FCC PART 15.407

TEST REPORT

For

AKUVOX (XIAMEN) NETWORKS CO., LTD.

10/F, No.56 Guanri Road, Software Park II, Xiamen 361009, China

FCC ID: 2AHCR-PG71

Report Type:	**Product Name:**
Original Report	HyPanel Pro

Report Number:	XMDN240219-08385E-RF-04
Report Date:	2025-01-06
Reviewed By:	Ash Lin
Approved By:	Miles Chen
Prepared By:	Bay Area Compliance Laboratories Corp. (Xiamen) Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone XiaMen Tel: + 86-592-3200111 www.baclcorp.com.cn

TABLE OF CONTENTS

REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	XMDN240219-08385E-RF-04	R1V1	2025-01-06	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	AKUVOX (XIAMEN) NETWORKS CO., LTD.
Product Name:	HyPanel Pro
Tested Model:	PG71
Series Model(s):	PG71N
Power Supply:	DC 12V from Adapter or DC 48V from PoE
Maximum Output Power:	16.79 dBm in 5150-5250 MHz Band 16.59 dBm in 5250-5350 MHz Band 13.83 dBm in 5470-5725 MHz Band 15.92 dBm in 5725-5850 MHz Band
Operating Frequency:	**5150-5250MHz:** 5180-5240 MHz (802.11a/n ht20/ac vht20) 5190-5230 MHz(802.11n ht40/ac vht40) 5210 MHz(802.11ac vht80) **5250-5350MHz:** 5260-5320 MHz (802.11a/n ht20/ac vht20) 5270-5310 MHz(802.11n ht40/ac vht40) 5290 MHz(802.11ac vht80) **5470-5725MHz:** 5500-5720 MHz (802.11a/n ht20/ac vht20) 5510-5710 MHz(802.11n ht40/ac vht40) 5530-5690MHz(802.11ac vht80) **5725-5850MHz:** 5745-5825 MHz (802.11a/n ht20/ac vht20) 5755-5795 MHz(802.11n ht40/ac vht40) 5775 MHz(802.11ac vht80)
Modulation Type:	802.11a/n/ac: OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM
Antenna Type:	FPC Antenna
★Maximum Antenna Gain:	3 dBi
EUT Received Status:	Good
Note: *1. The Maximum Antenna Gain was declared by manufacturer.* *2. The model difference is PG71 is equipped with a camera and an indicator Led, while PG71N does not. Please refer to declaration letter for more detail.* *3. All measurement and test data in this report was gathered from production sample serial number: XMDN240219-08385E-RF-1(model:PG71), XMDN240219-08385E-RF-2(model:PG71N) (Assigned by the BACL (Xiamen). The EUT supplied by the applicant was received on 2024-05-06)*	

Objective

This type approval report is prepared for *AKUVOX (XIAMEN) NETWORKS CO., LTD.* in accordance with Part 2-Subpart J, Part 15-Subparts A and E of the Federal Communication Commissions' rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart E, section 15.203, 15.205, 15.207, 15.209 and 15.407 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Xiamen).

Measurement Uncertainty

Item		Ulab = 2 Uc (y) (Confidence of 95%)
Conducted Emission	150kHz-30MHz	2.33 dB
Radiated Emission	9kHz-30MHz	2.59 dB
	30MHz~200MHz	4.38 dB
	200MHz~1GHz	4.50 dB
	1GHz~6GHz	4.58 dB
	6GHz~18GHz	5.43 dB
	18GHz~26.5GHz	5.47 dB
	26.5GHz~40GHz	5.63 dB
Occupied Channel Bandwidth		0.053 kHz
Transmitter Conducted Power		0.624 dB
Power Spectral Density		0.61 dB
Duty Cycle		1%
Temperature		1℃
Humidity		5%

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Xiamen) to collect test data is located on the Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone XiaMen

Bay Area Compliance Laboratories Corp. (Xiamen) Lab is accredited to ISO/IEC 17025 by A2LA (Certificate Number: 7134.01) and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No. : CN1384.

SYSTEM TEST CONFIGURATION

Test Mode and Voltage

The system was configured for testing in a typical mode (as normally used by a typical user).	
Test mode:	Test mode 1: Transmitting
Test voltage:	DC 12V from Adapter(AC 120V/60Hz) or DC 48V from PoE(AC 120V/60Hz)
Remark:	During all emission tests, the EUT was configured to measure its highest possible emission level and the worst case's test data was presented in this test report.

Note:
1. Power from adapter and PoE were evaluated in the XMDN240219-08385E-RF-02 report for the AC Line Conducted Emissions Test and Radiation Spurious Emissions Test. The report showed that PoE had worse emissions in AC Line Conducted Emissions Test and Radiation Spurious Emissions Test. Therefore, only the test results with worst case PoE are reflected in this report.

2. For series model PG71N, Radiated Spurious Emissions below 1GHz and AC line conducted emissions was tested since the hardware difference.

Description of Test Configuration

The EUT was configured for testing in an engineering mode which was provided by the manufacturer.

For **5150~5250 MHz** band, test channel list is as below,

802.11a/ac20/n20 mode Channel 36, 40, 48 were tested.
802.11n40/ac40 mode Channel 38, 46 were tested.
802.11ac80 mode Channel 42 was tested.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
38	5190	46	5230
40	5200	48	5240
42	5210	/	/

For **5250~5350 MHz** band, test channel list is as below,

802.11a/ac20/n20 mode Channel 52, 56, 64 were tested.
802.11n40/ac40 mode Channel 54, 62 were tested.
802.11ac80 mode Channel 58 was tested.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	60	5300
54	5270	64	5320
56	5280	62	5310
58	5290	/	/

For **5470-5725MHz** band, test channel list is as below,

802.11a/ac20/n20 mode Channel 100, 116, 140 were tested.
802.11n40/ac40 mode Channel 102, 110, 134 were tested.
802.11ac80 mode Channel 106.122 was tested

Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	124	5620
102	5510	126	5630
104	5520	128	5640
106	5530	132	5660
108	5540	134	5670
110	5550	136	5680
112	5560	138	5690
116	5580	140	5700
118	5590	142	5710
120	5600	143	5720
122	5610		

For **5725~5850 MHz** band,

802.11a/ac20/n20 mode Channel 149, 157, 165 were tested.
802.11n40/ac40 mode Channel 151, 159 were tested.
802.11ac80 mode Channel 155 was tested.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	159	5795
151	5755	161	5805
153	5765	165	5825
155	5775	/	/
157	5785	/	/

Note: Additional channels cross the band 5470-5725MHz and 5725-5850 MHz, Conducted output power/ Power Spectral Density/bandwidth test with the additional channel to compliance with stricter limit of the two bands (5470-5725MHz more stricter).

★EUT Exercise Software

The system was configured for testing in Engineering Mode, which was provided by the manufacturer.

RF test tool:	QRCT.exe			
5150-5250 MHz Band:				
Test Modes	**Test Channels**	**Test Frequency**	**Data rate**	**Power Level Setting**
802.11a	Lowest	5180	6Mbps	17
	Middle	5200	6Mbps	19
	Highest	5240	6Mbps	19
802.11n ht20	Lowest	5180	MCS0	17
	Middle	5200	MCS0	18
	Highest	5240	MCS0	18
802.11n ht40	Lowest	5190	MCS0	16
	Highest	5230	MCS0	17
802.11ac vht80	Middle	5210	MCS0	15
5250-5350 MHz Band:				
Test Modes	**Test Channels**	**Test Frequency**	**Data rate**	**Power Level Setting**
802.11a	Lowest	5260	6Mbps	19
	Middle	5280	6Mbps	19
	Highest	5320	6Mbps	19
802.11n ht20	Lowest	5260	MCS0	18
	Middle	5280	MCS0	18
	Highest	5320	MCS0	18
802.11n ht40	Lowest	5270	MCS0	18
	Highest	5310	MCS0	18
802.11ac vht80	Middle	5290	MCS0	15
5470-5725 MHz Band:				
Test Modes	**Test Channels**	**Test Frequency**	**Data rate**	**Power Level Setting**
802.11a	Lowest	5500	6Mbps	18
	Middle	5580	6Mbps	18
	Highest	5700	6Mbps	16
	Cross	5720	6Mbps	18
802.11n ht20	Lowest	5500	MCS0	17
	Middle	5580	MCS0	17
	Highest	5700	MCS0	17
	Cross	5720	MCS0	17
802.11n ht40	Lowest	5510	MCS0	17
	Highest	5550	MCS0	18
	Lowest	5670	MCS0	18
	Cross	5710	MCS0	18
802.11ac vht80	Lowest	5530	MCS0	15
	Middle	5610	MCS0	16
	Highest	5690	MCS0	16

5725-5850 MHz Band:				
Test Modes	**Test Channels**	**Test Frequency**	**Data rate**	**Power Level Setting**
802.11a	Lowest	5745	6Mbps	22
	Middle	5785	6Mbps	22
	Highest	5825	6Mbps	22
802.11n ht20	Lowest	5745	MCS0	20
	Middle	5785	MCS0	20
	Highest	5825	MCS0	20
802.11n ht40	Lowest	5755	MCS0	19
	Highest	5795	MCS0	19
802.11ac vht80	Middle	5775	MCS0	17

Note: The system support 802.11a/n ht20/n ht40/ac vht20/ac vht40/ac vht80/ac vht40, the ac vht20/ac vht40 were reduced since the identical parameters with 802.11n ht20/n ht40.

Duty Cycle

5.2G

Mode	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	1/T (Hz)	Duty Cycle Factor (dB)	VBW Setting (kHz)
802.11a	1.363	1.562	87.26	734	0.59	1.00
802.11n ht20	1.276	1.475	86.51	784	0.63	1.00
802.11n ht40	0.635	0.835	76.05	1575	1.19	2.00
802.11ac vht80	0.246	0.45	54.67	4065	2.62	5.00

5.3G

Mode	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	1/T (Hz)	Duty Cycle Factor (dB)	VBW Setting (kHz)
802.11a	1.039	1.238	83.93	962	0.76	1.00
802.11n ht20	0.975	1.175	82.98	1026	0.81	2.00
802.11n ht40	0.489	0.69	70.87	2045	1.50	3.00
802.11ac vht80	0.243	0.449	54.12	4115	2.67	5.00

5.6G

Mode	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	1/T (Hz)	Duty Cycle Factor (dB)	VBW Setting (kHz)
802.11a	1.039	1.238	83.93	962	0.76	1.00
802.11n ht20	0.975	1.174	83.05	1026	0.81	2.00
802.11n ht40	0.484	0.687	70.45	2066	1.52	3.00
802.11ac vht80	0.245	0.448	54.69	4082	2.62	5.00

5.8G

Mode	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	1/T (Hz)	Duty Cycle Factor (dB)	VBW Setting (kHz)
802.11a	1.039	1.238	83.93	962	0.76	1.00
802.11n ht20	0.975	1.174	83.05	1026	0.81	2.00
802.11n ht40	0.489	0.69	70.87	2045	1.50	3.00
802.11ac vht80	0.245	0.448	54.69	4082	2.62	5.00

Duty Cycle = Ton/(Ton+Toff)*100%

5.2G

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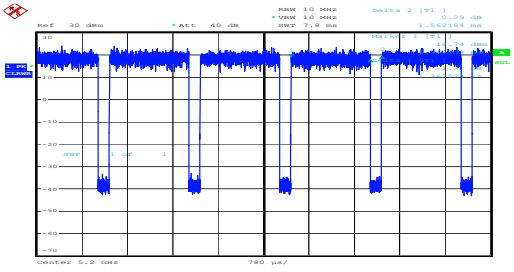

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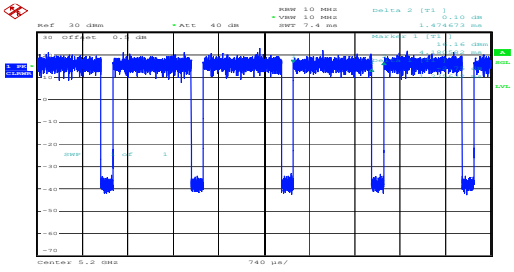

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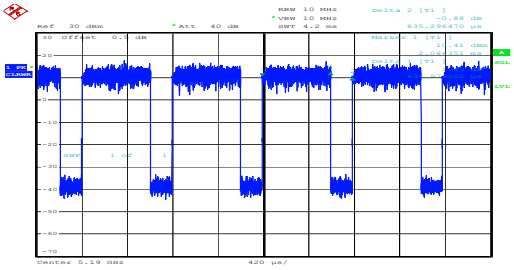

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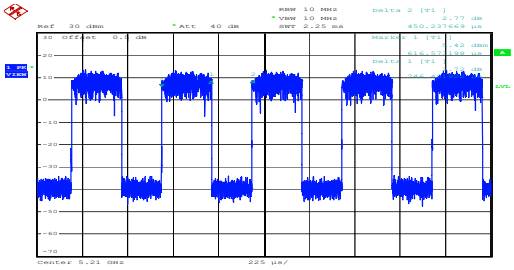
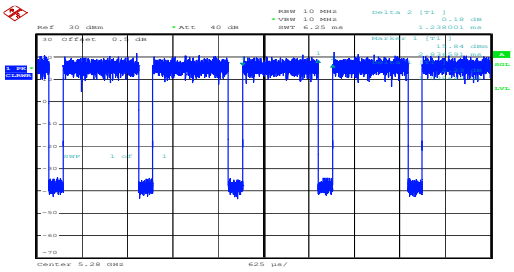


5.3G

a_5280MHz_Chain 0



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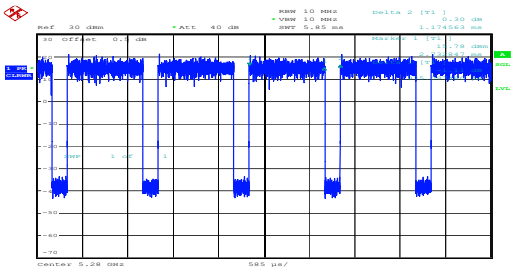

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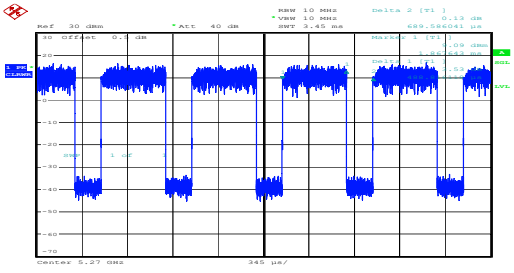

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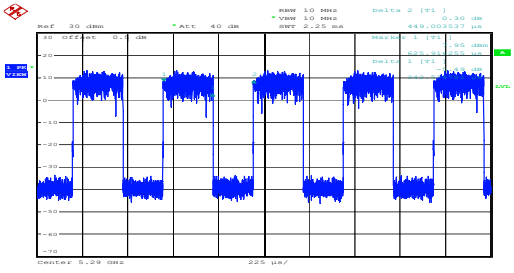
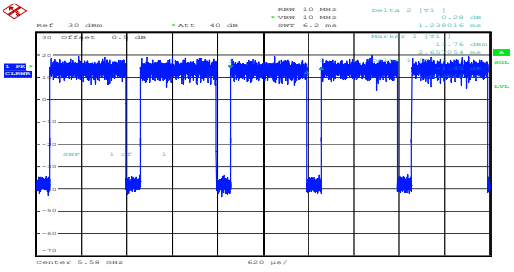


5.6G

a_5580MHz_Chain 0



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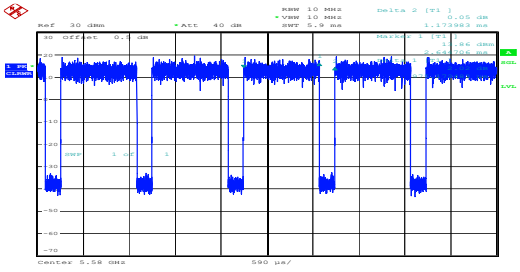

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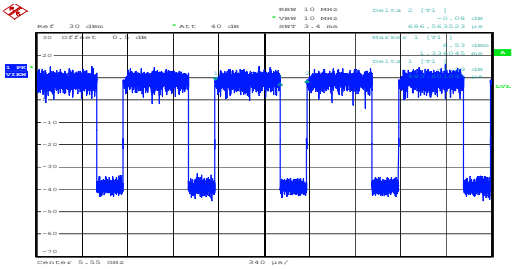

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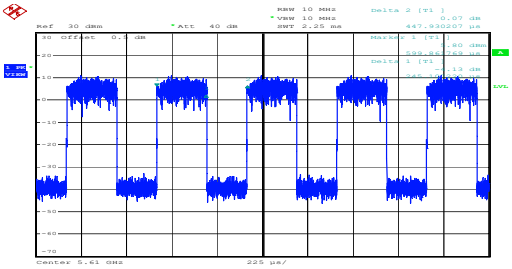

5.8G

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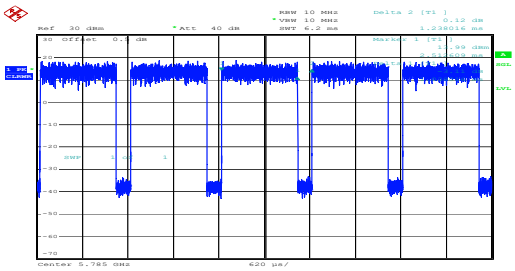

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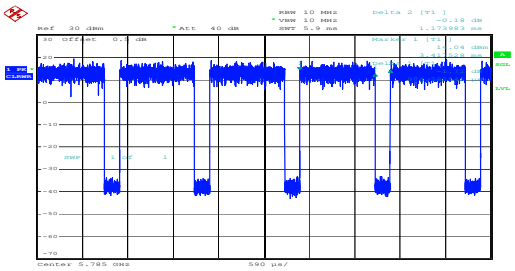

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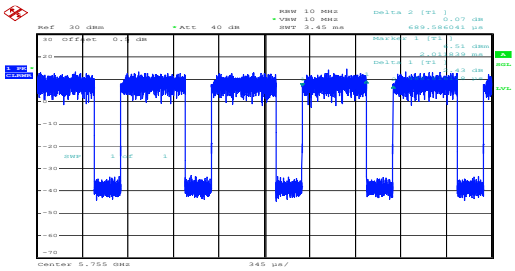
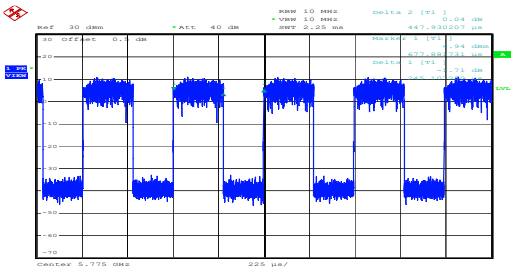


ac80_5775MHz_Chain 0



Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

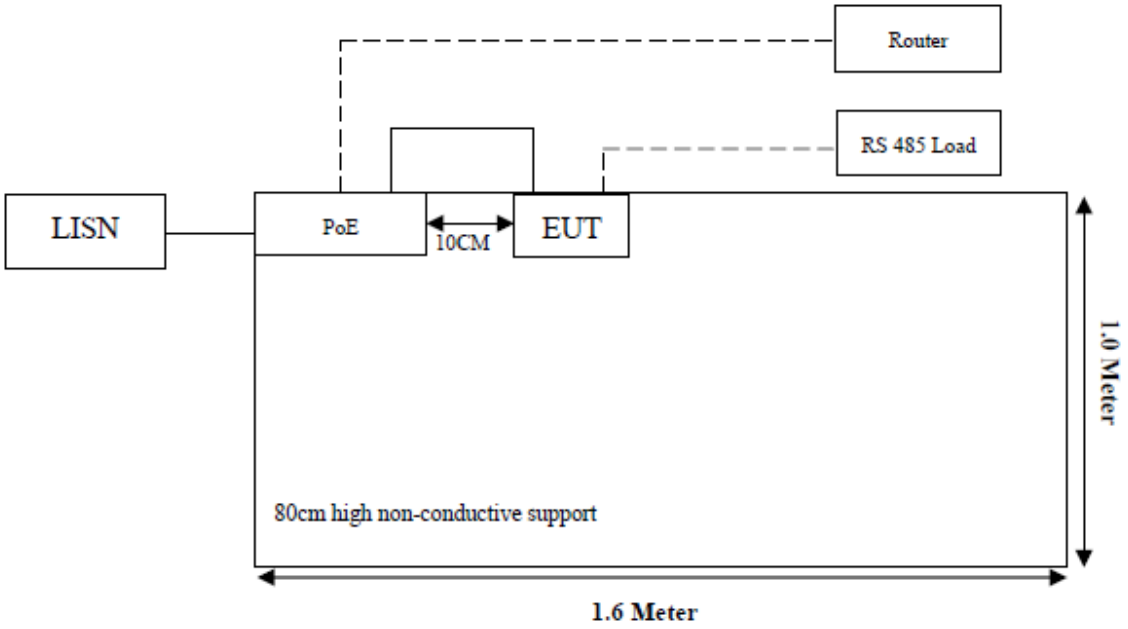
Manufacturer	Description	Model	Serial Number
NETGEAR	POE	MSIP-REN-NGR-GS108Ev3	3UJD1756006EB
SWITCHING ADAPTER	Adapter	FJ-SW126K1201000DU	unknown
BACL	RS 485 Load	unknown	unknown
Honor	Router	WS831	W6E7S15B09001200

External I/O Cable

Cable Description	Length (m)	From Port	To
Network cable	1	EUT	POE
Network cable	10	POE	Router
Load cable	10	EUT	RS 485 Load

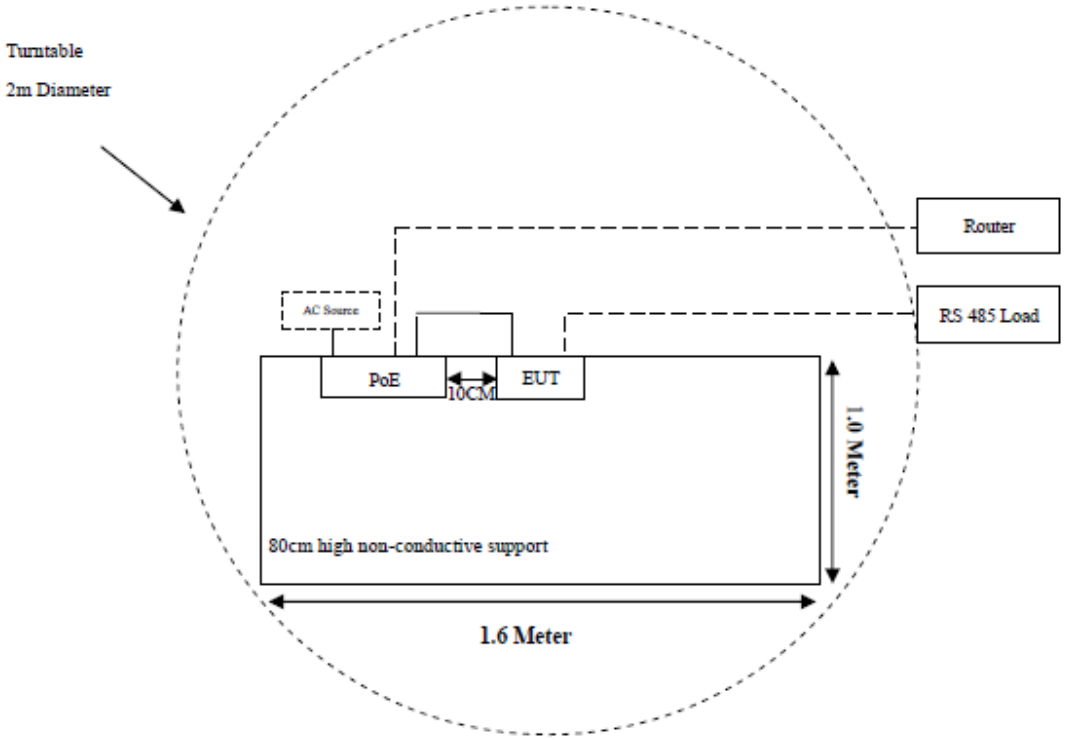
Block Diagram of Test Setup

Conducted Emission:

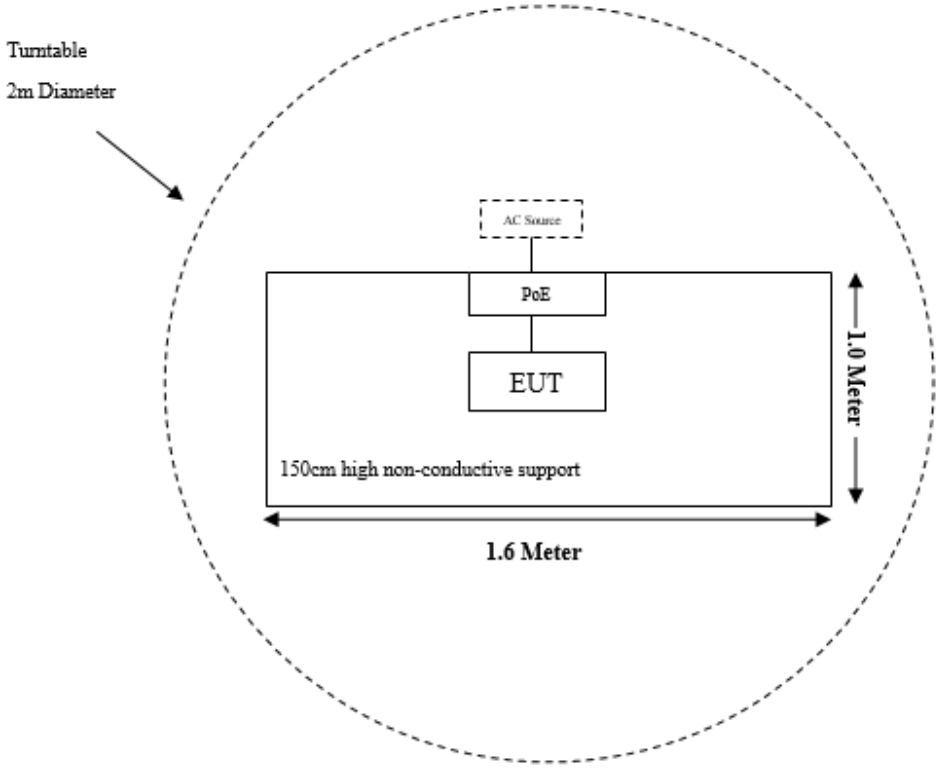


Radiated Emissions:

Below 1GHz



Above 1GHz


Turntable
2m Diameter
AC Source
PoE
EUT
150cm high non-conductive support
1.0 Meter
1.6 Meter

SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliant
§15.207 & §15.407(b) (8)	AC Power Line Conducted Emissions	Compliant
§15.205 & §15.209 & §15.407(b) (1), (4), (8),(9)	Undesirable Emission & Restricted Bands	Compliant
§15.407(a) &§15.407(e)	Emission Bandwidth	Compliant
§15.407(a) (3)	Conducted Transmitter Output Power	Compliant
§15.407(a) (3)	Power Spectral Density	Compliant

TEST EQUIPMENT LIST

Test Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions					
EMI Test Receiver	Rohde & Schwarz	ESR	103105	2024/03/29	2025/03/28
LISN	Rohde & Schwarz	ENV216	100129	2024/03/29	2025/03/28
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	0357.8810.54	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH400T-N-4M	CC001	2024/03/29	2025/03/28
Test Software	Audix	E3	18621a	N/A	N/A
Radiated Emissions Below 1GHz					
EMI Test Receiver	Rohde & Schwarz	ESR	103103	2024/03/29	2025/03/28
Loop Antenna	Rohde & Schwarz	HFH2-Z2	830749/001	2023/07/27	2026/07/26
Antenna	Sunol Sciences	JB6	A122022-5	2023/07/27	2026/07/26
Amplifier	Sonoma	310B	120903	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH400T-N-4M	CC002	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH460B-N-2M	CC006	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH460B-N-12M	CC007	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	HFH2-CC	335.3609	2024/03/29	2025/03/28
Test Software	Audix	E3	18621a	N/A	N/A
Radiated Emissions Above 1 GHz					
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102051	2024/03/29	2025/03/28
Double Ridge Guide Horn Antenna	A.H.Systems	SAS-571	1980	2023/07/28	2026/07/27
Horn Antenna	EMCO	3116	9407-2232	2023/07/31	2026/07/30
Horn Antenna	EMCO	3115	9002-3355	2024/11/19	2027/11/18
Preamplifier	A.H.Systems	PAM-0118P	489	2024/03/29	2025/03/28
Preamplifier	A.H.Systems	PAM-1840	200	2024/03/29	2025/03/28
Filter Switch Unit	Decentest	DT7220FSU	DS79904	2024/02/23	2025/02/22
Multiplex Switch Test Control Set	Decentest	DT7220SCU	DS79901	2024/02/23	2025/02/22
Coaxial Cable	XINHANGWEIBO	XH800A-N-6M	CC003	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH800A-N-1M	CC005	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH360A-2.92-3M	CC008	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH360A-2.92-1M	CC009	2024/03/29	2025/03/28
Test Software	Audix	E3	18621a	N/A	N/A
RF Conducted Test					
Spectrum Analyzer	Rohde & Schwarz	FSU	100405	2024/03/29	2025/03/28
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102051	2024/03/29	2025/03/28
Coaxial Cable	N/A	N/A	N/A	2024/03/29	2025/03/28
USB Wideband Power Sensor	Boonton	55318	8934	2023/09/20	2024/09/19

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Xiamen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §15.203 – ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

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

And according to FCC 47 CFR section 15.407, if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT has an FPC antenna for 5G Wi-Fi which the antenna gain is 3 dBi, fulfill the requirement of this section. Please refer to the EUT photos.

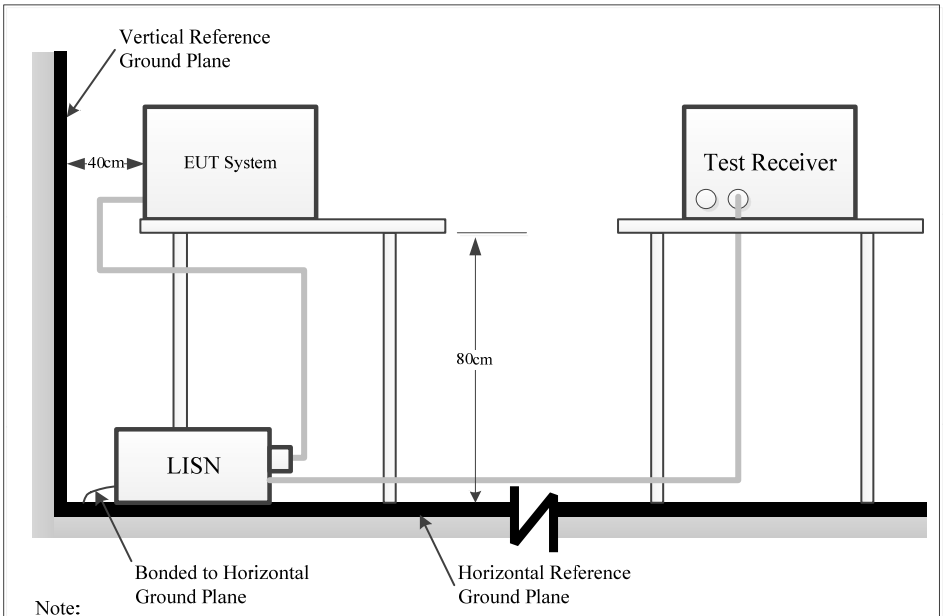
Result: Compliant.

FCC §15.407 (b) (8) §15.207 (a) – AC POWER LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a), §15.407(b) (8)

Test System Setup



Note:
1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at least 80 cm from other units and oter metal planes support units.

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

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	VBW	Detector
150 kHz – 30 MHz	9 kHz	30 kHz	QP/AV

Test Procedure

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

Result & Over Limit Calculation

The Result is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation from the Meter Reading. The basic equation is as follows:

Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)
Result (dBμV) = Read level (dBμV) + Factor (dB)

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin (dB) = Limit (dBμV) –Result (dBμV)

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

Test Data

Environmental Conditions & Test Information

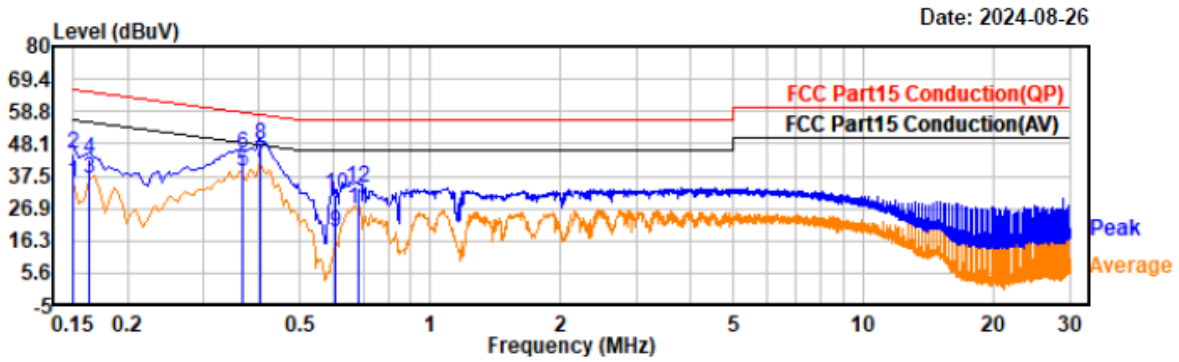
Temperature:	19.8℃~22.4℃
Relative Humidity:	41%~56%
ATM Pressure:	100.1kPa
Test Date:	2024-08-26~2025-01-02
Test Engineer:	Spike Gao

EUT operation mode: Transmitting in 802.11a mode middle channel (worst case).

EUT Model: PG71

Project No.: XMDN240219-08385E
Test Mode: Band1 11a 5200
EUT Model: PG71

Temp/Humi/ATM: 22.4℃/56%/100.1kPa
Tested by: Spike Gao
Power Source: DC 48V from PoE

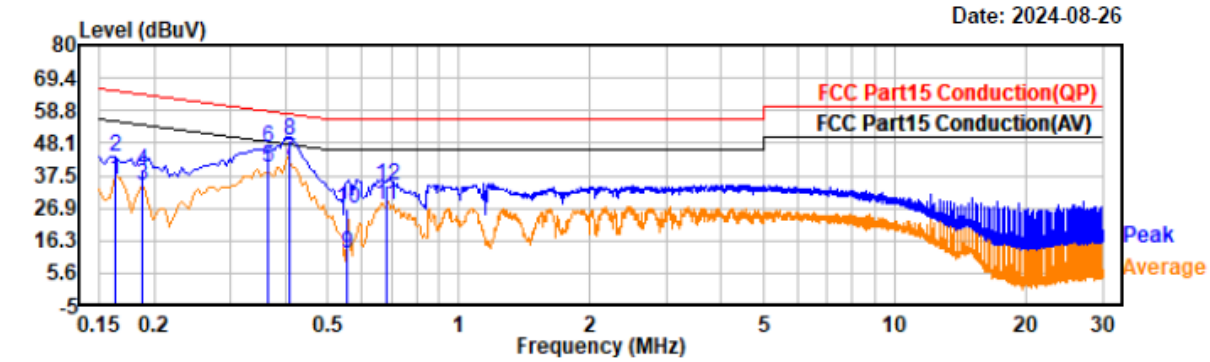


Trace: 1

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.15	14.63	21.03	35.66	55.98	20.32	Line	Average
0.15	23.86	21.03	44.89	65.98	21.09	Line	QP
0.16	15.55	21.10	36.65	55.27	18.62	Line	Average
0.16	21.72	21.10	42.82	65.27	22.45	Line	QP
0.37	18.17	20.62	38.79	48.56	9.77	Line	Average
0.37	24.49	20.62	45.11	58.56	13.45	Line	QP
0.40	21.10	20.51	41.61	47.78	6.17	Line	Average
0.40	27.40	20.51	47.91	57.78	9.87	Line	QP
0.60	-1.66	20.47	18.81	46.00	27.19	Line	Average
0.60	11.00	20.47	31.47	56.00	24.53	Line	QP
0.68	6.31	20.57	26.88	46.00	19.12	Line	Average
0.68	13.13	20.57	33.70	56.00	22.30	Line	QP

Project No.: XMDN240219-08385E
Test Mode: Band1 11a 5200
EUT Model: PG71

Temp/Humi/ATM: 22.4℃/56%/100.1kPa
Tested by: Spike Gao
Power Source: DC 48V from PoE



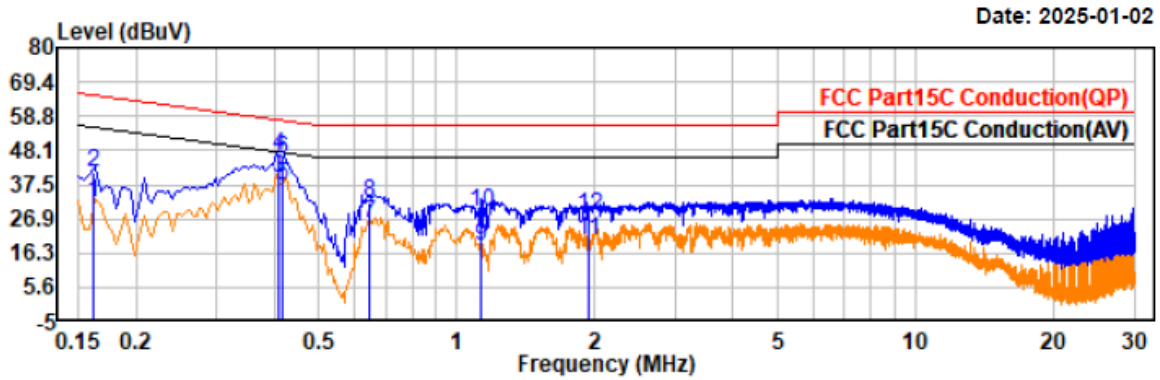
Trace: 1

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.16	15.33	20.90	36.23	55.34	19.11	Neutral	Average
0.16	22.66	20.90	43.56	65.34	21.78	Neutral	QP
0.19	13.20	21.02	34.22	54.09	19.87	Neutral	Average
0.19	18.01	21.02	39.03	64.09	25.06	Neutral	QP
0.37	19.81	20.55	40.36	48.58	8.22	Neutral	Average
0.37	25.81	20.55	46.36	58.58	12.22	Neutral	QP
0.41	22.02	20.45	42.47	47.65	5.18	Neutral	Average
0.41	28.37	20.45	48.82	57.65	8.83	Neutral	QP
0.56	-8.05	20.32	12.27	46.00	33.73	Neutral	Average
0.56	6.13	20.32	26.45	56.00	29.55	Neutral	QP
0.68	7.51	20.39	27.90	46.00	18.10	Neutral	Average
0.68	14.02	20.39	34.41	56.00	21.59	Neutral	QP

EUT Model: PG71N

Project No.: XMDN240219-08385E
Test Mode: Band1 11a 5200
EUT Model: PG71N

Temp/Humi/ATM: 19.8℃/41%/100.1kPa
Tested by: Spike Gao
Power Source: DC 48V From POE

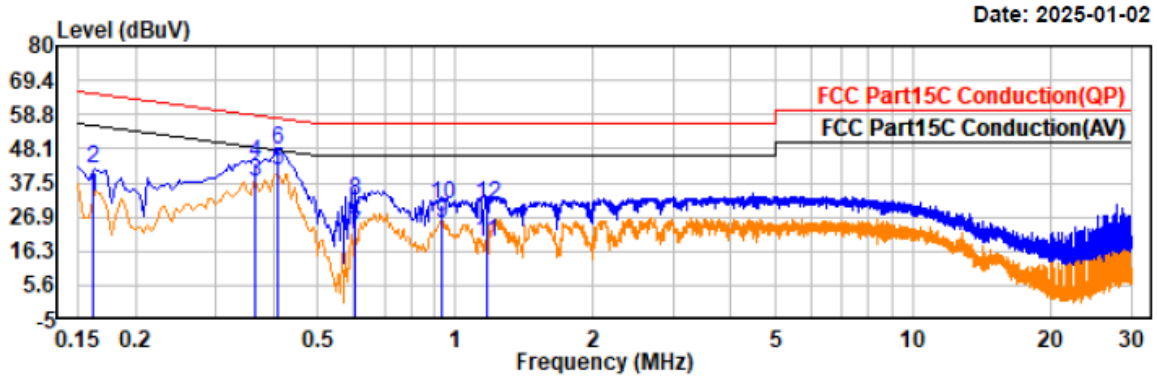


Trace: 1
Condition: QP/AV RBW:9kHz VBW:30kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.16	11.17	20.83	32.00	55.36	23.36	Line	Average
0.16	20.47	20.83	41.30	65.36	24.06	Line	QP
0.41	19.11	20.34	39.45	47.65	8.20	Line	Average
0.41	26.01	20.34	46.35	57.65	11.30	Line	QP
0.42	16.65	20.34	36.99	47.50	10.51	Line	Average
0.42	25.32	20.34	45.66	57.50	11.84	Line	QP
0.64	5.07	20.45	25.52	46.00	20.48	Line	Average
0.64	11.55	20.45	32.00	56.00	24.00	Line	QP
1.13	-2.67	20.96	18.29	46.00	27.71	Line	Average
1.13	8.15	20.96	29.11	56.00	26.89	Line	QP
1.94	-0.69	21.12	20.43	46.00	25.57	Line	Average
1.94	6.47	21.12	27.59	56.00	28.41	Line	QP

Project No.: XMDN240219-08385E
Test Mode: Band1 11a 5200
EUT Model: PG71N

Temp/Humi/ATM: 19.8℃/41%/100.1kPa
Tested by: Spike Gao
Power Source: DC 48V From POE



Trace: 1
Condition: QP/AV RBW:9kHz VBW:30kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.16	12.51	20.71	33.22	55.36	22.14	Neutral	Average
0.16	21.06	20.71	41.77	65.36	23.59	Neutral	QP
0.36	17.38	20.48	37.86	48.63	10.77	Neutral	Average
0.36	23.46	20.48	43.94	58.63	14.69	Neutral	QP
0.41	20.69	20.45	41.14	47.66	6.52	Neutral	Average
0.41	27.53	20.45	47.98	57.66	9.68	Neutral	QP
0.60	0.97	20.34	21.31	46.00	24.69	Neutral	Average
0.60	11.58	20.34	31.92	56.00	24.08	Neutral	QP
0.94	4.10	20.81	24.91	46.00	21.09	Neutral	Average
0.94	10.24	20.81	31.05	56.00	24.95	Neutral	QP
1.17	-2.13	20.94	18.81	46.00	27.19	Neutral	Average
1.17	10.04	20.94	30.98	56.00	25.02	Neutral	QP

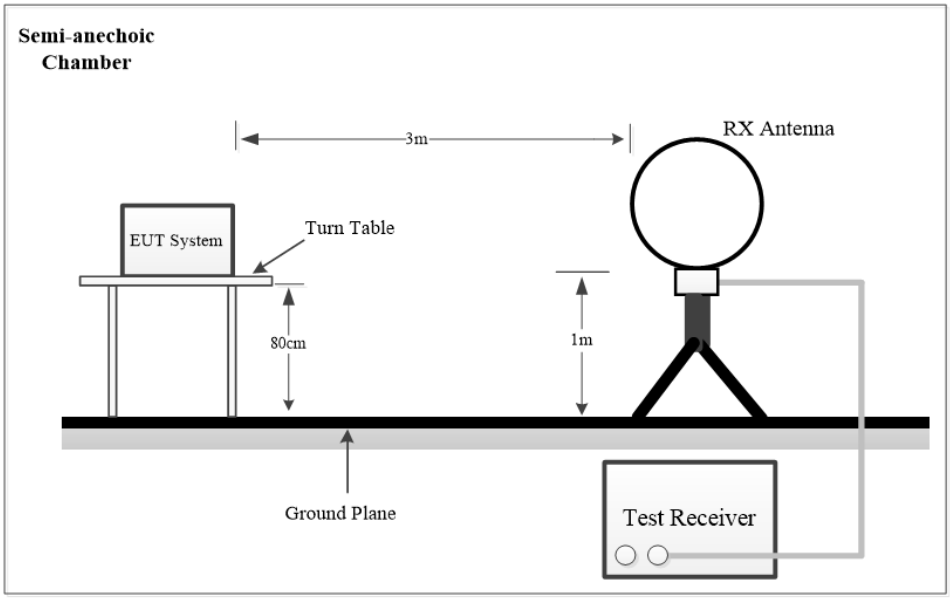
§15.205 & §15.209 & §15.407(B) (1), (4), (8),(9) – UNDESIRABLE EMISSION & RESTRICTED BANDS

Applicable Standard

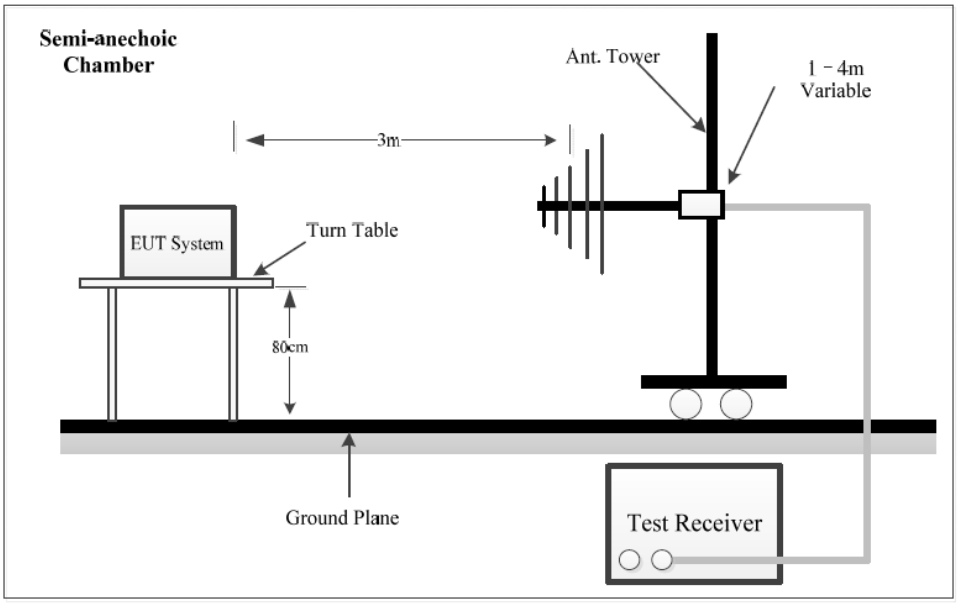
FCC §15.407 (b) (1), (4), (8), (9); §15.209; §15.205;

Test System Setup

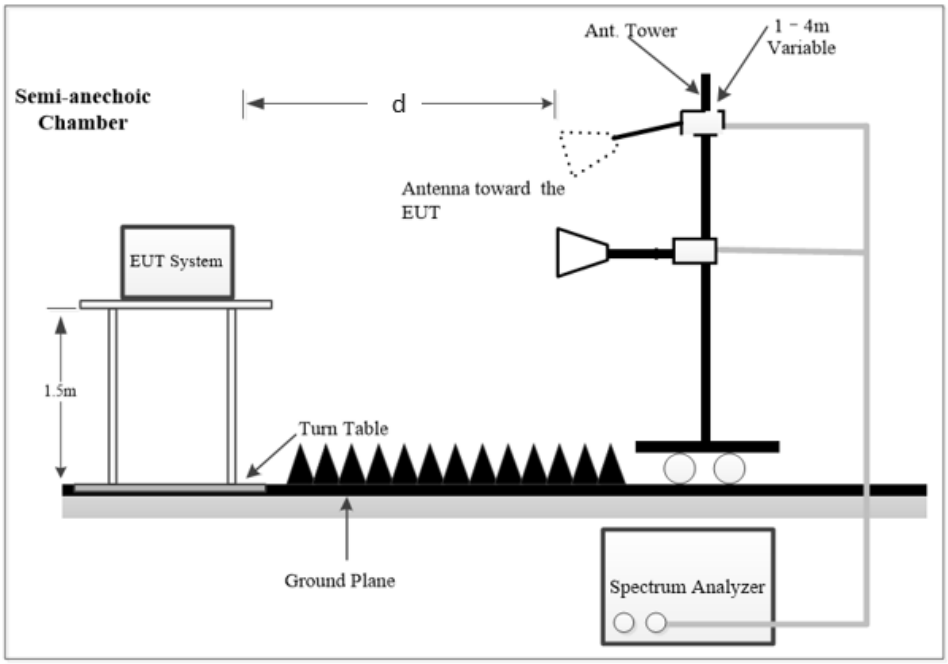
9 kHz-30MHz:



30MHz -1 GHz:



Above 1GHz:



The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC 15.209 and FCC 15.407 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

NOTE: d is testing distance;
For Radiated Emission test (1GH -18GHz) and Bandedge Emission test, which was performed at 3 m distance.

For Radiated Emission test (18GHz-40GHz), which was performed at 1.0 m distance, according to ANSI C63.10-2013, the test result shall be extrapolated to the specified distance using an extrapolation Factor of 20dB/decade from 3m to 1.0m.

Distance extrapolation Factor =20 log (specific distance [3m]/test distance [1.0m]) dB= 9.54 dB

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 40 GHz.

During the radiated emission test, the EMI test receiver Setup was set with the following configurations:

Below 1GHz:

Frequency Range	RBW	VBW	Measurement
9 kHz – 150 kHz	200Hz	1 kHz	PK
	200Hz	/	QP
150 kHz – 30 MHz	10 kHz	30 kHz	PK
	9kHz	/	QP
30 MHz – 1000 MHz	100 kHz	300 kHz	PK
	120kHz	/	QP

Above 1GHz:
Pre-scan:

Duty Cycle	RBW	VBW	Measurement
Any	1MHz	3MHz	PK
＞98%	1MHz	5kHz	AV
＜98%	1MHz	≥1/T, not less than 5kHz	AV

Final measurement for emission identified during the pre-scan:

Duty Cycle	RBW	VBW	Measurement
Any	1MHz	3MHz	PK
＞98%	1MHz	10Hz	AV
＜98%	1MHz	≥1/T	AV

Note: T is minimum transmission duration

Test Procedure

During the radiated emission test, the adapter was connected to AC floor outlet.

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

Result & Margin Calculation

The Result is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

For 9 kHz to 18GHz Radiated emission test
Factor (dB/m) =Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)

For 18GHz to 40GHz Radiated emission test and Bandedge emissions test
Factor (dB/m) =Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB) - Extrapolation factor (dB)

Extrapolation factor=9.54dB (distance=1m)

Result (dBμV/m) = Reading (dBμV) + Factor (dB/m)

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin (dB) = Limit (dBμV/m) –Result (dBμV/m)

Test Data

Please refer to the below table and plots.
After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

Frequency Range:	Below 1 GHz	Above 1 GHz
Temperature:	20.5℃~23.2℃	23.5℃~26.1℃
Relative Humidity:	44%~54%	53%~58%
ATM Pressure:	100.1kPa~101kPa	99.8kPa~100.1kPa
Test Date:	2024-07-26~2024-12-27	2024-08-10~2024-12-05
Test Engineer:	Wlif Wu	Wlif Wu

1) 9 kHz~30MHz

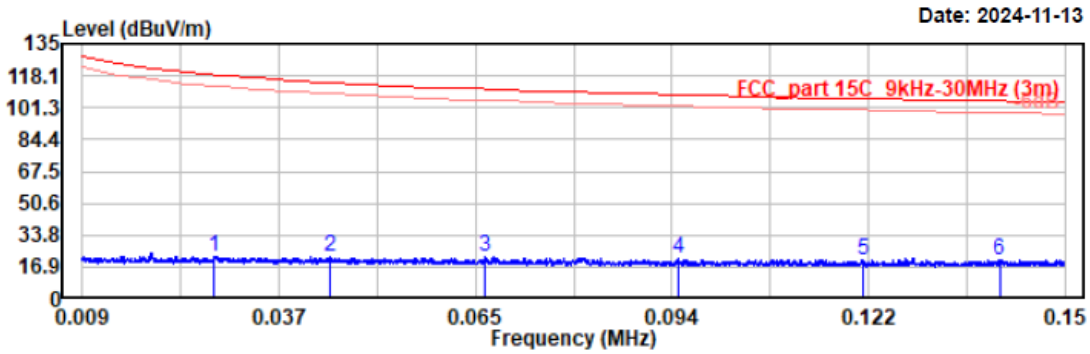
Pre-scan in parallel, ground-parallel and perpendicular of orientation of loop antenna, parallel is worst case

EUT operation mode: Transmitting in 802.11a mode middle channel (worst case)

EUT Model: PG71

Project No.: XMDN240219-08385E-RF
Test Mode: Band1 11a 5200
EUT Model: PG71
Test distance: 3m

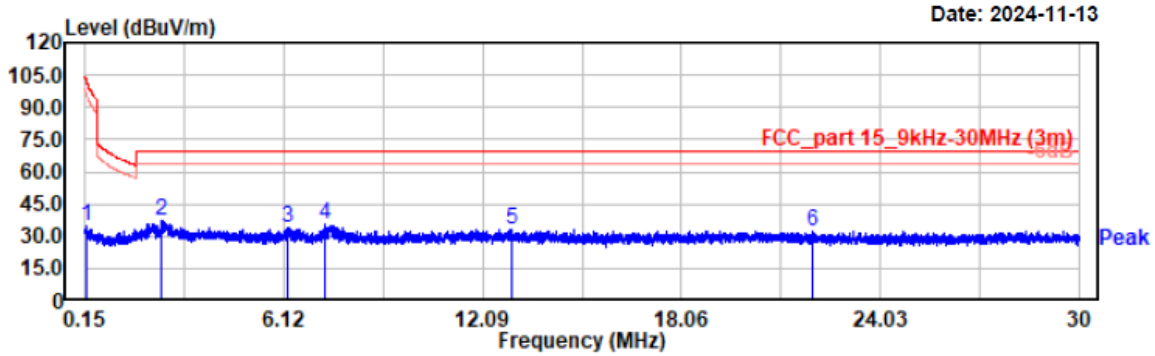
Temp/Humi/ATM: 22.8℃/54%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
0.028	2.56	19.89	22.45	118.70	96.25	Peak
0.045	2.79	19.91	22.70	114.62	91.92	Peak
0.067	2.46	19.84	22.30	111.12	88.82	Peak
0.094	2.05	19.78	21.83	108.10	86.27	Peak
0.121	0.54	19.73	20.27	105.96	85.69	Peak
0.141	0.50	19.73	20.23	104.65	84.42	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: Band1 11a 5200
EUT Model: PG71
Test distance: 3m

Temp/Humi/ATM: 22.8℃/54%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE

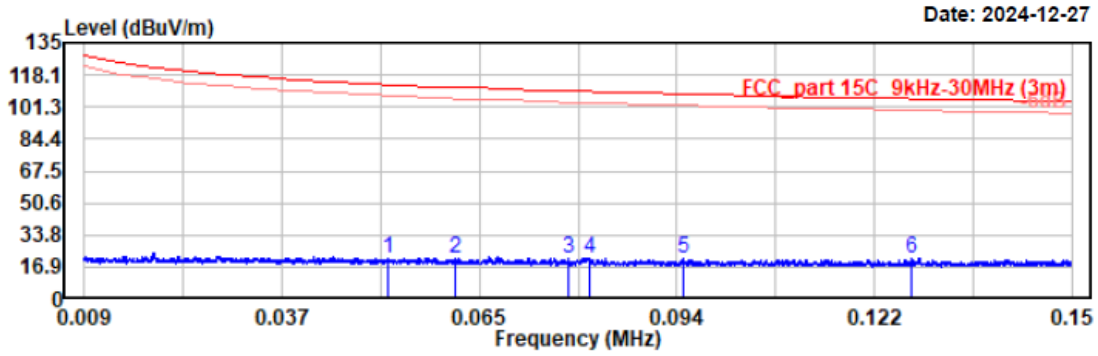


Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
0.189	15.06	19.72	34.78	102.08	67.30	Peak
2.460	17.74	19.70	37.44	69.54	32.10	Peak
6.257	14.51	19.77	34.28	69.54	35.26	Peak
7.356	16.31	19.68	35.99	69.54	33.55	Peak
12.953	13.17	19.74	32.91	69.54	36.63	Peak
21.979	11.96	20.14	32.10	69.54	37.44	Peak

EUT Model: PG71N

Project No.: XMDN240219-08385E-RF
Test Mode: Band1 11a 5200
EUT Model: PG71N
Test distance: 3m

Temp/Humi/ATM: 22.5℃/44%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE

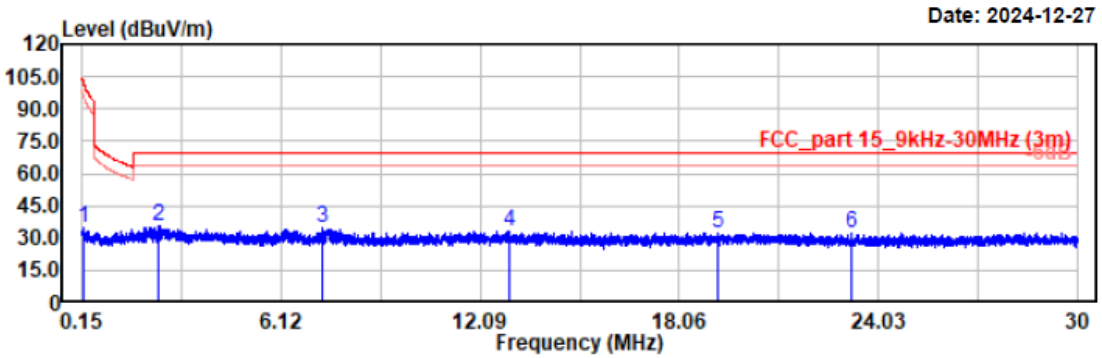


Condition: PK RBW:200Hz VBW:1kHz SWT:auto
QP RBW:200Hz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
0.052	1.32	19.91	21.23	113.24	92.01	Peak
0.062	1.88	19.89	21.77	111.76	89.99	Peak
0.078	1.79	19.73	21.52	109.76	88.24	Peak
0.081	2.04	19.72	21.76	109.43	87.67	Peak
0.094	2.05	19.78	21.83	108.10	86.27	Peak
0.127	1.52	19.73	21.25	105.52	84.27	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: Band1 11a 5200
EUT Model: PG71N
Test distance: 3m

Temp/Humi/ATM: 22.5℃/44%/100.1kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Condition: PK RBW:10kHz VBW:30kHz SWT:auto
QP RBW:9kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Remark
0.189	15.06	19.72	34.78	102.08	67.30	Peak
2.460	15.74	19.70	35.44	69.54	34.10	Peak
7.356	15.31	19.68	34.99	69.54	34.55	Peak
12.953	13.17	19.74	32.91	69.54	36.63	Peak
19.236	12.22	20.04	32.26	69.54	37.28	Peak
23.245	11.82	20.17	31.99	69.54	37.55	Peak

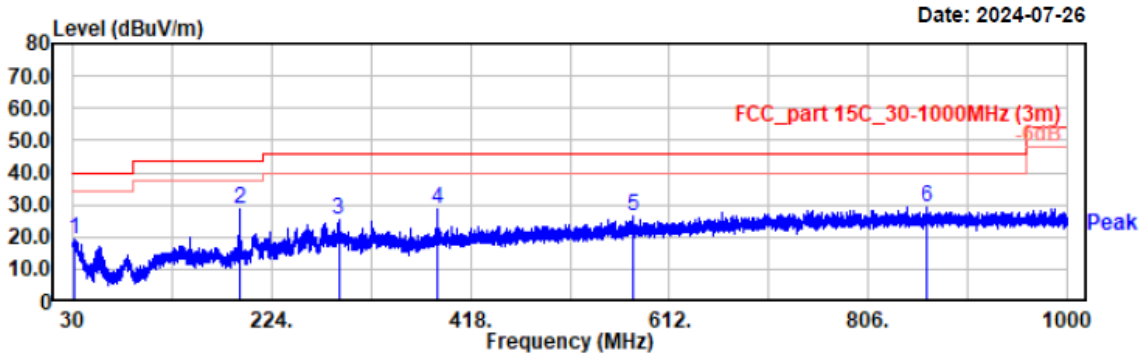
2) 30 MHz-1GHz

EUT operation mode: Transmitting in 802.11a mode middle channel in Z-axis of orientation (worst case)

EUT Model: PG71

Project No.: XMDN240219-08385E-RF
Test Mode: Band1 11a 5200
EUT Model: PG71
Test distance: 3m

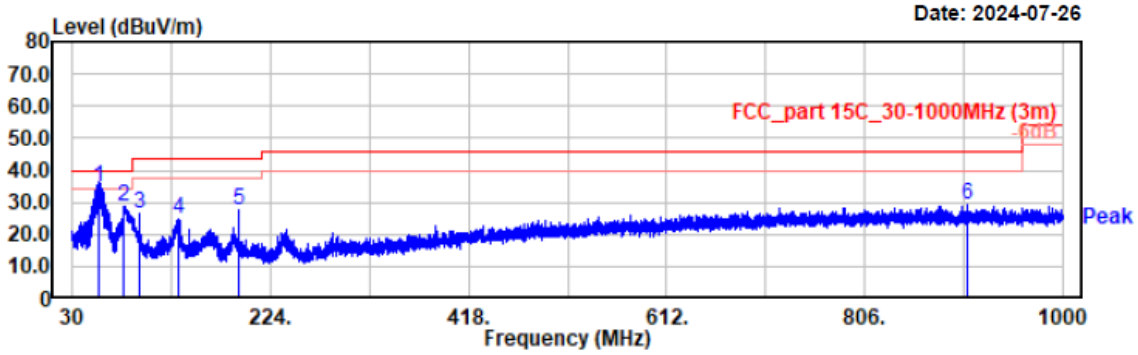
Temp/Humi/ATM: 20.5℃/51%/101kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
32.13	25.70	-6.48	19.22	40.00	20.78	Horizontal	Peak
192.96	40.91	-12.17	28.74	43.50	14.76	Horizontal	Peak
289.28	34.87	-9.24	25.63	46.00	20.37	Horizontal	Peak
385.80	35.37	-6.86	28.51	46.00	17.49	Horizontal	Peak
576.89	29.08	-2.55	26.53	46.00	19.47	Horizontal	Peak
862.55	26.91	2.15	29.06	46.00	16.94	Horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: Band1 11a 5200
EUT Model: PG71
Test distance: 3m

Temp/Humi/ATM: 20.5℃/51%/101kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE

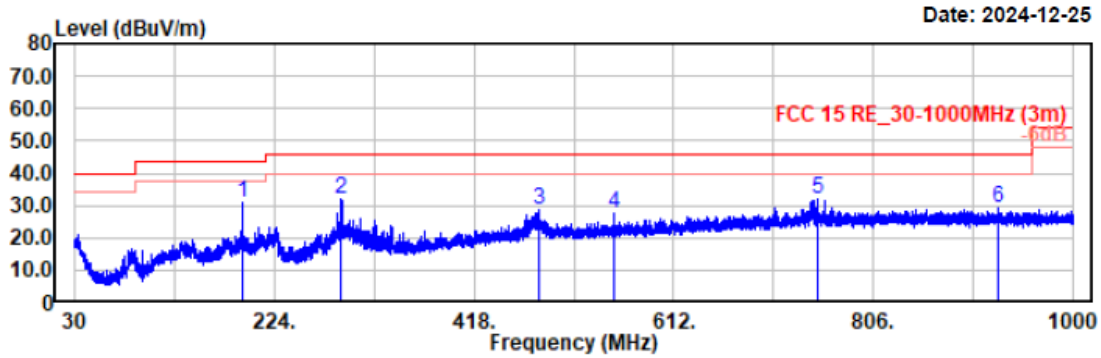


Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
56.58	52.48	-17.71	34.77	40.00	5.23	Vertical	QP
80.44	45.82	-17.07	28.75	40.00	11.25	Vertical	Peak
96.35	42.47	-15.98	26.49	43.50	17.01	Vertical	Peak
133.11	34.97	-10.26	24.71	43.50	18.79	Vertical	Peak
192.96	39.80	-12.17	27.63	43.50	15.87	Vertical	Peak
907.27	26.53	2.62	29.15	46.00	16.85	Vertical	Peak

EUT Model: PG71N

Project No.: XMDN240219-08385E-RF
Test Mode: Band1 11a 5200
EUT Model: PG71N
Test distance: 3m

Temp/Humi/ATM: 23.2℃/46%/100.2kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE

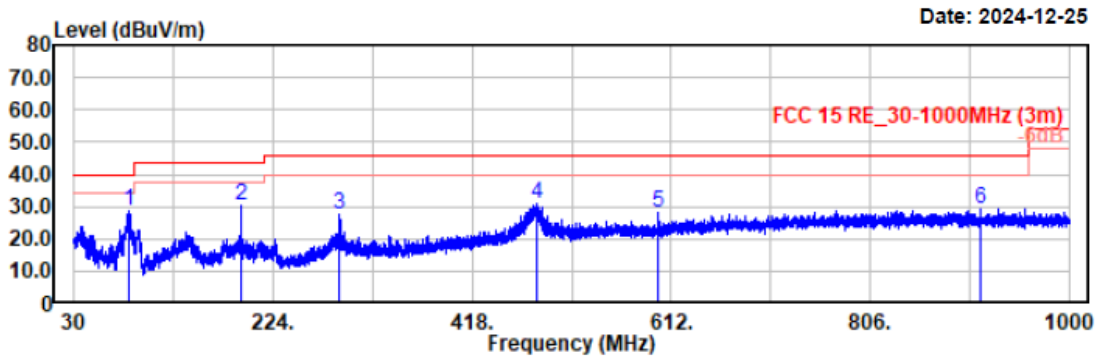


Condition: PK RBW:100kHz VBW:300kHz SWT:auto
QP RBW:120kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
192.67	43.28	-12.17	31.11	43.50	12.39	Horizontal	Peak
289.18	40.97	-9.24	31.73	46.00	14.27	Horizontal	Peak
480.47	32.37	-3.81	28.56	46.00	17.44	Horizontal	Peak
553.61	30.03	-2.66	27.37	46.00	18.63	Horizontal	Peak
752.17	31.72	0.52	32.24	46.00	13.76	Horizontal	Peak
928.12	26.17	2.85	29.02	46.00	16.98	Horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: Band1 11a 5200
EUT Model: PG71N
Test distance: 3m

Temp/Humi/ATM: 23.2℃/46%/100.2kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Condition: PK RBW:100kHz VBW:300kHz SWT:auto
QP RBW:120kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
83.54	45.89	-17.18	28.71	40.00	11.29	Vertical	Peak
192.67	42.31	-12.17	30.14	43.50	13.36	Vertical	Peak
288.89	37.10	-9.24	27.86	46.00	18.14	Vertical	Peak
481.24	34.88	-3.77	31.11	46.00	14.89	Vertical	Peak
600.07	30.39	-2.29	28.10	46.00	17.90	Vertical	Peak
913.86	26.56	2.70	29.26	46.00	16.74	Vertical	Peak

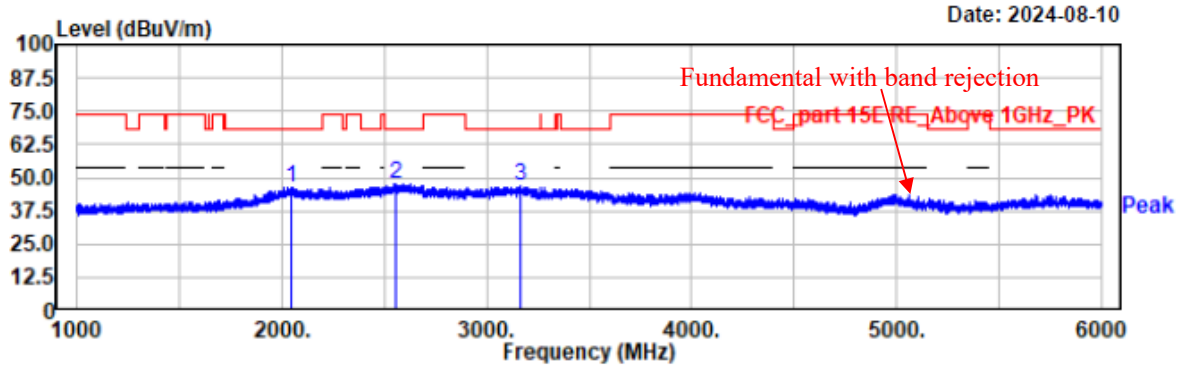
3) 1GHz~6GHz

EUT operation mode: Transmitting in Z-axis of orientation (worst case)

Band 1:

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5180
EUT Model: PG71
Test distance: 3m

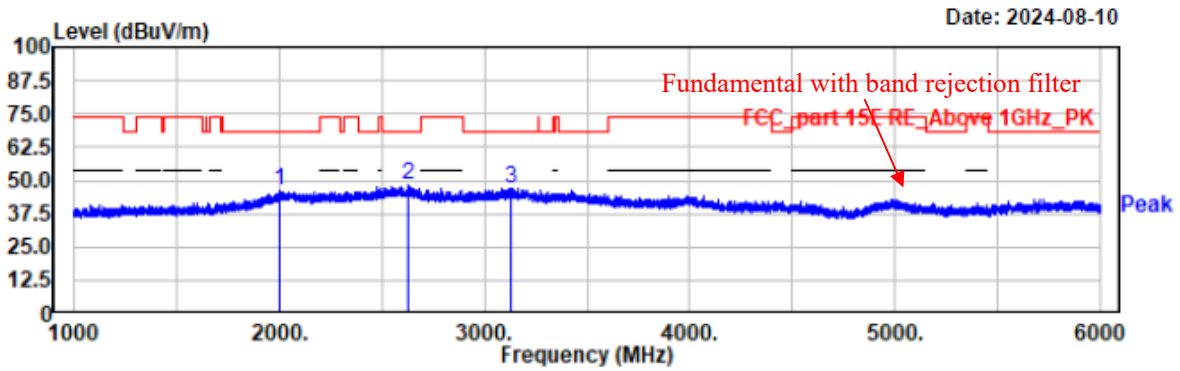
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2045.00	42.39	3.98	46.37	68.20	21.83	horizontal	Peak
2557.50	41.32	6.05	47.37	68.20	20.83	horizontal	Peak
3168.00	40.52	6.19	46.71	68.20	21.49	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5180
EUT Model: PG71
Test distance: 3m

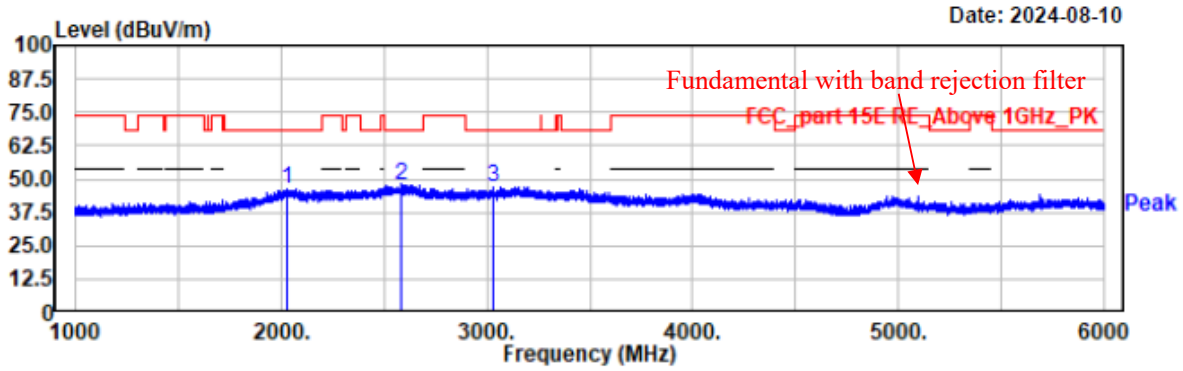
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
2000.50	42.88	3.44	46.32	68.20	21.88	vertical	Peak
2628.50	42.10	6.14	48.24	68.20	19.96	vertical	Peak
3129.50	40.90	6.15	47.05	68.20	21.15	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5200
EUT Model: PG71
Test distance: 3m

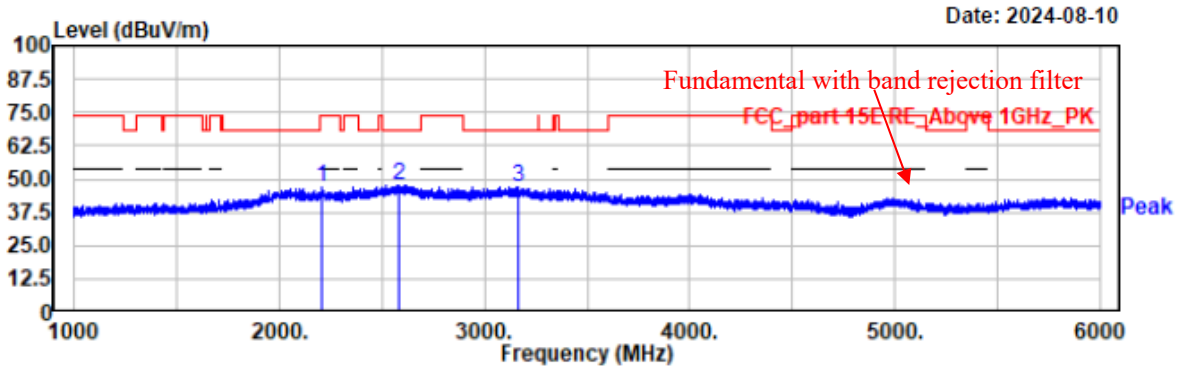
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2026.50	42.43	3.76	46.19	68.20	22.01	horizontal	Peak
2582.50	41.80	6.13	47.93	68.20	20.27	horizontal	Peak
3029.50	41.48	5.43	46.91	68.20	21.29	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5200
EUT Model: PG71
Test distance: 3m

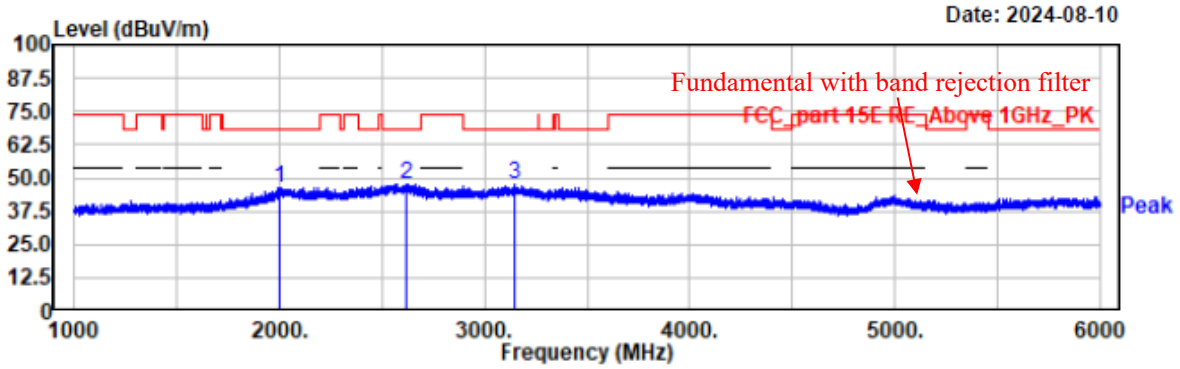
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2211.00	43.77	3.46	47.23	74.00	26.77	vertical	Peak
2587.00	41.55	6.16	47.71	68.20	20.49	vertical	Peak
3166.00	41.02	6.18	47.20	68.20	21.00	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5240
EUT Model: PG71
Test distance: 3m

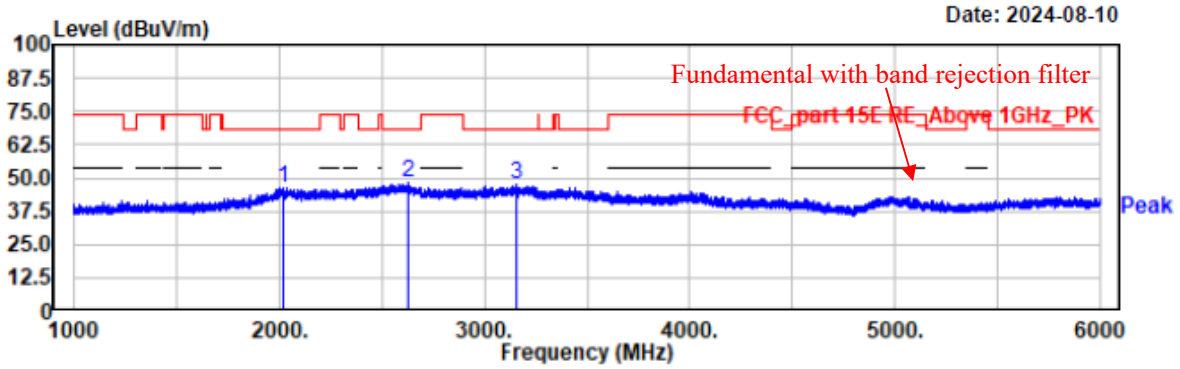
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1999.50	43.08	3.41	46.49	68.20	21.71	horizontal	Peak
2615.50	41.58	6.16	47.74	68.20	20.46	horizontal	Peak
3147.00	41.25	6.17	47.42	68.20	20.78	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5240
EUT Model: PG71
Test distance: 3m

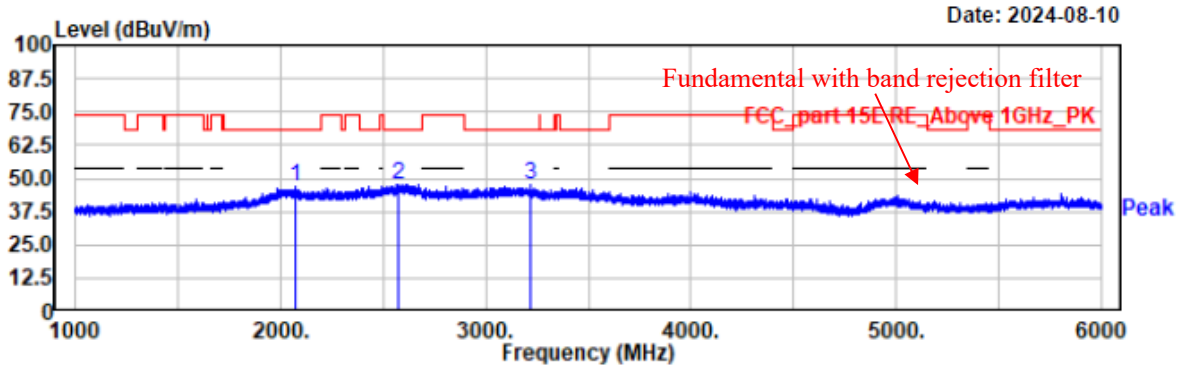
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2022.00	42.44	3.71	46.15	68.20	22.05	vertical	Peak
2629.50	42.08	6.14	48.22	68.20	19.98	vertical	Peak
3159.00	41.11	6.19	47.30	68.20	20.90	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11ac80-5210
EUT Model: PG71
Test distance: 3m

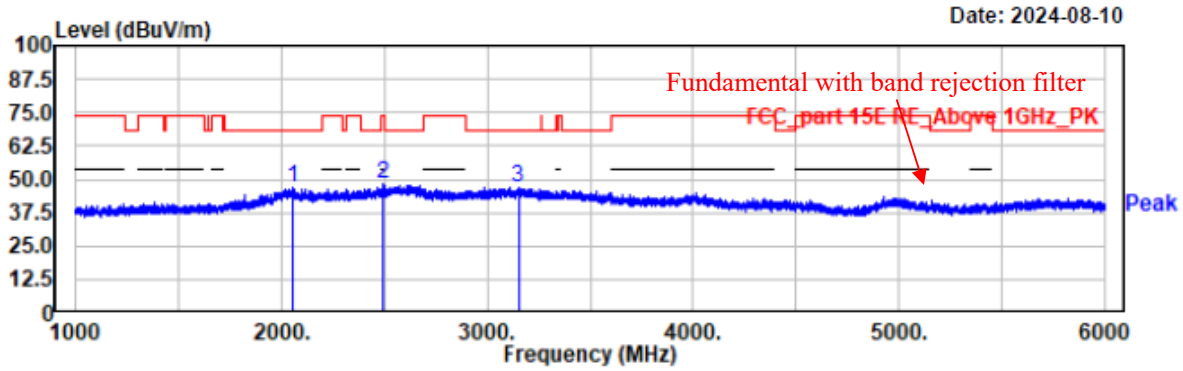
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2073.50	43.07	3.62	46.69	68.20	21.51	horizontal	Peak
2577.50	41.52	6.12	47.64	68.20	20.56	horizontal	Peak
3215.50	41.61	5.93	47.54	68.20	20.66	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11ac80-5210
EUT Model: PG71
Test distance: 3m

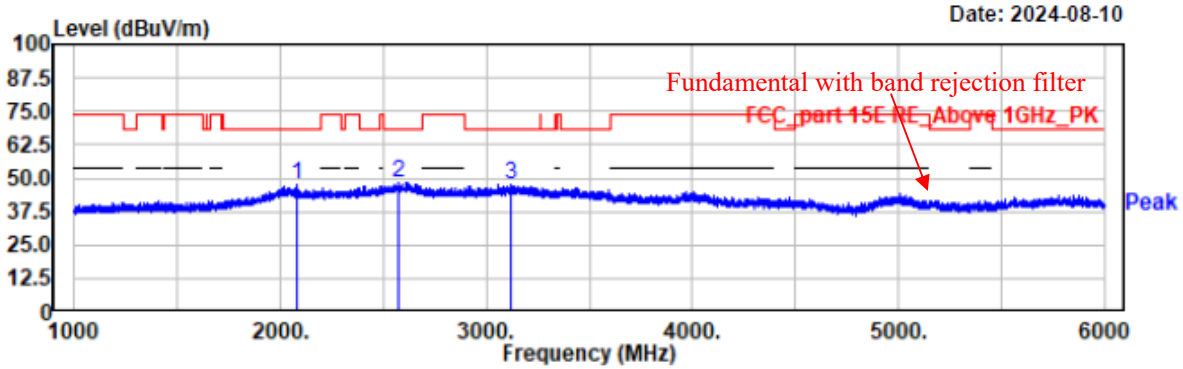
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2056.50	42.75	3.93	46.68	68.20	21.52	vertical	Peak
2495.00	42.90	5.24	48.14	74.00	25.86	vertical	Peak
3151.00	40.69	6.18	46.87	68.20	21.33	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n20-5180
EUT Model: PG71
Test distance: 3m

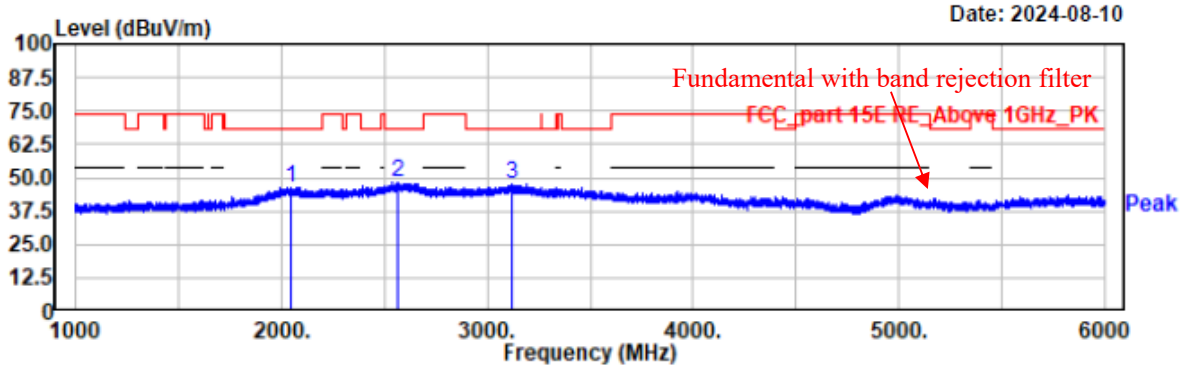
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2078.00	43.98	3.54	47.52	68.20	20.68	horizontal	Peak
2573.50	42.07	6.10	48.17	68.20	20.03	horizontal	Peak
3121.00	41.61	6.12	47.73	68.20	20.47	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n20-5180
EUT Model: PG71
Test distance: 3m

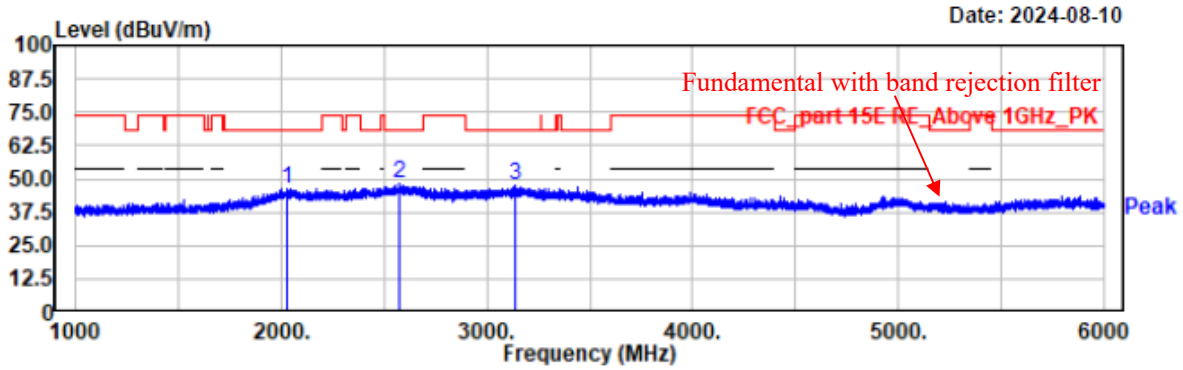
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2046.50	42.44	4.00	46.44	68.20	21.76	vertical	Peak
2566.00	41.96	6.07	48.03	68.20	20.17	vertical	Peak
3121.50	41.70	6.12	47.82	68.20	20.38	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n20-5200
EUT Model: PG71
Test distance: 3m

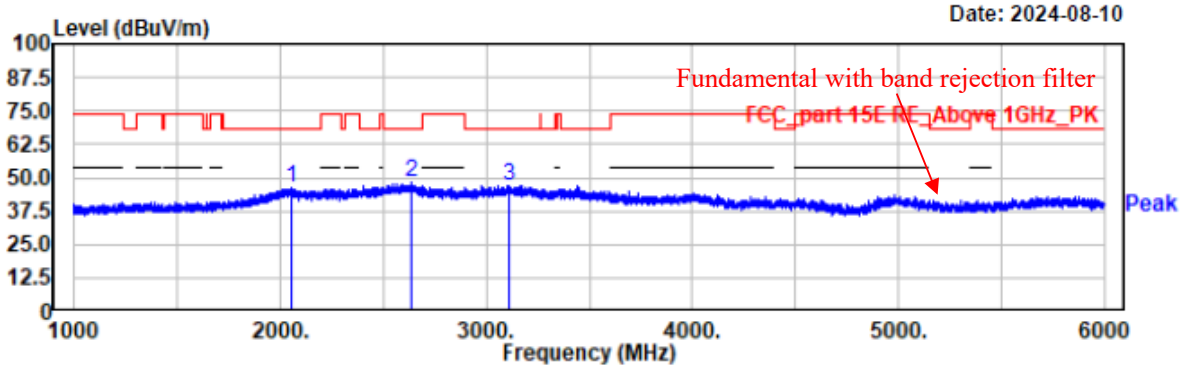
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2029.00	42.48	3.80	46.28	68.20	21.92	horizontal	Peak
2571.50	42.30	6.10	48.40	68.20	19.80	horizontal	Peak
3141.50	41.38	6.16	47.54	68.20	20.66	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n20-5200
EUT Model: PG71
Test distance: 3m

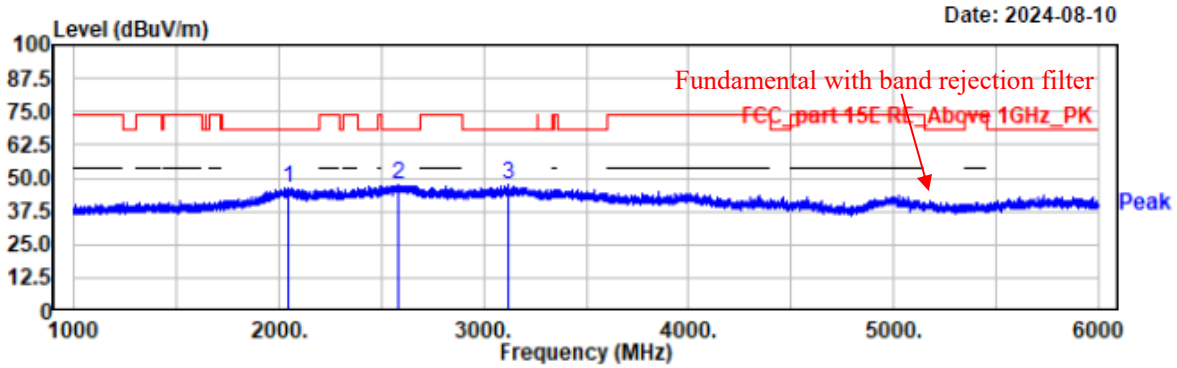
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2059.00	42.01	3.89	45.90	68.20	22.30	vertical	Peak
2640.50	41.92	6.11	48.03	68.20	20.17	vertical	Peak
3109.00	40.99	6.11	47.10	68.20	21.10	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n20-5240
EUT Model: PG71
Test distance: 3m

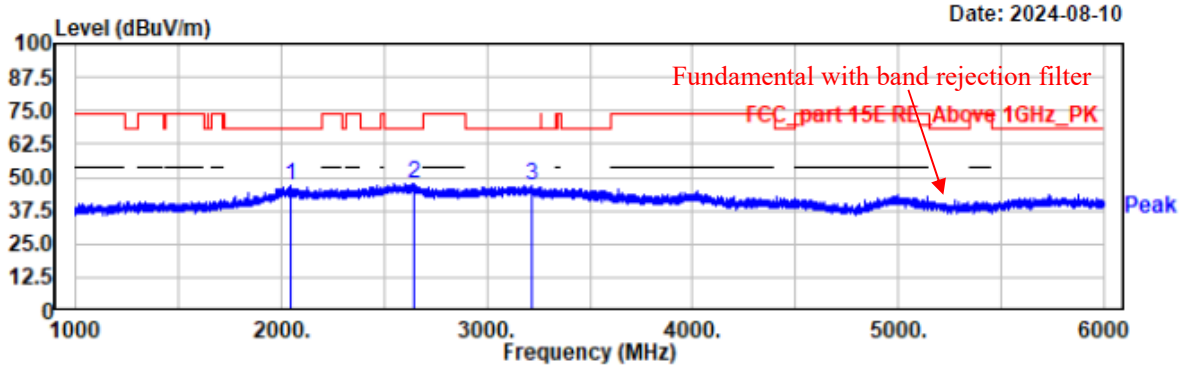
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2043.00	42.39	3.96	46.35	68.20	21.85	horizontal	Peak
2582.00	41.32	6.13	47.45	68.20	20.75	horizontal	Peak
3123.00	41.28	6.13	47.41	68.20	20.79	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n20-5240
EUT Model: PG71
Test distance: 3m

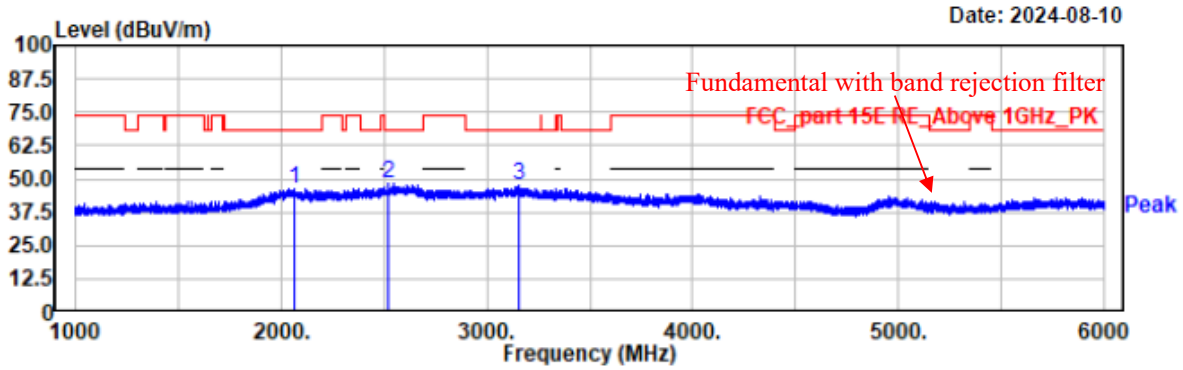
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2042.00	42.72	3.95	46.67	68.20	21.53	vertical	Peak
2642.50	41.58	6.11	47.69	68.20	20.51	vertical	Peak
3218.50	41.13	5.88	47.01	68.20	21.19	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n40-5190
EUT Model: PG71
Test distance: 3m

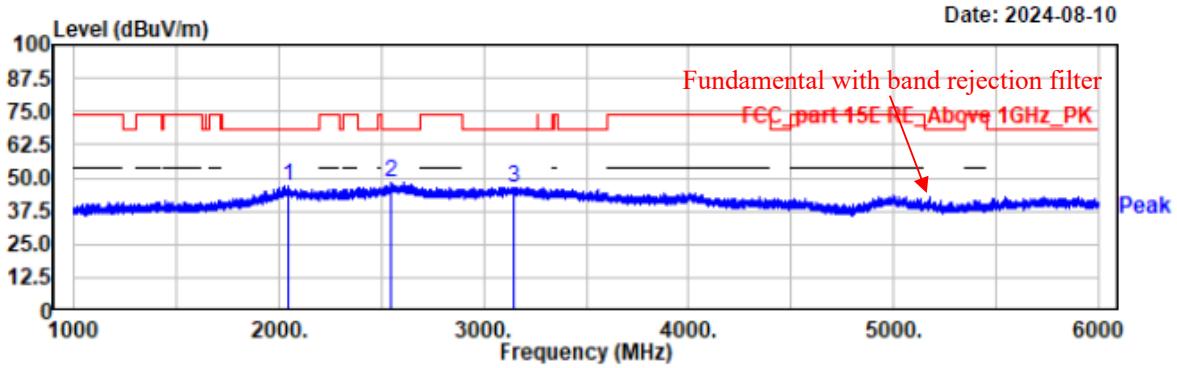
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2066.50	42.48	3.75	46.23	68.20	21.97	horizontal	Peak
2517.00	42.95	5.56	48.51	68.20	19.69	horizontal	Peak
3157.50	41.12	6.18	47.30	68.20	20.90	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n40-5190
EUT Model: PG71
Test distance: 3m

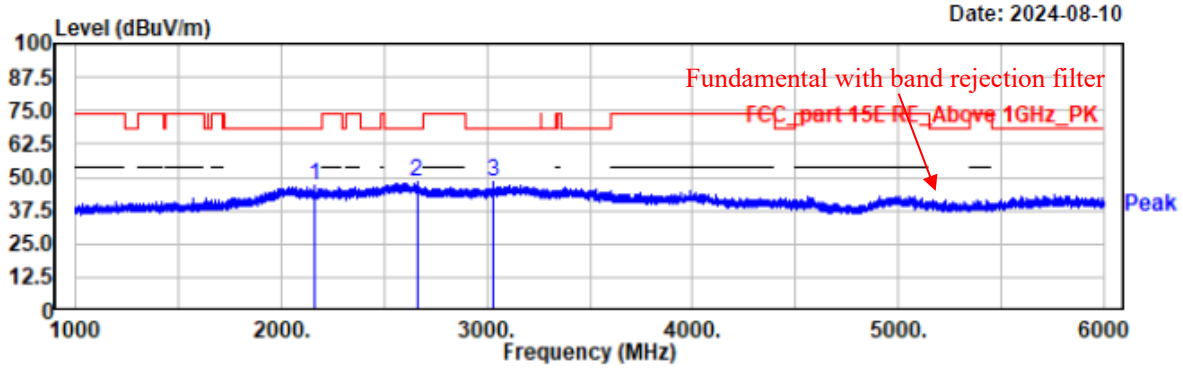
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
2045.50	43.03	3.99	47.02	68.20	21.18	vertical	Peak
2550.50	42.48	6.01	48.49	68.20	19.71	vertical	Peak
3146.50	40.34	6.18	46.52	68.20	21.68	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n40-5230
EUT Model: PG71
Test distance: 3m

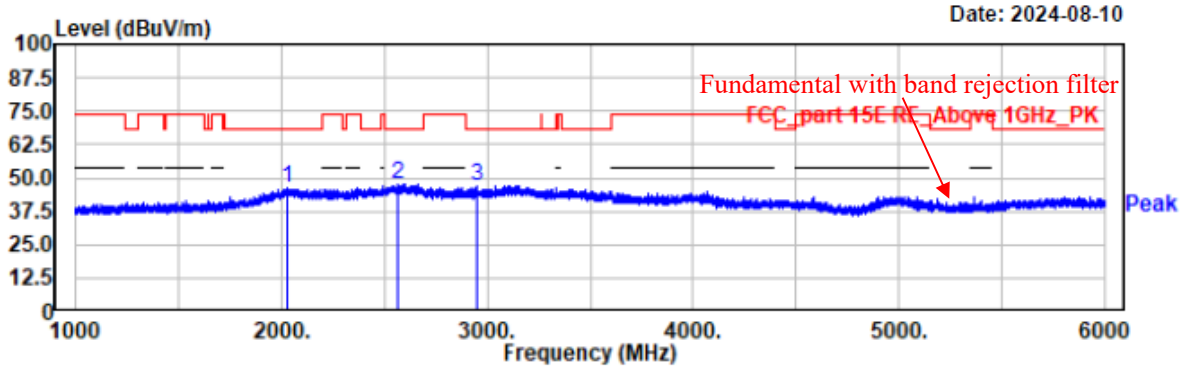
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2164.50	43.91	3.19	47.10	68.20	21.10	horizontal	Peak
2659.00	42.34	5.85	48.19	68.20	20.01	horizontal	Peak
3031.00	42.58	5.44	48.02	68.20	20.18	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n40-5230
EUT Model: PG71
Test distance: 3m

Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE

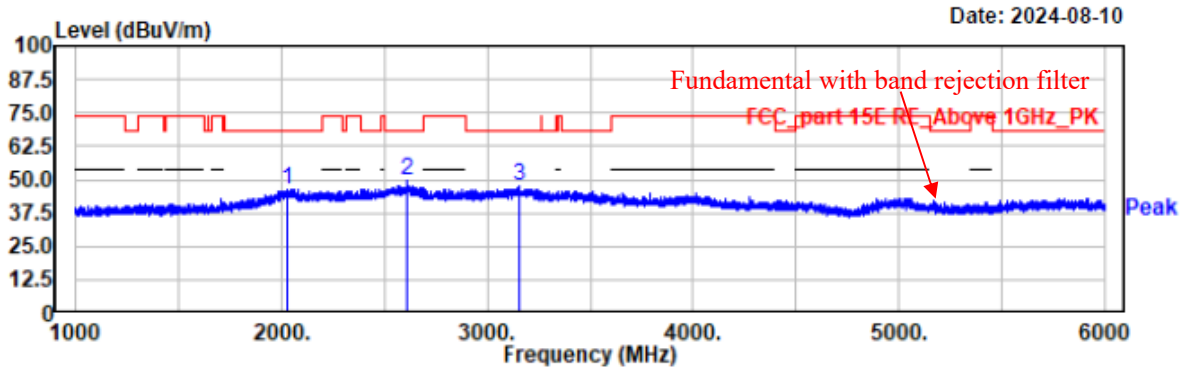


Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2027.00	42.31	3.77	46.08	68.20	22.12	vertical	Peak
2562.00	41.71	6.06	47.77	68.20	20.43	vertical	Peak
2947.00	42.14	4.99	47.13	68.20	21.07	vertical	Peak

Band 2:

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5260
EUT Model: PG71
Test distance: 3m

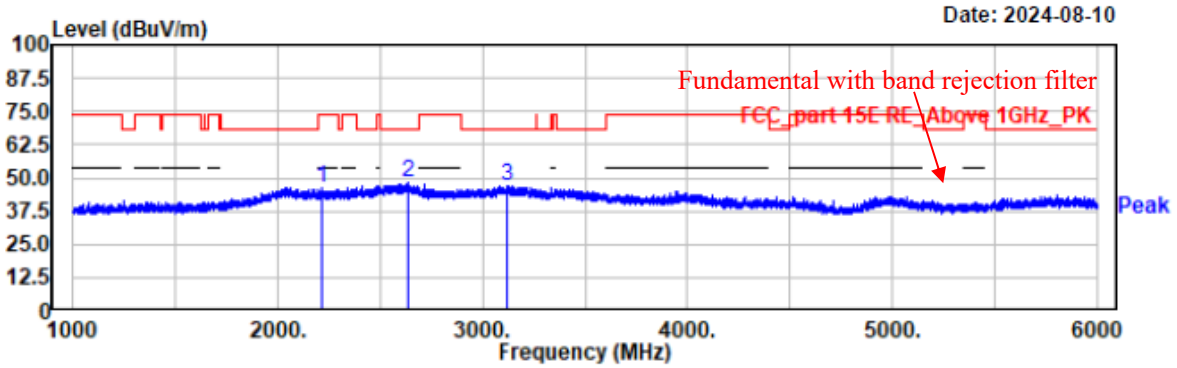
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2027.00	42.22	3.77	45.99	68.20	22.21	horizontal	Peak
2608.00	43.24	6.18	49.42	68.20	18.78	horizontal	Peak
3152.50	41.48	6.18	47.66	68.20	20.54	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5260
EUT Model: PG71
Test distance: 3m

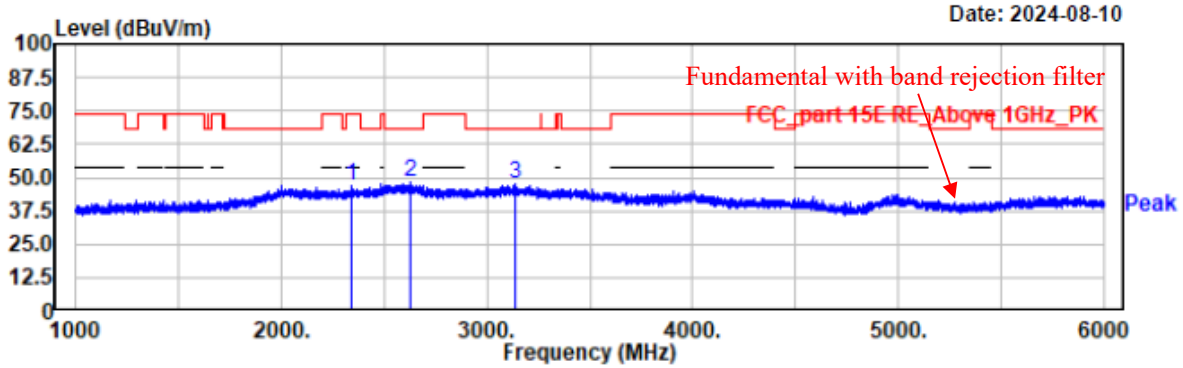
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2217.00	42.74	3.48	46.22	74.00	27.78	vertical	Peak
2638.00	41.87	6.11	47.98	68.20	20.22	vertical	Peak
3121.00	40.88	6.12	47.00	68.20	21.20	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5280
EUT Model: PG71
Test distance: 3m

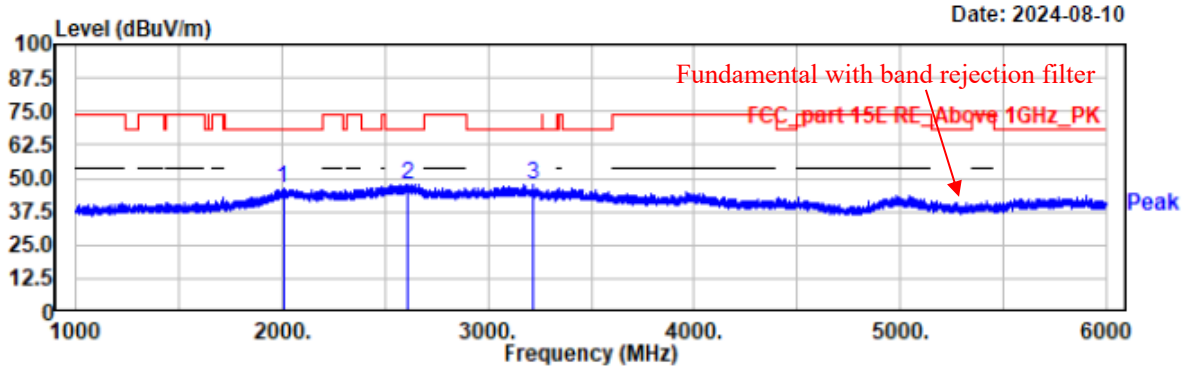
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
2343.00	43.14	3.74	46.88	74.00	27.12	horizontal	Peak
2628.00	41.92	6.14	48.06	68.20	20.14	horizontal	Peak
3136.00	41.11	6.15	47.26	68.20	20.94	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5280
EUT Model: PG71
Test distance: 3m

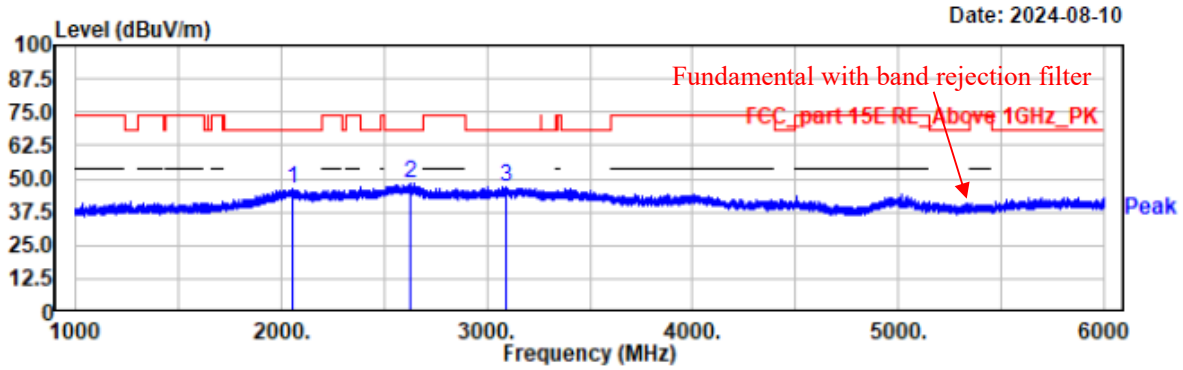
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2005.50	42.39	3.50	45.89	68.20	22.31	vertical	Peak
2608.50	41.62	6.18	47.80	68.20	20.40	vertical	Peak
3222.50	41.96	5.82	47.78	68.20	20.42	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5320
EUT Model: PG71
Test distance: 3m

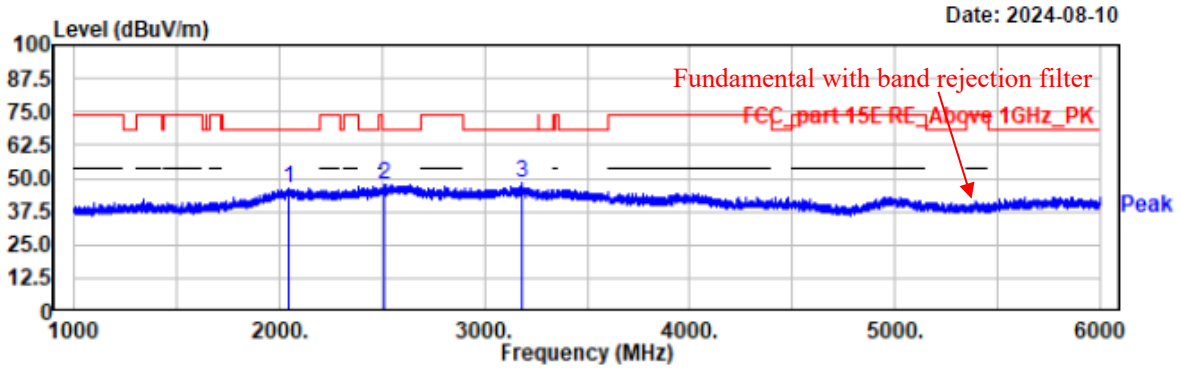
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2057.50	42.05	3.91	45.96	68.20	22.24	horizontal	Peak
2628.00	42.01	6.14	48.15	68.20	20.05	horizontal	Peak
3096.00	40.80	6.04	46.84	68.20	21.36	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5320
EUT Model: PG71
Test distance: 3m

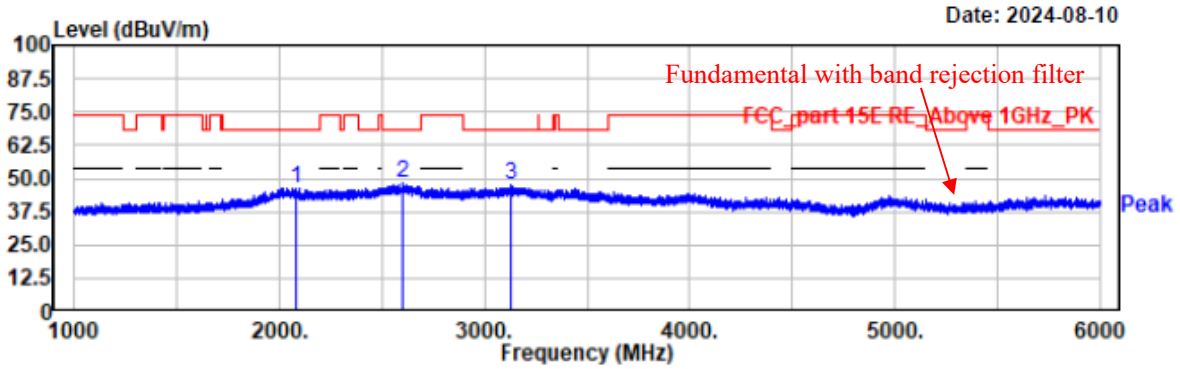
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2043.50	42.49	3.97	46.46	68.20	21.74	vertical	Peak
2512.50	42.27	5.51	47.78	68.20	20.42	vertical	Peak
3185.50	41.82	6.19	48.01	68.20	20.19	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11ac80-5290
EUT Model: PG71
Test distance: 3m

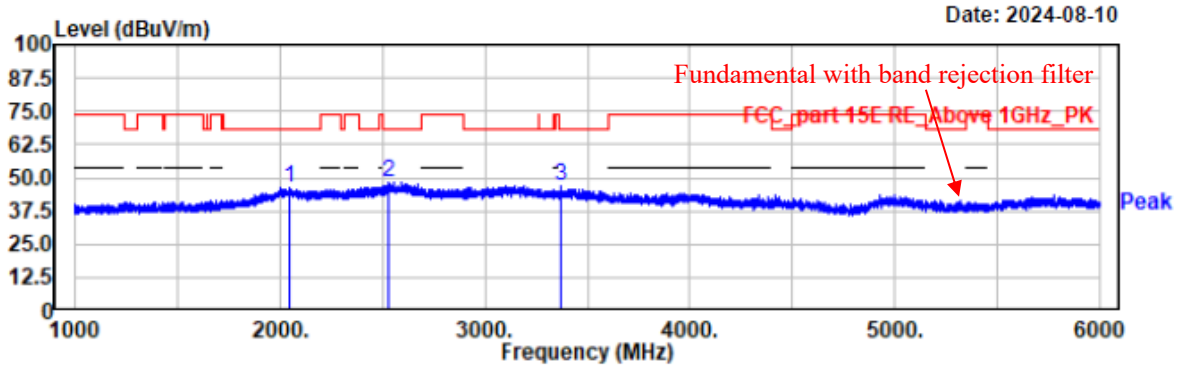
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2078.00	42.71	3.54	46.25	68.20	21.95	horizontal	Peak
2597.00	42.06	6.19	48.25	68.20	19.95	horizontal	Peak
3125.00	41.33	6.14	47.47	68.20	20.73	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11ac80-5290
EUT Model: PG71
Test distance: 3m

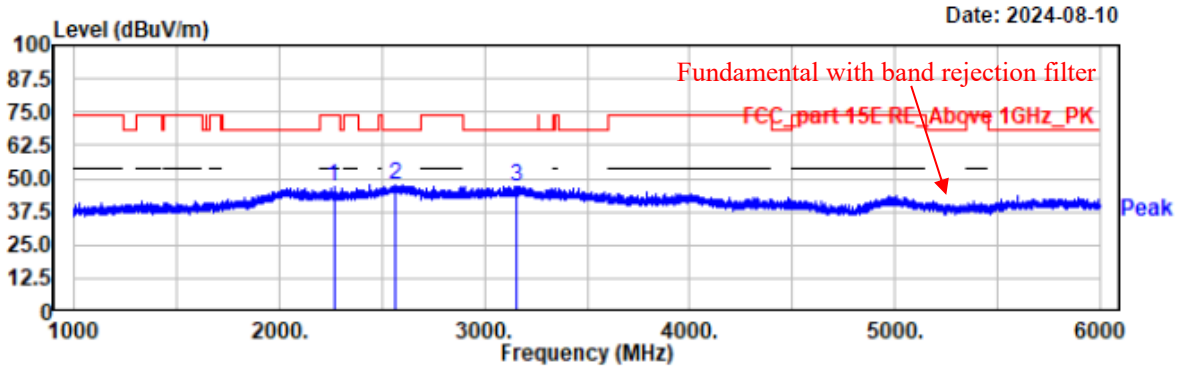
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2045.00	42.30	3.98	46.28	68.20	21.92	vertical	Peak
2527.00	42.64	5.69	48.33	68.20	19.87	vertical	Peak
3369.00	41.62	5.35	46.97	68.20	21.23	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n20-5260
EUT Model: PG71
Test distance: 3m

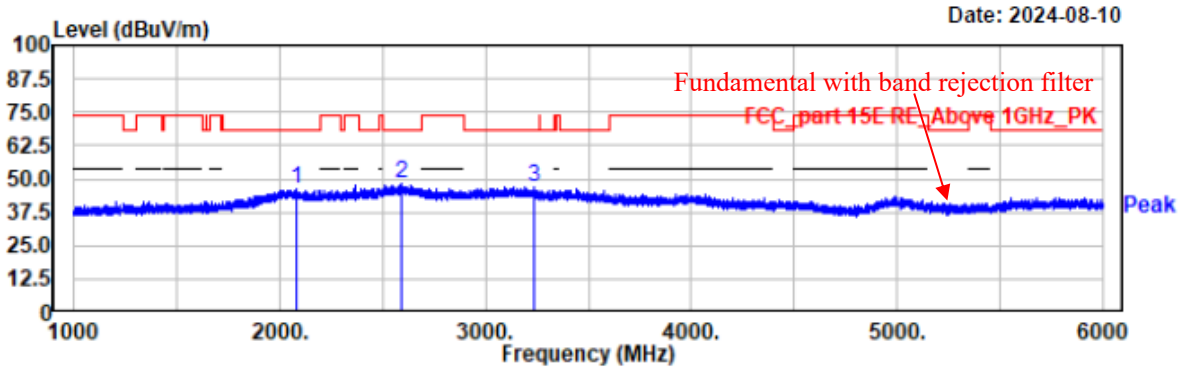
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2265.00	43.54	3.45	46.99	74.00	27.01	horizontal	Peak
2564.00	41.48	6.07	47.55	68.20	20.65	horizontal	Peak
3157.50	40.97	6.18	47.15	68.20	21.05	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n20-5260
EUT Model: PG71
Test distance: 3m

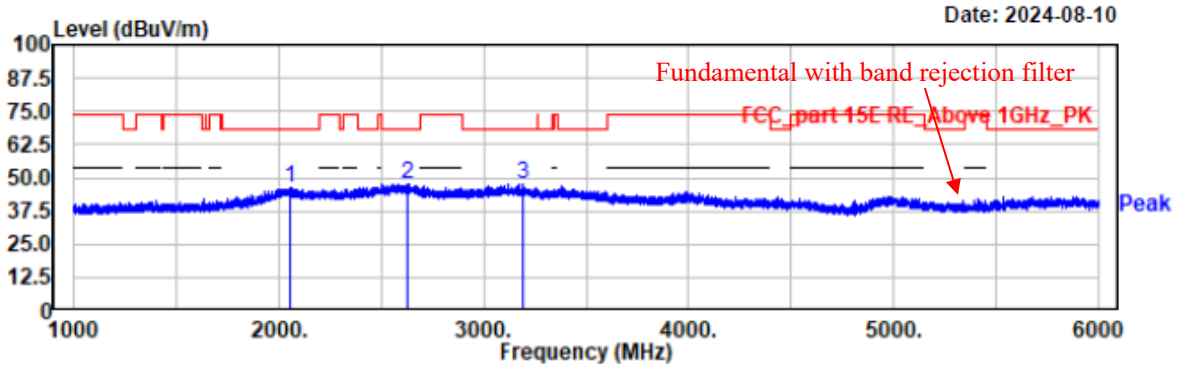
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2079.00	42.77	3.53	46.30	68.20	21.90	vertical	Peak
2588.00	42.21	6.16	48.37	68.20	19.83	vertical	Peak
3233.00	41.48	5.65	47.13	68.20	21.07	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n20-5280
EUT Model: PG71
Test distance: 3m

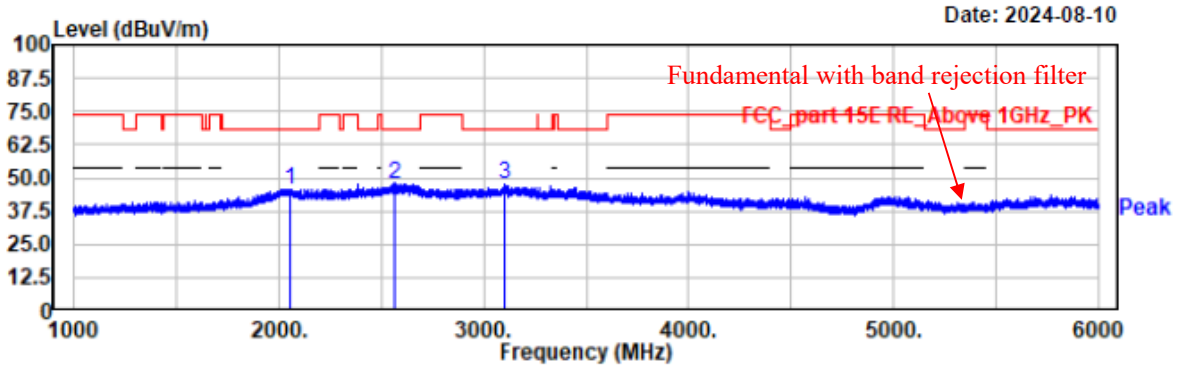
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2056.50	42.49	3.93	46.42	68.20	21.78	horizontal	Peak
2626.50	41.63	6.15	47.78	68.20	20.42	horizontal	Peak
3190.00	41.26	6.18	47.44	68.20	20.76	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n20-5280
EUT Model: PG71
Test distance: 3m

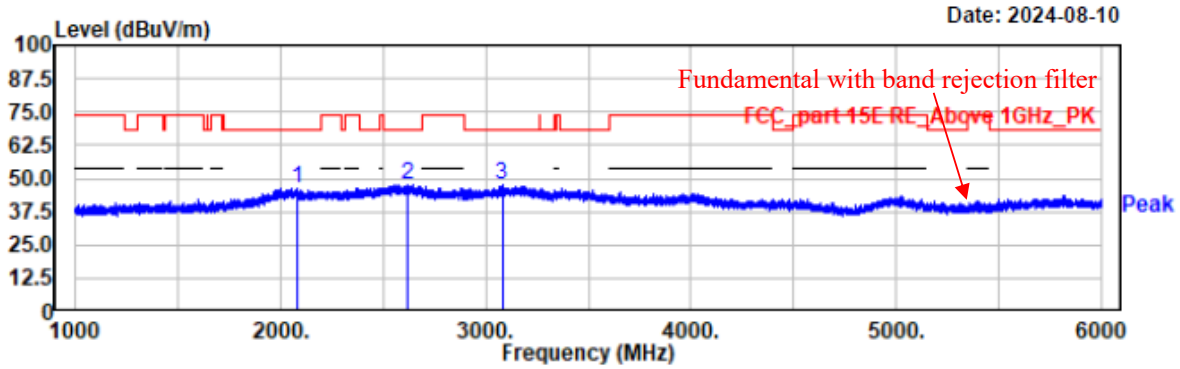
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2053.00	41.80	3.99	45.79	68.20	22.41	vertical	Peak
2565.50	41.86	6.07	47.93	68.20	20.27	vertical	Peak
3103.00	41.18	6.10	47.28	68.20	20.92	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n20-5320
EUT Model: PG71
Test distance: 3m

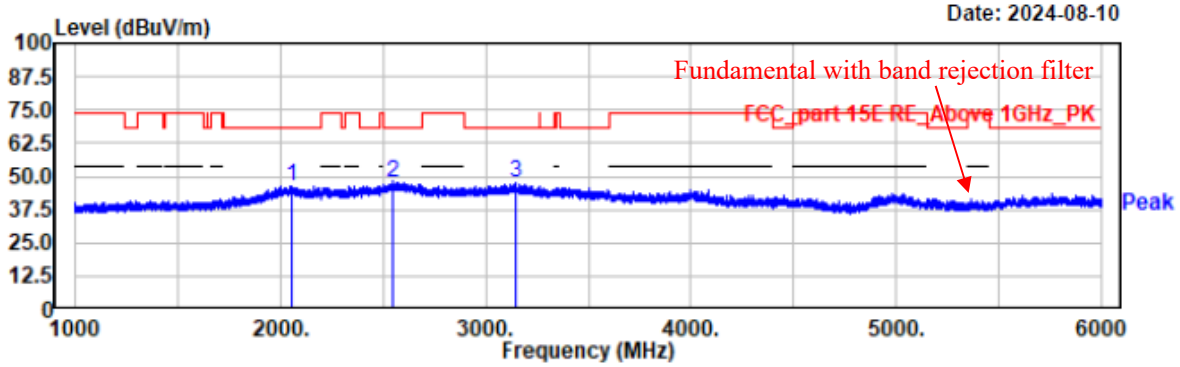
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2077.50	42.86	3.55	46.41	68.20	21.79	horizontal	Peak
2616.00	41.26	6.16	47.42	68.20	20.78	horizontal	Peak
3079.50	41.89	5.88	47.77	68.20	20.43	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n20-5320
EUT Model: PG71
Test distance: 3m

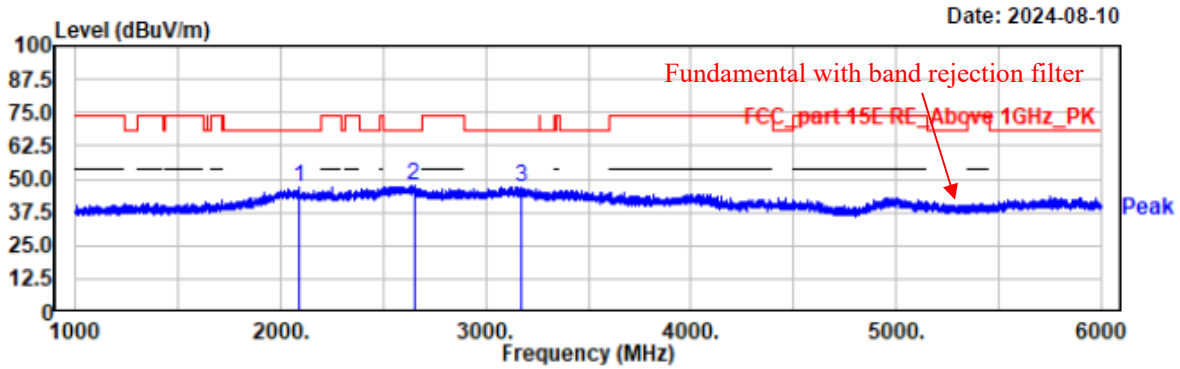
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2057.50	42.46	3.91	46.37	68.20	21.83	vertical	Peak
2548.00	41.96	5.97	47.93	68.20	20.27	vertical	Peak
3146.50	41.24	6.18	47.42	68.20	20.78	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n40-5270
EUT Model: PG71
Test distance: 3m

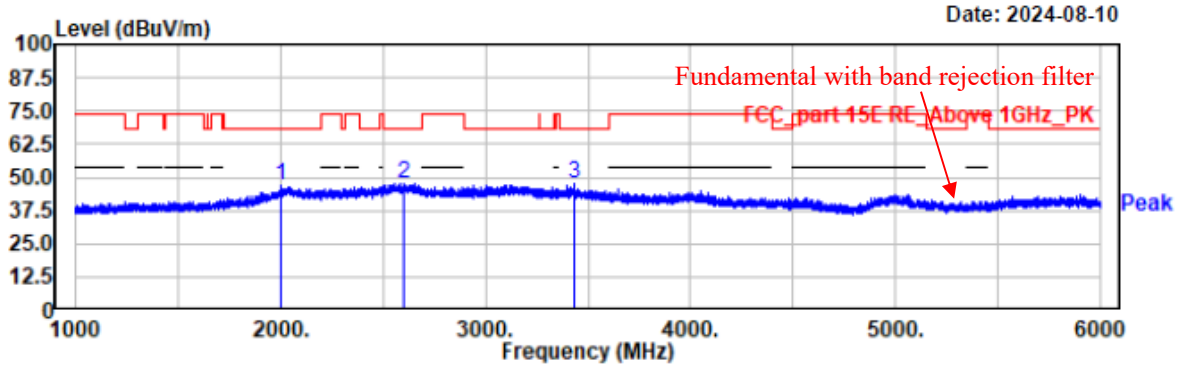
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2089.50	43.29	3.35	46.64	68.20	21.56	horizontal	Peak
2650.00	41.29	6.09	47.38	68.20	20.82	horizontal	Peak
3175.00	40.81	6.19	47.00	68.20	21.20	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n40-5270
EUT Model: PG71
Test distance: 3m

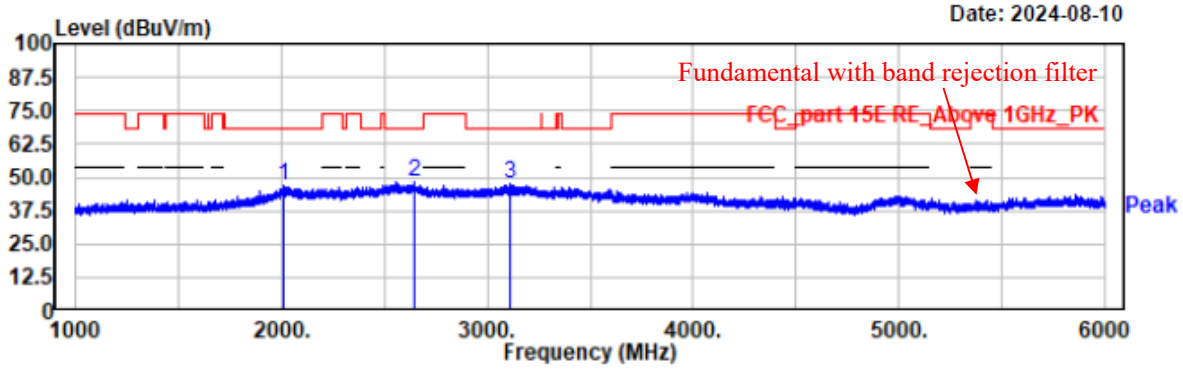
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1997.00	43.44	3.34	46.78	68.20	21.42	vertical	Peak
2597.50	41.56	6.19	47.75	68.20	20.45	vertical	Peak
3433.50	41.96	5.40	47.36	68.20	20.84	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n40-5310
EUT Model: PG71
Test distance: 3m

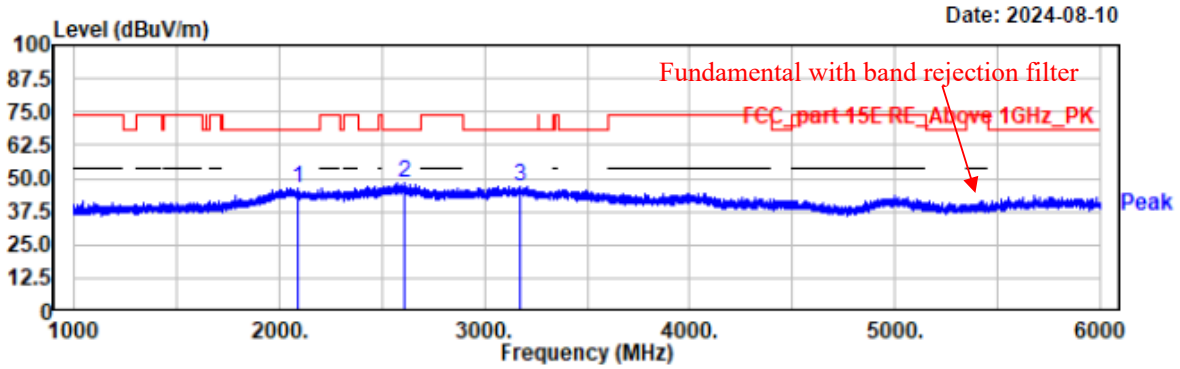
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2009.50	43.29	3.54	46.83	68.20	21.37	horizontal	Peak
2643.50	42.23	6.09	48.32	68.20	19.88	horizontal	Peak
3115.00	41.20	6.12	47.32	68.20	20.88	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11n40-5310
EUT Model: PG71
Test distance: 3m

Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE

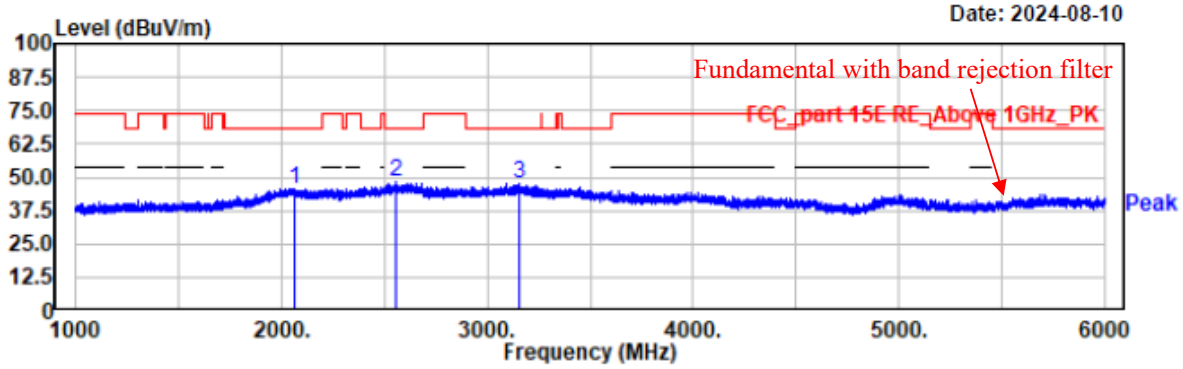


Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2090.50	42.99	3.33	46.32	68.20	21.88	vertical	Peak
2606.50	42.06	6.19	48.25	68.20	19.95	vertical	Peak
3177.50	41.03	6.19	47.22	68.20	20.98	vertical	Peak

Band 3:

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5500
EUT Model: PG71
Test distance: 3m

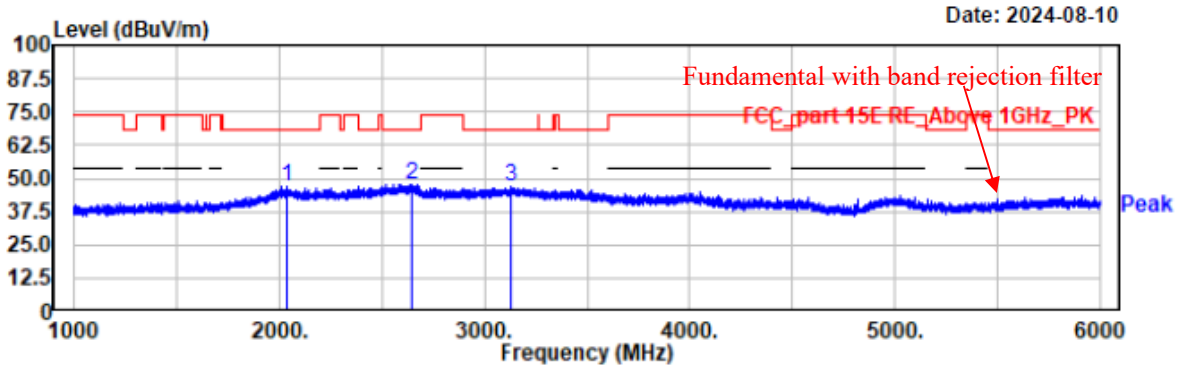
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2066.00	42.00	3.75	45.75	68.20	22.45	horizontal	Peak
2556.00	42.48	6.04	48.52	68.20	19.68	horizontal	Peak
3152.00	41.62	6.18	47.80	68.20	20.40	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5500
EUT Model: PG71
Test distance: 3m

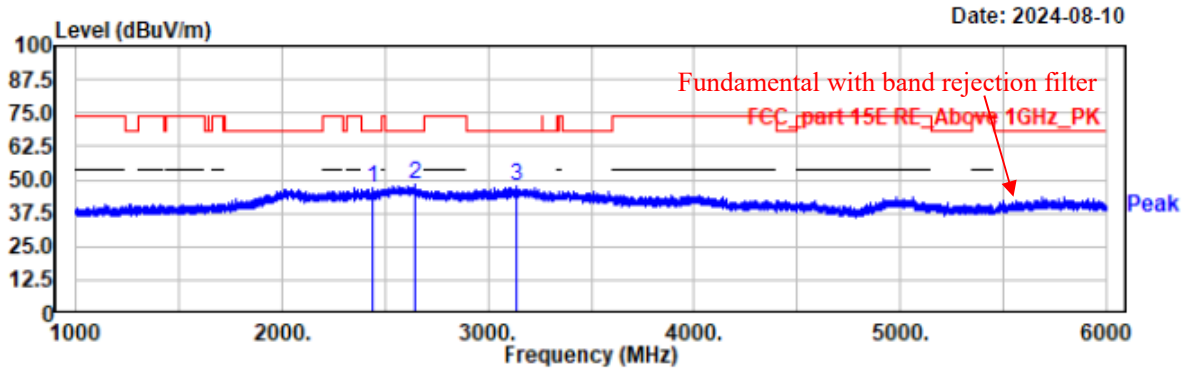
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
2033.50	42.94	3.85	46.79	68.20	21.41	vertical	Peak
2647.50	41.64	6.10	47.74	68.20	20.46	vertical	Peak
3130.50	40.52	6.15	46.67	68.20	21.53	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5580
EUT Model: PG71
Test distance: 3m

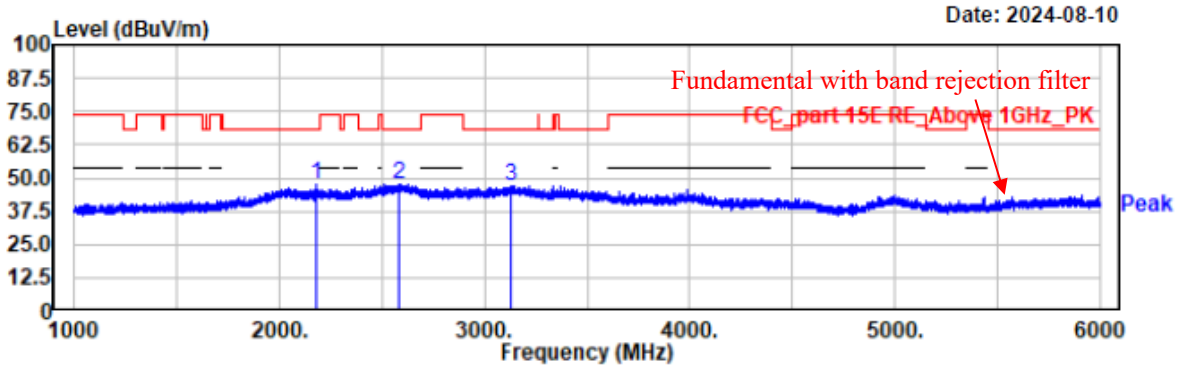
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2441.50	42.52	4.42	46.94	68.20	21.26	horizontal	Peak
2644.50	41.93	6.10	48.03	68.20	20.17	horizontal	Peak
3139.50	41.22	6.16	47.38	68.20	20.82	horizontal	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5580
EUT Model: PG71
Test distance: 3m

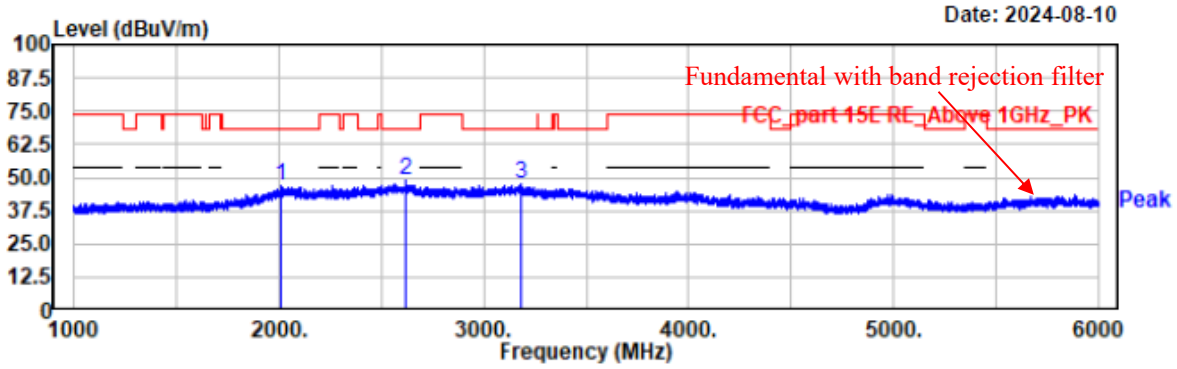
Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2181.50	44.01	3.31	47.32	68.20	20.88	vertical	Peak
2582.00	41.57	6.13	47.70	68.20	20.50	vertical	Peak
3125.00	40.95	6.14	47.09	68.20	21.11	vertical	Peak

Project No.: XMDN240219-08385E-RF
Test Mode: 11a-5700
EUT Model: PG71
Test distance: 3m

Temp/Humi/ATM: 23.7℃/58%/99.8kPa
Tested by: Wlif Wu
Power Source: DC 48V from PoE



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2008.00	43.05	3.52	46.57	68.20	21.63	horizontal	Peak
2622.50	42.85	6.14	48.99	68.20	19.21	horizontal	Peak
3185.50	41.06	6.19	47.25	68.20	20.95	horizontal	Peak