

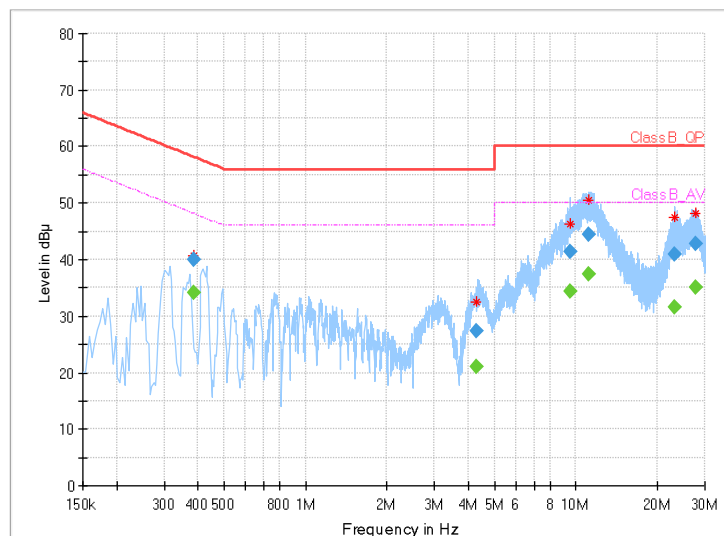


<b>Frequency Range</b>	150KHz ~ 30MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120Vac, 60Hz	<b>Environmental Conditions</b>	26deg. C, 51%RH
<b>Tested By</b>	Carl Xie		

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.384000	---	34.24	48.19	13.95	N	ON	9.6
0.384000	39.95	---	58.19	18.24	N	ON	9.6
4.276000	---	20.98	46.00	25.02	N	ON	9.7
4.276000	27.35	---	56.00	28.65	N	ON	9.7
9.572000	---	34.31	50.00	15.69	N	ON	10.3
9.572000	41.36	---	60.00	18.64	N	ON	10.3
11.204000	---	37.39	50.00	12.61	N	ON	10.5
11.204000	44.44	---	60.00	15.56	N	ON	10.5
23.196000	---	31.61	50.00	18.39	N	ON	11.4
23.196000	41.01	---	60.00	18.99	N	ON	11.4
27.808000	---	35.06	50.00	14.94	N	ON	11.4
27.808000	42.70	---	60.00	17.30	N	ON	11.4

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Limit value - Emission level
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.

Full Spectrum





### 3.3 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

#### 3.3.1 LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≤ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
	<b>B</b>	Indoor Access Point	1 Watt (30 dBm)
	√	Client devices	250mW (24 dBm)
U-NII-2A	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

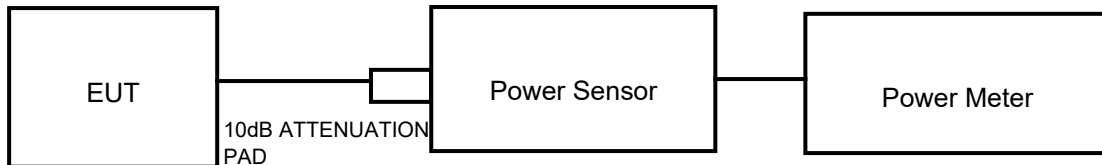
**NOTE:** Where B is the 26dB emission bandwidth in MHz.



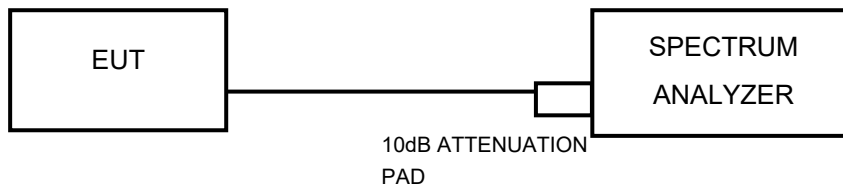
### 3.3.2 TEST SETUP

#### FOR POWER OUTPUT MEASUREMENT

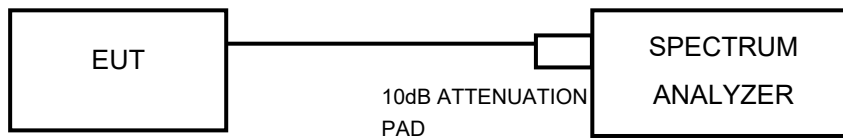
##### 802.11a, 802.11n/ac/ax (20MHz), 802.11 n/ac/ax (40MHz) TEST CONFIGURATION



##### 802.11ac/ax (80MHz) TEST CONFIGURATION



#### FOR 26dB BANDWIDTH



### 3.3.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Meter	ANRITSU	ML2495A	1506002	Feb. 22,22	Feb. 21,23
EXA Signal Analyzer	KEYSIGHT	N9010A-526	MY54510322	Feb. 18,22	Feb. 17,23
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.15,22	May.14,23
Power Sensor	ANRITSU	MA2411B	1339352	May. 06,22	May. 05,23

#### NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in RF Oven room.

### 3.3.4 TEST PROCEDURE

#### FOR POWER MEASUREMENT

##### For 802.11a, 802.11 n/ac/ax (20MHz), 802.11 n/ac/ax (40MHz)

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

##### For 802.11ac/ax (80MHz)

1. Measure the duty cycle,  $x$ , of the transmitter output signal as described in II.B.
2. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
3. Set RBW = 1 MHz.
4. Set VBW  $\geq$  3 MHz.
5. Number of points in sweep  $\geq 2 \times \text{span} / \text{RBW}$ . (This ensures that bin-to-bin spacing is  $\leq \text{RBW}/2$ , so that narrowband signals are not lost between frequency bins.)
6. Sweep time = auto.
7. Detector = power averaging (rms), if available. Otherwise, use sample detector mode.
8. Do not use sweep triggering. Allow the sweep to “free run.”
9. Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.
10. Add  $10 \log (1/x)$ , where  $x$  is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add  $10 \log (1/0.25) = 6 \text{ dB}$  if the duty cycle is 25%.



#### **FOR 99 PERCENT OCCUPIED BANDWIDTH**

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW  $\geq 3 \cdot$  RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

#### **FOR 26dB BANDWIDTH**

- 1) Set RBW = approximately 1% of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = Peak.
- 4) Trace mode = max hold.
- 5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

#### **FOR 6dB BANDWIDTH**

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW)  $\geq 3$  RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.



### 3.3.5 DEVIATION FROM TEST STANDARD

No deviation.

### 3.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



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**VERITAS**

### 3.3.7 TEST RESULTS

Please Refer to Appendix A/B Of this test report.

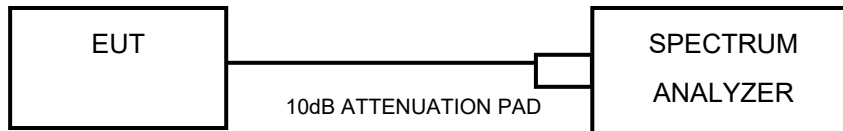


### 3.4 MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

#### 3.4.1 LIMITS OF MAXIMUM POWER SPECTRAL DENSITY MEASUREMENT

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Client devices	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

#### 3.4.2 TEST SETUP



#### 3.4.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.





### 3.4.4 TEST PROCEDURES

Using method SA-2(Band1/2/3)

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1 MHz, Set VBW  $\geq$  3 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to "free run".
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Add  $10 \log(1/x)$ , where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission).
- 7) Record the max value

Using method SA-2 (Band4)

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 300 KHz, Set VBW  $\geq$  1 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to "free run".
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Add  $10 \log(500\text{kHz}/\text{RBW})$  to the test result.  $10 \log(500\text{kHz}/300\text{KHZ}) = 2.22\text{dBm}$
- 7) Add  $10 \log(1/x)$ , where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission).
- 8) Record the max value

### 3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

### 3.4.6 EUT OPERATING CONDITIONS

Same as 3.1.7.



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### 3.4.7 TEST RESULTS

Please Refer to Appendix A/B Of this test report.



### 3.5 AUTOMATICALLY DISCONTINUE TRANSMISSION

#### 3.5.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

#### 3.5.2 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

#### 3.5.3 TEST RESULT

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission



### 3.6 ANTENNA REQUIREMENTS

#### 3.6.1 STANDARD APPLICABLE

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### 3.6.2 ANTENNA CONNECTED CONSTRUCTION

An embedded-in antenna design is used.

#### 3.6.3 ANTENNA GAIN

According to FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = GANT + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain = 10 log(NANT / Nss) dB;

For power measurements on IEEE 802.11 devices, Array Gain = 0 dB for NANT ≤ 4;

The EUT supports Cyclic Delay Diversity (CDD) mode,

For power measurements, the directional GANT is set equal to the antenna having the highest gain as following formulas.

$$\text{Directional Gain} = \text{Max.Gain} + \text{Array Gain.}$$

For PSD measurements, the directional GANT calculation is following F)2)f)ii of KDB 662911 D01 v02r01.

The directional gain is calculated as following table.

5GHz Band 1/2 3/4	Ant 1 (dBi)	Ant 2 (dBi)	DG For Power (dBi)	DG For PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	0.5	0.5	0.5	3.51	0.00	0.00

NOTE :DG= directional gain, Power Limit Reduction = DG For Power Gain -6dBi < 0

PSD Limit Reduction = DG For PSD - 6dBi < 0. Therefore, it is not necessary to reduce maximum peak output power and PSD limit.



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## 4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



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## 5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.



### 6 APPENDIX A: RLAN MAXIMUM CONDUCTED OUTPUT POWER TEST RESULT CHANNEL POWER

Test Mode	Antenna	Freq(MHz)	Result [dBm]	Limit [dBm]	Verdict
11A-CDD	Ant1	5180	16.94	≤23.98	PASS
	Ant2	5180	16.93	≤23.98	PASS
	total	5180	19.95	≤23.98	PASS
	Ant1	5200	17	≤23.98	PASS
	Ant2	5200	16.97	≤23.98	PASS
	total	5200	20	≤23.98	PASS
	Ant1	5240	17.15	≤23.98	PASS
	Ant2	5240	17.39	≤23.98	PASS
	total	5240	20.28	≤23.98	PASS
	Ant1	5260	17.19	≤23.81	PASS
	Ant2	5260	17.52	≤23.98	PASS
	total	5260	20.37	≤23.81	PASS
	Ant1	5300	17.06	≤23.90	PASS
	Ant2	5300	17	≤23.98	PASS
	total	5300	20.04	≤23.90	PASS
	Ant1	5320	16.85	≤23.81	PASS
	Ant2	5320	16.89	≤23.98	PASS
	total	5320	19.88	≤23.81	PASS
	Ant1	5500	17.12	≤23.98	PASS
	Ant2	5500	16.98	≤23.85	PASS
	total	5500	20.06	≤23.85	PASS
	Ant1	5580	16.82	≤23.85	PASS
	Ant2	5580	17.09	≤23.98	PASS
	total	5580	19.97	≤23.85	PASS
	Ant1	5700	17.05	≤23.97	PASS
	Ant2	5700	16.85	≤23.90	PASS
	total	5700	19.96	≤23.90	PASS
Ant1	5745	16.98	≤30.00	PASS	



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	Ant2	5745	17.09	≤30.00	PASS
	total	5745	20.05	≤30.00	PASS
	Ant1	5785	16.85	≤30.00	PASS
	Ant2	5785	17.17	≤30.00	PASS
	total	5785	20.02	≤30.00	PASS
	Ant1	5825	16.92	≤30.00	PASS
	Ant2	5825	16.93	≤30.00	PASS
	total	5825	19.94	≤30.00	PASS
11N20MIMO	Ant1	5180	16.23	≤23.98	PASS
	Ant2	5180	16.26	≤23.98	PASS
	total	5180	19.26	≤23.98	PASS
	Ant1	5200	16.09	≤23.98	PASS
	Ant2	5200	16.12	≤23.98	PASS
	total	5200	19.12	≤23.98	PASS
	Ant1	5240	15.77	≤23.98	PASS
	Ant2	5240	16.10	≤23.98	PASS
	total	5240	18.95	≤23.98	PASS
	Ant1	5260	15.81	≤23.98	PASS
	Ant2	5260	16.22	≤23.98	PASS
	total	5260	19.03	≤23.98	PASS
	Ant1	5300	16.16	≤23.98	PASS
	Ant2	5300	16.28	≤23.98	PASS
	total	5300	19.23	≤23.98	PASS
	Ant1	5320	16	≤23.98	PASS
	Ant2	5320	16.12	≤23.98	PASS
	total	5320	19.07	≤23.98	PASS
	Ant1	5500	16.26	≤23.98	PASS
	Ant2	5500	16.24	≤23.98	PASS
	total	5500	19.26	≤23.98	PASS
	Ant1	5580	15.94	≤23.98	PASS
	Ant2	5580	16.37	≤23.98	PASS
	total	5580	19.17	≤23.98	PASS
	Ant1	5700	16.16	≤23.98	PASS
	Ant2	5700	16.03	≤23.98	PASS
	total	5700	19.11	≤23.98	PASS

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	Ant1	5745	16.24	≤30.00	PASS
	Ant2	5745	16.36	≤30.00	PASS
	total	5745	19.31	≤30.00	PASS
	Ant1	5785	16.02	≤30.00	PASS
	Ant2	5785	16.45	≤30.00	PASS
	total	5785	19.25	≤30.00	PASS
	Ant1	5825	16.08	≤30.00	PASS
	Ant2	5825	16.30	≤30.00	PASS
	total	5825	19.20	≤30.00	PASS
11N40MIMO	Ant1	5190	15.35	≤23.98	PASS
	Ant2	5190	14.96	≤23.98	PASS
	total	5190	18.17	≤23.98	PASS
	Ant1	5230	15.44	≤23.98	PASS
	Ant2	5230	15.23	≤23.98	PASS
	total	5230	18.35	≤23.98	PASS
	Ant1	5270	15.67	≤23.98	PASS
	Ant2	5270	15.30	≤23.98	PASS
	total	5270	18.5	≤23.98	PASS
	Ant1	5310	15.25	≤23.98	PASS
	Ant2	5310	14.92	≤23.98	PASS
	total	5310	18.1	≤23.98	PASS
	Ant1	5510	15.54	≤23.98	PASS
	Ant2	5510	15.09	≤23.98	PASS
	total	5510	18.33	≤23.98	PASS
	Ant1	5550	15.27	≤23.98	PASS
	Ant2	5550	14.96	≤23.98	PASS
	total	5550	18.13	≤23.98	PASS
	Ant1	5670	15.01	≤23.98	PASS
	Ant2	5670	14.86	≤23.98	PASS
	total	5670	17.95	≤23.98	PASS
	Ant1	5755	15.15	≤30.00	PASS
	Ant2	5755	15.19	≤30.00	PASS
	total	5755	18.18	≤30.00	PASS
	Ant1	5795	14.73	≤30.00	PASS
	Ant2	5795	15.17	≤30.00	PASS



	total	5795	17.97	≤30.00	PASS
11AC20MIMO	Ant1	5180	16.23	≤23.98	PASS
	Ant2	5180	16.21	≤23.98	PASS
	total	5180	19.23	≤23.98	PASS
	Ant1	5200	16.24	≤23.98	PASS
	Ant2	5200	16.22	≤23.98	PASS
	total	5200	19.24	≤23.98	PASS
	Ant1	5240	15.81	≤23.98	PASS
	Ant2	5240	16.11	≤23.98	PASS
	total	5240	18.97	≤23.98	PASS
	Ant1	5260	15.91	≤23.98	PASS
	Ant2	5260	16.27	≤23.98	PASS
	total	5260	19.10	≤23.98	PASS
	Ant1	5300	16.25	≤23.98	PASS
	Ant2	5300	16.32	≤23.98	PASS
	total	5300	19.30	≤23.98	PASS
	Ant1	5320	16.05	≤23.98	PASS
	Ant2	5320	16.14	≤23.98	PASS
	total	5320	19.11	≤23.98	PASS
	Ant1	5500	16.13	≤23.98	PASS
	Ant2	5500	16.23	≤23.98	PASS
	total	5500	19.19	≤23.98	PASS
	Ant1	5580	15.97	≤23.98	PASS
	Ant2	5580	16.40	≤23.98	PASS
	total	5580	19.20	≤23.98	PASS
	Ant1	5700	16.12	≤23.98	PASS
	Ant2	5700	16.04	≤23.98	PASS
	total	5700	19.09	≤23.98	PASS
	Ant1	5745	16.20	≤30.00	PASS
	Ant2	5745	16.33	≤30.00	PASS
	total	5745	19.28	≤30.00	PASS
Ant1	5785	16.02	≤30.00	PASS	
Ant2	5785	16.47	≤30.00	PASS	
total	5785	19.26	≤30.00	PASS	
Ant1	5825	16.19	≤30.00	PASS	



	Ant2	5825	16.39	≤30.00	PASS
	total	5825	19.30	≤30.00	PASS
11AC40MIMO	Ant1	5190	15.4	≤23.98	PASS
	Ant2	5190	14.97	≤23.98	PASS
	total	5190	18.2	≤23.98	PASS
	Ant1	5230	15.47	≤23.98	PASS
	Ant2	5230	15.27	≤23.98	PASS
	total	5230	18.38	≤23.98	PASS
	Ant1	5270	14.89	≤23.98	PASS
	Ant2	5270	14.80	≤23.98	PASS
	total	5270	17.86	≤23.98	PASS
	Ant1	5310	15.20	≤23.98	PASS
	Ant2	5310	14.93	≤23.98	PASS
	total	5310	18.08	≤23.98	PASS
	Ant1	5510	15.39	≤23.98	PASS
	Ant2	5510	15.05	≤23.98	PASS
	total	5510	18.23	≤23.98	PASS
	Ant1	5550	15.31	≤23.98	PASS
	Ant2	5550	15.05	≤23.98	PASS
	total	5550	18.19	≤23.98	PASS
	Ant1	5670	15.03	≤23.98	PASS
	Ant2	5670	14.85	≤23.98	PASS
	total	5670	17.95	≤23.98	PASS
	Ant1	5755	15.09	≤30.00	PASS
	Ant2	5755	15.23	≤30.00	PASS
	total	5755	18.17	≤30.00	PASS
	Ant1	5795	14.84	≤30.00	PASS
	Ant2	5795	15.21	≤30.00	PASS
	total	5795	18.04	≤30.00	PASS
11AC80MIMO	Ant1	5210	14.04	≤23.98	PASS
	Ant2	5210	14.16	≤23.98	PASS
	total	5210	17.11	≤23.98	PASS
	Ant1	5290	13.95	≤23.98	PASS
	Ant2	5290	14.15	≤23.98	PASS
	total	5290	17.06	≤23.98	PASS



	Ant1	5530	13.82	≤23.98	PASS
	Ant2	5530	14.03	≤23.98	PASS
	total	5530	16.94	≤23.98	PASS
	Ant1	5610	13.82	≤23.98	PASS
	Ant2	5610	14.15	≤23.98	PASS
	total	5610	17	≤23.98	PASS
	Ant1	5775	13.85	≤30.00	PASS
	Ant2	5775	14.45	≤30.00	PASS
	total	5775	17.17	≤30.00	PASS
11AC160MIMO	Ant1	5250	12.6	≤23.98	PASS
	Ant2	5250	13.19	≤23.98	PASS
	total	5250	15.92	≤23.98	PASS
	Ant1	5570	12.97	≤23.98	PASS
	Ant2	5570	13.31	≤23.98	PASS
	total	5570	16.15	≤23.98	PASS
11AX20MIMO	Ant1	5180	16.16	≤23.98	PASS
	Ant2	5180	16.28	≤23.98	PASS
	total	5180	19.23	≤23.98	PASS
	Ant1	5200	16.41	≤23.98	PASS
	Ant2	5200	16.33	≤23.98	PASS
	total	5200	19.38	≤23.98	PASS
	Ant1	5240	15.77	≤23.98	PASS
	Ant2	5240	16.22	≤23.98	PASS
	total	5240	19.01	≤23.98	PASS
	Ant1	5260	15.87	≤23.98	PASS
	Ant2	5260	16.29	≤23.98	PASS
	total	5260	19.10	≤23.98	PASS
	Ant1	5300	16.21	≤23.98	PASS
	Ant2	5300	16.33	≤23.98	PASS
	total	5300	19.28	≤23.98	PASS
	Ant1	5320	15.97	≤23.98	PASS
	Ant2	5320	16.20	≤23.98	PASS
	total	5320	19.10	≤23.98	PASS
	Ant1	5500	16.31	≤23.98	PASS
	Ant2	5500	16.36	≤23.98	PASS



	total	5500	19.35	≤23.98	PASS	
	Ant1	5580	16.01	≤23.98	PASS	
	Ant2	5580	16.52	≤23.98	PASS	
	total	5580	19.28	≤23.98	PASS	
	Ant1	5700	16.18	≤23.98	PASS	
	Ant2	5700	16.18	≤23.98	PASS	
	total	5700	19.19	≤23.98	PASS	
	Ant1	5745	16.14	≤30.00	PASS	
	Ant2	5745	16.49	≤30.00	PASS	
	total	5745	19.33	≤30.00	PASS	
	Ant1	5785	16.03	≤30.00	PASS	
	Ant2	5785	16.57	≤30.00	PASS	
	total	5785	19.32	≤30.00	PASS	
	Ant1	5825	16.09	≤30.00	PASS	
	Ant2	5825	16.49	≤30.00	PASS	
	total	5825	19.30	≤30.00	PASS	
11AX40MIMO	Ant1	5190	14.97	≤23.98	PASS	
	Ant2	5190	14.88	≤23.98	PASS	
	total	5190	17.94	≤23.98	PASS	
	Ant1	5230	15.03	≤23.98	PASS	
	Ant2	5230	15.08	≤23.98	PASS	
	total	5230	18.07	≤23.98	PASS	
	Ant1	5270	15.23	≤23.98	PASS	
	Ant2	5270	15.15	≤23.98	PASS	
	total	5270	18.20	≤23.98	PASS	
	Ant1	5310	14.84	≤23.98	PASS	
	Ant2	5310	14.83	≤23.98	PASS	
	total	5310	17.85	≤23.98	PASS	
	Ant1	5510	15.01	≤23.98	PASS	
	Ant2	5510	14.94	≤23.98	PASS	
	total	5510	17.99	≤23.98	PASS	
	Ant1	5550	14.79	≤23.98	PASS	
	Ant2	5550	14.87	≤23.98	PASS	
	total	5550	17.84	≤23.98	PASS	
		Ant1	5670	15.30	≤23.98	PASS



	Ant2	5670	15.18	≤23.98	PASS
	total	5670	18.25	≤23.98	PASS
	Ant1	5755	14.76	≤30.00	PASS
	Ant2	5755	15.01	≤30.00	PASS
	total	5755	17.90	≤30.00	PASS
	Ant1	5795	15.05	≤30.00	PASS
	Ant2	5795	15.55	≤30.00	PASS
	total	5795	18.32	≤30.00	PASS
11AX80MIMO	Ant1	5210	13.88	≤23.98	PASS
	Ant2	5210	13.91	≤23.98	PASS
	total	5210	16.91	≤23.98	PASS
	Ant1	5290	13.87	≤23.98	PASS
	Ant2	5290	13.95	≤23.98	PASS
	total	5290	16.92	≤23.98	PASS
	Ant1	5530	14.35	≤23.98	PASS
	Ant2	5530	14.26	≤23.98	PASS
	total	5530	17.32	≤23.98	PASS
	Ant1	5610	13.79	≤23.98	PASS
	Ant2	5610	13.89	≤23.98	PASS
	total	5610	16.85	≤23.98	PASS
	Ant1	5690	14.21	≤23.98	PASS
	Ant2	5690	14.22	≤23.98	PASS
	total	5690	17.23	≤23.98	PASS
	Ant1	5775	13.61	≤30.00	PASS
	Ant2	5775	14.23	≤30.00	PASS
	total	5775	16.94	≤30.00	PASS
11AX160MIMO	Ant1	5250	12.73	≤23.98	PASS
	Ant2	5250	13.13	≤23.98	PASS
	total	5250	15.94	≤23.98	PASS
	Ant1	5570	13.02	≤23.98	PASS
	Ant2	5570	13.23	≤23.98	PASS
	total	5570	16.14	≤23.98	PASS



EMISSION BANDWIDTH

TEST RESULT

TestMode	Antenna	Freq(MHz)	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A-CDD	Ant1	5180	19.600	5170.040	5189.640	---	---
	Ant2	5180	19.840	5170.320	5190.160	---	---
	Ant1	5200	19.800	5189.760	5209.560	---	---
	Ant2	5200	20.160	5190.120	5210.280	---	---
	Ant1	5240	20.000	5229.760	5249.760	---	---
	Ant2	5240	19.680	5230.280	5249.960	---	---
	Ant1	5260	19.120	5250.560	5269.680	---	---
	Ant2	5260	20.160	5250.040	5270.200	---	---
	Ant1	5300	19.520	5290.040	5309.560	---	---
	Ant2	5300	19.960	5290.200	5310.160	---	---
	Ant1	5320	19.080	5310.400	5329.480	---	---
	Ant2	5320	19.880	5310.360	5330.240	---	---
	Ant1	5500	20.280	5489.920	5510.200	---	---
	Ant2	5500	19.280	5490.440	5509.720	---	---
	Ant1	5580	19.280	5570.360	5589.640	---	---
	Ant2	5580	20.160	5570.000	5590.160	---	---
	Ant1	5700	19.800	5689.800	5709.600	---	---
	Ant2	5700	19.520	5690.160	5709.680	---	---
	Ant1	5745	19.600	5735.320	5754.920	---	---
	Ant2	5745	20.520	5734.720	5755.240	---	---
Ant1	5785	19.320	5775.200	5794.520	---	---	
Ant2	5785	20.120	5775.040	5795.160	---	---	
Ant1	5825	20.320	5815.120	5835.440	---	---	
Ant2	5825	20.200	5814.960	5835.160	---	---	
11N20MIMO	Ant1	5180	21.440	5169.120	5190.560	---	---
	Ant2	5180	21.040	5169.520	5190.560	---	---
	Ant1	5200	20.760	5189.640	5210.400	---	---
	Ant2	5200	20.520	5189.840	5210.360	---	---
	Ant1	5240	20.760	5229.720	5250.480	---	---



	Ant2	5240	20.720	5229.800	5250.520	---	---
	Ant1	5260	20.560	5249.640	5270.200	---	---
	Ant2	5260	20.560	5249.960	5270.520	---	---
	Ant1	5300	21.160	5289.400	5310.560	---	---
	Ant2	5300	20.480	5289.880	5310.360	---	---
	Ant1	5320	20.920	5309.640	5330.560	---	---
	Ant2	5320	20.360	5309.920	5330.280	---	---
	Ant1	5500	20.840	5489.560	5510.400	---	---
	Ant2	5500	21.000	5489.480	5510.480	---	---
	Ant1	5580	20.960	5569.680	5590.640	---	---
	Ant2	5580	22.080	5568.960	5591.040	---	---
	Ant1	5700	20.680	5689.560	5710.240	---	---
	Ant2	5700	20.800	5689.600	5710.400	---	---
	Ant1	5745	21.120	5734.400	5755.520	---	---
	Ant2	5745	20.360	5735.000	5755.360	---	---
	Ant1	5785	20.440	5774.880	5795.320	---	---
	Ant2	5785	20.280	5774.840	5795.120	---	---
	11N40MIMO	Ant1	5825	20.840	5814.760	5835.600	---
Ant2		5825	20.440	5814.680	5835.120	---	---
Ant1		5190	40.320	5169.840	5210.160	---	---
Ant2		5190	39.840	5170.160	5210.000	---	---
Ant1		5230	39.840	5210.080	5249.920	---	---
Ant2		5230	40.160	5210.000	5250.160	---	---
Ant1		5270	39.440	5250.160	5289.600	---	---
Ant2		5270	39.280	5250.320	5289.600	---	---
Ant1		5310	40.160	5290.160	5330.320	---	---
Ant2		5310	40.080	5289.920	5330.000	---	---
Ant1		5510	39.840	5490.000	5529.840	---	---
Ant2		5510	40.000	5490.080	5530.080	---	---
Ant1		5550	40.240	5529.840	5570.080	---	---
Ant2		5550	40.000	5530.000	5570.000	---	---
Ant1		5670	39.920	5650.080	5690.000	---	---
Ant2		5670	40.320	5649.600	5689.920	---	---
Ant1	5755	40.000	5734.840	5774.840	---	---	
Ant2	5755	39.920	5735.160	5775.080	---	---	





	Ant1	5795	39.840	5775.000	5814.840	---	---
	Ant2	5795	39.440	5775.080	5814.520	---	---
11AC20MIMO	Ant1	5180	20.480	5169.760	5190.240	---	---
	Ant2	5180	20.800	5169.720	5190.520	---	---
	Ant1	5200	20.640	5189.560	5210.200	---	---
	Ant2	5200	20.600	5189.760	5210.360	---	---
	Ant1	5240	20.360	5230.040	5250.400	---	---
	Ant2	5240	20.840	5229.360	5250.200	---	---
	Ant1	5260	20.160	5249.960	5270.120	---	---
	Ant2	5260	21.080	5249.120	5270.200	---	---
	Ant1	5300	20.160	5289.960	5310.120	---	---
	Ant2	5300	20.640	5289.600	5310.240	---	---
	Ant1	5320	20.000	5310.080	5330.080	---	---
	Ant2	5320	21.080	5309.520	5330.600	---	---
	Ant1	5500	20.440	5489.880	5510.320	---	---
	Ant2	5500	20.840	5489.840	5510.680	---	---
	Ant1	5580	20.560	5569.880	5590.440	---	---
	Ant2	5580	20.800	5569.520	5590.320	---	---
	Ant1	5700	20.760	5689.800	5710.560	---	---
	Ant2	5700	20.400	5689.800	5710.200	---	---
	Ant1	5745	20.880	5734.680	5755.560	---	---
	Ant2	5745	20.960	5734.320	5755.280	---	---
Ant1	5785	20.280	5775.000	5795.280	---	---	
Ant2	5785	20.720	5774.600	5795.320	---	---	
Ant1	5825	20.440	5814.920	5835.360	---	---	
Ant2	5825	21.040	5814.640	5835.680	---	---	
11AC40MIMO	Ant1	5190	39.840	5170.160	5210.000	---	---
	Ant2	5190	40.000	5170.160	5210.160	---	---
	Ant1	5230	39.680	5210.240	5249.920	---	---
	Ant2	5230	40.160	5209.920	5250.080	---	---
	Ant1	5270	39.840	5250.160	5290.000	---	---
	Ant2	5270	39.680	5250.160	5289.840	---	---
	Ant1	5310	40.000	5290.000	5330.000	---	---
	Ant2	5310	39.600	5290.320	5329.920	---	---
	Ant1	5510	39.760	5490.080	5529.840	---	---



	Ant2	5510	39.840	5490.240	5530.080	---	---
	Ant1	5550	40.160	5529.840	5570.000	---	---
	Ant2	5550	39.760	5529.920	5569.680	---	---
	Ant1	5670	40.560	5649.680	5690.240	---	---
	Ant2	5670	39.760	5650.080	5689.840	---	---
	Ant1	5755	39.680	5735.080	5774.760	---	---
	Ant2	5755	39.520	5735.320	5774.840	---	---
	Ant1	5795	39.680	5775.240	5814.920	---	---
	Ant2	5795	39.680	5775.160	5814.840	---	---
11AC80MIMO	Ant1	5210	82.080	5168.720	5250.800	---	---
	Ant2	5210	81.440	5169.520	5250.960	---	---
	Ant1	5290	82.560	5249.200	5331.760	---	---
	Ant2	5290	81.600	5249.040	5330.640	---	---
	Ant1	5530	81.600	5489.200	5570.800	---	---
	Ant2	5530	81.760	5488.880	5570.640	---	---
	Ant1	5610	80.960	5569.360	5650.320	---	---
	Ant2	5610	81.760	5569.040	5650.800	---	---
	Ant1	5775	83.520	5732.600	5816.120	---	---
	Ant2	5775	82.400	5733.080	5815.480	---	---
11AC160MIMO	Ant1	5250	166.080	5166.800	5332.880	---	---
	Ant2	5250	164.800	5168.080	5332.880	---	---
	Ant1	5250_UNII-1	83.2	5166.800	5250	---	---
	Ant2	5250_UNII-1	81.92	5168.080	5250	---	---
	Ant1	5250_UNII-2A	82.88	5250	5332.880	---	---
	Ant2	5250_UNII-2A	82.88	5250	5332.880	---	---
	Ant1	5570	164.800	5487.120	5651.920	---	---
	Ant2	5570	164.160	5488.080	5652.240	---	---
11AX20MIMO	Ant1	5180	20.880	5169.560	5190.440	---	---
	Ant2	5180	21.600	5169.400	5191.000	---	---
	Ant1	5200	20.960	5189.480	5210.440	---	---
	Ant2	5200	21.600	5189.440	5211.040	---	---
	Ant1	5240	20.760	5229.680	5250.440	---	---
	Ant2	5240	21.080	5229.320	5250.400	---	---
	Ant1	5260	21.160	5249.560	5270.720	---	---
	Ant2	5260	20.800	5249.640	5270.440	---	---



	Ant1	5300	21.040	5289.560	5310.600	---	---
	Ant2	5300	20.840	5289.480	5310.320	---	---
	Ant1	5320	21.320	5309.360	5330.680	---	---
	Ant2	5320	20.880	5309.400	5330.280	---	---
	Ant1	5500	20.960	5489.560	5510.520	---	---
	Ant2	5500	20.760	5489.680	5510.440	---	---
	Ant1	5580	21.080	5569.600	5590.680	---	---
	Ant2	5580	21.040	5569.480	5590.520	---	---
	Ant1	5700	20.920	5689.720	5710.640	---	---
	Ant2	5700	21.480	5689.200	5710.680	---	---
	Ant1	5745	21.040	5734.600	5755.640	---	---
	Ant2	5745	21.360	5734.160	5755.520	---	---
	Ant1	5785	21.760	5774.720	5796.480	---	---
	Ant2	5785	20.680	5774.680	5795.360	---	---
	Ant1	5825	20.920	5814.600	5835.520	---	---
	Ant2	5825	21.160	5814.360	5835.520	---	---
11AX40MIMO	Ant1	5190	40.080	5169.920	5210.000	---	---
	Ant2	5190	40.320	5169.840	5210.160	---	---
	Ant1	5230	40.400	5209.680	5250.080	---	---
	Ant2	5230	40.320	5209.760	5250.080	---	---
	Ant1	5270	40.320	5249.920	5290.240	---	---
	Ant2	5270	40.880	5249.360	5290.240	---	---
	Ant1	5310	40.720	5289.680	5330.400	---	---
	Ant2	5310	40.080	5290.000	5330.080	---	---
	Ant1	5510	40.160	5489.840	5530.000	---	---
	Ant2	5510	40.400	5489.680	5530.080	---	---
	Ant1	5550	40.480	5530.000	5570.480	---	---
	Ant2	5550	40.400	5529.840	5570.240	---	---
	Ant1	5670	40.400	5649.840	5690.240	---	---
	Ant2	5670	40.320	5649.840	5690.160	---	---
	Ant1	5755	40.320	5734.840	5775.160	---	---
	Ant2	5755	40.320	5734.760	5775.080	---	---
Ant1	5795	40.320	5774.840	5815.160	---	---	
Ant2	5795	40.240	5774.920	5815.160	---	---	
11AX80MIMO	Ant1	5210	81.920	5169.360	5251.280	---	---



	Ant2	5210	81.280	5169.360	5250.640	---	---
	Ant1	5290	81.280	5249.520	5330.800	---	---
	Ant2	5290	82.560	5248.560	5331.120	---	---
	Ant1	5530	82.080	5488.880	5570.960	---	---
	Ant2	5530	82.880	5488.400	5571.280	---	---
	Ant1	5610	82.400	5568.560	5650.960	---	---
	Ant2	5610	81.600	5569.520	5651.120	---	---
	Ant1	5690	83.040	5648.240	5731.280	---	---
	Ant2	5690	84.320	5646.960	5731.280	---	---
	Ant1	5690_UNII-2C	76.76	5648.240	5725	---	---
	Ant2	5690_UNII-2C	78.04	5646.960	5725	---	---
	Ant1	5690_UNII-3	6.28	5725	5731.280	---	---
	Ant2	5690_UNII-3	6.28	5725	5731.280	---	---
	Ant1	5775	81.920	5734.200	5816.120	---	---
	Ant2	5775	82.080	5733.560	5815.640	---	---
11AX160MIMO	Ant1	5250	164.800	5167.760	5332.560	---	---
	Ant2	5250	163.840	5168.080	5331.920	---	---
	Ant1	5250_UNII-1	82.24	5167.760	5250	---	---
	Ant2	5250_UNII-1	81.92	5168.080	5250	---	---
	Ant1	5250_UNII-2A	82.56	5250	5332.560	---	---
	Ant2	5250_UNII-2A	81.92	5250	5331.920	---	---
	Ant1	5570	163.200	5488.080	5651.280	---	---
	Ant2	5570	165.440	5487.120	5652.560	---	---

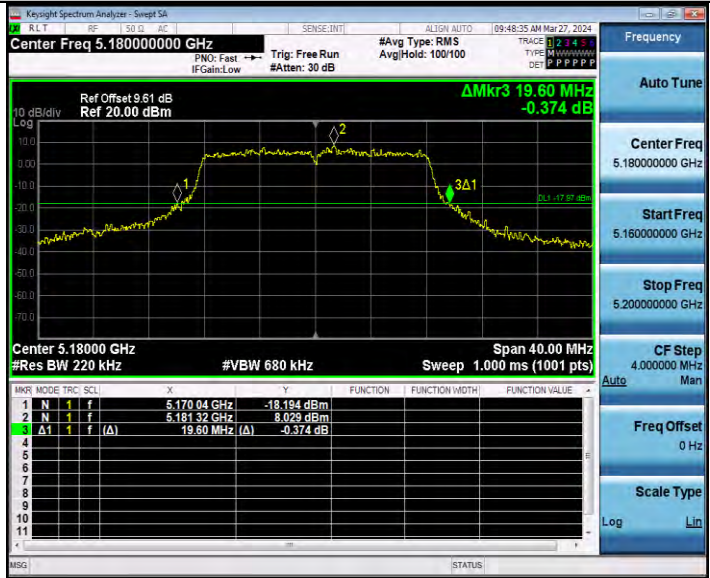


BUREAU VERITAS

Test Report No.: W7L-P24040006RF03

### TEST GRAPHS

11A-CDD\_Ant1\_5180



11A-CDD\_Ant2\_5180

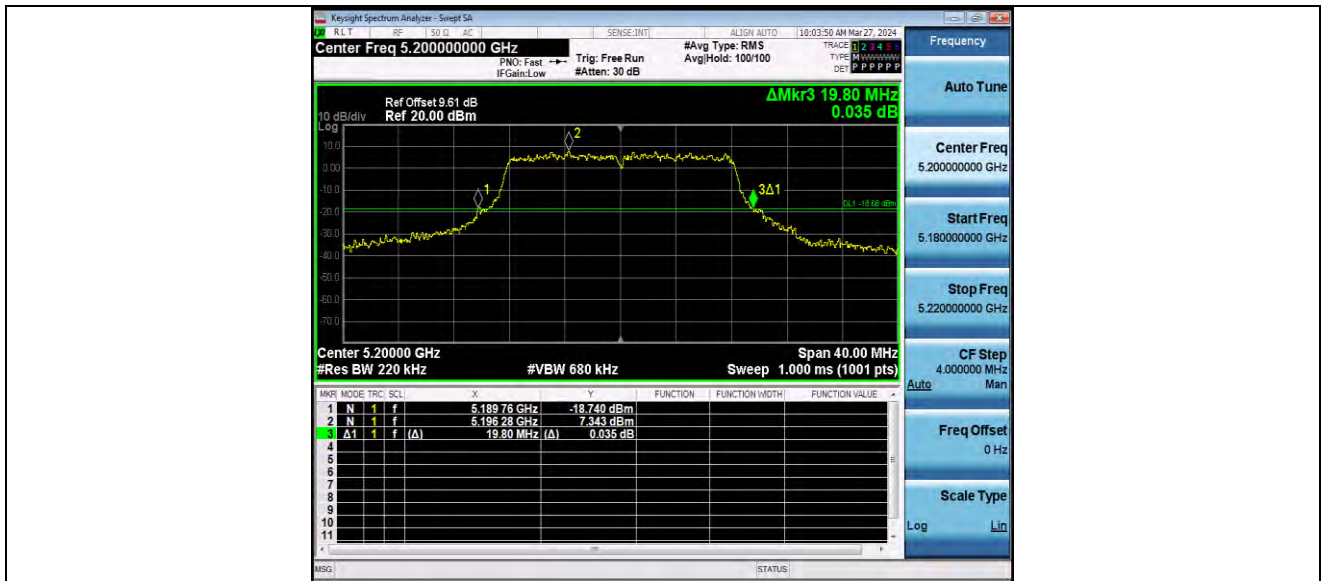


11A-CDD\_Ant1\_5200



BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11A-CDD\_Ant2\_5200



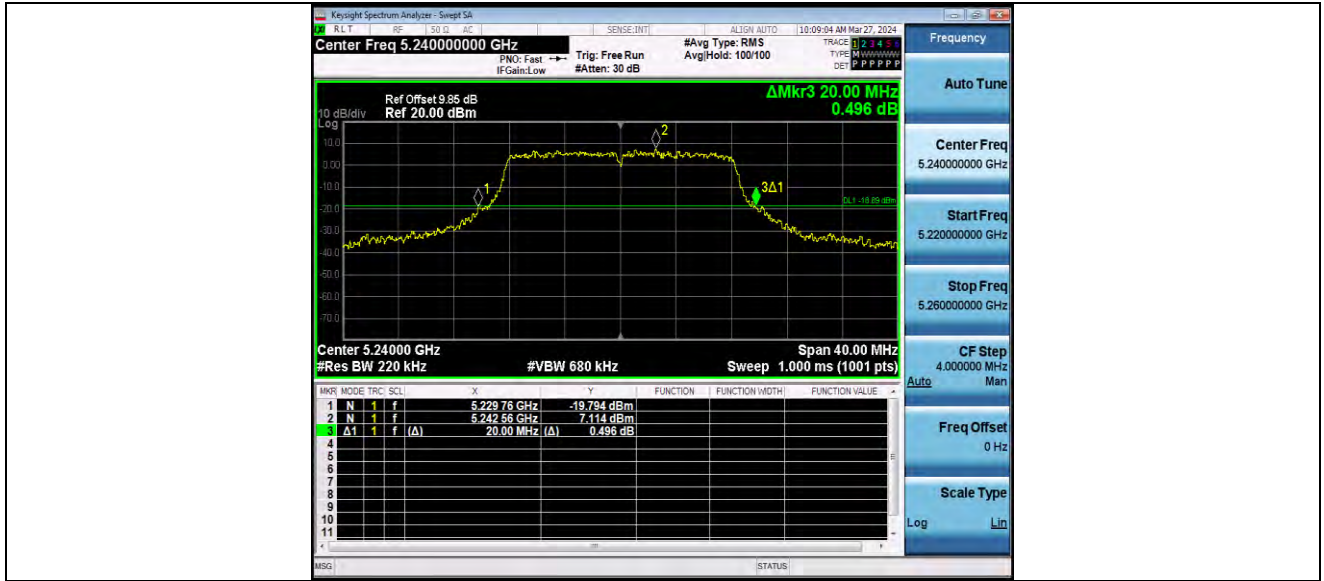
11A-CDD\_Ant1\_5240



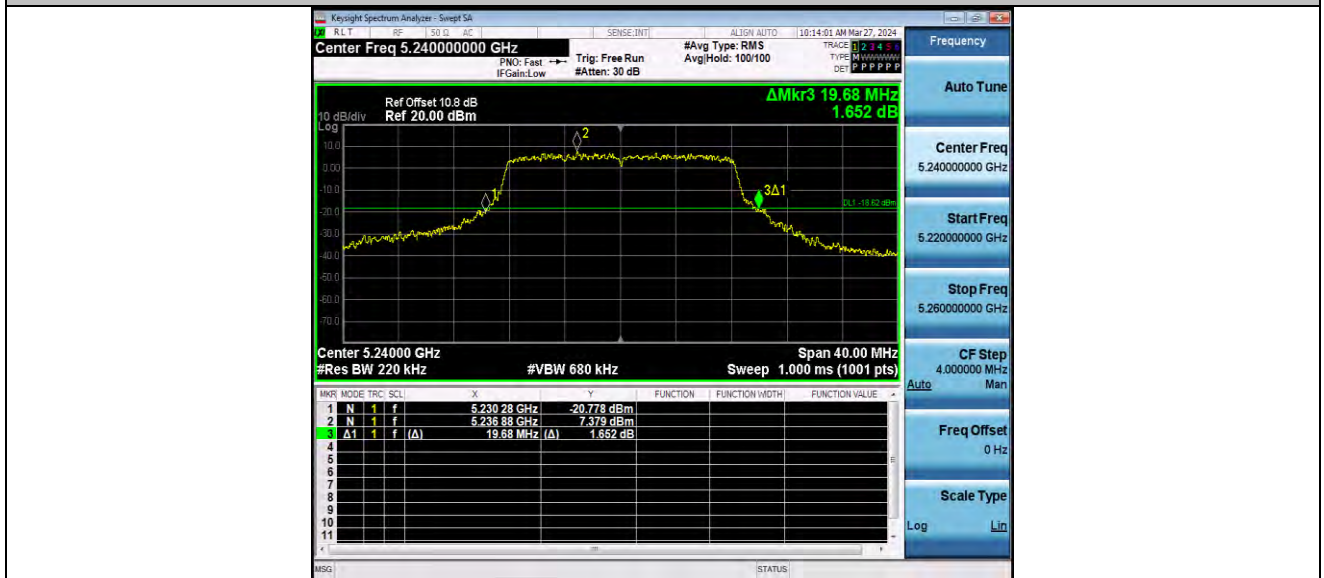


BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11A-CDD\_Ant2\_5240

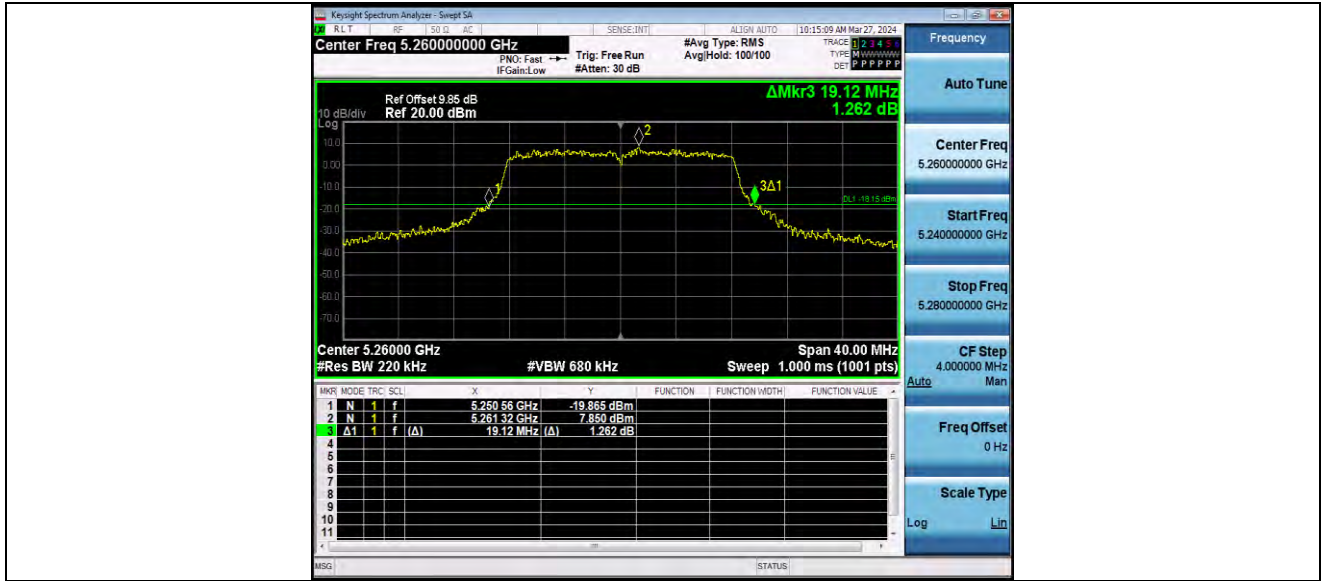


11A-CDD\_Ant1\_5260

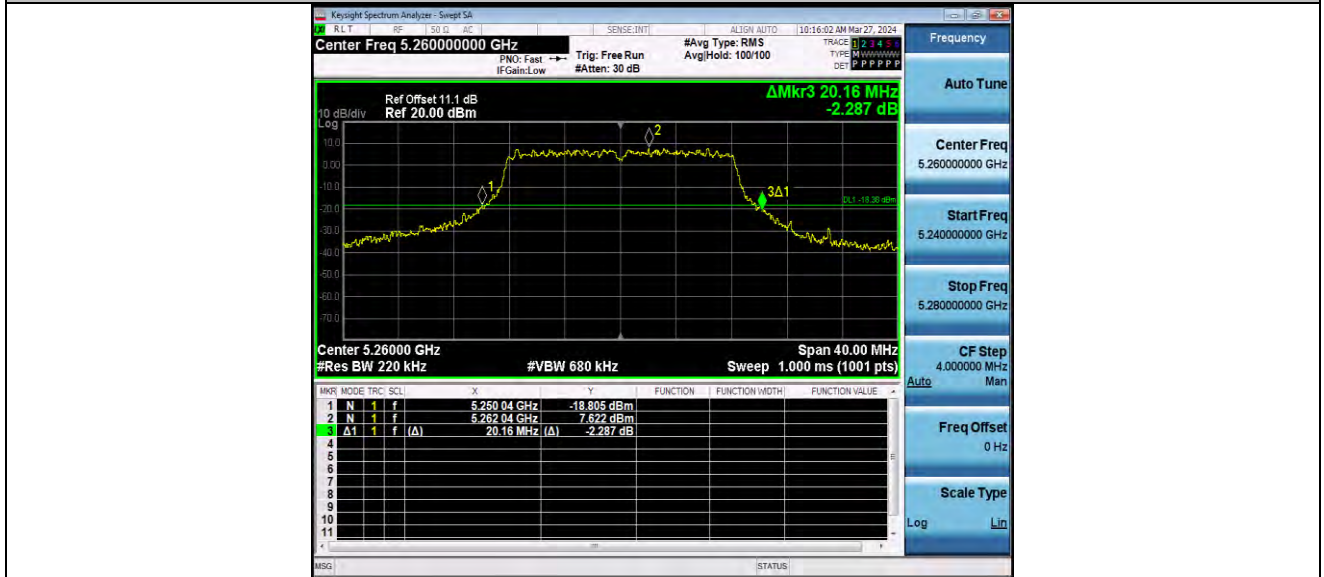


BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11A-CDD\_Ant2\_5260



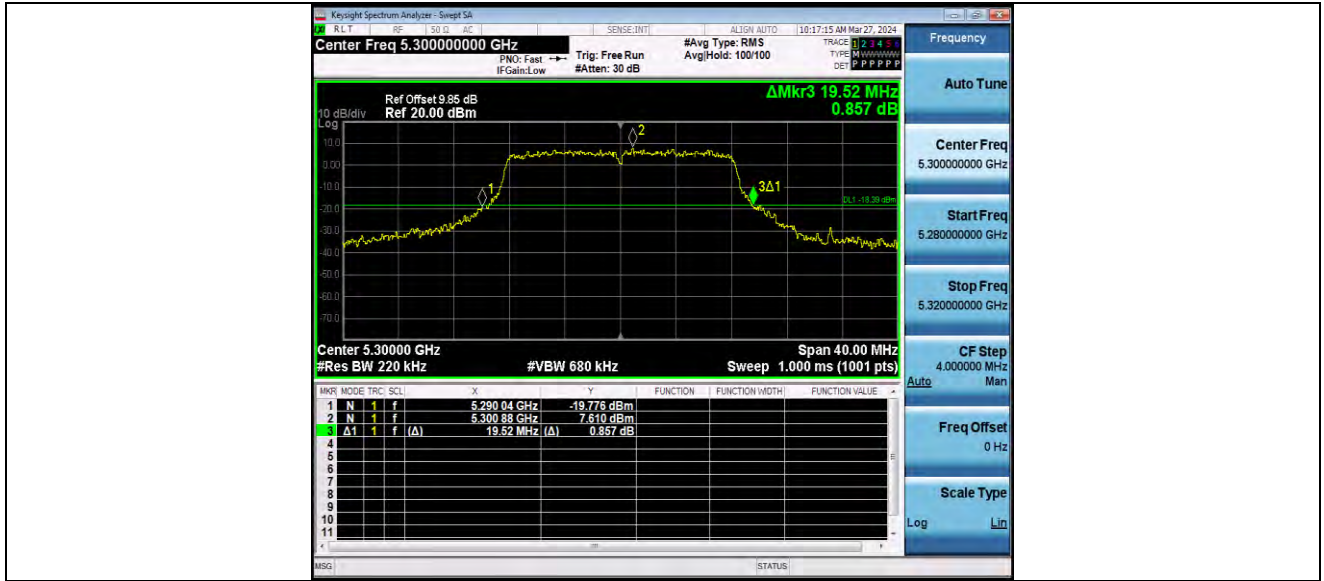
11A-CDD\_Ant1\_5300





**BUREAU  
VERITAS**

Test Report No.: W7L-P24040006RF03



11A-CDD\_Ant2\_5300

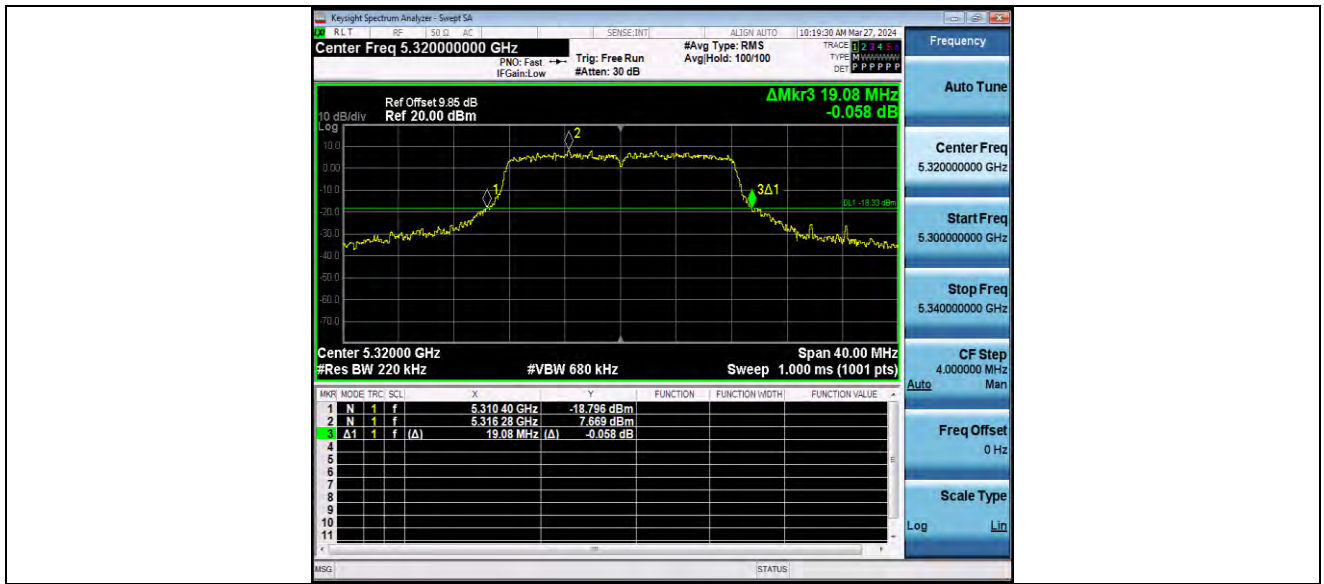


11A-CDD\_Ant1\_5320



BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11A-CDD\_Ant2\_5320

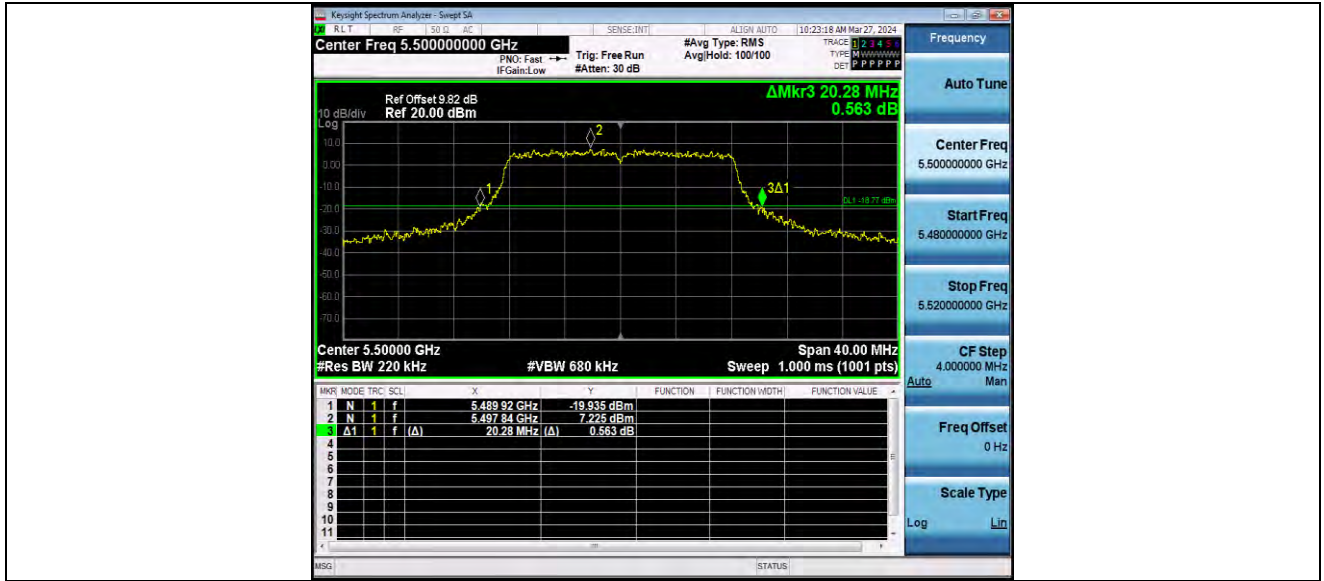


11A-CDD\_Ant1\_5500



**BUREAU  
VERITAS**

Test Report No.: W7L-P24040006RF03



11A-CDD\_Ant2\_5500



11A-CDD\_Ant1\_5580



BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11A-CDD\_Ant2\_5580



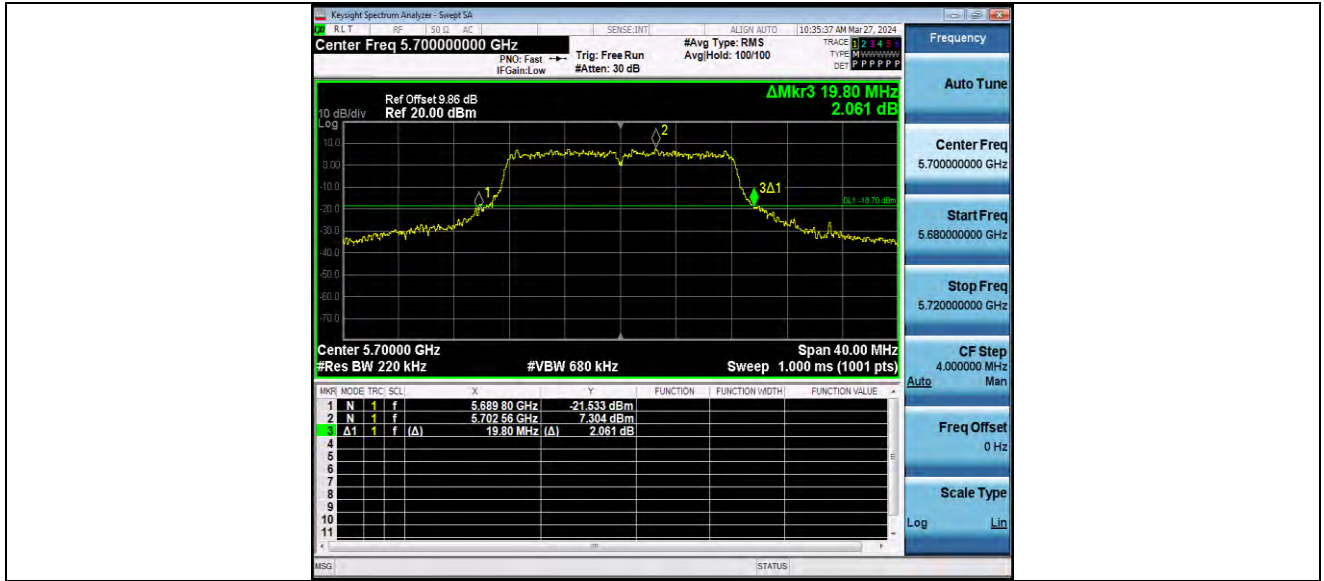
11A-CDD\_Ant1\_5700





BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11A-CDD\_Ant2\_5700



11A-CDD\_Ant1\_5745



BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11A-CDD\_Ant2\_5745

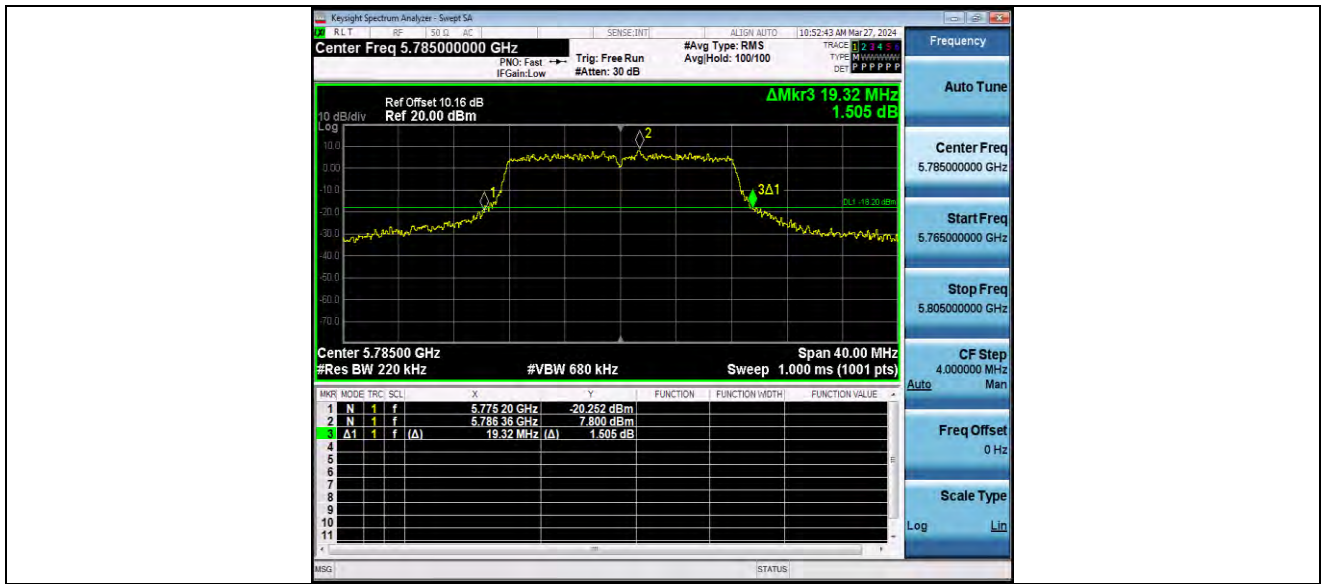


11A-CDD\_Ant1\_5785

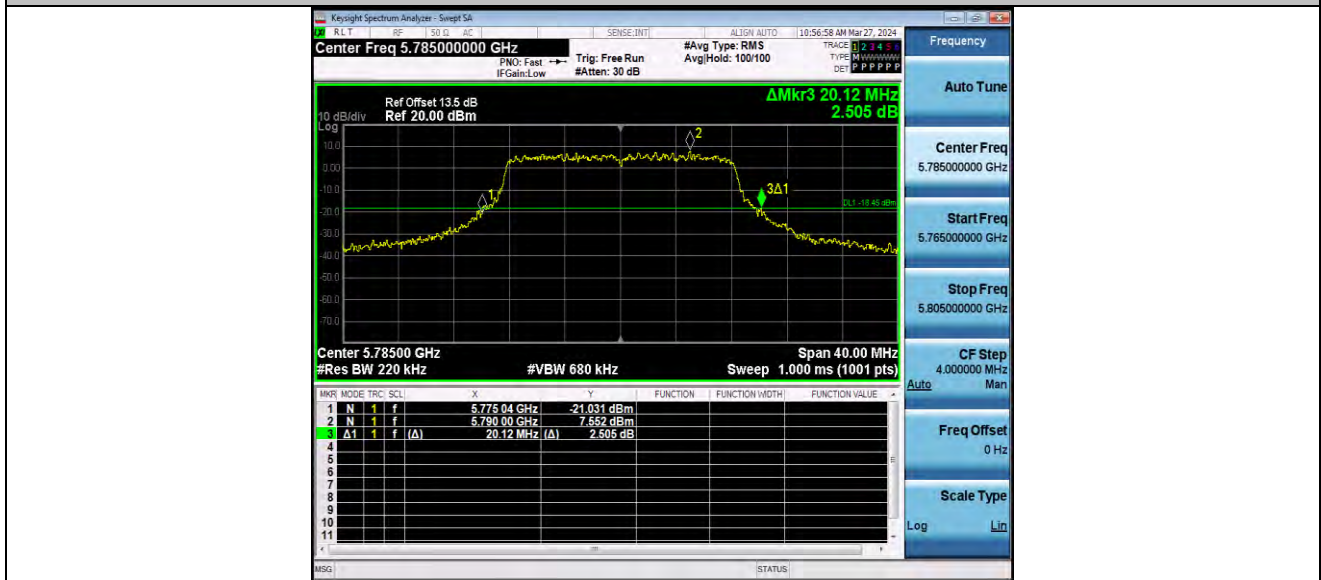


BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11A-CDD\_Ant2\_5785

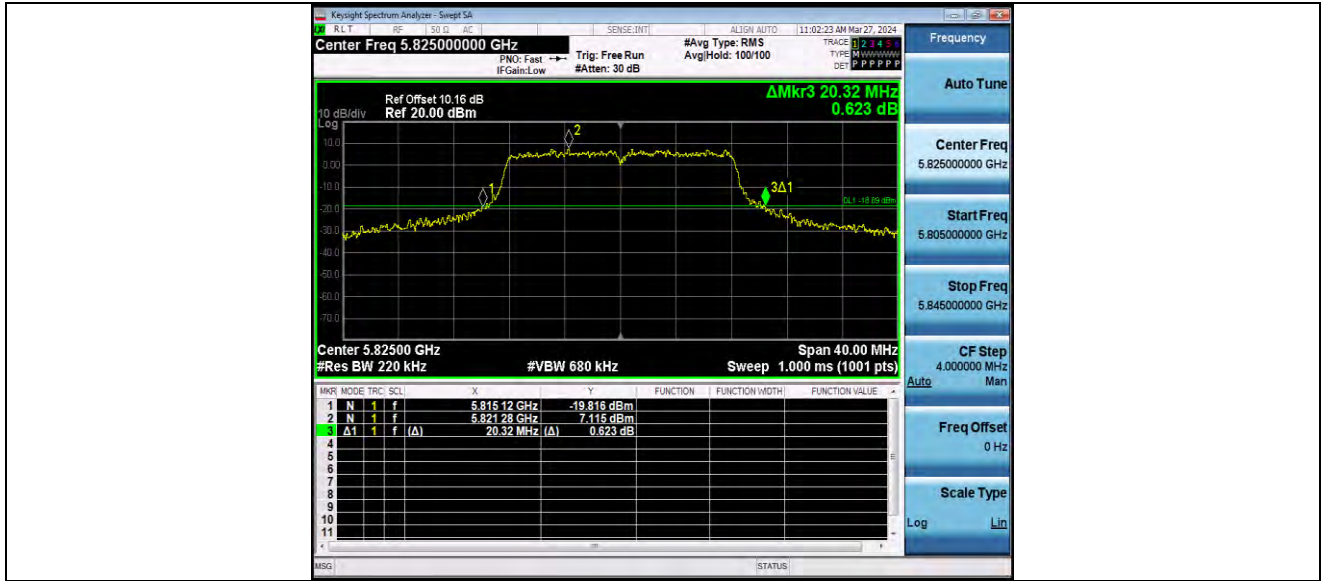


11A-CDD\_Ant1\_5825



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11A-CDD\_Ant2\_5825



11N20MIMO\_Ant1\_5180





BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11N20MIMO\_Ant2\_5180



11N20MIMO\_Ant1\_5200

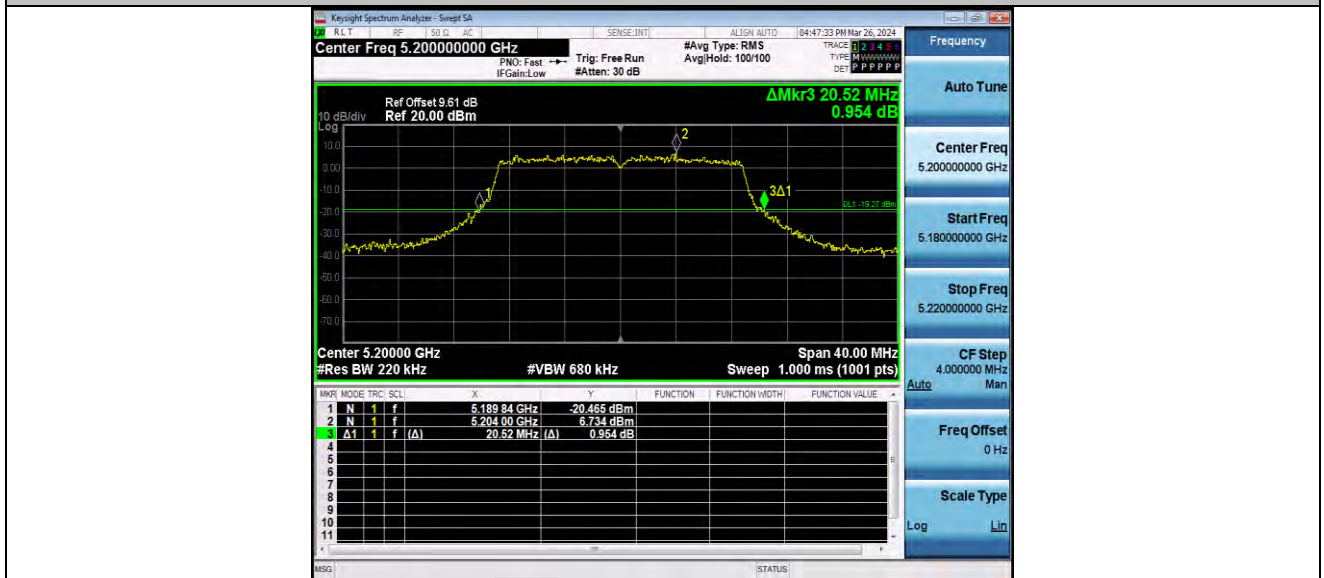


BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11N20MIMO\_Ant2\_5200



11N20MIMO\_Ant1\_5240

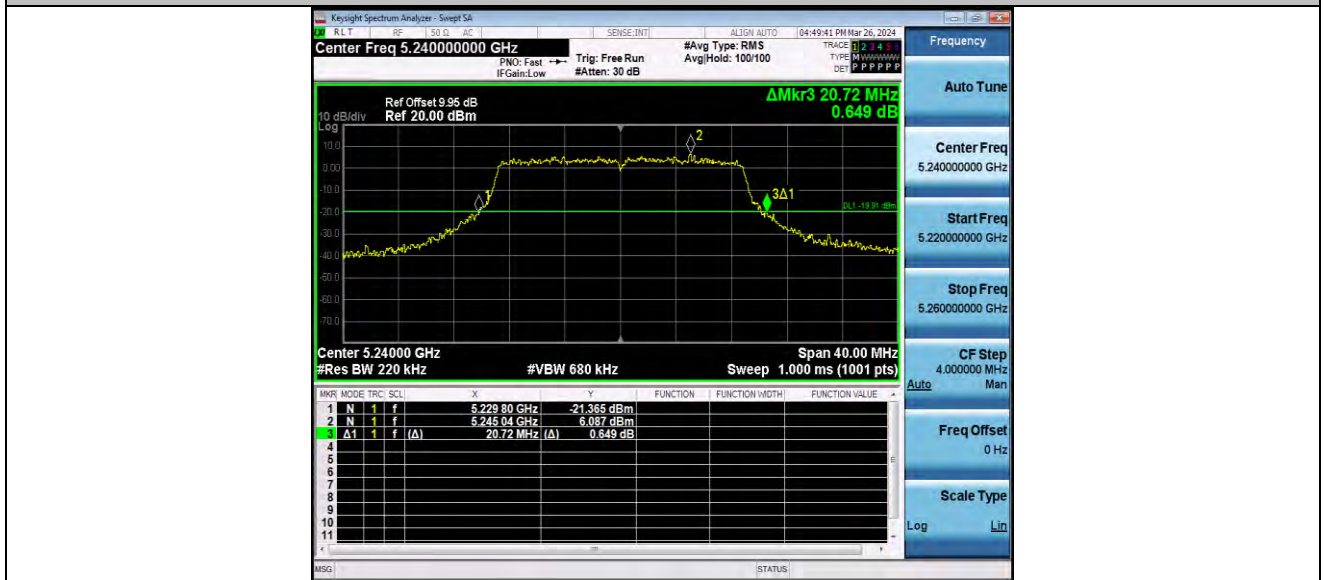


BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



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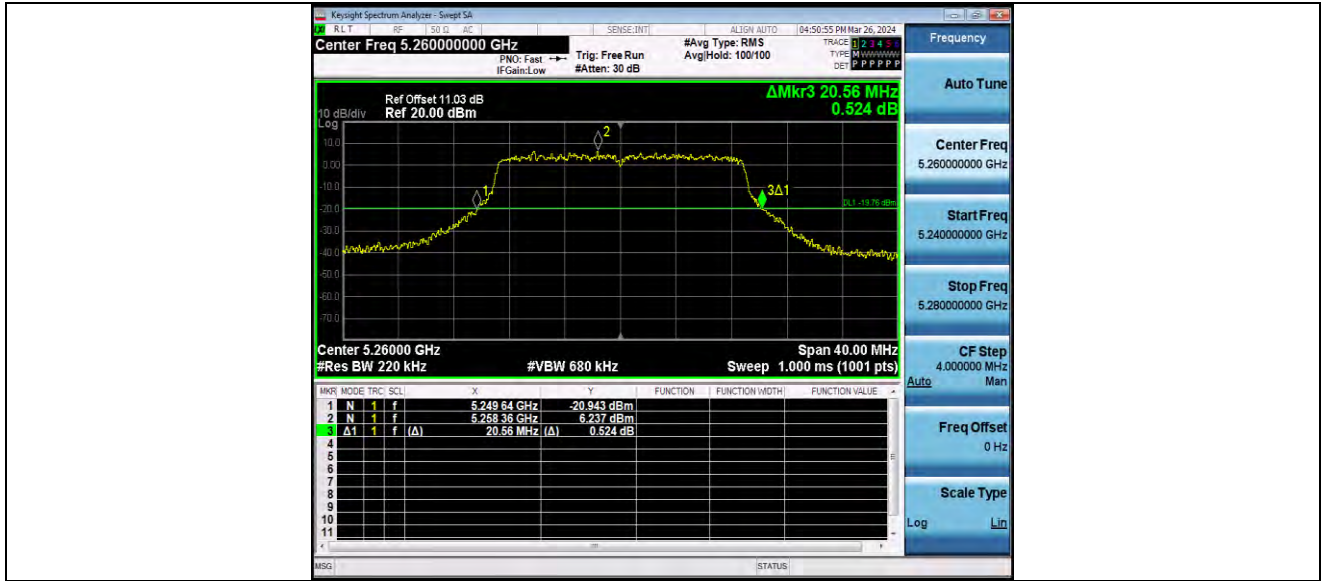


11N20MIMO\_Ant1\_5260



BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11N20MIMO\_Ant2\_5260



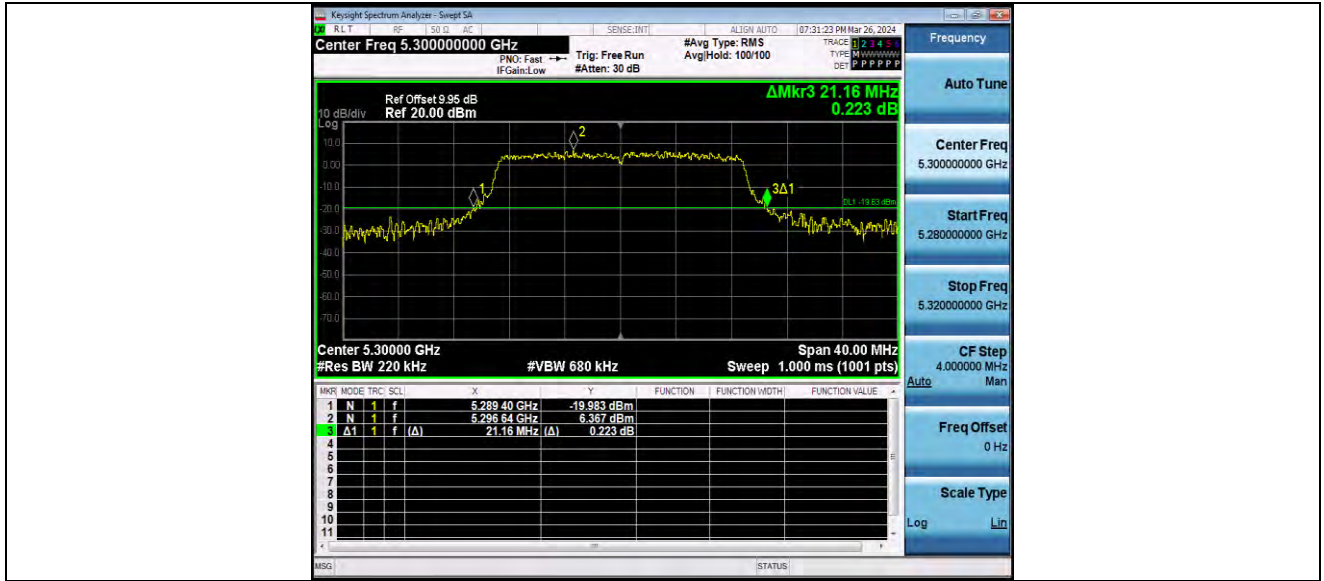
11N20MIMO\_Ant1\_5300





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VERITAS**

Test Report No.: W7L-P24040006RF03



11N20MIMO\_Ant2\_5300



11N20MIMO\_Ant1\_5320



BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11N20MIMO\_Ant2\_5320



11N20MIMO\_Ant1\_5500

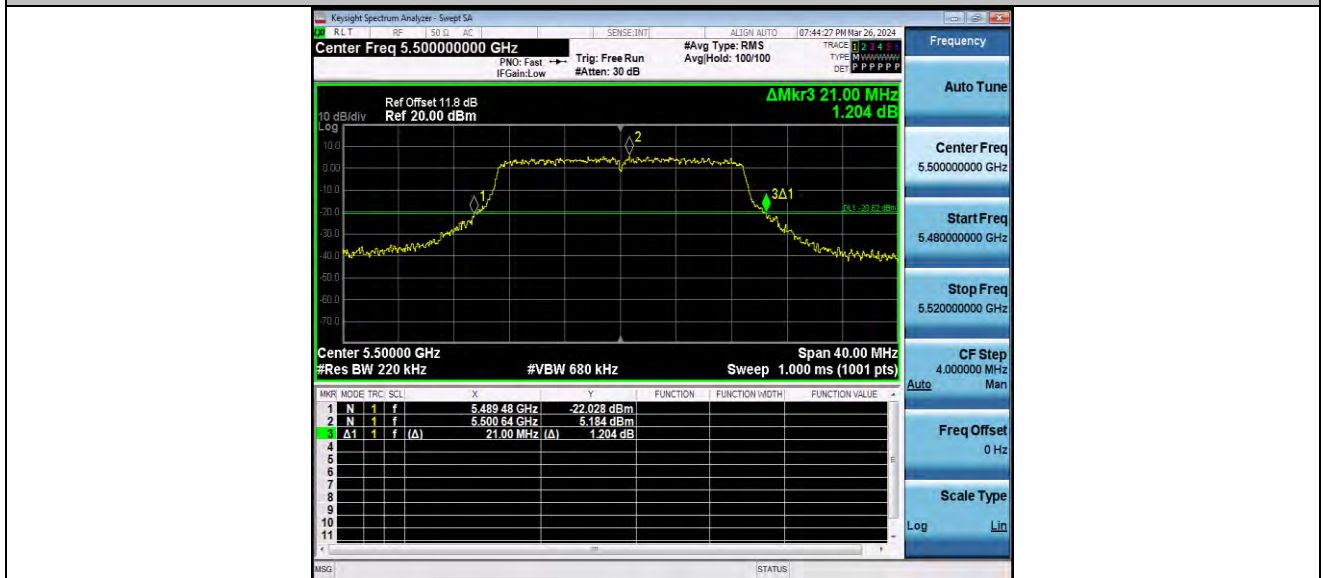


BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



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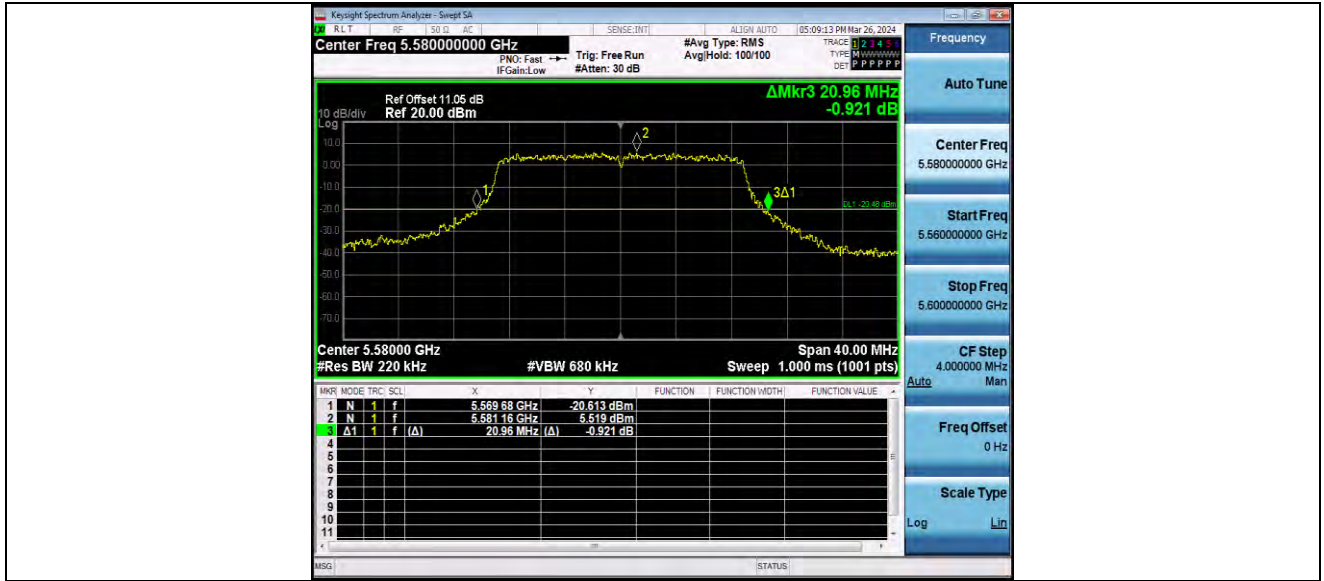


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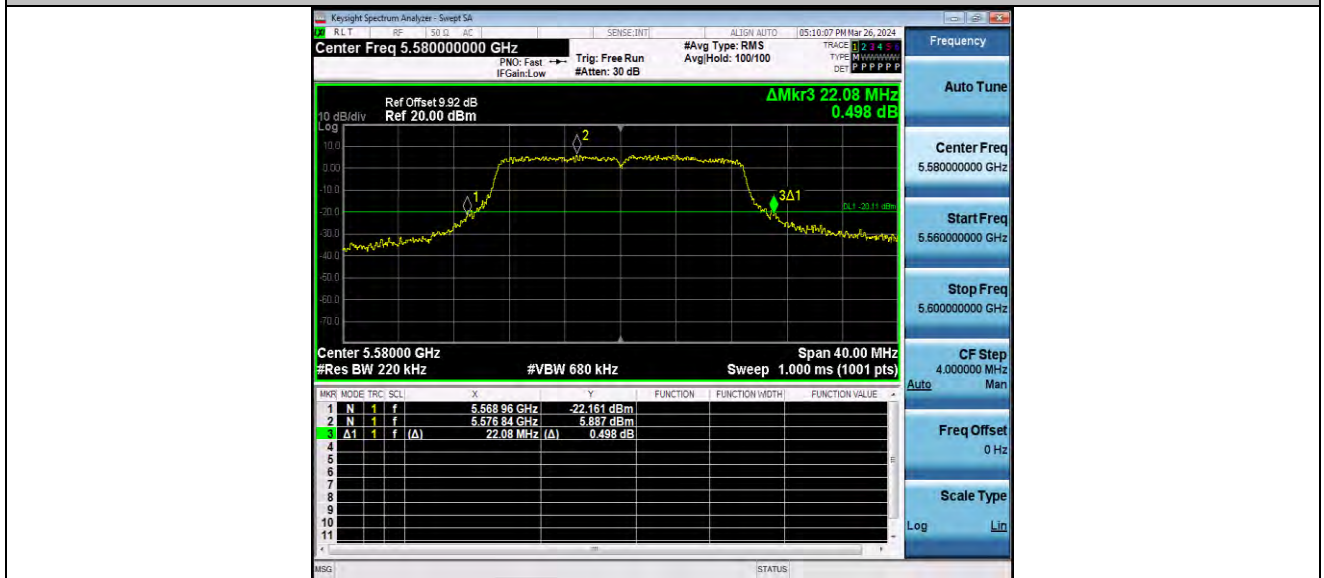


BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11N20MIMO\_Ant2\_5580



11N20MIMO\_Ant1\_5700

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Test Report No.: W7L-P24040006RF03



11N20MIMO\_Ant2\_5700

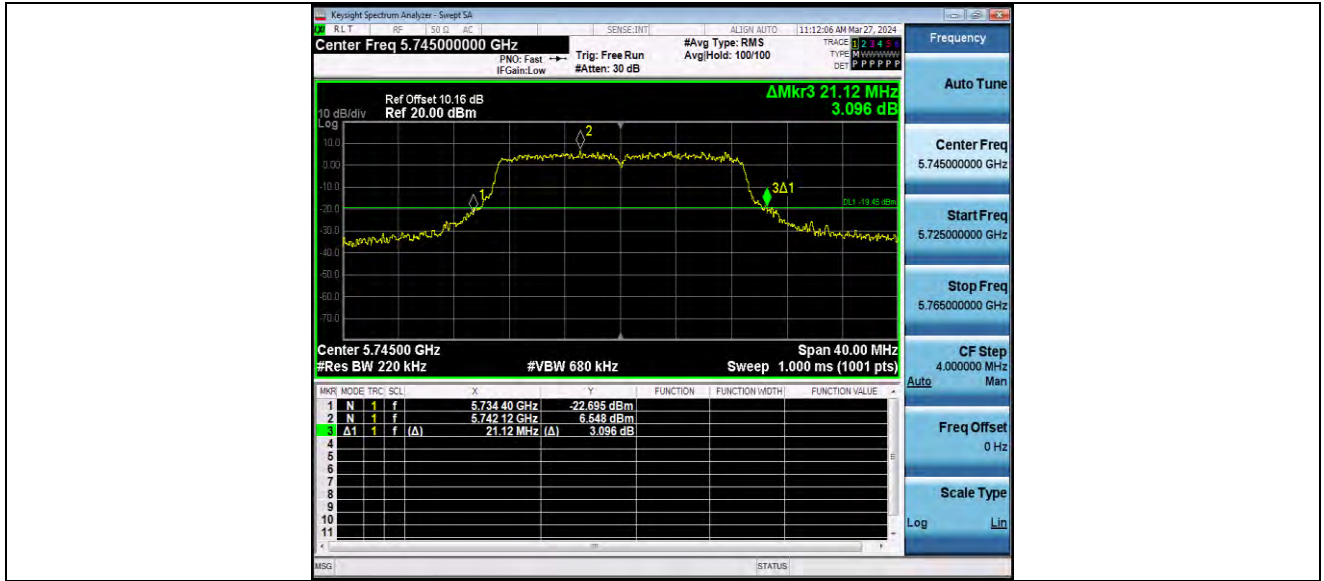


11N20MIMO\_Ant1\_5745



BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11N20MIMO\_Ant2\_5745

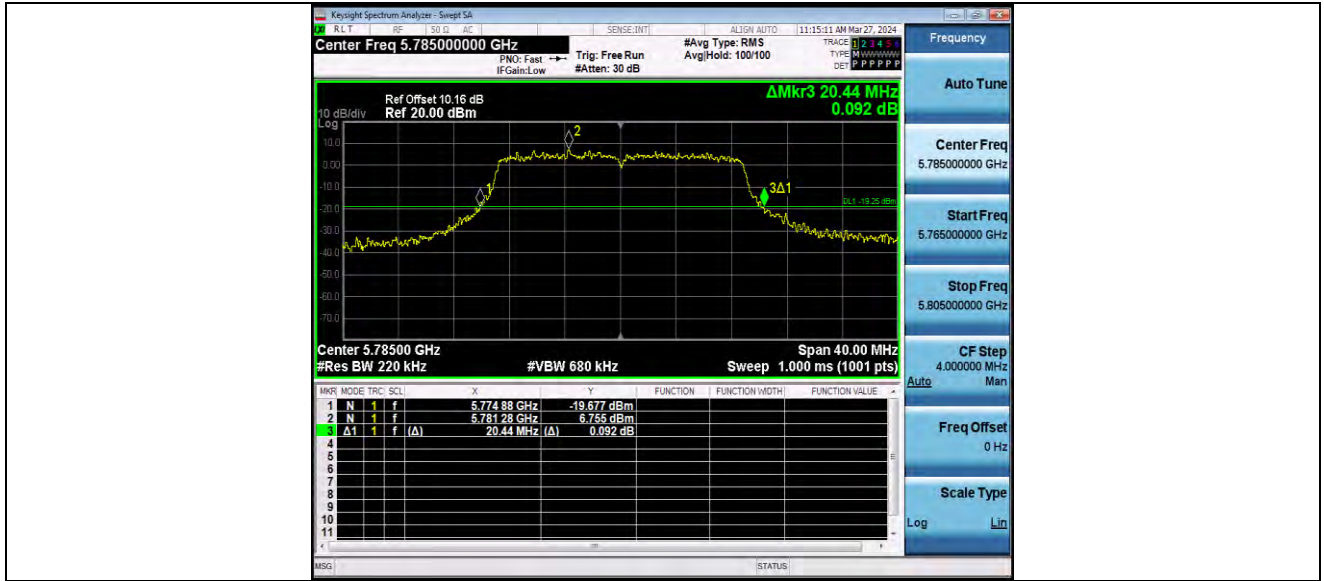


11N20MIMO\_Ant1\_5785



BUREAU VERITAS

Test Report No.: W7L-P24040006RF03



11N20MIMO\_Ant2\_5785



11N20MIMO\_Ant1\_5825