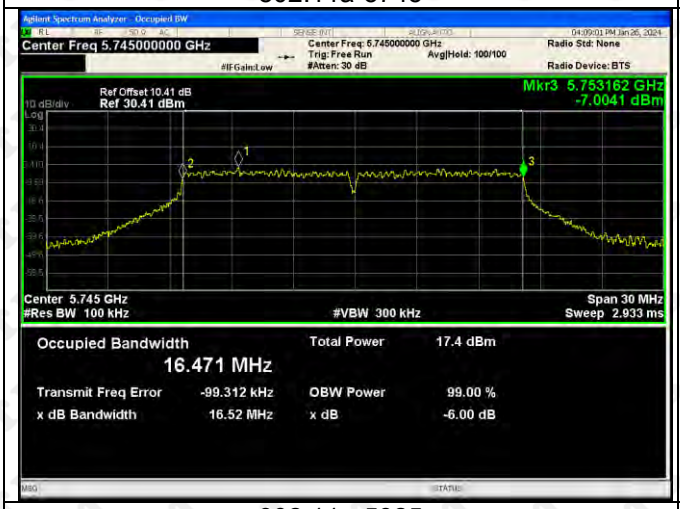
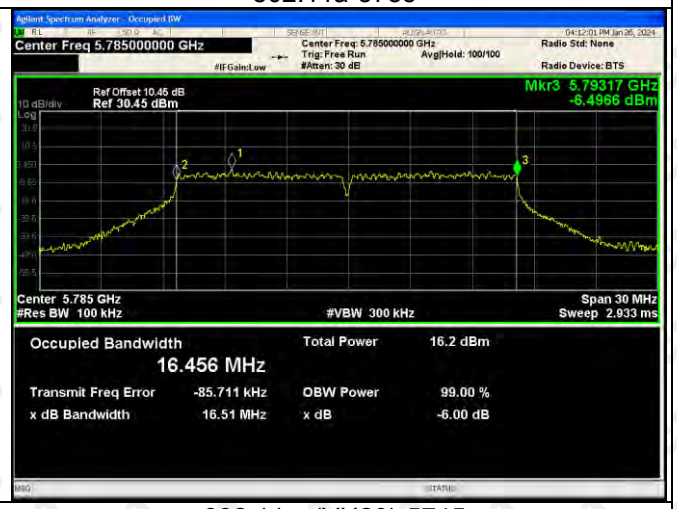
ANT1:

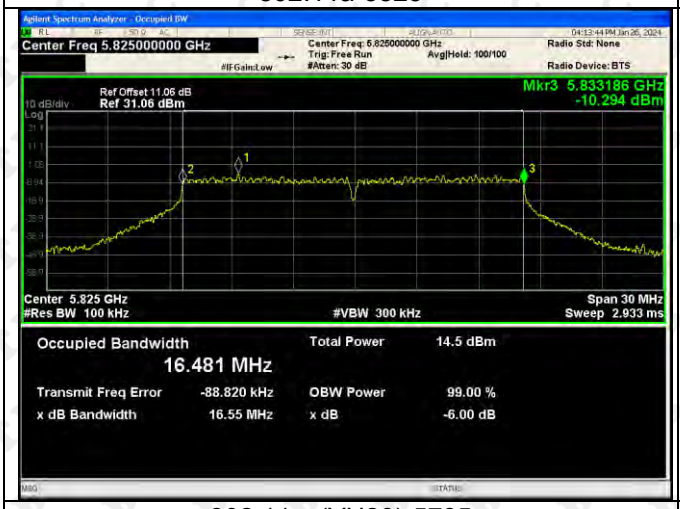
802.11a-5745



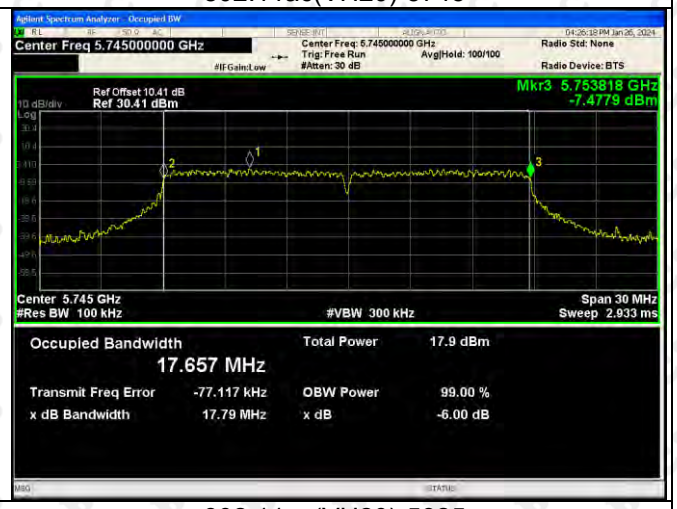
802.11a-5785



802.11a-5825

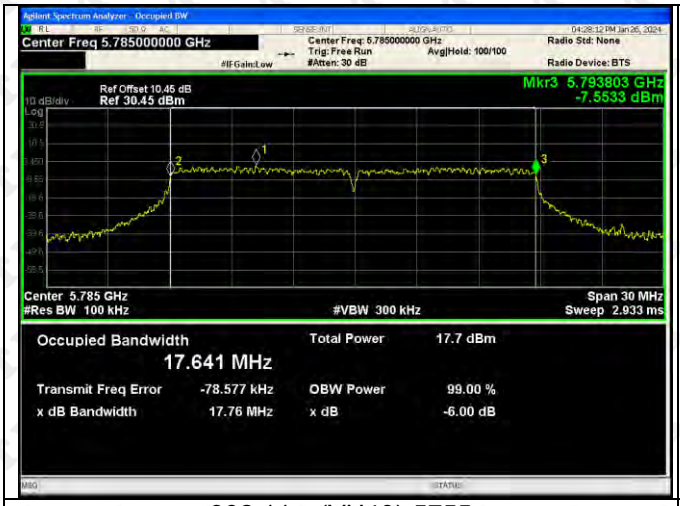


802.11ac(VH20)-5745



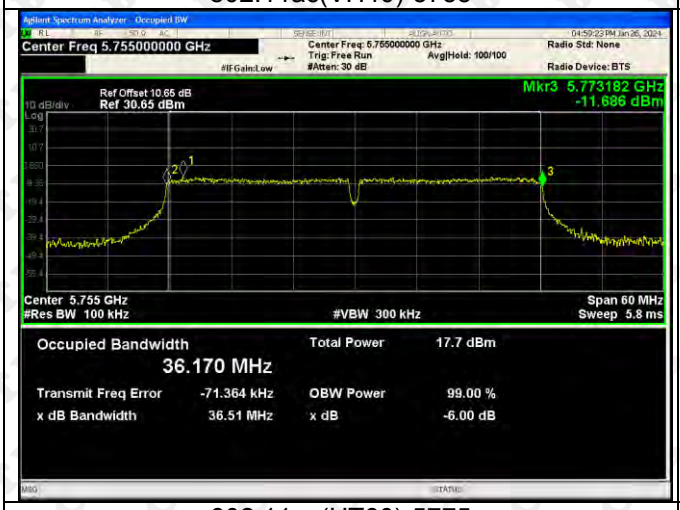
802.11ac(VH20)-5785

802.11ac(VH20)-5825

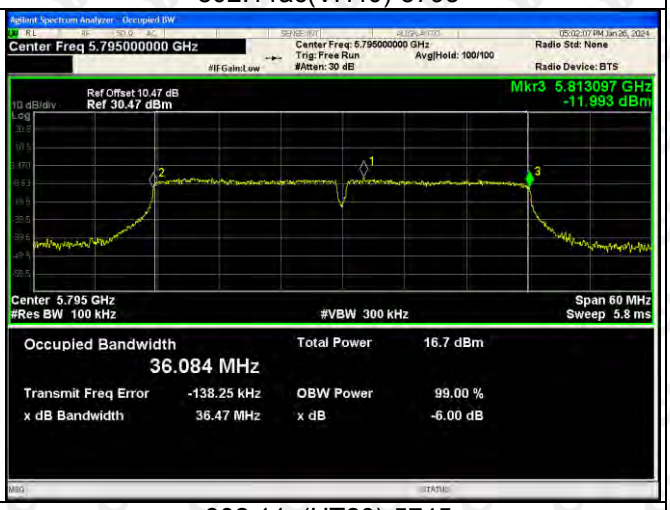


802.11ac(VH40)-5755

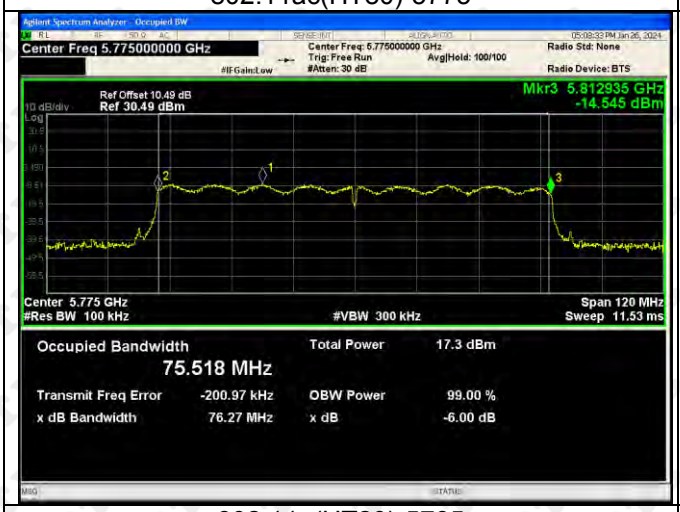
802.11ac(VH40)-5795



802.11ac(HT80)-5775

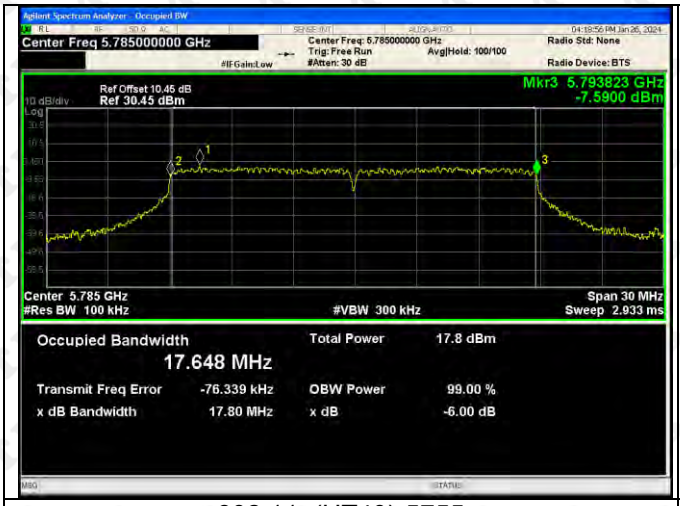


802.11n(HT20)-5745

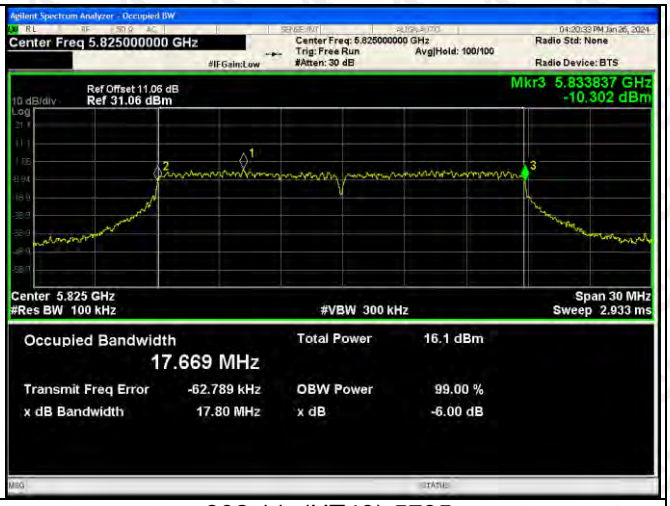


802.11n(HT20)-5785

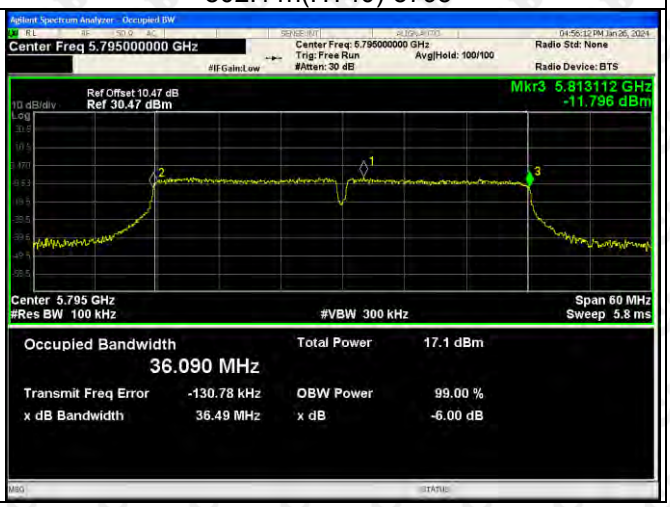
802.11n(HT20)-5825



802.11n(HT40)-5755



802.11n(HT40)-5795



ANT 2

802.11a-5180

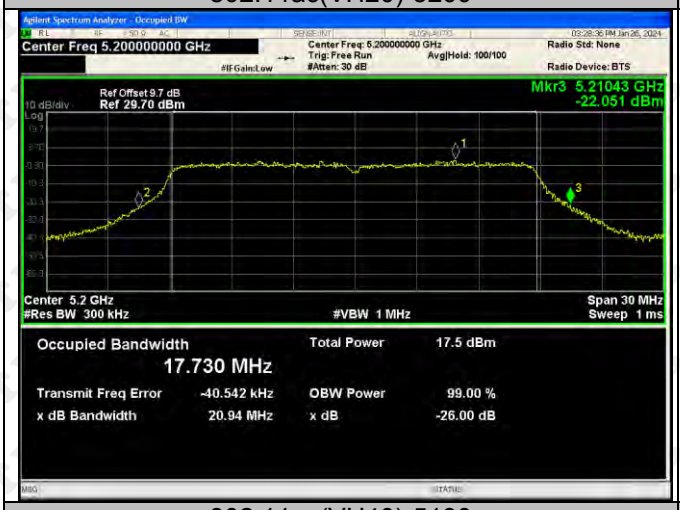
802.11a-5200

802.11a-5240

802.11ac(VH20)-5180

802.11ac(VH20)-5200

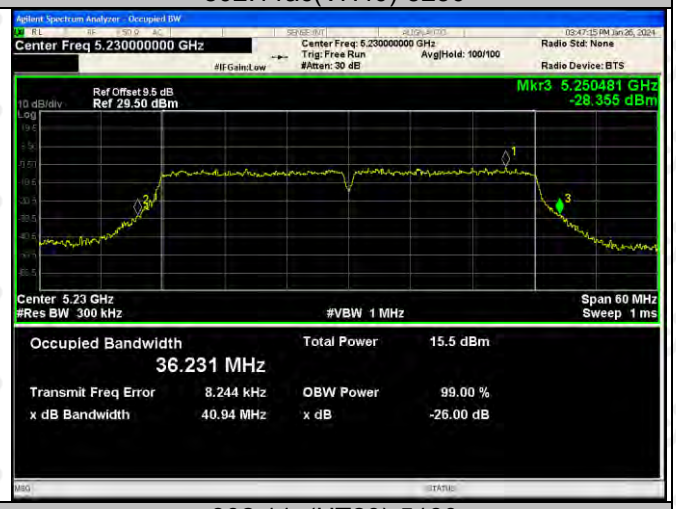
802.11ac(VH20)-5240



802.11ac(VH40)-5190

802.11ac(VH40)-5230

802.11ac(VH80)-5210

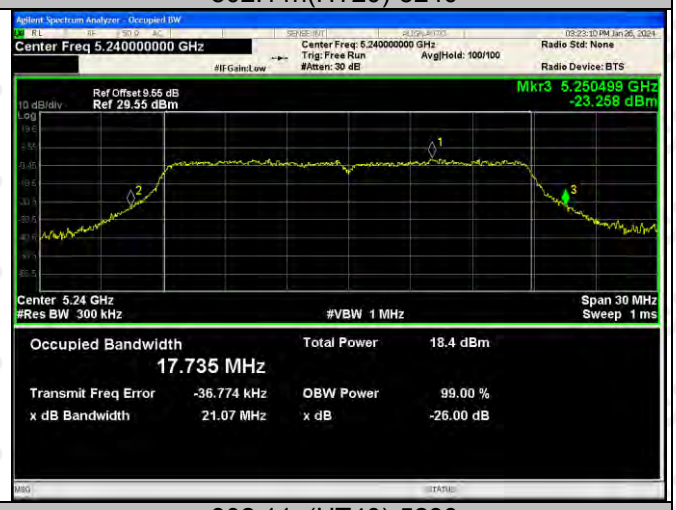


802.11n(HT20)-5180

802.11n(HT20)-5200

802.11n(HT20)-5240

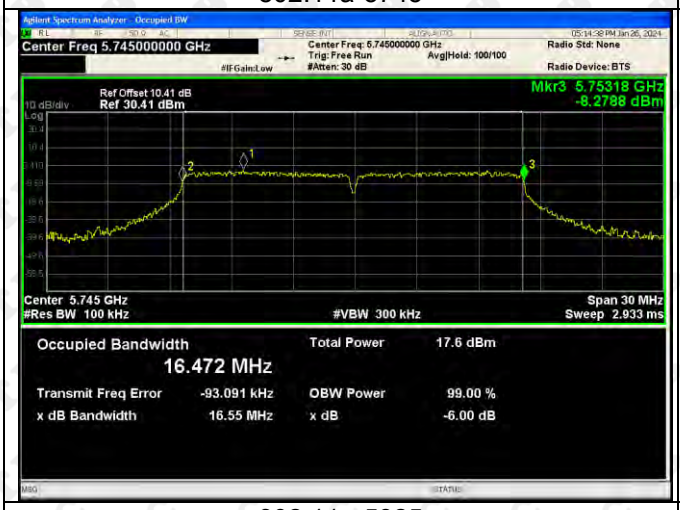
802.11n(HT40)-5190



802.11n(HT40)-5230

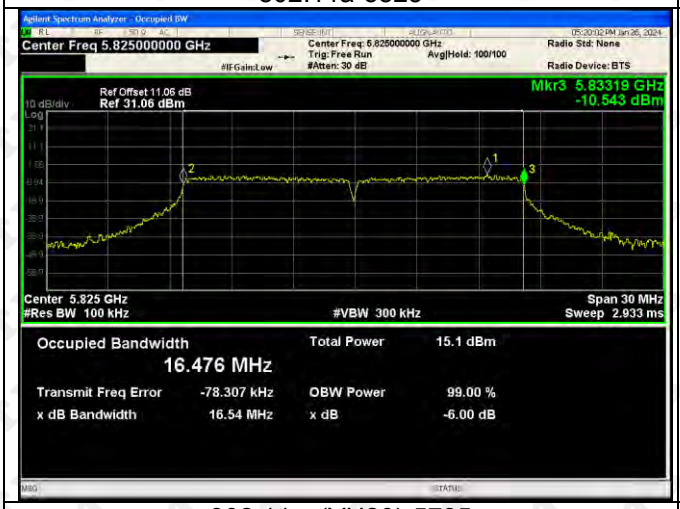
ANT2:

802.11a-5745



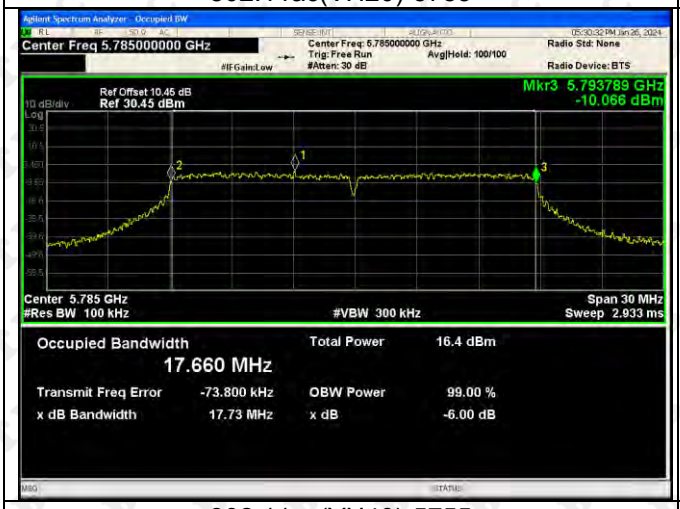
802.11a-5785

802.11a-5825



802.11ac(VH20)-5745

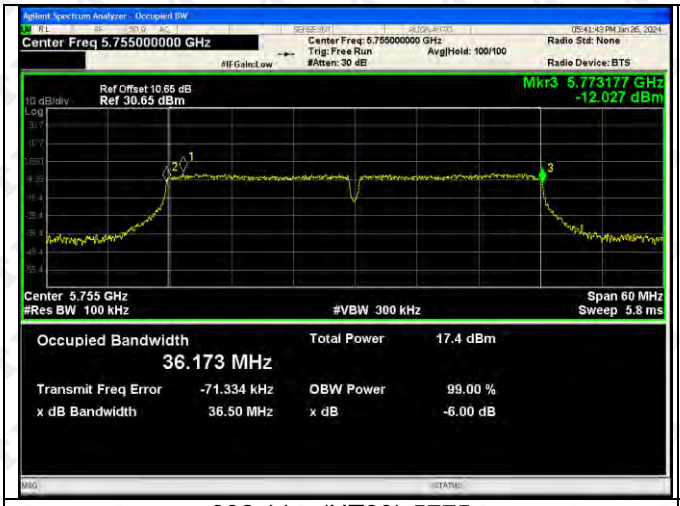
802.11ac(VH20)-5785



802.11ac(VH20)-5825

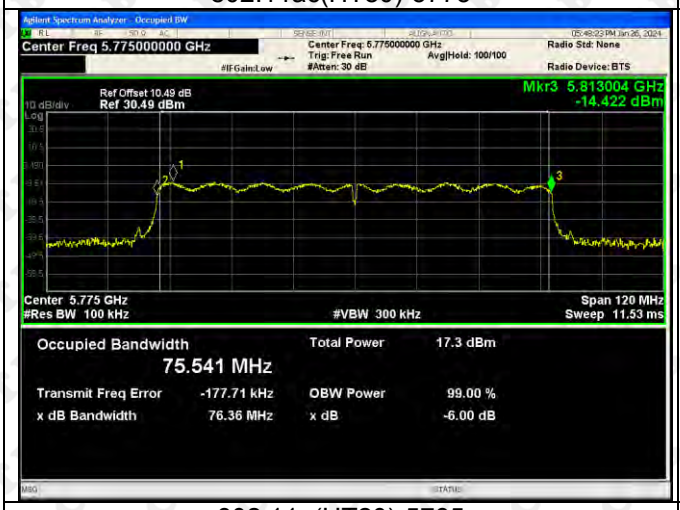
802.11ac(VH40)-5755

802.11ac(VH40)-5795



802.11ac(HT80)-5775

802.11n(HT20)-5745

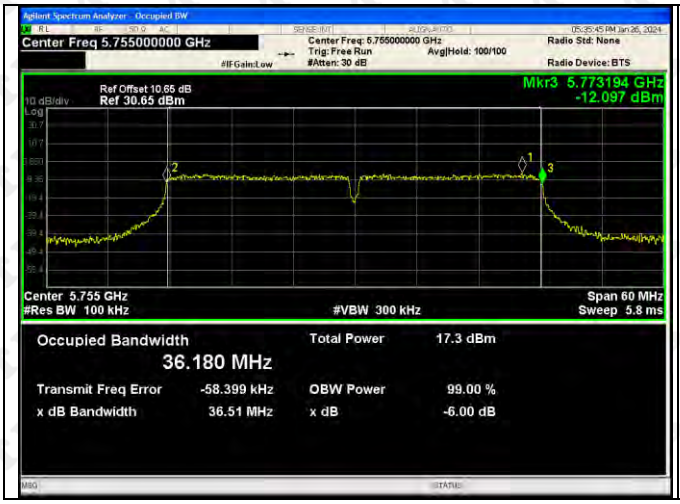


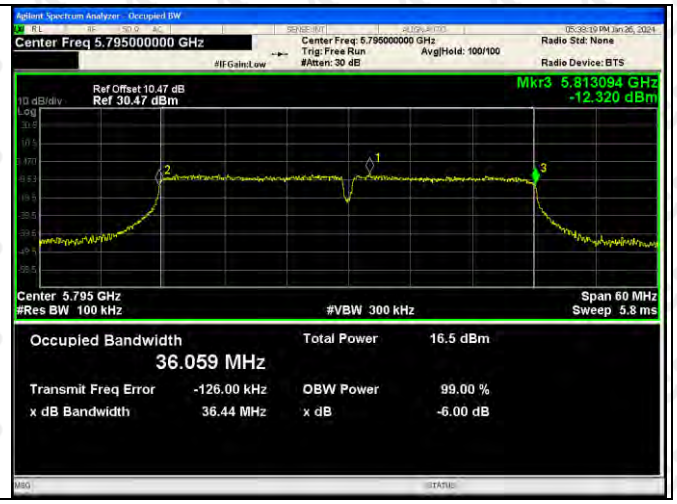
802.11n(HT20)-5785

802.11n(HT20)-5825

802.11n(HT40)-5755

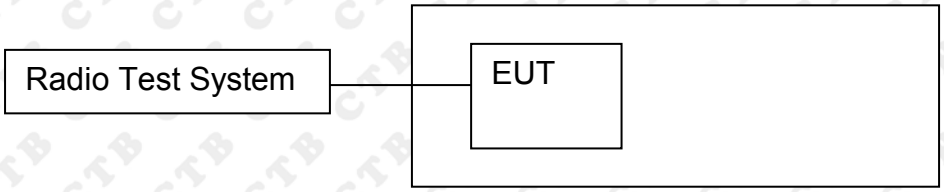
802.11n(HT40)-5795


Agilent Spectrum Analyzer - Occupied BW
Center Freq 5.755000000 GHz
Center Freq: 5.755000000 GHz
Trig: Free Run
Avg|Hold: 100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
#IFGain:Low
Ref Offset 10.65 dB
10 dB/div
Ref 30.65 dBm
Mkr3 5.773194 GHz
-12.097 dBm
Center 5.755 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 60 MHz
Sweep 5.8 ms
Occupied Bandwidth
36.180 MHz
Total Power 17.3 dBm
Transmit Freq Error -58.399 kHz
OBW Power 99.00 %
x dB Bandwidth 36.51 MHz
x dB -6.00 dB


Agilent Spectrum Analyzer - Occupied BW
Center Freq 5.795000000 GHz
Center Freq: 5.795000000 GHz
Trig: Free Run
Avg|Hold: 100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
#IFGain:Low
Ref Offset 10.47 dB
10 dB/div
Ref 30.47 dBm
Mkr3 5.813094 GHz
-12.320 dBm
Center 5.795 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 60 MHz
Sweep 5.8 ms
Occupied Bandwidth
36.059 MHz
Total Power 16.5 dBm
Transmit Freq Error -126.00 kHz
OBW Power 99.00 %
x dB Bandwidth 36.44 MHz
x dB -6.00 dB

11. POWER SPECTRAL DENSITY

11.1 Block Diagram Of Test Setup



11.2 Limit

(1) For the band 5.15-5.25 GHz.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

11.3 Test procedure

According to KDB789033 D02v02r01 sectionE, the following is the measurement procedure.

For devices operating in the bands 5.15−5.25 GHz, 5.25−5.35 GHz, and 5.47−5.725 GHz, the preceding procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in Section 15.407(a)(5). For devices operating in the band 5.725−5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:
a) Set RBW ≥ 1/*T*, where *T* is defined in II.B.I.a).

b) Set VBW ≥ 3 RBW.

c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/RBW) to the

measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log (1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.
Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the II.F.5.c) and II.F.5.d), since RBW=100 kHz is available on nearly all spectrum analyzers.

11.4 Test Result

ANT 1+ANT2

Test mode	Test Channel (MHz)	PSD [dBm/MHz] ANT 1	PSD [dBm/MHz] ANT 2	PSD [dBm/MHz] Total	Limit (dBm/MHz)	Result
802.11a	5180	0.154	-0.417	/	11	Pass
	5200	-0.224	-0.380	/	11	Pass
	5240	0.384	0.307	/	11	Pass
802.11ac(VH20)	5180	-0.459	-0.234	2.665	11	Pass
	5200	-0.230	0.186	2.993	11	Pass
	5240	0.094	0.602	3.366	11	Pass
802.11ac(VH40)	5190	-5.417	-5.284	-2.340	11	Pass
	5230	-4.609	-4.845	-1.715	11	Pass
802.11n(VH20)	5180	-8.366	-8.089	-5.215	11	Pass
	5200	0.165	0.070	3.128	11	Pass
	5240	0.428	0.540	3.495	11	Pass
802.11n(VH40)	5190	0.830	0.798	3.824	11	Pass
	5230	-5.280	-5.480	-2.369	11	Pass
802.11ac(VH80)	5230	-4.700	-4.775	-1.727	11	Pass

Test mode	Test Channel (MHz)	PSD [dBm/MHz] ANT 1	PSD [dBm/MHz] ANT 2	PSD [dBm/MHz] Total	Limit (dBm)	Result
802.11a	5745	-2.751	-2.042	/	30	Pass
	5785	-3.960	-2.719	/	30	Pass
	5825	-5.805	-4.286	/	30	Pass
802.11ac(VH20)	5745	-2.562	-3.236	0.124	30	Pass
	5785	-2.927	-3.369	-0.132	30	Pass
	5825	-4.552	-4.823	-1.675	30	Pass
802.11ac(VH40)	5755	-5.504	-5.396	-2.439	30	Pass
	5795	-6.246	-6.135	-3.180	30	Pass
802.11n(VH20)	5775	-8.540	-7.947	-5.223	30	Pass
	5745	-2.263	-3.076	0.360	30	Pass
	5785	-2.720	-3.113	0.098	30	Pass
802.11n(VH40)	5825	-4.587	-4.867	-1.714	30	Pass
	5755	-4.601	-5.595	-2.059	30	Pass
802.11ac(VH80)	5795	-5.650	-6.340	-2.971	30	Pass

ANT 1

802.11a-5180

802.11a-5200

802.11a-5240

802.11ac(VH20)-5180

802.11ac(VH20)-5200

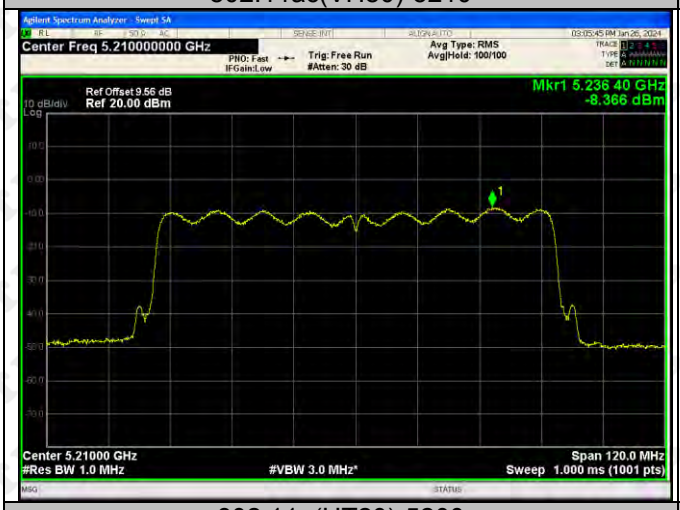
802.11ac(VH20)-5240

802.11ac(VH40)-5190

802.11ac(VH40)-5230

802.11ac(VH80)-5210

802.11n(HT20)-5180



802.11n(HT20)-5200

802.11n(HT20)-5240

802.11n(HT40)-5190

802.11n(HT40)-5230

ANT1:

802.11a-5745	802.11a-5785
	
802.11a-5825	802.11ac(VH20)-5745
	
802.11ac(VH20)-5785	802.11ac(VH20)-5825

802.11ac(VH40)-5755

802.11ac(VH40)-5795

802.11ac(HT80)-5775

802.11n(HT20)-5745

802.11n(HT20)-5785

802.11n(HT20)-5825

802.11n(HT40)-5755

802.11n(HT40)-5795

ANT 2

802.11a-5180

802.11a-5200

802.11a-5240

802.11ac(VH20)-5180

802.11ac(VH20)-5200

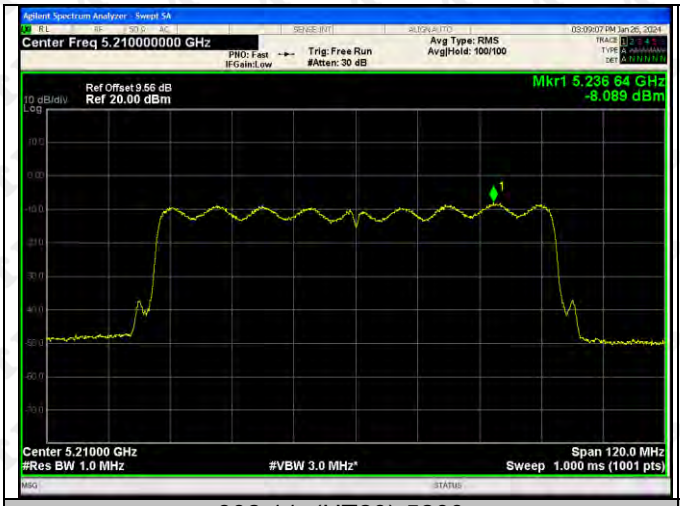
802.11ac(VH20)-5240

802.11ac(VH40)-5190

802.11ac(VH40)-5230

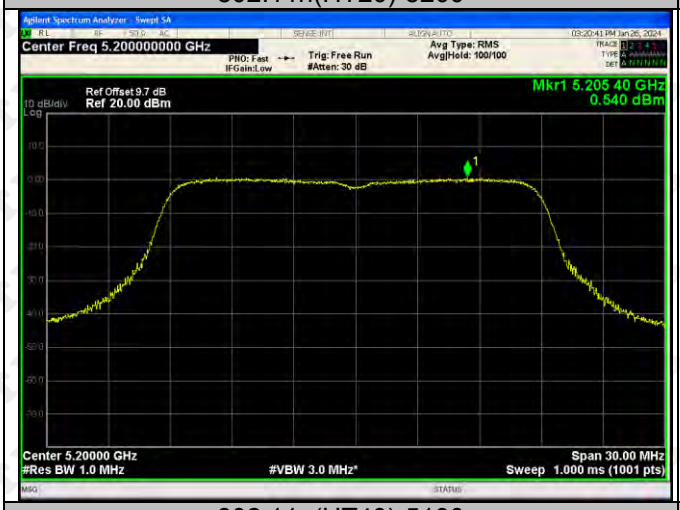
802.11ac(VH80)-5210

802.11n(HT20)-5180



802.11n(HT20)-5200

802.11n(HT20)-5240



802.11n(HT40)-5190

802.11n(HT40)-5230

ANT2:

802.11a-5745

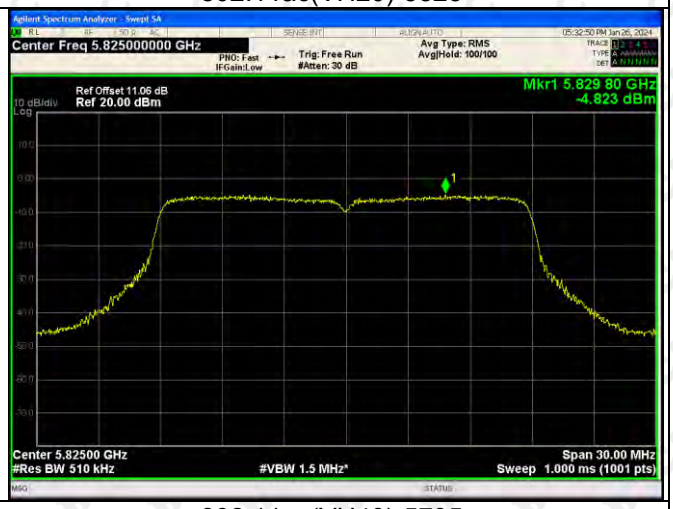
802.11a-5785

802.11a-5825

802.11ac(VH20)-5745

802.11ac(VH20)-5785

802.11ac(VH20)-5825



802.11ac(VH40)-5755

802.11ac(VH40)-5795

802.11ac(HT80)-5775

802.11n(HT20)-5745

802.11n(HT20)-5785

802.11n(HT20)-5825

802.11n(HT40)-5755

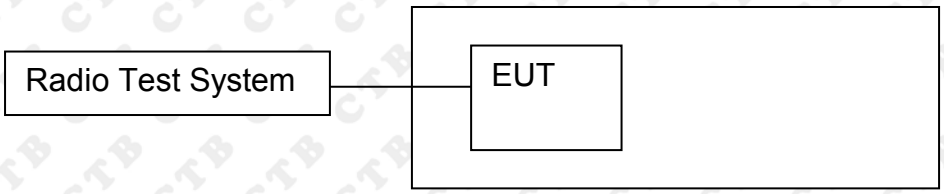
802.11n(HT40)-5795


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.755000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: RMS
Avg|Hold: 100/100
Ref Offset 10.65 dB
10 dB/div
Ref 20.00 dBm
Mkr1 5.768 68 GHz
-5.595 dBm
Center 5.75500 GHz
#Res BW 510 kHz
#VBW 1.5 MHz*
Span 60.00 MHz
Sweep 1.000 ms (1001 pts)


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.795000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: RMS
Avg|Hold: 100/100
Ref Offset 10.47 dB
10 dB/div
Ref 20.00 dBm
Mkr1 5.779 70 GHz
-6.340 dBm
Center 5.79500 GHz
#Res BW 510 kHz
#VBW 1.5 MHz*
Span 60.00 MHz
Sweep 1.000 ms (1001 pts)

12. FREQUENCY STABILITY

12.1 Block Diagram Of Test Setup



12.2 Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

12.3 Test procedure

1. The EUT was placed inside temperature chamber and powered and powered by nominal DC voltage.

2. Set EUT as normal operation.

3. Turn the EUT on and couple its output to spectrum.

4. Turn the EUT off and set the chamber to the highest temperature specified.

5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT and measure the operating frequency.

6. Repeat step with the temperature chamber set to the lowest temperature.

12.4 Test Result

TX Frequency (5150-5250MHz)

ANT1

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.0	5180.0379	5180	0.0379	7.3233
		V max (V)	13.1	5180.1005	5180	0.1005	19.4096
		V min (V)	10.8	5180.0764	5180	0.0764	14.7446
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5180.0168	5180	0.0168	3.2410
		T (°C)	10	5180.0123	5180	0.0123	2.3767
		T (°C)	20	5180.0100	5180	0.0100	1.9266
		T (°C)	30	5180.0007	5180	0.0007	0.1415
		T (°C)	40	5180.0314	5180	0.0314	6.0538
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.0	5200.0529	5200	0.0529	10.1770
		V max (V)	13.1	5200.0535	5200	0.0535	10.2951
		V min (V)	10.8	5200.0089	5200	0.0089	1.7204
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5200.0111	5200	0.0111	2.1407
		T (°C)	10	5200.0405	5200	0.0405	7.7835
		T (°C)	20	5200.0390	5200	0.0390	7.5088
		T (°C)	30	5200.0408	5200	0.0408	7.8468
		T (°C)	40	5200.0062	5200	0.0062	1.1842
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.0	5240.0002	5240	0.0002	0.0442
		V max (V)	13.1	5240.0460	5240	0.0460	8.7711
		V min (V)	10.8	5240.0003	5240	0.0003	0.0658
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5240.0305	5240	0.0305	5.8143
		T (°C)	10	5240.0375	5240	0.0375	7.1646
		T (°C)	20	5240.0232	5240	0.0232	4.4235
		T (°C)	30	5240.0481	5240	0.0481	9.1848
		T (°C)	40	5240.0049	5240	0.0049	0.9324
Limits				±20ppm			
Result				Complies			

TX Frequency (5725-5850MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.0	5745.0492	5745	0.0492	8.5570
		V max (V)	13.1	5745.0497	5745	0.0497	8.6570
		V min (V)	10.8	5745.0492	5745	0.0492	8.5570
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5745.0297	5745	0.0297	5.1739
		T (°C)	10	5745.0325	5745	0.0325	5.6501
		T (°C)	20	5745.0002	5745	0.0002	0.0381
		T (°C)	30	5745.0702	5745	0.0702	12.2188
		T (°C)	40	5745.0319	5745	0.0319	5.5470
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.0	5785.0722	5785	0.0722	12.4768
		V max (V)	13.1	5785.0605	5785	0.0605	10.4575
		V min (V)	10.8	5785.0536	5785	0.0536	9.2707
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5785.0874	5785	0.0874	15.1048
		T (°C)	10	5785.0645	5785	0.0645	11.1426
		T (°C)	20	5785.0769	5785	0.0769	13.2900
		T (°C)	30	5785.0522	5785	0.0522	9.0309
		T (°C)	40	5785.0898	5785	0.0898	15.5296
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.0	5825.0739	5825	0.0739	12.6786
		V max (V)	13.1	5825.0276	5825	0.0276	4.7396
		V min (V)	10.8	5825.0870	5825	0.0870	14.9356
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5825.0062	5825	0.0062	1.0699
		T (°C)	10	5825.0558	5825	0.0558	9.5758
		T (°C)	20	5825.0745	5825	0.0745	12.7838
		T (°C)	30	5825.0407	5825	0.0407	6.9890
		T (°C)	40	5825.0514	5825	0.0514	8.8168
Limits				±20ppm			
Result				Complies			

ANT2:

TX Frequency (5150-5250MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.0	5180.0848	5180	0.0848	16.3764
		V max (V)	13.1	5180.0205	5180	0.0205	3.9633
		V min (V)	10.8	5180.0437	5180	0.0437	8.4451
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5180.0362	5180	0.0362	6.9810
		T (°C)	10	5180.0534	5180	0.0534	10.3056
		T (°C)	20	5180.0602	5180	0.0602	11.6203
		T (°C)	30	5180.0416	5180	0.0416	8.0310
		T (°C)	40	5180.0111	5180	0.0111	2.1519
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.0	5200.0385	5200	0.0385	7.4070
		V max (V)	13.1	5200.0285	5200	0.0285	5.4729
		V min (V)	10.8	5200.0363	5200	0.0363	6.9738
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5200.0910	5200	0.0910	17.5008
		T (°C)	10	5200.0837	5200	0.0837	16.0985
		T (°C)	20	5200.0630	5200	0.0630	12.1165
		T (°C)	30	5200.0360	5200	0.0360	6.9302
		T (°C)	40	5200.0502	5200	0.0502	9.6603
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.0	5240.0208	5240	0.0208	3.9703
		V max (V)	13.1	5240.0614	5240	0.0614	11.7205
		V min (V)	10.8	5240.0628	5240	0.0628	11.9753
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5240.0268	5240	0.0268	5.1201
		T (°C)	10	5240.0544	5240	0.0544	10.3793
		T (°C)	20	5240.0085	5240	0.0085	1.6226
		T (°C)	30	5240.0337	5240	0.0337	6.4336
		T (°C)	40	5240.0674	5240	0.0674	12.8706
Limits				±20ppm			
Result				Complies			

TX Frequency (5725-5850MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.0	5745.0700	5745	0.0700	12.1765
		V max (V)	13.1	5745.0548	5745	0.0548	9.5310
		V min (V)	10.8	5745.0532	5745	0.0532	9.2520
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5745.0757	5745	0.0757	13.1784
		T (°C)	10	5745.0834	5745	0.0834	14.5108
		T (°C)	20	5745.0723	5745	0.0723	12.5801
		T (°C)	30	5745.0612	5745	0.0612	10.6603
		T (°C)	40	5745.0276	5745	0.0276	4.8026
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.0	5785.0075	5785	0.0075	1.2895
		V max (V)	13.1	5785.0740	5785	0.0740	12.7854
		V min (V)	10.8	5785.0845	5785	0.0845	14.6122
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5785.0536	5785	0.0536	9.2699
		T (°C)	10	5785.0728	5785	0.0728	12.5772
		T (°C)	20	5785.0850	5785	0.0850	14.6899
		T (°C)	30	5785.0485	5785	0.0485	8.3762
		T (°C)	40	5785.0191	5785	0.0191	3.2956
		T (°C)	50	5785.0209	5785	0.0209	3.6167
Limits				±20ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.0	5825.0051	5825	0.0051	0.8819
		V max (V)	13.1	5825.0217	5825	0.0217	3.7309
		V min (V)	10.8	5825.0106	5825	0.0106	1.8217
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	0	5825.0919	5825	0.0919	15.7817
		T (°C)	10	5825.0371	5825	0.0371	6.3762
		T (°C)	20	5825.0474	5825	0.0474	8.1336
		T (°C)	30	5825.0372	5825	0.0372	6.3937
		T (°C)	40	5825.0147	5825	0.0147	2.5303
Limits				±20ppm			
Result				Complies			

13. OPERATION IN THE ABSENCE OF INFORMATION TO THE TRANSMIT

13.1 Requirement

15.407(c) requirement:
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 signal ling 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.

13.2 Test Results

Operation in the absence of information to the transmit:

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
signal of ASK message transmitting from remote device and verify whether it shall resend or
discontinue transmission. (manufacturer declare)

14. ANTENNA REQUIREMENT

15.203 requirement:
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
15.247(b) (4) requirement:
The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

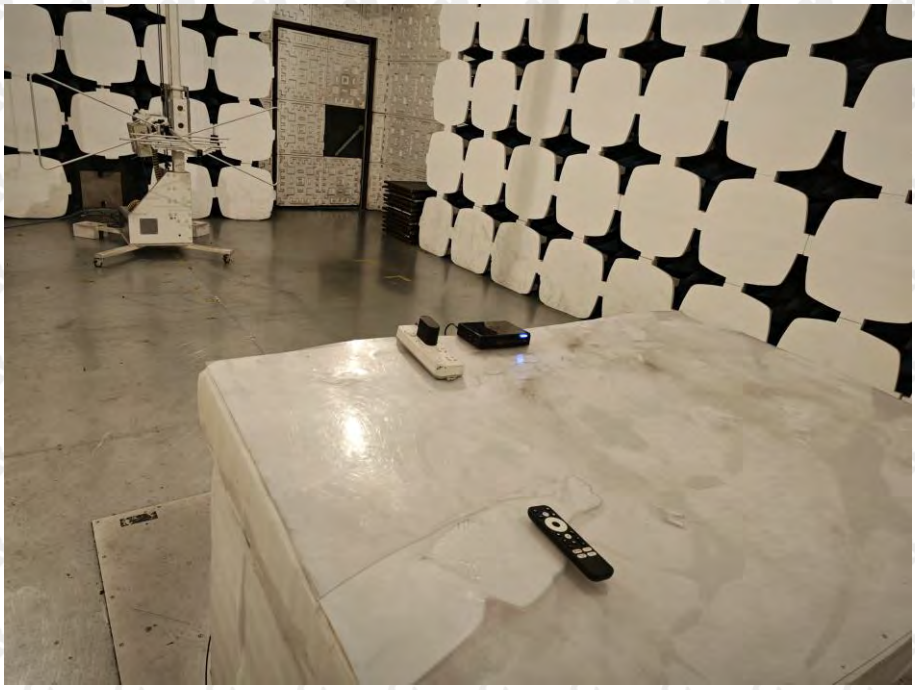
EUT Antenna:

The antenna is FPC antenna and no consideration of replacement. The best case gain of the antenna is 5.2G: ANT1: 2.76dBi, ANT2: 2.76dBi, 5.8G: ANT1: -1.15dBi, ANT2: - 1.15dBi

15. EUT TEST SETUP PHOTOGRAPHS

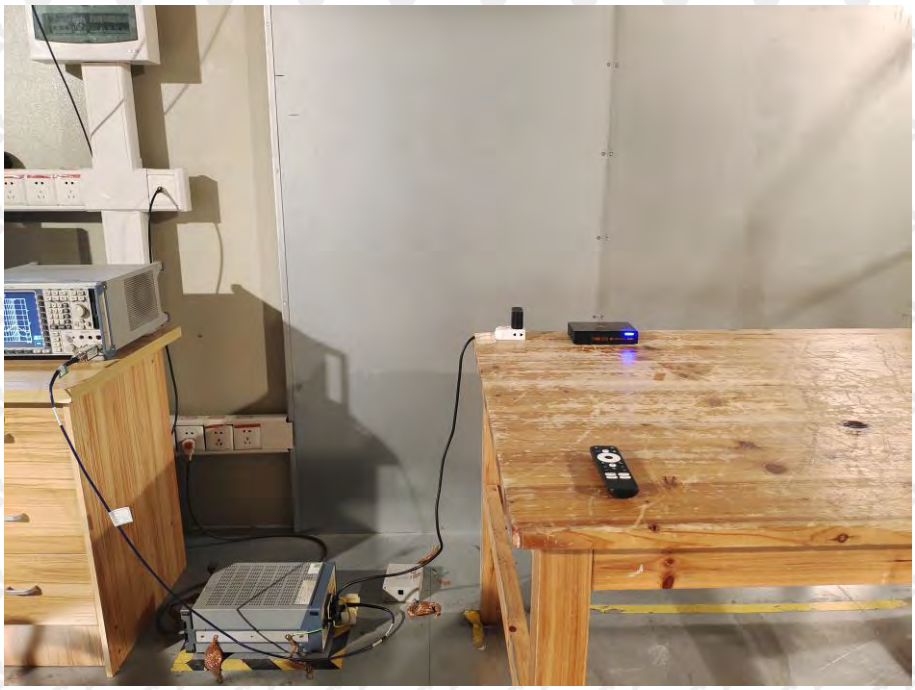
Spurious emissions

Below 1GHz



Above 1GHz

Conducted Emission



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