



FCC Test Report

Report No.: AGC11034220802FE10

FCC ID : 2AYHE-2205B

PRODUCT DESIGNATION: Video Doorbell

BRAND NAME : Reolink

MODEL NAME : Reolink Video Doorbell WiFi

APPLICANT: Reolink Innovation Limited

DATE OF ISSUE : Nov. 02, 2022

STANDARD(S) : FCC Part 15 Subpart C §15.231

REPORT VERSION: V 1.0

Attestation of Global Co., Ltd





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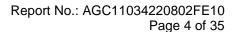
REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Nov. 02, 2022	Valid	Initial Release



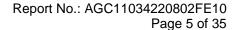
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1. GENERAL INFORMATION

Applicant	Reolink Innovation Limited
Address	FLAT/RM 705 7/F FA YUEN COMMERCIAL BUILDING 75-77 FA YUEN STREET MONG KOK KL HONG KONG
Manufacturer	Reolink Innovation Limited
Address	FLAT/RM 705 7/F FA YUEN COMMERCIAL BUILDING 75-77 FA YUEN STREET MONG KOK KL HONG KONG
Factory	Shenzhen Reolink Technology Co., Ltd
Address	2-4th Floor, Building 2, Yuanling Industrial Park, ShangWu, Shiyan Street, Bao' an District, Shenzhen, China
Product Designation	Video Doorbell
Brand Name	Reolink
Test Model	Reolink Video Doorbell WiFi
Deviation from Standard	Sep. 15, 2022
Date of Receipt	Sep. 20, 2022 – Nov. 02, 2022
Date of Test	Oct.13, 2020 - Oct.19, 2020
Test Result	Pass
Test Report Form No	AGCTR-ER-FCC-XXV1.0

Reviewed By

Bibo Zhang
(Project Engineer)

Calvin Liu
(Reviewer)

Nov. 02, 2022

Nov. 02, 2022

Max Zhang
(Authorized Officer)

Nov. 02, 2022



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2. PRODUCT INFORMATION

2.1 PRODUCT TECHNICAL DESCRIPTION

Hardware Version	PWR25 V120, N66C03 V110
Software Version	V1.0
Operation Frequency	433.92MHz
Modulation Type	ООК
Number of channels	1
Field Strength of Fundamental	433.92MHz: 85.59dBuV/m(PK)@3m 433.92MHz: 78.53dBuV/m(AV)@3m
Power Supply	DC 24V by adapter

2.2 TEST FREQUENCY LIST

Frequency Band Channel Number		Frequency	
	01	433.92 MHz	

Note :According to manufacturer's requirements, periodic operation in the band 40.66-40.70 MHz and above 70 MHz.



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2.3 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2AYHE-2205B**, filing to comply with Part 2, Part 15 of the Federal Communication Commission rules.

2.4 TEST METHODOLOGY

The tests were performed according to following standards:

No.	Identity	Identity Document Title		
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations		
2	FCC 47 CFR Part 15	Radio Frequency Devices		
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices		

2.5 SPECIAL ACCESSORIES

Not available for this EUT intended for grant.

2.6 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

2.7 ANTENNA REQUIREMENT

Standard Requirement

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antennathat uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a brokenantenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The non-detachable antenna inside the device cannot be replaced by the user at will. The gain of the antenna is -3dBi.



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3. TEST ENVIRONMENT

3.1 ADDRESS OF THE TEST LABORATORY

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

3.2 TEST FACILITY

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

IC-Registration No.: 24842 (CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.



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3.3 ENVIRONMENTAL CONDITIONS

NORMAL CONDITIONS	EXTREME CONDITIONS
15 - 35	-20 - 50
20 % - 75 %	20 % - 75 %
86 - 106	86 - 106
	15 - 35 20 % - 75 % 86 - 106

Note: The Extreme Temperature and Extreme Voltages declared by the manufacturer.

3.4 MEASUREMENT UNCERTAINTY

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

Item	Measurement Uncertainty
Uncertainty of Conducted Emission for AC Port	$U_c = \pm 3.1 \text{ dB}$
Uncertainty of Radiated Emission below 1GHz	$U_c = \pm 4.0 \text{ dB}$
Uncertainty of Radiated Emission above 1GHz	$U_c = \pm 4.8 \text{ dB}$
Uncertainty of total RF power, conducted	$U_c = \pm 0.8 \text{ dB}$
Uncertainty of RF power density, conducted	$U_c = \pm 2.6 \text{ dB}$
Uncertainty of spurious emissions, conducted	$U_c = \pm 2.7 \%$
Uncertainty of Occupied Channel Bandwidth	U _c = ±2 %



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3.5 LIST OF EQUIPMENTS USED

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESPI	101206	Mar. 28, 2022	Mar. 27, 2023
LISN	R&S	ESH2-Z5	100086	Jun. 08, 2022	Jun. 07, 2023
Test software	R&S	ES-K1	Ver.V1.71	N/A	N/A
TEST RECEIVER	R&S	ESCI	10096	May 15, 2020	May 14, 2021
EXA Signal Analyzer	Aglient	N9010A	MY5347050 4	Mar. 28, 2022	Mar. 27, 2023
2.4GHz Filter	EM Electronics	2400-2500MHz	N/A	Nov. 17, 2021	Nov. 16, 2022
Attenuator	ZHINAN	E-002	N/A	Mar. 04, 2022	Mar. 03, 2023
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Oct. 31, 2021	Oct. 30, 2023
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	Mar. 12, 2022	Mar. 21, 2024
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	Apr. 23, 2021	Apr. 22, 2023
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Aug. 04, 2022	Aug. 03, 2024
ANTENNA	SCHWARZBECK	VULB9168	494	Jan. 08, 2020	Jan. 07, 2023
Test software	FARA	EZ-EMC	Ver.RA-03A	N/A	N/A



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4.SYSTEM TEST CONFIGURATION

4.1 EUT CONFIGURATION

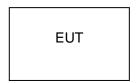
The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

4.2 EUT EXERCISE

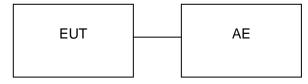
The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

4.3 CONFIGURATION OF TESTED SYSTEM

Radiated Emission Configure:



Conducted Emission Configure:



4.4 EQUIPMENT USED IN TESTED SYSTEM

The Following Peripheral Devices And Interface Cables Were Connected During The Measurement:

	Test	Accessories	Come	From	The	Labora	tory
--	------	-------------	------	------	-----	--------	------

☐ Test Accessories Come From The Manufacturer

Item	Equipment	Model No.	Identifier	Note
1	Video Doorbell	Reolink Video Doorbell WiFi	2AYHE-2205B	EUT
2	Adapter	DCT12W240050U S-B0	INPUT:100-240V, 50/60Hz, 0.3A OUTPUT:24V, 0.5A	Accessories



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4.5 SUMMARY OF TEST RESULTS

Item	FCC Rules	Description Of Test	Result
1	§15.203	Antenna Equipment	Pass
2	§15.231(a)	Transmission Time (Activated automatically)	Pass
3	§15.231	Field Strength of Fundamental	Pass
4	§15.209	Radiated Emission	Pass
5	§15.205(a)	Restricted Bands of Operation	Pass
6	§15.231(c)	20dB Bandwidth	Pass
7	§15.207	AC Power Line Conducted Emission	Pass



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5. DESCRIPTION OF TEST MODES

Summary table of Test Cases			
	Data Rate / Modulation		
Test Item	Short-range equipment / OOK		
Radiated&Conducted Test Cases	Mode 1: Tx _433.92 MHz		
AC Conducted Emission	Mode 1: Tx _433.92 MHz		

Note:

- 1. Only the result of the worst case was recorded in the report, if no other cases.
- 2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
- 3. For Conducted Test method, a temporary antenna connector is provided by the manufacture.



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6. PROVISION FOR MOMENTARY OPERATION

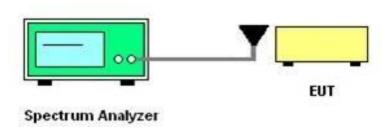
6.1 PROVISIONS APPLICABLE

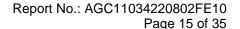
	(1)	A manually operated transmitter shall employ a switch that will automatically deactivate the
		transmitter within not more than 5 seconds of being released.
\boxtimes	(2)	A transmitter activated automatically shall cease transmission within 5 seconds after activation.
	(3)	Periodic transmissions at regular predetermined intervals are not permitted.
		However, polling or supervision transmissions, including data, to determine system integrity of
		transmitters used in security or safety applications are allowed if the total duration of transmissions
		does not exceed more than two seconds per hour for each transmitter. There is no limit on the
		number of individual transmissions, provided the total transmission time does not exceed two
		seconds per hour.
	(4)	Intentional radiators which are employed for radio control purposes during emergencies
		involving fire, security, and safety of life, when activated to signal an alarm, may operate during the
		pendency of the alarm condition.
	(5)	Transmission of set-up information for security systems may exceed the transmission duration
		limits in (1) and (2) above, provided such transmission are under the control of a professional
		installer and do not exceed ten seconds after a manually operated switch is released or a transmitter
		is activated automatically. Such set-up information may include data.

6.2 MEASUREMENT PROCEDURE

- 1. Set the parameters of SPA as below:
- 2. Centre frequency = Operation Frequency
- 3. RBW=1MHz, VBW=3MHz Span: 0Hz Sweep time: 10S
- 4. Set the EUT to transmit by manually operated. Use the "View" function of SPA to find the transmission time of being released.
- Record the data and Reported.

6.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)







6.4 MEASUREMENT RESULTS

Test Mode	Test Channel (MHz)	The time of stopping transmission after automatically activation by alarm sensor (s)	Limits	Pass or Fail
OOK	433.92	1.6	5s	Pass

Test Graphs Of Launch Operation Time Frequency Avg Type: Log-Pwr Center Freq 433.920000 MHz Trig: Free Run Atten: 30 dB PNO: Fast ↔ IFGain:Low **Auto Tune** ΔMkr1 1.600 s -0.50 dB Ref 20.00 dBm Center Freq 433.920000 MHz Start Freq 433.920000 MHz Stop Freq 433.920000 MHz Center 433.920000 MHz Res BW 1.0 MHz Span 0 Hz Sweep 20.00 s (1001 pts) CF Step 1.000000 MHz **#VBW 1.0 MHz** Auto FUNCTION FUNCTION WIDTH FUNCTION VALUE -0.50 dB -52.75 dBm Freq Offset 0 Hz



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7. DUTY CYCLE CORRECTION FACTOR

7.1 PROVISIONS APPLICABLE

According to FCC Part 15.231 (b)(2) and 15.35 (c), For pulse operation transmitter, the averaging pulsed emissions are calculated by peak value of measured emission plus duty cycle factor.

7.2 MEASUREMENT PROCEDURE

After the antenna of the EUT is connected, the output signal of the EUT is received by the connected test

To the spectrum analyzer. Set the center frequency to the actual working frequency of the EUT, and then set the spectrum analyzer to Zero Span for

Release time reading. During the test, the switch is released and the EUT is automatically closed

1. Set the parameters of SPA as below:

Centre frequency = Operation Frequency

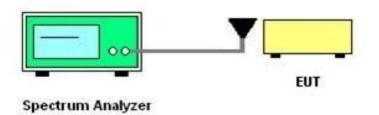
RBW=1MHz, VBW=3MHz

Span: 0Hz

Sweep time: more than two pulse trains or more than each type of pulse occupancy time

- 2. Set the EUT to transmit by manually operated. Use the "Delta mark" function of SPA to find the period time between two pulse trains and each type of pulse occupancy time.
- 3. Record the plots and Reported.

7.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)



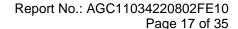
7.4 MEASUREMENT RESULTS

Type of Pules	Width of Pules (ms)	Quantity of Pules (pcs)	Transmission Time (ms)	Total Time (Ton) (ms)
Pules 1	0.355	11	3.905	17.205
Pules 2	0.950	14	13.300	17.205

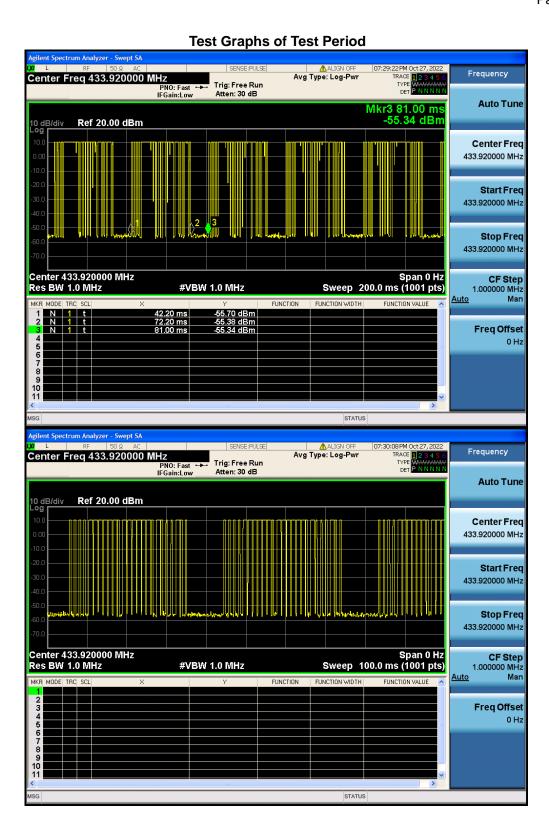
Test Period (Tp)	Total Time (Ton)	Duty Cycle	Duty Cycle Correction Factor
(ms)	(ms) `	(%)	(dB)
38.8	17.205	44.34	-7.06

NOTE 1: Duty Cycle Factor=20 log (Duty Cycle) =-7.06

NOTE 2: The maximum reference value of the test cycle is 100ms.

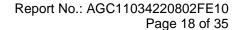




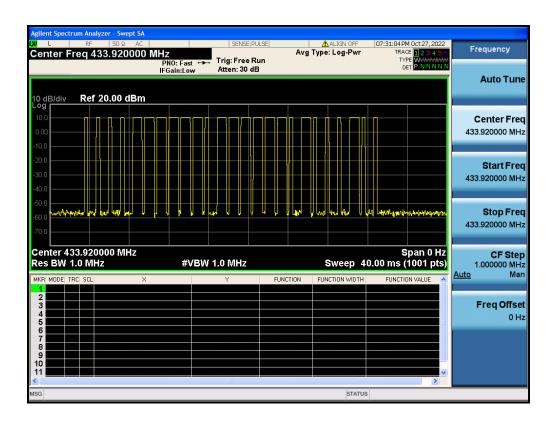


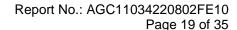
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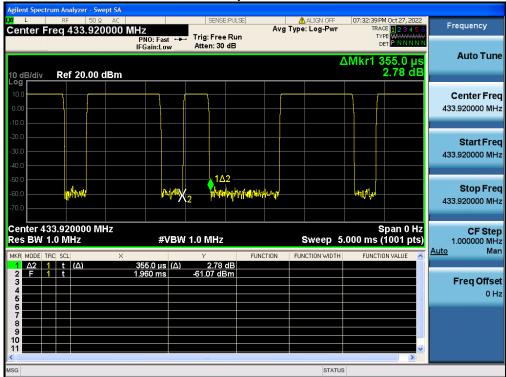




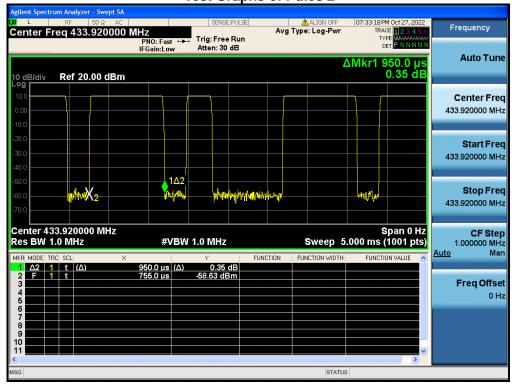








Test Graphs of Pules 2



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8. 20 dB BANDWIDTH

8.1 PROVISIONS APPLICABLE

According to FCC Part 15.231(c), The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. Bandwidth is determined at the points 20 dB down from the modulated carrier

8.2 MEASUREMENT PROCEDURE

1. Set the parameters of SPA as below:

Centre frequency = Operation Frequency

RBW=10KHz

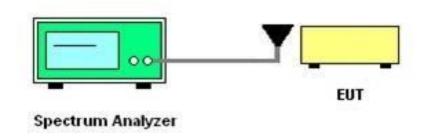
VBW=30KHz

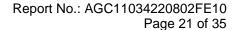
Span: 1MHz

Sweep time: Auto

- 2. Set the EUT to continue transmitting mode. Allow the trace to stabilize. Use the "N dB down" function of SPA to define the bandwidth.
- 3. Record the plots and Reported.

8.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)







7.4 MEASUREMENT RESULTS

Test Data of Occupied Bandwidth and -20dB Bandwidth					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-20dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail
OOK	433.92	0.21213	0.04475	N/A	Pass

Test Graphs of Occupied Bandwidth





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7. RADIATED EMISSION

7.1 LIMITS OF RADIATED EMISSION TEST

15.209 Limit in the below table has to be followed:

Frequency	Distance	Distance Field Strengths Lir	
(MHz)	Meters	μ V/m	dΒ(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	
0.490 ~ 1.705	30	24000/F(kHz)	
1.705 ~ 30	30	30	
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)/n 54.0 dB(μV)/n	` '

Remark:

- (1) Emission level dB μ V = 20 log Emission level μ V/m
- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

Note: All modes were tested for restricted band radiated emission, the test records reported below are the worst result compared to other modes.

15.231(b) Limit in the below table has to be followed:

Fundamental Frequency	Field Strength of Fundamental (microvolts/meter)	Field Strength of Harmonics (microvolts/meter)
40.66-40.70MHz	2250	225
70-130MHz	1250	125
130-174MHz	1250 to 3750	125 to 375
174-260MHz	3750	375
260-470MHz	3750 to 12500	375 to 1250
Above 470MHz	12500	1250



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15.231(e) Limit in the below table has to be followed:

Fundamental Frequency	Field Strength of Fundamental (microvolts/meter)	Field Strength of Harmonics (microvolts/meter)
40.66-40.70MHz	1000	225
70-130MHz	1250	125
130-174MHz	1250 to 3750	125 to 375
174-260MHz	3750	375
260-470MHz	3750 to 12500	375 to 1250
Above 470MHz	12500	1250

7.2 MEASUREMENT PROCEDURE

- 1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then
 testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not
 have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.



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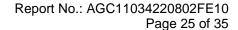
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP
Start ~Stop Frequency	1GHz~26.5GHz
Clart - Clop i requericy	1MHz/3MHz for Peak, 1MHz/3MHz for Average

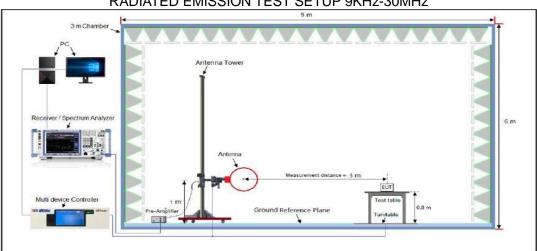
Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP



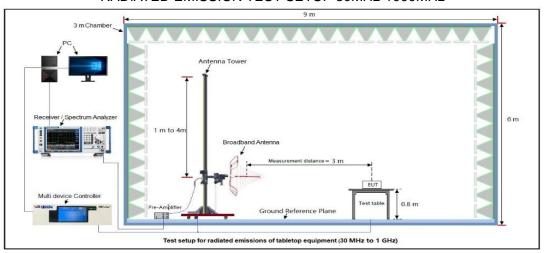


7.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)

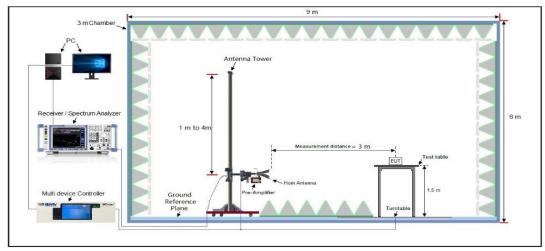
RADIATED EMISSION TEST SETUP 9KHz-30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



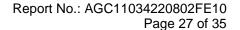


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7.4 MEASUREMENT RESULT

RADIATED EMISSION BELOW 30MHz

The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.





RADIATED EMISSION FROM 30MHz ~1000MHz

							Poolink	Video Doorbell	
EUT		Vic	Video Doorbell			Model Name		WiFi	
Temperature			25° C			Relative Humidity		55.4%	
Pres	sure	96	0hPa		Test Voltage		Normal Voltage		
Test	Mode	Mo	ode 1		Anten	Antenna		tal	
82.0 dBuV/m		//m							
	2.0	40 50 6	2	A MHZ	ny jay king ti king king king king king king king kin	300 400 500	*Andrew Andrew A	1000,000	
Susn	ected Data	List Peak	Detection						
Ousp		List_ i can				T .			
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	41.5670	5.28	11.03	40.00	34.72	150	348	Horizontal	
2	62.2128	5.66	16.85	46.00	40.34	150	32	Horizontal	
3	13.08369	7.20	16.87	46.00	38.80	150	45	Horizontal	
4	433.9200	58.87	20.50	100.82	41.95	150	46	Horizontal	
5	815.9678	8.13	28.12	46.00	37.87	150	47	Horizontal	
6	869.1301	29.14	30.49 46.00		16.86			112 Horizontal	
Final	data result	_ Average	Detection						
NO.	Freq. [MHz]	PK Level [dBµV/m]	Duty cycle	factor(dB)	AV Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity	
1	433.9200	79.37	-7.	.06	72.31	80.82	-8.51	Horizontal	
			1			1		†	

RESULT: PASS

815.9678

2

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

29.19

60.82

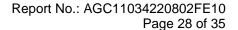
-31.63

Horizontal

-7.06

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/

36.25

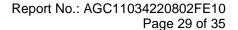




EUT			Video Doorbell			Mode	el Name	Reolink Video Doorbell WiFi		
Temperature			25° C			Polat	Polative Humidity		55.4%	
<u> </u>							Relative Humidity		55.4%	
Pres	sure	re 960hPa Test Voltage Normal Voltage			Voltage					
Test Mode			Mode 1			Ante	nna	Horizon	Horizontal	
	92.0 dBuV/m									
	52						*X		GX T	
	M	Albin	2 X		3	3	Audelman M. Hard	order of the following	M. KWA	
Susp	12.0 30.000 Dected Data	List_ Pea	k Dete	actor	(MHz	Margin	300 400 500 Height	Angle	1000.000	
NO.	pected Data Freq. [MHz]	List_ Pea	k Dete	ction actor dB]	Limit [dBµV/m]	Margin [dB]	300 400 500 Height [cm]	600 700 Angle [°]	1000.000 Polarity	
NO.	Freq. [MHz] 30.6378	List_ Pea Level [dBµV/m] 18.05	Fa [0	ction actor dB]	Limit [dBµV/m]	Margin [dB]	300 400 500 Height [cm] 150	Angle [°] 348	Polarity Vertical	
NO.	Freq. [MHz] 30.6378 64.6594	List_ Pea Level [dBµV/m] 18.05 8.11	Fa [0	ction actor dB] 3.18 7.98	Limit [dBµV/m] 40.00 46.00	Margin [dB] 21.95 37.89	Height [cm] 150	Angle [°] 348 32	Polarity Vertical Vertical	
NO. 1 2 3	Freq. [MHz] 30.6378 64.6594 173.8135	List_ Pea Level [dBµV/m] 18.05 8.11 8.06	Fa [0 13 17 17	ction actor dB] 3.18 7.98	Limit [dBµV/m] 40.00 46.00 46.00	Margin [dB] 21.95 37.89 37.94	Height [cm] 150 150 150	Angle [°] 348 32 45	Polarity Vertical Vertical Vertical	
NO. 1 2 3 4	30.000 Freq. [MHz] 30.6378 64.6594 173.8135 433.9200	Level [dBµV/m] 18.05 8.11 8.06 69.58	Fa 13 17 17 20	ction actor dB] 3.18 7.98 7.84	Limit [dBµV/m] 40.00 46.00 46.00 100.82	Margin [dB] 21.95 37.89 37.94 31.24	Height [cm] 150 150 150 150	Angle [°] 348 32 45 46	Polarity Vertical Vertical Vertical Vertical Vertical	
NO. 1 2 3	Freq. [MHz] 30.6378 64.6594 173.8135	List_ Pea Level [dBµV/m] 18.05 8.11 8.06 69.58 11.44	Fa [0 13 17 20 22	ction actor dB] 3.18 7.98 7.84 0.01 2.83	Limit [dBµV/m] 40.00 46.00 100.82 46.00	Margin [dB] 21.95 37.89 37.94 31.24 34.56	Height [cm] 150 150 150 150 150	Angle [°] 348 32 45 46 47	Polarity Vertical Vertical Vertical Vertical Vertical Vertical	
NO. 1 2 3 4 5 6	30.000 Prected Data Freq. [MHz] 30.6378 64.6594 173.8135 433.9200 528.2458	List_ Pea Level [dBµV/m] 18.05 8.11 8.06 69.58 11.44 18.50	Fa [d 13 17 20 22 33 33	ction actor dB] 3.18 7.98 7.84 0.01 2.83 3.33	Limit [dBµV/m] 40.00 46.00 46.00 100.82	Margin [dB] 21.95 37.89 37.94 31.24	Height [cm] 150 150 150 150	Angle [°] 348 32 45 46	Polarity Vertical Vertical Vertical Vertical Vertical	
NO. 1 2 3 4 5 6	30.000 Freq. [MHz] 30.6378 64.6594 173.8135 433.9200 528.2458 869.1301	List_ Pea Level [dBµV/m] 18.05 8.11 8.06 69.58 11.44 18.50	Fa [d 13 17 17 20 22 33 Detect	ction actor dB] 3.18 7.98 7.84 0.01 2.83 3.33 tion	Limit [dBµV/m] 40.00 46.00 100.82 46.00	Margin [dB] 21.95 37.89 37.94 31.24 34.56	Height [cm] 150 150 150 150 150	Angle [°] 348 32 45 46 47	Polarity Vertical Vertical Vertical Vertical Vertical Vertical	
NO. 1 2 3 4 5 6 Final	30.000 Freq. [MHz] 30.6378 64.6594 173.8135 433.9200 528.2458 869.1301 I data result Freq.	List_ Pea Level [dBµV/m] 18.05 8.11 8.06 69.58 11.44 18.50 LAVerage PK Level	Fa [d 13 17 17 20 22 33 Detect	ction actor dB] 3.18 7.98 7.84 0.01 2.83 3.33 tion	Limit [dBµV/m] 40.00 46.00 46.00 100.82 46.00 46.00	Margin [dB] 21.95 37.89 37.94 31.24 34.56 27.5	Height [cm] 150 150 150 150 150 150 150 Limit	Angle [°] 348 32 45 46 47 112	Polarity Vertical Vertical Vertical Vertical Vertical Vertical Vertical Vertical	

RESULT: PASS

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

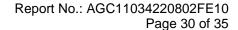




RADIATED EMISSION FROM ABOVE 1GHZ

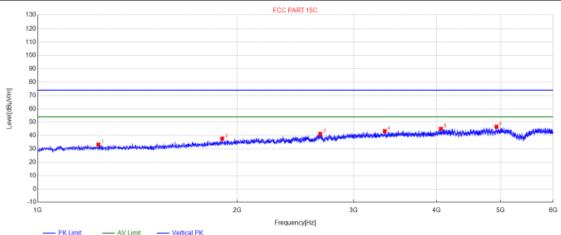
EUT Temperature Pressure			Video Doorbell			Model I	Model Name		Reolink Video Doorbo WiFi	
			25° C		Relative	Relative Humidity		55.4%		
			960hPa			Test Vo	Test Voltage		Normal Voltage	
Test Mode			Mode 1	Mode 1			 а	Н	Horizontal	
	130,			FCC PART 15C						
	120									
	110									
	100									
	90									
,	80									
	70									
60										
	50								,	
	50 40			2	to the se ^{#3} and the se ^{#4}	Marine Marie		with the second section	The state of the s	
		and the state of t	المتعادم بورود والمتعادم و	parting and property and an order	المراد المارية أسيال المادات	William Commence	na ngapatangan kanangan dan	and the second	S. Carried Street Street, Stre	
	40 30 20	Distance of the State of the St	أوالم المراد والمراد و		المرادية ا	Walter Commencer Com	and the second second second	NATION AND AND AND AND AND AND AND AND AND AN	5	
	40 30 20 10	Diagraphy and Speciments	المتعادية والمتعادية والمتعادية والمتعادية والمتعادية والمتعادة وا		the state of the s	Andrew Constitution of the State of the Stat	non-desirate de la companya de la	STATE OF THE PARTY	5	
	40	Engage and Propheries &	والمراجع المراجع المرا	ar to proper and a second	tangkan pangkan kanapa	National Control of the State o	en jarina era era era era era era era era era er	**************************************	S AND THE RESERVE OF THE PARTY	
	40 30 20 10	gra _{nde} ga _n atura Papa Jacoban <mark>A</mark> nd	المستعدد والمستعدد والمستعد والمستعدد والمستعد	2G		3G	4G	TO THE CONTRACT OF	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	
	40 30 20 10 0 -10	PK Lims —	— AV Limit — Horis	2G	Frequency(Hz)			and the second		
	40 30 20 10 0 -10	AV Detector	— AV Limit — Horis	2G zontal PK	Frequency[Hz]	3G	4G			1
	40 30 20 10 0 -10 1G		Level	2G	Frequency[Hz]	3G Margin		Angle	5G 6G	1
	40 30 20 10 0 -10	AV Detector		2G zontal PK	Frequency[Hz]	3G	4G]
	40 30 20 10 0 -10 1G	* AV Detector	Level	2G zontal PK Factor	Frequency[Hz]	3G Margin	4G Height	Angle	5G 6G	
	40	* AV Detector Freq. [MHz]	Level [dBµV/m]	zontal PK Factor [dB]	Frequency[Hz] Limit [dBµ√/m]	3G Margin [dB]	4G Height [cm]	Angle [°]	5G 6G Polarity	
	40 30 20 10 0 1G NO.	Freq. [MHz] 1250.5251	Level [dBµV/m] 34.06	zontal PK Factor [dB] -19.89	Frequency(Hz) Limit [dBµV/m] 74.00	36 Margin [dB] 39.94	Height [cm]	Angle [°] 320	Polarity Horizontal	
	40 30 20 10 0 -10 1G	Freq. [MHz] 1250.5251 1723.5724	Level [dBμV/m] 34.06 37.42	2G contal PK Factor [dB] -19.89 -18.18	Frequency[Hz] Limit [dBµV/m] 74.00 74.00	36 Margin [dB] 39.94 36.58	Height [cm] 150 150	Angle [°] 320 90	Polarity Horizontal Horizontal	
	40 30 20 10 10 1G NO.	Freq. [MHz] 1250.5251 1723.5724 2265.1265	Level [dBμV/m] 34.06 37.42 39.63	2G tontal PK Factor [dB] -19.89 -18.18 -14.48	Frequency[Hz] Limit [dBµV/m] 74.00 74.00 74.00	36 Margin [dB] 39.94 36.58 34.37	Height [cm] 150 150 150	Angle [°] 320 90 110	Polarity Horizontal Horizontal Horizontal	

RESULT: PASS





EUT	Video Doorbell	Model Name	Reolink Video Doorbell WiFi
Temperature	25° C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Vertical



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1235.0235	33.27	-19.88	74.00	40.73	150	160	Vertical
2	1899.0899	37.74	-16.81	74.00	36.26	150	260	Vertical
3	2670.167	41.33	-12.48	74.00	32.67	150	220	Vertical
4	3341.2341	43.34	-10.19	74.00	30.66	150	150	Vertical
5	4061.8062	45.05	-8.03	74.00	28.95	150	270	Vertical
6	4926.8927	46.62	-6.49	74.00	27.38	150	200	Vertical

RESULT: PASS

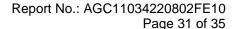
AV Detector

Note:

The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.

Factor = Antenna Factor + Cable loss - Amplifier gain, Margin=Limit-Level.

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





8. AC LINE CONDUCTED EMISSION TEST

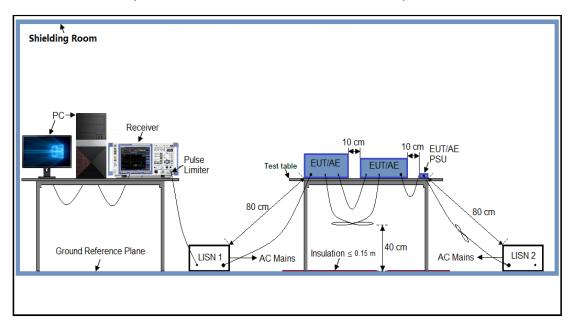
8.1 LIMITS OF LINE CONDUCTED EMISSION TEST

Francous	Maximum RF Line Voltage				
Frequency	Q.P. (dBμV)	Average (dBμV)			
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.

8.2 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)





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8.3 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 equipment received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received DC 5V 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.

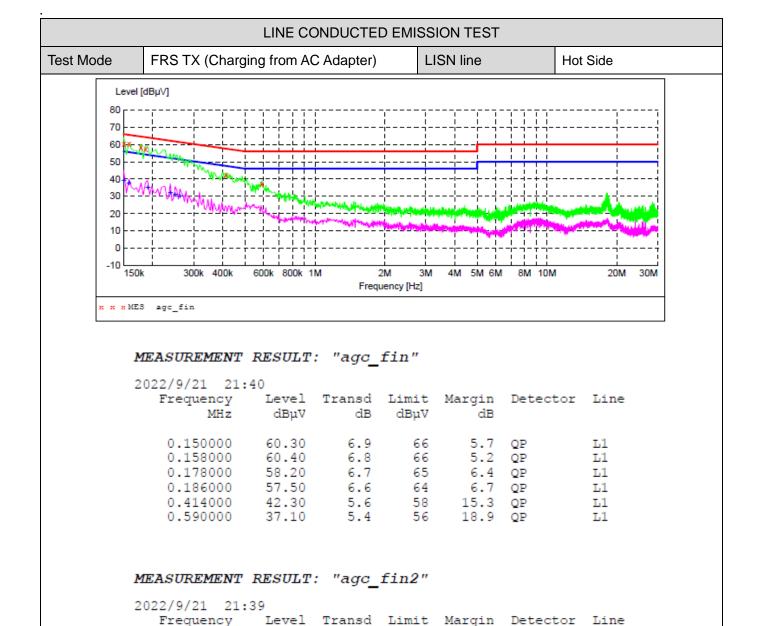
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

8.4 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.

8.5 MEASUREMENT RESULTS





RESULT: PASS

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dΒ

6.9

6.8

6.6

6.3

6.3

6.2

dBuV

56

56

54

52

52

51

dΒ

ΑV

ΑV

ΔV

ΑV

ΑV

ΑV

ь1

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ь1

ы

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Ьl

16.6

17.9

18.6

20.1

20.6

20.9

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MHz

0.150000

0.158000

0.190000

0.238000

0.250000

0.262000

dΒμV

39.40

37.70

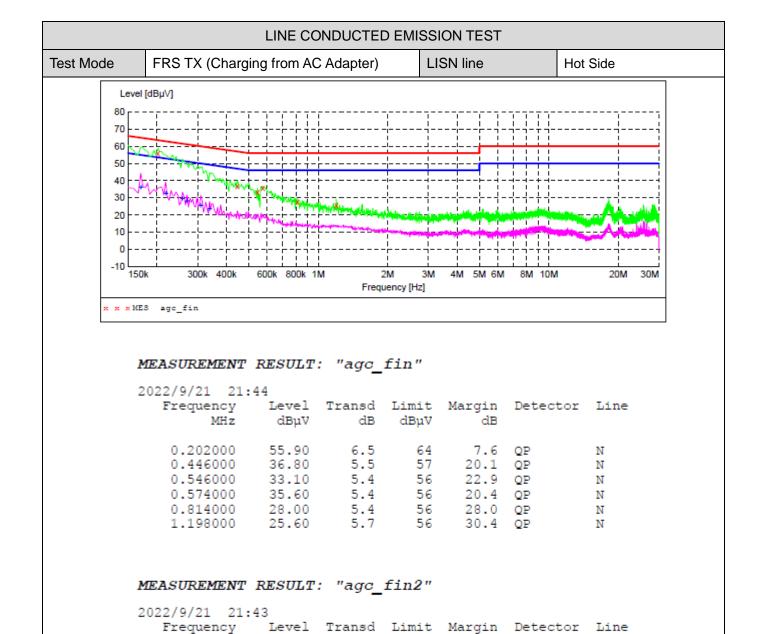
35.40

32.10

31.20

30.50





RESULT: PASS

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dΒ

6.8

6.4

6.2

6.2

6.0

5.9

dΒμV

55

53

52

51

50

49

dΒ

ΑV

ΑV

ΑV

ΑV

ΑV

ΑV

Ν

Ν

Ν

Ν

Ν

Ν

18.8

20.1

21.8

22.6

24.0

25.3

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MHz

0.170000

0.218000

0.258000

0.270000

0.310000

0.338000

dΒμV

36.20

32.80

29.70

28.50

26.00

24.00



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APPENDIX I: PHOTOGRAPHS OF TEST SETUP

Refer to the Report No.: AGC11034220802AP04

APPENDIX II: PHOTOGRAPHS OF TEST EUT

Refer to the Report No.: AGC11034220802AP05

----END OF REPORT-----



Conditions of Issuance of Test Reports

- 1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd. (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").
- 2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
- 3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
- 4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
- 5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
- 6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
- 7. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
- 8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
- 9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.