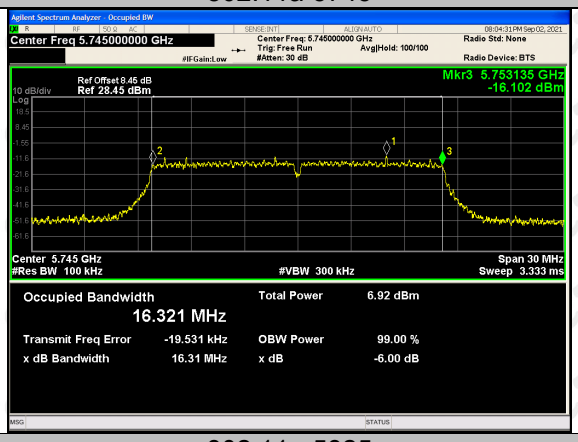
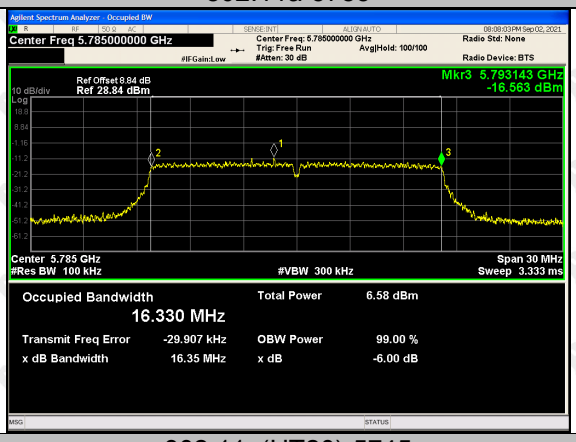
5725-5850MHz

802.11a-5745



802.11a-5785



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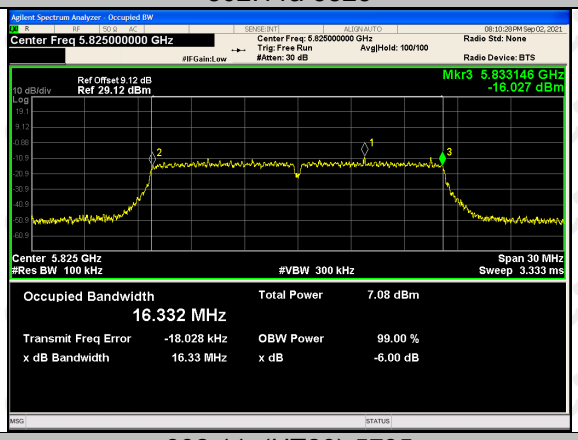

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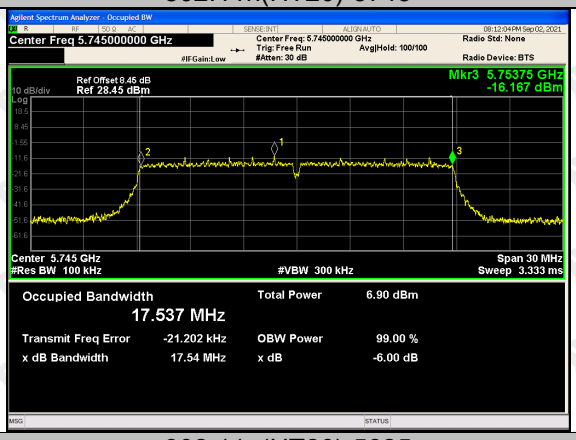

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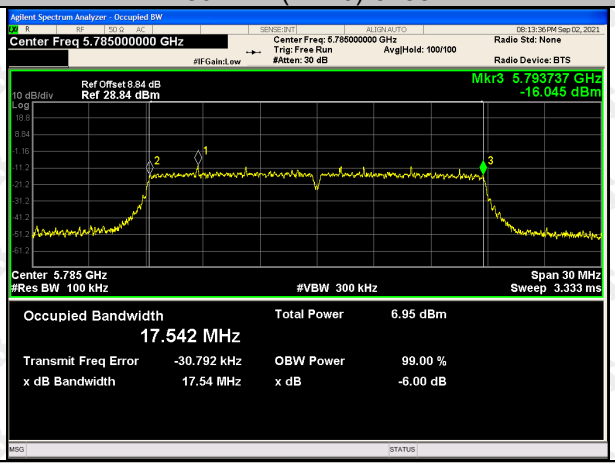

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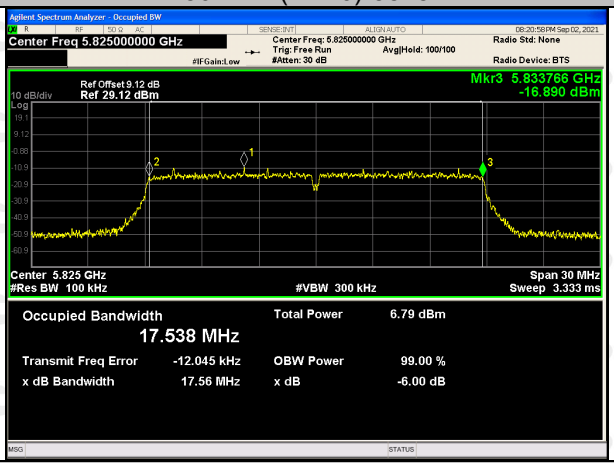

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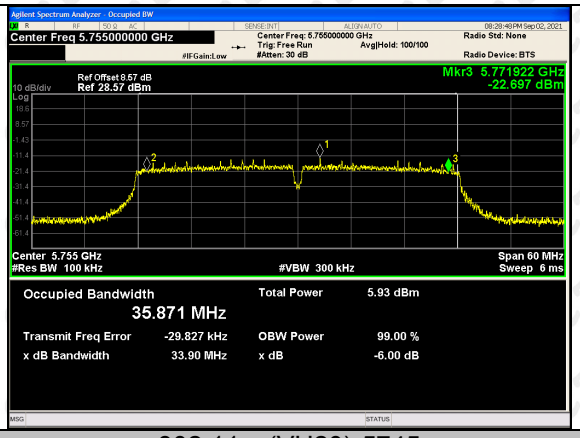

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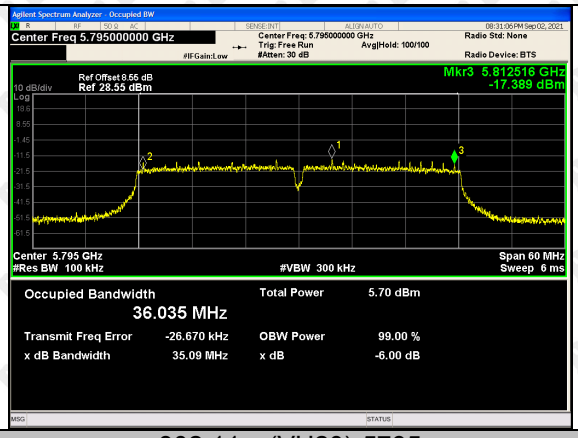

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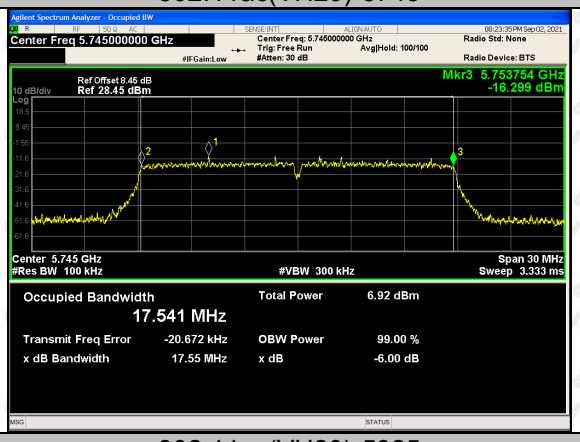

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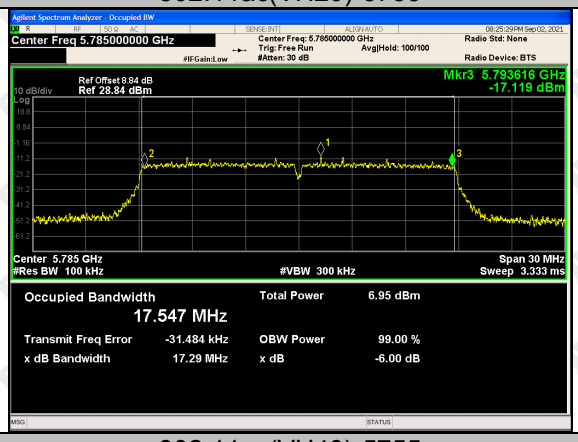

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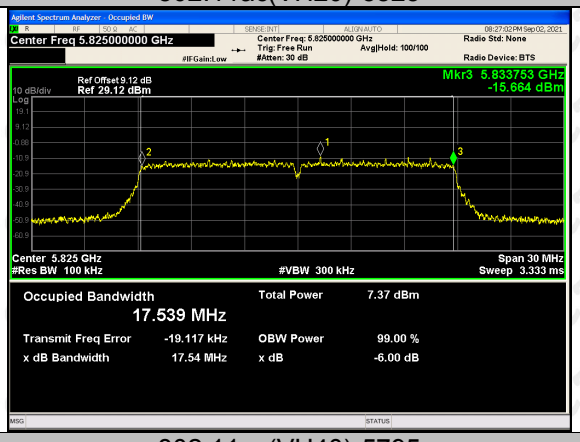

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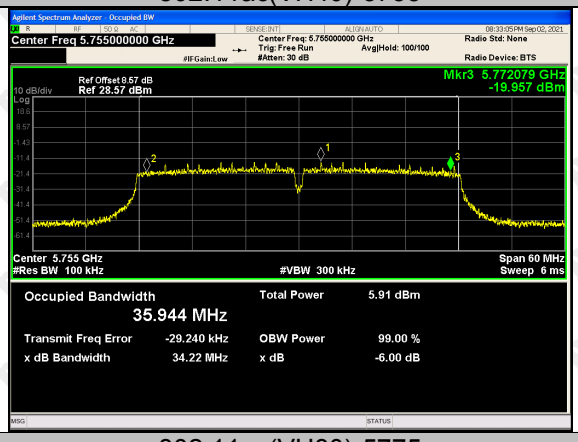

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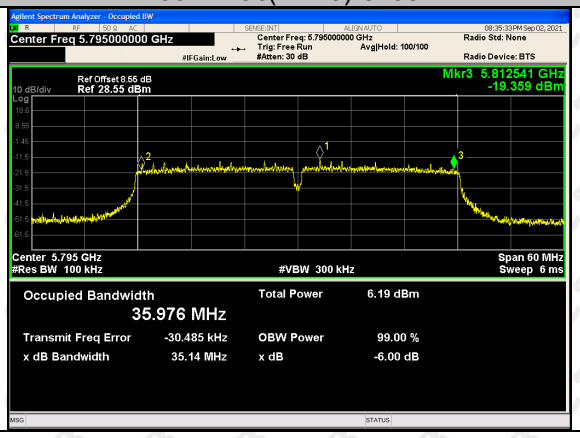
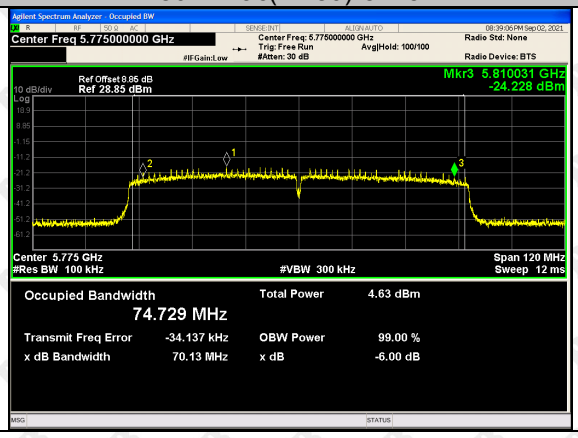
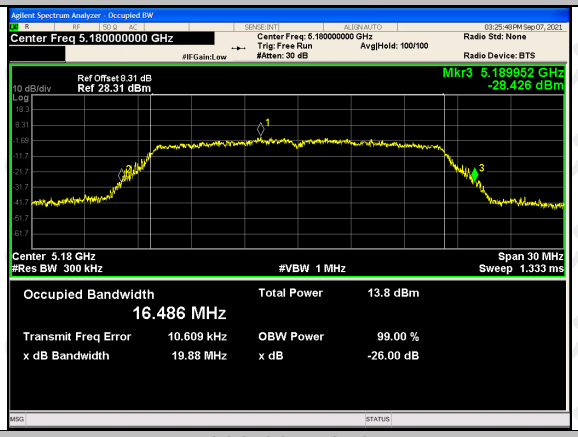


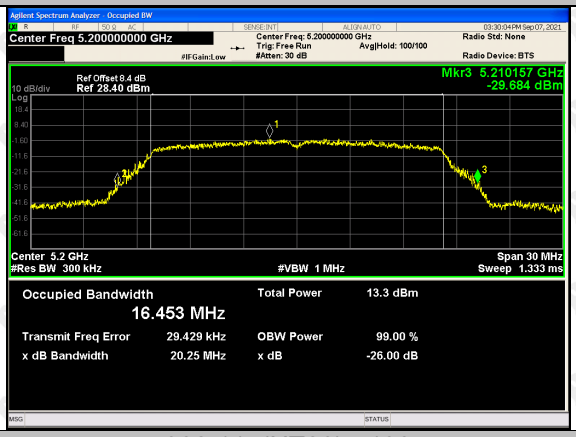


ANT 2

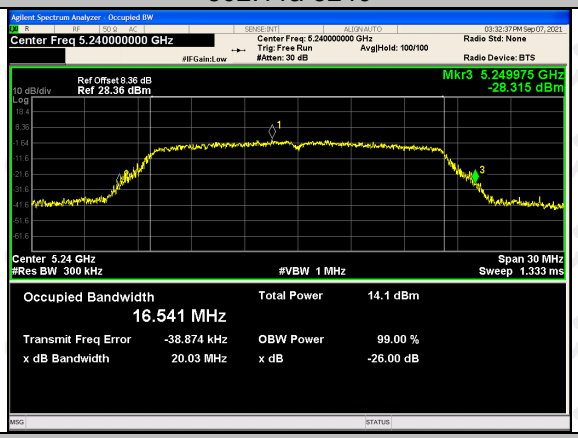
802.11a-5180



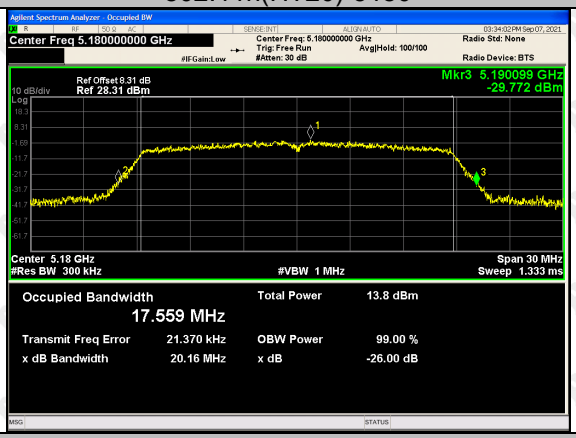
802.11a-5200



802.11a-5240



802.11n(HT20)-5180



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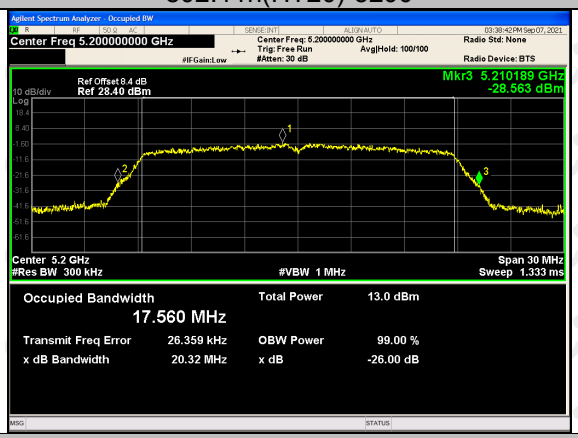

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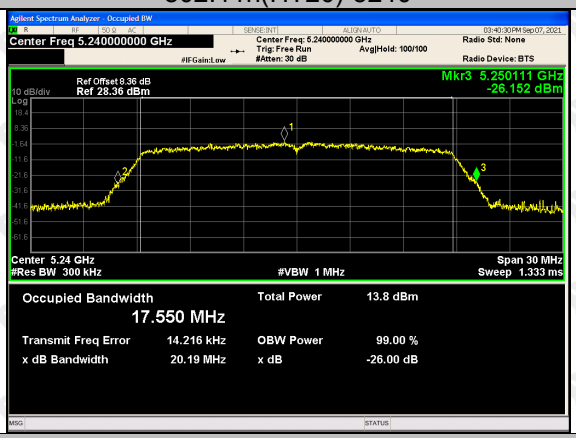

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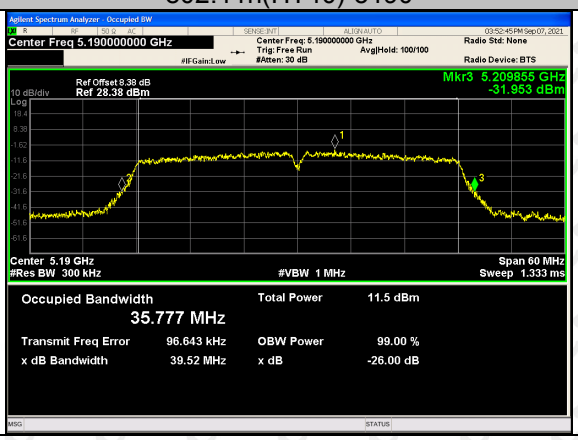

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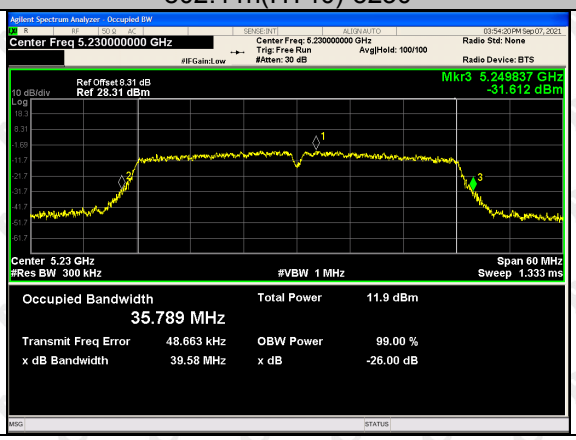

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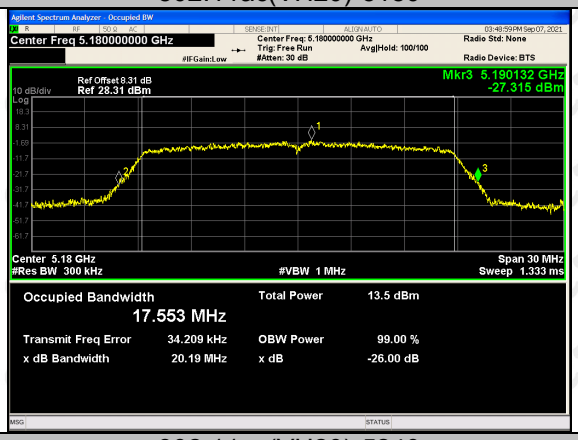

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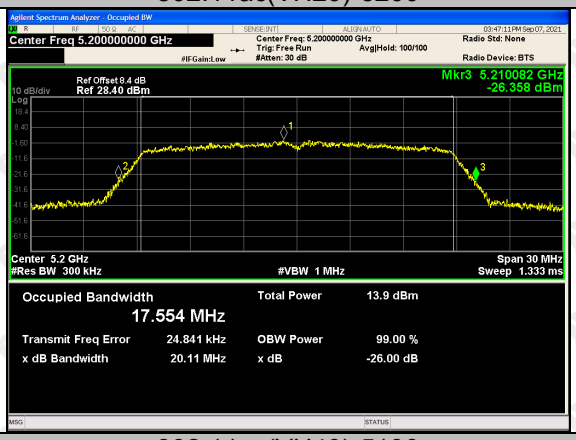

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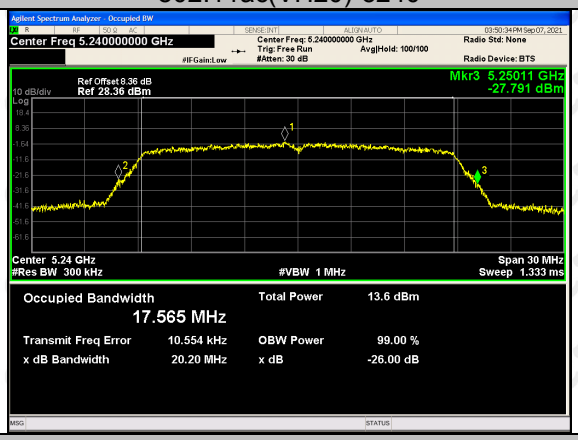

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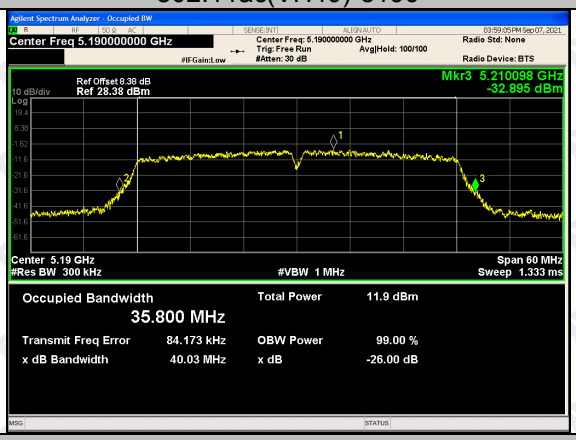

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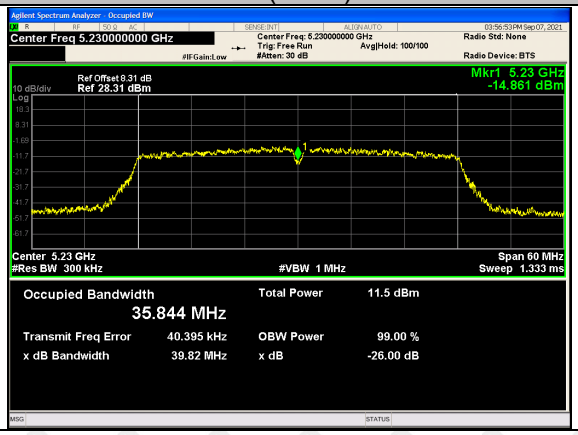

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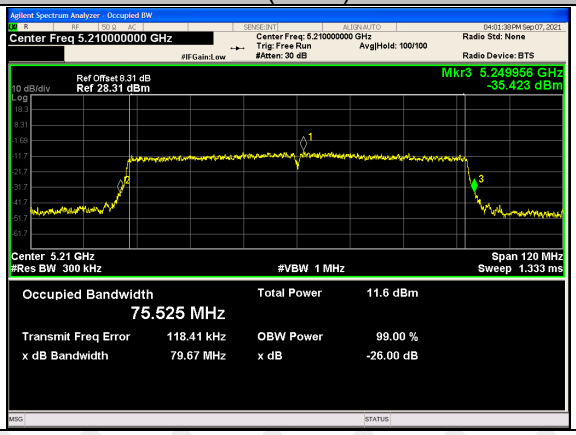
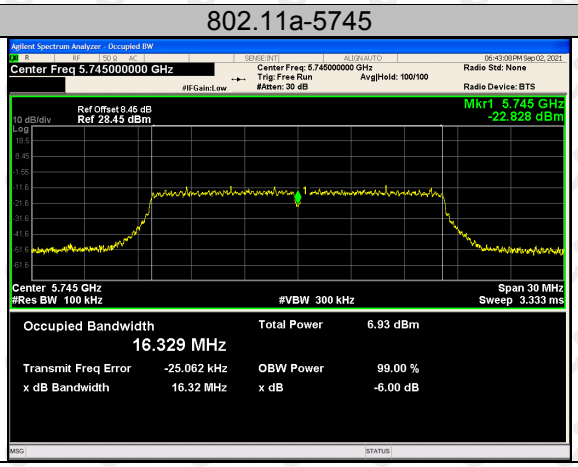
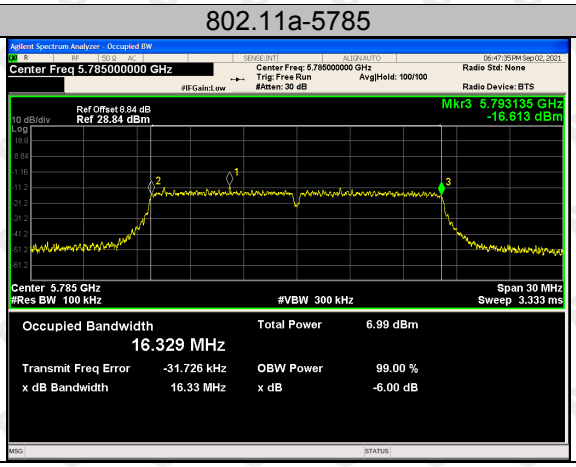


802.11a-5745



802.11a-5785



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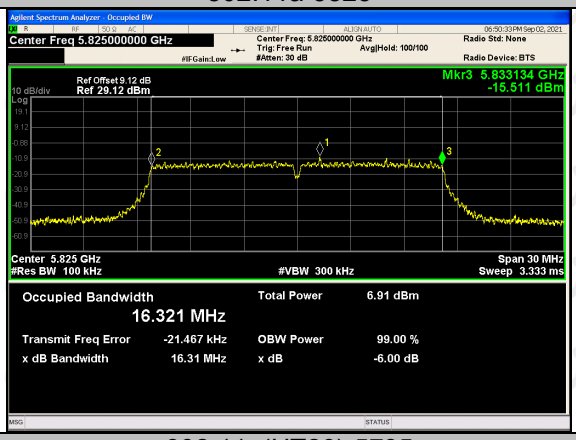

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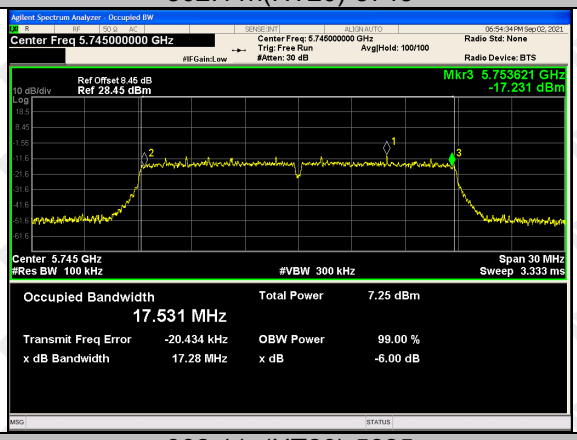

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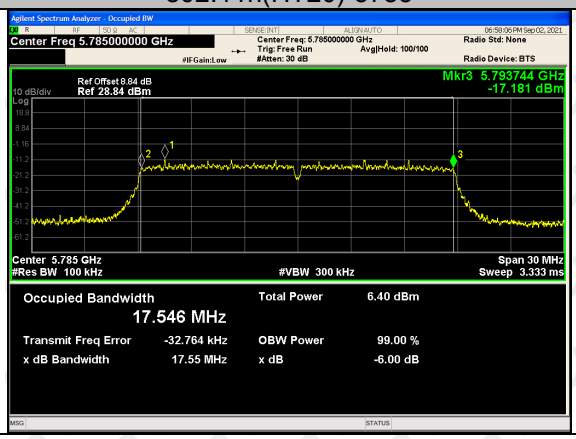

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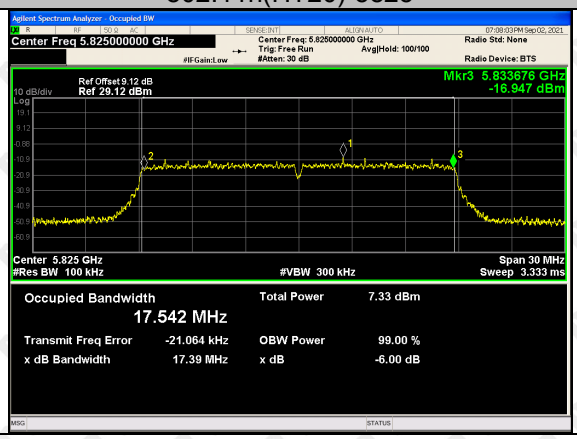

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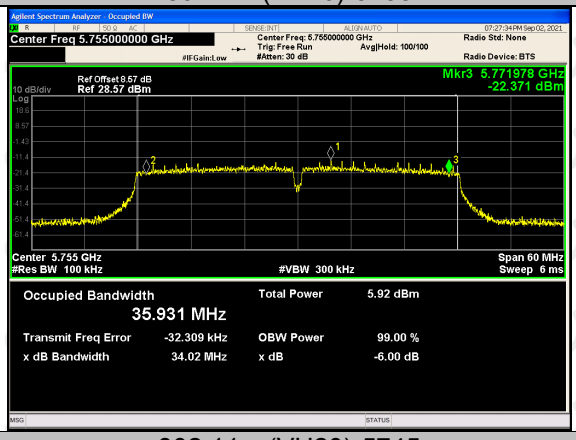

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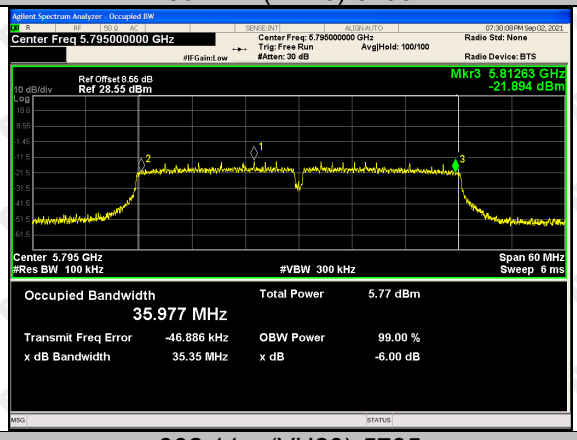

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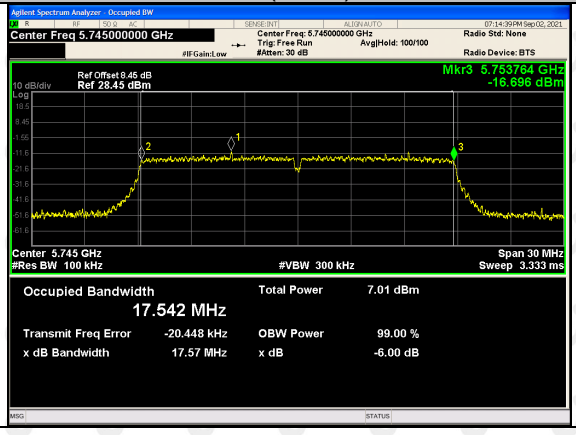

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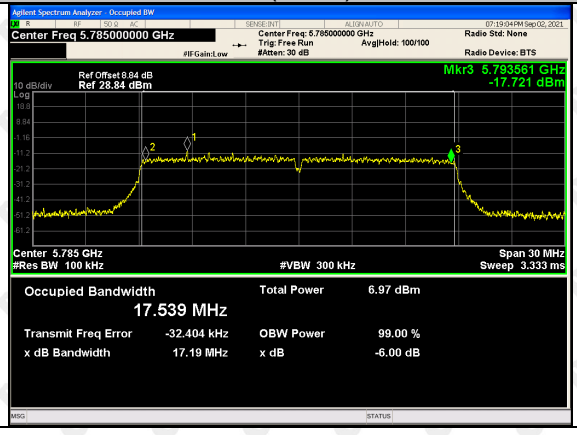

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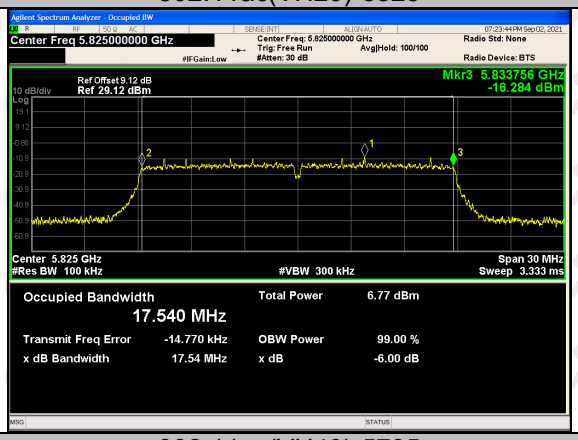

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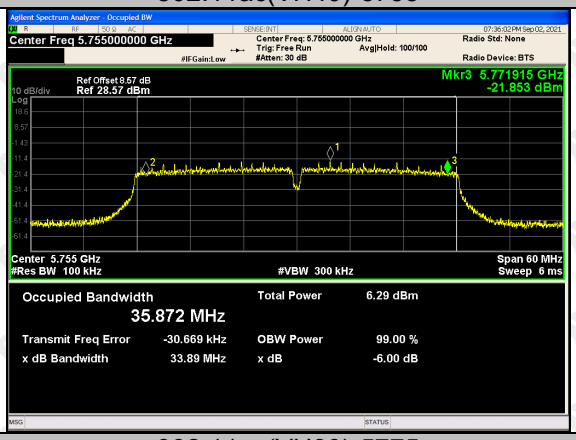

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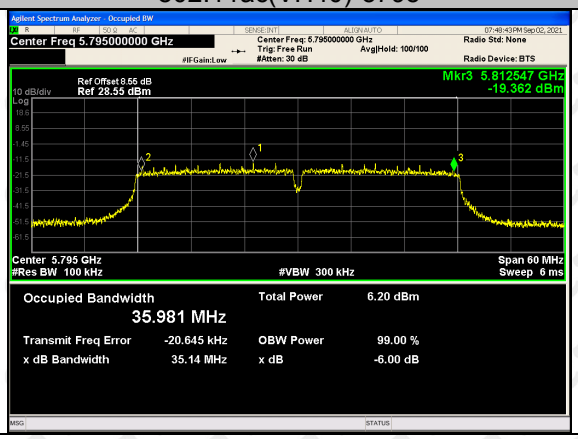

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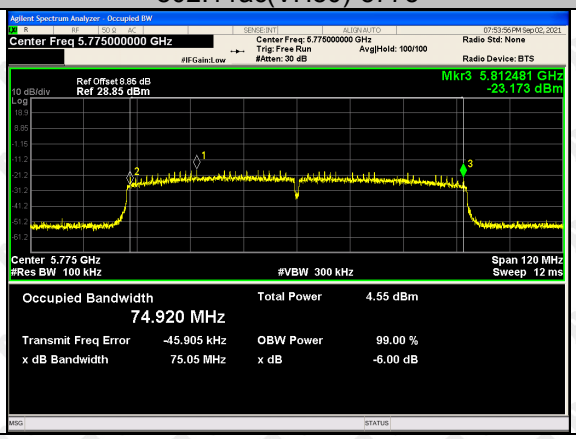
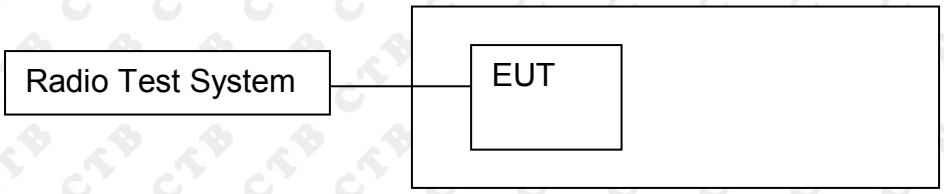


11. POWER SPECTRAL DENSITY

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.1.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.

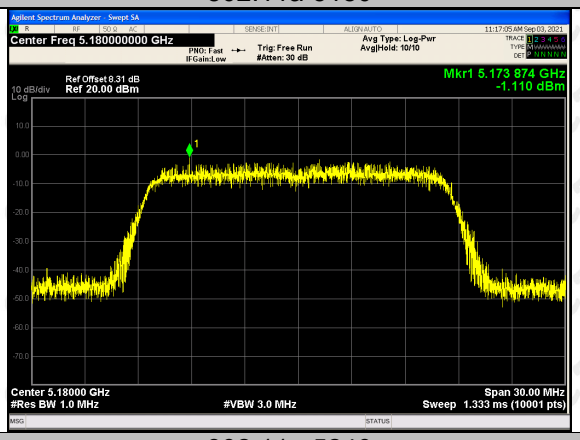
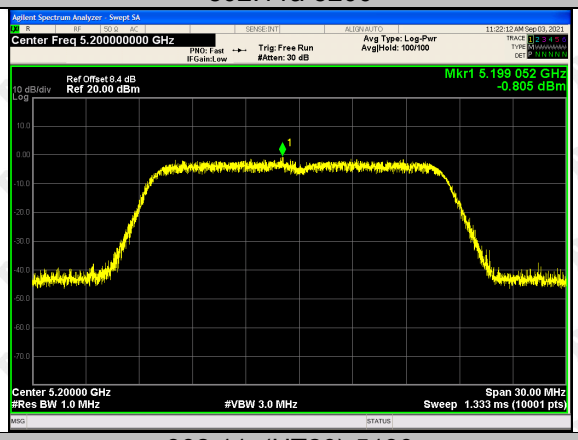
11.4 Test Result

ANT 1+2

Test mode	Test Channel (MHz)	PSD [dBm/MHz] ANT 1	PSD [dBm/MHz] ANT 2	PSD [dBm/MHz] Total	Limit (dBm)	Result
802.11a	5180	-1.11	-1.204	/	11	Pass
	5200	-0.805	-1.97	/	11	Pass
	5240	-0.534	-1.168	/	11	Pass
802.11n(HT20)	5180	-2.942	-1.513	0.841	11	Pass
	5200	-2.523	-2.267	0.617	11	Pass
	5240	-2.683	-1.588	0.909	11	Pass
802.11n(HT40)	5190	-5.945	-7.076	-3.463	11	Pass
	5230	-6.138	-6.603	-3.354	11	Pass
802.11ac(VH20)	5210	-2.048	-1.489	1.251	11	Pass
	5180	-2.667	-1.033	1.237	11	Pass
	5200	-2.513	-1.403	1.088	11	Pass
802.11ac(VH40)	5240	-6.271	-6.26	-3.255	11	Pass
	5190	-6.07	-6.909	-3.459	11	Pass
802.11ac(VH80)	5230	-10.152	-11.193	-7.631	11	Pass

Test mode	Test Channel (MHz)	PSD [dBm/500kHz] ANT 1	PSD [dBm/500kHz] ANT 2	PSD [dBm/500kHz] Total	Limit (dBm)	Result
802.11a	5745	-5.068	-4.935	/	30	Pass
	5785	-5.228	-4.632	/	30	Pass
	5825	-5.142	-3.966	/	30	Pass
802.11n(HT20)	5745	-6.08	-5.461	-2.749	30	Pass
	5785	-6.074	-6.924	-3.468	30	Pass
	5825	-6.475	-6.032	-3.238	30	Pass
802.11n(HT40)	5755	-10.133	-10.482	-7.294	30	Pass
	5795	-9.823	-10.055	-6.927	30	Pass
802.11ac(VH20)	5745	-6.164	-6.093	-3.118	30	Pass
	5785	-6.025	-4.609	-2.249	30	Pass
	5825	-6.091	-5.7	-2.881	30	Pass
802.11ac(VH40)	5755	-9.017	-9.689	-6.330	30	Pass
	5795	-10.12	-10.374	-7.235	30	Pass
802.11ac(VH80)	5775	-14.705	-14.405	-11.542	30	Pass

ANT 1

802.11a-5180	802.11a-5200
	
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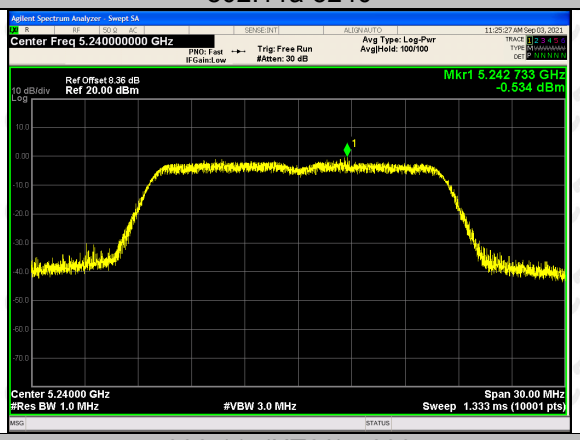	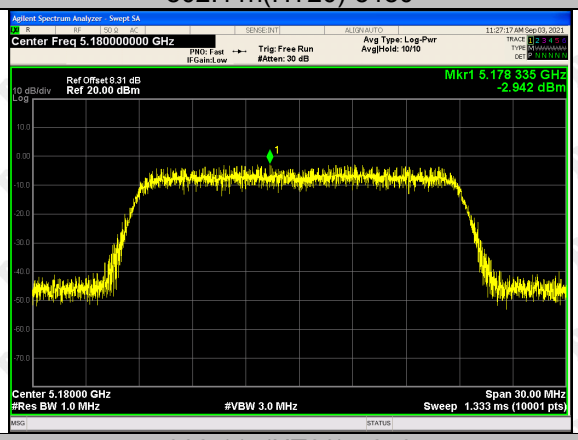
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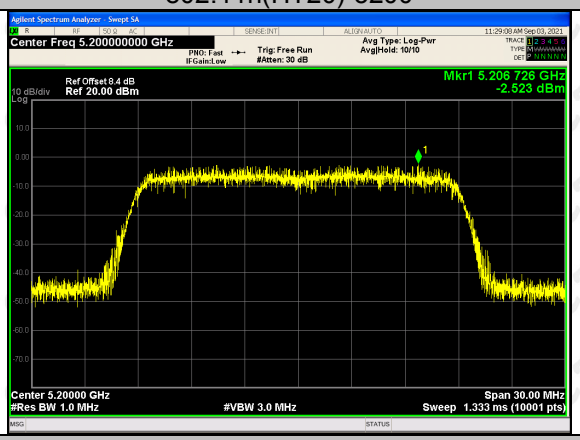	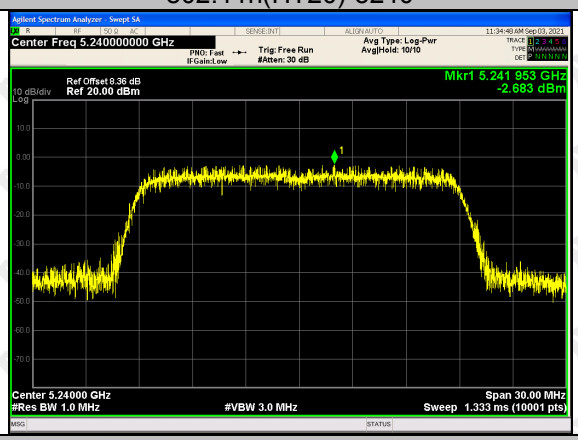
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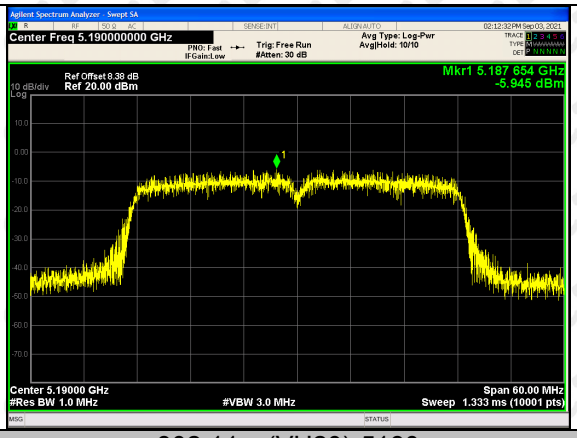

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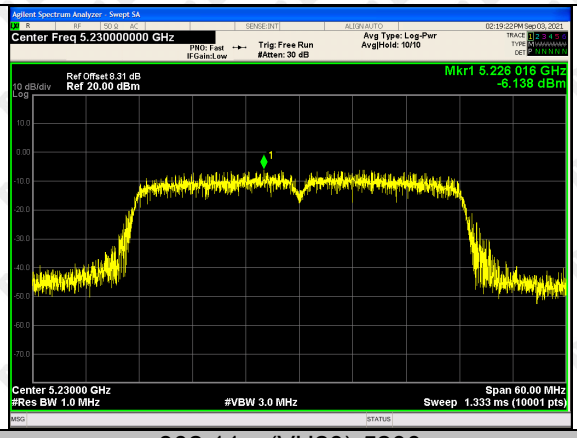

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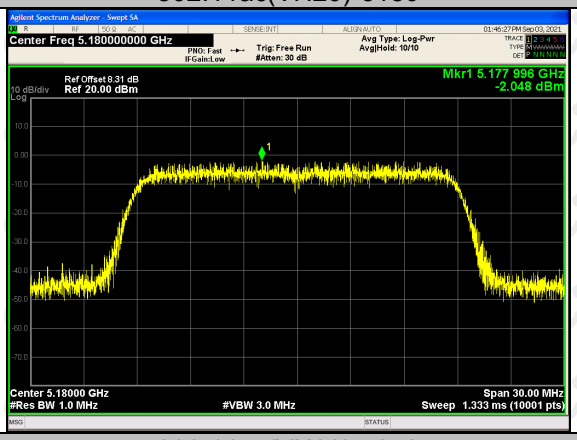

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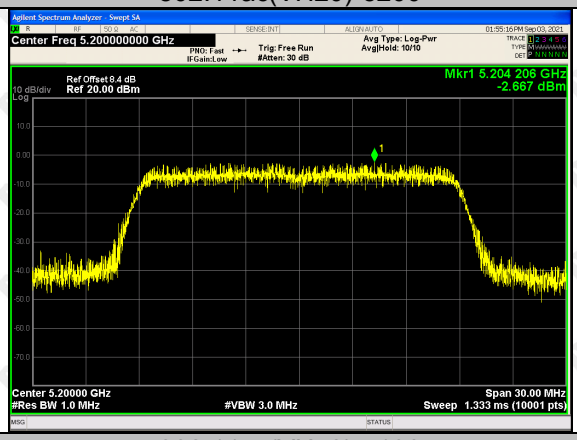

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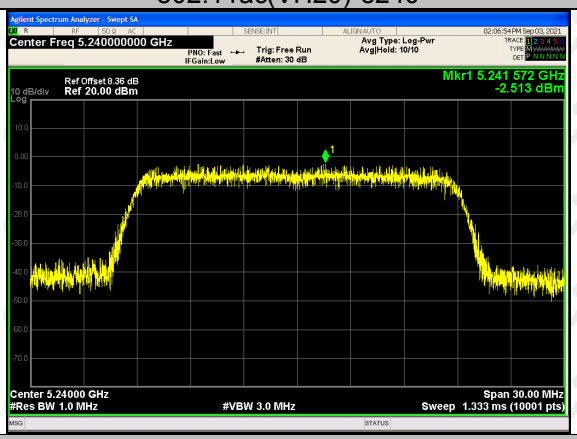

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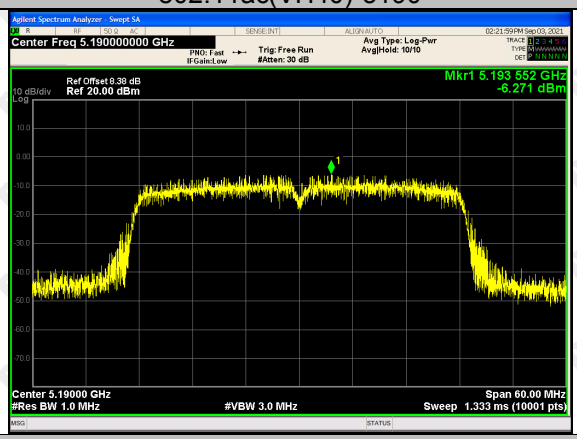

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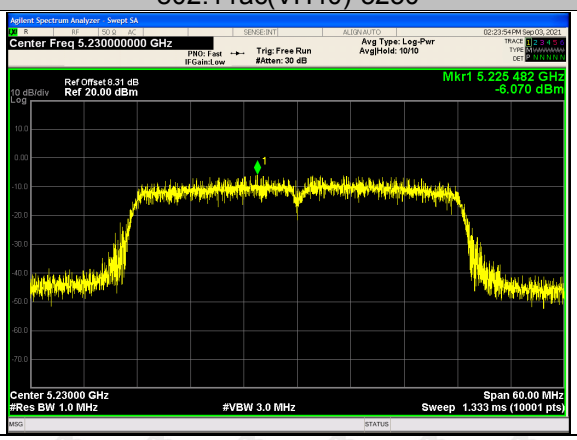

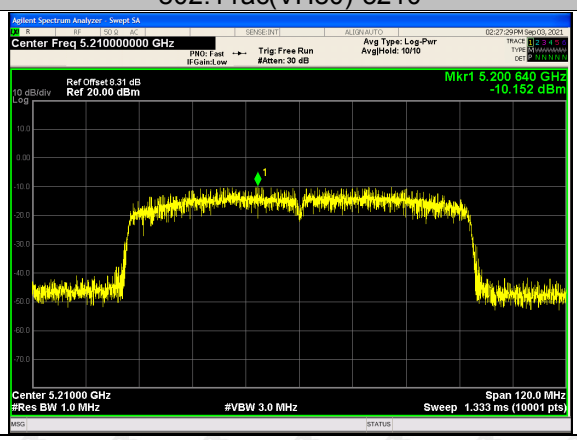

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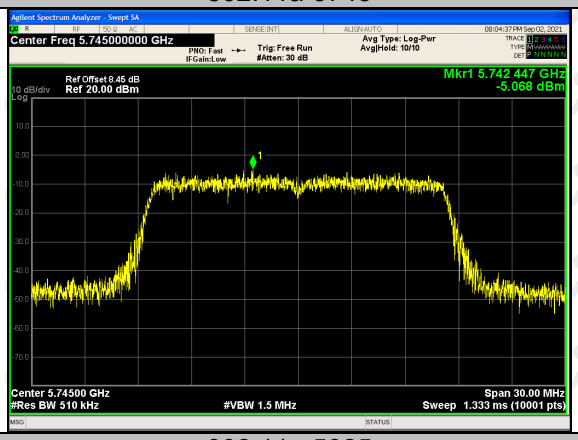

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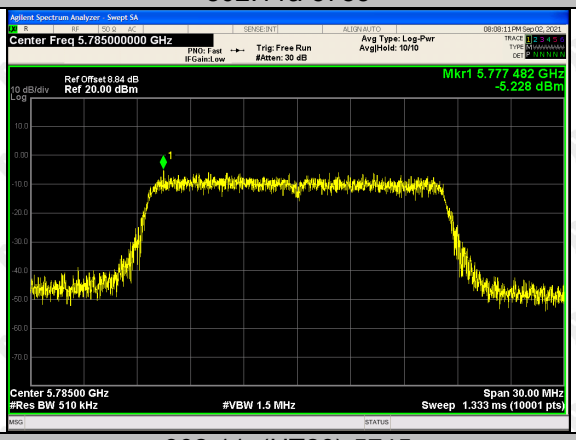

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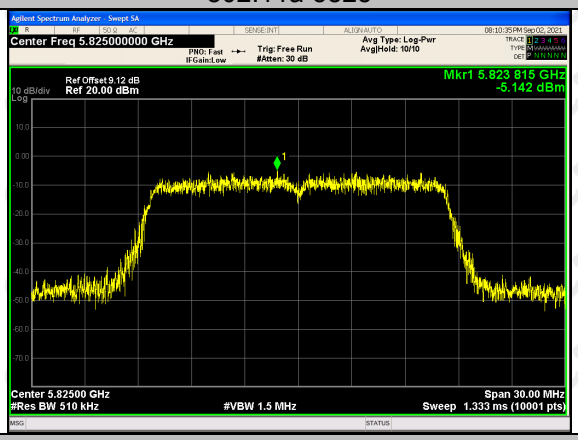

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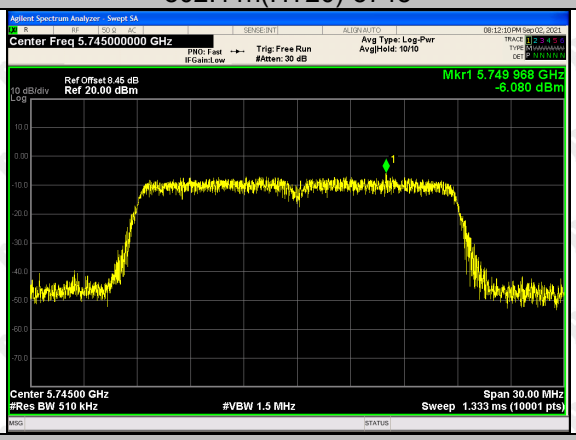

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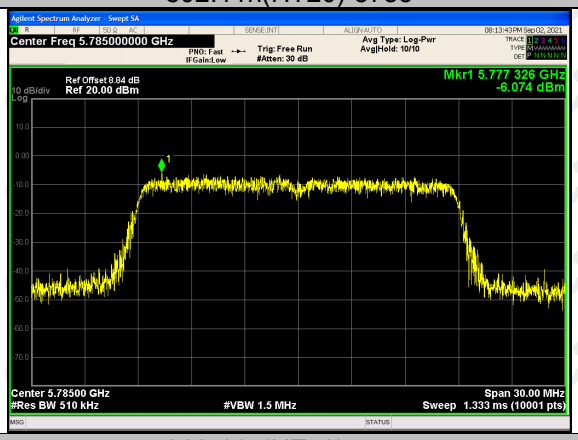

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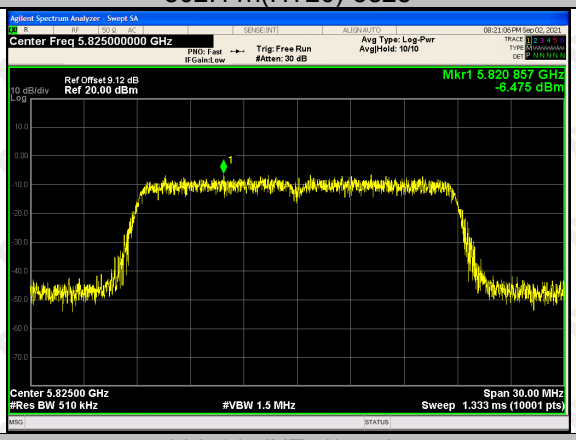

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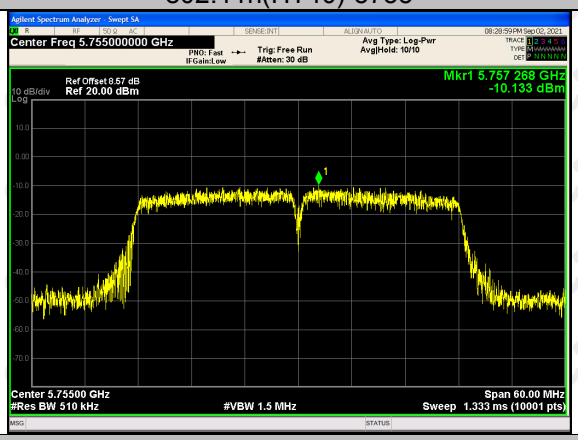

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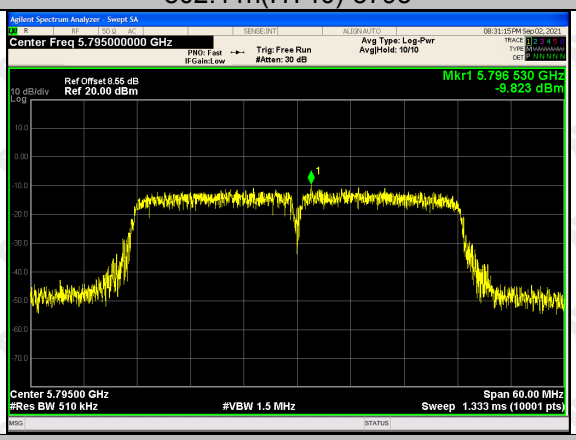

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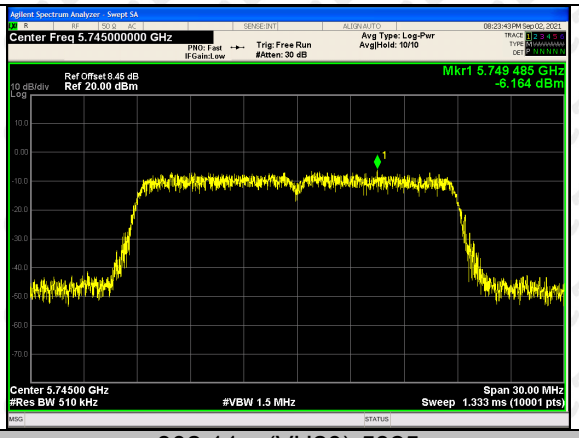

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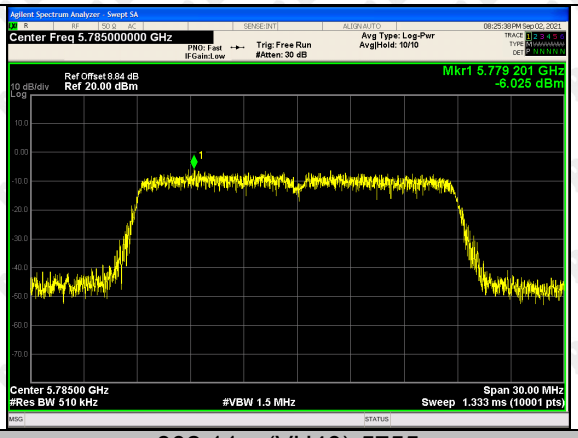

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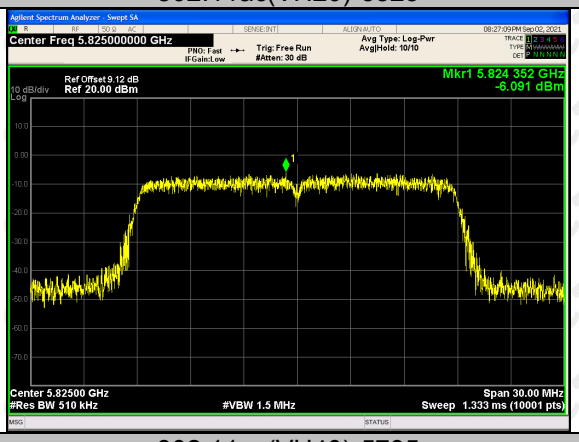

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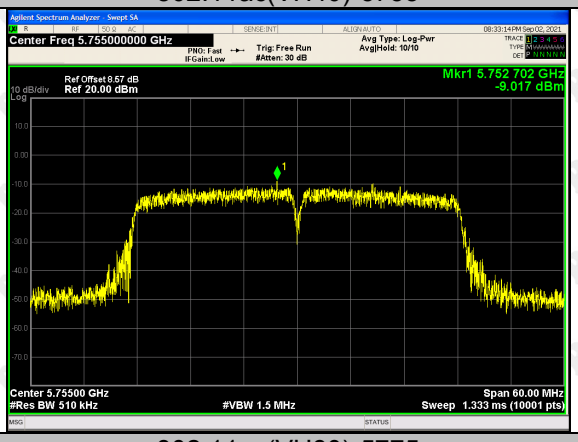

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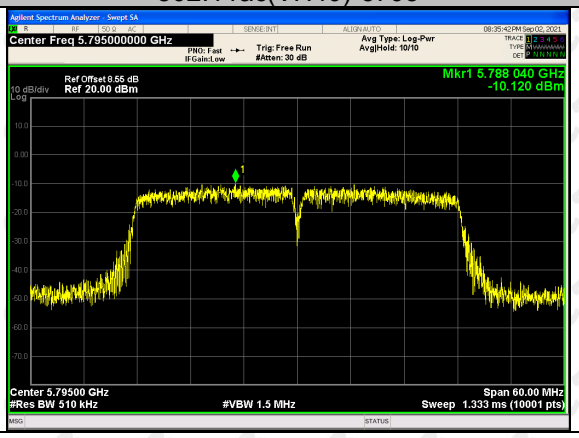

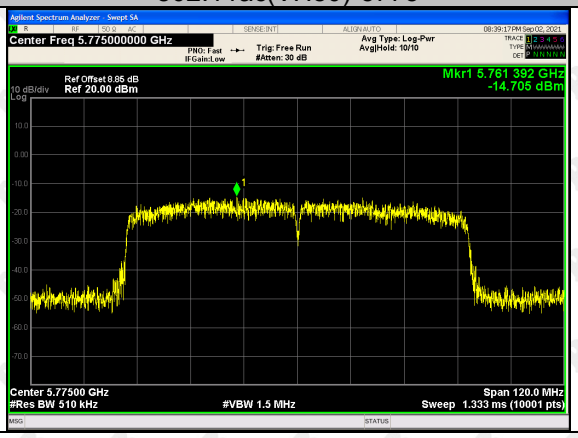

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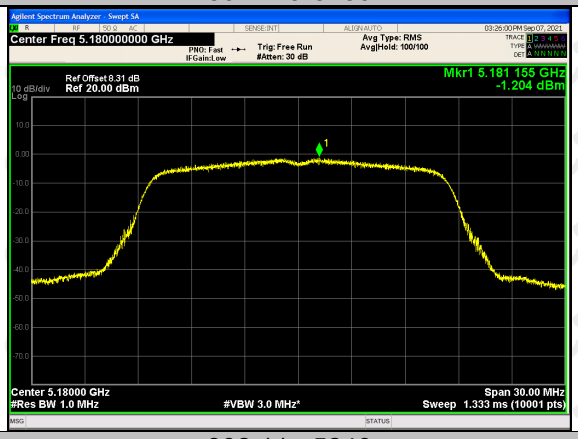

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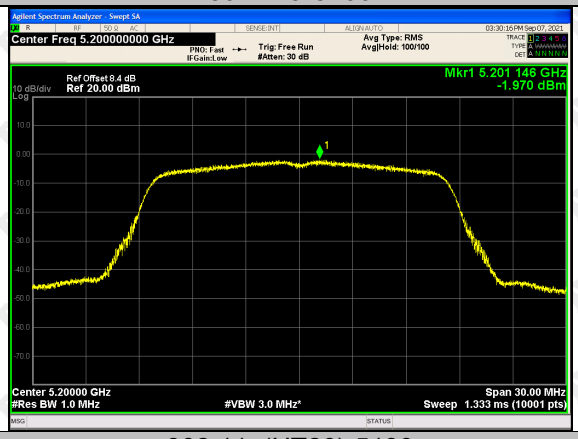

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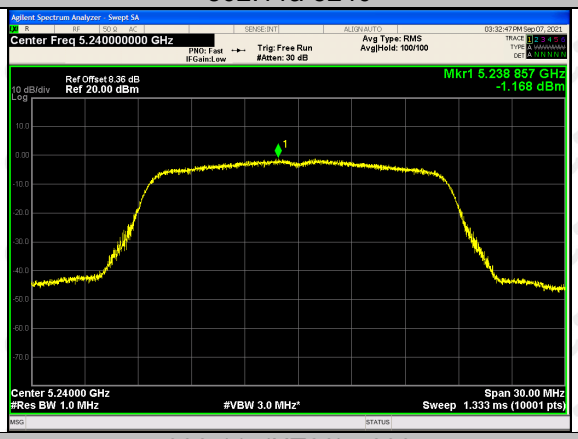

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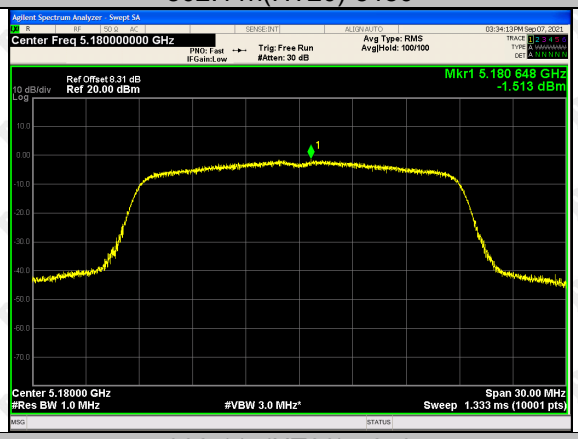

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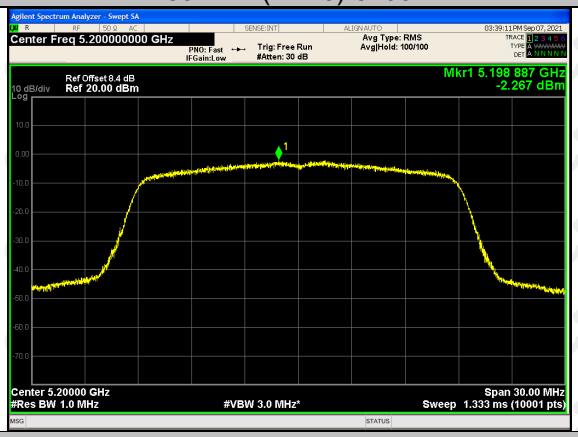

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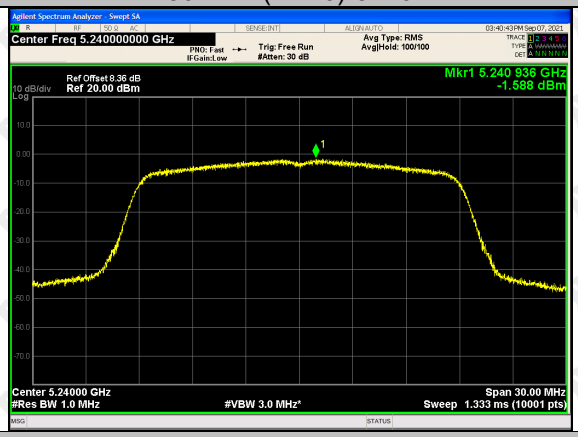

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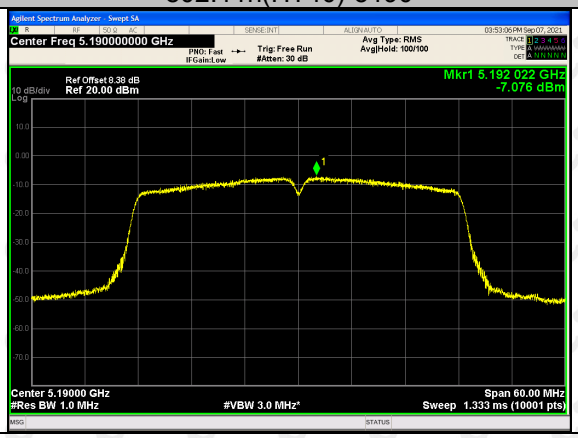

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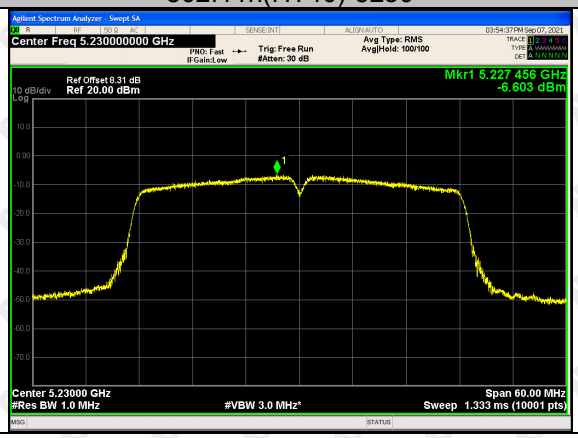

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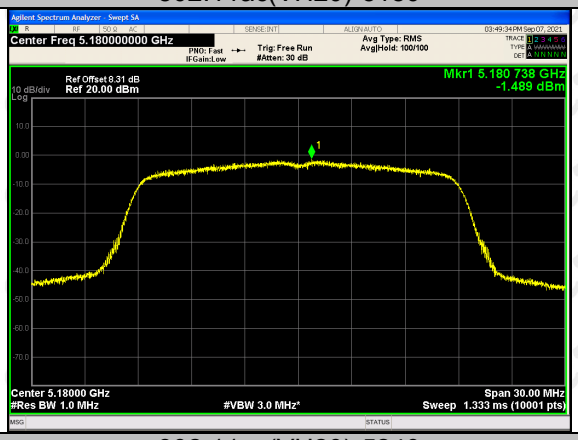

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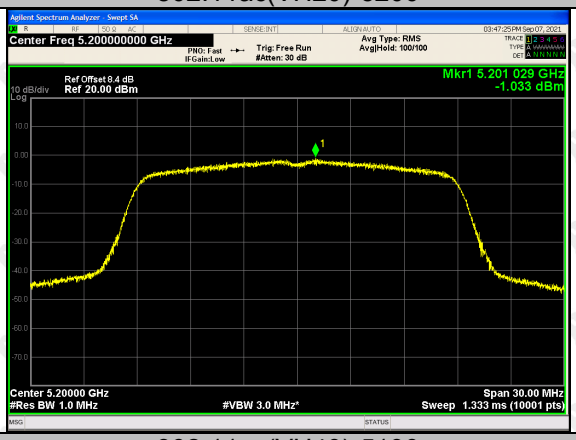

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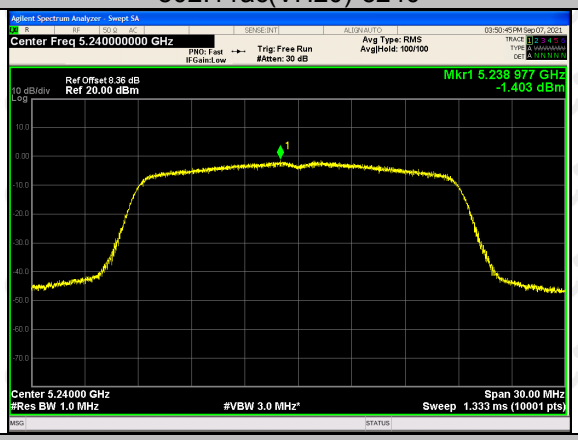

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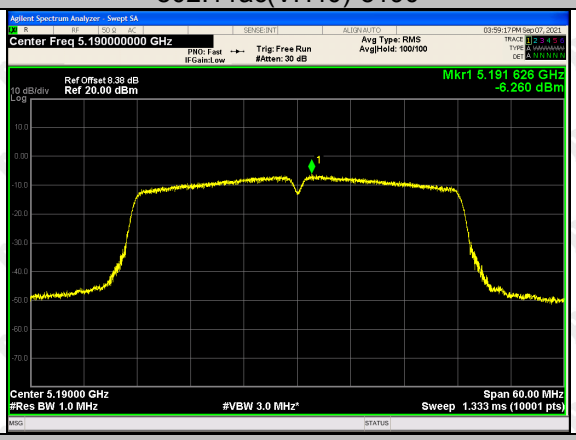

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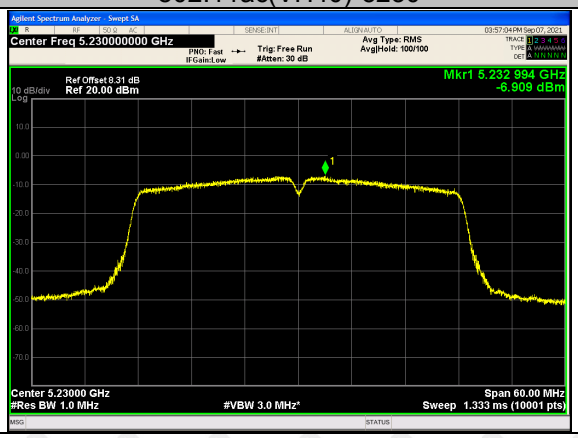

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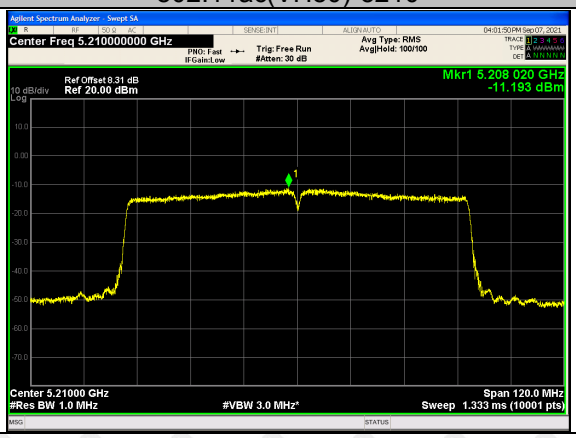

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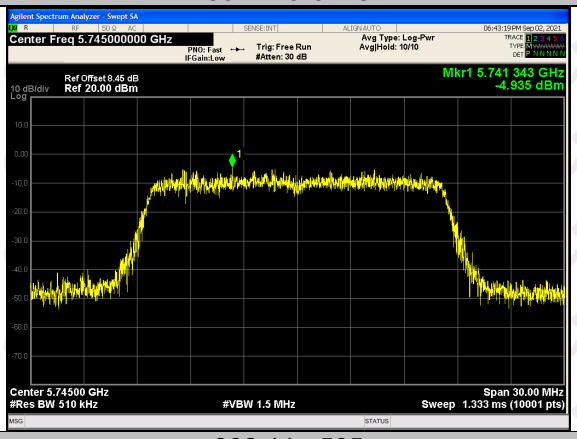

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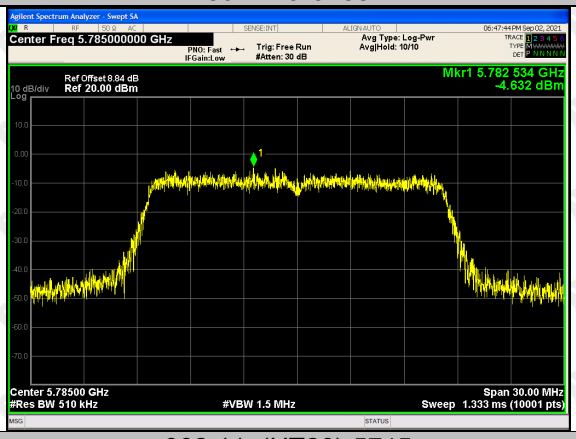

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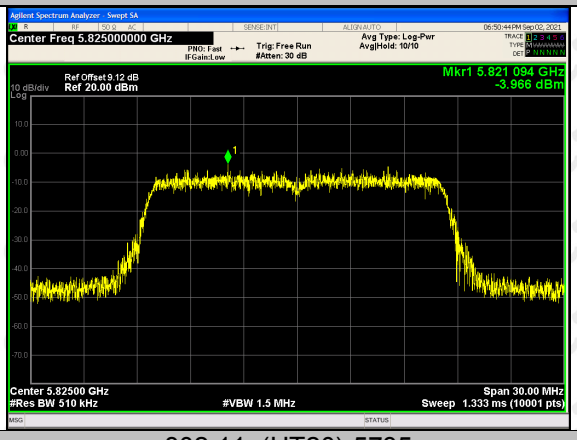

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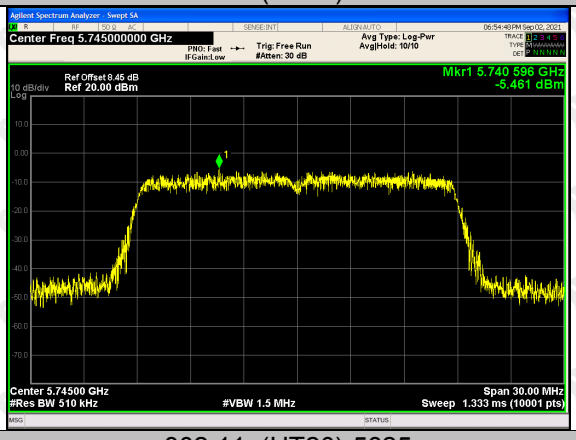

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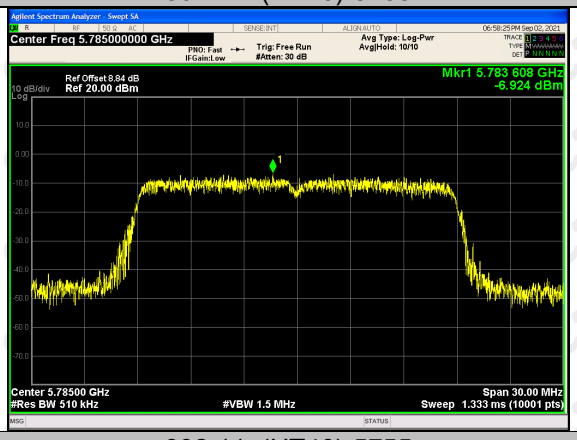

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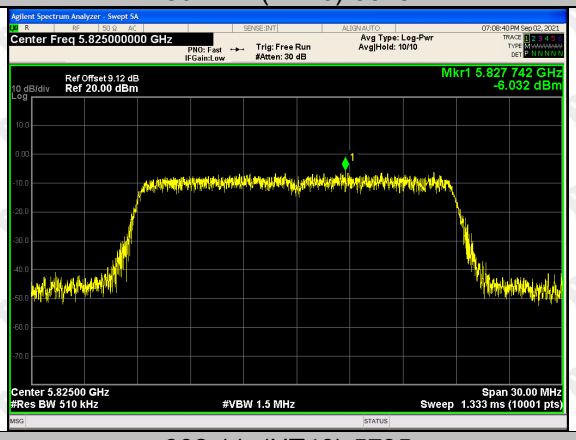

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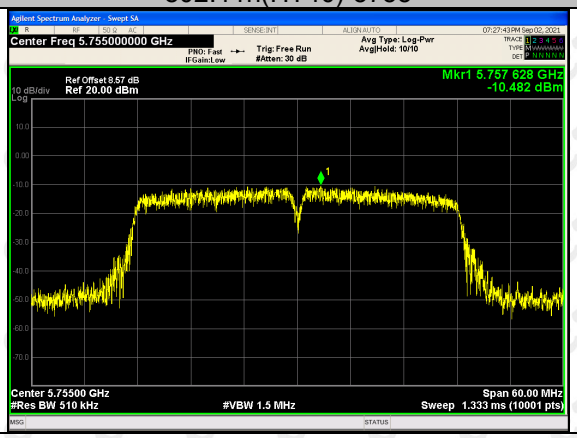

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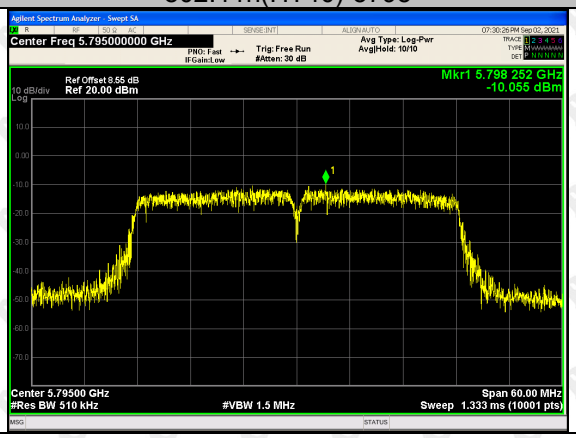

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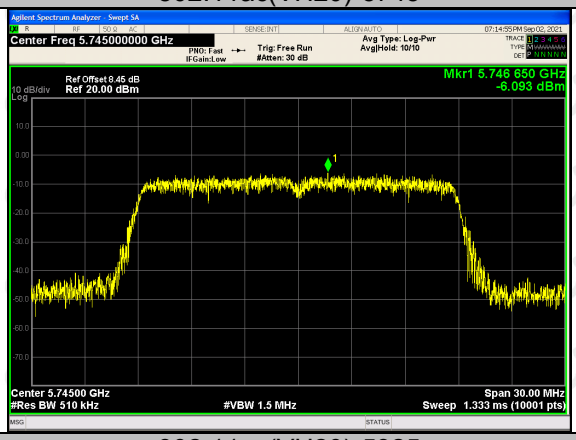

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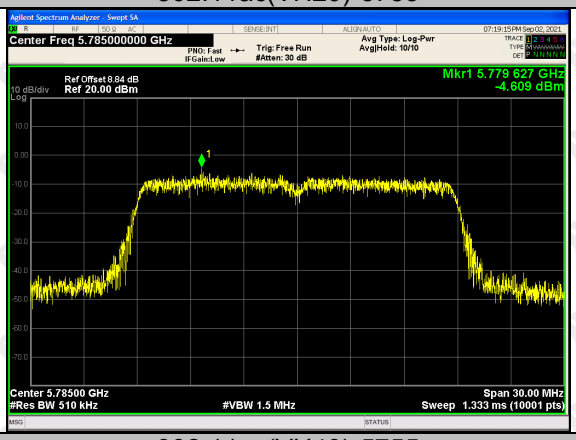

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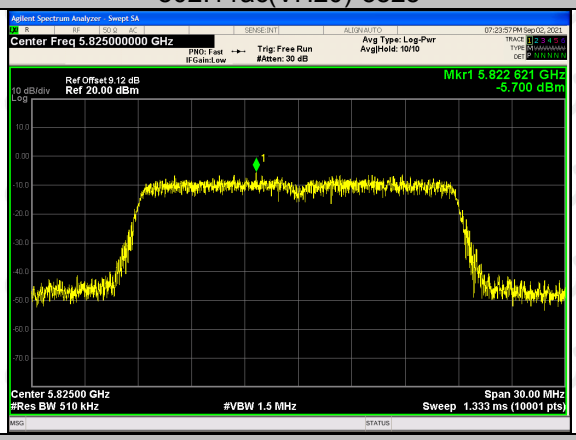

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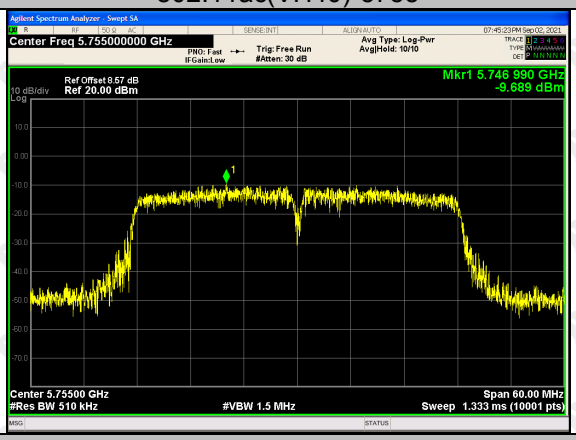

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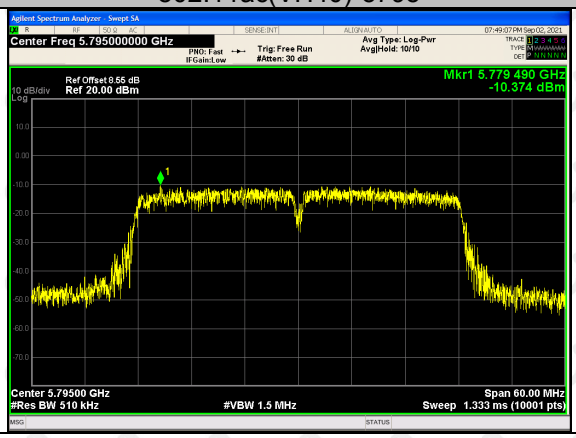

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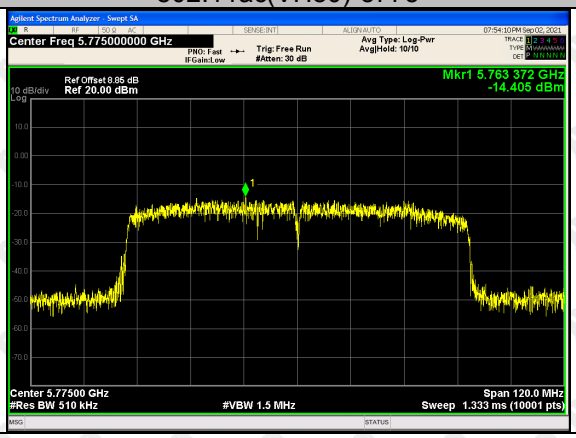
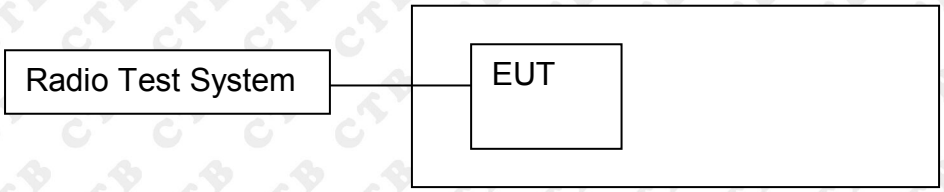


12. FREQUENCY STABILITY

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

ANT1:

TX Frequency (5180-5240MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5180.0556	5180	0.0556	10.7336
		V max (V)	13.20	5180.0323	5180	0.0323	6.2355
		V min (V)	10.80	5180.0246	5180	0.0246	4.7490
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	3.7	T (°C)	-20	5180.0054	5180	0.0054	1.0425
		T (°C)	-10	5180.0105	5180	0.0105	2.0270
		T (°C)	0	5180.0323	5180	0.0323	6.2355
		T (°C)	10	5180.0386	5180	0.0386	7.4517
		T (°C)	20	5180.0293	5180	0.0293	5.6564
		T (°C)	30	5180.0218	5180	0.0218	4.2085
		T (°C)	40	5180.0125	5180	0.0125	2.4131
		T (°C)	50	5180.0097	5180	0.0097	1.8726
		T (°C)	60	5180.0414	5180	0.0414	7.9923
		T (°C)	70	5180.0697	5180	0.0697	13.4556
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)	12.00	5200.0254	5200	0.0254	4.8846
		V max (V)	13.20	5200.0428	5200	0.0428	8.2308
		V min (V)	10.80	5200.0694	5200	0.0694	13.3462
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	3.7	T (°C)	-20	5200.0633	5200	0.0633	12.1731
		T (°C)	-10	5200.0526	5200	0.0526	10.1154
		T (°C)	0	5200.0434	5200	0.0434	8.3462
		T (°C)	10	5200.0928	5200	0.0928	17.8462
		T (°C)	20	5200.0635	5200	0.0635	12.2115
		T (°C)	30	5200.0124	5200	0.0124	2.3846
		T (°C)	40	5200.0733	5200	0.0733	14.0962
		T (°C)	50	5200.0416	5200	0.0416	8.0000
		T (°C)	60	5200.0325	5200	0.0325	6.2500
		T (°C)	70	5200.0427	5200	0.0427	8.2115
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)	12.00	5240.0136	5240	0.0136	2.5954
		V max (V)	13.20	5240.0414	5240	0.0414	7.9008
		V min (V)	10.80	5240.0097	5240	0.0097	1.8511
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	3.7	T (°C)	-20	5240.0094	5240	0.0094	1.7939
		T (°C)	-10	5240.0035	5240	0.0035	0.6679
		T (°C)	0	5240.0144	5240	0.0144	2.7481
		T (°C)	10	5240.0856	5240	0.0856	16.3359
		T (°C)	20	5240.0114	5240	0.0114	2.1756
		T (°C)	30	5240.0125	5240	0.0125	2.3855
		T (°C)	40	5240.0063	5240	0.0063	1.2023
		T (°C)	50	5240.0076	5240	0.0076	1.4504
		T (°C)	60	5240.0053	5240	0.0053	1.0115
		T (°C)	70	5240.0105	5240	0.0105	2.0038
Limits				±20ppm			
Result				Complies			

ANT2:

TX Frequency (5180-5240MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5180.0557	5180	0.0557	10.7490
		V max (V)	13.20	5180.0320	5180	0.0320	6.1776
		V min (V)	10.80	5180.0247	5180	0.0247	4.7683
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	3.7	T (°C)	-20	5180.0051	5180	0.0051	0.9846
		T (°C)	-10	5180.0107	5180	0.0107	2.0656
		T (°C)	0	5180.0321	5180	0.0321	6.1969
		T (°C)	10	5180.0383	5180	0.0382	7.3842
		T (°C)	20	5180.0235	5180	0.0235	4.5367
		T (°C)	30	5180.0219	5180	0.0219	4.2278
		T (°C)	40	5180.0127	5180	0.0127	2.4517
		T (°C)	50	5180.0097	5180	0.0097	1.8726
		T (°C)	60	5180.0417	5180	0.0417	8.0502
		T (°C)	70	5180.0695	5180	0.0695	13.4170
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)	12.00	5200.0252	5200	0.0252	4.8462
		V max (V)	13.20	5200.0427	5200	0.0427	8.2115
		V min (V)	10.80	5200.0696	5200	0.0696	13.3846
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	3.7	T (°C)	-20	5200.0637	5200	0.0637	12.2500
		T (°C)	-10	5200.0523	5200	0.0523	10.0577
		T (°C)	0	5200.0437	5200	0.0437	8.4038
		T (°C)	10	5200.0925	5200	0.0925	17.7885
		T (°C)	20	5200.0639	5200	0.0639	12.2885
		T (°C)	30	5200.0121	5200	0.0121	2.3269
		T (°C)	40	5200.0738	5200	0.0738	14.1923
		T (°C)	50	5200.0416	5200	0.0416	8.0000
		T (°C)	60	5200.0329	5200	0.0329	6.3269
		T (°C)	70	5200.0421	5200	0.0421	8.0962
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)	12.00	5240.0138	5240	0.0138	2.6336
		V max (V)	13.20	5240.0411	5240	0.0411	7.8435
		V min (V)	10.80	5240.0102	5240	0.0102	1.9466
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	3.7	T (°C)	-20	5240.0097	5240	0.0097	1.8511
		T (°C)	-10	5240.0033	5240	0.0033	0.6298
		T (°C)	0	5240.0148	5240	0.0148	2.8244
		T (°C)	10	5240.0856	5240	0.0856	16.3359
		T (°C)	20	5240.0119	5240	0.0119	2.2710
		T (°C)	30	5240.0125	5240	0.0125	2.3855
		T (°C)	40	5240.0061	5240	0.0061	1.1641
		T (°C)	50	5240.0076	5240	0.0076	1.4504
		T (°C)	60	5240.0059	5240	0.0059	1.1260
		T (°C)	70	5240.0107	5240	0.0107	2.0420
Limits				±20ppm			
Result				Complies			

ANT1:

TX Frequency(5745-5825MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5745.00453	5745	0.00453	0.7888
		V max (V)	13.20	5745.00913	5745	0.00913	1.5888
		V min (V)	10.80	5745.00023	5745	0.00023	0.0399
Limits				±20ppm			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	3.7	T (°C)	-20	5745.00058	5745	0.00058	0.1012
		T (°C)	-10	5745.01023	5745	0.01023	1.7813
		T (°C)	0	5745.00328	5745	0.00328	0.5705
		T (°C)	10	5745.00238	5745	0.00238	0.4150
		T (°C)	20	5745.01158	5745	0.01158	2.0157
		T (°C)	30	5745.00198	5745	0.00198	0.3446
		T (°C)	40	5745.00899	5745	0.00899	1.5650
		T (°C)	50	5745.01334	5745	0.01334	2.3228
		T (°C)	60	5745.01266	5745	0.01266	2.2034
		T (°C)	70	5745.00324	5745	0.00324	0.5633
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)	12.00	5785.00106	5785	0.00106	0.1825
		V max (V)	13.20	5785.00248	5785	0.00248	0.4287
		V min (V)	10.80	5785.01337	5785	0.01337	2.3110
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	3.7	T (°C)	-20	5785.00313	5785	0.00313	0.5413
		T (°C)	-10	5785.00598	5785	0.00598	1.0336
		T (°C)	0	5785.00059	5785	0.00059	0.1023
		T (°C)	10	5785.01338	5785	0.01338	2.3120
		T (°C)	20	5785.00108	5785	0.00108	0.1872
		T (°C)	30	5785.00815	5785	0.00815	1.4083
		T (°C)	40	5785.01354	5785	0.01354	2.3402
		T (°C)	50	5785.00521	5785	0.00521	0.8998
		T (°C)	60	5785.00916	5785	0.00916	1.5841
		T (°C)	70	5785.01155	5785	0.01155	1.9961
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)	12.00	5825.00885	5825	0.00885	1.5200
		V max (V)	13.20	5825.01115	5825	0.01115	1.9138
		V min (V)	10.80	5825.00955	5825	0.00955	1.6394
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	3.7	T (°C)	-20	5825.00756	5825	0.00756	1.2974
		T (°C)	-10	5825.00491	5825	0.00491	0.8422
		T (°C)	0	5825.00838	5825	0.00838	1.4380
		T (°C)	10	5825.00048	5825	0.00048	0.0830
		T (°C)	20	5825.00025	5825	0.00025	0.0433
		T (°C)	30	5825.00767	5825	0.00767	1.3166
		T (°C)	40	5825.01292	5825	0.01292	2.2178
		T (°C)	50	5825.00017	5825	0.00017	0.0300
		T (°C)	60	5825.00196	5825	0.00196	0.3369
		T (°C)	70	5825.00983	5825	0.00983	1.6875
Limits				±20ppm			
Result				Complies			

Ant2:

TX Frequency(5745-5825MHz)

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviati (ppm)
T nom (°C)	20	V nom (V)	12.00	5745.00726	5745	0.00726	1.2631
		V max (V)	13.20	5745.00199	5745	0.00199	0.3469
		V min (V)	10.80	5745.00401	5745	0.00401	0.6972
Limits				±20ppm			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	3.7	T (°C)	-20	5745.00809	5745	0.00809	1.4084
		T (°C)	-10	5745.00454	5745	0.00454	0.7911
		T (°C)	0	5745.01283	5745	0.01283	2.2331
		T (°C)	10	5745.00975	5745	0.00975	1.6973
		T (°C)	20	5745.00991	5745	0.00991	1.7247
		T (°C)	30	5745.00597	5745	0.00597	1.0400
		T (°C)	40	5745.01001	5745	0.01001	1.7422
		T (°C)	50	5745.00423	5745	0.00423	0.7365
		T (°C)	60	5745.00109	5745	0.00109	0.1891
		T (°C)	70	5745.01264	5745	0.01264	2.1998
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)	12.00	5785.01187	5785	0.01187	2.0521
		V max (V)	13.20	5785.00605	5785	0.00605	1.0466
		V min (V)	10.80	5785.00216	5785	0.00216	0.3740
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	3.7	T (°C)	-20	5785.00317	5785	0.00317	0.5476
		T (°C)	-10	5785.00054	5785	0.00054	0.0935
		T (°C)	0	5785.00288	5785	0.00288	0.4979
		T (°C)	10	5785.01296	5785	0.01296	2.2404
		T (°C)	20	5785.00520	5785	0.00520	0.8984
		T (°C)	30	5785.00354	5785	0.00354	0.6125
		T (°C)	40	5785.00839	5785	0.00839	1.4499
		T (°C)	50	5785.00102	5785	0.00102	0.1756
		T (°C)	60	5785.01266	5785	0.01266	2.1891
		T (°C)	70	5785.01147	5785	0.01147	1.9822
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)	12.00	5825.00561	5825	0.00561	0.9637
		V max (V)	13.20	5825.00468	5825	0.00468	0.8034
		V min (V)	10.80	5825.01198	5825	0.01198	2.0570
Limits				±20ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	3.7	T (°C)	-20	5825.00040	5825	0.00040	0.0678
		T (°C)	-10	5825.00076	5825	0.00076	0.1305
		T (°C)	0	5825.01115	5825	0.01115	1.9147
		T (°C)	10	5825.00228	5825	0.00228	0.3911
		T (°C)	20	5825.00359	5825	0.00359	0.6162
		T (°C)	30	5825.00325	5825	0.00325	0.5588
		T (°C)	40	5825.01298	5825	0.01298	2.2285
		T (°C)	50	5825.01132	5825	0.01132	1.9429
		T (°C)	60	5825.01319	5825	0.01319	2.2645
		T (°C)	70	5825.00416	5825	0.00416	0.7134
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 Internal Antenna and no consideration of replacement. The best case gain of the antenna is 1.2dBi.

15. EUT PHOTOGRAPHS

EUT Photo 1

EUT Photo 2

16. EUT TEST SETUP PHOTOGRAPHS

Spurious emissions

Below 1GHz

Above 1GHz

Conducted Emission

※※※※※ END OF REPORT ※※※※※