

Report No.: SUHR/2021/B001102

Rev.: 01

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TEST REPORT

Application No.:	HR/2021/B0011
Applicant:	Quectel Wireless Solutions Co., Ltd.
Address of Applicant:	Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China, 200233
Manufacturer:	Quectel Wireless Solutions Co., Ltd.
Address of Manufacturer:	Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China, 200233
EUT Description:	LTE Module
Model No.:	SC606T-NAD
Trade Mark:	Quectel
FCC ID:	XMR2021SC606TNAD
Standards:	47 CFR FCC Part 2, Subpart J 47 CFR Part 15, Subpart C
Date of Receipt:	2021/12/19
Date of Test:	2022/1/7 to 2022/1/9
Date of Issue:	2022/1/17

Test Result :	PASS *
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* In the configuration tested, the EUT detailed in this report complied with the standards specified above.

Authorized Signature:

Panta Sun
Wireless Laboratory Manager



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1 Version

Revision Record

Version	Chapter	Date	Modifier	Remark
01		2022/1/17		Original

Prepared By		Weller Liu
<hr/> (Weller Liu) / Engineer		
Checked By		Well Wei
<hr/> (Well Wei) / Reviewer		

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2 Test Summary

Test Item	Test Requirement	Test Method	Test Result	Result
Antenna Requirement	15.203/247(b)	--	Refer to HR/2020/A000204	PASS
AC Power Line Conducted Emission	15.207	ANSI C63.10 (2013)	Refer to HR/2020/A000204	PASS
Conducted Peak Output Power	15.247 (b)(1)	ANSI C63.10 (2013)	Refer to HR/2020/A000204	PASS
20dB Emission Bandwidth & 99% Occupied Bandwidth	15.247 (a)(1)	ANSI C63.10 (2013)	Refer to HR/2020/A000204	PASS
Carrier Frequencies Separation	15.247 (a)(1)	ANSI C63.10 (2013)	Refer to HR/2020/A000204	PASS
Hopping Channel Number	15.247 (a)(1)	ANSI C63.10 (2013)	Refer to HR/2020/A000204	PASS
Dwell Time	15.247 (a)(1)	ANSI C63.10 (2013)	Refer to HR/2020/A000204	PASS
Band-edge for RF Conducted Emissions	15.247(d)	ANSI C63.10 (2013)	Refer to HR/2020/A000204	PASS
RF Conducted Spurious Emissions	15.247(d)	ANSI C63.10 (2013)	Refer to HR/2020/A000204	PASS
Radiated Spurious emissions	15.247(d); 15.205/15.209	ANSI C63.10 (2013)	Clause 4.1	PASS
Restricted bands around fundamental frequency (Radiated Emission)	15.247(d); 15.205/15.209	ANSI C63.10 (2013)	Clause 4.2	PASS

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Remark:

This test report (Report No.: SUHR/2021/B001102 issued on 2022/1/17) is based on the original FCC ID with ID number XMR2021SC606TNAD issued on 2022/1/16.

Review this report and original report, this report just changing the parts according to the declaration letter from client.

Considering to the difference, pre-scan were performed on the sample in this report to find the items which can be influential to the result in the original test report for fully retest.

Therefore in this report only radiated spurious emissions were performed based on the worst case of the original FCC ID with ID number XMR2021SC606TNAD issued on 2022/1/16 and other test data in this report are based on the previous FCC ID with ID number XMR2021SC606TNAD issued on 2022/1/16.

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3 General Information

3.1 Details of Client

Applicant:	Quectel Wireless Solutions Co., Ltd.
Address of Applicant:	Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China, 200233
Manufacturer:	Quectel Wireless Solutions Co., Ltd.
Address of Manufacturer:	Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China, 200233

3.2 Test Location

Company:	SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd
Address:	South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone
Post code:	215000
Test engineer:	Weller Liu, King-p Li, Nature Shen, Tizzy Song

3.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA (Certificate No. 6336.01)

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

• Innovation, Science and Economic Development Canada

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

• FCC –Designation Number: CN1312

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number:0031225543

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3.4 General Description of EUT

EUT Description:	LTE Module		
Model No.:	SC606T-NAD		
Trade Mark:	Quectel		
Hardware Version:	R1.0		
Software Version:	SC606TNADNAR09A01		
Operation Frequency:	2400MHz~2483.5MHz $fc = 2402 \text{ MHz} + N * 1 \text{ MHz}$, where: -fc = "Operating Frequency" in MHz, -N = "Channel Number" with the range from 0 to 78.		
Bluetooth version:	Bluetooth V4.2		
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)		
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK		
Number of Channel:	79		
Hopping Channel Type:	Adaptive Frequency Hopping systems		
Sample Type:	<input type="checkbox"/> Portable Device, <input checked="" type="checkbox"/> Module		
Antenna Type:	<input checked="" type="checkbox"/> External, <input type="checkbox"/> Integrated		
Antenna Gain*:	<input checked="" type="checkbox"/> Provided by applicant 5.0dBi		
RF Cable*:	<input checked="" type="checkbox"/> Provided by applicant 0.5dB(0.6~1GHz) 0.8dB(1.4~2GHz) 1.0dB(2.1~2.7GHz) 1.5dB(3~4GHz) 1.8dB(4.4~6GHz)		
Remark:	*Since the above data and/or information is provided by the applicant relevant results or conclusions of this report are only made for these data and/or information, SGS is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.		

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Operation Frequency of each channel

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	20	2422MHz	40	2442MHz	60	2462MHz
1	2403MHz	21	2423MHz	41	2443MHz	61	2463MHz
2	2404MHz	22	2424MHz	42	2444MHz	62	2464MHz
3	2405MHz	23	2425MHz	43	2445MHz	63	2465MHz
4	2406MHz	24	2426MHz	44	2446MHz	64	2466MHz
5	2407MHz	25	2427MHz	45	2447MHz	65	2467MHz
6	2408MHz	26	2428MHz	46	2448MHz	66	2468MHz
7	2409MHz	27	2429MHz	47	2449MHz	67	2469MHz
8	2410MHz	28	2430MHz	48	2450MHz	68	2470MHz
9	2411MHz	29	2431MHz	49	2451MHz	69	2471MHz
10	2412MHz	30	2432MHz	50	2452MHz	70	2472MHz
11	2413MHz	31	2433MHz	51	2453MHz	71	2473MHz
12	2414MHz	32	2434MHz	52	2454MHz	72	2474MHz
13	2415MHz	33	2435MHz	53	2455MHz	73	2475MHz
14	2416MHz	34	2436MHz	54	2456MHz	74	2476MHz
15	2417MHz	35	2437MHz	55	2457MHz	75	2477MHz
16	2418MHz	36	2438MHz	56	2458MHz	76	2478MHz
17	2419MHz	37	2439MHz	57	2459MHz	77	2479MHz
18	2420MHz	38	2440MHz	58	2460MHz	78	2480MHz
19	2421MHz	39	2441MHz	59	2461MHz		

Remark:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The Lowest channel(CH0)	2402MHz
The Middle channel(CH39)	2441MHz
The Highest channel(CH78)	2480MHz

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3.5 Test Environment

Environment Parameter	101.0 KPa Selected Values During Tests	
Relative Humidity	44-46 % RH Ambient	
Value	Temperature(°C)	Voltage(V)
NTNV	22~23	3.85
LTNV	-35	3.85
HTNV	65	3.85

Remark:
NV: Normal Voltage
NT: Normal Temperature
LT: Low Extreme Test Temperature
HT: High Extreme Test Temperature

3.6 Description of Support Units

The EUT has been tested independent unit.

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4 Test results and Measurement Data

4.1 Radiated Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205				
Test Method:	ANSI C63.10 :2013 Section 11.12				
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
Remark: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.					

Test Setup:

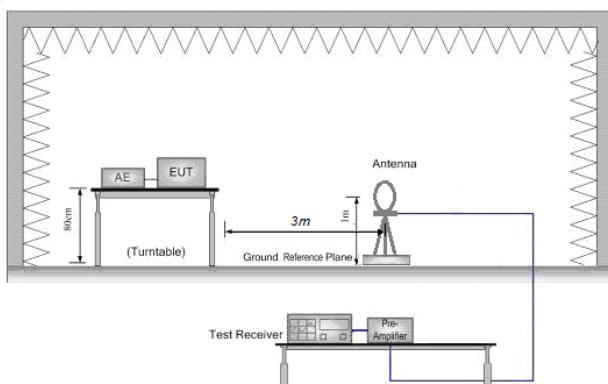


Figure 1. Below 30MHz

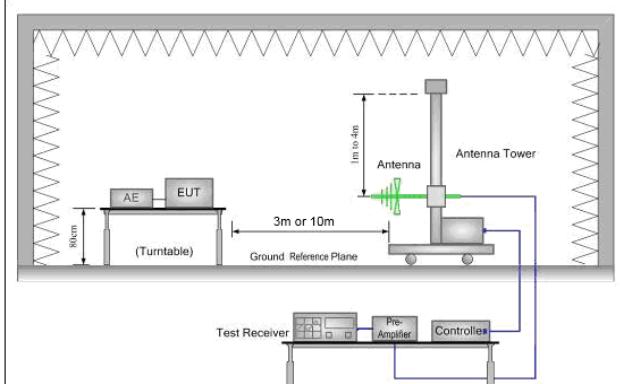


Figure 2. 30MHz to 1GHz

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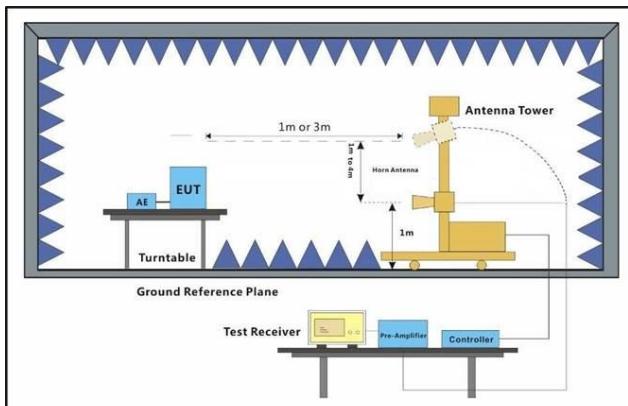


Figure 3. Above 1 GHz

Test Procedure:	<ol style="list-style-type: none"> For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters(for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. Test the EUT in the lowest channel, the middle channel ,the Highest channel. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the X axis positioning which it is worse case. Repeat above procedures until all frequencies measured was complete.
Test Configuration:	<p>Measurements Below 1000MHz</p> <ul style="list-style-type: none"> RBW = 120 kHz VBW = 300 kHz Detector = Peak Trace mode = max hold <p>Peak Measurements Above 1000 MHz</p> <ul style="list-style-type: none"> RBW = 1 MHz VBW \geq 3 MHz

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	<ul style="list-style-type: none"> Detector = Peak Sweep time = auto Trace mode = max hold <p>Average Measurements Above 1000MHz</p> <ul style="list-style-type: none"> RBW = 1 MHz VBW $\geq [3 * \text{RBW}]$ Detector = RMS (power averaging), if span / (# of points in sweep) $\leq (\text{RBW} / 2)$. Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak. Sweep time = auto Perform a trace average of at least 100 traces. condition cannot be satisfied, then the detector mode shall be set to peak. <p>transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.</p>
Exploratory Test Mode:	Non-hopping transmitting mode with all kind of modulation and all kind of data type Charge + Transmitting mode.
Final Test Mode:	Through Pre-scan, find the DH5 of data type and GFSK modulation is the worst case. Pretest the EUT at Charge + Transmitting mode For below 1GHz part, through pre-scan, the worst case is the lowest channel. Only the worst case is recorded in the report.
Instruments Used:	Refer to section 6 for details
Test Results:	Pass
The detailed test data see: Appendix	

Remark: Through pre-scan, The disturbance between 9KHz to 30MHz and below 18GHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported .

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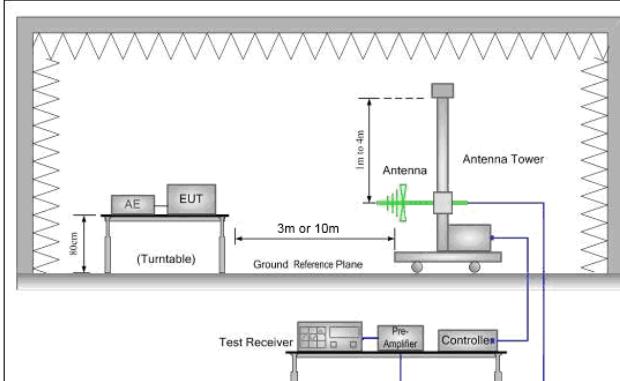
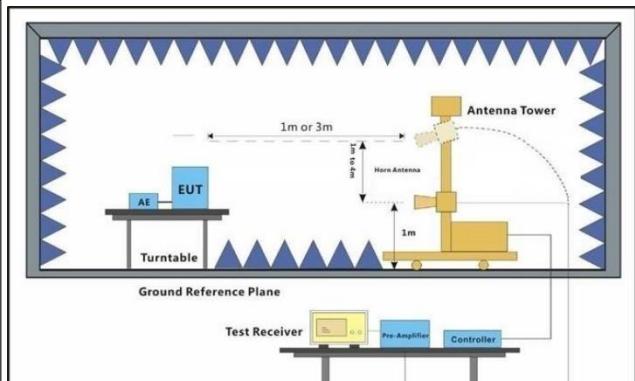
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4.2 Restricted bands around fundamental frequency

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205		
Test Method:	ANSI C63.10: 2013		
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)		
Limit:	Frequency	Limit (dBuV/m)	Remark
	30MHz-88MHz	40.0	Quasi-peak
	88MHz-216MHz	43.5	Quasi-peak
	216MHz-960MHz	46.0	Quasi-peak
	960MHz-1GHz	54.0	Quasi-peak
	Above 1GHz	54.0	Average Value
		74.0	Peak Value
Test Setup:			
			
	<p>Figure 1. 30MHz to 1GHz</p>		
	<p>Figure 2. Above 1 GHz</p>		
Test Procedure:	<ol style="list-style-type: none"> For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. Place a marker at the end of the restricted band closest to the transmit 		

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	<p>frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel</p> <p>h. Test the EUT in the lowest channel , the Highest channel</p> <p>i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode,And found the X axis positioning which it is worse case.</p> <p>j. Repeat above procedures until all frequencies measured was complete.</p>
Test Configuration:	<p>Measurements Below 1000MHz</p> <ul style="list-style-type: none"> • RBW = 120 kHz • VBW = 300 kHz • Detector = Peak • Trace mode = max hold <p>Peak Measurements Above 1000 MHz</p> <ul style="list-style-type: none"> • RBW = 1 MHz • VBW \geq 3 MHz • Detector = Peak • Sweep time = auto • Trace mode = max hold <p>Average Measurements Above 1000MHz</p> <ul style="list-style-type: none"> • RBW = 1 MHz • VBW \geq [3 *RBW] • Detector = RMS (power averaging), if span / (# of points in sweep) \leq (RBW / 2). Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak. • Sweep time = auto • Perform a trace average of at least 100 traces. <p>transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.</p>
Exploratory Test Mode:	<p>Non-hopping transmitting mode with all kind of modulation and all kind of data type</p> <p>Charge + Transmitting mode.</p>
Final Test Mode:	<p>Through Pre-scan, find the DH5 of data type and GFSK modulation is the worst case.</p> <p>Pretest the EUT at Charge + Transmitting mode,</p> <p>Only the worst case is recorded in the report.</p>
Instruments Used:	Refer to section 6 for details
Test Results:	Pass
The detailed test data see: Appendix	

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5 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radiated Emission	± 3.13dB (9kHz - 30MHz)
		± 4.8dB (30MHz - 1GHz)
		± 4.8dB (1GHz to 18GHz)
		± 4.8dB (Above 18GHz)

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6 Equipment List

RSE Test Equipment					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Semi-Anechoic Chamber	Brilliant-emc	N/A	SUWI-04-02-01	2021/5/8	2024/5/7
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-05	2021/2/20	2022/2/19
Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	2021/5/28	2022/5/27
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	2021/2/20	2022/2/19
DC Power Supply	HYELEC	HY3005B	SUWI-01-18-01	2021/2/20	2022/2/19
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	VULB 9163	SUWI-01-11-01	2021/5/16	2022/5/15
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	BBHA 9120D	SUWI-01-11-02	2021/5/16	2022/5/15
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	BBHA 9170	SUWI-01-11-03	2021/5/14	2022/5/13
Amplifier	Tonscend	TAP9K3G40	SUWI-01-14-01	2021/2/20	2022/2/19
Amplifier	Tonscend	TAP01018050	SUWI-01-14-02	2021/2/20	2022/2/19
Amplifier	Tonscend	TAP18040048	SUWI-01-14-03	2021/2/20	2022/2/19
Active Loop Antenna	SCHWRZBECK MESS-ELEKTRONIK	FMZB 1519B	SUWI-01-21-01	2021/6/10	2022/6/9
Measurement Software	Tonscend	JS32-RE V3.0.0.3	SUWI-02-09-04	NCR	NCR
Radio Communication Analyzer	ROHDE&SCHWARZ	CMW500	SUWI-01-27-01	2021/9/28	2022/9/27

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7 Photographs - EUT Constructional Details

Refer to Appendix A.2 WLAN Setup Photos.



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Appendix



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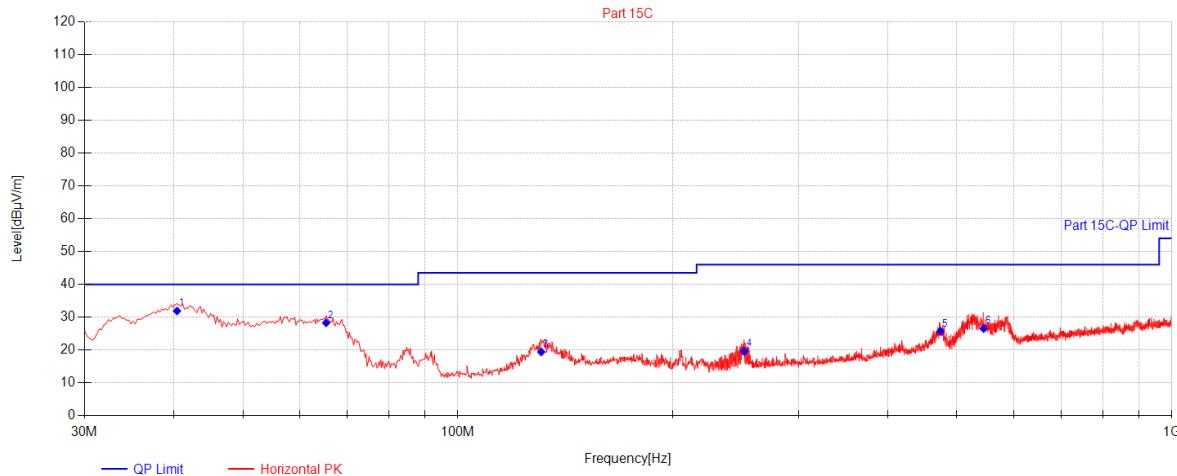
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Test on the worst case: Radiated Spurious Emissions

Radiated emission below 1GHz

Worst case Mode: GFSK_Channel 78



Final Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	40.4275	54.11	-22.23	31.88	40.00	8.12	112	257	Horizontal
2	65.405	53.02	-24.76	28.26	40.00	11.74	204	206	Horizontal
3	130.88	42.15	-22.78	19.37	43.50	24.13	311	185	Horizontal
4	251.8875	42.22	-22.64	19.58	46.00	26.42	142	308	Horizontal
5	474.0175	42.35	-16.70	25.65	46.00	20.35	116	164	Horizontal
6	544.8275	42.02	-15.52	26.50	46.00	19.50	119	308	Horizontal

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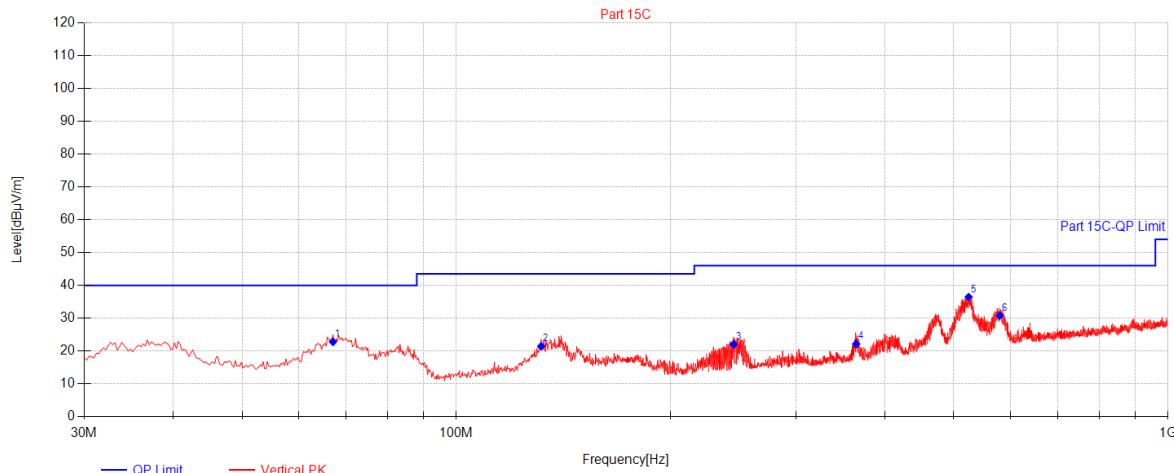


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Worst case Mode: GFSK_Channel 78



Final Data List									
NO.	Frequency [MHz]	Reading [dB μ V]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	67.1025	47.89	-25.11	22.78	40.00	17.22	213	282	Vertical
2	131.6075	44.11	-22.72	21.39	43.50	22.11	122	256	Vertical
3	245.34	45.20	-23.20	22.00	46.00	24.00	109	174	Vertical
4	364.65	42.16	-20.04	22.12	46.00	23.88	154	225	Vertical
5	524.7	52.26	-15.85	36.41	46.00	9.59	107	209	Vertical
6	579.99	45.45	-14.66	30.79	46.00	15.21	121	236	Vertical

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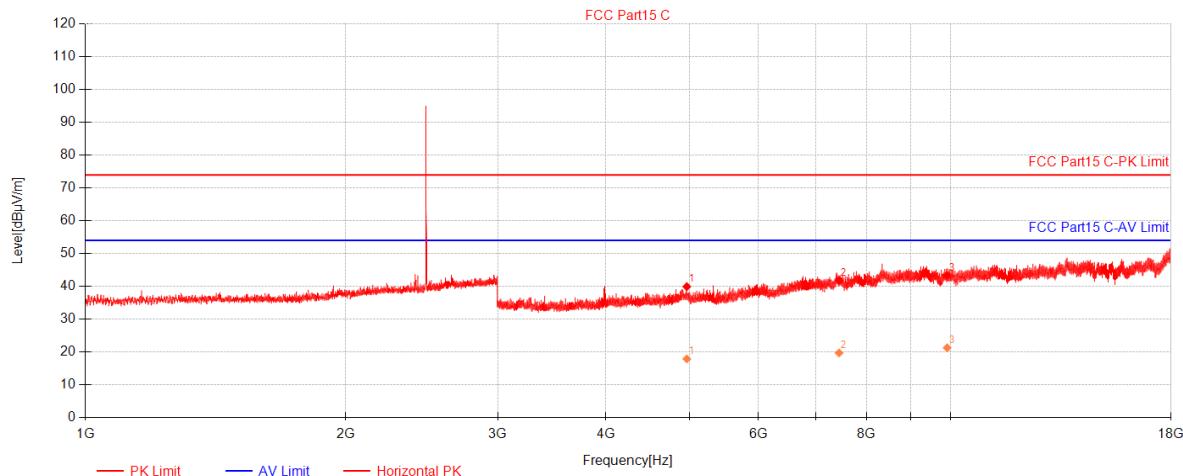
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Transmitter emission above 1GHz

Worst case Mode: GFSK_Channel 78



Final Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	4960	52.74	-12.83	39.91	74.00	34.09	125	242	Horizontal
2	4960	-	-	17.86	54	36.14	-	-	Horizontal
3	7440	48.57	-6.83	41.74	74.00	32.26	163	258	Horizontal
4	7440	-	-	19.69	54	34.31	-	-	Horizontal
5	9920	44.24	-0.93	43.31	74.00	30.69	195	208	Horizontal
6	9920	-	-	21.26	54	32.74	-	-	Horizontal

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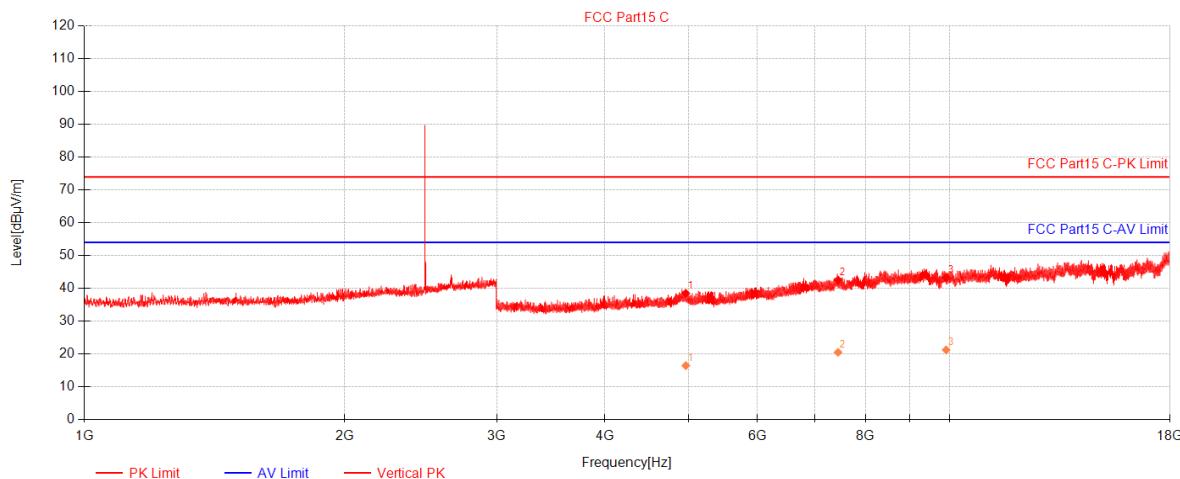
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Worst case Mode: GFSK_Channel 78



Final Data List										
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	4960	51.31	-12.83	38.48	74.00	35.52	185	276	Vertical	
2	4960	-	-	16.43	54	37.57	-	-	Vertical	
3	7440	49.35	-6.83	42.52	74.00	31.48	162	10	Vertical	
4	7440	-	-	20.47	54	33.53	-	-	Vertical	
5	9920	44.19	-0.93	43.26	74.00	30.74	133	310	Vertical	
6	9920	-	-	21.21	54	32.79	-	-	Vertical	

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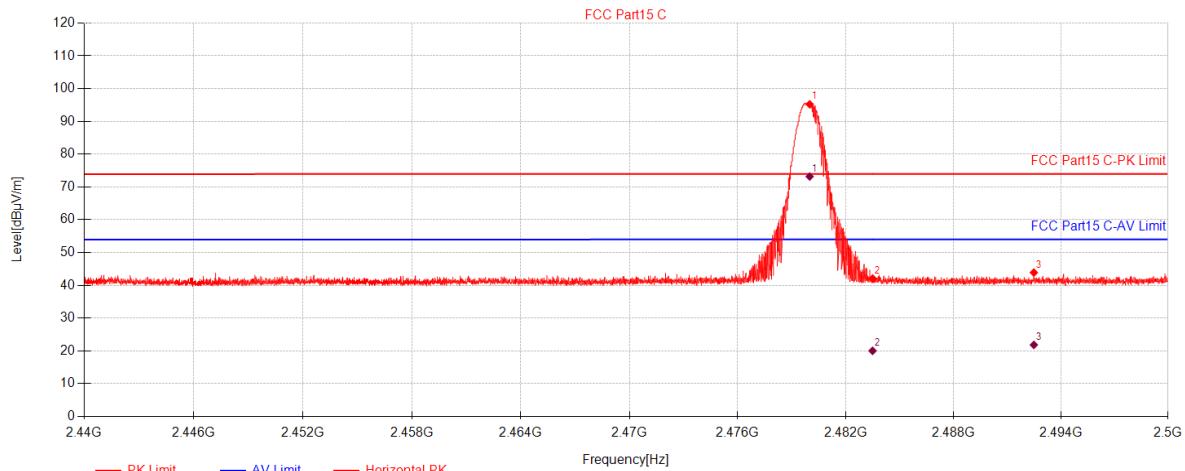
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Restricted bands around fundamental frequency

Worst case Mode: GFSK_Channel 78



Final Data List									
NO.	Frequency [MHz]	Reading [dB μ V]	Factor [dB]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2480	91.66	3.57	95.23	-	-	265	213	Horizontal
2	2480	-	-	73.18	-	-	-	-	Horizontal
3	2483.5	38.48	3.60	42.08	74.00	31.92	265	213	Horizontal
4	2483.5	-	-	20.03	54	33.97	-	-	Horizontal
5	2492.4925	40.24	3.65	43.89	74.00	30.11	265	213	Horizontal
6	2492.4925	-	-	21.84	54	32.16	-	-	Horizontal

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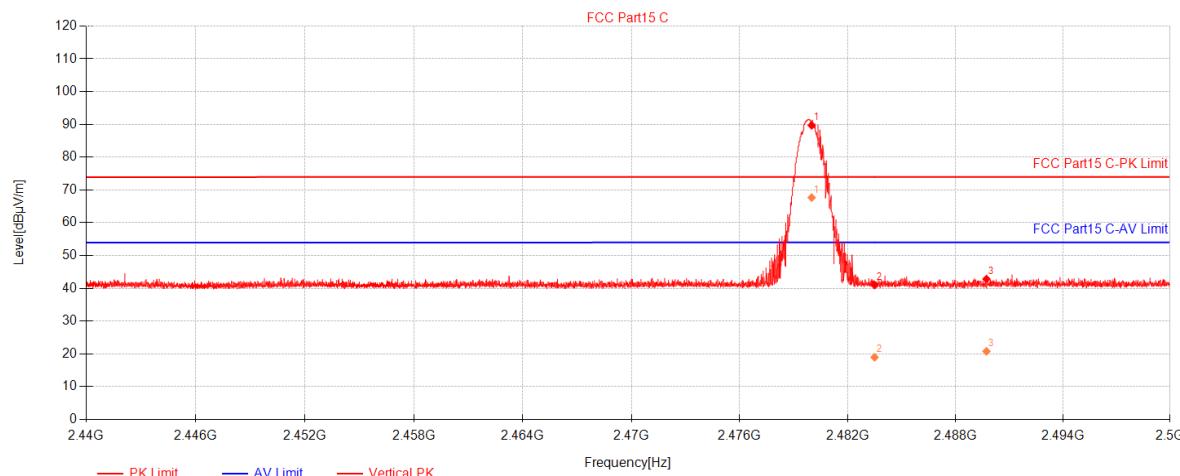
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Worst case Mode: GFSK_Channel 78



Final Data List										
NO.	Frequency [MHz]	Reading [dB μ V]	Factor [dB]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	2480	86.15	3.57	89.72	-	-	270	64	Vertical	
2	2480	-	-	67.67	-	-	-	-	Vertical	
3	2483.5	37.42	3.60	41.02	74.00	32.98	270	64	Vertical	
4	2483.5	-	-	18.97	54	35.03	-	-	Vertical	
5	2489.7325	39.20	3.64	42.84	74.00	31.16	270	64	Vertical	
6	2489.7325	-	-	20.79	54	33.21	-	-	Vertical	

The End

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