Report No.: DDT-RE23072405-2E02

Issued Date: Sep. 05, 2023

FCC AND ISED CERTIFICATION TEST REPORT

FOR

Applicant	**:**	Globe Electric Company Inc.
Address	**:**	150 Oneida, Montreal, Quebec, Canada, H9R 1A8
Equipment under Test	**:**	Ceiling fan
Model No.	**:**	GE27105(27105), GE27107(27107), GE27109(27109)
Trade Mark	**:**	Globe
FCC ID	**:**	2AQUQGE27109
IC	**:**	8290A-GE27109
Manufacturer	**:**	Globe Electric Company Inc.
Address	**:**	150 Oneida, Montreal, Quebec, Canada, H9R 1A8

Issued By: Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2,Building 1,No.17,Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

Tel.: +86-0769-38826678, **E-mail:** ddt@dgddt.com, http://www.dgddt.com

REPORT

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Test Report Declare

Applicant	:	Globe Electric Company Inc.
Address	:	150 Oneida, Montreal, Quebec, Canada, H9R 1A8
Equipment under Test	:	Ceiling fan
Model No	:	GE27105(27105), GE27107(27107), GE27109(27109)
Trade Mark	:	Globe
Manufacturer	:	Globe Electric Company Inc.
Address	:	150 Oneida, Montreal, Quebec, Canada, H9R 1A8

Test Standard Used: FCC Rules and Regulations Part 15 Subpart C, RSS-247 Issue 2 February 2017.

Test procedure used: ANSI C63.10:2013, RSS-Gen Issue 5, Apr. 2018, 558074 D01 15.247 Meas Guidance v05r02

We Declare:

The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC&ISED standards.

Report No:	DDT-RE23072405-2E02		
Date of Receipt:	Aug. 08, 2023	**Date of Test:**	Aug. 08, 2023 ~ Sep. 05, 2023

Prepared By:

Tiger Mo

Tiger Mo/Engineer

Approved By:

Damon Hu

Certificate and Report Seal
检验检测专用章

Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Sep. 05, 2023	

1. Summary of Test Results

The EUT have been tested according to the applicable standards as referenced below.		
Description of Test Item	**Standard**	**Results**
6dB Bandwidth and 99% Bandwidth	FCC Part 15: 15.247(a)(2) RSS-247 Issue 2 clause 5.2(a)	PASS
Conducted Output Power	FCC Part 15: 15.247(b)(3) RSS-247 Issue 2 clause 5.4(d)	PASS
Power Spectral Density	FCC Part 15:15.247(e) RSS-247 Issue 2 clause 5.2(b)	PASS
Band-edge and Spurious Emissions (Conducted)	FCC Part 15: 15.247(d) RSS-247 Issue 2 clause 5.5	PASS
Radiated Spurious Emissions	FCC Part 15: 15.205 FCC Part 15: 15.209 FCC Part 15: 15.247(d) RSS-247 Issue 2 clause 5.5 RSS-Gen Issue 5 clause 8.9	PASS
Radiated Band Edge Compliance	FCC Part 15: 15.205 FCC Part 15: 15.209 FCC Part 15: 15.247(d) RSS-247 Issue 2 clause 5.5 RSS-Gen Issue 5 clause 8.9	PASS
Power Line Conducted Emission	FCC Part 15: 15.207(a) RSS-Gen Issue 5 clause 8.8	PASS
Antenna requirement	FCC Part 15: 15.203 RSS-Gen Issue 5 clause 6.8	PASS
Note: The wireless module of the models are the same, and the difference of the models has no effect on the above 1GHz part. GE27105(27105), GE27107(27107) software version is not the same as GE27109(27109). Due to appearance and software version differences, all model the below 1GHz part Radiation Emission and Power Line Conducted Emission has tested.		

2. General Test Information

2.1. Description of EUT

EUT Name	:	Ceiling fan
Model Number	:	GE27105(27105), GE27107(27107), GE27109(27109)
Difference of models	:	All the models are electrical identical including the same hardware design (i.e., circuit design, PCB Layout, RF module/circuit, antenna type(s) and antenna location, components on PCB, etc.,), only the Model Number, software version and appearance are different for all the models, therefore the test performed on the model GE27109(27109).
EUT function description	:	Please reference user manual of this device
Power supply	:	AC 120V/60Hz
Radio Technology	:	IEEE 802.11b/g/n
Operation frequency	:	IEEE 802.11b: 2412MHz-2462MHz IEEE 802.11g: 2412MHz-2462MHz IEEE 802.11n HT20: 2412MHz-2462MHz IEEE 802.11n HT40: 2422MHz-2452MHz
Modulation	:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM, QPSK, BPSK)
Transmitter rate	:	IEEE 802.11b: up to 11 Mbps IEEE 802.11g: up to 54 Mbps IEEE 802.11n HT20: up to 72.2 Mbps IEEE 802.11n HT40: up to 150 Mbps
Antenna Type	:	Built-in FPC antenna,, Maximum PK gain: 1.36 dBi
Sample Number	:	S23072405-04 for conductive S23072405-04, S23072405-05, S23072405-06 for radiation

Note : EUT is the ab. of equipment under test.

Channel information					
CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447	/	/

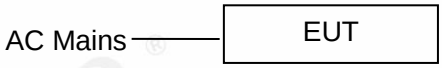
2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Description	Remark
N/A	N/A	N/A	N/A	N/A

2.3. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	EMC Compliance	SN
NoteBook	Lenovo	I7-4810MQ	N/A	00331-1000-00001-AA816

2.4. Block diagram of EUT configuration for test



Test software: Beken Wi-Fi Test Tool V1.6.0.exe
The test software was used to control EUT work in Continuous Tx mode and select test channel, wireless mode as below table.

The pathloss of external cable: 0.5dB (According to the manufacturer's claims)

Tested mode, channel, and data rate information				
Mode	Setting Tx Power ANT1	data rate (Mbps) (see Note)	Channel	Frequency (MHz)
IEEE 802.11b	38	1	LCH: CH1	2412
	38	1	MCH: CH6	2437
	38	1	HCH: CH11	2462
IEEE 802.11g	auto	6	LCH: CH1	2412
	auto	6	MCH: CH6	2437
	auto	6	HCH: CH11	2462
IEEE 802.11 n HT20	auto	MCS 0	LCH: CH1	2412
	auto	MCS 0	MCH: CH6	2437
	auto	MCS 0	HCH: CH11	2462
IEEE 802.11n HT40	auto	MCS 0	LCH: CH3	2422
	auto	MCS 0	MCH: CH6	2437
	auto	MCS 0	HCH: CH9	2452
Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.				

2.5. Deviations of test standard

No Deviation

2.6. Test environment conditions

Temperature range:	+15℃ to +35 ℃
Humidity range:	20% to 75%
Pressure range:	86 kPa to106 kPa

2.7. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2,Building 1,No.17,Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808.

Tel.: +86-0769-38826678, http://www.dgddt.com, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

2.8. Measurement uncertainty

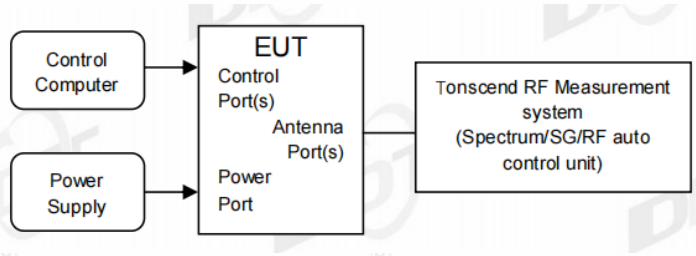
Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Frequencies Stability	6.7×10^{-8} (Antenna couple method)
	5.5×10^{-8} (Conducted method)
Conducted spurious emissions	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.40 dB (3.6 GHz ≤ f < 8 GHz)
	1.66 dB (8 GHz ≤ f < 26.5 GHz)
Uncertainty for radio frequency (RBW < 20 kHz)	3×10^{-8}
Temperature	0.4 ℃
Humidity	2 %
Uncertainty for Radiation Emission test (9 kHz – 30 MHz)	3.44 dB
Uncertainty for Radiation Emission test (30 MHz - 1 GHz)	4.70 dB (Antenna Polarize: V)
	4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1 GHz - 40 GHz)	4.10 dB (1 - 6 GHz)
	4.40 dB (6 GHz - 18 GHz)
	3.54 dB (18 GHz - 26 GHz)
	4.30 dB (26 GHz - 40 GHz)
Uncertainty for Power line conduction emission test	3.34dB (150KHz-30MHz)
	3.72dB (9KHz-150KHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

3. Equipment Used During Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒RF Connected Test (Tonscend RF Measurement System 1#)					
SIGNAL ANALYZER	R&S	FSQ26	101272	Apr. 27, 2023	1 Year
Wideband Radio Communication tester	R&S	CMW500	120259	Jul. 15, 2023	1 Year
MXG Vector Signal Generator	Agilent	N5182B	MY59100192	Apr. 27, 2023	1 Year
Vector Signal Generator	Agilent	N5182A	MY19060405	Apr. 27, 2023	1 Year
RF Control Unit	Tonsend	JS0806-2	158060010	Apr. 27, 2023	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-150L	ZX170110-A	May 15, 2023	1 Year
Test Software	JS Tonscend	JS1120-3	Ver.3.2.22	N/A	N/A
☒Radiation 3#chamber					
EMI Test Receiver	R&S	ESU26	100472	Apr. 23, 2023	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	Apr. 23, 2023	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Sep. 29, 2022	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	01429	Jul. 12, 2023	2 Year
Double Ridged Horn Antenna	Schwarzbeck	BBHA9120 D	02468	Sep. 29, 2022	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	Apr. 26, 2023	1 Year
Pre-amplifier	COM-POWER	PAM-118A	18040084	Jul. 15, 2023	1 Year
Pre-amplifier	COM-POWER	PAM-840A	461369	Apr. 27, 2023	1 Year
RE Cable	N/A	W23.02 CP1-X2 + W23.09 AP1-X8+ JCT26S-NJ-NJ-1.5M	4.5M+8M+1.5M	Apr. 21, 2023	1 Year
RF Cable	Yuhu Technology	JCTB810-NJ-NJ-9M+ ZT26S-SMAJ-SMAJ-1M	21123964	Apr. 23, 2023	1 Year
Micro-Tronics filters	REBES	BRM50702	G555	N/A	N/A
Micro-Tronics filters	REBES	BRM50716	G392	N/A	N/A
High Pass filter	XB	XBLBQ-GTA67	210820-2-3	N/A	N/A
Test software	Tonscend	JS32-RE	V 5.0.0.1	N/A	N/A
☒Power Line Conducted Emissions Test 1#					
Test Receiver	R&S	ESCI	100551	Jul. 11, 2023	1 Year
LISN 1	R&S	ENV216	101109	Jul. 11, 2023	1 Year
LISN 2	R&S	ESH2-Z5	100309	Jul. 12, 2023	1 Year
Pulse Limiter	R&S	ESH3-Z2	101242	Jul. 15, 2023	1 Year
CE Cable 1	HUBSER	N/A	W10.01	Jul. 15, 2023	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
Test Receiver	R&S	ESCI	100551	Jul. 11, 2023	1 Year

4. 6dB Bandwidth

4.1. Block diagram of test setup



4.2. Limits

For direct sequence systems, the minimum 6 dB bandwidth shall be at least 500 kHz

4.3. Test procedure

(1) The test according to ANSI C63.10-2013 clause 11.8.

(2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results

(3) Set the EUT as maximum power setting and enable the EUT transmit continuously

(4) Use the following spectrum analyzer settings for 6 dB Bandwidth:

RBW:	100 kHz
VBW:	≥ [3 × RBW]
Detector Mode:	peak
Sweep time:	auto
Trace mode	max hold

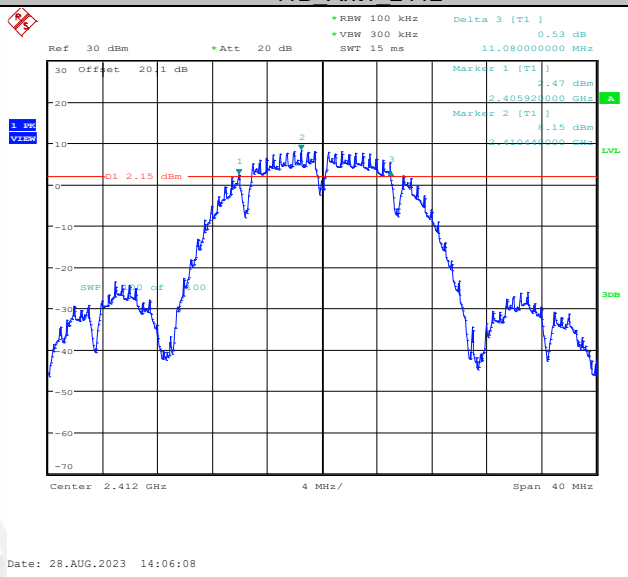
Allow the trace to stabilize, measure the 6 dB bandwidth of signal, and record the results in the report

4.4. Test result

Test Mode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	11.08	2405.92	2417.00	0.5	PASS
		2437	12.04	2430.92	2442.96	0.5	PASS
		2462	12.04	2455.92	2467.96	0.5	PASS
11G	Ant1	2412	15.16	2404.36	2419.52	0.5	PASS
		2437	15.08	2429.36	2444.44	0.5	PASS
		2462	15.16	2454.36	2469.52	0.5	PASS
11N20SISO	Ant1	2412	15.00	2404.44	2419.44	0.5	PASS
		2437	15.08	2429.40	2444.48	0.5	PASS
		2462	15.04	2454.44	2469.48	0.5	PASS
11N40SISO	Ant1	2422	32.64	2405.60	2438.24	0.5	PASS
		2437	32.56	2420.68	2453.24	0.5	PASS
		2452	31.28	2435.68	2466.96	0.5	PASS

4.5. Test graphs

11B_Ant1_2412



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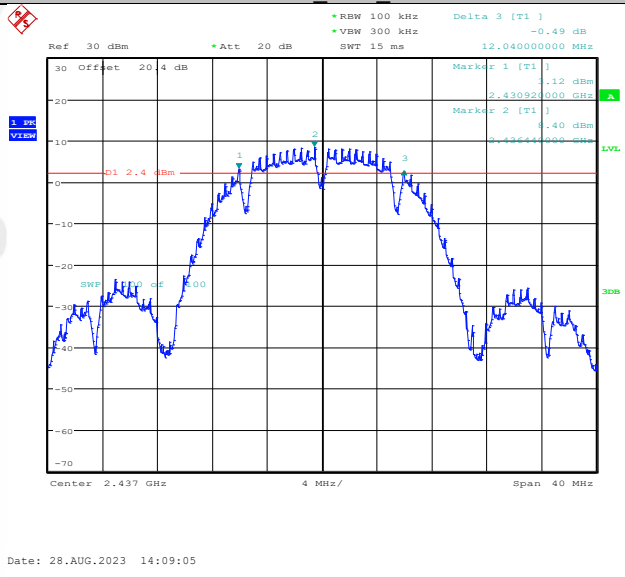

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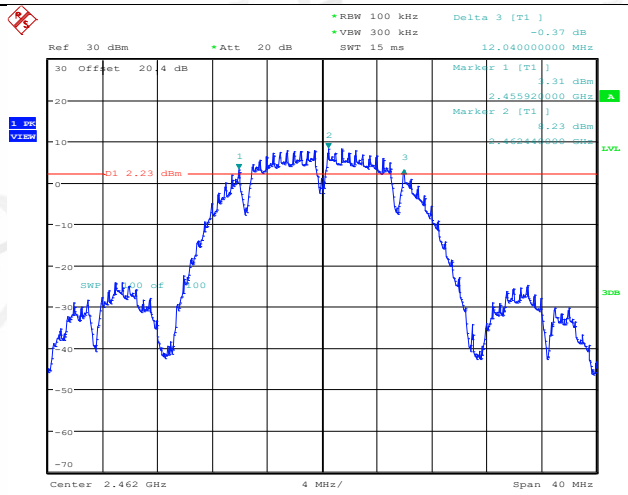

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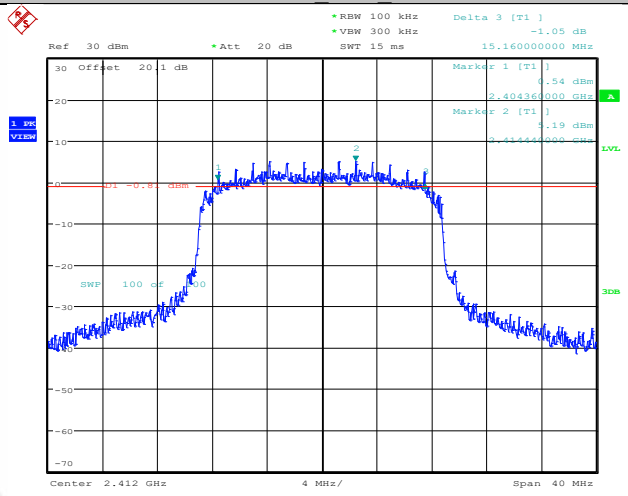

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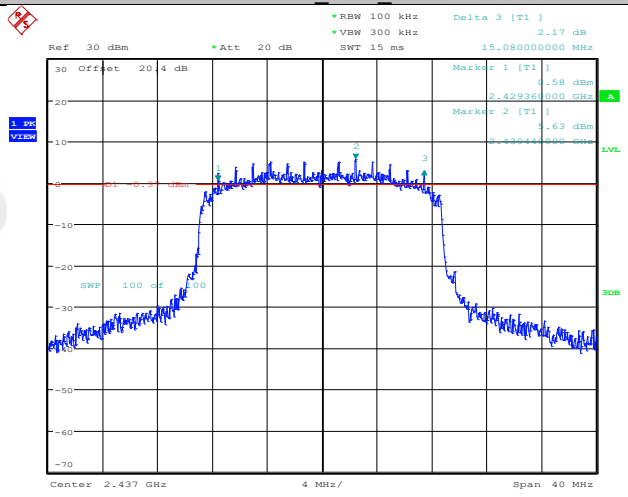

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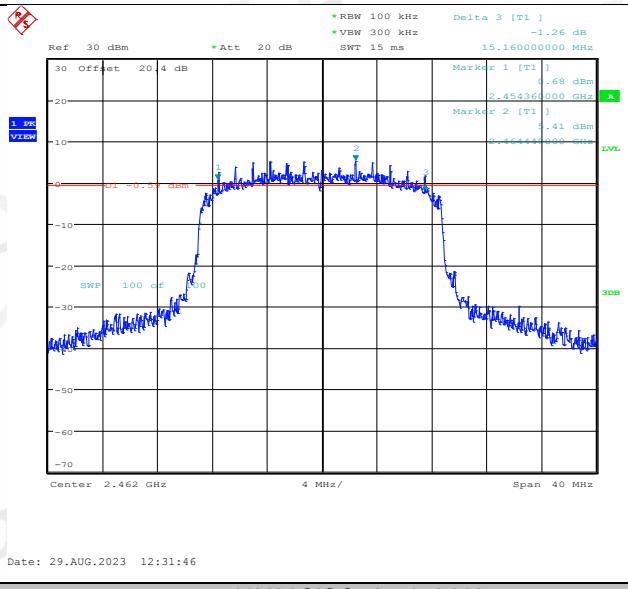

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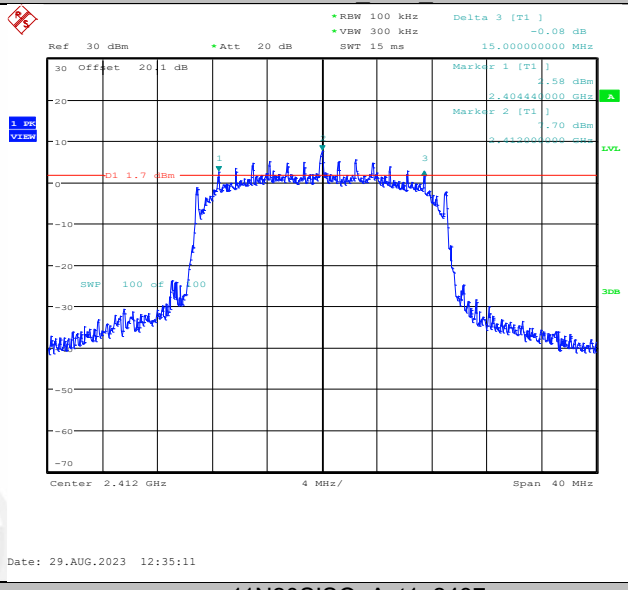

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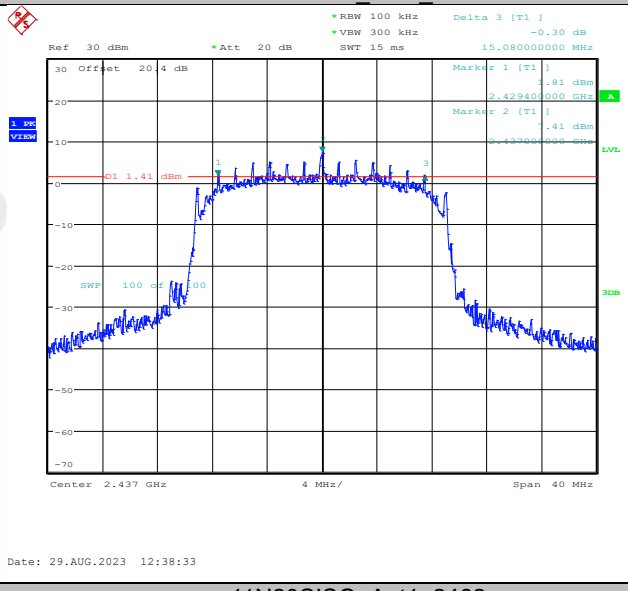

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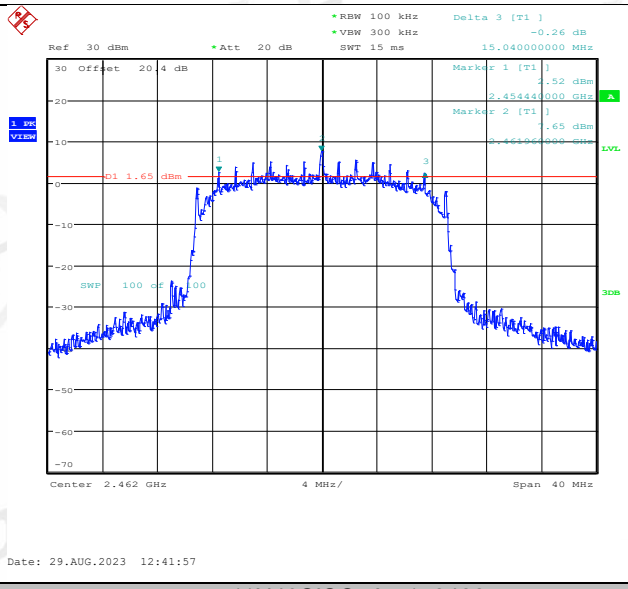

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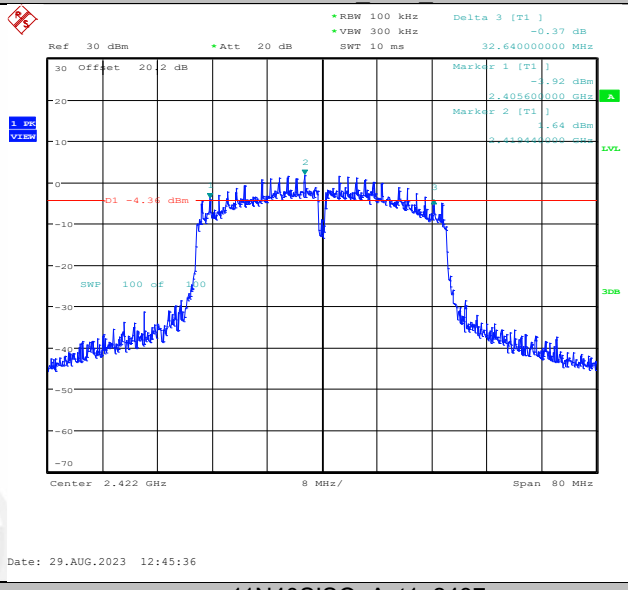

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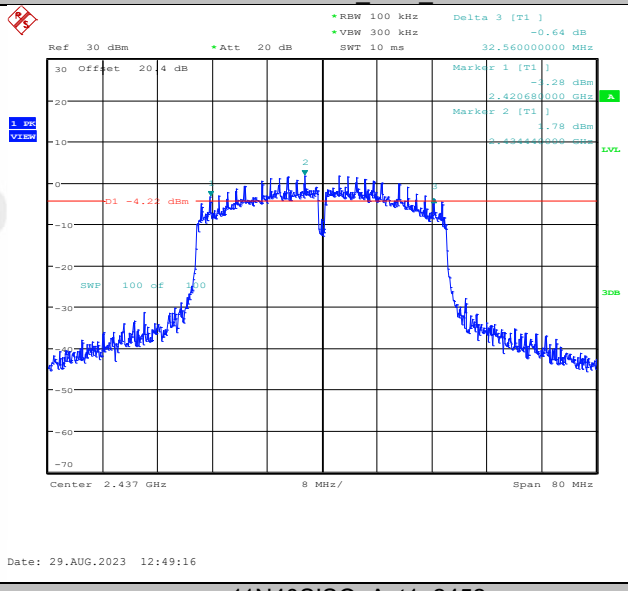

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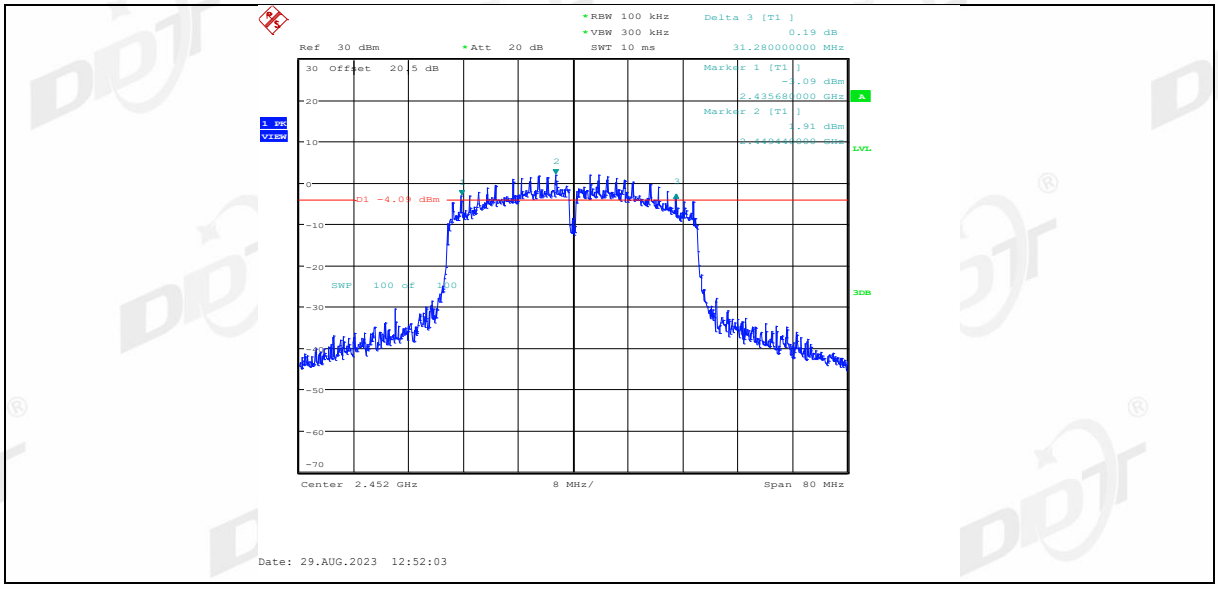
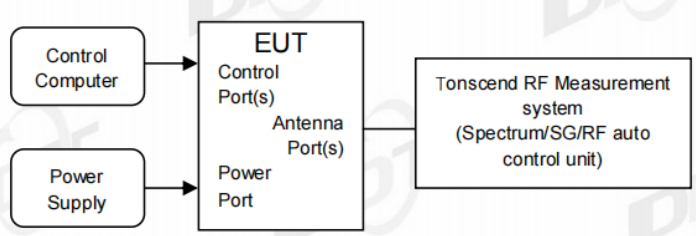

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
Delta 3 [T1]
0.19 dB
31.280000000 MHz
Ref 30 dBm
Att 20 dB
Offset 20.5 dB
Marker 1 [T1]
-3.09 dBm
2.435680000 GHz
Marker 2 [T1]
1.91 dBm
2.440440000 GHz
D1 -4.09 dBm
SWP 100 of 100
Center 2.452 GHz
8 MHz/
Span 80 MHz
Date: 29.AUG.2023 12:52:03

5. 99% Bandwidth

5.1. Block diagram of test setup



5.2. Limits

Just for Report.

5.3. Test procedure

(1) The test according to ANSI C63.10-2013 clause 6.9.3.

(2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results

(3) Set the EUT as maximum power setting and enable the EUT transmit continuously

(4) Use the following spectrum analyzer settings for the 99% Bandwidth:

RBW:	1% to 5% of the OBW
VBW:	approximately three times RBW
Span:	between 1.5 times and 5.0 times the OBW
Detector Mode:	peak
Sweep time:	auto
Trace mode	max hold

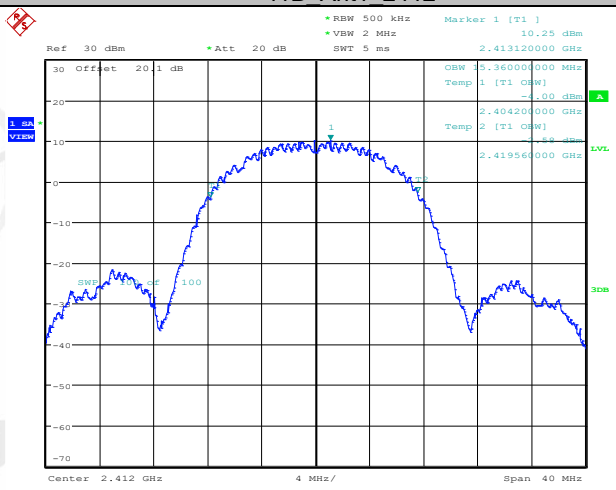
Allow the trace to stabilize, measure the 99% bandwidth of signal, and record the results in the report.

5.4. Test Result

TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	15.36	2404.2000	2419.5600	---	---
		2437	15.32	2429.2400	2444.5600	---	---
		2462	15.36	2454.2000	2469.5600	---	---
11G	Ant1	2412	17.44	2403.2000	2420.6400	---	---
		2437	17.32	2428.2800	2445.6000	---	---
		2462	17.36	2453.2400	2470.6000	---	---
11N20SISO	Ant1	2412	18.20	2402.8400	2421.0400	---	---
		2437	18.28	2427.7600	2446.0400	---	---
		2462	18.28	2452.8000	2471.0800	---	---
11N40SISO	Ant1	2422	35.68	2404.0800	2439.7600	---	---
		2437	35.60	2419.0800	2454.6800	---	---
		2452	35.52	2434.1600	2469.6800	---	---

5.5. Test Graphs

11B_Ant1_2412



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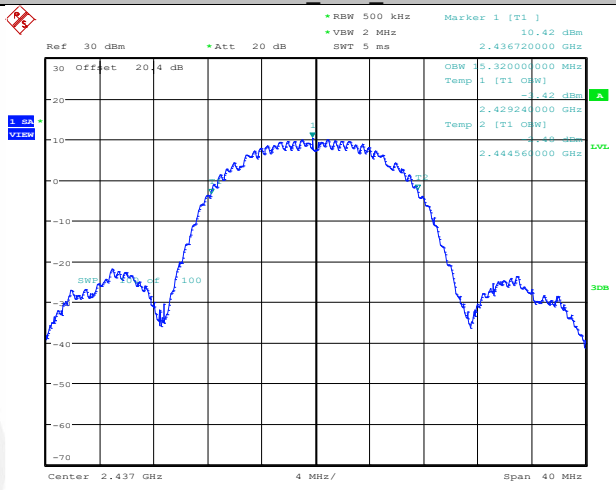

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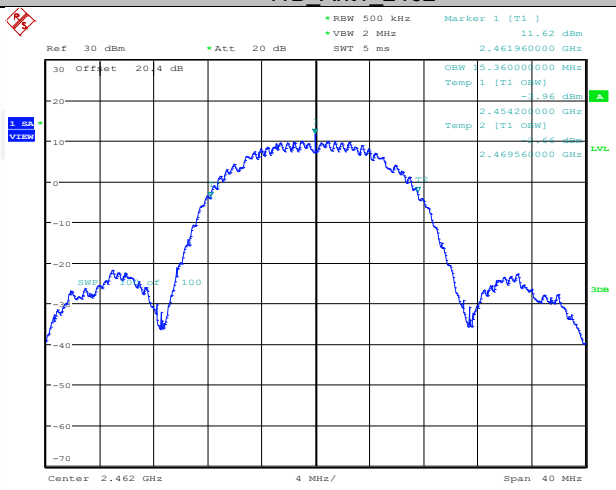

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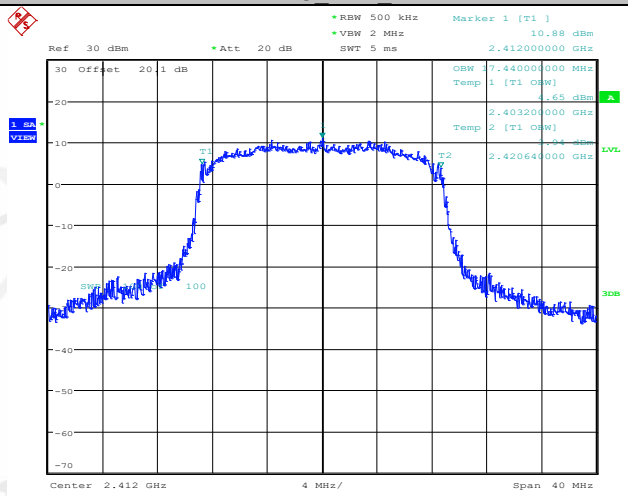

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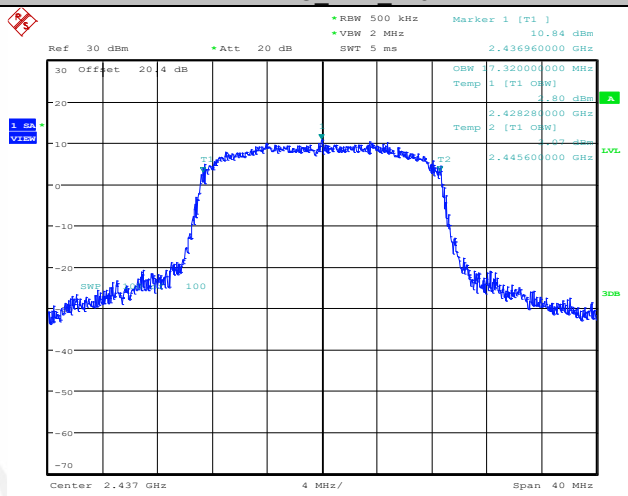
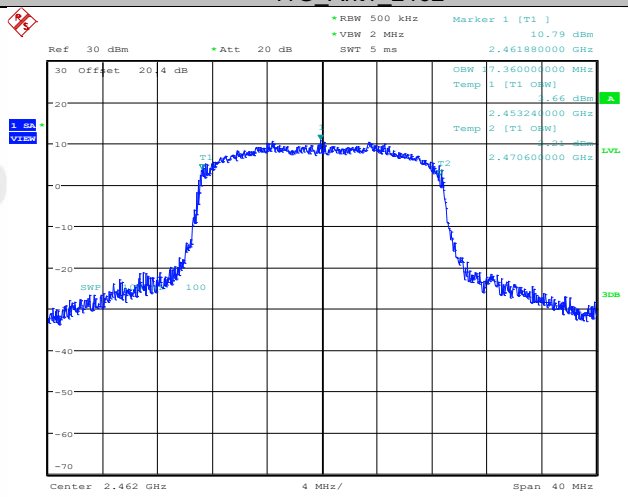


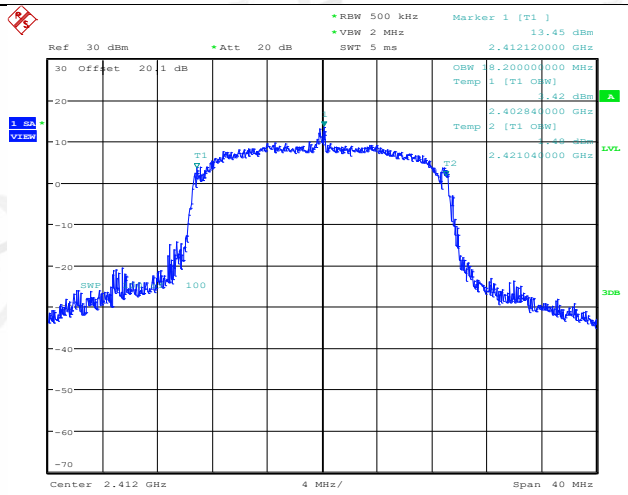
Date: 29.AUG.2023 11:52:01

11G_Ant1_2462



Date: 29.AUG.2023 12:32:00

11N20SISO_Ant1_2412



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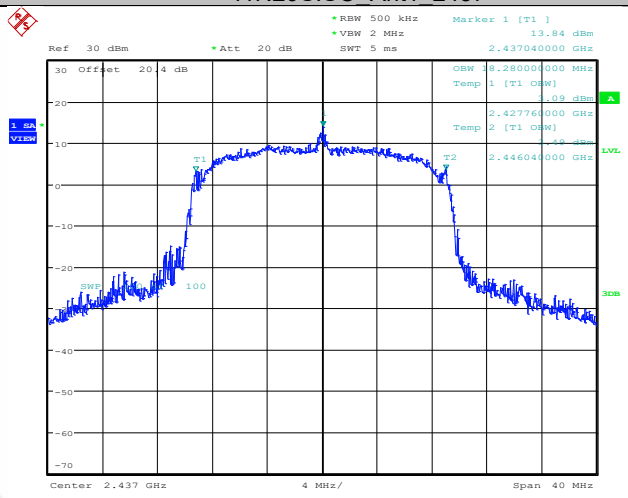

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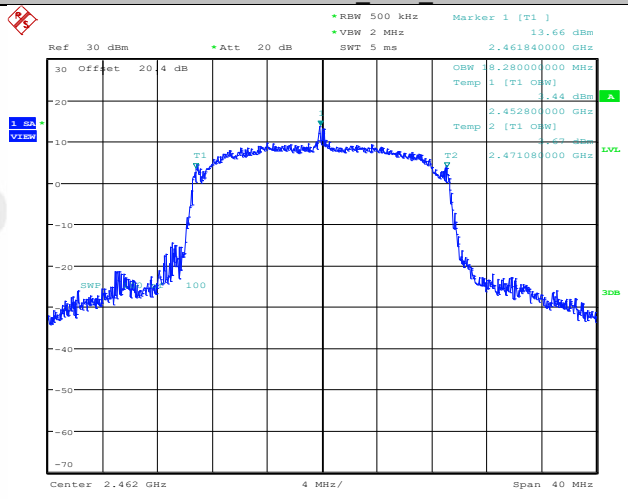

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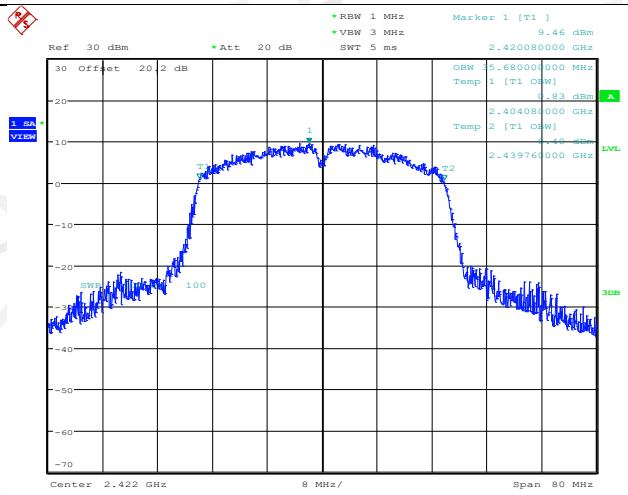

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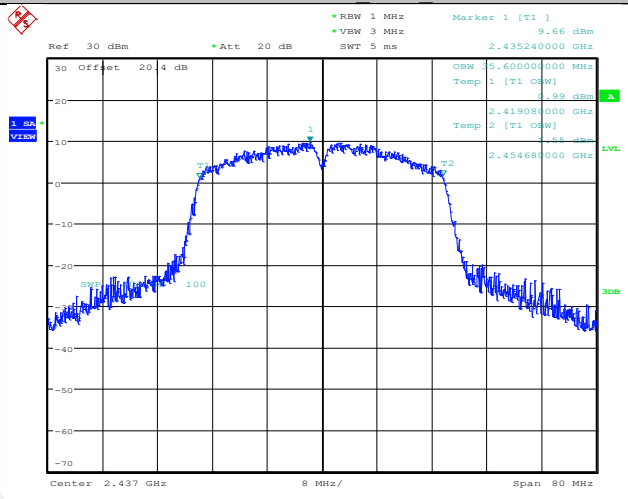
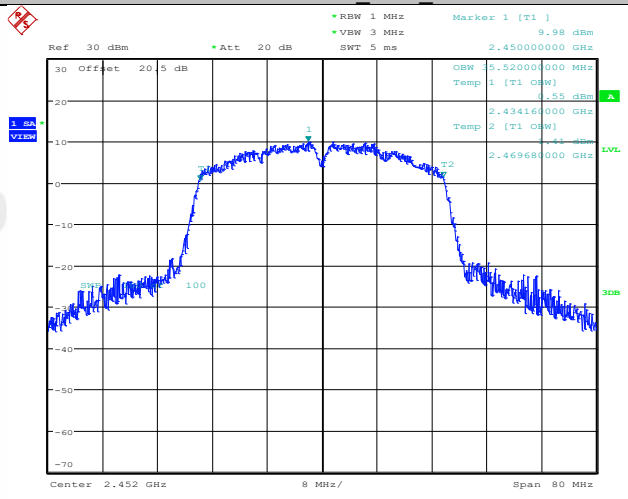
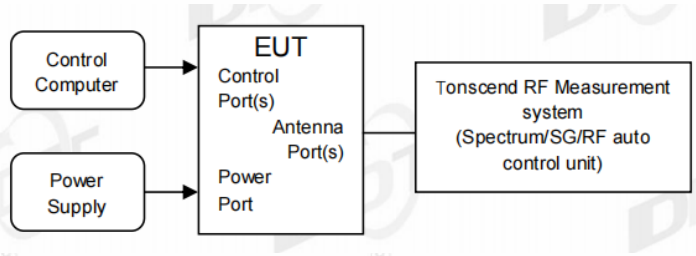


11N40SISO_Ant1_2452



6. Conducted Output Power

6.1. Block diagram of test setup



6.2. Limits

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.3. Test procedure

(1) The test according to ANSI C63.10-2013 clause 11.9.2.3.

(2) Connect EUT's antenna output to RF power meter by RF cable, the path loss was compensated to the results.

(3) Set the EUT as maximum power setting and enable the EUT transmit continuously, If the transmitter does not transmit continuously, measure the duty cycle, D, of the transmitter output signal.

(4) Measure the average power of the transmitter. This measurement is an average over both the ON and OFF periods of the transmitter.

(5) Adjust the measurement in dBm by adding [10 log (1 / D)], where D is the duty cycle.

(6) Record the RF average power of each antenna port.

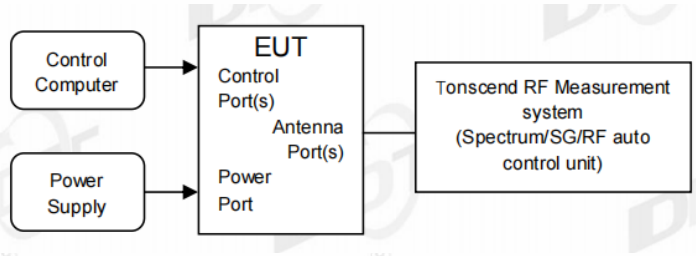
6.4. Test result average

Test Mode	Antenna	Frequency [MHz]	Average power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11B	Ant1	2412	18.86	98.94	0.05	**18.91**	≤30.00	20.27	≤36.00	PASS
		2437	18.81	98.94	0.05	18.86	≤30.00	20.22	≤36.00	PASS
		2462	18.74	98.94	0.05	18.79	≤30.00	20.15	≤36.00	PASS
11G	Ant1	2412	16.62	98.59	0.06	16.68	≤30.00	18.04	≤36.00	PASS
		2437	16.55	98.59	0.06	16.61	≤30.00	17.97	≤36.00	PASS
		2462	16.52	98.59	0.06	16.58	≤30.00	17.94	≤36.00	PASS
11N20SISO	Ant1	2412	16.37	98.50	0.07	16.44	≤30.00	17.80	≤36.00	PASS
		2437	16.33	98.50	0.07	16.40	≤30.00	17.76	≤36.00	PASS
		2462	16.31	98.50	0.07	16.38	≤30.00	17.74	≤36.00	PASS
11N40SISO	Ant1	2422	14.79	98.48	0.07	14.86	≤30.00	16.22	≤36.00	PASS
		2437	14.84	98.48	0.07	14.91	≤30.00	16.27	≤36.00	PASS
		2452	14.87	98.48	0.07	14.94	≤30.00	16.30	≤36.00	PASS

Note: EIRP (dBm)=Conducted Output Power (dBm)+ Antenna Gain (dBi)

7. Power Spectral Density

7.1. Block diagram of test setup



7.2. Limits

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

7.3. Test procedure

(1) The test according to ANSI C63.10-2013 clause 11.10.5.

(2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results.

(3) Set the EUT as maximum power setting and enable the EUT transmit continuously.

(4) Use the following spectrum analyzer settings for Power Spectral Density measurement:

Center frequency	DTS Channel center frequency
RBW:	3 kHz ≤ RBW ≤ 100 kHz
VBW:	≥ 3RBW
Span	1.5 times the DTS bandwidth
Detector Mode:	RMS
Sweep time:	auto
Trace mode	max hold
Trace	Employ trace averaging (rms) mode over a minimum of 100 traces.

(5) Add [10 log (1 / D)], where D is the duty cycle measured in step a), to the measured PSD to compute the average PSD during the actual transmission time.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

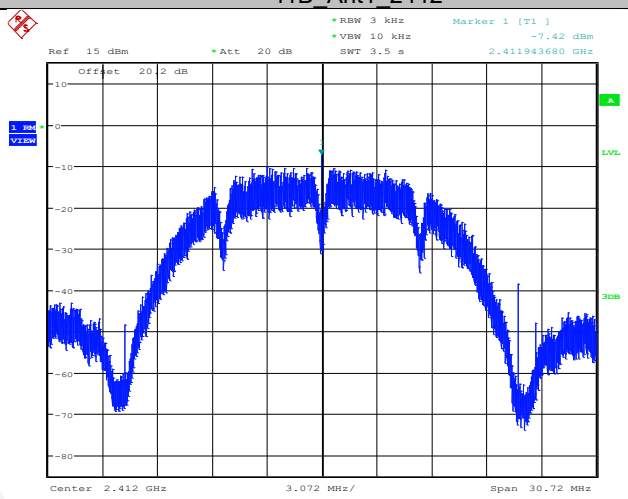
7.4. Test result

Test Mode	Antenna	Frequency [MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-7.42	≤8.00	PASS
		2437	-8.60	≤8.00	PASS
		2462	-7.20	≤8.00	PASS
11G	Ant1	2412	-13.09	≤8.00	PASS
		2437	-11.54	≤8.00	PASS
		2462	-11.56	≤8.00	PASS
11N20SISO	Ant1	2412	-12.67	≤8.00	PASS
		2437	-12.43	≤8.00	PASS
		2462	-12.49	≤8.00	PASS
11N40SISO	Ant1	2422	-15.51	≤8.00	PASS
		2437	-15.11	≤8.00	PASS
		2452	-15.77	≤8.00	PASS

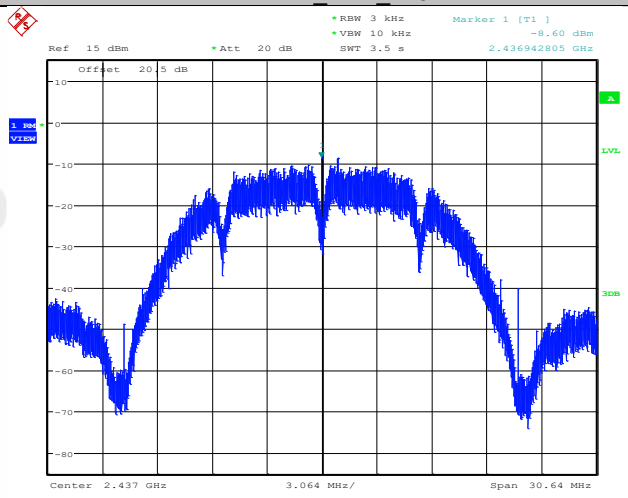
Note：The Duty Cycle Factor is compensated in the graph.

7.5. Test graphs

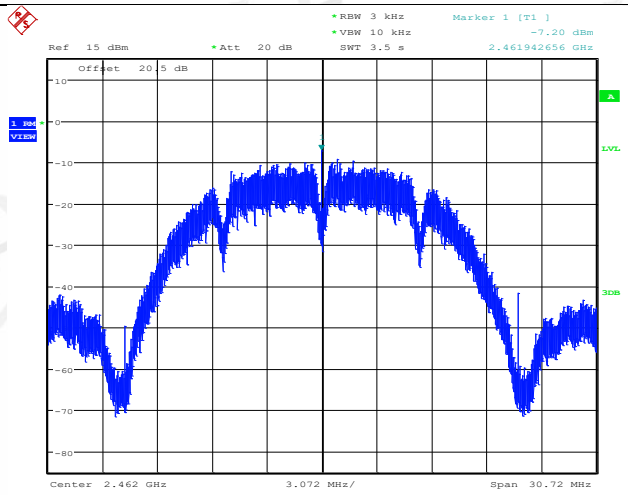
11B_Ant1_2412



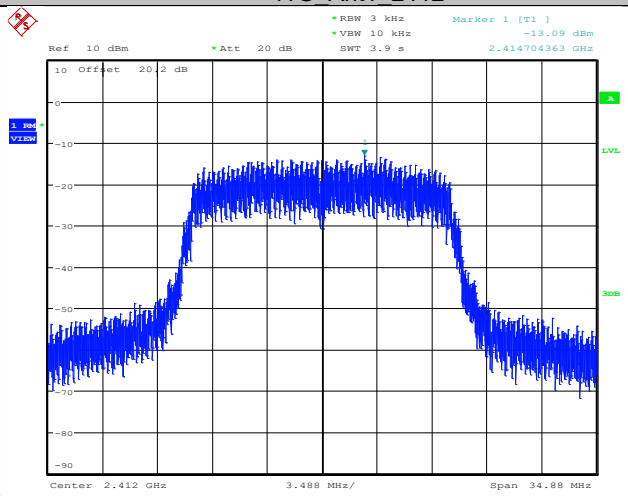
11B_Ant1_2437



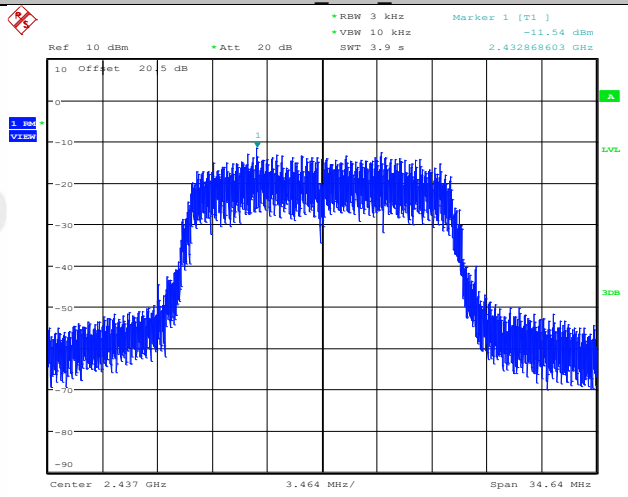
11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



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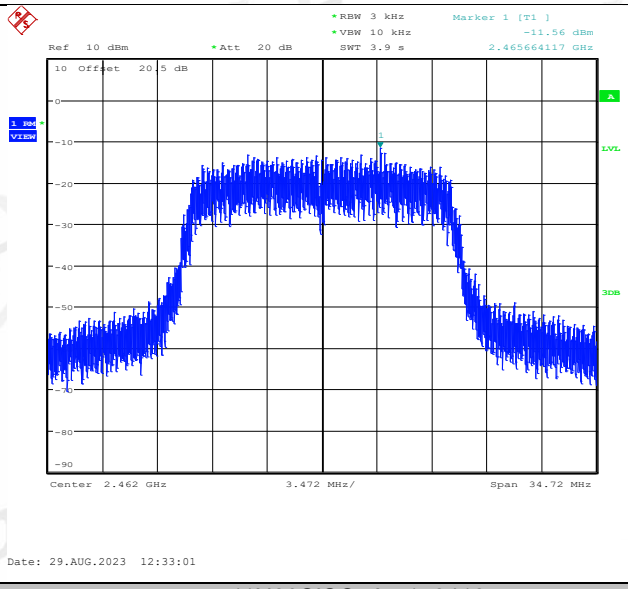

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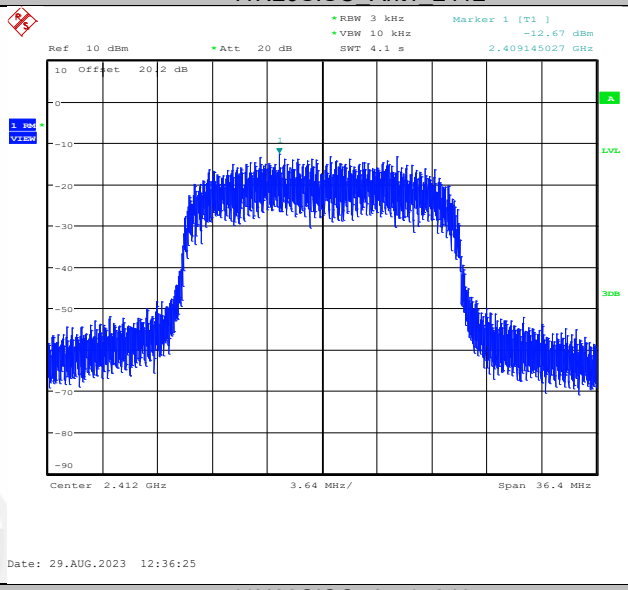

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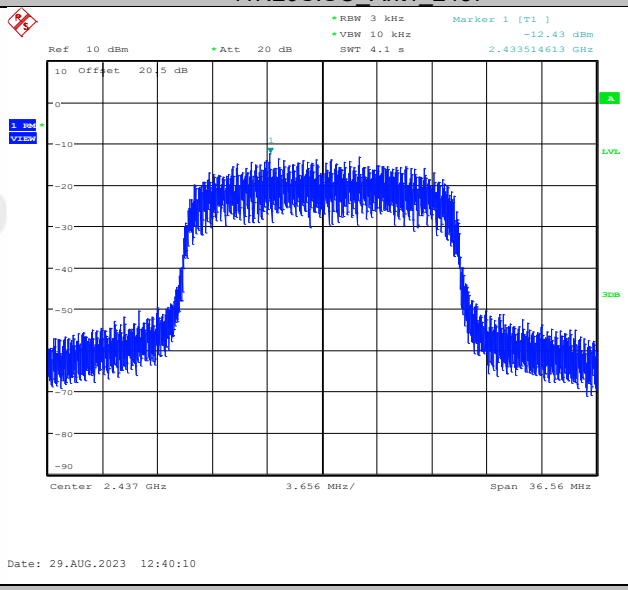

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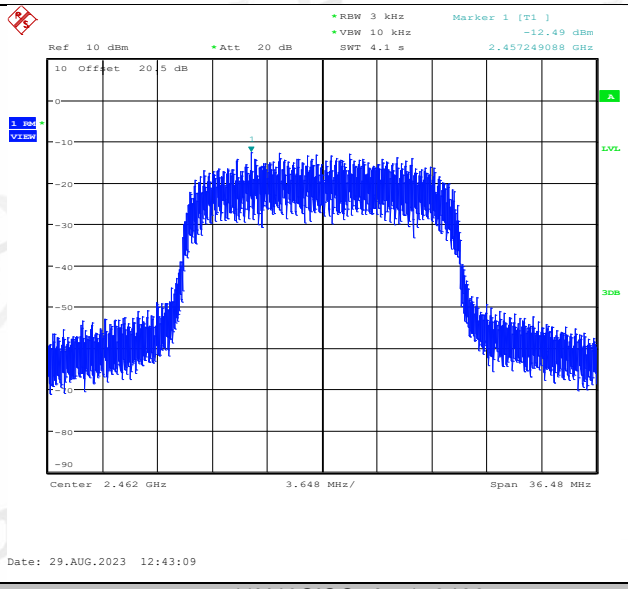

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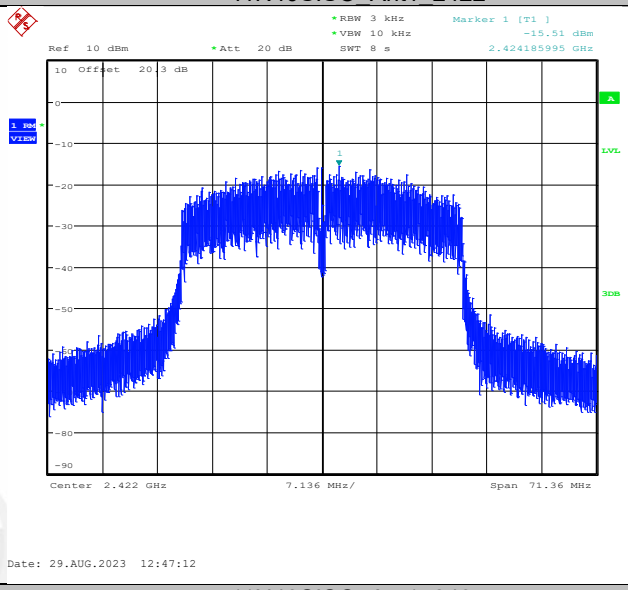

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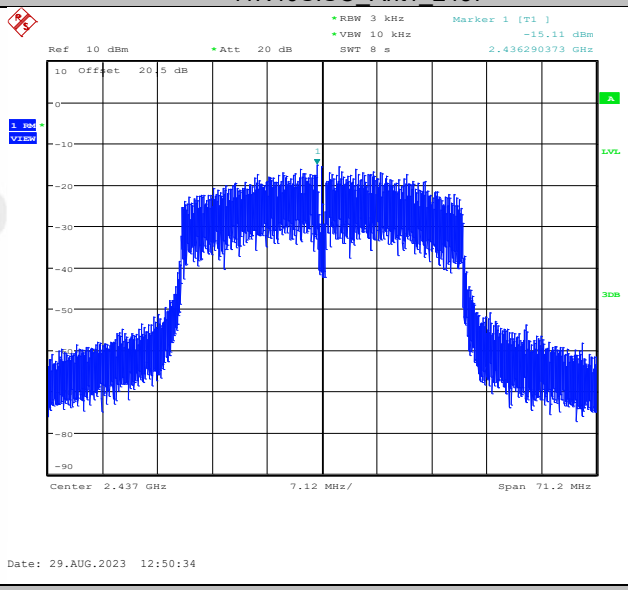

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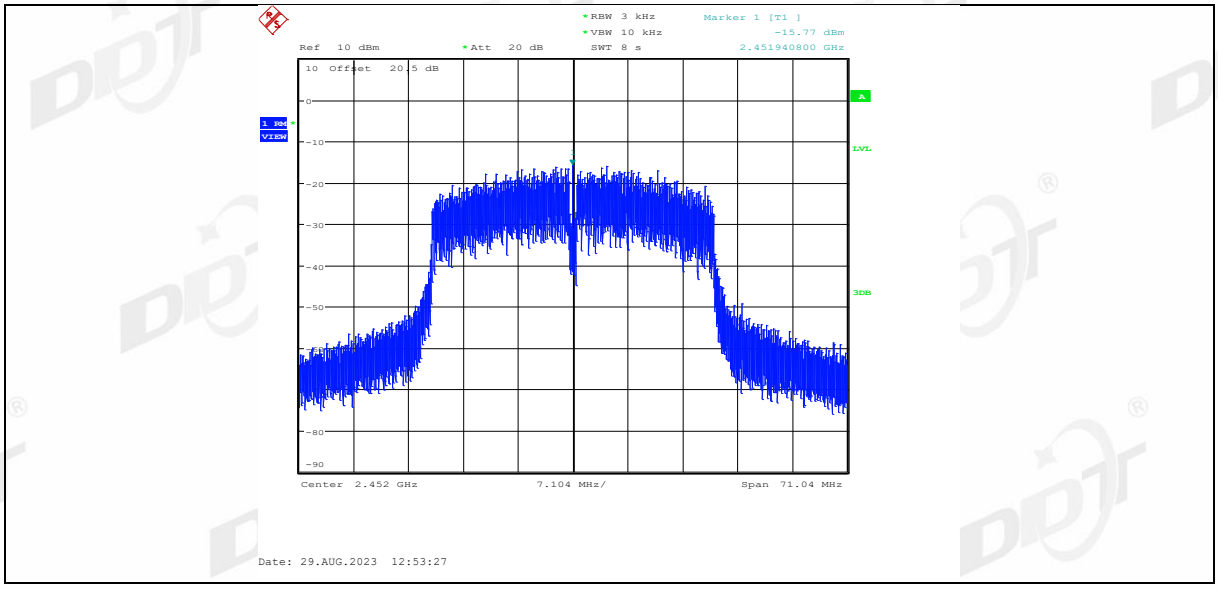
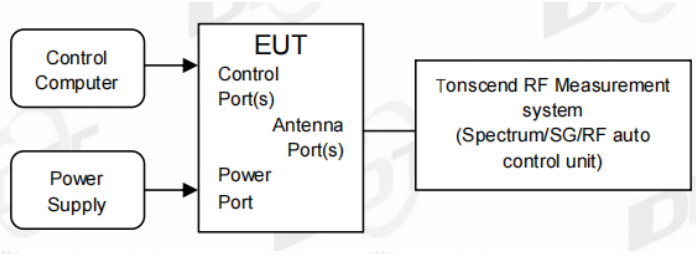

RBW 3 kHz
VBW 10 kHz
SWT 8 s
Marker 1 [T1]
-15.77 dBm
2.451940800 GHz
Ref 10 dBm
Att 20 dB
10 Offset 20.5 dB
1 RM
VIEW
A
LVL
3DB
0
-10
-20
-30
-40
-50
-80
-90
Center 2.452 GHz
7.104 MHz/
Span 71.04 MHz
Date: 29.AUG.2023 12:53:27

8. Band Edge Compliance (Conducted Method)

8.1. Block diagram of test setup



8.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

8.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

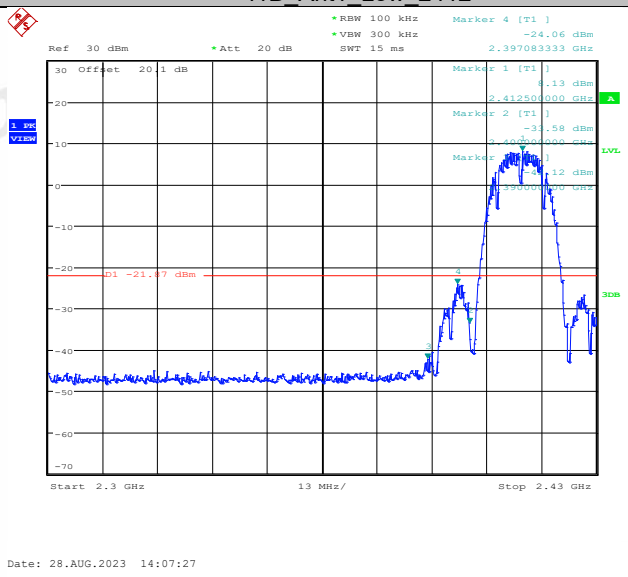
Then mark the maximum amplitude of all unwanted emissions outside of the authorized frequency band.

8.4. Test result

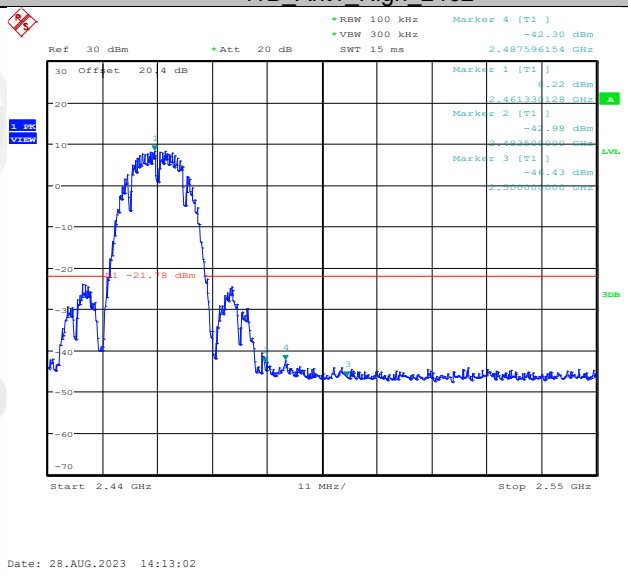
EUT Set Mode	CH or Frequency	Result (dBm)	EUT Set Mode	CH or Frequency	Result (dBm)
11b	CH1	Pass	11g	CH1	Pass
	CH11	Pass		CH11	Pass
11n HT 20	CH1	Pass	11n HT 40	CH3	Pass
	CH11	Pass		CH9	Pass

8.5. Test graphs

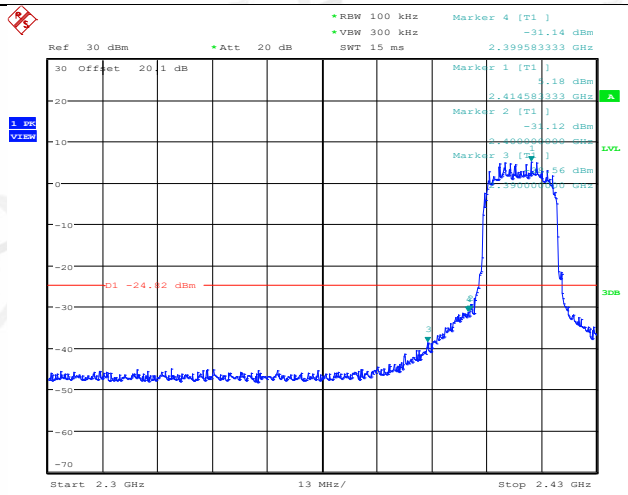
11B_Ant1_Low_2412



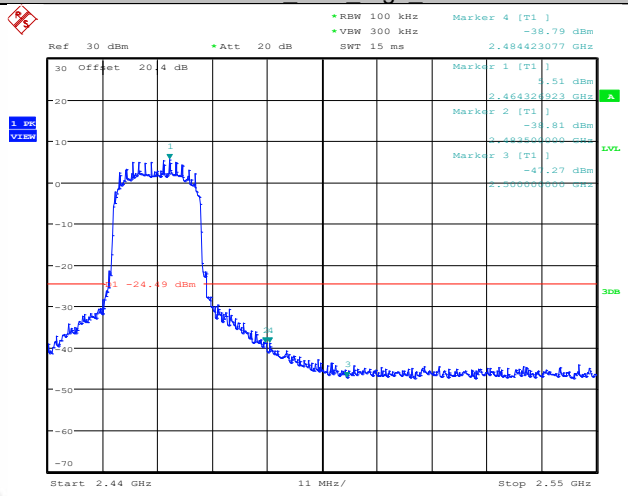
11B_Ant1_High_2462



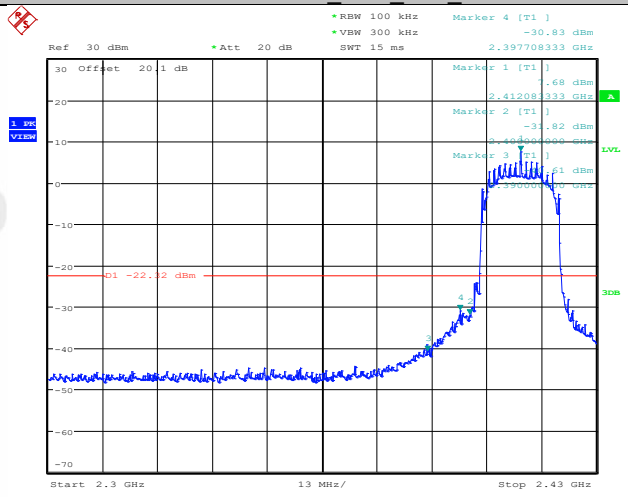
11G_Ant1_Low_2412



11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412



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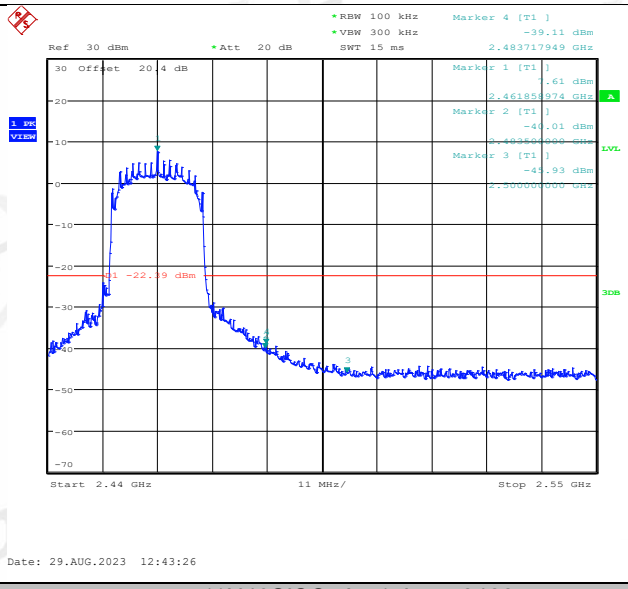
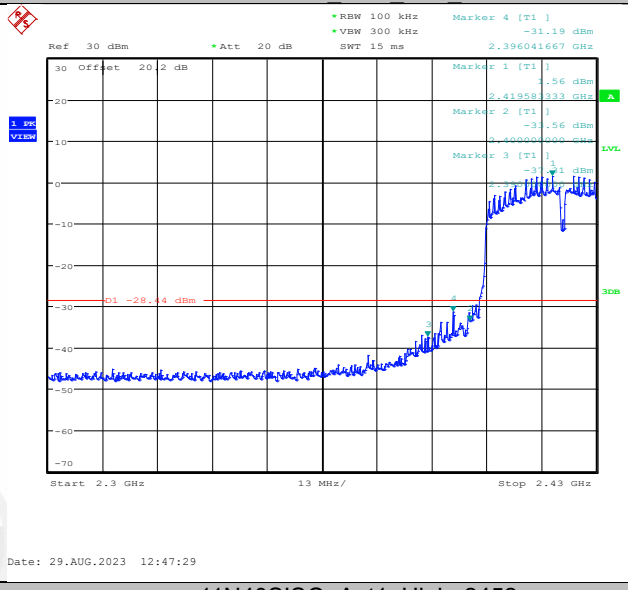
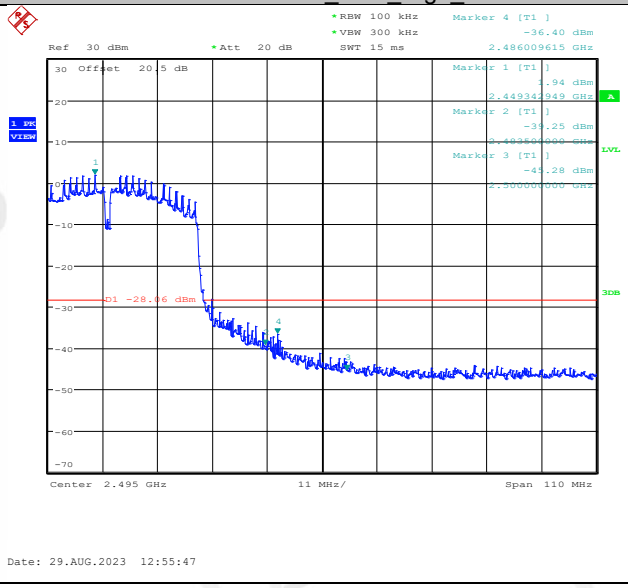


11N40SISO_Ant1_Low_2422

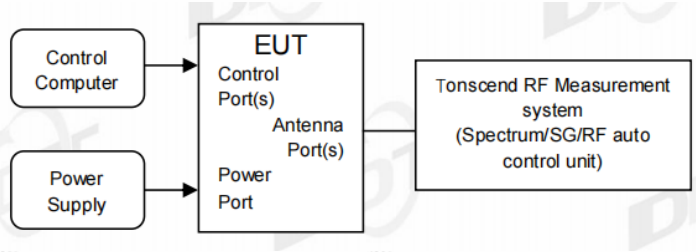


11N40SISO_Ant1_High_2452



9. RF Conducted Spurious Emissions

9.1. Block diagram of test setup



9.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

9.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

Center frequency	Test frequency
RBW:	100 kHz
VBW:	300 kHz
Span	Wide enough to capture the peak level of the in-band emission
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

(4) Set the spectrum analyzer as follows:

RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Number of measurement points	≥Span/RBW
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

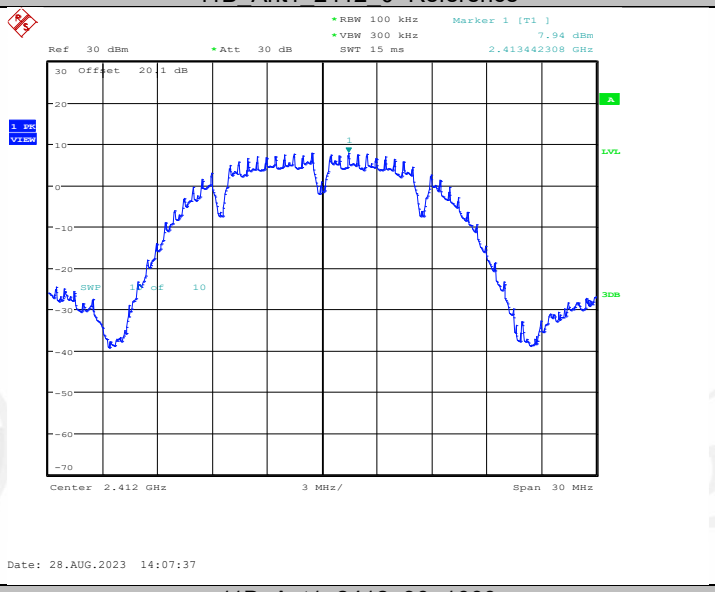
(5) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

9.4. Test result

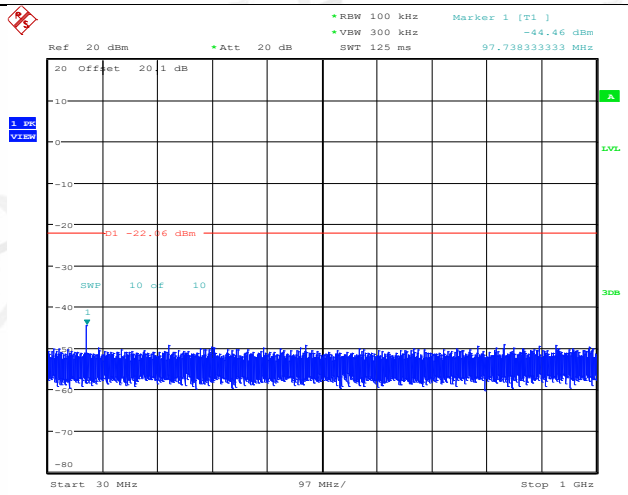
EUT Set Mode	CH or Frequency	Result (dBm)	EUT Set Mode	CH or Frequency	Result (dBm)
11b	CH1	Pass	11g	CH1	Pass
	CH6	Pass		CH6	Pass
	CH11	Pass		CH11	Pass
11n HT 20	CH1	Pass	11n HT 40	CH3	Pass
	CH6	Pass		CH6	Pass
	CH11	Pass		CH9	Pass

9.5. Test graphs

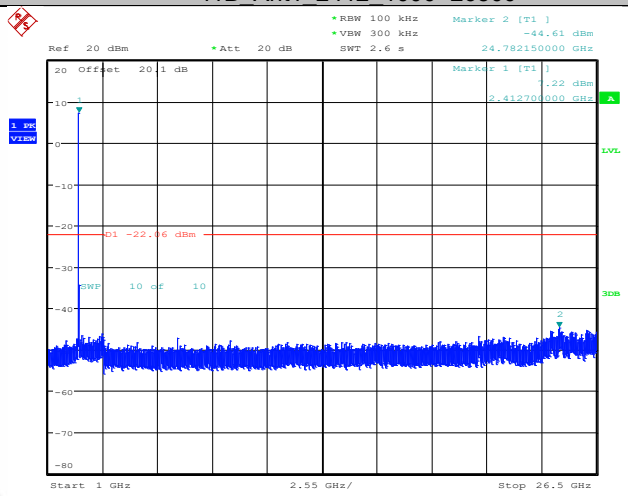
11B_Ant1_2412_0~Reference



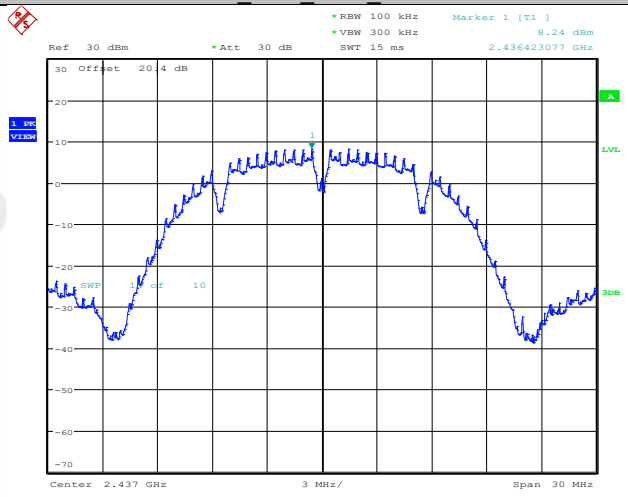
11B_Ant1_2412_30~1000



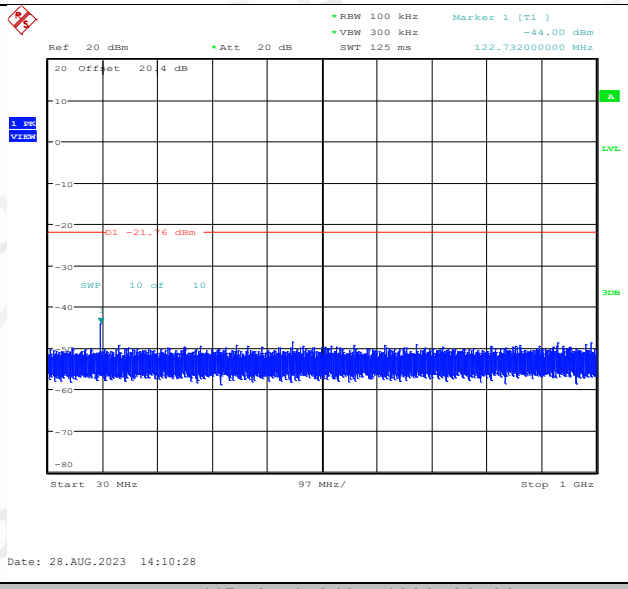
11B_Ant1_2412_1000~26500



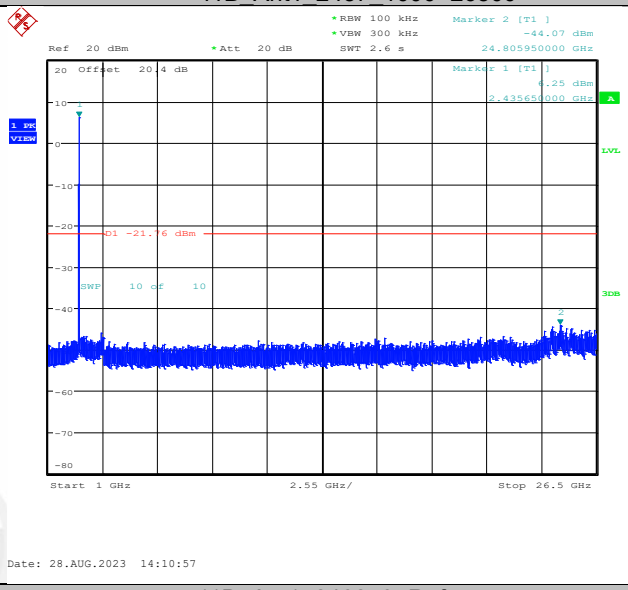
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



11B_Ant1_2437_1000~26500



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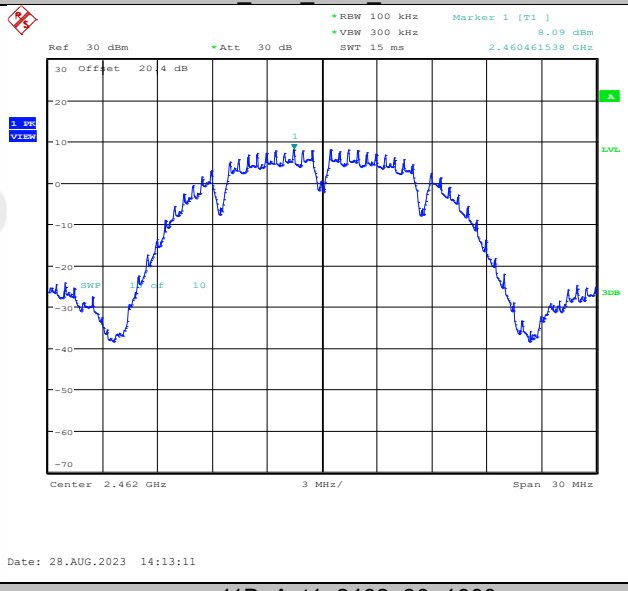
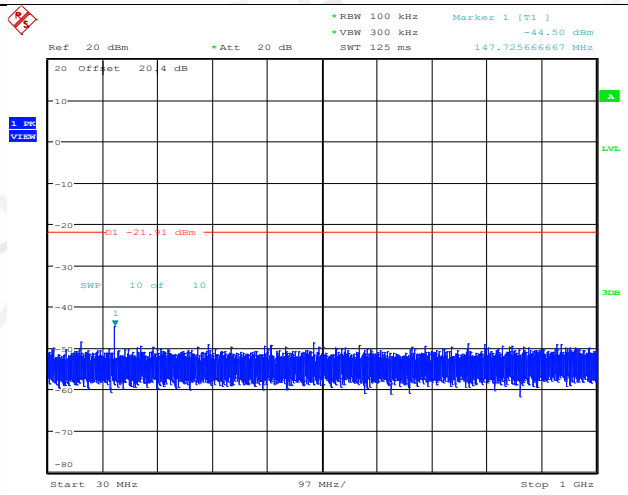
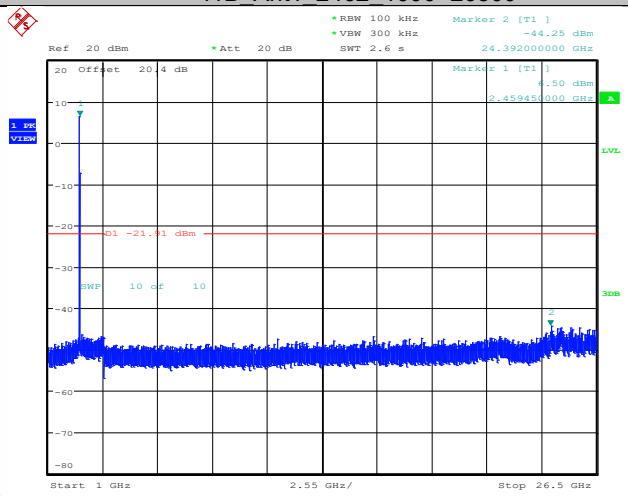


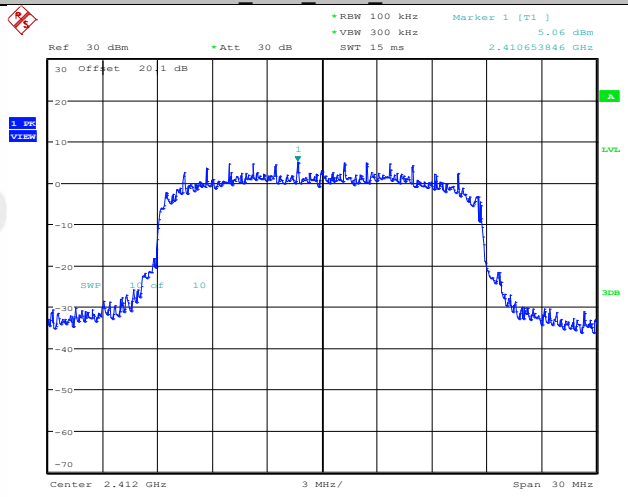
11B_Ant1_2462_30~1000



11B_Ant1_2462_1000~26500



11G_Ant1_2412_0~Reference



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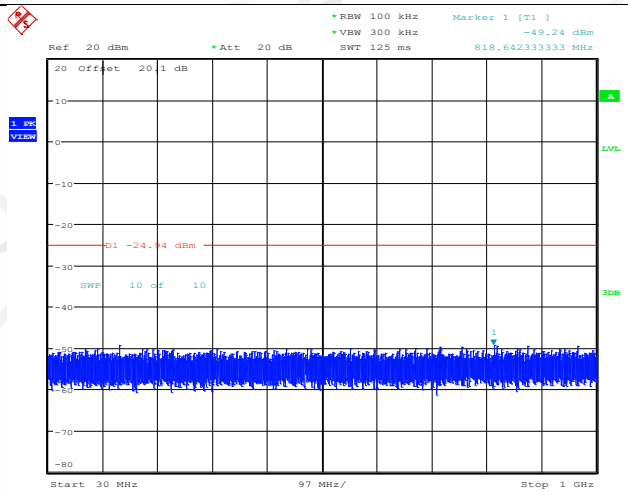

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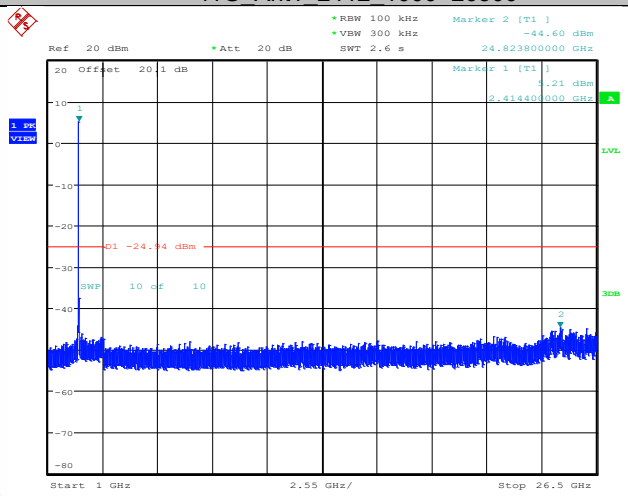

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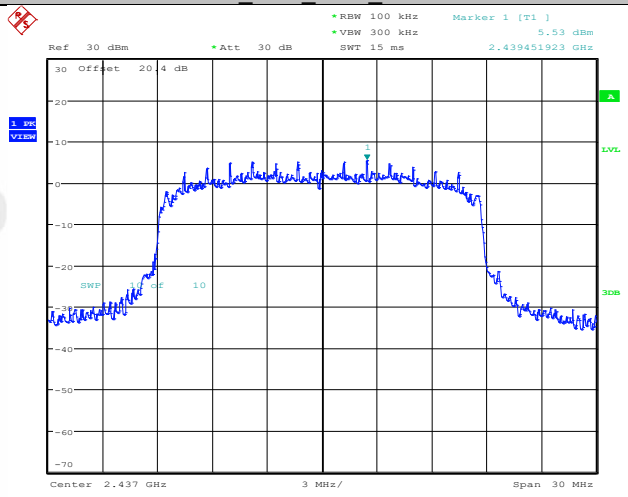

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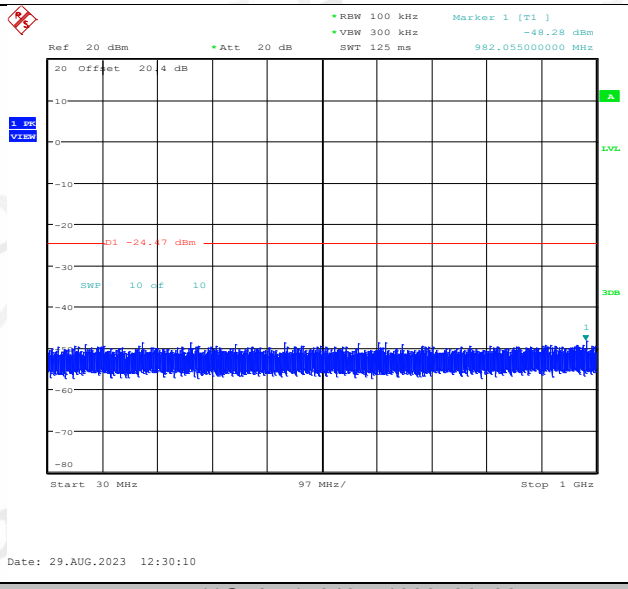

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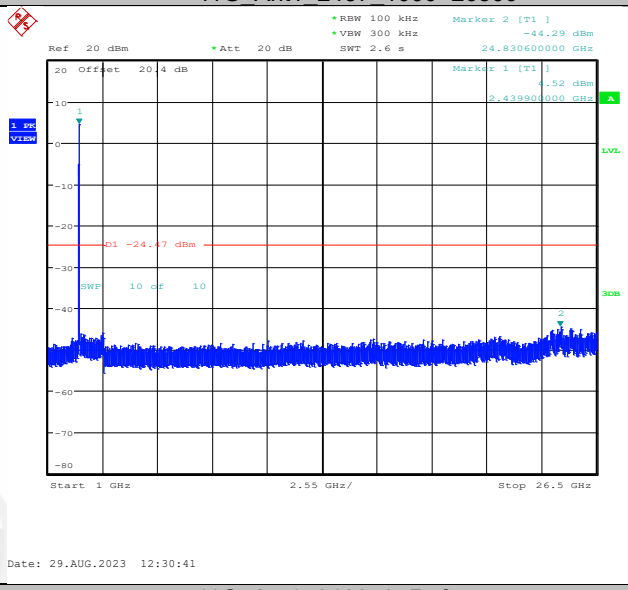

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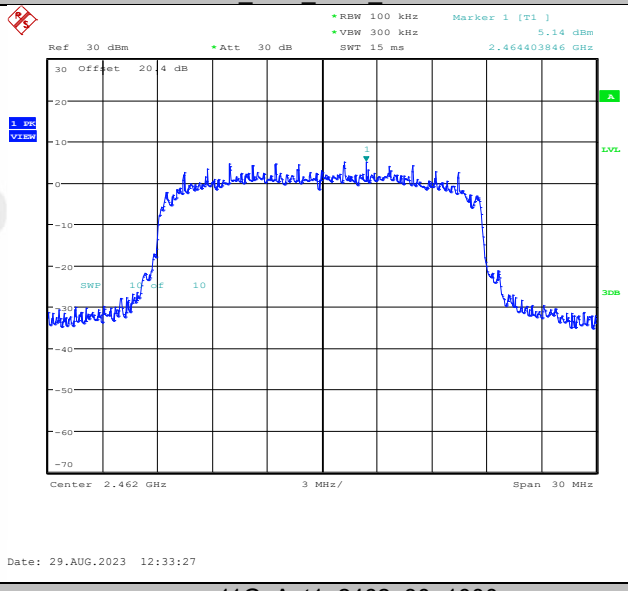

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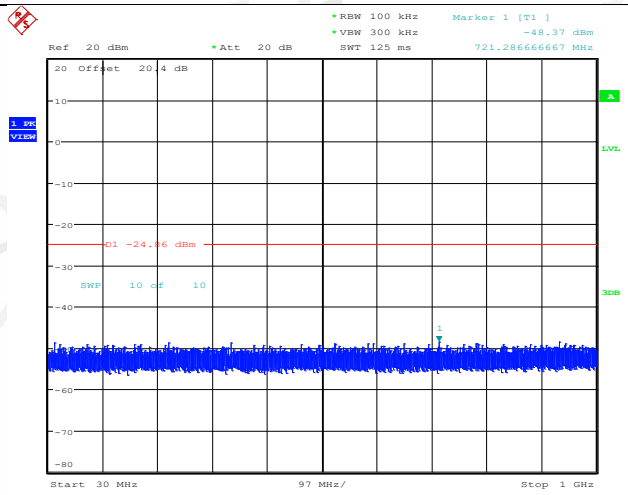

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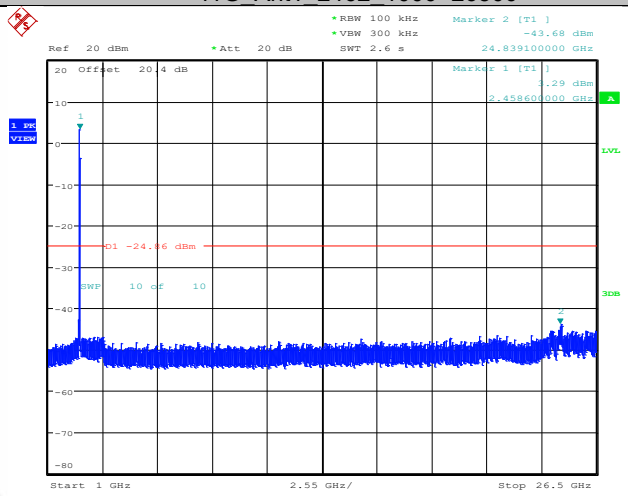

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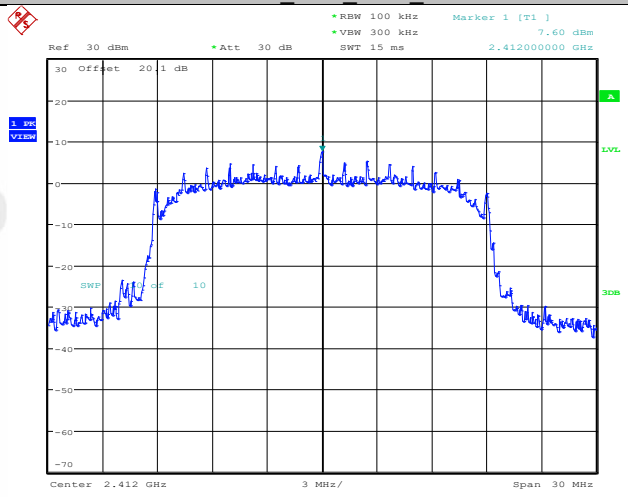

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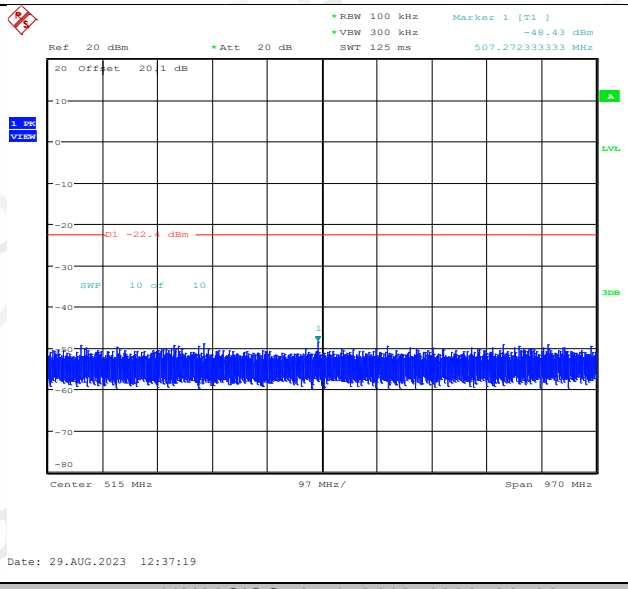

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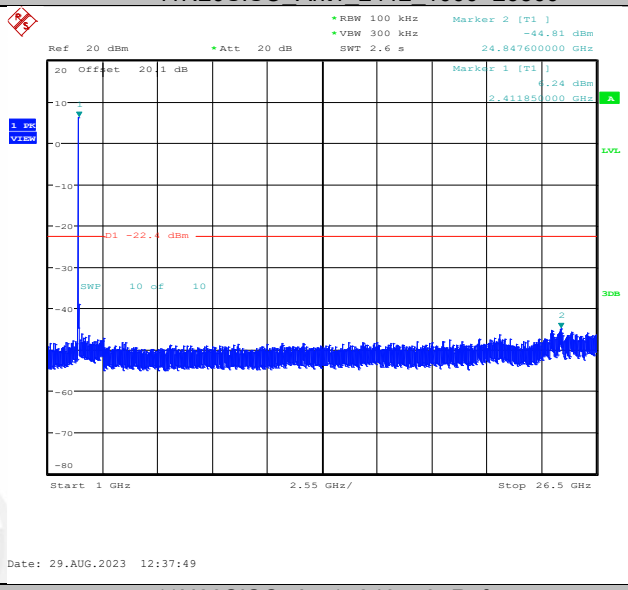

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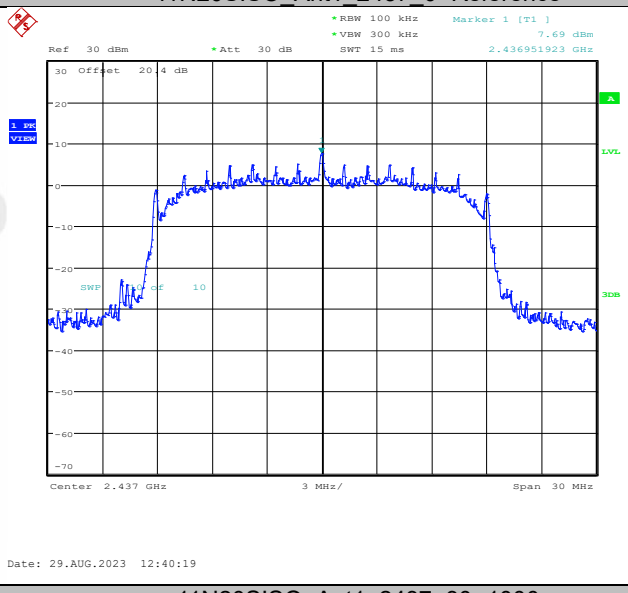

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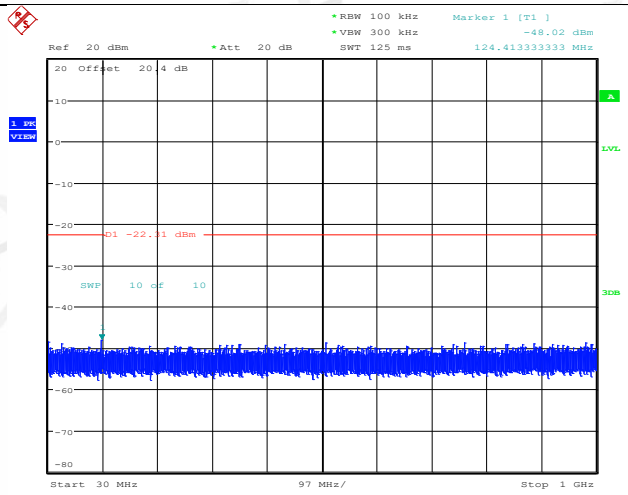

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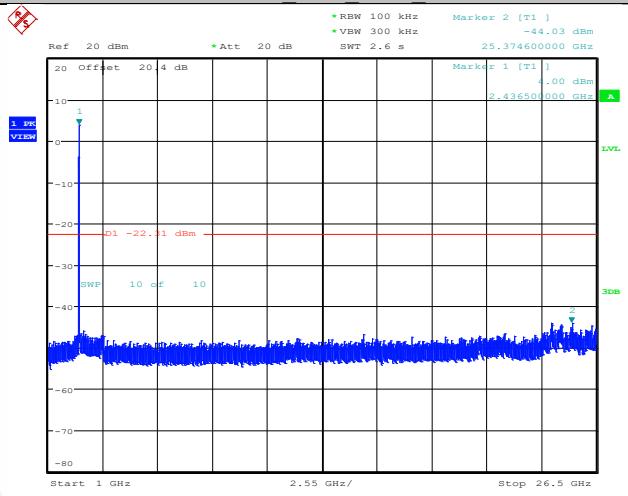

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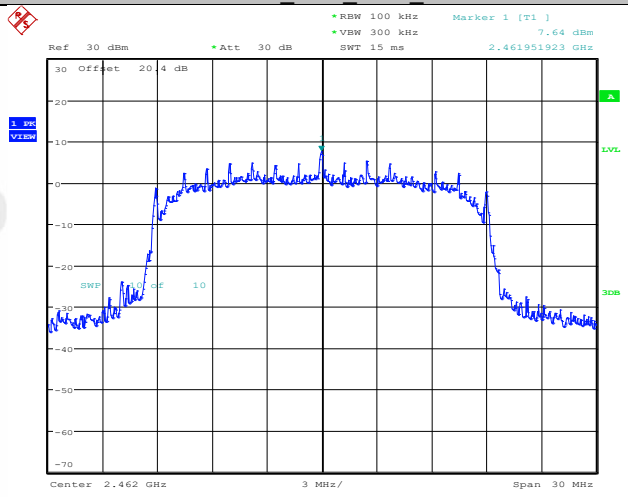
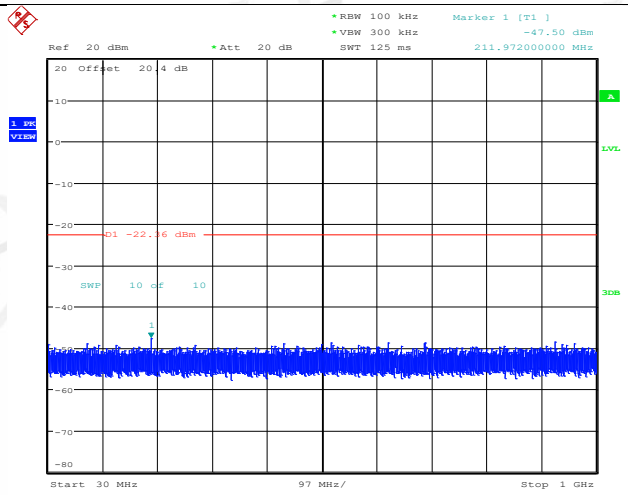


11N20SISO_Ant1_2462_30~1000



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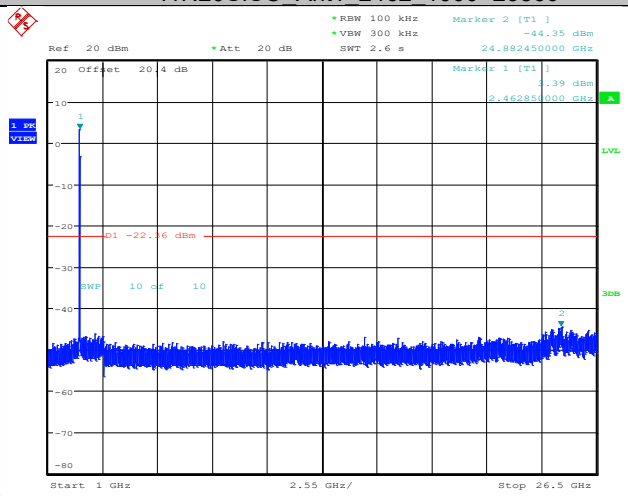

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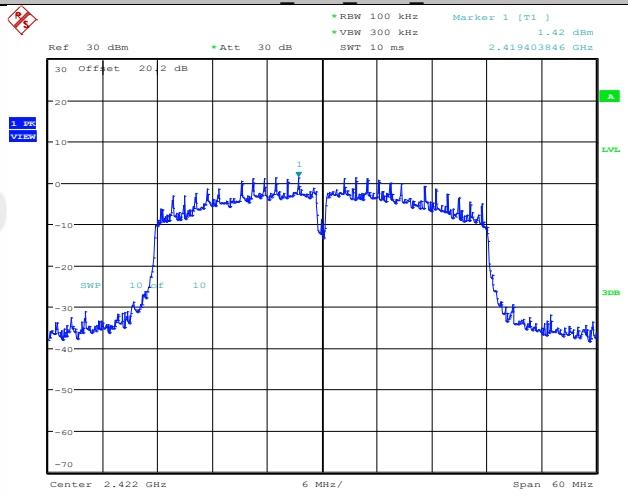

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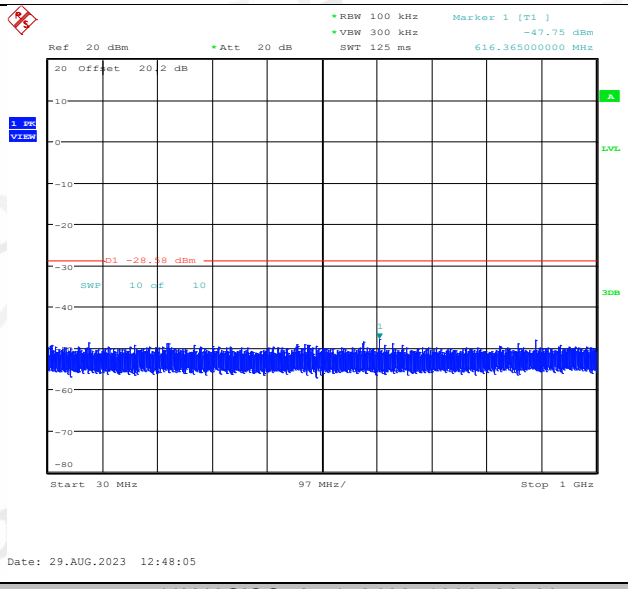

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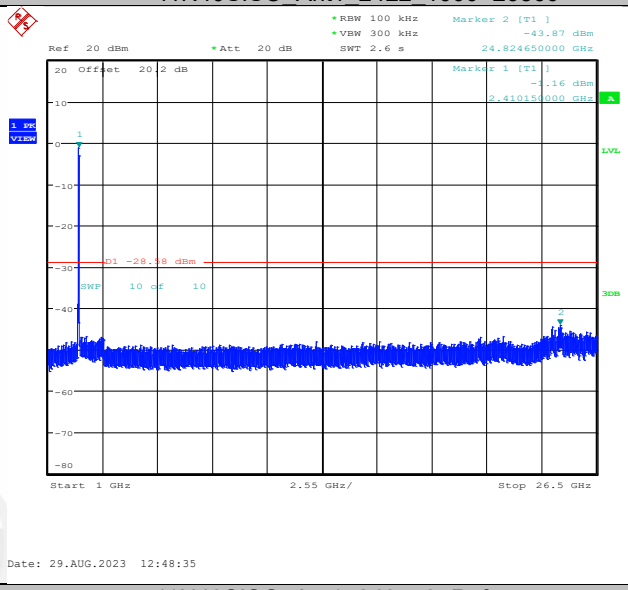

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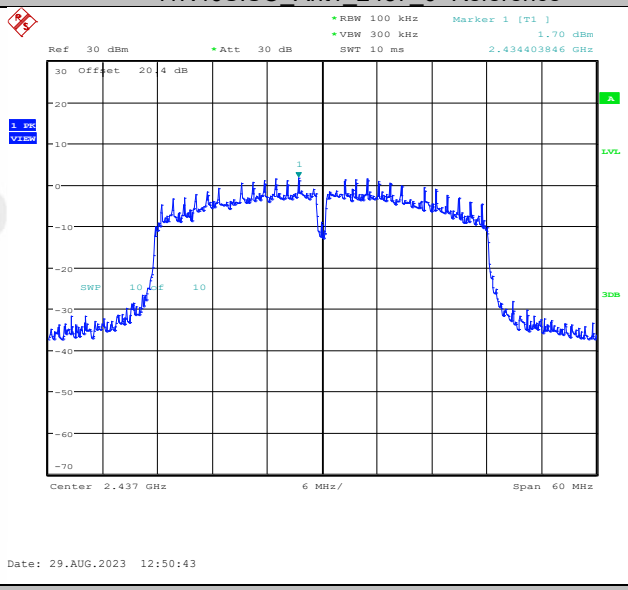

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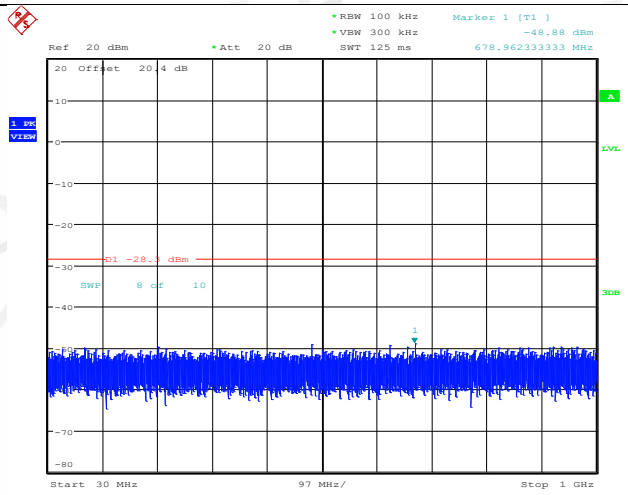

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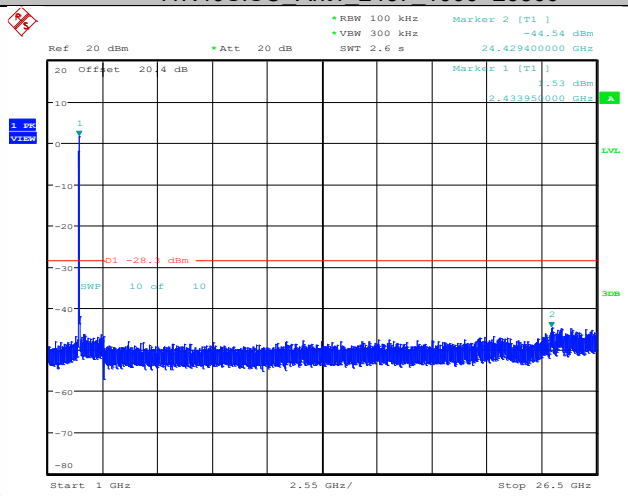
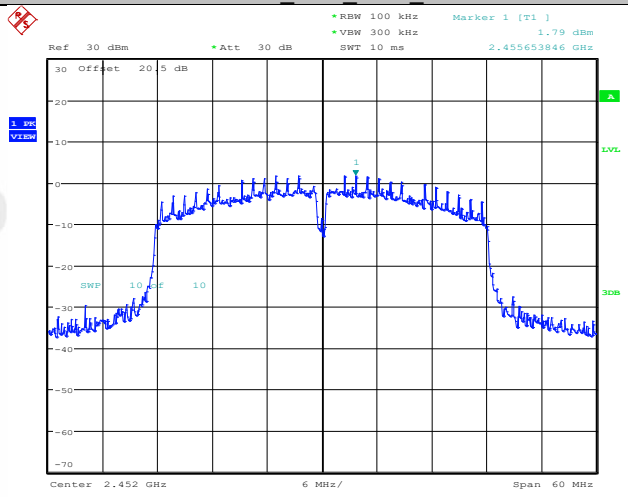


11N40SISO_Ant1_2452_0~Reference



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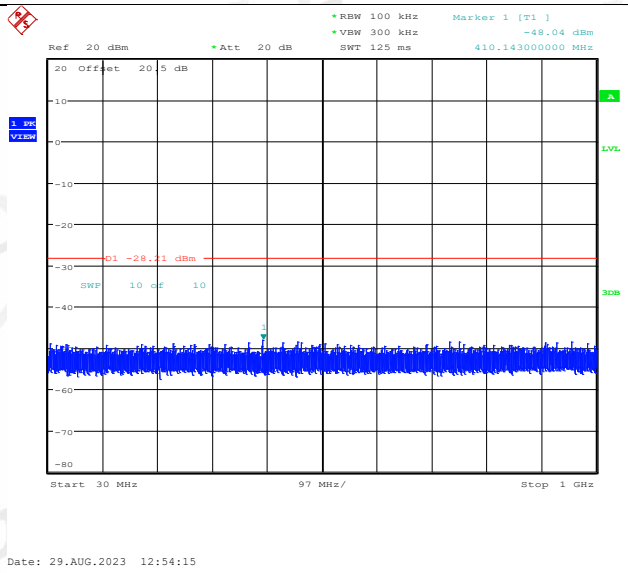

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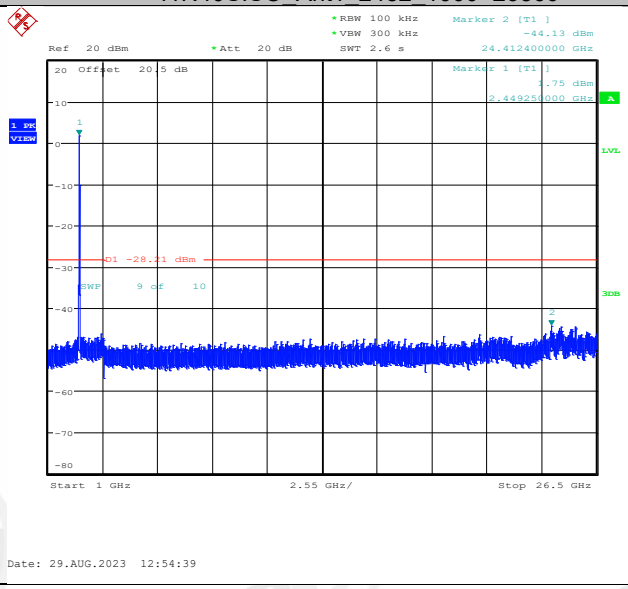
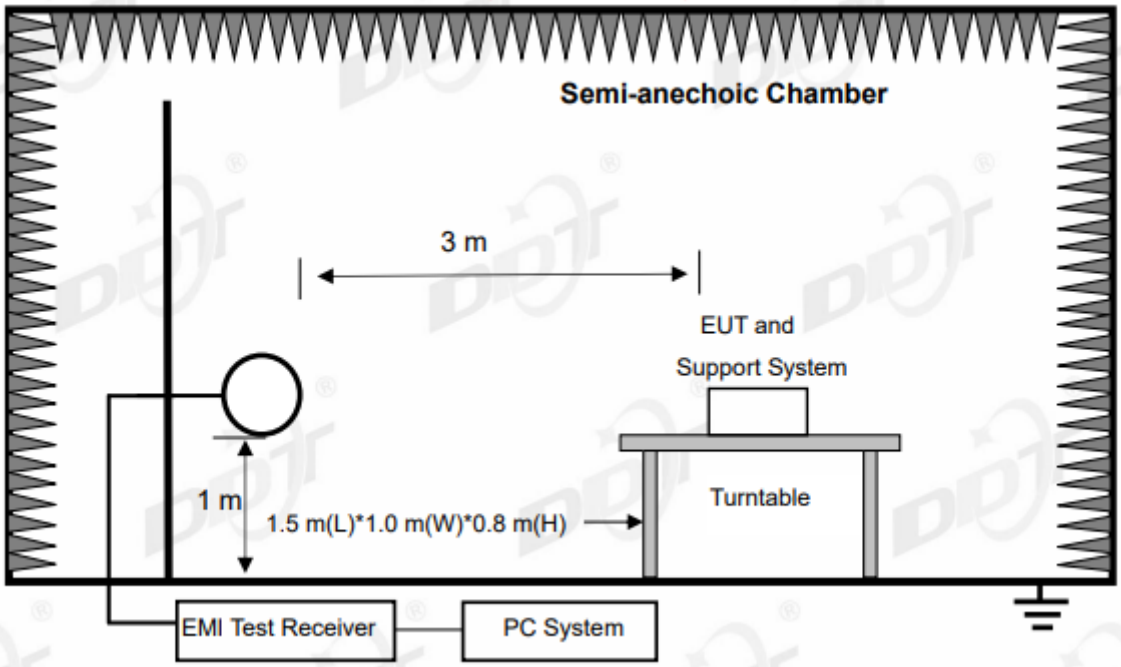


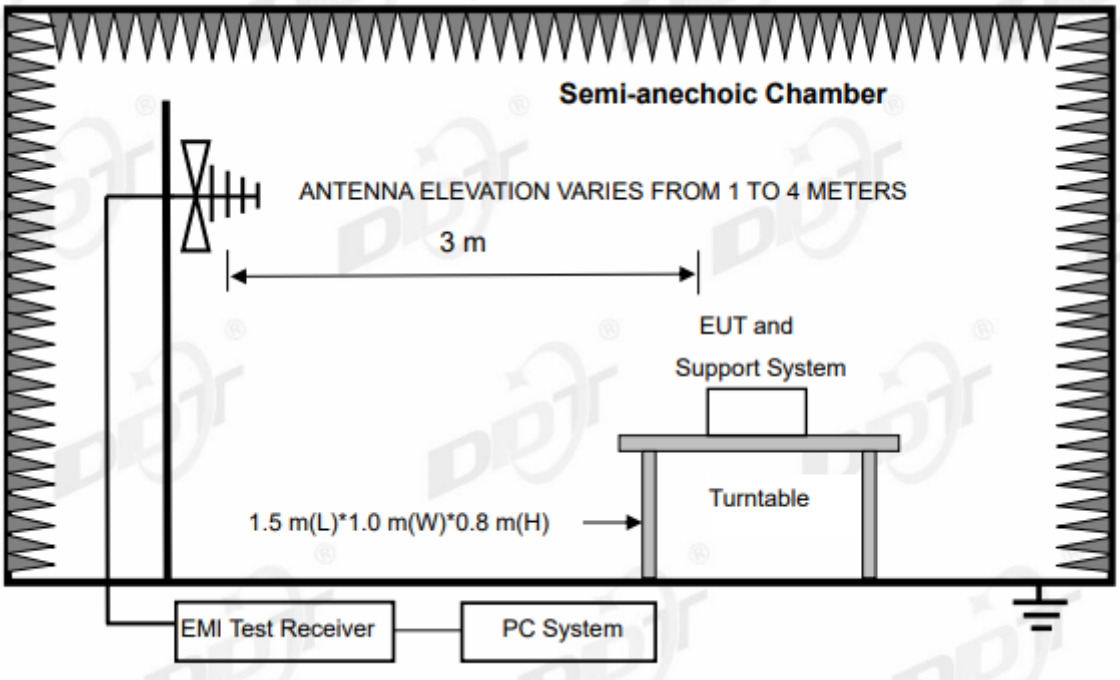
10. Radiated Spurious Emissions

10.1. Block diagram of test setup

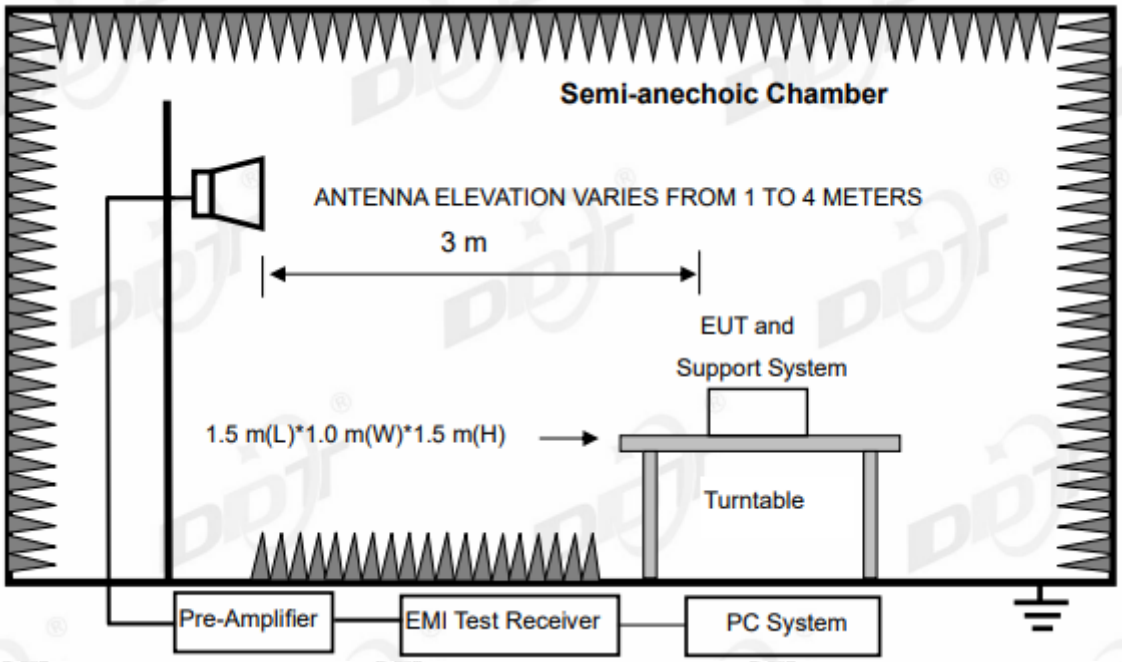
In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



In 3 m Anechoic Chamber, test setup diagram for 30 MHz - 1 GHz:



In 3 m Anechoic Chamber, test setup diagram for frequency above 1 GHz:



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

10.2. Limit

(1) FCC 15.205 Restricted frequency band:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2]Above 38.6

RSS-Gen section 8.10 Restricted frequency bands*

MHz	MHz	MHz	GHz
0.090-0.110	12.51975-12.52025	240-285	3.5-4.4
0.495-0.505	12.57675-12.57725	322-335.4	4.5-5.15
2.1735-2.1905	13.36-13.41	399.9-410	5.35-5.46
3.020-3.026	16.42-16.423	608-614	7.25-7.75
4.125-4.128	16.69475-16.69525	960-1427	8.025-8.5
4.1772&4.17775	16.80425-16.80475	1435-1626.5	9.0-9.2
4.2072&4.20775	25.5-25.67	1645.5-1646.5	9.3-9.5
5.677-5.683	37.5-38.25	1660-1710	10.6-12.7
6.215-6.218	73-74.6	1718.8-1722.2	13.25-13.4
6.26775-6.26825	74.8-75.2	2200-2300	14.47-14.5
6.31175-6.31225	108-138	2310-2390	15.35-16.2
8.291-8.294	149.9-150.05	2483.5-2500	17.7-21.4
8.362-8.366	156.52475-156.52525	2655-2900	22.01-23.12
8.37625-8.38675	156.7-156.9	3260-3267	23.6-24.0
8.41425-8.41475	162.0125-167.17	3332-3339	31.2-31.8
12.29-12.293	167.72-173.2	3345.8-3358	36.43-36.5
			Above 38.6

* Certain frequency bands listed in table and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

(2) FCC 15.209 Limit.

Frequency (MHz)	Measurement distance (meters)	Field strength limit	
		μV/m	dB(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak), 54.0 dB(μV)/m (Average)	

Note:

(1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000MHz, radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$Limit_{3m}(dBuV/m) = Limit_{30m}(dBuV/m) + 40Log(30m/3m)$$

(3) Limit for this EUT

The emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, and the emissions appearing within RSS-Gen section 8.10 Restricted frequency bands shall not exceed the limits shown in RSS-Gen section 8.9, all the other emissions shall be at least 20 dB below the fundamental emissions or comply with 15.209 limits and RSS-Gen section 8.9 limits.

10.3. Test procedure

(1) EUT height should be 0.8 m for below 1 GHz at a semi‐anechoic chamber while EUT height should be 1.5 m for above 1 GHz at full chamber or semi‐anechoic chamber ground with absorbers.

(2) The antenna used as below table.

Test frequency range	Test antenna used	Test antenna distance
9kHz-30MHz	Active Loop antenna	3m
30MHz-1GHz	Trilog Broadband Antenna	3m
1GHz-18GHz	Double Ridged Horn Antenna (1GHz-18GHz)	3m
18GHz-40GHz	Horn Antenna (18GHz-40GHz)	1m

According ANSI C63.10:2013 clause 6.4.6 and 6.5.3, for measurements below 30 MHz, Antenna was located 3 m from EUT, the loop antenna was positioned in three antenna orientations (parallel, perpendicular, and round-parallel), for each measurement antenna alignment, the EUT shall be rotated through 0°to 360°on a turntable, and the lowest height of the magnetic antenna shall be 1 m above the ground. For measurement above 30MHz, the trilog Broadband Antenna or Horn Antenna was located 3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 25 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 25 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 18GHz to 25GHz, so below final test was performed with frequency range from 9kHz to 18GHz.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 2013 on Radiated Emission test.

(5) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9-90 kHz, 110-490 kHz, for emissions from 9 kHz-90 kHz,110 kHz-490 kHz and above 1 GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW

Frequency band	RBW
9 kHz-150 kHz	200 Hz
150 kHz-30 MHz	9 kHz
30 MHz-1 GHz	120 kHz

(7) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz, VBW is set at 3 MHz for Peak measure; RMS detector RBW 1 MHz VBW 10 Hz for Average measure (according ANSI C63.10:2013 clause 4.2.3.2.3 procedure for average measure).

(8) For portable device, X axis, Y axis, Z axis are tested, and worse axis is reported.

10.4. Test result

Pass. (See below detailed test result)

All the emissions except fundamental emission from 9 kHz to 25 GHz were comply with 15.209 limits and RSS-Gen section 8.9 limits.

Note 1: According exploratory test, the emission levels are 20 dB below the limit detected from 9 kHz to 30 MHz and 18 GHz to 25 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

Note 2: 30 MHz ~ 25 GHz: (Scan with all mode, the worst case is 802.11b mode.

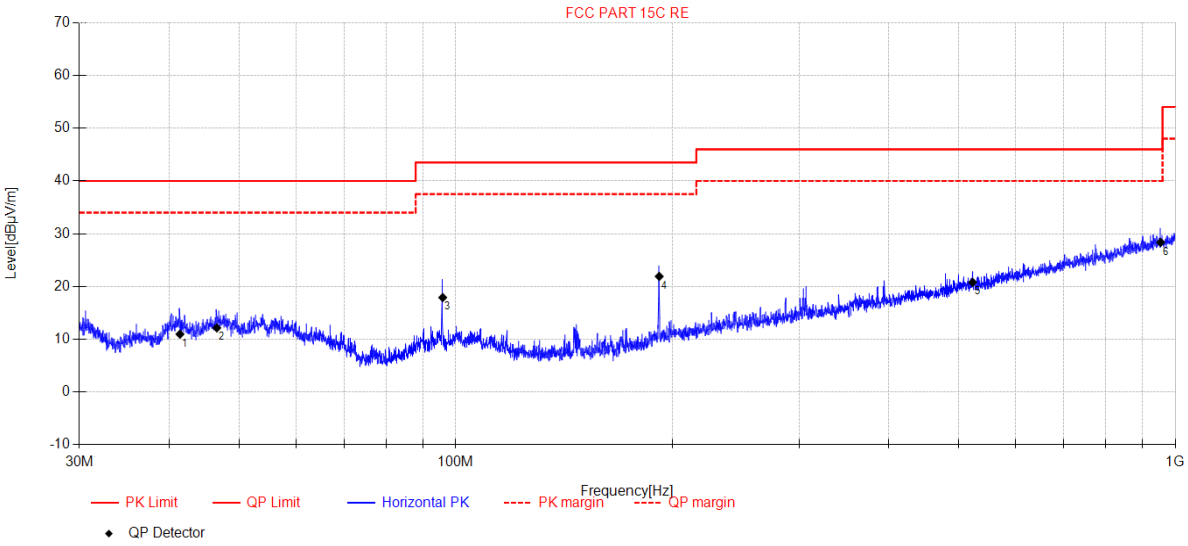
Note 3: For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in 802.11b Tx 2412 MHz mode.

Note 4: For emissions above 1 GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit, only recorded the worst case in this report.

Radiated Emission test (below 1GHz)

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-09-01	**Tested By**:	Bairong
EUT:	Ceiling fan	**Model Number**:	GE27105(27105)
Test Mode:	TX Mode	**Power Supply**:	Battery
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC BELOW 1G\20230901-000133_H		
Memo:	2.4GWIFI		

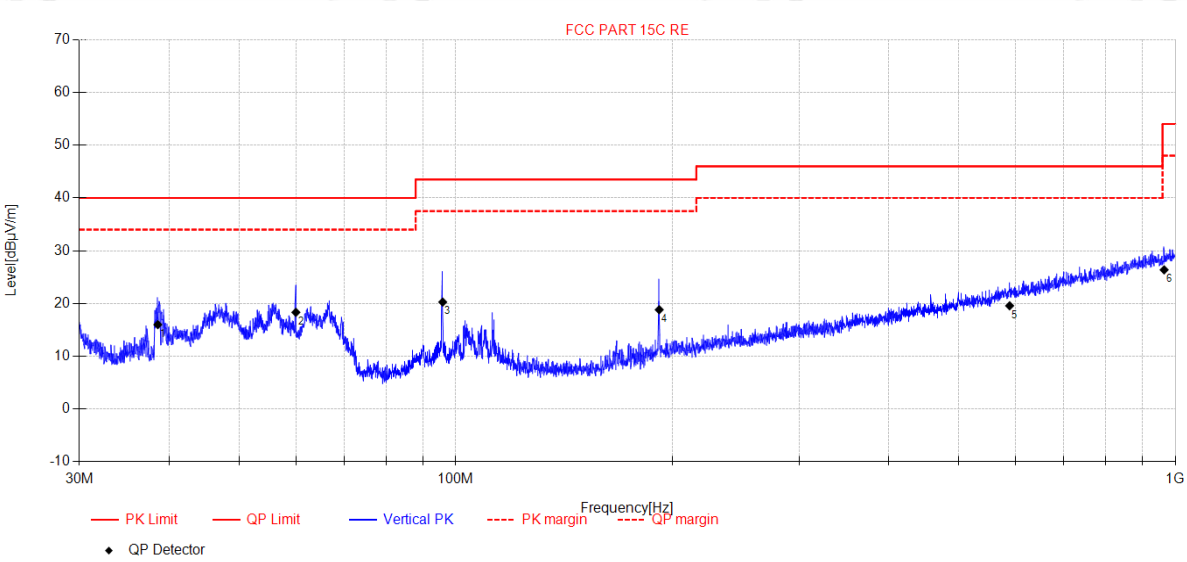


Final Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable Loss [dB]**	**AMP [dB]**	**Result [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	41.39	24.79	12.38	4.62	-30.83	10.96	40.00	29.04	QP	Horizontal
2	46.56	25.05	13.16	4.69	-30.75	12.15	40.00	27.85	QP	Horizontal
3	95.94	33.21	10.49	5.02	-30.82	17.90	43.50	25.60	QP	Horizontal
4	191.81	36.49	10.38	5.66	-30.62	21.91	43.50	21.59	QP	Horizontal
5	522.79	26.3	17.36	7.02	-29.90	20.78	46.00	25.22	QP	Horizontal
6	954.11	25.64	22.70	8.53	-28.51	28.36	46.00	17.64	QP	Horizontal

Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-09-01	**Tested By**:	Bairong
EUT:	Ceiling fan	**Model Number**:	GE27105(27105)
Test Mode:	TX Mode	**Power Supply**:	Battery
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC BELOW 1G\20230901-000217_V		
Memo:	2.4GWIFI		

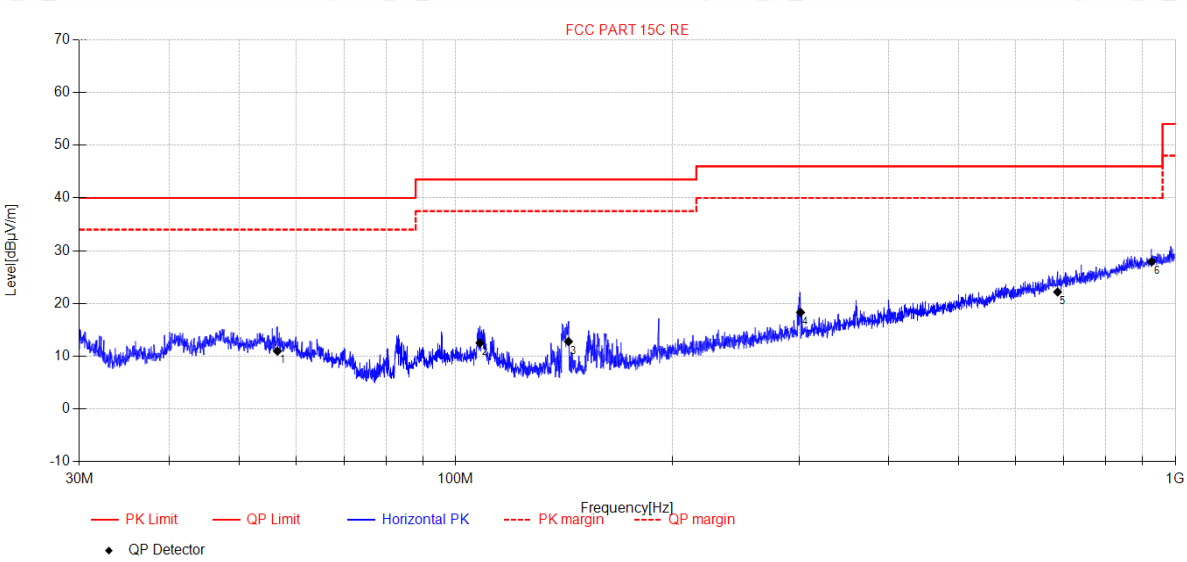


Final Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable Loss [dB]**	**AMP [dB]**	**Result [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	38.56	30.47	11.81	4.58	-30.87	15.99	40.00	24.01	QP	Vertical
2	59.98	32.29	11.90	4.76	-30.63	18.32	40.00	21.68	QP	Vertical
3	95.94	35.58	10.49	5.02	-30.82	20.27	43.50	23.23	QP	Vertical
4	191.81	33.4	10.38	5.66	-30.62	18.82	43.50	24.68	QP	Vertical
5	588.55	23.72	18.47	7.28	-29.90	19.57	46.00	26.43	QP	Vertical
6	964.87	23.43	22.80	8.57	-28.42	26.38	54.00	27.62	QP	Vertical

Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-09-01	**Tested By**:	Bairong
EUT:	Fan lamp	**Model Number**:	GE27107(27107)
Test Mode:	TX Mode	**Power Supply**:	Battery
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC BELOW 1G\20230901-001224_H		
Memo:	2.4GWIFI		



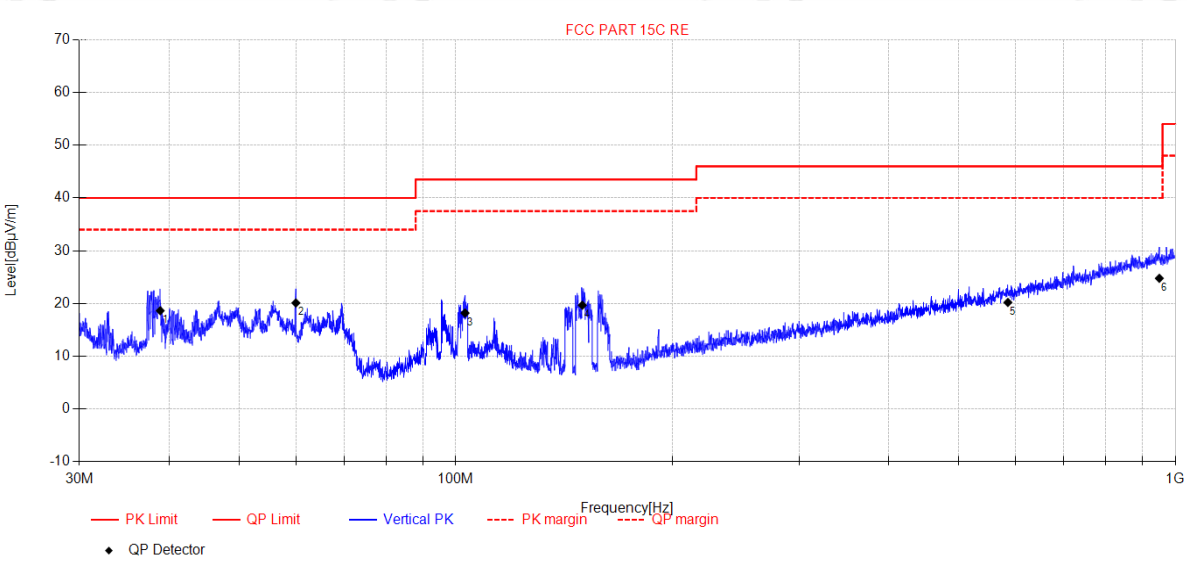
Final Data List

NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	56.55	24.43	12.45	4.75	-30.66	10.97	40.00	29.03	QP	Horizontal
2	108.09	27.6	10.69	5.11	-30.88	12.52	43.50	30.98	QP	Horizontal
3	143.48	30.86	7.40	5.29	-30.77	12.78	43.50	30.72	QP	Horizontal
4	301.49	29.12	13.33	6.16	-30.30	18.31	46.00	27.69	QP	Horizontal
5	686.24	24.56	19.82	7.70	-29.90	22.18	46.00	23.82	QP	Horizontal
6	927.07	25.75	22.50	8.43	-28.76	27.92	46.00	18.08	QP	Horizontal

Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-09-01	**Tested By**:	Bairong
EUT:	Fan lamp	**Model Number**:	GE27107(27107)
Test Mode:	TX Mode	**Power Supply**:	Battery
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC BELOW 1G\20230901-001309_V		
Memo:	2.4GWIFI		

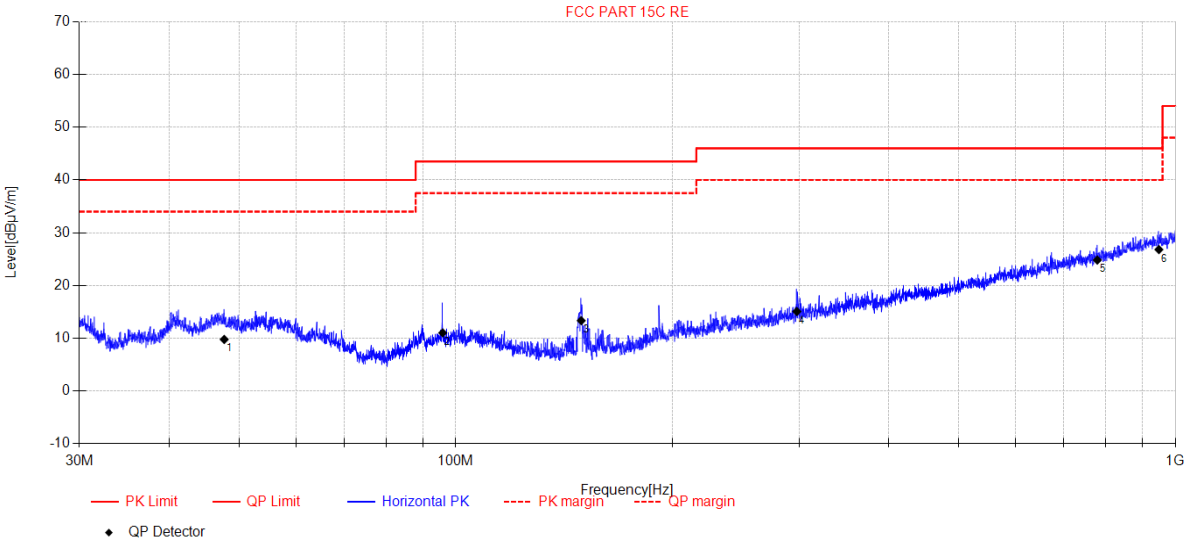


Final Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable Loss [dB]**	**AMP [dB]**	**Result [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	38.86	33.04	11.87	4.59	-30.87	18.63	40.00	21.37	QP	Vertical
2	59.98	34.07	11.90	4.76	-30.63	20.10	40.00	19.90	QP	Vertical
3	103.05	32.99	11.00	5.09	-30.89	18.19	43.50	25.31	QP	Vertical
4	149.96	37.6	7.50	5.32	-30.75	19.67	43.50	23.83	QP	Vertical
5	585.26	24.42	18.41	7.27	-29.90	20.20	46.00	25.80	QP	Vertical
6	950.10	22.1	22.70	8.52	-28.55	24.77	46.00	21.23	QP	Vertical

Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-09-01	**Tested By**:	Bairong
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	Battery
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC BELOW 1G\20230901-000637_H		
Memo:	2.4GWIFI		

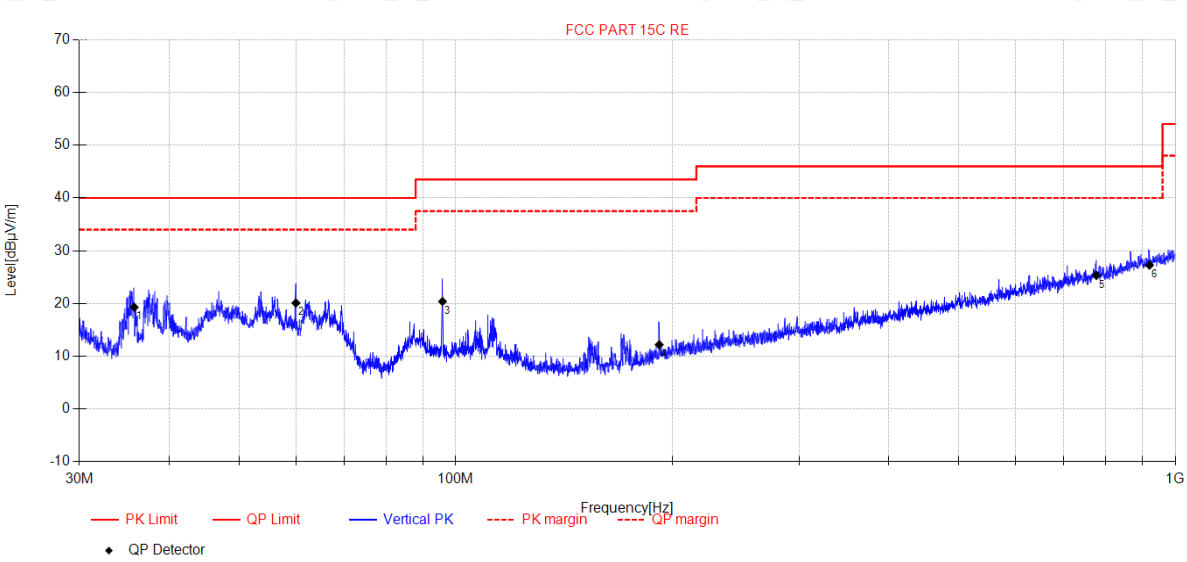


Final Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable Loss [dB]**	**AMP [dB]**	**Result [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	47.69	22.61	13.20	4.70	-30.73	9.78	40.00	30.22	QP	Horizontal
2	95.94	26.33	10.49	5.02	-30.82	11.02	43.50	32.48	QP	Horizontal
3	149.44	31.27	7.50	5.32	-30.75	13.34	43.50	30.16	QP	Horizontal
4	297.92	26.03	13.22	6.14	-30.31	15.08	46.00	30.92	QP	Horizontal
5	779.10	25.79	21.00	7.93	-29.90	24.82	46.00	21.18	QP	Horizontal
6	948.77	24.18	22.68	8.51	-28.56	26.81	46.00	19.19	QP	Horizontal

Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-09-01	**Tested By**:	Bairong
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	Battery
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC BELOW 1G\20230901-000722_V		
Memo:	2.4GWIFI		



Final Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable Loss [dB]**	**AMP [dB]**	**Result [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	35.75	34.54	11.12	4.54	-30.91	19.29	40.00	20.71	QP	Vertical
2	59.98	34.06	11.90	4.76	-30.63	20.09	40.00	19.91	QP	Vertical
3	95.87	35.71	10.47	5.02	-30.82	20.38	43.50	23.12	QP	Vertical
4	191.81	26.77	10.38	5.66	-30.62	12.19	43.50	31.31	QP	Vertical
5	776.92	26.29	21.00	7.93	-29.90	25.32	46.00	20.68	QP	Vertical
6	920.59	25.17	22.50	8.41	-28.81	27.27	46.00	18.73	QP	Vertical

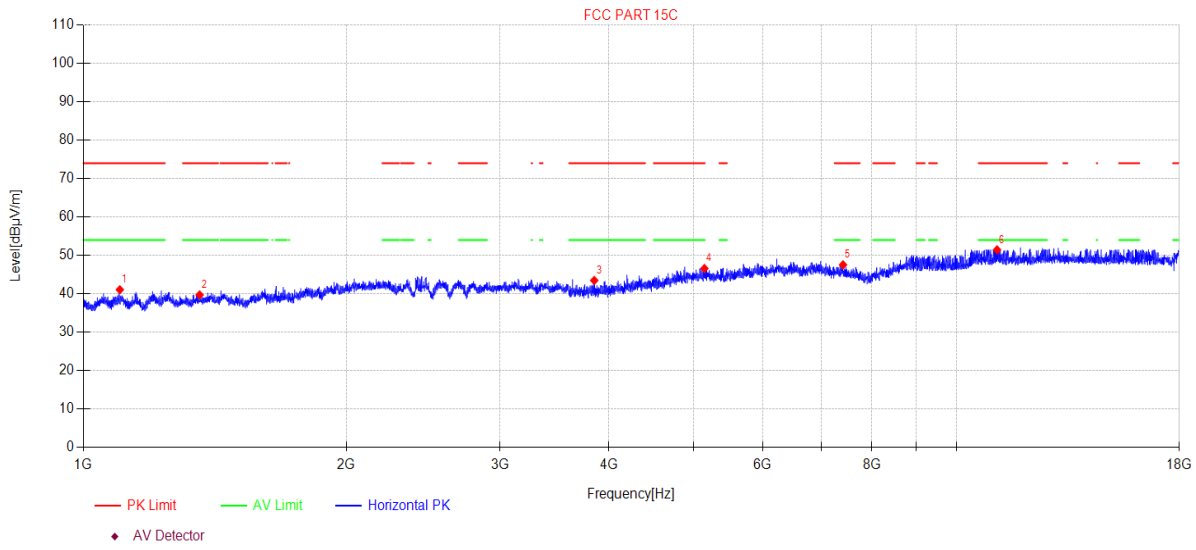
Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Radiated Emission test (above 1GHz)

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-24	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC ABOVE 1G\3		
Memo:	11B 2412		

Test Graph



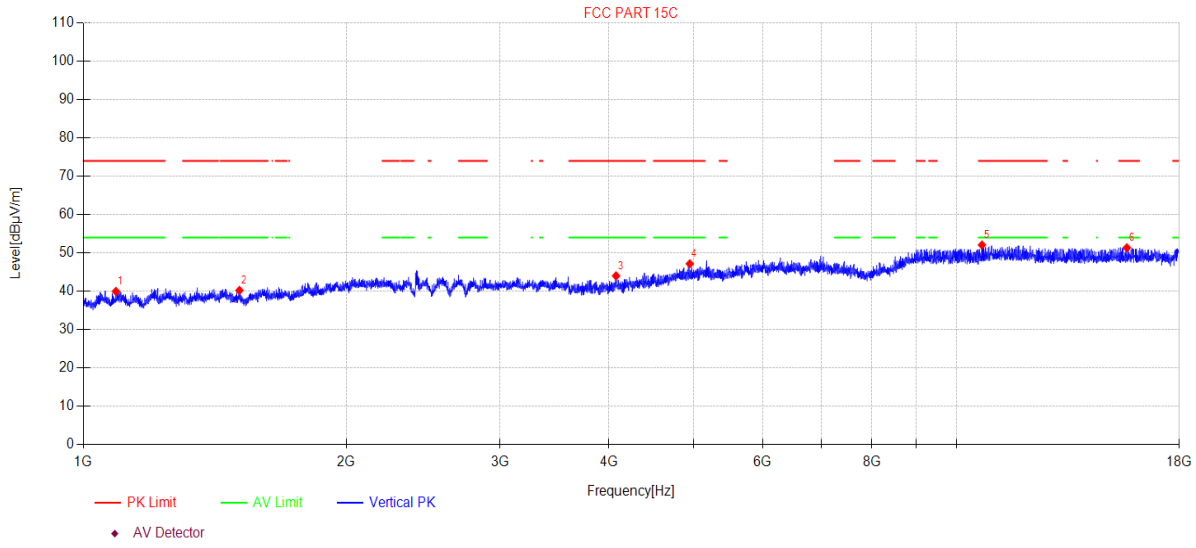
Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	1101.02	49.22	3.24	25.50	-36.89	41.07	74.00	32.93	PK	Horizontal
2	1358.85	47.01	4.05	25.60	-36.93	39.73	74.00	34.27	PK	Horizontal
3	3847.24	47.63	5.82	30.39	-40.36	43.48	74.00	30.52	PK	Horizontal
4	5143.89	45.68	8.07	32.90	-40.06	46.59	74.00	27.41	PK	Horizontal
5	7414.26	45.15	7.64	36.50	-41.74	47.55	74.00	26.45	PK	Horizontal
6	11131.19	41.73	9.77	39.10	-39.15	51.45	74.00	22.55	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-24	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC ABOVE 1G\4		
Memo:	11B 2412		

Test Graph



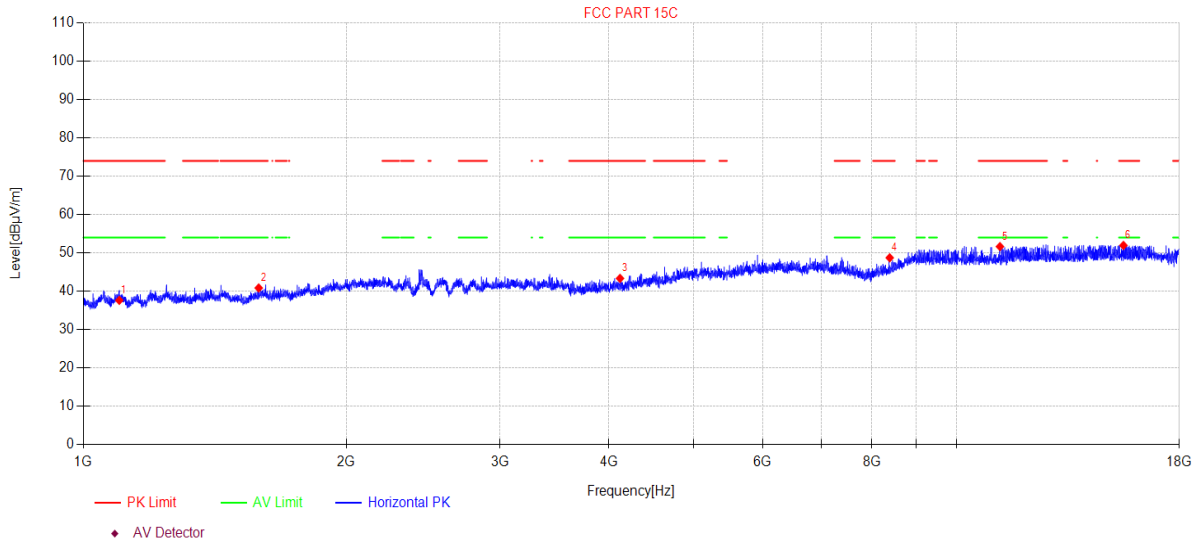
Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	1089.63	48.17	3.20	25.50	-36.89	39.98	74.00	34.02	PK	Vertical
2	1509.15	47.18	4.52	25.48	-36.95	40.23	74.00	33.77	PK	Vertical
3	4074.99	47.59	6.00	30.85	-40.42	44.02	74.00	29.98	PK	Vertical
4	4949.92	46.70	7.77	32.80	-40.10	47.17	74.00	26.83	PK	Vertical
5	10695.98	42.52	9.43	39.10	-38.98	52.07	74.00	21.93	PK	Vertical
6	15672.96	37.78	14.40	38.33	-39.16	51.35	74.00	22.65	PK	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-24	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC ABOVE 1G\5		
Memo:	11B 2437		

Test Graph



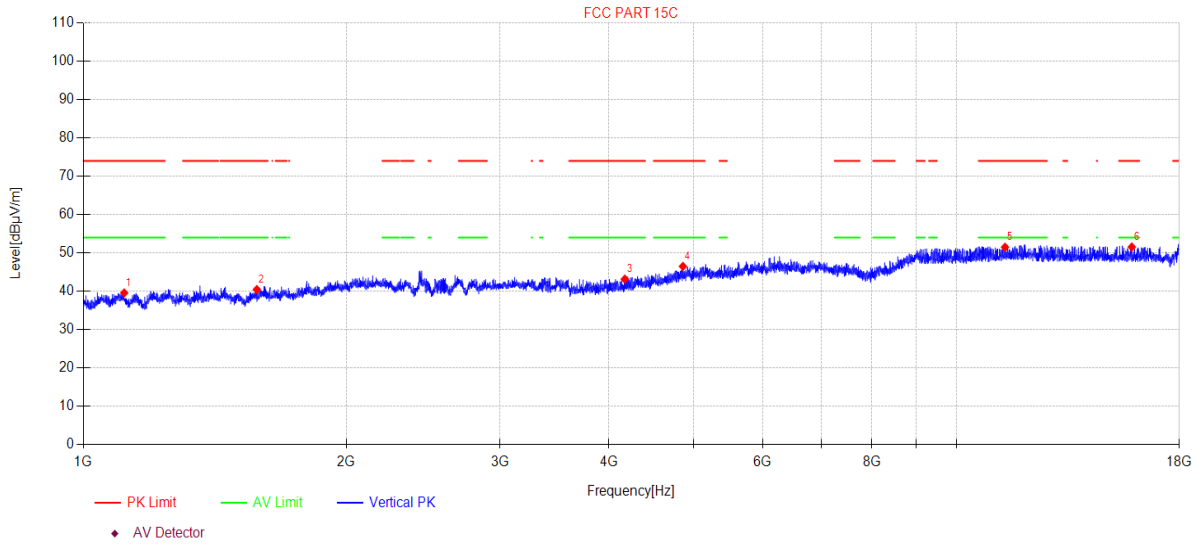
Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	1099.43	45.80	3.23	25.50	-36.89	37.64	74.00	33.80	PK	Horizontal
2	1587.90	47.65	4.77	25.40	-36.96	40.86	74.00	33.14	PK	Horizontal
3	4117.61	46.74	6.09	30.94	-40.41	43.36	74.00	30.64	PK	Horizontal
4	8385.66	44.88	8.08	37.27	-41.50	48.73	74.00	25.27	PK	Horizontal
5	11215.15	41.90	9.84	39.10	-39.19	51.65	74.00	22.35	PK	Horizontal
6	15533.17	38.74	13.77	38.53	-39.08	51.96	74.00	22.04	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-24	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC ABOVE 1G\6		
Memo:	11B 2437		

Test Graph



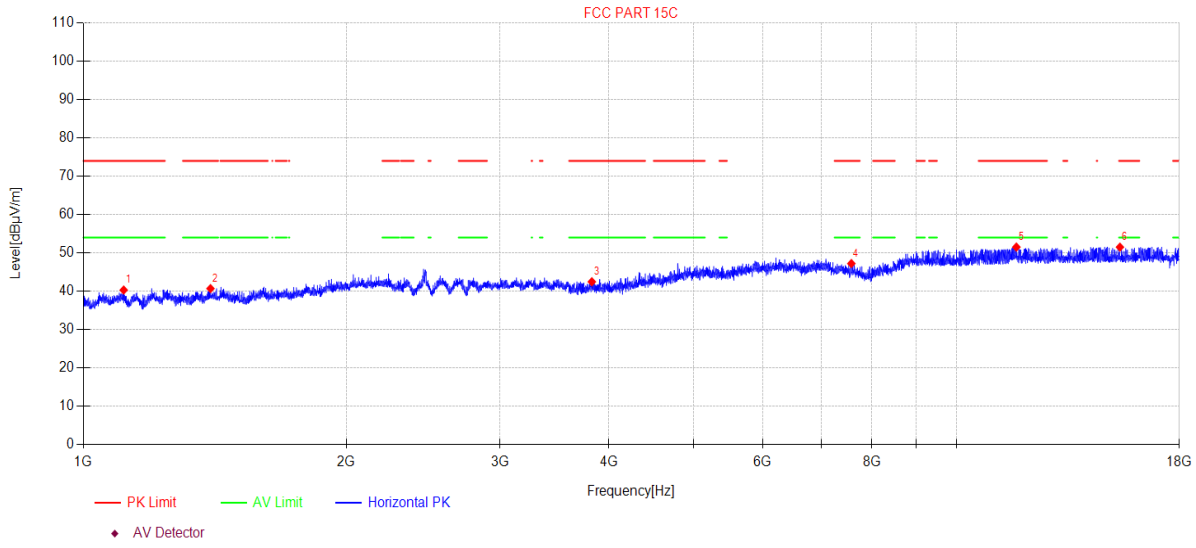
Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	1113.83	47.66	3.28	25.53	-36.89	39.58	74.00	34.42	PK	Vertical
2	1580.12	47.27	4.75	25.40	-36.96	40.46	74.00	33.54	PK	Vertical
3	4170.31	46.33	6.19	31.04	-40.39	43.17	74.00	30.83	PK	Vertical
4	4860.61	46.51	7.59	32.52	-40.13	46.49	74.00	27.51	PK	Vertical
5	11365.24	41.67	9.98	39.10	-39.26	51.49	74.00	22.51	PK	Vertical
6	15878.12	37.39	15.33	38.12	-39.29	51.55	74.00	22.45	PK	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-24	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC ABOVE 1G\7		
Memo:	11B 2462		

Test Graph



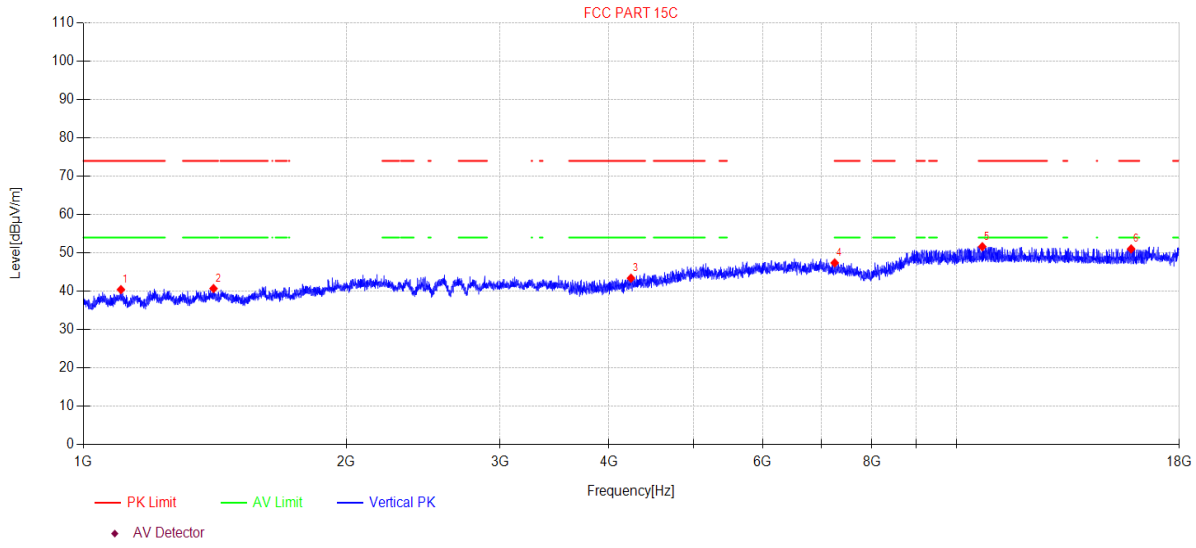
Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	1112.22	48.42	3.27	25.52	-36.89	40.32	74.00	33.68	PK	Horizontal
2	1398.29	47.86	4.17	25.60	-36.93	40.70	74.00	33.30	PK	Horizontal
3	3822.86	46.66	5.81	30.35	-40.34	42.48	74.00	31.52	PK	Horizontal
4	7578.91	45.33	7.65	36.40	-42.15	47.23	74.00	26.77	PK	Horizontal
5	11712.03	41.86	10.28	38.80	-39.42	51.52	74.00	22.48	PK	Horizontal
6	15390.17	38.67	13.12	38.71	-38.99	51.51	74.00	22.49	PK	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-24	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC ABOVE 1G\8		
Memo:	11B 2462		

Test Graph

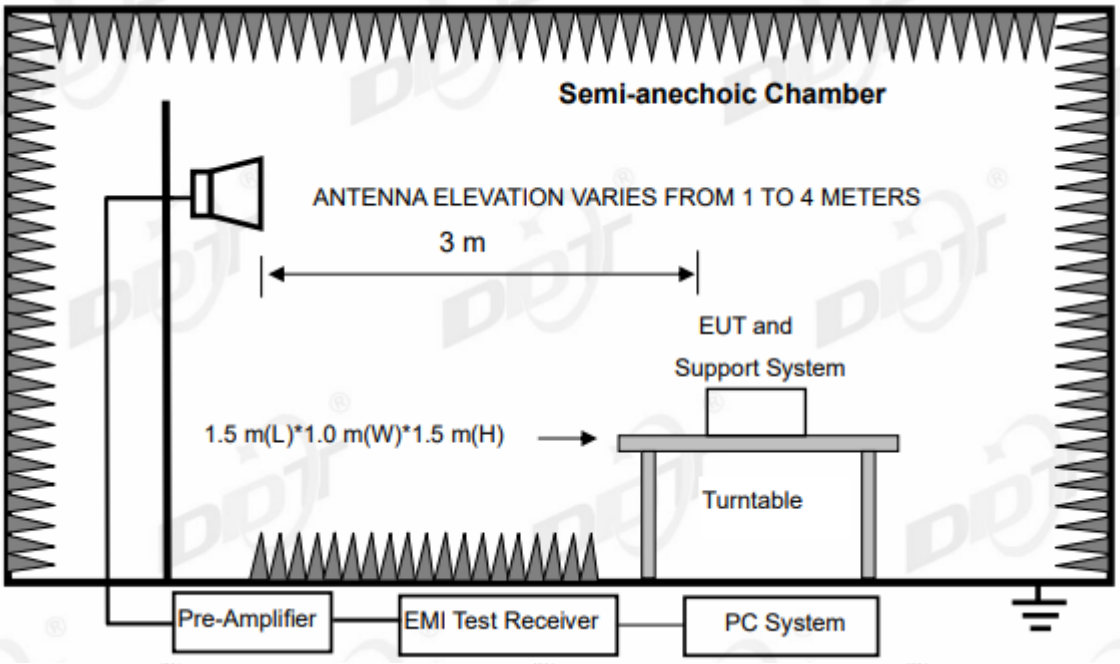


Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	1104.21	48.57	3.25	25.51	-36.89	40.44	74.00	33.56	PK	Vertical
2	1409.65	47.83	4.21	25.60	-36.93	40.71	74.00	33.29	PK	Vertical
3	4238.35	46.26	6.33	31.18	-40.36	43.41	74.00	30.59	PK	Vertical
4	7253.19	44.60	7.63	36.50	-41.33	47.40	74.00	26.60	PK	Vertical
5	10705.26	42.06	9.44	39.10	-38.98	51.62	74.00	22.38	PK	Vertical
6	15850.61	36.96	15.20	38.15	-39.27	51.04	74.00	22.96	PK	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

11. Radiated Band Edge Compliance

11.1. Block diagram of test setup



11.2. Limit

All restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400 MHz to 2483.5 MHz shall be at least 20dB below the fundamental emissions or comply with RSS-Gen Issue 5 clause 6.13.2 (Same as FCC 15.209) limits.

11.3. Test procedure

Same with Radiated Spurious Emissions except change investigated frequency range from 2310 MHz to 2430 MHz and 2445 MHz to 2500 MHz.

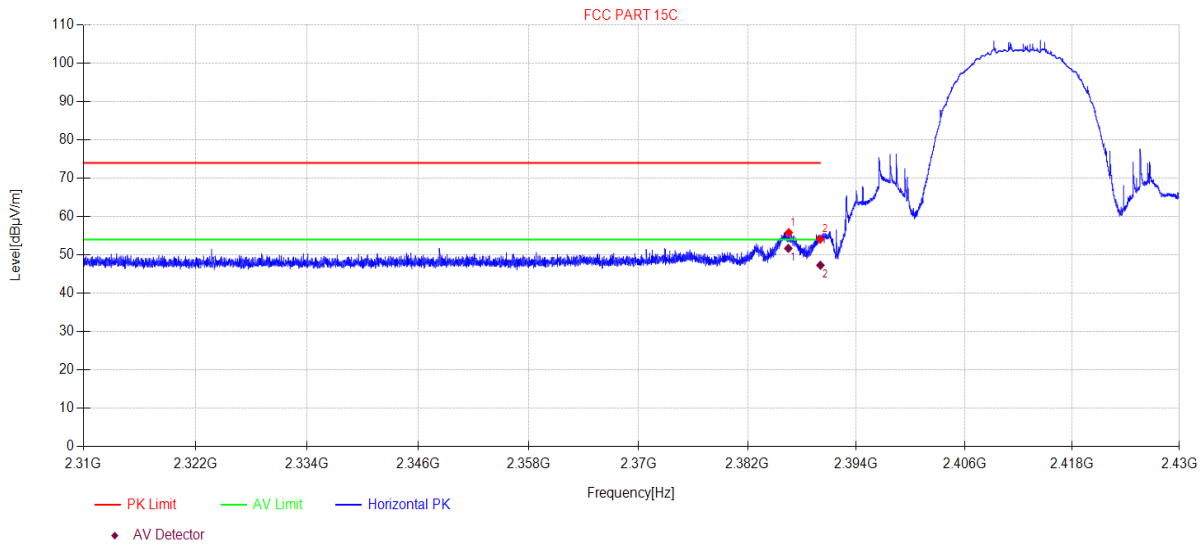
11.4. Test result

Pass. (See below detailed test result)

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-26	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC ABOVE 1G\19		
Memo:	11B 2412		

Test Graph



Suspected Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Cable loss [dB]**	**Antenna Factor [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	2386.54	52.59	3.86	27.47	-28.10	55.82	74.00	18.18	PK	Horizontal
2	2390.00	50.85	3.87	27.48	-28.11	54.09	74.00	19.91	PK	Horizontal

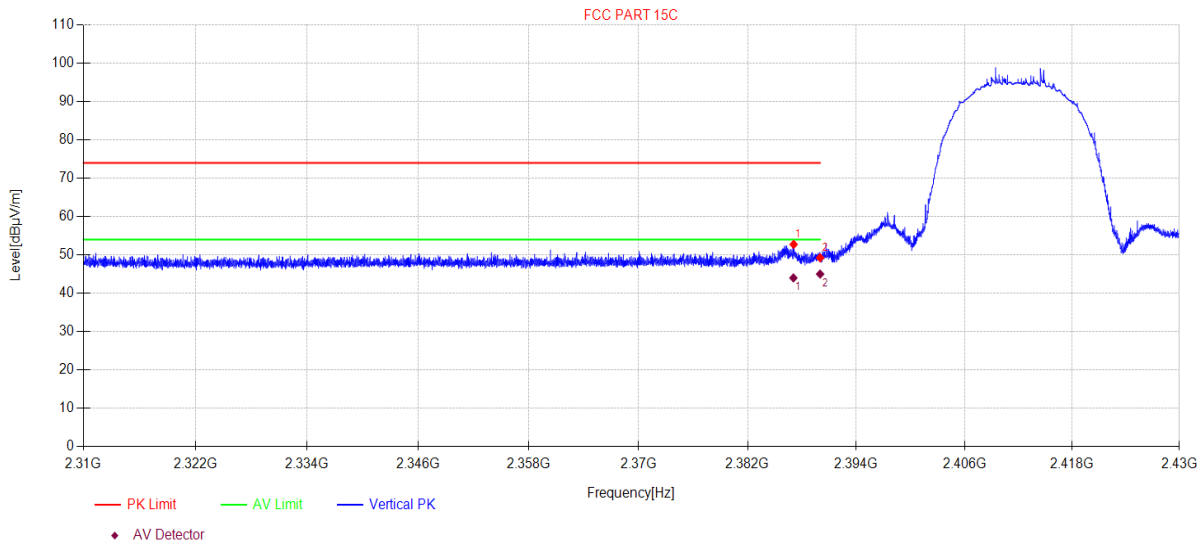
Final Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Cable loss[dB]**	**Antenna Factor [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit[dBµV/m]**	**Margin[dB]**	**Detector**	**Polarity**
1	2386.49	46.43	5.90	27.47	-28.10	51.70	54.00	2.30	AV	Horizontal
2	2390.03	42.03	5.90	27.48	-28.11	47.30	51.97	4.67	AV	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-26	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC ABOVE 1G\20		
Memo:	11B 2412		

Test Graph



Suspected Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Cable loss [dB]**	**Antenna Factor [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	2387.08	49.52	3.86	27.47	-28.11	52.74	74.00	21.26	PK	Vertical
2	2390.00	46.02	3.87	27.48	-28.11	49.26	74.00	24.74	PK	Vertical

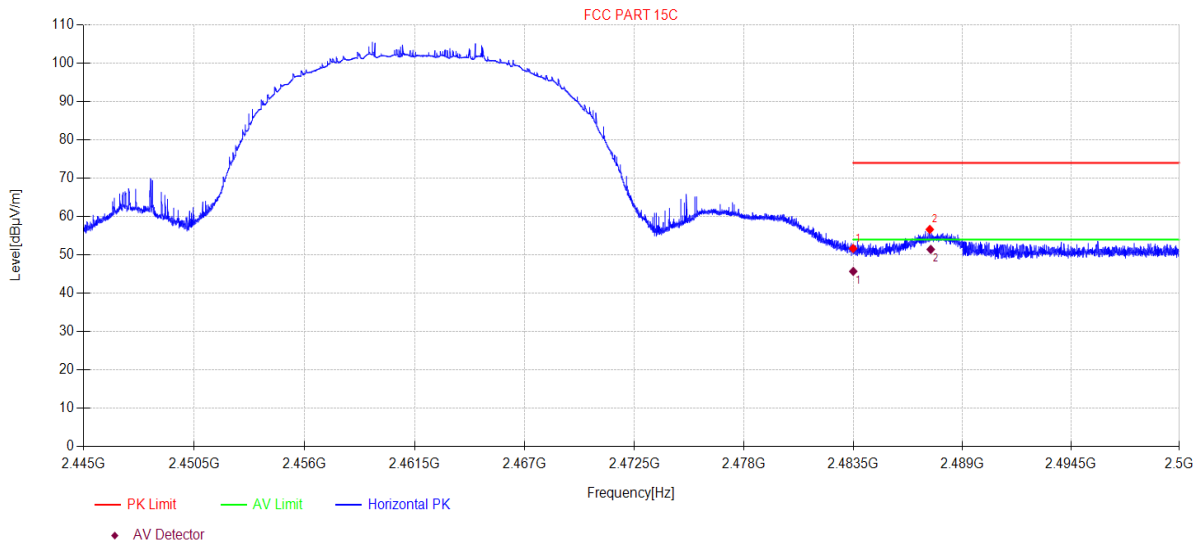
Final Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Cable loss[dB]**	**Antenna Factor [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit[dBµV/m]**	**Margin[dB]**	**Detector**	**Polarity**
1	2387.05	38.74	5.90	27.47	-28.11	44.00	54.00	10.00	AV	Vertical
2	2390.00	41.77	3.87	27.48	-28.11	45.01	54.00	8.99	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-26	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC ABOVE 1G\21		
Memo:	11B 2462		

Test Graph



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2483.50	48.38	3.94	27.73	-28.38	51.67	74.00	22.33	PK	Horizontal
2	2487.37	53.33	3.94	27.75	-28.39	56.63	74.00	17.37	PK	Horizontal

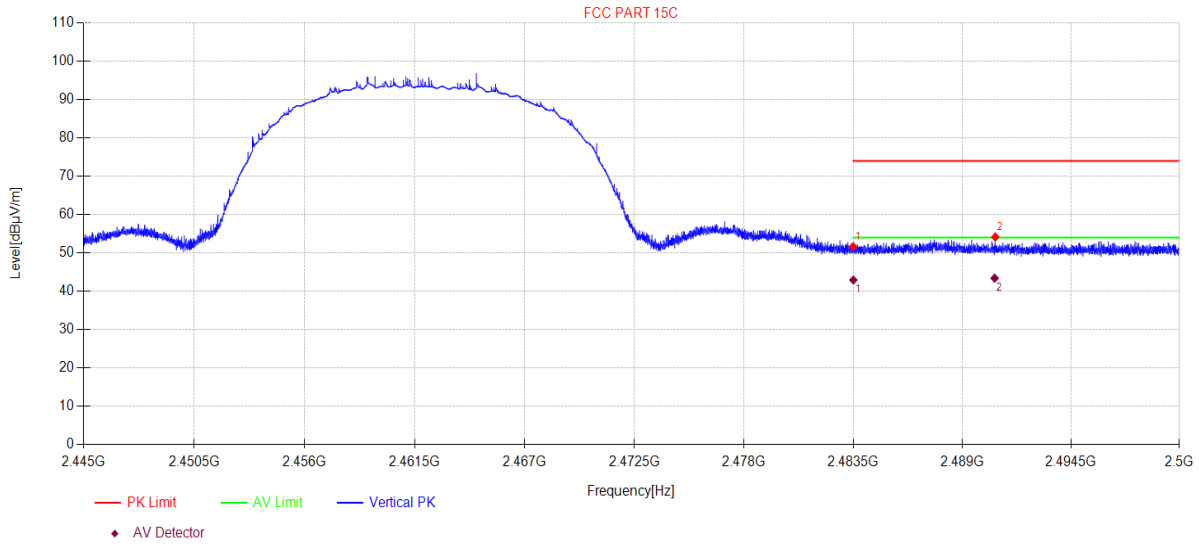
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2483.51	40.50	3.94	27.73	-28.38	45.71	54.00	8.29	AV	Horizontal
2	2487.42	46.22	5.86	27.75	-28.39	51.44	54.00	2.56	AV	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-26	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E GE27109(27109)\FCC ABOVE 1G\22		
Memo:	11B 2462		

Test Graph



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2483.50	48.36	3.94	27.73	-28.38	51.65	74.00	22.35	PK	Vertical
2	2490.68	50.85	3.94	27.76	-28.40	54.15	74.00	19.85	PK	Vertical

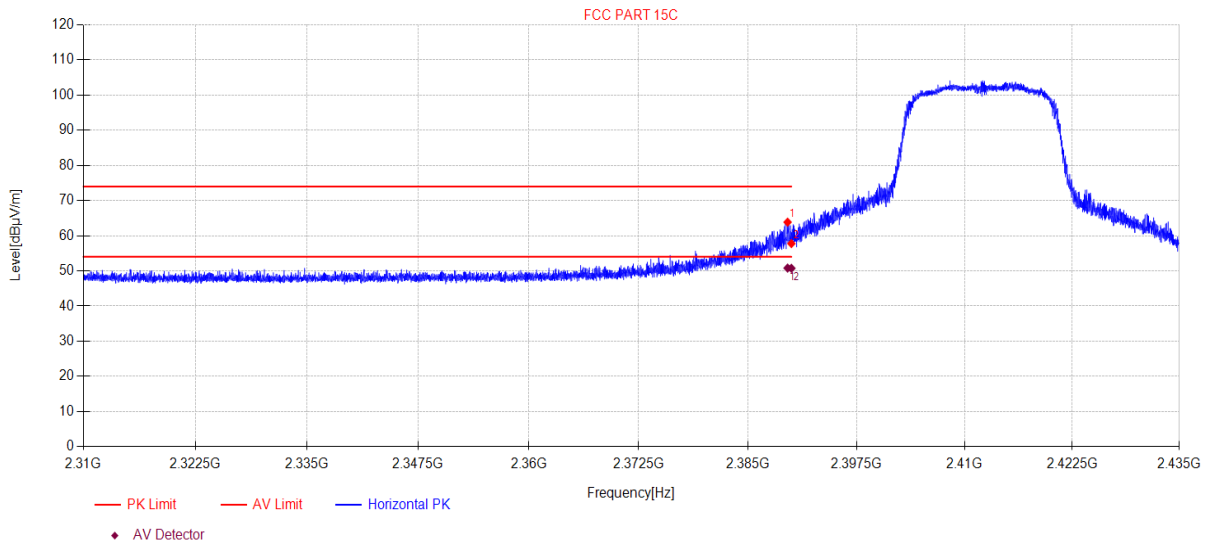
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2483.51	39.65	3.94	27.73	-28.38	42.94	54.00	11.06	AV	Vertical
2	2490.64	40.12	3.94	27.76	-28.40	43.42	54.00	10.58	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-28	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC ABOVE 1G\42		
Memo:	11G 2412		

Test Graph



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2389.56	60.62	3.87	27.48	-28.11	63.86	74.00	10.14	PK	Horizontal
2	2390.00	54.54	3.87	27.48	-28.11	57.78	74.00	16.22	PK	Horizontal

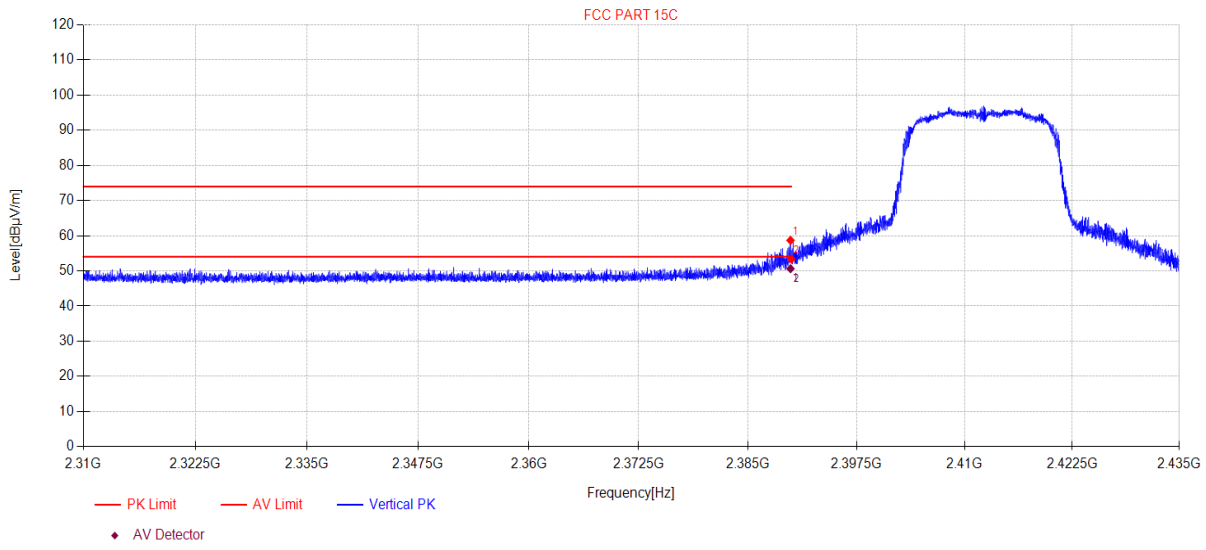
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2389.56	47.57	3.87	27.48	-28.11	50.81	54.00	3.19	AV	Horizontal
2	2390.00	47.50	3.87	27.48	-28.11	50.74	54.00	3.26	AV	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-28	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC ABOVE 1G\43		
Memo:	11G 2412		

Test Graph



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2389.90	55.45	3.87	27.48	-28.11	58.69	74.00	15.31	PK	Vertical
2	2390.00	50.11	3.87	27.48	-28.11	53.35	74.00	20.65	PK	Vertical

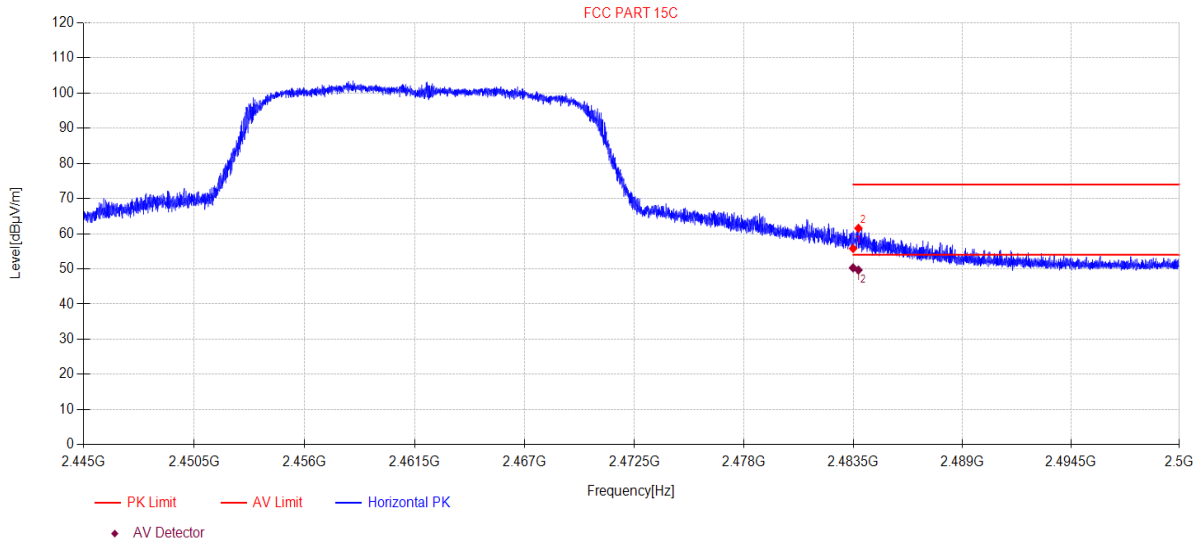
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2389.90	47.39	3.87	27.48	-28.11	50.63	54.00	3.37	AV	Vertical
2	2390.00	47.10	3.87	27.48	-28.11	50.34	54.00	3.66	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-28	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC ABOVE 1G\44		
Memo:	11G 2462		

Test Graph



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2483.50	52.50	3.94	27.73	-28.38	55.79	74.00	18.21	PK	Horizontal
2	2483.77	58.26	3.94	27.74	-28.38	61.56	74.00	12.44	PK	Horizontal

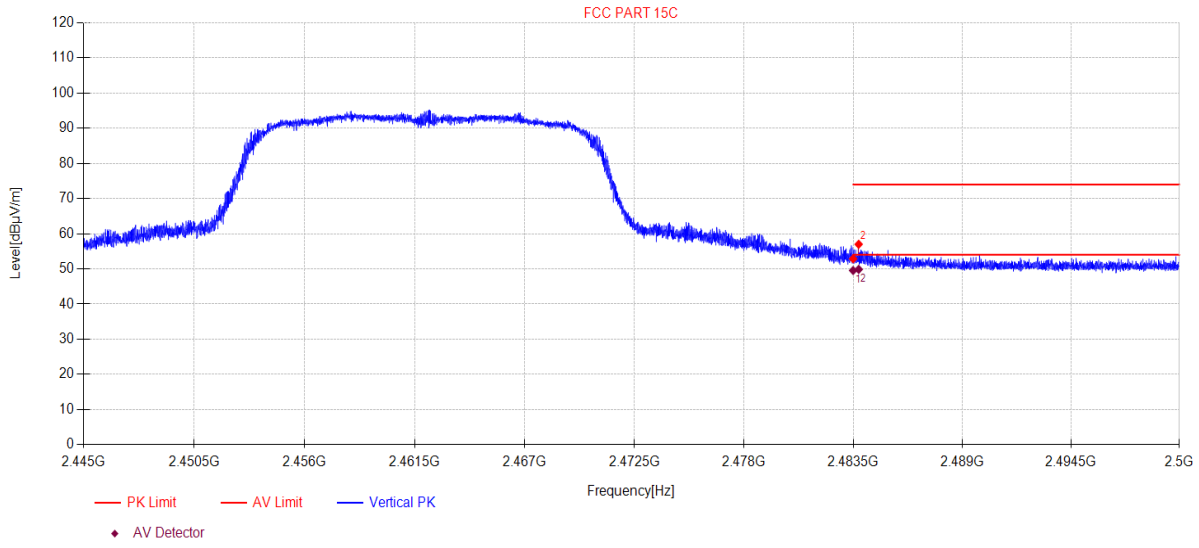
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2483.50	47.01	3.94	27.73	-28.38	50.30	54.00	3.70	AV	Horizontal
2	2483.77	46.38	3.94	27.74	-28.38	49.68	54.00	4.32	AV	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-28	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC ABOVE 1G\45		
Memo:	11G 2462		

Test Graph



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2483.50	49.59	3.94	27.73	-28.38	52.88	74.00	21.12	PK	Vertical
2	2483.78	53.71	3.94	27.74	-28.38	57.01	74.00	16.99	PK	Vertical

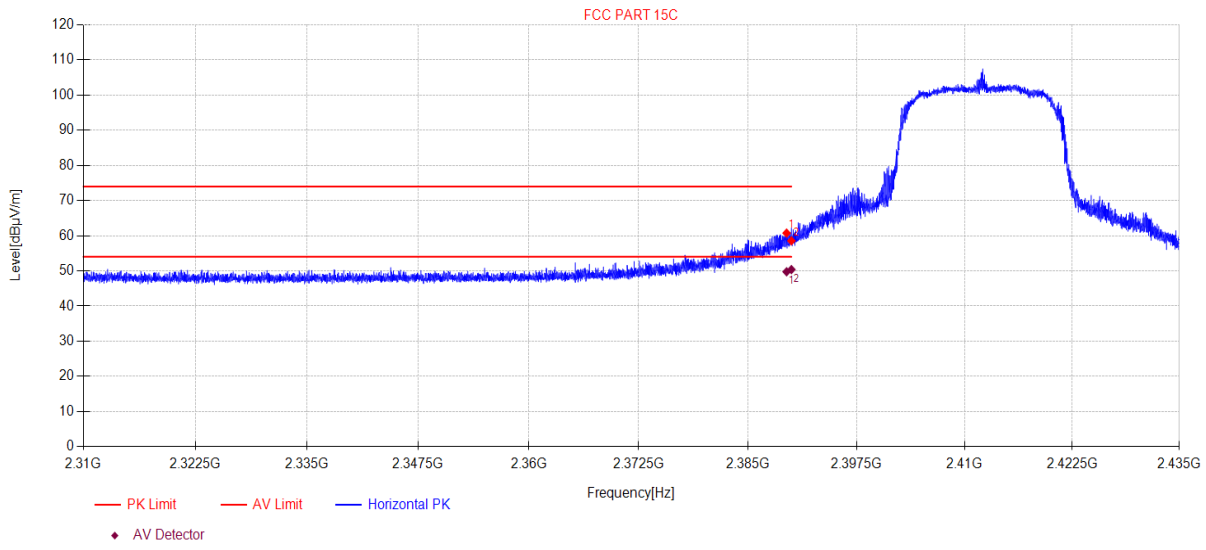
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2483.50	46.26	3.94	27.73	-28.38	49.55	54.00	4.45	AV	Vertical
2	2483.78	46.57	3.94	27.74	-28.38	49.87	54.00	4.13	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-28	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC ABOVE 1G\46		
Memo:	11N20 2412		

Test Graph



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2389.45	57.51	3.87	27.48	-28.11	60.75	74.00	13.25	PK	Horizontal
2	2390.00	55.31	3.87	27.48	-28.11	58.55	74.00	15.45	PK	Horizontal

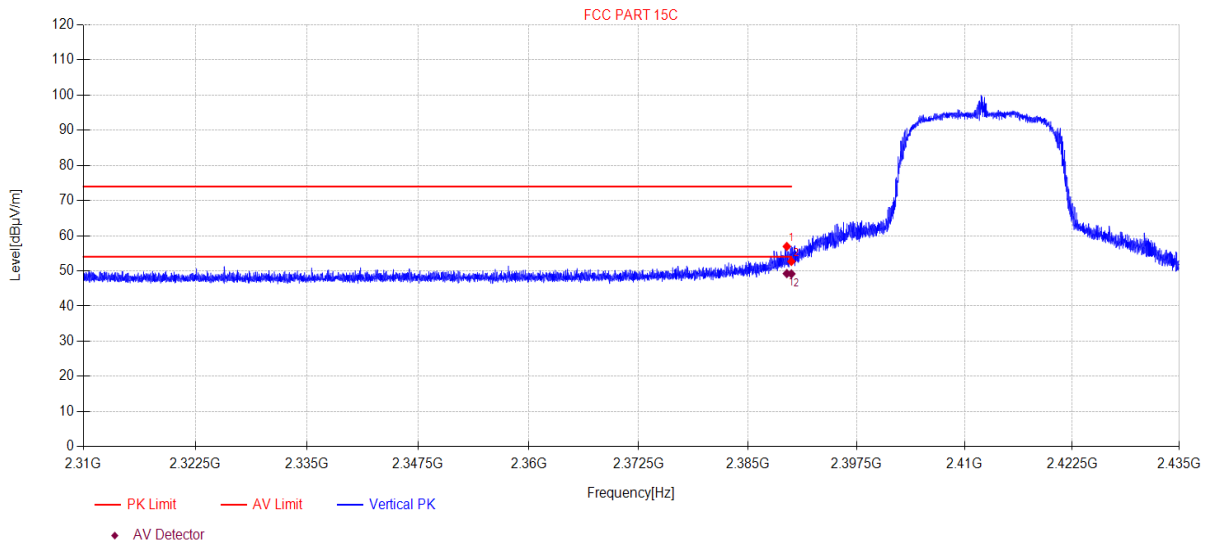
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2389.45	46.52	3.87	27.48	-28.11	49.76	54.00	4.24	AV	Horizontal
2	2390.00	47.13	3.87	27.48	-28.11	50.37	54.00	3.63	AV	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-28	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC ABOVE 1G\47		
Memo:	11N20 2412		

Test Graph



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2389.48	53.71	3.87	27.48	-28.11	56.95	74.00	17.05	PK	Vertical
2	2390.00	49.45	3.87	27.48	-28.11	52.69	74.00	21.31	PK	Vertical

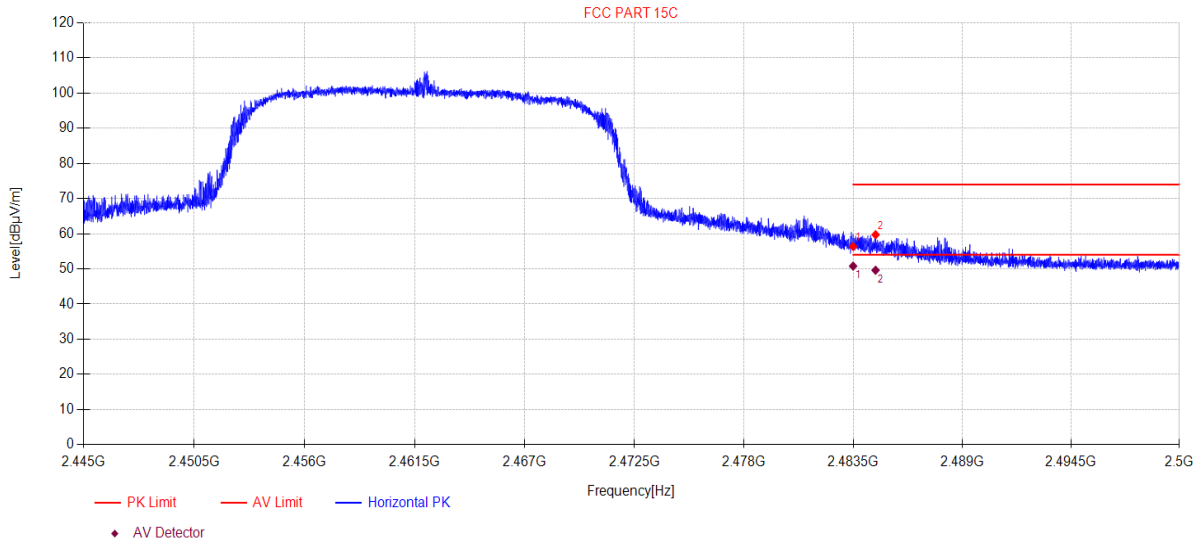
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2389.48	46.01	3.87	27.48	-28.11	49.25	54.00	4.75	AV	Vertical
2	2390.00	45.92	3.87	27.48	-28.11	49.16	54.00	4.84	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-28	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC ABOVE 1G\48		
Memo:	11N20 2462		

Test Graph



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2483.50	53.06	3.94	27.73	-28.38	56.35	74.00	17.65	PK	Horizontal
2	2484.63	56.42	3.94	27.74	-28.38	59.72	74.00	14.28	PK	Horizontal

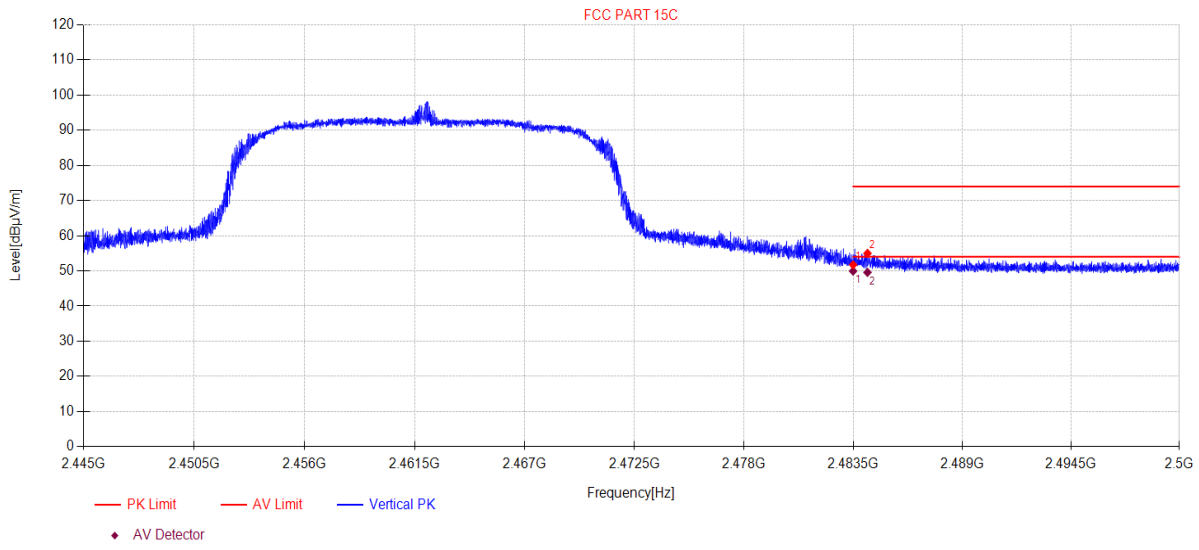
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2483.50	47.51	3.94	27.73	-28.38	50.80	54.00	3.20	AV	Horizontal
2	2484.63	46.32	3.94	27.74	-28.38	49.62	54.00	4.38	AV	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-28	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC ABOVE 1G\49		
Memo:	11N20 2462		

Test Graph



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2483.50	48.45	3.94	27.73	-28.38	51.74	74.00	22.26	PK	Vertical
2	2484.23	51.69	3.94	27.74	-28.38	54.99	74.00	19.01	PK	Vertical

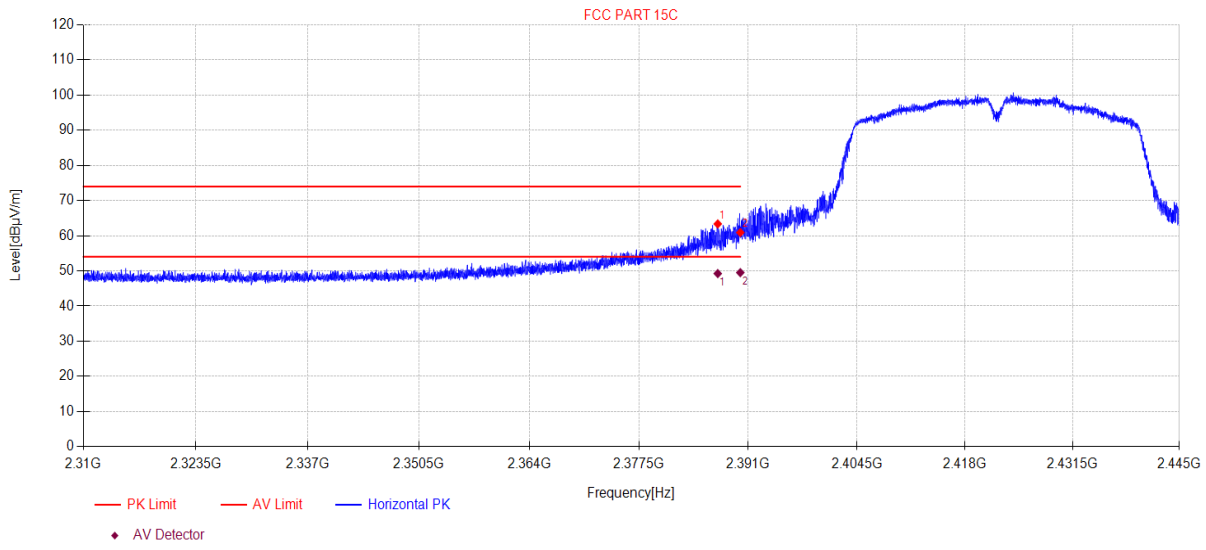
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2483.50	46.66	3.94	27.73	-28.38	49.95	54.00	4.05	AV	Vertical
2	2484.23	46.28	3.94	27.74	-28.38	49.58	54.00	4.42	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-28	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC ABOVE 1G\50		
Memo:	11N40 2422		

Test Graph



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2387.21	60.14	3.86	27.47	-28.11	63.36	74.00	10.64	PK	Horizontal
2	2390.00	57.68	3.87	27.48	-28.11	60.92	74.00	13.08	PK	Horizontal

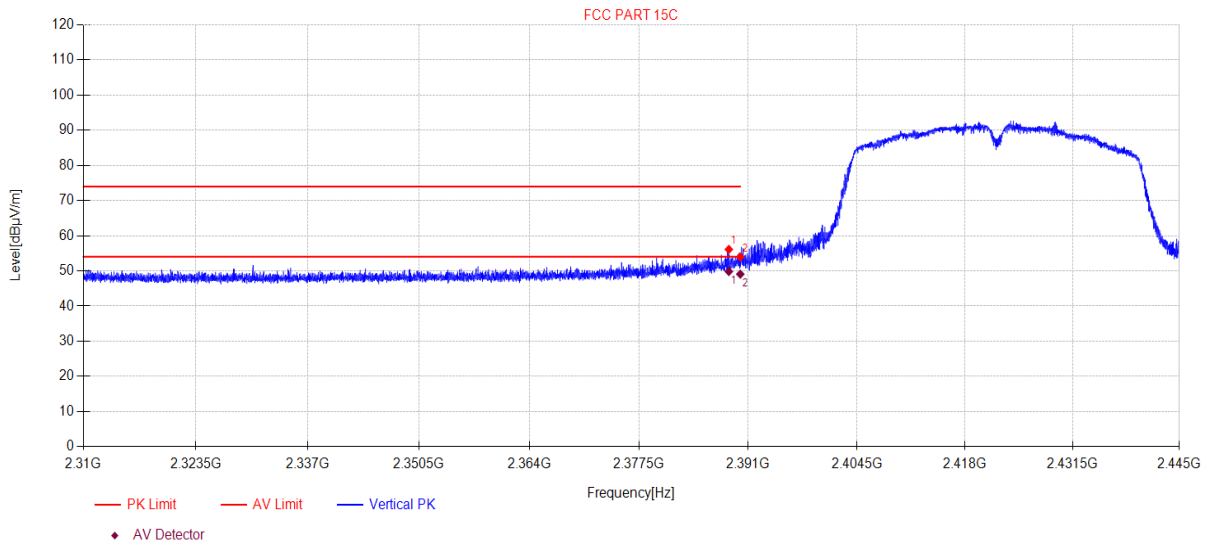
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2387.21	46.02	3.86	27.47	-28.11	49.24	54.00	4.76	AV	Horizontal
2	2390.00	46.28	3.87	27.48	-28.11	49.52	54.00	4.48	AV	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-28	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC ABOVE 1G\51		
Memo:	11N40 2422		

Test Graph



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2388.58	52.87	3.87	27.48	-28.11	56.11	74.00	17.89	PK	Vertical
2	2390.00	50.72	3.87	27.48	-28.11	53.96	74.00	20.04	PK	Vertical

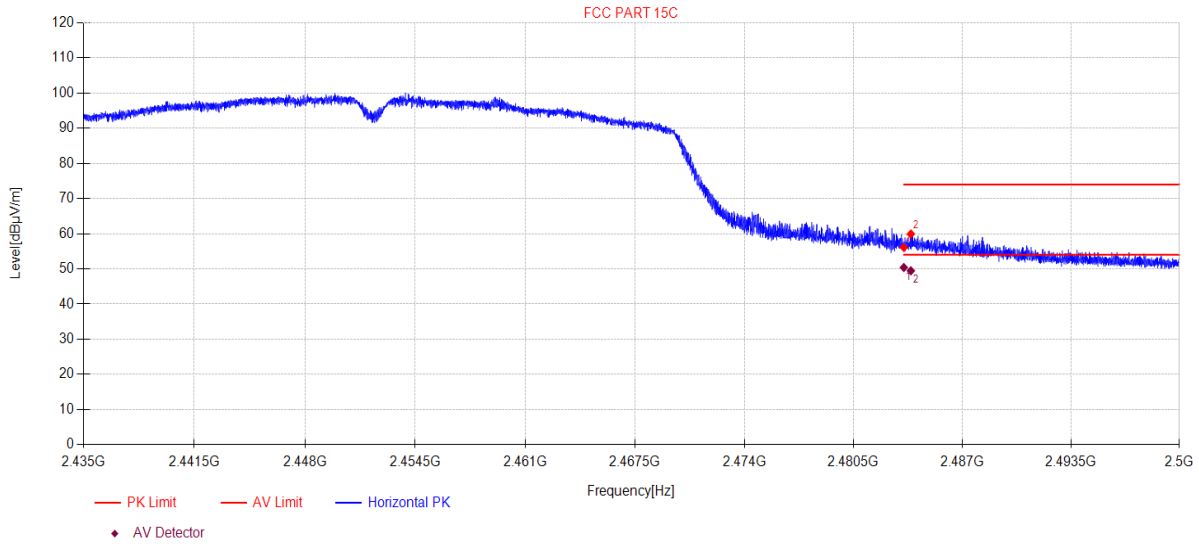
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2388.58	46.6	3.87	27.48	-28.11	49.84	54.00	4.16	AV	Vertical
2	2390.00	45.84	3.87	27.48	-28.11	49.08	54.00	4.92	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-28	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC ABOVE 1G\52		
Memo:	11N40 2452		

Test Graph



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2483.50	52.80	3.94	27.73	-28.38	56.09	74.00	17.91	PK	Horizontal
2	2483.92	56.64	3.94	27.74	-28.38	59.94	74.00	14.06	PK	Horizontal

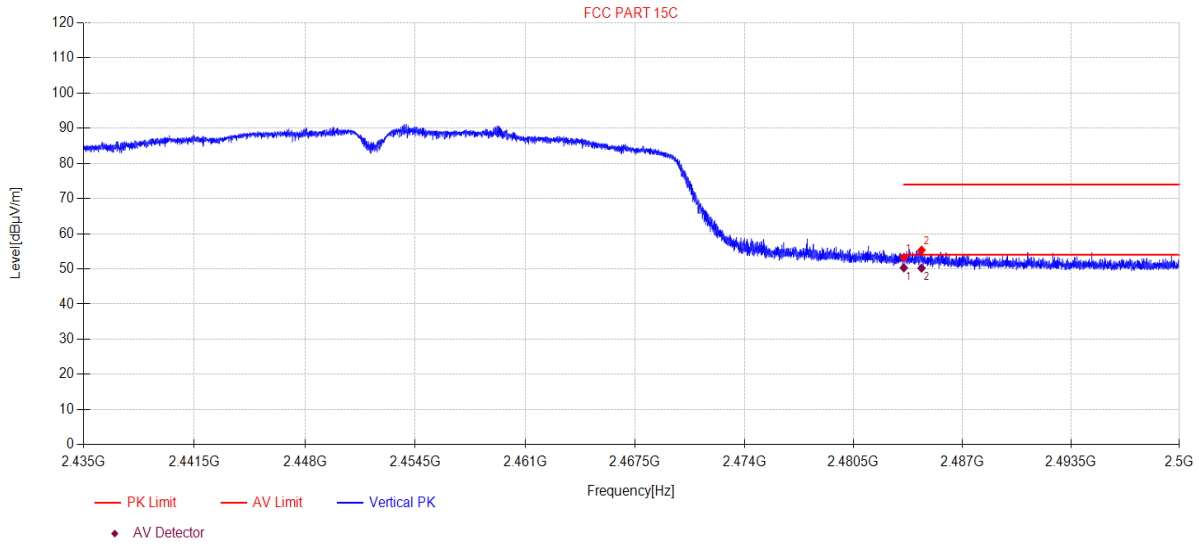
Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2483.50	47.10	3.94	27.73	-28.38	50.39	54.00	3.61	AV	Horizontal
2	2483.92	46.17	3.94	27.74	-28.38	49.47	54.00	4.53	AV	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-08-28	**Tested By**:	Johnson Huang
EUT:	Ceiling fan	**Model Number**:	GE27109(27109)
Test Mode:	TX Mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.4°C;Humi:64.5%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23072405-4E 27109\FCC ABOVE 1G\53		
Memo:	11N40 2452		

Test Graph



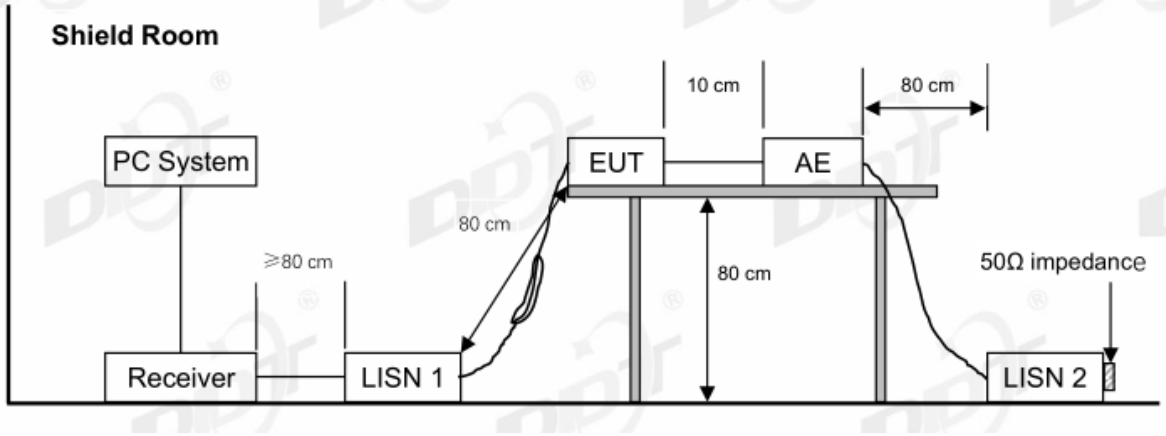
Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2483.50	49.94	3.94	27.73	-28.38	53.23	74.00	20.77	PK	Vertical
2	2484.56	52.03	3.94	27.74	-28.38	55.33	74.00	18.67	PK	Vertical

Final Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Cable loss[dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit[dBµV/m]	Margin[dB]	Detector	Polarity
1	2483.50	47.01	3.94	27.73	-28.38	50.30	54.00	3.70	AV	Vertical
2	2484.56	46.93	3.94	27.74	-28.38	50.23	54.00	3.77	AV	Vertical

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

12. Power Line Conducted Emission

12.1. Block diagram of test setup



12.2. Power Line Conducted Emission Limits

Frequency	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150 kHz ~ 500 kHz	66 ~ 56*	56 ~ 46*
500 kHz ~ 5 MHz	56	46
5 MHz ~ 30 MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

12.3. Test procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest

emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

12.4. Test result

Pass. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.

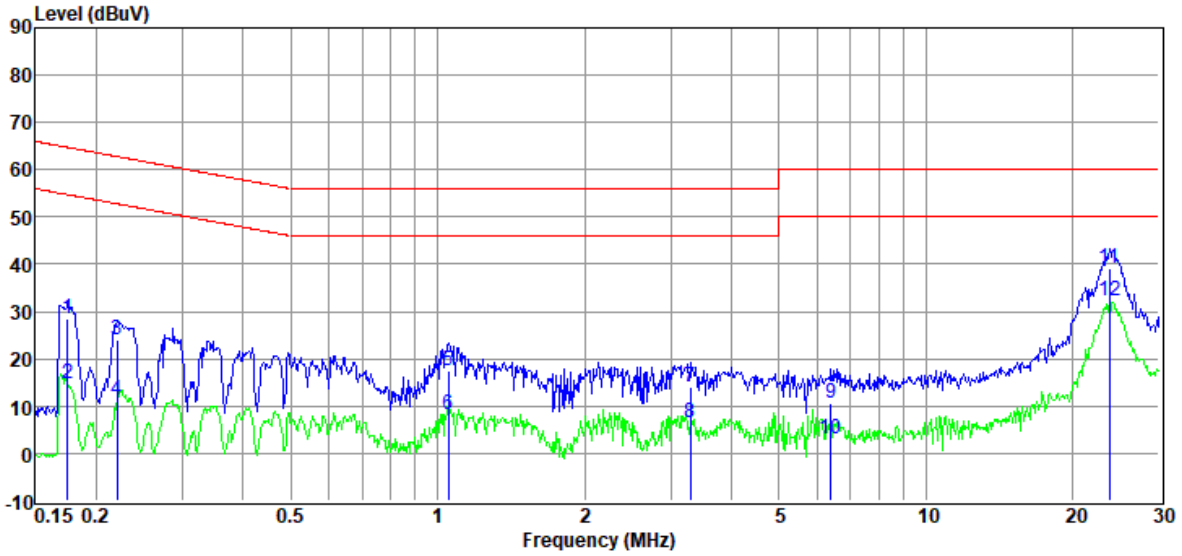
Note2: "-----" means peak detection; "-----" means average detection

Note3: Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/60Hz, recorded worse case.

TR-4-E-010 Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	D:\2023 CE report data\Q23072405-4E\FCC.EM6	
Test Date	: 2023-08-31	**Tested By**	: Johnson Huang
EUT	: Ceiling fan	**Model Number**	: GE27105(27105)
Power Supply	: AC 120V/60Hz	**Test Mode**	: TX mode
Condition	: TEMP:24.3°C, RH:60.4%	**LISN**	: 2022 1# ENV216/LINE
Memo	: 2.4G		

Data: 2



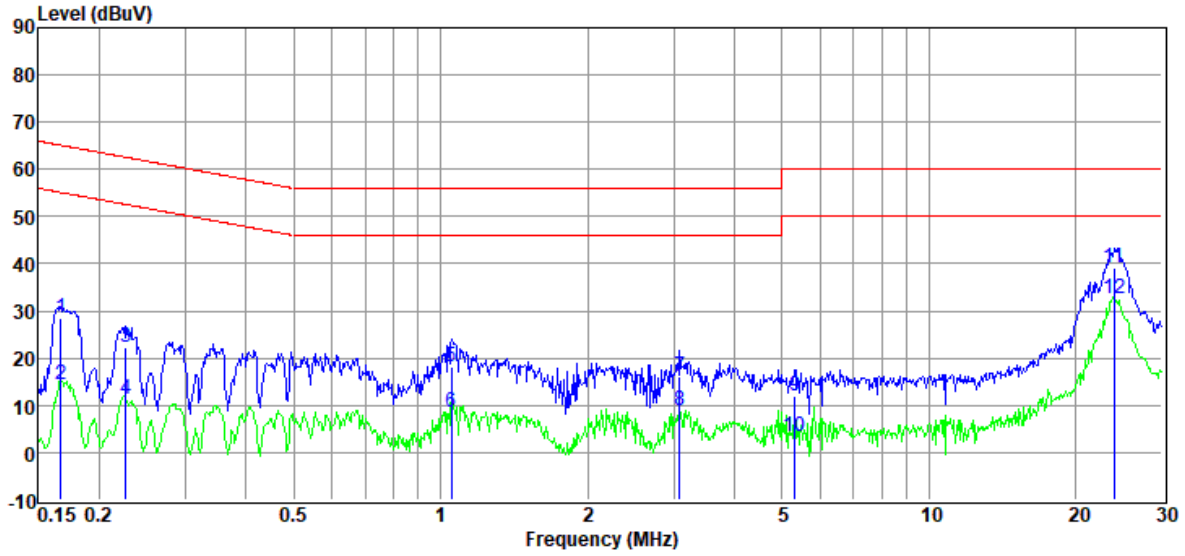
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.17	8.75	9.71	0.01	9.92	28.39	64.72	-36.33	QP	LINE
2	0.17	-4.87	9.71	0.01	9.92	14.77	54.72	-39.95	Average	LINE
3	0.22	4.29	9.79	0.01	9.90	23.99	62.79	-38.80	QP	LINE
4	0.22	-8.33	9.79	0.01	9.90	11.37	52.79	-41.42	Average	LINE
5	1.05	-1.85	9.51	0.02	9.91	17.59	56.00	-38.41	QP	LINE
6	1.05	-11.15	9.51	0.02	9.91	8.29	46.00	-37.71	Average	LINE
7	3.29	-5.47	9.53	0.04	9.91	14.01	56.00	-41.99	QP	LINE
8	3.29	-13.09	9.53	0.04	9.91	6.39	46.00	-39.61	Average	LINE
9	6.39	-8.86	9.58	0.06	9.92	10.70	60.00	-49.30	QP	LINE
10	6.39	-16.50	9.58	0.06	9.92	3.06	50.00	-46.94	Average	LINE
11	23.76	19.41	9.59	0.15	9.97	39.12	60.00	-20.88	QP	LINE
12	23.76	12.39	9.59	0.15	9.97	32.10	50.00	-17.90	Average	LINE

Note:
1. Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	D:\2023 CE report data\Q23072405-4E\FCC.EM6	
Test Date	: 2023-08-31	**Tested By**	: Johnson Huang
EUT	: Ceiling fan	**Model Number**	: GE27105(27105)
Power Supply	: AC 120V/60Hz	**Test Mode**	: TX mode
Condition	: TEMP:24.3°C, RH:60.4%	**LISN**	: 2022 1# ENV216/NEUTRAL
Memo	: 2.4G		

Data: 4



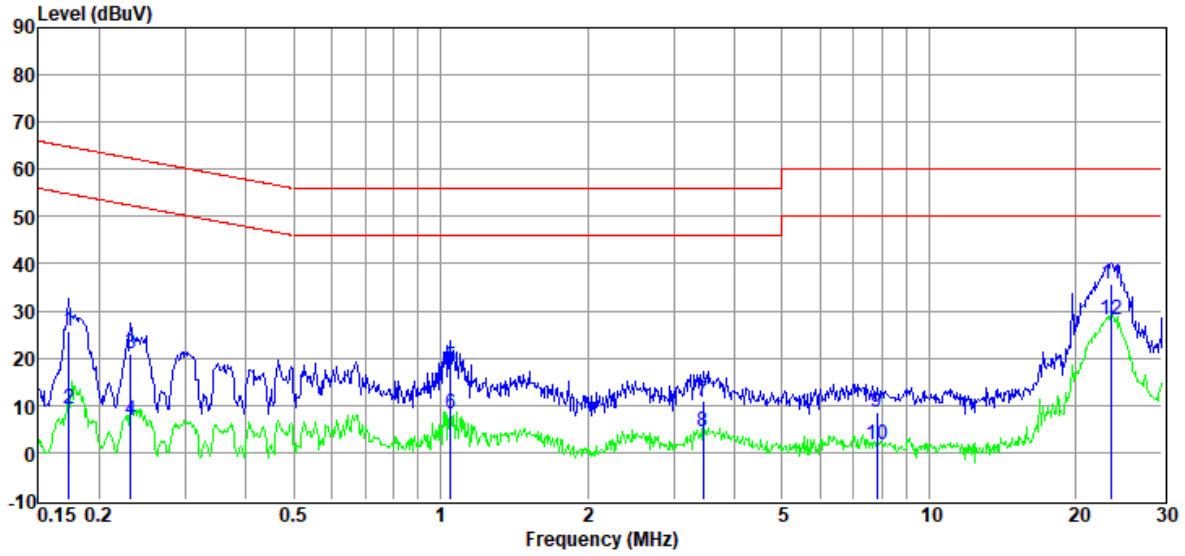
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.17	8.78	9.84	0.01	9.93	28.56	65.12	-36.56	QP	NEUTRAL
2	0.17	-5.43	9.84	0.01	9.93	14.35	55.12	-40.77	Average	NEUTRAL
3	0.23	2.53	9.86	0.01	9.90	22.30	62.57	-40.27	QP	NEUTRAL
4	0.23	-8.59	9.86	0.01	9.90	11.18	52.57	-41.39	Average	NEUTRAL
5	1.05	-1.41	9.70	0.02	9.91	18.22	56.00	-37.78	QP	NEUTRAL
6	1.05	-11.10	9.70	0.02	9.91	8.53	46.00	-37.47	Average	NEUTRAL
7	3.09	-3.70	9.70	0.04	9.91	15.95	56.00	-40.05	QP	NEUTRAL
8	3.09	-10.77	9.70	0.04	9.91	8.88	46.00	-37.12	Average	NEUTRAL
9	5.31	-7.51	9.65	0.05	9.92	12.11	60.00	-47.89	QP	NEUTRAL
10	5.31	-16.21	9.65	0.05	9.92	3.41	50.00	-46.59	Average	NEUTRAL
11	23.89	19.31	9.80	0.15	9.97	39.23	60.00	-20.77	QP	NEUTRAL
12	23.89	12.52	9.80	0.15	9.97	32.44	50.00	-17.56	Average	NEUTRAL

Note:
1. Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	D:\2023 CE report data\Q23072405-4E\FCC.EM6	
Test Date	: 2023-08-31	**Tested By**	: Johnson Huang
EUT	: Ceiling fan	**Model Number**	: 27107
Power Supply	: AC 120V/60Hz	**Test Mode**	: TX mode
Condition	: TEMP:24.3°C, RH:60.4%	**LISN**	: 2022 1# ENV216/LINE
Memo	: 2.4G		

Data: 10



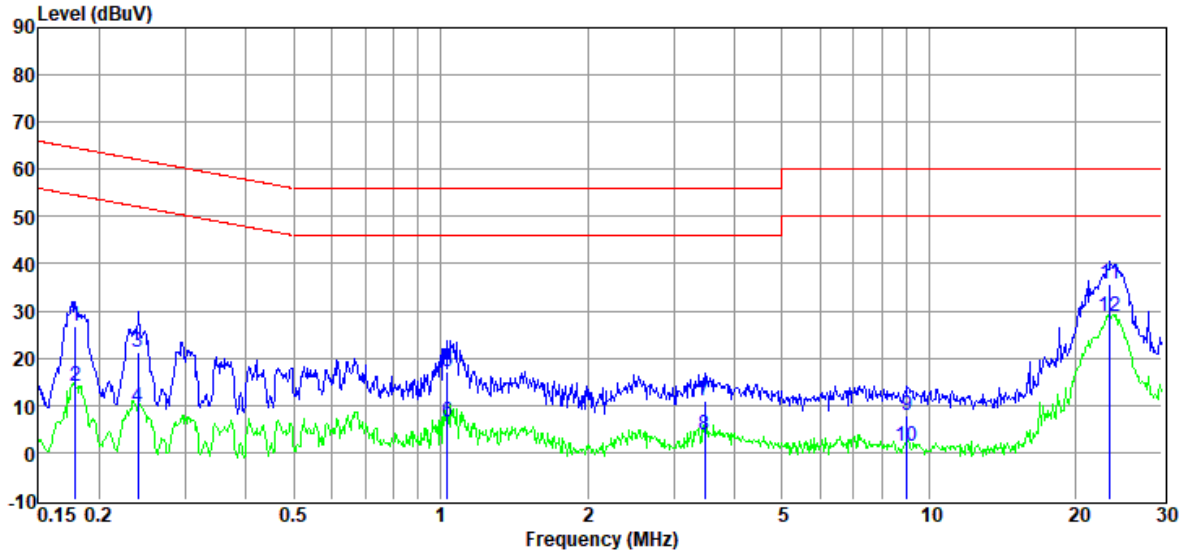
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.17	6.28	9.70	0.01	9.92	25.91	64.81	-38.90	QP	LINE
2	0.17	-10.26	9.70	0.01	9.92	9.37	54.81	-45.44	Average	LINE
3	0.23	1.08	9.78	0.01	9.90	20.77	62.39	-41.62	QP	LINE
4	0.23	-12.69	9.78	0.01	9.90	7.00	52.39	-45.39	Average	LINE
5	1.05	-1.32	9.51	0.02	9.91	18.12	56.00	-37.88	QP	LINE
6	1.05	-11.12	9.51	0.02	9.91	8.32	46.00	-37.68	Average	LINE
7	3.45	-8.60	9.52	0.04	9.91	10.87	56.00	-45.13	QP	LINE
8	3.45	-14.90	9.52	0.04	9.91	4.57	46.00	-41.43	Average	LINE
9	7.81	-11.19	9.57	0.08	9.93	8.39	60.00	-51.61	QP	LINE
10	7.81	-17.97	9.57	0.08	9.93	1.61	50.00	-48.39	Average	LINE
11	23.64	16.00	9.58	0.15	9.97	35.70	60.00	-24.30	QP	LINE
12	23.64	8.34	9.58	0.15	9.97	28.04	50.00	-21.96	Average	LINE

Note:
1. Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	D:\2023 CE report data\Q23072405-4E\FCC.EM6	
Test Date	: 2023-08-31	**Tested By**	: Johnson Huang
EUT	: Ceiling fan	**Model Number**	: 27107
Power Supply	: AC 120V/60Hz	**Test Mode**	: TX mode
Condition	: TEMP:24.3°C, RH:60.4%	**LISN**	: 2022 1# ENV216/NEUTRAL
Memo	: 2.4G		

Data: 12



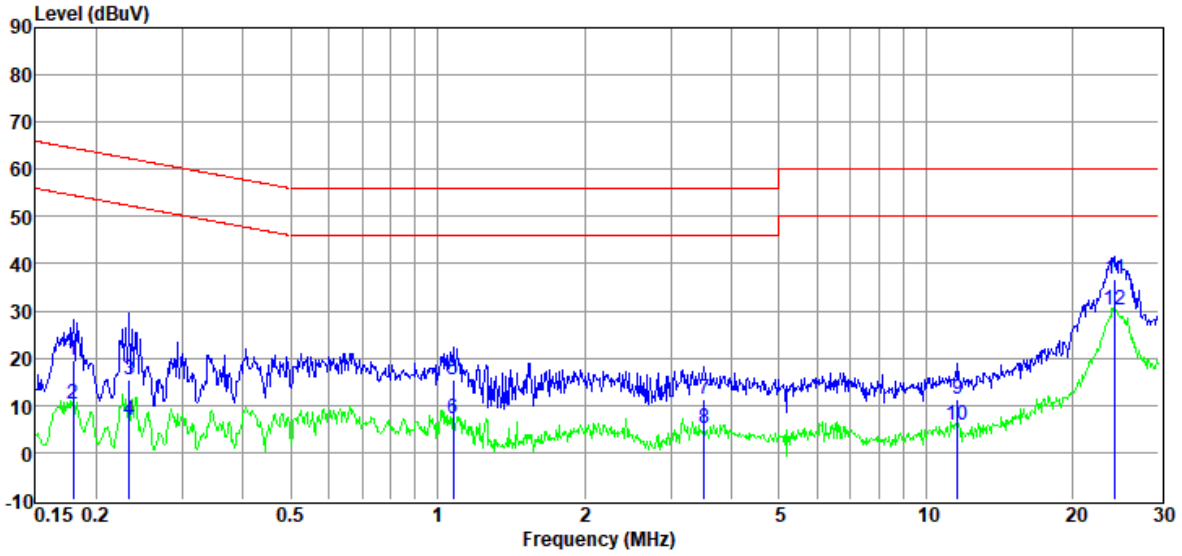
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.18	7.14	9.86	0.01	9.92	26.93	64.55	-37.62	QP	NEUTRAL
2	0.18	-5.84	9.86	0.01	9.92	13.95	54.55	-40.60	Average	NEUTRAL
3	0.24	1.50	9.84	0.01	9.90	21.25	62.08	-40.83	QP	NEUTRAL
4	0.24	-10.20	9.84	0.01	9.90	9.55	52.08	-42.53	Average	NEUTRAL
5	1.03	-2.52	9.70	0.02	9.91	17.11	56.00	-38.89	QP	NEUTRAL
6	1.03	-13.01	9.70	0.02	9.91	6.62	46.00	-39.38	Average	NEUTRAL
7	3.47	-8.66	9.70	0.04	9.91	10.99	56.00	-45.01	QP	NEUTRAL
8	3.47	-16.00	9.70	0.04	9.91	3.65	46.00	-42.35	Average	NEUTRAL
9	9.01	-11.88	9.74	0.08	9.95	7.89	60.00	-52.11	QP	NEUTRAL
10	9.01	-18.38	9.74	0.08	9.95	1.39	50.00	-48.61	Average	NEUTRAL
11	23.51	15.89	9.80	0.15	9.97	35.81	60.00	-24.19	QP	NEUTRAL
12	23.51	8.89	9.80	0.15	9.97	28.81	50.00	-21.19	Average	NEUTRAL

Note:
1. Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	D:\2023 CE report data\Q23072405-4E\FCC.EM6	
Test Date	: 2023-08-31	**Tested By**	: Johnson Huang
EUT	: Ceiling fan	**Model Number**	: GE27109(27109)
Power Supply	: AC 120V/60Hz	**Test Mode**	: TX mode
Condition	: TEMP:24.3°C, RH:60.4%	**LISN**	: 2022 1# ENV216/LINE
Memo	: 2.4G		

Data: 18



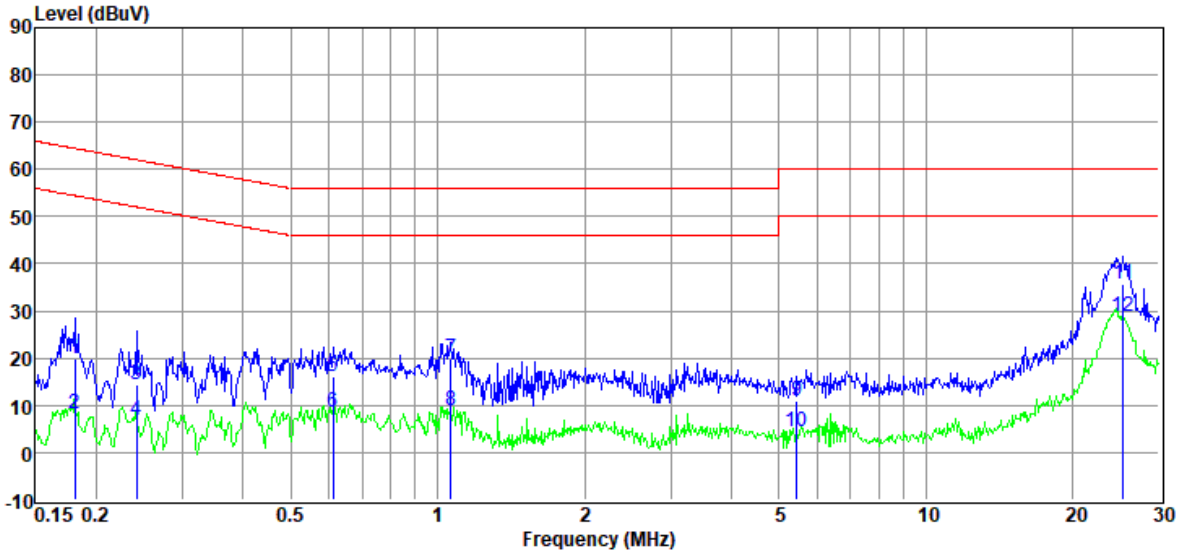
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.18	0.03	9.73	0.01	9.91	19.68	64.50	-44.82	QP	LINE
2	0.18	-9.41	9.73	0.01	9.91	10.24	54.50	-44.26	Average	LINE
3	0.23	-4.22	9.78	0.01	9.90	15.47	62.30	-46.83	QP	LINE
4	0.23	-12.81	9.78	0.01	9.90	6.88	52.30	-45.42	Average	LINE
5	1.08	-3.92	9.51	0.02	9.91	15.52	56.00	-40.48	QP	LINE
6	1.08	-12.29	9.51	0.02	9.91	7.15	46.00	-38.85	Average	LINE
7	3.51	-8.27	9.52	0.04	9.91	11.20	56.00	-44.80	QP	LINE
8	3.51	-14.43	9.52	0.04	9.91	5.04	46.00	-40.96	Average	LINE
9	11.62	-8.30	9.61	0.10	9.96	11.37	60.00	-48.63	QP	LINE
10	11.62	-13.94	9.61	0.10	9.96	5.73	50.00	-44.27	Average	LINE
11	24.40	17.02	9.60	0.15	9.97	36.74	60.00	-23.26	QP	LINE
12	24.40	10.49	9.60	0.15	9.97	30.21	50.00	-19.79	Average	LINE

Note:
1. Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	D:\2023 CE report data\Q23072405-4E\FCC.EM6	
Test Date	: 2023-08-31	**Tested By**	: Johnson Huang
EUT	: Ceiling fan	**Model Number**	: GE27109(27109)
Power Supply	: AC 120V/60Hz	**Test Mode**	: TX mode
Condition	: TEMP:24.3°C, RH:60.4%	**LISN**	: 2022 1# ENV216/NEUTRAL
Memo	: 2.4G		

Data: 20



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.18	0.25	9.86	0.01	9.91	20.03	64.46	-44.43	QP	NEUTRAL
2	0.18	-11.40	9.86	0.01	9.91	8.38	54.46	-46.08	Average	NEUTRAL
3	0.24	-5.33	9.84	0.01	9.90	14.42	62.04	-47.62	QP	NEUTRAL
4	0.24	-12.96	9.84	0.01	9.90	6.79	52.04	-45.25	Average	NEUTRAL
5	0.61	-3.45	9.72	0.01	9.92	16.20	56.00	-39.80	QP	NEUTRAL
6	0.61	-11.06	9.72	0.01	9.92	8.59	46.00	-37.41	Average	NEUTRAL
7	1.07	0.27	9.70	0.02	9.91	19.90	56.00	-36.10	QP	NEUTRAL
8	1.07	-10.74	9.70	0.02	9.91	8.89	46.00	-37.11	Average	NEUTRAL
9	5.45	-8.66	9.64	0.05	9.92	10.95	60.00	-49.05	QP	NEUTRAL
10	5.45	-15.08	9.64	0.05	9.92	4.53	50.00	-45.47	Average	NEUTRAL
11	25.32	15.82	9.80	0.15	9.98	35.75	60.00	-24.25	QP	NEUTRAL
12	25.32	8.83	9.80	0.15	9.98	28.76	50.00	-21.24	Average	NEUTRAL

Note:
1. Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

13. Antenna Requirements

13.1. Limit

For intentional device, according to FCC 47 CFR Section 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For intentional device, according to RSS-Gen issue 5 section 6.8.
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.

13.2. Result

The device support 1T1R SISO, the antennas both used for this product are Built-in FPC antenna, and no antenna other than that furnished by the responsible party shall be used with the device, maximum antenna gain is 1.36 dBi

15. Photos of the EUT

Please refer to appendix I.

END OF REPORT