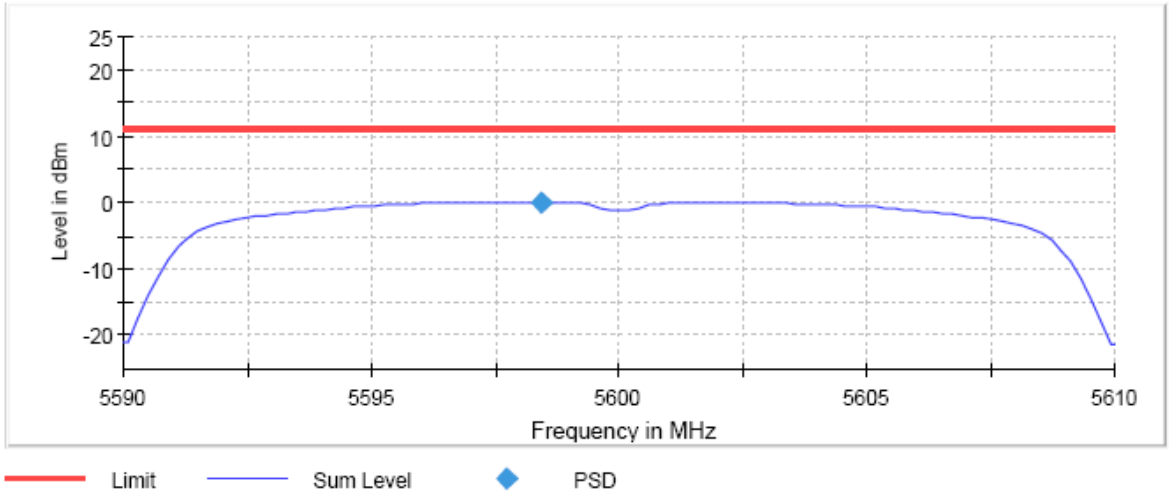
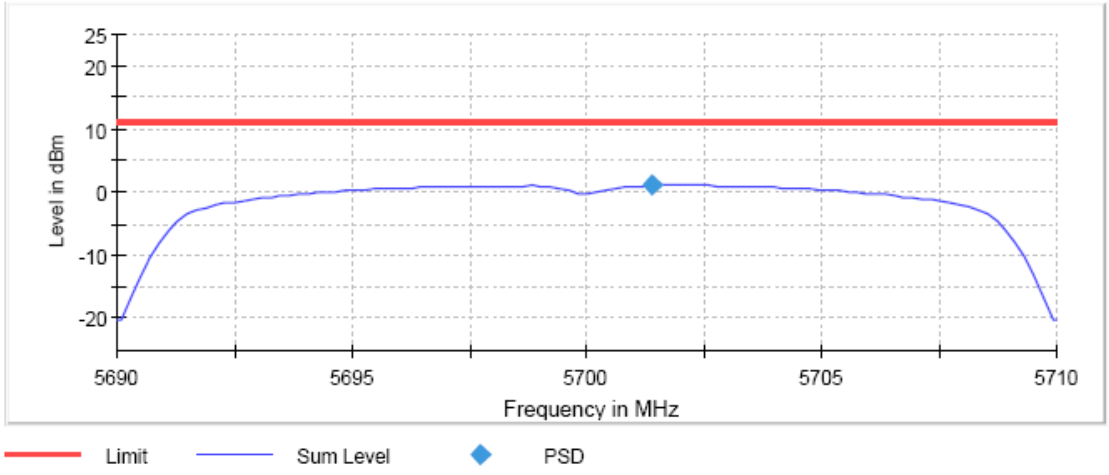
TEST RESULTS (Cont.):	

Middle Channel



High Channel



TEST RESULTS (Cont.):	

Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.49000 GHz	5.59000 GHz	5.69000 GHz
Stop Frequency	5.51000 GHz	5.61000 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	10.000 dBm	10.000 dBm	20.000 dBm
Attenuation	30.000 dB	30.000 dB	40.000 dB
Detector	RMS	RMS	RMS
SweepCount	3	3	3
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweeptype	Sweep	Sweep	Sweep
Preamp	off	off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	4 / max. 150	4 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.04 dB	0.05 dB	0.05 dB

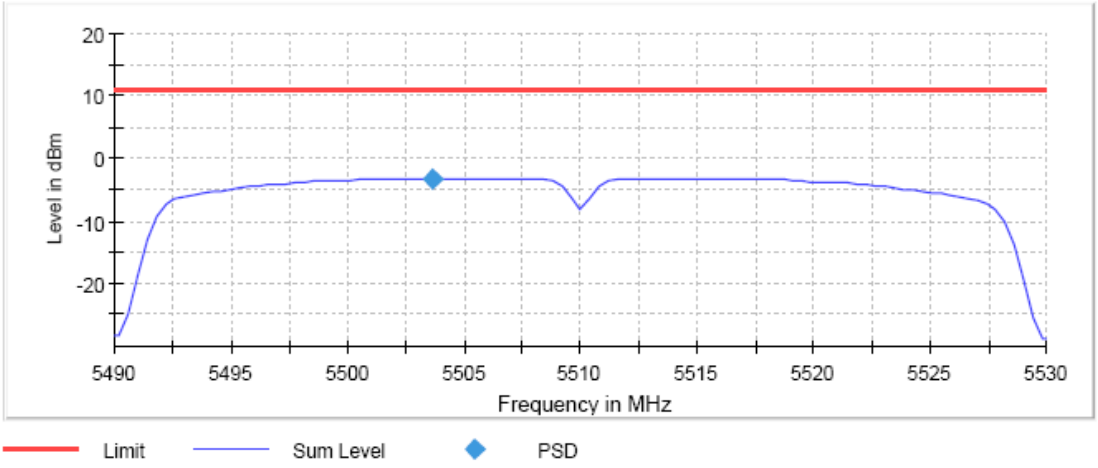
TEST RESULTS (Cont.):	n Mode

Bandwidth: 40 MHz

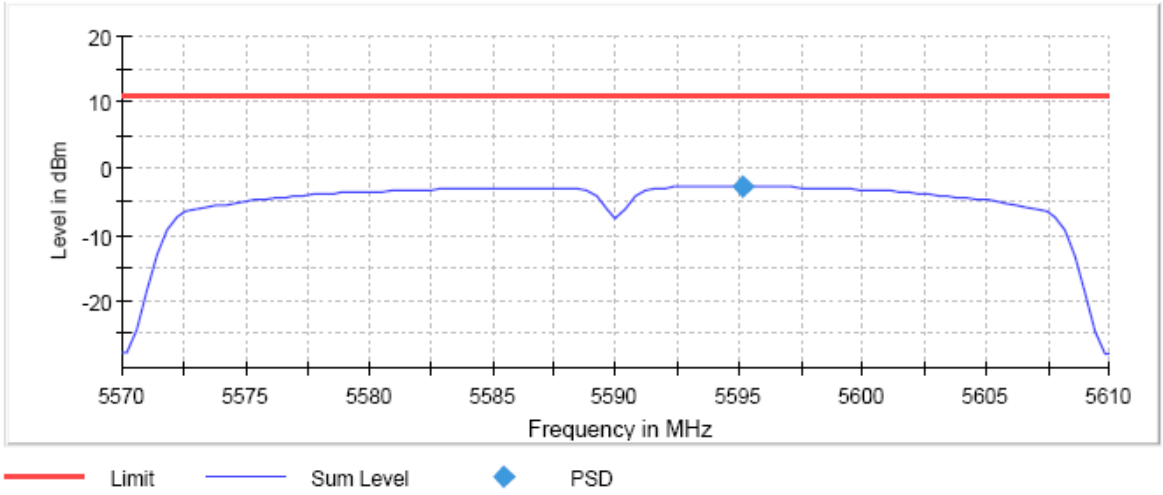
	Lowest frequency 5510 MHz	Middle frequency 5590 MHz	Highest frequency 5710 MHz
Power spectral density (dBm)	-3.155	-2.730	-1.708
Measurement uncertainty (dB)	<±0.78		

TEST RESULTS (Cont.):	

Lowest Channel

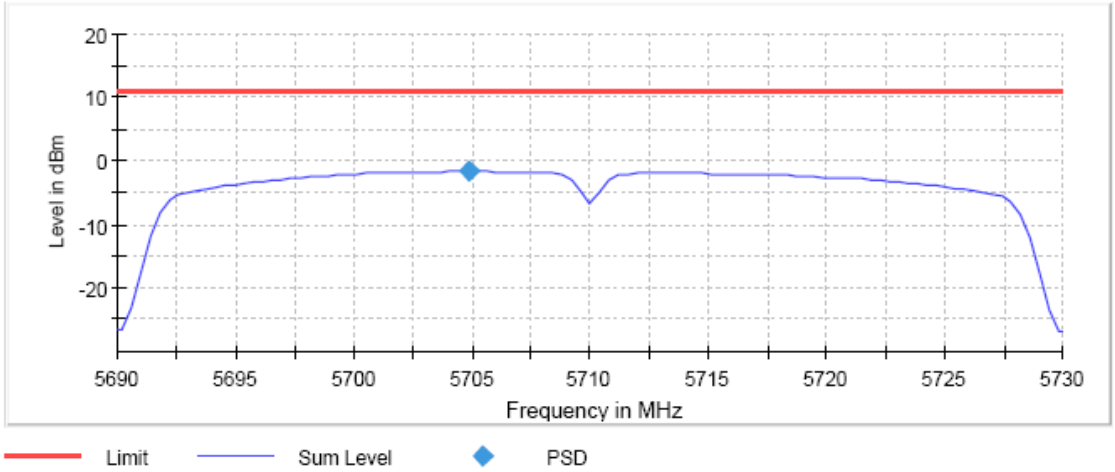


Middle Channel



TEST RESULTS (Cont.):	

Highest Channel



Measurement

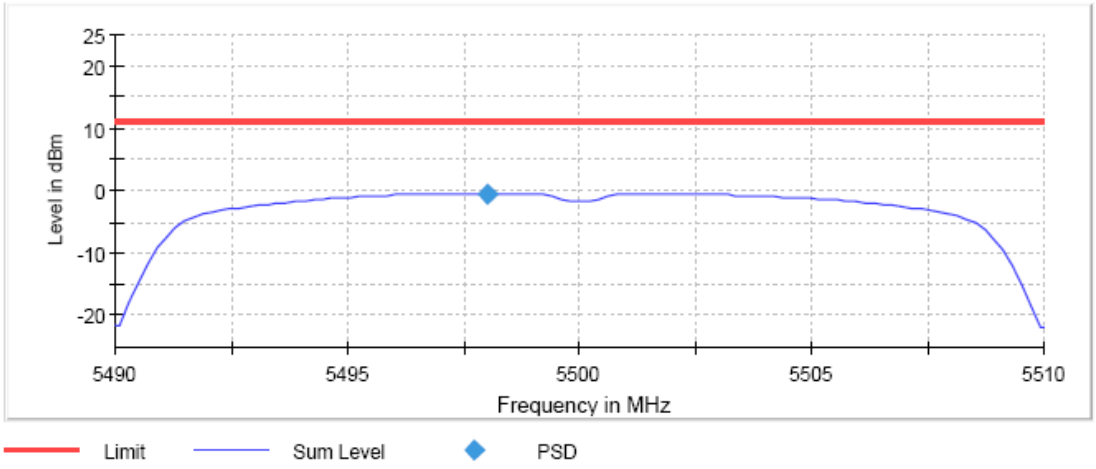
Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.49000 GHz	5.57000 GHz	5.69000 GHz
Stop Frequency	5.53000 GHz	5.61000 GHz	5.73000 GHz
Span	40.000 MHz	40.000 MHz	40.000 MHz
RBW	1.000 MHz	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz	3.000 MHz
SweepPoints	101	101	101
Sweeptime	2.020 s	2.020 s	2.020 s
Reference Level	10.000 dBm	20.000 dBm	20.000 dBm
Attenuation	30.000 dB	40.000 dB	40.000 dB
Detector	RMS	RMS	RMS
SweepCount	3	3	3
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweeptype	Sweep	Sweep	Sweep
Preamp	off	off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	4 / max. 150	4 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3	3 / 3
Max Stable	0.05 dB	0.05 dB	0.03 dB

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

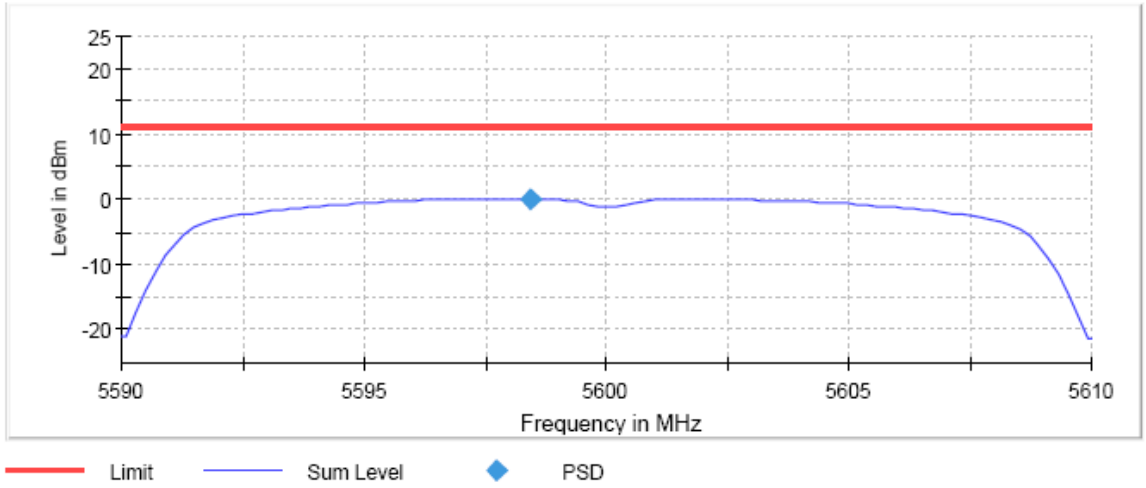
Bandwidth: 20 MHz

	Lowest frequency 5500 MHz	Middle frequency 5600 MHz	Highest frequency 5700 MHz
Power spectral density (dBm)	-0.442	0.097	0.975
Measurement uncertainty (dB)	<±0.78		

Lowest Channel

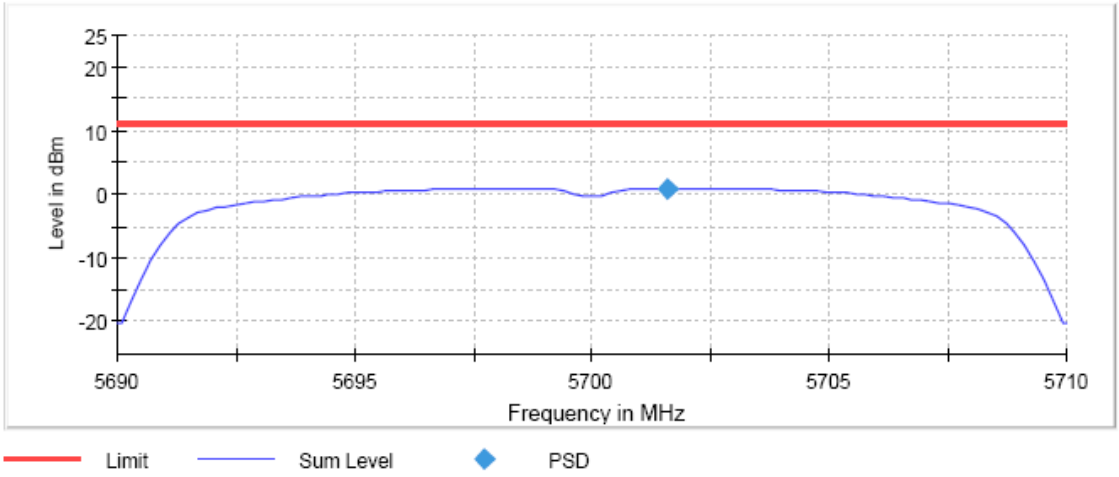


Middle Channel



TEST RESULTS (Cont.)	

Highest Channel



Measurement

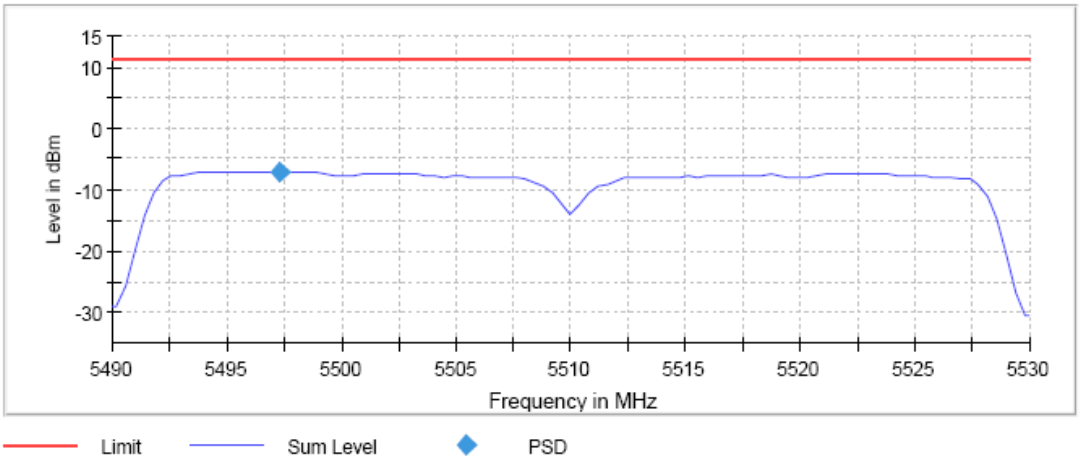
Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.49000 GHz	5.59000 GHz	5.69000 GHz
Stop Frequency	5.51000 GHz	5.61000 GHz	5.71000 GHz
Span	20.000 MHz	20.000 MHz	20.000 MHz
RBW	1.000 MHz	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz	3.000 MHz
SweepPoints	101	101	101
Sweeptime	2.020 s	2.020 s	2.020 s
Reference Level	10.000 dBm	10.000 dBm	20.000 dBm
Attenuation	30.000 dB	30.000 dB	40.000 dB
Detector	RMS	RMS	RMS
SweepCount	3	3	3
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweeptype	Sweep	Sweep	Sweep
Preamp	off	off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	4 / max. 150	4 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.04 dB	0.06 dB	0.06 dB

TEST RESULTS	ac Mode (40 MHz)

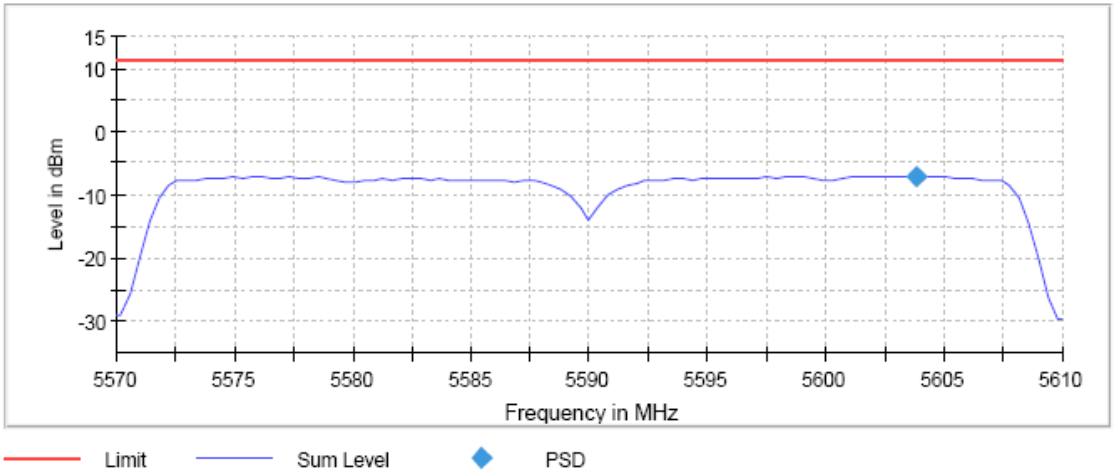
	Lowest frequency 5510 MHz	Middle frequency 5590 MHz	Highest frequency 5710 MHz
Power spectral density (dBm)	-7.023	-7.044	-6.084
Measurement uncertainty (dB)	<±0.78		

TEST RESULTS (Cont.):

Lowest Channel

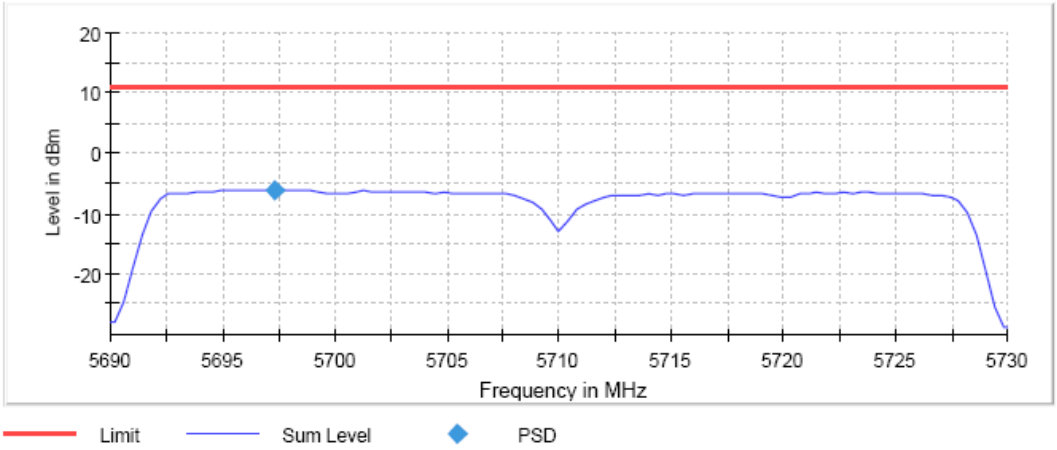


Middle Channel



TEST RESULTS (Cont.):	

Highest Channel



Measurement

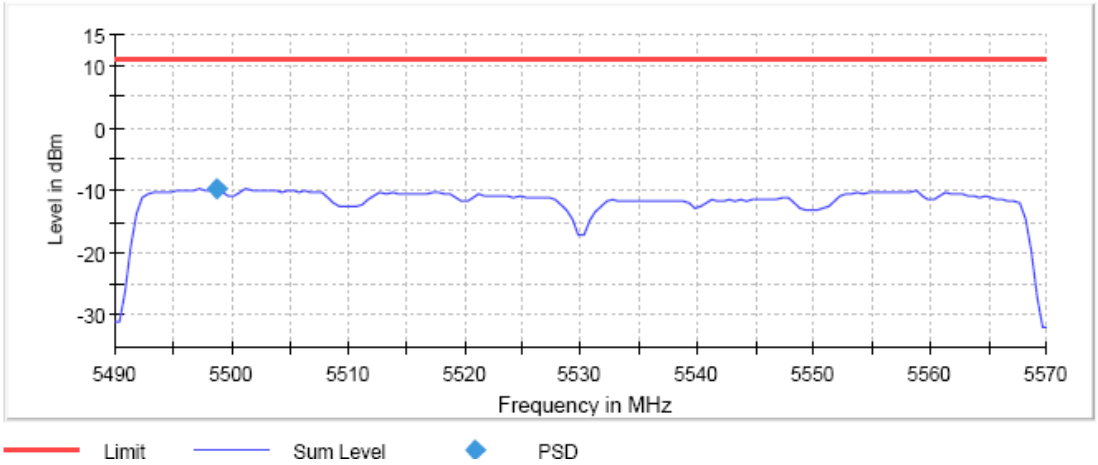
Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.49000 GHz	5.57000 GHz	5.69000 GHz
Stop Frequency	5.53000 GHz	5.61000 GHz	5.73000 GHz
Span	40.000 MHz	40.000 MHz	40.000 MHz
RBW	1.000 MHz	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz	3.000 MHz
SweepPoints	101	101	101
Sweeptime	2.020 s	2.020 s	2.020 s
Reference Level	10.000 dBm	20.000 dBm	10.000 dBm
Attenuation	30.000 dB	40.000 dB	30.000 dB
Detector	RMS	RMS	RMS
SweepCount	3	3	3
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweeptype	Sweep	Sweep	Sweep
Preamp	off	off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	4 / max. 150	4 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.07 dB	0.11 dB	0.04 dB

TEST RESULTS	ac Mode (80 MHz)

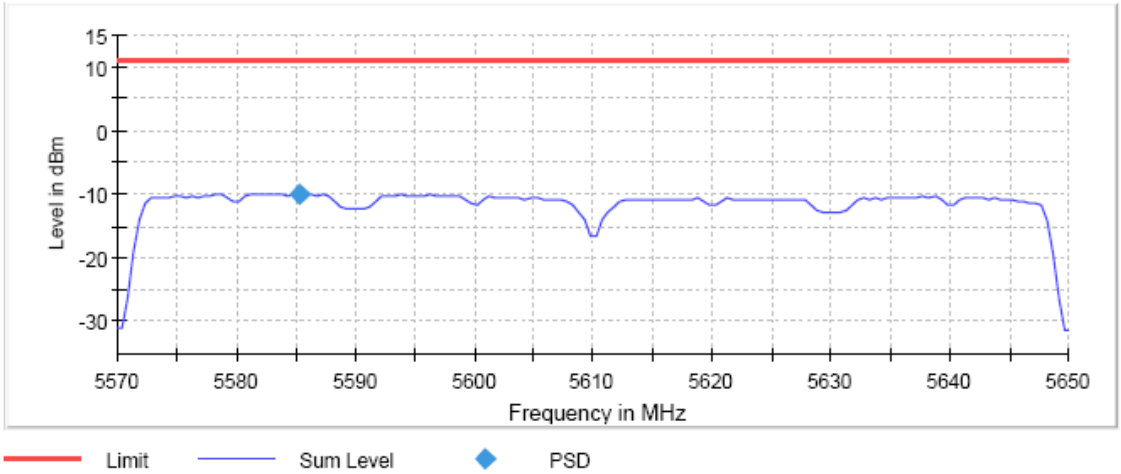
	Lowest frequency 5530 MHz	Middle frequency 5610 MHz	Highest frequency 5690 MHz
Power spectral density (dBm)	-9.711	-9.961	-8.901
Measurement uncertainty (dB)	<±0.78		

TEST RESULTS (Cont.):	

Lowest Channel

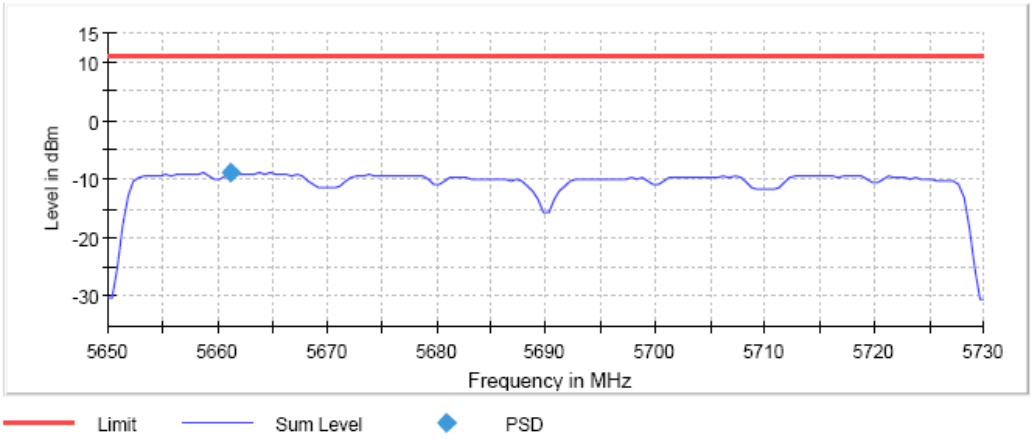


Middle Channel



TEST RESULTS (Cont.):	

Highest Channel



Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	5.49000 GHz	5.57000 GHz	5.65000 GHz
Stop Frequency	5.57000 GHz	5.65000 GHz	5.73000 GHz
Span	80.000 MHz	80.000 MHz	80.000 MHz
RBW	1.000 MHz	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz	3.000 MHz
SweepPoints	160	160	160
Sweeptime	3.200 s	3.200 s	3.200 s
Reference Level	10.000 dBm	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	30.000 dB	30.000 dB
Detector	RMS	RMS	RMS
SweepCount	3	3	3
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweeptype	Sweep	Sweep	Sweep
Preamp	off	off	off
Stablemode	Trace	Trace	Trace
Stablevalue	0.30 dB	0.30 dB	0.30 dB
Run	4 / max. 150	4 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.11 dB	0.11 dB	0.17 dB

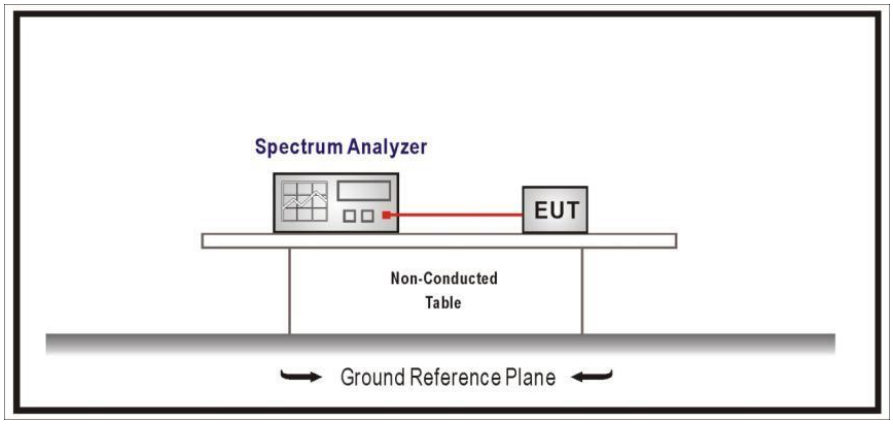
TEST D.5: BAND-EDGE EMISSIONS COMPLIANCE (TRANSMITTER)

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

LIMITS

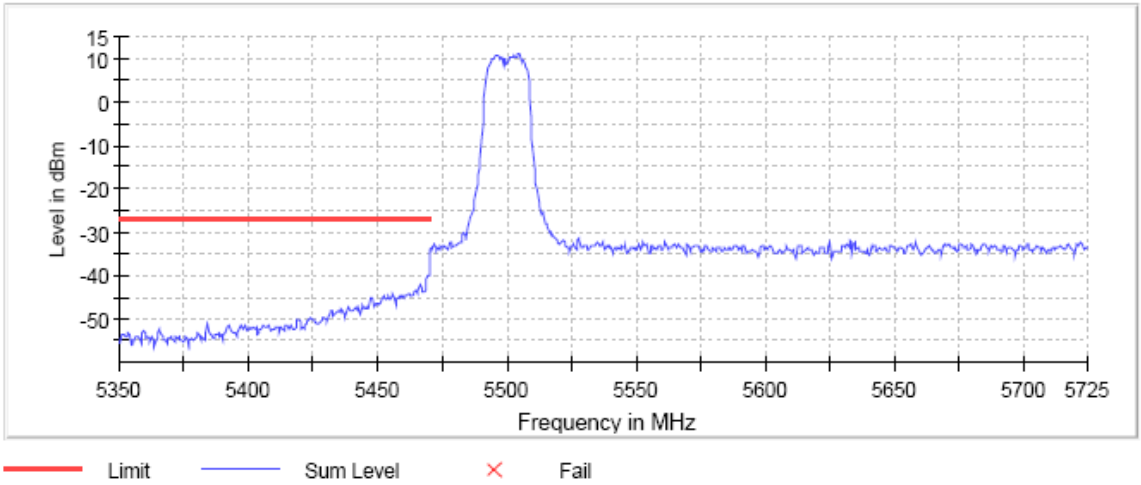
For transmitters operating in the 5.15 – 5.25 GHz band: all emissions outside the frequency band shall not exceed an EIRP of -27 dBm /MHz

TEST SETUP	



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

Lowest Channel

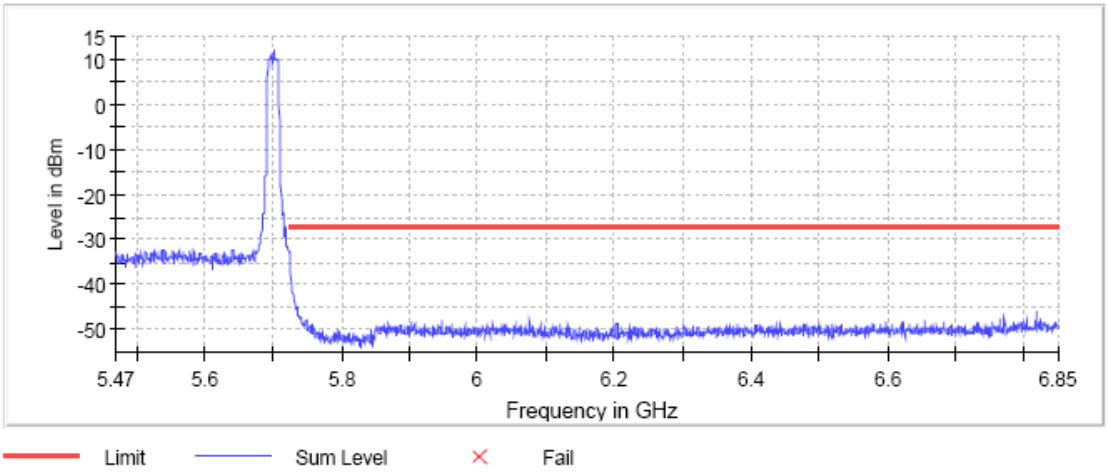


Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.35000 GHz
Stop Frequency	5.72500 GHz	5.47000 GHz
Span	255.000 MHz	120.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	510	240
Sweeptime	34.313 µs	17.156 µs
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	23 / max. 150	11 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.24 dB	0.00 dB

TEST RESULTS (Cont.):	

Highest Channel



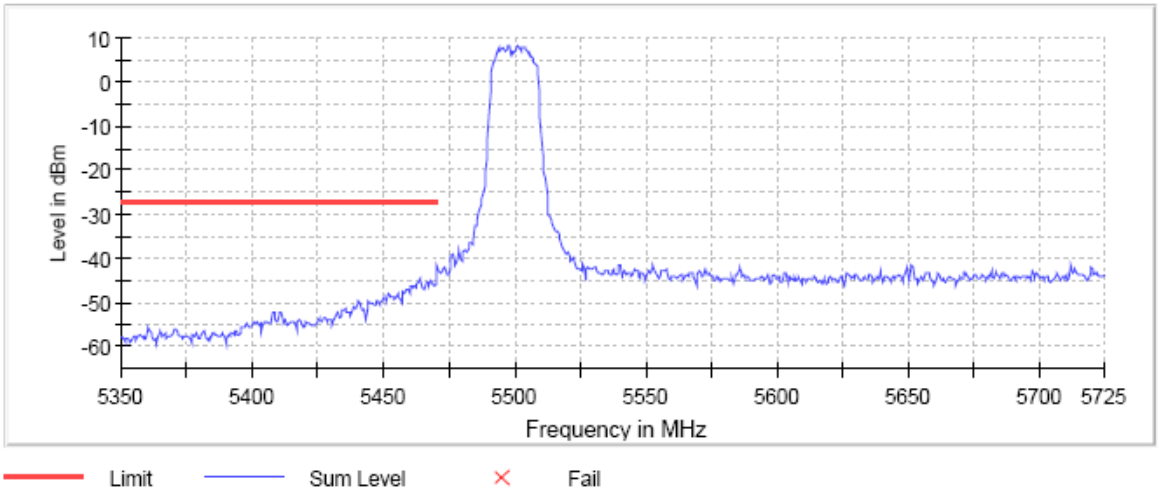
Measurement

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
Sweeptime	34.313 µs	2.25 ms
Reference Level	20.000 dBm	0.000 dBm
Attenuation	40.000 dB	20.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	FFT
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	16 / max. 150	7 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.34 dB	0.00 dB

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

Bandwidth: 20 MHz

Lowest Channel

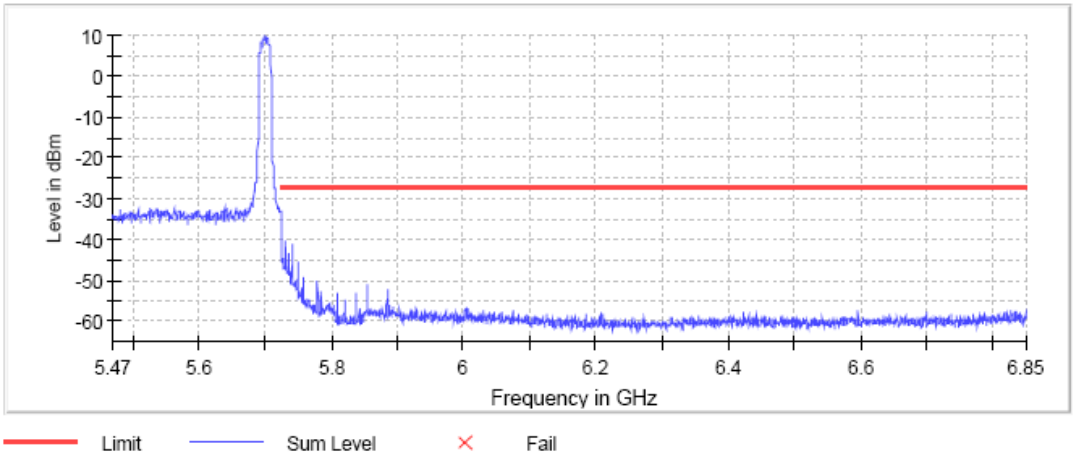


Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.35000 GHz
Stop Frequency	5.72500 GHz	5.47000 GHz
Span	255.000 MHz	120.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	510	240
Sweeptime	34.313 µs	17.156 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	13 / max. 150	9 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.43 dB	0.00 dB

TEST RESULTS (Cont.):	

Highest Channel

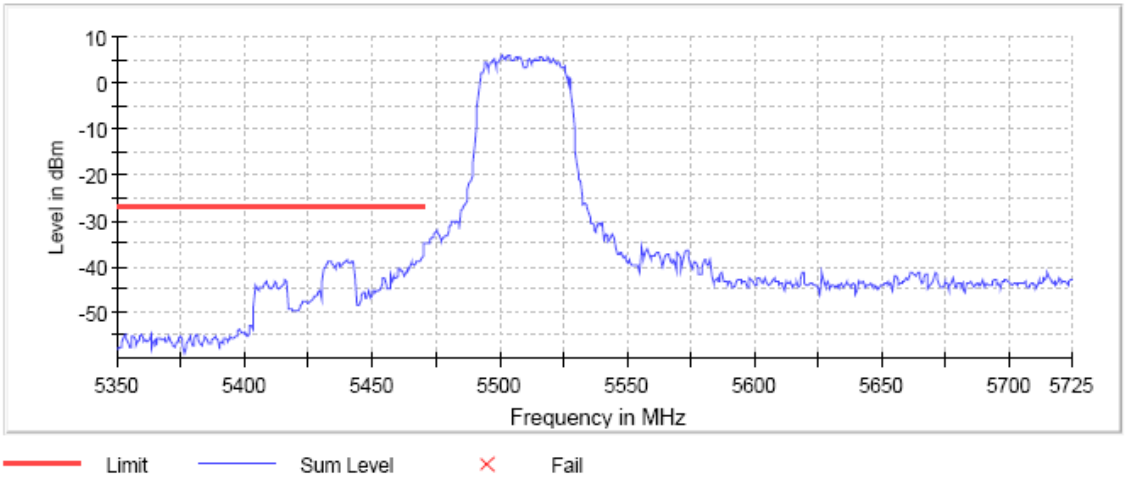


Measurement

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
Sweeptime	34.313 µs	2.25 ms
Reference Level	20.000 dBm	0.000 dBm
Attenuation	40.000 dB	20.000 dB
Detector	Maxpeak	Maxpeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	FFT
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	15 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.16 dB	0.00 dB

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

Lowest Channel

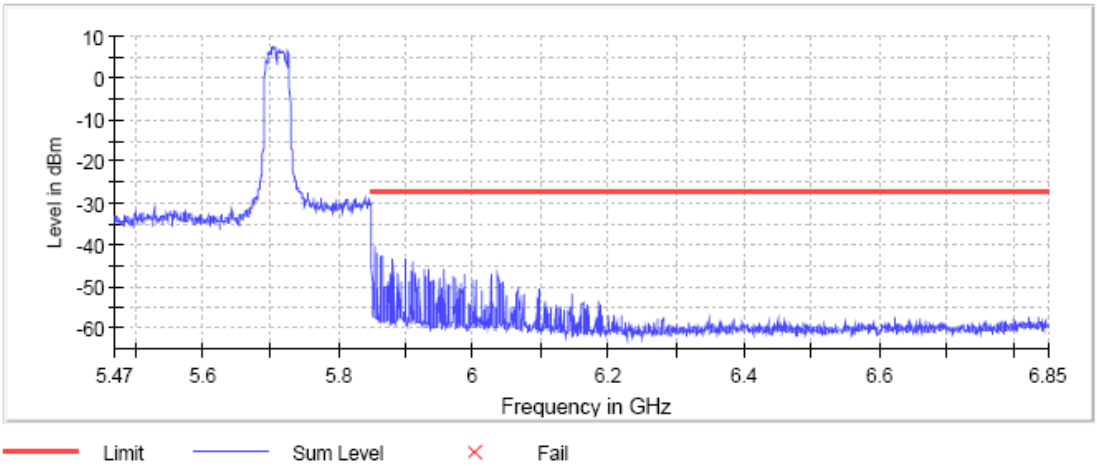


Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.35000 GHz
Stop Frequency	5.72500 GHz	5.47000 GHz
Span	255.000 MHz	120.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	510	240
Sweeptime	34.313 µs	17.156 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	30 / max. 150	20 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.00 dB	0.12 dB

TEST RESULTS (Cont.):	

Highest Channel



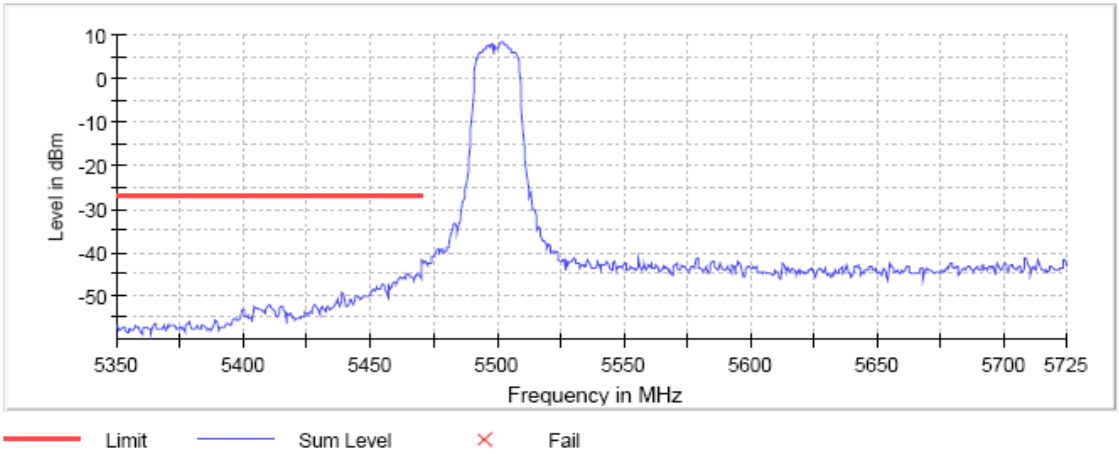
Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.85000 GHz
Stop Frequency	5.5000 GHz	6.85000 GHz
Span	380.000 MHz	1.000 GHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	760	2000
Sweeptime	51.469 µs	2.00 ms
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	31 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.30 dB	0.00 dB

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

Bandwidth: 20 MHz

Lowest Channel:

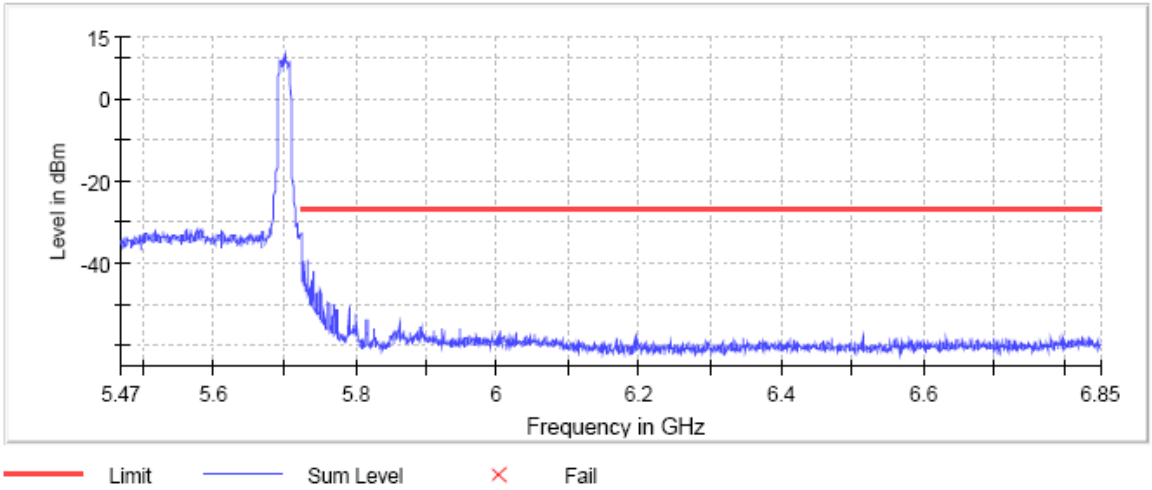


Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.35000 GHz
Stop Frequency	5.72500 GHz	5.47000 GHz
Span	255.000 MHz	120.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	510	240
Sweeptime	34.313 µs	17.156 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	20 / max. 150	16 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.00 dB	0.00 dB

TEST RESULTS (Cont.):	

Highest Channel



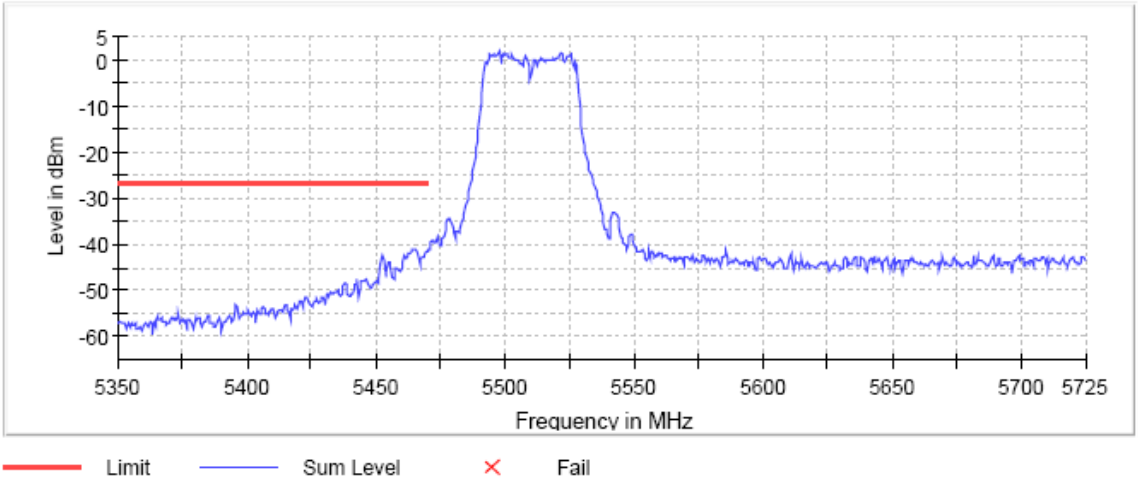
Measurement

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
Sweeptime	34.313 µs	2.25 ms
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	17 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.22 dB	0.00 dB

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

Bandwidth: 40 MHz

Lowest Channel

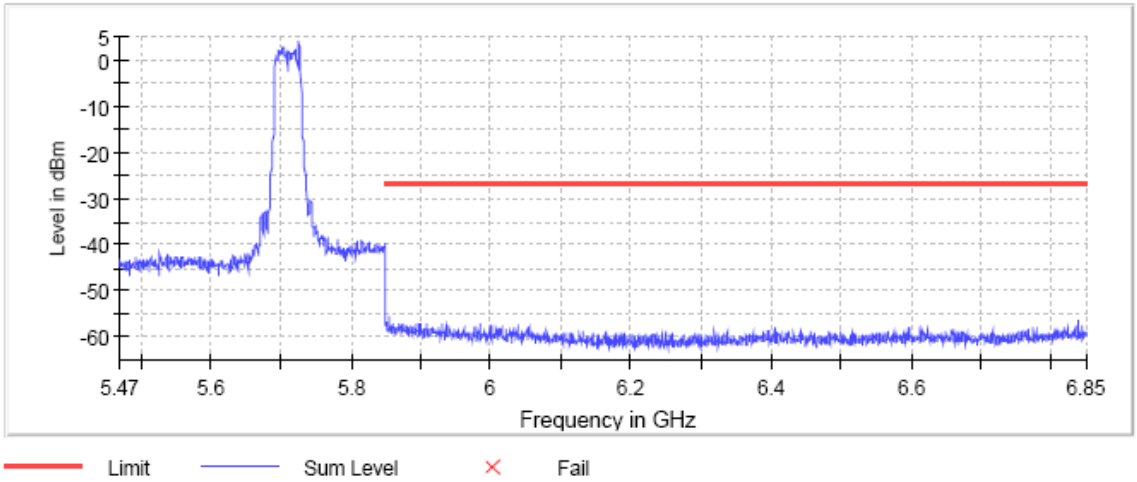


Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.35000 GHz
Stop Frequency	5.72500 GHz	5.47000 GHz
Span	255.000 MHz	120.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	510	240
Sweeptime	34.313 µs	17.156 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	20 / max. 150	13 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.00 dB	0.12 dB

TEST RESULTS (Cont.):	

Highest Channel



Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.85000 GHz
Stop Frequency	5.85000 GHz	6.85000 GHz
Span	380.000 MHz	1.000 GHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	760	2000
Sweeptime	51.469 µs	2.00 ms
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	18 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.31 dB	0.00 dB

TEST RESULTS (Cont.):	ac mode (80 MHz)

Bandwidth: 80 MHz

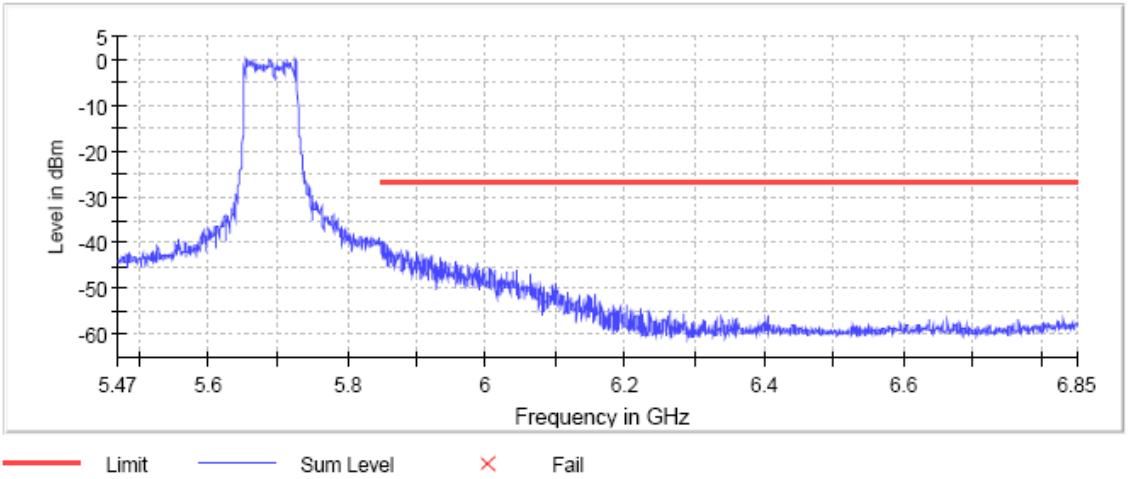
Lowest Channel

Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.35000 GHz
Stop Frequency	5.72500 GHz	5.47000 GHz
Span	255.000 MHz	120.000 MHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	510	240
Sweeptime	34.313 µs	17.156 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	53 / max. 150	9 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.07 dB	0.00 dB

TEST RESULTS (Cont.):	ac mode (80 MHz)

Highest Channel



Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	5.47000 GHz	5.85000 GHz
Stop Frequency	5.85000 GHz	6.85000 GHz
Span	380.000 MHz	1.000 GHz
RBW	1.000 MHz	1.000 MHz
VBW	3.000 MHz	3.000 MHz
SweepPoints	760	2000
Sweeptime	51.469 µs	2.00 ms
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	48 / max. 150	49 / max. 150
Stable	3 / 3	3 / 3
Max Stable	0.22 dB	0.00 dB

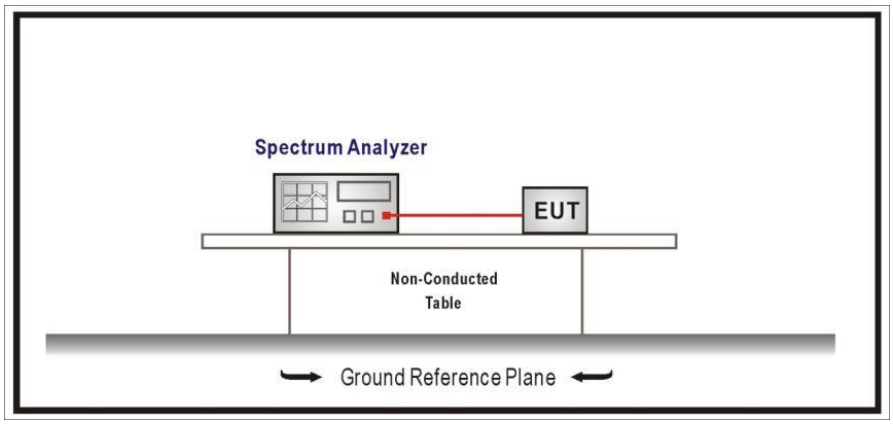
TEST D.6: EMISSION LIMITATIONS CONDUCTED (TRANSMITTER)

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

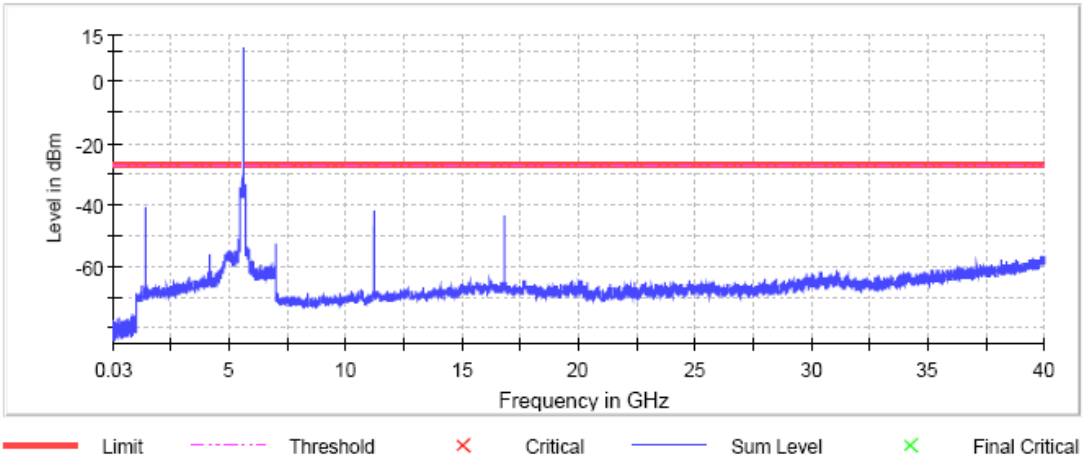


TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01 (a mode)
TEST RESULTS:	PASS

Bandwidth: 20 MHz

Frequency: 5600 MHz

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



Measurement Settings

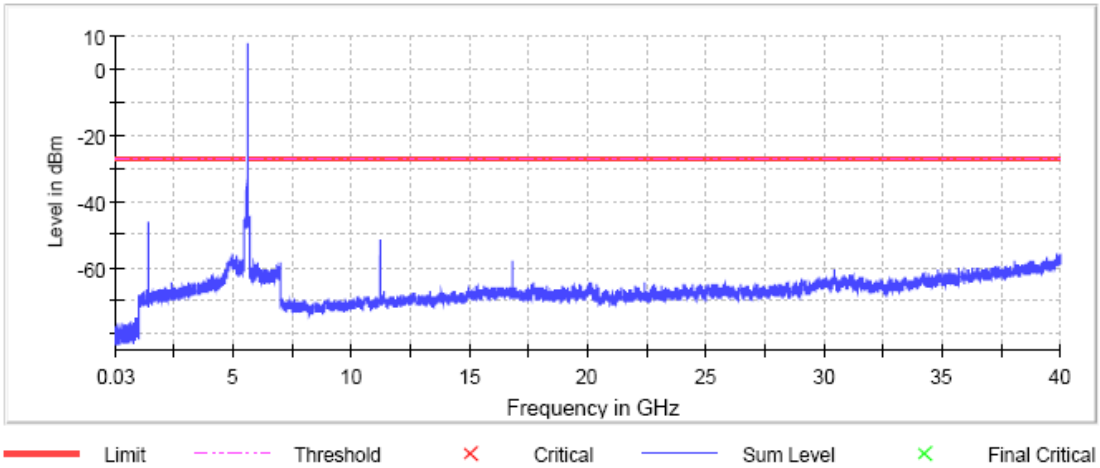
Setting	Instrument Value	Instrument Value
Start Frequency	**30.000 MHz**	**30.000 MHz**
Stop Frequency	**40 GHz**	**40 GHz**
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	10.000 dB	10.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	sweep	Sweep
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	4 / max. 150	12 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.00 dB

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

Bandwidth: 20 MHz

Frequency: 5600 MHz

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



Measurement Settings

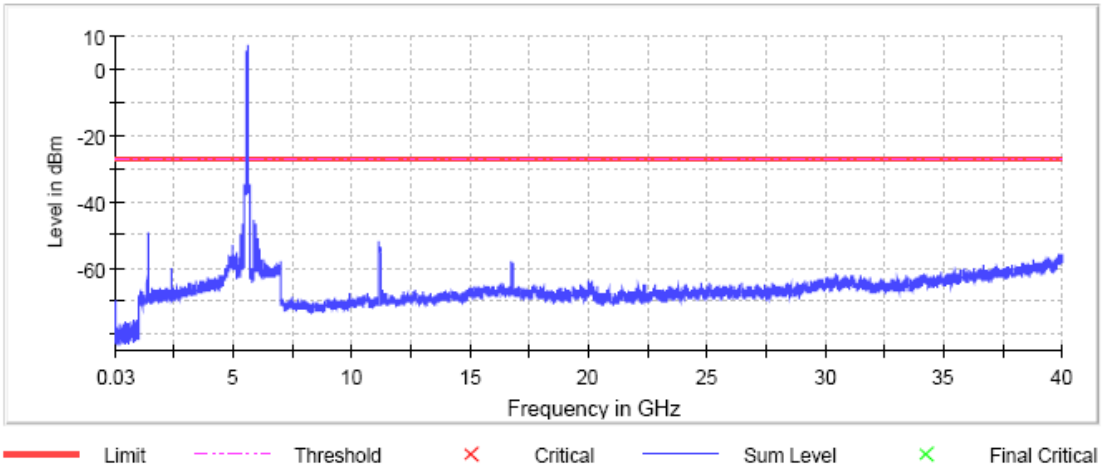
Setting	Instrument Value	Instrument Value
Start Frequency	**30.000 MHz**	**30.000 MHz**
Stop Frequency	**40 GHz**	**40 GHz**
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	10.000 dB	10.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	sweep	Sweep
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	4 / max. 150	9 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.45 dB

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

Bandwidth: 40 MHz

Frequency: 5590 MHz

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



Measurement Settings

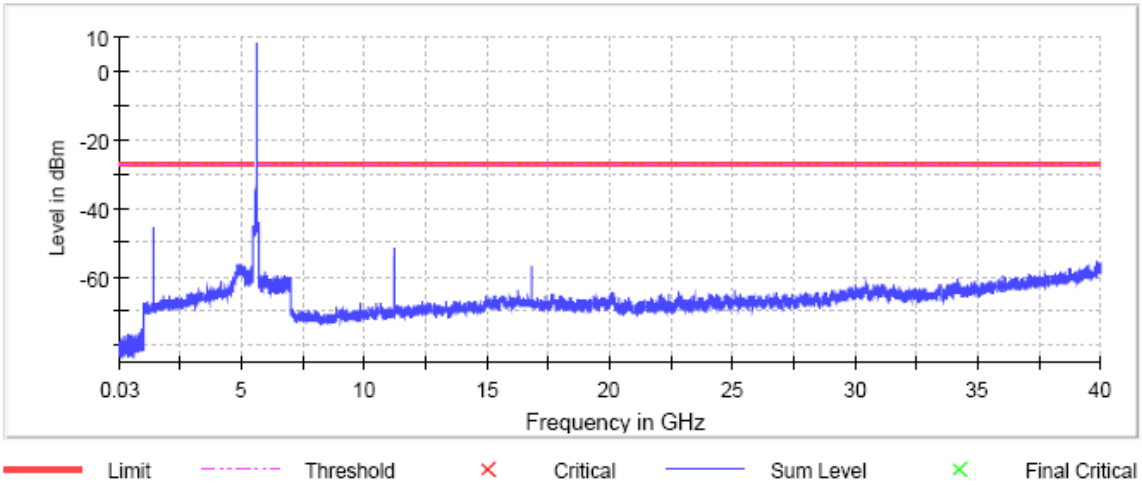
Setting	Instrument Value	Instrument Value
Start Frequency	**30.000 MHz**	**30.000 MHz**
Stop Frequency	**40 GHz**	**40 GHz**
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	10.000 dB	10.000 dB
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	5 / max. 150	11 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.12 dB

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

Bandwidth: 20 MHz

Frequency: 5600 MHz

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



Measurement Settings

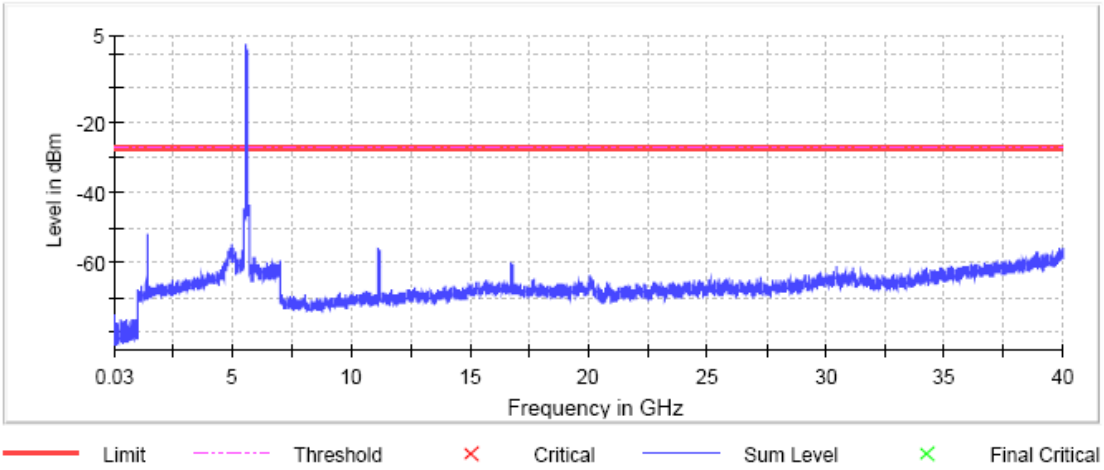
Setting	Instrument Value	Instrument Value
Start Frequency	**30.000 MHz**	**30.000 MHz**
Stop Frequency	**40 GHz**	**40 GHz**
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	10.000 dB	10.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	sweep	Sweep
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	4 / max. 150	21 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.34 dB

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

Bandwidth: 40 MHz

Frequency: 5590 MHz

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



Measurement Settings

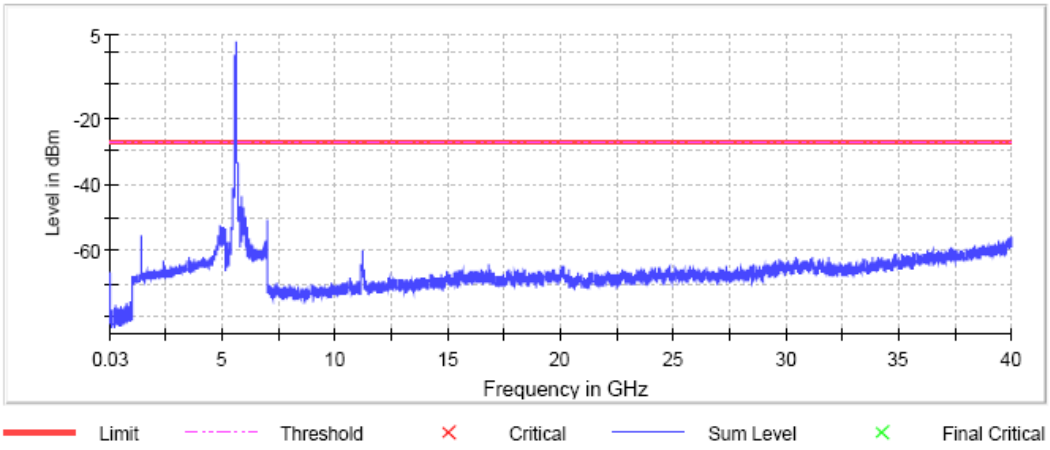
Setting	Instrument Value	Instrument Value
Start Frequency	**30.000 MHz**	**30.000 MHz**
Stop Frequency	**40 GHz**	**40 GHz**
RBW	100.000 kHz	1.000 MHz
VBW	300.000 kHz	3.000 MHz
Sweep Points	9700	4150
Sweep time	9.700 ms	4.150 ms
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	10.000 dB	10.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	sweep	Sweep
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	4 / max. 150	23 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.00 dB

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

Frequency: 5610 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	6 / max. 150	124 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.44 dB	0.24 dB

TEST D.7: 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.

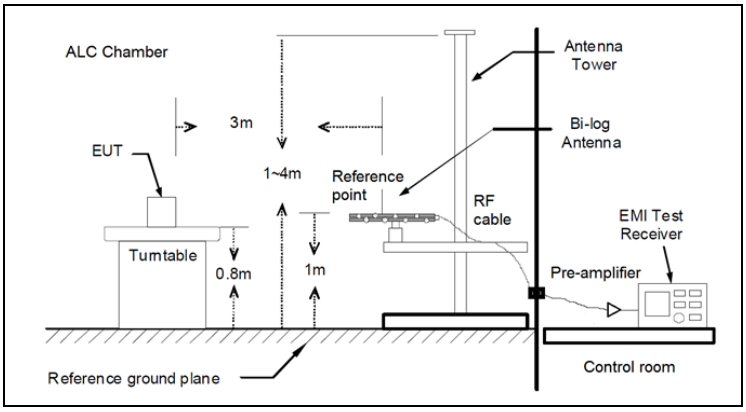
The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360º and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

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

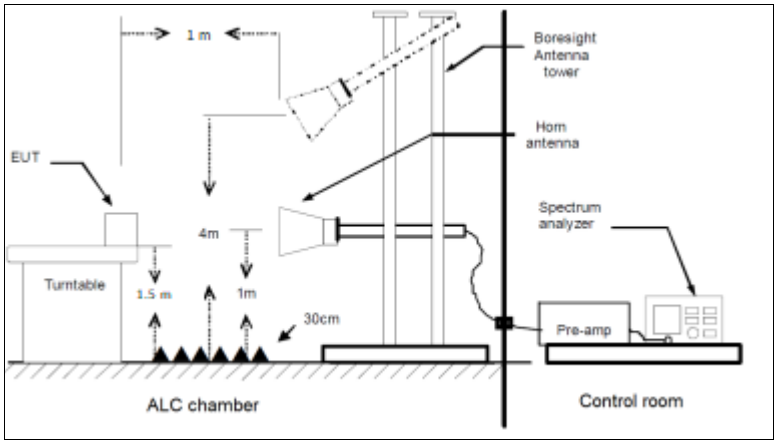
The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

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

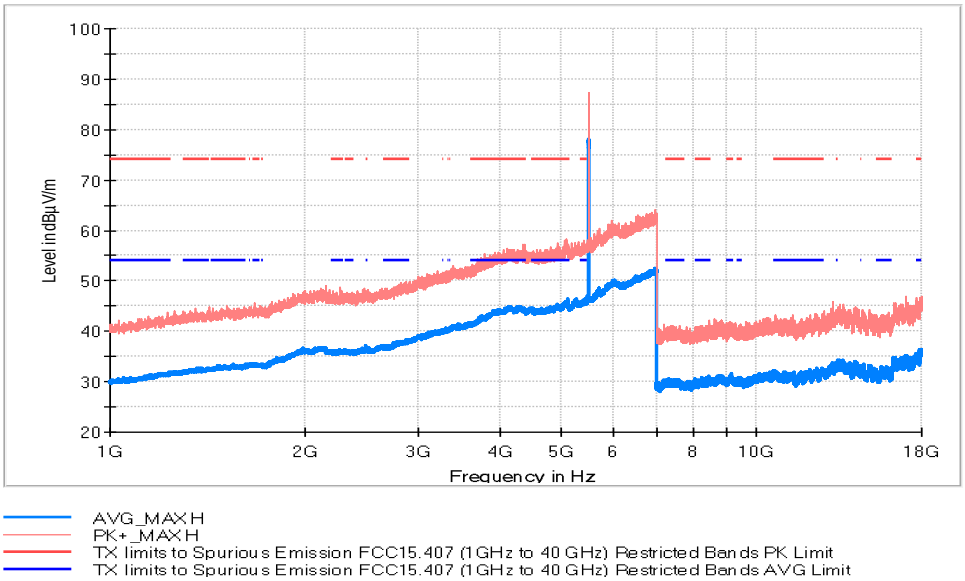
Co-Location

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.

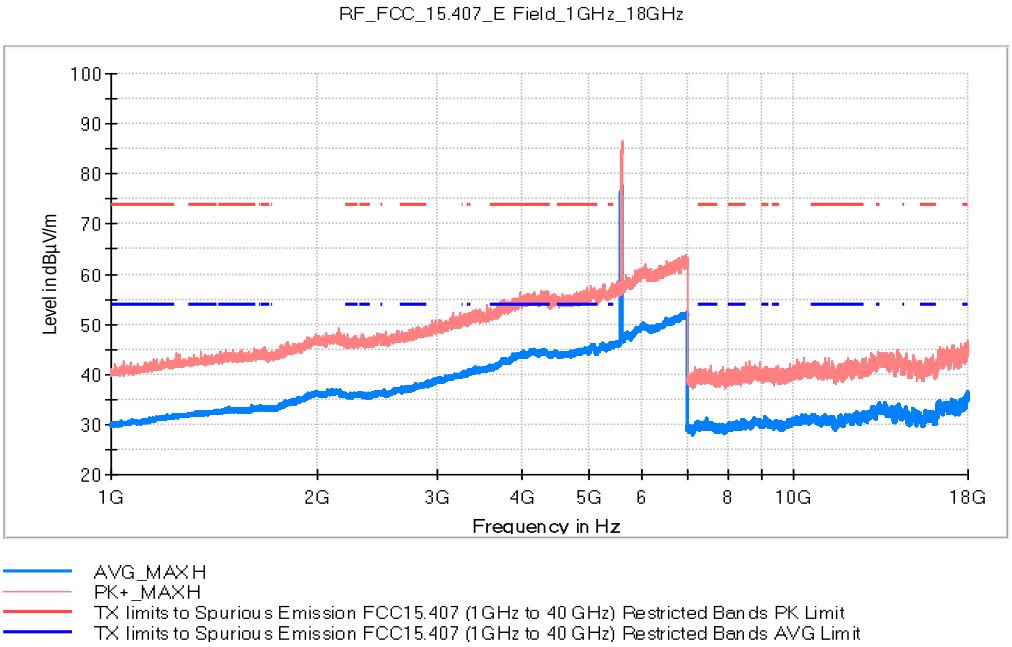
Frequency range 1 GHz – 40 GHz
The results and plots below show the maximum measured levels in the 1- 40 GHz range and the restricted band 4.5 – 5.15 GHz.

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

Low Channel

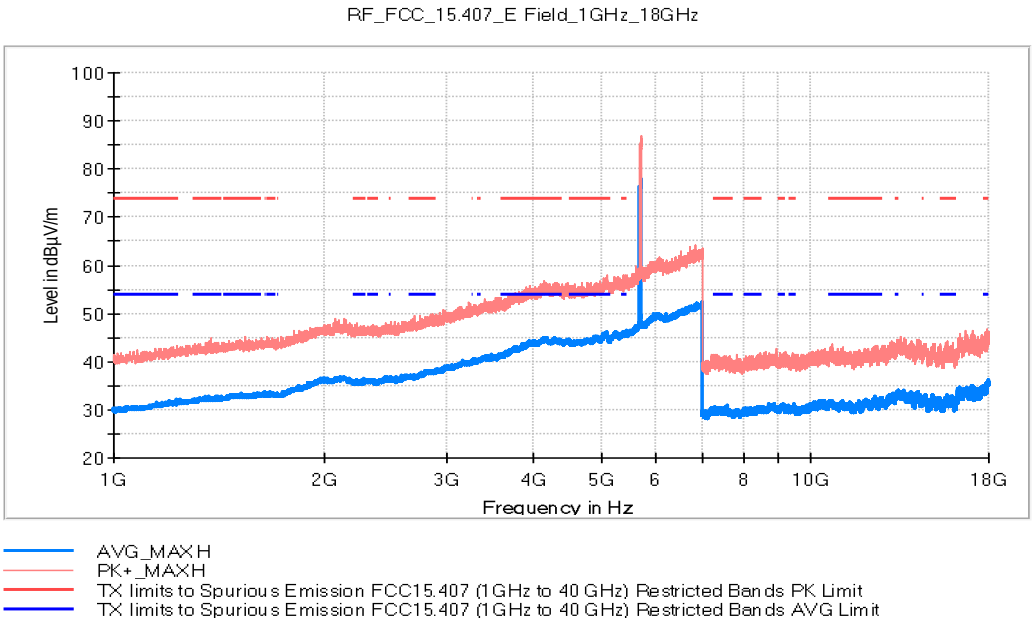


Middle Channel



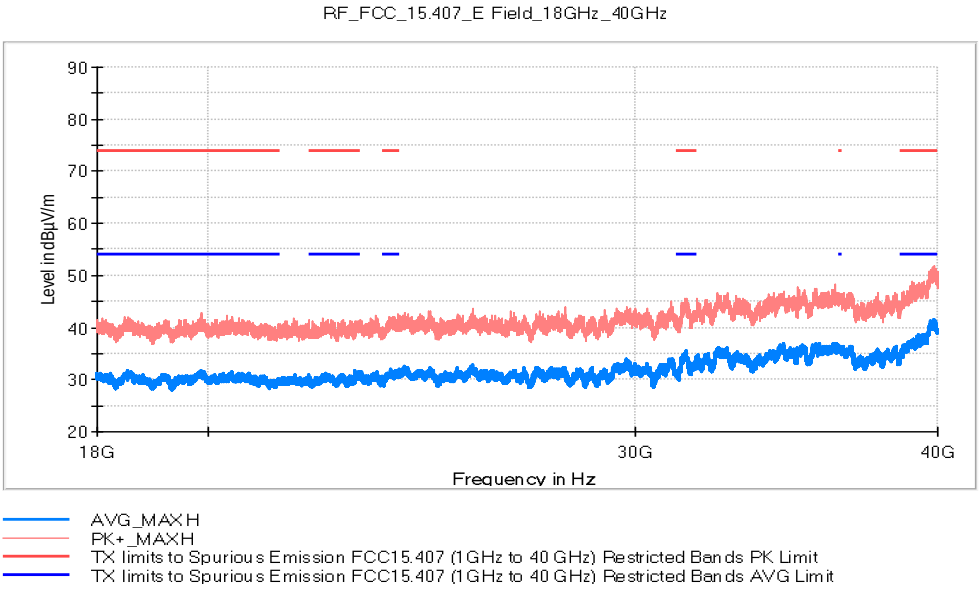
TEST RESULTS (Cont.)	

High Channel



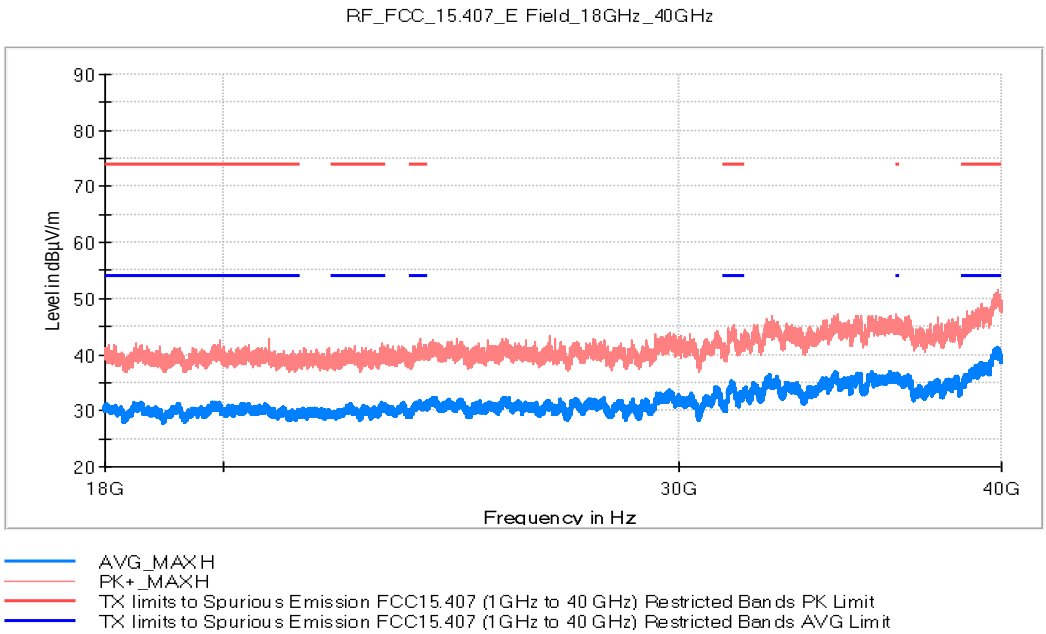
FREQUENCY RANGE	18 GHz – 40 GHz

Low Channel

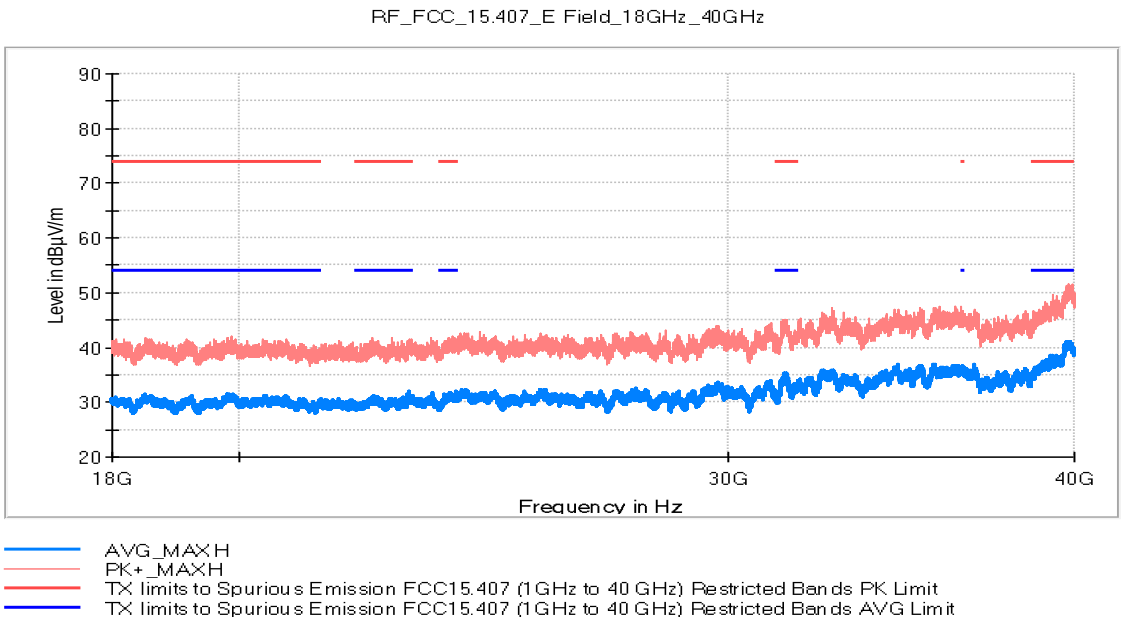


TEST RESULTS (Cont.)	

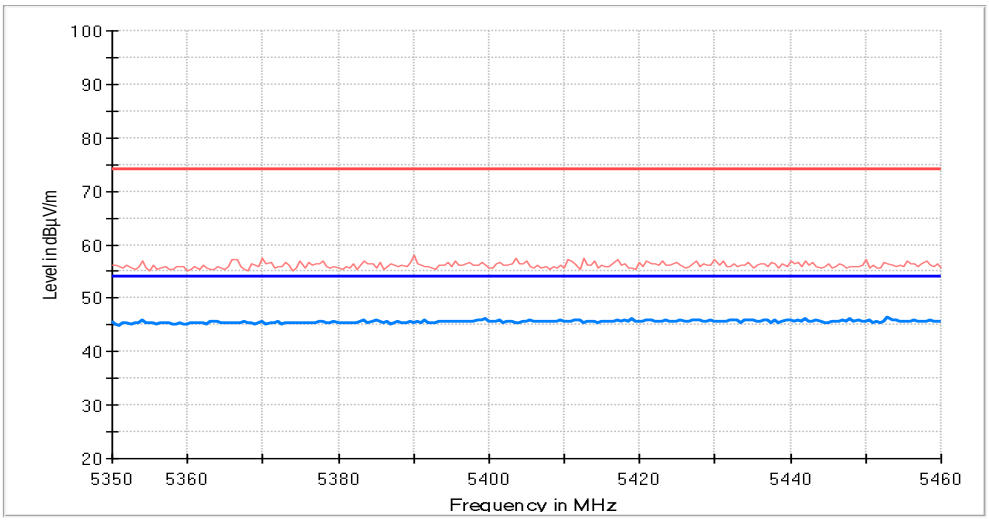
Middle Channel



High Channel



RESTRICTED BANDS	5.35 GHz – 5.46 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

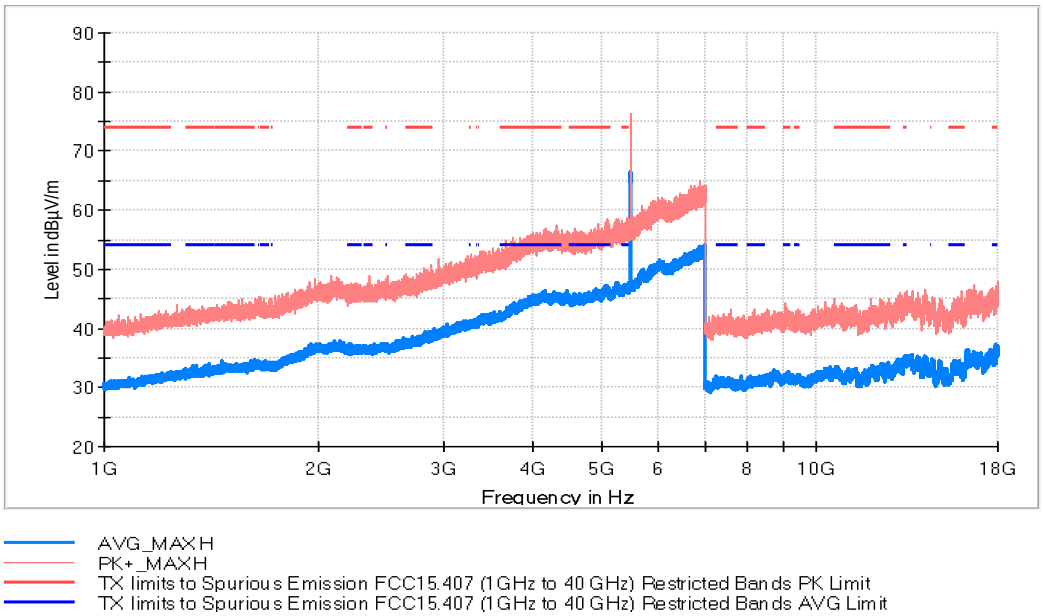
TESTED SAMPLES:	S/02
TESTED CONDITIONS MODES:	TC#02 (n mode 20 MHz)
TEST RESULTS:	PASS

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

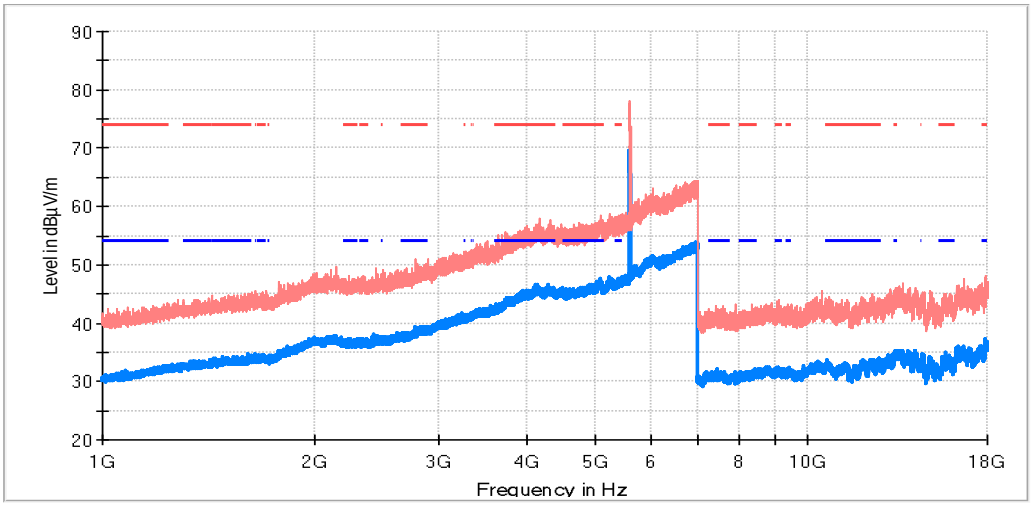


Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comment
5503.545455	75.0	66.4	V	Fundamental

TEST RESULTS (Cont.)	

Mid Channel



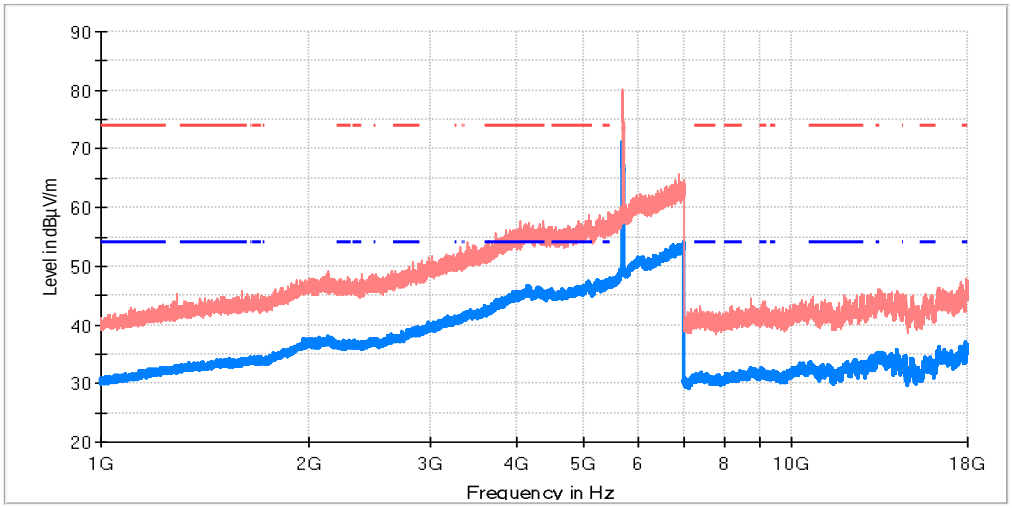
AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5602.818182	78.0	68.6	V	Fundamental

TEST RESULTS (Cont.)	

High Channel



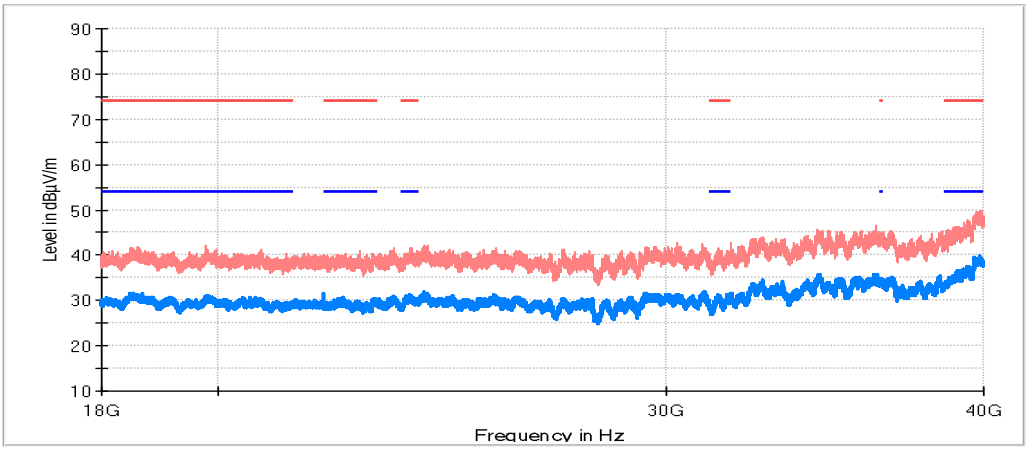
AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5703.181818	80.2	70.2	V	Fundamental

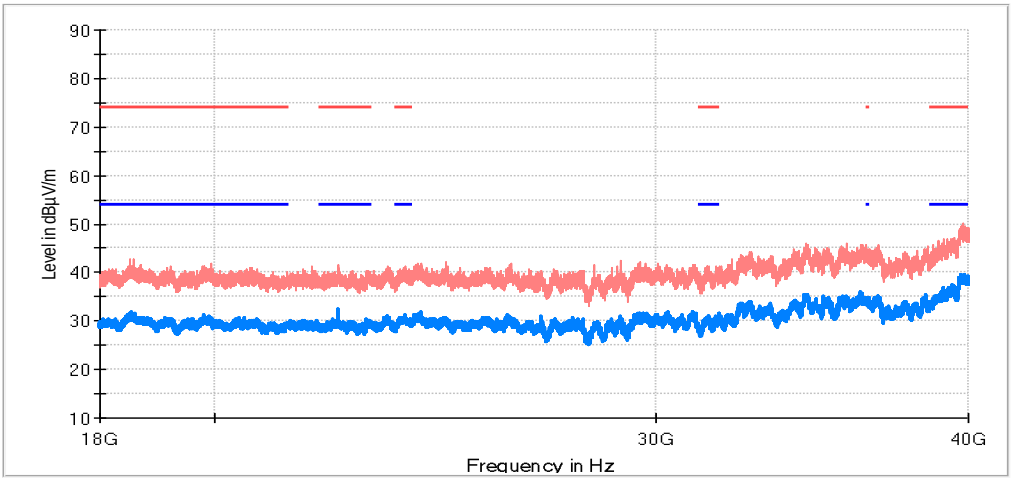
TEST RESULTS (Cont.)	
FREQUENCY RANGE	**18 GHz – 40 GHz**

Low Channel



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

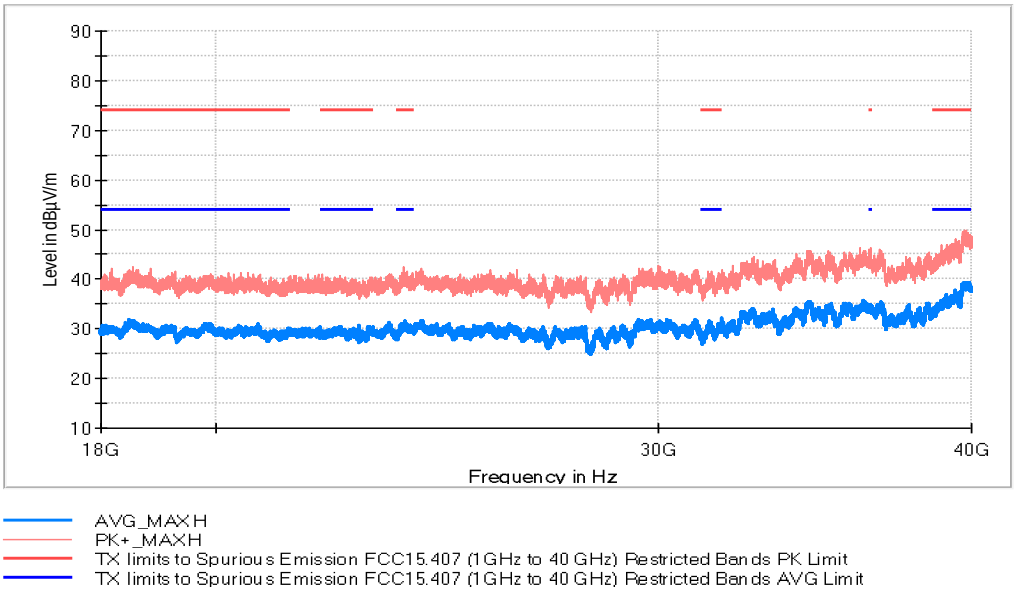
Middle Channel



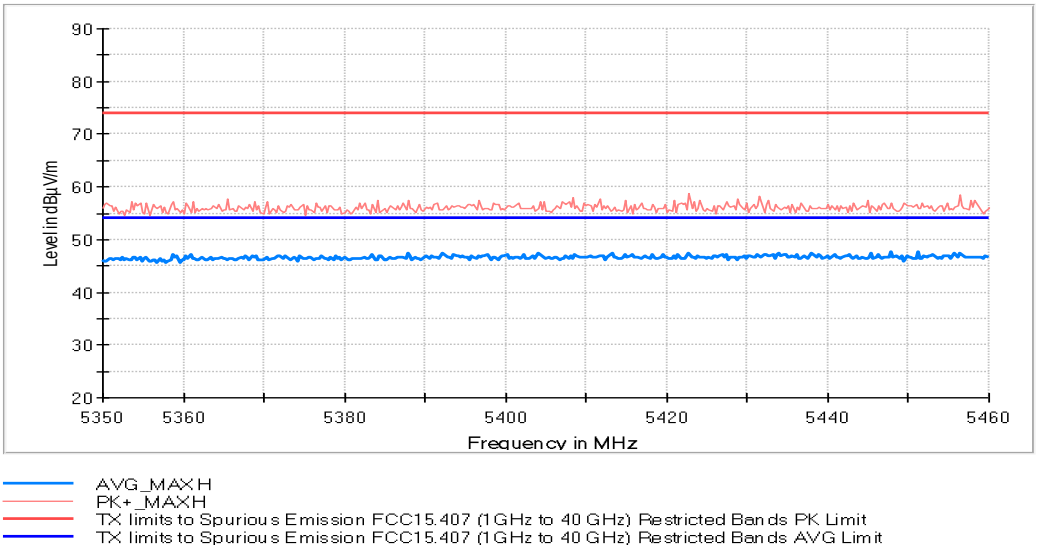
AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

TEST RESULTS (Cont.)	

High Channel

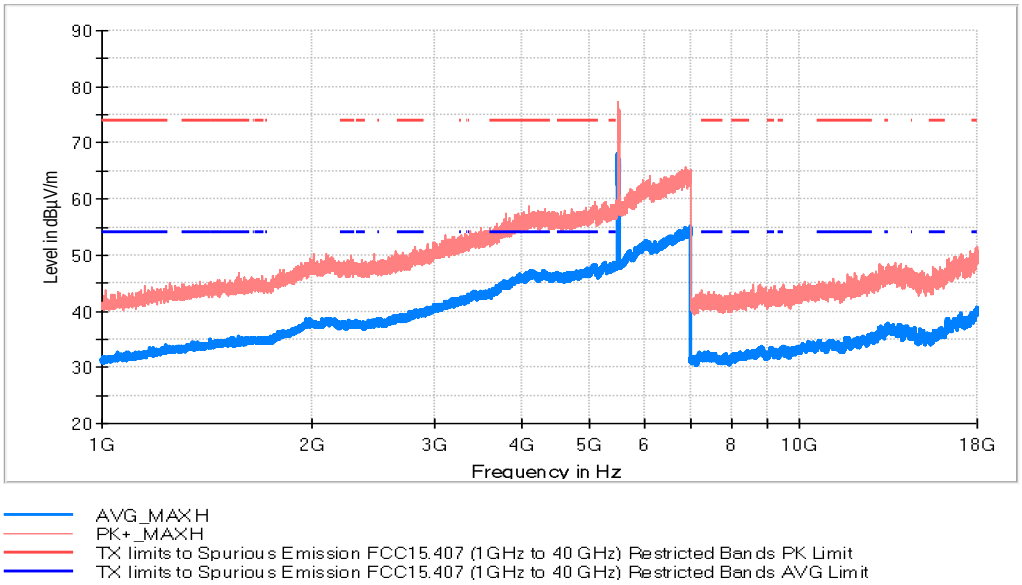


RESTRICTED BANDS	5.35 GHz – 5.46 GHz



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

Low Channel

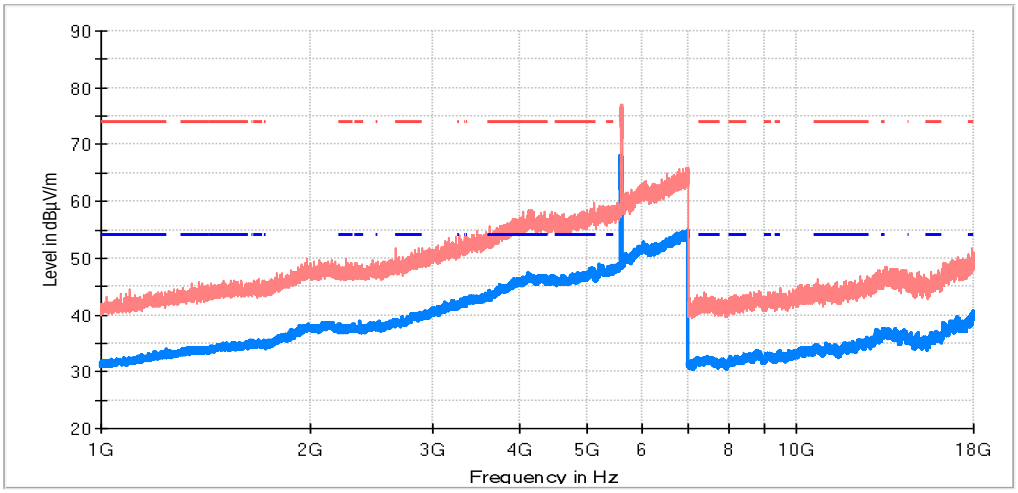


Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5498.636364	74.43	68.09	V	Fundamental

TEST RESULTS (Cont.)	

Mid Channel



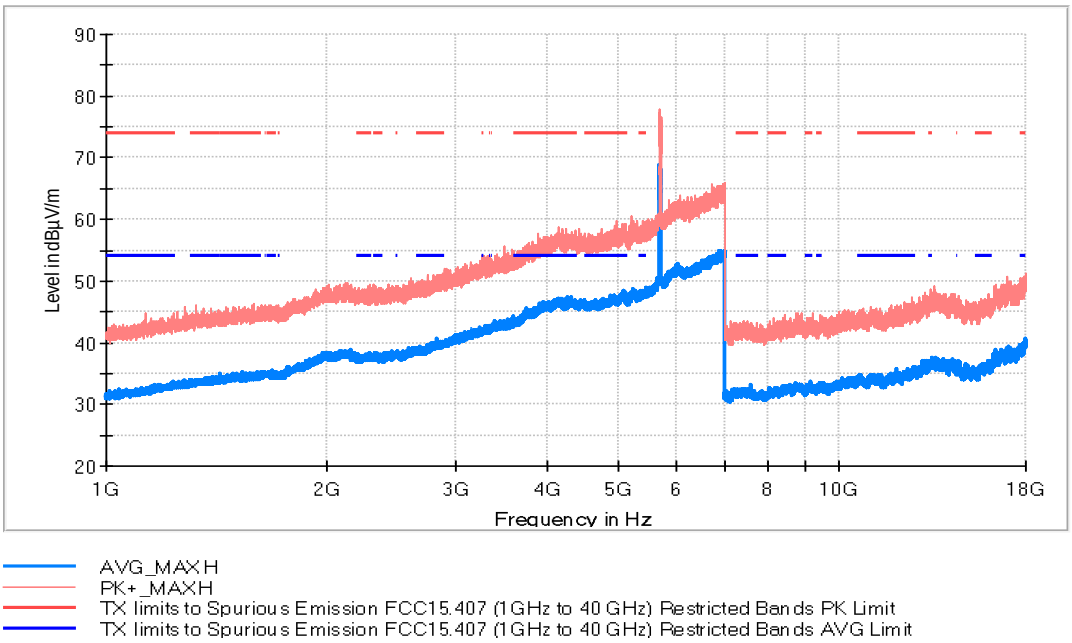
AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5591.636364	76.49	68.07	V	Fundamental

TEST RESULTS (Cont.)	

High Channel

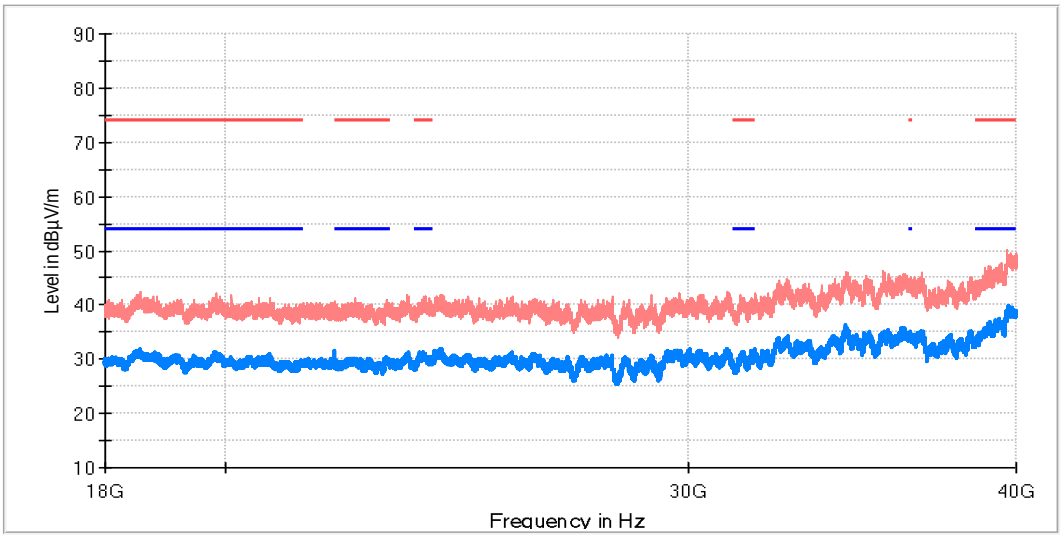


Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5693.909091	76.97	68.73	V	Fundamental

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

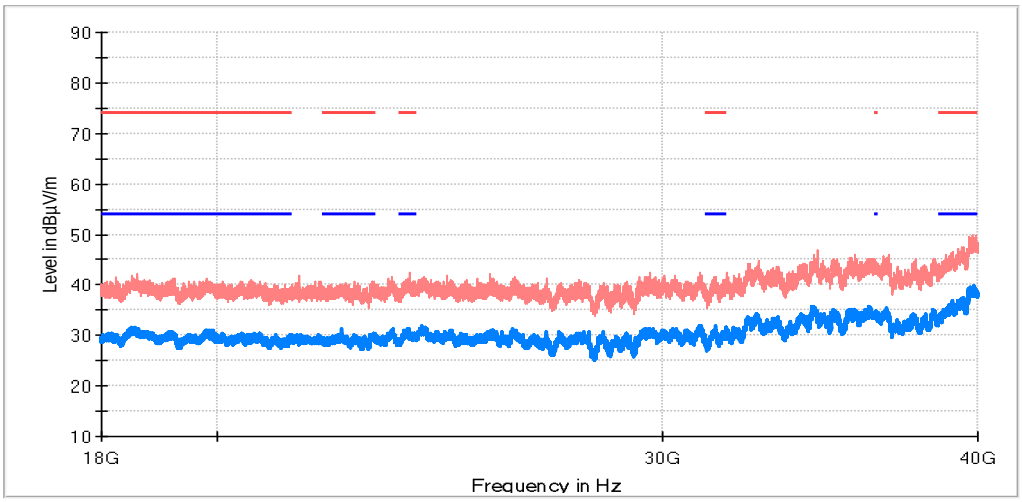
Low Channel



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

.

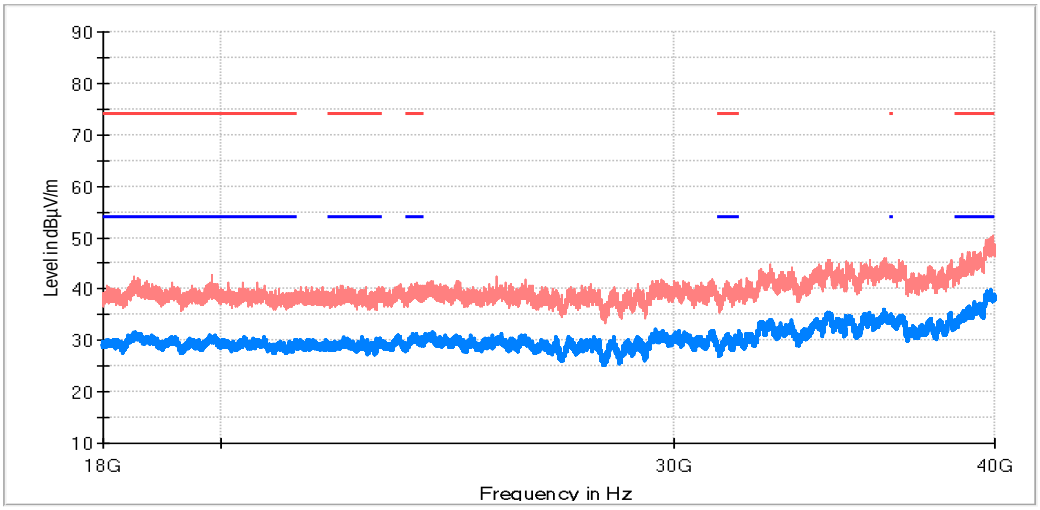
Mid Channel



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

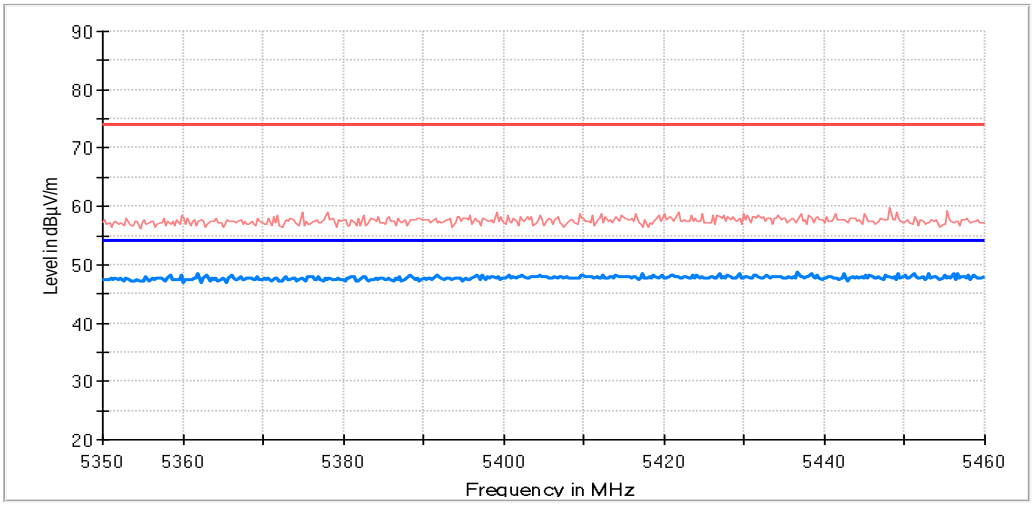
TEST RESULTS (Cont.)	

High Channel



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

RESTRICTED BANDS	5.35 GHz – 5.46 GHz



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

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

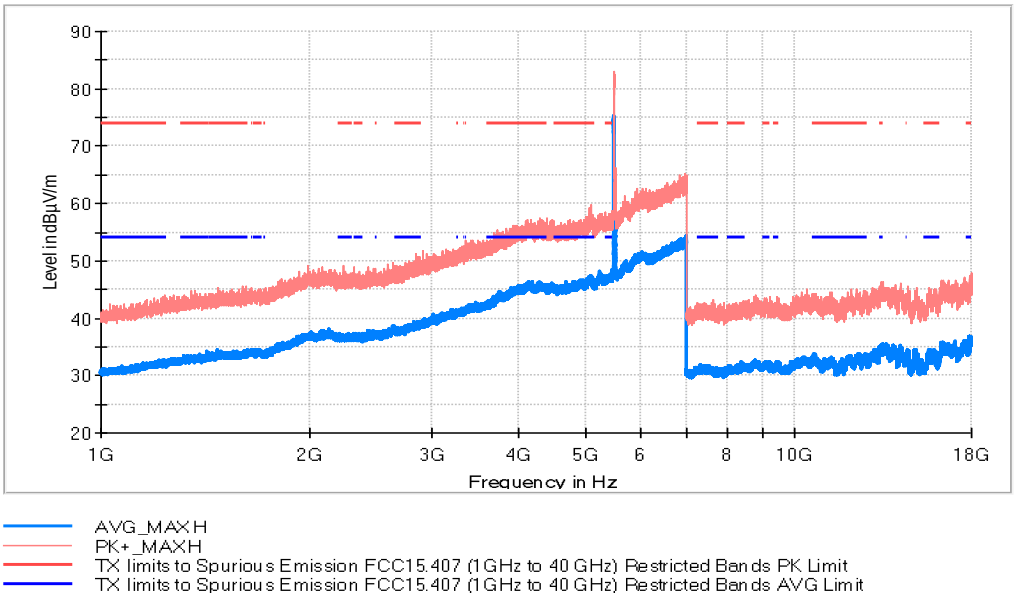
Co-Location

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

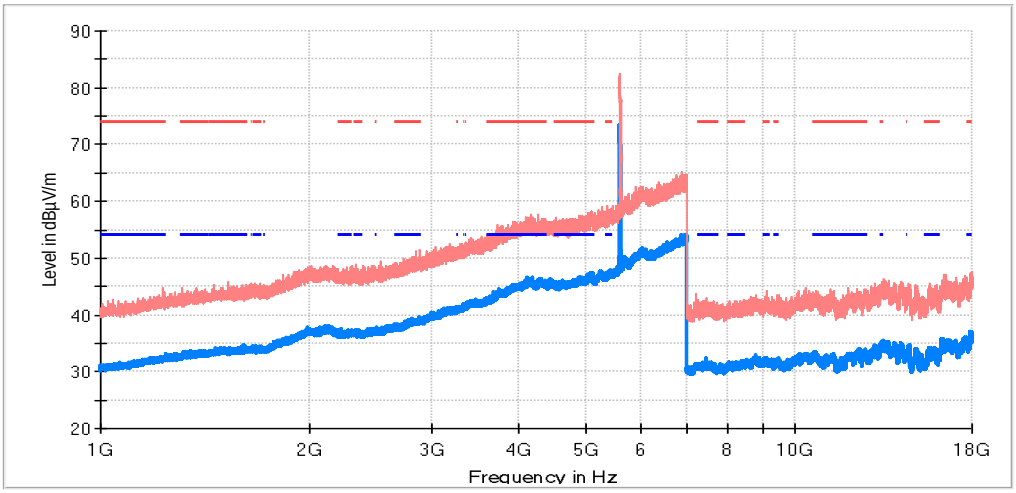


Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5496.181818	82.9	74.3	V	Fundamental

TEST RESULTS (Cont.)	

Mid Channel



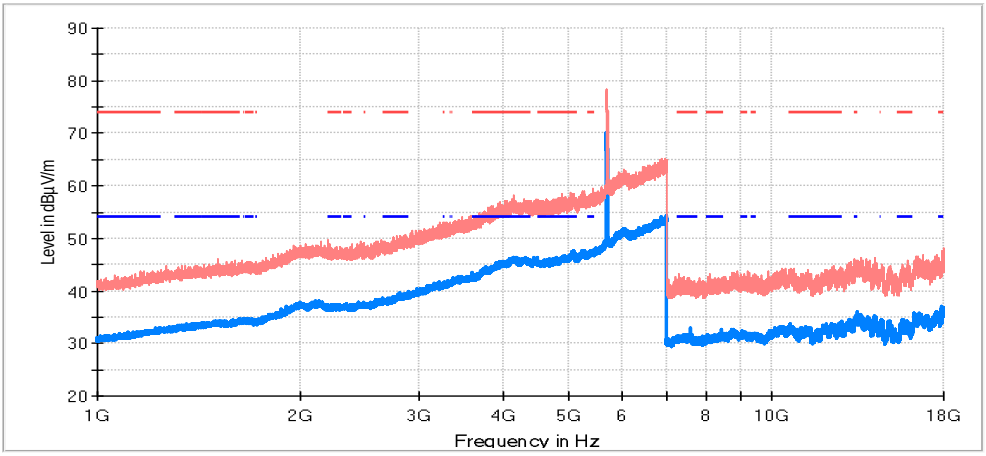
AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5597.363636	80.4	73.4	V	Fundamental

TEST RESULTS (Cont.)	

High Channel



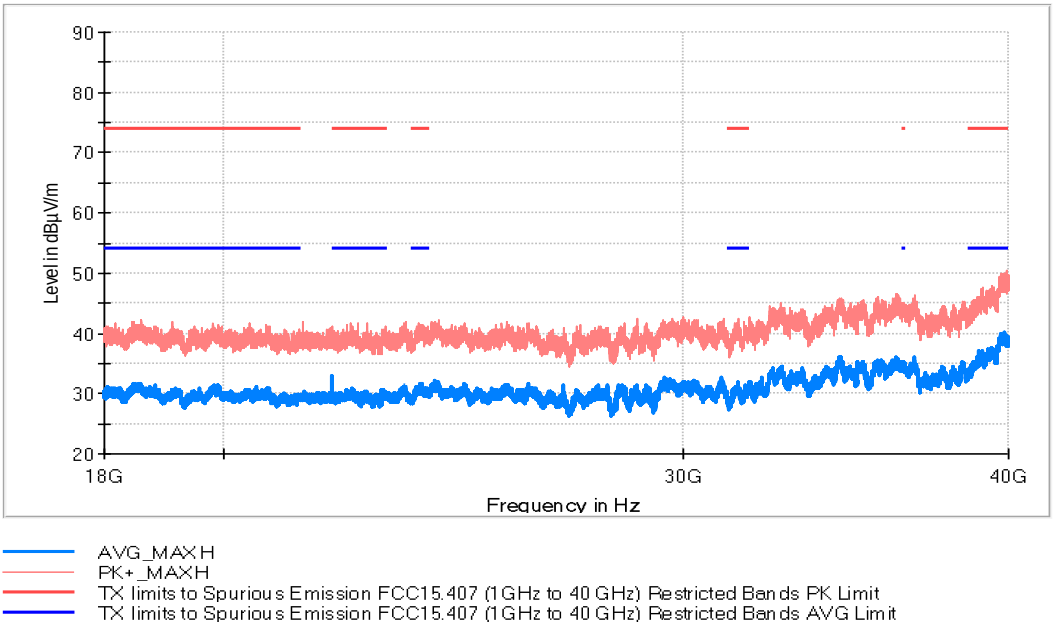
AVG_MAXH
PK+_MAXH
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands PK Limit
TX limits to Spurious Emission FCC15.407 (1GHz to 40 GHz) Restricted Bands AVG Limit

Maximizations

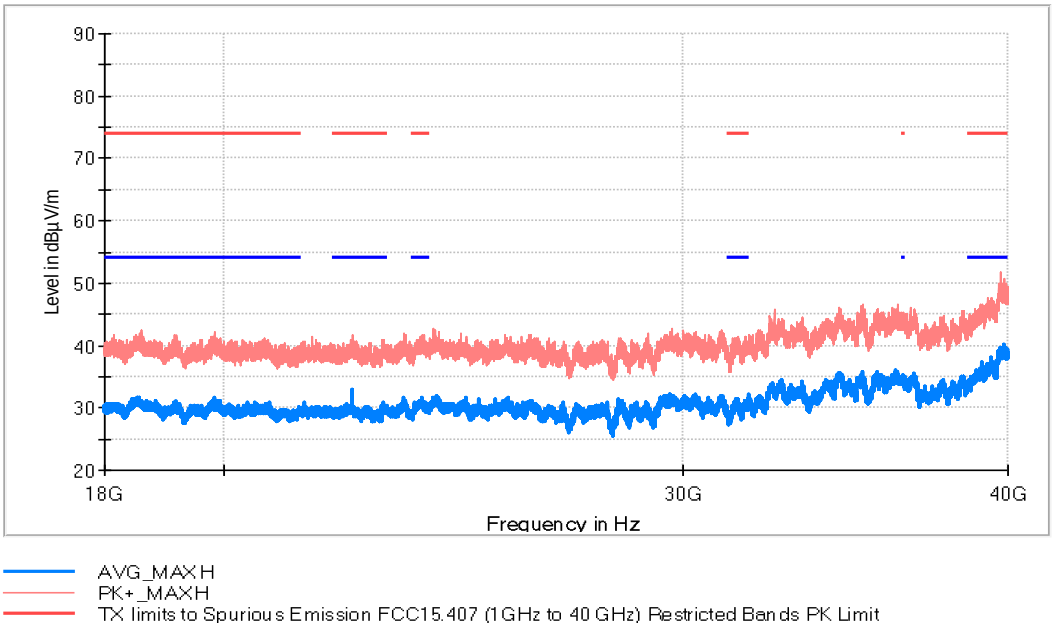
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comments
5696.090909	77.7	70.1	V	Fundamnetal

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

Low Channel

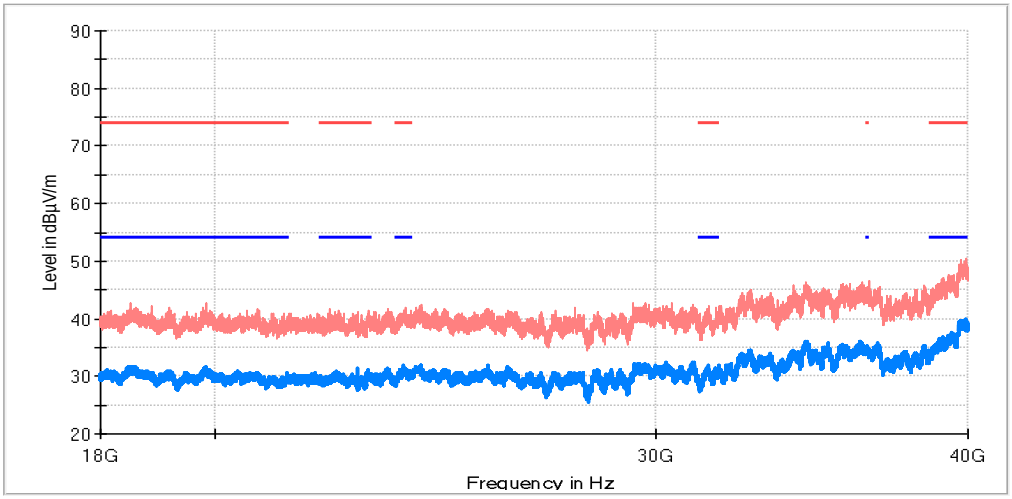


Middle Channel



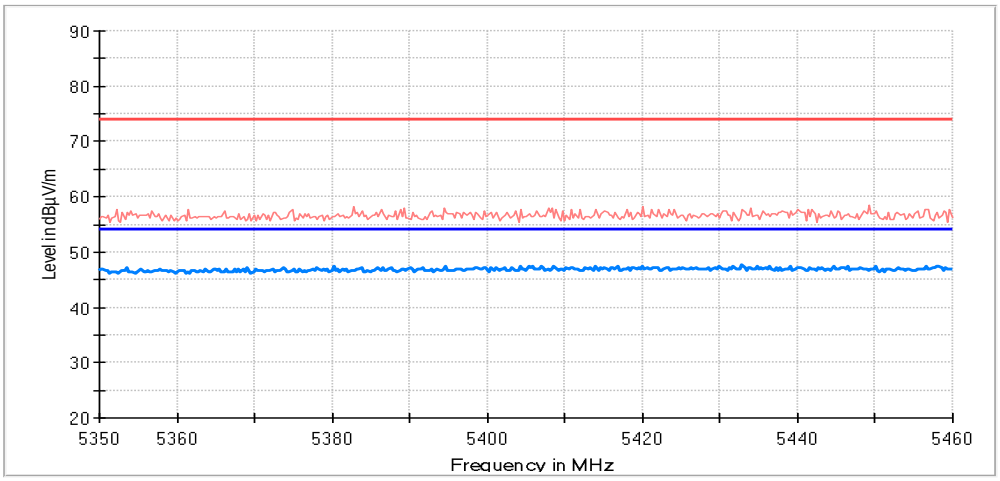
TEST RESULTS (Cont.)	

High Channel



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

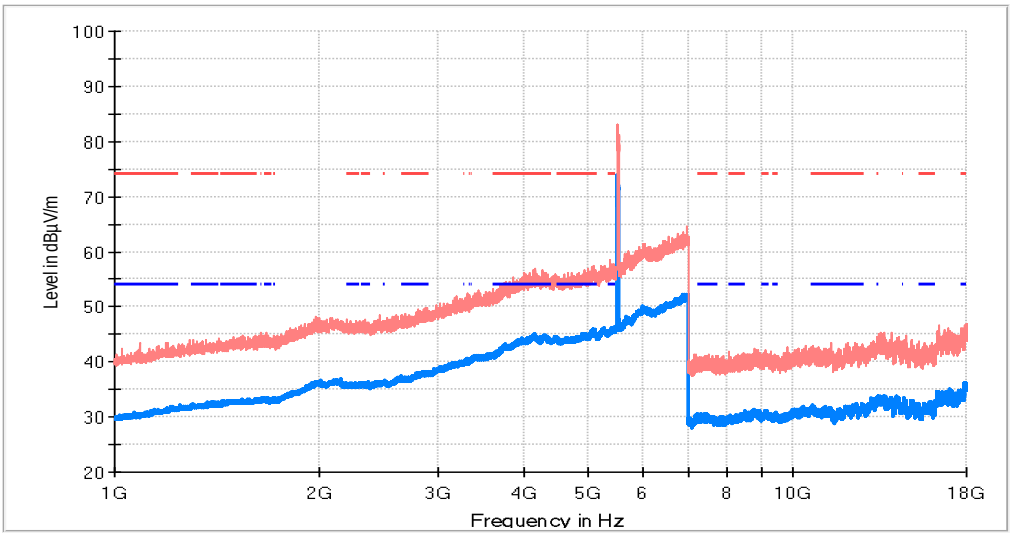
RESTRICTED BANDS	5.35 GHz – 5.46 GHz



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

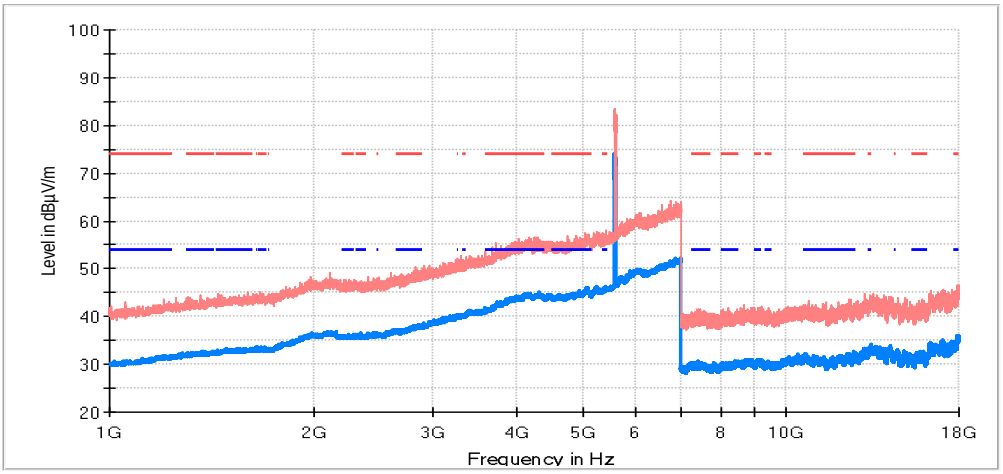
TEST RESULTS (Cont.)	ac mode (40 MHz)
FREQUENCY RANGE	1 GHz – 18 GHz

Low Channel



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

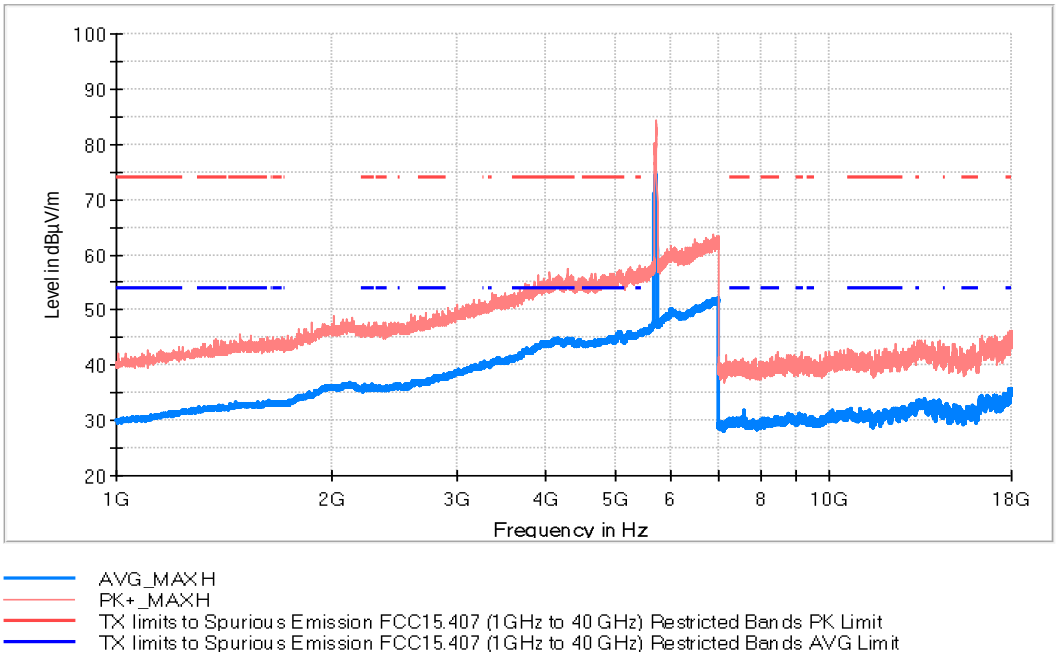
Mid Channel



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

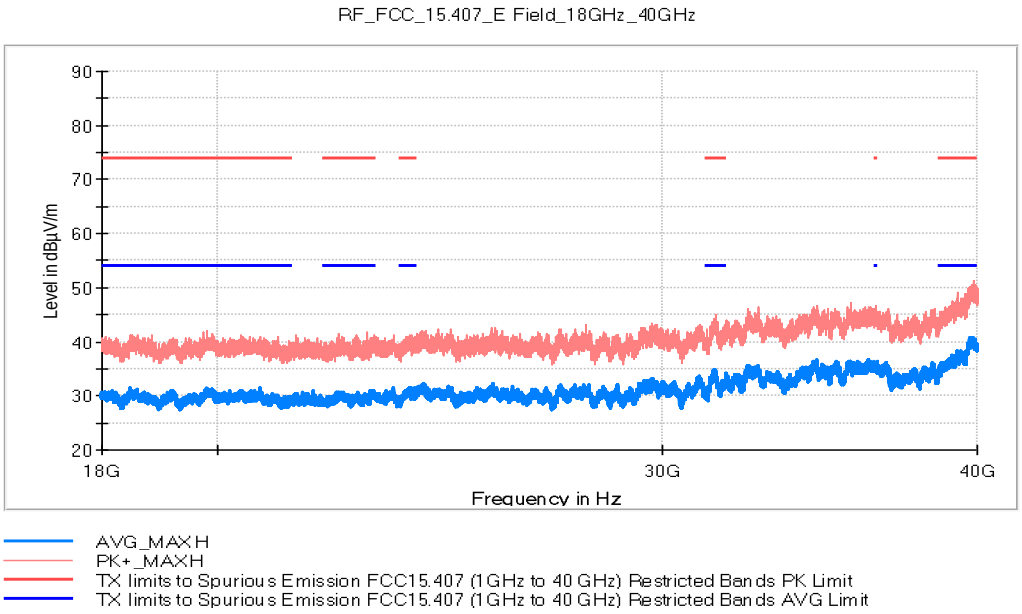
TEST RESULTS (Cont.)	

High Channel



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

Low Channel



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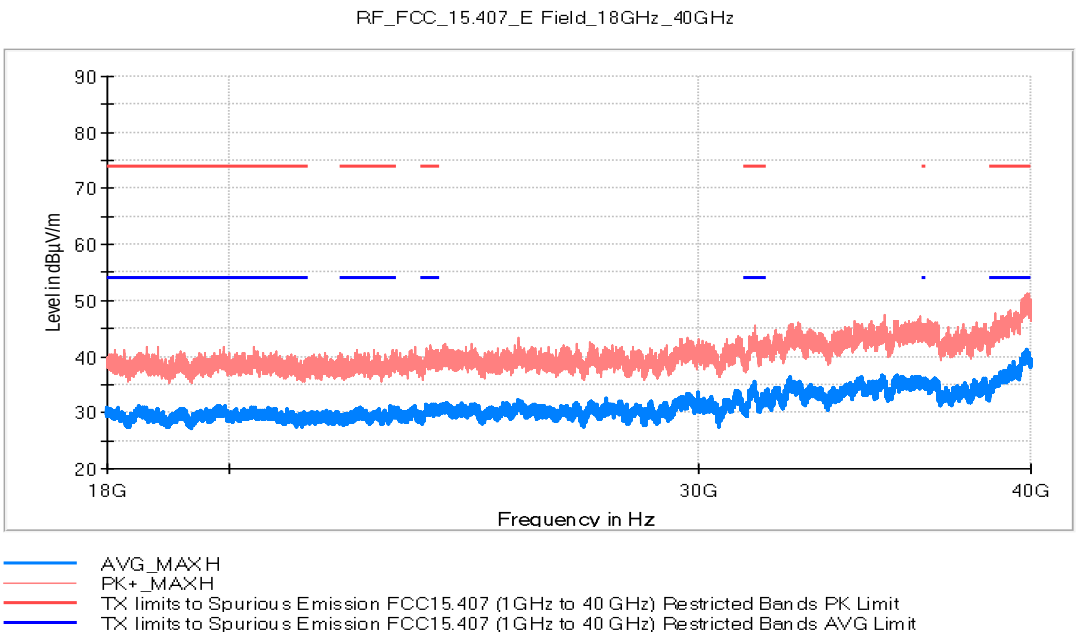
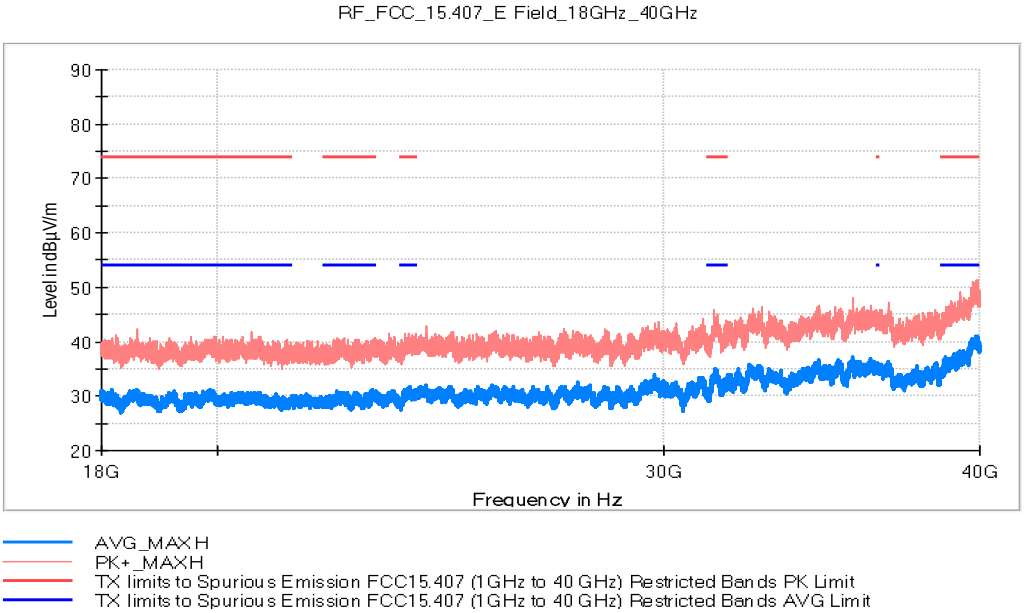
Mid Channel

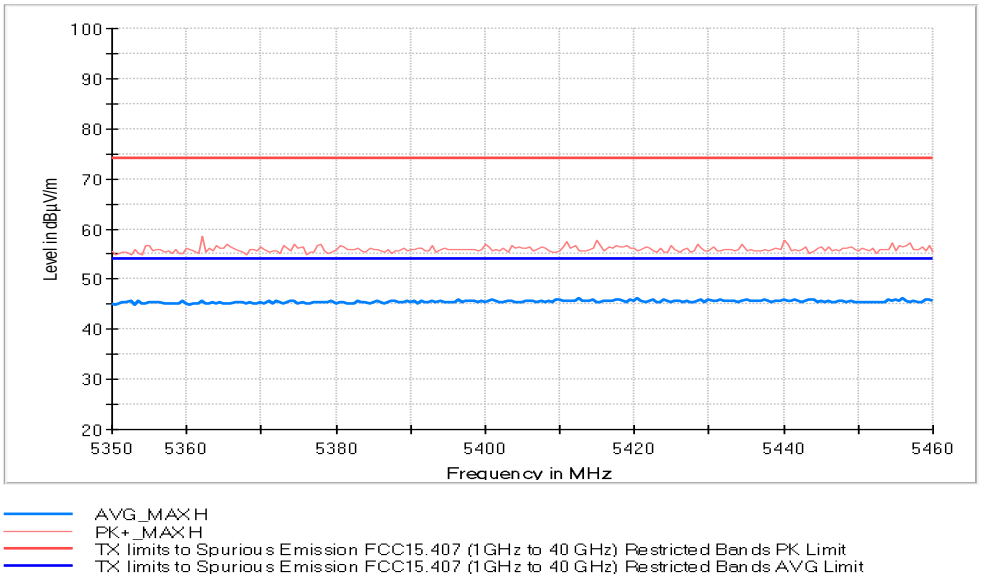


TEST RESULTS (Cont.)	

High Channel

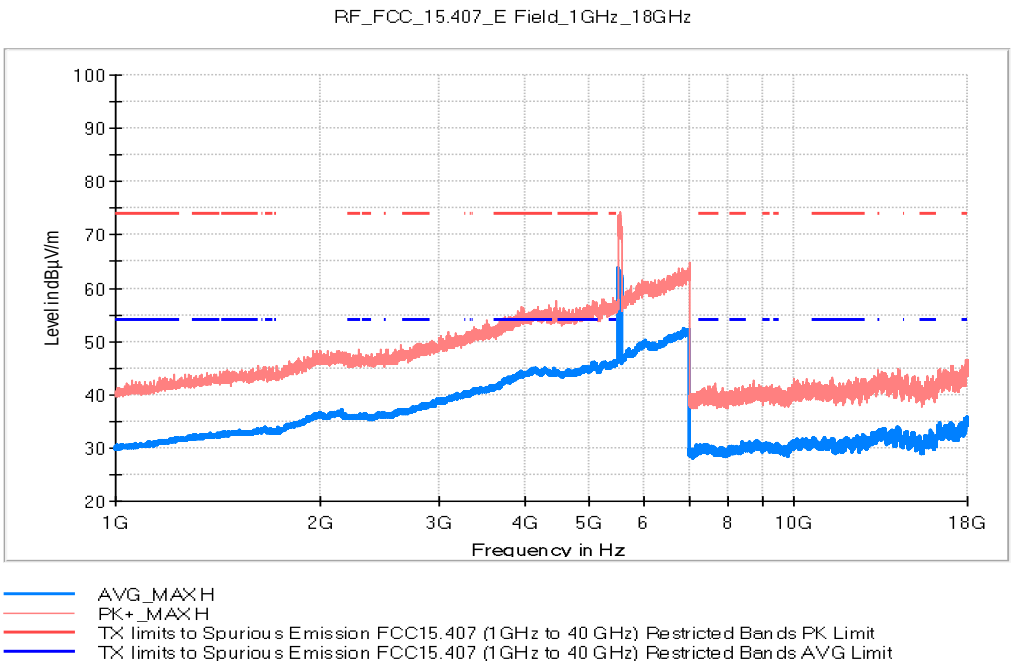


RESTRICTED BANDS	5.35 GHz – 5.46 GHz

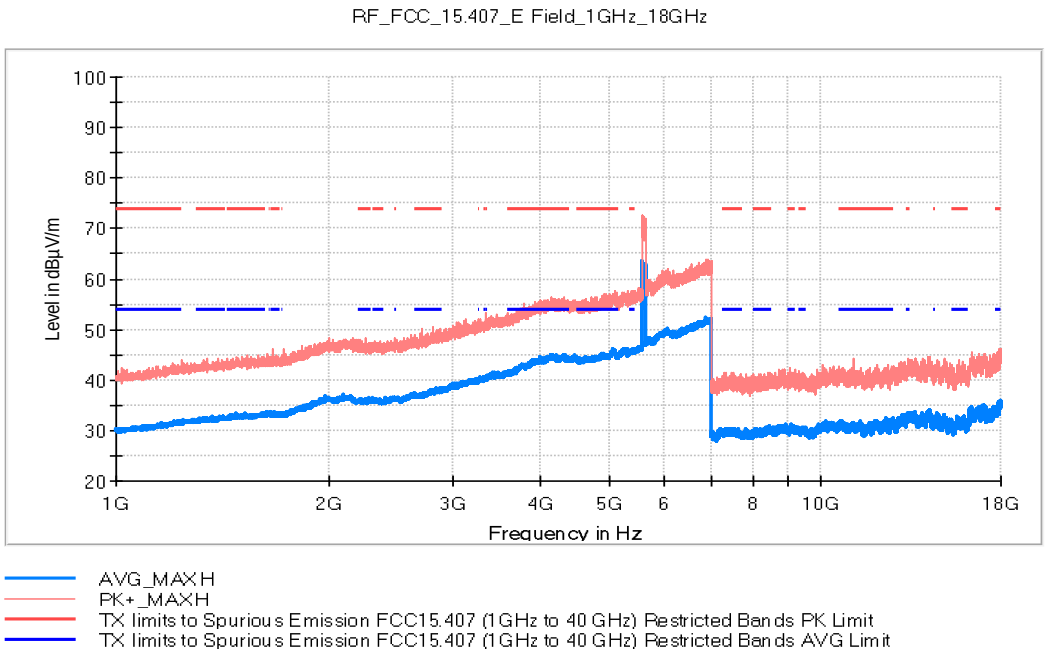


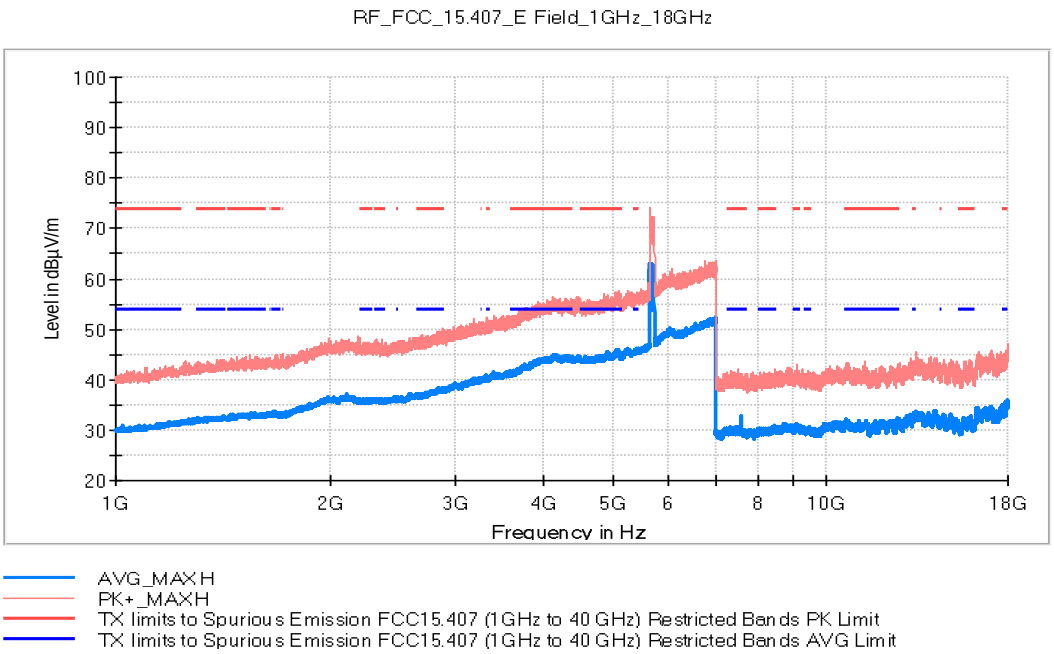
TEST RESULTS (Cont.)	ac mode (80 MHz)
FREQUENCY RANGE	1 GHz – 18 GHz

Low Channel



Mid Channel



TEST RESULTS (Cont.)	

High Channel