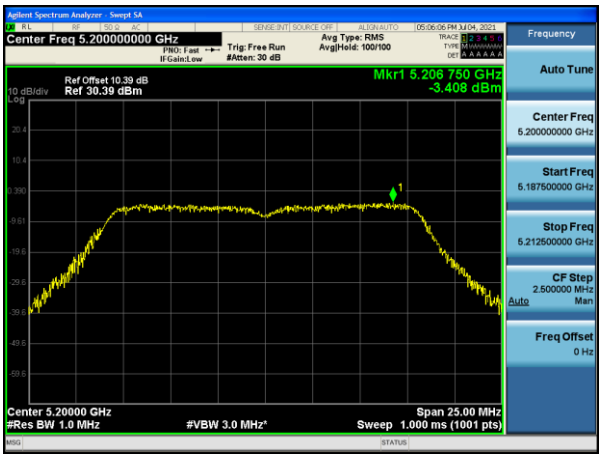
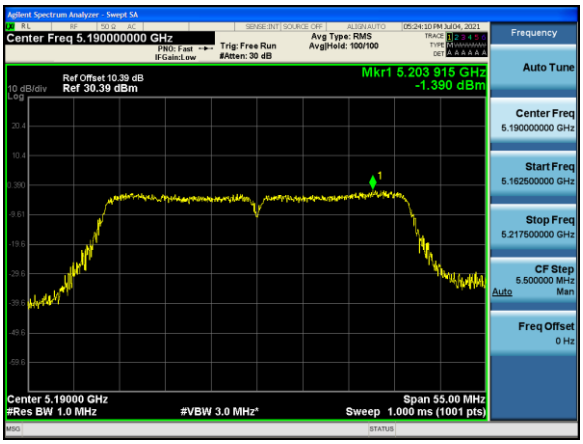
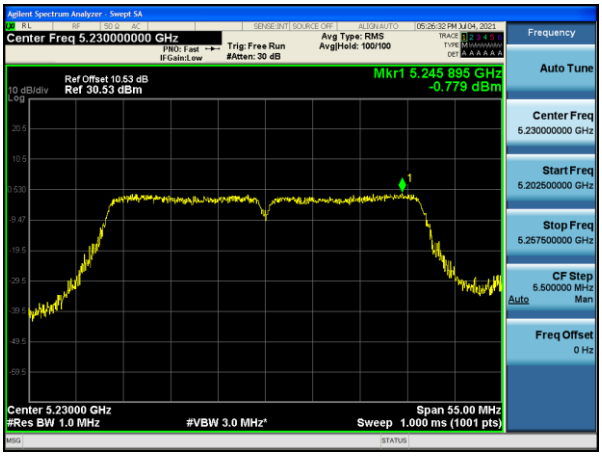
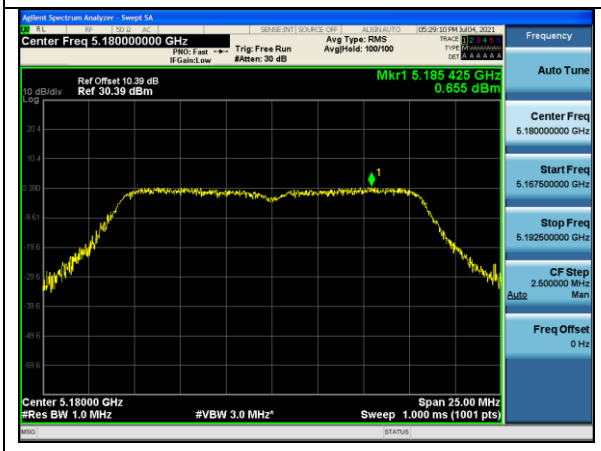
Test plots

ANT A

For U-NII-1

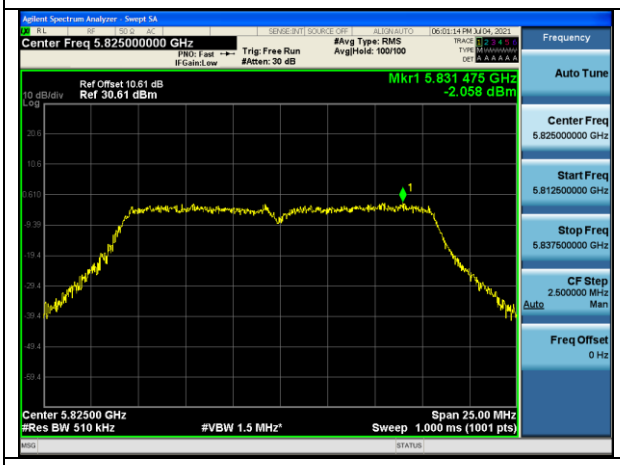
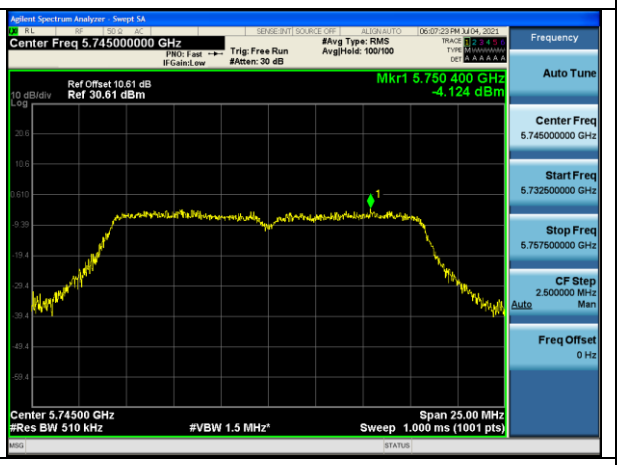
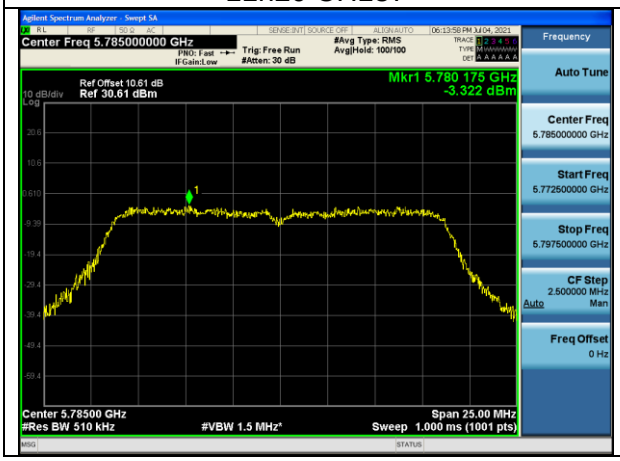
11a CH36	11a CH44
	
11a CH48	**11n20 CH36**
	
11n20 CH44	**11n20 CH48**
	

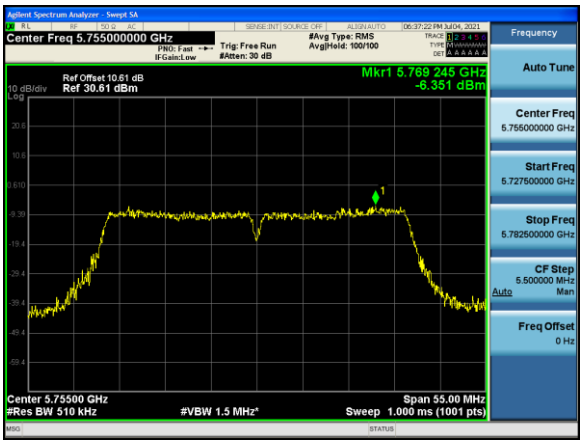
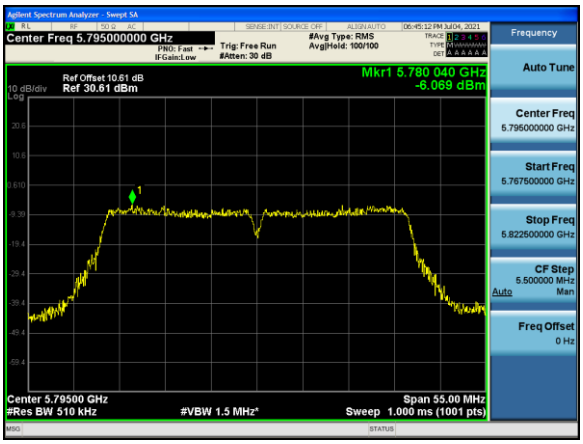
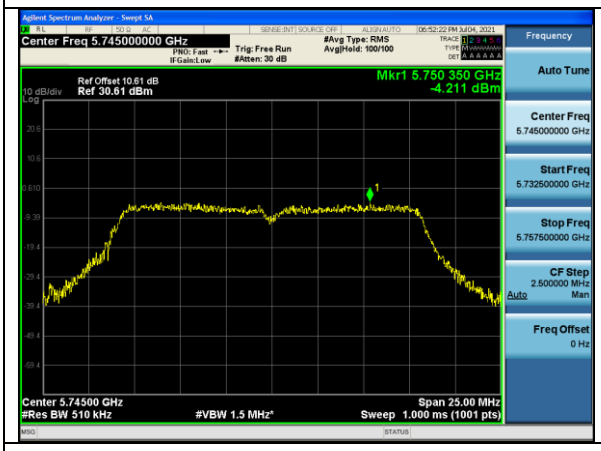
11n40 CH38	11n40 CH46
	
11ac20 CH36	**11ac20 CH40**
	
11ac20 CH48	**11ac40 CH38**
	

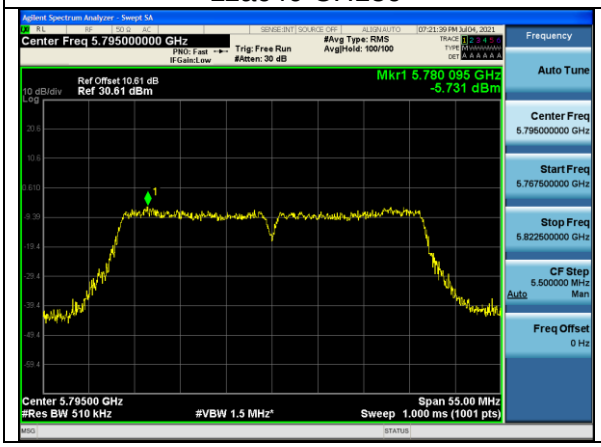
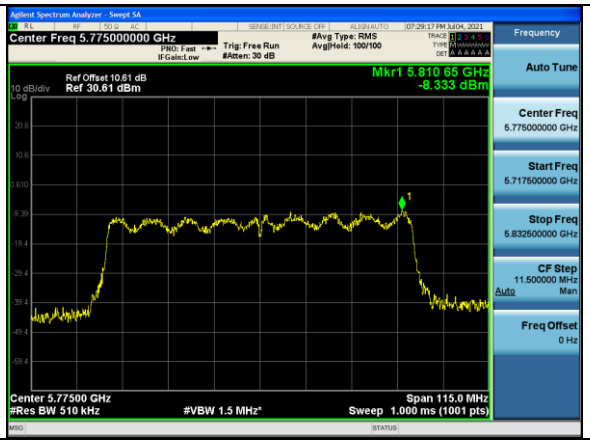
11ac40 CH46	11ac80 CH42
	

Test plots

For U-NII-3

11a CH149	11a CH157
	
11a CH165	**11n20 CH149**
	
11n20 CH157	**11n20 CH165**
	

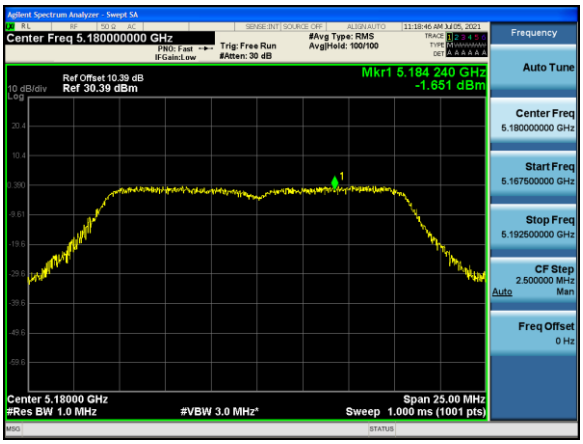
11n40 CH151	11n40 CH159
	
11ac20 CH149	11ac20 CH157
	
11ac20 CH165	11ac40 CH151
	

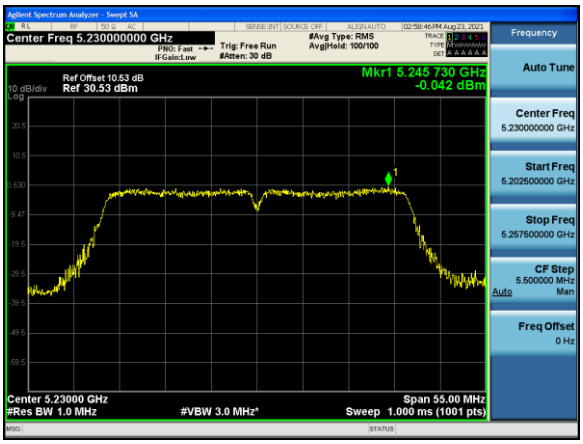
11ac40 CH159	11ac80 CH155
	

ANT B

Test plots

For U-NII-1

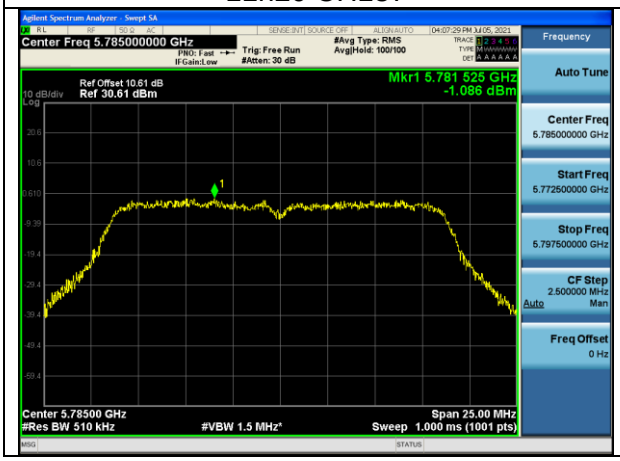
11a CH36	11a CH44
	
11a CH48	**11n20 CH36**
	
11n20 CH44	**11n20 CH48**
	

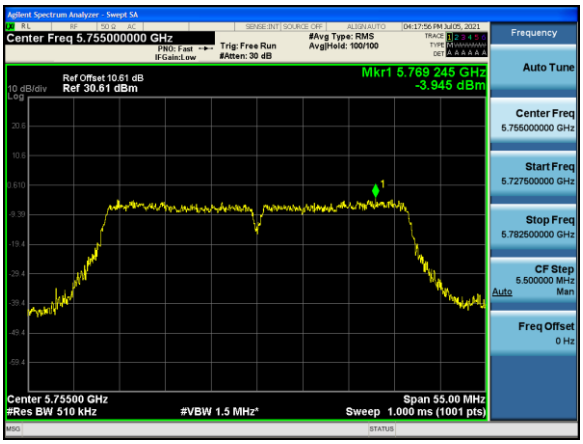
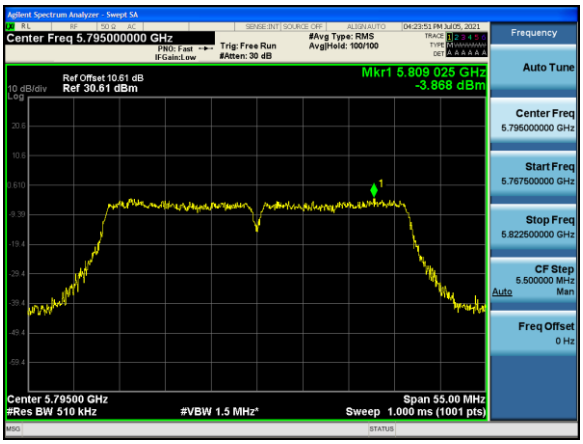
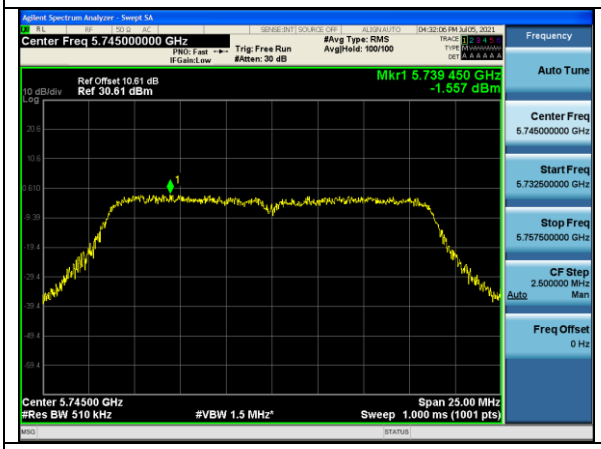
11n40 CH38	11n40 CH46
	
11ac20 CH36	**11ac20 CH40**
	
11ac20 CH48	**11ac40 CH38**
	

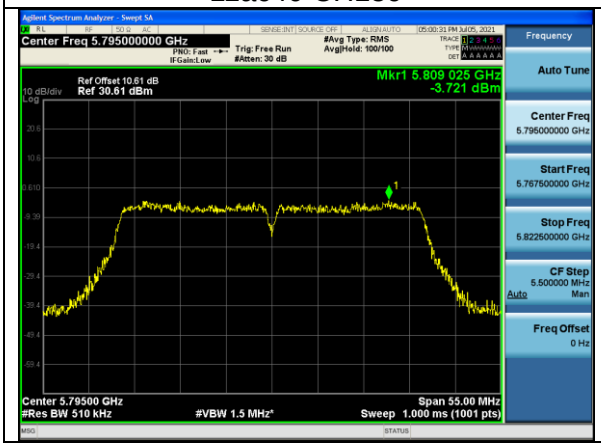
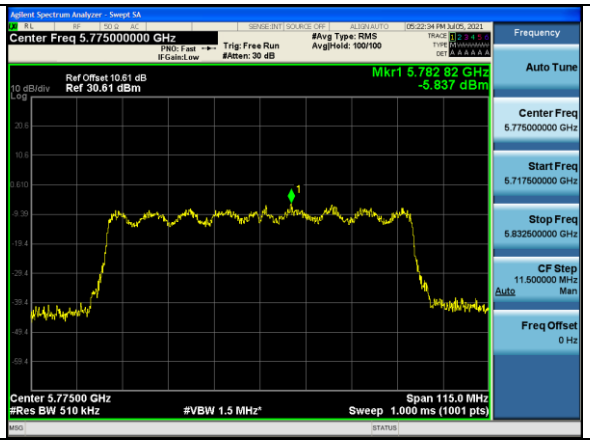
11ac40 CH46	11ac80 CH42
	

Test plots

For U-NII-3

11a CH149	11a CH157
	
11a CH165	**11n20 CH149**
	
11n20 CH157	**11n20 CH165**
	

11n40 CH151	11n40 CH159
	
11ac20 CH149	11ac20 CH157
	
11ac20 CH165	11ac40 CH151
	

11ac40 CH159	11ac80 CH155
	

5.9 Frequency Stability Measurement

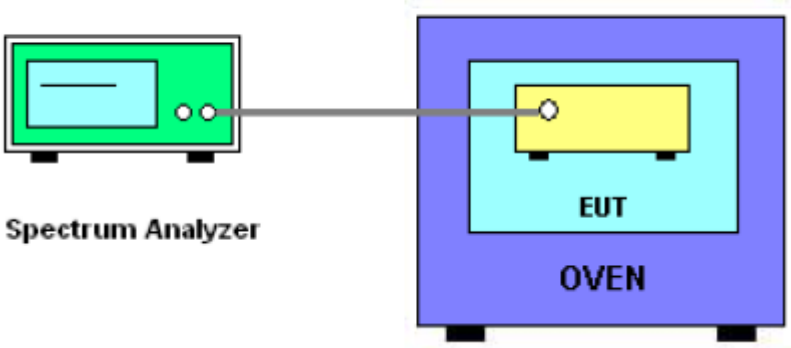
5.9.1 Limit

Manufactures 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.

5.9.2 Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and max hold settings.
5. Fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 106 ppm and the limit is less than ±20ppm (IEEE 802.11nspecification).
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature is -20°C~70°C.

5.9.3 Test Setup Layout



5.9.4 EUT Operation during Test

The EUT was programmed to be in continuously un-modulation transmitting mode.

5.9.5 TEST RESULTS

Note1: The antenna A and antenna B have been tested. The report only shows the worst antenna. The worst case is ANT A.

ANT A test data：

For U-NII-1

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.00	5180.0195	5180	0.0195	-3.7645
		V max (V)	5.75	5180.0182	5180	0.0182	-3.5135
		V min (V)	4.25	5180.0176	5180	0.0176	-3.3977
Limits				within 5150-5250MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	-20	5180.0155	5180	0.0155	-2.9923
		T (°C)	-10	5180.0161	5180	0.0161	-3.1081
		T (°C)	0	5180.0126	5180	0.0126	-2.4324
		T (°C)	10	5180.0130	5180	0.0130	-2.5097
		T (°C)	20	5180.0134	5180	0.0134	-2.5869
		T (°C)	30	5180.0127	5180	0.0127	-2.4517
		T (°C)	40	5180.0141	5180	0.0141	-2.7220
		T (°C)	50	5180.0116	5180	0.0116	-2.2317
		T (°C)	60	5180.0142	5180	0.0142	-2.7413
		T (°C)	70	5180.0139	5180	0.0139	-2.6834
Limits				within 5150-5250MHz			
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)	5.00	5200.0196	5200	0.0196	-3.7692
		V max (V)	5.75	5200.0187	5200	0.0187	-3.5962
		V min (V)	4.25	5200.0192	5200	0.0192	-3.6923
Limits				within 5150-5250MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	-20	5200.0190	5200	0.0190	-3.6538
		T (°C)	-10	5200.0184	5200	0.0184	-3.5385
		T (°C)	0	5200.0171	5200	0.0171	-3.2885
		T (°C)	10	5200.0169	5200	0.0169	-3.2500
		T (°C)	20	5200.0188	5200	0.0188	-3.6154
		T (°C)	30	5200.0173	5200	0.0173	-3.3269
		T (°C)	40	5200.0195	5200	0.0195	-3.7500
		T (°C)	50	5200.0184	5200	0.0184	-3.5385
		T (°C)	60	5200.0172	5200	0.0172	-3.3077
		T (°C)	70	5200.0193	5200	0.0193	-3.7115
Limits				within 5150-5250MHz			
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)	5.00	5240.0191	5240	0.0191	-3.6450
		V max (V)	5.75	5240.0189	5240	0.0189	-3.6069
		V min (V)	4.25	5240.0184	5240	0.0184	-3.5115
Limits				within 5150-5250MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	-20	5240.0179	5240	0.0179	-3.4160
		T (°C)	-10	5240.0180	5240	0.0180	-3.4351
		T (°C)	0	5240.0178	5240	0.0178	-3.3969
		T (°C)	10	5240.0187	5240	0.0187	-3.5687
		T (°C)	20	5240.0190	5240	0.0190	-3.6260
		T (°C)	30	5240.0181	5240	0.0181	-3.4542
		T (°C)	40	5240.0183	5240	0.0183	-3.4924
		T (°C)	50	5240.0184	5240	0.0184	-3.5115
		T (°C)	60	5240.0186	5240	0.0186	-3.5496
		T (°C)	70	5240.0177	5240	0.0177	-3.3779
Limits				within 5150-5250MHz			
Result				Complies			

For U-NII-3

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.00	5745.0197	5745	0.01970	-3.4291
		V max (V)	5.75	5745.0192	5745	0.01920	-3.3420
		V min (V)	4.25	5745.0196	5745	0.01960	-3.4117
Limits				within 5725-5850MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	-20	5745.0187	5745	0.01870	-3.2550
		T (°C)	-10	5745.0192	5745	0.01921	-3.3438
		T (°C)	0	5745.0193	5745	0.01925	-3.3507
		T (°C)	10	5745.0184	5745	0.01836	-3.1958
		T (°C)	20	5745.0193	5745	0.01926	-3.3525
		T (°C)	30	5745.0189	5745	0.01892	-3.2933
		T (°C)	40	5745.0180	5745	0.01796	-3.1262
		T (°C)	50	5745.0185	5745	0.01846	-3.2132
		T (°C)	60	5745.0188	5745	0.01880	-3.2731
		T (°C)	70	5745.0176	5745	0.01760	-3.0635
Limits				within 5725-5850MHz			
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)	5.00	5785.01697	5785	0.01697	-2.9334
		V max (V)	5.75	5785.01855	5785	0.01855	-3.2066
		V min (V)	4.25	5785.01626	5785	0.01626	-2.8107
Limits				within 5725-5850MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	-20	5785.0157	5785	0.01569	-2.7122
		T (°C)	-10	5785.0170	5785	0.01698	-2.9352
		T (°C)	0	5785.0174	5785	0.01742	-3.0112
		T (°C)	10	5785.0164	5785	0.01639	-2.8332
		T (°C)	20	5785.0194	5785	0.01941	-3.3552
		T (°C)	30	5785.0184	5785	0.01843	-3.1858
		T (°C)	40	5785.0169	5785	0.01690	-2.9213
		T (°C)	50	5785.0168	5785	0.01684	-2.9110
		T (°C)	60	5785.0175	5785	0.01753	-3.0303
		T (°C)	70	5785.0177	5785	0.01771	-3.0614
Limits				within 5725-5850MHz			
Result				Complies			

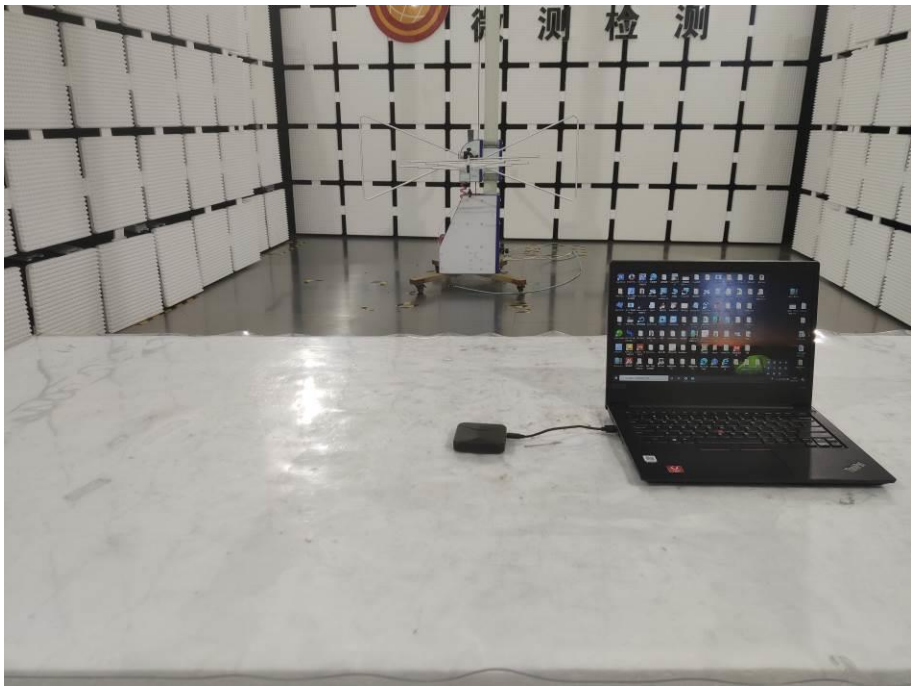
Voltage vs. Frequency Stability

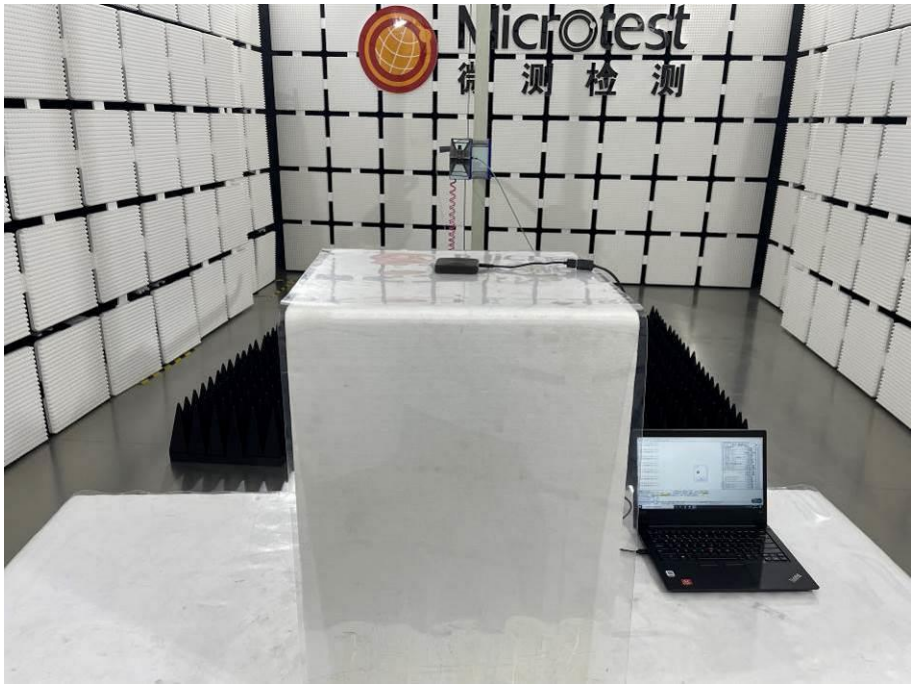
TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5.00	5825.0194	5825	0.01940	-3.3305
		V max (V)	5.75	5825.0188	5825	0.01884	-3.2343
		V min (V)	4.25	5825.0176	5825	0.01760	-3.0215
Limits				within 5725-5850MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5	T (°C)	-20	5825.0169	5825	0.01690	-2.9013
		T (°C)	-10	5825.0176	5825	0.01760	-3.0215
		T (°C)	0	5825.0175	5825	0.01750	-3.0043
		T (°C)	10	5825.0168	5825	0.01684	-2.8910
		T (°C)	20	5825.0171	5825	0.01712	-2.9391
		T (°C)	30	5825.0182	5825	0.01815	-3.1159
		T (°C)	40	5825.0179	5825	0.01787	-3.0678
		T (°C)	50	5825.0181	5825	0.01811	-3.1097
		T (°C)	60	5825.0176	5825	0.01756	-3.0146
		T (°C)	70	5825.0178	5825	0.01783	-3.0613
Limits				within 5725-5850MHz			
Result				Complies			

Photographs of the Test Setup

Radiated emission




Conducted emission

Photographs of the EUT

See the APPENDIX 1- EUT PHOTO.

----END OF REPORT----