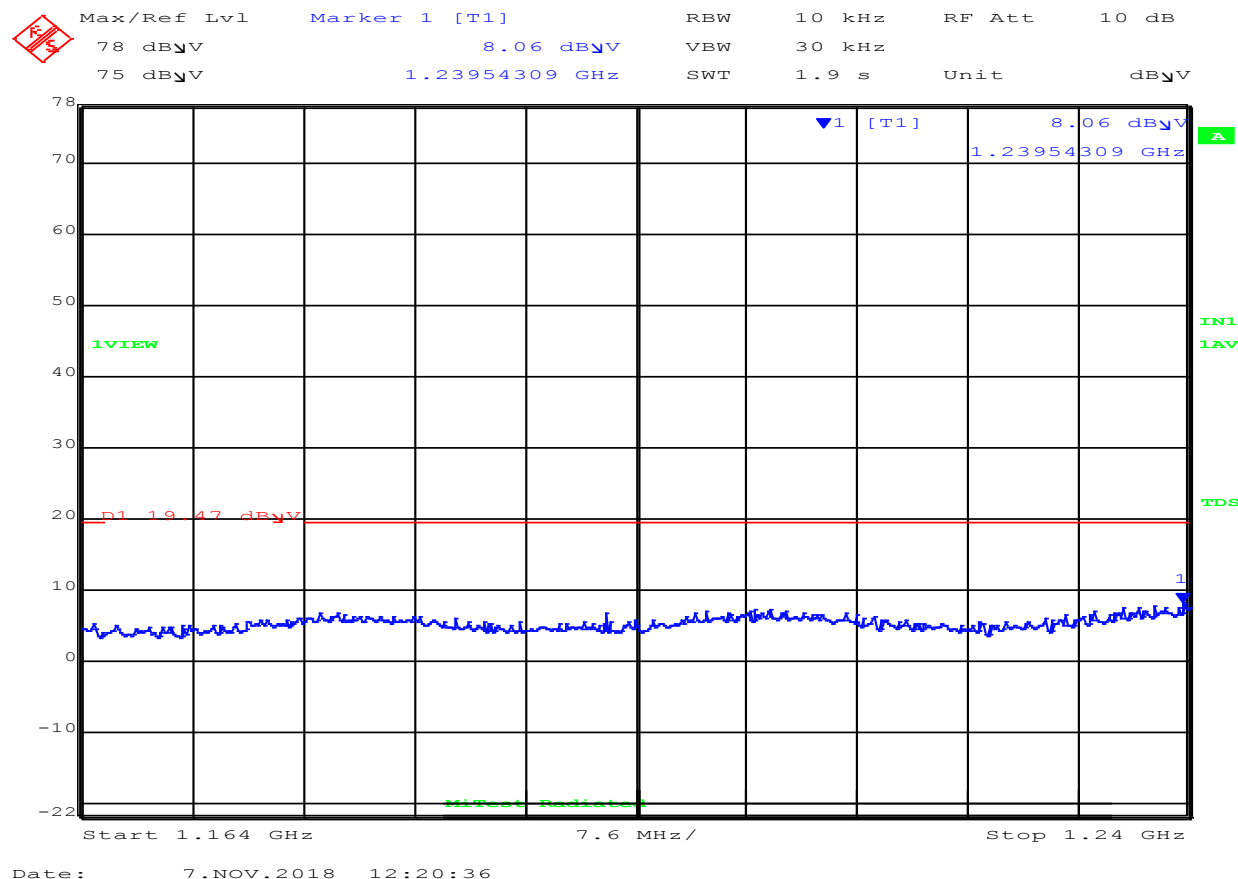
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 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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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

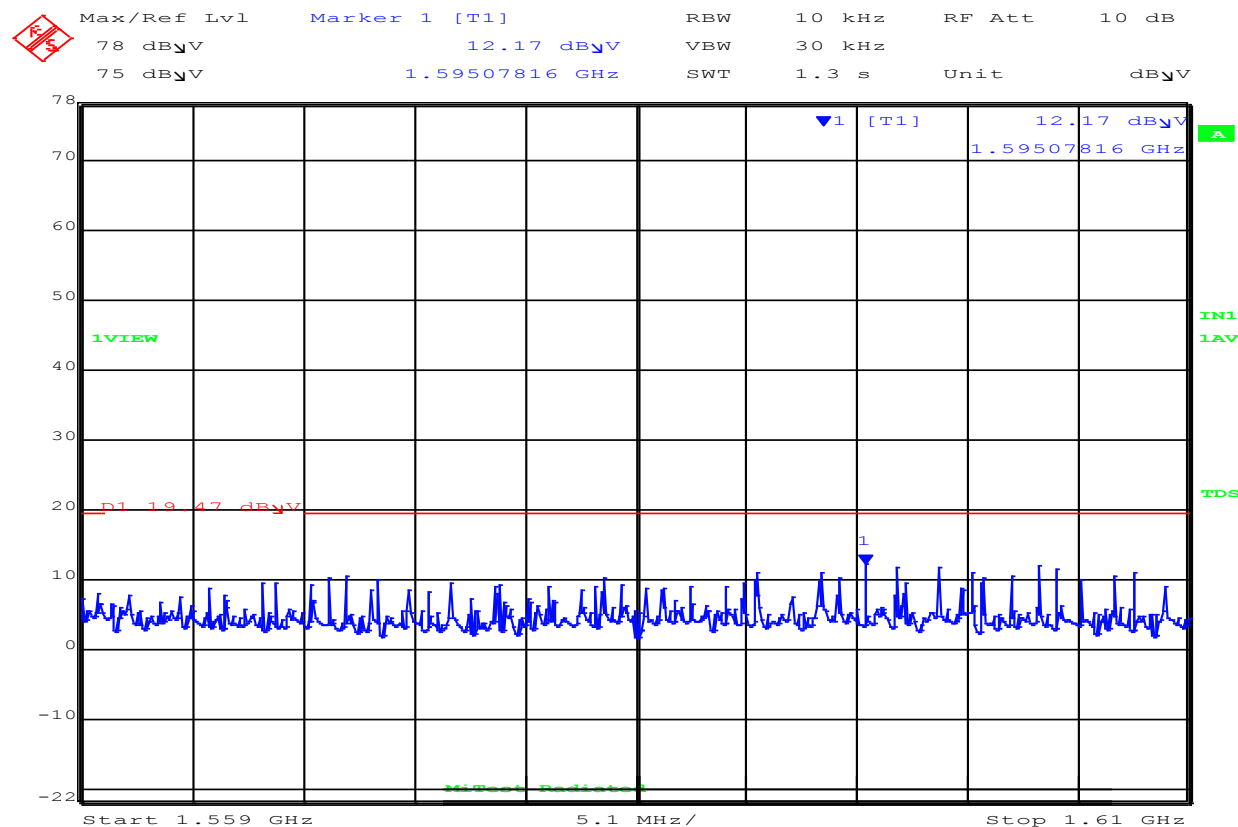
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

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



Date: 7.NOV.2018 12:17:47

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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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

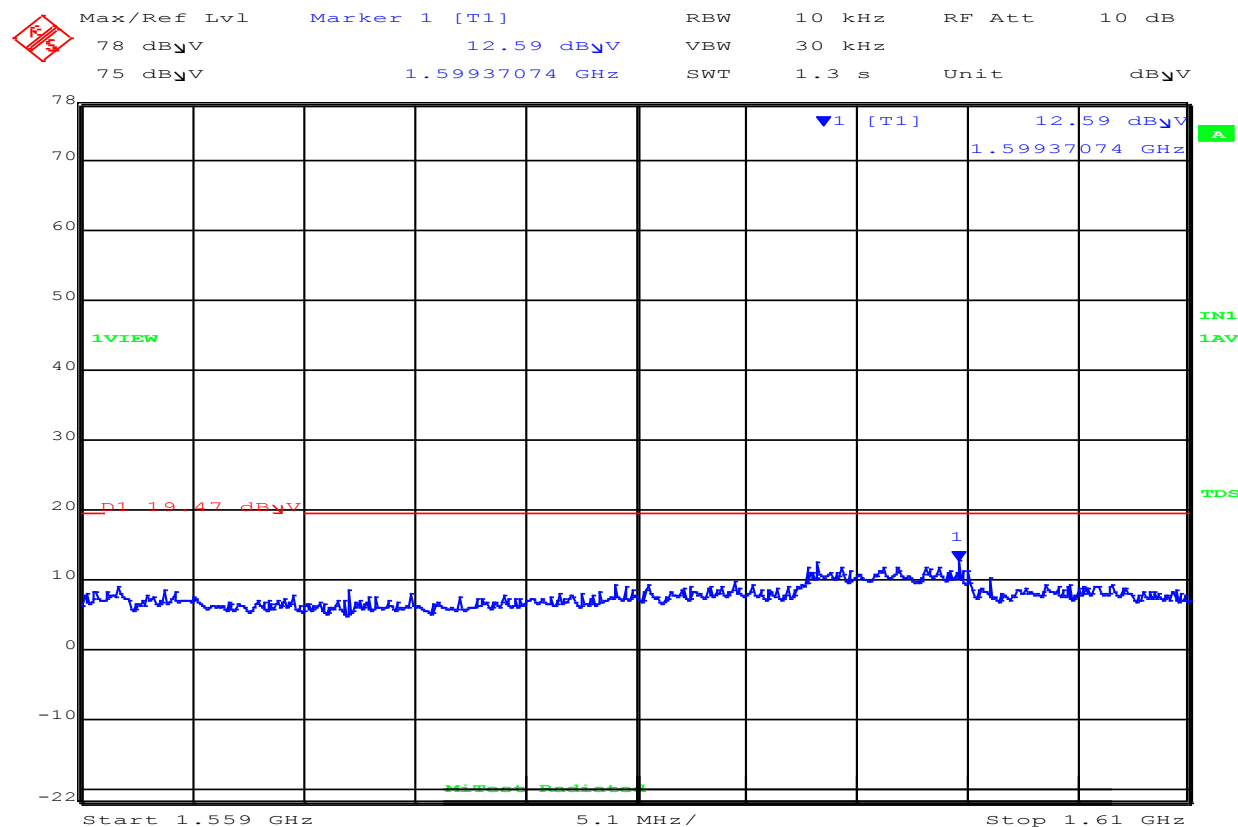
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

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

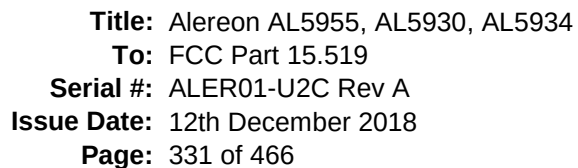


Date: 7.NOV.2018 12:14:28

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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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal	
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Test Measurement Results	
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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

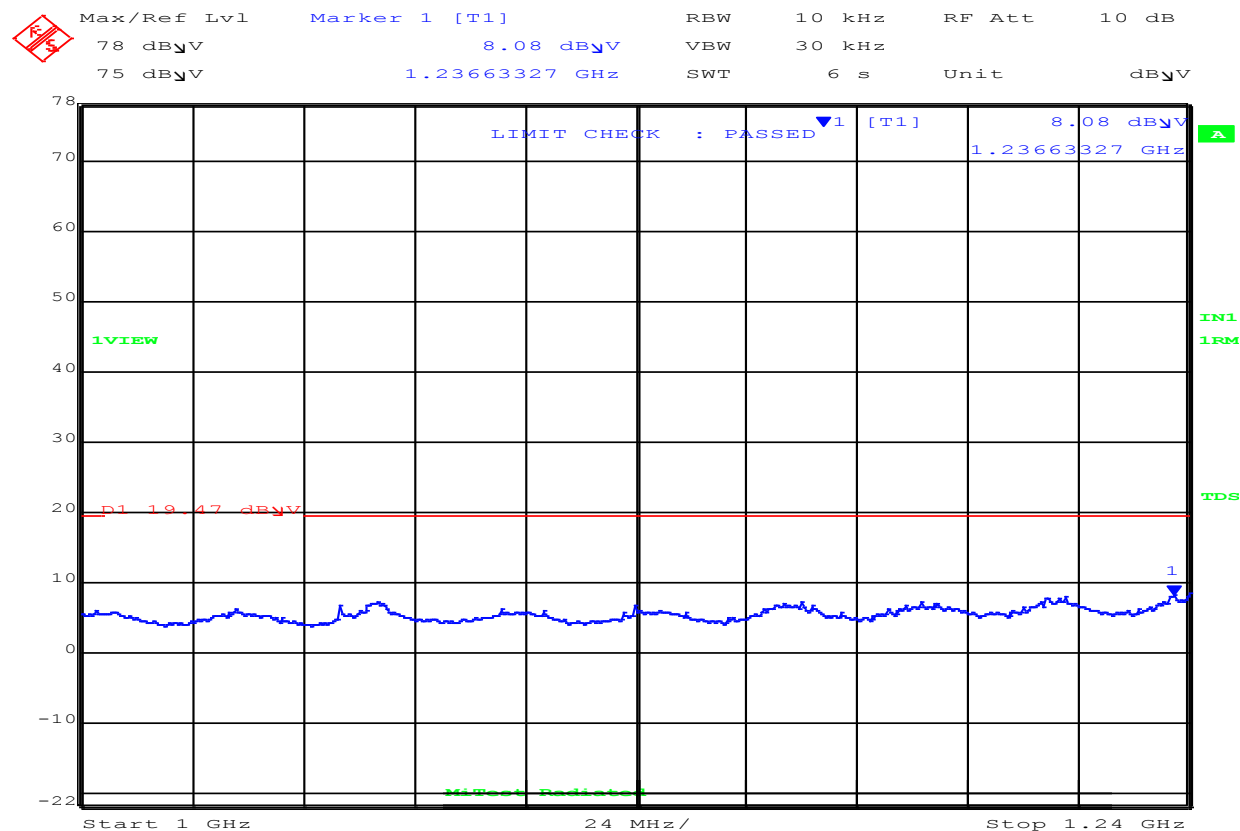
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

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



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

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 1.559-1.610 GHz Horizontal

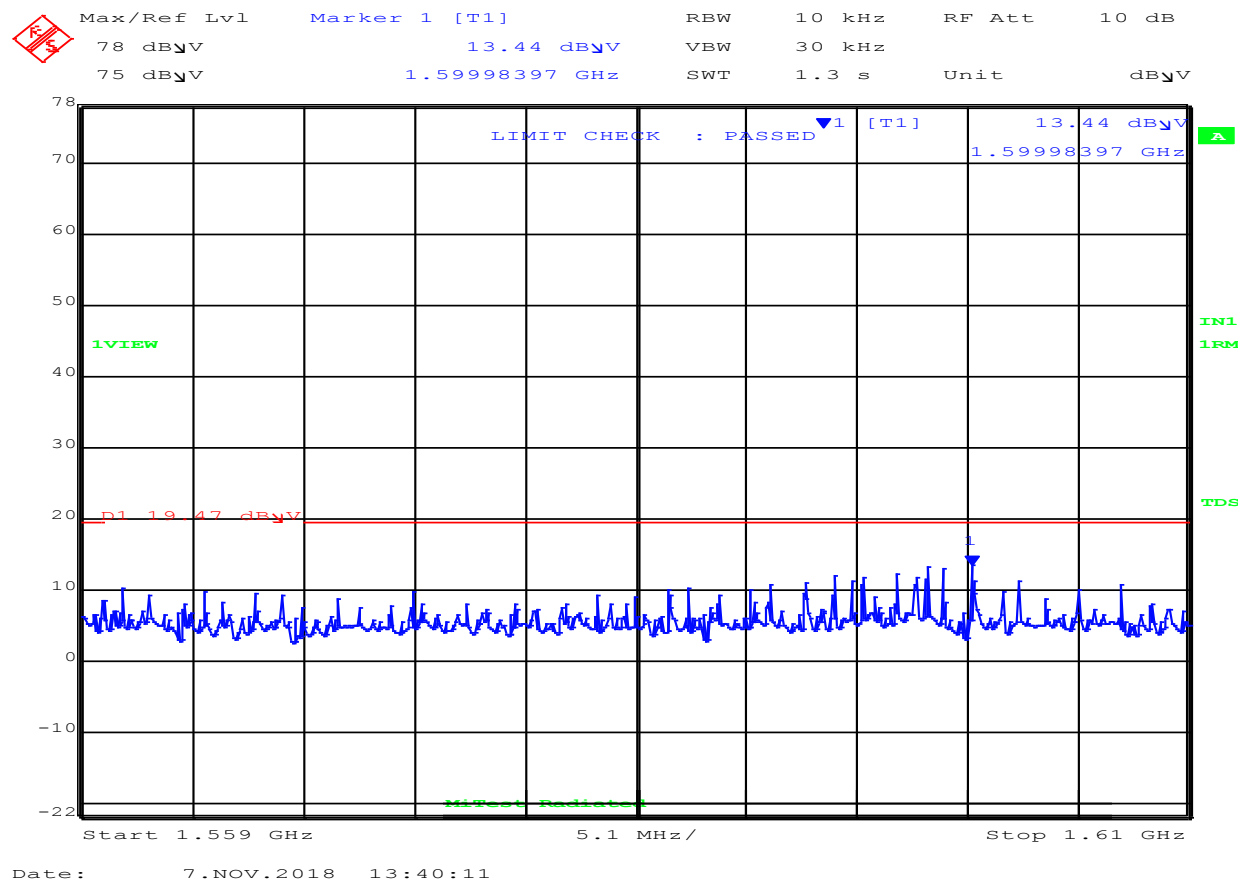
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 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
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

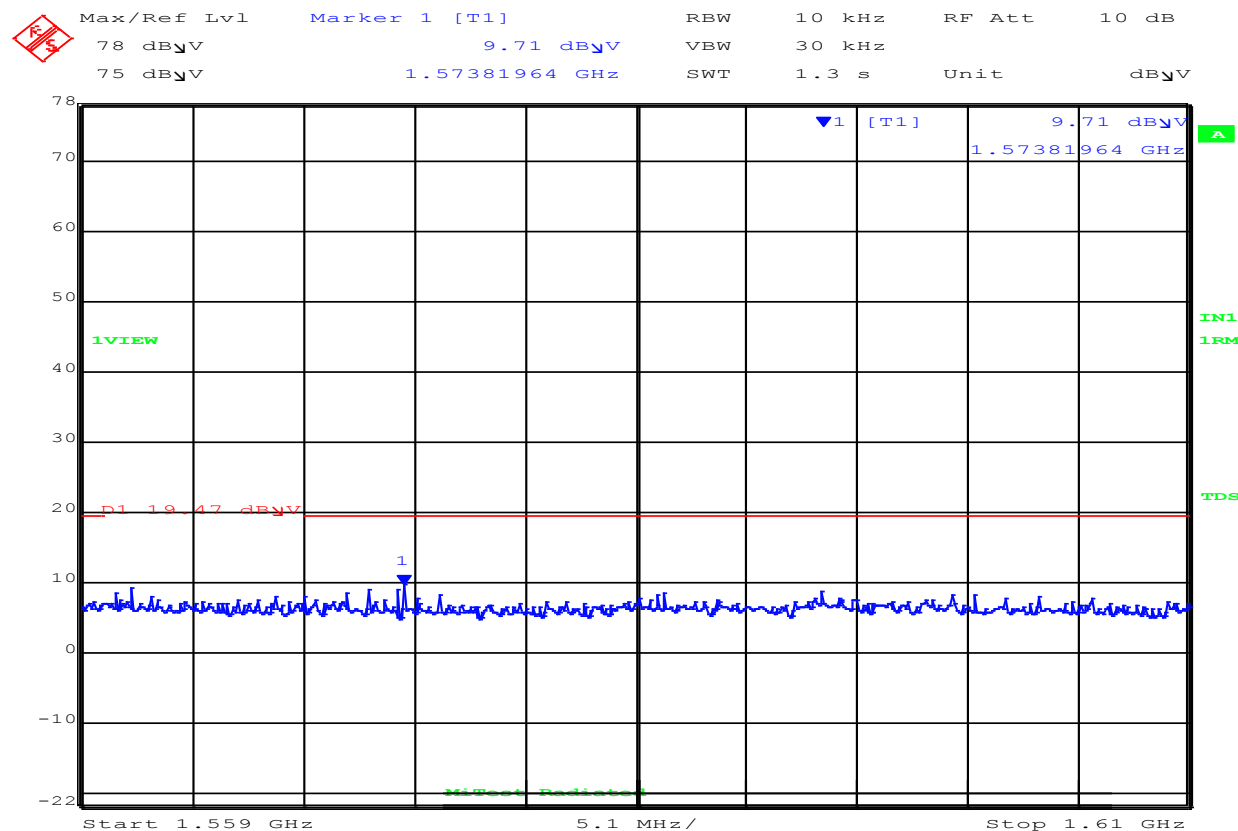
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

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 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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6600 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

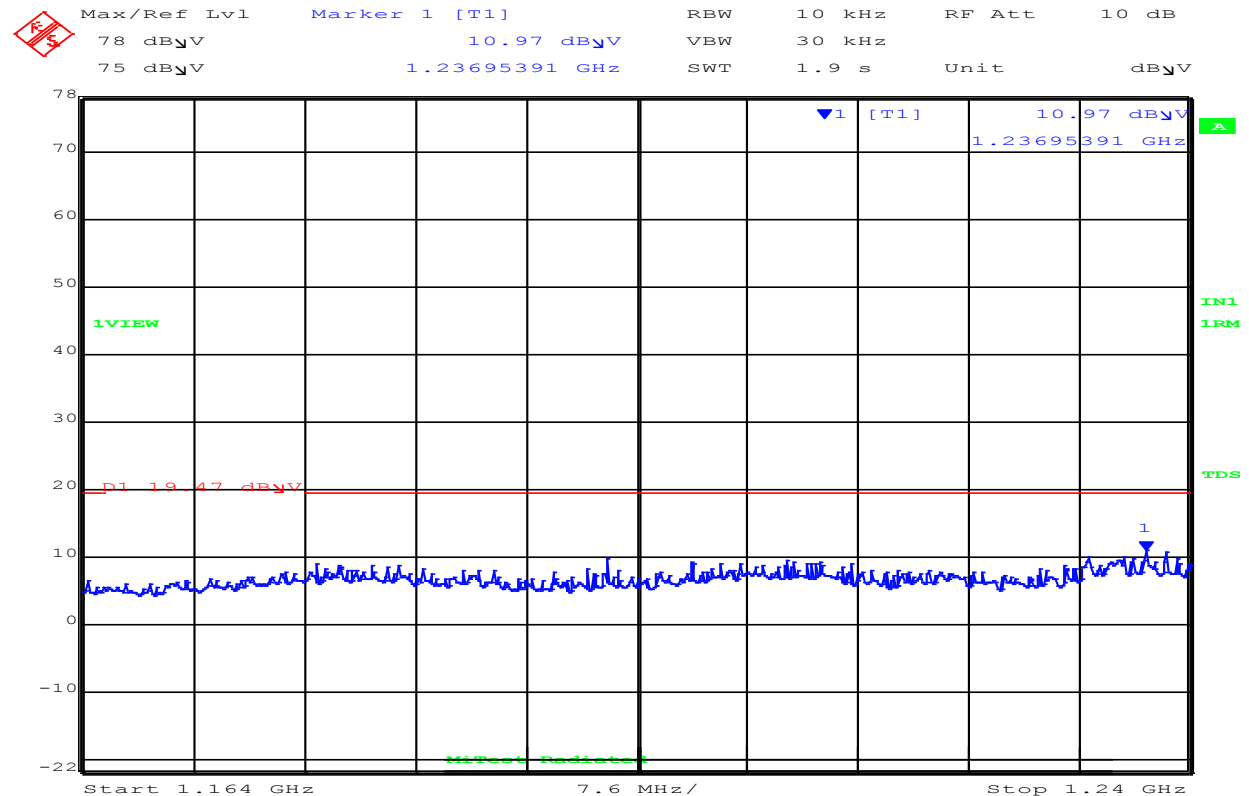
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

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



Date: 7.NOV.2018 13:53:35

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

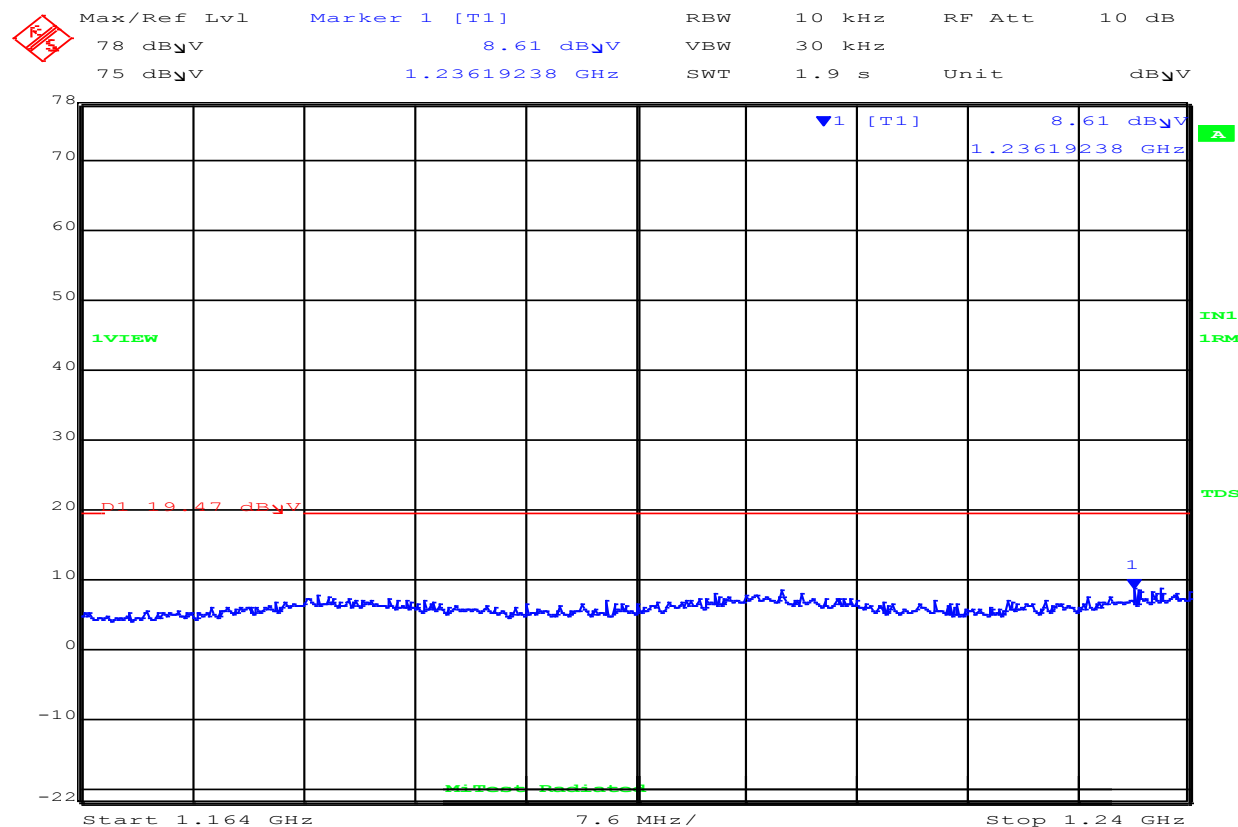
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

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



Date: 7.NOV.2018 13:55:05

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 1.559-1.610 GHz Horizontal

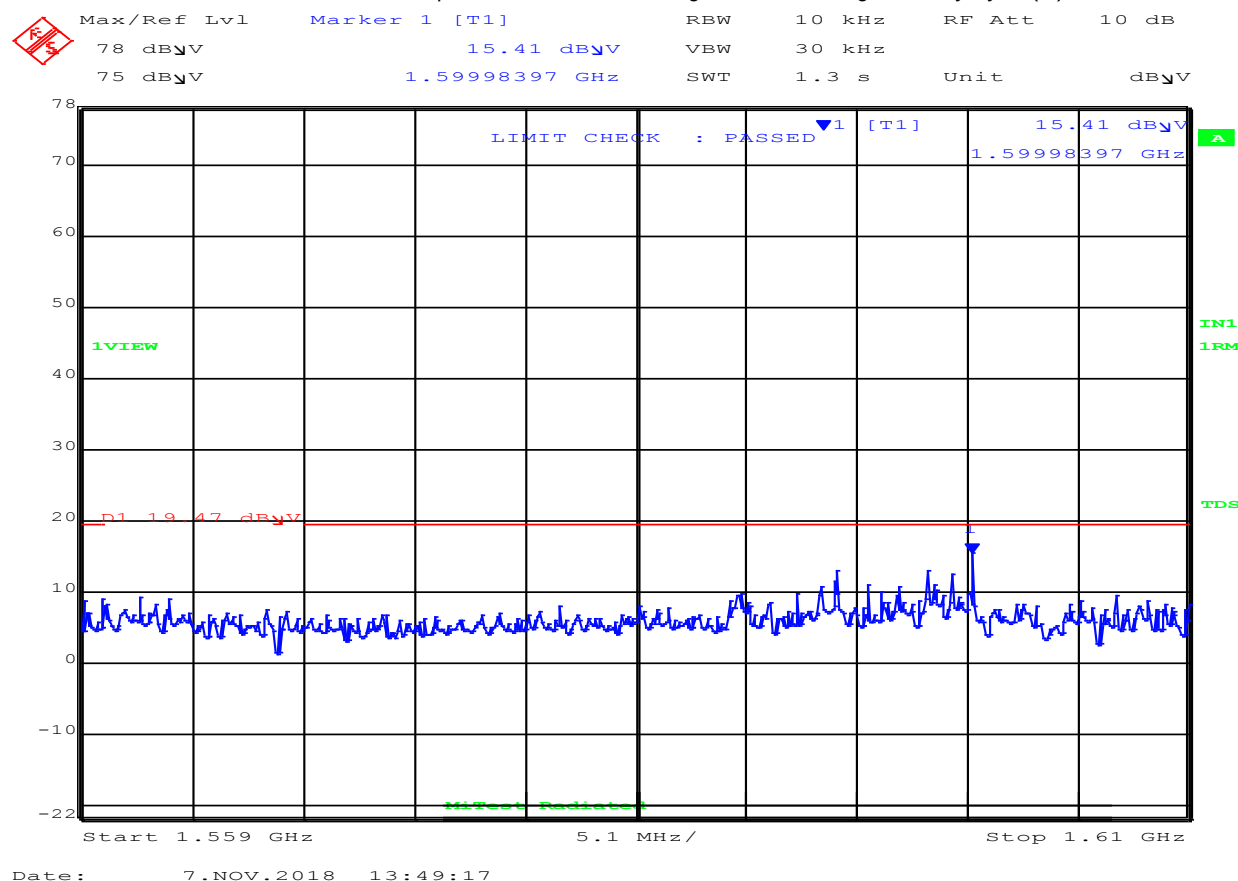
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

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



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	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

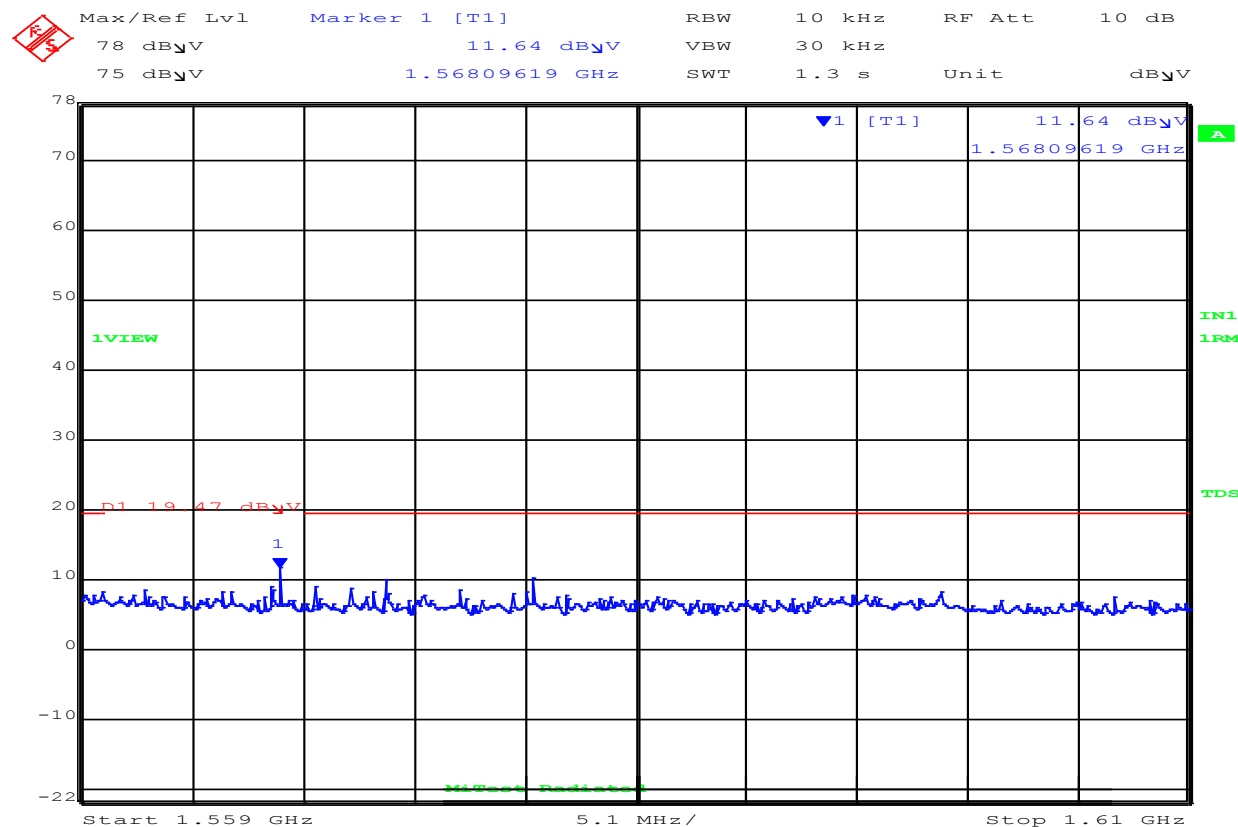
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

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

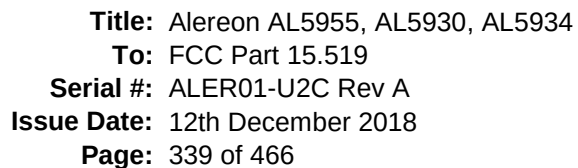


Date: 7.NOV.2018 13:46:34

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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[illegible]

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

 RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

Max/Ref Lvl 78 dBμV Marker 1 [T1] 8.39 dBμV RBW 10 kHz RF Att 10 dB

75 dBμV 1.23893387 GHz SWT 1.9 s Unit dBμV

LIMIT CHECK : PASSED [T1] 8.39 dBμV 1.23893387 GHz

1VIEW

D1 19.47 dBμV

1

MiTest Radiator

Start 1.164 GHz 7.6 MHz/ Stop 1.24 GHz

Date: 7.NOV.2018 14:25:01

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:									

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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

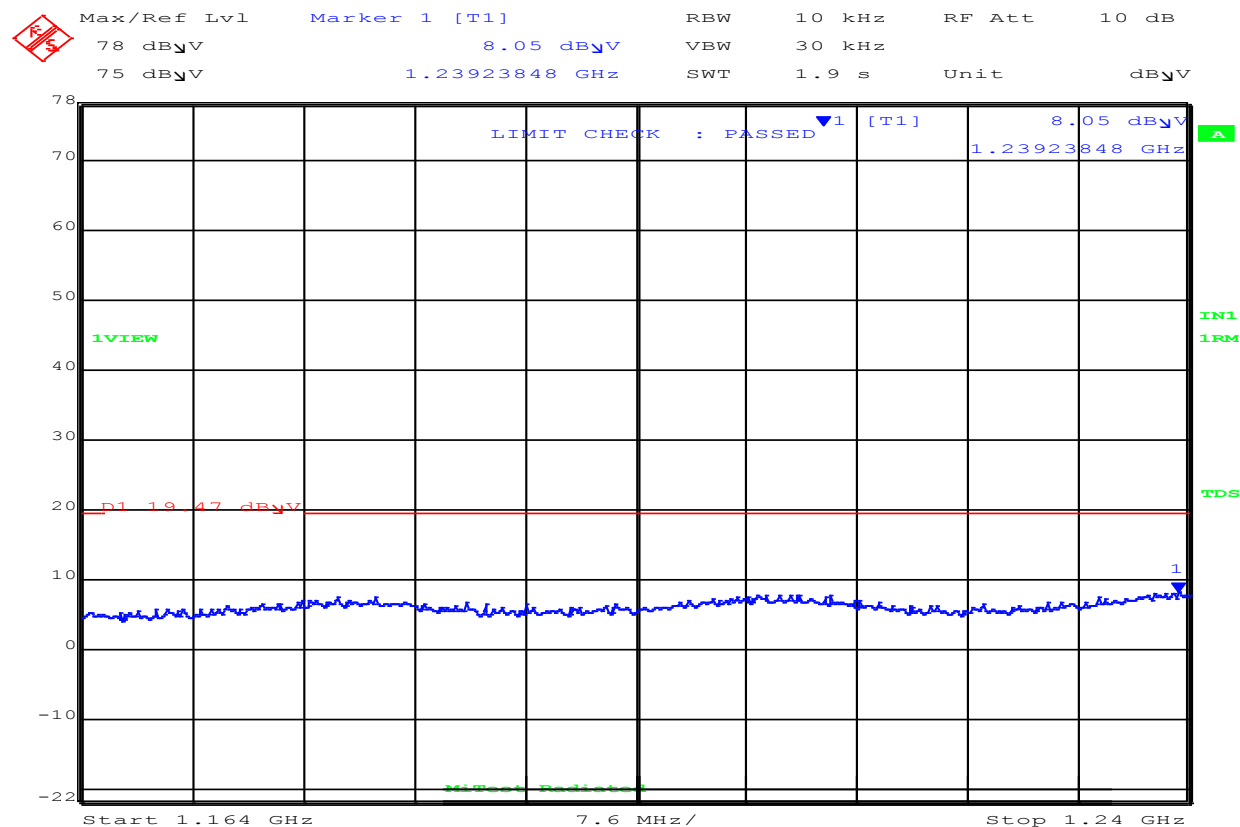
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

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



Date: 7.NOV.2018 14:23:13

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 1.559-1.610 GHz Horizontal

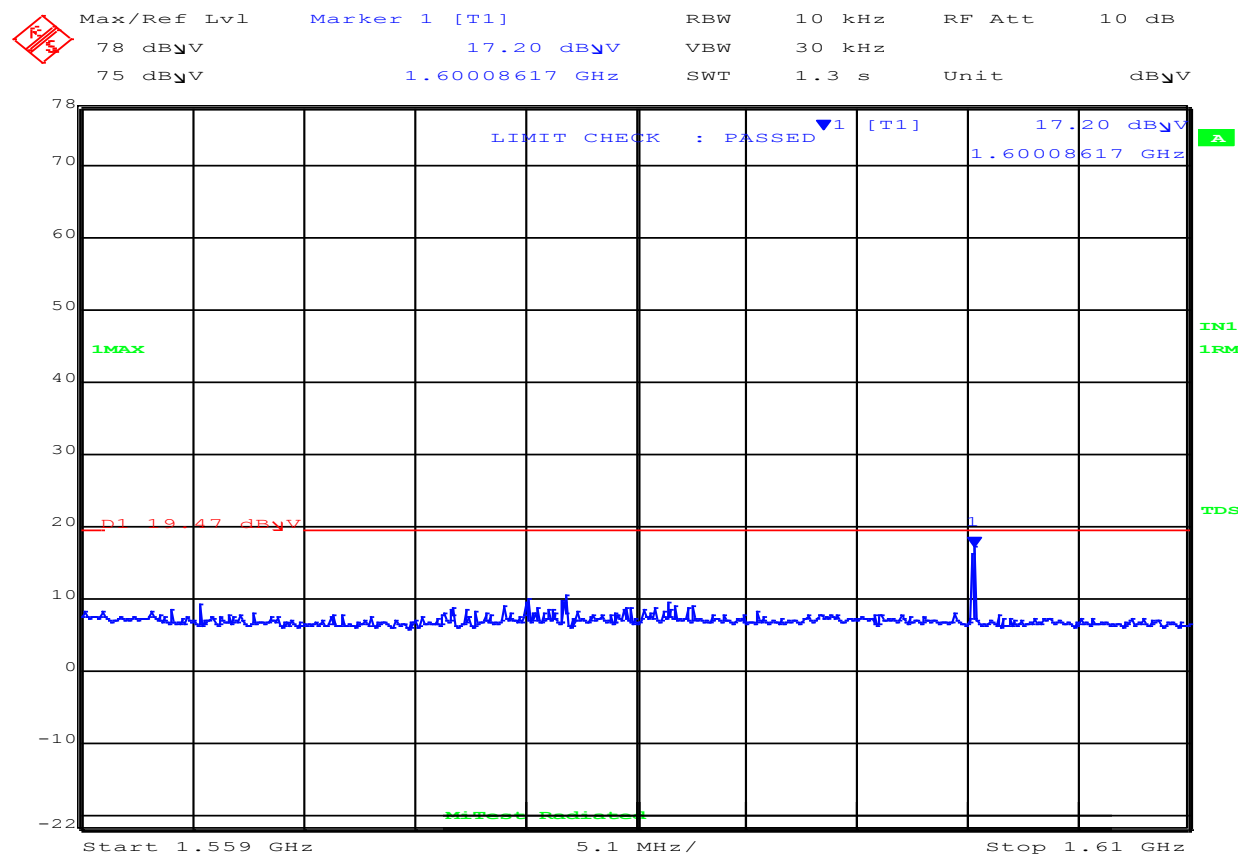
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

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



Date: 7.NOV.2018 14:27:39

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	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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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

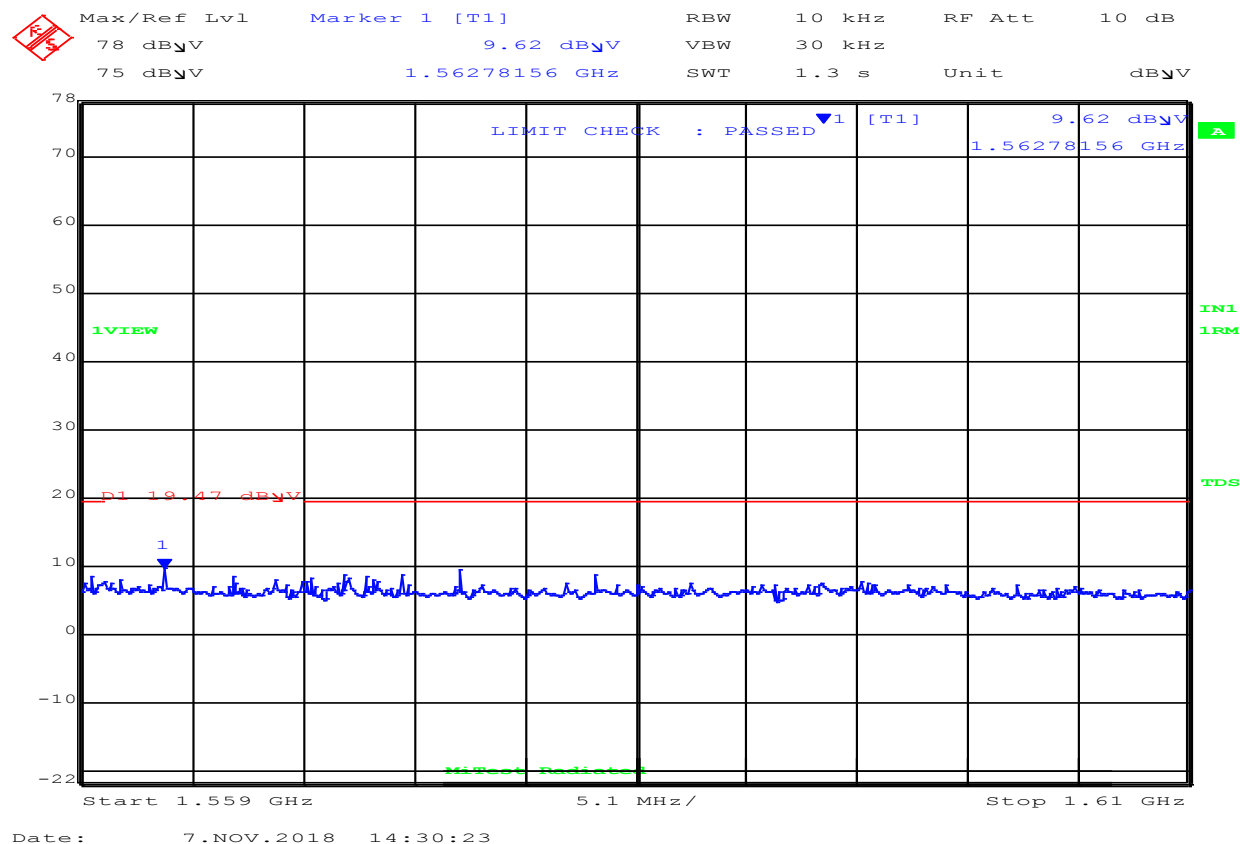
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, 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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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

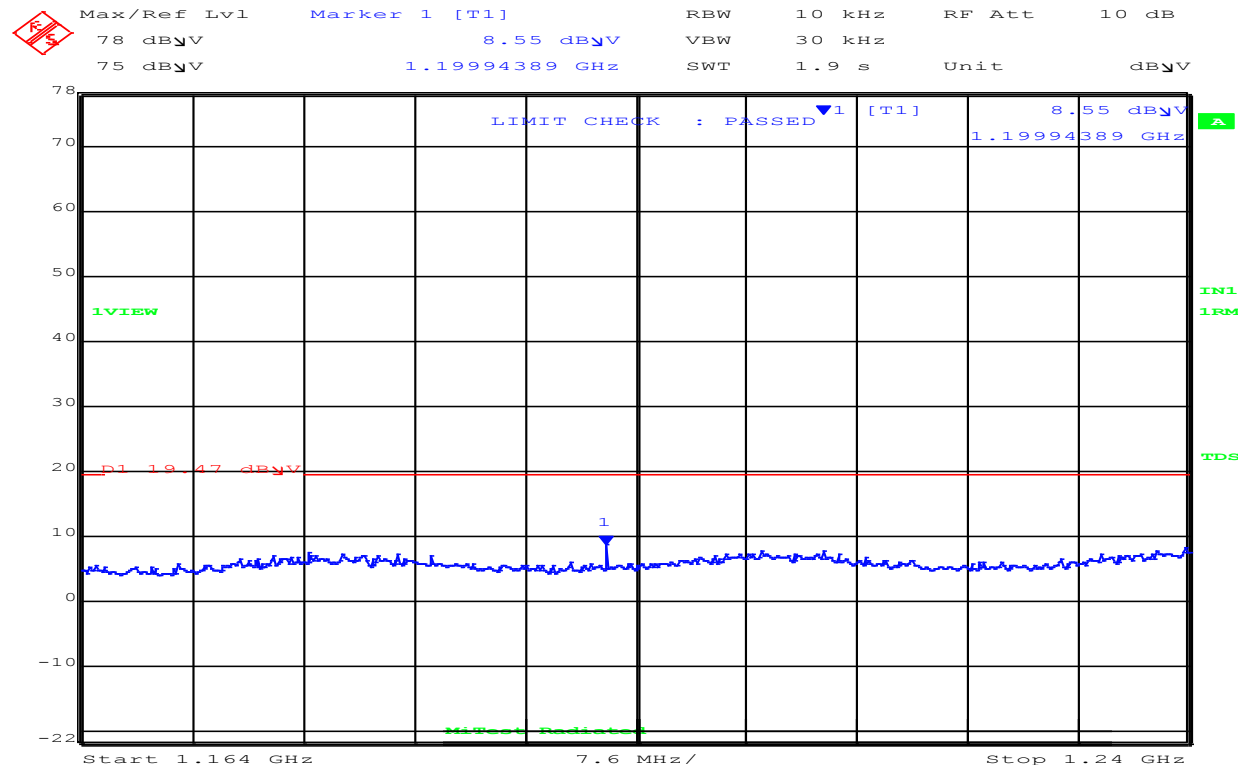
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

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



Date: 7.NOV.2018 14:47:39

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

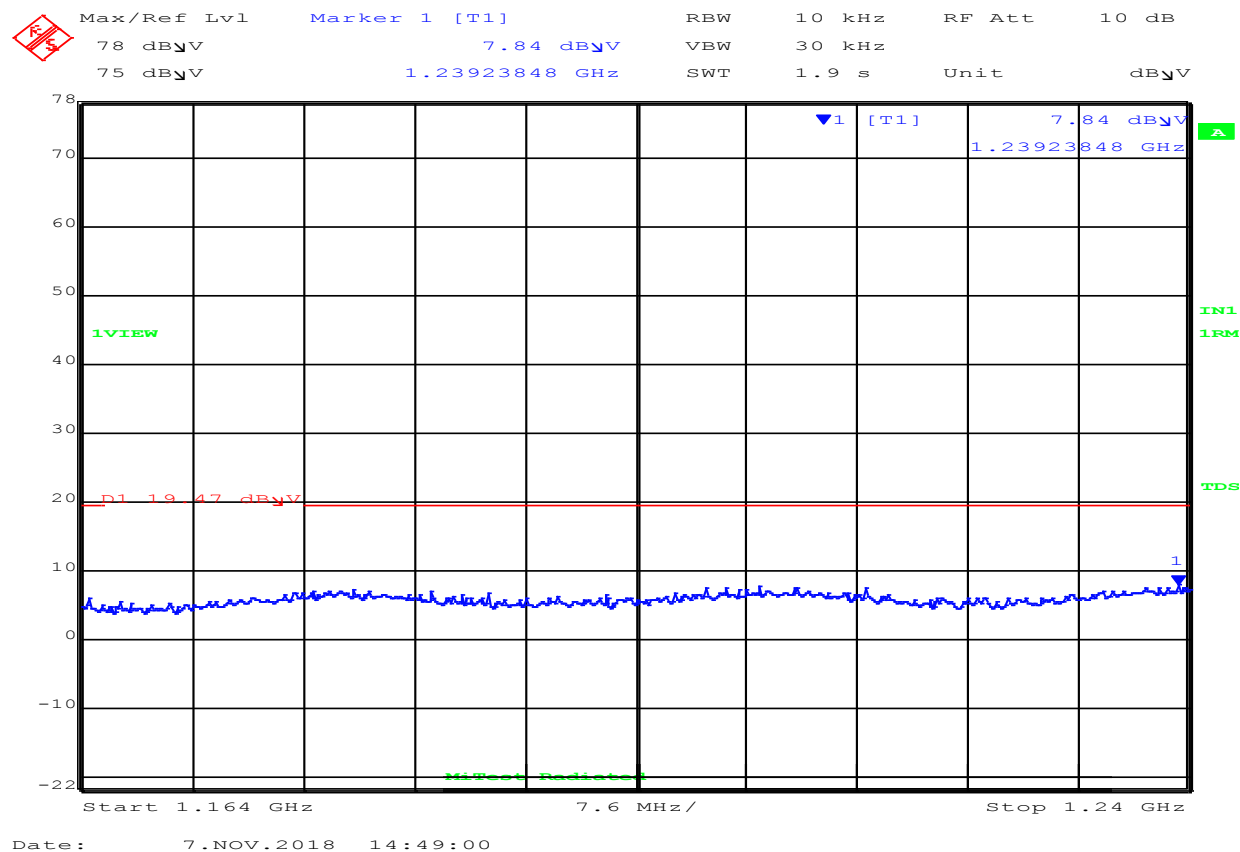
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

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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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

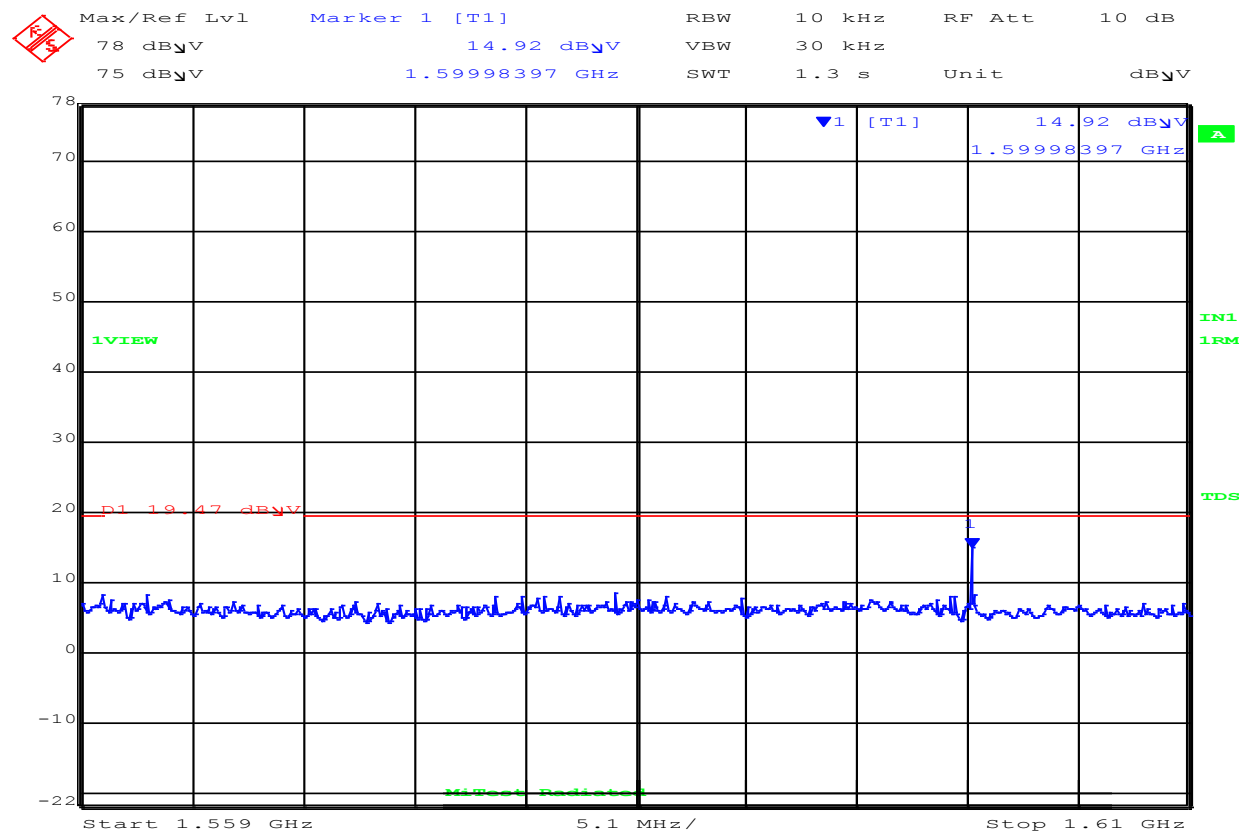
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

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 14:44:44

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	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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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

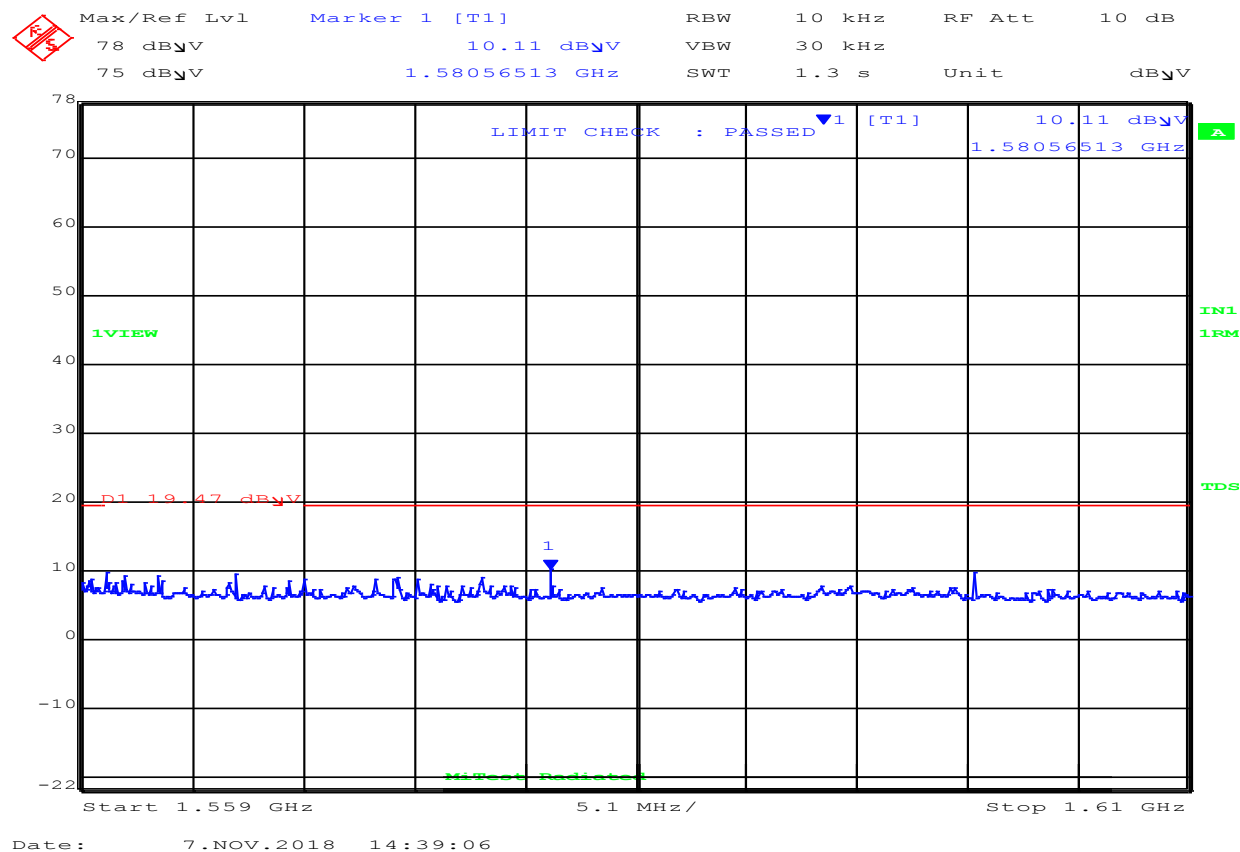
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

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



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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8184 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

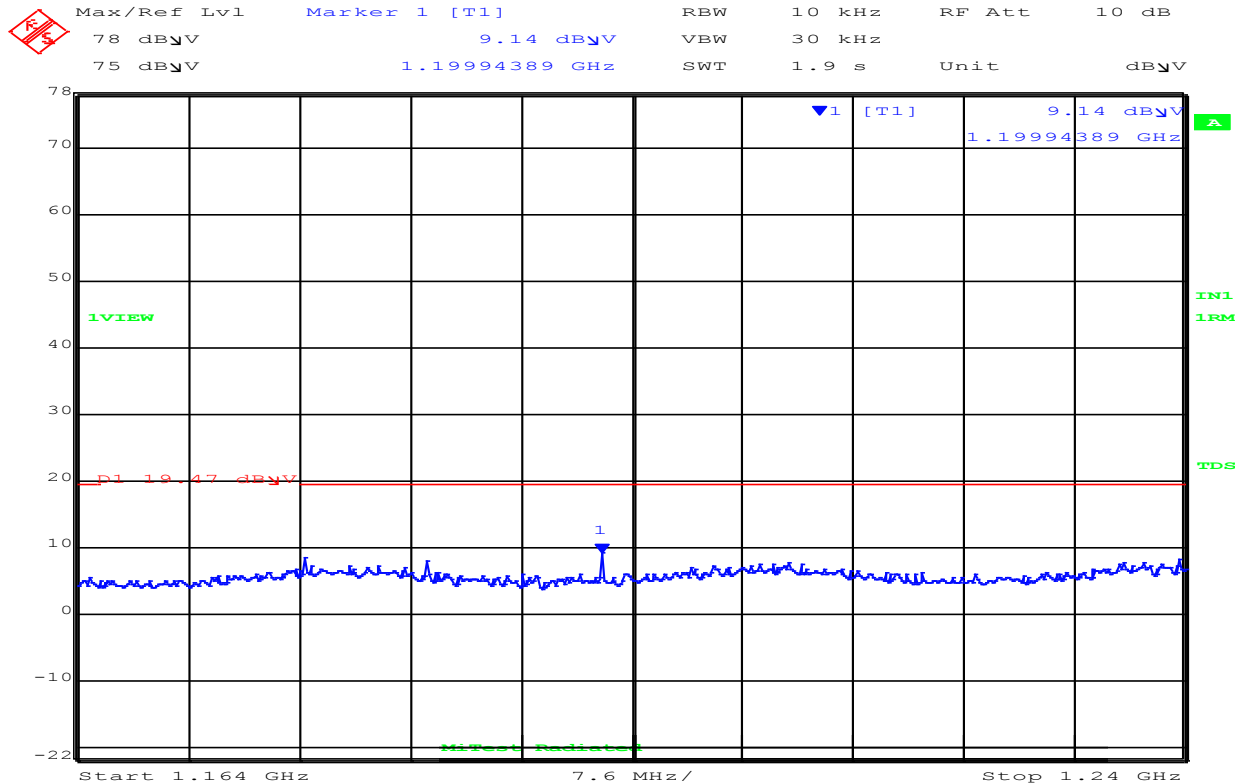
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

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



Date: 7.NOV.2018 15:05:21

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

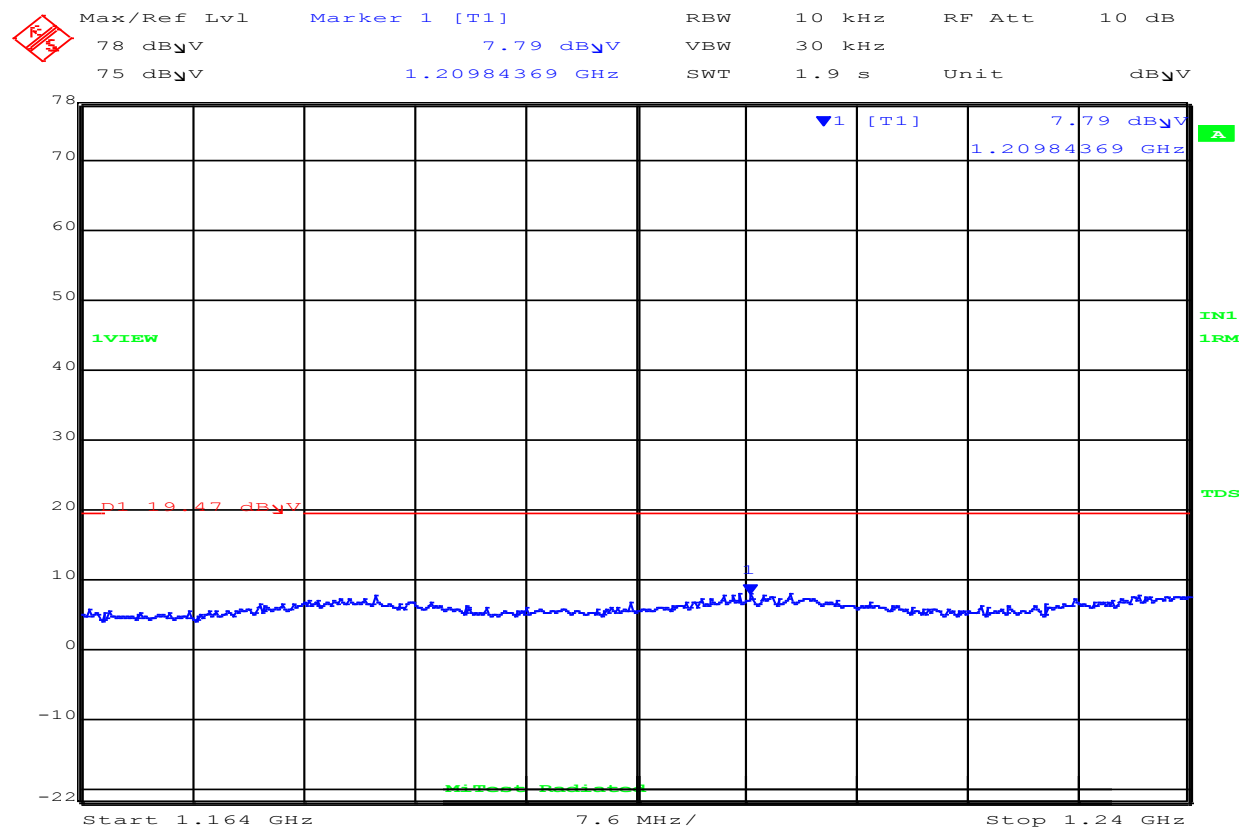
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

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



Date: 7.NOV.2018 15:03:14

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 1.559-1.610 GHz Horizontal

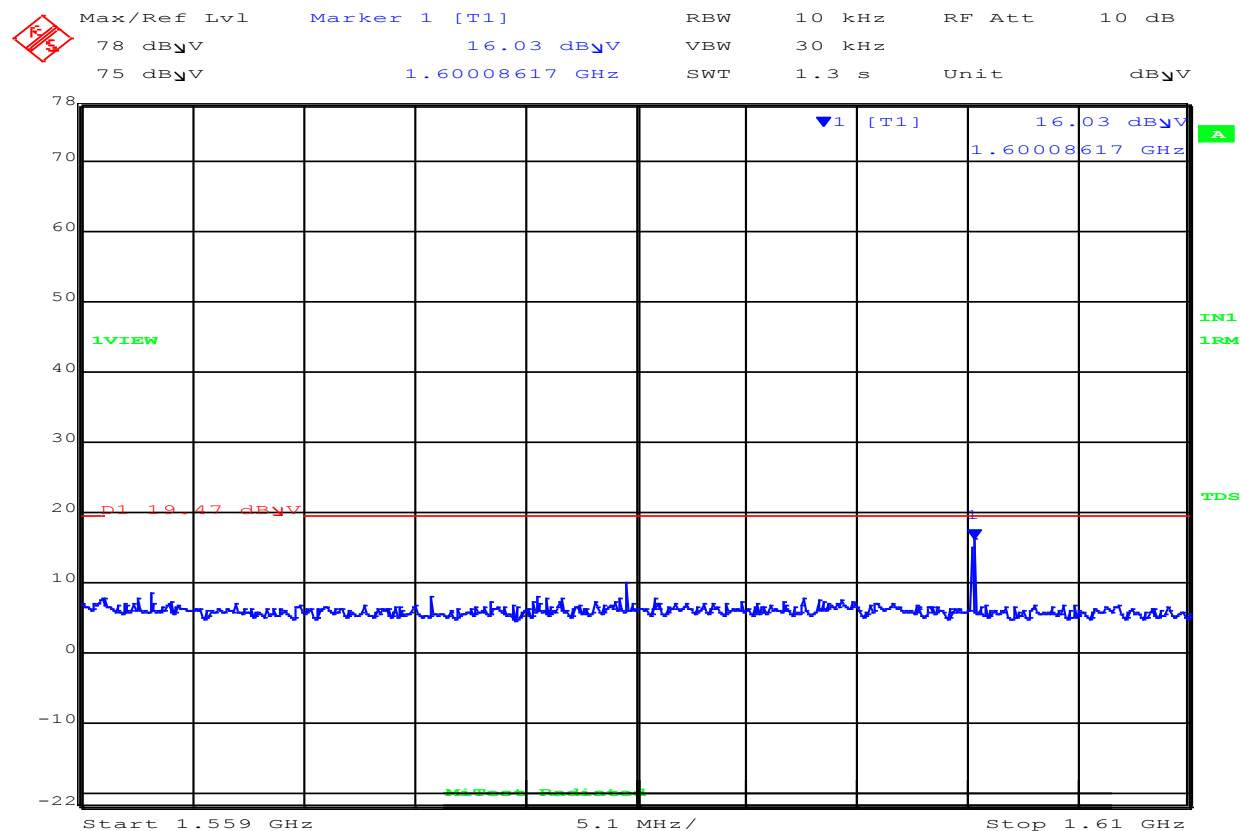
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

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



Date: 7.NOV.2018 15:06:35

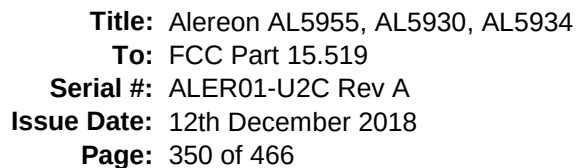
1559.00-1610.00 MHz

Num	Frequency MHz	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
2	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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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 Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99

Max/Ref Lvl Marker 1 [T1] RBW 10 kHz RF Att 10 dB

78 dBμV 8.26 dBμV VBW 30 kHz

75 dBμV 1.57014028 GHz SWT 1.3 s Unit dBμV

▼1 [T1] 8.26 dBμV

1.57014028 GHz

1VIEW

D1 19.47 dBμV

1

HiTest Radiator

Start 1.559 GHz 5.1 MHz/ Stop 1.61 GHz

Date: 7.NOV.2018 15:09:44

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									

MiCOM Labs, 575 Boulder Court, Pleasanton, California 94566 USA, Phone: +1 (925) 462 0304, Fax: +1 (925) 462 0306, www.micomlabs.com



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8712 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

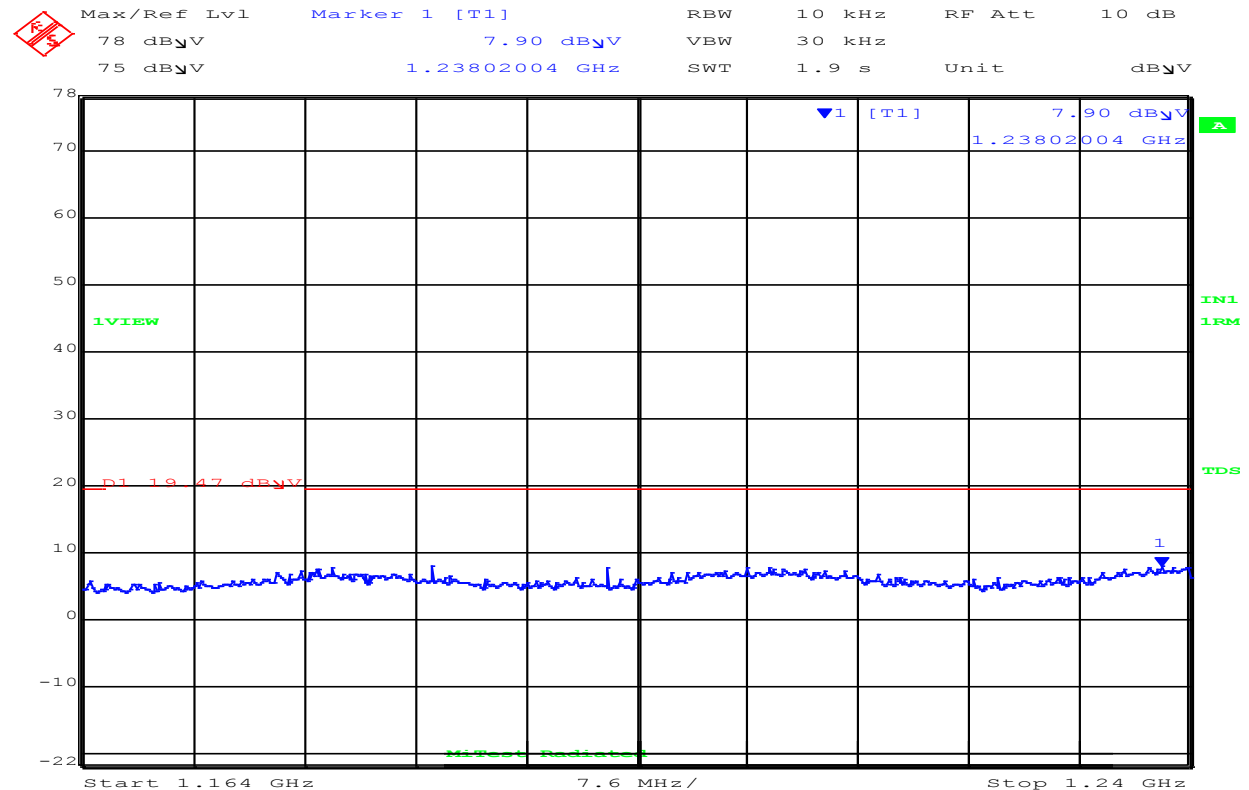
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

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



Date: 7.NOV.2018 15:18:47

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

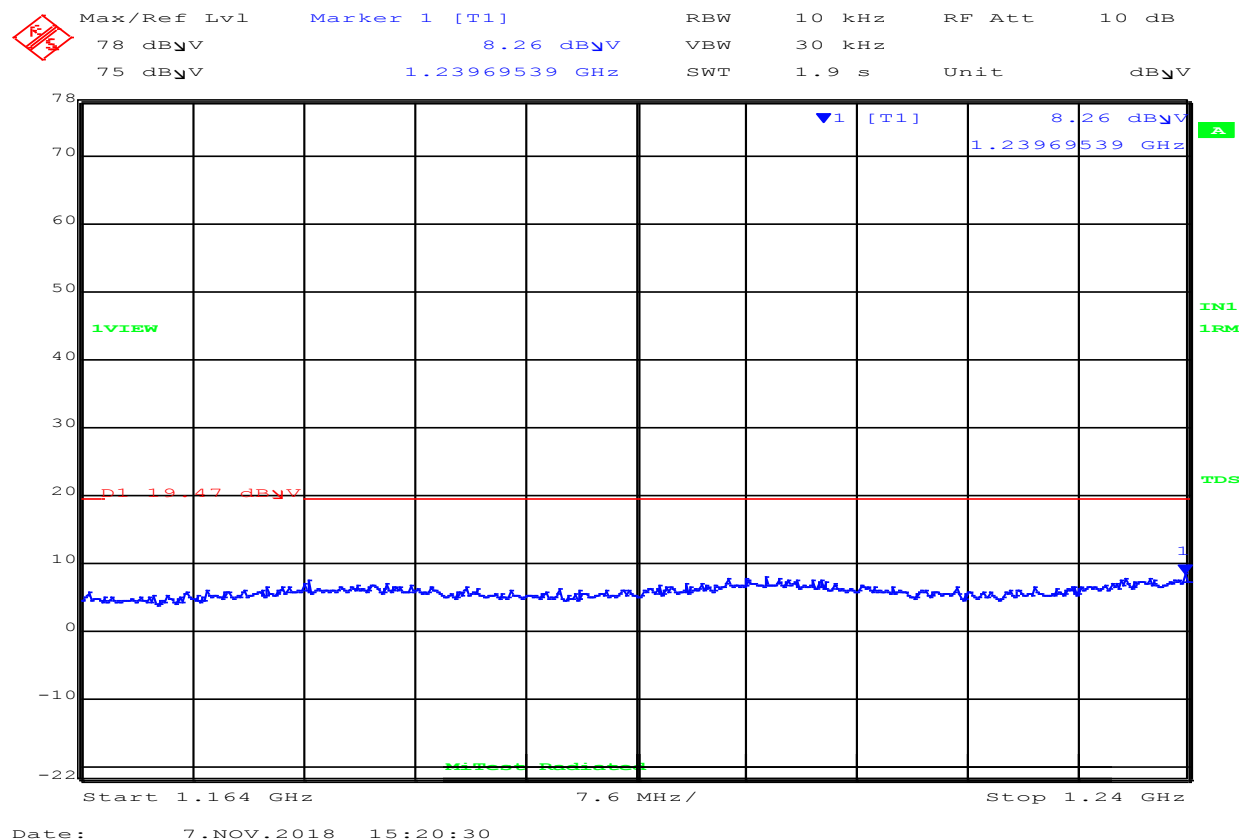
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

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



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 1.559-1.610 GHz Horizontal

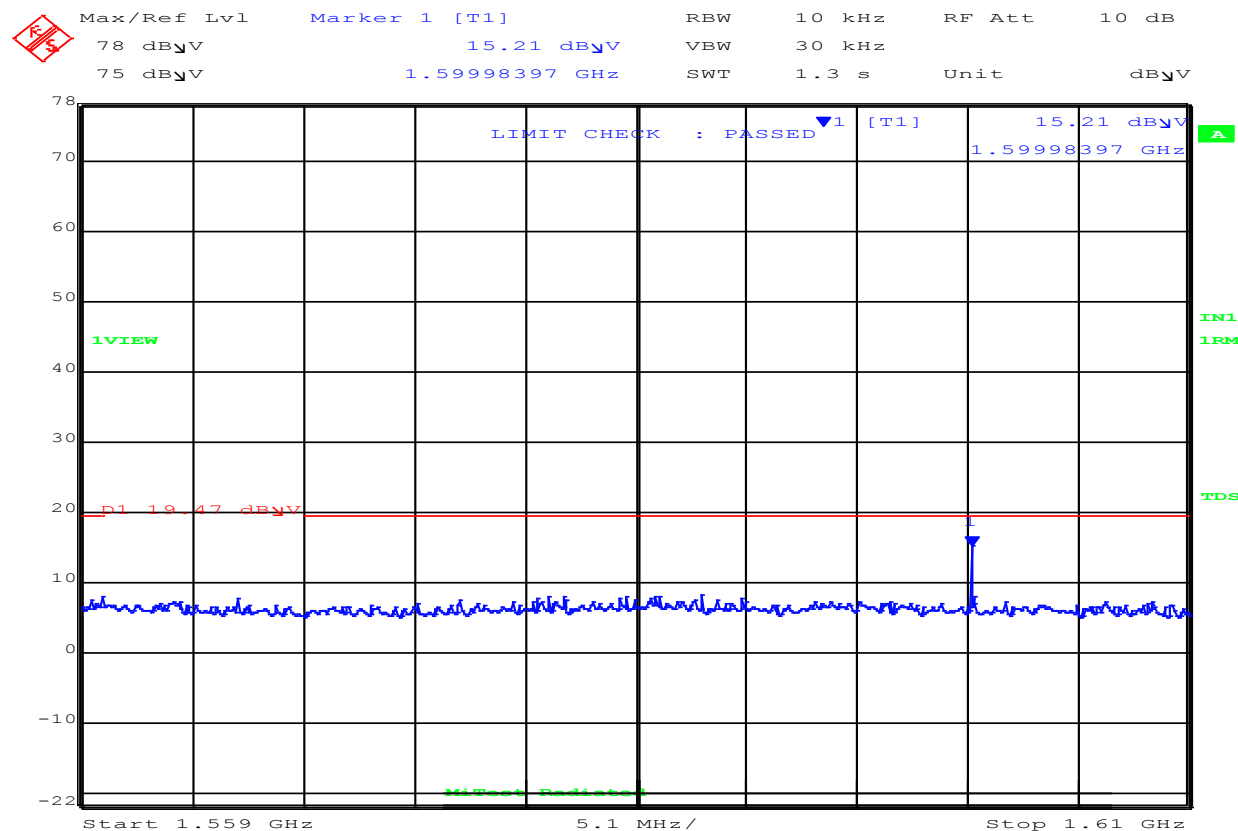
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

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



Date: 7.NOV.2018 15:14:23

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	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 1.559-1.610 GHz Vertical

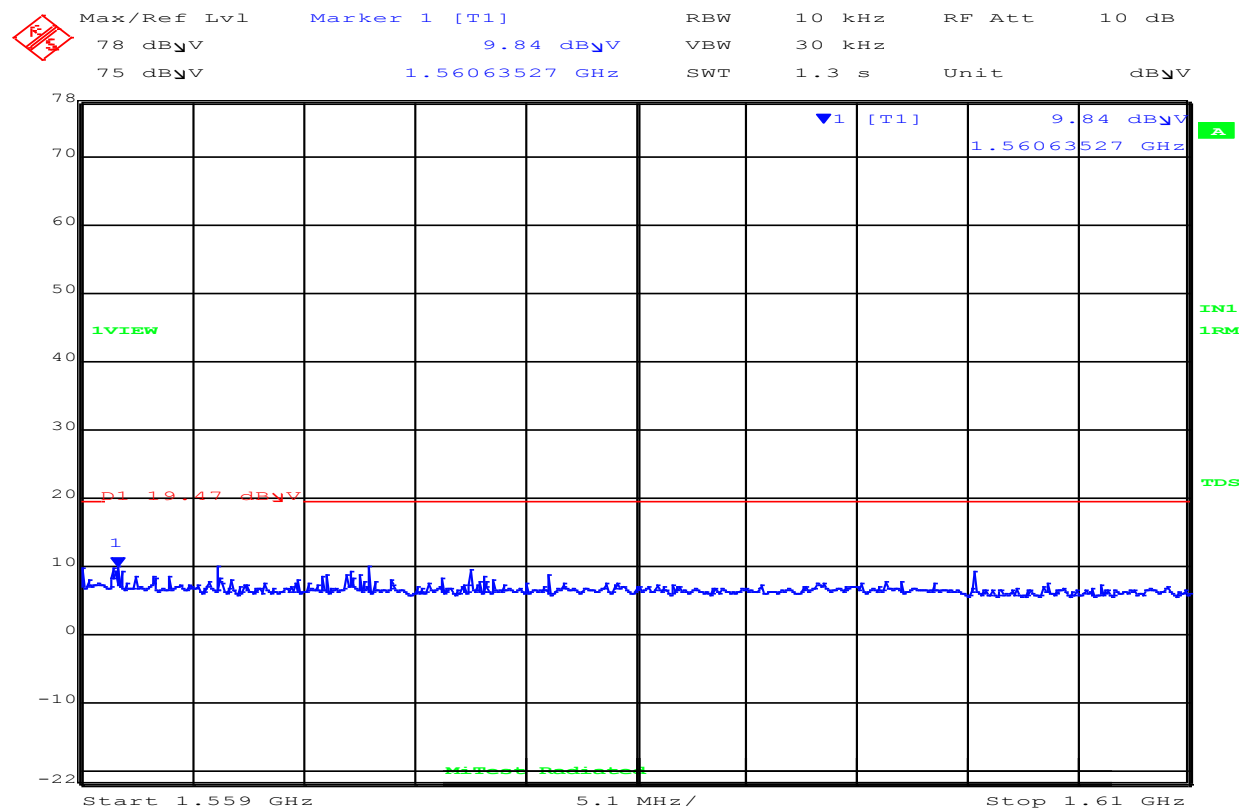
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610 GHz 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

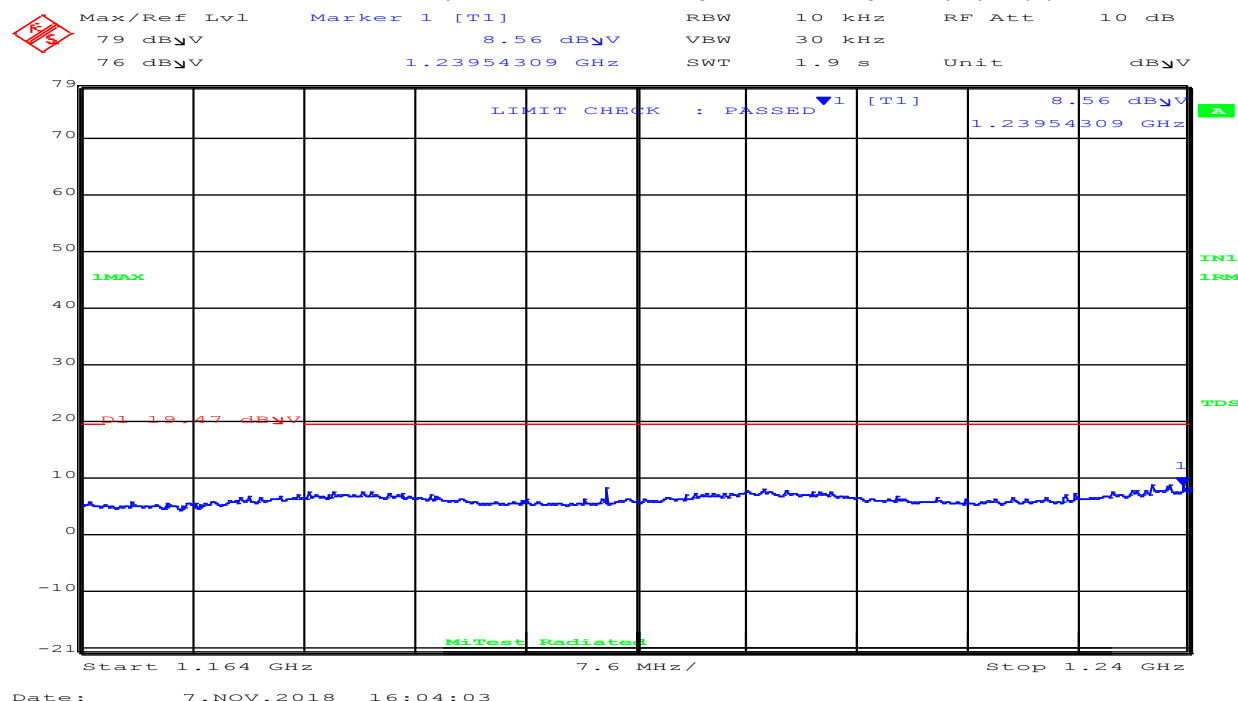
Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

Antenna:	Chip	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 Horizontal

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



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
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No Signals Found within 6 dB of Limit

Test Notes:

Laptop Removed

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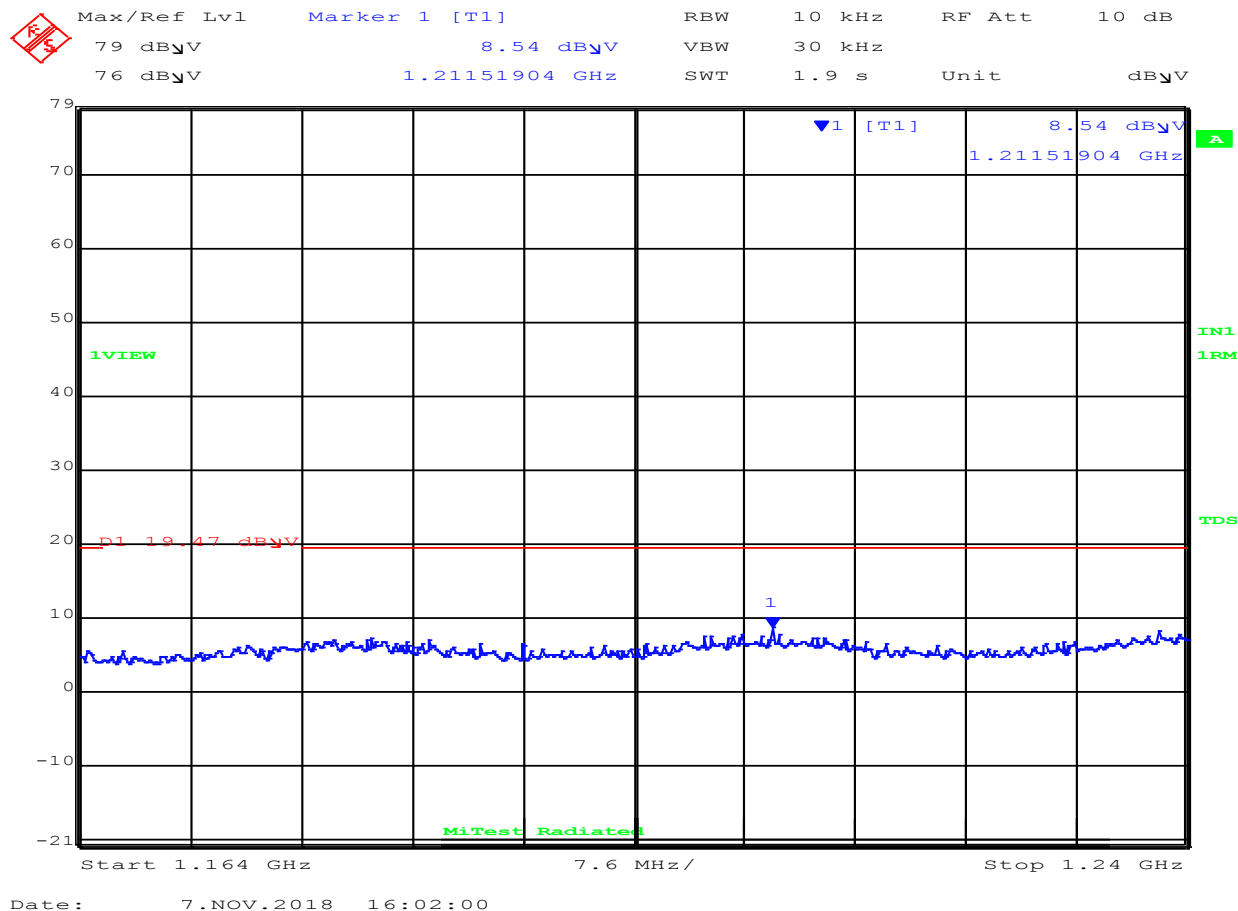
Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

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



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

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



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 1.559-1.610GHz Horizontal

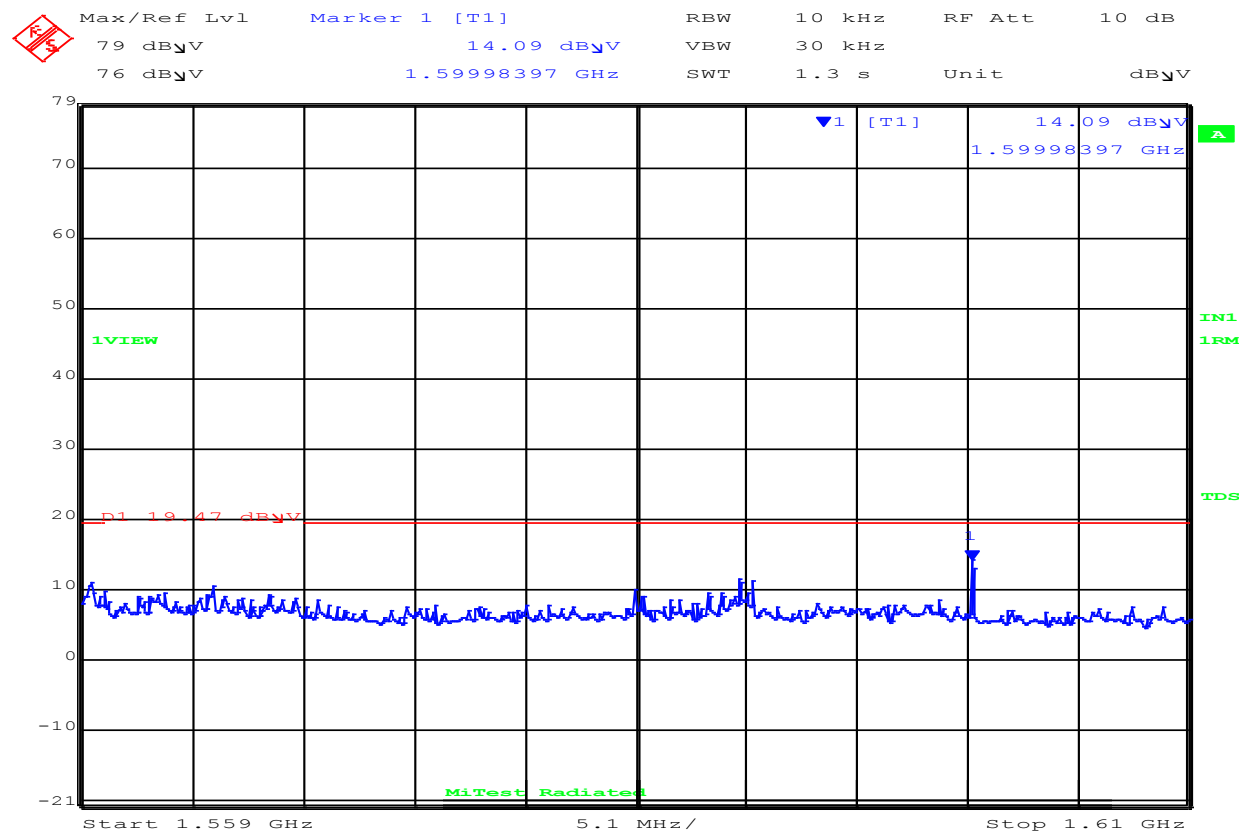
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

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



Date: 7.NOV.2018 16:06:26

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
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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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

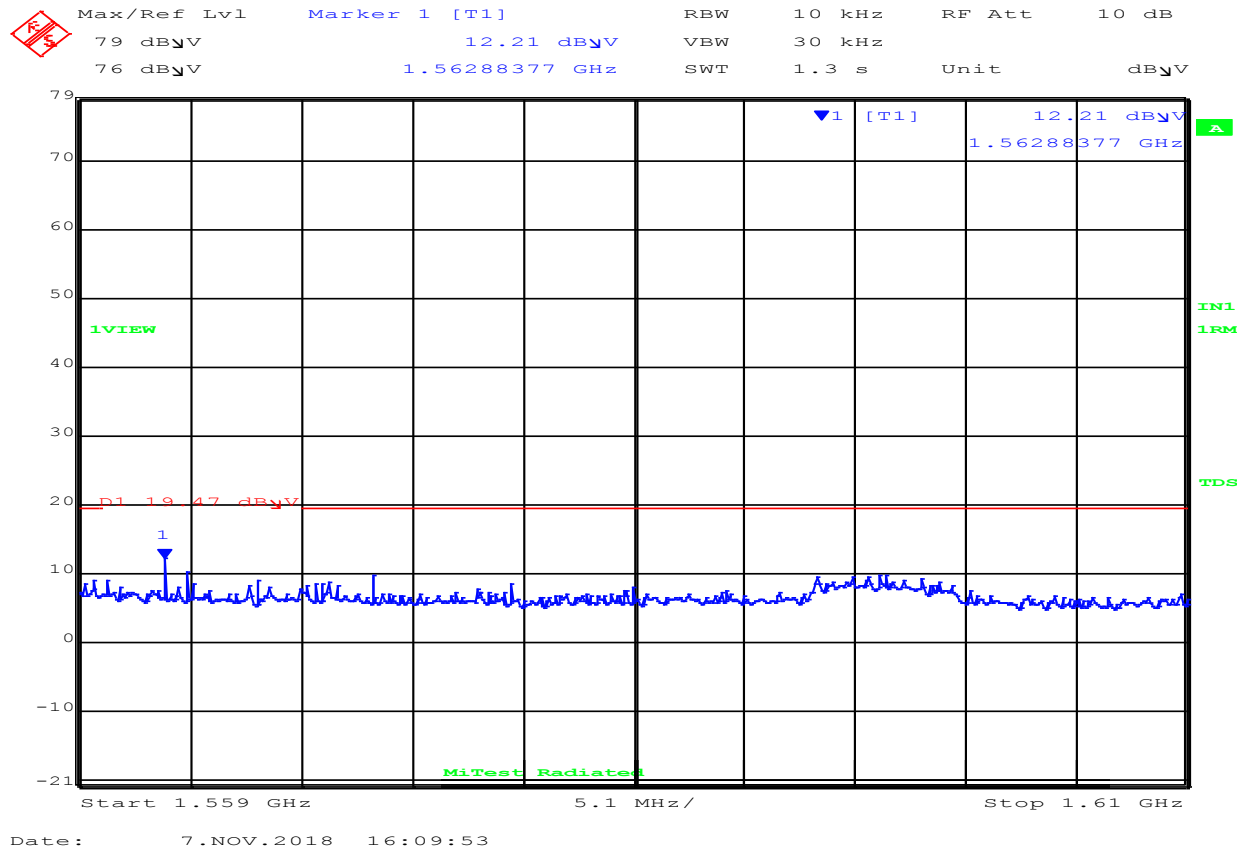
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

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



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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3960 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

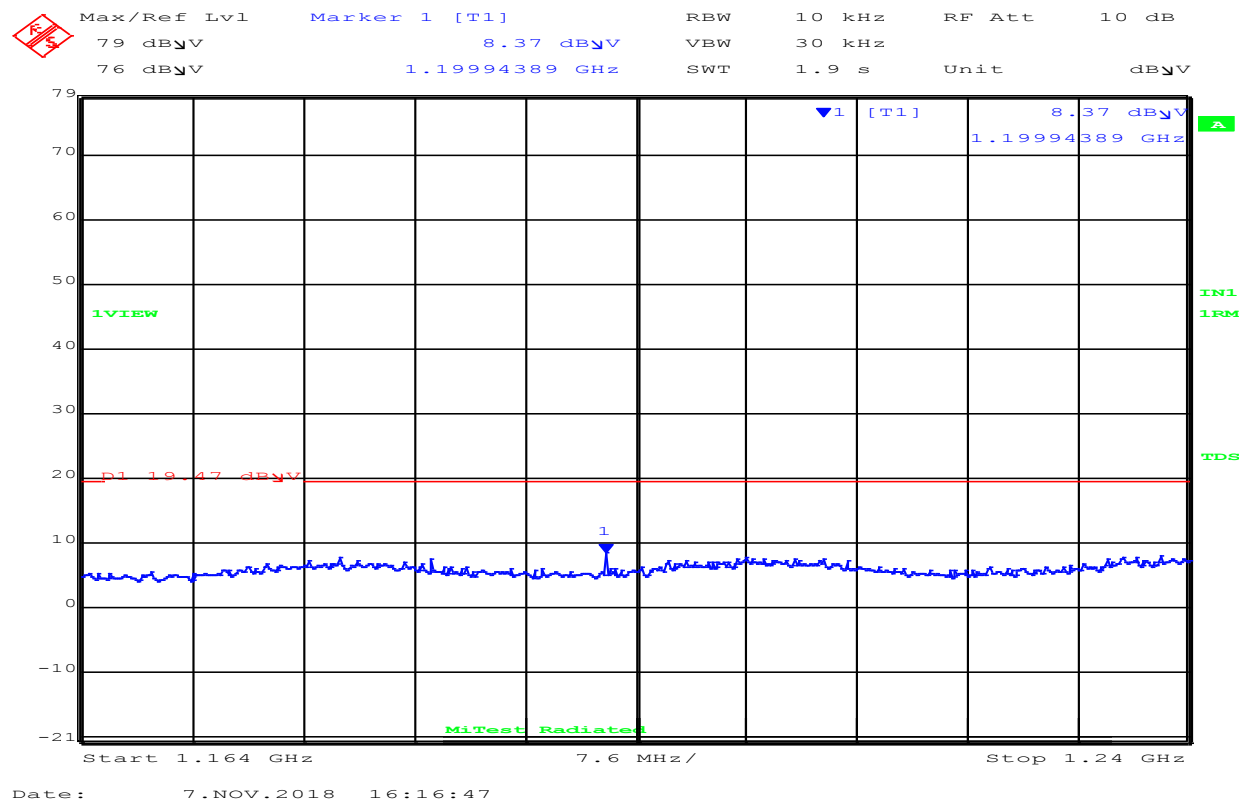
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 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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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

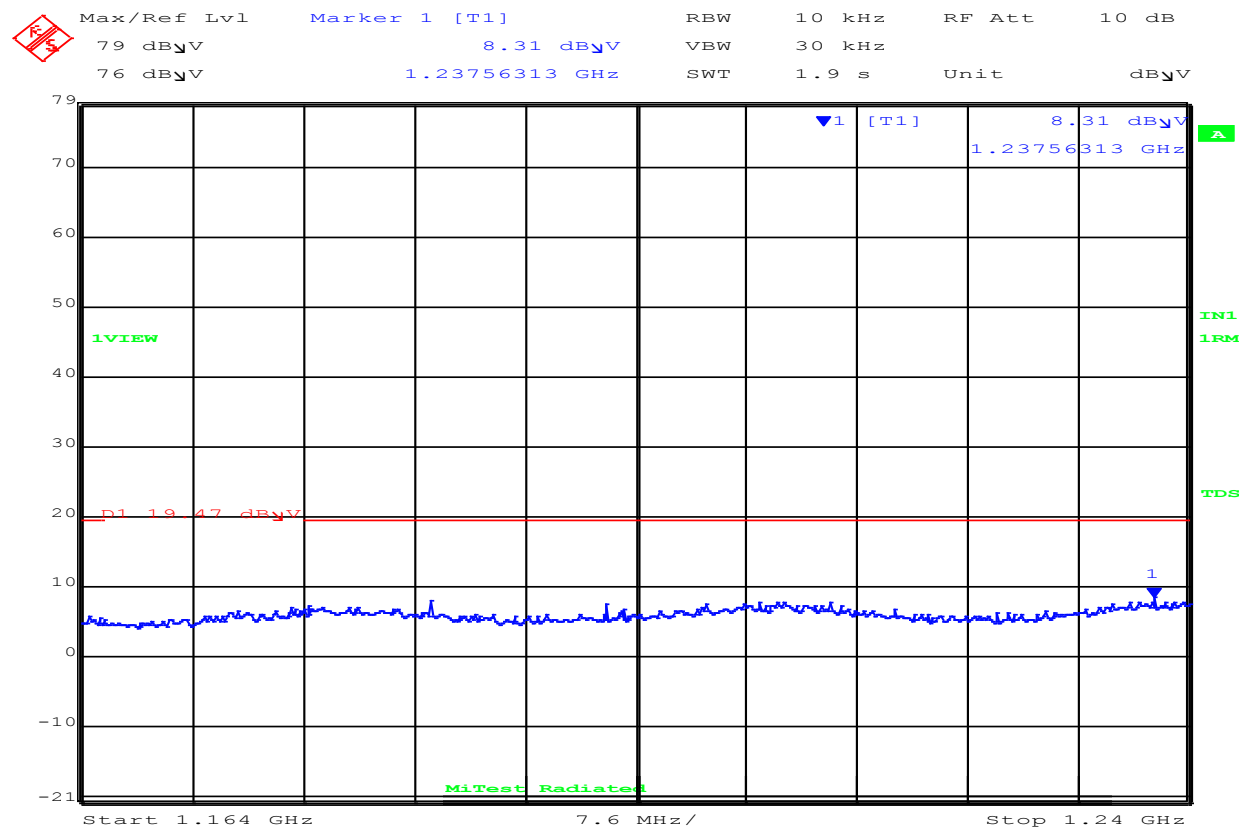
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

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



Date: 7.NOV.2018 16:17:53

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 1.559-1.610 GHz Horizontal

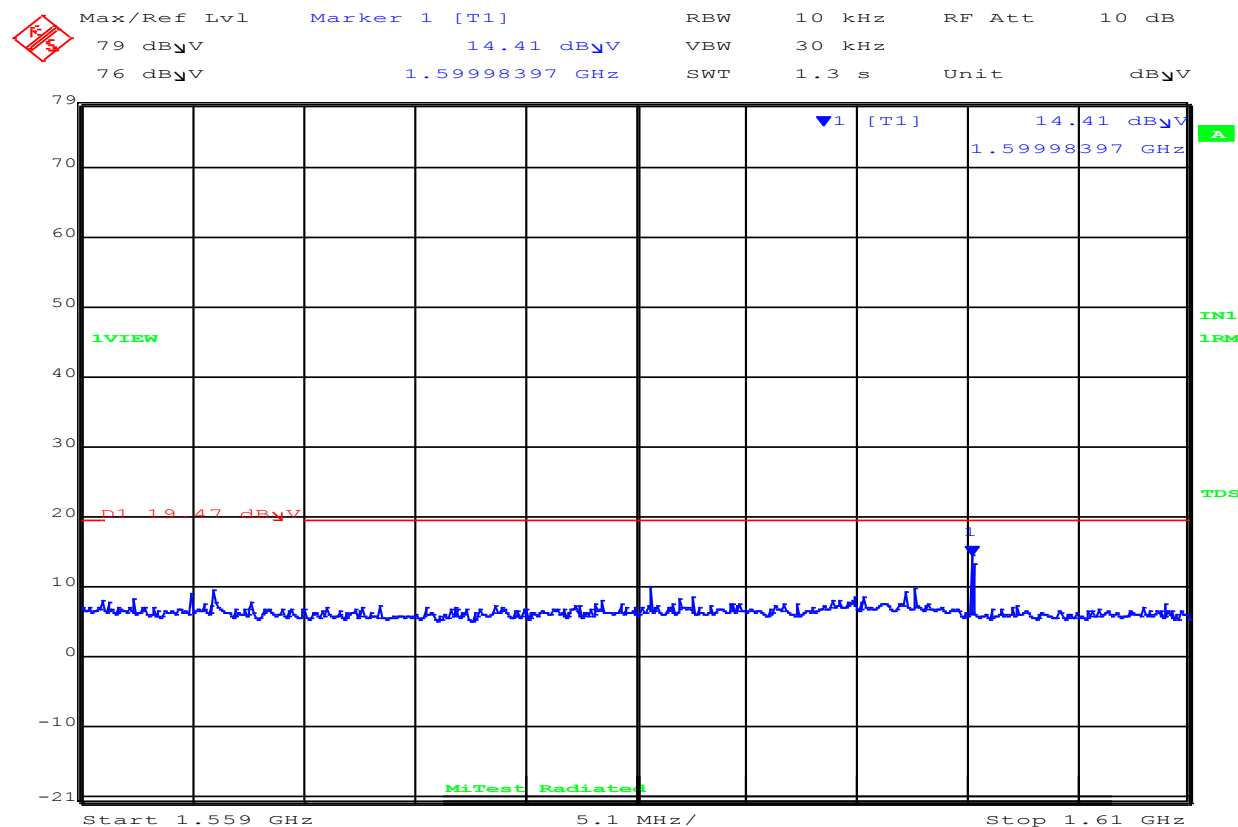
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

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



Date: 7.NOV.2018 16:13:44

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	1599.99	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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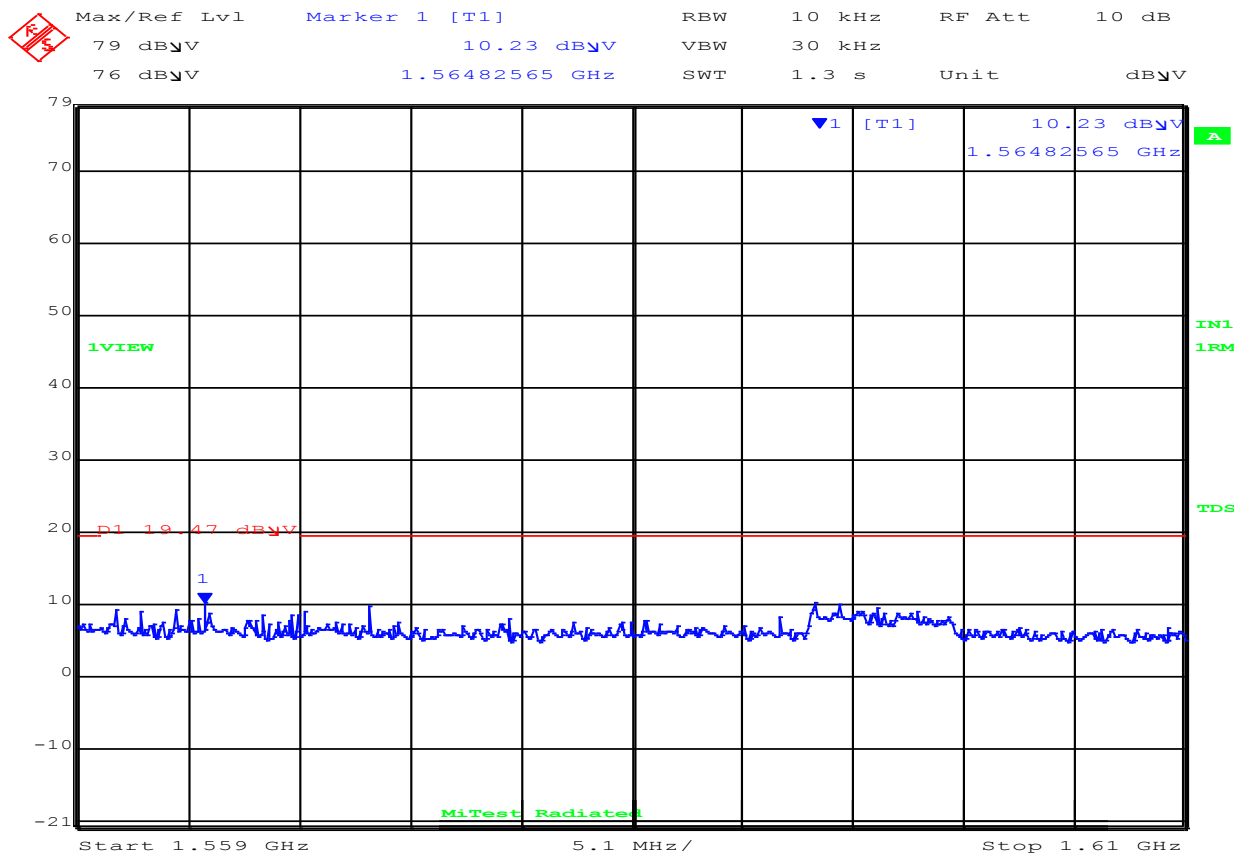
Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

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 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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4488 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

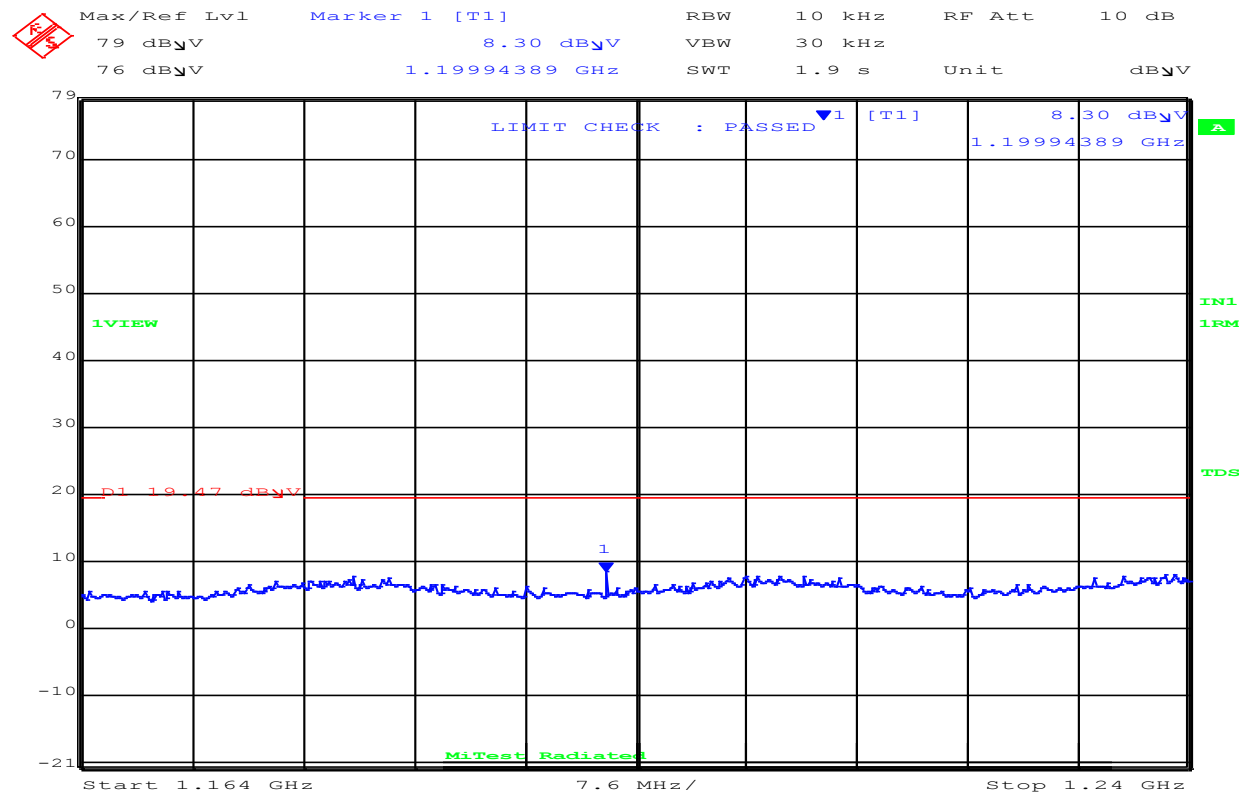
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

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

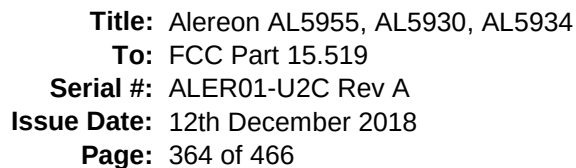


Date: 7.NOV.2018 16:38:15

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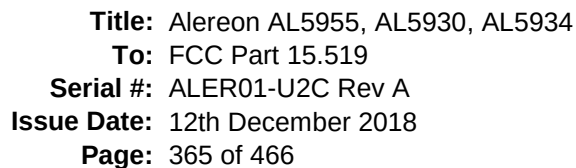
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

MiTest
regulatory compliance in the cloud

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

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

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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

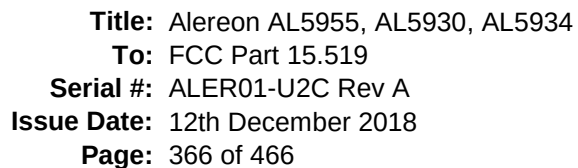
Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Test Notes:

Final Average measurements done with 1 KHz Receiver Bandwidth per standard

MiCOM Labs, 575 Boulder Court, Pleasanton, California 94566 USA, Phone: +1 (925) 462 0304, Fax: +1 (925) 462 0306, www.micomlabs.com



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

Max/Ref Lvl Marker 1 [T1] RBW 10 kHz RF Att 10 dB

79 dB μ V 10.57 dB μ V VBW 30 kHz

76 dB μ V 1.56002204 GHz SWT 1.3 s Unit dB μ V

▼1 [T1] 10.57 dB μ V
1.56002204 GHz

1VIEW

19.47 dB μ V

1

MiTest Radiated

Start 1.559 GHz 5.1 MHz/ Stop 1.61 GHz

Date: 7.NOV.2018 16:43:24

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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6600 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

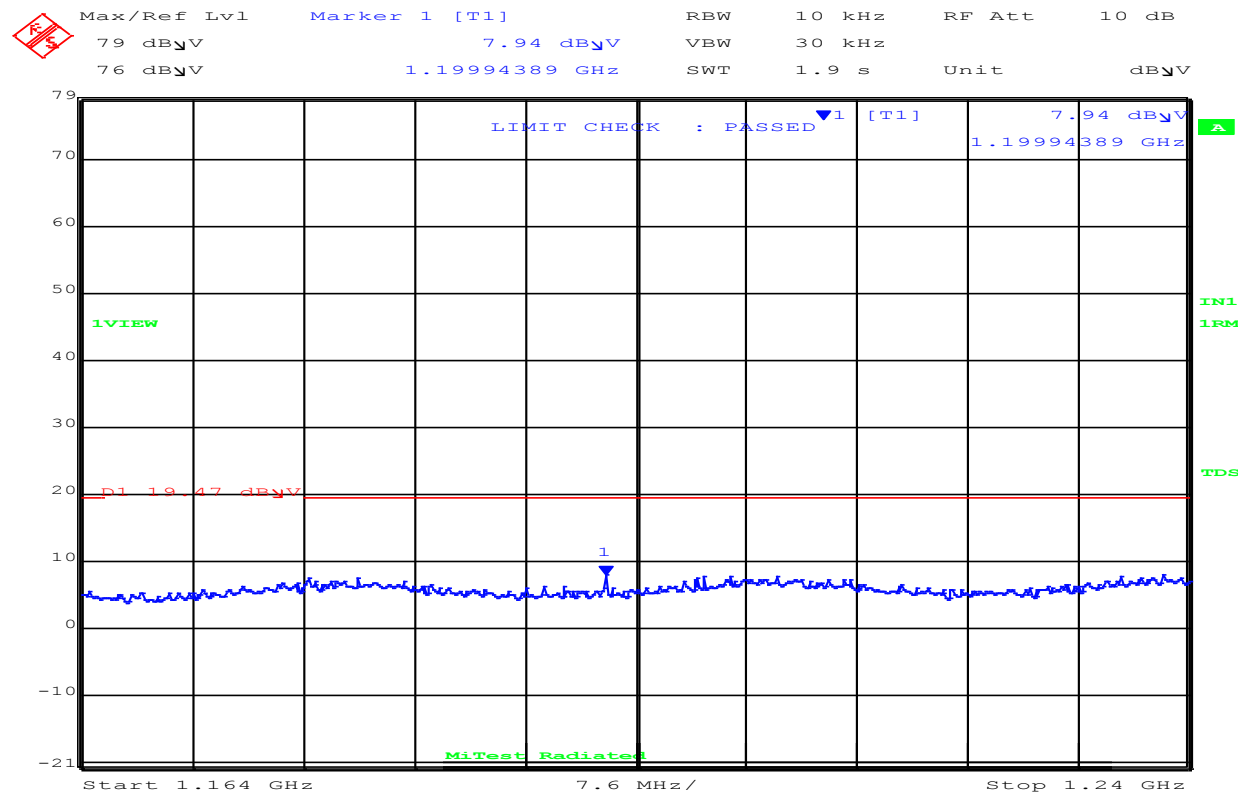
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

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



Date: 7.NOV.2018 16:52:57

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

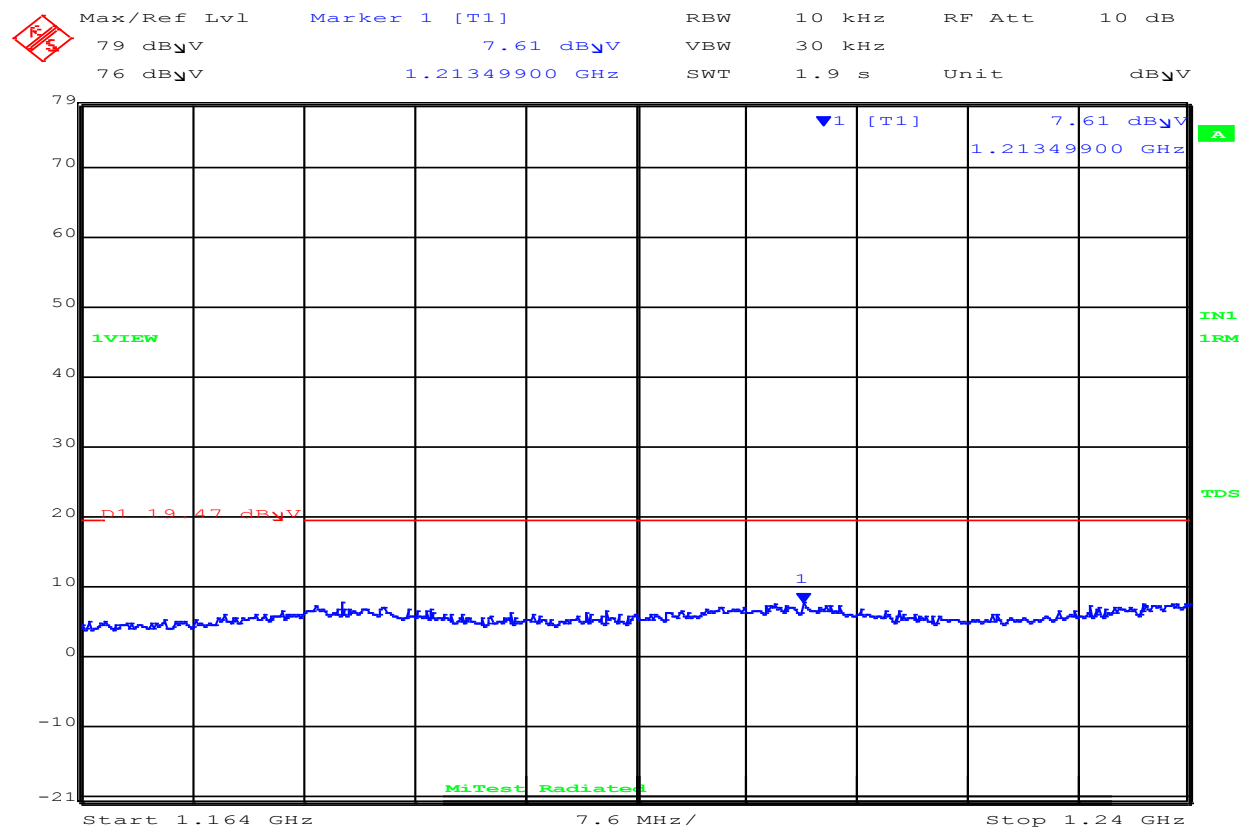
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

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



Date: 7.NOV.2018 16:54:33

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 1.559-1.610 GHz Horizontal

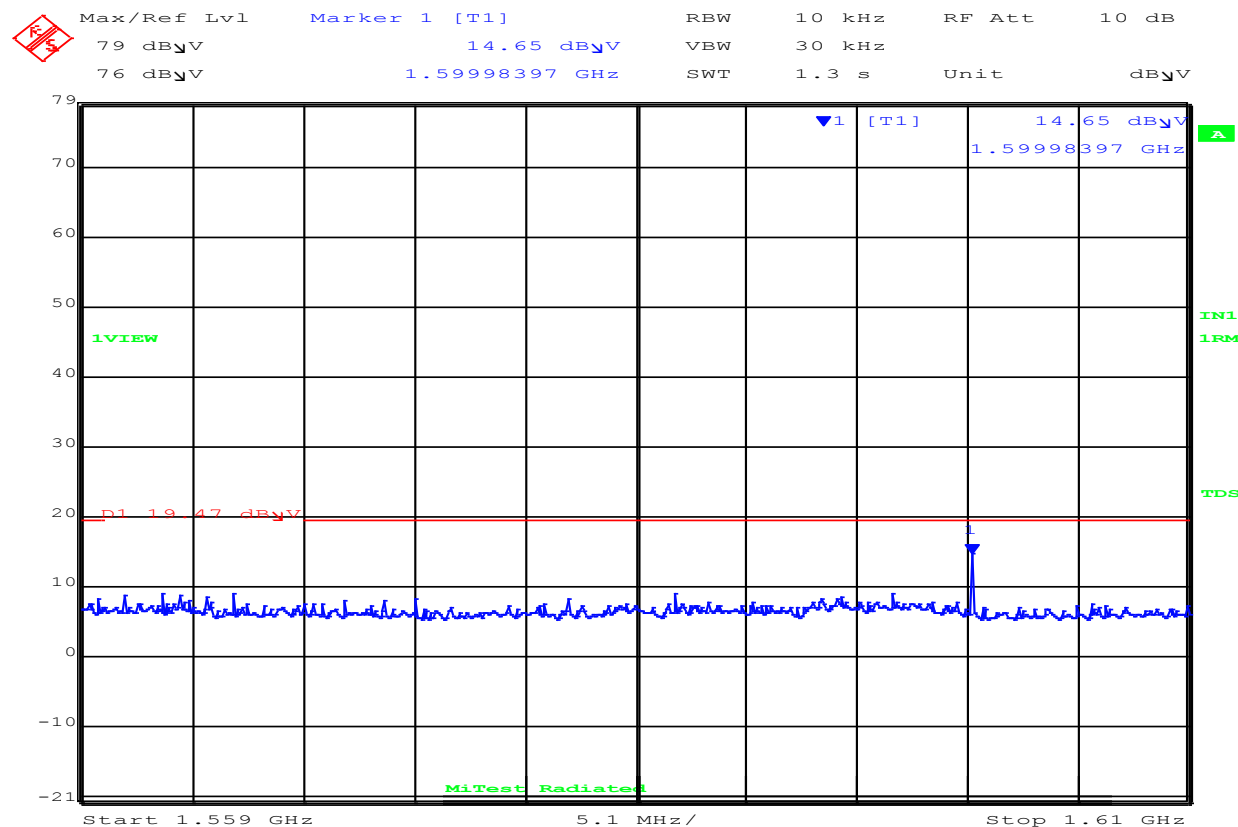
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

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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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Vertical

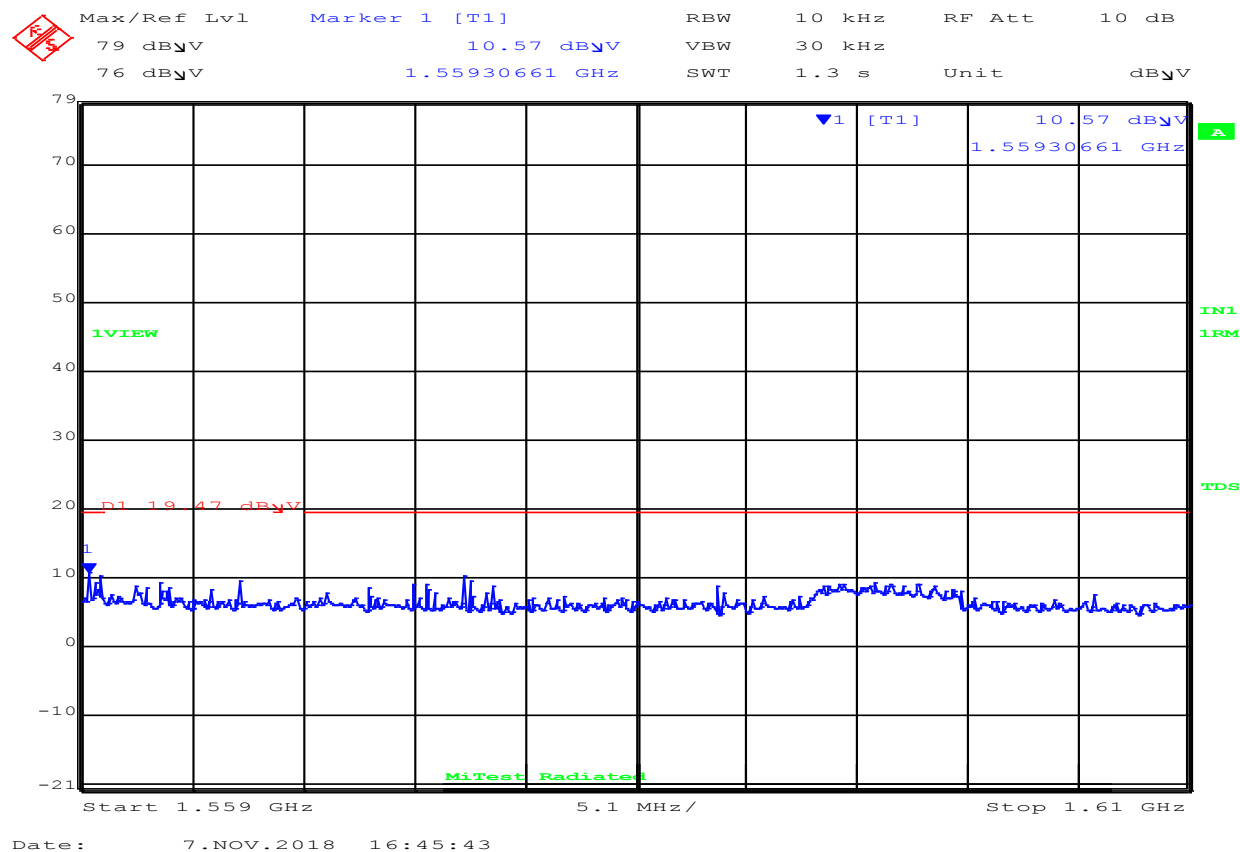
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610 GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, 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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7128 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

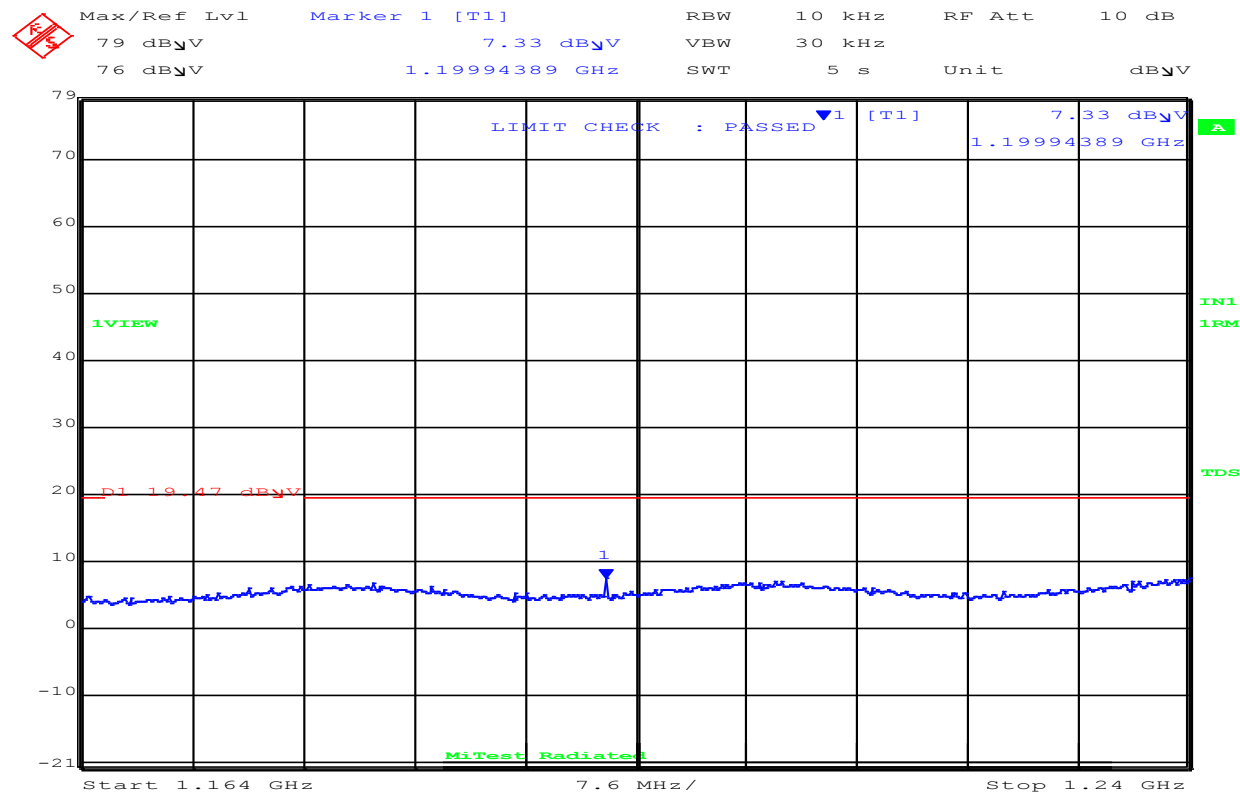
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

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



Date: 7.NOV.2018 17:20:28

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

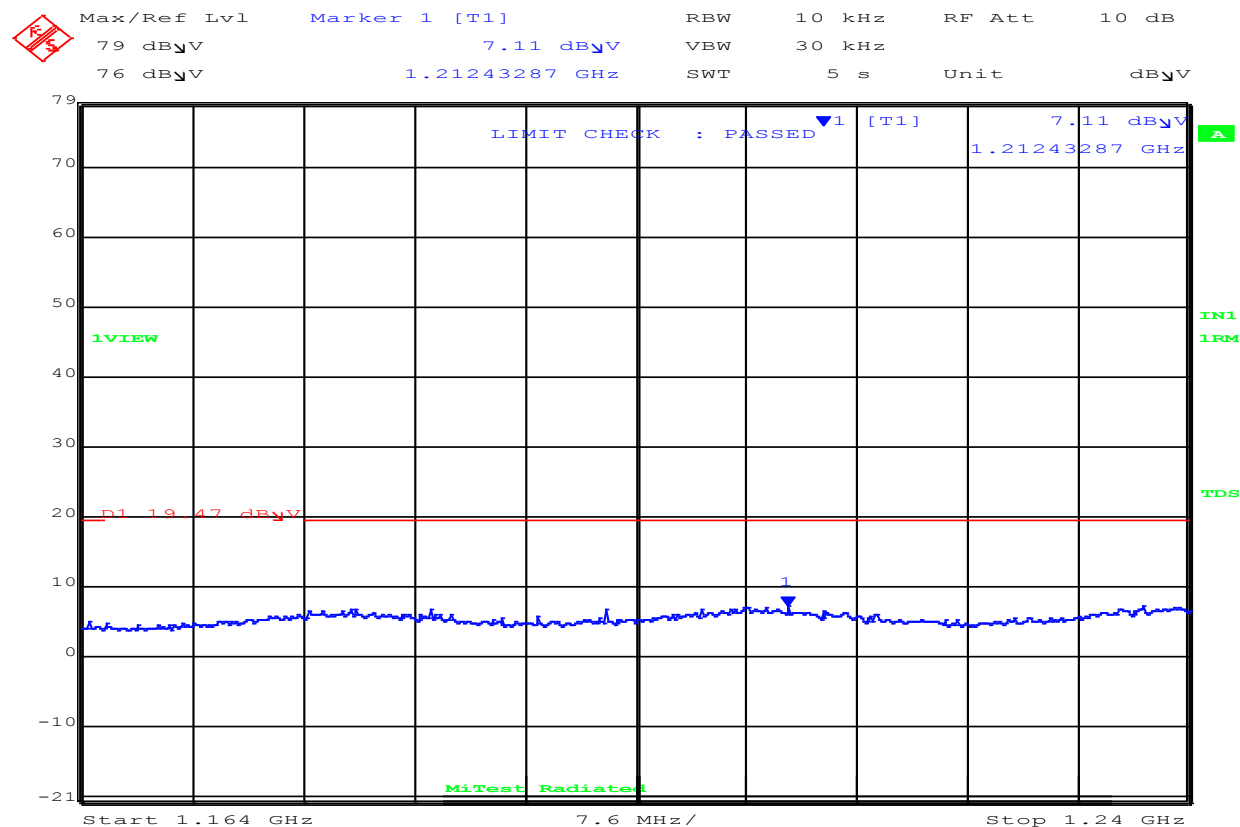
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

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



Date: 7.NOV.2018 17:18:56

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 1.559-1.610 GHz Horizontal

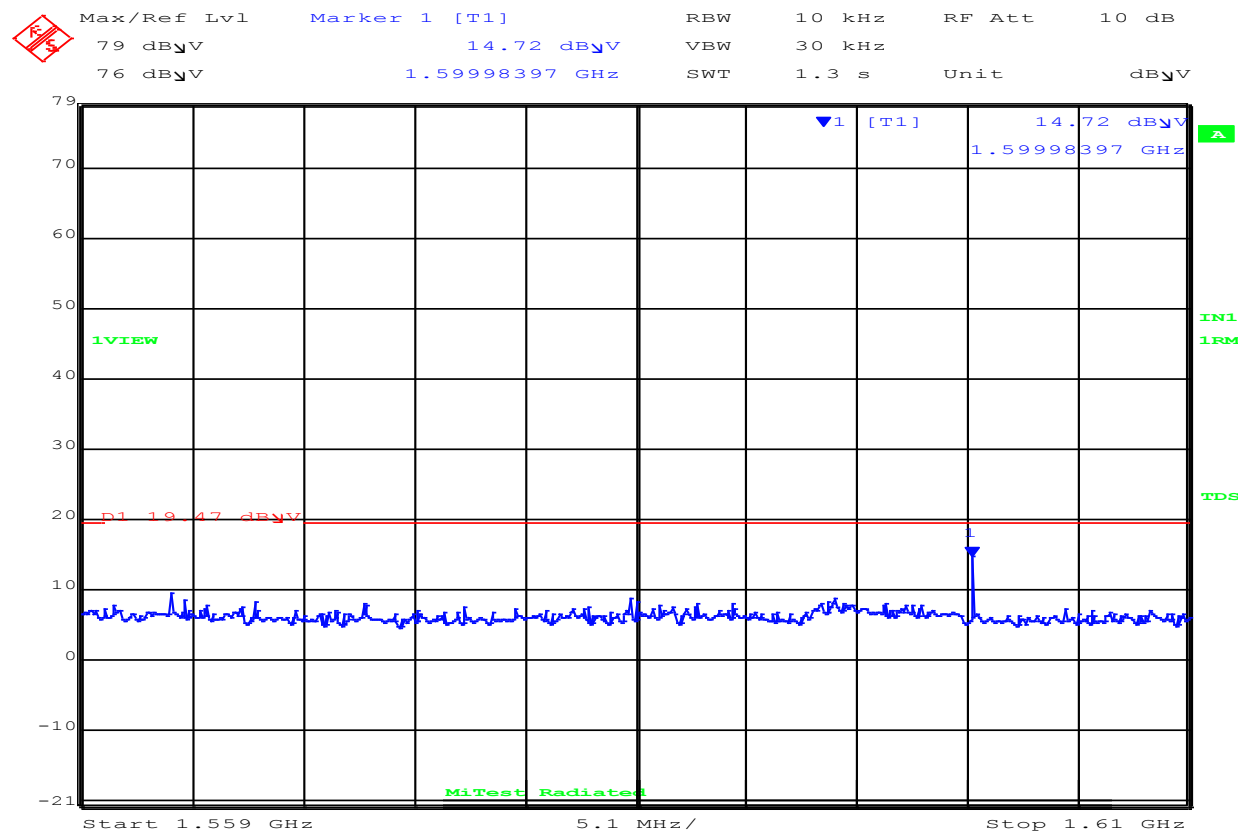
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

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



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

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	1.8*	Average	Horizontal	150	0	19.47	-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 1.559-1.610 GHz Vertical

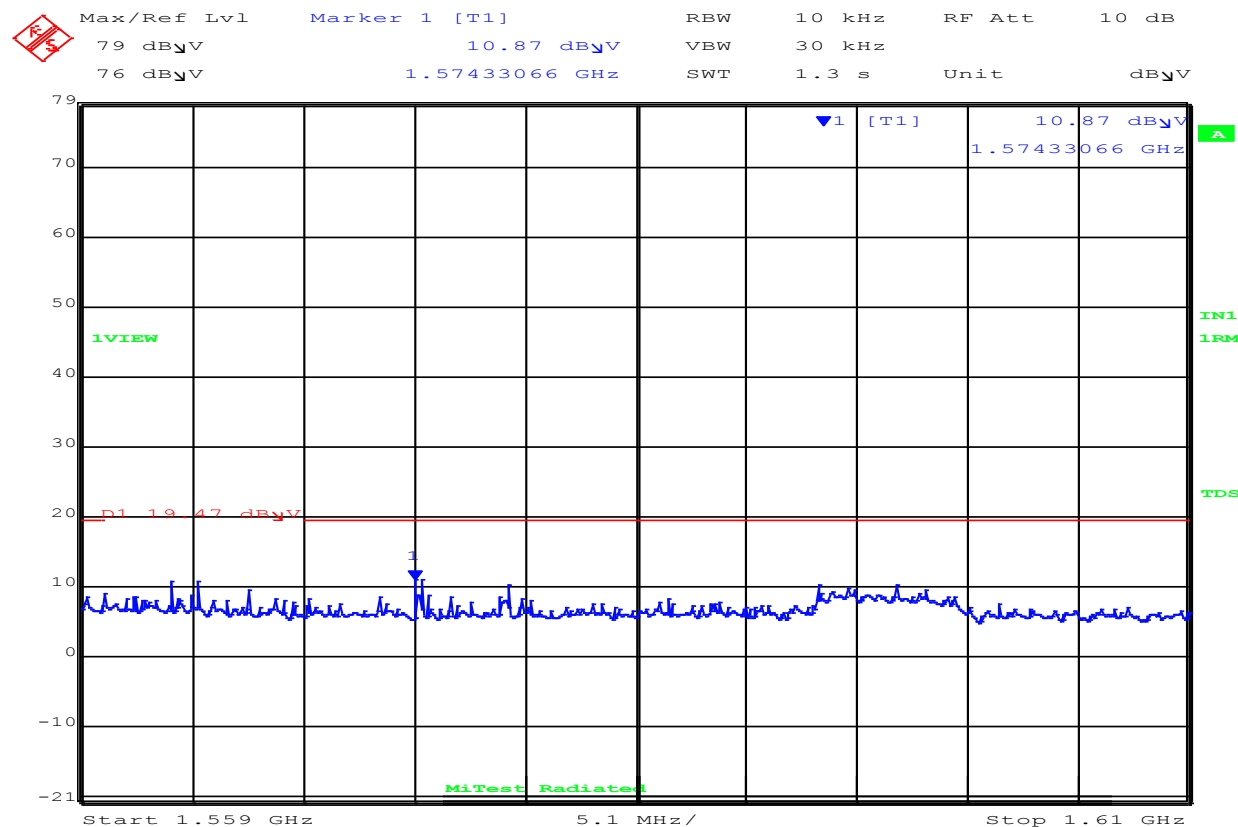
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610 GHz Vertical

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



Date: 7.NOV.2018 17:25:18

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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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

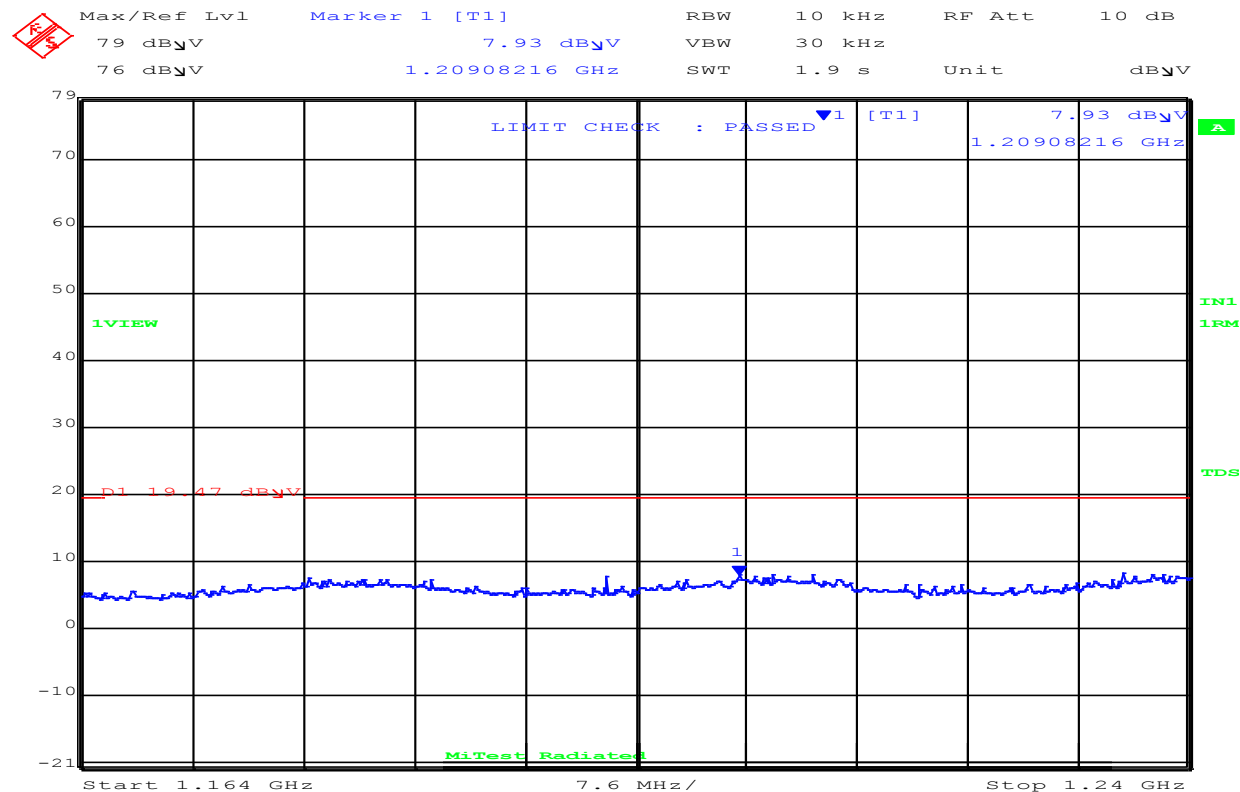
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

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



Date: 7.NOV.2018 17:32:44

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

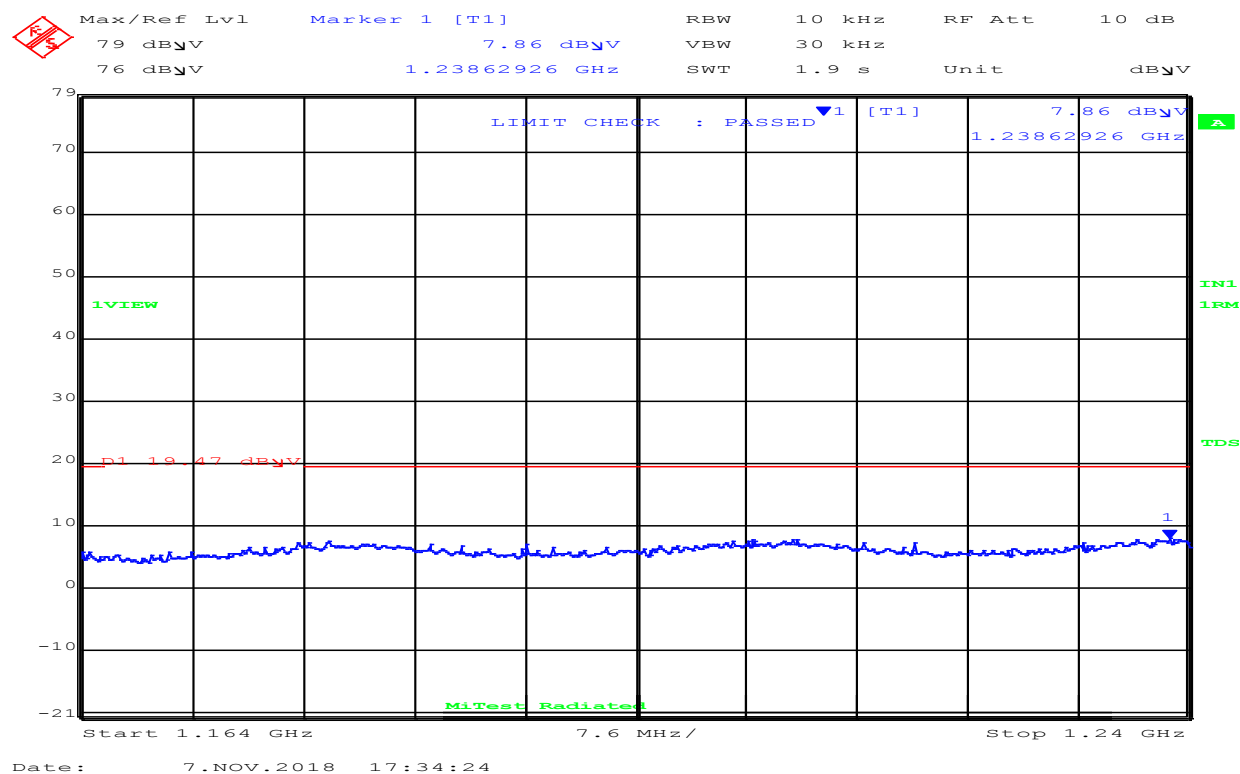
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

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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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

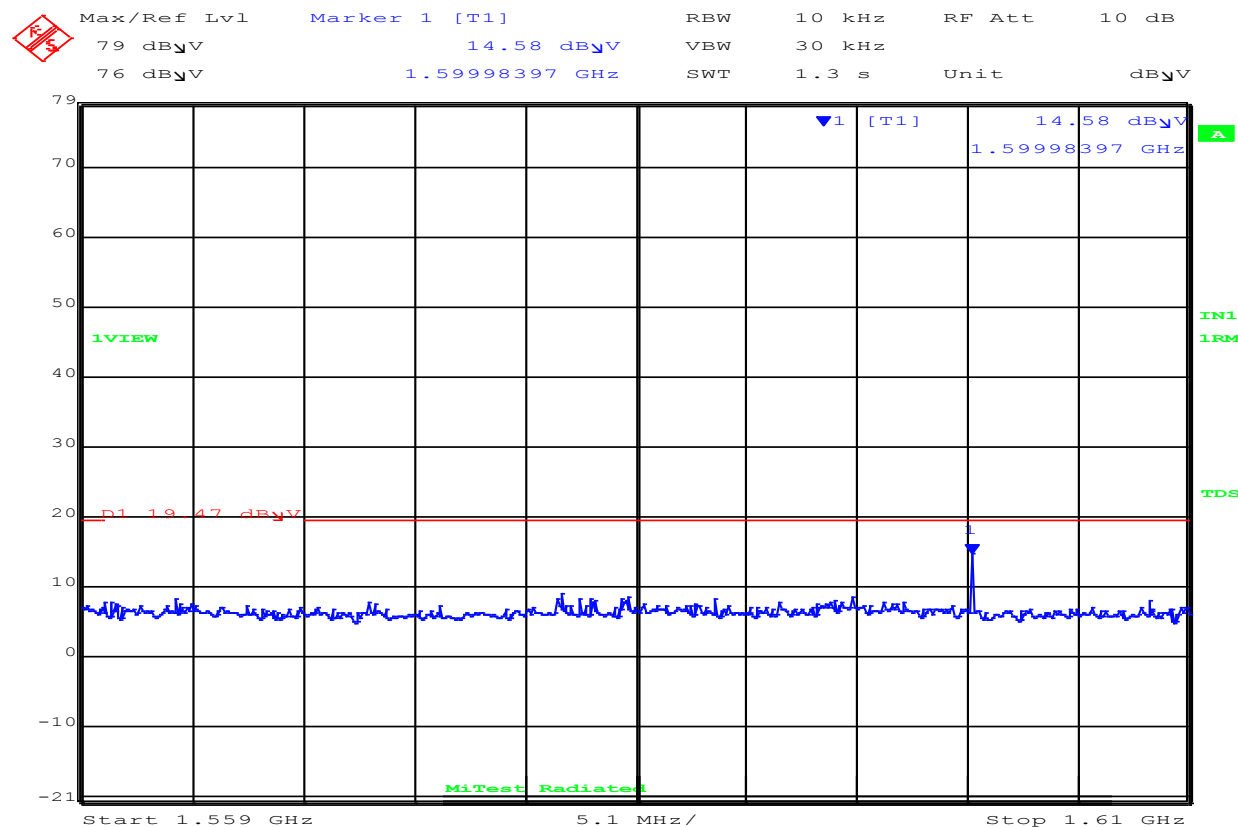
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

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

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 Vertical

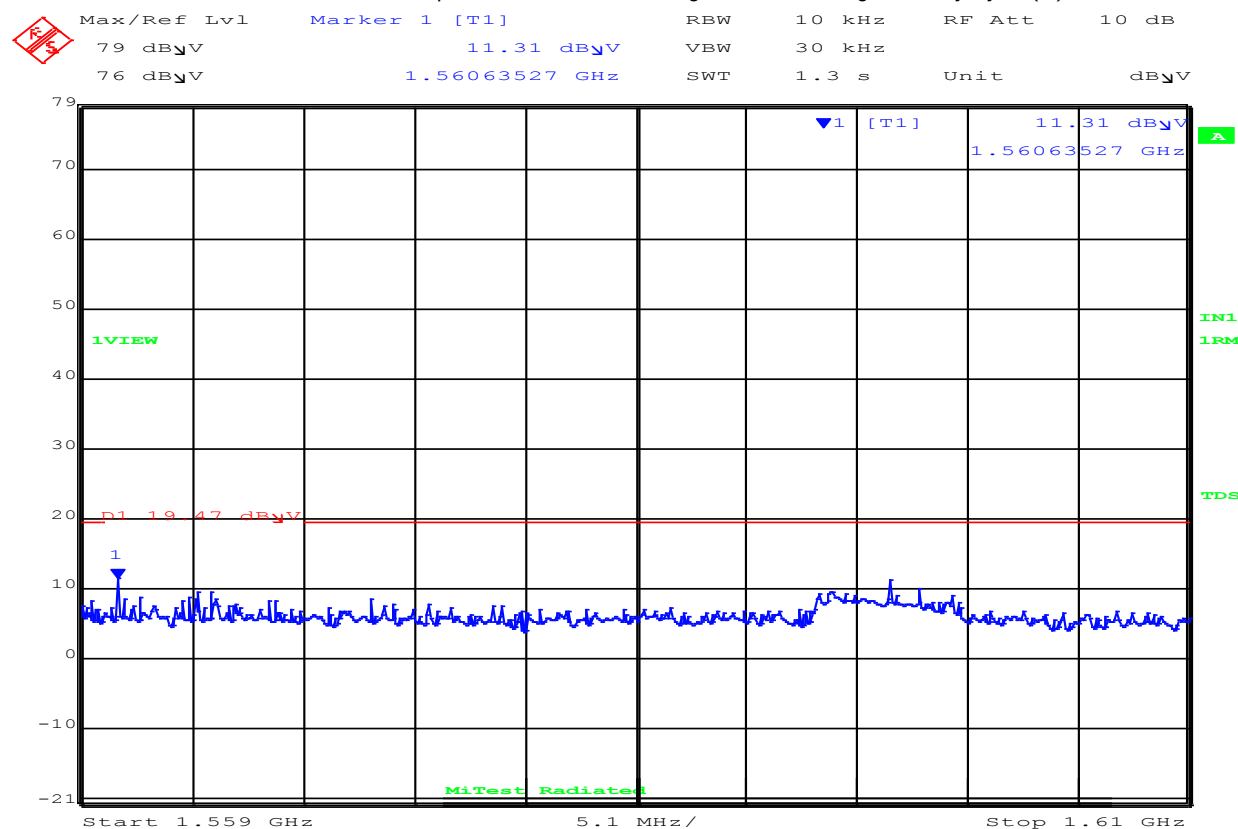
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610 GHz 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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8184 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

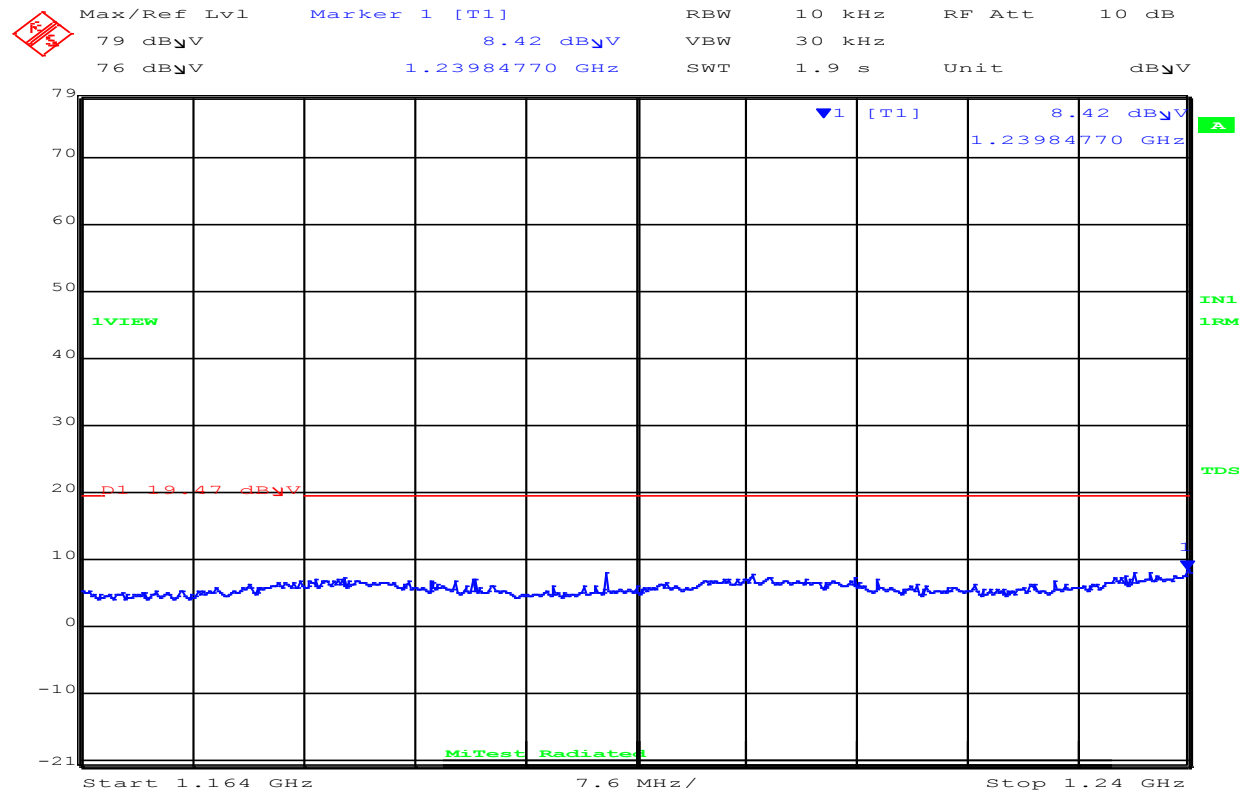
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

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



Date: 7.NOV.2018 17:52:37

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

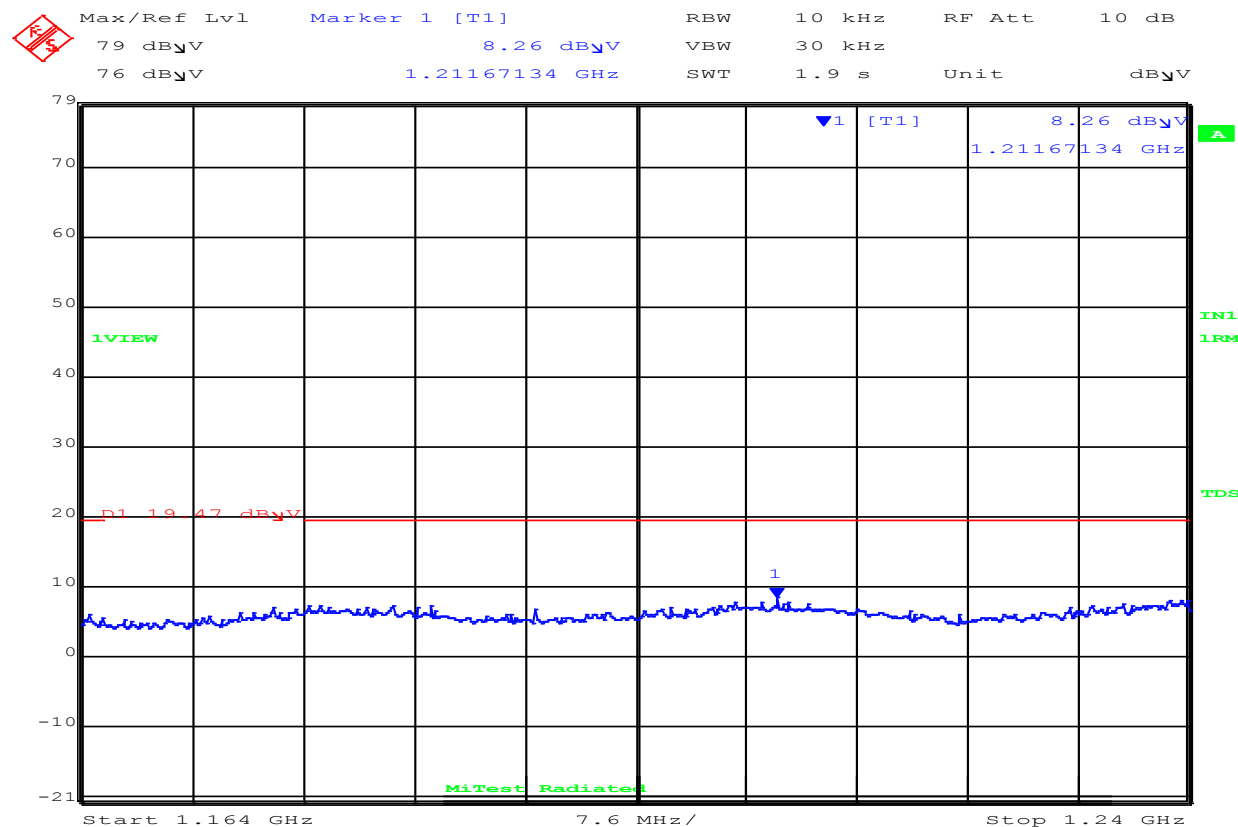
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

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



Date: 7.NOV.2018 17:51:11

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 1.559-1.610 GHz Horizontal

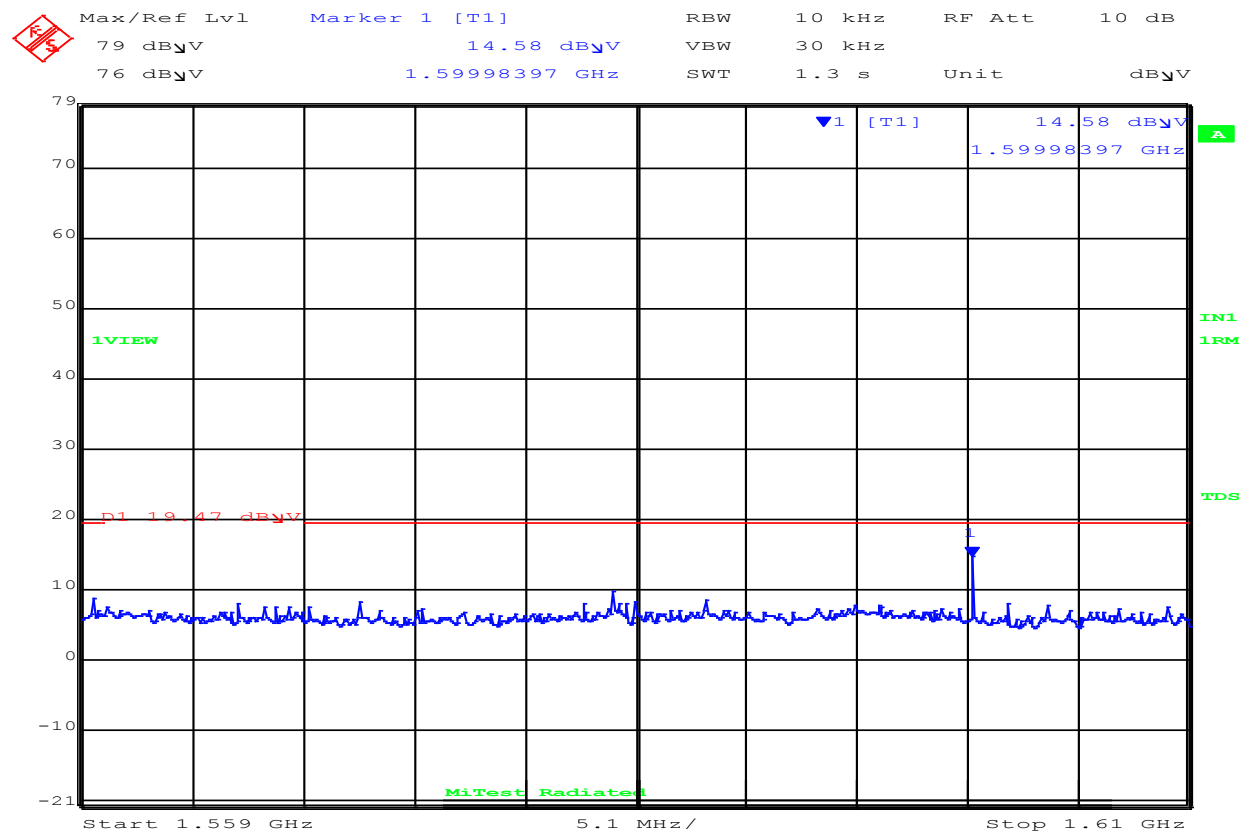
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

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



Date: 7.NOV.2018 17:53:54

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

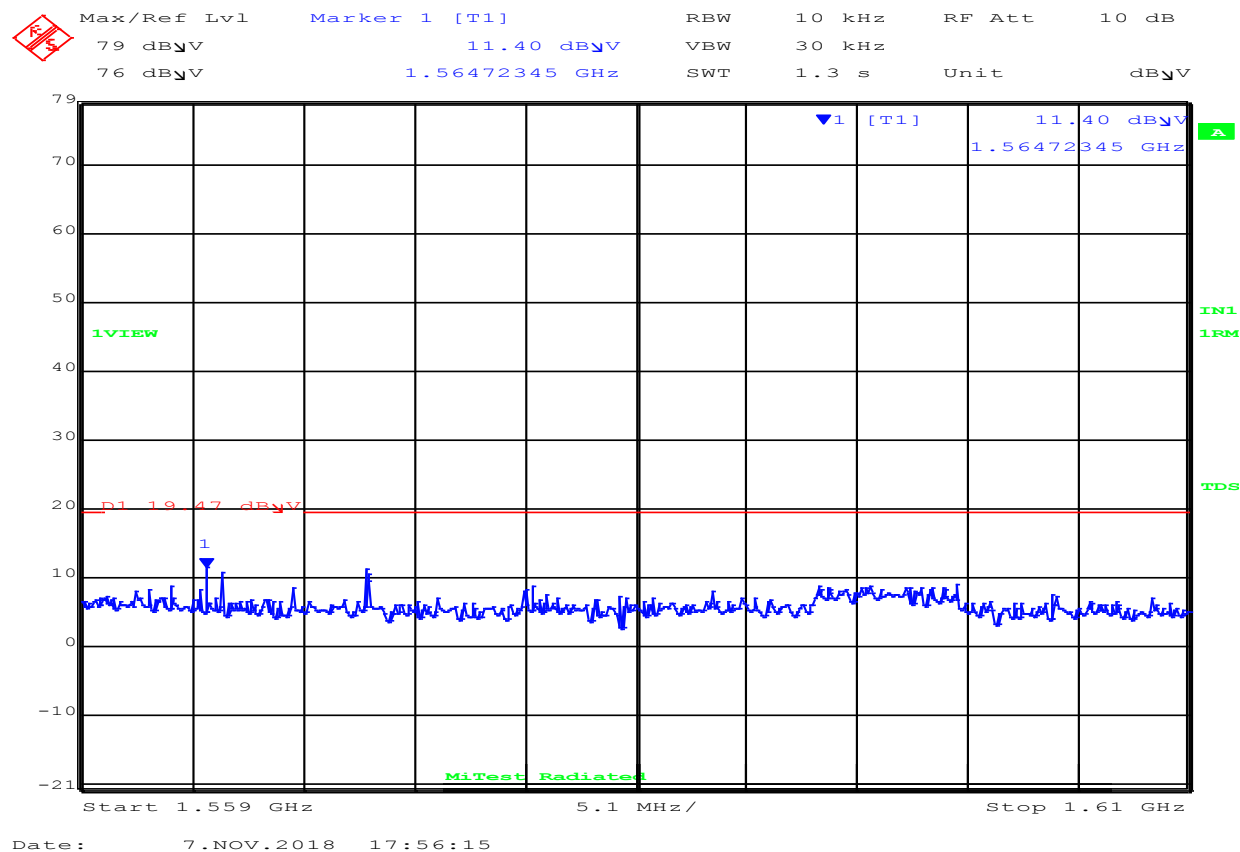
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

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



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

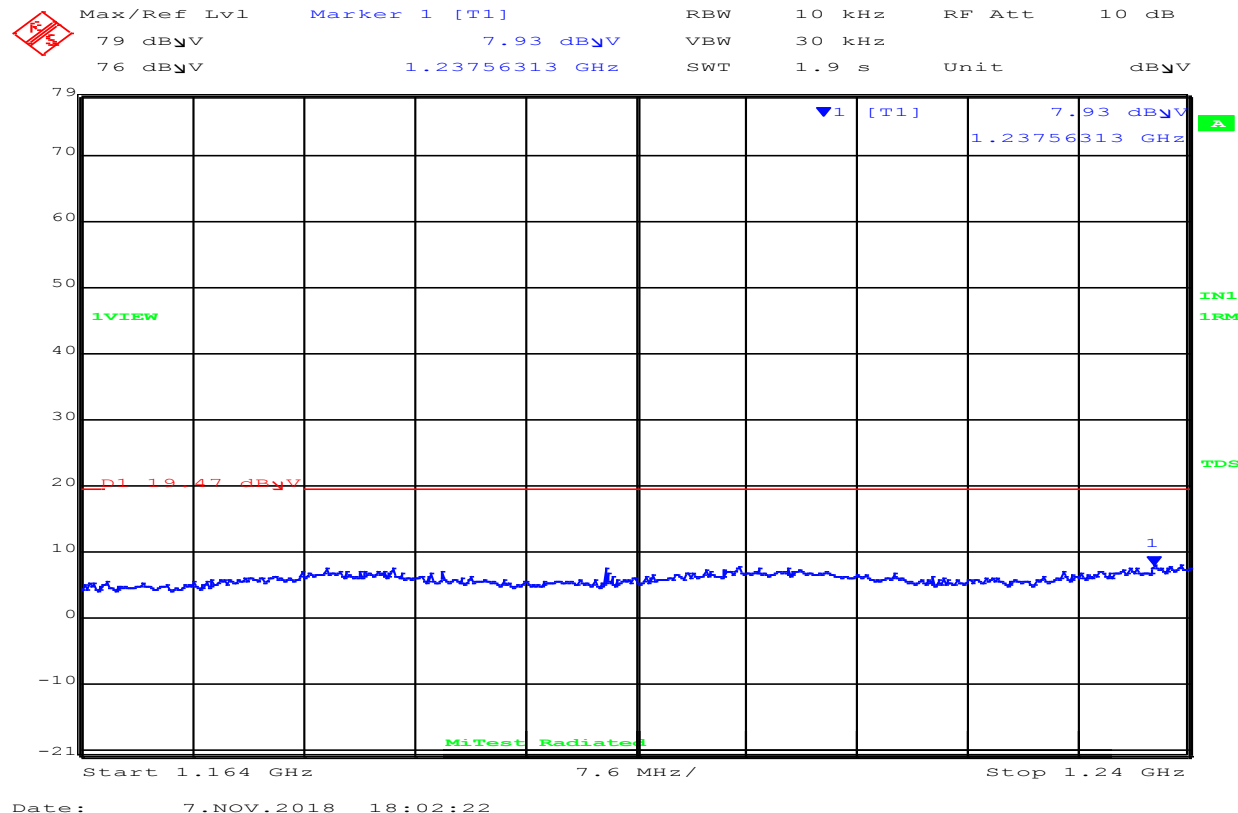
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

Test Freq: 8712 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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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

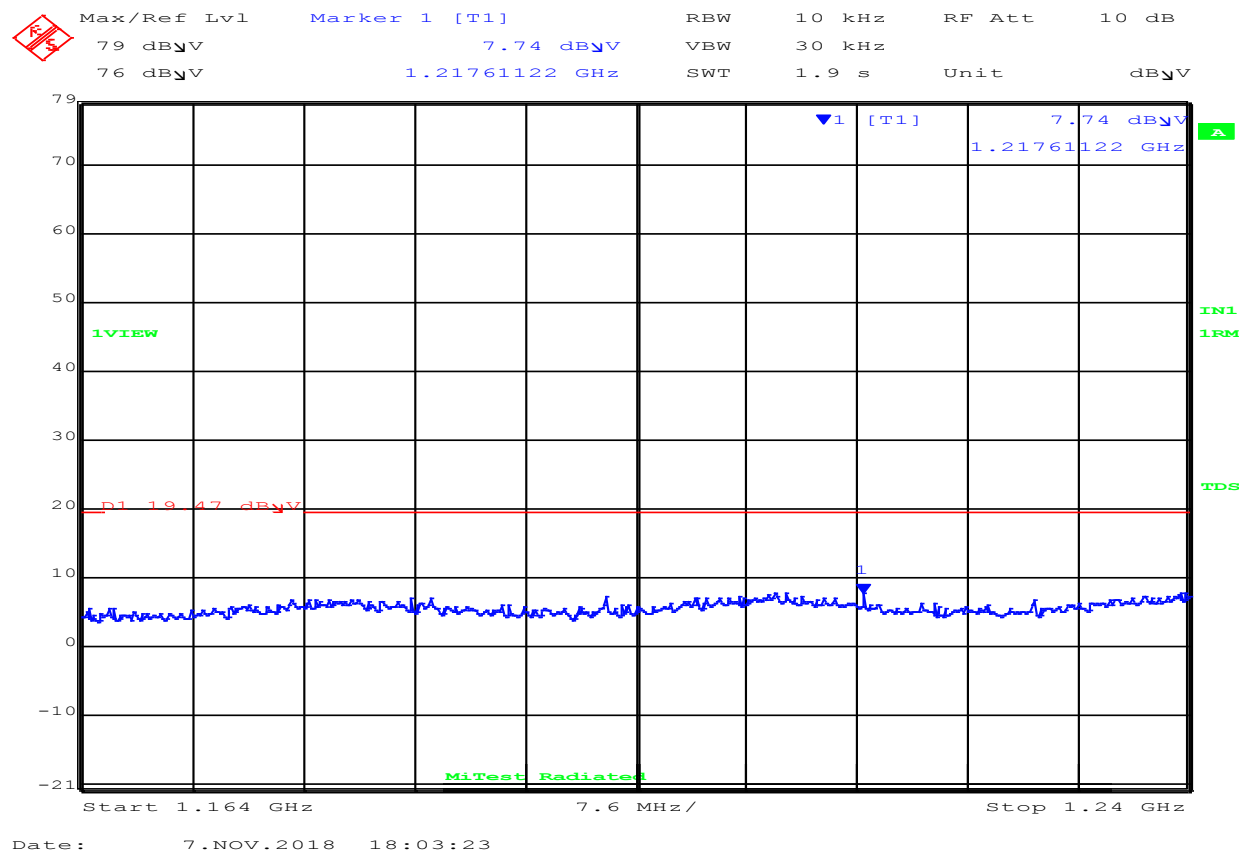
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

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



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 1.559-1.610 GHz Horizontal

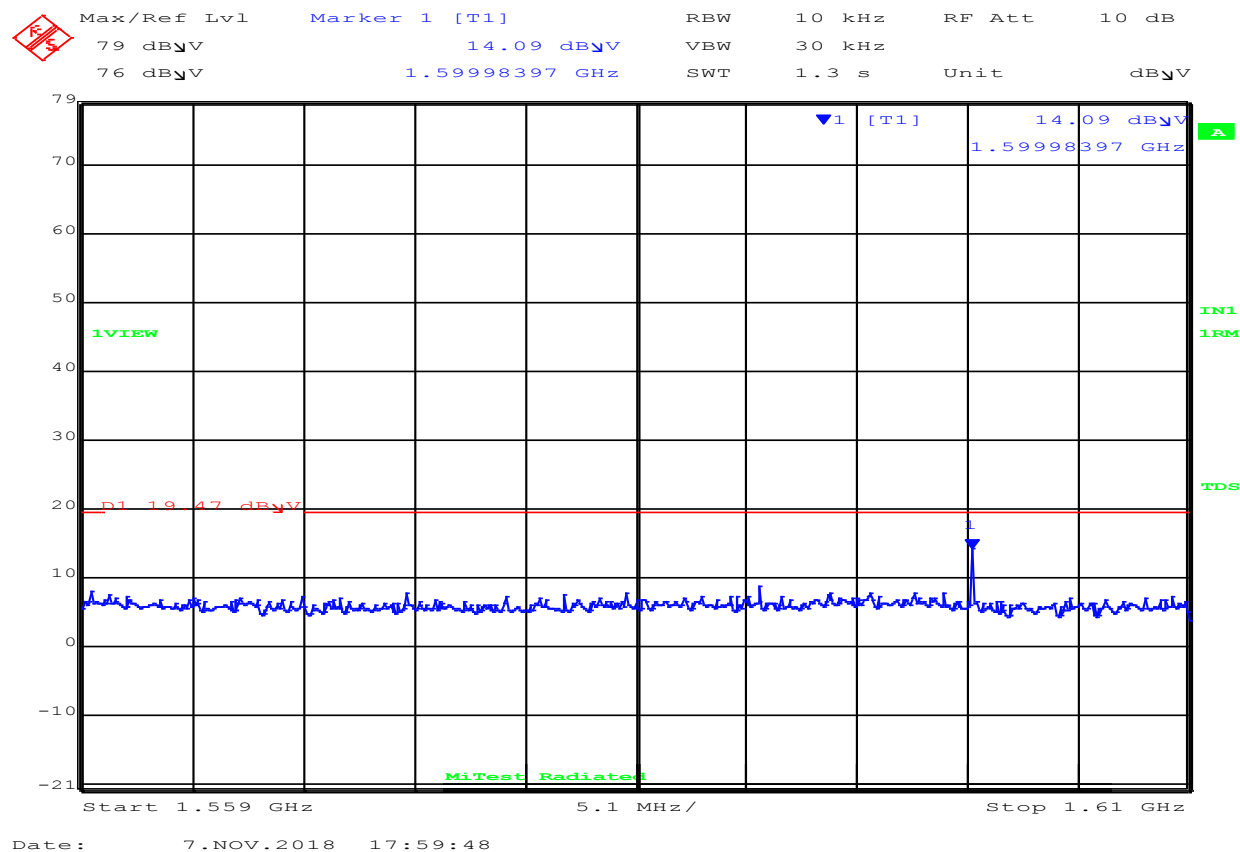
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

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
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 1.559-1.610 GHz Vertical

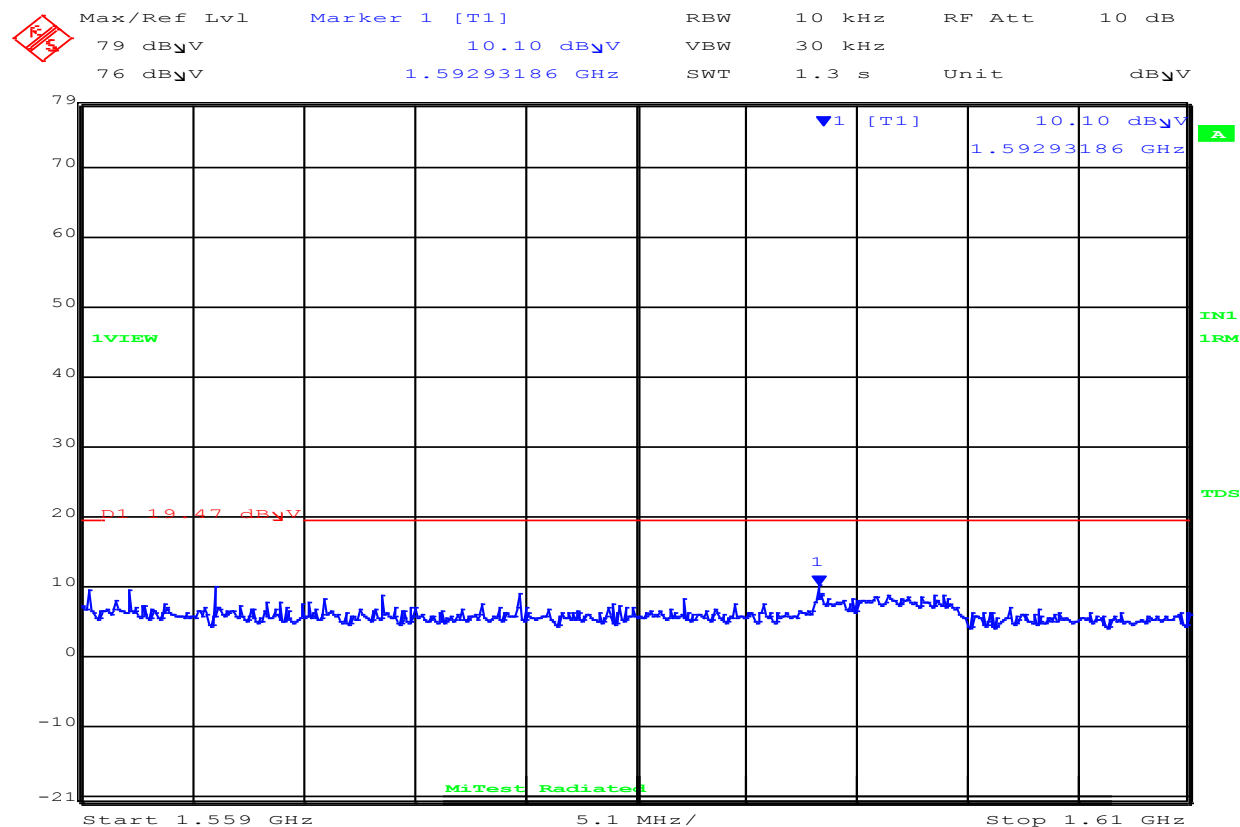
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610 GHz Vertical

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



Date: 7.NOV.2018 17:58:57

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

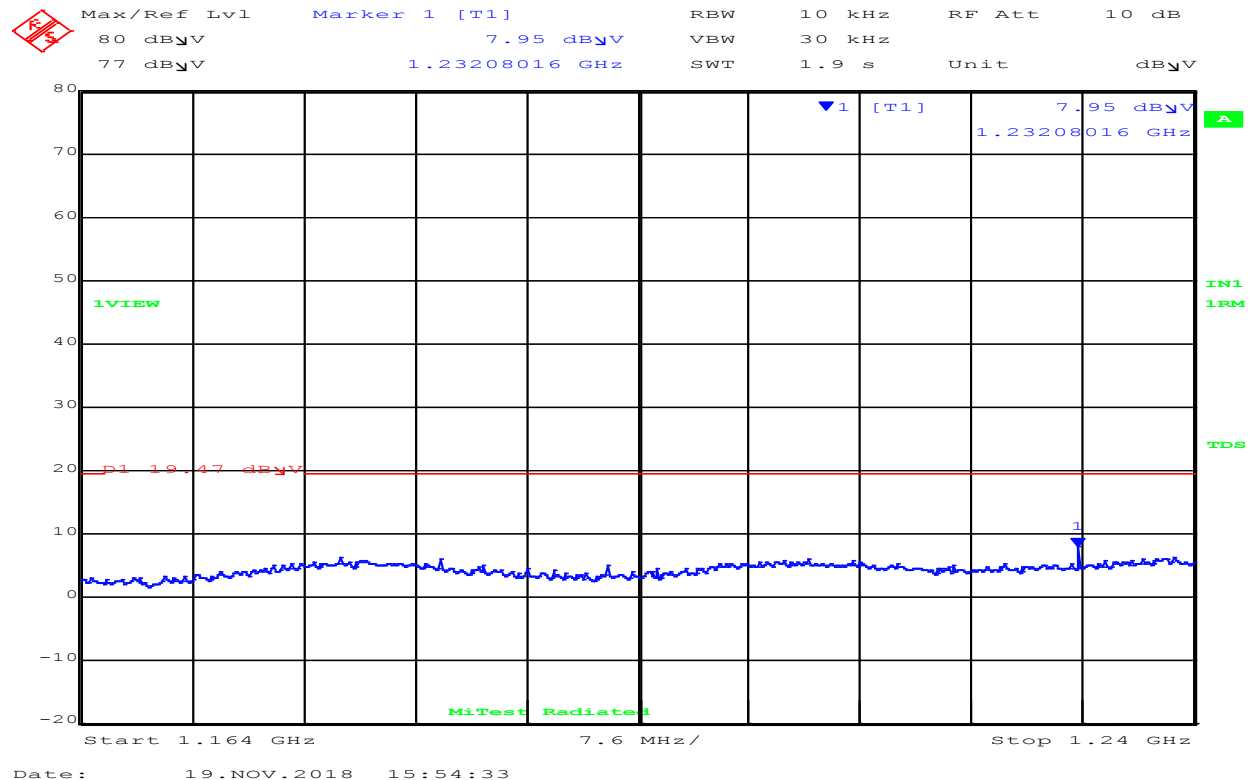
Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

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



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

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



Test Measurement Results

1164.00-1240.00 MHz

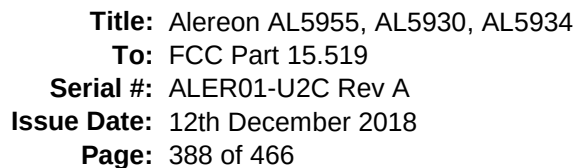
Num	Frequency MHz	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
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No Signals Found within 6 dB of Limit

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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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



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 1.559-1.610GHz Horizontal

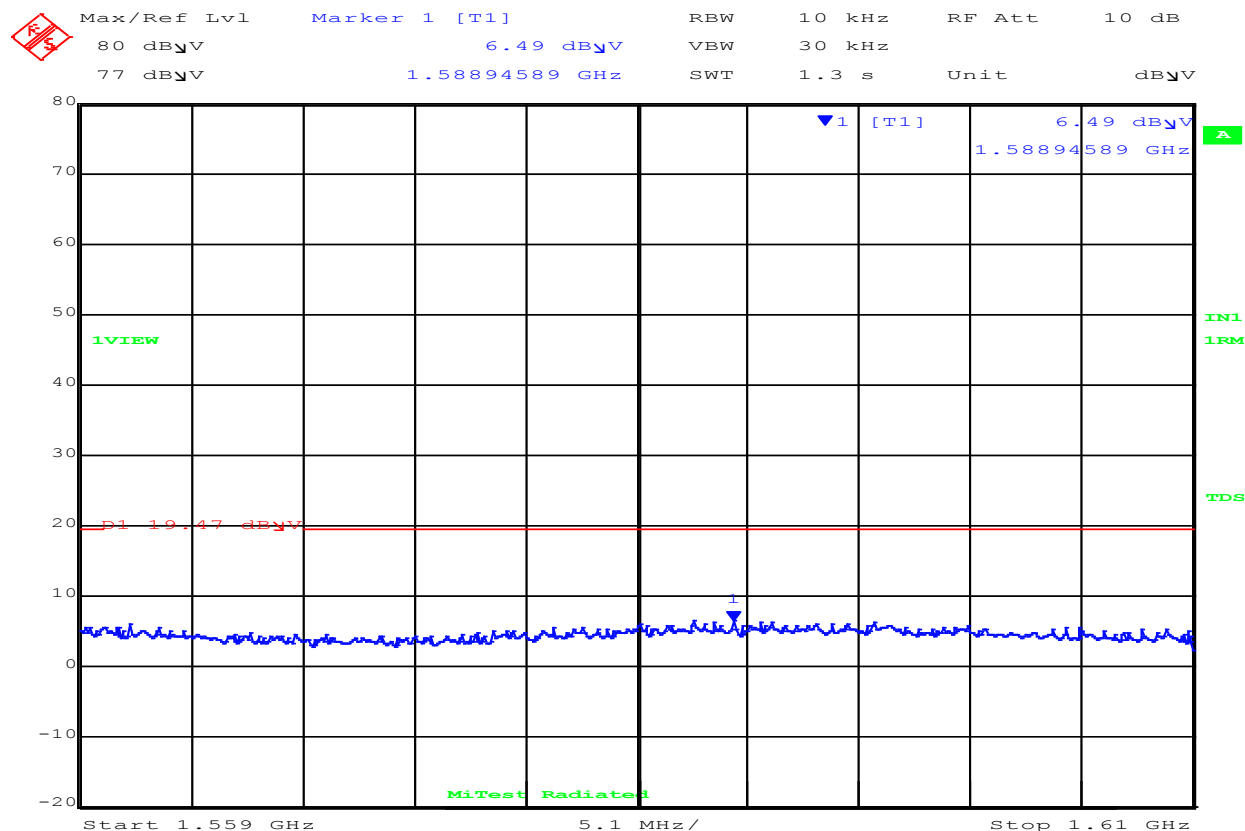
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

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



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

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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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

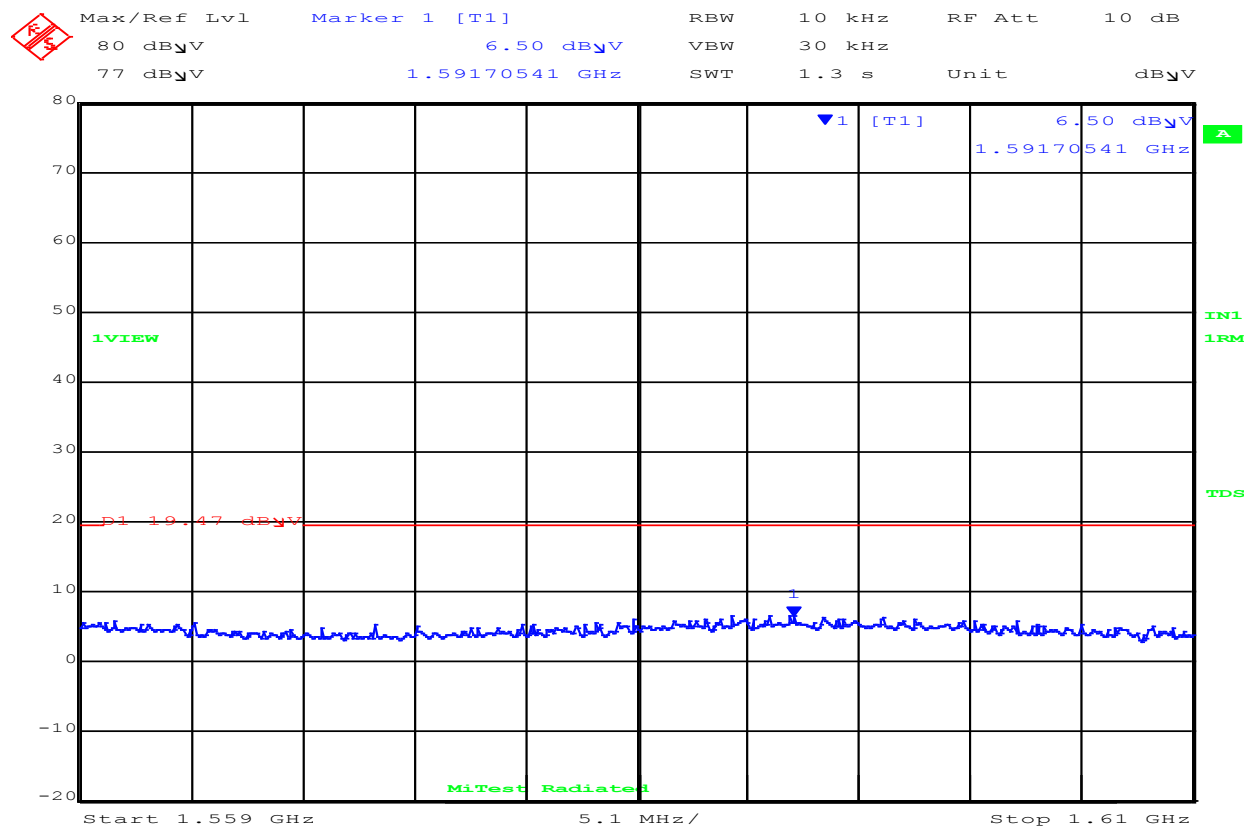
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3432.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

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: 19.NOV.2018 16:08:22

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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3960 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

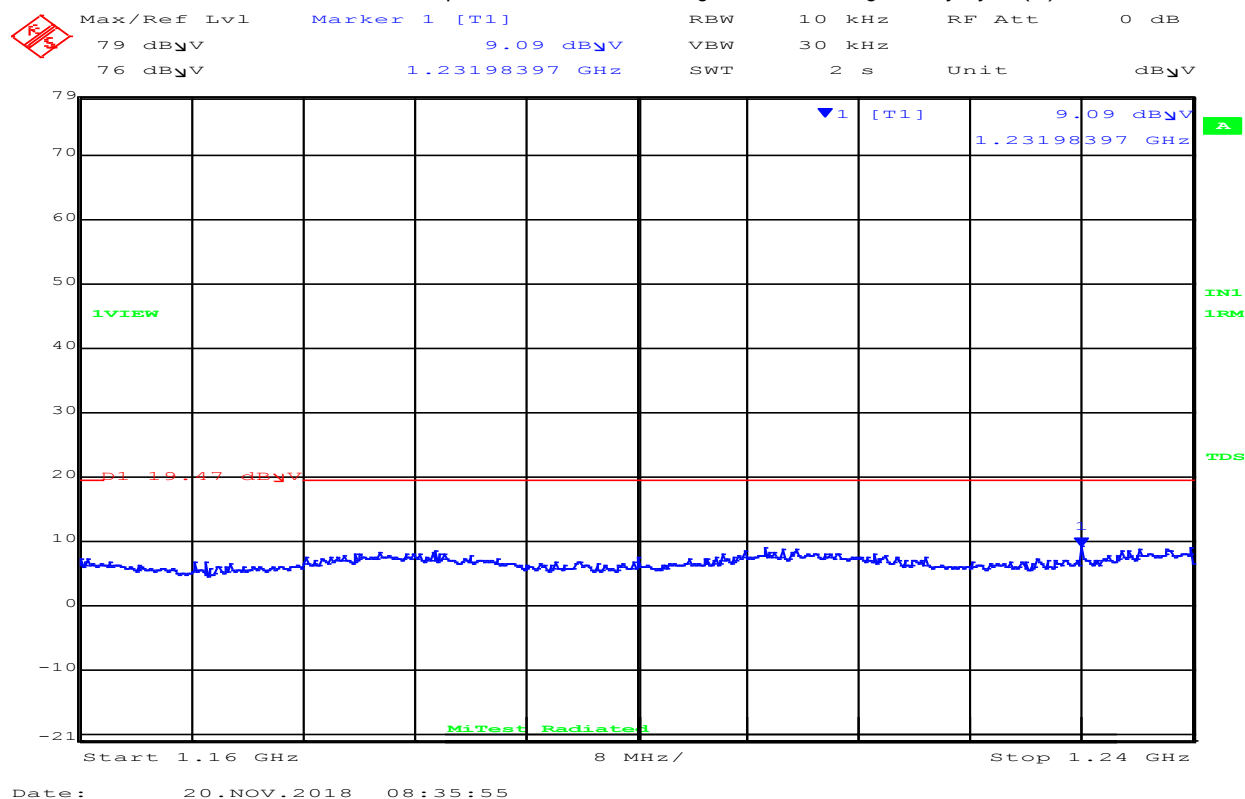
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

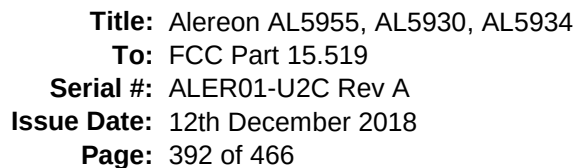
Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1164.00-1240.00 MHz

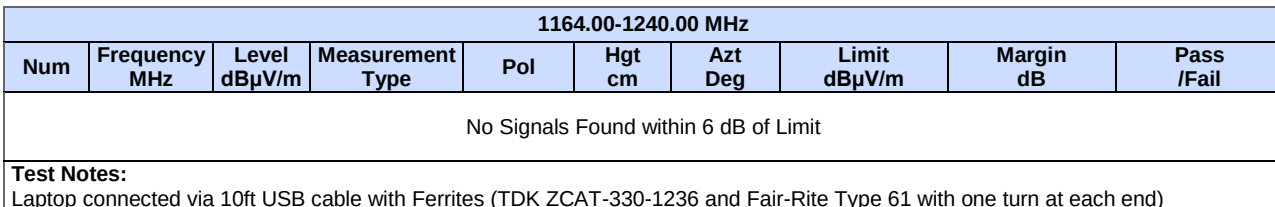
Num	Frequency MHz	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
No Signals Found within 6 dB of Limit									
Test Notes: Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)									

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



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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

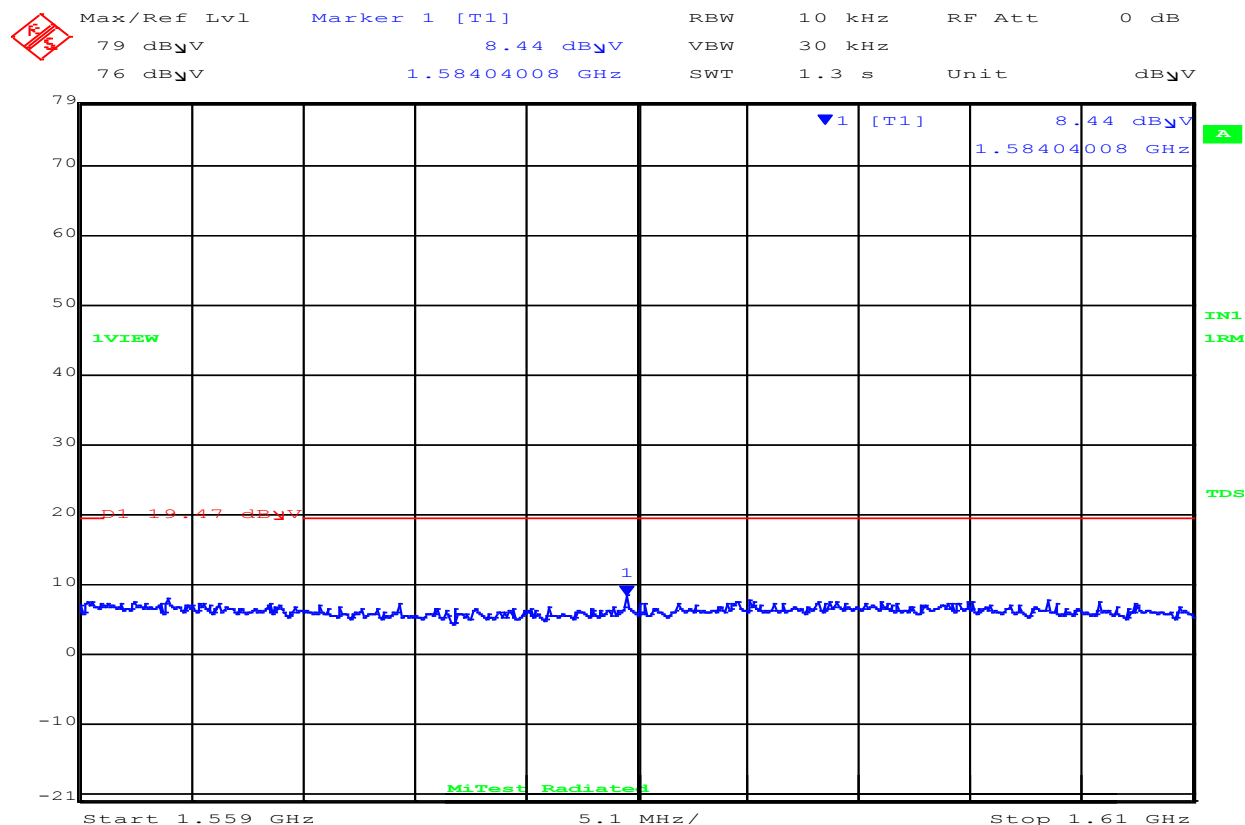
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

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



Date: 20.NOV.2018 08:42:12

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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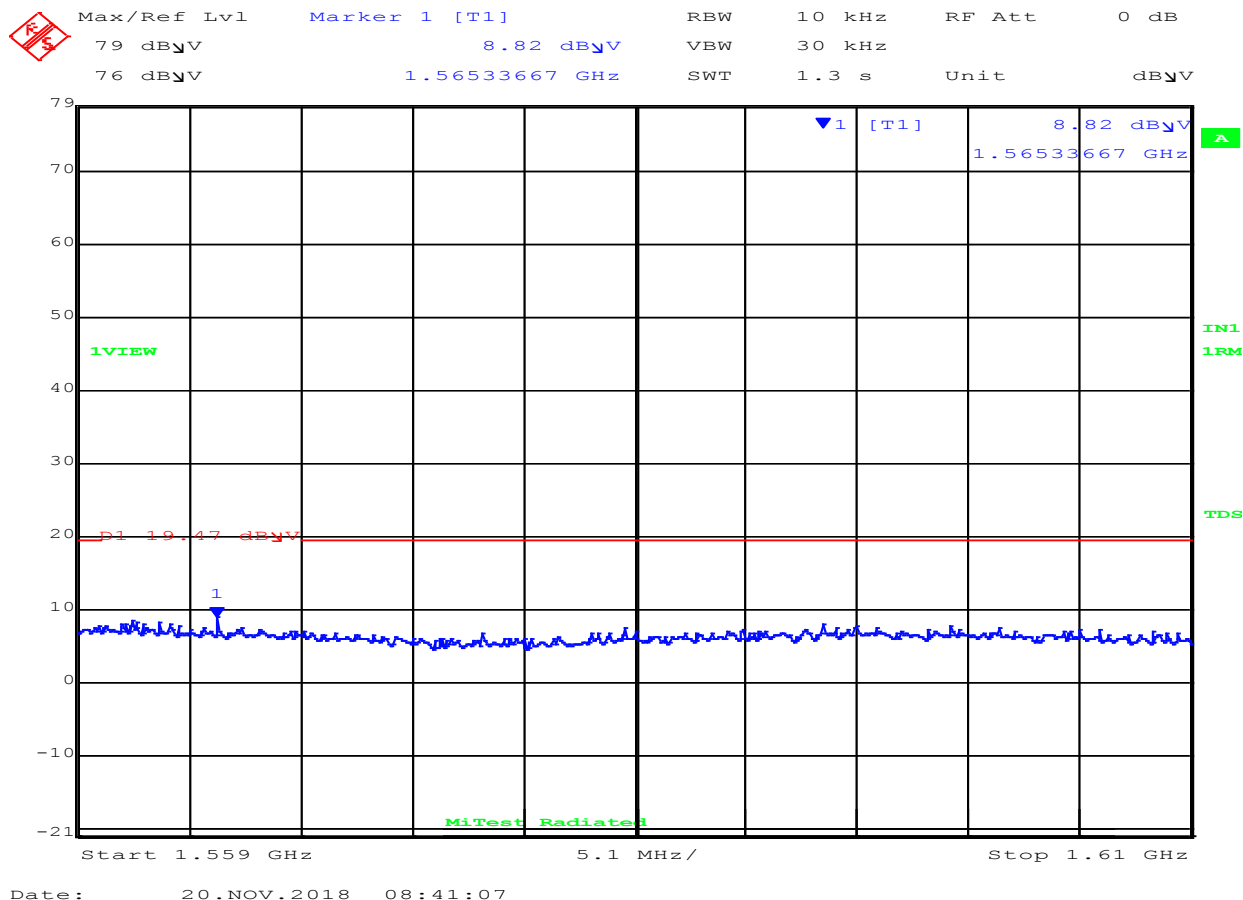
Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

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

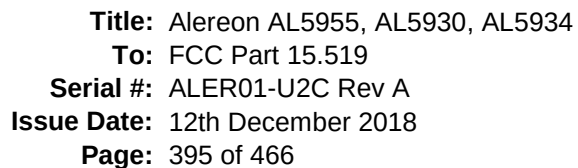
Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



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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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal	
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Test Measurement Results	
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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

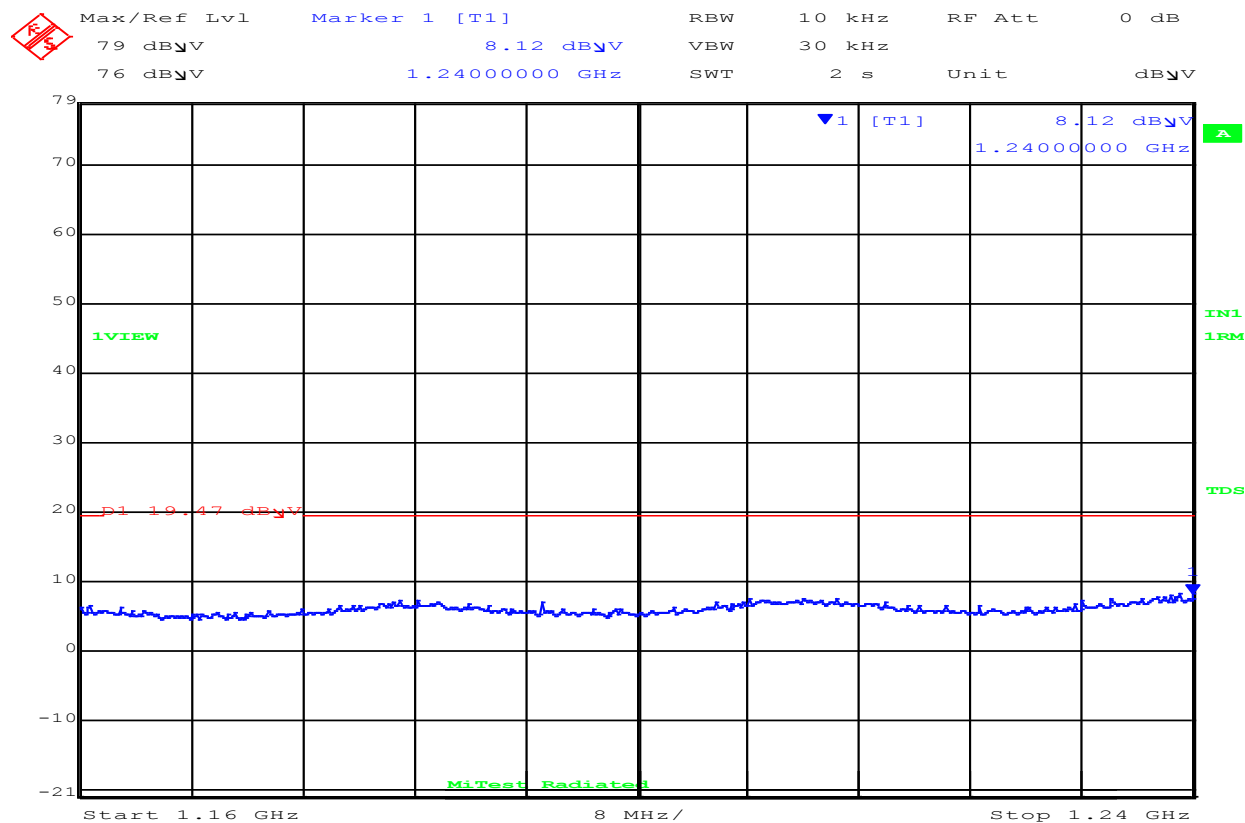
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

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: 20.NOV.2018 10:20:36

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 1.559-1.610 GHz Horizontal

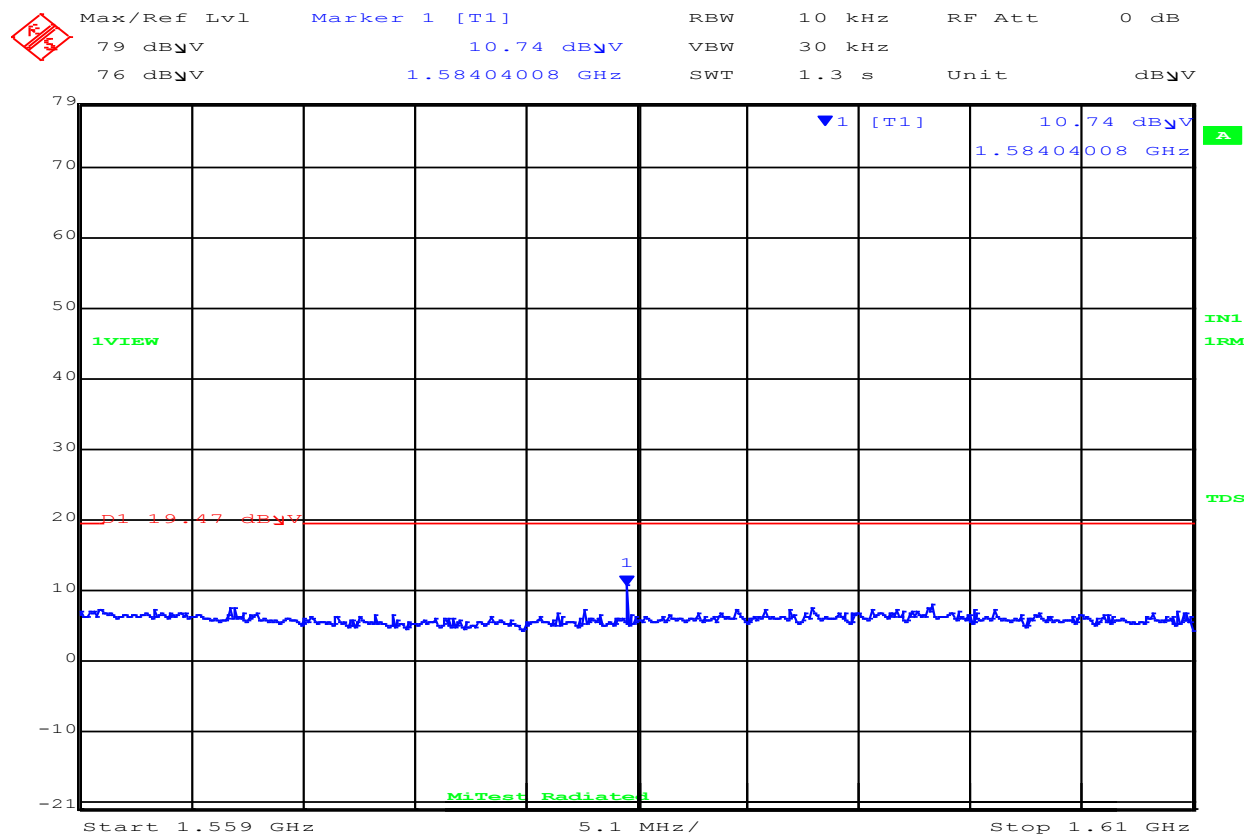
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

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



Date: 20.NOV.2018 10:25:41

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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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

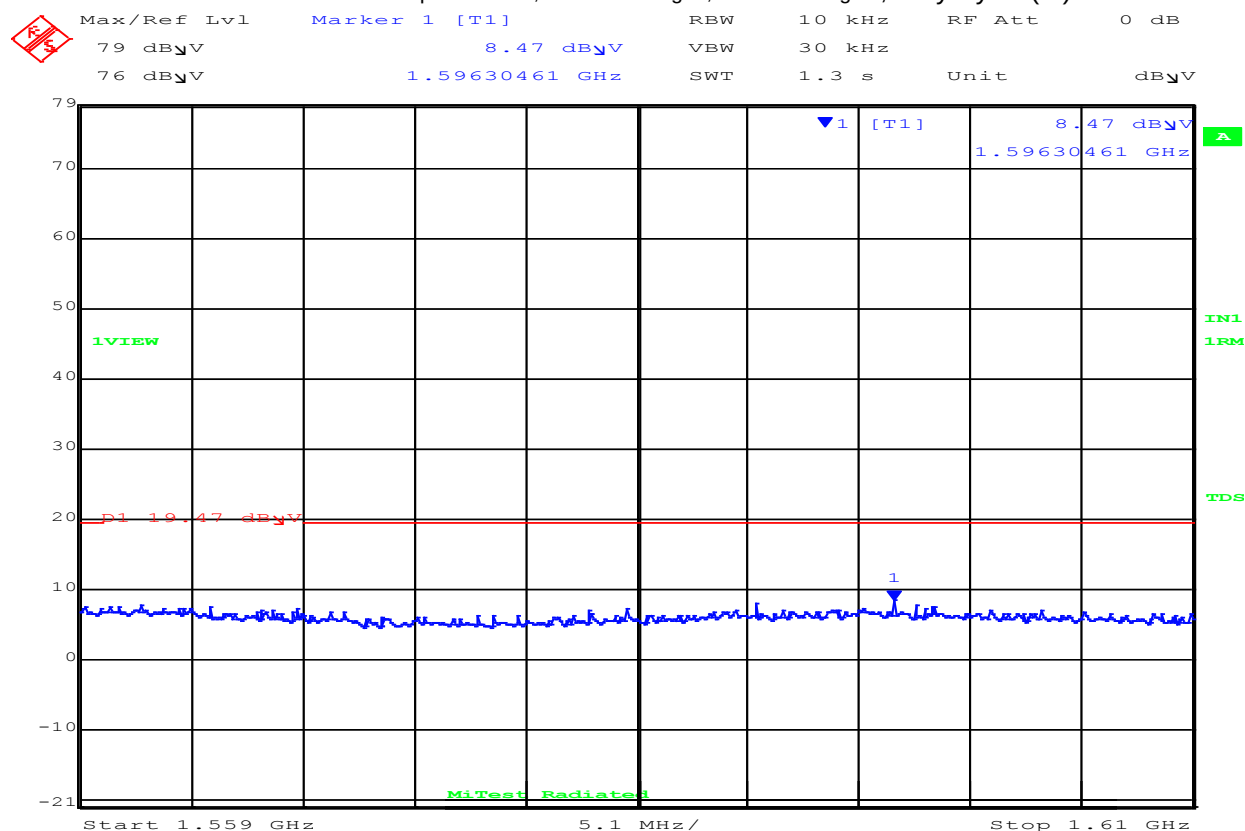
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

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



Date: 20.NOV.2018 10:26:54

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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6600 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

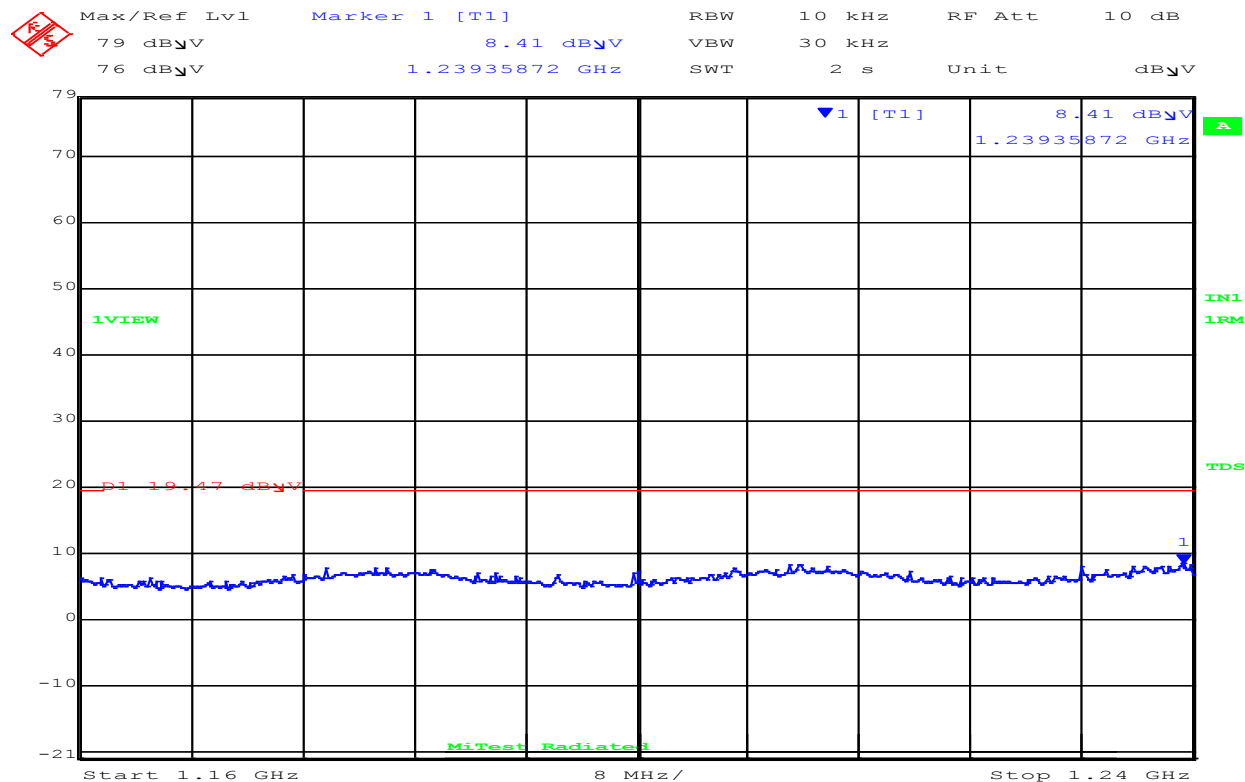
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

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



Date: 20.NOV.2018 11:37:20

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

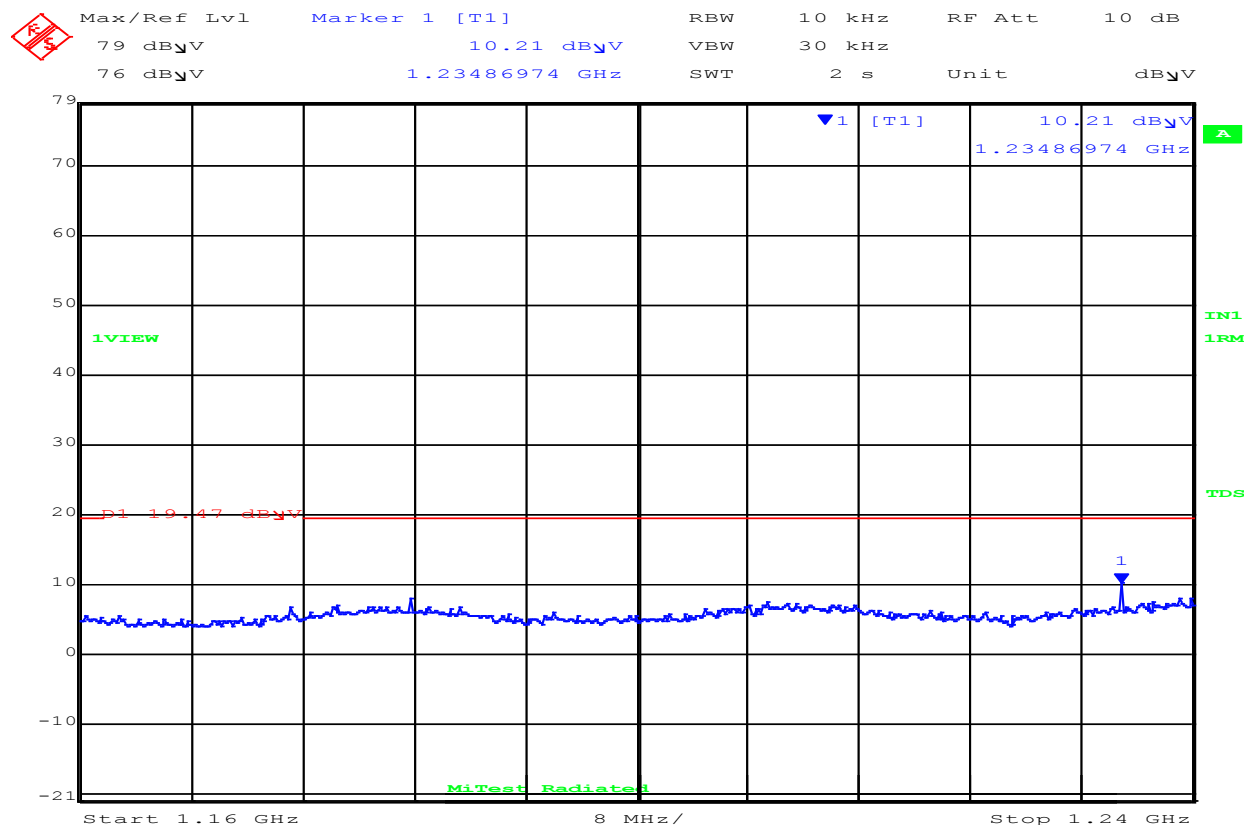
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Vertical

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



Date: 20.NOV.2018 11:38:52

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 1.559-1.610 GHz Horizontal

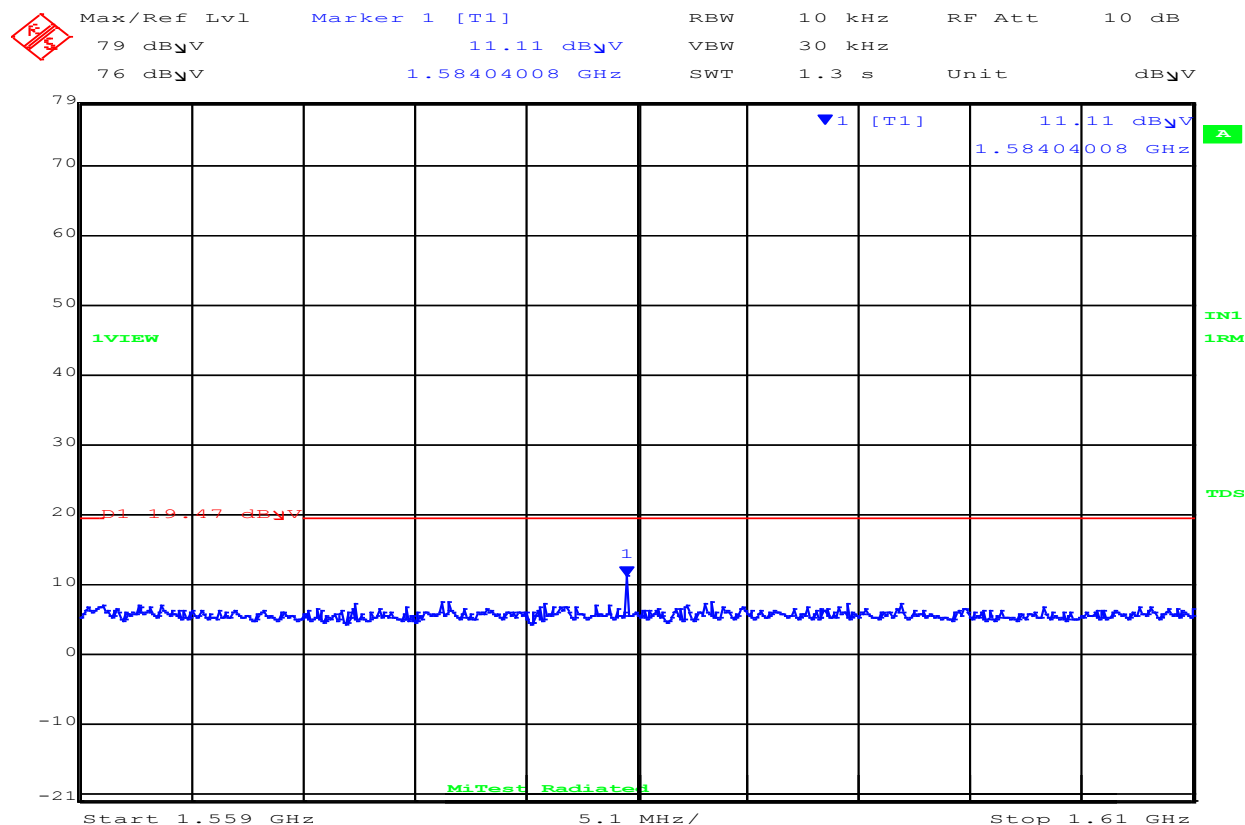
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

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: 20.NOV.2018 11:36:02

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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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Vertical

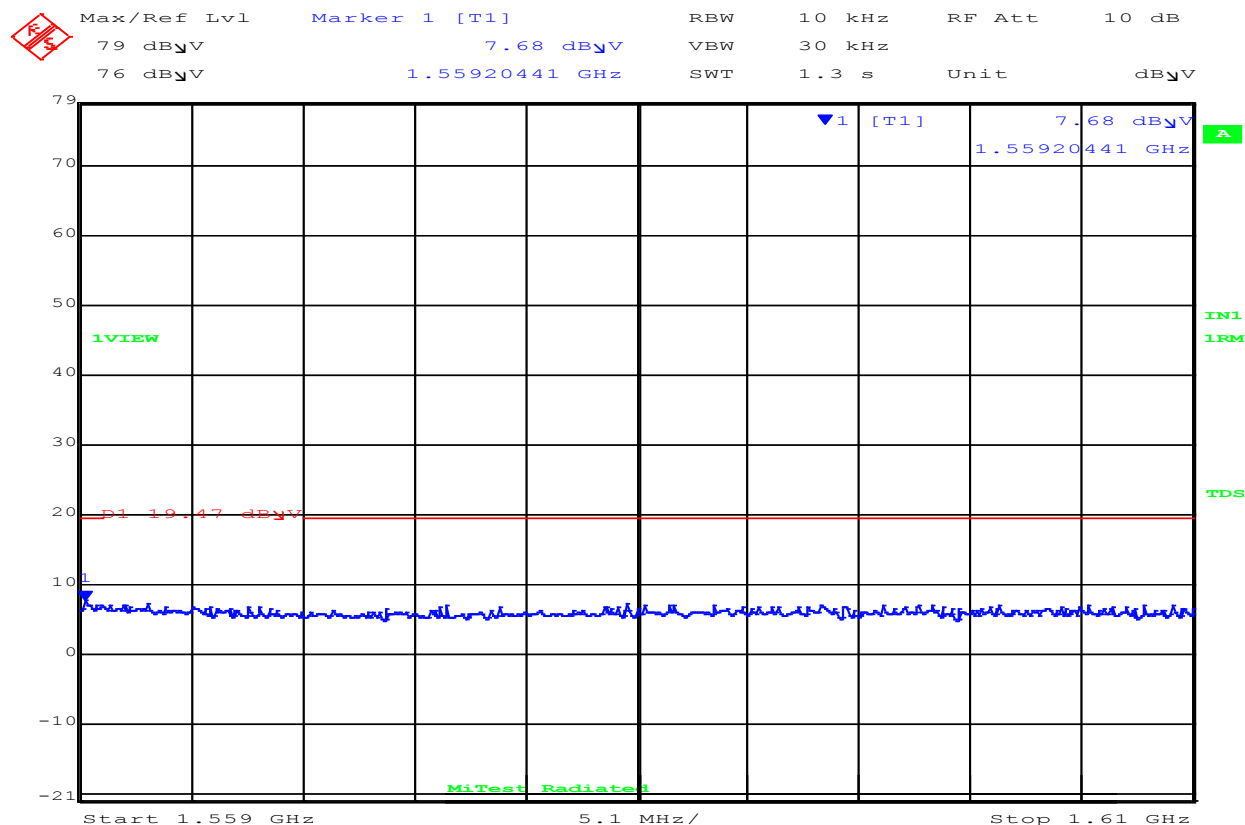
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610 GHz Vertical

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



Date: 20.NOV.2018 11:33:52

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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7128 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

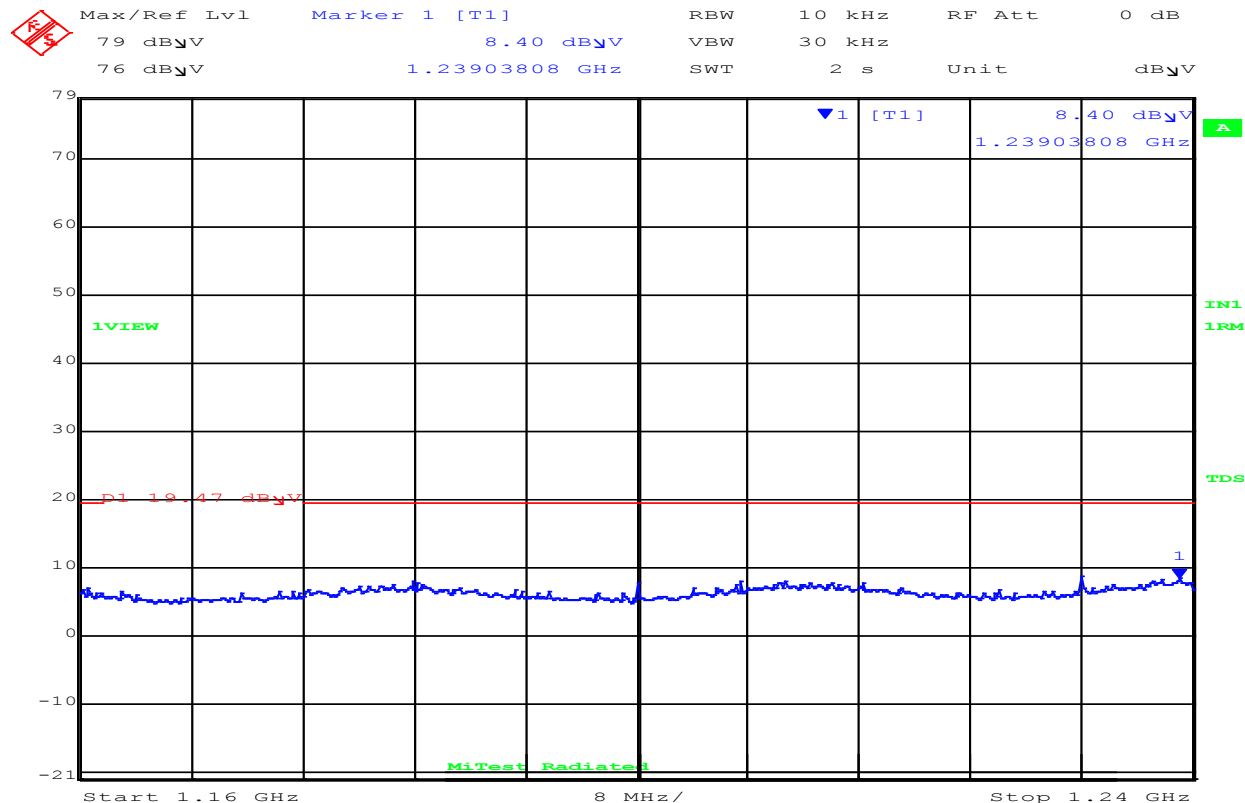
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

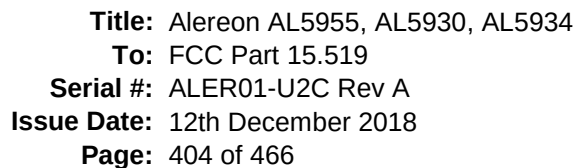
Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 20.NOV.2018 13:41:34

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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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

MiTest
regulatory compliance in the cloud

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

Date: 20.NOV.2018 13:39:48

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 1.559-1.610 GHz Horizontal

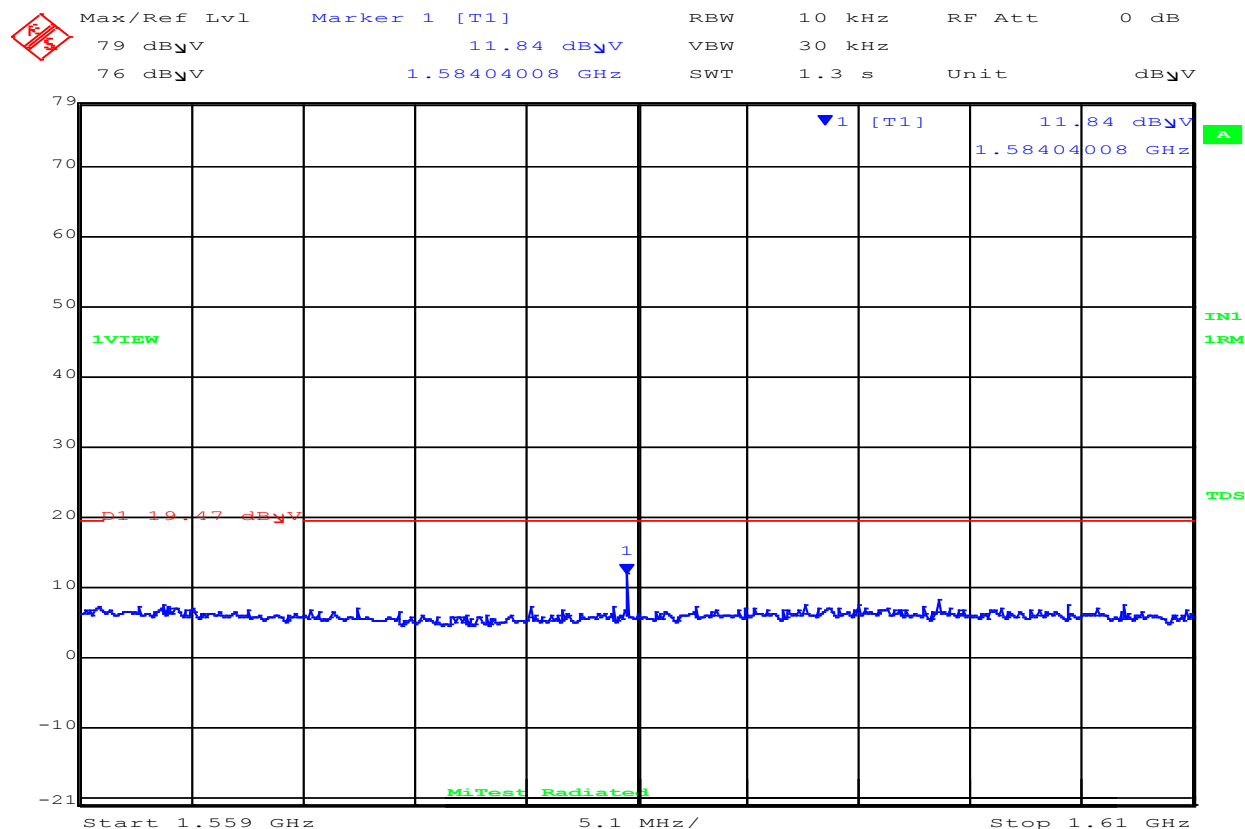
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

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



Date: 20.NOV.2018 13:43:06

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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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

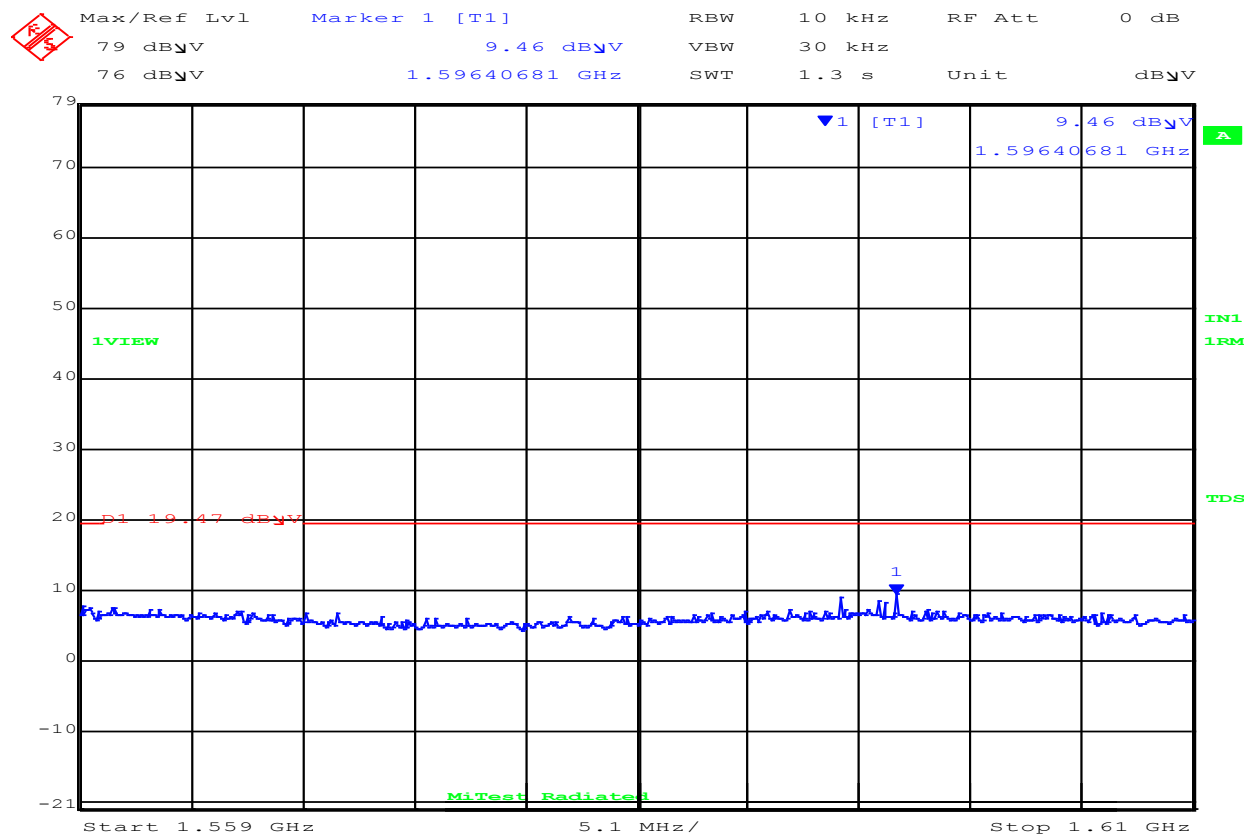
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Vertical

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



Date: 20.NOV.2018 13:46:37

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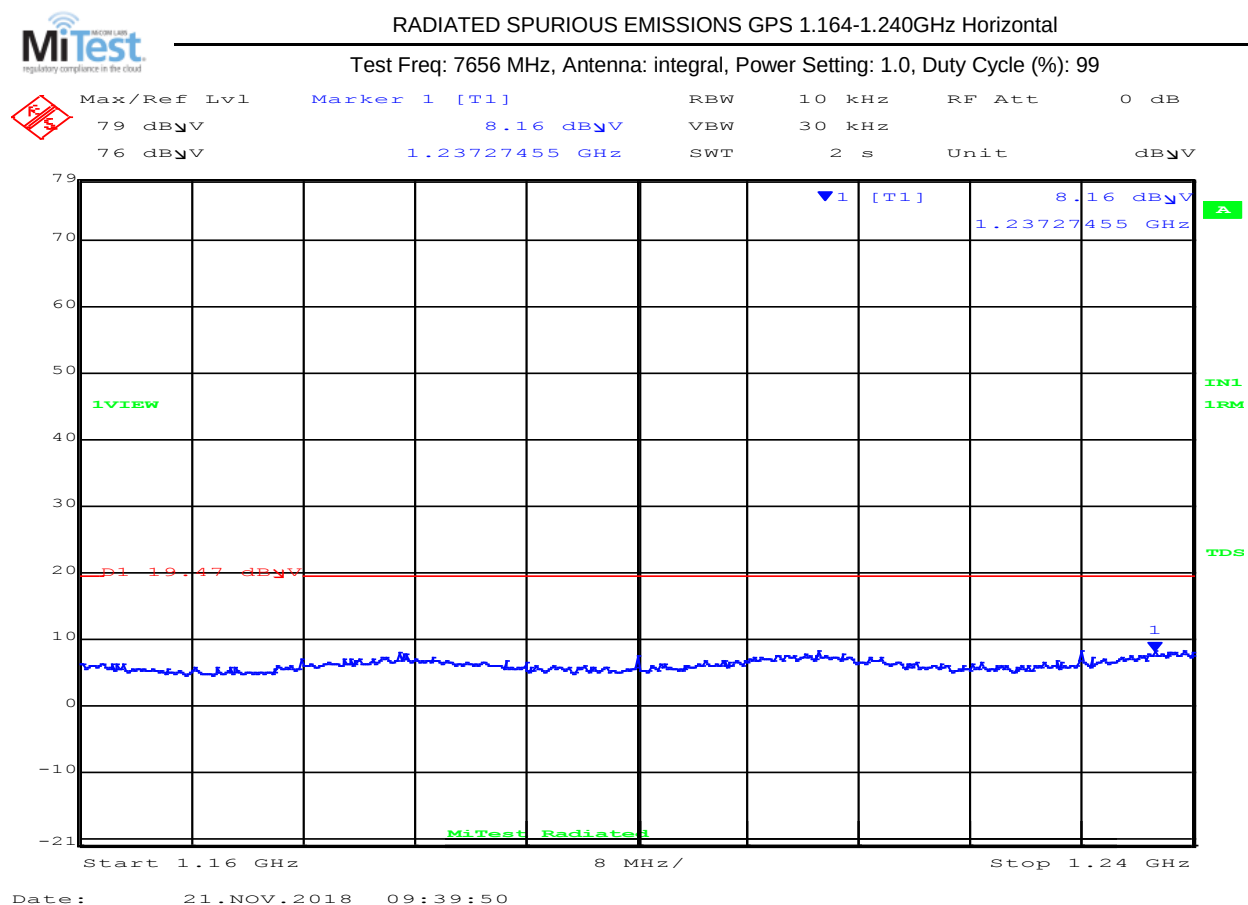
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7656 MHz (Covers Band Group 3 TFC 7 and Band Group 6 TFC 5)

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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Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Vertical

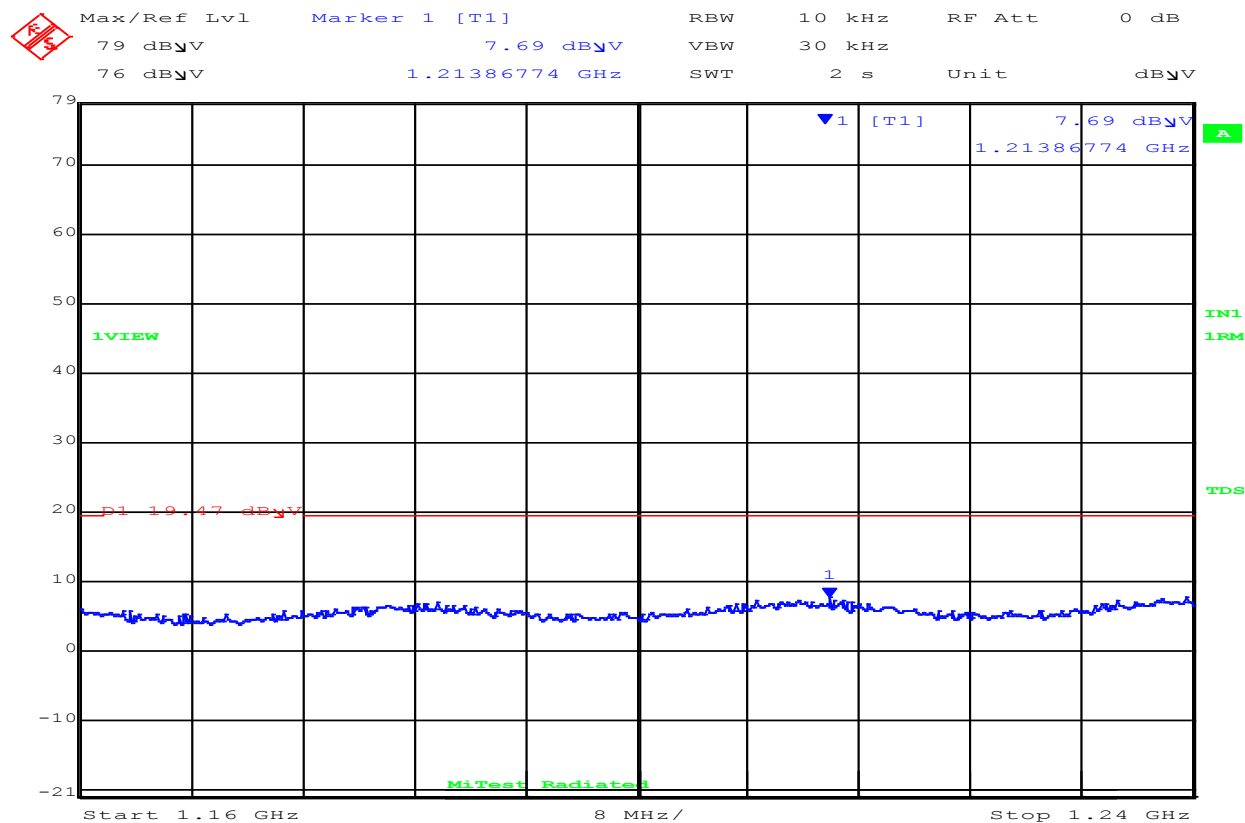
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

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



Date: 21.NOV.2018 09:41:03

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 1.559-1.610 GHz Horizontal

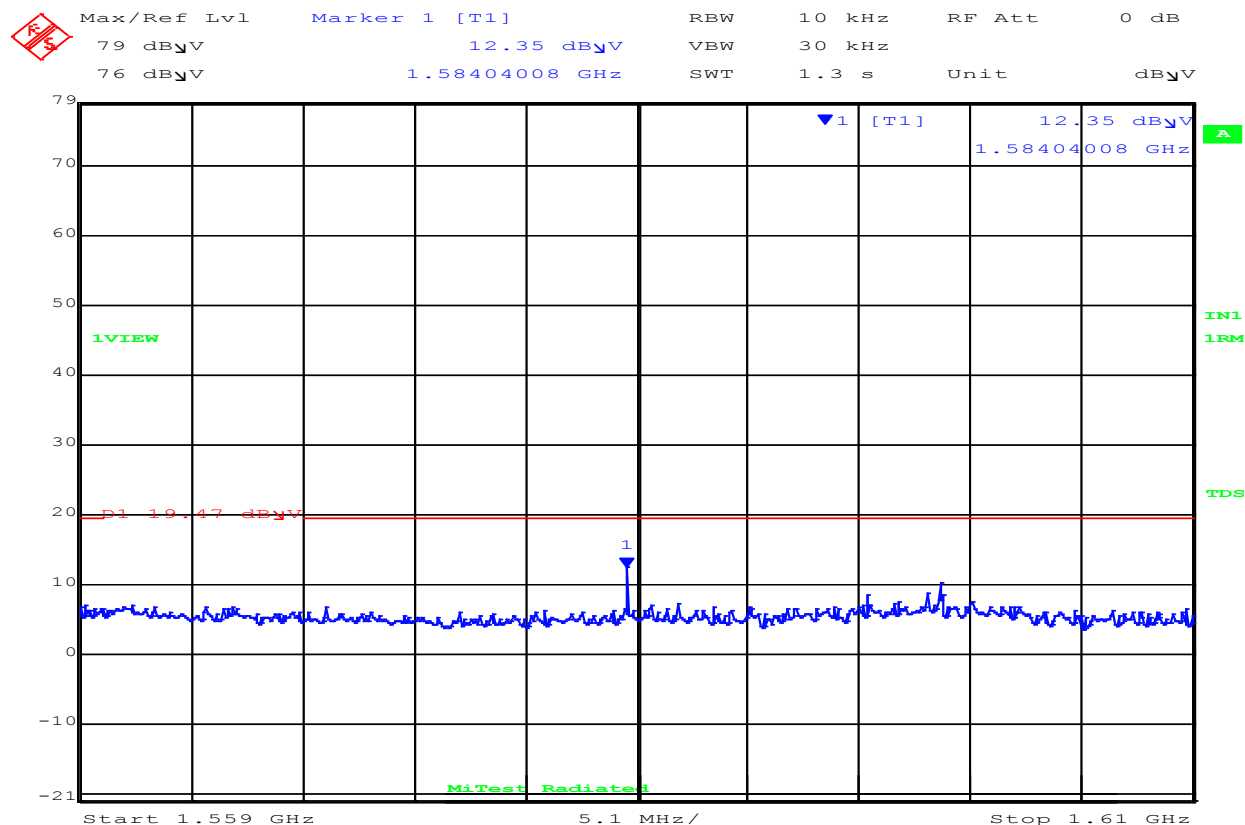
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

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: 21.NOV.2018 09:44:21

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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Equipment Configuration for Spurious Emissions 1.559-1.610GHz Vertical

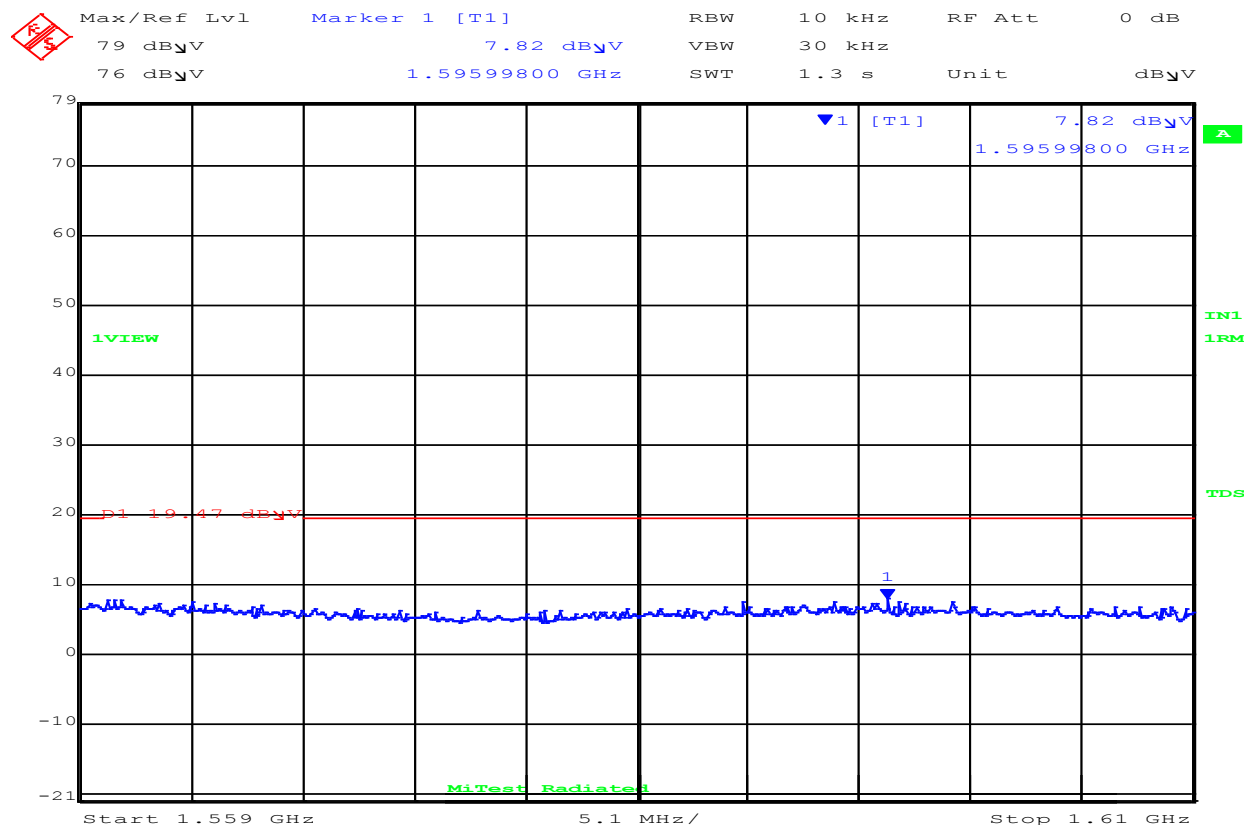
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

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: 21.NOV.2018 09:42:47

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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8184 MHz

Equipment Configuration for Spurious Emissions 1.164-1.240 GHz Horizontal

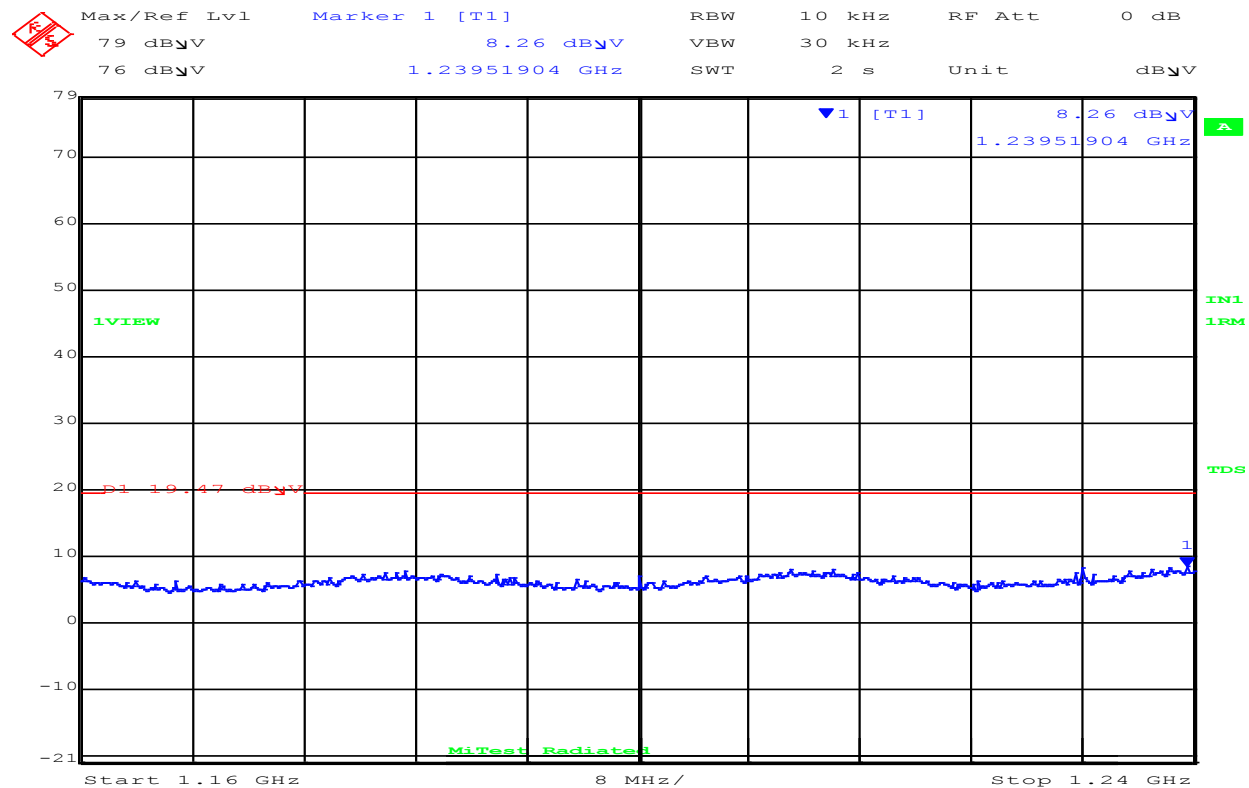
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

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

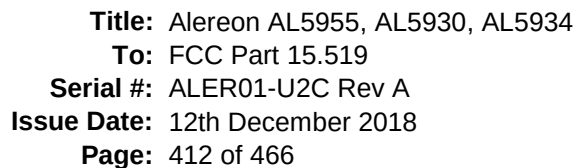


Date: 21.NOV.2018 10:04:28

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



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Equipment Configuration for Spurious Emissions 1.559-1.610 GHz Horizontal

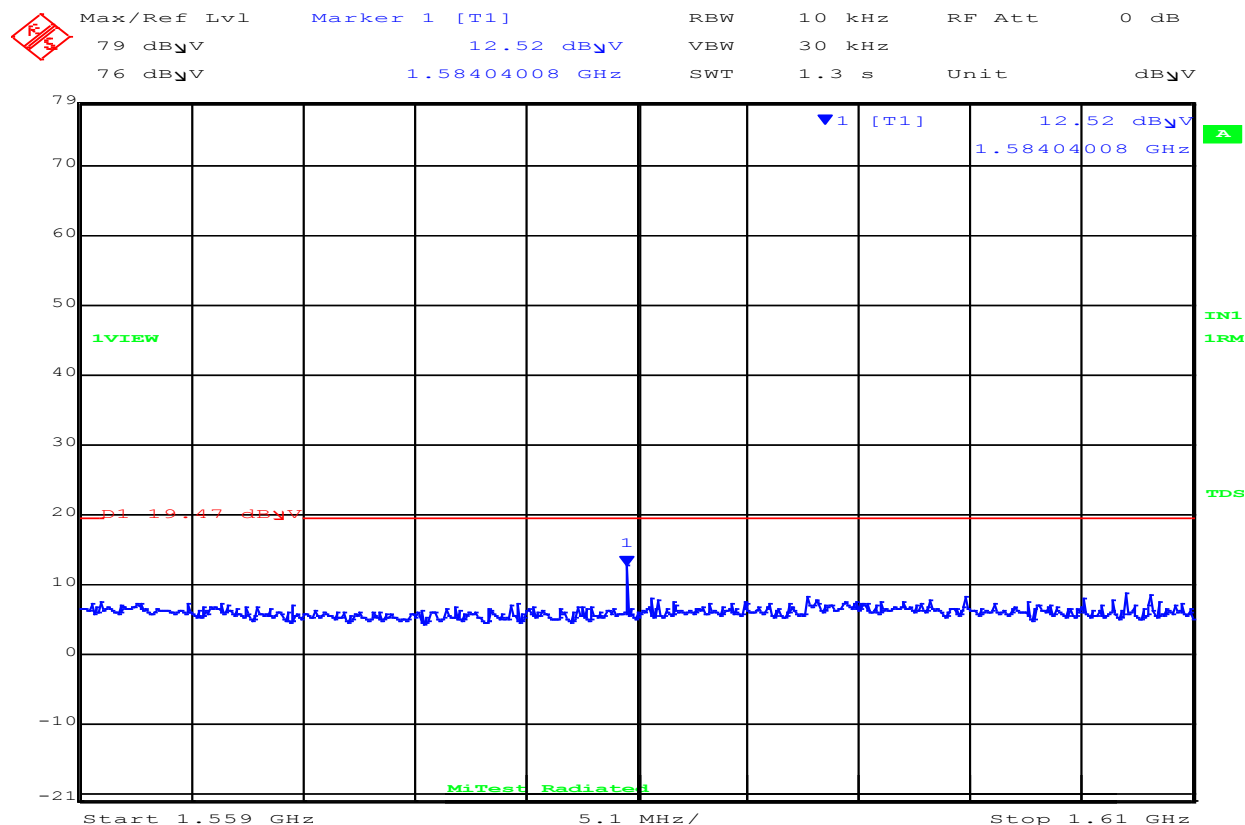
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

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



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

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 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 1.559-1.610 GHz Vertical

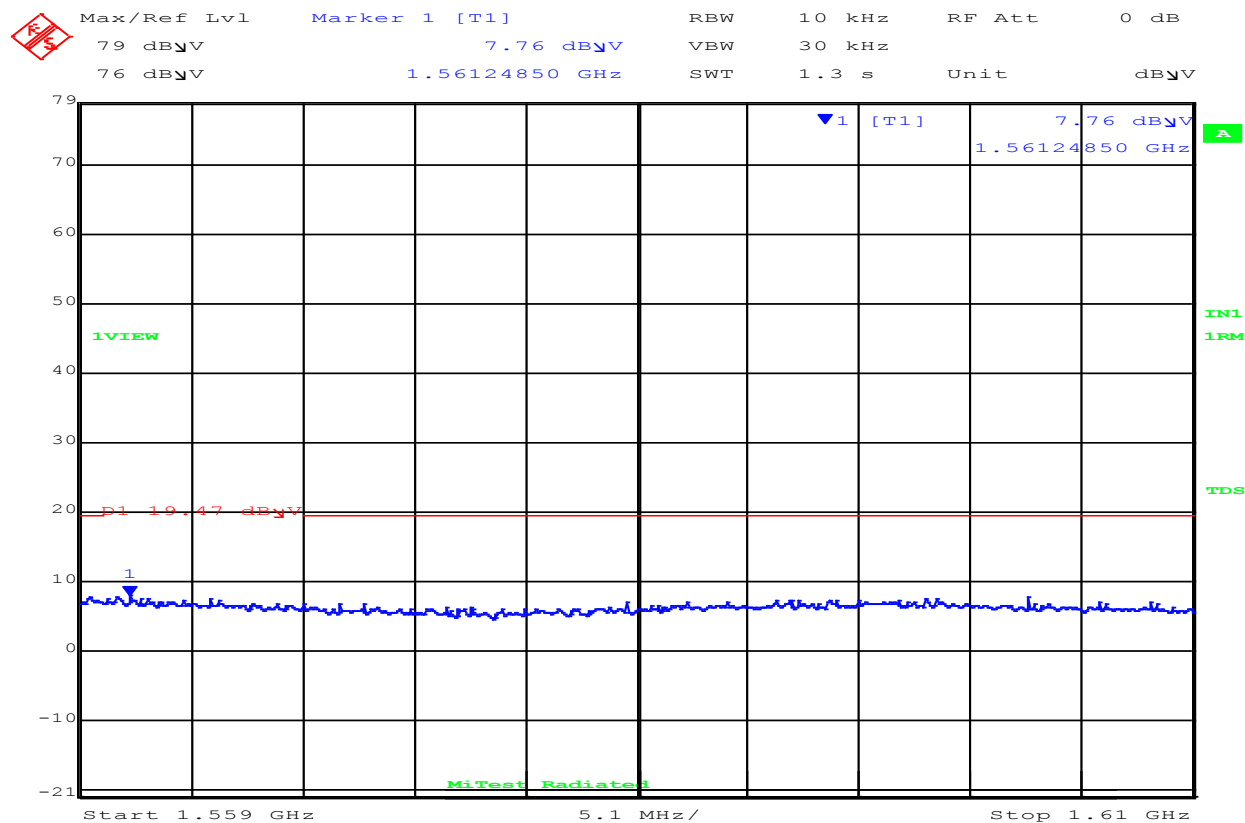
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610 GHz Vertical

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



Date: 21.NOV.2018 10:01:09

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 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

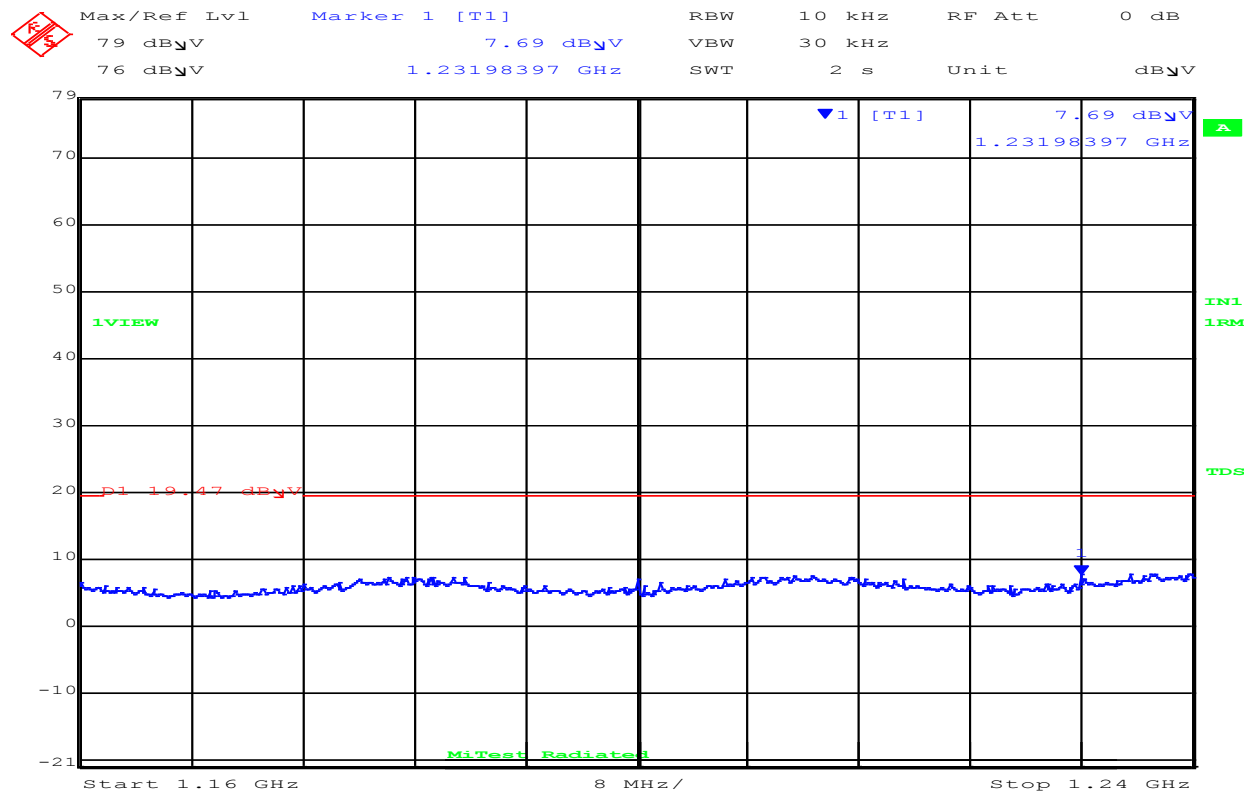
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.164-1.240GHz Horizontal

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



Date: 21.NOV.2018 11:55:48

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

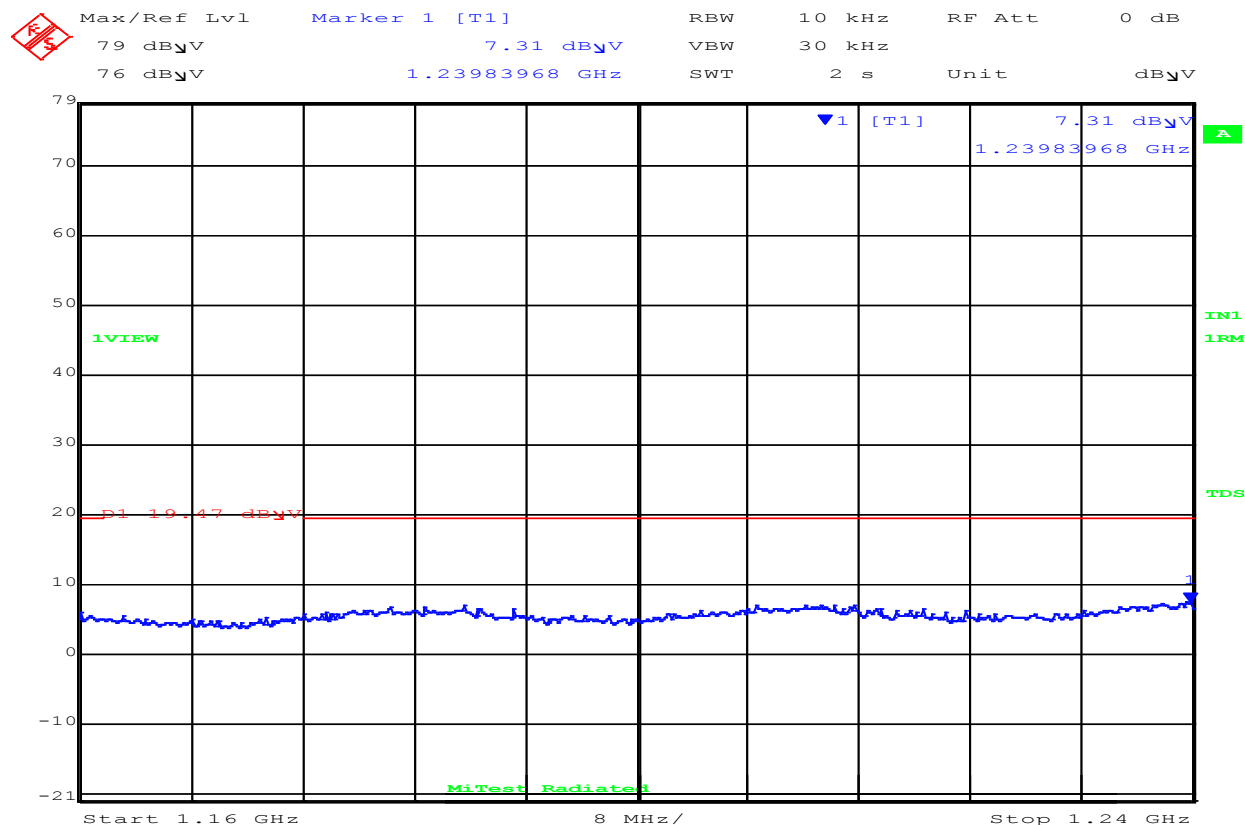
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

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: 21.NOV.2018 11:57:05

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 1.559-1.610 GHz Horizontal

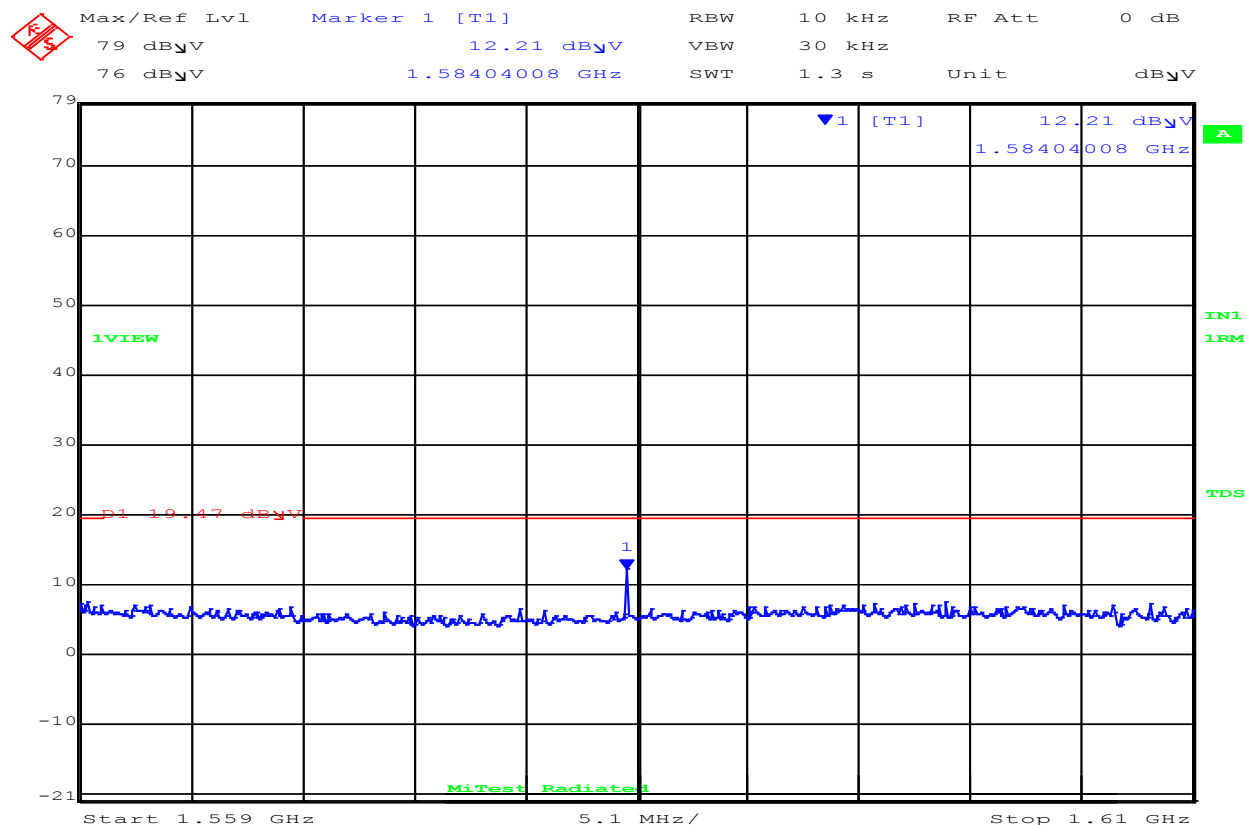
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



RADIATED SPURIOUS EMISSIONS GPS 1.559-1.610GHz Horizontal

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

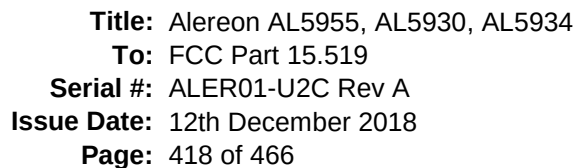


Date: 21.NOV.2018 11:54:14

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



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9.4.3. 50 MHz Bandwidth Peak Emissions

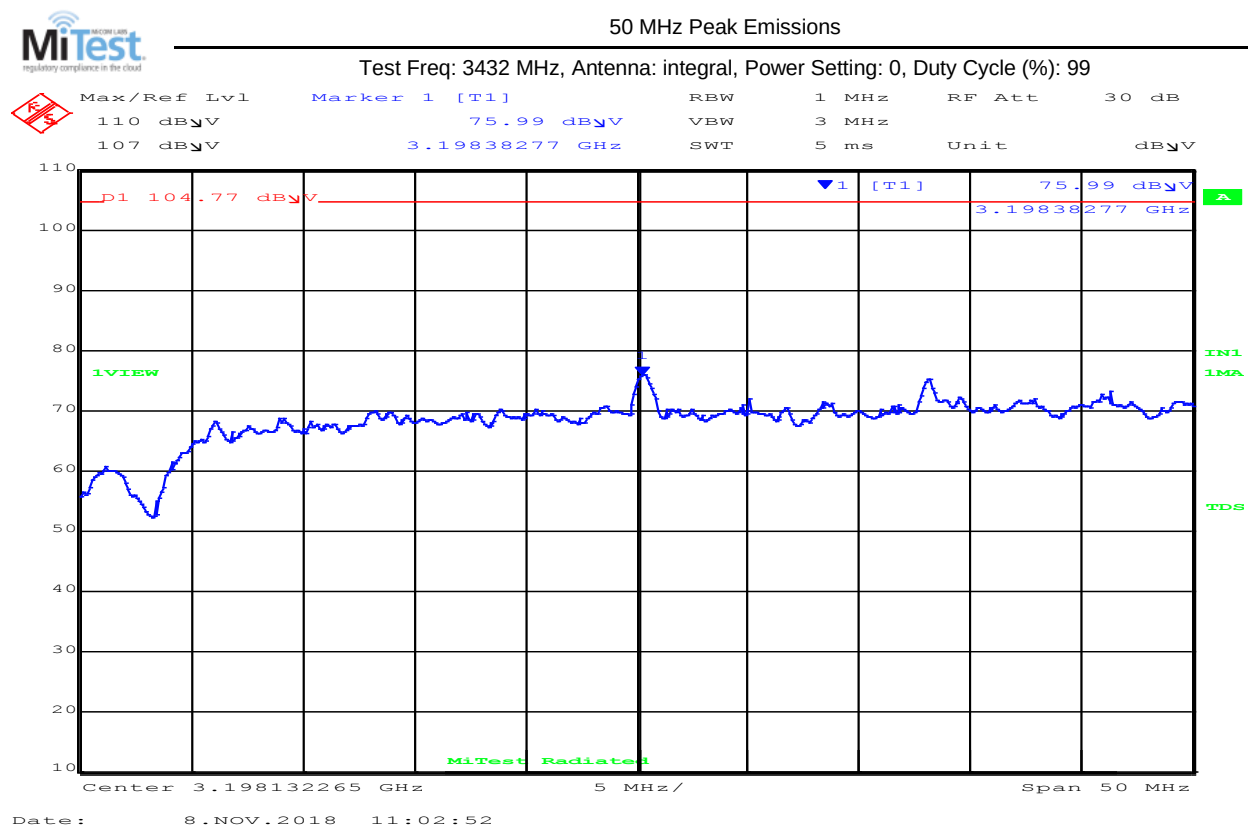
9.4.3.1. Commander AL5930

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 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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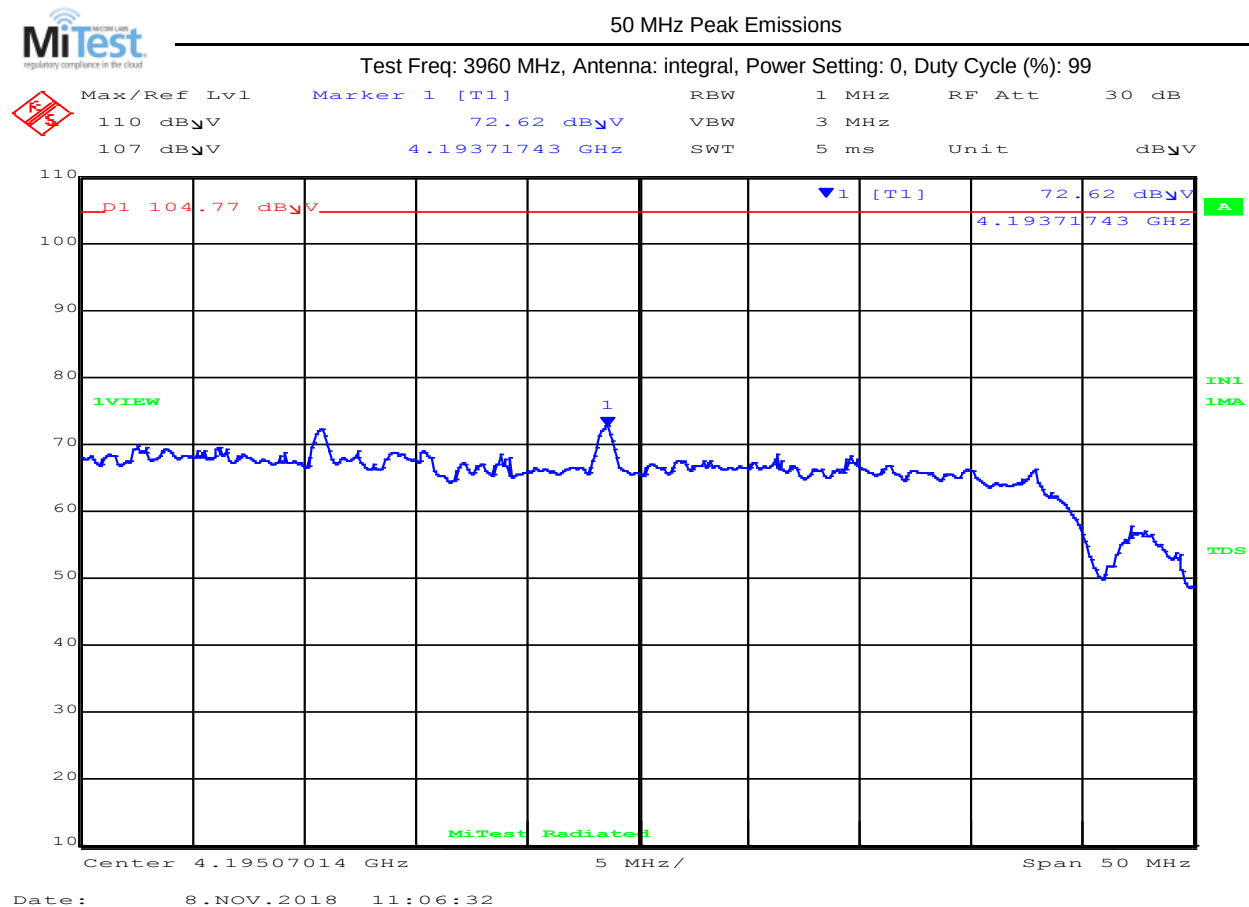
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3960 MHz

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:									

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4488 MHz

Equipment Configuration for 50 MHz Peak Emissions

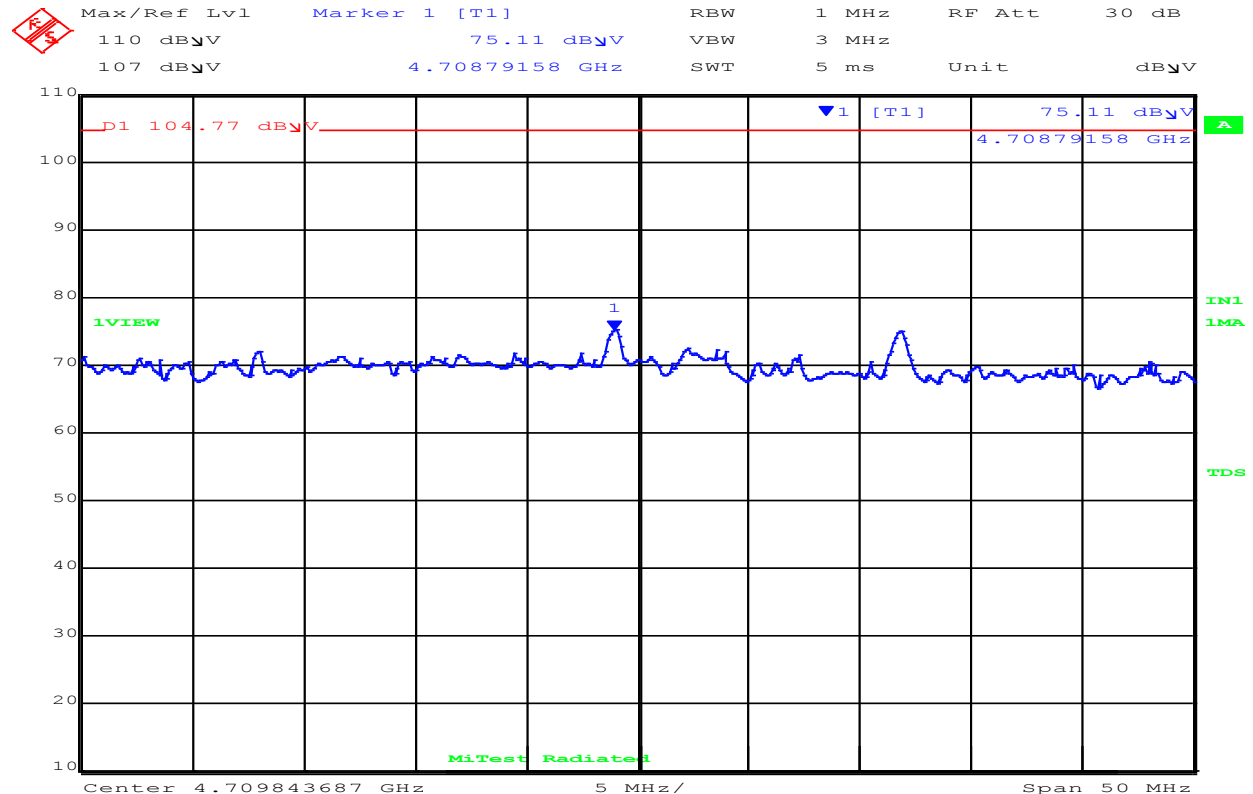
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 8.NOV.2018 11:09:19

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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6600 MHz

Equipment Configuration for 50 MHz Peak Emissions

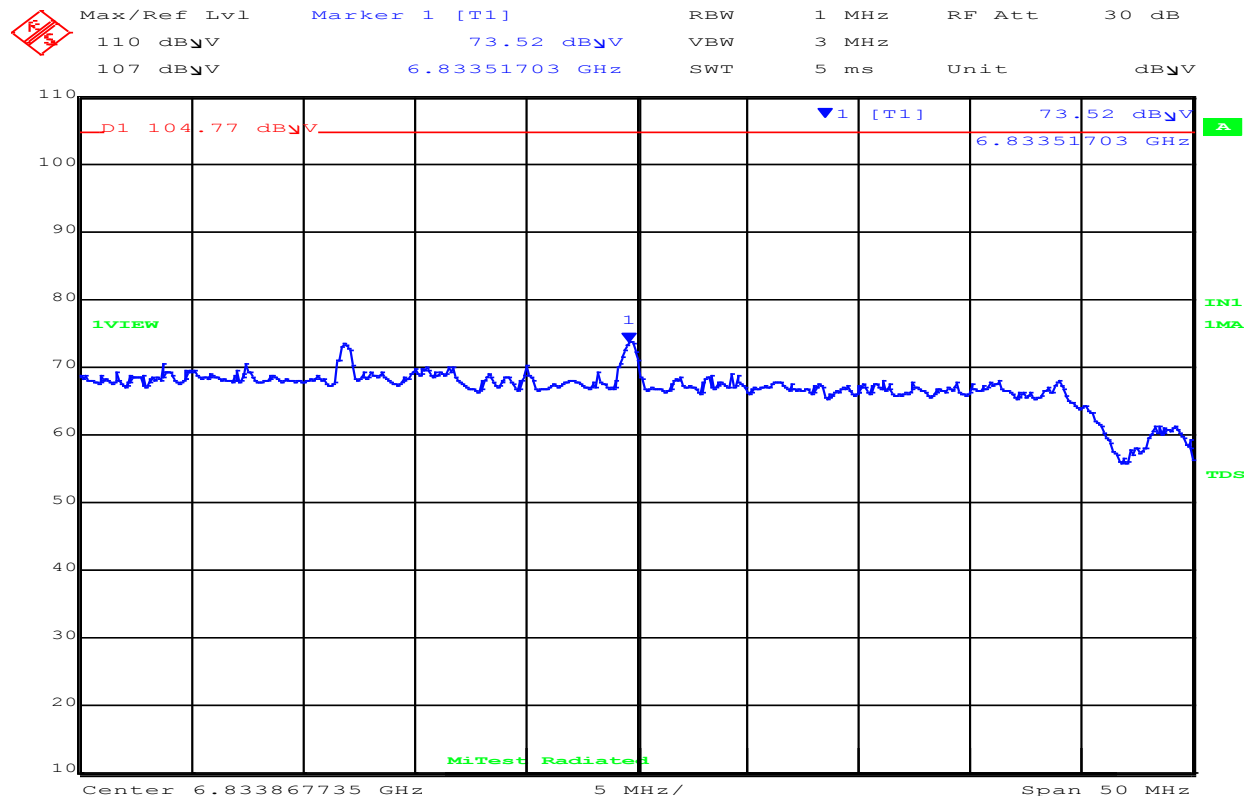
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 8.NOV.2018 11:12:23

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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7128 MHz

Equipment Configuration for 50 MHz Peak Emissions

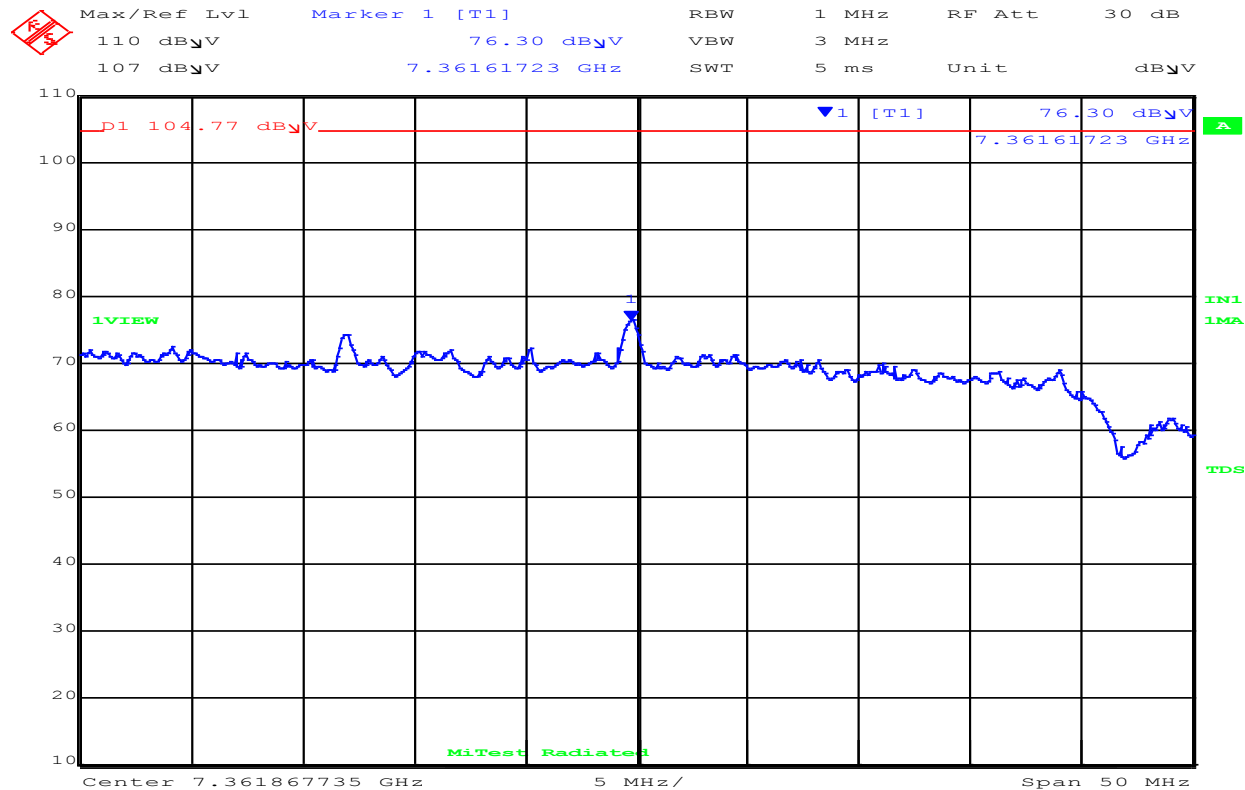
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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

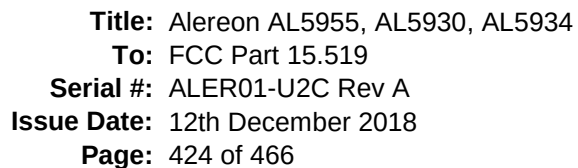


Date: 8.NOV.2018 11:15:55

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:									

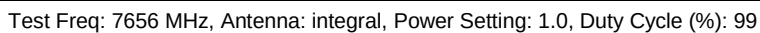
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Equipment Configuration for 50 MHz Peak Emissions

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

50 MHz Peak Emissions



Date: 8.NOV.2018 11:18:58

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:									

MiCOM Labs, 575 Boulder Court, Pleasanton, California 94566 USA, Phone: +1 (925) 462 0304, Fax: +1 (925) 462 0306, www.micomlabs.com



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8184 MHz

Equipment Configuration for 50 MHz Peak Emissions

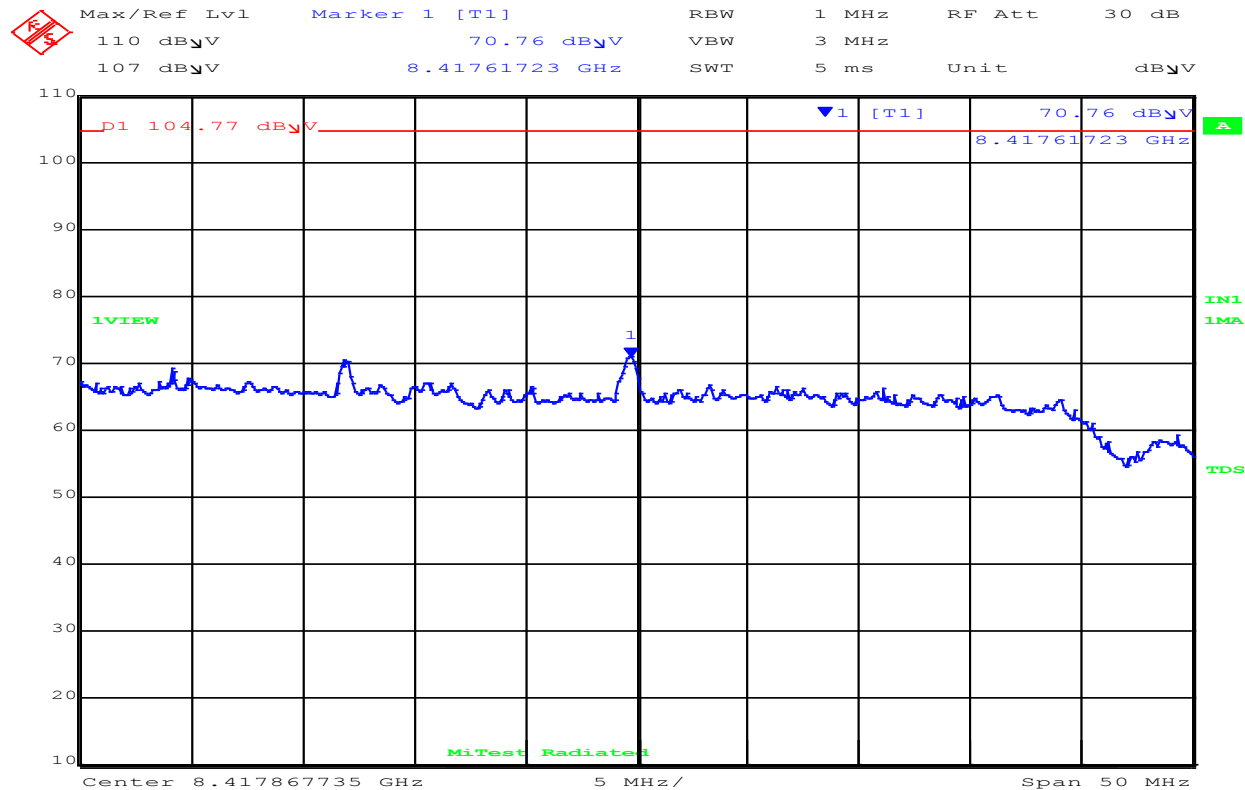
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



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

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

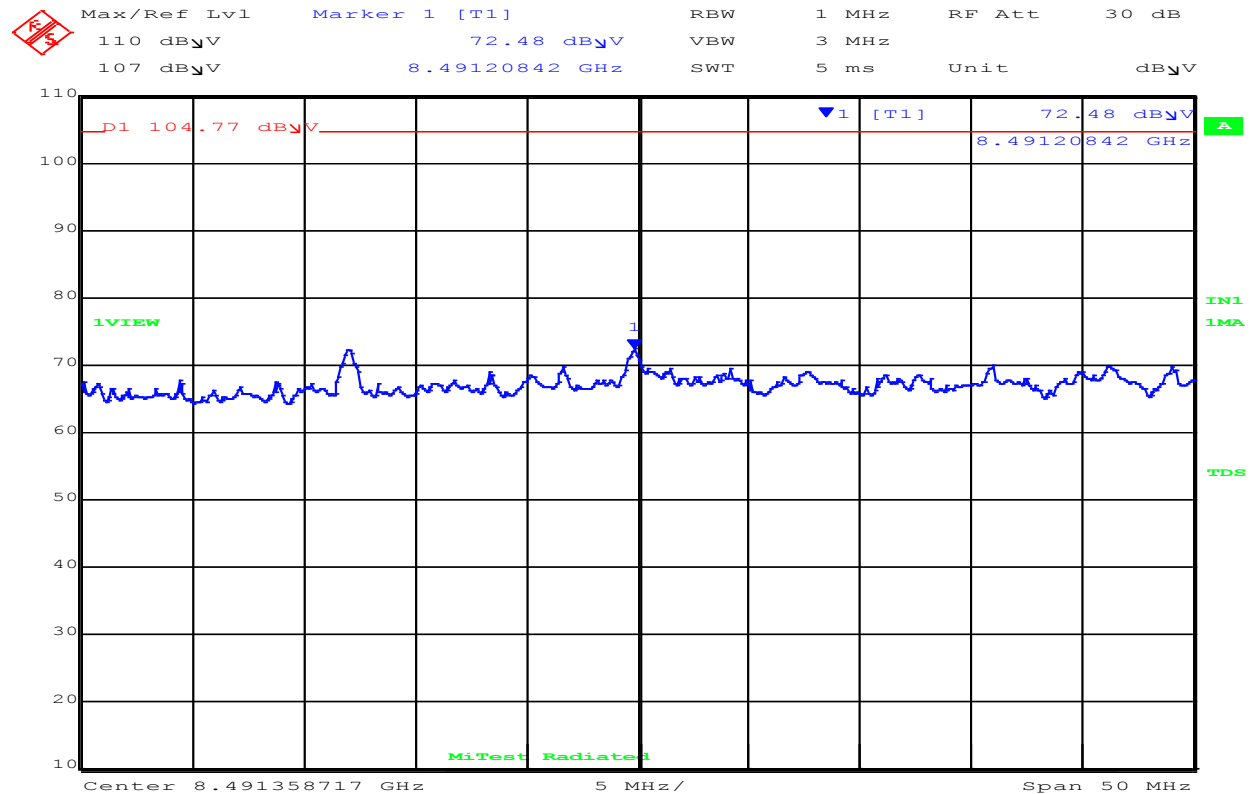
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 8.NOV.2018 11:24:49

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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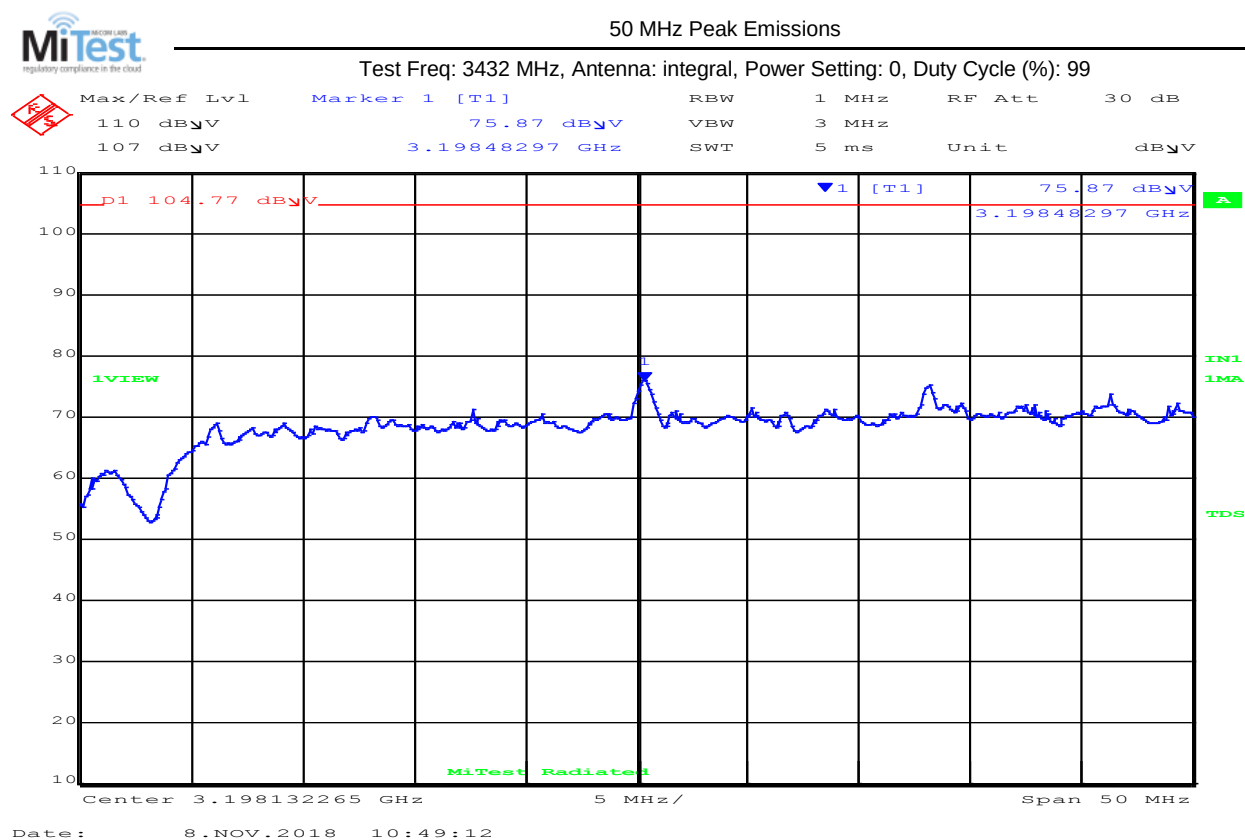
9.4.3.2. Camouflage AL5955

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 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

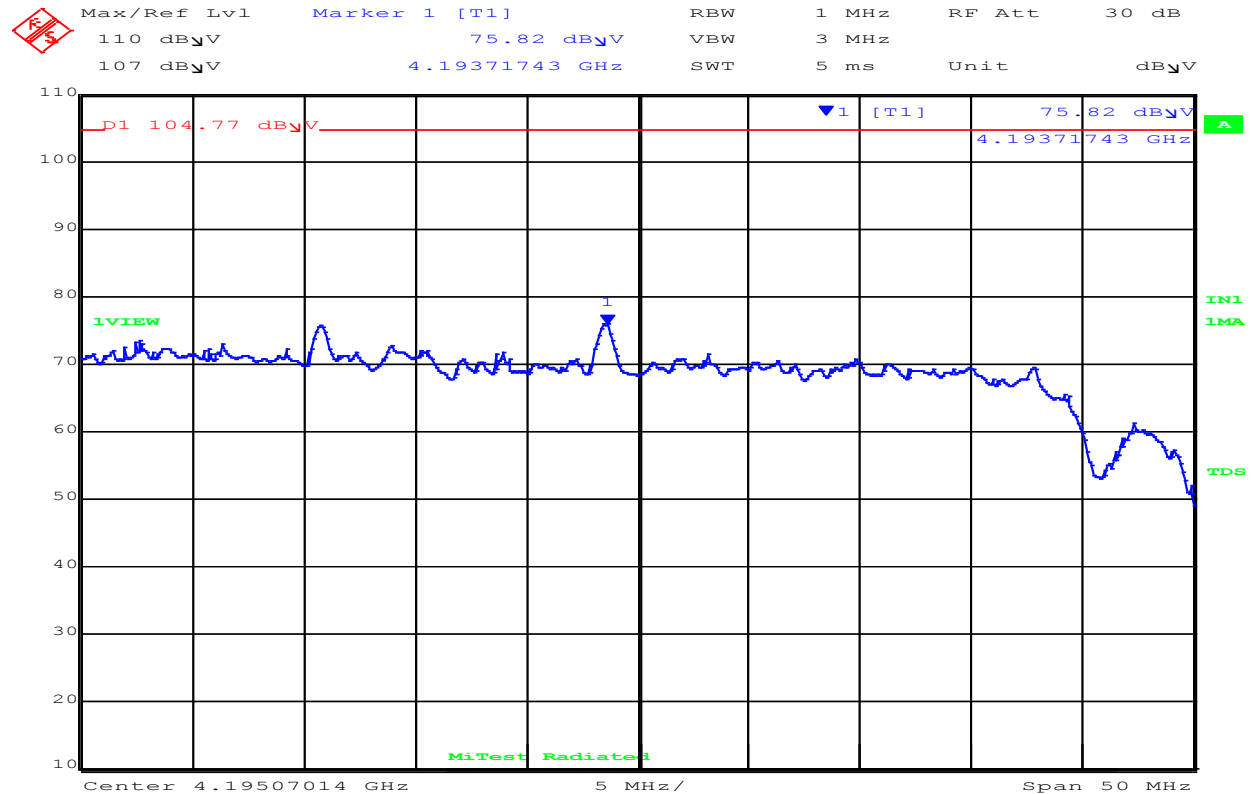
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 8.NOV.2018 10:45:45

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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4488 MHz

Equipment Configuration for 50 MHz Peak Emissions

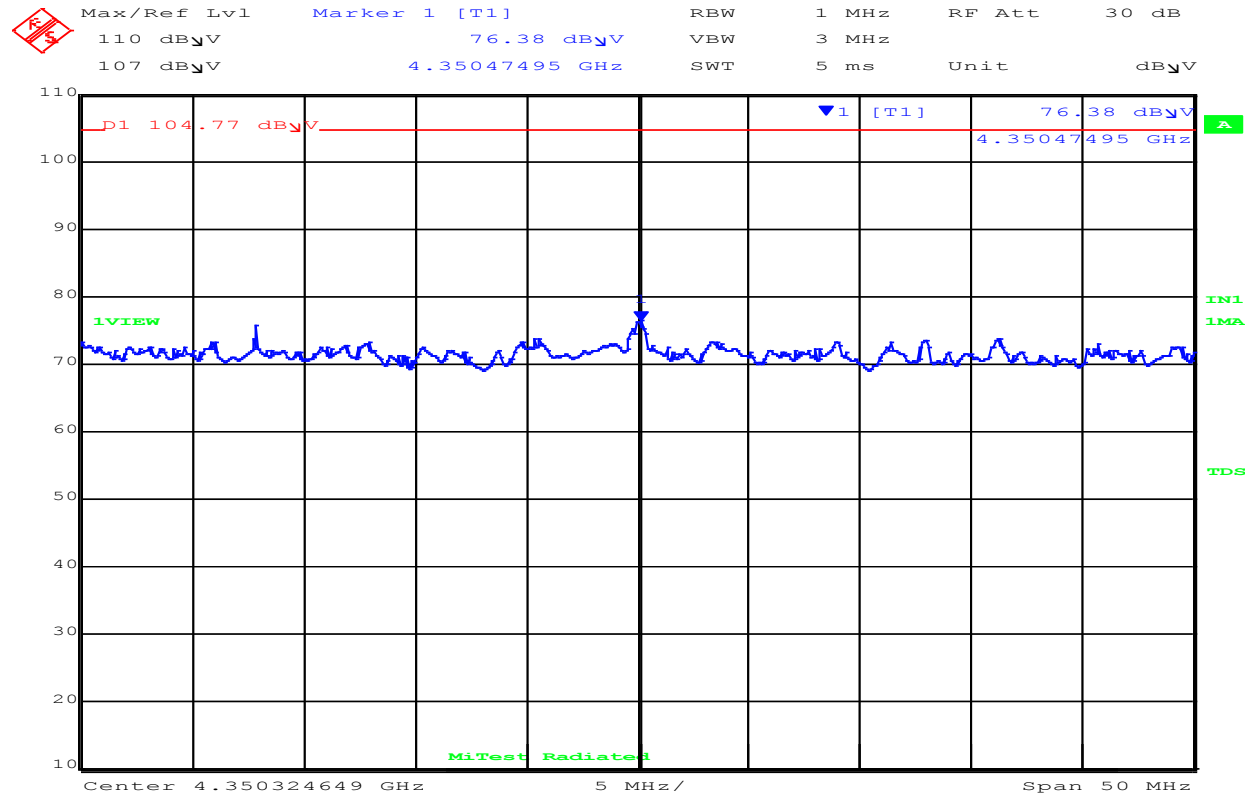
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 8.NOV.2018 10:40:47

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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6600 MHz

Equipment Configuration for 50 MHz Peak Emissions

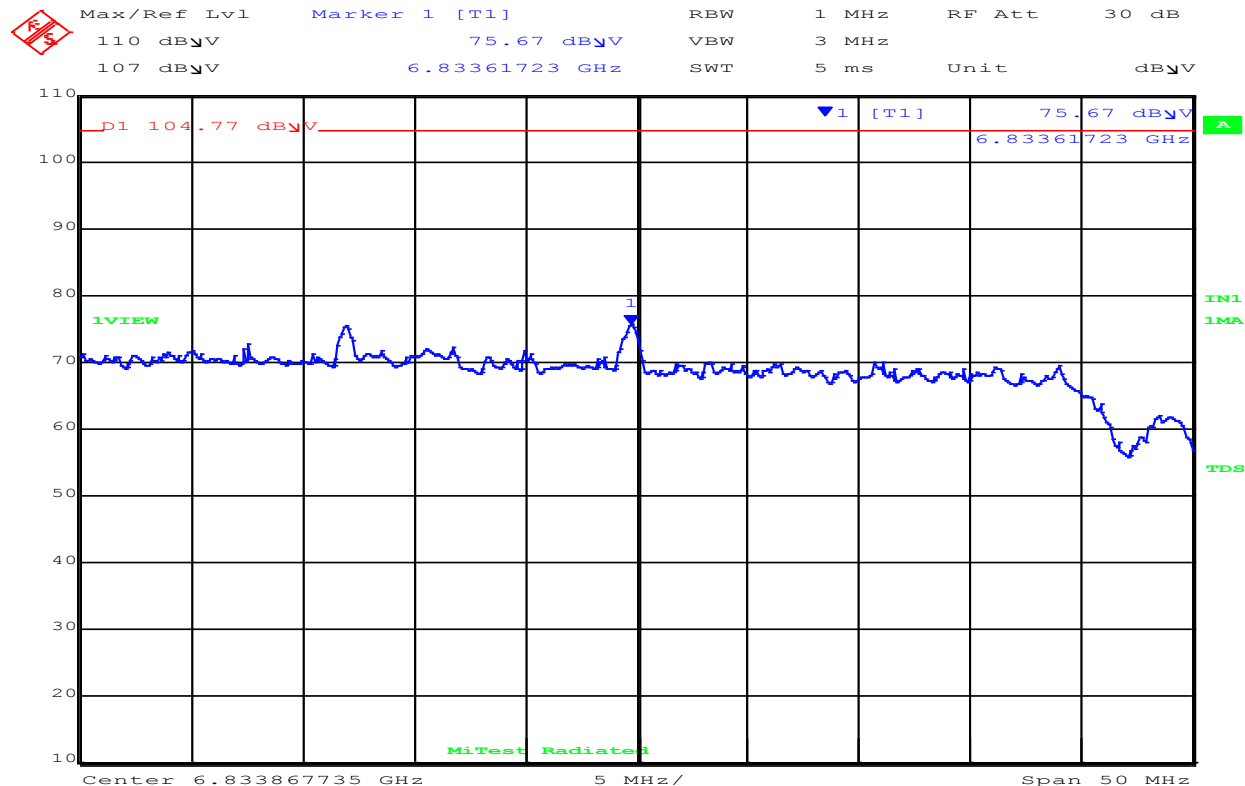
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 8.NOV.2018 10:37:39

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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7128 MHz

Equipment Configuration for 50 MHz Peak Emissions

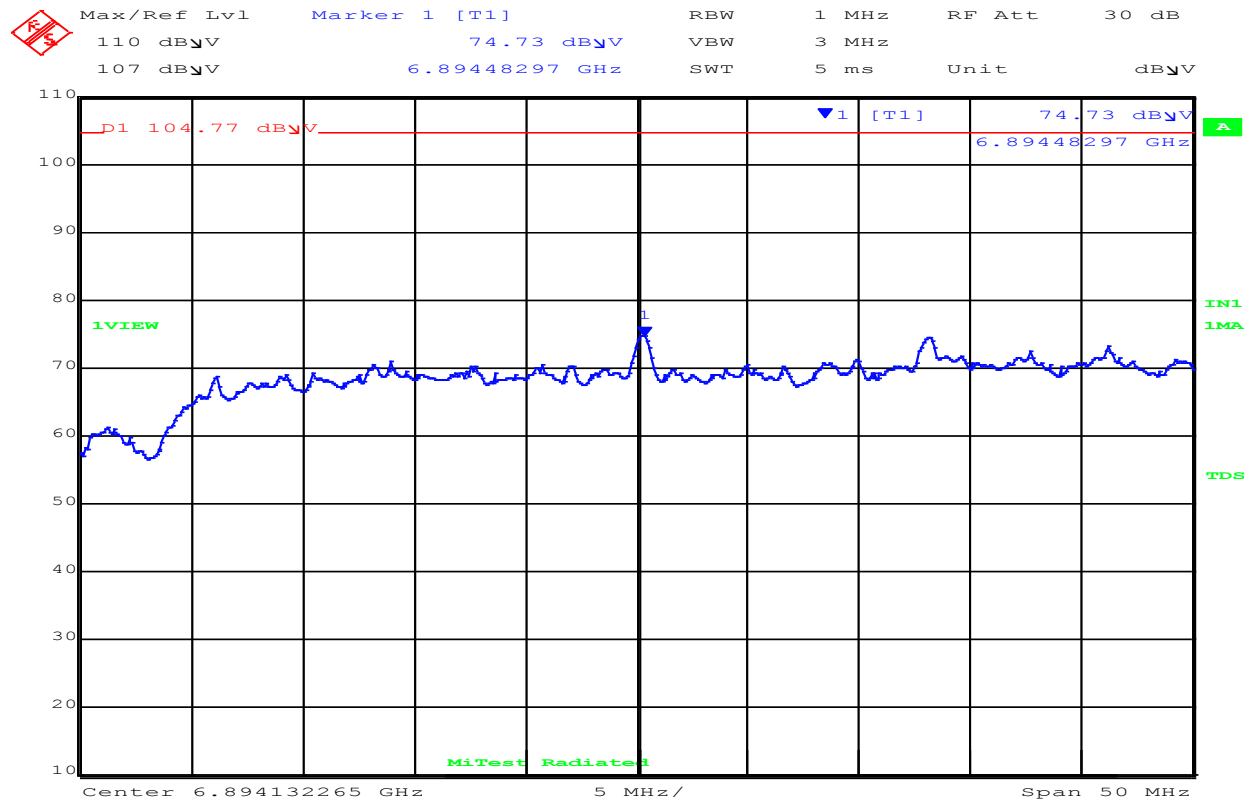
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 8.NOV.2018 10:33:58

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

Equipment Configuration for 50 MHz Peak Emissions

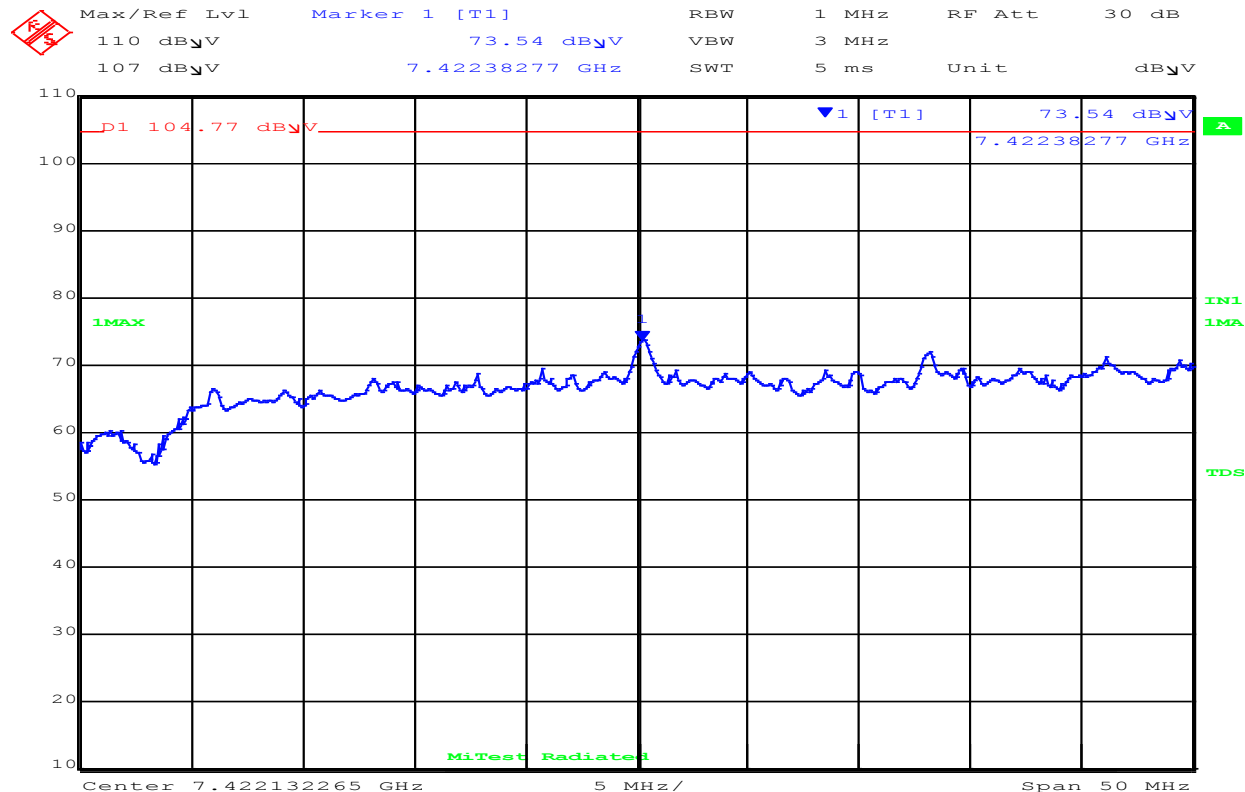
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7656.00	Data Rate:	
Power Setting:	1.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 8.NOV.2018 10:28:14

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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8184 MHz

Equipment Configuration for 50 MHz Peak Emissions

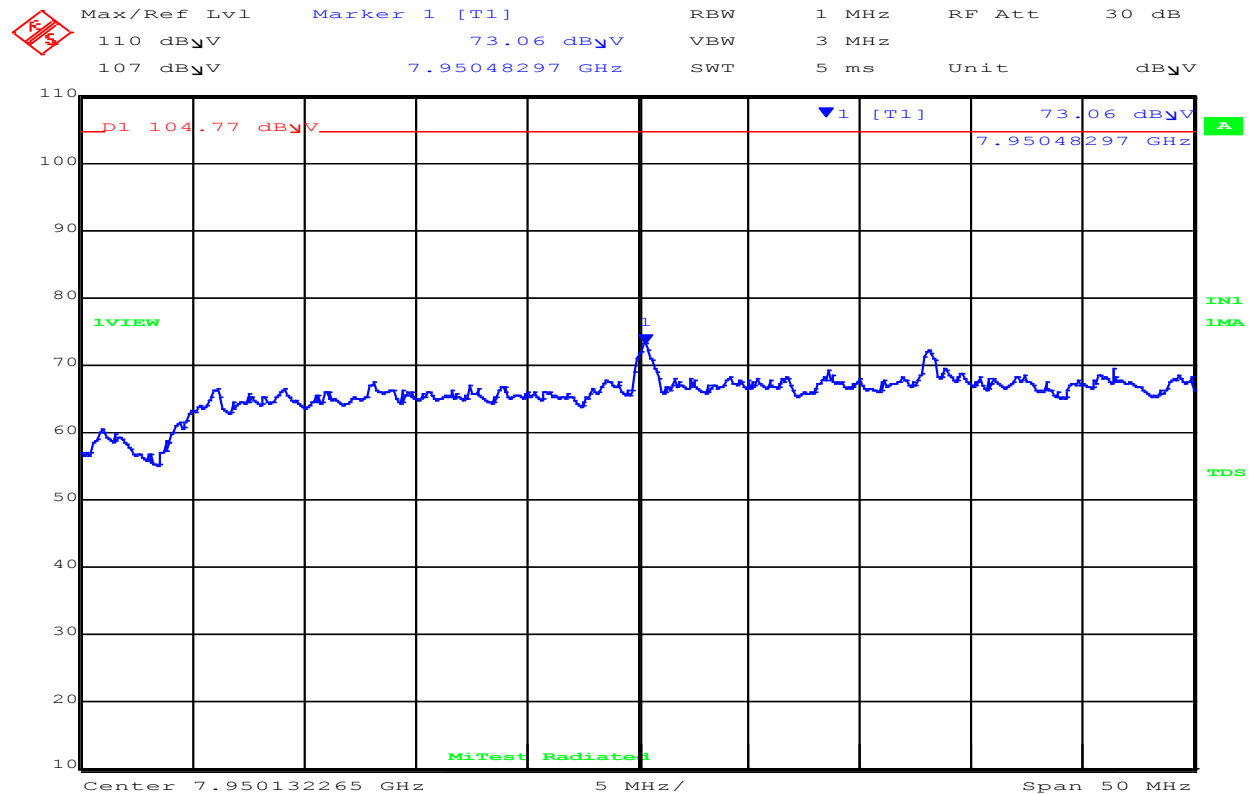
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8184.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 8.NOV.2018 10:52:53

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

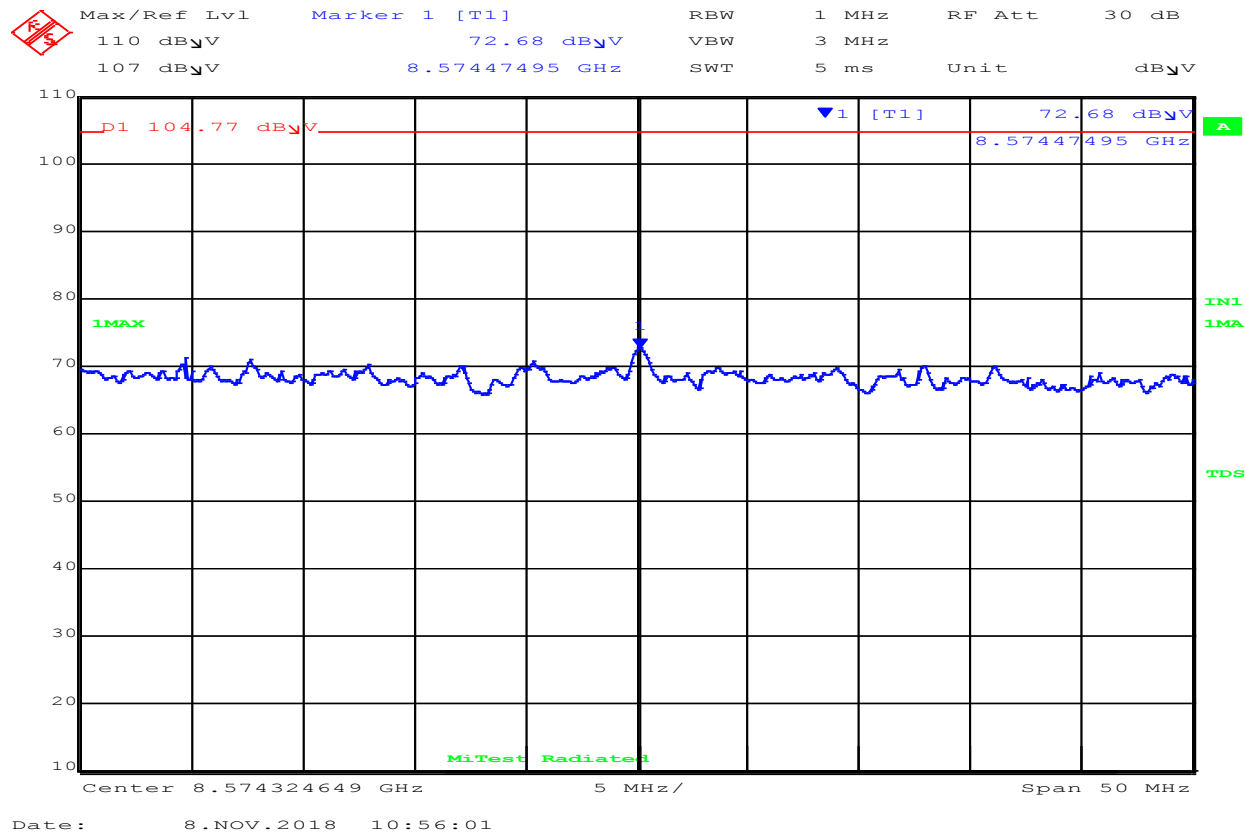
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



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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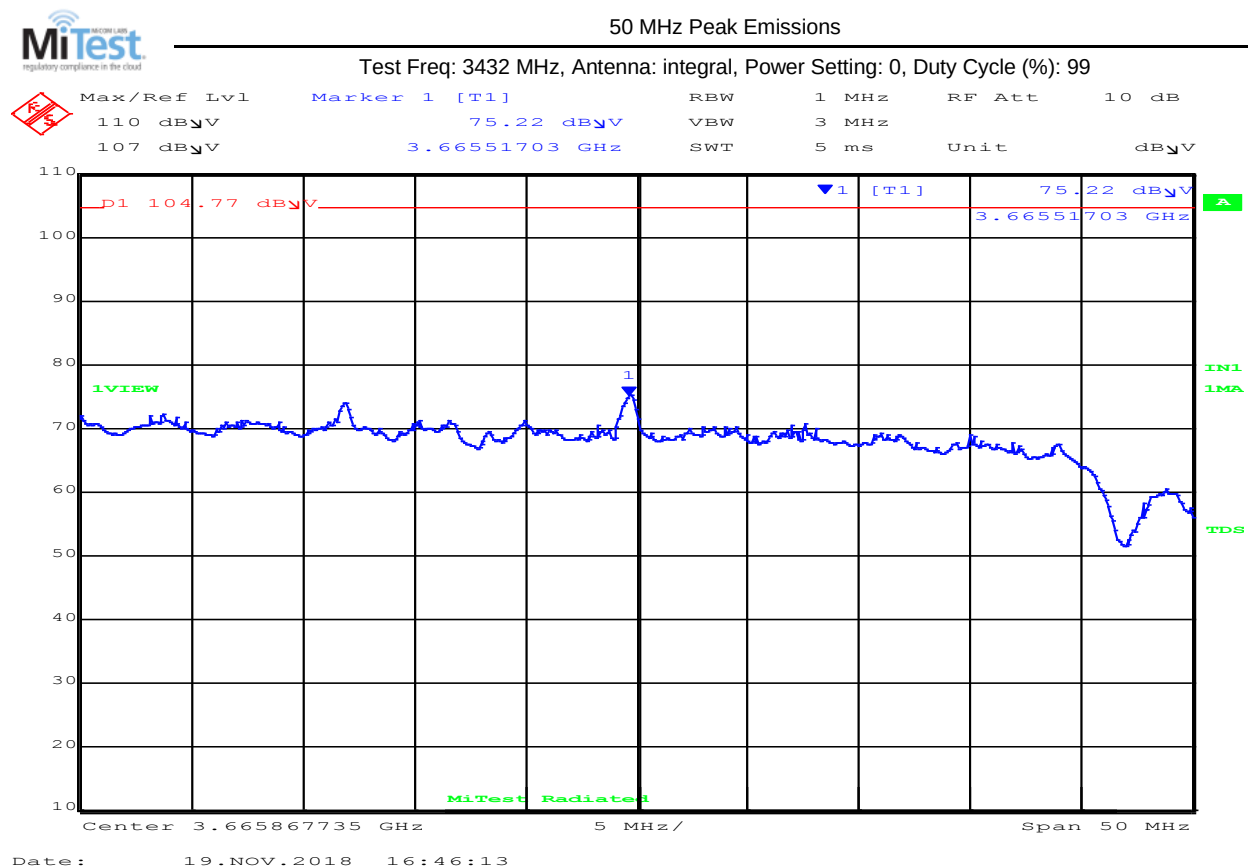
9.4.3.3. Combat AL5934

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 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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3960 MHz

Equipment Configuration for 50 MHz Peak Emissions

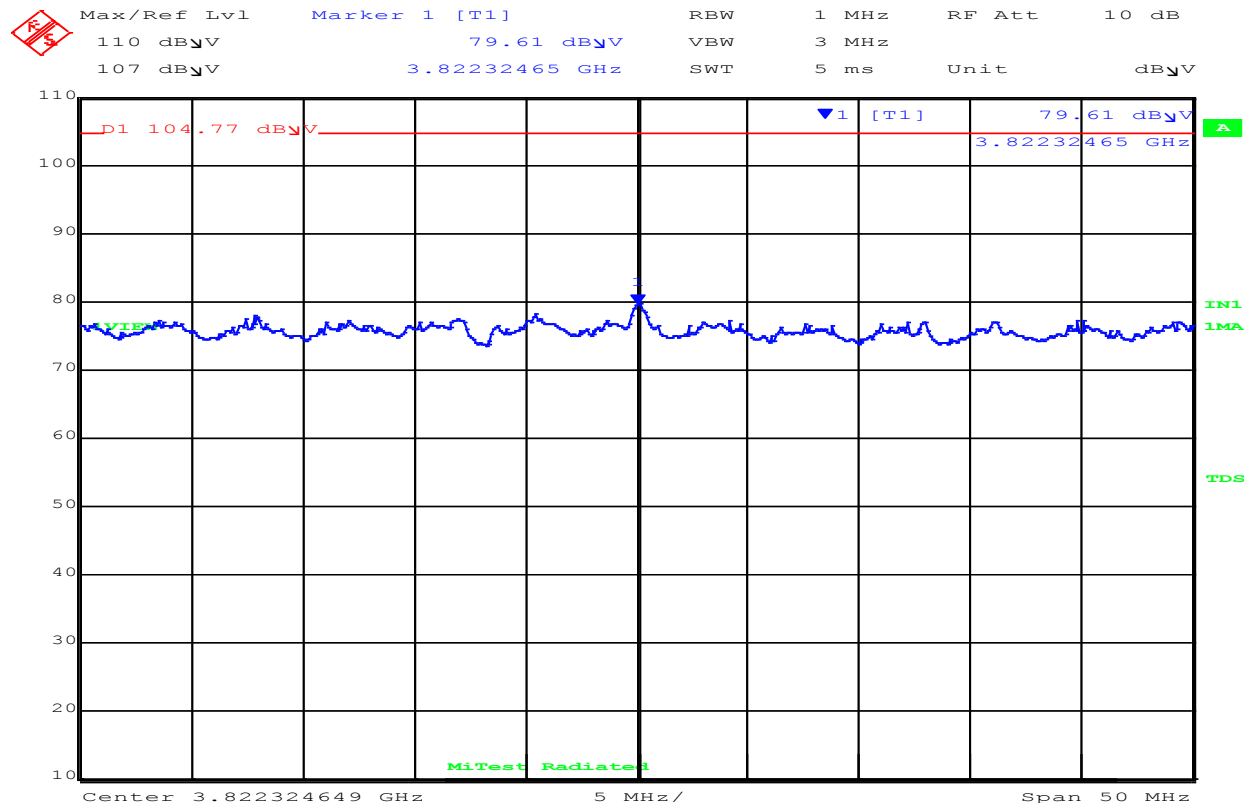
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	3960.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 20.NOV.2018 08:31:44

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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4488 MHz

Equipment Configuration for 50 MHz Peak Emissions

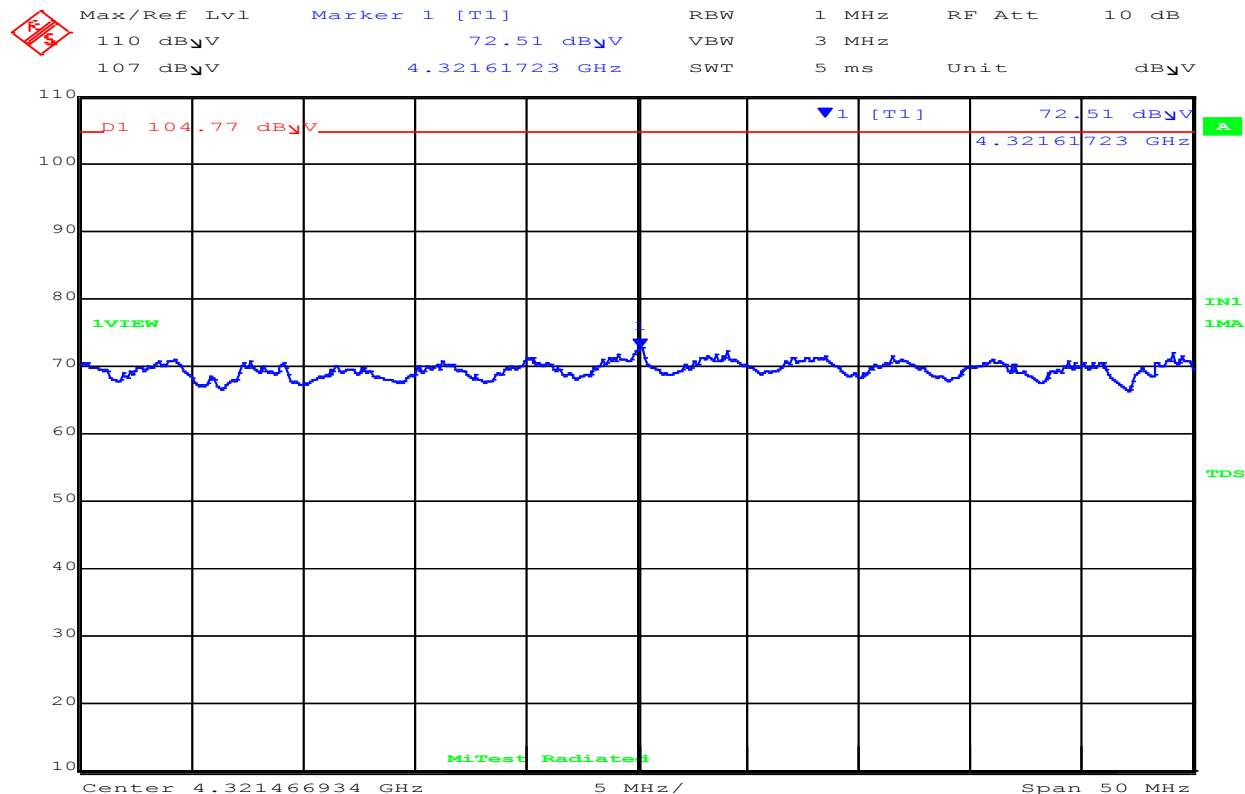
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	4488.00	Data Rate:	
Power Setting:	Max	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 20.NOV.2018 10:33:15

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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6600 MHz

Equipment Configuration for 50 MHz Peak Emissions

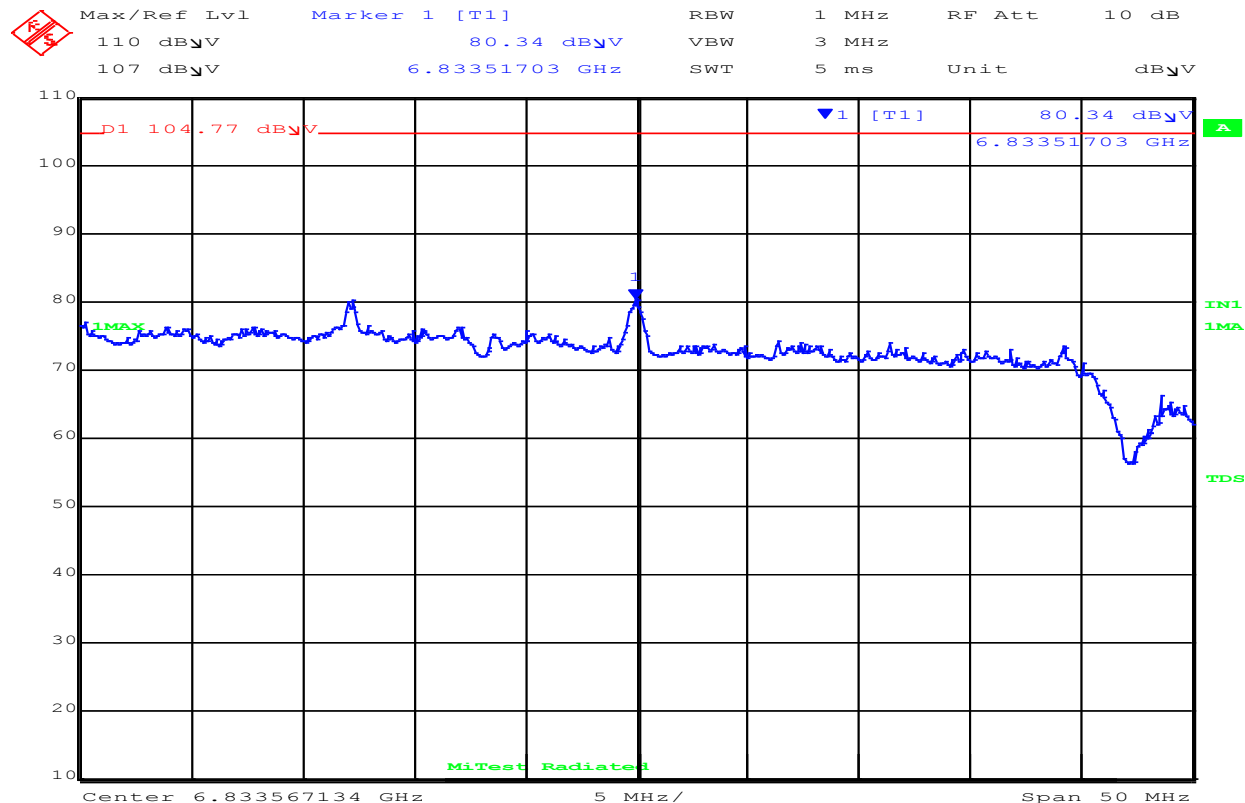
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	6600.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 20.NOV.2018 11:00:39

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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7128 MHz

Equipment Configuration for 50 MHz Peak Emissions

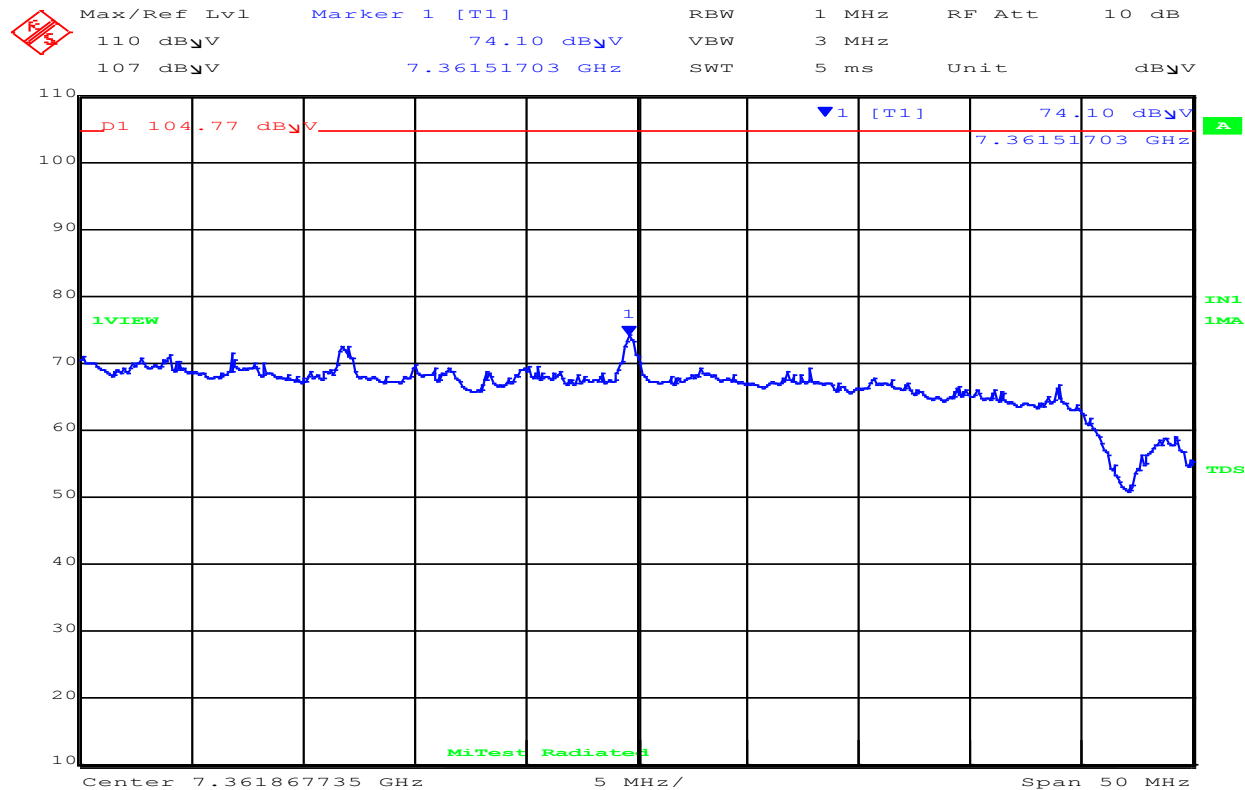
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	7128.00	Data Rate:	
Power Setting:	2.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 21.NOV.2018 08:39:16

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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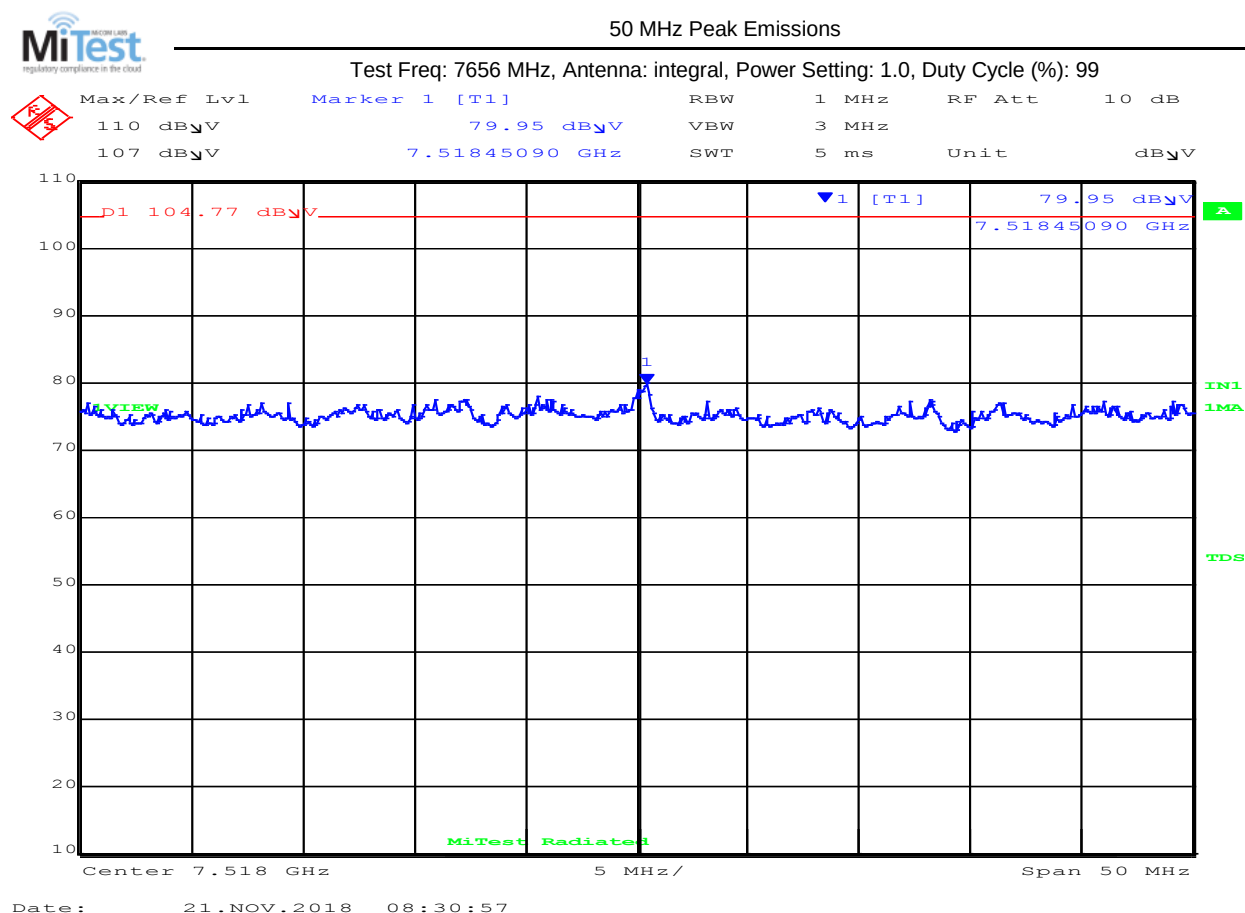
Title: Alereon AL5955, AL5930, AL5934
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7656 MHz (Covers Band Group 3 TFC 7 and Band Group 6 TFC 5)

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:									

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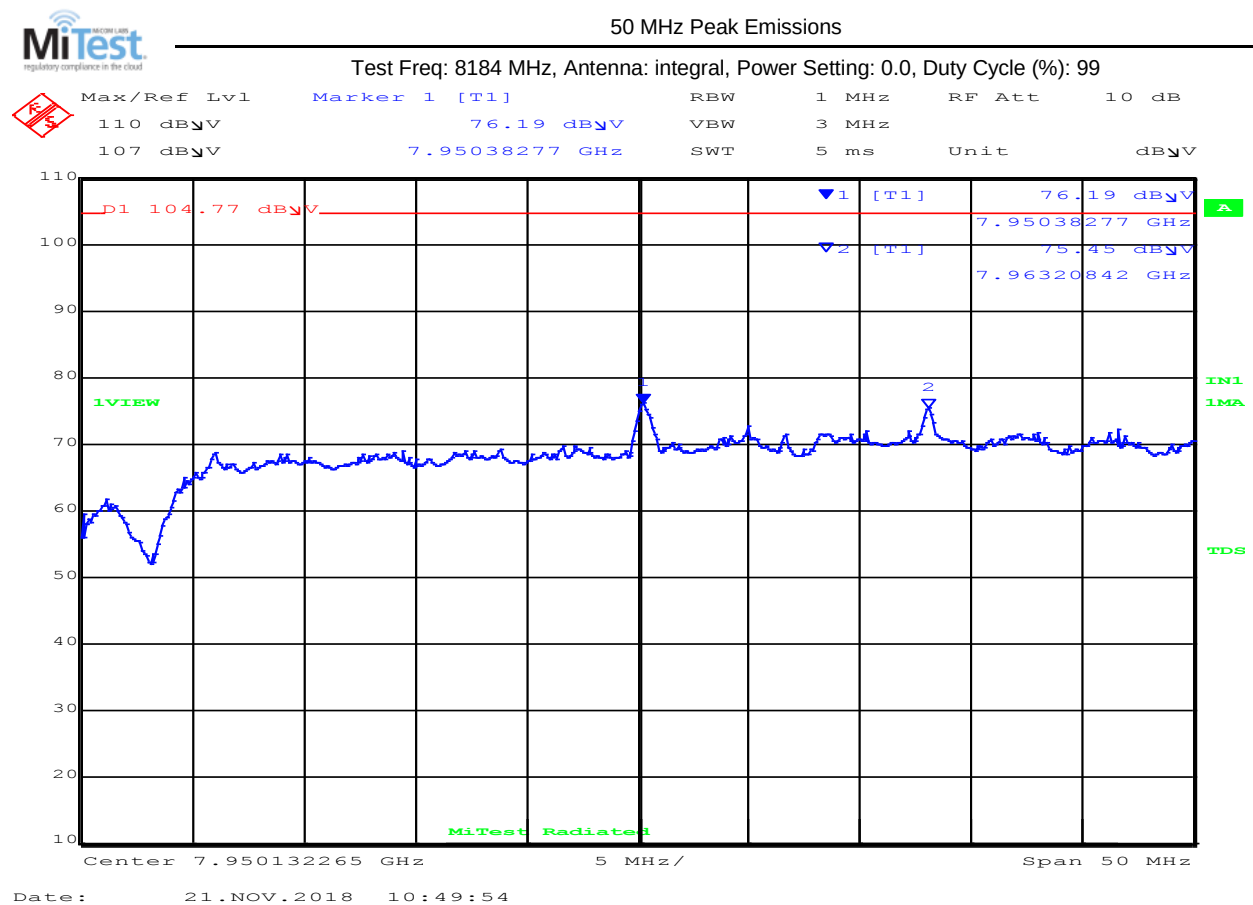
Title: Alereon AL5955, AL5930, AL5934
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8184 MHz

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



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

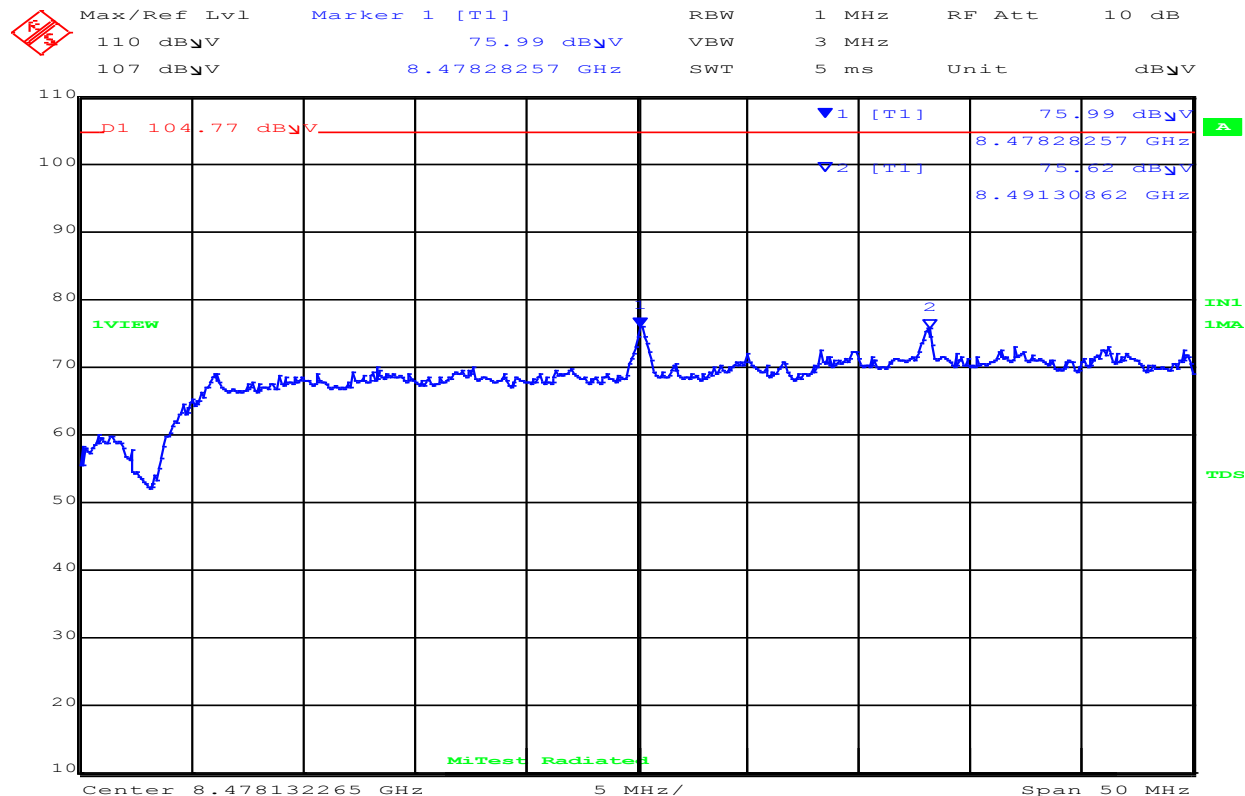
Antenna:	Chip	Variant:	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	Modulation:	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99%
Channel Frequency (MHz):	8712.00	Data Rate:	
Power Setting:	0.0	Tested By:	JMH

Test Measurement Results



50 MHz Peak Emissions

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



Date: 21.NOV.2018 10:56:58

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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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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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

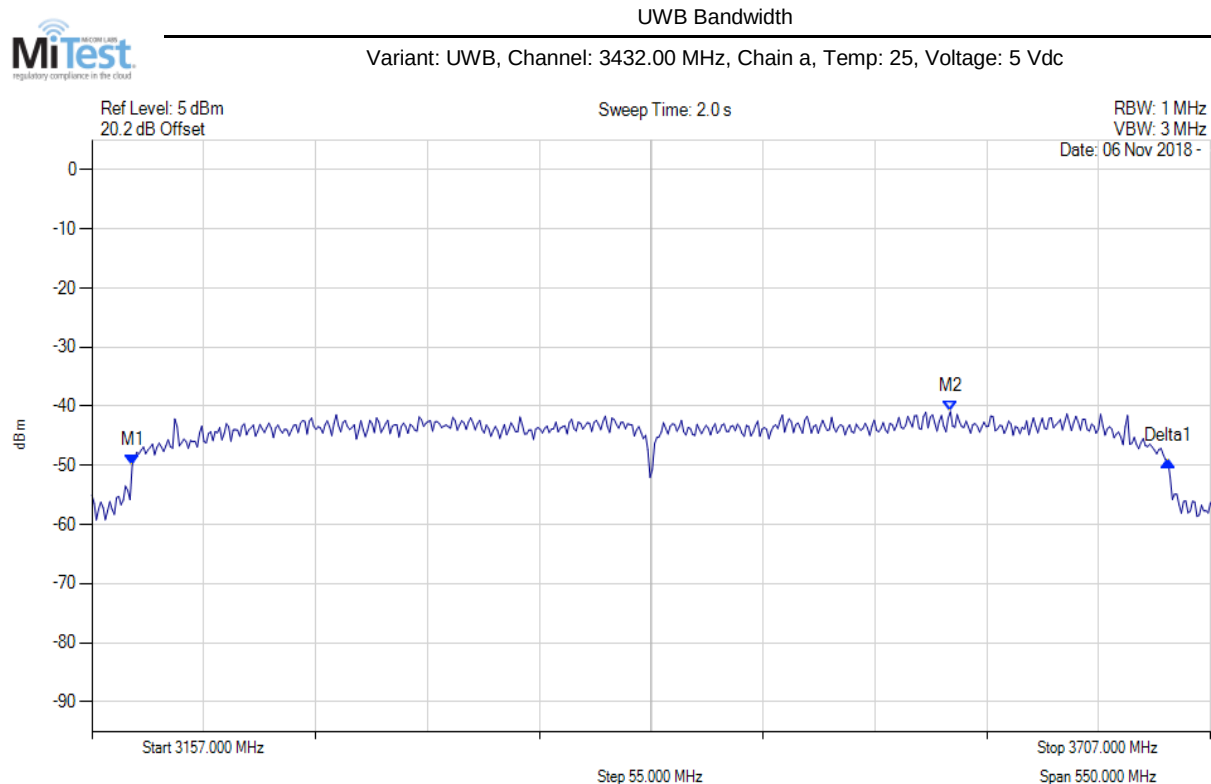
Traceability to Industry Recognized Test Methodologies

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

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A. APPENDIX - GRAPHICAL IMAGES

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](#)

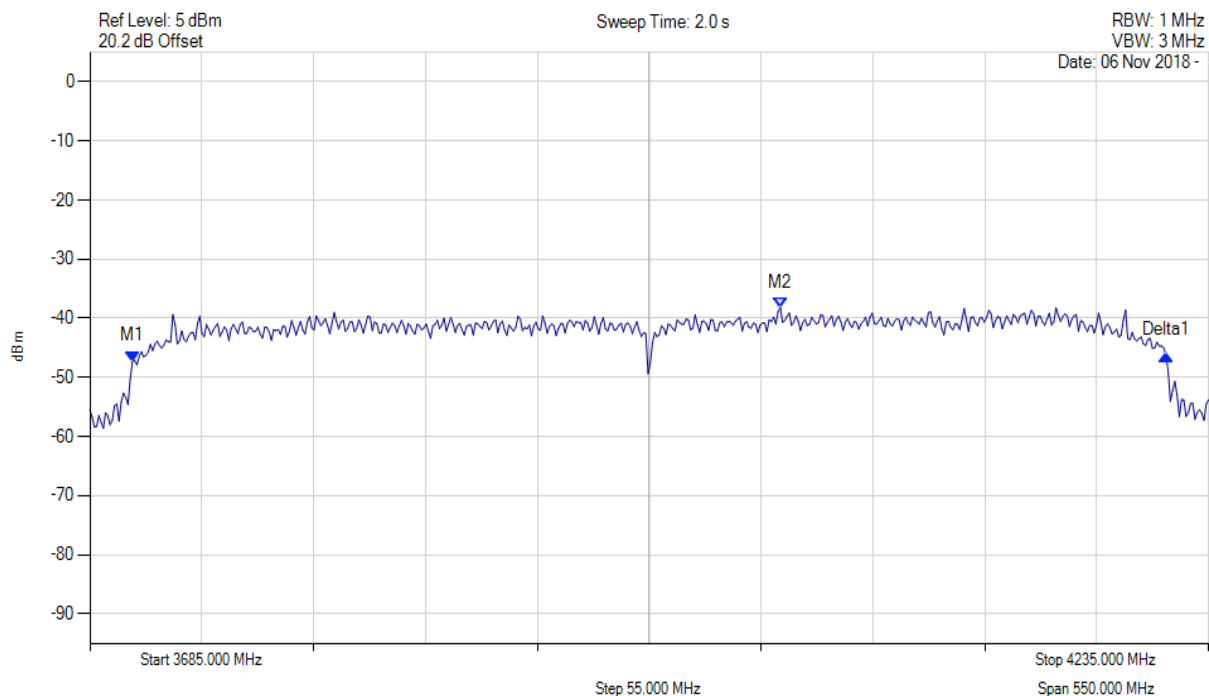


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UWB Bandwidth

Variant: UWB, Channel: 3960.00 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 : 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

[back to matrix](#)

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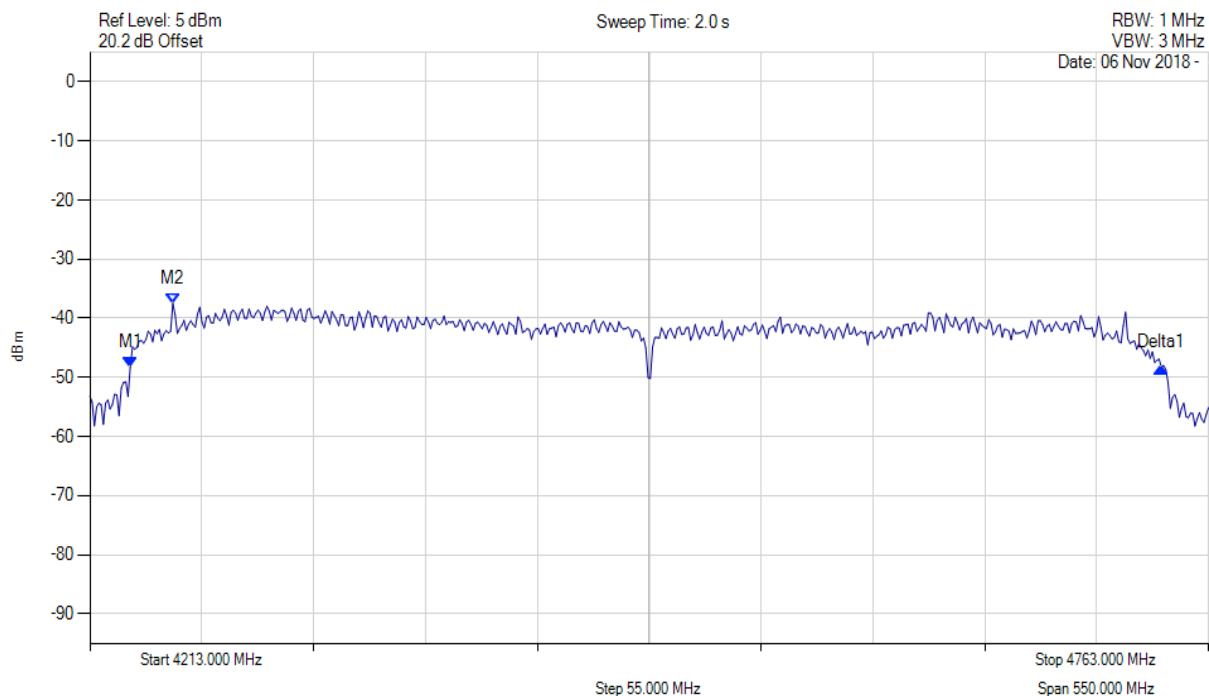


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UWB Bandwidth

Variant: UWB, Channel: 4488.00 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 : 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

[back to matrix](#)

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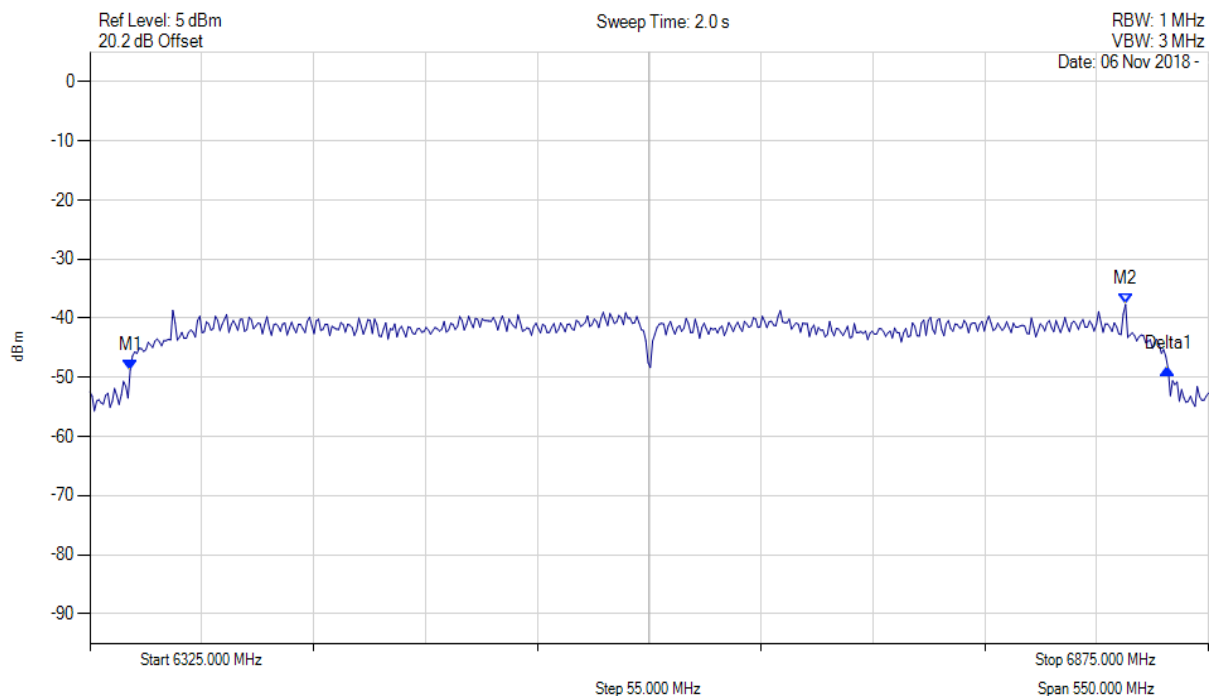


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UWB Bandwidth

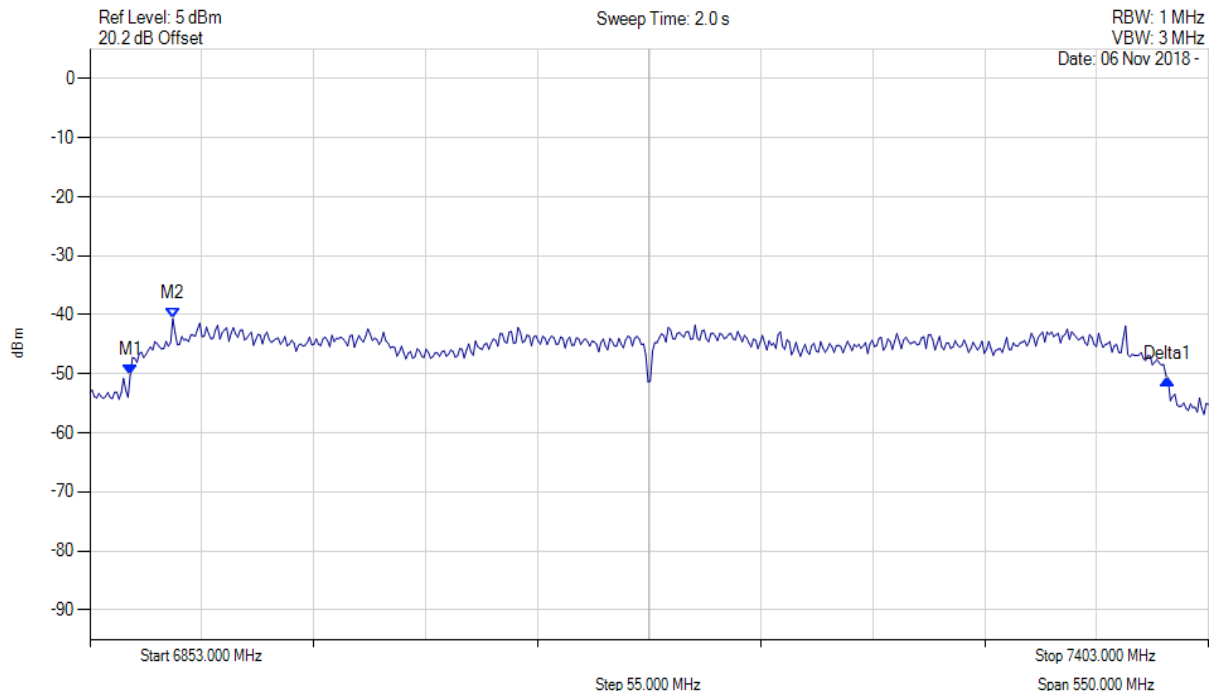
Variant: UWB, Channel: 6600.00 MHz, Chain a, Temp: 25, Voltage: 5 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 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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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](#)

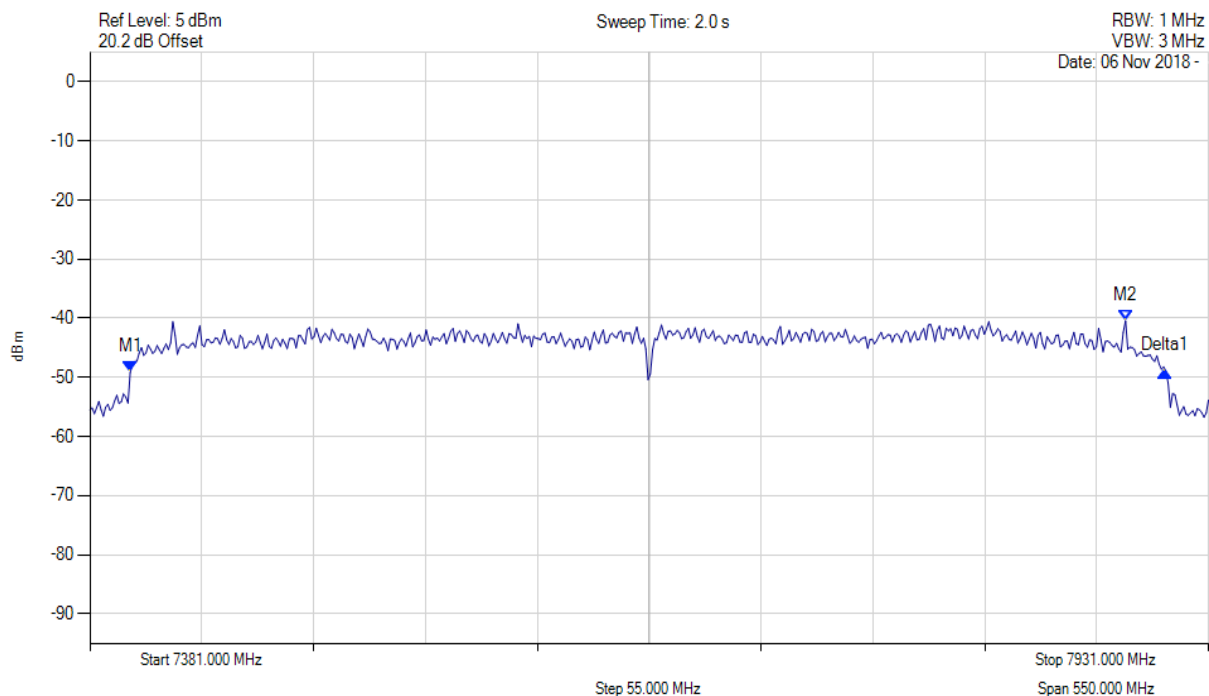


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UWB Bandwidth

Variant: UWB, Channel: 7656.00 MHz, Chain a, Temp: 25, Voltage: 5 Vdc



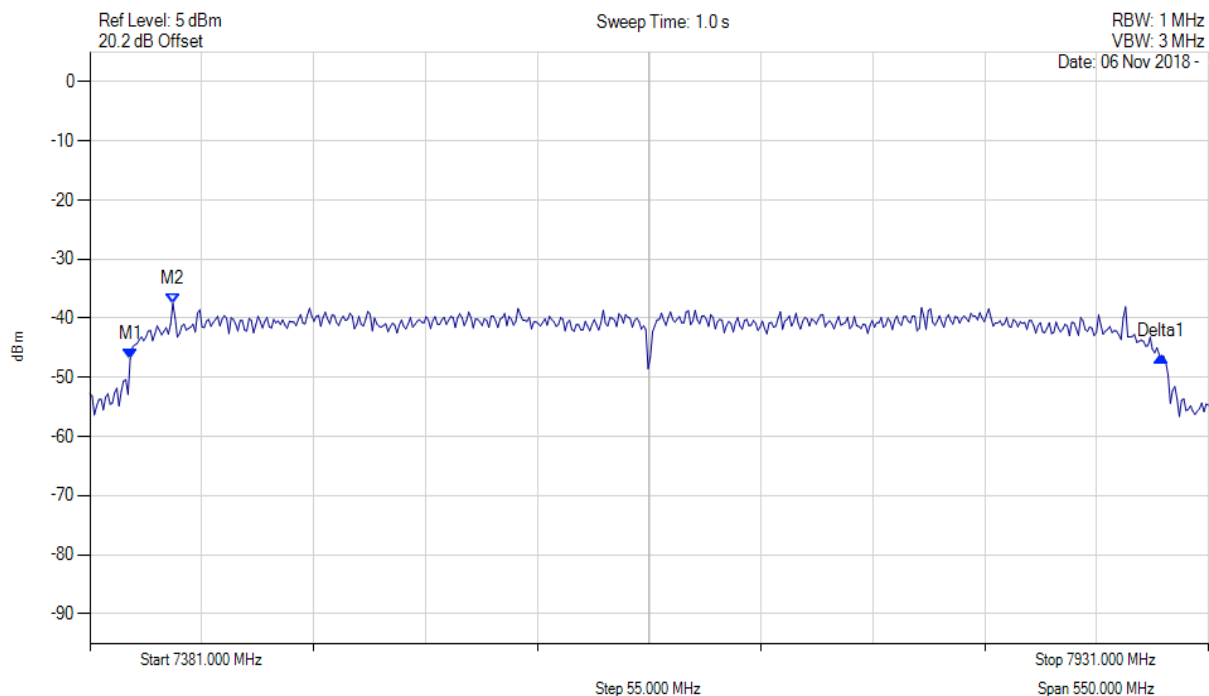
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 7400.840 MHz : -49.106 dBm M2 : 7890.218 MHz : -40.409 dBm Delta1 : 508.818 MHz : 0.214 dB	Channel Frequency: 7656.00 MHz

[back to matrix](#)

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UWB Bandwidth

Variant: UWB, Channel: 7656.00 MHz, Chain a, Temp: 25, Voltage: 5 Vdc

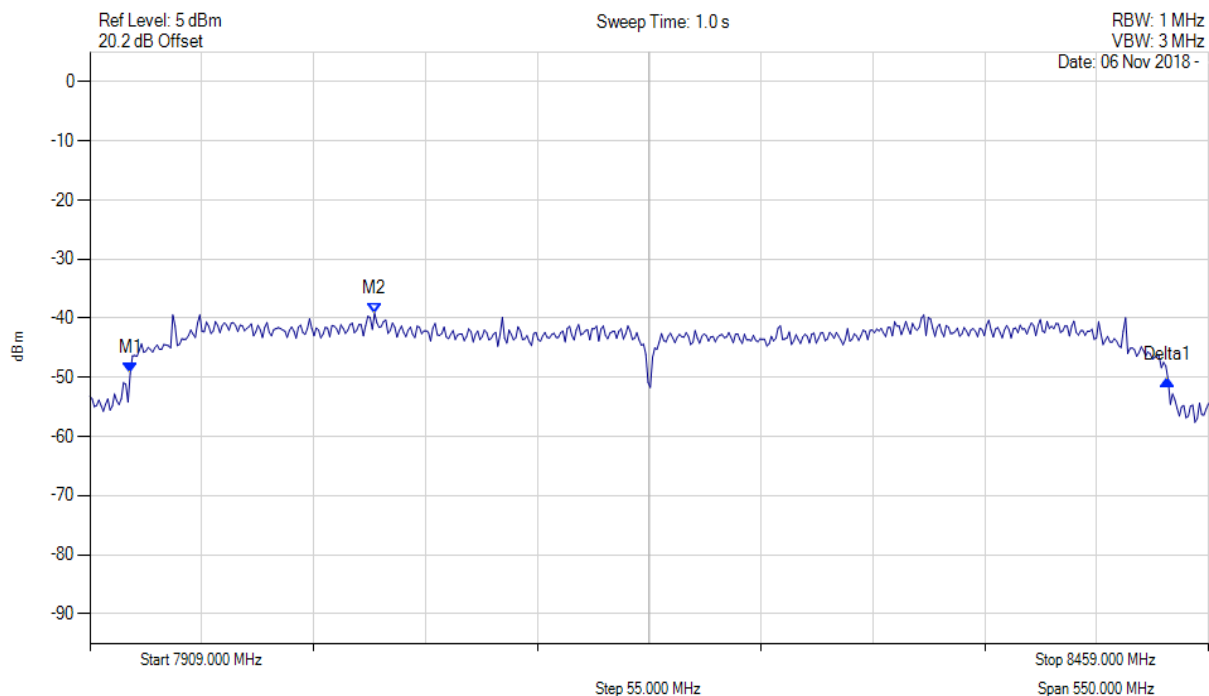


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 7400.840 MHz : -46.810 dBm M2 : 7421.782 MHz : -37.489 dBm Delta1 : 506.613 MHz : 0.307 dB	Channel Frequency: 0 Hz

[back to matrix](#)

UWB Bandwidth

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 : 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

[back to matrix](#)

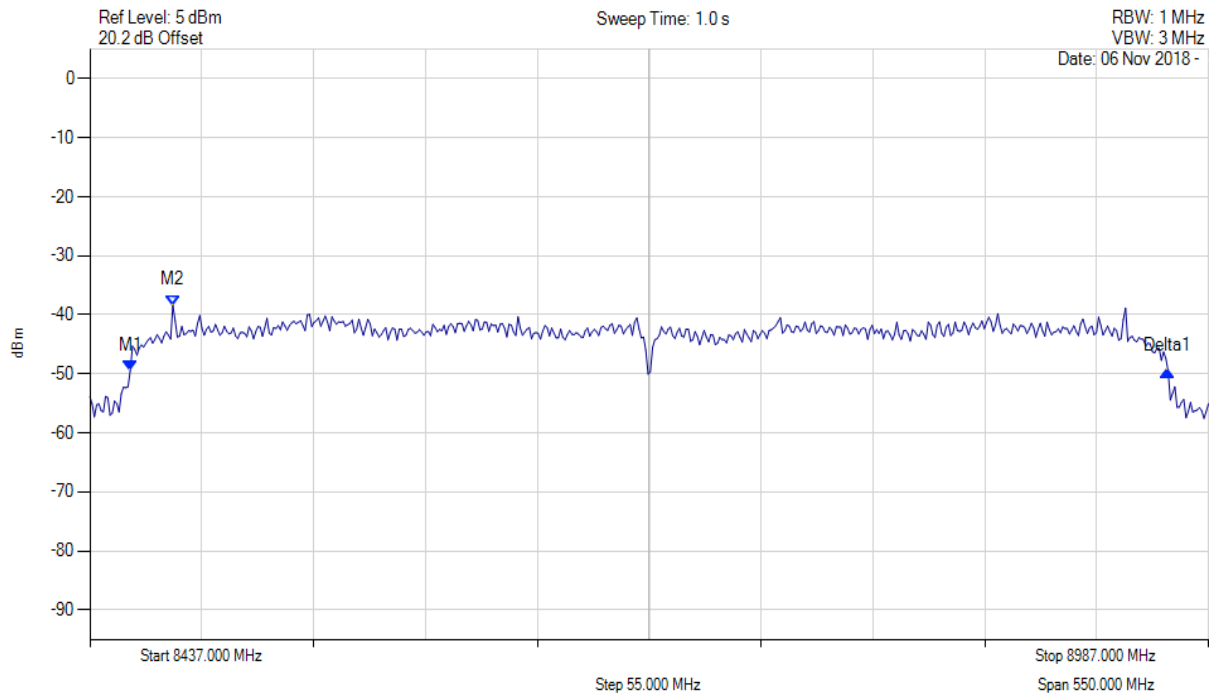


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UWB Bandwidth

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

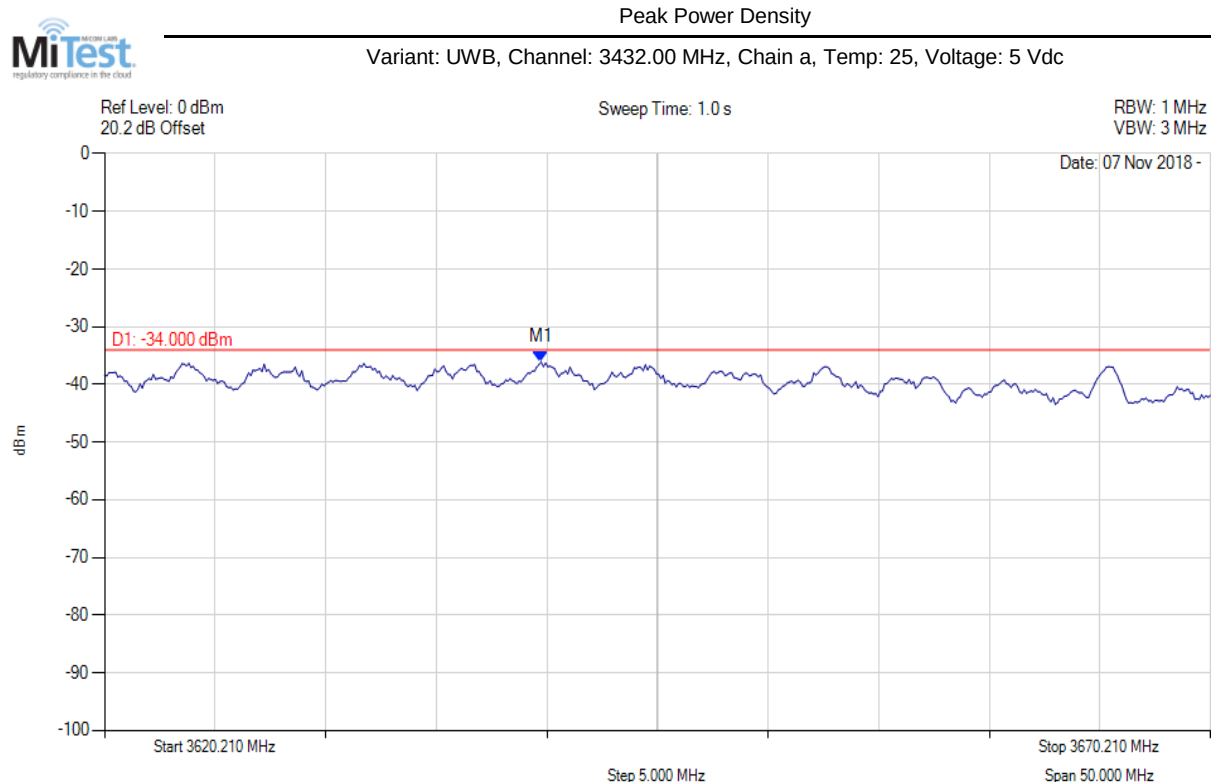


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 8456.840 MHz : -49.468 dBm M2 : 8477.782 MHz : -38.388 dBm Delta1 : 509.920 MHz : -0.057 dB	Channel Frequency: 8712.00 MHz

[back to matrix](#)

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A.2. Peak Power Density



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

[back to matrix](#)

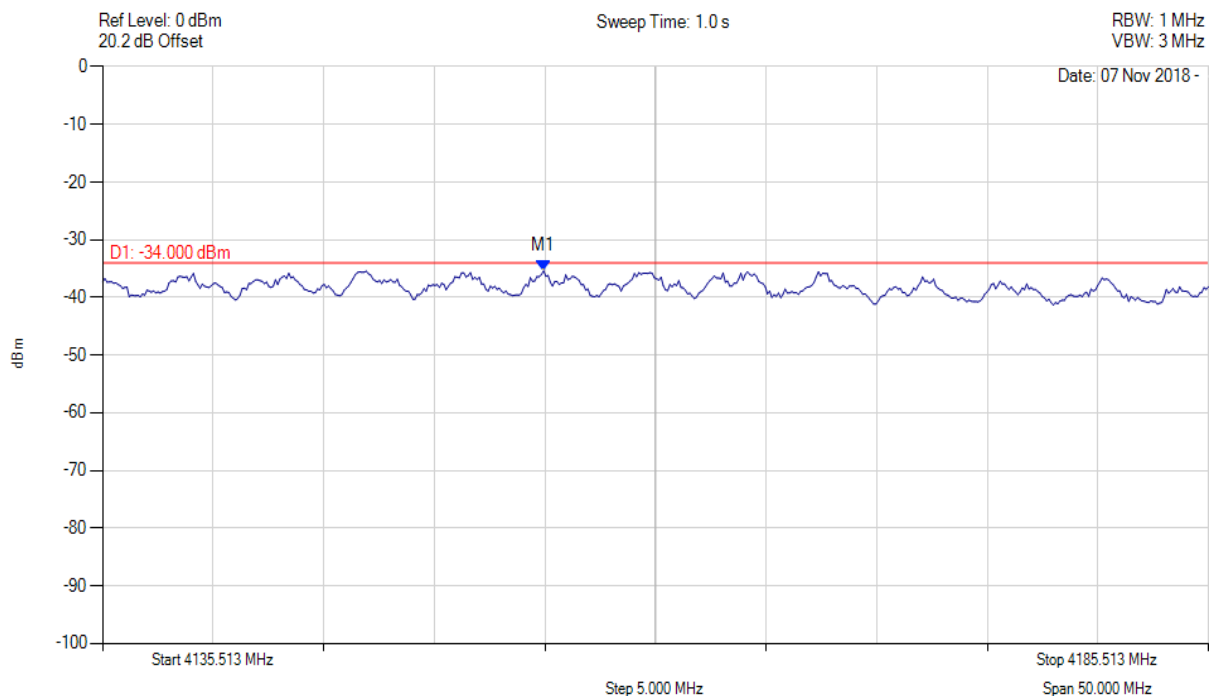


Title: Alereon AL5955, AL5930, AL5934
To: FCC Part 15.519
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Peak Power Density

Variant: UWB, Channel: 3690.00 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 : 4155.453 MHz : -35.379 dBm	Channel Frequency: 3690.00 MHz

[back to matrix](#)

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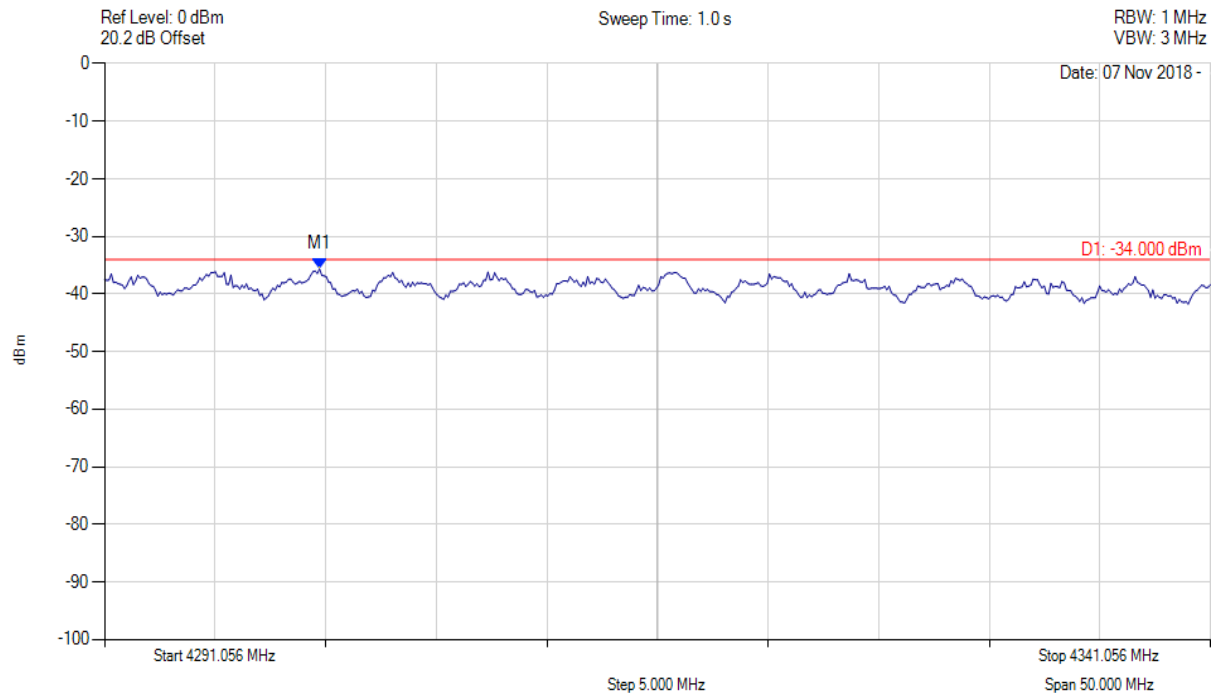


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Peak Power Density

Variant: UWB, Channel: 4488.00 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 : 4300.776 MHz : -35.635 dBm	Channel Frequency: 4488.00 MHz

[back to matrix](#)

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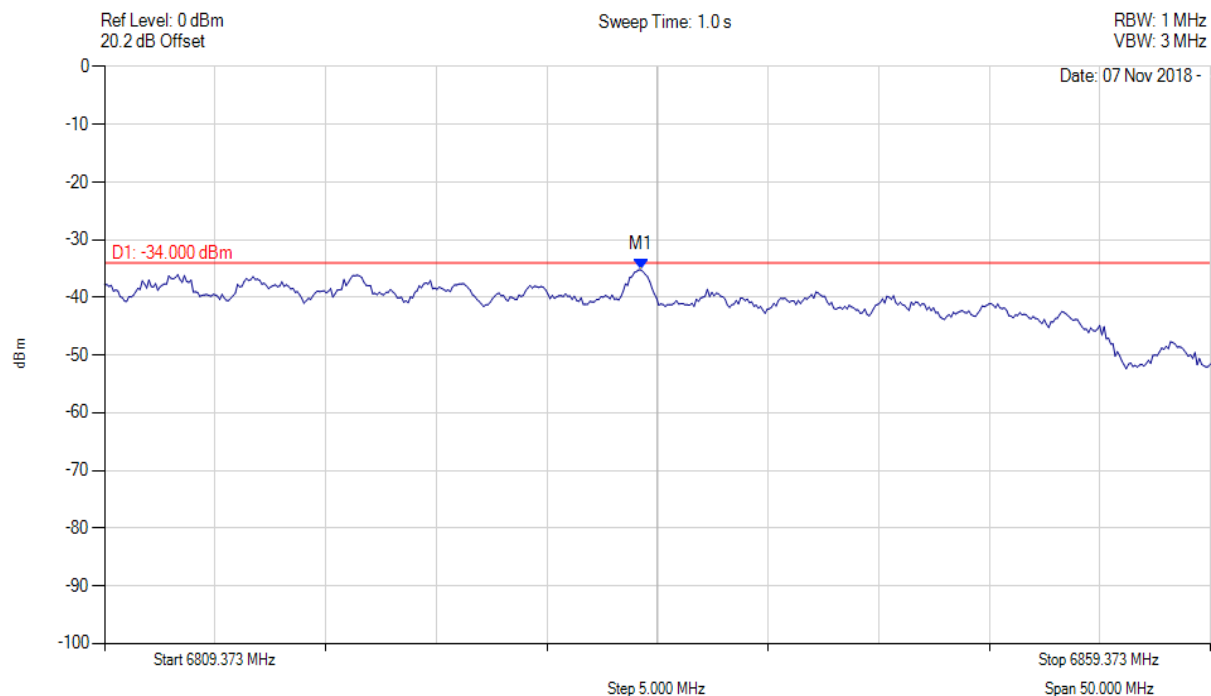


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Peak Power Density

Variant: UWB, Channel: 6600.00 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 : 6833.621 MHz : -35.220 dBm	Channel Frequency: 6600.00 MHz

[back to matrix](#)

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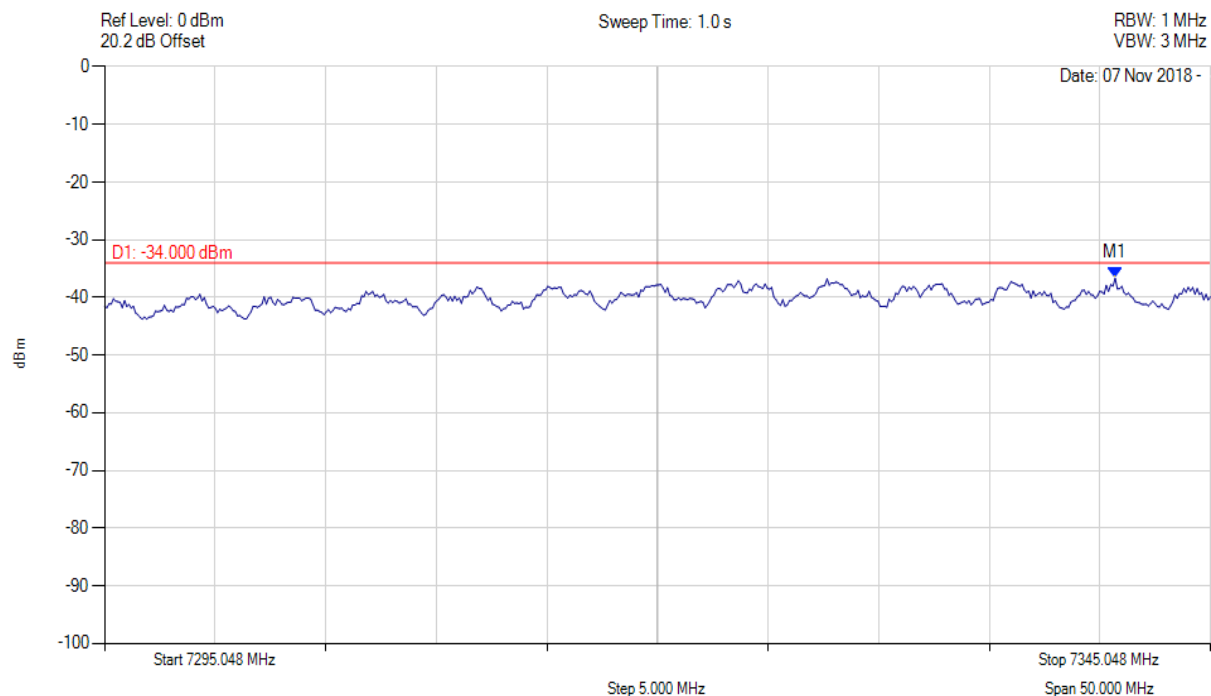


Title: Alereon AL5955, AL5930, AL5934
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Peak Power Density

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 : 7340.739 MHz : -36.648 dBm	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.

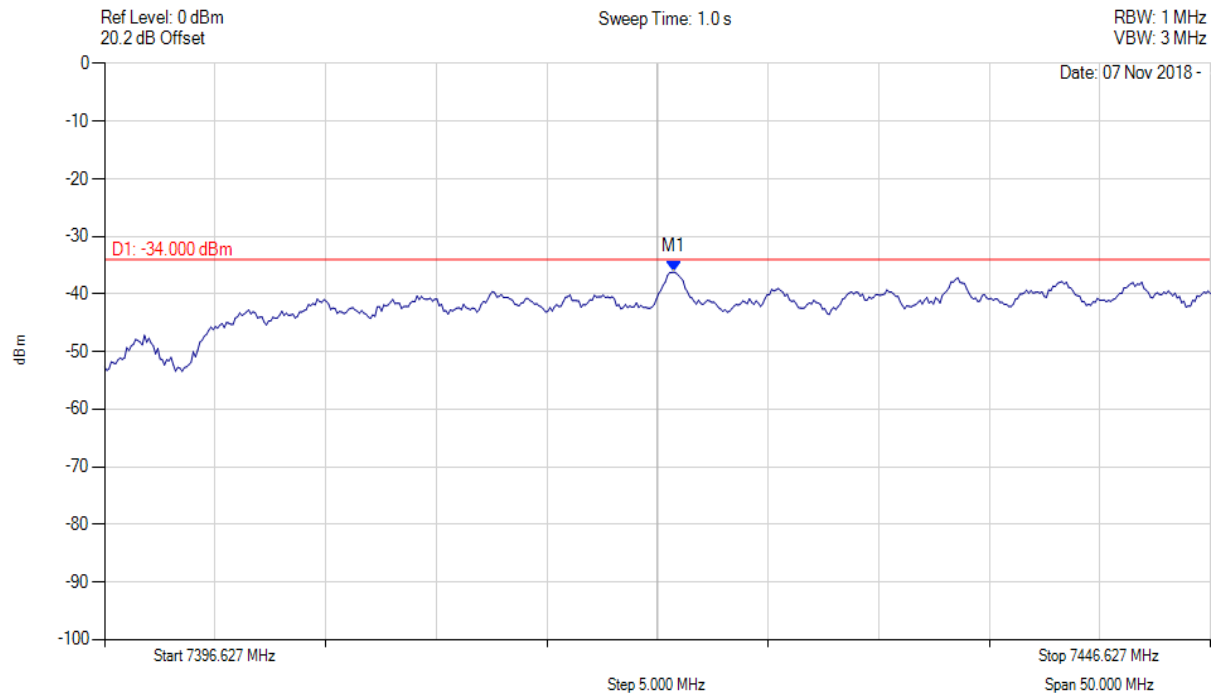


Title: Alereon AL5955, AL5930, AL5934
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Peak Power Density

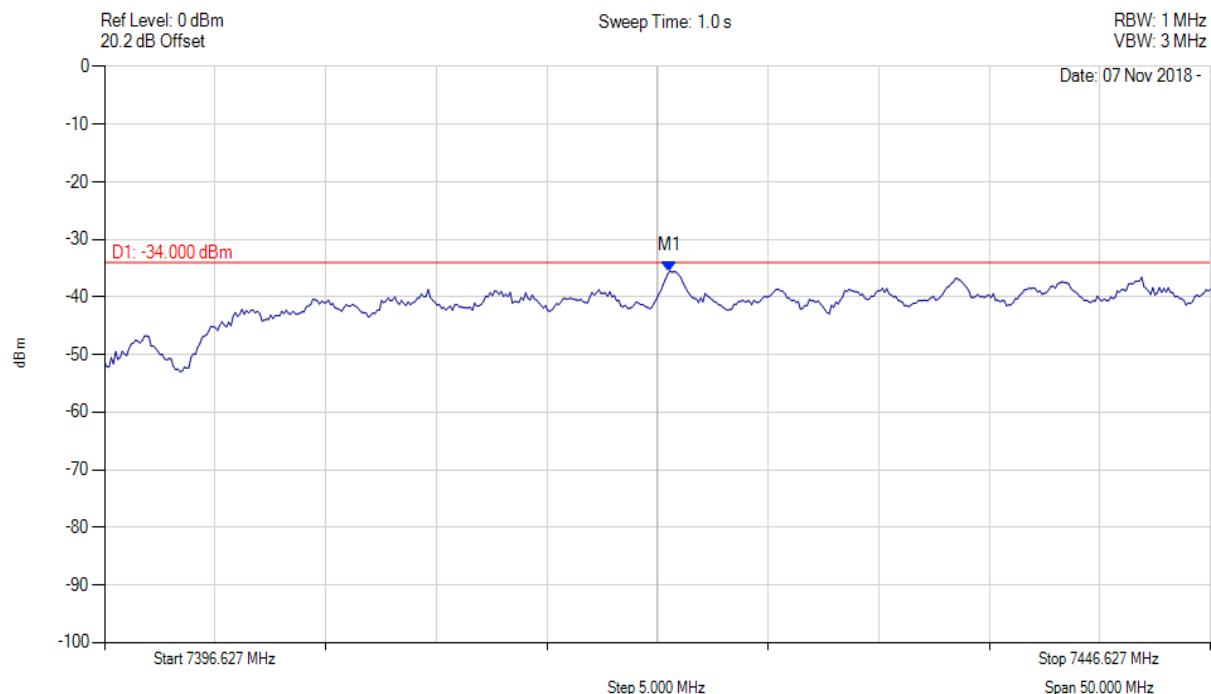
Variant: UWB, Channel: 7656.00 MHz, Chain a, Temp: 25, Voltage: 5 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 7422.379 MHz : -36.188 dBm	Channel Frequency: 7656.00 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 : 7422.178 MHz : -35.495 dBm	Channel Frequency: 0 Hz

[back to matrix](#)

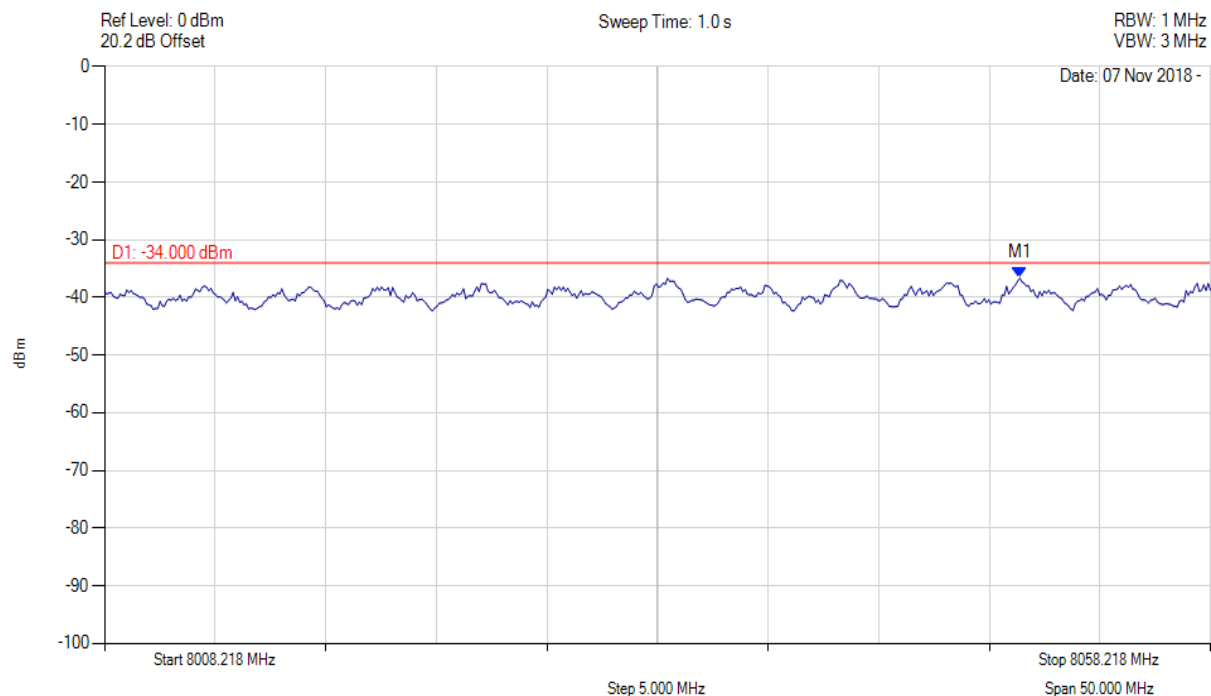


Title: Alereon AL5955, AL5930, AL5934
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Peak Power Density

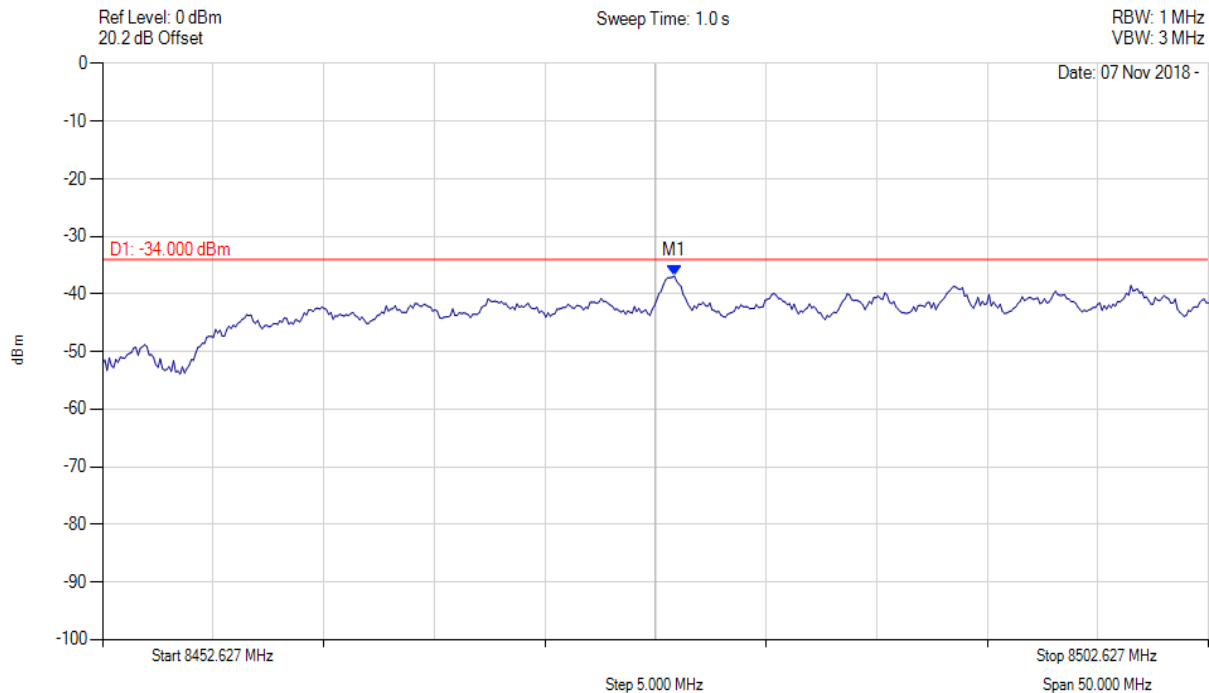
Variant: UWB, Channel: 8184.00 MHz, Chain a, Temp: 25, Voltage: 5 Vdc



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

[back to matrix](#)

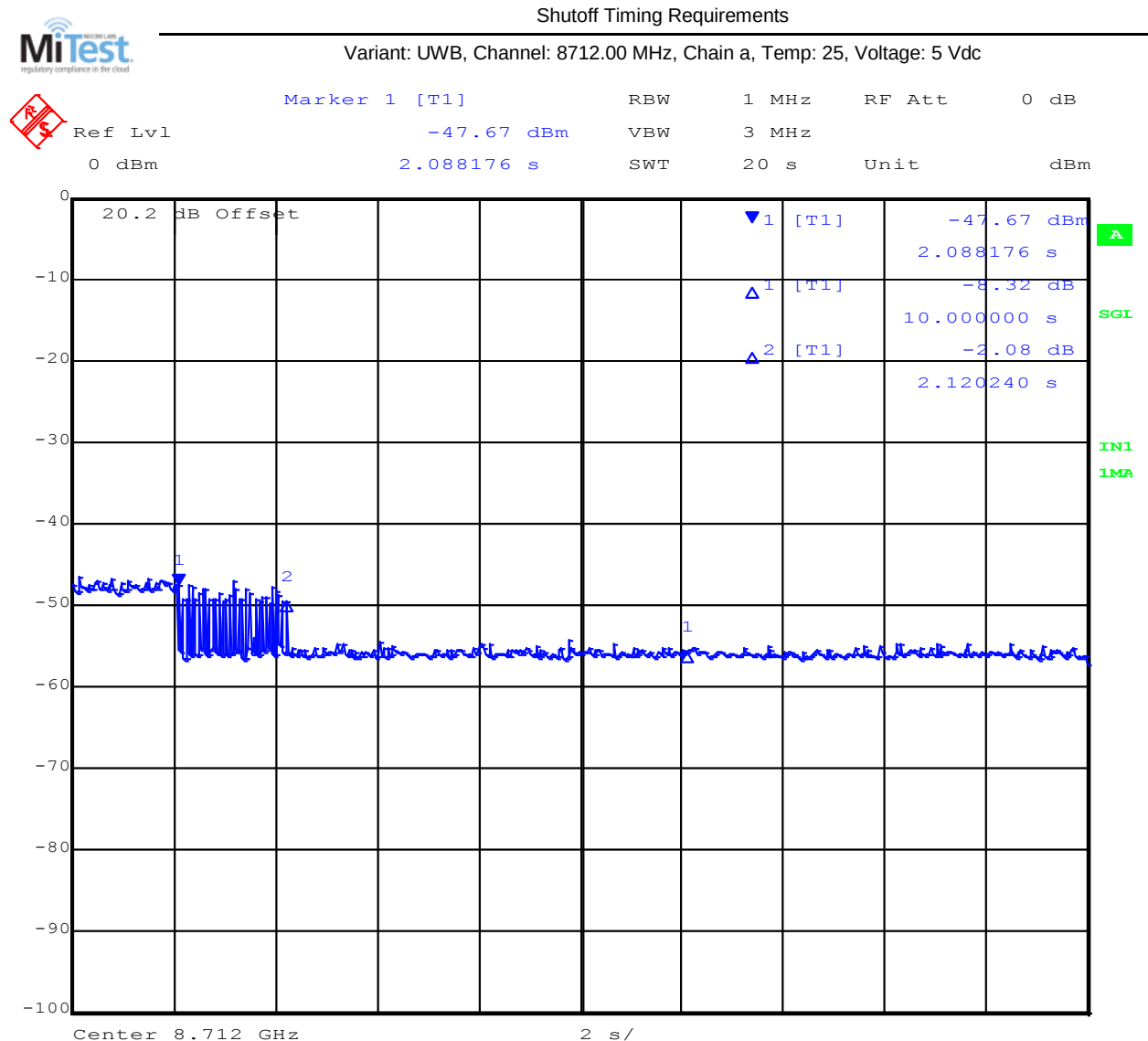
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Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 0 Trace Mode = CLR/WRITE	M1 : 8478.479 MHz : -36.858 dBm	Channel Frequency: 8712.00 MHz

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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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B. APPENDIX – Manufacturer Declaration on Similarity of Models

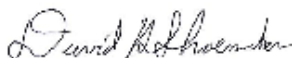


www.alereon.com | 10800 Pecos Park Blvd | Suite 100 | Austin, TX 78738 | 512.345.4200 | 512.345.4201

To whom it may concern,

The AL5934 Combat, AL5930 Commander and the AL5955 Camouflage all use the exact same Alereon 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
Alereon, Inc.

12/6/2018

12/6/2018

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