



Shenzhen CTA Testing Technology Co., Ltd.
 Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

FCC PART 15 SUBPART C TEST REPORT FCC PART 15.247

Report Reference No.....: CTA24103100101

FCC ID..... : 2AYD5-I24D02

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Date of issue.....: Sep.20, 2024

Representative Laboratory Name.: Shenzhen CTA Testing Technology Co., Ltd.

Address: Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name.....: Imin Technology Pte Ltd

Address: 11 Bishan Street 21, #03-05 Bosch Building, Singapore 573943

Test specification

Standard.....: **FCC Part 15.247: Operation within the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz**

TRF Originator.....: Shenzhen Global Test Service Co.,Ltd.

Master TRF.....: Dated 2014-12

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Test item description POS Device

Trade Mark:

Manufacturer: Imin Technology Pte Ltd

Model/Type reference: I24D02

List Models: N/A

Modulation Type.....: GFSK,π/4-DQPSK,8DPSK

Operation Frequency.....: From 2402MHz to 2480MHz

Hardware Version: N/A

Software Version: N/A

Rating: DC 24V/1.5A by adapter

Result: **PASS**

TEST REPORT

Test Report No. : CTA24103100101	Sep.20, 2024 Date of issue
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Equipment under Test : POS Device

Model /Type : I24D02

Listed 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
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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.

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1. TEST STANDARDS

The tests were performed according to following standards:

[FCC Rules Part 15.247](#): Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.

[ANSI C63.10-2020](#): American National Standard for Testing Unlicensed Wireless Devices


[KDB 558074 D01 15.247 Meas Guidance v05r02](#): Digital Transmission Systems (DTS) and Frequency Hopping measurement procedures

2. SUMMARY

2.1. General Remarks

Date of receipt of test sample	:	Aug.29, 2024
Testing commenced on	:	Aug.29, 2024
Testing concluded on	:	Sep.19, 2024

2.2. Product Description

Product Name:	POS Device
Trade Mark:	
Model/Type reference:	I24D02
List Model:	N/A
Model Declaration	N/A
Power supply:	DC 24V/1.5A by adapter
Hardware Version	N/A
Software Version	N/A
Sample ID	CTA241031001-S0001-3# CTA241031001-S0001-4#(Version A) CTA241031001-S0001-5#(Version B) CTA241031001-S0001-6#(Version C) CTA241031001-S0001-7#(Version D)
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, $\pi/4$ -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 I24D02 model has 4 versions; Version A: One large display and one small display(large display+ 10 inch small display) Version B: Only one large display Version C: Double large display Version D: One large display and one small display (large display+ 5 inch small display)	

2.3. Equipment Under Test

Power supply system utilised

Power supply voltage	:	<input type="radio"/> 230V / 50 Hz	<input type="radio"/> 120V / 60Hz
		<input type="radio"/> 12 V DC	<input checked="" type="radio"/> 24 V DC
		<input type="radio"/> Other (specified in blank below)	

DC 24.0V

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

This is a POS Device.

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

2.5. EUT operation mode

The Applicant provides communication tools software to control the EUT for staying in continuous transmitting (Duty Cycle more than 98%) and receiving mode for testing .There are 79 channels provided to the EUT. Channel 00/39/78 was selected to test.

Mode of Operations	Frequency Range (MHz)	Data Rate (Mbps)
(BDR/EDR)	2402	1/2/3
	2441	1/2/3
	2480	1/2/3
For Conducted Emission		
Test Mode		TX Mode
For Radiated Emission		
Test Mode		TX Mode

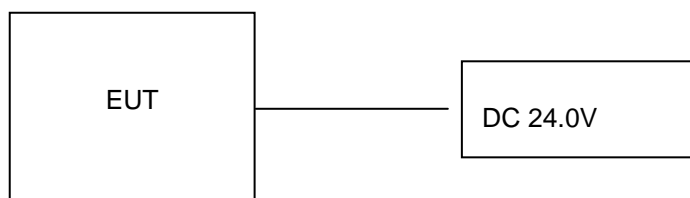
Channel	Frequency(MHz)	Channel	Frequency(MHz)
00	2402	40	2442
01	2403	41	2443
02	2404	42	2444
--	--	--	--
--	--	--	--
38	2440	78	2480
39	2441		

AC conducted emission pre-test at both at AC 120V/60Hz and AC 240V/50Hz modes, recorded worst case(AC 120V/60Hz).

Worst-case mode and channel used for 150 KHz-30 MHz power line conducted emissions was the mode and channel with the highest output power that was determined to be TX (1Mbps).

Worst-case mode and channel used for 9 KHz-1000 MHz radiated emissions was the mode and channel with the highest output power, that was determined to be TX(1Mbps-MCH).

2.6. Block Diagram of Test Setup



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

This submittal(s) (test report) is intended for **FCC ID: 2AYD5-I24D02** filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

2.8. EUT Exercise Software

The system enters the engineering mode through the instructions provided by the application (adb model), tests under continuous transmission conditions, and changes the test channel.

2.9. Special Accessories

Manufacturer	Description	Model	Serial Number	Certificate
SHENZHEN HONOR ELECTRONIC CO.,LTD.	Adapter	ADS-65HI-19A-124036F	--	SDOC
Shenzhen SOY Technology Co.,Ltd.	Adapter	SOY-2400150-332-A	--	SDOC
Jiangsu Chenyang Electron Co.,Ltd.	Adapter	CYZS36-240150	--	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
--	Electronic Scale	--	--	SDOC
--	Cashbox	--	--	SDOC

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

2.10. External I/O Cable

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

2.11. Modifications

No modifications were implemented to meet testing criteria.

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

3.2. Test Facility

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

FCC-Registration No.: 517856 Designation Number: CN1318

Shenzhen CTA Testing Technology Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA-Lab Cert. No.: 6534.01

Shenzhen CTA Testing Technology Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

3.3. Environmental conditions

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

Temperature:	15-35 ° 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 TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " and is documented in the Shenzhen CTA Testing Technology 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 CTA Testing Technology Co., Ltd. :

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	9KHz~30MHz	3.02 dB	(1)
Radiated Emission	30~1000MHz	4.06 dB	(1)
Radiated Emission	1~18GHz	5.14 dB	(1)
Radiated Emission	18-40GHz	5.38 dB	(1)
Conducted Disturbance	0.15~30MHz	2.14 dB	(1)
Output Peak power	30MHz~18GHz	0.55 dB	(1)
Power spectral density	/	0.57 dB	(1)
Spectrum bandwidth	/	1.1%	(1)
Radiated spurious emission (30MHz-1GHz)	30~1000MHz	4.10 dB	(1)
Radiated spurious emission (1GHz-18GHz)	1~18GHz	4.32 dB	(1)
Radiated spurious emission (18GHz-40GHz)	18-40GHz	5.54 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				
FCC Rules	Description of Test	Test Sample	Result	Remark
§15.247(b)(1)	Maximum Conducted Output Power	CTA241031001-S0001-3#	Compliant	Appendix A
§15.247(c)	Frequency Separation	CTA241031001-S0001-3#	Compliant	Appendix A
§15.247(c)	99% and 20 dB Bandwidth	CTA241031001-S0001-3#	Compliant	Appendix A
§15.247(a)(1)(ii)	Number of Hopping Frequency	CTA241031001-S0001-3#	Compliant	Appendix A
§15.247(a)(1)(iii)	Time Of Occupancy (Dwell Time)	CTA241031001-S0001-3#	Compliant	Appendix A
§15.209, §15.205	Conducted Spurious Emissions and Band Edges Test	CTA241031001-S0001-3#	Compliant	Appendix A
§15.209, §15.247(d)	Radiated Spurious Emissions	CTA241031001-S0001-3# CTA241031001-S0001-4# CTA241031001-S0001-5# CTA241031001-S0001-6# CTA241031001-S0001-7#	Compliant	Note 1
§15.205	Emissions at Restricted Band	CTA241031001-S0001-3#	Compliant	Appendix A
§15.207(a)	AC Conducted Emissions	CTA241031001-S0001-4# CTA241031001-S0001-5# CTA241031001-S0001-6# CTA241031001-S0001-7#	Compliant	Note 1
§15.203 §15.247(c)	Antenna Requirements	CTA241031001-S0001-3#	Compliant	Note 1
§15.247(i)§2.1091	RF Exposure	/	Compliant	Note 2

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 (MPE Report).
5. We tested all test mode and recorded worst case in report

3.6. Equipments Used during the Test

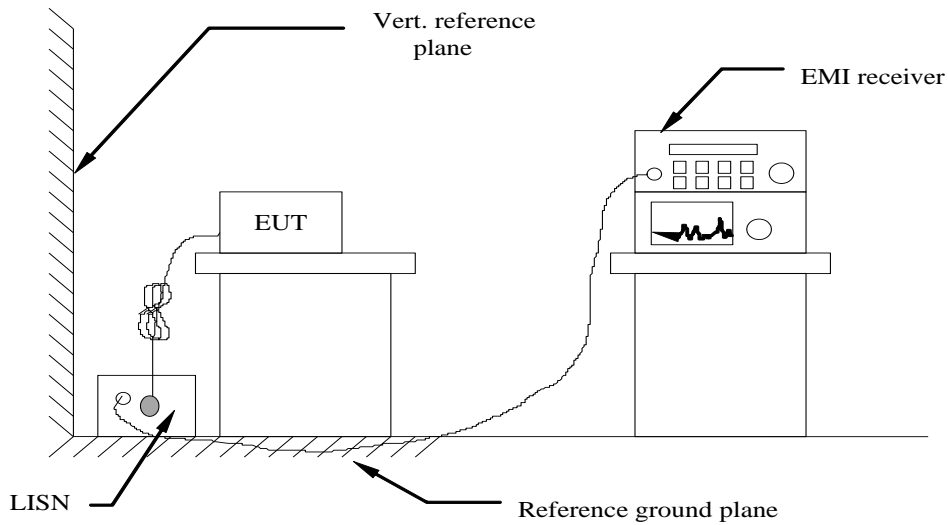
Test Equipment	Manufacturer	Model No.	Equipment No.	Calibration Date	Calibration Due Date
LISN	R&S	ENV216	CTA-308	2024/08/02	2025/08/02
LISN	R&S	ENV216	CTA-314	2024/08/02	2025/08/02
EMI Test Receiver	R&S	ESPI	CTA-307	2024/08/02	2025/08/02
EMI Test Receiver	R&S	ESCI	CTA-306	2024/08/02	2025/08/02
Spectrum Analyzer	Agilent	N9020A	CTA-301	2024/08/02	2025/08/02
Spectrum Analyzer	R&S	FSP	CTA-337	2024/08/02	2025/08/02
Vector Signal generator	Agilent	N5182A	CTA-305	2024/08/02	2025/08/02
Analog Signal Generator	R&S	SML03	CTA-304	2024/08/02	2025/08/02
Universal Radio Communication	CMW500	R&S	CTA-302	2024/08/02	2025/08/02
Temperature and humidity meter	Chigo	ZG-7020	CTA-326	2024/08/02	2025/08/02
Ultra-Broadband Antenna	Schwarzbeck	VULB9163	CTA-310	2024/08/02	2025/08/02
Horn Antenna	Schwarzbeck	BBHA 9120D	CTA-309	2024/08/02	2025/08/02
Loop Antenna	Zhinan	ZN30900C	CTA-311	2024/08/02	2025/08/02
Horn Antenna	Beijing Hangwei Dayang	OBH100400	CTA-336	2024/08/06	2027/08/05
Antenna Tower	Suzhou Keletuo electronic Technology Co., LTD	BK-*AT-BS	N/A	N/A	N/A
Amplifier	Schwarzbeck	BBV 9745	CTA-312	2024/08/02	2025/08/02
Amplifier	Taiwan chengyi	EMC051845B	CTA-313	2024/08/02	2025/08/02
Directional coupler	NARDA	4226-10	CTA-303	2024/08/02	2025/08/02
High-Pass Filter	XingBo	XBLBQ-GTA18	CTA-402	2024/08/02	2025/08/02
High-Pass Filter	XingBo	XBLBQ-GTA27	CTA-403	2024/08/02	2025/08/02
Automated filter bank	Tonscend	JS0806-F	CTA-404	2024/08/02	2025/08/02
Power Sensor	Agilent	U2021XA	CTA-405	2024/08/02	2025/08/02
Amplifier	Schwarzbeck	BBV9719	CTA-406	2024/08/02	2025/08/02

Note: The Cal.Interval was one year.

4. TEST CONDITIONS AND RESULTS

4.1. AC Power Conducted Emission

TEST CONFIGURATION



TEST PROCEDURE

- 1 The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10-2020.
- 2 Support equipment, if needed, was placed as per ANSI C63.10-2020.
- 3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10-2020.
- 4 The EUT received DC 24.0V power, the Adapter received AC120V/60Hz or AC 240V/50Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7 Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
- 8 During the above scans, the emissions were maximized by cable manipulation.

AC Power Conducted Emission Limit

For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following :

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

* Decreases with the logarithm of the frequency.

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:

$$CD \text{ (dBuV)} = RA \text{ (dBuV)} + PL \text{ (dB)} + CL \text{ (dB)}$$

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

TEST RESULTS

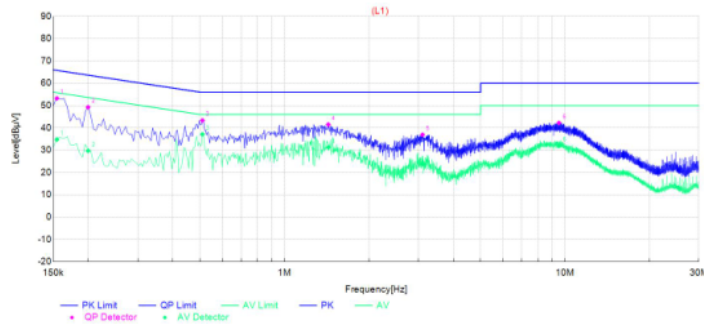
Remark: We measured Conducted Emission at GFSK, π/4-DQPSK and 8DPSK mode in AC 120V/60Hz and AC 240V/60Hz, the worst case was recorded(GFSK 1Mbps-MCH) .

Temperature	26°C	Humidity	47%
Test Engineer	Lushan Kong	Configurations	BT

Version A:
Adapter: ADS-65HI-19A-124036F

Power supply:	AC 120V/60Hz	Polarization	L
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Test Graph



Final Data List

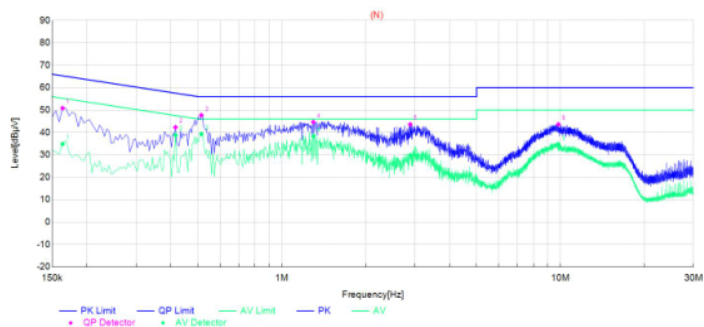
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.1545	42.88	24.43	10.33	53.21	34.76	65.75	55.75	12.54	20.99	L1	PASS
2	0.1995	39.11	19.56	10.15	49.26	29.71	63.63	53.63	14.37	23.92	L1	PASS
3	0.51	33.09	26.86	10.25	43.34	37.11	56.00	46.00	12.66	8.89	L1	PASS
4	1.4325	31.28	21.02	10.23	41.51	31.25	56.00	46.00	14.49	14.75	L1	PASS
5	3.1065	26.58	13.44	10.34	36.92	23.78	56.00	46.00	19.08	22.22	L1	PASS
6	9.519	31.65	21.38	10.56	42.21	31.94	60.00	50.00	17.79	18.06	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
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Test Graph



Final Data List

NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.1635	40.54	24.54	10.29	50.83	34.83	65.28	55.28	14.45	20.45	N	PASS
2	0.4155	32.13	28.60	10.18	42.31	38.78	57.54	47.54	15.23	8.76	N	PASS
3	0.5145	37.45	29.09	10.24	47.69	39.33	56.00	46.00	8.31	6.67	N	PASS
4	1.2975	34.42	28.09	10.22	44.64	38.31	56.00	46.00	11.36	7.69	N	PASS
5	2.8905	33.27	19.47	10.33	43.60	29.80	56.00	46.00	12.40	16.20	N	PASS
6	9.825	33.02	24.16	10.57	43.59	34.73	60.00	50.00	16.41	15.27	N	PASS

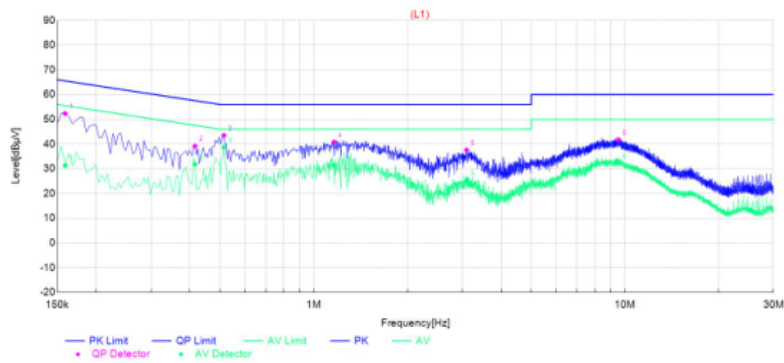
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

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

Adapter: SOY-2400150-332-A

Power supply:	AC 120V/60Hz	Polarization	L
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Test Graph



Final Data List

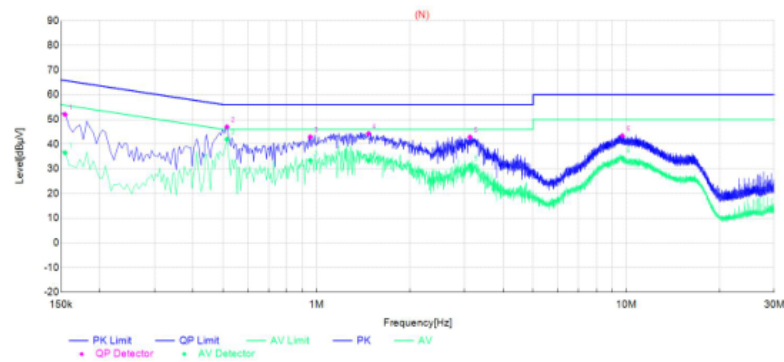
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.159	42.03	21.01	10.31	52.34	31.32	65.52	55.52	13.18	24.20	L1	PASS
2	0.4155	28.99	21.67	10.18	39.17	31.85	57.54	47.54	18.37	15.69	L1	PASS
3	0.5145	33.27	28.41	10.24	43.51	38.65	56.00	46.00	12.49	7.35	L1	PASS
4	1.1625	30.61	21.24	10.21	40.82	31.45	56.00	46.00	15.18	14.55	L1	PASS
5	3.0975	27.23	14.79	10.34	37.57	25.13	56.00	46.00	18.43	20.87	L1	PASS
6	9.5325	31.14	21.80	10.56	41.70	32.36	60.00	50.00	18.30	17.64	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
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Test Graph



Final Data List

NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.1545	41.66	26.16	10.33	51.99	36.49	65.75	55.75	13.76	19.26	N	PASS
2	0.5145	36.73	31.69	10.24	46.97	41.93	56.00	46.00	9.03	4.07	N	PASS
3	0.9555	32.71	23.20	10.20	42.91	33.40	56.00	46.00	13.09	12.60	N	PASS
4	1.473	34.06	23.27	10.23	44.29	33.50	56.00	46.00	11.71	12.50	N	PASS
5	3.129	32.51	21.03	10.34	42.85	31.37	56.00	46.00	13.15	14.63	N	PASS
6	9.7035	32.78	23.77	10.57	43.35	34.34	60.00	50.00	16.65	15.66	N	PASS

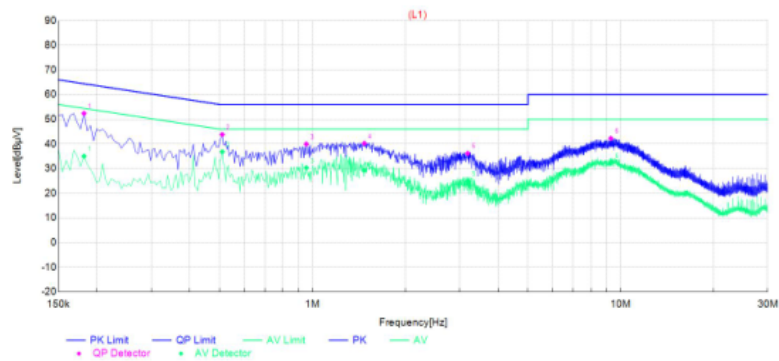
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

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

Adapter: CYZS36-240150

Power supply:	AC 120V/60Hz	Polarization	L
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Test Graph



Final Data List

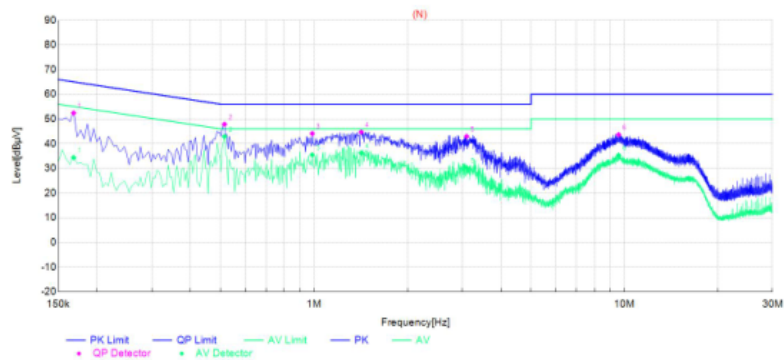
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.1815	42.19	24.81	10.20	52.39	35.01	64.42	54.42	12.03	19.41	L1	PASS
2	0.51	33.57	26.54	10.25	43.82	36.79	56.00	46.00	12.18	9.21	L1	PASS
3	0.9555	29.74	20.13	10.20	39.94	30.33	56.00	46.00	16.06	15.67	L1	PASS
4	1.473	29.98	19.07	10.23	40.21	29.30	56.00	46.00	15.79	16.70	L1	PASS
5	3.1875	25.79	14.59	10.35	36.14	24.94	56.00	46.00	19.86	21.06	L1	PASS
6	9.2895	31.68	21.71	10.56	42.24	32.27	60.00	50.00	17.76	17.73	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
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Test Graph



Final Data List

NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.168	42.17	24.09	10.27	52.44	34.36	65.06	55.06	12.62	20.70	N	PASS
2	0.5145	37.66	32.64	10.24	47.90	42.88	56.00	46.00	8.10	3.12	N	PASS
3	0.987	33.90	25.29	10.19	44.09	35.48	56.00	46.00	11.91	10.52	N	PASS
4	1.419	34.49	25.99	10.23	44.72	36.22	56.00	46.00	11.28	9.78	N	PASS
5	3.102	32.62	19.92	10.34	42.96	30.26	56.00	46.00	13.04	15.74	N	PASS
6	9.5775	33.08	24.77	10.57	43.65	35.34	60.00	50.00	16.35	14.66	N	PASS

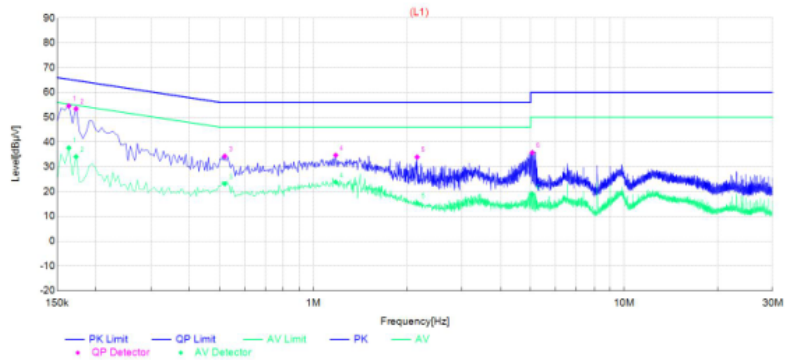
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

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

Version B:
 Adapter: ADS-65HI-19A-124036F

Power supply:	AC 120V/60Hz	Polarization	L
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Test Graph



Final Data List

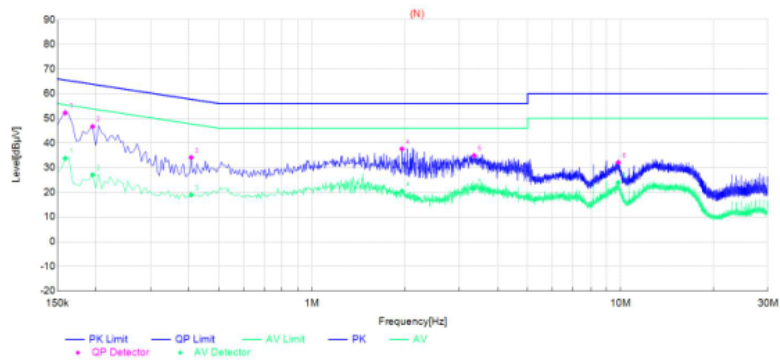
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.1635	44.28	27.35	10.29	54.57	37.64	65.28	55.28	10.71	17.64	L1	PASS
2	0.1725	43.18	23.81	10.24	53.42	34.05	64.84	54.84	11.42	20.79	L1	PASS
3	0.519	24.02	12.90	10.24	34.26	23.14	56.00	46.00	21.74	22.86	L1	PASS
4	1.1805	24.44	13.57	10.21	34.65	23.78	56.00	46.00	21.35	22.22	L1	PASS
5	2.157	23.62	5.00	10.28	33.90	15.28	56.00	46.00	22.10	30.72	L1	PASS
6	5.0595	25.35	8.53	10.35	35.70	18.88	60.00	50.00	24.30	31.12	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
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Test Graph



Final Data List

NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.159	41.90	23.46	10.31	52.21	33.77	65.52	55.52	13.31	21.75	N	PASS
2	0.195	36.50	16.92	10.16	46.66	27.08	63.82	53.82	17.16	26.74	N	PASS
3	0.4065	23.94	8.79	10.17	34.11	18.96	57.72	47.72	23.61	28.76	N	PASS
4	1.959	27.33	10.23	10.27	37.60	20.50	56.00	46.00	18.40	25.50	N	PASS
5	3.354	24.54	11.22	10.35	34.89	21.57	56.00	46.00	21.11	24.43	N	PASS
6	9.8295	21.55	13.40	10.57	32.12	23.97	60.00	50.00	27.88	26.03	N	PASS

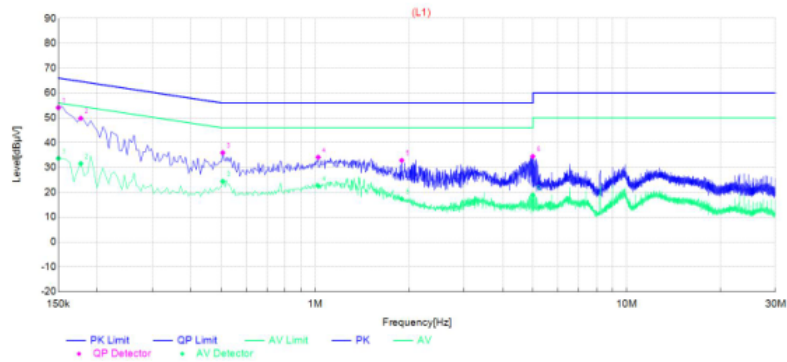
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

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

Adapter: SOY-2400150-332-A

Power supply:	AC 120V/60Hz	Polarization	L
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Test Graph



Final Data List

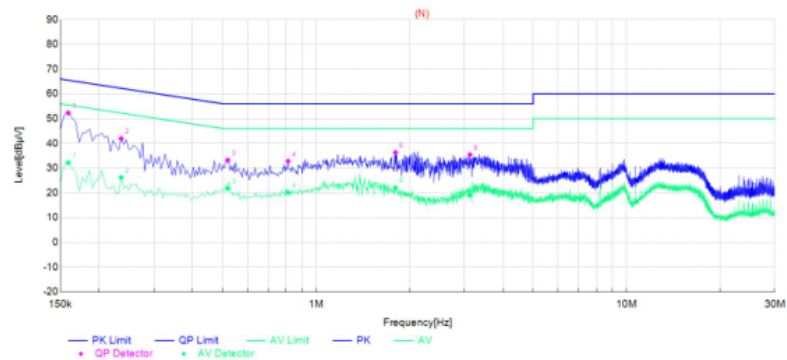
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.15	43.71	23.29	10.35	54.06	33.64	66.00	56.00	11.94	22.36	L1	PASS
2	0.177	39.58	21.33	10.22	49.80	31.55	64.63	54.63	14.83	23.08	L1	PASS
3	0.5055	25.68	14.16	10.25	35.93	24.41	56.00	46.00	20.07	21.59	L1	PASS
4	1.023	23.91	12.34	10.20	34.11	22.54	56.00	46.00	21.89	23.46	L1	PASS
5	1.896	22.60	7.03	10.26	32.86	17.29	56.00	46.00	23.14	28.71	L1	PASS
6	4.992	24.11	8.58	10.34	34.45	18.92	56.00	46.00	21.55	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
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Test Graph



Final Data List

NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.159	41.96	21.86	10.31	52.27	32.17	65.52	55.52	13.25	23.35	N	PASS
2	0.2355	31.79	16.07	10.13	41.92	26.20	62.25	52.25	20.33	26.05	N	PASS
3	0.519	22.93	11.52	10.24	33.17	21.76	56.00	46.00	22.83	24.24	N	PASS
4	0.8115	22.52	9.86	10.25	32.77	20.11	56.00	46.00	23.23	25.89	N	PASS
5	1.8015	26.02	11.81	10.26	36.28	22.07	56.00	46.00	19.72	23.93	N	PASS
6	3.129	25.05	8.64	10.34	35.39	18.98	56.00	46.00	20.61	27.02	N	PASS

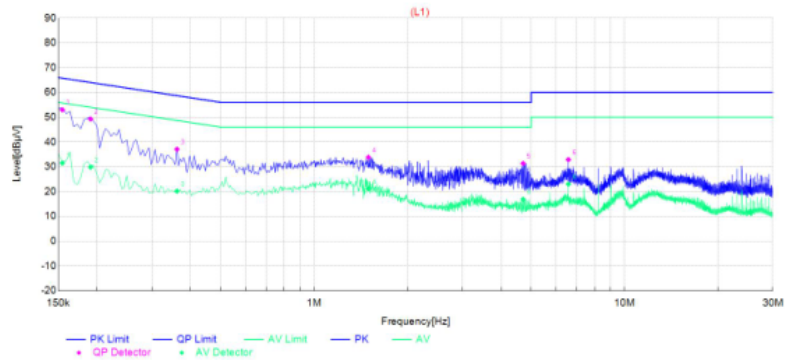
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

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

Adapter: CYZS36-240150

Power supply:	AC 120V/60Hz	Polarization	L
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Test Graph



Final Data List

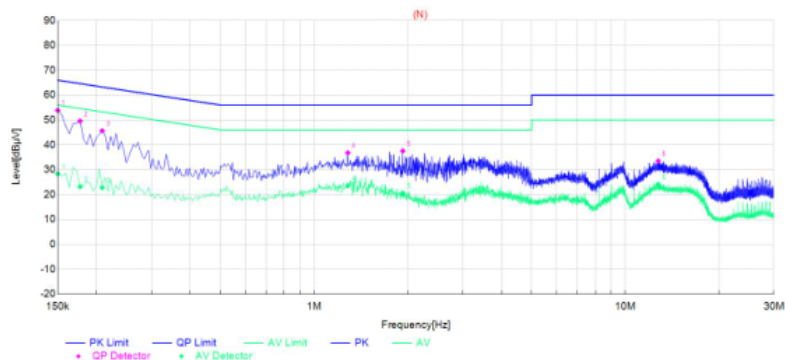
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.1545	42.66	21.16	10.33	52.99	31.49	65.75	55.75	12.76	24.26	L1	PASS
2	0.1905	39.13	19.70	10.16	49.29	29.86	64.01	54.01	14.72	24.15	L1	PASS
3	0.3615	26.93	10.02	10.14	37.07	20.16	58.69	48.69	21.62	28.53	L1	PASS
4	1.4955	23.57	10.90	10.23	33.80	21.13	56.00	46.00	22.20	24.87	L1	PASS
5	4.7085	20.98	6.51	10.35	31.33	16.86	56.00	46.00	24.67	29.14	L1	PASS
6	6.5895	22.39	12.49	10.50	32.89	22.99	60.00	50.00	27.11	27.01	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
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Test Graph



Final Data List

NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.15	43.51	17.98	10.35	53.86	28.33	66.00	56.00	12.14	27.67	N	PASS
2	0.177	39.35	12.94	10.22	49.57	23.16	64.63	54.63	15.06	31.47	N	PASS
3	0.2085	35.52	12.64	10.15	45.67	22.79	63.26	53.26	17.59	30.47	N	PASS
4	1.284	26.56	13.41	10.22	36.78	23.63	56.00	46.00	19.22	22.37	N	PASS
5	1.9275	27.30	10.34	10.26	37.56	20.60	56.00	46.00	18.44	25.40	N	PASS
6	12.7545	22.60	13.22	10.89	33.49	24.11	60.00	50.00	26.51	25.89	N	PASS

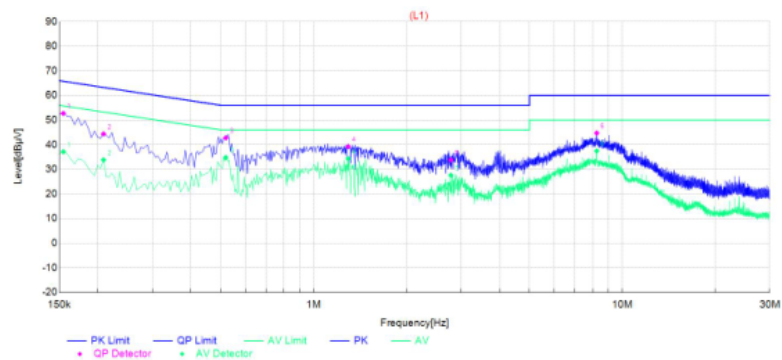
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

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

Version C:
 Adapter: ADS-65HI-19A-124036F

Power supply:	AC 120V/60Hz	Polarization	L
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Test Graph



Final Data List

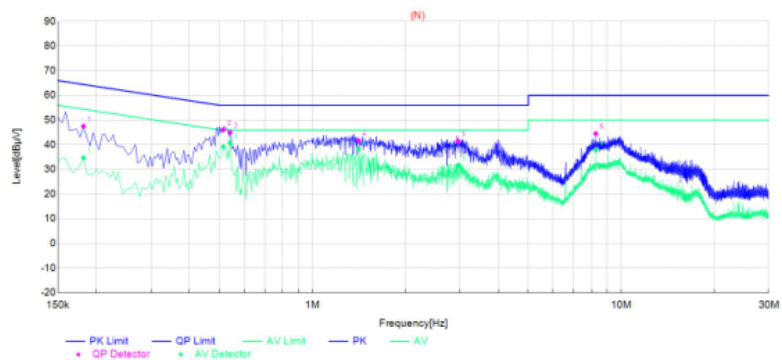
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.1545	42.39	26.81	10.33	52.72	37.14	65.75	55.75	13.03	18.61	L1	PASS
2	0.2085	34.21	23.67	10.15	44.36	33.82	63.26	53.26	18.90	19.44	L1	PASS
3	0.519	32.53	24.54	10.24	42.77	34.78	56.00	46.00	13.23	11.22	L1	PASS
4	1.293	28.99	24.10	10.22	39.21	34.32	56.00	46.00	16.79	11.68	L1	PASS
5	2.7825	23.49	17.24	10.32	33.81	27.56	56.00	46.00	22.19	18.44	L1	PASS
6	8.2545	34.13	26.87	10.57	44.70	37.44	60.00	50.00	15.30	12.56	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
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Test Graph



Final Data List

NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.1815	37.29	24.49	10.20	47.49	34.69	64.42	54.42	16.93	19.73	N	PASS
2	0.5145	35.84	28.97	10.24	46.08	39.21	56.00	46.00	9.92	6.79	N	PASS
3	0.5415	34.73	30.32	10.22	44.95	40.54	56.00	46.00	11.05	5.46	N	PASS
4	1.41	31.45	28.00	10.23	41.68	38.23	56.00	46.00	14.32	7.77	N	PASS
5	2.958	31.16	21.35	10.34	41.50	31.69	56.00	46.00	14.50	14.31	N	PASS
6	8.2635	33.93	27.21	10.57	44.50	37.78	60.00	50.00	15.50	12.22	N	PASS

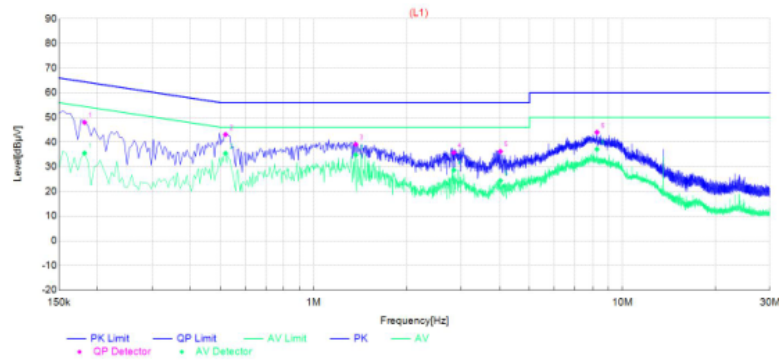
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

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

Adapter: SOY-2400150-332-A

Power supply:	AC 120V/60Hz	Polarization	L
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Test Graph



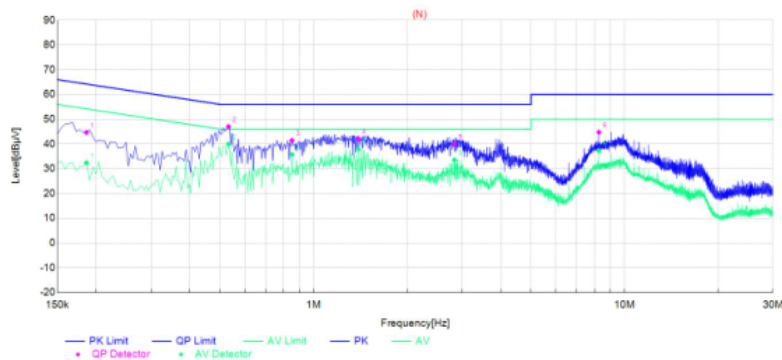
Final Data List												
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.1815	37.77	25.32	10.20	47.97	35.52	64.42	54.42	16.45	18.90	L1	PASS
2	0.519	32.83	25.18	10.24	43.07	35.42	56.00	46.00	12.93	10.58	L1	PASS
3	1.3695	28.84	24.57	10.23	39.07	34.80	56.00	46.00	16.93	11.20	L1	PASS
4	2.8455	25.40	18.32	10.33	35.73	28.65	56.00	46.00	20.27	17.35	L1	PASS
5	4.0245	25.84	13.97	10.37	36.21	24.34	56.00	46.00	19.79	21.66	L1	PASS
6	8.2635	33.39	26.52	10.57	43.96	37.09	60.00	50.00	16.04	12.91	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
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Test Graph



Final Data List												
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.186	34.45	22.18	10.18	44.63	32.36	64.21	54.21	19.58	21.85	N	PASS
2	0.5325	36.77	29.71	10.23	47.00	39.94	56.00	46.00	9.00	6.06	N	PASS
3	0.852	31.19	25.46	10.24	41.43	35.70	56.00	46.00	14.57	10.30	N	PASS
4	1.392	31.92	27.74	10.23	42.15	37.97	56.00	46.00	13.85	8.03	N	PASS
5	2.8365	29.60	23.21	10.33	39.93	33.54	56.00	46.00	16.07	12.46	N	PASS
6	8.268	34.18	26.63	10.57	44.75	37.20	60.00	50.00	15.25	12.80	N	PASS

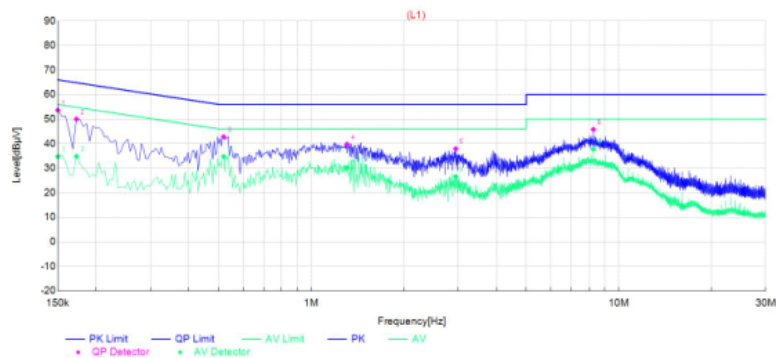
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

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

Adapter: CYZS36-240150

Power supply:	AC 120V/60Hz	Polarization	L
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Test Graph



Final Data List

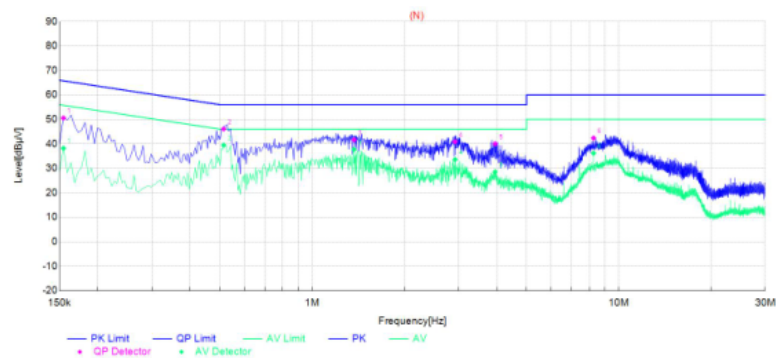
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.15	43.31	24.36	10.35	53.66	34.71	66.00	56.00	12.34	21.29	L1	PASS
2	0.1725	39.78	24.58	10.24	50.02	34.82	64.84	54.84	14.82	20.02	L1	PASS
3	0.519	32.57	24.52	10.24	42.81	34.76	56.00	46.00	13.19	11.24	L1	PASS
4	1.3065	29.54	19.91	10.22	39.76	30.13	56.00	46.00	16.24	15.87	L1	PASS
5	2.949	27.56	16.27	10.34	37.90	26.61	56.00	46.00	18.10	19.39	L1	PASS
6	8.2635	35.23	27.11	10.57	45.80	37.68	60.00	50.00	14.20	12.32	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
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Test Graph



Final Data List

NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.1545	40.23	27.85	10.33	50.56	38.18	65.75	55.75	15.19	17.57	N	PASS
2	0.5145	35.86	29.21	10.24	46.10	39.45	56.00	46.00	9.90	6.55	N	PASS
3	1.3695	31.41	27.49	10.23	41.64	37.72	56.00	46.00	14.36	8.28	N	PASS
4	2.922	30.52	23.24	10.33	40.85	33.57	56.00	46.00	15.15	12.43	N	PASS
5	3.948	29.64	18.19	10.37	40.01	28.56	56.00	46.00	15.99	17.44	N	PASS
6	8.268	31.78	25.61	10.57	42.35	36.18	60.00	50.00	17.65	13.82	N	PASS

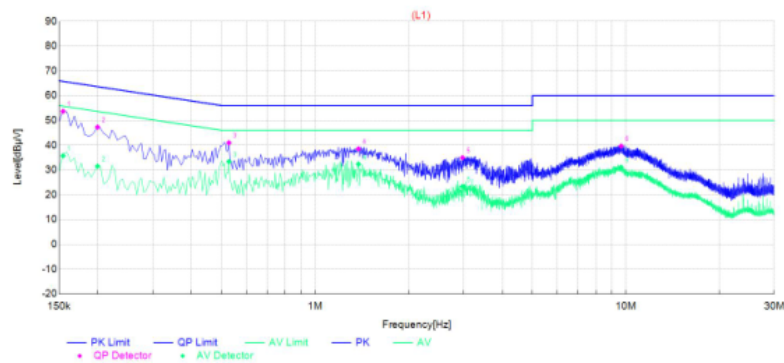
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

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

Version D:
 Adapter: ADS-65HI-19A-124036F

Power supply:	AC 120V/60Hz	Polarization	L
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Test Graph



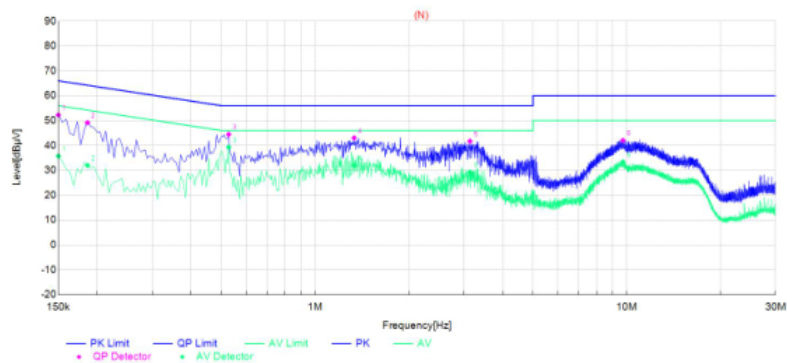
Final Data List												
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.1545	43.35	25.38	10.33	53.68	35.71	65.75	55.75	12.07	20.04	L1	PASS
2	0.1995	37.14	21.36	10.15	47.29	31.51	63.63	53.63	16.34	22.12	L1	PASS
3	0.528	30.75	23.14	10.23	40.98	33.37	56.00	46.00	15.02	12.63	L1	PASS
4	1.3785	28.30	22.13	10.23	38.53	32.36	56.00	46.00	17.47	13.64	L1	PASS
5	2.9805	24.61	13.01	10.34	34.95	23.35	56.00	46.00	21.05	22.65	L1	PASS
6	9.6495	29.05	20.53	10.57	39.62	31.10	60.00	50.00	20.38	18.90	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
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Test Graph



Final Data List												
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.15	41.92	25.40	10.35	52.27	35.75	66.00	56.00	13.73	20.25	N	PASS
2	0.186	38.96	21.79	10.18	49.14	31.97	64.21	54.21	15.07	22.24	N	PASS
3	0.528	34.23	29.07	10.23	44.46	39.30	56.00	46.00	11.54	6.70	N	PASS
4	1.3335	32.80	21.76	10.22	43.02	31.98	56.00	46.00	12.98	14.02	N	PASS
5	3.138	31.36	18.88	10.34	41.70	29.22	56.00	46.00	14.30	16.78	N	PASS
6	9.7215	31.46	22.78	10.57	42.03	33.35	60.00	50.00	17.97	16.65	N	PASS

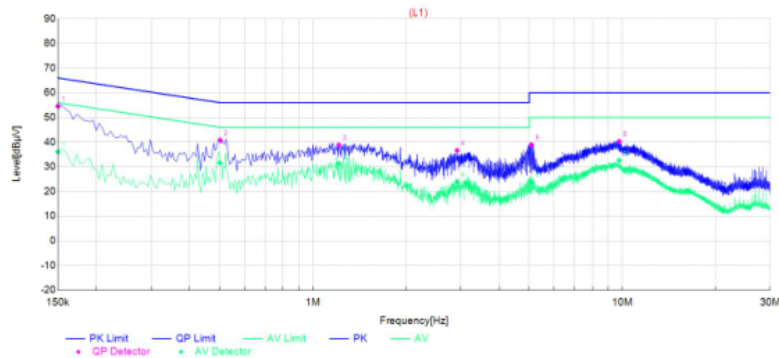
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

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

Adapter: SOY-2400150-332-A

Power supply:	AC 120V/60Hz	Polarization	L
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Test Graph



Final Data List

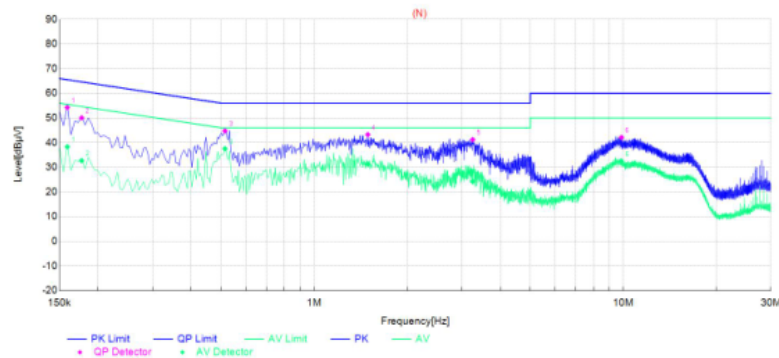
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.15	44.15	25.66	10.35	54.50	36.01	66.00	56.00	11.50	19.99	L1	PASS
2	0.501	30.56	21.29	10.25	40.81	31.54	56.00	46.00	15.19	14.46	L1	PASS
3	1.212	28.65	21.08	10.21	38.86	31.29	56.00	46.00	17.14	14.71	L1	PASS
4	2.922	26.25	13.61	10.33	36.58	23.94	56.00	46.00	19.42	22.06	L1	PASS
5	5.073	28.53	13.47	10.35	38.88	23.82	60.00	50.00	21.12	26.18	L1	PASS
6	9.762	29.73	21.98	10.57	40.30	32.55	60.00	50.00	19.70	17.45	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
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Test Graph



Final Data List

NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.159	43.94	28.00	10.31	54.25	38.31	65.52	55.52	11.27	17.21	N	PASS
2	0.177	39.83	22.46	10.22	50.05	32.68	64.63	54.63	14.58	21.95	N	PASS
3	0.5145	34.49	27.31	10.24	44.73	37.55	56.00	46.00	11.27	8.45	N	PASS
4	1.491	33.01	21.03	10.23	43.24	31.26	56.00	46.00	12.76	14.74	N	PASS
5	3.255	30.87	13.82	10.35	41.22	24.17	56.00	46.00	14.78	21.83	N	PASS
6	9.8565	31.51	21.90	10.58	42.09	32.48	60.00	50.00	17.91	17.52	N	PASS

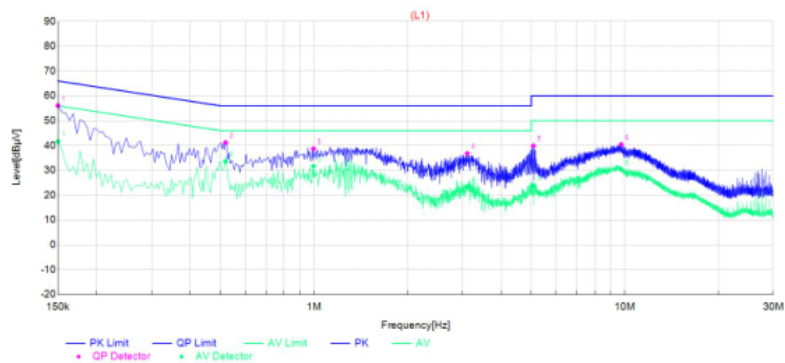
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

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

Adapter: CYZS36-240150

Power supply:	AC 120V/60Hz	Polarization	L
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Test Graph



Final Data List

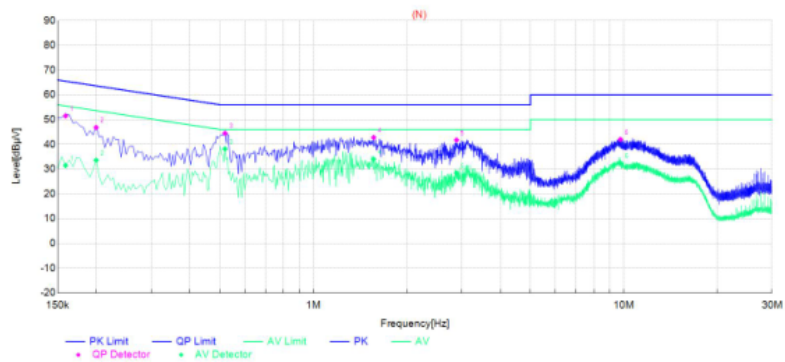
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.15	45.70	31.26	10.35	56.05	41.61	66.00	56.00	9.95	14.39	L1	PASS
2	0.519	30.94	23.33	10.24	41.18	33.57	56.00	46.00	14.82	12.43	L1	PASS
3	0.996	28.50	21.46	10.20	38.70	31.66	56.00	46.00	17.30	14.34	L1	PASS
4	3.111	26.45	13.10	10.34	36.79	23.44	56.00	46.00	19.21	22.56	L1	PASS
5	5.0775	29.52	13.47	10.35	39.87	23.82	60.00	50.00	20.13	26.18	L1	PASS
6	9.735	29.82	19.80	10.57	40.39	30.37	60.00	50.00	19.61	19.63	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
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Test Graph



Final Data List

NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.159	41.20	21.14	10.31	51.51	31.45	65.52	55.52	14.01	24.07	N	PASS
2	0.1995	36.69	23.45	10.15	46.84	33.60	63.63	53.63	16.79	20.03	N	PASS
3	0.519	34.23	27.94	10.24	44.47	38.18	56.00	46.00	11.53	7.82	N	PASS
4	1.563	32.54	23.77	10.24	42.78	34.01	56.00	46.00	13.22	11.99	N	PASS
5	2.8905	31.42	18.00	10.33	41.75	28.33	56.00	46.00	14.25	17.67	N	PASS
6	9.7485	31.43	21.91	10.57	42.00	32.48	60.00	50.00	18.00	17.52	N	PASS

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

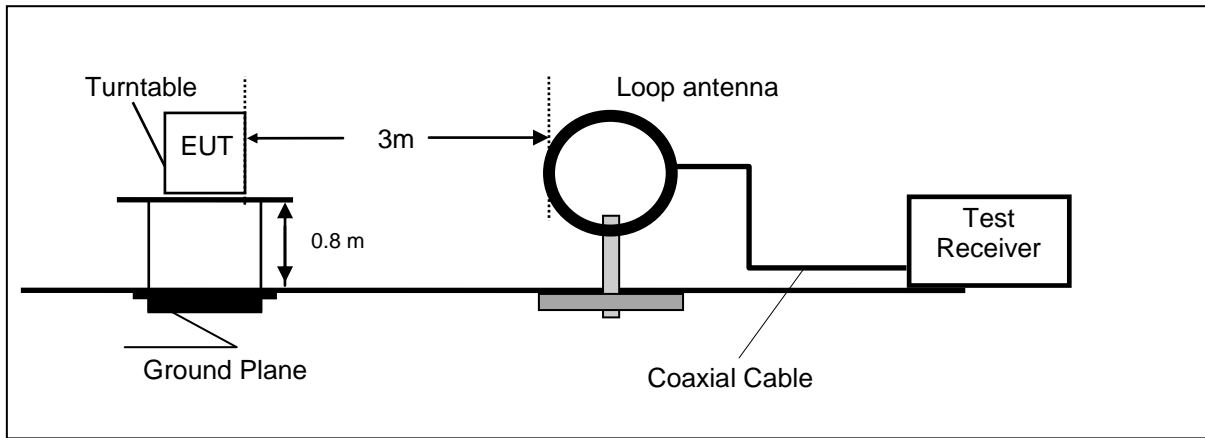
2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

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).

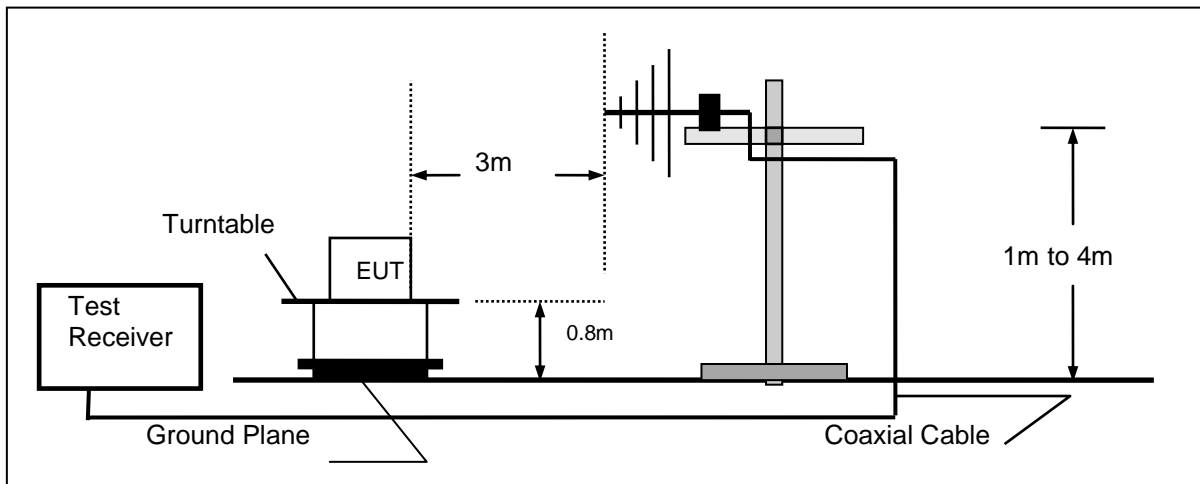
4.2. Radiated Emission

TEST CONFIGURATION

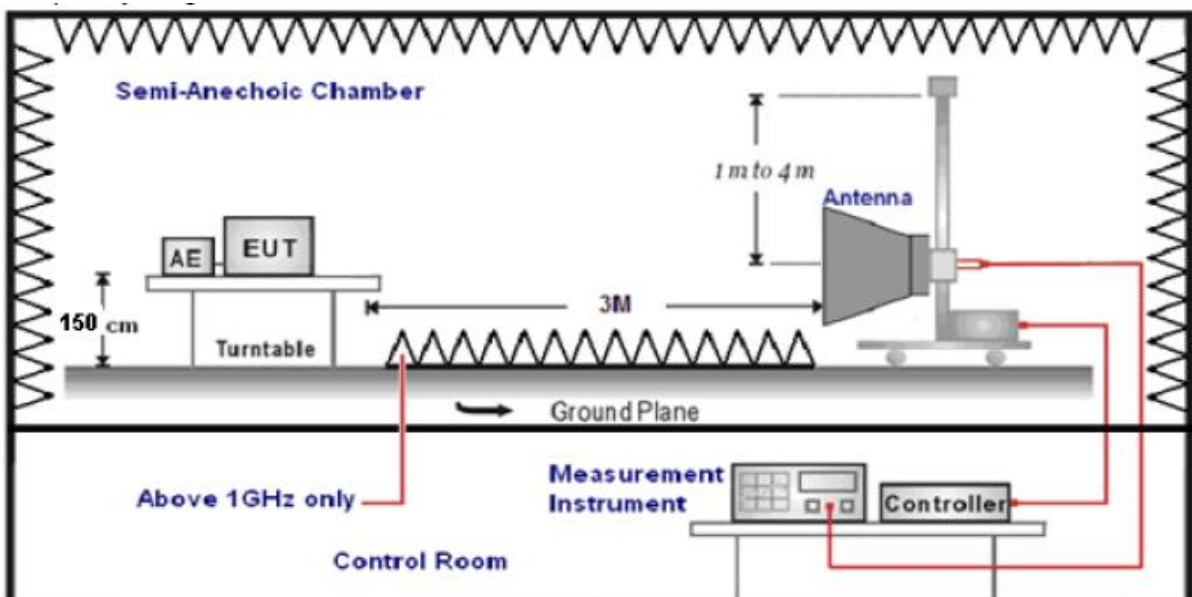
Frequency range 9 KHz – 30MHz



Frequency range 30MHz – 1000MHz



Frequency range above 1GHz-25GHz



TEST PROCEDURE

1. The EUT was placed on a turn table which is 0.8m above ground plane when testing frequency range 9 KHz –1GHz;the EUT was placed on a turn table which is 1.5m above ground plane when testing frequency range 1GHz – 25GHz.
2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0°C to 360°C to acquire the highest emissions from EUT.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measurements have been completed.
5. The EUT minimum operation frequency was 32.768KHz and maximum operation frequency was 2480MHz.so radiated emission test frequency band from 9KHz to 25GHz.
6. The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz-30MHz	Active Loop Antenna	3
30MHz-1GHz	Ultra-Broadband Antenna	3
1GHz-18GHz	Double Ridged Horn Antenna	3
18GHz-25GHz	Horn Antenna	1

7. Setting test receiver/spectrum as following table states:

Test Frequency range	Test Receiver/Spectrum Setting	Detector
9KHz-150KHz	RBW=200Hz/VBW=3KHz, Sweep time=Auto	QP
150KHz-30MHz	RBW=9KHz/VBW=100KHz, Sweep time=Auto	QP
30MHz-1GHz	RBW=120KHz/VBW=1000KHz, Sweep time=Auto	QP
1GHz-40GHz	Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto	Peak

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

RADIATION LIMIT

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emission from intentional radiators at a distance of 3 meters shall not exceed the following table. According to § 15.247(d), in any 100kHz bandwidth outside the frequency band in which the EUT is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of desired power.

The pre-test have done for the EUT in three axes and found the worst emission at position shown in test setup photos.

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

TEST RESULTS

Remark: We measured Radiated Emission at GFSK, $\pi/4$ -DQPSK and 8DPSK mode from 9KHz to 25GHz and recorded worst case at GFSK(1Mbps-MCH) mode.

Temperature	26°C	Humidity	47%
Test Engineer	Lushan Kong	Configurations	BT

For 9 KHz~30MHz

Freq. (MHz)	Level (dB μ V)	Over Limit (dB)	Over Limit (dB μ V)	Remark
-	-	-	-	See Note

Note:

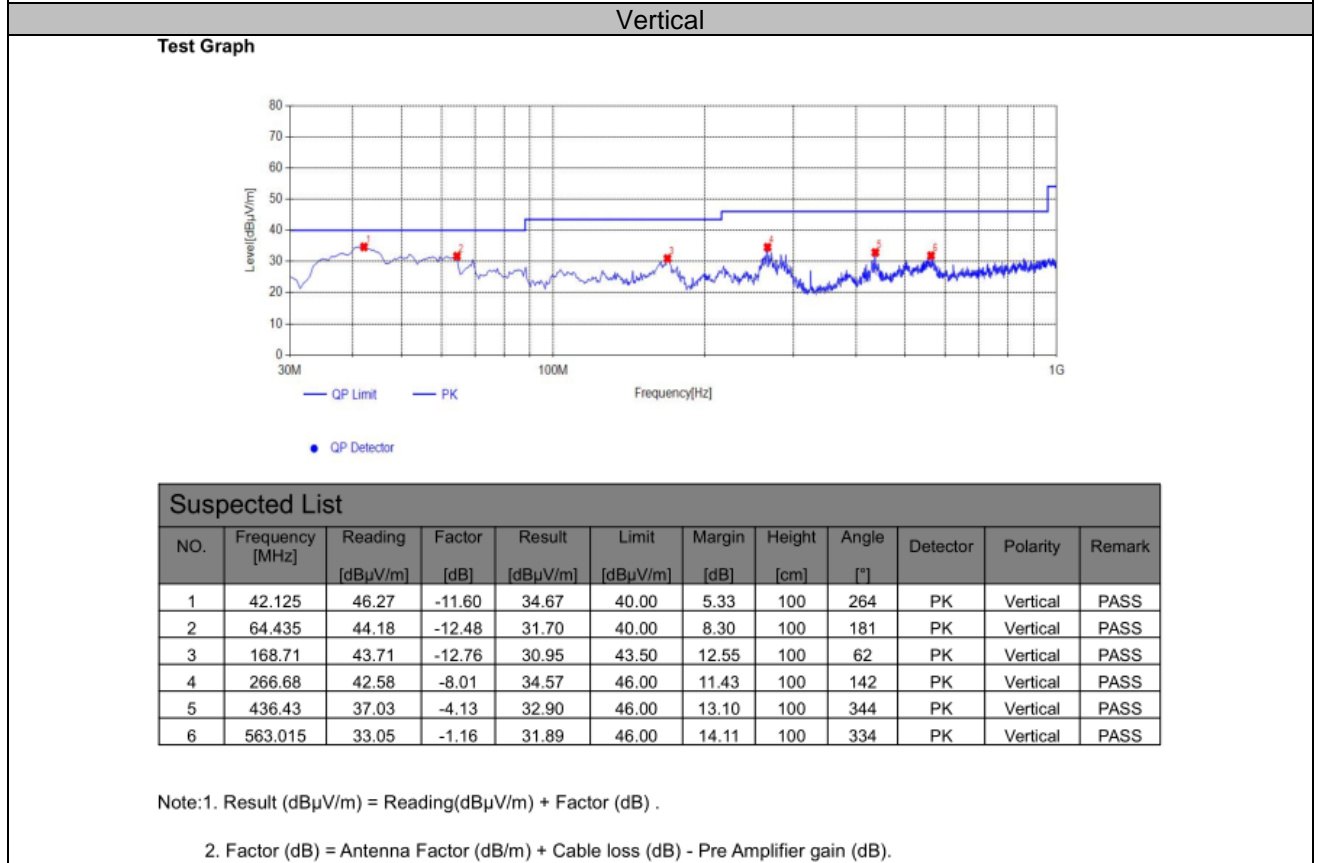
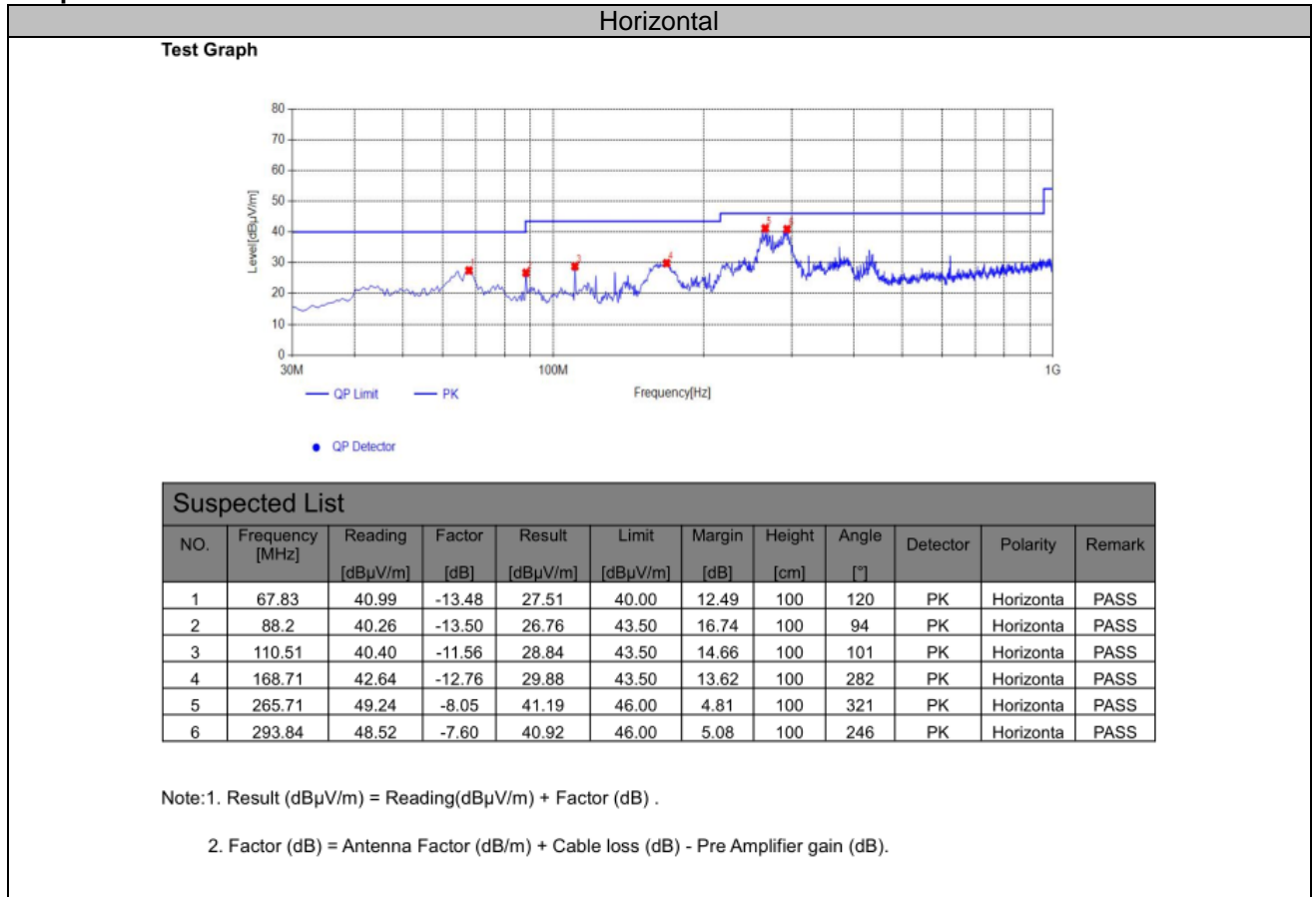
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log(\text{specific distance} / \text{test distance})$ (dB);

Limit line = specific limits (dB μ V) + distance extrapolation factor.

For 30MHz-1GHz
Version A:

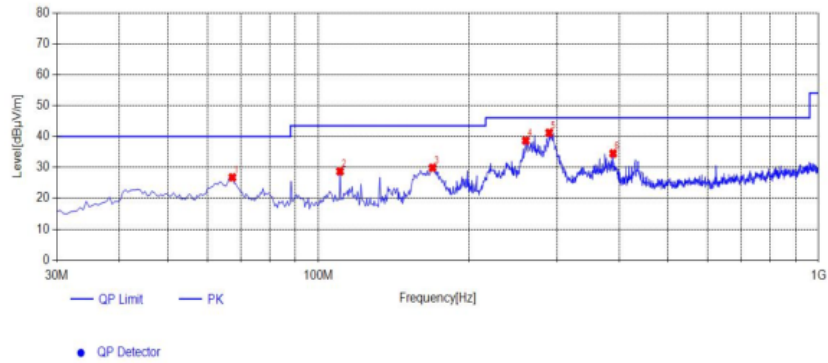
Adapter: ADS-65HI-19A-124036F



Adapter: SOY-2400150-332-A

Horizontal

Test Graph



Suspected List

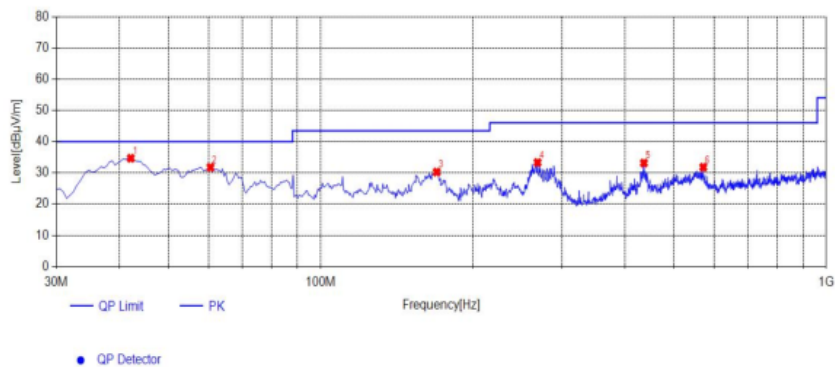
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	67.345	40.11	-13.34	26.77	40.00	13.23	100	83	PK	Horizontal	PASS
2	110.51	40.28	-11.56	28.72	43.50	14.78	100	89	PK	Horizontal	PASS
3	169.195	42.63	-12.75	29.88	43.50	13.62	100	288	PK	Horizontal	PASS
4	259.89	46.97	-8.28	38.69	46.00	7.31	100	318	PK	Horizontal	PASS
5	289.475	48.86	-7.66	41.20	46.00	4.80	100	221	PK	Horizontal	PASS
6	388.415	40.02	-5.51	34.51	46.00	11.49	100	215	PK	Horizontal	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	42.125	46.28	-11.60	34.68	40.00	5.32	100	6	PK	Vertical	PASS
2	60.555	43.19	-11.42	31.77	40.00	8.23	100	207	PK	Vertical	PASS
3	169.68	43.01	-12.75	30.26	43.50	13.24	100	79	PK	Vertical	PASS
4	268.62	41.26	-7.93	33.33	46.00	12.67	100	132	PK	Vertical	PASS
5	435.945	37.31	-4.16	33.15	46.00	12.85	100	326	PK	Vertical	PASS
6	571.26	32.81	-1.00	31.81	46.00	14.19	100	336	PK	Vertical	PASS

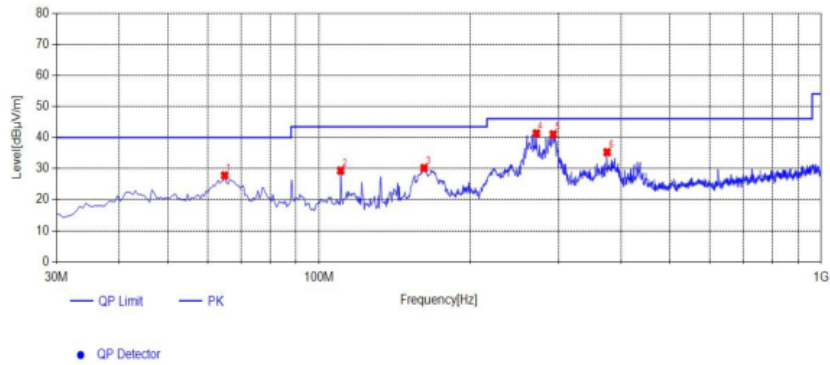
Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

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

Adapter: CYZS36-240150

Horizontal

Test Graph



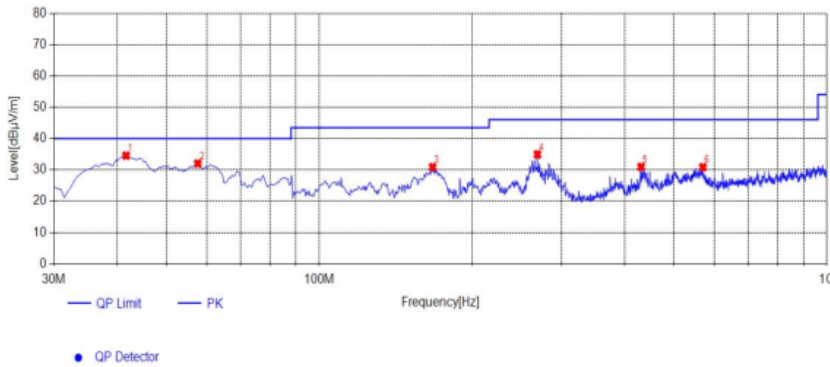
Suspected List											
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	64.92	40.42	-12.63	27.79	40.00	12.21	100	102	PK	Horizontal	PASS
2	110.51	40.93	-11.56	29.37	43.50	14.13	100	102	PK	Horizontal	PASS
3	161.92	43.25	-13.08	30.17	43.50	13.33	100	322	PK	Horizontal	PASS
4	271.045	49.23	-7.88	41.35	46.00	4.65	100	289	PK	Horizontal	PASS
5	292.87	48.63	-7.61	41.02	46.00	4.98	100	243	PK	Horizontal	PASS
6	374.835	40.99	-5.71	35.28	46.00	10.72	100	226	PK	Horizontal	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



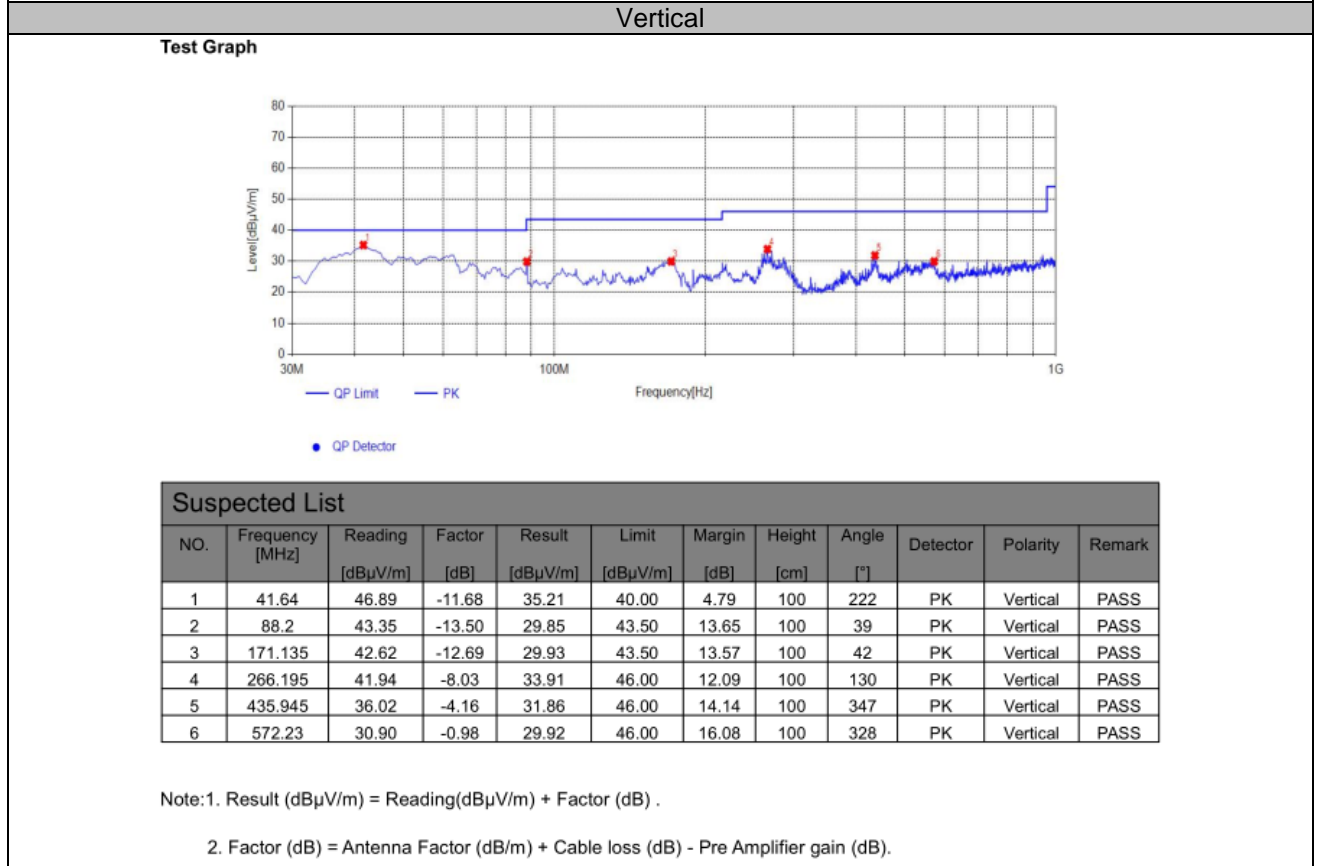
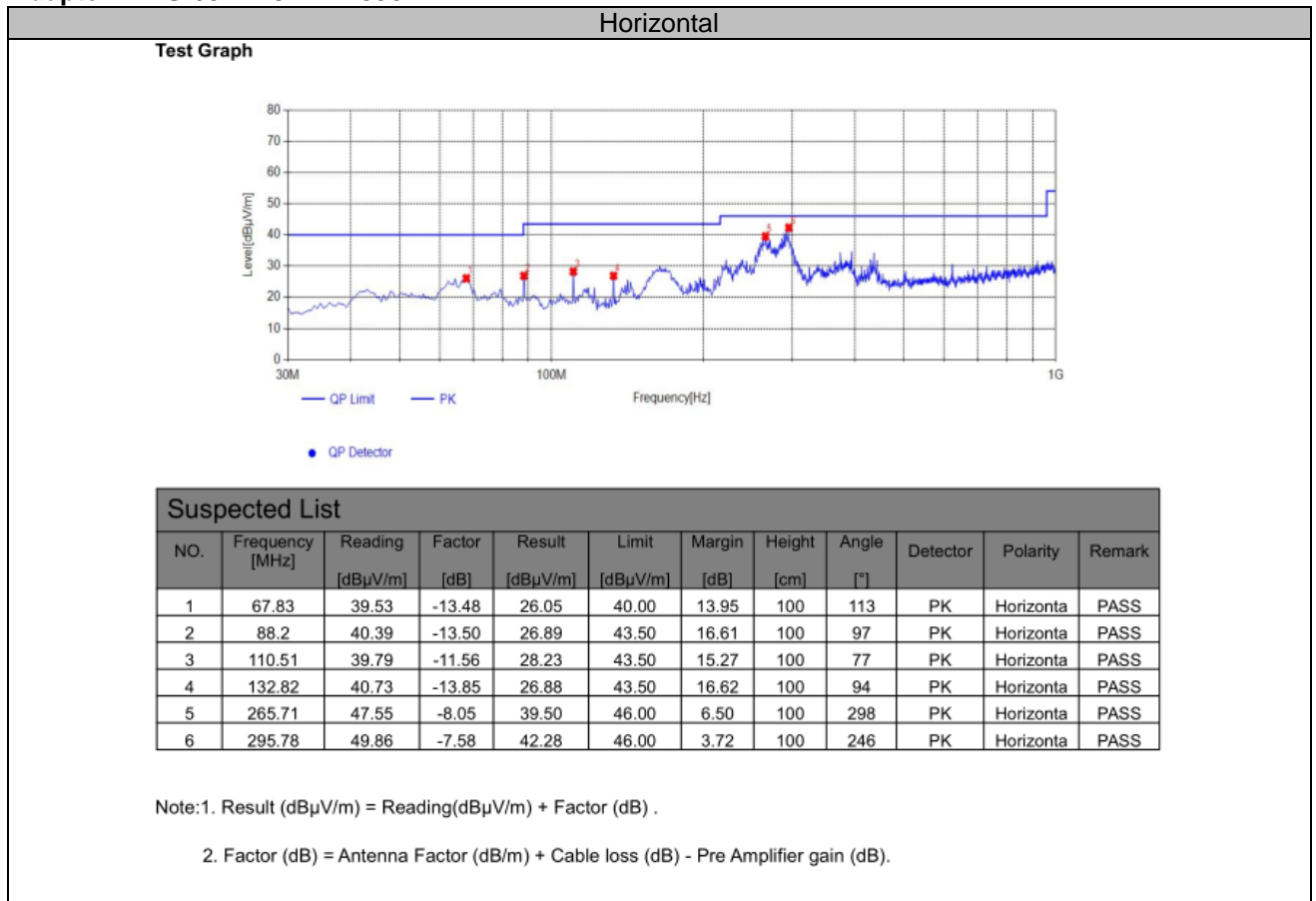
Suspected List											
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	41.64	46.23	-11.68	34.55	40.00	5.45	100	265	PK	Vertical	PASS
2	57.645	43.34	-11.32	32.02	40.00	7.98	100	150	PK	Vertical	PASS
3	167.255	43.69	-12.81	30.88	43.50	12.62	100	61	PK	Vertical	PASS
4	269.105	42.84	-7.91	34.93	46.00	11.07	100	150	PK	Vertical	PASS
5	430.61	35.29	-4.32	30.97	46.00	15.03	100	318	PK	Vertical	PASS
6	569.805	31.86	-1.02	30.84	46.00	15.16	100	334	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:

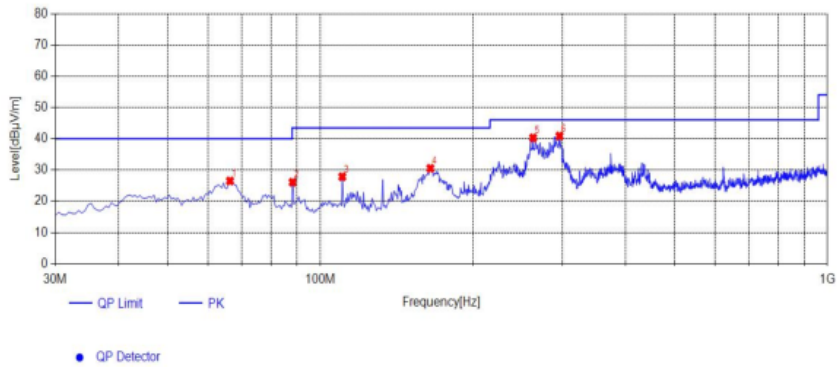
Adapter: ADS-65HI-19A-124036F



Adapter: SOY-2400150-332-A

Horizontal

Test Graph



Suspected List

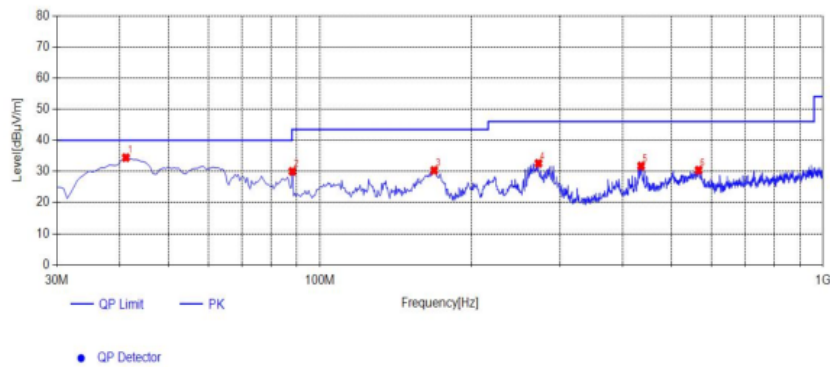
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	66.375	39.57	-13.06	26.51	40.00	13.49	100	108	PK	Horizontal	PASS
2	88.2	39.58	-13.50	26.08	43.50	17.42	100	115	PK	Horizontal	PASS
3	110.51	39.42	-11.56	27.86	43.50	15.64	100	92	PK	Horizontal	PASS
4	164.83	43.42	-12.89	30.53	43.50	12.97	100	293	PK	Horizontal	PASS
5	262.8	48.45	-8.17	40.28	46.00	5.72	100	323	PK	Horizontal	PASS
6	296.265	48.45	-7.57	40.88	46.00	5.12	100	201	PK	Horizontal	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	46.21	-11.77	34.44	40.00	5.56	100	222	PK	Vertical	PASS
2	88.2	43.51	-13.50	30.01	43.50	13.49	100	57	PK	Vertical	PASS
3	168.71	43.11	-12.76	30.35	43.50	13.15	100	71	PK	Vertical	PASS
4	272.015	40.46	-7.86	32.60	46.00	13.40	100	156	PK	Vertical	PASS
5	434.975	35.95	-4.19	31.76	46.00	14.24	100	324	PK	Vertical	PASS
6	565.925	31.52	-1.10	30.42	46.00	15.58	100	324	PK	Vertical	PASS

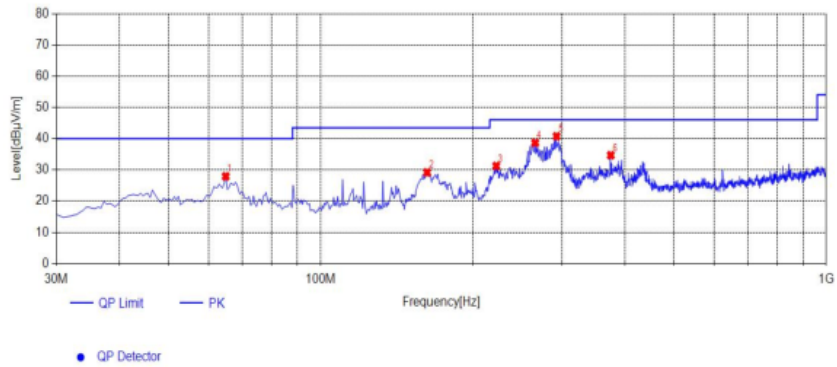
Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

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

Adapter: CYZS36-240150

Horizontal

Test Graph



Suspected List

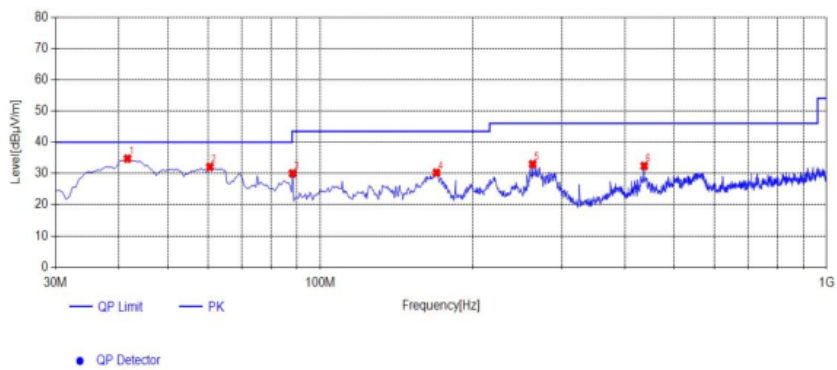
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	64.92	40.56	-12.63	27.93	40.00	12.07	100	266	PK	Horizontal	PASS
2	162.405	42.25	-13.05	29.20	43.50	14.30	100	311	PK	Horizontal	PASS
3	222.545	40.73	-9.47	31.26	46.00	14.74	100	24	PK	Horizontal	PASS
4	265.71	46.73	-8.05	38.68	46.00	7.32	100	318	PK	Horizontal	PASS
5	292.87	48.36	-7.61	40.75	46.00	5.25	100	196	PK	Horizontal	PASS
6	374.835	40.39	-5.71	34.68	46.00	11.32	100	219	PK	Horizontal	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	41.64	46.42	-11.68	34.74	40.00	5.26	100	302	PK	Vertical	PASS
2	60.555	43.51	-11.42	32.09	40.00	7.91	100	190	PK	Vertical	PASS
3	88.2	43.51	-13.50	30.01	43.50	13.49	100	56	PK	Vertical	PASS
4	169.68	42.98	-12.75	30.23	43.50	13.27	100	83	PK	Vertical	PASS
5	262.8	41.15	-8.17	32.98	46.00	13.02	100	149	PK	Vertical	PASS
6	436.43	36.53	-4.13	32.40	46.00	13.60	100	351	PK	Vertical	PASS

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

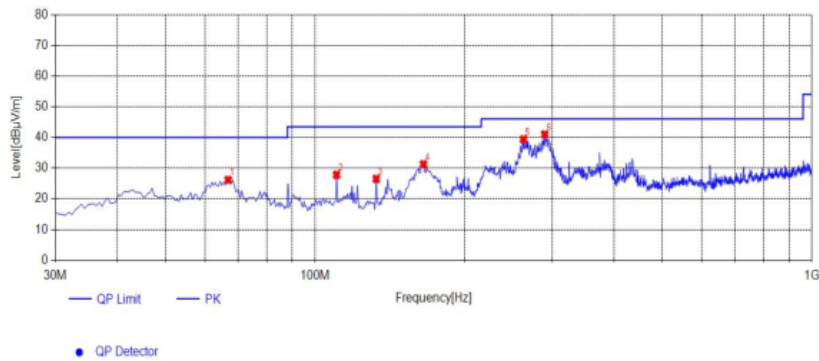
2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Version C:

Adapter: ADS-65HI-19A-124036F

Horizontal

Test Graph



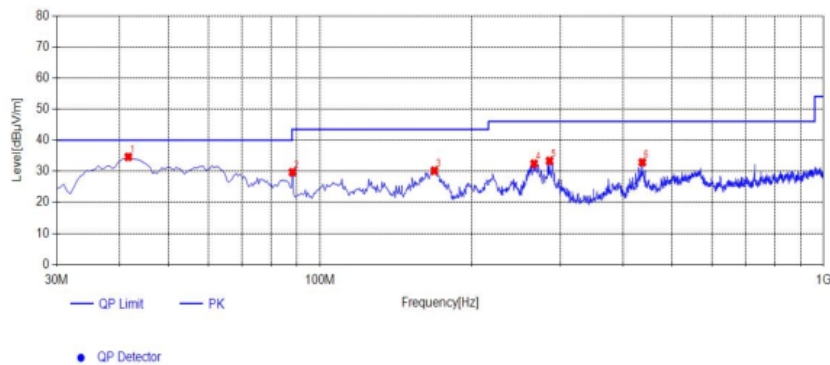
Suspected List											
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	66.86	39.37	-13.20	26.17	40.00	13.83	100	94	PK	Horizontal	PASS
2	110.51	39.40	-11.56	27.84	43.50	15.66	100	98	PK	Horizontal	PASS
3	132.82	40.37	-13.85	26.52	43.50	16.98	100	94	PK	Horizontal	PASS
4	165.315	44.13	-12.85	31.28	43.50	12.22	100	288	PK	Horizontal	PASS
5	262.8	47.57	-8.17	39.40	46.00	6.60	100	308	PK	Horizontal	PASS
6	289.96	48.62	-7.66	40.96	46.00	5.04	100	272	PK	Horizontal	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	41.64	46.29	-11.68	34.61	40.00	5.39	100	216	PK	Vertical	PASS
2	88.2	43.20	-13.50	29.70	43.50	13.80	100	41	PK	Vertical	PASS
3	168.71	42.93	-12.76	30.17	43.50	13.33	100	51	PK	Vertical	PASS
4	266.195	40.47	-8.03	32.44	46.00	13.56	100	163	PK	Vertical	PASS
5	285.595	41.07	-7.72	33.35	46.00	12.65	100	120	PK	Vertical	PASS
6	436.43	37.01	-4.13	32.88	46.00	13.12	100	328	PK	Vertical	PASS

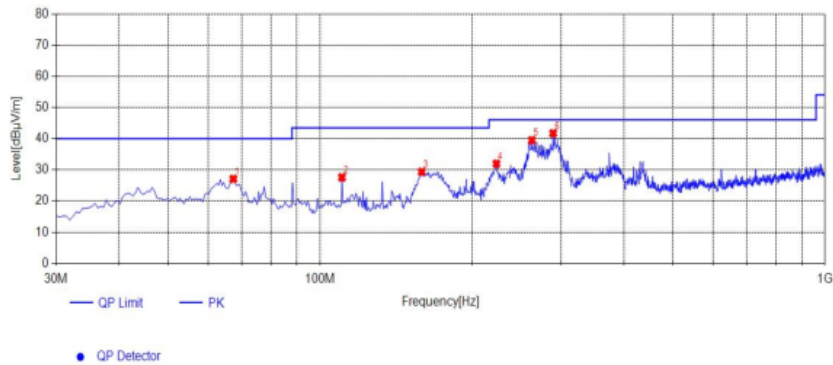
Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

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

Adapter: SOY-2400150-332-A

Horizontal

Test Graph



Suspected List

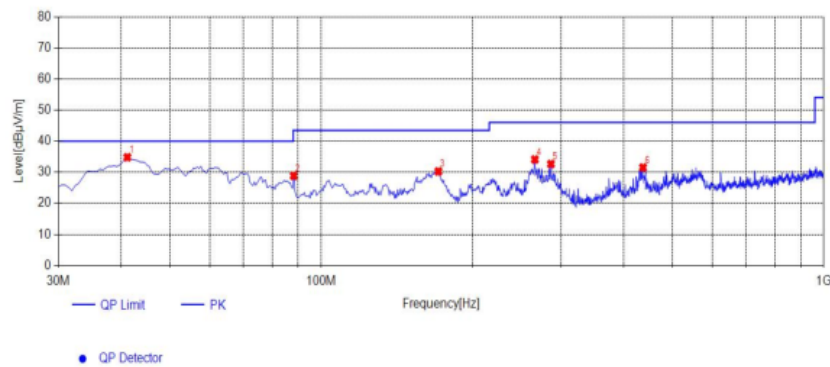
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	67.345	40.42	-13.34	27.08	40.00	12.92	100	122	PK	Horizontal	PASS
2	110.51	39.13	-11.56	27.57	43.50	15.93	100	109	PK	Horizontal	PASS
3	159.01	42.64	-13.29	29.35	43.50	14.15	100	308	PK	Horizontal	PASS
4	223.515	41.40	-9.45	31.95	46.00	14.05	100	17	PK	Horizontal	PASS
5	262.8	47.66	-8.17	39.49	46.00	6.51	100	325	PK	Horizontal	PASS
6	289.475	49.39	-7.66	41.73	46.00	4.27	100	344	PK	Horizontal	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	46.60	-11.77	34.83	40.00	5.17	100	211	PK	Vertical	PASS
2	88.2	42.37	-13.50	28.87	43.50	14.63	100	52	PK	Vertical	PASS
3	171.135	42.95	-12.69	30.26	43.50	13.24	100	79	PK	Vertical	PASS
4	266.195	42.14	-8.03	34.11	46.00	11.89	100	128	PK	Vertical	PASS
5	286.565	40.36	-7.71	32.65	46.00	13.35	100	122	PK	Vertical	PASS
6	436.915	35.65	-4.12	31.53	46.00	14.47	100	329	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: CYZS36-240150

