TEST REPORT

Applicant Name :	Shenzhen Youmi Intelligent Technology Co., Ltd.
Address :	406-407 Jinqi Zhigu Building, 4/F, 1 Tangling Road, Nanshan District, Shenzhen City, China
Report Number :	SZNS220313-08568E-RFB
FCC ID:	2ATZ4-A1300
IC:	26074-A1300

Test Standard (s)

FCC PART 15.247; RSS-GEN ISSUE 5, FEBRUARY 2021 AMENDMENT 2; RSS-247, ISSUE 2, FEBRUARY 2017

Sample Description

Product Type:	Smart phone
Model No.:	A13
Multiple Model(s) No.:	F3 SE (Please refer to DOS for Model difference)
Trade Mark:	UMIDIGI
Date Received:	2022/03/13
Report Date:	2022/06/07

Test Result:	Pass*

* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Ting Lü
EMC Engineer

Approved By:

Robert Li
EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★ ".
Shenzhen Accurate Technology Co., Ltd. is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '*'. Customer model name, addresses, names, trademarks etc. are not considered data.
This report cannot be reproduced except in full, without prior written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

HVIN	A13:G2207H-UD-V1.0-A F3 SE:G2207H-UD-V1.0-F
FVIN	A13: UMIDIGI_A13_V1.0 F3 SE: UMIDIGI_F3_SE_V1.0
Frequency Range	Bluetooth: 2402~2480MHz
Transmit Peak Power	3.63dBm
Modulation Technique	Bluetooth: GFSK, π/4-DQPSK, 8DPSK
Antenna Specification*	-0.88 dBi (It is provided by the applicant)
Voltage Range	DC 3.85V from battery or DC 5V from adapter
Sample serial number	SZNS220313-08568E-RF-S1 (Assigned by ATC)
Sample/EUT Status	Good condition
Adapter information	Model: HJ-0502000W2-US Input: AC 100-240V, 50/60Hz, 0.3A Output: DC 5 V, 2A

Note: The series model F3 SE is electrical identical to the model A13, the difference between them is back cover shape, the material is same, so the difference will not affect the test result, only the model A13 was tested.

Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commissions rules and RSS-247, Issue 2, February 2017, RSS-GEN Issue 5, Feb. 2021Amendment 2 of the Innovation, Science and Economic Development Canada rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices and RSS-247, Issue 2, February 2017, RSS-GEN Issue 5, Feb. 2021Amendment 2 of the Innovation, Science and Economic Development Canada rules.

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		5%
RF Frequency		$0.082*10^{-7}$
RF output power, conducted		0.73dB
Unwanted Emission, conducted		1.6dB
AC Power Lines Conducted Emissions		2.72dB
Emissions, Radiated	9kHz - 30MHz	2.66dB
	30MHz - 1GHz	4.28dB
	1GHz - 18GHz	4.98dB
	18GHz - 26.5GHz	5.06dB
	26.5GHz- 40GHz	4.72dB
Temperature		1℃
Humidity		6%
Supply voltages		0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189.

Accredited by American Association for Laboratory Accreditation (A2LA). The Certificate Number is 4297.01

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0016. The Registration Number is 5077A.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in an engineering mode.

EUT Exercise Software

EUT testing in engineering mode and the power level is 8*. The power level was provided by the applicant.

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

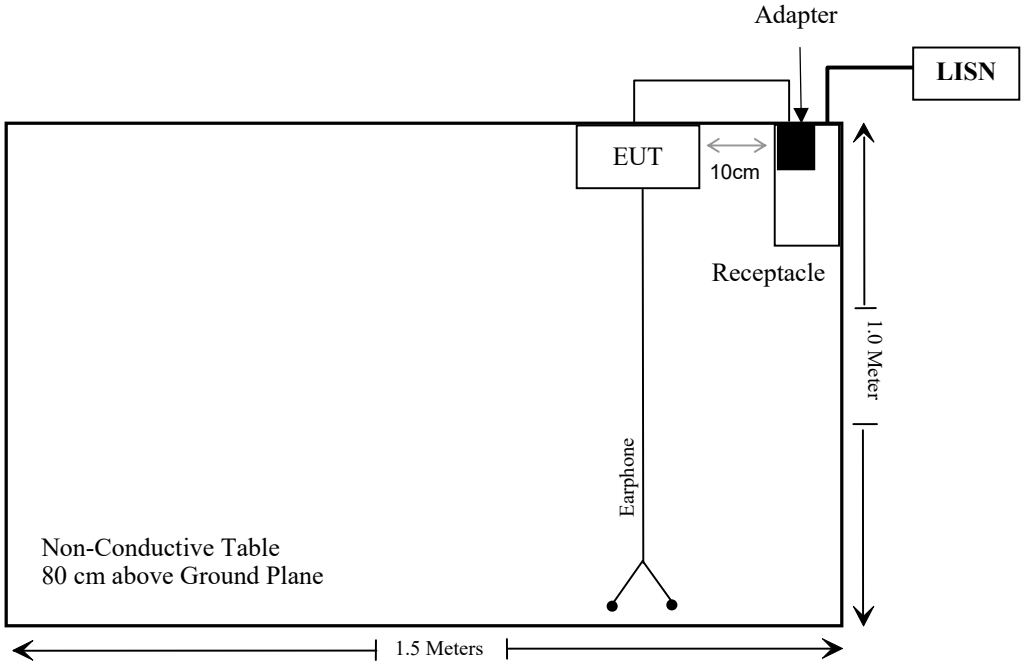
Manufacturer	Description	Model	Serial Number
Unknown	Earphone	Unknown	Earphone

External I/O Cable

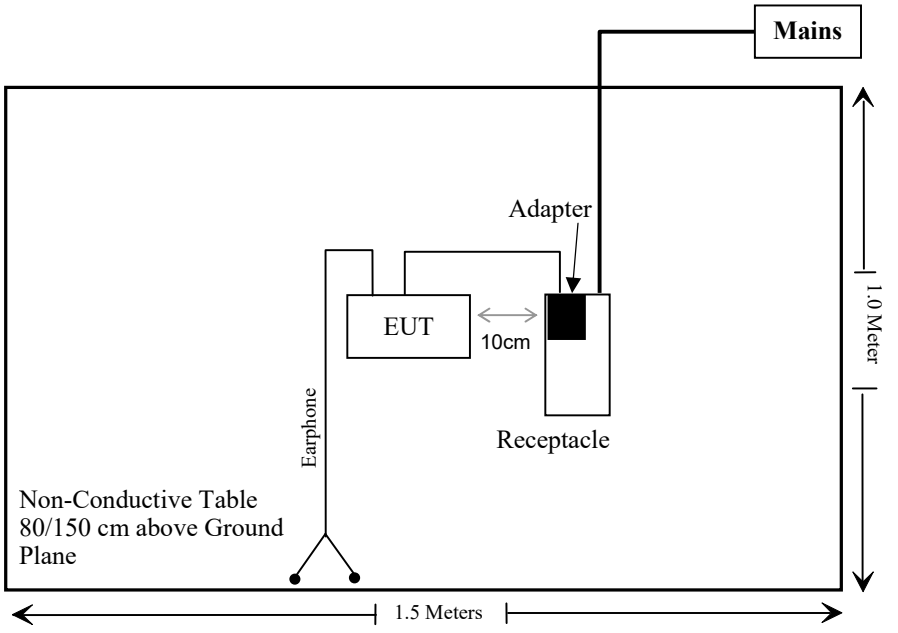
Cable Description	Length (m)	From Port	To
Un-shielding Detachable USB Cable	1.0	EUT	Adapter

Block Diagram of Test Setup

For conducted emission:



For radiated emission:



SUMMARY OF TEST RESULTS

Rules	Description of Test	Result	Remark
FCC §15.247 (i) & §2.1093	RF EXPOSURE	Compliant	/
RSS-102 § 2.5.1	EXEMPTION LIMITS FOR ROUTINE EVALUATION-SAR EVALUATION	Compliant	/
FCC §15.203 RSS-Gen §6.8	Antenna Requirement	Compliant	/
FCC §15.207(a) RSS-Gen §8.8	AC Line Conducted Emissions	Compliant	/
FCC §15.205, §15.209, §15.247(d) RSS-247 § 5.5, RSS-GEN § 8.10	Radiated Emissions	Compliant	/
FCC §15.247(a)(1) RSS-247 § 5.1(a), RSS-GEN § 6.7	20 dB Emission Bandwidth & 99% Occupied Bandwidth	Compliant*	Refer to report SZNS220313-08566E-RFB page 27~28&34~41
FCC §15.247(a)(1) RSS-247 § 5.1 (b)	Channel Separation Test	Compliant*	Refer to report SZNS220313-08566E-RFB page 26&46-47
FCC §15.247(a)(1)(iii) RSS-247 § 5.1 (d)	Time of Occupancy (Dwell Time)	Compliant*	Refer to report SZNS220313-08566E-RFB page 30&48~54
FCC §15.247(a)(1)(iii) RSS-247 § 5.1 (d)	Quantity of hopping channel Test	Compliant*	Refer to report SZNS220313-08566E-RFB page 29&55~56
FCC §15.247(b)(1) RSS-247 § 5.1(b) & § 5.4(b)	Peak Output Power Measurement	Compliant*	Refer to report SZNS220313-08566E-RFB page 31&42~45
FCC §15.247(d) RSS-247 § 5.5	Band edges	Compliant*	Refer to report SZNS220313-08566E-RFB page 32~33&57-60

Compliant*: The EUT is identical with the certified device (model name: Smart phone, model number: A13 Pro, F3S, FCC ID: 2ATZ4-A13PF, IC: 26074-A13PF), except for the NFC function was removed. The output power of EUT was tested and verified remain within the tune-up tolerance range, so the test data please refer to the report SZNS220313-08566E-RFB.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions Test					
Rohde& Schwarz	EMI Test Receiver	ESCI	100784	2021/12/13	2022/12/12
Rohde & Schwarz	L.I.S.N.	ENV216	101314	2021/12/13	2022/12/12
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2021/12/13	2022/12/12
Unknown	RF Coaxial Cable	No.17	N0350	2021/12/14	2022/12/13
Conducted Emission Test Software: e3 19821b (V9)					
Radiated Emissions Test					
Rohde& Schwarz	Test Receiver	ESR	102725	2021/12/13	2022/12/12
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2021/12/13	2022/12/12
SONOMA INSTRUMENT	Amplifier	310 N	186131	2021/11/09	2022/11/08
A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2021/11/09	2022/11/08
Quinstar	Amplifier	QLW-18405536-J0	15964001002	2021/11/11	2022/11/10
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
Schwarzbeck	HORN ANTENNA	BBHA9170	9170-359	2020/01/05	2023/01/04
Radiated Emission Test Software: e3 19821b (V9)					
Unknown	RF Coaxial Cable	No.10	N050	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.11	N1000	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.12	N040	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.13	N300	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.14	N800	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.15	N600	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.16	N650	2021/12/14	2022/12/13
Wainwright	High Pass Filter	WHKX3.6/18 G-10SS	5	2021/12/14	2022/12/13

*** Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC§15.247 (i), §1.1307 (b) (1) & §2.1093 – RF EXPOSURE

Applicable Standard

According to FCC §2.1093 and §1.1307(b) (1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

a) According to KDB 447498 D01 General RF Exposure Guidance

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
1. f(GHz) is the RF channel transmit frequency in GHz.
2. Power and distance are rounded to the nearest mW and mm before calculation.
3. The result is rounded to one decimal place for comparison.
4. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion.

Measurement Result

For worst case:

Frequency (MHz)	Maximum Tune-up power		Calculated Distance (mm)	Calculated Value	Threshold (1-g SAR)	SAR Test Exclusion
	(dBm)	(mW)				
2402-2480	4.0	2.51	5	0.8	3.0	**Yes**

Result: No Standalone SAR test is required

RSS-102 § 2.5.1 –EXEMPTION LIMITS FOR ROUTINE EVALUATION-SAR EVALUATION

Applicable Standard

According to RSS-102 Issue 5 § (2.5.1), SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table 1.

Table 1: SAR evaluation – Exemption limits for routine evaluation based on frequency and separation distance[4,5]

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5800	1 mW	6 mW	15 mW	27 mW	41 mW

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of ≥50 mm
≤300	223 mW	254 mW	284 mW	315 mW	345 mW
450	141 mW	159 mW	177 mW	195 mW	213 mW
835	80 mW	92 mW	105 mW	117 mW	130 mW
1900	99 mW	153 mW	225 mW	316 mW	431 mW
2450	83 mW	123 mW	173 mW	235 mW	309 mW
3500	86 mW	124 mW	170 mW	225 mW	290 mW
5800	56 mW	71 mW	85 mW	97 mW	106 mW

4. The exemption limits in Table 1 are based on measurements and simulations of half-wave dipole antennas at separation distances of 5 mm to 25 mm from a flat phantom, providing a SAR value of approximately 0.4 W/kg for 1 g of tissue. For low frequencies (300 MHz to 835 MHz), the exemption limits are derived from a linear fit. For high frequencies (1900 MHz and above), the exemption limits are derived from a third order polynomial fit.
5. Transmitters operating between 0.003-10 MHz, meeting the exemption from routine SAR evaluation, shall demonstrate compliance to the instantaneous limits in Section 4.

Output power level shall be the higher of the maximum conducted or equivalent isotropically radiated power (e.i.r.p.) source-based, time-averaged output power. For controlled use devices where the 8 W/kg for 1 gram of tissue applies, the exemption limits for routine evaluation in Table 1 are multiplied by a factor of 5. For limb-worn devices where the 10 gram value applies, the exemption limits for routine evaluation in Table 1 are multiplied by a factor of 2.5. If the operating frequency of the device is between two frequencies located in Table 1, linear interpolation shall be applied for the applicable separation distance. For test separation distance less than 5 mm, the exemption limits for a separation distance of 5 mm can be applied to determine if a routine evaluation is required.

For medical implants devices, the exemption limit for routine evaluation is set at 1 mW. The output power of a medical implants device is defined as the higher of the conducted or e.i.r.p to determine whether the device is exempt from the SAR evaluation.

Test Result:

For worst case:

For worst case:

The higher of the conducted or equivalent isotropically radiated power (e.i.r.p.) source-based, time-averaged output power:

(2480-2450)/(3500-2450)= (4-P)/(4-2)

The exemption limit of 2480MHz is P= 3.94mW

The antenna gain is -0.88dBi

The maximum tune-up conducted power is 4.0dBm (2.51mW), which less than 3.94 mW@2480MHz exemption limit

So the stand-alone SAR test is not required.

FCC §15.203 & RSS-GEN §6.8 – ANTENNA REQUIREMENT

Applicable Standard

According to FCC § 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. 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.

According to FCC § 15.203, the applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).

When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.

The test report shall state the RF power, output power setting and spurious emission measurements with each antenna type that is used with the transmitter being tested.

For licence-exempt equipment with detachable antennas, the user manual shall also contain the following notice in a conspicuous location:

This radio transmitter [enter the device's ISED certification number] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.
Immediately following the above notice, the manufacturer shall provide a list of all antenna types which can be used with the transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna type.

Antenna Connector Construction

The EUT has one internal antenna arrangement which was permanently attached and the maximum antenna gain is -0.88dBi, fulfill the requirement of this section. Please refer to the EUT photos.

Antenna Type	Antenna Gain	Impedance	Frequency Range
FPC	-0.88dBi	50 Ω	2.4~2.5GHz

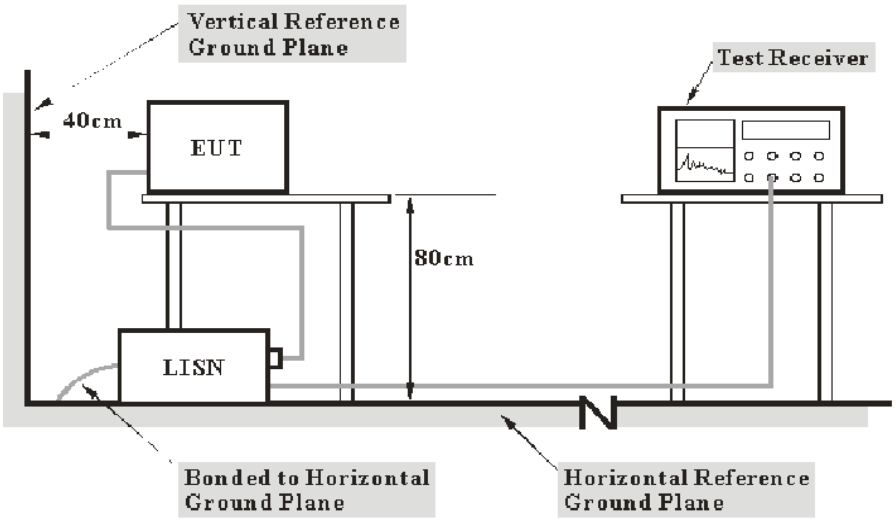
Result: Compliance

FCC §15.207 (a) & RSS-GEN § 8.8 – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a), RSS-GEN § 8.8

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The measurement procedure of EUT setup is according with ANSI C63.10-2013. The related limit was specified in FCC Part 15.207 & RSS-Gen.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak and average detection mode.

Corrected Factor & Margin Calculation

The Transd factor is calculated by adding LISN VDF (Voltage Division Factor) and Cable Loss. The basic equation is as follows:

Factor = LISN VDF + Cable Loss

The "**Over limit**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over limit of -7 dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

Over Limit = Level – Limit
Level = Read Level + Factor

Test Data

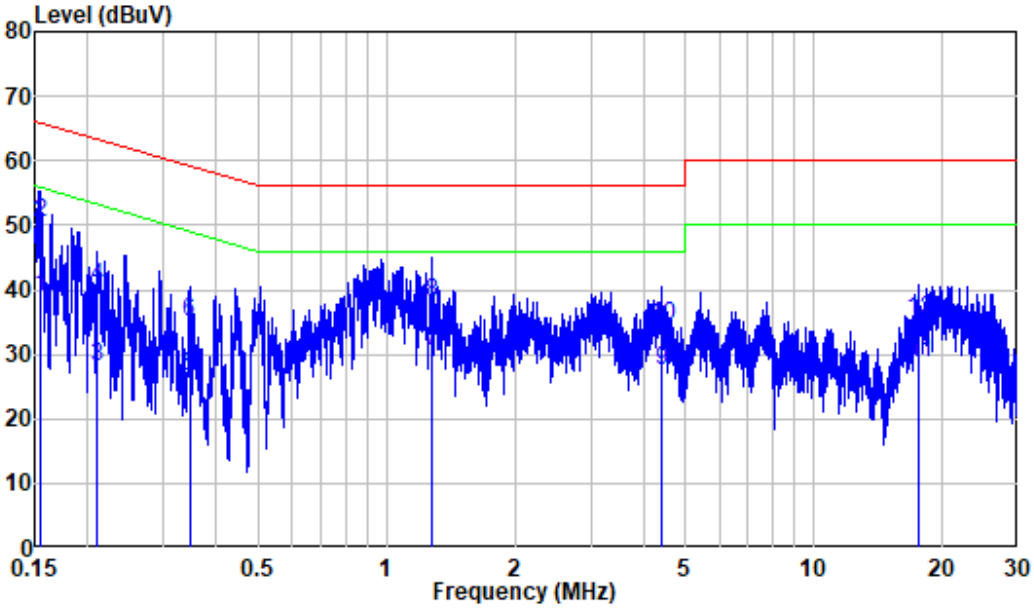
Environmental Conditions

Temperature:	23 °C
Relative Humidity:	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Jason on 2022-05-26.

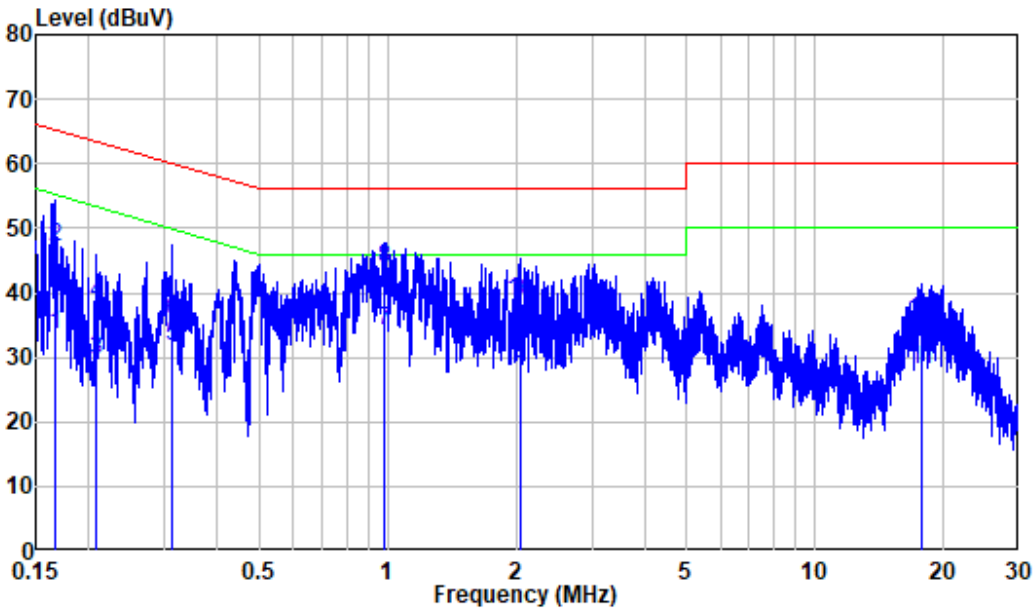
EUT operation mode: Transmitting (*the worst case is 8DPSK Mode, high channel*)

AC 120V/60 Hz, Line



	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.155	9.80	29.20	39.00	55.75	-16.75	Average
2	0.155	9.80	40.66	50.46	65.75	-15.29	QP
3	0.210	9.80	18.40	28.20	53.19	-24.99	Average
4	0.210	9.80	30.70	40.50	63.19	-22.69	QP
5	0.346	9.80	16.64	26.44	49.07	-22.63	Average
6	0.346	9.80	25.31	35.11	59.07	-23.96	QP
7	1.275	9.81	20.54	30.35	46.00	-15.65	Average
8	1.275	9.81	28.34	38.15	56.00	-17.85	QP
9	4.410	9.84	17.54	27.38	46.00	-18.62	Average
10	4.410	9.84	24.53	34.37	56.00	-21.63	QP
11	17.603	9.98	18.59	28.57	50.00	-21.43	Average
12	17.603	9.98	25.38	35.36	60.00	-24.64	QP

AC 120V/60 Hz, Neutral



	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.166	9.80	23.56	33.36	55.14	-21.78	Average
2	0.166	9.80	37.34	47.14	65.14	-18.00	QP
3	0.208	9.80	19.75	29.55	53.30	-23.75	Average
4	0.208	9.80	28.67	38.47	63.30	-24.83	QP
5	0.312	9.80	22.04	31.84	49.92	-18.08	Average
6	0.312	9.80	25.71	35.51	59.92	-24.41	QP
7	0.985	9.81	24.43	34.24	46.00	-11.76	Average
8	0.985	9.81	33.90	43.71	56.00	-12.29	QP
9	2.035	9.82	19.28	29.10	46.00	-16.90	Average
10	2.035	9.82	28.82	38.64	56.00	-17.36	QP
11	17.673	10.08	18.13	28.21	50.00	-21.79	Average
12	17.673	10.08	25.46	35.54	60.00	-24.46	QP

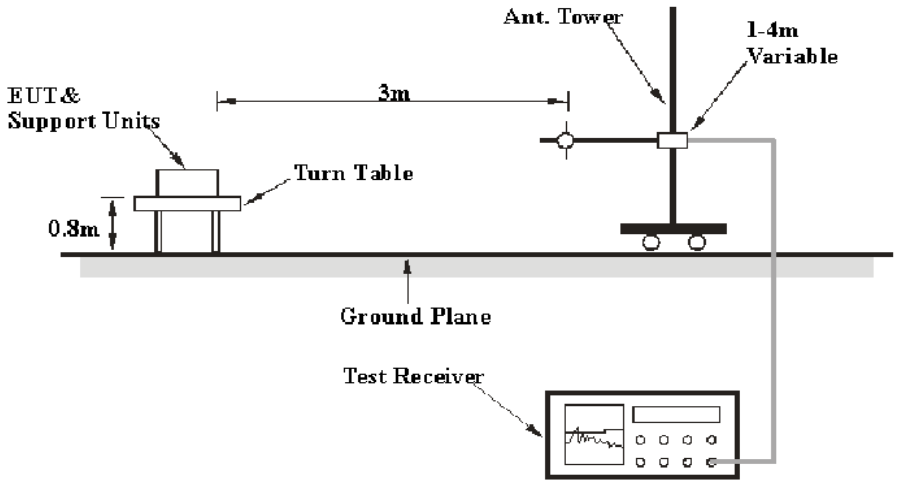
FCC §15.209, §15.205 & §15.247(d) & RSS-247§ 5.5 - SPURIOUS EMISSIONS

Applicable Standard

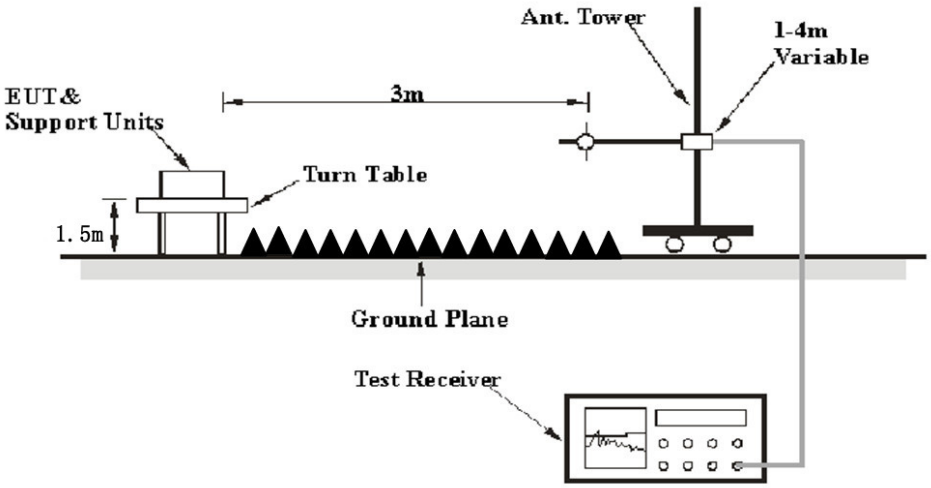
FCC §15.205; §15.209; §15.247(d); RSS-247§ 5.5; RSS-GEN § 8.10

EUT Setup

Below 1 GHz:



Above 1GHz:



The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.10-2013 & RSS-Gen. The specification used was the FCC 15.209, and FCC 15.247/RSS-247 limits.

EMI Test Receiver & Spectrum Analyzer Setup

The EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	PK
	1 MHz	10 Hz	/	Average

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All final data was recorded in Quasi-peak detection mode for frequency range of 30 MHz -1 GHz and peak and Average detection modes for frequencies above 1 GHz.

Factor & Margin Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

Factor = Antenna Factor + Cable Loss - Amplifier Gain

The "**Over Limit/Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

Over Limit/Margin = Level / Corrected Amplitude – Limit
Level / Corrected Amplitude = Read Level + Factor

Test Data

Environmental Conditions

Temperature:	25.5~30 ℃
Relative Humidity:	50~65 %
ATM Pressure:	101.0 kPa

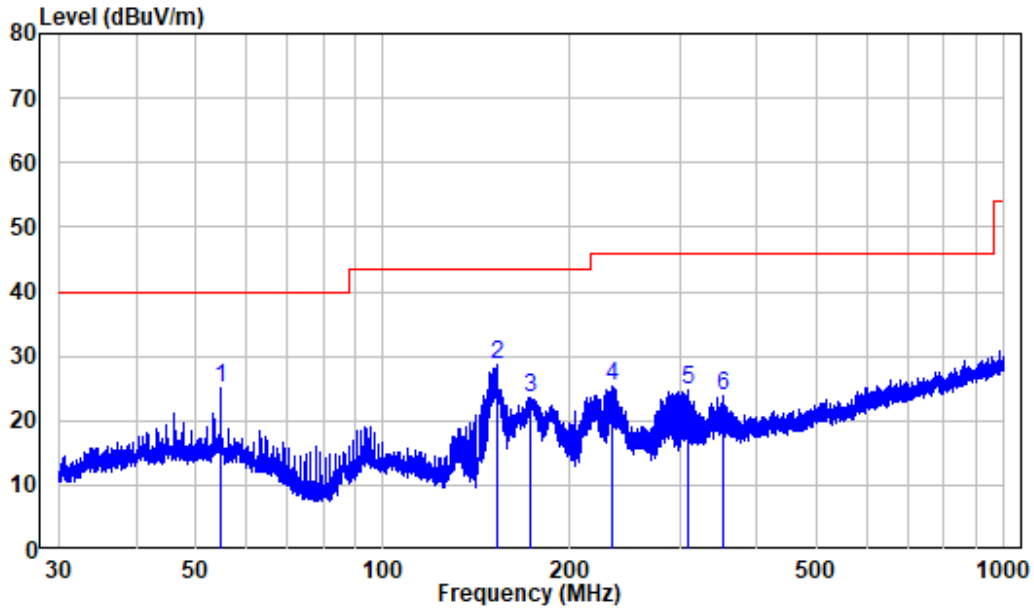
The testing was performed by Leo on 2022-05-30 for below 1GHz, Icey Huang and Level from 2022-06-01 to 2022-06-02 for above 1GHz.

EUT operation mode: Transmitting (Pre-scan in the X,Y and Z axes of orientation, the worst case X-axes of orientation was recorded)

Below 1GHz: (*the worst case is 8DPSK Mode, high channel*)

Note: When the result of Peak less than the limit of QP by more than 6dB, just the peak value was recorded.

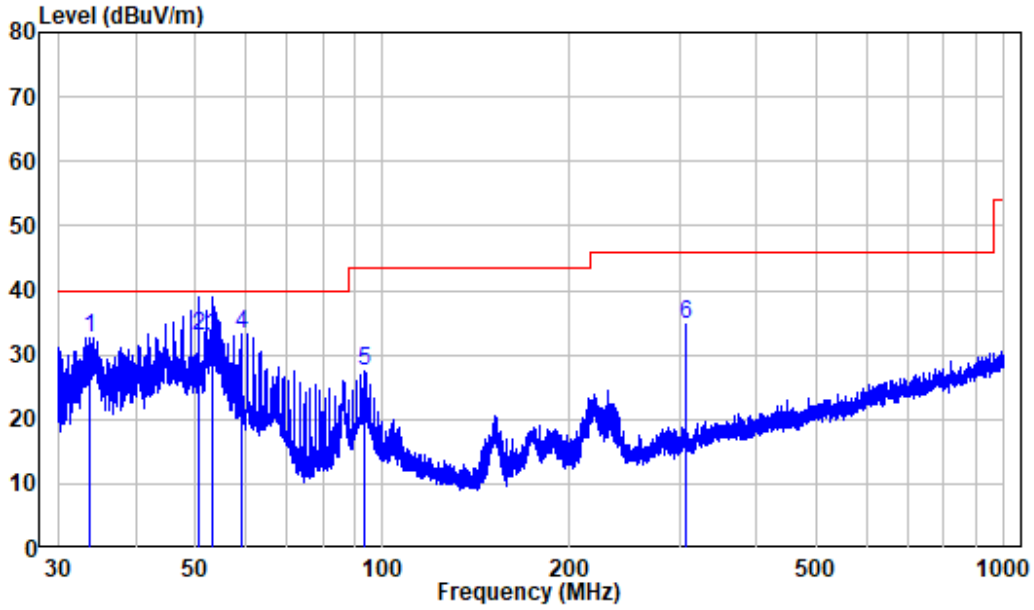
Horizontal



Site : chamber
Condition: 3m Horizontal
Job No. : SZNS220313-08568E-RF
Test Mode: BT

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	54.811	-10.29	35.28	24.99	40.00	-15.01	Peak
2	152.865	-15.10	43.91	28.81	43.50	-14.69	Peak
3	172.978	-13.28	36.89	23.61	43.50	-19.89	Peak
4	233.656	-11.00	36.49	25.49	46.00	-20.51	Peak
5	310.134	-8.89	33.55	24.66	46.00	-21.34	Peak
6	353.408	-7.44	31.17	23.73	46.00	-22.27	Peak

Vertical



Site : chamber
Condition: 3m VERTICAL
Job No. : SZNS220313-08568E-RF
Test Mode: BT

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	33.739	-11.89	44.52	32.63	40.00	-7.37	Peak
2	50.453	-9.92	42.88	32.96	40.00	-7.04	QP
3	53.318	-10.22	42.70	32.48	40.00	-7.52	QP
4	59.103	-10.30	43.53	33.23	40.00	-6.77	Peak
5	93.727	-12.77	40.11	27.34	43.50	-16.16	Peak
6	306.754	-9.00	43.68	34.68	46.00	-11.32	Peak

Above 1GHz: (worst case for 8DPSK)

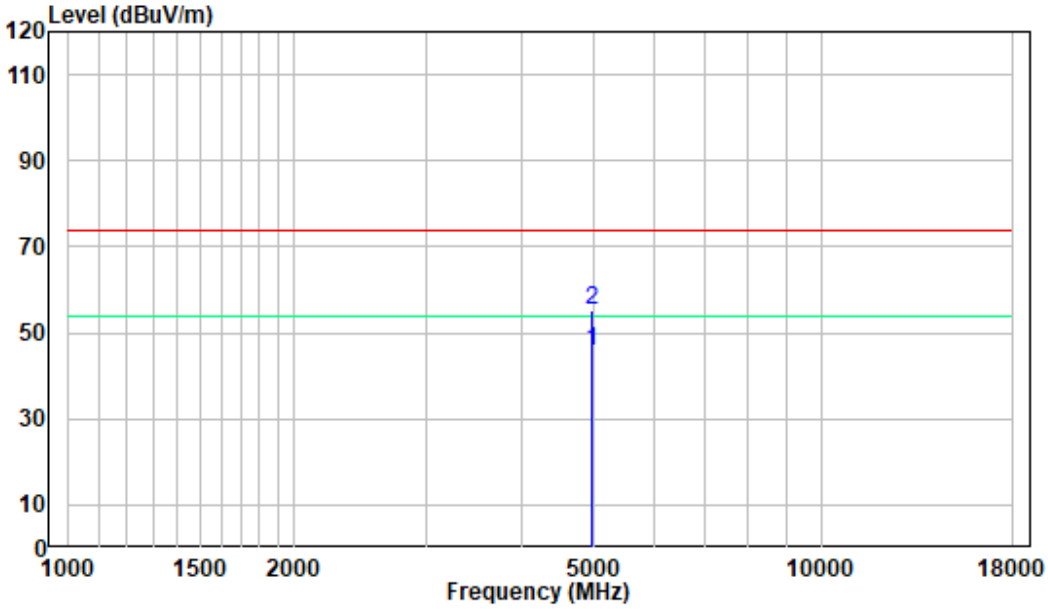
Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Factor (dB/m)	Absolute Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
	Reading (dBuV)	PK/AV		Height (m)	Polar (H/V)				
Low Channel									
2310	67.68	PK	66	1.6	H	-7.24	60.44	74	-13.56
2310	53.00	AV	66	1.6	H	-7.24	45.76	54	-8.24
2310	67.80	PK	149	1.8	V	-7.24	60.56	74	-13.44
2310	53.09	AV	149	1.8	V	-7.24	45.85	54	-8.15
2390	68.62	PK	356	2.0	H	-7.22	61.4	74	-12.60
2390	53.68	AV	356	2.0	H	-7.22	46.46	54	-7.54
2390	68.79	PK	51	2.0	V	-7.22	61.57	74	-12.43
2390	53.67	AV	51	2.0	V	-7.22	46.45	54	-7.55
4804	56.66	PK	242	1.7	H	-3.51	53.15	74	-20.85
4804	47.36	AV	242	1.7	H	-3.51	43.85	54	-10.15
4804	59.70	PK	200	2.1	V	-3.51	56.19	74	-17.81
4804	52.15	AV	200	2.1	V	-3.51	48.64	54	-5.36
Middle Channel 2441MHz									
4882	57.87	PK	257	1.8	H	-3.37	54.5	74	-19.50
4882	47.21	AV	257	1.8	H	-3.37	43.84	54	-10.16
4882	60.94	PK	77	1.9	V	-3.37	57.57	74	-16.43
4882	52.63	AV	77	1.9	V	-3.37	49.26	54	-4.74
High Channel 2480MHz									
2483.5	69.60	PK	220	2.0	H	-7.2	62.4	74	-11.60
2483.5	54.65	AV	220	2.0	H	-7.2	47.45	54	-6.55
2483.5	69.08	PK	84	1.9	V	-7.2	61.88	74	-12.12
2483.5	54.03	AV	84	1.9	V	-7.2	46.83	54	-7.17
2500	68.11	PK	229	2.1	H	-7.18	60.93	74	-13.07
2500	53.78	AV	229	2.1	H	-7.18	46.6	54	-7.40
2500	68.22	PK	330	1.9	V	-7.18	61.04	74	-12.96
2500	54.12	AV	330	1.9	V	-7.18	46.94	54	-7.06
4960	58.23	PK	33	1.8	H	-3.01	55.22	74	-18.78
4960	48.90	AV	33	1.8	H	-3.01	45.89	54	-8.11
4960	61.52	PK	43	2.0	V	-3.01	58.51	74	-15.49
4960	52.45	AV	43	2.0	V	-3.01	49.44	54	-4.56

Note:
Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
Corrected Amplitude = Corrected Factor + Reading
Margin = Corrected. Amplitude - Limit
The other spurious emission which is 20dB to the limit or in noise floor was not recorded.

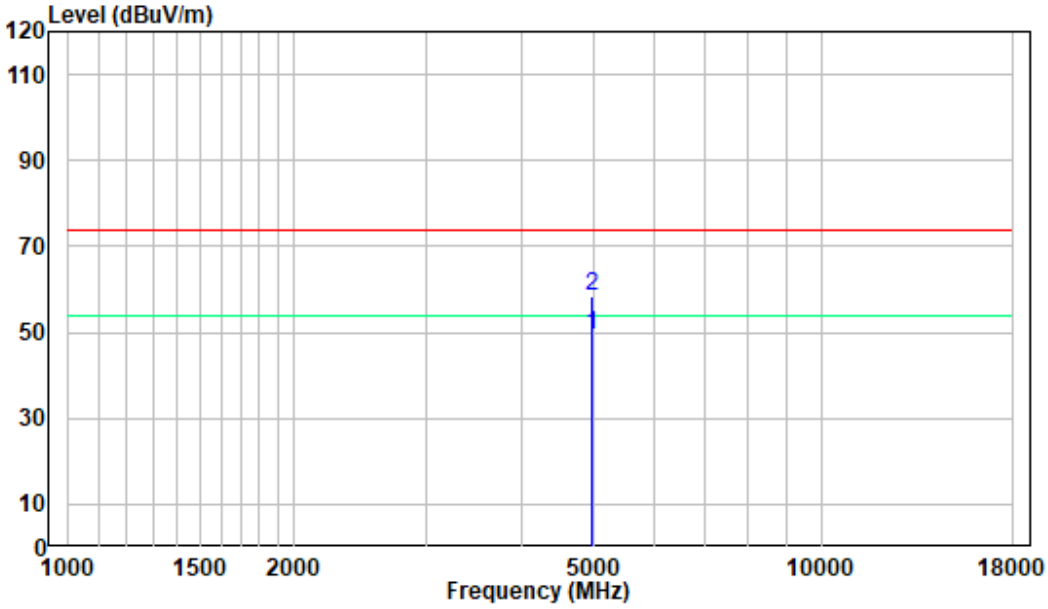
1 GHz - 18 GHz: (Pre-Scan plots)

High channel

Horizontal



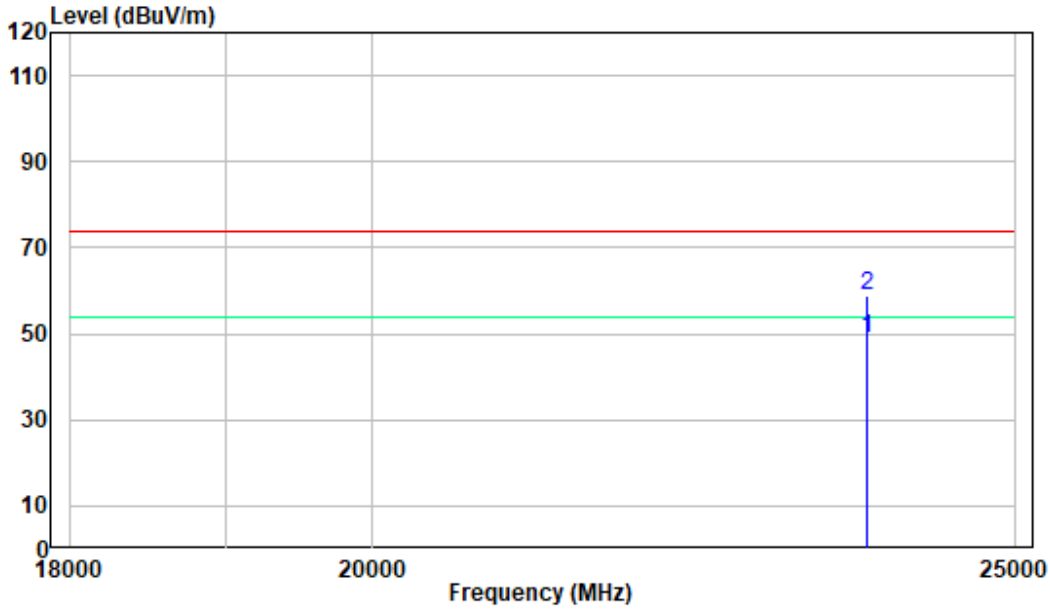
Vertical



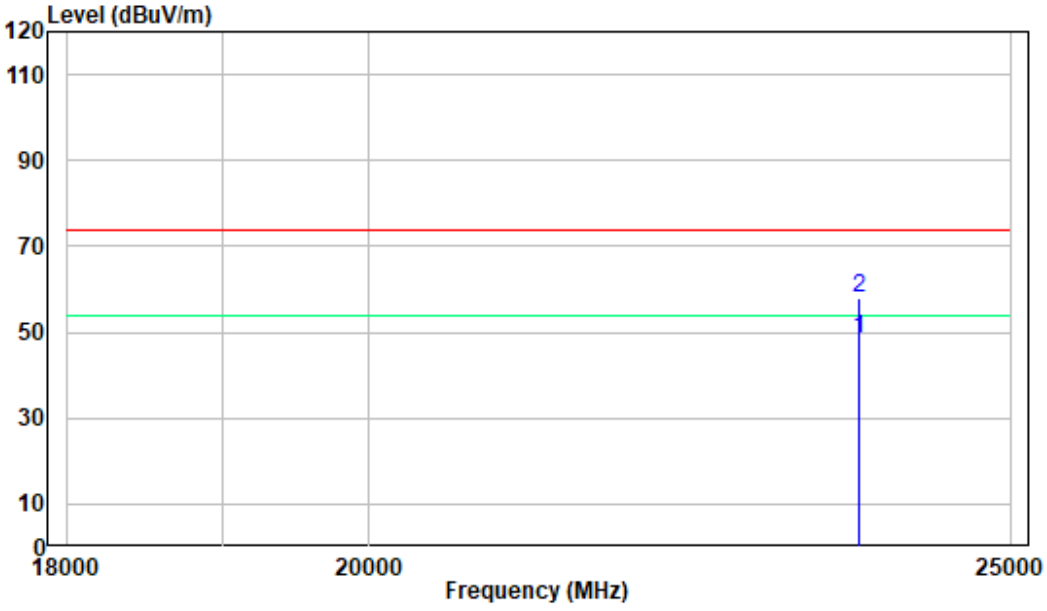
18-25GHz: (Pre-Scan plots)

High channel

Horizontal



Vertical



******* END OF REPORT *******