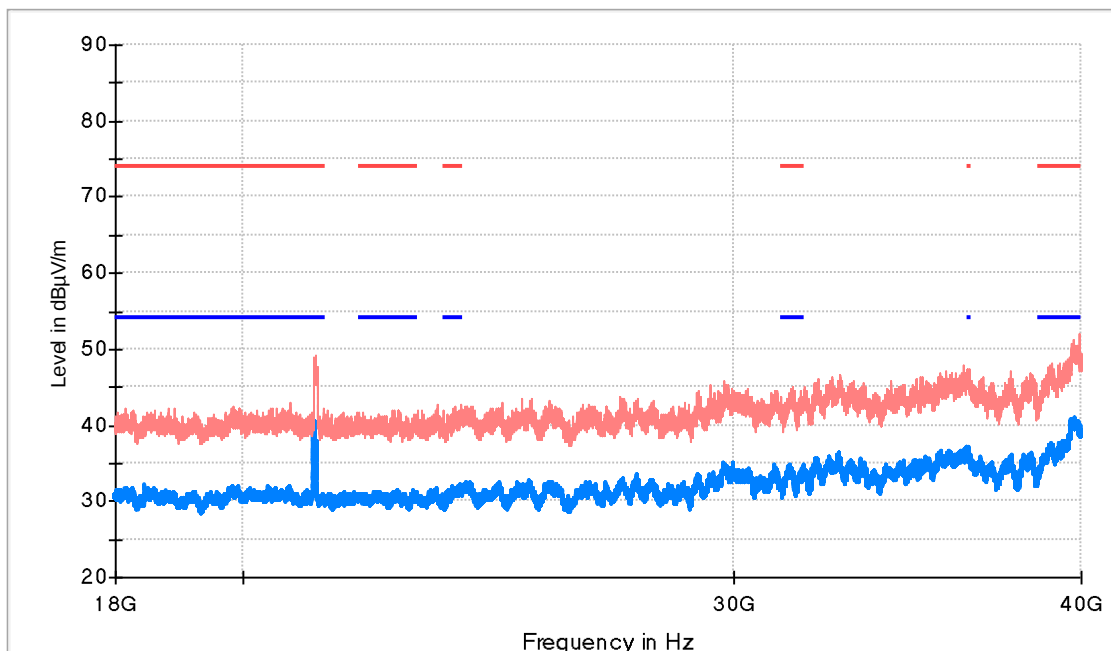


TEST RESULTS (Cont.)

18 GHz – 40 GHz

High Channel



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

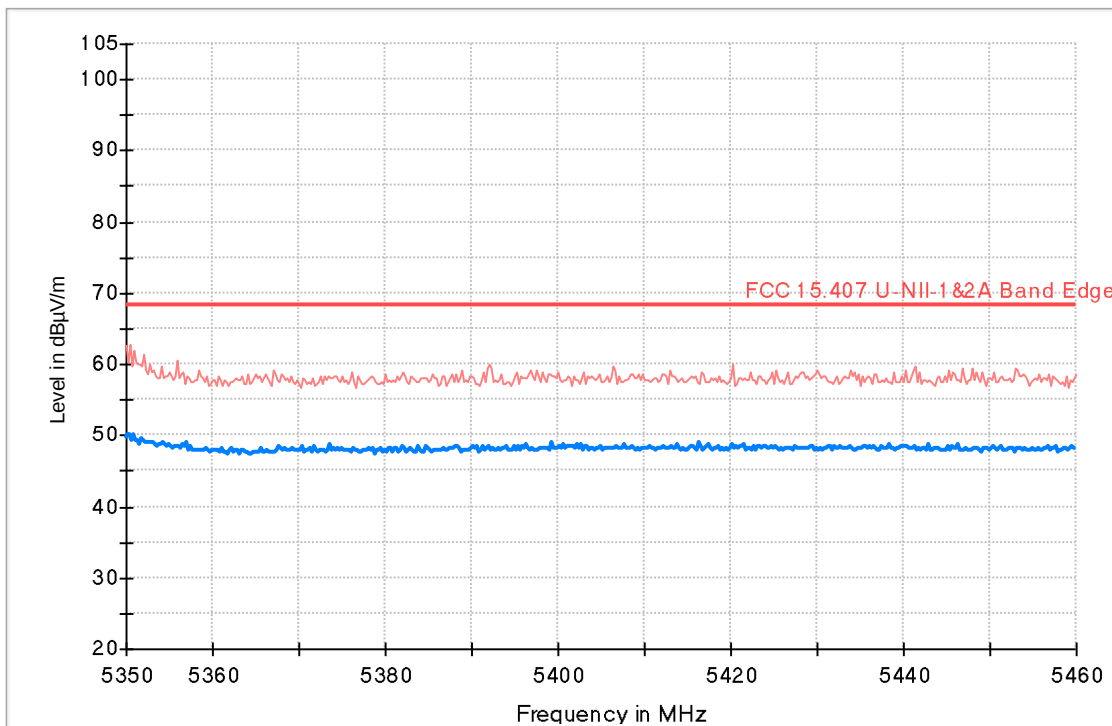
Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol
21239.500000	49.1	40.4	H

RESTRICTED BANDS

5.35 GHz – 5.46 GHz

High Channel



— AVG_MAXH — PK+_MAXH — FCC 15.407 U-NII-1&2A Band Edge

Appendix D:

Test results 5.47 GHz – 5.725 GHz Band

Appendix D Content

DESCRIPTION OF TEST CONDITIONS 110

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DESCRIPTION OF TEST CONDITIONS

TEST CONDITIONS	DESCRIPTION
TC#01 ⁽¹⁾ (a mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 13.5 \text{ Vdc}$ <u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u> Lowest channel: 5500 MHz Middle channel: 5580 MHz Highest channel: 5700 MHz
TC#02 ⁽¹⁾ (n mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 13.5 \text{ Vdc}$ <u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u> Lowest channel: 5500 MHz Middle channel: 5580 MHz Highest channel: 5700 MHz <u>Test Frequencies for Conducted/Radiated tests (40 MHz):</u> Lowest channel: 5510 MHz Middle channel: 5550 MHz Highest channel: 5670 MHz

Note (1): For spurious emissions for OFDM modes 802.11a, 802.11n20 and 802.11n40 a preliminary scan was performed to determine the worst case.

The data rates of 6Mb/s for 802.11a and MCS0 for 802.11n40 were selected based on preliminary testing that identified those rates corresponding to the worst cases.

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

LIMITS:

Product standard:

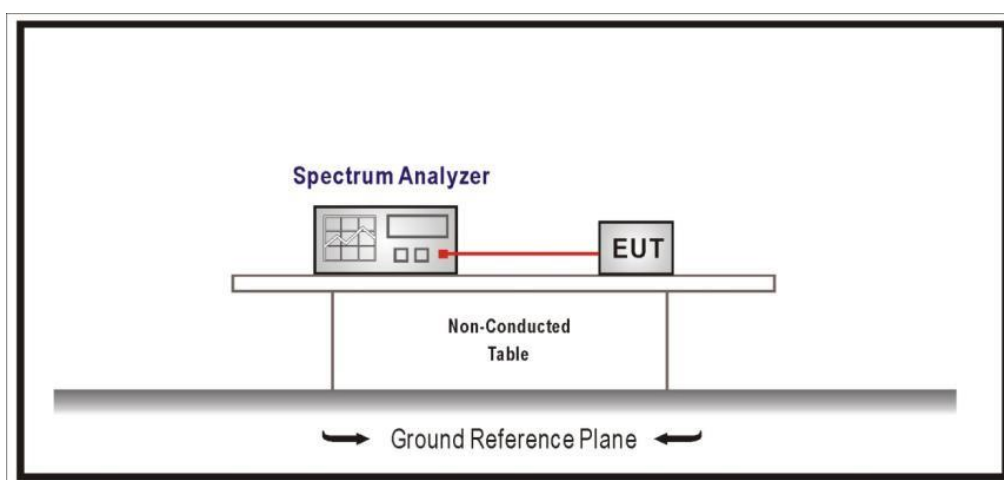
Part 15 Subpart C §15.403 and RSS-247

Test standard:

Part 15 Subpart C §15.403 and RSS-247 6.2.3

No requirements requested

TEST SETUP:



TESTED SAMPLES:

S/01

TESTED CONDITIONS MODES:

TC#01 (a mode)

TEST RESULTS:

PASS

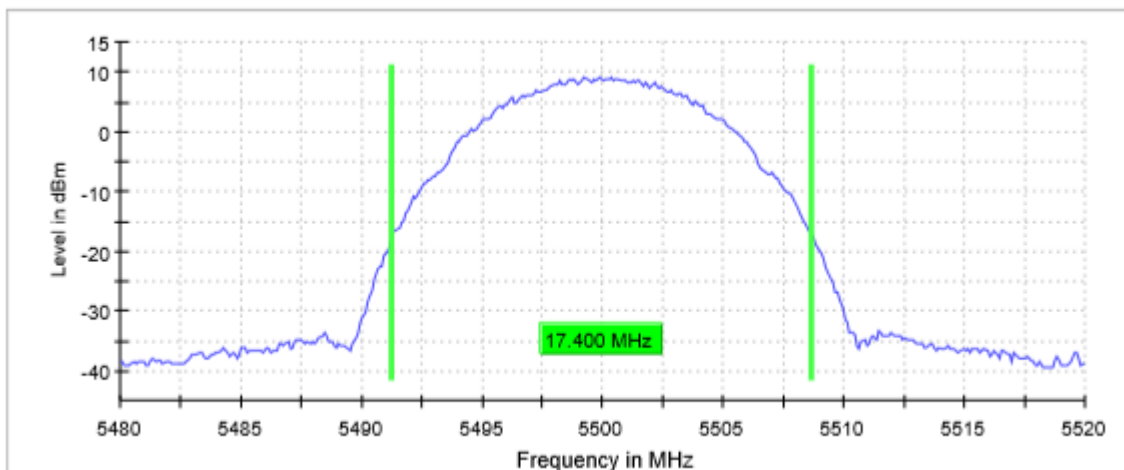
Bandwidth: 20 MHz

	Lowest frequency 5500 MHz	Middle frequency 5580 MHz	Highest frequency 5700 MHz
26dB Bandwidth (MHz)	17.400	17.400	17.400
Occupied bandwidth (MHz)	13.000	13.100	13.100
Measurement uncertainty (kHz)	<± 8.33		

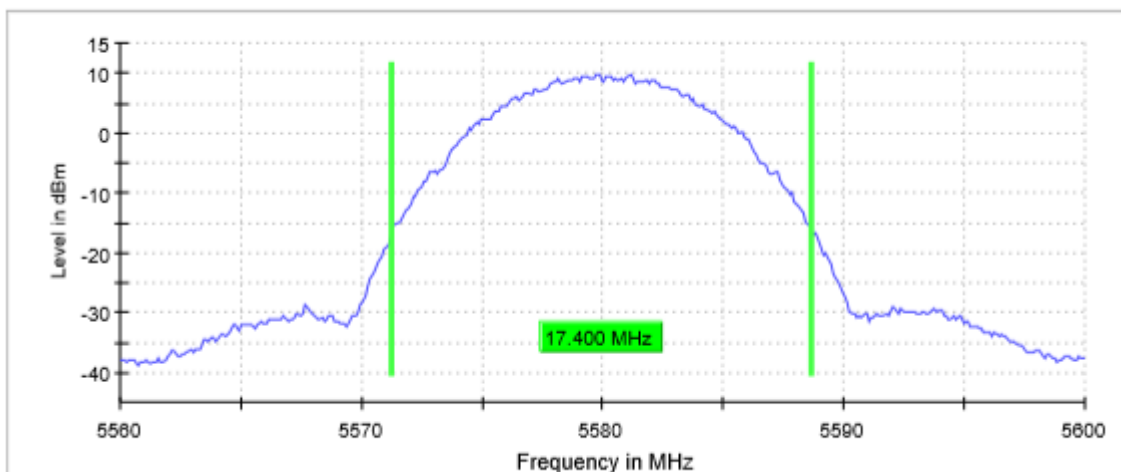
TEST RESULTS (Cont.):

26 dB BANDWIDTH

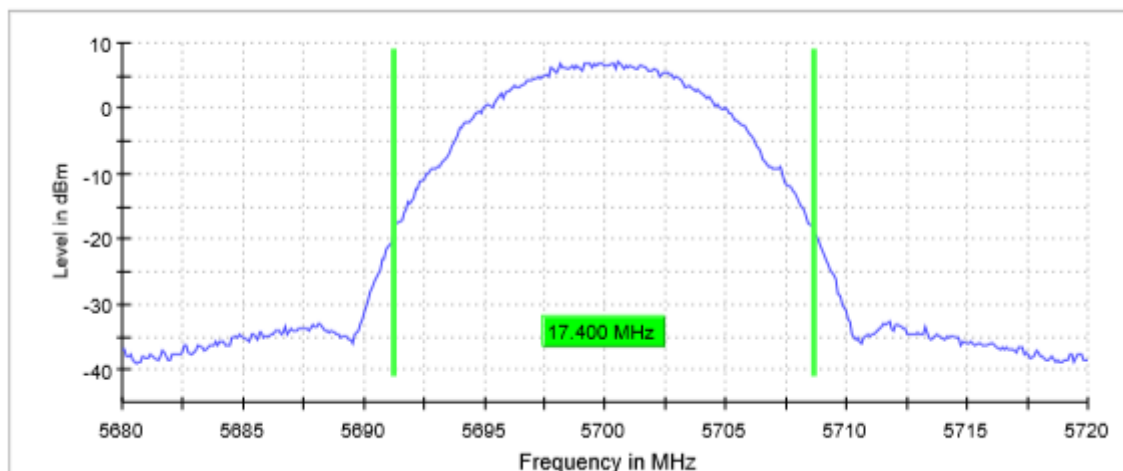
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.)

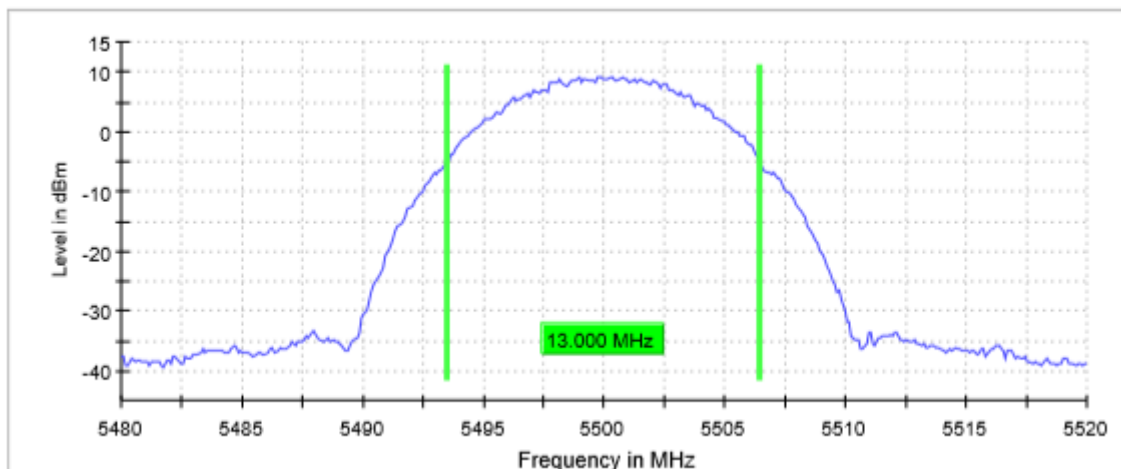
Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.48000 GHz	5.56000 GHz	5.68000 GHz
Stop Frequency	5.52000 GHz	5.60000 GHz	5.72000 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	400	400	400
Sweeptime	28.477 μ s	28.477 μ s	28.477 μ s
Reference Level	20.000 dBm	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB	40.000 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
Preamp	Off	Off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	51 / max. 150	75 / max. 150	86 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.19 dB	0.00 dB	0.28 dB

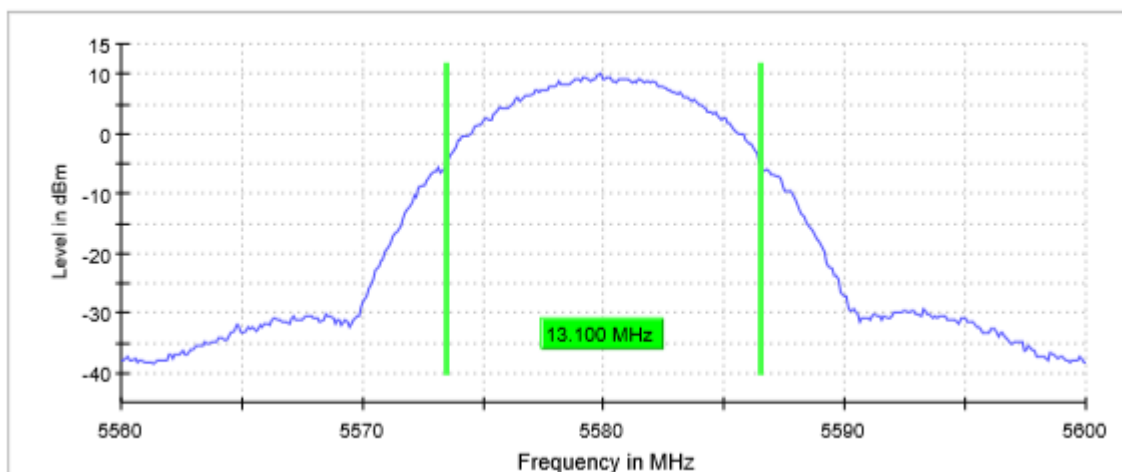
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

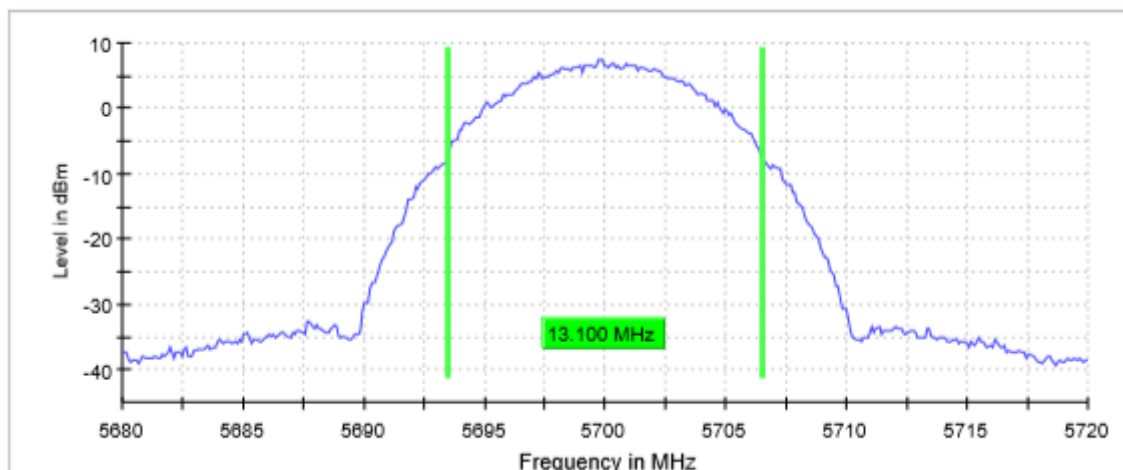
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.)			
Measurement			
Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.48000 GHz	5.56000 GHz	5.68000 GHz
Stop Frequency	5.52000 GHz	5.60000 GHz	5.72000 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	400	400	400
Sweeptime	28.477 μs	28.477 μs	28.477 μs
Reference Level	20.000 dBm	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB	40.000 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
Preamp	Off	Off	Off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	78 / max. 150	71 / max. 150	57 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.17 dB	0.04 dB	0.17 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n Mode 20 MHz)
TEST RESULTS:	PASS

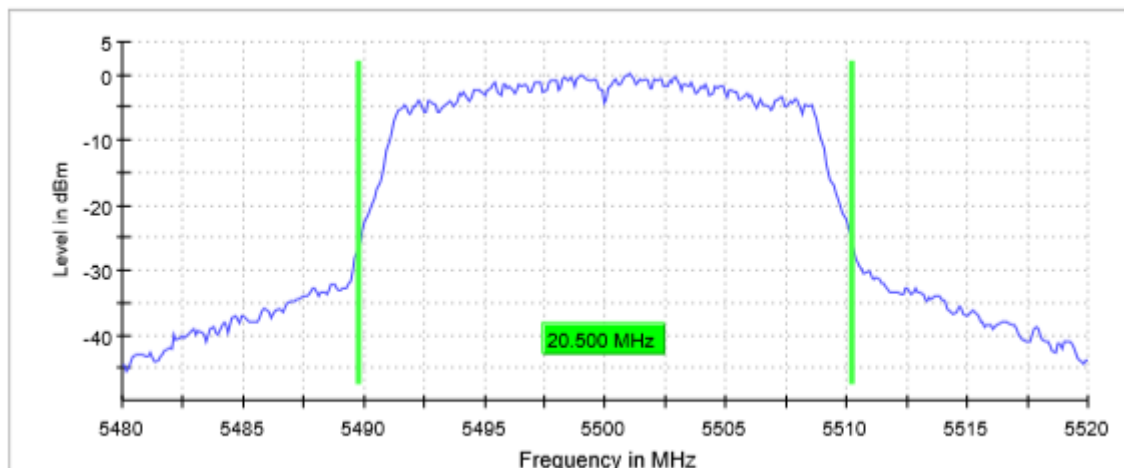
Bandwidth: 20 MHz

	Lowest frequency	Middle frequency	Highest frequency
	5500 MHz	5580 MHz	5700 MHz
26dB bandwidth (MHz)	20.500	20.600	20.600
Occupied bandwidth (MHz)	17.700	17.700	17.700
Measurement uncertainty (kHz)	<± 8.33		

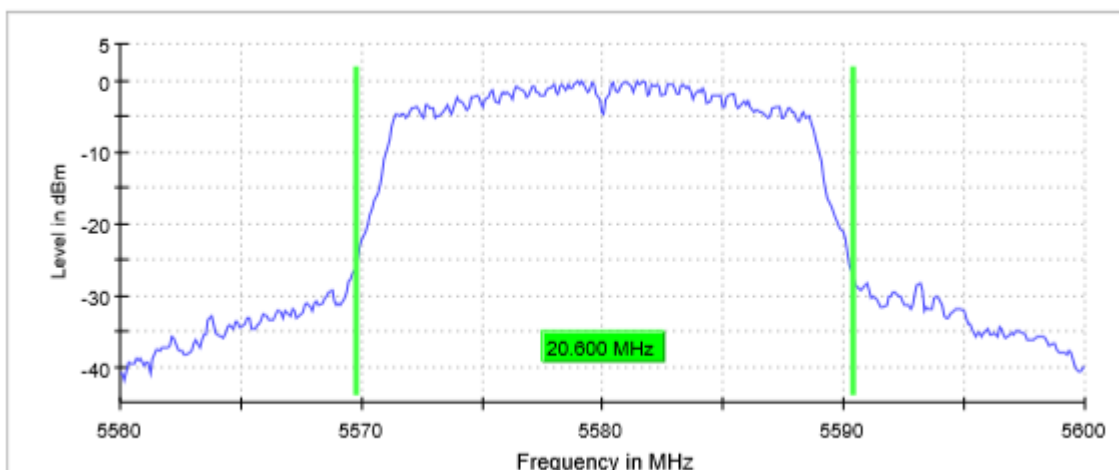
TEST RESULTS (Cont.):

26 dB BANDWIDTH

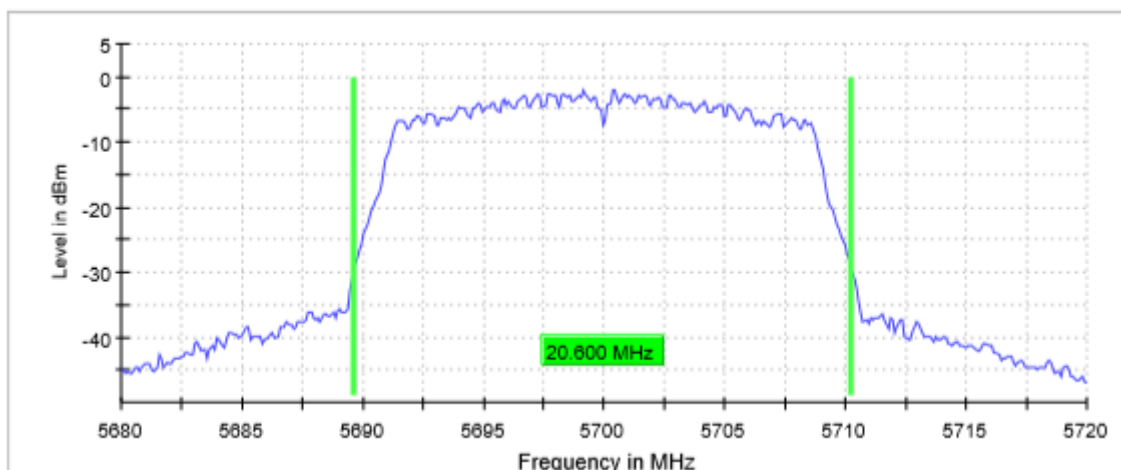
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.):

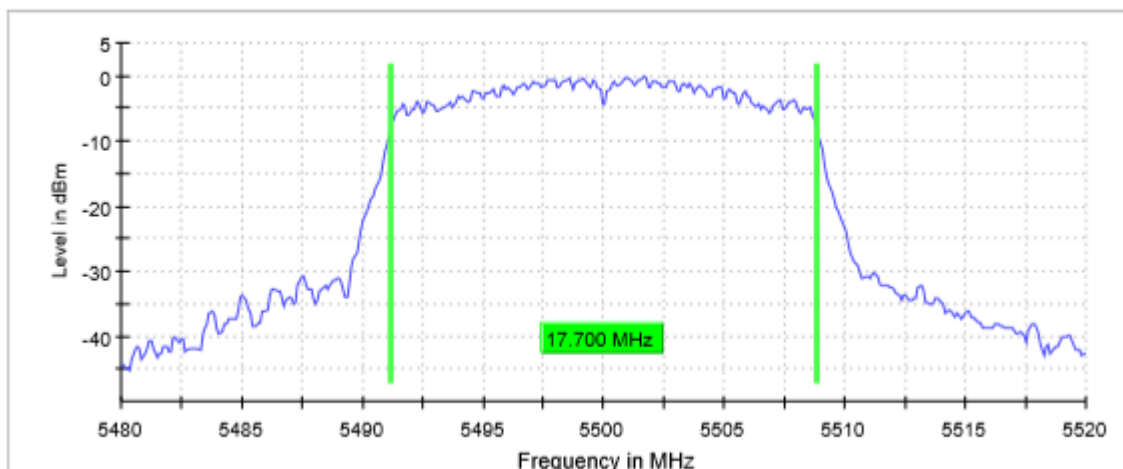
Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.48000 GHz	5.56000 GHz	5.68000 GHz
Stop Frequency	5.52000 GHz	5.60000 GHz	5.72000 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	400	400	400
Sweeptime	28.477 μ s	28.477 μ s	28.477 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	84 / max. 150	51 / max. 150	46 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.07 dB	0.20 dB	0.07 dB

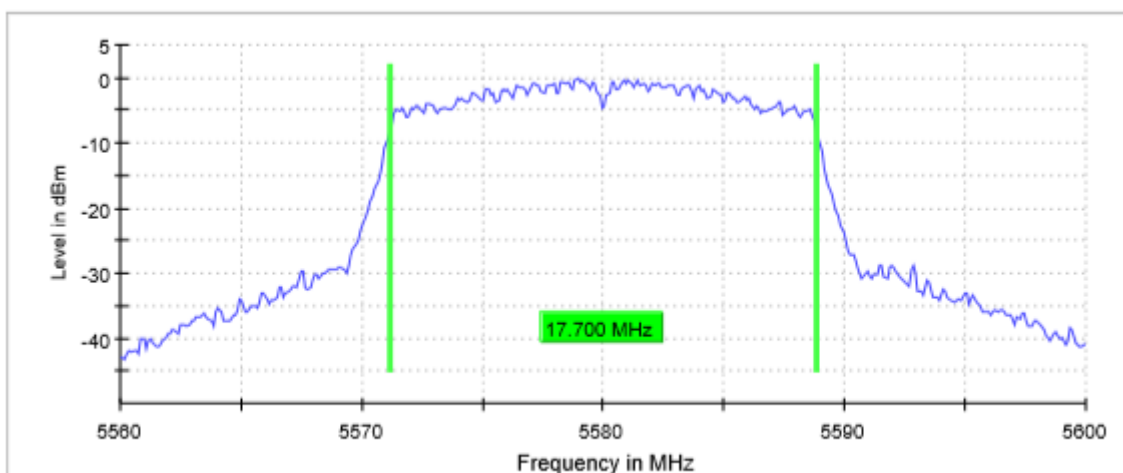
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

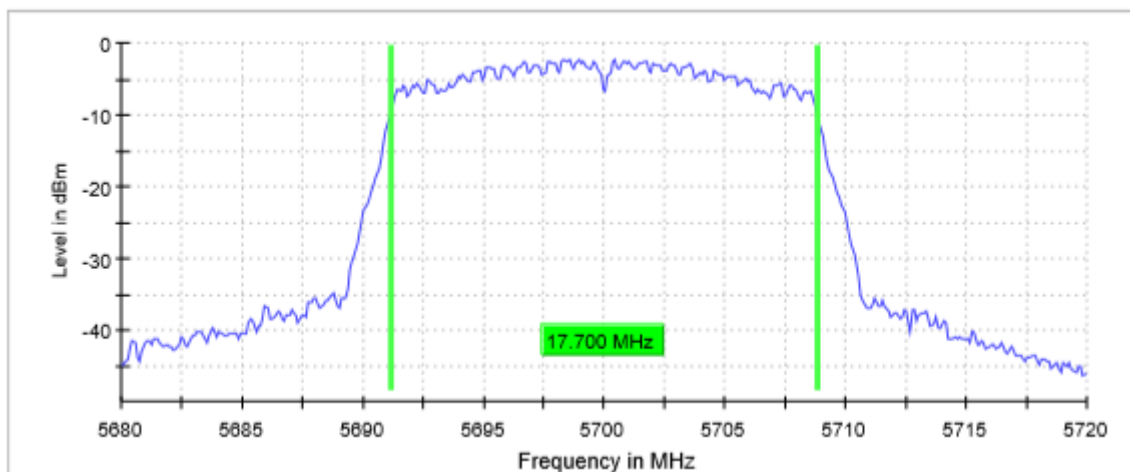
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.):

Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.48000 GHz	5.56000 GHz	5.68000 GHz
Stop Frequency	5.52000 GHz	5.60000 GHz	5.72000 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	400	400	400
Sweptime	28.477 μ s	28.477 μ s	28.477 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
Preampl	Off	Off	Off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	82 / max. 150	34 / max. 150	77 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.27 dB	0.00 dB	0.08 dB

TESTED SAMPLES:

S/01

TESTED CONDITIONS MODES:

TC#02 (n Mode 40 MHz)

TEST RESULTS:

PASS

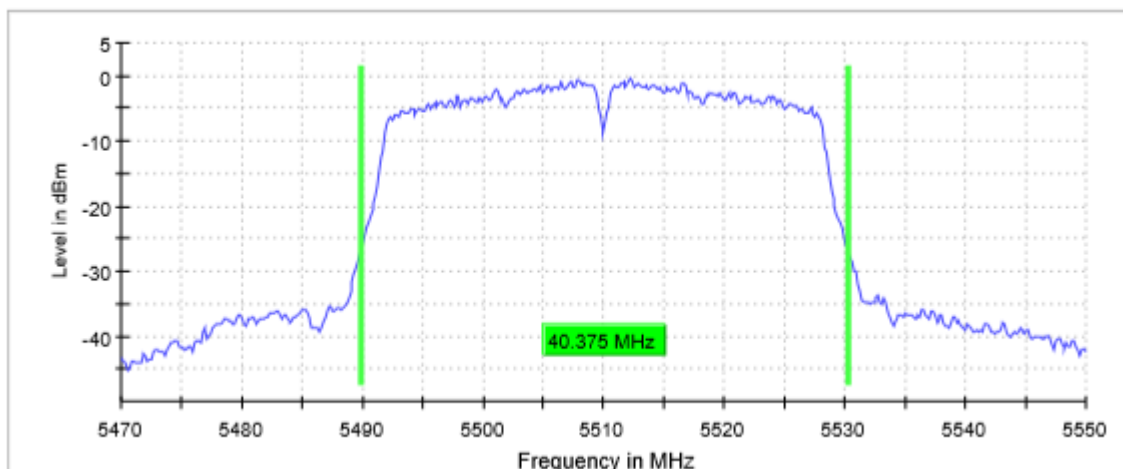
Bandwidth: 40 MHz

	Lowest frequency 5510 MHz	Middle frequency 5550 MHz	Highest frequency 5670 MHz
26dB bandwidth (MHz)	40.375	40.525	40.375
Occupied bandwidth (MHz)	36.250	36.250	36.250
Measurement uncertainty (kHz)	< $\pm$ 8.33		

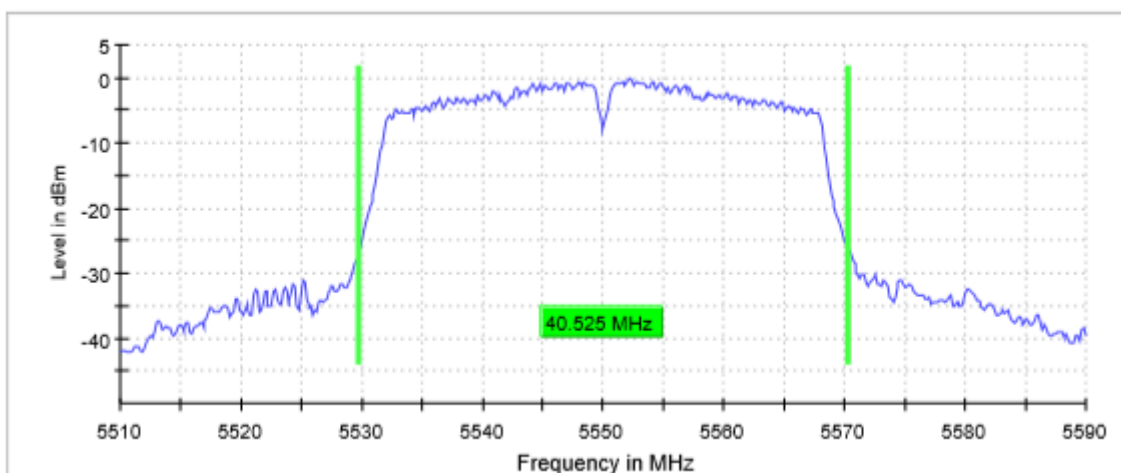
TEST RESULTS (Cont.):

26 dB BANDWIDTH

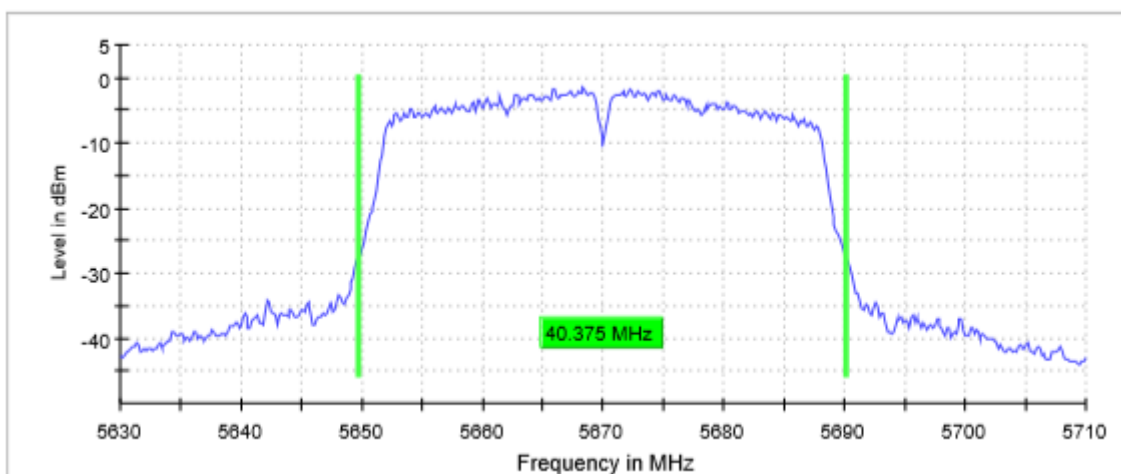
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.):

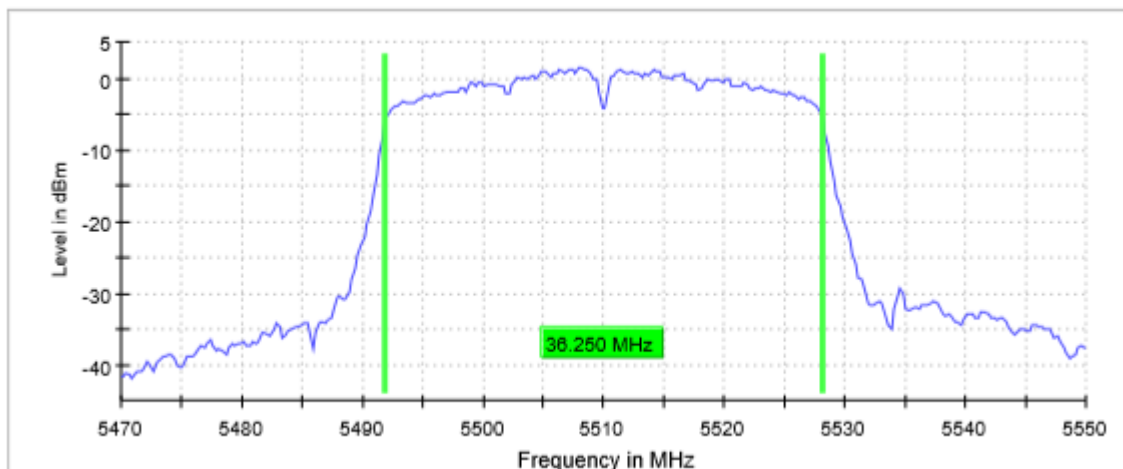
Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.51000 GHz	5.63000 GHz
Stop Frequency	5.55000 GHz	5.59000 GHz	5.71000 GHz
Span	80.000 MHz	80.000 MHz	80.000 MHz
RBW	300.000 kHz	300.000 kHz	300.000 kHz
VBW	1.000 MHz	1.000 MHz	1.000 MHz
SweepPoints	533	533	533
Sweeptime	31.621 μ s	31.621 μ s	31.621 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
Preampl	Off	Off	Off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	72 / max. 150	94 / max. 150	81 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.00 dB	0.22 dB	0.19 dB

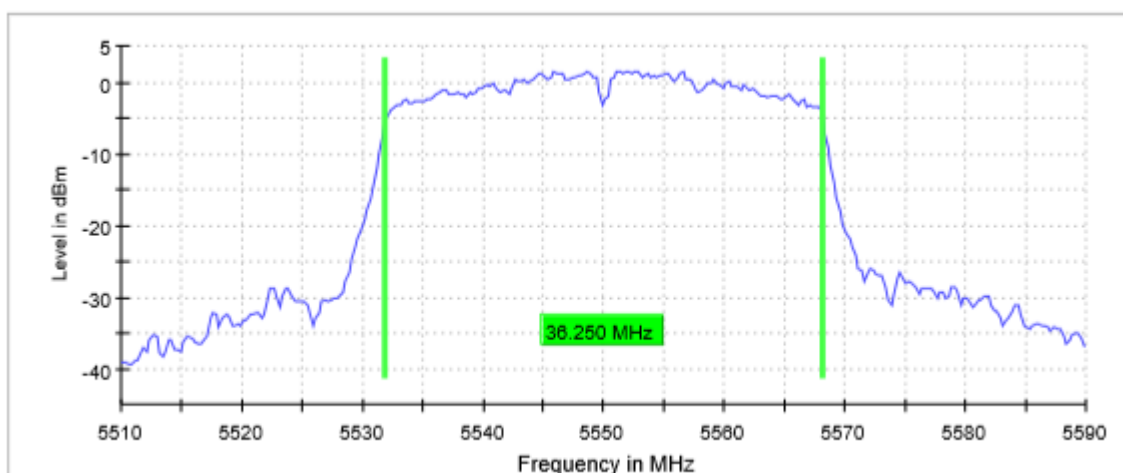
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

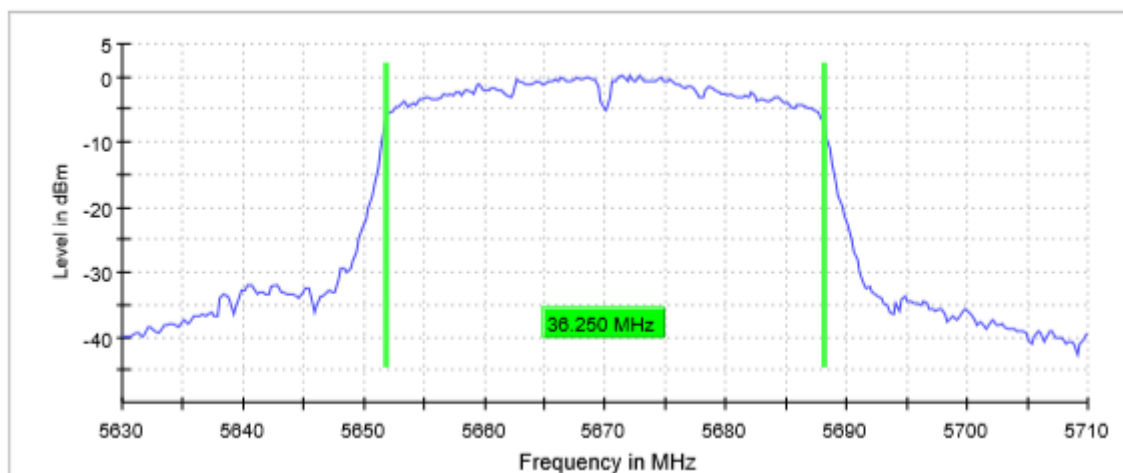
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.):

Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.51000 GHz	5.63000 GHz
Stop Frequency	5.55000 GHz	5.59000 GHz	5.71000 GHz
Span	80.000 MHz	80.000 MHz	80.000 MHz
RBW	500.000 kHz	500.000 kHz	500.000 kHz
VBW	2.000 MHz	2.000 MHz	2.000 MHz
SweepPoints	320	320	320
Sweeptime	18.906 µs	18.906 µs	18.906 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	103 / max. 150	76 / max. 150	56 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.07 dB	0.14 dB	0.00 dB

TEST D.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) (2) (4) and RSS-247 6.2.3.1

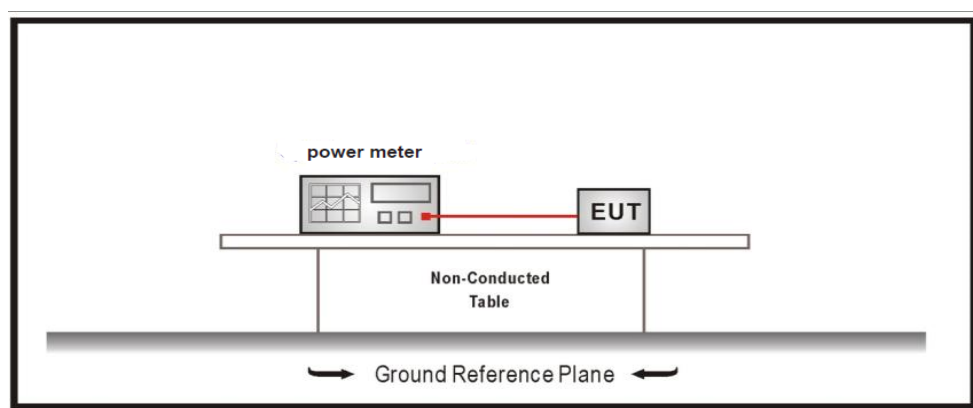
LIMITS

In band 5.47-5.725 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 1megahertz 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: 0 dBi

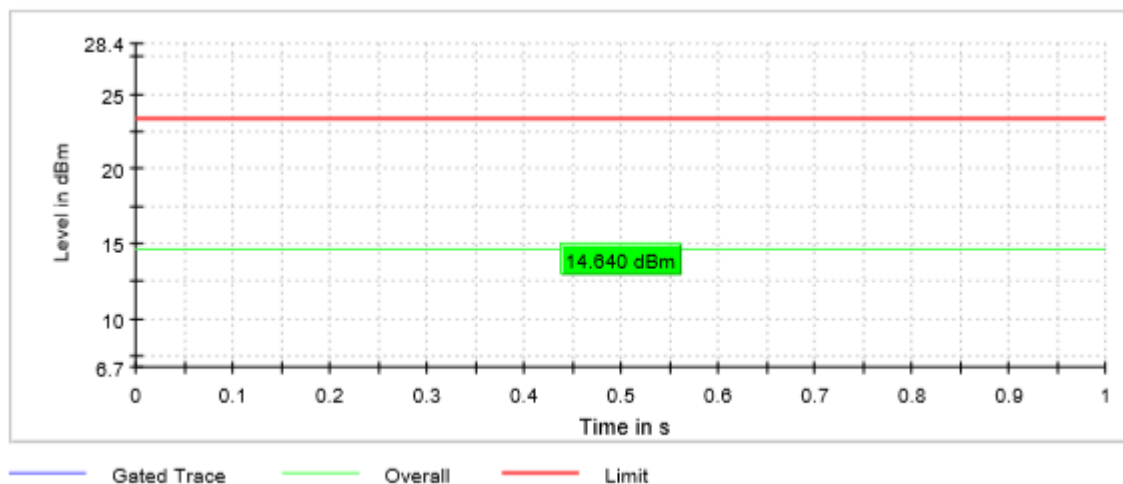
	Lowest frequency 5500 MHz	Middle frequency 5580 MHz	Highest frequency 5700 MHz
Maximum conducted power (dBm)	14.6	14.9	13.1
Maximum EIRP power (dBm)	14.6	14.9	13.1
Measurement uncertainty (dB)	<±0.78		

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.

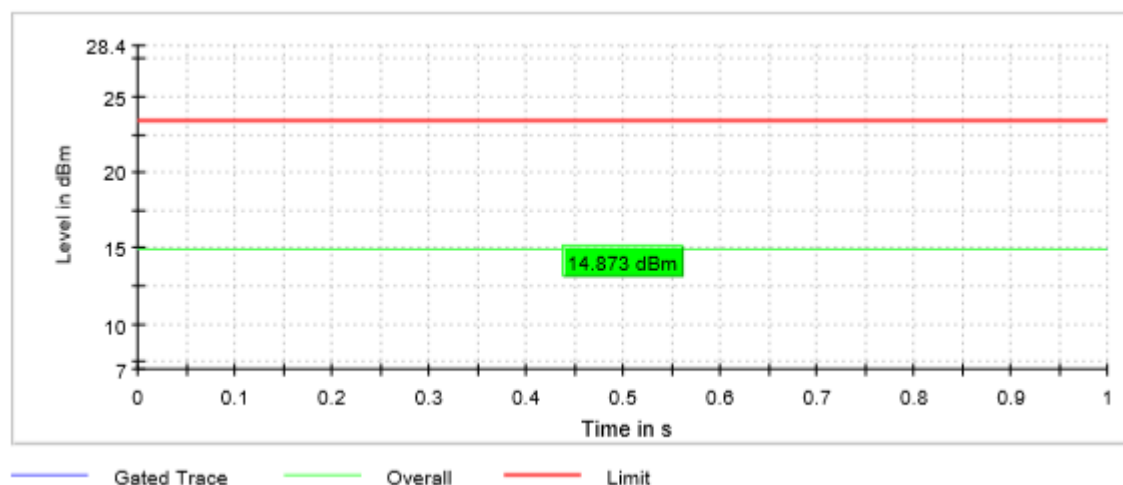
TEST RESULTS (Cont.):

CONDUCTED OUTPUT POWER

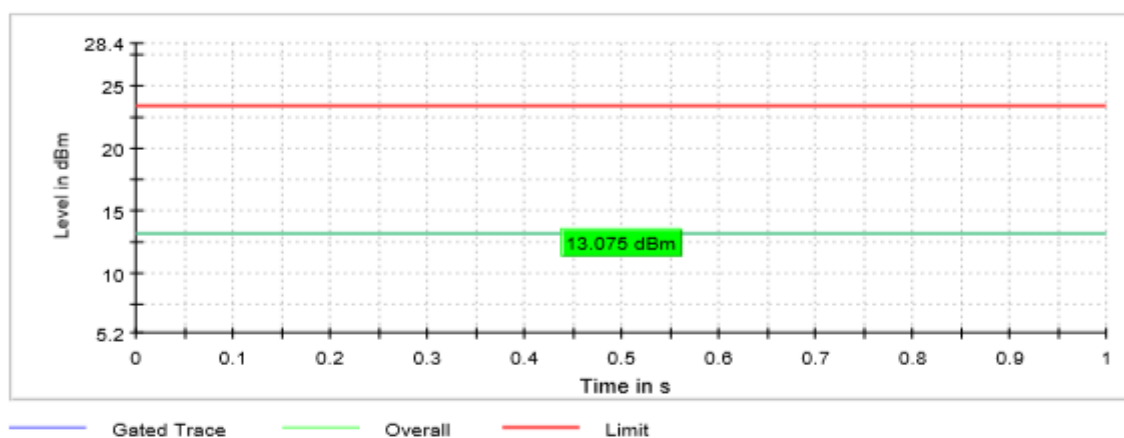
Lowest Channel



Middle Channel



Highest Channel



TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode 20 MHz)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

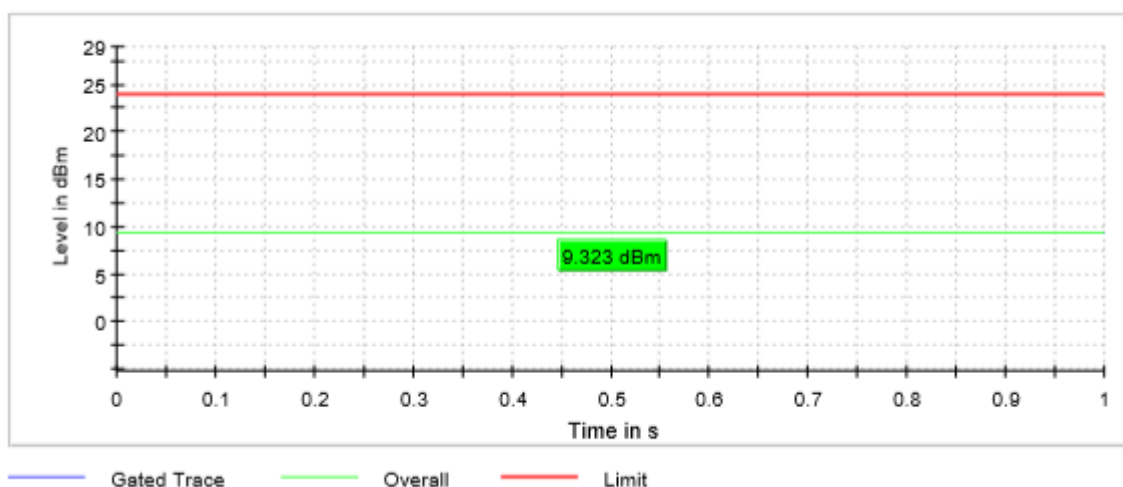
Maximum declared antenna gain: 0 dBi

	Lowest frequency 5500 MHz	Middle frequency 5580 MHz	Highest frequency 5700 MHz
Maximum conducted power (dBm)	9.3	9.4	7.7
Maximum EIRP power (dBm)	9.3	9.4	7.7
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.

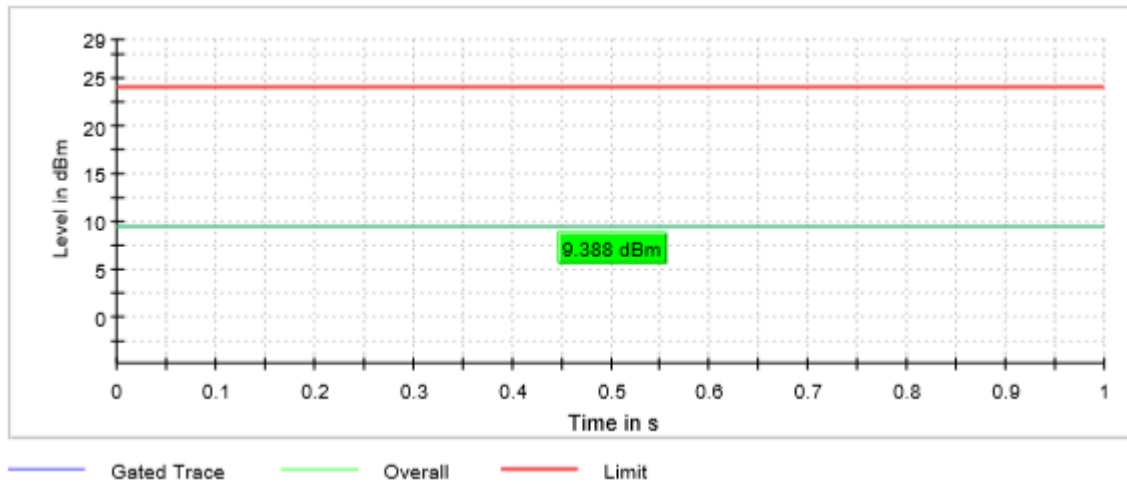
TEST RESULTS (Cont.):	CONDUCTED OUTPUT POWER
------------------------------	-------------------------------

Lowest Channel

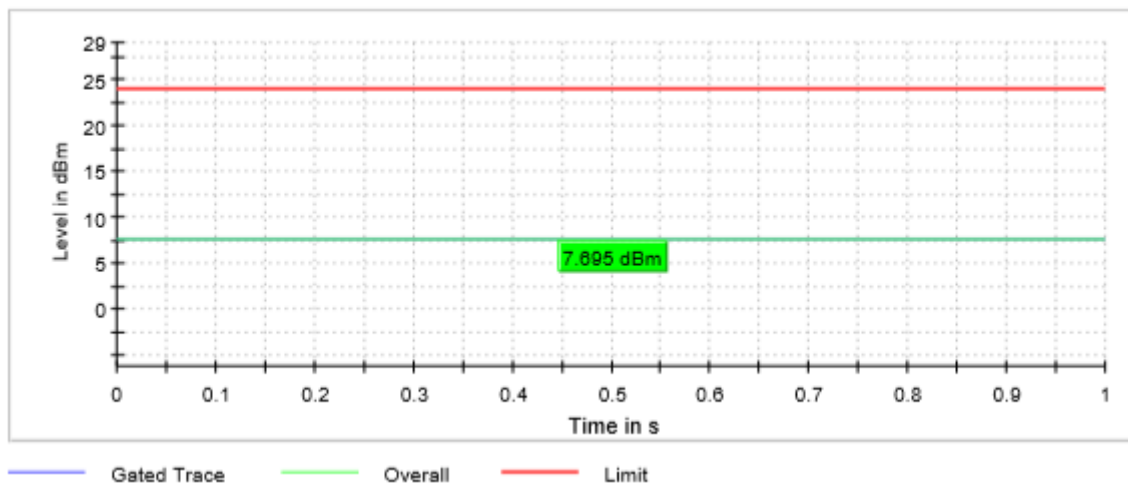


TEST RESULTS (Cont.)

Middle Channel



Highest Channel



TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode 40 MHz)
TEST RESULTS:	PASS

Bandwidth: 40 MHz

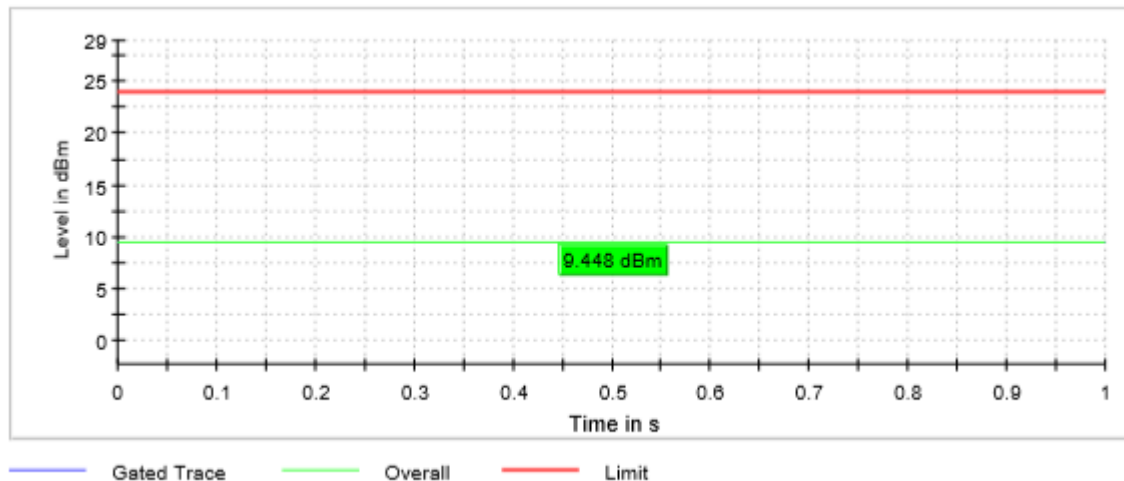
Maximum declared antenna gain: 0 dBi

	Lowest frequency 5510 MHz	Middle frequency 5550 MHz	Highest frequency 5670 MHz
Maximum conducted power (dBm)	9.4	9.8	8.3
Maximum EIRP power (dBm)	9.4	9.8	8.3
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.

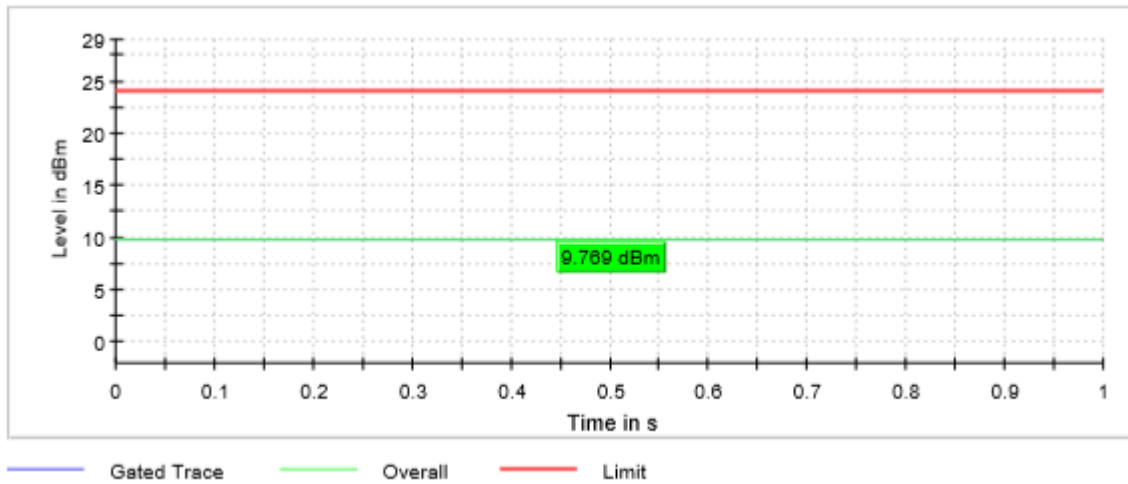
TEST RESULTS (Cont.):	CONDUCTED OUTPUT POWER
------------------------------	-------------------------------

Lowest Channel

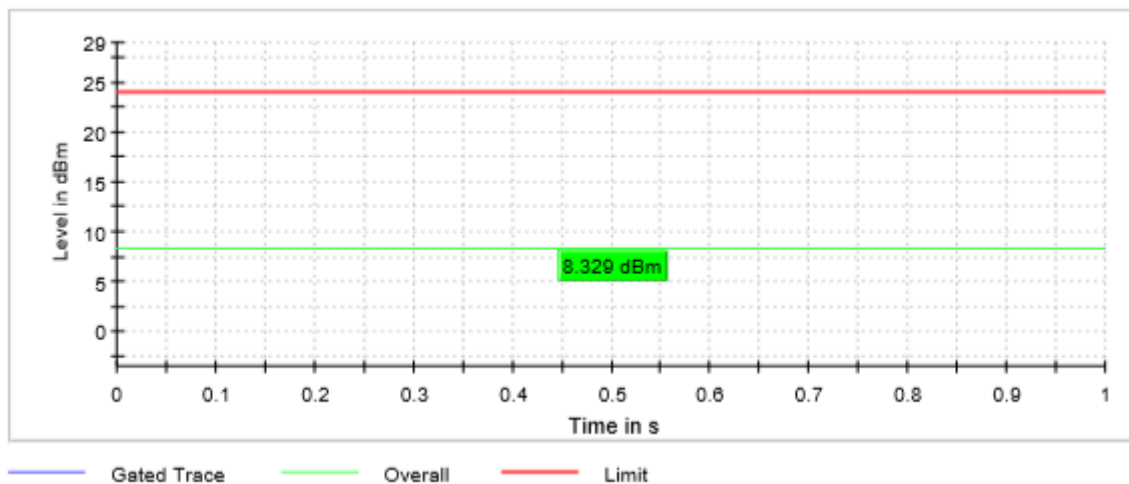


TEST RESULTS (Cont.)

Middle Channel



Highest Channel



TEST D.3: POWER SPECTRAL DENSITY

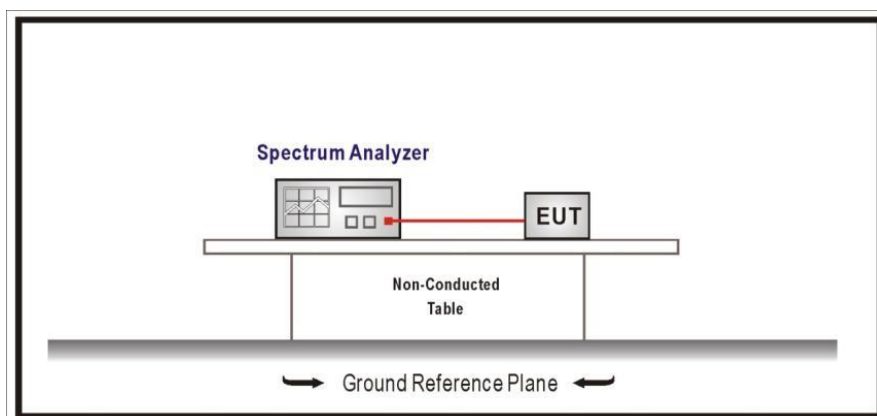
LIMITS:	Product standard:	Part 15 Subpart C §15.407 and RSS-247
	Test standard:	Part 15 Subpart C §15.407(a) (2) (5) and RSS-247 6.2.3.1

LIMITS

In the band 5.47-5.725 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 1megahertz 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.



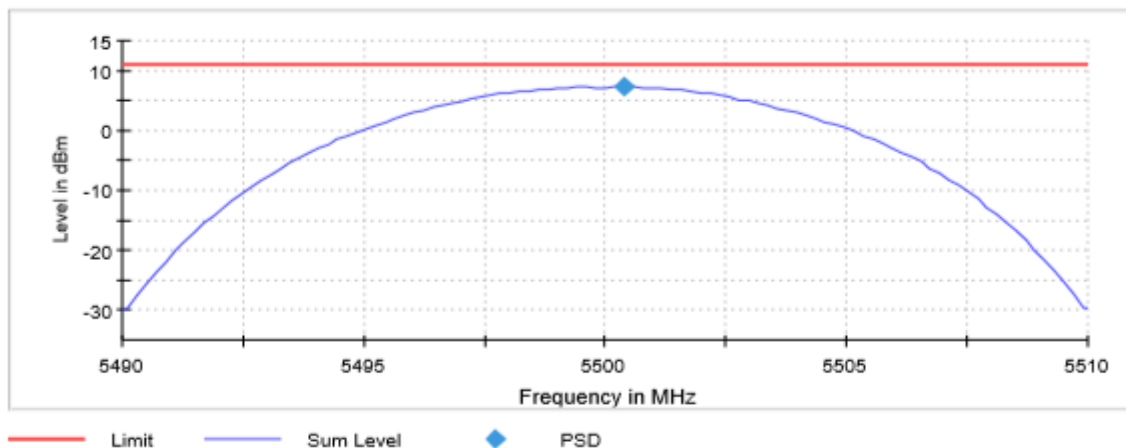
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01 (a mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

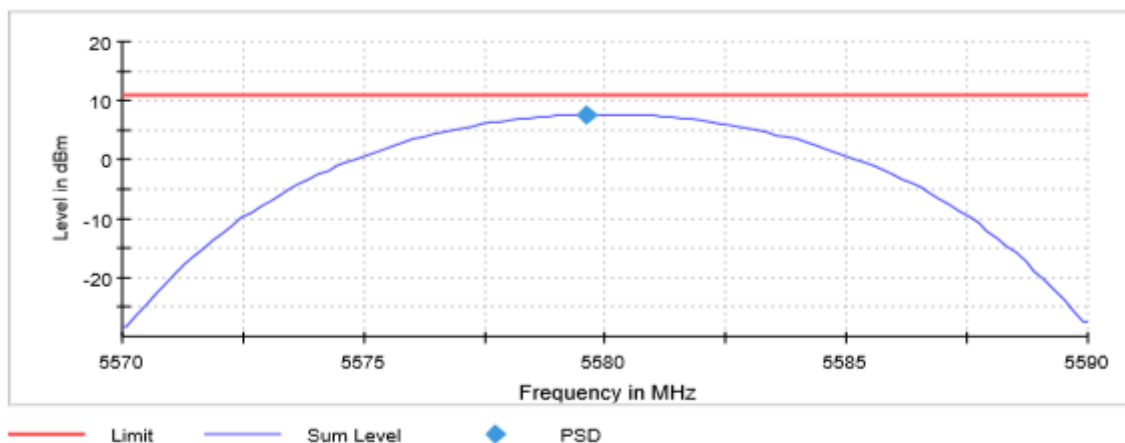
	Lowest frequency 5500 MHz	Middle frequency 5580 MHz	Highest frequency 5700 MHz
Power spectral density (dBm)	7.312	7.641	5.128
Measurement uncertainty (dB)	<±0.78		

TEST RESULTS (Cont.):

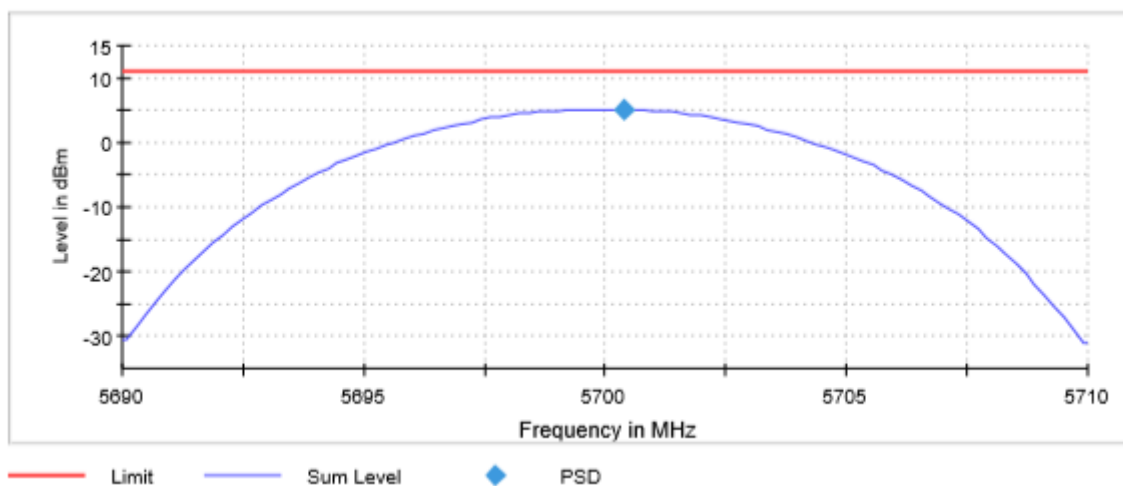
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.):

Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.49000 GHz	5.57000 GHz	5.69000 GHz
Stop Frequency	5.51000 GHz	5.59000 GHz	5.71000 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	20.000 dBm	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB	40.000 dB
Detector	RMS	RMS	RMS
SweepCount	29703	29703	29703
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
SweepType	FFT	FFT	FFT
Preampl	Off	Off	Off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	4 / max. 15	4 / max. 15	4 / max. 15
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.00 dB	0.00 dB

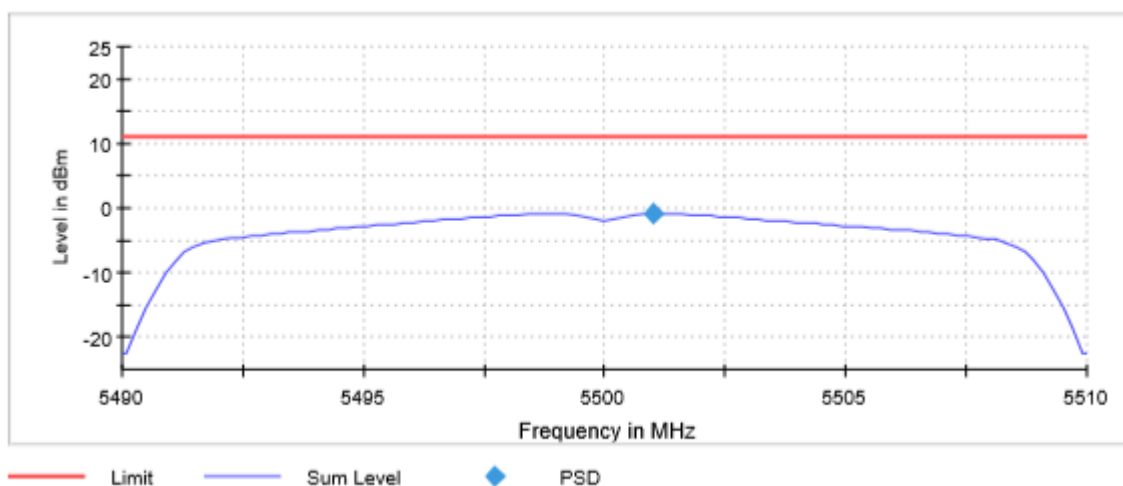
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode 20 MHz)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

	Lowest frequency 5500 MHz	Middle frequency 5580 MHz	Highest frequency 5700 MHz
Power spectral density (dBm)	-0.744	-0.626	-2.753
Measurement uncertainty (dB)	<±0.78		

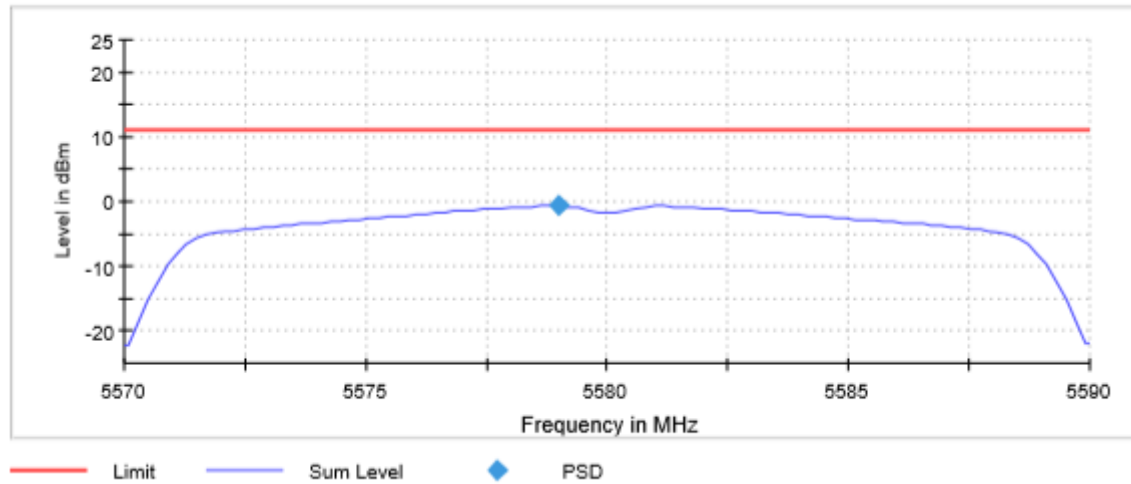
TEST RESULTS (Cont.):	
------------------------------	--

Lowest Channel

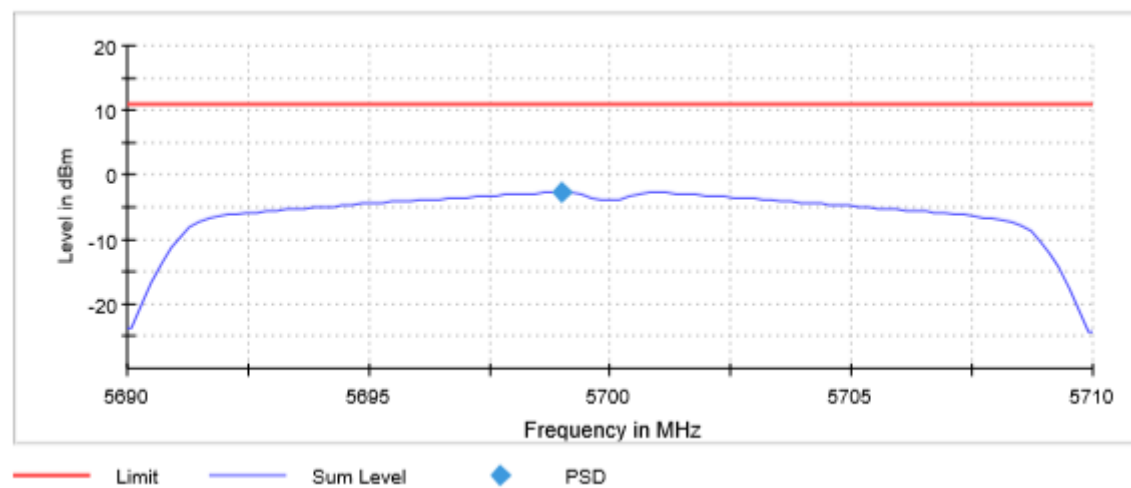


TEST RESULTS (Cont.):

Middle Channel



Highest Channel



TEST RESULTS (Cont.):

Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.49000 GHz	5.57000 GHz	5.69000 GHz
Stop Frequency	5.51000 GHz	5.59000 GHz	5.71000 GHz
Span	20.000 MHz	20.000 MHz	20.000 MHz
RBW	1.000 MHz kHz	1.000 MHz kHz	1.000 MHz kHz
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	29703	29703	29703
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	4 / max. 15	4 / max. 15	4 / max. 15
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.01 dB	0.02 dB	0.24 dB

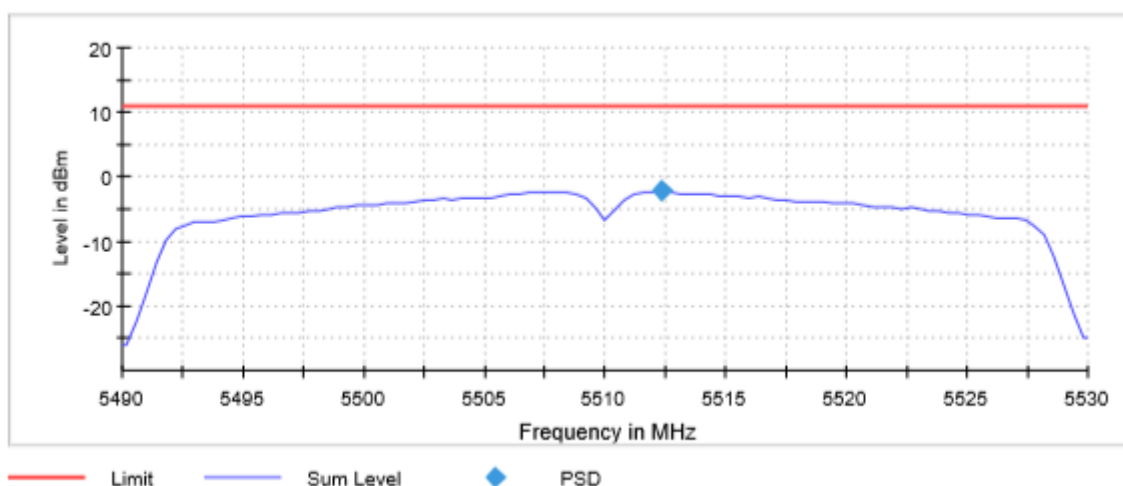
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode 40 MHz)
TEST RESULTS:	PASS

Bandwidth: 40 MHz

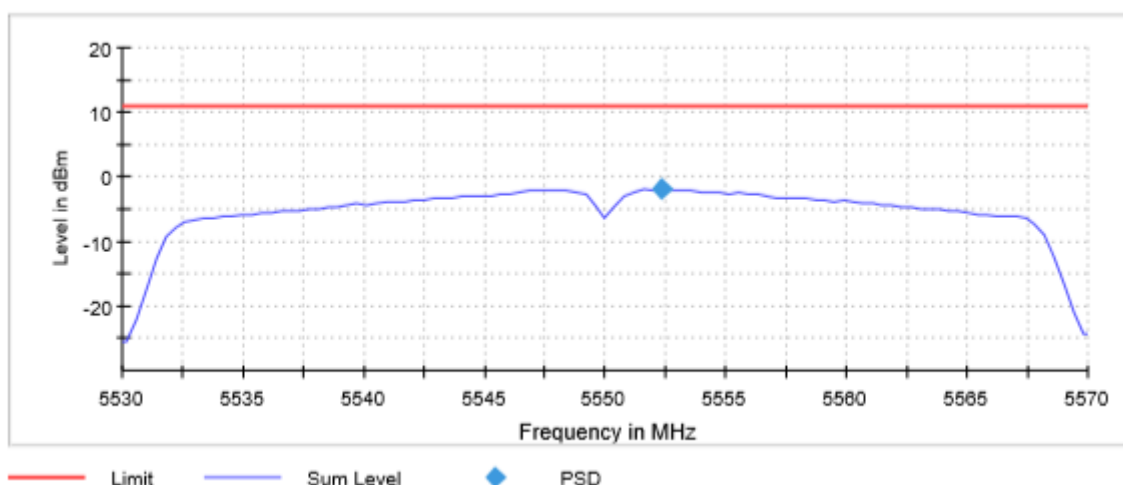
	Lowest frequency 5510 MHz	Middle frequency 5550 MHz	Highest frequency 5670 MHz
Power spectral density (dBm)	-2.150	-1.856	-3.397
Measurement uncertainty (dB)	<±0.78		

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

Lowest Channel

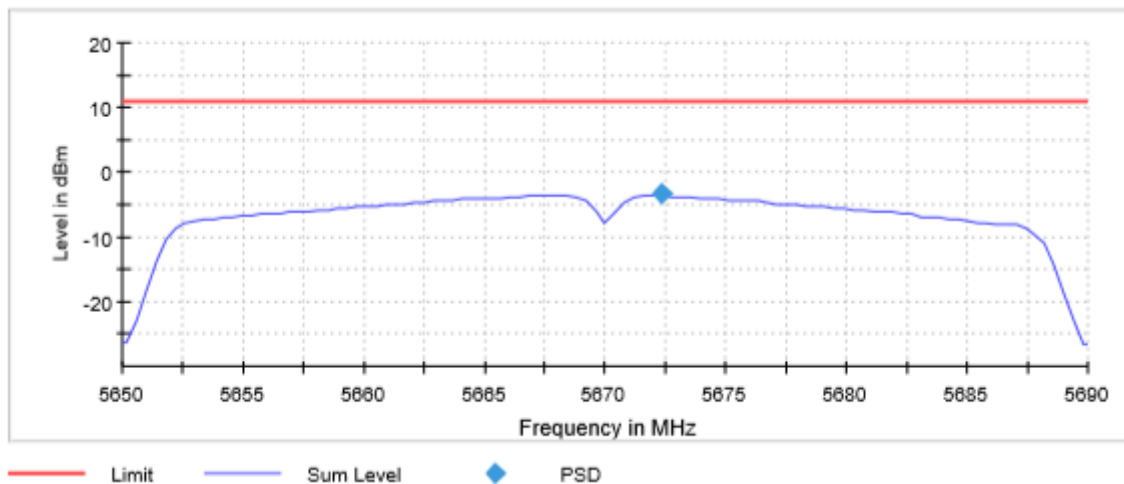


Mid Channel



TEST RESULTS (Cont.):

High Channel



Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.49000 GHz	5.53000 GHz	5.65000 GHz
Stop Frequency	5.53000 GHz	5.57000 GHz	5.69000 GHz
Span	40.000 MHz	40.000 MHz	40.000 MHz
RBW	1.000 MHz kHz	1.000 MHz kHz	1.000 MHz kHz
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	29703	29703	29703
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	4 / max. 15	4 / max. 15	4 / max. 15
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.09 dB	0.17 dB	0.17 dB

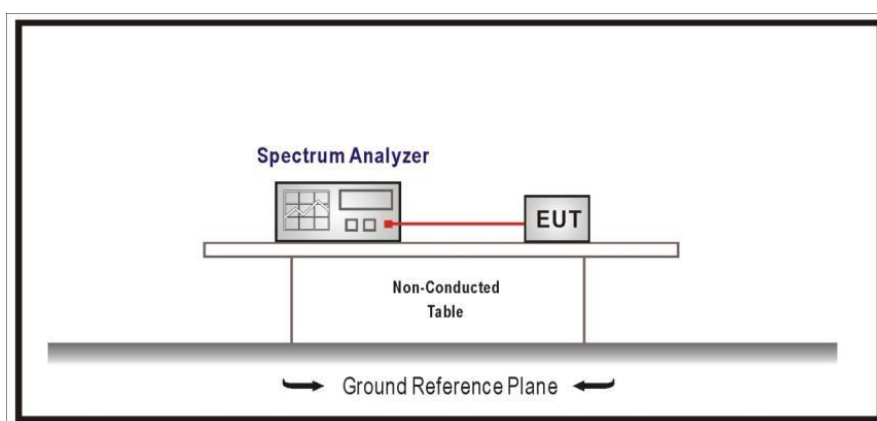
TEST D.4: BAND-EDGE EMISSIONS COMPLIANCE (TRANSMITTER)

LIMITS:	Product standard:	Part 15 Subpart C §15.407 and RSS-247
	Test standard:	Part 15 Subpart C §15.407(b)(3) and RSS-247 6.2.3.2

LIMITS

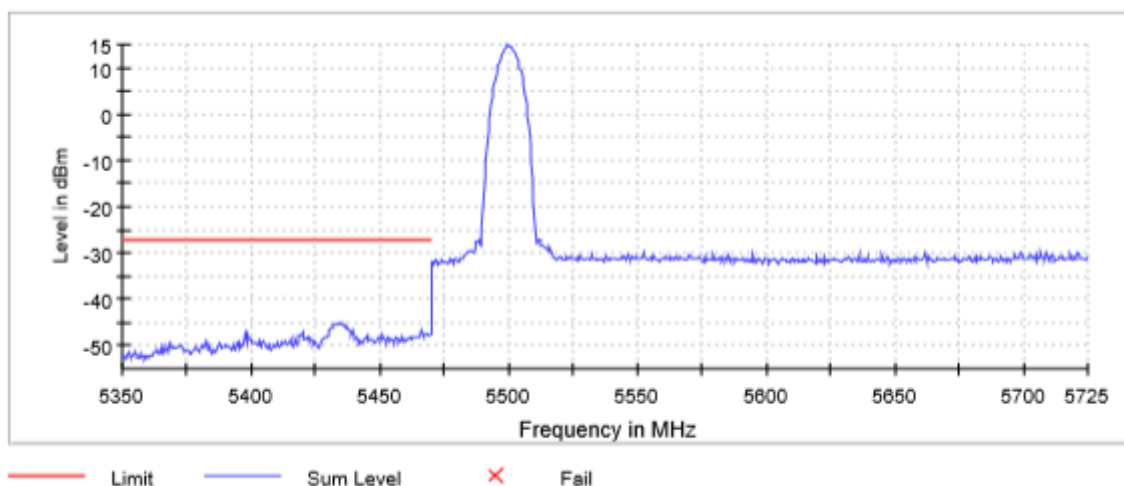
For transmitters operating in the 5.47 – 5.725 GHz band: all emissions outside the frequency band shall not exceed an EIRP of -27 dBm /MHz

TEST SETUP



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

Lowest Channel

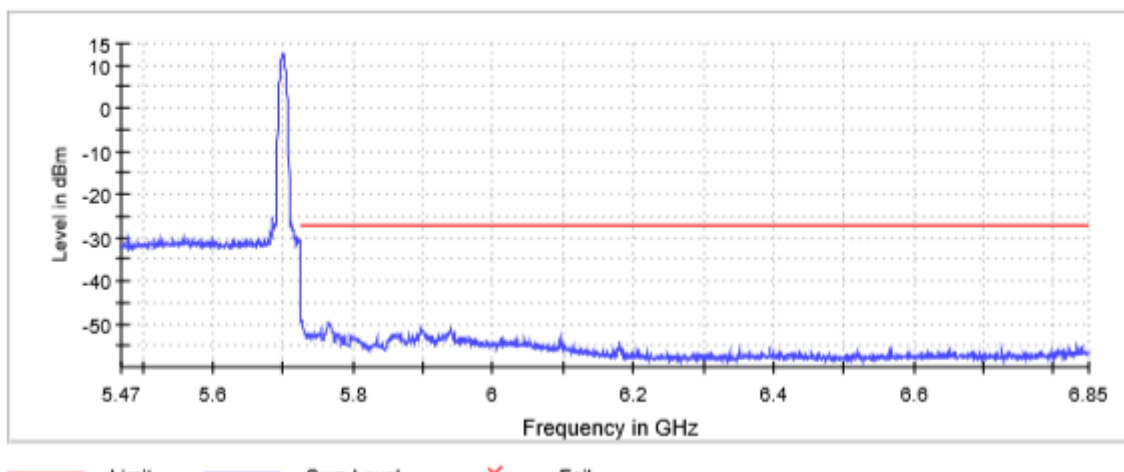


Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.35000 GHz	5.47000 GHz
Stop Frequency	5.47000 GHz	5.72500 GHz
Span	120.000 MHz	255.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	240	510
Sweeptime	24.000 ms	51.000 ms
Reference Level	-10.000 dBm	20.000 dBm
Attenuation	10.000 dB	40.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
Sweeptype	sweep	sweep
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	8 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.26 dB

TEST RESULTS (Cont.):

Highest Channel



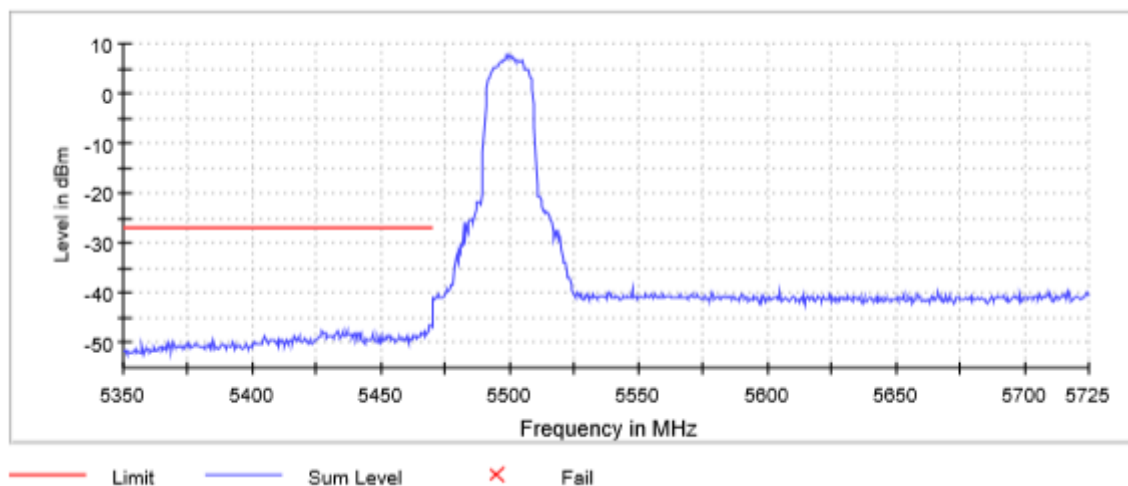
Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.72500 GHz
Stop Frequency	5.72500 GHz	6.85000 GHz
Span	255.000 MHz	1.125 GHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	510	2250
Sweptime	51.000 ms	255.000 ms
Reference Level	20.000 dBm	-10.000 dBm
Attenuation	40.000 dB	10.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	sweep	sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	5 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.40 dB	0.00 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode 20 MHz)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

Lowest Channel

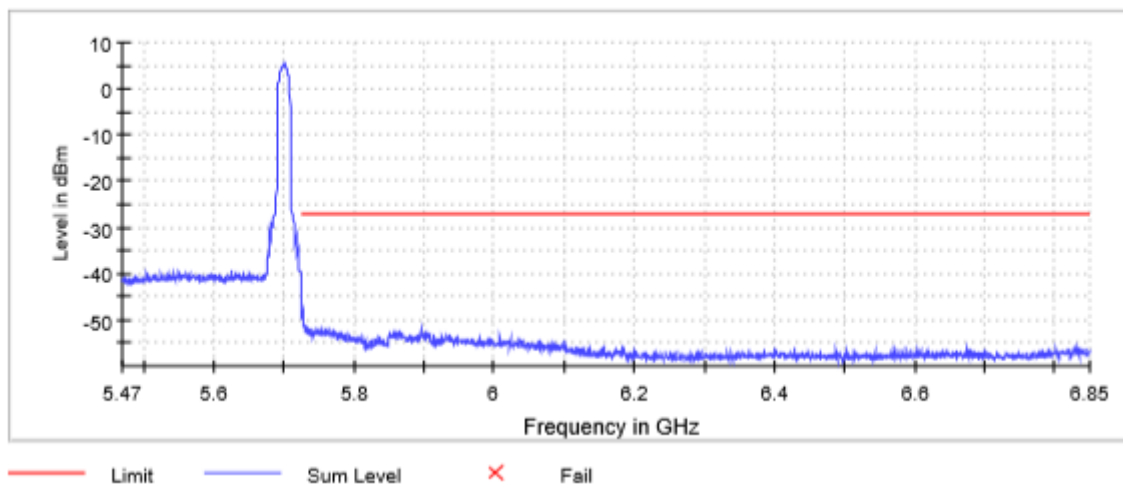


Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.35000 GHz	5.47000 GHz
Stop Frequency	5.47000 GHz	5.72500 GHz
Span	120.000 MHz	255.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	240	510
Sweeptime	24.000 ms	51.000 ms
Reference Level	-10.000 dBm	20.000 dBm
Attenuation	10.000 dB	40.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
Sweeptype	sweep	sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	13 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.43 dB

TEST RESULTS (Cont.):

Highest Channel



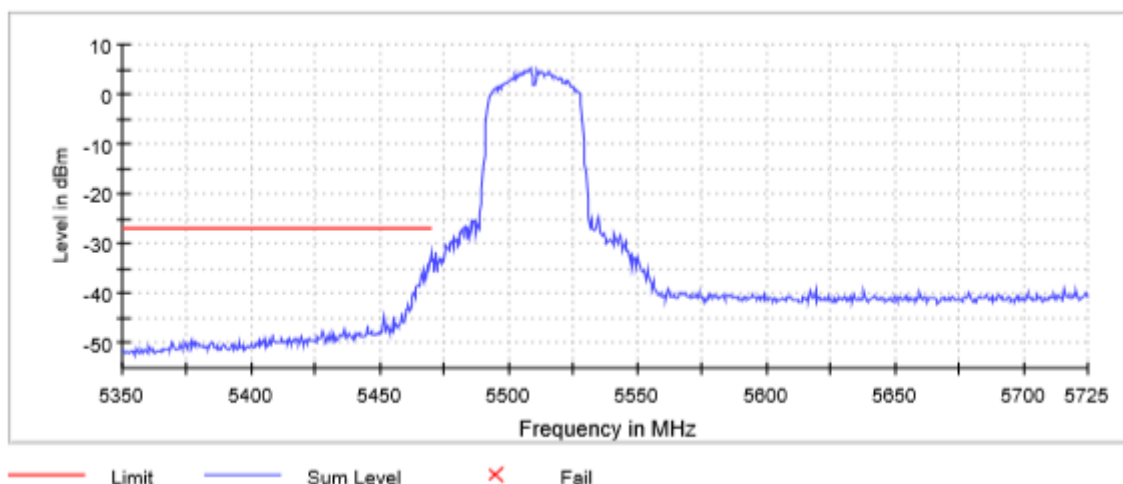
Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.72500 GHz
Stop Frequency	5.72500 GHz	6.85000 GHz
Span	255 MHz	1.125 GHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	510	2250
SweepTime	51.000 ms	255.000 ms
Reference Level	10.000 dBm	-10.000 dBm
Attenuation	30.000 dB	10.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
Sweeptype	sweep	sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	17 / 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 40 MHz)
TEST RESULTS:	PASS

Bandwidth: 40 MHz

Lowest Channel

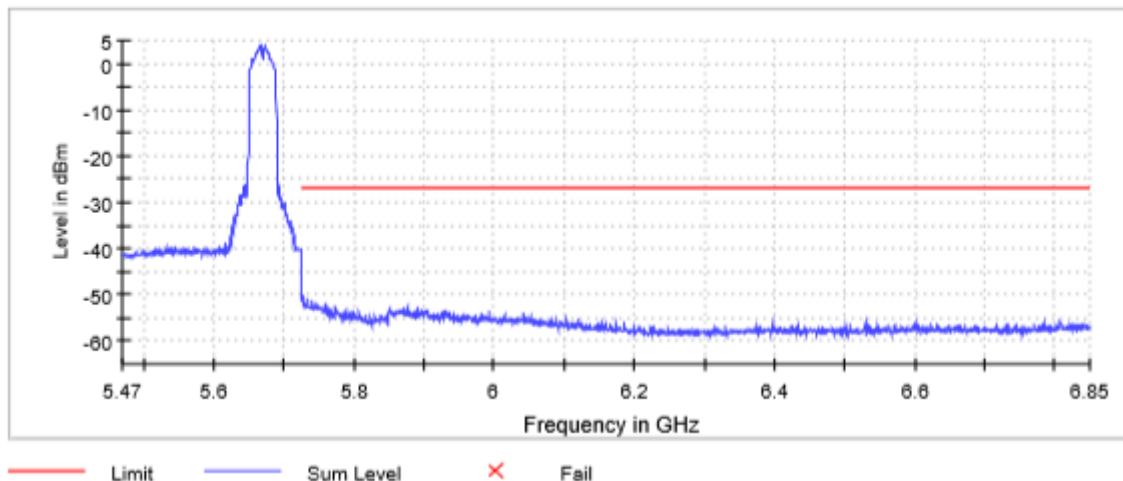


Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	4.35000 GHz	5.47000 GHz
Stop Frequency	5.47000 GHz	5.72500 GHz
Span	120.000 MHz	255.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	240	510
Sweeptime	24.000 ms	51.000 ms
Reference Level	-10.000 dBm	10.000 dBm
Attenuation	10.000 dB	30.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	Channel	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	sweep
Preamplifier	Off	Off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	13 / max. 150	13 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.34 dB

TEST RESULTS (Cont.):

Highest Channel



Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.72500 GHz
Stop Frequency	5.72500 GHz	6.85000 GHz
Span	255 MHz	1.125 GHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	510	2250
Sweptime	51.000 ms	255.000 ms
Reference Level	10.000 dBm	-10.000 dBm
Attenuation	30.000 dB	10.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
Sweeptype	sweep	sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	26 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.22 dB	0.00 dB

TEST D.5: 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)(3)(6)(7) and RSS-247 6.2.3.2

LIMITS

For transmitters operating in the 5.47 – 5.725 GHz band: all emissions outside of the 5.47 – 5.725 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.

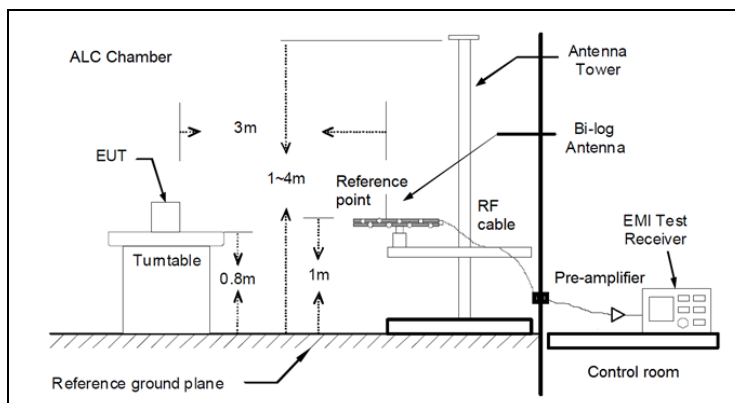
The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

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

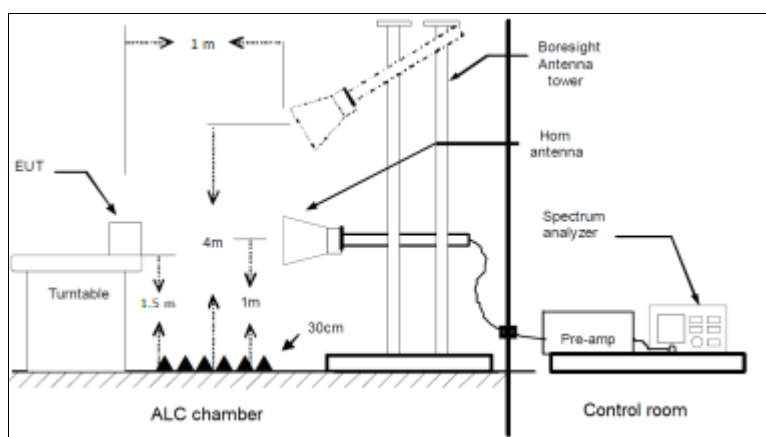
The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

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

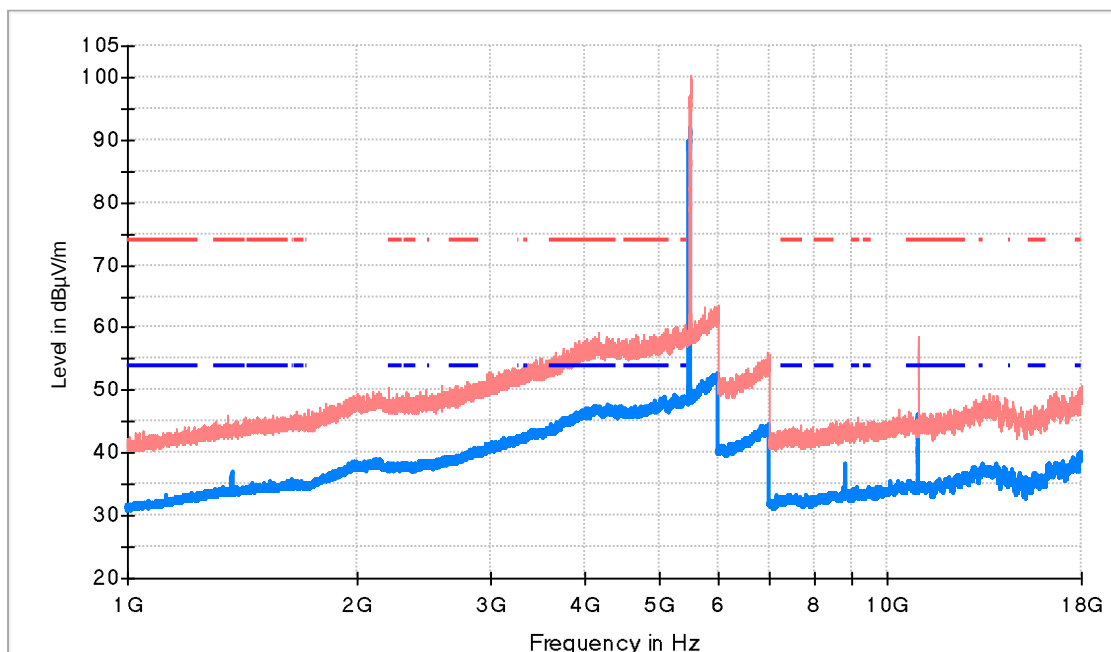
Frequency range 1 GHz – 40 GHz

The results and plots below show the maximum measured levels in the 1- 40 GHz range.

TEST RESULTS (Cont.)

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

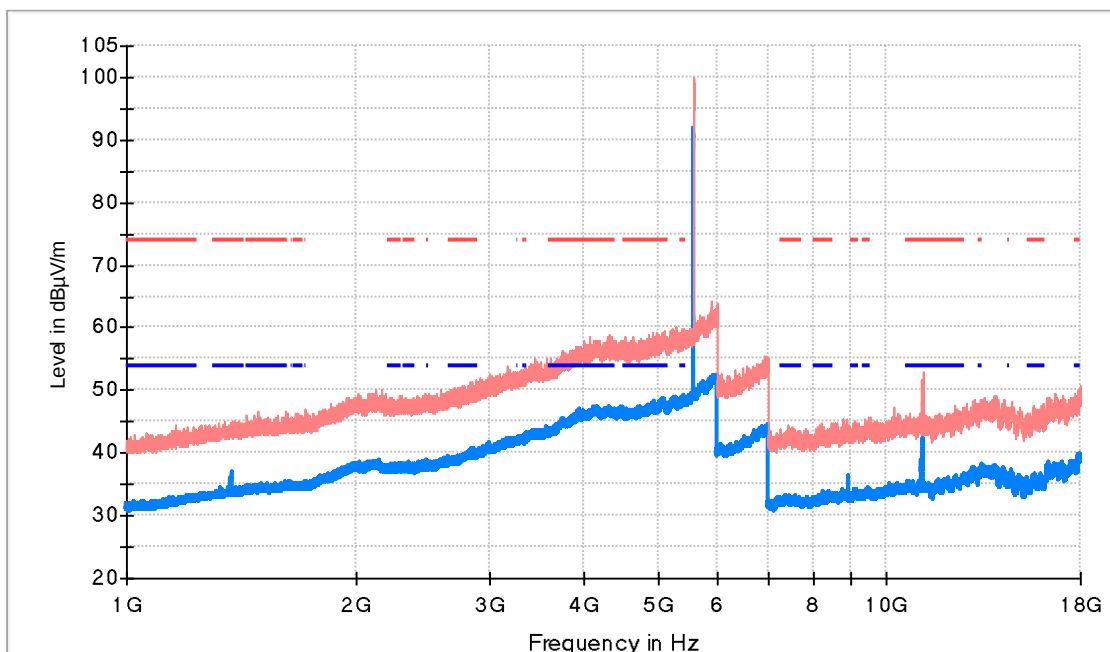
Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
1374.772727	44.7	37.0	H	
5499.090909	99.1	91.8	H	Fundamental
8799.818182	44.6	38.0	V	
10999.090909	54.4	46.0	H	

TEST RESULTS (Cont.)

1 GHz – 18 GHz

Middle 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

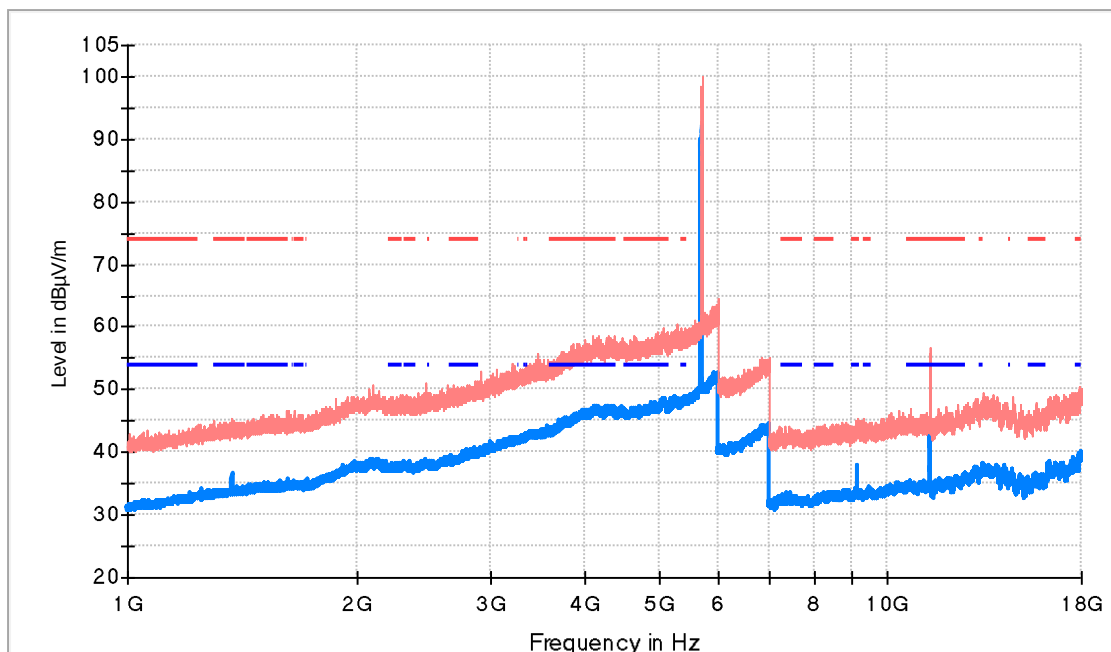
Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
1375.000000	44.5	37.0	H	
5578.636364	98.8	91.7	H	Fundamental
8928.000000	44.1	36.4	V	
11156.727273	51.5	42.3	H	

TEST RESULTS (Cont.)

1 GHz – 18 GHz

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

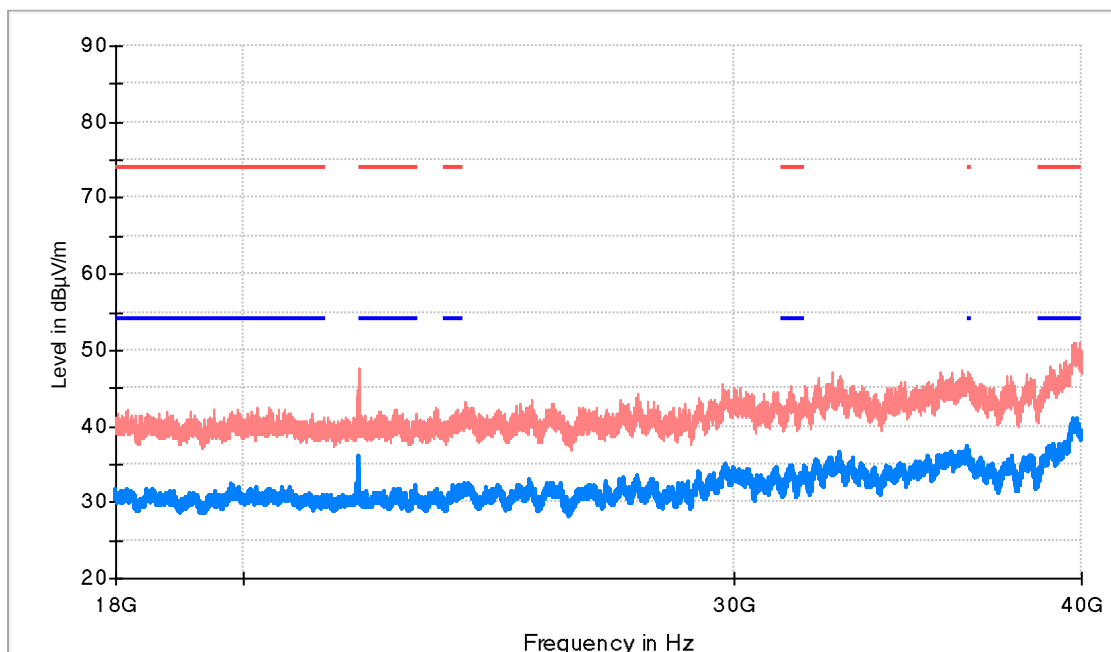
Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
1375.000000	44.4	36.7	H	
5698.863636	98.3	92.1	H	Fundamental
9120.000000	45.1	37.7	V	
11396.181818	56.6	44.1	H	

TEST RESULTS (Cont.)

18 – 40 GHz

Low Channel



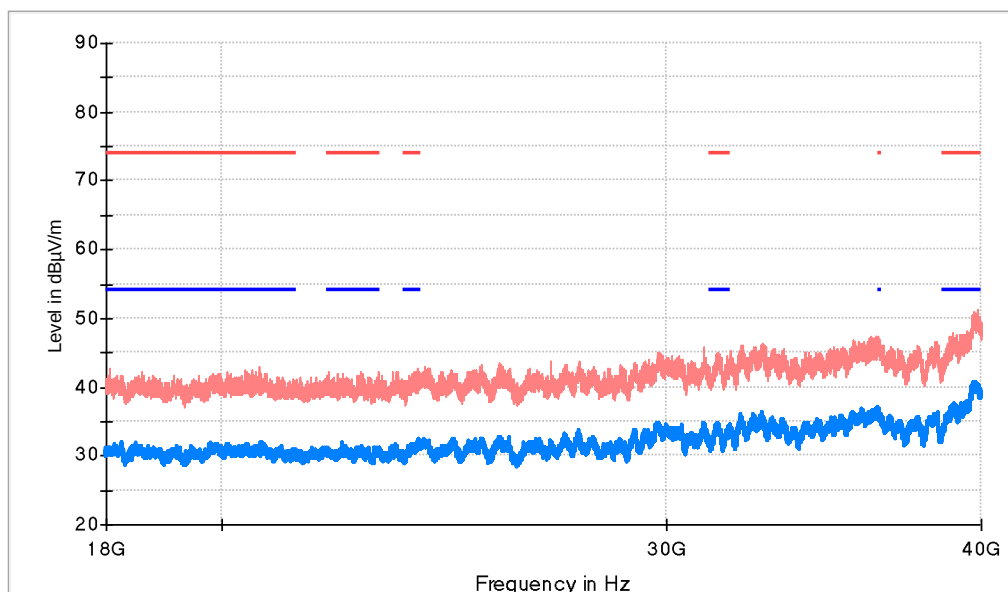
- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol
21999.875000	43.0	35.9	H

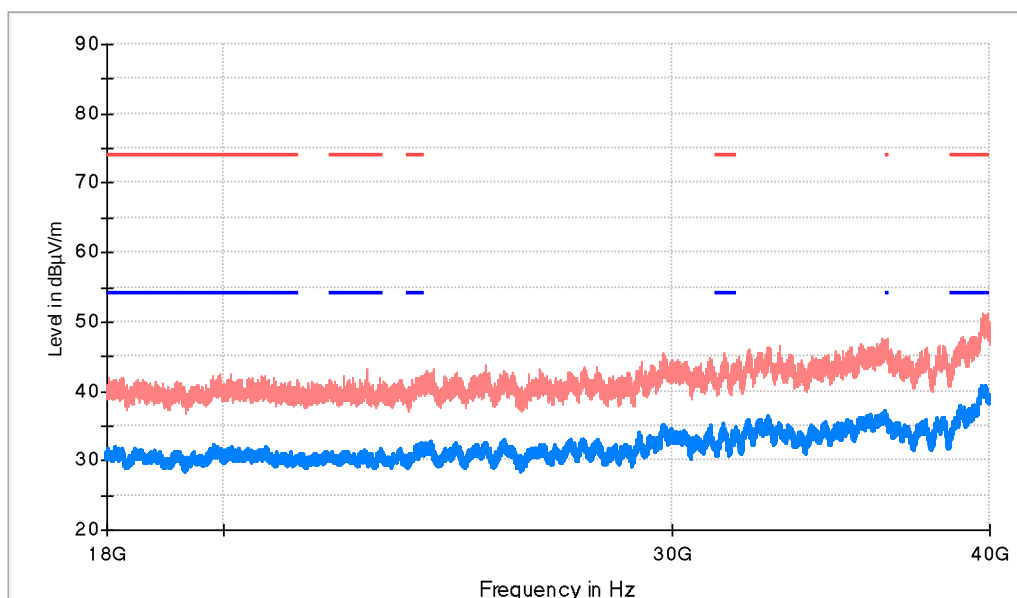
TEST RESULTS (Cont.)

Middle 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

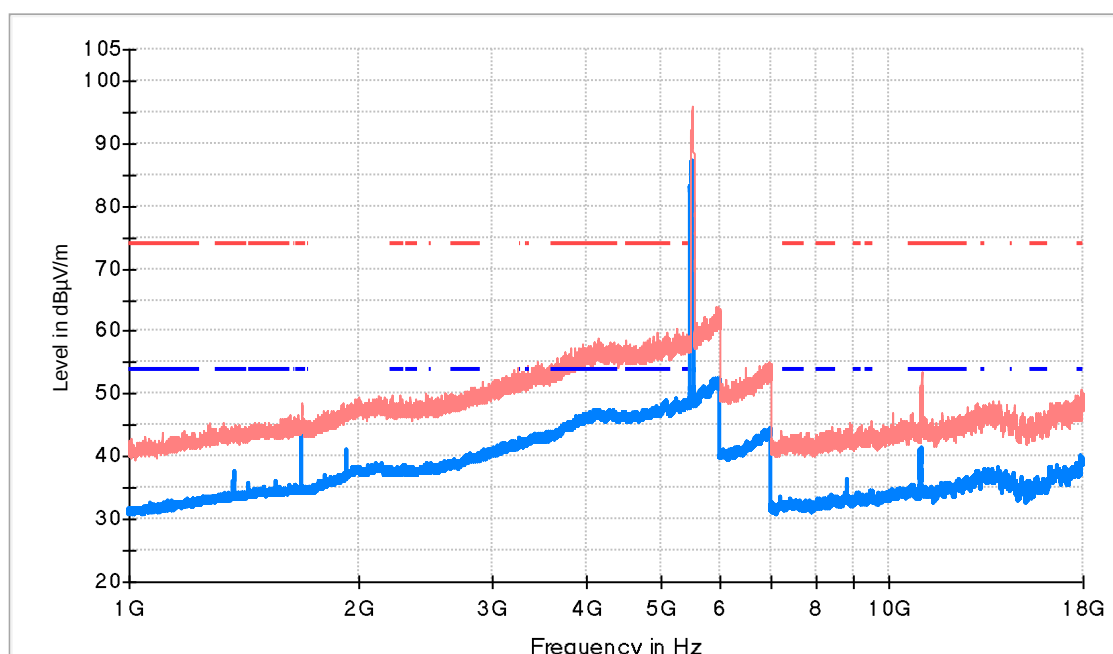
TESTED SAMPLES:	S/02
TESTED CONDITIONS MODES:	TC#02 (n mode 40 MHz)
TEST RESULTS:	PASS

Frequency range 1 GHz – 40 GHz

The results and plots below show the maximum measured levels in the 1- 40 GHz range.

FREQUENCY RANGE	1 GHz – 18 GHz
-----------------	----------------

Low Channel



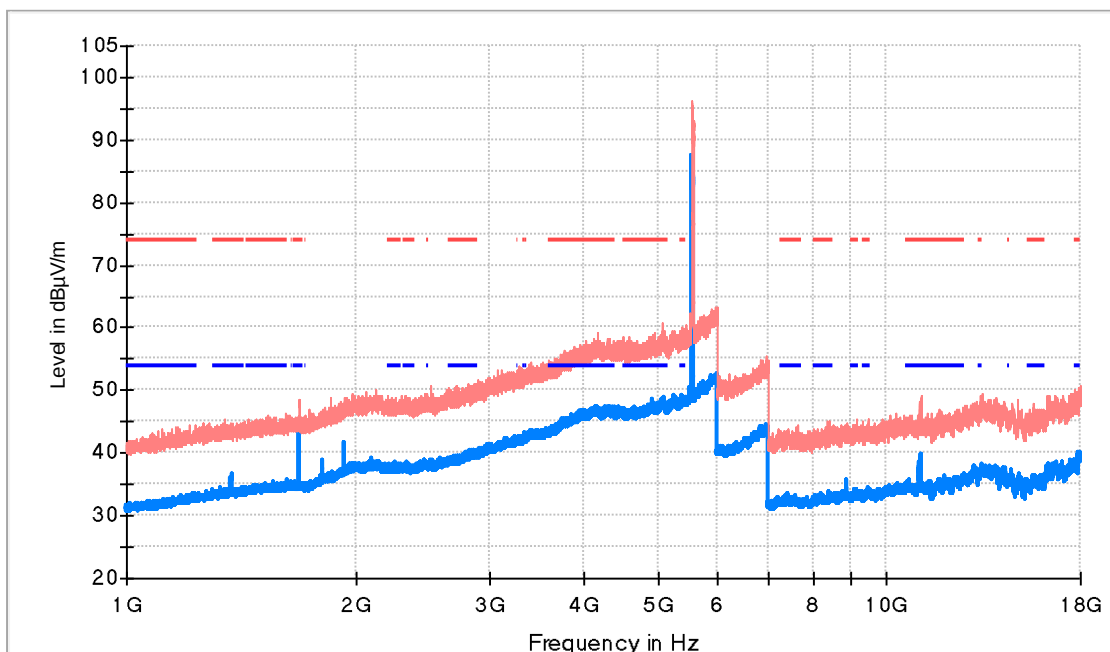
- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
1375.000000	44.0	37.5	H	
1687.500000	48.6	44.1	V	
1937.500000	48.1	41.1	H	
5507.727273	95.7	87.2	H	Fundamental
8815.636364	43.5	36.3	V	
11022.000000	49.5	41.2	H	

TEST RESULTS (Cont.)

Middle Channel



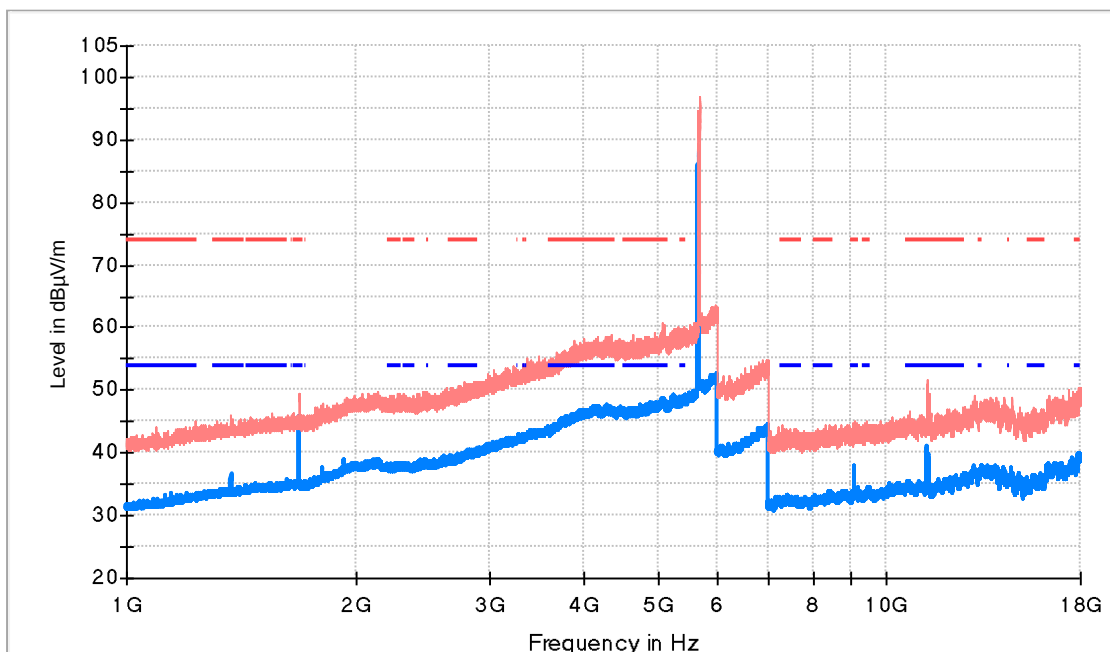
- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
1375.000000	43.6	36.7	H	
1687.500000	47.6	43.8	H	
1937.500000	48.4	41.8	H	
5551.590909	94.0	87.5	H	Fundamental
8880.000000	44.2	35.7	V	
11100.545455	48.1	39.9	H	

TEST RESULTS (Cont.)

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

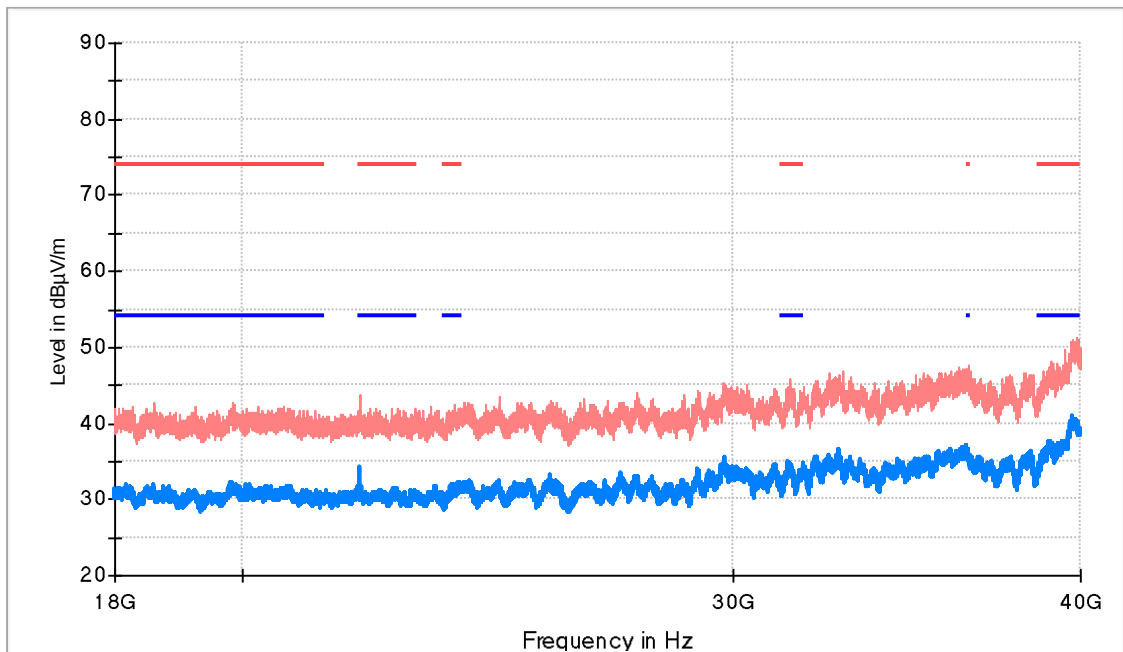
Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
1375.000000	43.9	36.7	H	
1687.500000	49.4	45.8	V	
5671.363636	96.0	88.3	H	Fundamental
9072.000000	44.4	37.8	V	
11337.818182	49.8	41.1	H	
1375.000000	43.9	36.7	H	

TEST RESULTS (Cont.)

18 GHz – 40 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

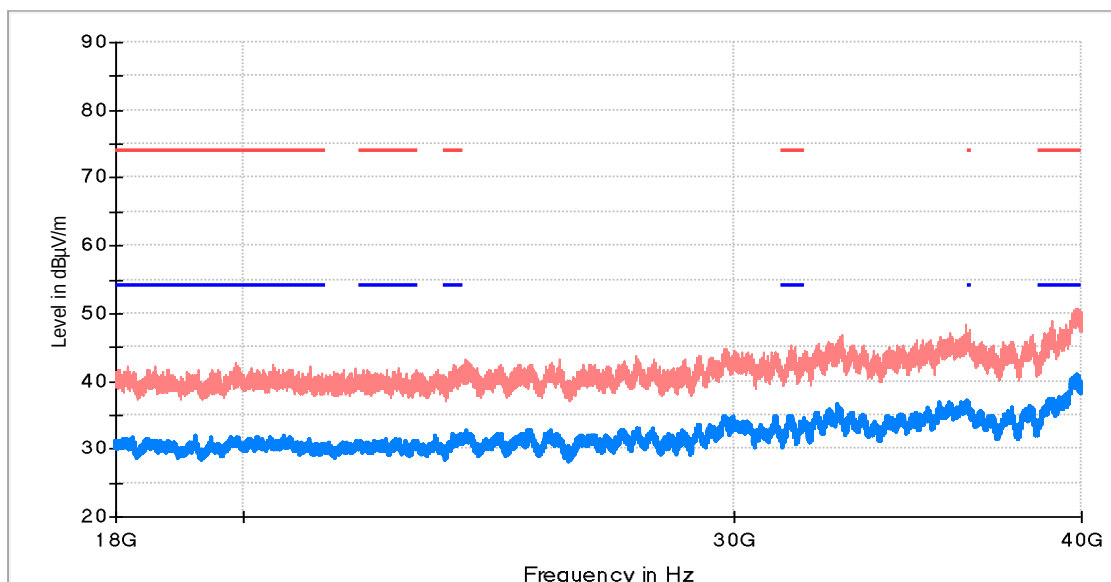
Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol
22040.437500	43.8	34.3	H

TEST RESULTS (Cont.)

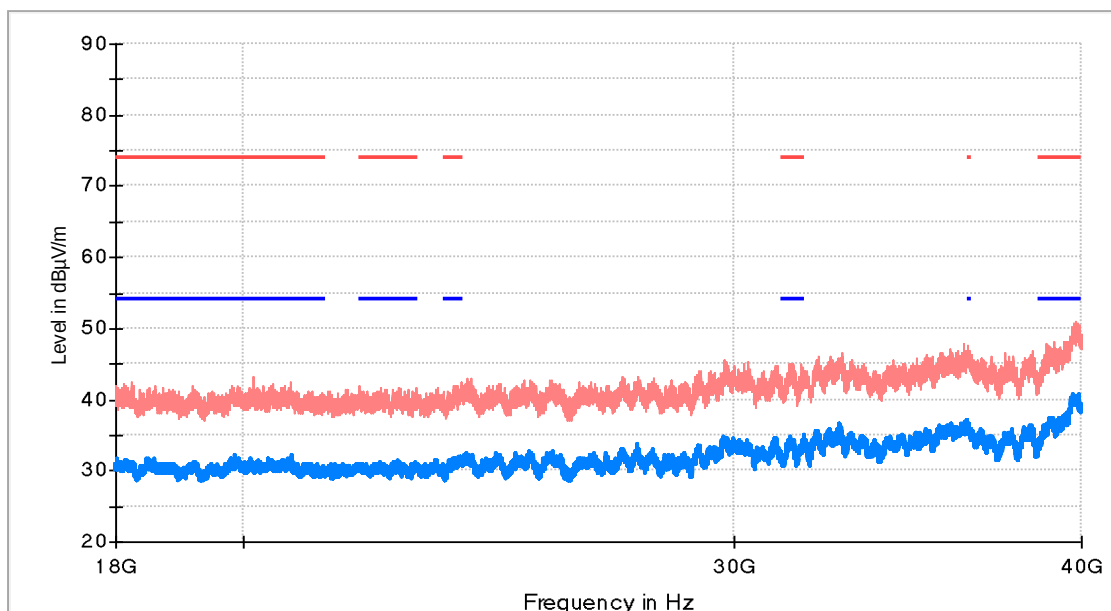
18 GHz – 40 GHz

Middle 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

Appendix E:

Test results 5.725 GHz – 5.85 GHz Band

Appendix E Content

DESCRIPTION OF TEST CONDITIONS159

TEST E.1: 26DB EMISSION BANDWIDTH AND OCCUPIED BANDWIDTH160

TEST E.2: 6DB BANDWIDTH.....160

TEST E.3: POWER LIMITS. MAXIMUM OUTPUT POWER.....180

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TEST E.6: UNDESIRABLE RADIATED EMISSIONS (TRANSMITTER)201

DESCRIPTION OF TEST CONDITIONS

TEST CONDITIONS	DESCRIPTION
TC#01 ⁽¹⁾ (a mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 13.5 \text{ Vdc}$ <u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u> Lowest channel: 5745 MHz Middle channel: 5785 MHz Highest channel: 5825 MHz
TC#02 ⁽¹⁾ (n mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 13.5 \text{ Vdc}$ <u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u> Lowest channel: 5745 MHz Middle channel: 5785 MHz Highest channel: 5825 MHz <u>Test Frequencies for Conducted/Radiated tests (40 MHz):</u> Lowest channel: 5755 MHz Highest channel: 5795 MHz

Note (1): For spurious emissions for OFDM modes 802.11a, 802.11n20 and 802.11n40 a preliminary scan was performed to determine the worst case.

The data rates of 6Mb/s for 802.11a and MCS0 for 802.11n40 were selected based on preliminary testing that identified those rates corresponding to the worst cases.

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

LIMITS:

Product standard:

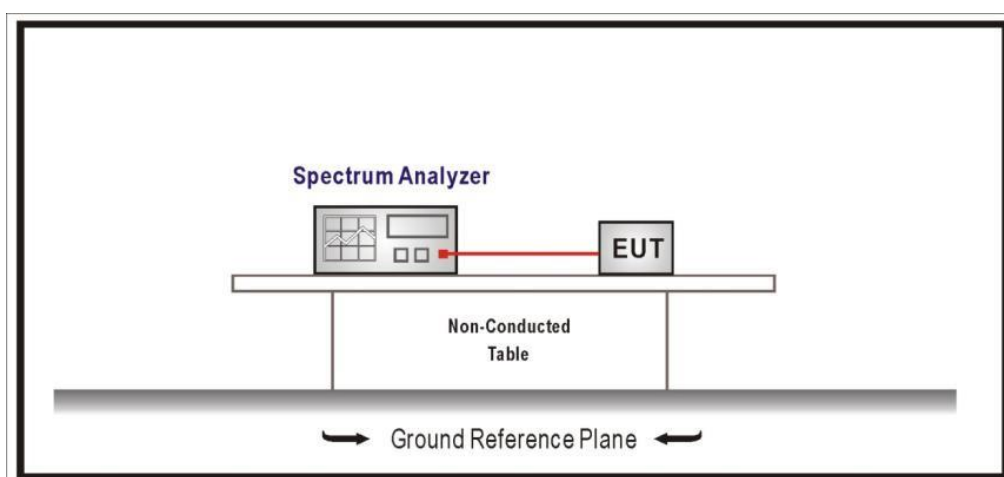
Part 15 Subpart C §15.403 and RSS-247

Test standard:

Part 15 Subpart C §15.403 and RSS-247 6.2.4

No requirements requested

TEST SETUP:



TESTED SAMPLES:

S/01

TESTED CONDITIONS MODES:

TC#01 (a mode)

TEST RESULTS:

PASS

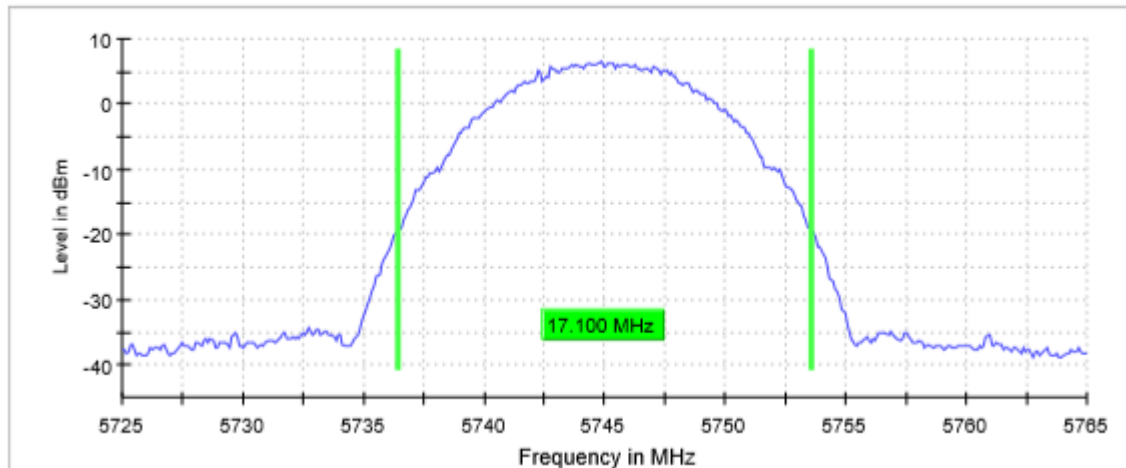
Bandwidth: 20 MHz

	Lowest frequency 5745 MHz	Middle frequency 5785 MHz	Highest frequency 5825 MHz
26dB Bandwidth (MHz)	17.100	17.300	17.200
Occupied bandwidth (MHz)	12.900	13.000	13.100
Measurement uncertainty (kHz)	<± 8.33		

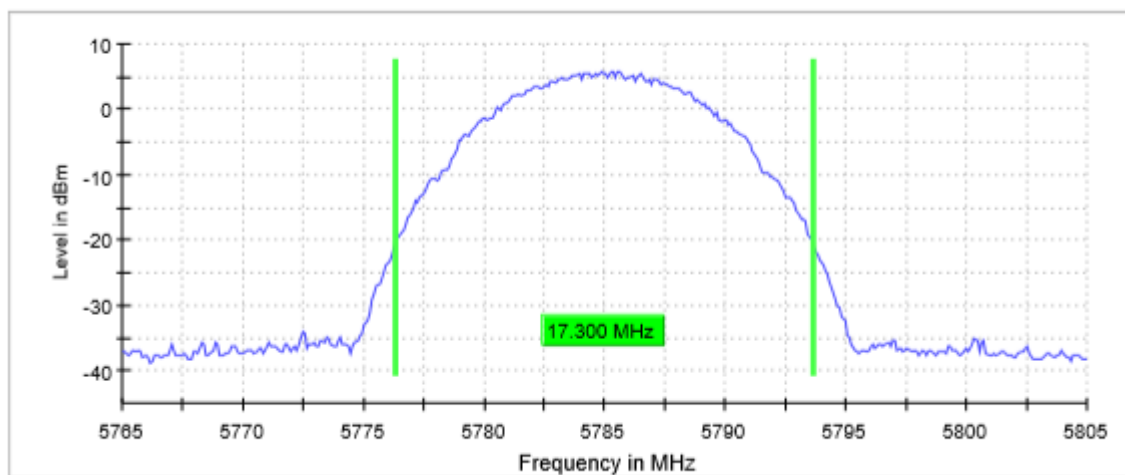
TEST RESULTS (Cont.):

26 dB BANDWIDTH

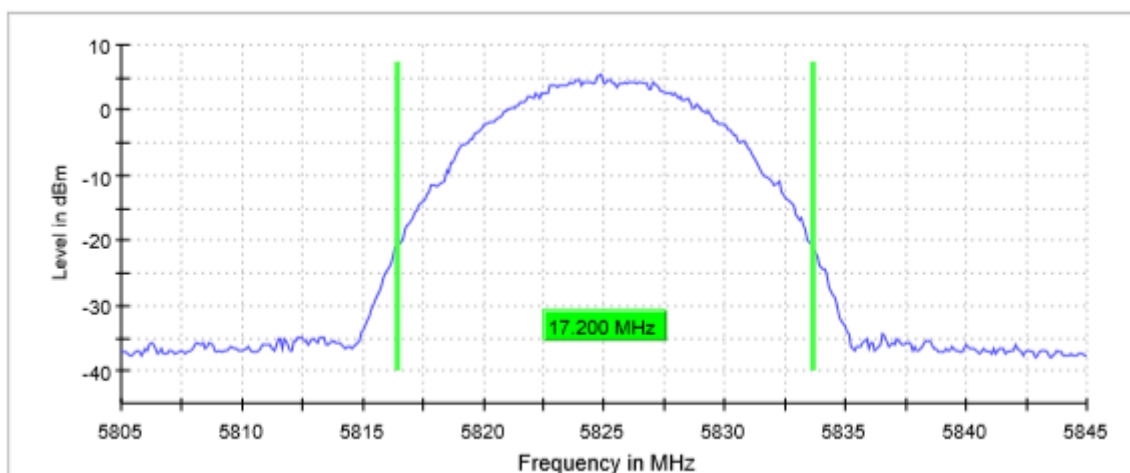
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.)

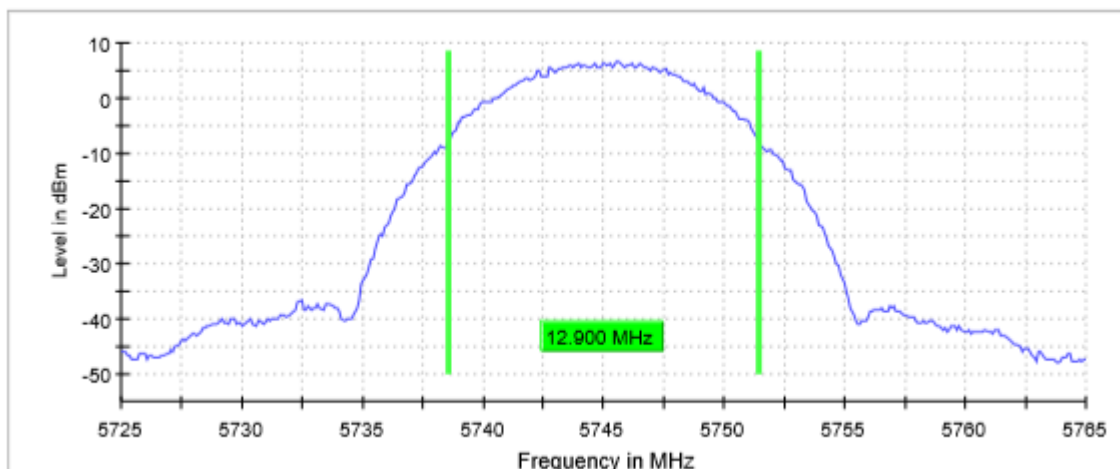
Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.72500 GHz	5.76500 GHz	5.80500 GHz
Stop Frequency	5.76500 GHz	5.80500 GHz	5.84500 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	400	400	400
Sweeptime	28.477 μ s	28.477 μ s	28.477 μ s
Reference Level	20.000 dBm	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB	40.000 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
Preamp	Off	Off	Off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	45 / max. 150	63 / max. 150	77 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.23 dB	0.28 dB	0.00 dB

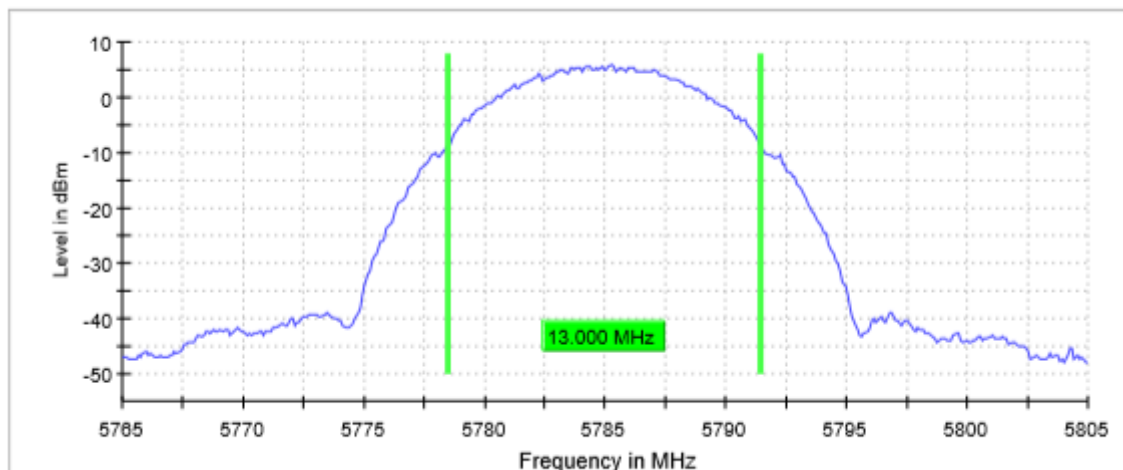
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

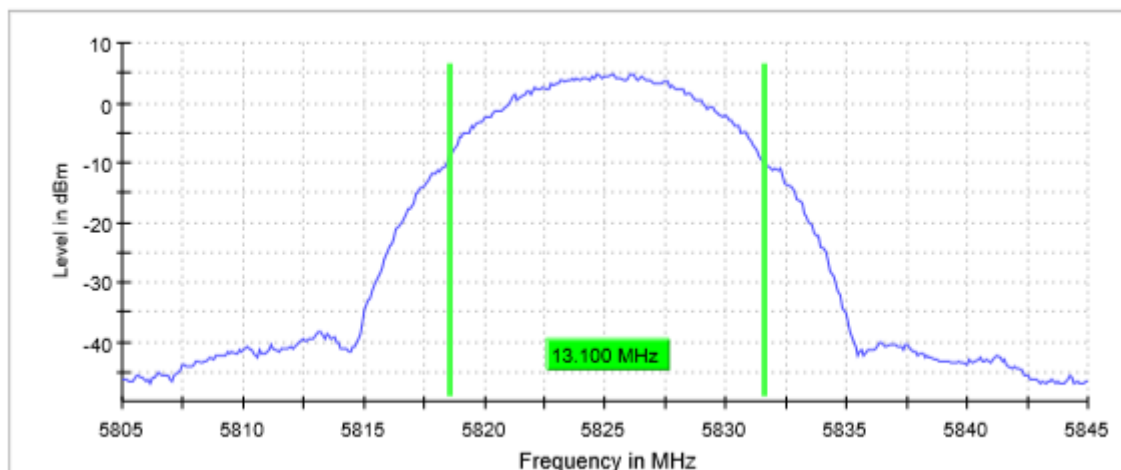
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.)			
Measurement			
Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.72500 GHz	5.76500 GHz	5.80500 GHz
Stop Frequency	5.76500 GHz	5.80500 GHz	5.84500 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	400	400	400
SweepTime	28.477 μs	28.477 μs	28.477 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
Preamp	Off	Off	Off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	70 / max. 150	58 / max. 150	87 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.21 dB	0.07 dB	0.28 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n Mode 20 MHz)
TEST RESULTS:	PASS

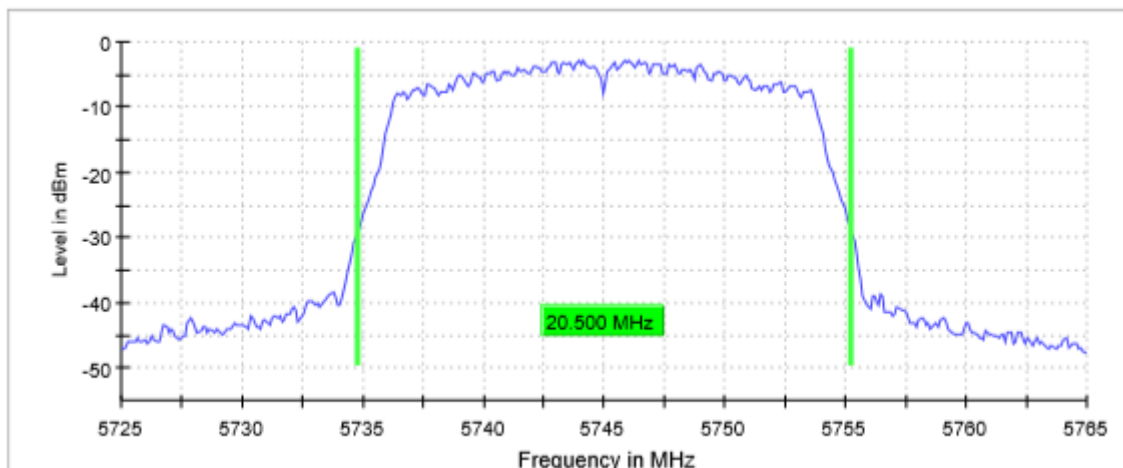
Bandwidth: 20 MHz

	Lowest frequency	Middle frequency	Highest frequency
	5745 MHz	5785 MHz	5825 MHz
26dB bandwidth (MHz)	20.500	20.500	20.600
Occupied bandwidth (MHz)	17.600	17.700	17.600
Measurement uncertainty (kHz)	<± 8.33		

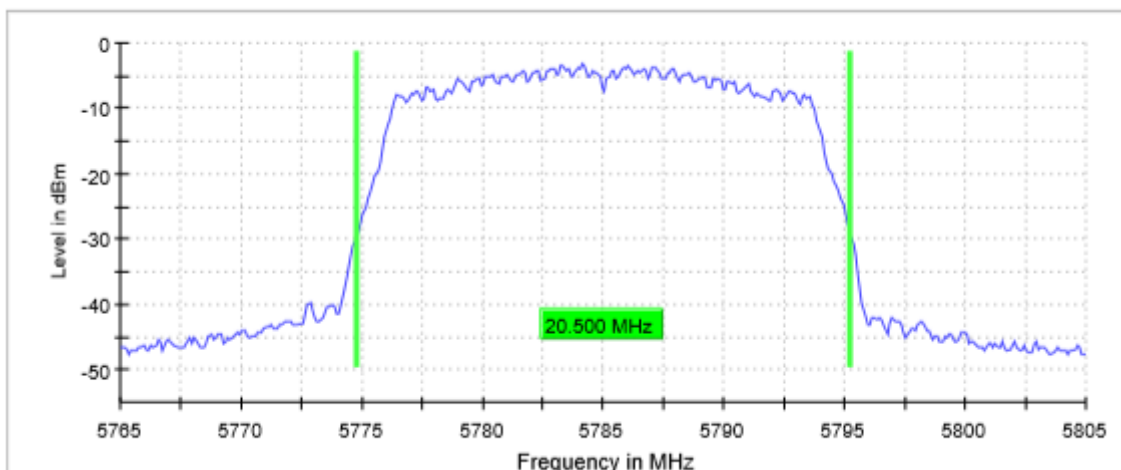
TEST RESULTS (Cont.):

26 dB BANDWIDTH

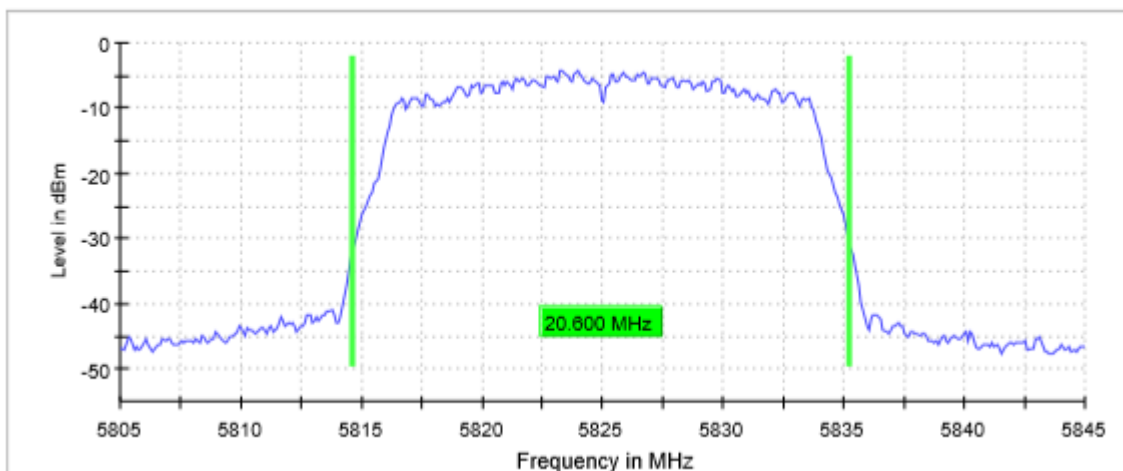
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.):

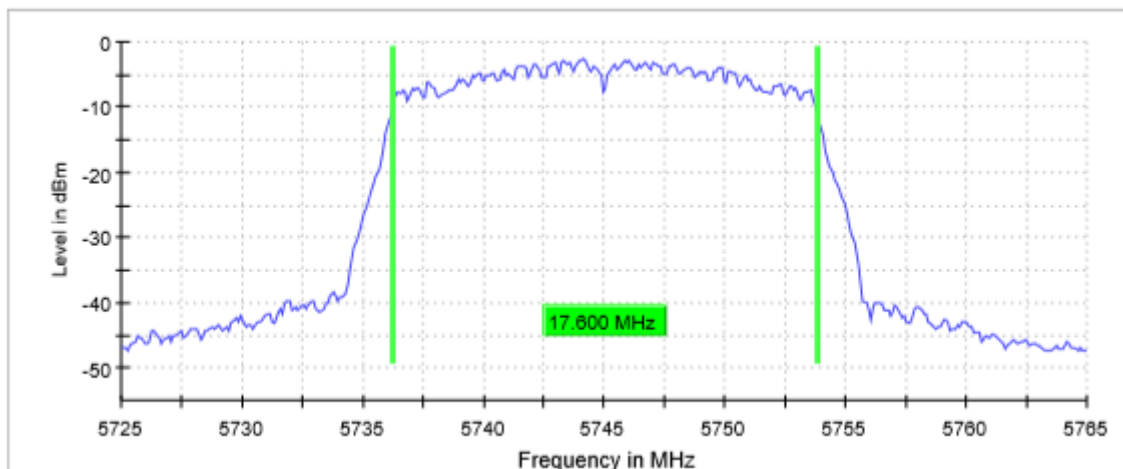
Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.72500 GHz	5.76500 GHz	5.80500 GHz
Stop Frequency	5.76500 GHz	5.80500 GHz	5.84500 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	400	400	400
Sweeptime	28.477 μ s	28.477 μ s	28.477 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
Preamp	Off	Off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	55 / max. 150	51 / max. 150	34 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.19 dB	0.27 dB	0.00 dB

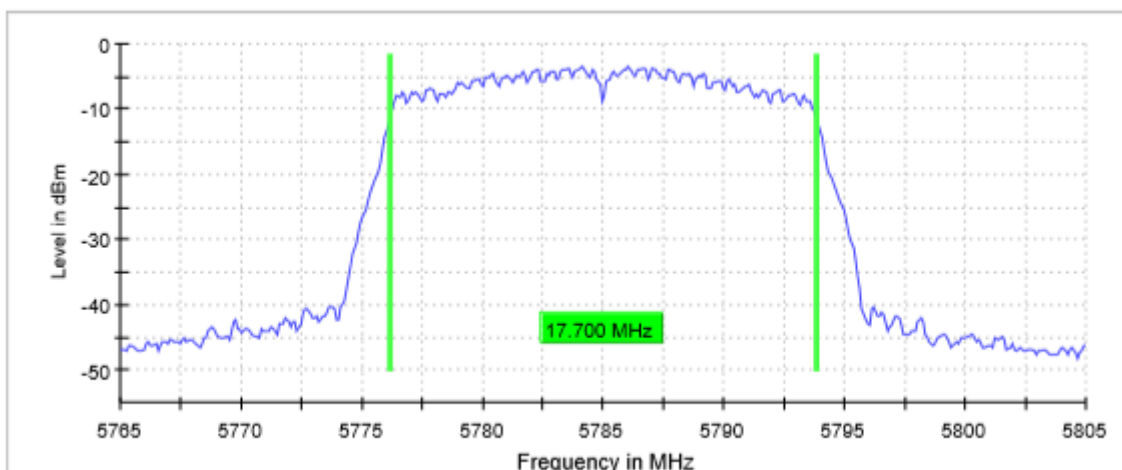
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

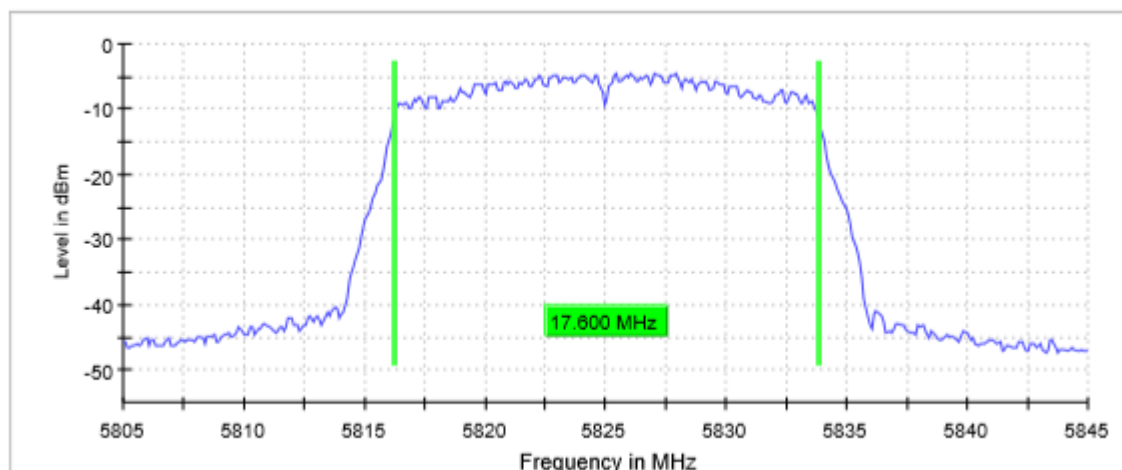
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.):

Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.72500 GHz	5.76500 GHz	5.80500 GHz
Stop Frequency	5.76500 GHz	5.80500 GHz	5.84500 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	400	400	400
Sweeptime	28.477 μ s	28.477 μ s	28.477 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
Preampl	Off	Off	Off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	55 / max. 150	59 / max. 150	73 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.08 dB	0.17 dB	0.11 dB

TESTED SAMPLES:

S/01

TESTED CONDITIONS MODES:

TC#02 (n Mode 40 MHz)

TEST RESULTS:

PASS

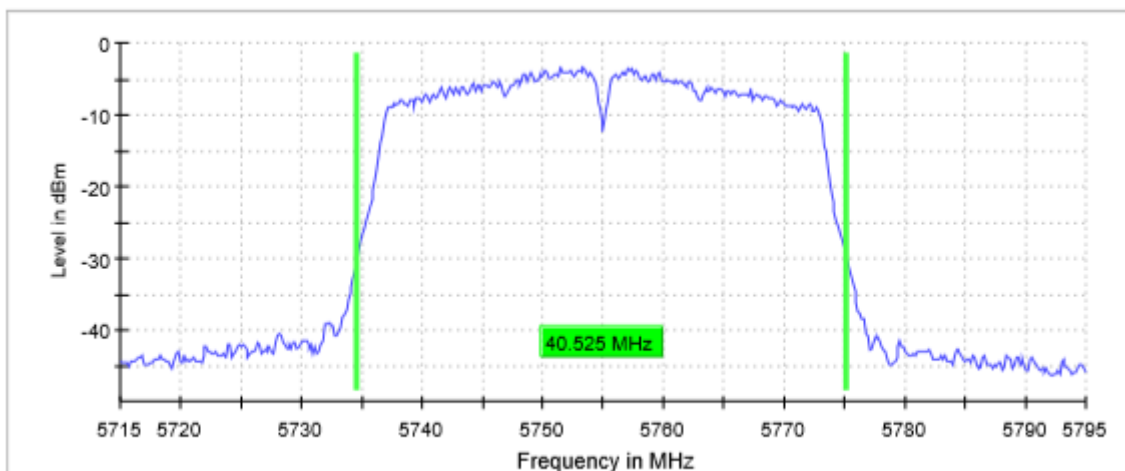
Bandwidth: 40 MHz

	Lowest frequency 5755 MHz	Highest frequency 5795 MHz
26dB bandwidth (MHz)	40.525	40.525
Occupied bandwidth (MHz)	36.250	36.500
Measurement uncertainty (kHz)	< $\pm$ 8.33	

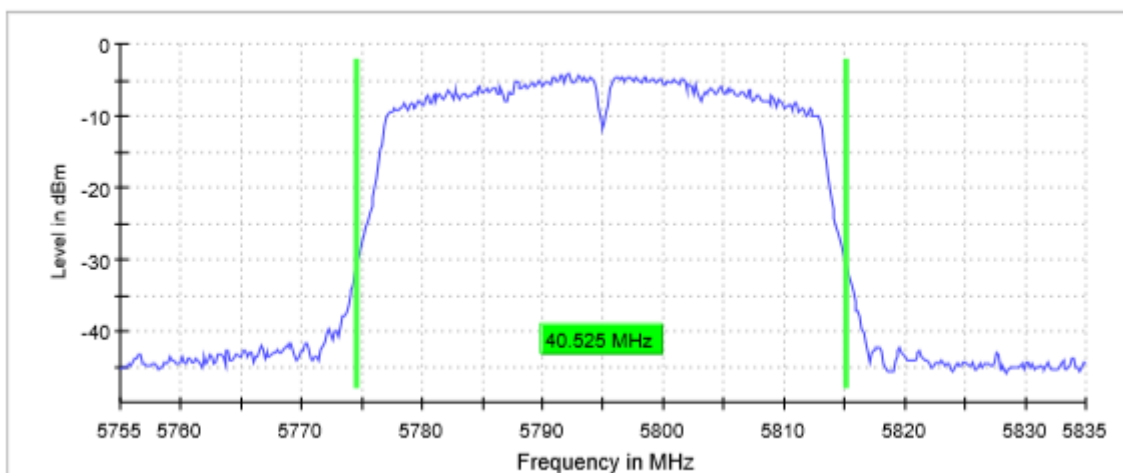
TEST RESULTS (Cont.):

26 dB BANDWIDTH

Lowest Channel



Highest Channel



TEST RESULTS (Cont.):

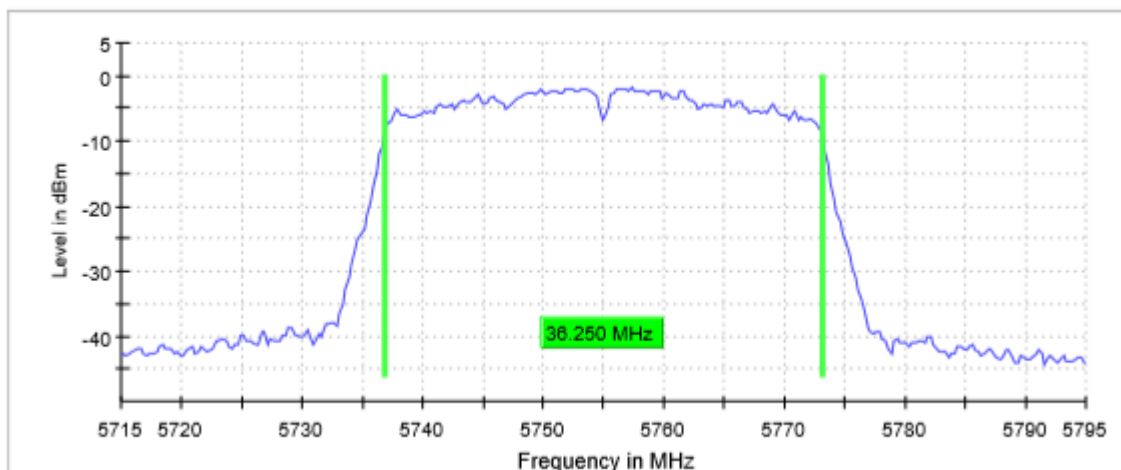
Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.71500 GHz	5.75500 GHz
Stop Frequency	5.79500 GHz	5.83500 GHz
Span	80.000 MHz	80.000 MHz
RBW	300.000 kHz	300.000 kHz
VBW	1.000 MHz	1.000 MHz
SweepPoints	533	533
Sweeptime	31.621 µs	31.621 µs
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	30.000 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	90 / max. 150	108 / max. 150
Stable	5 / 5	5 / 5
Max Stable Difference	0.11 dB	0.01 dB

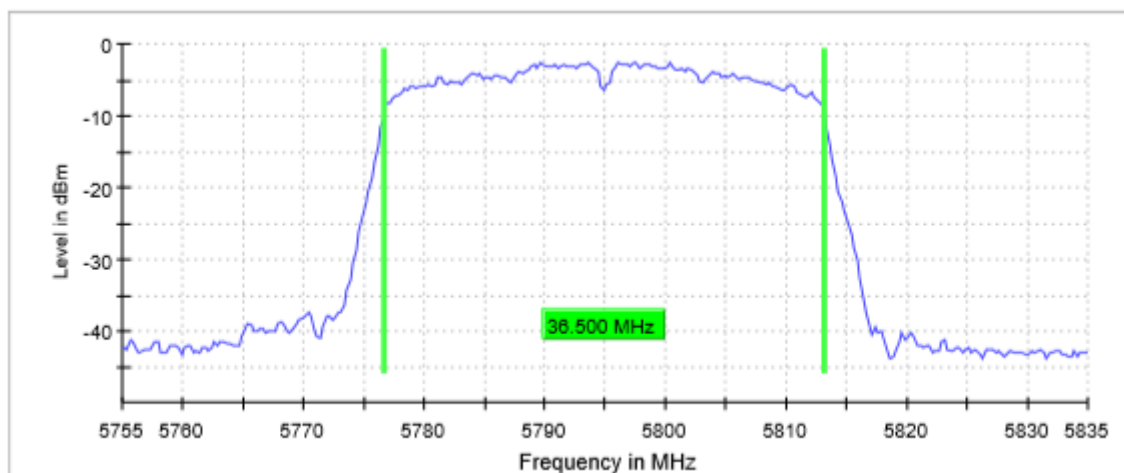
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

Lowest Channel



Highest Channel



TEST RESULTS (Cont.):

Measurement

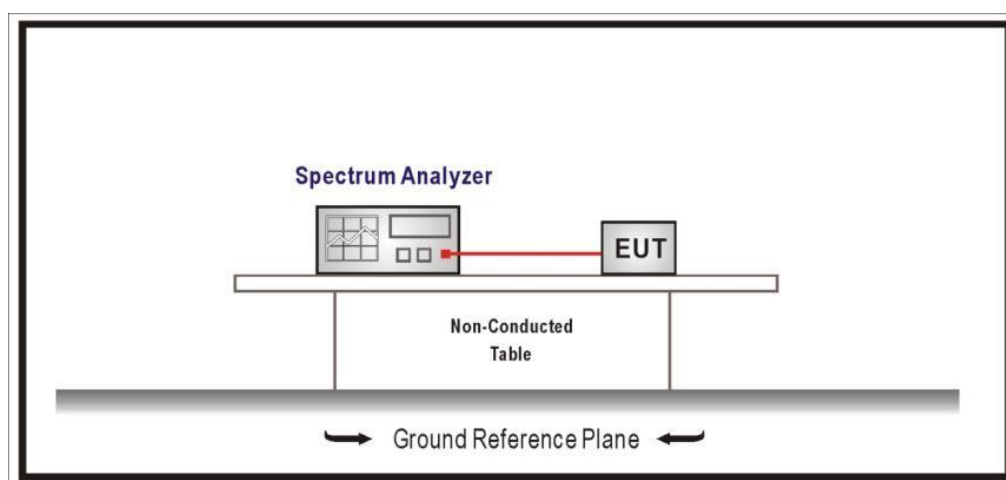
Setting	Instrument Value	Instrument Value
Start Frequency	5.71500 GHz	5.75500 GHz
Stop Frequency	5.79500 GHz	5.83500 GHz
Span	80.000 MHz	80.000 MHz
RBW	500.000 kHz	500.000 kHz
VBW	2.000 MHz	2.000 MHz
SweepPoints	320	320
SweepTime	18.906 μ s	18.906 μ s
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	30.000 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	65 / max. 150	75 / max. 150
Stable	5 / 5	5 / 5
Max Stable Difference	0.23 dB	0.11 dB

TEST E.2: 6DB BANDWIDTH

LIMITS:	Product standard:	Part 15 Subpart C §15.407 and RSS-247
	Test standard:	Part 15 Subpart C §15.407 (e) and RSS-247 6.2.4.1

Within the 5.725- 5.85 GHz band, the minimum 6dB bandwidth of U-NII devices shall be at least 500 kHz.

TEST SETUP:



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

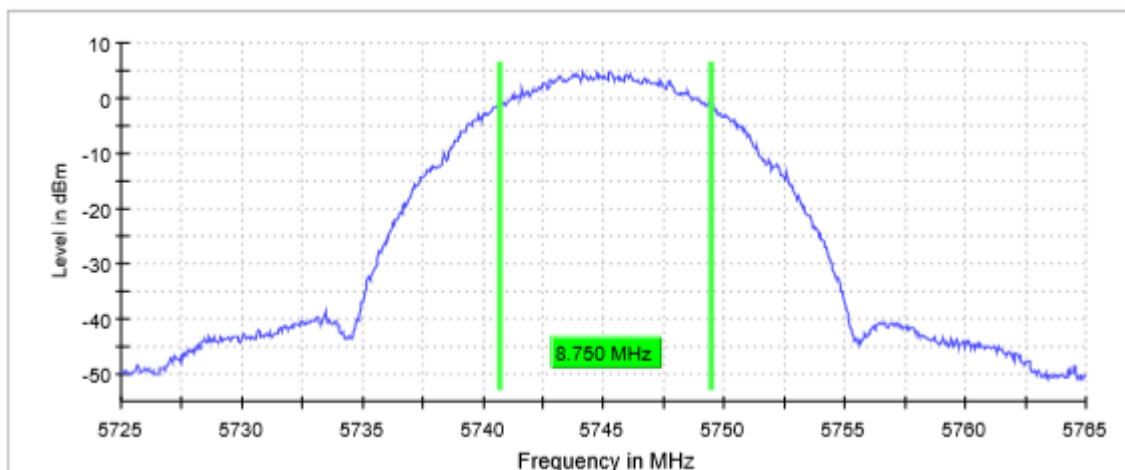
Bandwidth: 20 MHz

	Lowest frequency	Middle frequency	Highest frequency
	5745 MHz	5785 MHz	5825 MHz
6dB Bandwidth (MHz)	8.750	8.850	8.750
Measurement uncertainty (kHz)	<± 8.33		

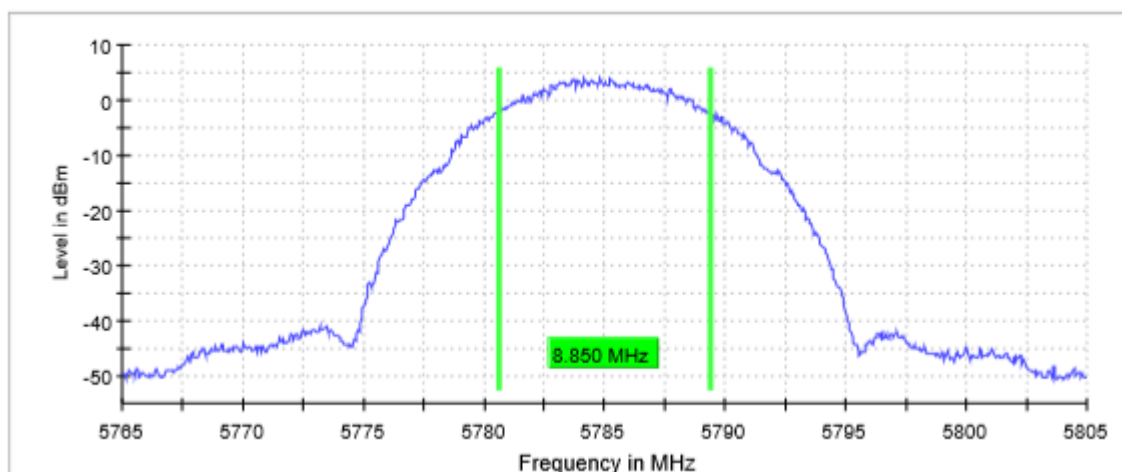
TEST RESULTS (Cont.):

6 dB BANDWIDTH

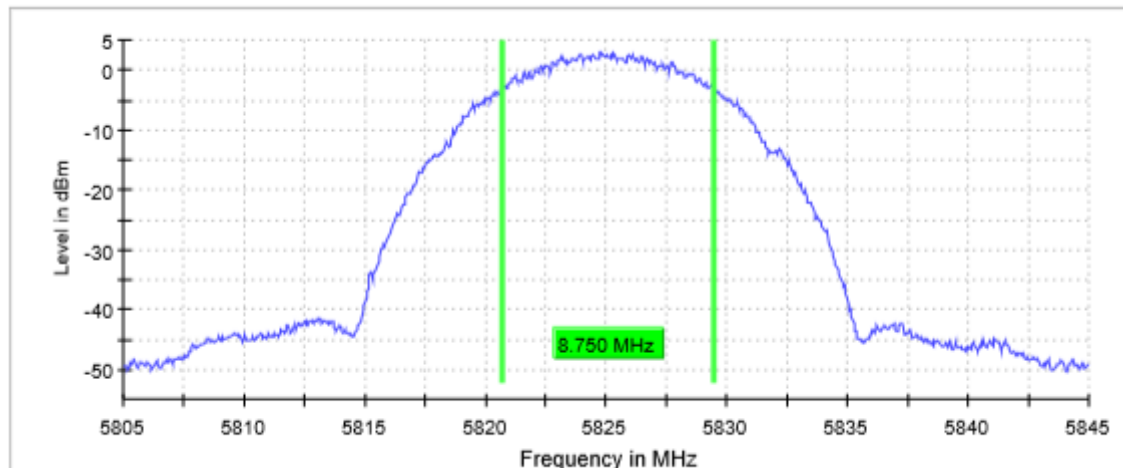
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.)			
Measurement			
Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.72500 GHz	5.76500 GHz	5.80500 GHz
Stop Frequency	5.76500 GHz	5.80500 GHz	5.84500 GHz
Span	40.000 MHz	40.000 MHz	40.000 MHz
RBW	100.000 kHz	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz	300.000 kHz
SweepPoints	800	800	800
Sweeptime	56.836 μs	56.836 μs	56.836 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
Preampl	Off	Off	Off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	104 / max. 150	102 / max. 150	108 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.06 dB	0.06 dB	0.00 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n Mode 20 MHz)
TEST RESULTS:	PASS

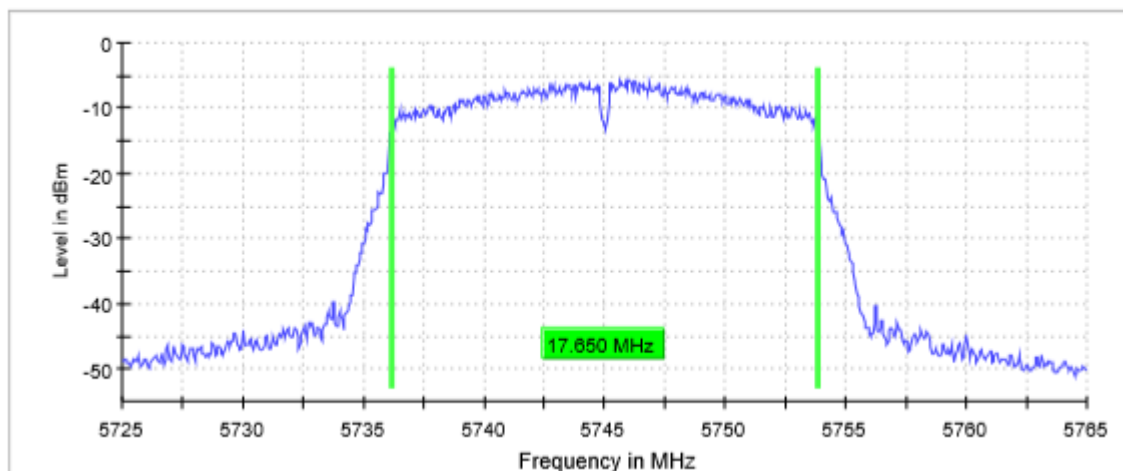
Bandwidth: 20 MHz

	Lowest frequency	Middle frequency	Highest frequency
	5745 MHz	5785 MHz	5825 MHz
6dB bandwidth (MHz)	17.650	17.650	17.650
Measurement uncertainty (kHz)	<± 8.33		

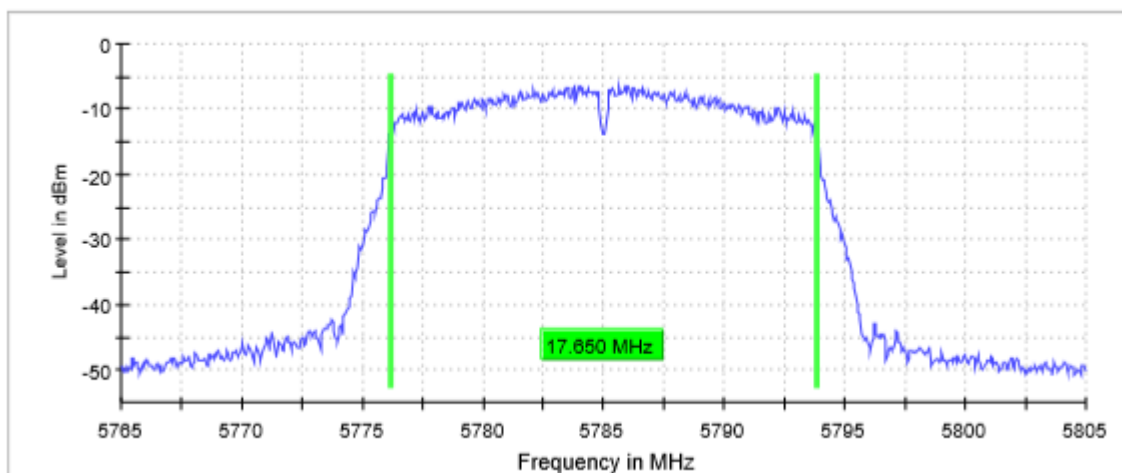
TEST RESULTS (Cont.):

6 dB BANDWIDTH

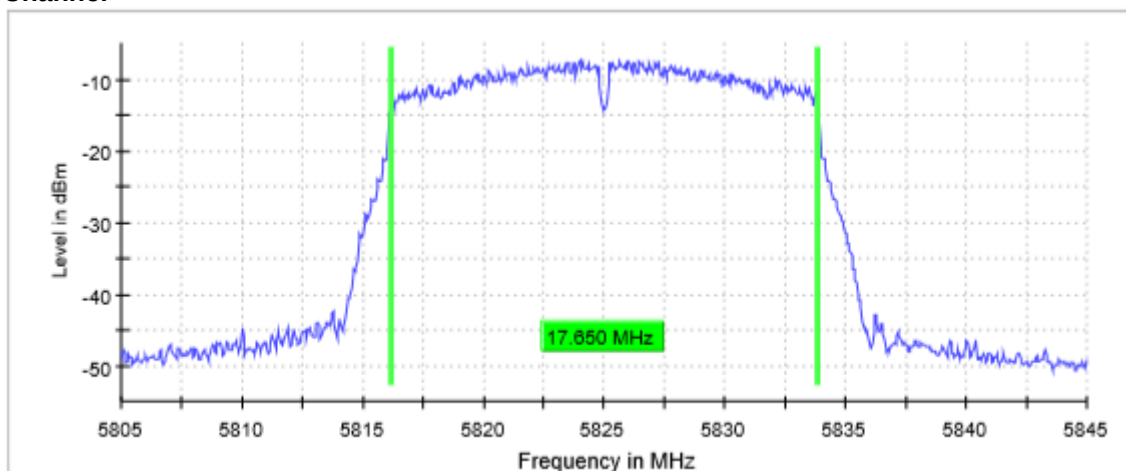
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.):

Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.72500 GHz	5.76500 GHz	5.80500 GHz
Stop Frequency	5.76500 GHz	5.80500 GHz	5.84500 GHz
Span	40.000 MHz	40.000 MHz	40.000 MHz
RBW	100.000 kHz	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz	300.000 kHz
SweepPoints	800	800	800
Sweeptime	56.836 μ s	56.836 μ s	56.836 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
Preamp	Off	Off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	73 / max. 150	100 / max. 150	112 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.09 dB	0.12 dB	0.06 dB

TESTED SAMPLES:

S/01

TESTED CONDITIONS MODES:

TC#02 (n Mode 40 MHz)

TEST RESULTS:

PASS

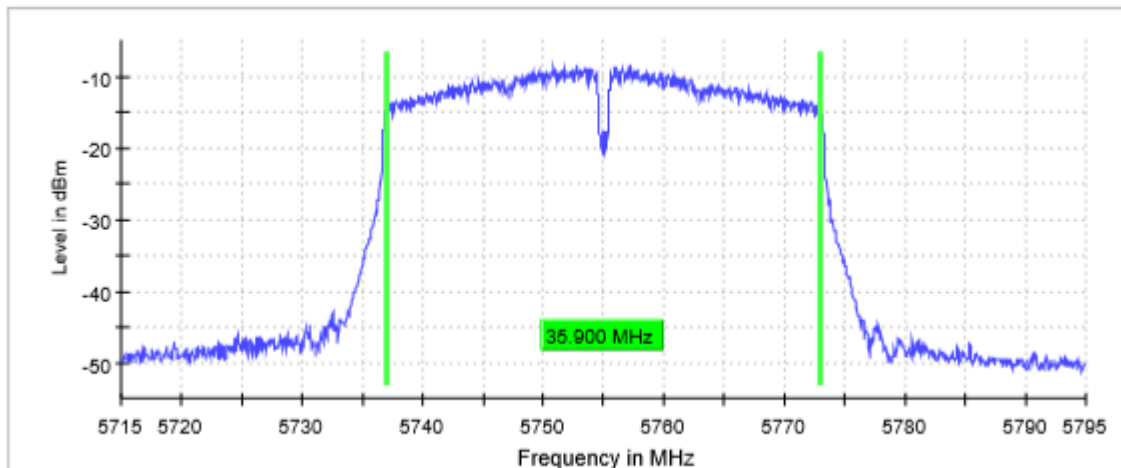
Bandwidth: 40 MHz

	Lowest frequency	Highest frequency
	5755 MHz	5795 MHz
6dB bandwidth (MHz)	35.900	36.100
Measurement uncertainty (kHz)	< $\pm$ 8.33	

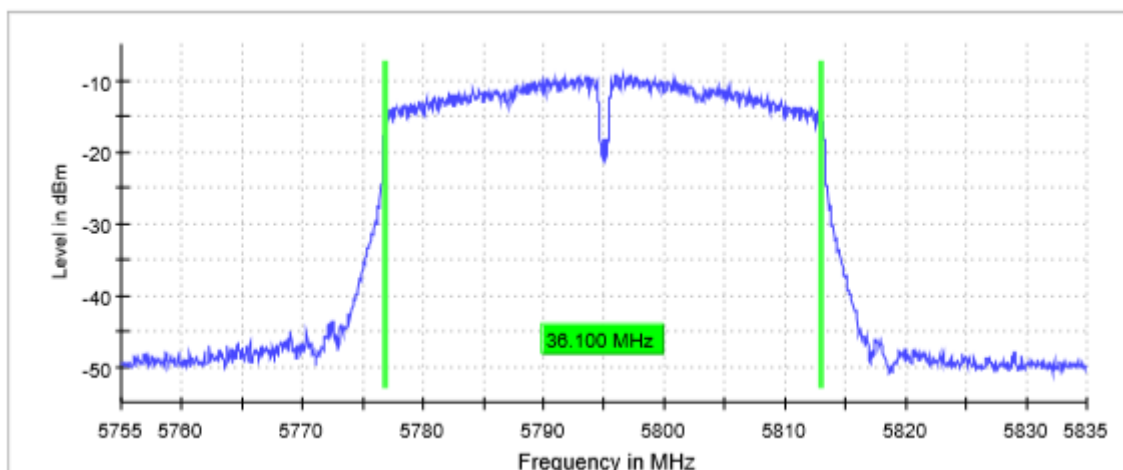
TEST RESULTS (Cont.):

6 dB BANDWIDTH

Lowest Channel



Highest Channel



TEST RESULTS (Cont.):

Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.71500 GHz	5.75500 GHz
Stop Frequency	5.79500 GHz	5.83500 GHz
Span	80.000 MHz	80.000 MHz
RBW	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz
SweepPoints	1600	1600
Sweeptime	94.727 μ s	94.727 μ s
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	30.000 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	124 / max. 150	130 / max. 150
Stable	5 / 5	5 / 5
Max Stable Difference	0.16 dB	0.16 dB

TEST E.3: 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) (3) (4) and RSS-247 6.2.4.1

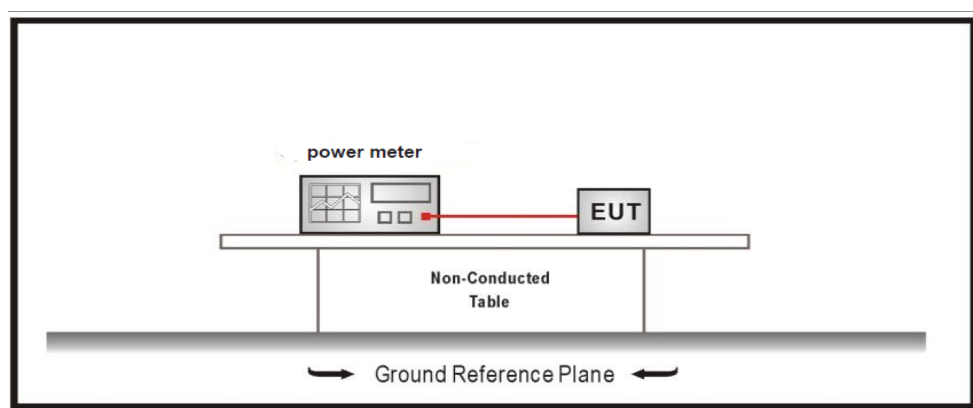
LIMITS

In band 5.725-5.85 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: 0 dBi

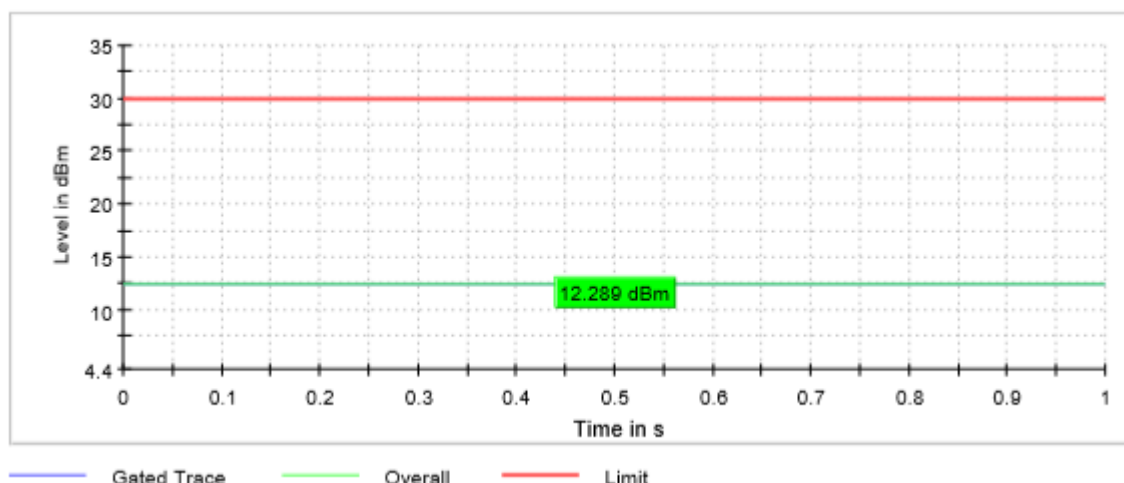
	Lowest frequency 5745 MHz	Middle frequency 5785 MHz	Highest frequency 5825 MHz
Maximum conducted power (dBm)	12.3	11.3	10.3
Maximum EIRP power (dBm)	12.3	11.3	10.3
Measurement uncertainty (dB)	<±0.78		

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.

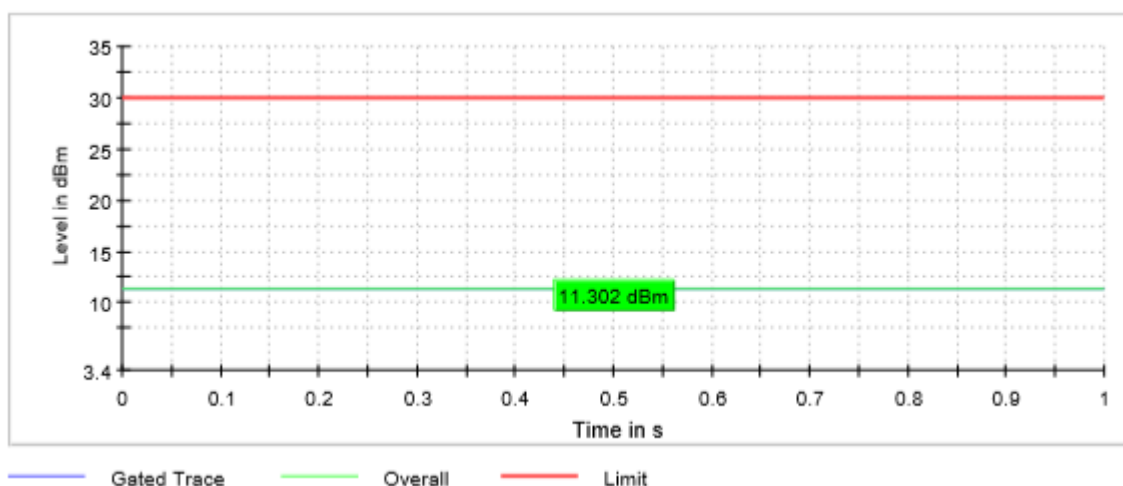
TEST RESULTS (Cont.):

CONDUCTED OUTPUT POWER

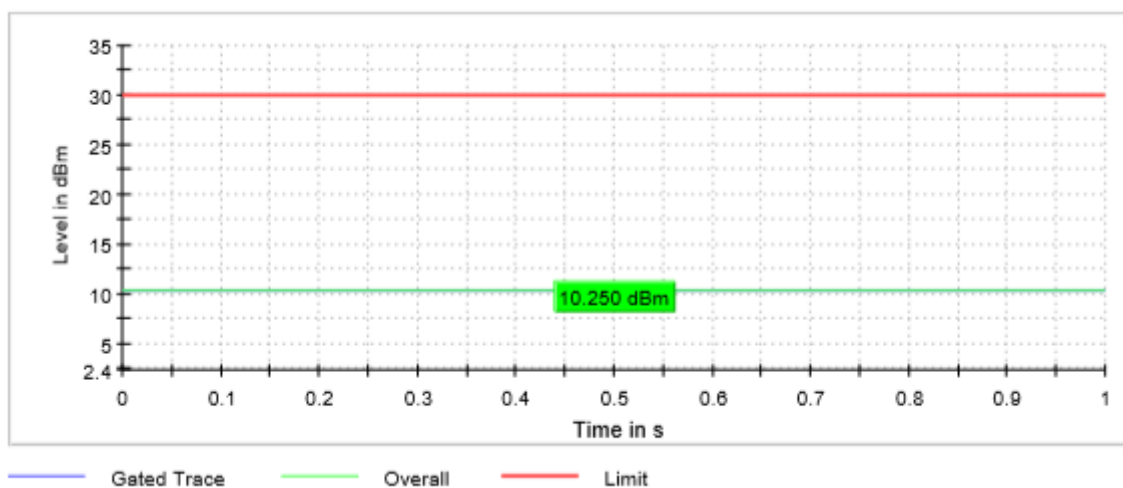
Lowest Channel



Middle Channel



Highest Channel



TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode 20 MHz)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

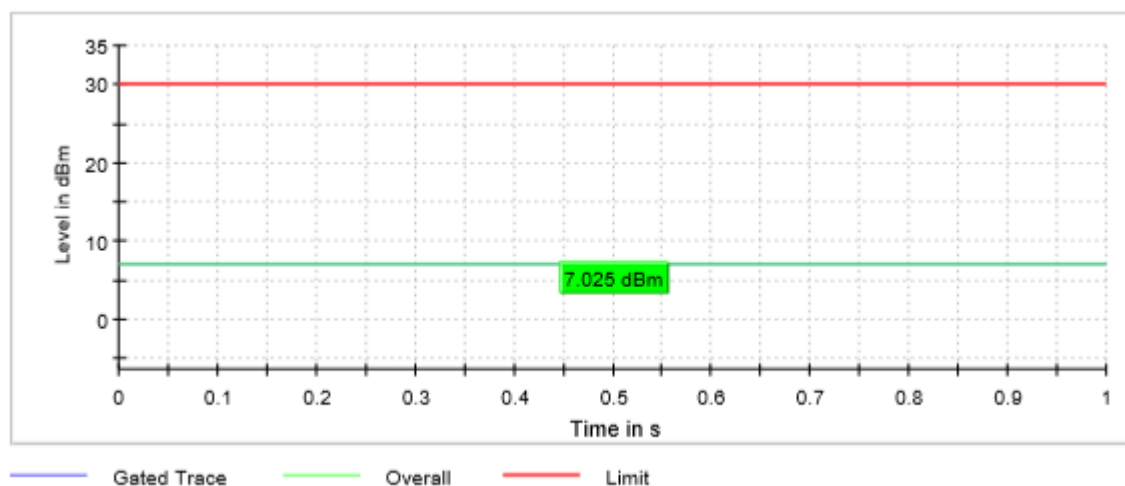
Maximum declared antenna gain: 0 dBi

	Lowest frequency 5745 MHz	Middle frequency 5785 MHz	Highest frequency 5825 MHz
Maximum conducted power (dBm)	7.0	6.1	5.2
Maximum EIRP power (dBm)	7.0	6.1	5.2
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.

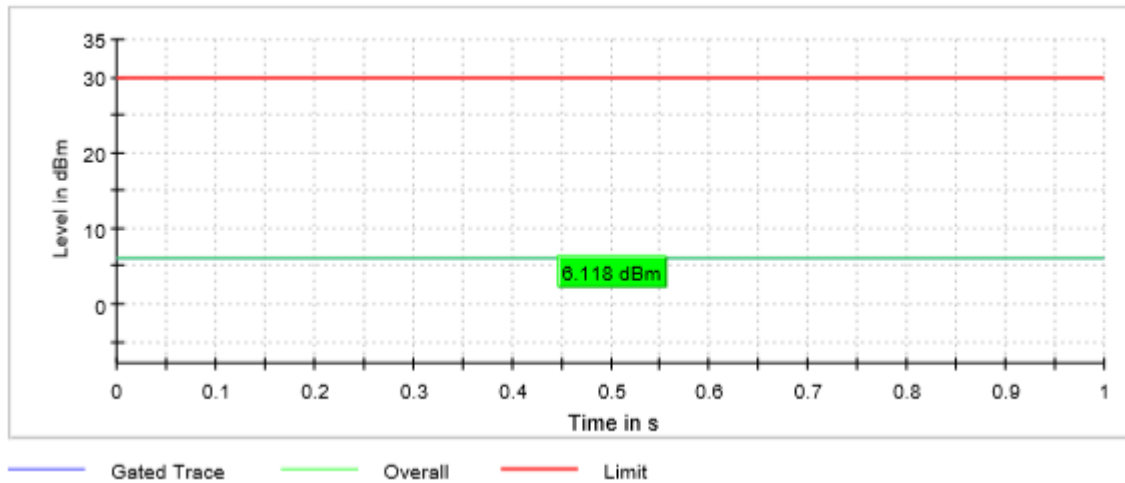
TEST RESULTS (Cont.):	CONDUCTED OUTPUT POWER
------------------------------	-------------------------------

Lowest Channel

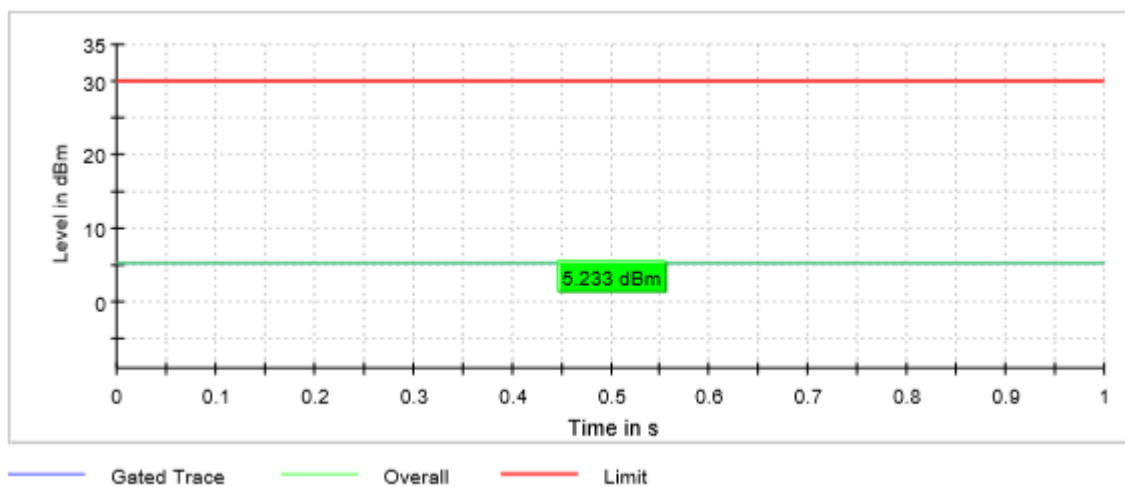


TEST RESULTS (Cont.)

Middle Channel



Highest Channel



TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode 40 MHz)
TEST RESULTS:	PASS

Bandwidth: 40 MHz

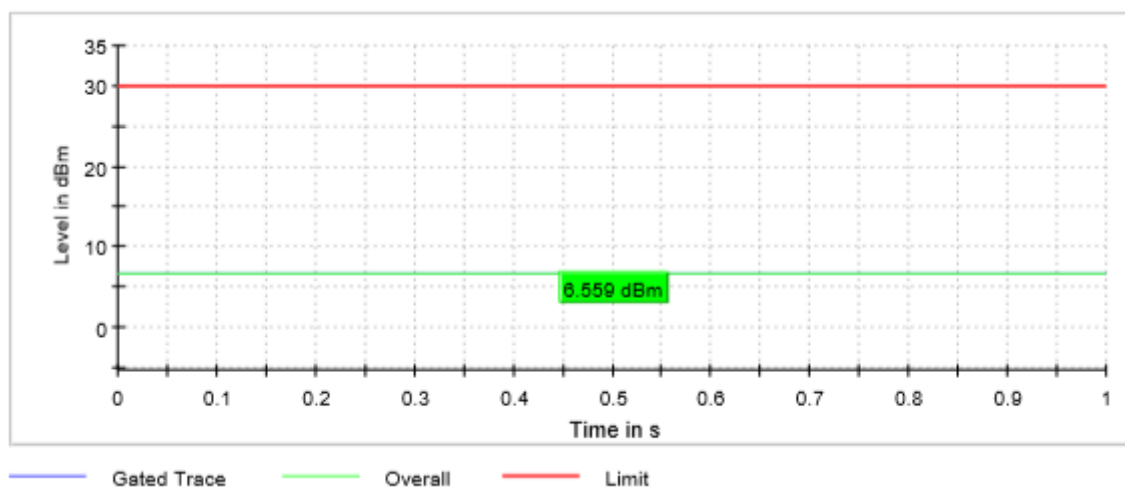
Maximum declared antenna gain: 0 dBi

	Lowest frequency 5755 MHz	Highest frequency 5795 MHz
Maximum conducted power (dBm)	6.6	6.1
Maximum EIRP power (dBm)	6.6	6.1
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.

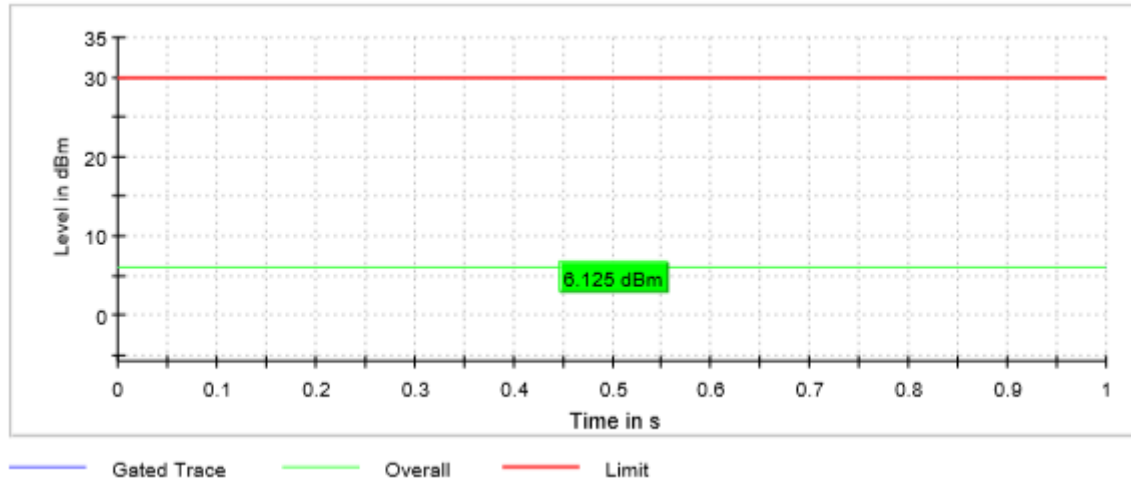
TEST RESULTS (Cont.):	CONDUCTED OUTPUT POWER
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Lowest Channel



TEST RESULTS (Cont.)

Highest Channel



TEST E.4: POWER SPECTRAL DENSITY

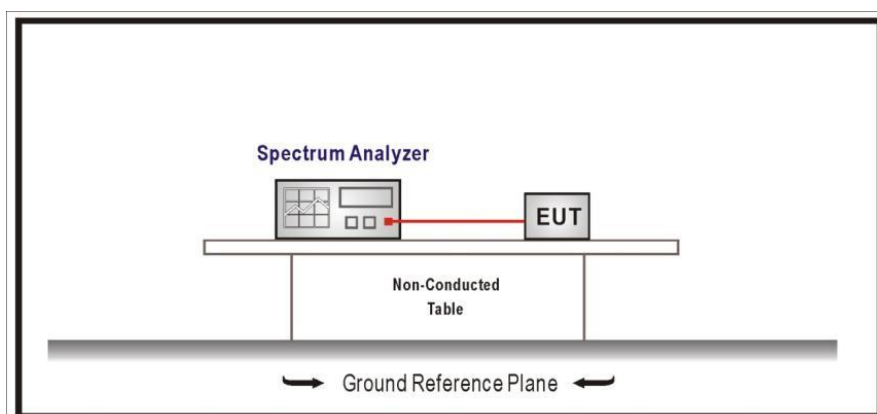
LIMITS:	Product standard:	Part 15 Subpart C §15.407 and RSS-247
	Test standard:	Part 15 Subpart C §15.407(a) (3) (5) and RSS-247 6.2.4.1

LIMITS

In the band 5.725-5.85 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 1megahertz 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.



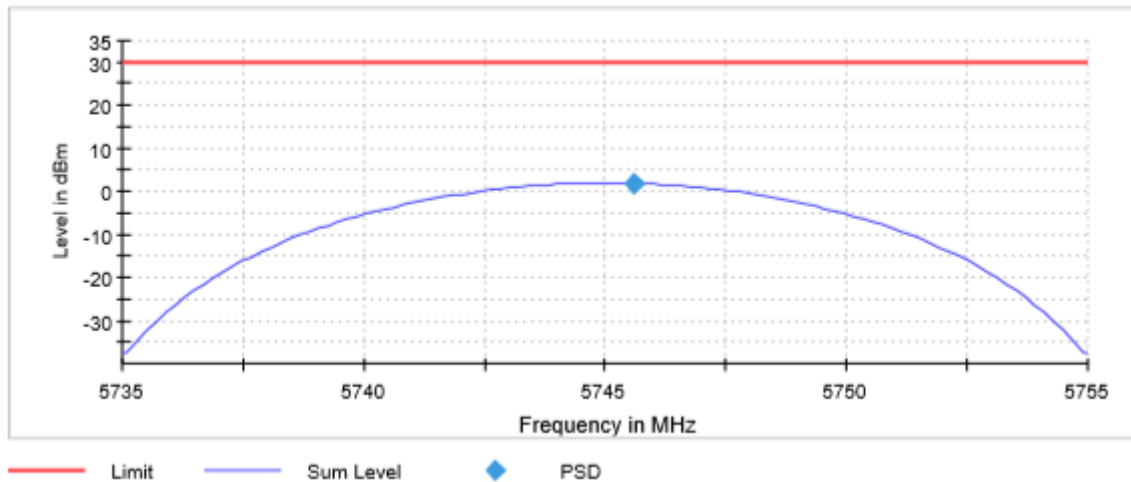
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01 (a mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

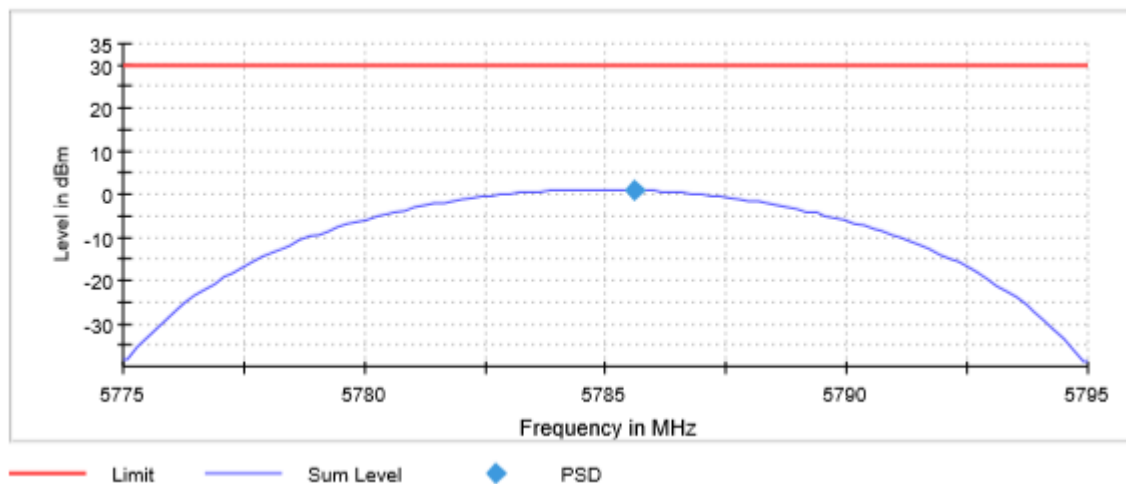
	Lowest frequency 5745 MHz	Middle frequency 5785 MHz	Highest frequency 5825 MHz
Power spectral density (dBm)	1.806	1.052	0.105
Measurement uncertainty (dB)	<±0.78		

TEST RESULTS (Cont.):

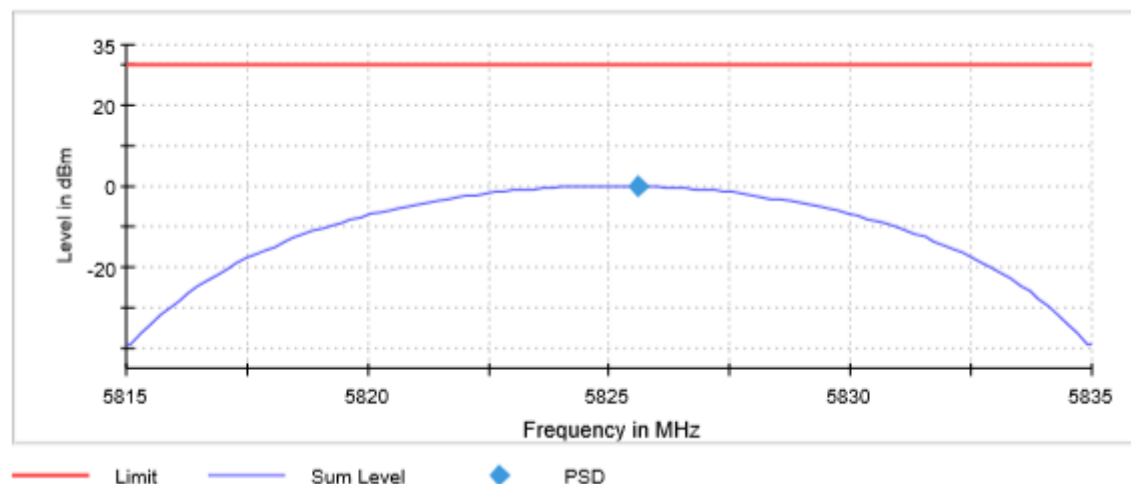
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.):

Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.73500 GHz	5.77500 GHz	5.81500 GHz
Stop Frequency	5.75500 GHz	5.79500 GHz	5.83500 GHz
Span	20.000 MHz	20.000 MHz	20.000 MHz
RBW	500.000 kHz	500.000 kHz	500.000 kHz
VBW	2.000 MHz	2.000 MHz	2.000 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	29703	29703	29703
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	4 / max. 15	4 / max. 15	4 / max. 15
Stable	3 / 3	3 / 3	3 / 3
Max Stable	0.01 dB	0.01 dB	0.03 dB

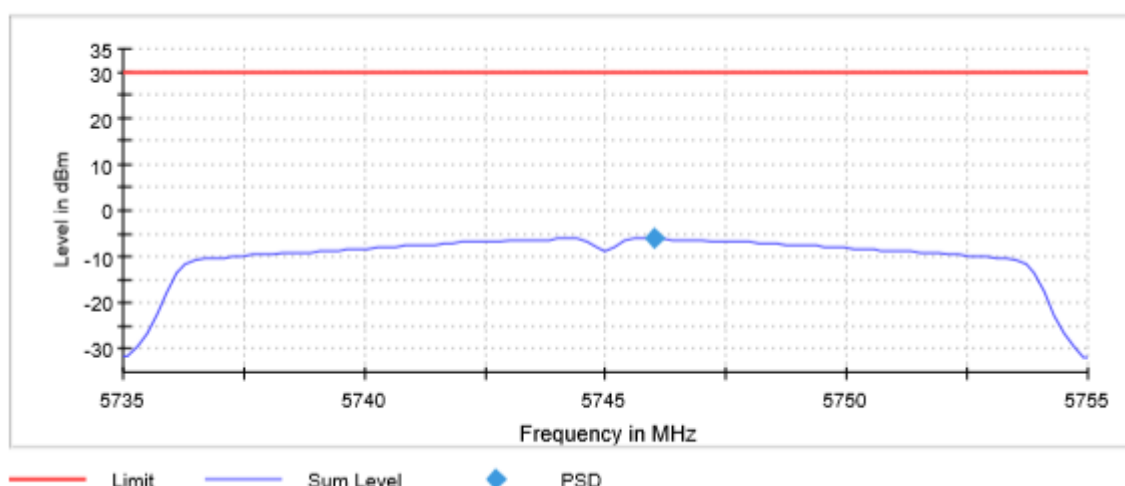
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode 20 MHz)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

	Lowest frequency 5745 MHz	Middle frequency 5785 MHz	Highest frequency 5825 MHz
Power spectral density (dBm)	-5.975	-6.647	-7.536
Measurement uncertainty (dB)	<±0.78		

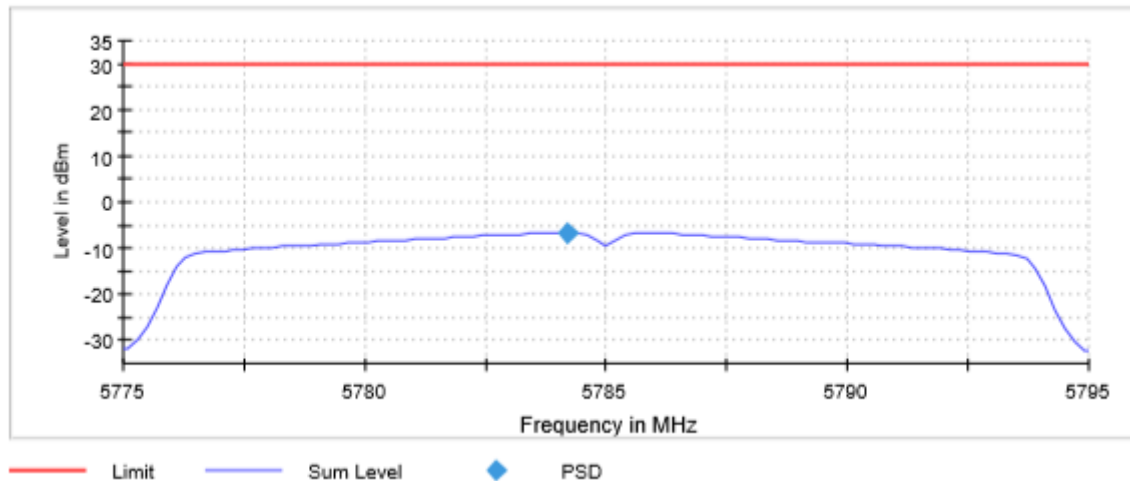
TEST RESULTS (Cont.):	
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Low Channel

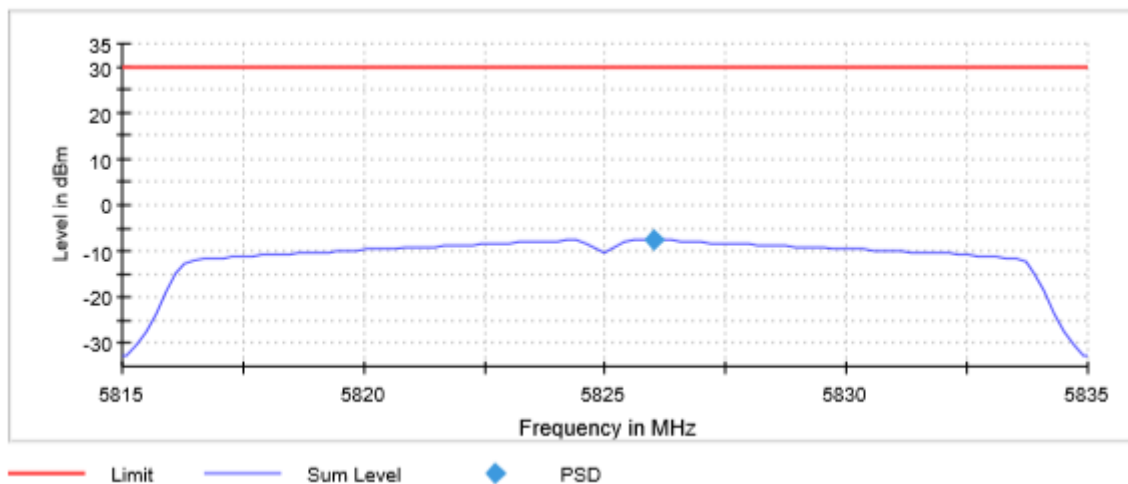


TEST RESULTS (Cont.):

Middle Channel



High Channel



TEST RESULTS (Cont.):

Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.73500 GHz	5.77500 GHz	5.81500 GHz
Stop Frequency	5.75500 GHz	5.79500 GHz	5.83500 GHz
Span	20.000 MHz	20.000 MHz	20.000 MHz
RBW	500.000 kHz	500.000 kHz	500.000 kHz
VBW	2.000 MHz	2.000 MHz	2.000 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	29703	29703	29703
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	4 / max. 15	4 / max. 15	4 / max. 15
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.04 dB	0.03 dB

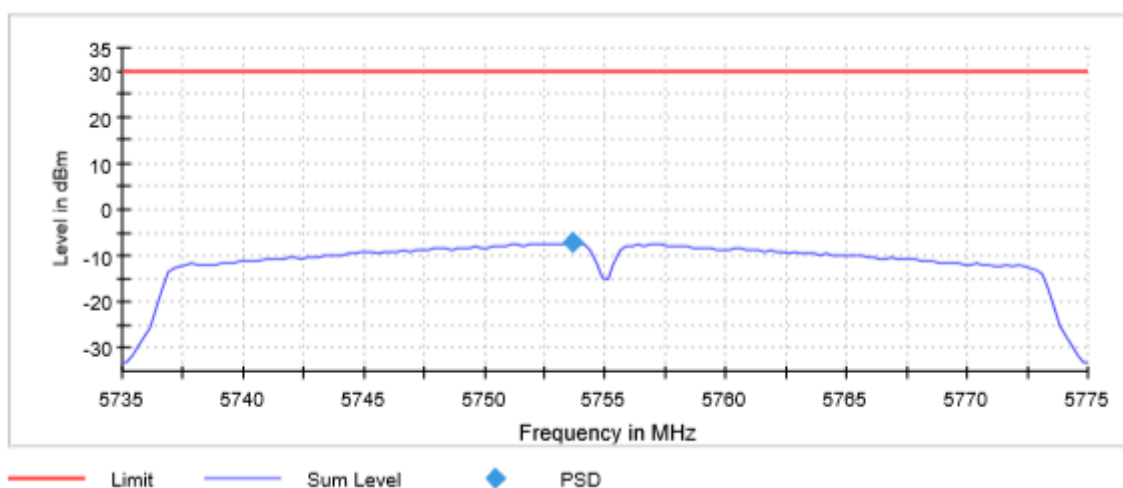
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode 40 MHz)
TEST RESULTS:	PASS

Bandwidth: 40 MHz

	Lowest frequency 5755 MHz	Highest frequency 5795 MHz
Power spectral density (dBm)	-7.276	-7.999
Measurement uncertainty (dB)	<±0.78	

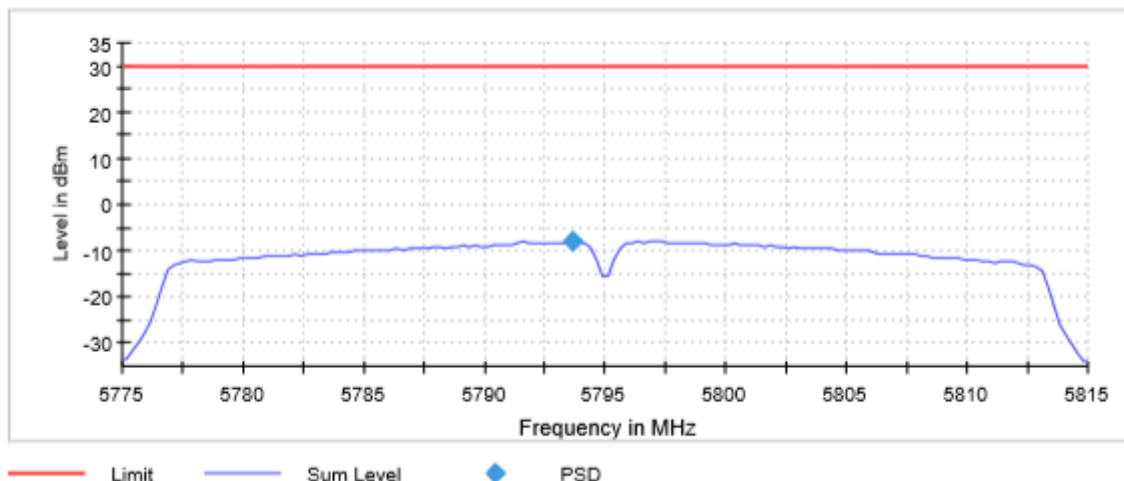
TEST RESULTS (Cont.):	
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Low Channel



TEST RESULTS (Cont.):

High Channel



Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.73500 GHz	5.77500 GHz
Stop Frequency	5.77500 GHz	5.81500 GHz
Span	40.000 MHz	40.000 MHz
RBW	500.000 kHz	500.000 kHz
VBW	2.000 MHz	2.000 MHz
SweepPoints	160	160
SweepTime	3.200 s	3.200 s
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	30.000 dB
Detector	RMS	RMS
SweepCount	18751	18751
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	6 / max. 15	10 / max. 15
Stable	3 / 3	3 / 3
Max Stable Difference	0.26 dB	0.13 dB

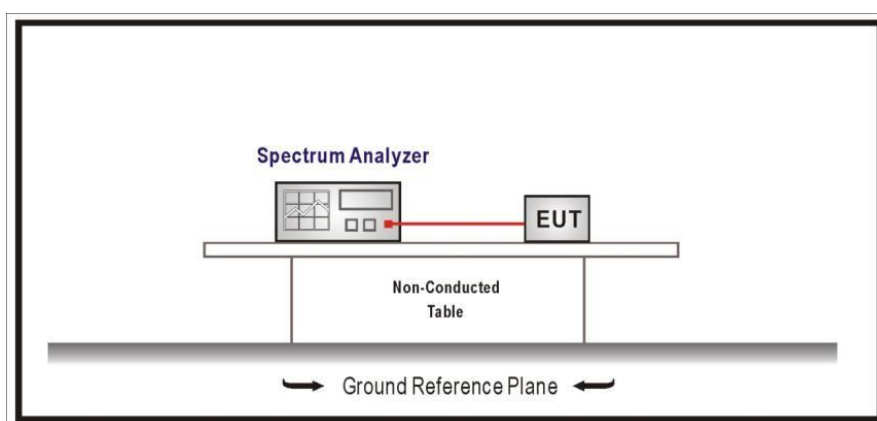
TEST E.5: BAND-EDGE EMISSIONS COMPLIANCE (TRANSMITTER)

LIMITS:	Product standard:	Part 15 Subpart C §15.407 and RSS-247
	Test standard:	Part 15 Subpart C §15.407(b)(4) and RSS-247 6.2.4.2

LIMITS

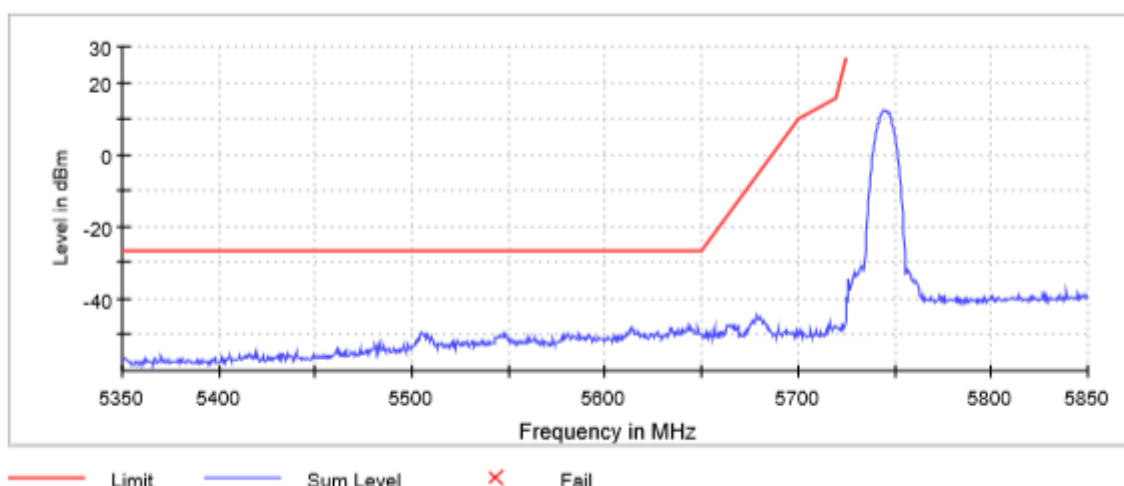
For transmitters operating in the 5.725 – 5.85 GHz band: all emissions outside the frequency band shall not exceed an EIRP of -27 dBm /MHz

TEST SETUP



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

Lowest Channel

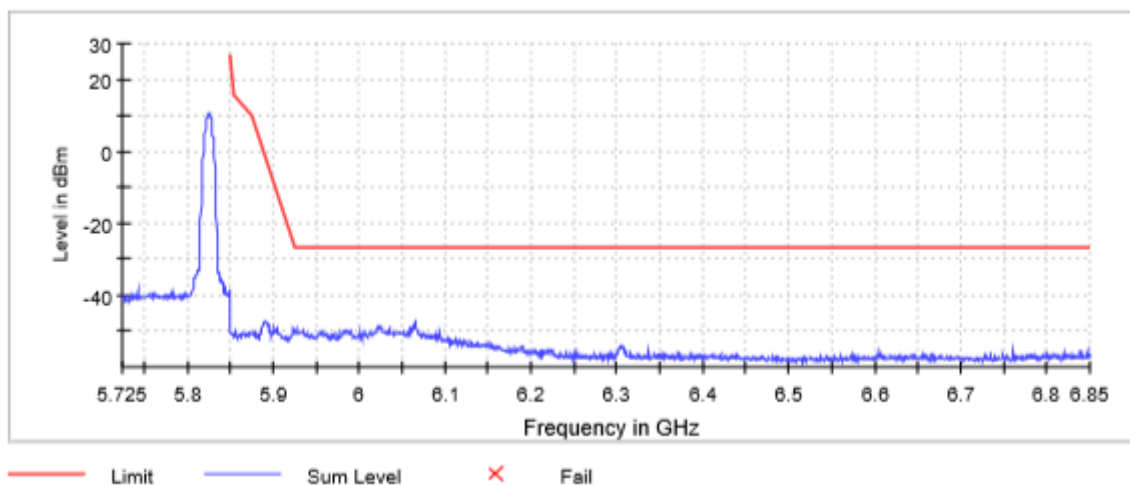


Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.35000 GHz	5.72500 GHz
Stop Frequency	5.72500 GHz	5.85000 GHz
Span	375.000 MHz	125.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	750	250
Sweptime	75.000 ms	25.000 ms
Reference Level	-10.000 dBm	10.000 dBm
Attenuation	10.000 dB	30.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
Sweeptype	sweep	sweep
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	7 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.17 dB

TEST RESULTS (Cont.):

Highest Channel



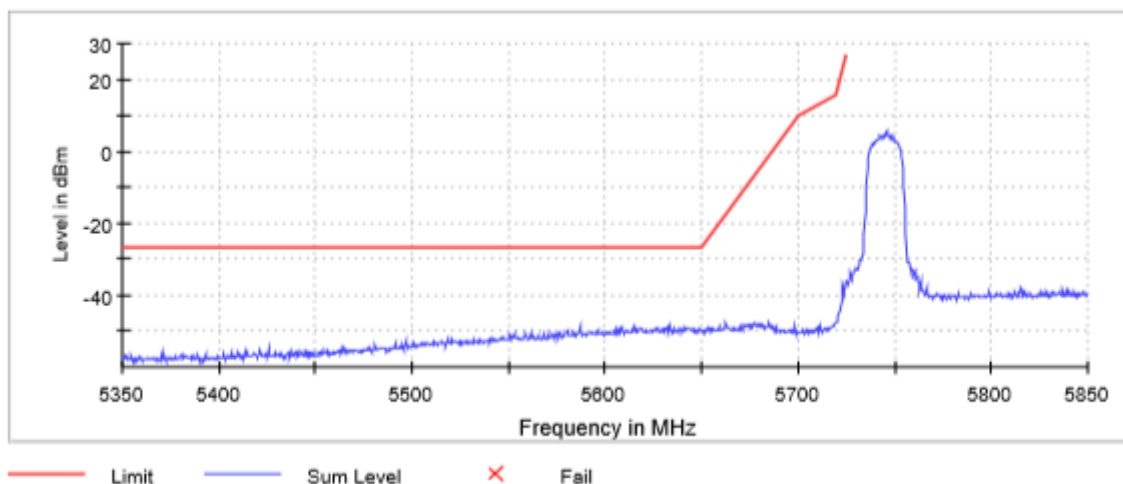
Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.72500 GHz	5.85000 GHz
Stop Frequency	5.85000 GHz	6.85000 GHz
Span	125.000 MHz	1.000 GHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	250	2000
Sweeptime	25.000 ms	200.000 ms
Reference Level	10.000 dBm	-10.000 dBm
Attenuation	30.000 dB	10.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
Sweeptype	sweep	sweep
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	7 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.46 dB	0.00 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode 20 MHz)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

Lowest Channel

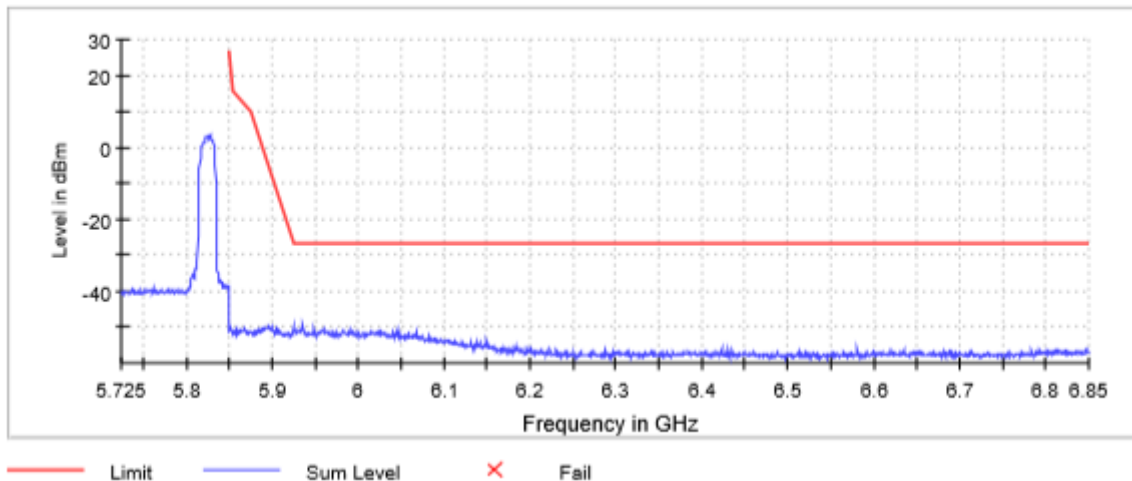


Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.35000 GHz	5.72500 GHz
Stop Frequency	5.72500 GHz	5.85000 GHz
Span	375.000 MHz	125.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	750	250
SweepTime	75.000 ms	25.000 ms
Reference Level	-10.000 dBm	10.000 dBm
Attenuation	10.000 dB	30.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
Sweeptype	sweep	sweep
Preamp	Off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	8 / max. 150	10 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.45 dB

TEST RESULTS (Cont.):

Highest Channel



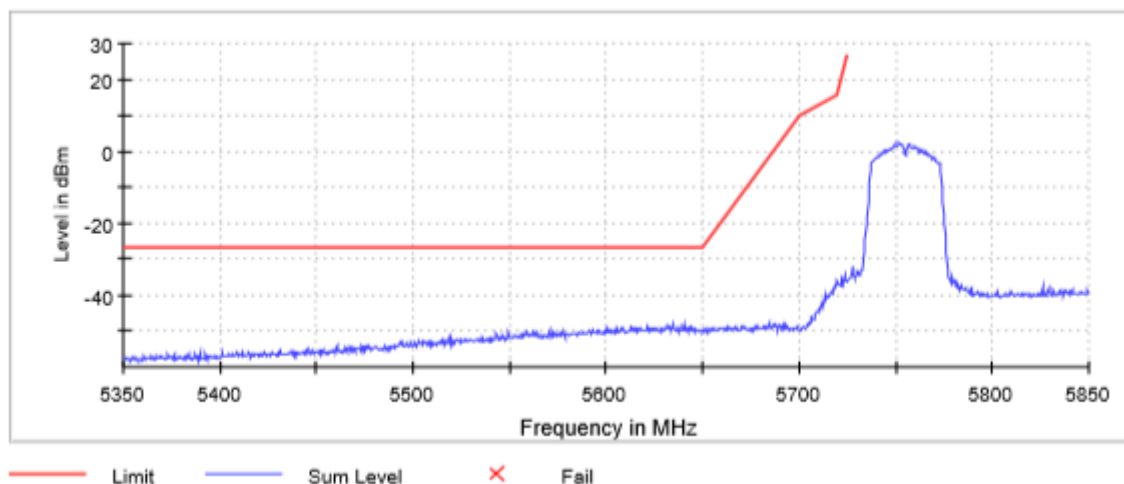
Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.72500 GHz	5.85000 GHz
Stop Frequency	5.85000 GHz	6.85000 GHz
Span	125.000 MHz	1.000 GHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	250	2000
Sweptime	25.000 ms	200.000 ms
Reference Level	10.000 dBm	-10.000 dBm
Attenuation	30.000 dB	10.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
SweepType	sweep	sweep
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	19 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.07 dB	0.00 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (n mode 40 MHz)
TEST RESULTS:	PASS

Bandwidth: 40 MHz

Lowest Channel

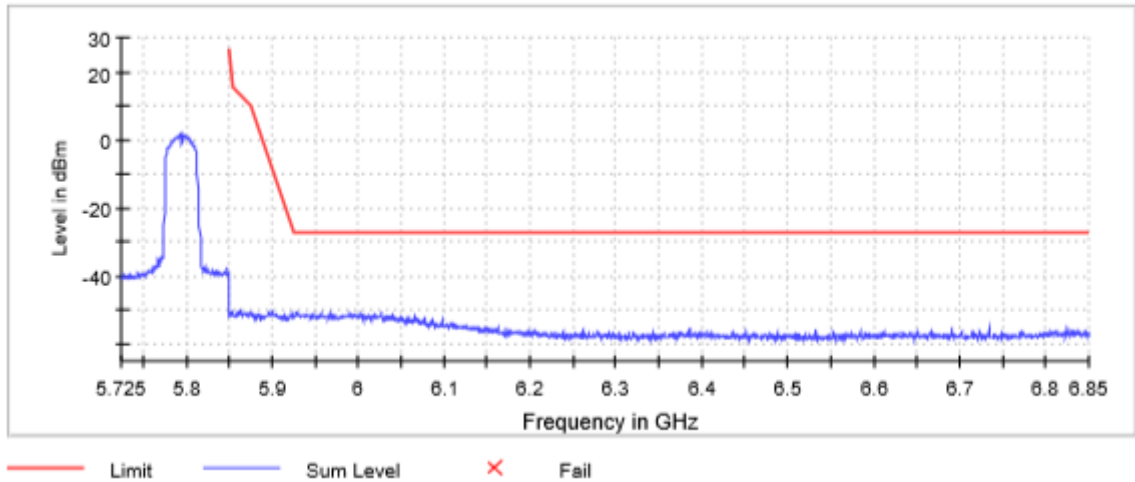


Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.35000 GHz	5.72500 GHz
Stop Frequency	5.72500 GHz	5.85000 GHz
Span	375.000 MHz	125.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	750	250
Sweeptime	75.000 ms	25.000 ms
Reference Level	-10.000 dBm	10.000 dBm
Attenuation	10.000 dB	30.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	Channel	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	sweep
Preamp	Off	Off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	16 / max. 150	19 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.48 dB

TEST RESULTS (Cont.):

Highest Channel



Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.72500 GHz	5.85000 GHz
Stop Frequency	5.85000 GHz	6.85000 GHz
Span	125.000 MHz	1.125 GHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	250	2000
Sweptime	25.000 ms	200.000 ms
Reference Level	10.000 dBm	-10.000 dBm
Attenuation	30.000 dB	10.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	Channel	Channel
Trace Mode	Max Hold	Max Hold
Sweeptype	sweep	sweep
Preamp	Off	Off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	21 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.22 dB	0.00 dB

TEST E.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)(4)(6)(7) and RSS-247 6.2.4.2

LIMITS

For transmitters operating in the 5.725 – 5.85 GHz band: all emissions outside of the 5.725 – 5.85 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.

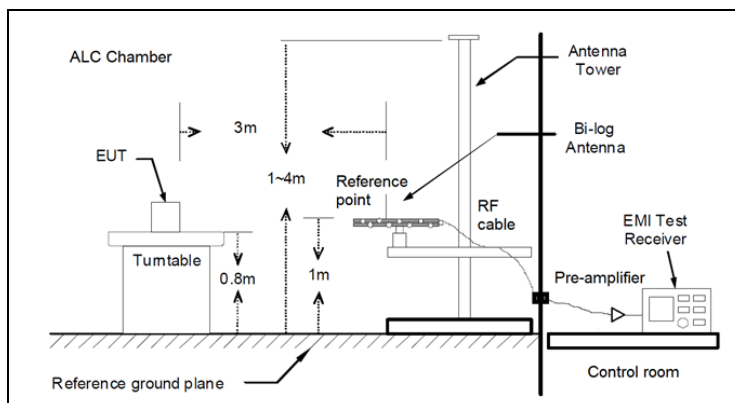
The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

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

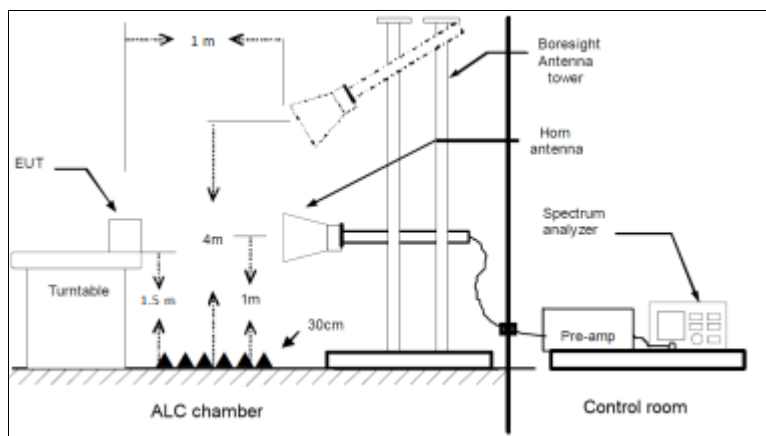
The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

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

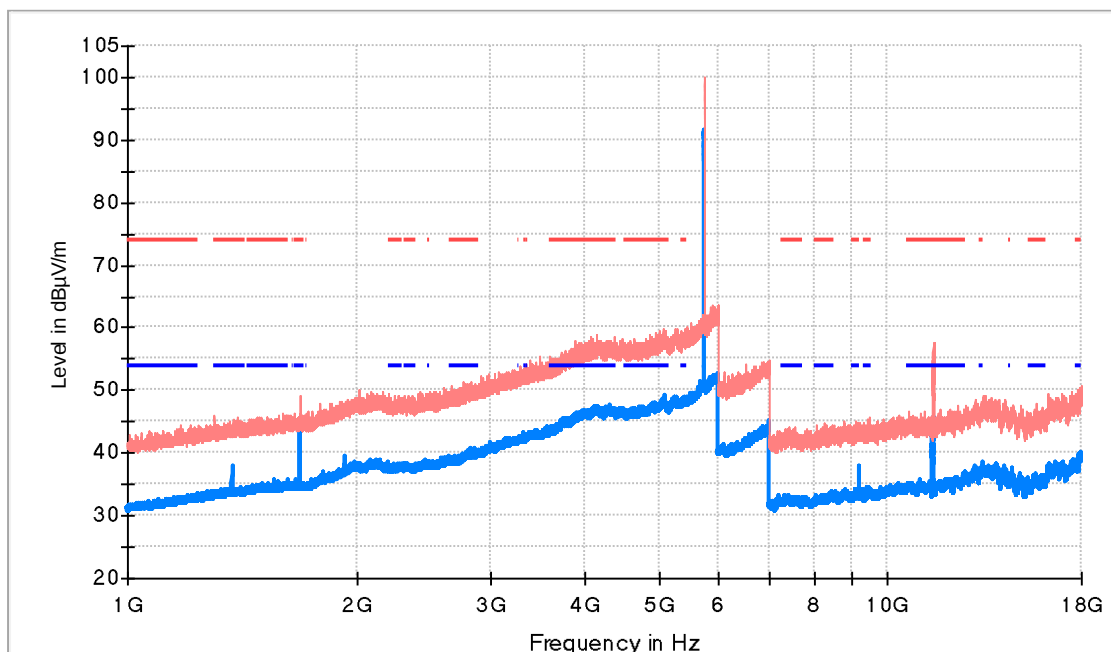
Frequency range 1 GHz – 40 GHz

The results and plots below show the maximum measured levels in the 1- 40 GHz range.

TEST RESULTS (Cont.)

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

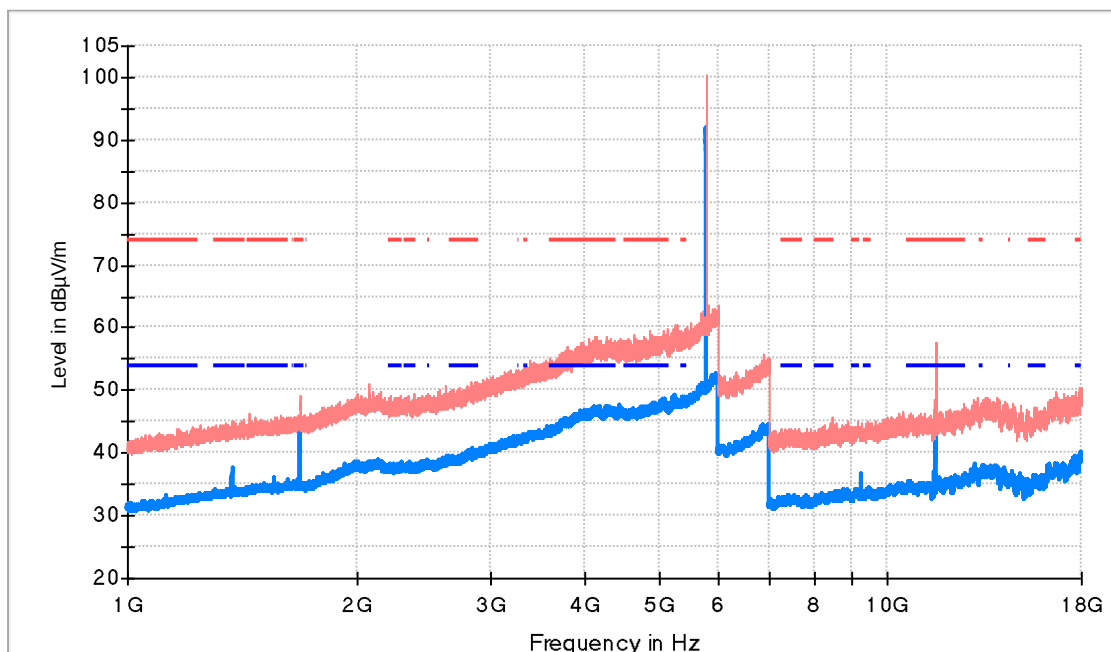
Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
1375.000000	44.6	38.0	H	
1687.500000	48.3	43.4	V	
1937.500000	47.2	39.5	H	
5745.909091	98.5	91.4	H	Fundamental
9192.000000	44.9	37.8	V	
11491.090909	57.5	45.7	H	

TEST RESULTS (Cont.)

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

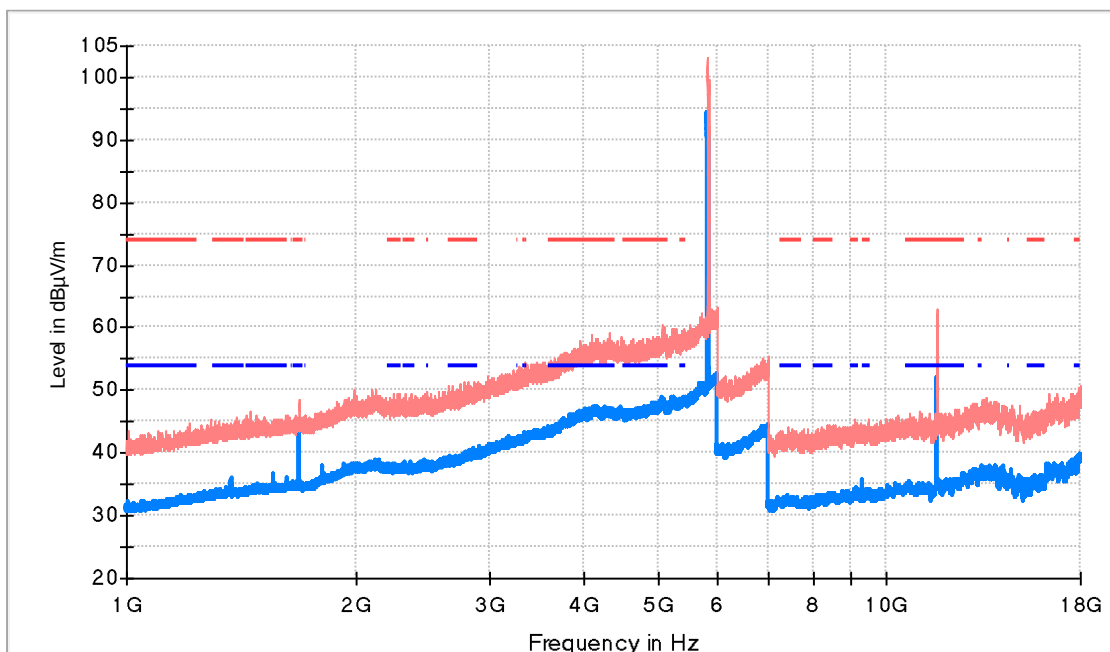
Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
1375.000000	45.0	37.5	H	
1687.500000	49.1	43.5	V	
5786.136364	98.7	91.9	H	Fundamental
9255.818182	44.5	36.5	V	
11570.727273	53.9	46.1	H	
1375.000000	45.0	37.5	H	

TEST RESULTS (Cont.)

1 GHz – 18 GHz

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

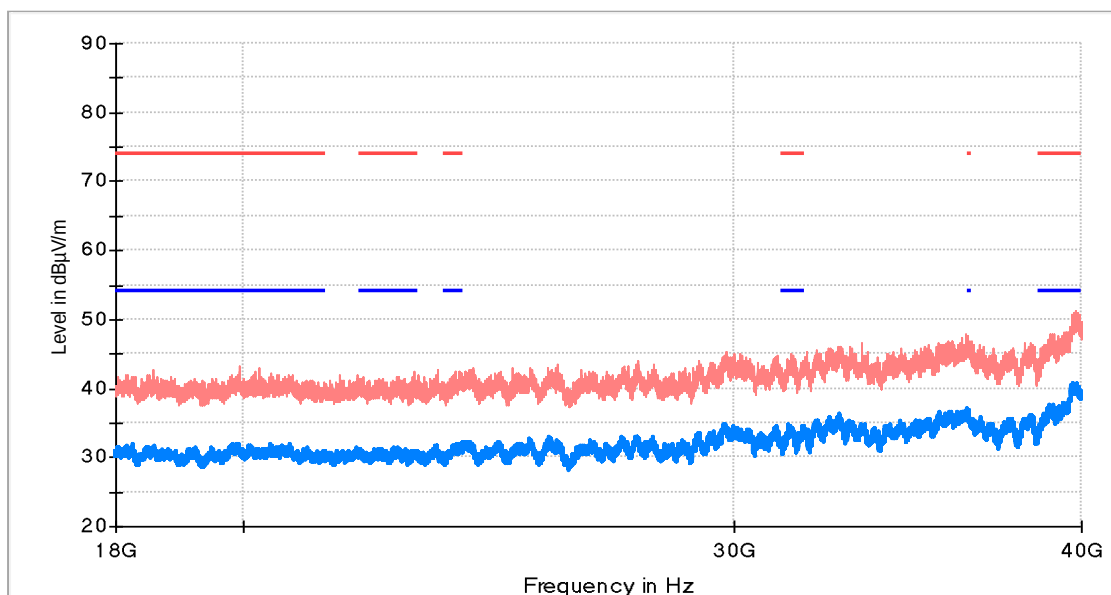
Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
1562.272727	44.4	36.6	H	
1687.500000	47.8	43.4	V	
1812.272727	45.8	38.0	H	
5825.909091	101.9	94.5	H	Fundamental
9320.181818	43.8	35.6	V	
11649.272727	61.1	52.0	H	

TEST RESULTS (Cont.)

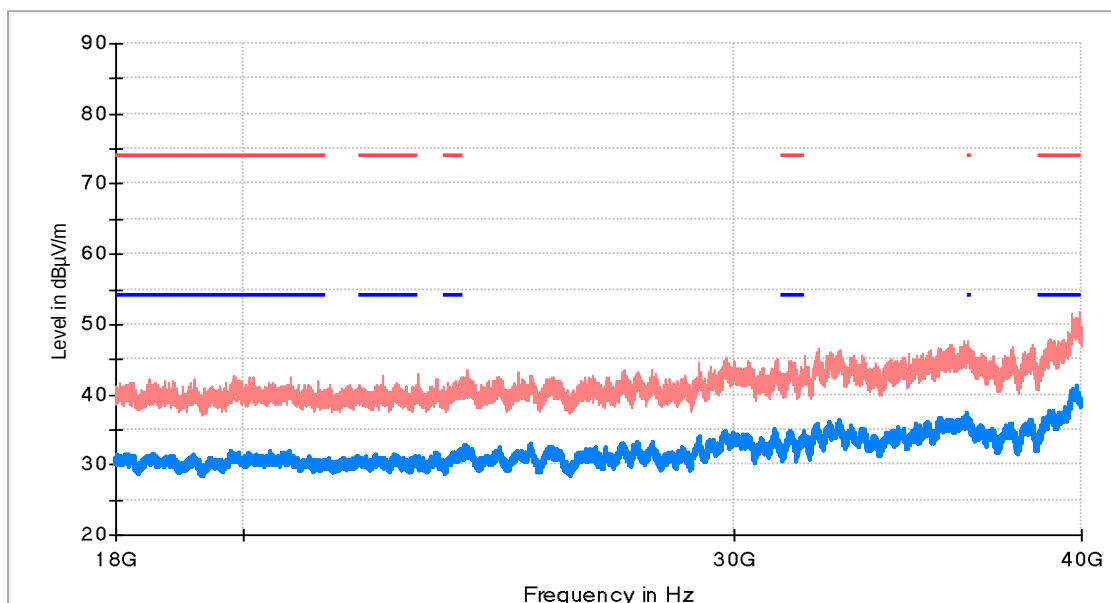
18 – 40 GHz

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

Middle Channel

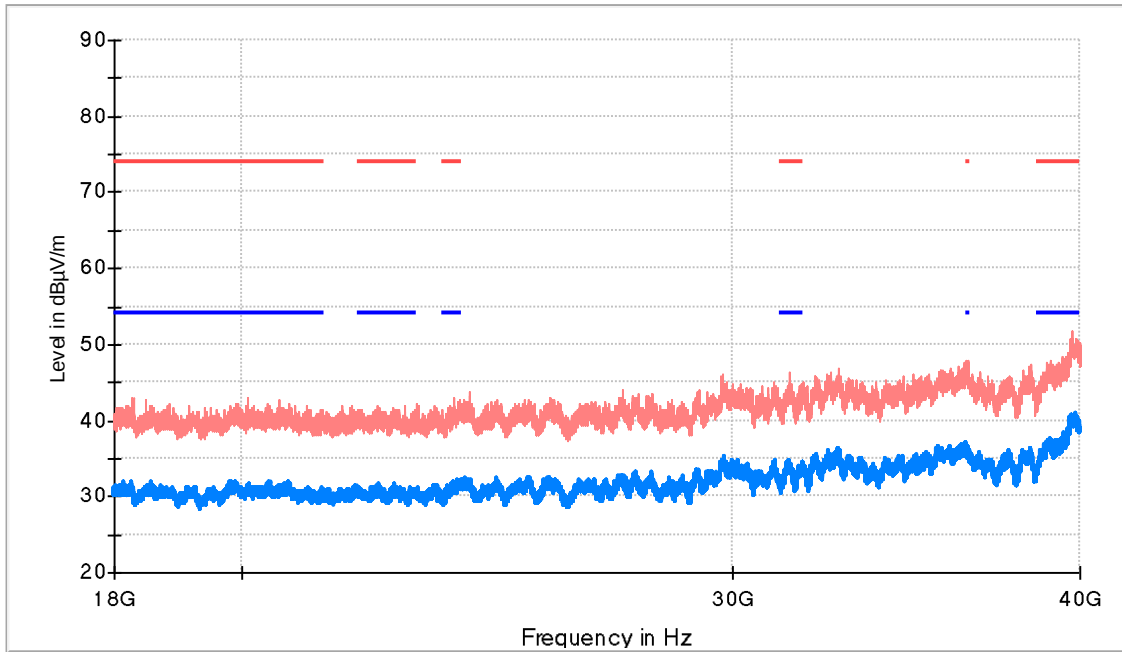


- AVG_MAXH
- PK+_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

TEST RESULTS (Cont.)

18 – 40 GHz

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

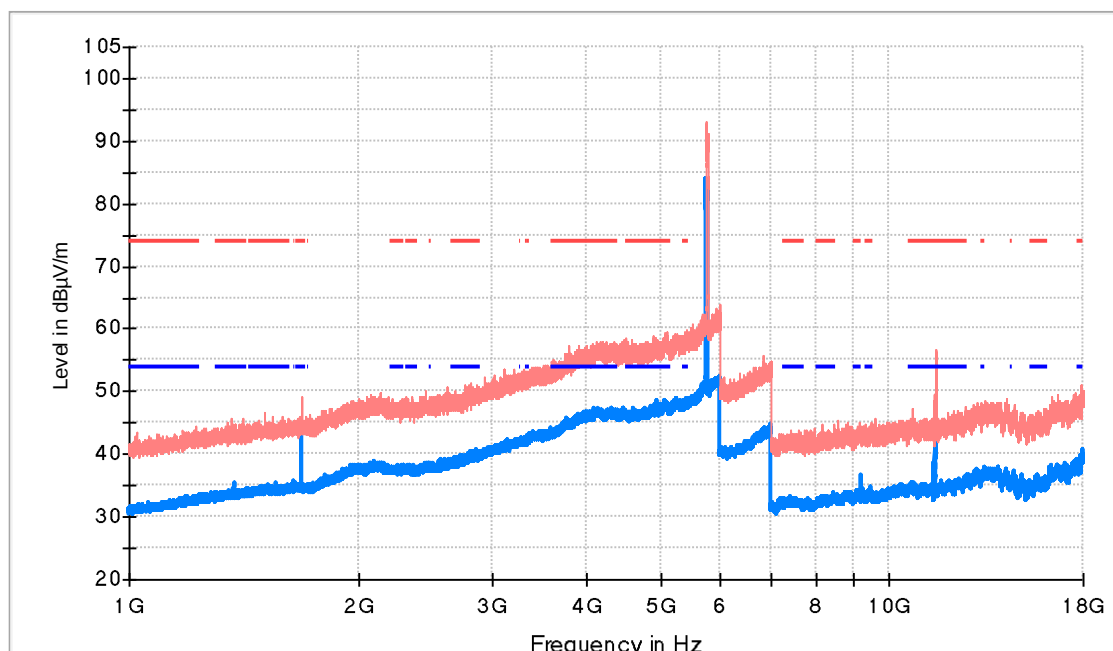
TESTED SAMPLES:	S/02
TESTED CONDITIONS MODES:	TC#02 (n mode 40 MHz)
TEST RESULTS:	PASS

Frequency range 1 GHz – 40 GHz

The results and plots below show the maximum measured levels in the 1- 40 GHz range.

FREQUENCY RANGE	1 GHz – 18 GHz
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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

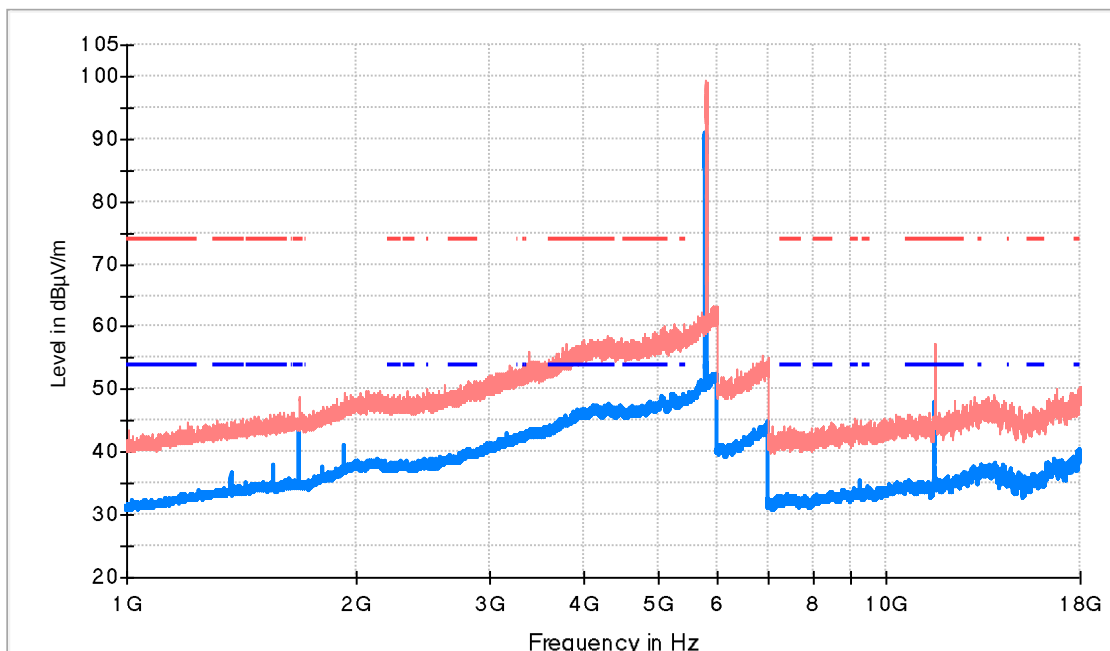
Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comment
1375.000000	44.7	35.3	V	
1687.272727	49.1	44.8	V	
5756.818182	92.3	84.1	V	Fundamental
9207.818182	44.5	36.6	V	
11509.636364	56.8	46.0	H	
1375.000000	44.7	35.3	V	

TEST RESULTS (Cont.)

1 GHz – 18 GHz

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

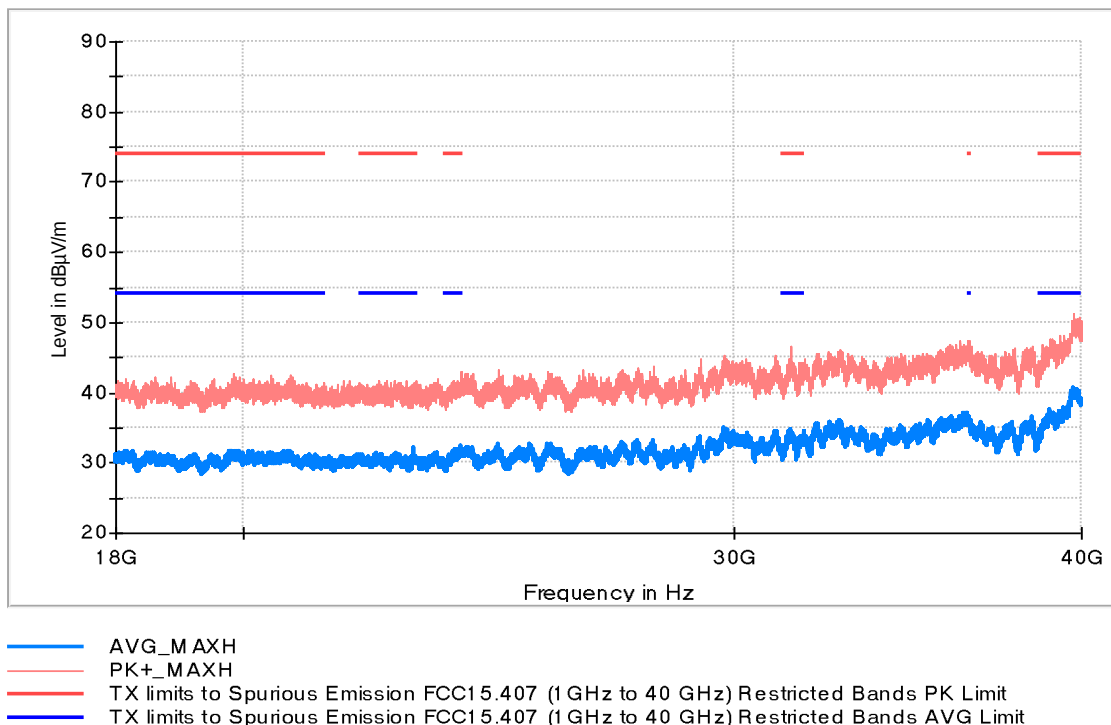
Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
1374.772727	44.8	36.7	V	
1562.272727	45.2	37.9	H	
1687.500000	48.2	44.7	V	
1937.272727	47.6	40.9	H	
5777.272727	91.2	85.2	H	Fundamental
9272.181818	44.3	35.4	V	

TEST RESULTS (Cont.)

18 GHz – 40 GHz

Low Channel



High Channel

