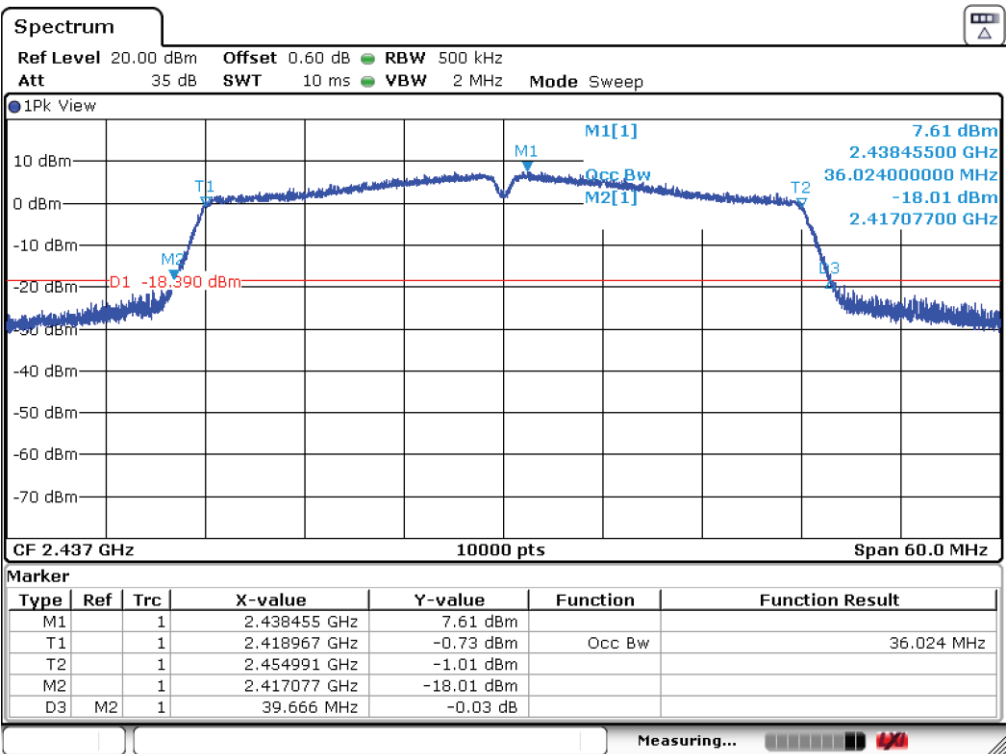
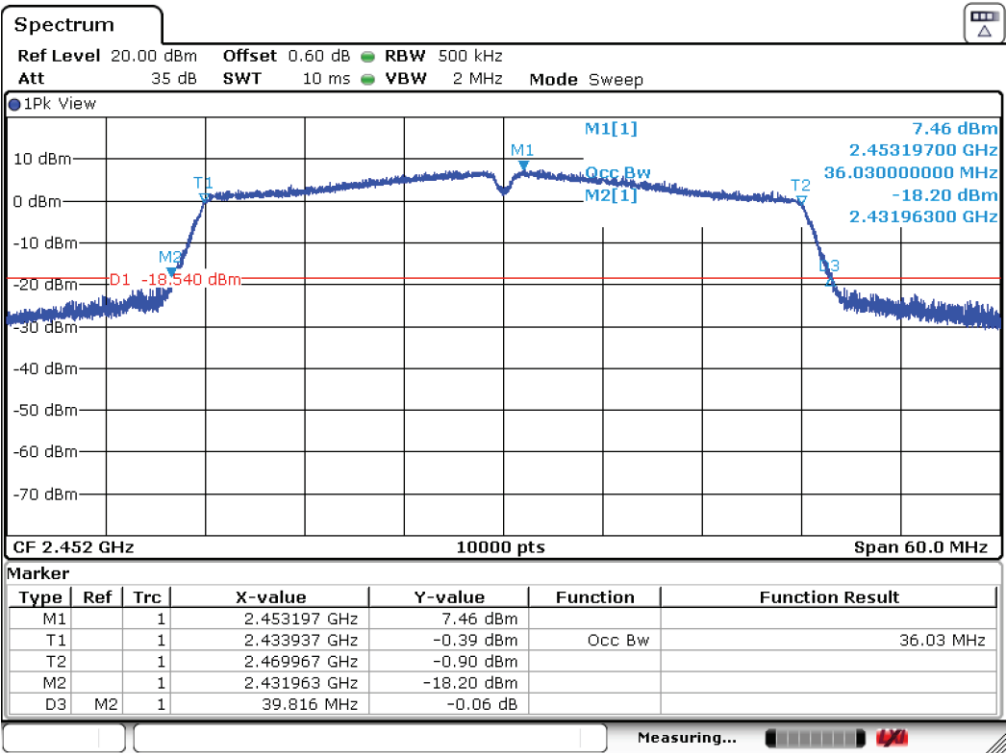


Middle Channel



Highest channel



Section 15.247 Subclause (a) (2) / RSS-247 5.2. (1). 6 dB Bandwidth

SPECIFICATION

The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

6 dB Bandwidth (see next plots).

Mode B

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
6 dB Spectrum bandwidth (MHz)	8.998	9.018	9.012
Measurement uncertainty (kHz)	<±65.0		

Mode G

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
6 dB Spectrum bandwidth (MHz)	16.296	16.298	16.320
Measurement uncertainty (kHz)	<±65.0		

Mode N20

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
6 dB Spectrum bandwidth (MHz)	17.528	17.522	17.544
Measurement uncertainty (kHz)	<±65.0		

Mode N40

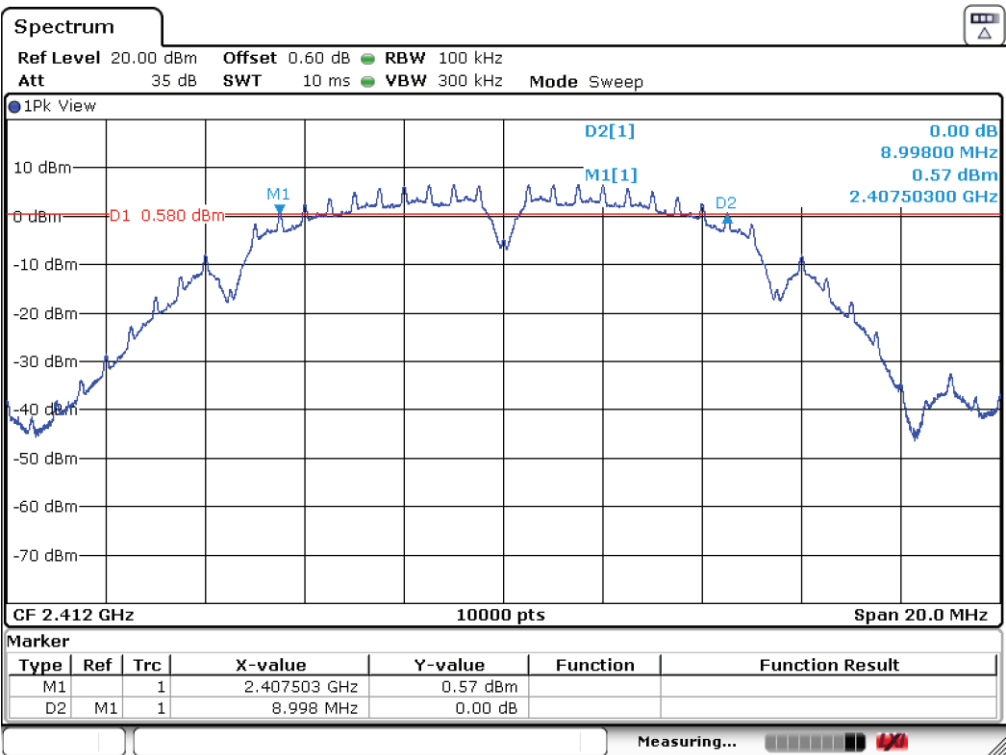
	Lowest frequency 2422 MHz	Middle frequency 2437 MHz	Highest frequency 2452 MHz
6 dB Spectrum bandwidth (MHz)	35.156	35.172	35.168
Measurement uncertainty (kHz)	<±155.0		

Verdict: PASS

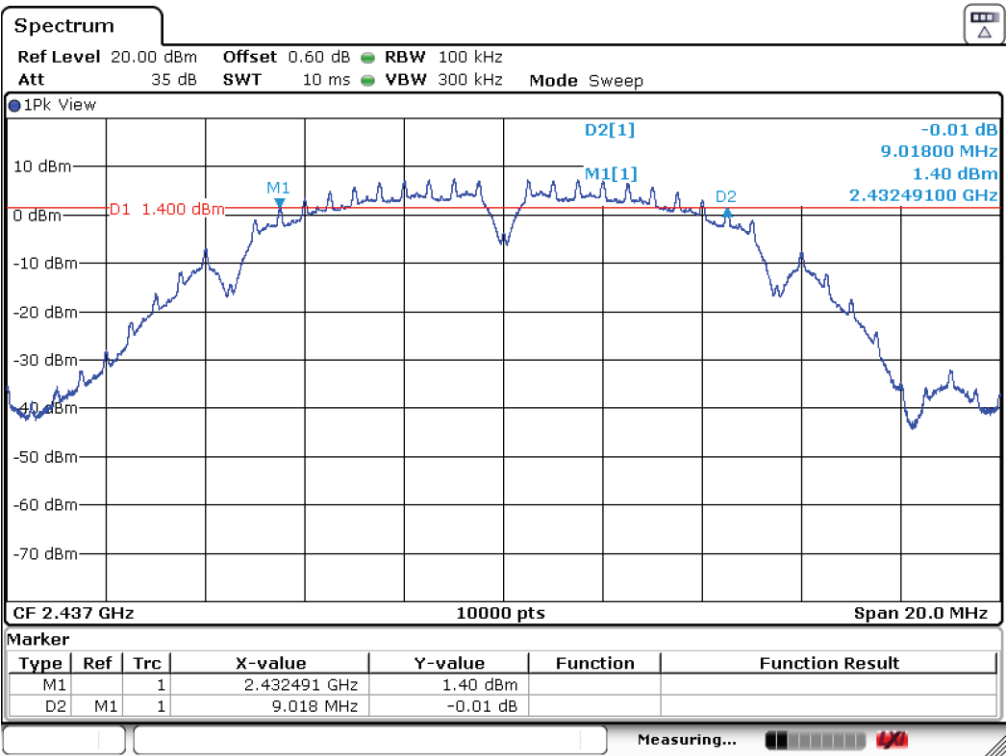
6 dB BANDWIDTH.

Mode B

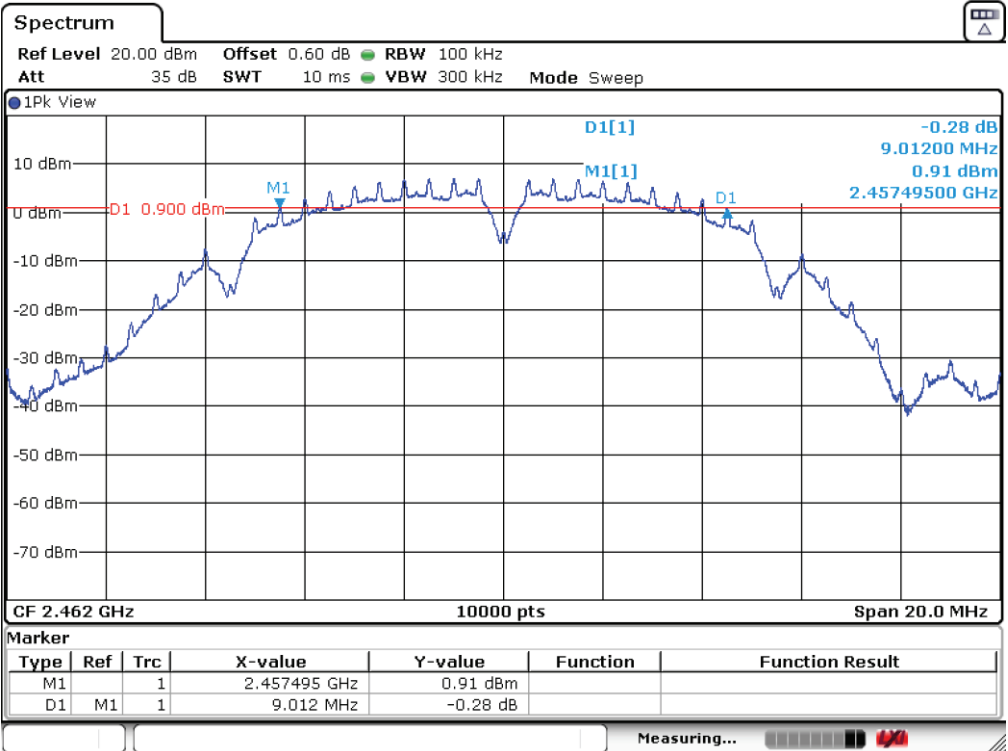
Lowest Channel



Middle Channel

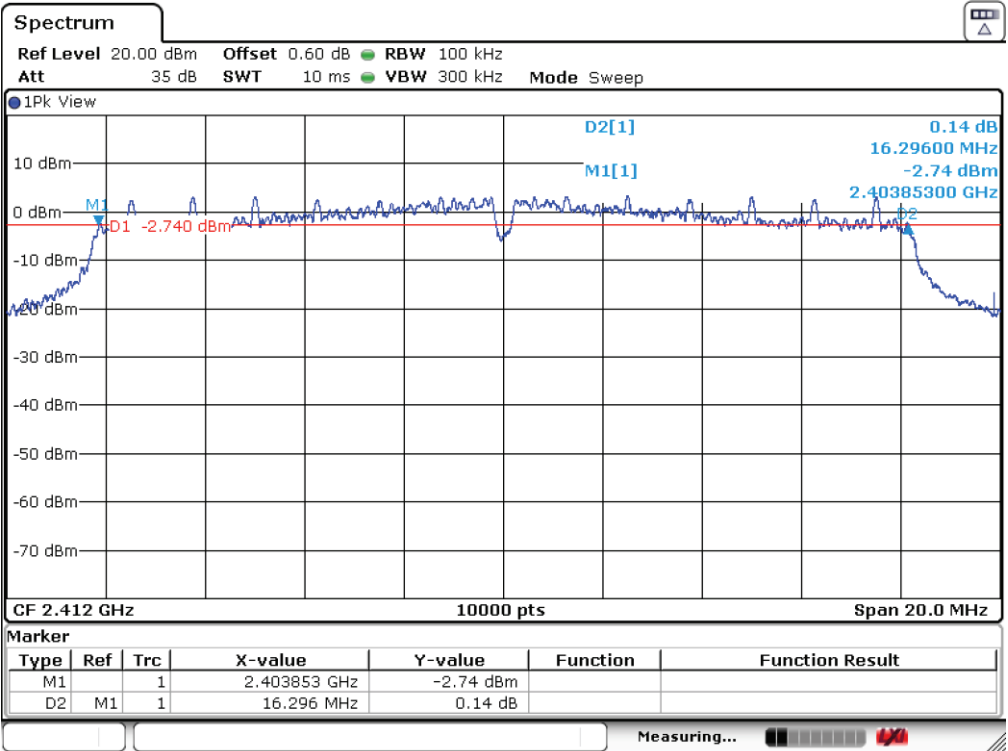


Highest channel

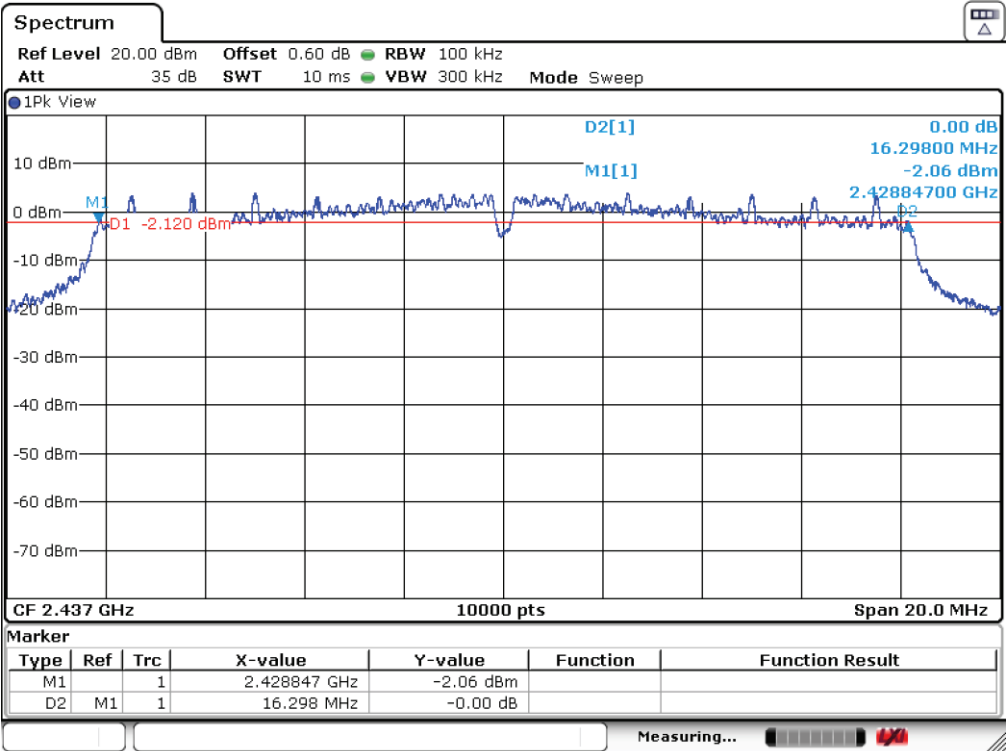


Mode G

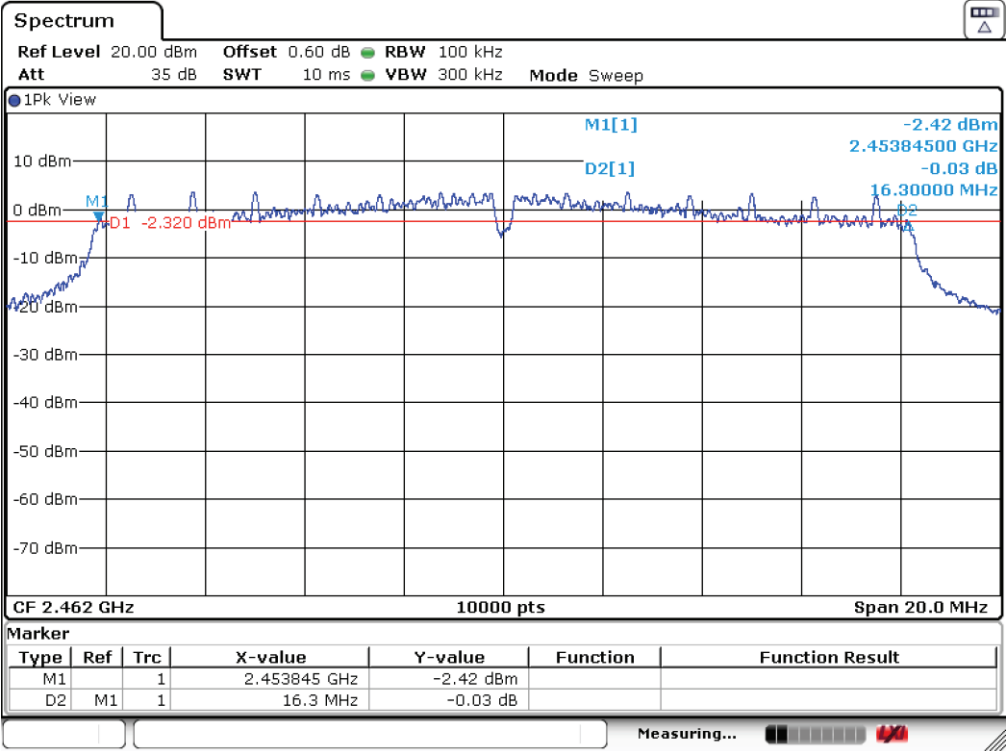
Lowest Channel



Middle Channel

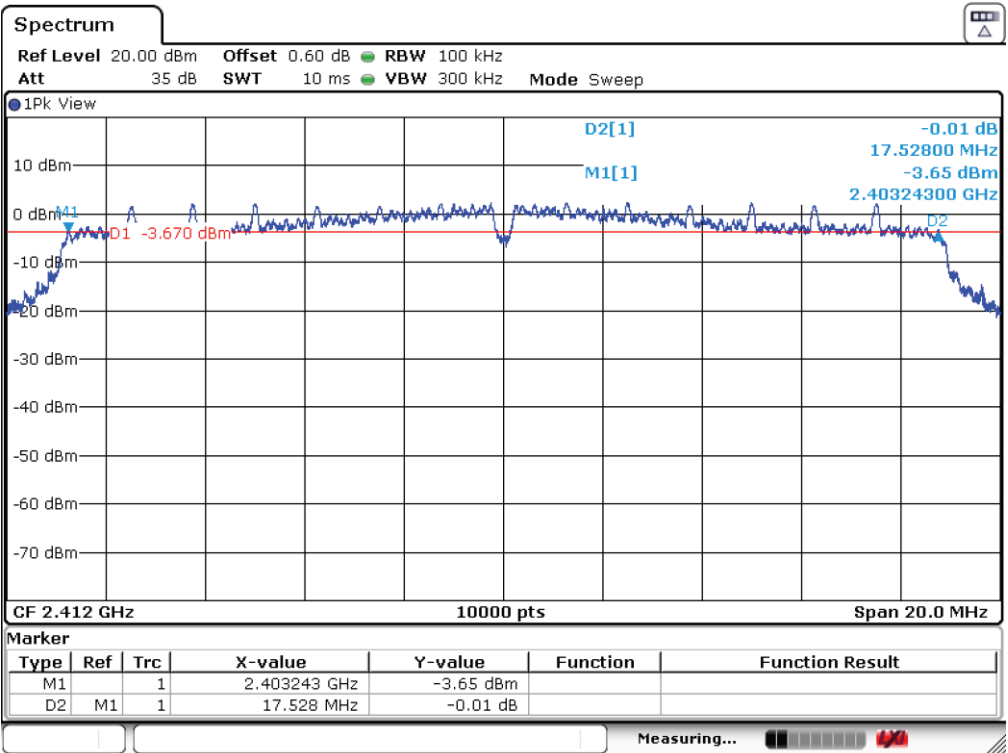


Highest channel

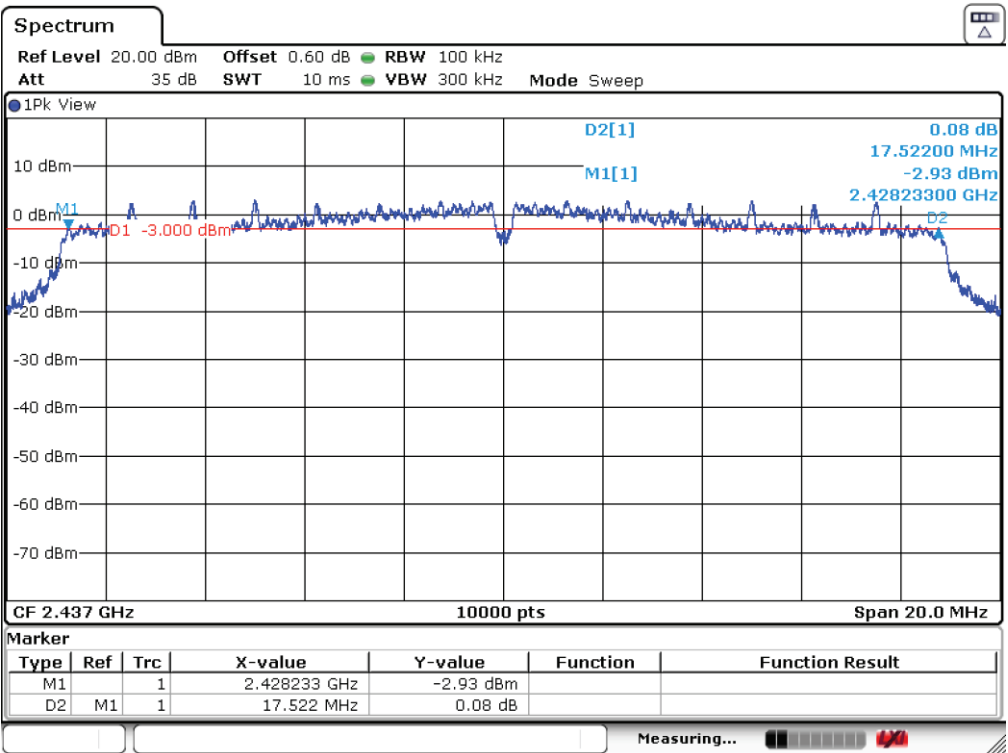


Mode N20

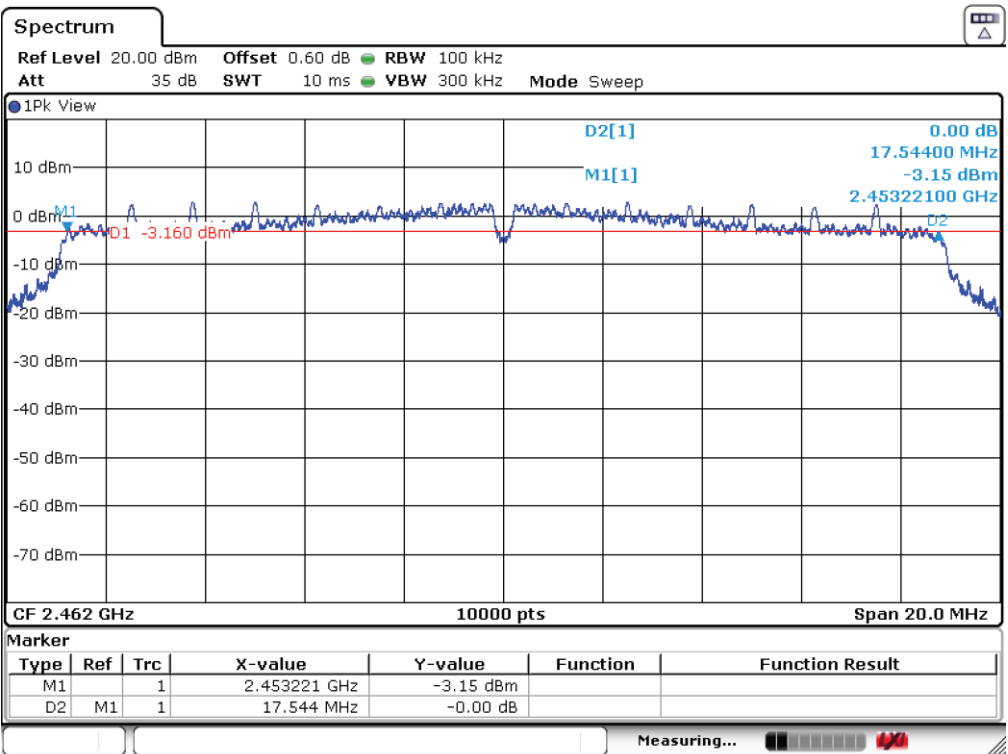
Lowest Channel



Middle Channel

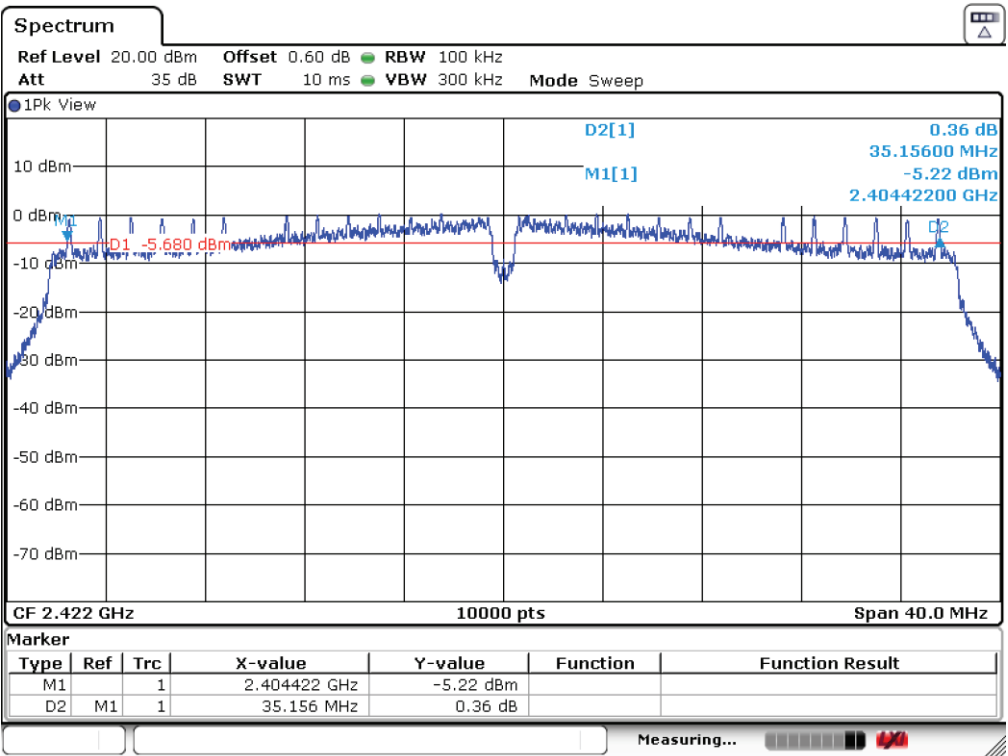


Highest channel

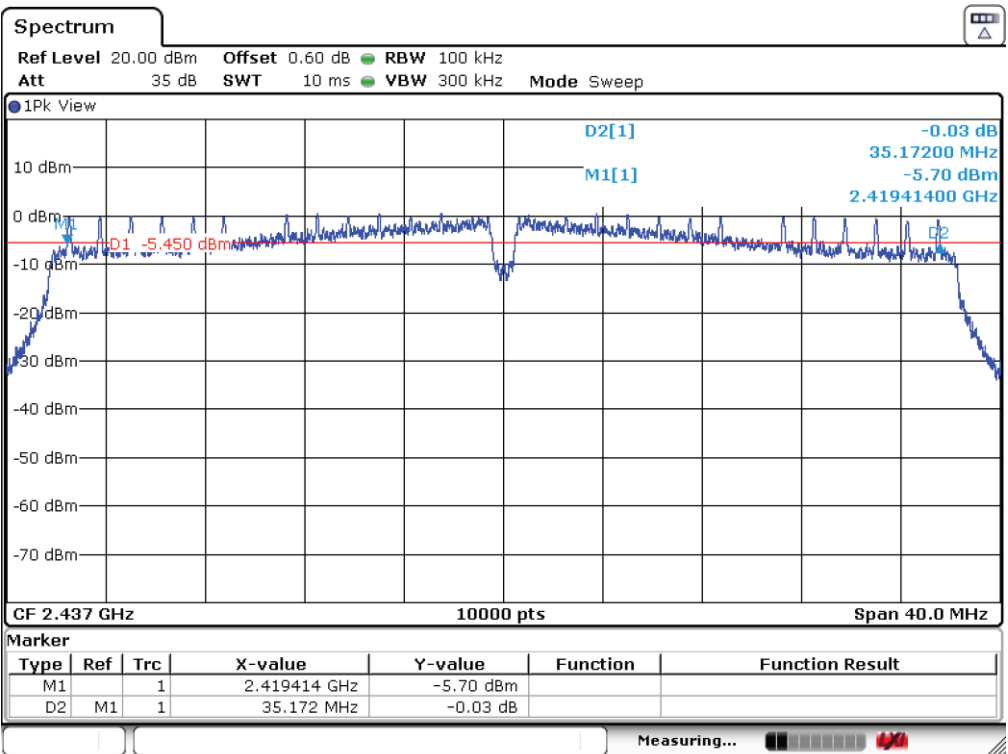


Mode N40

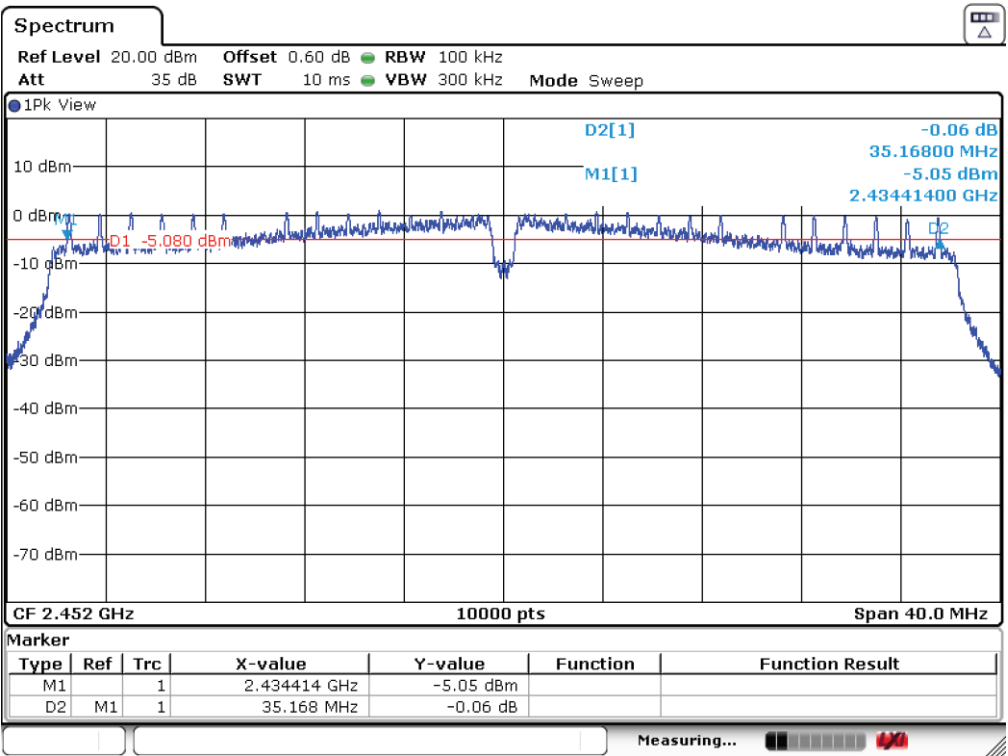
Lowest Channel



Middle Channel



Highest channel



Section 15.247 Subclause (b) / RSS-247 5.4. (4). Maximum output power and antenna gain

SPECIFICATION

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 (36 dBm) (Canada).

RESULTS

For all modes, the maximum conducted (average) output power was measured using the method according to point 9.2.2.2 of Guidance for Performing Compliance Measurements on Transmission Systems (DTS) Operating Under §15.247 558074 D01 DTS Meas Guidance v04 dated 05/04/2017.

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

MAXIMUM OUTPUT POWER. See next plots.

Declared Gain for antenna RF WIFI/Bluetooth (maximum): -6.2 dBi.

Mode B: Average Conducted Output Power:

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Maximum conducted power (dBm)	14.95	15.91	15.48
Maximum EIRP power (dBm)	8.75	9.71	9.28
Measurement uncertainty (dB)	<±1.20		

Mode G: Average Conducted Output Power:

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Maximum conducted power (dBm)	15.63	16.39	16.01
Maximum EIRP power (dBm)	9.43	10.19	9.81
Measurement uncertainty (dB)	<±1.20		

Mode N20: Average Conducted Output Power:

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Maximum conducted power (dBm)	14.22	14.95	14.58
Maximum EIRP power (dBm)	8.02	8.75	8.38
Measurement uncertainty (dB)	<±1.20		

Mode N40: Average Conducted Output Power:

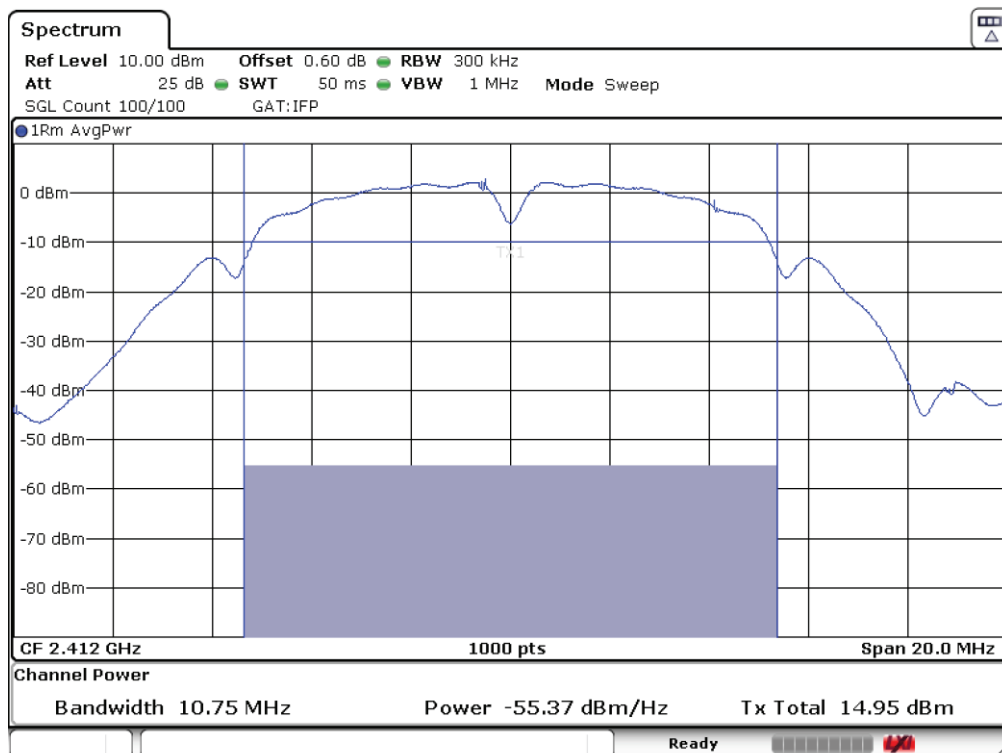
	Lowest frequency 2422 MHz	Middle frequency 2437 MHz	Highest frequency 2452 MHz
Maximum conducted power (dBm)	14.96	15.07	15.09
Maximum EIRP power (dBm)	8.76	8.87	8.89
Measurement uncertainty (dB)	<±1.20		

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.

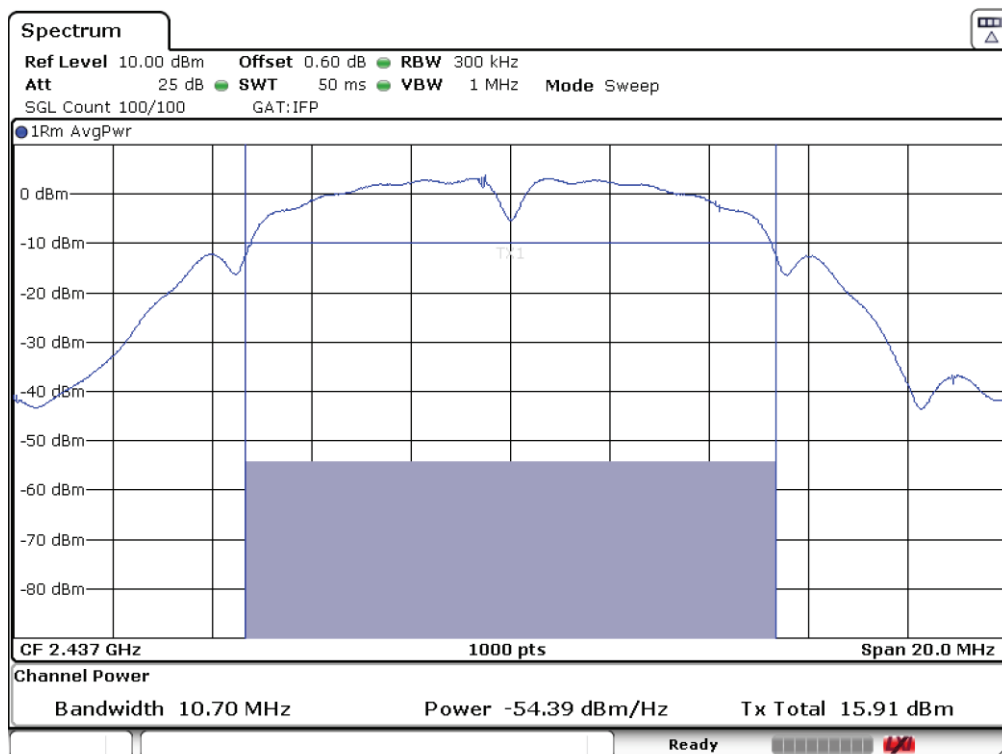
Verdict: PASS

Mode B

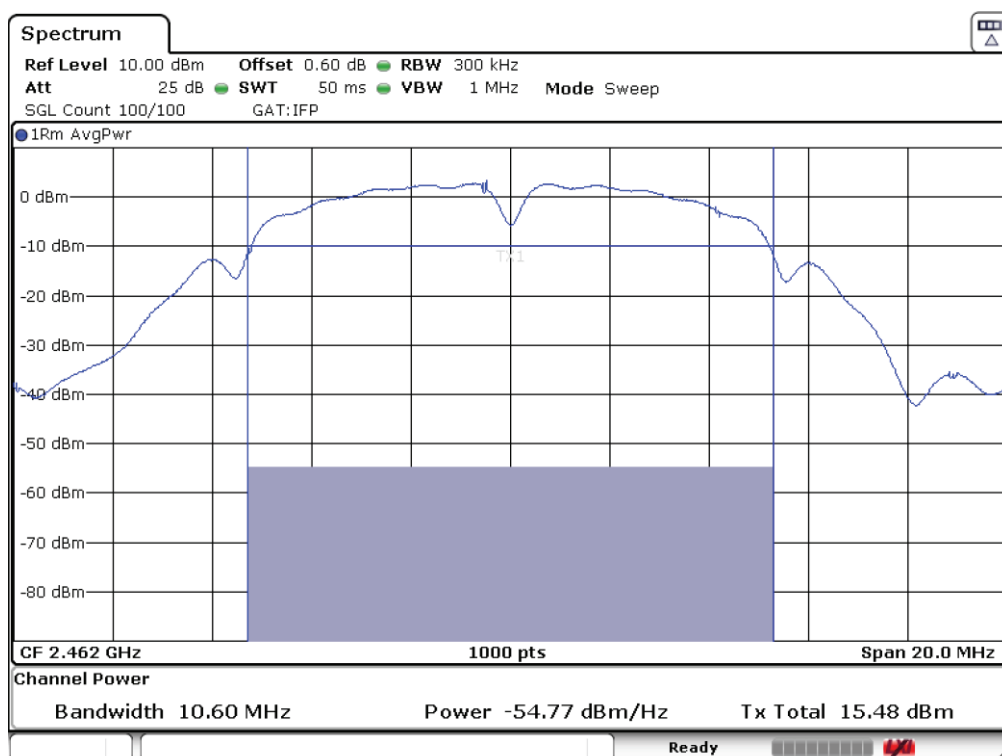
Lowest Channel



Middle Channel

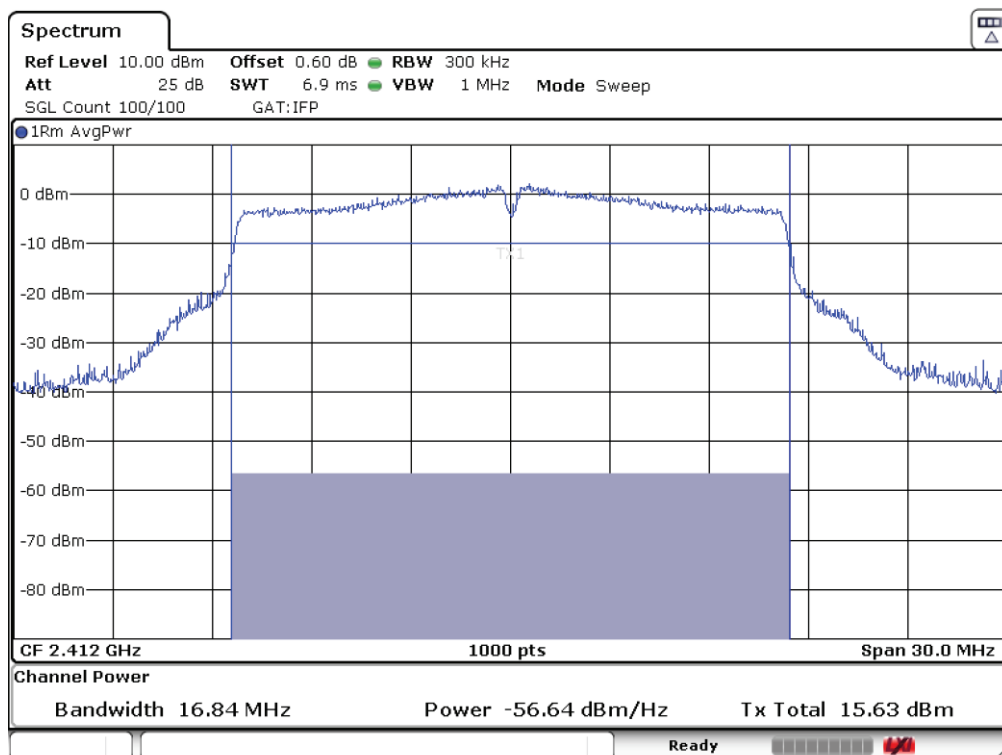


Highest Channel

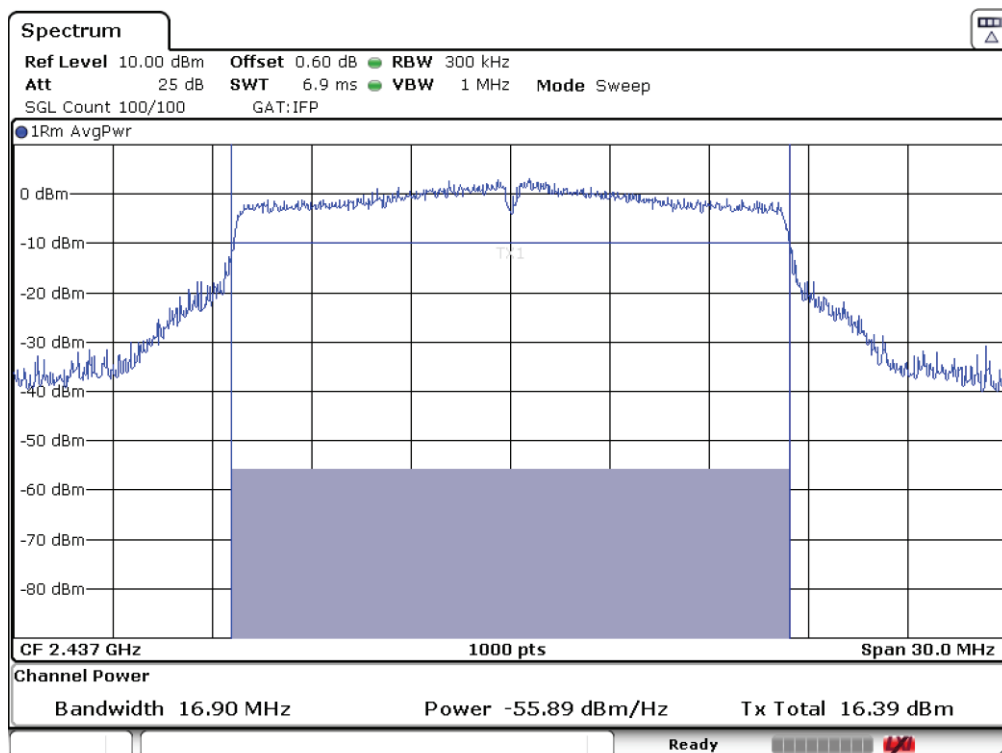


Mode G

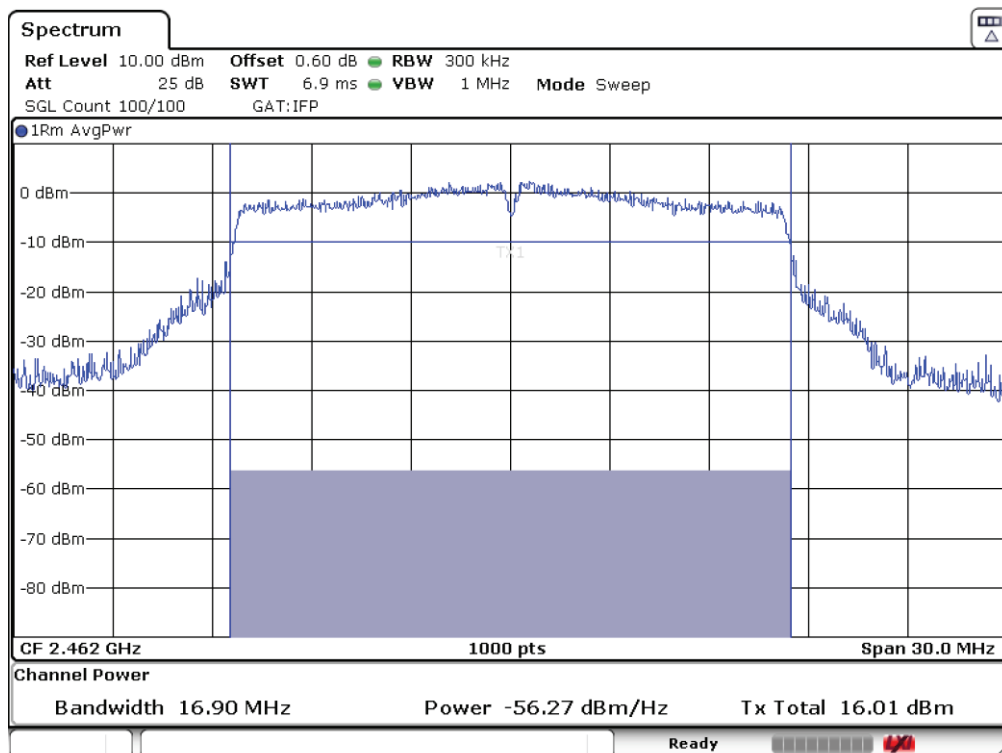
Lowest Channel



Middle Channel

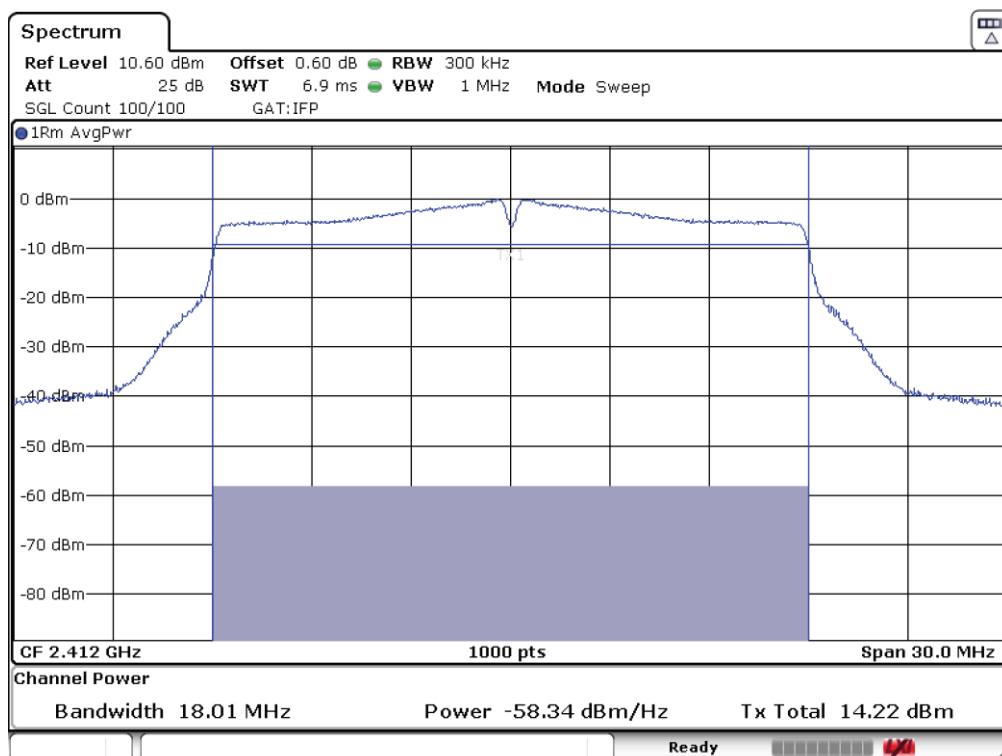


Highest Channel

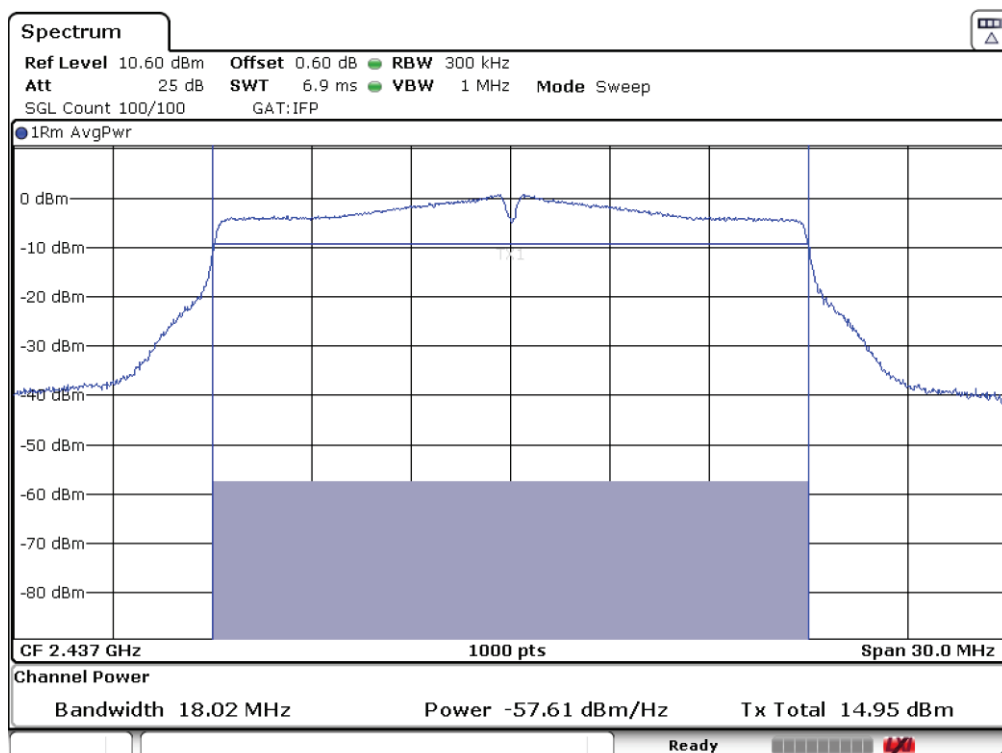


Mode N20

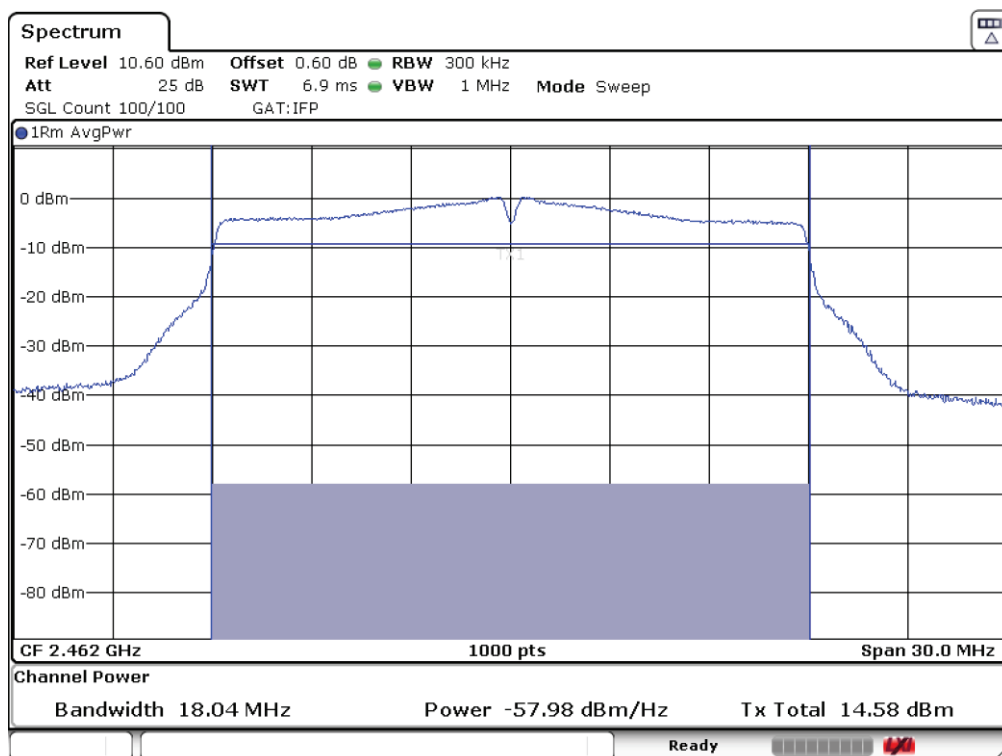
Lowest Channel



Middle Channel

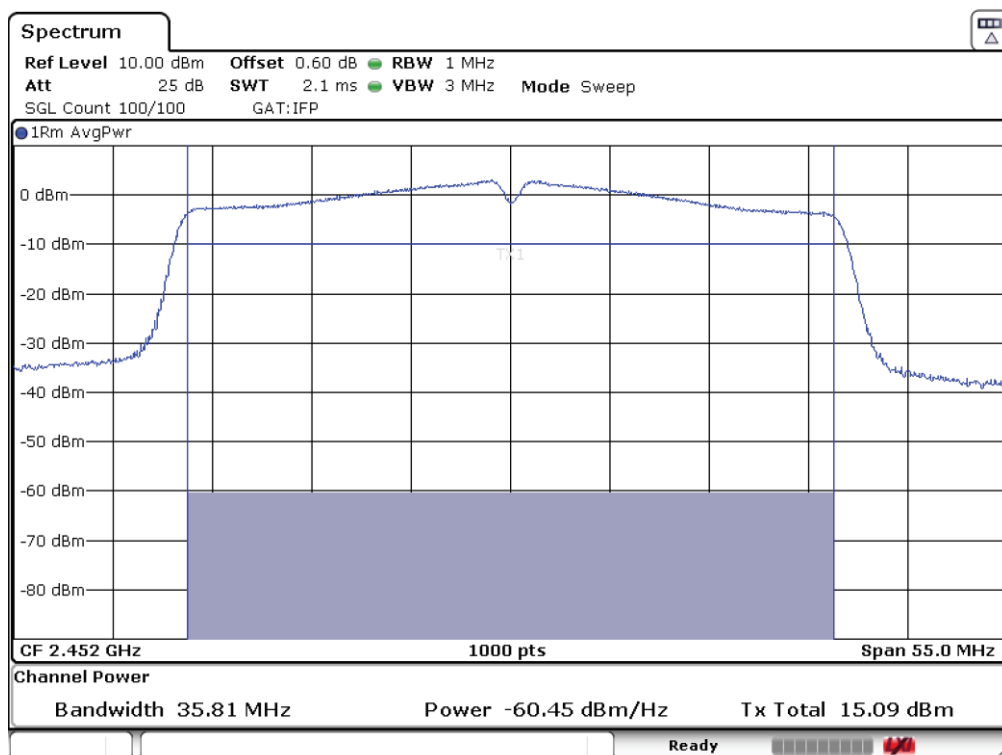


Highest Channel

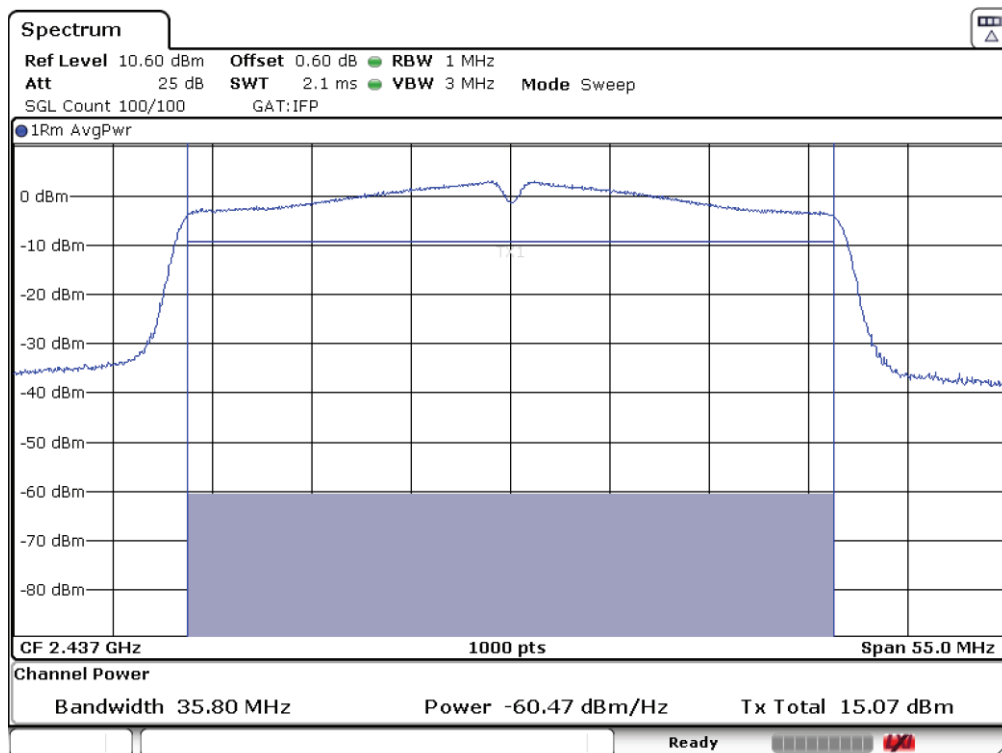


Mode N40

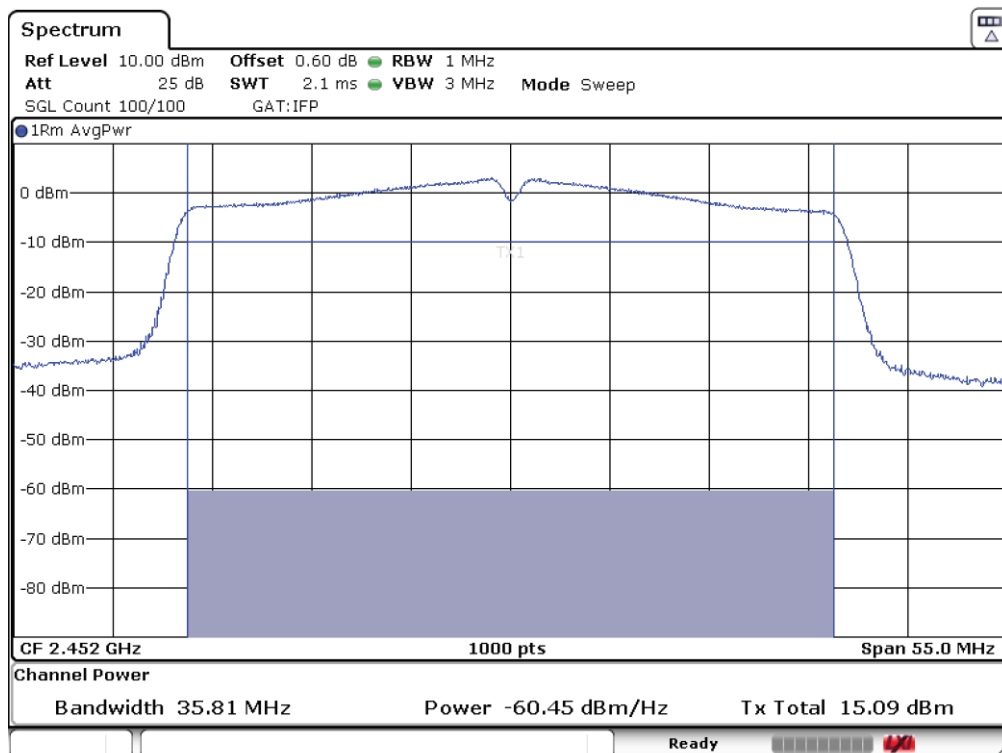
Lowest Channel



Middle Channel



Highest Channel



Section 15.247 Subclause (d) / RSS-247 5.5. Emission limitations conducted (Transmitter)

SPECIFICATION

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.

RESULTS:

Reference Level Measurement

Mode B

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Reference Level Measurement (dBm)	6.74	7.36	6.98
Measurement uncertainty (dB)	<±1.20		

Mode G

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Reference Level Measurement (dBm)	3.36	3.95	3.78
Measurement uncertainty (dB)	<±1.20		

Mode N20

	Lowest frequency 2412 MHz	Middle frequency 2437 MHz	Highest frequency 2462 MHz
Reference Level Measurement (dBm)	2.52	3.17	2.81
Measurement uncertainty (dB)	<±1.20		

Mode N40

	Lowest frequency 2422 MHz	Middle frequency 2437 MHz	Highest frequency 2452 MHz
Reference Level Measurement (dBm)	0.73	0.94	1.30
Measurement uncertainty (dB)	<±1.20		

Mode B

Lowest frequency 2412 MHz

Lowest frequency 2412 MHz	Limit (dBm)
All peaks are more than 20 dB below the limit.	-23.26

Middle frequency 2437 MHz	Limit (dBm)
All peaks are more than 20 dB below the limit.	-22.64

Highest frequency 2462 MHz	Limit (dBm)
All peaks are more than 20 dB below the limit.	-23.02

Mode G

Lowest frequency 2412 MHz	Limit (dBm)
All peaks are more than 20 dB below the limit.	-26.64

Middle frequency 2437 MHz	Limit (dBm)
All peaks are more than 20 dB below the limit.	-26.05

Highest frequency 2462 MHz	Limit (dBm)
All peaks are more than 20 dB below the limit.	-26.22

Mode N20

Lowest frequency 2412 MHz	Limit (dBm)
All peaks are more than 20 dB below the limit.	-27.48

Middle frequency 2437 MHz	Limit (dBm)
All peaks are more than 20 dB below the limit.	-26.83

Highest frequency 2462 MHz	Limit (dBm)
All peaks are more than 20 dB below the limit.	-27.19

Mode N40

Lowest frequency 2422 MHz	Limit (dBm)
All peaks are more than 20 dB below the limit.	-29.27

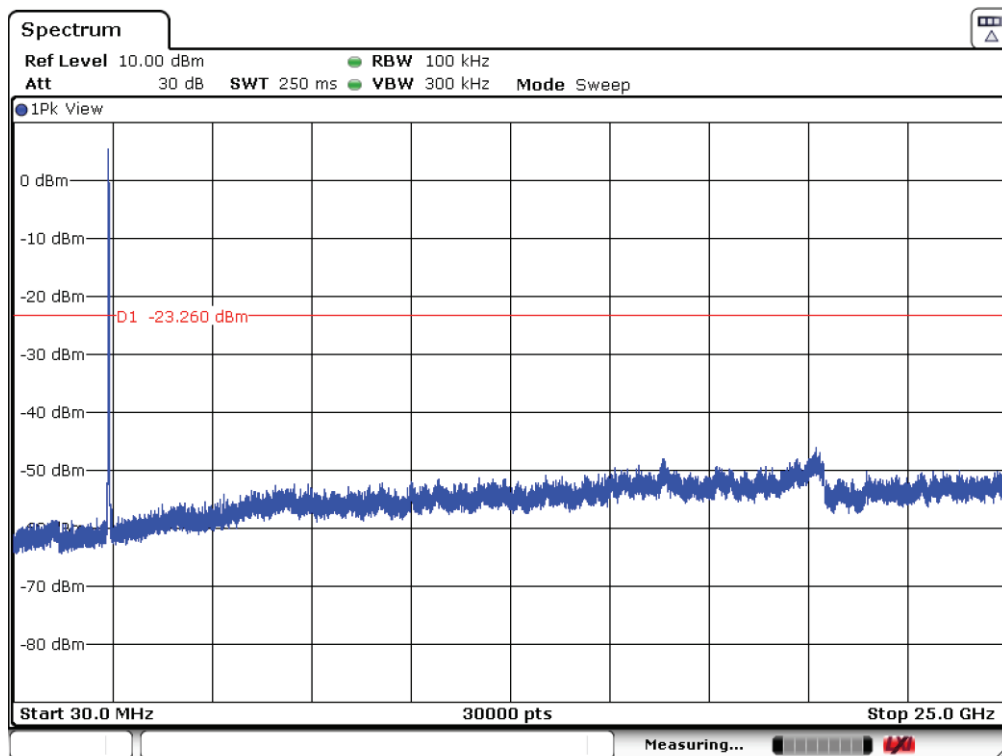
Middle frequency 2437 MHz	Limit (dBm)
All peaks are more than 20 dB below the limit.	-29.06

Highest frequency 2452 MHz	Limit (dBm)
All peaks are more than 20 dB below the limit.	-28.70

Verdict: PASS

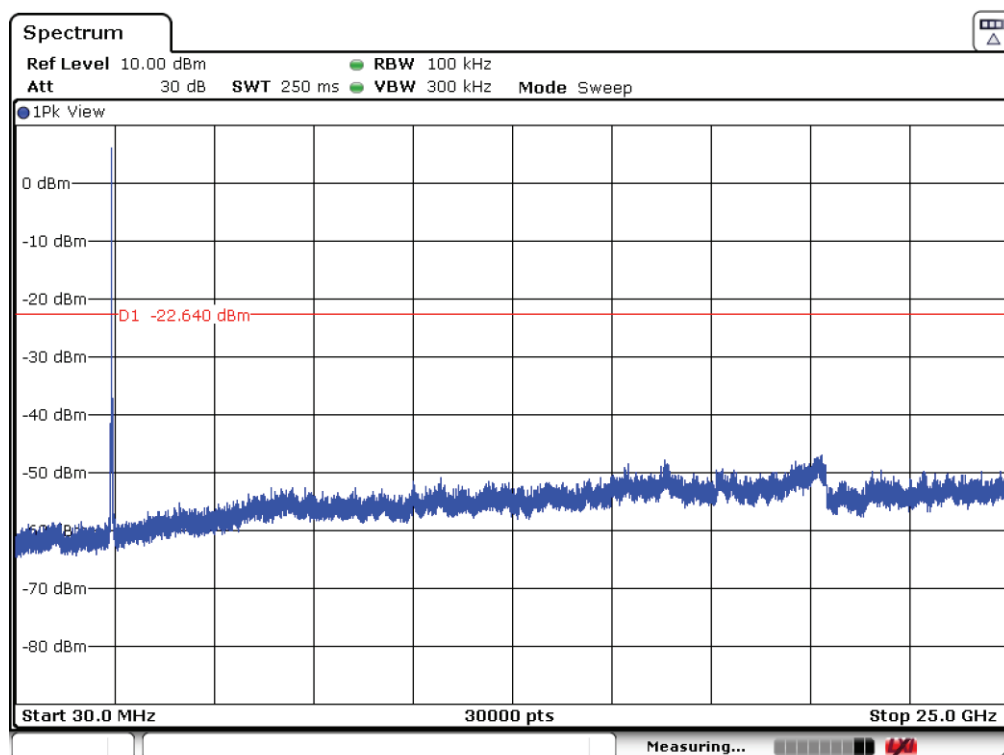
Mode B

Lowest Channel



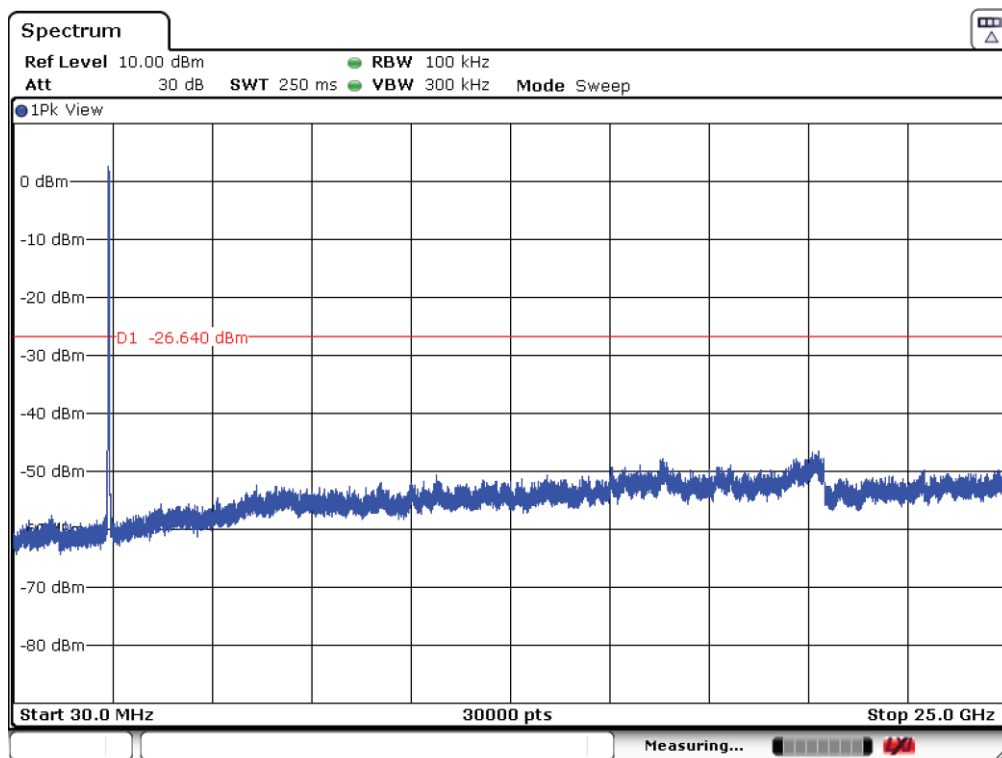
Note: The peak shown in the plot above the limit is the carrier frequency.

Middle Channel



Note: The peak shown in the plot above the limit is the carrier frequency.

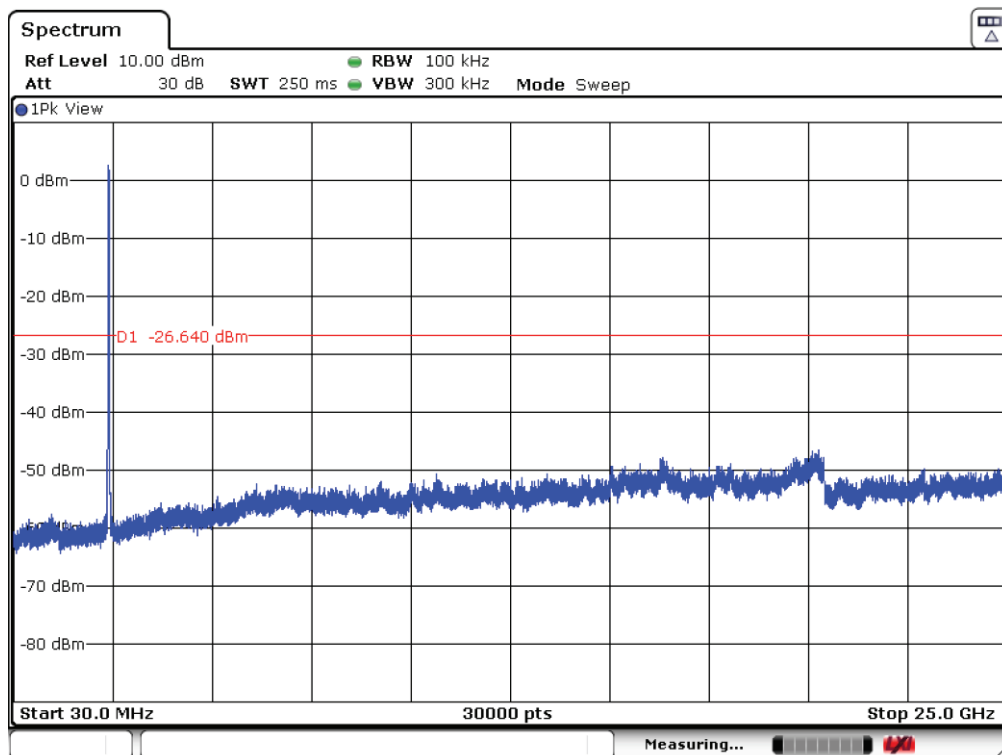
Highest channel



Note: The peak shown in the plot above the limit is the carrier frequency.

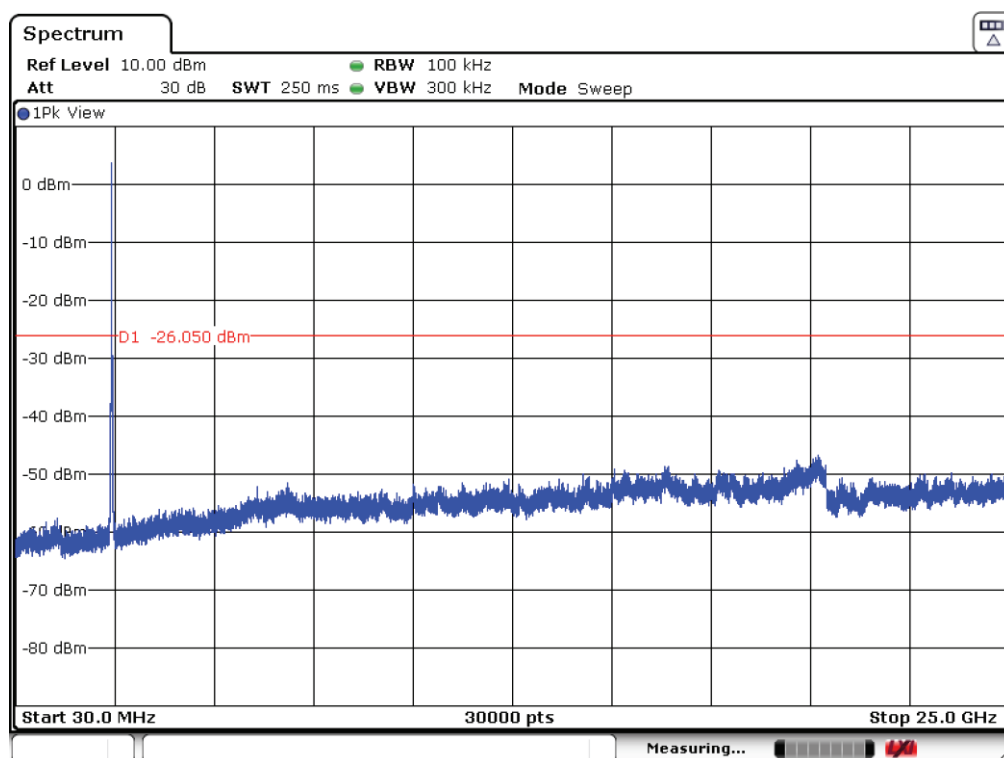
Mode G

Lowest Channel



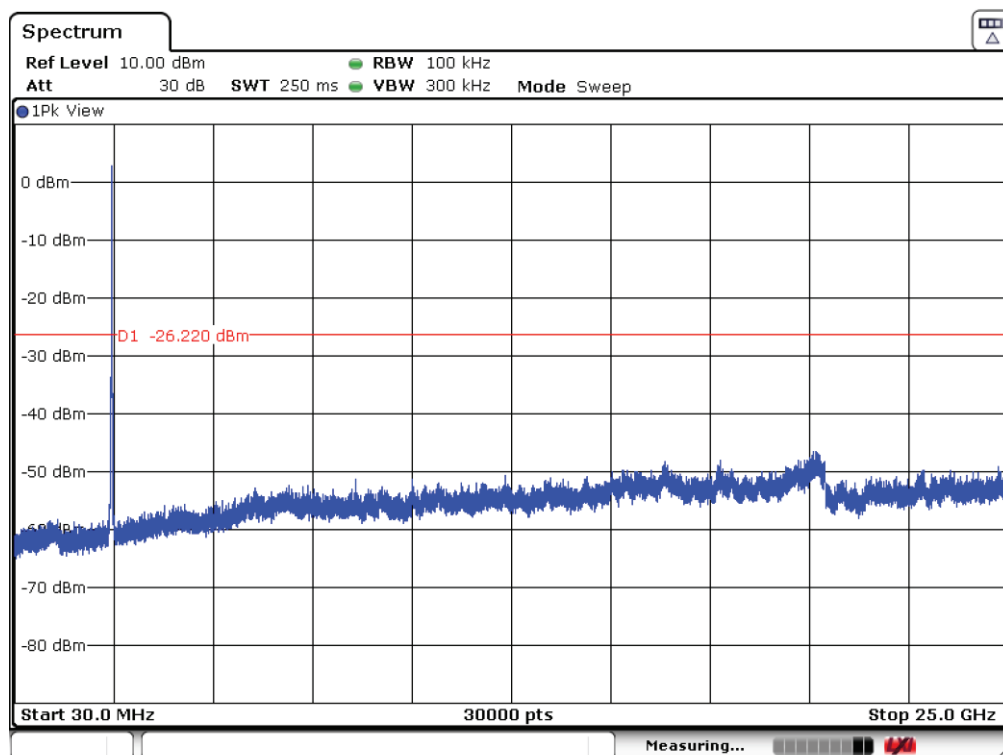
Note: The peak shown in the plot above the limit is the carrier frequency.

Middle Channel



Note: The peak shown in the plot above the limit is the carrier frequency.

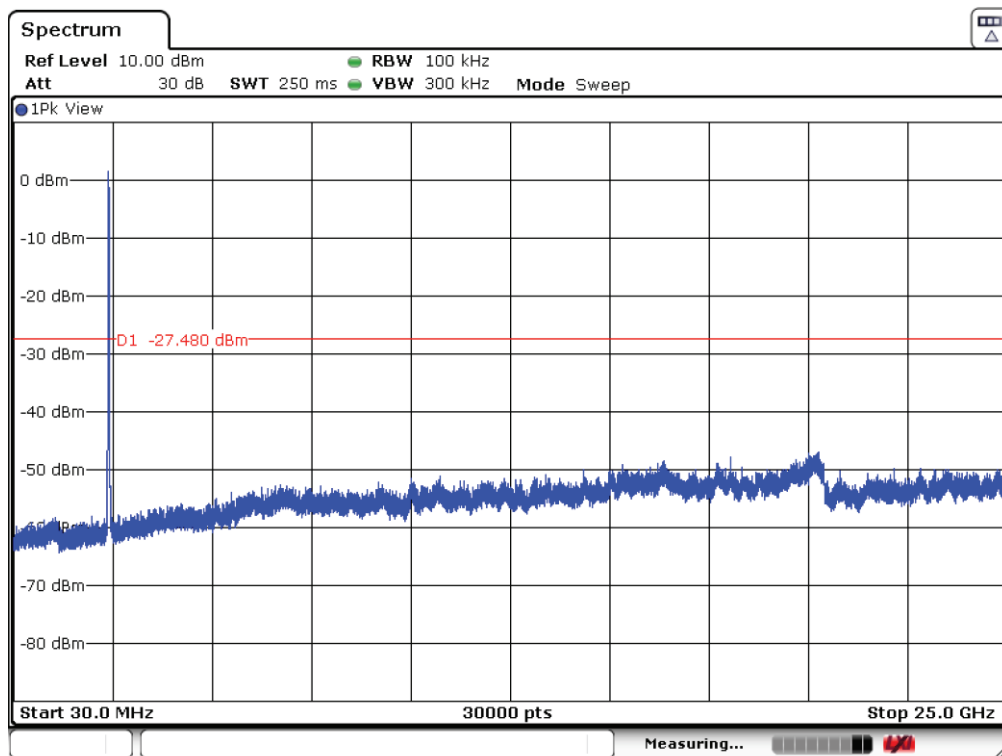
Highest channel



Note: The peak shown in the plot above the limit is the carrier frequency.

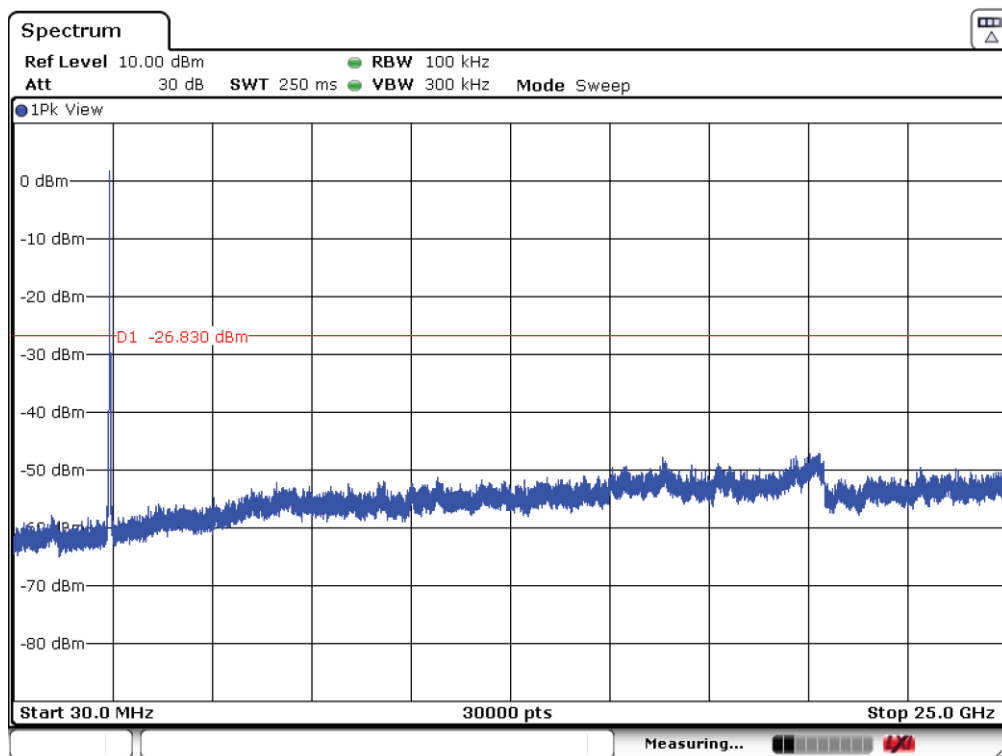
Mode N20

Lowest Channel



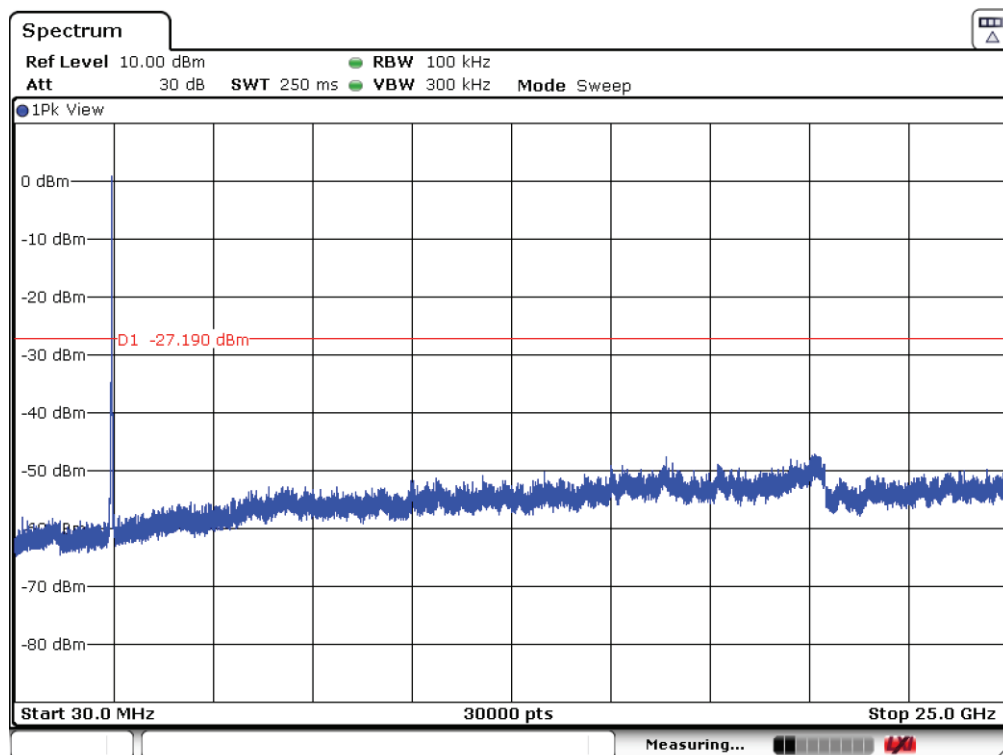
Note: The peak shown in the plot above the limit is the carrier frequency.

Middle Channel



Note: The peak shown in the plot above the limit is the carrier frequency.

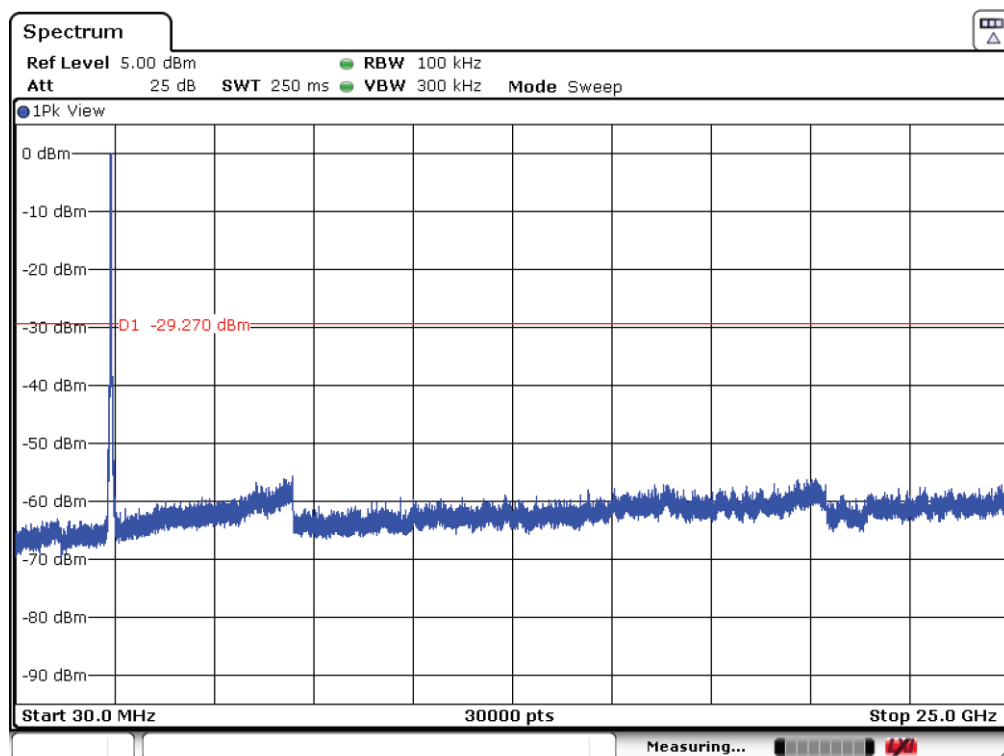
Highest channel



Note: The peak shown in the plot above the limit is the carrier frequency.

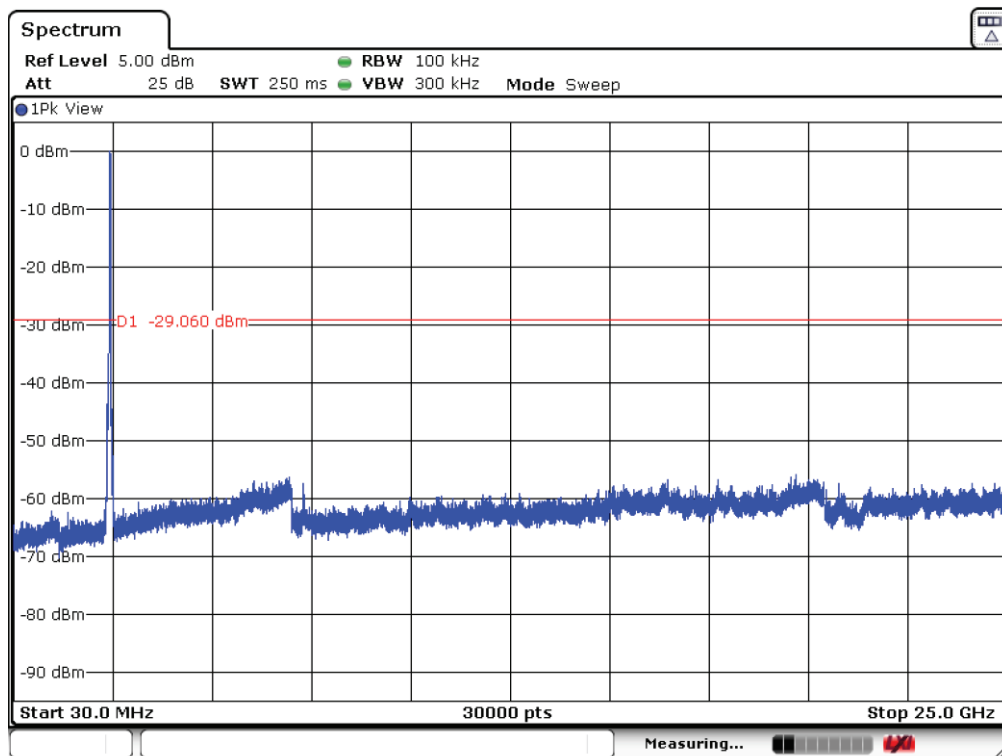
Mode N40

Lowest Channel



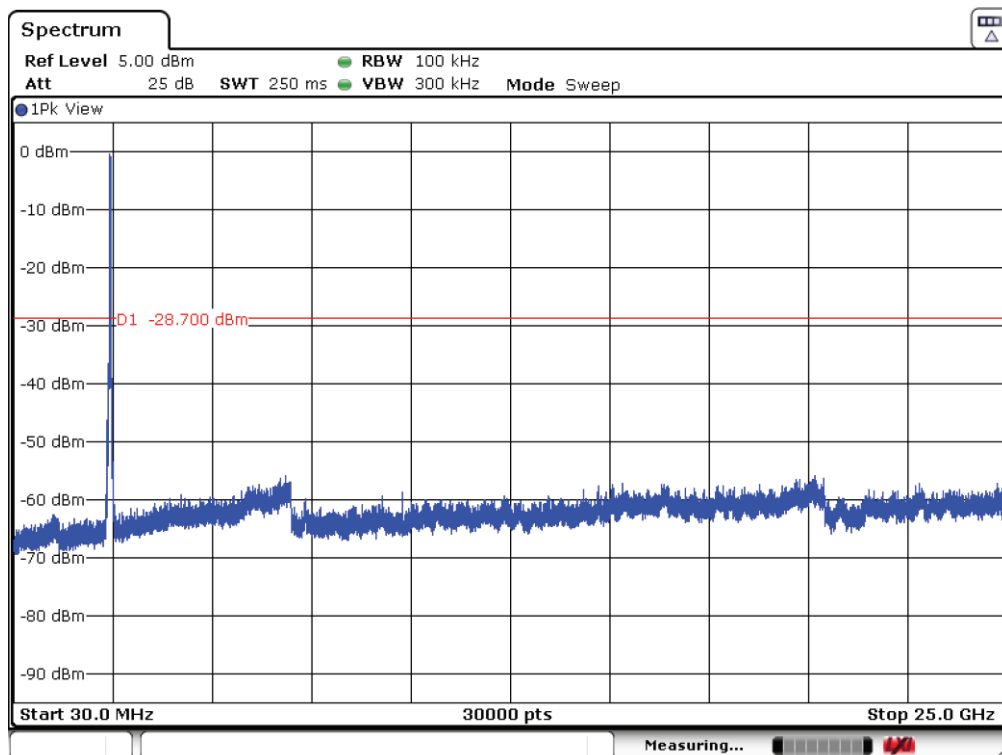
Note: The peak shown in the plot above the limit is the carrier frequency.

Middle Channel



Note: The peak shown in the plot above the limit is the carrier frequency.

Highest Channel



Note: The peak shown in the plot above the limit is the carrier frequency.

Section 15.247 Subclause (d) / RSS-247 5.5. Band-edge emissions compliance (Transmitter)

SPECIFICATION

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.

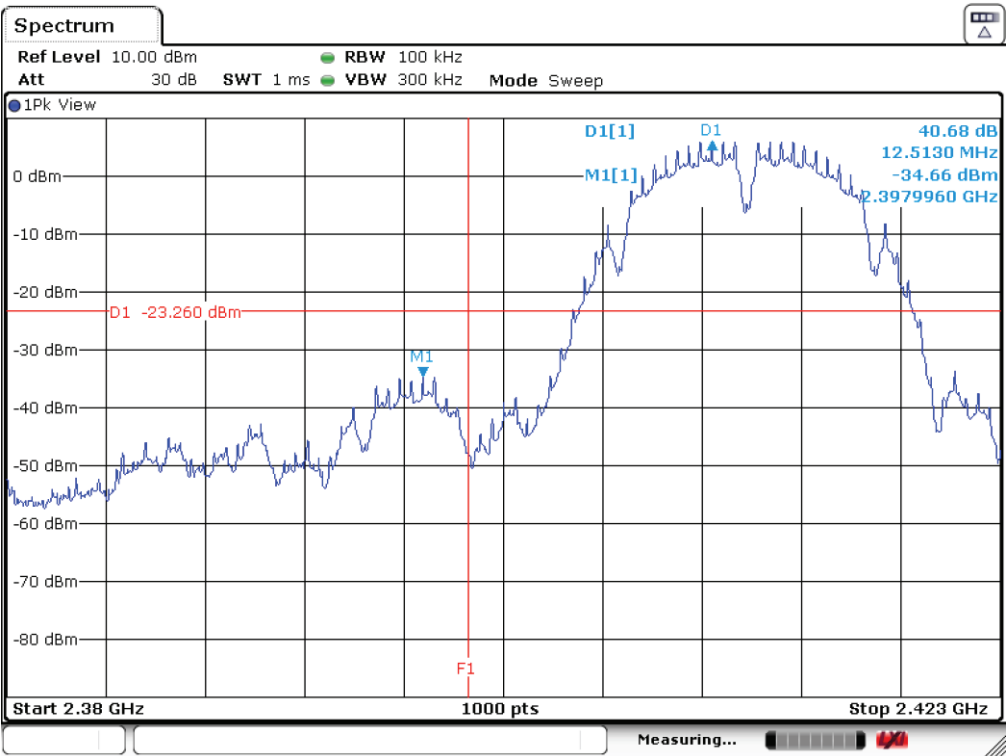
RESULTS:

Note: Radiated measurements were used to show compliance with the limits in the restricted bands 2.31-2.39 GHz and 2.4835-2.5 GHz.

LOW FREQUENCY SECTION 2412 MHz (b/g/n20) and LOW FREQUENCY SECTION 2422 MHz (n40) CONDUCTED.

Mode B

See next plot.



Measurement uncertainty (dB)	< ±2.03
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Verdict: PASS