

FCC Test Report

Test report

On Behalf of

Shenzhen Haimeilan Technology Co., LTD.

For

Smart Phone

Model No.: I16 Pro max, AE01, AE02, AE03, AE04, AE05, AE06, AE07, AE08, AE09, AE10, AE11, AE12, AE13, AE14, AE15, AE16, AE17, AE18, AE19, AE20, FA01, FA02, FA03, FA04, FA05, FA06, FA07, FA08, FA09, FA10, FA11, FA12, FA13, FA14, FA15, FA16, FA17, FA18, FA19, FA20, Viral11, Alpha10 Pro, Zero 5 neo, Echo8 Se, S26 Ultra, Pixel 9, SP30 Pro, MT Ultimate, M15 pro

FCC ID: 2BDI3-V

Prepared For : Shenzhen Haimeilan Technology Co., LTD.
9V777, East 9th Floor, Building 2, SEG Science Park, Huaqiang North Street, Futian District, Shenzhen, 518000 China

Prepared By : Shenzhen HUAKE Testing Technology Co., Ltd.
1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Date of Test: Feb. 20, 2025 ~ Apr. 18, 2025

Date of Report: Apr. 18, 2025

Report Number: HK2502080444-5E

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Test Result Certification

Applicant's name : Shenzhen Haimeilan Technology Co., LTD.
Address : 9V777, East 9th Floor, Building 2, SEG Science Park, Huaqiang North Street, Futian District, Shenzhen, 518000 China
Manufacturer's Name : Shenzhen Haimeilan Technology Co., LTD.
Address : 9V777, East 9th Floor, Building 2, SEG Science Park, Huaqiang North Street, Futian District, Shenzhen, 518000 China
Product description
Trade Mark: N/A
Product name : Smart Phone
Model and/or type reference : I16 Pro max, AE01, AE02, AE03, AE04, AE05, AE06, AE07, AE08, AE09, AE10, AE11, AE12, AE13, AE14, AE15, AE16, AE17, AE18, AE19, AE20, FA01, FA02, FA03, FA04, FA05, FA06, FA07, FA08, FA09, FA10, FA11, FA12, FA13, FA14, FA15, FA16, FA17, FA18, FA19, FA20, Viral11, Alpha10 Pro, Zero 5 neo, Echo8 Se, S26 Ultra, Pixel 9, SP30 Pro, MT Ultimate, M15 pro
Standards : **47 CFR FCC Part 15 Subpart C 15.247**

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen HUAK Testing Technology Co., Ltd. is acknowledged as copyright owner and source of the material. Shenzhen HUAK Testing Technology Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Date of Test :
Date (s) of performance of tests : Feb. 20, 2025 ~ Apr. 18, 2025
Date of Issue : Apr. 18, 2025
Test Result : **Pass**

Testing Engineer *Len Liao*

Len Liao

Technical Manager *Sliver Wan*

Sliver Wan

Authorized Signatory *Jason Zhou*

Jason Zhou

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAK Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Contents

Page

1	Test Summary	5
1.1	Test Description.....	5
1.2	Measurement Uncertainty	6
1.3	Information of the Test Laboratory	6
2	General Information.....	7
2.1	General Description of EUT	7
2.2	Description of Test Conditions	9
2.3	Description of Test Setup	10
2.4	Description of Support Units.....	11
3	Equipments List for All Test Items.....	12
4	Test Result.....	13
4.1	Antenna Requirement.....	13
4.2	AC Power Line Conducted Emission	14
4.3	Radiated Emissions Measurement.....	28
4.4	Maximum Peak Output Power Measurement	57
4.5	Power Spectral Density	58
4.6	6db Bandwidth.....	61
4.7	Occupied Bandwidth.....	63
4.8	Band Edge.....	64
4.9	Conducted Spurious Emissions	66
5	Test Setup Photos of the EUT	70
6	Photos of the EUT.....	82

**** Modified History ****

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	Apr. 18, 2025	Jason Zhou

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

1 Test Summary

1.1 Test Description

Test Item	Test Requirement	Result
Antenna Requirement	§15.203/§15.247(b)(4)	PASS
AC Power Line Conducted Emission	FCC Part 15.207	PASS
Radiated Emissions	FCC Part 15.205/15.209	PASS
Maximum Peak Output Power	FCC Part 15.247(b)	PASS
Power Spectral Density	FCC Part 15.247(e)	PASS
6dB Bandwidth & 99% Bandwidth	FCC Part 15.247(a)(2)	PASS
Spurious RF Conducted Emission	FCC Part 15.247(d)	PASS
Band Edge	FCC Part 15.247(d)	PASS

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAK Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

1.2 Measurement Uncertainty

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

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 2.71\text{dB}$
2	All emissions, radiated(<1G)	$\pm 3.90\text{dB}$
3	All emissions, radiated(>1G)	$\pm 4.28\text{dB}$

1.3 Information of the Test Laboratory

Shenzhen HUAK Testing Technology Co., Ltd.

Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Testing Laboratory Authorization:

A2LA Accreditation Code is 4781.01.

FCC Designation Number is CN1229.

Canada IC CAB identifier is CN0045.

CNAS Registration Number is L9589.

2 General Information

2.1 General Description of EUT

EUT Name:	Smart Phone
Model Name	I16 Pro max
Series Models:	AE01, AE02, AE03, AE04, AE05, AE06, AE07, AE08, AE09, AE10, AE11, AE12, AE13, AE14, AE15, AE16, AE17, AE18, AE19, AE20, FA01, FA02, FA03, FA04, FA05, FA06, FA07, FA08, FA09, FA10, FA11, FA12, FA13, FA14, FA15, FA16, FA17, FA18, FA19, FA20, Viral11, Alpha10 Pro, Zero 5 neo, Echo8 Se, S26 Ultra, Pixel 9, SP30 Pro, MT Ultimate, M15 pro
Model Difference:	All model's the function, software and electric circuit are the same, only with a product appearance, color and model named different. Test sample mode: I16 Pro max.
Trade Mark:	N/A
Operation Frequency:	2402 MHz to 2480 MHz
Channel Separation:	2MHz
Number of Channel:	40
Modulation Technology:	GFSK
Hardware Version:	V1.0
Software Version:	V1.0
Antenna Type:	FPC Antenna
Antenna Gain:	-1.52dBi
Power Supply:	DC 5V From Type-C or DC 3.85V From Battery
Note:	<ol style="list-style-type: none"> 1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual. 2. Antenna gain Refer to the antenna specifications. 3. The cable loss data is obtained from the supplier. 4. The test results in the report only apply to the tested sample.

Description of Channel:					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	14	2430	28	2458
1	2404	15	2432	29	2460
2	2406	16	2434	30	2462
3	2408	17	2436	31	2464
4	2410	18	2438	32	2466
5	2412	19	2440	33	2468
6	2414	20	2442	34	2470
7	2416	21	2444	35	2472
8	2418	22	2446	36	2474
9	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	39	2480
12	2426	26	2454		
13	2428	27	2456		

The EUT has been operated in modulations: GFSK independently.

NO.	Test Mode Description
1	Low channel TX
2	Middle channel TX
3	High channel TX

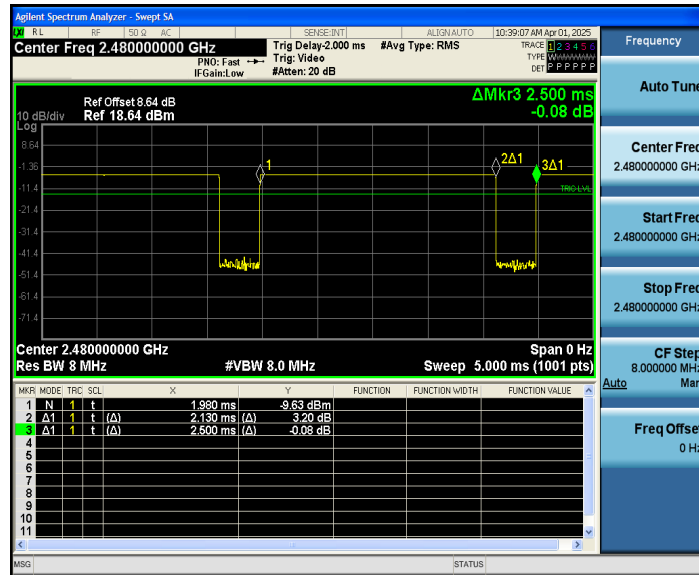
Note:

- All the test modes can be supply by Built-in Li-ion battery, only the result of the worst case was recorded in the report if no any records.
- For Radiated Emission, 3axis were chosen for testing for each applicable mode.

2.2 Description of Test Conditions

- (1) E.U.T. test conditions:
For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery.
- (2) Frequency range of radiated measurements:
The test range will be up to the tenth harmonic of the highest fundamental frequency.
- (3) Pre-test the EUT in all transmitting mode at the lowest (2402 MHz), middle (2440 MHz) and highest (2480 MHz) channel with different data packet and conducted to determine the worst-case mode, only the worst-case results are recorded in this report.
- (4) Mode Test Duty Cycle

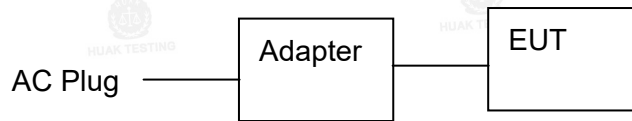
Mode	Duty Cycle
BT-LE(1Mbps)	0.85



The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAK Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

2.3 Description of Test Setup

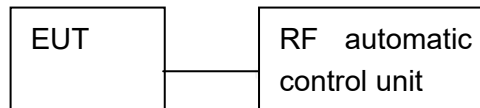
Operation of EUT during AC conducted testing and below 1GHz radiation testing:



Operation of EUT during above 1GHz radiation testing:



Operation of EUT during RF conducted testing:



The sample was placed (0.8m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages. The worst case is X position.

2.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Trade Mark	Model/Type No.	Specification	Remark
1	Smart Phone	N/A	I16 Pro max	N/A	EUT
2	USB Cable	N/A	N/A	Length:0.82m	Accessory
3	Adapter	N/A	APD5-2	Input: AC 100-240V, 50/60Hz, 0.5A Output: DC 5V, 2A	Accessory

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
3. For conducted measurements (Output Power, 6dB Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

3 Equipments List for All Test Items

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	L.I.S.N.	R&S	ENV216	HKE-002	2025/02/19	1 Year
2	L.I.S.N.	R&S	ENV216	HKE-059	2025/02/19	1 Year
3	EMI Test Receiver	R&S	ESR	HKE-005	2025/02/19	1 Year
4	Spectrum analyzer	Agilent	N9020A	HKE-048	2025/02/19	1 Year
5	Spectrum analyzer	R&S	FSV3044	HKE-126	2025/02/19	1 Year
6	Preamplifier	EMCI	EMC051845S	HKE-006	2025/02/19	1 Year
7	Preamplifier	Schwarzbeck	BBV 9743	HKE-016	2025/02/19	1 Year
8	Preamplifier	A.H. Systems	SAS-574	HKE-182	2025/02/19	1 Year
9	6d Attenuator	Pasternack	6db	HKE-184	2025/02/19	1 Year
10	EMI Test Receiver	Rohde & Schwarz	ESR-7	HKE-010	2025/02/19	1 Year
11	Broadband Antenna	Schwarzbeck	VULB9168	HKE-167	2024/02/21	2 Year
12	Loop Antenna	COM-POWER	AL-130R	HKE-014	2024/02/21	2 Year
13	Horn Antenna	Schwarzbeck	9120D	HKE-013	2024/02/21	2 Year
14	EMI Test Software	Tonscend	JS32-CE 2.5.0.6	HKE-081	/	/
15	EMI Test Software	Tonscend	JS32-RE 5.0.0	HKE-082	/	/
16	RF Automatic control unit	Tonscend	JS0806-1	HKE-096	2025/02/19	1 Year
17	High pass filter unit	Tonscend	JS0806-F	HKE-055	2025/02/19	1 Year
18	Wireless Communication Test Set	R&S	CMU200	HKE-026	2025/02/19	1 Year
19	Wireless Communication Test Set	R&S	CMW500	HKE-027	2025/02/19	1 Year
20	High-low temperature chamber	Guangke	HT-80L	HKE-118	2024/06/10	1 Year
21	Temperature and humidity meter	Boyang	HTC-1	HKE-075	2024/06/10	1 Year
22	RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	/	/
23	10dB Attenuator	Schwarzbeck	VTSD9561F	HKE-153	2025/02/19	1 Year
24	RSE Test Software	Tonscend	JS36-RSE 5.0. 0	HKE-184	/	/

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

4 Test Result

4.1 Antenna Requirement

4.1.1 Standard Requirement

Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247, if 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 6dBi.

Refer to statement below for compliance.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

Antenna Connected Construction

The antenna used in this product is a FPC Antenna, need professional installation, not easy to remove. It conforms to the standard requirements. The directional gains of antenna used for transmitting is -1.52dBi.

4.1.2 EUT Antenna



4.2 AC Power Line Conducted Emission

4.2.1 Applied Procedures / Limit

According to FCC CFR Title 47 Part 15 Subpart C Section 15.207, AC Power Line Conducted Emissions Limits for Licence-Exempt Radio Apparatus as below:

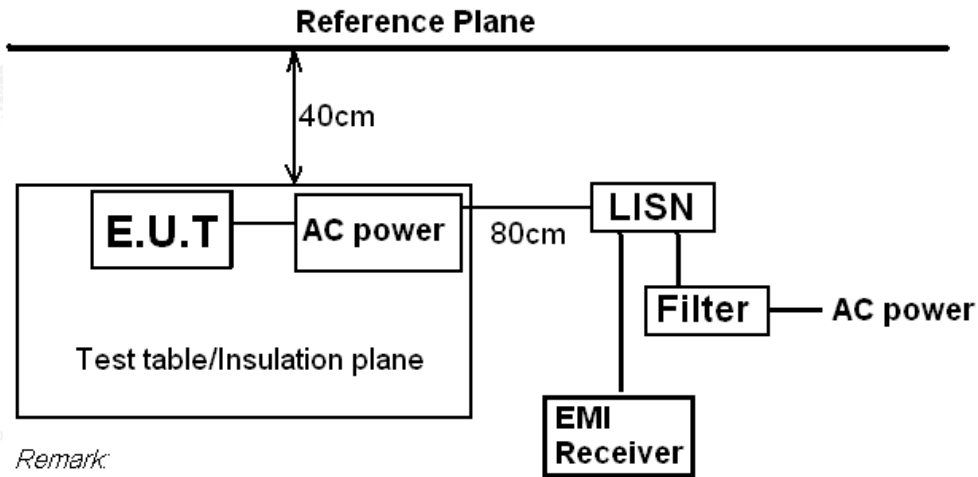
Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

4.2.2 Test Procedure

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. 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 C63.10:2013.
2. Support equipment, if needed, was placed as per ANSI C63.10:2013.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10:2013.
4. The adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT 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.

4.2.3 Test Setup



Remark:
E.U.T: Equipment Under Test
LISN: Line Impedance Stabilization Network
Test table height=0.8m

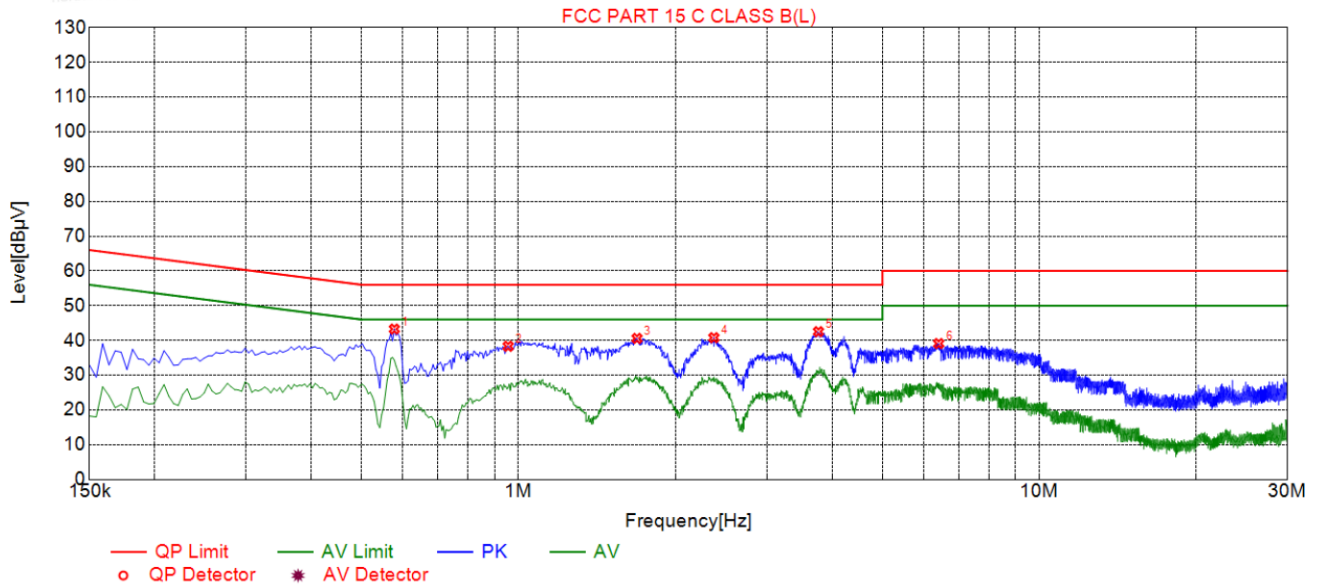
4.2.4 Test Results

PASS

Only the worst result of GFSK Low channel TX was reported as below:

Test Model No.: I16 Pro max

Test Specification: Line



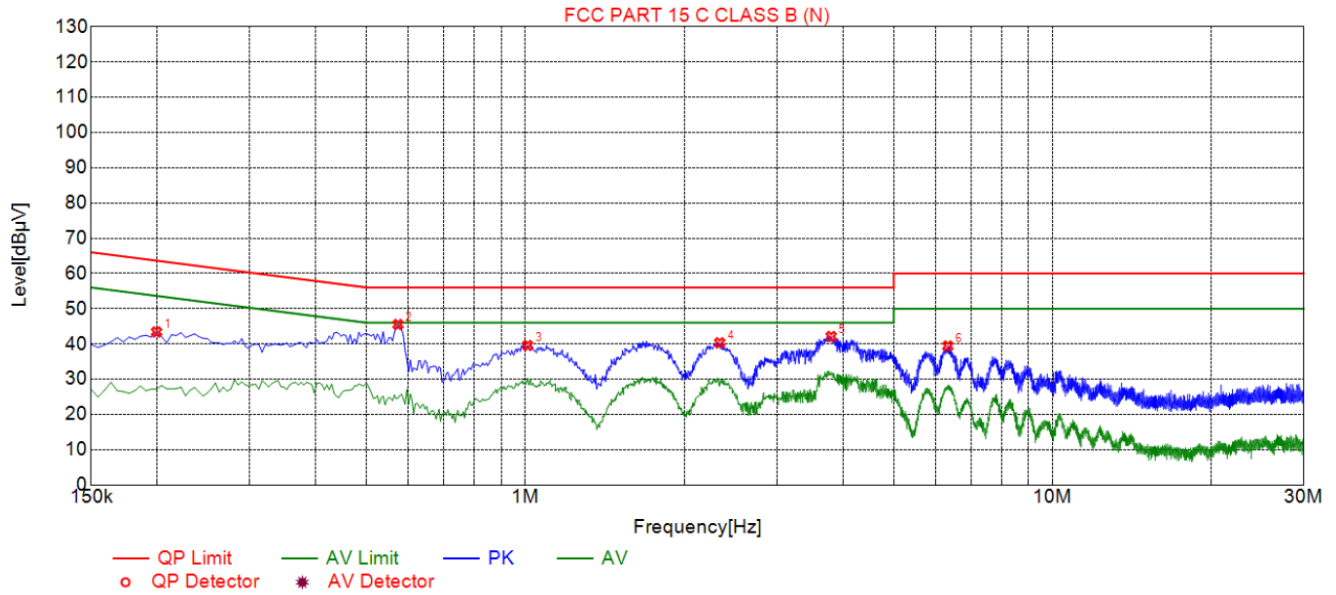
Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.5775	43.27	19.86	56.00	12.73	23.41	PK	L
2	0.9555	38.32	19.87	56.00	17.68	18.45	PK	L
3	1.6890	40.58	19.95	56.00	15.42	20.63	PK	L
4	2.3730	40.78	20.00	56.00	15.22	20.78	PK	L
5	3.7680	42.52	20.09	56.00	13.48	22.43	PK	L
6	6.4140	39.09	20.08	60.00	20.91	19.01	PK	L

Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

Test Specification: Neutral



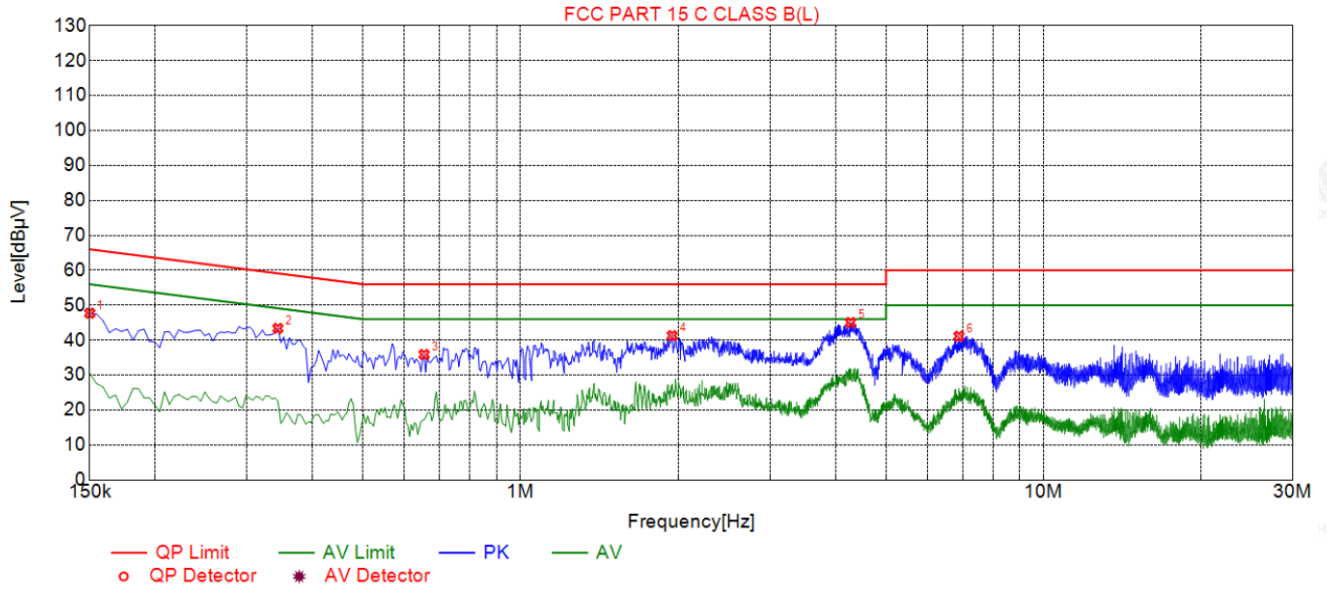
Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1995	43.40	19.73	63.63	20.23	23.67	PK	N
2	0.5730	45.51	19.74	56.00	10.49	25.77	PK	N
3	1.0095	39.57	19.74	56.00	16.43	19.83	PK	N
4	2.3370	40.33	19.88	56.00	15.67	20.45	PK	N
5	3.8040	42.12	19.97	56.00	13.88	22.15	PK	N
6	6.3330	39.42	19.98	60.00	20.58	19.44	PK	N

Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

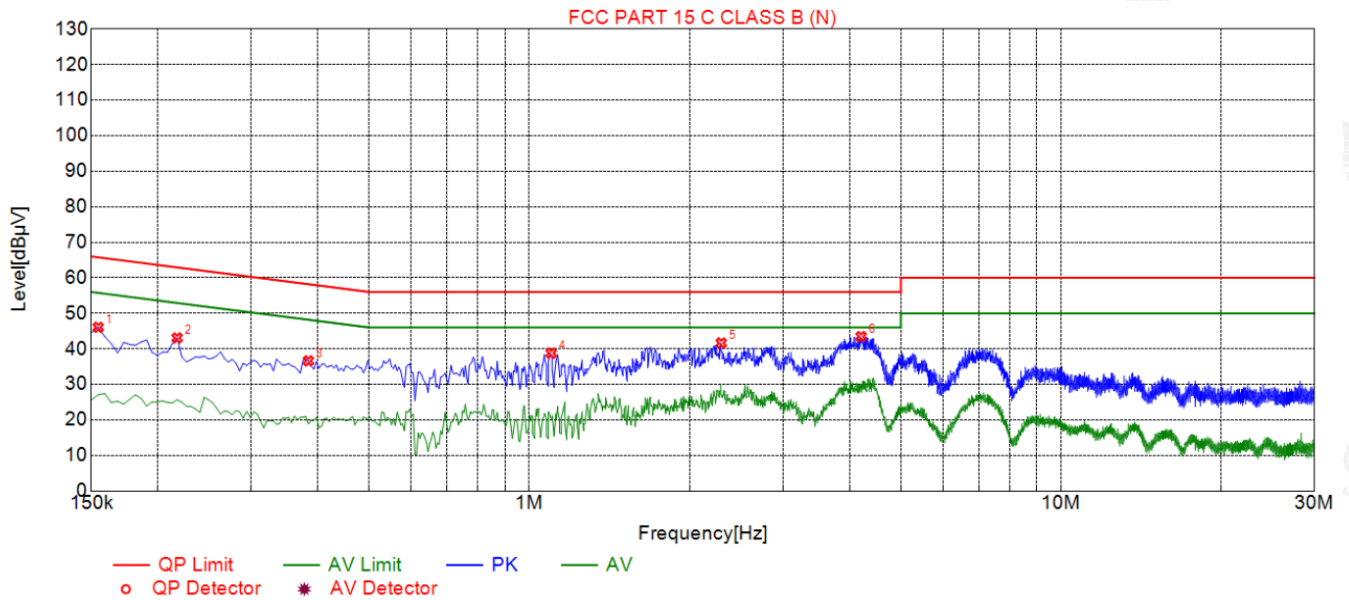
Series Model No.: S26 Ultra
 Test Specification: Line



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1500	47.72	19.83	66.00	18.28	27.89	PK	L
2	0.3435	43.37	19.83	59.12	15.75	23.54	PK	L
3	0.6540	35.91	19.86	56.00	20.09	16.05	PK	L
4	1.9500	41.28	19.96	56.00	14.72	21.32	PK	L
5	4.2765	45.04	20.09	56.00	10.96	24.95	PK	L
6	6.8955	41.12	20.07	60.00	18.88	21.05	PK	L

Remark: Margin = Limit – Level
 Correction factor = Cable lose + LISN insertion loss
 Level=Test receiver reading + correction factor

Test Specification: Neutral



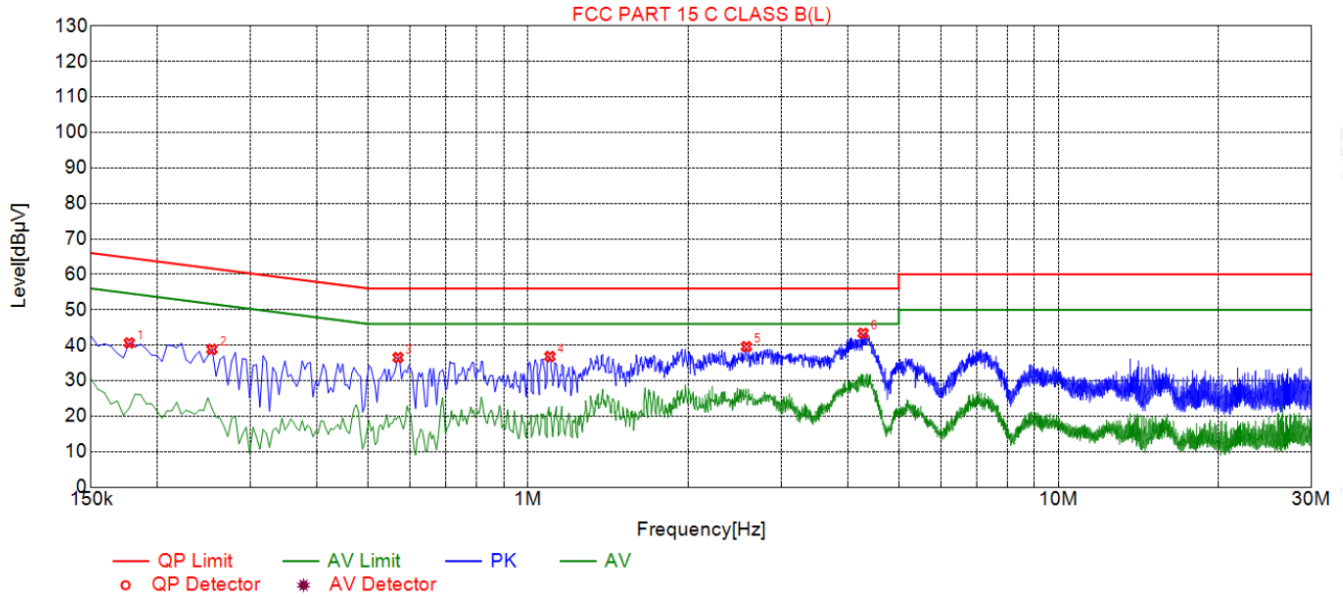
Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1545	46.06	19.73	65.75	19.69	26.33	PK	N
2	0.2175	43.08	19.75	62.91	19.83	23.33	PK	N
3	0.3840	36.62	19.74	58.19	21.57	16.88	PK	N
4	1.0995	38.77	19.75	56.00	17.23	19.02	PK	N
5	2.2965	41.65	19.88	56.00	14.35	21.77	PK	N
6	4.2090	43.47	19.98	56.00	12.53	23.49	PK	N

Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

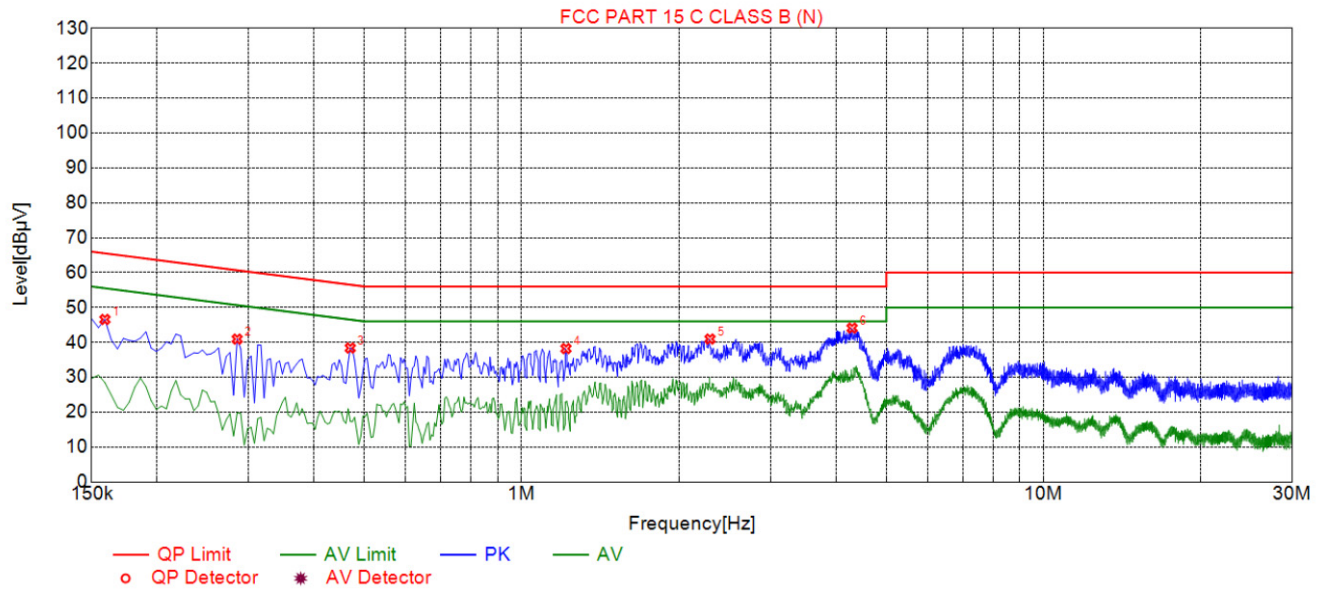
Series Model No.: Pixel 9
 Test Specification: Line



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1770	40.67	19.85	64.63	23.96	20.82	PK	L
2	0.2535	38.86	19.84	61.64	22.78	19.02	PK	L
3	0.5685	36.55	19.86	56.00	19.45	16.69	PK	L
4	1.0995	36.85	19.88	56.00	19.15	16.97	PK	L
5	2.5800	39.62	20.03	56.00	16.38	19.59	PK	L
6	4.2810	43.39	20.09	56.00	12.61	23.30	PK	L

Remark: Margin = Limit – Level
 Correction factor = Cable lose + LISN insertion loss
 Level=Test receiver reading + correction factor

Test Specification: Neutral



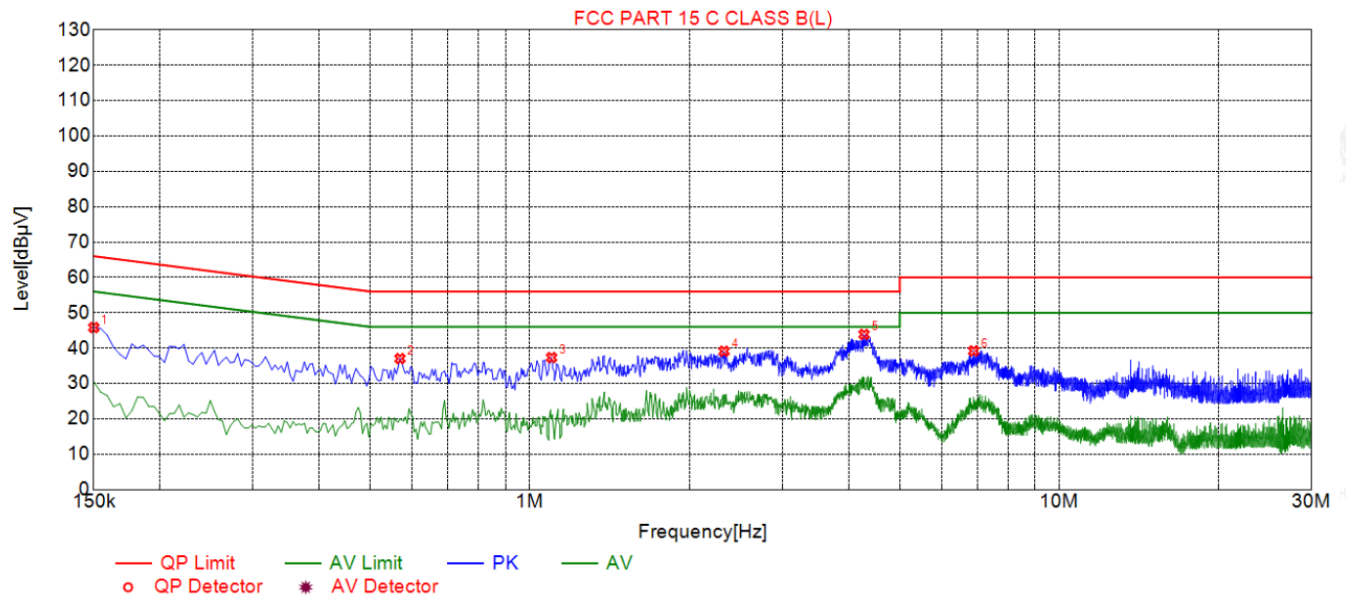
Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1590	46.58	19.70	65.52	18.94	26.88	PK	N
2	0.2850	40.94	19.73	60.67	19.73	21.21	PK	N
3	0.4695	38.38	19.73	56.52	18.14	18.65	PK	N
4	1.2165	38.22	19.77	56.00	17.78	18.45	PK	N
5	2.2965	40.95	19.88	56.00	15.05	21.07	PK	N
6	4.2990	44.09	19.98	56.00	11.91	24.11	PK	N

Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

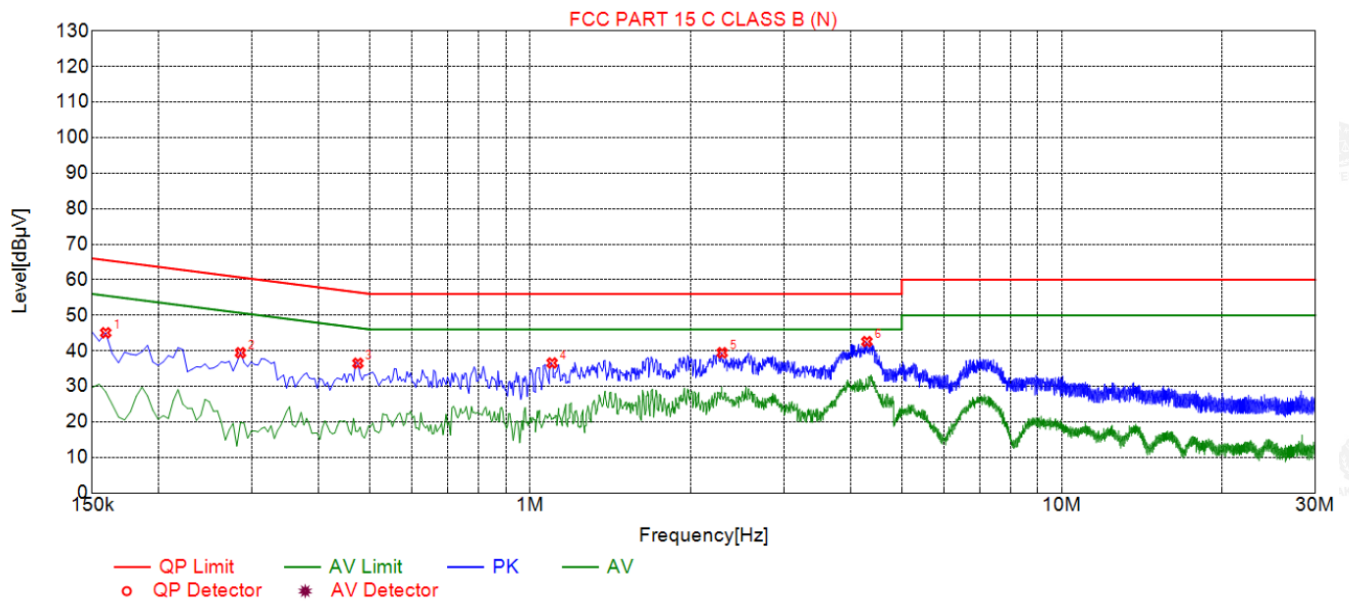
Series Model No.: SP30 Pro
 Test Specification: Line



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1500	45.82	19.83	66.00	20.18	25.99	PK	L
2	0.5685	37.05	19.86	56.00	18.95	17.19	PK	L
3	1.0995	37.35	19.88	56.00	18.65	17.47	PK	L
4	2.3280	39.13	20.00	56.00	16.87	19.13	PK	L
5	4.2810	43.89	20.09	56.00	12.11	23.80	PK	L
6	6.8955	39.22	20.07	60.00	20.78	19.15	PK	L

Remark: Margin = Limit – Level
 Correction factor = Cable lose + LISN insertion loss
 Level=Test receiver reading + correction factor

Test Specification: Neutral



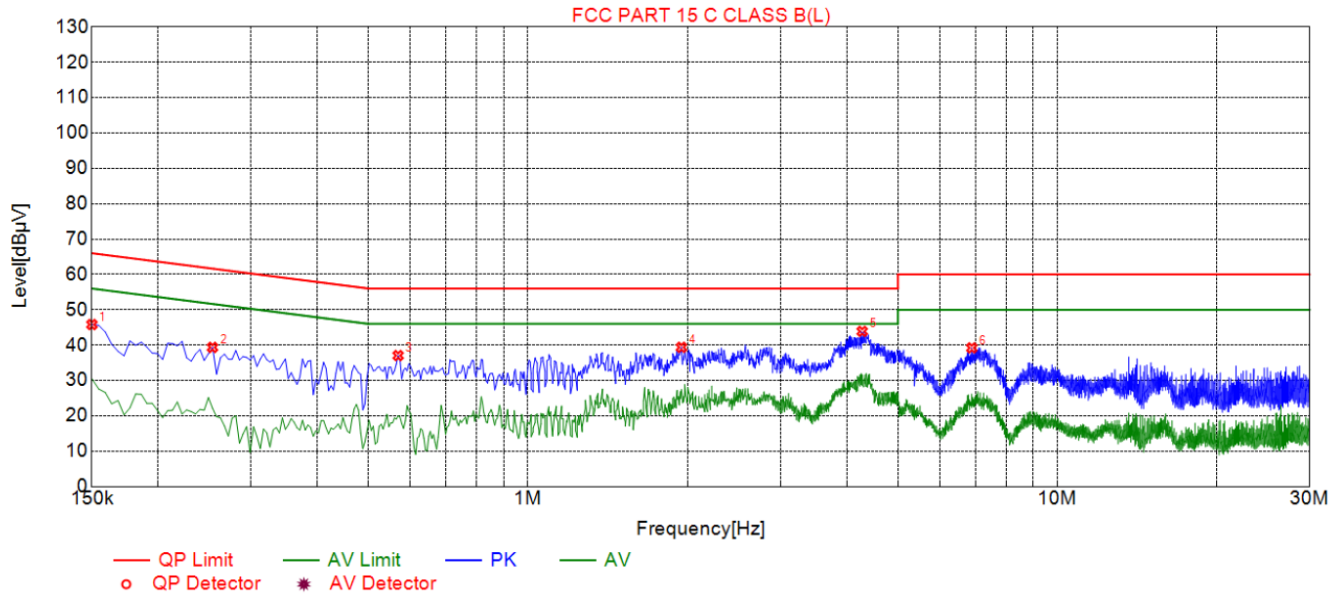
Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1590	45.08	19.70	65.52	20.44	25.38	PK	N
2	0.2850	39.44	19.73	60.67	21.23	19.71	PK	N
3	0.4740	36.50	19.73	56.44	19.94	16.77	PK	N
4	1.0995	36.57	19.75	56.00	19.43	16.82	PK	N
5	2.2965	39.45	19.88	56.00	16.55	19.57	PK	N
6	4.2990	42.59	19.98	56.00	13.41	22.61	PK	N

Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

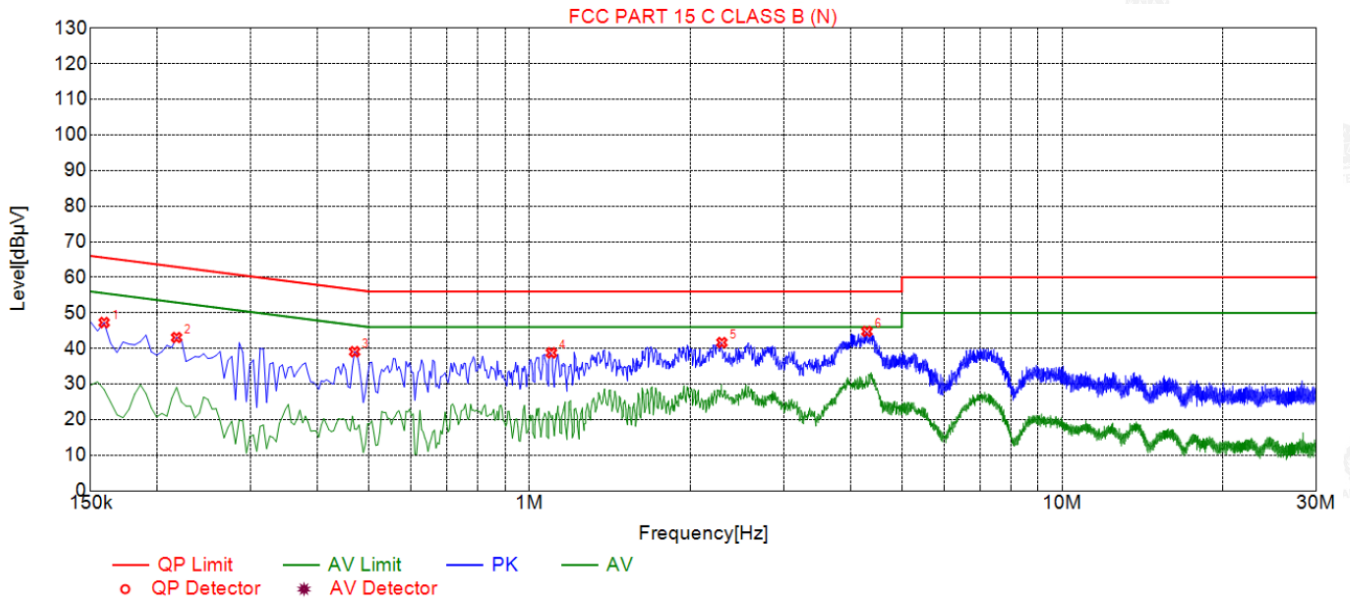
Series Model No.: MT Ultimate
 Test Specification: Line



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1500	45.82	19.83	66.00	20.18	25.99	PK	L
2	0.2535	39.36	19.84	61.64	22.28	19.52	PK	L
3	0.5685	37.05	19.86	56.00	18.95	17.19	PK	L
4	1.9500	39.38	19.96	56.00	16.62	19.42	PK	L
5	4.2810	43.89	20.09	56.00	12.11	23.80	PK	L
6	6.8955	39.22	20.07	60.00	20.78	19.15	PK	L

Remark: Margin = Limit – Level
 Correction factor = Cable lose + LISN insertion loss
 Level=Test receiver reading + correction factor

Test Specification: Neutral



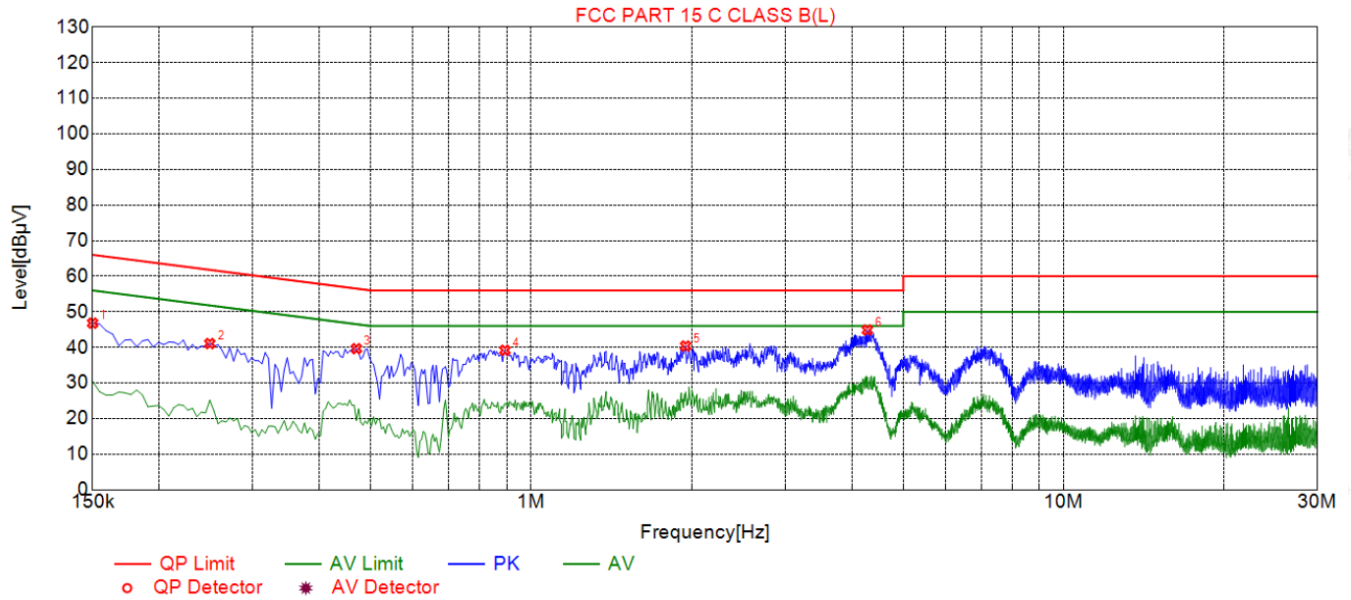
Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1590	47.28	19.70	65.52	18.24	27.58	PK	N
2	0.2175	43.08	19.75	62.91	19.83	23.33	PK	N
3	0.4695	39.08	19.73	56.52	17.44	19.35	PK	N
4	1.0995	38.77	19.75	56.00	17.23	19.02	PK	N
5	2.2965	41.65	19.88	56.00	14.35	21.77	PK	N
6	4.2990	44.79	19.98	56.00	11.21	24.81	PK	N

Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

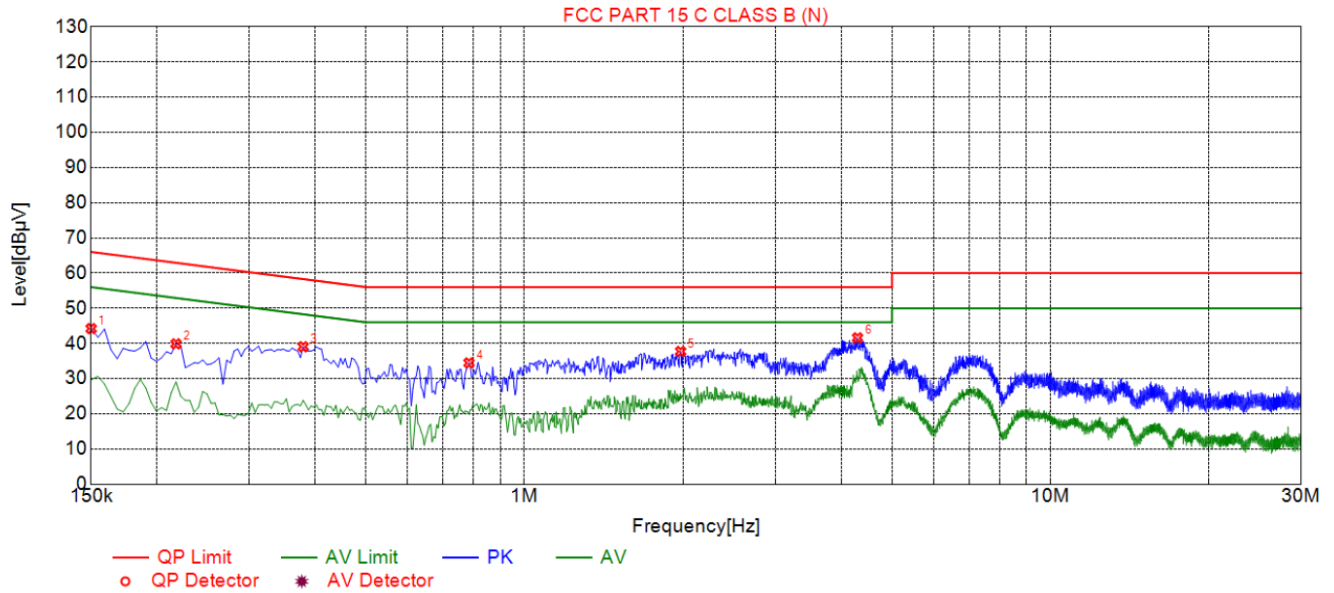
Series Model No.: M15 pro
 Test Specification: Line



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1500	46.82	19.83	66.00	19.18	26.99	PK	L
2	0.2490	41.08	19.84	61.79	20.71	21.24	PK	L
3	0.4695	39.64	19.84	56.52	16.88	19.80	PK	L
4	0.8925	39.18	19.87	56.00	16.82	19.31	PK	L
5	1.9500	40.38	19.96	56.00	15.62	20.42	PK	L
6	4.2810	44.89	20.09	56.00	11.11	24.80	PK	L

Remark: Margin = Limit – Level
 Correction factor = Cable lose + LISN insertion loss
 Level=Test receiver reading + correction factor

Test Specification: Neutral



Suspected List								
NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Reading [dBμV]	Detector	Type
1	0.1500	44.22	19.73	66.00	21.78	24.49	PK	N
2	0.2175	39.88	19.75	62.91	23.03	20.13	PK	N
3	0.3795	39.05	19.74	58.29	19.24	19.31	PK	N
4	0.7845	34.46	19.74	56.00	21.54	14.72	PK	N
5	1.9815	37.72	19.84	56.00	18.28	17.88	PK	N
6	4.2990	41.59	19.98	56.00	14.41	21.61	PK	N

Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

4.3 Radiated Emissions Measurement

4.3.1 Applied Procedures / Limit

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emission out of authorized band shall not exceed the following table at a 3 meters measurement distance.

In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

Except when the requirements applicable to a given device state otherwise, emissions from license-exempt transmitters shall comply with the field strength limits shown in table below. Additionally, the level of any transmitter emission shall not exceed the level of the transmitter’s fundamental emission.

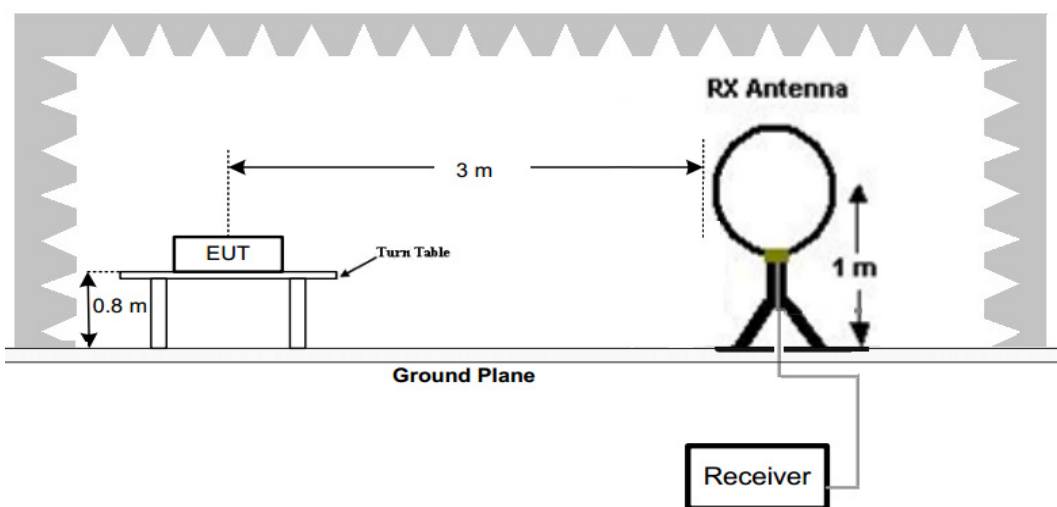
Radiated emission limits

Frequency (MHz)	Distance (Meters)	Radiated (dBµV/m)	Radiated (µV/m)
0.009-0.49	3	$20\log(2400/F(\text{KHz}))+40\log(300/3)$	$2400/F(\text{KHz})$
0.49-1.705	3	$20\log(24000/F(\text{KHz}))+40\log(30/3)$	$24000/F(\text{KHz})$
1.705-30	3	$20\log(30)+40\log(30/3)$	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

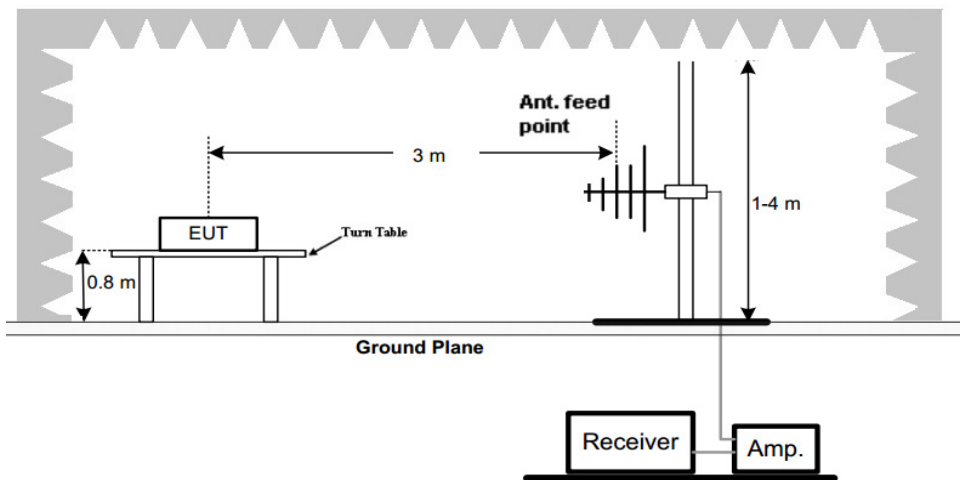
4.3.2 Test Setup

Test Configuration:

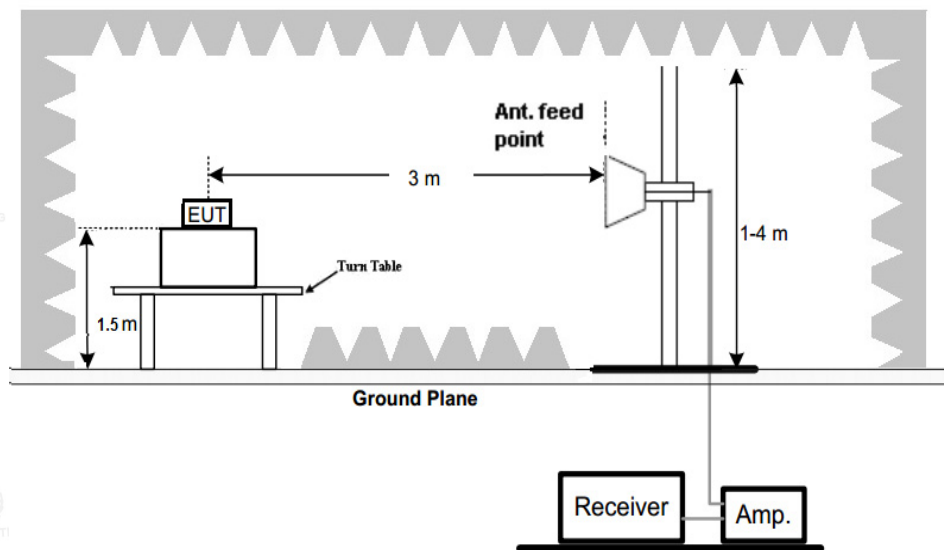
- 1) 9 kHz to 30 MHz emissions:



2) 30 MHz to 1 GHz emissions:



3) 1 GHz to 25 GHz emissions:



Test Procedure

1. The EUT was placed on turn table which is 0.8m above ground plane for below 1GHz test, and on a low permittivity and low loss tangent turn table which is 1.5m above ground plane for above 1GHz test.
2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0° to 360° to acquire the highest emissions from EUT.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measurements have been completed.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAK Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

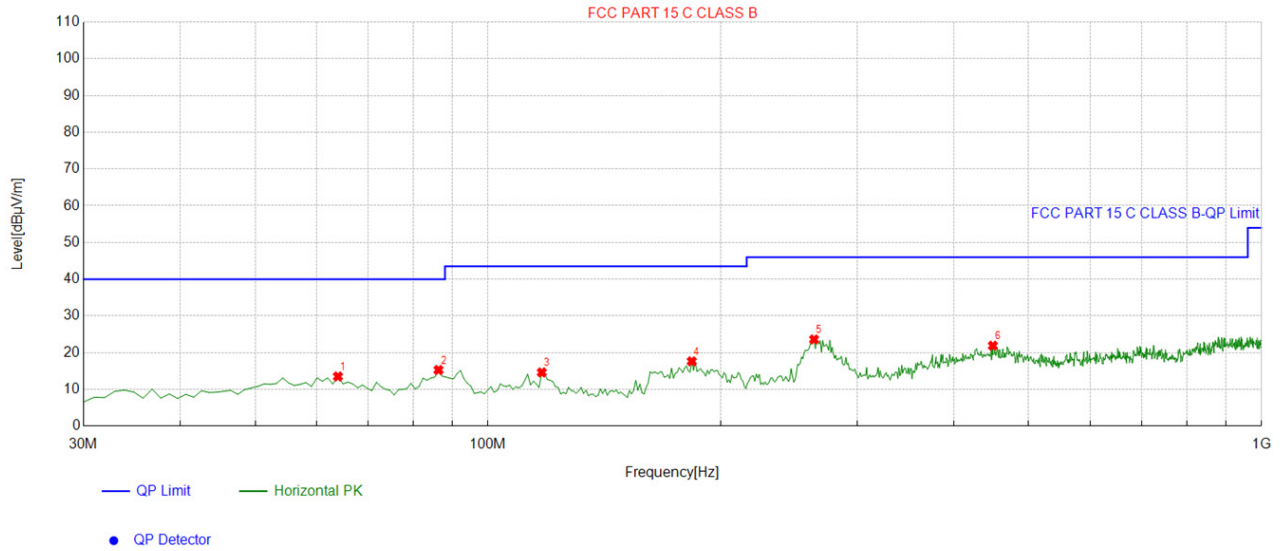
4.3.3 Test Result

Below 1GHz Test Results:

All modes have been tested, only the worst mode of GFSK Low channel TX is reflected.

Test Model No.: I16 Pro max

Horizontal



Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	63.983984	-14.38	27.90	13.52	40.00	26.48	100	198	Horizontal
2	86.316316	-17.62	32.91	15.29	40.00	24.71	100	20	Horizontal
3	117.38738	-16.02	30.64	14.62	43.50	28.88	100	214	Horizontal
4	183.41341	-15.63	33.27	17.64	43.50	25.86	100	238	Horizontal
5	264.00400	-13.15	36.74	23.59	46.00	22.41	100	234	Horizontal
6	449.45945	-8.78	30.68	21.90	46.00	24.10	100	145	Horizontal

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level