中认信通
CHINA CERTIFICATION ICT CO.,LTD (DONGGUAN)

ACCREDITED
TESTING LABORATORY
CERTIFICATE # 6356.01

TEST REPORT

Applicant: **DTEN Inc**

Address: 97 E Brokaw Road suite 180 San Jose CA 95112

FCC ID: **2AQ7Q-DCR200**

Product Name: **DTEN Bar**

Model: **DCR200**

Standard(s): **47 CFR Part 15, Subpart C(15.249)**
ANSI C63.10-2013

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: **CR231166569-00**

Date Of Issue: **2023/12/12**

Reviewed By: **Calvin Chen**

Title: RF Engineer

Approved By: **Sun Zhong**

Title: Manager

CHINA CERTIFICATION ICT CO., LTD (DONGGUAN) CCICT

Test Laboratory: **China Certification ICT Co., Ltd (Dongguan)**
No. 113, Pingkang Road, Dalang Town, Dongguan,
Guangdong, China
Tel: +86-769-82016888

Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0123.

Declarations

China Certification ICT Co., Ltd (Dongguan) 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 a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR231166569-00	Original Report	2023/12/12

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	DTEN Bar
EUT Model:	DCR200
Trade Name:	DTEN
Operation Frequency:	24059-24239 MHz
Modulation Type:	FMCW
Rated Input Voltage:	24Vdc from adapter
Serial Number:	2DI4-1
EUT Received Date:	2023/11/14
EUT Received Status:	Good

Operation Frequency Detail:

Sweep Start Frequency (MHz)	Sweep Stop Frequency (MHz)
24059	24239
Per section 15.31(m), the below frequencies were performed the test as below:	
Test Frequency	**Frequency (MHz)**
Lowest	24059
Middle	24149
Highest	24239

Antenna Information Detail▲:

Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
Pach Antenna	50	24~24.25GHz	2dBi
The Method of §15.203 Compliance: ☒Antenna was permanently attached to the unit. ☐Antenna use a unique type of connector to attach to the EUT. ☐Unit was professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.			

Accessory Information:

Accessory Description	Manufacturer	Model
Adapter	FOSHAN SHUNDE GUANYUDA POWER SUPPLY CO.,LTD	DPA03

1.2 Description of Test Configuration

1.2.1 EUT Operation Condition:

EUT Operation Mode:	The system was configured for testing in Engineering Mode, which was provided by the manufacturer. Transmitting
Equipment Modifications:	No
EUT Exercise Software:	No
Engineering Mode was provided by manufacturer▲. The maximum power was configured default setting.	

1.2.2 Support Equipment List and Details

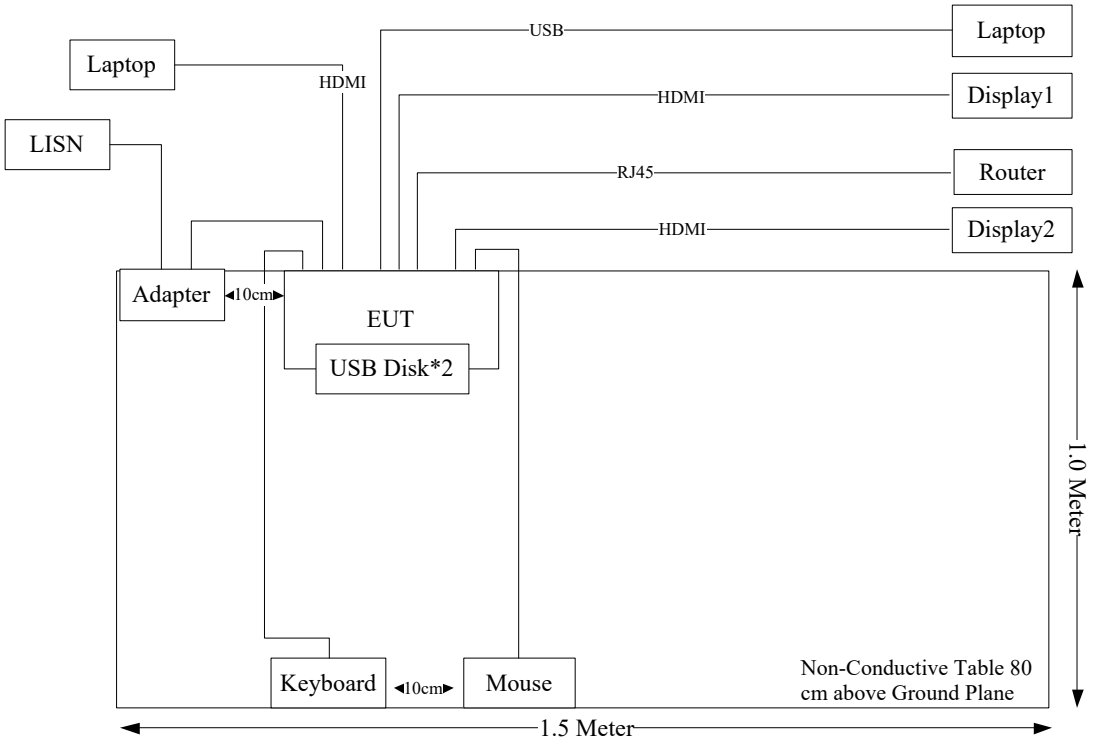
Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	T460S	60PDTEK8
Kingston	USB Disk	DTI/2GB	CH 031308
SanDisk	USB Disk	16 GB	BL201026210Z
PHILIPS	Keyboard	SPT6234	K234210510746
PHILIPS	Mouse	SPT6234	C234210506222
Lenovo	Laptop	T460S	60PDTEK7
PHILIPS	Display1	24PFF5595/T3	XM2A2124000343
AOC	Display2	24M2	OHWL5YA000130 H7
TOTO LINK	Router	X5000R	X5000RK9T0560

1.2.3 Support Cable List and Details

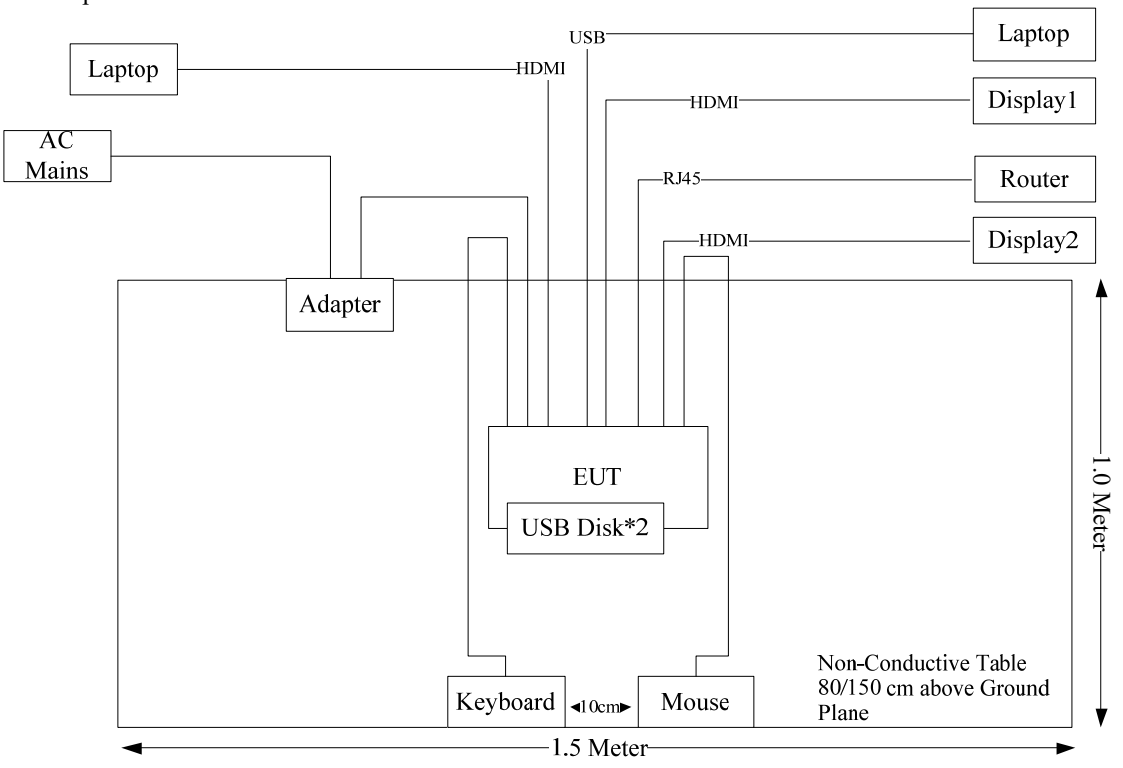
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Power Cable	No	No	1.2	Adapter	LISN
Power Cable	No	No	1.2	Adapter	EUT
HDMI Cable	No	No	3	Laptop	EUT
Keyboard Cable	No	No	1.2	Keyboard	EUT
Mouse Cable	No	No	1.2	Mouse	EUT
USB Cable	No	No	1.5	Laptop	EUT
HDMI Cable	No	Yes	1.5	Display1	EUT
HDMI Cable	No	No	3	Display2	EUT
RJ45 Cable	No	No	3	Router	EUT

1.2.4 Block Diagram of Test Setup

AC Line Conducted Emissions:



Radiated Spurious Emissions:



1.3 Measurement Uncertainty

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

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
Unwanted Emissions, radiated	30M~200MHz: 4.15 dB,200M~1GHz: 5.61 dB,1G~6GHz: 5.14 dB, 6G~18GHz: 5.93 dB,18G~26.5G:5.47 dB,26.5G~40G:5.63 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	2.8 dB (150 kHz to 30 MHz)

2. SUMMARY OF TEST RESULTS

Standard(s)/Rule(s)	Description of Test	Result
§15.203	Antenna Requirement	Compliant
§15.207(a)	Conduction Emissions	Compliant
§15.205, §15.209, §15.249	Radiated Emissions	Compliant
§15.215 (c)	20 dB Bandwidth	Compliant

3. REQUIREMENTS AND TEST PROCEDURES

3.1 AC Line Conducted Emissions

3.1.1 Applicable Standard

FCC§15.207(a).

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

	Conducted limit (dBμV)	
Frequency of emission (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

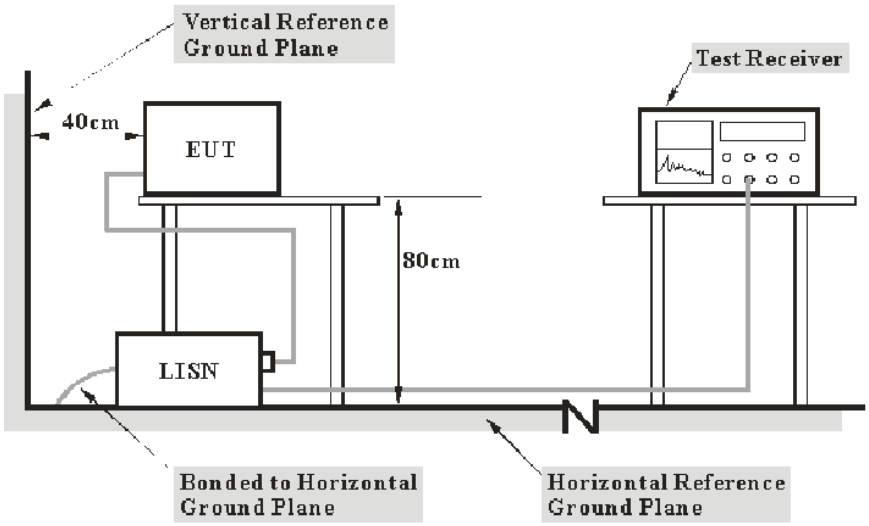
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 μV within the frequency band 535-1705 kHz, as measured using a 50 μH/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtainig their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

3.1.2 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 setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

3.1.3 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

3.1.4 Test Procedure

During the conducted emission test, the EUT was connected to the outlet of the first LISN.

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

3.1.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor = attenuation caused by cable loss + voltage division factor of AMN

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

3.2 Radiated Emissions

3.2.1 Applicable Standard

As per FCC§15.249 (a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

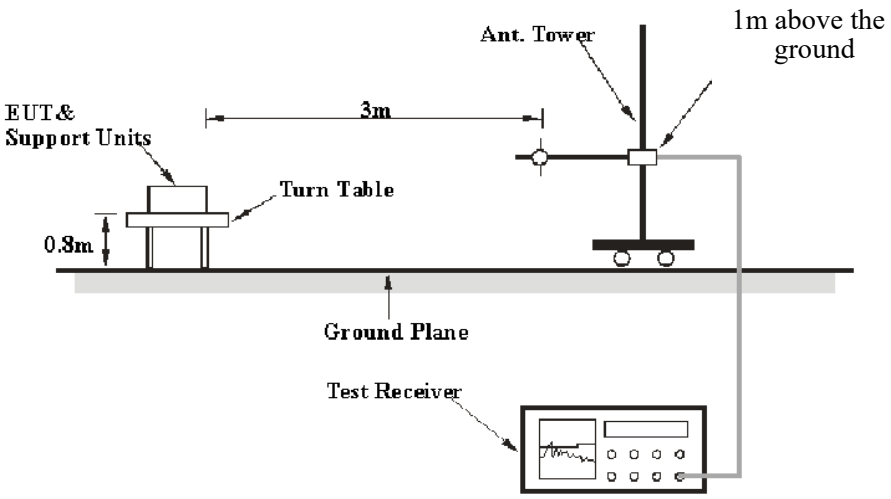
Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

As per FCC§15.249 (c), Field strength limits are specified at a distance of 3 meters.

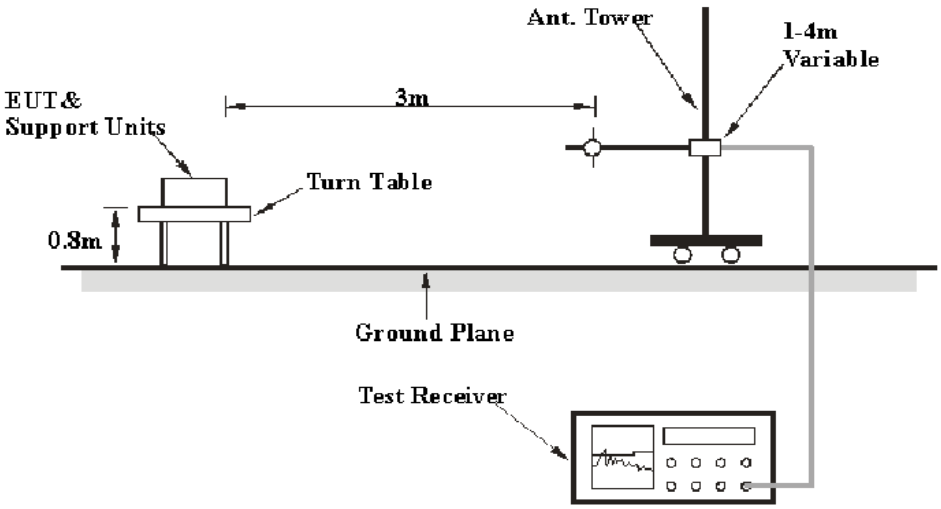
(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

3.2.2 EUT Setup

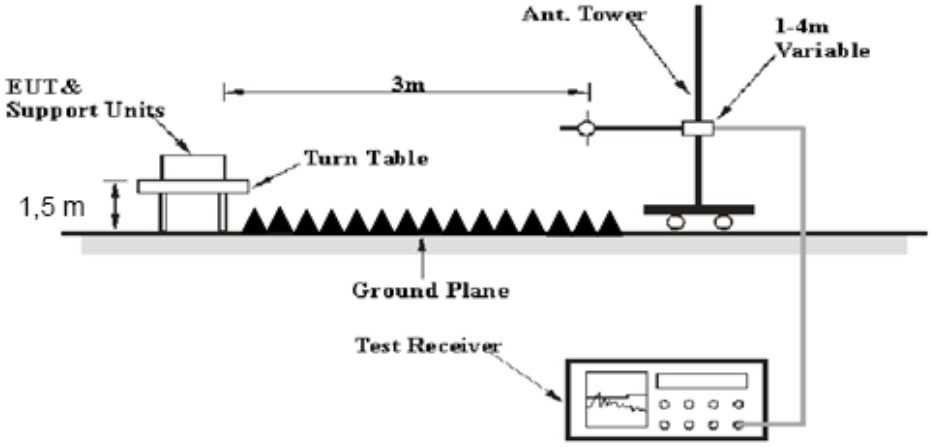
9kHz-30MHz:



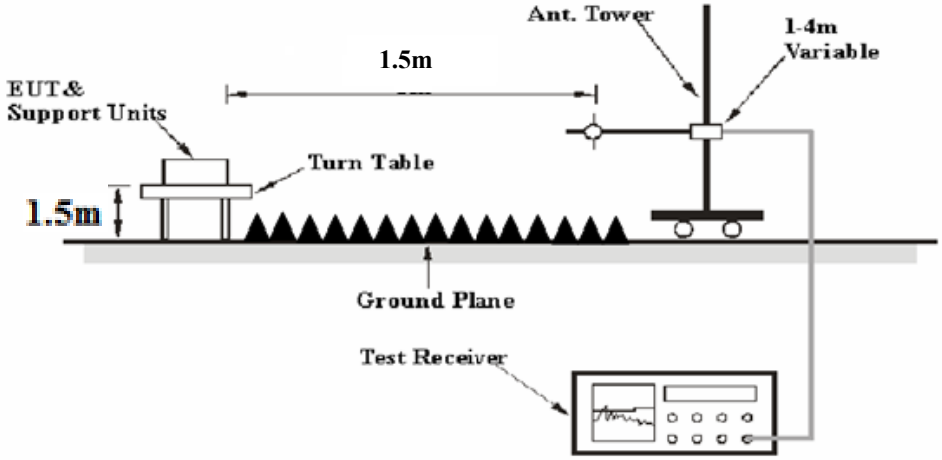
30MHz-1GHz:



1-26.5 GHz:



26.5-40 GHz:



Above 40GHz:

The antenna is scanned around the entire perimeter surface of the EUT, in both horizontal and vertical polarizations, at the distance of 1.0 m from 40 GHz to 90 GHz, and 0.5 m from 90 GHz to 100 GHz.

The radiated emissions were performed in the 3 meters distance, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.249 limits.

For 9kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

3.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 100 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
9 kHz – 150 kHz	300 Hz	1 kHz	200 Hz	QP/AV
150 kHz – 30 MHz	10 kHz	30 kHz	9 kHz	QP/AV
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	AV

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

3.2.4 Test Procedure

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

Data was recorded in Quasi-peak detection mode for frequency range of 9 kHz-1 GHz, average detection modes for the frequency bands 9–90 kHz and 110–490 kHz, peak and average detection modes for frequencies above 1 GHz.

According to C63.10, the 26.5-40GHz test result shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade from 3m to 1.5m.

Distance extrapolation factor =20 log (specific distance [3m]/test distance [1.5m]) dB= 6.02 dB.

The 40-90GHz test result shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade from 3m to 1m.

Distance extrapolation factor =20 log (specific distance [3m]/test distance [1m]) dB= 9.54 dB.

The 40-90GHz test result shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade from 3m to 0.5m.

Distance extrapolation factor =20 log (specific distance [3m]/test distance [0.5m]) dB=15.56 dB.

All emissions under the average limit and under the noise floor have not recorded in the report.

3.2.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor

For 9kHz-26.5GHz:
Factor = Antenna Factor + Cable Loss- Amplifier Gain

For 26.5GHz-100GHz
Factor = Antenna Factor + Cable Loss- Amplifier Gain -Distance extrapolation Factor

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

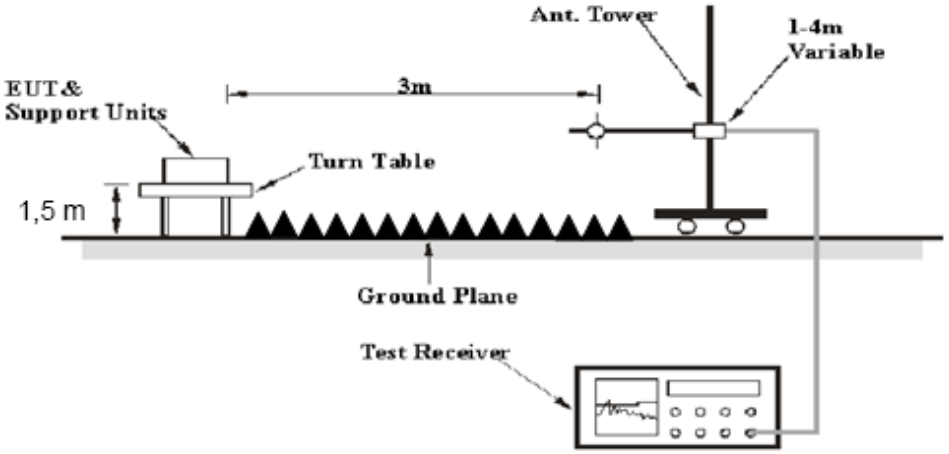
3.3 20 dB Emission Bandwidth:

3.3.1 Applicable Standard

FCC §15.215

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

3.3.2 EUT Setup



3.3.3Test Procedure

According to ANSI C63.10-2013 Section 6.9.2

a) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, unless otherwise specified by the applicable requirement.
b) Set the video bandwidth (VBW) ≥ 3×RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

3.4 Antenna Requirement

3.4.1 Applicable Standard

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 user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

a. Antenna must be permanently attached to the unit.
b. Antenna must use a unique type of connector to attach to the EUT.
c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

3.4.2 Judgment

Please refer to the Antenna Information detail in Section 1.

4. Test DATA AND RESULTS

4.1 AC Line Conducted Emissions

Serial Number:	2DI4-1	Test Date:	2023/12/9
Test Site:	CE	Test Mode:	Transmitting(Sweep mode)
Tester:	David Huang	Test Result:	Pass

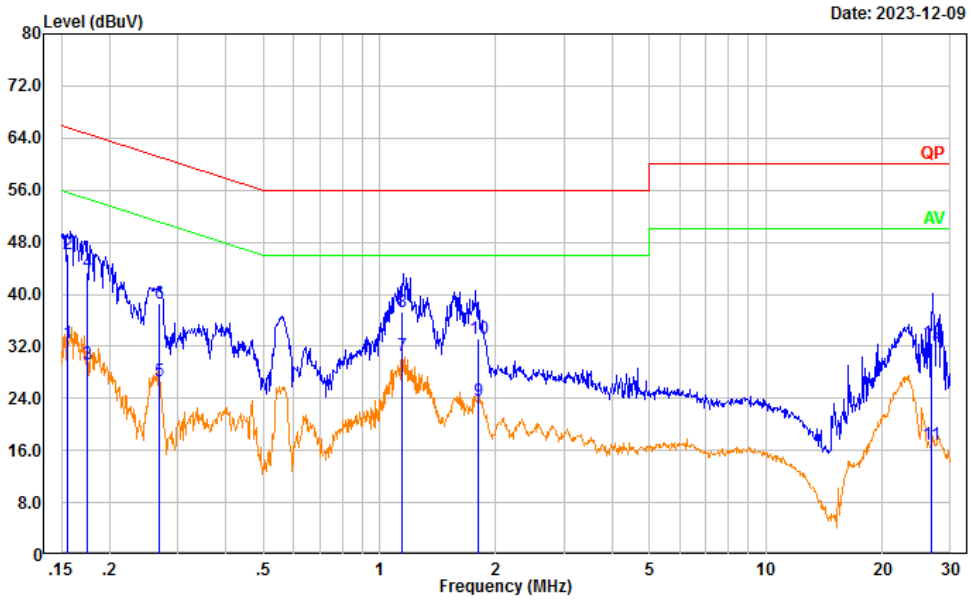
Environmental Conditions:					
Temperature: (℃)	26.9	Relative Humidity: (%)	47	ATM Pressure: (kPa)	100.9

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101134	2023/3/31	2024/3/30
R&S	EMI Test Receiver	ESR3	102726	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UTIFLEX	C-0200-01	2023/8/6	2024/8/5
Audix	Test Software	E3	190306 (V9)	N/A	N/A

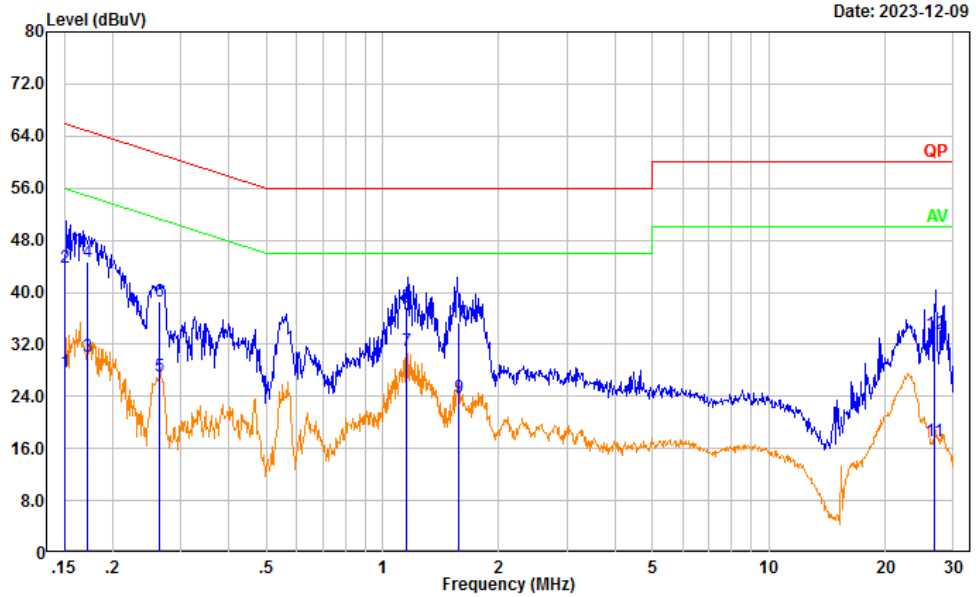
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Project No.: CR231166569-RF
Tester: David Huang
Port: Line
Note: Transmitting



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.156	22.87	9.61	32.48	55.68	23.20	Average
2	0.156	36.48	9.61	46.09	65.68	19.59	QP
3	0.175	19.63	9.61	29.24	54.71	25.47	Average
4	0.175	33.73	9.61	43.34	64.71	21.37	QP
5	0.268	17.00	9.61	26.61	51.18	24.57	Average
6	0.268	29.05	9.61	38.66	61.18	22.52	QP
7	1.140	20.99	9.62	30.61	46.00	15.39	Average
8	1.140	27.76	9.62	37.38	56.00	18.62	QP
9	1.802	13.99	9.63	23.62	46.00	22.38	Average
10	1.802	23.62	9.63	33.25	56.00	22.75	QP
11	26.763	7.11	9.83	16.94	50.00	33.06	Average
12	26.763	22.59	9.83	32.42	60.00	27.58	QP

Project No.: CR231166569-RF
Tester: David Huang
Port: neutral
Note: Transmitting



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.150	18.14	9.61	27.75	55.99	28.24	Average
2	0.150	34.24	9.61	43.85	65.99	22.14	QP
3	0.172	20.62	9.61	30.23	54.84	24.61	Average
4	0.172	35.11	9.61	44.72	64.84	20.12	QP
5	0.265	17.48	9.61	27.09	51.26	24.17	Average
6	0.265	28.89	9.61	38.50	61.26	22.76	QP
7	1.154	21.47	9.62	31.09	46.00	14.91	Average
8	1.154	28.00	9.62	37.62	56.00	18.38	QP
9	1.572	14.28	9.63	23.91	46.00	22.09	Average
10	1.572	25.79	9.63	35.42	56.00	20.58	QP
11	26.769	7.25	9.80	17.05	50.00	32.95	Average
12	26.769	23.88	9.80	33.68	60.00	26.32	QP

4.2 Radiation Spurious Emissions

Serial Number:	2DI4-1	Test Date:	2023/12/9~2023/12/11
Test Site:	966-1, 966-2	Test Mode:	Transmitting
Tester:	Carl Xue ,coco Tian	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.3~26.2	Relative Humidity: (%)	42~59	ATM Pressure: (kPa)	100.8~100.9

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-6	2023/9/18	2026/9/17
BACL	Loop Antenna	1313-1P	3092721	2023/10/20	2026/10/19
R&S	EMI Test Receiver	ESR3	102724	2023/3/31	2024/3/30
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2023/7/16	2024/7/15
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2023/7/16	2024/7/15
Sonoma	Amplifier	310N	186165	2023/7/16	2024/7/15
Audix	Test Software	E3	201021 (V9)	N/A	N/A
AH	Double Ridge Guide Horn Antenna	SAS-571	1394	2023/2/22	2026/2/21
R&S	Spectrum Analyzer	FSV40	101591	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2023/8/6	2024/8/5
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2023/8/6	2024/8/5
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2023/11/8	2024/11/7
Audix	Test Software	E3	201021 (V9)	N/A	N/A
PASTERNACK	Horn Antenna	PE9852/2F-20	112002	2021/2/5	2024/2/4
Quinstar	Preamplifier	QLW-18405536-JO	15964001005	2023/9/15	2024/9/14
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2023/8/6	2024/8/5
PASTERNACK	Horn Antenna	PE9850/2F-20	072001	2021/2/5	2024/2/4
OML	Harmonic Mixer	WR19/M19HWD	U60314-1	2023/2/16	2026/2/15
OML	Horn Antenna	M19RH	11648-03	2023/2/27	2026/2/26
OML	Harmonic Mixer	WR12/M12HWD	E60119-1	2023/2/16	2026/2/15
OML	Horn Antenna	M12RH	E60119-2	2023/2/27	2026/2/26
OML	Harmonic Mixer	WR08/M08HWD	F60315-1	2023/2/16	2026/2/15
OML	Horn Antenna	M08RH	F60315-2	2023/2/27	2026/2/26

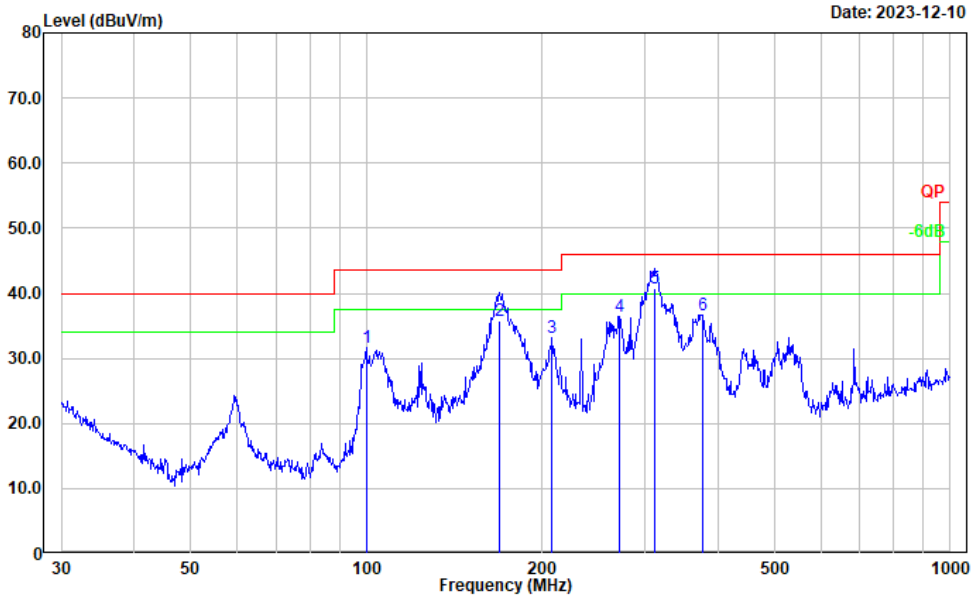
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:
For 9kHz-30MHz, The amplitude of spurious emissions attenuated more than 20 dB below the limit was not be recorded.

1) 30MHz-1GHz

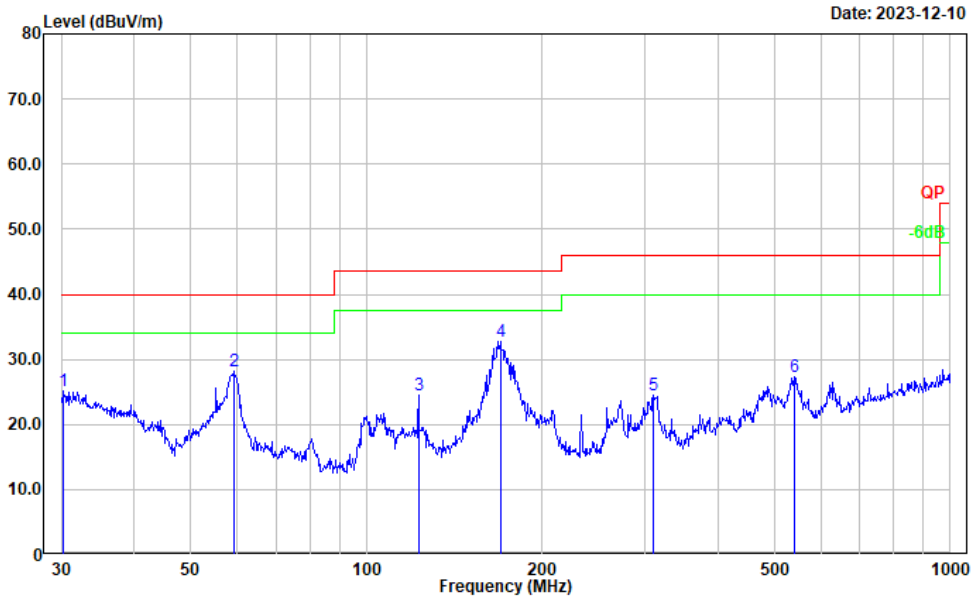
Low Channel:

Project No.: CR231166569-RF
Tester: Carl Xue
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	99.878	46.41	-14.66	31.75	43.50	11.75	Peak
2	168.958	48.84	-13.10	35.74	43.50	7.76	QP
3	207.850	46.06	-12.90	33.16	43.50	10.34	Peak
4	271.325	48.88	-12.40	36.48	46.00	9.52	Peak
5	310.938	51.72	-10.91	40.81	46.00	5.19	QP
6	377.259	46.30	-9.66	36.64	46.00	9.36	Peak

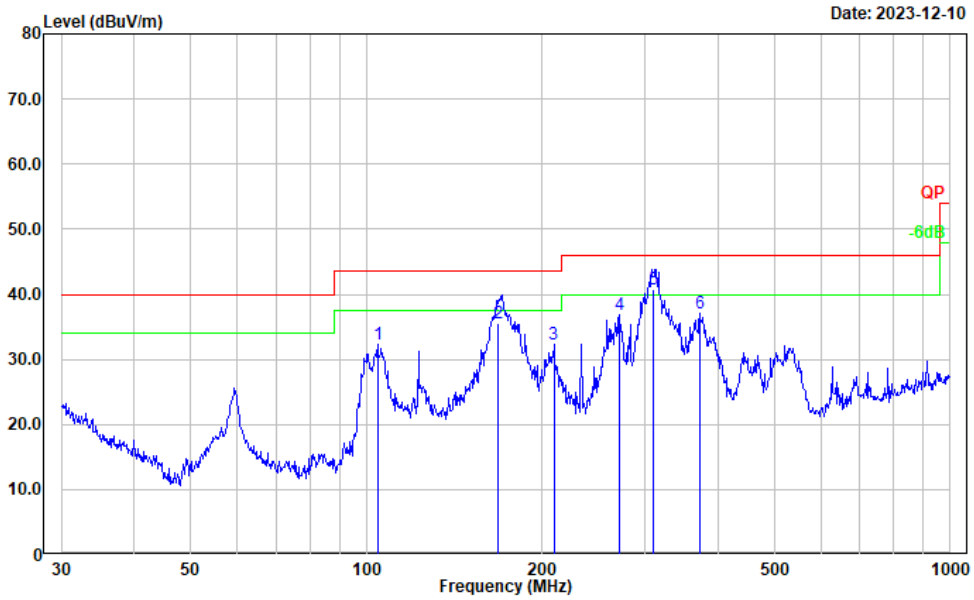
Project No.: CR231166569-RF
Tester: Carl Xue
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.317	29.54	-4.36	25.18	40.00	14.82	Peak
2	59.441	45.83	-17.64	28.19	40.00	11.81	Peak
3	122.834	36.23	-11.75	24.48	43.50	19.02	Peak
4	169.599	45.94	-13.14	32.80	43.50	10.70	Peak
5	309.998	35.32	-10.91	24.41	46.00	21.59	Peak
6	539.478	33.60	-6.22	27.38	46.00	18.62	Peak

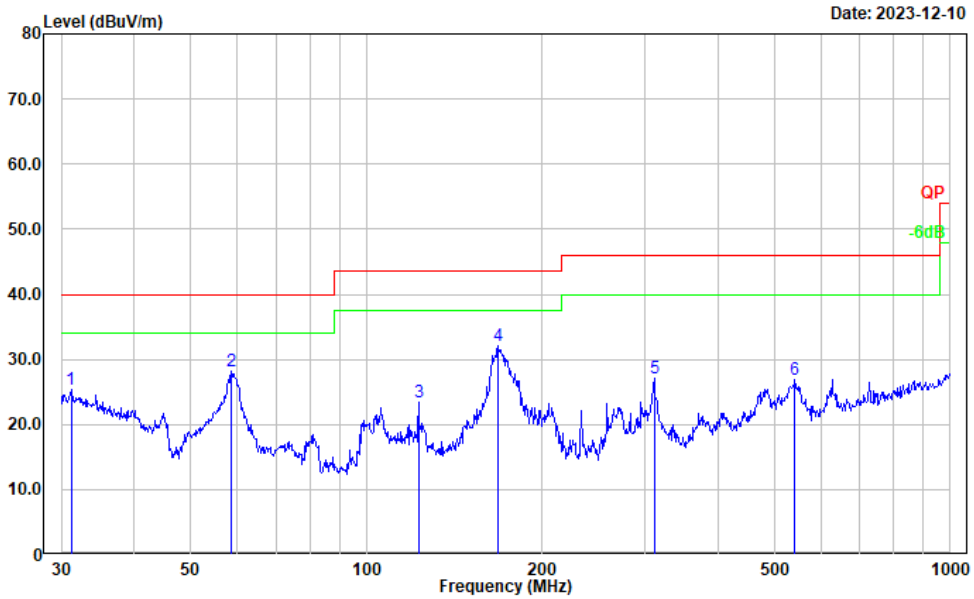
Middle Channel:

Project No.: CR231166569-RF
Tester: Carl Xue
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	104.536	46.07	-13.73	32.34	43.50	11.16	Peak
2	168.308	48.67	-13.01	35.66	43.50	7.84	QP
3	209.313	45.17	-12.92	32.25	43.50	11.25	Peak
4	271.325	49.17	-12.40	36.77	46.00	9.23	Peak
5	310.587	51.57	-10.91	40.66	46.00	5.34	QP
6	372.005	46.93	-9.80	37.13	46.00	8.87	Peak

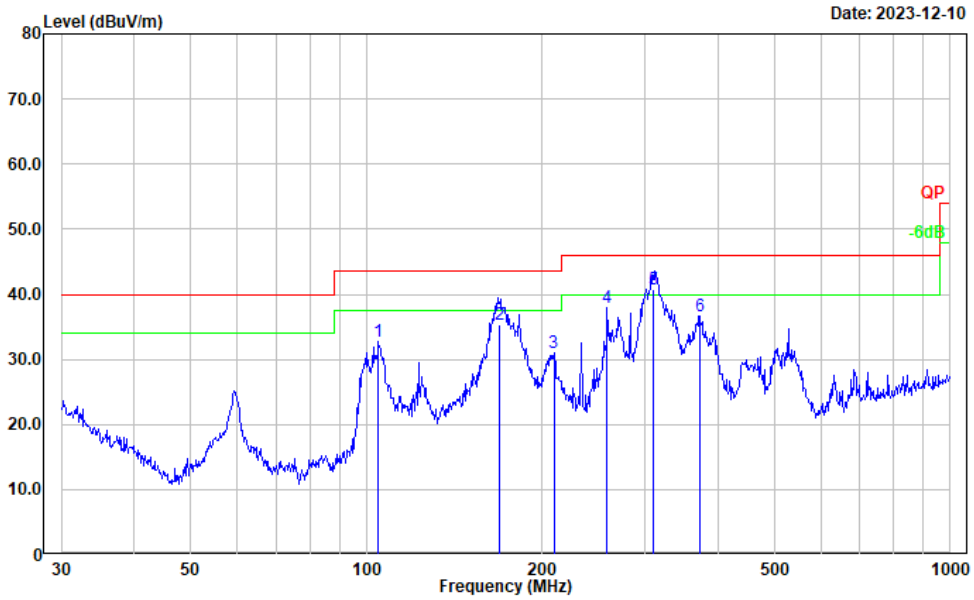
Project No.: CR231166569-RF
Tester: Carl Xue
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	31.180	30.42	-5.02	25.40	40.00	14.60	Peak
2	58.613	45.70	-17.61	28.09	40.00	11.91	Peak
3	122.834	35.19	-11.75	23.44	43.50	20.06	Peak
4	167.824	44.96	-12.97	31.99	43.50	11.51	Peak
5	311.087	38.09	-10.91	27.18	46.00	18.82	Peak
6	541.373	33.14	-6.22	26.92	46.00	19.08	Peak

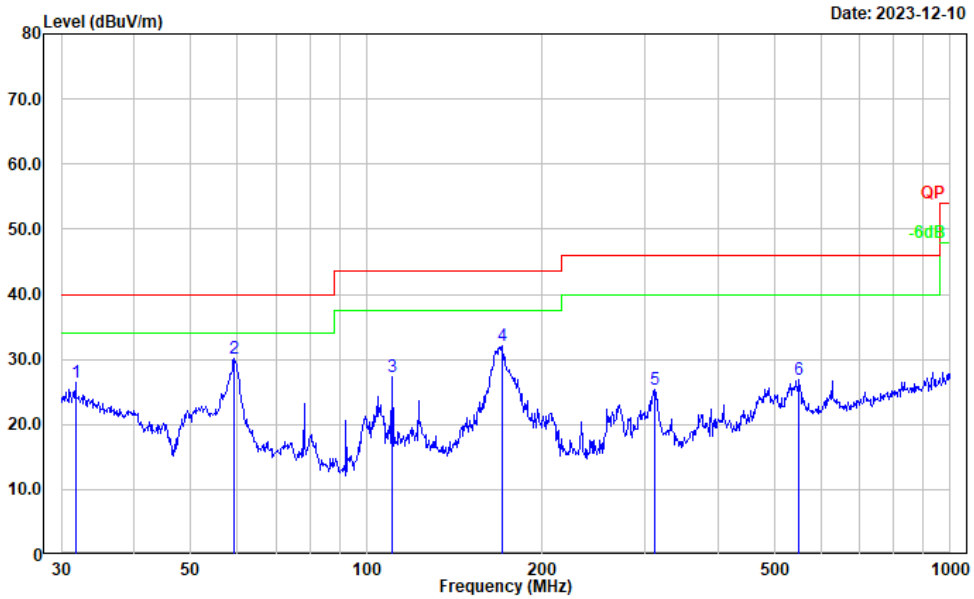
High Channel:

Project No.: CR231166569-RF
Tester: Carl Xue
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	104.903	46.49	-13.67	32.82	43.50	10.68	Peak
2	169.293	48.51	-13.12	35.39	43.50	8.11	QP
3	209.313	43.82	-12.92	30.90	43.50	12.60	Peak
4	258.326	51.05	-13.07	37.98	46.00	8.02	Peak
5	310.328	51.68	-10.91	40.77	46.00	5.23	QP
6	372.005	46.48	-9.80	36.68	46.00	9.32	Peak

Project No.: CR231166569-RF
Tester: Carl Xue
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	31.731	31.92	-5.43	26.49	40.00	13.51	Peak
2	59.441	47.88	-17.64	30.24	40.00	9.76	Peak
3	110.569	40.04	-12.63	27.41	43.50	16.09	Peak
4	170.793	45.28	-13.23	32.05	43.50	11.45	Peak
5	311.087	36.33	-10.91	25.42	46.00	20.58	Peak
6	550.948	33.01	-6.17	26.84	46.00	19.16	Peak

2) 1-40GHz:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low frequency				24059	MHz		
24059.000	91.30	PK	H	4.77	96.07	127.96	31.89
24059.000	90.12	AV	H	4.77	94.89	107.96	13.07
24059.000	81.23	PK	V	4.77	86.00	127.96	41.96
24059.000	80.07	AV	V	4.77	84.84	107.96	23.12
24000.000	51.34	PK	H	4.69	56.03	74.00	17.97
24000.000	38.25	AV	H	4.69	42.94	54.00	11.06
24000.000	50.41	PK	V	4.69	55.10	74.00	18.90
24000.000	37.36	AV	V	4.69	42.05	54.00	11.95
17636.58	30.17	PK	H	30.85	61.02	74.00	12.98
17636.58	17.11	AV	H	30.85	47.96	54.00	6.04
17423.50	29.86	PK	V	29.77	59.63	74.00	14.37
17423.50	16.75	AV	V	29.77	46.52	54.00	7.48
22695.38	50.79	PK	H	5.45	56.24	74.00	17.76
22695.38	37.86	AV	H	5.45	43.31	54.00	10.69
22674.43	50.81	PK	V	5.46	56.27	74.00	17.73
22674.43	37.69	AV	V	5.46	43.15	54.00	10.85
39529.67	51.49	PK	H	16.06	61.53	74.00	12.47
39529.67	38.62	AV	H	16.06	48.66	54.00	5.34
39531.52	51.27	PK	V	16.06	61.31	74.00	12.69
39531.52	38.34	AV	V	16.06	48.38	54.00	5.62
Middle frequency				24149	MHz		
24149.000	91.34	PK	H	4.89	96.23	127.96	31.73
24149.000	90.15	AV	H	4.89	95.04	107.96	12.92
24149.000	82.33	PK	V	4.89	87.22	127.96	40.74
24149.000	81.14	AV	V	4.89	86.03	107.96	21.93
17534.25	30.15	PK	H	30.16	60.31	74.00	13.69
17534.25	17.11	AV	H	30.16	47.27	54.00	6.73
17585.44	30.04	PK	V	30.51	60.55	74.00	13.45
17585.44	17.09	AV	V	30.51	47.60	54.00	6.40
25445.68	51.23	PK	H	6.39	57.62	74.00	16.38
25445.68	38.45	AV	H	6.39	44.84	54.00	9.16
25435.49	51.07	PK	V	6.42	57.49	74.00	16.51
25435.49	38.11	AV	V	6.42	44.53	54.00	9.47
39532.44	51.87	PK	H	16.05	61.90	74.00	12.10
39532.44	38.76	AV	H	16.05	48.79	54.00	5.21
39531.65	51.80	PK	V	16.05	61.83	74.00	12.17
39531.65	38.57	AV	V	16.05	48.60	54.00	5.40

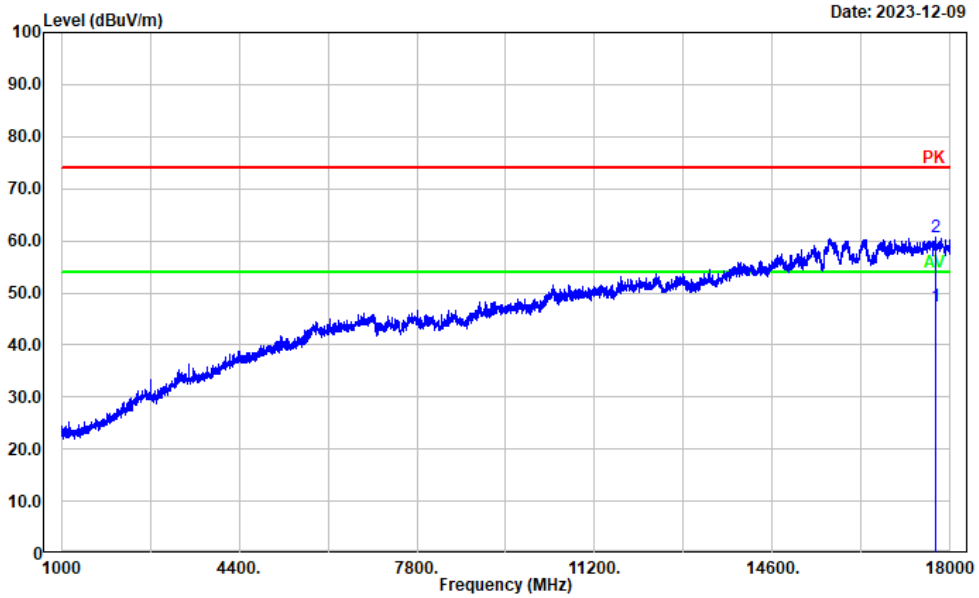
Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
High frequency				24239	MHz		
24239.000	91.55	PK	H	5.01	96.56	127.96	31.40
24239.000	90.26	AV	H	5.01	95.27	107.96	12.69
24239.000	81.97	PK	V	5.01	86.98	127.96	40.98
24239.000	80.45	AV	V	5.01	85.46	107.96	22.50
24250.000	60.25	PK	H	5.03	65.28	74.00	8.72
24250.000	47.25	AV	H	5.03	52.28	54.00	1.72
24250.000	51.32	PK	V	5.03	56.35	74.00	17.65
24250.000	38.45	AV	V	5.03	43.48	54.00	10.52
17710.94	29.32	PK	H	31.30	60.62	74.00	13.38
17710.94	16.16	AV	H	31.30	47.46	54.00	6.54
17816.36	28.70	PK	V	31.72	60.42	74.00	13.58
17816.36	15.77	AV	V	31.72	47.49	54.00	6.51
22272.96	52.62	PK	H	5.40	58.02	74.00	15.98
22272.96	40.24	AV	H	5.40	45.64	54.00	8.36
25350.57	52.04	PK	V	6.62	58.66	74.00	15.34
25350.57	39.16	AV	V	6.62	45.78	54.00	8.22
39538.20	52.27	PK	H	16.04	62.29	74.00	11.71
39538.20	39.85	AV	H	16.04	49.87	54.00	4.13
39368.10	52.02	PK	V	16.19	62.19	74.00	11.81
39368.10	39.47	AV	V	16.19	49.64	54.00	4.36

40-100GHz:

Frequency (GHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
		Low frequency		24.039	GHz		
48.078	48.87	PK	H	40.05	79.38	87.96	8.58
48.078	35.22	AV	H	40.05	65.73	67.96	2.23
48.078	37.68	PK	V	40.05	68.19	87.96	19.77
48.078	34.88	AV	V	40.05	65.39	67.96	2.57
72.117	45.03	PK	H	43.80	79.29	87.96	8.67
72.117	32.05	AV	H	43.80	66.31	67.96	1.65
72.117	44.79	PK	V	43.80	79.05	87.96	8.91
72.117	31.59	AV	V	43.80	65.85	67.96	2.11
96.156	44.11	PK	H	45.87	74.42	87.96	13.54
96.156	31.28	AV	H	45.87	61.59	67.96	6.37
96.156	43.87	PK	V	45.87	74.18	87.96	13.78
96.156	30.74	AV	V	45.87	61.05	67.96	6.91
		Middle frequency		24.149	GHz		
48.298	48.65	PK	H	40.08	79.19	87.96	8.77
48.298	35.78	AV	H	40.08	66.32	67.96	1.64
48.298	48.11	PK	V	40.08	78.65	87.96	9.31
48.298	35.37	AV	V	40.08	65.91	67.96	2.05
72.447	44.96	PK	H	43.85	79.27	87.96	8.69
72.447	31.85	AV	H	43.85	66.16	67.96	1.80
72.447	44.27	PK	V	43.85	78.58	87.96	9.38
72.447	31.28	AV	V	43.85	65.59	67.96	2.37
96.596	44.05	PK	H	45.92	74.41	87.96	13.55
96.596	31.11	AV	H	45.92	61.47	67.96	6.49
96.596	43.75	PK	V	45.92	74.11	87.96	13.85
96.596	30.62	AV	V	45.92	60.98	67.96	6.98
		High frequency		24.239	GHz		
48.478	49.02	PK	H	40.11	79.59	87.96	8.37
48.478	36.11	AV	H	40.11	66.68	67.96	1.28
48.478	48.64	PK	V	40.11	79.21	87.96	8.75
48.478	35.69	AV	V	40.11	66.26	67.96	1.70
72.717	45.36	PK	H	43.89	79.71	87.96	8.25
72.717	32.58	AV	H	43.89	66.93	67.96	1.03
72.717	44.67	PK	V	43.89	79.02	87.96	8.94
72.717	31.58	AV	V	43.89	65.93	67.96	2.03
96.956	44.35	PK	H	45.97	74.76	87.96	13.20
96.956	31.25	AV	H	45.97	61.66	67.96	6.30
96.956	43.96	PK	V	45.97	74.37	87.96	13.59
96.956	30.75	AV	V	45.97	61.16	67.96	6.80

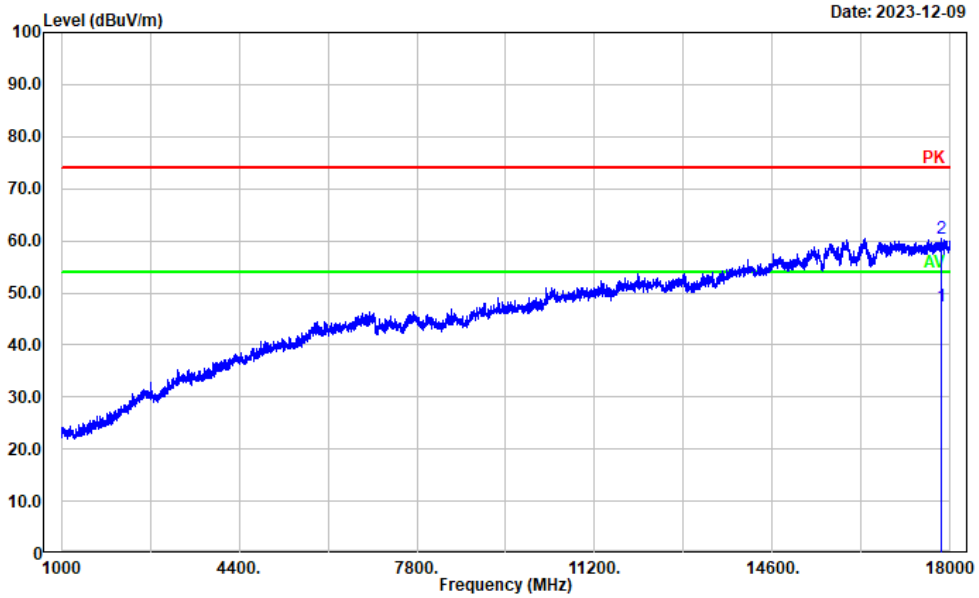
Worst Test Plots (High frequency**)**

Project No.: CR231166569-RF
Tester: coco Tian
Polarization: horizontal
Note:



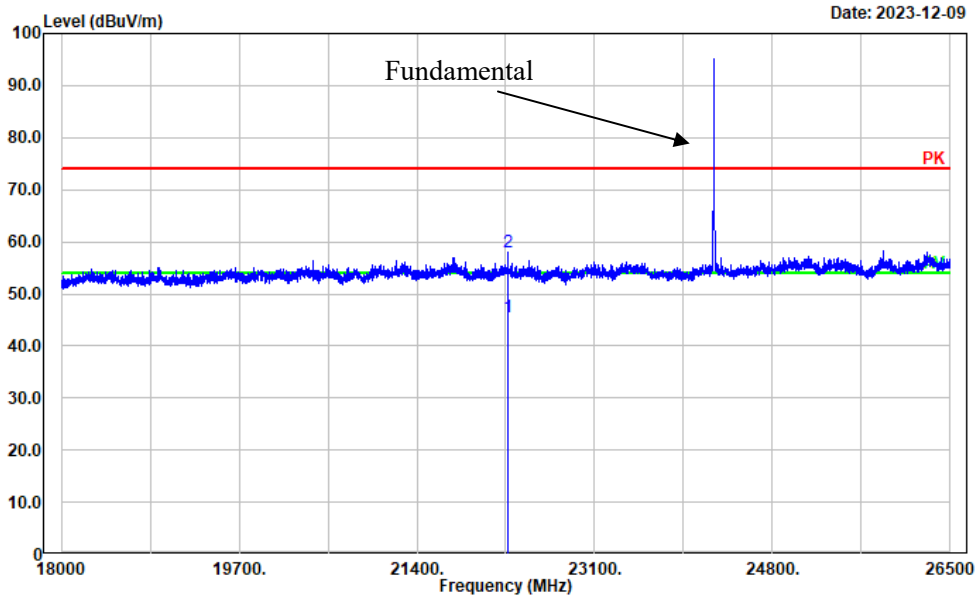
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	17710.940	16.16	31.30	47.46	54.00	6.54	Average
2	17710.940	29.32	31.30	60.62	74.00	13.38	Peak

Project No.: CR231166569-RF
Tester: coco Tian
Polarization: vertical
Note:



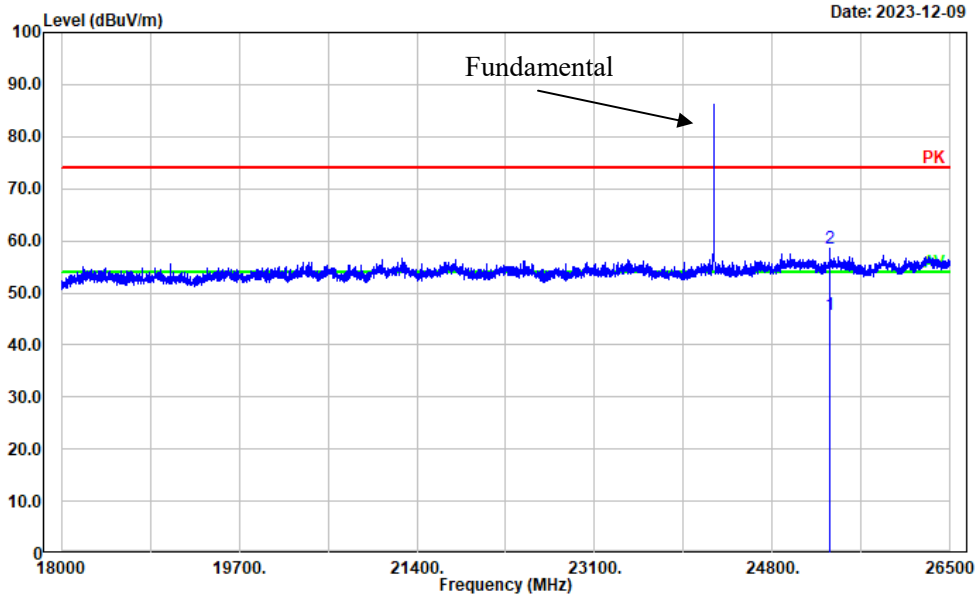
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	17816.360	15.77	31.72	47.49	54.00	6.51	Average
2	17816.360	28.70	31.72	60.42	74.00	13.58	Peak

Project No.: CR231166569-RF
Tester: coco Tian
Polarization: horizontal
Note:



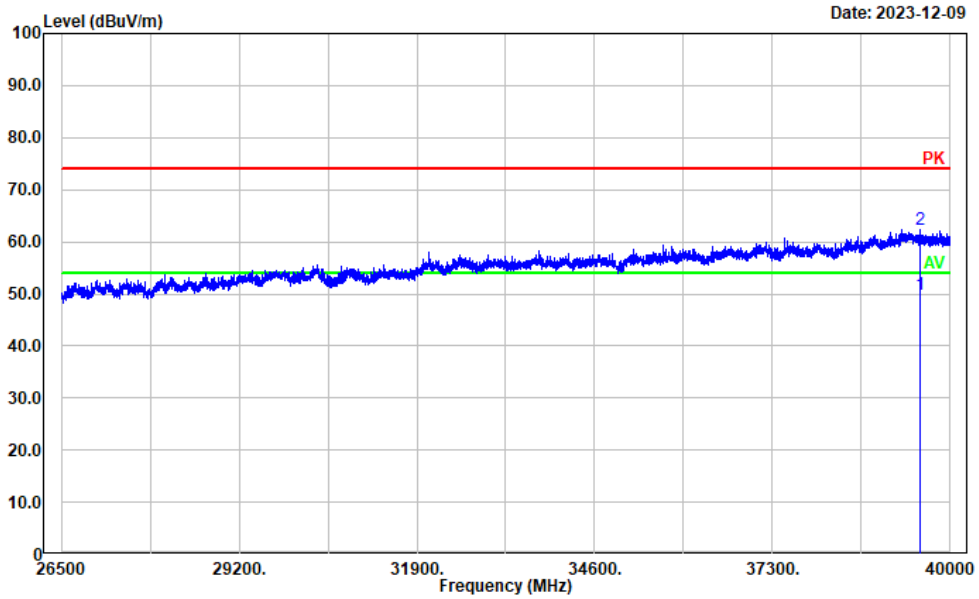
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	22272.960	40.24	5.40	45.64	54.00	8.36	Average
2	22272.960	52.62	5.40	58.02	74.00	15.98	Peak

Project No.: CR231166569-RF
Tester: coco Tian
Polarization: vertical
Note:



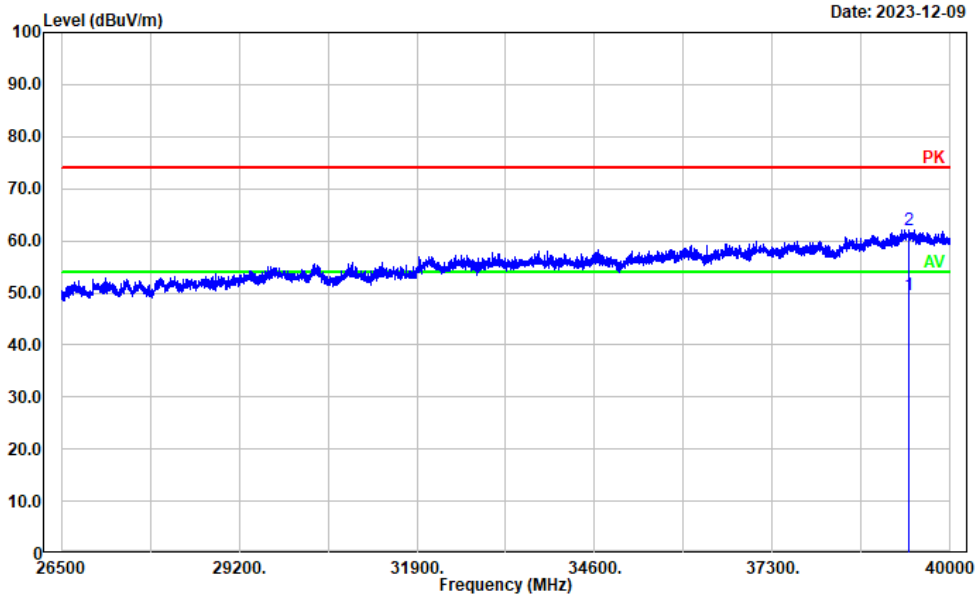
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	25350.570	39.16	6.62	45.78	54.00	8.22	Average
2	25350.570	52.04	6.62	58.66	74.00	15.34	Peak

Project No.: CR231166569-RF
Tester: coco Tian
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	39538.210	39.85	10.02	49.87	54.00	4.13	Average
2	39538.210	52.27	10.02	62.29	74.00	11.71	Peak

Project No.: CR231166569-RF
Tester: coco Tian
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	39368.070	39.47	10.17	49.64	54.00	4.36	Average
2	39368.070	52.02	10.17	62.19	74.00	11.81	Peak

4.3 20 dB Emission Bandwidth:

Serial Number:	2DI4-1	Test Date:	2023/12/9
Test Site:	966-1	Test Mode:	Transmitting
Tester:	coco Tian	Test Result:	pass

Environmental Conditions:					
Temperature: (℃)	26.3	Relative Humidity: (%)	59	ATM Pressure: (kPa)	100.9

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101591	2023/3/31	2024/3/30
PASTERNACK	Horn Antenna	PE9852/2F-20	112002	2021/2/5	2024/2/4
Quinstar	Preamplifier	QLW-18405536-JO	15964001005	2023/9/15	2024/9/14
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2023/8/6	2024/8/5

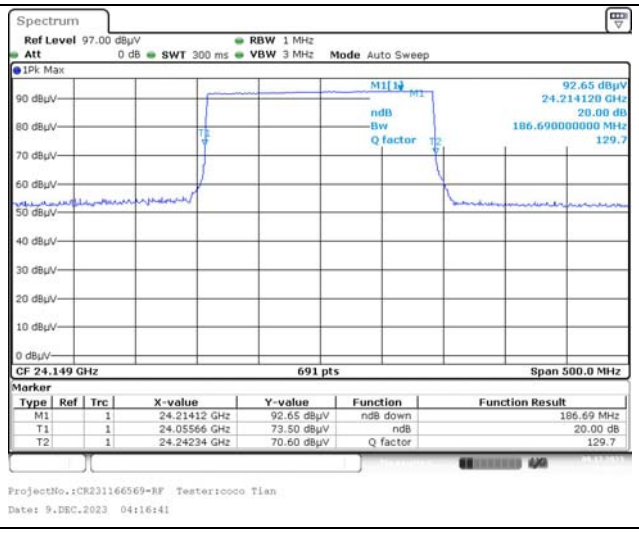
**** Statement of Traceability:*** *China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Test Mode	20 dB Bandwidth (MHz)
Sweep Mode	186.690

20dB Emission Bandwidth=241.49MHz

Sweep Mode



5. EUT PHOTOGRAPHS

Please refer to the attachment CR231166569-EXP EUT EXTERNAL PHOTOGRAPHS and CR231166569-INP EUT INTERNAL PHOTOGRAPHS

6. TEST SETUP PHOTOGRAPHS

Please refer to the attachment CR231166569-00-TSP TEST SETUP PHOTOGRAPHS.

===== END OF REPORT =====