

Prüfbericht-Nr.: <i>Test report No.:</i>	CN22B9BZ 001	Auftrags-Nr.: <i>Order No.:</i>	170305056	Seite 1 von 21 <i>Page 1 of 21</i>	
Kunden-Referenz-Nr.: <i>Client reference No.:</i>	N/A	Auftragsdatum: <i>Order date.:</i>	06.04.2022		
Auftraggeber: <i>Client:</i>	Foshan Lifecode Electronic Tech. Co., Ltd. Jiangyi Industrial Zone, Leliu, Shunde, Foshan, Guangdong 528322, P.R. China.				
Prüfgegenstand: <i>Test item:</i>	Car Fridges				
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	SU-T15A, SU-T20A, SU-T25A, SU-T30A, SU-T40A, SU-T50A				
Auftrags-Inhalt: <i>Order content:</i>	FCC approval				
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 FCC KDB Publication 447498 D01 v06				
Wareneingangsdatum: <i>Date of receipt:</i>	22 Jun, 2022				
Prüfmuster-Nr.: <i>Test sample No.:</i>	A003285607-001/002				
Prüfzeitraum: <i>Testing period:</i>	Refer to test report				
Ort der Prüfung: <i>Place of testing:</i>	Refer to section 2.1				
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Guangdong) Co., Ltd.				
Prüfergebnis*: <i>Test result*:</i>	Pass				
geprüft von: <i>tested by :</i> Datum: <i>Date:</i> 2022.08.01			genehmigt von: <i>authorized by:</i> Ausstelldatum : <i>Issue Date:</i> 2022.08.01		
Stellung/Position:	Storm Shu / Project Manager		Stellung/Position:	Amy Wang / Technical Certifier	
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>
Sonstiges / Other: FCC ID: 2A72LT15A-T50A					
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>			Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged:</i>		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specifications(s) F(ail) = failed a.m. test specifications(s) N/A = not applicable N/T = not tested					
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>					

Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER

RESULT: Pass

5.1.3 CONDUCTED POWER SPECTRAL DENSITY

RESULT: Pass

5.1.4 6dB BANDWIDTH

RESULT: Pass

5.1.5 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 kHz BANDWIDTH

RESULT: Pass

5.1.6 RADIATED SPURIOUS EMISSION

RESULT: Pass

5.1.7 CONDUCTED EMISSION ON AC MAINS

RESULT: Pass

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix 1: Test setup and test equipment

Appendix 2: Test Results of Bluetooth

2 Test Sites

2.1 Test Facilities

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ,
Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: CN1203

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment
Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2021.09.30	2022.09.29
Signal Analyzer	R&S	FSV 40-N	101823	2021.09.30	2022.09.29
Active loop Antenna	ZHINAN	ZN30900C	16035	2021.04.11	2023.04.10
Bilog Antenna	TESEQ	CBL6111D	34678	2020.10.12	2022.10.11
Horn Antenna	SCHWARZBECK	BBHA 9120D	02014	2021.10.11	2023.10.10
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	J211020657	2020.10.12	2022.10.11
Pre-Amplifier(0.1M-3GHz)	EM	EM330	060665	2021.10.08	2022.10.07
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2021.09.30	2022.09.29
Pre-Amplifier (18G-40GHz)	SKET	LNPA-1840-50	SK2018101801	2021.09.28	2022.09.27
Temperature & Humidity	HH660	Mieo	N/A	2021.10.09	2022.10.08
Turn table	EM	SC100_1	60531	N/A	N/A
Antenna mast	EM	SC100	N/A	N/A	N/A
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 RE)			

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2021.09.30	2022.09.29
LISN	R&S	ENV216	101242	2021.09.30	2022.09.29
LISN	EMCO	3810/2NM	23625	2021.09.30	2022.09.29
Temperature & Humidity	HH660	Mieo	N/A	2021.10.09	2022.10.08
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 RE)			

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Power Sensor	Keysight	U2021XA	MY55520005	2021.09.30	2022.09.29
			MY55520006	2021.09.30	2022.09.29
			MY56120038	2021.09.30	2022.09.29
			MY56280002	2021.09.30	2022.09.29
Signal Analyzer	Agilent	N9020A	MY51110105	2022.03.01	2023.02.28
Temperature & Humidity	HH660	Mieo	N/A	2021.10.09	2022.10.08
Power Sensor	Keysight	U2021XA	MY55520005	2021.09.30	2022.09.29
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 RE)			

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.87\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.895\text{dB}$
3	All emissions, radiated 9K-30MHz	$\pm 3.80\text{dB}$
4	All emissions, radiated 30M-1GHz	$\pm 4.09\text{dB}$
5	All emissions, radiated 1G-6GHz	$\pm 4.92\text{dB}$
6	All emissions, radiated >6G	$\pm 5.49\text{dB}$
7	Conducted Emission (9KHz-30MHz)	$\pm 2.73\text{dB}$

2.6 Sample Calculations

Calculation of test results for conducted emission measurement:

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2100	24.61	20.35	44.96	63.21	-18.25	QP
2	0.2100	4.92	20.35	25.27	53.21	-27.94	AVG

Frequency (MHz) = Emission frequency in MHz

Correct Factor = Insertion loss + Cable loss

Margin = Result (Result = Reading + Correct Factor) – Limit

Detector: QP= Quasi-Peak; AVG= Average

e.g.:

44.96dBuV (Result) = 24.61dBuV (Reading) + 20.35dB (Correct Factor)

-18.25dB (Margin) = 44.96dBuV (Result) – 63.21dBuV (Limit)

2.7 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix 2 of this report and delivered to the applicant. A copy has been retained in the SHENZHEN STS TEST SERVICES CO., LTD file for certification follow-up purposes.

2.8 Status of Facility Used for Testing

SHENZHEN STS TEST SERVICES CO., LTD is listed on the US Federal Communications Commission list of facilities approved to perform measurements, whose designation number is 625569.

3 General Product Information

3.1 Product Function and Intended Use

The appliance is Refrigerator.

This appliance is intended to be used in car and similar applications and it supports Bluetooth wireless technology.

Model List:

Model	Rating	Volume(L)	DC Fan	Compressor
SU-T15A	100-240V~, 50-60Hz	15	KX-9025	BZH20D
SU-T20A		20		
SU-T25A		25		
SU-T30A		30	KX-12025	QDZH50W
SU-T40A		40		
SU-T50A		50		

Model difference:

1. All models used the same Bluetooth module.
2. SU-T15A, SU-T20A are identical with SU-T25A except the volume and weight.
2. SU-T30A, SU-T40A are identical with SU-T50A except the volume and weight.

According to above information, full test were performed on SU-T50A.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

Technical Specification	Value
Kind of Equipment	Car Fridges
Type Designation	SU-T15A, SU-T20A, SU-T25A, SU-T30A, SU-T40A, SU-T50A
Trade Mark	LIFECODE
FCC ID	2A72LT15A-T50A
Operating Frequency	2402 - 2480 MHz
Operating Temperature Range	0°C to +43°C
Operating Voltage	Input: 100-240V~ 50/60Hz, 2.0A Output: 14.5V, 4.1A 59.45W
Testing Voltage	AC 120V/60Hz
Technical Specification of Bluetooth	
Operating Frequency	2402-2480MHz
Type of Modulation	GFSK
Channel Number	40 Channels
Channel Spacing	2 MHz
Bluetooth Version	4.2
Bluetooth Configuration	LE(Support 1M PHY)
Antenna Type	PCB Layout Antenna
Antenna Gain	0dBi

Table 3: RF Channel and Frequency of Wi-Fi 802.11 b/g/n

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	10	2422	20	2442	30	2462
01	2404	11	2424	21	2444	31	2464
02	2406	12	2426	22	2446	32	2466
03	2408	13	2428	23	2448	33	2468
04	2410	14	2430	24	2450	34	2470
05	2412	15	2432	25	2452	35	2472
06	2414	16	2434	26	2454	36	2474
07	2416	17	2436	27	2456	37	2476
08	2418	18	2438	28	2458	38	2478
09	2420	19	2440	29	2460	39	2480

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, General Bluetooth transmitting mode
 - 1. Low channel
 - 2. Middle channel
 - 3. High channel
- B. On, Normal operation with Bluetooth mode
- C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- Block Diagram
- FCC/IC Label and Location Info
- Model Difference Letter
- Operation Description
- Photo Document
- Schematics
- User Manual

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2013 and ANSI C63.4: 2014

RF Function	Type	Mode Or Modulation type	Ant Gain(dBi)	Power Class	Software For Testing
BLE	BLE	GFSK	0	4	Panchip Serial Assistant V0.0.006

4.3 Special Accessories and Auxiliary Equipment

Table 4: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Notebook Adapter	LENOVO	ADLX45DLC3A	N/A	N/A
Notebook	LENOVO	Think Pad E470	N/A	N/A
USB Cable	N/A	N/A	150cm	NO

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

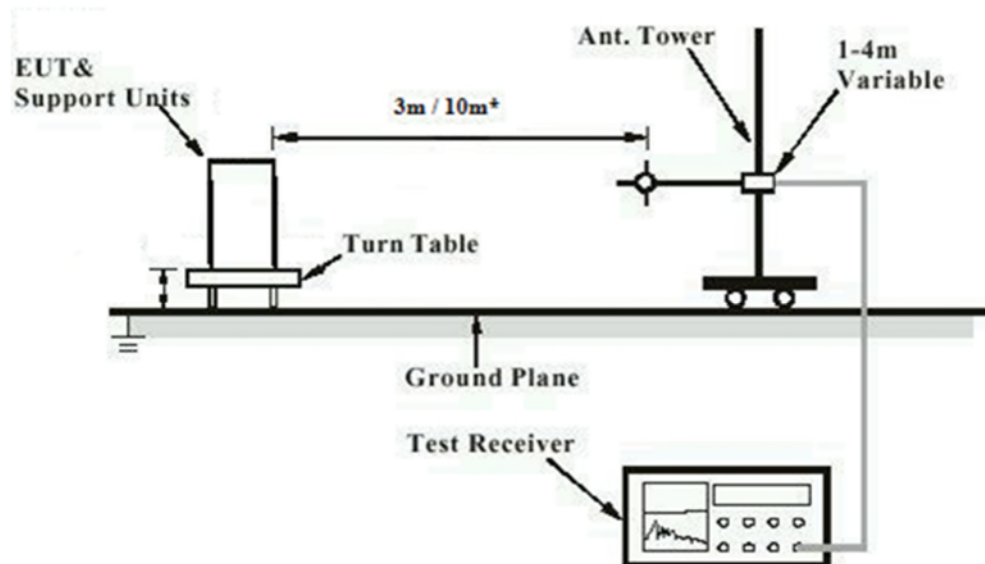


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

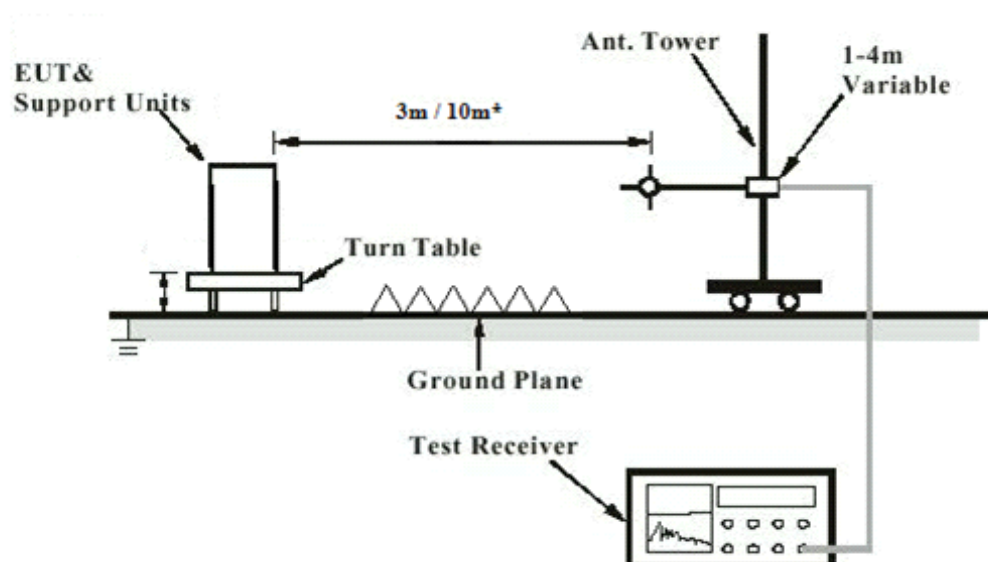


Diagram of Measurement Configuration for Mains Conduction Measurement

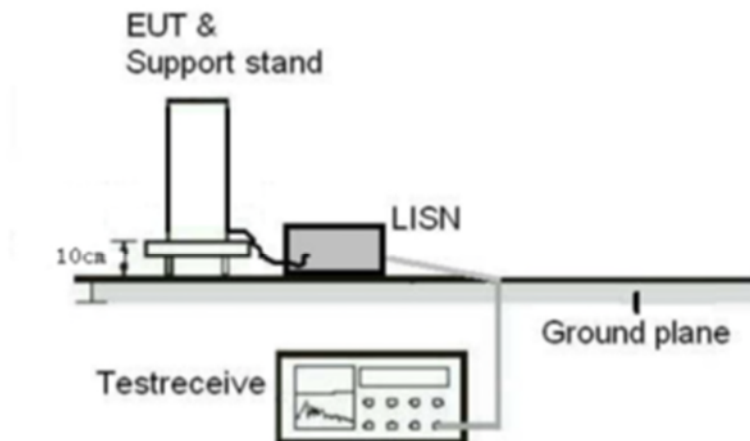
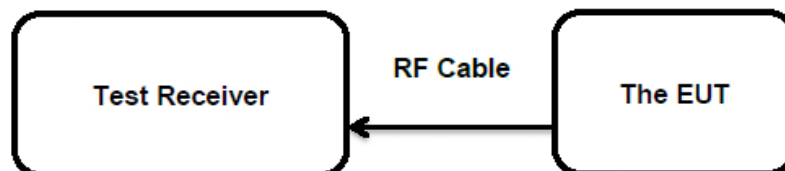


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(b)(4) and Part 15.203

According to the manufacturer declared, the EUT has an internal antenna, the directional gain is 0 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

5.1.2 Maximum Peak Conducted Output Power

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(b)(3)
RSS-247 Clause 5.4(b)&(d)

Basic standard : ANSI C63.10: 2013

Limits : FHSS < 0.125 Watts, DSSS < 1.0 Watts

Kind of test site : Shielded Room

Test Setup

Date of testing : 01.07.2022

Input voltage : AC 120V/60HZ

Operation mode : A

Test channel : Low / Middle / High

Ambient temperature : 25.7 °C

Relative humidity : 40 %

Atmospheric pressure : 101 kPa

Table 5: Test Result of Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	-4.21	<=30	Pass
NVNT	BLE 1M	2440	-4.66	<=30	Pass
NVNT	BLE 1M	2480	-5.53	<=30	Pass

Note:

- 1) The cable loss is 0.5dB taken into account in results.
- 2) Antenna gain(G) of Bluetooth: 0 dB

The Maximum peak conducted output power (e.i.r.p.)= $P_{\text{(Peak power)}} + G$, which is far below the 4 W

This testing was carried out on all operation modes, but only the worst case was presented in this report.

5.1.3 Conducted Power Spectral Density

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(e)
Basic standard : ANSI C63.10: 2013
Limits : 8 dBm/3kHz
Kind of test site : Shielded Room

Test Setup

Date of testing : 01.07.2022
Input voltage : AC 120V/60HZ
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 25.7 °C
Relative humidity : 40 %
Atmospheric pressure : 101 kPa

Table 6: Test Result of Power Spectral Density

Condition	Mode	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	-16.58	<=8	Pass
NVNT	BLE 1M	2440	-16.13	<=8	Pass
NVNT	BLE 1M	2480	-18.38	<=8	Pass

Note: The cable loss is 0.5dB taken into account in results.

5.1.4 6dB Bandwidth

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(a)(2)
Basic standard : ANSI C63.10: 2013
Limits : More than 500 KHz
Kind of test site : Shielded Room

Test Setup

Date of testing : 01.07.2022
Input voltage : AC 120V/60HZ
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 25.7 °C
Relative humidity : 40 %
Atmospheric pressure : 101 kPa

Table 7: Test Result of 6dB Bandwidth

Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	0.69	≥ 0.5	Pass
NVNT	BLE 1M	2440	0.72	≥ 0.5	Pass
NVNT	BLE 1M	2480	0.74	≥ 0.5	Pass

5.1.5 Conducted Spurious Emissions Measured in 100 kHz Bandwidth**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.247(d) RSS-247 Clause 5.5
Basic standard	: ANSI C63.10: 2013
Limits	: 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 30.06.2022
Input voltage	: AC 120V/60HZ
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 25.7 °C
Relative humidity	: 40 %
Atmospheric pressure	: 101 kPa

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to following test plot, and compliance is achieved as well.

For the measurement records, refer to the appendix 2.

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5.1.6 Radiated Spurious Emission**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.247(d) & FCC Part 15.205 RSS-247 Clause 3.3
Basic standard	: ANSI C63.10: 2013
Limits	: Refer to 15.209(a) of FCC part 15.247(d)
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 30.06.2022
Input voltage	: AC 120V/60HZ
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 25.7 °C
Relative humidity	: 40 %
Atmospheric pressure	: 101 kPa

Remark:

The Radiated Spurious Emission was carried out within frequency range 9kHz – 30MHz and 18GHz - 26.5GHz, and the measurements with active antenna were greater than 20dB below the limit, so the test data were not recorded in the test report.

For the measurement records, refer to the appendix 2.

5.1.7 Conducted Emission on AC Mains

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.207(a) & FCC Part 15.107(a) RSS-GEN Clause 7.2
Basic standard	: ANSI C63.10: 2013 & ANSI C63.4: 2014
Frequency range	: 0.15 – 30MHz
Limits	: FCC Part 15.207(a) & FCC Part 15.107(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 30.06.2022
Input voltage	: AC 120V/60HZ
Operation mode	: C
Earthing	: Not connected
Ambient temperature	: 25.8 °C
Relative humidity	: N53%
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix 2.

6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix 1.

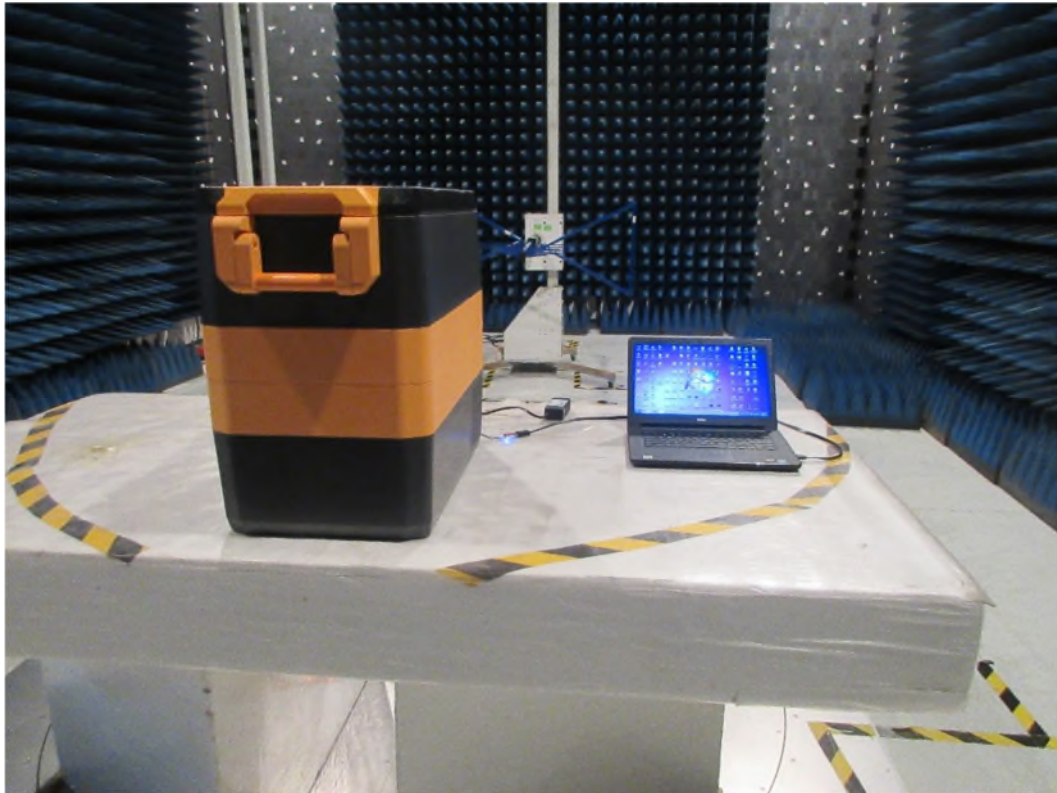
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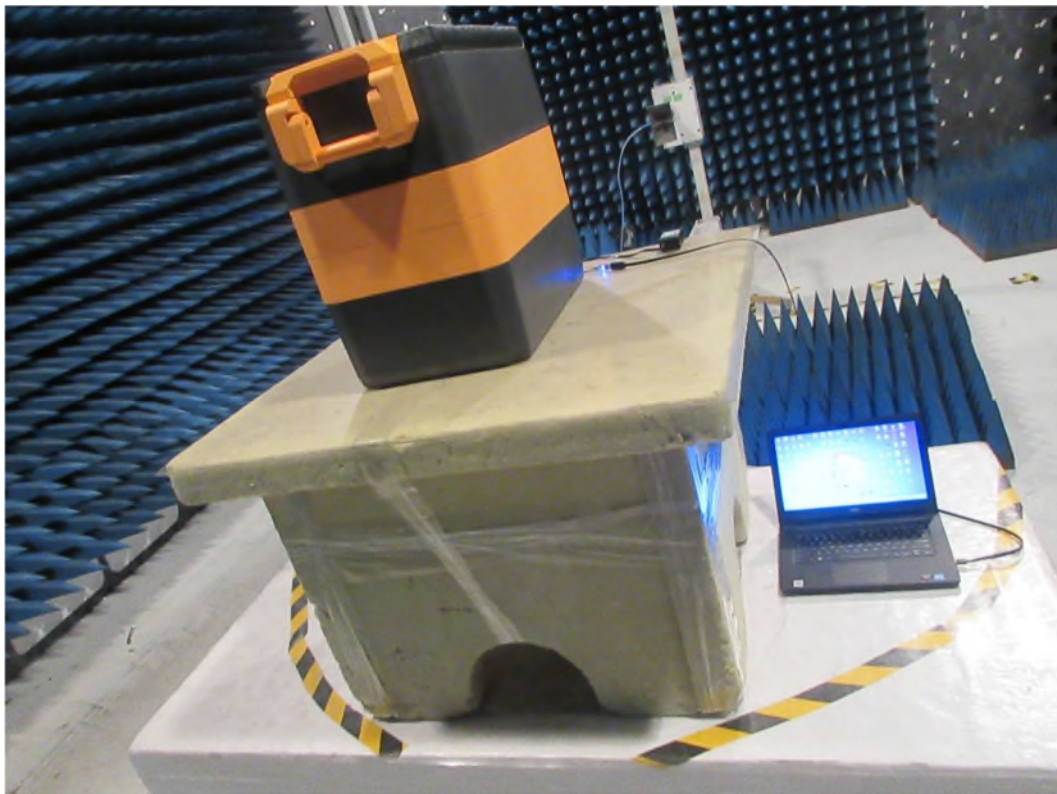
Appendix A.1: Photographs of the Test Set-Up

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Photograph 1: Set-up for Radiated Spurious Emission, 30MHz - 1GHz



Photograph 2: Set-up for Radiated Spurious Emission, above 1GHz



Photograph 3: Set-up for Conducted Emission



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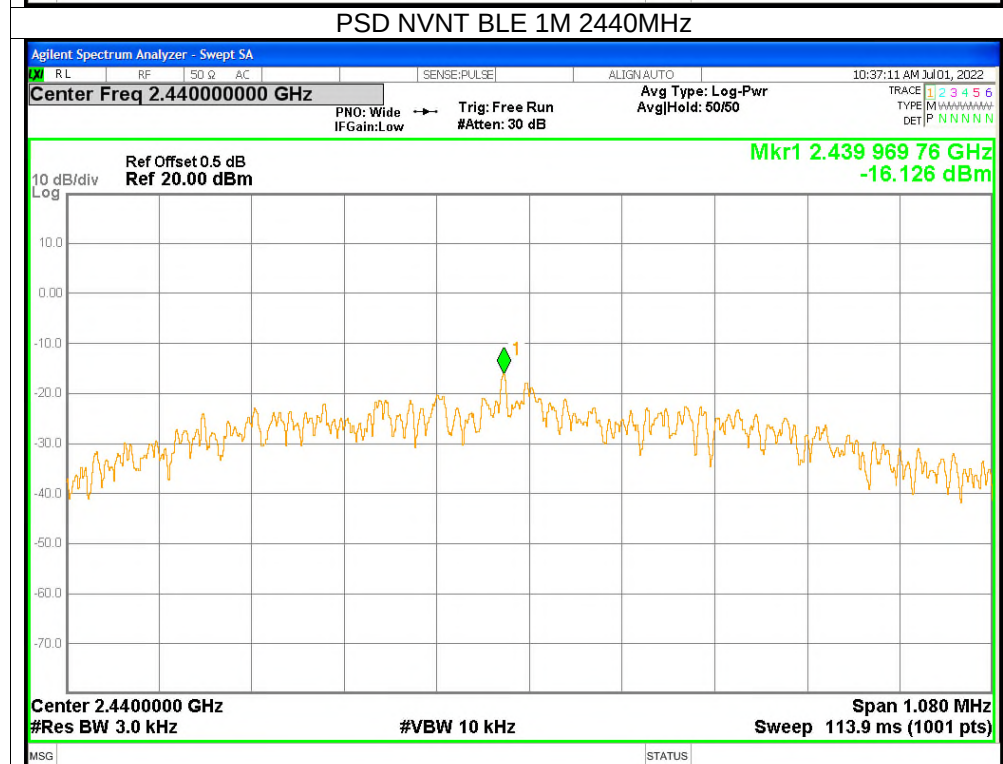
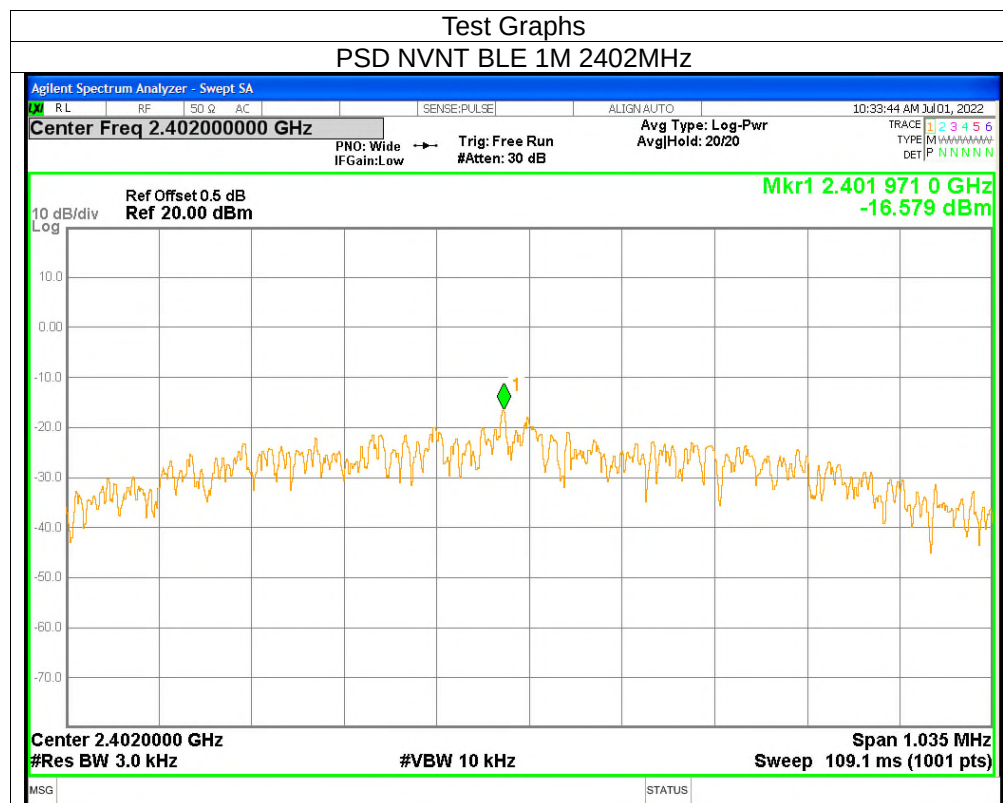
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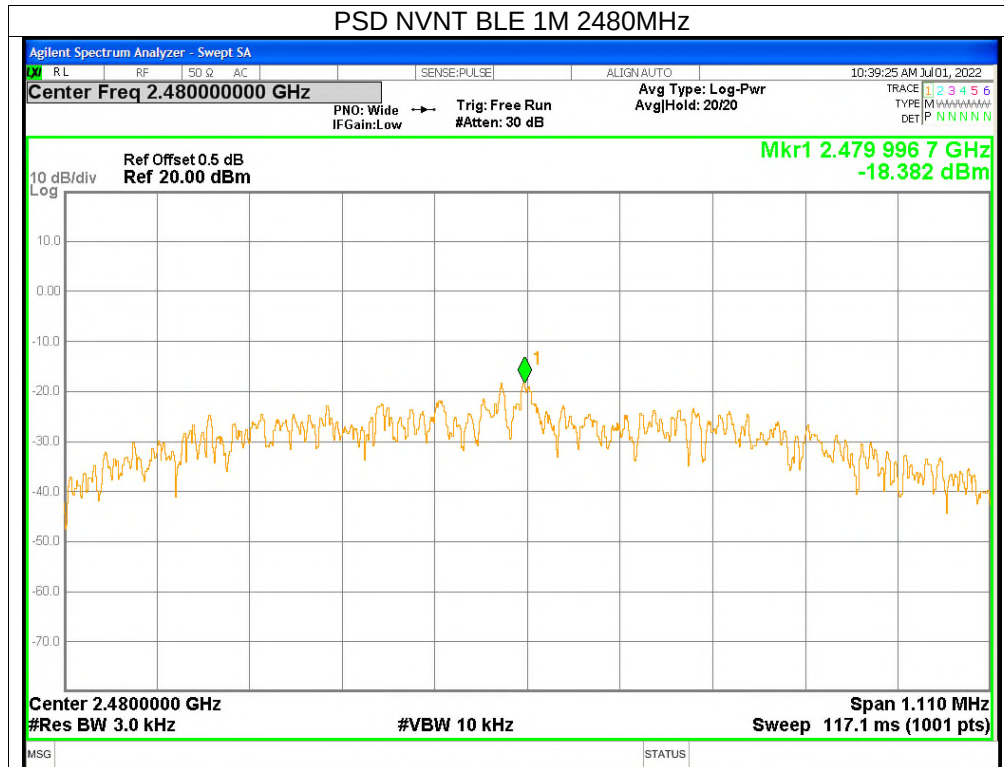
Conducted Power Spectral Density



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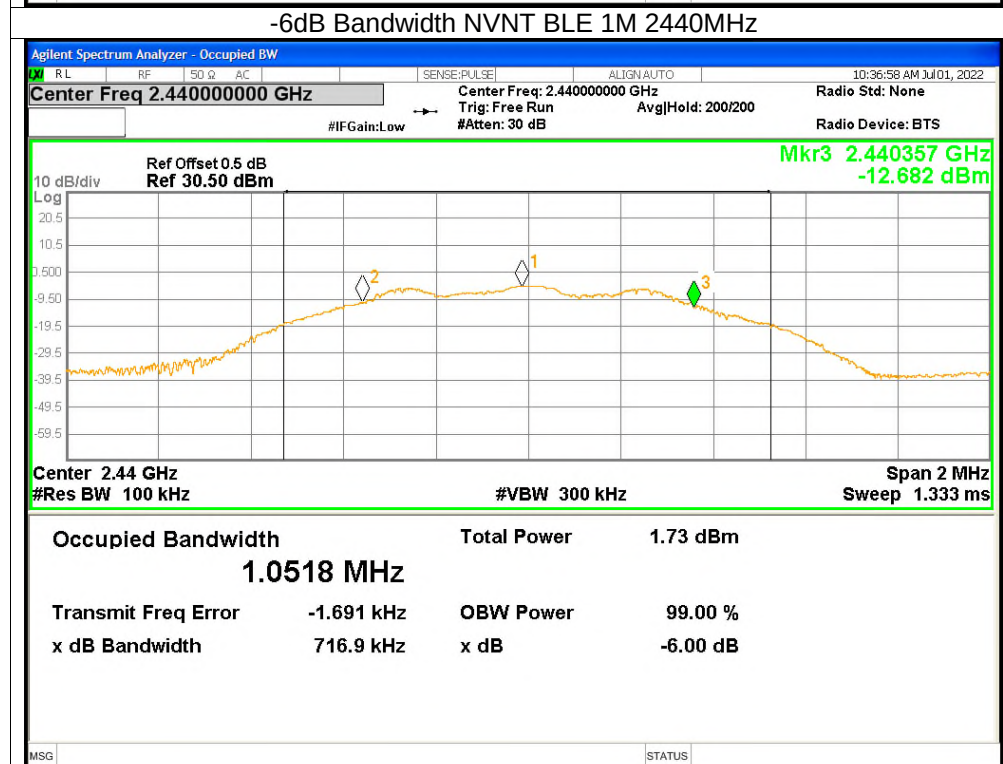
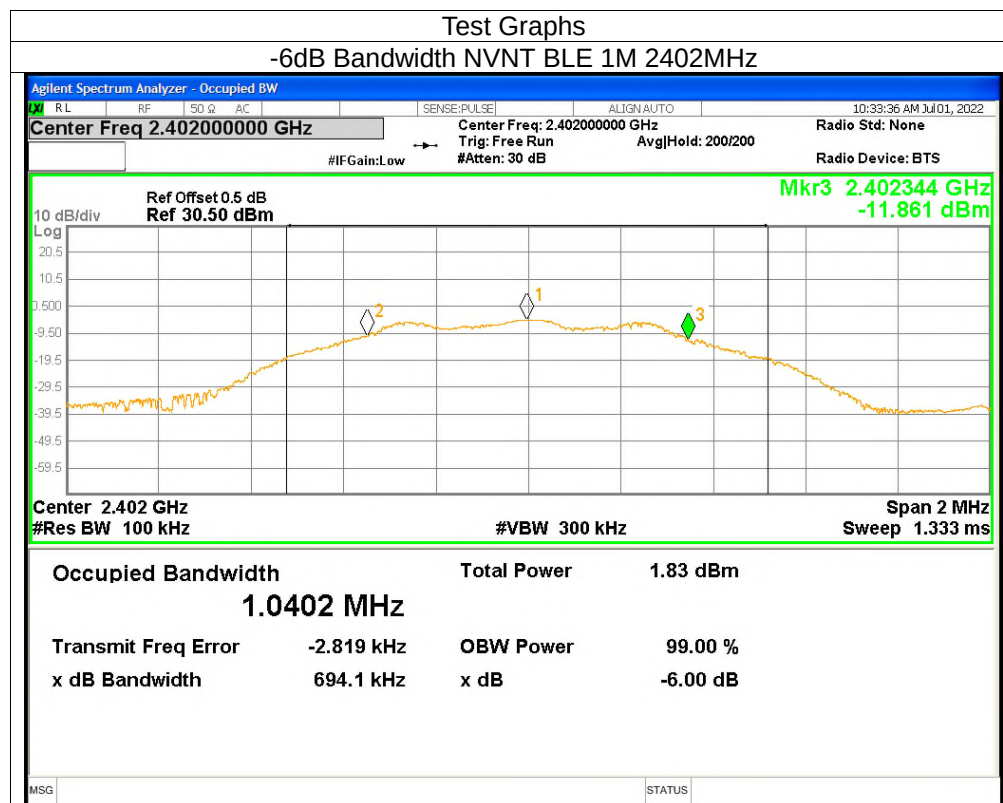
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-6dB Bandwidth



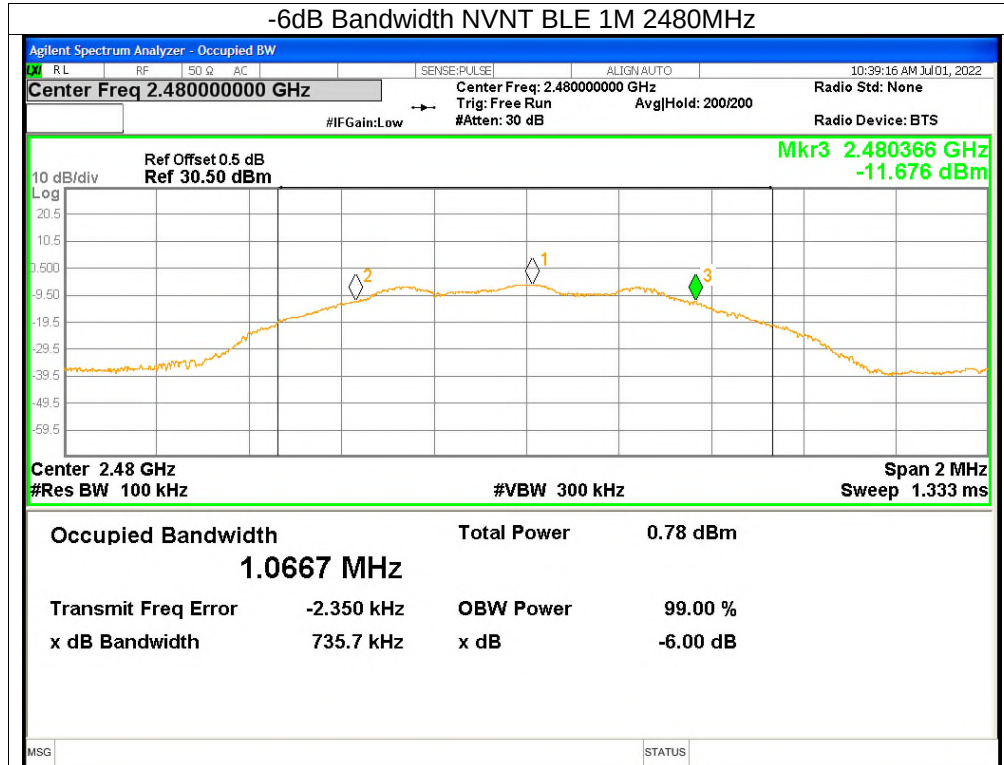
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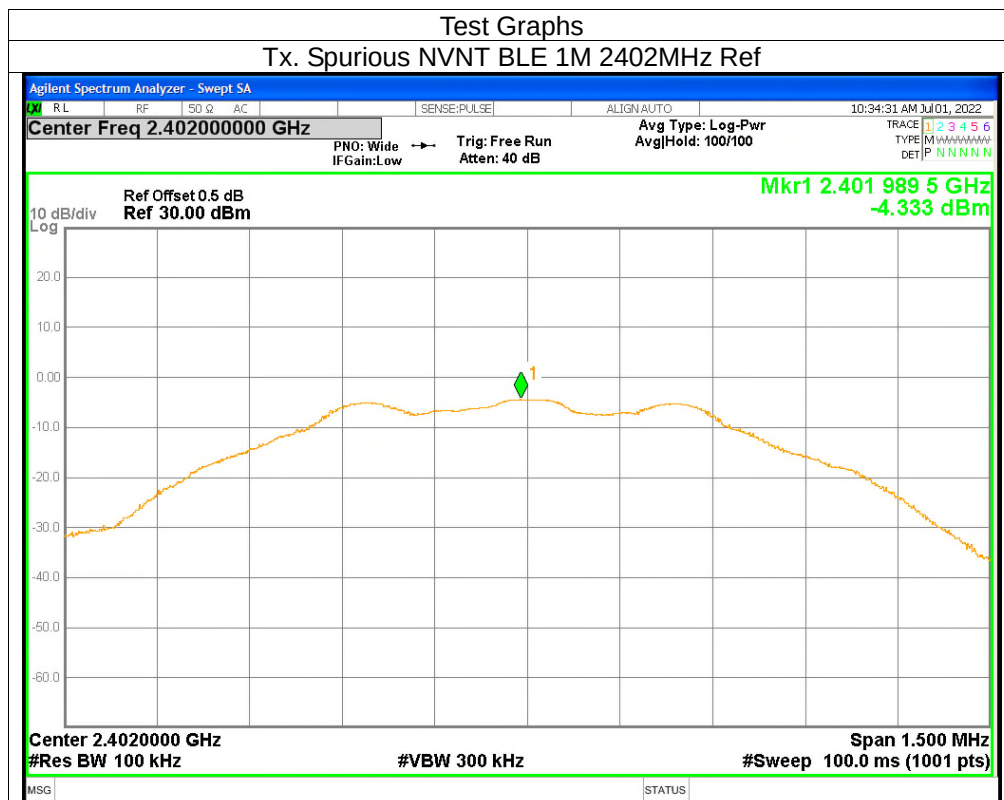
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Conducted Spurious Emissions

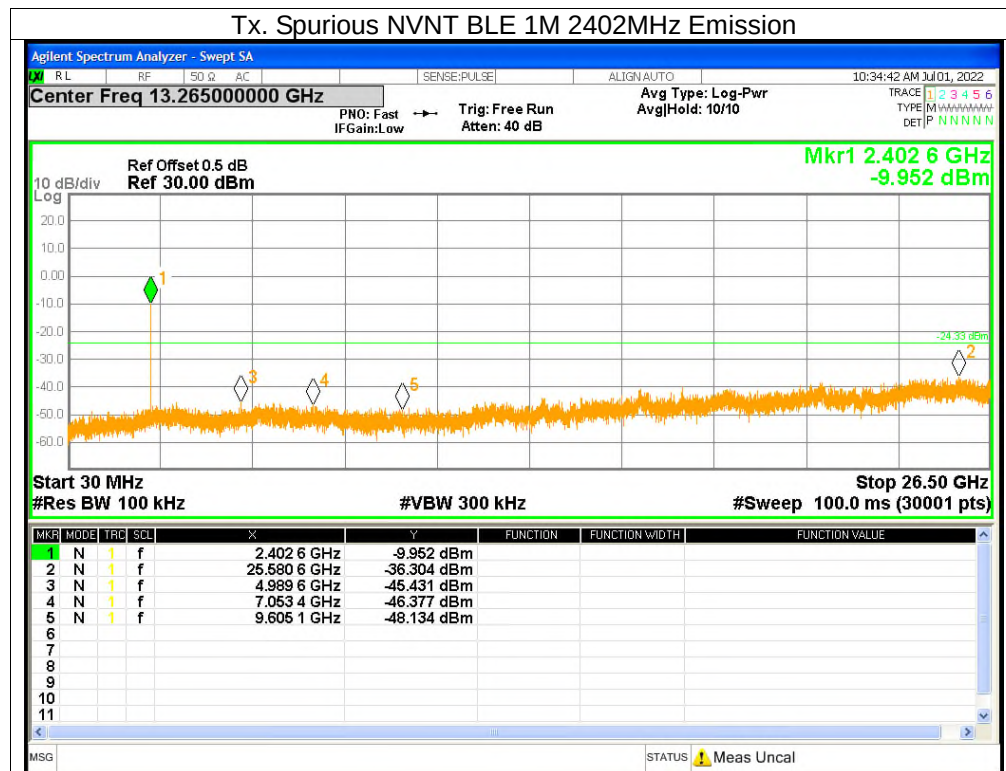
Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-31.97	<=-20	Pass
NVNT	BLE 1M	2440	-40.73	<=-20	Pass
NVNT	BLE 1M	2480	-30.89	<=-20	Pass

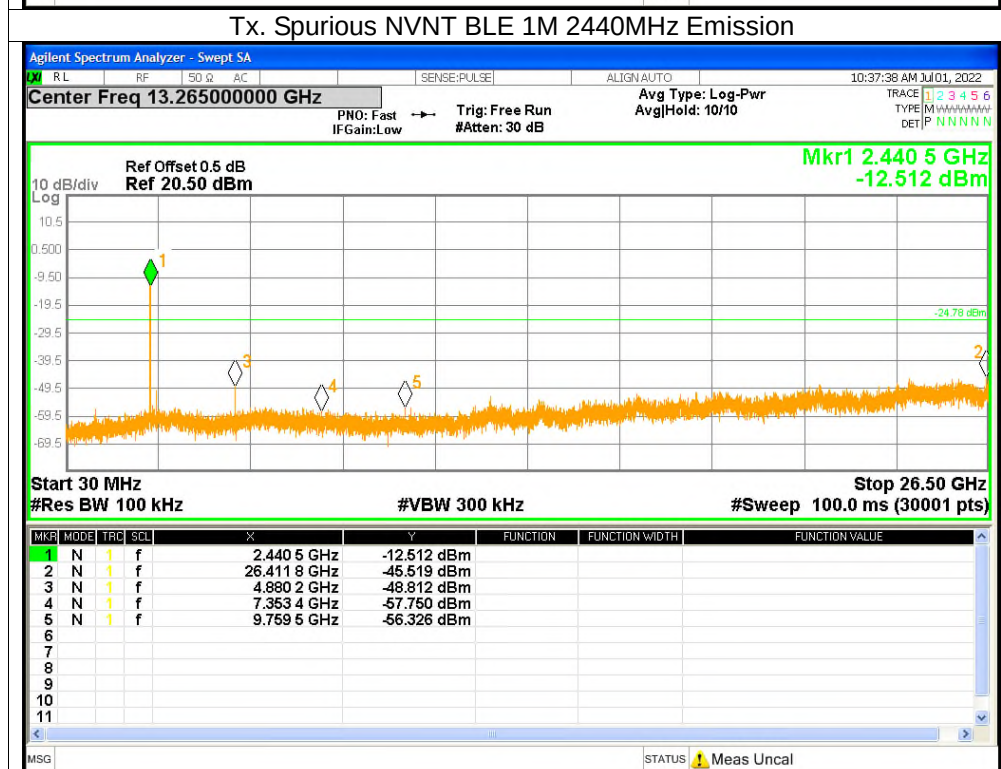
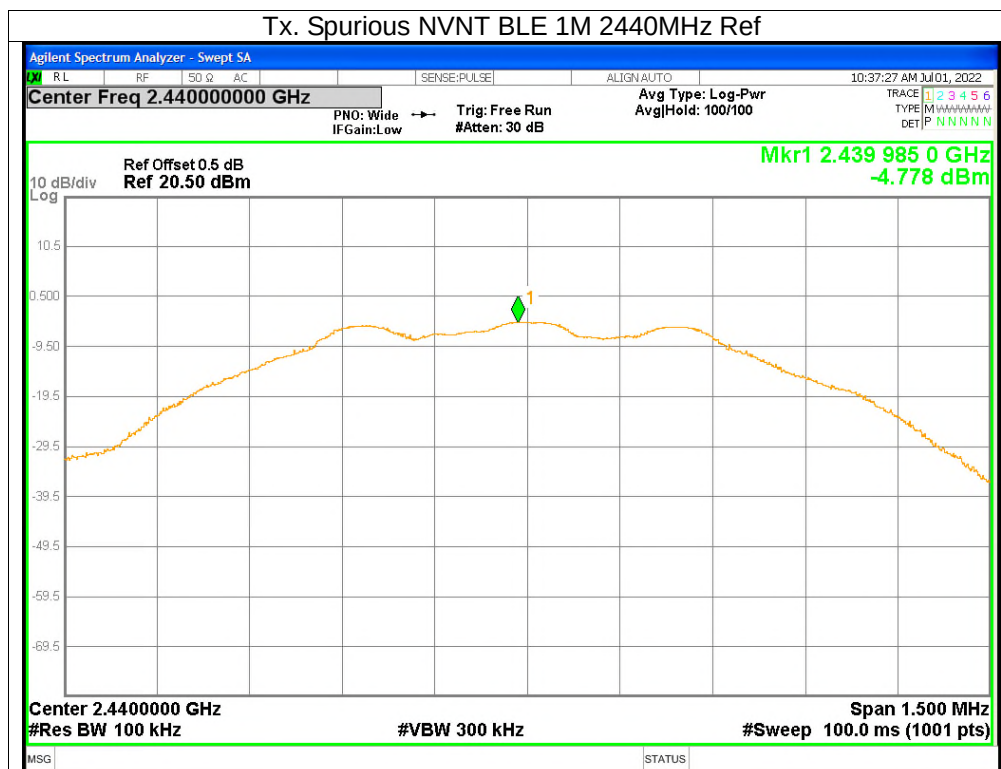


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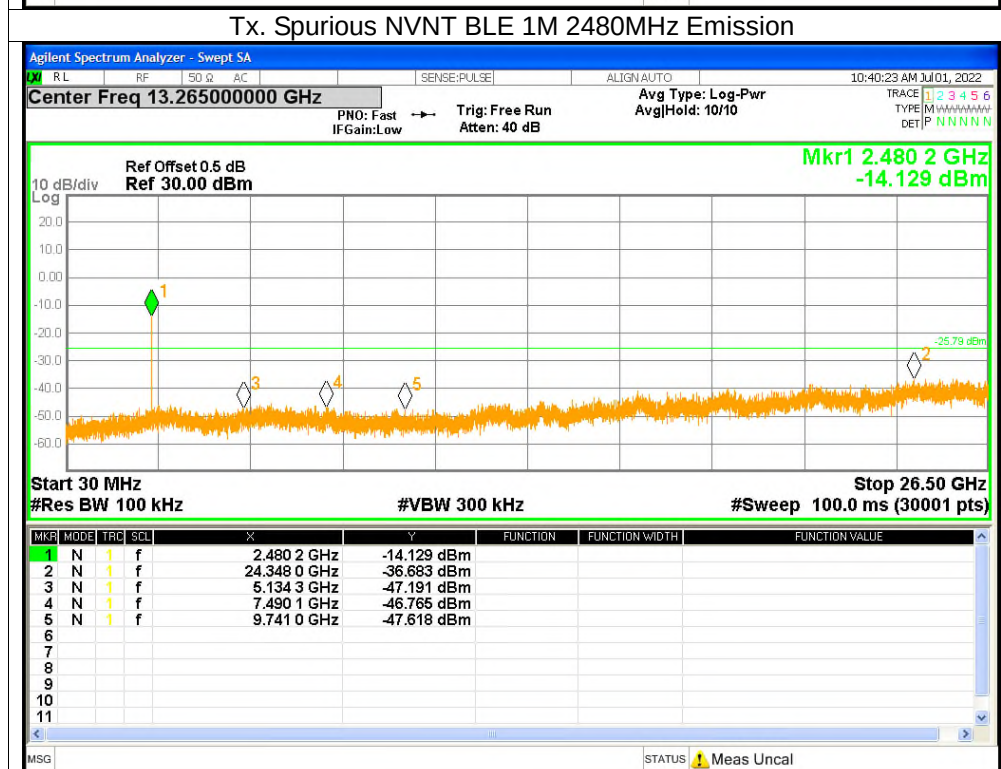
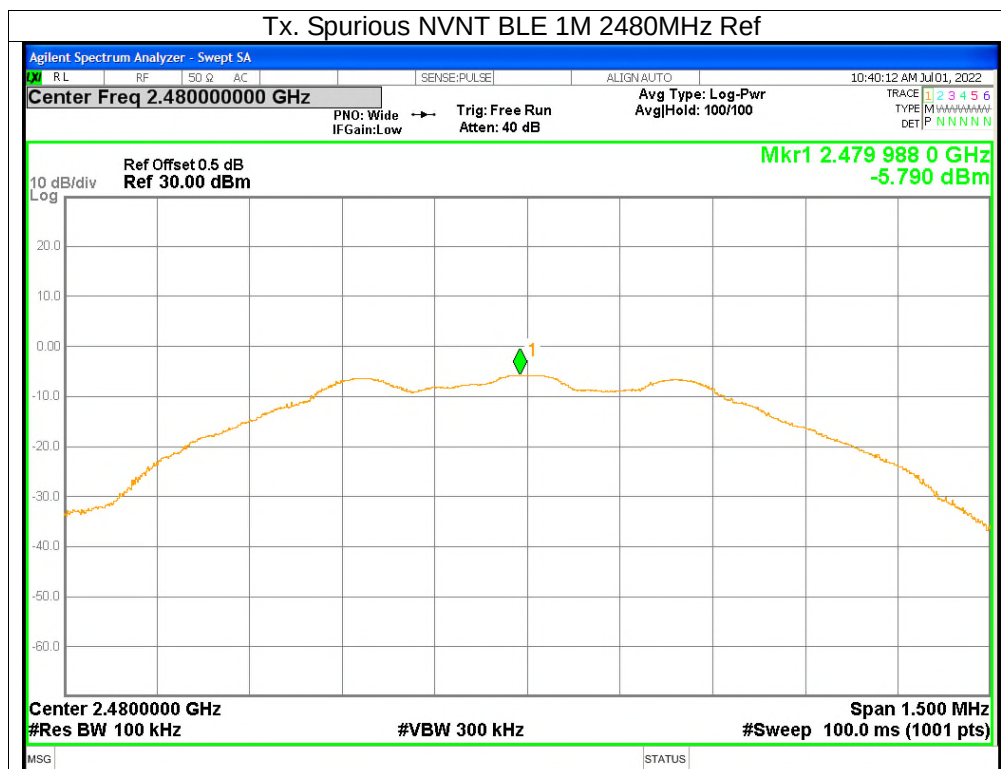
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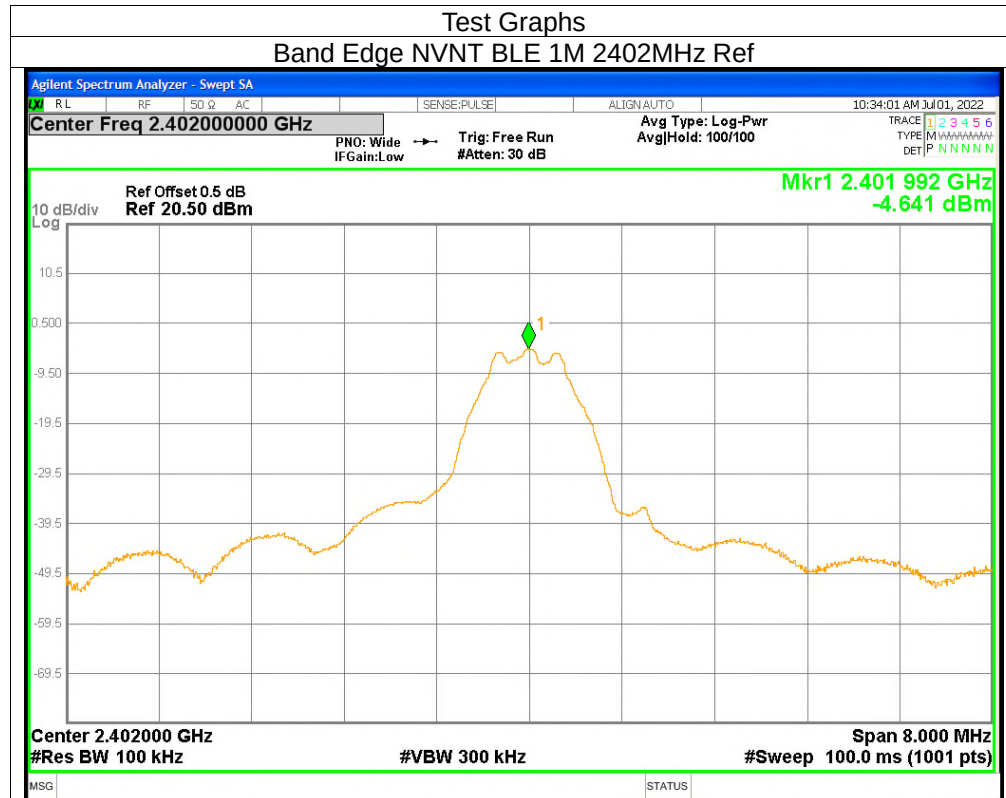
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Band Edg

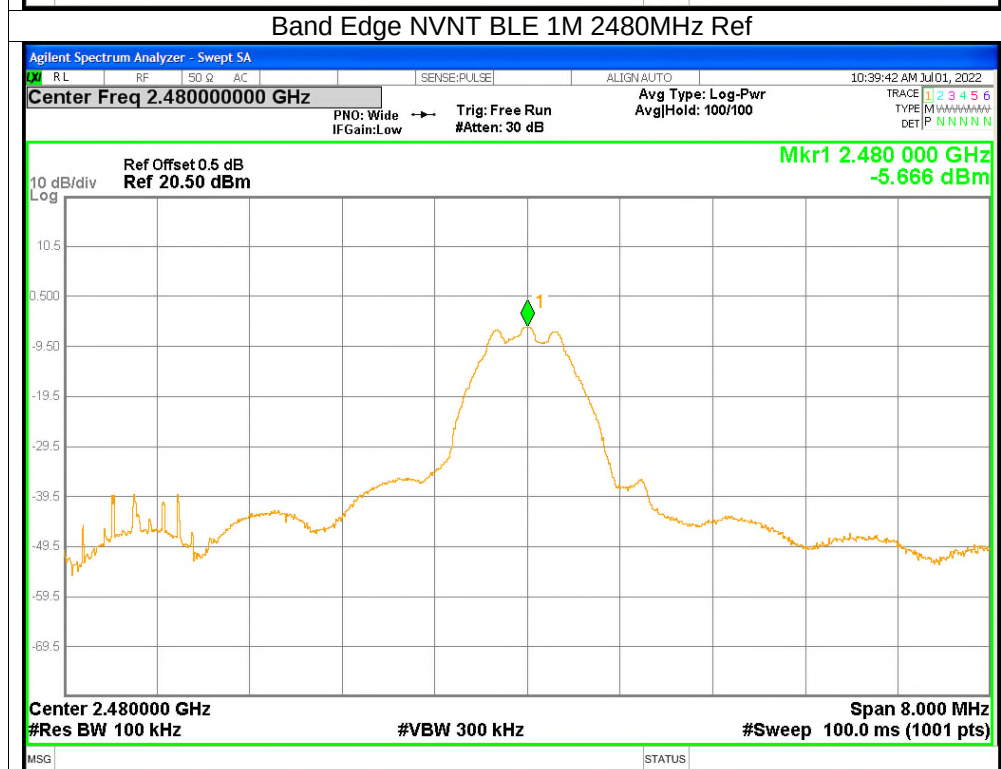
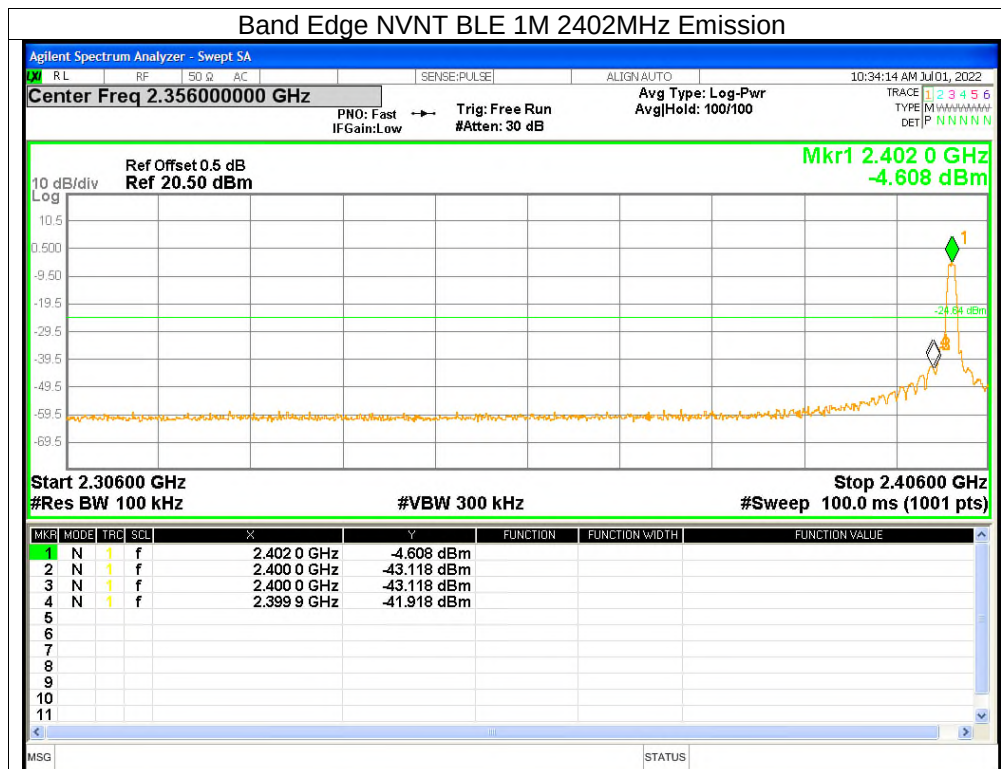
Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-37.27	<=-20	Pass
NVNT	BLE 1M	2480	-43.9	<=-20	Pass



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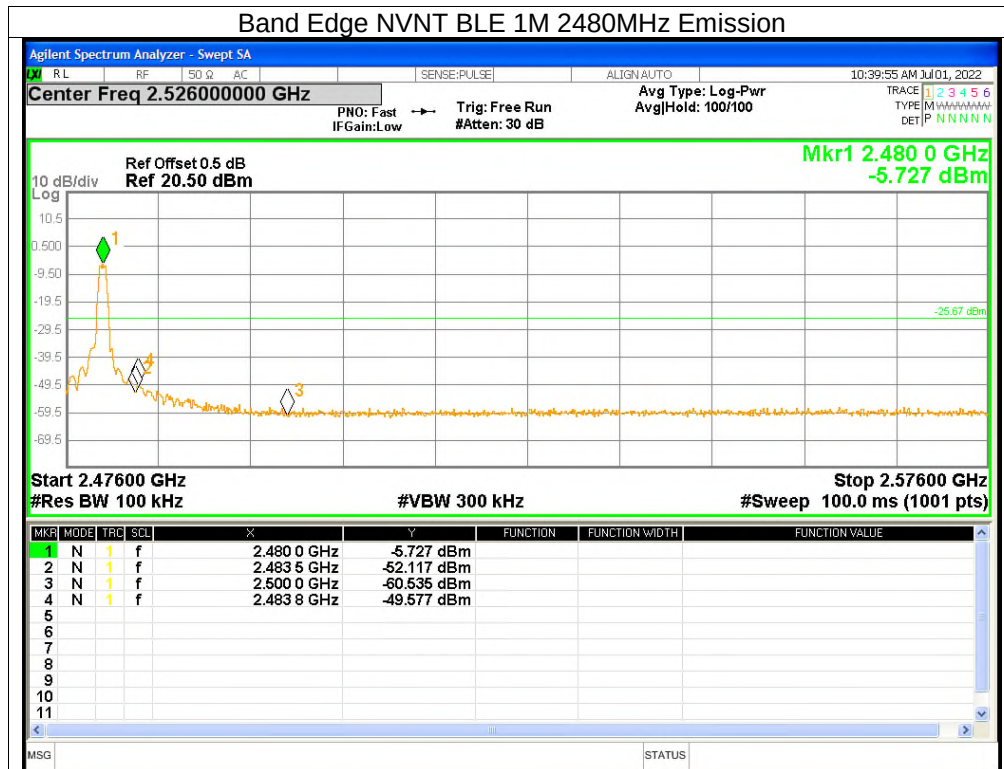
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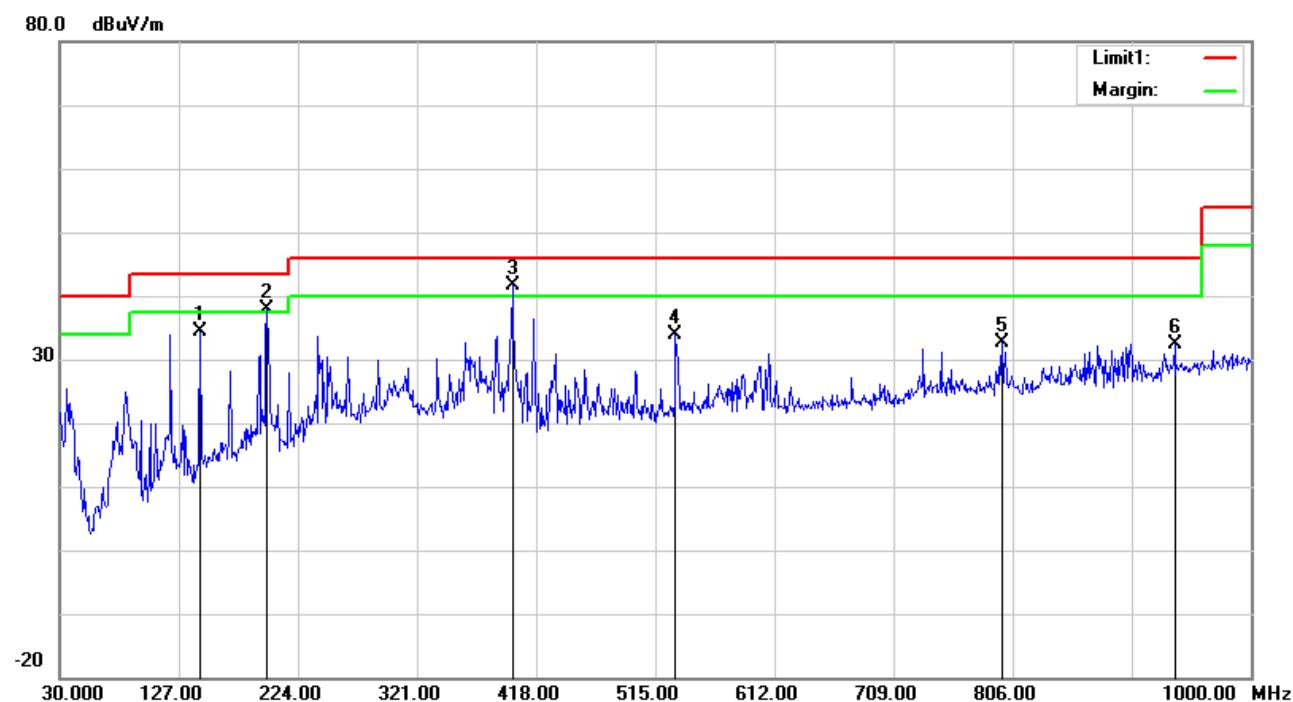
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Radiated Spurious Emissions (30MHz -1000MHz)

Job No.:	STS2206015	Ant.Polar.:	Horizontal
Standard:	FCC 15C_03M_QP	Date:2022/6/30	Time:15:56:51
Test item:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Car Fridges	Hum. (%RH):	60%RH
Model:	SU-T50A	Power:	DC 5V
Mode:	BLE	Test By:	Leon.Yi



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	144.4600	52.57	-18.29	34.28	43.50	-9.22	peak
2	198.7800	59.06	-21.12	37.94	43.50	-5.56	peak
3	398.6000	52.89	-11.20	41.69	46.00	-4.31	peak
4	531.4900	41.25	-7.37	33.88	46.00	-12.12	peak
5	797.2700	34.67	-2.03	32.64	46.00	-13.36	peak
6	937.9200	31.24	1.20	32.44	46.00	-13.56	peak

Prüfbericht - Nr.:

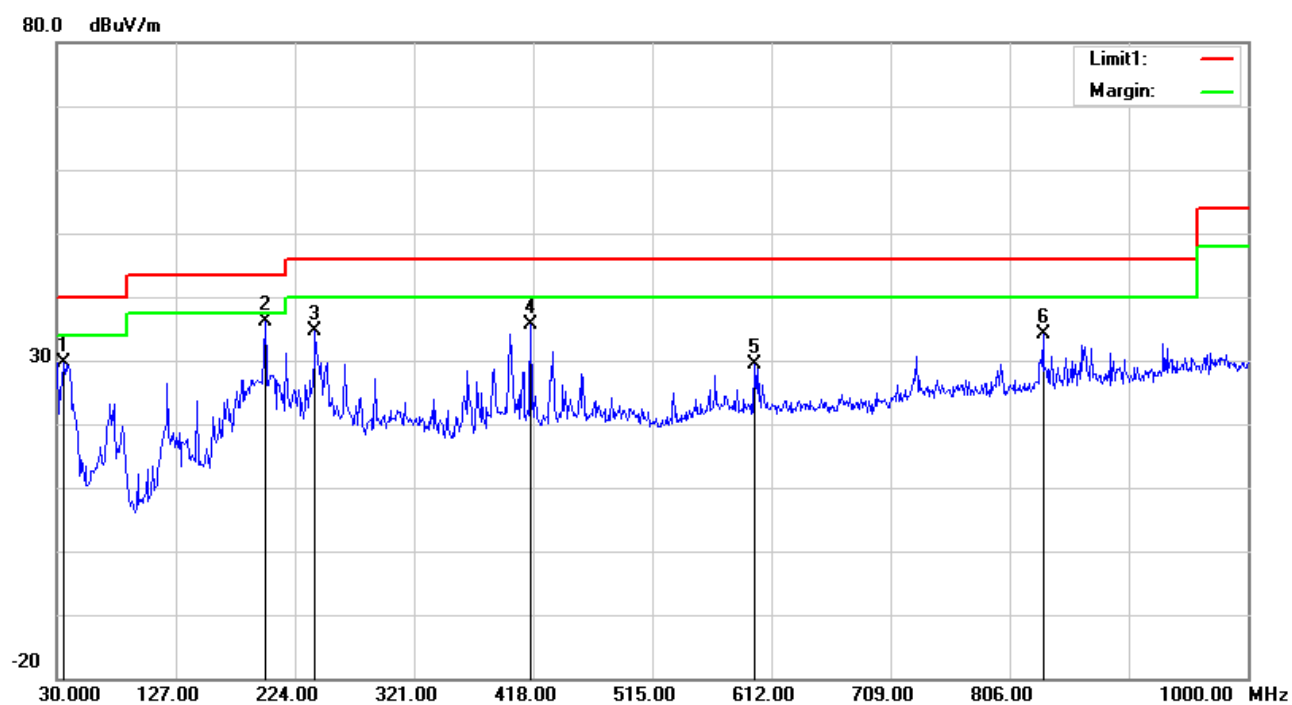
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Job No.:	STS2206015	Ant.Polar.:	Vertical
Standard:	FCC 15C_03M_QP	Date:2022/6/30	Time:15:55:46
Test item:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Car Fridges	Hum. (%RH):	60%RH
Model:	SU-T50A	Power:	DC 5V
Mode:	BLE	Test By:	Leon.Yi



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	35.8200	45.58	-15.91	29.67	40.00	-10.33	peak
2	199.7500	57.33	-21.11	36.22	43.50	-7.28	peak
3	240.4900	52.59	-17.93	34.66	46.00	-11.34	peak
4	416.0600	45.88	-10.28	35.60	46.00	-10.40	peak
5	598.4200	35.15	-5.85	29.30	46.00	-16.70	peak
6	833.1600	34.77	-0.62	34.15	46.00	-11.85	peak

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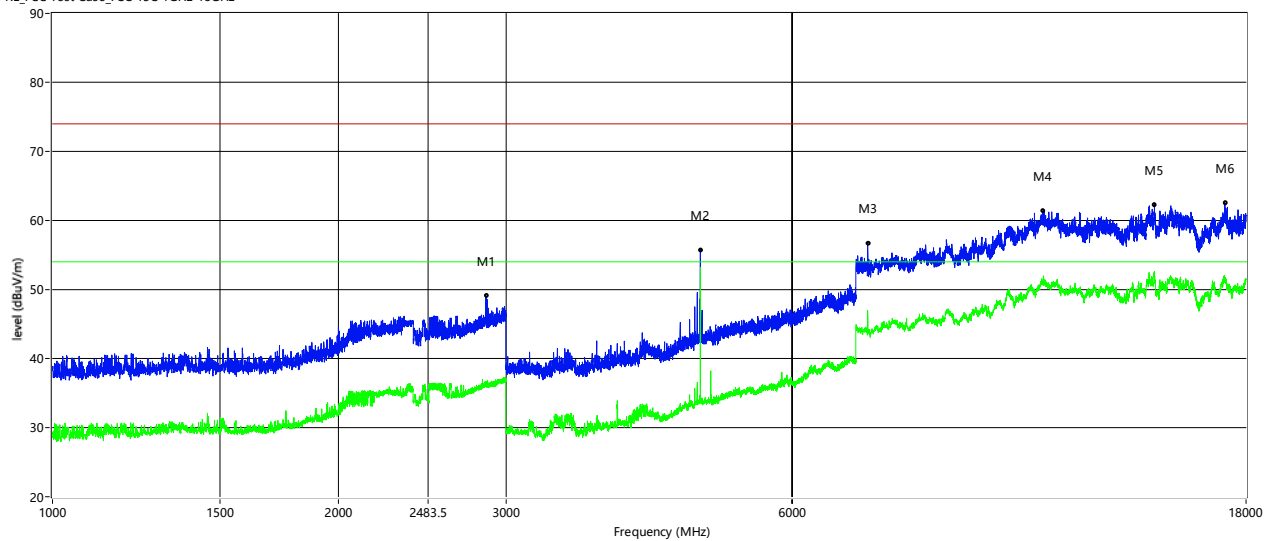
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Radiated Spurious Emissions ABOVE 1G

EUT Name: Car Fridges
Mode: BLE
Model: SU-T50A
Temp.(oC): 23.4
Hum.: 60%

Test Engineer: Leon.Yi
Test Standard: FCC 15C
Work Addition:
Load:
Remark:

RE_FCC Test Case_FCC 15C 1GHz-18GHz



Frequency (MHz)	Peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	Table (o)	Height (cm)	ANT	Verdict
2858.000	49.07	36.66	5.61	74.0	54.0	-17.34	97.30	100	Horizontal	Pass
4804.000	55.75	53.23	-6.96	74.0	54.0	-0.77	166.30	100	Horizontal	Pass
7203.500	56.74	46.96	2.69	74.0	54.0	-7.04	152.10	100	Horizontal	Pass
11012.250	61.43	50.97	10.15	74.0	54.0	-3.03	343.20	100	Horizontal	Pass
14422.250	62.24	52.23	11.16	74.0	54.0	-1.77	129.50	100	Horizontal	Pass
17103.500	62.50	51.34	10.46	74.0	54.0	-2.66	94.60	100	Horizontal	Pass

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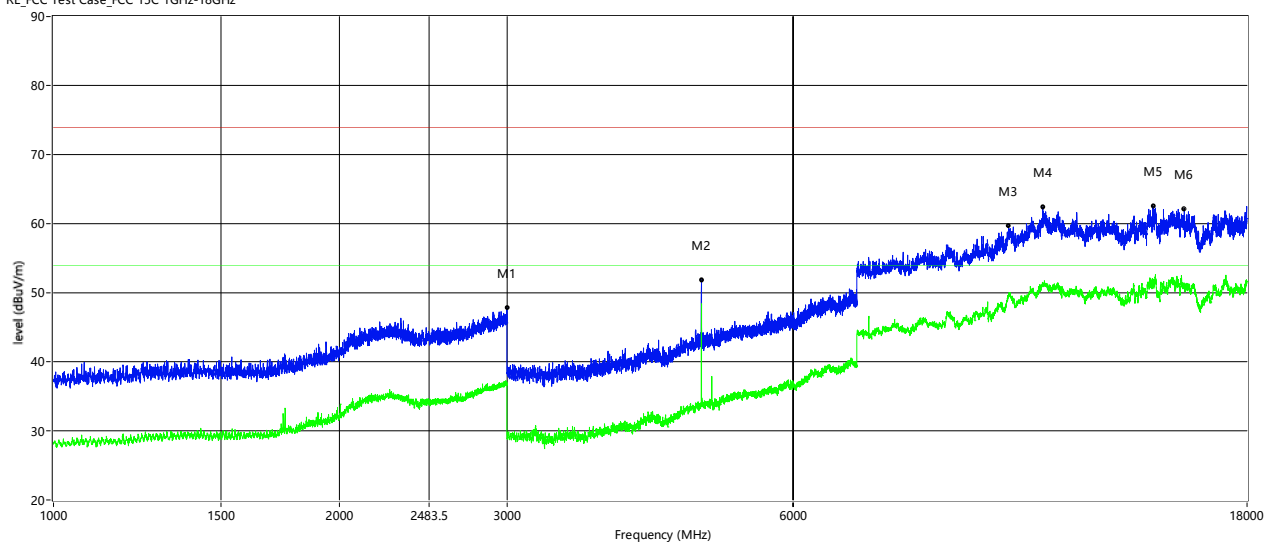
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EUT Name: Car Fridges
Mode: BLE
Model: SU-T50A
Temp.(oC): 23.4
Hum.: 60%

Test Engineer: Leon.Yi
Test Standard: FCC 15C
Work Addition:
Load:
Remark:

RE_FCC Test Case_FCC 15C 1GHz-18GHz



Frequency (MHz)	Peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	Table (o)	Height (cm)	ANT	Verdict
2999.000	47.79	36.59	6.11	74.0	54.0	-17.41	295.30	100	Vertical	Pass
4804.000	51.89	48.41	-6.96	74.0	54.0	-5.59	240.70	100	Vertical	Pass
10104.750	59.67	49.71	7.18	74.0	54.0	-4.29	63.80	100	Vertical	Pass
10979.250	62.41	50.85	10.06	74.0	54.0	-3.15	294.50	100	Vertical	Pass
14334.250	62.52	51.63	11.03	74.0	54.0	-2.37	351.30	100	Vertical	Pass
15464.500	62.15	51.20	10.76	74.0	54.0	-2.80	45.60	100	Vertical	Pass

Prüfbericht - Nr.:

CN22B9BZ 001

Test Report No.

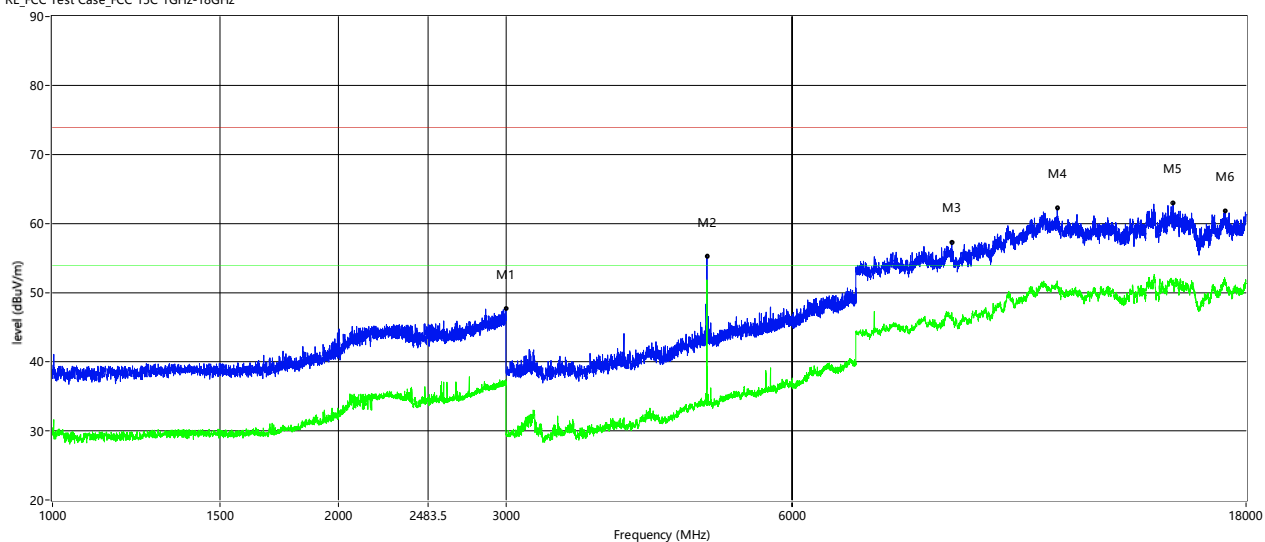
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EUT Name: Car Fridges
Mode: BLE
Model: SU-T50A
Temp.(oC): 23.4
Hum.: 60%

Test Engineer: Leon.Yi
Test Standard: FCC 15C
Work Addition:
Load:
Remark:

RE_FCC Test Case_FCC 15C 1GHz-18GHz



Frequency (MHz)	Peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	Table (o)	Height (cm)	ANT	Verdict
3000.000	47.74	37.03	6.11	74.0	54.0	-16.97	255.20	100	Horizontal	Pass
4880.000	55.24	51.83	-6.51	74.0	54.0	-2.17	172.80	100	Horizontal	Pass
8826.000	57.32	46.52	4.69	74.0	54.0	-7.48	269.40	100	Horizontal	Pass
11399.999	62.27	51.11	9.74	74.0	54.0	-2.89	32.50	100	Horizontal	Pass
15087.750	63.02	51.83	10.32	74.0	54.0	-2.17	198.30	100	Horizontal	Pass
17125.500	61.85	51.27	10.34	74.0	54.0	-2.73	351.80	100	Horizontal	Pass

Prüfbericht - Nr.:

CN22B9BZ 001

Test Report No.

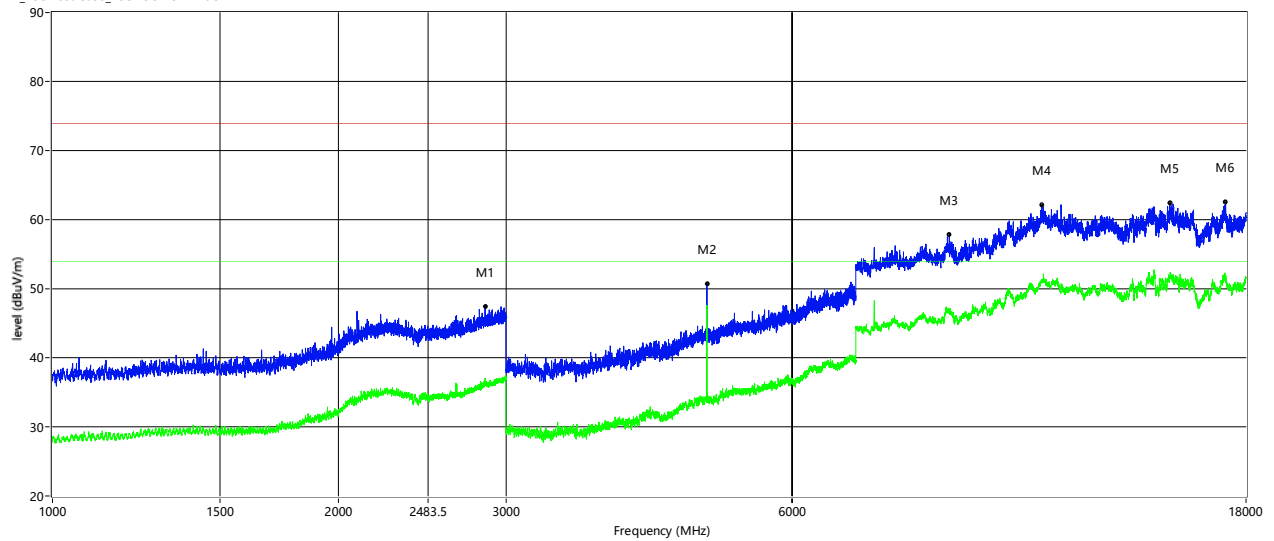
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EUT Name: Car Fridges
Mode: BLE
Model: SU-T50A
Temp.(oC): 23.4
Hum.: 60%

Test Engineer: Leon.Yi
Test Standard: FCC 15C
Work Addition:
Load:
Remark:

RE_FCC Test Case_FCC 15C 1GHz-18GHz



Frequency (MHz)	Peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	Table (o)	Height (cm)	ANT	Verdict
2852.000	47.44	37.01	5.61	74.0	54.0	-16.99	129.20	100	Vertical	Pass
4880.000	50.75	47.59	-6.51	74.0	54.0	-6.41	236.60	100	Vertical	Pass
8776.500	57.82	46.37	4.92	74.0	54.0	-7.63	359.70	100	Vertical	Pass
10971.000	62.11	51.16	10.00	74.0	54.0	-2.84	194.40	100	Vertical	Pass
14969.500	62.43	51.46	10.24	74.0	54.0	-2.54	60.70	100	Vertical	Pass
17139.250	62.55	51.33	10.26	74.0	54.0	-2.67	334.90	100	Vertical	Pass

Prüfbericht - Nr.:

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Test Report No.

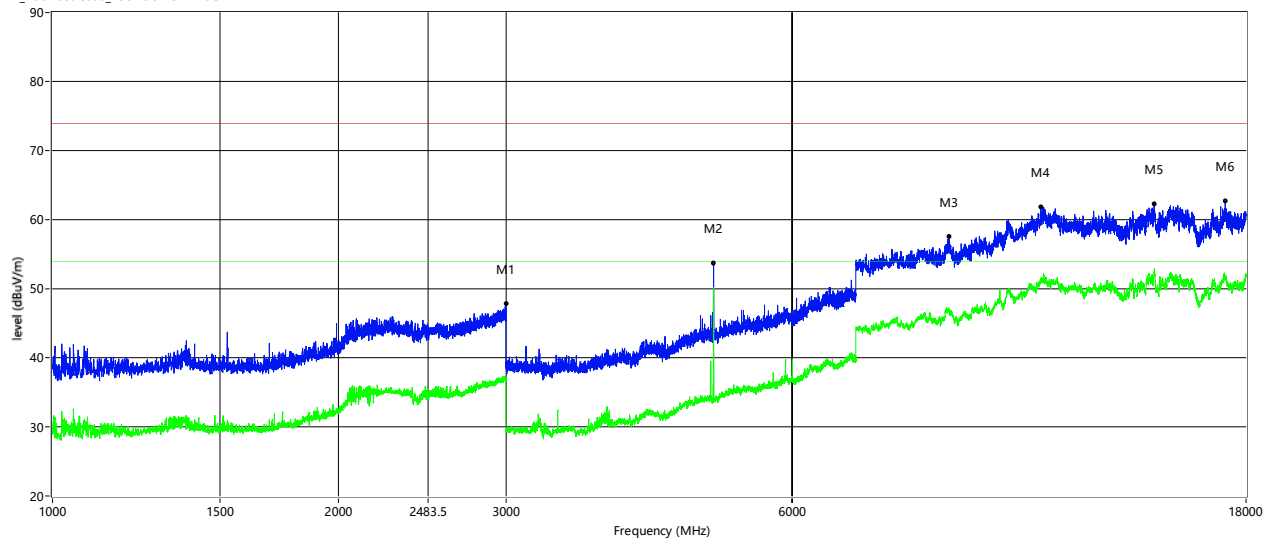
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EUT Name: Car Fridges
Mode: BLE
Model: SU-T50A
Temp.(oC): 23.4
Hum.: 60%

Test Engineer: Leon.Yi
Test Standard: FCC 15C
Work Addition:
Load:
Remark:

RE_FCC Test Case_FCC 15C 1GHz-18GHz



Frequency (MHz)	Peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	Table (o)	Height (cm)	ANT	Verdict
2998.500	47.86	37.21	6.10	74.0	54.0	-16.79	189.10	100	Horizontal	Pass
4959.000	53.67	47.72	-6.38	74.0	54.0	-6.28	174.30	100	Horizontal	Pass
8768.250	57.57	46.70	4.95	74.0	54.0	-7.30	80.80	100	Horizontal	Pass
10957.250	61.92	51.13	9.89	74.0	54.0	-2.87	184.80	100	Horizontal	Pass
14414.000	62.32	52.35	11.26	74.0	54.0	-1.65	329.60	100	Horizontal	Pass
17117.250	62.67	51.57	10.39	74.0	54.0	-2.43	360.00	100	Horizontal	Pass

Prüfbericht - Nr.:

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Test Report No.

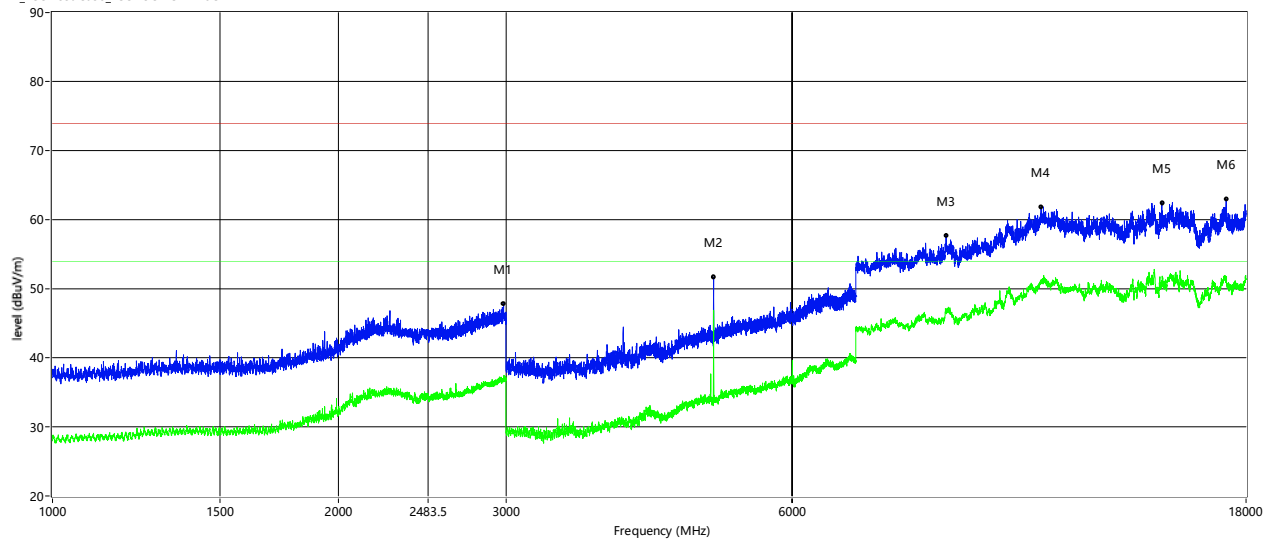
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EUT Name: Car Fridges
Mode: BLE
Model: SU-T50A
Temp.(oC): 23.4
Hum.: 60%

Test Engineer: Leon.Yi
Test Standard: FCC 15C
Work Addition:
Load:
Remark:

RE_FCC Test Case_FCC 15C 1GHz-18GHz



Frequency (MHz)	Peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	Table (o)	Height (cm)	ANT	Verdict
2982.000	47.88	37.07	6.03	74.0	54.0	-16.93	240.10	100	Vertical	Pass
4959.000	51.68	43.48	-6.38	74.0	54.0	-10.52	234.80	100	Vertical	Pass
8707.750	57.75	46.38	5.14	74.0	54.0	-7.62	328.90	100	Vertical	Pass
10960.000	61.91	51.03	9.91	74.0	54.0	-2.97	3.80	100	Vertical	Pass
14680.750	62.49	50.72	11.24	74.0	54.0	-3.28	83.50	100	Vertical	Pass
17155.750	62.96	51.69	10.16	74.0	54.0	-2.31	157.30	100	Vertical	Pass

Prüfbericht - Nr.:

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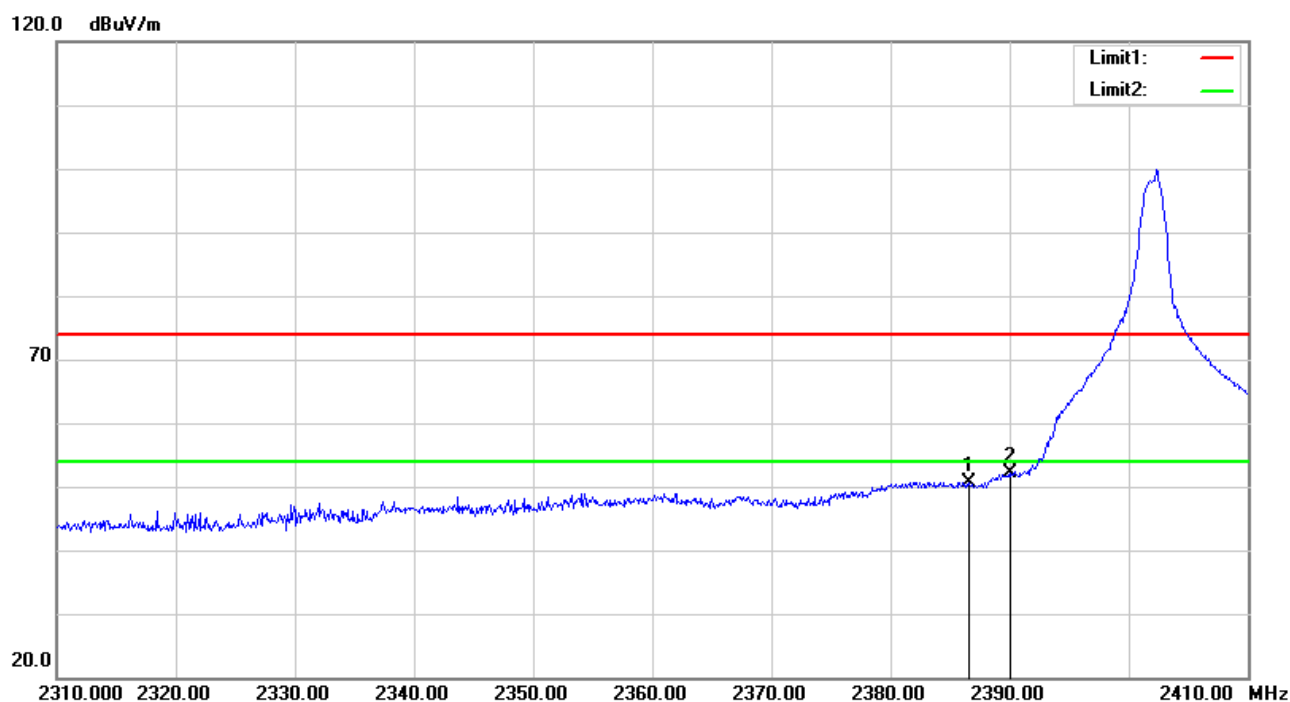
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Radiation Restricted band

Job No.:	STS2206015	Ant.Polar.:	Horizontal
Standard:	FCC 15C_03M_QP	Date:2022/7/1	Time:9:26:23
Test item:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Car Fridges	Hum. (%RH):	60%RH
Model:	SU-T50A	Power:	DC 5V
Mode:	BLE	Test By:	Leon.Yi



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.600	46.47	4.28	50.75	74.00	-23.25	peak
2	2390.000	47.75	4.34	52.09	74.00	-21.91	peak

Prüfbericht - Nr.:

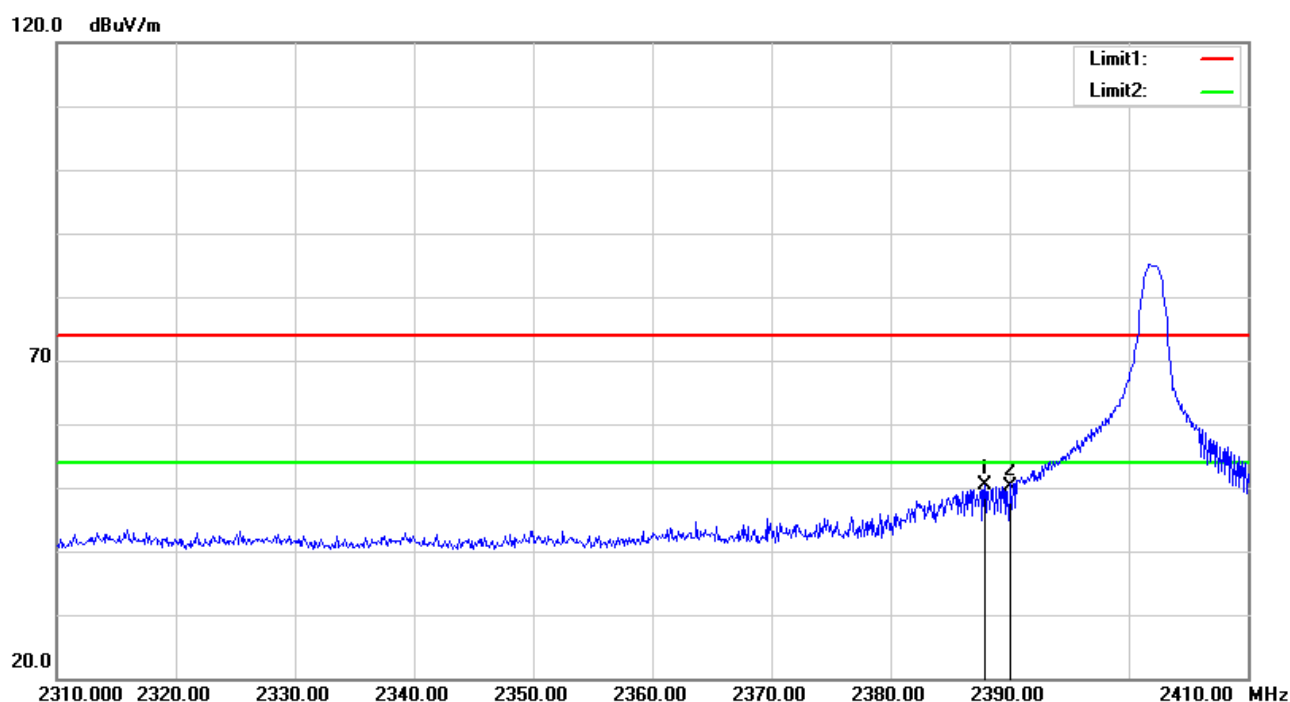
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Job No.:	STS2206015	Ant.Polar.:	Vertical
Standard:	FCC 15C_03M_QP	Date:2022/7/1	Time:9:29:31
Test item:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Car Fridges	Hum. (%RH):	60%RH
Model:	SU-T50A	Power:	DC 5V
Mode:	BLE	Test By:	Leon.Yi



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.900	45.95	4.31	50.26	74.00	-23.74	peak
2	2390.000	45.86	4.34	50.20	74.00	-23.80	peak

Prüfbericht - Nr.:

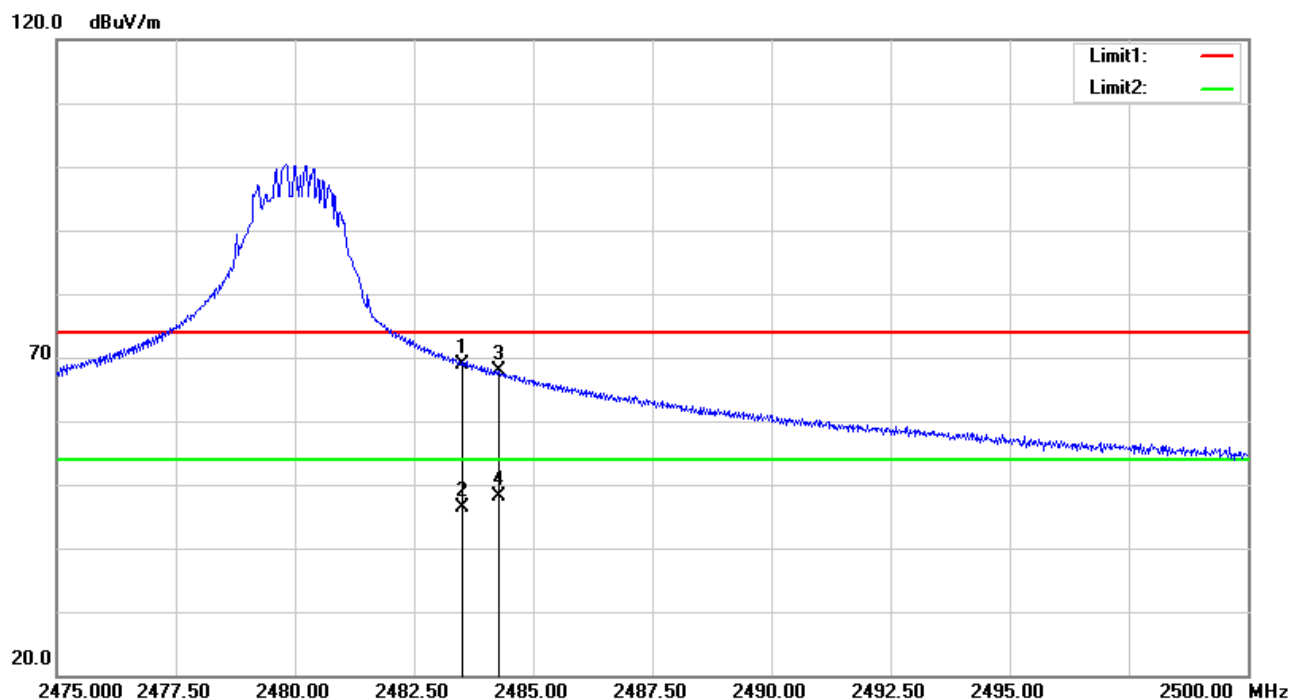
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Job No.:	STS2206015	Ant.Polar.:	Horizontal
Standard:	FCC 15C_03M_QP	Date:2022/7/1	Time:9:42:36
Test item:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Car Fridges	Hum. (%RH):	60%RH
Model:	SU-T50A	Power:	DC 5V
Mode:	BLE	Test By:	Leon.Yi



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	64.40	4.60	69.00	74.00	-5.00	peak
2	2483.500	41.86	4.60	46.46	54.00	-7.54	AVG
3	2484.275	63.15	4.61	67.76	74.00	-6.24	peak
4	2484.275	43.50	4.61	48.11	54.00	-5.89	AVG

Prüfbericht - Nr.:

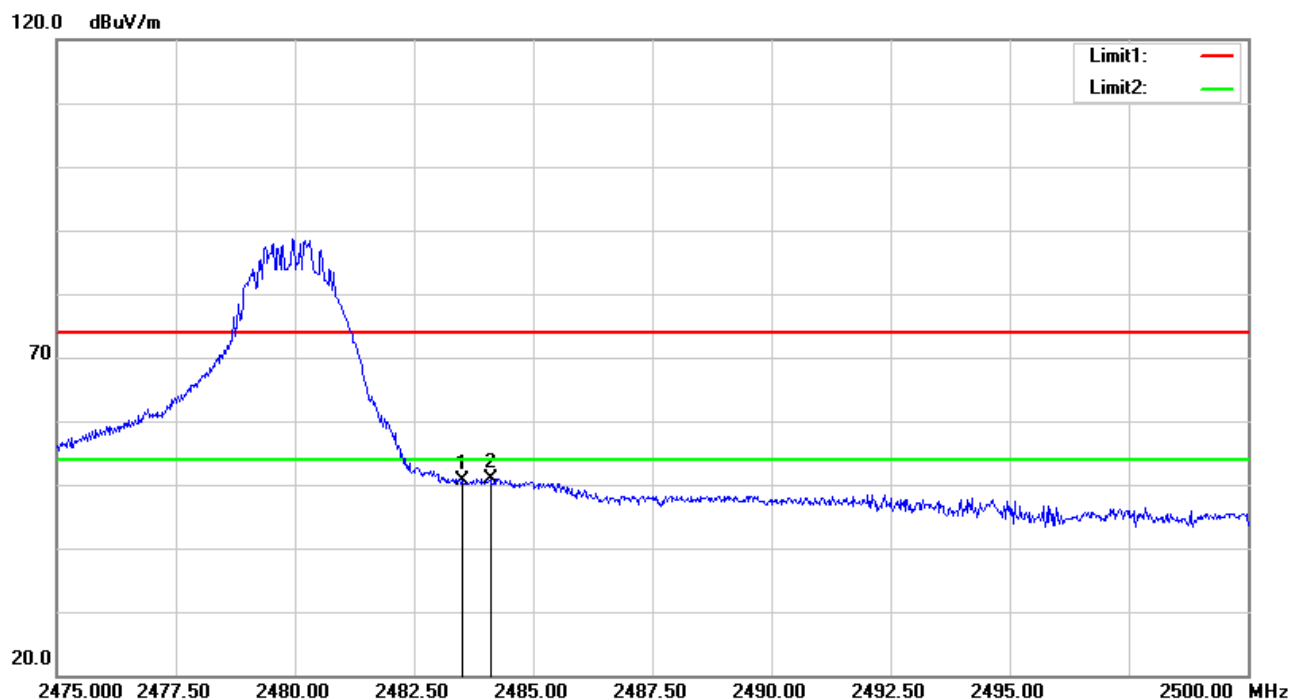
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Job No.:	STS2206015	Ant.Polar.:	Vertical
Standard:	FCC 15C_03M_QP	Date:2022/7/1	Time:9:39:30
Test item:	Radiated Emission	Temp.(C):	23.1(C)
Company:	Car Fridges	Hum. (%RH):	60%RH
Model:	SU-T50A	Power:	DC 5V
Mode:	BLE	Test By:	Leon.Yi



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	46.04	4.60	50.64	74.00	-23.36	peak
2	2484.100	46.29	4.61	50.90	74.00	-23.10	peak

Prüfbericht - Nr.:

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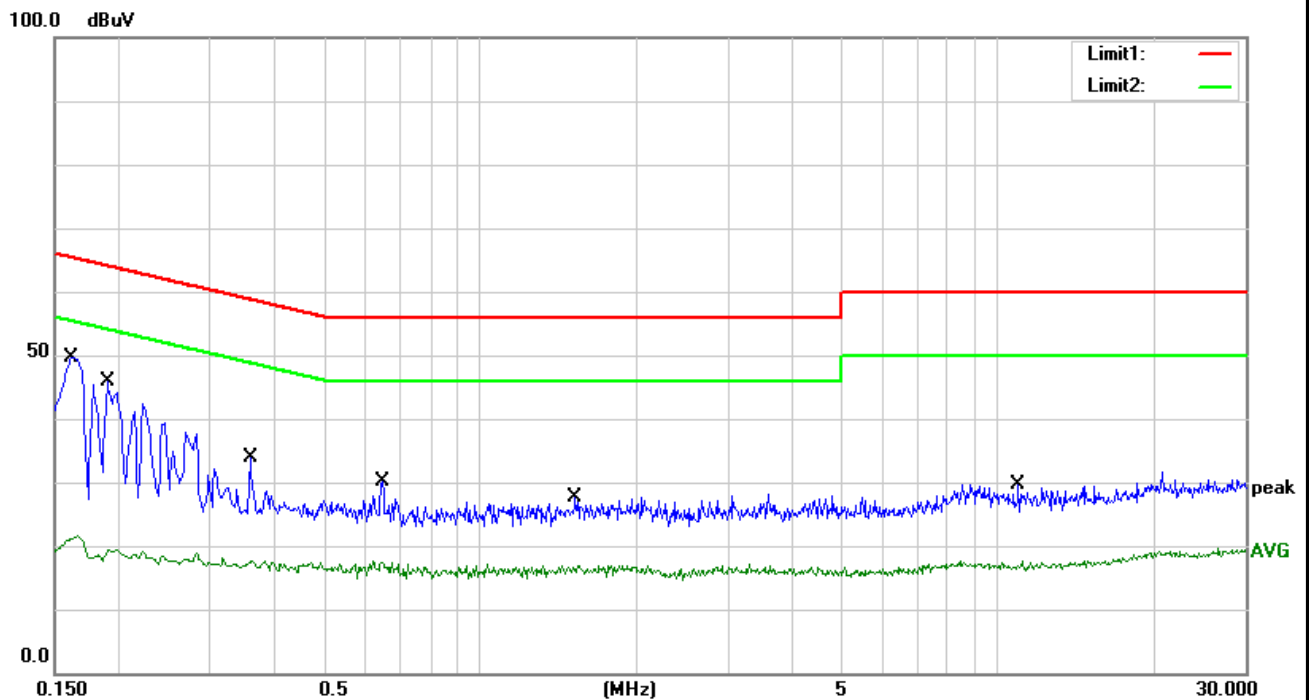
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Conducted Emissions

Job No.:	STS2206015	LISN:	N
Standard:	FCC Part 15C_QP	Date:2022/6/30	Time:17:40:38
Test item:	Conducted Emission	Temp.(C):	25.4(C)
Company:	Car Fridges	Hum. (%RH):	51%RH
Model:	SU-T50A	Power:	AC 120V/60Hz
Mode:	BT	Test By:	ALBERT



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1620	29.40	20.32	49.72	65.36	-15.64	QP
2	0.1620	1.19	20.32	21.51	55.36	-33.85	AVG
3	0.1900	25.43	20.38	45.81	64.04	-18.23	QP
4	0.1900	-0.97	20.38	19.41	54.04	-34.63	AVG
5	0.3580	13.17	20.66	33.83	58.77	-24.94	QP
6	0.3580	-2.58	20.66	18.08	48.77	-30.69	AVG
7	0.6460	9.80	20.40	30.20	56.00	-25.80	QP
8	0.6460	-2.83	20.40	17.57	46.00	-28.43	AVG
9	1.5260	7.17	20.35	27.52	56.00	-28.48	QP
10	1.5260	-3.30	20.35	17.05	46.00	-28.95	AVG
11	10.9340	8.60	21.04	29.64	60.00	-30.36	QP
12	10.9340	-1.87	21.04	19.17	50.00	-30.83	AVG

Prüfbericht - Nr.:

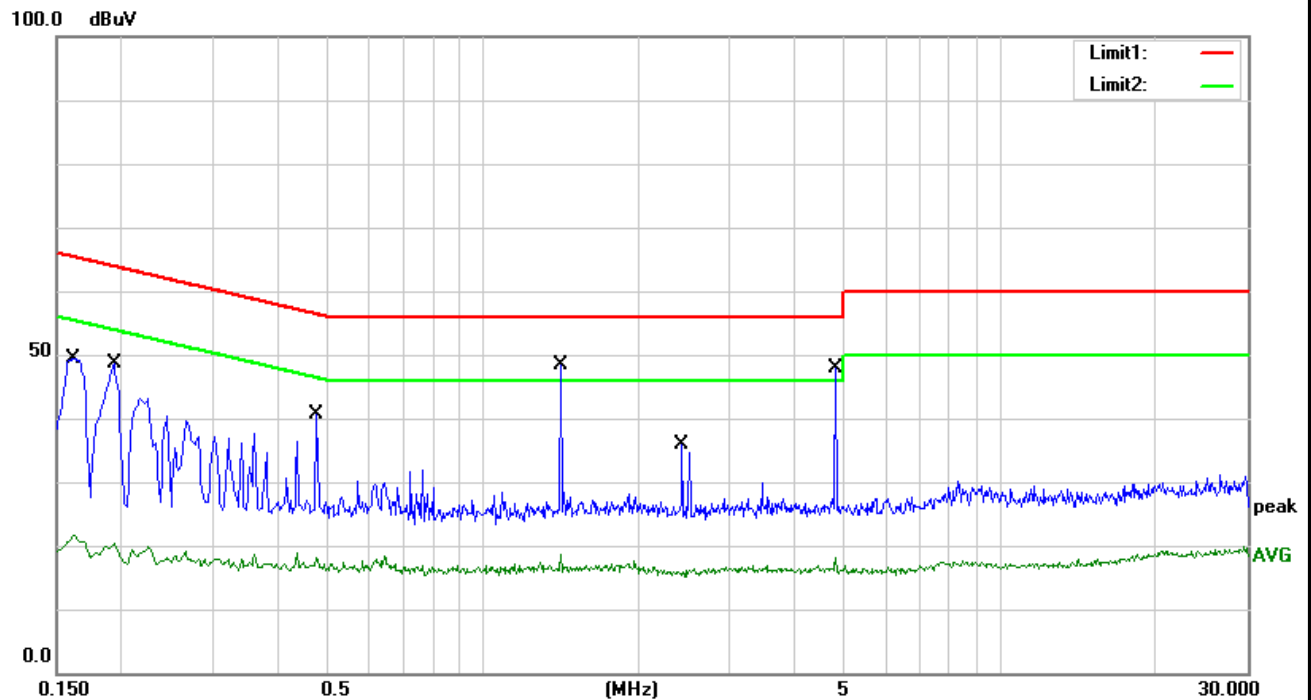
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Job No.:	STS2206015	LISN:	L1
Standard:	FCC Part 15C_QP	Date:2022/6/30	Time:17:51:10
Test item:	Conducted Emission	Temp.(C):	25.4(C)
Company:	Car Fridges	Hum. (%RH):	51%RH
Model:	SU-T50A	Power:	AC 120V/60Hz
Mode:	BT	Test By:	ALBERT



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1660	28.67	20.33	49.00	65.16	-16.16	QP
2	0.1660	1.04	20.33	21.37	55.16	-33.79	AVG
3	0.2180	24.61	20.39	45.00	62.89	-17.89	QP
4	0.2180	-0.29	20.39	20.10	52.89	-32.79	AVG
5	0.2740	18.18	20.63	38.81	61.00	-22.19	QP
6	0.2740	-2.50	20.63	18.13	51.00	-32.87	AVG
7	0.4580	9.07	20.54	29.61	56.73	-27.12	QP
8	0.4580	-3.05	20.54	17.49	46.73	-29.24	AVG
9	1.9620	7.98	20.30	28.28	56.00	-27.72	QP
10	1.9620	-2.90	20.30	17.40	46.00	-28.60	AVG
11	8.1260	9.61	20.82	30.43	60.00	-29.57	QP
12	8.1260	-2.95	20.82	17.87	50.00	-32.13	AVG