

PART 15C & RSS-247 RF TEST REPORT

FCC ID:	A3LSMS741B	Samsung Electronics Co., Ltd. 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea Certification
Model (s):	SM-S741B/DS, SM-S741B	
Device Type:	Portable Handset	
Report Issue Date:	July 24, 2026	

The measurement evaluations presented in this report are based on the maximum performance of the tested device(s), which has been shown to be capable of compliance with the applicable technical requirements specified herein and has been tested in accordance with the measurement procedures outlined in 47CFR §2.947, ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Errata to C63.10a-2024.

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This document has been revised and replaces all previously issued versions of this document with the same Test Report S/N.



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1. DUT Specifics

1.1. Device under Test

The manufacturer has confirmed that the device is within operational tolerances expected for production units and has the same physical, mechanical, and thermal characteristics expected for production units. The serial number of the device used for each test is indicated alongside the results.

1.2. Maximum Power per Mode

Table 1-1 Maximum Conducted Peak Power Summary

MODE	Operating Mode	Frequency Range			Max Peak Power	
		[MHz]			[dBm]	[W]
BT	DH5	2402	-	2480	18.26	0.067
	2DH5	2402	-	2480	17.53	0.057
	3DH5	2402	-	2480	17.88	0.061

1.3. Description of Antennas

The antenna gain values are provided by the manufacturer in the antenna specification document. The document is included in the certification filing as a public exhibit.
 The highest antenna gain for each operating frequency band is applied during the compliance evaluation.

Table 1-2 Antenna Operating Configurations

Band	Mode	SISO		MIMO	
		Ant 1	Ant 2	Ant 1	Ant 2
BT	DH5	✓	✓	✓	✓
	2DH5	✓	✓	✓	✓
	3DH5	✓	✓	✓	✓

Table 1-3 Maximum Antenna Peak Gain by Operating Band

Antenna Gain	Bluetooth (2.4 GHz) [dBi]
Antenna 1	-5.03
Antenna 2	-6.47
Directional Gain	-2.71

Note 1 : The DUT incorporates an internal, permanently attached antenna which cannot be replaced by the end-user. Therefore, DUT complies with the requirements of §15.203

Note 2 : Per KDB 662911 D01 v02r01, the directional gain for MIMO operations with unequal antenna gains and equal transmit powers was calculated as follows

$$\text{Correlated Directional Gain} = 10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{\text{ANT}}] \text{ dBi}$$

2. Executive Summary

2.1. Device Description

The DUT is a portable wireless handset designed to operate across multiple communication standards and frequency bands. This report covers the complete compliance testing of Bluetooth (DSS) in accordance with the applicable standards and regulatory requirements.

2.2. Summary of Test Results

The DUT has been tested according to the following specifications. The test period was from June 17, 2026 through July 04, 2026.

Test Condition	Test Item	FCC	ISED	Limit	Test Result	Reference
Conducted	Maximum peak conducted output power	§15.247(b)	RSS-247(6.2)	< 1 Watt >= 75 non-overlapping channels used	PASS	Section 4.4
	Carrier Frequency Separation	§15.247(a)	RSS-247(6.2)	2/3 of 20 dB BW for system with output power < 125mW	PASS	Section 4.7
	Time of Occupancy	§15.247(a)	RSS-247(6.2)	< 0.4 sec	PASS	Section 4.5
	Number of Channels	§15.247(a)	RSS-247(6.2)	> 15 Channels	PASS	Section 4.8
	20dB Bandwidth 99% OBW	§15.247(a)	RSS-247(6.2)	NA	PASS	Section 4.6
	Conducted Spurious Emissions	§15.247(d)	RSS-247(6.6)	> 20 dBc	PASS	Section 4.9
	AC Conducted Emissions	§15.207	RSS-Gen(8.8)	The DUT shall comply with the limits specified in §15.207	PASS	Section 6
Radiated	Unwanted Emissions Outside of the Band	§15.247(d) §15.205 §15.209	RSS-247(6.6) RSS-Gen(8.9) RSS-Gen(8.10)	Undesirable emission must meet the limits detailed in 15.247(d) & RSS-247(6.6)	PASS	Section 5

2.3. Test Guidance Applied

Testing was performed in accordance with the following rules, standards, and guidance:

- ANSI C63.10 - 2020 + Cor.1-2023 + C63.10a-2024 + Errata to C63.10a-2024
- ANSI C63.4 - 2014 + C63.4a - 2017
- RSS-Gen Issue 5
- RSS-247 Issue 4
- FCC 47 CFR Part 2
- FCC 47 CFR Part 15
- KDB 662911 D01 v02r01
- KDB 558074 D01 v05r02

2.4. NGTL Test Site Location

All measurement operations were conducted at the NGTL testing facility.

- Location: 52-7, Choha-ro, Mohyeon-eup, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea.
- Site Compliance: The measurement environments strictly adhere to the site validation requirements specified in ANSI C63.4-2014+C63.a-2017 and FCC KDB 414788 D01.
- Accreditations: Fully accredited to ISO/IEC 17025 and designated by the National Radio Research Agency (RRA) as a Conformity Assessment Body (CAB) under the MRAs, maintaining official testing recognition from the FCC and ISED.

FCC Designation Number	FCC Test Firm Registration Number
KR0179	985720
ISED CAB identifier	ISED Company Number
KR0179	35746

3. Description of Tests

Testing of the DUT was conducted in accordance with the methodologies outlined in ANSI C63.10-2020 and KDB 558074 D01 15.247 Meas Guidance v05r02. For details regarding the test configuration, refer to the following sections:

- Antenna Port Conducted Test: Sections 4.1
- Radiated Emissions Test: Sections 5.1
- AC Line Conducted Test: Sections 6.1

- All tests were conducted under the environmental conditions specified below

Ambient Temperature : 22 - 26°C

Relative Humidity : 41- 49 % RH

- Data Referencing is applied for the following tests:

Test Condition	Test Item	Data Referencing [Applied / Full]	Referred Data and Spot-Checks
Conducted	Maximum Peak Conducted Output Power	Applied	Section 11
	20dB Bandwidth	Applied	Section 11
Radiated	Radiated Spurious Emissions	Applied	Section 11
	Radiated Band Edge	Applied	Section 11

4. Conducted Test Results

4.1. Test Configuration

All operating modes, channels, and data rates across the Bluetooth bands were investigated; the results documented herein represent the worst-case emissions. Since the output power differs between SISO and MIMO configurations, all required tests were performed for both configurations, and only the worst-case results are presented in this report.

All spectrum analyzer plots incorporate pre-loaded correction factors to compensate for external path losses (cables, couplers, splitters and attenuators) across the measured frequency range.

Conducted emissions were captured using automated test software 'NGTL ATE' Ver. 0.00.

4.2. Conducted Measurement Setup

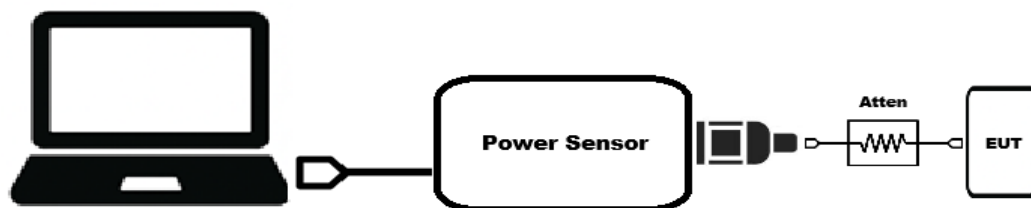


Figure 4-1 Conducted Power Measurement Setup

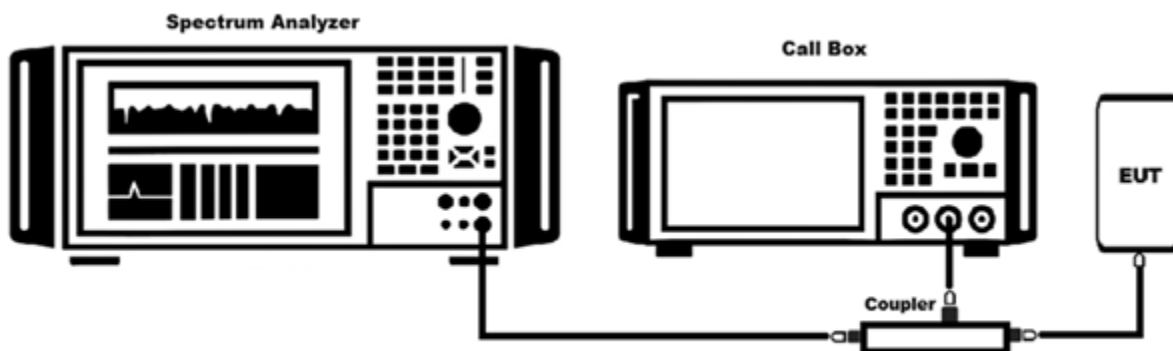


Figure 4-2 Conducted Measurement Setup

4.3. Conducted Measurement Sample

Serial Number(s) :

ZDH0498M, ZDH0475M, ZEJ0881M

4.4. The Maximum Output Power

4.4.1. Regulatory Limit

Part. 15.247(b)

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

RSS-247 - Section 6.2

If the hopset uses 75 or more hopping channels, the maximum peak conducted output power shall not exceed 1.0 W.

If the hopset uses less than 75 hopping channels the maximum peak conducted output power shall not exceed 0.125 W.

4.4.2. Test Method

ANSI C63.10-2020, clause 7.8.5

4.4.3. Test Procedure

- a) Connect the DUT to a wideband gated RF power meter.
- b) Apply an offset to the power meter to compensate for the insertion losses of the cables and attenuators connected between the DUT and the power sensor.
- c) Configure the DUT to transmit at its maximum power control level.
- d) Adjust the gate parameters on the power meter to ensure that the power is measured strictly during the active transmission of the DUT.

Test Note

- ✓ A peak responding power meter may be used, where the power meter and sensor system video bandwidth is greater than the occupied bandwidth of the unlicensed wireless device, rather than a spectrum analyzer.

4.4.4. Sample Calculation

$$\text{MIMO } P_T = P_T (\text{Ant1}) + P_T (\text{Ant2})$$

$$= 14.73 \text{ dBm} + 15.13 \text{ dBm} = 29.72 \text{ mW} + 32.58 \text{ mW} = 62.30 \text{ mW}$$

$$= 10 \log (62.30 \text{ mW}) = 17.94 \text{ dBm}$$

$$\text{Correlated Directional Gain} = 10 \log [(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{\text{ANT}}] \text{ dBi}$$

$$= 10 \log [(10^{-5.03/20} + 10^{-6.47/20})^2 / 2] \text{ dBi} = -2.71 \text{ dBi}$$

$$\text{ERP or EIRP} = P_{\text{Cond}} + G_{\text{EUT}} = 17.94 \text{ dBm} + (-2.71 \text{ dBi}) = 15.24 \text{ dBm}$$

P_{Cond} is the measured power at feedpoint of the EUT antenna, in dBm

G_{EUT} is the gain of the EUT radiating element(antenna), in dBi. (in dBd ERP)

Test Note

- ✓ The output power was measured during the transmitter ON time at the maximum power control level using a gated RF power meter. No duty cycle correction factor was applied.

4.4.5. Test Results

Table 4-1 SISO Maximum Output Power

Mode	freq. [MHz]	CH. [MHz]	SISO				LIMIT [dBm]	Margin [dB]
			Average [dBm]		Peak Power [dBm]			
			Ant1	Ant2	Ant1	Ant2		
DH5	2402	0	16.74	17.98	17.33	18.26	30	-11.74
	2440	38	17.37	17.63	18.03	17.96	30	-11.97
	2480	78	17.16	17.88	17.86	18.16	30	-11.84
2DH5	2404	0	13.06	14.92	16.03	17.45	30	-12.55
	2440	38	13.52	14.36	16.37	16.94	30	-13.06
	2478	78	13.51	14.81	16.58	17.52	30	-12.48
3DH5	2402	0	13.11	14.95	16.11	17.88	30	-12.12
	2440	38	13.56	14.64	16.72	17.76	30	-12.24
	2480	78	13.67	14.84	16.62	17.86	30	-12.14

Table 4-2 SISO Maximum Output Power – e.i.r.p

Mode	freq. [MHz]	CH. [MHz]	SISO [e.i.r.p]				LIMIT [dBm]	Margin [dB]
			Average [dBm]		Peak Power [dBm]			
			Ant1	Ant2	Ant1	Ant2		
DH5	2402	0	11.71	11.51	12.30	11.79	36	-23.70
	2440	38	12.34	11.16	13.00	11.49	36	-23.00
	2480	78	12.13	11.41	12.83	11.69	36	-23.17
2DH5	2402	0	8.03	8.45	11.00	10.98	36	-25.00
	2440	38	8.49	7.89	11.34	10.47	36	-24.66
	2480	78	8.48	8.34	11.55	11.05	36	-24.45
3DH5	2402	0	8.08	8.48	11.08	11.41	36	-24.59
	2440	38	8.53	8.17	11.69	11.29	36	-24.31
	2480	78	8.64	8.37	11.59	11.39	36	-24.41

Table 4-3 MIMO Maximum Output Power

Mode	freq. [MHz]	CH. [MHz]	MIMO						LIMIT [dBm]	Margin [dB]
			Average Power [dBm]			Peak Power [dBm]				
			Ant1	Ant2	MIMO	Ant1	Ant2	MIMO		
DH5	2402	0	14.61	14.93	17.78	14.73	15.13	17.94	30	-12.06
	2440	38	13.72	13.72	16.73	13.95	13.92	16.95	30	-13.05
	2480	78	13.28	13.76	16.54	13.52	13.94	16.75	30	-13.25
2DH5	2402	0	12.44	12.04	15.25	14.93	14.07	17.53	30	-12.47
	2440	38	11.51	10.76	14.16	13.72	12.94	16.36	30	-13.64
	2480	78	11.22	10.83	14.04	13.55	13.11	16.35	30	-13.65
3DH5	2402	0	12.46	12.02	15.26	15.19	14.29	17.77	30	-12.23
	2440	38	11.61	10.76	14.22	14.04	13.03	16.57	30	-13.43
	2480	78	11.26	10.88	14.08	13.79	13.36	16.59	30	-13.41

Table 4-4 MIMO Maximum Output Power – e.i.r.p

Mode	freq. [MHz]	CH. [MHz]	MIMO [e.i.r.p]		LIMIT [dBm]	Margin [dB]
			Average Power [dBm]	Peak Power [dBm]		
			MIMO	MIMO		
DH5	2402	0	15.07	15.24	36	-20.76
	2440	38	14.02	14.24	36	-21.76
	2480	78	13.83	14.04	36	-21.96
2DH5	2402	0	12.55	14.82	36	-21.18
	2440	38	11.45	13.65	36	-22.35
	2480	78	11.33	13.64	36	-22.36
3DH5	2402	0	12.55	15.06	36	-20.94
	2440	38	11.51	13.86	36	-22.14
	2480	78	11.37	13.88	36	-22.12

4.5. Dwell Time

4.5.1. Regulatory Limit

Part. 15.247(a)

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

RSS-247 - Section 6.2

FHS operating in the band 2400-2483.5 MHz shall use at least 15 hopping channels. The average time of occupancy on any channel shall not be greater than 0.4 s within a period of 0.4 s, multiplied by the number of hopping channels employed. Transmissions on particular hopping frequencies may be avoided or suppressed provided that at least 15 hopping channels are used.

4.5.2. Test Method

ANSI C63.10-2020 The Zero-Span mode on spectrum analyzer

4.5.3. Test Procedure

- a) Span: Zero span, centered on a hopping channel.
- b) RBW shall be $\leq$ channel spacing and where possible RBW should be set $\gg 1 / T$, where T is the expected transmission time per hop.
- c) Sweep time: Set so that the start of the first transmission and end of the last transmission for the
- d) hops are clearly captured. Setting the sweep time to be slightly longer than the hopping period per channel (hopping period = $1/\text{hopping rate}$) should achieve this.
- e) Use a video trigger, where possible with a trigger delay, so that the start of the transmission is clearly observed.
- f) The trigger level may need to be adjusted to reduce the possibility of triggering when the system hops to an adjacent channel.
- g) Detector = Peak
- h) Trace Mode = Clear-Write
- i) Sweep Type = Single Sweep
- j) Place markers at the start of the first transmission on the channel and at the end of the last transmission. The dwell time per hop is the time between these two markers.

4.5.4. Sample Calculation

Dwell time = 400ms x Hopping Channels x Burst On time x

((Hopping rate / Time slot) / Hoping channels)

FH mode Dwell time = 0.4s x 79 x 2.887 x ((1600 / 6) / 79) = 307.95 ms

* 0.4 x Hopping channels = Time of Occupancy Limit.

* Hopping channels = FH mode has 79 channels, and AFH mode has 20 channels.

* Hopping rate = EDR mode has 1600 hops/s and AFH mode rate is reduced by 50% to 800 hops/s.

* Time slot = EDR mode uses 5 transmit slots and 1 receive slot, for total of 6 slots

DCCF Calculation (Duty Cycle Correction Factor)

DCCF = 20 x log x (The worst-case Dwell time / 100 ms) dB

= 20 x log x (7.5 / 100) = -22.5 dB

* Channel hop rate = 800 Hops/s (AFH Mode is worst)

* Adjusted channel hop rate for DH5 mode = Hopping rate / Time slot = 133.33 hops/s

* Time to cycle through all channels = (1 / (Hopping rate / Time slot)) x hopping channels

= (1 / (800 / 6)) x 20 (AFH Mode is worst)

= 150 ms

* Number of times transmitter hits on one channel = 100 ms / 150 ms = 1 Time (s)

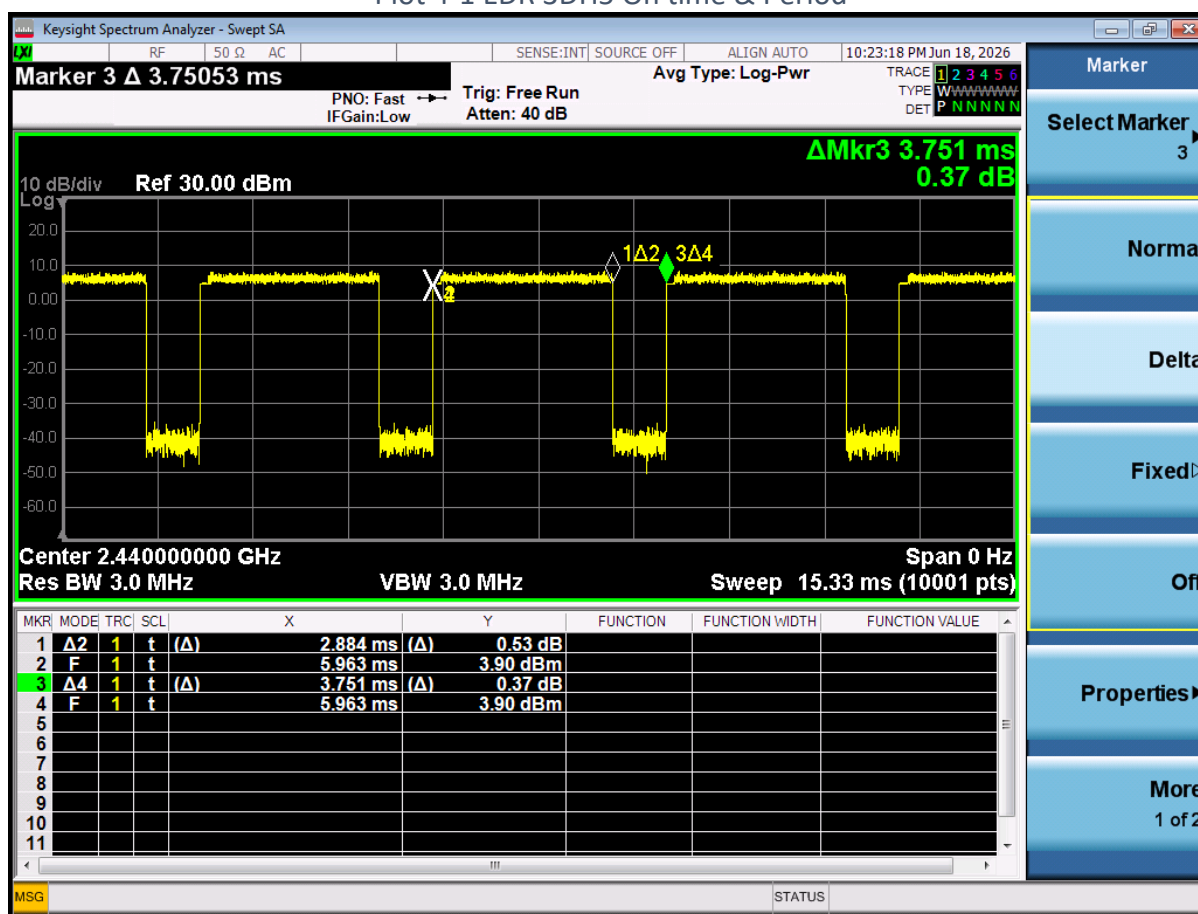
* Worst case dwell time = 7.5 ms (Time per channel)

4.5.5. Test Results

Table 4-5 Dwell Time

Mode		On Time	Period	Duty Cycle	DCCF	Dwell Time [ms]	
		[ms]	[ms]	[%]	[dB]	FH	AFH
BDR	DH5	2.881	3.751	76.81	-22.50	307.31	153.65
EDR	2DH5	2.881	3.751	76.81	-22.50	307.31	153.65
EDR	3DH5	2.884	3.751	76.89	-22.50	307.63	153.81

Plot 4-1 EDR 3DH5 On time & Period



4.6. 20dB Bandwidth & Occupied Bandwidth

4.6.1. Regulatory Limit

Part. 15.247(a)

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

RSS-247 - Section 6.2

The bandwidth of a frequency hopping channel is the 20 dB emission bandwidth, measured with the hopping stopped. The system's RF bandwidth is equal to the channel bandwidth multiplied by the number of channels in the hopset. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

4.6.2. Test Method

ANSI C63.10-2020, clause 7.8.6

4.6.3. Test Procedure

The procedure for this method is as follows:

- a) RBW = [approximately 1 % ~ 5 % of the EBW]
- b) VBW $\geq$ [3 $\times$ RBW]
- c) Detector = Peak
- d) Trace Mode = Max-Hold
- e) Sweep Time = Auto (Coupled) or sufficient to investigate
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is 20 dB down from the peak of the emission.
- h) Compare this with the RBW setting of the instrument. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is in the range of 1% to 5%.

Test Note

- ✓ The automatic bandwidth measurement function of the spectrum analyzer was used.

4.6.4. Test Results

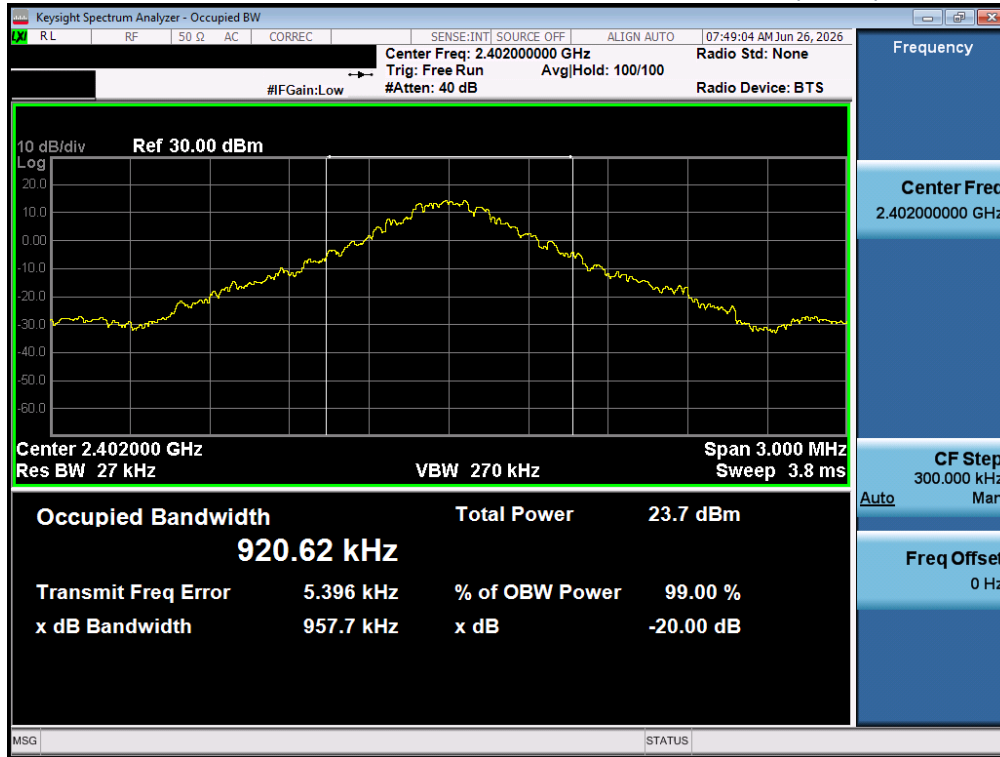
Table 4-6 20dB Bandwidth & 99% OBW - SISO

Mode	freq. [MHz]	CH.	20dB Bandwidth [MHz]		99% OBW [MHz]	
			Ant1	Ant2	Ant1	Ant2
DH5	2402	0	0.96	0.96	0.92	0.93
	2440	38	0.95	0.95	0.91	0.91
	2480	78	0.96	0.95	0.91	0.91
2DH5	2402	0	1.33	1.34	1.21	1.21
	2440	38	1.34	1.31	1.21	1.21
	2480	78	1.32	1.33	1.21	1.22
3DH5	2402	0	1.34	1.33	1.22	1.22
	2440	38	1.35	1.32	1.23	1.21
	2480	78	1.33	1.37	1.20	1.19

Table 4-7 20dB Bandwidth & 99% OBW - MIMO

Mode	freq. [MHz]	CH.	20dB Bandwidth [MHz]		99% OBW [MHz]	
			Ant1	Ant2	Ant1	Ant2
DH5	2402	0	0.96	0.97	0.87	0.87
	2440	38	0.97	0.97	0.90	0.89
	2480	78	0.96	0.96	0.89	0.89
2DH5	2402	0	1.33	1.35	1.20	1.20
	2440	38	1.33	1.35	1.21	1.20
	2480	78	1.35	1.31	1.22	1.20
3DH5	2402	0	1.32	1.35	1.20	1.20
	2440	38	1.34	1.34	1.22	1.21
	2480	78	1.34	1.34	1.21	1.21

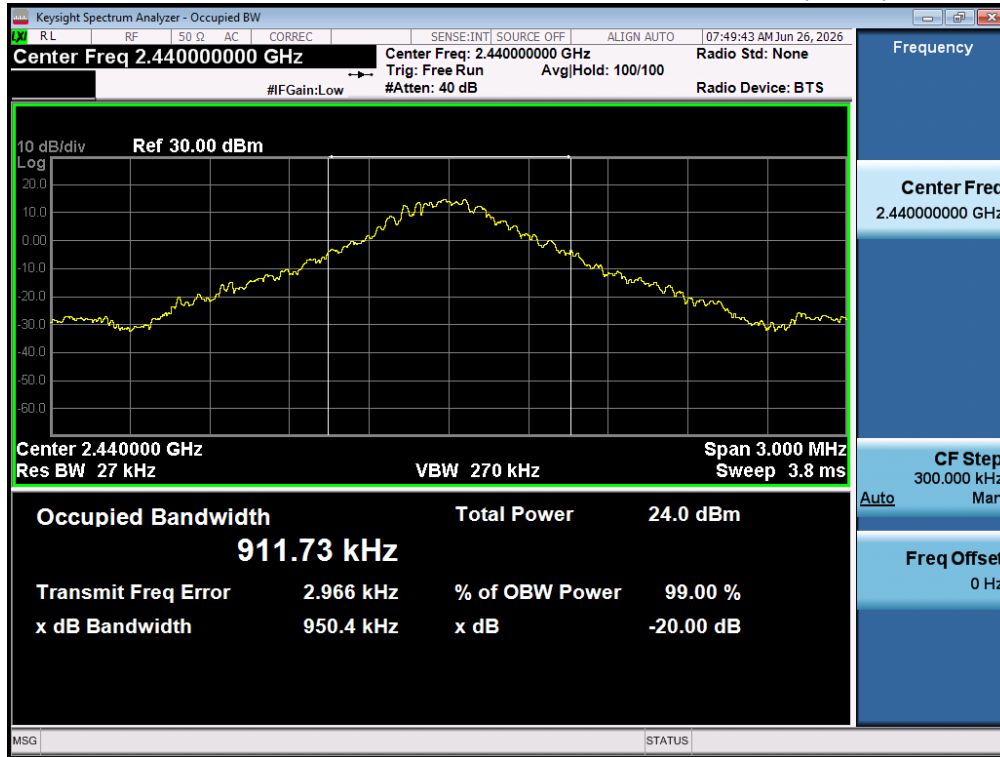
Plot 4-2 DH5 CH.0 SISO 20dB Bandwidth & OBW – (ANT1)



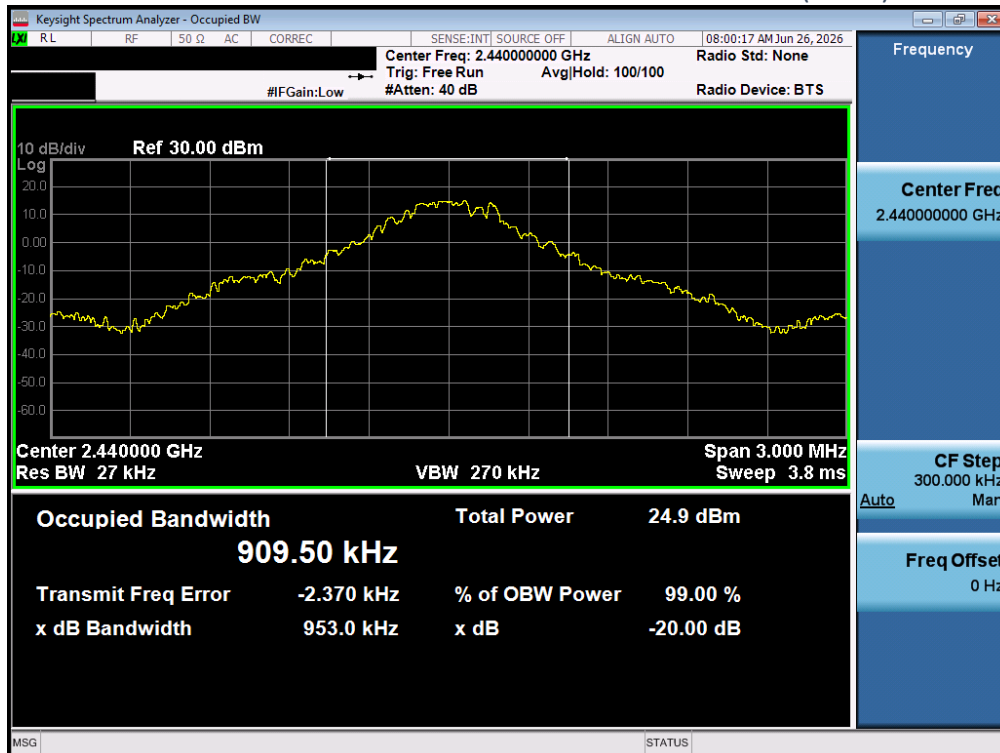
Plot 4-3 DH5 CH.0 SISO 20dB Bandwidth & OBW – (ANT2)



Plot 4-4 DH5 CH.38 SISO 20dB Bandwidth & OBW – (ANT1)



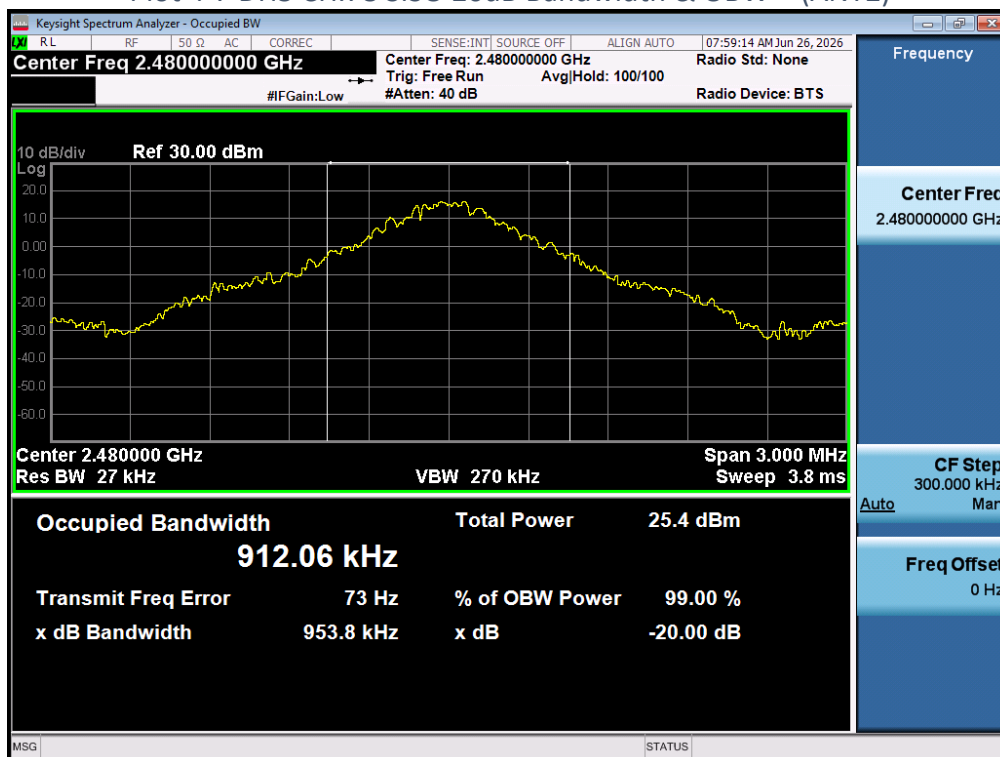
Plot 4-5 DH5 CH.38 SISO 20dB Bandwidth & OBW – (ANT2)



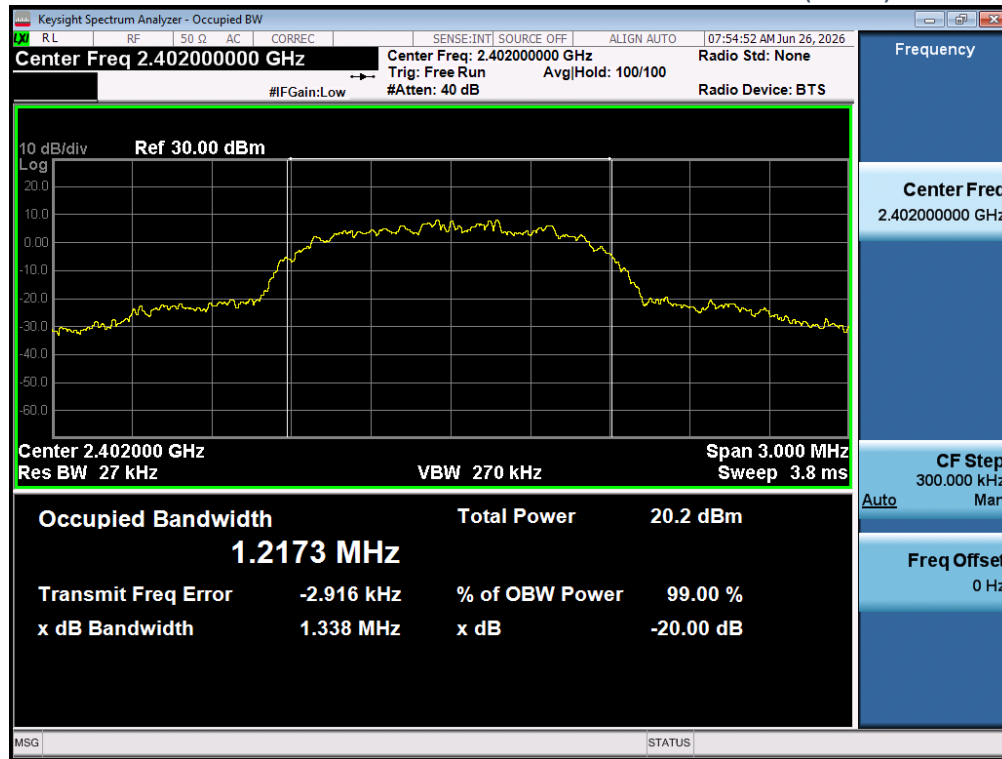
Plot 4-6 DH5 CH.78 SISO 20dB Bandwidth & OBW – (ANT1)



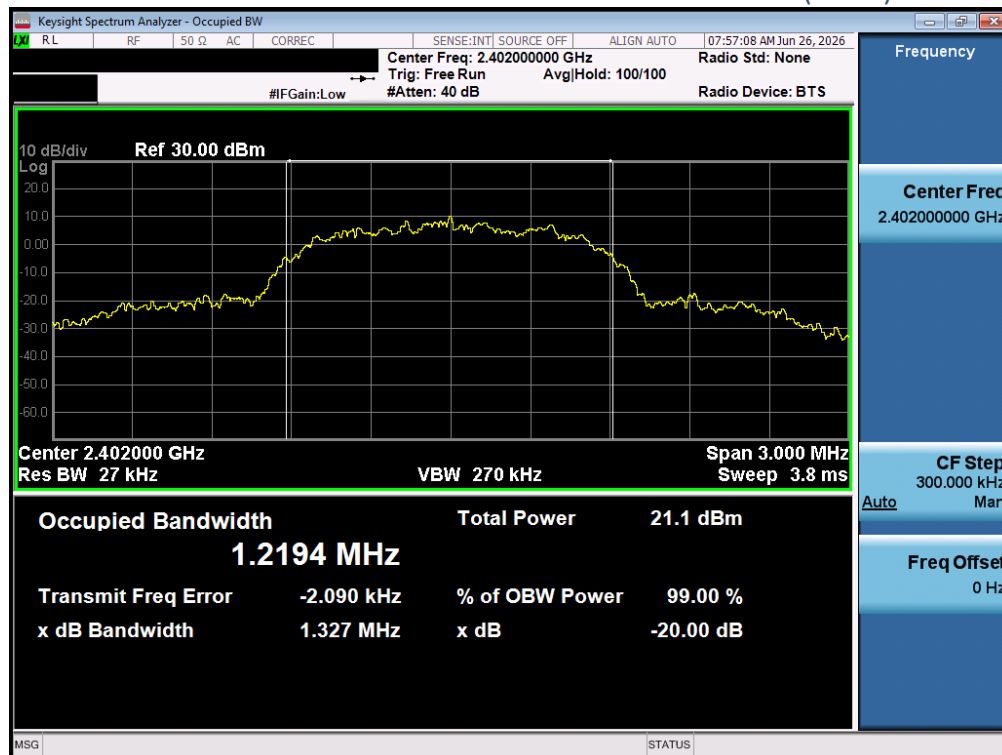
Plot 4-7 DH5 CH.78 SISO 20dB Bandwidth & OBW – (ANT2)



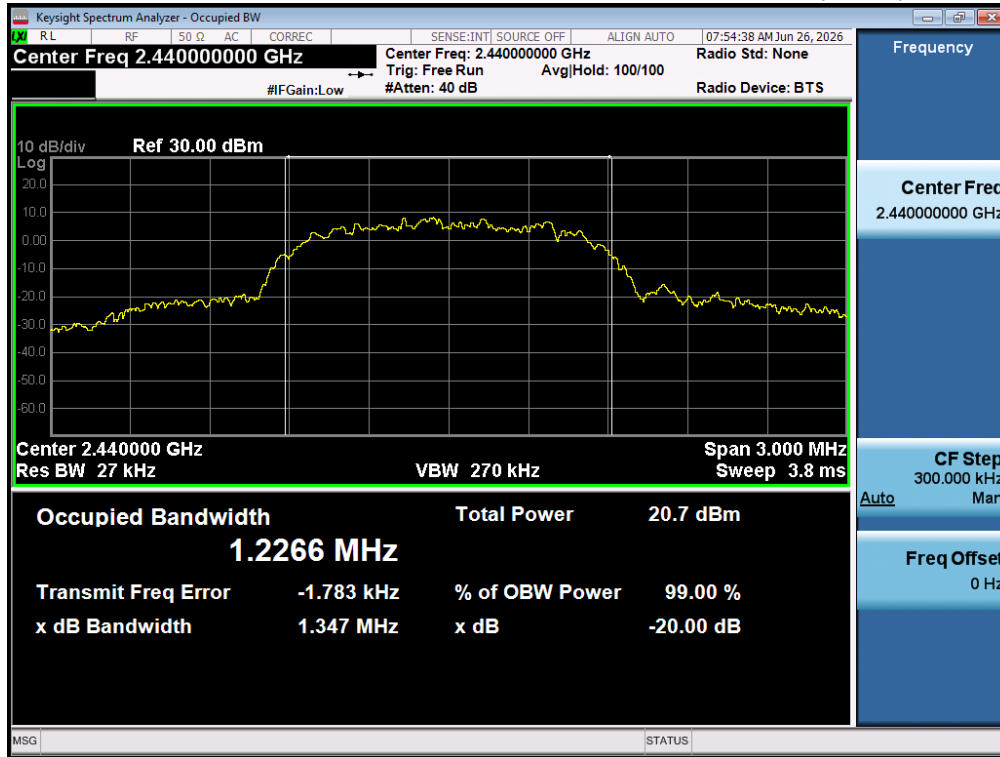
Plot 4-8 3DH5 CH.0 SISO 20dB Bandwidth & OBW – (ANT1)



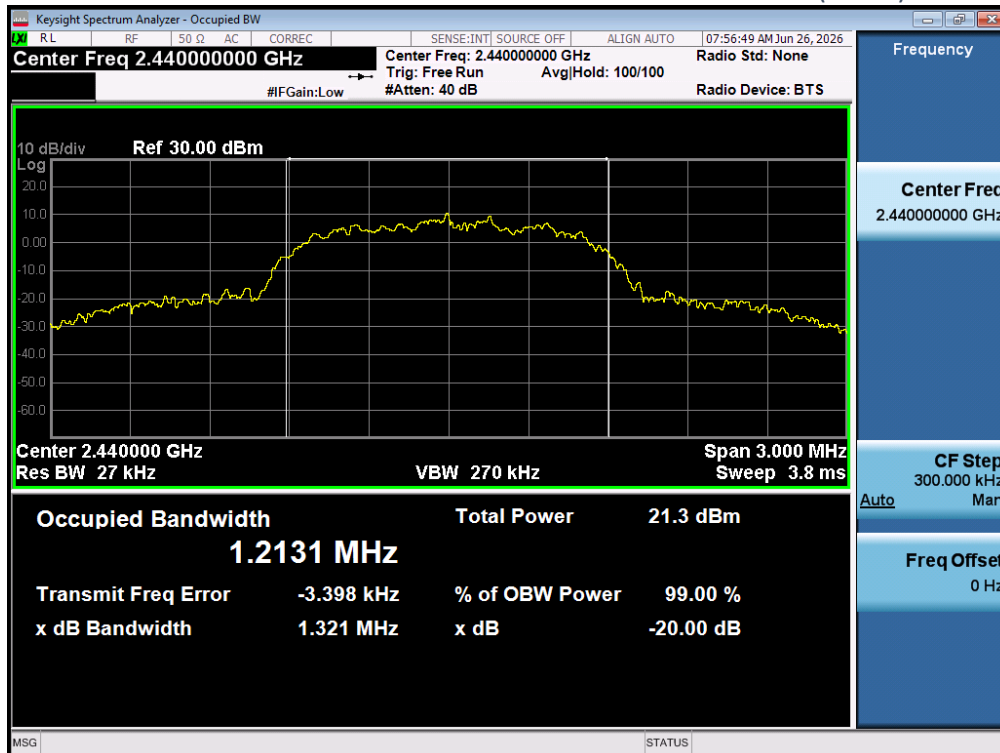
Plot 4-9 3DH5 CH.0 SISO 20dB Bandwidth & OBW – (ANT2)



Plot 4-10 3DH5 CH.38 SISO 20dB Bandwidth & OBW – (ANT1)



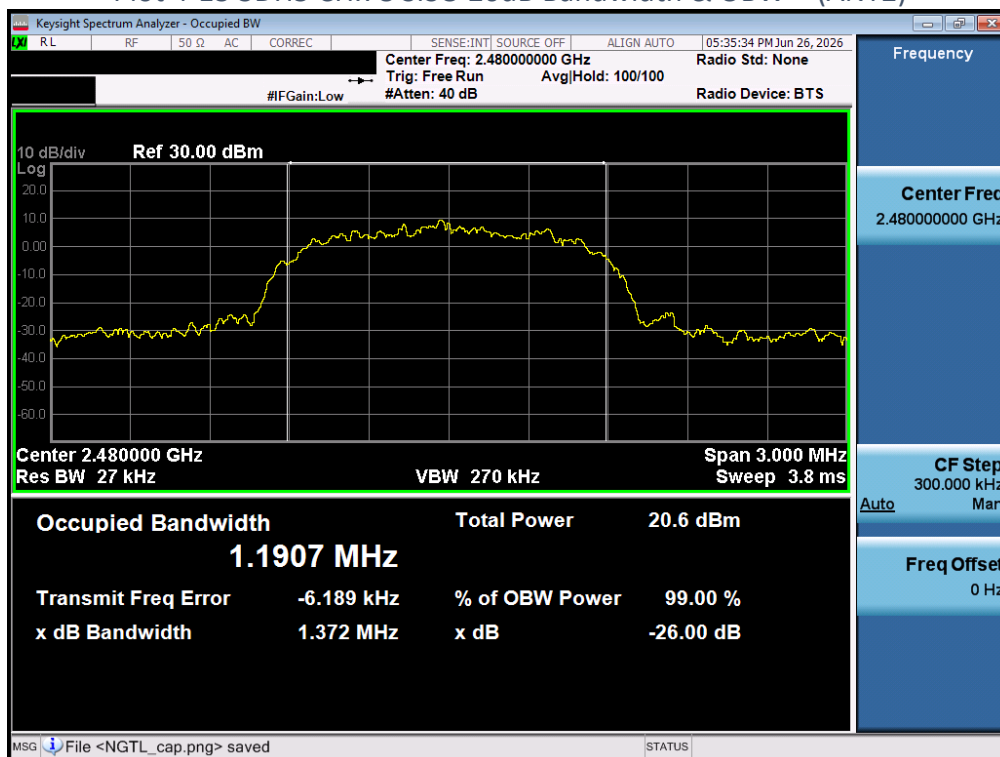
Plot 4-11 3DH5 CH.38 SISO 20dB Bandwidth & OBW – (ANT2)



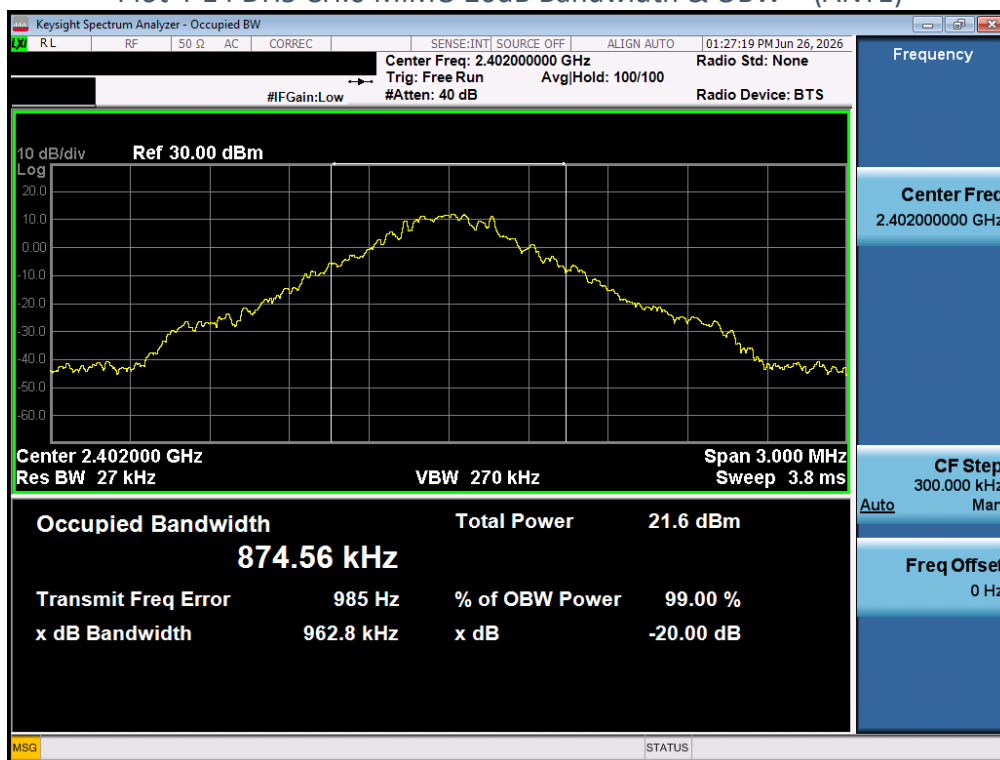
Plot 4-12 3DH5 CH.78 SISO 20dB Bandwidth & OBW – (ANT1)



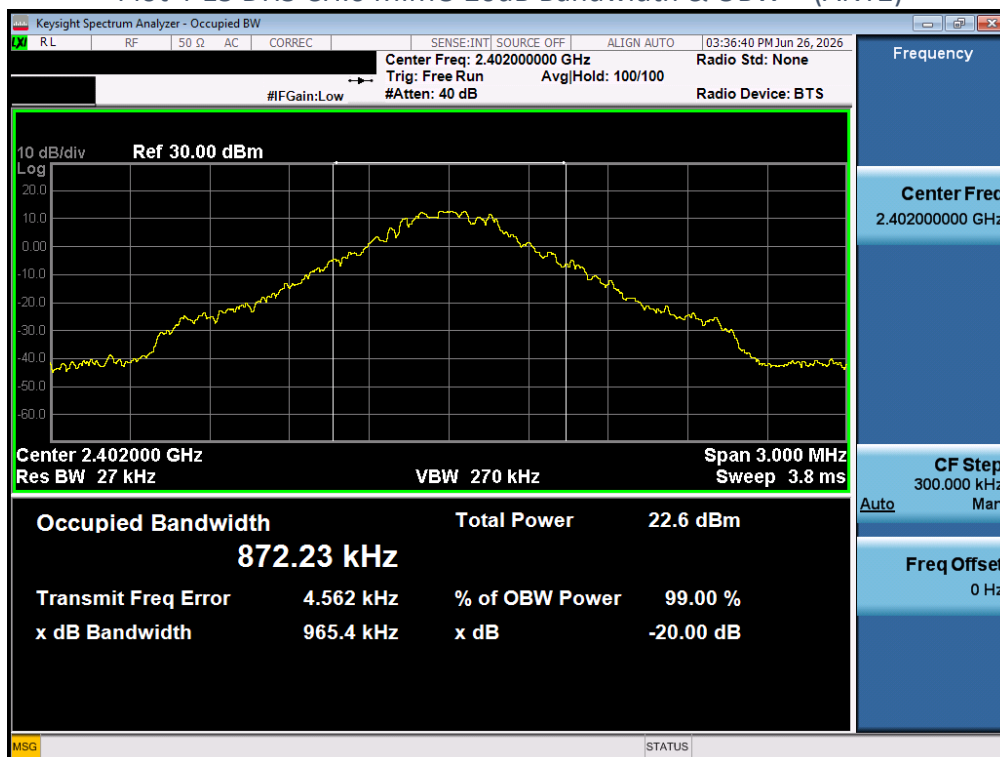
Plot 4-13 3DH5 CH.78 SISO 20dB Bandwidth & OBW – (ANT2)



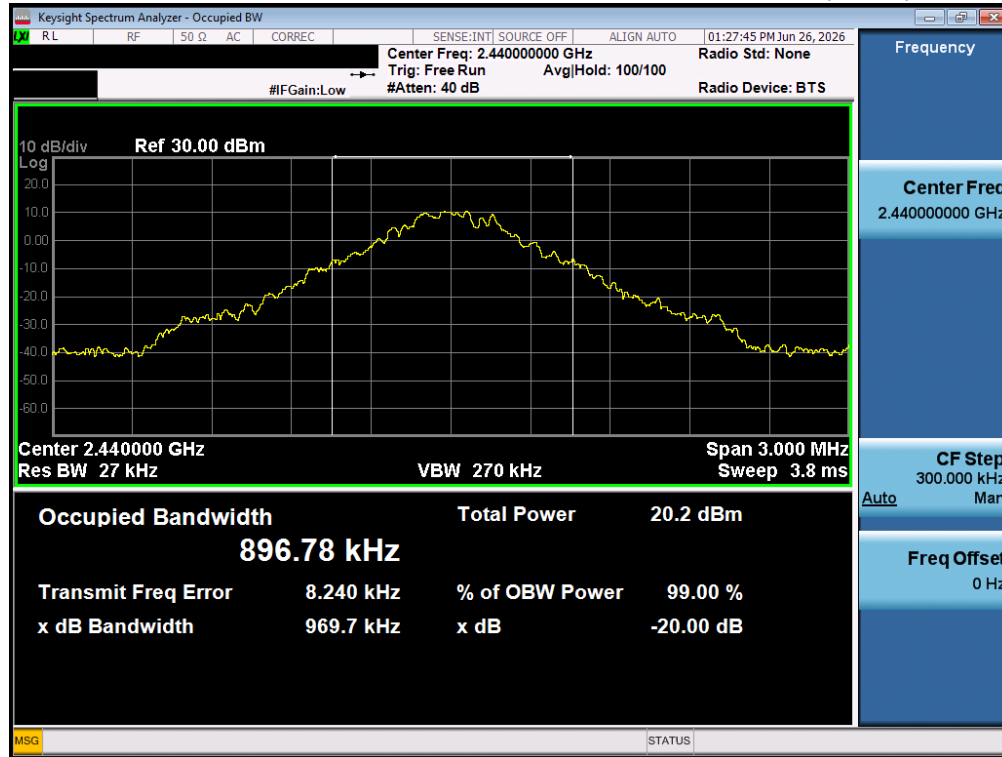
Plot 4-14 DH5 CH.0 MIMO 20dB Bandwidth & OBW – (ANT1)



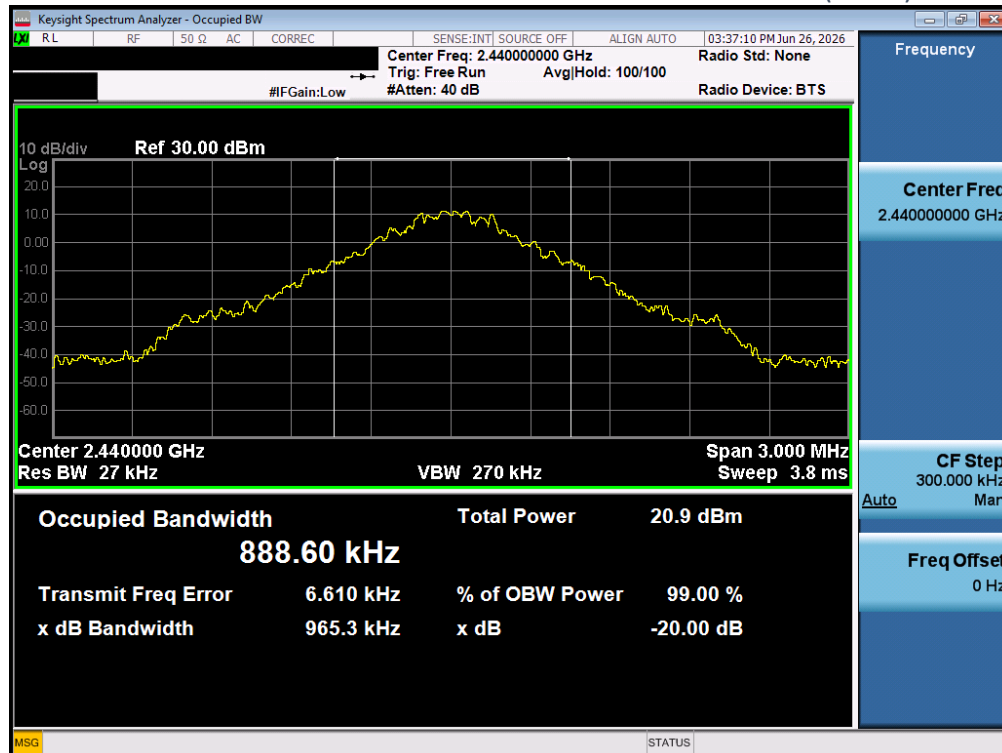
Plot 4-15 DH5 CH.0 MIMO 20dB Bandwidth & OBW – (ANT2)



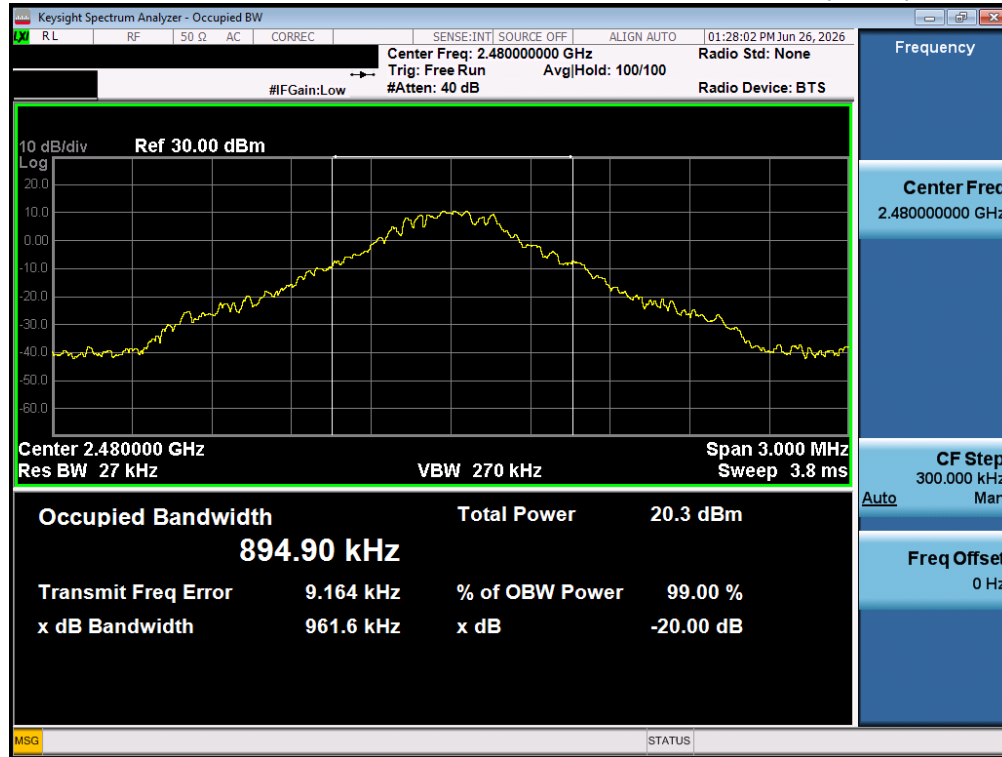
Plot 4-16 DH5 CH.38 MIMO 20dB Bandwidth & OBW – (ANT1)



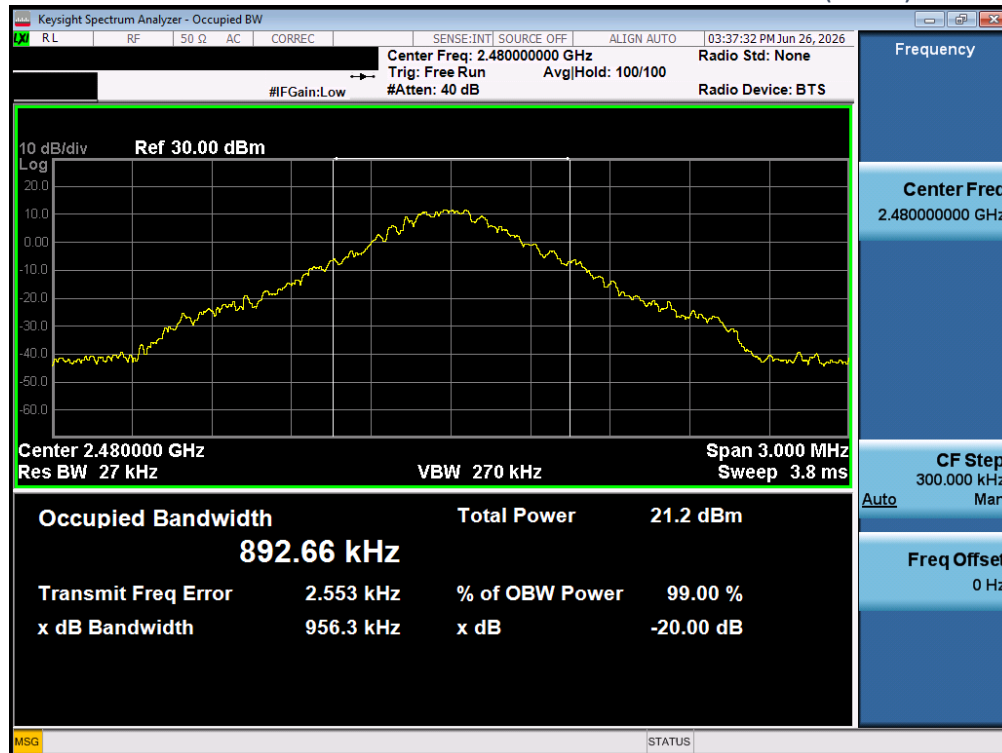
Plot 4-17 DH5 CH.38 MIMO 20dB Bandwidth & OBW – (ANT2)



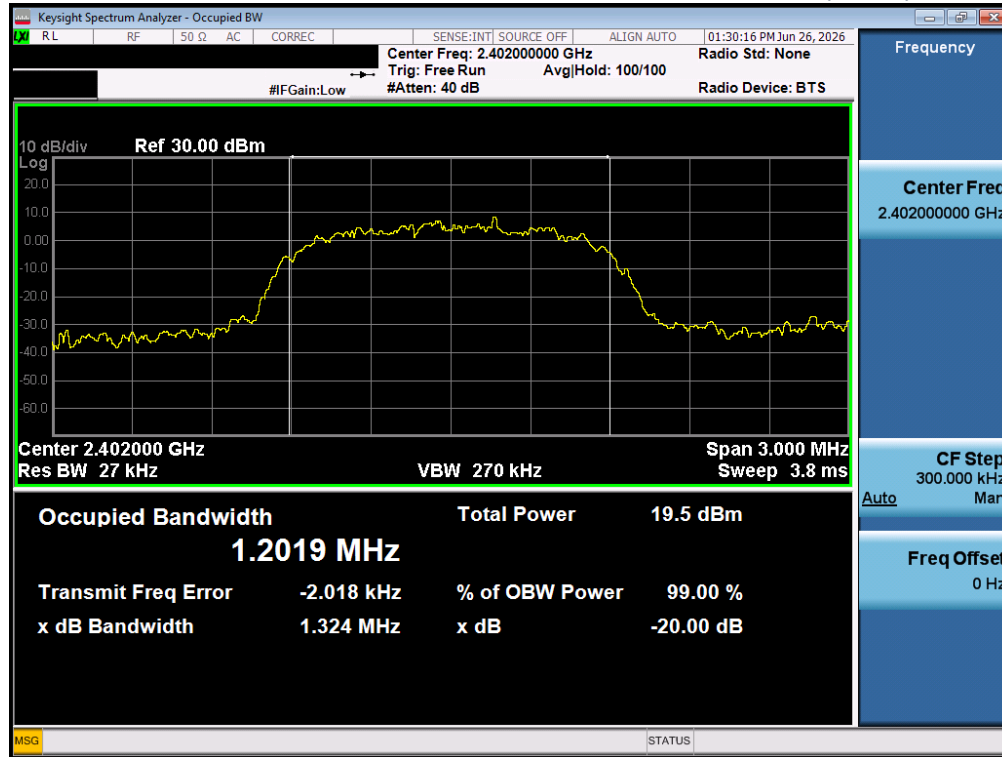
Plot 4-18 DH5 CH.78 MIMO 20dB Bandwidth & OBW – (ANT1)



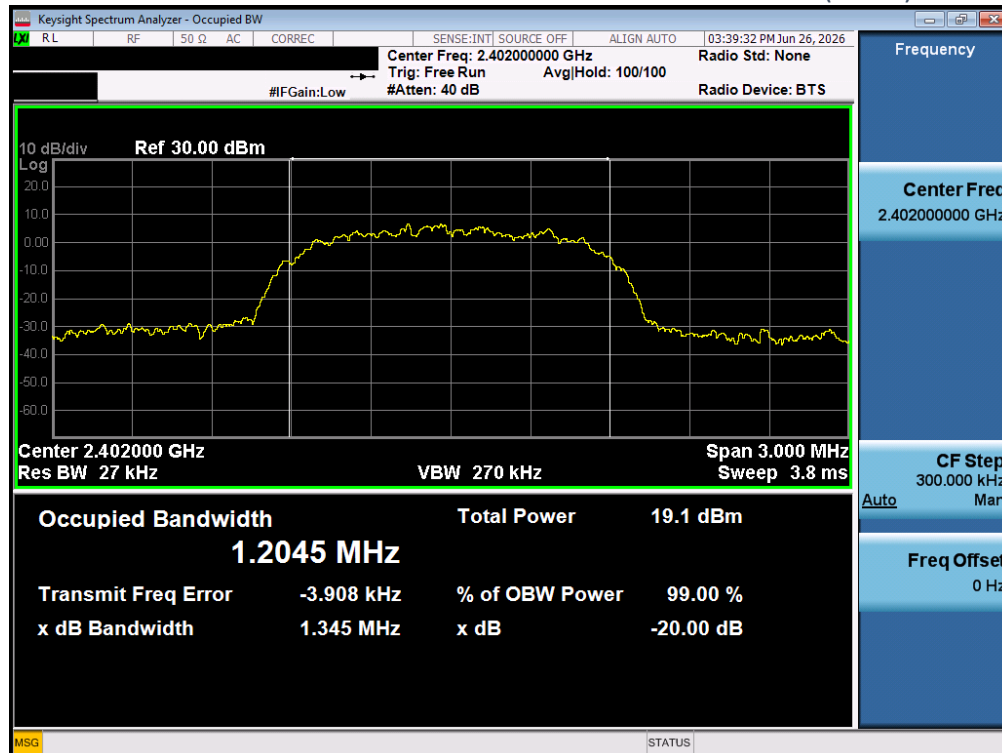
Plot 4-19 DH5 CH.78 MIMO 20dB Bandwidth & OBW – (ANT2)



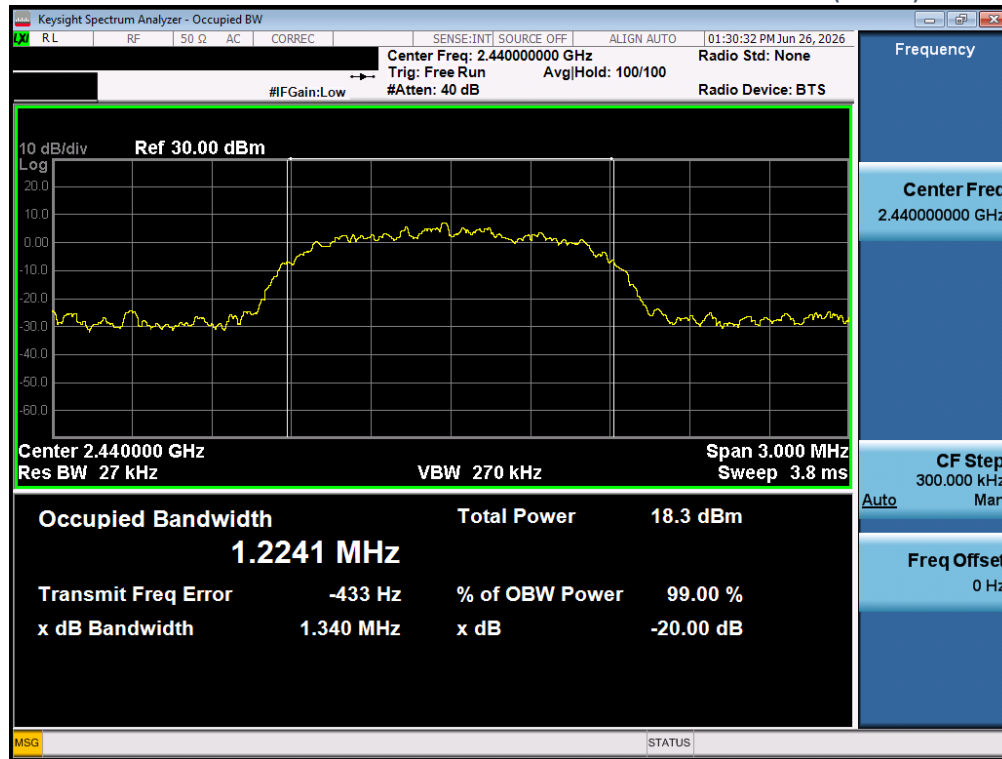
Plot 4-20 3DH5 CH.0 MIMO 20dB Bandwidth & OBW – (ANT1)



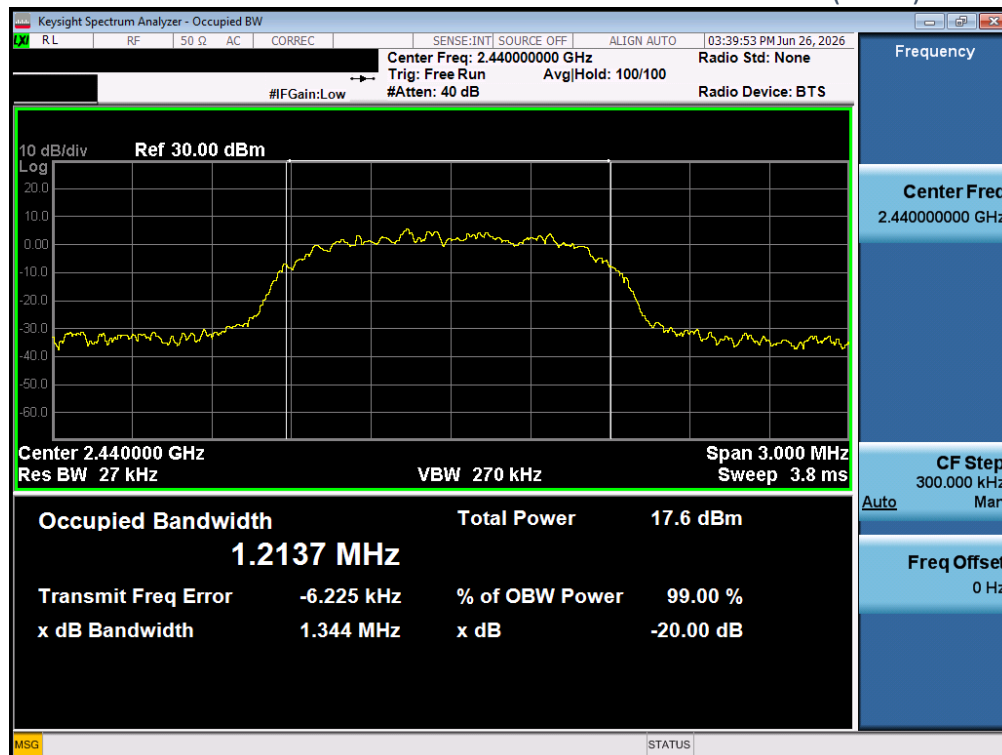
Plot 4-21 3DH5 CH.0 MIMO 20dB Bandwidth & OBW – (ANT2)



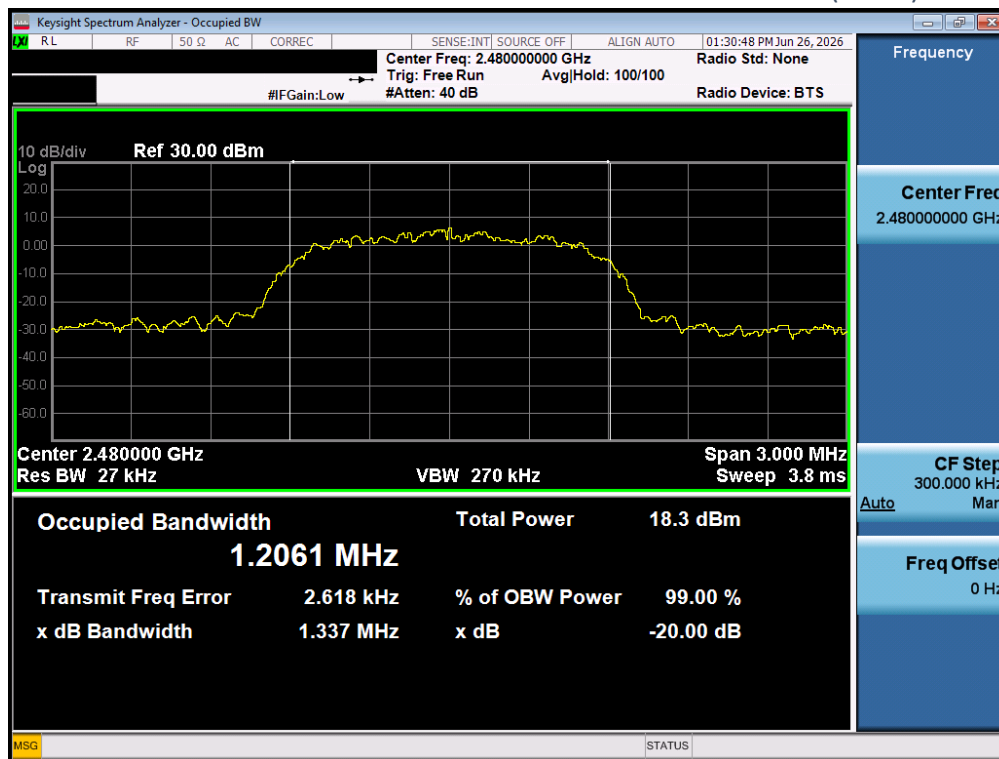
Plot 4-22 3DH5 CH.38 MIMO 20dB Bandwidth & OBW – (ANT1)



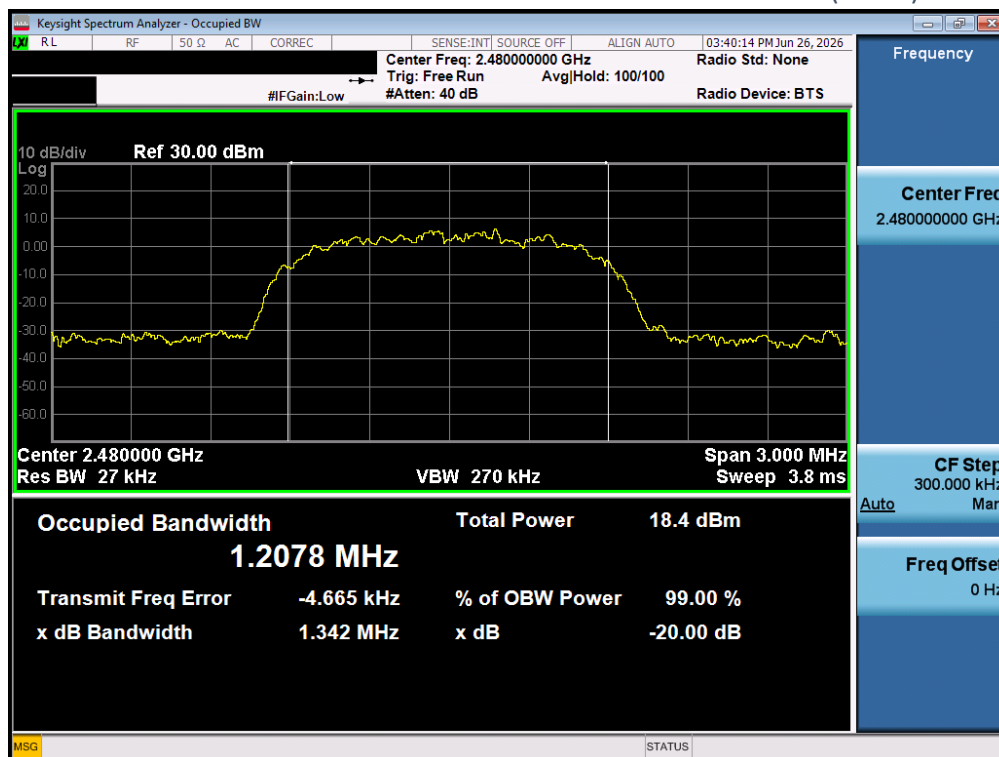
Plot 4-23 3DH5 CH.38 MIMO 20dB Bandwidth & OBW – (ANT2)



Plot 4-24 3DH5 CH.78 MIMO 20dB Bandwidth & OBW – (ANT1)



Plot 4-25 3DH5 CH.78 MIMO 20dB Bandwidth & OBW – (ANT2)



4.7. Carrier Frequency Separation

4.7.1. Regulatory Limit

§ Part. 15.247(a)

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

§RSS-247 - Section 6.2

FHS operating in the band 2400-2483.5 MHz may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

4.7.2. Test Method

ANSI C63.10 – 2020, clause 7.8.2

4.7.3. Test Procedure

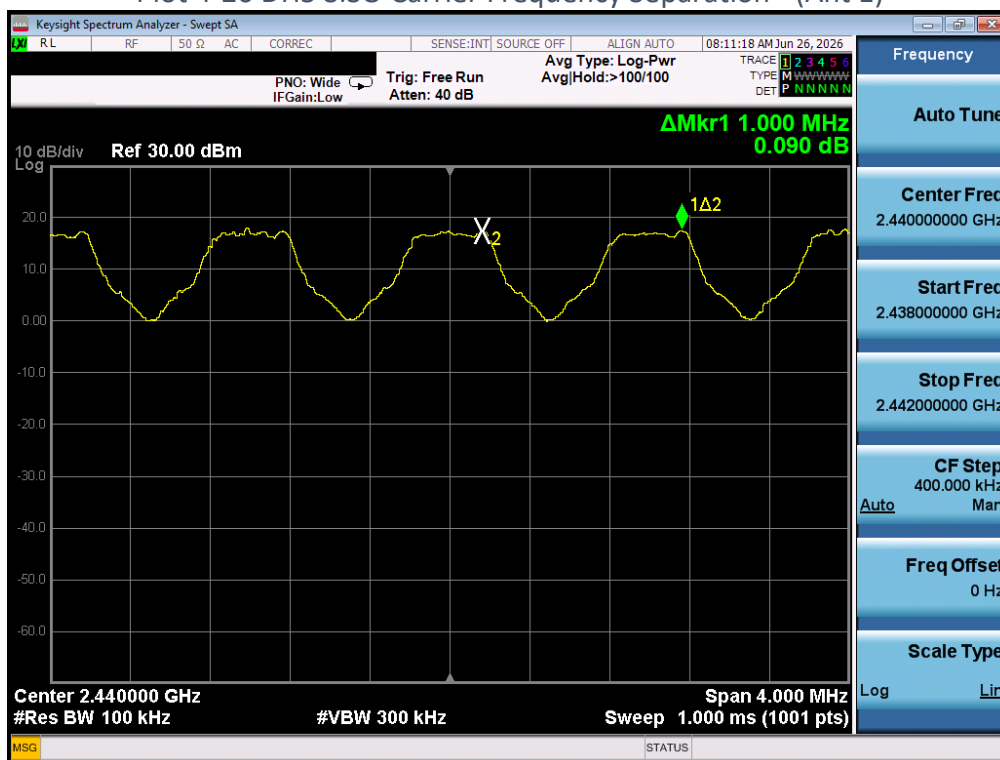
The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

- a) Span: Wide enough to capture the peaks of two adjacent channels.
- b) RBW: Start with the RBW set to approximately 30 % of the channel spacing;
adjust as necessary to best identify the center of each individual channel.
- c) VBW ≥ RBW
- d) Sweep Time = Auto (Coupled) or sufficient to investigate
- e) Detector = Peak
- f) Trace Mode : Max-Hold
- g) Allow the trace to stabilize.

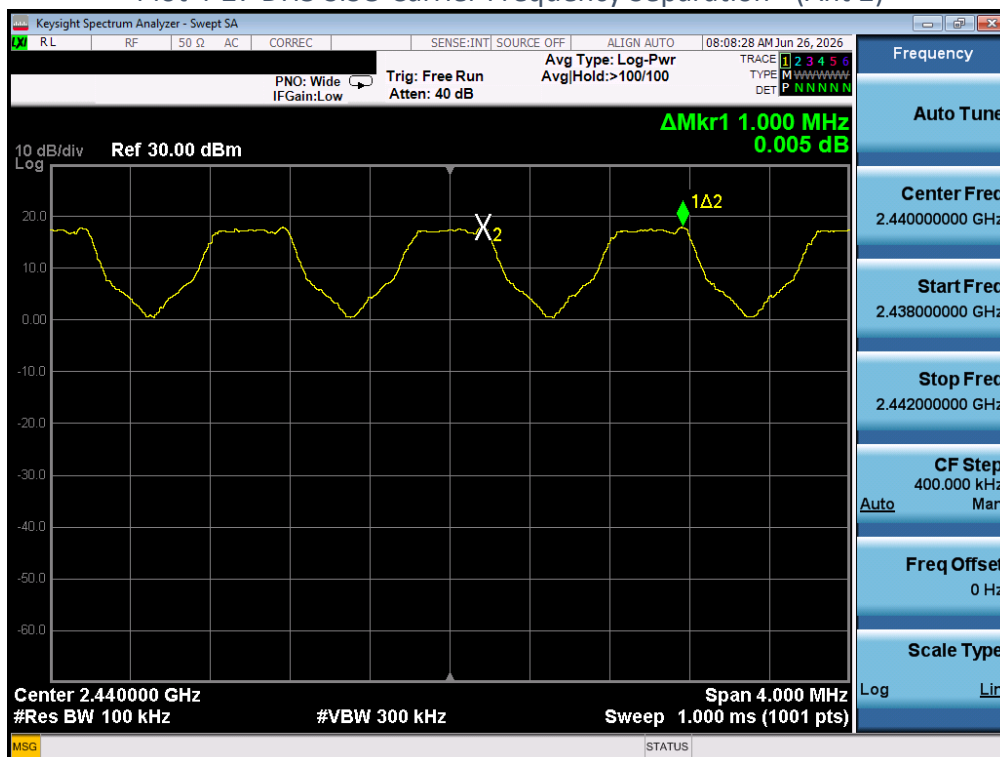
4.7.4. Test Results

Mode	freq. [MHz]	SISO [MHz]		MIMO [MHz]	
		Ant1	Ant2	Ant1	Ant2
DH5	Hopping	1.000	1.000	0.996	1.000
2DH5	Hopping	1.000	1.000	1.000	1.000
3DH5	Hopping	1.004	1.004	1.000	1.000

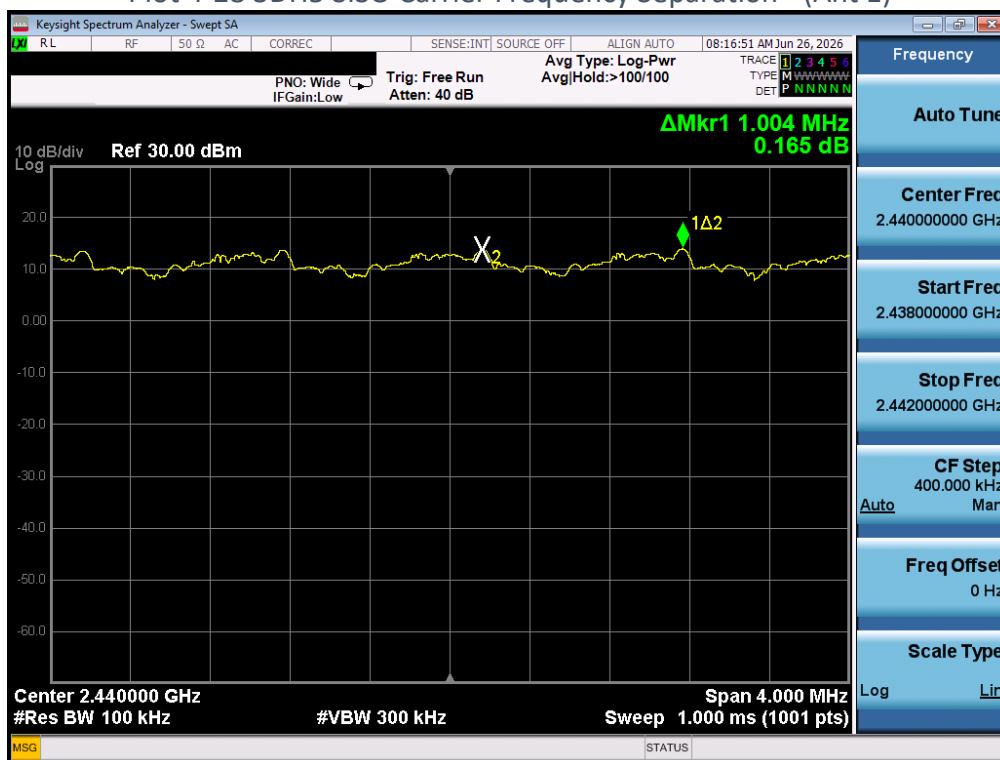
Plot 4-26 DH5 SISO Carrier Frequency Separation - (Ant 1)



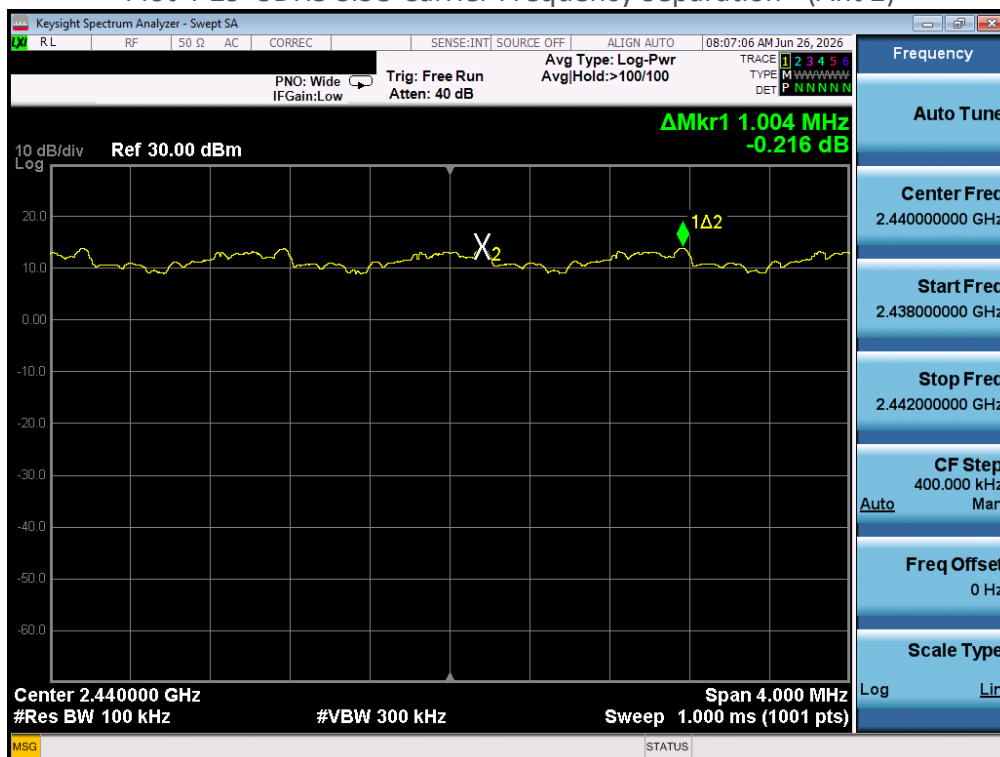
Plot 4-27 DH5 SISO Carrier Frequency Separation - (Ant 2)

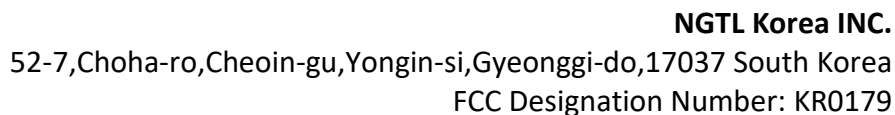


Plot 4-28 3DH5 SISO Carrier Frequency Separation - (Ant 1)



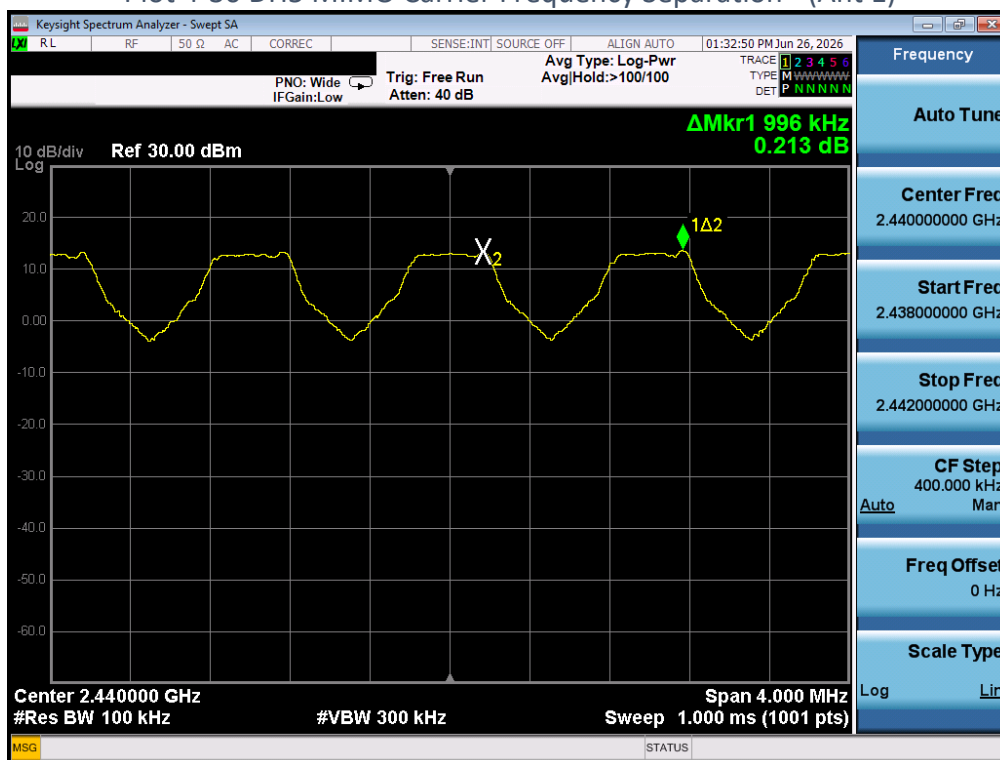
Plot 4-29 3DH5 SISO Carrier Frequency Separation - (Ant 2)



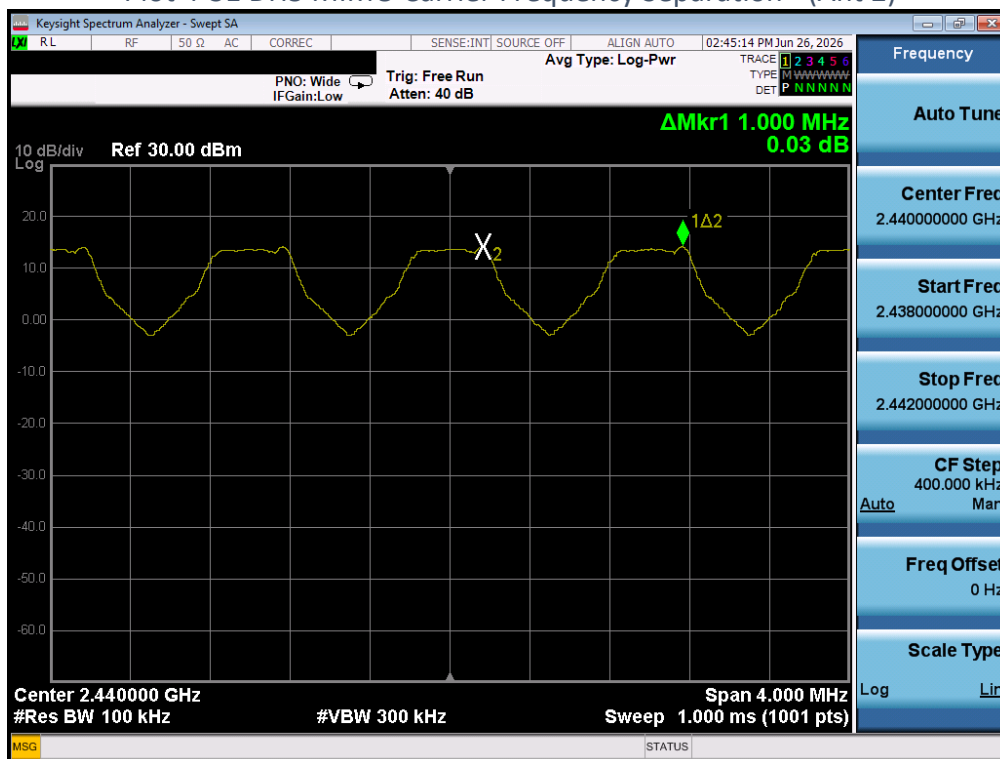


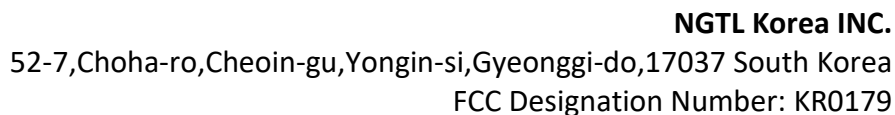
+82 031 334 2510; info.kr@ngtl.com

Plot 4-30 DH5 MIMO Carrier Frequency Separation - (Ant 1)

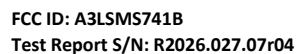


Plot 4-31 DH5 MIMO Carrier Frequency Separation - (Ant 2)





Plot 4-32 3DH5 MIMO Carrier Frequency Separation - (Ant 1)



4.8. Number of hopping frequencies

4.8.1. Regulatory Limit

Part. 15.247(a)

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

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FHS operating in the band 2400-2483.5 MHz shall use at least 15 hopping channels. The average time of occupancy on any channel shall not be greater than 0.4 s within a period of 0.4 s, multiplied by the number of hopping channels employed. Transmissions on particular hopping frequencies may be avoided or suppressed provided that at least 15 hopping channels are used.

4.8.2. Test Method

ANSI C63.10 – 2020, clause 7.8.3

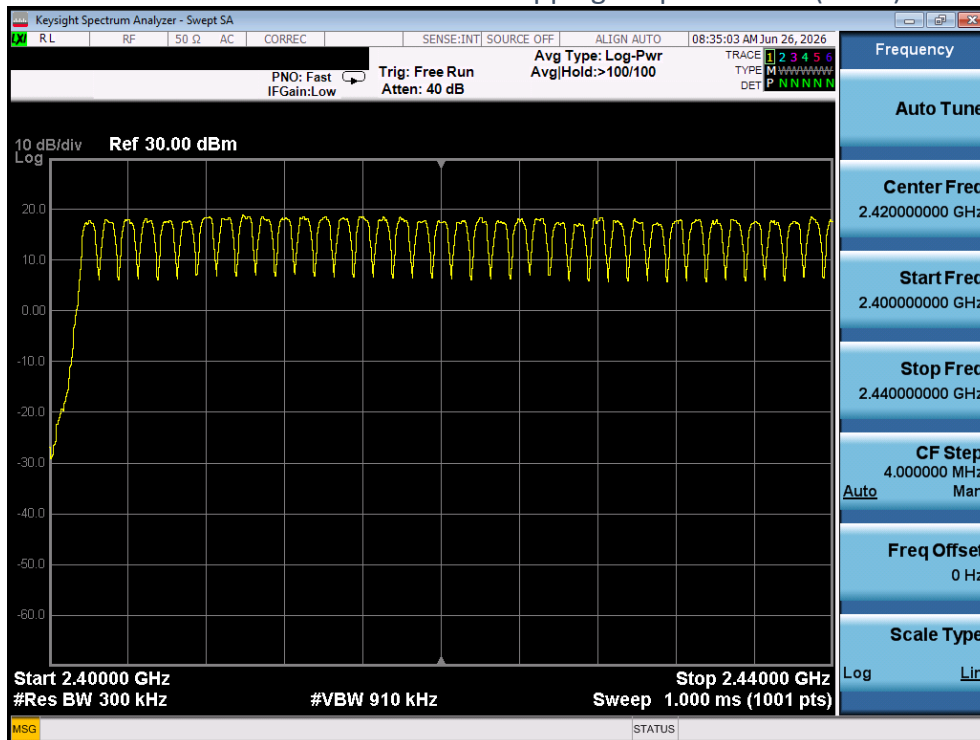
4.8.3. Test Procedure

The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

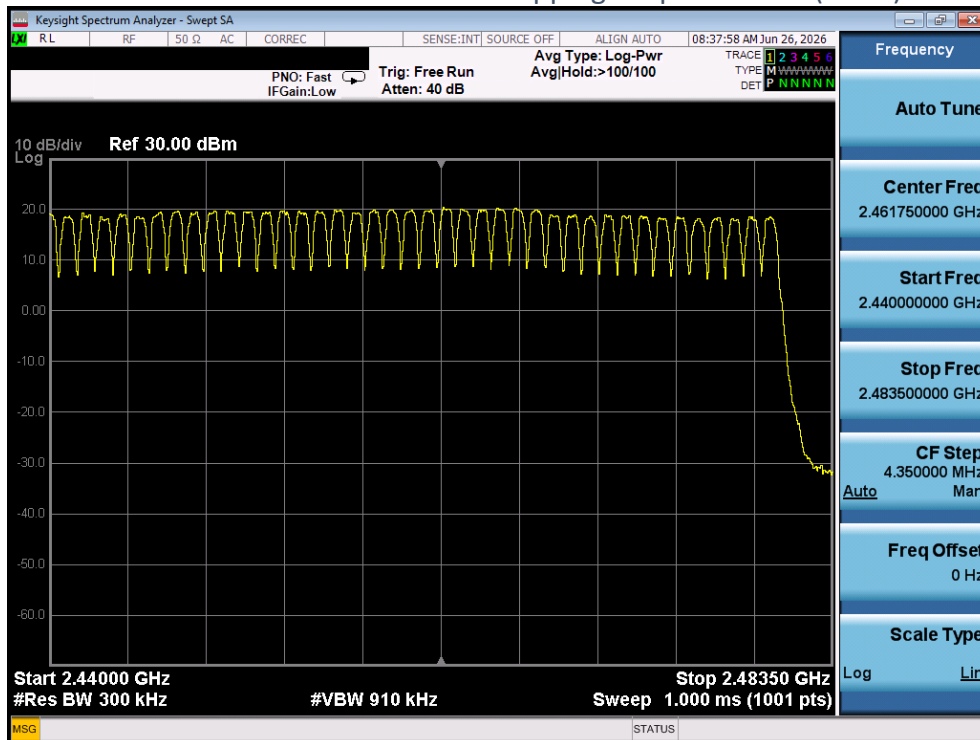
- a) Span = The frequency band of operation. Depending on the number of channels the device supports, it could be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
- b) RBW = To clearly identify the individual channels, set the RBW to less than 30 % of the channel spacing or the 20 dB bandwidth, whichever is smaller.
- c) VBW $\geq$ RBW
- d) Sweep Time = Auto (Coupled) or sufficient to investigate
- e) Detector = Peak
- f) Trace Mode = Max-Hold
- g) Allow the trace to stabilize.

4.8.4. Test Results

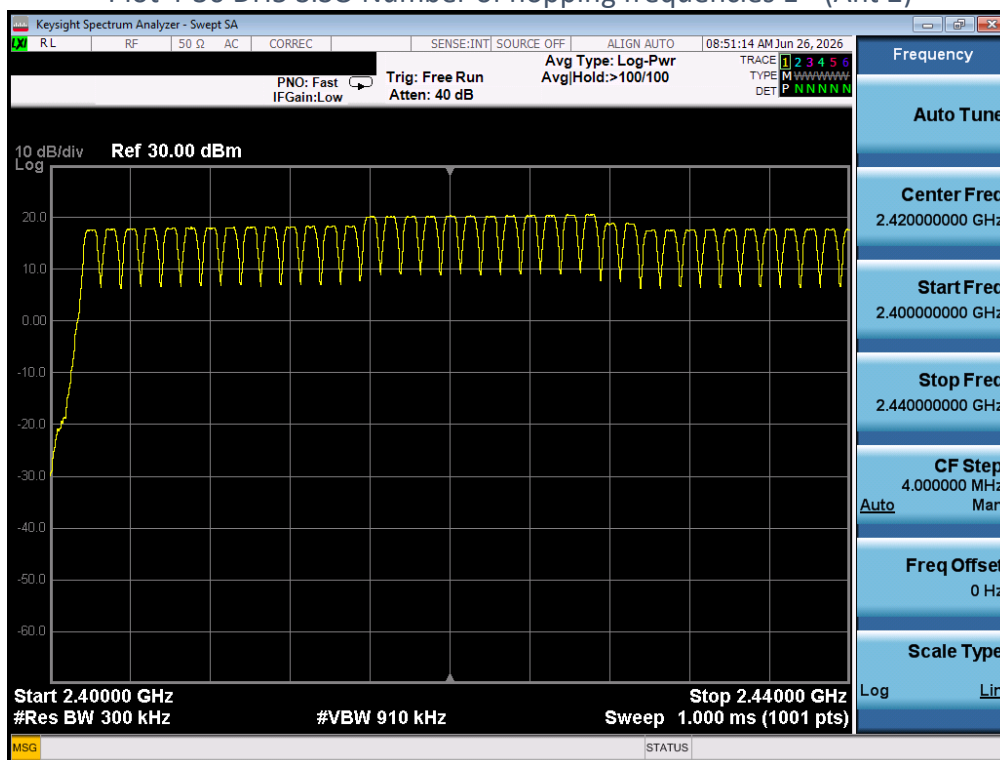
Plot 4-34 DH5 SISO Number of hopping frequencies 1 - (Ant 1)



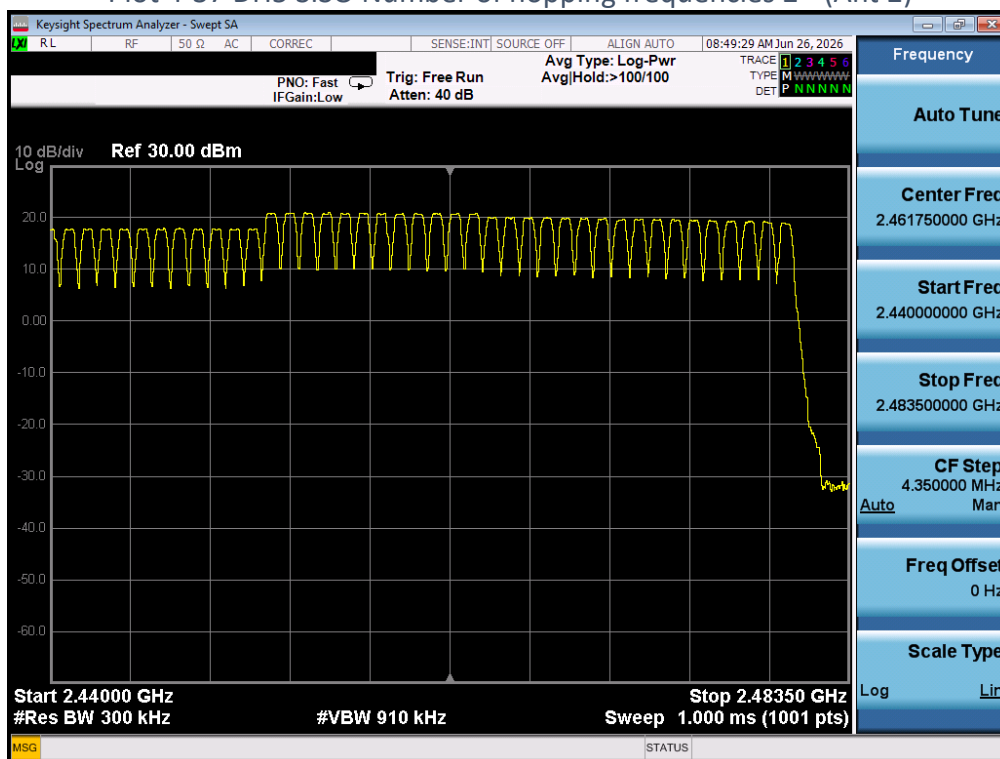
Plot 4-35 DH5 SISO Number of hopping frequencies 2 - (Ant 1)



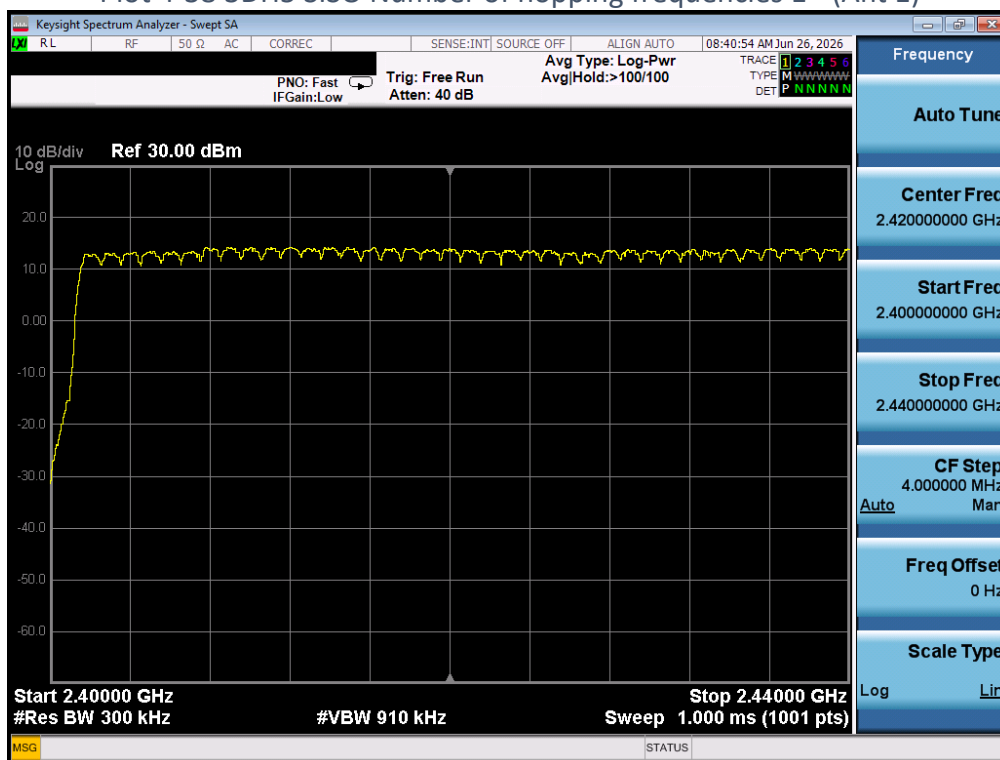
Plot 4-36 DH5 SISO Number of hopping frequencies 1 - (Ant 2)



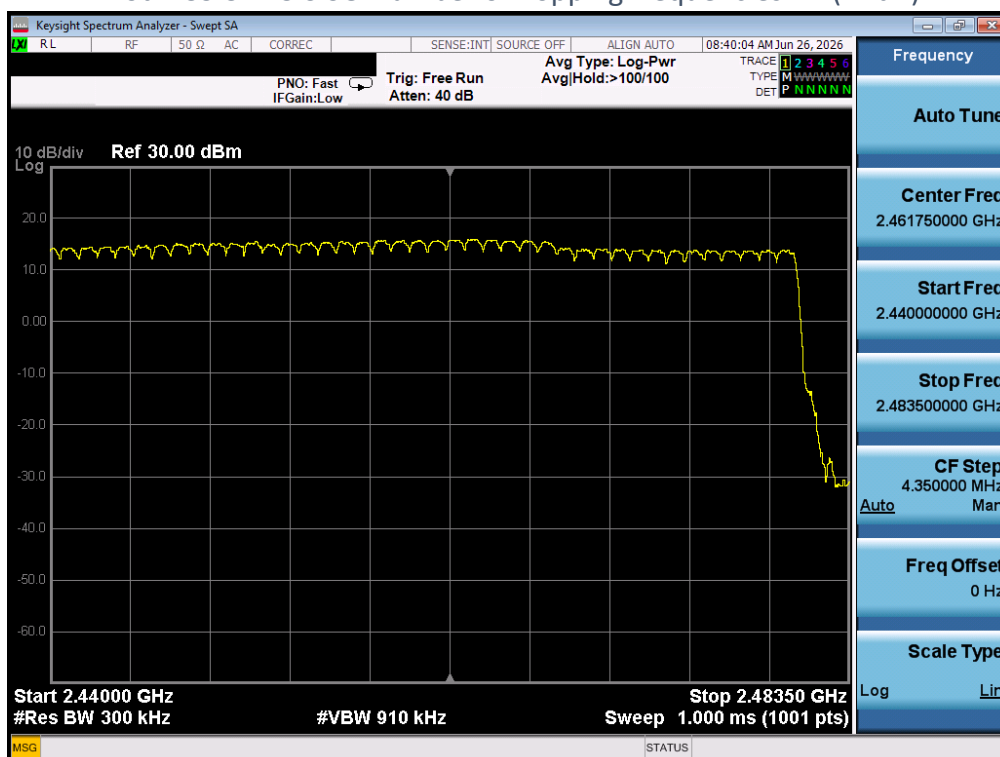
Plot 4-37 DH5 SISO Number of hopping frequencies 2 - (Ant 2)



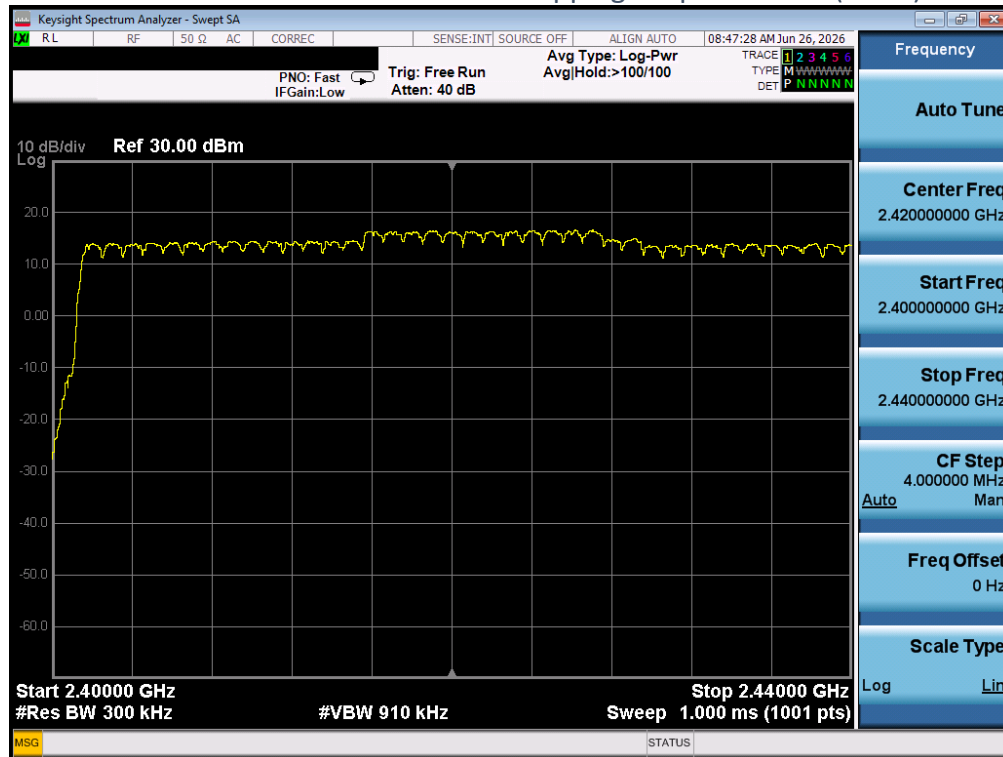
Plot 4-38 3DH5 SISO Number of hopping frequencies 1 - (Ant 1)



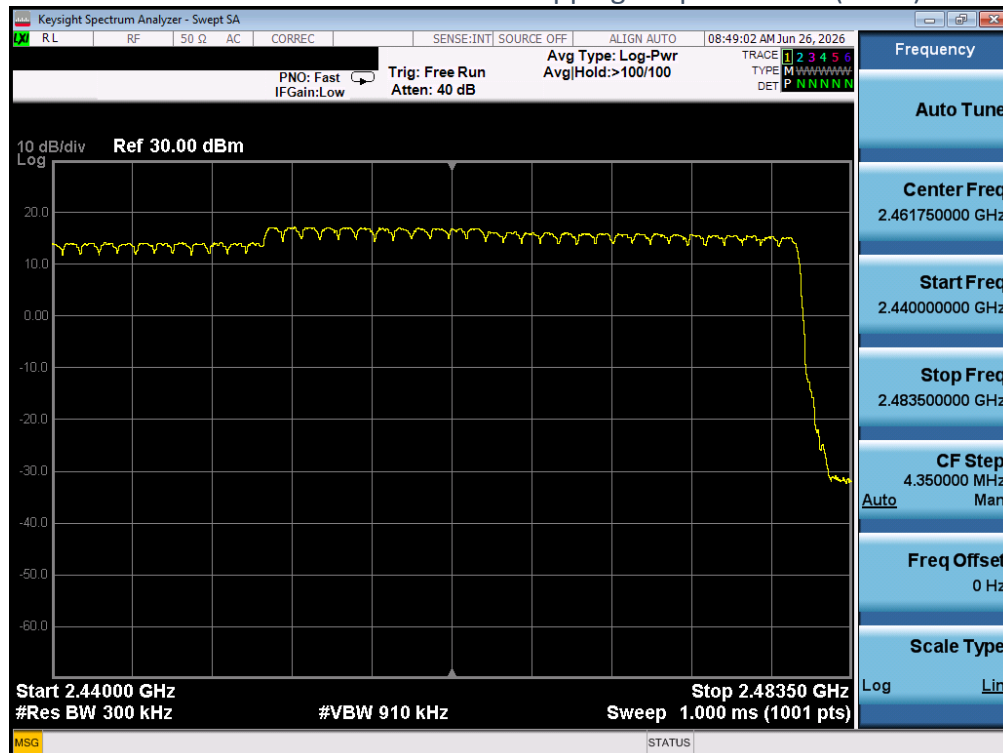
Plot 4-39 3DH5 SISO Number of hopping frequencies 2 - (Ant 1)



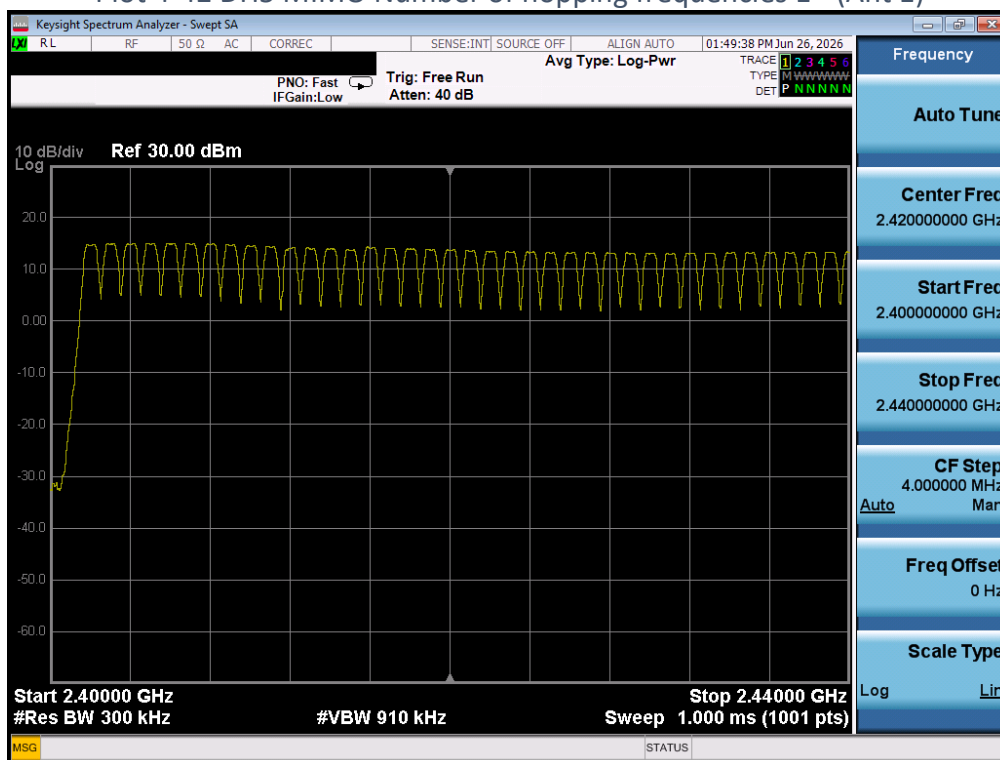
Plot 4-40 3DH5 SISO Number of hopping frequencies 1 - (Ant 2)



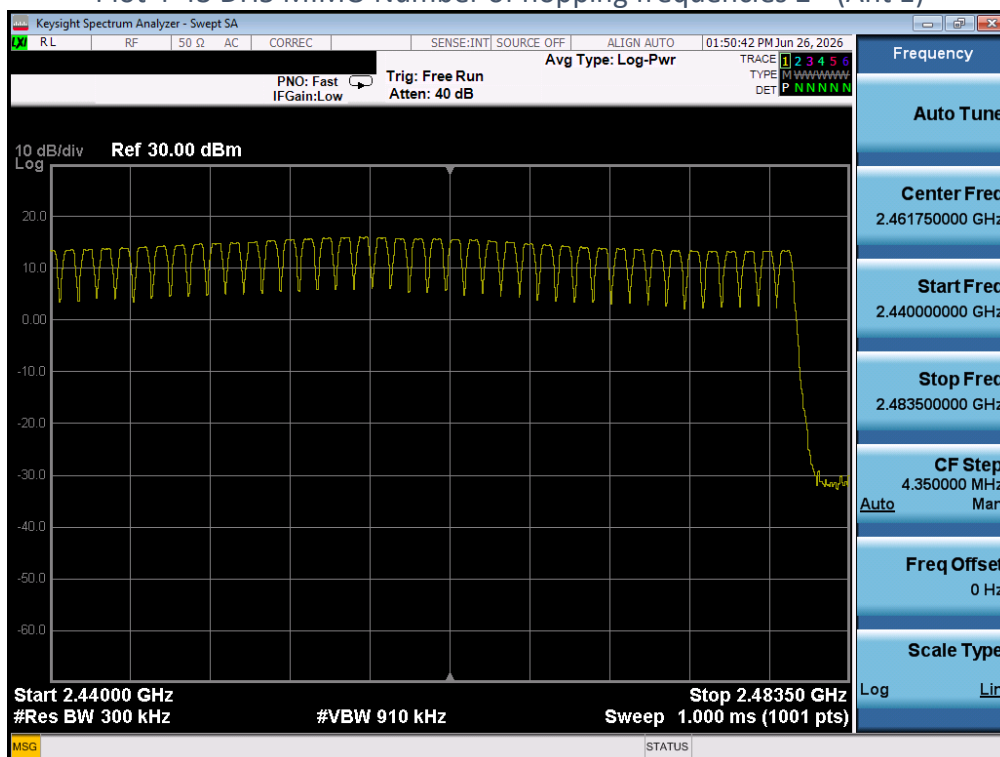
Plot 4-41 3DH5 SISO Number of hopping frequencies 2 - (Ant 2)



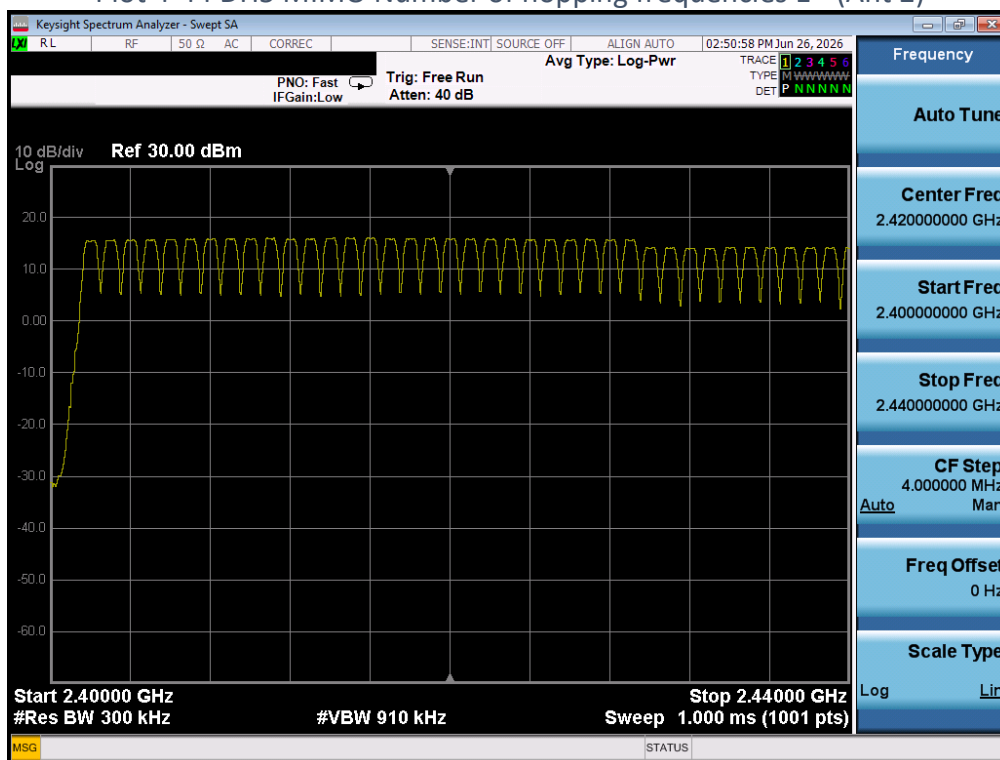
Plot 4-42 DH5 MIMO Number of hopping frequencies 1 - (Ant 1)



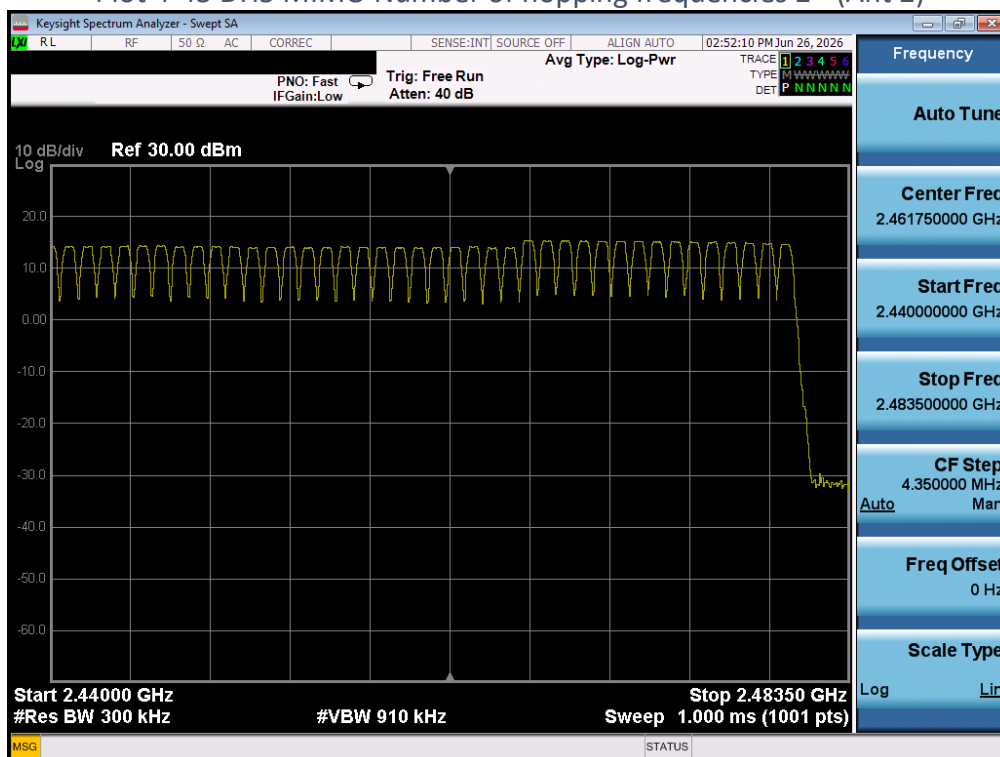
Plot 4-43 DH5 MIMO Number of hopping frequencies 2 - (Ant 1)



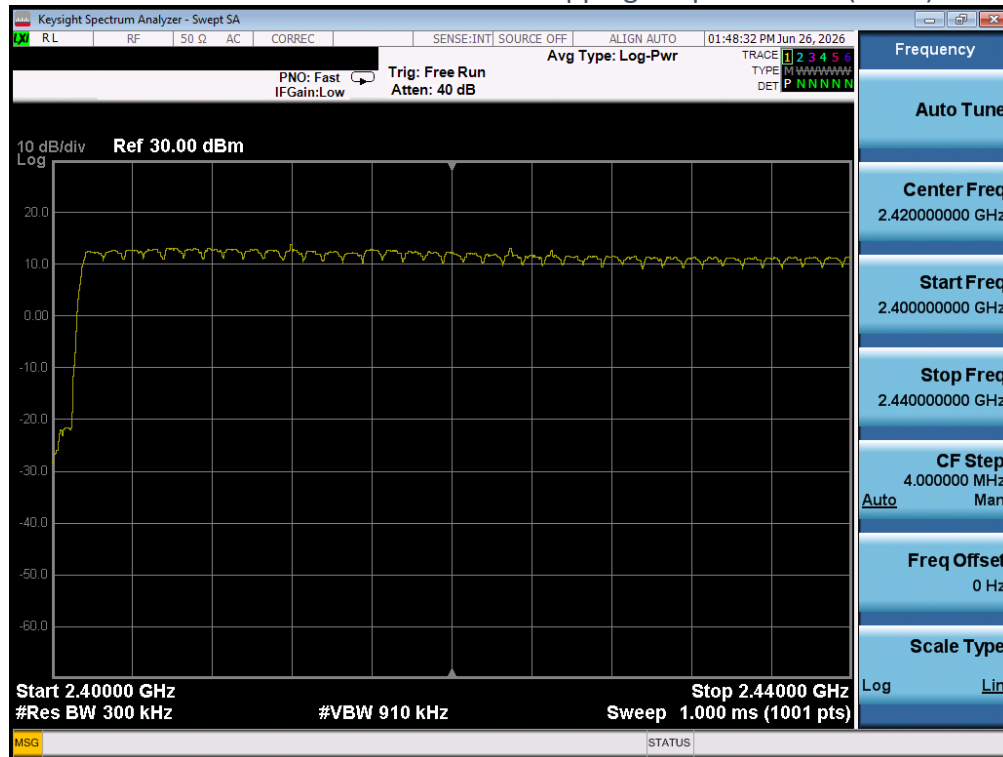
Plot 4-44 DH5 MIMO Number of hopping frequencies 1 - (Ant 2)



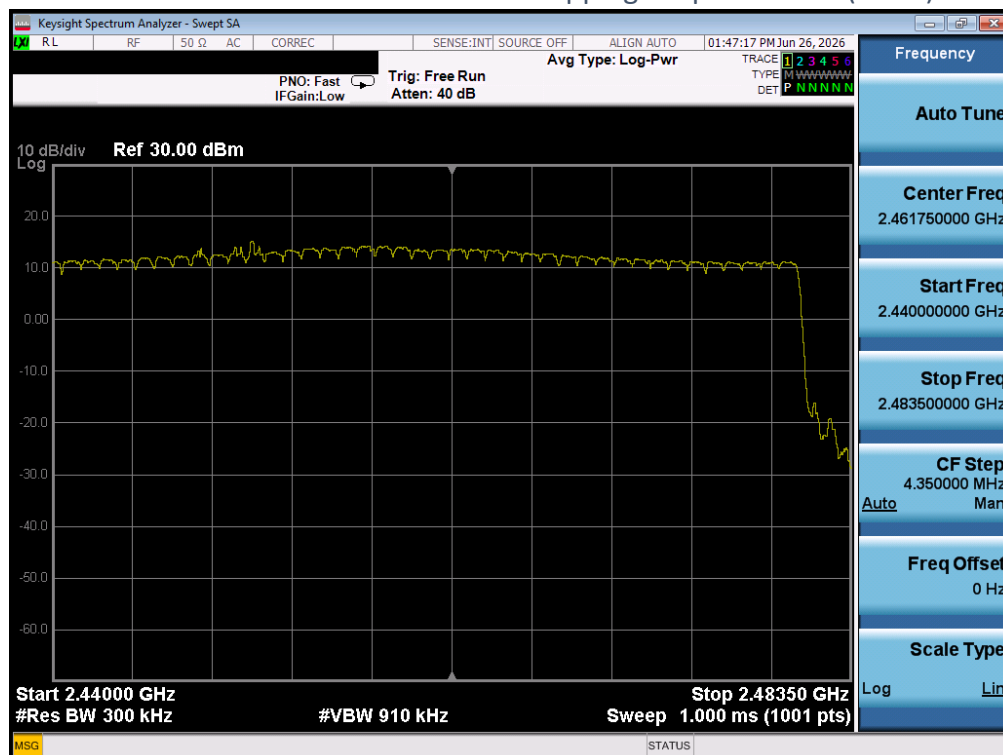
Plot 4-45 DH5 MIMO Number of hopping frequencies 2 - (Ant 2)



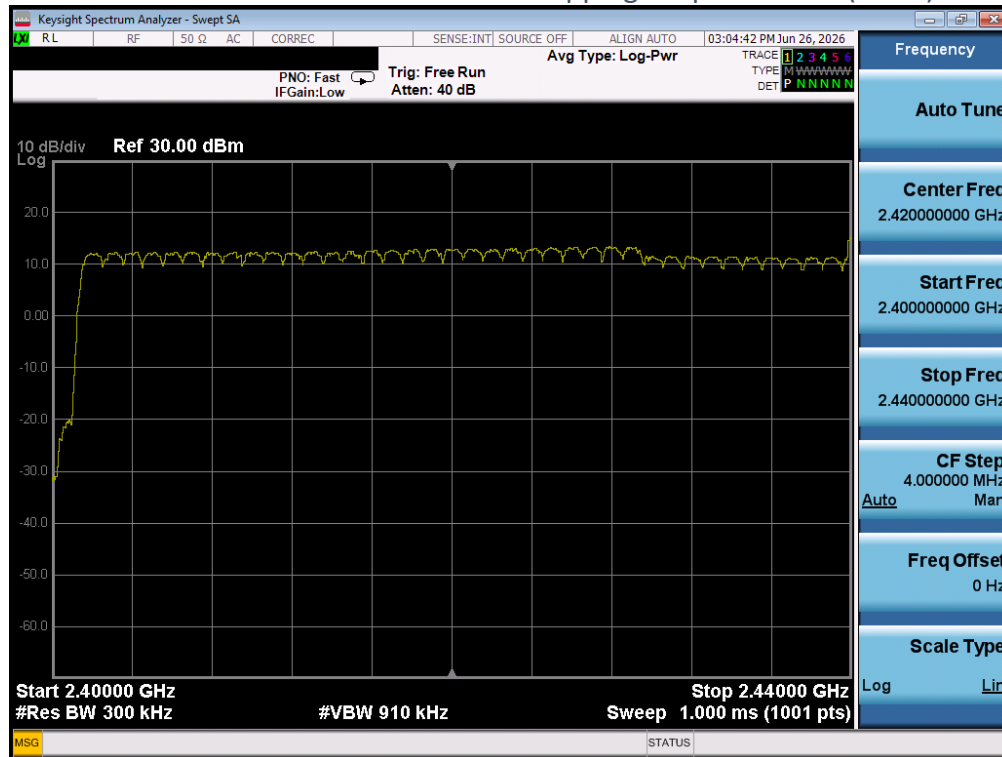
Plot 4-46 3DH5 MIMO Number of hopping frequencies 1 - (Ant 1)



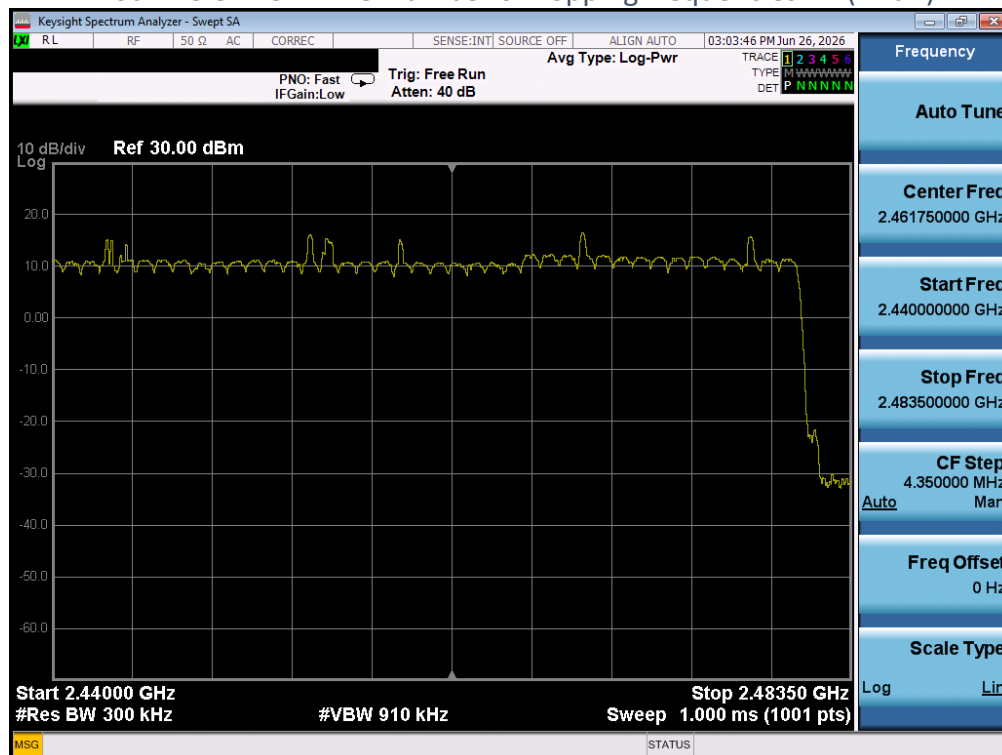
Plot 4-47 3DH5 MIMO Number of hopping frequencies 2 - (Ant 1)



Plot 4-48 3DH5 MIMO Number of hopping frequencies 1 - (Ant 2)



Plot 4-49 3DH5 MIMO Number of hopping frequencies 2 - (Ant 2)



4.9. Conducted Spurious Emissions

4.9.1. Regulatory Limit

Part. 15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or 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, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

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In any 100 kHz bandwidth outside the frequency band in which the spread spectrum device, digitally modulated device, or hybrid system is operating, the RF power that is produced 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 – based on either an RF conducted or a radiated measurement – provided that the transmitter demonstrates compliance with the peak conducted power limits.

4.9.2. Test Method

ANSI C63.10 – 2020, clause 7.8.7

4.9.3. Test Procedure

Band Edge Measurement.

- a) Set the start and stop frequencies such that the band edge is placed in the center of the plot.
- b) Set the span large enough to capture all out-of-band emissions near the band edge.
- c) RBW = 100 kHz
- d) VBW $\geq$ [3 x RBW]
- e) Detector = Peak
- f) Sweep Point = [Number of sweep points $\geq$ 2 x SPAN/RBW]
- g) Trace Mode = Max-Hold
- h) Use the peak marker to locate the highest out-of-band emission, then use the delta marker function to measure the emission level relative to the fundamental.

Spurious Emissions Measurement.

Establish a reference level by using the following procedure:

- a) Set the instrument center frequency to the channel center frequency.
- b) Span $\geq$ [1.5 times the 20 dB bandwidth]
- c) RBW = 100 kHz
- d) VBW $\geq$ [3 $\times$ RBW]
- e) Detector = Peak
- f) Sweep Time = Auto (Coupled) or sufficient to investigate
- g) Trace mode = Max-Hold
- h) Allow trace to fully stabilize

Establish an emission level by using the following procedure:

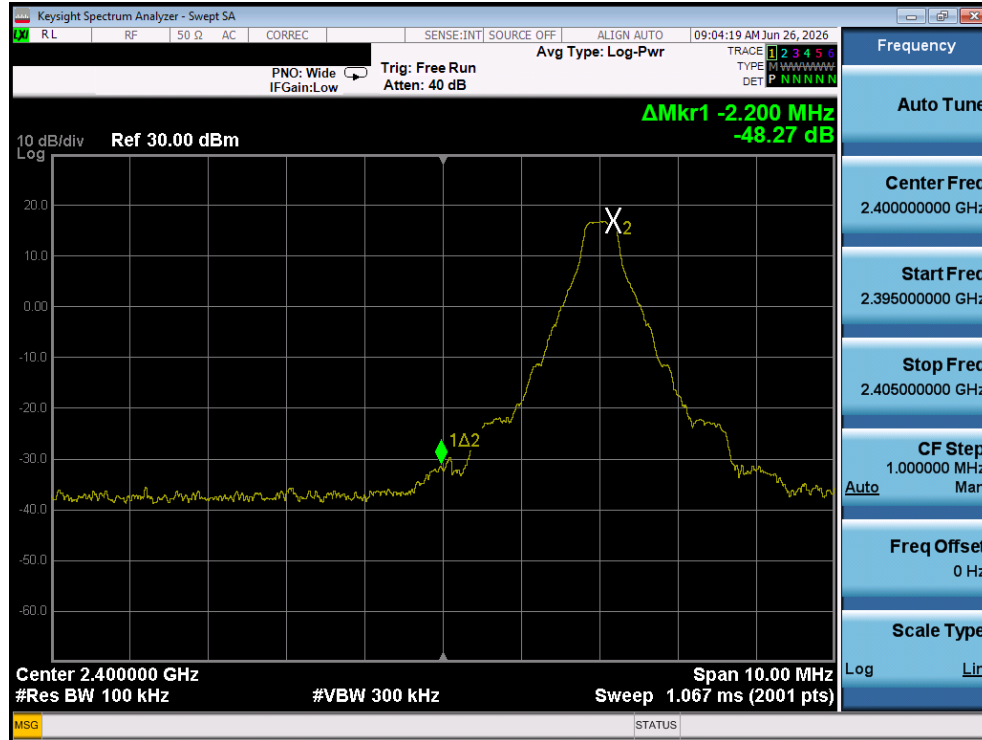
- a) Set the center frequency and span to encompass frequency range to be measured. Note that the frequency range might need to be divided into multiple frequency ranges to retain frequency resolution.
- b) RBW = 1 MHz
- c) VBW $\geq$ [3 $\times$ RBW]
- d) Detector = Peak
- e) Sweep time = Auto (Coupled) or sufficient to investigate
- f) Trace mode = Max-Hold
- g) Allow trace to fully stabilize.
- h) Use the peak marker function to determine the maximum amplitude level.

Test Note

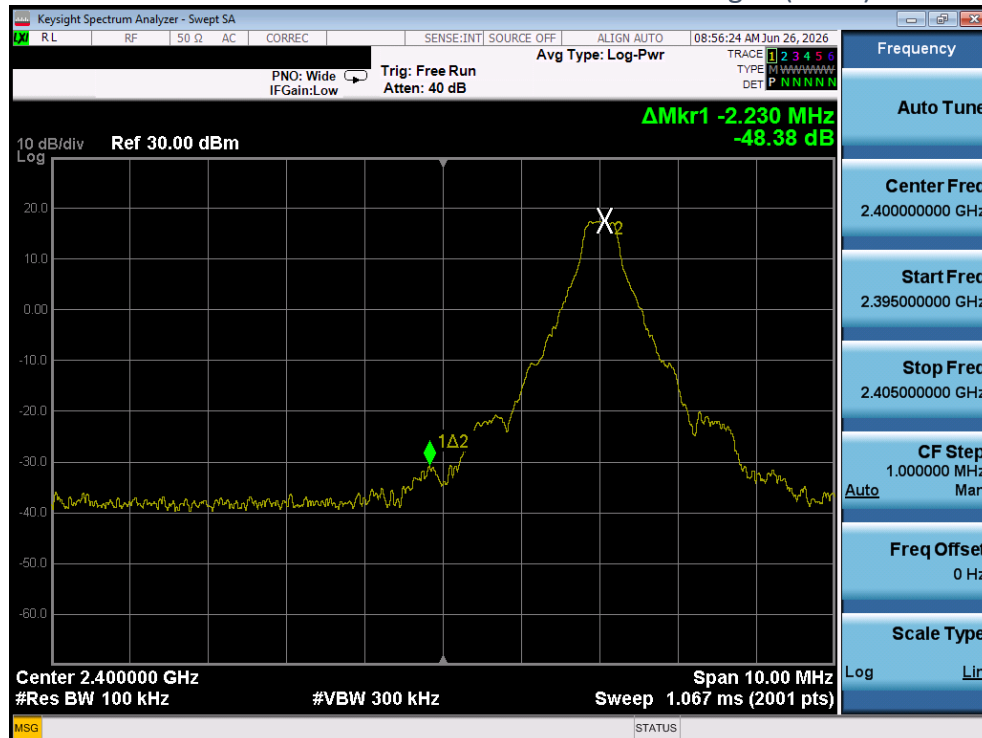
- ✓ The number of points can also be increased for large spans to retain frequency resolution.
- ✓ Out-of-band conducted spurious emissions were investigated for all data rates.
However, the traces in the following plots were measured with a 1 MHz RBW to reduce test time, so the display line may not necessarily appear to be 20 dB below the level of the fundamental in a 1 MHz bandwidth.
- ✓ If there is no compliance margin or a non-conformity occurs, reduce the RBW to 100 kHz and repeat the measurement.

4.9.4. Test Results

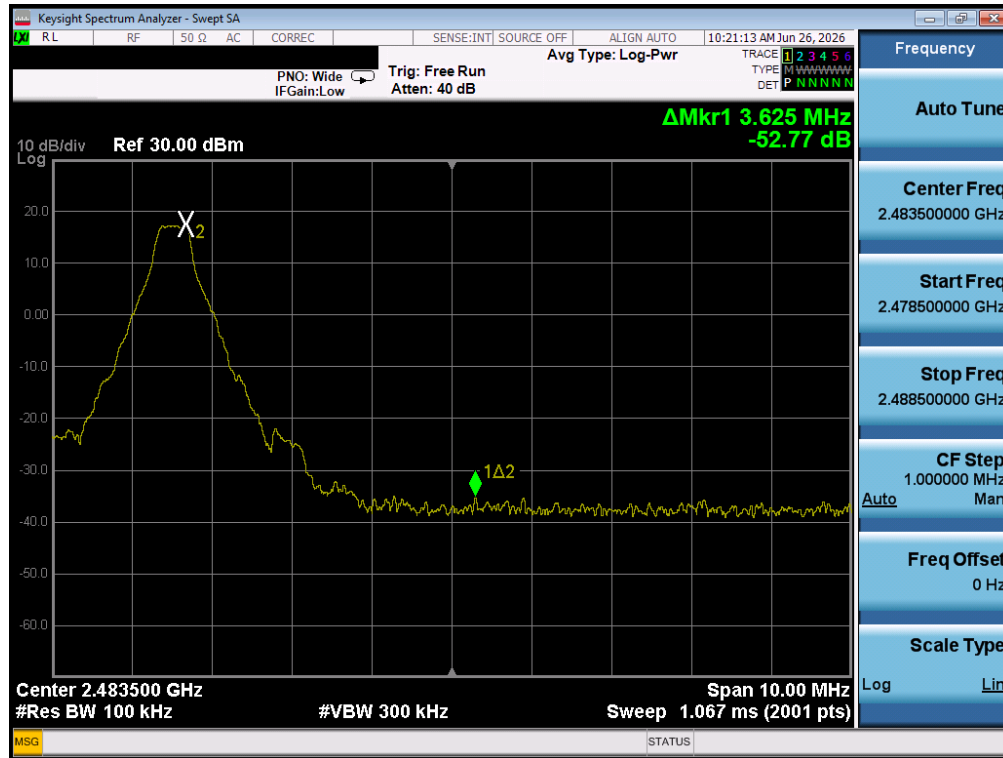
Plot 4-50 DH5 SISO Conducted Lower Band edge - (Ant 1)



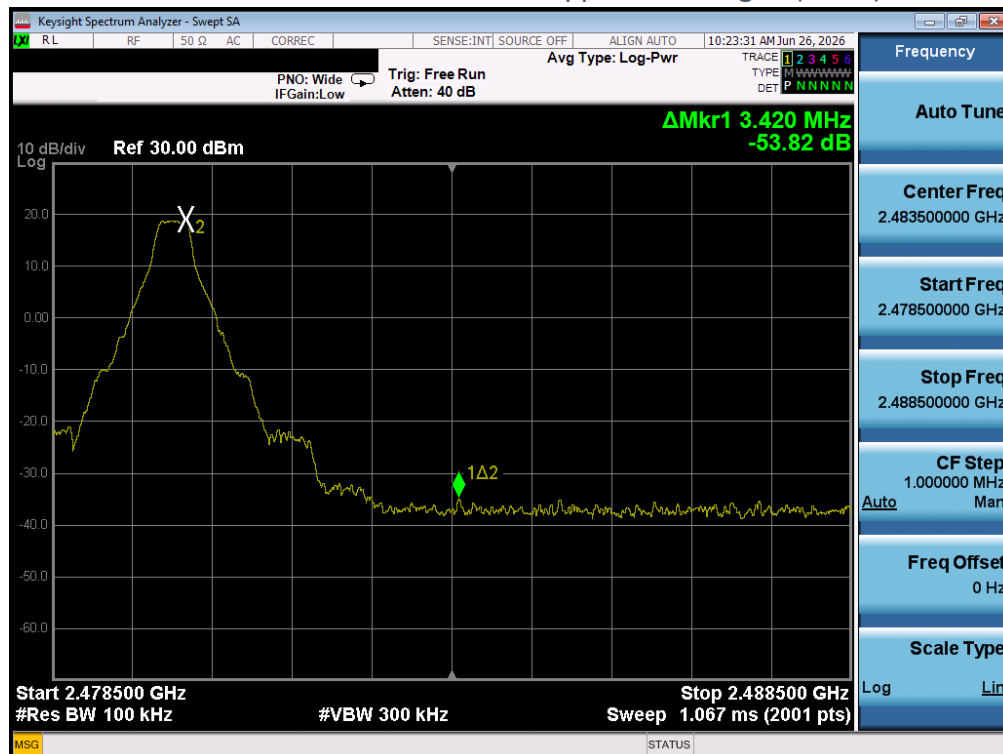
Plot 4-51 DH5 SISO Conducted Lower Band edge - (Ant 2)



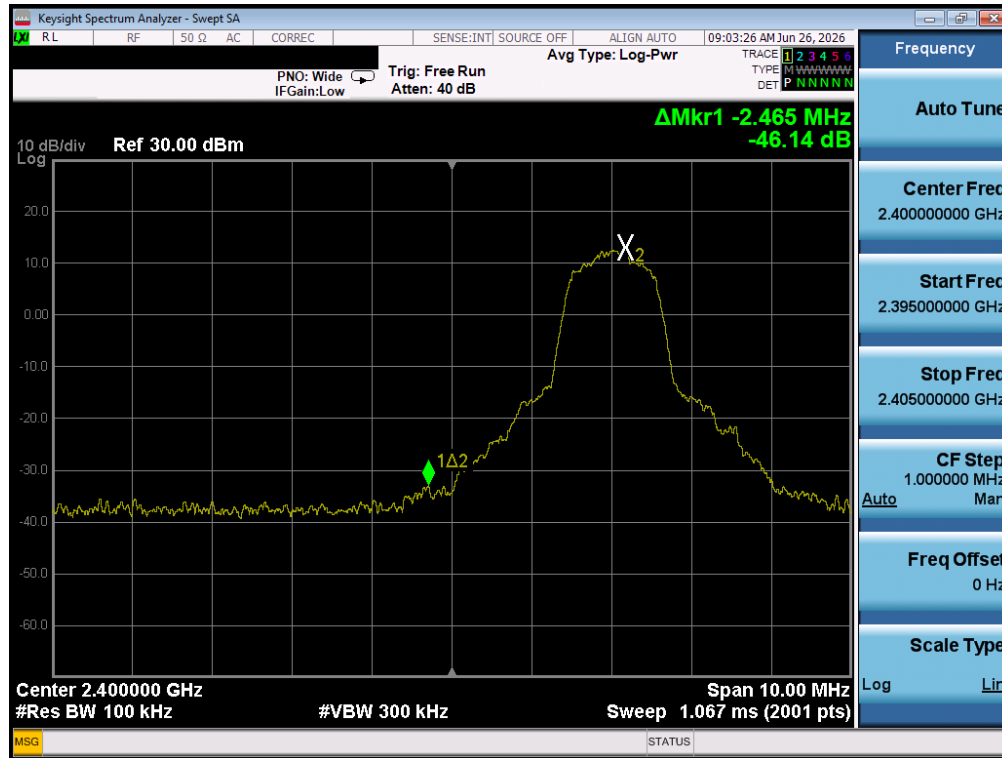
Plot 4-52 DH5 SISO Conducted Upper Band edge - (Ant 1)



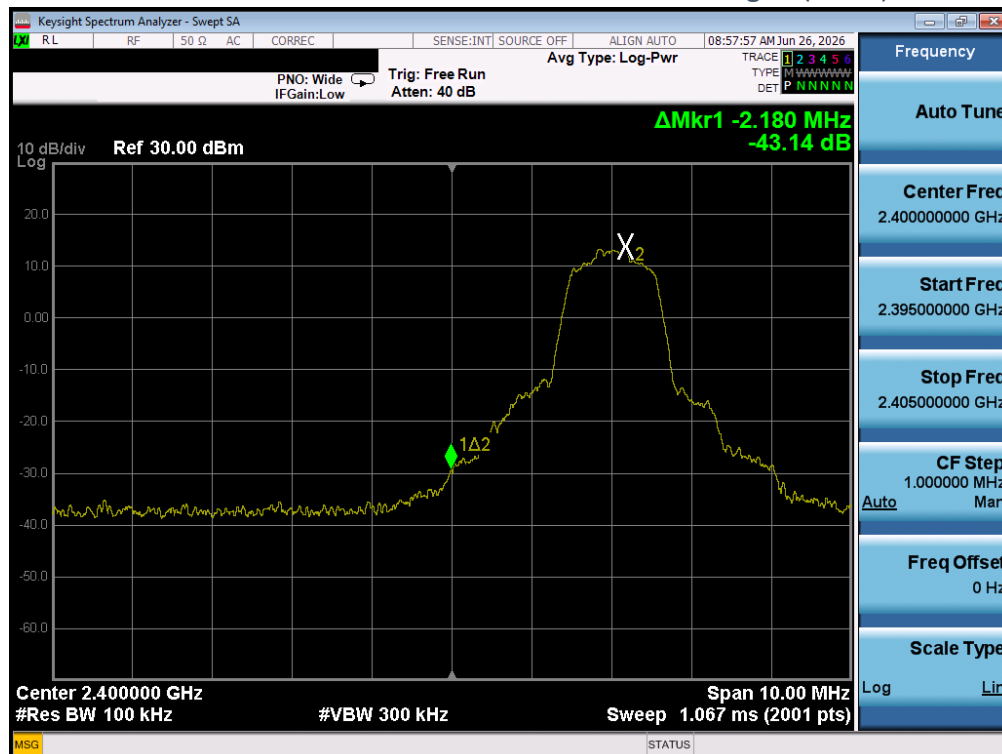
Plot 4-53 DH5 SISO Conducted Upper Band edge - (Ant 2)



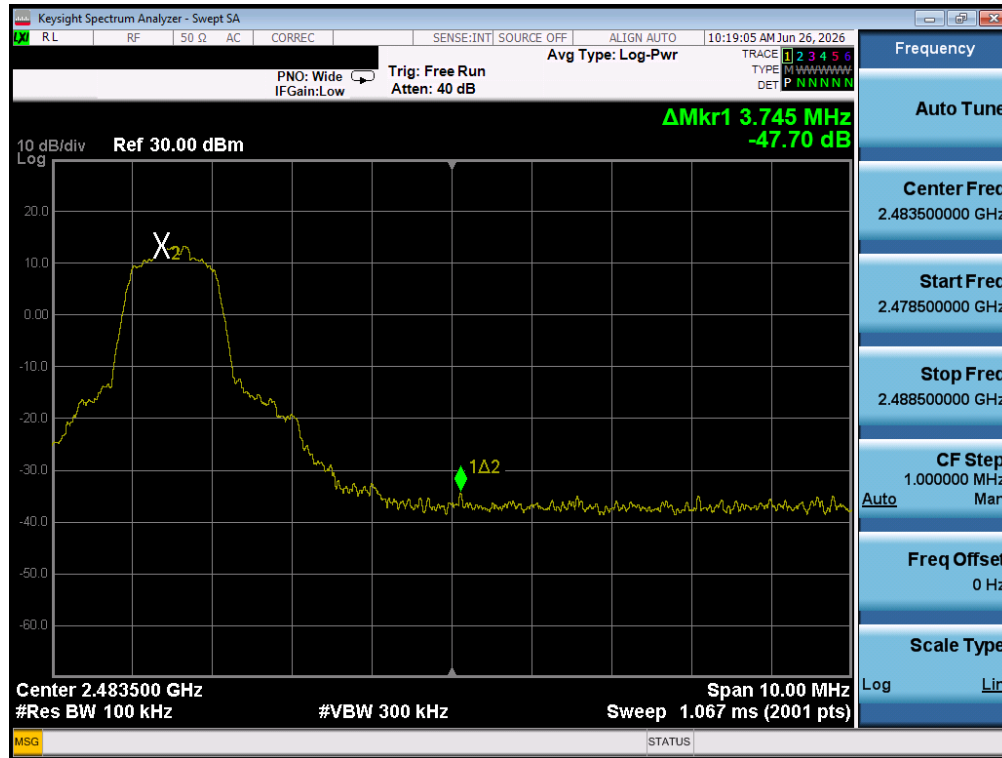
Plot 4-54 2DH5 SISO Conducted Lower Band edge - (Ant 1)



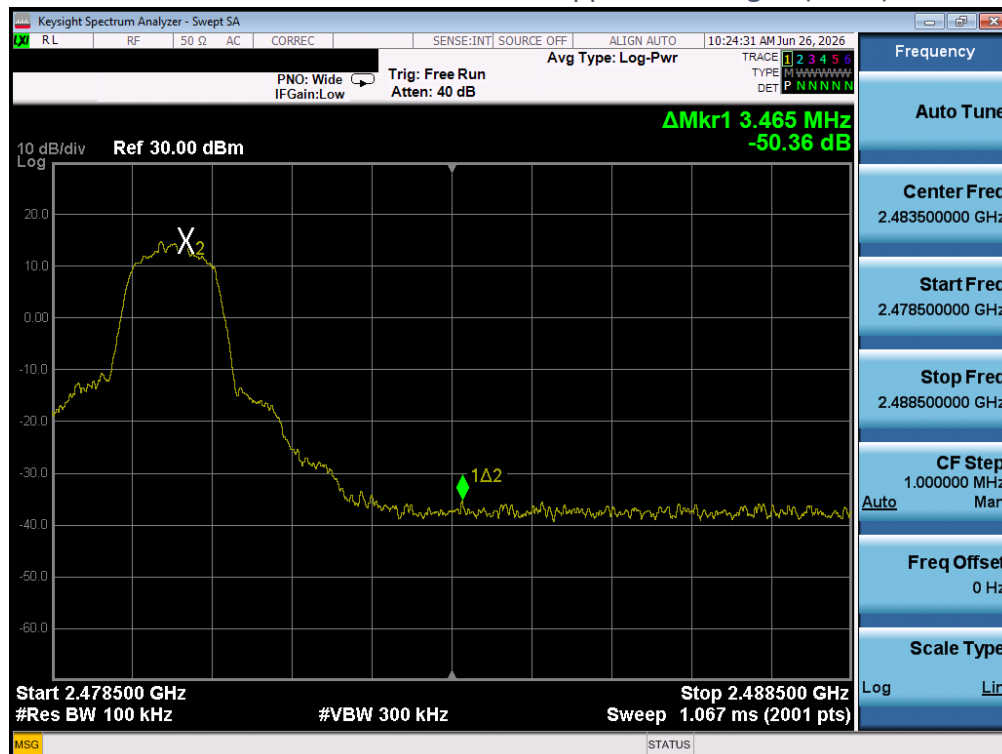
Plot 4-55 2DH5 SISO Conducted Lower Band edge - (Ant 2)



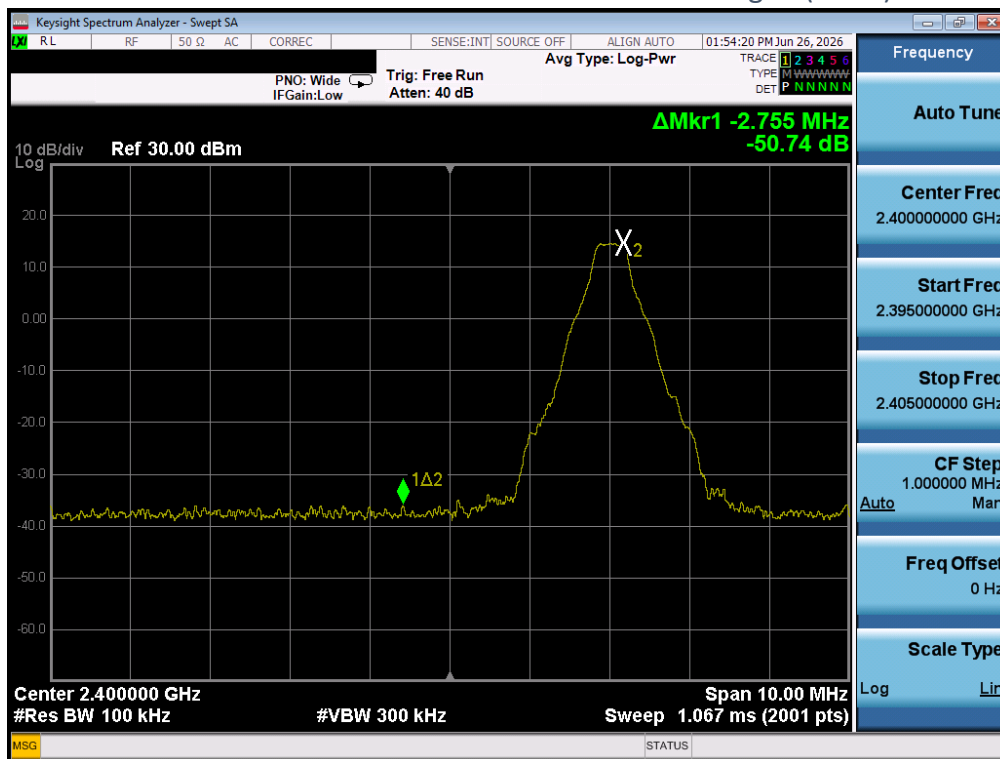
Plot 4-56 2DH5 SISO Conducted Upper Band edge - (Ant 1)



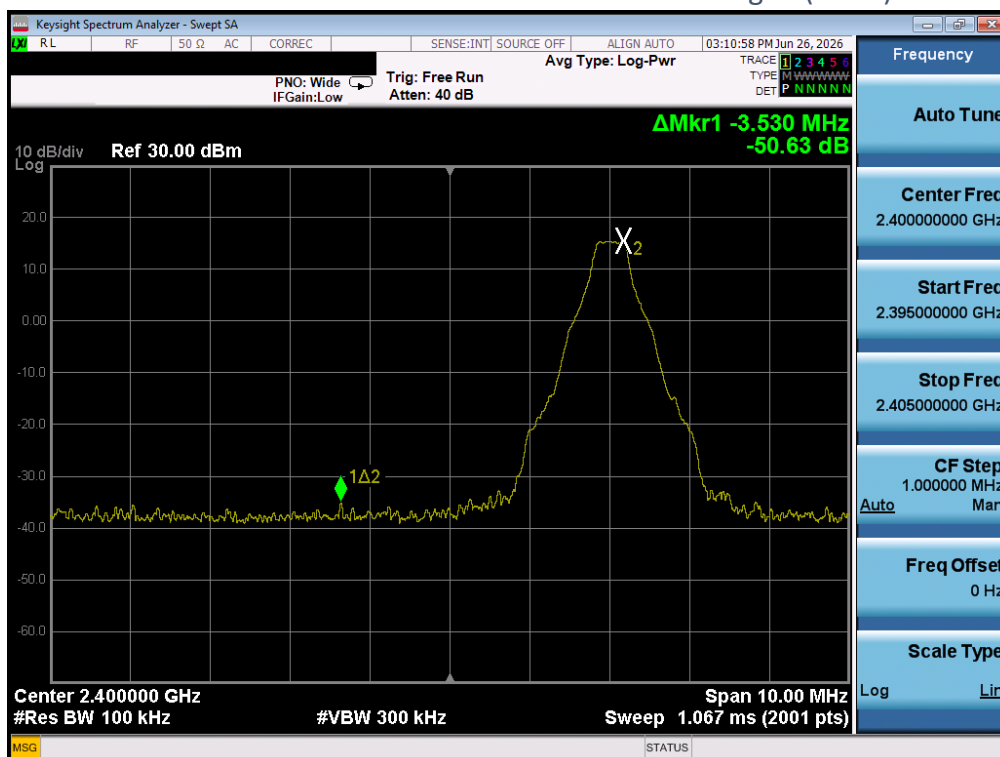
Plot 4-57 2DH5 SISO Conducted Upper Band edge - (Ant 2)



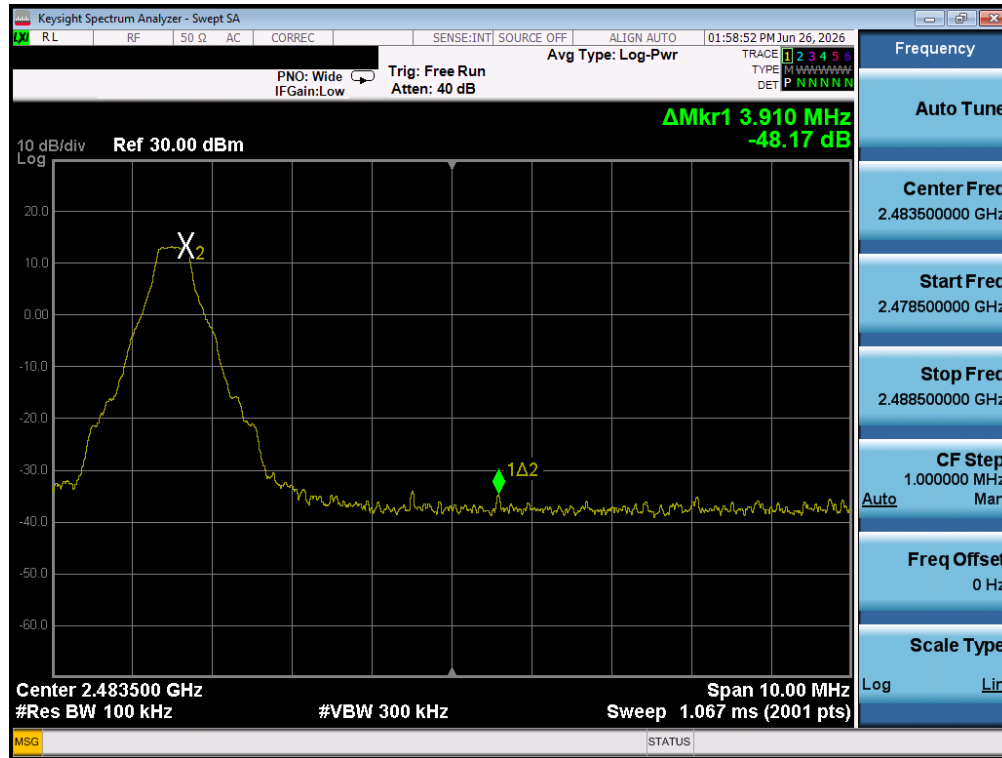
Plot 4-58 DH5 MIMO Conducted Lower Band edge - (Ant 1)



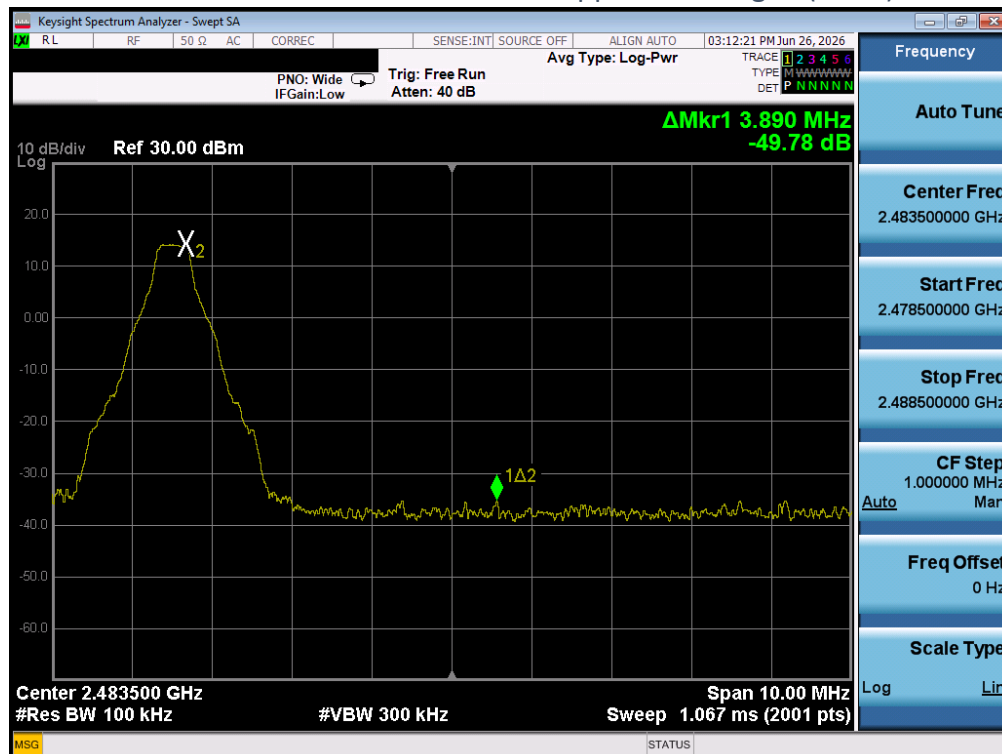
Plot 4-59 DH5 MIMO Conducted Lower Band edge - (Ant 2)



Plot 4-60 DH5 MIMO Conducted Upper Band edge - (Ant 1)



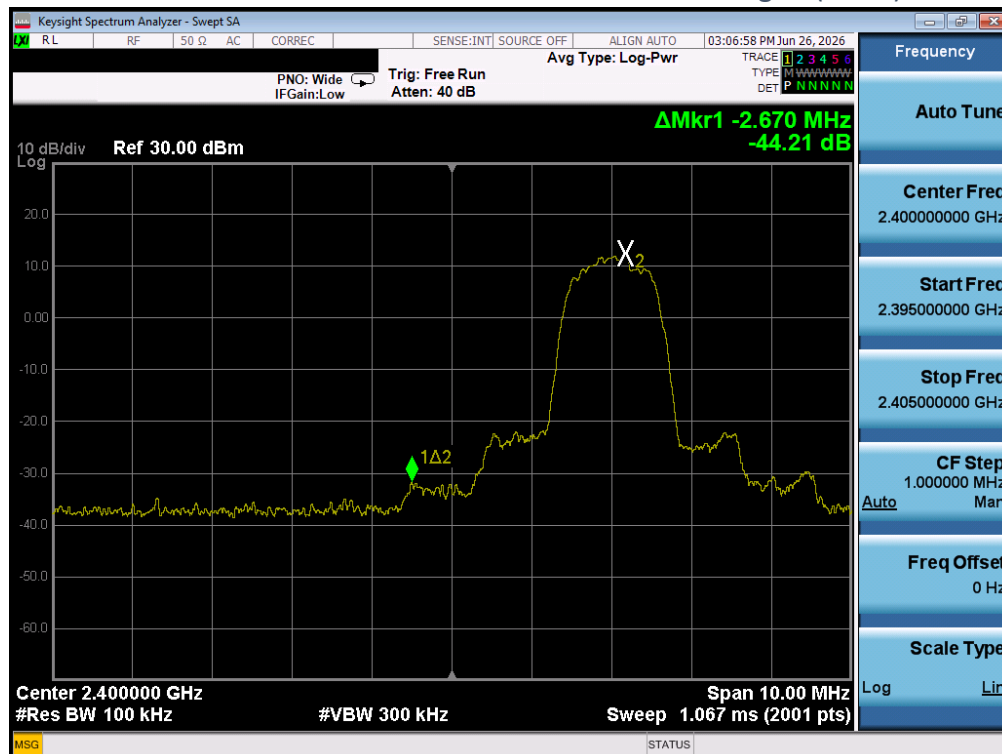
Plot 4-61 DH5 MIMO Conducted Upper Band edge - (Ant 2)



Plot 4-62 3DH5 MIMO Conducted Lower Band edge - (Ant 1)



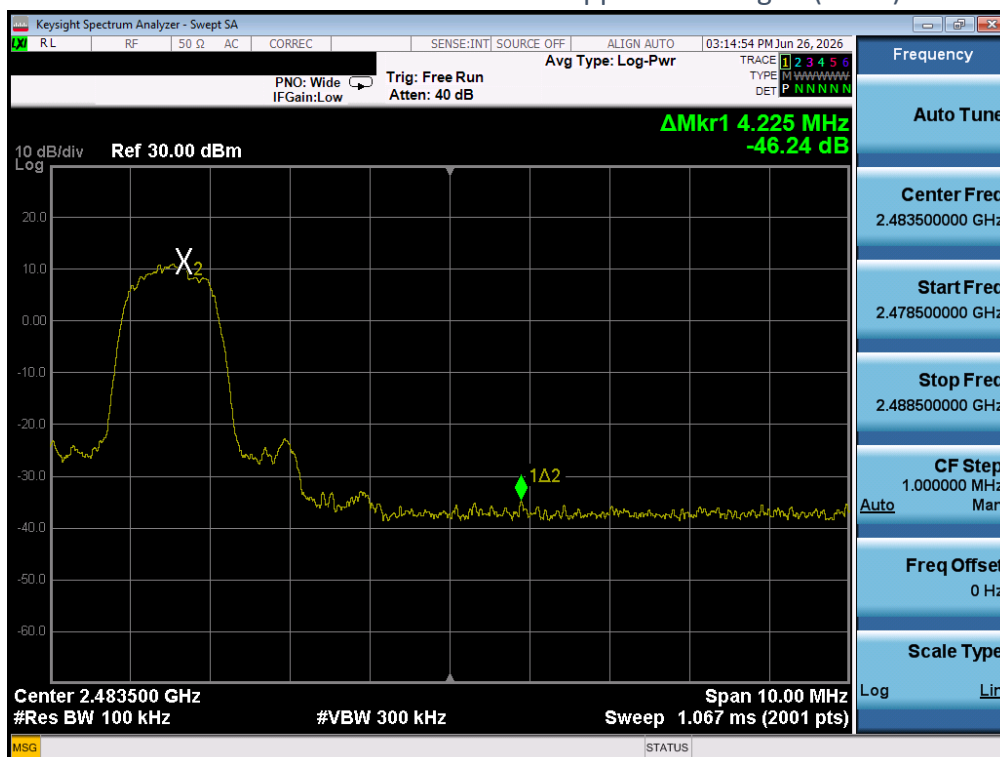
Plot 4-63 3DH5 MIMO Conducted Lower Band edge - (Ant 2)



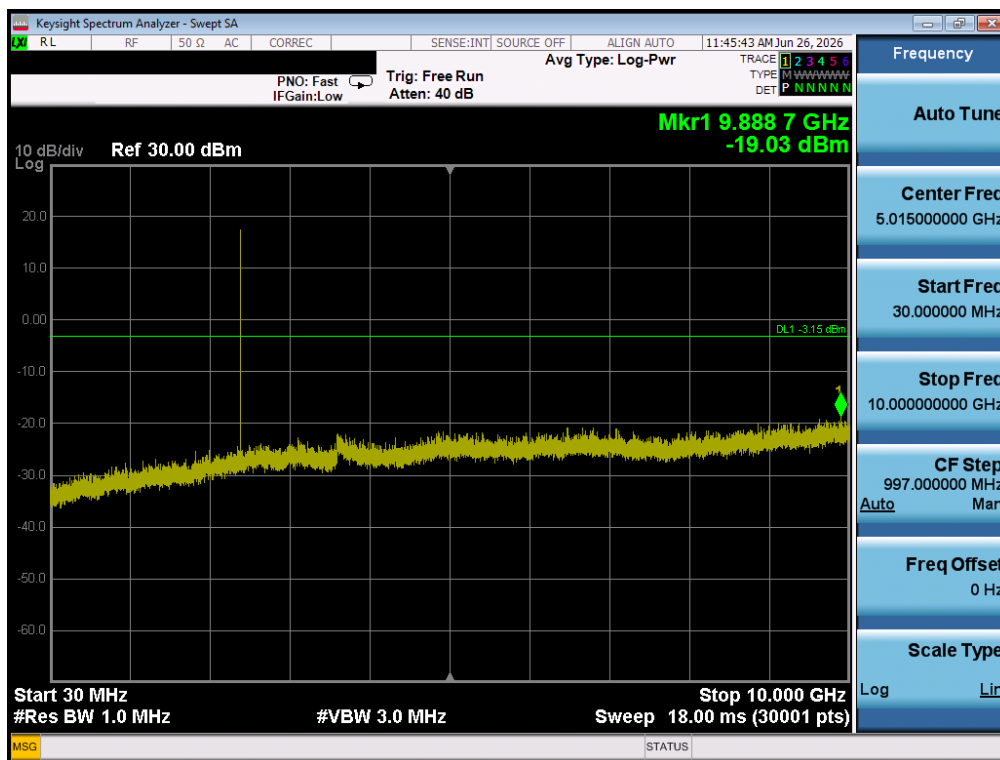
Plot 4-64 3DH5 MIMO Conducted Upper Band edge - (Ant 1)



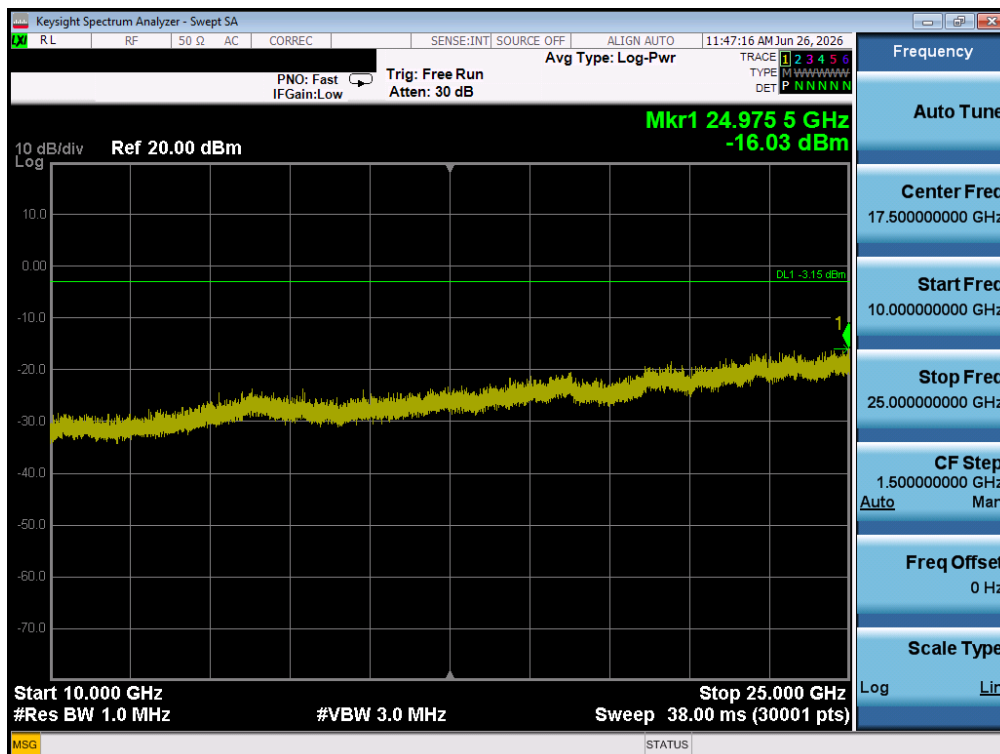
Plot 4-65 3DH5 MIMO Conducted Upper Band edge - (Ant 2)



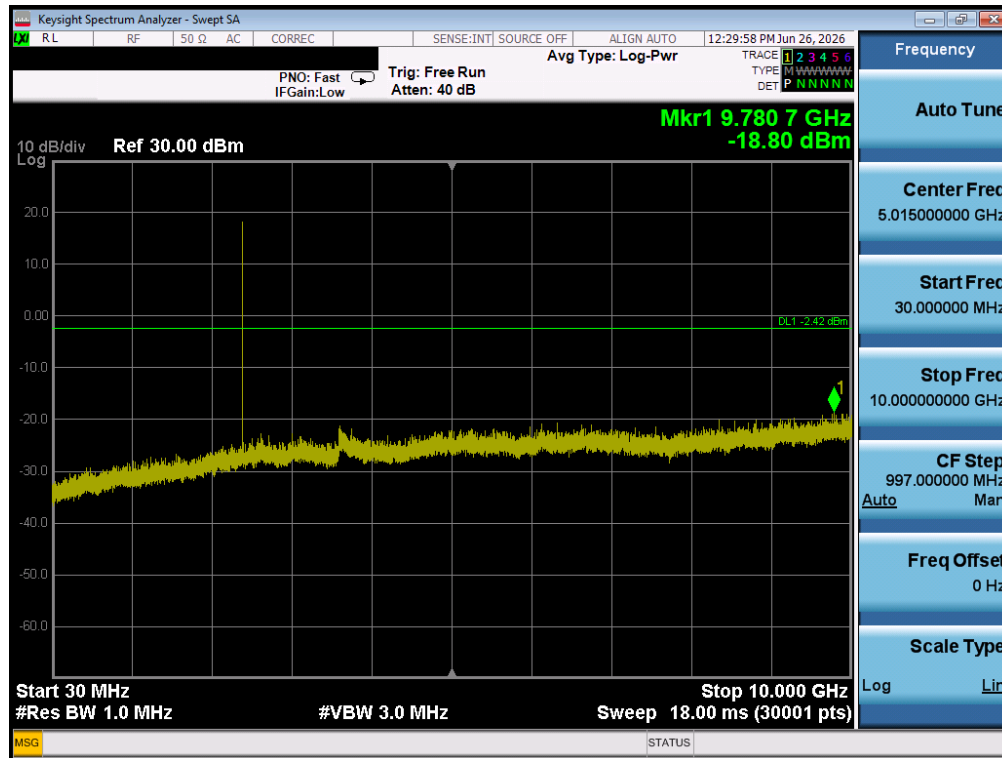
Plot 4-66 DH5 SISO CH.0 Conducted Spurious Emission 0.03 to 10 GHz - (Ant 1)



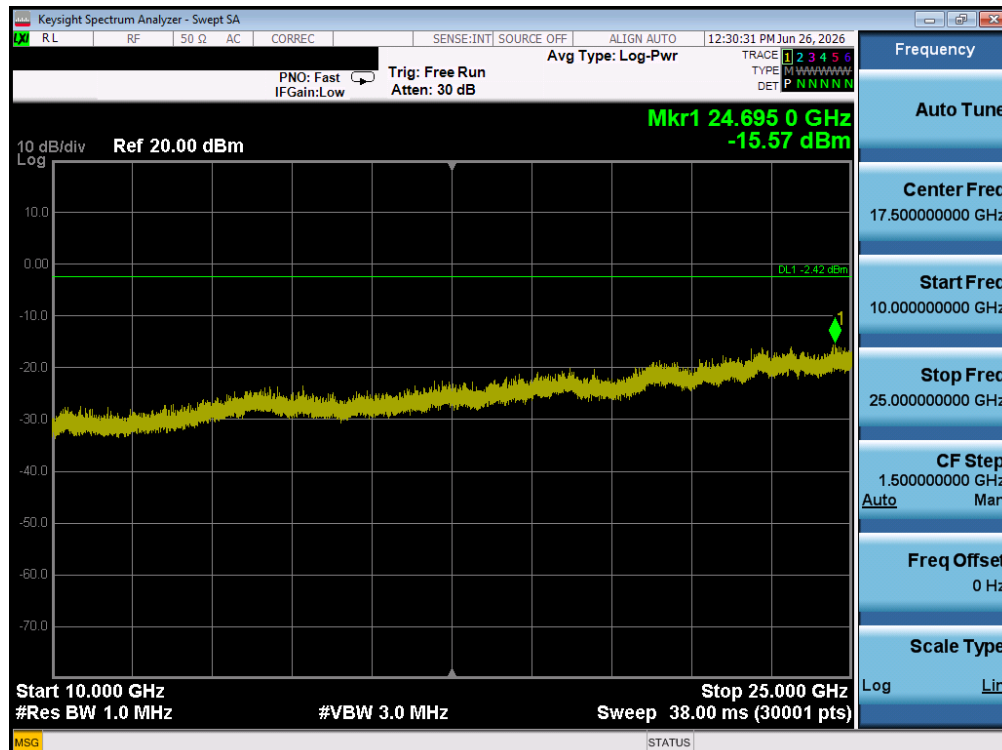
Plot 4-67 DH5 SISO CH.0 Conducted Spurious Emission 10 to 25 GHz - (Ant 1)



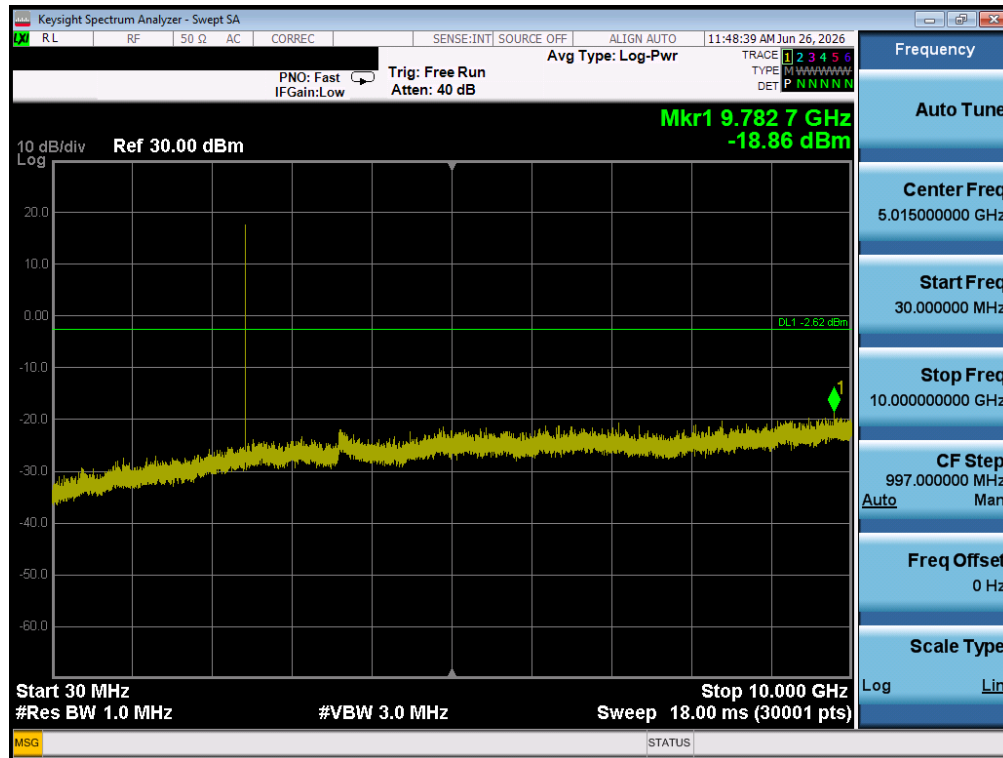
Plot 4-68 DH5 SISO CH.0 Conducted Spurious Emission 0.03 to 10 GHz - (Ant2)



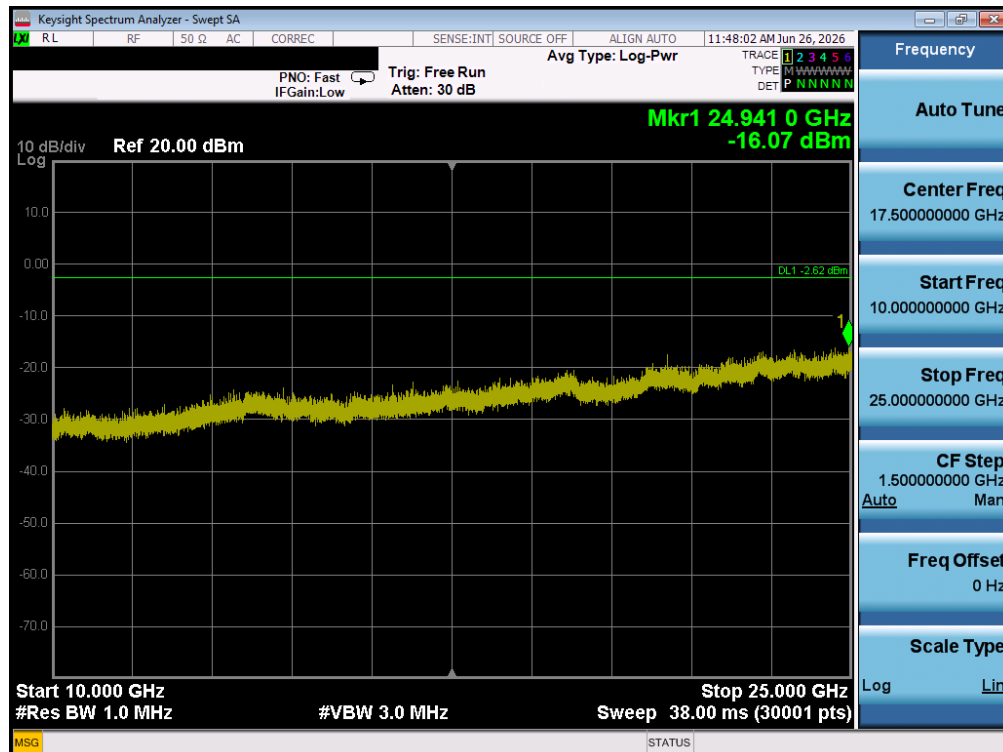
Plot 4-69 DH5 SISO CH.0 Conducted Spurious Emission 10 to 25 GHz - (Ant 2)



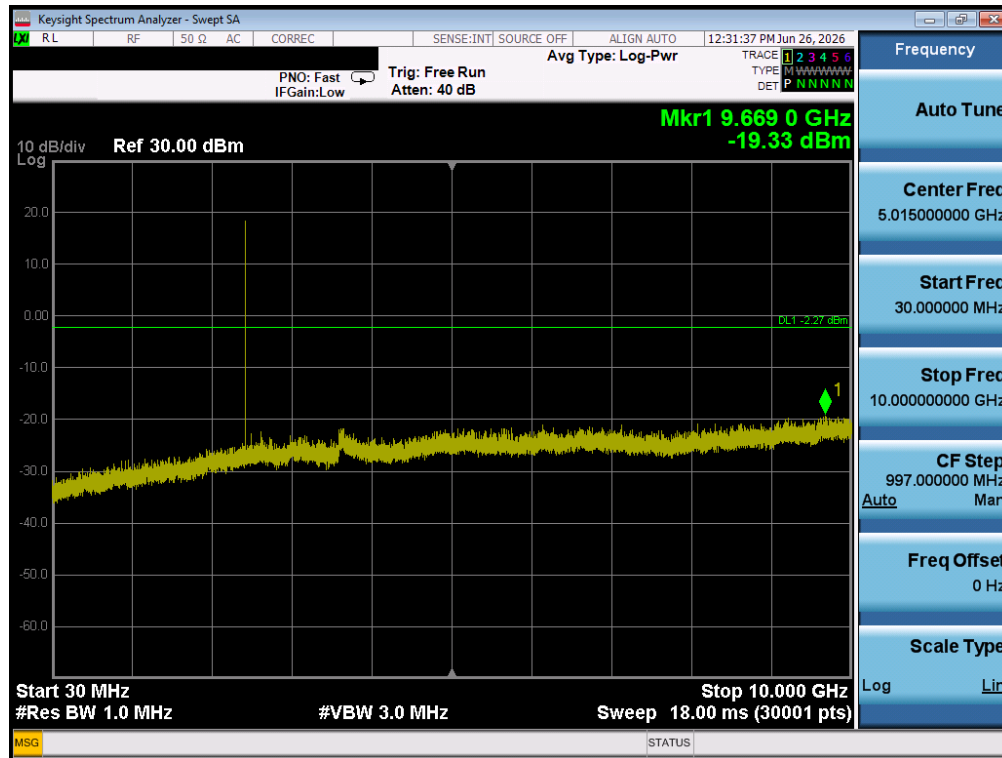
Plot 4-70 DH5 SISO CH.38 Conducted Spurious Emission 0.03 to 10 GHz - (Ant 1)



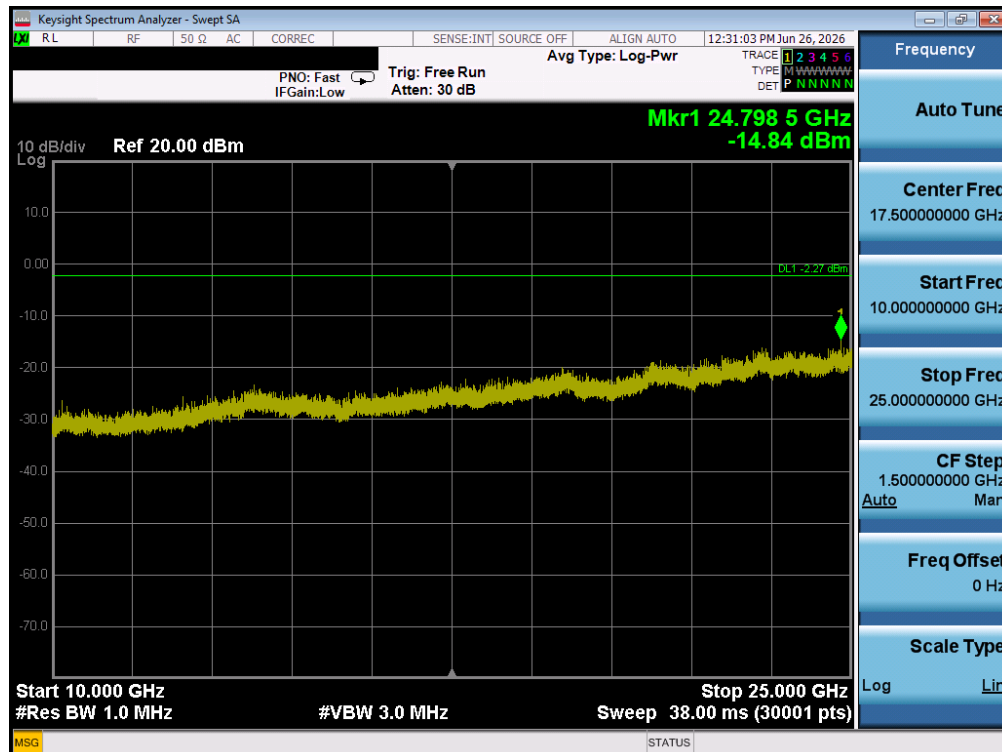
Plot 4-71 DH5 SISO CH.38 Conducted Spurious Emission 10 to 25 GHz - (Ant 1)



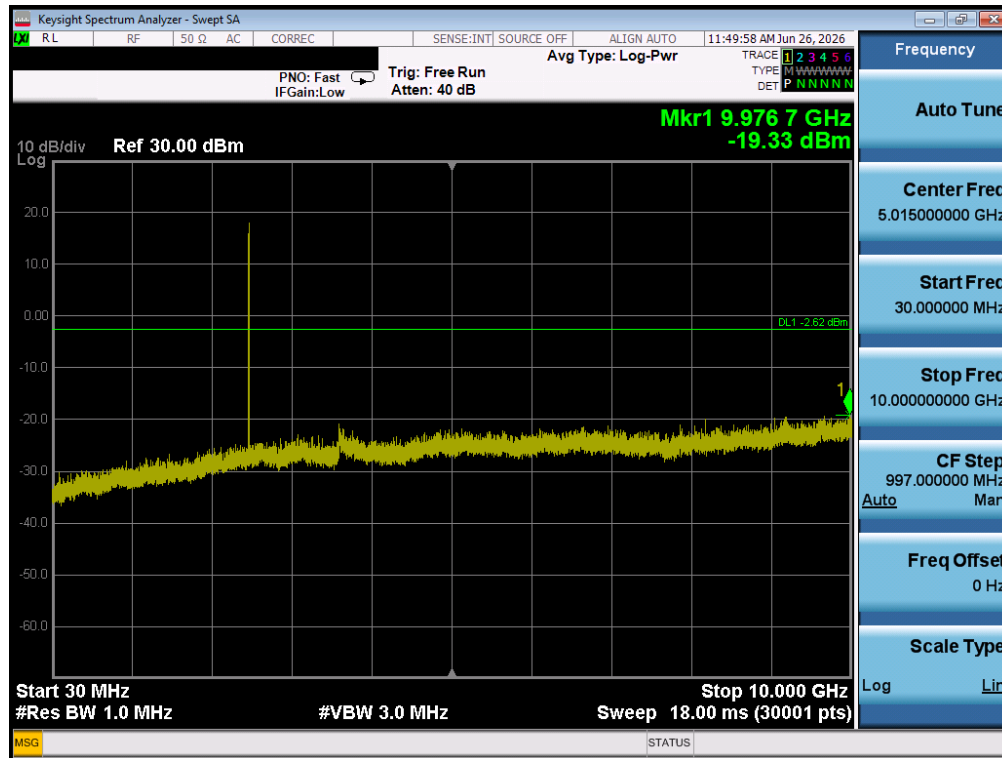
Plot 4-72 DH5 SISO CH.38 Conducted Spurious Emission 0.03 to 10 GHz - (Ant 2)



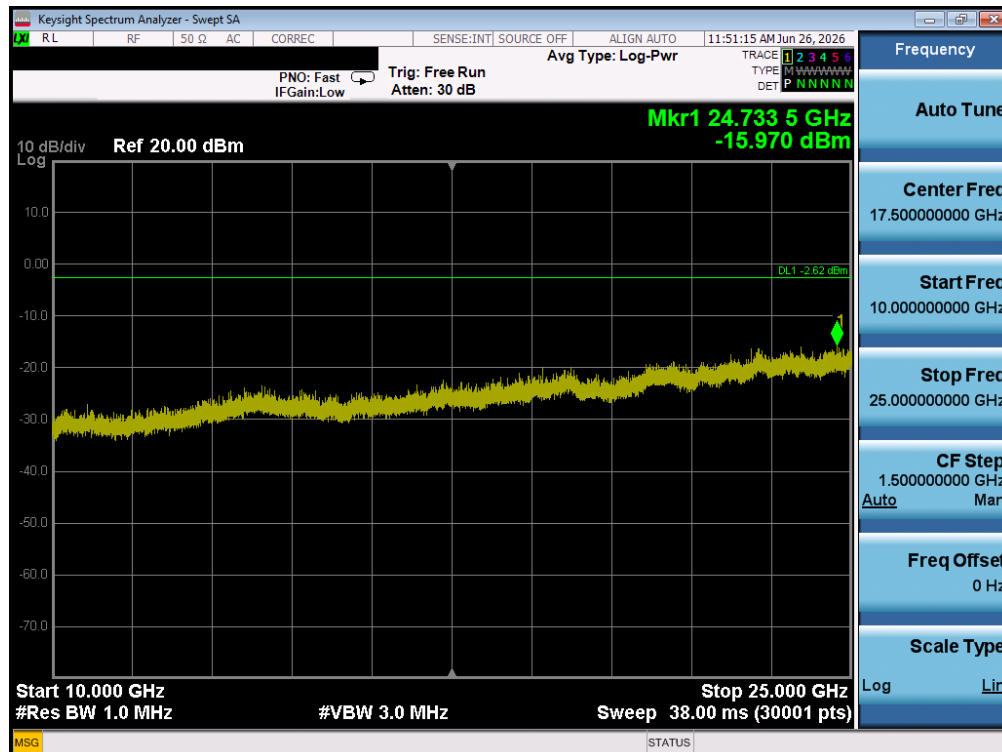
Plot 4-73 DH5 SISO CH.38 Conducted Spurious Emission 10 to 25 GHz - (Ant 2)



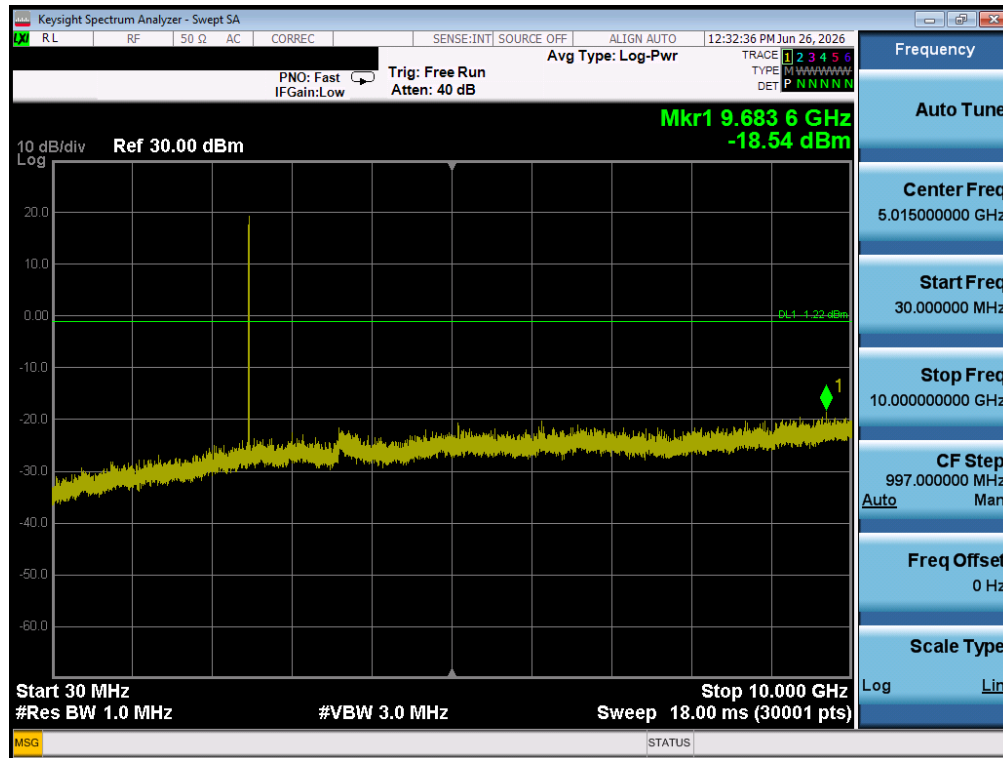
Plot 4-74 DH5 SISO CH.78 Conducted Spurious Emission 0.03 to 10 GHz - (Ant 1)



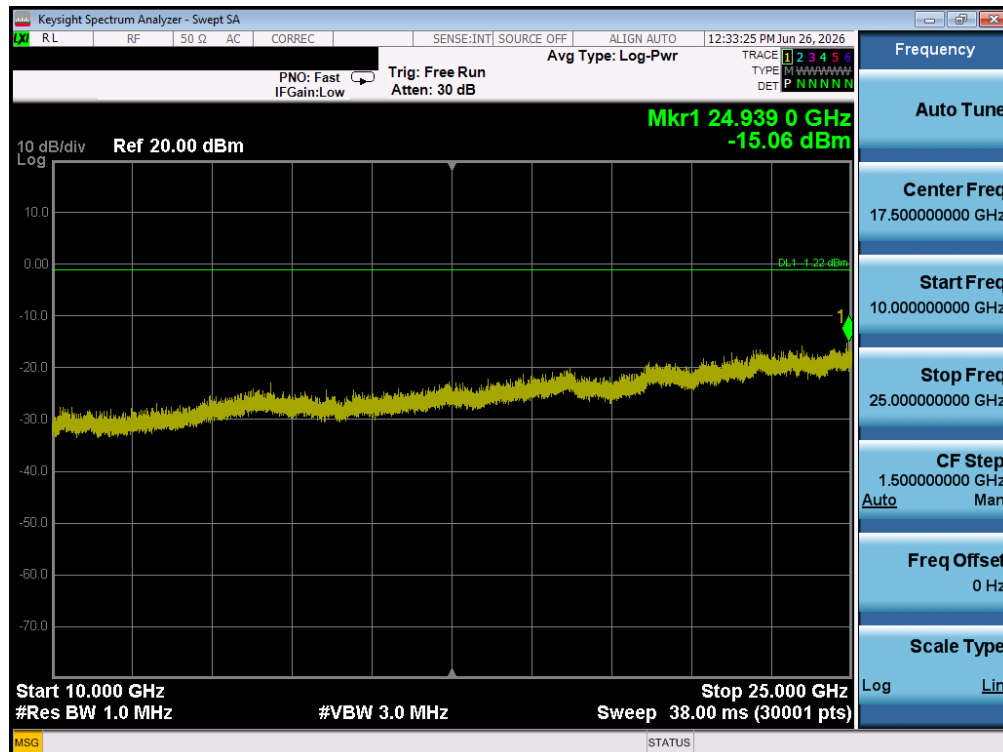
Plot 4-75 DH5 SISO CH.78 Conducted Spurious Emission 10 to 25 GHz - (Ant 1)



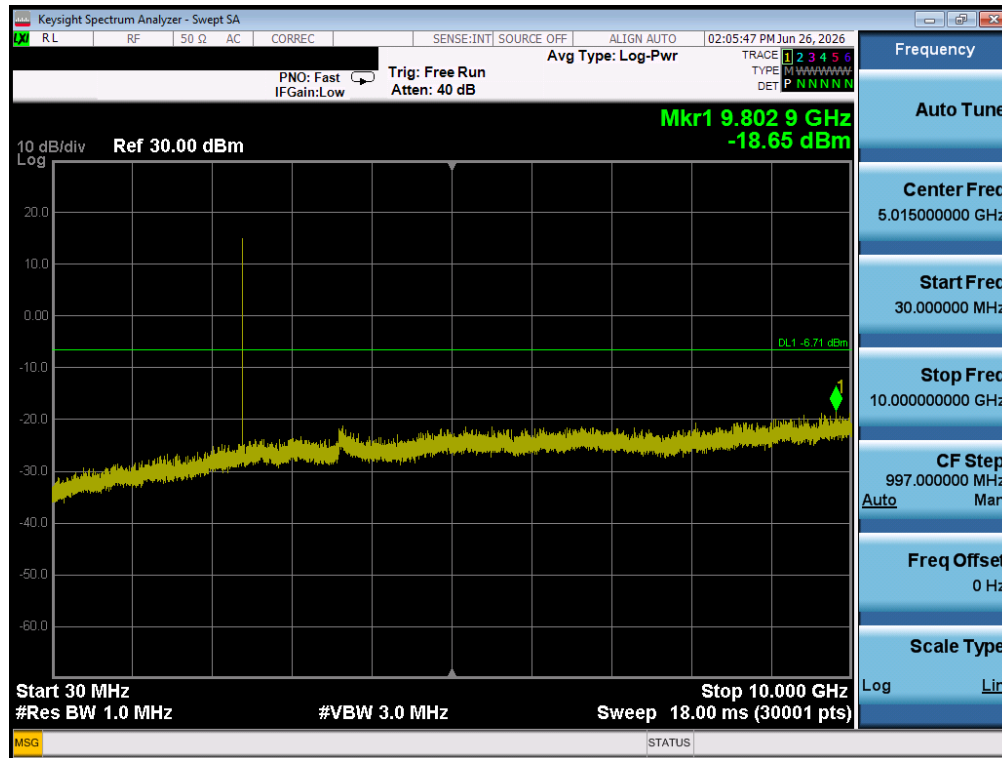
Plot 4-76 DH5 SISO CH.78 Conducted Spurious Emission 0.03 to 10 GHz - (Ant 2)



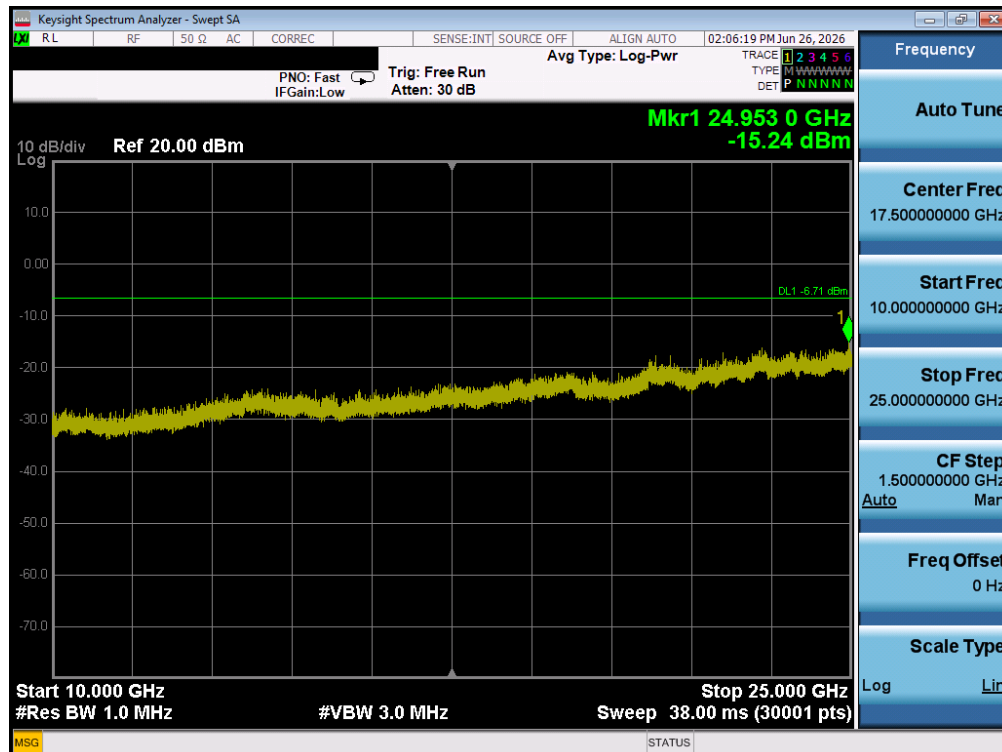
Plot 4-77 DH5 SISO CH.78 Conducted Spurious Emission 10 to 25 GHz - (Ant 2)



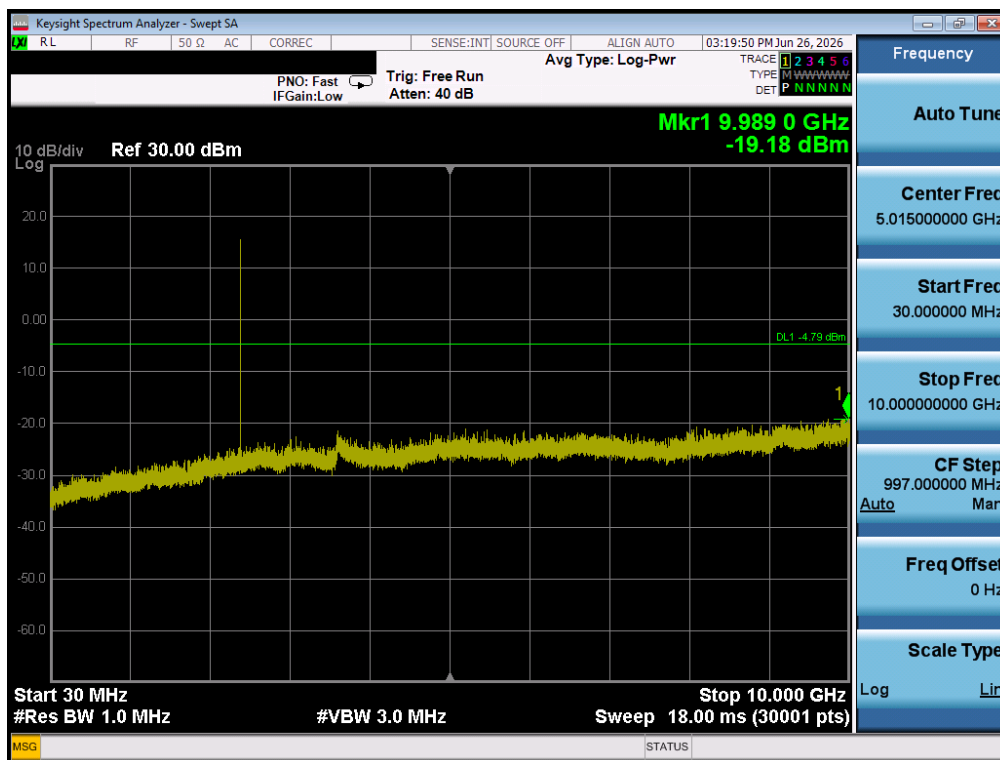
Plot 4-78 DH5 MIMO CH.0 Conducted Spurious Emission 0.03 to 10 GHz - (Ant 1)



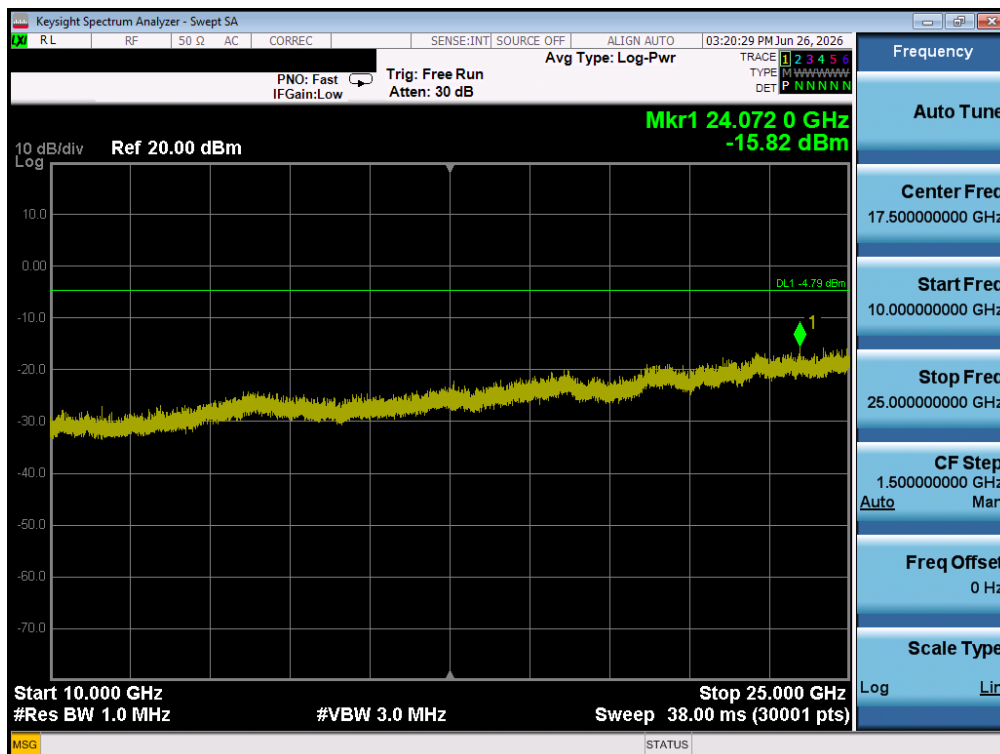
Plot 4-79 DH5 MIMO CH.0 Conducted Spurious Emission 10 to 25 GHz - (Ant 1)



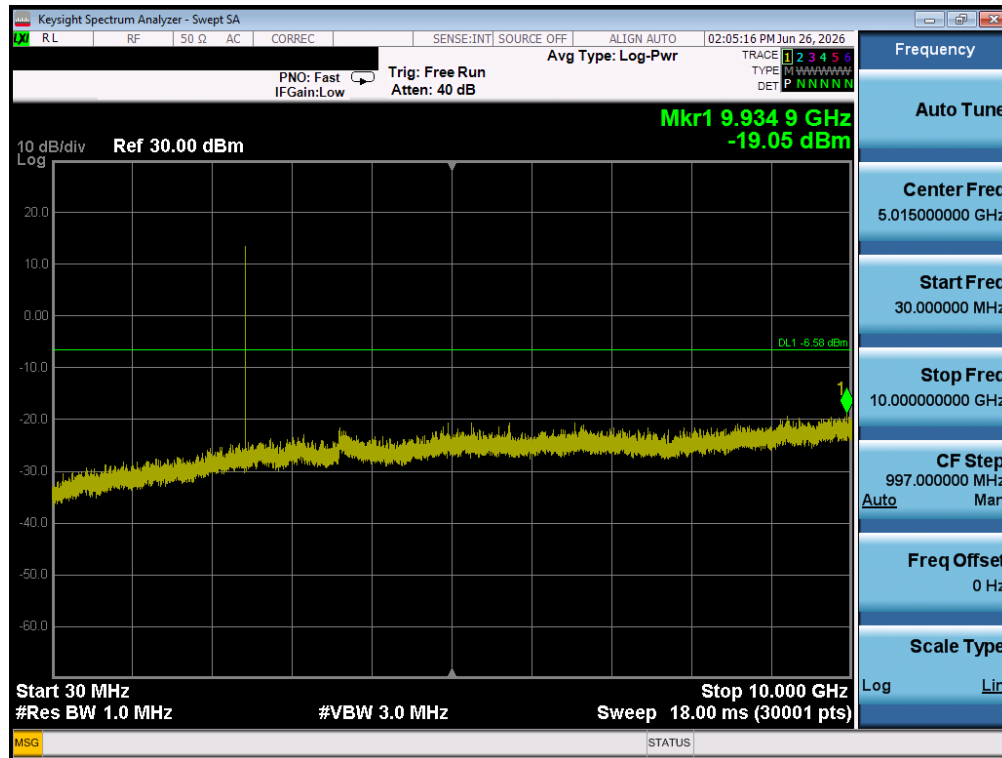
Plot 4-80 DH5 MIMO CH.0 Conducted Spurious Emission 0.03 to 10 GHz - (Ant 2)



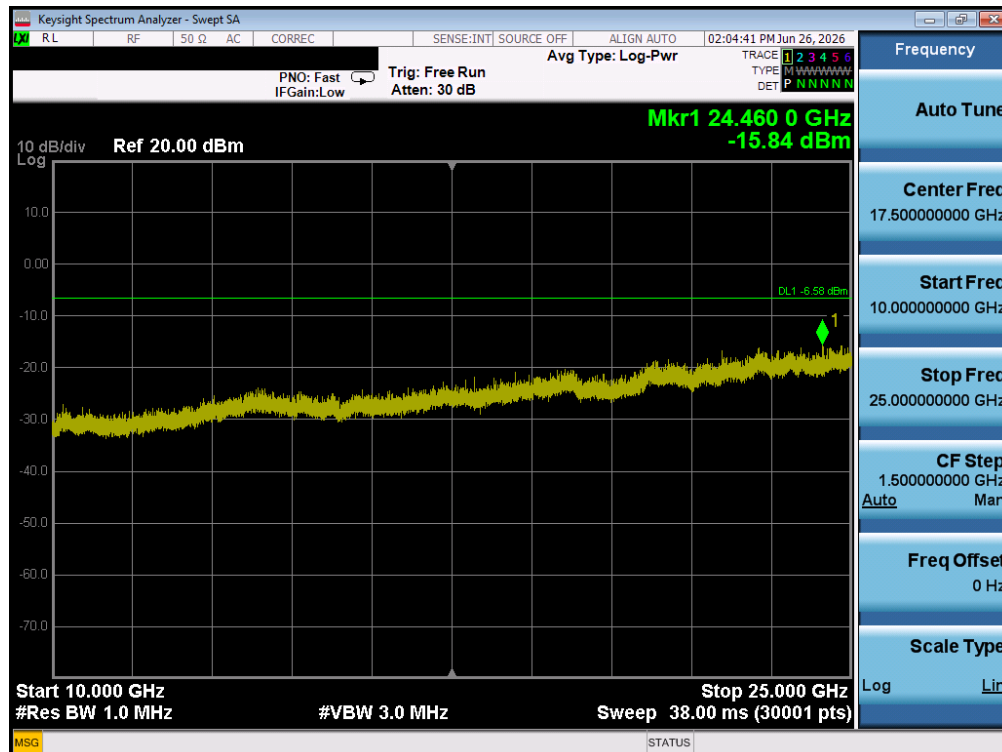
Plot 4-81 DH5 MIMO CH.0 Conducted Spurious Emission 10 to 25 GHz - (Ant 2)



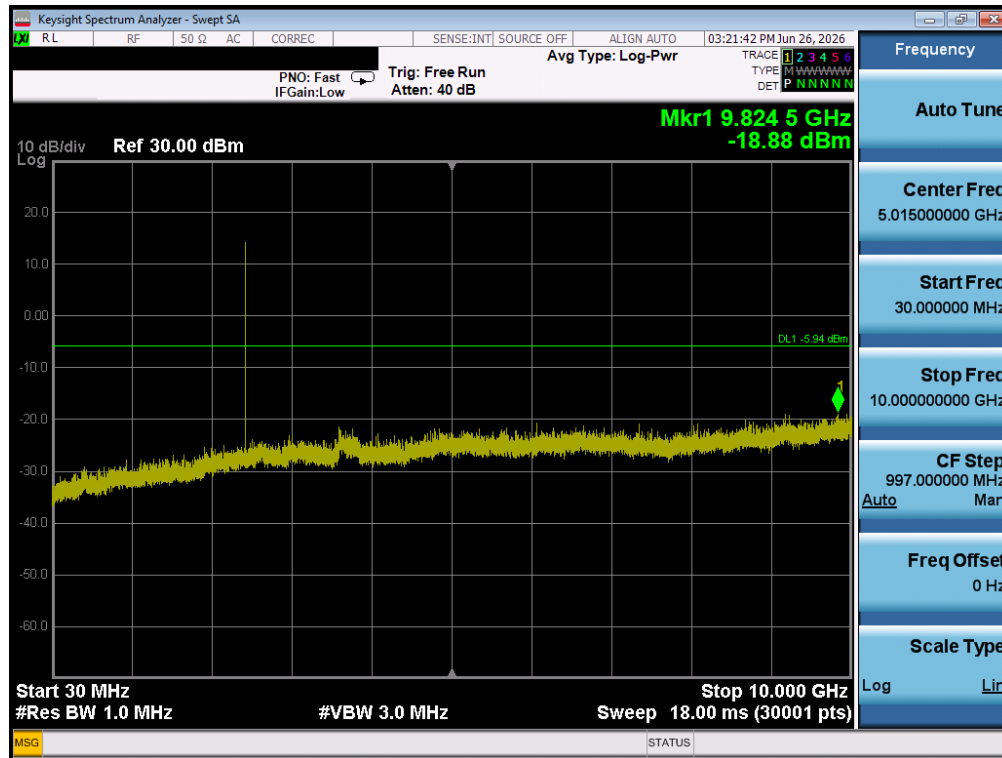
Plot 4-82 DH5 MIMO CH.38 Conducted Spurious Emission 0.03 to 10 GHz - (Ant 1)



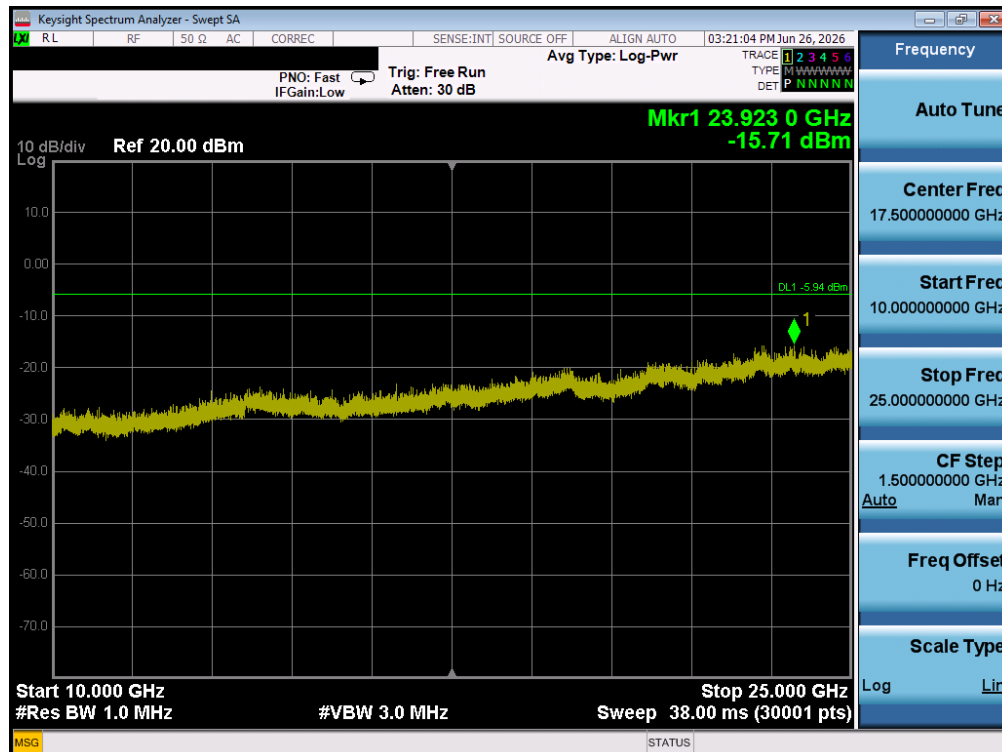
Plot 4-83 DH5 MIMO CH.38 Conducted Spurious Emission 10 to 25 GHz - (Ant 1)



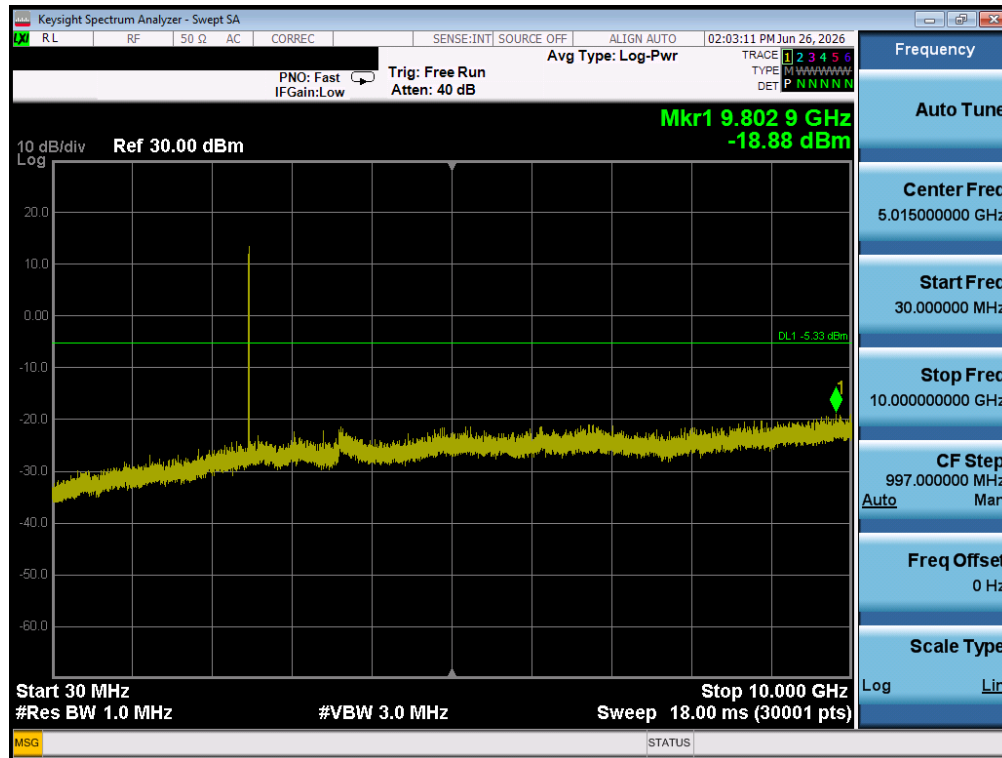
Plot 4-84 DH5 MIMO CH.38 Conducted Spurious Emission 0.03 to 10 GHz - (Ant 2)



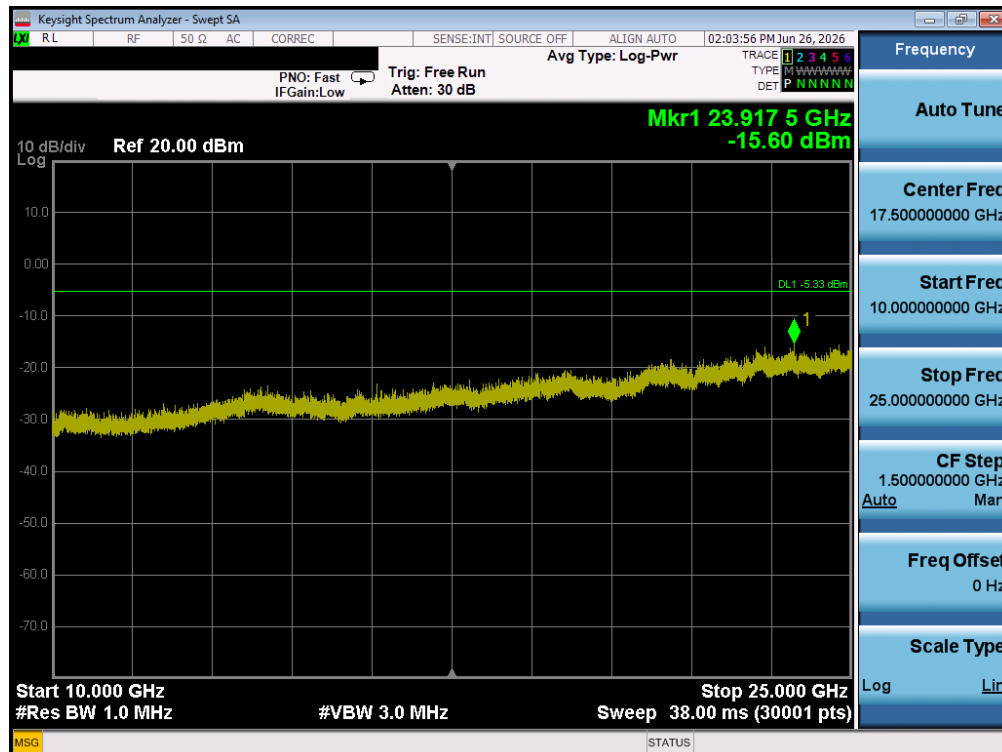
Plot 4-85 DH5 MIMO CH.38 Conducted Spurious Emission 10 to 25 GHz - (Ant 2)



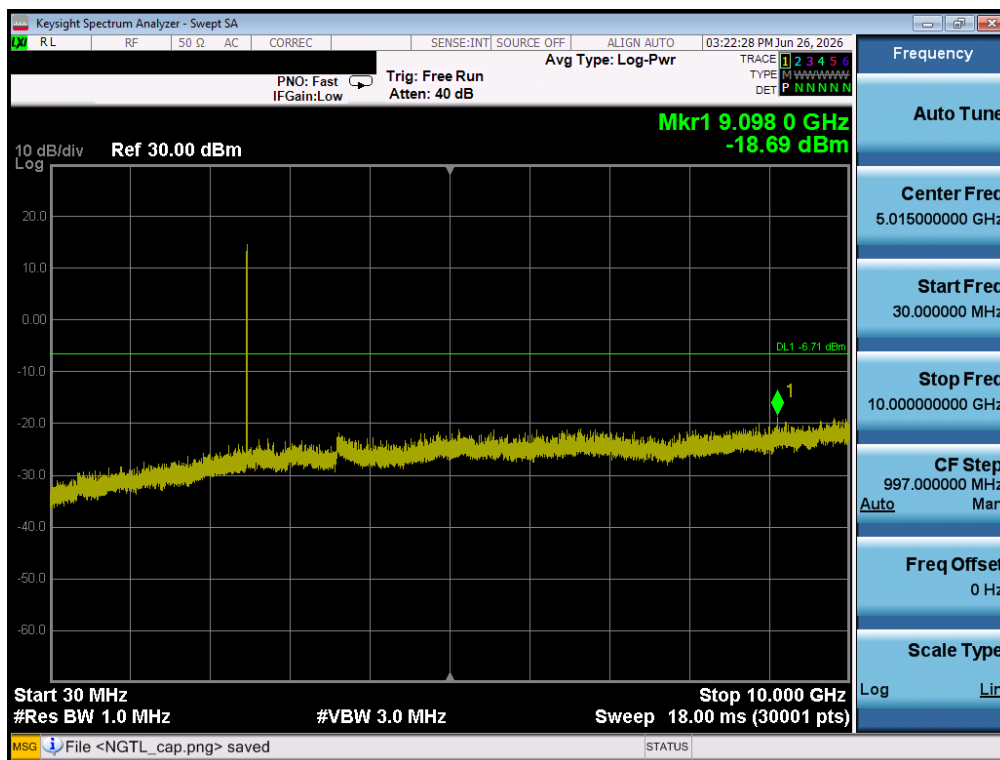
Plot 4-86 DH5 MIMO CH.78 Conducted Spurious Emission 0.03 to 10 GHz - (Ant 1)



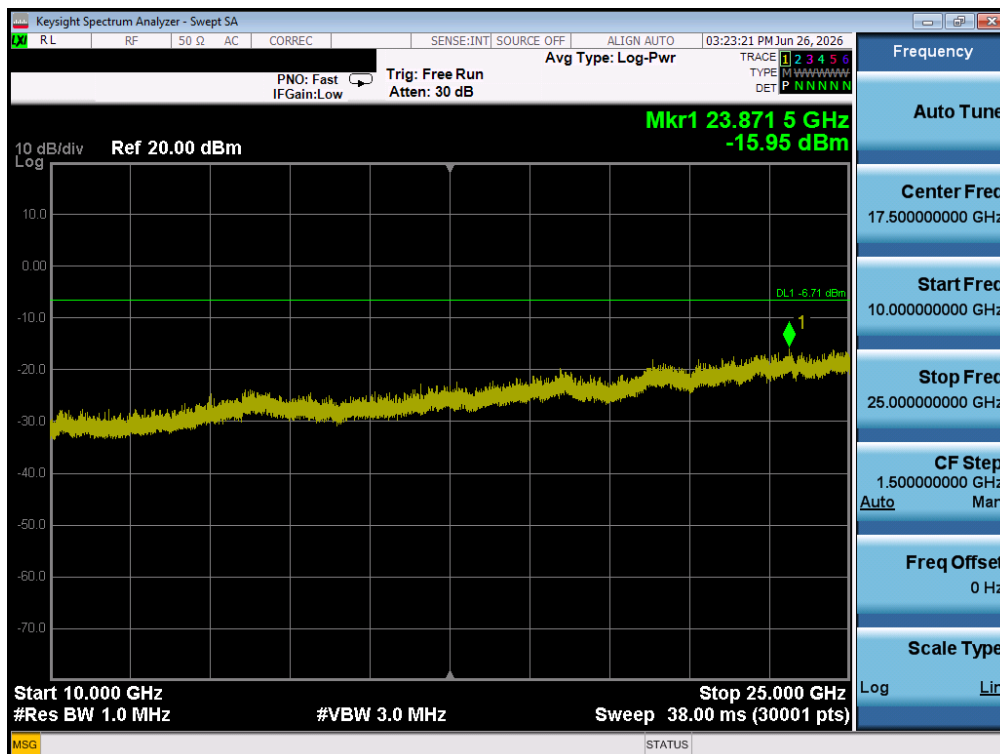
Plot 4-87 DH5 MIMO CH.78 Conducted Spurious Emission 10 to 25 GHz - (Ant 1)



Plot 4-88 DH5 MIMO CH.78 Conducted Spurious Emission 0.03 to 10 GHz - (Ant 2)



Plot 4-89 DH5 MIMO CH.78 Conducted Spurious Emission 10 to 25 GHz - (Ant 2)



5. Radiated Test Results

5.1. Test Configuration

Radiated Test Facilities & Setup

Radiated emissions testing was conducted in an indoor 3-meter semi-anechoic chamber (SAC). For each frequency range, the turntable was rotated through 360° and the receive antenna height was varied from 1 m to 4 m to maximize emissions. The specific test setups and calibrated, linearly polarized antennas utilized are as follows:

- 9 kHz to 30 MHz : DUT height at 0.8 m / Active Loop Antenna
- 30 MHz to 1 GHz : DUT height at 0.8 m / No floor absorbers / Broadband Bi-log Antenna
- 1 GHz to 18 GHz : DUT height at 1.5 m / Floor absorbers deployed / Broadband Double-Ridge Horn Antenna
- Above 18 GHz : DUT height at 1.5 m / Floor absorbers deployed / Standard Gain Horn Antenna

Test Orientations

The DUT was investigated in three orthogonal orientations (X, Y, and Z) for each band. Since the equipment transmits below 10 GHz, Radiated Spurious Emissions testing was performed from 9 kHz up to the lower of the tenth harmonic of the highest fundamental frequency or 40 GHz. Testing from 1 GHz to 18 GHz was performed on the low, mid, and high channels. Testing below 1 GHz and above 18 GHz was conducted only under the worst-case configuration. In accordance with ANSI C63.10, measurement results for frequencies below 1 GHz and above 18 GHz are included in the report only when emissions are detected within 20 dB of the applicable limit.

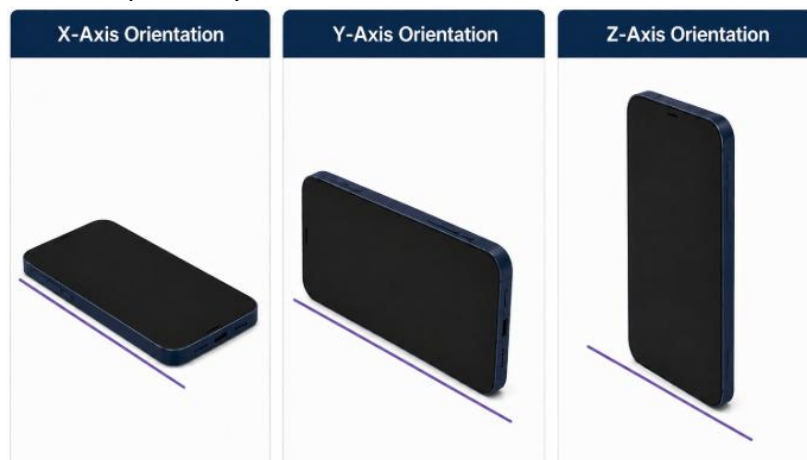


Figure 5-1 Three orthogonal orientations.

Radiated emissions were captured using automated test software 'NGTL ATE' Ver. 0.00.

5.2. Radiated Measurement Setup

Figure 5-2 Radiated Measurement Setup Below 30 MHz

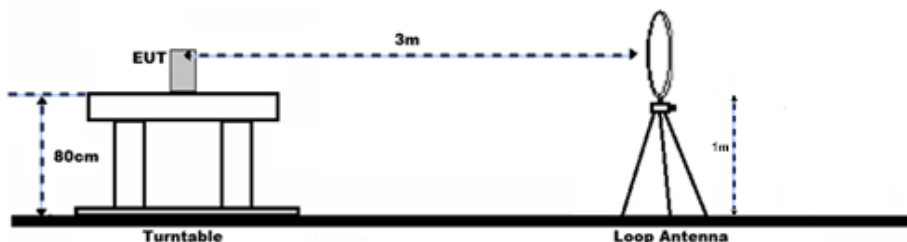


Figure 5-3 Radiated Measurement Setup Below 1 GHz

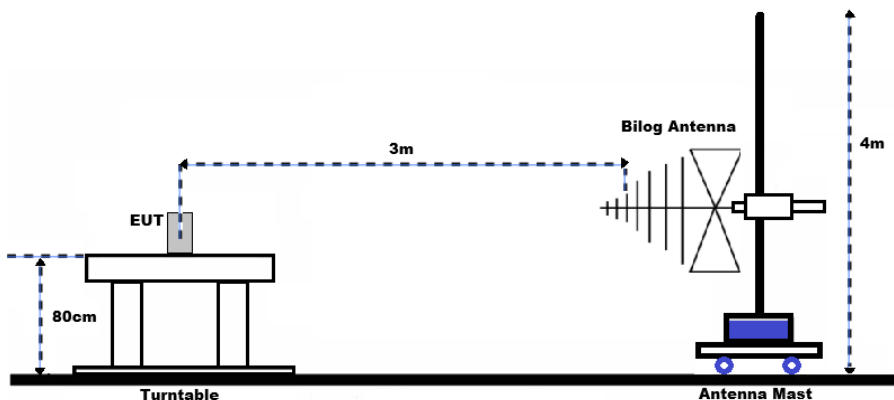
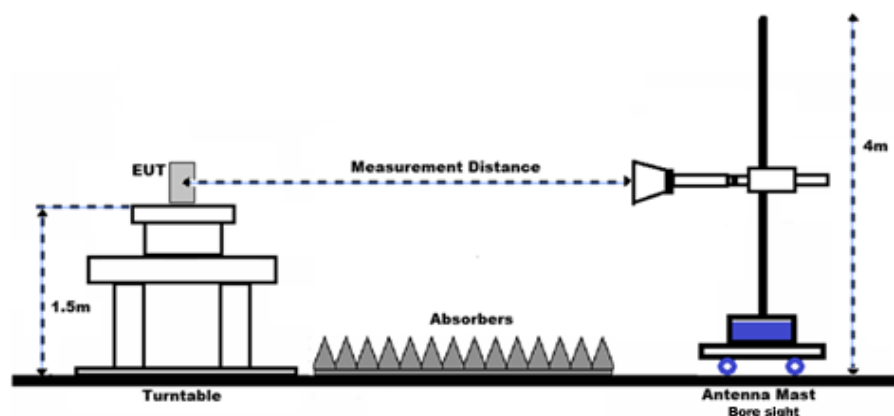


Figure 5-4 Radiated Measurement Setup Above 1 GHz



5.3. Radiated Measurement Sample

Serial Number(s) :

ZDH0461M, ZDH0460M

5.4. Radiated Spurious Emissions

5.4.1. Regulatory Limit

Part 15.205 Restriction band of operation

Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(Above 38.6)
13.36-13.41			

Part 15.209 Radiated emission limit; general requirements

Except as shown in paragraph (b)(6) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 – 0.490	2400 / F(kHz)	300
0.490 – 1.705	24000 / F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100**	3
88 – 216	150**	3
216 – 960	200**	3
Above 960	500	3

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241.

Part 15.247 (d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or 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, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

RSS-GEN - Section 8.9

Except where otherwise indicated in the applicable RSS, radiated emissions shall comply with the field strength limits shown in table 5 and table 6. Additionally, the level of any transmitter unwanted emission shall not exceed the level of the transmitter's fundamental emission.

Frequency (MHz)	Magnetic field strength (H-Field) (μA/m)	Measurement Distance (m)
0.009 – 0.490 ^{Note}	6.37/F (F in kHz)	300
0.490 – 1.705	63.7/F (F in kHz)	30
1.705 – 30.0	0.08	30

The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
30 – 88	100	3
88 – 216	150	3
216 – 960	200	3
Above 960	500	3

RSS-GEN - Section 8.10

Restricted frequency bands

Restricted frequency bands, identified in table 7, are designated primarily for safety-of-life services (distress calling and certain aeronautical activities), certain satellite downlinks, radio astronomy and some government use. Except where otherwise indicated, the following conditions related to the restricted frequency bands apply:

- a. The transmit frequency, including fundamental components of modulation, of licensed-exempt radio apparatus shall not fall within the restricted frequency bands listed in table 7 except for apparatus compliant with RSS-287, Emergency Position Indicating Radio Beacons (EPIRB), Emergency Locator Transmitters (ELT), Personal Locator Beacons (PLB), and Maritime Survivor Locator Devices (MSLD).
- b. Unwanted emissions that fall into restricted frequency bands listed in table 7 shall comply with the limits specified in table 5 and table 6.
- c. Unwanted emissions that do not fall within the restricted frequency bands listed in table 7 shall comply either with the limits specified in the applicable RSS or with those specified in table 5 and table 6.

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	13.36 - 13.41	960 - 1427	9.0 - 9.2
0.495 - 0.505	16.42 - 16.423	1435 - 1626.5	9.3 - 9.5
2.1735 - 2.1905	16.69475 - 16.69525	1645.5 - 1646.5	10.6 - 12.7
3.020 - 3.026	16.80425 - 16.80475	1660 - 1710	13.25 - 13.4
4.125 - 4.128	25.5 - 25.67	1718.8 - 1722.2	14.47 - 14.5
4.17725 - 4.17775	37.5 - 38.25	2200 - 2300	15.35 - 16.2
4.20725 - 4.20775	73 - 74.6	2310 - 2390	17.7 - 21.4
5.677 - 5.683	74.8 - 75.2	2483.5 - 2500	22.01 - 23.12
6.215 - 6.218	108 - 138	2655 - 2900	23.6 - 24.0
6.26775 - 6.26825	149.9 - 150.05	3260 - 3267	31.2 - 31.8
6.31175 - 6.31225	156.52475 - 156.52525	3332 - 3339	36.43 - 36.5
8.291 - 8.294	156.7 - 156.9	3345.8 - 3358	Above 38.6
8.362 - 8.366	162.0125 - 167.17	3500 - 4400	
8.37625 - 8.38675	167.72 - 173.2	4500 - 5150	
8.41425 - 8.41475	240 - 285	5350 - 5460	
12.29 - 12.293	322 - 335.4	7250 - 7750	
12.51975 - 12.52025	399.9 - 410	8025 - 8500	
12.57675 - 12.57725	608 - 614		

RSS-247 - Section 6.6

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum device, digitally modulated device, or hybrid system is operating, the RF power that is produced 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 – based on either an RF conducted or a radiated measurement – provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 6.3.2, the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

5.4.2. Test Method

ANSI C63.10 – 2020, clause 7.8.8

ANSI C63.10 - 2020, clause 6.6.4.3

5.4.3. Test Procedure

Quasi-Peak - Below 1GHz

- a) RBW = 120 kHz
- b) Detector = Quasi-Peak
- c) Trace Mode = Max-Hold
- d) Sweep time = Auto (Coupled) or sufficient to investigate.

Peak measurement - above 1GHz

- a) RBW = 1 MHz
- b) VBW $\geq [3 \times \text{RBW}]$
- c) Detector = Peak
- d) Trace Mode = Max-Hold
- e) Allow sweeps to continue until the trace stabilizes. Note that if the transmission is not continuous, then the time required for the trace to stabilize will increase by a factor of approximately $1 / D$, where D is the duty cycle. For example, at 50% duty cycle, the measurement time will increase by a factor of two, relative to measurement time for continuous transmission.

Average measurement - above 1GHz [Method AD]

- a) RBW = 1 MHz
- b) VBW = 1 kHz $\geq 1/t$ Hz, where t = pulse width in seconds
- c) Detector = Peak
- d) Trace mode = Max-Hold
- e) Sweep time = Auto (Coupled) or sufficient to investigate.

5.4.4. Sample Calculation

Where relevant, the following sample calculation is provided:

$E(\text{dB}\mu\text{V}/\text{m}) = \text{Measured Voltage (dB}\mu\text{V}) + \text{DCCF (dB)} + \text{Antenna Factor (dB/m)} + \text{Total Loss [Cable Loss (dB) – Preamplifier Gain (dB)]}$

$E(\text{dB}\mu\text{V}/\text{m}) = 52.11 \text{ dB}\mu\text{V} + (-1.58) \text{ dB/m} = 50.53 \text{ dB}\mu\text{V}/\text{m}$

* DCCF: Duty Cycle Correction Factor

5.4.5. Radiated Spurious Test Results

Plot 5-1 Radiated Spurious Emissions 30 MHz to 1 000 MHz Worst case DH5 SISO ANT1 2440 MHz

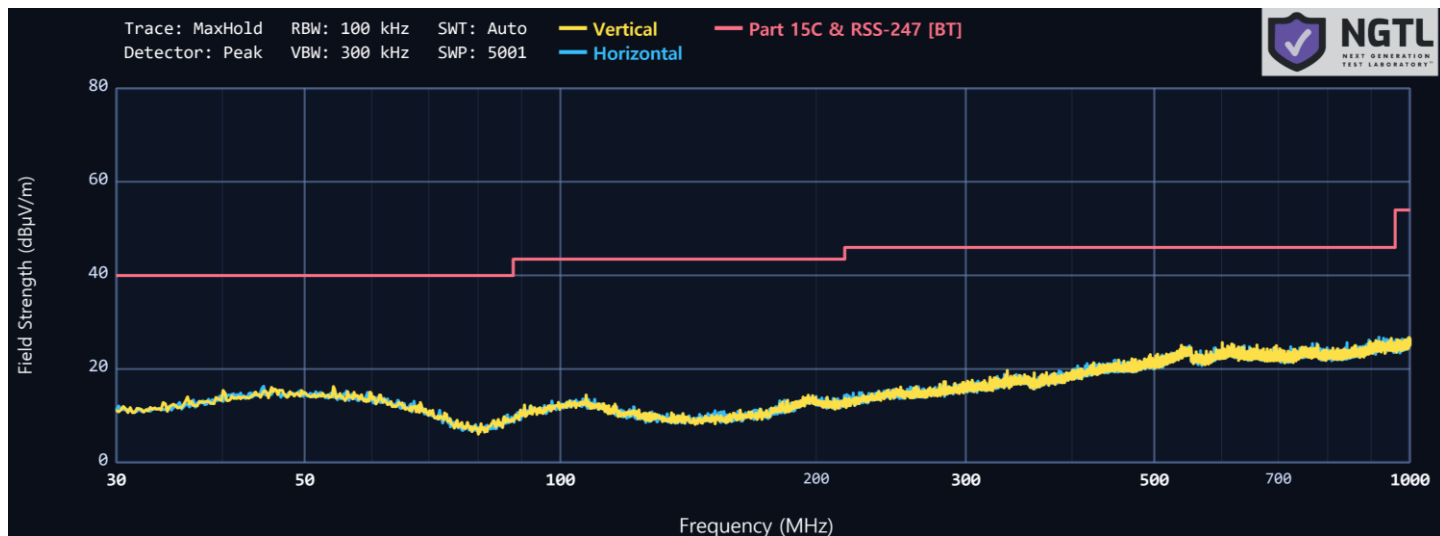


Table 5-1 Radiated Spurious Emissions 30 MHz to 1000 MHz

Test Mode	Tested Frequency [MHz]	Frequency [MHz]	Reading Value [dBμV]	Pol [H/V]	Detector Mode	DCCF [dB]	AFCL [dB/m]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]
DH5	2440	50.05	47.94	H	PK	0.00	-31.30	16.64	40.00	-23.36
		126.74	44.73	H	PK	0.00	-28.40	16.33	43.00	-26.67
		523.55	50.04	H	PK	0.00	-26.45	23.59	46.00	-22.41

Plot 5-2 Radiated Spurious Emissions Above 18 GHz Worst case DH5 SISO ANT1 2440 MHz

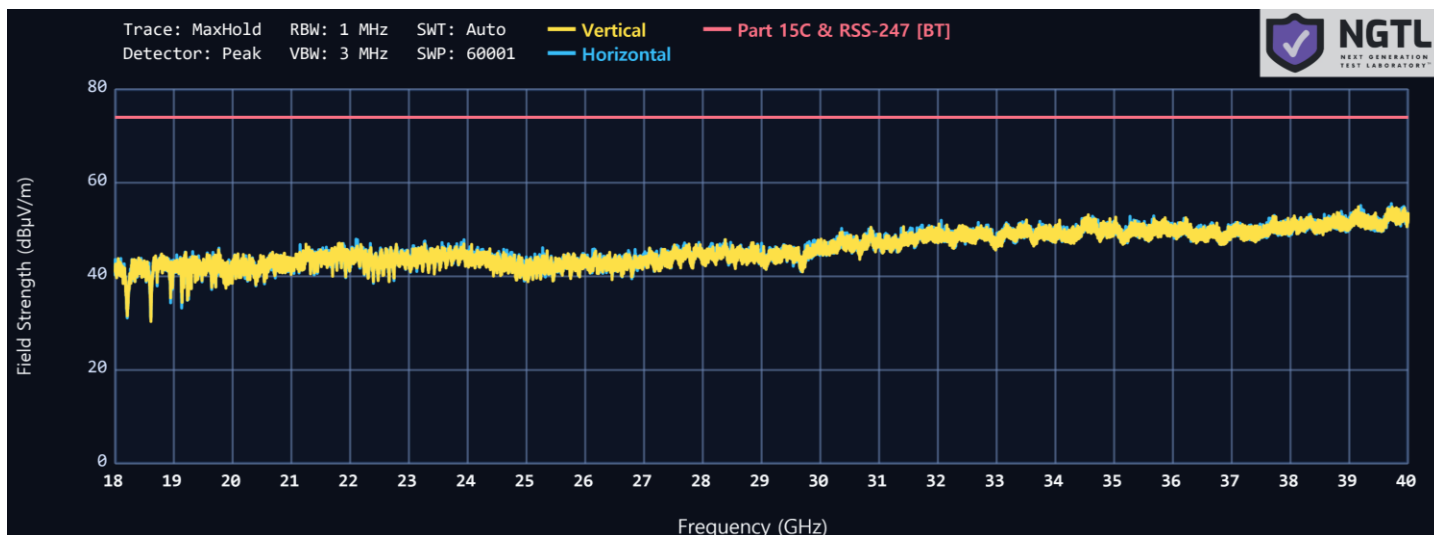


Table 5-2 Radiated Spurious Emissions 18 GHz to 40 GHz

Test Mode	Tested Frequency [MHz]	Frequency [MHz]	Reading Value [dBμV]	Pol [H/V]	Detector Mode	DCCF [dB]	AFCL [dB/m]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]
DH5	2440	19 519.78	37.56	H	PK	0.00	5.60	43.16	74.00	-30.84
		19 521.43	24.33	H	AV	-22.50	5.60	7.43	54.00	-46.57
		21 959.96	37.22	H	PK	0.00	7.60	44.82	74.00	-29.18
		21 959.03	25.85	H	AV	-22.50	7.60	10.95	54.00	-43.05
		24 398.28	35.76	H	PK	0.00	6.10	41.86	74.00	-32.14
		24 398.24	22.44	H	AV	-22.50	6.10	6.04	54.00	-47.96

Plot 5-3 Radiated Spurious Emissions DH5 SISO ANT1 2440 MHz

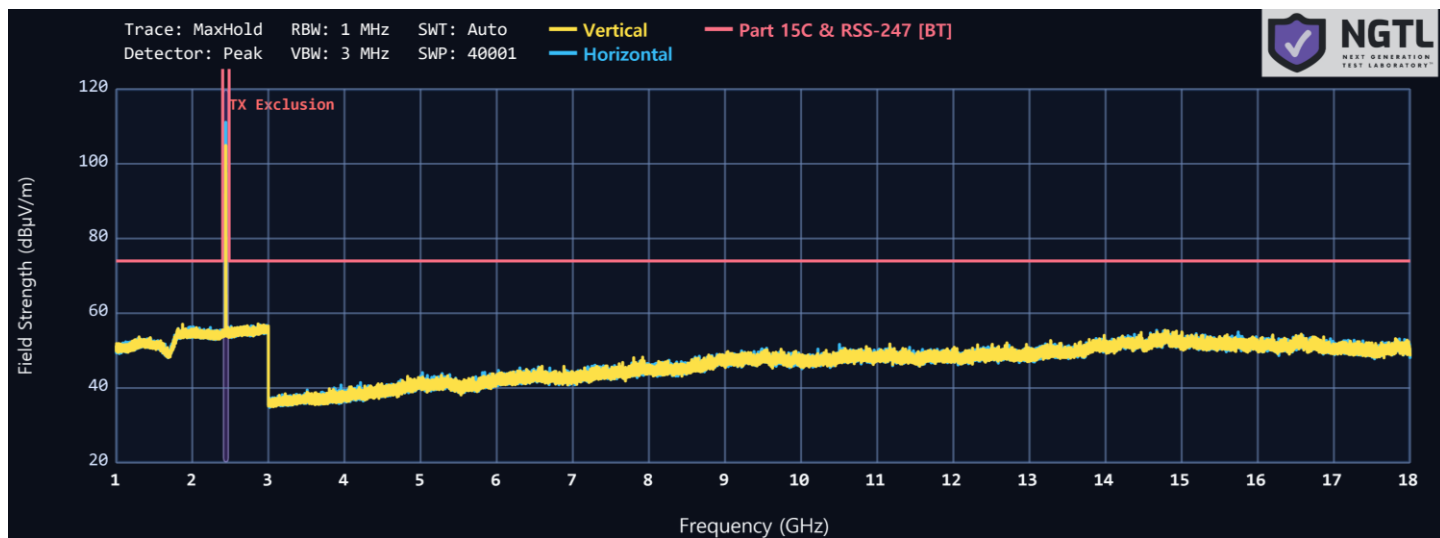


Table 5-3 Radiated Spurious Emissions BT SISO ANT 1

Test Mode	Tested Frequency [MHz]	Frequency [MHz]	Reading Value [dBμV]	Pol [H/V]	Detector Mode	DCCF [dB]	AFCL [dB/m]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]
DH5	2402	4 804.15	47.66	V	PK	0.00	-6.80	40.86	74.00	-33.14
		4 804.91	36.32	V	AV	-22.50	-6.80	7.02	54.00	-46.98
		7 206.31	45.97	V	PK	0.00	-2.30	43.67	74.00	-30.33
		7 206.60	36.66	V	AV	-22.50	-2.30	11.86	54.00	-42.14
	2440	4 880.14	48.19	V	PK	0.00	-6.60	41.59	74.00	-32.41
		4 880.53	36.13	V	AV	-22.50	-6.60	7.03	54.00	-46.97
		7 320.81	46.66	V	PK	0.00	-1.70	44.96	74.00	-29.04
		7 320.38	35.94	V	AV	-22.50	-1.70	11.74	54.00	-42.26
	2480	4 960.58	48.23	V	PK	0.00	-6.50	41.73	74.00	-32.27
		4 960.65	35.62	V	AV	-22.50	-6.50	6.62	54.00	-47.38
		7 440.37	46.11	V	PK	0.00	-1.40	44.71	74.00	-29.29
		7 440.36	35.95	V	AV	-22.50	-1.40	12.05	54.00	-41.95
2DH5	2402	4 804.39	48.01	V	PK	0.00	-6.80	41.21	74.00	-32.79
		4 804.56	35.83	V	AV	-22.50	-6.80	6.53	54.00	-47.47
		7 206.51	46.18	V	PK	0.00	-2.30	43.88	74.00	-30.12
		7 206.41	35.78	V	AV	-22.50	-2.30	10.98	54.00	-43.02
	2440	4 880.23	48.13	V	PK	0.00	-6.60	41.53	74.00	-32.47
		4 880.77	36.40	V	AV	-22.50	-6.60	7.30	54.00	-46.70
		7 320.25	45.92	V	PK	0.00	-1.70	44.22	74.00	-29.78
		7 320.49	36.07	V	AV	-22.50	-1.70	11.87	54.00	-42.13
	2480	4 960.16	47.35	V	PK	0.00	-6.50	40.85	74.00	-33.15
		4 960.16	35.79	V	AV	-22.50	-6.50	6.79	54.00	-47.21
		7 440.62	46.19	V	PK	0.00	-1.40	44.79	74.00	-29.21
		7 440.46	35.97	V	AV	-22.50	-1.40	12.07	54.00	-41.93
3DH5	2402	4 804.75	48.25	V	PK	0.00	-6.80	41.45	74.00	-32.55
		4 804.13	36.00	V	AV	-22.50	-6.80	6.70	54.00	-47.30
		7 206.78	45.85	V	PK	0.00	-2.30	43.55	74.00	-30.45
		7 206.45	36.43	V	AV	-22.50	-2.30	11.63	54.00	-42.37
	2440	4 880.42	47.44	V	PK	0.00	-6.60	40.84	74.00	-33.16
		4 880.75	36.26	V	AV	-22.50	-6.60	7.16	54.00	-46.84
		7 320.66	46.42	V	PK	0.00	-1.70	44.72	74.00	-29.28
		7 320.16	36.46	V	AV	-22.50	-1.70	12.26	54.00	-41.74
	2480	4 960.84	48.19	V	PK	0.00	-6.50	41.69	74.00	-32.31
		4 960.79	36.31	V	AV	-22.50	-6.50	7.31	54.00	-46.69
		7 440.65	45.79	V	PK	0.00	-1.40	44.39	74.00	-29.61
		7 440.03	36.13	V	AV	-22.50	-1.40	12.23	54.00	-41.77

Plot 5-4 Radiated Spurious Emissions 2DH5 SISO ANT2 2440 MHz

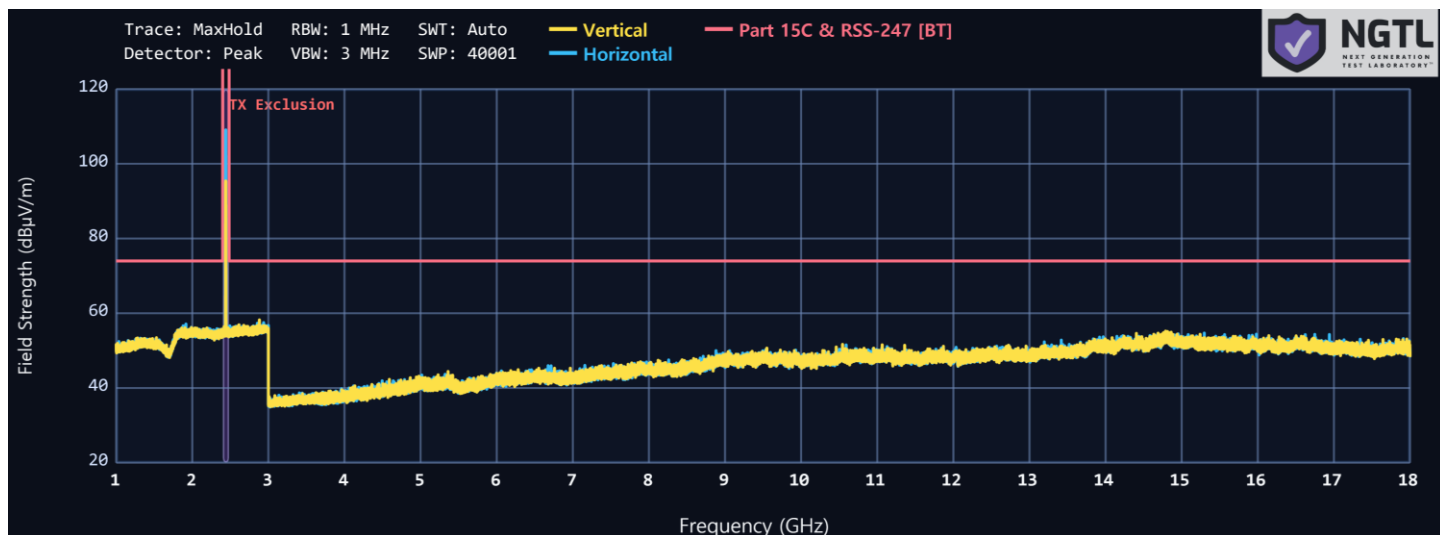


Table 5-4 Radiated Spurious Emissions BT SISO ANT 2

Test Mode	Tested Frequency [MHz]	Frequency [MHz]	Reading Value [dBμV]	Pol [H/V]	Detector Mode	DCCF [dB]	AFCL [dB/m]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]
DH5	2402	4 804.38	47.94	H	PK	0.00	-6.80	41.14	74.00	-32.86
		4 804.81	35.94	H	AV	-22.50	-6.80	6.64	54.00	-47.36
		7 206.20	45.89	H	PK	0.00	-2.30	43.59	74.00	-30.41
		7 206.37	36.47	H	AV	-22.50	-2.30	11.67	54.00	-42.33
	2440	4 880.32	47.63	H	PK	0.00	-6.60	41.03	74.00	-32.97
		4 880.72	35.96	H	AV	-22.50	-6.60	6.86	54.00	-47.14
		7 320.45	46.48	H	PK	0.00	-1.70	44.78	74.00	-29.22
		7 320.10	36.66	H	AV	-22.50	-1.70	12.46	54.00	-41.54
	2480	4 960.18	47.91	H	PK	0.00	-6.50	41.41	74.00	-32.59
		4 960.64	35.97	H	AV	-22.50	-6.50	6.97	54.00	-47.03
		7 440.63	46.20	H	PK	0.00	-1.40	44.80	74.00	-29.20
		7 440.95	36.52	H	AV	-22.50	-1.40	12.62	54.00	-41.38
2DH5	2402	4 804.45	47.98	H	PK	0.00	-6.80	41.18	74.00	-32.82
		4 804.95	36.15	H	AV	-22.50	-6.80	6.85	54.00	-47.15
		7 206.72	46.02	H	PK	0.00	-2.30	43.72	74.00	-30.28
		7 206.12	36.61	H	AV	-22.50	-2.30	11.81	54.00	-42.19
	2440	4 880.65	47.57	H	PK	0.00	-6.60	40.97	74.00	-33.03
		4 880.04	35.64	H	AV	-22.50	-6.60	6.54	54.00	-47.46
		7 320.48	46.59	H	PK	0.00	-1.70	44.89	74.00	-29.11
		7 320.25	36.27	H	AV	-22.50	-1.70	12.07	54.00	-41.93
	2480	4 960.50	48.32	H	PK	0.00	-6.50	41.82	74.00	-32.18
		4 960.00	35.80	H	AV	-22.50	-6.50	6.80	54.00	-47.20
		7 440.37	45.90	H	PK	0.00	-1.40	44.50	74.00	-29.50
		7 440.45	36.22	H	AV	-22.50	-1.40	12.32	54.00	-41.68
3DH5	2402	4 804.45	48.19	H	PK	0.00	-6.80	41.39	74.00	-32.61
		4 804.84	36.01	H	AV	-22.50	-6.80	6.71	54.00	-47.29
		7 206.80	45.94	H	PK	0.00	-2.30	43.64	74.00	-30.36
		7 206.76	35.73	H	AV	-22.50	-2.30	10.93	54.00	-43.07
	2440	4 880.28	47.97	H	PK	0.00	-6.60	41.37	74.00	-32.63
		4 880.74	36.04	H	AV	-22.50	-6.60	6.94	54.00	-47.06
		7 320.94	45.99	H	PK	0.00	-1.70	44.29	74.00	-29.71
		7 320.90	36.21	H	AV	-22.50	-1.70	12.01	54.00	-41.99
	2480	4 960.33	47.48	H	PK	0.00	-6.50	40.98	74.00	-33.02
		4 960.08	36.19	H	AV	-22.50	-6.50	7.19	54.00	-46.81
		7 440.93	46.11	H	PK	0.00	-1.40	44.71	74.00	-29.29
		7 440.07	36.15	H	AV	-22.50	-1.40	12.25	54.00	-41.75

Plot 5-5 Radiated Spurious Emissions DH5 MIMO 2480 MHz

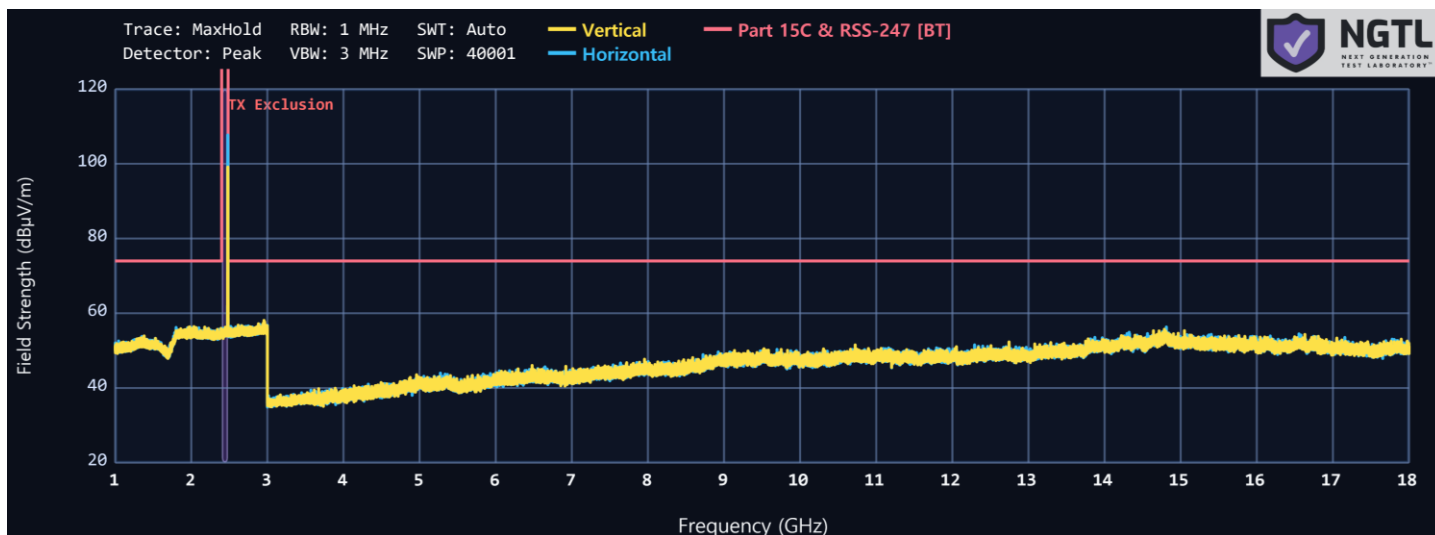


Table 5-5 Radiated Spurious Emissions BT MIMO

Test Mode	Tested Frequency [MHz]	Frequency [MHz]	Reading Value [dBμV]	Pol [H/V]	Detector Mode	DCCF [dB]	AFCL [dB/m]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]
DH5	2402	4 804.25	47.78	H	PK	0.00	-6.80	40.98	74.00	-33.02
		4 804.27	36.52	H	AV	-22.50	-6.80	7.22	54.00	-46.78
		7 206.33	45.90	H	PK	0.00	-2.30	43.60	74.00	-30.40
		7 206.68	36.52	H	AV	-22.50	-2.30	11.72	54.00	-42.28
	2440	4 880.14	48.02	H	PK	0.00	-6.60	41.42	74.00	-32.58
		4 880.99	36.16	H	AV	-22.50	-6.60	7.06	54.00	-46.94
		7 320.70	46.29	H	PK	0.00	-1.70	44.59	74.00	-29.41
		7 320.05	36.12	H	AV	-22.50	-1.70	11.92	54.00	-42.08
	2480	4 960.94	47.46	H	PK	0.00	-6.50	40.96	74.00	-33.04
		4 960.26	36.30	H	AV	-22.50	-6.50	7.30	54.00	-46.70
		7 440.07	46.25	H	PK	0.00	-1.40	44.85	74.00	-29.15
		7 440.84	36.38	H	AV	-22.50	-1.40	12.48	54.00	-41.52
2DH5	2402	4 804.93	47.36	H	PK	0.00	-6.80	40.56	74.00	-33.44
		4 804.19	36.38	H	AV	-22.50	-6.80	7.08	54.00	-46.92
		7 206.54	46.17	H	PK	0.00	-2.30	43.87	74.00	-30.13
		7 206.78	35.72	H	AV	-22.50	-2.30	10.92	54.00	-43.08
	2440	4 880.80	47.82	H	PK	0.00	-6.60	41.22	74.00	-32.78
		4 880.57	36.36	H	AV	-22.50	-6.60	7.26	54.00	-46.74
		7 320.03	46.49	H	PK	0.00	-1.70	44.79	74.00	-29.21
		7 320.02	36.24	H	AV	-22.50	-1.70	12.04	54.00	-41.96
	2480	4 960.69	48.13	H	PK	0.00	-6.50	41.63	74.00	-32.37
		4 960.56	36.09	H	AV	-22.50	-6.50	7.09	54.00	-46.91
		7 440.77	46.14	H	PK	0.00	-1.40	44.74	74.00	-29.26
		7 440.62	36.03	H	AV	-22.50	-1.40	12.13	54.00	-41.87
3DH5	2402	4 804.57	47.40	H	PK	0.00	-6.80	40.60	74.00	-33.40
		4 804.36	36.27	H	AV	-22.50	-6.80	6.97	54.00	-47.03
		7 206.65	46.22	H	PK	0.00	-2.30	43.92	74.00	-30.08
		7 206.12	35.77	H	AV	-22.50	-2.30	10.97	54.00	-43.03
	2440	4 880.77	47.47	H	PK	0.00	-6.60	40.87	74.00	-33.13
		4 880.20	35.74	H	AV	-22.50	-6.60	6.64	54.00	-47.36
		7 320.62	46.30	H	PK	0.00	-1.70	44.60	74.00	-29.40
		7 320.30	36.23	H	AV	-22.50	-1.70	12.03	54.00	-41.97
	2480	4 960.72	47.43	H	PK	0.00	-6.50	40.93	74.00	-33.07
		4 960.85	35.67	H	AV	-22.50	-6.50	6.67	54.00	-47.33
		7 440.93	46.22	H	PK	0.00	-1.40	44.82	74.00	-29.18
		7 440.77	36.70	H	AV	-22.50	-1.40	12.80	54.00	-41.20

5.4.6. Radiated Band Edge Test Results

Plot 5-6 Radiated Lower Band Edge – DH5 SISO ANT1 2402 MHz – Peak

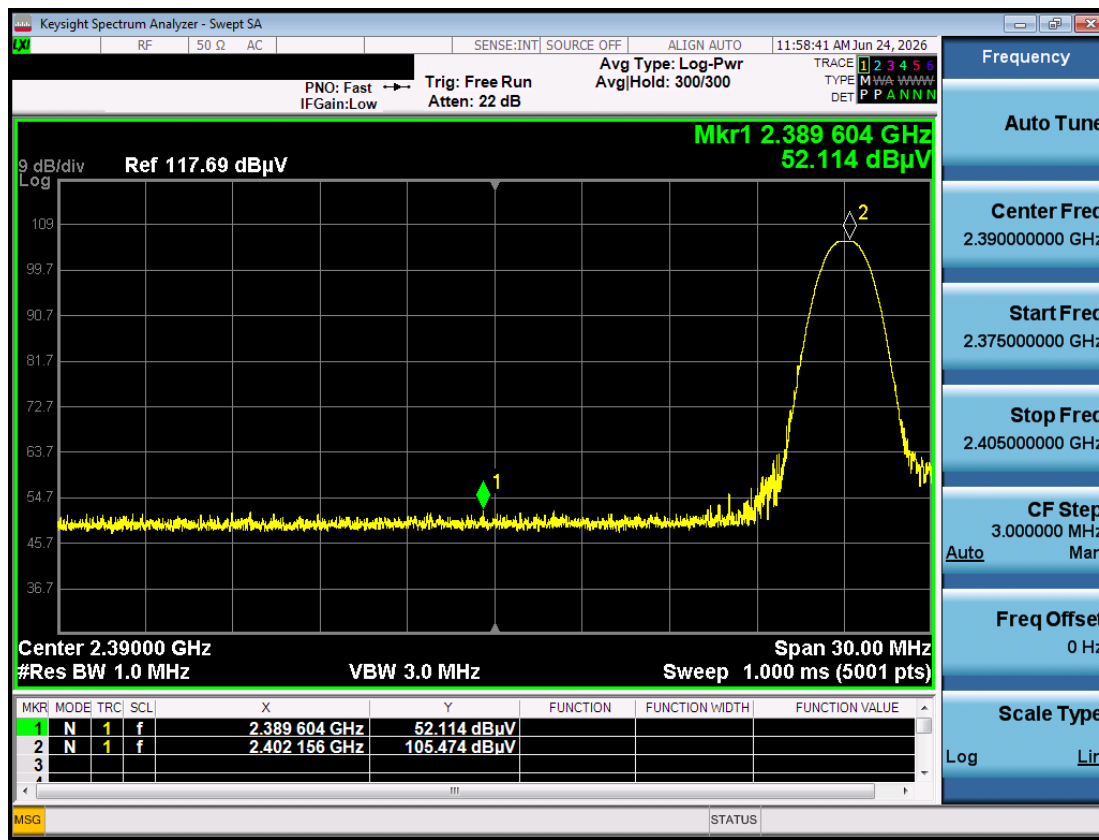


Table 5-6 Radiated Lower Band Edge – BT SISO ANT1

Test Mode	Tested Frequency [MHz]	Frequency [MHz]	Reading Value [dBμV]	Pol [H/V]	Detector Mode	DCCF [dB]	AFCL [dB/m]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]
DH5	2402	2 389.60	52.11	V	PK	0.00	-1.58	50.53	74.00	-23.47
		2 389.77	39.98	V	AV	-22.50	-1.58	15.90	54.00	-38.10
2DH5	2402	2 389.67	51.36	V	PK	0.00	-1.58	49.78	74.00	-24.22
		2 387.84	40.38	V	AV	-22.50	-1.58	16.30	54.00	-37.70
3DH5	2402	2 389.65	51.15	V	PK	0.00	-1.58	49.57	74.00	-24.43
		2 389.69	39.59	V	AV	-22.50	-1.58	15.51	54.00	-38.49