Certificate #4312.01

TEST REPORT

Product Name:	GPON ONT
Trade Mark:	SKYWORTH, STRONG, QVWI, ACL fiber
Model No.:	SK-D7462v3
Add. Model No.:	TEN03, GN630V, ACLF646
Report Number:	25071118980EMC-1
Test Standards:	FCC 47 CFR Part 15 Subpart B
FCC ID:	WNA-TEN03
Test Result:	PASS
Date of Issue:	September 26, 2025

Prepared for:

Shenzhen Skyworth Digital Technology Co., LTD.
14/F, Unit A, Skyworth Building, Gaoxin Ave.1.S., Nanshan District, Shenzhen, China

Prepared by:

Shenzhen UnionTrust Quality and Technology Co., Ltd.
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Prepared by: David Chen — David Chen, Senior Project Engineer

Reviewed by: Henry Lu — Henry Lu, Team Leader

Approved by: Kevin Liang, Assistant Manager

Date: September 26, 2025

Version

Version No.	Date	Description
V1.0	September 26, 2025	Original

CONTENTS

1. GENERAL INFORMATION

1.1 CLIENT INFORMATION

Applicant:	Shenzhen Skyworth Digital Technology Co., LTD.
Address of Applicant:	14/F, Unit A, Skyworth Building, Gaoxin Ave.1.S., Nanshan District, Shenzhen, China
Manufacturer:	Shenzhen Skyworth Digital Technology Co., LTD.
Address of Manufacturer:	14/F, Unit A, Skyworth Building, Gaoxin Ave.1.S., Nanshan District, Shenzhen, China

1.2 EUT INFORMATION

1.2.1 General Description of EUT

Product Name:	GPON ONT
Model No.:	SK-D7462v3
Add. Model No.:	TEN03, GN630V, ACLF646
Trade Mark:	SKYWORTH, STRONG, QVWI, ACL fiber
DUT Stage:	Identical Prototype
Rated Voltage:	DC 12.0 V ⎓ 1.5A supplied by adapter
Classification of digital devices:	Class B
Highest Internal Frequency:	5825 MHz
Software Version:	V1.0.0(Provided by the customer)
Hardware Version:	V1.0(Provided by the customer)
Sample Received Date:	July 10, 2024
Sample Tested Date:	July 17, 2025 July 21, 2025
Remark: The above EUT's information was provided by customer. Please refer to the specifications or user's manual for more detailed description.	

1.2.2 Description of Accessories

Adapter(1)	
Model No.:	AH-SDT120150U5xP(x=0-9, represent different customer and different output cord, not affecting safety)
Input:	100-240 V~50/60Hz 0.6 A
Output:	12.0 V ⎓ 1.5 A 18.0W
DC Cable:	1.5 Meter, Unshielded without ferrite

Adapter(2)	
Model No.:	YS-SKY120150U0xP(x=0-9,indicates marketing purpose ,no safety and EMC impact)
Input:	100-240 V~50/60Hz 0.6 A
Output:	12.0 V ⎓ 1.5 A
DC Cable:	1.5 Meter, Unshielded without ferrite

1.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested with associated equipment below.

1) Support Equipment

Description	Manufacturer	Model No.	Serial Number	Supplied by
Notebook	Lenovo	Lenovo B40-80	MP12NEQ6	UnionTrust
Notebook	Lenovo	TP00067A	PN-0FZDEU 16\02	UnionTrust
Telephone	PHILIPS	HCD9669(118)TSD	411101943928	UnionTrust
OLT	ZTE	ZXA10 C620	N/A	UnionTrust
USB flash disk	Kingston	DTSE9	N/A	UnionTrust

2) Support Cable

Description	Quantity	Cable Type	Length (m)	Supplied by
Ethernet Cable	1	Shielded without ferrite	1.5	UnionTrust
Ethernet Cable	1	Shielded without ferrite	1.5	UnionTrust
Ethernet Cable	1	Shielded without ferrite	3.0	UnionTrust
Fiber optic Cable	1	Unshielded without ferrite	3.0	UnionTrust

1.4 TEST LOCATION

Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: 16/F, Block A, Building 6th, Baoneng Science and Technology Park, Longhua Street, Longhua District, Shenzhen, China
Telephone: +86 (0) 755 2823 0888
Fax: +86 (0) 755 2823 0886

1.5 TEST FACILITY

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

CNAS-Lab Code: L9069
The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

A2LA-Lab Certificate No.: 4312.01
Shenzhen UnionTrust Quality and Technology Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

ISED Wireless Device Testing Laboratories
CAB identifier: CN0032

FCC Accredited Lab.
Designation Number: CN1194
Test Firm Registration Number: 259480

1.6 DEVIATION FROM STANDARDS

None.

1.7 ABNORMALITIES FROM STANDARD CONDITIONS

None.

1.8 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

1.9 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Measurement Uncertainty
1	Conducted emission 9kHz-150kHz	±3.2 dB
2	Conducted emission 150kHz-30MHz	±2.7 dB
3	Radiated emission 9kHz-30MHz	± 4.7 dB
4	Radiated emission 30MHz-1GHz	± 4.6 dB
5	Radiated emission 1GHz-18GHz	± 4.4 dB
6	Radiated emission 18GHz-26GHz	± 4.6 dB
7	Radiated emission 26GHz-40GHz	± 4.6 dB

2. TEST SUMMARY

FCC 47 CFR Part 15 Subpart B Test Cases			
Test Item	**Test Requirement**	**Test Method**	**Result**
Conducted Emission	FCC 47 CFR Part 15.107	ANSI C63.4-2014	PASS
Radiated Emission	FCC 47 CFR Part 15.109	ANSI C63.4-2014	PASS

3. EQUIPMENT LIST

Radiated Emission Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date**	**Cal. Due date**
☒	3m SAC	ETS-LINDGREN	3m	Euroshiedpn-CT001270-1317	11-Nov-2023	10-Nov-2026
☒	Receiver	R&S	ESIB26	100114	25-Oct-2024	24-Oct-2025
☒	Broadband Antenna	ETS-LINDGREN	3142E	00201566	29-Oct-2024	28-Oct-2025
☒	6dB Attenuator	Talent	RA6A5-N-18	18103001	29-Oct-2024	28-Oct-2025
☒	Preamplifier	HP	8447F	2805A02960	25-Oct-2024	24-Oct-2025
☒	Double-Ridged Waveguide Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3117-PA	00201541	29-Mar-2025	28-Mar-2026
☒	Pre-amplifier	ETS-Lindgren	00118385	00201874	28-Mar-2025	27-Mar-2026
☒	Double-Ridged Waveguide Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3116C-PA	00202652	28-Oct-2024	27-Oct-2025
☒	Pre-amplifier	ETS-Lindgren	00118384	00202652	28-Oct-2024	27-Oct-2025
☒	Multi device Controller	ETS-LINDGREN	7006-001	00160105	N/A	N/A
☒	Test Software	Audix	e3	Software Version: 9.160323		

Conducted Emission Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date**	**Cal. Due date**
☒	Pulse Limiter	R&S	ESH3-Z2	0357.8810.54	25-Oct-2024	24-Oct-2025
☒	LISN	ETS-Lindgren	3816/2SH	00201088	25-Oct-2024	24-Oct-2025
☒	Shielding room	ETS-Lindgren	843	Euroshiedpn-CT001270-1246	25-Oct-2024	24-Oct-2025
☒	Test Software	EZ-EMC	EZ-CON	Software Version: EMC-CON 3A1.1		

4. TEST CONFIGURATION

4.1 ENVIRONMENTAL CONDITIONS FOR TESTING

4.1.1 Normal or Extreme Test Conditions

Environment Parameter	Selected Values During Tests		
Test Condition	Ambient		
	Temperature (°C)	Voltage	Relative Humidity (%)
NV/NT	+15 to +35	DC 12.0 V ⎓ 1.5A supplied by adapter	20 to 75
Remark: 1) NV: Normal Voltage; NT: Normal Temperature			

4.1.2 Record of Normal Environment and Test sample

Test Item	Temperature (°C)	Relative Humidity (%)	Pressure (kPa)	Sample No.	Tested by
Conducted Emission	24.7	58.9	99.2	S202507106455-ZJA01/3	Linson Xie
Radiated Emission	24.7	62.3	98.4		Linson Xie

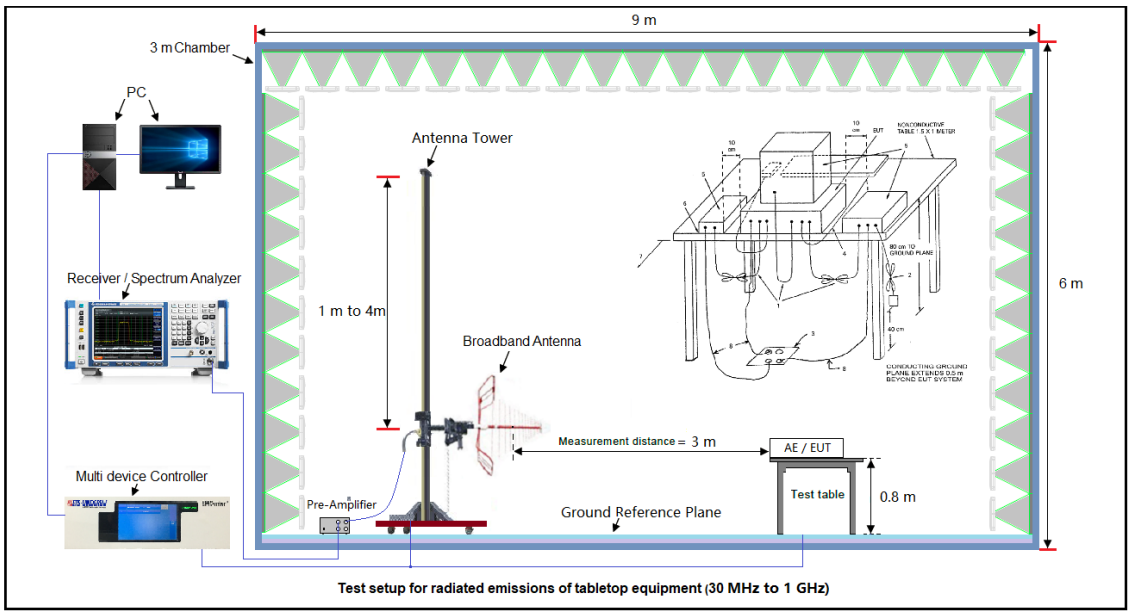
4.2 TEST MODES

Test Item	EMI Test Modes
Radiated Emission	Test Mode1: AC120V~60Hz (Adaptor1) + LAN Port data transmission + PON Port data transmission + USB + TEL port phone **Test Mode2: AC240V~50Hz (Adaptor1) + LAN Port data transmission + PON Port data transmission + USB + TEL port phone** Test Mode3: Adapter2 + Worse case Test Mode1~2
Conducted Emission	Test Mode1: AC120V~60Hz (Adaptor1) + LAN Port data transmission + PON Port data transmission + USB + TEL port phone **Test Mode2: AC240V~50Hz (Adaptor1) + LAN Port data transmission + PON Port data transmission + USB + TEL port phone** Test Mode3: Adapter2 + Worse case Test Mode1~2
Remark: The above test modes in boldface were the worst cases, only the test data of these modes were reported.	

4.3 TEST SETUP

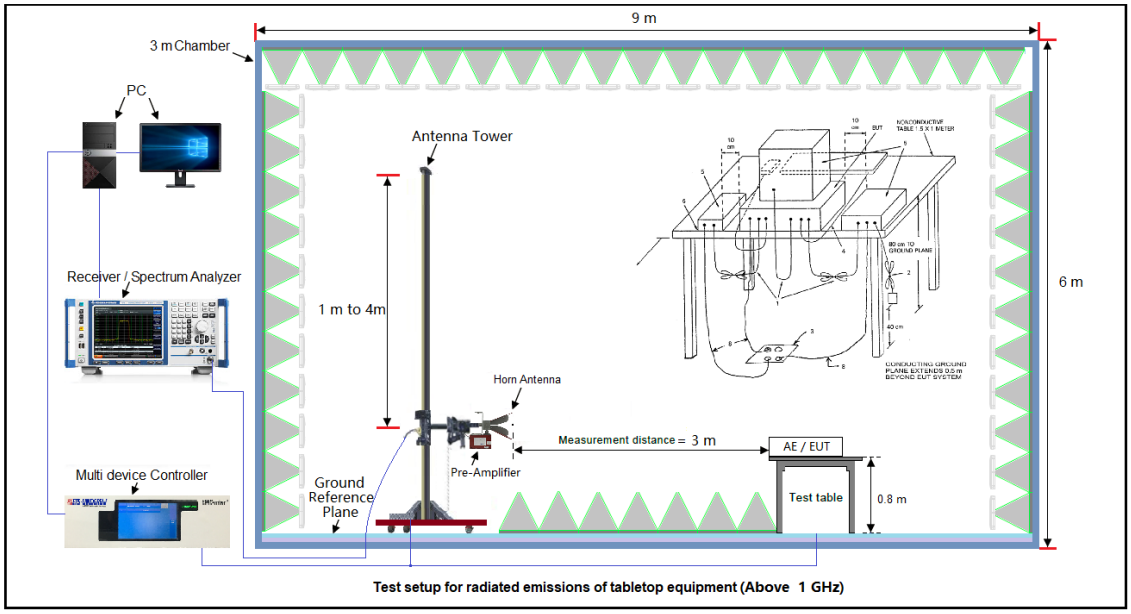
4.3.1 For Radiated Emissions test setup

Figure 1. 30MHz to 1GHz



Test setup for radiated emissions of tabletop equipment (30 MHz to 1 GHz)

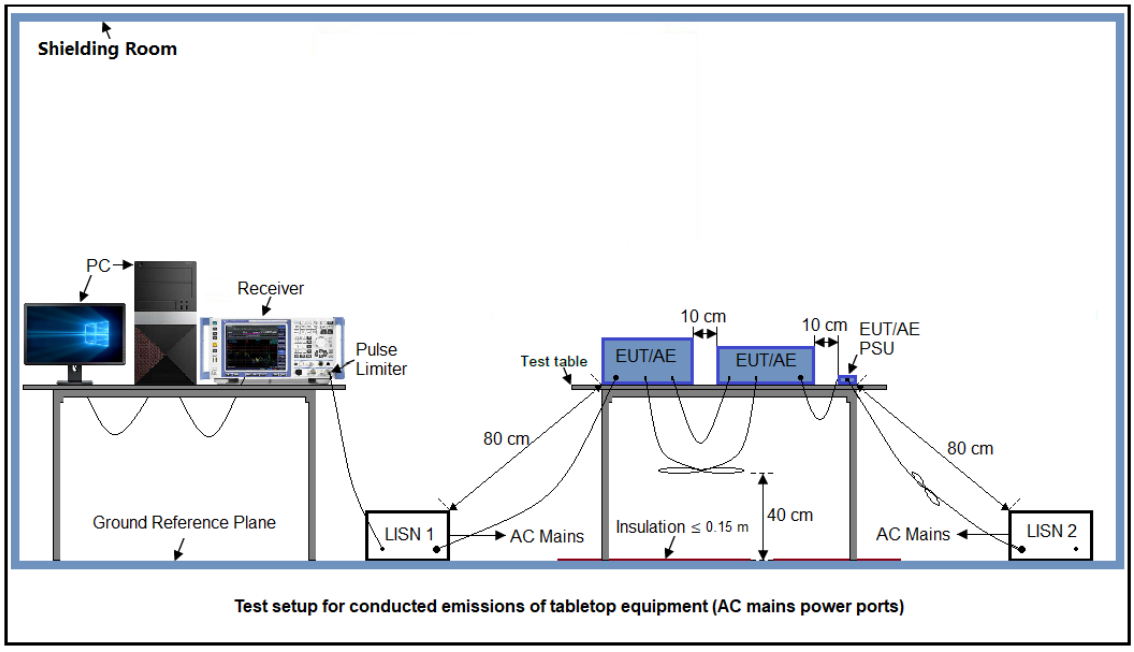
Figure 2. Above 1GHz



Test setup for radiated emissions of tabletop equipment (Above 1 GHz)

4.3.2 For Conducted Emissions test setup

Figure 3. Conducted Emissions setup



4.4 SYSTEM TEST CONFIGURATION

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. Analyzer resolution is 100 kHz or greater for frequencies below 1000MHz. The resolution is 1 MHz or greater for frequencies above 1000MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

Radiated emission measurement were performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic (according to KDB 896810 D02 SDoC FAQ v01r01) of the highest fundamental frequency or to 40 GHz, whichever is lower.

5. REFERENCE DOCUMENTS FOR TESTING

No.	Identity	Document Title
1	FCC 47 CFR Part15 Subpart B	Unintentional Radiators
2	ANSI C63.4-2014	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
3	KDB 174176 D01 Line Conducted FAQ v01r01	AC power-line conducted emission frequency asked questions
4	KDB 896810 D02 SDoC FAQ v01r02	Supplier's Declaration of Conformity frequency asked questions

6. EMC REQUIREMENTS SPECIFICATION

6.1 RADIATED EMISSION

Test Requirement: FCC 47 CFR Part 15.109

Test Method: ANSI C63.4-2014

Receiver Setup:

Frequency: (f) (MHz)	Detector type	Measurement receiver bandwidth	
		RBW	VBW
30 ≤ f ≤ 1 000	Quasi Peak	120 kHz	300 kHz
f ≥1000	Peak	1 MHz	3 MHz
	Average	1 MHz	3 MHz

Measured frequency range

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30.
1.705-108	1000.
108-500	2000.
500-1000	5000.
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower.

Limits:

Limits for Class B devices

FCC 47 CFR Part 15 Subpart B

Frequency (MHz)	limits at 3m (dBμV/m)		
	QP Detector	PK Detector	AV Detector
30 – 88	40.0	--	--
88 – 216	43.5	--	--
216 – 960	46.0		
960 – 1000	54.0	--	--
Above 1000	--	74.0	54.0

Remark:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBμV/m) = 20 log Emission level (μV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

Test Setup: Refer to section 4.3.1 for details.

Test Procedures:

1. From 30 MHz to 1GHz test procedure as below:

1) The Product was placed on the non-conductive turntable 0.8 m above the ground at a chamber.
2) Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
3) For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

2. Above 1GHz test procedure as below:

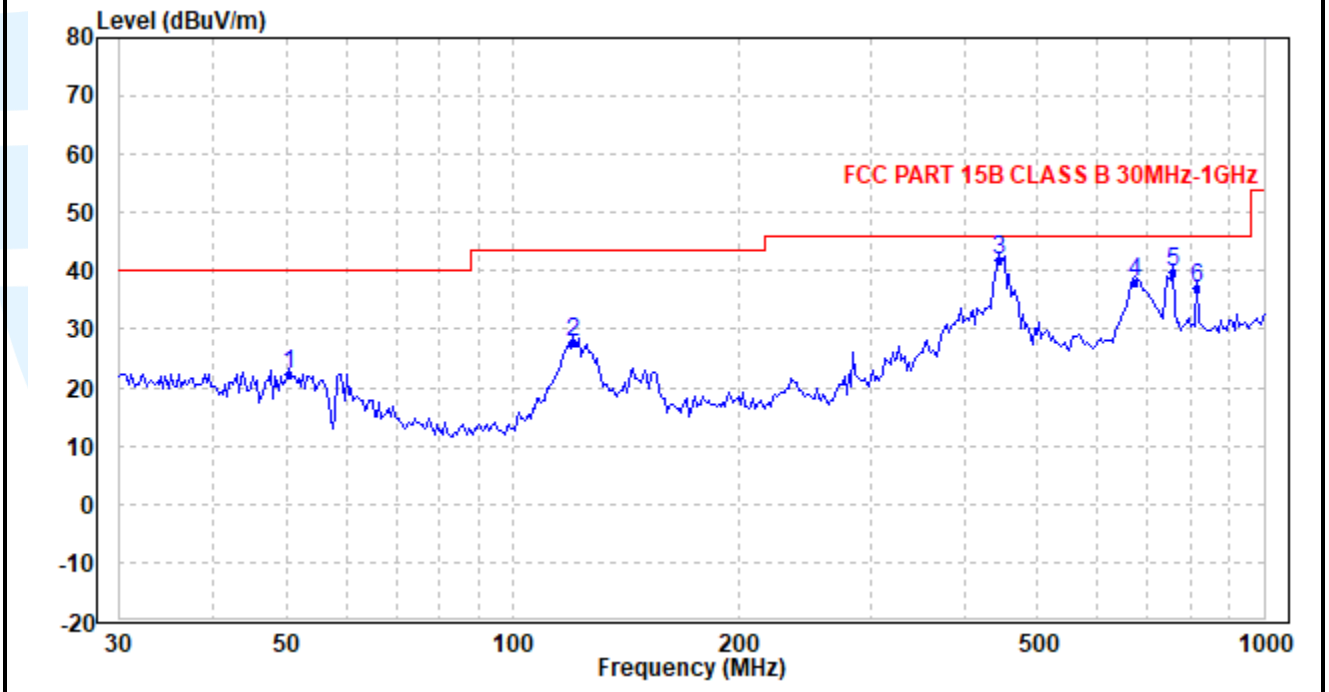
1) The Product was placed on the non-conductive turntable 0.8 m above the ground at a chamber.
2) Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 1MHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
3) For each frequency whose maximum record was higher or close to limit, measure its AV value: rotate the turntable from 0 to 360 degrees to find the degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to AV value and specified bandwidth with Maximum Hold Mode, and record the maximum value.

Equipment Used: Refer to section 3 for details.

Test Result: Pass

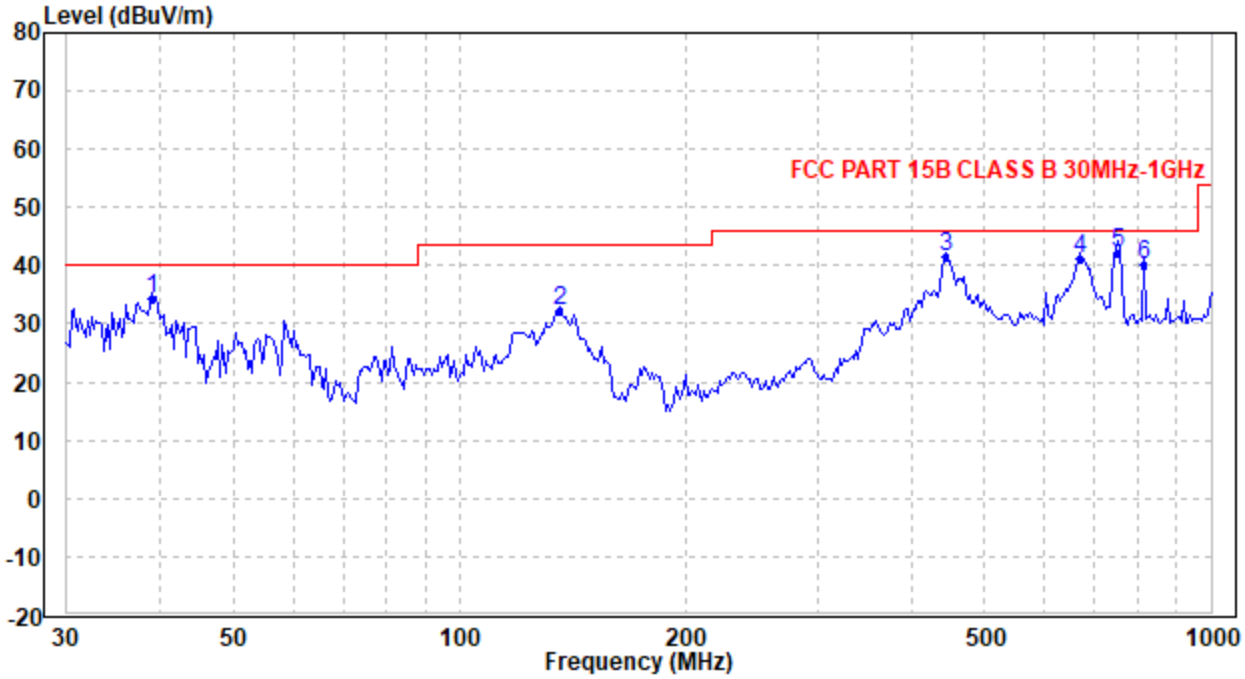
The worst measurement data as follows:

Below 1GHz(Quasi Peak):
Test Mode2
Horizontal



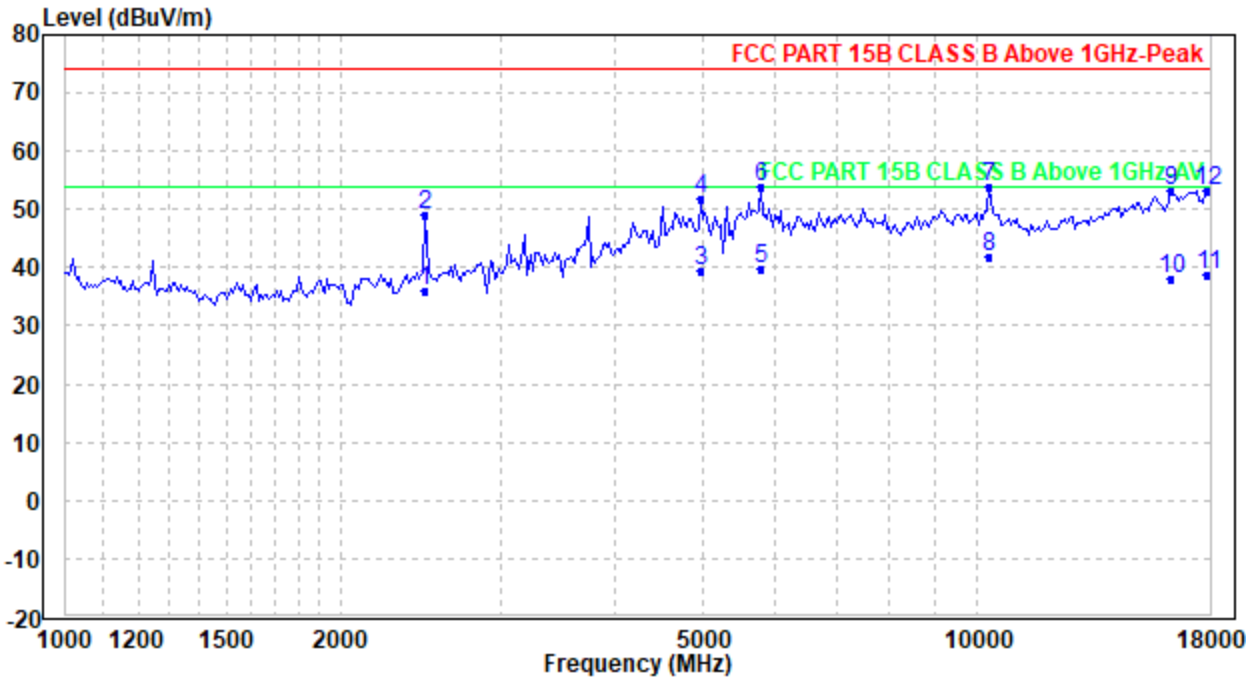
No.	Frequency (MHz)	Reading (dBμV)	Correction factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	50.461	36.37	-14.19	22.18	40.00	-17.82	QP
2	120.612	43.68	-15.75	27.93	43.50	-15.57	QP
3	442.572	45.45	-3.54	41.91	46.00	-4.09	QP
4	674.677	37.48	0.47	37.95	46.00	-8.05	QP
5	754.963	38.32	1.56	39.88	46.00	-6.12	QP
6	815.635	34.05	2.97	37.02	46.00	-8.98	QP

Vertical



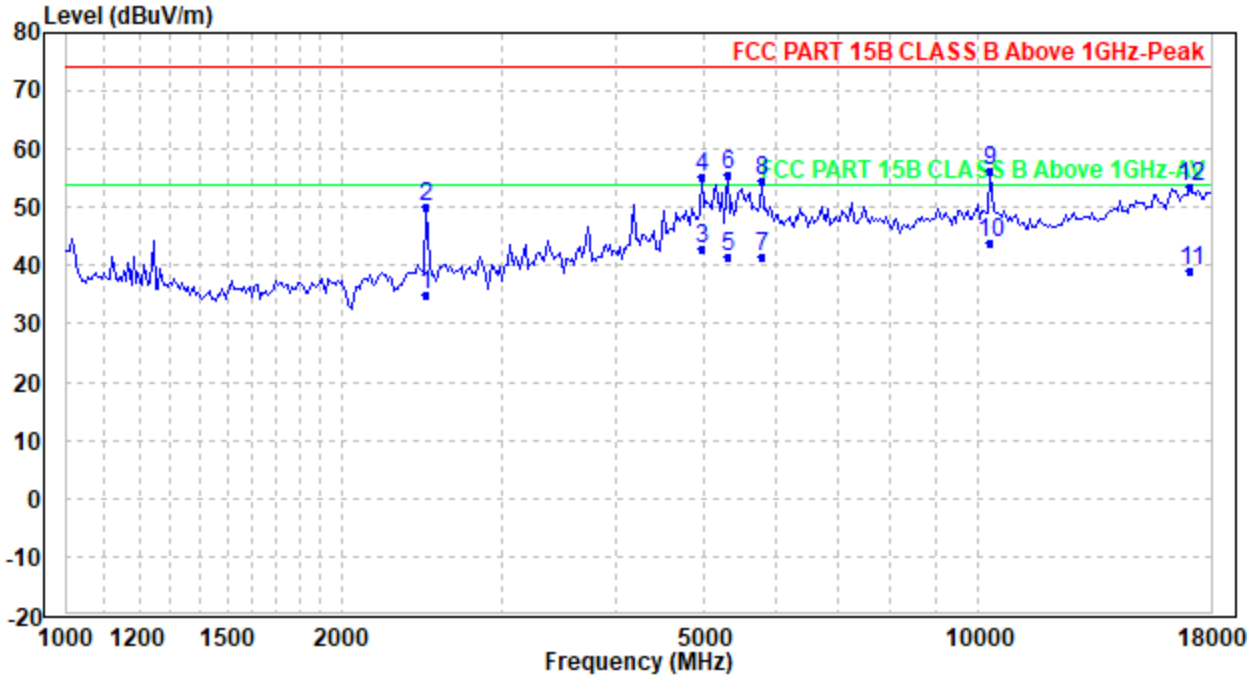
No.	Frequency (MHz)	Reading (dBµV)	Correction factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	38.908	42.58	-8.32	34.26	40.00	-5.74	QP
2	135.916	47.79	-15.70	32.09	43.50	-11.41	QP
3	442.572	44.89	-3.54	41.35	46.00	-4.65	QP
4	669.952	40.66	0.37	41.03	46.00	-4.97	QP
5	749.676	40.61	1.55	42.16	46.00	-3.84	QP
6	815.635	37.26	2.97	40.23	46.00	-5.77	QP

Above 1GHz(Peak & Average)
Test Mode2:
Horizontal



No.	Frequency (MHz)	Reading (dBµV)	Correction factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	2482.821	44.15	-8.25	35.90	54.00	-18.10	Average
2	2482.821	57.28	-8.25	49.03	74.00	-24.97	Peak
3	4975.247	41.59	-2.01	39.58	54.00	-14.42	Average
4	4975.247	53.71	-2.01	51.70	74.00	-22.30	Peak
5	5783.884	39.94	-0.21	39.73	54.00	-14.27	Average
6	5783.884	54.09	-0.21	53.88	74.00	-20.12	Peak
7	10322.320	50.46	3.37	53.83	74.00	-20.17	Peak
8	10322.320	38.33	3.37	41.70	54.00	-12.30	Average
9	16312.020	45.51	7.68	53.19	74.00	-20.81	Peak
10	16312.020	30.36	7.68	38.04	54.00	-15.96	Average
11	17896.040	28.49	10.42	38.91	54.00	-15.09	Average
12	17896.040	42.63	10.42	53.05	74.00	-20.95	Peak

Vertical



No.	Frequency (MHz)	Reading (dBµV)	Correction factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	2482.821	43.23	-8.25	34.98	54.00	-19.02	Average
2	2482.821	58.39	-8.25	50.14	74.00	-23.86	Peak
3	4975.247	45.05	-2.01	43.04	54.00	-10.96	Average
4	4975.247	57.17	-2.01	55.16	74.00	-18.84	Peak
5	5302.564	42.88	-1.34	41.54	54.00	-12.46	Average
6	5302.564	57.02	-1.34	55.68	74.00	-18.32	Peak
7	5783.884	41.68	-0.21	41.47	54.00	-12.53	Average
8	5783.884	54.81	-0.21	54.60	74.00	-19.40	Peak
9	10322.320	52.81	3.37	56.18	74.00	-17.82	Peak
10	10322.320	40.68	3.37	44.05	54.00	-9.95	Average
11	17085.680	30.44	8.78	39.22	54.00	-14.78	Average
12	17085.680	44.59	8.78	53.37	74.00	-20.63	Peak

Remark:

1. Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.
2. Result = Reading + Correct Factor.
3. Margin = Result – Limit
4. For Radiated Emission above 18GHz, there was not any unwanted emission detected.

6.2 CONDUCTED EMISSION

Test Requirement: FCC 47 CFR Part 15.107

Test Method: ANSI C63.4-2014

Limits:

Limits for Class B devices

Frequency range (MHz)	Limits (dB(μV))	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

Remark:

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

Test Setup: Refer to section 4.3.2 for details.

Test Procedures:

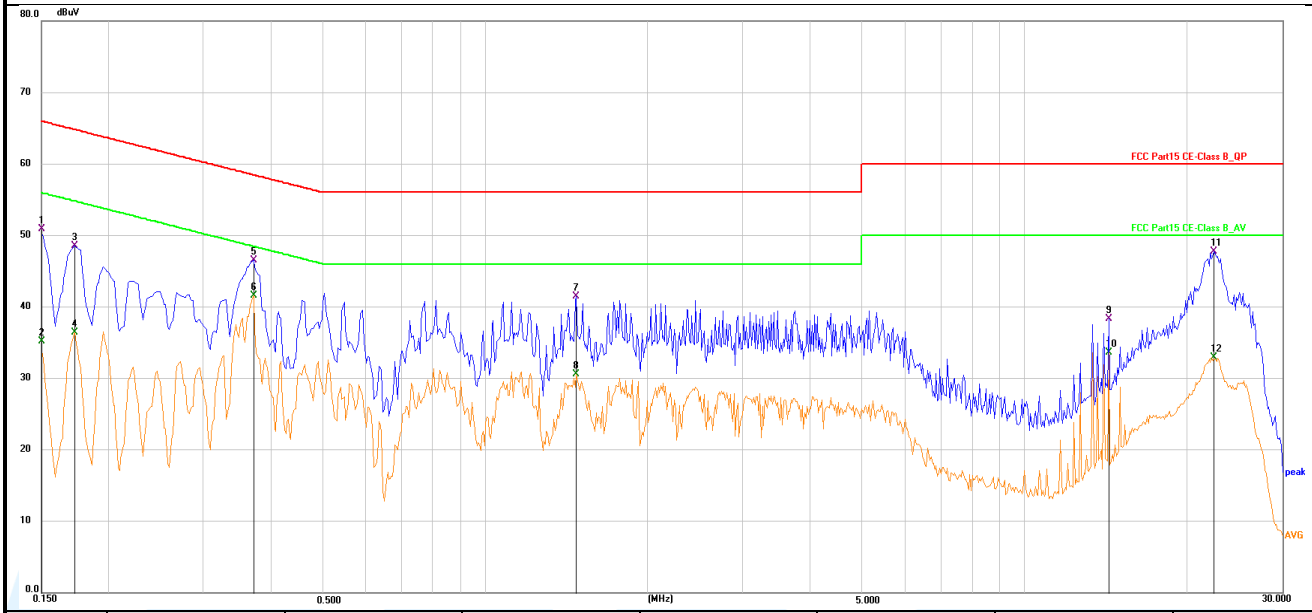
1) The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
2) The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
3) For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

Equipment Used: Refer to section 3 for details.

Test Result: Pass

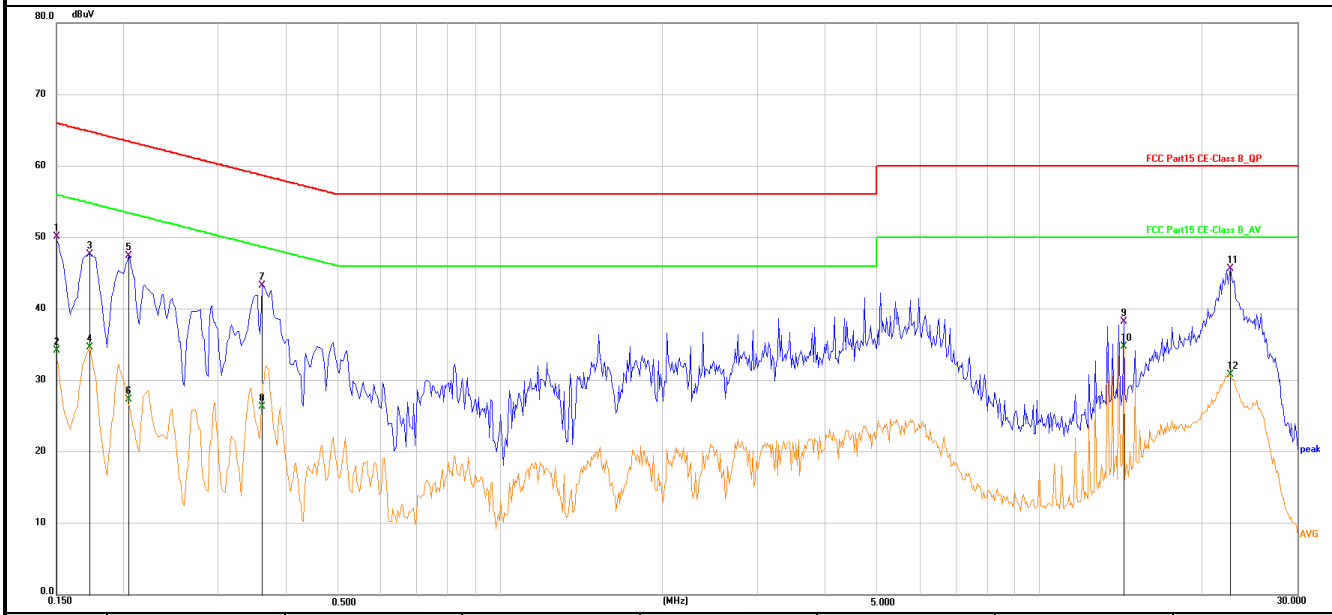
The worst measurement data as follows:
Quasi Peak and Average:
Test Mode2:

Live Line



No.	Frequency (MHz)	Reading (dBµV)	Correction factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.1500	40.98	9.88	50.86	66.00	-15.14	QP
2	0.1500	25.33	9.88	35.21	56.00	-20.79	AVG
3	0.1724	38.79	9.78	48.57	64.84	-16.27	QP
4	0.1724	26.62	9.78	36.40	54.84	-18.44	AVG
5	0.3704	36.73	9.78	46.51	58.49	-11.98	QP
6	0.3704	31.78	9.78	41.56	48.49	-6.93	AVG
7	1.4775	31.76	9.71	41.47	56.00	-14.53	QP
8	1.4775	20.82	9.71	30.53	46.00	-15.47	AVG
9	14.3475	28.55	9.79	38.34	60.00	-21.66	QP
10	14.3475	23.84	9.79	33.63	50.00	-16.37	AVG
11	22.4295	37.88	9.91	47.79	60.00	-12.21	QP
12	22.4295	22.97	9.91	32.88	50.00	-17.12	AVG

Neutral Line



No.	Frequency (MHz)	Reading (dBµV)	Correction factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.1500	40.29	9.83	50.12	66.00	-15.88	QP
2	0.1500	24.37	9.83	34.20	56.00	-21.80	AVG
3	0.1724	37.81	9.80	47.61	64.84	-17.23	QP
4	0.1724	24.76	9.80	34.56	54.84	-20.28	AVG
5	0.2040	37.64	9.76	47.40	63.45	-16.05	QP
6	0.2040	17.60	9.76	27.36	53.45	-26.09	AVG
7	0.3614	33.51	9.76	43.27	58.70	-15.43	QP
8	0.3614	16.50	9.76	26.26	48.70	-22.44	AVG
9	14.3475	28.44	9.76	38.20	60.00	-21.80	QP
10	14.3475	24.97	9.76	34.73	50.00	-15.27	AVG
11	22.6454	35.76	9.88	45.64	60.00	-14.36	QP
12	22.6454	20.93	9.88	30.81	50.00	-19.19	AVG

Remark:

1. Correct Factor = LISN Factor + Cable Loss + Pulse Limiter Factor, the value was added to Original Receiver Reading by the software automatically.
2. Result = Reading + Correct Factor.
3. Margin = Result - Limit
4. An initial pre-scan was performed on the Phase and neutral lines with peak detector. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

APPENDIX 1 PHOTOS OF TEST SETUP

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photos.

********** End of Report **********