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

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
6dB bandwidth (MHz)	15.50	15.60	15.30
Occupied bandwidth (MHz)	16.4	16.6	16.2
Measurement uncertainty (kHz)	<± 1.80		

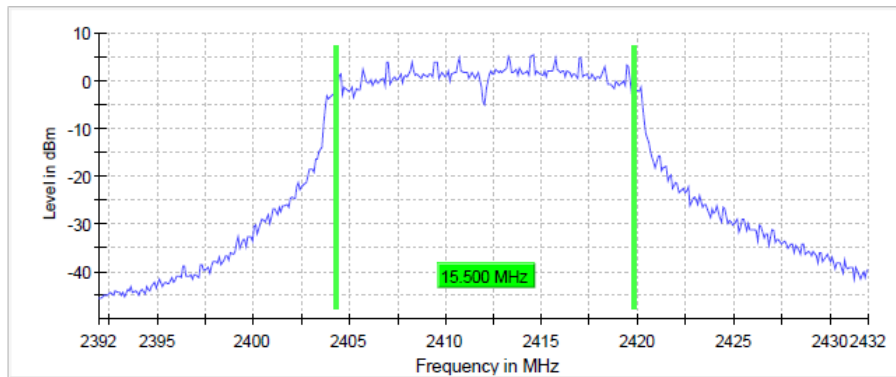
6dB Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	2.39200 GHz	2.41700 GHz	2.44200 GHz
Stop Frequency	2.43200 GHz	2.45700 GHz	2.48200 GHz
Span	40.00 MHz	40.000 MHz	40.000 MHz
RBW	100.000 kHz	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz	300.000 kHz
Sweep Points	800	800	400
Sweep time	56.836 µs	56.836 µs	56.886 µs
Reference Level	20.000 dBm	20.000 dBm	10.000 dBm
Attenuation	40.000 dB	40.000 dB	30.000 dB
Detector	MaxPeak	MaxPeak	MaxPeak
Sweep Count	100	100	100
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep type	FFT	FFT	FFT
Preamp	off	off	off
Stable mode	Trace	Trace	Trace
Stable value	0.50 dB	0.50 dB	0.50 dB
Run	37 / max. 150	53 / max. 150	47 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.38 dB	0.04 dB	0.14 dB

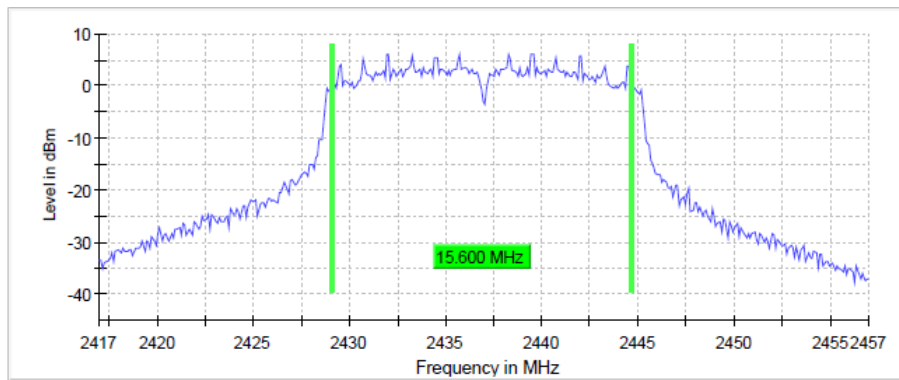
TEST RESULTS (Cont.):

6 dB BANDWIDTH

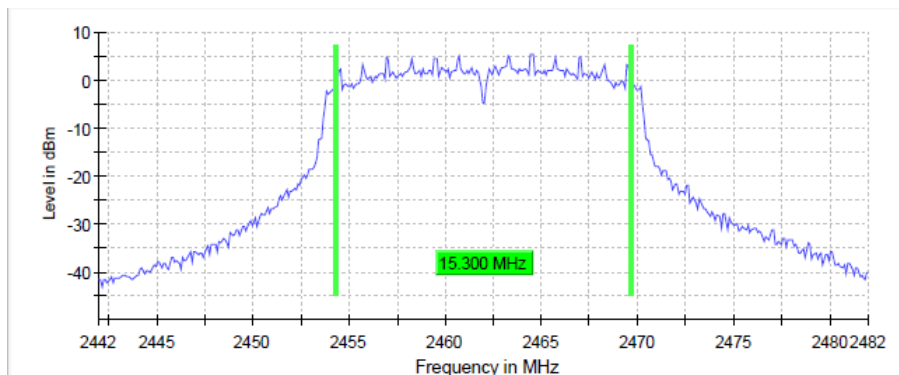
Lowest Channel



Middle Channel



Highest Channel



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TEST RESULTS (Cont.):

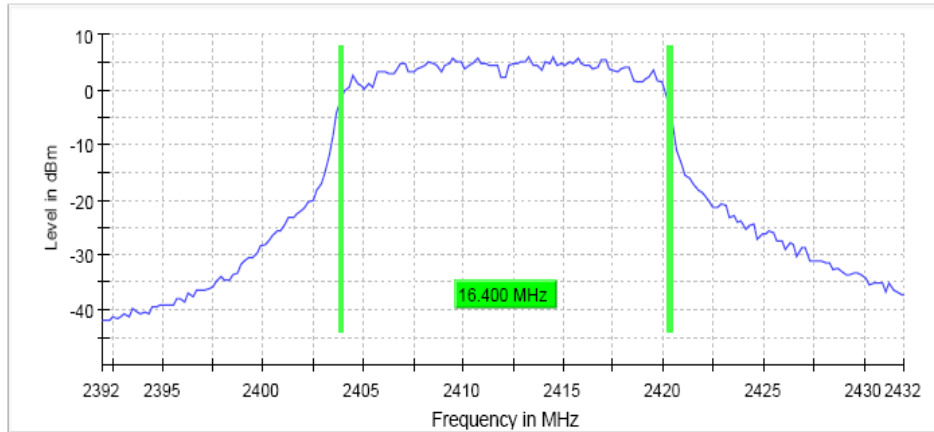
OBW Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	2.39200 GHz	2.41700 GHz	2.44200 GHz
Stop Frequency	2.43200 GHz	2.45700 GHz	2.48200 GHz
Span	40.00 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
Sweep Points	200	200	200
Sweep time	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
Sweep Count	100	100	100
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep type	FFT	FFT	FFT
Preamp	off	off	off
Stable mode	Trace	Trace	Trace
Stable value	0.30 dB	0.30 dB	0.30 dB
Run	59 / max. 150	32 / max. 150	31 / max. 150
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.00 dB	0.00 dB

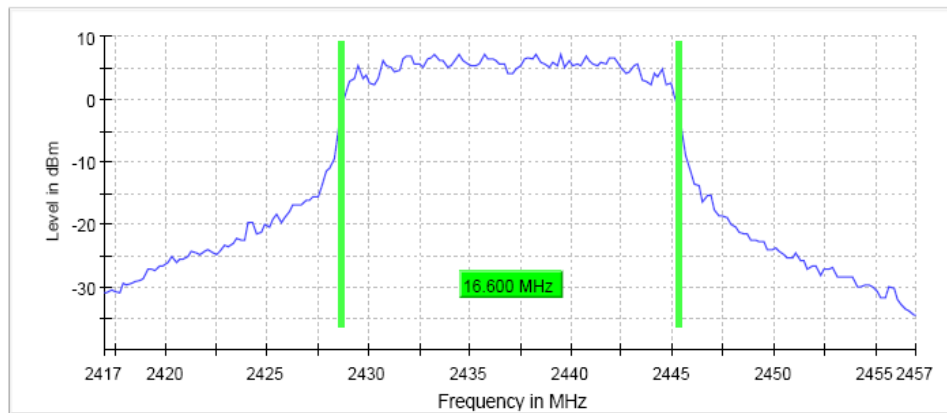
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

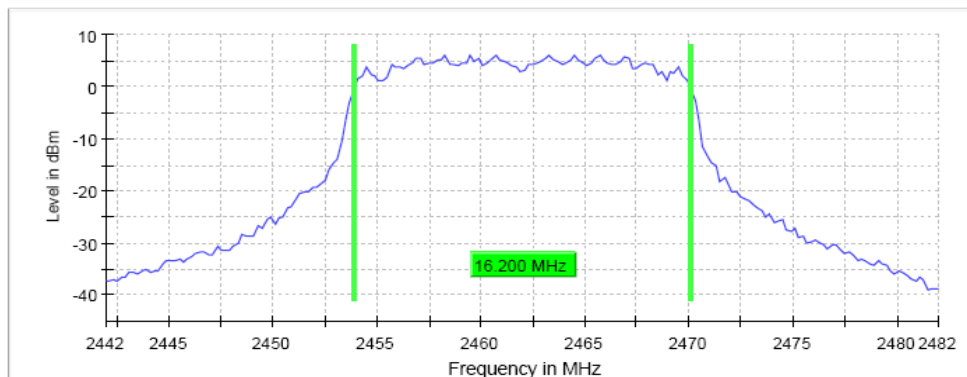
Lowest Channel



Middle Channel



Highest Channel



#

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#03 (n20 mode)
TEST RESULTS:	PASS

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
6dB bandwidth (MHz)	15.40	16.30	15.40
Occupied bandwidth (MHz)	17.4	17.6	17.4
Measurement uncertainty (kHz)	<± 1.80		

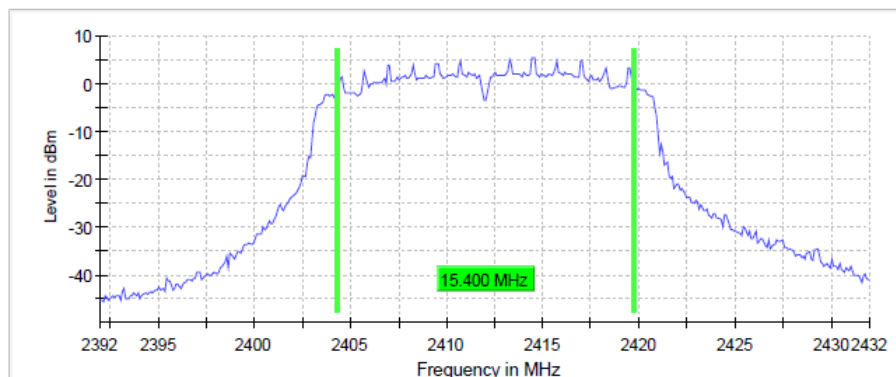
6dB Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	2.39200 GHz	2.41700 GHz	2.44200 GHz
Stop Frequency	2.43200 GHz	2.45700 GHz	2.48200 GHz
Span	40.00 MHz	40.000 MHz	40.000 MHz
RBW	100.000 kHz	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz	300.000 kHz
Sweep Points	800	800	800
Sweep time	56.836 µs	56.836 µs	56.836 µs
Reference Level	20.000 dBm	20.000 dBm	10.000 dBm
Attenuation	40.000 dB	40.000 dB	30.000 dB
Detector	MaxPeak	MaxPeak	MaxPeak
Sweep Count	100	100	100
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep type	FFT	FFT	FFT
Preamp	off	off	off
Stable mode	Trace	Trace	Trace
Stable value	0.50 dB	0.50 dB	0.50 dB
Run	73 / max. 150	65 / max. 150	45 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.14 dB	0.18 dB	0.12 dB

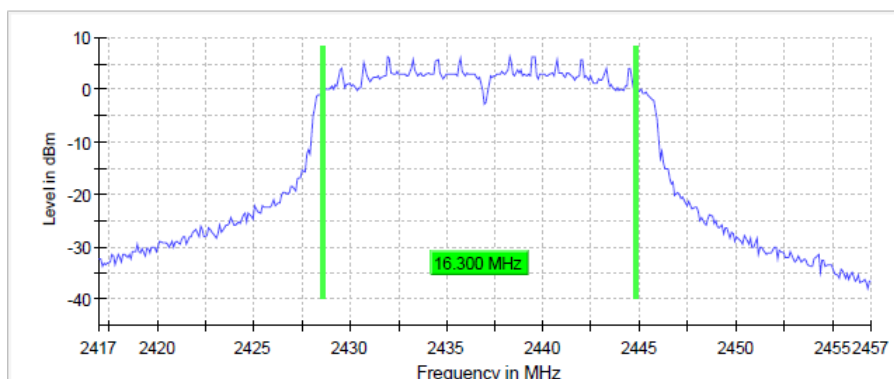
TEST RESULTS (Cont.):

6 dB BANDWIDTH

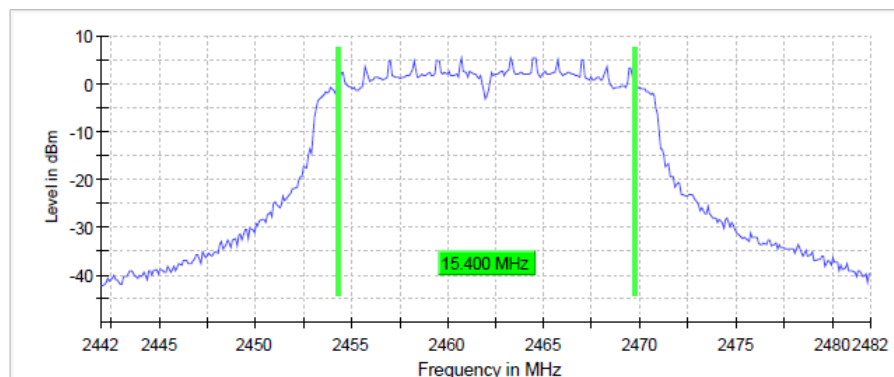
Lowest Channel



Middle Channel



Highest Channel



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TEST RESULTS (Cont.):

OBW Measurement

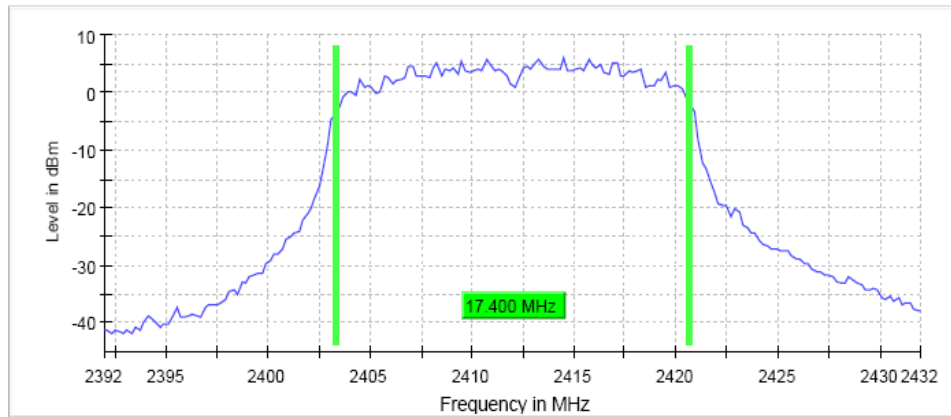
Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	2.39200 GHz	2.41700 GHz	2.44200 GHz
Stop Frequency	2.43200 GHz	2.45700 GHz	2.48200 GHz
Span	40.00 MHz	40.000 MHz	40.000 MHz
RBW	200.000 kHz	200.000 kHz	200.000 kHz
VBW	1.000 MHz	1.000 MHz	1.000 MHz
Sweep Points	200	200	200
Sweep time	28.443 μ s	28.443 μ s	28.443 μ s
Reference Level	20.000 dBm	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak	MaxPeak
Sweep Count	100	100	100
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep type	FFT	FFT	FFT
Preamp	off	off	off
Stable mode	Trace	Trace	Trace
Stable value	0.30 dB	0.30 dB	0.30 dB
Run	46 / max. 150	43 / max. 150	28 / max. 150
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.21 dB	0.24 dB	0.00 dB

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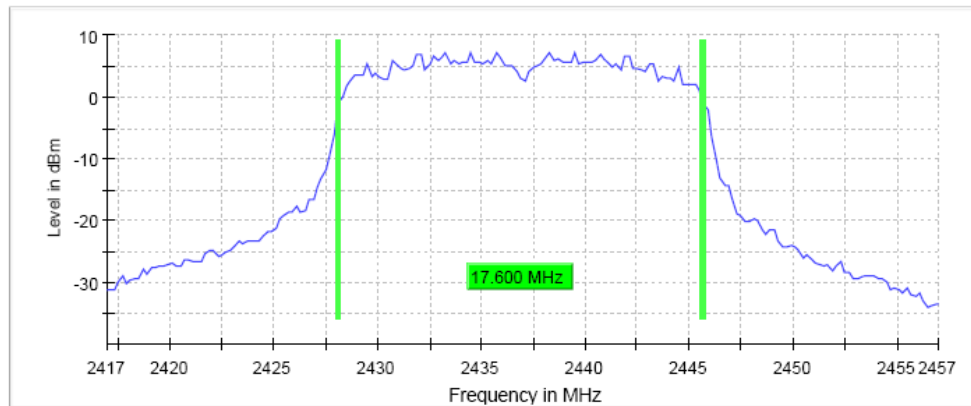
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

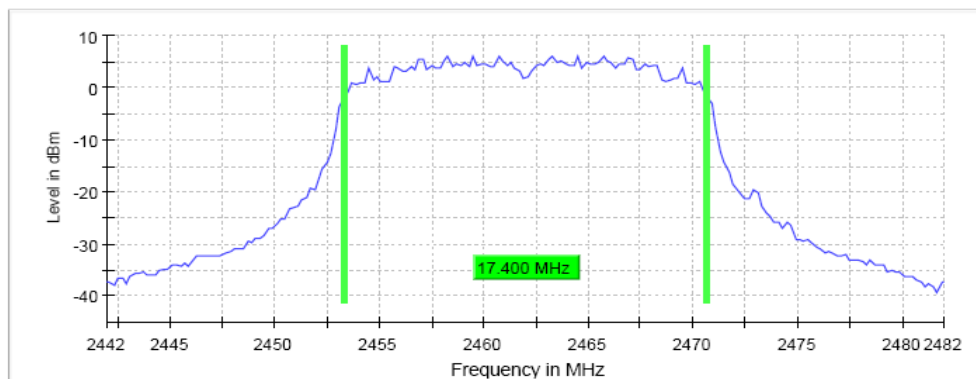
Lowest Channel



Middle Channel



Highest Channel



#

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#04 (n40 mode)
TEST RESULTS:	PASS

	Lowest frequency 2422 MHz	Middle frequency 2437 MHz	Highest frequency 2452 MHz
6dB bandwidth (MHz)	35.30	35.70	35.30
Occupied bandwidth (MHz)	35.5	36.5	36.5
Measurement uncertainty (kHz)	<± 1.80		

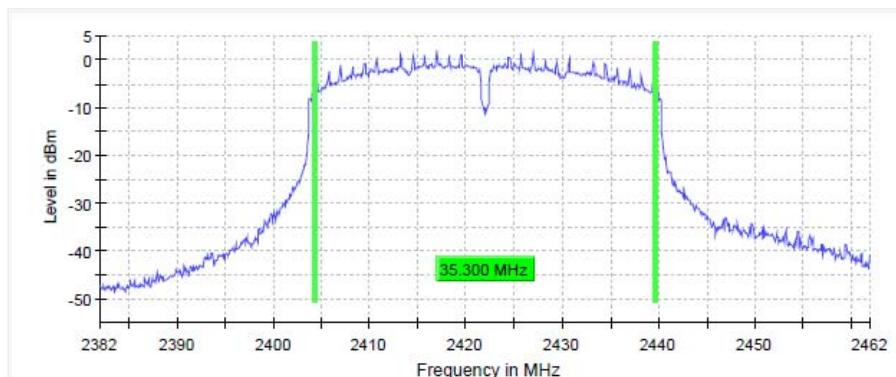
6dB Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	2.38200 GHz	2.39700 GHz	2.41200 GHz
Stop Frequency	2.46200 GHz	2.47700 GHz	2.49200 GHz
Span	80.00 MHz	80.000 MHz	40.000 MHz
RBW	100.000 kHz	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz	300.000 kHz
Sweep Points	1600	1600	1600
Sweep time	94.727 µs	94.727 µs	94.727 µs
Reference Level	20.000 dBm	20.000 dBm	10.000 dBm
Attenuation	40.000 dB	40.000 dB	30.000 dB
Detector	MaxPeak	MaxPeak	MaxPeak
Sweep Count	100	100	100
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep type	FFT	FFT	FFT
Preamp	off	off	off
Stable mode	Trace	Trace	Trace
Stable value	0.50 dB	0.50 dB	0.50 dB
Run	98 / max. 150	83 / max. 150	1052 / max. 150
Stable	5 / 5	5 / 5	5 / 5
Max Stable Difference	0.17 dB	0.23 dB	0.00 dB

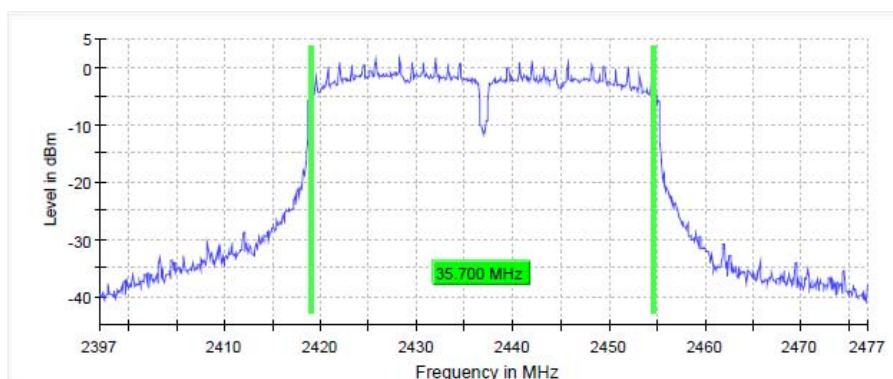
TEST RESULTS (Cont.):

6 dB BANDWIDTH

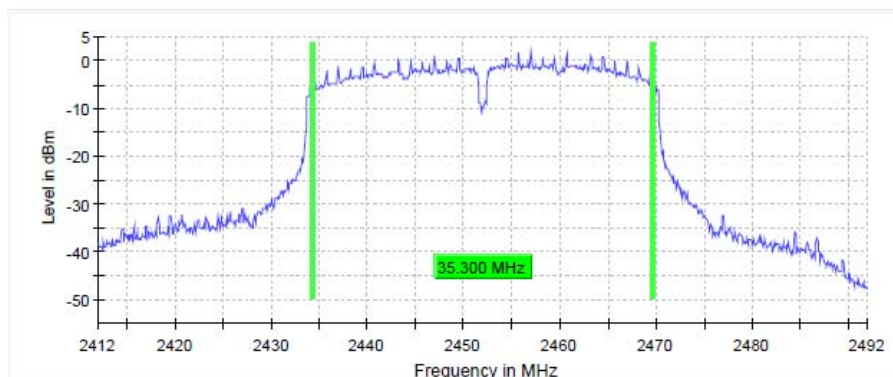
Lowest Channel



Middle Channel



Highest Channel



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TEST RESULTS (Cont.):

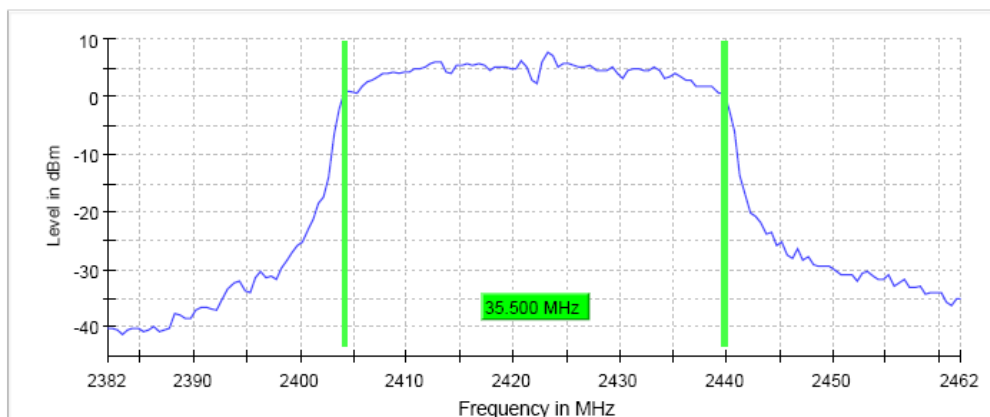
OBW Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	2.38200 GHz	2.39700 GHz	2.41200 GHz
Stop Frequency	2.46200 GHz	2.47700 GHz	2.49200 GHz
Span	80.000 MHz	80.000 MHz	80.000 MHz
RBW	500.000 kHz	500.000 kHz	500.000 kHz
VBW	2.000 MHz	2.000 MHz	2.000 MHz
Sweep Points	160	160	160
Sweep time	18.962 μ s	18.962 μ s	18.962 μ s
Reference Level	20.000 dBm	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak	MaxPeak
Sweep Count	100	100	100
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep type	FFT	FFT	FFT
Preamplifier	off	off	off
Stable mode	Trace	Trace	Trace
Stable value	0.30 dB	0.30 dB	0.30 dB
Run	30 / max. 150	34 / max. 150	45 / max. 150
Stable	3 / 3	3 / 3	3 / 3
Max Stable Difference	0.06 dB	0.00 dB	0.11 dB

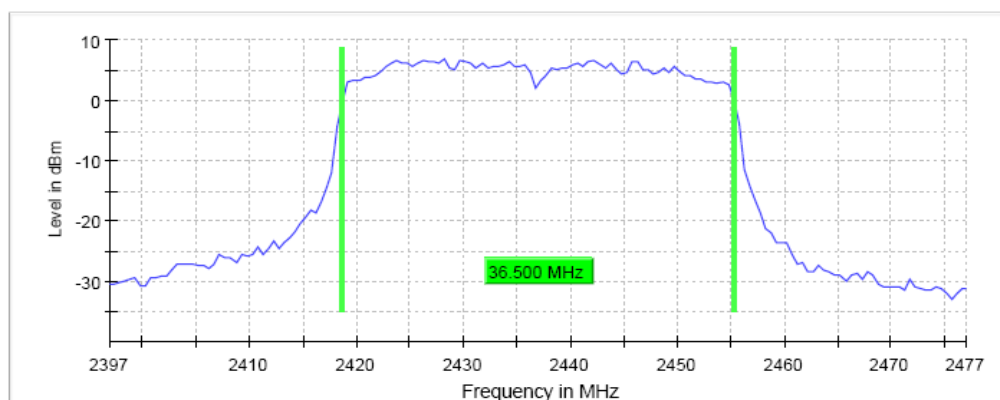
TEST RESULTS (Cont.):

OCCUPIED BANDWIDTH

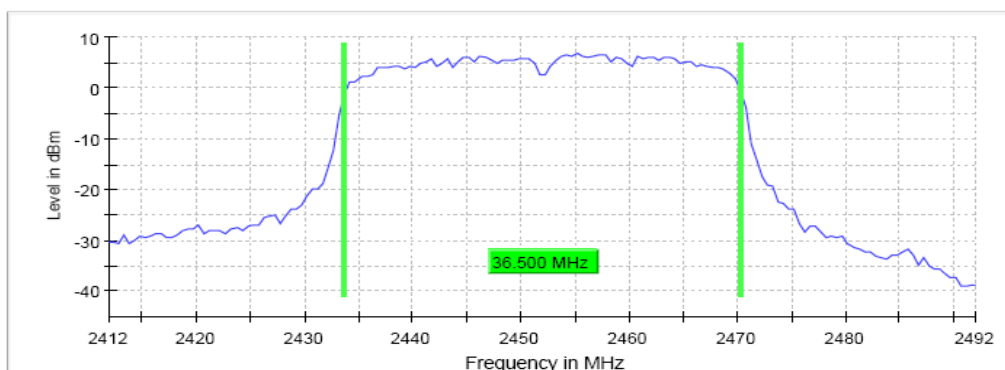
Lowest Channel



Middle Channel



Highest Channel



TEST C.2: MAXIMUM CONDUCTED OUTPUT POWER AND ANTENNA GAIN

LIMITS:	Product standard:	Part 15 Subpart C §15.247 and RSS-247
	Test standard:	Part 15 Subpart C §15.247(b) and RSS-247 5.4(d)

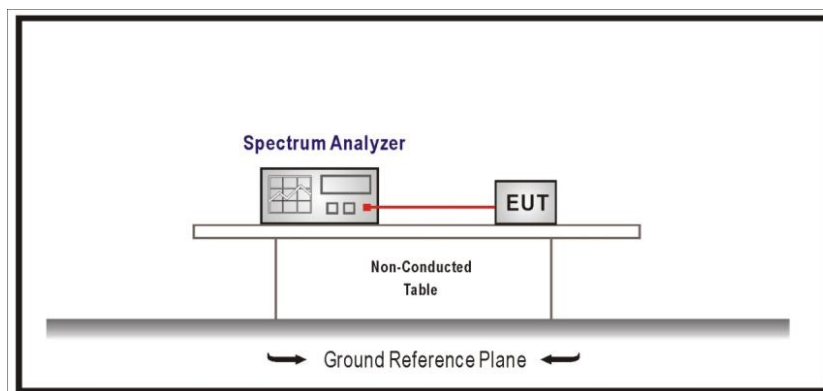
LIMITS

For systems using digital modulation in the 2400 -2483.5 MHz band: 1 watt (30 dBm).

The e.i.r.p. shall not exceed 4 W (RSS-247).

TEST SETUP

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



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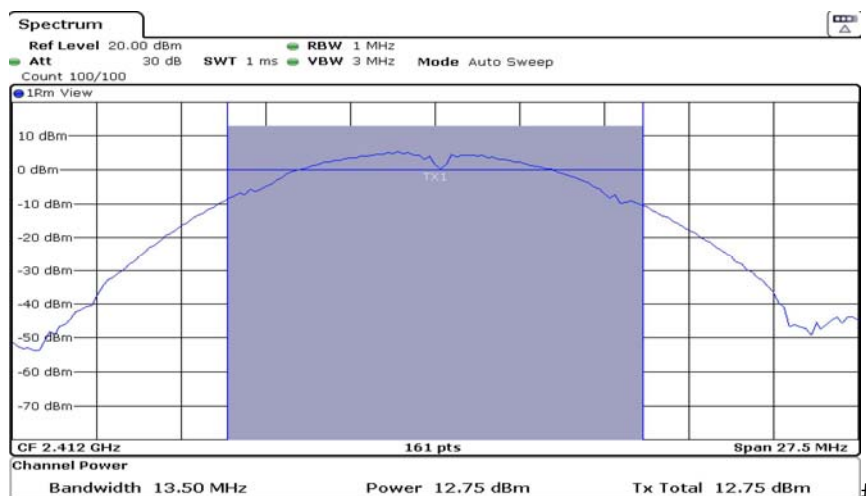
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01 (b mode)
TEST RESULTS:	PASS

Maximum declared antenna gain: 2.5 dBi

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Maximum conducted power (dBm)	12.75	13.94	12.97
Maximum EIRP power (dBm)	15.25	16.44	15.47
Measurement uncertainty (dB)	<±0.78		

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

Lowest Channel



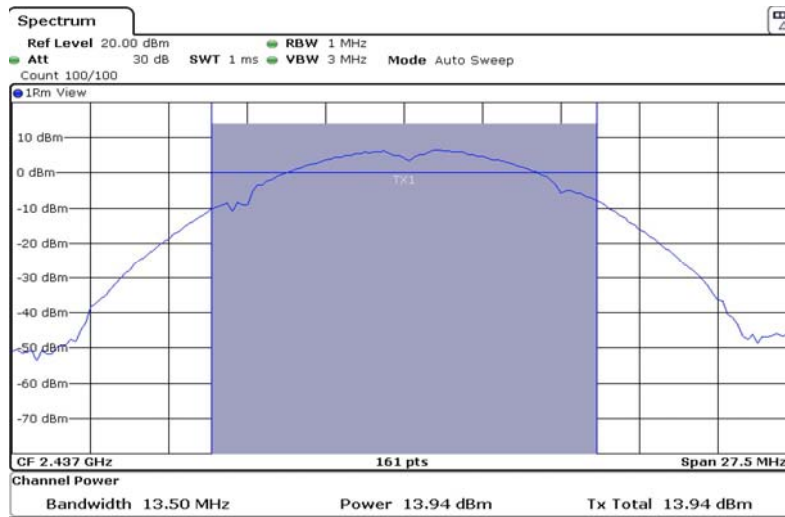
#

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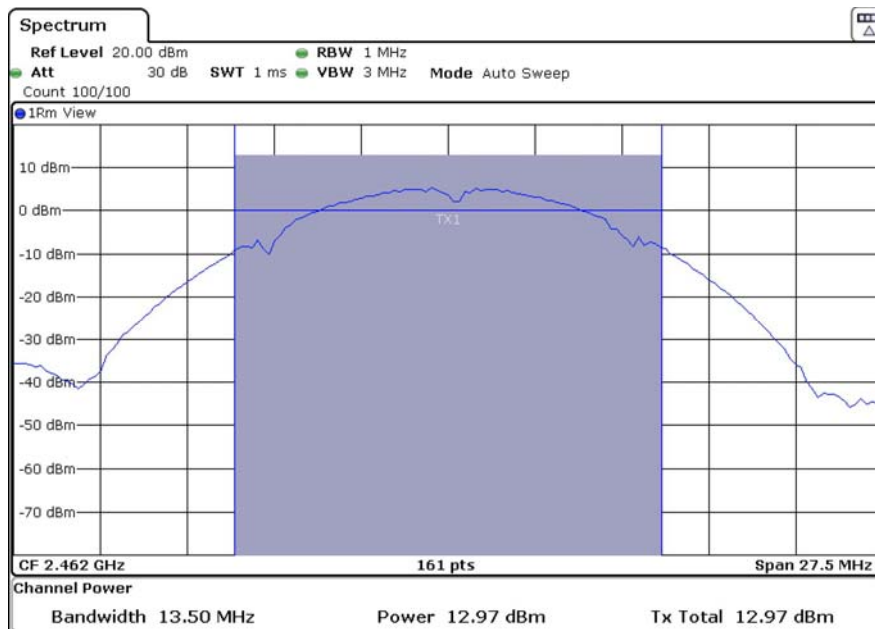
TEST RESULTS (Cont.):

CONDUCTED OUTPUT POWER

Middle Channel



Highest Channel



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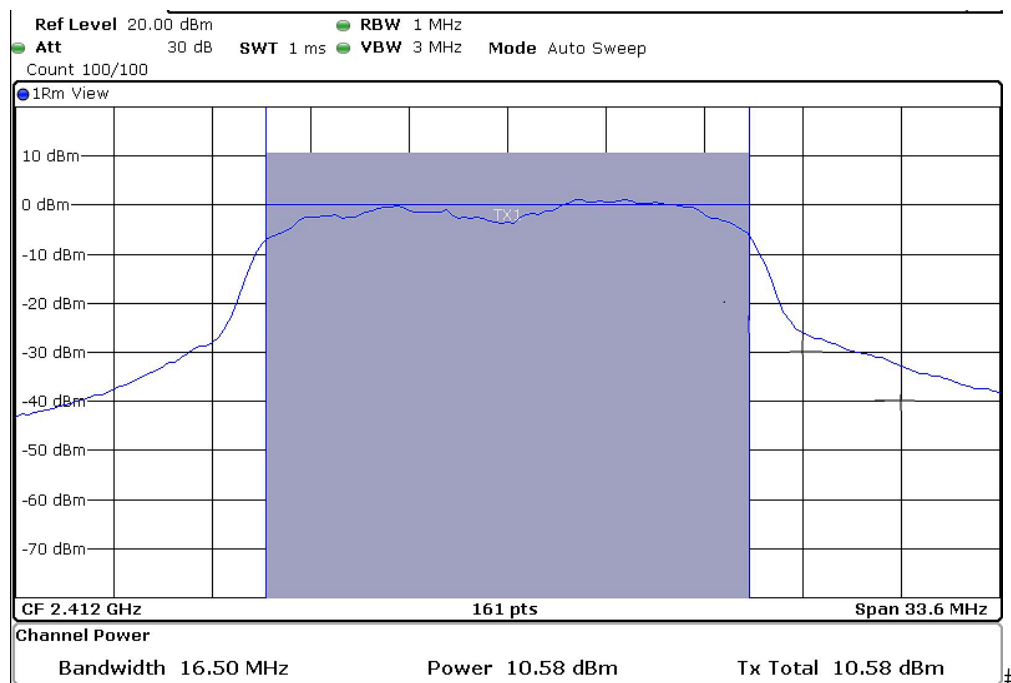
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (g mode)
TEST RESULTS:	PASS

Maximum declared antenna gain: 2.5 dBi

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Maximum conducted power (dBm)	10.58	11.66	10.99
Maximum EIRP power (dBm)	13.08	14.16	13.49
Measurement uncertainty (dB)	<±0.78		

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

Lowest Channel

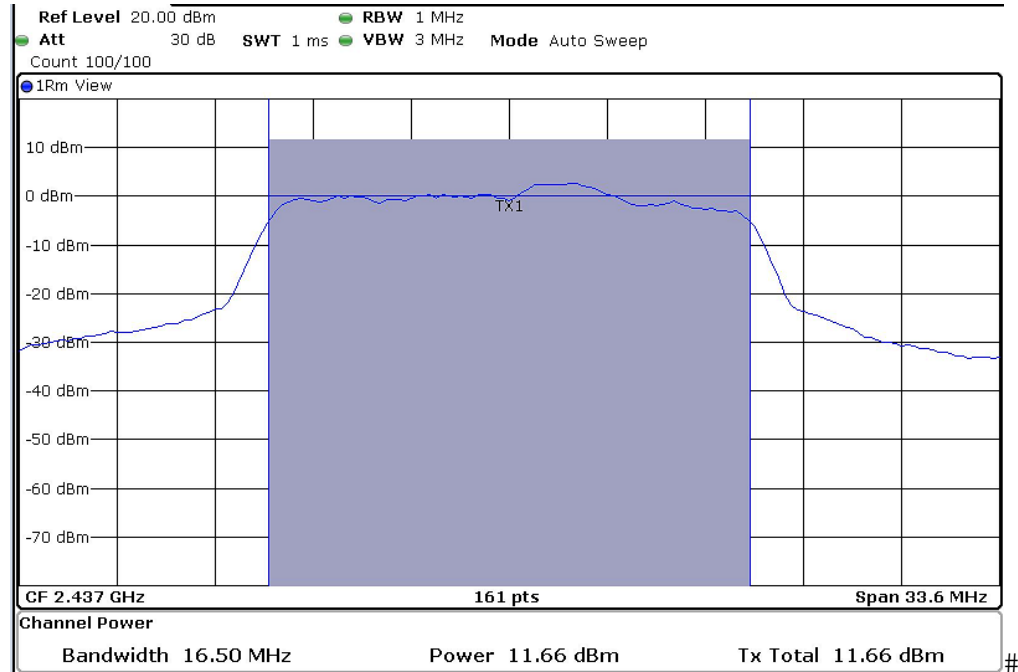


TEST RESULTS (Cont.):

CONDUCTED OUTPUT POWER

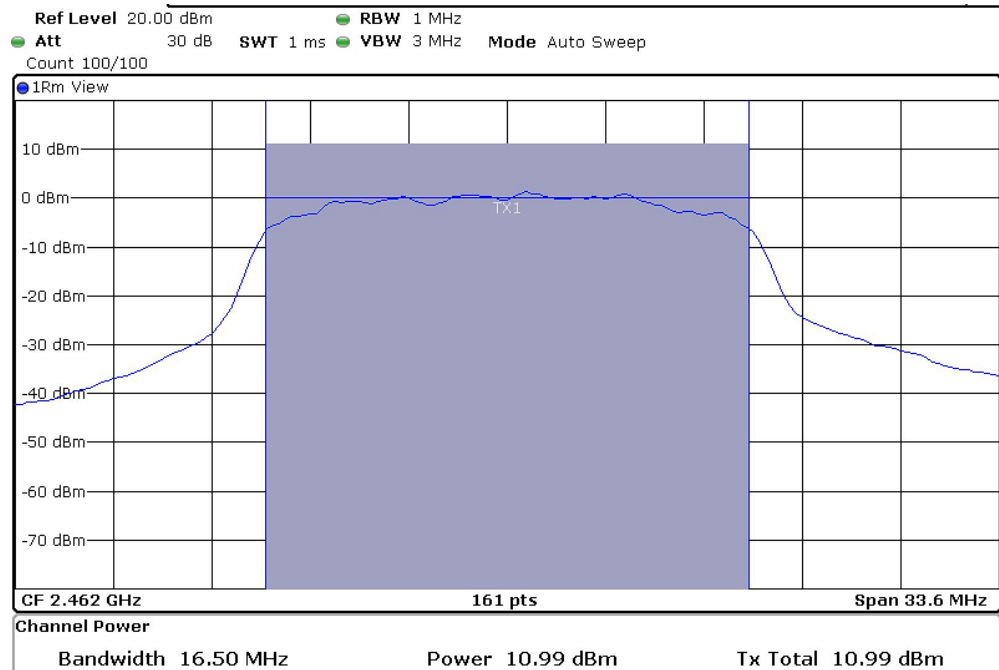
Middle Channel

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Highest Channel



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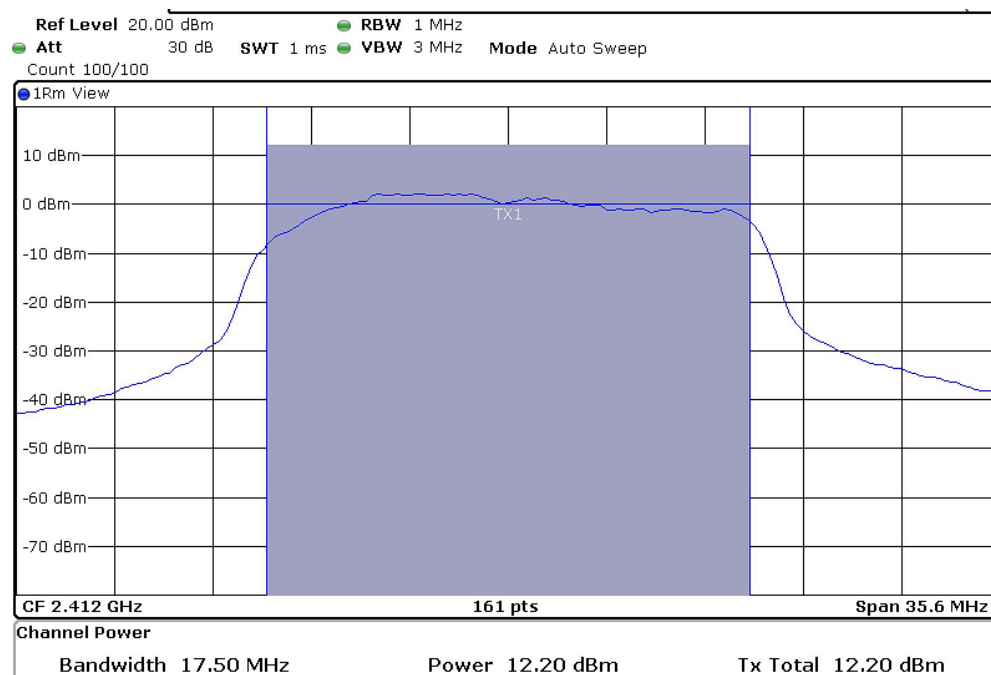
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#03 (n20 mode)
TEST RESULTS:	PASS

Maximum declared antenna gain: 2.5 dBi

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Maximum conducted power (dBm)	12.20	13.09	12.41
Maximum EIRP power (dBm)	14.70	14.59	14.91
Measurement uncertainty (dB)	<±0.78		

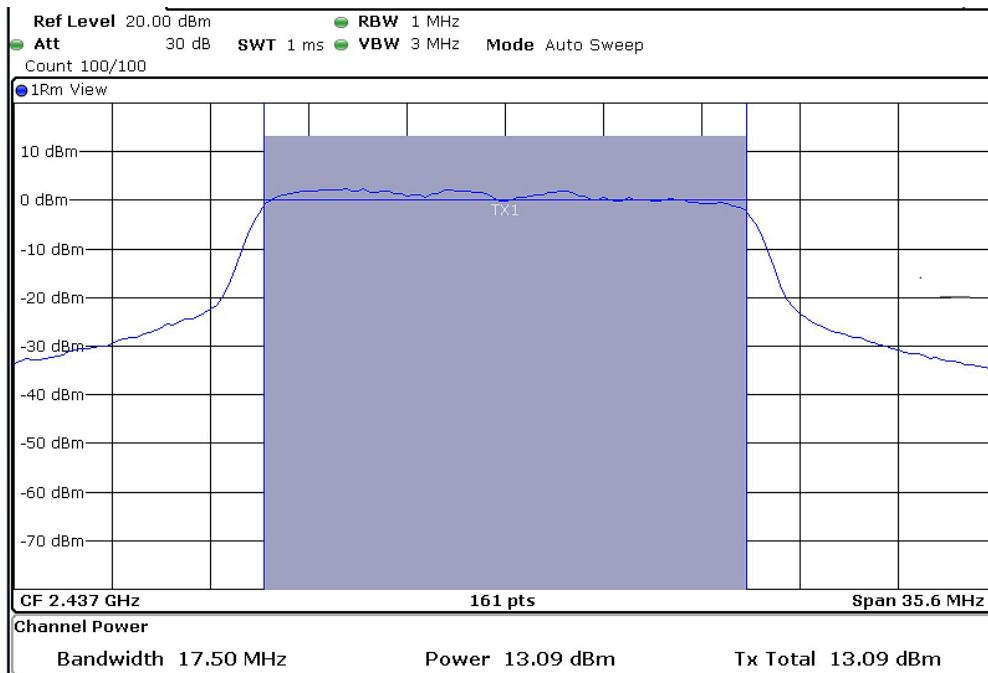
The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

Lowest Channel

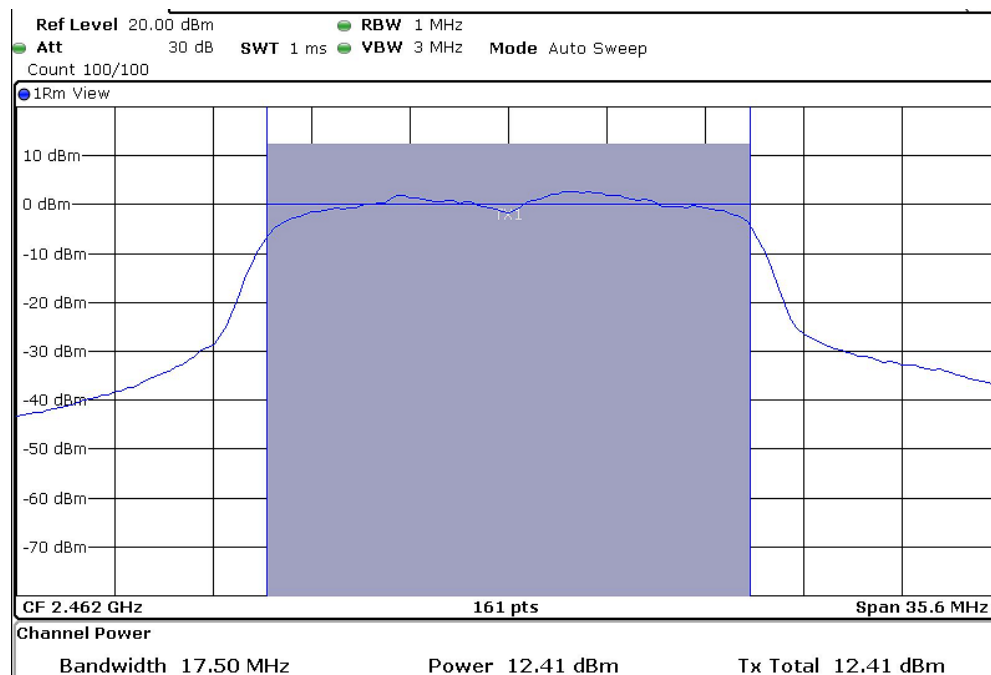


TEST RESULTS (Cont.)

Middle Channel



Highest Channel



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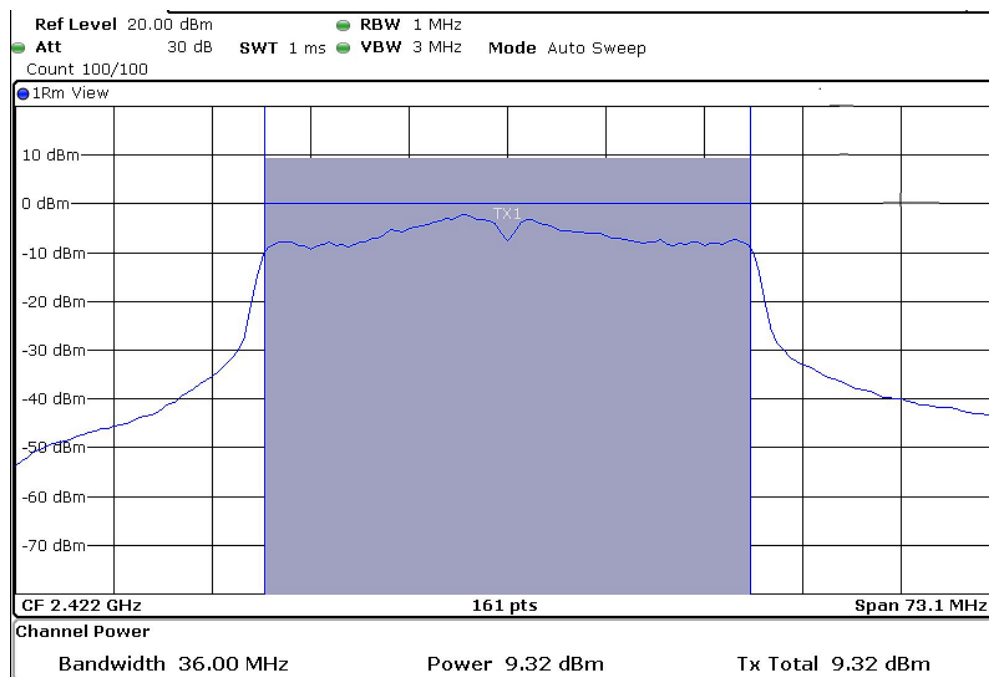
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#04 (n40 mode)
TEST RESULTS:	PASS

Maximum declared antenna gain: 2.5 dBi

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Maximum conducted power (dBm)	9.32	9.44	9.29
Maximum EIRP power (dBm)	11.57	11.94	11.79
Measurement uncertainty (dB)	<±0.78		

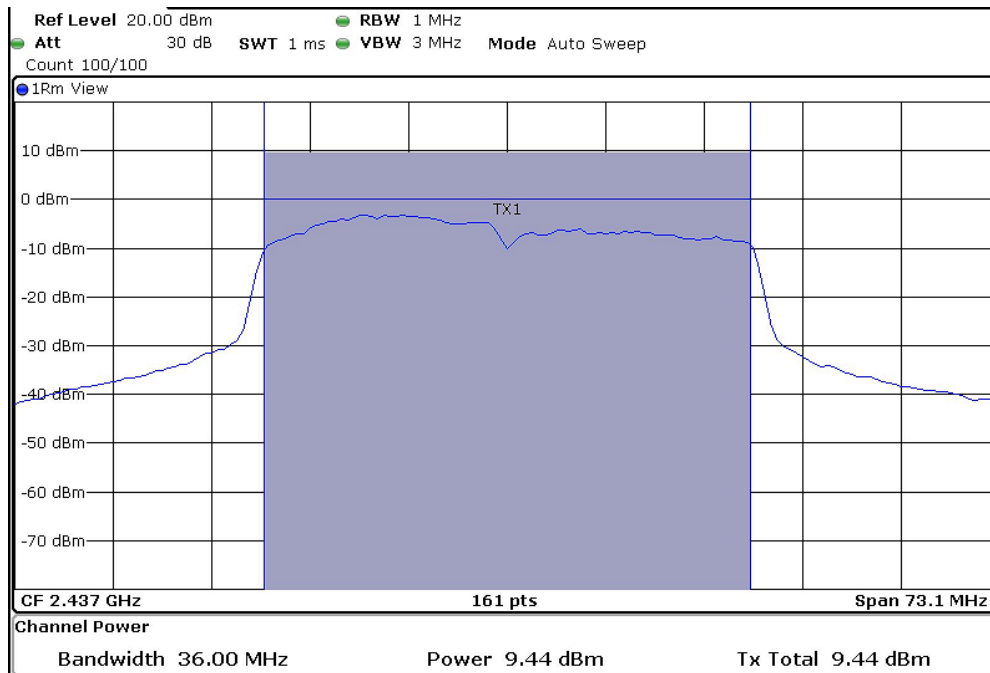
The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

Lowest Channel

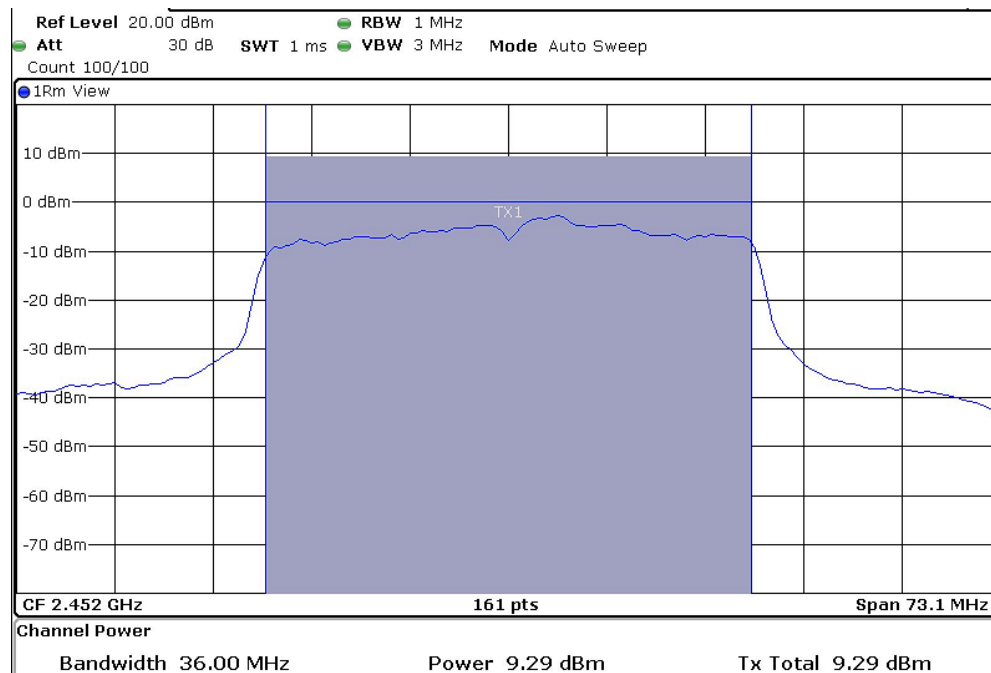


TEST RESULTS (Cont.)

Middle Channel



Highest Channel



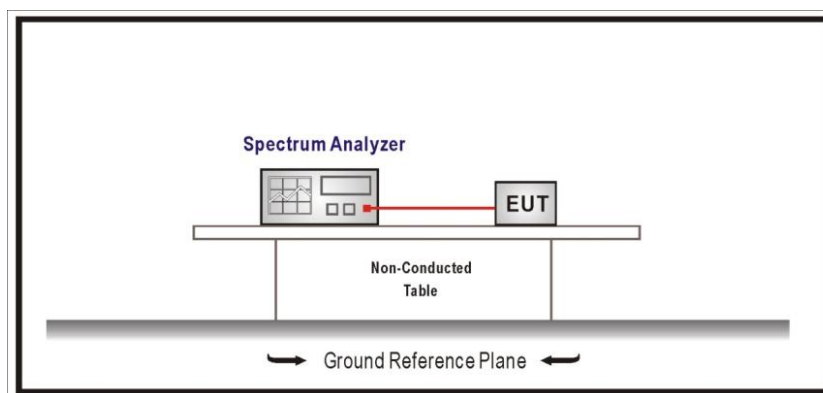
TEST C.3: BAND-EDGE EMISSIONS COMPLIANCE (TRANSMITTER)

LIMITS:	Product standard:	Part 15 Subpart C §15.247 and RSS-247
	Test standard:	Part 15 Subpart C §15.247(d) and RSS-247 5.5

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.

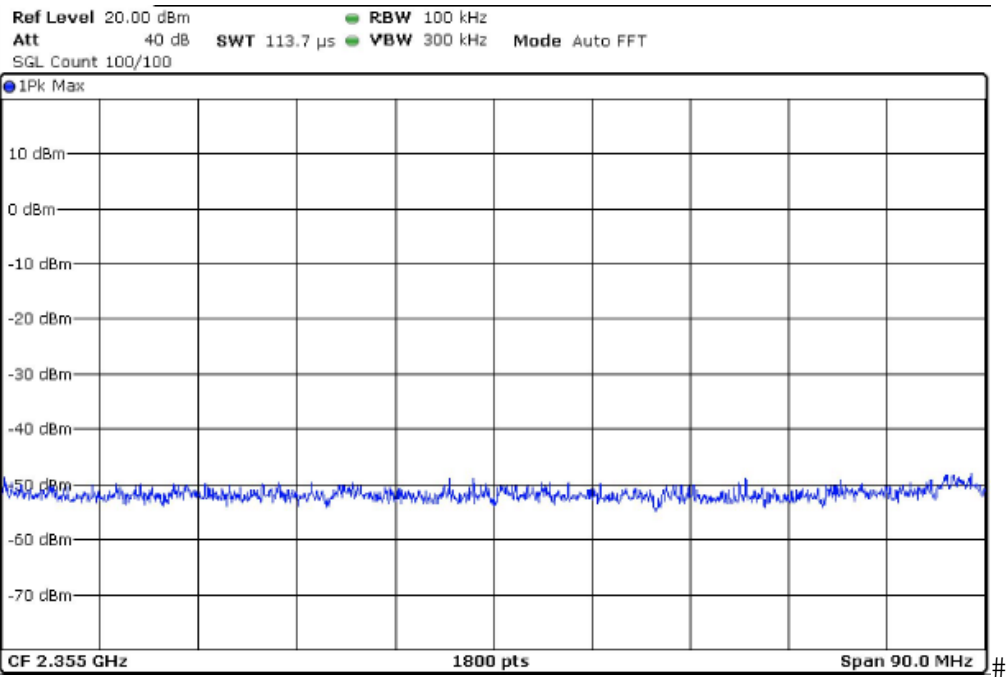
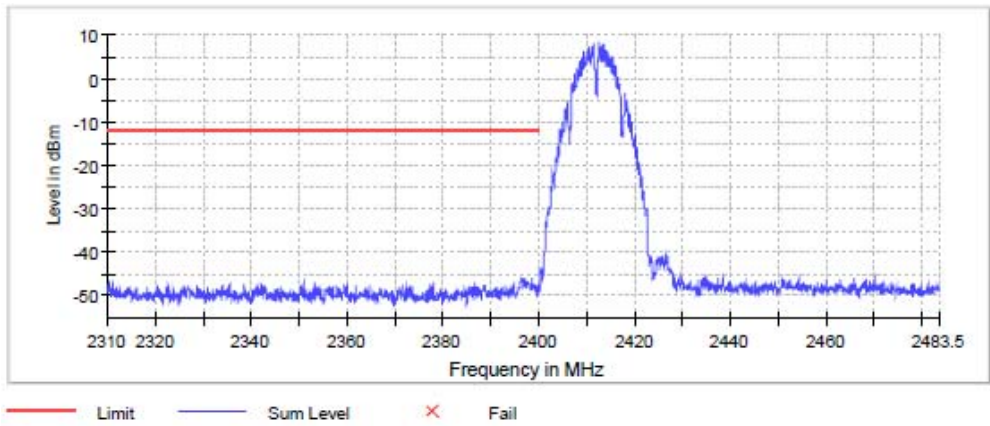
TEST SETUP



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

Lowest Channel

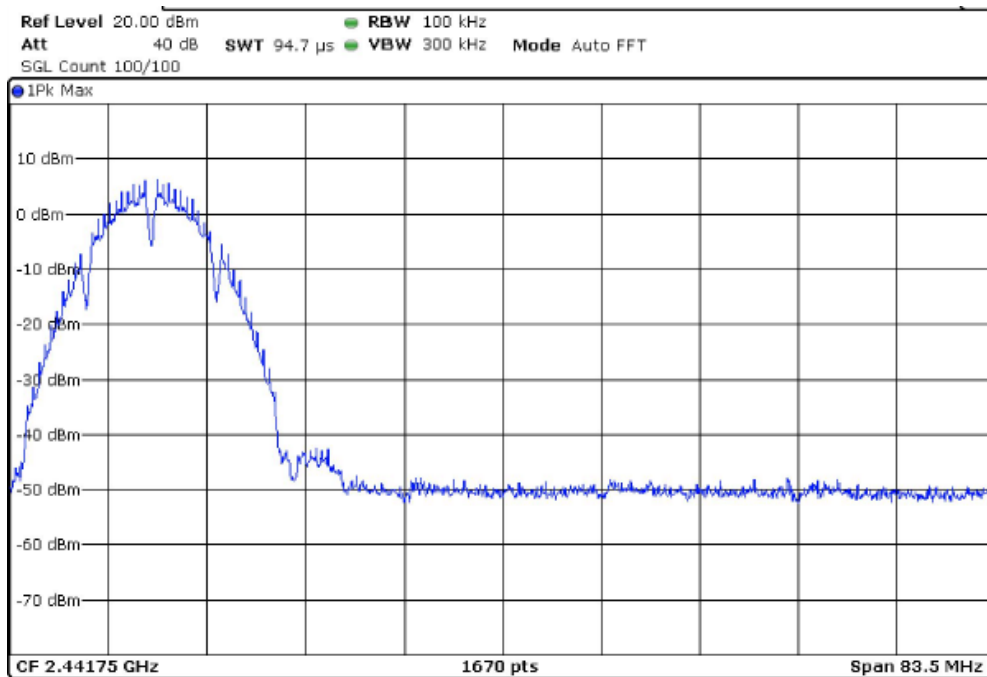


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TEST RESULTS (Cont.):

Lowest Channel



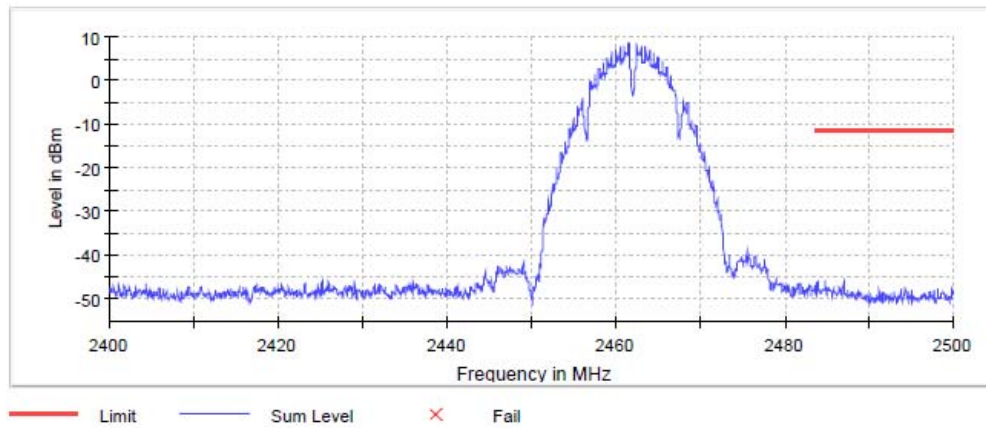
Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	2.31000 GHz	2.40000 GHz
Stop Frequency	2.40000 GHz	2.48350 GHz
Span	90.000 MHz	83.500 MHz
RBW	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz
Sweep Points	1800	1800
Sweep time	113.672 μ s	94.727 μ s
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	FFT	FFT
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	4 / max. 150	10 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.09 dB

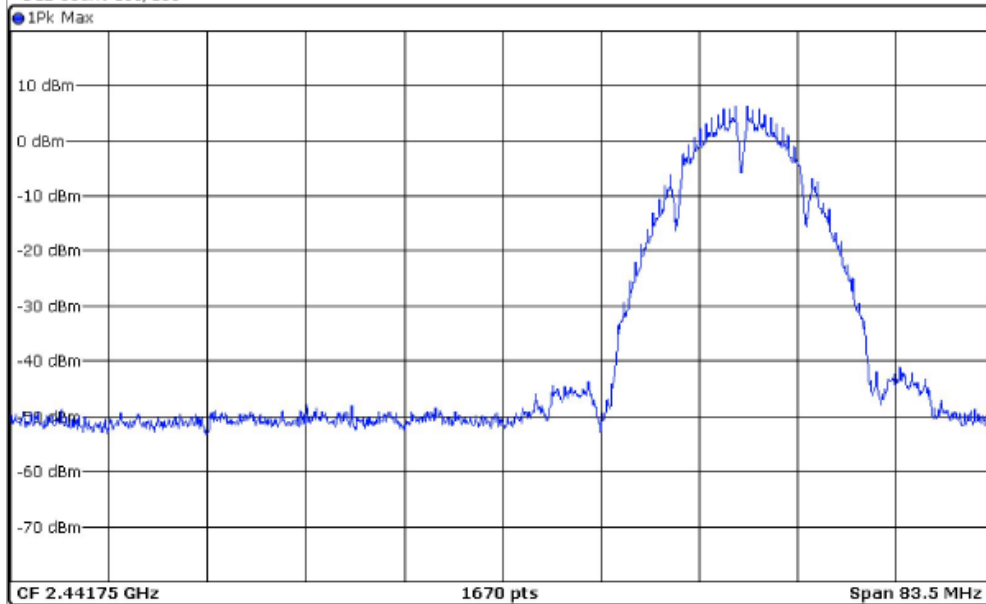
TEST RESULTS (Cont.):

Highest Channel

Highest Channel



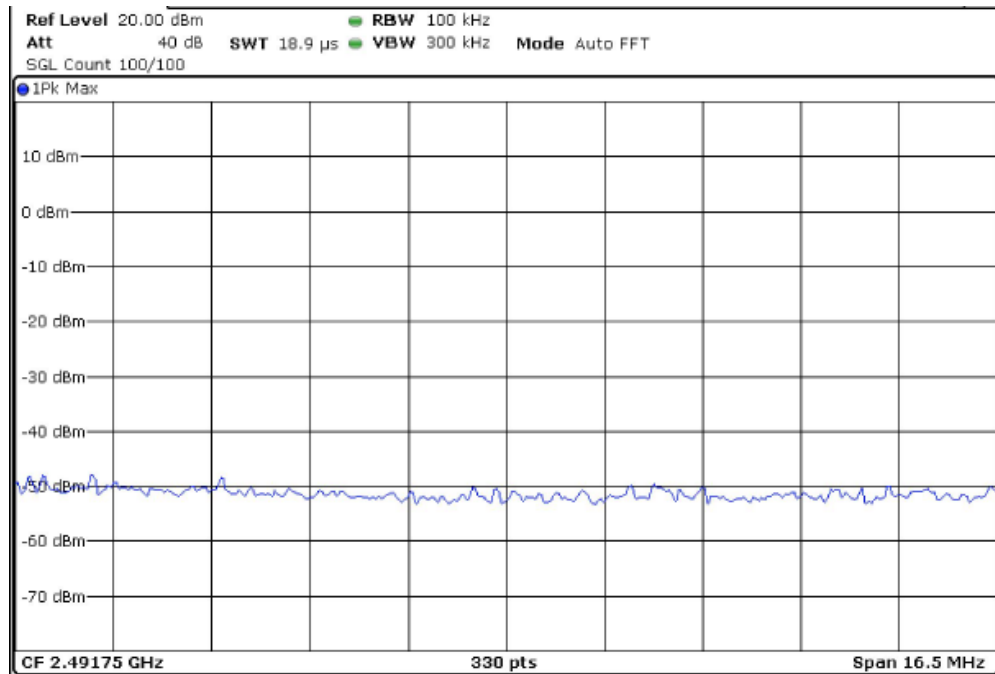
Ref Level 20.00 dBm RBW 100 kHz
Att 40 dB SWT 94.7 μ s VBW 300 kHz Mode Auto FFT
SGL Count 100/100



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TEST RESULTS (Cont.):

Highest Channel

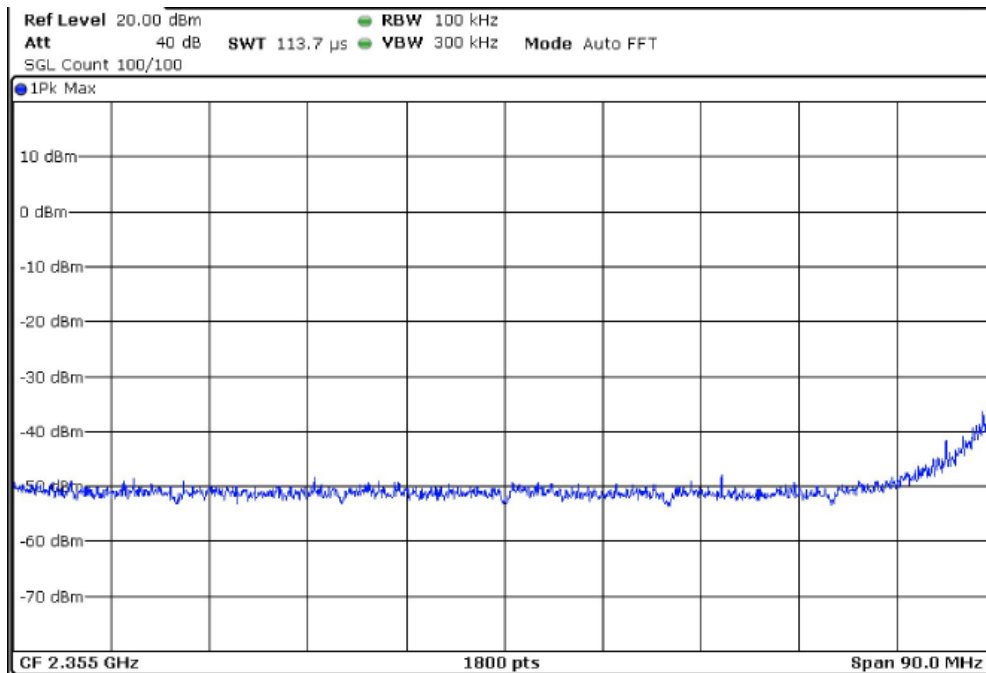
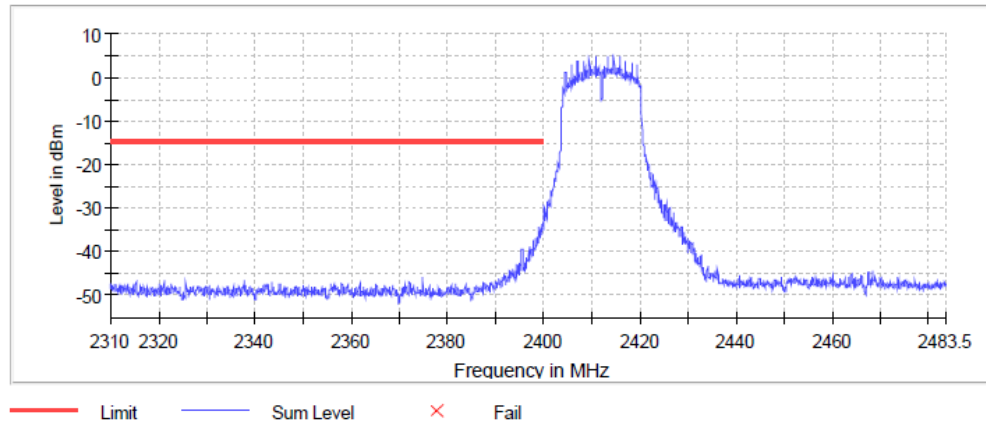


Measurement

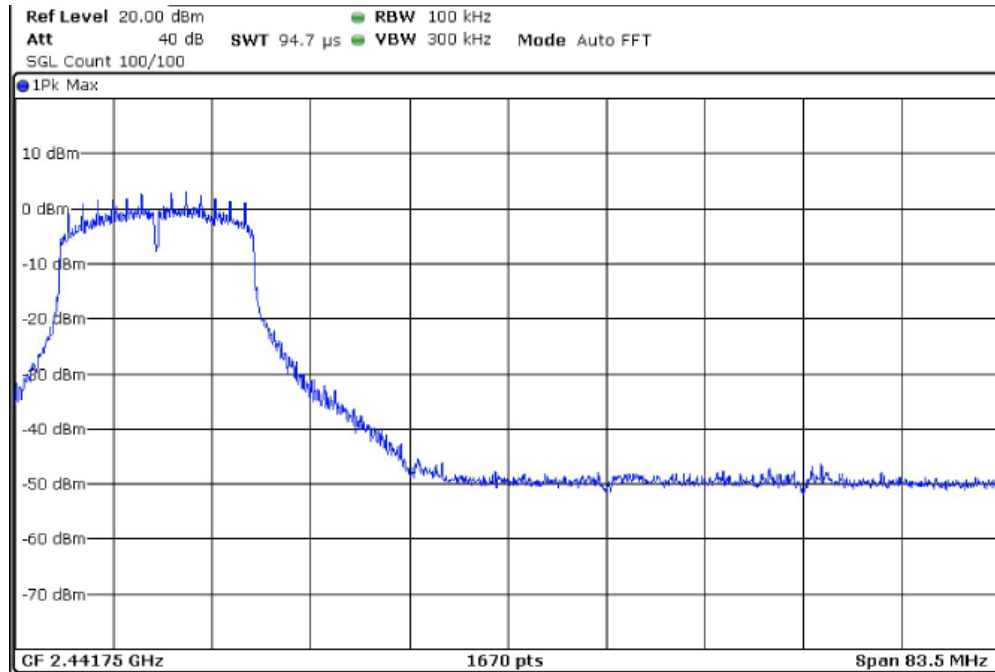
Setting	Instrument Value	Instrument Value
Start Frequency	2.40000 GHz	2.48350 GHz
Stop Frequency	2.48350 GHz	2.50000 GHz
Span	83.500 MHz	16.500 MHz
RBW	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz
Sweep Points	1670	330
Sweep time	94.727 μ s	18.945 μ s
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	FFT	FFT
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	7 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.44 dB	0.00 dB

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

Lowest Channel



TEST RESULTS (Cont.):



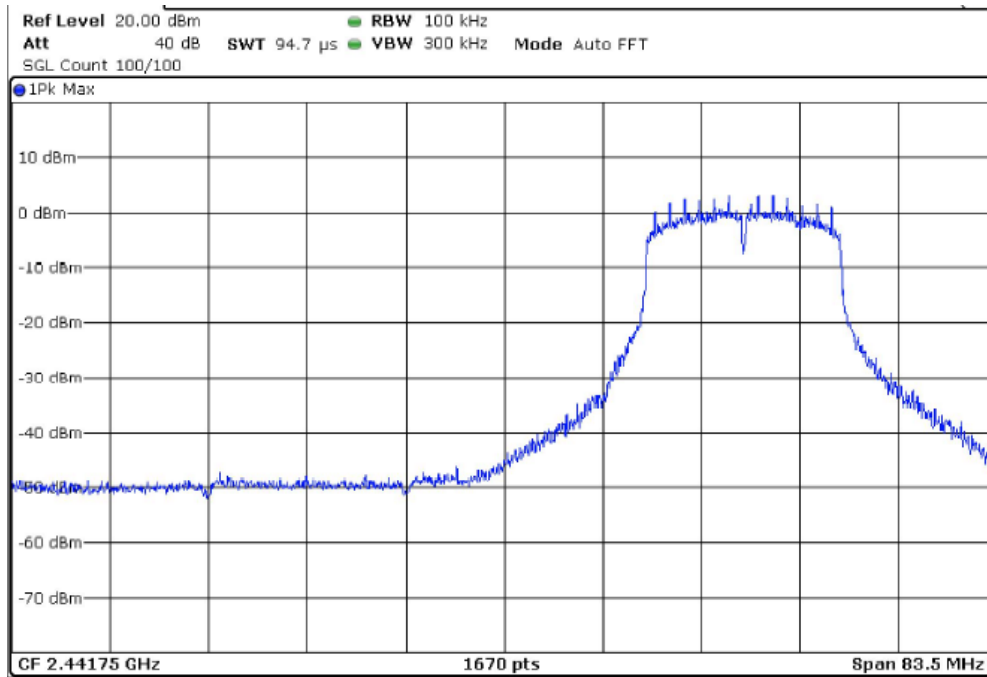
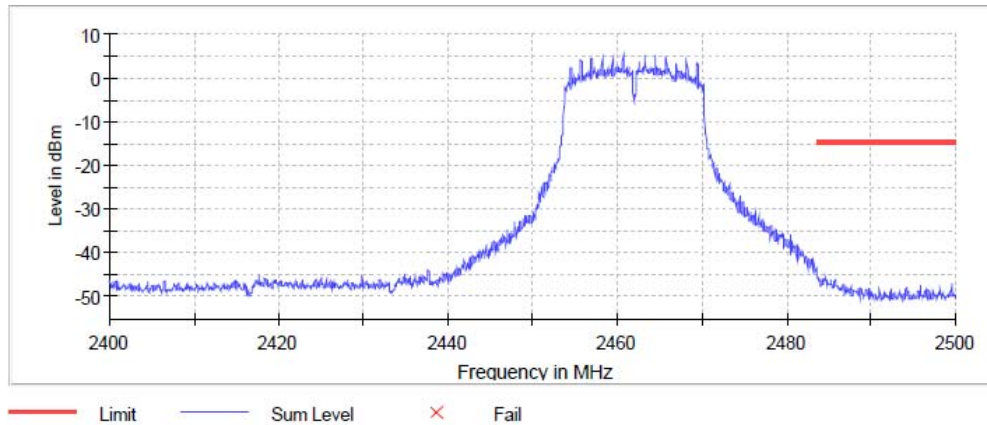
Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	2.31000 GHz	2.40000 GHz
Stop Frequency	2.40000 GHz	2.48350 GHz
Span	90.000 MHz	83.500 MHz
RBW	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz
Sweep Points	1800	1670
Sweep time	113.672 μ s	94.727 μ s
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	FFT	FFT
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	14 / max. 150	53 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.40 dB	0.28 dB

TEST RESULTS (Cont.):

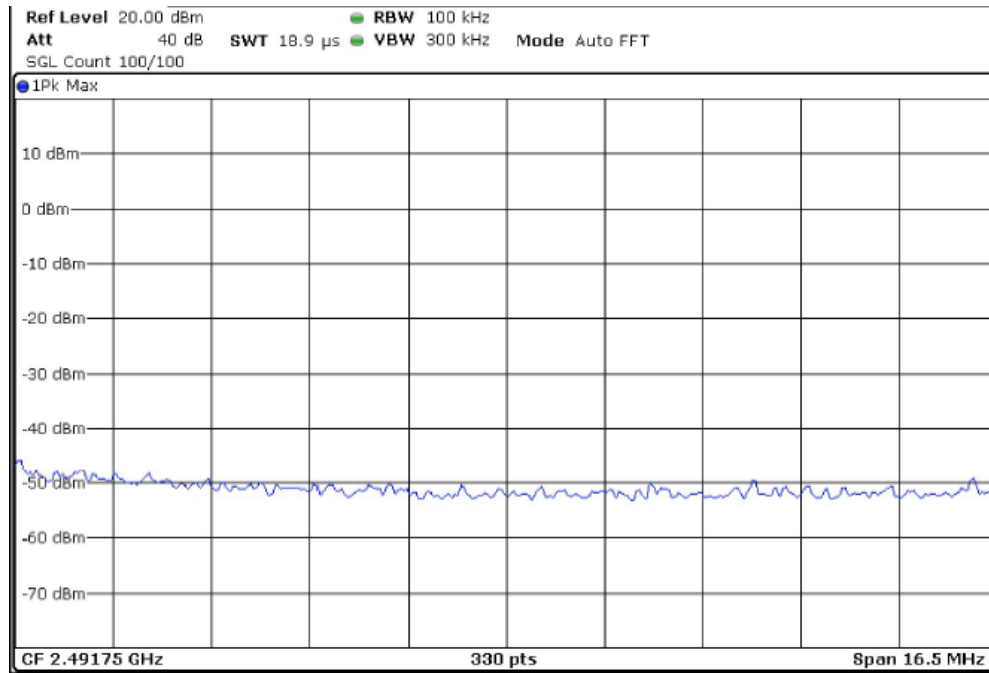
Highest Channel

Highest Channel



#

TEST RESULTS (Cont.):

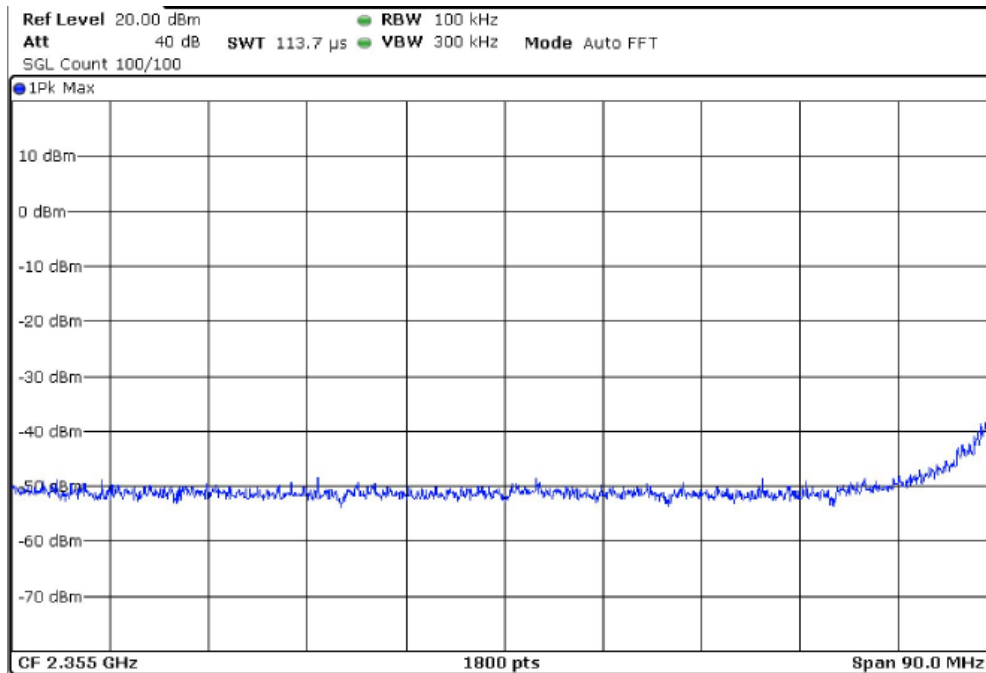
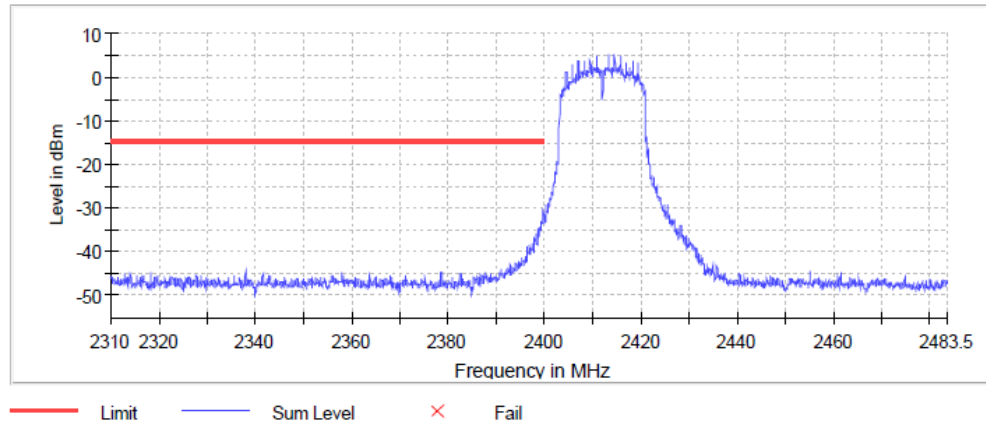


Measurement

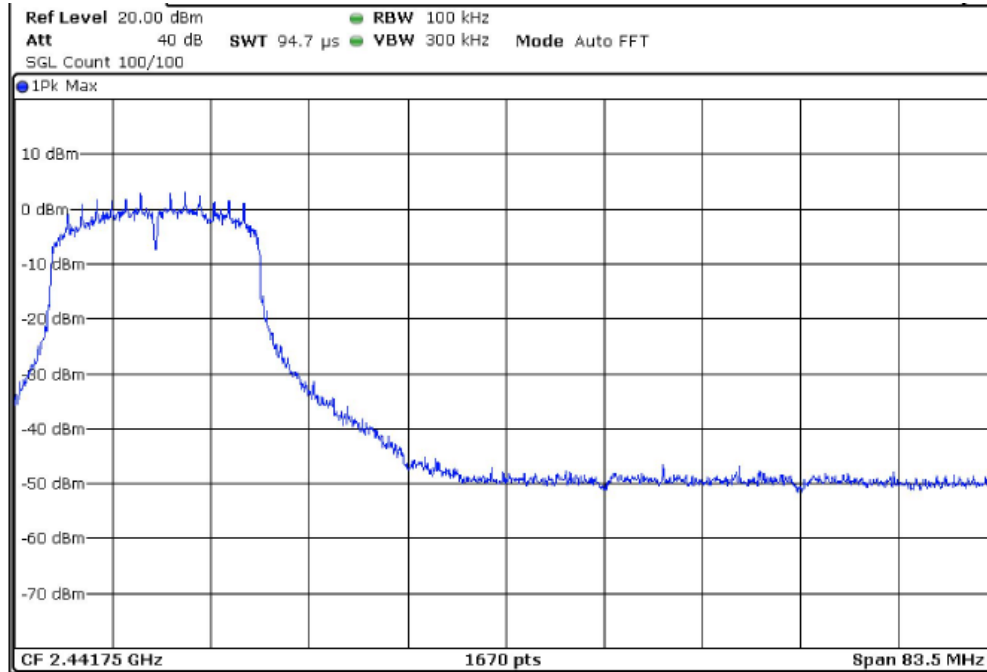
Setting	Instrument Value	Instrument Value
Start Frequency	2.40000 GHz	2.48350 GHz
Stop Frequency	2.48350 GHz	2.50000 GHz
Span	83.500 MHz	16.500 MHz
RBW	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz
Sweep Points	1670	330
Sweep time	94.727 μ s	18.945 μ s
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	FFT	FFT
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	49 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.36 dB	0.00 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#03 (n20 mode)
TEST RESULTS:	PASS

Lowest Channel



TEST RESULTS (Cont.):



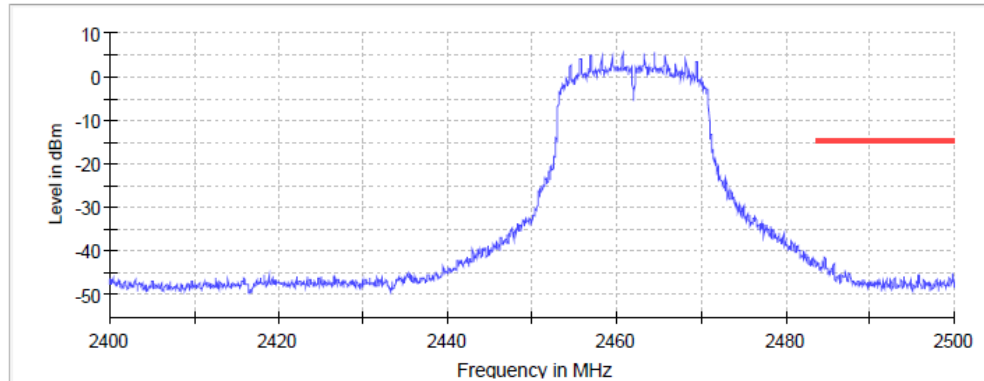
Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	2.31000 GHz	2.40000 GHz
Stop Frequency	2.40000 GHz	2.48350 GHz
Span	90.000 MHz	83.500 MHz
RBW	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz
Sweep Points	1800	1670
Sweep time	113.672 μ s	94.727 μ s
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	FFT	FFT
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	11 / max. 150	56 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.17 dB

TEST RESULTS (Cont.):

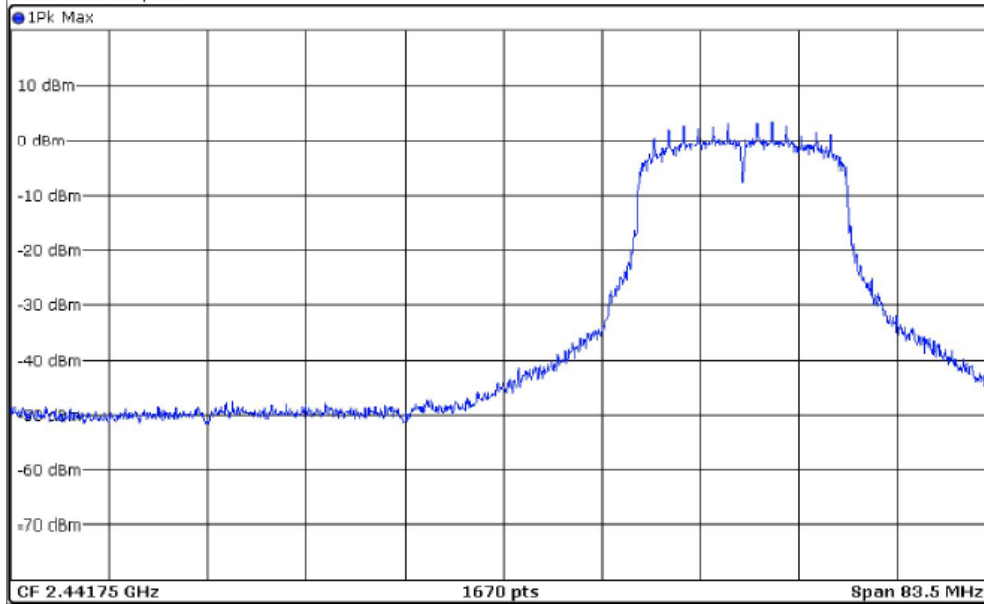
Highest Channel

Highest Channel



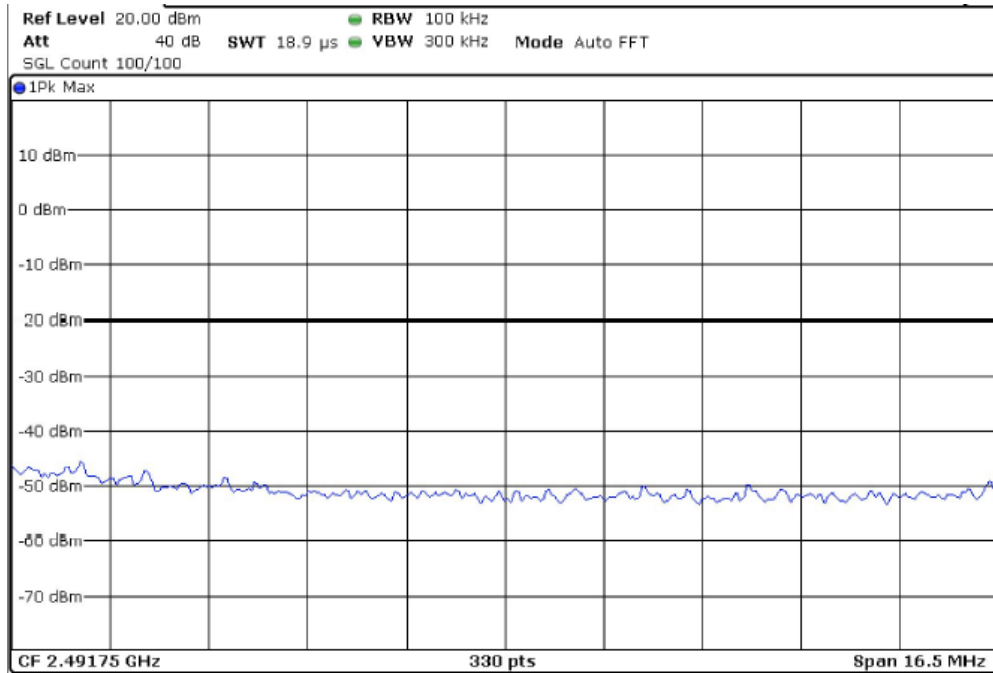
— Limit — Sum Level × Fail

Ref Level 20.00 dBm RBW 100 kHz
Att 40 dB SWT 94.7 μ s VBW 300 kHz Mode Auto FFT
SGL Count 100/100



#

TEST RESULTS (Cont.):

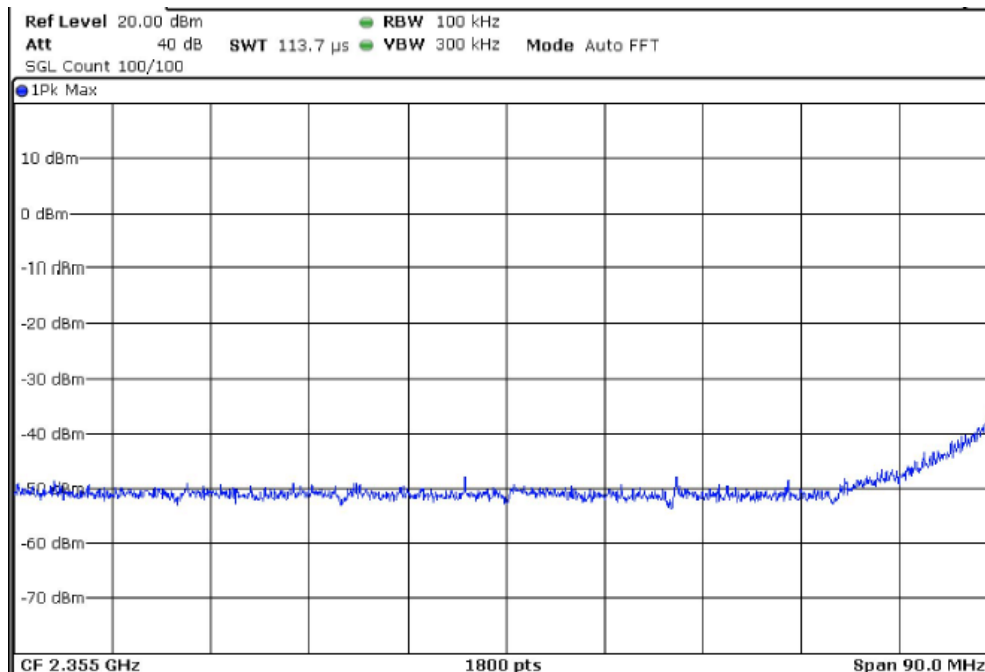
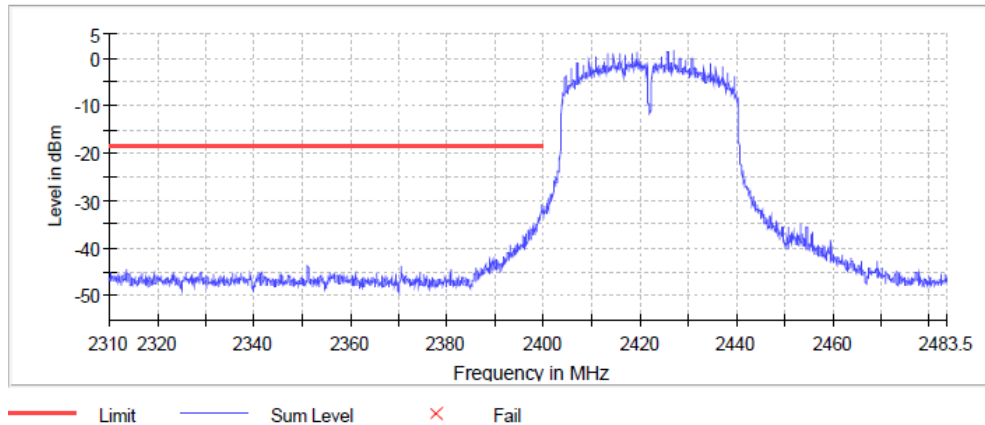


Measurement

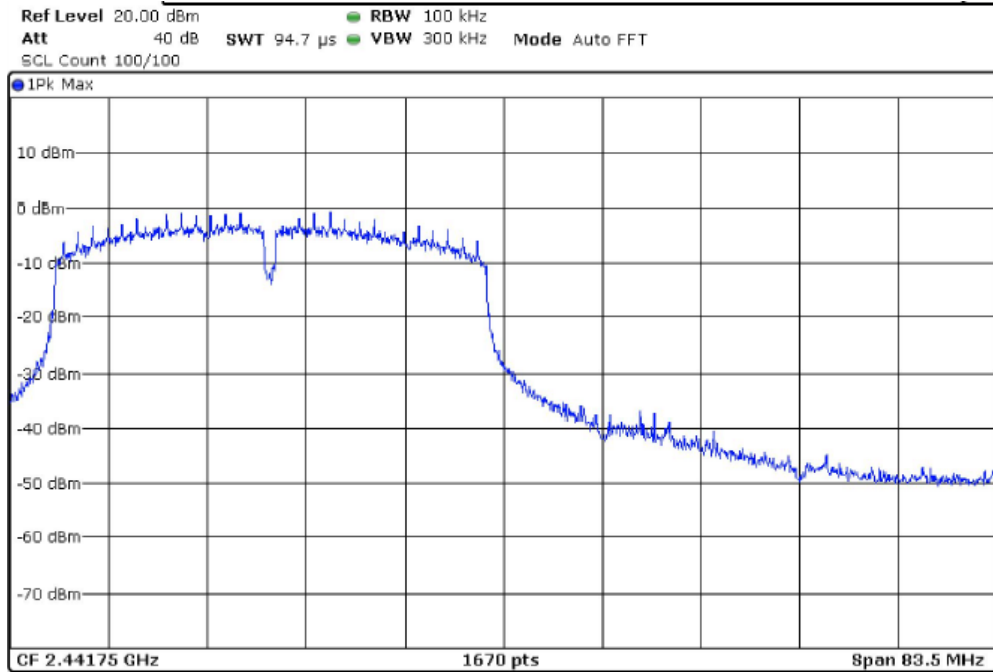
Setting	Instrument Value	Instrument Value
Start Frequency	2.40000 GHz	2.48350 GHz
Stop Frequency	2.48350 GHz	2.50000 GHz
Span	83.500 MHz	16.500 MHz
RBW	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz
Sweep Points	1670	330
Sweep time	94.727 μ s	18.945 μ s
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	FFT	FFT
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	46 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.24 dB	0.00 dB

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#04 (n40 mode)
TEST RESULTS:	PASS

Lowest Channel



TEST RESULTS (Cont.):



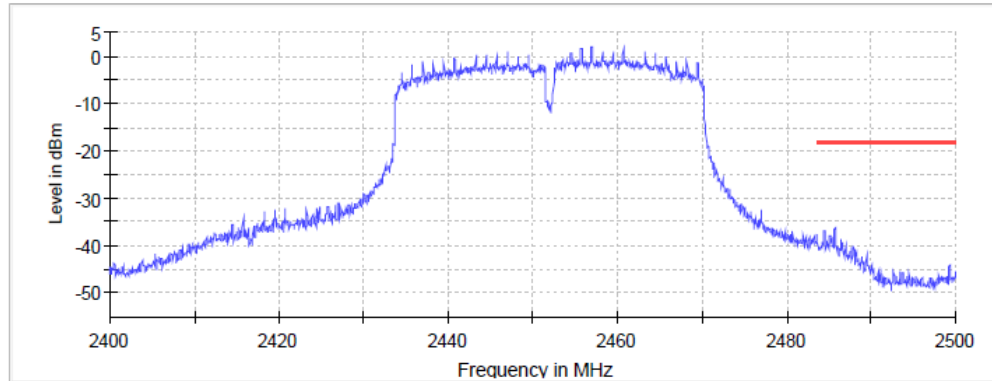
Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	2.31000 GHz	2.40000 GHz
Stop Frequency	2.40000 GHz	2.48350 GHz
Span	90.000 MHz	83.500 MHz
RBW	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz
Sweep Points	1800	1670
Sweep time	113.672 μ s	94.727 μ s
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	FFT	FFT
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	18 / max. 150	69 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.00 dB	0.48 dB

TEST RESULTS (Cont.):

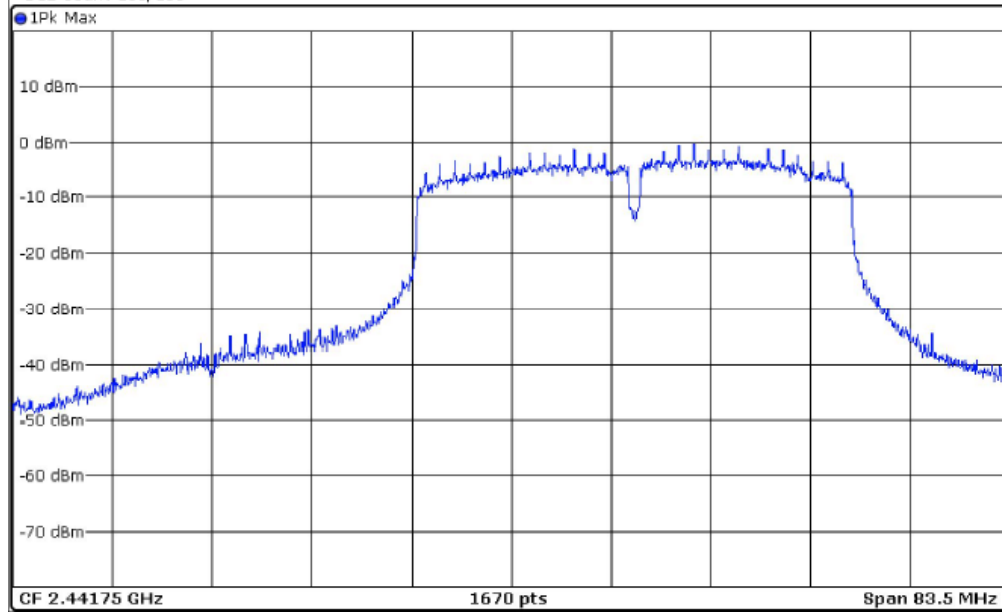
Highest Channel

Highest Channel



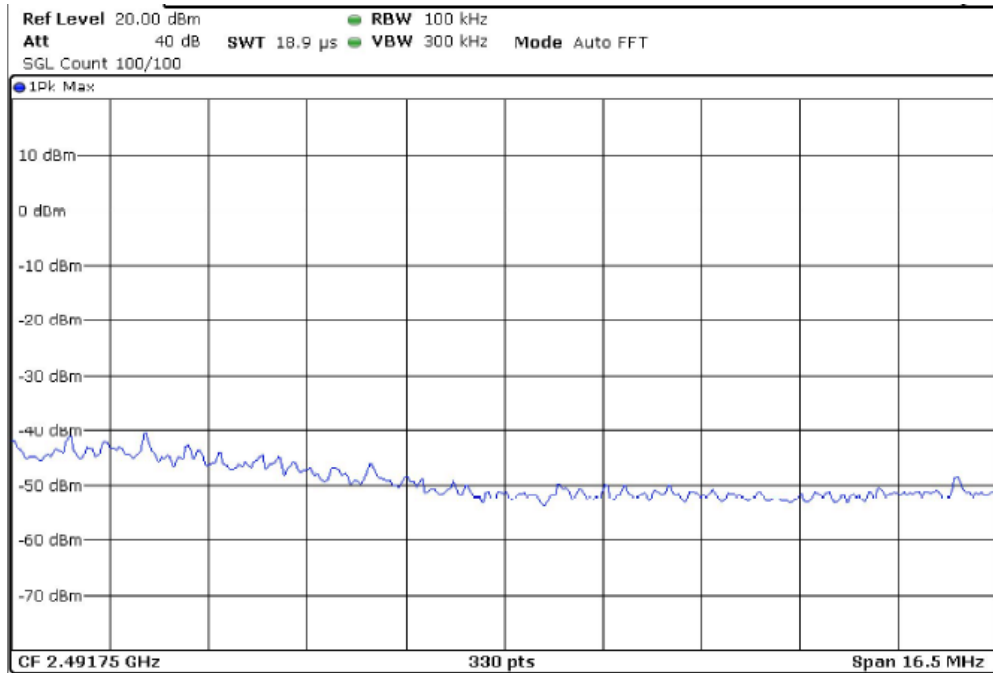
— Limit — Sum Level × Fail

Ref Level 20.00 dBm RBW 100 kHz
Att 40 dB SWT 94.7 μ s VBW 300 kHz Mode Auto FFT
SGL Count 100/100



#

TEST RESULTS (Cont.):



Measurement

Setting	Instrument Value	Instrument Value
Start Frequency	2.40000 GHz	2.48350 GHz
Stop Frequency	2.48350 GHz	2.50000 GHz
Span	83.500 MHz	16.500 MHz
RBW	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz
Sweep Points	1670	330
Sweep time	94.727 μ s	18.945 μ s
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak
Sweep Count	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweep type	FFT	FFT
Preamp	off	off
Stable mode	Trace	Trace
Stable value	0.50 dB	0.50 dB
Run	79 / max. 150	4 / max. 150
Stable	3 / 3	3 / 3
Max Stable Difference	0.48 dB	0.00 dB

TEST C.4: POWER SPECTRAL DENSITY

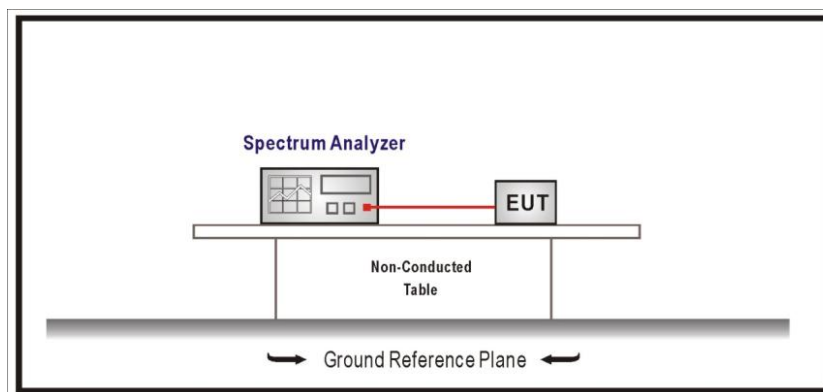
LIMITS:	Product standard:	Part 15 Subpart C §15.247 and RSS-247
	Test standard:	Part 15 Subpart C §15.247(e) and RSS-247 5.2 (b)

LIMITS

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST SETUP

For all modes, the maximum power spectral density level in the fundamental emission was measured using the method AVGPSD-1 according to point 10.3. of Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 558074 D01 DTS Meas Guidance v04 dated 05/04/2017.

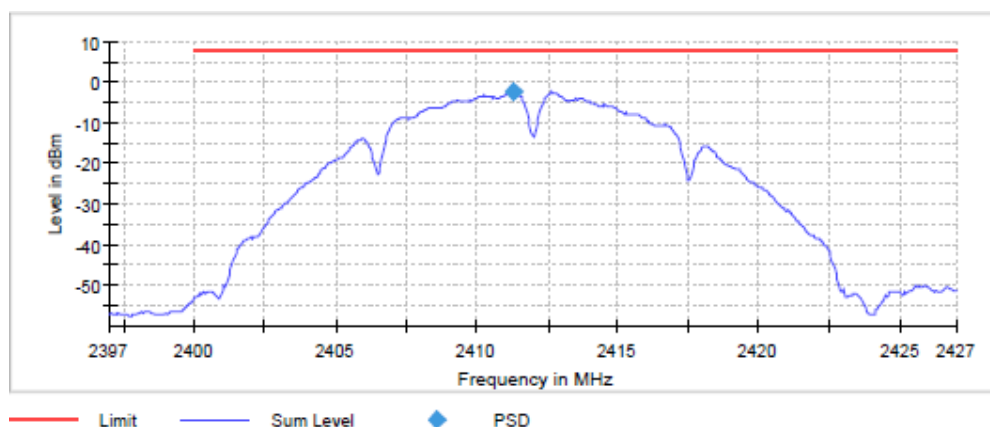


#

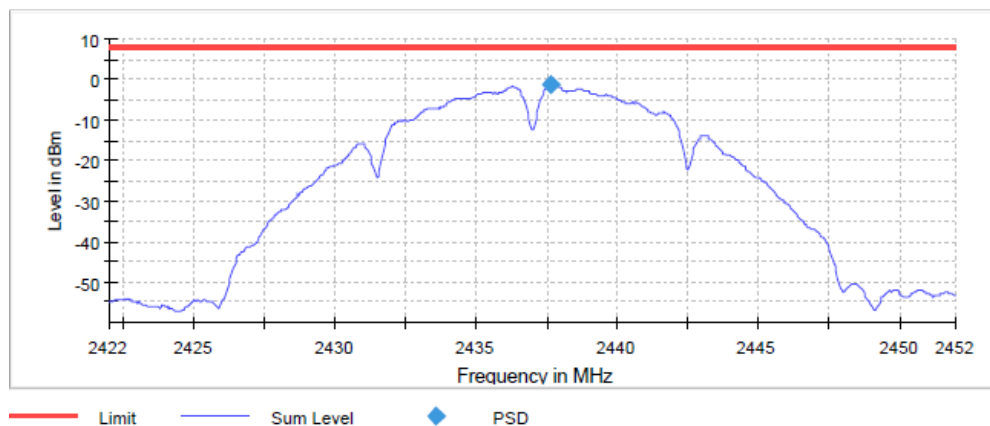
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01 (b mode)
TEST RESULTS:	PASS

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Power spectral density (dBm)	-2.26	-1.29	-2.33
Measurement uncertainty (dB)	<±0.78		

Lowes Channel

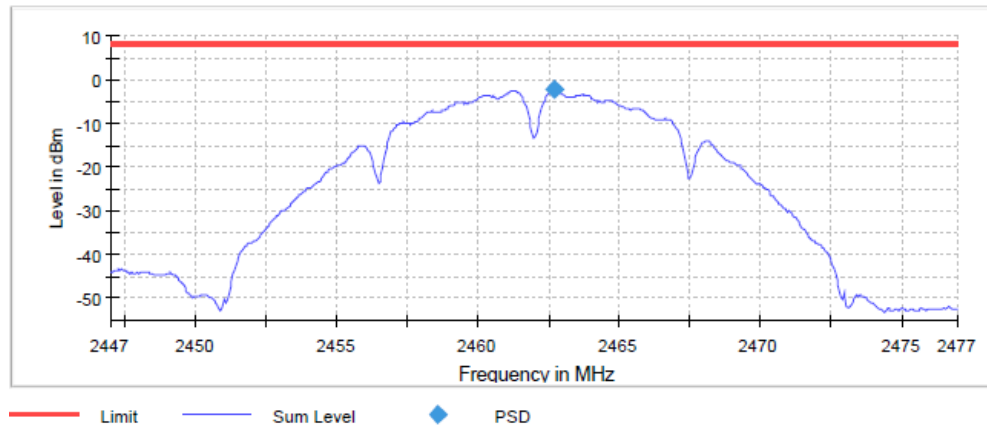


Middle Channel



TEST RESULTS (Cont.):

Highest Channel



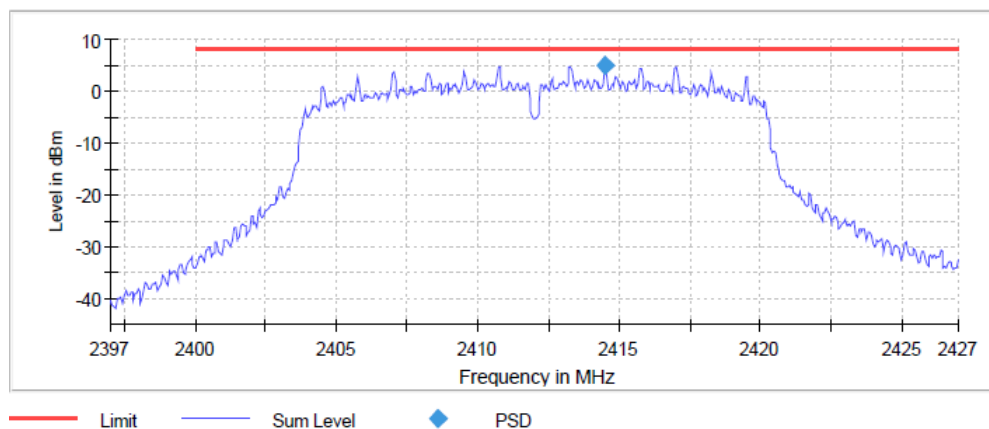
Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	2.39700 GHz	2.42200 GHz	2.44700 GHz
Stop Frequency	2.42700 GHz	2.45200 GHz	2.47700 GHz
Span	30.000 MHz	30.000 MHz	30.000 MHz
RBW	100.000 kHz	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz	300.000 kHz
Sweep Points	600	600	600
Sweep time	3 s	3 s	3 s
Reference Level	20.000 dBm	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB	40.000 dB
Detector	RMS	RMS	RMS
Sweep Count	100	100	100
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep type	Sweep	Sweep	Sweep
Preamp	off	off	off
Stable mode	Trace	Trace	Trace
Stable value	0.50 dB	0.50 dB	0.50 dB
Run	4 / max.150	6 / max. 150	6 / max. 150
Stable	2 / 2	2 / 2	2 / 2
Max Stable Difference	0.38 dB	0.24 dB	0.26 dB

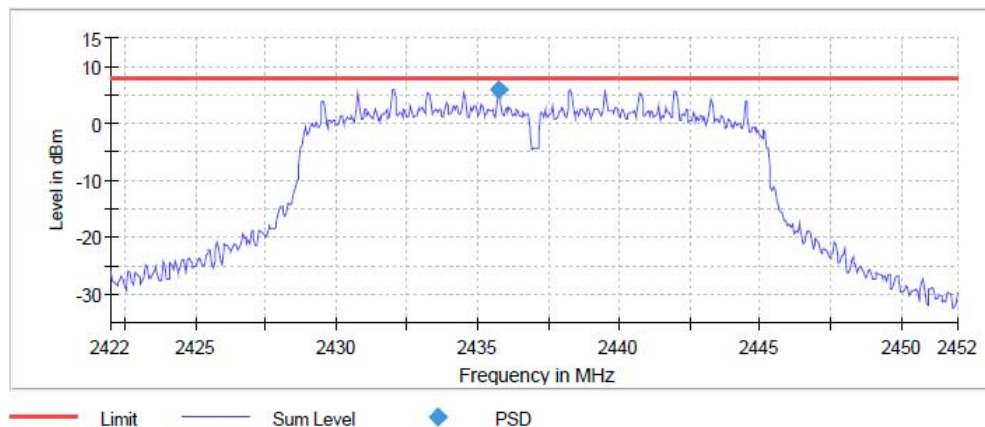
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (g mode)
TEST RESULTS:	PASS

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Power spectral density (dBm)	5.06	6.04	5.30
Measurement uncertainty (dB)	<±0.78		

Lowest Channel

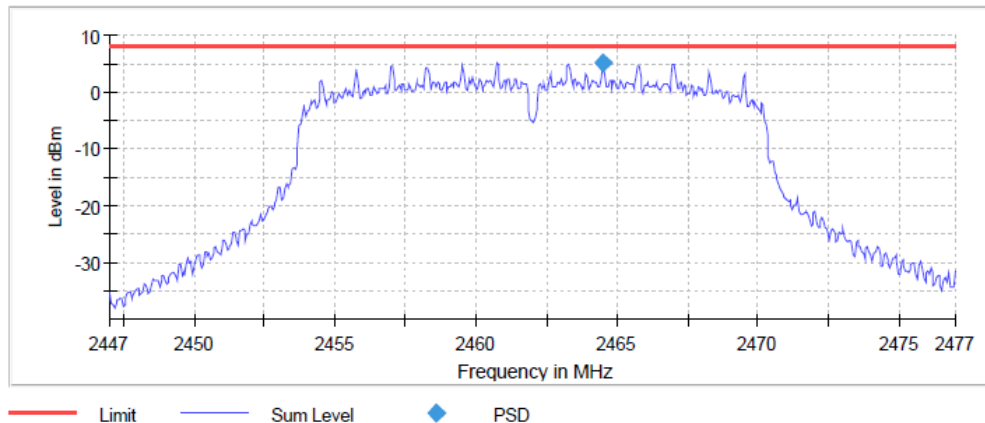


Middle Channel



TEST RESULTS (Cont.):

Highest Channel



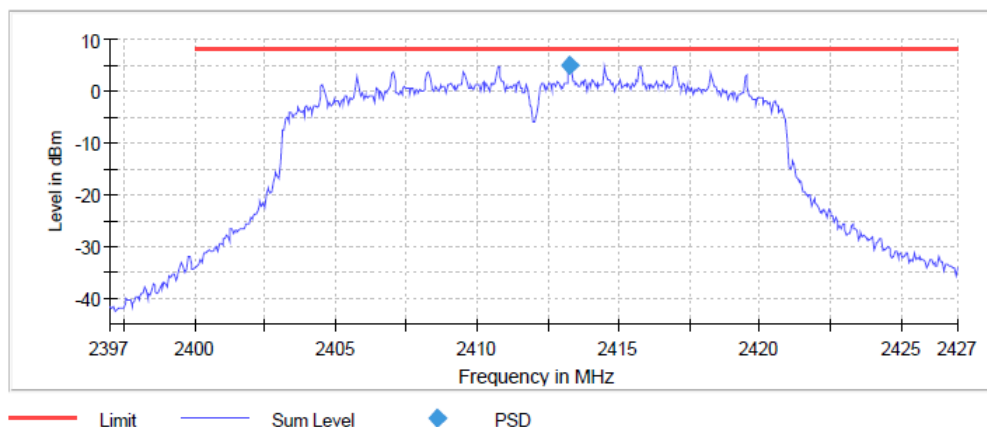
Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	2.39700 GHz	2.42200 GHz	2.44700 GHz
Stop Frequency	2.42700 GHz	2.45200 GHz	2.47700 GHz
Span	30.000 MHz	30.000 MHz	30.000 MHz
RBW	100.000 kHz	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz	300.000 kHz
Sweep Points	600	600	600
Sweep time	1.040 ms	1.040 ms	1.040 ms
Reference Level	20.000 dBm	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB	40.000 dB
Detector	RMS	RMS	RMS
Sweep Count	100	100	100
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep type	Sweep	Sweep	Sweep
Preamp	off	off	off
Stable mode	Trace	Trace	Trace
Stable value	0.50 dB	0.50 dB	0.50 dB
Run	32 / max.150	18 / max. 150	32 / max. 150
Stable	2 / 2	2 / 2	2 / 2
Max Stable Difference	0.24 dB	0.43 dB	0.33 dB

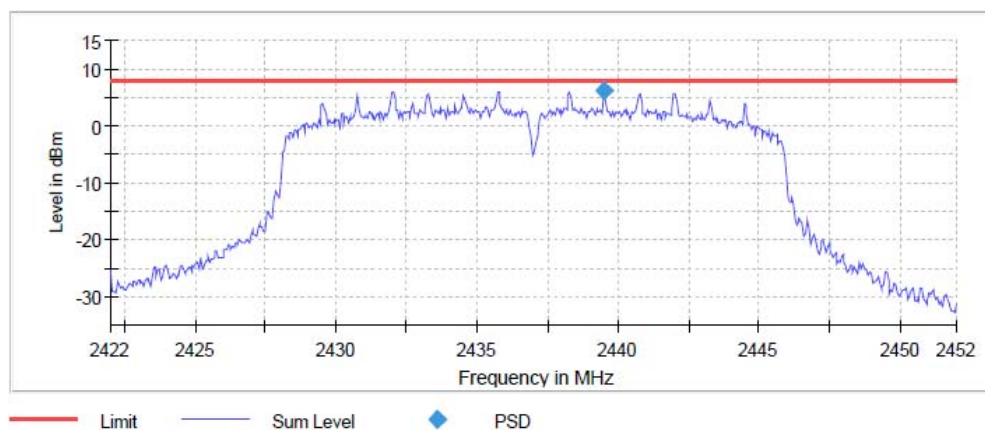
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#03 (n20 mode)
TEST RESULTS:	PASS

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Power spectral density (dBm)	4.87	6.06	5.27
Measurement uncertainty (dB)	<±0.78		

Lowest Channel

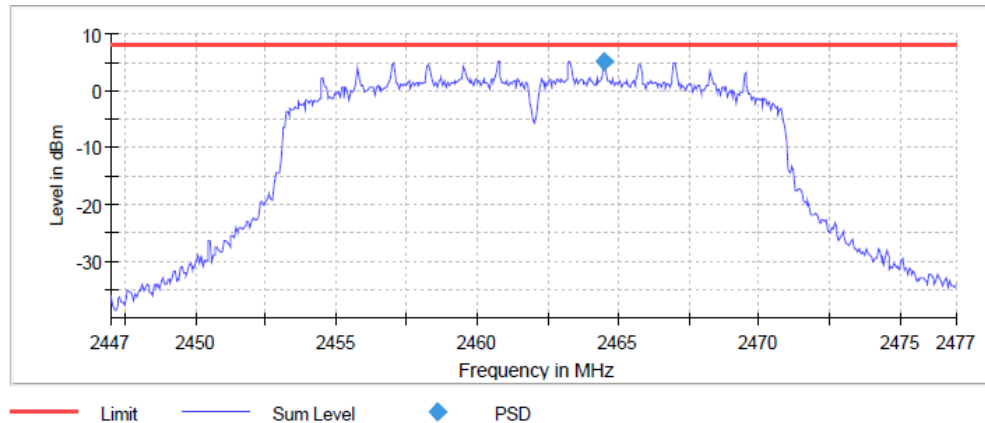


Middle Channel



TEST RESULTS (Cont.):

Highest Channel



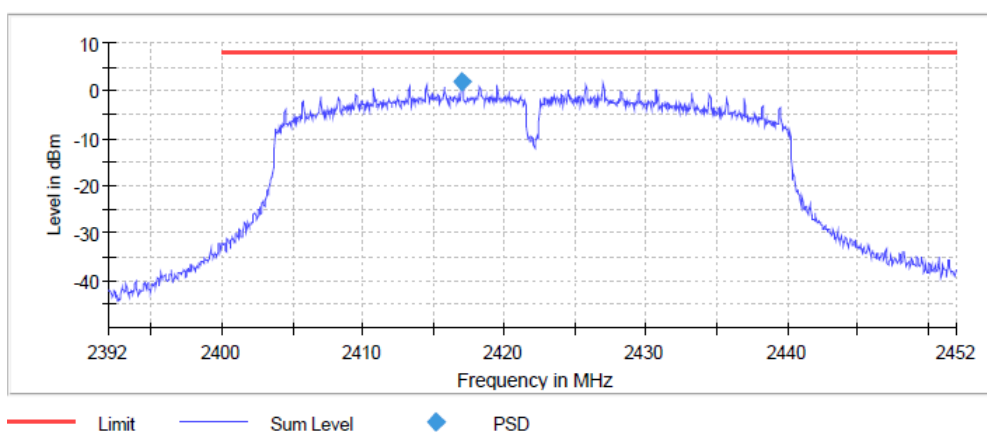
Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	2.39700 GHz	2.42200 GHz	2.44700
Stop Frequency	2.42700 GHz	2.45200 GHz	2.47700
Span	30.000 MHz	30.000 MHz	30.000 MHz
RBW	100.000 kHz	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz	300.000 kHz
Sweep Points	600	600	600
Sweep time	1.040 ms	1.040 ms	1.040 ms
Reference Level	20.000 dBm	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB	40.000 dB
Detector	RMS	RMS	RMS
Sweep Count	100	100	100
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep type	Sweep	Sweep	Sweep
Preamp	off	off	off
Stable mode	Trace	Trace	Trace
Stable value	0.50 dB	0.50 dB	0.50 dB
Run	24 / max.150	37 / max. 150	33 / max.
Stable	2 / 2	2 / 2	2 / 2
Max Stable Difference	0.37 dB	0.39 dB	0.34 dB

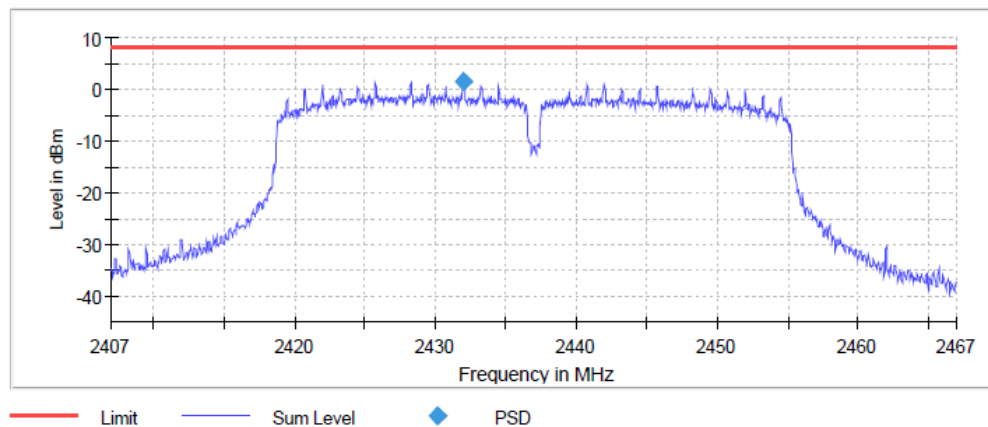
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#04 (n40 mode)
TEST RESULTS:	PASS

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Power spectral density (dBm)	1.77	1.57	2.11
Measurement uncertainty (dB)	<±0.78		

Lowest Channel

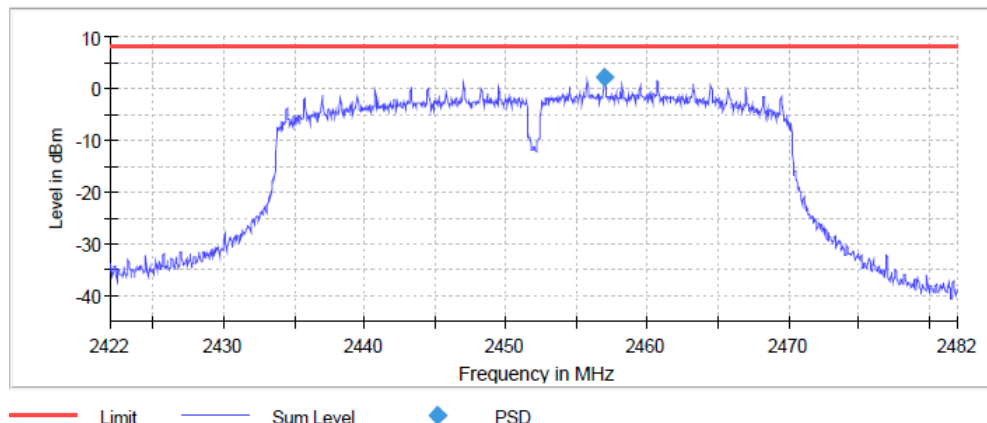


Middle Channel



TEST RESULTS (Cont.):

Highest Channel



Measurement

Setting	Instrument Value	Instrument Value	Instrument Value
Start Frequency	2.39200 GHz	2.40700 GHz	2.42200 GHz
Stop Frequency	2.45200 GHz	2.46700 GHz	2.48200 GHz
Span	60.000 MHz	60.000 MHz	60.000 MHz
RBW	100.000 kHz	100.000 kHz	100.000 kHz
VBW	300.000 kHz	300.000 kHz	300.000 kHz
Sweep Points	1200	1200	1200
Sweep time	1.200 ms	1.200 ms	1.200 ms
Reference Level	20.000 dBm	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB	40.000 dB
Detector	RMS	RMS	RMS
Sweep Count	100	100	100
Filter	3 dB	3 dB	3 dB
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep type	Sweep	Sweep	Sweep
Preamp	off	off	off
Stable mode	Trace	Trace	Trace
Stable value	0.50 dB	0.50 dB	0.50 dB
Run	72 / max.150	41 / max. 150	52 / max. 150
Stable	2 / 2	2 / 2	2 / 2
Max Stable	0.24 dB	0.31 dB	0.45 dB

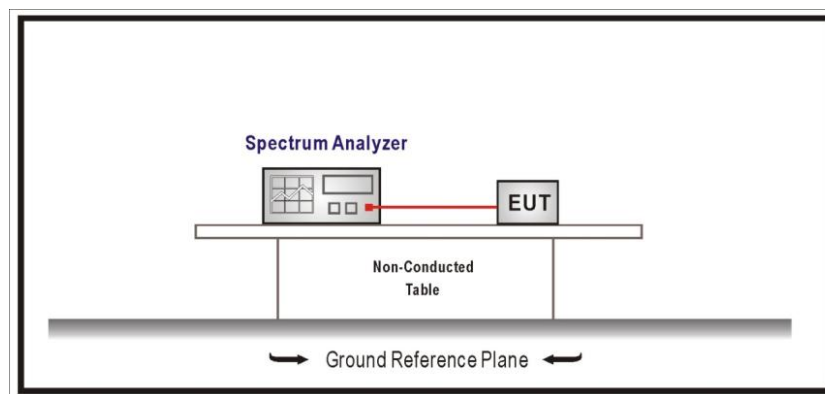
TEST C.5: EMISSION LIMITATIONS CONDUCTED (TRANSMITTER)

LIMITS:	Product standard:	Part 15 Subpart C §15.247 and RSS-247
	Test standard:	Part 15 Subpart C §15.247(d) and RSS-247 5.5

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 (b mode)
TEST RESULTS:	PASS

Reference Level Measurement

	Lowest frequency 2402 MHz	Middle frequency 2440 MHz	Highest frequency 2480 MHz
Reference Level Measurement (dBm)	-2.26	-1.29	-2.33
Measurement uncertainty (dB)	<±0.78		

Lowest Channel

No spurious signal was detected at 6dB below the limit or above.

Middle Channel

#

Frequency (GHz)	Emission limitations conducted (dBm)	Limit (dBm)
4874.25	-47.2	-41.2

Highest Channel

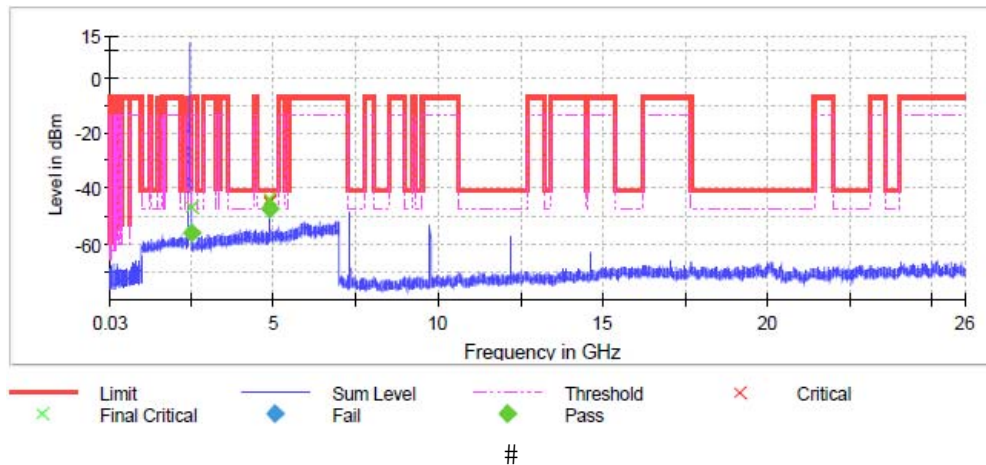
Frequency (GHz)	Emission limitations conducted (dBm)	Limit (dBm)
4924.25	-51.0	-41.2
7384.75	-63.1	-41.2

TEST RESULTS (Cont.):

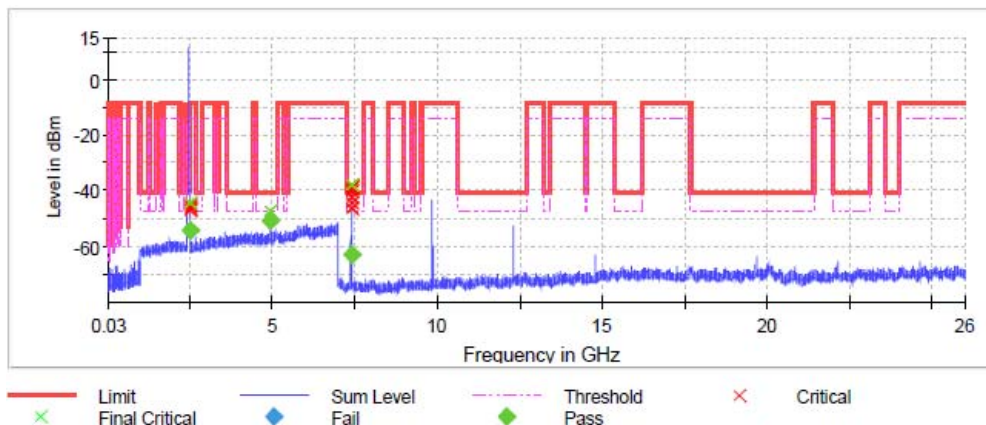
Lowest Channel



Middle Channel



Highest Channel



#

TEST RESULTS (Cont.):

Measurement Settings

Setting	Instrument Value
Start Frequency	30.000 MHz
Stop Frequency	26 GHz
RBW	100.000 kHz
VBW	300.000 kHz
Sweep Points	19400
Sweep time	1.061 ms
Reference Level	-10.000 dBm
Attenuation	20.000 dB
Detector	MaxPeak
Sweep Count	30
Filter	3 dB
Trace Mode	Max Hold
Sweep type	FFT
Preamp	off
Stable mode	Trace
Stable value	0.50 dB
Run	4 / max. 150
Stable	3 / 3
Max Stable Difference	0.00 dB

#

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

Reference Level Measurement

	Lowest frequency 2402 MHz	Middle frequency 2440 MHz	Highest frequency 2480 MHz
Reference Level Measurement (dBm)	5.06	6.04	5.30
Measurement uncertainty (dB)	<±0.78		

Lowest Channel

Frequency (GHz)	Emission limitations conducted (dBm)	Limit (dBm)
7251.75	-64.1	-41.2
12060.75	-62.4	-41.2

Middle Channel

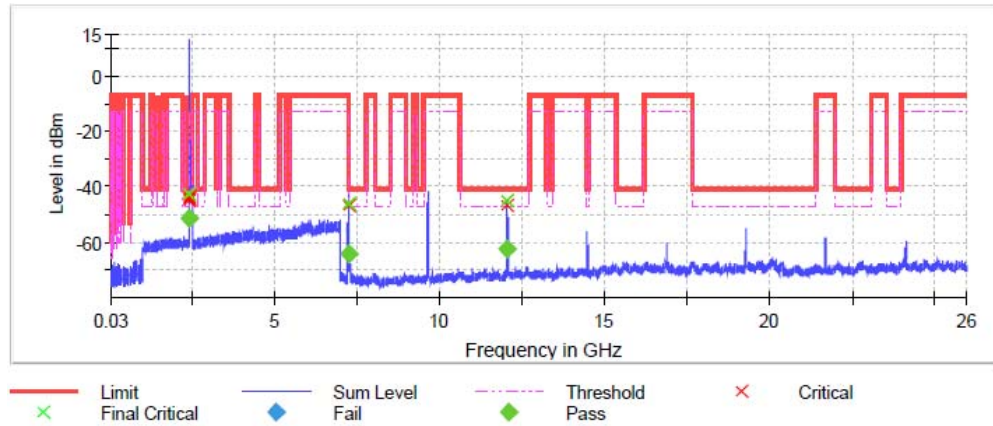
Frequency (GHz)	Emission limitations conducted (dBm)	Limit (dBm)
4876.75	-58.6	-41.2
7320.25	-63.6	-41.2
12193.25	-62.6	-41.2

Highest Channel

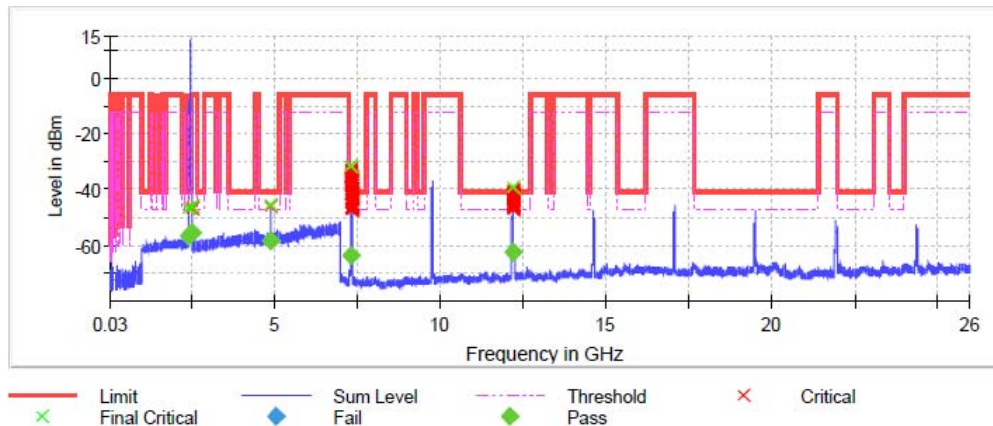
Frequency (GHz)	Emission limitations conducted (dBm)	Limit (dBm)
7379.25	-63.4	-41.2
12313.75	-61.8	-41.2
19715.75	-58.4	41.2

TEST RESULTS (Cont.):

Lowest Channel

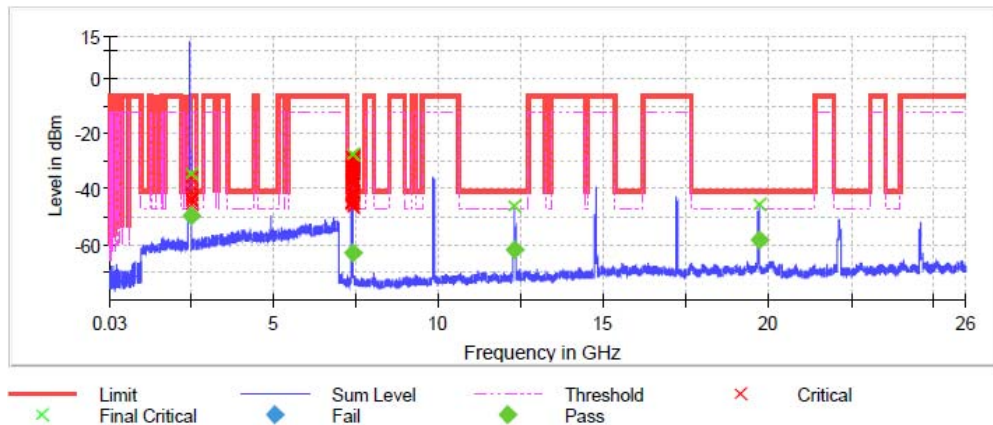


Middle Channel



#

Highest Channel



#

TEST RESULTS (Cont.):

Measurement Settings

Setting	Instrument Value
Start Frequency	30.000 MHz
Stop Frequency	26 GHz
RBW	100.000 kHz
VBW	300.000 kHz
Sweep Points	19400
Sweep time	1.061 ms
Reference Level	-10.000 dBm
Attenuation	20.000 dB
Detector	MaxPeak
Sweep Count	30
Filter	3 dB
Trace Mode	Max Hold
Sweep type	FFT
Preamp	off
Stable mode	Trace
Stable value	0.50 dB
Run	4 / max. 150
Stable	3 / 3
Max Stable Difference	0.00 dB

#

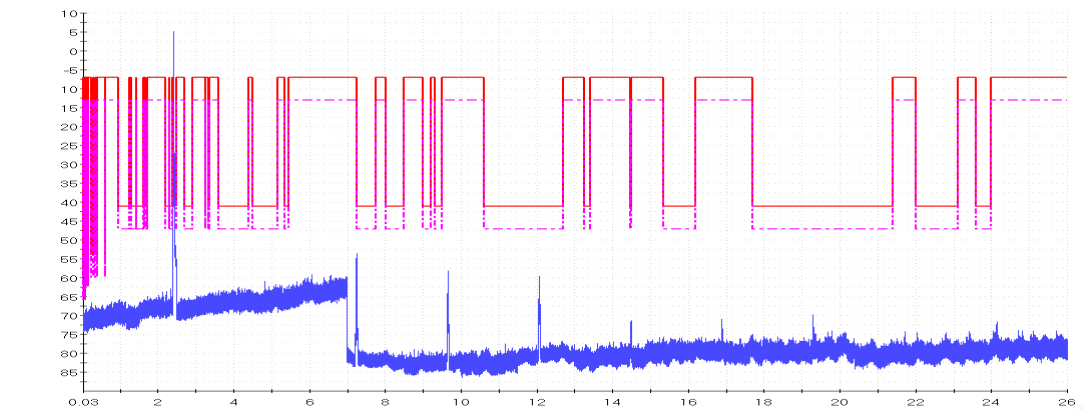
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#03 (n20 mode)
TEST RESULTS:	PASS
TEST RESULTS (Cont.):	

Reference Level Measurement

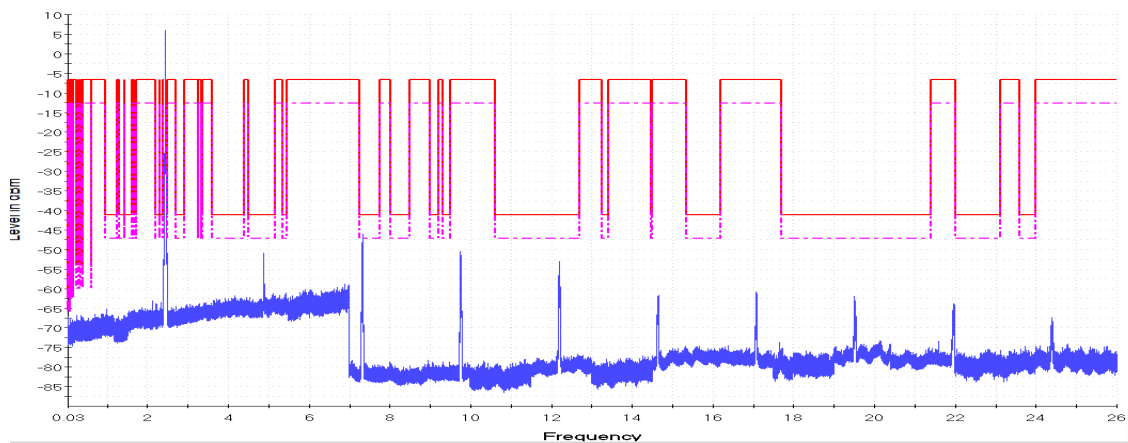
	Lowest frequency 2402 MHz	Middle frequency 2440 MHz	Highest frequency 2480 MHz
Reference Level Measurement (dBm)	4.87	6.06	5.27
Measurement uncertainty (dB)	<±0.78		

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

Lowest Channel



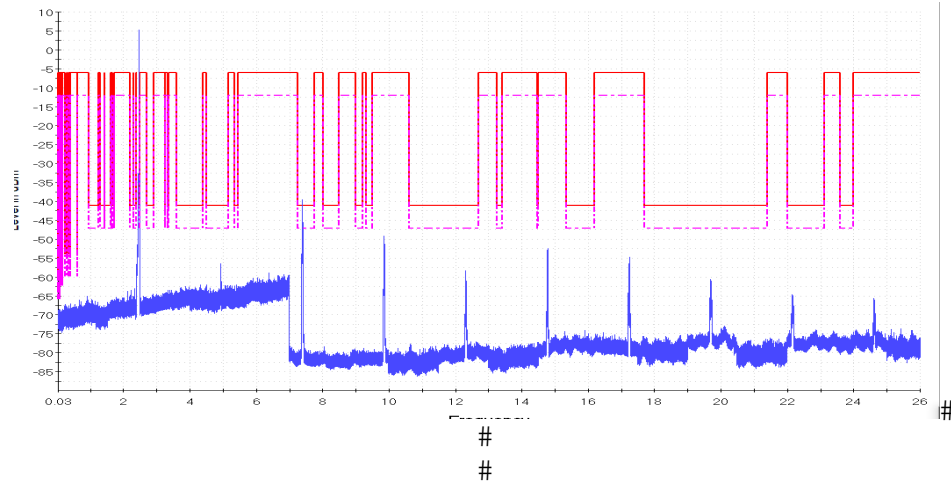
Middle Channel



#

TEST RESULTS (Cont.):

Highest Channel



Measurement Settings

Setting	Instrument Value
Start Frequency	30.000 MHz
Stop Frequency	26 GHz
RBW	100.000 kHz
VBW	300.000 kHz
Sweep Points	29400
Sweep time	29.4 ms
Reference Level	-10.000 dBm
Attenuation	20.000 dB
Detector	MaxPeak
Sweep Count	30
Filter	3 dB
Trace Mode	Max Hold
Sweep type	FFT
Preamp	off
Stable mode	Trace
Stable value	0.50 dB
Run	4 / max. 150
Stable	3 / 3
Max Stable Difference	0.00 dB

#

TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#04 (n40 mode)
TEST RESULTS:	PASS

Reference Level Measurement

	Lowest frequency 2402 MHz	Middle frequency 2440 MHz	Highest frequency 2480 MHz
Reference Level Measurement (dBm)	1.77	1.57	2.11
Measurement uncertainty (dB)	<±0.78		

Lowest Channel

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

Middle Channel

Frequency (GHz)	Emission limitations conducted (dBm)	Limit (dBm)
7318.75	-61.6	-41.2

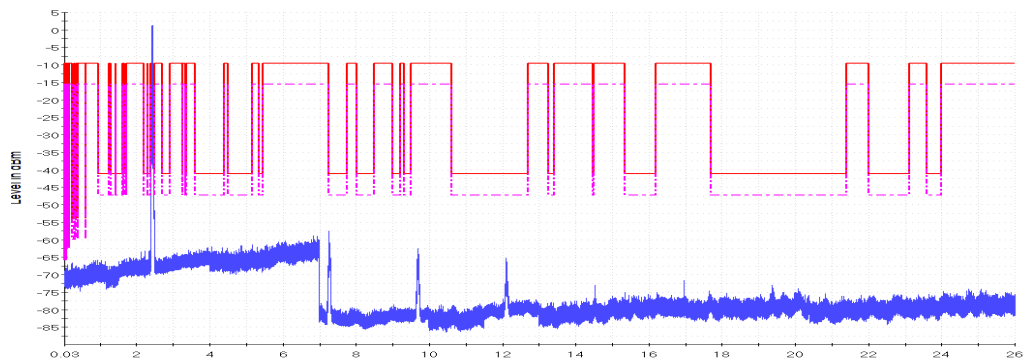
Highest Channel

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

#

TEST RESULTS (Cont.):

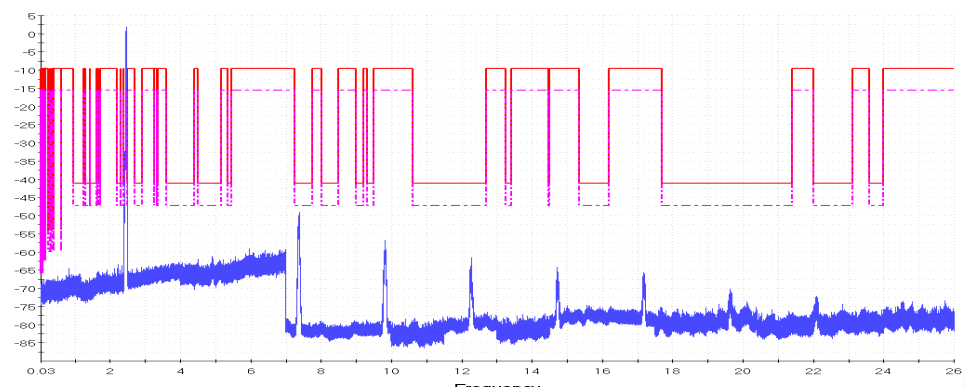
Lowest Channel



Middle Channel



Highest Channel



#

TEST RESULTS (Cont.):

#

Measurement Settings

Setting	Instrument Value
Start Frequency	30.000 MHz
Stop Frequency	26 GHz
RBW	100.000 kHz
VBW	300.000 kHz
Sweep Points	29400
Sweep time	29.4 ms
Reference Level	-10.000 dBm
Attenuation	20.000 dB
Detector	MaxPeak
Sweep Count	30
Filter	3 dB
Trace Mode	Max Hold
Sweep type	FFT
Preamp	off
Stable mode	Trace
Stable value	0.50 dB
Run	4 / max. 150
Stable	3 / 3
Max Stable Difference	0.00 dB

#

TEST C.6: EMISSION LIMITATIONS RADIATED (TRANSMITTER)

LIMITS:	Product standard:	Part 15 Subpart C §15.247 and RSS-247
	Test standard:	Part 15 Subpart C §15.247(d) and RSS-247 5.5

LIMITS

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.

RSS-247. Attenuation below the general field strength limits specified in RSS-Gen is not required

TEST SETUP

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

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

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

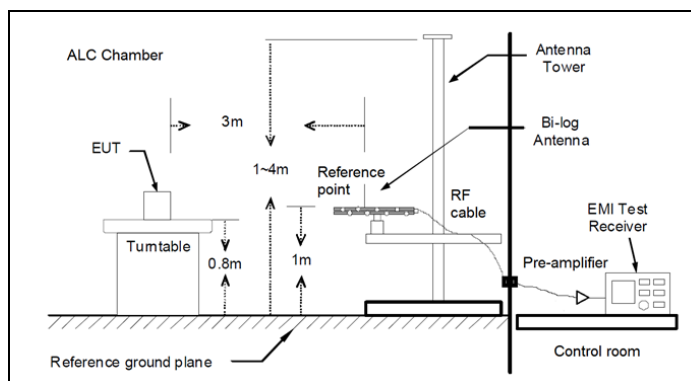
Measurements were made in both horizontal and vertical planes of polarization.

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

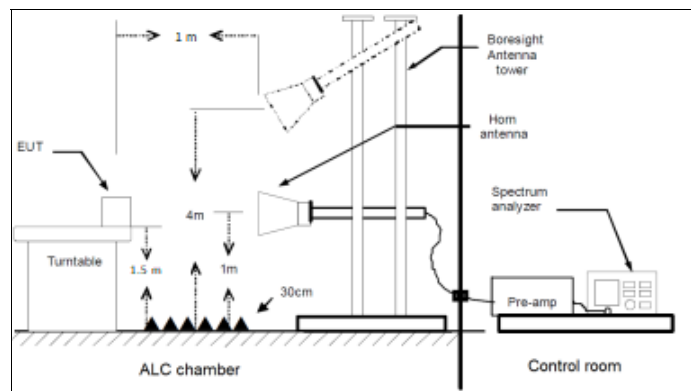
#

TEST SETUP (CONT.)

Radiated measurements Setup $f < 1$ GHz



Radiated measurements setup $f > 1$ GHz



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

Co-Location

The test was performed with the equipment transmitting first with only the Wi-Fi 2.4GHz (WLAN1 CORE1) and repeated with the 2.4 GHz BT-EDR (WLAN 0), and Wi-Fi 5 GHz (WLAN0 CORE0) 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

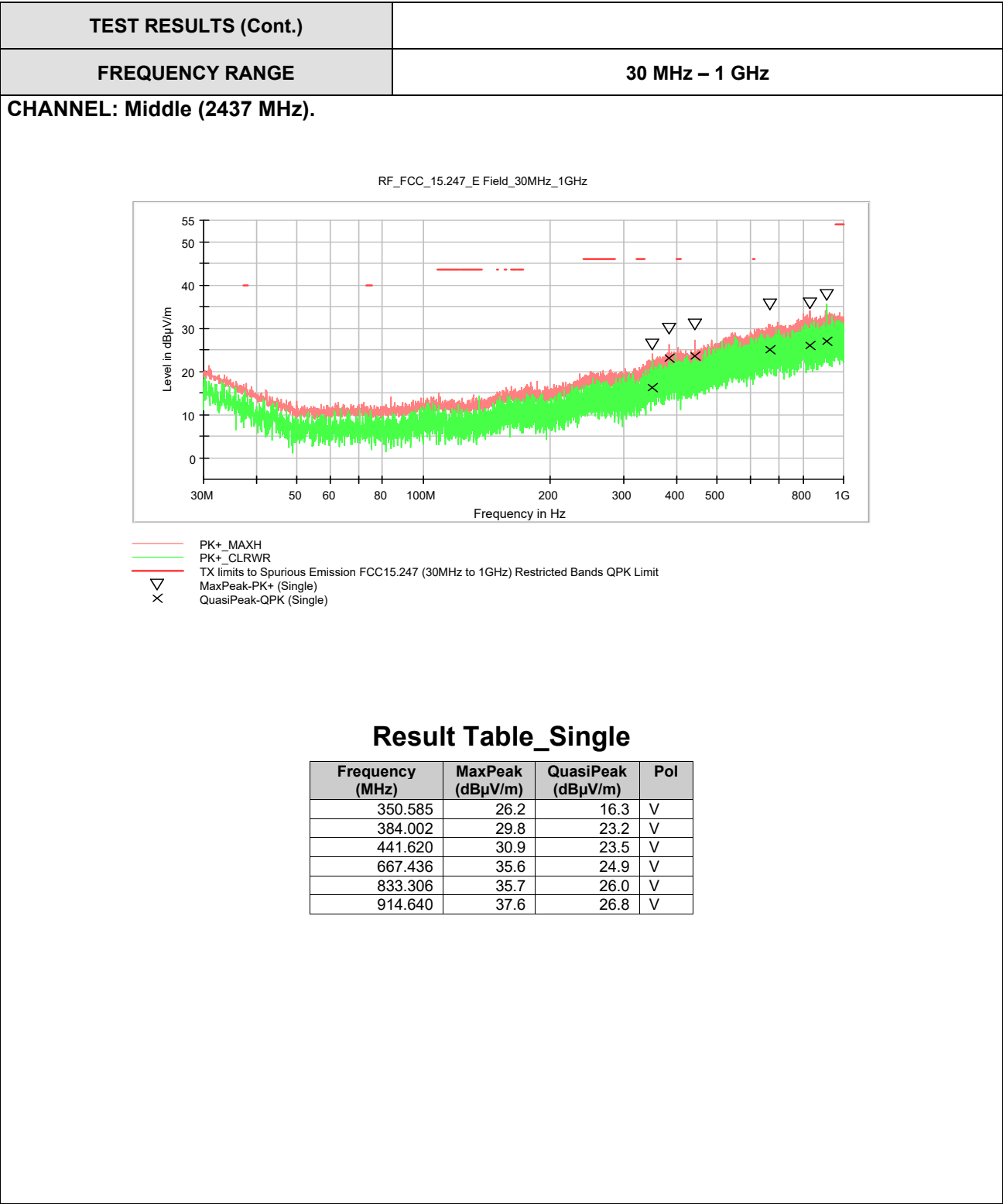
The spurious emissions below 1 GHz do not depend on the operating channel and mode selected in the EUT. See worst operation mode selected for this range. (b mode)

Frequency range 1 GHz – 26 GHz

The results in the next tables show the maximum measured levels in the 1-26 GHz range including the restricted bands 2.31-2.39 GHz and 2.4835-2.5 GHz (see next plots).

The radiated spurious signals detected at less than 10 dB respect to the limit for the lowest, middle and highest operating channels are showed in the tables below of each frequency range.

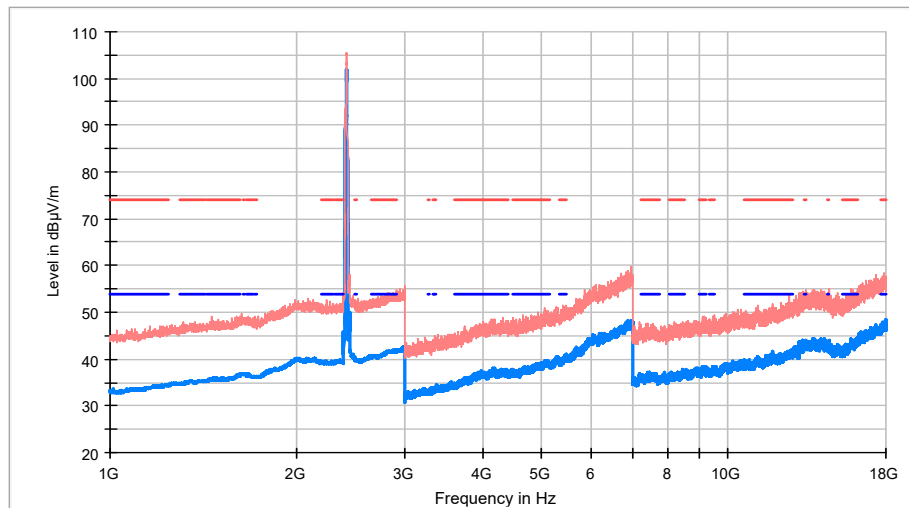
#



TEST RESULTS (Cont.)

1 – 18 GHz

CHANNEL: Low (2412 MHz).



— AVG_MAXH
 — PK+ MAXH
 — TX limits to Spurious Emission FCC15.247 (1GHz to 26 GHz) Restricted Bands PK Limit
 — TX limits to Spurious Emission FCC15.247 (1GHz to 26 GHz) Restricted Bands AVG Limit

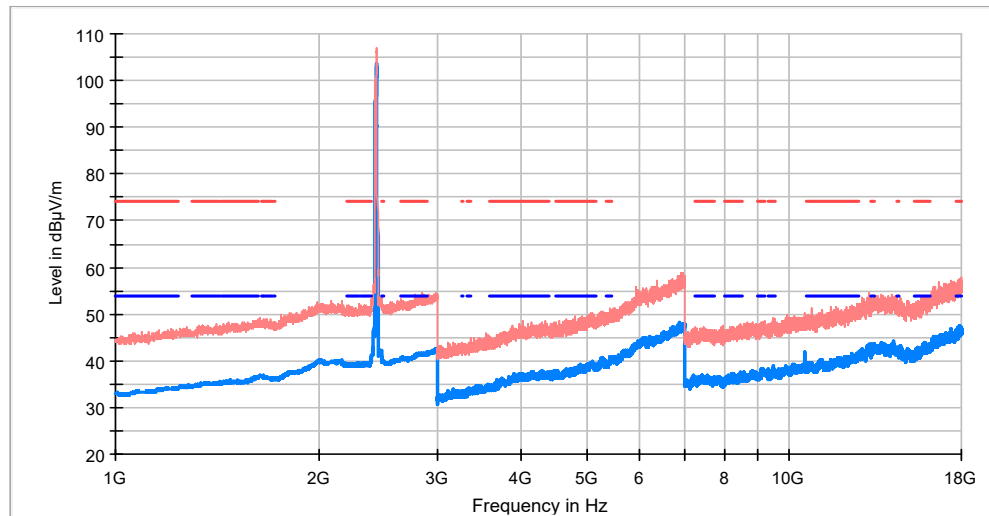
Maximizations

Frequency (MHz)	PK+ MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
2387.500000	53.54	45.78	V	
2411.000000	105.52	102.00	V	Fundamental

TEST RESULTS (Cont.)

1 – 18 GHz

CHANNEL: Middle (2437 MHz).



— AVG_MAXH
— PK+_MAXH
— TX limits to Spurious Emission FCC15.247 (1GHz to 26 GHz) Restricted Bands PK Limit
— TX limits to Spurious Emission FCC15.247 (1GHz to 26 GHz) Restricted Bands AVG Limit

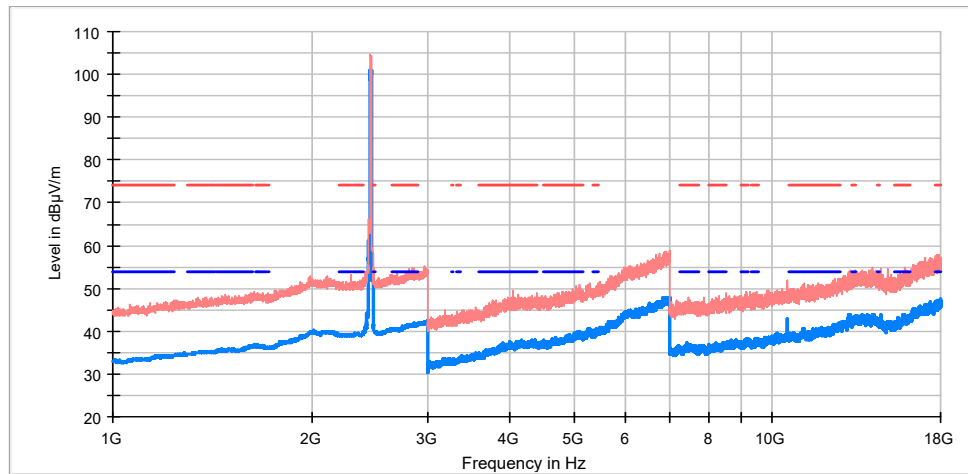
Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
2438.000000	107.12	103.65	V	Fundamental

TEST RESULTS (Cont.)

1 – 18 GHz

CHANNEL: Highest (2462 MHz).



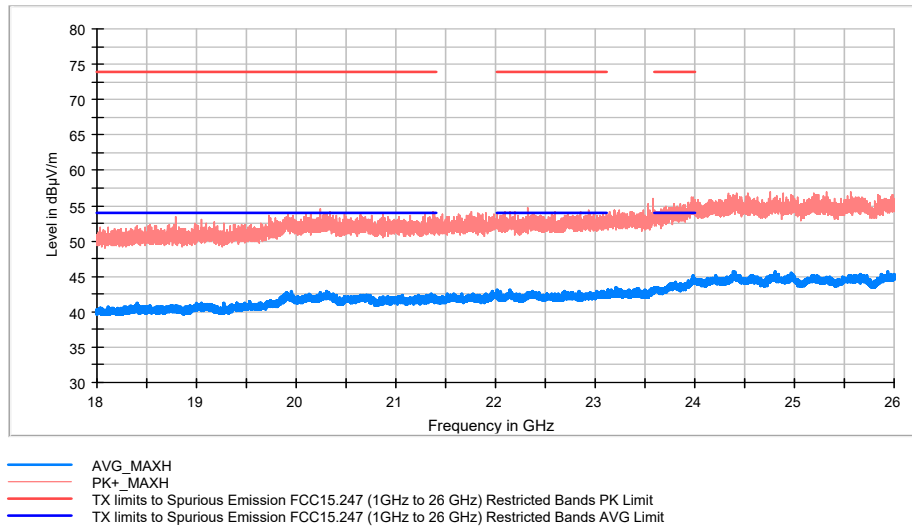
— AVG_MAXH
 — PK+_MAXH
 — TX limits to Spurious Emission FCC15.247 (1GHz to 26 GHz) Restricted Bands PK Limit
 — TX limits to Spurious Emission FCC15.247 (1GHz to 26 GHz) Restricted Bands AVG Limit

Maximizations

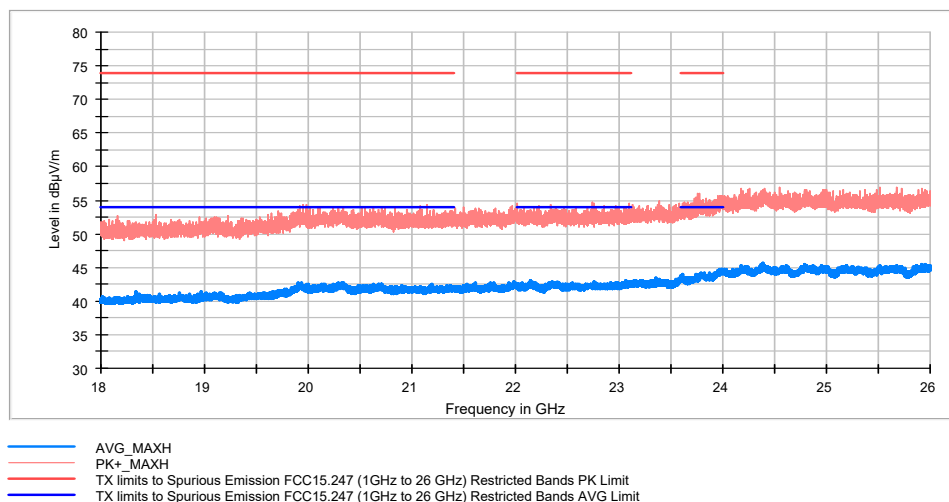
Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
2463.000000	104.49	101.14	V	Fundamental

TEST RESULTS (Cont.)	
FREQUENCY RANGE	18 GHz – 26 GHz

CHANNEL: Lowest (2412 MHz).

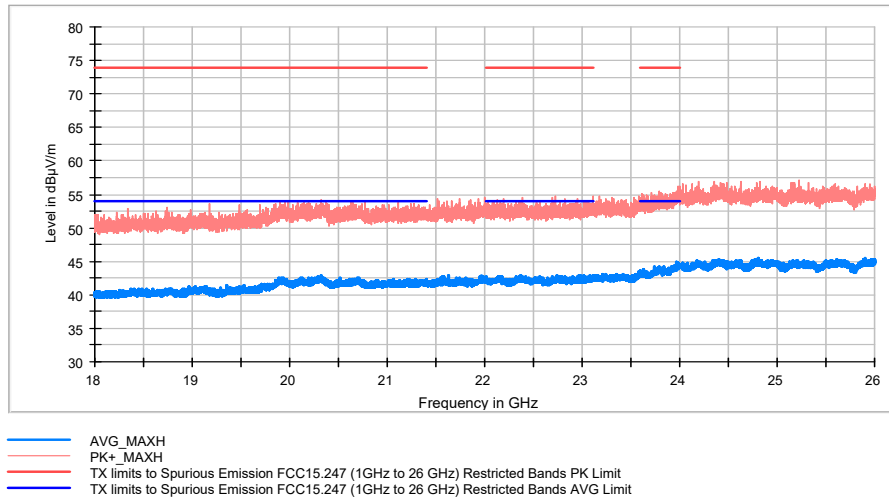


CHANNEL: Middle (2437 MHz).



TEST RESULTS (Cont.)

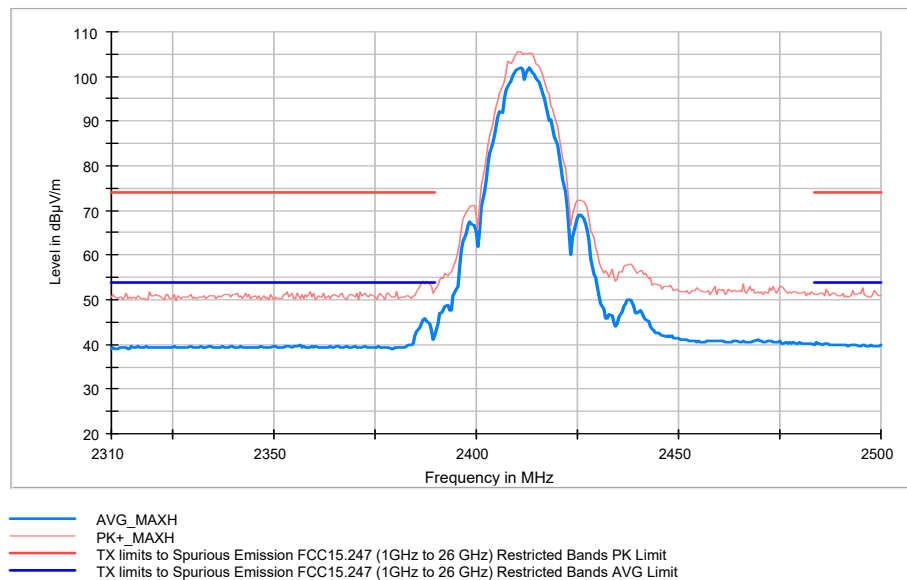
CHANNEL: Highest (2462 MHz).



RESTRICTED BANDS

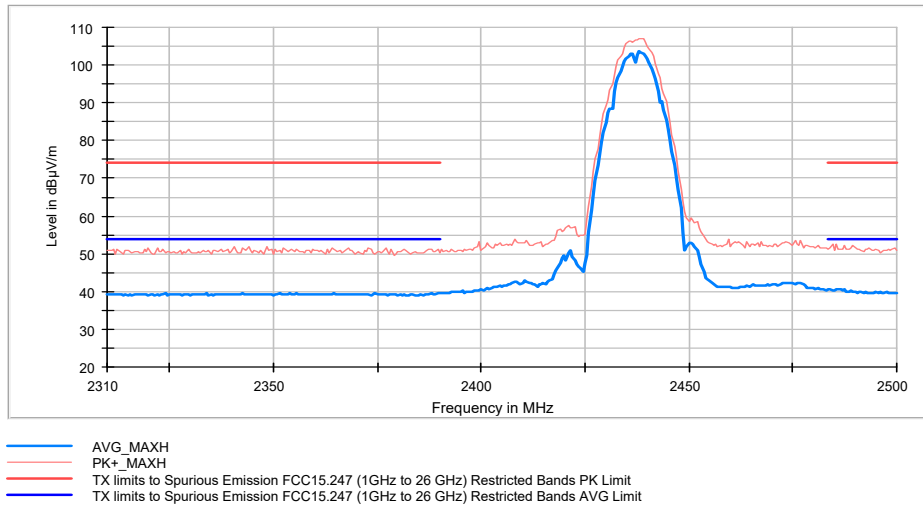
2.31 GHz – 2.5 GHz

CHANNEL: Lowest (2412 MHz)

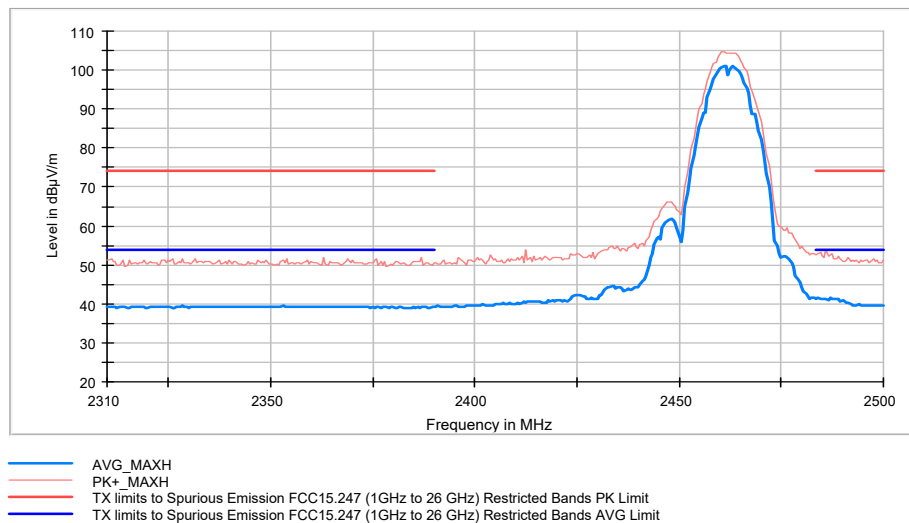


TEST RESULTS (Cont.)

CHANNEL: Middle (2437 MHz)



CHANNEL: Highest (2462 MHz)



#

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

Co-Location

The test was performed with the equipment transmitting first with only the Wi-Fi 2.4GHz (WLAN1 CORE1) and repeated with the 2.4 GHz BT-EDR (WLAN 0), and Wi-Fi 5 GHz (WLAN0 CORE0) 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.

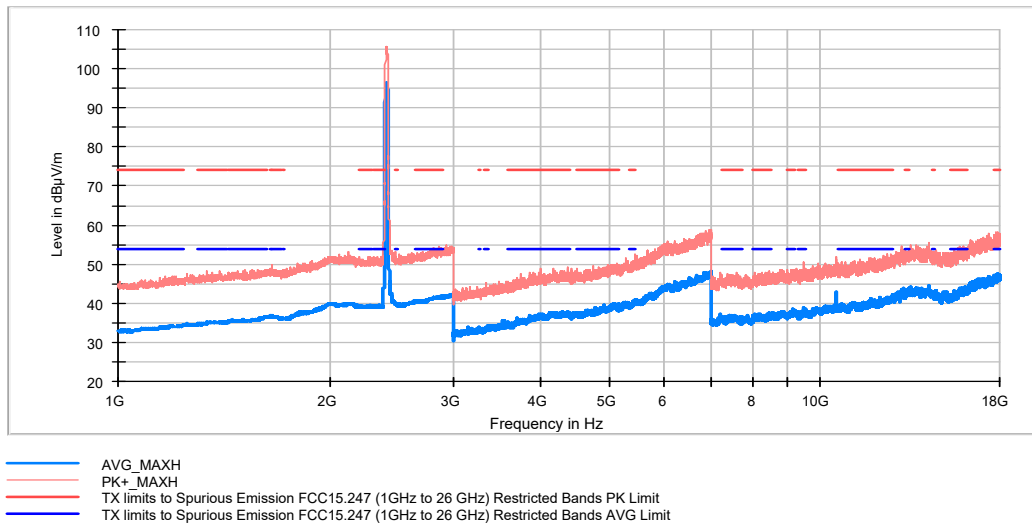
Frequency range 1 GHz – 26 GHz

The results in the next tables show the maximum measured levels in the 1-26 GHz range including the restricted bands 2.31-2.39 GHz and 2.4835-2.5 GHz (see next plots).

The radiated spurious signals detected at less than 10 dB respect to the limit for the lowest, middle and highest operating channels are showed in the tables below of each frequency range.

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

CHANNEL: Low (2412 MHz).



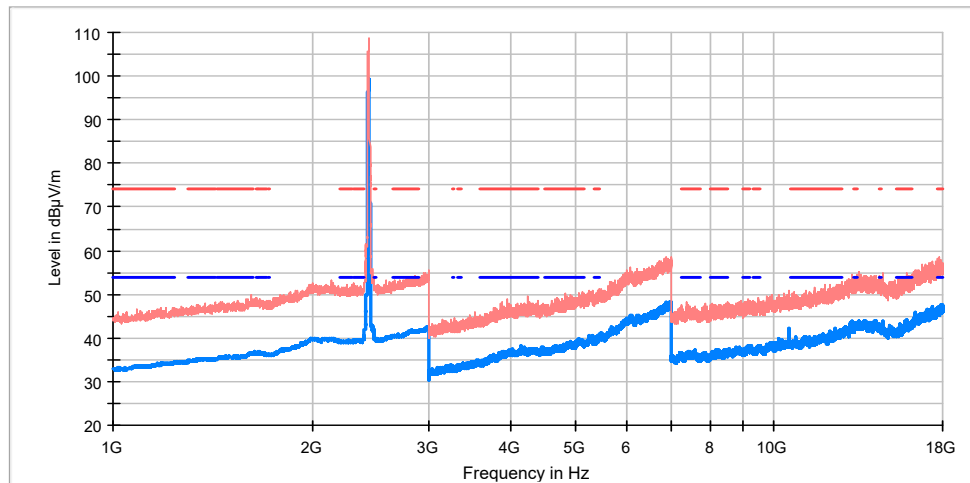
Maximizations

Frequency (MHz)	PK+ _MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
2415.500000	105.53	96.49	V	Fundamental

TEST RESULTS (Cont.)

1 – 18 GHz

CHANNEL: Middle (2437 MHz).



— AVG_MAXH
— PK+_MAXH
— TX limits to Spurious Emission FCC15.247 (1GHz to 26 GHz) Restricted Bands PK Limit
— TX limits to Spurious Emission FCC15.247 (1GHz to 26 GHz) Restricted Bands AVG Limit

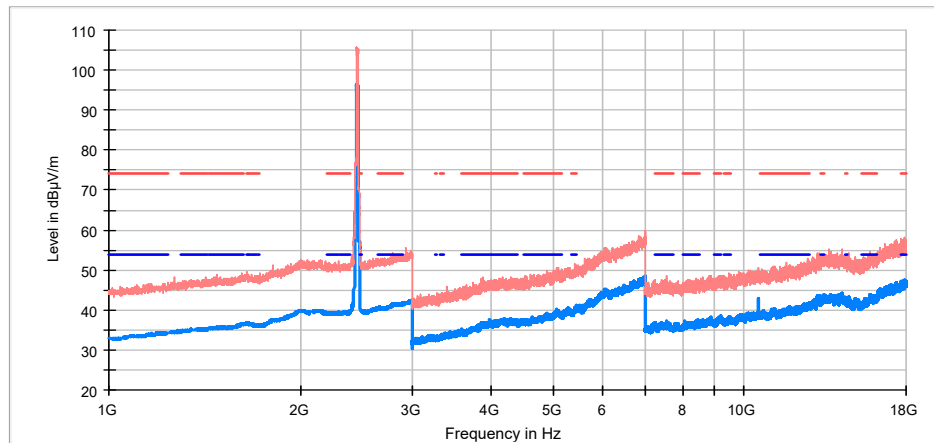
Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Comment
2439.000000	108.56	99.29	V	Fundamental

TEST RESULTS (Cont.)

1 – 18 GHz

CHANNEL: Highest (2462 MHz).



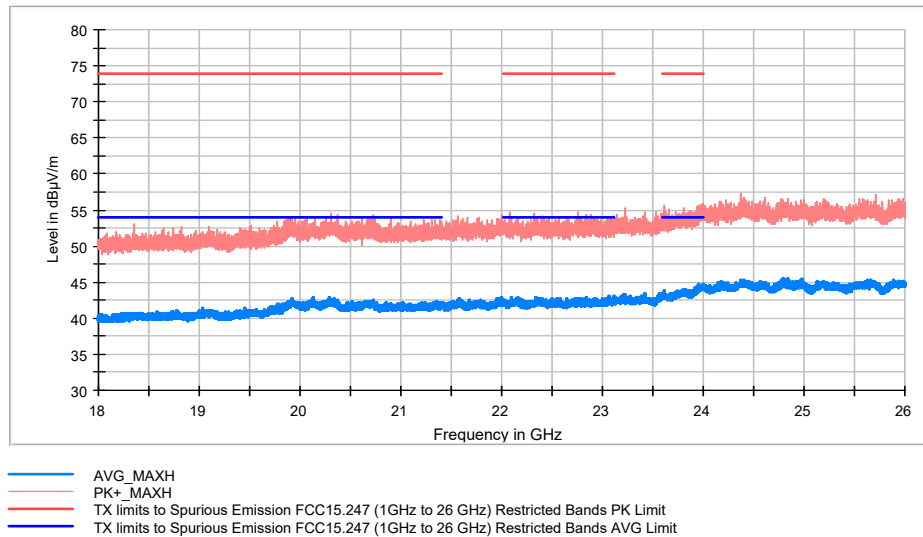
— AVG_MAXH
— PK+_MAXH
— TX limits to Spurious Emission FCC15.247 (1GHz to 26 GHz) Restricted Bands PK Limit
— TX limits to Spurious Emission FCC15.247 (1GHz to 26 GHz) Restricted Bands AVG Limit

Maximizations

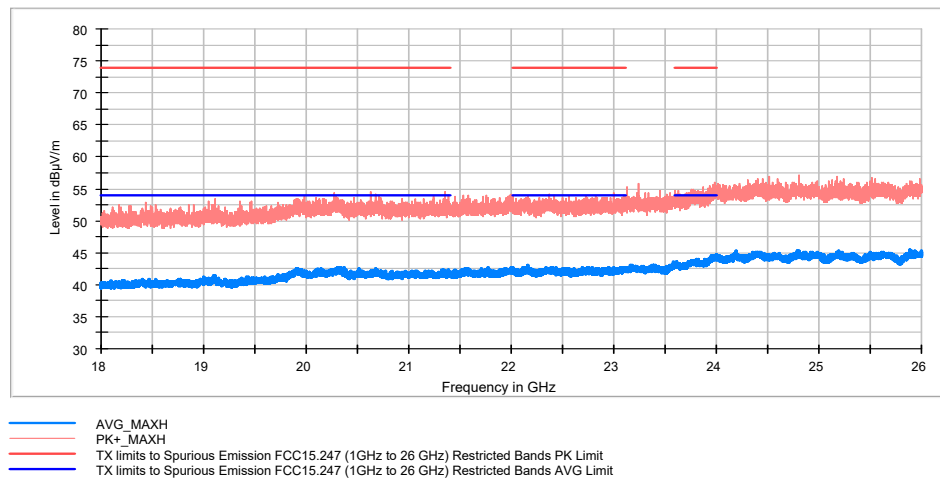
Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Comment
2458.000000	105.60	96.33	V	Fundamental

TEST RESULTS (Cont.)	
FREQUENCY RANGE	18 GHz – 26 GHz

CHANNEL: Lowest (2412 MHz).

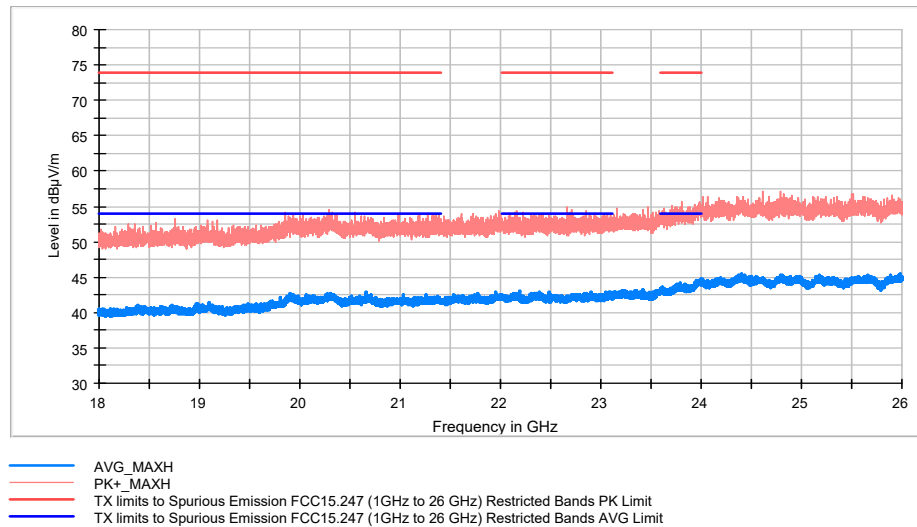


CHANNEL: Middle (2437 MHz).



TEST RESULTS (Cont.)

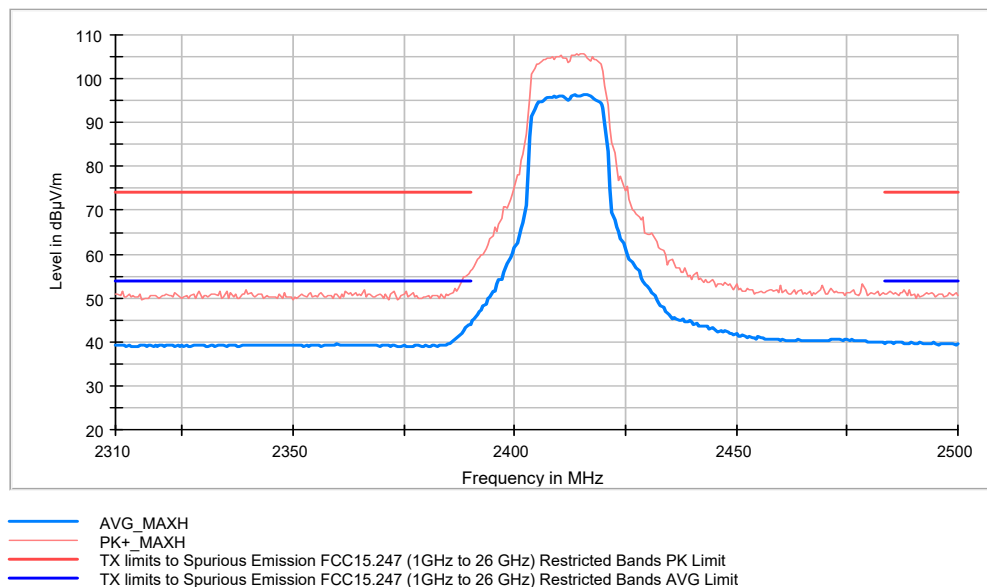
CHANNEL: Highest (2462 MHz).



RESTRICTED BANDS

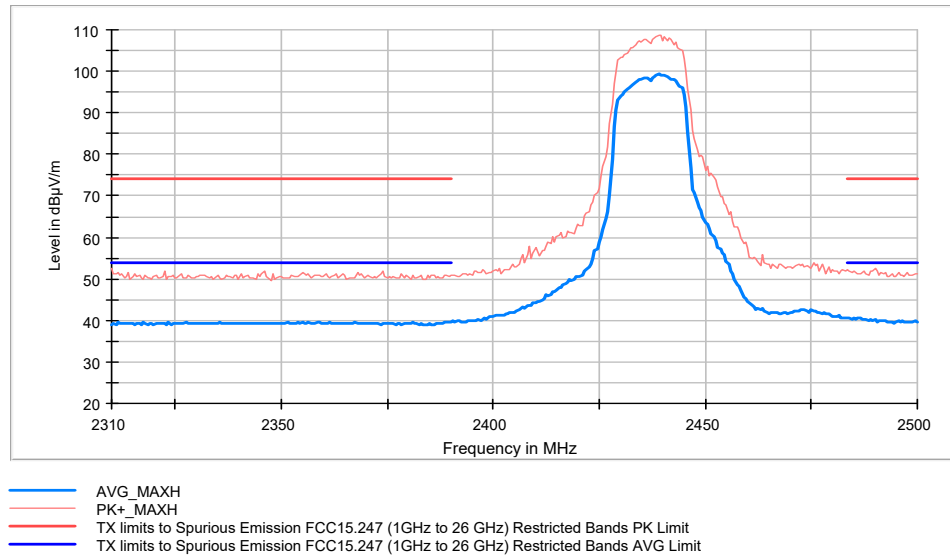
2.31 GHz – 2.5 GHz

CHANNEL: Lowest (2412 MHz)



TEST RESULTS (Cont.)

CHANNEL: Middle (2437 MHz)



CHANNEL: Highest (2462 MHz)

