Shenzhen Global Test Service Co.,Ltd.
No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road,
Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong

FCC PART 15 SUBPART C TEST REPORT

FCC PART 15 C (15.225)

Report Reference No. .....:	**GTS20241108022-2-06**
FCC ID. ..... :	**2AYD5-I24D04**
Compiled by (position+printed name+signature) .:	File administrators Peter Xiao
Supervised by (position+printed name+signature) .:	Test Engineer Evan Ouyang
Approved by (position+printed name+signature) .:	Manager Jason Hu
Date of issue .....:	Jan.10, 2025
Representative Laboratory Name.:	**Shenzhen Global Test Service Co.,Ltd.**
Address .....:	No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong
Applicant's name.....:	**Imin Technology Pte Ltd**
Address .....:	11 Bishan Street 21, #03-05 Bosch Building, Singapore 573943
Test specification .....:	
Standard .....:	**FCC Part 15 C (15.225)**
TRF Originator.....:	Shenzhen Global Test Service Co.,Ltd.
Master TRF .....:	Dated 2014-12

Test item description .....:	**POS Device, Intelligent Electronic Scale**
Trade Mark .....:	iMin
Manufacturer .....:	Imin Technology Pte Ltd
Model/Type reference .....:	I24D04
List Model .....:	N/A
Modulation Type.....:	ASK
Operation Frequency .....:	13.56 MHz
Hardware Version .....:	N/A
Software Version.....:	N/A
Rating .....:	DC 24V/4.0A by adapter or DC 24V/2.5A by adapter
Result .....:	**PASS**

T E S T R E P O R T

Test Report No.:	**GTS20241108022-2-06**	Jan.10, 2025 Date of issue

Equipment under Test	:	POS Device, Intelligent Electronic Scale
Model /Type	:	I24D04
List Model	:	N/A
Applicant	:	**Imin Technology Pte Ltd**
Address	:	11 Bishan Street 21, #03-05 Bosch Building, Singapore 573943
Manufacturer	:	**Imin Technology Pte Ltd**
Address	:	11 Bishan Street 21, #03-05 Bosch Building, Singapore 573943

Test Result:	**PASS**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1. TEST STANDARDS

The tests were performed according to following standards:

FCC Rules Part 15.225: RADIO FREQUENCY DEVICES.
ANSI C63.10-2020: American National Standard for Testing Unlicensed Wireless Devices

2. SUMMARY

2.1. General Remarks

Date of receipt of test sample	:	Dec.19, 2024
Testing commenced on	:	Dec.19, 2024
Testing concluded on	:	Jan.09, 2025

2.2. Product Description

Product Name:	POS Device, Intelligent Electronic Scale
Trade Mark:	iMiN
Model/Type reference:	I24D04
List Model:	N/A
Model Declaration	N/A
Power supply:	DC 24V/4.0A by adapter or DC 24V/2.5A by adapter
Hardware Version	N/A
Software Version	N/A
Sample ID	GTS20241108022-2-S0001-3# GTS20241108022-2-S0001-4#(Version A) GTS20241108022-2-S0001-5#(Version B) GTS20241108022-2-S0001-6#(Version C) GTS20241108022-2-S0001-7#(Version D) GTS20241108022-2-S0001-8#(Version E) GTS20241108022-2-S0001-9#(Version F) GTS20241108022-2-S0001-10#(Version G) GTS20241108022-2-S0001-11#(Version H) GTS20241108022-2-S0001-12#(Version I)
Bluetooth	
Frequency Range	2402MHz ~ 2480MHz
Channel Number	79 channels for Bluetooth (DSS) 40 channels for Bluetooth (DTS)
Channel Spacing	1MHz for Bluetooth (DSS) 2MHz for Bluetooth (DTS)
Modulation Type	GFSK, π/4-DQPSK, 8DPSK for Bluetooth (DSS) GFSK for Bluetooth (DTS)
2.4GWLAN	
WLAN Operation frequency	IEEE 802.11b:2412-2462MHz IEEE 802.11g:2412-2462MHz IEEE 802.11n HT20:2412-2462MHz IEEE 802.11n HT40:2422-2452MHz IEEE 802.11ax HE20:2412-2462MHz IEEE 802.11ax HE40:2422-2452MHz
WLAN Modulation Type	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ax HE20: OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ax HE40: OFDMA (1024QAM, 256QAM, 64QAM, 16QAM,

	QPSK, BPSK)
Channel number:	11 Channel for IEEE 802.11b/g/n/ax (HT20) 7 Channel for IEEE 802.11n/ax (HT40)
Channel separation:	5MHz
WIFI(5.2G/5.3G/5.7G/5.8G Band)	
WLAN Operation frequency	5180-5240MHz/ 5260MHz to 5320MHz/ 5500MHz to 5700MHz/ 5745MHz to 5825MHz
WLAN Modulation Type	IEEE 802.11a: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11ac VHT20: OFDM (256QAM,64QAM, 16QAM, QPSK,BPSK) IEEE 802.11ax HE20: OFDMA (1024QAM,256QAM,64QAM, 16QAM, QPSK,BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11ac VHT40: OFDM (256QAM,64QAM, 16QAM, QPSK,BPSK) IEEE 802.11ax HE40: OFDMA (1024QAM,256QAM,64QAM, 16QAM, QPSK,BPSK) IEEE 802.11ac VHT80: OFDM (256QAM,64QAM, 16QAM, QPSK,BPSK) IEEE 802.11ax HE80: OFDMA (1024QAM,256QAM,64QAM, 16QAM, QPSK,BPSK)
Channel number:	4 Channels for 20MHz bandwidth(5180-5240MHz) 4 Channels for 20MHz bandwidth(5260-5320MHz) 11 Channels for 20MHz bandwidth(5500-5700MHz) 5 channels for 20MHz bandwidth(5745-5825MHz) 2 channels for 40MHz bandwidth(5190~5230MHz) 2 channels for 40MHz bandwidth(5270~5310MHz) 5 Channels for 40MHz bandwidth(5510-5670MHz) 2 channels for 40MHz bandwidth(5755~5795MHz) 1 channels for 80MHz bandwidth(5210MHz) 1 channels for 80MHz bandwidth(5290MHz) 2 Channels for 80MHz bandwidth(5530-5610MHz) 1 channels for 80MHz bandwidth(5775MHz)
Antenna Description	Internal Antenna, 2.05dBi(Max.) for 2.4G Band and 3.87dBi(Max.) for 5G Band
RFID(13.56MHz) (Optional)	
Frequency Range	13.56MHz
Channel Number	1
Modulation Type	ASK
Antenna Description	Internal Antenna, 0dBi (Max.), NFC has two optional antennas, antenna 1(Model:DS2-52) and antenna 2 (Model:DS2-51).
Remark:The I24D04 model has 9 versions; Version A: One large display and one small display (80 inch printer), Version B: One large display and one small display (58 inch printer), Version C: One large display and one small display (label printer), Version D: Double large display (80 inch printer), Version E: Double large display (58 inch printer), Version F: Double large display (label printer), Version G: Only one large display (80 inch printer), Version H: Only one large display (58 inch printer), Version I: Only one large display (label printer, The I24D04 screen is available in two resolutions, with the largest resolution screen tested in the report.	

2.3. Equipment Under Test

Power supply system utilised

Power supply voltage	:	○	230V / 50 Hz	○	120V / 60Hz
		○	12 V DC	●	24 V DC
		○	Other (specified in blank below)		

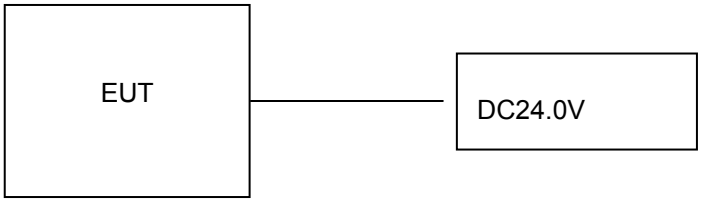
DC 24.0V

2.4. Short description of the Equipment under Test (EUT)

This is a POS Device, Intelligent Electronic Scale

For more details, refer to the user's manual of the EUT.

2.5. Block Diagram of Test Setup



2.6. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: 2AYD5-I24D04** filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

2.7. EUT Exercise Software

N/A.

2.8. Special Accessories

Manufacturer	Description	Model	Serial Number	Certificate
SHENZHEN HONOR ELECTRONIC CO.,LTD.	Adapter	ADS-110DL-19-1240096G	--	SDOC
SHENZHEN HONOR ELECTRONIC CO.,LTD.	Adapter	ADS-65HI-19A-124060F	--	SDOC
Jiangsu Chenyang Electron Co.,Ltd.	Adapter	CYSE65-240250	--	SDOC
LENOVO	PC	DESKYOP-EUIVCNR	--	SDOC
LENOVO	Keyboard	T460S	--	SDOC
LENOVO	Mouse	Howard	--	SDOC
aigo	USB flash disk	U330	--	SDOC
THTF	Display	LE23CW-D	--	SDOC
SONY	Earphone	MDR-XB550AP	--	SDOC
--	Cashbox	--	--	SDOC

Note: The PC, Display, Cashbox, Keyboard, Mouse, Earphone and USB flash disk is only used for auxiliary testing.

2.9. External I/O Cable

I/O Port Description	Quantity	Cable
DC IN Port	1	Non-Shielded, 1.0m
USB Port	5	N/A
RJ11 Port	1	N/A
RJ12 Port	1	N/A
RJ45 Port	1	Non-Shielded, 10m
HDMI Port	1	N/A
Type-C Port	1	N/A
Earphone Port	1	N/A

2.10. Modifications

No modifications were implemented to meet testing criteria.

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen Global Test Service Co.,Ltd.
No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong

3.2. Test Facility

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

CNAS (No. CNAS L8169)
Shenzhen Global Test Service Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2019 General Requirements) for the Competence of Testing and Calibration Laboratories.
A2LA (Certificate No. 4758.01)
Shenzhen Global Test Service Co., Ltd. has been assessed by the American Association for Laboratory Accreditation (A2LA). Certificate No. 4758.01.
Industry Canada Registration Number. is 24189.
FCC Designation Number is CN1234.
FCC Registered Test Site Number is165725.

3.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	-20-50 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

3.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Global Test Service Co.,Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.
Hereafter the best measurement capability for Shenzhen GTS laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.10 dB	(1)
Radiated Emission	1~18GHz	4.32 dB	(1)
Radiated Emission	18-40GHz	5.54 dB	(1)
Conducted Disturbance	0.15~30MHz	3.12 dB	(1)

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.5. Summary of measurement results

Applied Standard: FCC Part 15 Subpart C			
Test Items	**FCC Rules**	**Test Sample**	**Result**
Line Conducted Emissions	§15.207(a)	GTS20241108022-2-S0001-3# GTS20241108022-2-S0001-4# GTS20241108022-2-S0001-5# GTS20241108022-2-S0001-6# GTS20241108022-2-S0001-7# GTS20241108022-2-S0001-8# GTS20241108022-2-S0001-9# GTS20241108022-2-S0001-10# GTS20241108022-2-S0001-11# GTS20241108022-2-S0001-12#	PASS
Field Strength of Fundamental Emissions	§15.225(a)(b)(c)	GTS20241108022-2-S0001-3#	PASS
Radiated Emissions	§15.225(d) & §15.209	GTS20241108022-2-S0001-3# GTS20241108022-2-S0001-4# GTS20241108022-2-S0001-5# GTS20241108022-2-S0001-6# GTS20241108022-2-S0001-7# GTS20241108022-2-S0001-8# GTS20241108022-2-S0001-9# GTS20241108022-2-S0001-10# GTS20241108022-2-S0001-11# GTS20241108022-2-S0001-12#	PASS
20dB Bandwidth	§ 15.215	GTS20241108022-2-S0001-3#	PASS
Frequency Stability	§15.225(e)	GTS20241108022-2-S0001-3#	PASS
Antenna Requirement	§15.203	GTS20241108022-2-S0001-3#	PASS

Remark:
1. The measurement uncertainty is not included in the test result.
2. NA = Not Applicable; NP = Not Performed
3. Note 1 – Test results inside test report;
4. Note 2 – Test results in other test report (SAR Report).
5. We tested all test mode and recorded worst case in report

3.6. Equipments Used during the Test

Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
LISN	CYBERTEK	EM5040A	E1850400105	2024/07/15	2025/07/14
LISN	R&S	ESH2-Z5	893606/008	2024/07/15	2025/07/14
EMI Test Receiver	R&S	ESPI3	101841-cd	2024/07/15	2025/07/14
EMI Test Receiver	R&S	ESCI7	101102	2024/07/15	2025/07/14
Spectrum Analyzer	Agilent	N9020A	MY48010425	2024/07/15	2025/07/14
Spectrum Analyzer	R&S	FSV40-N	101800	2024/07/15	2025/07/14
Vector Signal generator	Agilent	N5181A	MY49060502	2024/07/15	2025/07/14
Signal generator	Agilent	N5182A	3610AO1069	2024/07/15	2025/07/14
Climate Chamber	ESPEC	EL-10KA	A20120523	2024/07/15	2025/07/14
Controller	EM Electronics	Controller EM 1000	N/A	N/A	N/A
Horn Antenna	Schwarzbeck	BBHA 9120D	01622	2024/12/16	2025/12/15
Active Loop Antenna	Beijing Da Ze Technology Co.,Ltd.	ZN30900C	15006	2024/07/15	2025/07/14
Bilog Antenna	Schwarzbeck	VULB9163	000976	2024/07/15	2025/07/14
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	791	2024/07/15	2025/07/14
Amplifier	Schwarzbeck	BBV 9743	#202	2024/01/27	2025/01/26
Amplifier	Taiwan Chengyi	EMC051845B	980355	2024/01/27	2025/01/26
Amplifier	Schwarzbeck	BBV9179	9719-025	2024/01/27	2025/01/26
Temperature/Humidity Meter	Gangxing	CTH-608	02	2024/07/15	2025/07/14
High-Pass Filter	HUBER+SUHNER	RG214	RE01	2024/07/15	2025/07/14
High-Pass Filter	HUBER+SUHNER	RG214	RE02	2024/07/15	2025/07/14
RF Cable(below 1GHz)	HUBER+SUHNER	RG214	RE01	2024/07/15	2025/07/14
RF Cable(above 1GHz)	HUBER+SUHNER	RG214	RE02	2024/07/15	2025/07/14
Data acquisition card	Agilent	U2531A	TW53323507	2024/07/15	2025/07/14
Power Sensor	Agilent	U2021XA	MY5365004	2024/07/15	2025/07/14
Test Control Unit	Tonscend	JS0806-1	178060067	2024/07/15	2025/07/14
Automated filter bank	Tonscend	JS0806-F	19F8060177	2024/07/15	2025/07/14
Wireless Commnunication Tester	Rohde&Schwarz	CMW500	125408	2024/07/15	2025/07/14
EMI Test Software	Tonscend	JS1120-1	Ver 2.6.8.0518	/	/
EMI Test Software	Tonscend	JS1120-3	Ver 2.5.77.0418	/	/
EMI Test Software	Tonscend	JS32-CE	Ver 2.5	/	/
EMI Test Software	Tonscend	JS32-RE	Ver 2.5.1.8	/	/

Note: The Cal.Interval was one year.

4. RADIATED MEASUREMENT

4.1. Standard Applicable

According to §15.209/ §15.205

15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
\1\ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293.	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(\2\)
13.36-13.41			

\1\ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

\2\ Above 38.6

According to §15.247 (d): 20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.2. Measuring Instruments and Setting

Please refer to equipment list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10^{th} carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB/VB 200Hz/1KHz for QP/AVG
Start ~ Stop Frequency	150kHz~30MHz / RB/VB 9kHz/30KHz for QP/AVG
Start ~ Stop Frequency	30MHz~1000MHz / RB/VB 120kHz/1MHz for QP

4.3. Test Procedures

1) Sequence of testing 9 kHz to 30 MHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions.

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna height is 1.0 meter.

--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement:

--- Identified emissions during the premeasurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axes (0° to 360°).

--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

2) Sequence of testing 30 MHz to 1 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 3 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

3) Sequence of testing 1 GHz to 18 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height scan range is 1 meter to 2.5 meter.

--- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.

--- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

4) Sequence of testing above 18 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 1 meter.

--- The EUT was set into operation.

Premeasurement:

--- The antenna is moved spherical over the EUT in different polarizations of the antenna.

Final measurement:

--- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and Average detector.

--- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

Field Strength Calculation

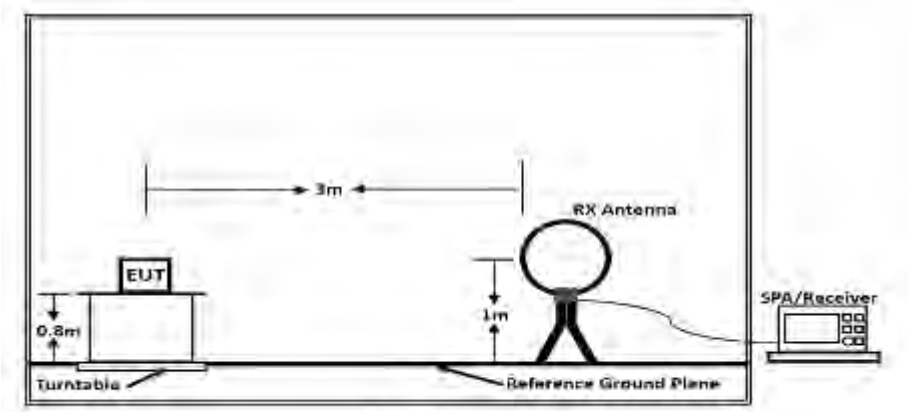
The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

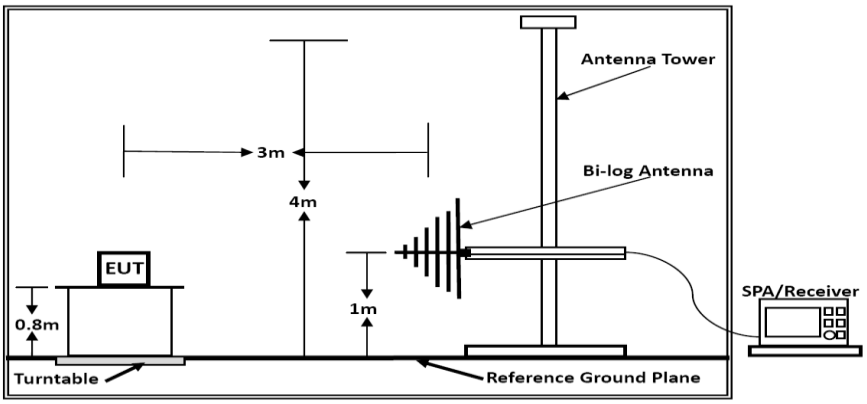
Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

Transd=AF +CL-AG

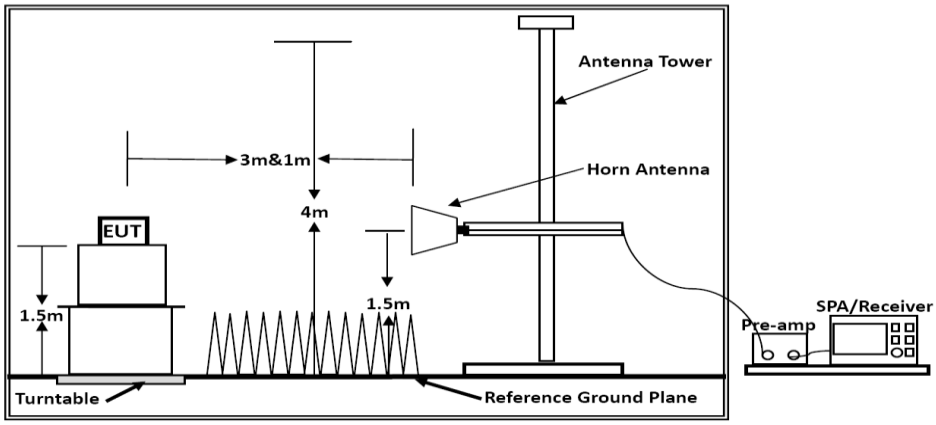
4.4. Test Setup Layout



Below 30MHz



Below 1GHz



Above 1GHz

Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1m.

Distance extrapolation factor = 20 log (specific distanc [3m] / test distance [1m]) (dB);
Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

4.5. Test Results

Temperature	24.5℃	Humidity	53.7%
Test Engineer	Evan Ouyang	Configurations	NFC

PASS.

The test data please refer to following page:

9 KHz~30MHz

Version A(Adapter: ADS-65HI-19A-124060F, NFC antenna Model:DS2-52):

Freq. MHz	Reading dBuV	Factor dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark
0.21	34.14	20.54	54.68	101.21	46.53	QP
0.91	31.81	20.48	52.29	81.21	28.92	QP
1.96	32.71	20.30	53.01	69.54	16.53	QP
5.03	32.89	20.32	53.21	69.54	16.33	QP
13.56	58.61	20.18	78.79	124.00	45.21	QP
14.98	35.23	20.12	55.35	69.54	14.19	QP
21.99	31.81	19.94	51.75	69.54	17.79	QP
25.99	32.57	19.95	52.52	69.54	17.02	QP

Version B(Adapter: ADS-65HI-19A-124060F, NFC antenna Model:DS2-52):

Freq. MHz	Reading dBuV	Factor dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark
0.24	33.70	20.54	54.24	99.90	45.66	QP
0.89	26.86	20.48	47.34	79.90	32.56	QP
2.05	33.27	20.30	53.57	69.54	15.97	QP
5.02	33.21	20.32	53.53	69.54	16.01	QP
13.56	58.45	20.18	78.63	124.00	45.37	QP
15.04	32.31	20.12	52.43	69.54	17.11	QP
22.05	26.57	19.94	46.51	69.54	23.03	QP
25.98	25.00	19.95	44.95	69.54	24.59	QP

Version C(Adapter: ADS-110DL-19-1240096G, NFC antenna Model:DS2-52):

Freq. MHz	Reading dBuV	Factor dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark
0.23	31.55	20.54	52.09	100.39	48.30	QP
0.88	31.48	20.48	51.96	80.39	28.42	QP
1.98	26.35	20.30	46.65	69.54	22.89	QP
5.01	29.41	20.32	49.73	69.54	19.81	QP
13.56	56.31	20.18	76.49	124.00	47.51	QP
15.02	32.31	20.12	52.43	69.54	17.11	QP
22.04	33.31	19.94	53.25	69.54	16.29	QP
26.00	31.84	19.95	51.79	69.54	17.75	QP

Version D(Adapter: ADS-65HI-19A-124060F, NFC antenna Model:DS2-52):

Freq. MHz	Reading dBuV	Factor dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark
0.22	35.30	20.54	55.84	100.91	45.07	QP
0.91	33.73	20.48	54.21	80.91	26.70	QP
1.99	28.41	20.30	48.71	69.54	20.83	QP
4.99	29.42	20.32	49.74	69.54	19.80	QP
13.56	55.35	20.18	75.53	124.00	48.47	QP
15.02	30.28	20.12	50.40	69.54	19.14	QP
22.02	31.19	19.94	51.13	69.54	18.41	QP
26.00	24.90	19.95	44.85	69.54	24.69	QP

Version E(Adapter: ADS-65HI-19A-124060F, NFC antenna Model:DS2-52):

Freq. MHz	Reading dBuV	Factor dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark
0.22	35.61	20.54	56.15	100.66	44.51	QP
0.92	29.10	20.48	49.58	80.66	31.07	QP
1.99	26.02	20.30	46.32	69.54	23.22	QP
4.95	34.76	20.32	55.08	69.54	14.46	QP
13.56	54.18	20.18	74.36	124.00	49.64	QP
14.97	28.16	20.12	48.28	69.54	21.26	QP
22.01	25.79	19.94	45.73	69.54	23.81	QP
26.01	24.90	19.95	44.85	69.54	24.69	QP

Version F(Adapter: ADS-110DL-19-1240096G, NFC antenna Model:DS2-52):

Freq. MHz	Reading dBuV	Factor dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark
0.23	34.22	20.54	54.76	100.41	45.65	QP
0.92	35.93	20.48	56.41	80.41	24.00	QP
2.02	27.19	20.30	47.49	69.54	22.05	QP
5.00	29.70	20.32	50.02	69.54	19.52	QP
13.56	57.29	20.18	77.47	124.00	46.53	QP
14.97	32.64	20.12	52.76	69.54	16.78	QP
21.99	27.12	19.94	47.06	69.54	22.48	QP
26.02	26.79	19.95	46.74	69.54	22.80	QP

Version G(Adapter: ADS-65HI-19A-124060F, NFC antenna Model:DS2-52):

Freq. MHz	Reading dBuV	Factor dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark
0.19	27.40	20.54	47.94	102.24	54.30	QP
0.86	31.22	20.48	51.70	82.24	30.54	QP
2.02	33.51	20.30	53.81	69.54	15.73	QP
5.03	27.89	20.32	48.21	69.54	21.33	QP
13.56	58.81	20.18	78.99	124.00	45.01	QP
14.97	28.61	20.12	48.73	69.54	20.81	QP
21.95	31.44	19.94	51.38	69.54	18.16	QP
26.04	31.91	19.95	51.86	69.54	17.68	QP

Version H(Adapter: ADS-65HI-19A-124060F, NFC antenna Model:DS2-52):

Freq. MHz	Reading dBuV	Factor dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark
0.15	29.88	20.54	50.42	103.94	53.52	QP
0.87	34.32	20.48	54.80	83.94	29.14	QP
2.05	29.78	20.30	50.08	69.54	19.46	QP
5.04	33.02	20.32	53.34	69.54	16.20	QP
13.56	55.20	20.18	75.38	124.00	48.62	QP
15.02	27.14	20.12	47.26	69.54	22.28	QP
22.01	26.41	19.94	46.35	69.54	23.19	QP
26.02	30.19	19.95	50.14	69.54	19.40	QP

Version I(Adapter: ADS-110DL-19-1240096G, NFC antenna Model:DS2-52):

Freq. MHz	Reading dBuV	Factor dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark
0.22	30.00	20.54	50.54	100.80	50.26	QP
0.92	28.65	20.48	49.13	80.80	31.66	QP
2.01	30.07	20.30	50.37	69.54	19.17	QP
4.97	34.33	20.32	54.65	69.54	14.89	QP
13.56	59.01	20.18	79.19	124.00	44.81	QP
15.02	36.11	20.12	56.23	69.54	13.31	QP
22.03	28.47	19.94	48.41	69.54	21.13	QP
26.02	31.36	19.95	51.31	69.54	18.23	QP

*Note: Emission Level= Reading Level + Factor

Factor= Antenna Factor + Cable Loss

Margin = Emission Level Limit – Measured Values

"--" means noise floor.

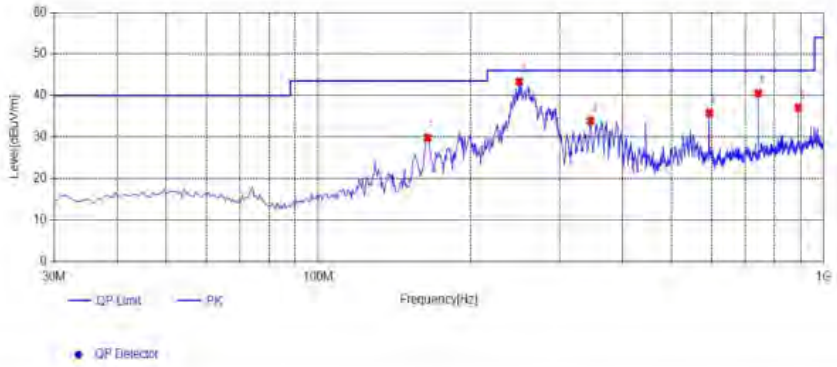
NOTE: All the modes have been tested and recorded worst mode in the report.

For 30MHz-1GHz
Version A:

Adapter: ADS-65HI-19A-124060F

Horizontal

Test Graph



Suspected List

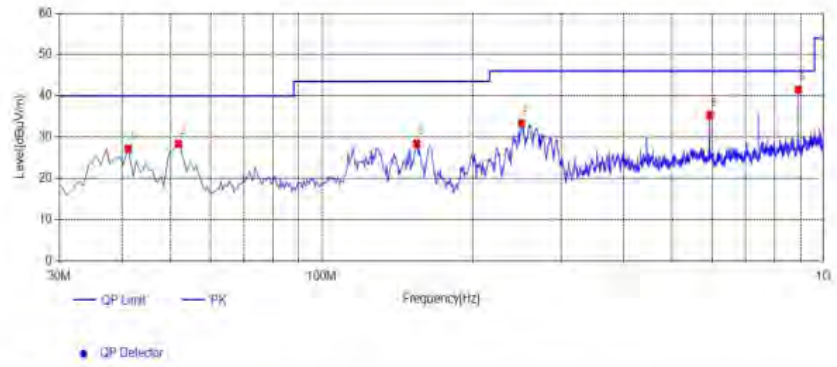
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	164.345	42.75	-12.92	29.83	43.50	13.67	100	304	PK	Horizonta	PASS
2	249.705	52.08	-8.72	43.36	46.00	2.64	100	127	PK	Horizonta	PASS
3	345.735	40.21	-6.29	33.92	46.00	12.08	100	151	PK	Horizonta	PASS
4	594.055	36.38	-0.60	35.78	46.00	10.22	100	320	PK	Horizonta	PASS
5	742.465	39.46	1.13	40.59	46.00	5.41	100	30	PK	Horizonta	PASS
6	891.36	35.13	1.98	37.11	46.00	8.89	100	327	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	41.155	38.98	-11.77	27.21	40.00	12.79	100	62	PK	Vertical	PASS
2	51.825	39.32	-10.96	28.36	40.00	11.64	100	278	PK	Vertical	PASS
3	154.645	42.13	-13.71	28.42	43.50	15.08	100	288	PK	Vertical	PASS
4	250.19	42.14	-8.70	33.44	46.00	12.56	100	198	PK	Vertical	PASS
5	594.055	35.93	-0.60	35.33	46.00	10.67	100	96	PK	Vertical	PASS
6	891.36	39.51	1.98	41.49	46.00	4.51	100	142	PK	Vertical	PASS

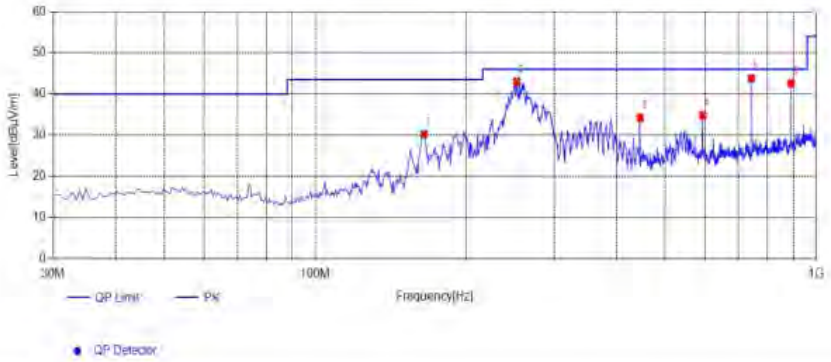
Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Adapter: CYSE65-240250

Horizontal

Test Graph



Suspected List

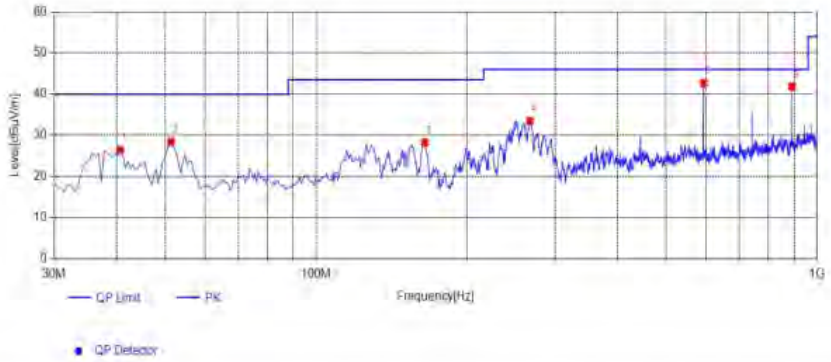
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	164.83	43.17	-12.89	30.28	43.50	13.22	100	323	PK	Horizonta	PASS
2	252.615	51.63	-8.59	43.04	46.00	2.96	100	139	PK	Horizonta	PASS
3	445.645	38.15	-3.91	34.24	46.00	11.76	100	156	PK	Horizonta	PASS
4	594.055	35.40	-0.60	34.80	46.00	11.20	100	43	PK	Horizonta	PASS
5	742.465	42.70	1.13	43.83	46.00	2.17	100	36	PK	Horizonta	PASS
6	891.36	40.62	1.98	42.60	46.00	3.40	100	183	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	40.67	38.26	-11.85	26.41	40.00	13.59	100	97	PK	Vertical	PASS
2	51.34	39.36	-10.92	28.44	40.00	11.56	100	290	PK	Vertical	PASS
3	164.83	41.19	-12.89	28.30	43.50	15.20	100	358	PK	Vertical	PASS
4	267.165	41.50	-7.99	33.51	46.00	12.49	100	83	PK	Vertical	PASS
5	594.055	43.31	-0.60	42.71	46.00	3.29	100	196	PK	Vertical	PASS
6	891.36	39.89	1.98	41.87	46.00	4.13	100	220	PK	Vertical	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

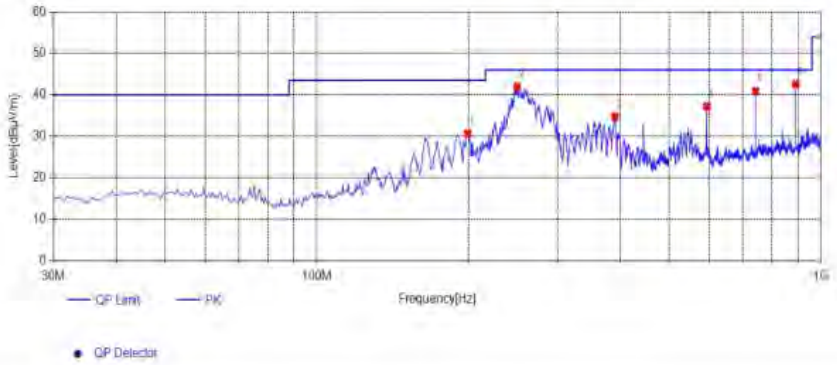
2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Version B:

Adapter: ADS-65HI-19A-124060F

Horizontal

Test Graph



Suspected List

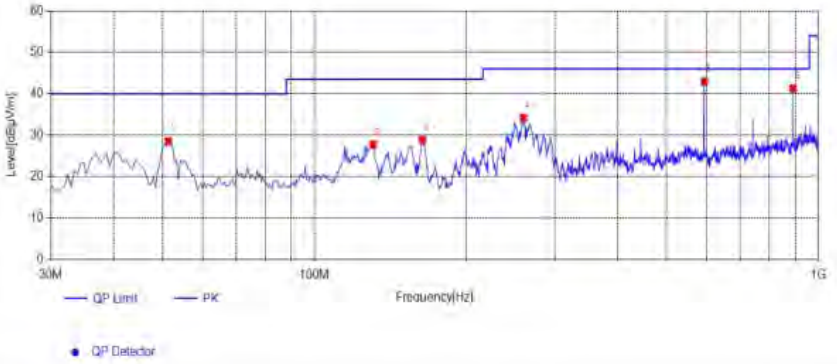
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	199.265	40.88	-10.25	30.63	43.50	12.87	100	277	PK	Horizonta	PASS
2	249.705	50.63	-8.72	41.91	46.00	4.09	100	257	PK	Horizonta	PASS
3	390.355	40.21	-5.49	34.72	46.00	11.28	100	25	PK	Horizonta	PASS
4	594.055	37.83	-0.60	37.23	46.00	8.77	100	5	PK	Horizonta	PASS
5	742.465	39.81	1.13	40.94	46.00	5.06	100	32	PK	Horizonta	PASS
6	891.36	40.62	1.98	42.60	46.00	3.40	100	327	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	51.34	39.44	-10.92	28.52	40.00	11.48	100	322	PK	Vertical	PASS
2	130.88	41.38	-13.68	27.70	43.50	15.80	100	162	PK	Vertical	PASS
3	163.86	41.79	-12.96	28.83	43.50	14.67	100	282	PK	Vertical	PASS
4	259.89	42.45	-8.28	34.17	46.00	11.83	100	80	PK	Vertical	PASS
5	594.055	43.59	-0.60	42.99	46.00	3.01	100	80	PK	Vertical	PASS
6	891.36	39.33	1.98	41.31	46.00	4.69	100	182	PK	Vertical	PASS

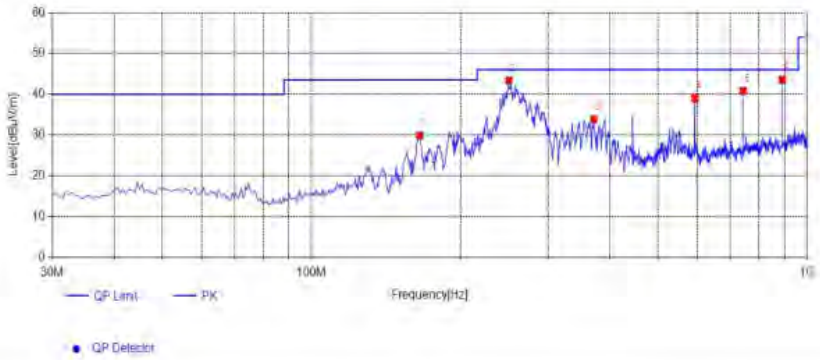
Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Adapter: CYSE65-240250

Horizontal

Test Graph



Suspected List

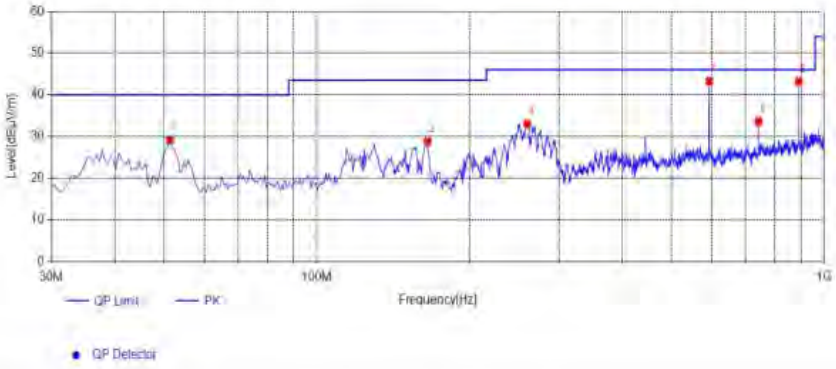
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	165.315	42.75	-12.85	29.90	43.50	13.60	100	327	PK	Horizonta	PASS
2	250.19	52.06	-8.70	43.36	46.00	2.64	100	76	PK	Horizonta	PASS
3	371.44	39.59	-5.76	33.83	46.00	12.17	100	16	PK	Horizonta	PASS
4	594.055	39.58	-0.60	38.98	46.00	7.02	100	2	PK	Horizonta	PASS
5	742.465	39.72	1.13	40.85	46.00	5.15	100	39	PK	Horizonta	PASS
6	891.36	41.62	1.98	43.60	46.00	2.40	100	334	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	51.34	40.13	-10.92	29.21	40.00	10.79	100	227	PK	Vertical	PASS
2	165.315	41.60	-12.85	28.75	43.50	14.75	100	300	PK	Vertical	PASS
3	259.89	41.31	-8.28	33.03	46.00	12.97	100	81	PK	Vertical	PASS
4	594.055	43.89	-0.60	43.29	46.00	2.71	100	111	PK	Vertical	PASS
5	742.465	32.47	1.13	33.60	46.00	12.40	100	15	PK	Vertical	PASS
6	891.36	41.25	1.98	43.23	46.00	2.77	100	42	PK	Vertical	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

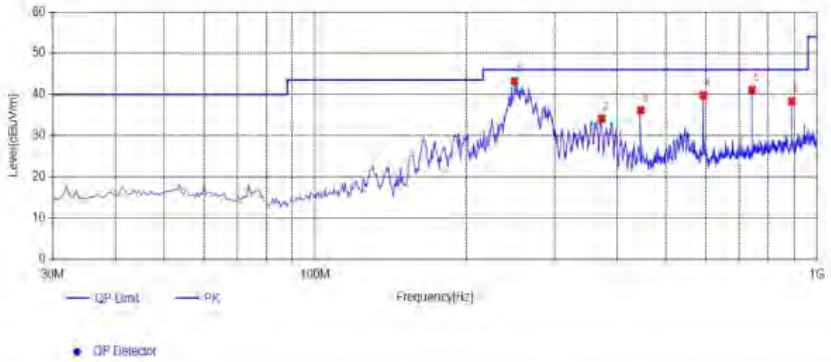
2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Version C:

Adapter: ADS-110DL-19-1240096G

Horizontal

Test Graph



Suspected List

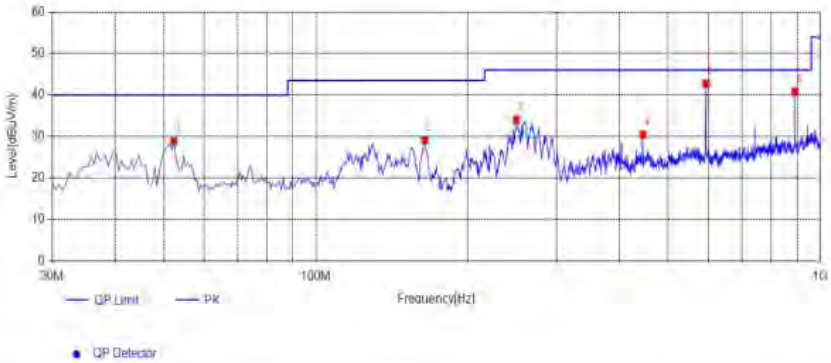
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	249.705	51.95	-8.72	43.23	46.00	2.77	100	272	PK	Horizonta	PASS
2	372.41	39.88	-5.74	34.14	46.00	11.86	100	303	PK	Horizonta	PASS
3	445.645	40.06	-3.91	36.15	46.00	9.85	100	143	PK	Horizonta	PASS
4	594.055	40.39	-0.60	39.79	46.00	6.21	100	27	PK	Horizonta	PASS
5	742.465	39.96	1.13	41.09	46.00	4.91	100	33	PK	Horizonta	PASS
6	891.36	36.36	1.98	38.34	46.00	7.66	100	4	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	52.31	39.82	-10.98	28.84	40.00	11.16	100	268	PK	Vertical	PASS
2	164.345	42.08	-12.92	29.16	43.50	14.34	100	275	PK	Vertical	PASS
3	249.705	42.82	-8.72	34.10	46.00	11.90	100	59	PK	Vertical	PASS
4	445.645	34.38	-3.91	30.47	46.00	15.53	100	360	PK	Vertical	PASS
5	594.055	43.35	-0.60	42.75	46.00	3.25	100	99	PK	Vertical	PASS
6	891.36	38.82	1.98	40.80	46.00	5.20	100	261	PK	Vertical	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

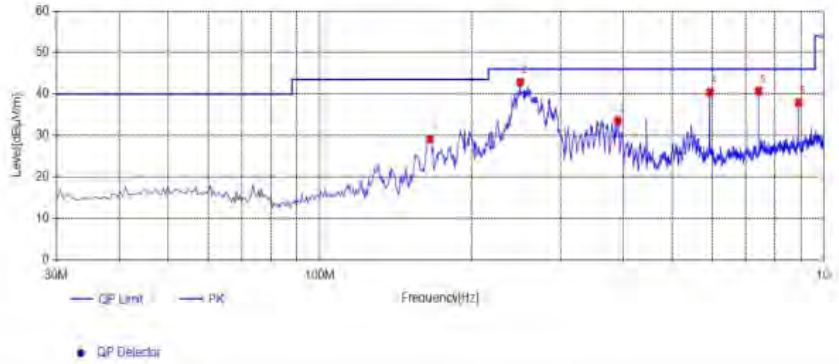
2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Version D:

Adapter: ADS-65HI-19A-124060F

Horizontal

Test Graph



Suspected List

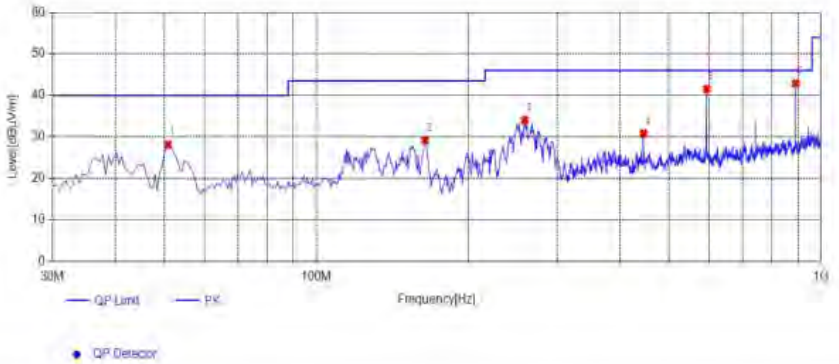
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	165.315	41.93	-12.85	29.08	43.50	14.42	100	328	PK	Horizonta	PASS
2	249.705	51.57	-8.72	42.85	46.00	3.15	100	278	PK	Horizonta	PASS
3	390.355	39.05	-5.49	33.56	46.00	12.44	100	322	PK	Horizonta	PASS
4	594.055	41.04	-0.60	40.44	46.00	5.56	100	149	PK	Horizonta	PASS
5	742.465	39.57	1.13	40.70	46.00	5.30	100	36	PK	Horizonta	PASS
6	891.36	35.95	1.98	37.93	46.00	8.07	100	328	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	50.855	39.02	-10.90	28.12	40.00	11.88	100	347	PK	Vertical	PASS
2	164.345	42.11	-12.92	29.19	43.50	14.31	100	330	PK	Vertical	PASS
3	258.92	42.37	-8.31	34.06	46.00	11.94	100	79	PK	Vertical	PASS
4	445.645	34.70	-3.91	30.79	46.00	15.21	100	322	PK	Vertical	PASS
5	594.055	42.18	-0.60	41.58	46.00	4.42	100	176	PK	Vertical	PASS
6	891.36	40.90	1.98	42.88	46.00	3.12	100	225	PK	Vertical	PASS

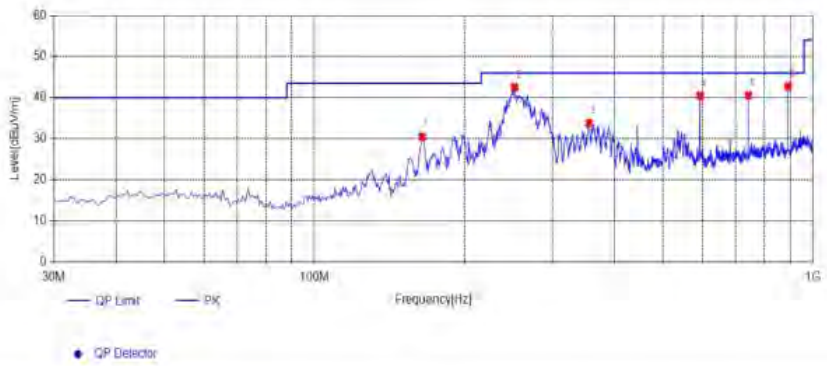
Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Adapter: CYSE65-240250

Horizontal

Test Graph



Suspected List

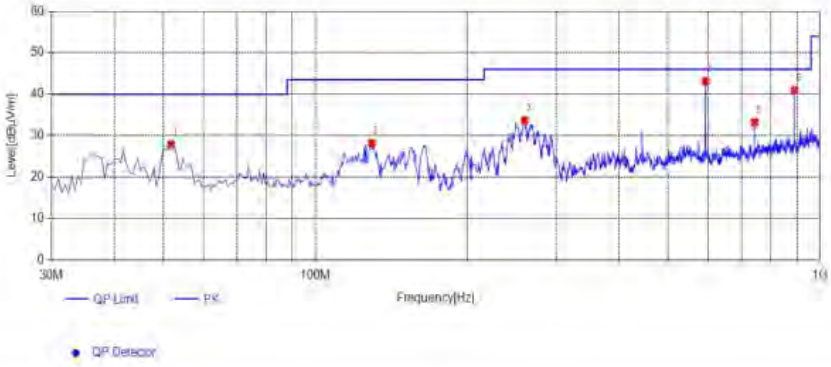
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	164.345	43.41	-12.92	30.49	43.50	13.01	100	327	PK	Horizonta	PASS
2	252.13	51.18	-8.61	42.57	46.00	3.43	100	268	PK	Horizonta	PASS
3	355.435	39.90	-6.06	33.84	46.00	12.16	100	304	PK	Horizonta	PASS
4	594.055	41.08	-0.60	40.48	46.00	5.52	100	358	PK	Horizonta	PASS
5	742.465	39.46	1.13	40.59	46.00	5.41	100	29	PK	Horizonta	PASS
6	891.36	40.82	1.98	42.80	46.00	3.20	100	327	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	51.825	38.85	-10.96	27.89	40.00	12.11	100	323	PK	Vertical	PASS
2	129.425	41.73	-13.54	28.19	43.50	15.31	100	153	PK	Vertical	PASS
3	259.89	41.95	-8.28	33.67	46.00	12.33	100	87	PK	Vertical	PASS
4	594.055	43.71	-0.60	43.11	46.00	2.89	100	113	PK	Vertical	PASS
5	742.465	32.08	1.13	33.21	46.00	12.79	100	70	PK	Vertical	PASS
6	891.36	39.02	1.98	41.00	46.00	5.00	100	150	PK	Vertical	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

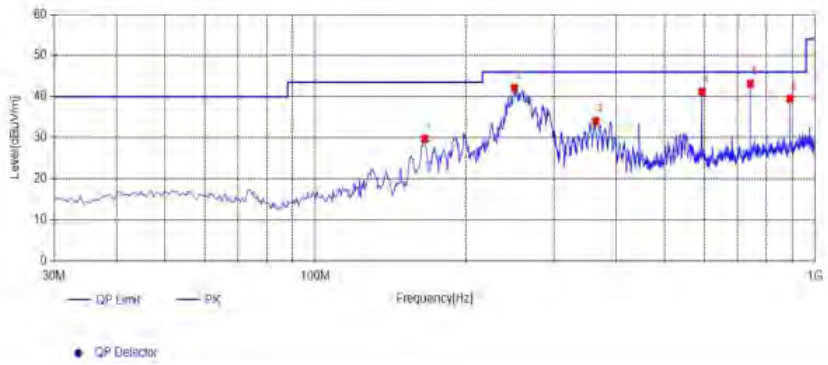
2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Version E:

Adapter: ADS-65HI-19A-124060F

Horizontal

Test Graph



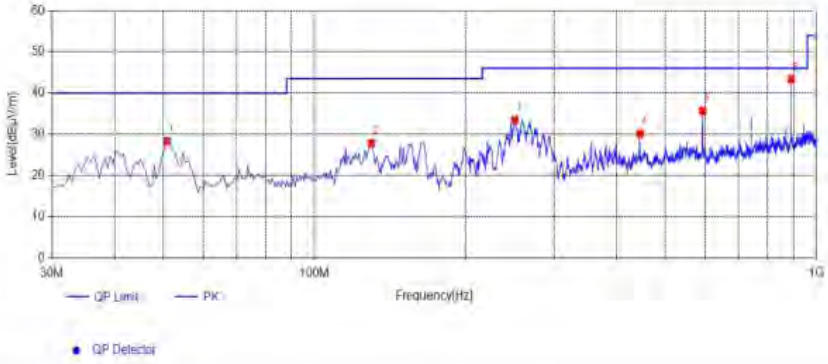
Suspected List											
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	165.8	42.60	-12.84	29.76	43.50	13.74	100	317	PK	Horizonta	PASS
2	250.19	50.83	-8.70	42.13	46.00	3.87	100	277	PK	Horizonta	PASS
3	363.68	39.91	-5.87	34.04	46.00	11.96	100	324	PK	Horizonta	PASS
4	594.055	41.86	-0.60	41.26	46.00	4.74	100	33	PK	Horizonta	PASS
5	742.465	42.07	1.13	43.20	46.00	2.80	100	33	PK	Horizonta	PASS
6	891.36	37.54	1.98	39.52	46.00	6.48	100	9	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List											
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	50.855	39.25	-10.90	28.35	40.00	11.65	100	358	PK	Vertical	PASS
2	129.91	41.45	-13.58	27.87	43.50	15.63	100	182	PK	Vertical	PASS
3	250.675	42.17	-8.67	33.50	46.00	12.50	100	125	PK	Vertical	PASS
4	445.645	34.04	-3.91	30.13	46.00	15.87	100	344	PK	Vertical	PASS
5	594.055	36.31	-0.60	35.71	46.00	10.29	100	16	PK	Vertical	PASS
6	891.36	41.38	1.98	43.36	46.00	2.64	100	238	PK	Vertical	PASS

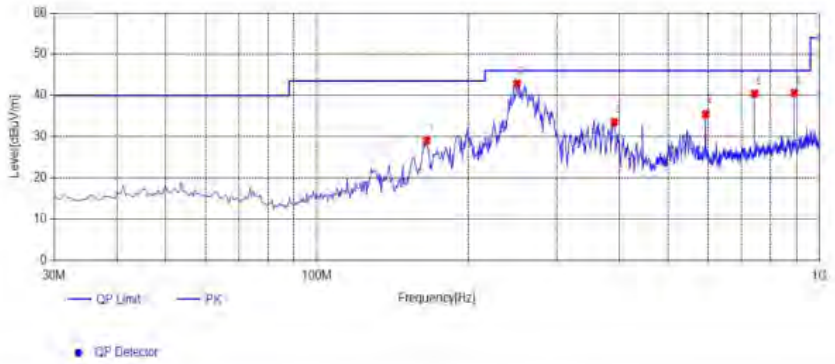
Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Adapter: CYSE65-240250

Horizontal

Test Graph



Suspected List

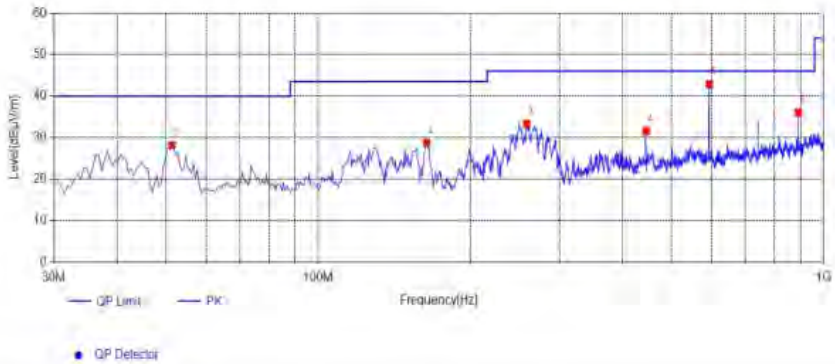
NO.	Frequency (MHz)	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	165.315	41.92	-12.85	29.07	43.50	14.43	100	331	PK	Horizonta	PASS
2	250.19	51.58	-8.70	42.88	46.00	3.12	100	254	PK	Horizonta	PASS
3	390.355	39.01	-5.49	33.52	46.00	12.48	100	321	PK	Horizonta	PASS
4	594.055	36.07	-0.60	35.47	46.00	10.53	100	331	PK	Horizonta	PASS
5	742.95	39.33	1.13	40.46	46.00	5.54	100	35	PK	Horizonta	PASS
6	891.36	38.68	1.98	40.66	46.00	5.34	100	171	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	51.34	39.06	-10.92	28.14	40.00	11.86	100	345	PK	Vertical	PASS
2	163.86	41.67	-12.96	28.71	43.50	14.79	100	282	PK	Vertical	PASS
3	258.435	41.71	-8.34	33.37	46.00	12.63	100	9	PK	Vertical	PASS
4	445.645	35.48	-3.91	31.57	46.00	14.43	100	329	PK	Vertical	PASS
5	594.055	43.47	-0.60	42.87	46.00	3.13	100	203	PK	Vertical	PASS
6	891.36	34.07	1.98	36.05	46.00	9.95	100	246	PK	Vertical	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

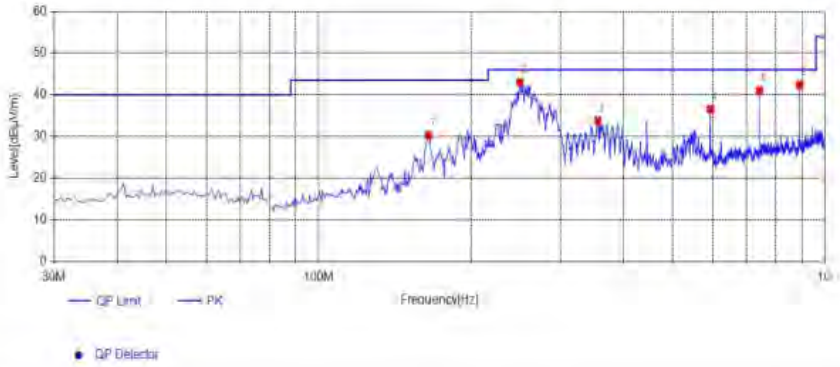
2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Version F:

Adapter: ADS-110DL-19-1240096G

Horizontal

Test Graph



Suspected List

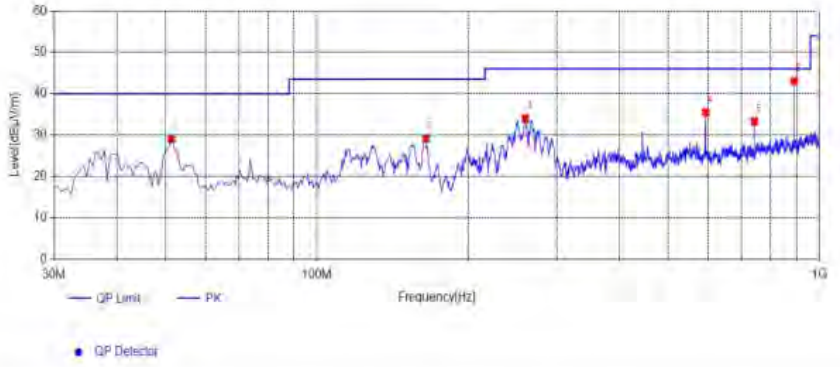
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	164.83	43.20	-12.89	30.31	43.50	13.19	100	319	PK	Horizonta	PASS
2	249.705	51.77	-8.72	43.05	46.00	2.95	100	122	PK	Horizonta	PASS
3	355.92	39.84	-6.04	33.80	46.00	12.20	100	312	PK	Horizonta	PASS
4	594.055	37.19	-0.60	36.59	46.00	9.41	100	26	PK	Horizonta	PASS
5	742.465	39.93	1.13	41.06	46.00	4.94	100	39	PK	Horizonta	PASS
6	891.36	40.45	1.98	42.43	46.00	3.57	100	179	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	51.34	39.91	-10.92	28.99	40.00	11.01	100	287	PK	Vertical	PASS
2	164.83	42.10	-12.89	29.21	43.50	14.29	100	341	PK	Vertical	PASS
3	259.89	42.30	-8.28	34.02	46.00	11.98	100	78	PK	Vertical	PASS
4	594.055	36.09	-0.60	35.49	46.00	10.51	100	78	PK	Vertical	PASS
5	742.465	32.25	1.13	33.38	46.00	12.62	100	188	PK	Vertical	PASS
6	891.36	41.09	1.98	43.07	46.00	2.93	100	115	PK	Vertical	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

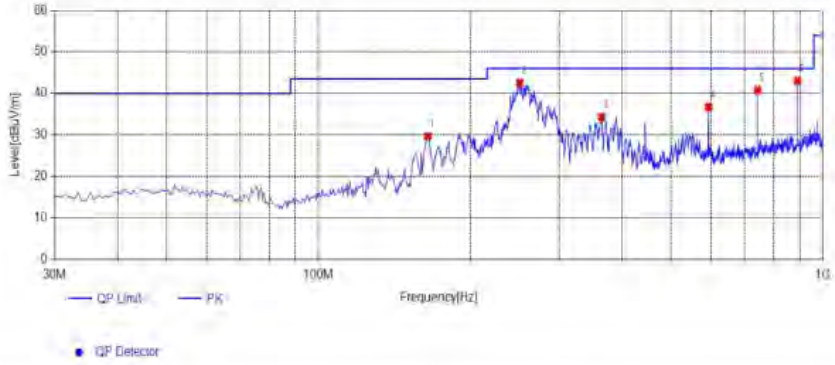
2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Version G:

Adapter: ADS-65HI-19A-124060F

Horizontal

Test Graph



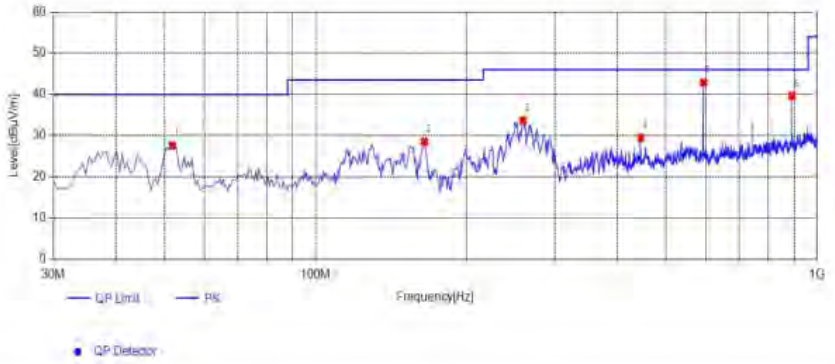
Suspected List											
NO.	Frequency (MHz)	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	164.83	42.58	-12.89	29.69	43.50	13.81	100	337	PK	Horizonta	PASS
2	250.675	51.27	-8.67	42.60	46.00	3.40	100	114	PK	Horizonta	PASS
3	364.165	40.16	-5.87	34.29	46.00	11.71	100	301	PK	Horizonta	PASS
4	594.055	37.35	-0.60	36.75	46.00	9.25	100	164	PK	Horizonta	PASS
5	742.465	39.71	1.13	40.84	46.00	5.16	100	35	PK	Horizonta	PASS
6	891.36	41.05	1.98	43.03	46.00	2.97	100	321	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List											
NO.	Frequency (MHz)	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	51.825	38.52	-10.96	27.56	40.00	12.44	100	270	PK	Vertical	PASS
2	164.83	41.44	-12.89	28.55	43.50	14.95	100	310	PK	Vertical	PASS
3	259.405	41.92	-8.29	33.63	46.00	12.37	100	97	PK	Vertical	PASS
4	445.645	33.41	-3.91	29.50	46.00	16.50	100	333	PK	Vertical	PASS
5	594.055	43.51	-0.60	42.91	46.00	3.09	100	104	PK	Vertical	PASS
6	891.36	37.71	1.98	39.69	46.00	6.31	100	276	PK	Vertical	PASS

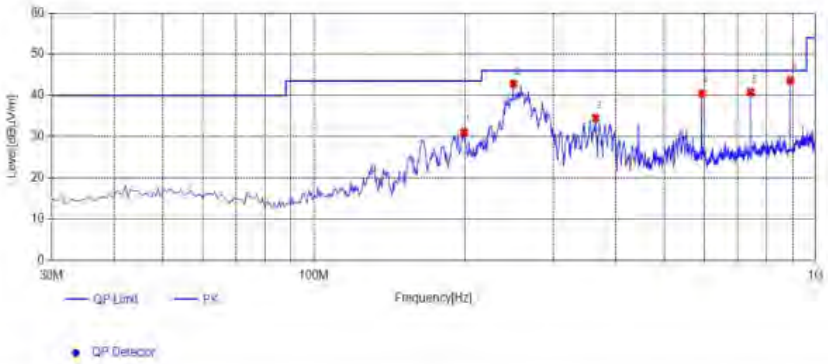
Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Adapter: CYSE65-240250

Horizontal

Test Graph



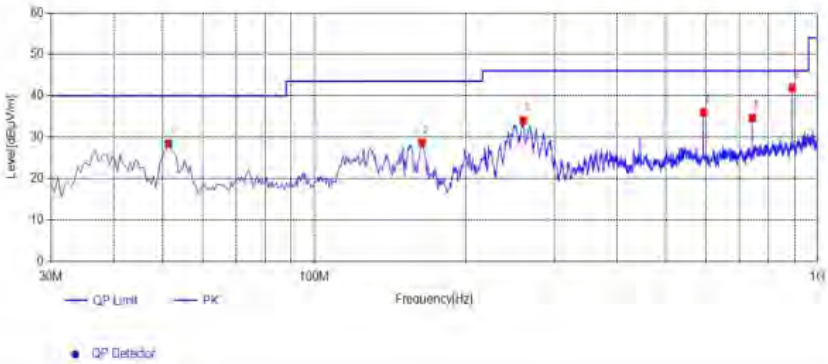
Suspected List											
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	199.265	41.32	-10.25	31.07	43.50	12.43	100	298	PK	Horizonta	PASS
2	250.19	51.53	-8.70	42.83	46.00	3.17	100	258	PK	Horizonta	PASS
3	364.65	40.39	-5.86	34.53	46.00	11.47	100	298	PK	Horizonta	PASS
4	594.055	41.14	-0.60	40.54	46.00	5.46	100	149	PK	Horizonta	PASS
5	742.465	39.70	1.13	40.83	46.00	5.17	100	33	PK	Horizonta	PASS
6	891.36	41.63	1.98	43.61	46.00	2.39	100	335	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List											
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	51.34	39.39	-10.92	28.47	40.00	11.53	100	297	PK	Vertical	PASS
2	163.86	41.64	-12.96	28.68	43.50	14.82	100	327	PK	Vertical	PASS
3	260.375	42.32	-8.26	34.06	46.00	11.94	100	80	PK	Vertical	PASS
4	594.055	36.62	-0.60	36.02	46.00	9.98	100	87	PK	Vertical	PASS
5	742.465	33.55	1.13	34.68	46.00	11.32	100	144	PK	Vertical	PASS
6	891.36	39.97	1.98	41.95	46.00	4.05	100	287	PK	Vertical	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

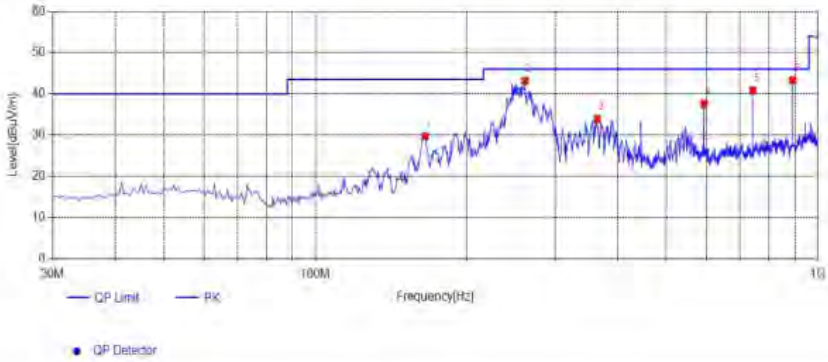
2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Version H:

Adapter: ADS-65HI-19A-124060F

Horizontal

Test Graph



Suspected List

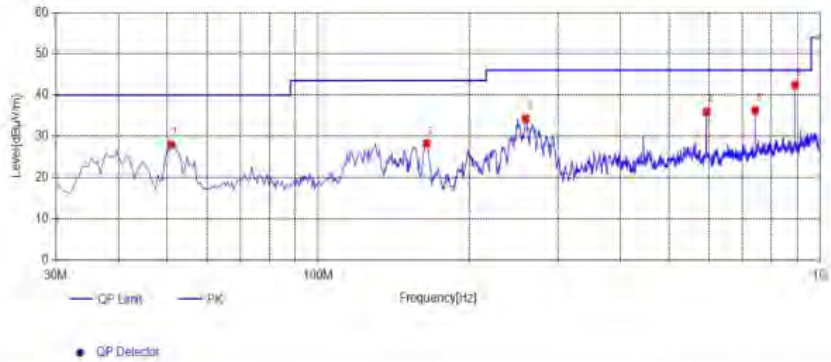
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	165.315	42.52	-12.85	29.67	43.50	13.83	100	297	PK	Horizonta	PASS
2	261.345	51.36	-8.22	43.14	46.00	2.86	100	260	PK	Horizonta	PASS
3	364.165	39.75	-5.87	33.88	46.00	12.12	100	304	PK	Horizonta	PASS
4	594.055	38.23	-0.60	37.63	46.00	8.37	100	217	PK	Horizonta	PASS
5	742.465	39.72	1.13	40.85	46.00	5.15	100	34	PK	Horizonta	PASS
6	891.36	41.34	1.98	43.32	46.00	2.68	100	34	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	50.855	38.89	-10.90	27.99	40.00	12.01	100	258	PK	Vertical	PASS
2	164.345	41.22	-12.92	28.30	43.50	15.20	100	338	PK	Vertical	PASS
3	258.92	42.61	-8.31	34.30	46.00	11.70	100	79	PK	Vertical	PASS
4	594.055	36.54	-0.60	35.94	46.00	10.06	100	162	PK	Vertical	PASS
5	742.465	35.15	1.13	36.28	46.00	9.72	100	185	PK	Vertical	PASS
6	891.36	40.49	1.98	42.47	46.00	3.53	100	208	PK	Vertical	PASS

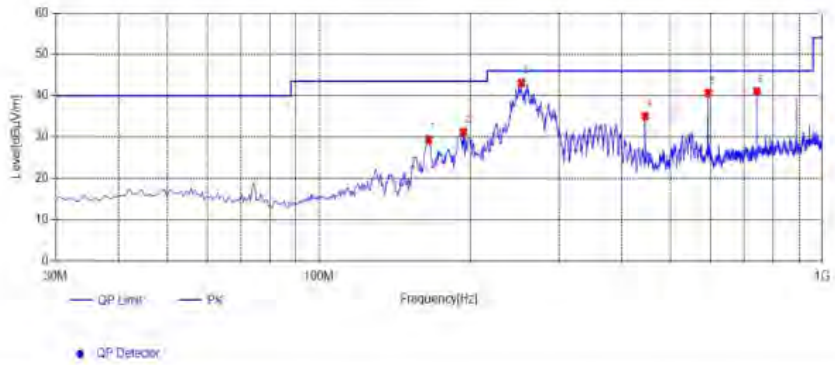
Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Adapter: CYSE65-240250

Horizontal

Test Graph



Suspected List

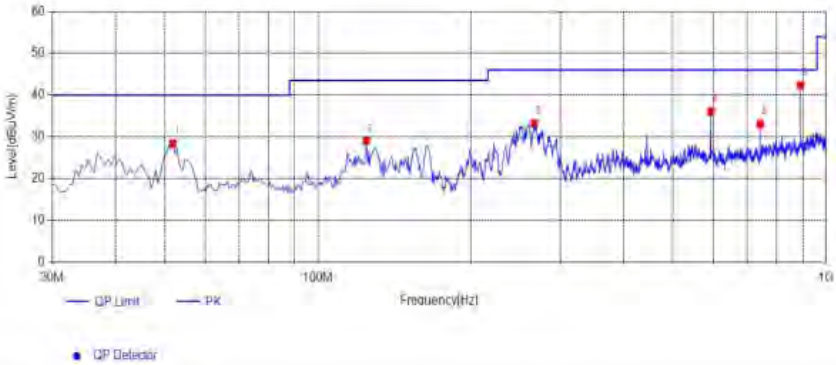
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	165.315	42.25	-12.85	29.40	43.50	14.10	100	329	PK	Horizonta	PASS
2	193.93	41.99	-10.75	31.24	43.50	12.26	100	270	PK	Horizonta	PASS
3	252.615	51.70	-8.59	43.11	46.00	2.89	100	93	PK	Horizonta	PASS
4	445.645	39.01	-3.91	35.10	46.00	10.90	100	157	PK	Horizonta	PASS
5	594.055	41.29	-0.60	40.69	46.00	5.31	100	147	PK	Horizonta	PASS
6	742.465	39.96	1.13	41.09	46.00	4.91	100	36	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	51.825	39.35	-10.96	28.39	40.00	11.61	100	221	PK	Vertical	PASS
2	124.575	42.30	-13.21	29.09	43.50	14.41	100	188	PK	Vertical	PASS
3	266.68	41.29	-8.01	33.28	46.00	12.72	100	89	PK	Vertical	PASS
4	594.055	36.71	-0.60	36.11	46.00	9.89	100	85	PK	Vertical	PASS
5	742.465	31.93	1.13	33.06	46.00	12.94	100	148	PK	Vertical	PASS
6	891.36	40.41	1.98	42.39	46.00	3.61	100	248	PK	Vertical	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

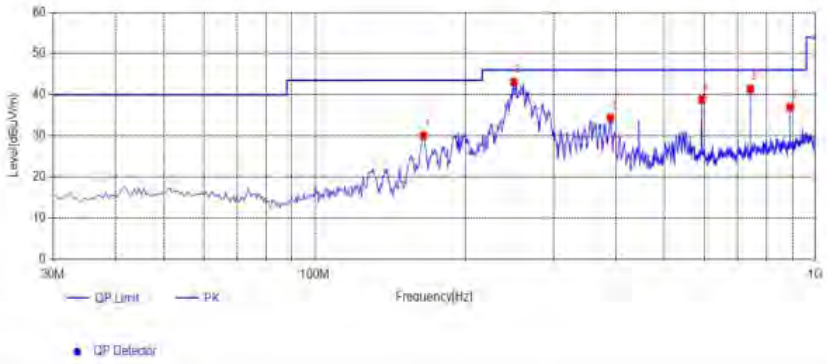
2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Version I:

Adapter: ADS-110DL-19-1240096G

Horizontal

Test Graph



Suspected List

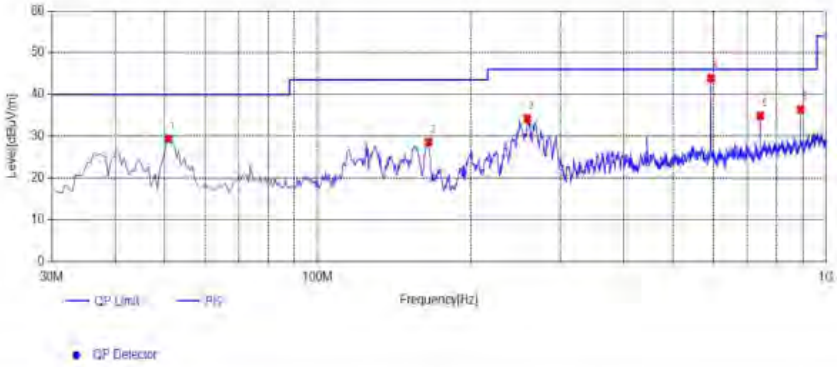
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	164.83	42.92	-12.89	30.03	43.50	13.47	100	324	PK	Horizonta	PASS
2	249.705	51.85	-8.72	43.13	46.00	2.87	100	267	PK	Horizonta	PASS
3	389.87	39.87	-5.50	34.37	46.00	11.63	100	28	PK	Horizonta	PASS
4	594.055	39.48	-0.60	38.88	46.00	7.12	100	358	PK	Horizonta	PASS
5	742.465	40.30	1.13	41.43	46.00	4.57	100	34	PK	Horizonta	PASS
6	891.36	34.99	1.98	36.97	46.00	9.03	100	164	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	50.855	40.27	-10.90	29.37	40.00	10.63	100	331	PK	Vertical	PASS
2	165.315	41.44	-12.85	28.59	43.50	14.91	100	279	PK	Vertical	PASS
3	258.435	42.60	-8.34	34.26	46.00	11.74	100	83	PK	Vertical	PASS
4	594.055	44.56	-0.60	43.96	46.00	2.04	100	86	PK	Vertical	PASS
5	742.465	33.76	1.13	34.89	46.00	11.11	100	106	PK	Vertical	PASS
6	891.36	34.44	1.98	36.42	46.00	9.58	100	176	PK	Vertical	PASS

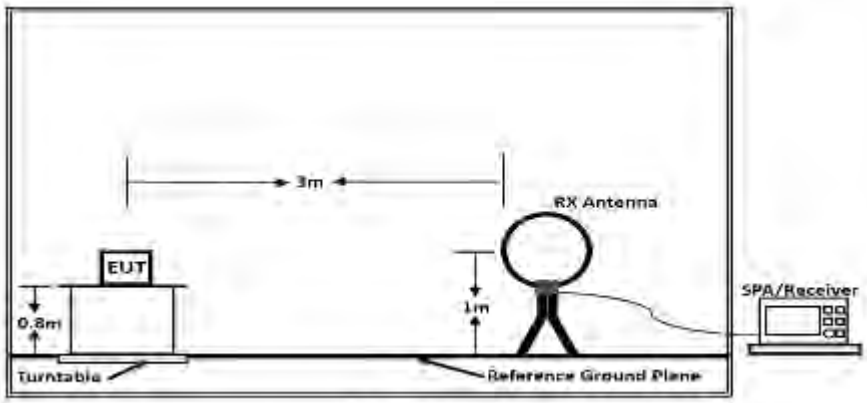
Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

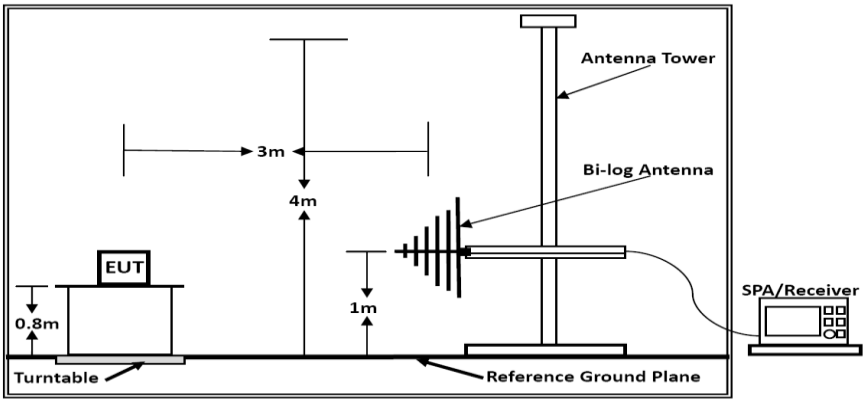
Note: All modes have been tested and the worst mode is recorded in the report, NFC has two optional antennas, with the worst mode recorded in the report (NFC antenna Model:DS2-52).

5. FIELD STRENGTH OF FUNDAMENTAL EMISSIONS AND MASK MEASUREMENT

5.1. Block Diagram of Test Setup



Below 30MHz



Below 1GHz

5.2. Field strength of fundamental emissions limit and Mask limit

The field strength of fundamental emissions shall not exceed 15848 microvolts/meter at 30 meters. The emissions limit in this paragraph is based on measurement instrumentation employing a QP detector.

Frequencies (MHz)	Field Strength (microvolts/meter)	Field Strength (dBμV/m) at 10m	Field Strength (dBμV/m) at 3m
13.553 ~ 13.567MHz	15848 at 30m	103.08 (QP)	124 (QP)

Mask Limit:

Frequency (MHz)	Limit (dBuV/m)	Distance (m)
1.705-13.110	69.5	3
13.110-13.410	80.5	3
13.410-13.553	90.5	3
13.553-13.567	124.0	3
13.567-13.710	90.5	3
13.710-14.010	80.5	3
14.010-30.000	69.5	3

5.3. Test Results

Temperature	24.5℃	Humidity	53.7%
Test Engineer	Evan Ouyang	Configurations	NFC

PASS.

The test data please refer to following page:

Version A(Adapter: ADS-65HI-19A-124060F, NFC antenna Model:DS2-52):

	Freq.(MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin dB	Remark
1	13.18	33.92	20.18	54.10	80.50	26.40	QP
2	13.48	35.83	20.18	56.01	90.50	34.49	QP
3	13.56	58.61	20.18	78.79	124.00	45.21	QP
4	13.55	31.16	20.18	51.34	90.50	39.16	QP
5	13.63	33.11	20.18	53.29	90.50	37.21	QP
6	14.72	35.22	21.18	56.40	81.50	25.10	QP

Version B(Adapter: ADS-65HI-19A-124060F, NFC antenna Model:DS2-52):

	Freq.(MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin dB	Remark
1	13.23	33.79	20.18	53.97	80.50	26.53	QP
2	13.50	35.17	20.18	55.35	90.50	35.15	QP
3	13.56	58.45	20.18	78.63	124.00	45.37	QP
4	13.58	34.89	20.18	55.07	90.50	35.43	QP
5	13.65	28.24	20.18	48.42	90.50	42.08	QP
6	14.71	28.72	21.18	49.90	81.50	31.60	QP

Version C(Adapter: ADS-110DL-19-1240096G, NFC antenna Model:DS2-52):

	Freq.(MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin dB	Remark
1	13.16	31.51	20.18	51.69	80.50	28.81	QP
2	13.43	32.32	20.18	52.50	90.50	38.00	QP
3	13.56	56.31	20.18	76.49	124.00	47.51	QP
4	13.57	30.84	20.18	51.02	90.50	39.48	QP
5	13.61	25.79	20.18	45.97	90.50	44.53	QP
6	14.74	33.01	21.18	54.19	81.50	27.31	QP

Version D(Adapter: ADS-65HI-19A-124060F, NFC antenna Model:DS2-52):

	Freq.(MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin dB	Remark
1	13.23	31.76	20.18	51.94	80.50	28.56	QP
2	13.41	28.58	20.18	48.76	90.50	41.74	QP
3	13.56	55.35	20.18	75.53	124.00	48.47	QP
4	13.57	33.39	20.18	53.57	90.50	36.93	QP
5	13.63	33.55	20.18	53.73	90.50	36.77	QP
6	14.74	30.39	21.18	51.57	81.50	29.93	QP

Version E(Adapter: ADS-65HI-19A-124060F, NFC antenna Model:DS2-52):

	Freq.(MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin dB	Remark
1	13.21	28.40	20.18	48.58	80.50	31.92	QP
2	13.46	34.81	20.18	54.99	90.50	35.51	QP
3	13.56	54.18	20.18	74.36	124.00	49.64	QP
4	13.59	32.64	20.18	52.82	90.50	37.68	QP
5	13.62	33.56	20.18	53.74	90.50	36.76	QP
6	14.69	36.84	21.18	58.02	81.50	23.48	QP

Version F(Adapter: ADS-110DL-19-1240096G, NFC antenna Model:DS2-52):

	Freq.(MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin dB	Remark
1	13.19	34.60	20.18	54.78	80.50	25.72	QP
2	13.42	33.84	20.18	54.02	90.50	36.48	QP
3	13.56	57.29	20.18	77.47	124.00	46.53	QP
4	13.60	26.40	20.18	46.58	90.50	43.92	QP
5	13.67	27.31	20.18	47.49	90.50	43.01	QP
6	14.71	31.02	21.18	52.20	81.50	29.30	QP

Version G(Adapter: ADS-65HI-19A-124060F, NFC antenna Model:DS2-52):

	Freq.(MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin dB	Remark
1	13.20	33.99	20.18	54.17	80.50	26.33	QP
2	13.42	32.85	20.18	53.03	90.50	37.47	QP
3	13.56	58.81	20.18	78.99	124.00	45.01	QP
4	13.61	28.83	20.18	49.01	90.50	41.49	QP
5	13.65	27.84	20.18	48.02	90.50	42.48	QP
6	14.68	35.10	21.18	56.28	81.50	25.22	QP

Version H(Adapter: ADS-65HI-19A-124060F, NFC antenna Model:DS2-52):

	Freq.(MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin dB	Remark
1	13.16	32.08	20.18	52.26	80.50	28.24	QP
2	13.49	34.77	20.18	54.95	90.50	35.55	QP
3	13.56	55.20	20.18	75.38	124.00	48.62	QP
4	13.57	34.19	20.18	54.37	90.50	36.13	QP
5	13.62	25.39	20.18	45.57	90.50	44.93	QP
6	14.70	35.14	21.18	56.32	81.50	25.18	QP

Version I(Adapter: ADS-110DL-19-1240096G, NFC antenna Model:DS2-52):

	Freq.(MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin dB	Remark
1	13.18	33.80	20.18	53.98	80.50	26.52	QP
2	13.42	30.41	20.18	50.59	90.50	39.91	QP
3	13.56	59.01	20.18	79.19	124.00	44.81	QP
4	13.60	30.65	20.18	50.83	90.50	39.67	QP
5	13.68	25.38	20.18	45.56	90.50	44.94	QP
6	14.71	30.22	21.18	51.40	81.50	30.10	QP

*Note: Factor= Antenna Factor + Cable Loss

Emission level (dBμV/m) = 20 log Emission level (μV/m).

Measured distance is 3m.

All emissions emit from non-NFC function of digital unintentional emissions. All NFC's spurious emissions are below 20dB of limits.

NOTE: All the modes have been tested and recorded worst mode in the report.

6. BANDWIDTH OF THE OPERATING FREQUENCY

6.1. Standard Applicable

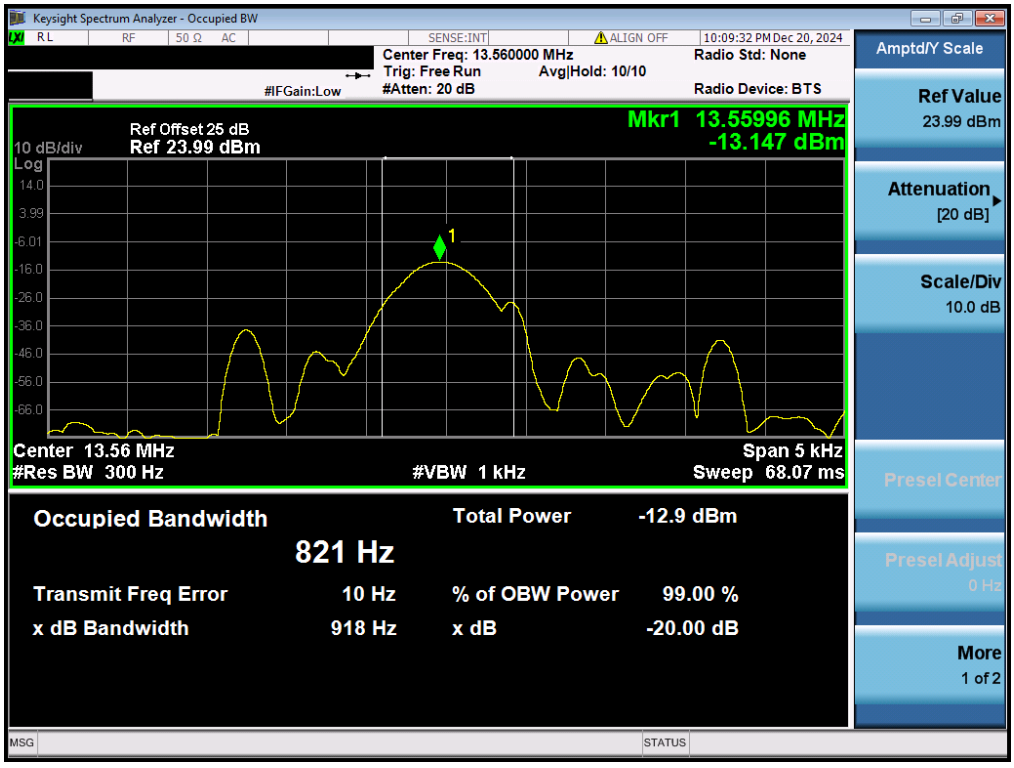
Intentional radiators must be designed to ensure that the 20 dB bandwidth of the emissions in the specific band (13.553 ~ 13.567MHz).

6.2. Test Result

Temperature	24.5℃	Humidity	53.7%
Test Engineer	Evan Ouyang	Configurations	NFC

Carrier Frequency (MHz)	20dB Bandwidth (KHz)	F_L (MHz)	F_H (MHz)
13.56	0.918	13.559541	13.560459

Please refer to the test plot:



7. FREQUENCY STABILITY MEASUREMENT

7.1. Standard Applicable

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% (100ppm) of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a full charged battery.

7.2. Test Result

Temperature	24.5℃	Humidity	53.7%
Test Engineer	Evan Ouyang	Configurations	NFC

Voltage vs. Frequency Stability

Voltage(V)	Measurement Frequency (MHz)	Deviation (KHz)	Deviation (ppm)	Limit (ppm)
DC 26.4V	13.560025	0.025	1.83	100
DC 24.0V	13.560033	0.033	2.41	100
DC 21.6V	13.560042	0.042	3.08	100

Temperature vs. Frequency Stability

Temperature (℃)	Measurement Frequency (MHz)	Deviation (KHz)	Deviation (ppm)	Limit (ppm)
-20	13.560048	0.048	3.52	100
-10	13.560062	0.062	4.60	100
0	13.560031	0.031	2.32	100
10	13.560048	0.048	3.57	100
20	13.560020	0.020	1.44	100
30	13.560033	0.033	2.41	100
40	13.560044	0.044	3.26	100
45	13.560039	0.039	2.85	100

8. LINE CONDUCTED EMISSIONS

8.1. Standard Applicable

According to §15.207(a): For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range are listed as follows:

Frequency Range (MHz)	Limits (dBμV)	
	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

* Decreasing linearly with the logarithm of the frequency

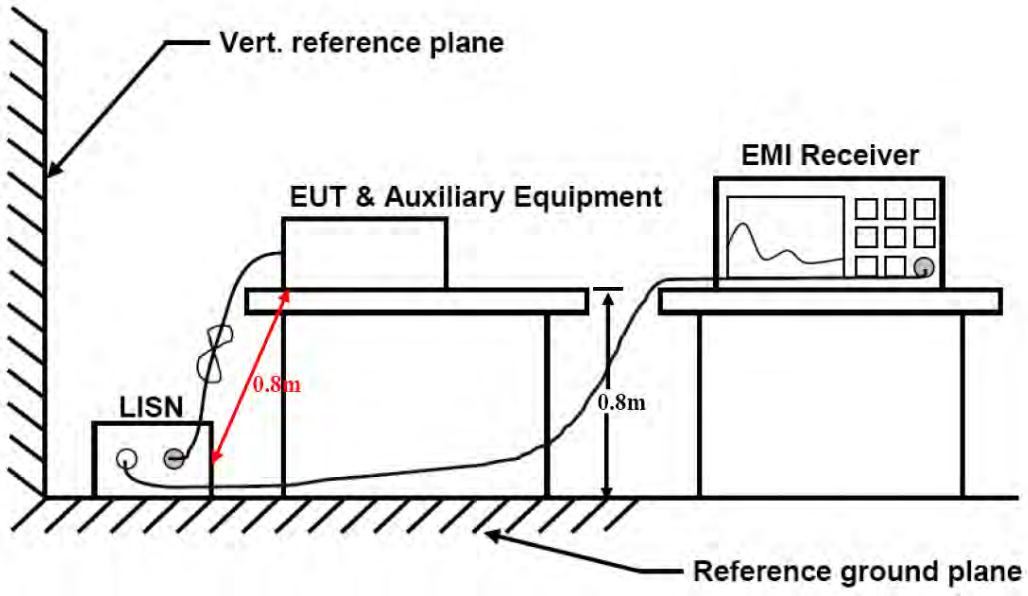
DISTURBANCE Calculation

The AC mains conducted disturbance is calculated by adding the 10dB Pulse Limiter and Cable Factor and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

CD (dBuV) = RA (dBuV) + PL (dB) + CL (dB)

Where CD = Conducted Disturbance	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	PL = 10 dB Pulse Limiter Factor

8.2. Block Diagram of Test Setup



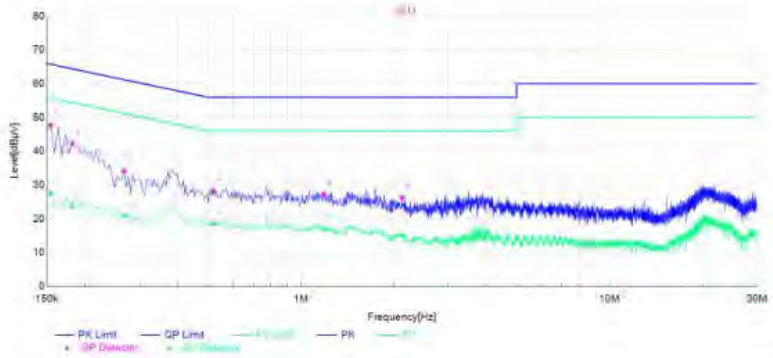
8.3. Test Results

Temperature	24.5℃	Humidity	53.7%
Test Engineer	Evan Ouyang	Configurations	NFC

Version A:
Adapter: ADS-65HI-19A-124060F

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

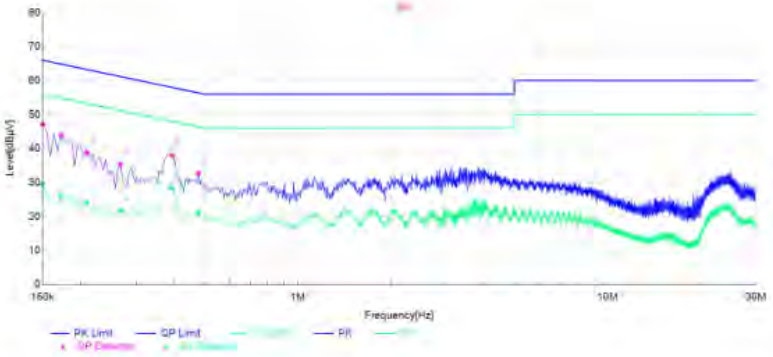
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1545	37.38	17.19	10.33	47.71	27.52	65.75	55.75	18.04	28.23	L1	PASS
2	0.1815	32.21	13.30	10.20	42.41	23.50	64.42	54.42	22.01	30.92	L1	PASS
3	0.267	24.06	11.02	10.11	34.17	21.13	61.21	51.21	27.04	30.08	L1	PASS
4	0.519	18.05	8.23	10.24	28.29	18.47	56.00	46.00	27.71	27.53	L1	PASS
5	1.185	17.03	6.87	10.21	27.24	17.08	56.00	46.00	28.76	28.92	L1	PASS
6	2.1255	15.99	4.81	10.28	26.27	15.09	56.00	46.00	29.73	30.91	L1	PASS

Note:1. Result (dBμV) = Reading (dBμV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	36.78	19.21	10.35	47.13	29.56	66.00	56.00	18.87	26.44	N	PASS
2	0.1725	33.82	15.97	10.24	44.06	26.21	64.84	54.84	20.78	28.63	N	PASS
3	0.2085	28.70	14.11	10.15	38.85	24.26	63.26	53.26	24.41	29.00	N	PASS
4	0.267	25.24	11.75	10.11	35.35	21.86	61.21	51.21	25.86	29.35	N	PASS
5	0.393	27.77	18.38	10.16	37.93	28.54	58.00	48.00	20.07	19.46	N	PASS
6	0.4785	22.50	11.11	10.24	32.74	21.35	56.37	46.37	23.63	25.02	N	PASS

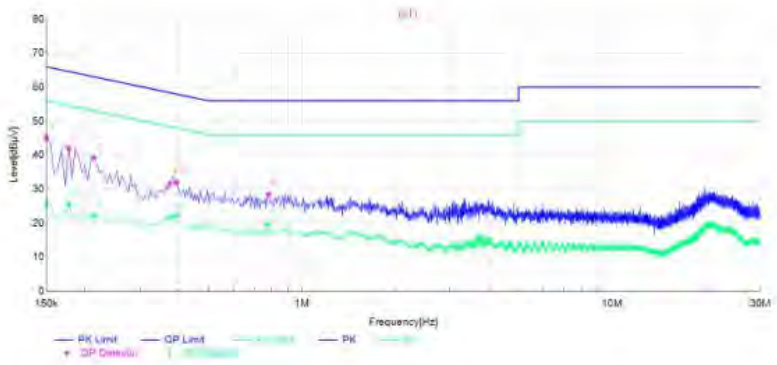
Note:1. Result (dBμV) = Reading (dBμV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Adapter: CYSE65-240250

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

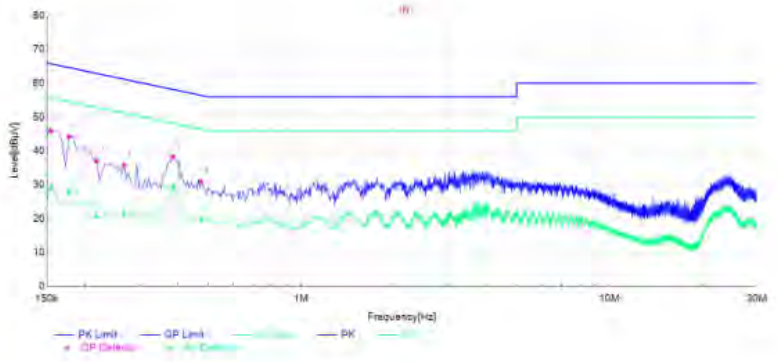
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	34.94	15.59	10.35	45.29	25.94	66.00	56.00	20.71	30.06	L1	PASS
2	0.177	31.95	15.49	10.22	42.17	25.71	64.63	54.63	22.46	28.92	L1	PASS
3	0.213	29.22	12.01	10.14	39.36	22.15	63.09	53.09	23.73	30.94	L1	PASS
4	0.375	21.38	11.28	10.15	31.53	21.43	58.39	48.39	26.86	26.96	L1	PASS
5	0.393	21.85	11.97	10.16	32.01	22.13	58.00	48.00	25.99	25.87	L1	PASS
6	0.78	18.28	9.45	10.25	28.53	19.70	56.00	46.00	27.47	26.30	L1	PASS

Note:1. Result (dBμV) = Reading (dBμV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1545	35.70	18.70	10.33	46.03	29.03	65.75	55.75	19.72	26.72	N	PASS
2	0.177	34.02	17.91	10.22	44.24	28.13	64.63	54.63	20.39	26.50	N	PASS
3	0.2175	26.90	10.49	10.14	37.04	20.63	62.91	52.91	25.87	32.28	N	PASS
4	0.267	25.63	11.73	10.11	35.74	21.84	61.21	51.21	25.47	29.37	N	PASS
5	0.384	28.14	18.90	10.15	38.29	29.05	58.19	48.19	19.90	19.14	N	PASS
6	0.474	20.61	9.73	10.24	30.85	19.97	56.44	46.44	25.59	26.47	N	PASS

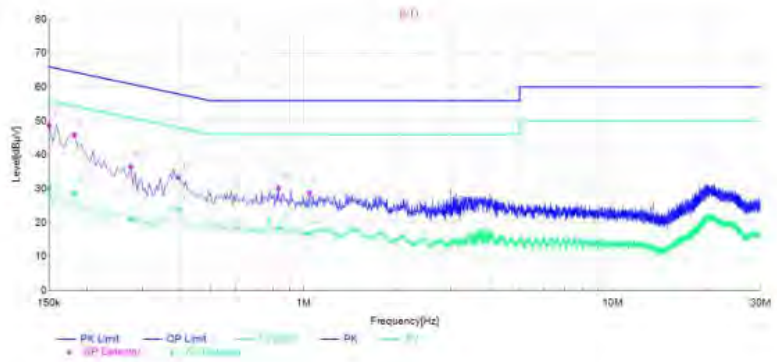
Note:1. Result (dBμV) = Reading (dBμV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Version B:
Adapter: ADS-65HI-19A-124060F

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

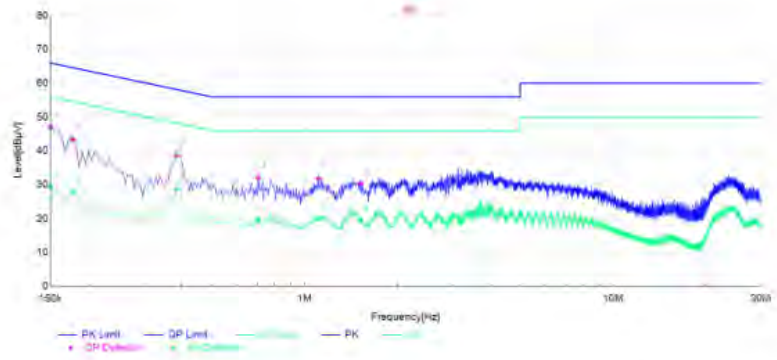
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	38.41	19.82	10.35	48.76	30.17	66.00	56.00	17.24	25.83	L1	PASS
2	0.1815	35.71	18.45	10.20	45.91	28.65	64.42	54.42	18.51	25.77	L1	PASS
3	0.276	26.47	10.98	10.11	36.58	21.09	60.94	50.94	24.36	29.85	L1	PASS
4	0.393	23.14	13.68	10.16	33.30	23.84	58.00	48.00	24.70	24.16	L1	PASS
5	0.8295	20.03	8.03	10.24	30.27	18.27	56.00	46.00	25.73	27.73	L1	PASS
6	1.0455	18.53	6.43	10.20	28.73	16.63	56.00	46.00	27.27	29.37	L1	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	36.64	19.35	10.35	46.99	29.70	66.00	56.00	19.01	26.30	N	PASS
2	0.177	33.10	17.62	10.22	43.32	27.84	64.63	54.63	21.31	26.79	N	PASS
3	0.384	28.40	18.42	10.15	38.55	28.57	58.19	48.19	19.64	19.62	N	PASS
4	0.708	21.83	9.57	10.23	32.06	19.80	56.00	46.00	23.94	26.20	N	PASS
5	1.1085	21.63	9.79	10.21	31.84	20.00	56.00	46.00	24.16	26.00	N	PASS
6	1.518	20.12	9.14	10.24	30.36	19.38	56.00	46.00	25.64	26.62	N	PASS

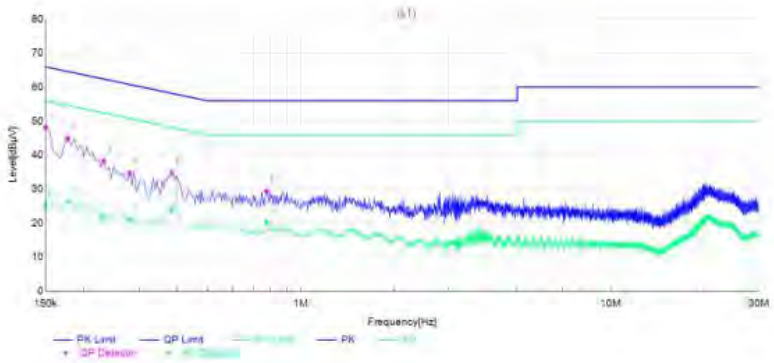
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Adapter: CYSE65-240250

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

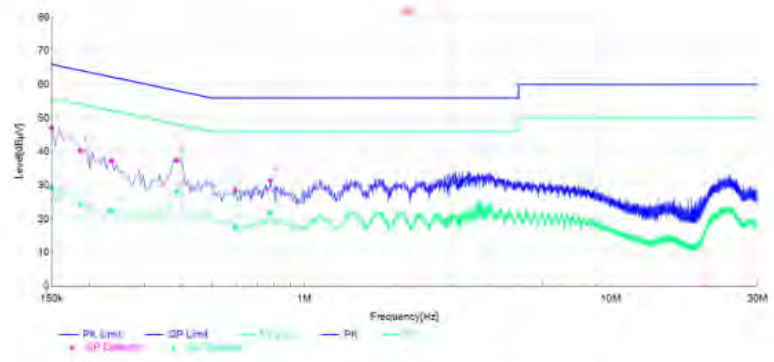
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	37.83	14.62	10.35	48.18	24.97	66.00	56.00	17.82	31.03	L1	PASS
2	0.177	34.61	16.26	10.22	44.83	26.48	64.63	54.63	19.80	28.15	L1	PASS
3	0.231	28.06	11.57	10.13	38.19	21.70	62.41	52.41	24.22	30.71	L1	PASS
4	0.2805	24.66	10.99	10.11	34.77	21.10	60.80	50.80	26.03	29.70	L1	PASS
5	0.384	24.59	14.05	10.15	34.74	24.20	58.19	48.19	23.45	23.99	L1	PASS
6	0.7755	19.19	10.03	10.25	29.44	20.28	56.00	46.00	26.56	25.72	L1	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	36.81	18.96	10.35	47.16	29.31	66.00	56.00	18.84	26.69	N	PASS
2	0.186	30.26	14.32	10.18	40.44	24.50	64.21	54.21	23.77	29.71	N	PASS
3	0.2355	27.27	12.36	10.13	37.40	22.49	62.25	52.25	24.85	29.76	N	PASS
4	0.384	27.23	17.92	10.15	37.38	28.07	58.19	48.19	20.81	20.12	N	PASS
5	0.5955	18.36	7.29	10.19	28.55	17.48	56.00	46.00	27.45	28.52	N	PASS
6	0.7755	21.14	11.70	10.25	31.39	21.95	56.00	46.00	24.61	24.05	N	PASS

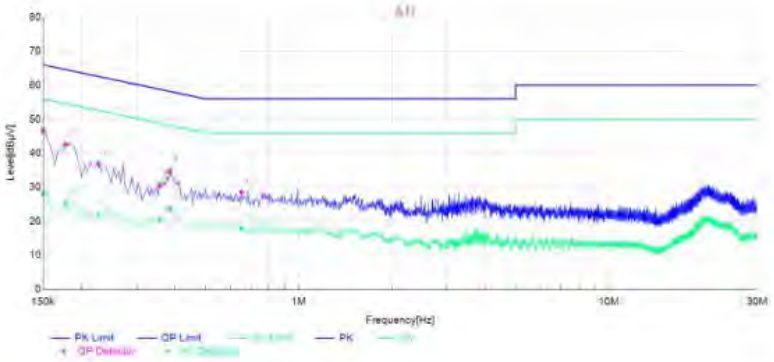
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Version C:
Adapter: ADS-110DL-19-1240096G

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

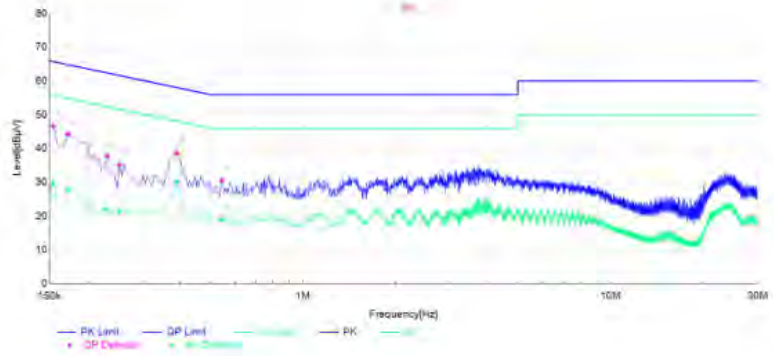
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	36.31	17.77	10.35	46.66	28.12	66.00	56.00	19.34	27.88	L1	PASS
2	0.177	32.29	14.70	10.22	42.51	24.92	64.63	54.63	22.12	29.71	L1	PASS
3	0.2265	26.57	11.97	10.14	36.71	22.11	62.58	52.58	25.87	30.47	L1	PASS
4	0.357	20.49	10.29	10.14	30.63	20.43	58.80	48.80	28.17	28.37	L1	PASS
5	0.384	24.57	13.30	10.15	34.72	23.45	58.19	48.19	23.47	24.74	L1	PASS
6	0.654	18.33	7.64	10.21	28.54	17.85	56.00	46.00	27.46	28.15	L1	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1545	36.41	19.65	10.33	46.74	29.98	65.75	55.75	19.01	25.77	N	PASS
2	0.1725	34.09	17.53	10.24	44.33	27.77	64.84	54.84	20.51	27.07	N	PASS
3	0.231	27.77	11.95	10.13	37.90	22.08	62.41	52.41	24.51	30.33	N	PASS
4	0.2535	25.10	11.44	10.12	35.22	21.56	61.64	51.64	26.42	30.08	N	PASS
5	0.3885	28.55	20.11	10.15	38.70	30.26	58.10	48.10	19.40	17.84	N	PASS
6	0.546	20.42	8.76	10.22	30.64	18.98	56.00	46.00	25.36	27.02	N	PASS

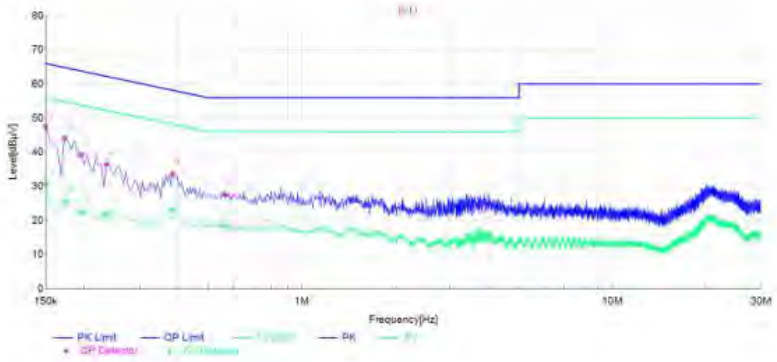
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Version D:
Adapter: ADS-65HI-19A-124060F

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

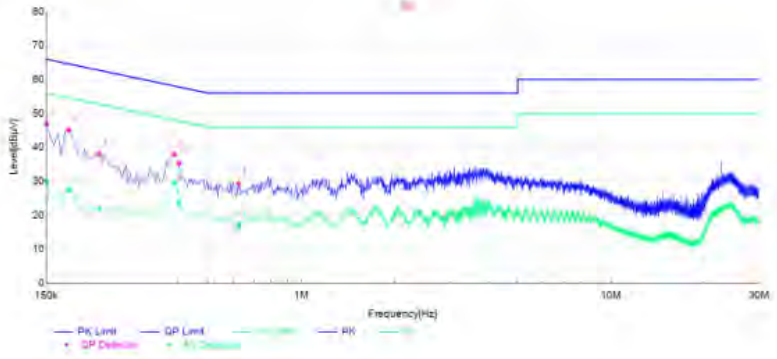
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	37.19	20.33	10.35	47.54	30.68	66.00	56.00	18.46	25.32	L1	PASS
2	0.1725	33.95	15.36	10.24	44.19	25.60	64.84	54.84	20.65	29.24	L1	PASS
3	0.195	29.14	12.34	10.16	39.30	22.50	63.82	53.82	24.52	31.32	L1	PASS
4	0.2355	26.34	11.60	10.13	36.47	21.73	62.25	52.25	25.78	30.52	L1	PASS
5	0.384	23.48	13.03	10.15	33.63	23.18	58.19	48.19	24.56	25.01	L1	PASS
6	0.564	17.52	8.26	10.21	27.73	18.47	56.00	46.00	28.27	27.53	L1	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	36.61	19.77	10.35	46.96	30.12	66.00	56.00	19.04	25.88	N	PASS
2	0.177	34.92	17.13	10.22	45.14	27.35	64.63	54.63	19.49	27.28	N	PASS
3	0.222	27.96	11.76	10.14	38.10	21.90	62.74	52.74	24.64	30.84	N	PASS
4	0.3885	27.82	19.42	10.15	37.97	29.57	58.10	48.10	20.13	18.53	N	PASS
5	0.402	25.17	13.70	10.17	35.34	23.87	57.81	47.81	22.47	23.94	N	PASS
6	0.627	19.10	6.54	10.20	29.30	16.74	56.00	46.00	26.70	29.26	N	PASS

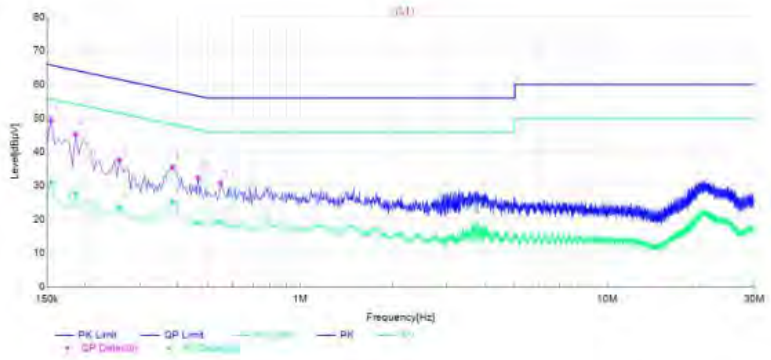
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Adapter: CYSE65-240250

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

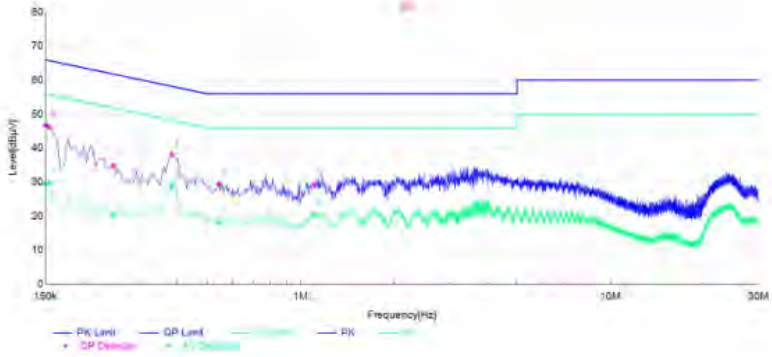
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1545	38.98	20.81	10.33	49.31	31.14	65.75	55.75	16.44	24.61	L1	PASS
2	0.186	35.12	17.56	10.18	45.30	27.74	64.21	54.21	18.91	26.47	L1	PASS
3	0.258	27.50	13.43	10.12	37.62	23.55	61.50	51.50	23.88	27.95	L1	PASS
4	0.384	25.37	15.09	10.15	35.52	25.24	58.19	48.19	22.67	22.95	L1	PASS
5	0.465	22.17	8.73	10.23	32.40	18.96	56.60	46.60	24.20	27.64	L1	PASS
6	0.5505	20.59	9.12	10.22	30.81	19.34	56.00	46.00	25.19	26.66	L1	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	36.38	19.05	10.35	46.73	29.40	66.00	56.00	19.27	26.60	N	PASS
2	0.1545	35.89	19.38	10.33	46.22	29.71	65.75	55.75	19.53	26.04	N	PASS
3	0.249	24.68	10.13	10.12	34.80	20.25	61.79	51.79	26.99	31.54	N	PASS
4	0.384	27.98	19.01	10.15	38.13	29.16	58.19	48.19	20.06	19.03	N	PASS
5	0.546	19.26	7.76	10.22	29.48	17.98	56.00	46.00	26.52	28.02	N	PASS
6	1.1085	19.03	10.09	10.21	29.24	20.30	56.00	46.00	26.76	25.70	N	PASS

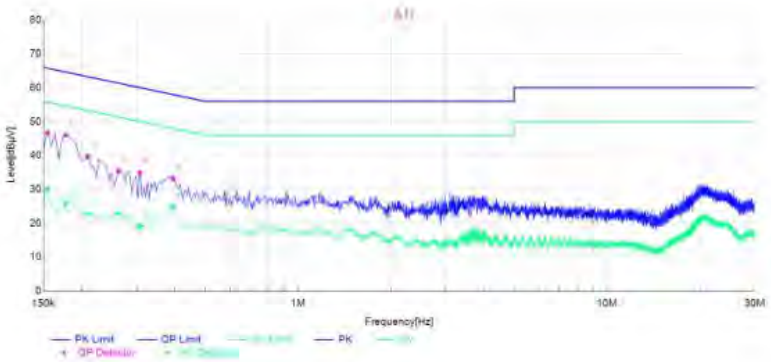
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Version E:
Adapter: ADS-65HI-19A-124060F

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

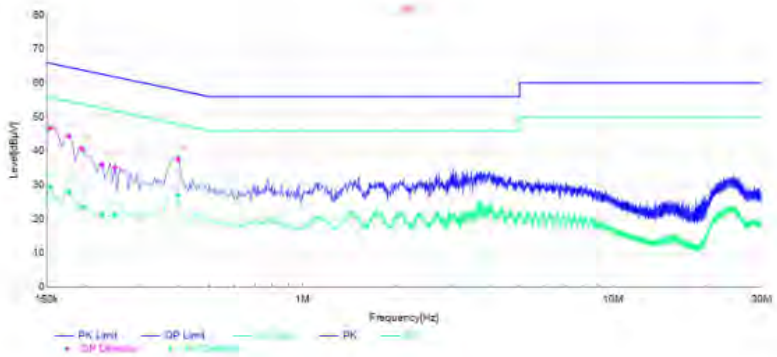
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1545	36.35	19.80	10.33	46.68	30.13	65.75	55.75	19.07	25.62	L1	PASS
2	0.177	35.74	15.63	10.22	45.96	25.85	64.63	54.63	18.67	28.78	L1	PASS
3	0.2085	29.58	12.57	10.15	39.73	22.72	63.26	53.26	23.53	30.54	L1	PASS
4	0.2625	25.41	12.81	10.12	35.53	22.93	61.35	51.35	25.82	28.42	L1	PASS
5	0.3075	24.76	9.13	10.11	34.87	19.24	60.04	50.04	25.17	30.80	L1	PASS
6	0.393	22.95	14.75	10.16	33.11	24.91	58.00	48.00	24.89	23.09	L1	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1545	36.42	19.15	10.33	46.75	29.48	65.75	55.75	19.00	26.27	N	PASS
2	0.177	34.29	17.78	10.22	44.51	28.00	64.63	54.63	20.12	26.63	N	PASS
3	0.195	30.38	13.35	10.16	40.54	23.51	63.82	53.82	23.28	30.31	N	PASS
4	0.2265	25.77	11.46	10.14	35.91	21.60	62.58	52.58	26.67	30.98	N	PASS
5	0.249	25.04	11.01	10.12	35.16	21.13	61.79	51.79	26.63	30.66	N	PASS
6	0.3975	27.36	16.81	10.16	37.52	26.97	57.91	47.91	20.39	20.94	N	PASS

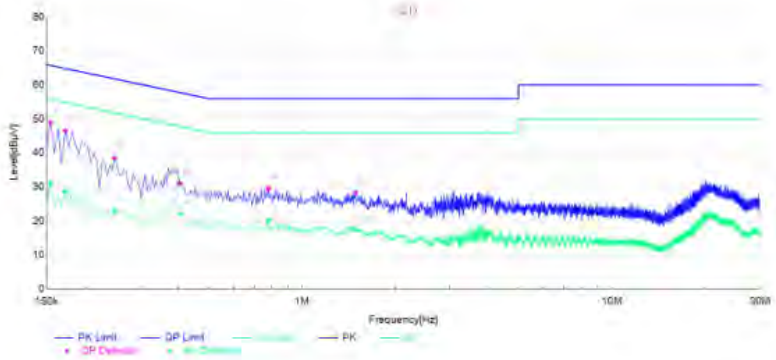
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Adapter: CYSE65-240250

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

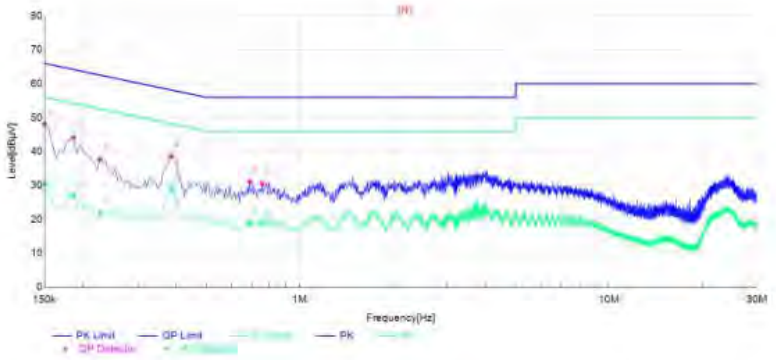
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1545	38.49	20.80	10.33	48.82	31.13	65.75	55.75	16.93	24.62	L1	PASS
2	0.1725	36.29	18.43	10.24	46.53	28.67	64.84	54.84	18.31	26.17	L1	PASS
3	0.249	28.37	12.93	10.12	38.49	23.05	61.79	51.79	23.30	28.74	L1	PASS
4	0.402	21.01	11.91	10.17	31.18	22.08	57.81	47.81	26.63	25.73	L1	PASS
5	0.78	19.31	9.97	10.25	29.56	20.22	56.00	46.00	26.44	25.78	L1	PASS
6	1.491	18.07	7.01	10.23	28.30	17.24	56.00	46.00	27.70	28.76	L1	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	37.80	20.21	10.35	48.15	30.56	66.00	56.00	17.85	25.44	N	PASS
2	0.186	33.97	16.80	10.18	44.15	26.98	64.21	54.21	20.06	27.23	N	PASS
3	0.2265	27.59	11.63	10.14	37.73	21.77	62.58	52.58	24.85	30.81	N	PASS
4	0.384	28.47	18.92	10.15	38.62	29.07	58.19	48.19	19.57	19.12	N	PASS
5	0.69	20.88	8.69	10.22	31.10	18.91	56.00	46.00	24.90	27.09	N	PASS
6	0.7575	20.39	8.50	10.24	30.63	18.74	56.00	46.00	25.37	27.26	N	PASS

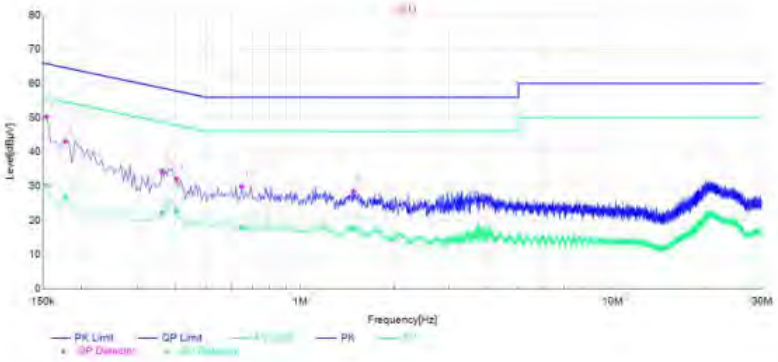
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Version F:
Adapter: ADS-110DL-19-1240096G

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

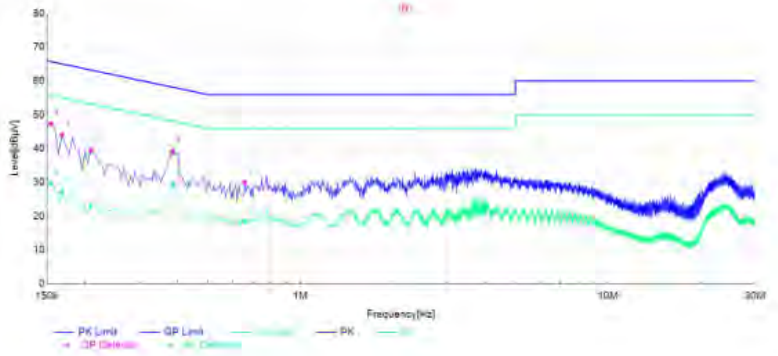
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1545	39.99	19.92	10.33	50.32	30.25	65.75	55.75	15.43	25.50	L1	PASS
2	0.177	32.87	16.68	10.22	43.09	26.90	64.63	54.63	21.54	27.73	L1	PASS
3	0.3615	24.26	12.16	10.14	34.40	22.30	58.69	48.69	24.29	26.39	L1	PASS
4	0.402	21.86	12.47	10.17	32.03	22.64	57.81	47.81	25.78	25.17	L1	PASS
5	0.6495	19.66	7.78	10.21	29.87	17.99	56.00	46.00	26.13	28.01	L1	PASS
6	1.482	18.28	7.13	10.23	28.51	17.36	56.00	46.00	27.49	28.64	L1	PASS

Note:1. Result (dBμV) = Reading (dBμV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG Result	QP Limit	AVG. Limit	QP Margin	AVG Margin	Line	Remark
1	0.1545	37.03	19.43	10.33	47.36	29.76	65.75	55.75	18.39	25.99	N	PASS
2	0.1545	37.03	19.43	10.33	47.36	29.76	65.75	55.75	18.39	25.99	N	PASS
3	0.168	33.73	16.90	10.27	44.00	27.17	65.06	55.06	21.06	27.89	N	PASS
4	0.2085	29.46	12.95	10.15	39.61	23.10	63.26	53.26	23.65	30.16	N	PASS
5	0.384	28.90	19.01	10.15	39.05	29.16	58.19	48.19	19.14	19.03	N	PASS
6	0.6585	19.73	8.30	10.21	29.94	18.51	56.00	46.00	26.06	27.49	N	PASS

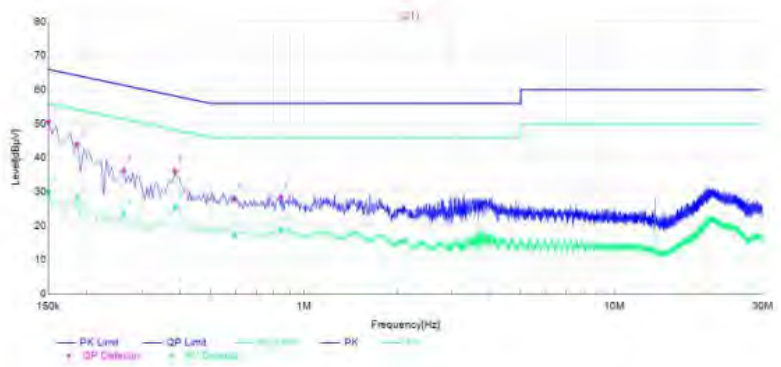
Note:1. Result (dBμV) = Reading (dBμV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Version G:
Adapter: ADS-65HI-19A-124060F

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

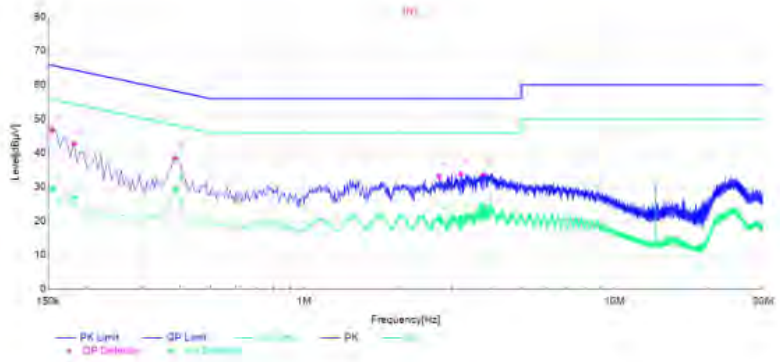
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	40.22	19.72	10.35	50.57	30.07	66.00	56.00	15.43	25.93	L1	PASS
2	0.186	33.76	18.08	10.18	43.94	28.26	64.21	54.21	20.27	25.95	L1	PASS
3	0.2625	26.09	13.31	10.12	36.21	23.43	61.35	51.35	25.14	27.92	L1	PASS
4	0.384	26.02	15.40	10.15	36.17	25.55	58.19	48.19	22.02	22.64	L1	PASS
5	0.5955	17.99	6.94	10.19	28.18	17.13	56.00	46.00	27.82	28.87	L1	PASS
6	0.843	18.20	8.68	10.24	28.44	18.92	56.00	46.00	27.56	27.08	L1	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1545	36.29	18.87	10.33	46.62	29.20	65.75	55.75	19.13	26.55	N	PASS
2	0.1815	32.46	16.71	10.20	42.66	26.91	64.42	54.42	21.76	27.51	N	PASS
3	0.384	28.24	19.15	10.15	38.39	29.30	58.19	48.19	19.80	18.89	N	PASS
4	2.724	22.87	10.04	10.32	33.19	20.36	56.00	46.00	22.81	25.64	N	PASS
5	3.1965	23.50	10.81	10.35	33.85	21.16	56.00	46.00	22.15	24.84	N	PASS
6	3.7995	23.36	13.26	10.36	33.72	23.62	56.00	46.00	22.28	22.38	N	PASS

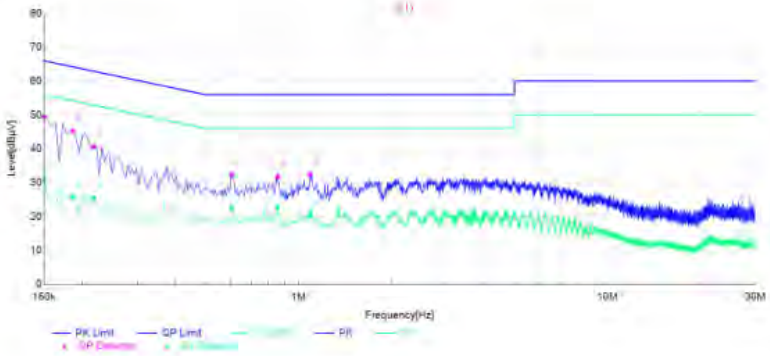
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Adapter: CYSE65-240250

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

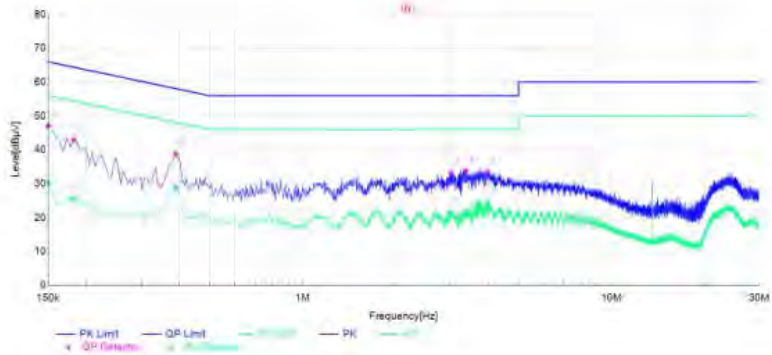
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	39.10	20.71	10.35	49.45	31.06	66.00	56.00	16.55	24.94	L1	PASS
2	0.186	35.06	15.69	10.18	45.24	25.87	64.21	54.21	18.97	28.34	L1	PASS
3	0.2175	30.57	15.41	10.14	40.71	25.55	62.91	52.91	22.20	27.36	L1	PASS
4	0.609	22.30	12.67	10.20	32.50	22.87	56.00	46.00	23.50	23.13	L1	PASS
5	0.8565	21.57	12.60	10.24	31.81	22.84	56.00	46.00	24.19	23.16	L1	PASS
6	1.086	22.39	10.18	10.21	32.60	20.39	56.00	46.00	23.40	25.61	L1	PASS

Note:1. Result (dBμV) = Reading (dBμV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	36.79	19.99	10.35	47.14	30.34	66.00	56.00	18.86	25.66	N	PASS
2	0.1815	32.68	15.22	10.20	42.88	25.42	64.42	54.42	21.54	29.00	N	PASS
3	0.3885	28.55	18.86	10.15	38.70	29.01	58.10	48.10	19.40	19.09	N	PASS
4	3.0255	22.88	11.16	10.34	33.22	21.50	56.00	46.00	22.78	24.50	N	PASS
5	3.381	23.50	10.38	10.35	33.85	20.73	56.00	46.00	22.15	25.27	N	PASS
6	3.957	23.09	14.19	10.37	33.46	24.56	56.00	46.00	22.54	21.44	N	PASS

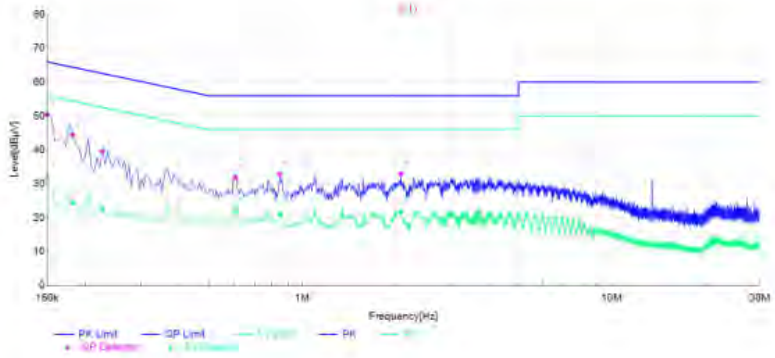
Note:1. Result (dBμV) = Reading (dBμV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Version H:
Adapter: ADS-65HI-19A-124060F

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

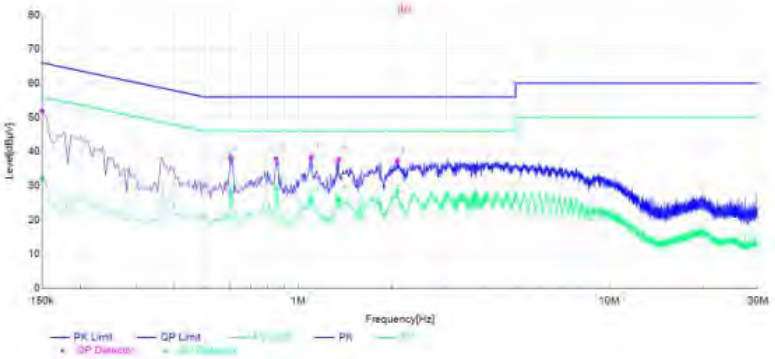
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	40.13	21.43	10.35	50.48	31.78	66.00	56.00	15.52	24.22	L1	PASS
2	0.1815	34.25	14.27	10.20	44.45	24.47	64.42	54.42	19.97	29.95	L1	PASS
3	0.2265	29.44	12.79	10.14	39.58	22.93	62.58	52.58	23.00	29.65	L1	PASS
4	0.609	21.74	11.69	10.20	31.94	21.89	56.00	46.00	24.06	24.11	L1	PASS
5	0.8475	22.59	10.87	10.24	32.83	21.11	56.00	46.00	23.17	24.89	L1	PASS
6	2.085	22.66	11.52	10.28	32.94	21.80	56.00	46.00	23.06	24.20	L1	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	41.51	21.71	10.35	51.86	32.06	66.00	56.00	14.14	23.94	N	PASS
2	0.6045	28.21	18.09	10.19	38.40	28.28	56.00	46.00	17.60	17.72	N	PASS
3	0.8475	27.67	18.97	10.24	37.91	29.21	56.00	46.00	18.09	16.79	N	PASS
4	1.104	28.16	15.33	10.21	38.37	25.54	56.00	46.00	17.63	20.46	N	PASS
5	1.3515	27.53	15.74	10.22	37.75	25.96	56.00	46.00	18.25	20.04	N	PASS
6	2.085	27.06	18.12	10.28	37.34	28.40	56.00	46.00	18.66	17.60	N	PASS

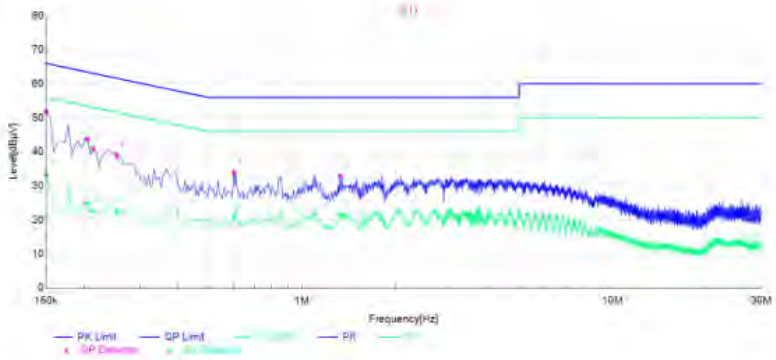
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Adapter: CYSE65-240250

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

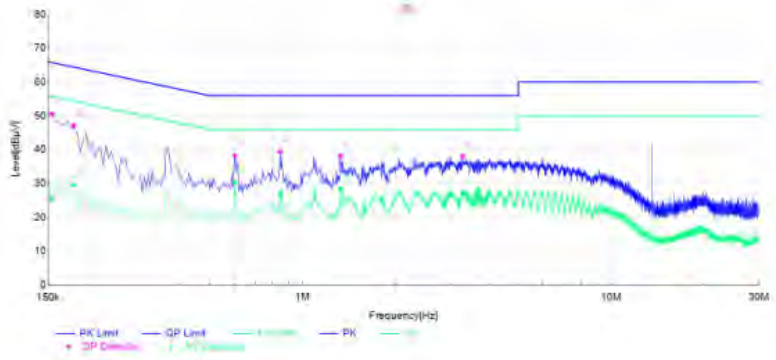
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	41.38	23.06	10.35	51.73	33.41	66.00	56.00	14.27	22.59	L1	PASS
2	0.204	33.63	14.75	10.15	43.78	24.90	63.45	53.45	19.67	28.55	L1	PASS
3	0.213	30.76	12.64	10.14	40.90	22.78	63.09	53.09	22.19	30.31	L1	PASS
4	0.2535	28.88	12.10	10.12	39.00	22.22	61.64	51.64	22.64	29.42	L1	PASS
5	0.6045	23.72	10.63	10.19	33.91	20.82	56.00	46.00	22.09	25.18	L1	PASS
6	1.329	22.68	11.47	10.22	32.90	21.69	56.00	46.00	23.10	24.31	L1	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1545	40.19	15.23	10.33	50.52	25.56	65.75	55.75	15.23	30.19	N	PASS
2	0.1815	36.91	19.37	10.20	47.11	29.57	64.42	54.42	17.31	24.85	N	PASS
3	0.6045	28.06	20.15	10.19	38.25	30.34	56.00	46.00	17.75	15.66	N	PASS
4	0.8475	29.14	16.87	10.24	39.38	27.11	56.00	46.00	16.62	18.89	N	PASS
5	1.329	27.91	18.19	10.22	38.13	28.41	56.00	46.00	17.87	17.59	N	PASS
6	3.309	27.72	16.88	10.35	38.07	27.23	56.00	46.00	17.93	18.77	N	PASS

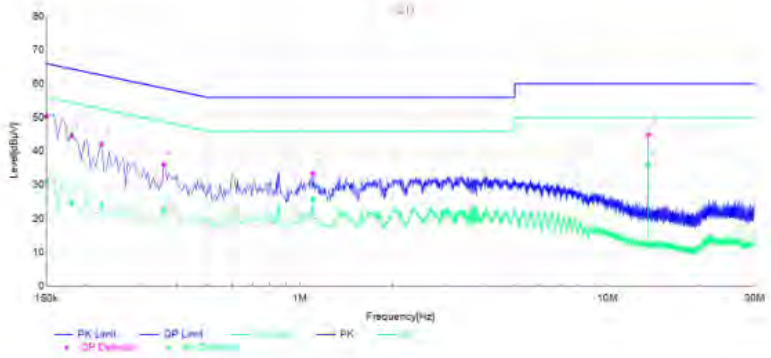
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Version I:
Adapter: ADS-110DL-19-1240096G

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

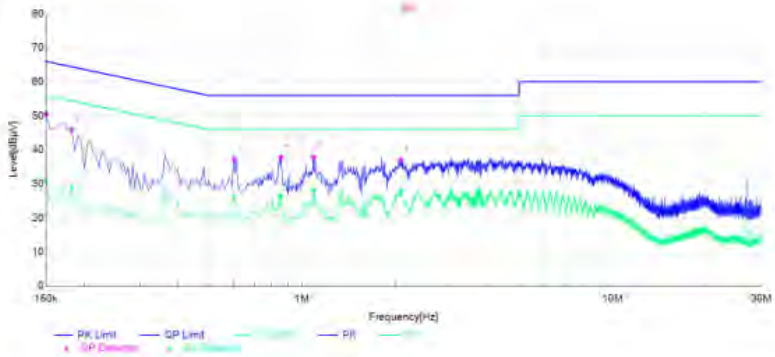
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	40.00	20.46	10.35	50.35	30.81	66.00	56.00	15.65	25.19	L1	PASS
2	0.1815	34.52	14.80	10.20	44.72	25.00	64.42	54.42	19.70	29.42	L1	PASS
3	0.2265	31.95	13.96	10.14	42.09	24.10	62.58	52.58	20.49	28.48	L1	PASS
4	0.3615	25.92	12.28	10.14	36.06	22.42	58.69	48.69	22.63	26.27	L1	PASS
5	1.104	23.19	15.58	10.21	33.40	25.79	56.00	46.00	22.60	20.21	L1	PASS
6	13.56	33.94	25.03	10.88	44.82	35.91	60.00	50.00	15.18	14.09	L1	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.15	40.25	20.80	10.35	50.60	31.15	66.00	56.00	15.40	24.85	N	PASS
2	0.1815	35.73	18.47	10.20	45.93	28.67	64.42	54.42	18.49	25.75	N	PASS
3	0.6045	27.31	16.24	10.19	37.50	26.43	56.00	46.00	18.50	19.57	N	PASS
4	0.8565	27.61	16.07	10.24	37.85	26.31	56.00	46.00	18.15	19.69	N	PASS
5	1.086	27.69	17.98	10.21	37.90	28.19	56.00	46.00	18.10	17.81	N	PASS
6	2.085	26.56	17.73	10.28	36.84	28.01	56.00	46.00	19.16	17.99	N	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Note: All modes have been tested and the worst mode is recorded in the report, NFC has two optional antennas, with the worst mode recorded in the report (NFC antenna Model:DS2-52).

9. ANTENNA REQUIREMENTS

9.1. Standard Applicable

According to antenna requirement of §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 re-placed by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

9.2. Antenna Connected Construction

9.2.1. Standard Applicable

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.

9.2.2. Antenna Connector Construction

The gains of antenna used for transmitting is 0dBi, and the antenna is a Loop antenna connect to PCB board and no consideration of replacement. Please see EUT photo for details.

9.2.3. Results: Compliance.

10. TEST SETUP PHOTOS OF THE EUT

Photo of Radiated Emissions Measurement

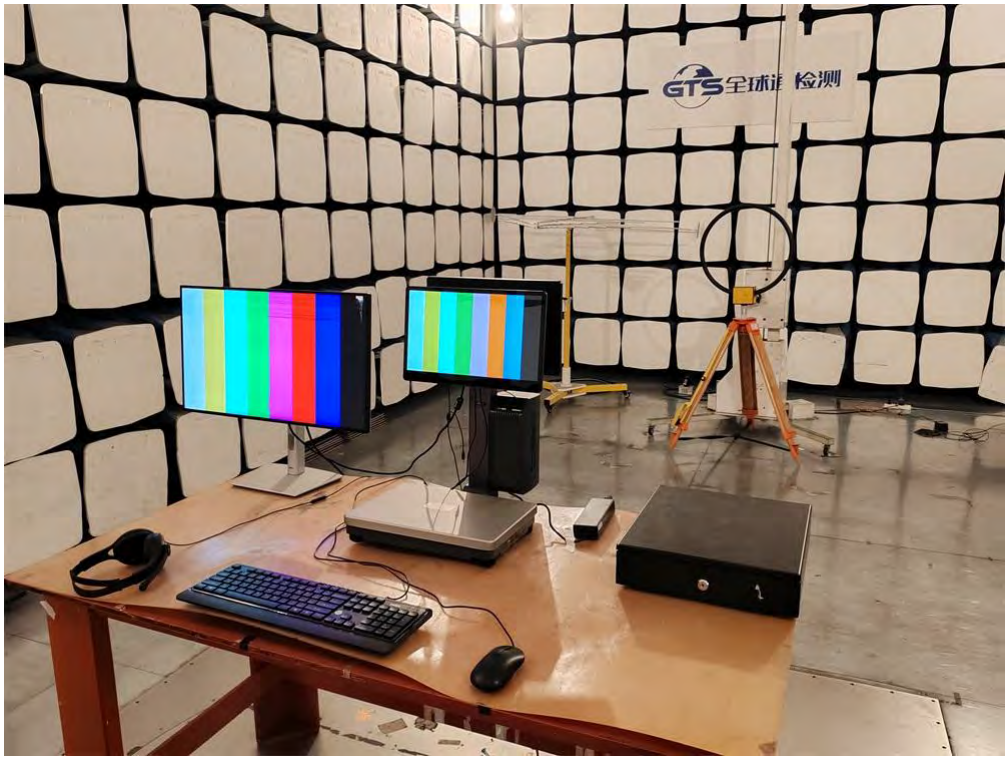


Fig. 1

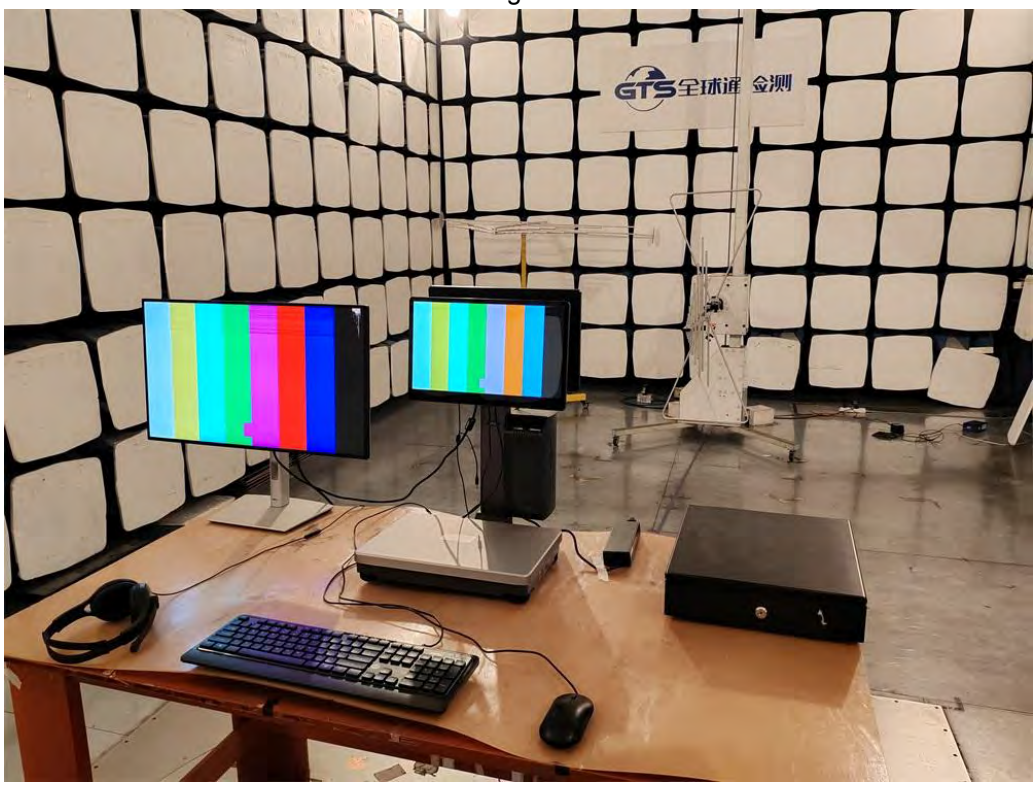


Fig. 2

Photo of Conducted Emission Measurement

Fig. 3

11. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

Reference to the **GTS20241108022-2-01.**

.....End of Report.....