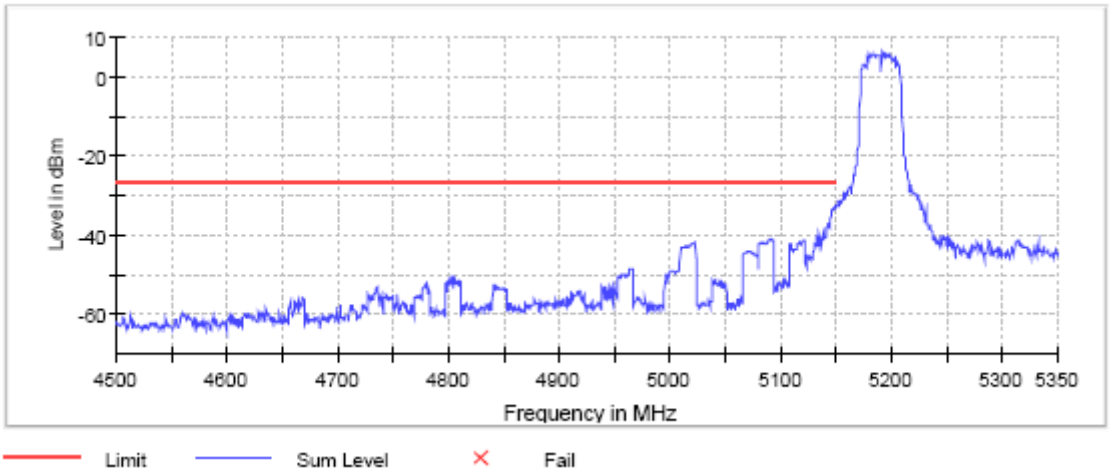
TEST RESULTS (Cont.):	n Mode (40 MHz)

Lowest Channel



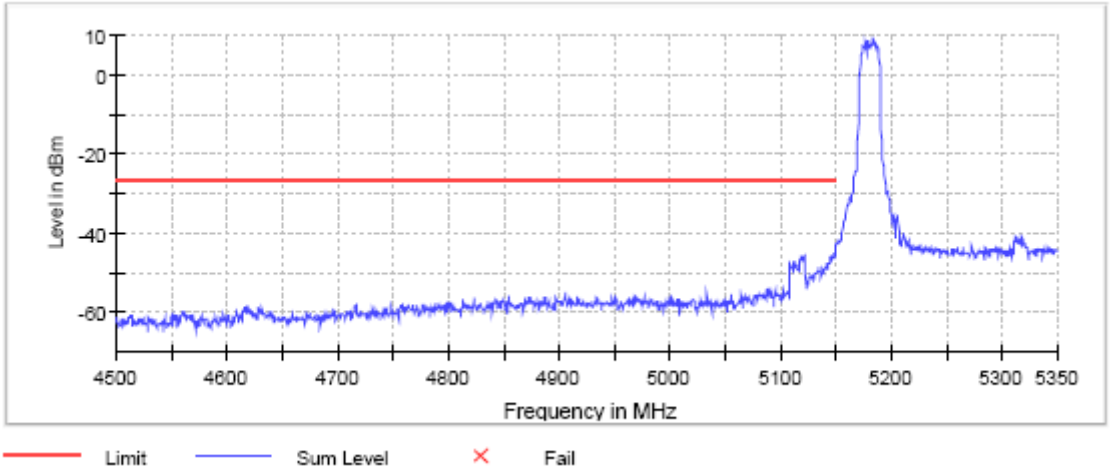
Measurement

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 us	87.688 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
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	26 / max. 150	13 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.00 dB	0.00 dB

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

Bandwidth: 20 MHz

Lowest Channel:



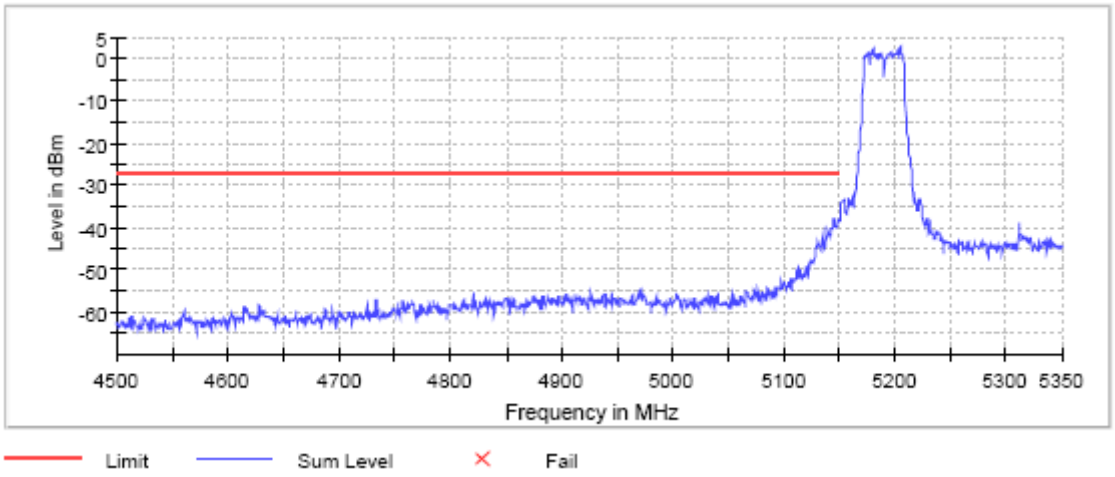
Measurement

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 µs	87.688 µs
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
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	23 / max. 150	15 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.00 dB	0.03 dB

TEST RESULTS (Cont.):	ac mode (40 MHz)

Bandwidth: 40 MHz

Lowest Channel



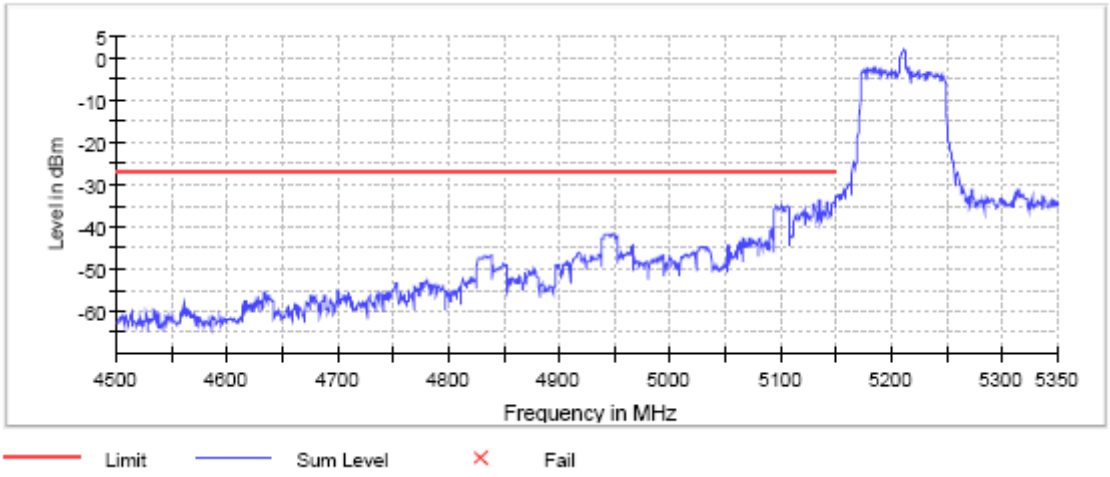
Measurement

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 us	87.688 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
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	37 / max. 150	12 / 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 us	87.688 us
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	28 / max. 150	30 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.00 dB	0.41 dB

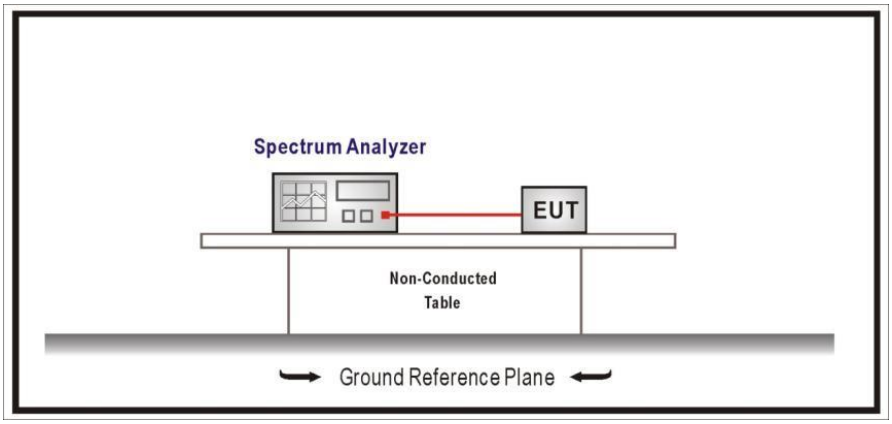
TEST B.5: EMISSION LIMITATIONS CONDUCTED (TRANSMITTER)

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	

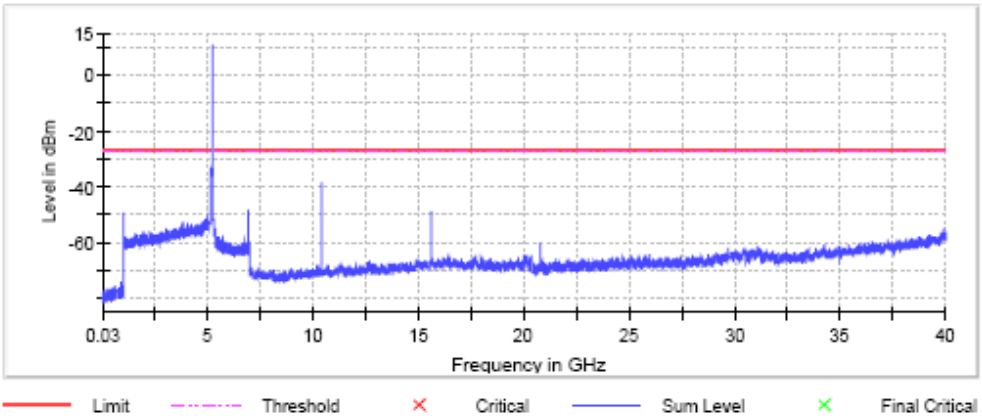


TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01 (a mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

Frequency: 5200 MHz

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



Measurement Settings

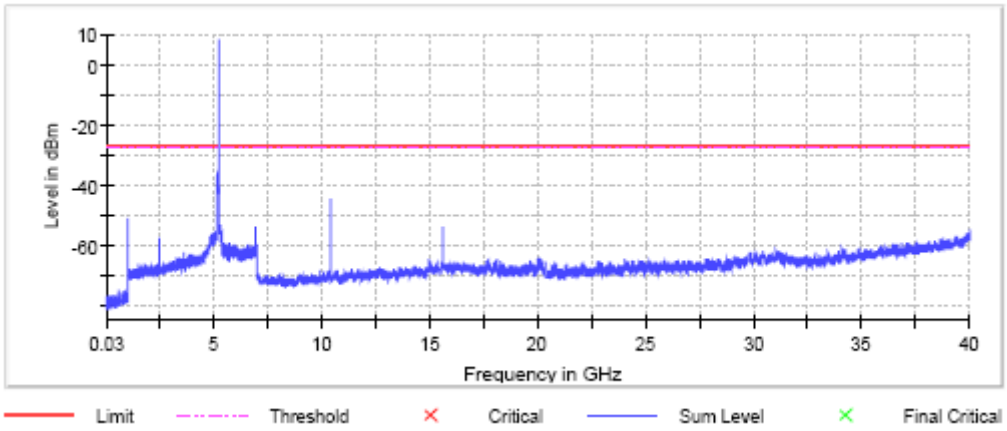
Setting	Instrument Value	Instrument Value
Start Frequency	**30.000 MHz**	**30.000 MHz**
Stop Frequency	**40 GHz**	**40 GHz**
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-10.000 dBm
Attenuation	10.000 dB	20.000 dB
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	34 / max. 150	5 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.38 dB	0.00 dB

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

Bandwidth: 20 MHz

Frequency: 5200 MHz

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



Measurement Settings

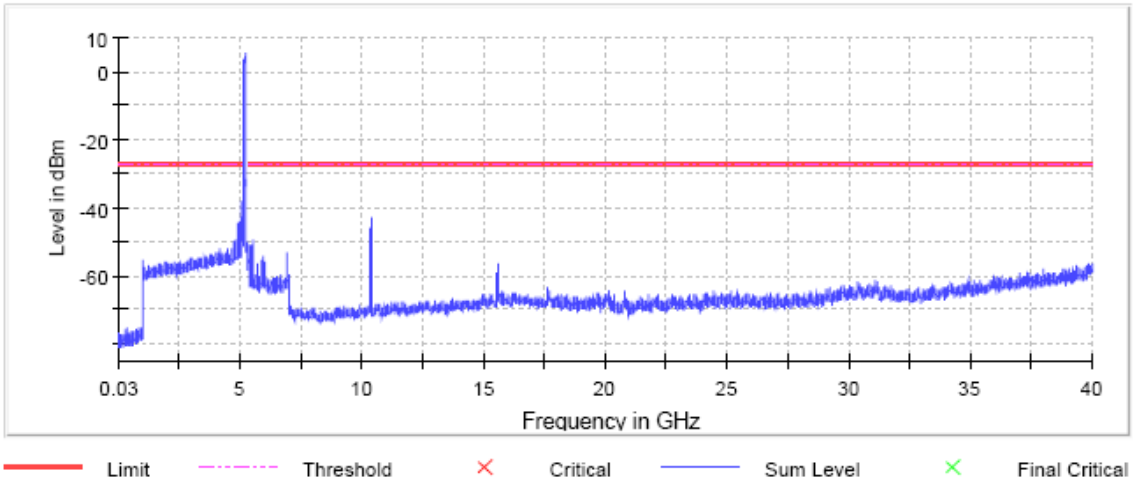
Setting	Instrument Value	Instrument Value
Start Frequency	**30.000 MHz**	**30.000 MHz**
Stop Frequency	**40 GHz**	**40 GHz**
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	10.000 dB	10.000 dB
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	56 / max. 150	11 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.28 dB	0.00 dB

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

Bandwidth: 40 MHz

Frequency: 5190 MHz

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



Measurement Settings

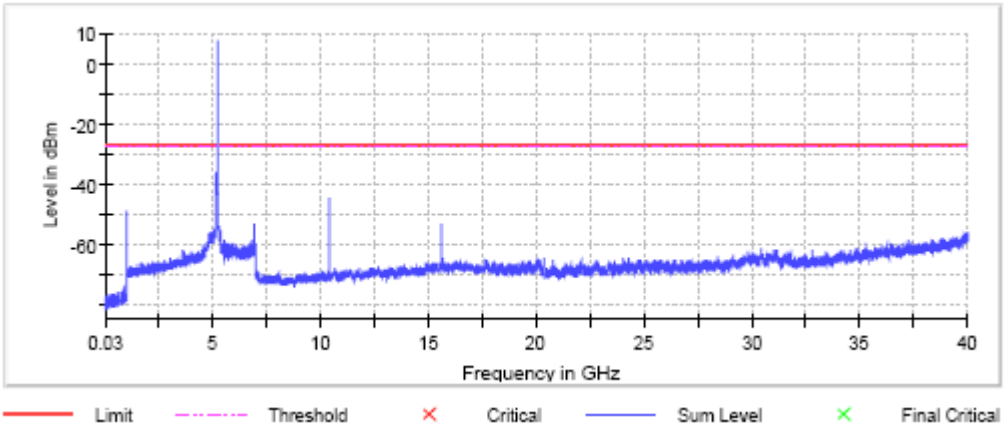
Setting	Instrument Value	Instrument Value
Start Frequency	**30.000 MHz**	**30.000 MHz**
Stop Frequency	**40 GHz**	**40 GHz**
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-10.000 dBm
Attenuation	10.000 dB	20.000 dB
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	51 / max. 150	18 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.21 dB	0.00 dB

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

Bandwidth: 20 MHz

Frequency: 5200 MHz

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



Measurement Settings

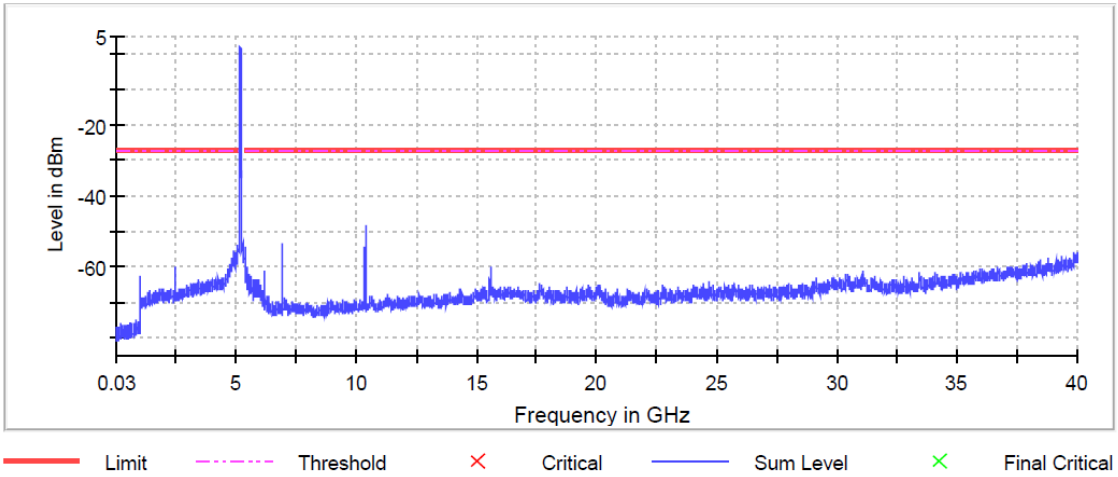
Setting	Instrument Value	Instrument Value
Start Frequency	**30.000 MHz**	**30.000 MHz**
Stop Frequency	**40 GHz**	**40 GHz**
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	10.000 dB	10.000 dB
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	43 / max. 150	21 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.49 dB	0.00 dB

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

Bandwidth: 40 MHz

Frequency: 5190 MHz

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



Measurement Settings

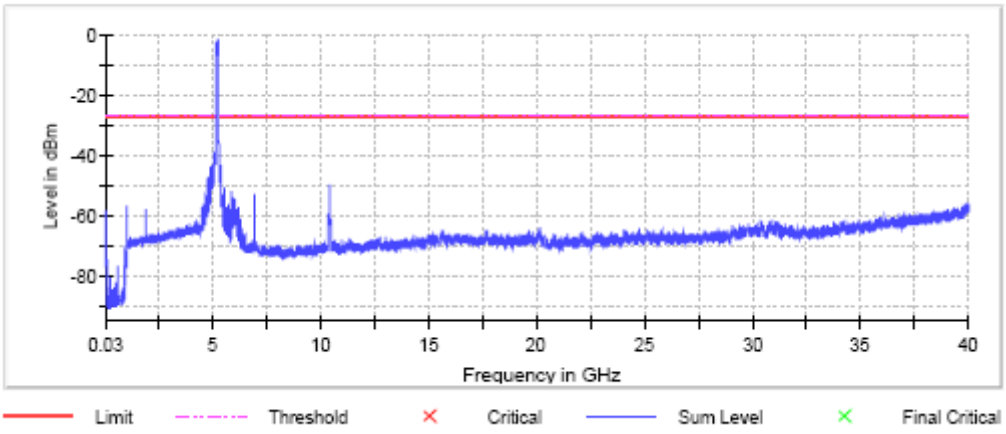
Setting	Instrument Value	Instrument Value
Start Frequency	**30.000 MHz**	**30.000 MHz**
Stop Frequency	**40 GHz**	**40 GHz**
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	10.000 dB	10.000 dB
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	83 / max. 150	14 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.39 dB	0.00 dB

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

Frequency: 5210 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
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	93 / max. 150	37 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.31 dB

TEST B.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.

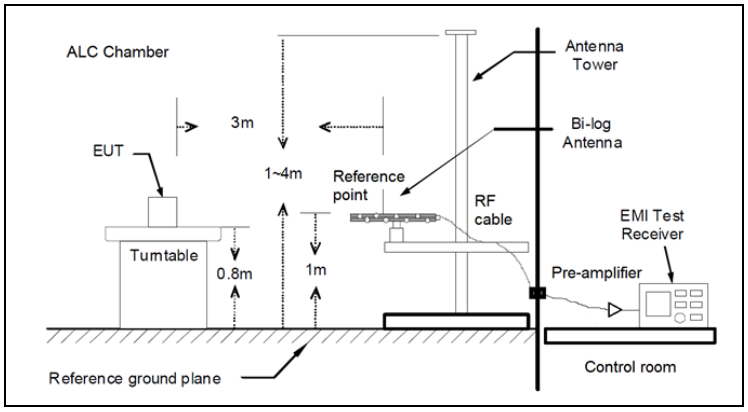
The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360º and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

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

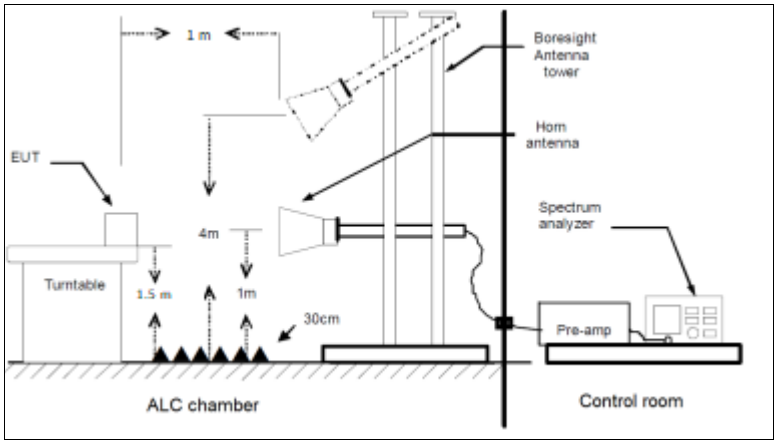
The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

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 30 MHz – 1000 MHz

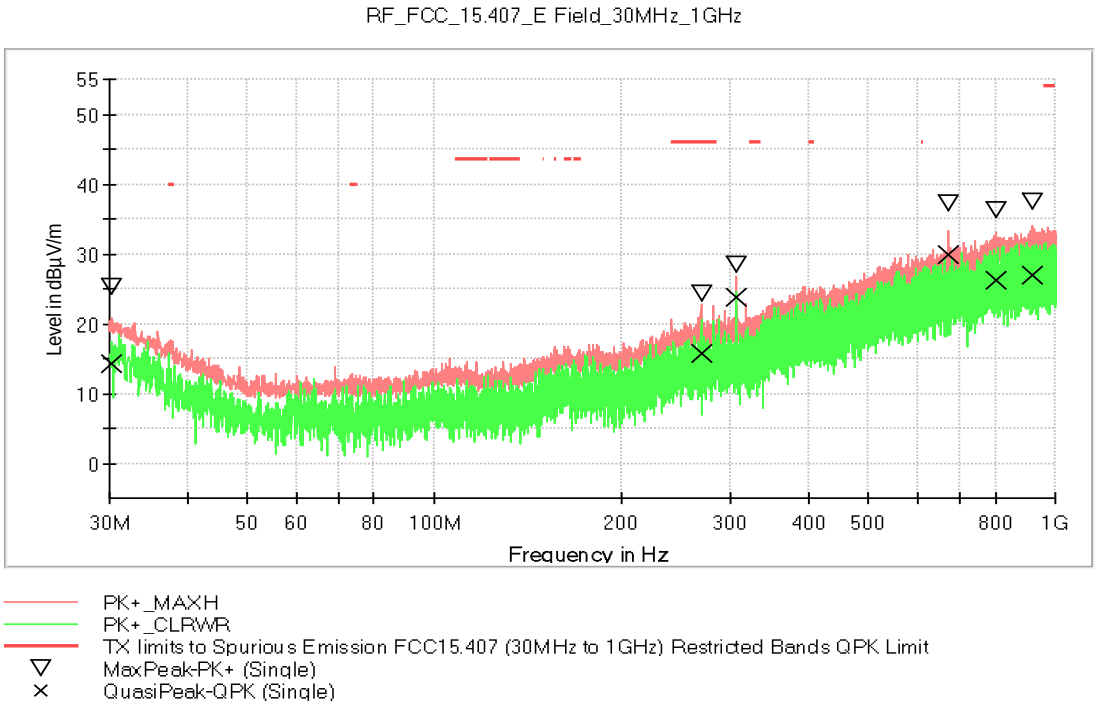
The spurious emissions below 1 GHz do not depend on the operating channel selected in the EUT. See worst operation mode selected for all the ranges (a mode 20 MHz and Mid channel) as a worst case.

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	**30 MHz – 1 GHz**

Mid Channel

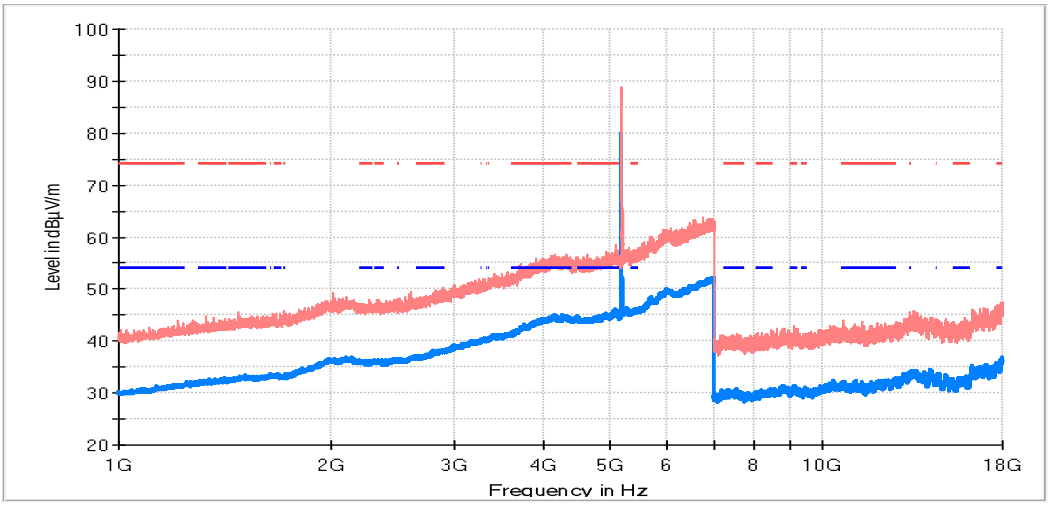


Result_Table Single

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Pol
30.291000	25.3	14.3	H
307.177500	28.4	23.8	H
804.836000	36.3	26.1	V
671.994500	37.2	29.9	V
919.393000	37.4	27.0	V
268.765500	24.3	15.8	V

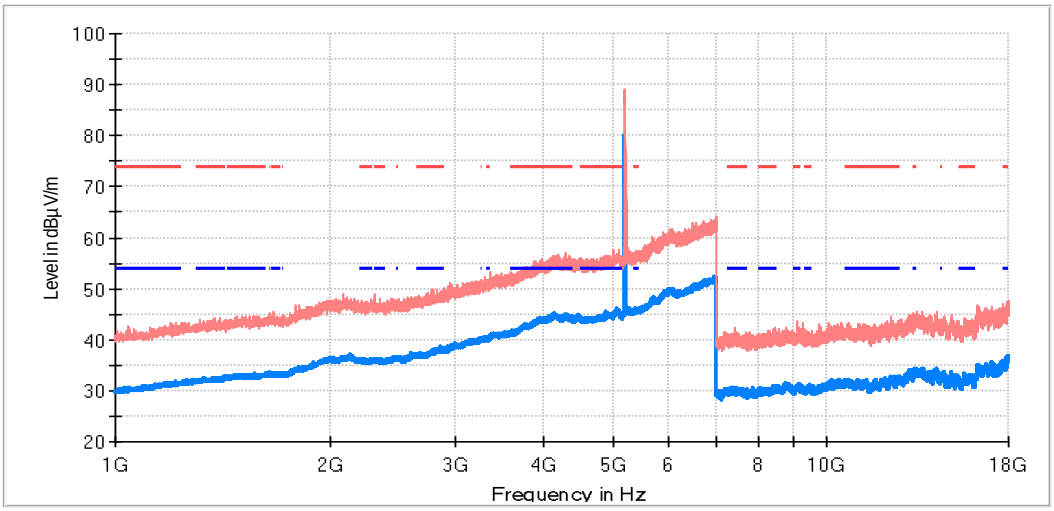
TEST RESULTS (Cont.)	
FREQUENCY RANGE	**1 GHz – 18 GHz**

Low Channel



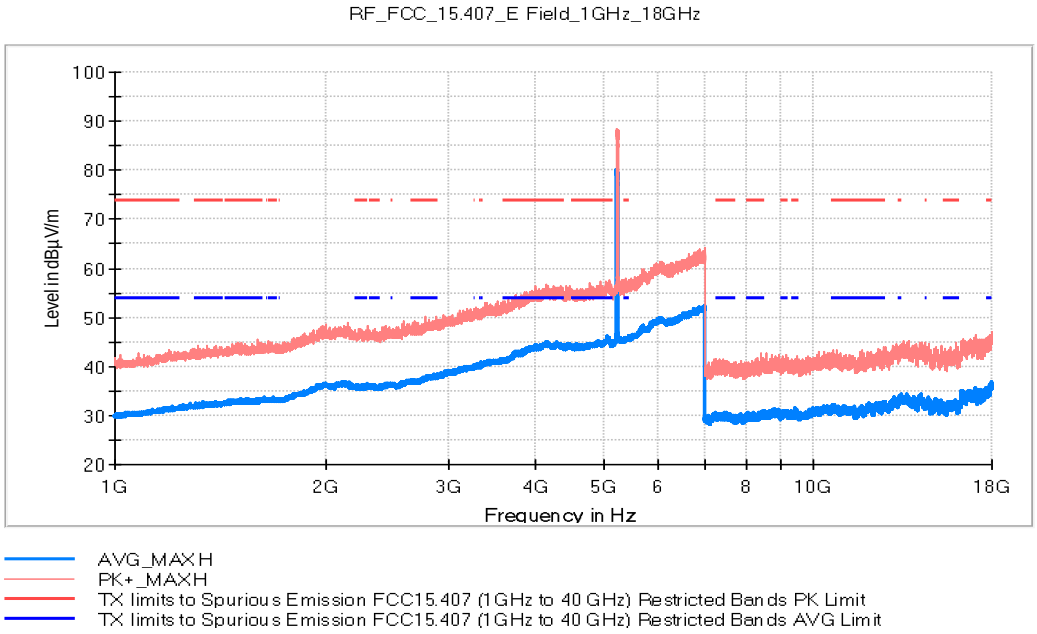
Middle Channel

RF_FCC_15.407_E Field_1GHz_18GHz



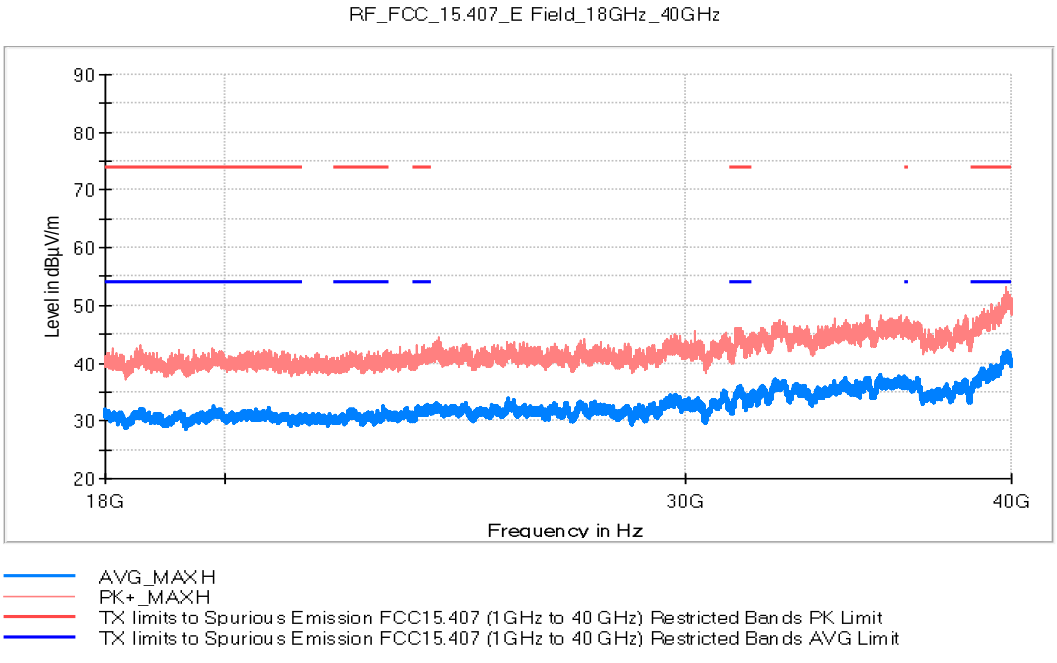
TEST RESULTS (Cont.)	

High Channel



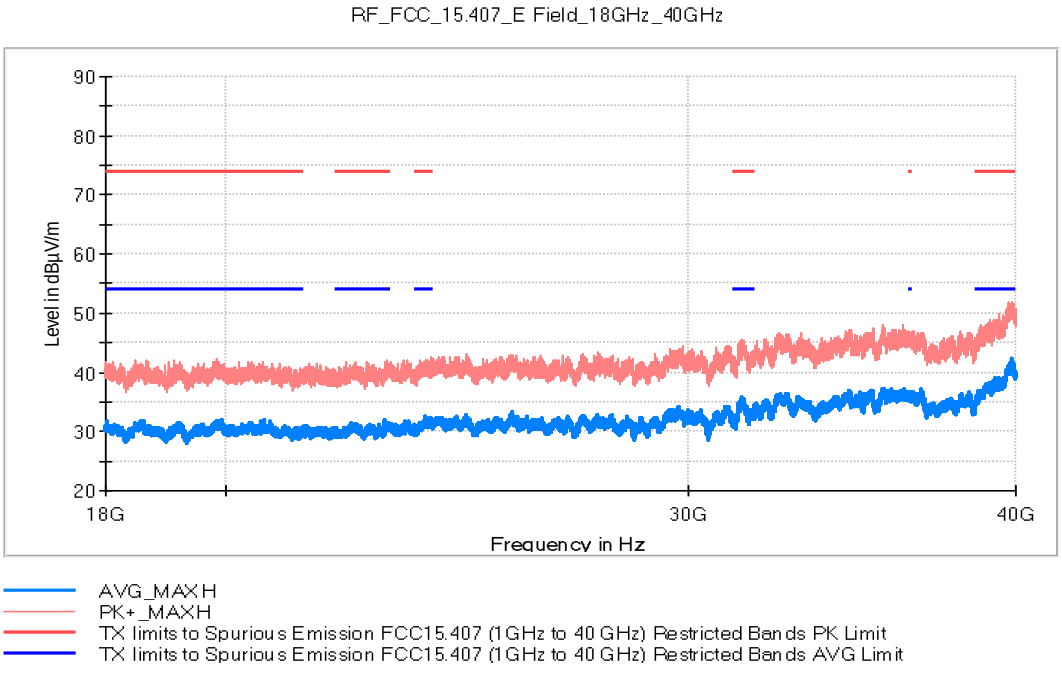
FREQUENCY RANGE	18 GHz – 40 GHz

Low Channel

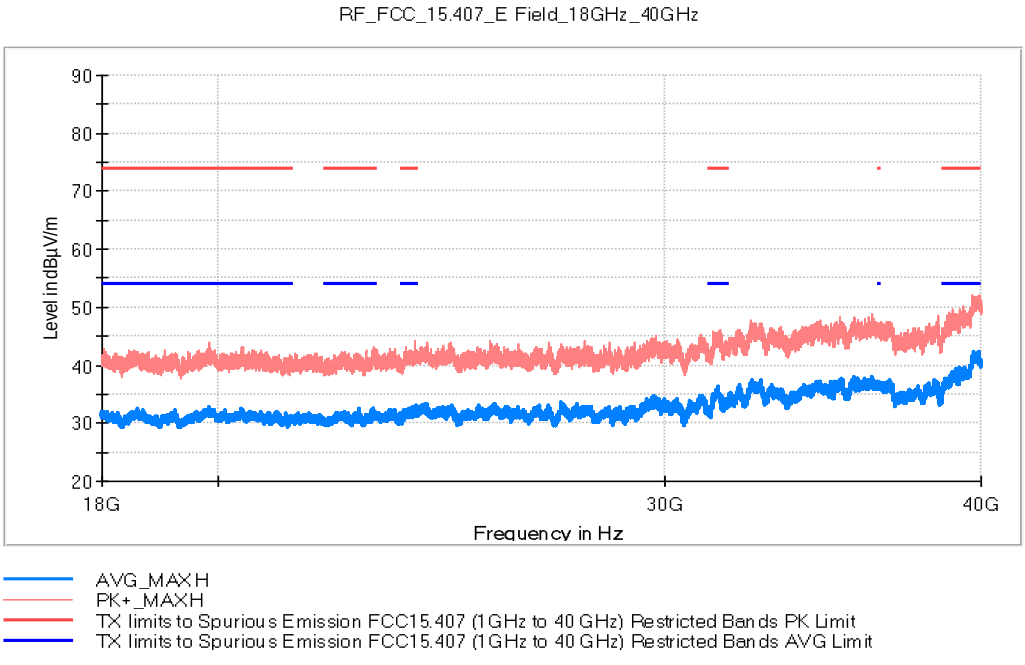


TEST RESULTS (Cont.)	

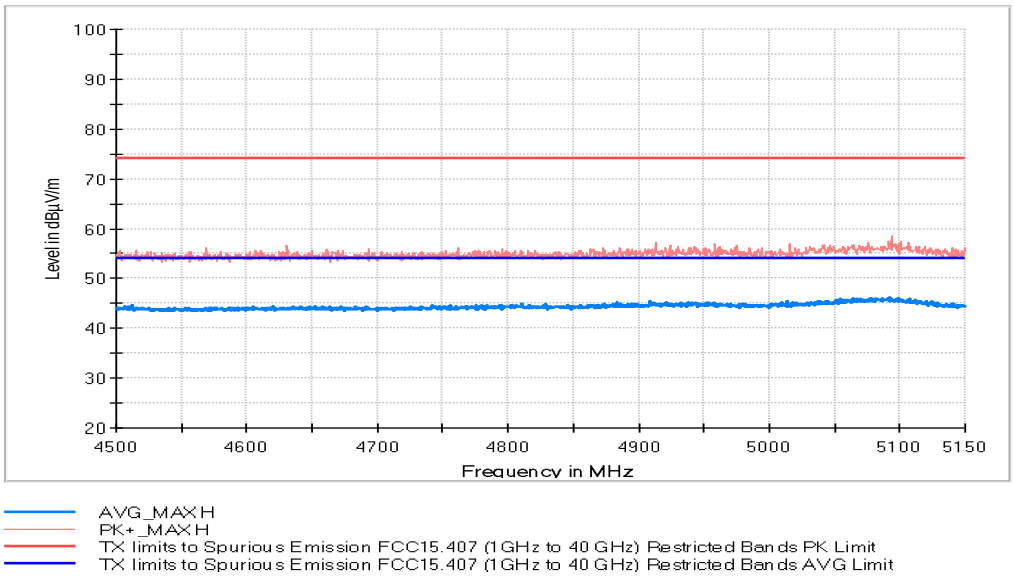
Middle Channel



High Channel



RESTRICTED BANDS	4.5 GHz – 5.15 GHz



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

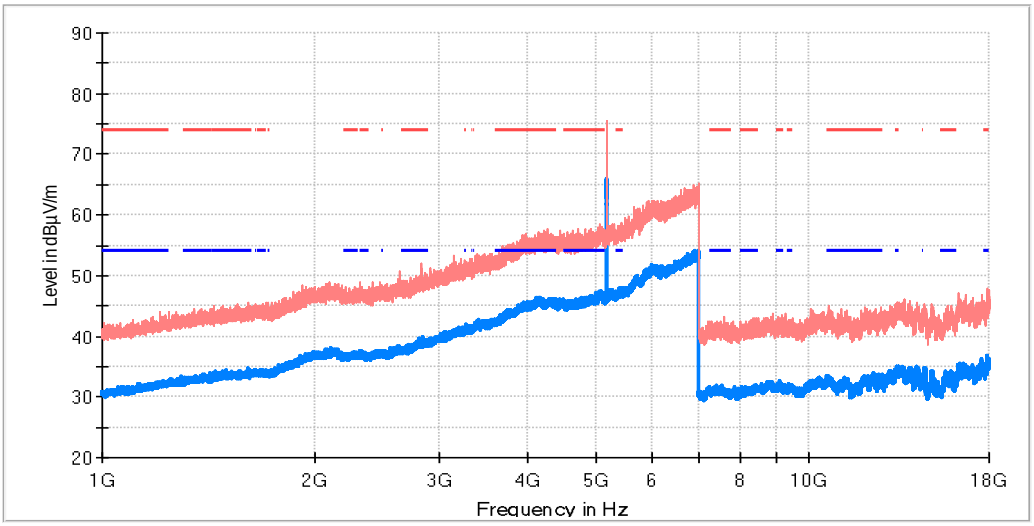
Co-Location

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**

Low Channel

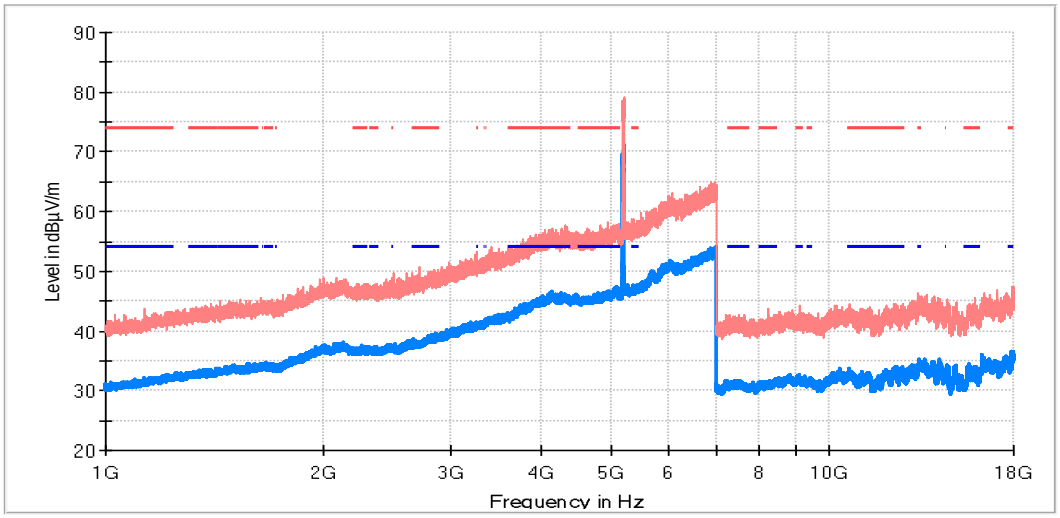


Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comment
5183.090909	74.4	65.9	V	Fundamental

TEST RESULTS (Cont.)	

Middle Channel



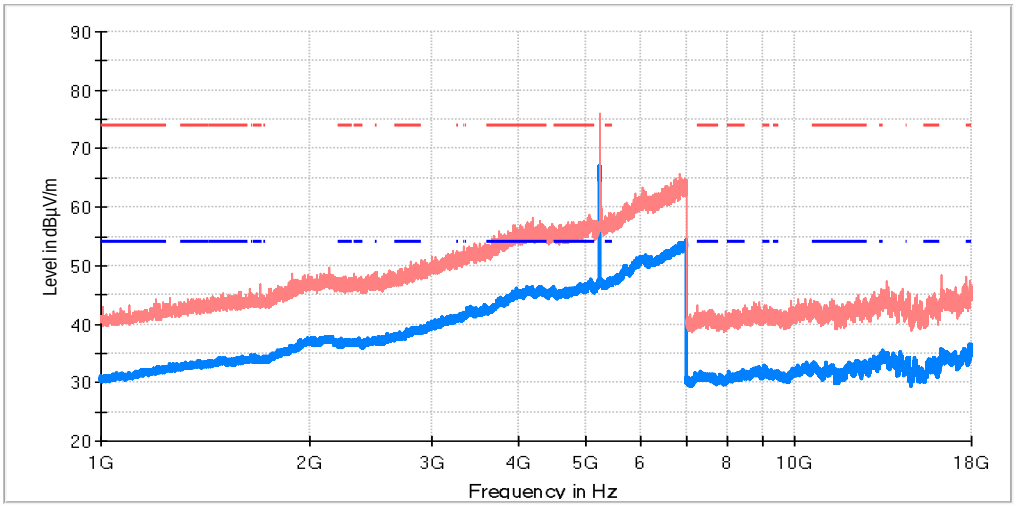
AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comment
5198.636364	77.8	71.0	V	Fundamental

TEST RESULTS (Cont.)	

High Channel



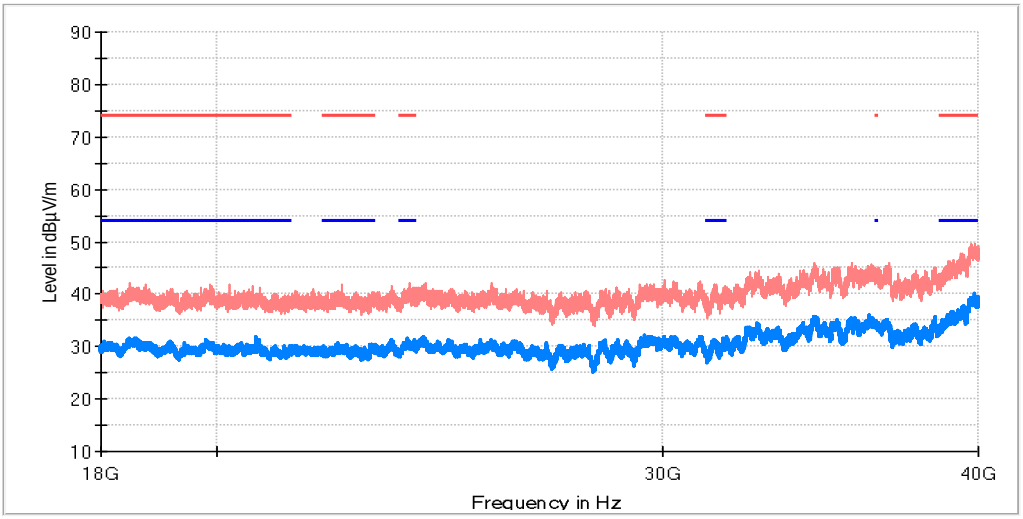
AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5242.545455	75.2	67.0	V	Fundamental

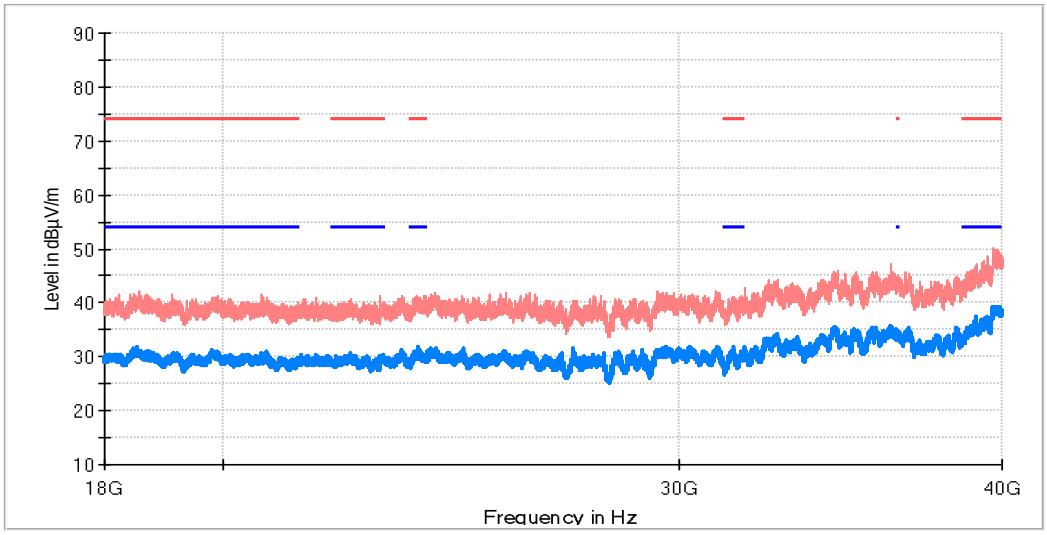
TEST RESULTS (Cont.)	
FREQUENCY RANGE	**18 GHz – 40 GHz**

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

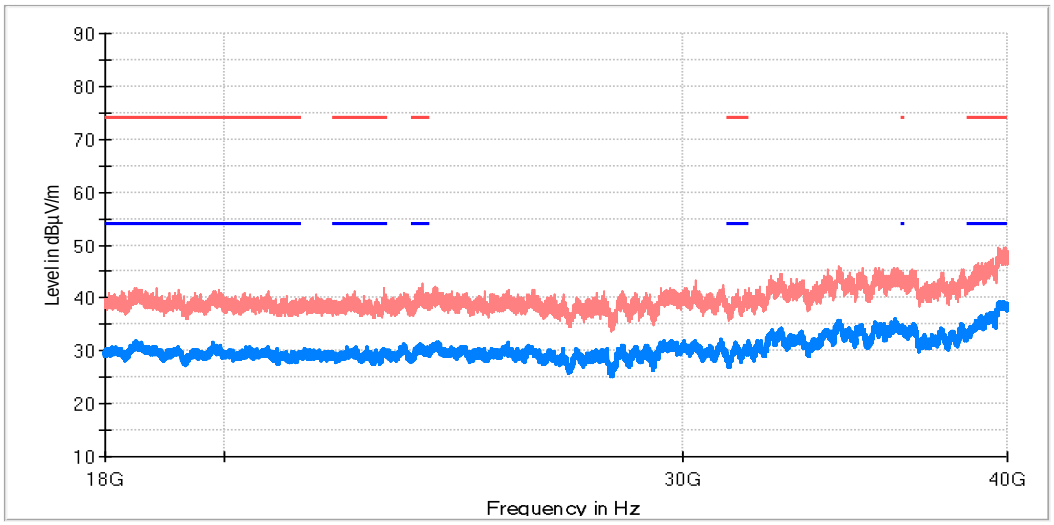
Middle Channel



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

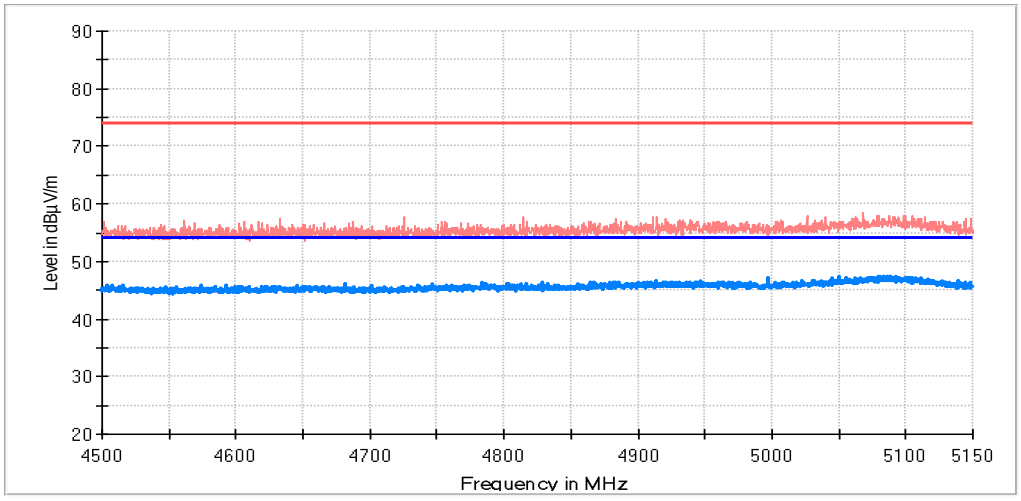
TEST RESULTS (Cont.)	

High Channel



AVG_MAX H
PK+_MAX H
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

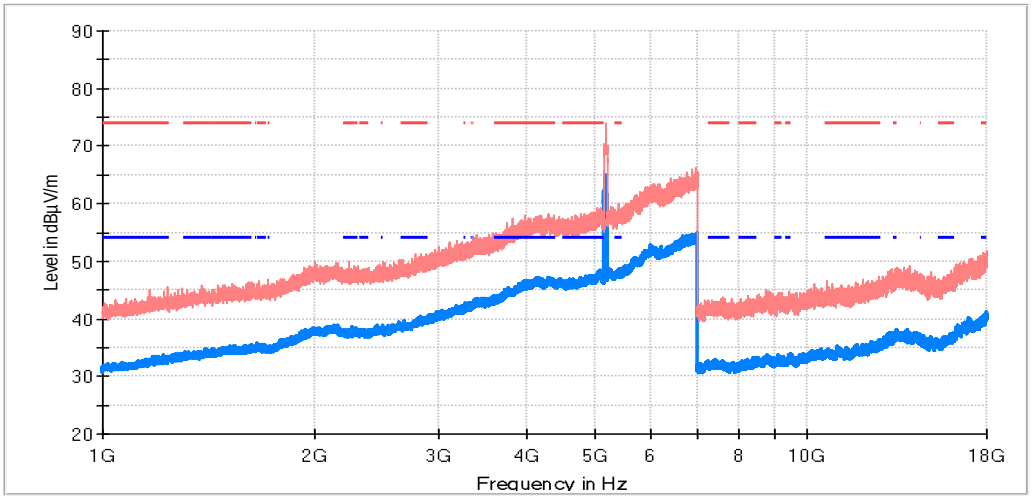
RESTRICTED BANDS	4.5 GHz – 5.15 GHz



AVG_MAX H
PK+_MAX H
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

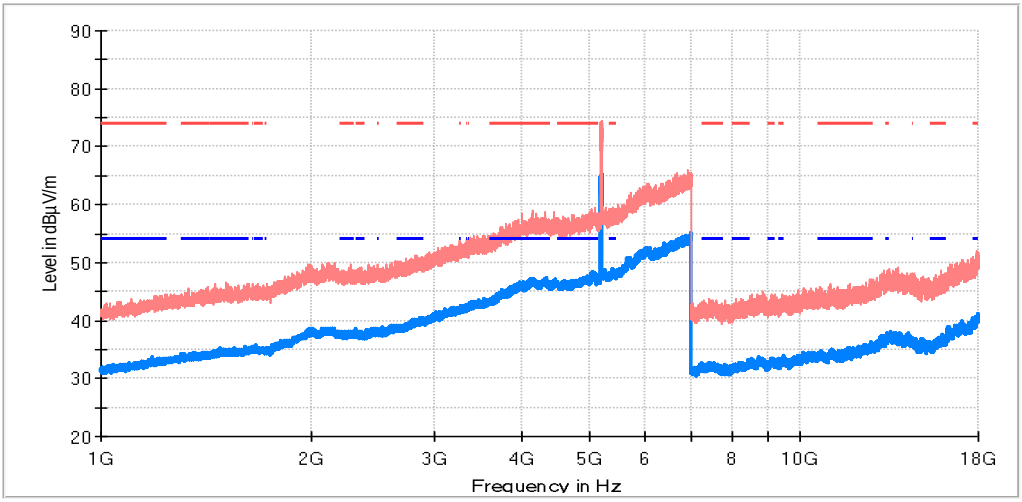


Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5178.454546	73.30	64.85	V	Fundamental

TEST RESULTS (Cont.)	

Mid Channel



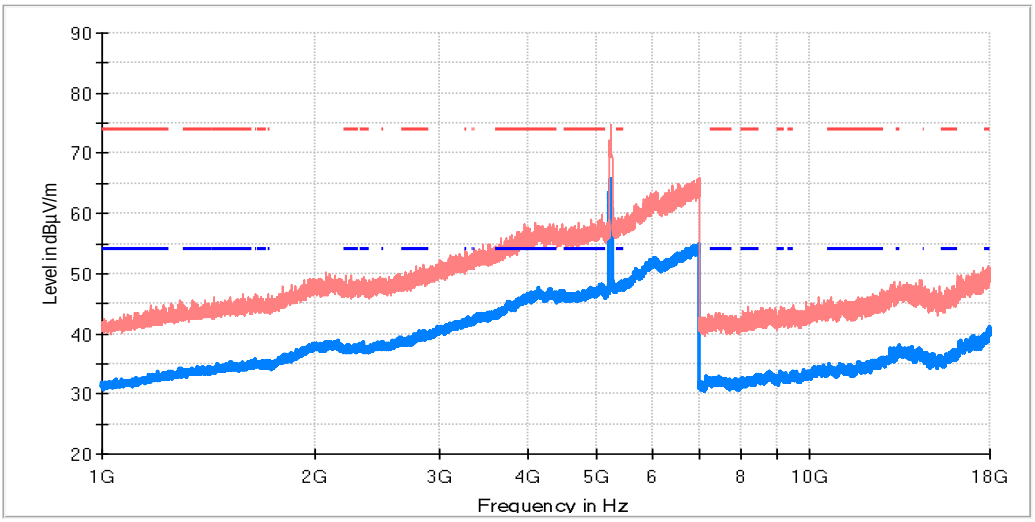
AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5209.000000	74.15	65.24	V	Fundamental

TEST RESULTS (Cont.)	

High Channel

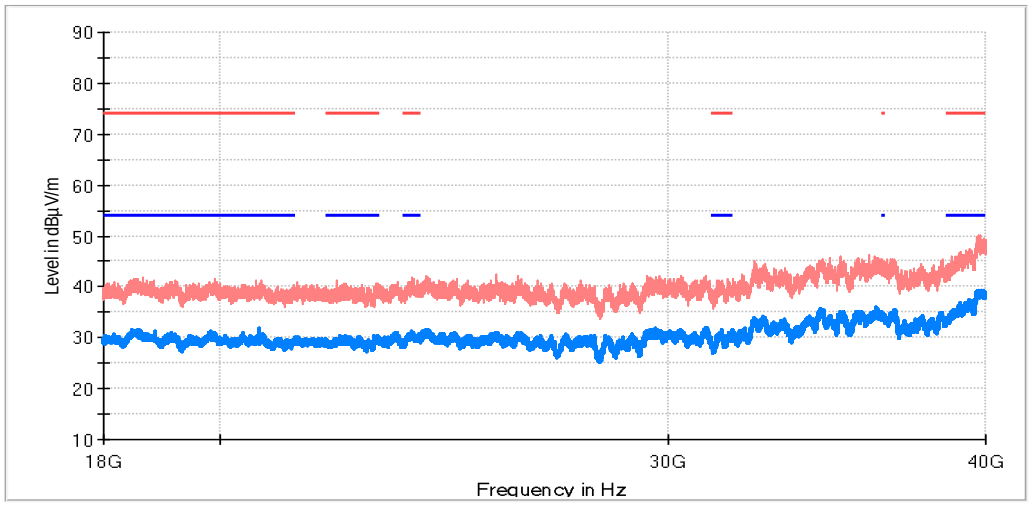


Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5244.727273	74.13	65.82	V	Fundamental

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

Low Channel



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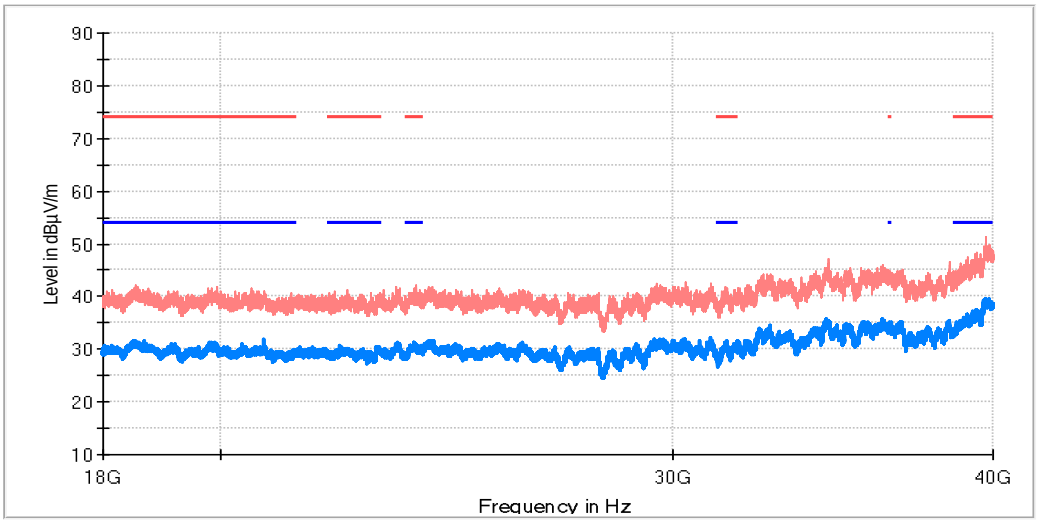
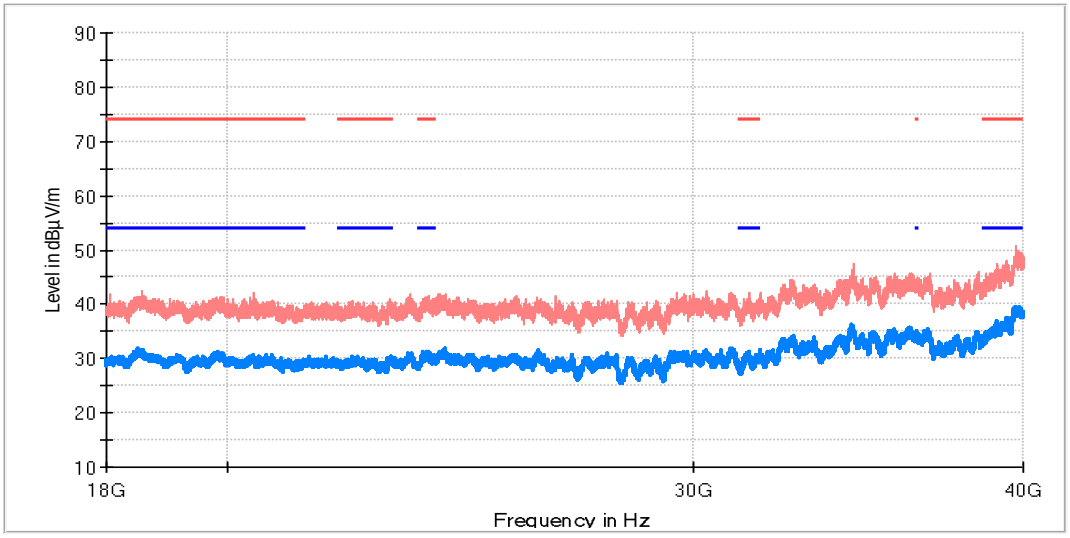
Mid Channel



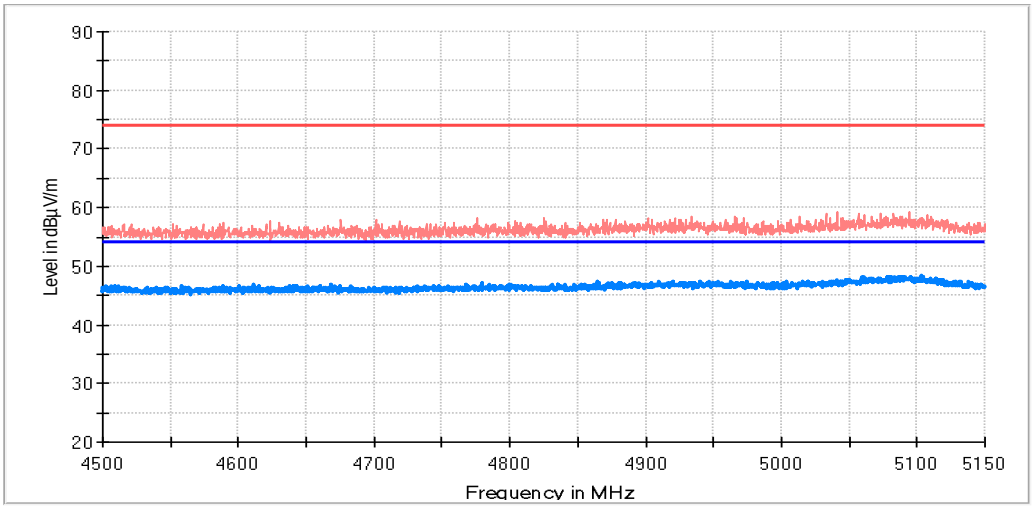
TEST RESULTS (Cont.)	

High Channel



AVG_MAX H
PK+_MAX H
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_MAX H
PK+_MAX H
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

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

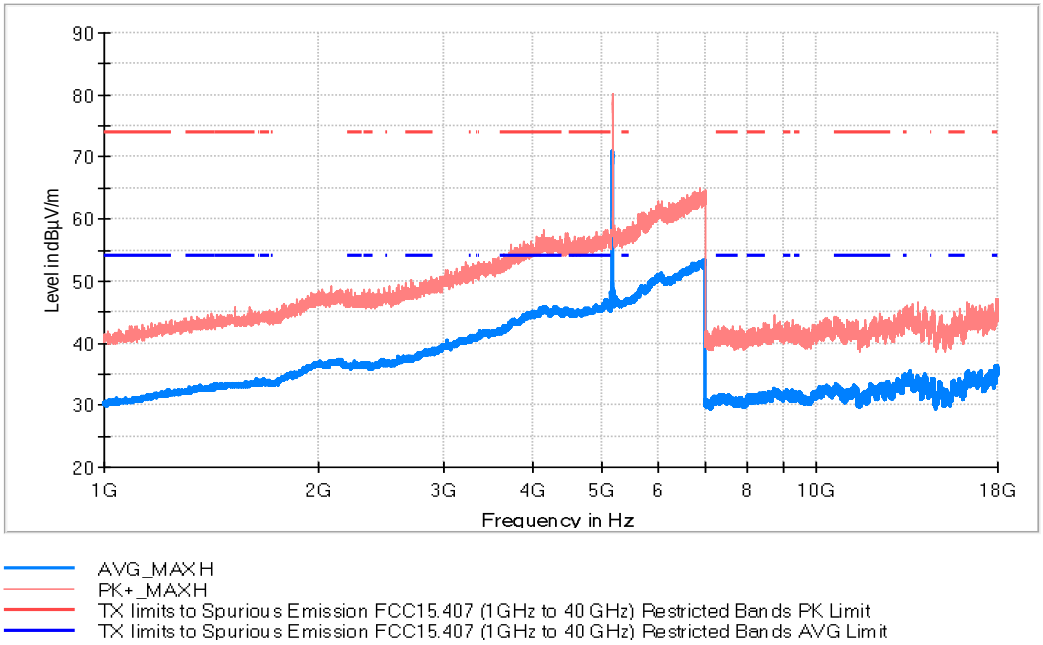
Co-Location

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

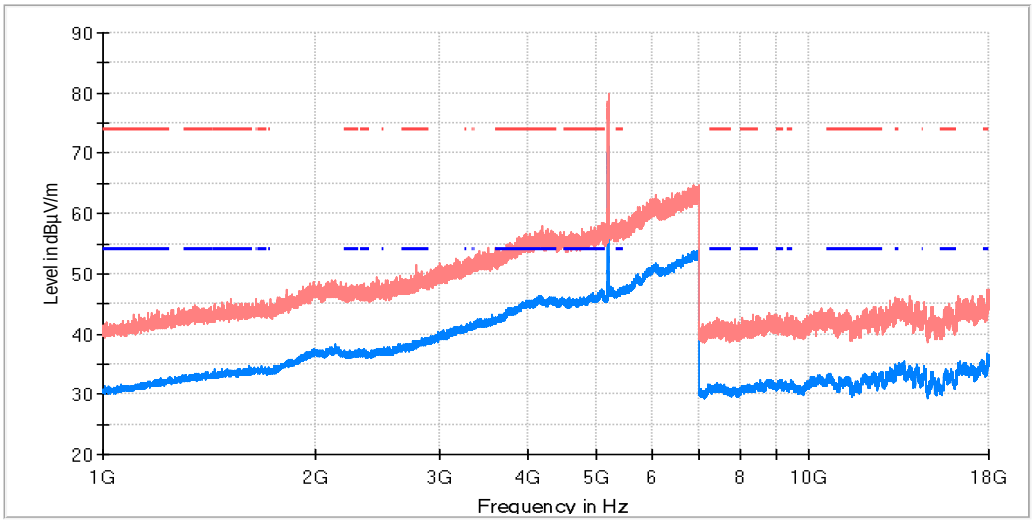


Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5184.000000	79.4	71.0	V	Fundamental

TEST RESULTS (Cont.)	

Mid Channel



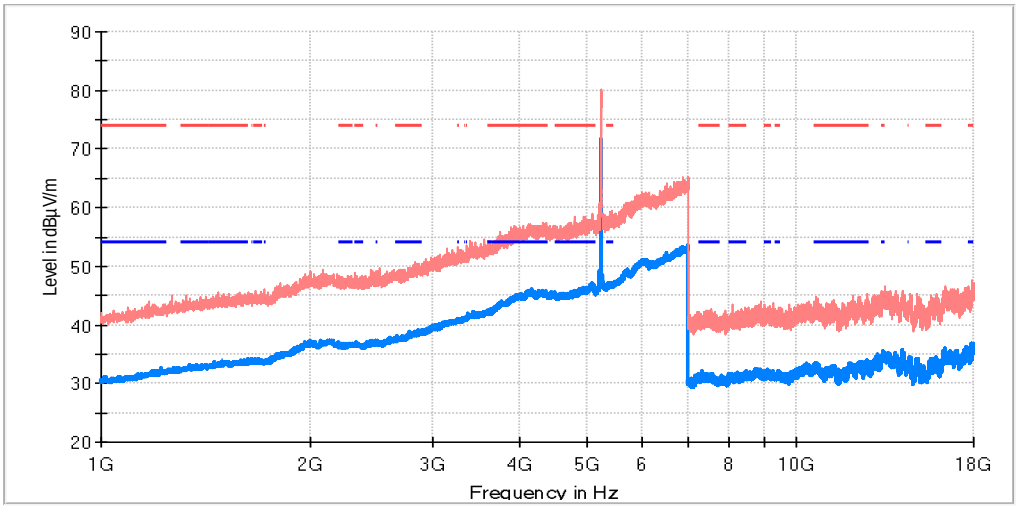
AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Comments
5203.545455	79.9	71.0	Fundamental

TEST RESULTS (Cont.)	

High Channel



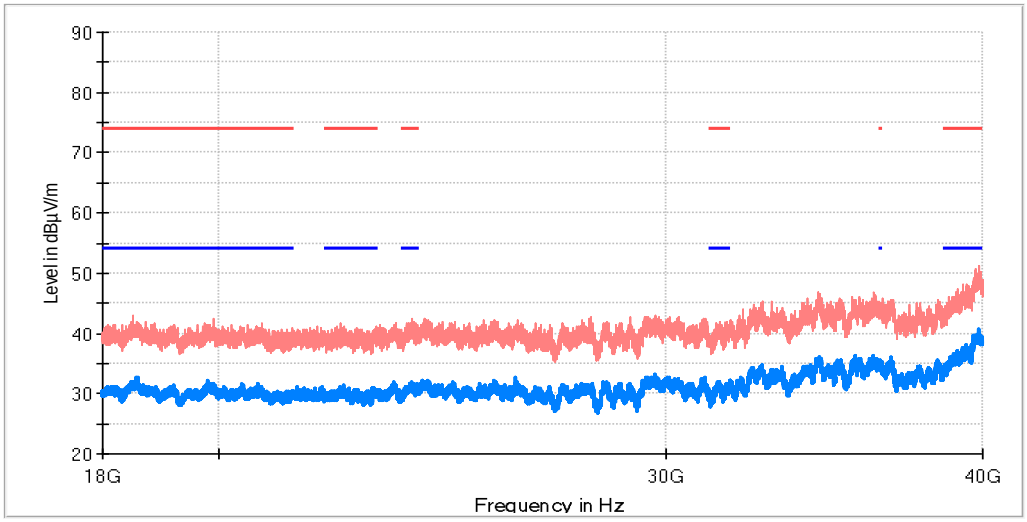
AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

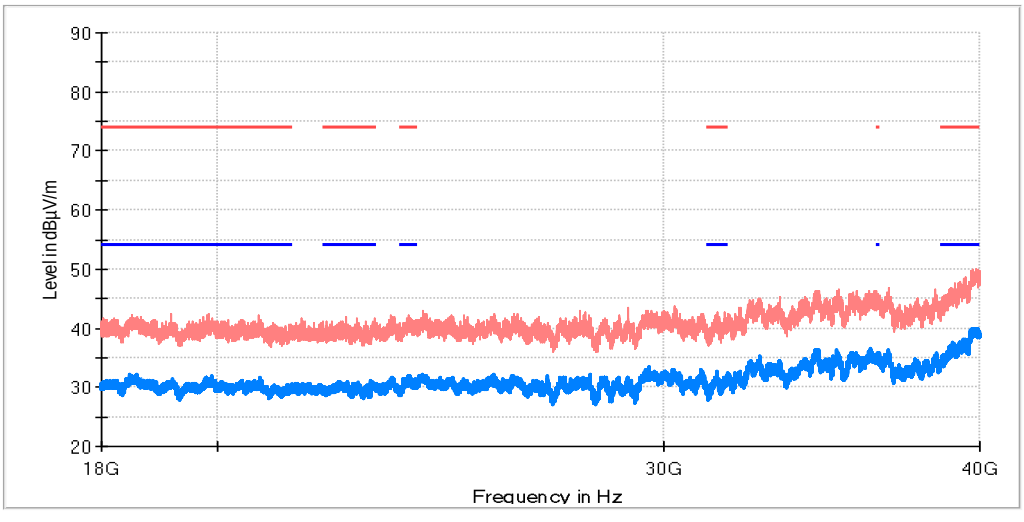
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5237.500000	79.13	71.62	V	Fundamental

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

Low Channel

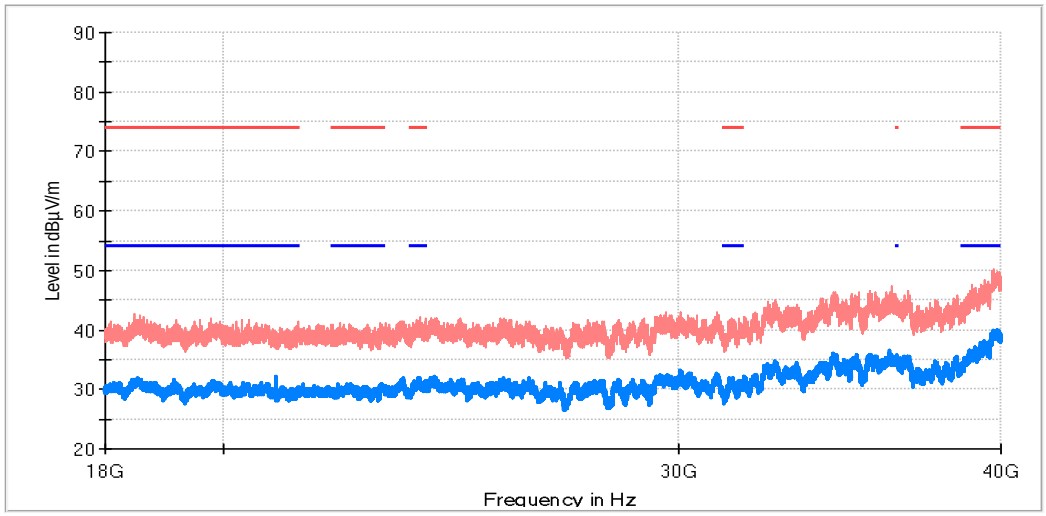


Middle Channel

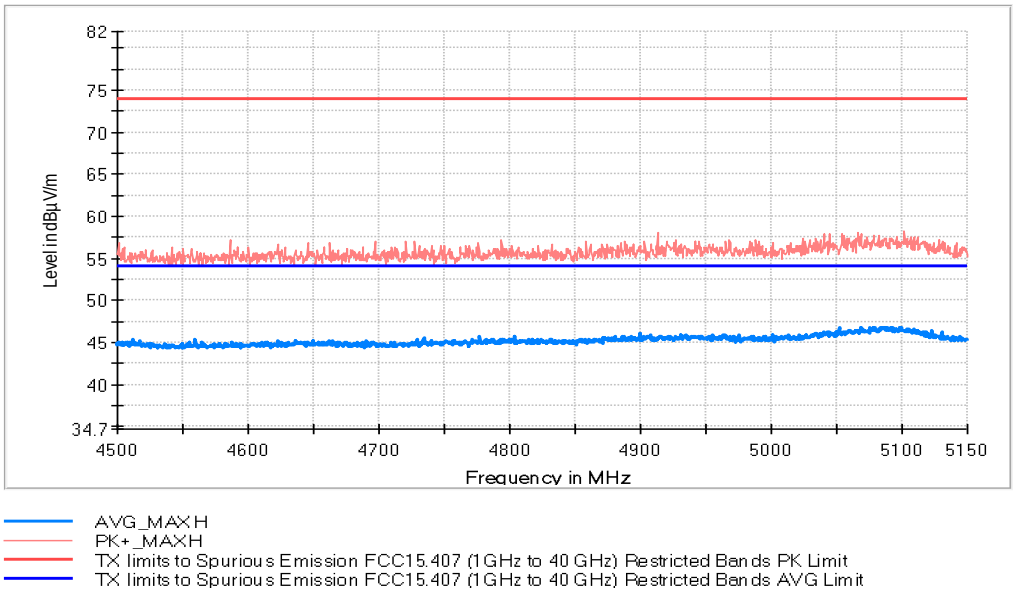


TEST RESULTS (Cont.)	

High Channel

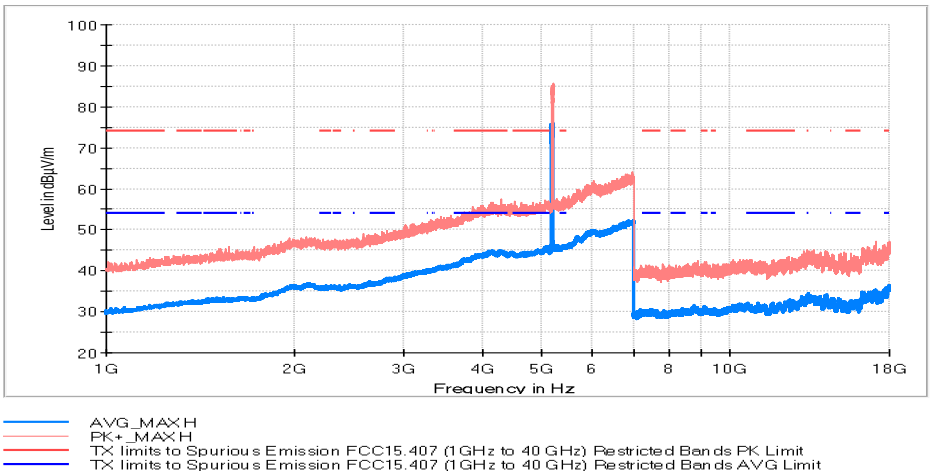


RESTRICTED BANDS	4.5 GHz – 5.15 GHz

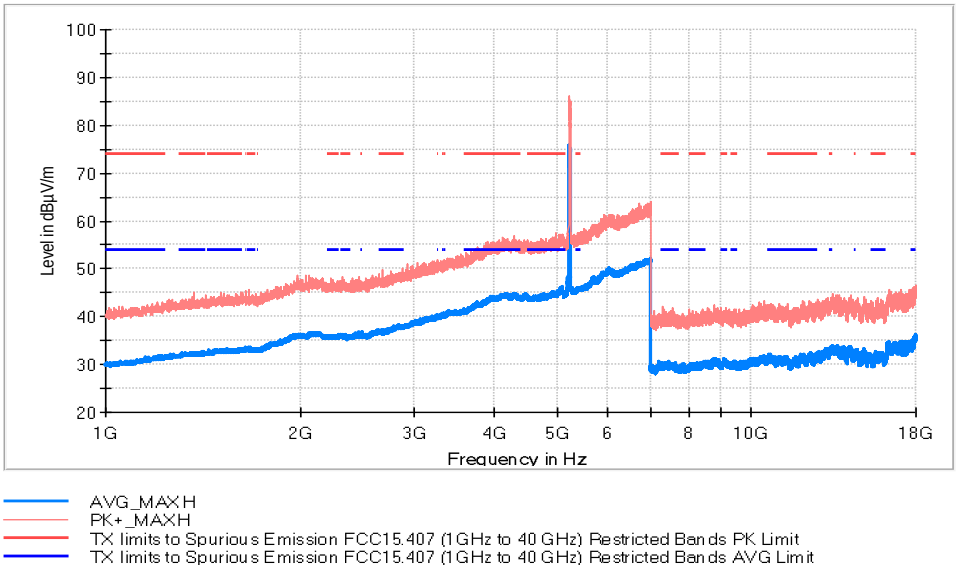


TEST RESULTS (Cont.)	ac mode (40 MHz)
FREQUENCY RANGE	1 GHz – 18 GHz

Low Channel

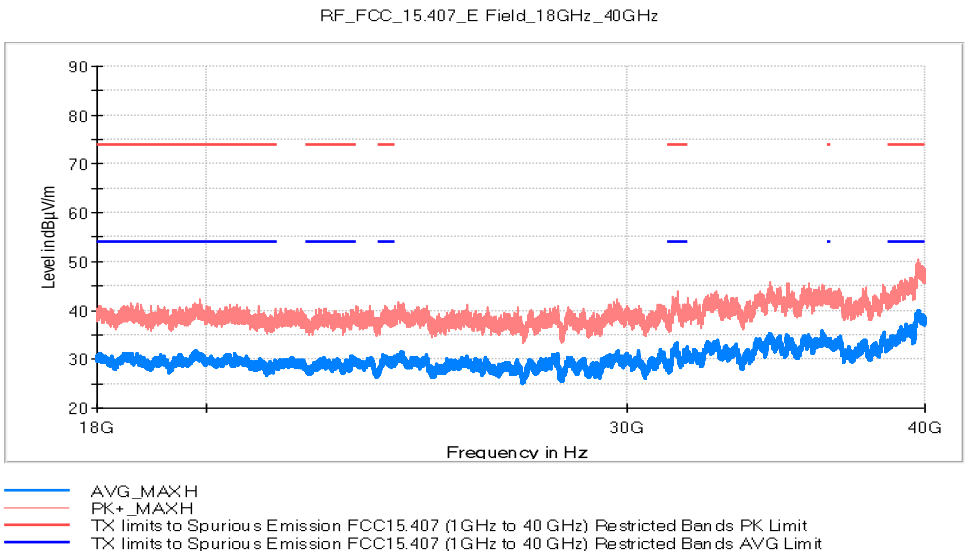


High Channel



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

Low Channel



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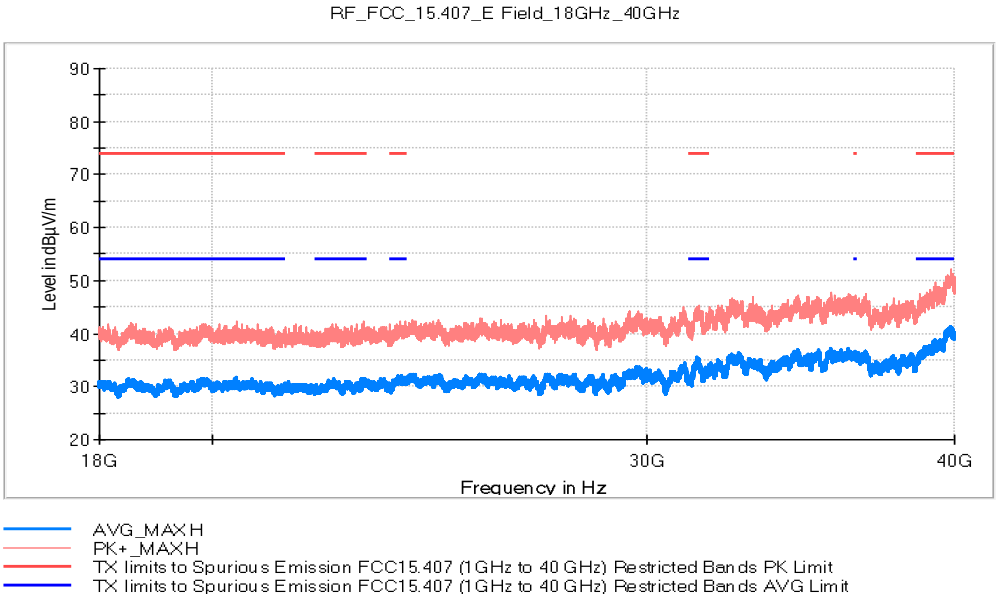
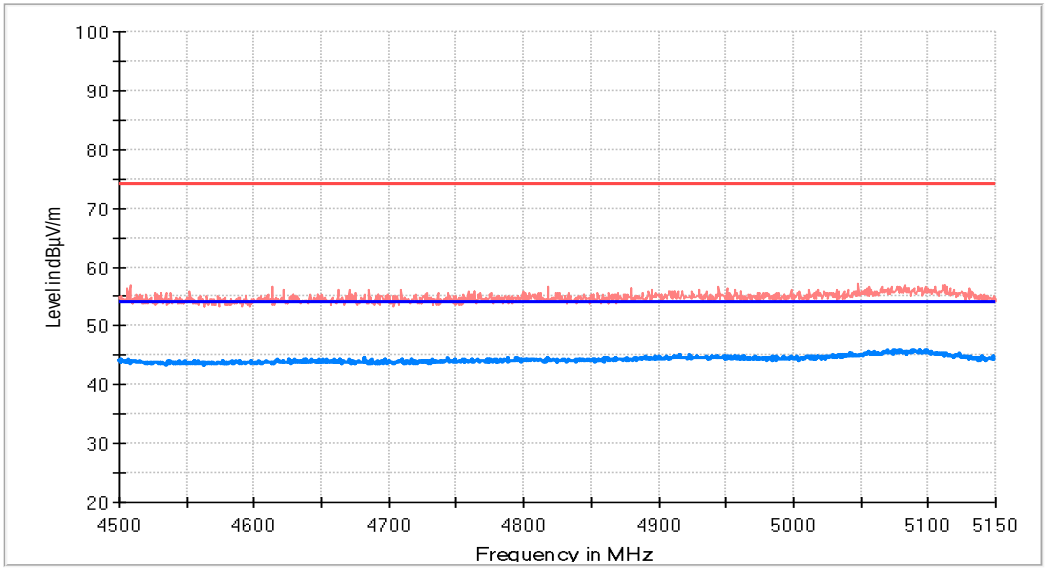
High Channel



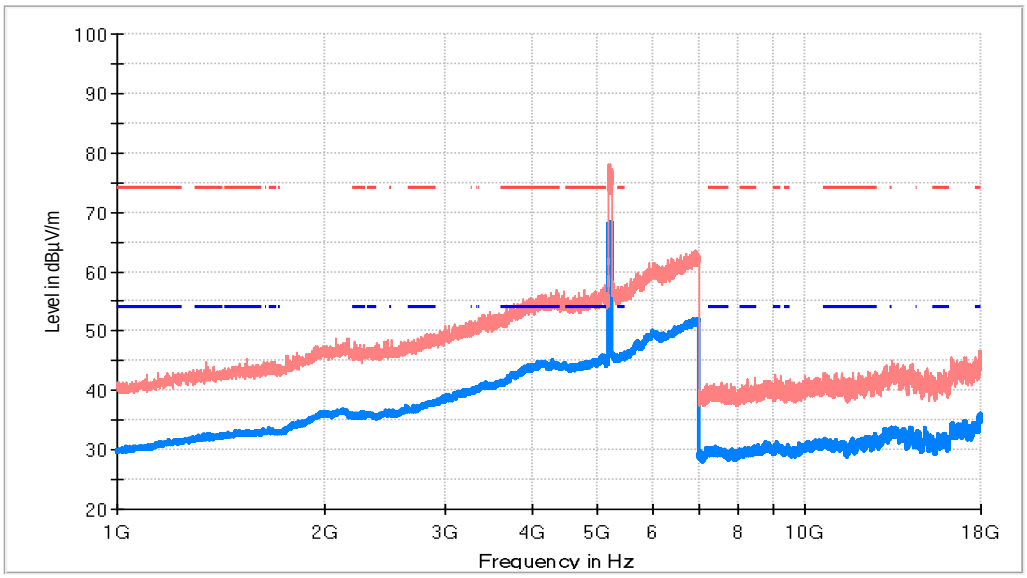
RESTRICTED BANDS	4.5 GHz – 5.15 GHz



AVG_MAX H
PK+_MAX H
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.)	ac mode (80 MHz)
FREQUENCY RANGE	1 GHz – 18 GHz

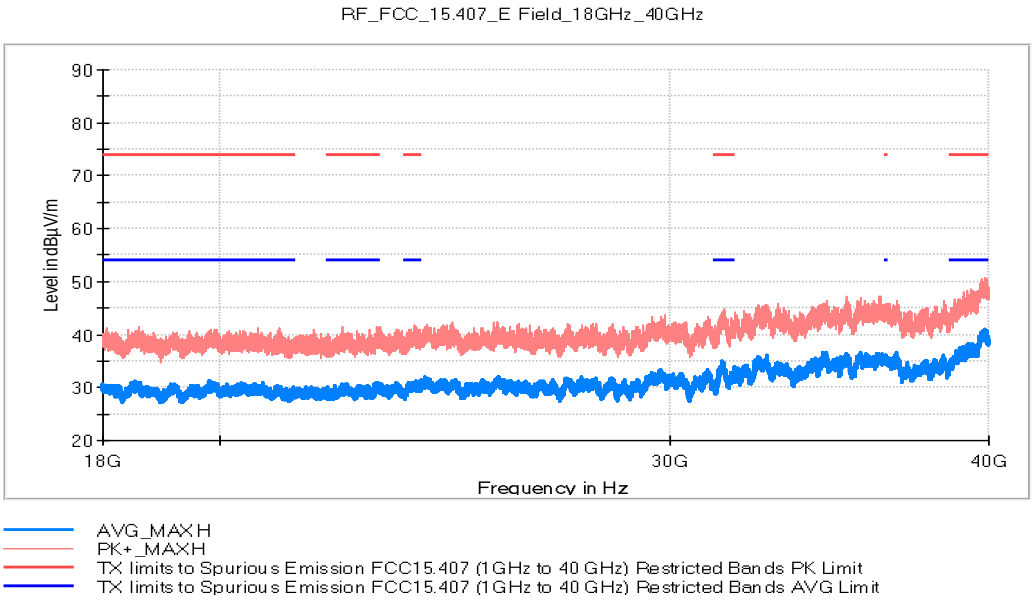
Mid Channel



AVG_MAX H
PK+_MAX H
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

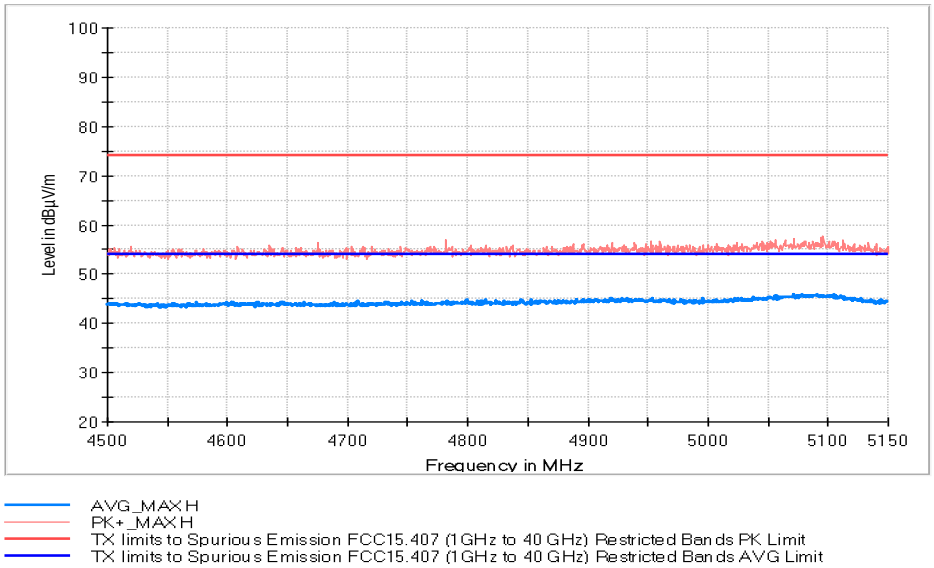
TEST RESULTS (Cont.)	
FREQUENCY RANGE	**18 GHz – 40 GHz**

Mid Channel



RESTRICTED BANDS	4.5 GHz – 5.15 GHz

Mid Channel



Appendix C: Test results
5.25 GHz – 5.35 GHz Band

Appendix C Content

DESCRIPTION OF TEST CONDITIONS

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

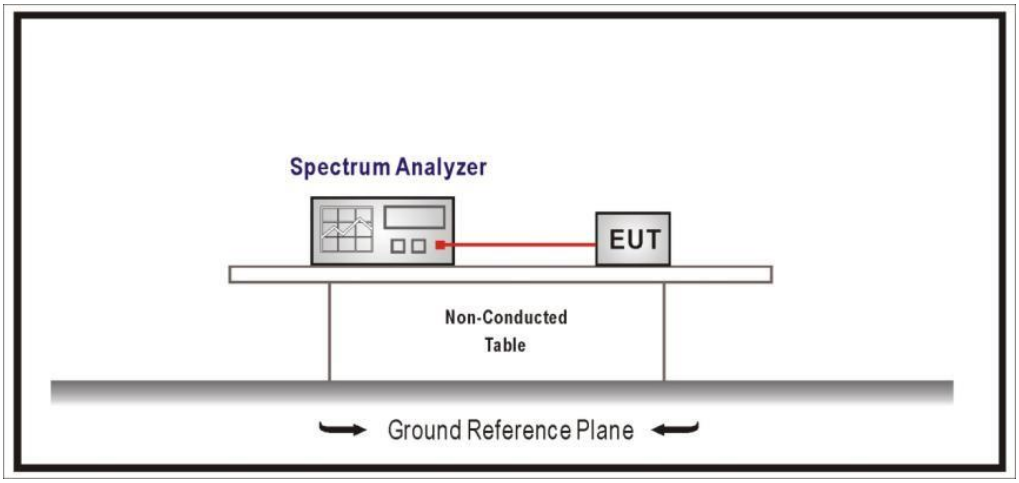
Note (1): For spurious emissions for OFDM modes 802.11a, 802.11n20/40 and 802.11ac20/40/80 a preliminary scan was performed to determine the worst case.
The data rates of 6Mb/s for 802.11a, HT0 (SISO) for 802.11n20/ac20 and n40/ac40, and VHT0 (SISO) for 802.11 ac80 were selected based on preliminary 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:	



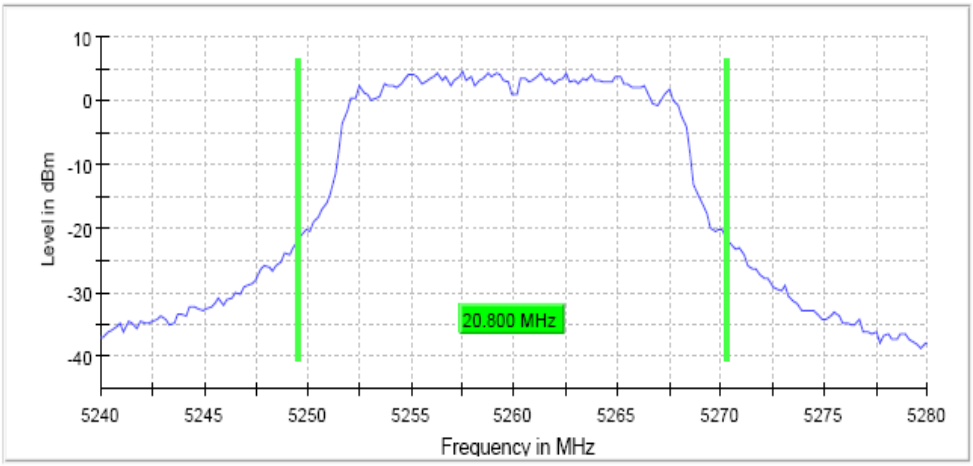
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01 **(a mode)**
TEST RESULTS:	PASS

Bandwidth: 20 MHz

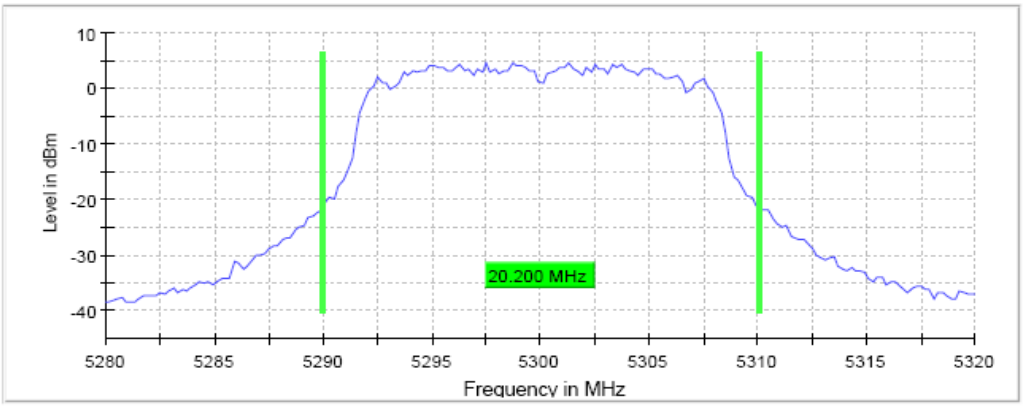
	Lowest frequency 5260 MHz	Middle frequency 5300 MHz	Highest frequency 5320 MHz
26dB Bandwidth (MHz)	20.8	20.2	20.4
Occupied bandwidth (MHz)	16.4	16.2	16.2
Measurement uncertainty (kHz)	<± 8.33		

TEST RESULTS (Cont.):	26 dB BANDWIDTH

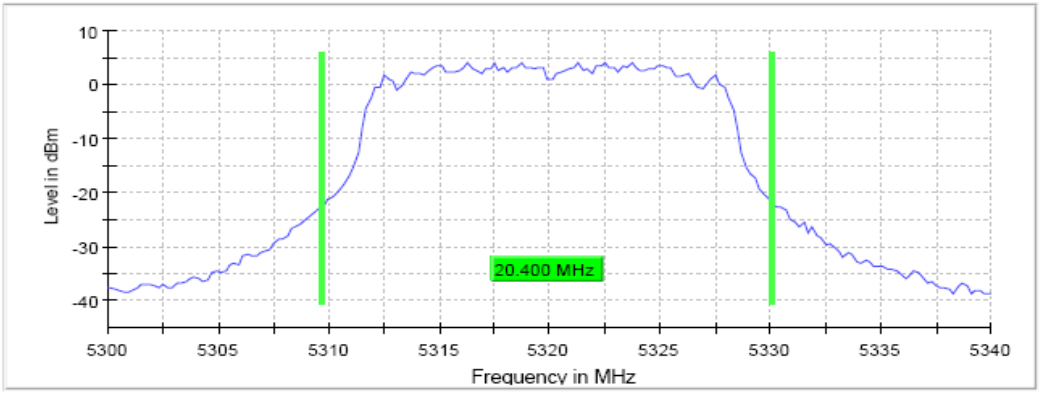
Lowest Channel



Middle Channel

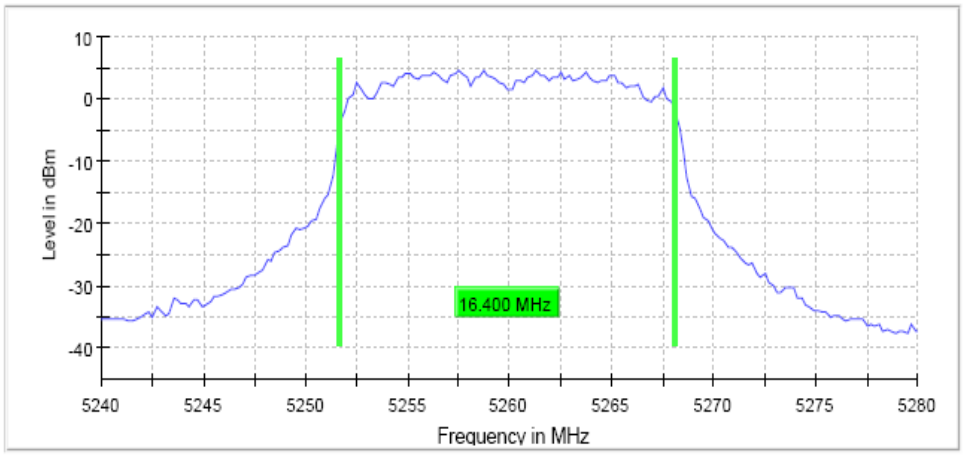


Highest Channel

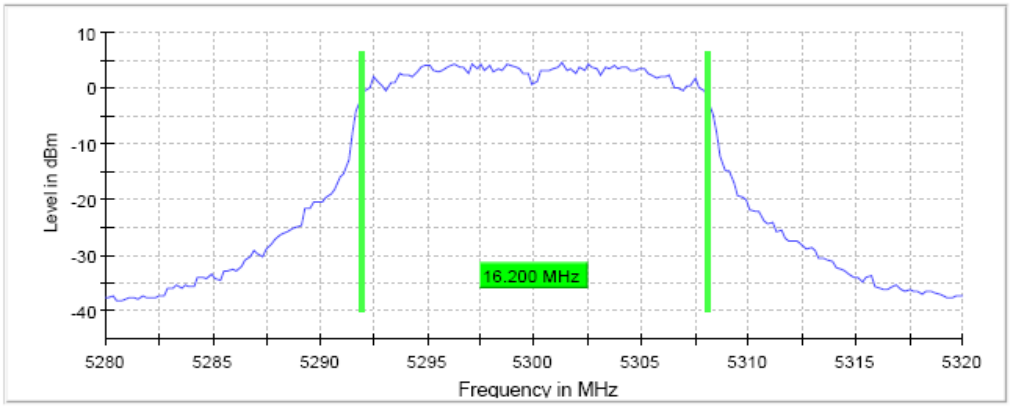


TEST RESULTS (Cont.):	OCCUPIED BANDWIDTH

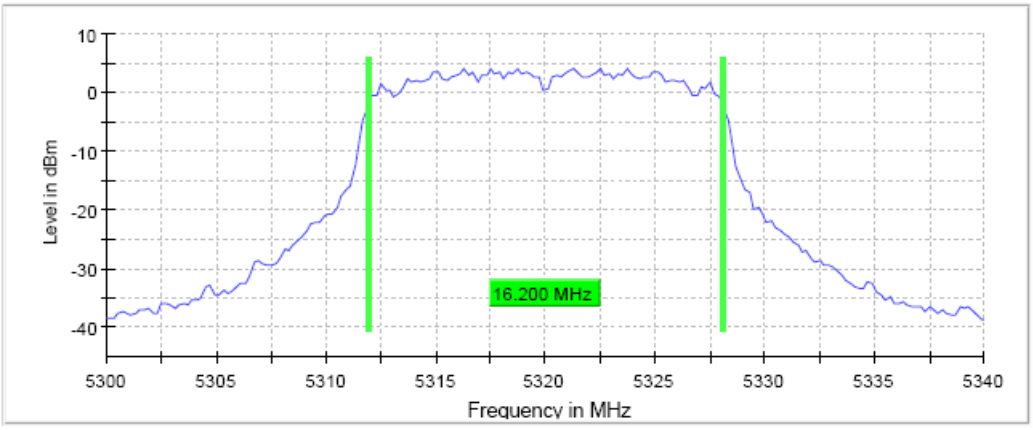
Lowest Channel



Middle Channel



Highest Channel



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	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	30 / max. 150	35 / max. 150	50 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.03 dB	0.04 dB	0.00 dB

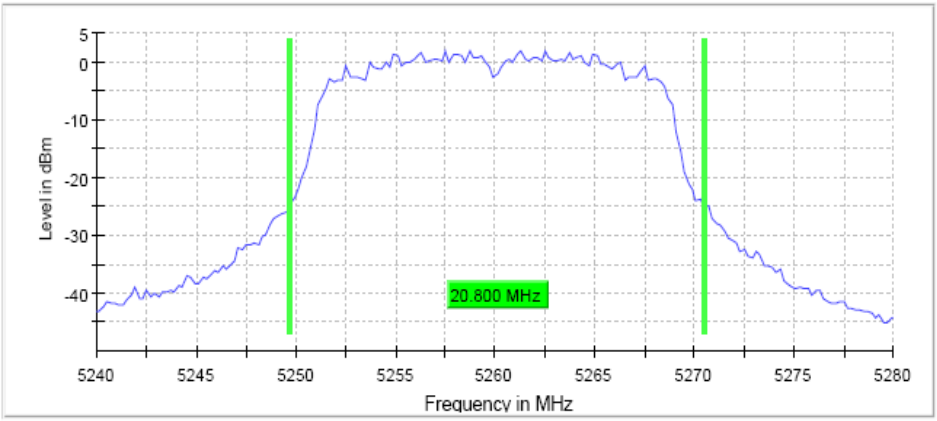
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 **(n Mode)**
TEST RESULTS:	PASS

Bandwidth: 20 MHz

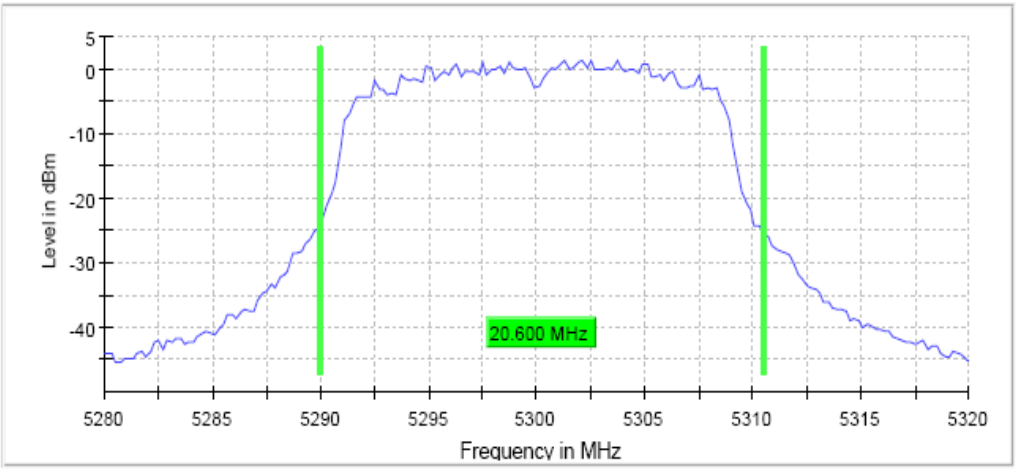
	Lowest frequency 5260 MHz	Middle frequency 5300 MHz	Highest frequency 5320 MHz
26dB bandwidth (MHz)	20.8	20.6	20.8
Occupied bandwidth (MHz)	17.4	17.4	17.4
Measurement uncertainty (kHz)	<± 8.33		

TEST RESULTS (Cont.):	26 dB BANDWIDTH

Lowest Channel



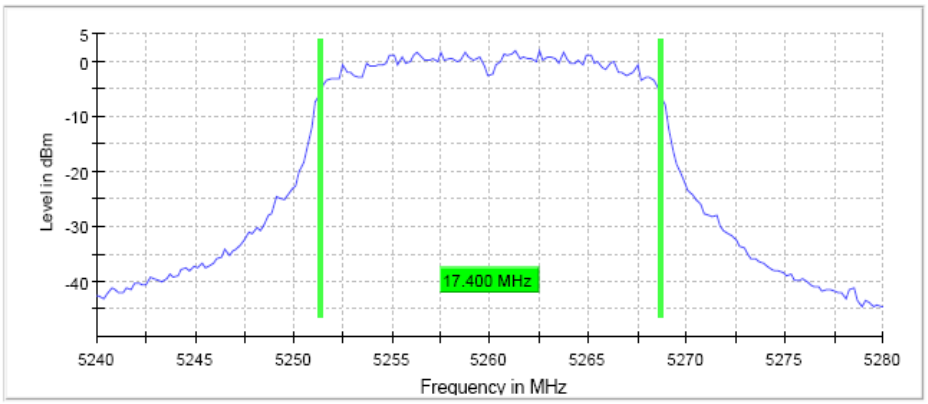
Middle Channel



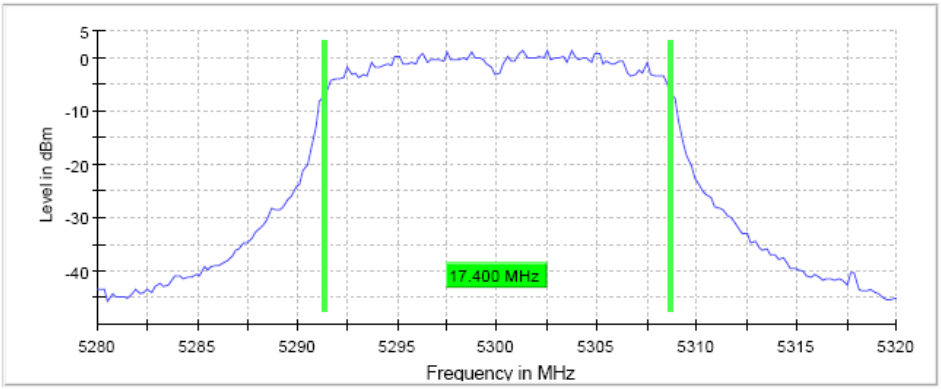
Highest Channel

TEST RESULTS (Cont.):	OCCUPIED BANDWIDTH

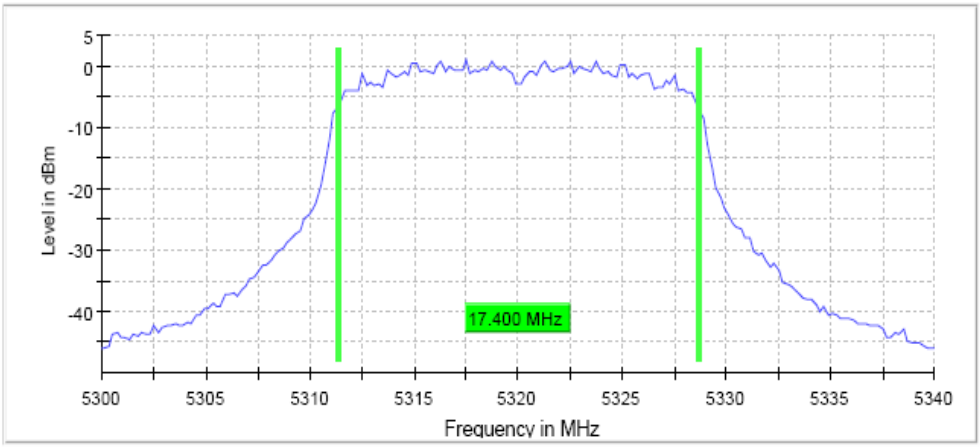
Lowest Channel



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 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
Preamp	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

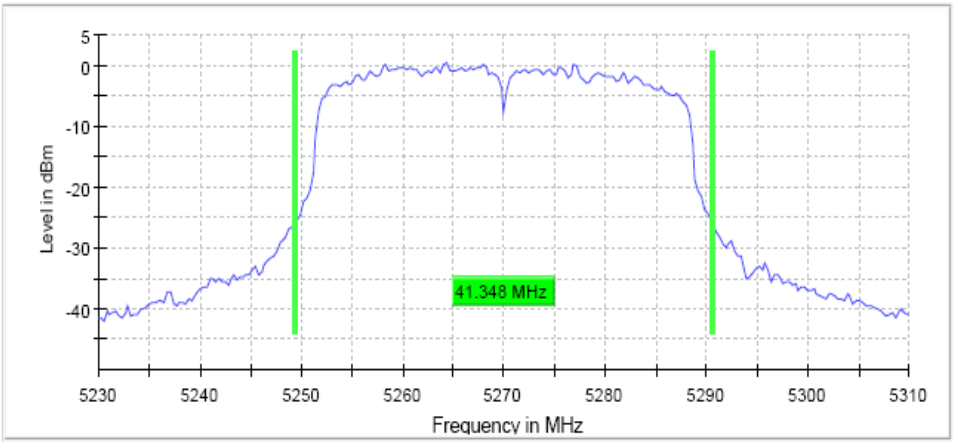
TEST RESULTS (Cont.)	n Mode

Bandwidth: 40 MHz

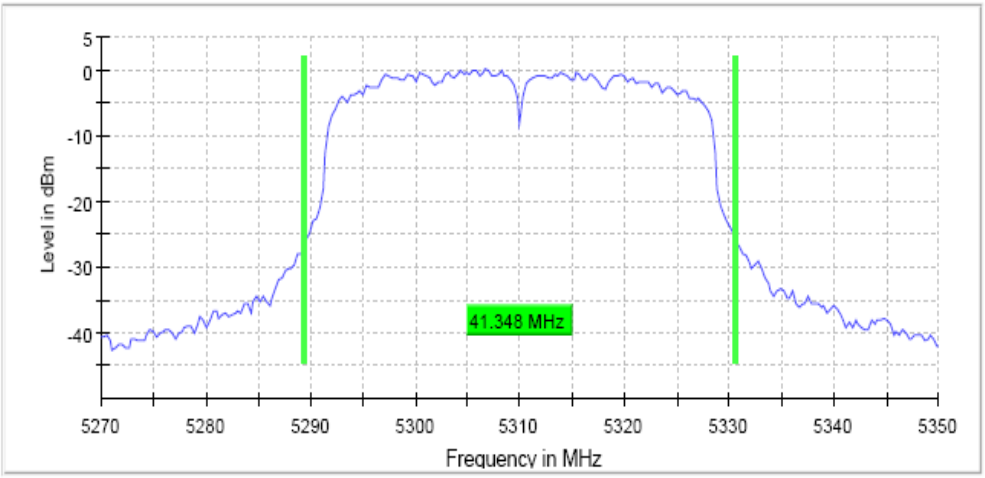
	Lowest frequency 5270 MHz	Highest frequency 5310 MHz
26dB bandwidth (MHz)	41.348	41.348
Occupied bandwidth (MHz)	36.5	36.5
Measurement uncertainty (kHz)	<± 8.33	

TEST RESULTS (Cont.):	26 dB BANDWIDTH

Lowest Channel

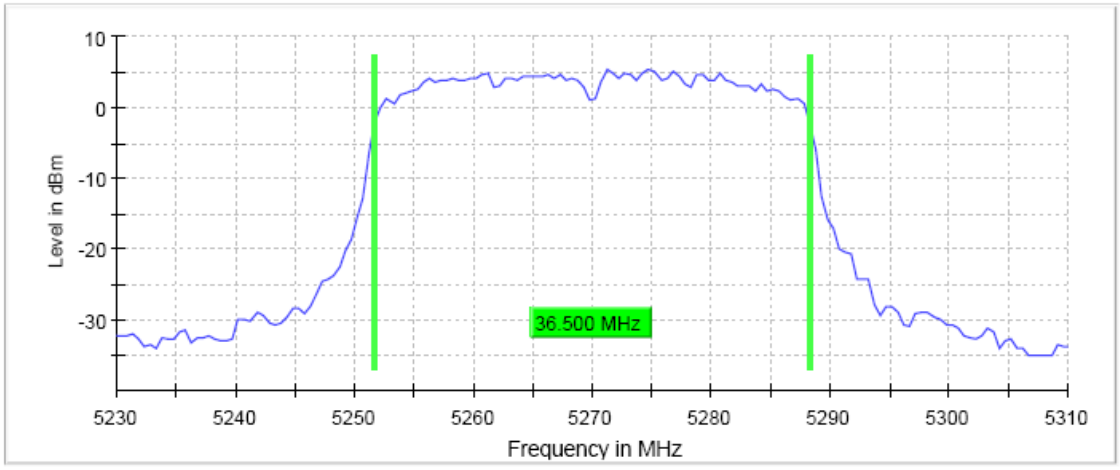


Highest Channel

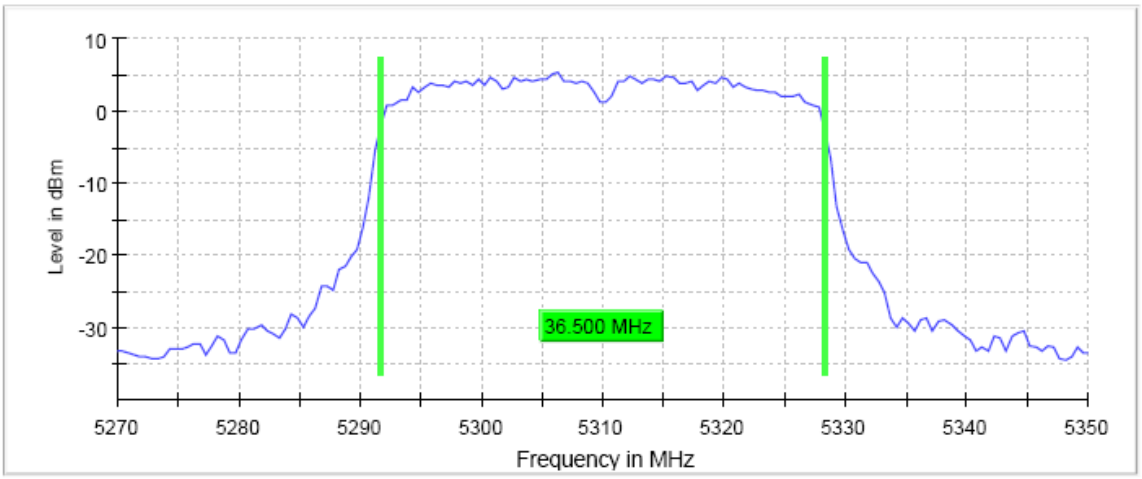


TEST RESULTS (Cont.):	OCCUPIED BANDWIDTH

Lowest Channel



Highest Channel



TEST RESULTS (Cont.)	

Measurement

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
Preamp	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

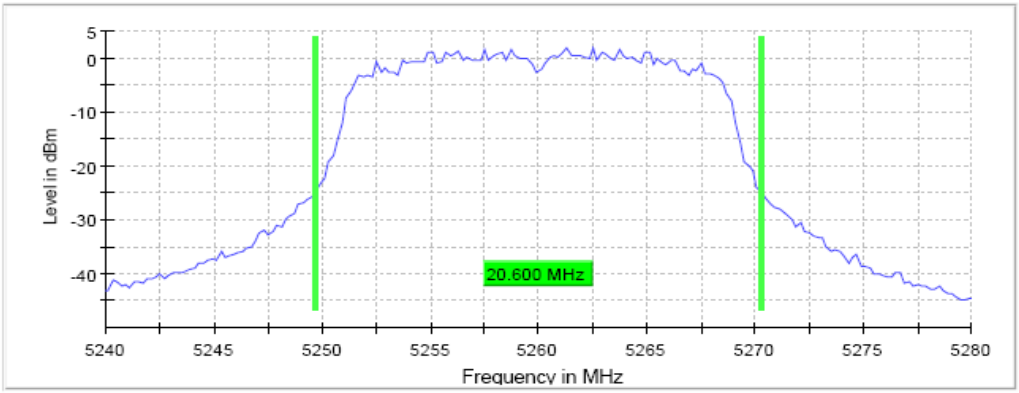
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#03 (ac mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

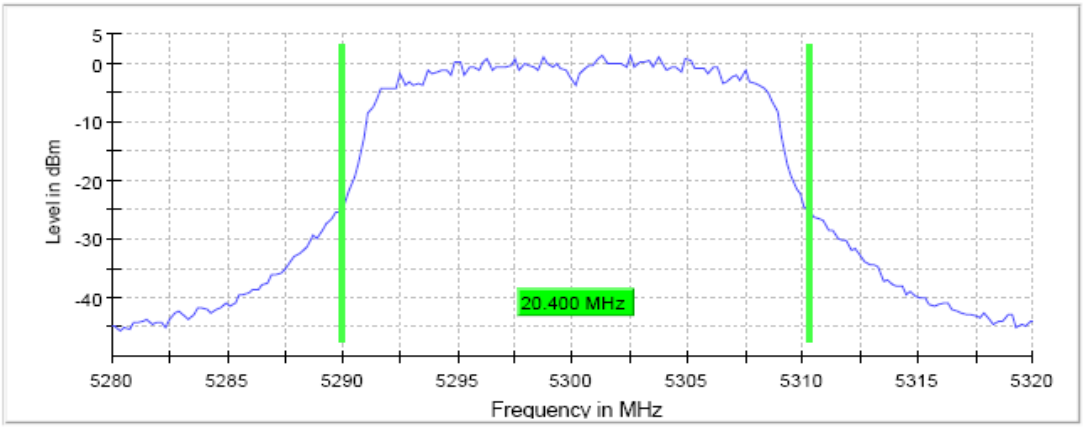
	Lowest frequency 5260 MHz	Middle frequency 5300 MHz	Highest frequency 5320 MHz
26db bandwidth (MHz)	20.6	20.4	21
Occupied bandwidth (MHz)	17.4	17.4	17.4
Measurement uncertainty (kHz)	<± 8.33		

TEST RESULTS (Cont.):	26 dB BANDWIDTH

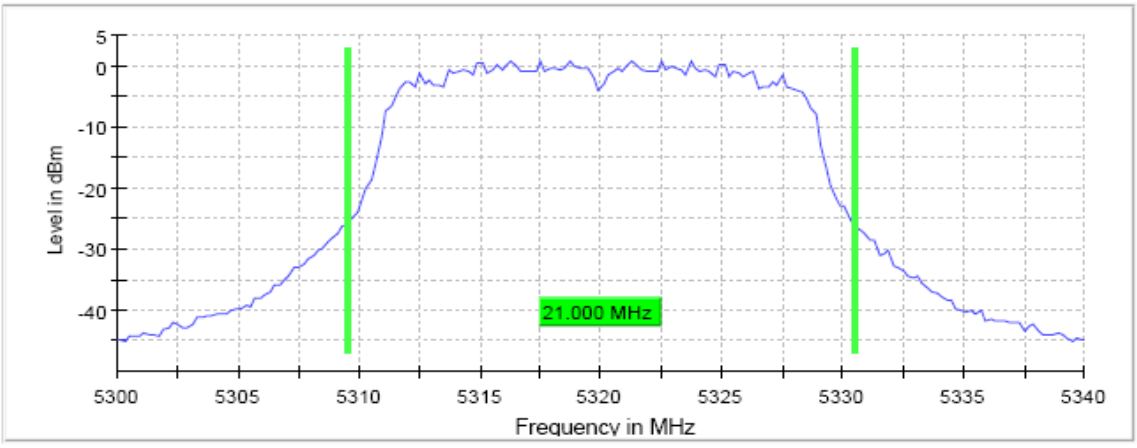
Lowest Channel



Middle Channel

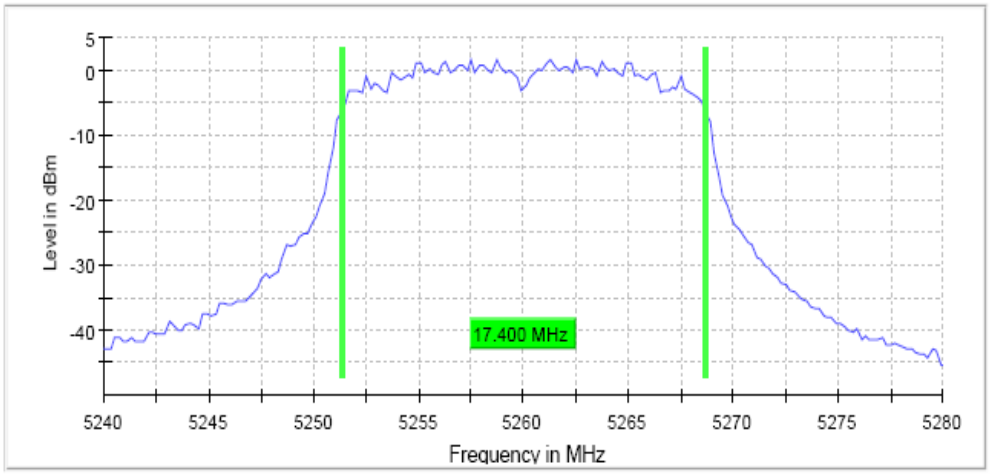


Highest Channel

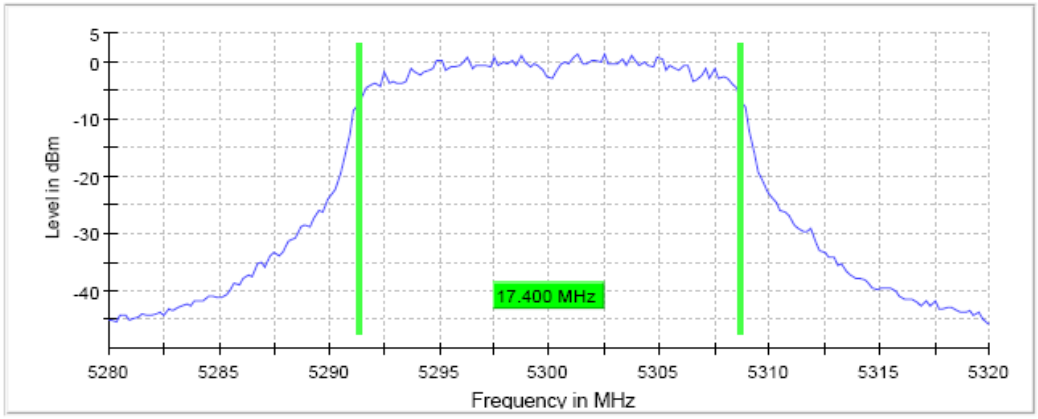


TEST RESULTS (Cont.):	OCCUPIED BANDWIDTH

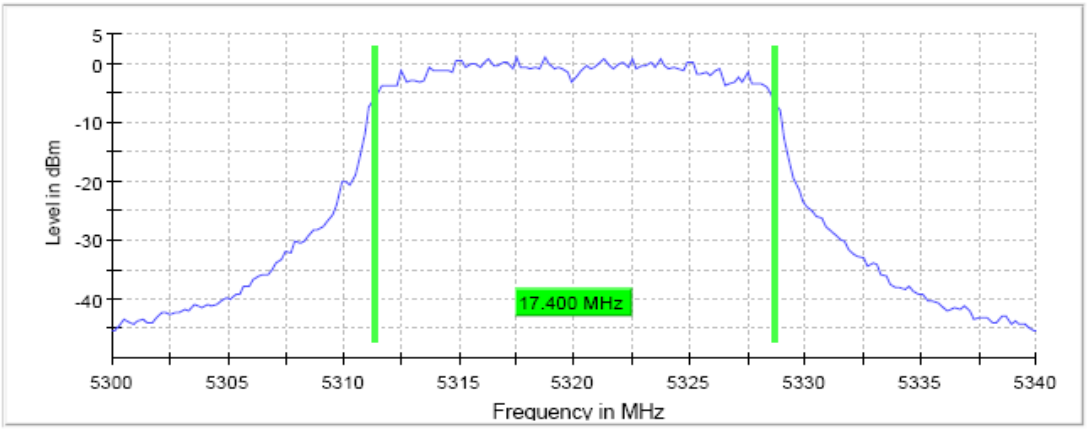
Lowest Channel



Middle Channel



Highest Channel



TEST RESULTS (Cont.)	

Measurement

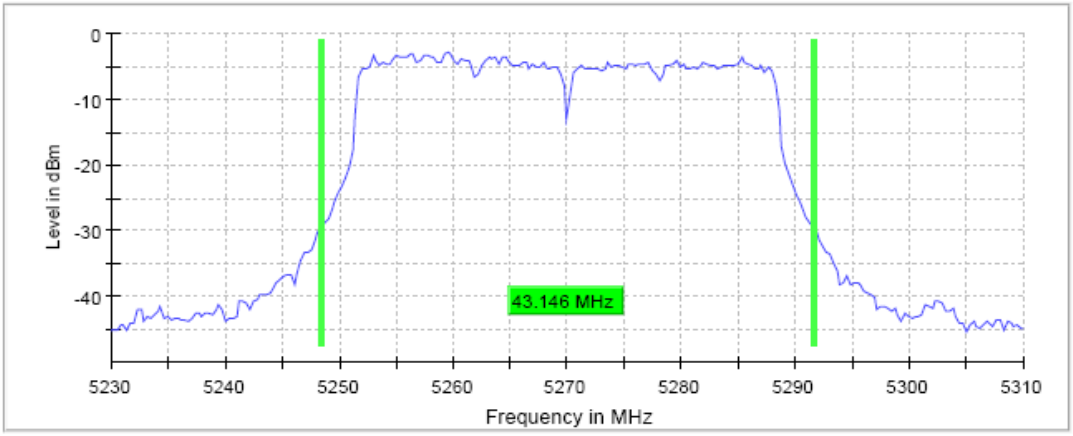
Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.24000 GHz	5.28000 GHz	5.30000 GHz
Stop Frequency	5.28000 GHz	5.32000 GHz	5.34000 GHz
Span	40.000 MHz	40.000 MHz	40.000 MHz
RBW	200.000 kHz	200.000 KHz	200.000 kHz
VBW	1.000 MHz	1.000 MHz	1.000 MHz
SweepPoints	200	200	200
Sweeptime	28.443 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
Preamp	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)

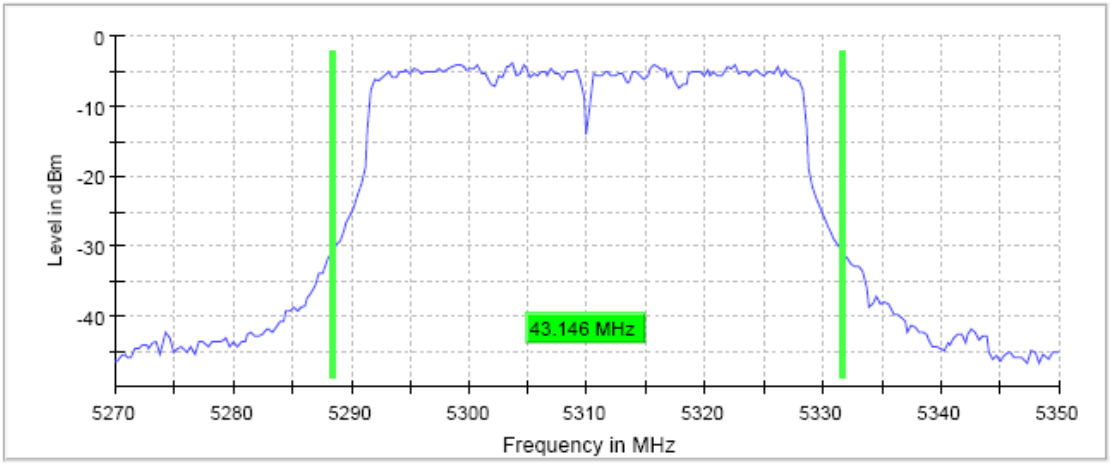
	Lowest frequency 5270 MHz	Highest frequency 5310 MHz
26dB bandwidth (MHz)	43.146	43.146
Occupied bandwidth (MHz)	36.5	36.5
Measurement uncertainty (kHz)	<± 8.33	

TEST RESULTS (Cont.):	26 dB BANDWIDTH

Lowest Channel

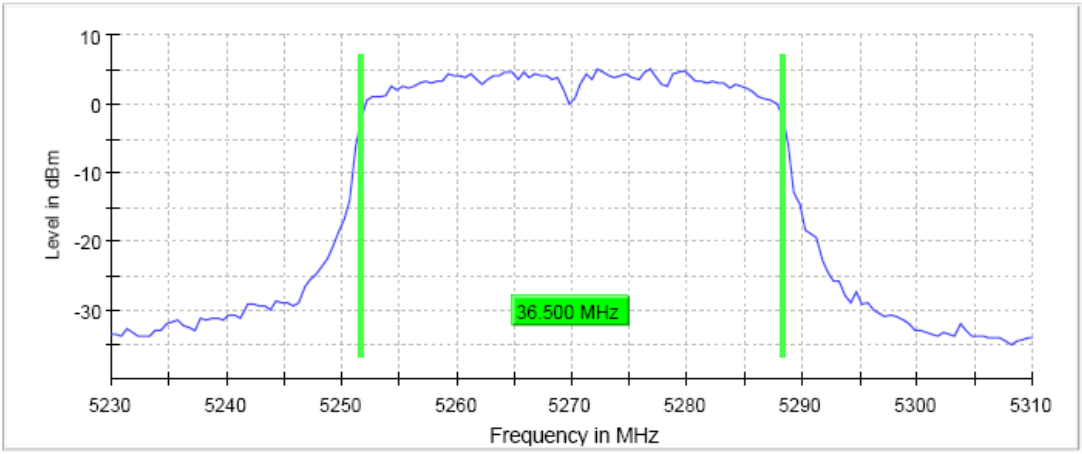


Highest Channel

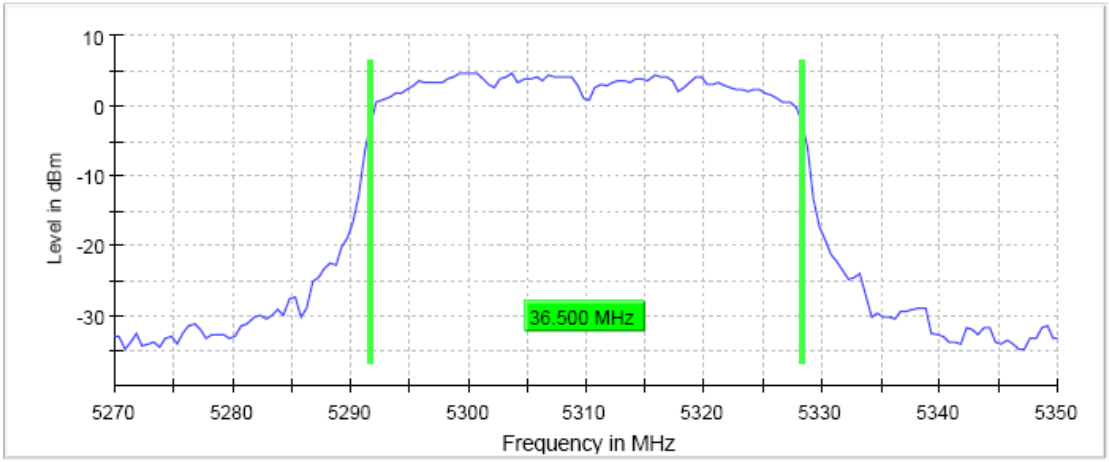


TEST RESULTS (Cont.):	OCCUPIED BANDWIDTH

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 µs	18.962 µs
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
Preamp	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)	<± 8.33

TEST RESULTS (Cont.):	26 dB BANDWIDTH

Lowest Channel