POWER SPECTRAL DENSITY

XMit 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Keysight	N5182B	TFU	2020-11-20	2022-11-20
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2022-03-14	2023-03-14
Attenuator	S.M. Electronics	SA26B-20	AUY	2022-03-15	2023-03-15
Block - DC	Fairview Microwave	SD3379	AMW	2022-03-14	2023-03-14
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2021-07-06	2022-07-06

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The power spectral density was measured using the channels and modes as called out in the following data sheets.

The method AVGPSD-2 in clause 11.10.5 of ANSI C63.10:2013 was used to make the measurement. This method uses trace averaging and RMS detection across the ON and OFF times of the transmission. The analyzer was configured to the following settings:

Span = at least 1.5 * OBW
RBW = 100 kHz
VBW = 300 kHz
Detector = RMS
Sweep = 601 mS
Points = 601

The peak marker function was used to determine the maximum amplitude level. An additional [10*log(1 / D)], where D is the duty cycle was added to the peak marker to compute the average PSD during the actual transmission time.
The resultant value was further corrected to the reference bandwidth of 3 kHz using a correction factor of -15.2 dB, and compared to the limit.

dBm/100kHz To dBm/3kHz = 10*log(Ref. RBW / Meas. Bandwidth)
= 10*log(3 kHz / 100 kHz) = -15.2 dB

POWER SPECTRAL DENSITY

TbtTx 2021.03.19.1 XMit 2022.02.07.0

EUT:	SHOUT sp Handheld Iridium Smartphone	Work Order:	PCTE0003
Serial Number:	FCC3	Date:	18-May-22
Customer:	NAL Research Corporation	Temperature:	22.6 °C
Attendees:	None	Humidity:	43.1% RH
Project:	None	Barometric Pres.:	1025 mbar
Tested by:	Jeff Alcoke	Power: 5.0 VDC via USB	Job Site: EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2022	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

Configuration # 12

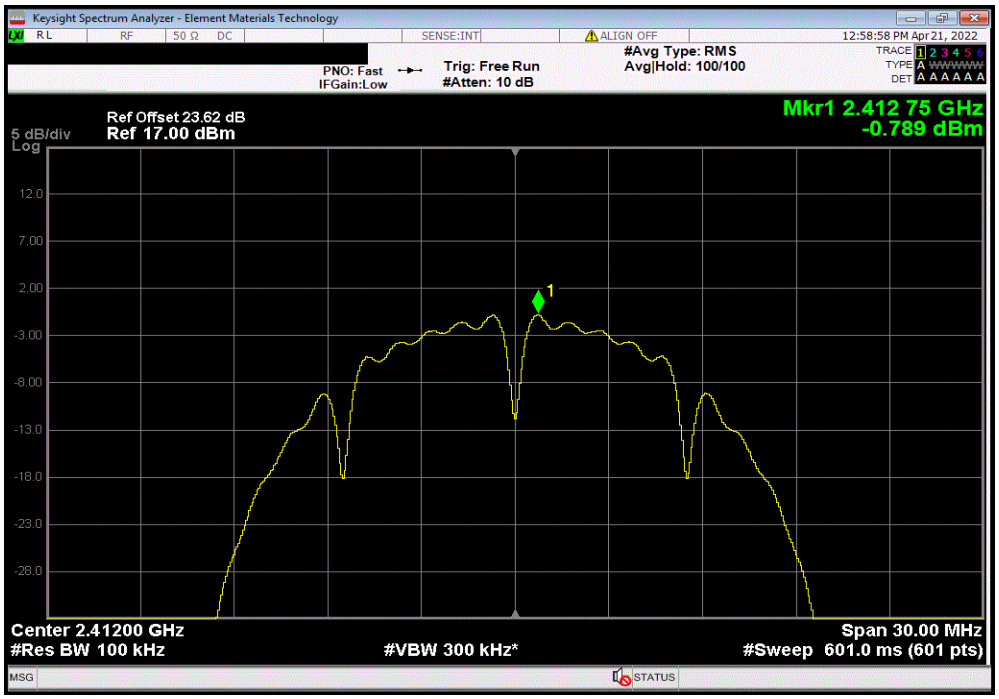
Signature

	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
2400 MHz - 2483.5 MHz Band						
20 MHz						
802.11(b) 1 Mbps						
Low Channel 1, 2412 MHz	-0.789	0	-15.2	-16.0	8	Pass
Mid Channel 6, 2437 MHz	-0.97	0	-15.2	-16.2	8	Pass
High Channel 11, 2462 MHz	-1.239	0	-15.2	-16.4	8	Pass
802.11(b) 11 Mbps						
Low Channel 1, 2412 MHz	-1.937	0.3	-15.2	-16.8	8	Pass
Mid Channel 6, 2437 MHz	-2.304	0.3	-15.2	-17.2	8	Pass
High Channel 11, 2462 MHz	-2.332	0.3	-15.2	-17.2	8	Pass
802.11(g) 6 Mbps						
Low Channel 1, 2412 MHz	-7.146	0.2	-15.2	-22.1	8	Pass
Mid Channel 6, 2437 MHz	-3.058	0.2	-15.2	-18.1	8	Pass
High Channel 11, 2462 MHz	-7.241	0.2	-15.2	-22.2	8	Pass
802.11(g) 36 Mbps						
Low Channel 1, 2412 MHz	-7.852	0.9	-15.2	-22.2	8	Pass
Mid Channel 6, 2437 MHz	-5.275	0.9	-15.2	-19.6	8	Pass
High Channel 11, 2462 MHz	-7.947	0.9	-15.2	-22.2	8	Pass
802.11(g) 54 Mbps						
Low Channel 1, 2412 MHz	-8.242	1.3	-15.2	-22.1	8	Pass
Mid Channel 6, 2437 MHz	-7.163	1.3	-15.2	-21.1	8	Pass
High Channel 11, 2462 MHz	-8.18	1.3	-15.2	-22.1	8	Pass
802.11(n) MCS0						
Low Channel 1, 2412 MHz	-9.381	0.2	-15.2	-24.4	8	Pass
Mid Channel 6, 2437 MHz	-4.518	0.2	-15.2	-19.5	8	Pass
High Channel 11, 2462 MHz	-9.527	0.2	-15.2	-24.5	8	Pass
802.11(n) MCS7						
Low Channel 1, 2412 MHz	-10.295	1.6	-15.2	-23.9	8	Pass
Mid Channel 6, 2437 MHz	-8.402	1.6	-15.2	-22.0	8	Pass
High Channel 11, 2462 MHz	-10.388	1.6	-15.2	-24.0	8	Pass
40 MHz						
802.11(n) MCS0						
Low Channel 1/5, 2422 MHz	-13.338	0.4	-15.2	-28.1	8	Pass
Mid Channel 4/8, 2437 MHz	-8.993	0.4	-15.2	-23.8	8	Pass
High Channel 7/11, 2452 MHz	-13.554	0.4	-15.2	-28.4	8	Pass
802.11(n) MCS7						
Low Channel 1/5, 2422 MHz	-13.217	2.7	-15.2	-25.7	8	Pass
Mid Channel 4/8, 2437 MHz	-13.391	2.7	-15.2	-25.9	8	Pass
High Channel 7/11, 2452 MHz	-13.366	2.7	-15.2	-25.9	8	Pass

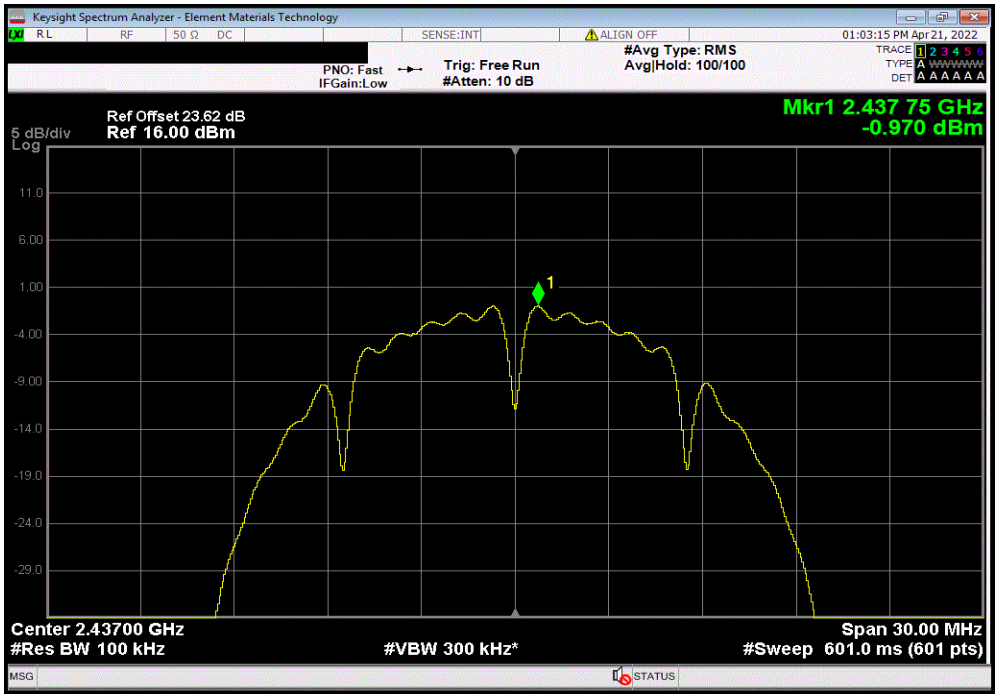
POWER SPECTRAL DENSITY

TbtTx 2021.03.19.1 XMit 2022.02.07.0

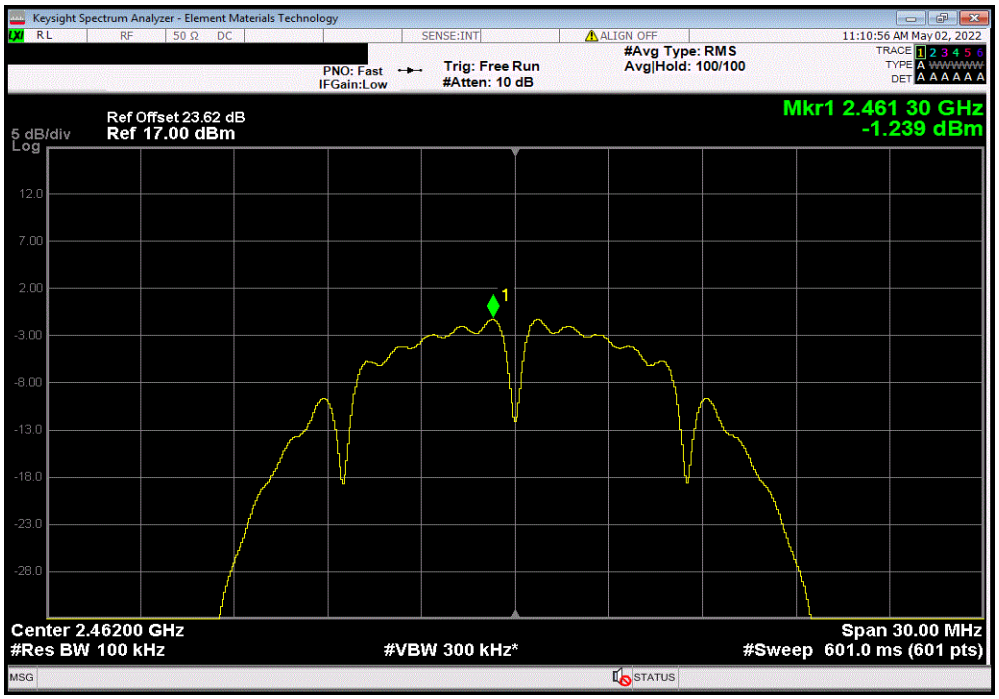
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-0.789	0	-15.2	-16.0	8	Pass



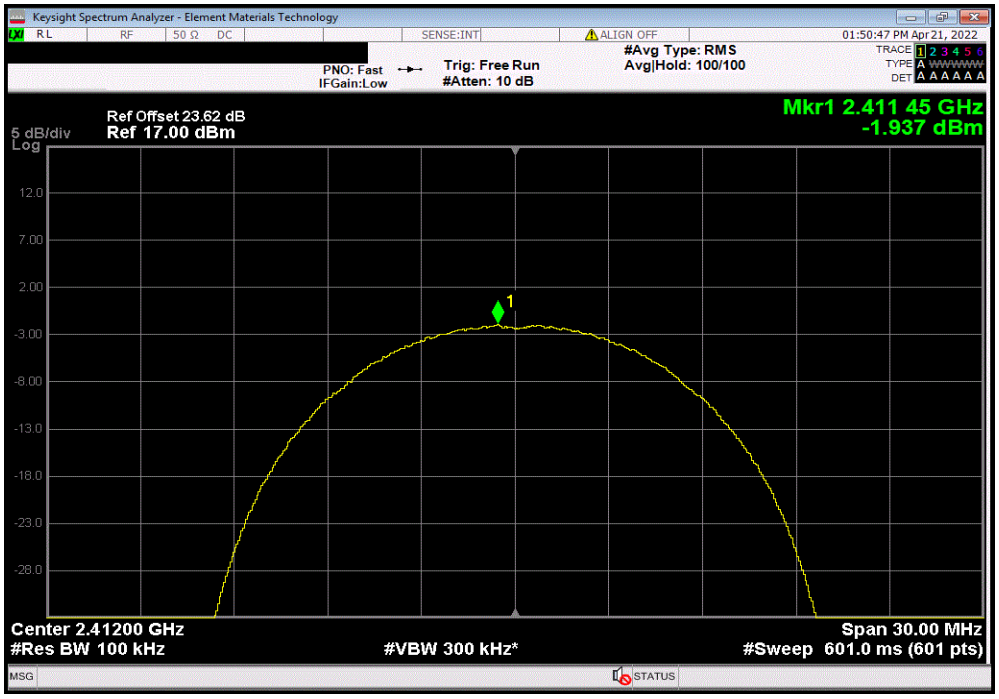
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-0.97	0	-15.2	-16.2	8	Pass



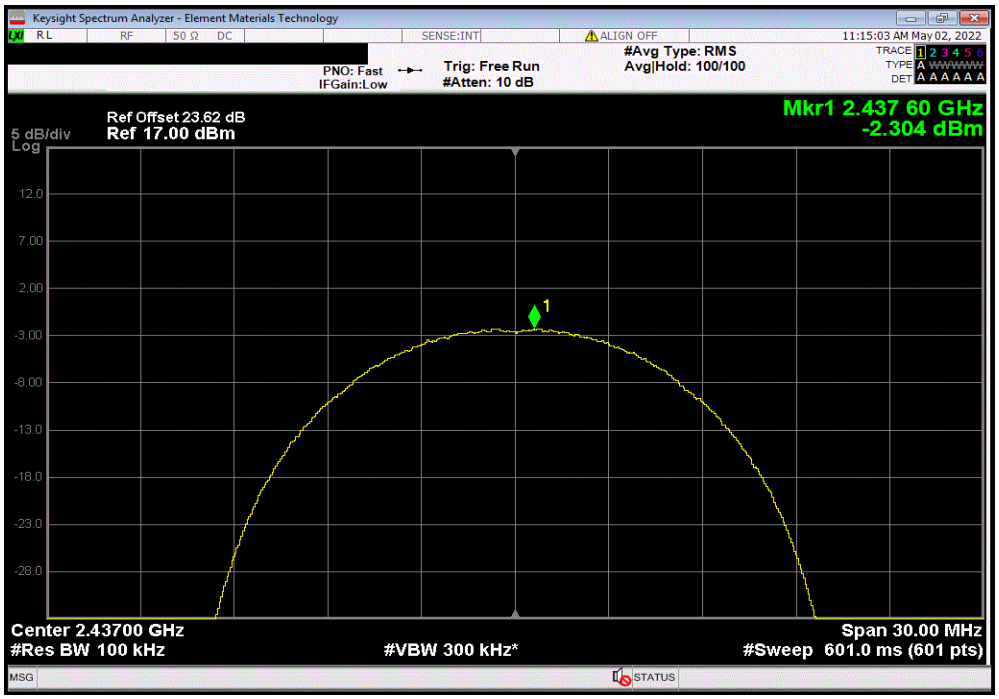
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-1.239	0	-15.2	-16.4	8	Pass



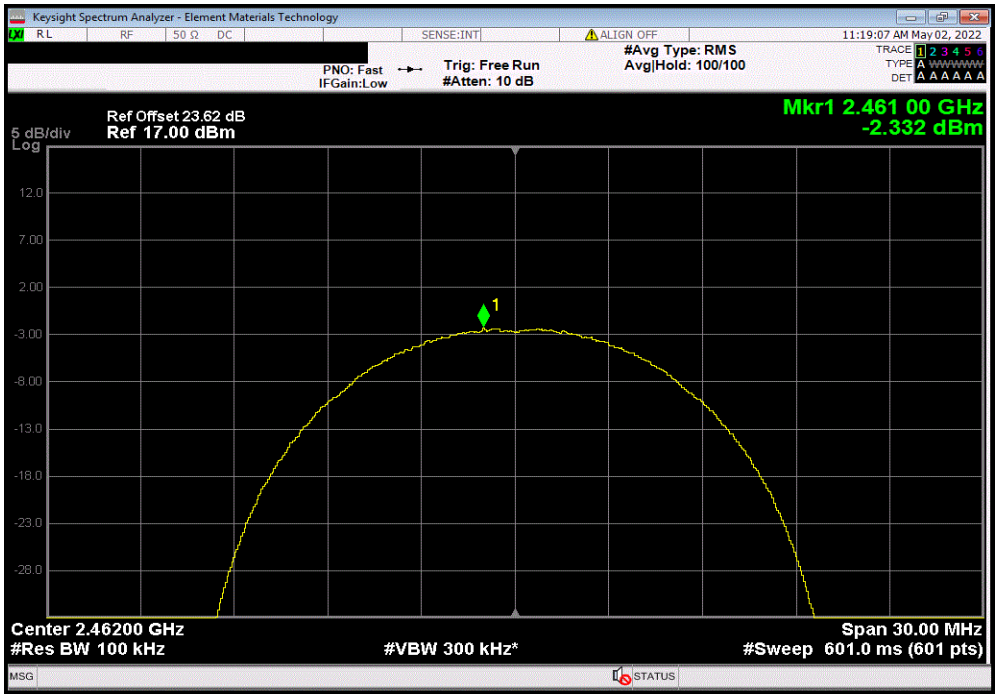
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-1.937	0.3	-15.2	-16.8	8	Pass



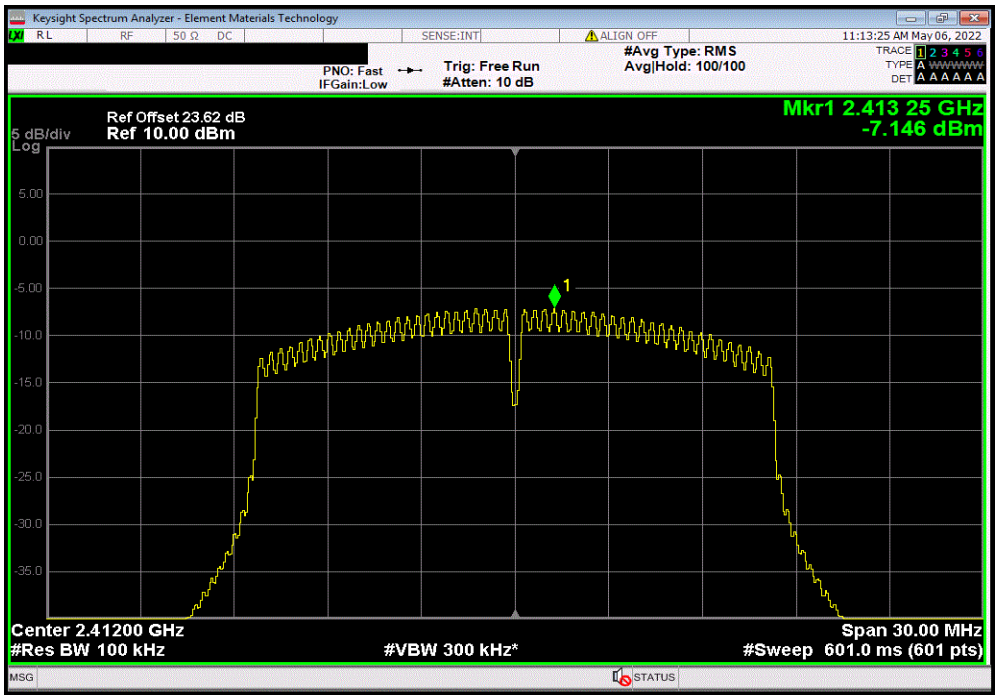
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-2.304	0.3	-15.2	-17.2	8	Pass



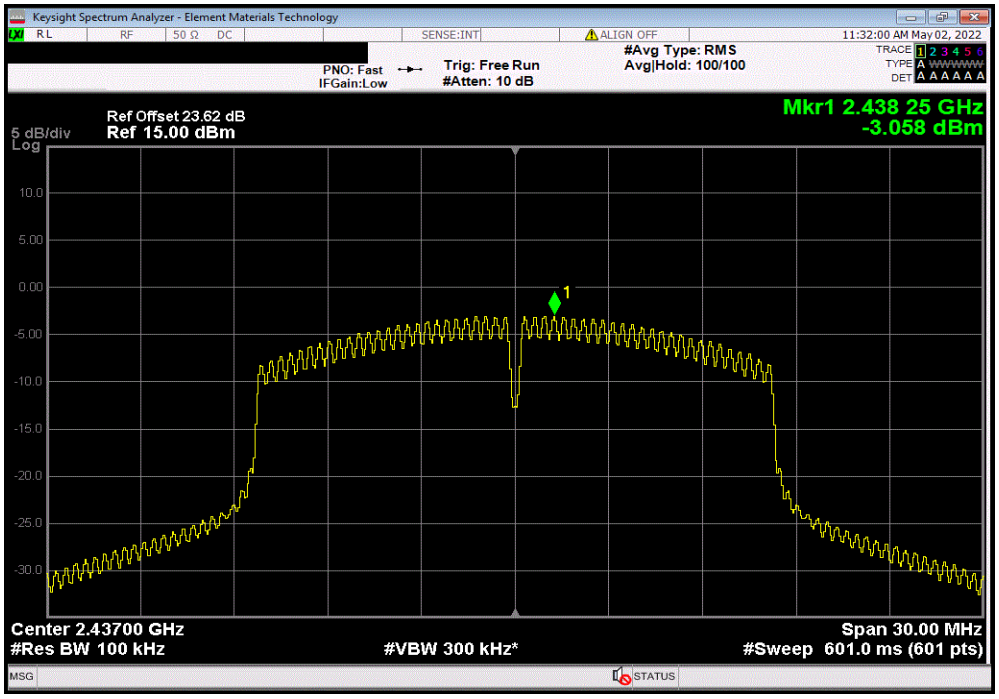
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-2.332	0.3	-15.2	-17.2	8	Pass



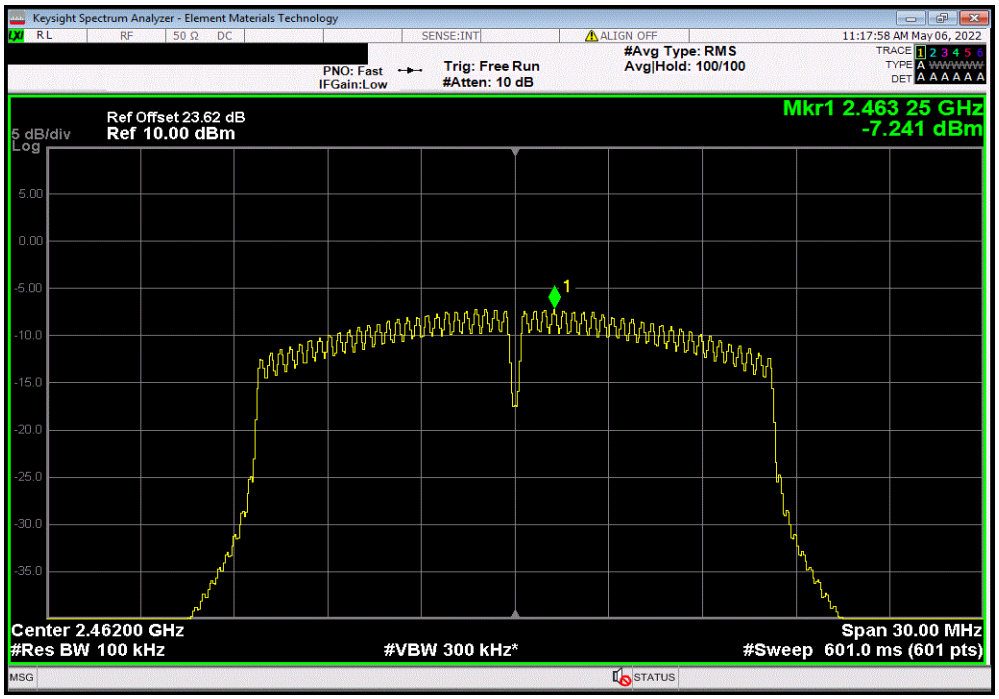
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-7.146	0.2	-15.2	-22.1	8	Pass



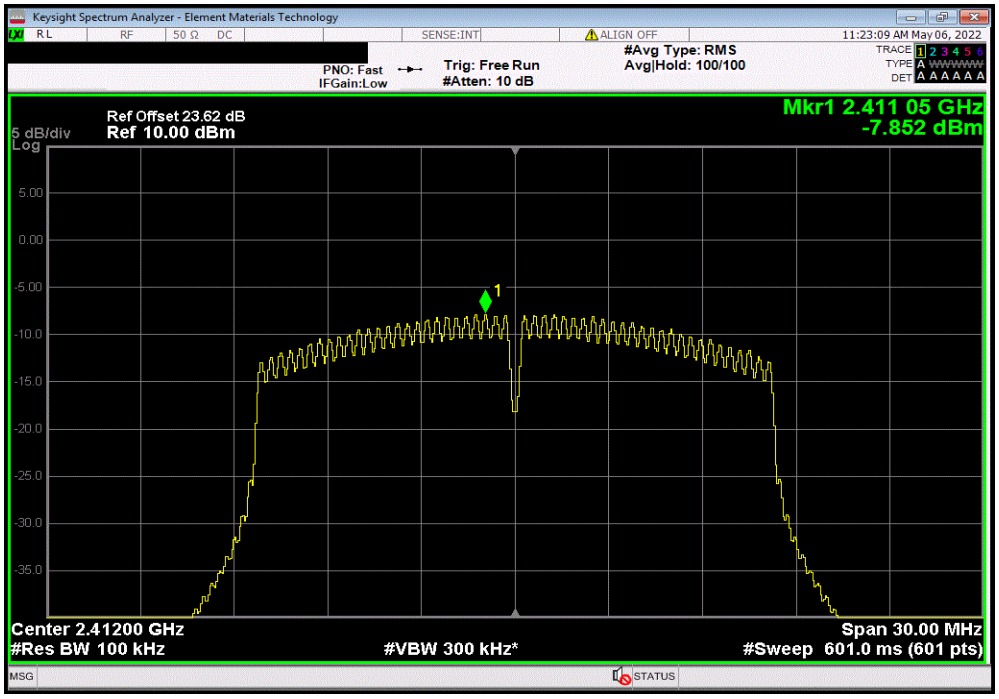
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-3.058	0.2	-15.2	-18.1	8	Pass



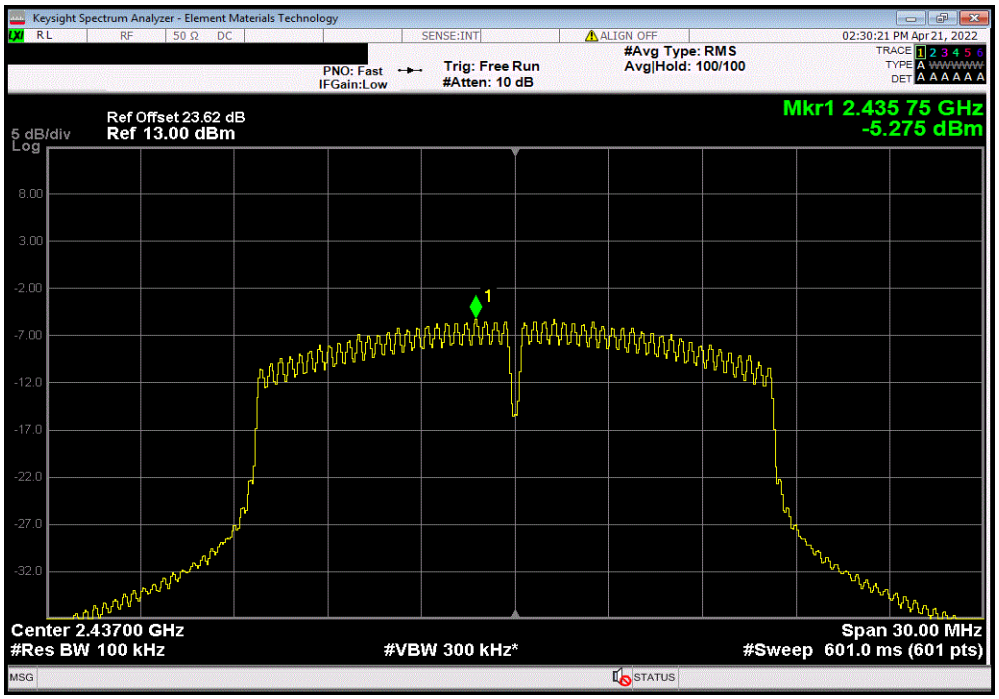
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-7.241	0.2	-15.2	-22.2	8	Pass



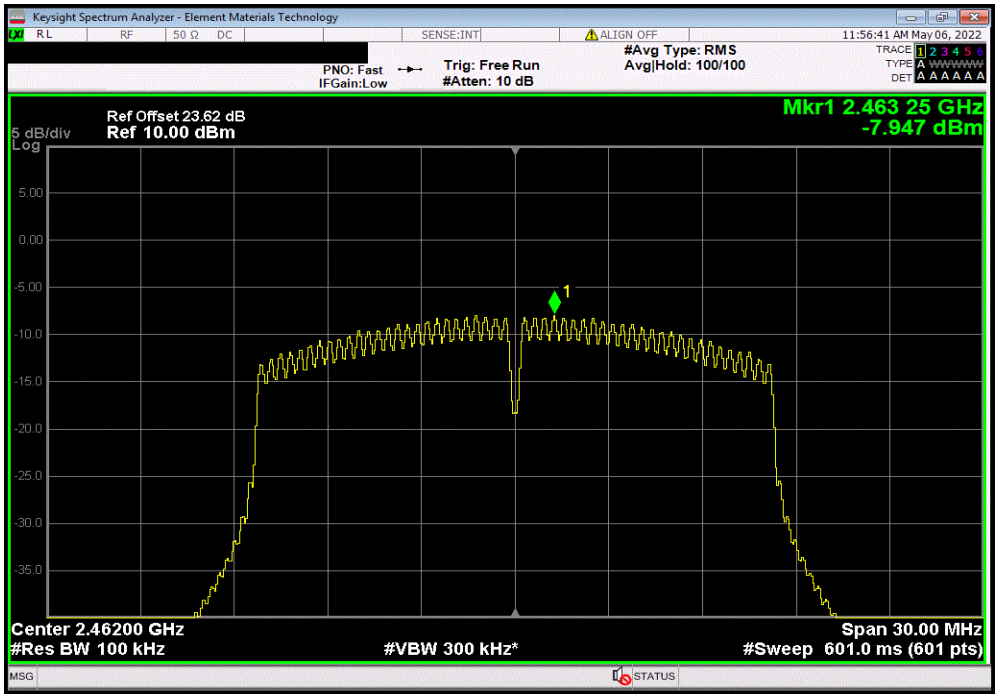
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-7.852	0.9	-15.2	-22.2	8	Pass



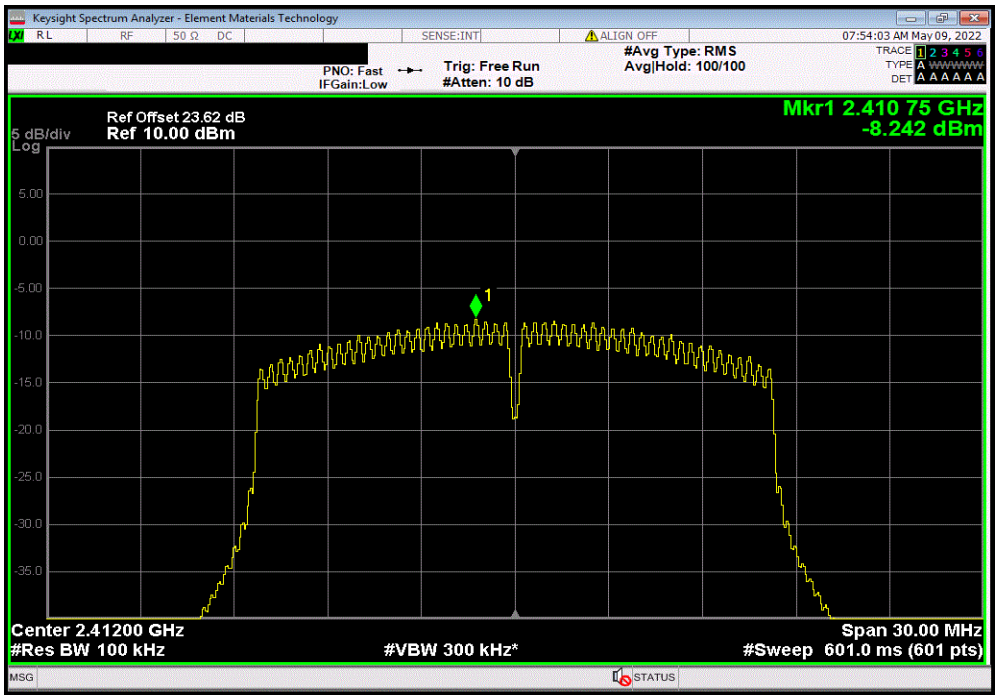
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-5.275	0.9	-15.2	-19.6	8	Pass



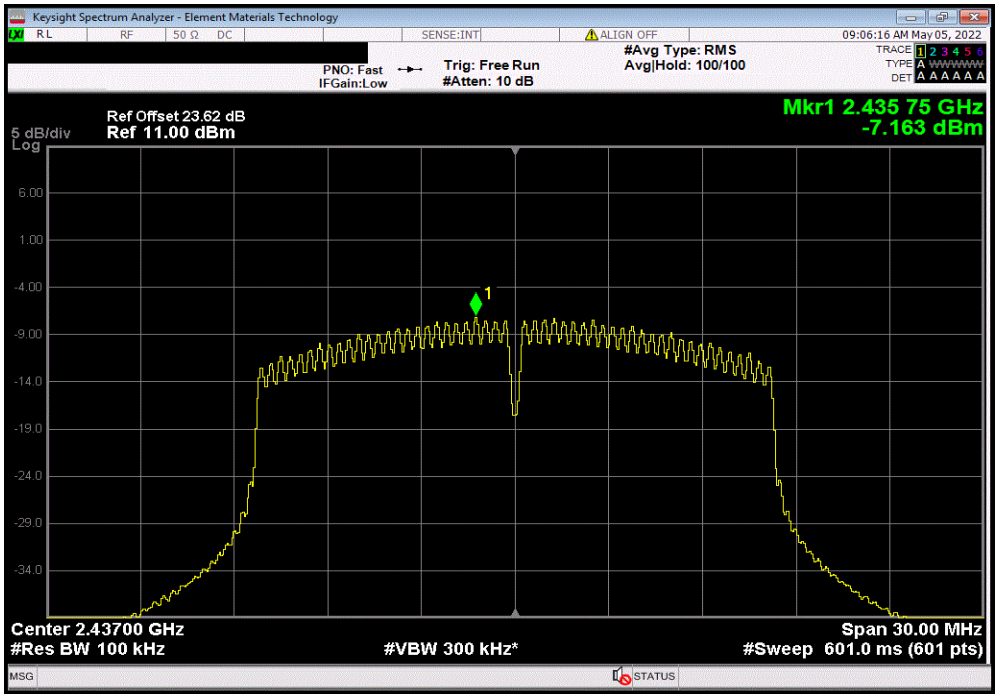
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-7.947	0.9	-15.2	-22.2	8	Pass



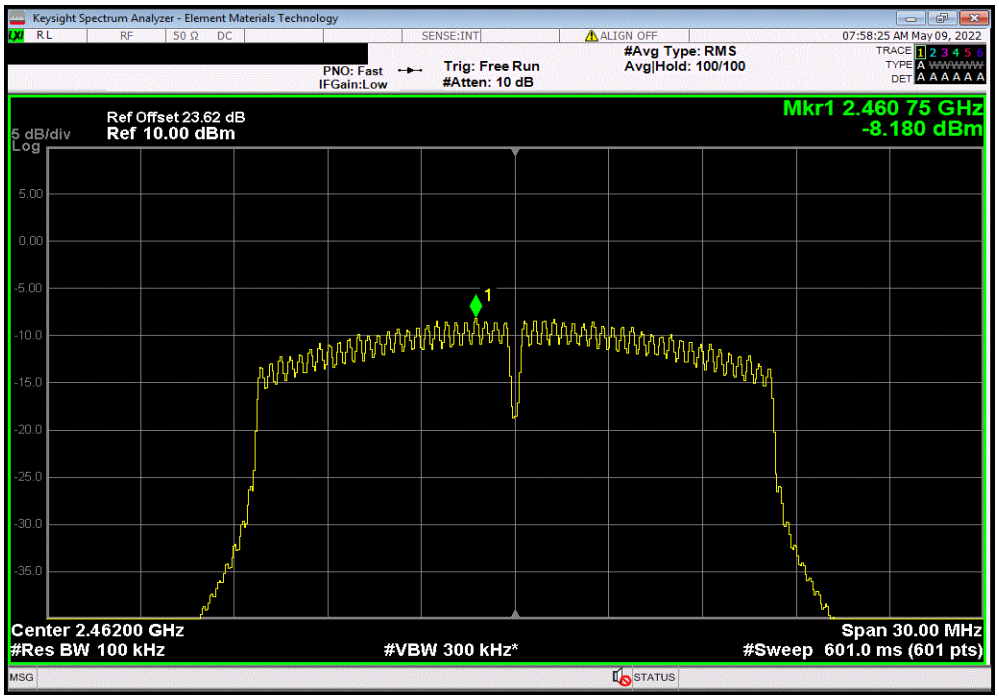
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-8.242	1.3	-15.2	-22.1	8	Pass



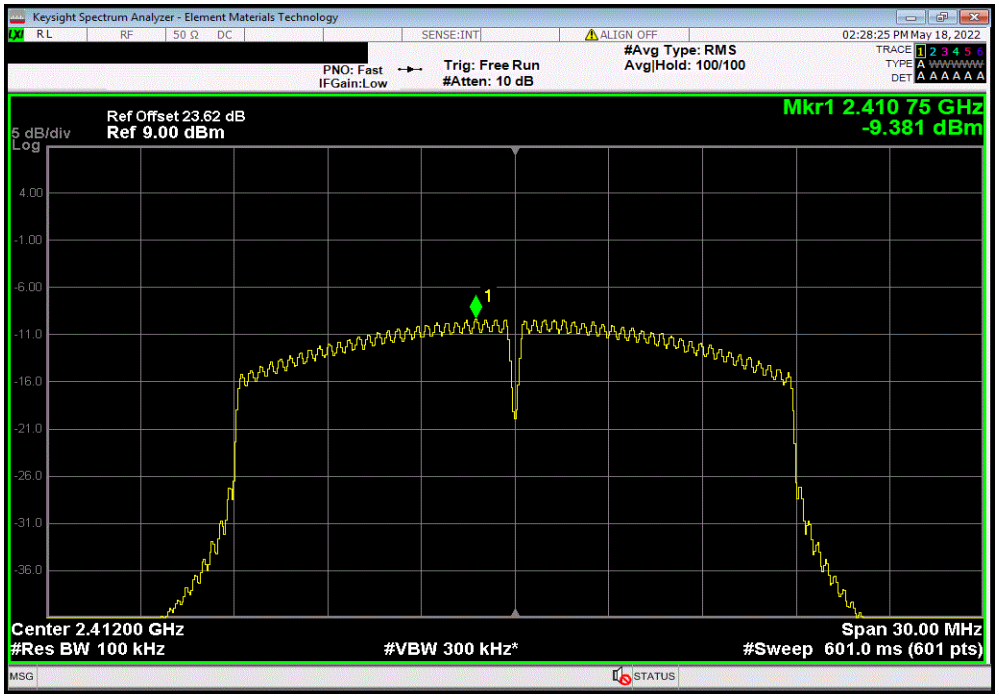
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-7.163	1.3	-15.2	-21.1	8	Pass



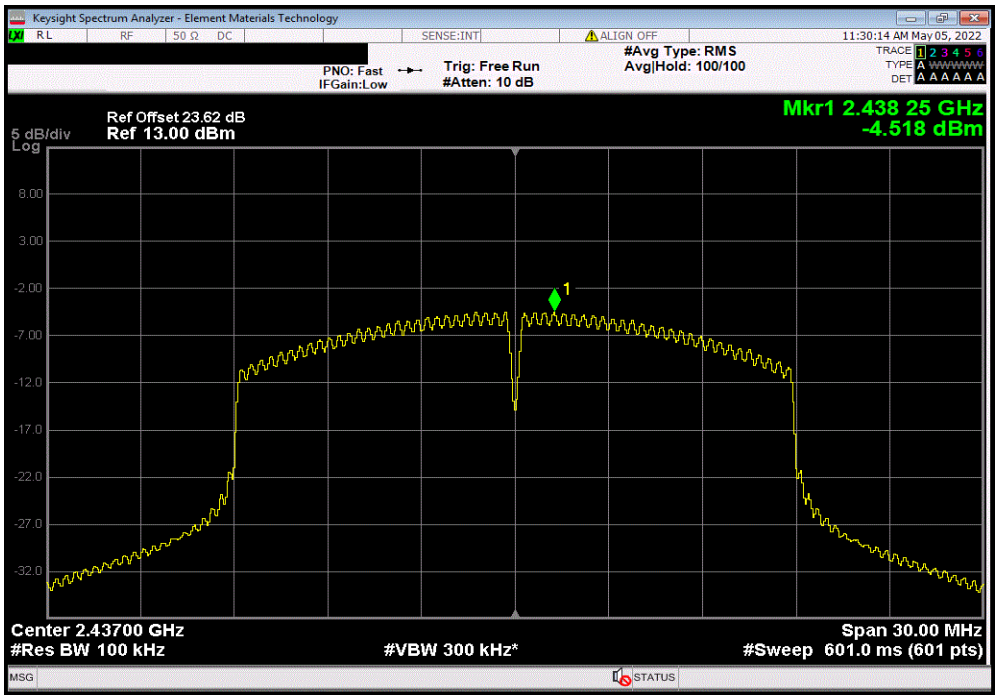
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-8.18	1.3	-15.2	-22.1	8	Pass



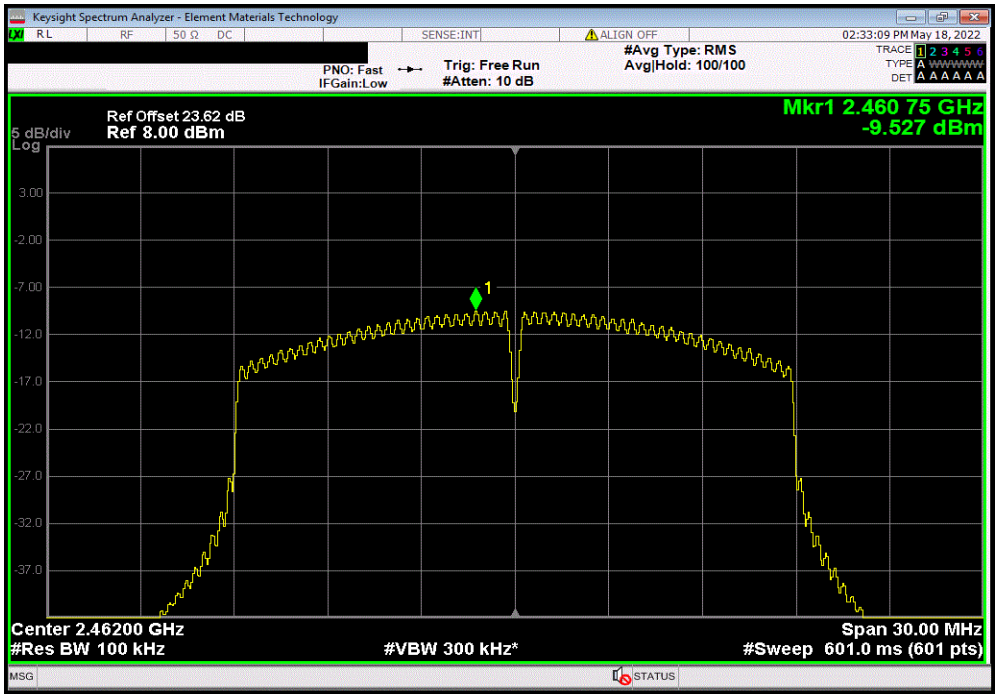
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-9.381	0.2	-15.2	-24.4	8	Pass



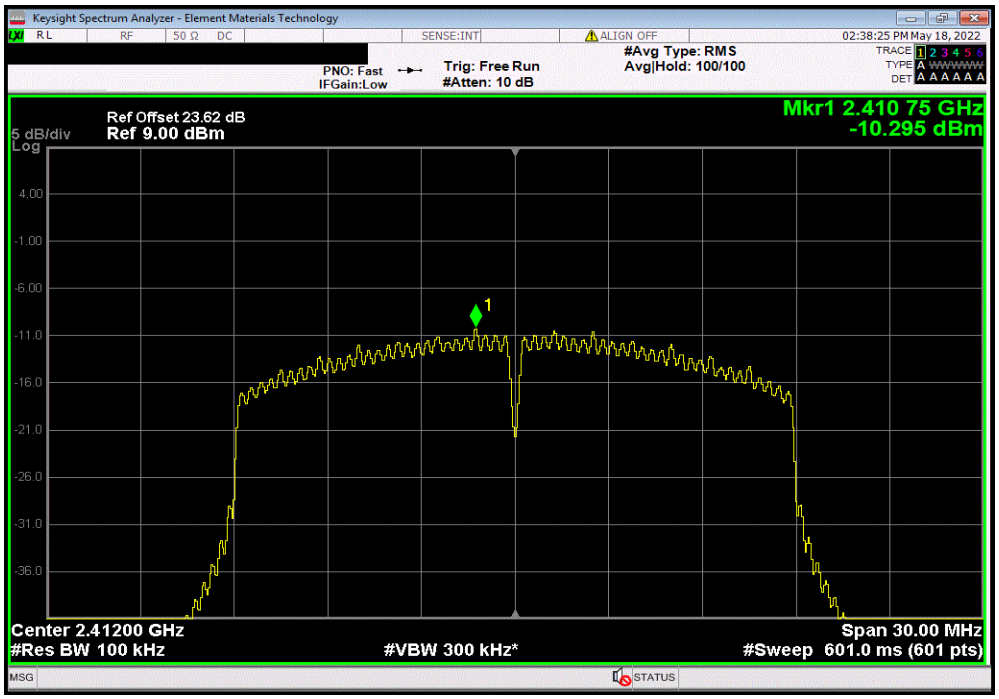
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-4.518	0.2	-15.2	-19.5	8	Pass



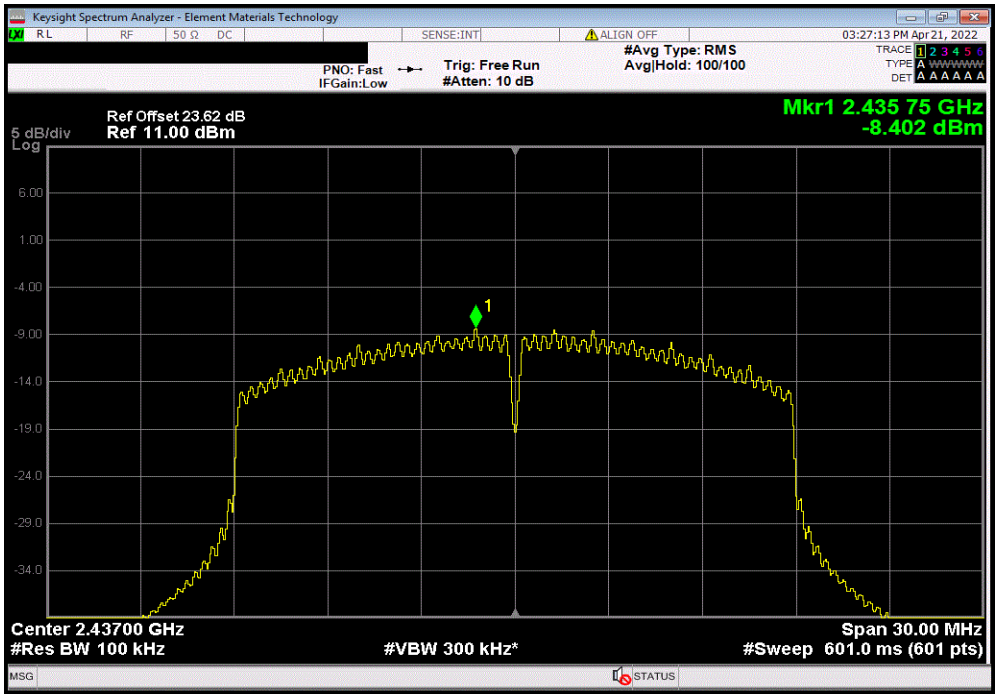
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, High Channel 11, 2462 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-9.527	0.2	-15.2	-24.5	8	Pass



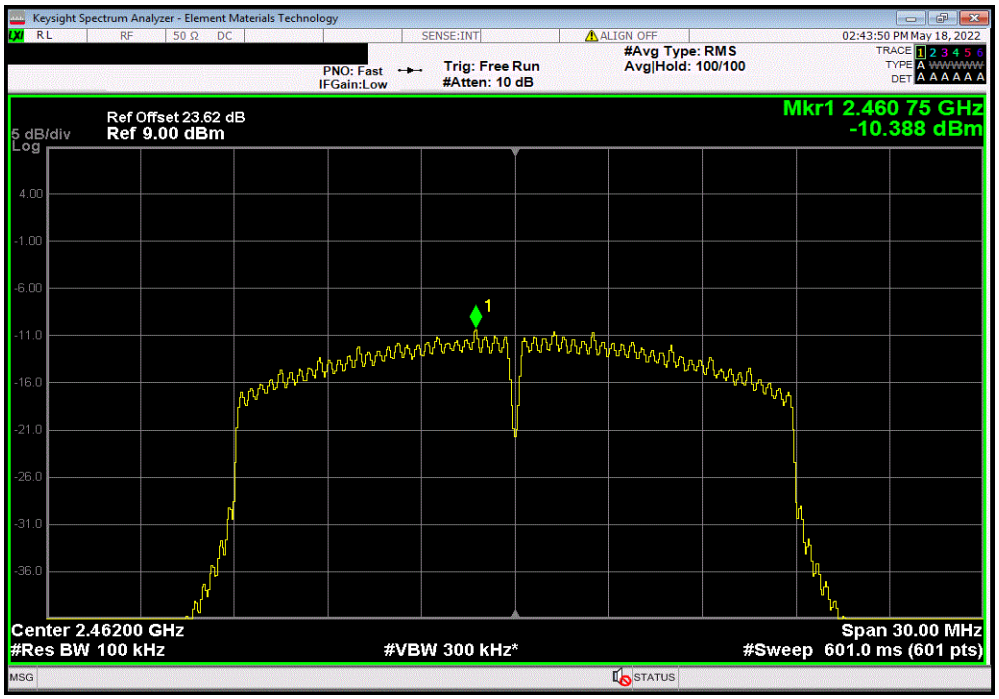
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-10.295	1.6	-15.2	-23.9	8	Pass



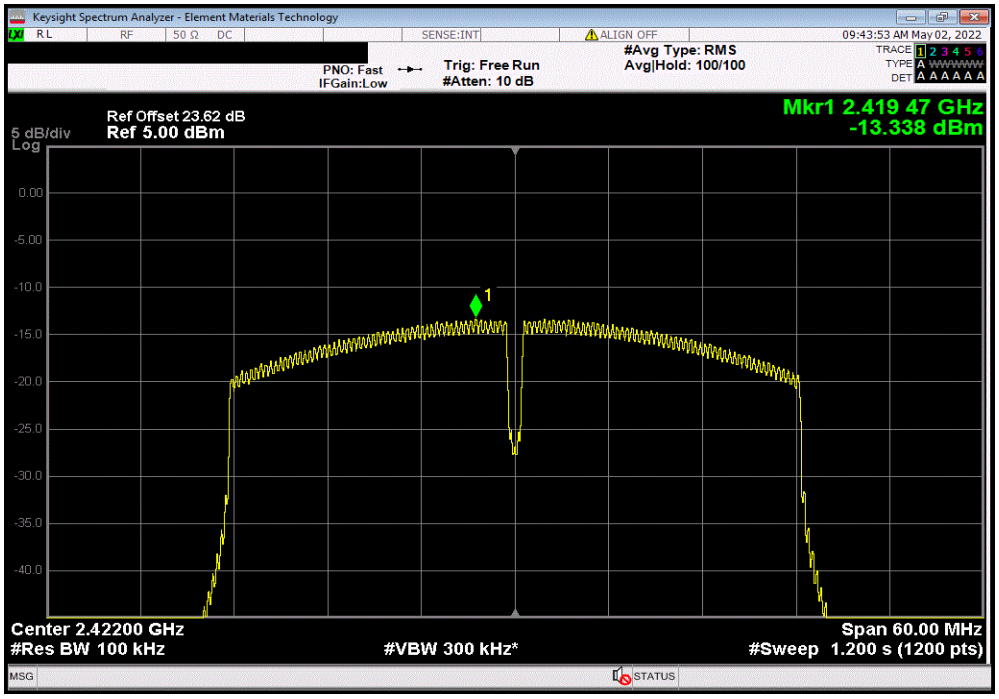
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-8.402	1.6	-15.2	-22.0	8	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, High Channel 11, 2462 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-10.388	1.6	-15.2	-24.0	8	Pass



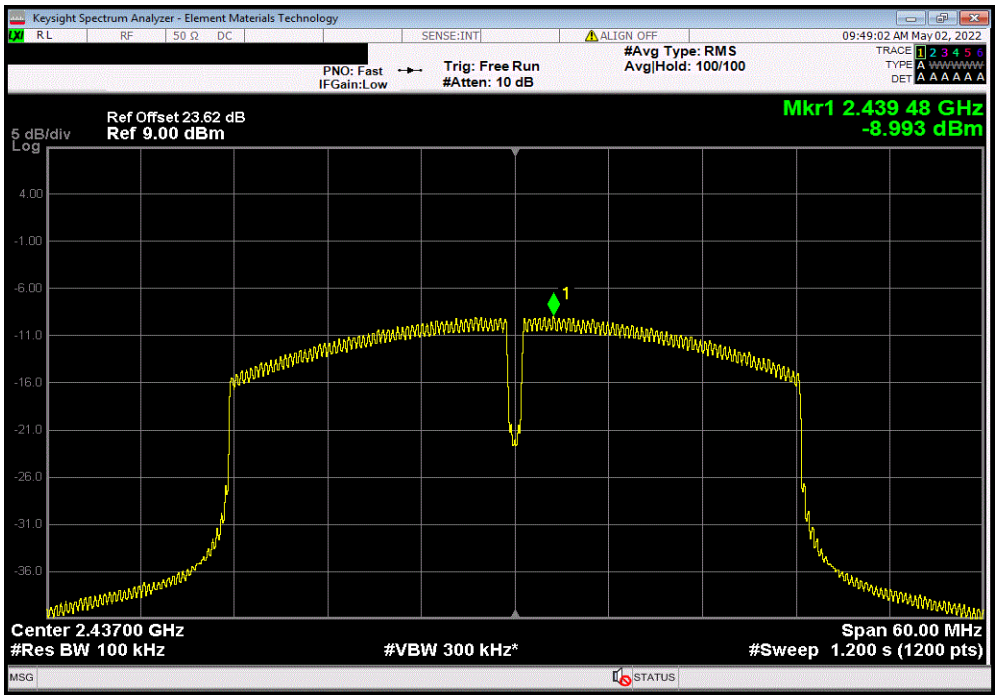
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Low Channel 1/5, 2422 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-13.338	0.4	-15.2	-28.1	8	Pass



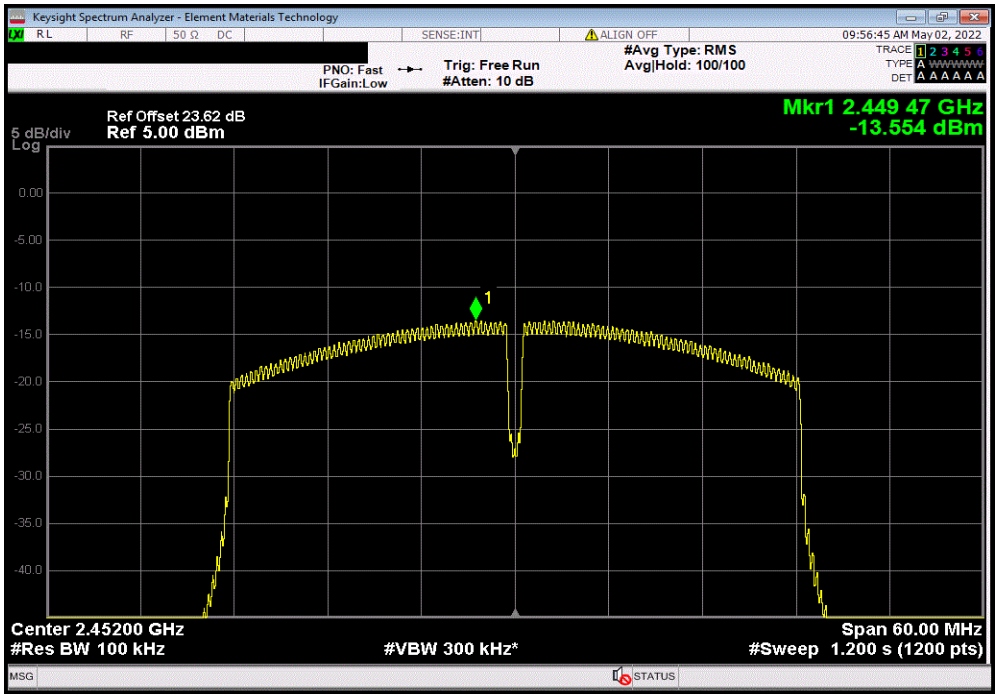
POWER SPECTRAL DENSITY

TbtTx 2021.03.19.1 XMit 2022.02.07.0

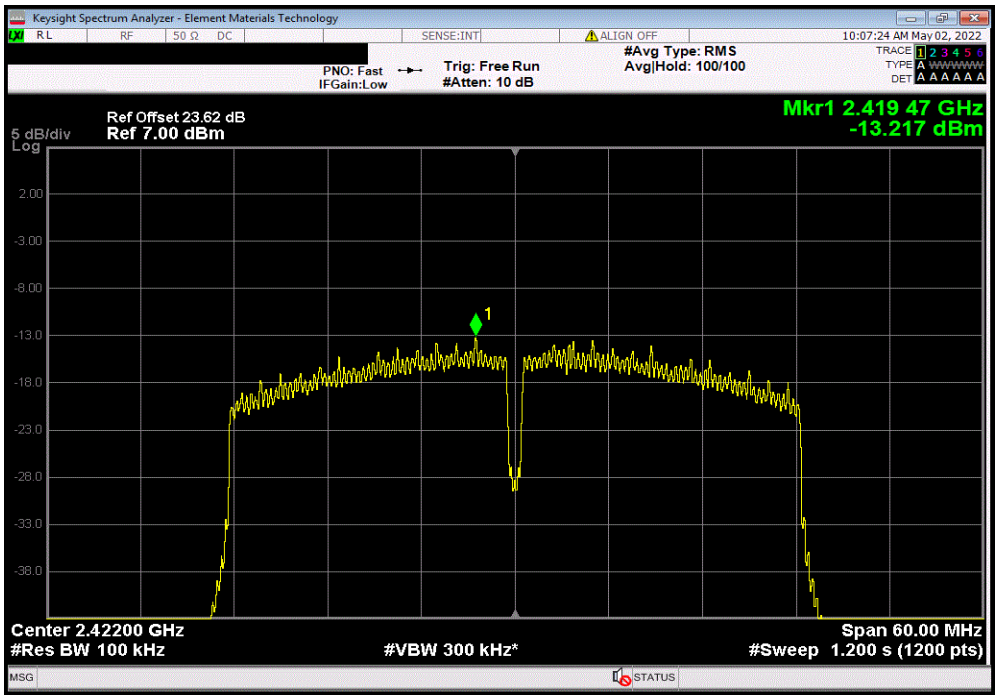
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Mid Channel 4/8, 2437 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-8.993	0.4	-15.2	-23.8	8	Pass



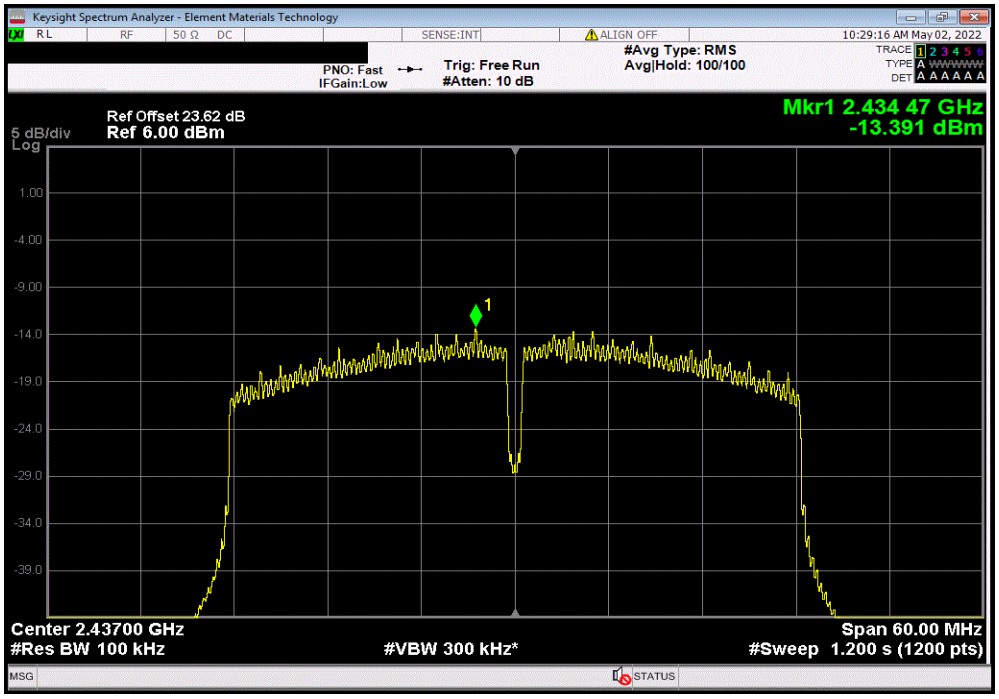
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , High Channel 7/11, 2452 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-13.554	0.4	-15.2	-28.4	8	Pass



2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Low Channel 1/5, 2422 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-13.217	2.7	-15.2	-25.7	8	Pass



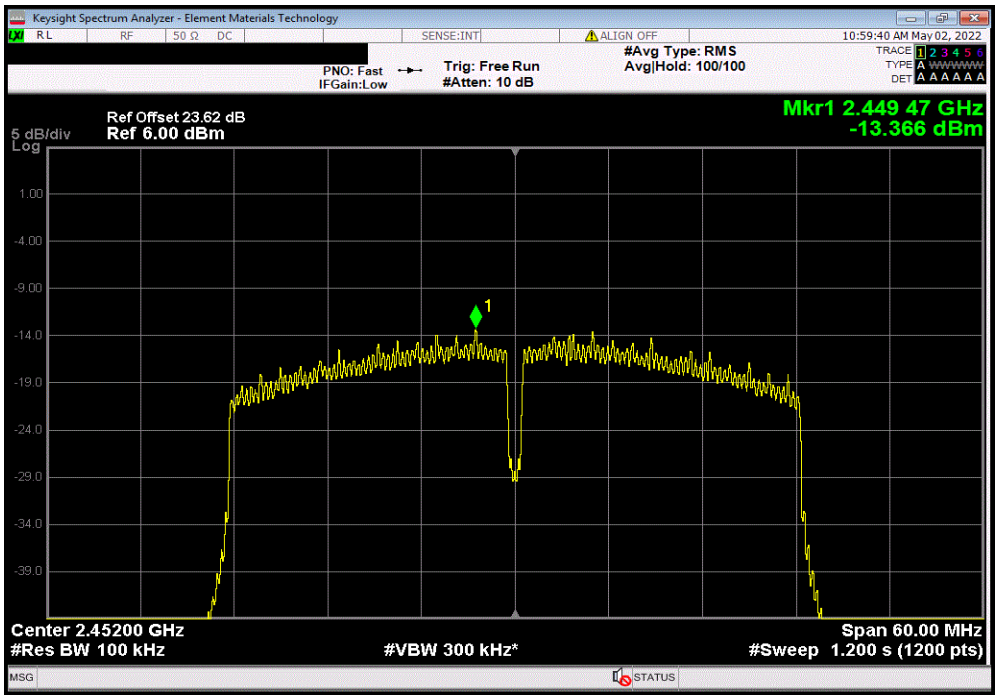
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Mid Channel 4/8, 2437 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-13.391	2.7	-15.2	-25.9	8	Pass



POWER SPECTRAL DENSITY

TbtTx 2021.03.19.1 XMit 2022.02.07.0

2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , High Channel 7/11, 2452 MHz						
	Value dBm/100kHz	DCCF (dB)	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit < dBm/3kHz	Results
	-13.366	2.7	-15.2	-25.9	8	Pass



SPURIOUS CONDUCTED EMISSIONS

XMit 2020.12.30.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2021-03-14	2022-03-14
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2021-07-06	2022-07-06
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFE	2021-04-08	2022-04-08
Block - DC	Fairview Microwave	SD3379	AMW	2021-03-14	2022-03-14
Attenuator	S.M. Electronics	SA26B-20	AUY	2021-03-14	2022-03-14
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	2021-03-14	2022-03-14
Generator - Signal	Agilent	N5181A	TIG	2020-04-16	2023-04-16

TEST DESCRIPTION

The spurious RF conducted emissions were measured with the EUT set to low, medium and high transmit frequencies. The EUT was transmitting at the data rate(s) listed in the datasheet. For each transmit frequency, the fundamental was measured with a 100 kHz resolution bandwidth and the highest value was recorded. The rest of the spectrum was then measured with a 100 kHz resolution bandwidth and the highest value was found. The difference between the value found on the fundamental and the rest of the spectrum was compared against the limit to determine compliance.

SPURIOUS CONDUCTED EMISSIONS

element

TbtTx 2021.03.19.1 XMit 2020.12.30.0

EUT:	SHOUT sp Handheld Iridium Smartphone	Work Order:	PCTE0003
Serial Number:	FCC 1	Date:	30-Aug-21
Customer:	NAL Research Corporation	Temperature:	23 °C
Attendees:	None	Humidity:	41.9% RH
Project:	None	Barometric Pres.:	1019 mbar
Tested by:	Jeff Alcoke	Job Site:	EV06
Power:	5.0 VDC via USB		

TEST SPECIFICATIONS	Test Method
FCC 15.247:2021	ANSI C63.10:2013

COMMENTS

None

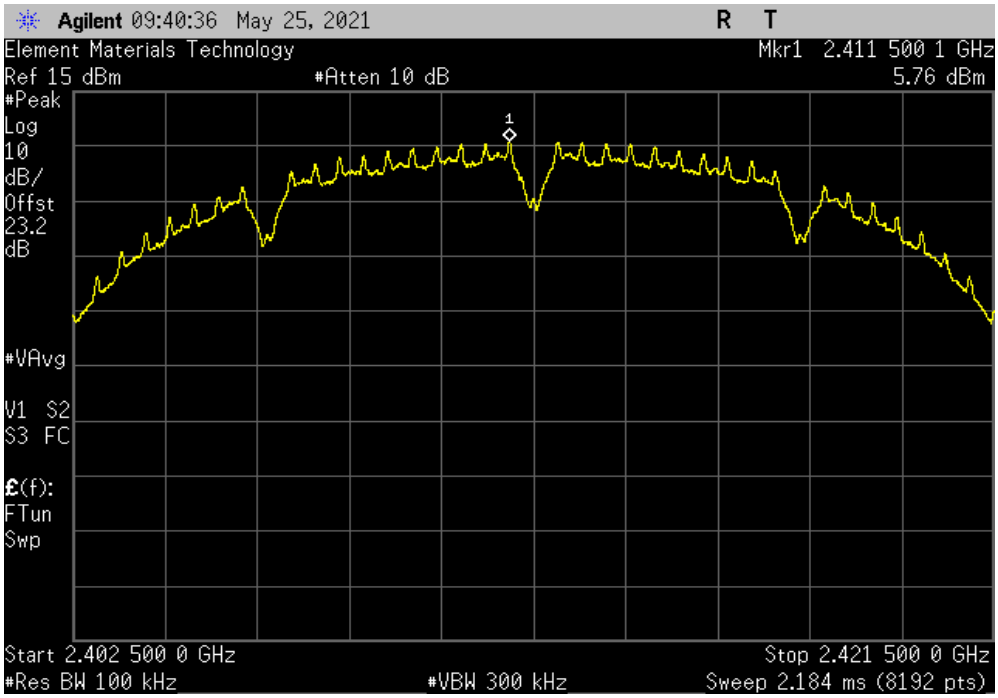
DEVIATIONS FROM TEST STANDARD

None

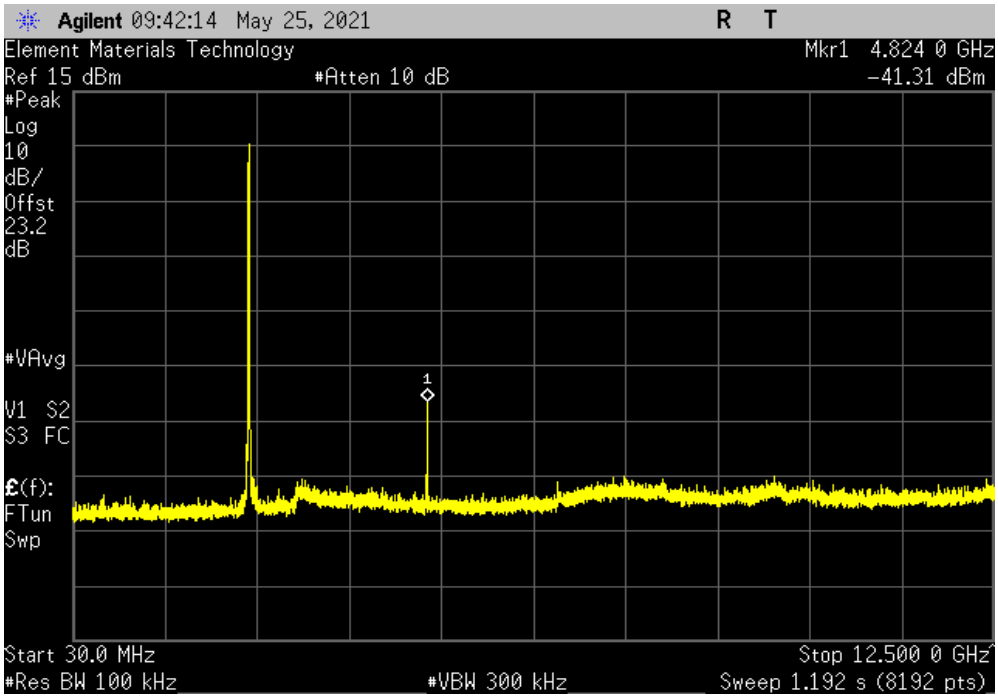
Configuration #	3	Signature

		Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
2400 MHz - 2483.5 MHz Band						
20 MHz						
802.11(b) 1 Mbps						
Low Channel 1, 2412 MHz		Fundamental	2411.5	N/A	N/A	N/A
Low Channel 1, 2412 MHz		30 MHz - 12.5 GHz	4824	-47.07	-30	Pass
Low Channel 1, 2412 MHz		12.5 GHz - 25 GHz	24163.7	-57.33	-30	Pass
Mid Channel 6, 2437 MHz		Fundamental	2437.51	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		30 MHz - 12.5 GHz	4874.3	-49.26	-30	Pass
Mid Channel 6, 2437 MHz		12.5 GHz - 25 GHz	24913	-57.7	-30	Pass
High Channel 11, 2462 MHz		Fundamental	2462.5	N/A	N/A	N/A
High Channel 11, 2462 MHz		30 MHz - 12.5 GHz	4924.5	-50.22	-30	Pass
High Channel 11, 2462 MHz		12.5 GHz - 25 GHz	24087.4	-58.33	-30	Pass
802.11(b) 11 Mbps						
Low Channel 1, 2412 MHz		Fundamental	2410.59	N/A	N/A	N/A
Low Channel 1, 2412 MHz		30 MHz - 12.5 GHz	4824	-49.07	-30	Pass
Low Channel 1, 2412 MHz		12.5 GHz - 25 GHz	24897.8	-57.9	-30	Pass
Mid Channel 6, 2437 MHz		Fundamental	2437.53	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		30 MHz - 12.5 GHz	4874.3	-58.89	-30	Pass
Mid Channel 6, 2437 MHz		12.5 GHz - 25 GHz	24974.1	-58.99	-30	Pass
High Channel 11, 2462 MHz		Fundamental	2461.1	N/A	N/A	N/A
High Channel 11, 2462 MHz		30 MHz - 12.5 GHz	4924.5	-50.14	-30	Pass
High Channel 11, 2462 MHz		12.5 GHz - 25 GHz	24881	-58.06	-30	Pass
802.11(g) 6 Mbps						
Low Channel 1, 2412 MHz		Fundamental	2410.75	N/A	N/A	N/A
Low Channel 1, 2412 MHz		30 MHz - 12.5 GHz	2386.7	-51.06	-30	Pass
Low Channel 1, 2412 MHz		12.5 GHz - 25 GHz	24855	-53.24	-30	Pass
Mid Channel 6, 2437 MHz		Fundamental	2435.74	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		30 MHz - 12.5 GHz	4869.7	-58.48	-30	Pass
Mid Channel 6, 2437 MHz		12.5 GHz - 25 GHz	24848.9	-57.21	-30	Pass
High Channel 11, 2462 MHz		Fundamental	2460.74	N/A	N/A	N/A
High Channel 11, 2462 MHz		30 MHz - 12.5 GHz	4924.5	-56.83	-30	Pass
High Channel 11, 2462 MHz		12.5 GHz - 25 GHz	24812.3	-54.08	-30	Pass
802.11(g) 36 Mbps						
Low Channel 1, 2412 MHz		Fundamental	2413.27	N/A	N/A	N/A
Low Channel 1, 2412 MHz		30 MHz - 12.5 GHz	2386.7	-50.83	-30	Pass
Low Channel 1, 2412 MHz		12.5 GHz - 25 GHz	24917.6	-54.51	-30	Pass
Mid Channel 6, 2437 MHz		Fundamental	2438.28	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		30 MHz - 12.5 GHz	4872.8	-59.05	-30	Pass
Mid Channel 6, 2437 MHz		12.5 GHz - 25 GHz	24832.1	-55.2	-30	Pass
High Channel 11, 2462 MHz		Fundamental	2463.28	N/A	N/A	N/A
High Channel 11, 2462 MHz		30 MHz - 12.5 GHz	7333	-58.35	-30	Pass
High Channel 11, 2462 MHz		12.5 GHz - 25 GHz	23544.1	-54.79	-30	Pass
802.11(g) 54 Mbps						
Low Channel 1, 2412 MHz		Fundamental	2413.27	N/A	N/A	N/A
Low Channel 1, 2412 MHz		30 MHz - 12.5 GHz	2385.2	-51.63	-30	Pass
Low Channel 1, 2412 MHz		12.5 GHz - 25 GHz	24937.4	-54.13	-30	Pass
Mid Channel 6, 2437 MHz		Fundamental	2438.28	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		30 MHz - 12.5 GHz	7374.1	-56.93	-30	Pass
Mid Channel 6, 2437 MHz		12.5 GHz - 25 GHz	24906.9	-52.76	-30	Pass
High Channel 11, 2462 MHz		Fundamental	2463.27	N/A	N/A	N/A
High Channel 11, 2462 MHz		30 MHz - 12.5 GHz	7710.5	-56.78	-30	Pass
High Channel 11, 2462 MHz		12.5 GHz - 25 GHz	24409.4	-54.24	-30	Pass
802.11(n) MCS0						
Low Channel 1, 2412 MHz		Fundamental	2413.28	N/A	N/A	N/A
Low Channel 1, 2412 MHz		30 MHz - 12.5 GHz	2386.7	-49.93	-30	Pass
Low Channel 1, 2412 MHz		12.5 GHz - 25 GHz	24974.1	-54.32	-30	Pass
Mid Channel 6, 2437 MHz		Fundamental	2435.74	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		30 MHz - 12.5 GHz	4872.8	-58.17	-30	Pass
Mid Channel 6, 2437 MHz		12.5 GHz - 25 GHz	23638.7	-56.32	-30	Pass
High Channel 11, 2462 MHz		Fundamental	2463.24	N/A	N/A	N/A
High Channel 11, 2462 MHz		30 MHz - 12.5 GHz	7322.3	-56.94	-30	Pass
High Channel 11, 2462 MHz		12.5 GHz - 25 GHz	24249.2	-54.6	-30	Pass
802.11(n) MCS7						
Low Channel 1, 2412 MHz		Fundamental	2413.26	N/A	N/A	N/A
Low Channel 1, 2412 MHz		30 MHz - 12.5 GHz	2385.2	-52.13	-30	Pass
Low Channel 1, 2412 MHz		12.5 GHz - 25 GHz	24406.4	-52.85	-30	Pass
Mid Channel 6, 2437 MHz		Fundamental	2438.26	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		30 MHz - 12.5 GHz	7660.3	-56	-30	Pass
Mid Channel 6, 2437 MHz		12.5 GHz - 25 GHz	24397.2	-53.44	-30	Pass
High Channel 11, 2462 MHz		Fundamental	2463.26	N/A	N/A	N/A
High Channel 11, 2462 MHz		30 MHz - 12.5 GHz	7836.9	-56.72	-30	Pass
High Channel 11, 2462 MHz		12.5 GHz - 25 GHz	24212.6	-53.08	-30	Pass
40 MHz						
802.11(n) MCS0						
Low Channel 1/5, 2422 MHz		Fundamental	2419.49	N/A	N/A	N/A
Low Channel 1/5, 2422 MHz		30 MHz - 12.5 GHz	9508.5	-51.05	-30	Pass
Low Channel 1/5, 2422 MHz		12.5 GHz - 25 GHz	23950.1	-47.69	-30	Pass
Mid Channel 4/8, 2437 MHz		Fundamental	2434.49	N/A	N/A	N/A
Mid Channel 4/8, 2437 MHz		30 MHz - 12.5 GHz	3915.17	-51.24	-30	Pass
Mid Channel 4/8, 2437 MHz		12.5 GHz - 25 GHz	23765.41	-47.95	-30	Pass
High Channel 7/11, 2452 MHz		Fundamental	2454.5	N/A	N/A	N/A
High Channel 7/11, 2452 MHz		30 MHz - 12.5 GHz	3100.7	-49.53	-30	Pass
High Channel 7/11, 2452 MHz		12.5 GHz - 25 GHz	23933.3	-47.6	-30	Pass
802.11(n) MCS7						
Low Channel 1/5, 2422 MHz		Fundamental	2425.74	N/A	N/A	N/A
Low Channel 1/5, 2422 MHz		30 MHz - 12.5 GHz	2377.5	-48.24	-30	Pass
Low Channel 1/5, 2422 MHz		12.5 GHz - 25 GHz	24050.8	-48.91	-30	Pass
Mid Channel 4/8, 2437 MHz		Fundamental	2434.5	N/A	N/A	N/A
Mid Channel 4/8, 2437 MHz		30 MHz - 12.5 GHz	9551.1	-51.87	-30	Pass
Mid Channel 4/8, 2437 MHz		12.5 GHz - 25 GHz	24029.4	-48.58	-30	Pass
High Channel 7/11, 2452 MHz		Fundamental	2449.5	N/A	N/A	N/A
High Channel 7/11, 2452 MHz		30 MHz - 12.5 GHz	12119.4	-51.68	-30	Pass
High Channel 7/11, 2452 MHz		12.5 GHz - 25 GHz	24968	-48.45	-30	Pass

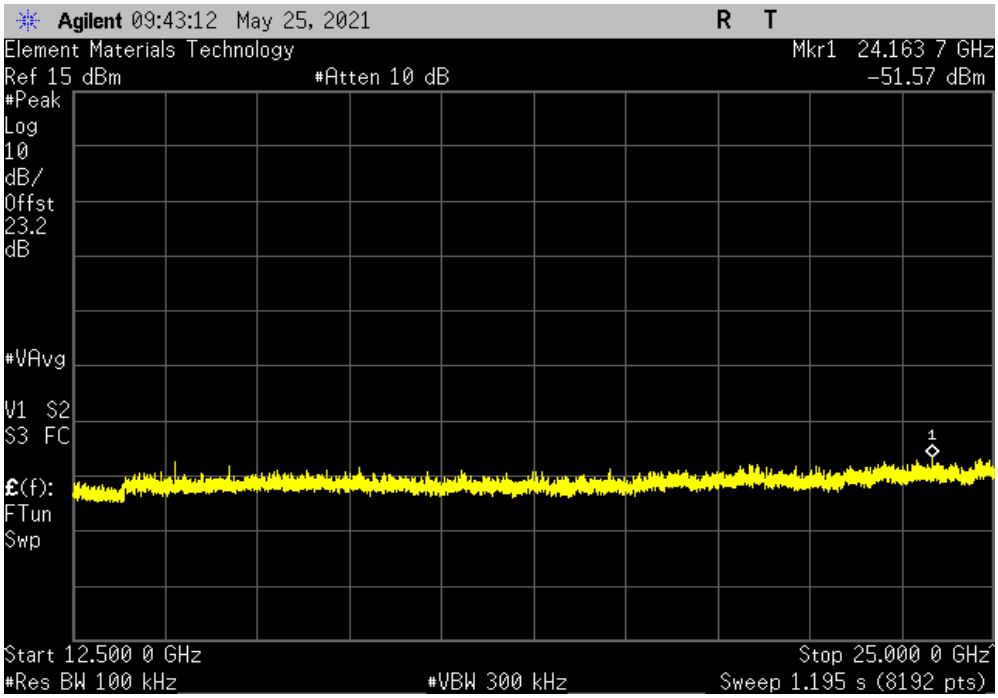
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		2411.5	N/A	N/A	N/A



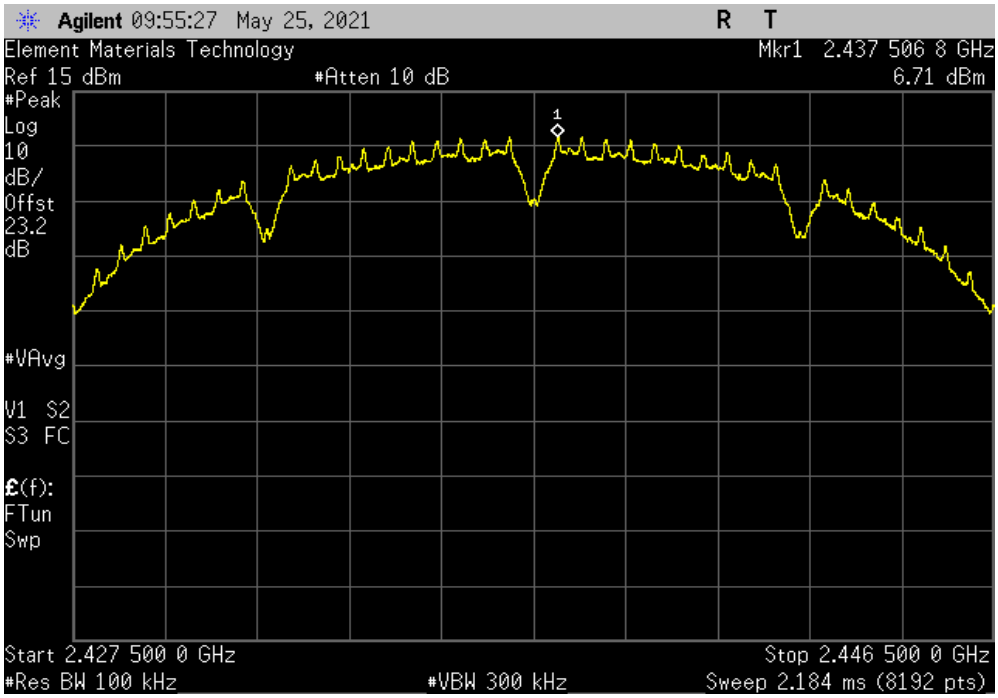
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	4824	-47.07	-30	Pass



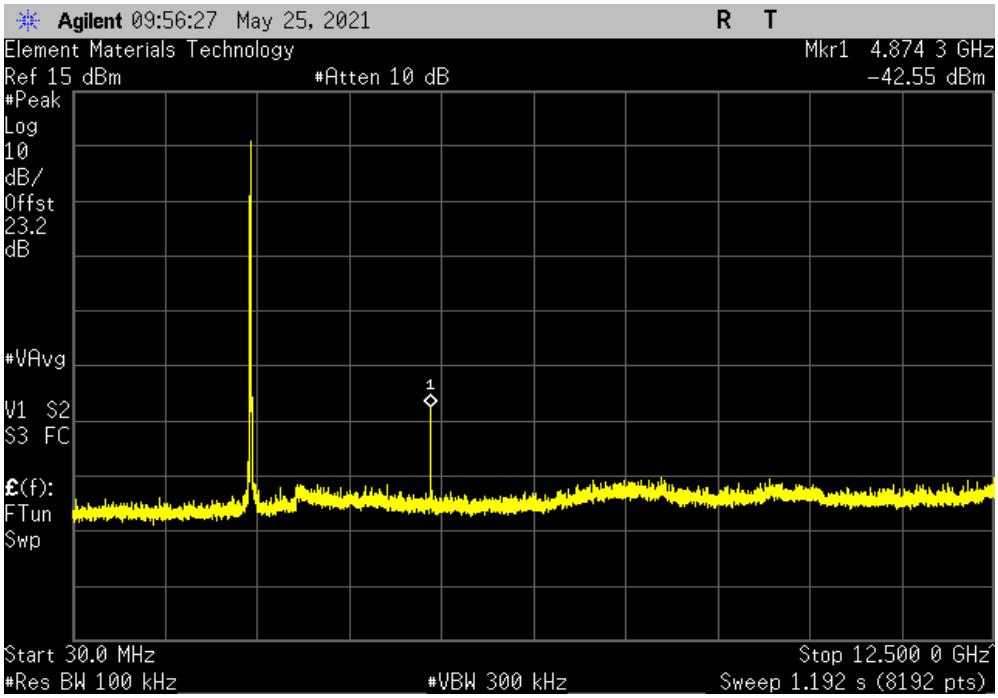
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24163.7	-57.33	-30	Pass



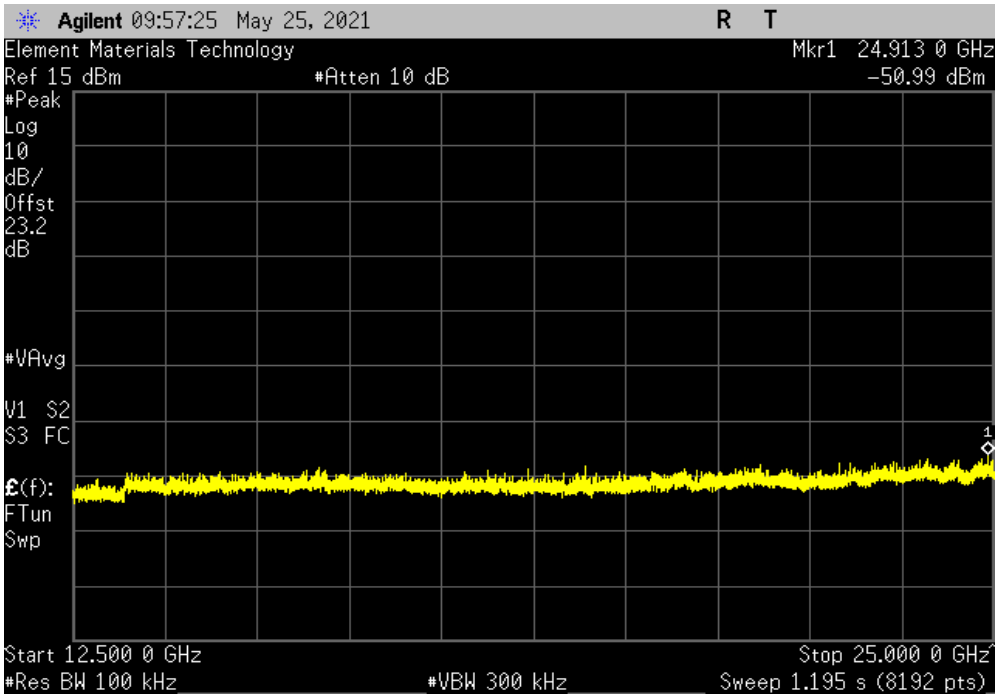
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
	Frequency Range		**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
	Fundamental		2437.51	N/A	N/A	N/A



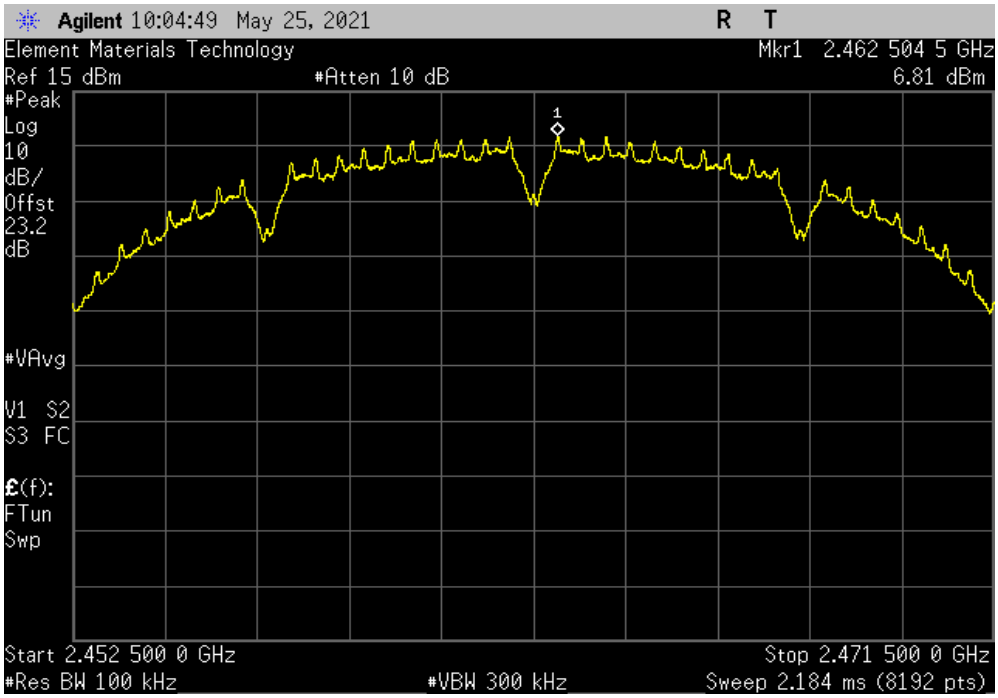
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	4874.3	-49.26	-30	Pass



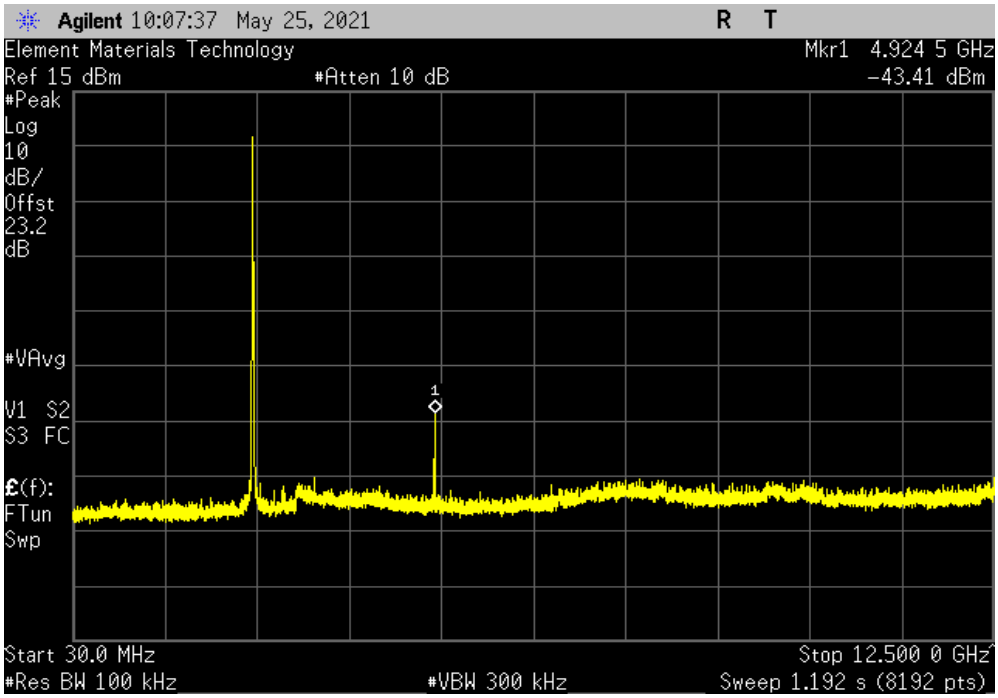
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24913	-57.7	-30	Pass



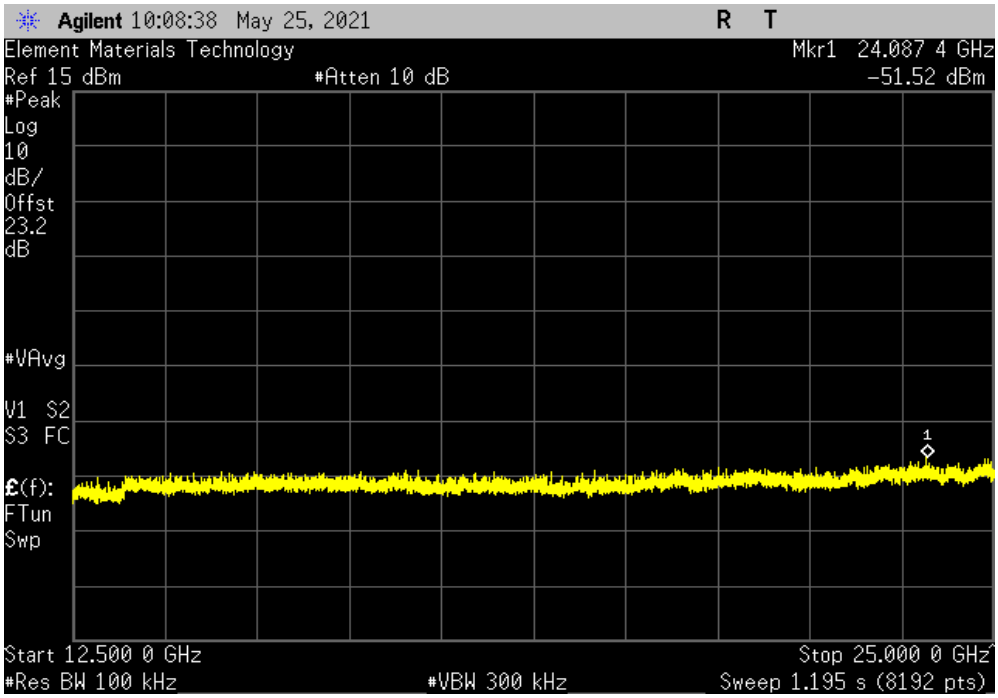
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		2462.5	N/A	N/A	N/A



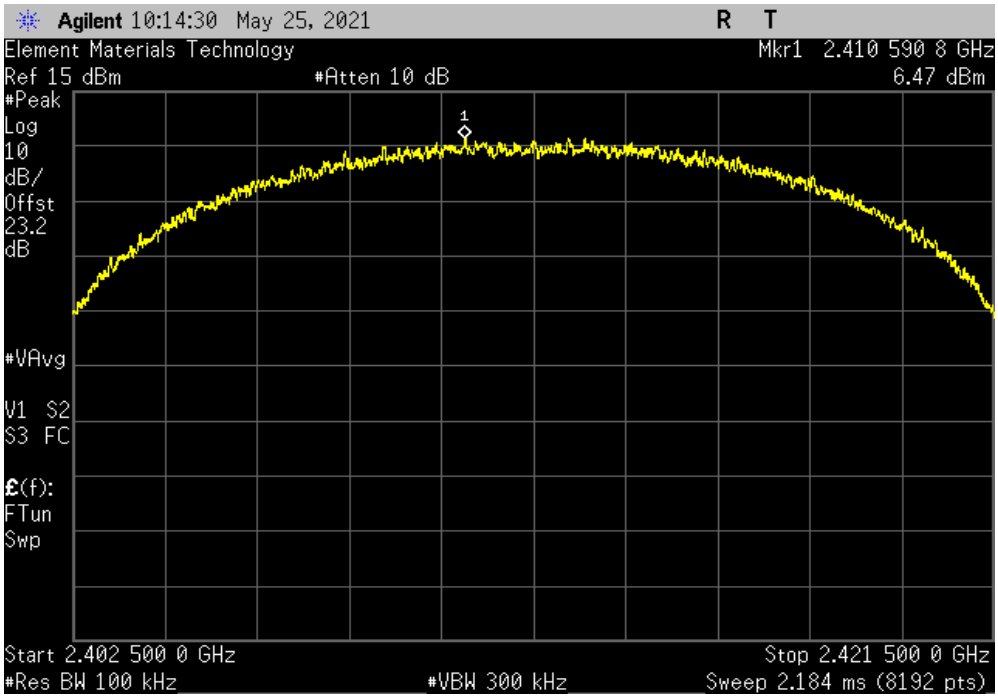
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	4924.5	-50.22	-30	Pass



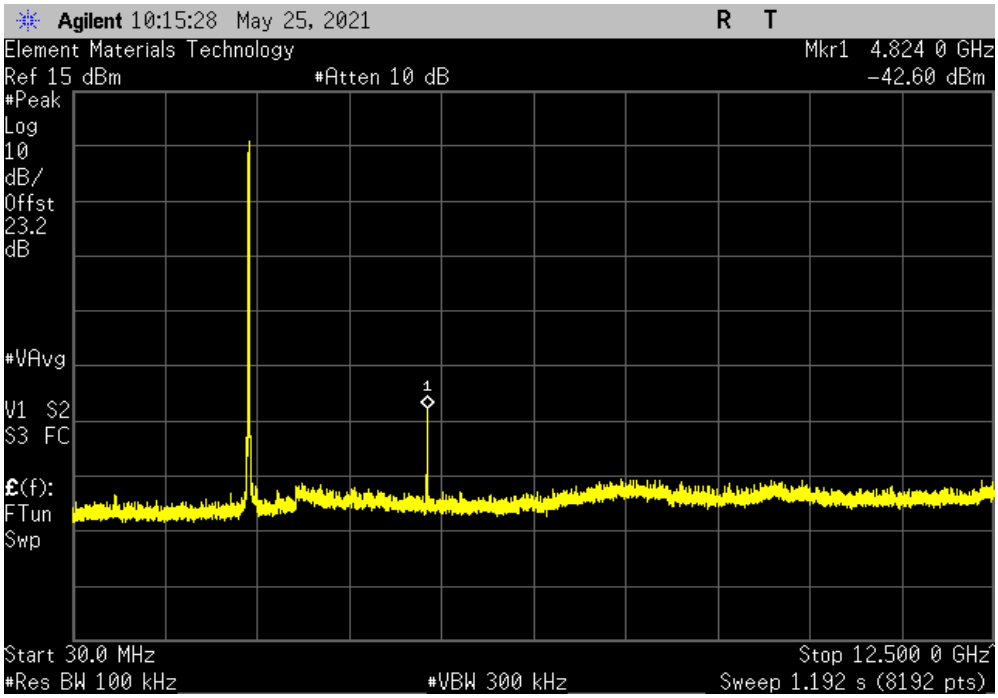
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24087.4	-58.33	-30	Pass



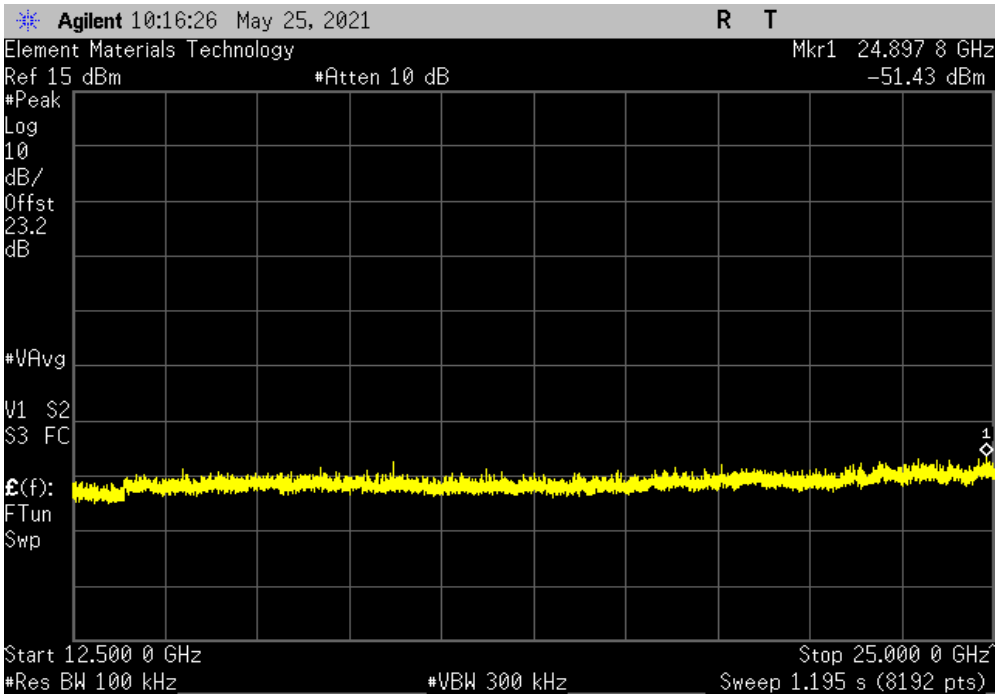
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
Fundamental	2410.59	N/A	N/A	N/A



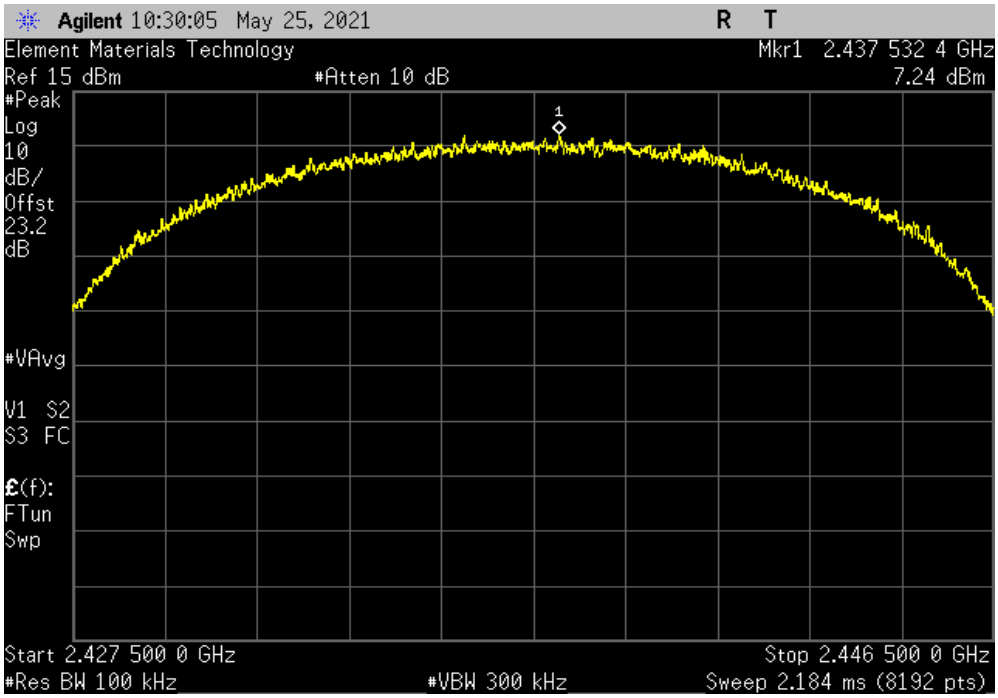
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	4824	-49.07	-30	Pass



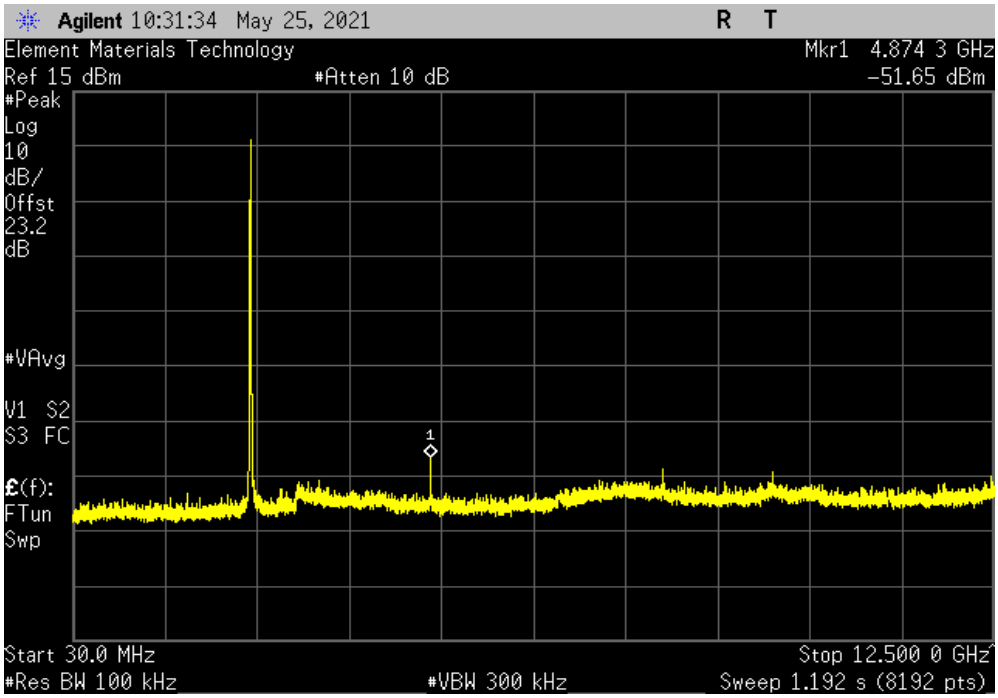
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24897.8	-57.9	-30	Pass



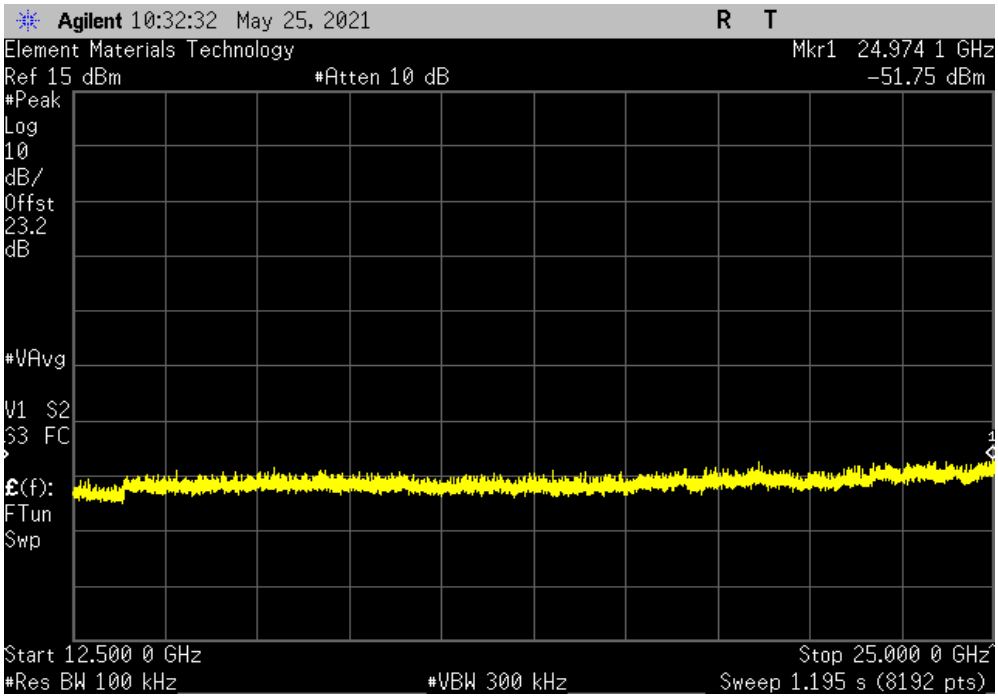
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		2437.53	N/A	N/A	N/A



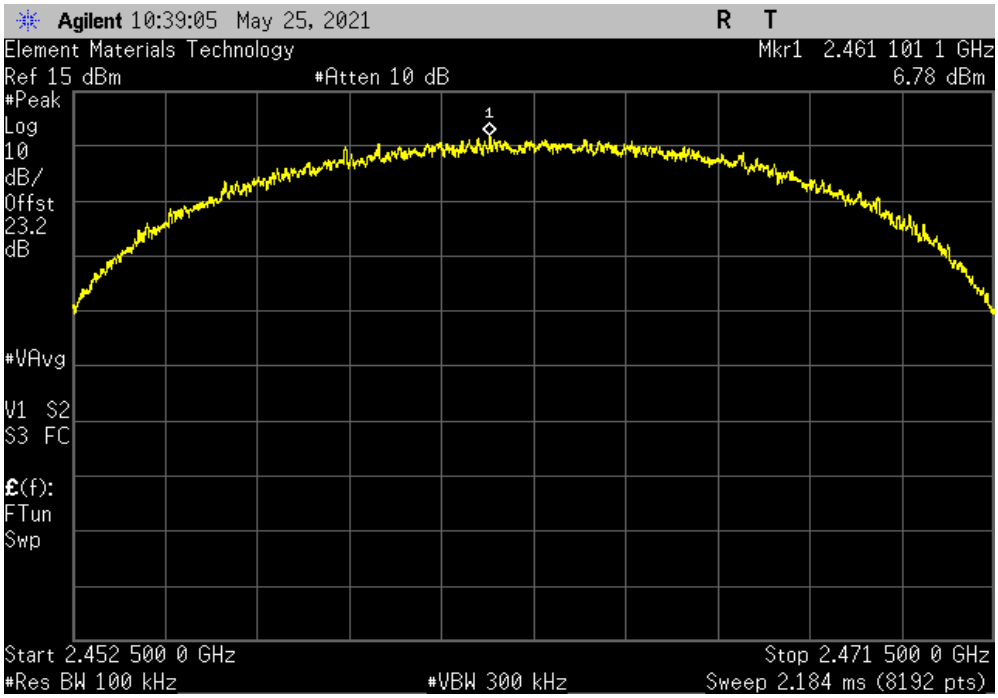
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	4874.3	-58.89	-30	Pass



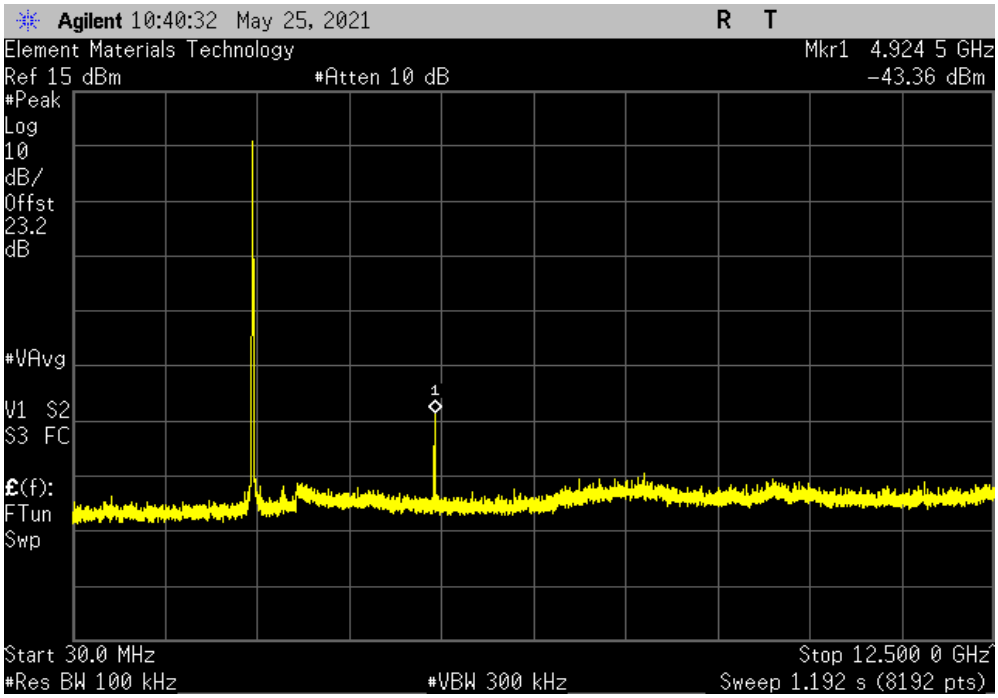
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24974.1	-58.99	-30	Pass



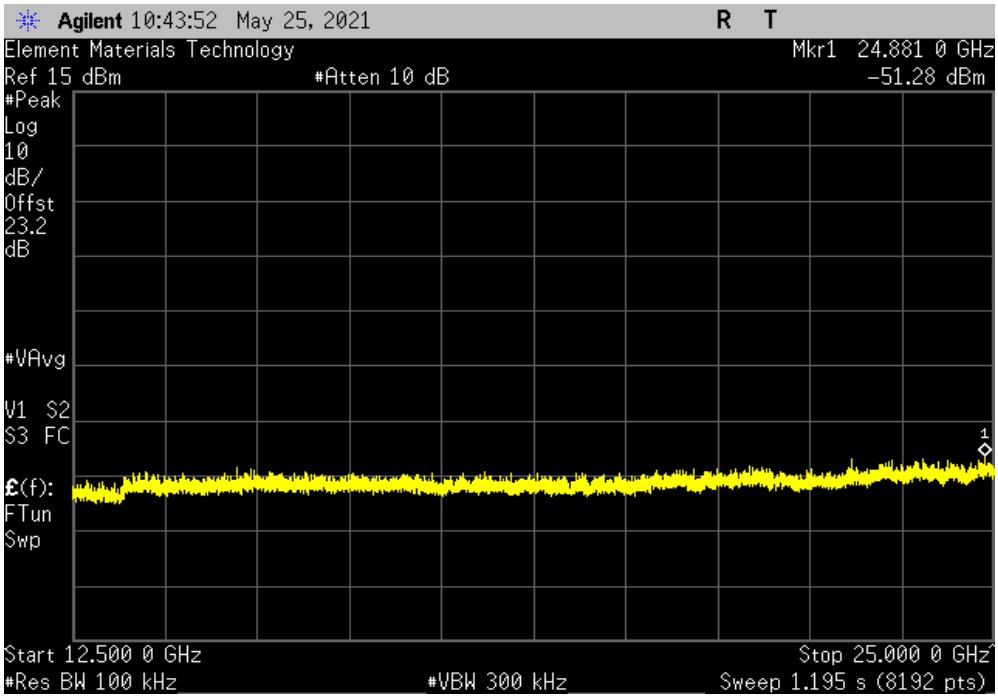
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
Fundamental	2461.1	N/A	N/A	N/A



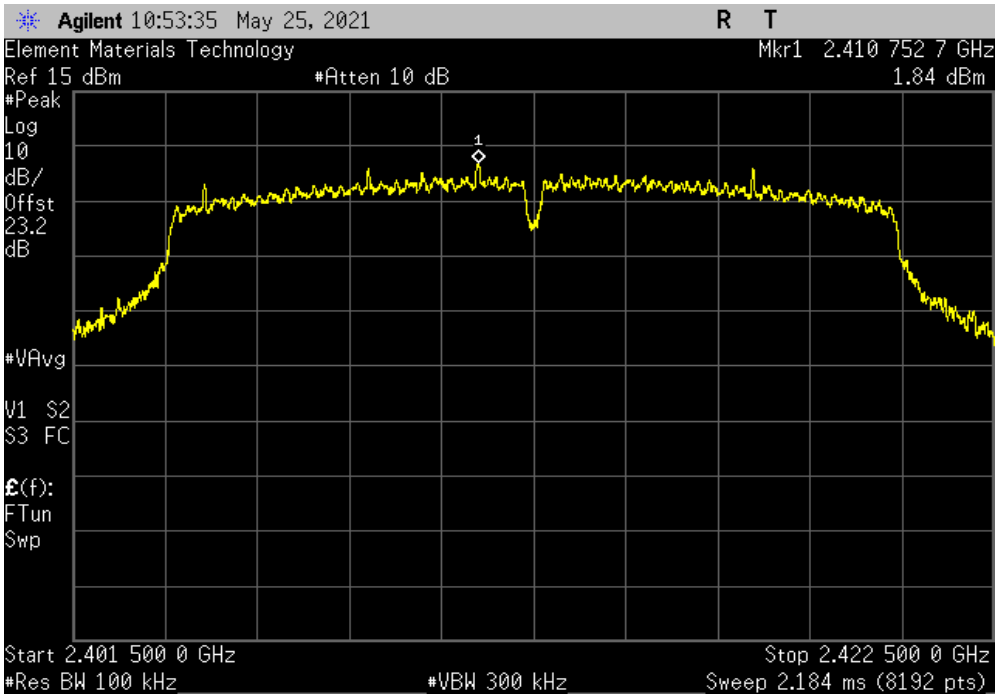
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	4924.5	-50.14	-30	Pass



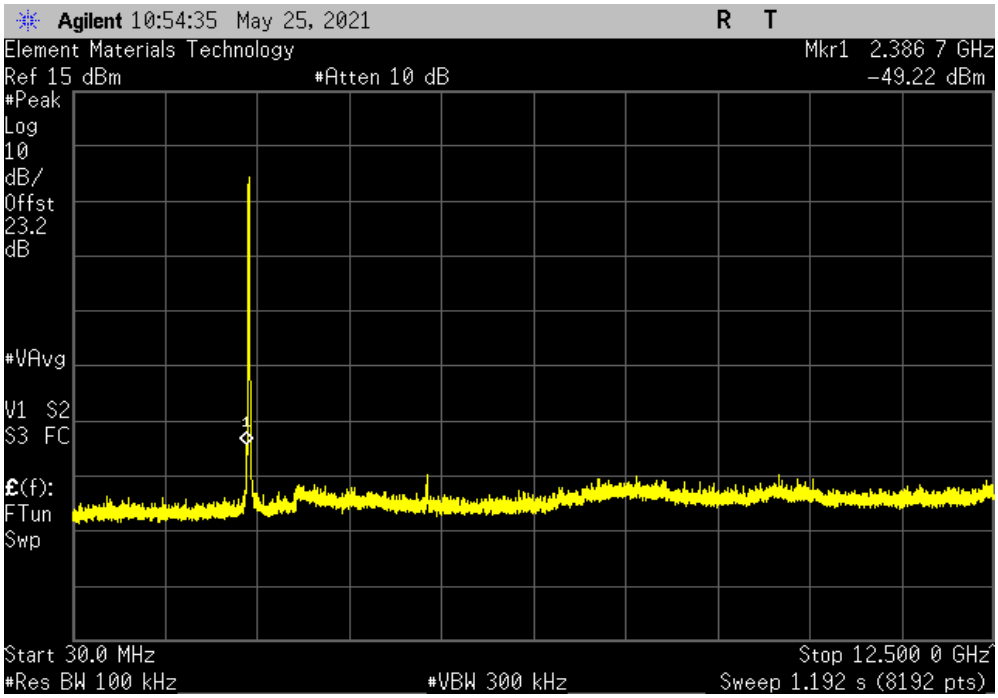
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24881	-58.06	-30	Pass



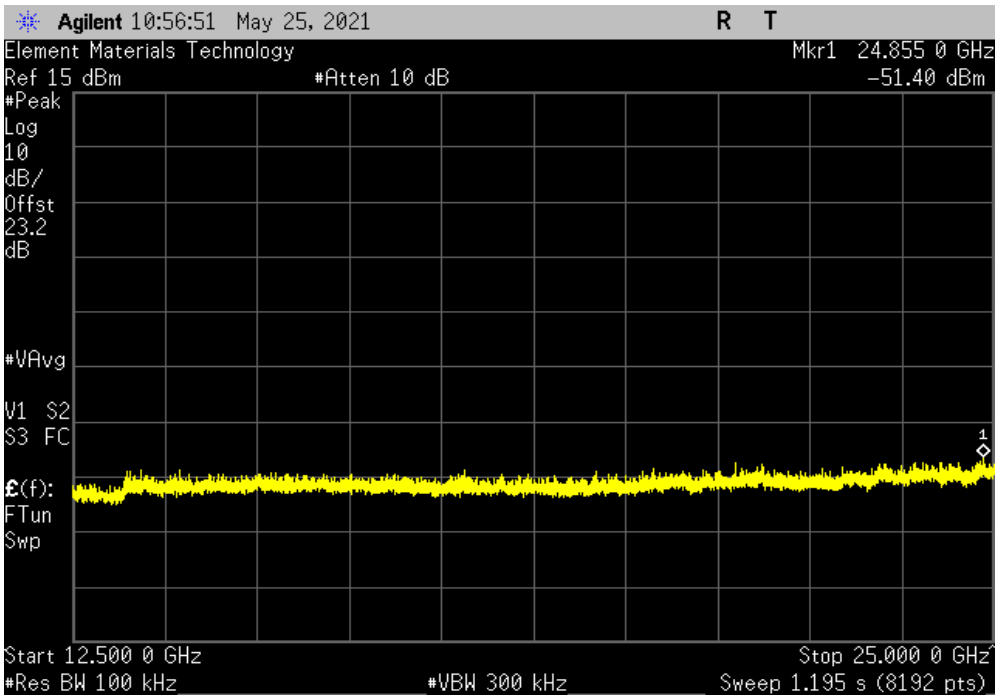
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		2410.75	N/A	N/A	N/A



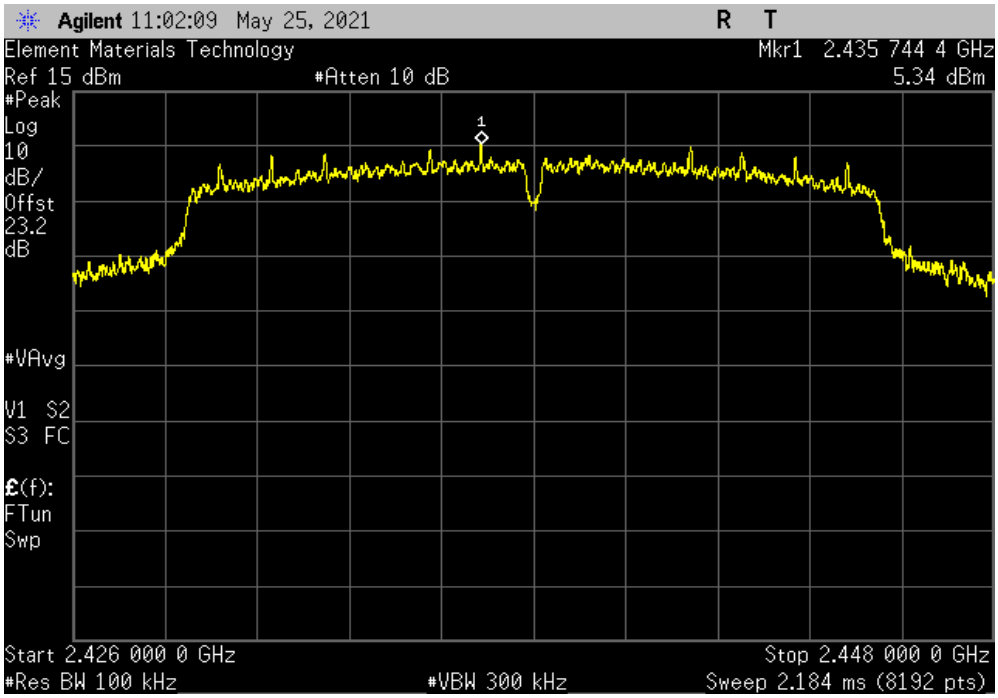
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	2386.7	-51.06	-30	Pass



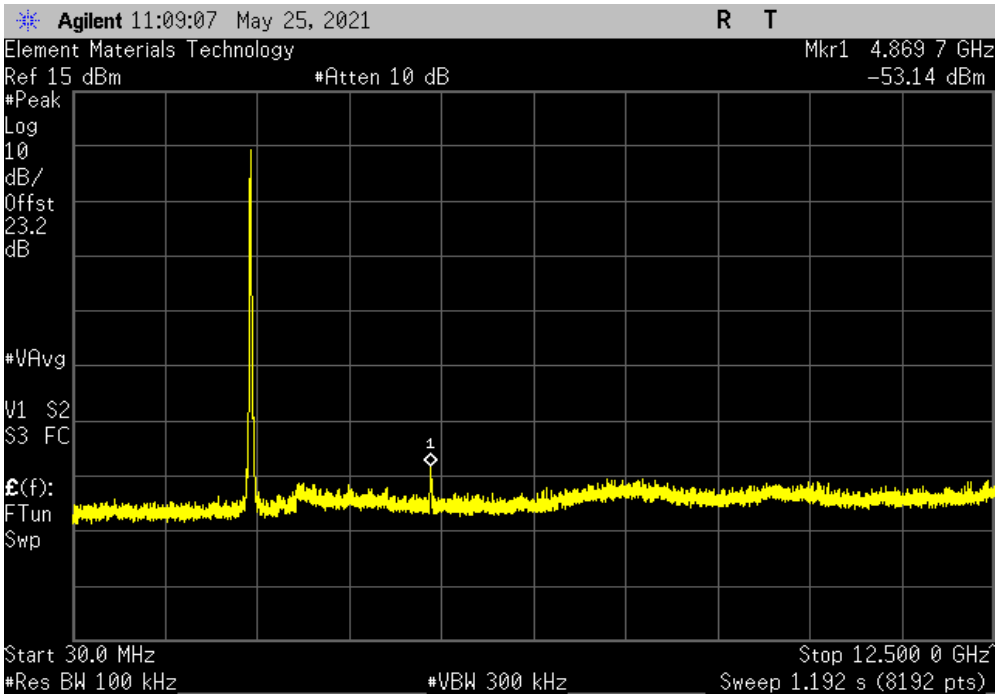
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24855	-53.24	-30	Pass



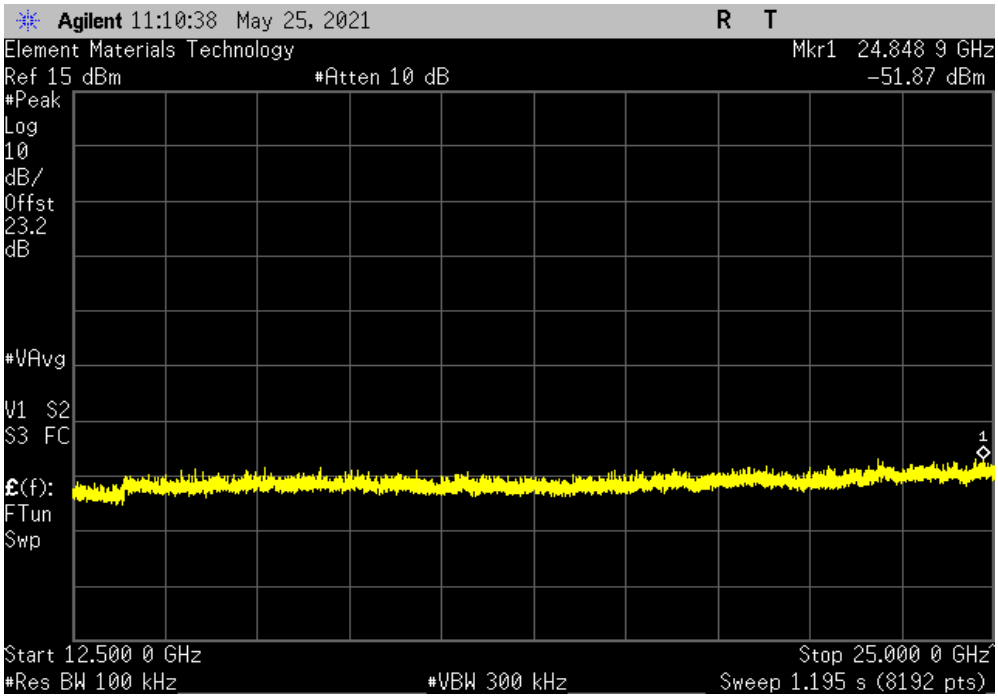
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
Fundamental	2435.74	N/A	N/A	N/A



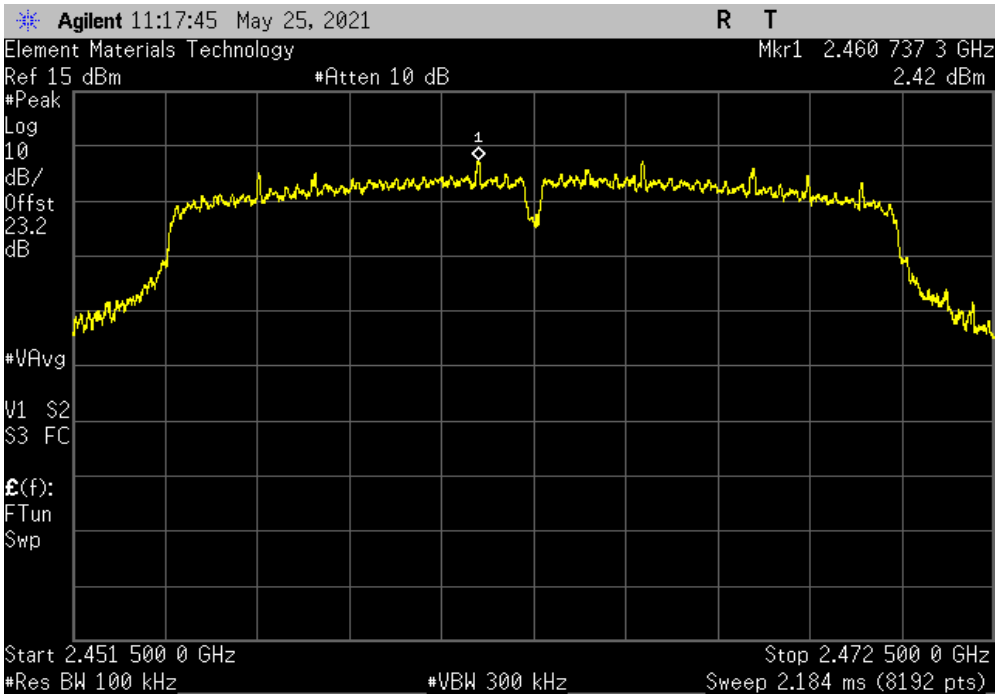
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	4869.7	-58.48	-30	Pass



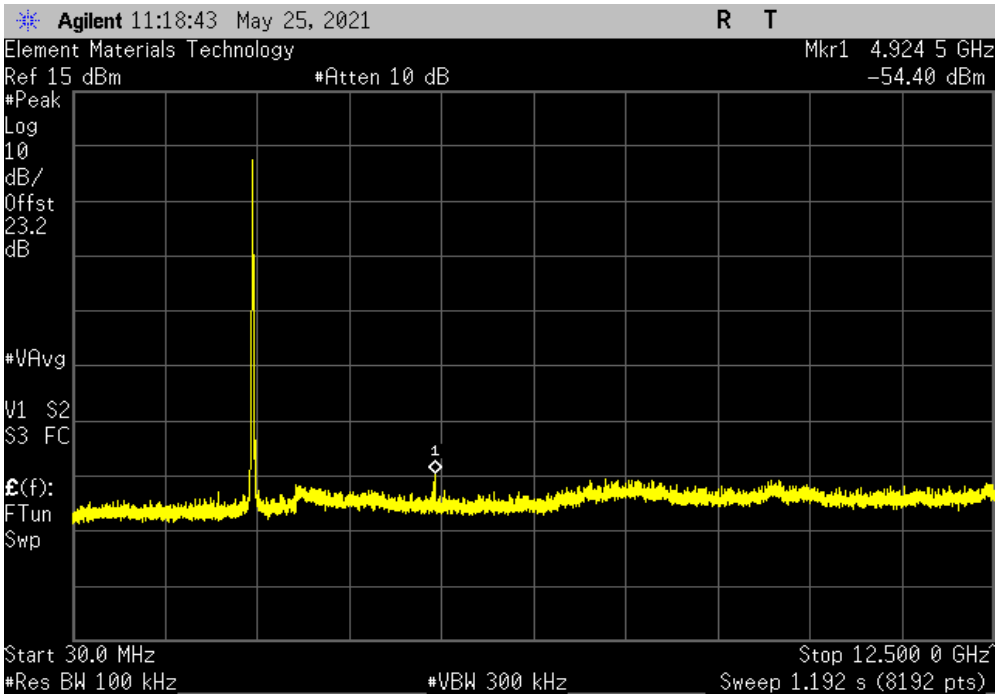
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24848.9	-57.21	-30	Pass



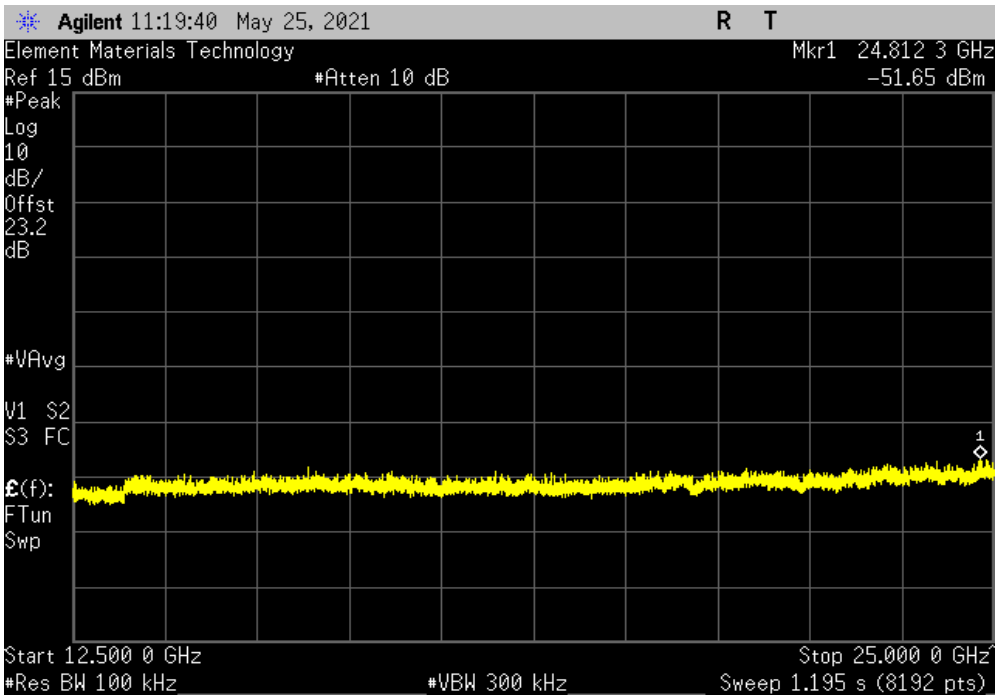
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		2460.74	N/A	N/A	N/A



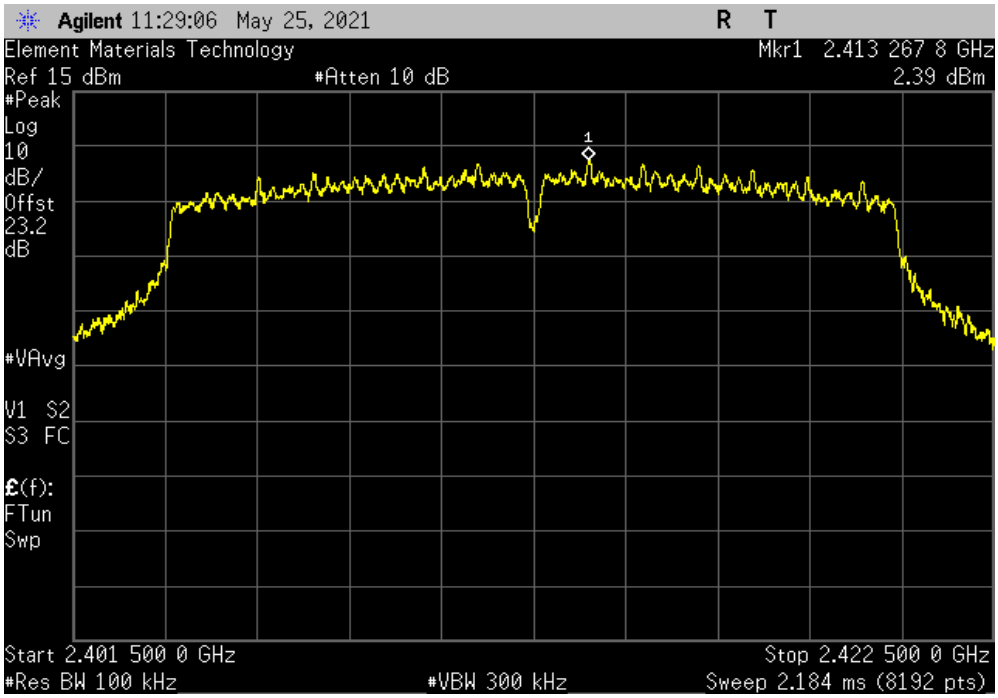
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	4924.5	-56.83	-30	Pass



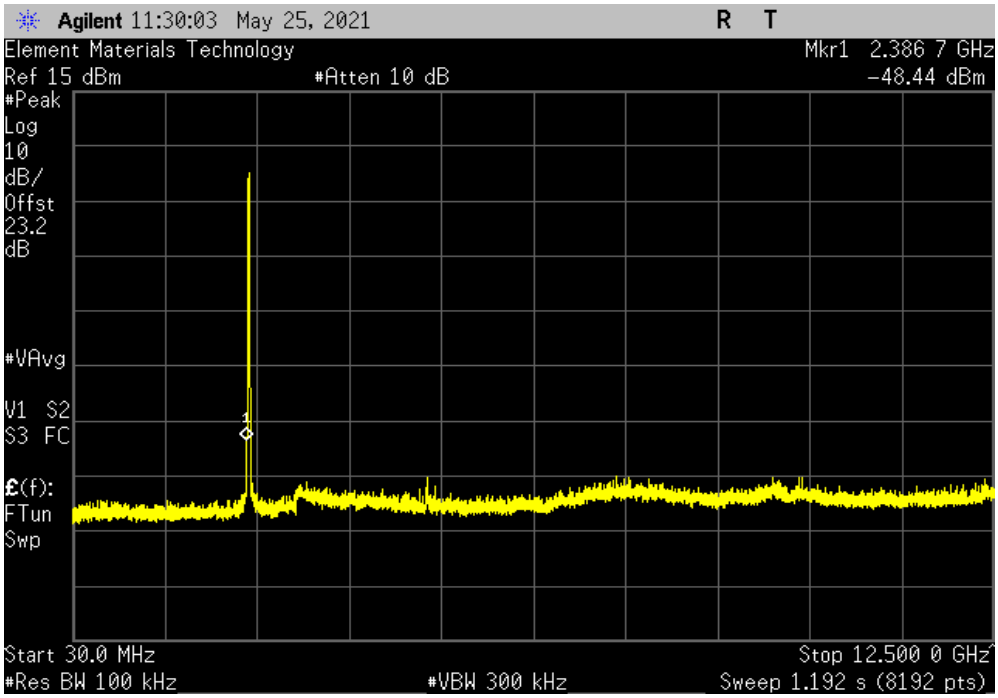
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24812.3	-54.08	-30	Pass



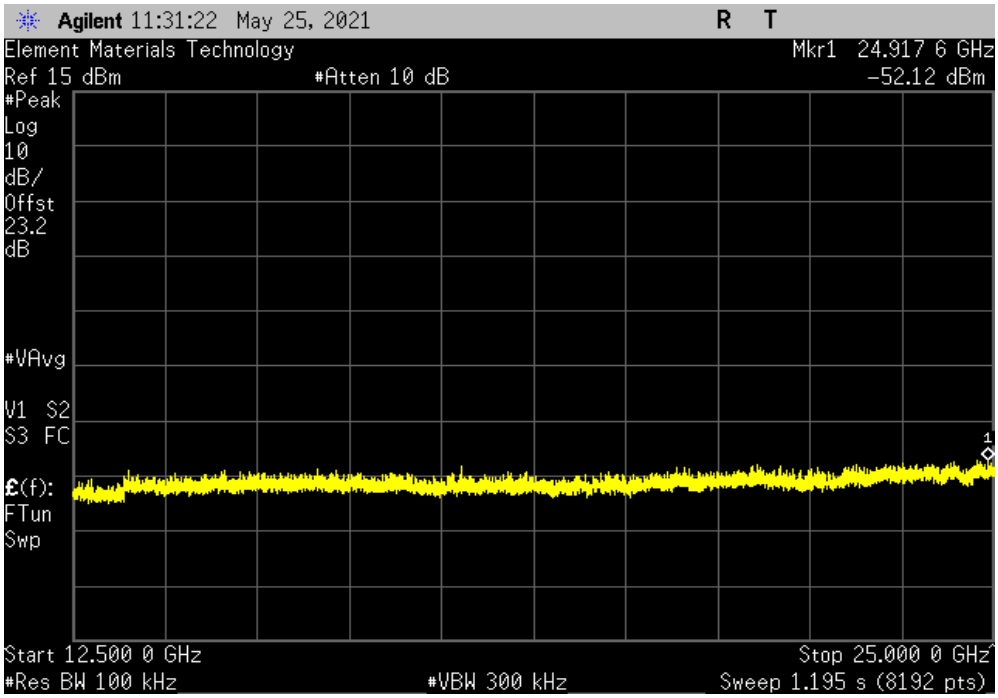
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
Fundamental	2413.27	N/A	N/A	N/A



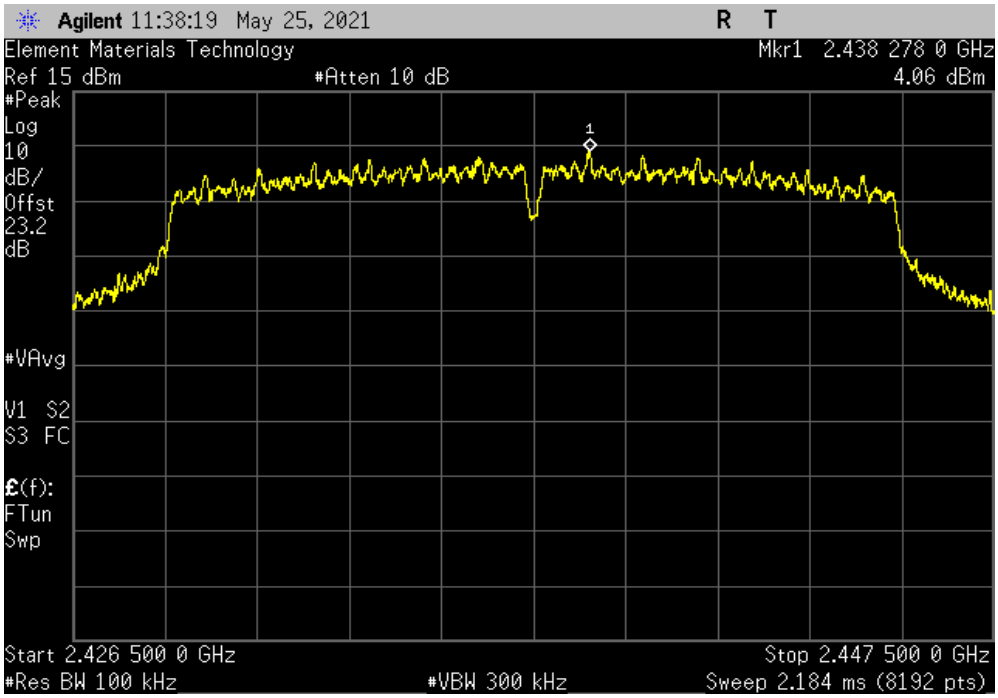
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	2386.7	-50.83	-30	Pass



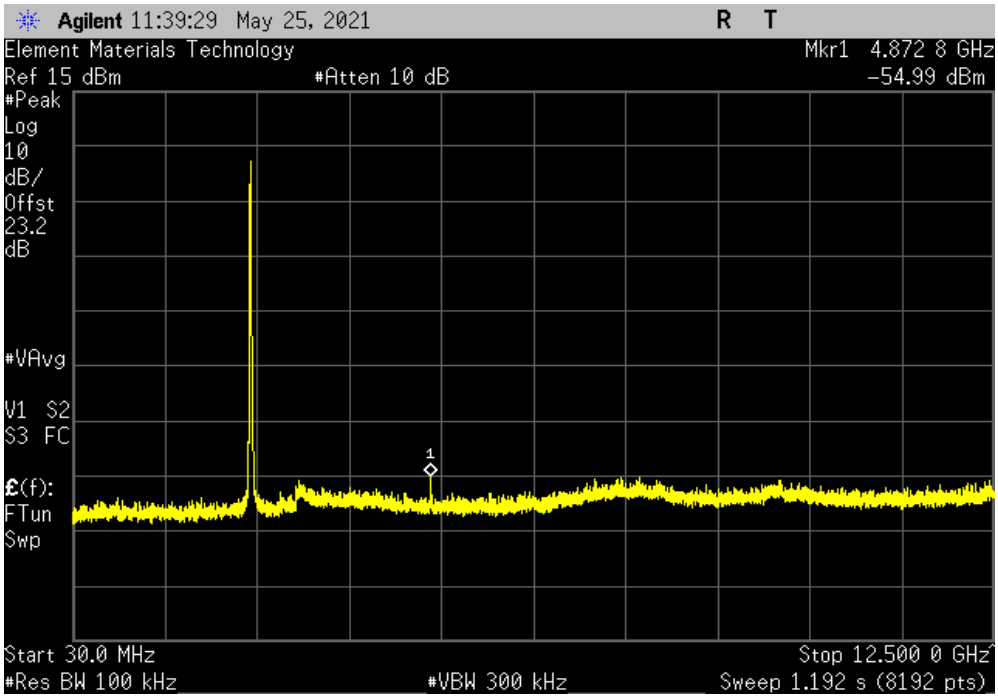
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24917.6	-54.51	-30	Pass



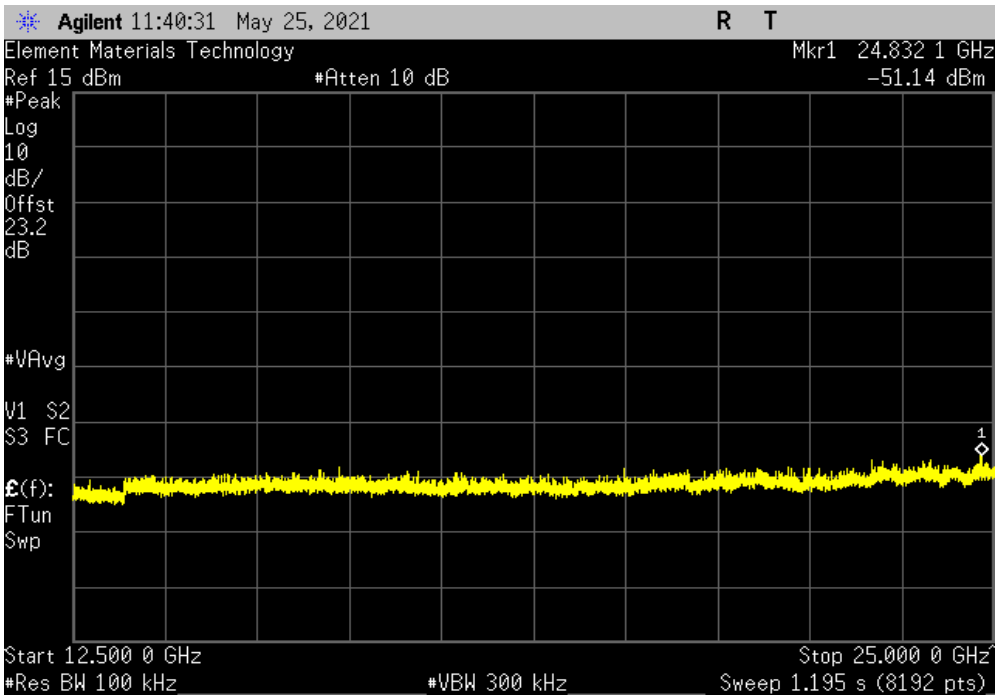
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		2438.28	N/A	N/A	N/A



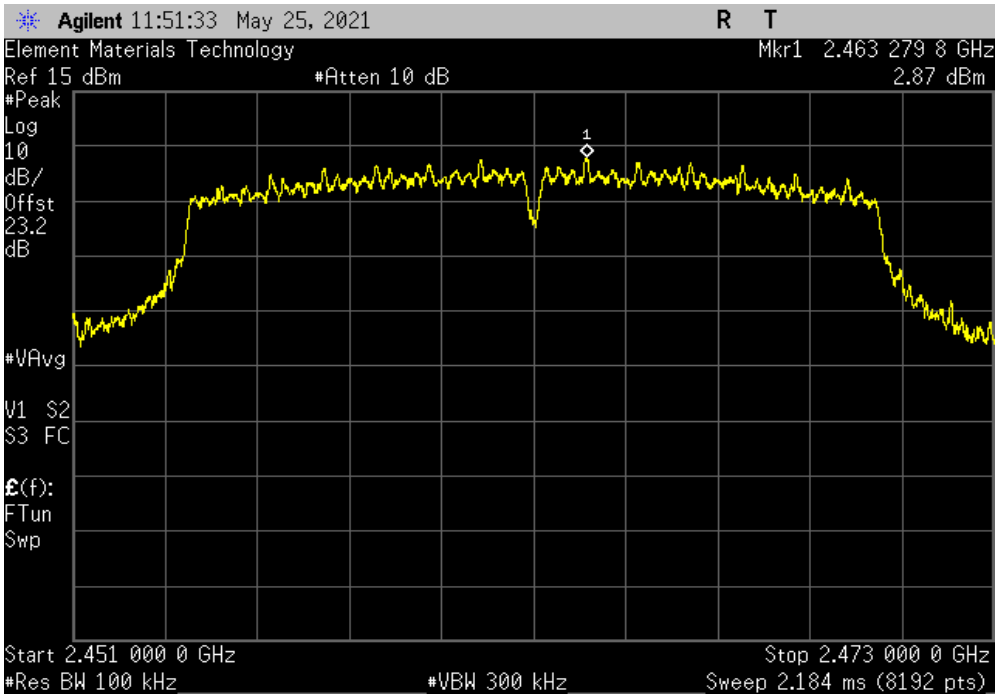
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	4872.8	-59.05	-30	Pass



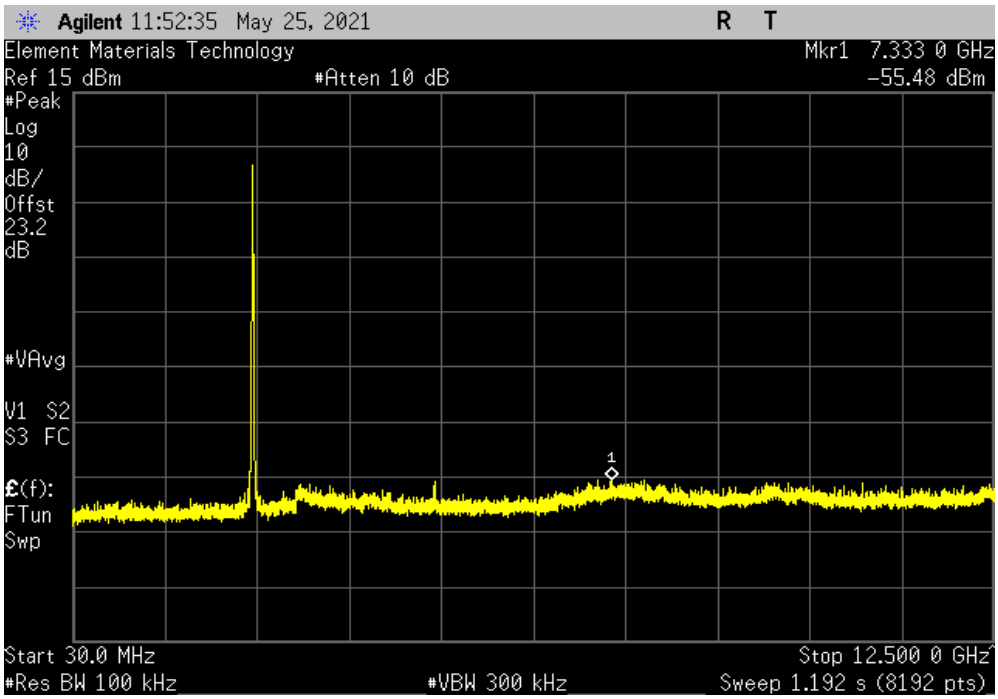
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24832.1	-55.2	-30	Pass



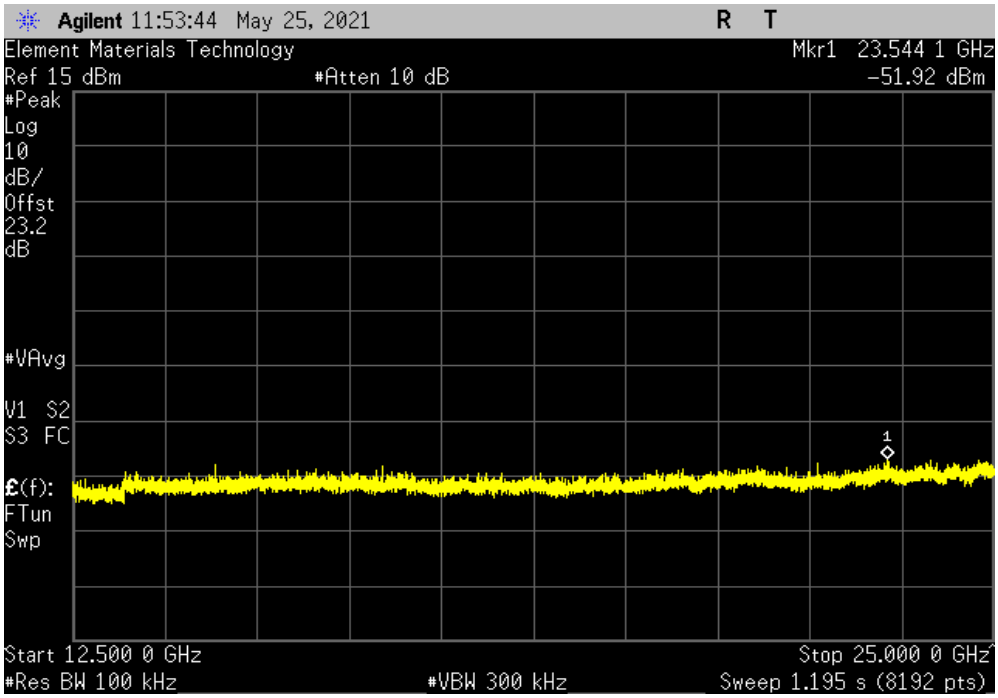
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
Fundamental	2463.28	N/A	N/A	N/A



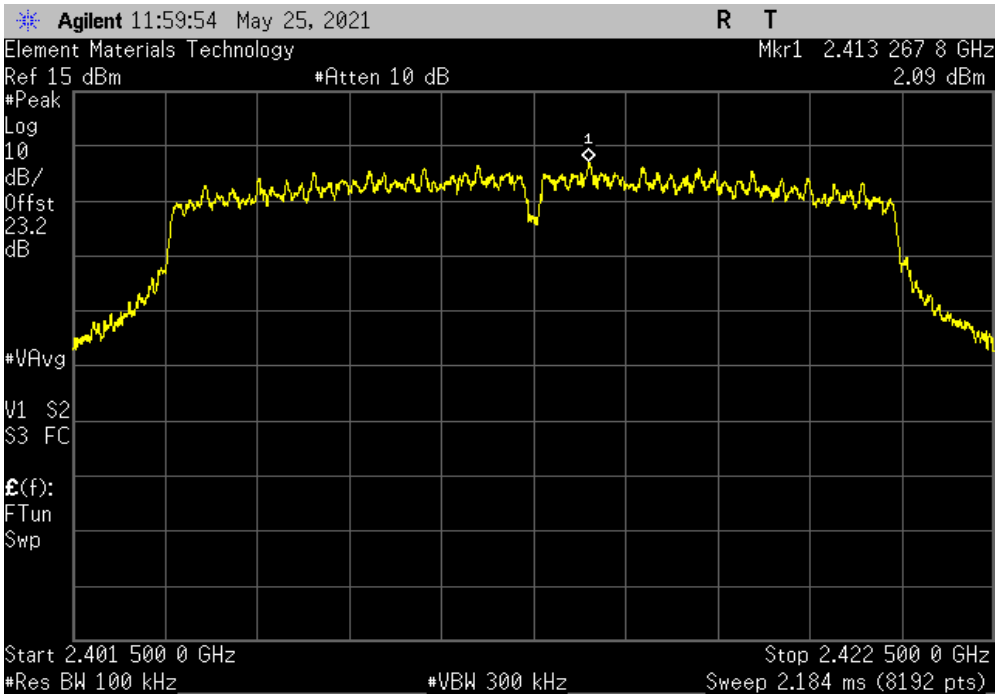
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	7333	-58.35	-30	Pass



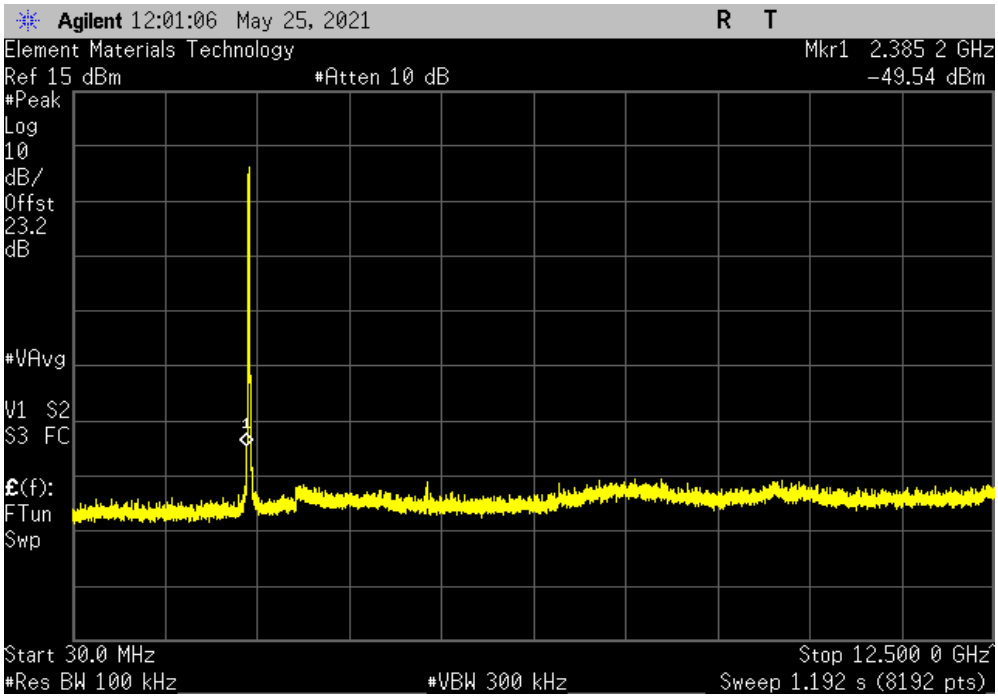
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	23544.1	-54.79	-30	Pass



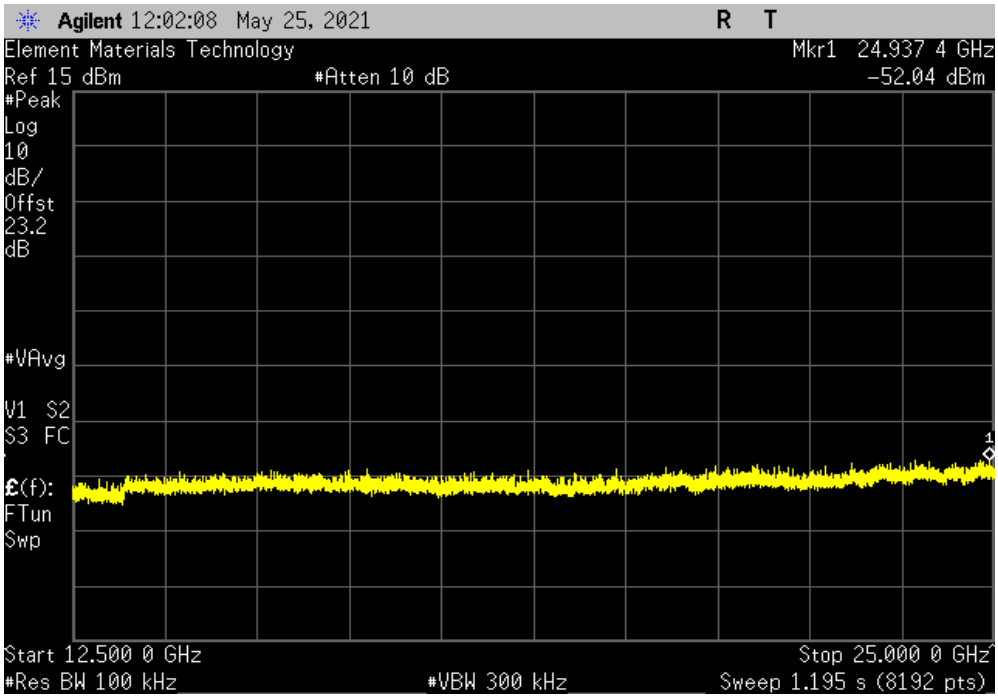
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		2413.27	N/A	N/A	N/A



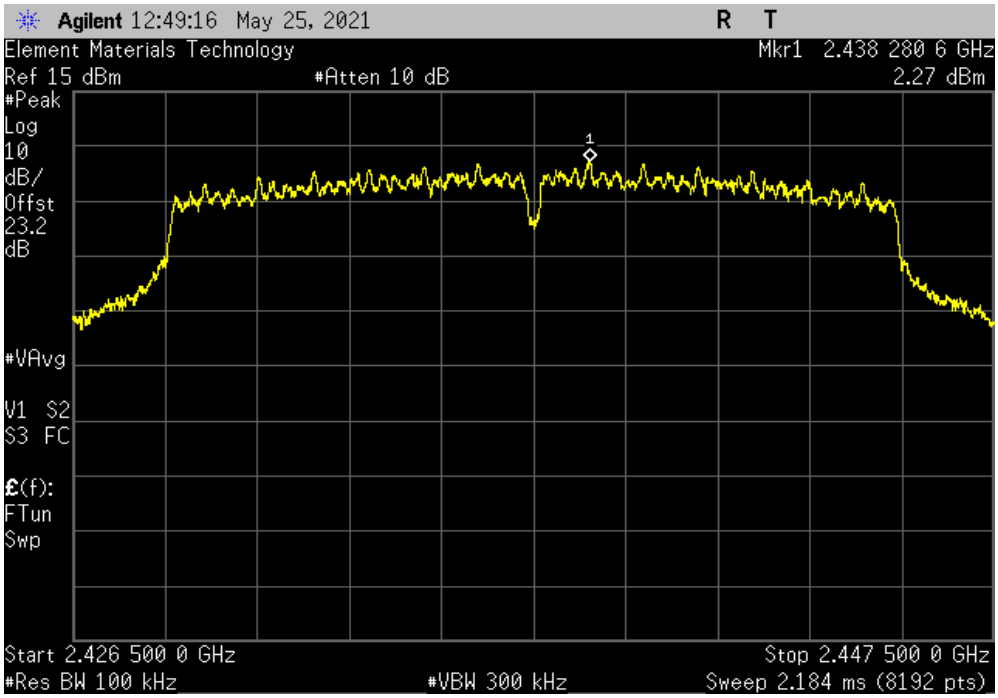
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	2385.2	-51.63	-30	Pass



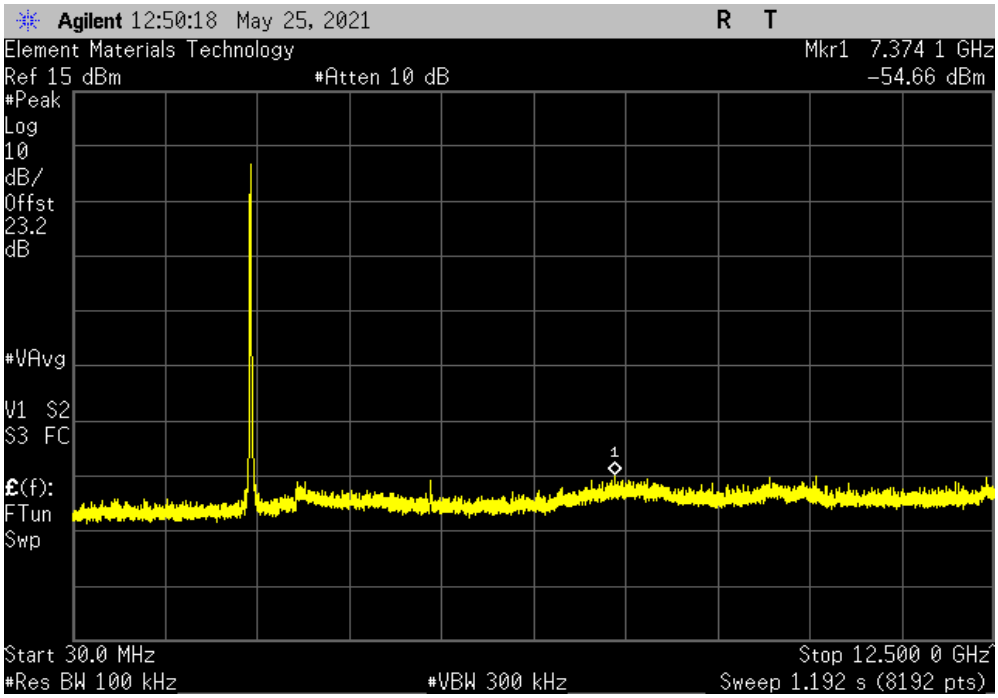
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24937.4	-54.13	-30	Pass



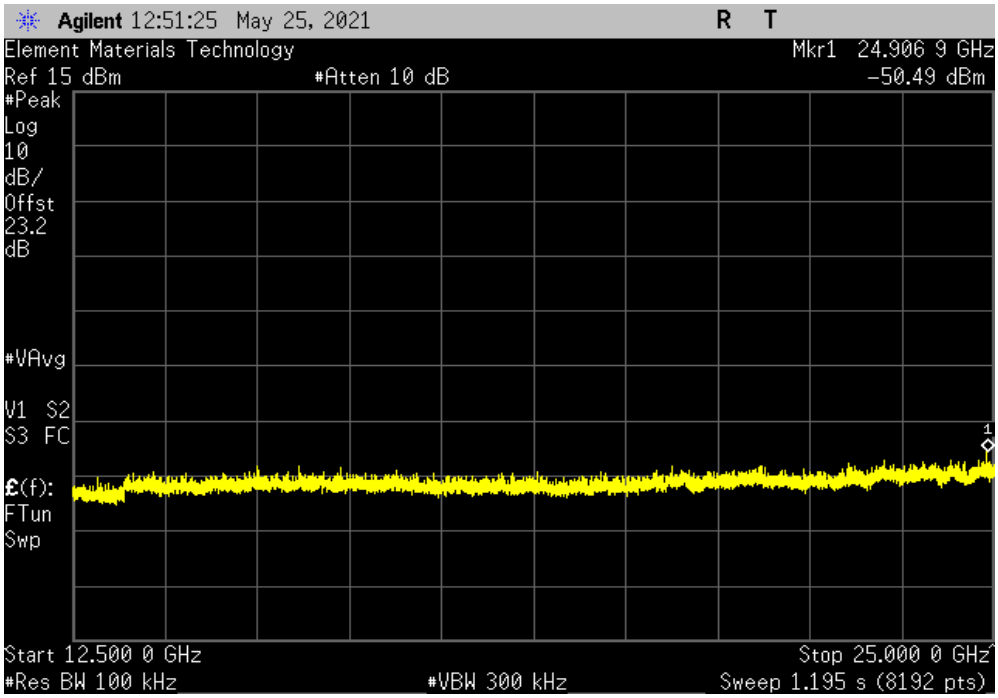
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
Fundamental	2438.28	N/A	N/A	N/A



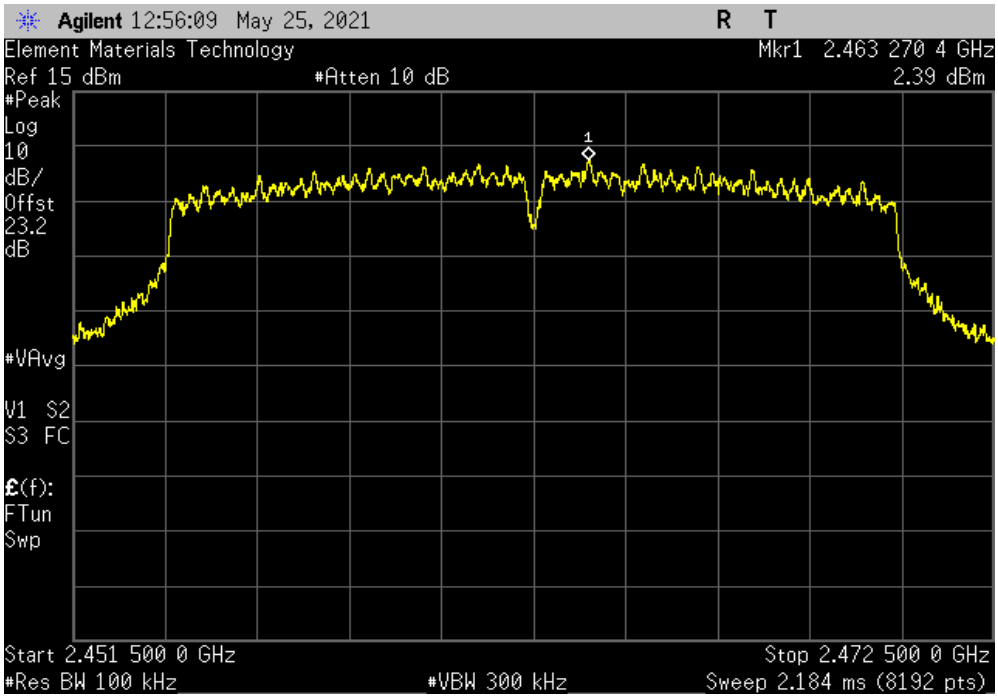
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	7374.1	-56.93	-30	Pass



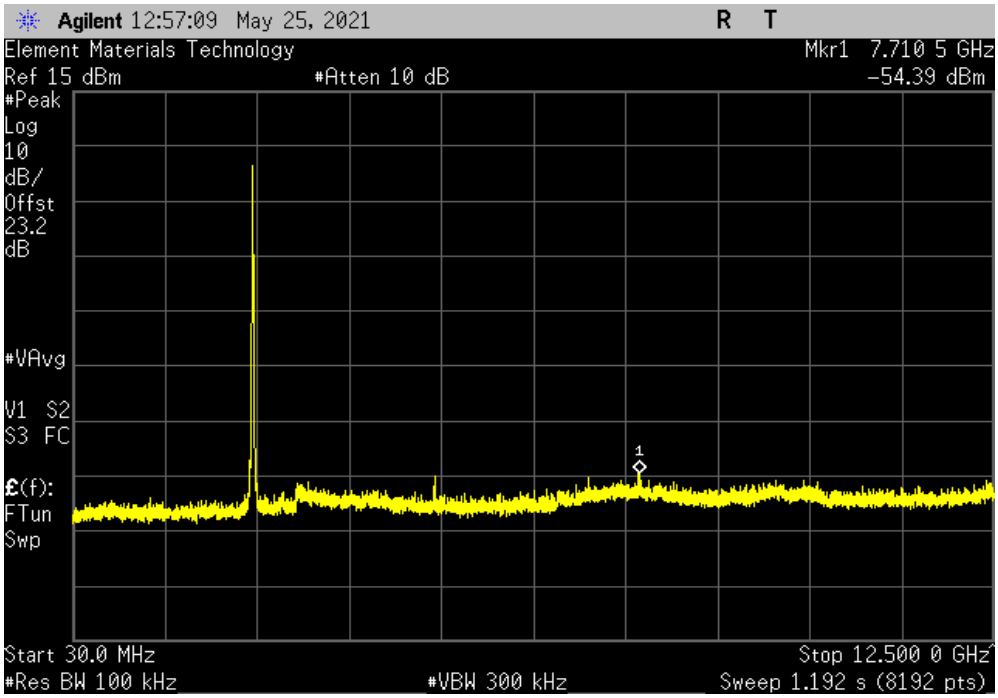
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24906.9	-52.76	-30	Pass



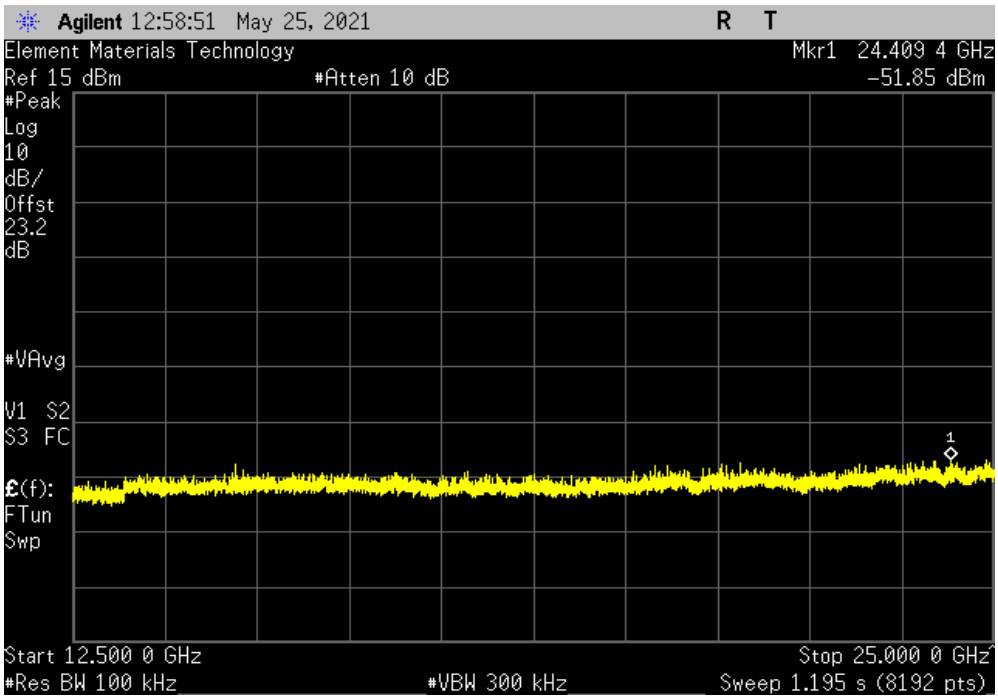
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		2463.27	N/A	N/A	N/A



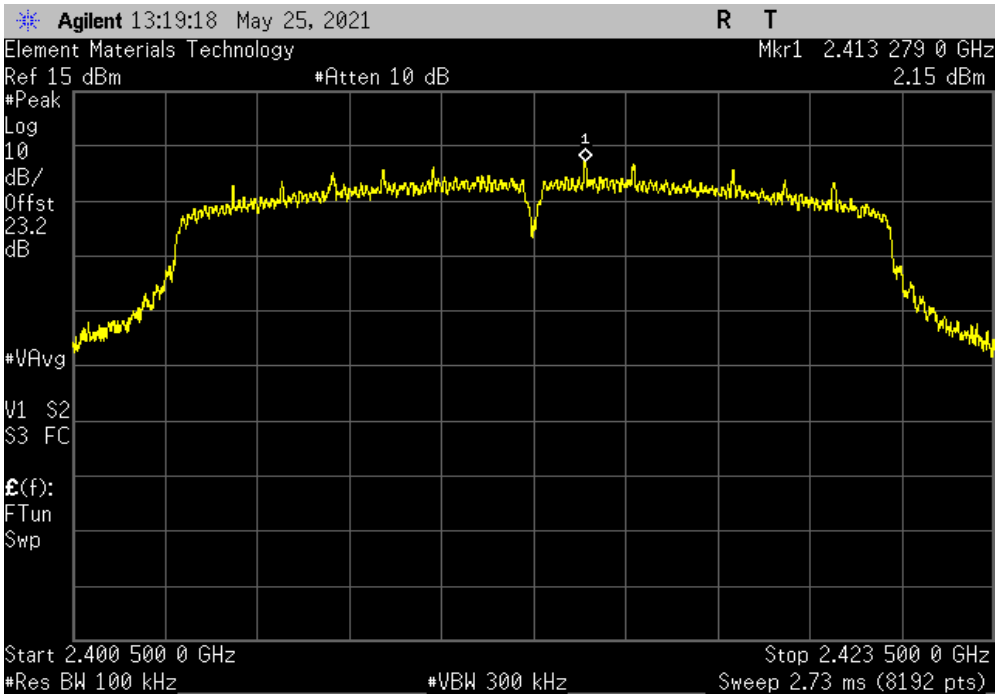
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	7710.5	-56.78	-30	Pass



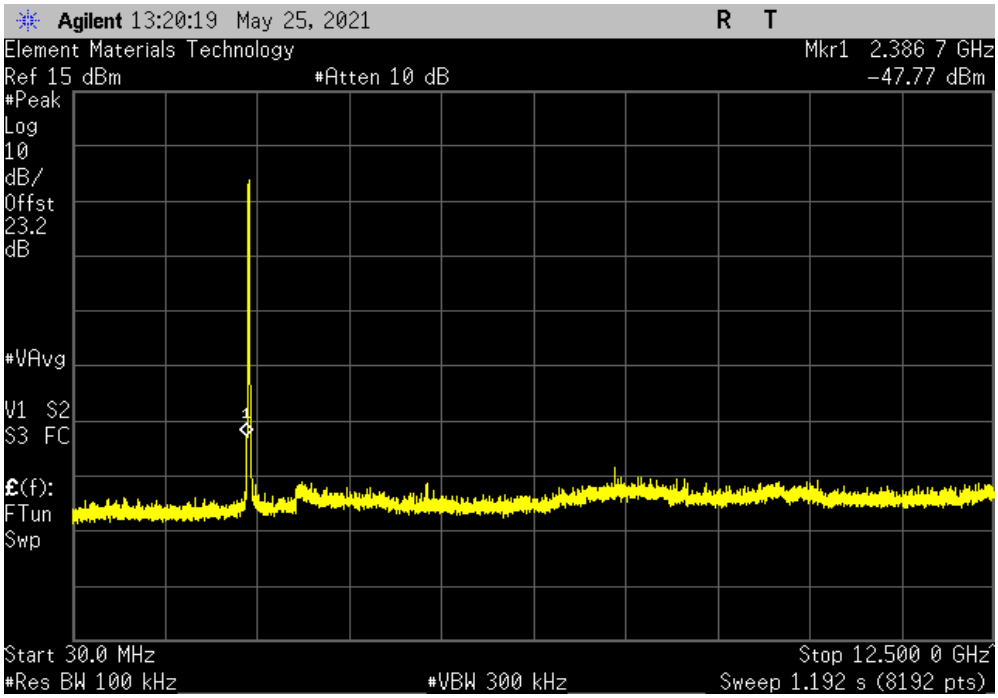
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24409.4	-54.24	-30	Pass



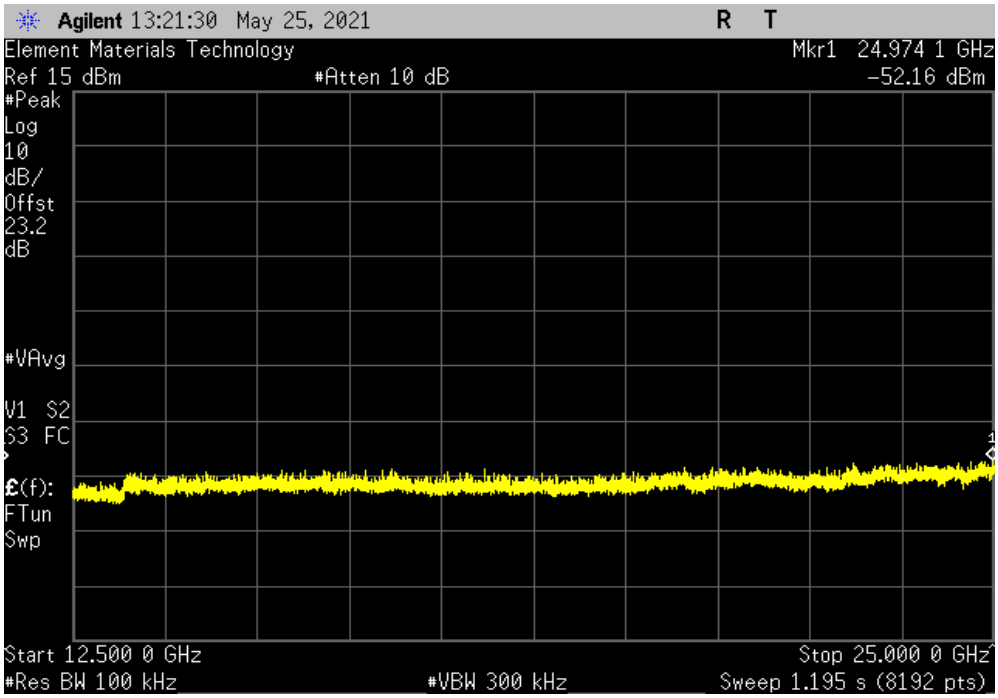
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, Low Channel 1, 2412 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
Fundamental	2413.28	N/A	N/A	N/A



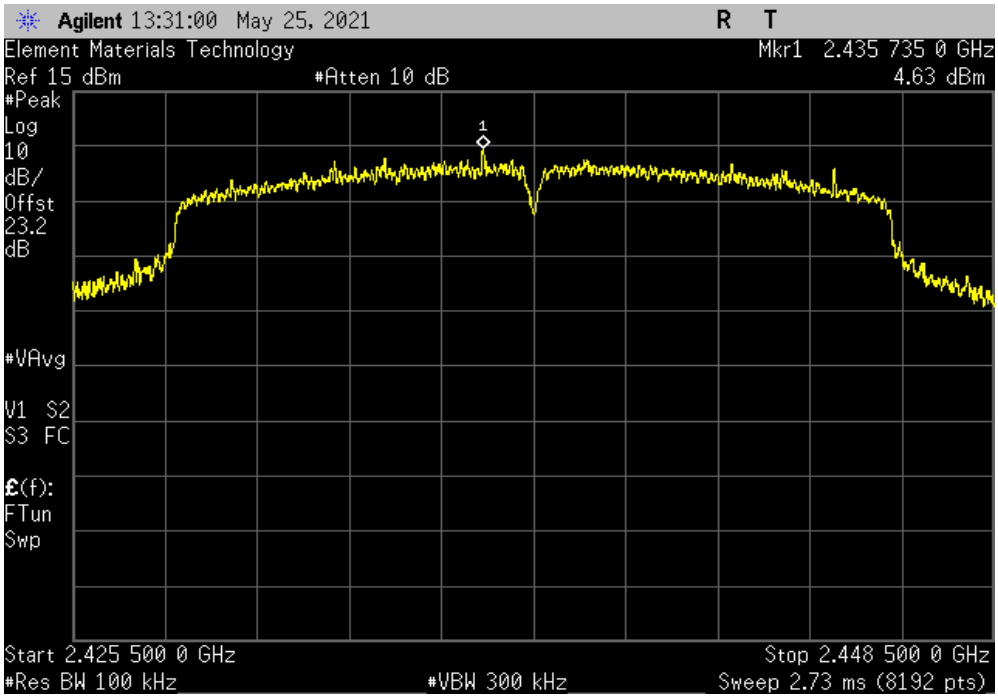
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, Low Channel 1, 2412 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	2386.7	-49.93	-30	Pass



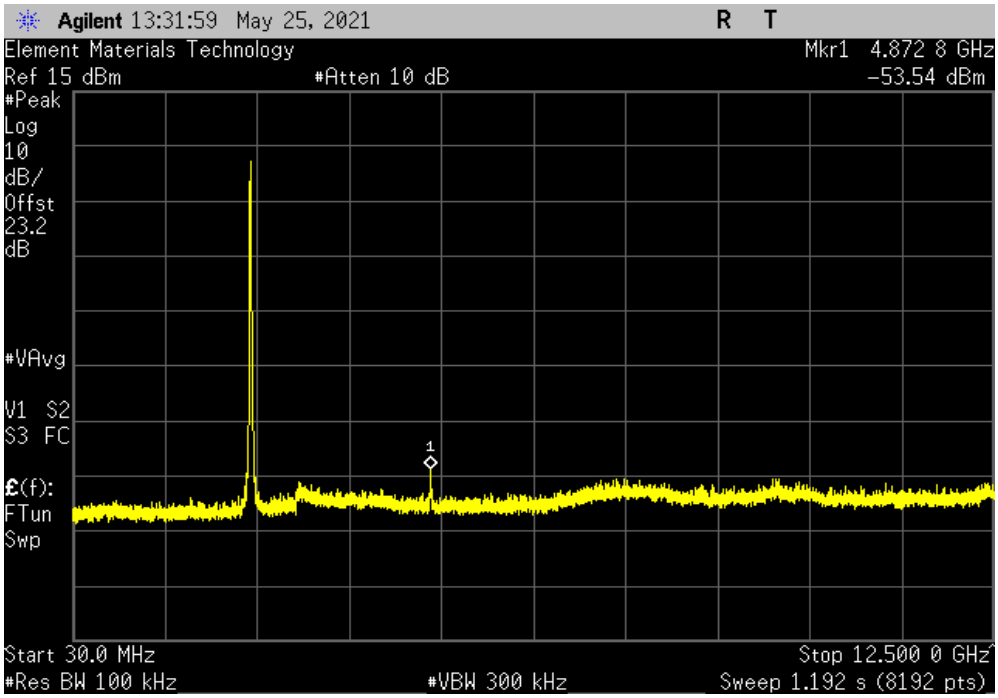
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, Low Channel 1, 2412 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24974.1	-54.32	-30	Pass



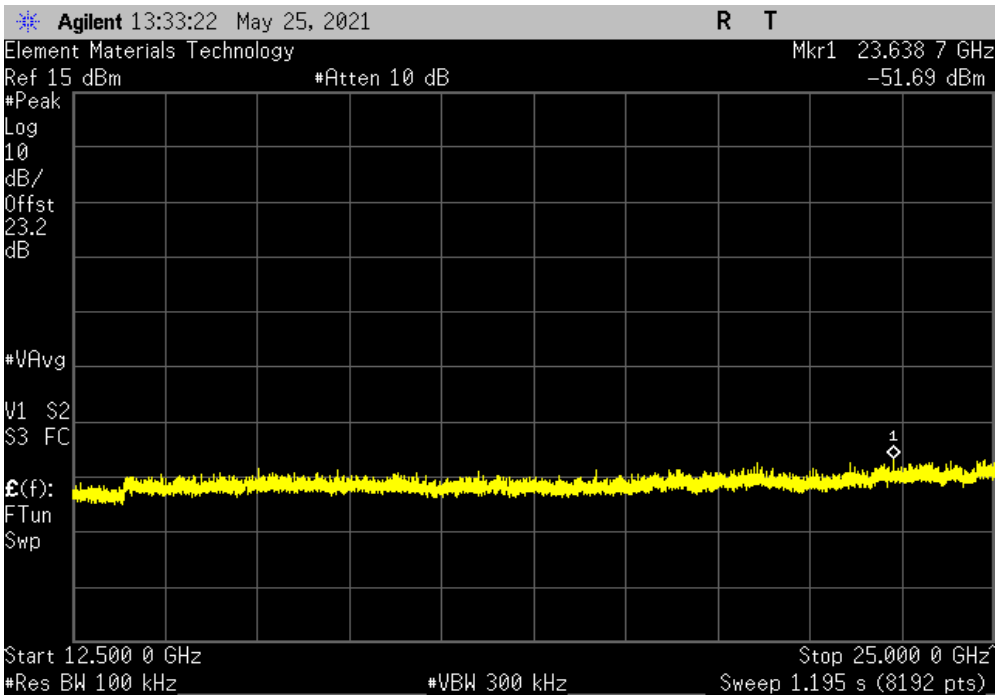
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
	Frequency Range		**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
	Fundamental		2435.74	N/A	N/A	N/A



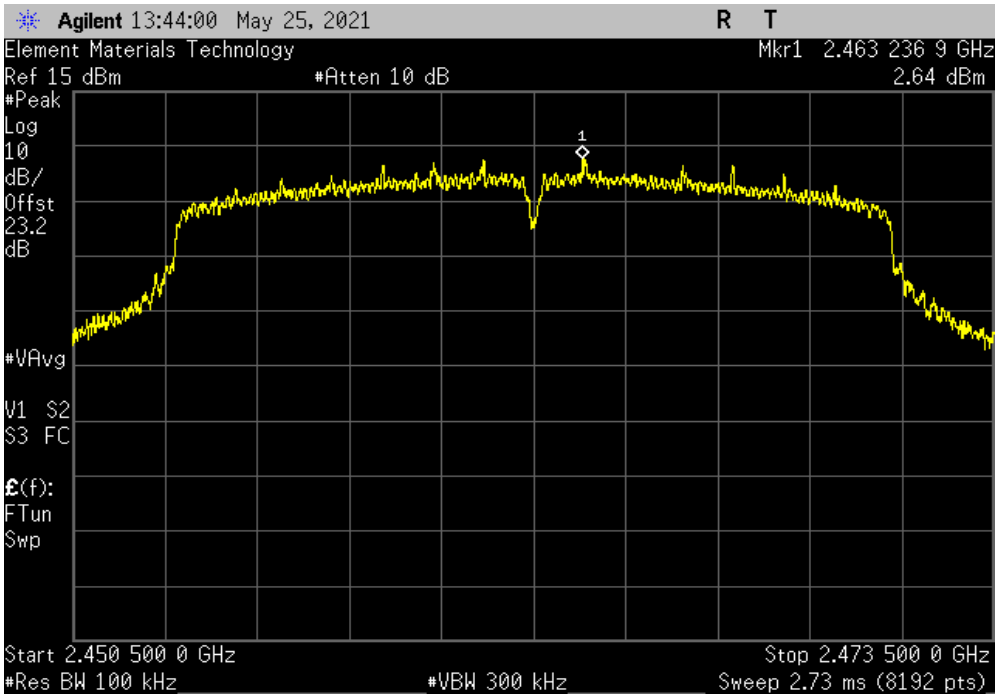
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	4872.8	-58.17	-30	Pass



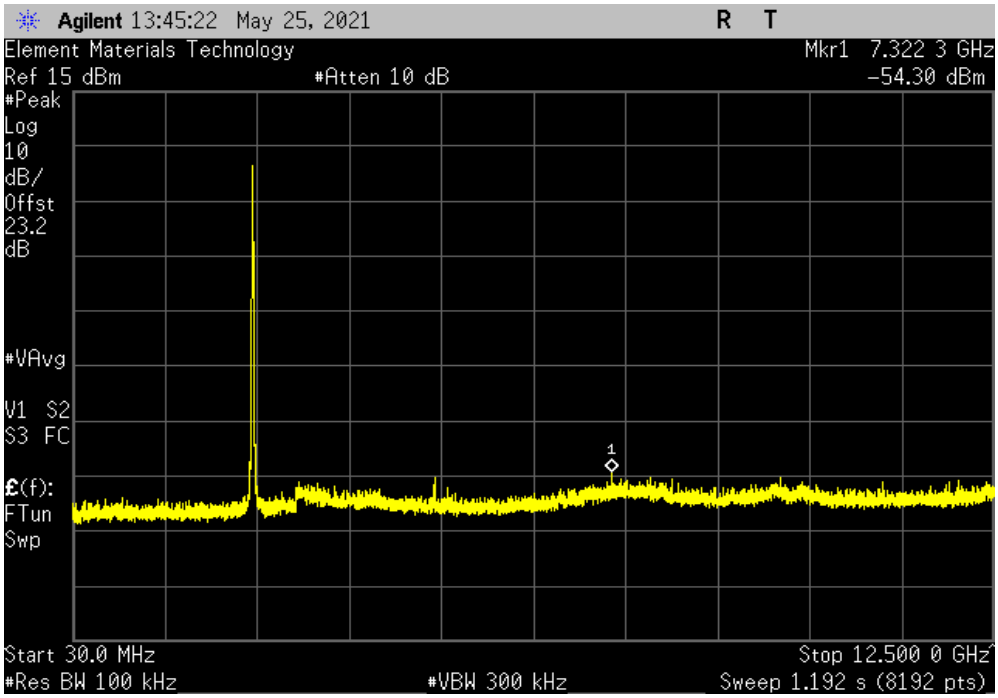
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	23638.7	-56.32	-30	Pass



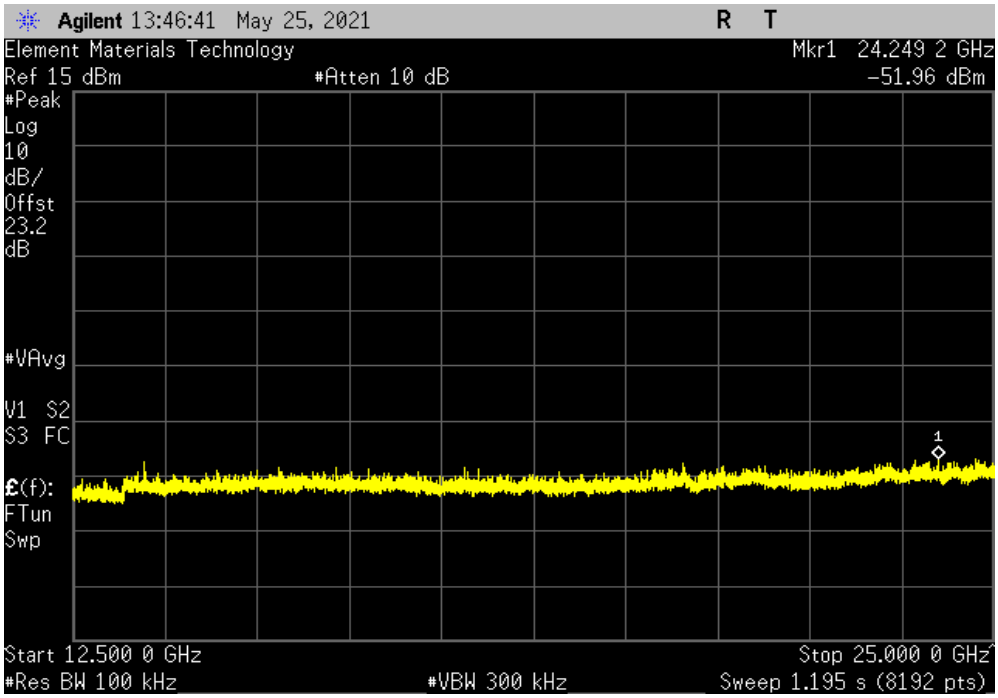
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, High Channel 11, 2462 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
Fundamental	2463.24	N/A	N/A	N/A



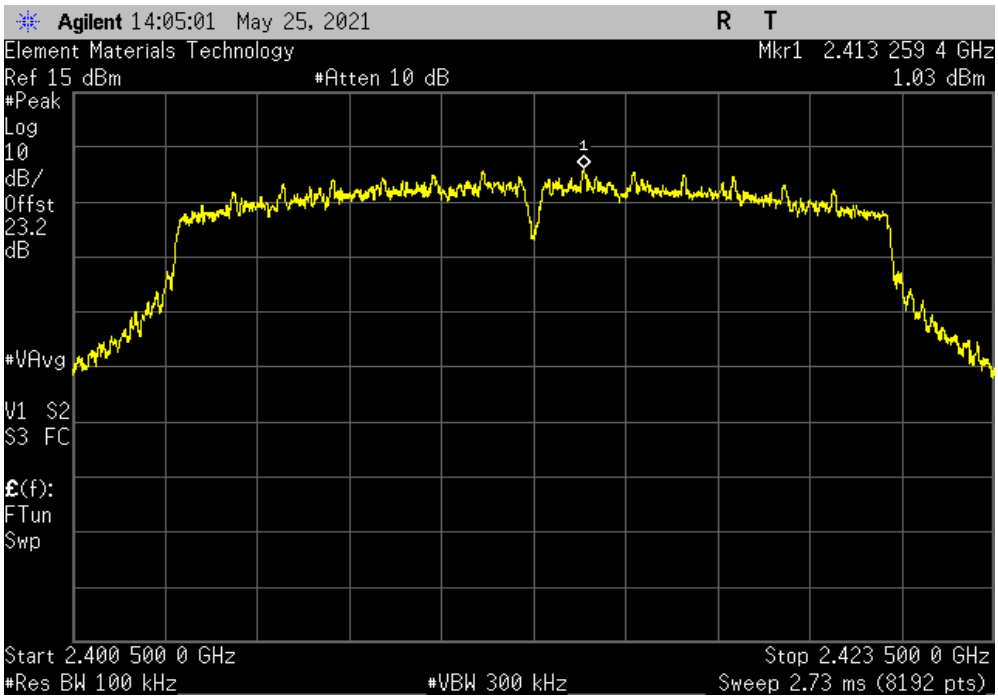
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, High Channel 11, 2462 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	7322.3	-56.94	-30	Pass



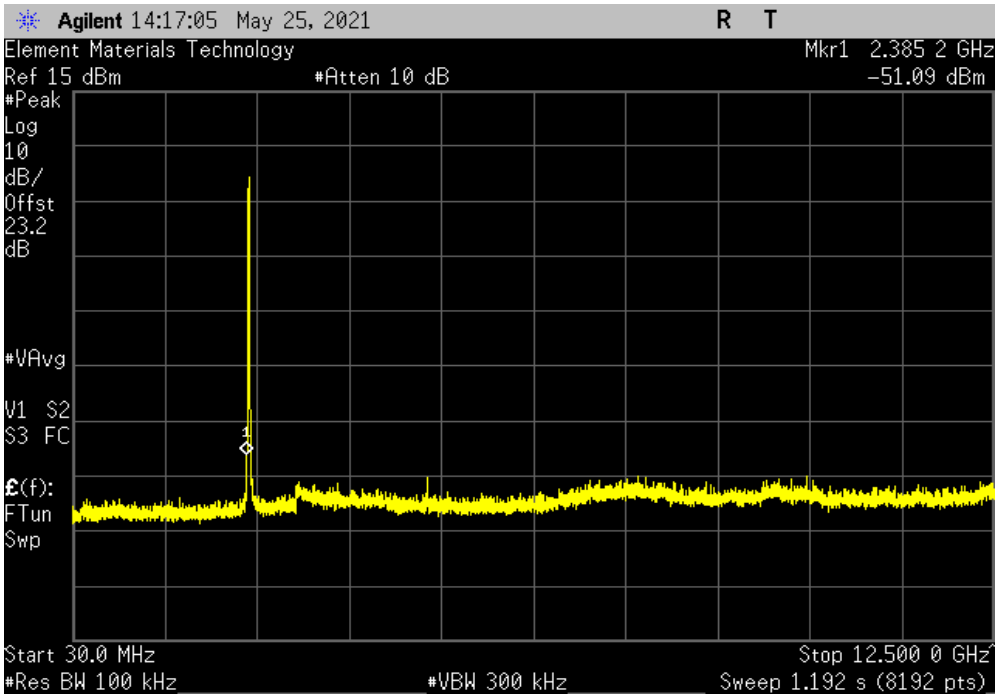
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, High Channel 11, 2462 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24249.2	-54.6	-30	Pass



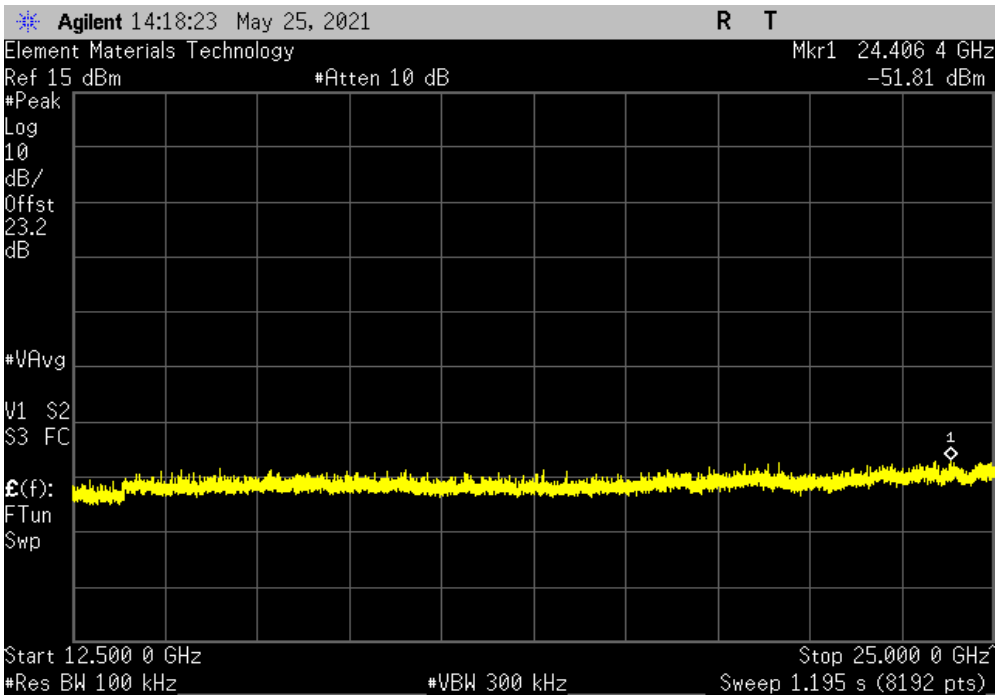
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		2413.26	N/A	N/A	N/A



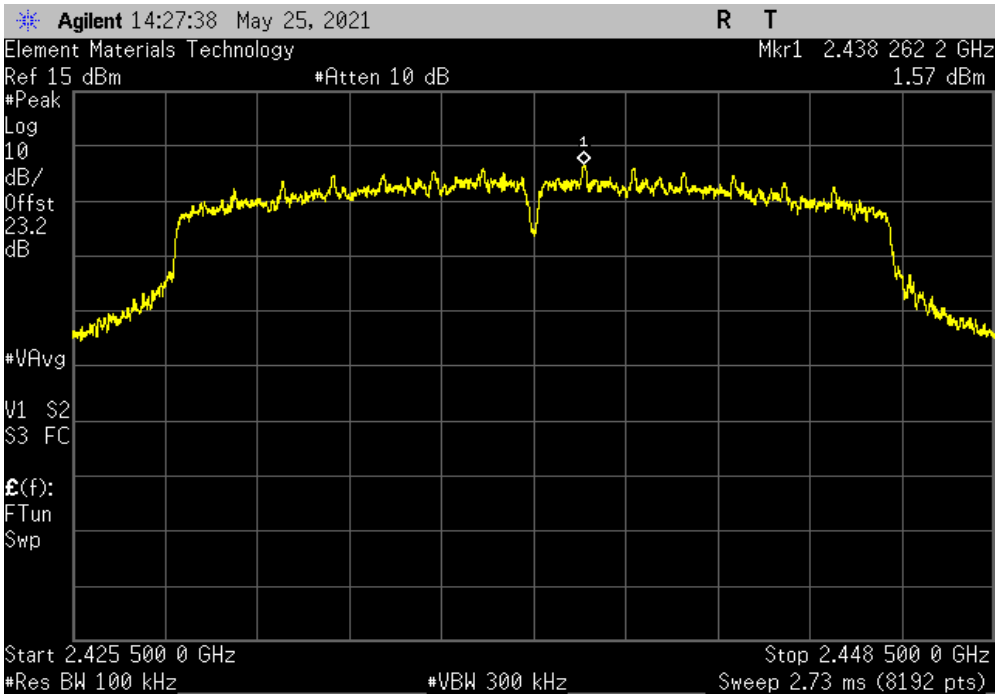
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, Low Channel 1, 2412 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	2385.2	-52.13	-30	Pass



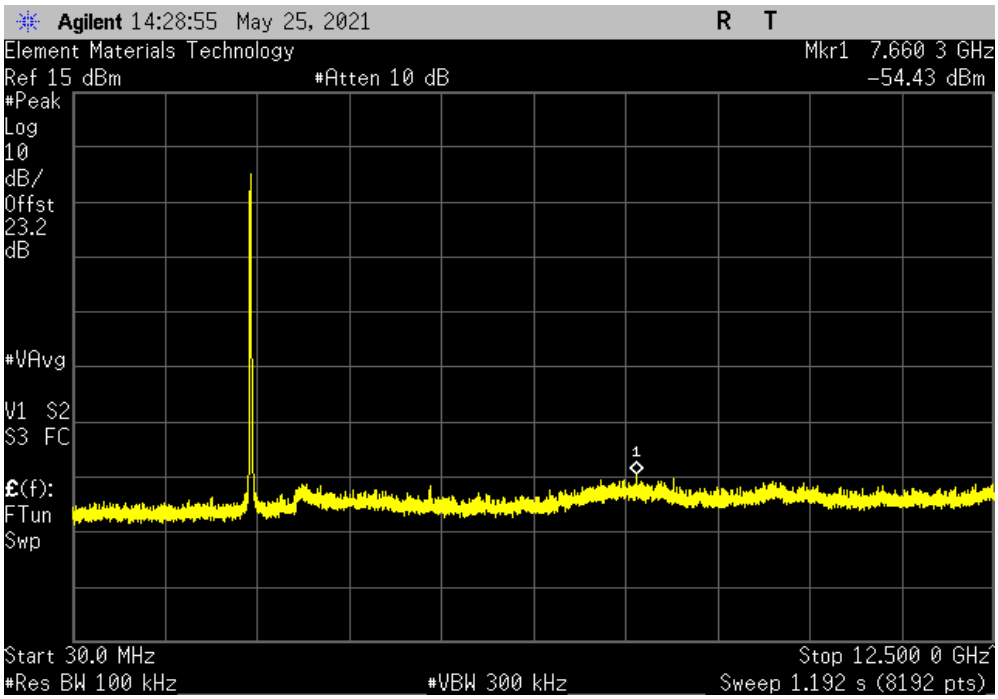
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, Low Channel 1, 2412 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
12.5 GHz - 25 GHz	24406.4	-52.85	-30	Pass



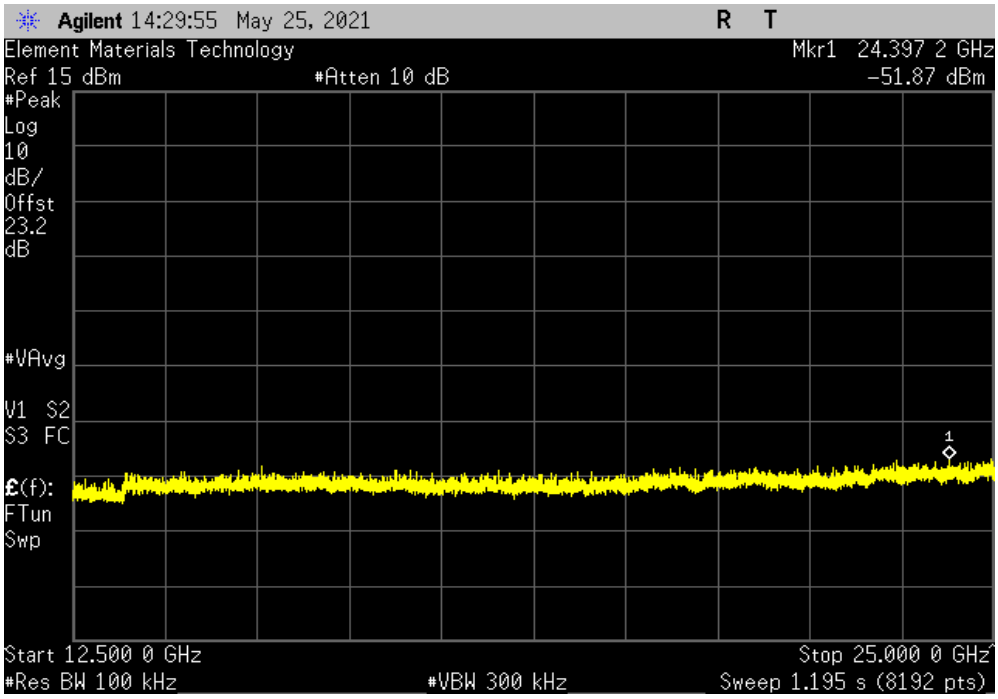
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, Mid Channel 6, 2437 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
Fundamental	2438.26	N/A	N/A	N/A



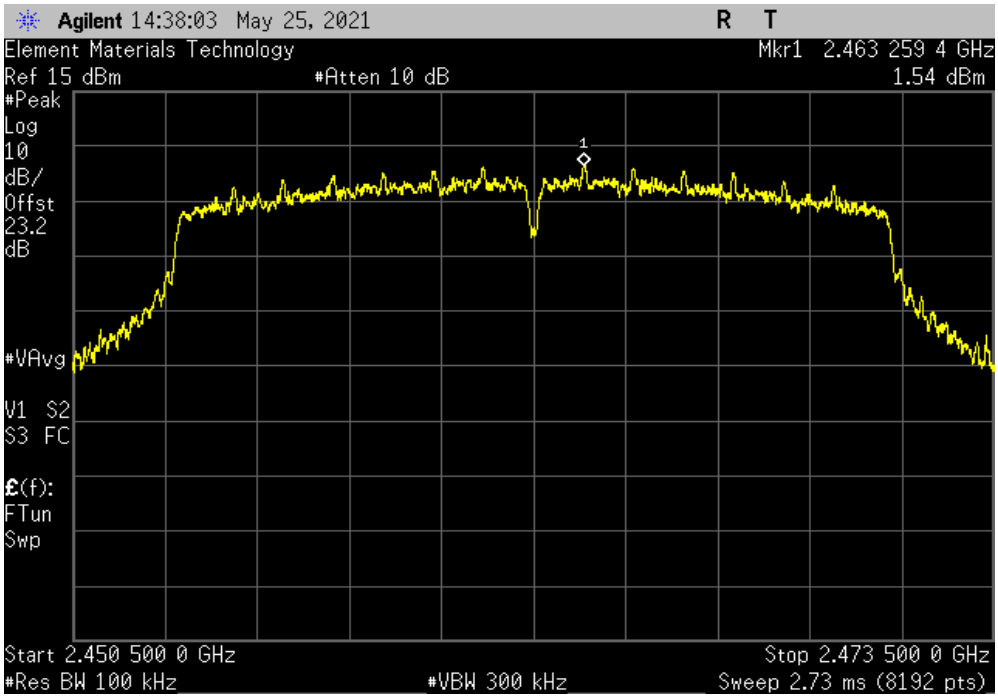
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	7660.3	-56	-30	Pass



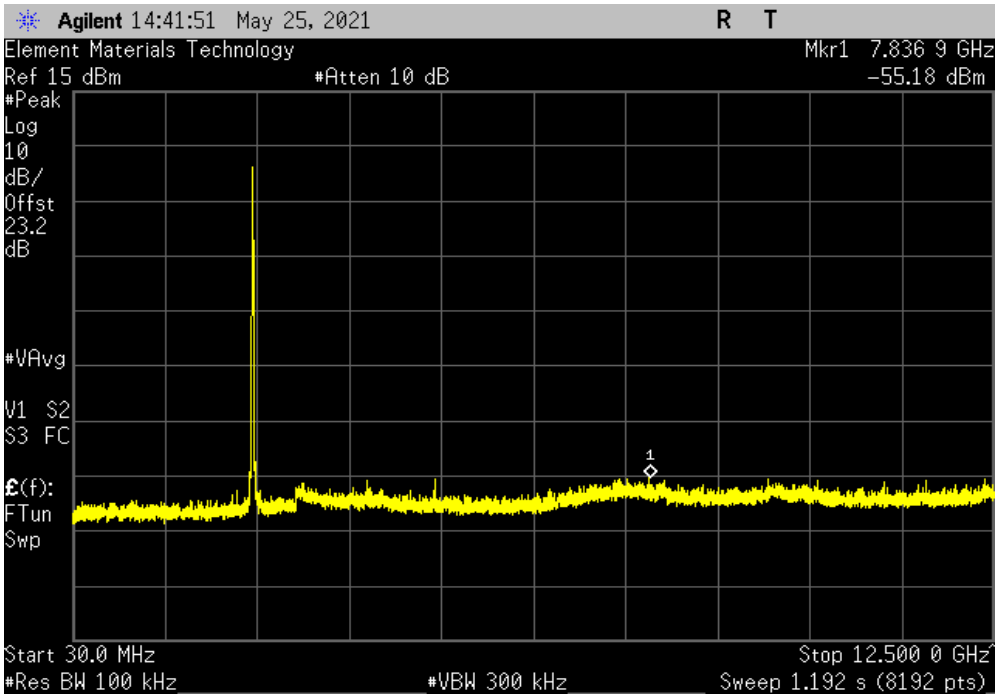
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, Mid Channel 6, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24397.2	-53.44	-30	Pass



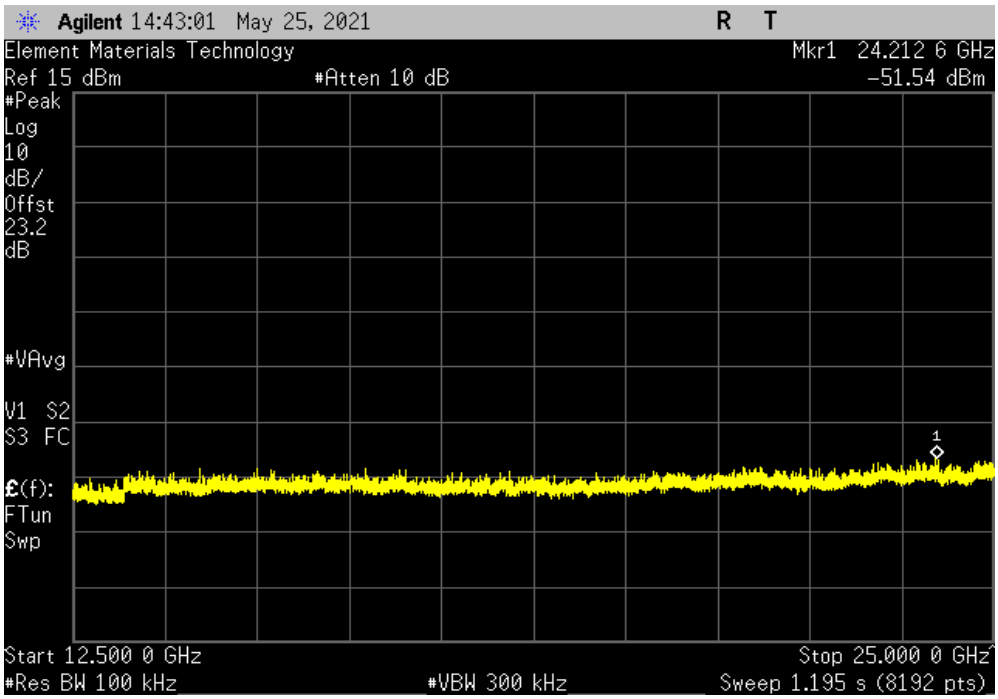
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, High Channel 11, 2462 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		2463.26	N/A	N/A	N/A



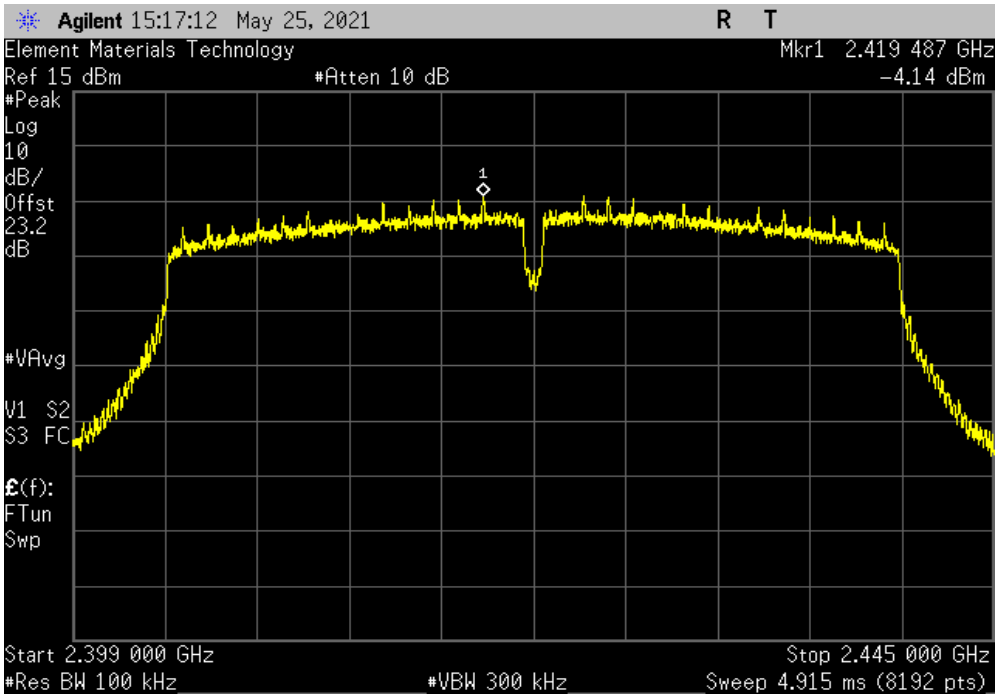
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, High Channel 11, 2462 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	7836.9	-56.72	-30	Pass



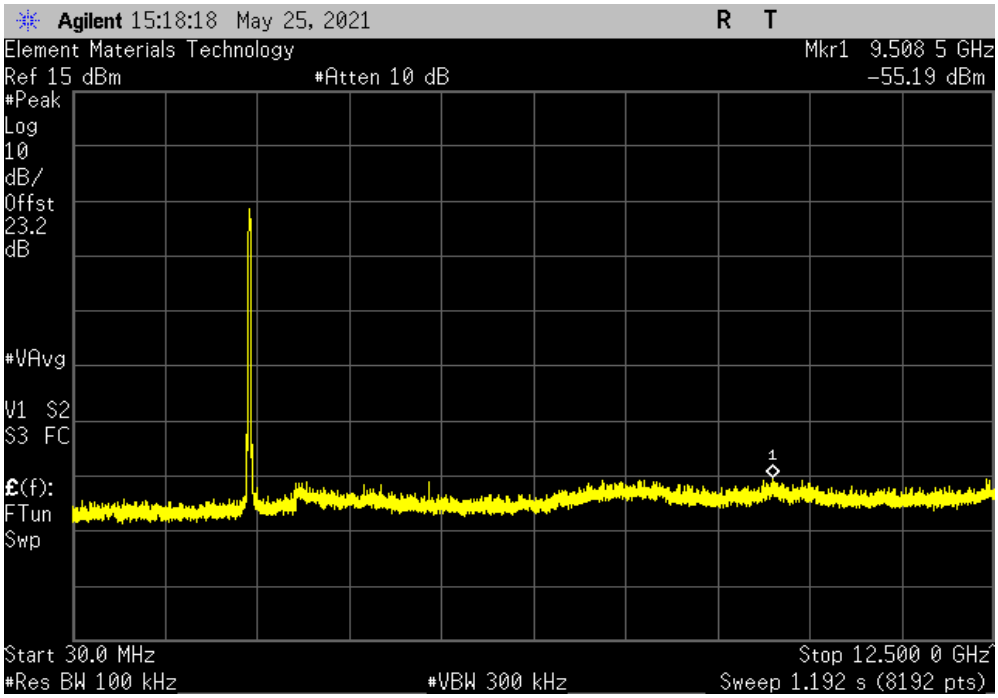
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, High Channel 11, 2462 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24212.6	-53.08	-30	Pass



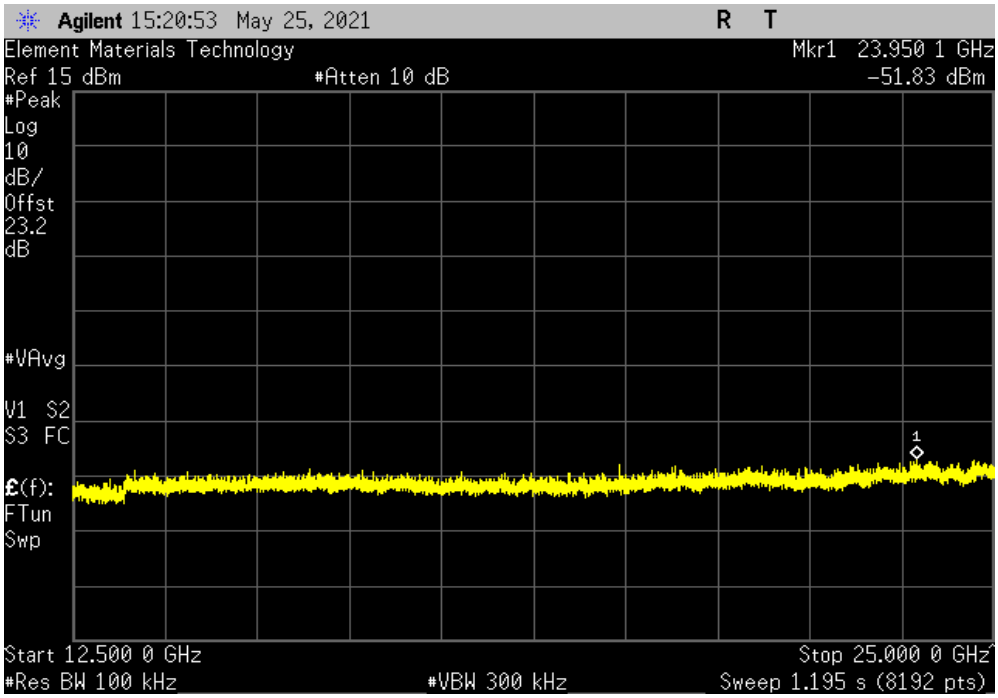
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Low Channel 1/5, 2422 MHz						
	Frequency Range		**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
	Fundamental		2419.49	N/A	N/A	N/A



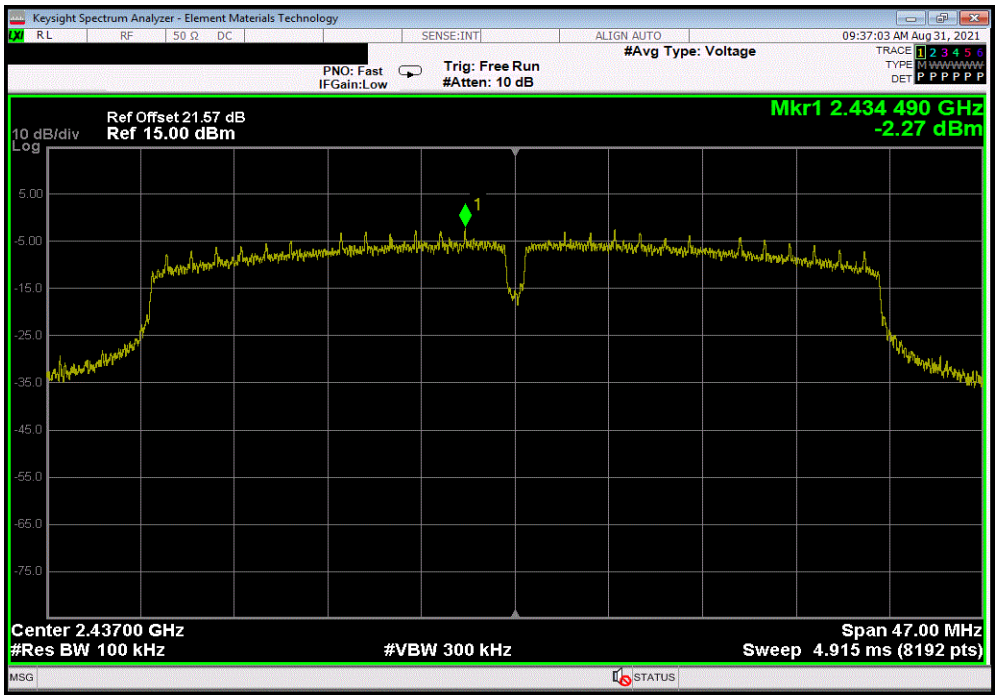
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Low Channel 1/5, 2422 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	9508.5	-51.05	-30	Pass



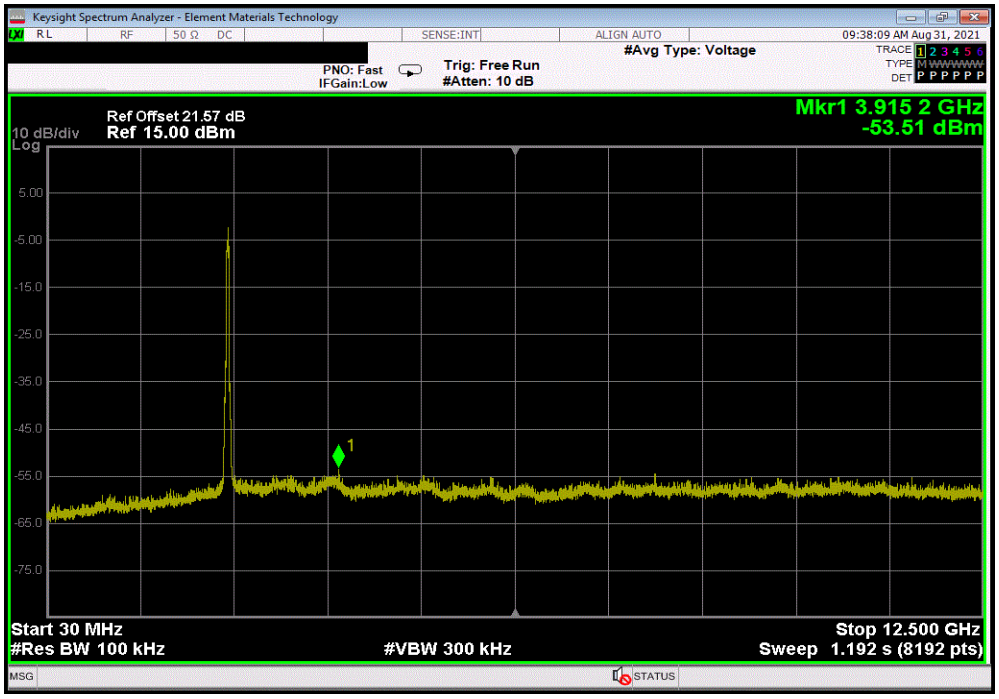
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Low Channel 1/5, 2422 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	23950.1	-47.69	-30	Pass



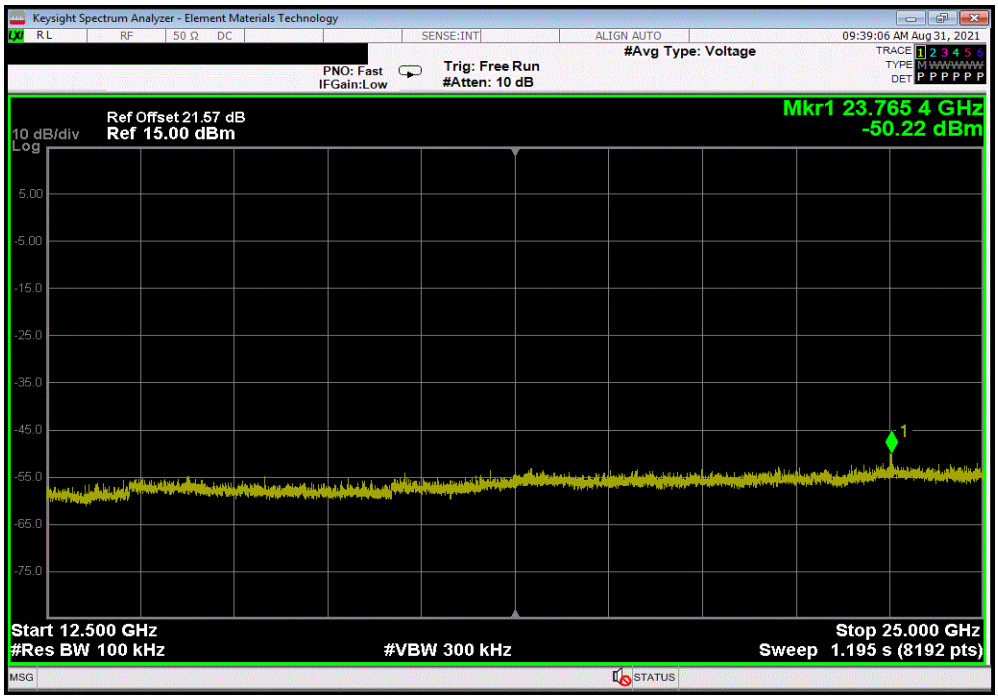
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Mid Channel 4/8, 2437 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		2434.49	N/A	N/A	N/A



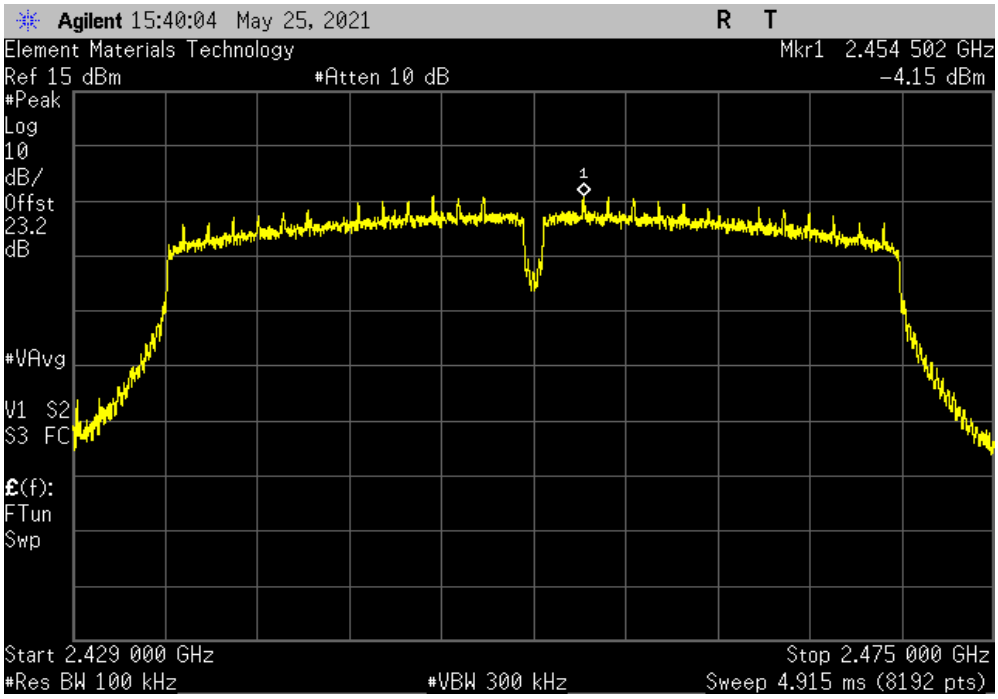
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Mid Channel 4/8, 2437 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	3915.17	-51.24	-30	Pass



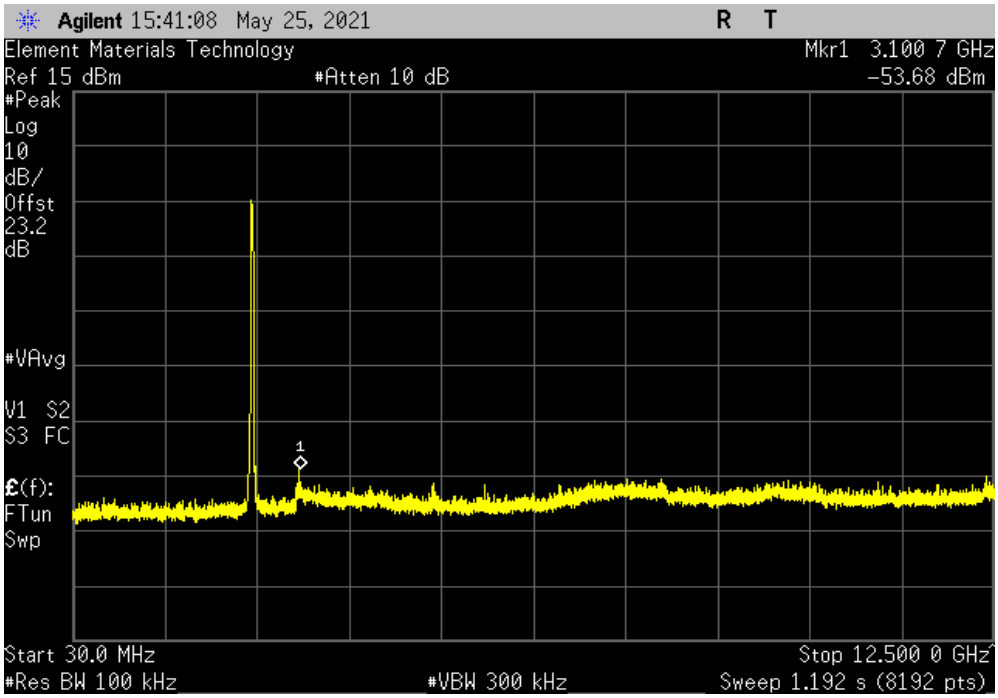
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Mid Channel 4/8, 2437 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
12.5 GHz - 25 GHz	23765.41	-47.95	-30	Pass



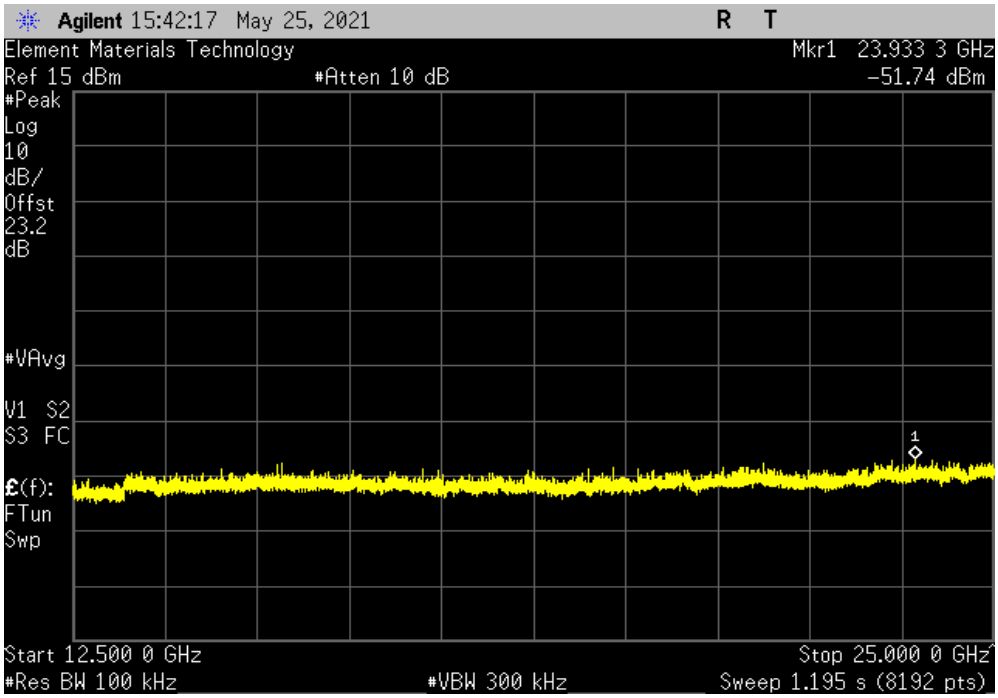
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , High Channel 7/11, 2452 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
Fundamental	2454.5	N/A	N/A	N/A



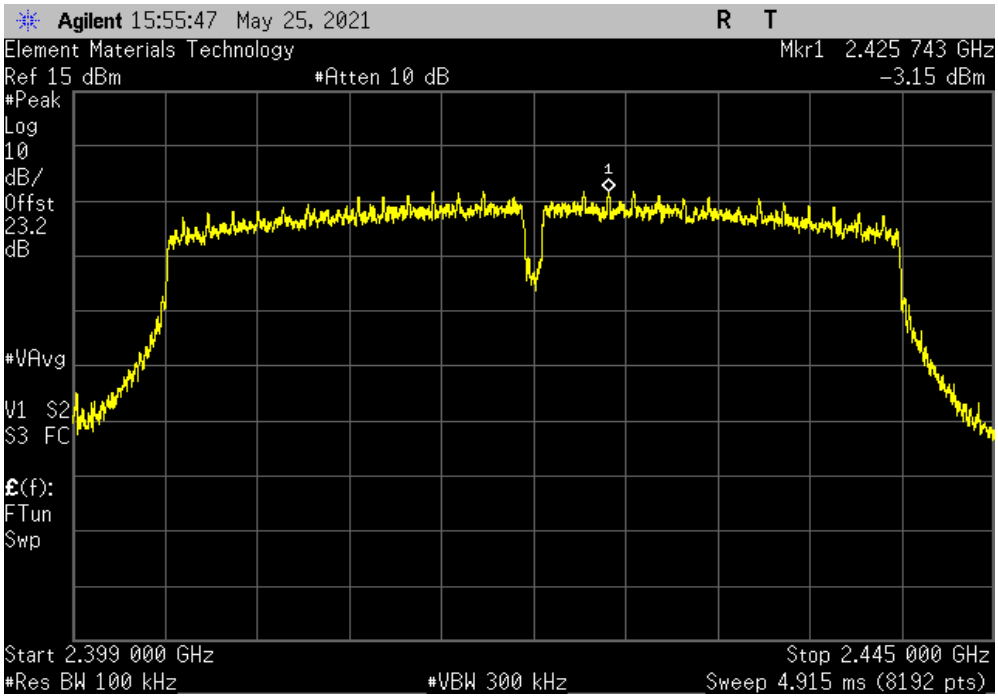
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , High Channel 7/11, 2452 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	3100.7	-49.53	-30	Pass



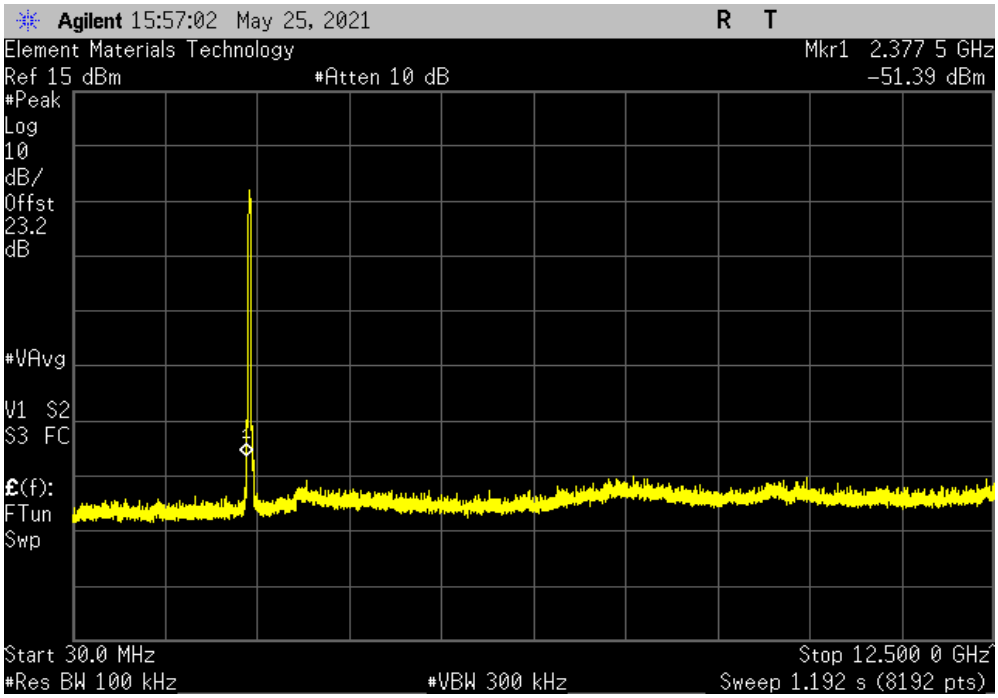
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , High Channel 7/11, 2452 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	23933.3	-47.6	-30	Pass



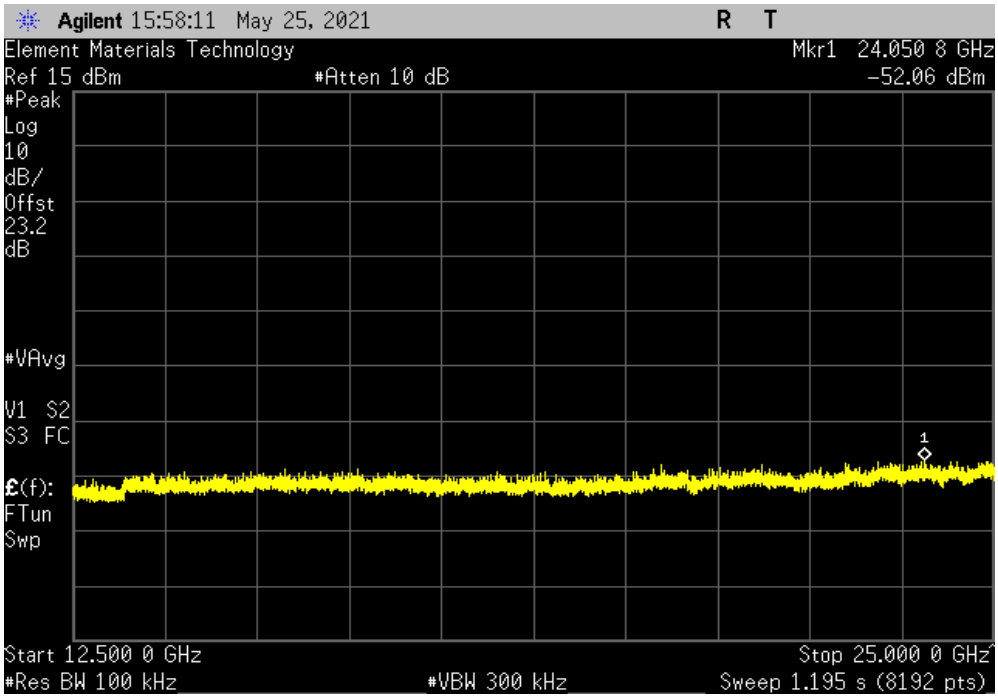
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Low Channel 1/5, 2422 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		2425.74	N/A	N/A	N/A



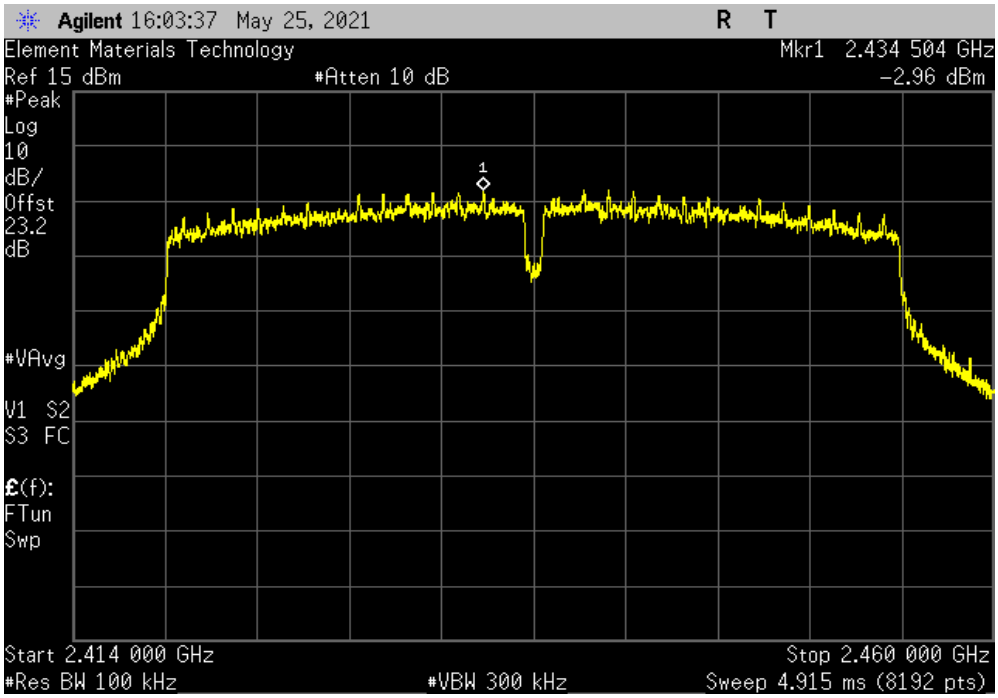
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Low Channel 1/5, 2422 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	2377.5	-48.24	-30	Pass



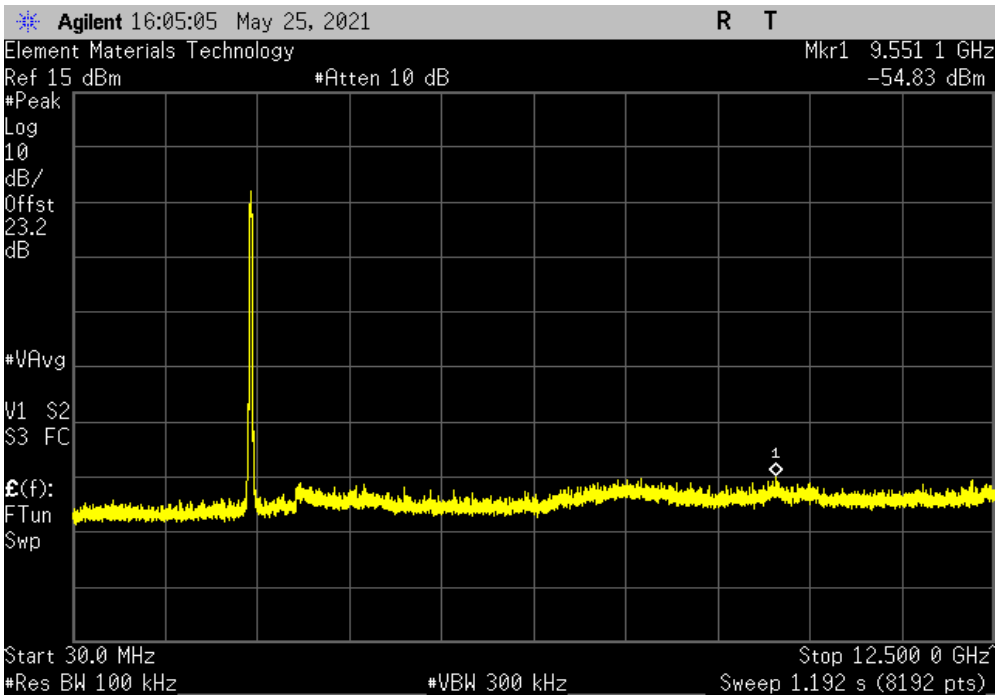
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Low Channel 1/5, 2422 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24050.8	-48.91	-30	Pass



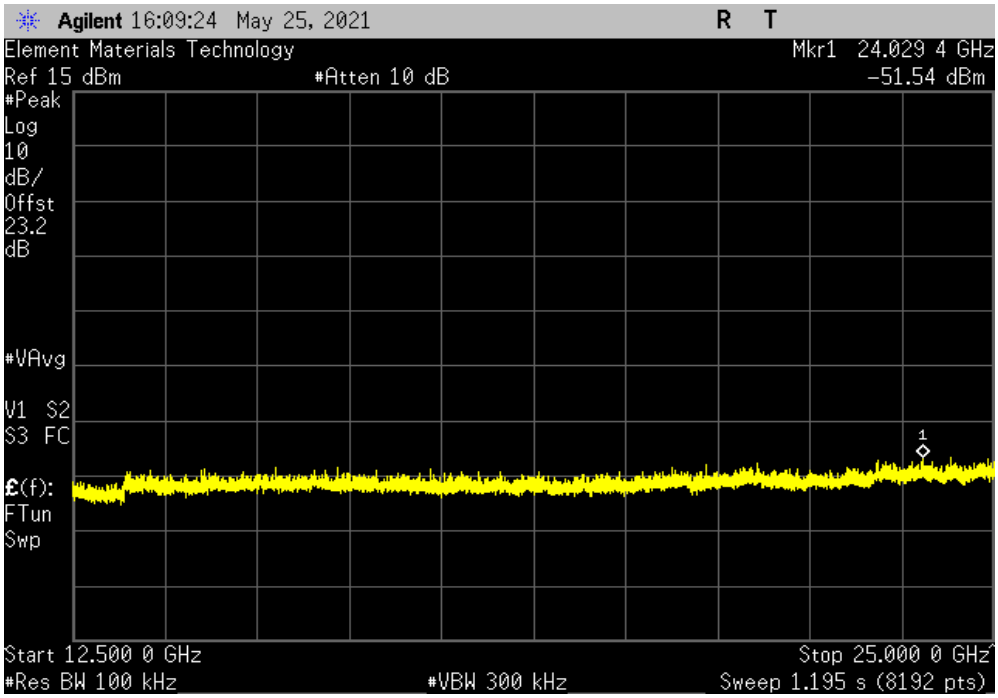
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Mid Channel 4/8, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
Fundamental	2434.5	N/A	N/A	N/A



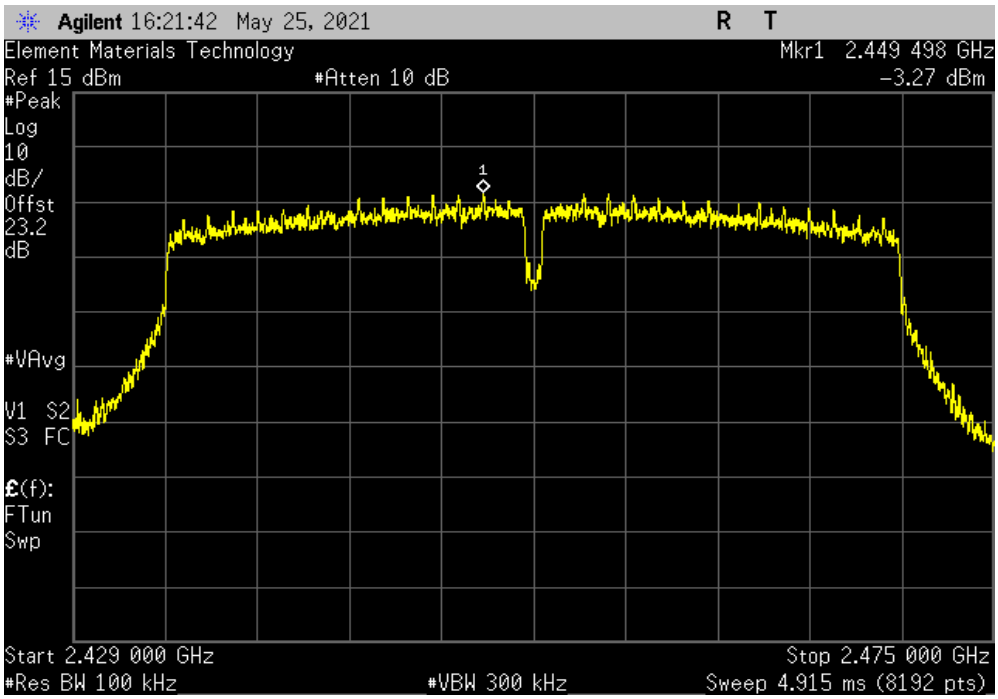
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Mid Channel 4/8, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz	9551.1	-51.87	-30	Pass



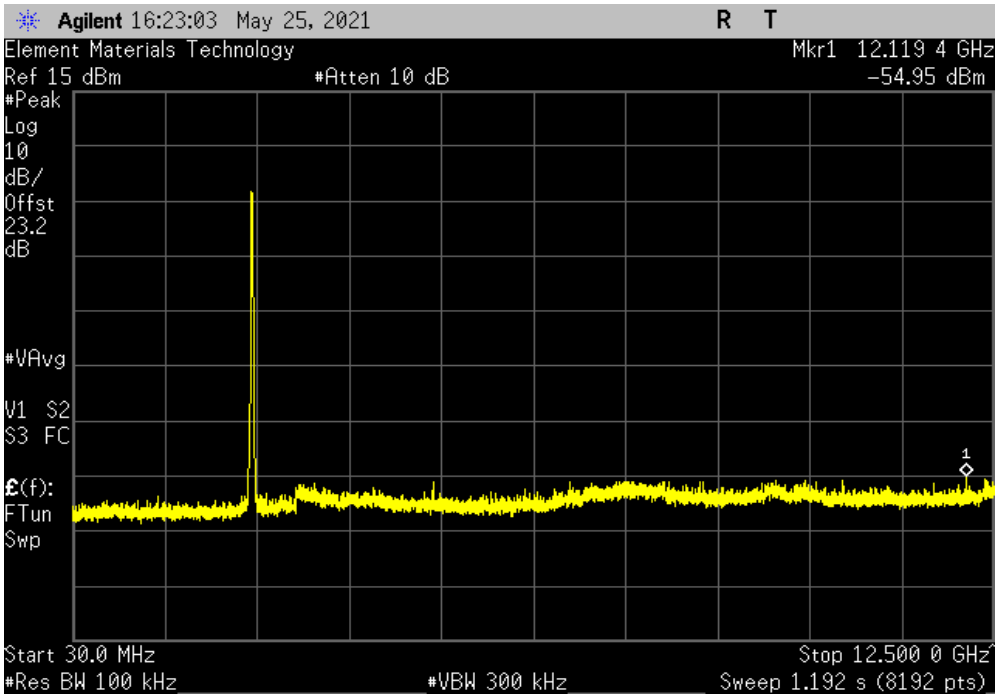
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Mid Channel 4/8, 2437 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24029.4	-48.58	-30	Pass



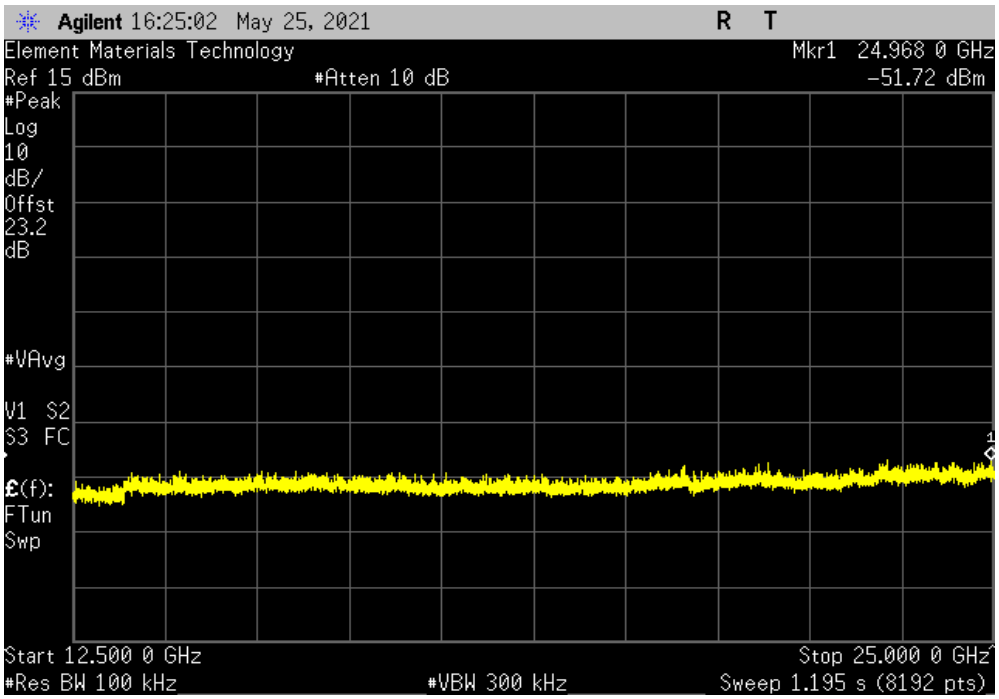
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , High Channel 7/11, 2452 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		2449.5	N/A	N/A	N/A



2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , High Channel 7/11, 2452 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	12119.4	-51.68	-30	Pass



2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , High Channel 7/11, 2452 MHz				
Frequency Range	**Measured Freq (MHz)**	**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz	24968	-48.45	-30	Pass



BAND EDGE COMPLIANCE

XMit 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Keysight	N5182B	TFU	2020-11-20	2022-11-20
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2022-03-14	2023-03-14
Attenuator	S.M. Electronics	SA26B-20	AUY	2022-03-15	2023-03-15
Block - DC	Fairview Microwave	SD3379	AMW	2022-03-14	2023-03-14
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2021-07-06	2022-07-06

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge.

BAND EDGE COMPLIANCE

TbtTx 2021.03.19.1 XMit 2022.02.07.0

EUT:	SHOUT sp Handheld Iridium Smartphone	Work Order:	PCTE0003
Serial Number:	FCC3	Date:	18-May-22
Customer:	NAL Research Corporation	Temperature:	22.6 °C
Attendees:	None	Humidity:	43.3% RH
Project:	None	Barometric Pres.:	1025 mbar
Tested by:	Jeff Alcoke	Power: 5.0 VDC via USB	Job Site: EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2022	ANSI C63.10:2013

COMMENTS

None

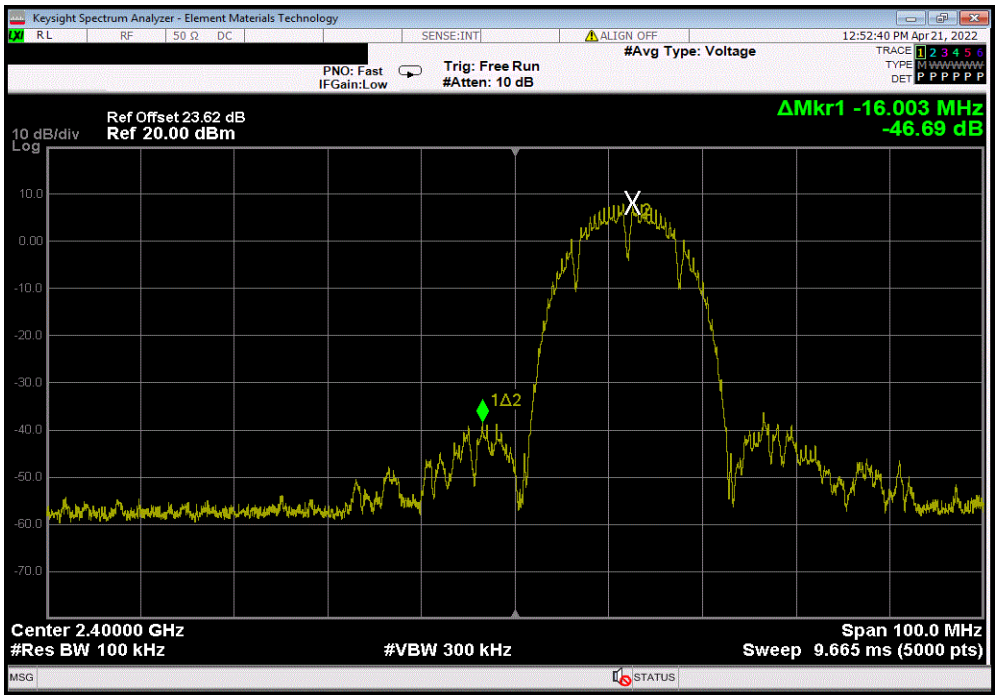
DEVIATIONS FROM TEST STANDARD

None

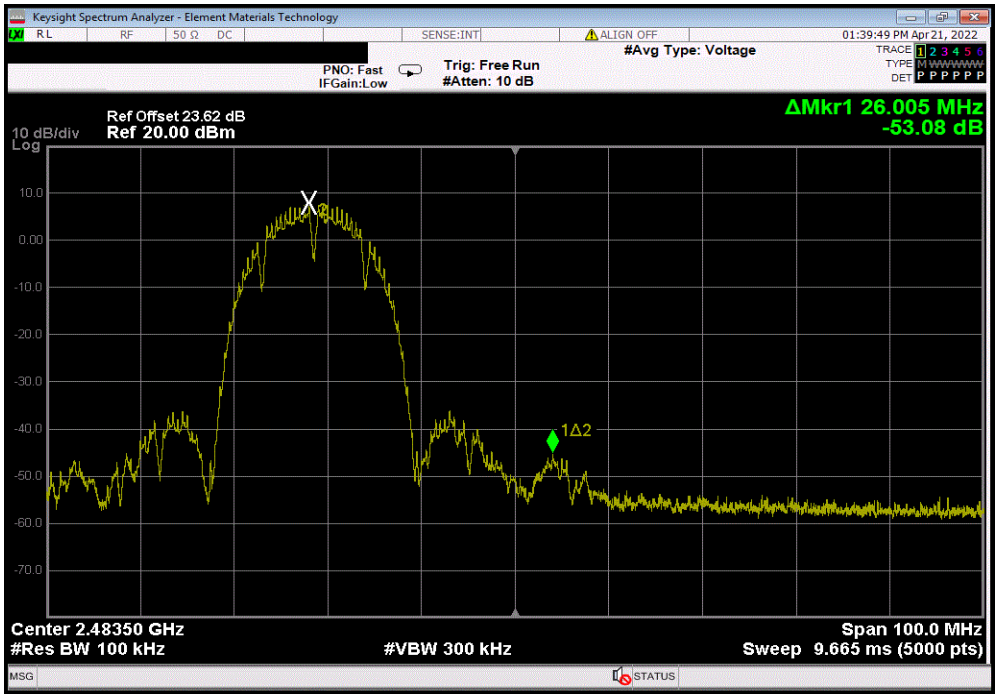
Configuration #	12	Signature

	Value (dBc)	Limit ≤ (dBc)	Result
2400 MHz - 2483.5 MHz Band			
20 MHz			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	-46.7	-30	Pass
High Channel 11, 2462 MHz	-53.08	-30	Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	-46.14	-30	Pass
High Channel 11, 2462 MHz	-52.77	-30	Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	-32.33	-30	Pass
High Channel 11, 2462 MHz	-46.09	-30	Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	-34.3	-30	Pass
High Channel 11, 2462 MHz	-48.73	-30	Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	-33.87	-30	Pass
High Channel 11, 2462 MHz	-44.37	-30	Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz	-31.59	-30	Pass
High Channel 11, 2462 MHz	-45.3	-30	Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz	-37.95	-30	Pass
High Channel 11, 2462 MHz	-47.25	-30	Pass
40 MHz			
802.11(n) MCS0			
Low Channel 1/5, 2422 MHz	-34.46	-30	Pass
High Channel 7/11, 2452 MHz	-40.33	-30	Pass
802.11(n) MCS7			
Low Channel 1/5, 2422 MHz	-34.26	-30	Pass
High Channel 7/11, 2452 MHz	-37.84	-30	Pass

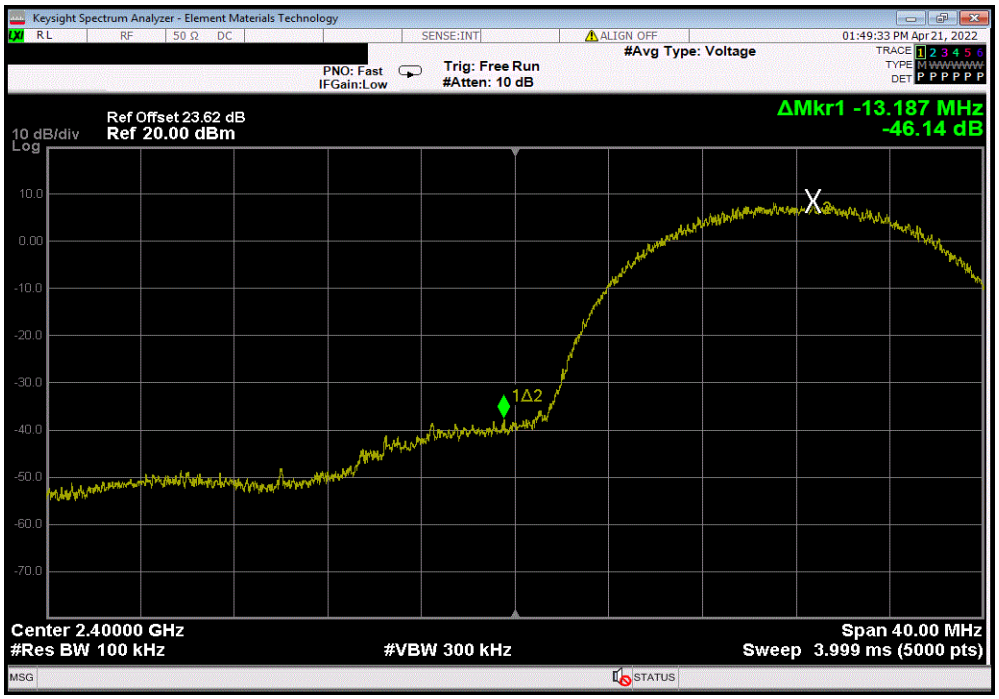
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-46.7	-30	Pass



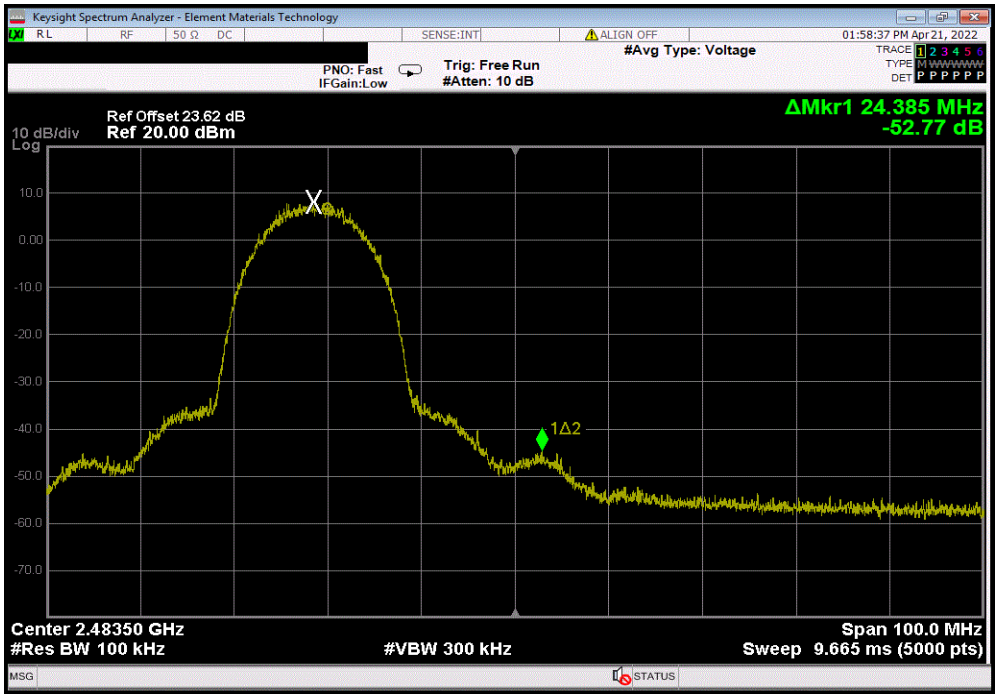
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-53.08	-30	Pass



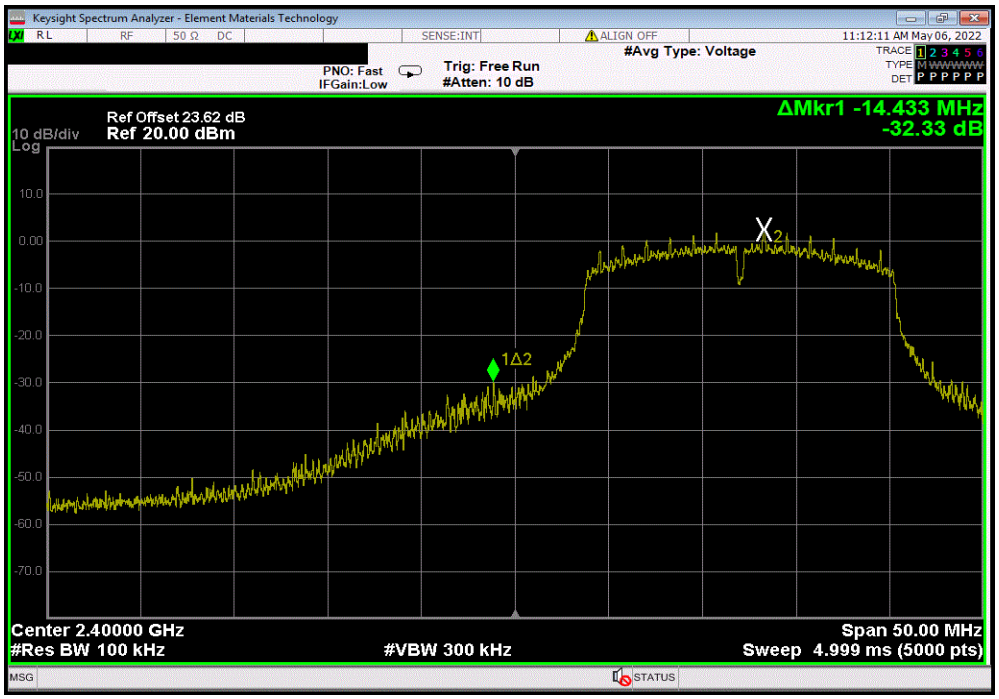
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-46.14	-30	Pass



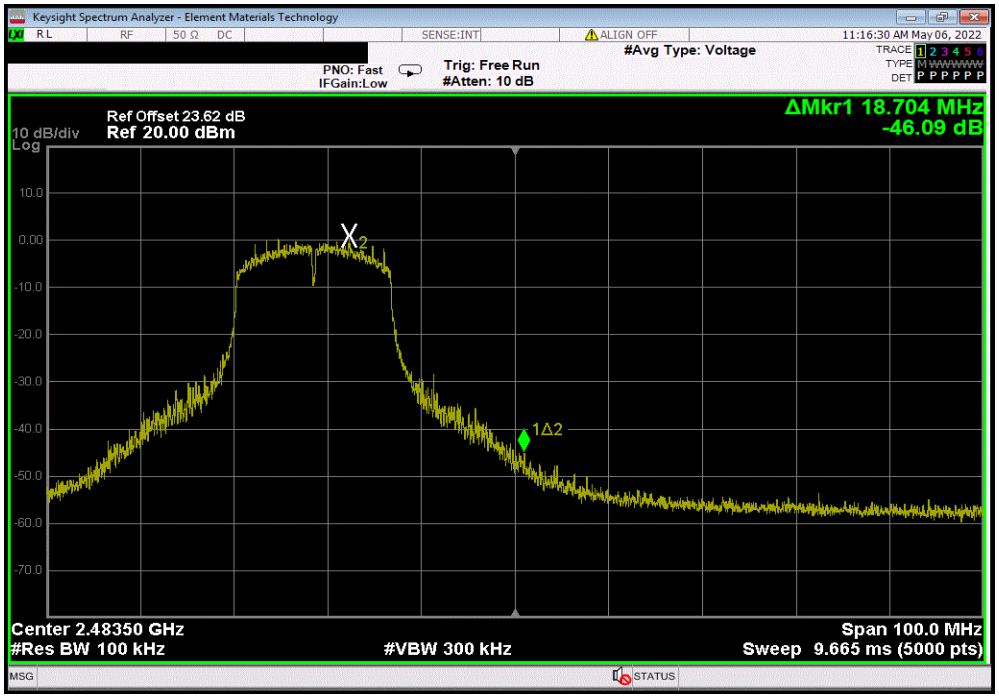
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-52.77	-30	Pass



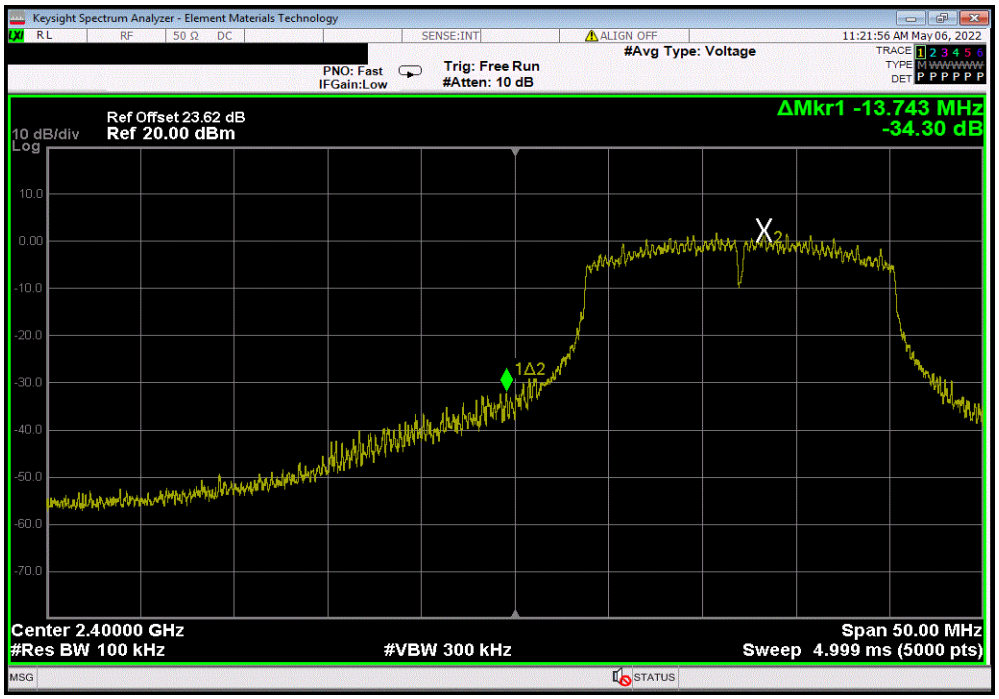
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-32.33	-30	Pass



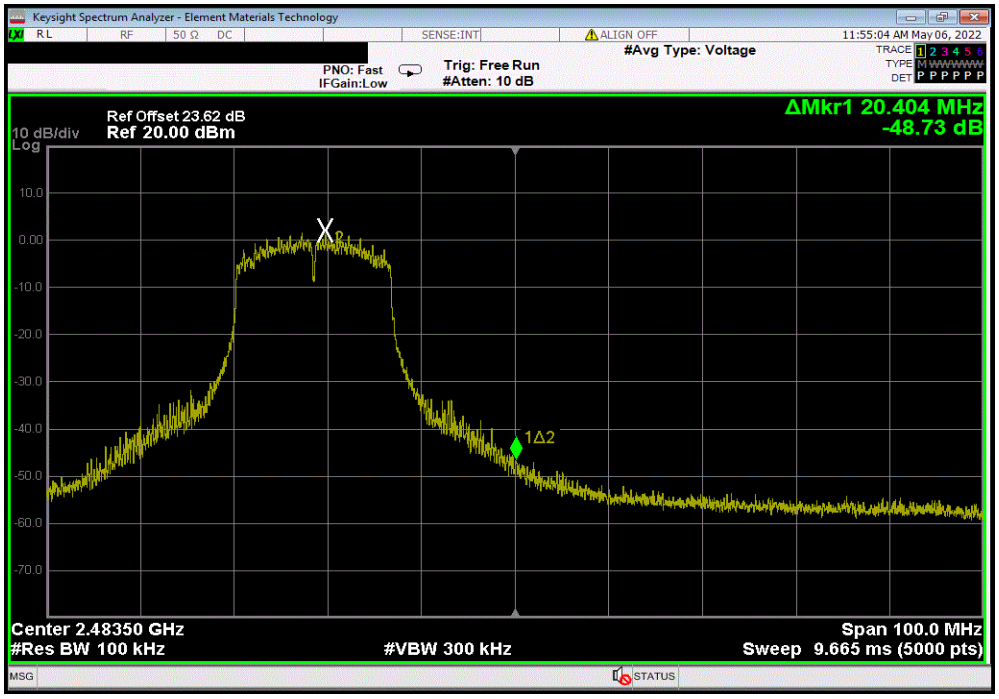
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-46.09	-30	Pass



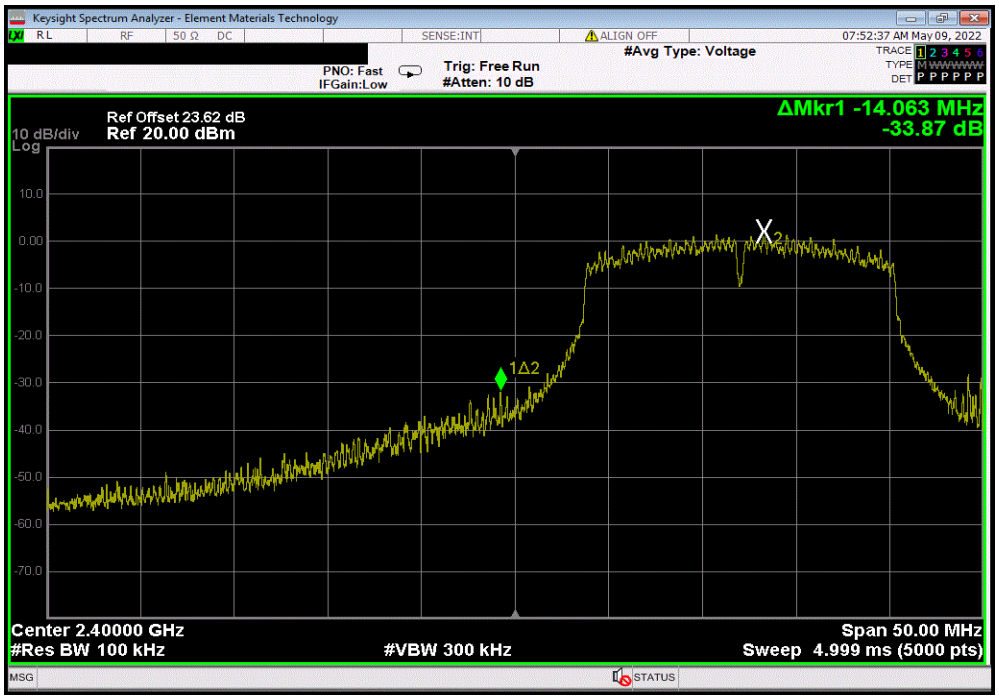
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-34.3	-30	Pass



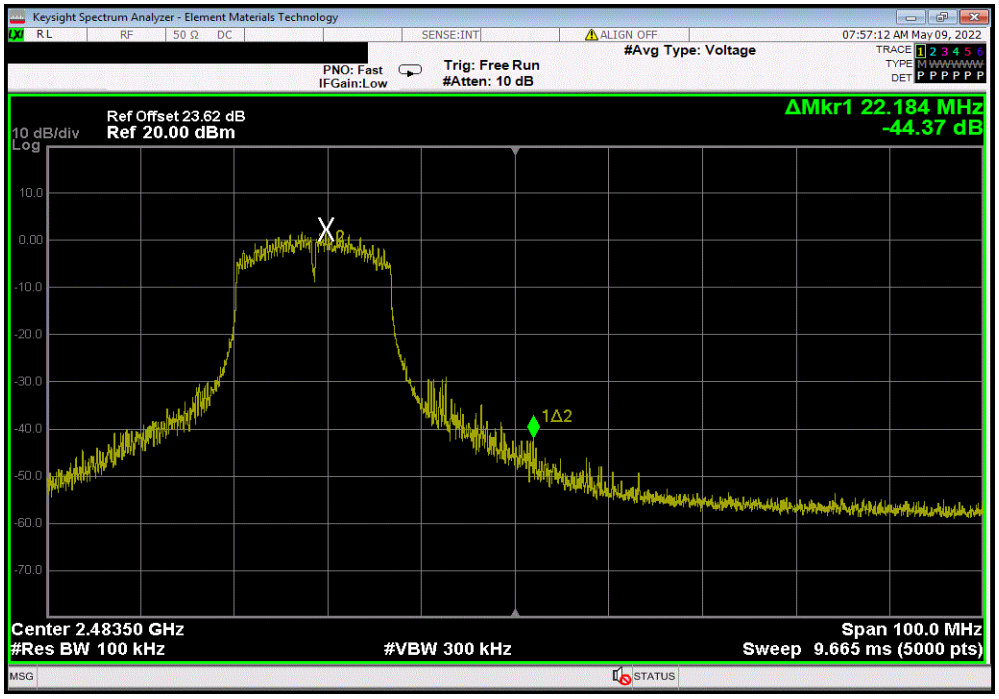
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-48.73	-30	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-33.87	-30	Pass



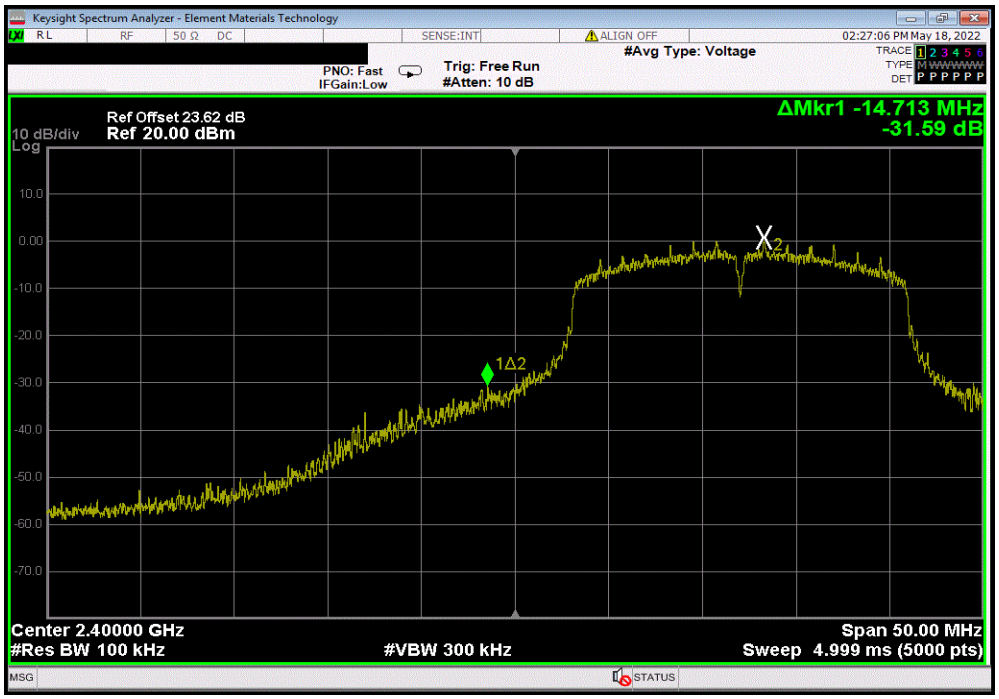
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-44.37	-30	Pass



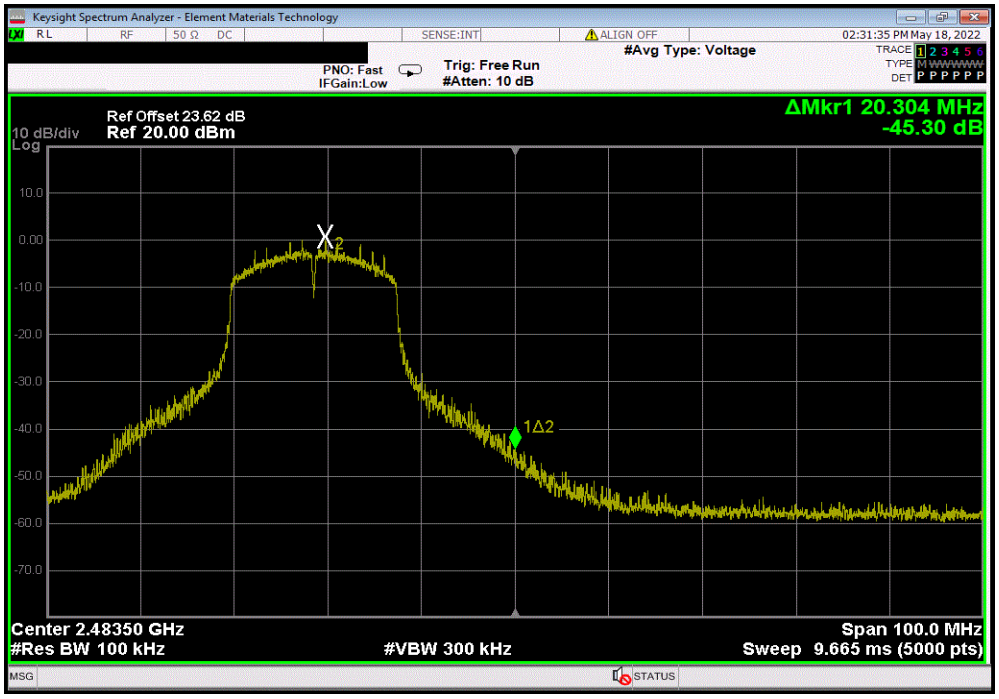
BAND EDGE COMPLIANCE

TbtTx 2021.03.19.1 XMit 2022.02.07.0

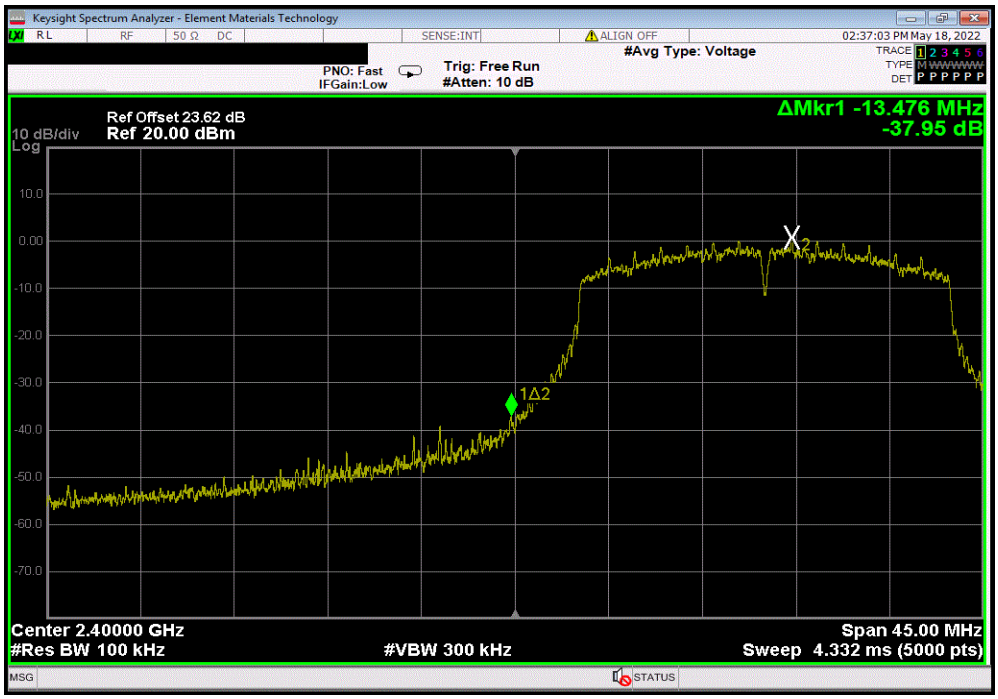
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-31.59	-30	Pass



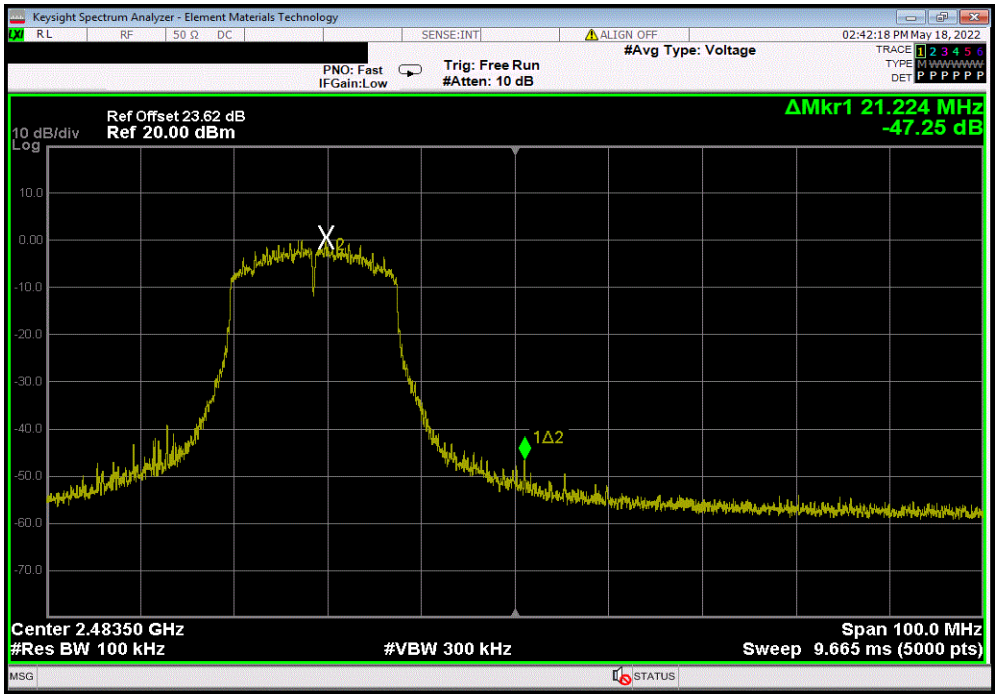
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-45.3	-30	Pass



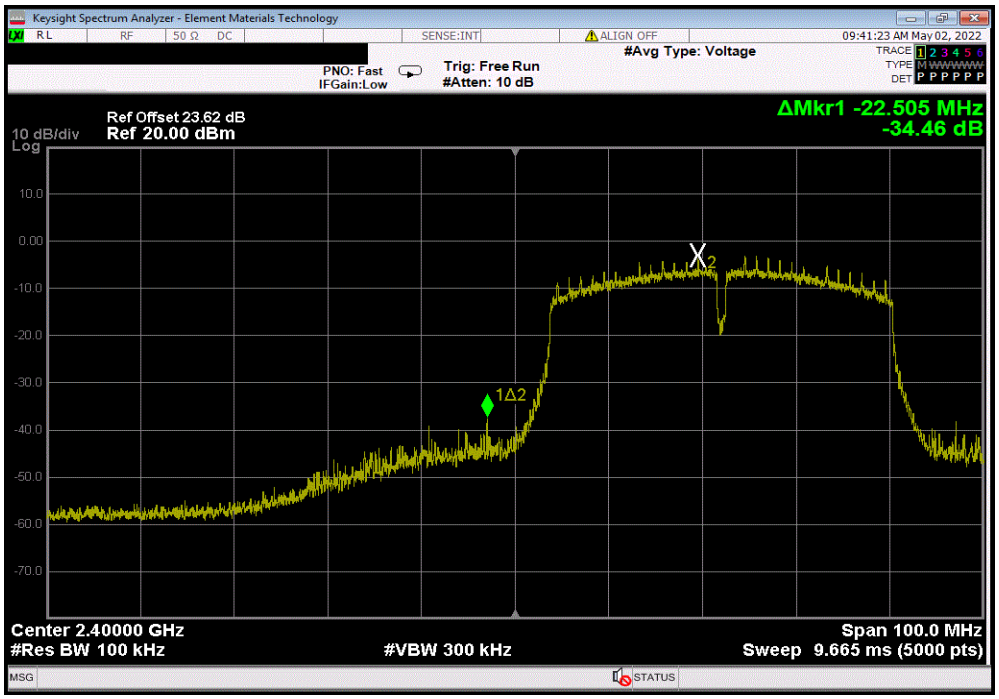
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-37.95	-30	Pass



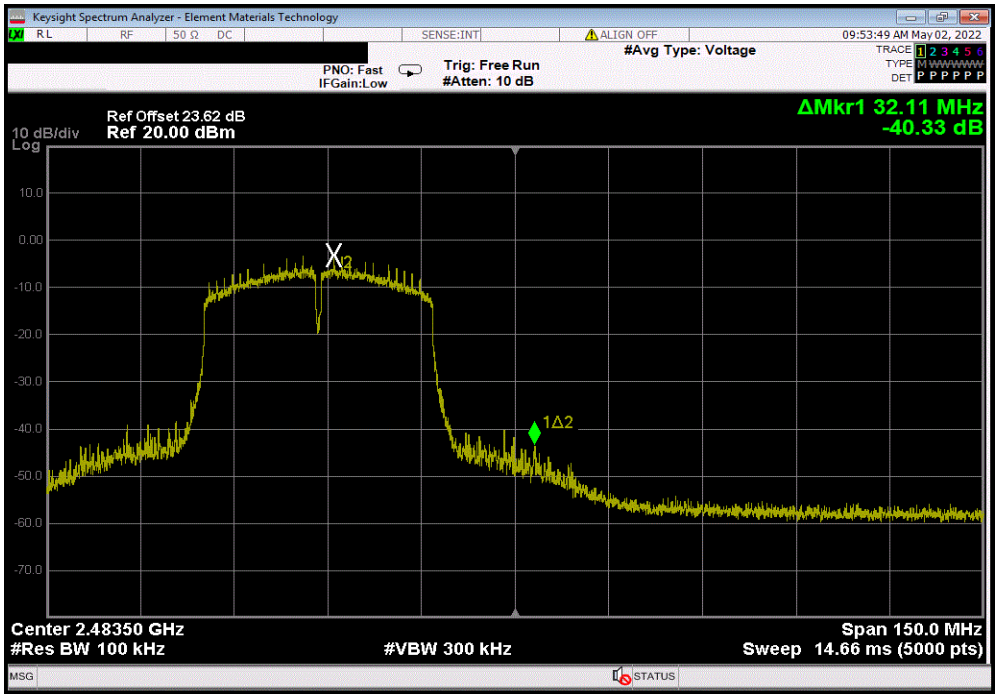
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-47.25	-30	Pass



2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Low Channel 1/5, 2422 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-34.46	-30	Pass



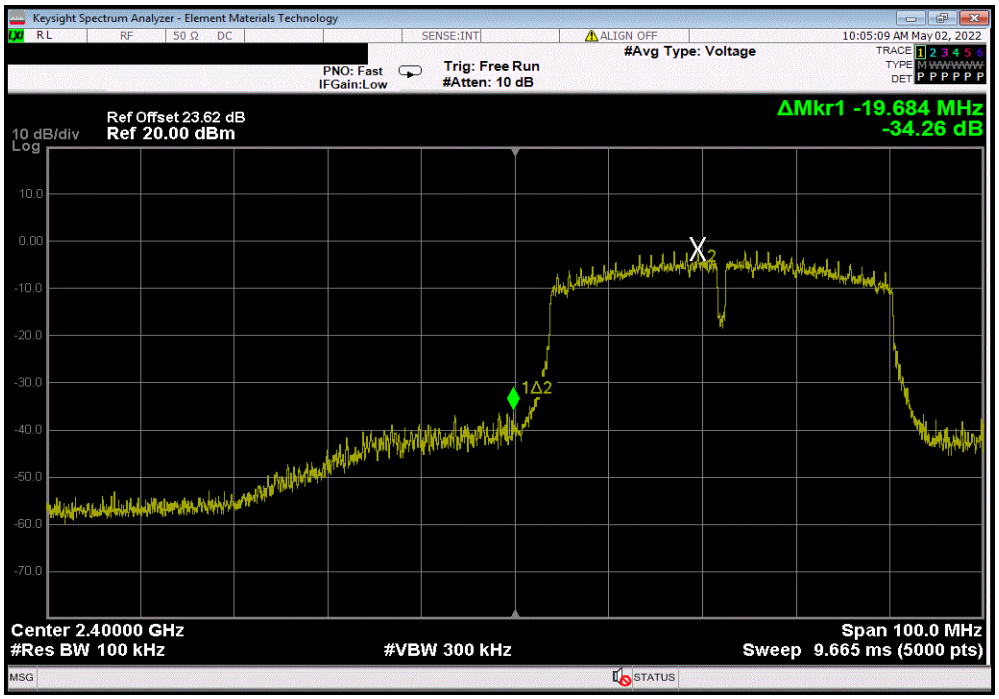
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , High Channel 7/11, 2452 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-40.33	-30	Pass



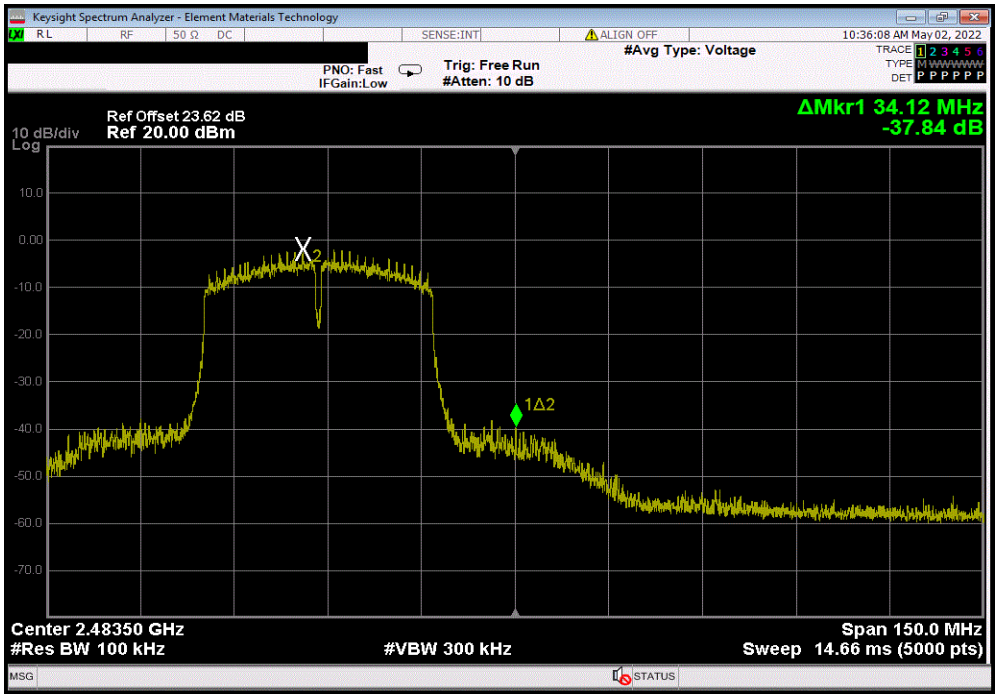
BAND EDGE COMPLIANCE

TbtTx 2021.03.19.1 XMit 2022.02.07.0

2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Low Channel 1/5, 2422 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-34.26	-30	Pass



2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , High Channel 7/11, 2452 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-37.84	-30	Pass



SPURIOUS RADIATED EMISSIONS

element
WTD.2021.05.19.0
EmiR5 2021.06.24.0
PSA-ESCI 2021.03.17.0

TEST DESCRIPTION

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.
For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. These “pre-scans” are not included in the report. Final measurements on individual emissions were then made and included in this test report.
The individual emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.
Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

QP = Quasi-Peak Detector
PK = Peak Detector
AV = RMS Detector

Measurements were made to satisfy the specific requirements of the test specification for out of band emissions as well as the restricted band requirements.
If there are no detectable emissions above the noise floor, the data included may show noise floor measurements for reference only.
Measurements within 2 MHz of the allowable band may have been taken using the integration method from ANSI C63.10 clause 11.13.3. This procedure uses the channel power feature of the spectrum analyzer to integrate the power of the emission within a 1 MHz bandwidth.
Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of 10*log(1/dc).

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFI	2020-12-08	2021-12-08
Antenna - Biconilog	Teseq	CBL 6141B	AXR	2020-10-13	2022-10-13
Antenna - Double Ridge	EMCO	3115	AHC	2020-07-01	2022-07-01
Antenna - Standard Gain	ETS Lindgren	3160-07	AHU	NCR	NCR
Antenna - Standard Gain	ETS Lindgren	3160-08	AHV	NCR	NCR
Antenna - Standard Gain	ETS Lindgren	3160-09	AIV	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AOL	2020-11-17	2021-11-17
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAG	2020-11-17	2021-11-17
Amplifier - Pre-Amplifier	L-3 Narda-MITEQ	AMF-6F-08001200-30-10P	PAO	2020-11-18	2021-11-18
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	2020-11-18	2021-11-18
Amplifier - Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AVU	2021-07-16	2022-07-16
Cable	N/A	Bilog Cables	EVA	2020-11-17	2021-11-17
Cable	N/A	Double Ridge Horn Cables	EVB	2020-11-17	2021-11-17
Cable	None	Standard Gain Horns Cable	EVF	2020-11-18	2021-11-18
Cable	ESM Cable Corp.	TTBJ141-KMKM-72	EVY	2021-07-16	2022-07-16
Attenuator	Coaxicom	3910-20	AXZ	2021-02-15	2022-02-15
Filter - Low Pass	Micro-Tronics	LPM50004	LFD	2021-02-15	2022-02-15
Filter - High Pass	Micro-Tronics	HPM50111	HFO	2020-11-17	2021-11-17

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.2 dB	-5.2 dB

FREQUENCY RANGE INVESTIGATED

30 MHz TO 26.5 GHz

POWER INVESTIGATED

5.0 VDC via USB

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.05.19.0
EmiR5 2021.06.24.0
PSA-ESCI 2021.03.17.0

CONFIGURATIONS INVESTIGATED

PCTE0003-5

MODES INVESTIGATED

802.11bgn, Ch 1 = 2412 MHz, Ch 6 = 2437 MHz, Ch 11 = 2462 MHz, Ch 1/5 = 2422 MHz, Ch 7/11 = 2452 MHz
1 Mbps, 11 Mbps, 6 Mbps, 36 Mbps, 54 Mbps, MCS0, MCS7

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.05.19.0
EmiR5 2021.06.24.0
PSA-ESCI 2021.03.17.0

EUT:	SHOUT sp Handheld Iridium Smartphone	Work Order:	PCTE0003
Serial Number:	FCC 2	Date:	2021-08-24
Customer:	NAL Research Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	42%
Customer Project:	None	Bar. Pressure:	1016 mb
Tested By:	Jeff Alcoke	Job Site:	EV01
Power:	5.0 VDC via USB	Configuration:	PCTE0003-5

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	36	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)

COMMENTS

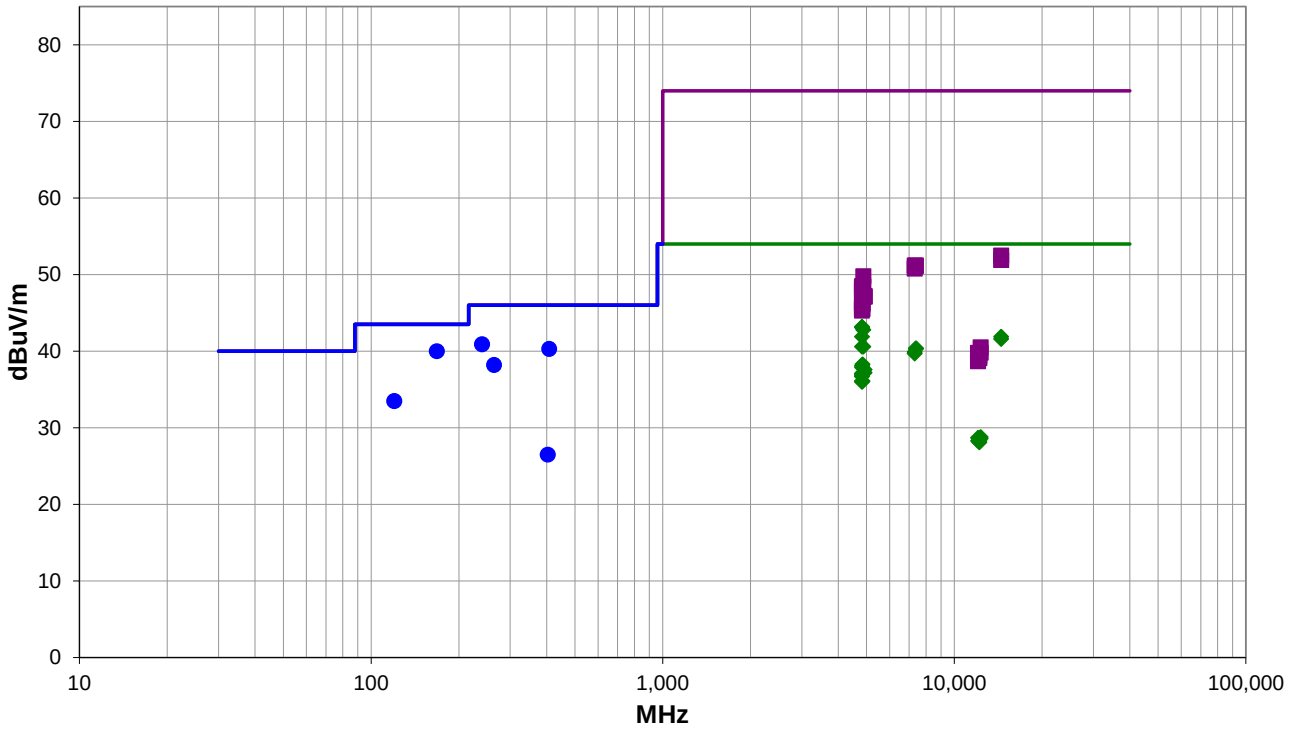
Please reference data comments below for channel, data rate and EUT orientation.

EUT OPERATING MODES

802.11bgn, Ch 1 = 2412 MHz, Ch 6 = 2437 MHz, Ch 11 = 2462 MHz, Ch 1/5 = 2422 MHz, Ch 7/11 = 2452 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 36 ■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.05.19.0
EmiR5 2021.06.24.0
PSA-ESCI 2021.03.17.0

RESULTS - Run #36

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
168.010	44.7	-4.7	2.0	241.0	0.0	0.0	Horz	QP	0.0	40.0	43.5	-3.5	Ch 11, 1 Mbps, EUT Horz
240.010	44.3	-3.4	1.3	75.0	0.0	0.0	Horz	QP	0.0	40.9	46.0	-5.1	Ch 11, 1 Mbps, EUT Horz
408.010	37.8	2.5	1.0	352.0	0.0	0.0	Horz	QP	0.0	40.3	46.0	-5.7	Ch 11, 1 Mbps, EUT Horz
264.010	40.4	-2.2	1.2	88.0	0.0	0.0	Horz	QP	0.0	38.2	46.0	-7.8	Ch 11, 1 Mbps, EUT Horz
120.011	37.6	-4.1	2.8	82.0	0.0	0.0	Horz	QP	0.0	33.5	43.5	-10.0	Ch 11, 1 Mbps, EUT Horz
4823.883	37.8	5.4	1.5	235.0	0.0	0.0	Horz	AV	0.0	43.2	54.0	-10.8	Ch 1, 1 Mbps, EUT on Side
4823.933	37.7	5.4	1.2	175.0	0.0	0.0	Vert	AV	0.0	43.1	54.0	-10.9	Ch 1, 1 Mbps, EUT Horz
4873.992	36.8	6.0	3.2	132.0	0.0	0.0	Vert	AV	0.0	42.8	54.0	-11.2	Ch 6, 1 Mbps, EUT Horz
4823.967	36.5	5.4	1.4	199.0	0.0	0.0	Horz	AV	0.0	41.9	54.0	-12.1	Ch 1, 1 Mbps, EUT Horz
14471.650	25.8	16.1	1.5	330.0	0.0	0.0	Horz	AV	0.0	41.9	54.0	-12.1	Ch 1, 1 Mbps, EUT on Side
14473.400	25.5	16.1	3.6	265.0	0.0	0.0	Vert	AV	0.0	41.6	54.0	-12.4	Ch 1, 1 Mbps, EUT Horz
4823.917	35.2	5.4	2.2	128.0	0.0	0.0	Horz	AV	0.0	40.6	54.0	-13.4	Ch 1, 1 Mbps, EUT Vert
4873.892	34.6	6.0	1.1	223.0	0.0	0.0	Horz	AV	0.0	40.6	54.0	-13.4	Ch. 6, 1 Mbps, EUT on Side
7386.825	28.1	12.3	3.3	119.0	0.0	0.0	Horz	AV	0.0	40.4	54.0	-13.6	Ch 11, 1 Mbps, EUT on Side
7385.092	28.0	12.3	1.5	325.0	0.0	0.0	Vert	AV	0.0	40.3	54.0	-13.7	Ch 11, 1 Mbps, EUT Horz
7312.242	28.3	11.6	1.5	250.0	0.0	0.0	Vert	AV	0.0	39.9	54.0	-14.1	Ch 6, 1 Mbps, EUT Horz
7312.150	28.1	11.6	1.5	130.0	0.0	0.0	Horz	AV	0.0	39.7	54.0	-14.3	Ch. 6, 1 Mbps, EUT on Side
4843.867	29.8	5.8	2.8	183.0	2.7	0.0	Horz	AV	0.0	38.3	54.0	-15.7	Ch 1/5, MCS7, EUT on Side
4823.983	32.7	5.4	1.1	215.0	0.0	0.0	Vert	AV	0.0	38.1	54.0	-15.9	Ch 1, 1 Mbps, EUT on Side
4823.908	32.2	5.4	1.5	201.0	0.3	0.0	Horz	AV	0.0	37.9	54.0	-16.1	Ch 1, 11 Mbps, EUT on Side
4924.067	31.6	6.0	1.5	222.0	0.0	0.0	Horz	AV	0.0	37.6	54.0	-16.4	Ch 11, 1 Mbps, EUT on Side
4923.858	31.2	6.0	3.6	206.0	0.0	0.0	Vert	AV	0.0	37.2	54.0	-16.8	Ch 11, 1 Mbps, EUT Horz
4823.233	30.1	5.4	1.5	201.0	1.6	0.0	Horz	AV	0.0	37.1	54.0	-16.9	Ch 1, MCS7, EUT on Side
4822.533	30.3	5.4	1.5	201.0	1.3	0.0	Horz	AV	0.0	37.0	54.0	-17.0	Ch 1, 54 Mbps, EUT on Side
4823.900	31.4	5.4	1.5	54.0	0.0	0.0	Vert	AV	0.0	36.8	54.0	-17.2	Ch 1, 1 Mbps, EUT Vert
4821.733	30.4	5.4	1.5	201.0	0.9	0.0	Horz	AV	0.0	36.7	54.0	-17.3	Ch 1, 36 Mbps, EUT on Side
4820.967	30.5	5.4	1.5	201.0	0.2	0.0	Horz	AV	0.0	36.1	54.0	-17.9	Ch 1, 6 Mbps, EUT on Side
4843.900	29.9	5.8	2.8	183.0	0.4	0.0	Horz	AV	0.0	36.1	54.0	-17.9	Ch 1/5, MCS0, EUT on Side
4823.067	30.4	5.4	1.5	201.0	0.2	0.0	Horz	AV	0.0	36.0	54.0	-18.0	Ch 1, MCS0, EUT on Side
403.225	24.2	2.3	3.6	336.0	0.0	0.0	Horz	QP	0.0	26.5	46.0	-19.5	Ch 11, 1 Mbps, EUT Horz
14475.900	36.5	16.0	1.5	330.0	0.0	0.0	Horz	PK	0.0	52.5	74.0	-21.5	Ch 1, 1 Mbps, EUT on Side
14475.900	35.9	16.0	3.6	265.0	0.0	0.0	Vert	PK	0.0	51.9	74.0	-22.1	Ch 1, 1 Mbps, EUT Horz
7309.633	39.6	11.6	1.5	250.0	0.0	0.0	Vert	PK	0.0	51.2	74.0	-22.8	Ch 6, 1 Mbps, EUT Horz
7385.667	38.9	12.3	3.3	119.0	0.0	0.0	Horz	PK	0.0	51.2	74.0	-22.8	Ch 11, 1 Mbps, EUT on Side
7385.450	38.8	12.3	1.5	325.0	0.0	0.0	Vert	PK	0.0	51.1	74.0	-22.9	Ch 11, 1 Mbps, EUT Horz
7312.842	39.2	11.6	1.5	130.0	0.0	0.0	Horz	PK	0.0	50.8	74.0	-23.2	Ch. 6, 1 Mbps, EUT on Side
4874.125	43.8	6.0	3.2	132.0	0.0	0.0	Vert	PK	0.0	49.8	74.0	-24.2	Ch 6, 1 Mbps, EUT Horz
12308.260	27.4	1.4	1.5	355.0	0.0	0.0	Vert	AV	0.0	28.8	54.0	-25.2	Ch 11, 1 Mbps, EUT Horz
12057.830	27.4	1.3	1.5	167.0	0.0	0.0	Horz	AV	0.0	28.7	54.0	-25.3	Ch 1, 1 Mbps, EUT on Side
12308.400	27.2	1.4	1.5	347.0	0.0	0.0	Horz	AV	0.0	28.6	54.0	-25.4	Ch 11, 1 Mbps, EUT on Side
4823.833	43.1	5.4	1.2	175.0	0.0	0.0	Vert	PK	0.0	48.5	74.0	-25.5	Ch 1, 1 Mbps, EUT Horz
4874.100	42.5	6.0	1.1	223.0	0.0	0.0	Horz	PK	0.0	48.5	74.0	-25.5	Ch. 6, 1 Mbps, EUT on Side

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.05.19.0
EmiR5 2021.06.24.0
PSA-ESCI 2021.03.17.0

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
12064.970	27.0	1.3	1.5	120.0	0.0	0.0	Vert	AV	0.0	28.3	54.0	-25.7	Ch 1, 1 Mbps, EUT Horz
12184.520	27.3	1.0	1.5	47.0	0.0	0.0	Horz	AV	0.0	28.3	54.0	-25.7	Ch 6, 1 Mbps, EUT on Side
4823.500	42.9	5.4	1.5	235.0	0.0	0.0	Horz	PK	0.0	48.3	74.0	-25.7	Ch 1, 1 Mbps, EUT on Side
4823.767	42.8	5.4	1.4	199.0	0.0	0.0	Horz	PK	0.0	48.2	74.0	-25.8	Ch 1, 1 Mbps, EUT Horz
4823.758	42.8	5.4	1.5	201.0	0.0	0.0	Horz	PK	0.0	48.2	74.0	-25.8	Ch 1, 11 Mbps, EUT on Side
12182.670	27.1	1.0	1.5	105.0	0.0	0.0	Vert	AV	0.0	28.1	54.0	-25.9	Ch 6, 1 Mbps, EUT Horz
4823.867	42.4	5.4	2.2	128.0	0.0	0.0	Horz	PK	0.0	47.8	74.0	-26.2	Ch 1, 1 Mbps, EUT Vert
4924.392	41.2	6.0	1.5	222.0	0.0	0.0	Horz	PK	0.0	47.2	74.0	-26.8	Ch 11, 1 Mbps, EUT on Side
4923.608	41.1	6.0	3.6	206.0	0.0	0.0	Vert	PK	0.0	47.1	74.0	-26.9	Ch 11, 1 Mbps, EUT Horz
4824.250	41.0	5.4	1.5	54.0	0.0	0.0	Vert	PK	0.0	46.4	74.0	-27.6	Ch 1, 1 Mbps, EUT Vert
4823.267	40.9	5.4	1.5	201.0	0.0	0.0	Horz	PK	0.0	46.3	74.0	-27.7	Ch 1, 6 Mbps, EUT on Side
4823.817	40.8	5.4	1.1	215.0	0.0	0.0	Vert	PK	0.0	46.2	74.0	-27.8	Ch 1, 1 Mbps, EUT Horz
4851.167	40.3	5.9	2.8	183.0	0.0	0.0	Horz	PK	0.0	46.2	74.0	-27.8	Ch 1/5, MCS7, EUT on Side
4825.967	40.2	5.5	1.5	201.0	0.0	0.0	Horz	PK	0.0	45.7	74.0	-28.3	Ch 1, 54 Mbps, EUT on Side
4821.600	40.2	5.4	1.5	201.0	0.0	0.0	Horz	PK	0.0	45.6	74.0	-28.4	Ch 1, 36 Mbps, EUT on Side
4819.133	40.3	5.3	1.5	201.0	0.0	0.0	Horz	PK	0.0	45.6	74.0	-28.4	Ch 1, MCS0, EUT on Side
4839.533	39.7	5.8	2.8	183.0	0.0	0.0	Horz	PK	0.0	45.5	74.0	-28.5	Ch 1/5, MCS0, EUT on Side
4820.533	40.0	5.3	1.5	201.0	0.0	0.0	Horz	PK	0.0	45.3	74.0	-28.7	Ch 1, MCS7, EUT on Side
12309.680	39.1	1.4	1.5	347.0	0.0	0.0	Horz	PK	0.0	40.5	74.0	-33.5	Ch 11, 1 Mbps, EUT on Side
12057.420	38.5	1.3	1.5	167.0	0.0	0.0	Horz	PK	0.0	39.8	74.0	-34.2	Ch 1, 1 Mbps, EUT on Side
12310.710	38.4	1.4	1.5	355.0	0.0	0.0	Vert	PK	0.0	39.8	74.0	-34.2	Ch 11, 1 Mbps, EUT Horz
12183.400	38.4	1.0	1.5	47.0	0.0	0.0	Horz	PK	0.0	39.4	74.0	-34.6	Ch 6, 1 Mbps, EUT on Side
12184.760	38.1	1.0	1.5	105.0	0.0	0.0	Vert	PK	0.0	39.1	74.0	-34.9	Ch 6, 1 Mbps, EUT Horz
12058.950	37.4	1.3	1.5	120.0	0.0	0.0	Vert	PK	0.0	38.7	74.0	-35.3	Ch 1, 1 Mbps, EUT Horz

CONCLUSION
Pass

Tested By

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.05.19.0
EmiR5 2021.06.24.0
PSA-ESCI 2021.03.17.0

EUT:	SHOUT sp Handheld Iridium Smartphone	Work Order:	PCTE0003
Serial Number:	FCC 2	Date:	2021-08-24
Customer:	NAL Research Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	42%
Customer Project:	None	Bar. Pressure:	1016 mb
Tested By:	Jeff Alcoke	Job Site:	EV01
Power:	5.0 VDC via USB	Configuration:	PCTE0003-5

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	42	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)

COMMENTS

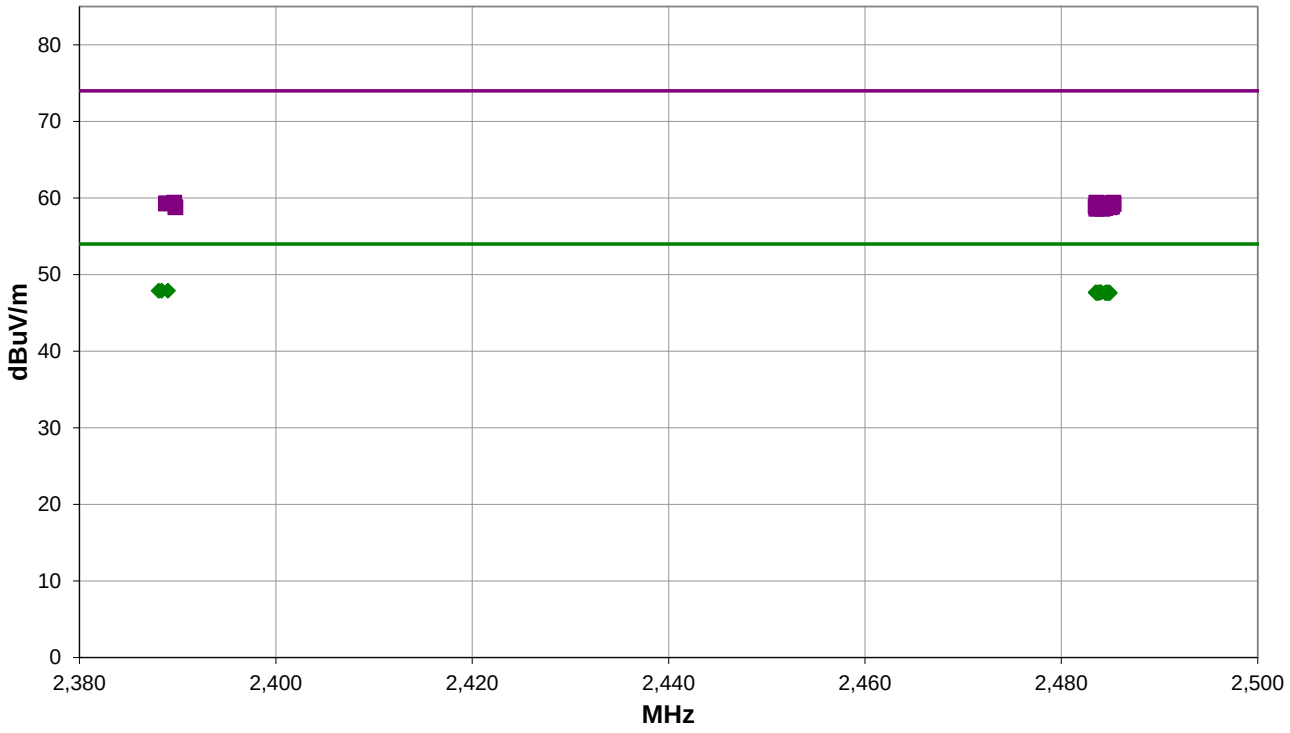
All measurements are noise floor, no DCCF added to the AVG values.

EUT OPERATING MODES

802.11bgn, Ch 1 = 2412 MHz, Ch 6 = 2437 MHz, Ch 11 = 2462 MHz, Ch 1/5 = 2422 MHz, Ch 7/11 = 2452 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 42 ■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.05.19.0
EmiR5 2021.06.24.0
PSA-ESCI 2021.03.17.0

RESULTS - Run #42

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2388.997	31.4	-3.5	1.06	138.0	3.0	20.0	Horz	AV	0.0	47.9	54.0	-6.1	Ch 1/5, MCS0, EUT Horz
2388.360	31.4	-3.5	1.06	138.0	3.0	20.0	Horz	AV	0.0	47.9	54.0	-6.1	Ch 1, 1 Mbps, EUT Horz
2388.063	31.4	-3.5	1.06	138.0	3.0	20.0	Horz	AV	0.0	47.9	54.0	-6.1	Ch 1, 6 Mbps, EUT Horz
2484.873	31.3	-3.6	1.5	219.0	3.0	20.0	Horz	AV	0.0	47.7	54.0	-6.3	Ch 11, 11 Mbps, EUT on Side
2484.687	31.3	-3.6	1.5	77.0	3.0	20.0	Horz	AV	0.0	47.7	54.0	-6.3	Ch 11, 1 Mbps, EUT on Side
2484.530	31.3	-3.6	2.44	96.0	3.0	20.0	Horz	AV	0.0	47.7	54.0	-6.3	Ch 7/11, MCS0 EUT Horz
2484.063	31.3	-3.6	1.5	340.0	3.0	20.0	Vert	AV	0.0	47.7	54.0	-6.3	Ch 11, 1 Mbps, EUT Horz
2483.950	31.3	-3.6	4.0	140.0	3.0	20.0	Vert	AV	0.0	47.7	54.0	-6.3	Ch 7/11, MCS0 EUT Horz
2483.853	31.3	-3.6	1.5	219.0	3.0	20.0	Horz	AV	0.0	47.7	54.0	-6.3	Ch 7/11, MCS7, EUT Horz
2483.553	31.3	-3.6	1.5	203.0	3.0	20.0	Horz	AV	0.0	47.7	54.0	-6.3	Ch 11, 1 Mbps, EUT Vert
2483.513	31.3	-3.6	2.74	26.0	3.0	20.0	Horz	AV	0.0	47.7	54.0	-6.3	Ch 11, 1 Mbps, EUT Horz
2484.927	31.2	-3.6	3.63	11.0	3.0	20.0	Vert	AV	0.0	47.6	54.0	-6.4	Ch 11, 1 Mbps, EUT on Side
2484.823	31.2	-3.6	1.5	219.0	3.0	20.0	Horz	AV	0.0	47.6	54.0	-6.4	Ch 11, 54 Mbps, EUT Horz
2484.653	31.2	-3.6	1.5	219.0	3.0	20.0	Horz	AV	0.0	47.6	54.0	-6.4	Ch 11, MCS7, EUT Horz
2484.487	31.2	-3.6	2.57	171.0	3.0	20.0	Vert	AV	0.0	47.6	54.0	-6.4	Ch 11, 1 Mbps, EUT Vert
2483.830	31.2	-3.6	1.5	219.0	3.0	20.0	Horz	AV	0.0	47.6	54.0	-6.4	Ch 11, 6 Mbps, EUT Horz
2483.587	31.2	-3.6	1.5	219.0	3.0	20.0	Horz	AV	0.0	47.6	54.0	-6.4	Ch 11, 36 Mbps, EUT Horz
2483.580	31.2	-3.6	1.5	219.0	3.0	20.0	Horz	AV	0.0	47.6	54.0	-6.4	Ch 11, MCS0, EUT Horz
2485.277	42.9	-3.5	1.5	219.0	3.0	20.0	Horz	PK	0.0	59.4	74.0	-14.6	Ch 11, 54 Mbps, EUT Horz
2483.570	43.0	-3.6	1.5	219.0	3.0	20.0	Horz	PK	0.0	59.4	74.0	-14.6	Ch 11, MCS0, EUT Horz
2389.637	42.9	-3.5	1.06	138.0	3.0	20.0	Horz	PK	0.0	59.4	74.0	-14.6	Ch 1, 1 Mbps, EUT Horz
2483.690	42.9	-3.6	2.44	96.0	3.0	20.0	Horz	PK	0.0	59.3	74.0	-14.7	Ch 7/11, MCS0 EUT Horz
2388.807	42.8	-3.5	1.06	138.0	3.0	20.0	Horz	PK	0.0	59.3	74.0	-14.7	Ch 1, 6 Mbps, EUT Horz
2485.320	42.7	-3.5	1.5	203.0	3.0	20.0	Horz	PK	0.0	59.2	74.0	-14.8	Ch 11, 1 Mbps, EUT Vert
2484.863	42.8	-3.6	2.74	26.0	3.0	20.0	Horz	PK	0.0	59.2	74.0	-14.8	Ch 11, 1 Mbps, EUT Horz
2484.717	42.8	-3.6	4.0	140.0	3.0	20.0	Vert	PK	0.0	59.2	74.0	-14.8	Ch 7/11, MCS0 EUT Horz
2484.627	42.8	-3.6	1.5	219.0	3.0	20.0	Horz	PK	0.0	59.2	74.0	-14.8	Ch 11, 6 Mbps, EUT Horz
2484.507	42.8	-3.6	1.5	219.0	3.0	20.0	Horz	PK	0.0	59.2	74.0	-14.8	Ch 7/11, MCS7, EUT Horz
2484.827	42.6	-3.6	1.5	219.0	3.0	20.0	Horz	PK	0.0	59.0	74.0	-15.0	Ch 11, 36 Mbps, EUT Horz
2485.143	42.4	-3.5	2.57	171.0	3.0	20.0	Vert	PK	0.0	58.9	74.0	-15.1	Ch 11, 1 Mbps, EUT Vert
2483.500	42.5	-3.6	1.5	219.0	3.0	20.0	Horz	PK	0.0	58.9	74.0	-15.1	Ch 11, MCS7, EUT Horz
2484.943	42.4	-3.6	1.5	340.0	3.0	20.0	Vert	PK	0.0	58.8	74.0	-15.2	Ch 11, 1 Mbps, EUT Horz
2389.760	42.3	-3.5	1.06	138.0	3.0	20.0	Horz	PK	0.0	58.8	74.0	-15.2	Ch 1/5, MCS0, EUT Horz
2484.463	42.3	-3.6	1.5	77.0	3.0	20.0	Horz	PK	0.0	58.7	74.0	-15.3	Ch 11, 1 Mbps, EUT on Side
2484.187	42.2	-3.6	3.63	11.0	3.0	20.0	Vert	PK	0.0	58.6	74.0	-15.4	Ch 11, 1 Mbps, EUT on Side
2483.567	42.2	-3.6	1.5	219.0	3.0	20.0	Horz	PK	0.0	58.6	74.0	-15.4	Ch 11, 11 Mbps, EUT on Side

CONCLUSION

Pass

Tested By

End of Test Report