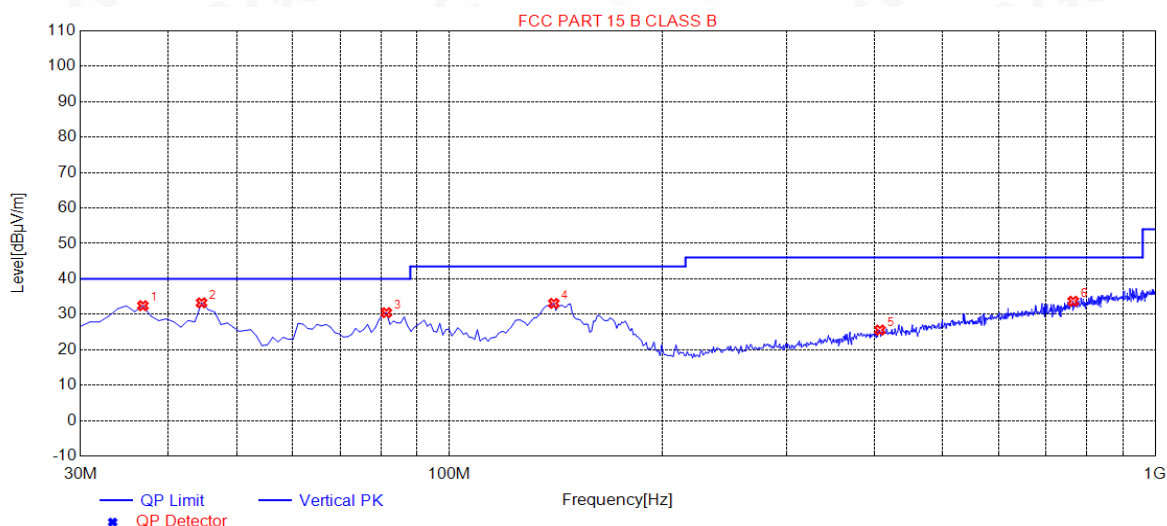


EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2412MHZ	Antenna	Vertical



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.7900	32.43	14.16	40.00	7.57	100	255	Vertical
2	44.5500	33.24	14.82	40.00	6.76	100	188	Vertical
3	81.4100	30.45	10.16	40.00	9.55	100	284	Vertical
4	140.5800	33.08	14.88	43.50	10.42	100	142	Vertical
5	407.3300	25.55	19.98	46.00	20.45	100	252	Vertical
6	765.2600	33.68	27.58	46.00	12.32	100	195	Vertical

RESULT: PASS

Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The “Factor” value can be calculated automatically by software of measurement system.

3. All test modes had been pre-tested. The 802.11b at low channel is the worst case and recorded in the report.

RADIATED EMISSION ABOVE 1GHZ

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4824.000	44.55	0.08	44.63	74	-29.37	peak
4824.000	40.55	0.08	40.63	54	-13.37	AVG
7236.000	42.8	2.21	45.01	74	-28.99	peak
7236.000	37.77	2.21	39.98	54	-14.02	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4824.000	42.69	0.08	42.77	74	-31.23	peak
4824.000	38.36	0.08	38.44	54	-15.56	AVG
7236.000	39.18	2.21	41.39	74	-32.61	peak
7236.000	35.21	2.21	37.42	54	-16.58	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4874.000	43.31	0.14	43.45	74	-30.55	peak
4874.000	39.26	0.14	39.4	54	-14.6	AVG
7311.000	41.5	2.36	43.86	74	-30.14	peak
7311.000	37.44	2.36	39.8	54	-14.2	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4874.000	41.59	0.14	41.73	74	-32.27	peak
4874.000	36.88	0.14	37.02	54	-16.98	AVG
7311.000	39.74	2.36	42.1	74	-31.9	peak
7311.000	35.04	2.36	37.4	54	-16.6	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4924.000	42.73	0.22	42.95	74	-31.05	peak
4924.000	37.62	0.22	37.84	54	-16.16	AVG
7386.000	39.32	2.64	41.96	74	-32.04	peak
7386.000	35.03	2.64	37.67	54	-16.33	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4924.000	40.48	0.22	40.7	74	-33.3	peak
4924.000	35.97	0.22	36.19	54	-17.81	AVG
7386.000	36.51	2.64	39.15	74	-34.85	peak
7386.000	32.07	2.64	34.71	54	-19.29	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RESULT: PASS

Note:

Other emissions from 1G to 25 GHz are considered as ambient noise. No recording in the test report.

Factor = Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

All test modes had been pre-tested. The 802.11b mode is the worst case and recorded in the report.

12. BAND EDGE EMISSION

12.1. MEASUREMENT PROCEDURE

Radiated restricted band edge measurements

The radiated restricted band edge measurements are measured with an EMI test receiver connected to the receive antenna while the EUT is transmitting

12.2. TEST SET-UP

same as 11.2

Note:

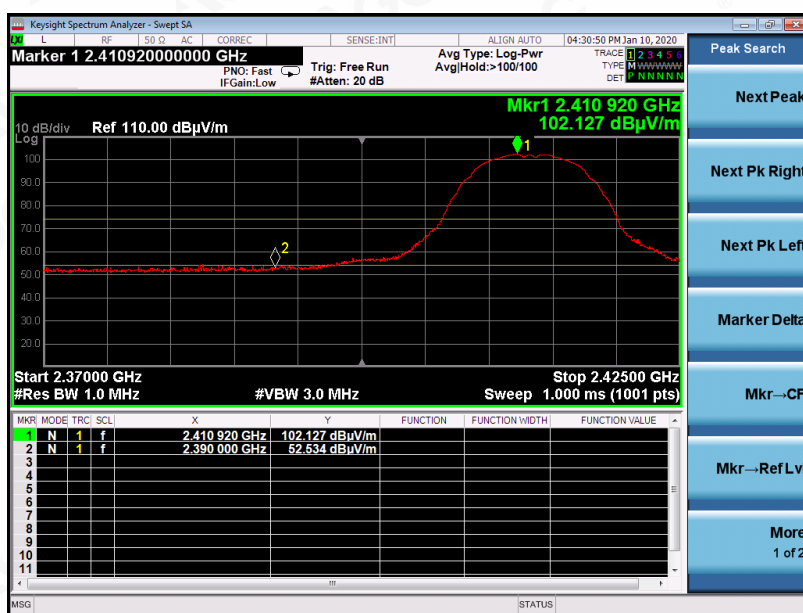
1. Factor=Antenna Factor + Cable loss - Amplifier gain. Field Strength=Factor + Reading level
2. The factor had been edited in the "Input Correction" of the Spectrum Analyzer. So the Amplitude of test plots is equal to Reading level plus the Factor in dB. Use the A dB(μ V) to represent the Amplitude. Use the F dB(μ V/m) to represent the Field Strength. So A=F.



12.3. TEST RESULT

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2412MHZ	Antenna	Horizontal

PK



AV



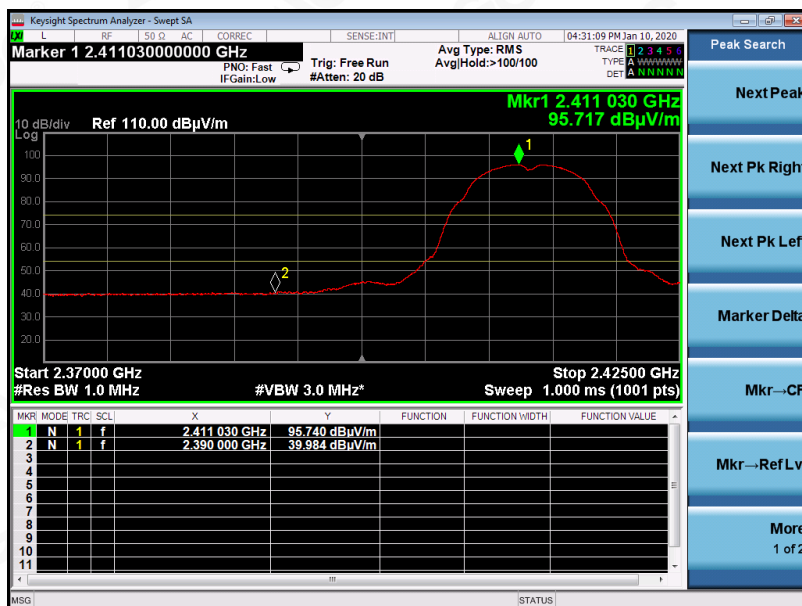
RESULT: PASS

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2412MHZ	Antenna	Vertical

PK



AV



RESULT: PASS

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2462MHZ	Antenna	Horizontal

PK



AV



RESULT: PASS

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2462MHZ	Antenna	Vertical

PK



AV



RESULT: PASS

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11g with data rate 6 2412MHZ	Antenna	Horizontal

PK



AV



RESULT: PASS

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11g with data rate 6 2412MHZ	Antenna	Vertical

PK



AV



RESULT: PASS

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11g with data rate 6 2462MHZ	Antenna	Horizontal

PK



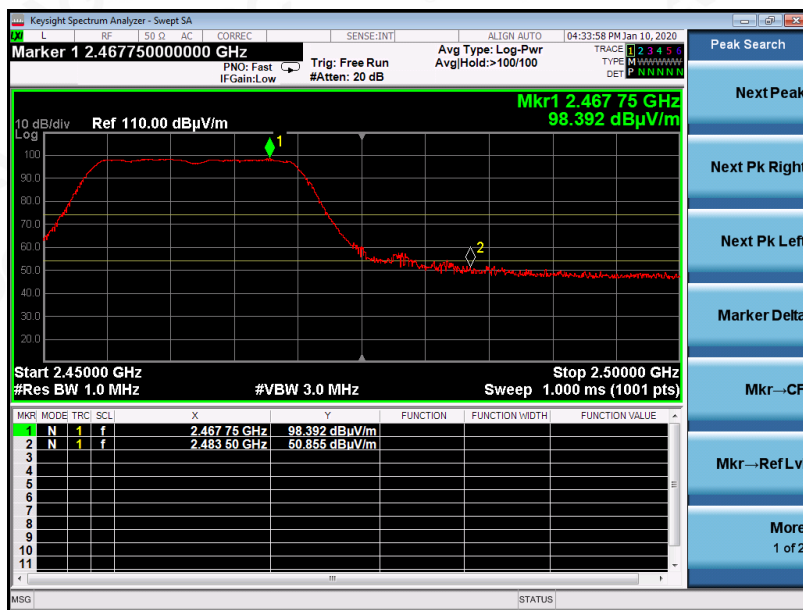
AV



RESULT: PASS

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11g with data rate 6 2462MHZ	Antenna	Vertical

PK



AV



RESULT: PASS

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 20 with data rate 6.5 2412MHZ	Antenna	Horizontal

PK



AV



RESULT: PASS

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 20 with data rate 6.5 2412MHZ	Antenna	Vertical

PK



AV



RESULT: PASS

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 20 with data rate 6.5 2462MHZ	Antenna	Horizontal

PK



AV



RESULT: PASS

EUT	ALARM SYSTEM	Model Name	X1
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 20 with data rate 6.5 2462MHZ	Antenna	Vertical

PK



AV



RESULT: PASS

13. FCC LINE CONDUCTED EMISSION TEST

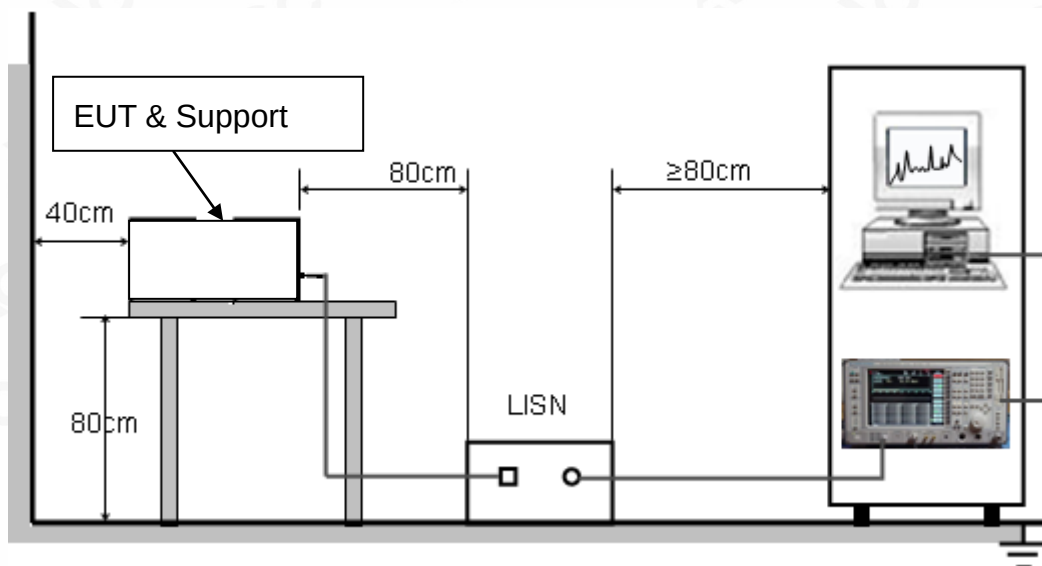
13.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Note:

1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

13.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



13.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2. Support equipment, if needed, was placed as per ANSI C63.10.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4. All support equipments received AC120V/60Hz power from a LISN, if any.
5. The EUT received DC 12V power from adapter which received AC120V/60Hz power from a LISN.
6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.
9. The test mode(s) were scanned during the preliminary test.

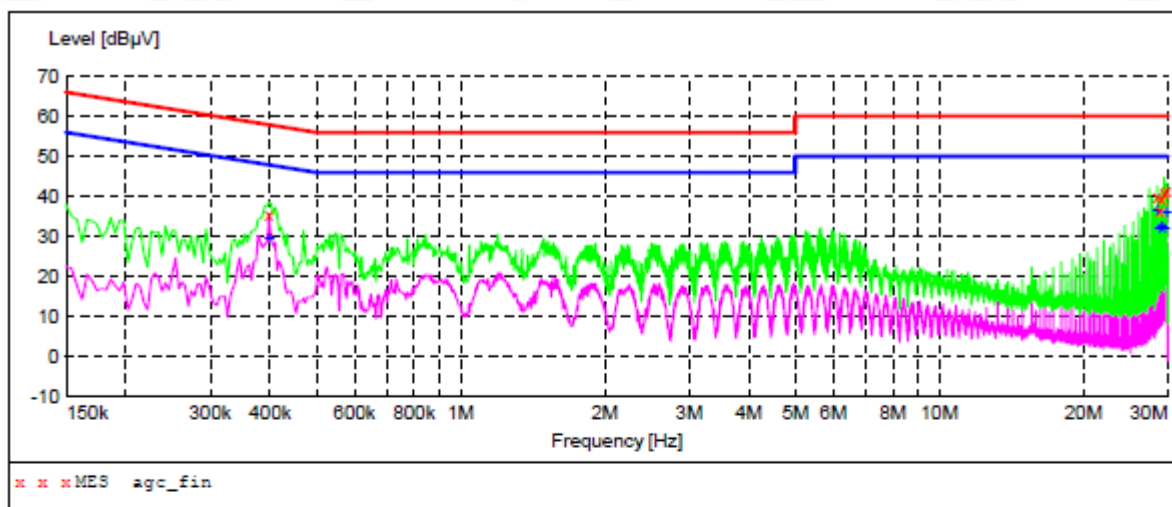
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

13.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
2. A scan was taken on both power lines, Line 1 and Line 2, 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. If EUT emission level was less -2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
3. The test data of the worst case condition(s) was reported on the Summary Data page.

13.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

Line Conducted Emission Test Line 1-L



MEASUREMENT RESULT: "agc_fin"

2020/1/4 0:10

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.398000	35.40	11.0	58	22.5	QP	L1	FLO
28.490000	39.80	12.6	60	20.2	QP	L1	FLO
28.830000	36.60	12.6	60	23.4	QP	L1	FLO
29.170000	39.70	12.6	60	20.3	QP	L1	FLO
29.510000	41.20	12.6	60	18.8	QP	L1	FLO
29.846000	41.40	12.6	60	18.6	QP	L1	FLO

MEASUREMENT RESULT: "agc_fin2"

2020/1/4 0:10

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.398000	29.70	11.0	48	18.2	AV	L1	FLO
28.490000	36.30	12.6	50	13.7	AV	L1	FLO
28.830000	31.90	12.6	50	18.1	AV	L1	FLO
29.170000	32.50	12.6	50	17.5	AV	L1	FLO
29.510000	31.80	12.6	50	18.2	AV	L1	FLO
29.846000	35.80	12.6	50	14.2	AV	L1	FLO



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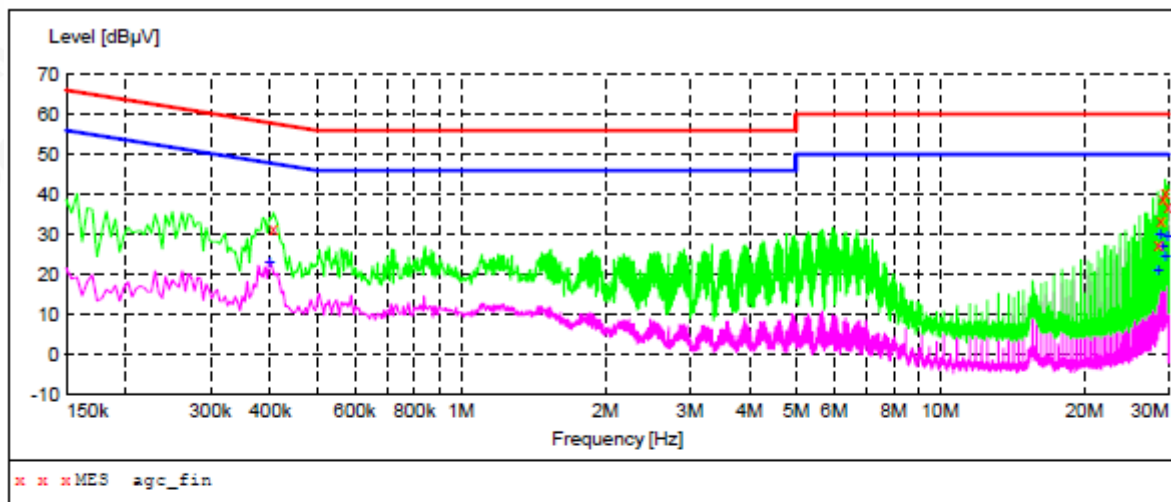
Add: 2/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community,
Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118

Line Conducted Emission Test Line 2-N


MEASUREMENT RESULT: "agc_fin"

2020/1/4 0:06

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.406000	31.40	11.0	58	26.3	QP	N	FLO
28.502000	27.30	12.6	60	32.7	QP	N	FLO
28.838000	33.70	12.6	60	26.3	QP	N	FLO
29.178000	38.70	12.6	60	21.3	QP	N	FLO
29.518000	40.40	12.6	60	19.6	QP	N	FLO
29.858000	36.80	12.6	60	23.2	QP	N	FLO

MEASUREMENT RESULT: "agc_fin2"

2020/1/4 0:06

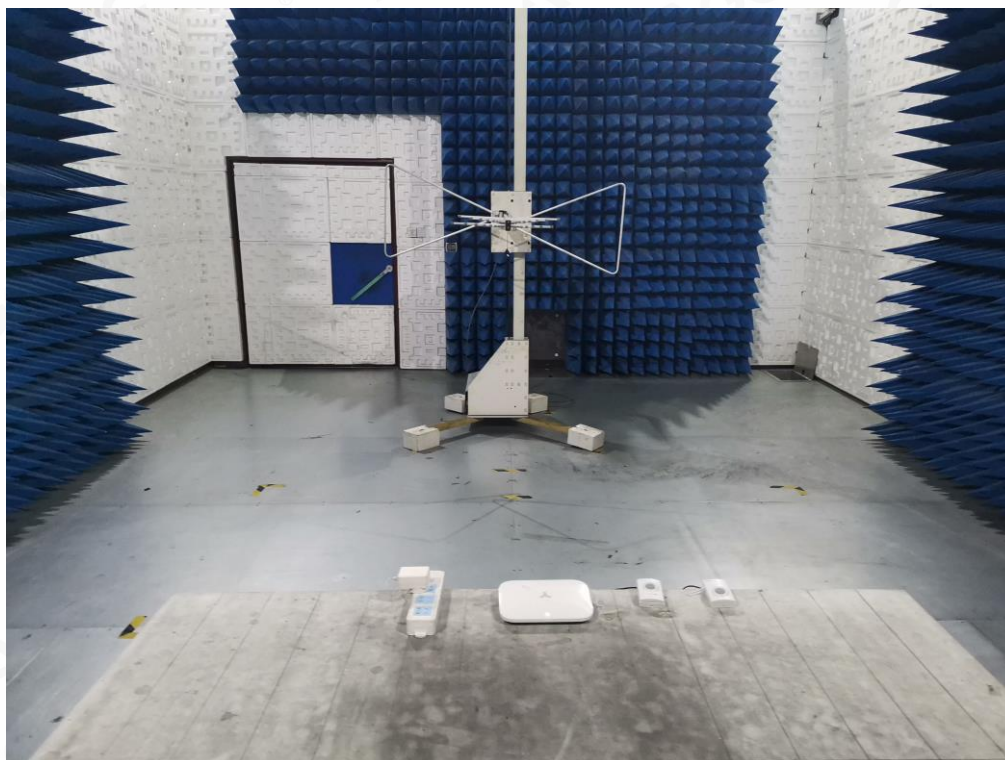
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.398000	22.80	11.0	48	25.1	AV	N	FLO
28.502000	21.20	12.6	50	28.8	AV	N	FLO
28.838000	29.80	12.6	50	20.2	AV	N	FLO
29.178000	27.20	12.6	50	22.8	AV	N	FLO
29.518000	24.70	12.6	50	25.3	AV	N	FLO
29.854000	29.50	12.6	50	20.5	AV	N	FLO

RESULT: PASS

Note: All the test modes had been tested, the mode 1 was the worst case. Only the data of the worst case would be record in this test report.

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

FCC RADIATED EMISSION TEST SETUP BELOW 1GHZ



FCC RADIATED EMISSION TEST SETUP ABOVE 1GHZ



CONDUCTED EMISSION TEST SETUP



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APPENDIX B: PHOTOGRAPHS OF EUT

Refer to Attached file (Appendix I)

----END OF REPORT----



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