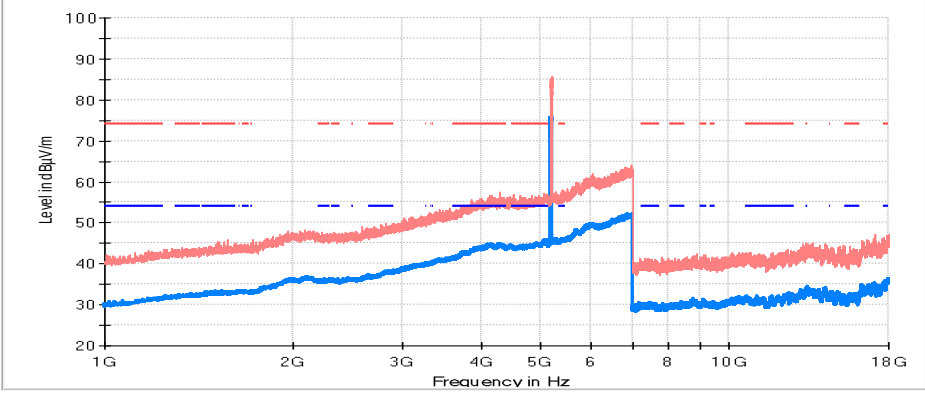
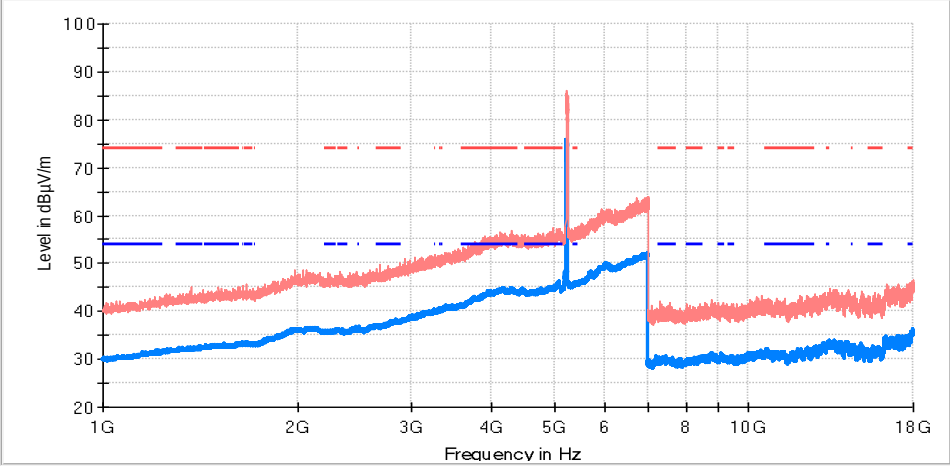
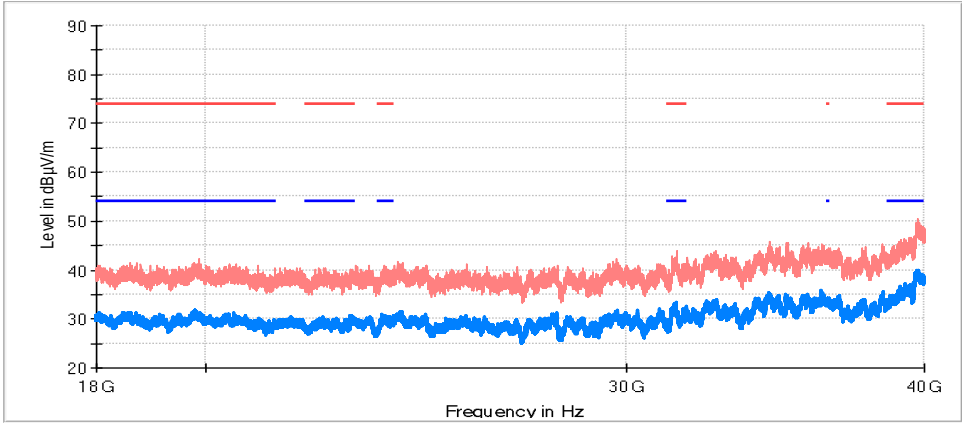
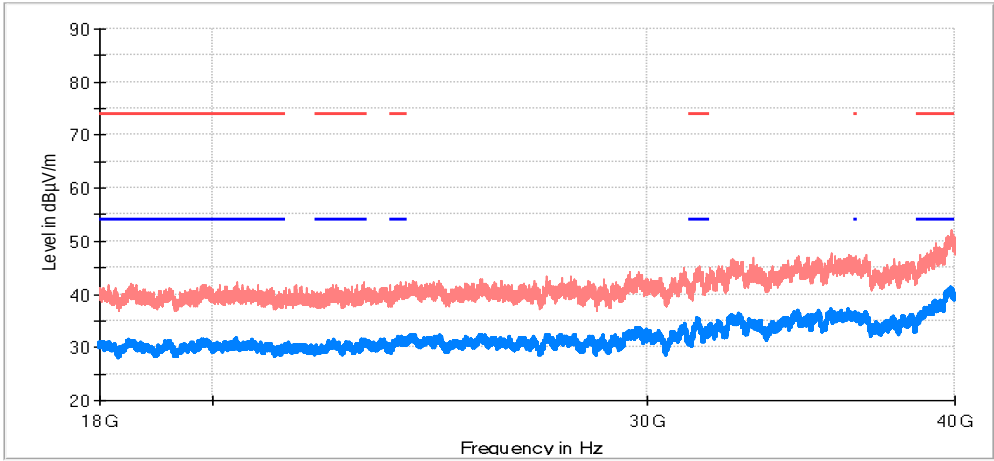
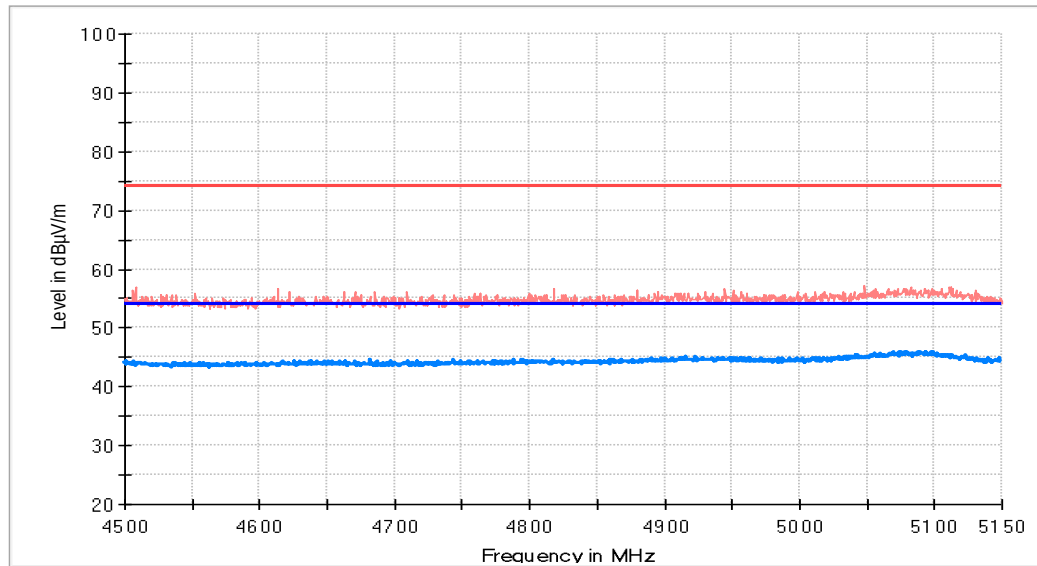


TEST RESULTS (Cont.)	ac mode (40 MHz)
FREQUENCY RANGE	1 GHz – 18 GHz
Low Channel  — AVG_MAXH — PK+_MAXH — TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit — TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit High Channel  — AVG_MAXH — PK+_MAXH — TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit — TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit	

TEST RESULTS (Cont.)	
FREQUENCY RANGE	18 GHz – 40 GHz
Low Channel RF_FCC_15.407_E Field_18GHz_40GHz  — AVG_ MAXH — PK+ _MAXH TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit High Channel RF_FCC_15.407_E Field_18GHz_40GHz  — AVG_ MAXH — PK+ _MAXH TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit	

RESTRICTED BANDS

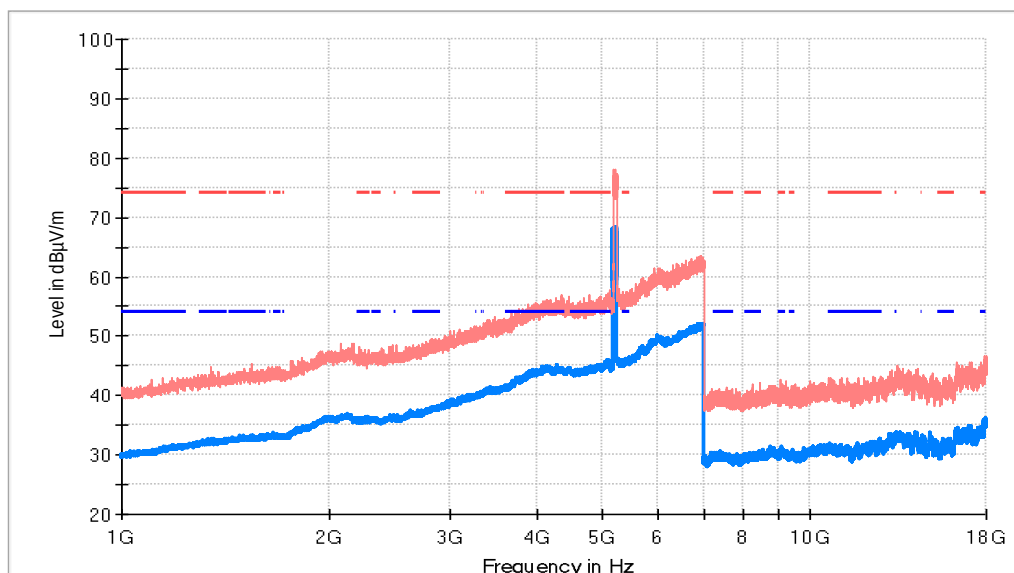
4.5 GHz – 5.15 GHz



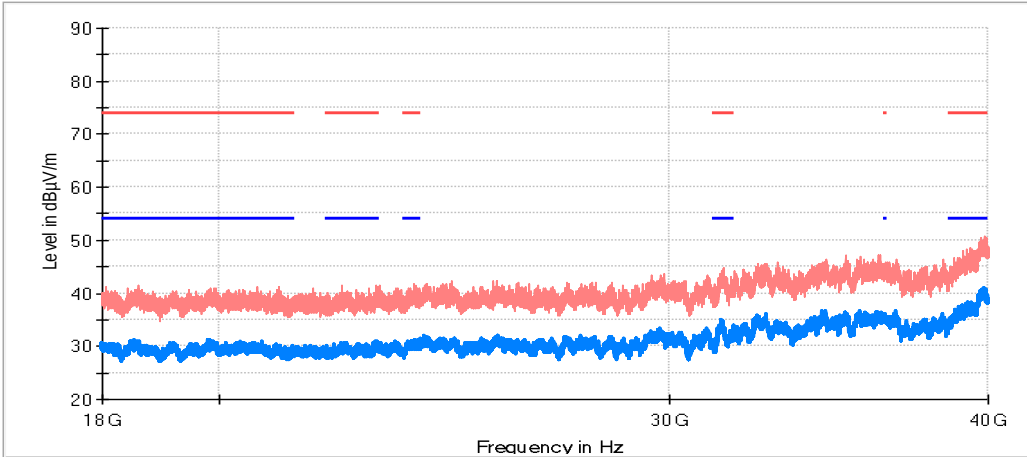
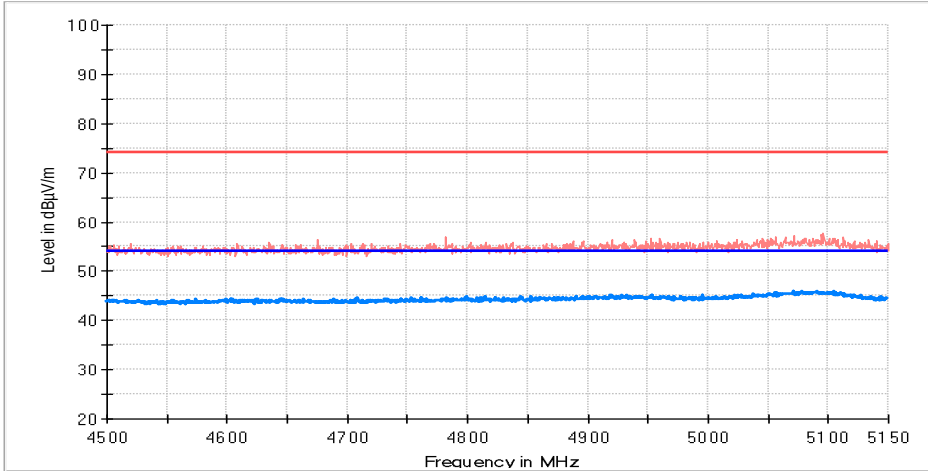
- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

TEST RESULTS (Cont.)	ac mode (80 MHz)
FREQUENCY RANGE	1 GHz – 18 GHz

Mid Channel



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

TEST RESULTS (Cont.)	
FREQUENCY RANGE	18 GHz – 40 GHz
Mid Channel RF_FCC_15.407_E Field_18GHz_40GHz  — AVG_MAXH — PK+_MAXH — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit	
RESTRICTED BANDS	4.5 GHz – 5.15 GHz
Mid Channel  — AVG_MAXH — PK+_MAXH — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit	

Appendix C: Test results

5.25 GHz – 5.35 GHz Band

Appendix C Content

DESCRIPTION OF TEST CONDITIONS 98

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DESCRIPTION OF TEST CONDITIONS

TEST CONDITIONS ⁽¹⁾	DESCRIPTION
TC#01 (a mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 3.8 \text{ Vdc}$ <u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u> Lowest channel: 5260 MHz Middle channel: 5300 MHz Highest channel: 5320 MHz
TC#02 (n mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 3.8 \text{ Vdc}$ <u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u> Lowest channel: 5260 MHz Middle channel: 5300 MHz Highest channel: 5320 MHz <u>Test Frequencies for Conducted/Radiated tests (40 MHz):</u> Lowest channel: 5270 MHz Highest channel: 5310 MHz
TC#03 (ac mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 3.8 \text{ Vdc}$ <u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u> Lowest channel: 5260 MHz Middle channel: 5300 MHz Highest channel: 5320 MHz <u>Test Frequencies for Conducted/Radiated tests (40 MHz):</u> Lowest channel: 5270 MHz Highest channel: 5310 MHz <u>Test Frequencies for Radiated tests: (80 MHz)</u> Middle channel: 5290 MHz

Note (1): For spurious emissions for OFDM modes 802.11a, 802.11n20/40 and 802.11ac20/40/80 a preliminary scan was performed to determine the worst case.

The data rates of 6Mb/s for 802.11a, HT0 (SISO) for 802.11n20/ac20 and n40/ac40, and VHT0 (SISO) for 802.11 ac80 were selected based on preliminary testing that identified those rates corresponding to the worst cases.

TEST C.1: 26DB EMISSION BANDWIDTH AND OCCUPIED BANDWIDTH

LIMITS:

Product standard:

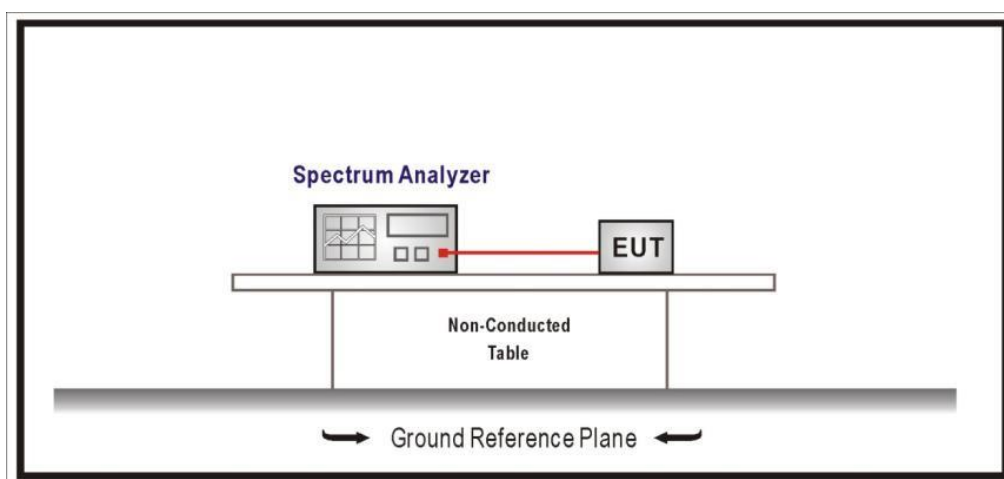
Part 15 Subpart C §15.403 and RSS-247

Test standard:

Part 15 Subpart C §15.403 and RSS-247 6.2.1

No requirements requested

TEST SETUP:



TESTED SAMPLES:

S/01

TESTED CONDITIONS MODES:

TC#01 (a mode)

TEST RESULTS:

PASS

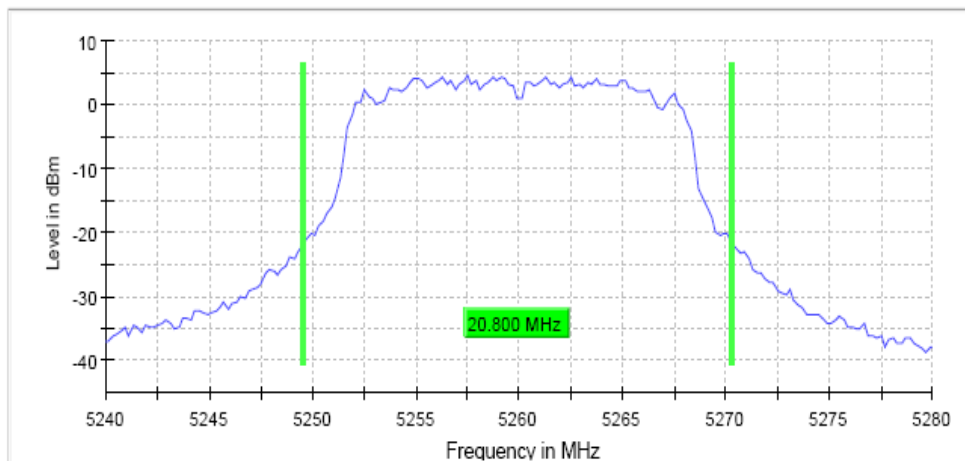
Bandwidth: 20 MHz

	Lowest frequency 5260 MHz	Middle frequency 5300 MHz	Highest frequency 5320 MHz
26dB Bandwidth (MHz)	20.8	20.2	20.4
Occupied bandwidth (MHz)	16.4	16.2	16.2
Measurement uncertainty (kHz)	<± 8.33		

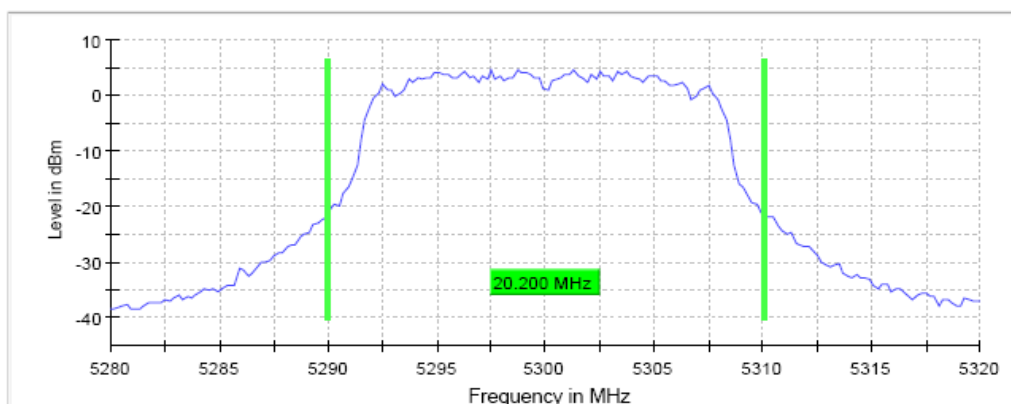
TEST RESULTS (Cont.):

26 dB BANDWIDTH

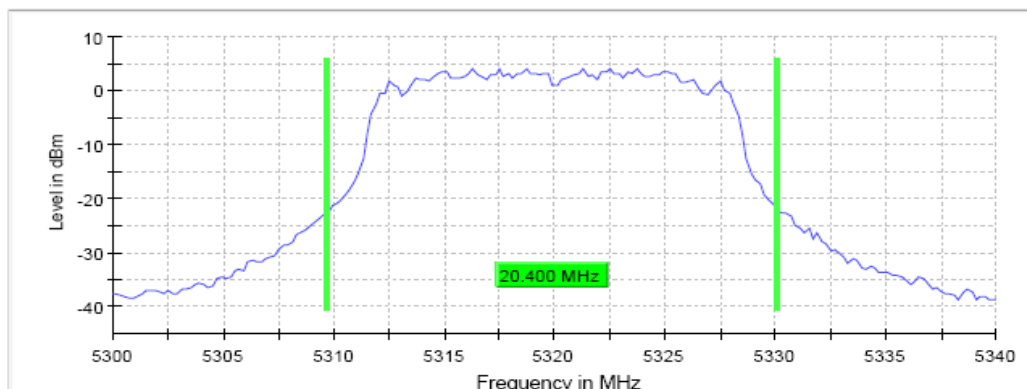
Lowest Channel



Middle Channel



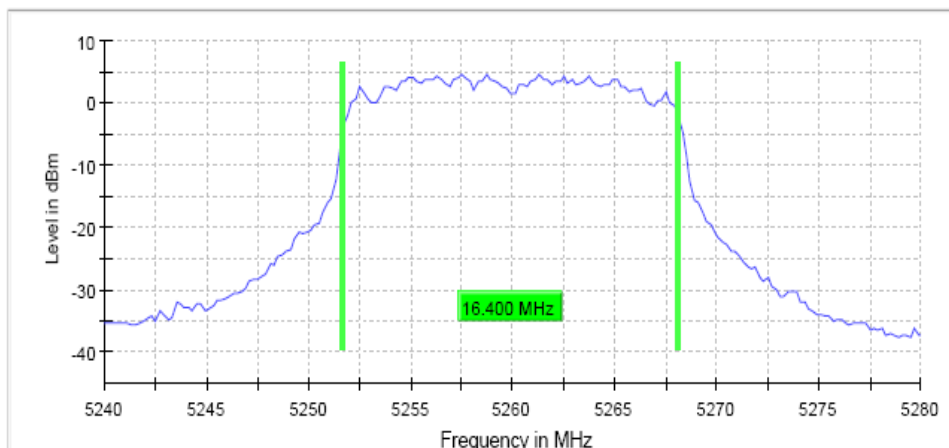
Highest Channel



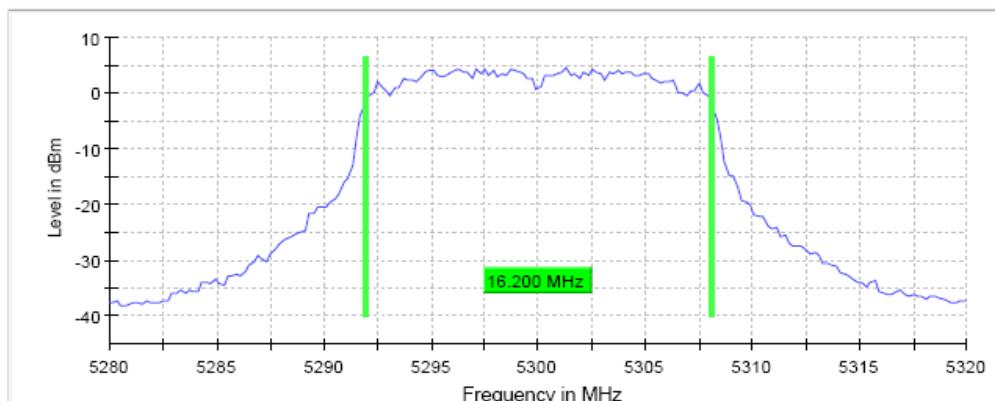
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

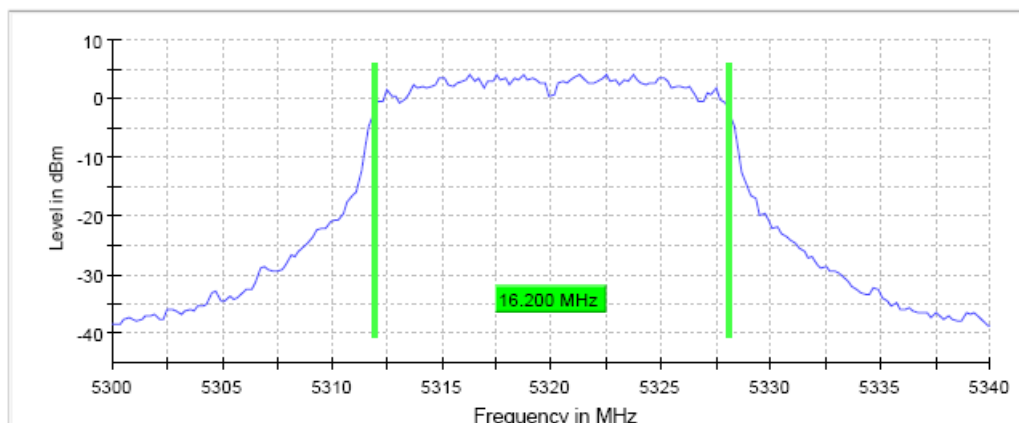
Lowest Channel



Middle Channel



Highest Channel

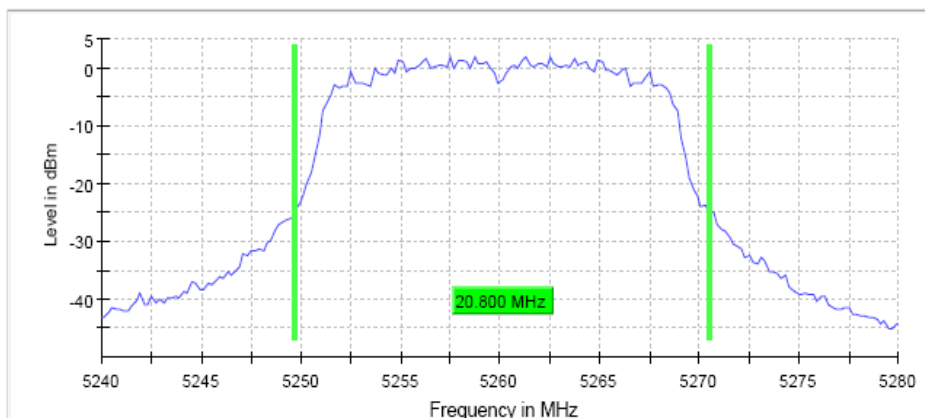


05-14-2020

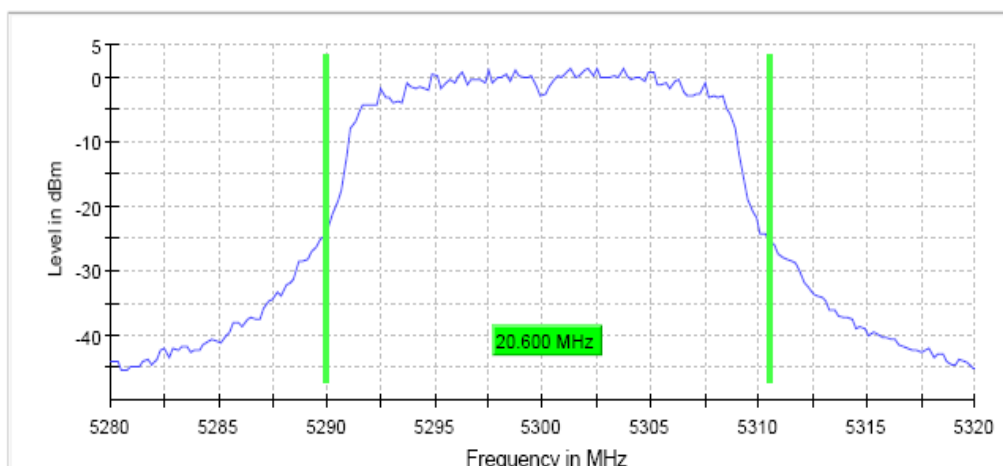
TEST RESULTS (Cont.):

26 dB BANDWIDTH

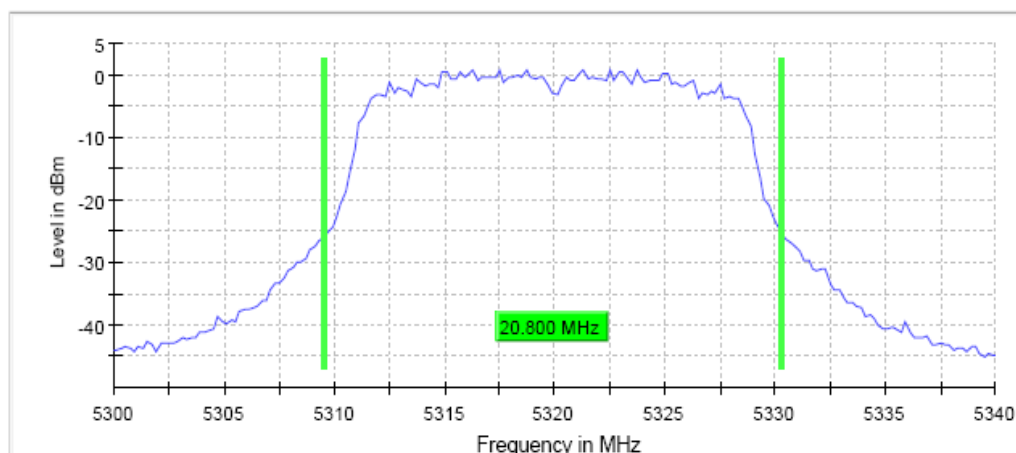
Lowest Channel



Middle Channel



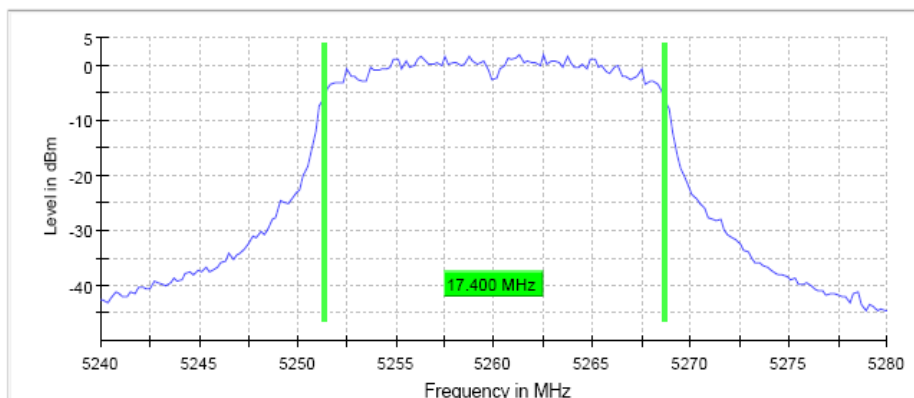
Highest Channel



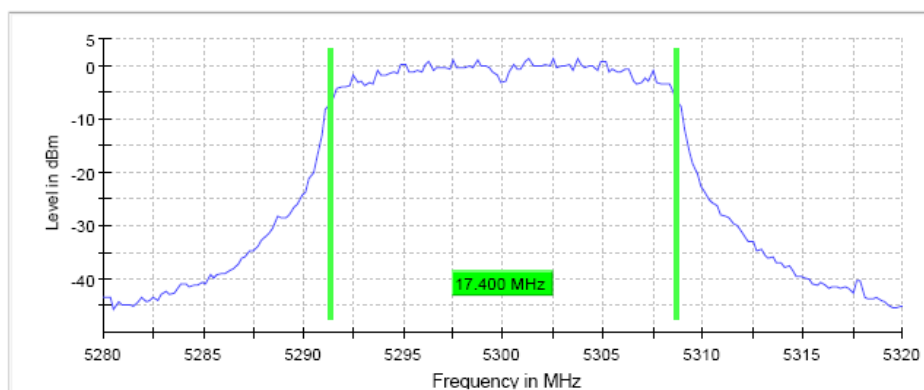
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

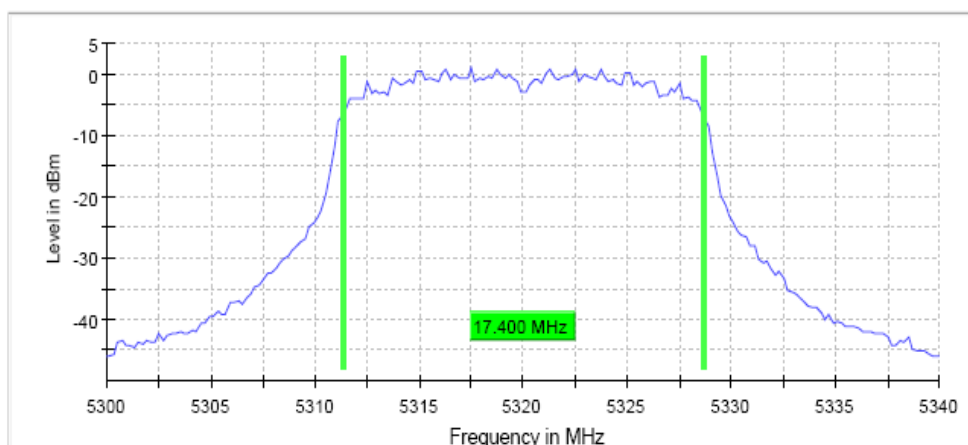
Lowest Channel



Middle Channel



Highest Channel



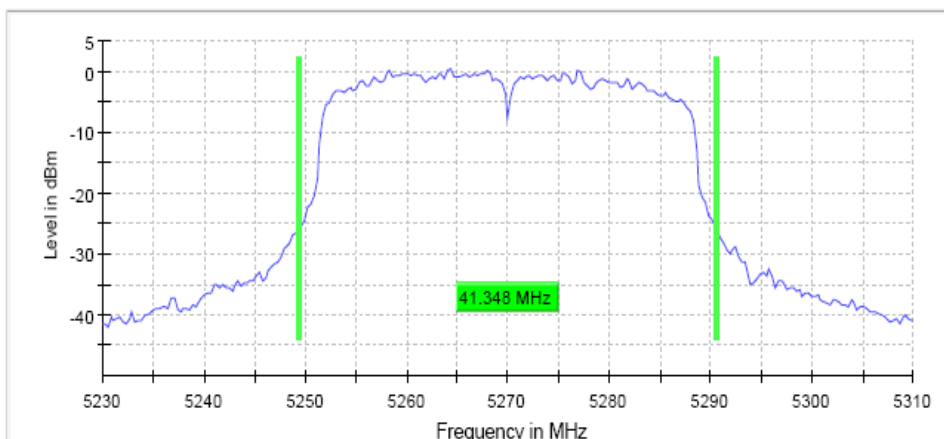
TEST RESULTS (Cont.)			
Measurement			
Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.24000 GHz	5.28000 GHz	5.30000 GHz
Stop Frequency	5.28000 GHz	5.32000 GHz	5.34000 GHz
Span	40.000 MHz	40.000 MHz	40.000 MHz
RBW	200.000 kHz	200.000 KHz	200.000 kHz
VBW	1.000 MHz	1.000 MHz	1.000 MHz
SweepPoints	200	200	200
Sweeptime	28.443 μs	28.443 μs	28.443 μs
Reference Level	10.000 dBm	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	30.000 dB	30.000 dB
Detector	MaxPeak	MaxPeak	MaxPeak
SweepCount	200	200	200
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
SweepType	FFT	FFT	FFT
Preamplifier	off	off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	40 / max. 150	48 / max. 150	55 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.00 dB	0.00 dB	0.00 dB

TEST RESULTS (Cont.)		n Mode	
Bandwidth: 40 MHz			
	Lowest frequency	Highest frequency	
	5270 MHz	5310 MHz	
26dB bandwidth (MHz)	41.348	41.348	
Occupied bandwidth (MHz)	36.5	36.5	
Measurement uncertainty (kHz)	<± 8.33		

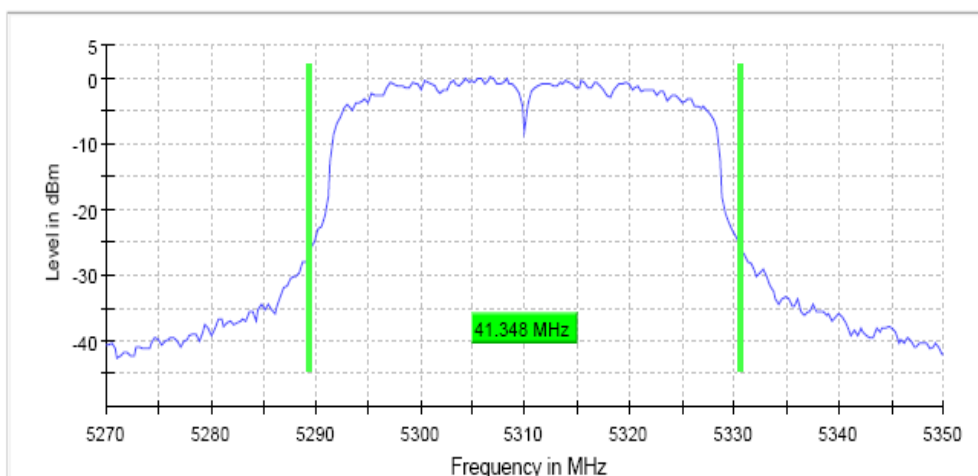
TEST RESULTS (Cont.):

26 dB BANDWIDTH

Lowest Channel



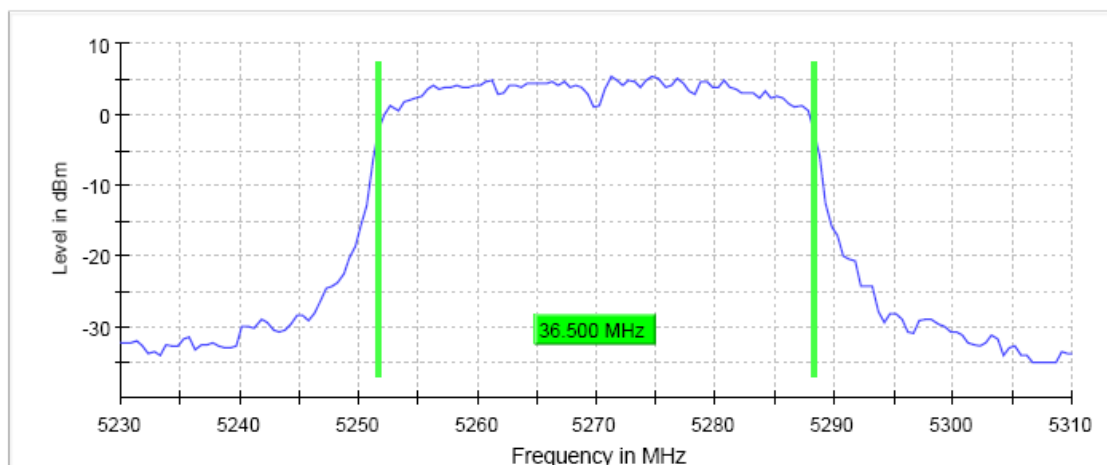
Highest Channel



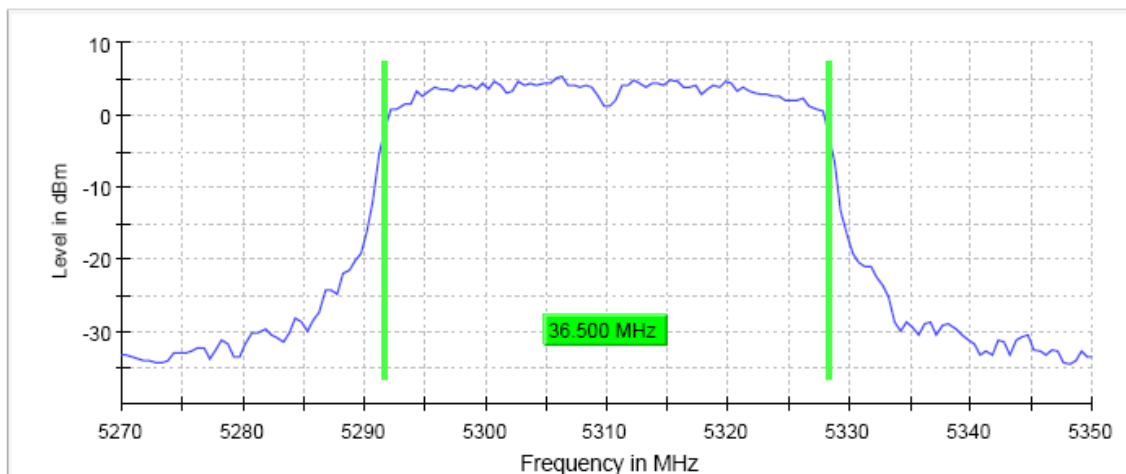
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

Lowest Channel



Highest Channel

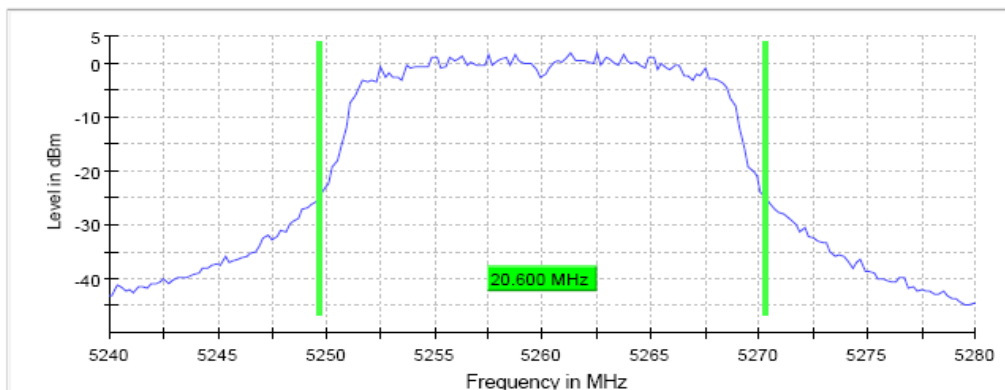


TEST RESULTS (Cont.)																																																																		
Measurement																																																																		
	<table><thead><tr><th>Setting</th><th>Instrument Value</th><th>Instrument Value</th></tr></thead><tbody><tr><td>Start Frequency</td><td>5.23000 GHz</td><td>5.27000 GHz</td></tr><tr><td>Stop Frequency</td><td>5.31000 GHz</td><td>5.35000 GHz</td></tr><tr><td>Span</td><td>80.000 MHz</td><td>80.000 MHz</td></tr><tr><td>RBW</td><td>500.000 kHz</td><td>500.000 kHz</td></tr><tr><td>VBW</td><td>2.000 MHz</td><td>2.000 MHz</td></tr><tr><td>SweepPoints</td><td>160</td><td>160</td></tr><tr><td>SweepTime</td><td>18.962 us</td><td>18.962 us</td></tr><tr><td>Reference Level</td><td>20.000 dBm</td><td>20.000 dBm</td></tr><tr><td>Attenuation</td><td>40.000 dB</td><td>40.000 dB</td></tr><tr><td>Detector</td><td>MaxPeak</td><td>MaxPeak</td></tr><tr><td>SweepCount</td><td>200</td><td>200</td></tr><tr><td>Filter</td><td>3 dB</td><td>3 dB</td></tr><tr><td>Trace Mode</td><td>Max Hold</td><td>Max Hold</td></tr><tr><td>SweepType</td><td>FFT</td><td>FFT</td></tr><tr><td>Preamplifier</td><td>off</td><td>off</td></tr><tr><td>Stablemode</td><td>Trace</td><td>Trace</td></tr><tr><td>Stablevalue</td><td>0.30 dB</td><td>0.30 dB</td></tr><tr><td>Run</td><td>76 / max. 150</td><td>84 / max. 150</td></tr><tr><td>Stable</td><td>5 / 5</td><td>5 / 5</td></tr><tr><td>Max Stable</td><td>0.05 dB</td><td>0.18 dB</td></tr></tbody></table>	Setting	Instrument Value	Instrument Value	Start Frequency	5.23000 GHz	5.27000 GHz	Stop Frequency	5.31000 GHz	5.35000 GHz	Span	80.000 MHz	80.000 MHz	RBW	500.000 kHz	500.000 kHz	VBW	2.000 MHz	2.000 MHz	SweepPoints	160	160	SweepTime	18.962 us	18.962 us	Reference Level	20.000 dBm	20.000 dBm	Attenuation	40.000 dB	40.000 dB	Detector	MaxPeak	MaxPeak	SweepCount	200	200	Filter	3 dB	3 dB	Trace Mode	Max Hold	Max Hold	SweepType	FFT	FFT	Preamplifier	off	off	Stablemode	Trace	Trace	Stablevalue	0.30 dB	0.30 dB	Run	76 / max. 150	84 / max. 150	Stable	5 / 5	5 / 5	Max Stable	0.05 dB	0.18 dB		
Setting	Instrument Value	Instrument Value																																																																
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Max Stable	0.05 dB	0.18 dB																																																																
TESTED SAMPLES:		S/01																																																																
TESTED CONDITIONS MODES:		TC#03 (ac mode)																																																																
TEST RESULTS:		PASS																																																																
Bandwidth: 20 MHz																																																																		
	Lowest frequency	Middle frequency	Highest frequency																																																															
	5260 MHz	5300 MHz	5320 MHz																																																															
26db bandwidth (MHz)	20.6	20.4	21																																																															
Occupied bandwidth (MHz)	17.4	17.4	17.4																																																															
Measurement uncertainty (kHz)	<± 8.33																																																																	

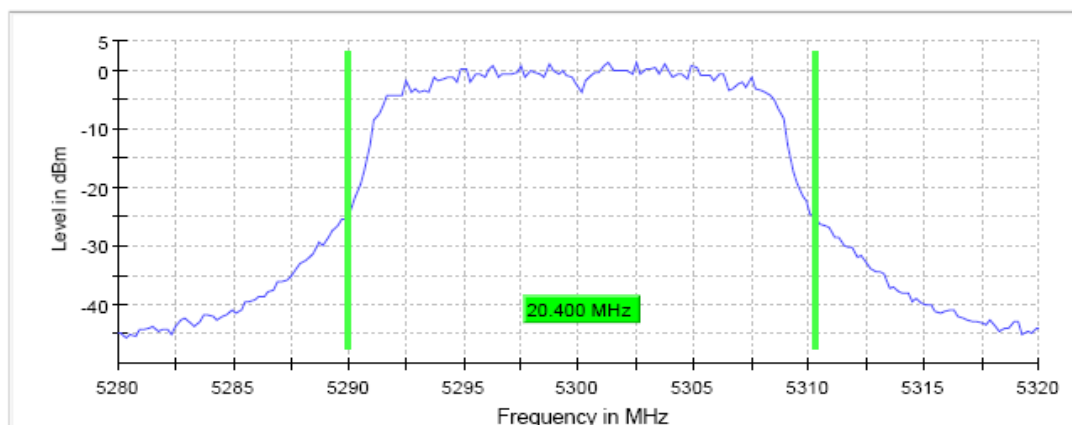
TEST RESULTS (Cont.):

26 dB BANDWIDTH

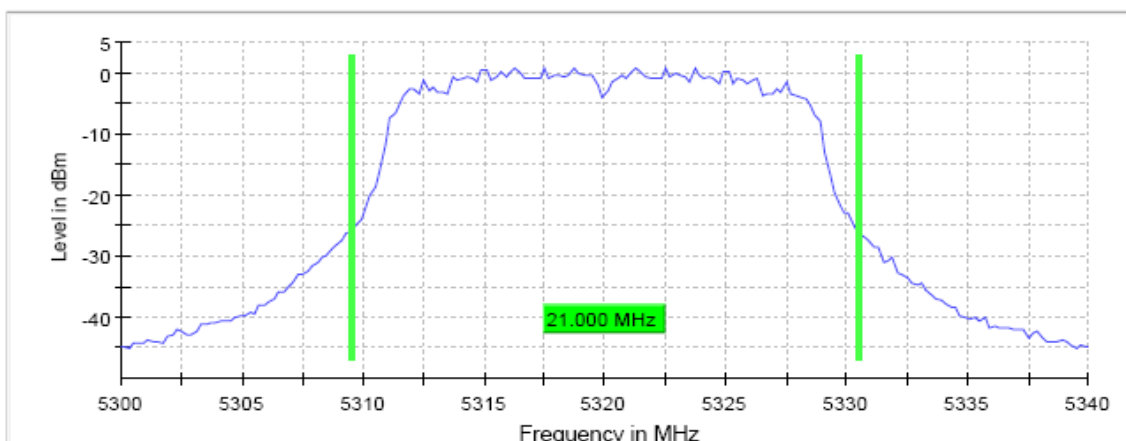
Lowest Channel



Middle Channel



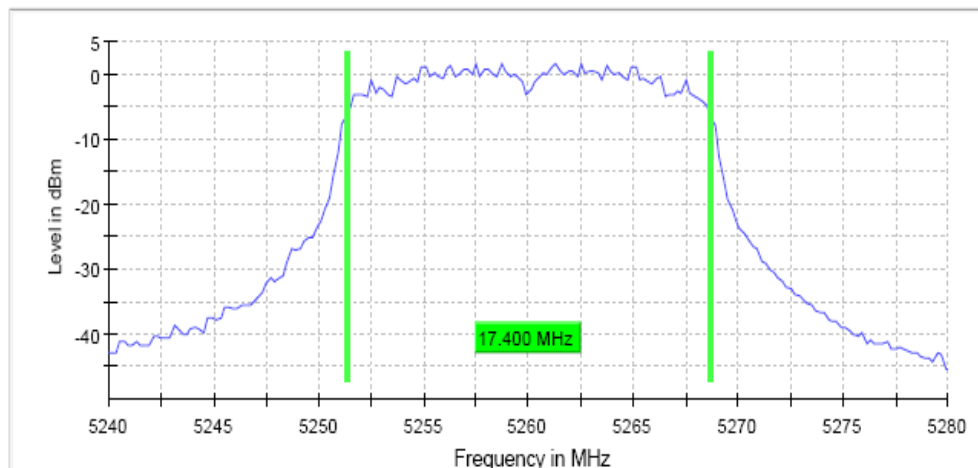
Highest Channel



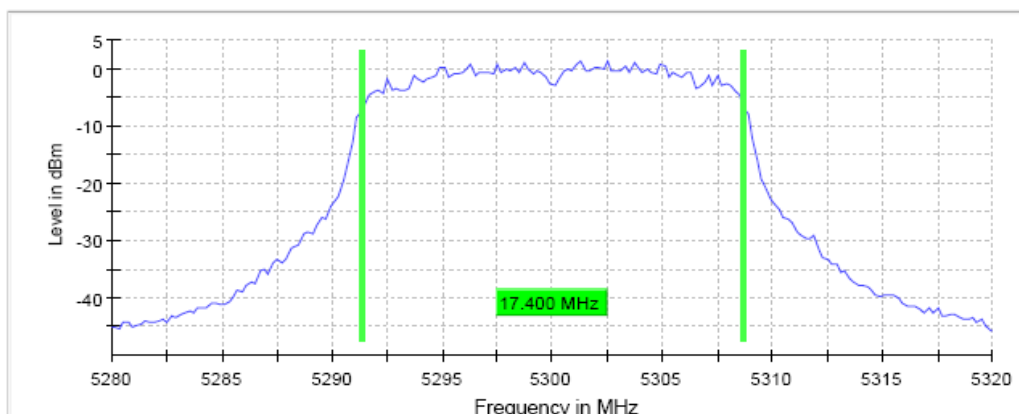
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

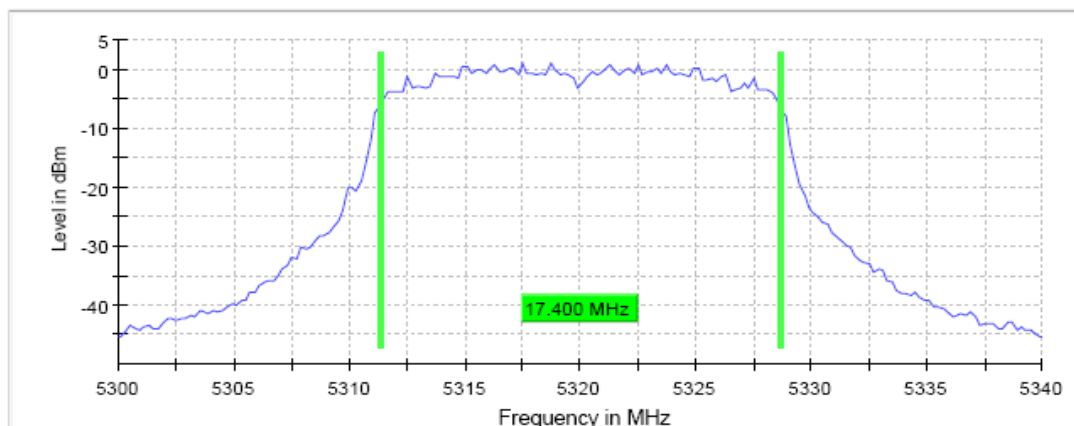
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.)

Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.24000 GHz	5.28000 GHz	5.30000 GHz
Stop Frequency	5.28000 GHz	5.32000 GHz	5.34000 GHz
Span	40.000 MHz	40.000 MHz	40.000 MHz
RBW	200.000 kHz	200.000 KHz	200.000 kHz
VBW	1.000 MHz	1.000 MHz	1.000 MHz
SweepPoints	200	200	200
SweepTime	28.443 μ s	28.443 μ s	28.443 μ s
Reference Level	10.000 dBm	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	30.000 dB	30.000 dB
Detector	MaxPeak	MaxPeak	MaxPeak
SweepCount	200	200	200
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
SweepType	FFT	FFT	FFT
Preamplifier	off	off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	43 / max. 150	30 / max. 150	67 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.00 dB	0.00 dB	0.24 dB

TEST RESULTS

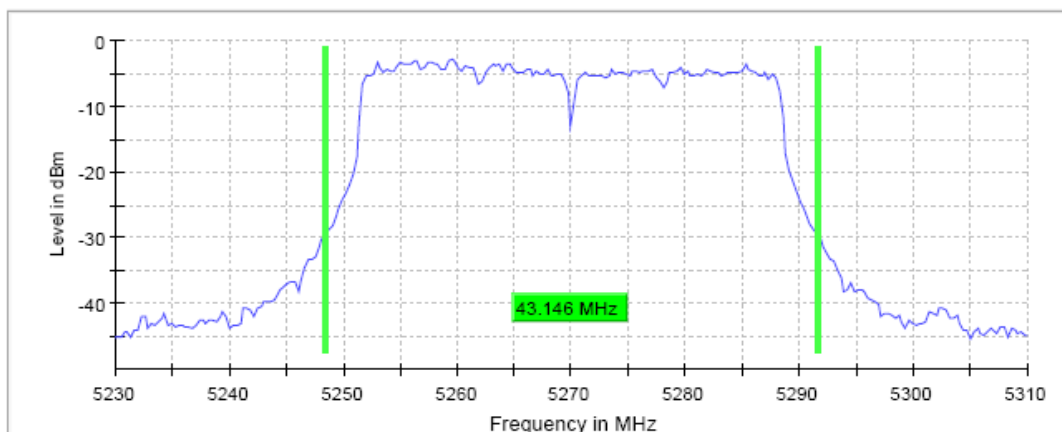
ac mode (40 MHz)

	Lowest frequency 5270 MHz	Highest frequency 5310 MHz
26dB bandwidth (MHz)	43.146	43.146
Occupied bandwidth (MHz)	36.5	36.5
Measurement uncertainty (kHz)	< $\pm$ 8.33	

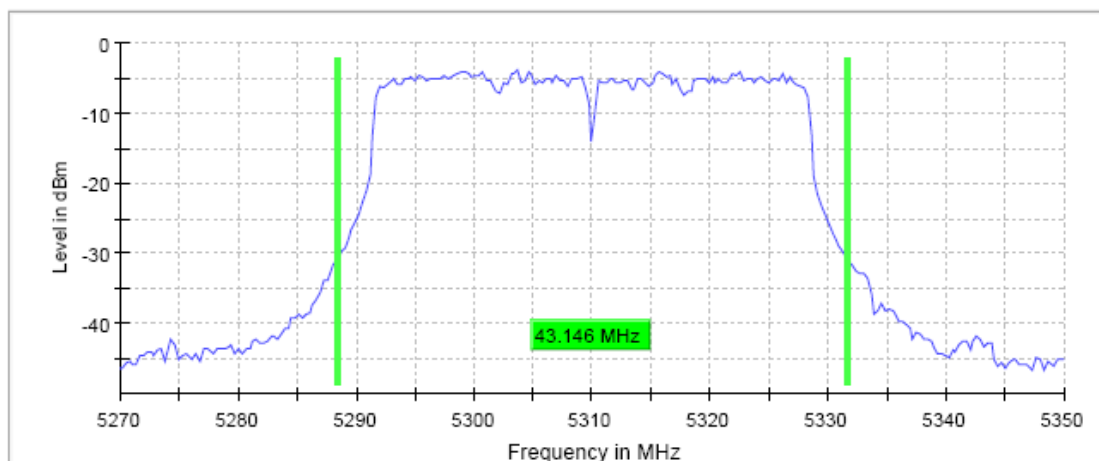
TEST RESULTS (Cont.):

26 dB BANDWIDTH

Lowest Channel



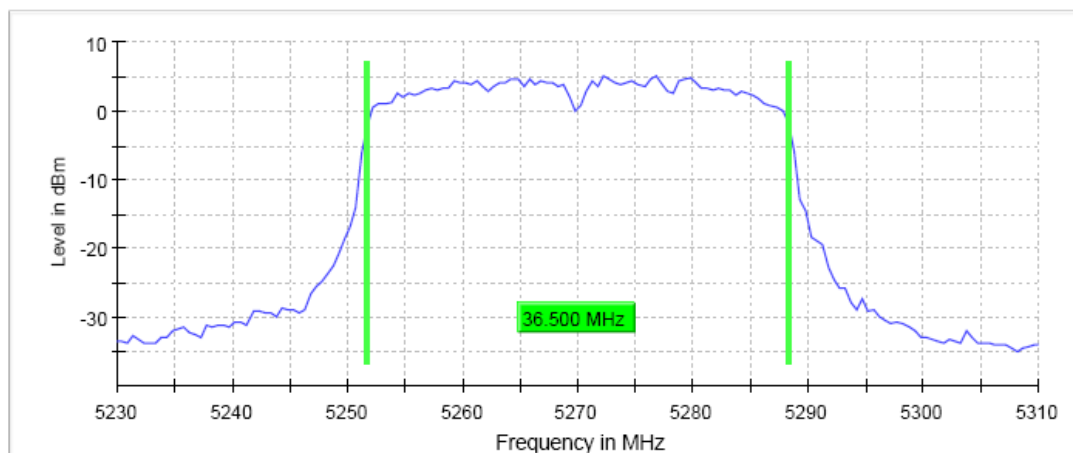
Highest Channel



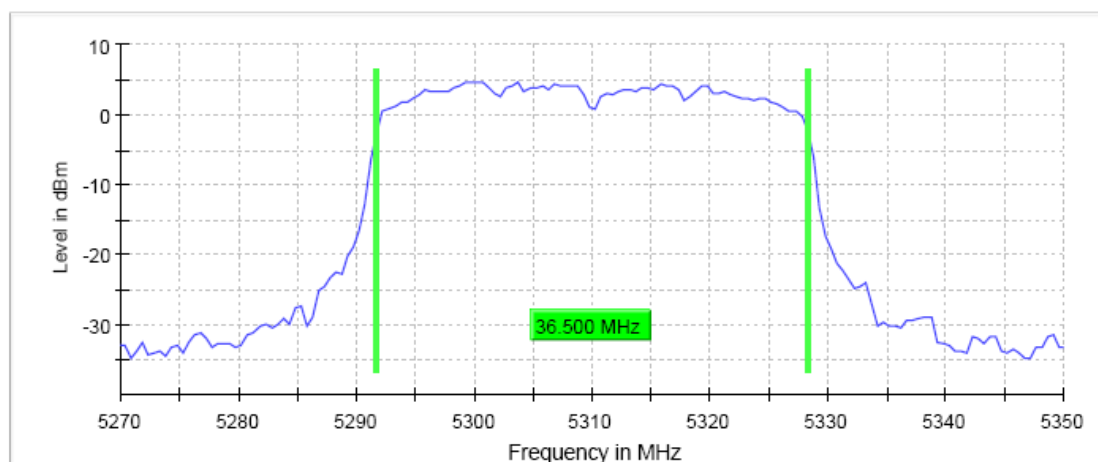
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

Lowest Channel



Highest Channel



TEST RESULTS (Cont.)

Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.23000 GHz	5.27000 GHz
Stop Frequency	5.31000 GHz	5.35000 GHz
Span	80.000 MHz	80.000 MHz
RBW	500.000 kHz	500.000 kHz
VBW	2.000 MHz	2.000 MHz
SweepPoints	160	160
SweepTime	18.962 μ s	18.962 μ s
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	FFT
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	83 / max. 150	69 / max. 150
Stable	5 / 5	5 / 5
Max Stable Difference	0.00 dB	0.24 dB

TEST RESULTS

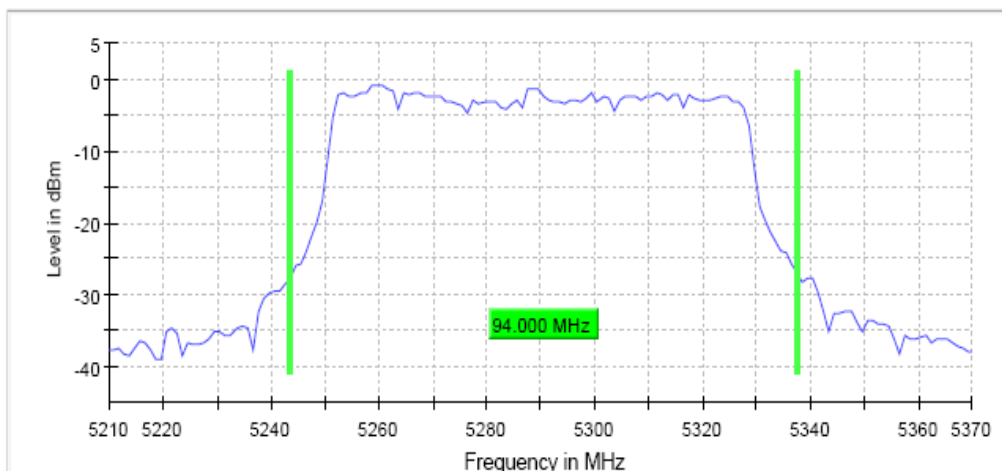
ac mode (80 MHz)

	Lowest frequency 5290 MHz
26dB bandwidth (MHz)	94
Occupied bandwidth (MHz)	76.5
Measurement uncertainty (kHz)	< $\pm$ 8.33

TEST RESULTS (Cont.):

26 dB BANDWIDTH

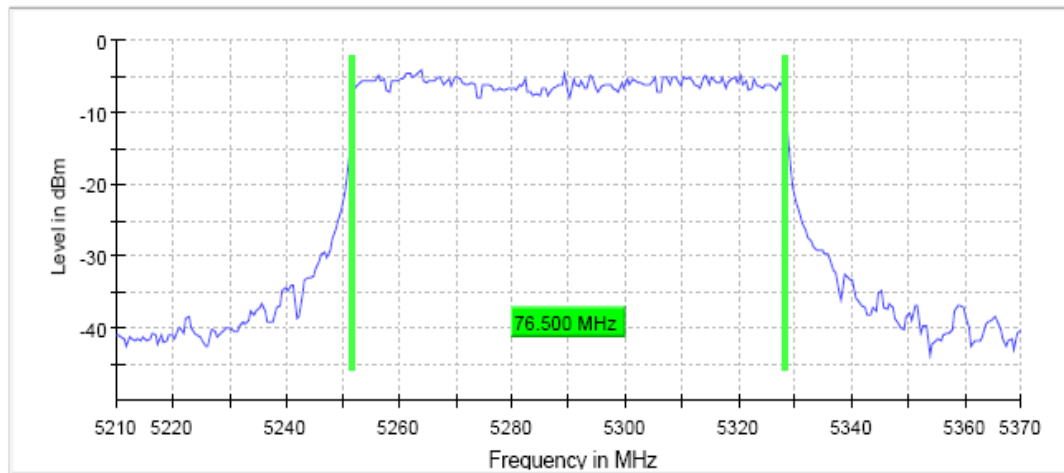
Lowest Channel



TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

Lowest Channel



Measurement

Setting	Instrument Value
Start Frequency	5.21000 GHz
Stop Frequency	5.37000 GHz
Span	160.000 MHz
RBW	1.000 MHz
VBW	3.000 MHz
SweepPoints	160
SweepTime	22.754 μ s
Reference Level	10.000 dBm
Attenuation	30.000 dB
Detector	MaxPeak
SweepCount	200
Filter	3 dB
Trace Mode	Max Hold
SweepType	FFT
Preamplifier	off
Stablemode	Trace
Stablevalue	0.30 dB
Run	54 / max. 150
Stable	5 / 5
Max Stable Difference	0.23 dB

TEST C.2: POWER LIMITS. MAXIMUM OUTPUT POWER

LIMITS:	Product standard:	Part 15 Subpart C §15.407 and RSS-247
	Test standard:	Part 15 Subpart C §15.407(a) (1) (4) and RSS-247 6.2.1.1

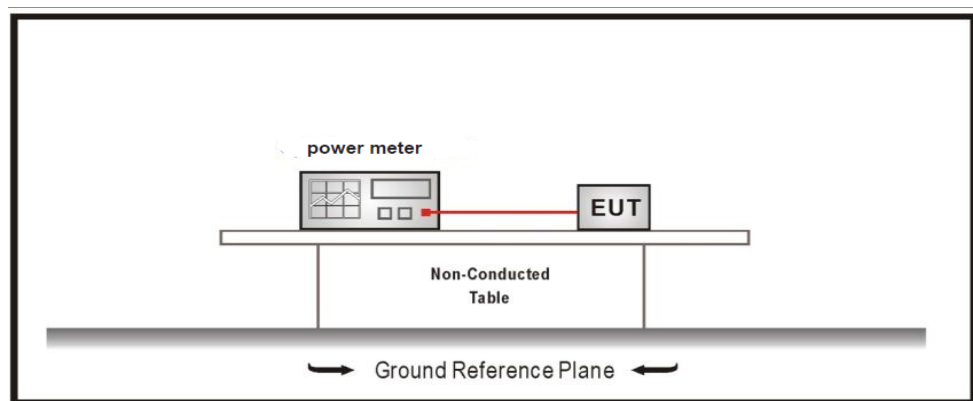
LIMITS

In band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST SETUP

Measured according to ANSI C63.10, Section 11.9.2.3.2 Method AVGPM-G

The EIRP power (dBm) is calculated by adding the declared maximum antenna gain to the measured conducted power



TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01 (a mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

Maximum declared antenna gain: 4.5 dBi

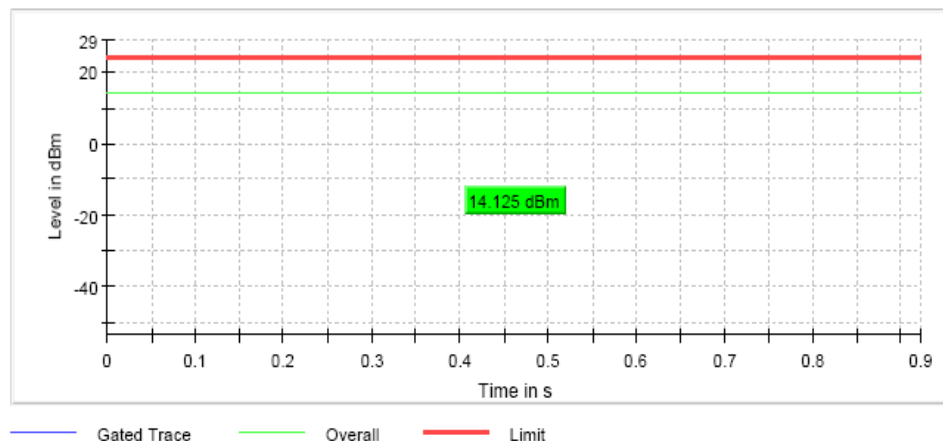
	Lowest frequency 5260 MHz	Middle frequency 5300 MHz	Highest frequency 5320 MHz
Maximum conducted power (dBm)	14.1	14.1	13.7
Maximum EIRP power (dBm)	18.6	18.6	18.2
Measurement uncertainty (dB)	<±0.78		

The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

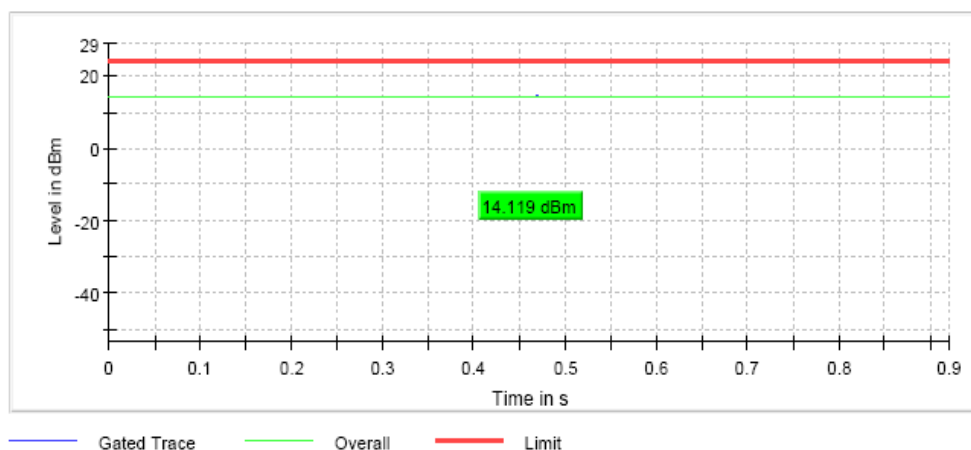
TEST RESULTS (Cont.):

CONDUCTED OUTPUT POWER

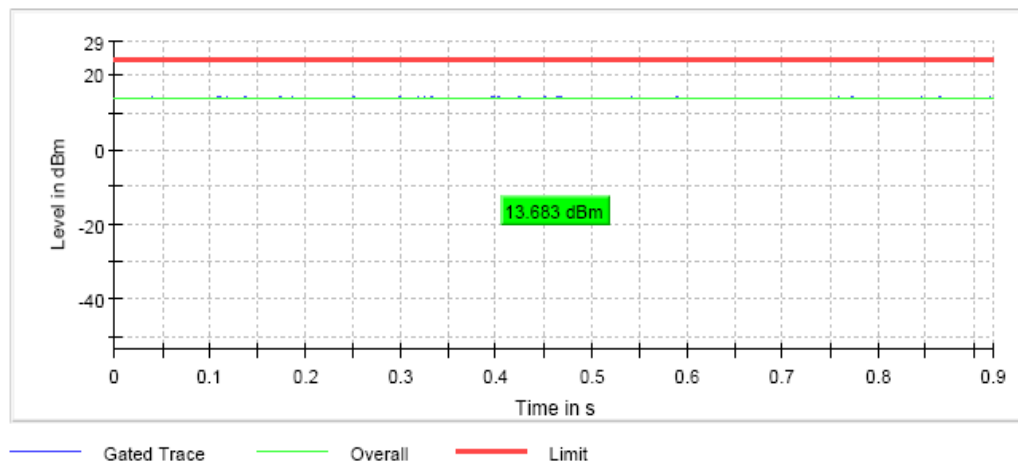
Lowest Channel



Middle Channel



Highest Channel



TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

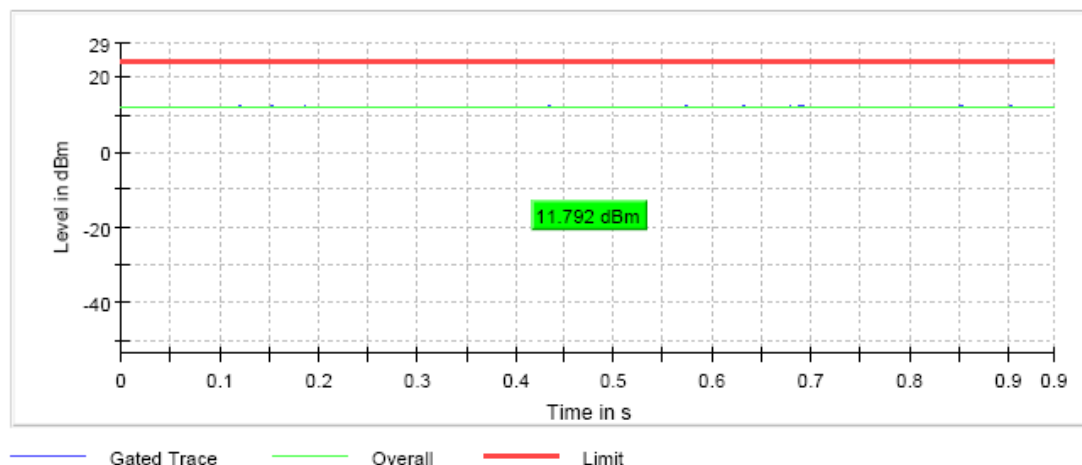
Maximum declared antenna gain: 4.5 dBi

	Lowest frequency 5260 MHz	Middle frequency 5300 MHz	Highest frequency 5320 MHz
Maximum conducted power (dBm)	11.8	11.2	11.3
Maximum EIRP power (dBm)	16.3	15.7	15.8
Measurement uncertainty (dB)	<±0.78		

The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

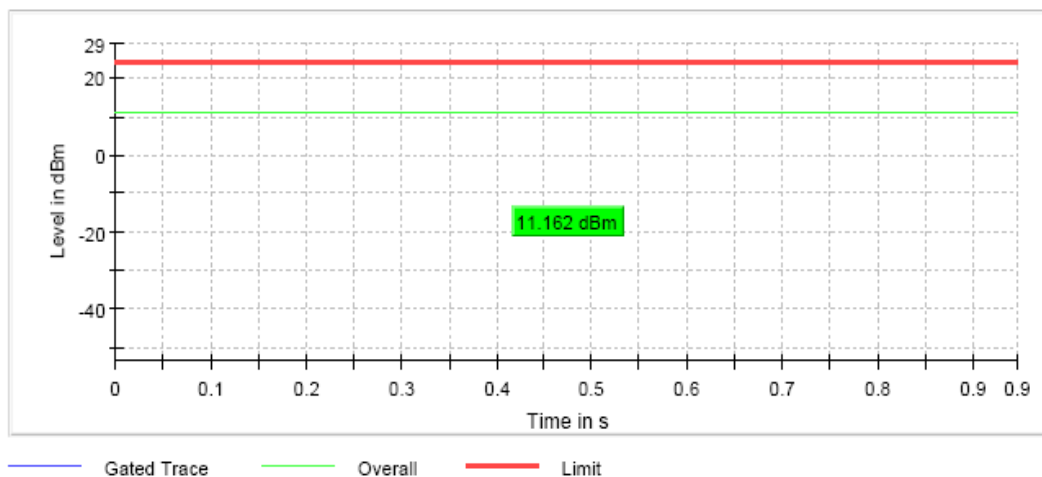
TEST RESULTS (Cont.):	CONDUCTED OUTPUT POWER
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Lowest Channel

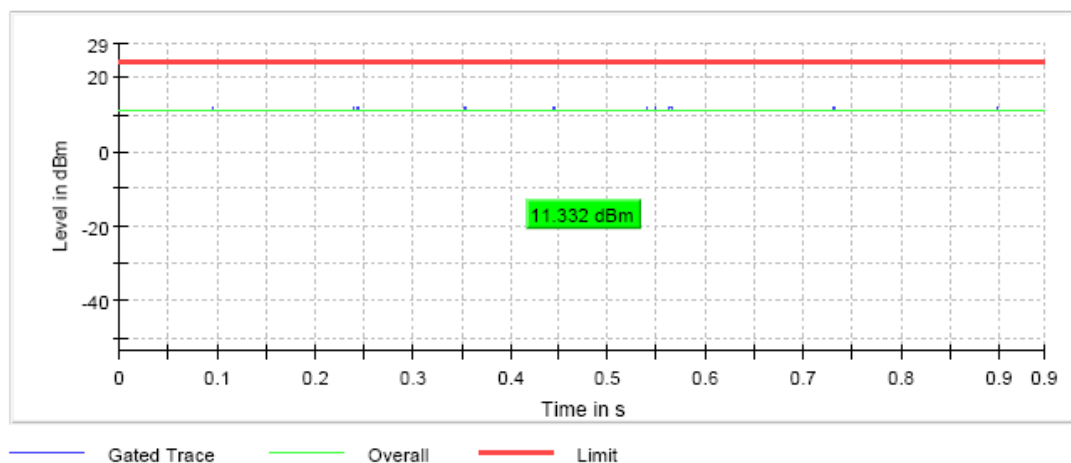


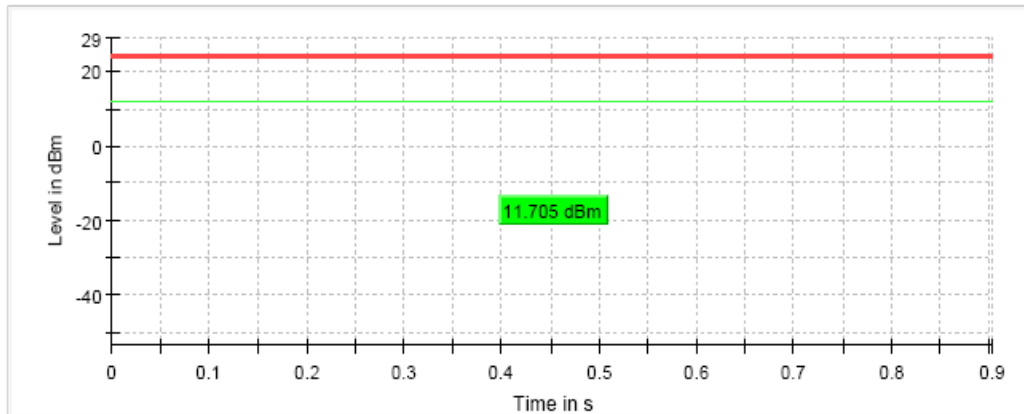
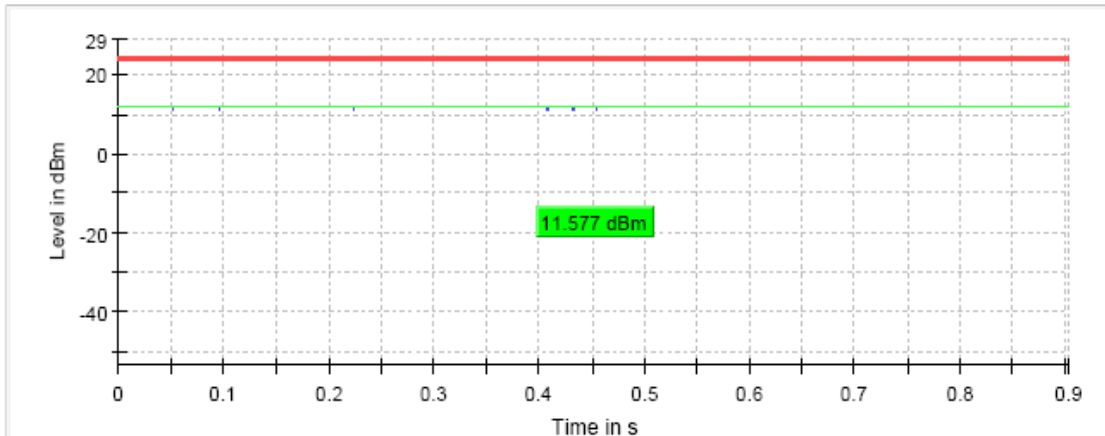
TEST RESULTS (Cont.)

Middle Channel



Highest Channel



TEST RESULTS	n Mode (40 MHz)	
Maximum declared antenna gain: 4.5 dBi		
	Lowest frequency 5270 MHz	Highest frequency 5310 MHz
Maximum conducted power (dBm)	11.7	11.6
Maximum EIRP power (dBm)	16.2	16.1
Measurement uncertainty (dB)	<±0.78	
The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.		
TEST RESULTS (Cont.):	CONDUCTED OUTPUT POWER	
Lowest Channel		
		
Highest Channel		
		

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#03 (ac mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

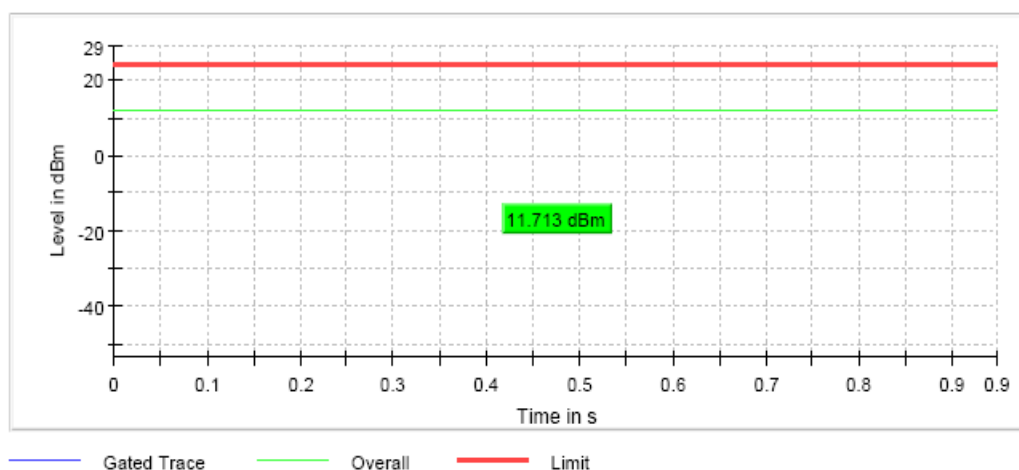
Maximum declared antenna gain: 4.5 dBi

	Lowest frequency 5260 MHz	Middle frequency 5300 MHz	Highest frequency 5320 MHz
Maximum conducted power (dBm)	11.7	11	11.3
Maximum EIRP power (dBm)	16.2	15.5	15.8
Measurement uncertainty (dB)	<±0.78		

The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

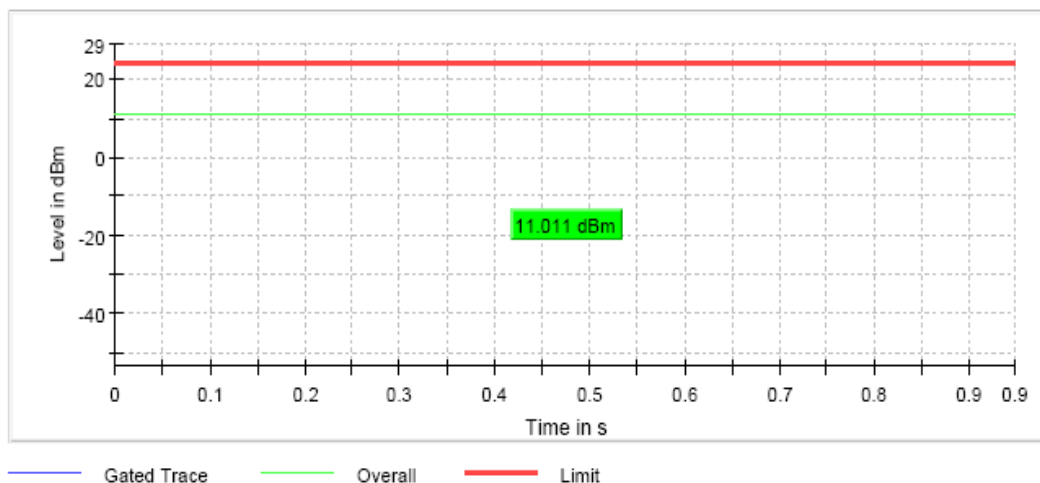
TEST RESULTS (Cont.):	CONDUCTED OUTPUT POWER
-----------------------	------------------------

Lowest Channel

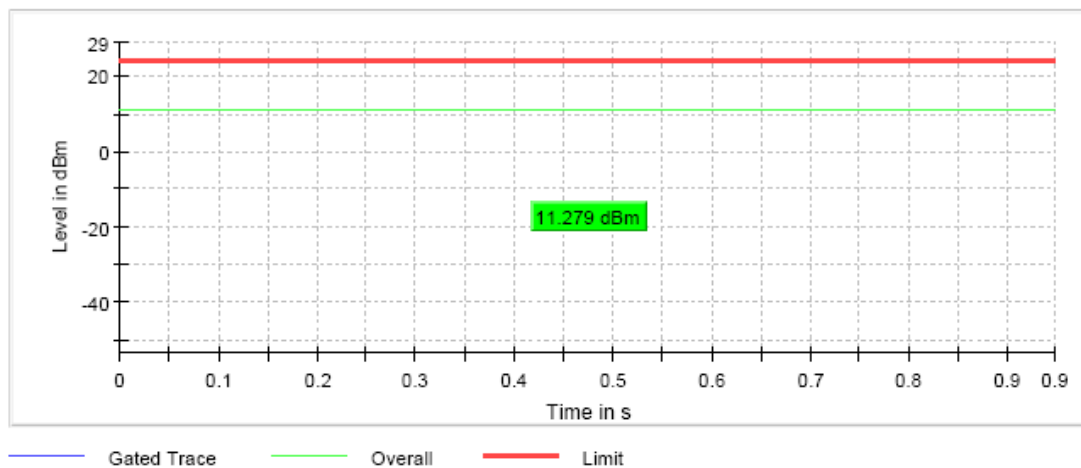


TEST RESULTS (Cont.)

Middle Channel

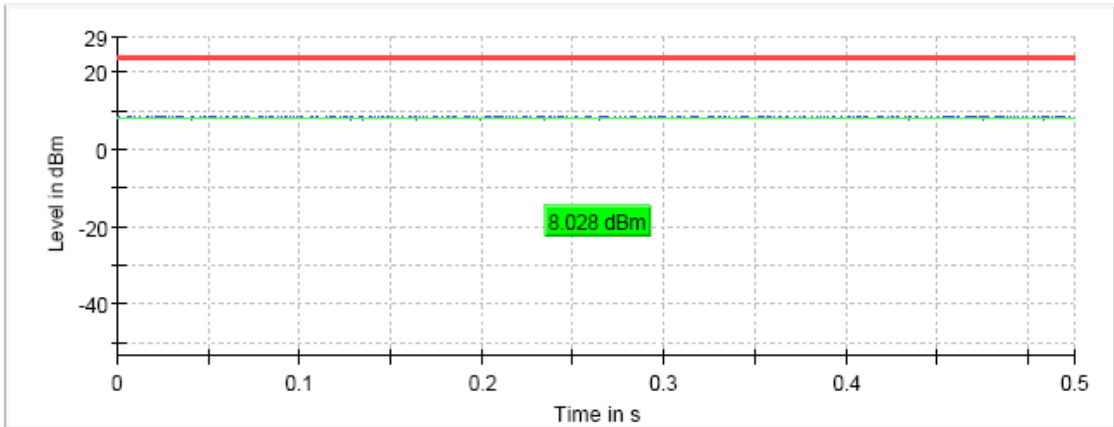
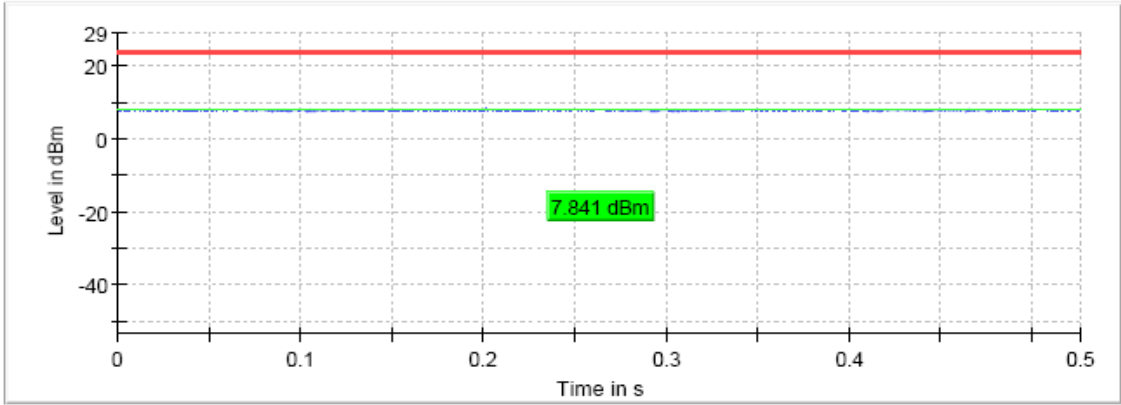


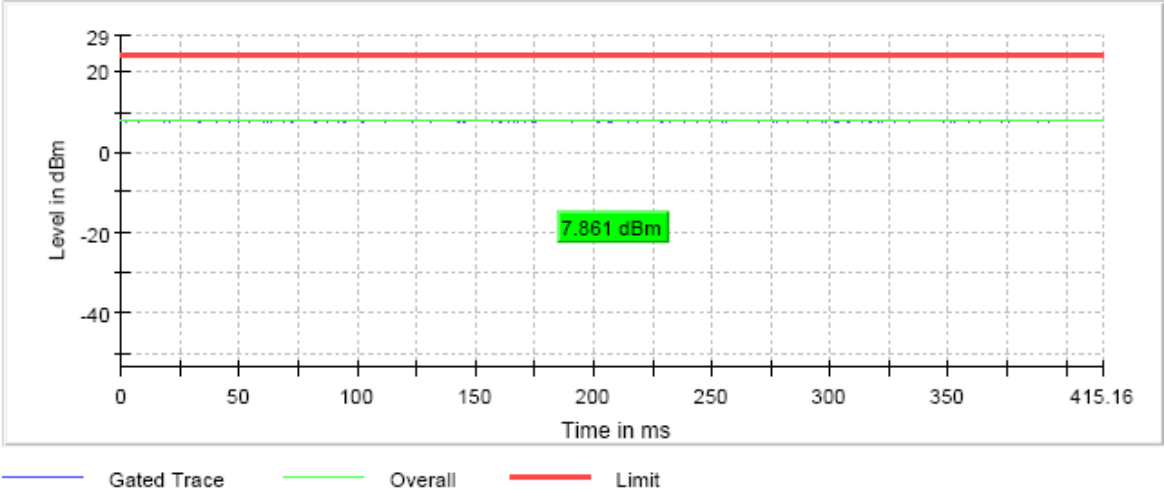
Highest Channel



TEST RESULTS	ac mode (40 MHz)	
Maximum declared antenna gain: 4.5 dBi		
	Lowest frequency 5270 MHz	Highest frequency 5310 MHz
Maximum conducted power (dBm)	8	7.8
Maximum EIRP power (dBm)	12.5	12.3
Measurement uncertainty (dB)	<±0.78	

The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

TEST RESULTS (Cont.):	CONDUCTED OUTPUT POWER
Lowest Channel  — Gated Trace — Overall — Limit	
Highest Channel  — Gated Trace — Overall — Limit	

TEST RESULTS	ac mode (80 MHz)								
Maximum declared antenna gain: 4.5 dBi <table border="1" data-bbox="445 488 1147 730"> <tr> <td></td><td>Lowest frequency 5290 MHz</td></tr> <tr> <td>Maximum conducted power (dBm)</td><td>7.9</td></tr> <tr> <td>Maximum EIRP power (dBm)</td><td>12.4</td></tr> <tr> <td>Measurement uncertainty (dB)</td><td><±0.78</td></tr> </table> The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.			Lowest frequency 5290 MHz	Maximum conducted power (dBm)	7.9	Maximum EIRP power (dBm)	12.4	Measurement uncertainty (dB)	<±0.78
	Lowest frequency 5290 MHz								
Maximum conducted power (dBm)	7.9								
Maximum EIRP power (dBm)	12.4								
Measurement uncertainty (dB)	<±0.78								
TEST RESULTS (Cont.):	CONDUCTED OUTPUT POWER								
Lowest Channel  Level in dBm Time in ms — Gated Trace — Overall — Limit									

TEST C.3: POWER SPECTRAL DENSITY

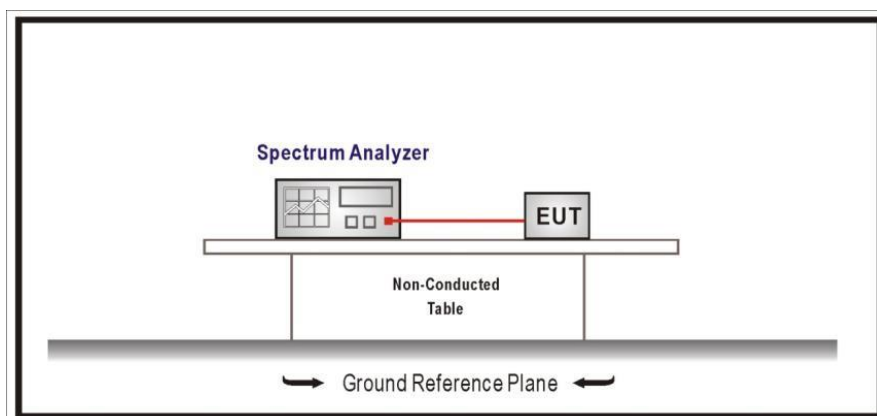
LIMITS:	Product standard:	Part 15 Subpart C §15.407 and RSS-247
	Test standard:	Part 15 Subpart C §15.407(a) (1) (5) and RSS-247 6.2.1.1

LIMITS

In the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST SETUP

For all modes, the maximum power spectral density level in the fundamental emission was measured using the method according to point F) (Method SA-1) of Guidance 789033 D02 General UNII Test Procedures New Rules v01.



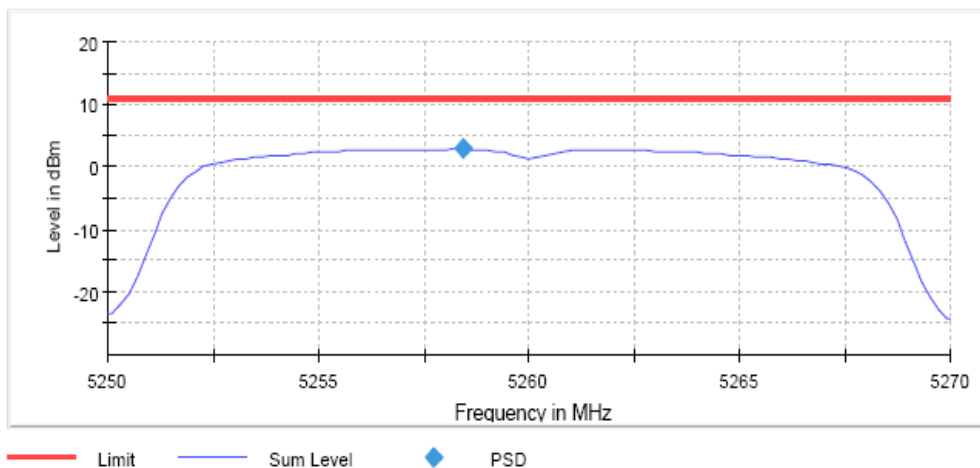
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01 (a mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

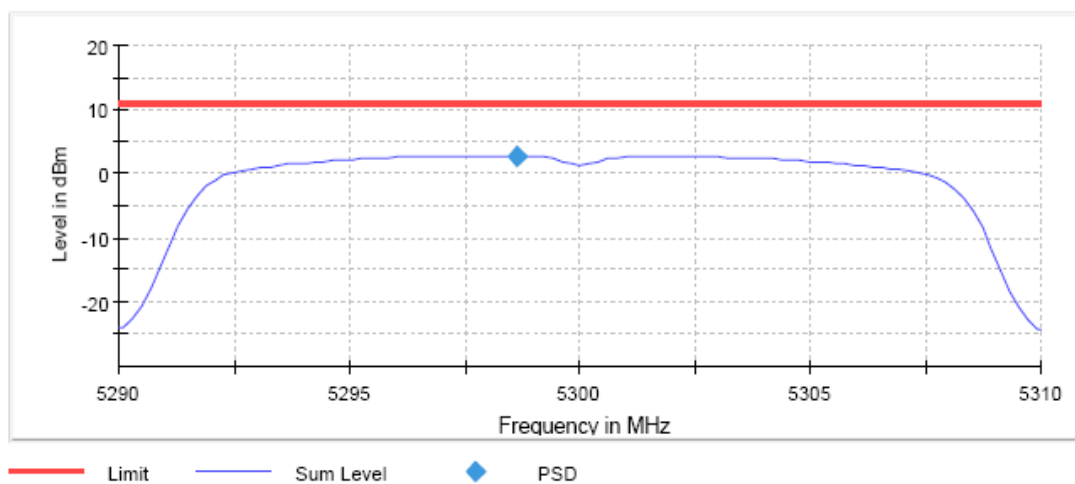
	Lowest frequency 5260 MHz	Middle frequency 5300 MHz	Highest frequency 5320 MHz
Power spectral density (dBm)	2.818	2.809	2.343
Measurement uncertainty (dB)	<±0.78		

TEST RESULTS (Cont.):

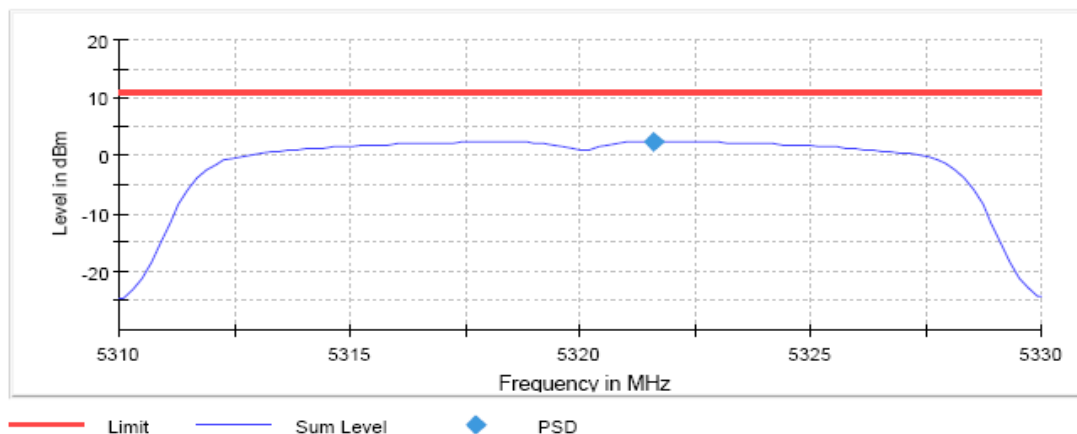
Low Channel



Middle Channel



High Channel



TEST RESULTS (Cont.):

Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.25000 GHz	5.29000 GHz	5.31000 GHz
Stop Frequency	5.27000 GHz	5.31000 GHz	5.33000 GHz
Span	20.000 MHz	20.000 MHz	20.000 MHz
RBW	1.000 MHz kHz	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz	3.000 MHz
SweepPoints	101	101	101
SweepTime	2.020 s	2.020 s	2.020 s
Reference Level	20.000 dBm	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB	40.000 dB
Detector	RMS	RMS	RMS
SweepCount	3	3	3
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
SweepType	Sweep	Sweep	Sweep
Preamplifier	off	off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	4 / max. 150	4 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3	3 / 3
Max Stable	0.06 dB	0.05 dB	0.04 dB

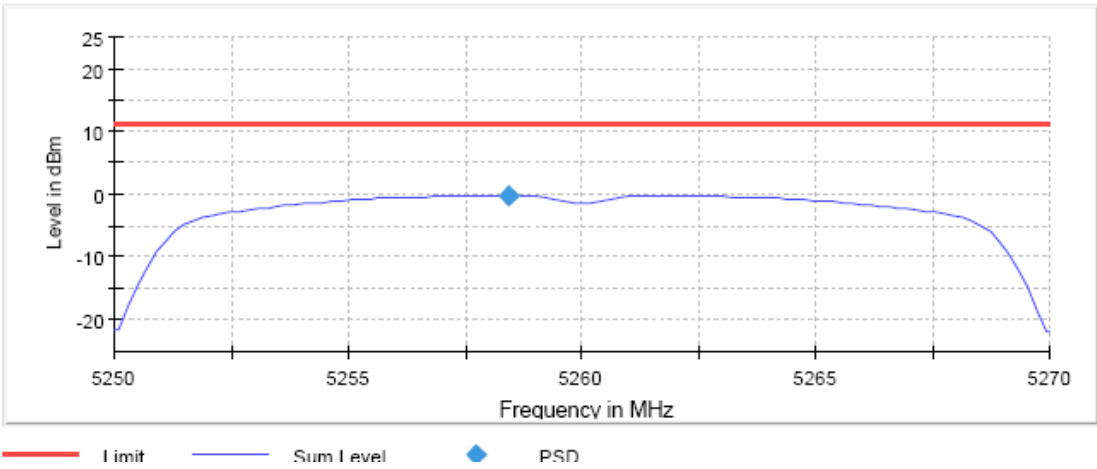
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

	Lowest frequency 5260 MHz	Middle frequency 5300 MHz	Highest frequency 5320 MHz
Power spectral density (dBm)	-0.265	-0.758	-1.162
Measurement uncertainty (dB)	<±0.78		

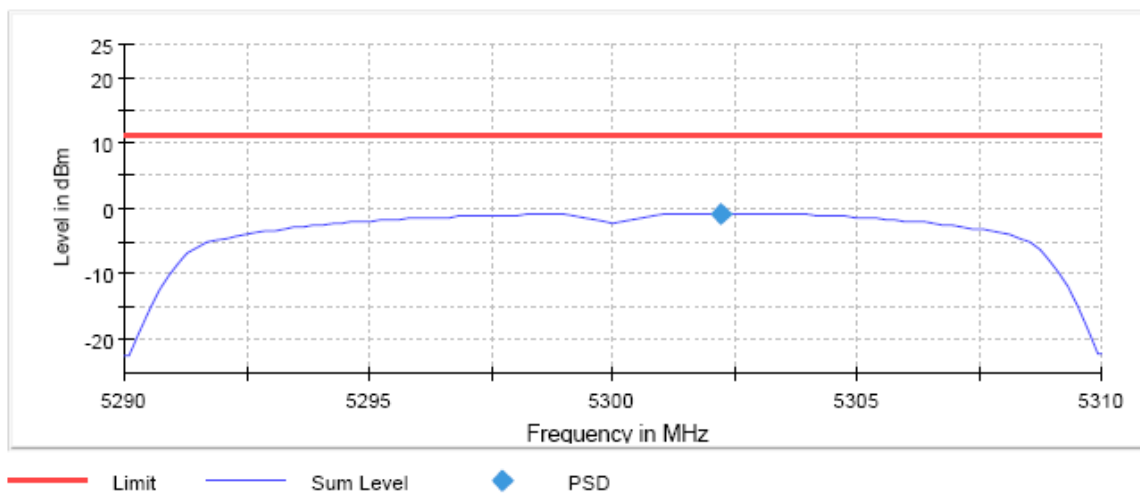
TEST RESULTS (Cont.):	
------------------------------	--

Low Channel

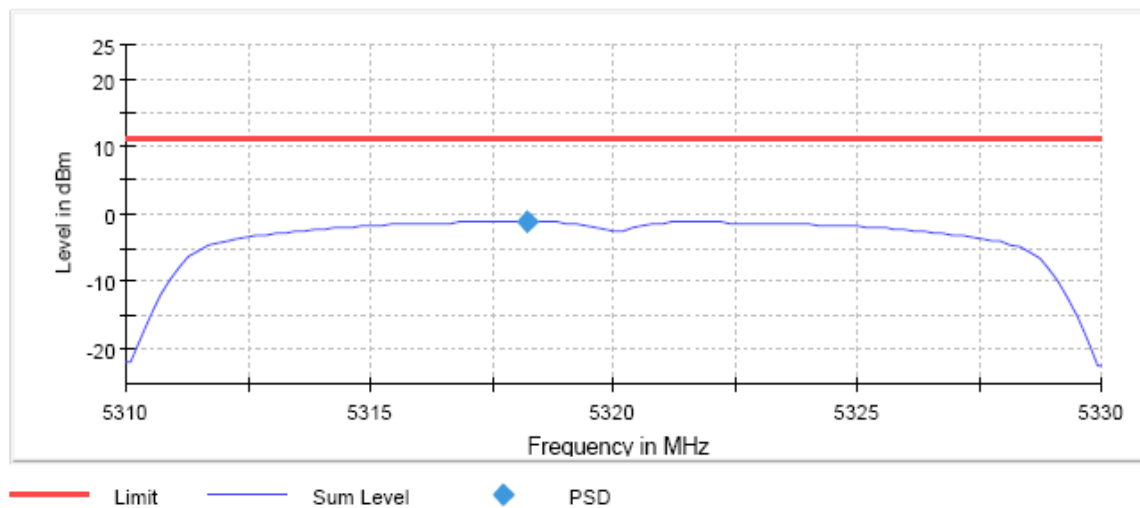


TEST RESULTS (Cont.):

Middle Channel



High Channel



TEST RESULTS (Cont.):

Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.25000 GHz	5.29000 GHz	5.31000 GHz
Stop Frequency	5.27000 GHz	5.31000 GHz	5.33000 GHz
Span	20.000 MHz	20.000 MHz	20.000 MHz
RBW	1.000 MHz	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz	3.000 MHz
SweepPoints	101	101	101
SweepTime	2.020 s	2.020 s	2.020 s
Reference Level	10.000 dBm	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	30.000 dB	30.000 dB
Detector	RMS	RMS	RMS
SweepCount	3	3	3
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
SweepType	Sweep	Sweep	Sweep
Preamp	off	off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	4 / max. 150	4 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.04 dB	0.04 dB	0.06 dB

TEST RESULTS (Cont.):

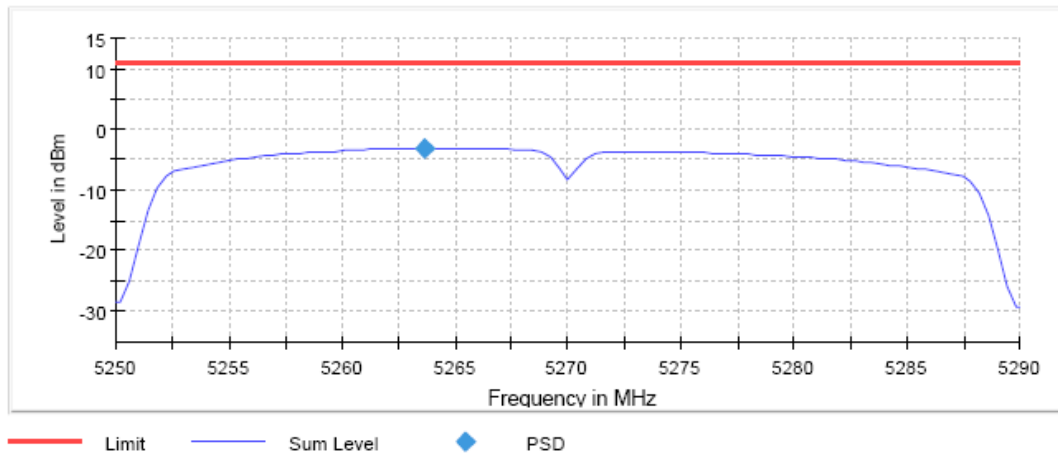
n Mode

Bandwidth: 40 MHz

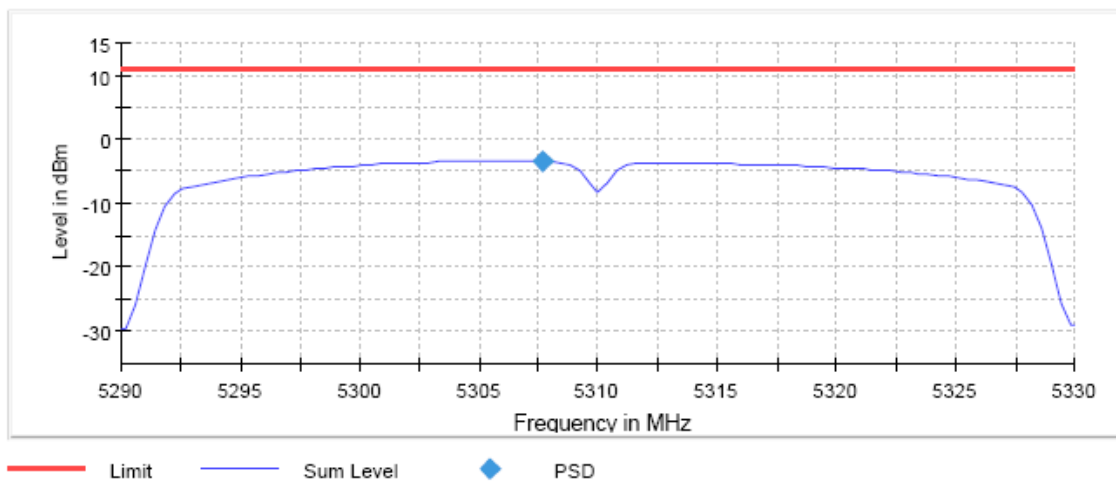
	Lowest frequency 5270 MHz	Highest frequency 5310 MHz
Power spectral density (dBm)	-3.198	-3.451
Measurement uncertainty (dB)	<±0.78	

TEST RESULTS (Cont.):

Lowest Channel



Highest Channel



TEST RESULTS (Cont.):

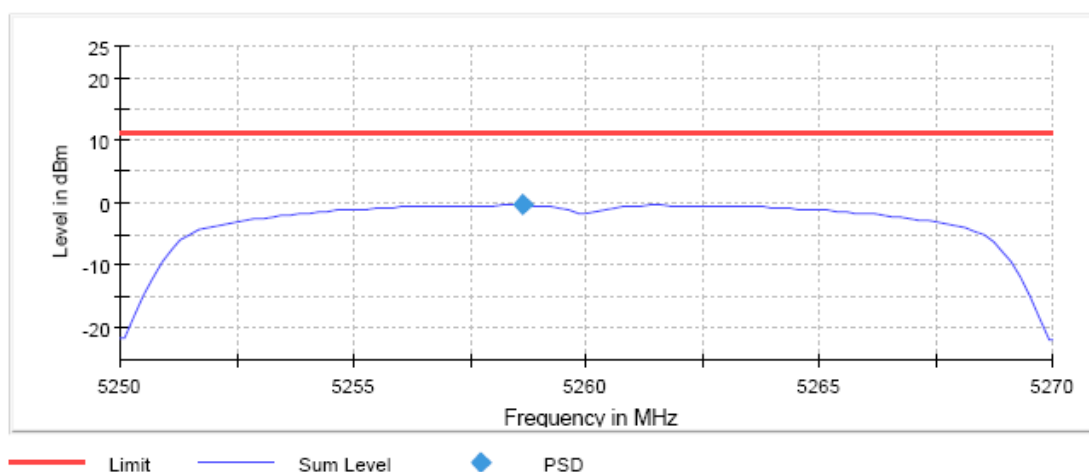
Measurement		
Setting	Instrument Value	Instrument Value
Start Frequency	5.25000 GHz	5.29000 GHz
Stop Frequency	5.29000 GHz	5.33000 GHz
Span	20.000 MHz	20.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	101	101
SweepTime	2.020 s	2.020 s
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	30.000 dB
Detector	RMS	RMS
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	4 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.04 dB	0.06 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#03 (ac mode)
TEST RESULTS:	PASS

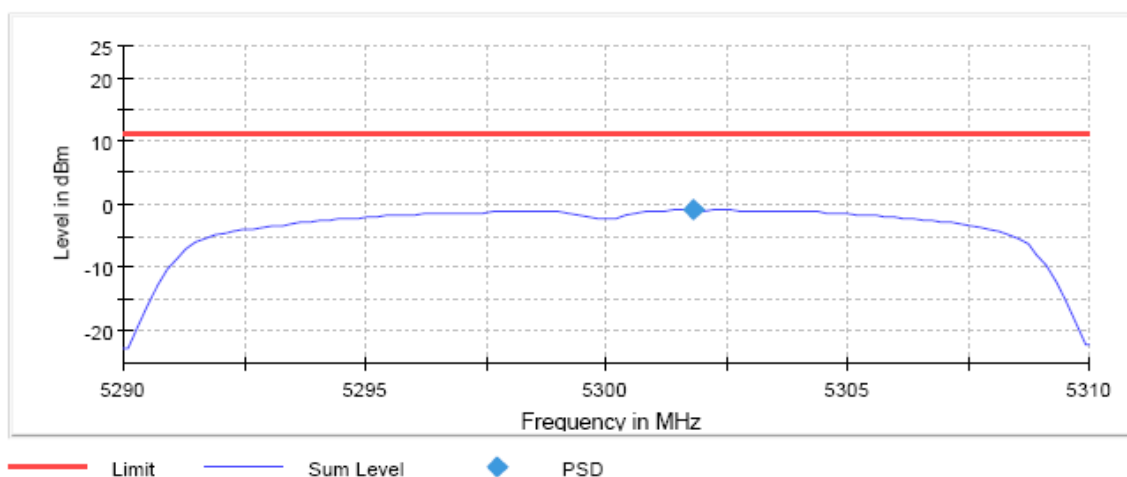
Bandwidth: 20 MHz

	Lowest frequency 5260 MHz	Middle frequency 5300 MHz	Highest frequency 5320 MHz
Power spectral density (dBm)	-0.383	-0.953	-1.247
Measurement uncertainty (dB)	<±0.78		

Lowest Channel

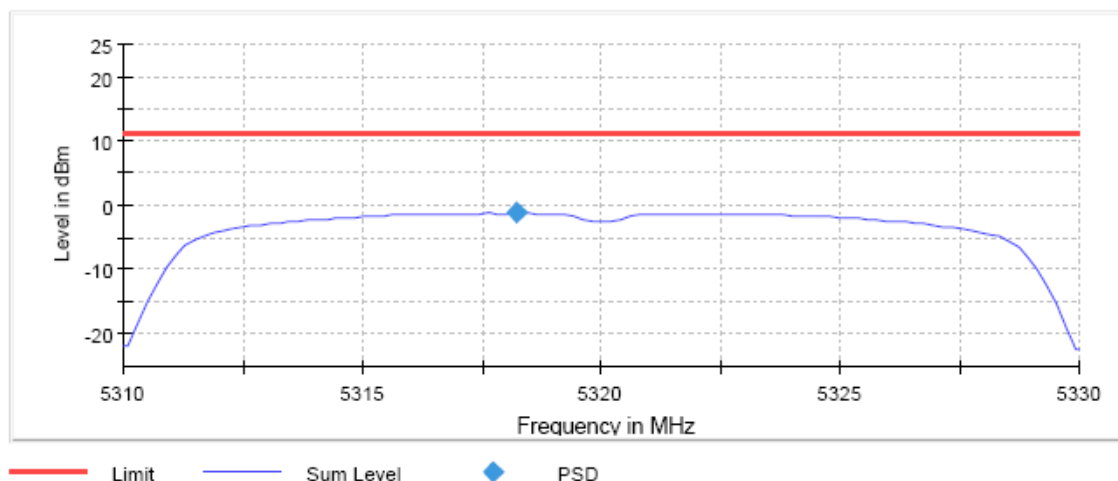


Middle Channel



TEST RESULTS (Cont.)

Highest Channel



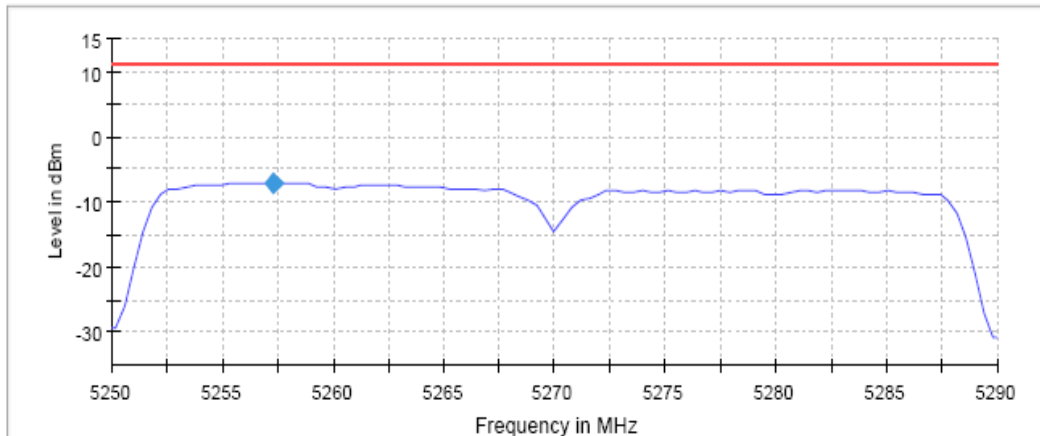
Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.25000 GHz	5.29000 GHz	5.31000 GHz
Stop Frequency	5.27000 GHz	5.31000 GHz	5.33000 GHz
Span	20.000 MHz	20.000 MHz	20.000 MHz
RBW	1.000 MHz	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz	3.000 MHz
SweepPoints	101	101	101
Sweptime	2.020 s	2.020 s	2.020 s
Reference Level	10.000 dBm	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	30.000 dB	30.000 dB
Detector	RMS	RMS	RMS
SweepCount	3	3	3
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
SweepType	Sweep	Sweep	Sweep
Preamplifier	off	off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	4 / max. 150	4 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.06 dB	0.04 dB	0.04 dB

TEST RESULTS	ac Mode (40 MHz)	
	Lowest frequency 5270 MHz	Highest frequency 5310 MHz
Power spectral density (dBm)	-7.102	-7.847
Measurement uncertainty (dB)	<±0.78	

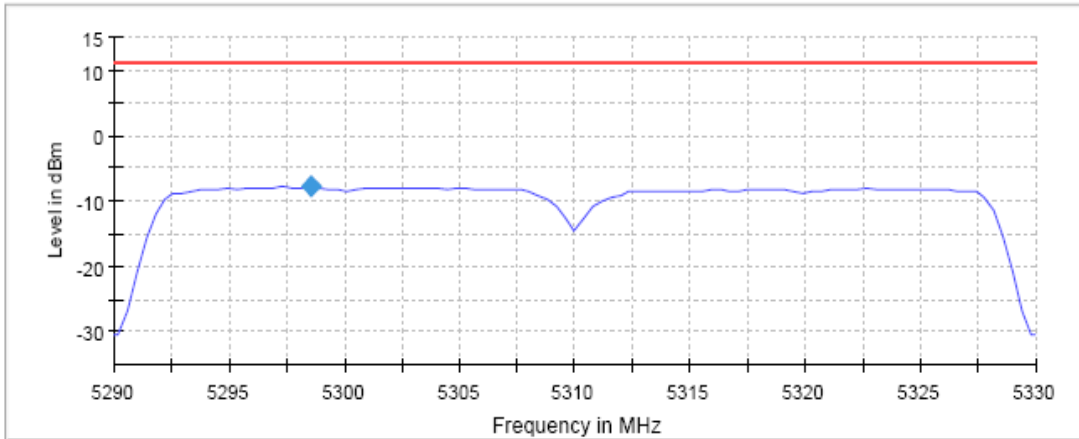
TEST RESULTS (Cont.):	
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Lowest Channel



— Limit — Sum Level ◆ PSD

Highest Channel

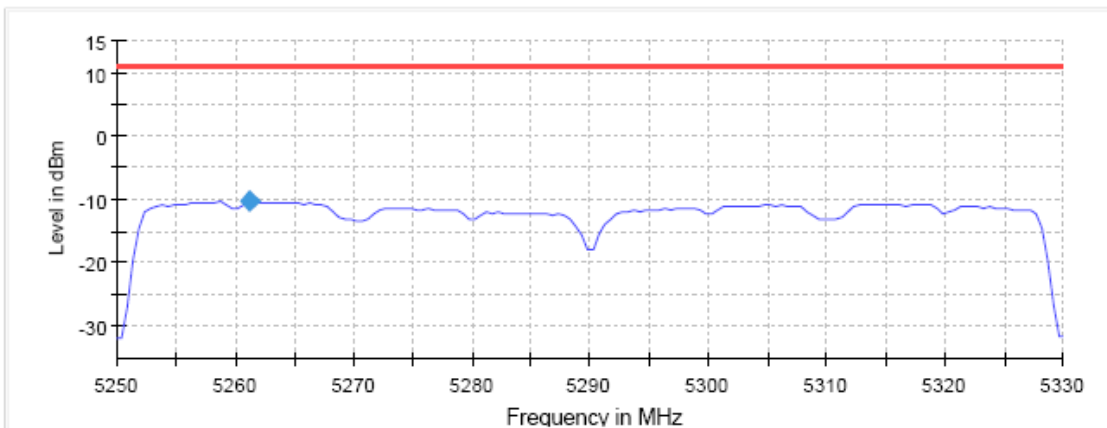


— Limit — Sum Level ◆ PSD

TEST RESULTS (Cont.):

Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.25000	5.29000
Stop Frequency	5.29000	5.33000
Span	40.000 MHz	40.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	101	101
Sweeptime	2.020 s	2.020 s
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	30.000 dB
Detector	RMS	RMS
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	4 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.10 dB	0.07 dB

TEST RESULTS		ac Mode (80 MHz)	
		Lowest frequency	5290 MHz
Power spectral density (dBm)		-10.338	
Measurement uncertainty (dB)		<±0.78	
TEST RESULTS (Cont.):			
Lowest Channel			
 Level in dBm Frequency in MHz — Limit — Sum Level ◆ PSD			
Measurement			
Setting		Instrument Value	
Start Frequency		5.25000 GHz	
Stop Frequency		5.33000 GHz	
Span		80.000 MHz	
RBW		1.000 MHz	
VBW		3.000 MHz	
SweepPoints		160	
Sweptime		3.200 s	
Reference Level		10.000 dBm	
Attenuation		30.000 dB	
Detector		RMS	
SweepCount		3	
Filter		3 dB	
Trace Mode		Max Hold	
SweepType		Sweep	
Preamplifier		off	
Stablemode		Trace	
Stablevalue		0.30 dB	
Run		4 / max. 150	
Stable		3 / 3	
Max Stable Difference		0.11 dB	

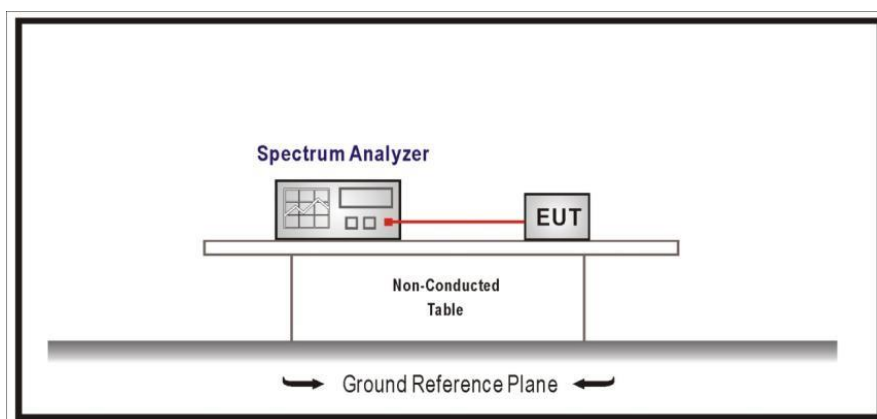
TEST C.4: BAND-EDGE EMISSIONS COMPLIANCE (TRANSMITTER)

LIMITS:	Product standard:	Part 15 Subpart C §15.407 and RSS-247
	Test standard:	Part 15 Subpart C §15.407(b)(1) and RSS-247 6.2.1.2

LIMITS

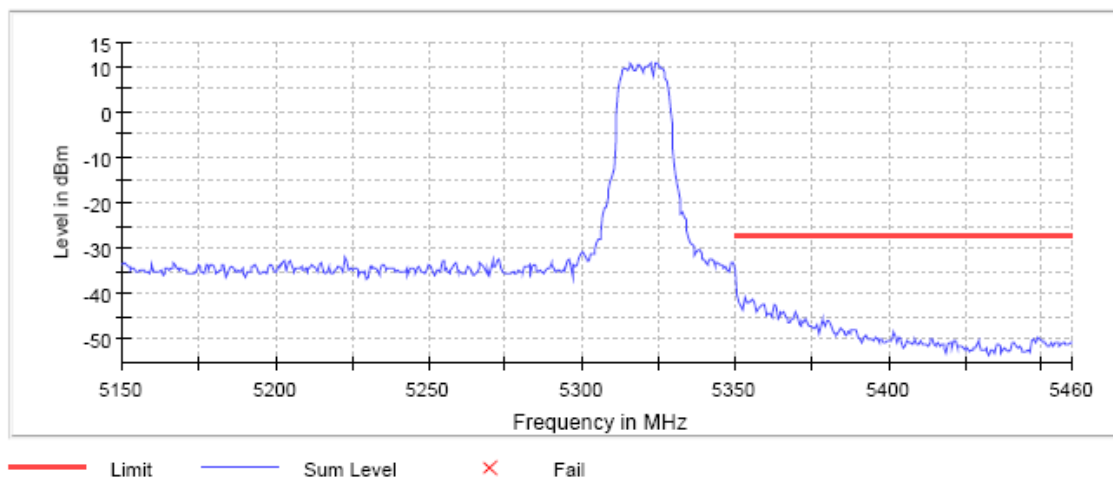
For transmitters operating in the 5.15 – 5.25 GHz band: all emissions outside the frequency band shall not exceed an EIRP of -27 dBm /MHz

TEST SETUP



TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01 (a mode)
TEST RESULTS:	PASS

Highest Channel



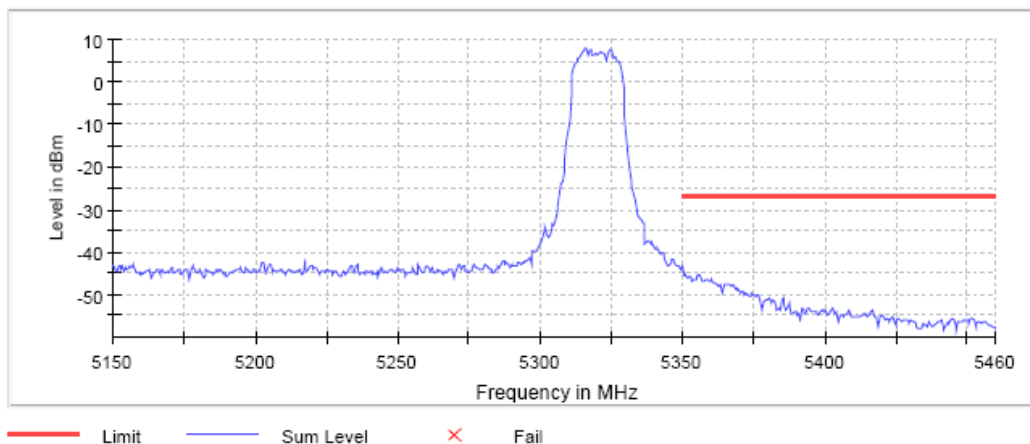
Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.15000 GHz	5.35000 GHz
Stop Frequency	5.35000 GHz	5.46000 GHz
Span	200.000 MHz	110.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	400	220
Sweeptime	28.594 μ s	15.250 μ s
Reference Level	20.000 dBm	0.000 dBm
Attenuation	40.000 dB	20.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	FFT
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	15 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.42 dB	0.00 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

Highest Channel



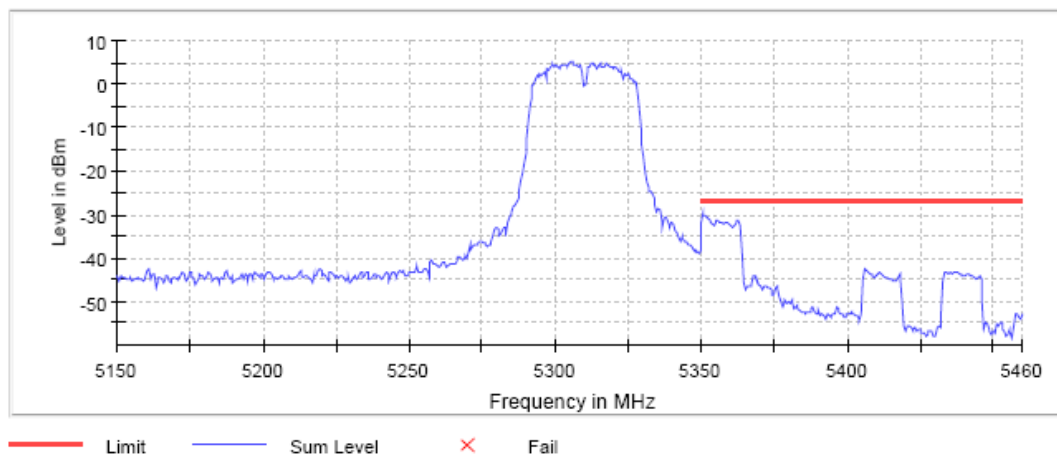
Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.15000 GHz	5.35000 GHz
Stop Frequency	5.35000 GHz	5.46000 GHz
Span	200.000 MHz	110.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	400	220
SweepTime	28.594 μ s	15.250 μ s
Reference Level	10.000 dBm	-10.000 dBm
Attenuation	30.000 dB	10.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	FFT
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	26 / max. 150	19 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.41 dB	0.12 dB

TEST RESULTS (Cont.):

n Mode (40 MHz)

Highest Channel



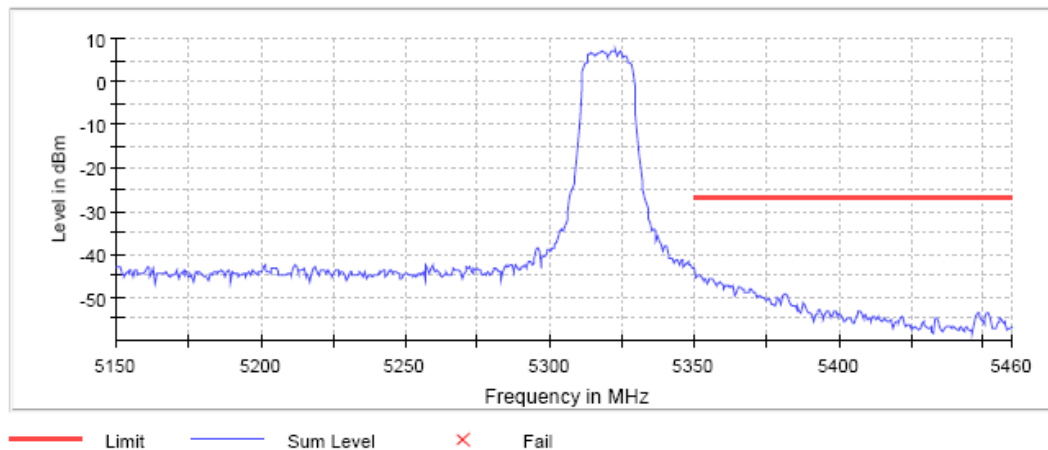
Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.15000 GHz	5.35000 GHz
Stop Frequency	5.35000 GHz	5.46000 GHz
Span	200.000 MHz	110.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	400	220
Sweptime	28.594 us	15.250 us
Reference Level	10.000 dBm	-10.000 dBm
Attenuation	30.000 dB	10.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweptype	FFT	FFT
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	22 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.27 dB	0.00 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#03 (ac mdoe)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

Highest Channel



Measurement

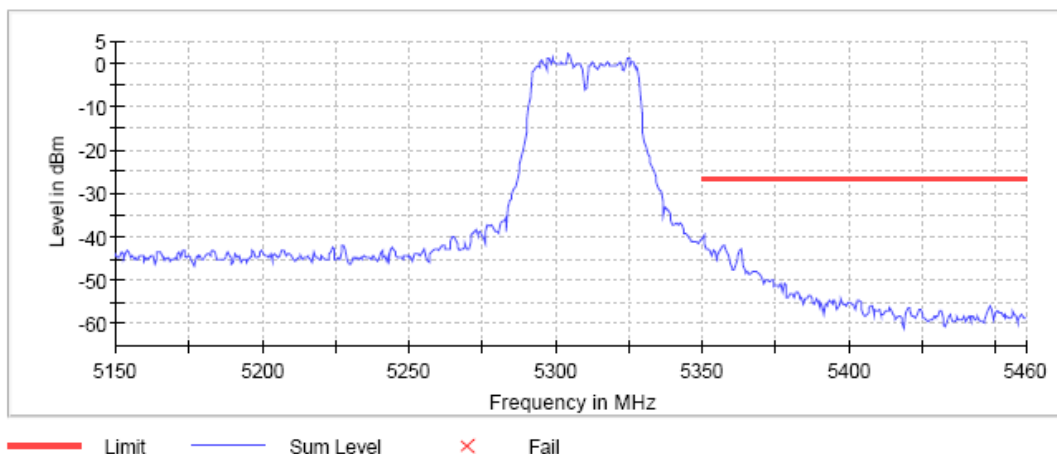
Setting	Instrument Value	Instrument Value
Start Frequency	5.15000 GHz	5.35000 GHz
Stop Frequency	5.35000 GHz	5.46000 GHz
Span	200.000 MHz	110.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	400	220
Sweptime	28.594 us	15.250 us
Reference Level	10.000 dBm	-10.000 dBm
Attenuation	30.000 dB	10.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	FFT
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	25 / max. 150	16 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.00 dB	0.00 dB

TEST RESULTS (Cont.):

ac mode (40 MHz)

Bandwidth: 40 MHz

Highest Channel



Measurement

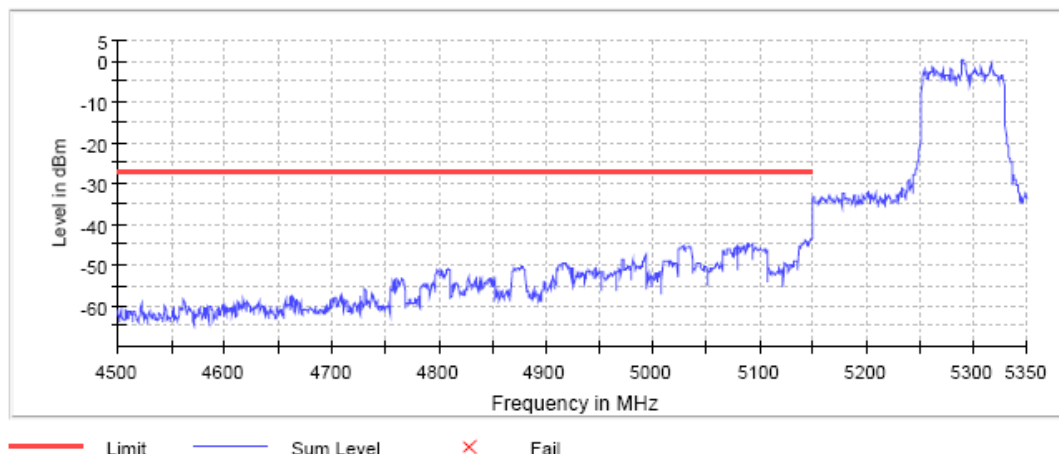
Setting	Instrument Value	Instrument Value
Start Frequency	5.15000 GHz	5.35000 GHz
Stop Frequency	5.35000 GHz	5.46000 GHz
Span	200.000 MHz	110.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	400	220
SweepTime	28.594 μ s	15.250 μ s
Reference Level	10.000 dBm	-10.000 dBm
Attenuation	30.000 dB	10.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	FFT
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	22 / max. 150	15 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.00 dB	0.00 dB

TEST RESULTS (Cont.):

ac mode (80 MHz)

Bandwidth: 80 MHz

Lowest Channel



Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.15000 GHz	4.50000 GHz
Stop Frequency	5.35000 GHz	5.15000 GHz
Span	200.000 MHz	650.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	400	1300
SweepTime	28.594 μ s	87.688 μ s
Reference Level	20.000 dBm	-10.000 dBm
Attenuation	40.000 dB	10.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	FFT
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	34 / max. 150	20 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.25 dB	0.00 dB

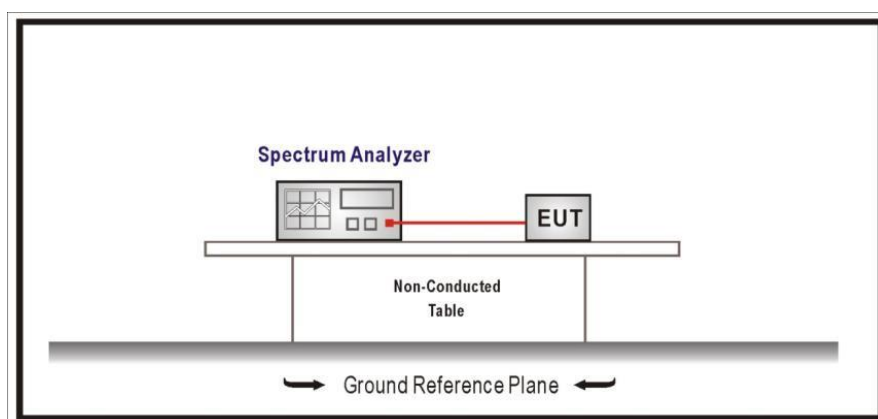
TEST C.5: EMISSION LIMITATIONS CONDUCTED (TRANSMITTER)

LIMITS:	Product standard:	Part 15 Subpart C §15.407, 15.207 and RSS-Gen
	Test standard:	Part 15 Subpart C §15.407(b)(6), 15.207 and RSS-Gen 8.8

LIMITS

In any 100 kHz bandwidth outside the frequency band in which the digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required shall be 30 dB instead of 20 dB.

TEST SETUP

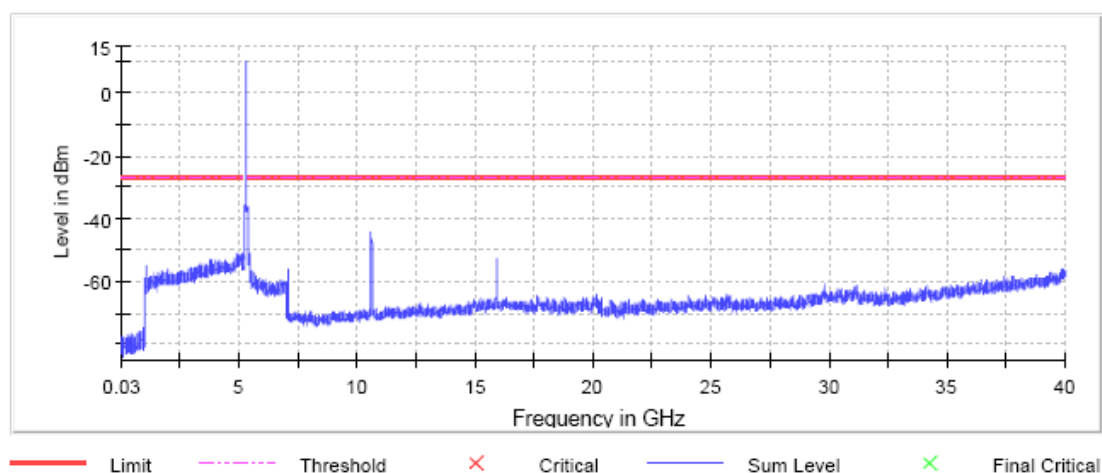


TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01 (a mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

Frequency: 5300 MHz

No spurious signal was detected at 20dB below the limit or above for the channel.



Measurement Settings

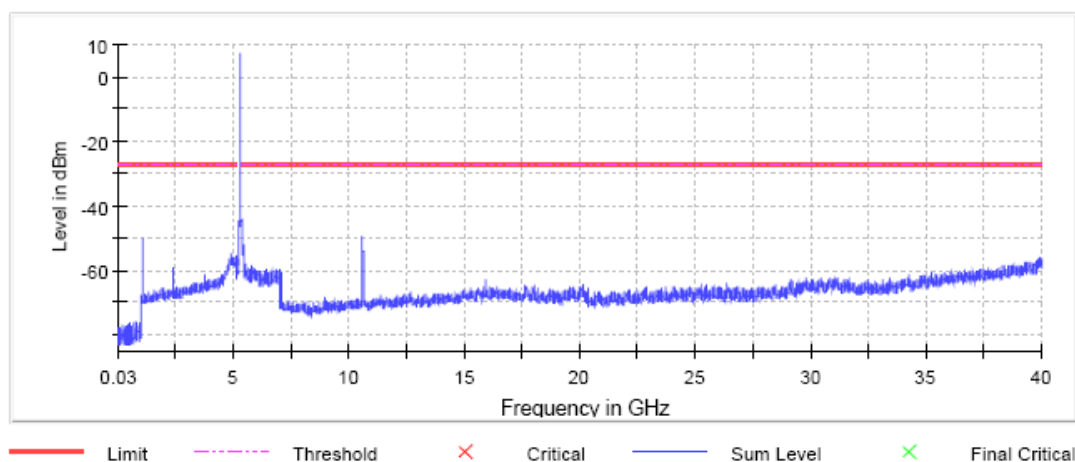
Setting	Instrument Value	Instrument Value
Start Frequency	30.000 MHz	30.000 MHz
Stop Frequency	40 GHz	40 GHz
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-10.000 dBm
Attenuation	10.000 dB	20.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	sweep	Sweep
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	4 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.00 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

Frequency: 5300 MHz

No spurious signal was detected at 20dB below the limit or above for the channel.



Measurement Settings

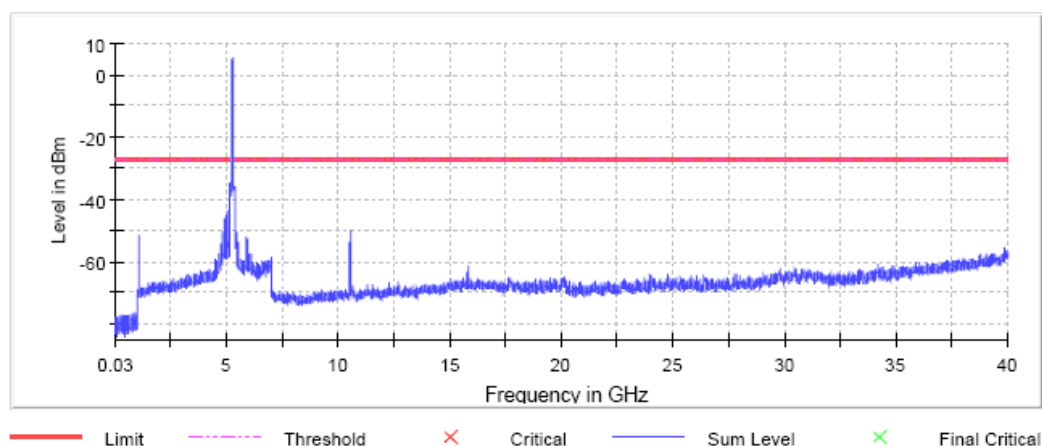
Setting	Instrument Value	Instrument Value
Start Frequency	30.000 MHz	30.000 MHz
Stop Frequency	40 GHz	40 GHz
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	10.000 dB	10.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	sweep	Sweep
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	4 / max. 150	45 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.00 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode)
TEST RESULTS:	PASS

Bandwidth: 40 MHz

Frequency: 5270 MHz

No spurious signal was detected at 20dB below the limit or above for the channel.



Measurement Settings

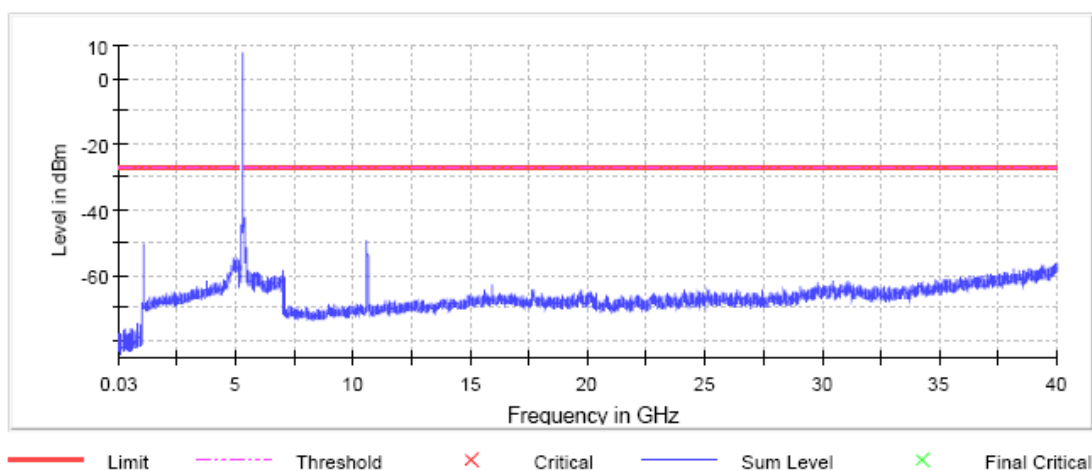
Setting	Instrument Value	Instrument Value
Start Frequency	30.000 MHz	30.000 MHz
Stop Frequency	40 GHz	40 GHz
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	10.000 dB	10.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	sweep	Sweep
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	4 / max. 150	13 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.00 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#03 (ac mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

Frequency: 5300 MHz

No spurious signal was detected at 20dB below the limit or above for the channel.



Measurement Settings

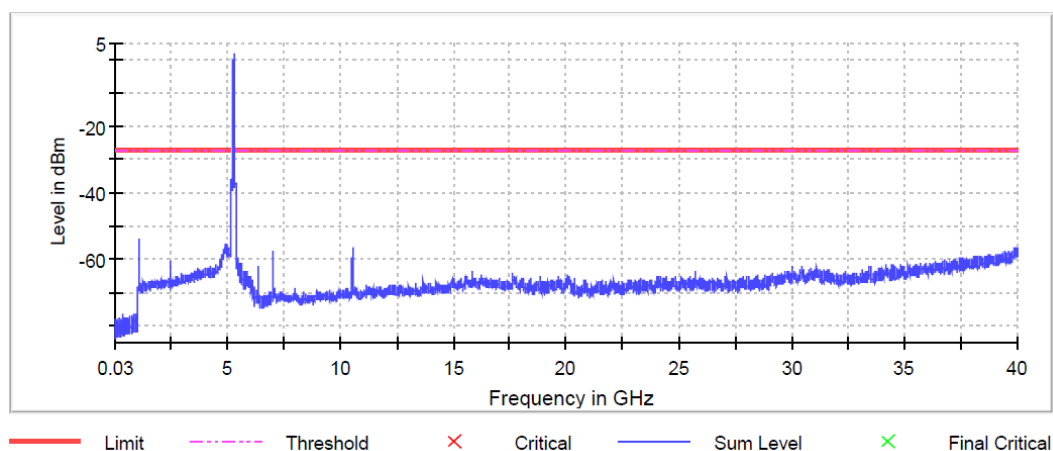
Setting	Instrument Value	Instrument Value
Start Frequency	30.000 MHz	30.000 MHz
Stop Frequency	40 GHz	40 GHz
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	10.000 dB	10.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	sweep	Sweep
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	4 / max. 150	35 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.00 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (ac mode)
TEST RESULTS:	PASS

Bandwidth: 40 MHz

Frequency: 5270 MHz

No spurious signal was detected at 20dB below the limit or above for the channel.



Measurement Settings

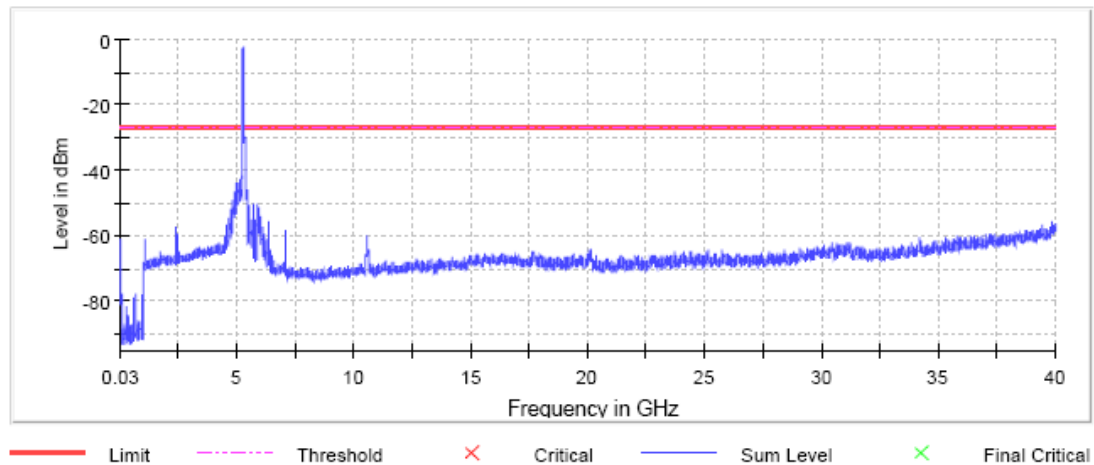
Setting	Instrument Value	Instrument Value
Start Frequency	30.000 MHz	30.000 MHz
Stop Frequency	40 GHz	40 GHz
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	10.000 dB	10.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	sweep	Sweep
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	4 / max. 150	99 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.44 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#03 (ac mode 80 MHz BW)
TEST RESULTS:	PASS
TEST RESULTS (Cont.):	

Frequency: 5290 MHz

No spurious signal was detected at 20dB below the limit or above for all three channels.

Lowest Channel



Measurement Settings

Setting	Instrument Value	Instrument Value
Start Frequency	30.000 MHz	30.000 MHz
Stop Frequency	40 GHz	40 GHz
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-30.000 dBm	-20.000 dBm
Attenuation	0.000 dB	10.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	sweep	Sweep
Preamplifier	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	4 / max. 150	60 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.00 dB

TEST C.6: UNDESIRABLE RADIATED EMISSIONS (TRANSMITTER)

LIMITS:	Product standard:	Part 15 Subpart C §15.407 and RSS-247
	Test standard:	Part 15 Subpart C §15.407(b) (1)(6)(7) and RSS-247 6.2.1.2

LIMITS

For transmitters operating in the 5.15 – 5.25 GHz band: all emissions outside of the 5.15 – 5.25 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.23 dBμ V/m at 3m distance).

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c) / RSS-Gen):

Frequency Range (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Measurement distance (m)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	30
1.705 - 30.0	30	-	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
960 - 25000	500	54	3

The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

For average radiated emission measurements above 1000 MHz, there is also a limit corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function

TEST SETUP

All radiated tests were performed in a semi-anechoic chamber. The measurement antenna is situated at 3 m for the frequency range 30-1000 MHz (Bilog antenna) and at 1m for the frequency range 1-40 GHz (1 GHz-18 GHz and 18 GHz-40 GHz Double ridge horn antennas).

For radiated emissions in the range 1-40 GHz that is performed at a distance closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

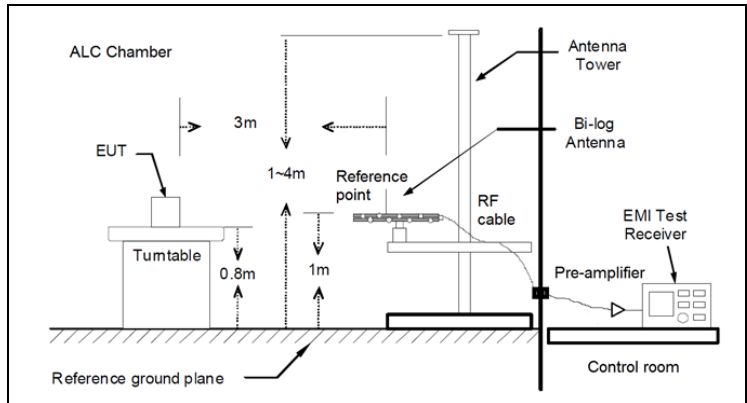
The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

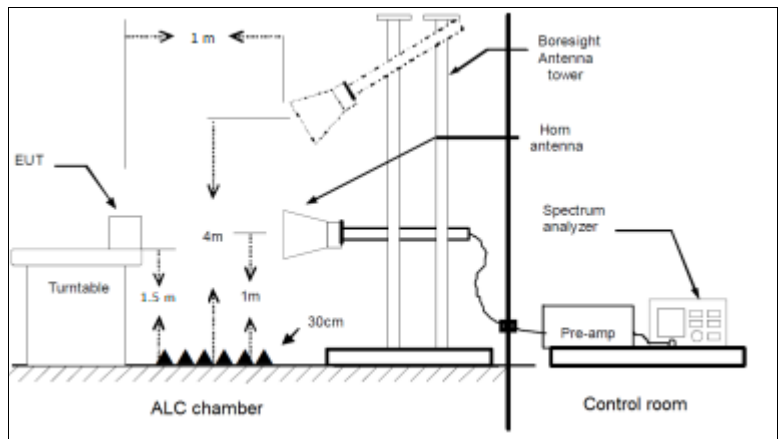
The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

TEST SETUP (CONT.)

Radiated measurements Setup $f < 1$ GHz



Radiated measurements setup $f > 1$ GHz



TESTED SAMPLES:

S/02

TESTED CONDITIONS MODES:

TC#01 (a mode)

TEST RESULTS:

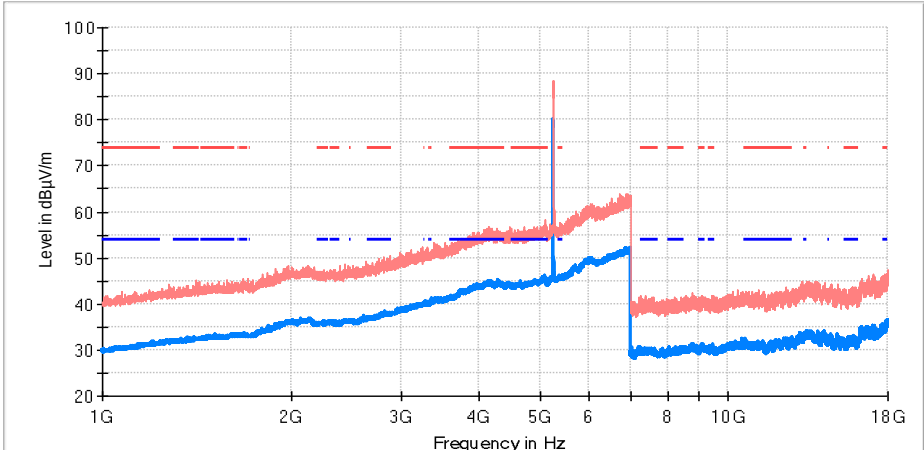
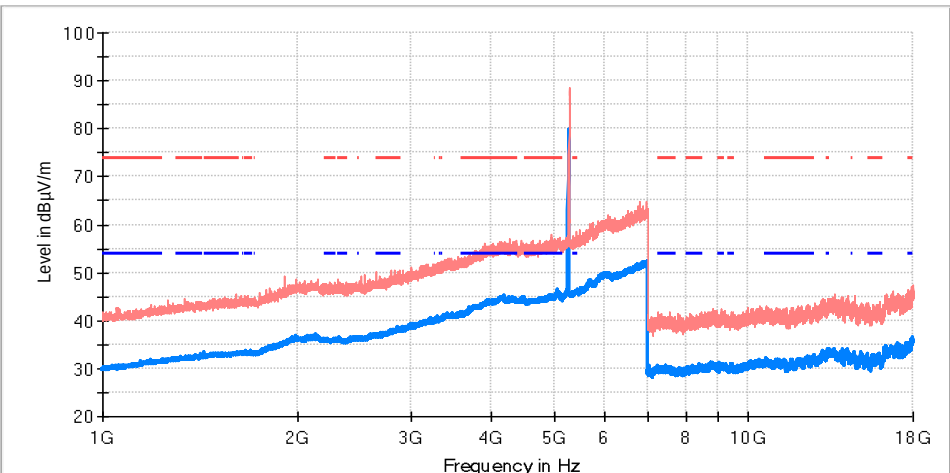
PASS

Co-Location

The test was performed with the equipment transmitting first with only the WiFi 5 GHz (WLAN0 CORE0) radio and repeated with the 2.4 GHz BT-EDR (WLAN 0), WiFi 2.4GHz (WLAN0 CORE1) radios transmitting simultaneously to check the impact of the co-location of the other radio interfaces. The results and plots below show the worst results obtained.

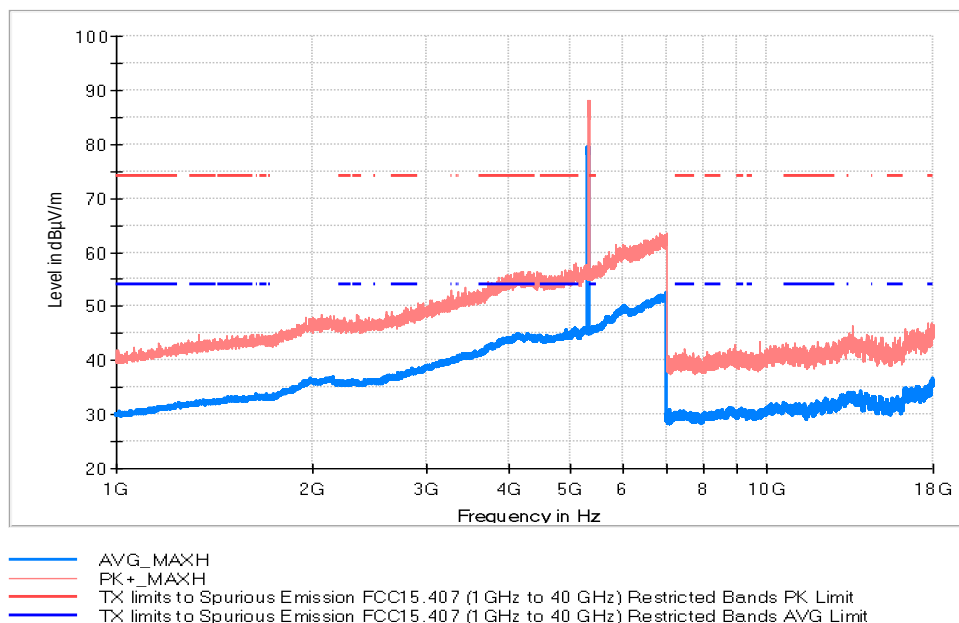
Frequency range 1 GHz – 40 GHz

The results and plots below show the maximum measured levels in the 1- 40 GHz range and the restricted band 4.5 – 5.15 GHz.

TEST RESULTS (Cont.)	
FREQUENCY RANGE	1 GHz – 18 GHz
Low Channel RF_FCC_15.407_E Field_1GHz_18GHz  Level in dBµV/m Frequency in Hz — AVG_MAXH — PK+_MAXH — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit Middle Channel RF_FCC_15.407_E Field_1GHz_18GHz  Level in dBµV/m Frequency in Hz — AVG_MAXH — PK+_MAXH — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit	

TEST RESULTS (Cont.)

High Channel

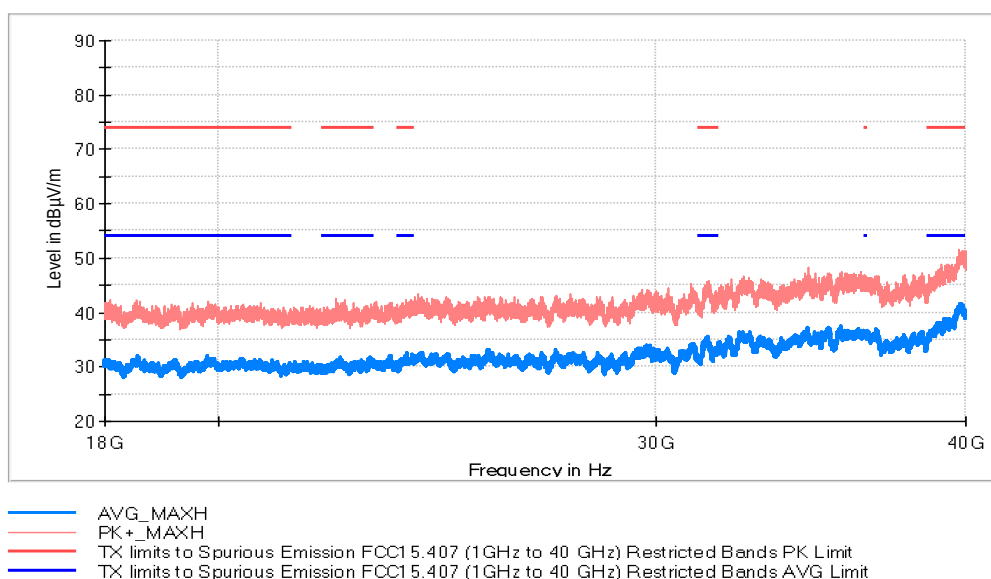


FREQUENCY RANGE

18 GHz – 40 GHz

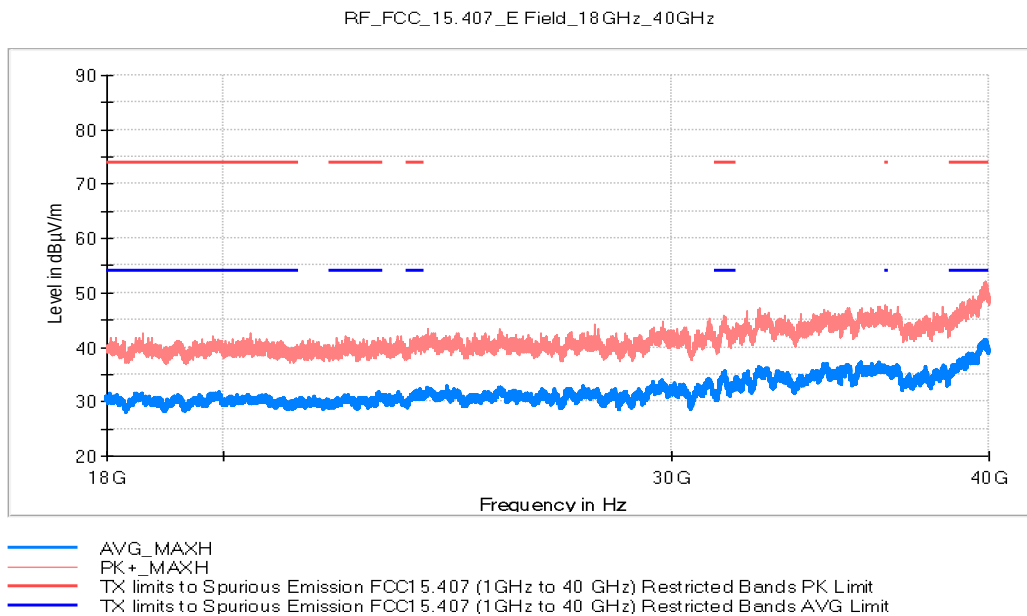
Low Channel

RF_FCC_15.407_E Field_18GHz_40GHz

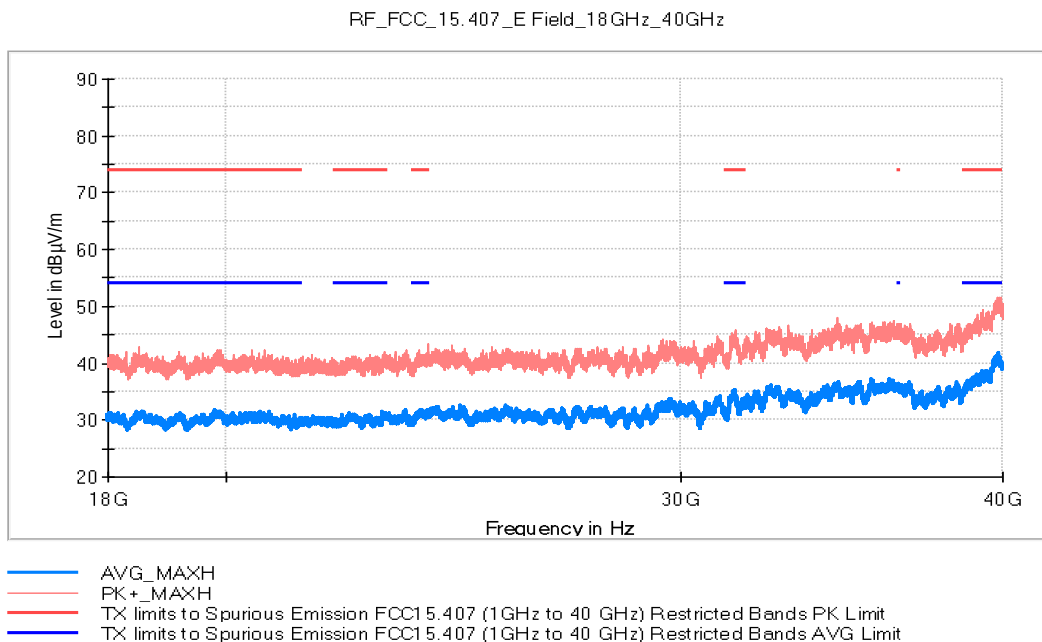


TEST RESULTS (Cont.)

Middle Channel

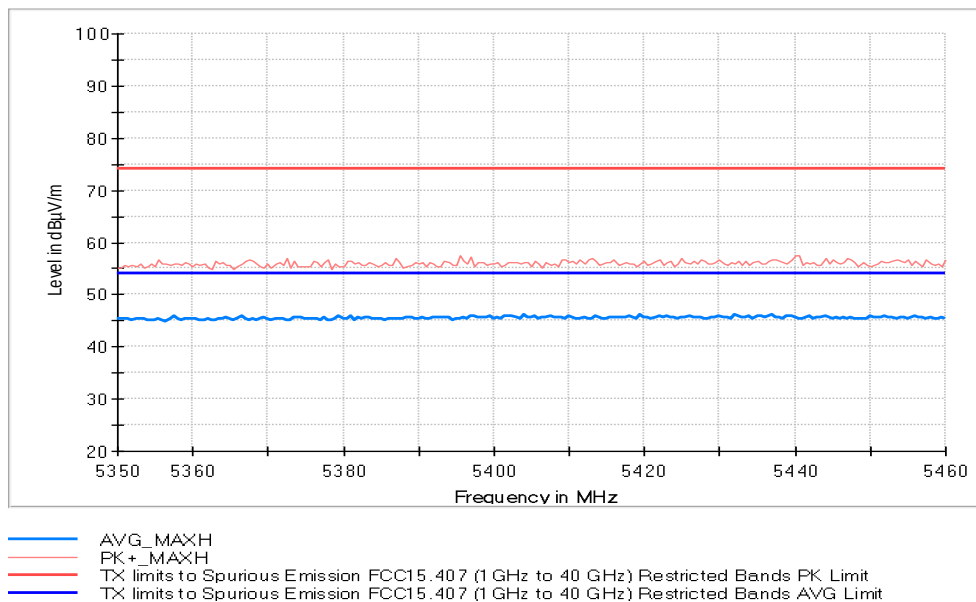


High Channel



RESTRICTED BANDS

5.35 GHz – 5.46 GHz



TESTED SAMPLES:	S/02
TESTED CONDITIONS MODES:	TC#02 (n mode 20 MHz)
TEST RESULTS:	PASS

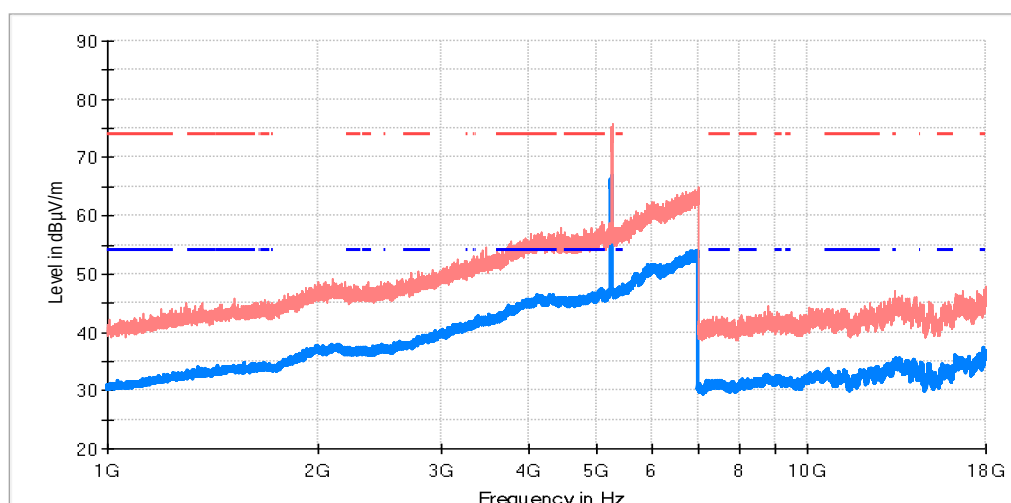
Co-Location

The test was performed with the equipment transmitting first with only the WiFi 5 GHz (WLAN0 CORE0) radio and repeated with the 2.4 GHz BT-EDR (WLAN 0), WiFi 2.4GHz (WLAN0 CORE1) radios transmitting simultaneously to check the impact of the co-location of the other radio interfaces. The results and plots below show the worst results obtained.

Frequency range 1 GHz – 40 GHz

The results and plots below show the maximum measured levels in the 1- 40 GHz range and the restricted band 4.5 – 5.15 GHz.

FREQUENCY RANGE	1 GHz – 18 GHz
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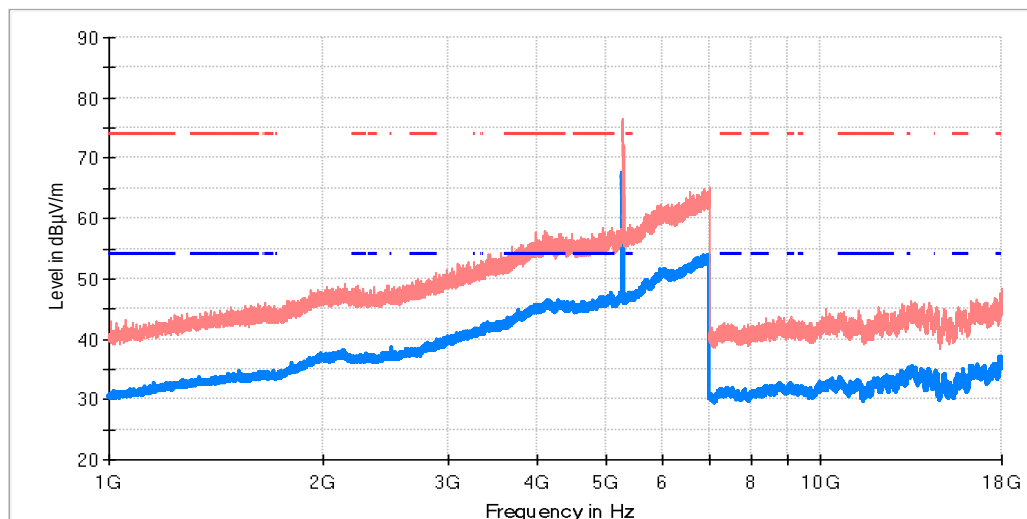
- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
5257.818182	74.7	66.8	V	Fundamental

TEST RESULTS (Cont.)

Mid Channel



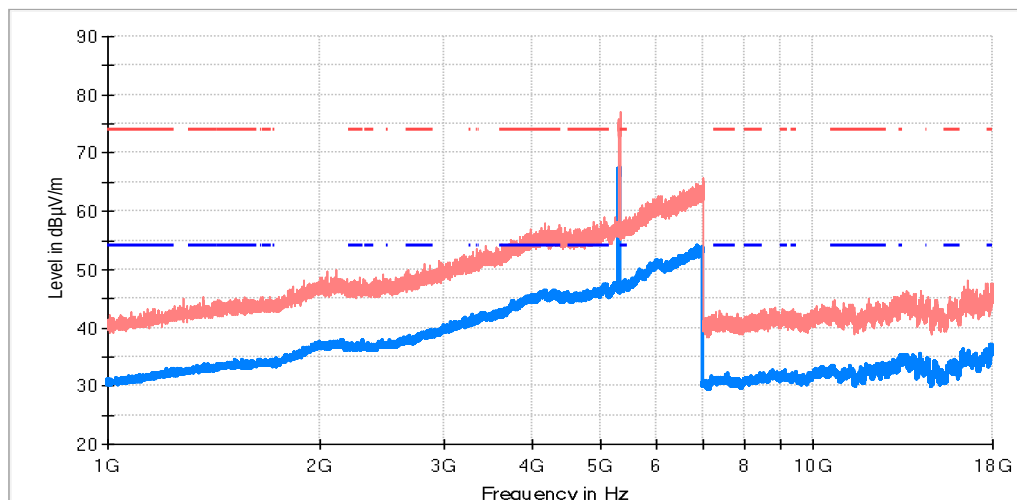
- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBuV/m)	AVG_MAXH (dBuV/m)	Pol	Comments
5283.181818	74.5	67.4	V	Fundamental

TEST RESULTS (Cont.)

High Channel



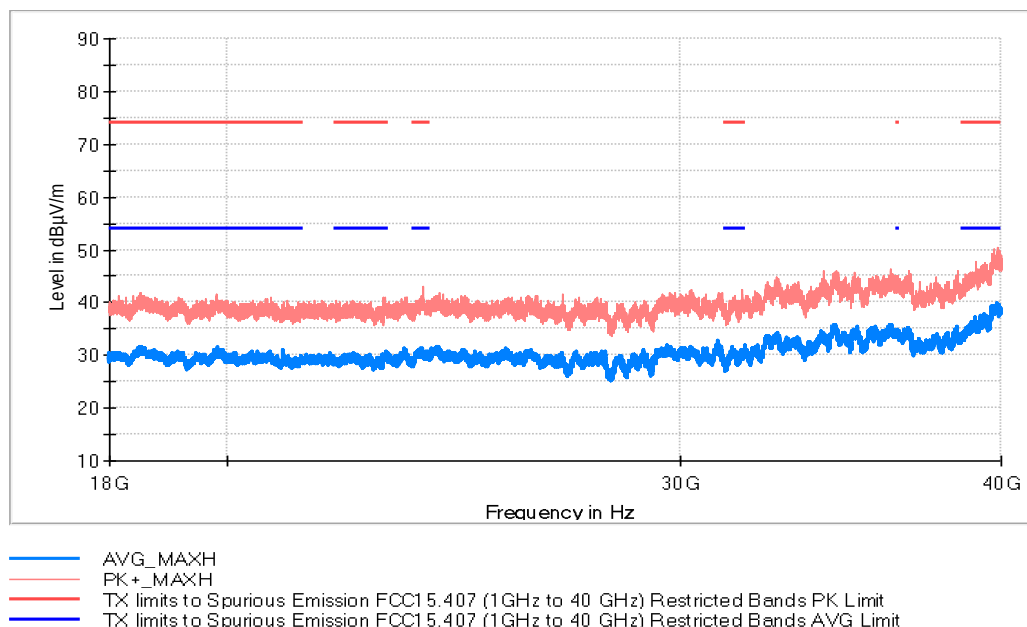
- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

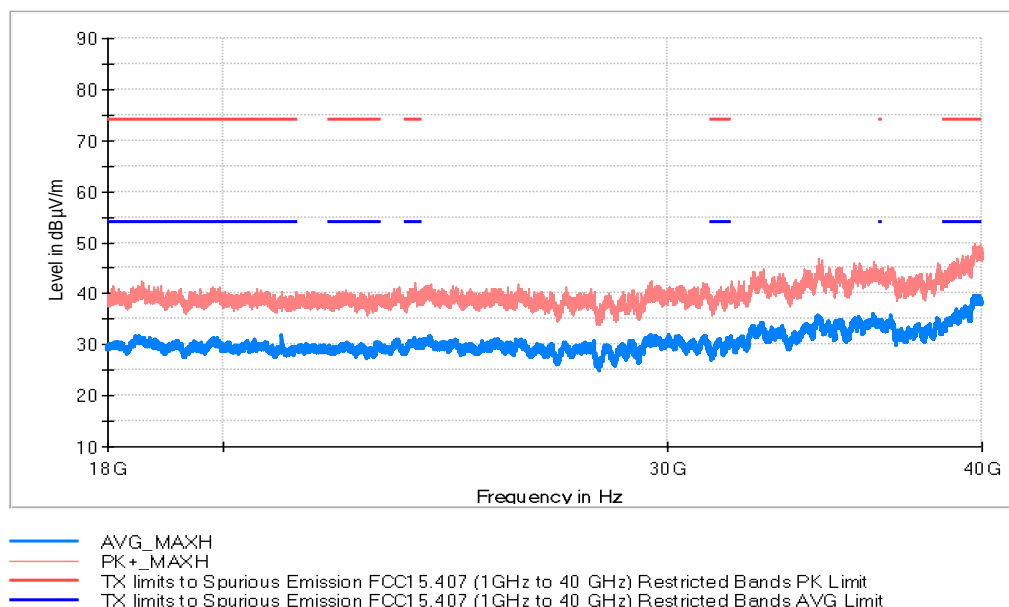
Frequency (MHz)	PK+_MAXH (dBuV/m)	AVG_MAXH (dBuV/m)	Pol	Comments
5321.636364	74.1	67.5	V	Fundamental

TEST RESULTS (Cont.)	
FREQUENCY RANGE	18 GHz – 40 GHz

Low Channel

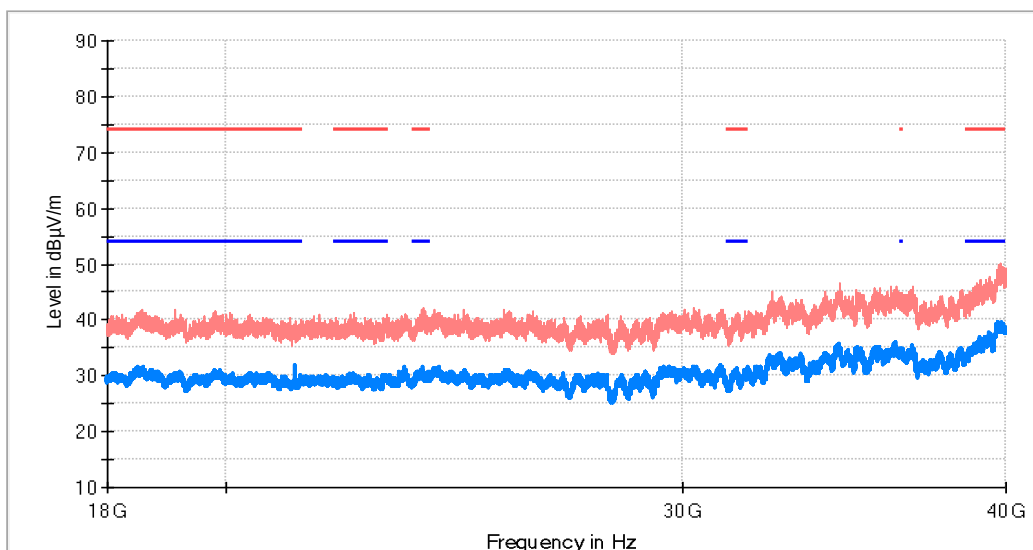


Middle Channel



TEST RESULTS (Cont.)

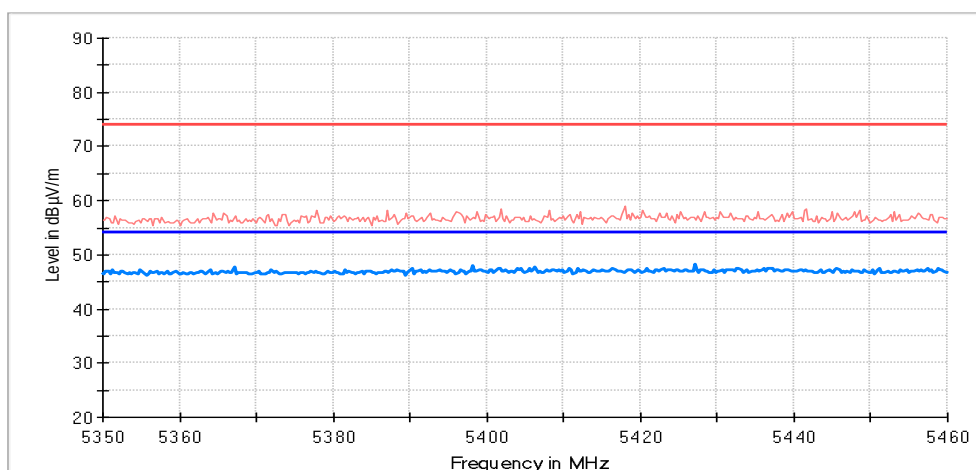
High Channel



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

RESTRICTED BANDS

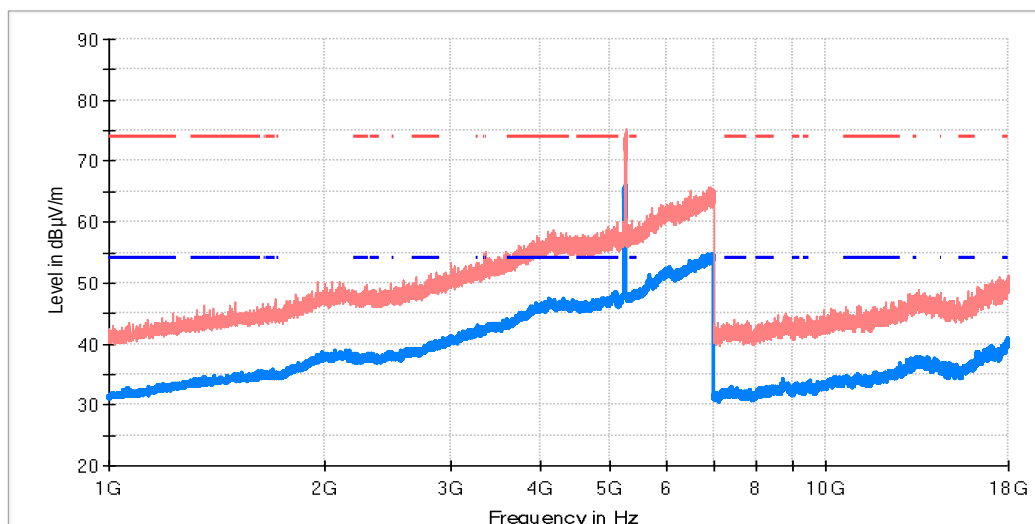
5.35 GHz – 5.46 GHz



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

TEST RESULTS (Cont.)	n mode (40 MHz)
FREQUENCY RANGE	1 GHz – 18 GHz

Low Channel



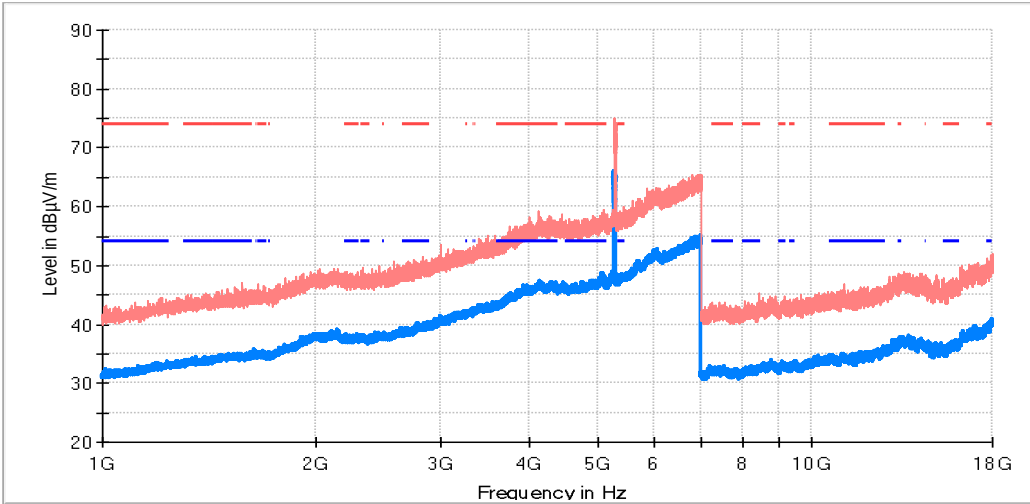
— AVG_MAXH
 — PK+_MAXH
 — TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands PK Limit
 — TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comments
5264.909091	73.60	66.00	V	Fundamental

TEST RESULTS (Cont.)

Mid Channel



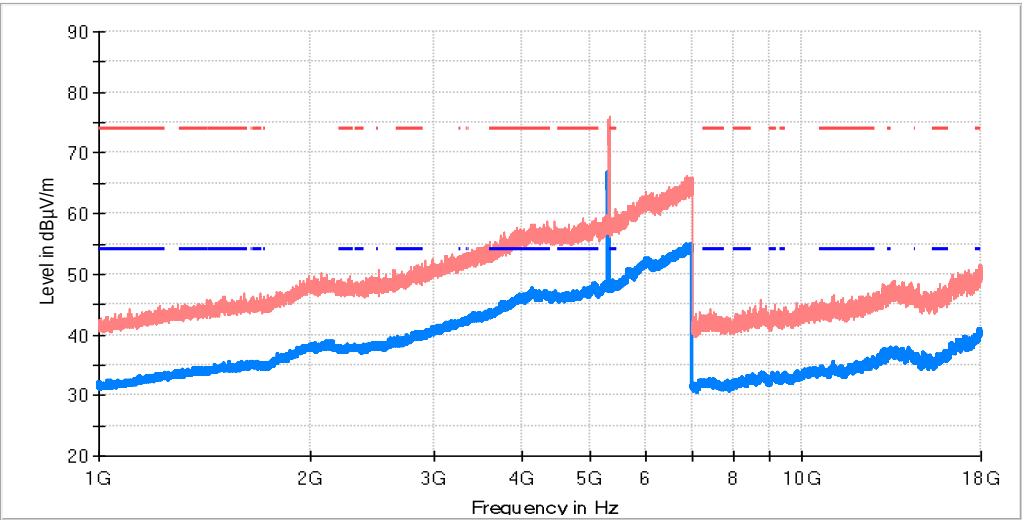
— AVG_MAXH
 — PK+_MAXH
 — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
 — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comments
5281.818182	73.30	65.91	V	Fundamental

TEST RESULTS (Cont.)

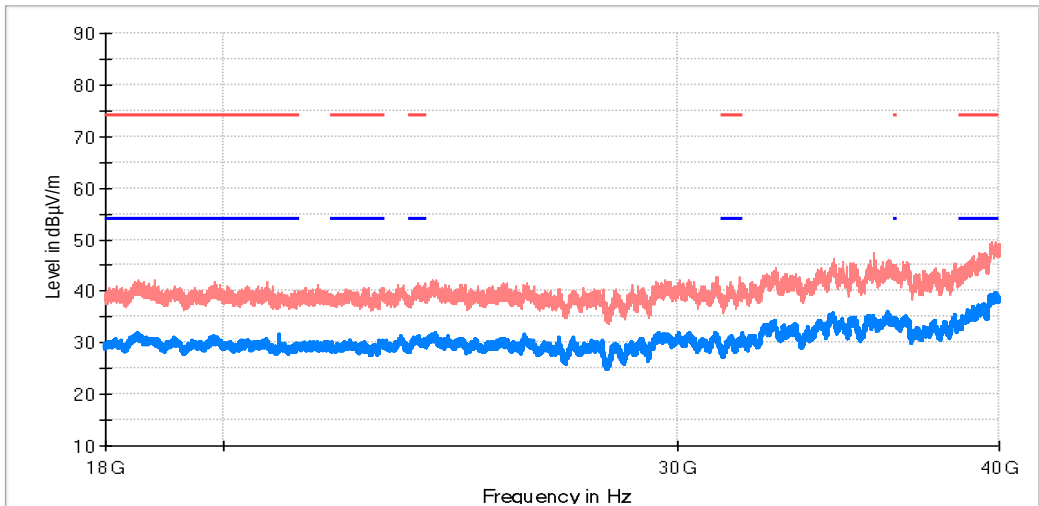
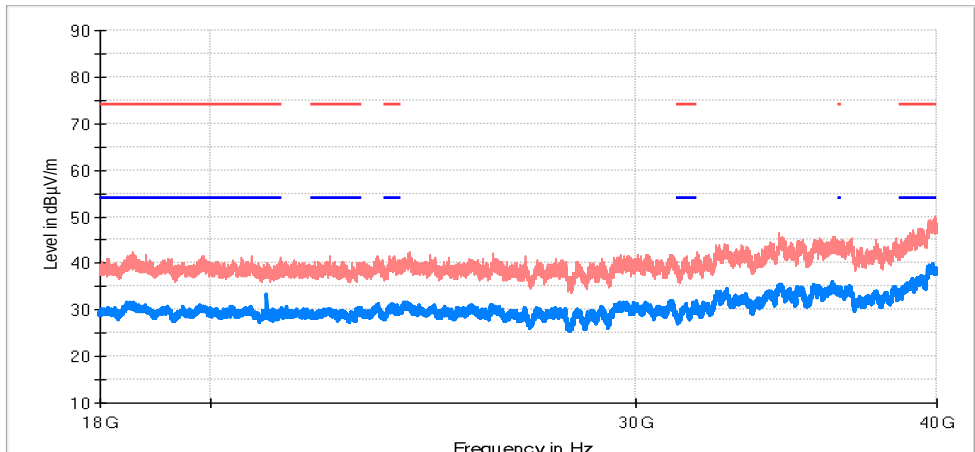
High Channel



— AVG_MAXH
 — PK+_MAXH
 — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
 — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

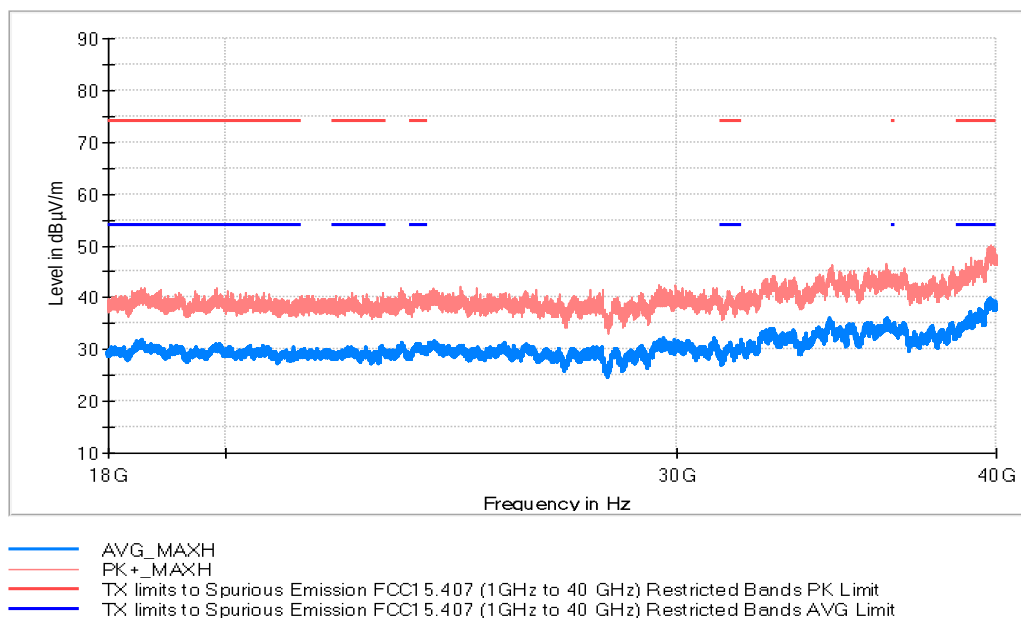
Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comments
5317.545455	73.90	66.76	V	Fundamental

TEST RESULTS (Cont.)	
FREQUENCY RANGE	18 GHz – 40 GHz
Low Channel  — AVG_MAXH — PK+_MAXH --- TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands PK Limit — TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands AVG Limit Mid Channel  — AVG_MAXH — PK+_MAXH --- TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands PK Limit — TX limits to Spurious Emission FCC1 5.407 (1GHz to 40 GHz) Restricted Bands AVG Limit	

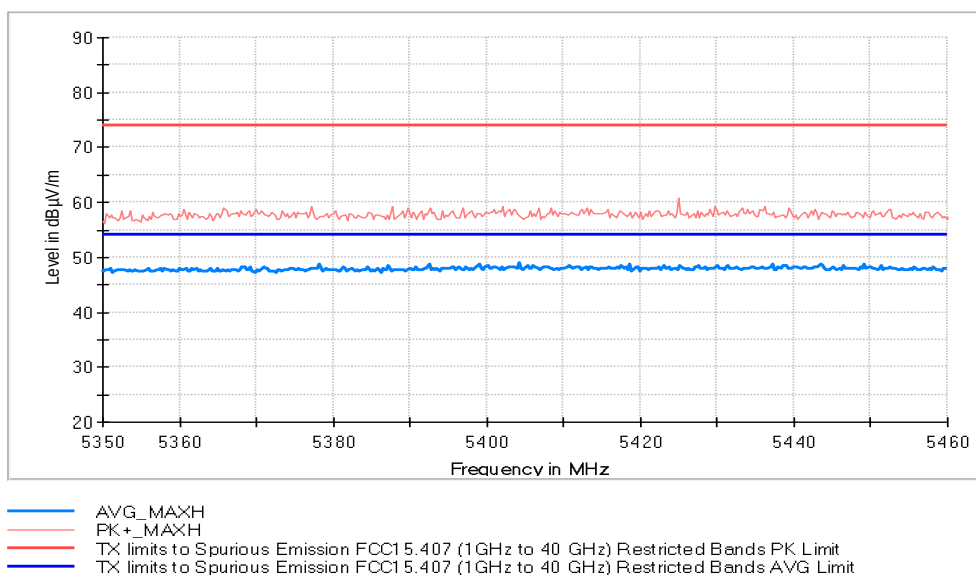
TEST RESULTS (Cont.)

High Channel



RESTRICTED BANDS

5.35 GHz – 5.46 GHz



TESTED SAMPLES:	S/02
TESTED CONDITIONS MODES:	TC#03 (ac mode)
TEST RESULTS:	PASS

Co-Location

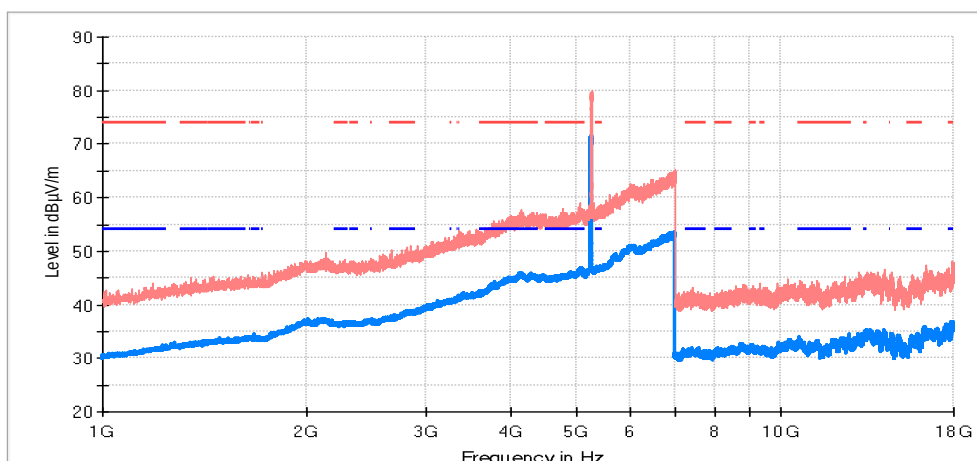
The test was performed with the equipment transmitting first with only the WiFi 5 GHz (WLAN0 CORE0) radio and repeated with the 2.4 GHz BT-EDR (WLAN 0), WiFi 2.4GHz (WLAN0 CORE1) radios transmitting simultaneously to check the impact of the co-location of the other radio interfaces. The results and plots below show the worst results obtained.

Frequency range 1 GHz – 40 GHz

The results and plots below show the maximum measured levels in the 1- 40 GHz range and the restricted band 4.5 – 5.15 GHz.

TEST RESULTS (Cont.)	ac mode (20 MHz)
FREQUENCY RANGE	1 GHz – 18 GHz

Low Channel



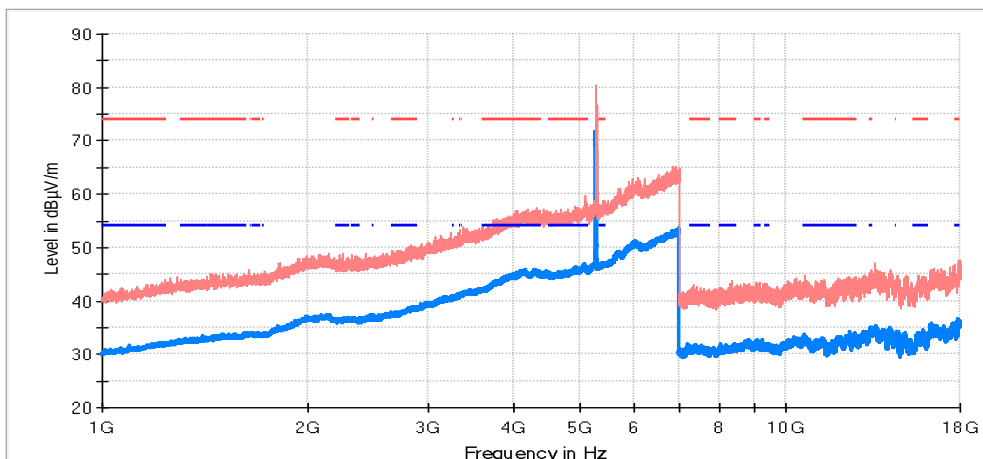
— AVG_MAXH
 — PK+ MAXH
 — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
 — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+ MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comments
5264.000000	79.1	71.5	V	Fundamental

TEST RESULTS (Cont.)

Mid Channel



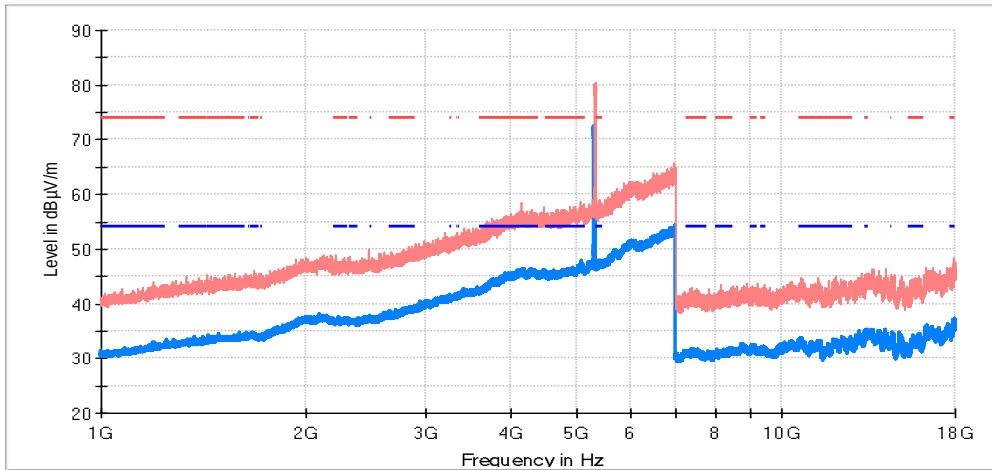
— AVG_MAXH
 — PK+_MAXH
 — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
 — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5277.000000	79.0	71.7	V	Fundamental

TEST RESULTS (Cont.)

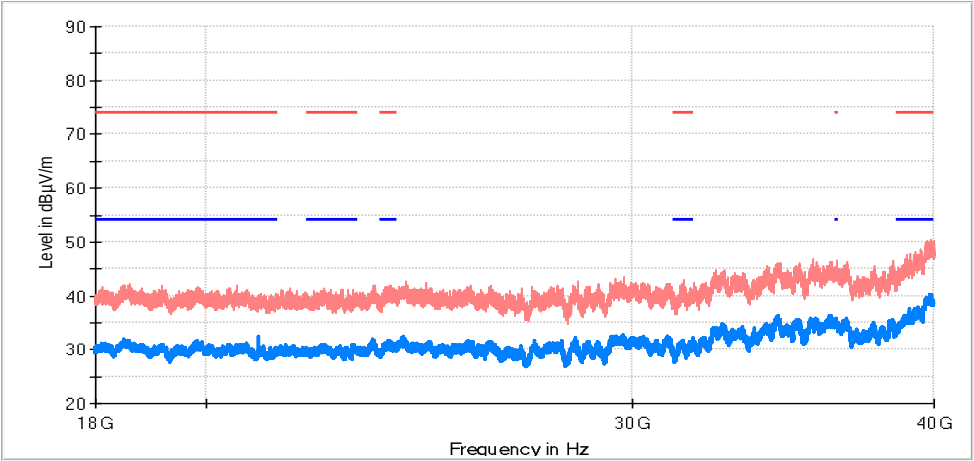
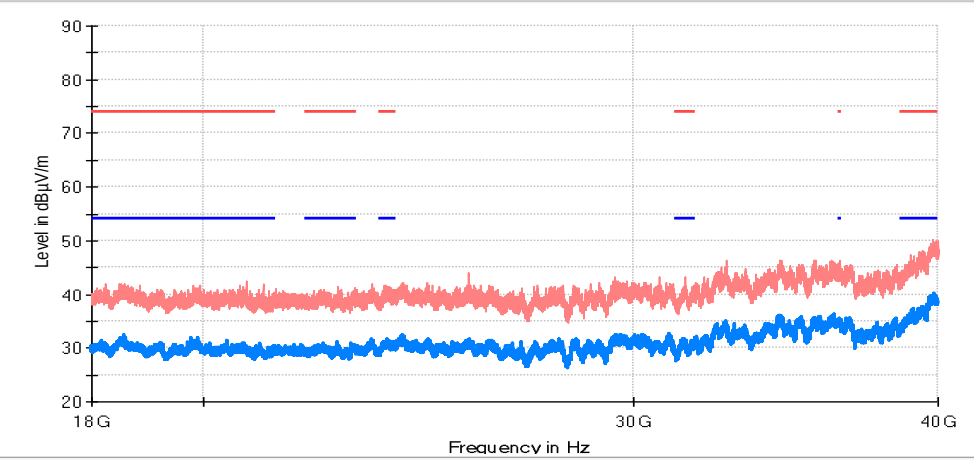
High Channel



— AVG_MAXH
 — PK+_MAXH
 — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
 — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

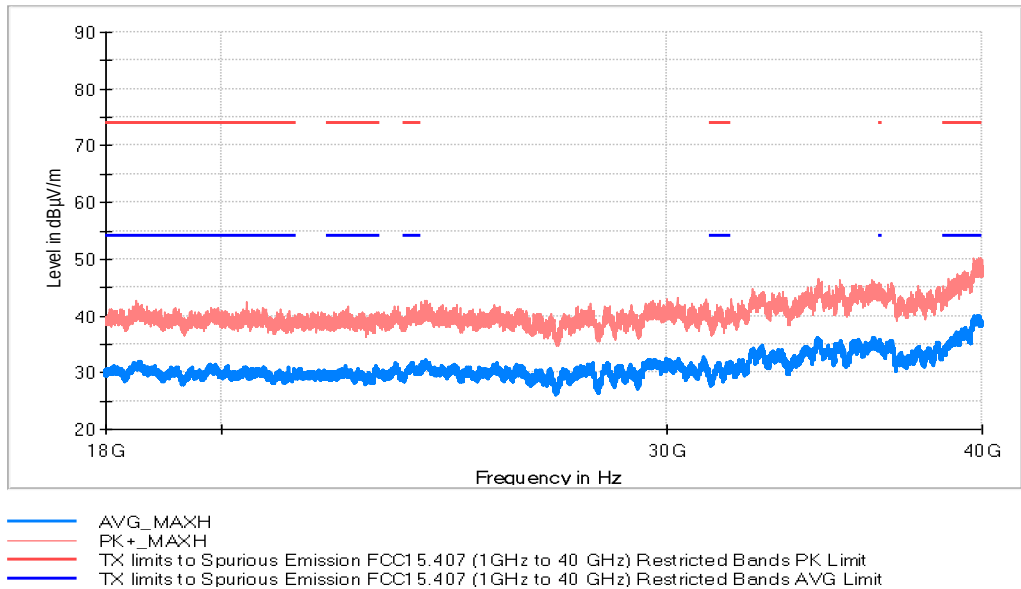
Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5323.545455	80.2	72.7	V	Fundamental

TEST RESULTS (Cont.)	
FREQUENCY RANGE	18 GHz – 40 GHz
Low Channel  — AVG_MAXH — PK+_MAXH — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit	
Middle Channel  — AVG_MAXH — PK+_MAXH — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit — TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit	

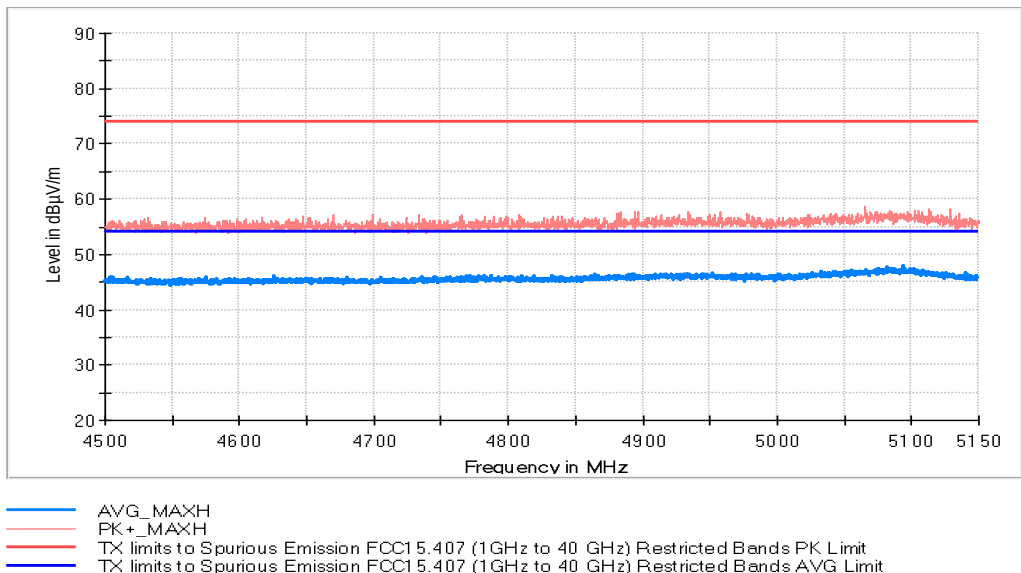
TEST RESULTS (Cont.)

High Channel



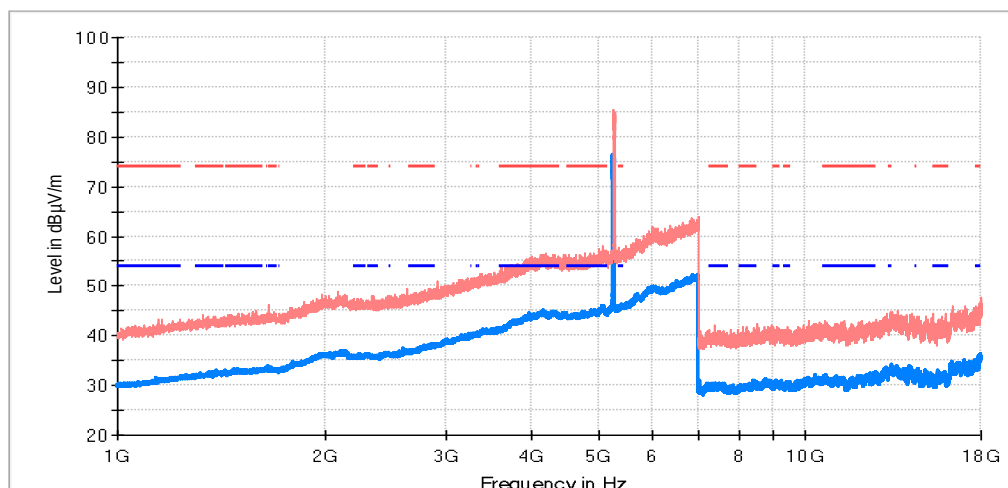
RESTRICTED BANDS

4.5 GHz – 5.15 GHz



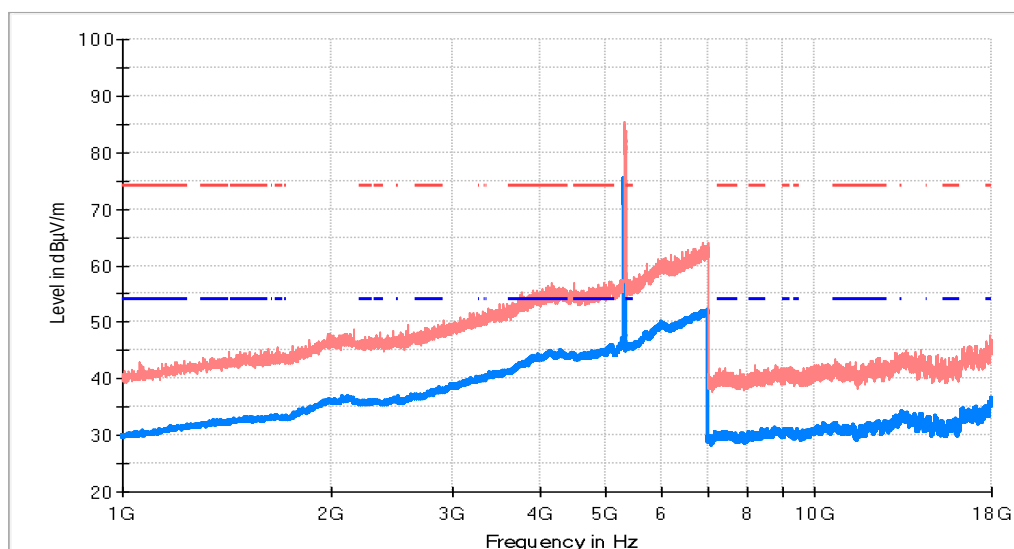
TEST RESULTS (Cont.)	ac mode (40 MHz)
FREQUENCY RANGE	1 GHz – 18 GHz

Low Channel



- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

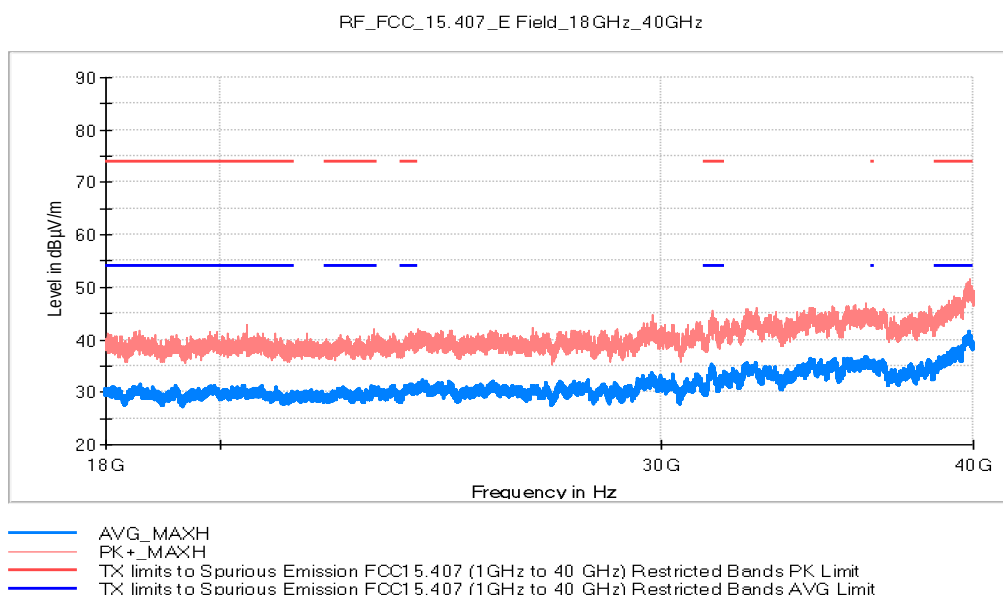
High Channel



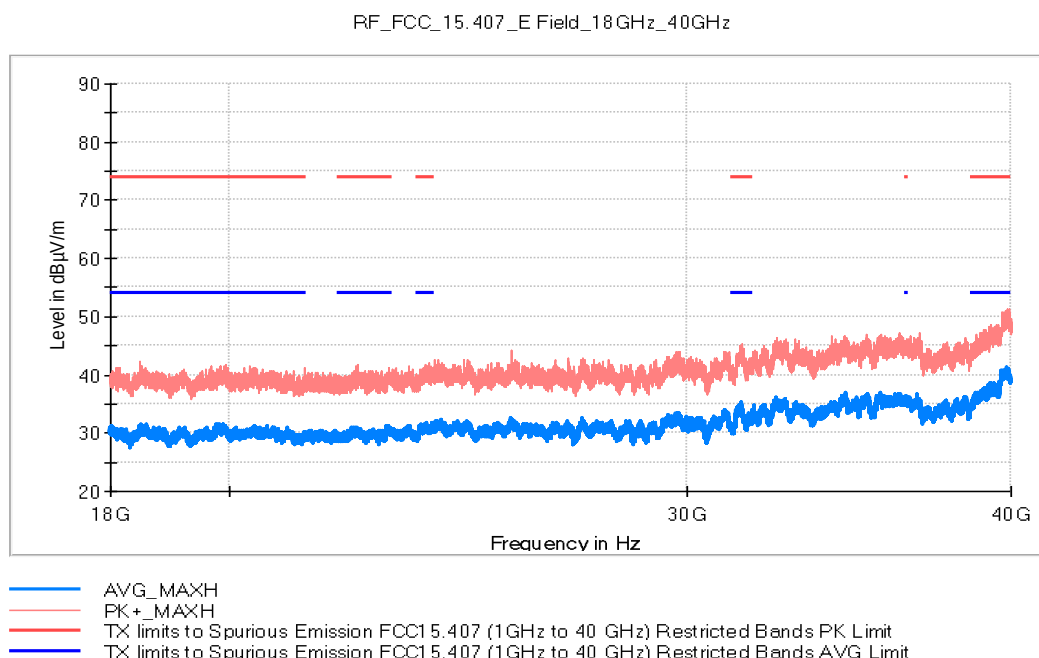
- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

TEST RESULTS (Cont.)	
FREQUENCY RANGE	18 GHz – 40 GHz

Low Channel

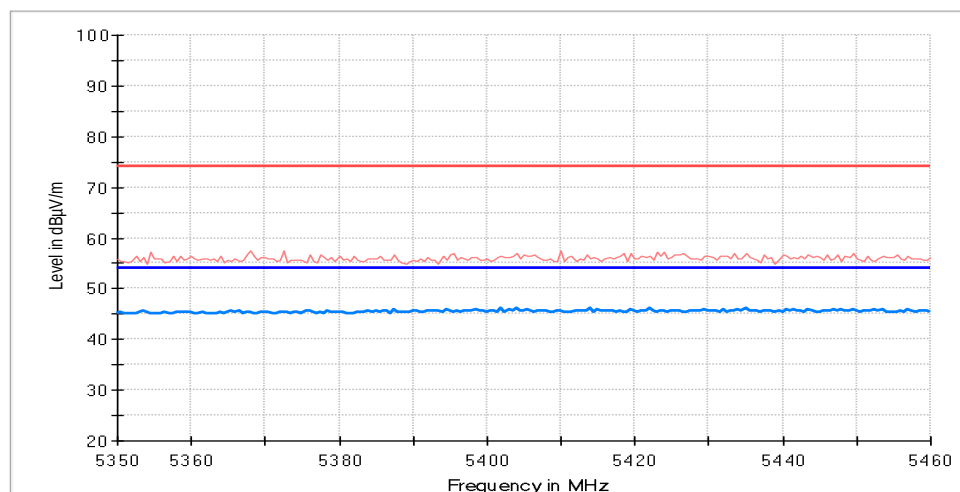


High Channel



RESTRICTED BANDS

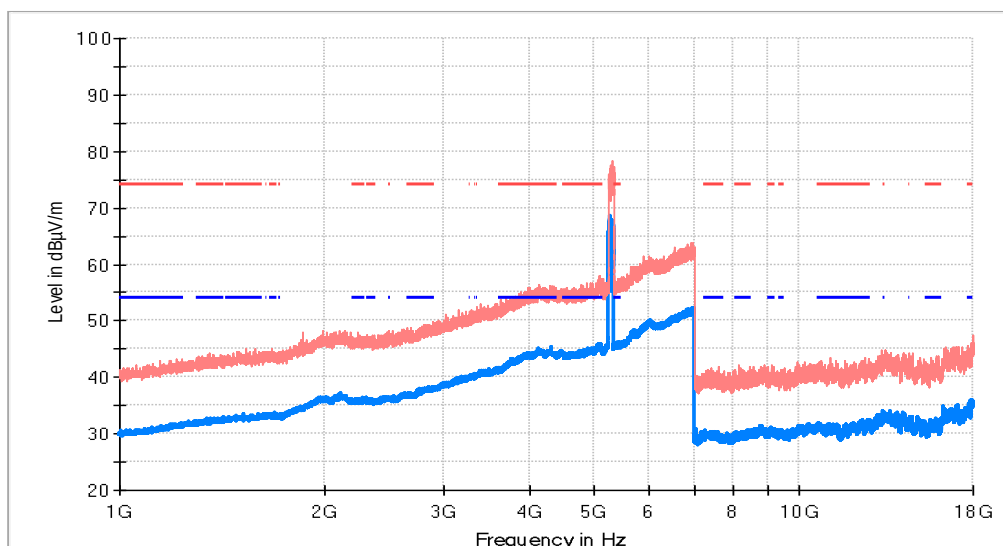
5.35 GHz – 5.46 GHz



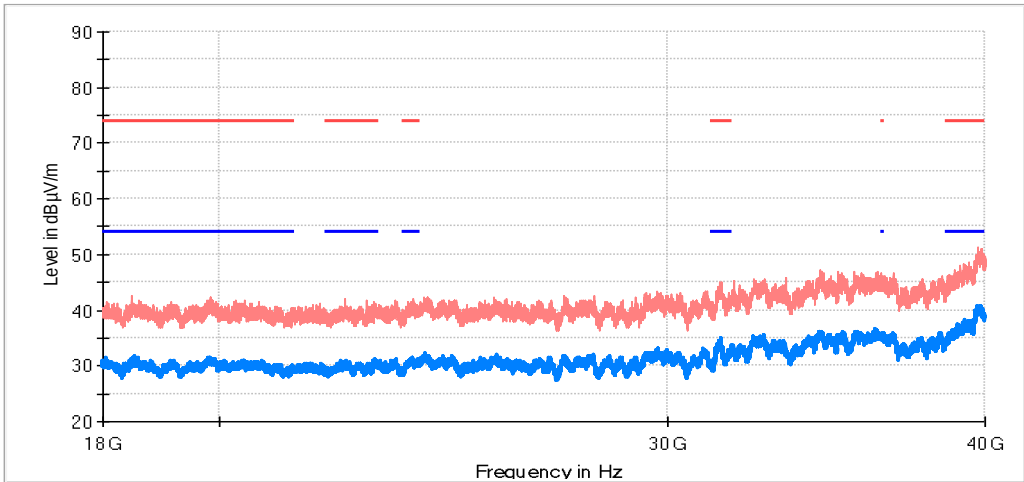
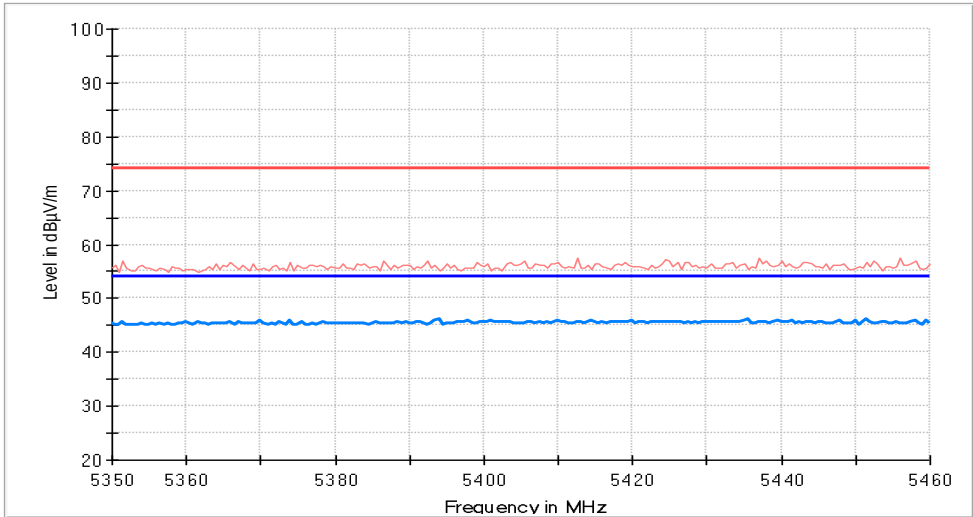
AVG_MAXH
 PK+_MAXH
 TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
 TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

TEST RESULTS (Cont.)	ac mode (80 MHz)
FREQUENCY RANGE	1 GHz – 18 GHz

Mid Channel



- AVG_MAXH
- PK+ _MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

TEST RESULTS (Cont.)	
FREQUENCY RANGE	18 GHz – 40 GHz
Mid Channel RF_FCC_15.407_E Field_18GHz_40GHz  — AVG_MAXH — PK_MAXH — TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit — TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit	
RESTRICTED BANDS	5.35 GHz – 5.46 GHz
 — AVG_MAXH — PK_MAXH — TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit — TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit	

Appendix D: Test results

5.47 GHz – 5.725 GHz Band

Appendix D Content

DESCRIPTION OF TEST CONDITIONS180

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DESCRIPTION OF TEST CONDITIONS

TEST CONDITIONS ⁽¹⁾	DESCRIPTION
TC#01 (a mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 3.8 \text{ Vdc}$ <u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u> Lowest channel: 5500 MHz Middle channel: 5600 MHz Highest channel: 5700 MHz
TC#02 (n mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 3.8 \text{ Vdc}$ <u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u> Lowest channel: 5500 MHz Middle channel: 5600 MHz Highest channel: 5700 MHz <u>Test Frequencies for Conducted/Radiated tests (40 MHz):</u> Lowest channel: 5510 MHz Middle channel: 5590 MHz Highest channel: 5710 MHz
TC#03 (ac mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 3.8 \text{ Vdc}$ <u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u> Lowest channel: 5500 MHz Middle channel: 5600 MHz Highest channel: 5700 MHz <u>Test Frequencies for Conducted/Radiated tests (40 MHz):</u> Lowest channel: 5510 MHz Middle channel: 5590 MHz Highest channel: 5710 MHz <u>Test Frequencies for Radiated tests: (80 MHz)</u> Lowest channel: 5530 MHz Middle channel: 5610 MHz Highest channel: 5690 MHz

Note (1): For spurious emissions for OFDM modes 802.11a, 802.11n20/40 and 802.11ac20/40/80 a preliminary scan was performed to determine the worst case.

The data rates of 6Mb/s for 802.11a, HT0 (SISO) for 802.11n20/ac20 and n40/ac40, and VHT0 (SISO) for 802.11 ac80 were selected based on preliminary testing that identified those rates corresponding to the worst cases.