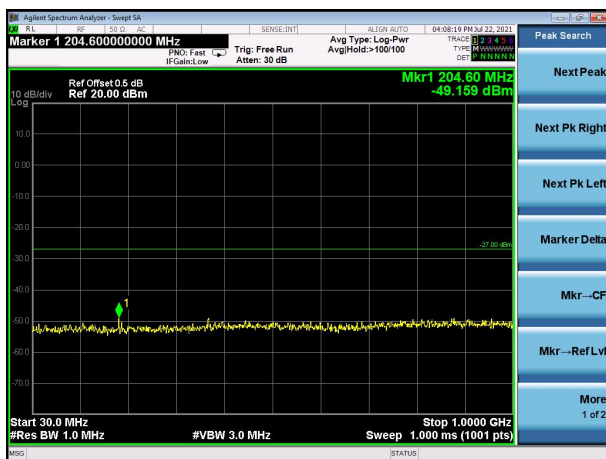
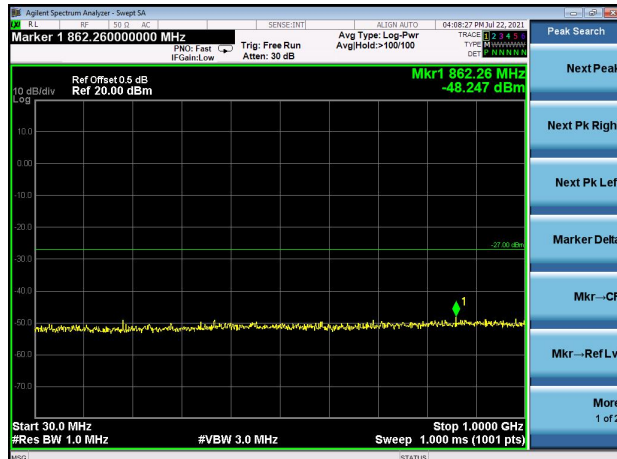


Test Plot

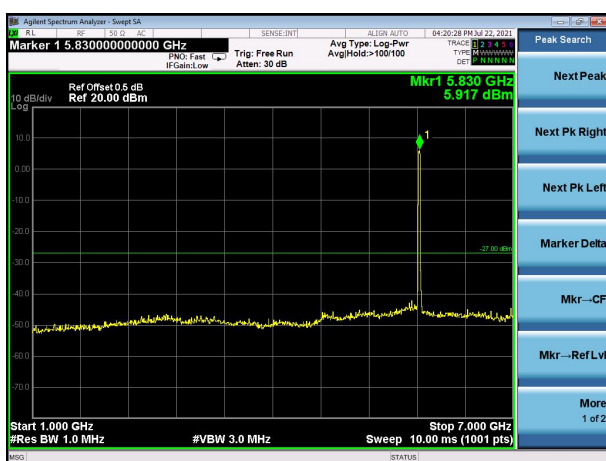
802.11ac20 on channel 165



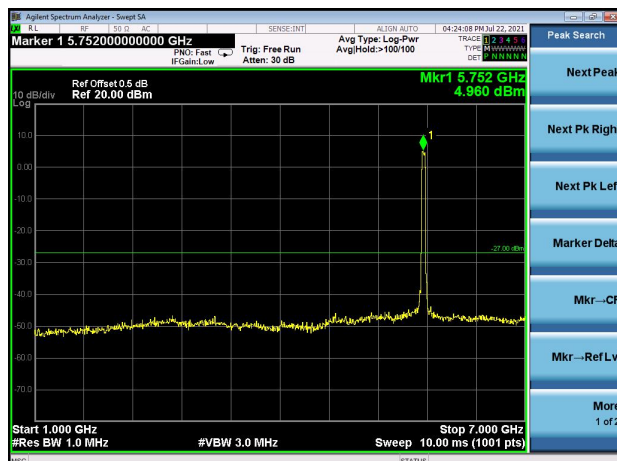
802.11ac40 on channel 151



802.11ac20 on channel 165



802.11ac40 on channel 151



802.11ac20 on channel 165

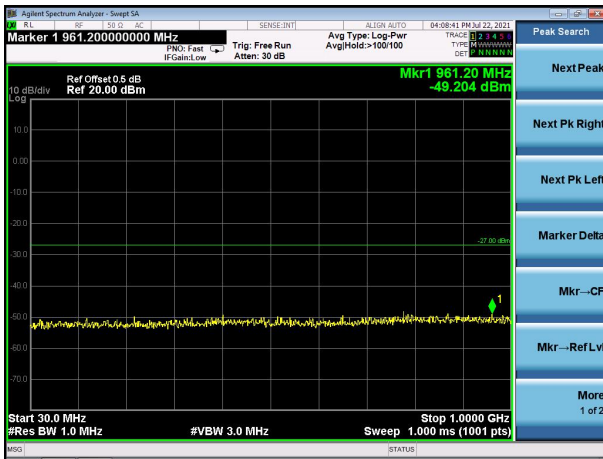


802.11ac40 on channel 151



Test Plot

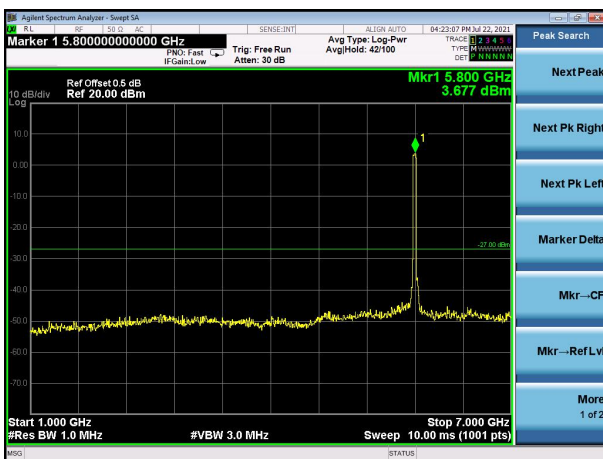
802.11ac40 on channel 159



802.11ac80 on channel 151



802.11ac40 on channel 159



802.11ac80 on channel 151



802.11ac40 on channel 159



802.11ac80 on channel 151



13. FREQUENCY STABILITY MEASUREMENT

13.1 Block Diagram Of Test Setup



13.2 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.

The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band (IEEE 802.11n specification)..

13.3 Test procedure

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 maxhold settings.
5. f_c is declaring of channel frequency. Then the frequency error formula is $(f_c - f)/f_c \times 10^6$ ppm and he limit is less than ± 20 ppm (IEEE 802.11n specification).
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 $-20^\circ\text{C} \sim 70^\circ\text{C}$.

13.4 Test Result

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 5V
Hzst Mode :	TX Frequency(5745-5825MHz)		

Voltage vs. Frequency Stabilit

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	5V	5745.00819	5745	0.00819	1.4259
		V max (V)	5.5V	5745.00437	5745	0.00437	0.7606
		V min (V)	4.5V	5745.01058	5745	0.01058	1.8423
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5V	T (°C)	-20	5745.00129	5745	0.00129	0.2250
		T (°C)	-10	5745.00918	5745	0.00918	1.5977
		T (°C)	0	5745.00892	5745	0.00892	1.5525
		T (°C)	10	5745.01145	5745	0.01145	1.9922
		T (°C)	20	5745.01256	5745	0.01256	2.1854
		T (°C)	30	5745.00502	5745	0.00502	0.8737
		T (°C)	40	5745.00874	5745	0.00874	1.5218
		T (°C)	50	5745.00434	5745	0.00434	0.7552
		T (°C)	60	5745.01100	5745	0.01100	1.9139
		T (°C)	70	5745.00705	5745	0.00705	1.2278
Limits				5725-5850 MHz			
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)	5V	5785.00044	5785	0.00044	0.0768
		V max (V)	5.5V	5785.00631	5785	0.00631	1.0913
		V min (V)	4.5V	5785.01015	5785	0.01015	1.7544
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5V	T (°C)	-20	5785.01257	5785	0.01257	2.1737
		T (°C)	-10	5785.00092	5785	0.00092	0.1583
		T (°C)	0	5785.00471	5785	0.00471	0.8138
		T (°C)	10	5785.01113	5785	0.01113	1.9235
		T (°C)	20	5785.01141	5785	0.01141	1.9718
		T (°C)	30	5785.00459	5785	0.00459	0.7931
		T (°C)	40	5785.00505	5785	0.00505	0.8728
		T (°C)	50	5785.00814	5785	0.00814	1.4072
		T (°C)	60	5785.01142	5785	0.01142	1.9738
		T (°C)	70	5785.00352	5785	0.00352	0.6093
Limits				5725-5850 MHz			
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)	5V	5825.00422	5825	0.00422	0.7252
		V max (V)	5.5V	5825.00662	5825	0.00662	1.1369
		V min (V)	4.5V	5825.00447	5825	0.00447	0.7676
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	5V	T (°C)	-20	5825.00335	5825	0.00335	0.5748
		T (°C)	-10	5825.00313	5825	0.00313	0.5375
		T (°C)	0	5825.00380	5825	0.00380	0.6517
		T (°C)	10	5825.00401	5825	0.00401	0.6888
		T (°C)	20	5825.00264	5825	0.00264	0.4529
		T (°C)	30	5825.00664	5825	0.00664	1.1406
		T (°C)	40	5825.00529	5825	0.00529	0.9090
		T (°C)	50	5825.00160	5825	0.00160	0.2754
		T (°C)	60	5825.00509	5825	0.00509	0.8742
		T (°C)	70	5825.00462	5825	0.00462	0.7923
Limits				5725-5850 MHz			
Result				Complies			

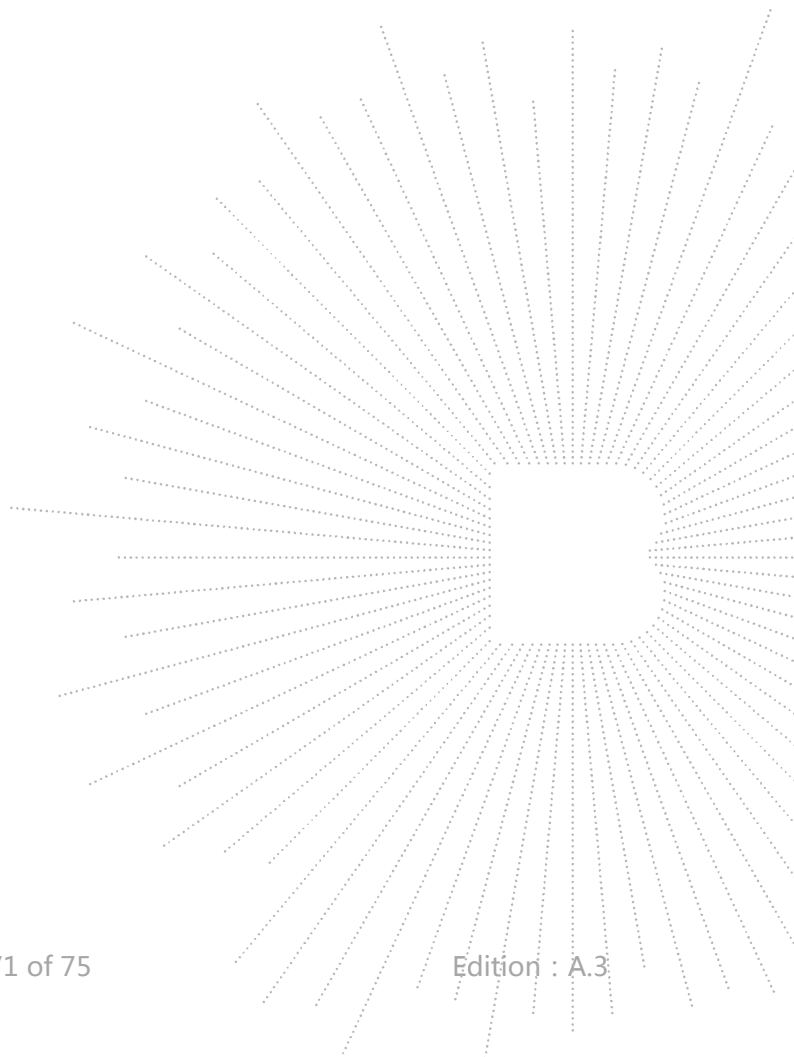
14. ANTENNA REQUIREMENT

14.1 Limit

15.203 requirement: For intentional device, according to 15.203: 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.

14.2 EUT ANTENNA

The EUT antenna is External antenna (antenna gain:2.85dBi). It comply with the standard requirement.



15. EUT PHOTOGRAPHS

EUT Photo 1



EUT Photo 2

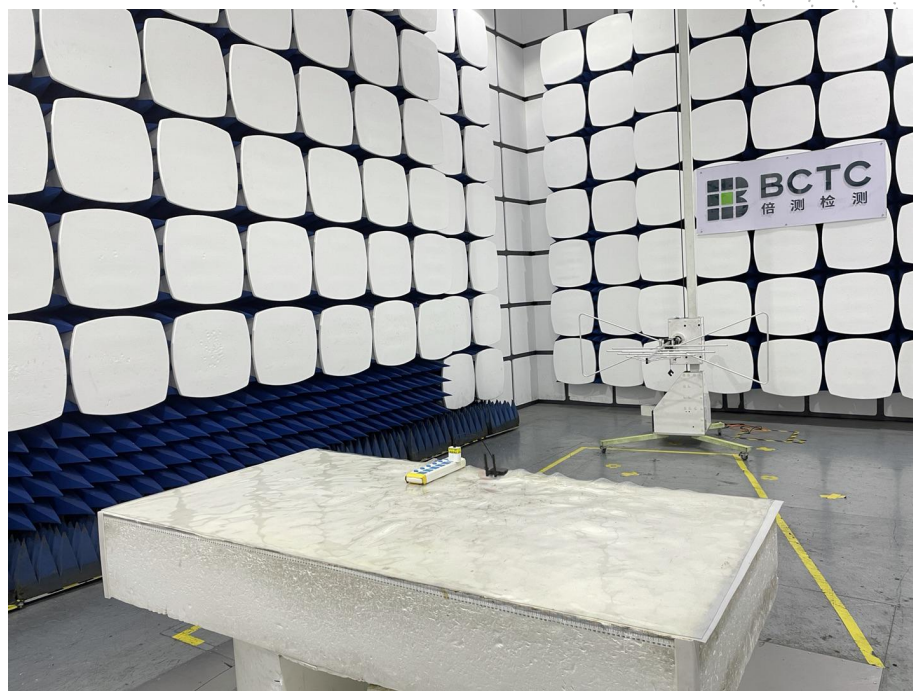


16. EUT TEST SETUP PHOTOGRAPHS

Conducted Measurement Photos



Radiated Measurement Photos



TX



STATEMENT

- 1.The equipment lists are traceable to the national reference standards.
- 2.The test report can not be partially copied unless prior written approval is issued from our lab.
- 3.The test report is invalid without stamp of laboratory.
- 4.The test report is invalid without signature of person(s) testing and authorizing.
- 5.The test process and test result is only related to the Unit Under Test.
- 6.The quality system of our laboratory is in accordance with ISO/IEC17025.
- 7.If there is any objection to report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

Address:

1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

TEL : 400-788-9558

P. C.: 518103

FAX : 0755-33229357

Website : <http://www.chnbctc.com>

E-Mail : bctc@bctc-lab.com.cn

***** END *****