

#### FCC PART 15 SUBPART C TEST REPORT

#### **FCC PART 15.247**

Report Reference No....: GTS20241101002-1-02

FCC ID.....: 2AYD5-I24D03

Compiled by

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Dec.25, 2024 Date of issue .....:

Representative Laboratory Name.: Shenzhen Global Test Service Co.,Ltd.

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Address .....:

Street, Longgang District, Shenzhen, Guangdong, China

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

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

Test specification .....:

Standard ...... FCC Part 15.247

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

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

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Test item description ...... POS Device

Manufacturer .....: Imin Technology Pte Ltd

Model/Type reference .....: 124D03

Listed Models .....: N/A

Trade Mark .....:

Modulation Type ...... GFSK

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

Hardware Version .....: N/A Software Version .....: N/A

Rating ...... DC 24V/2.5A by adapter

Result ..... PASS

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# TEST REPORT

Test Report No. :	GTS20241101002-1-02	Dec.25, 2024
	31020241101002-1-02	Date of issue

Equipment under Test : POS Device

Model /Type : I24D03

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:

<u>FCC Rules Part 15.247</u>: 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.

<u>ANSI C63.10-2020</u>: American National Standard for Testing Unlicensed Wireless Devices

<u>KDB 558074 D01 DTS Meas Guidance:</u> Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247.

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# 2. SUMMARY

# 2.1. General Remarks

Date of receipt of test sample		Nov.28, 2024
Testing commenced on	:	Nov.28, 2024
Testing concluded on	:	Dec.24, 2024

# 2.2. Product Description

Product Name:	POS Device		
Trade Mark:	imin		
Model/Type reference:	I24D03		
List Model:	N/A		
Model Declaration	N/A		
Power supply:	DC 24V/2.5A by adapter		
Hardware Version	N/A		
Software Version	N/A		
Sample ID	GTS20241101002-1-S0001-3# GTS20241101002-1-S0001-4#( Version A ) GTS20241101002-1-S0001-5#( Version B ) GTS20241101002-1-S0001-6#( Version C ) GTS20241101002-1-S0001-7#( Version D ) GTS20241101002-1-S0001-8#( Version E ) GTS20241101002-1-S0001-9#( Version F )		
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				
	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)				
WLAN Modulation Type	IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK)				
WEAR Modulation Type	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)				
	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)				
Channel number:	2 channels for 40MHz bandwidth(5270~5310MHz)				
Charmer number.	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 5 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).					
Version C: Only one large display Version D: Double large display (5	30 inch printer). one small display (80 inch printer), (80 inch printer), 58 inch printer), one small display (58 inch printer),				

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#### 2.3. Equipment Under Test

#### Power supply system utilised

Power supply voltage	:	0	230V / 50 Hz	0	120V / 60Hz
		0	12 V DC	•	24 V DC
		0	Other (specified in blank bel	ow)	)

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 40 channels provided to the EUT. Channel 00/19/39 was selected to test.

Mode of Operations	Frequency Range (MHz)	Data Rate (Mbps)		
	2402	1		
(BLE)	2440	1		
	2480	1		
For Conducted Emission				
Test Mode		TX Mode		
For Radiated Emission				
Test Mode		TX Mode		

Channel	Frequency(MHz)	Channel	Frequency(MHz)
0	2402	20	2442
1	2404	21	2444
2	2406	22	2446
18	2438	38	2478
19	2440	39	2480

The EUT has been tested under operating condition.

This test was performed with EUT in X, Y, Z position and the worst case was found when EUT in X position.

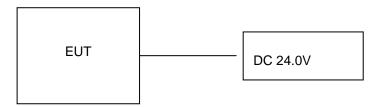
AC conducted emission pre-test at both at AC 120V/60Hz and AC 240V/50Hz modes, recorded worst case(AC 120V/60Hz).

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, which was determined to be BT LE mode (MCH).

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 BT LE mode(MCH).

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#### 2.6. Block Diagram of Test Setup



#### 2.7. EUT Exercise Software

The system was configured for testing in a continuous transmits condition and change test channels by software (adb model) provided by application.

#### 2.8. Special Accessories

Manufacturer	Description	Model	Serial Number	Certificate
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
	Electronic Scale			SDOC
	Cashbox			SDOC

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

#### 2.9. 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. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: 2AYD5-I24D03** filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

#### 2.11. Modifications

No modifications were implemented to meet testing criteria.

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#### 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, China.

#### 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:	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 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.

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# 3.5. Test Description

	Applied Standard: FCC Part 15 Subpart C								
FCC Rules	Description of Test	Test Sample	Result	Remark					
/	On Time and Duty Cycle	GTS20241101002-1-S0001-3#	/	/					
§15.247(b)	Maximum Conducted Output Power	GTS20241101002-1-S0001-3#	Compliant	Appendix B					
§15.247(e)	Power Spectral Density	GTS20241101002-1-S0001-3#	Compliant	Appendix B					
§15.247(a)(2)	6dB Bandwidth	GTS20241101002-1-S0001-3#	Compliant	Appendix B					
§2.1047	99% Occupied Bandwidth	GTS20241101002-1-S0001-3#	Compliant	Appendix B					
§15.209, §15.247(d)	Conducted Spurious Emissions and Band Edges Test	GTS20241101002-1-S0001-3#	Compliant	Appendix B					
§15.209, §15.247(d)	Radiated Spurious Emissions	GTS20241101002-1-S0001-3# GTS20241101002-1-S0001-4# GTS20241101002-1-S0001-5# GTS20241101002-1-S0001-6# GTS20241101002-1-S0001-7# GTS20241101002-1-S0001-8# GTS20241101002-1-S0001-9#	Compliant	Note 1					
§15.205	Emissions at Restricted Band	GTS20241101002-1-S0001-3#	Compliant	Appendix B					
§15.207(a)	AC Conducted Emissions	GTS20241101002-1-S0001-4# GTS20241101002-1-S0001-5# GTS20241101002-1-S0001-6# GTS20241101002-1-S0001-7# GTS20241101002-1-S0001-8# GTS20241101002-1-S0001-9#	Compliant	Note 1					
§15.203 §15.247(c)	Antenna Requirements	GTS20241101002-1-S0001-3#	Compliant	Note 1					
§15.247(i)§2.10 91	RF Exposure	/	Compliant	Note 2					

#### Remark:

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

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# 3.6. Equipments Used during the Test

				O all and a	O dilla control
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	2024/07/15	2025/07/14
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/Humidit y 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	/	/

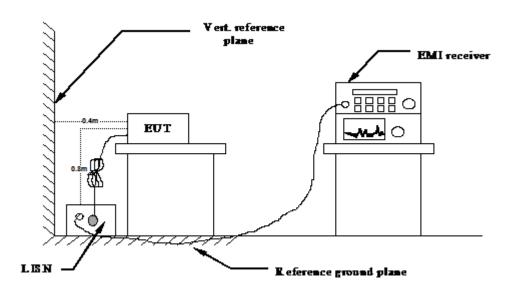
Note: 1. The Cal.Interval was one year.

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#### 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 24V 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.
- 5 All support equipments received AC power from a second LISN, if any.
- 6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7 Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
- 8 During the above scans, the emissions were maximized by cable manipulation.

#### **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)					
r requericy rarige (initiz)	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 freque	ncy.					

#### **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

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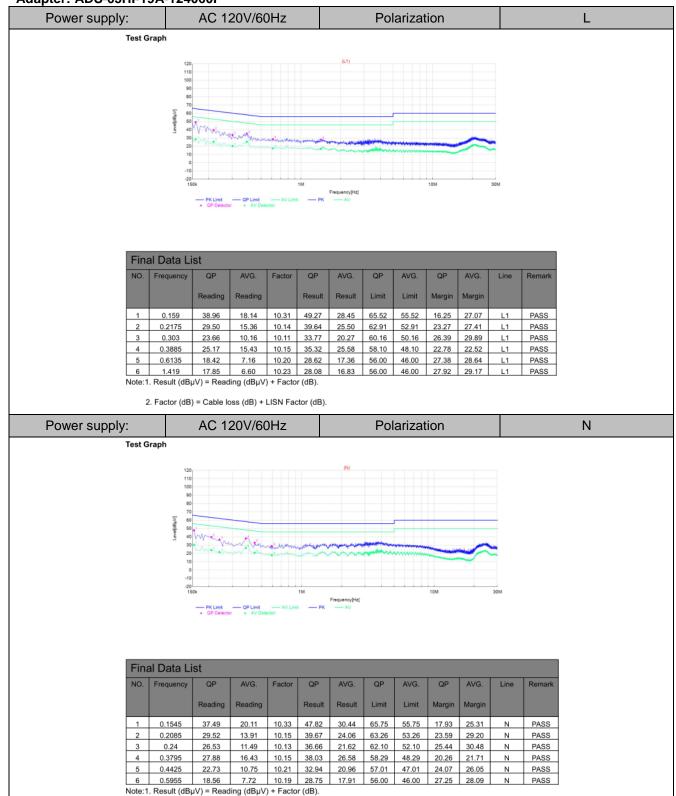
#### **TEST RESULTS**

Remark: We measured Conducted Emission at GFSK mode from 150 KHz to 30MHz in AC120V and the worst case was recorded.

Temperature	25℃	Humidity	60%	
Test Engineer	Evan Ouyang	Configurations	BT	

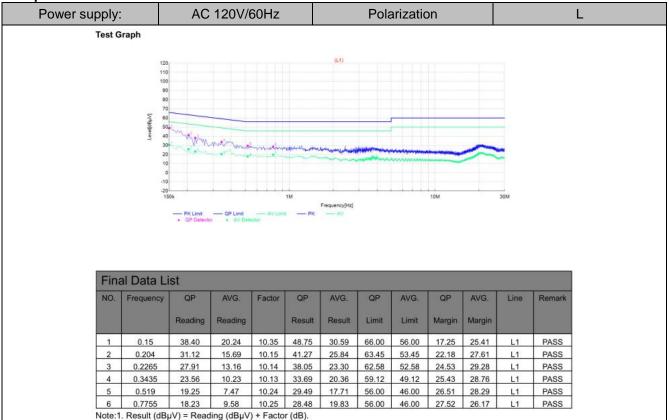
**Version A:** 

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



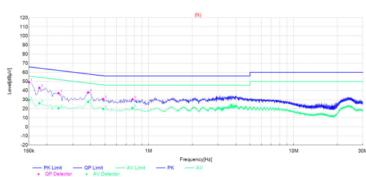
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Adapter: CYSE65-240250



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

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



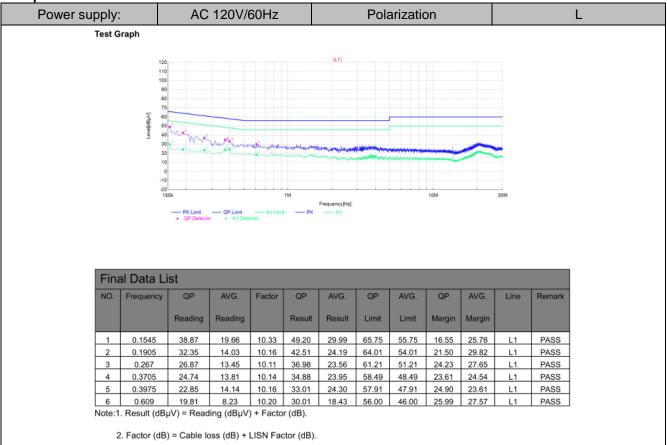
Fina	Final Data List											
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.15	38.85	19.12	10.35	49.20	29.47	66.00	56.00	16.80	26.53	N	PASS
2	0.177	32.77	15.90	10.22	42.99	26.12	64.63	54.63	21.64	28.51	Ν	PASS
3	0.24	26.98	10.43	10.13	37.11	20.56	62.10	52.10	24.99	31.54	N	PASS
4	0.384	27.72	17.48	10.15	37.87	27.63	58.19	48.19	20.32	20.56	N	PASS
5	0.4875	20.41	9.55	10.25	30.66	19.80	56.21	46.21	25.55	26.41	N	PASS
6	0.7755	20.16	10.74	10.25	30.41	20.99	56.00	46.00	25.59	25.01	N	PASS

Note:1. Result (dB $\mu$ V) = Reading (dB $\mu$ V) + Factor (dB).

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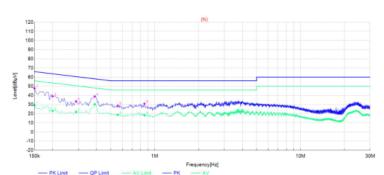
Version B:

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



Power supply: AC 120V/60Hz Polarization N

Test Graph

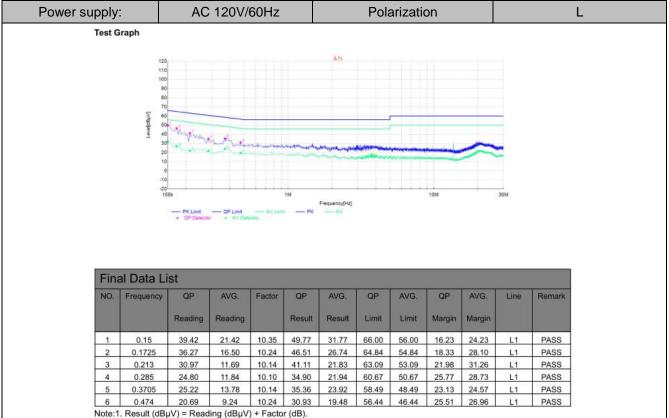


Fina	Final Data List											
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.15	37.45	18.87	10.35	47.80	29.22	66.00	56.00	18.20	26.78	N	PASS
2	0.1995	28.91	12.91	10.15	39.06	23.06	63.63	53.63	24.57	30.57	Ν	PASS
3	0.2895	23.43	11.90	10.10	33.53	22.00	60.54	50.54	27.01	28.54	Ν	PASS
4	0.3885	28.74	20.21	10.15	38.89	30.36	58.10	48.10	19.21	17.74	Ν	PASS
5	0.5595	18.56	8.59	10.21	28.77	18.80	56.00	46.00	27.23	27.20	Z	PASS
6	0.852	20.69	8.14	10.24	30.93	18.38	56.00	46.00	25.07	27.62	Ν	PASS

Note:1. Result (dB $\mu$ V) = Reading (dB $\mu$ V) + Factor (dB).

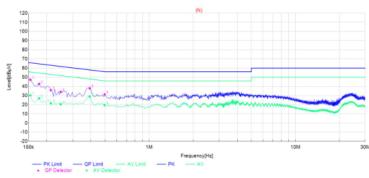
Report No.: GTS20241101002-1-02 Page 16 of 52

Adapter: CYSE65-240250



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

Power supply:	AC 120V/60Hz	Polarization	N
Test Graph			
		(N)	



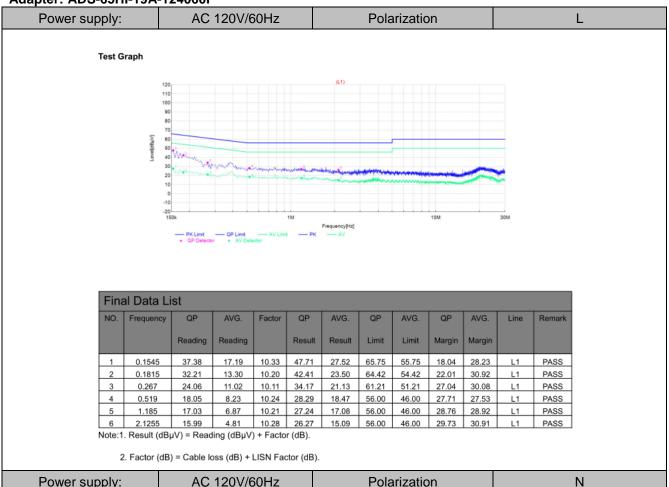
Fina	Final Data List											
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.1545	36.84	19.97	10.33	47.17	30.30	65.75	55.75	18.58	25.45	N	PASS
2	0.177	32.47	16.80	10.22	42.69	27.02	64.63	54.63	21.94	27.61	N	PASS
3	0.213	25.74	11.40	10.14	35.88	21.54	63.09	53.09	27.21	31.55	N	PASS
4	0.249	23.94	10.31	10.12	34.06	20.43	61.79	51.79	27.73	31.36	N	PASS
5	0.393	27.77	18.74	10.16	37.93	28.90	58.00	48.00	20.07	19.10	N	PASS
6	0.4965	21.03	9.25	10.25	31.28	19.50	56.06	46.06	24.78	26.56	N	PASS

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

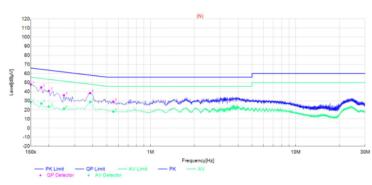
Report No.: GTS20241101002-1-02 Page 17 of 52

#### **Version C:**

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



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

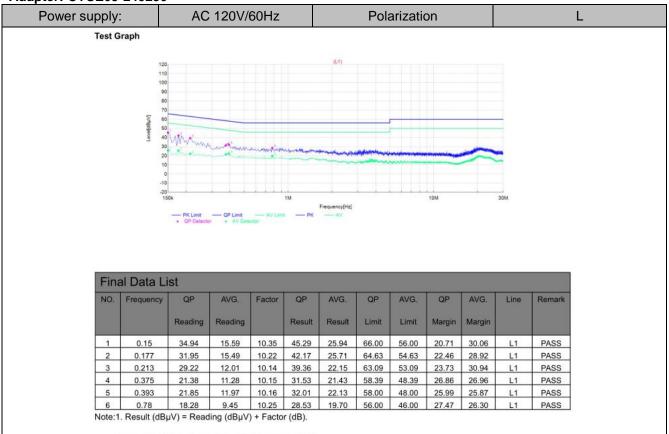


Fina	Final Data List												
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark	
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin			
1	0.15	37.57	18.10	10.35	47.92	28.45	66.00	56.00	18.08	27.55	N	PASS	
2	0.177	34.59	16.88	10.22	44.81	27.10	64.63	54.63	19.82	27.53	Z	PASS	
3	0.1995	30.71	13.60	10.15	40.86	23.75	63.63	53.63	22.77	29.88	Ν	PASS	
4	0.2535	26.04	11.38	10.12	36.16	21.50	61.64	51.64	25.48	30.14	Ν	PASS	
5	0.384	28.36	18.48	10.15	38.51	28.63	58.19	48.19	19.68	19.56	N	PASS	
6	0.555	18.80	7.84	10.21	29.01	18.05	56.00	46.00	26.99	27.95	Ν	PASS	

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

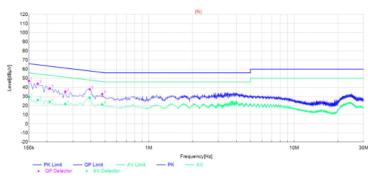
Report No.: GTS20241101002-1-02 Page 18 of 52

Adapter: CYSE65-240250



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

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

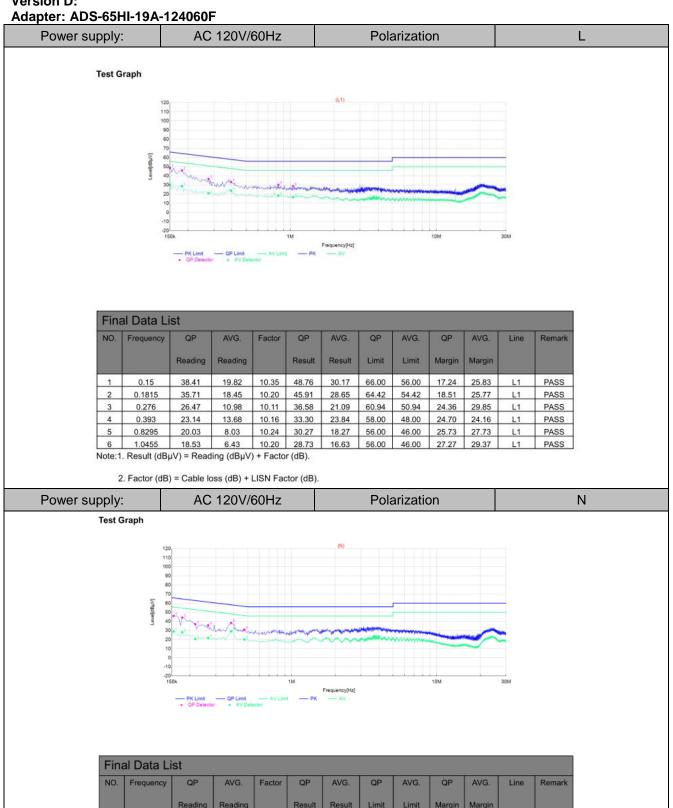


Fina	Final Data List												
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark	
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin			
1	0.15	36.78	19.21	10.35	47.13	29.56	66.00	56.00	18.87	26.44	Ν	PASS	
2	0.1725	33.82	15.97	10.24	44.06	26.21	64.84	54.84	20.78	28.63	Ν	PASS	
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	Ν	PASS	
6	0.4785	22.50	11.11	10.24	32.74	21.35	56.37	46.37	23.63	25.02	Ν	PASS	

Note:1. Result (dB $\mu$ V) = Reading (dB $\mu$ V) + Factor (dB).

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#### **Version D:**

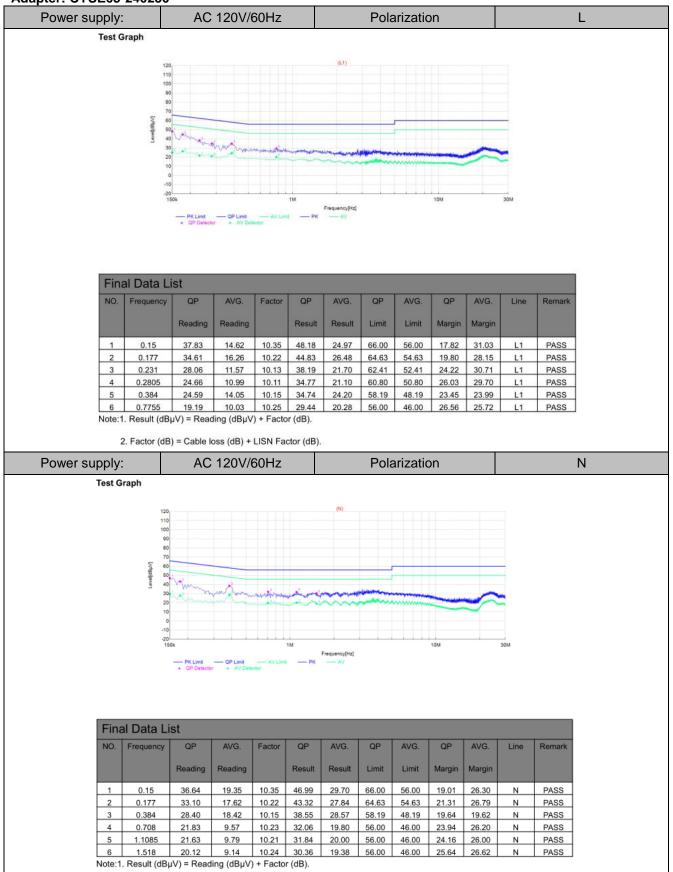


Fina	Final Data List											
NO.	Frequency	QP	AVG.	Factor	QP	AVG.	QP	AVG.	QP	AVG.	Line	Remark
		Reading	Reading		Result	Result	Limit	Limit	Margin	Margin		
1	0.1545	35.70	18.70	10.33	46.03	29.03	65.75	55.75	19.72	26.72	N	PASS
2	0.177	34.02	17.91	10.22	44.24	28.13	64.63	54.63	20.39	26.50	N	PASS
3	0.2175	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).

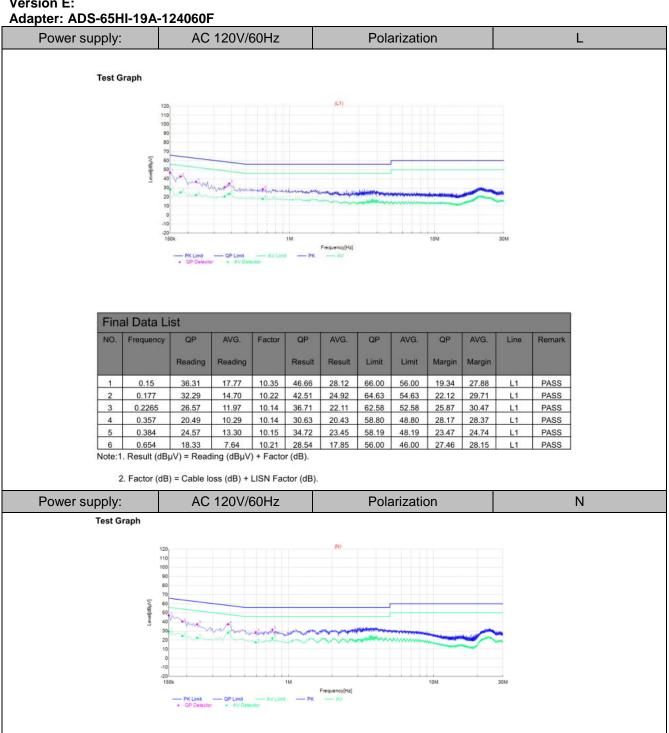
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Adapter: CYSE65-240250



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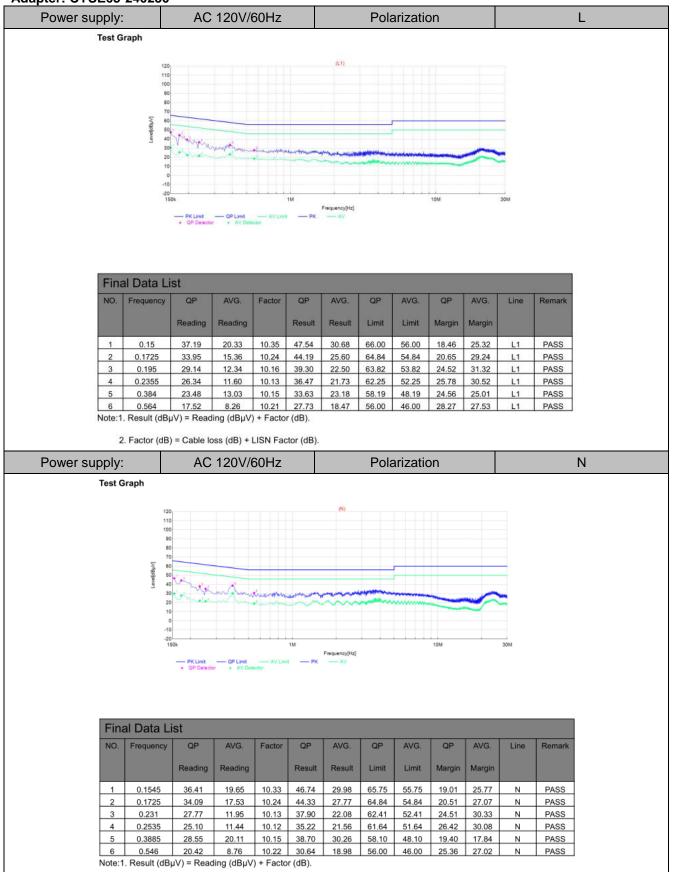
#### Version E:



Fina	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	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	Ν	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	Ν	PASS
Note:1	. Result (dB	JV) = Read	ing (dBµV)	+ Facto	r (dB).							

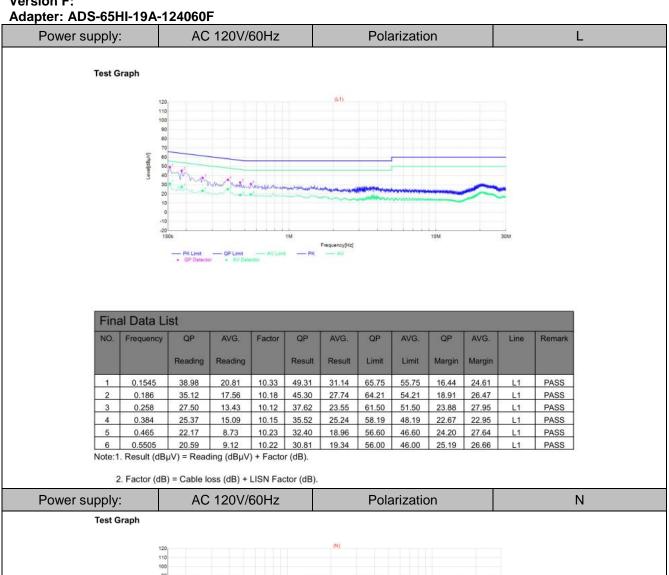
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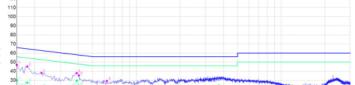
Adapter: CYSE65-240250



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#### Version F:





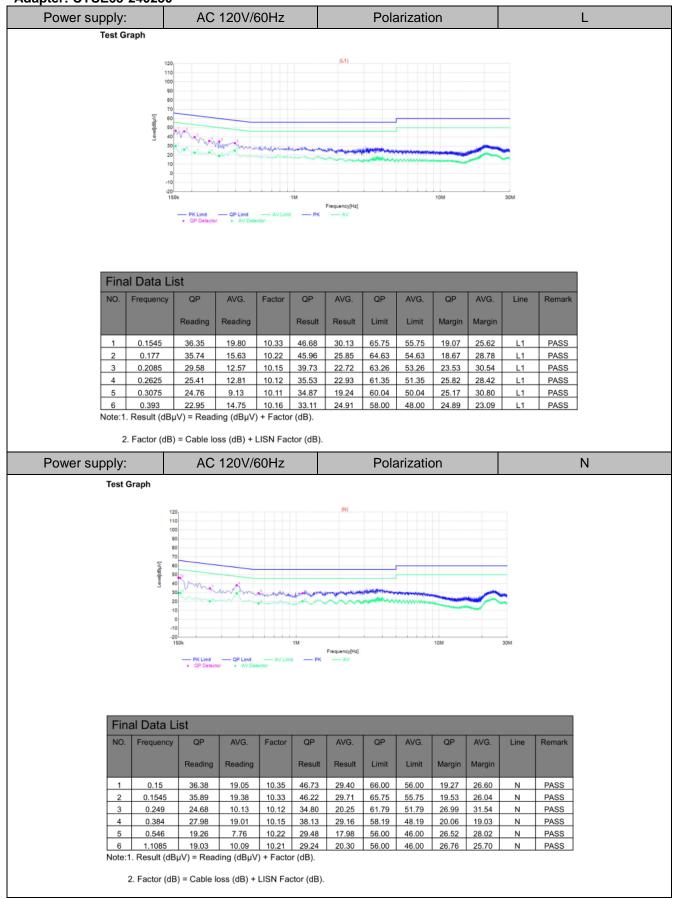
PKLimit — QP Limit — AV Limit — PK — AV

Fina	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	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 (dB $\mu$ V) = Reading (dB $\mu$ V) + Factor (dB).

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Adapter: CYSE65-240250

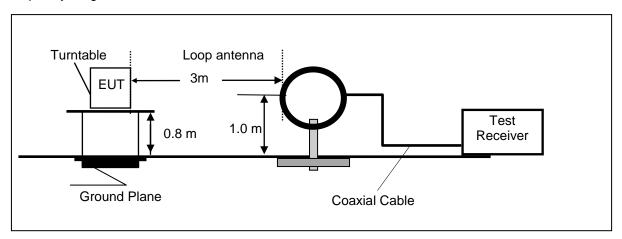


Note: All modes have been tested and the worst mode is recorded in the report, NFC has two optional antennas, with the worst mode recorded in the report (NFC antenna Model:DS2-52).

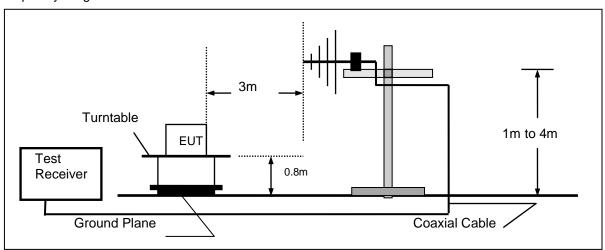
#### 4.2. Radiated Emission

#### **TEST CONFIGURATION**

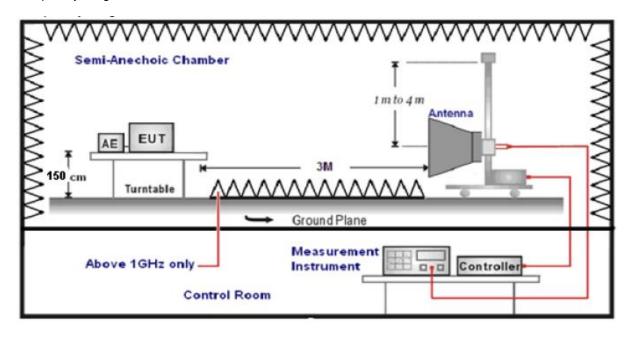
Frequency range 9 KHz - 30MHz



Frequency range 30MHz - 1000MHz



Frequency range above 1GHz-25GHz



#### **TEST PROCEDURE**

- 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  $0^{\circ}$  to  $360^{\circ}$  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. Radiated emission test frequency band from 30MHz 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 Anternna	1

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

Test	Frequency	Test Receiver/Spectrum Setting	Detector
range			
9KHz-1	50KHz	RBW=200Hz/VBW=3KHz,Sweep time=Auto	QP
150KHz	z-30MHz	RBW=9KHz/VBW=100KHz,Sweep time=Auto	QP
30MHz-	·1GHz	RBW=120KHz/VBW=1000KHz,Sweep time=Auto	QP
		Peak Value: RBW=1MHz/VBW=3MHz,	
1GHz-4	0CU-	Sweep time=Auto	Peak
1002-4	UGIIZ	Average Value: RBW=1MHz/VBW=10Hz,	reak
		Sweep time=Auto	

#### **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

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#### **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 the100kHz 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 (dBµV/m)	Radiated (μV/m)
0.009-0.49	3	20log(2400/F(KHz))+40log(300/3)	2400/F(KHz)
0.49-1.705	3	20log(24000/F(KHz))+ 40log(30/3)	24000/F(KHz)
1.705-30	3	20log(30)+ 40log(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 mode from 9KHz to 25GHz in AC120V and the worst case was recorded.

Temperature	Temperature 25°C		55%	
Test Engineer	Evan Ouyang	Configurations	BT	

#### For 9 KHz~30MHz

Freq.	Level	Over Limit	Over Limit	Remark
(MHz)	(dBuV)	(dB)	(dBuV)	
-	-	-	-	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.

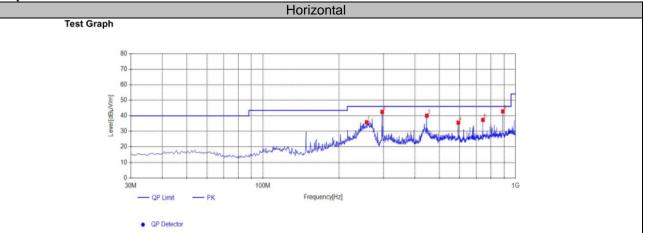
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

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# For 30MHz-1GHz Version A:

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



Sus	Suspected List												
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark		
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]					
1	257.465	44.22	-8.38	35.84	46.00	10.16	100	249	PK	Horizonta	PASS		
2	296.75	50.13	-7.56	42.57	46.00	3.43	100	102	PK	Horizonta	PASS		
3	445.645	43.98	-3.91	40.07	46.00	5.93	100	345	PK	Horizonta	PASS		
4	594.055	36.21	-0.60	35.61	46.00	10.39	100	16	PK	Horizonta	PASS		
5	742.95	36.25	1.13	37.38	46.00	8.62	100	56	PK	Horizonta	PASS		
6	891.36	40.88	1.98	42.86	46.00	3.14	100	259	PK	Horizonta	PASS		

Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

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

# Test Graph \*\*Prequency(Hz)\*\* Test Graph Test Graph \*\*Prequency(Hz)\*\* Test Graph Test G

Sus	pected Lis	st									
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]			
1	148.34	54.35	-14.22	40.13	43.50	3.37	100	300	PK	Vertical	PASS
2	445.645	42.56	-3.91	38.65	46.00	7.35	100	317	PK	Vertical	PASS
3	594.055	43.84	-0.60	43.24	46.00	2.76	100	102	PK	Vertical	PASS
4	676.505	35.86	0.44	36.30	46.00	9.70	100	108	PK	Vertical	PASS
5	742.465	41.48	1.13	42.61	46.00	3.39	100	330	PK	Vertical	PASS
6	891.36	41.18	1.98	43.16	46.00	2.84	100	88	PK	Vertical	PASS

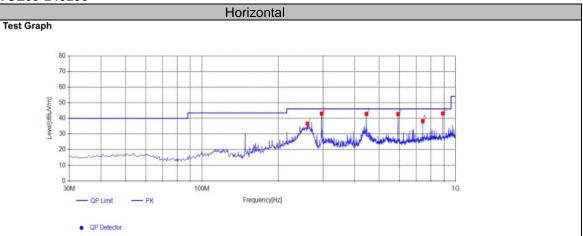
Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

QP Detector

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#### Adapter: CYSE65-240250

Report No.: GTS20241101002-1-02



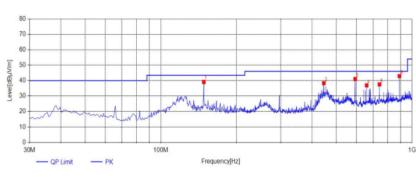
Sus	Suspected List												
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark		
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]					
1	260.86	44.87	-8.24	36.63	46.00	9.37	100	255	PK	Horizonta	PASS		
2	296.75	50.64	-7.56	43.08	46.00	2.92	100	235	PK	Horizonta	PASS		
3	445.645	46.79	-3.91	42.88	46.00	3.12	100	76	PK	Horizonta	PASS		
4	594.055	43.41	-0.60	42.81	46.00	3.19	100	242	PK	Horizonta	PASS		
5	742.465	37.12	1.13	38.25	46.00	7.75	100	40	PK	Horizonta	PASS		
6	891.36	41.22	1.98	43.20	46.00	2.80	100	337	PK	Horizonta	PASS		

Note:1. Result  $(dB\mu V/m)$  = Reading $(dB\mu V/m)$  + Factor (dB) .

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

#### Vertical





Sus	Suspected List												
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark		
	[	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	["]					
1	148.34	53.39	-14.22	39.17	43.50	4.33	100	317	PK	Vertical	PASS		
2	445.645	42.25	-3.91	38.34	46.00	7.66	100	119	PK	Vertical	PASS		
3	594.055	41.69	-0.60	41.09	46.00	4.91	100	281	PK	Vertical	PASS		
4	660.015	36.68	0.28	36.96	46.00	9.04	100	132	PK	Vertical	PASS		
5	742.465	36.45	1.13	37.58	46.00	8.42	100	178	PK	Vertical	PASS		
6	891.36	40.96	1.98	42.94	46.00	3.06	100	321	PK	Vertical	PASS		

Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

QP Detector

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#### **Version B:**

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



Sus	Suspected List													
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark			
	[	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]						
1	260.375	43.73	-8.26	35.47	46.00	10.53	100	271	PK	Horizonta	PASS			
2	271.045	46.08	-7.88	38.20	46.00	7.80	100	251	PK	Horizonta	PASS			
3	445.645	46.02	-3.91	42.11	46.00	3.89	100	182	PK	Horizonta	PASS			
4	594.055	44.24	-0.60	43.64	46.00	2.36	100	69	PK	Horizonta	PASS			
5	742.95	37.55	1.13	38.68	46.00	7.32	100	55	PK	Horizonta	PASS			
6	891.36	39.29	1.98	41.27	46.00	4.73	100	321	PK	Horizonta	PASS			

Vertical

Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

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

# Test Graph

QP Detector

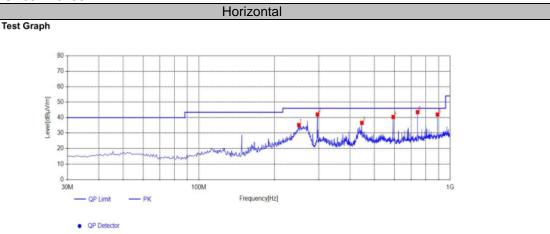
Sus	Suspected List													
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark			
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]						
1	148.34	54.18	-14.22	39.96	43.50	3.54	100	270	PK	Vertical	PASS			
2	445.645	41.97	-3.91	38.06	46.00	7.94	100	9	PK	Vertical	PASS			
3	594.055	43.15	-0.60	42.55	46.00	3.45	100	197	PK	Vertical	PASS			
4	683.295	36.13	0.49	36.62	46.00	9.38	100	108	PK	Vertical	PASS			
5	742.465	38.69	1.13	39.82	46.00	6.18	100	102	PK	Vertical	PASS			
6	891.36	41.12	1.98	43.10	46.00	2.90	100	350	PK	Vertical	PASS			

Frequency[Hz]

Note:1. Result ( $dB\mu V/m$ ) = Reading( $dB\mu V/m$ ) + Factor (dB) .

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#### Adapter: CYSE65-240250

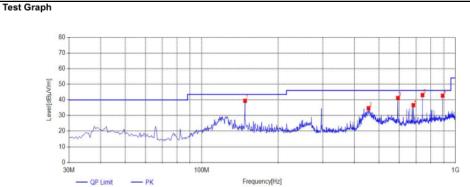


Sus	pected Lis	st									
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark
	[	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	["]			
1	250.19	43.98	-8.70	35.28	46.00	10.72	100	255	PK	Horizonta	PASS
2	296.75	49.64	-7.56	42.08	46.00	3.92	100	311	PK	Horizonta	PASS
3	445.645	40.51	-3.91	36.60	46.00	9.40	100	228	PK	Horizonta	PASS
4	594.055	41.05	-0.60	40.45	46.00	5.55	100	358	PK	Horizonta	PASS
5	742.465	42.44	1.13	43.57	46.00	2.43	100	251	PK	Horizonta	PASS
6	891.36	40.04	1.98	42.02	46.00	3.98	100	311	PK	Horizonta	PASS

Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

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

#### Vertical



QP Detector

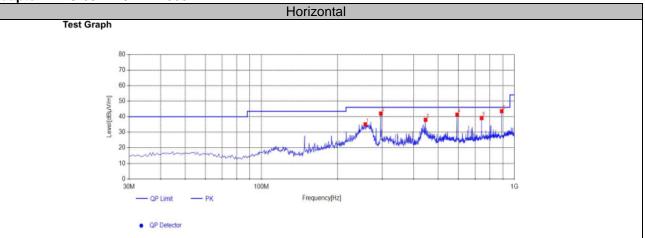
Sus	Suspected List													
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark			
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]						
1	148.34	53.64	-14.22	39.42	43.50	4.08	100	347	PK	Vertical	PASS			
2	454.86	38.37	-3.72	34.65	46.00	11.35	100	360	PK	Vertical	PASS			
3	594.055	41.79	-0.60	41.19	46.00	4.81	100	298	PK	Vertical	PASS			
4	683.295	36.14	0.49	36.63	46.00	9.37	100	135	PK	Vertical	PASS			
5	742.465	41.93	1.13	43.06	46.00	2.94	100	321	PK	Vertical	PASS			
6	891.36	40.71	1.98	42.69	46.00	3.31	100	350	PK	Vertical	PASS			

Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

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#### **Version C:**

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

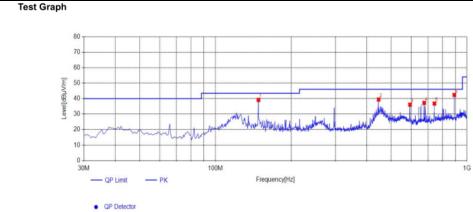


Sus	Suspected List													
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark			
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]						
1	257.465	43.48	-8.38	35.10	46.00	10.90	100	320	PK	Horizonta	PASS			
2	296.75	49.62	-7.56	42.06	46.00	3.94	100	274	PK	Horizonta	PASS			
3	445.645	41.93	-3.91	38.02	46.00	7.98	100	337	PK	Horizonta	PASS			
4	594.055	41.91	-0.60	41.31	46.00	4.69	100	290	PK	Horizonta	PASS			
5	742.465	38.03	1.13	39.16	46.00	6.84	100	42	PK	Horizonta	PASS			
6	891.36	41.61	1.98	43.59	46.00	2.41	100	55	PK	Horizonta	PASS			

Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

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

#### Vertical

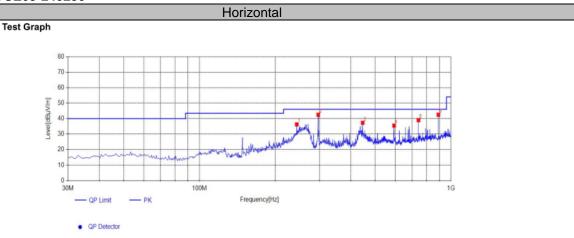


Sus	Suspected List													
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark			
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]						
1	148.34	53.40	-14.22	39.18	43.50	4.32	100	347	PK	Vertical	PASS			
2	445.645	43.36	-3.91	39.45	46.00	6.55	100	318	PK	Vertical	PASS			
3	594.055	36.71	-0.60	36.11	46.00	9.89	100	73	PK	Vertical	PASS			
4	676.505	36.80	0.44	37.24	46.00	8.76	100	106	PK	Vertical	PASS			
5	742.95	35.69	1.13	36.82	46.00	9.18	100	185	PK	Vertical	PASS			
6	891.36	40.41	1.98	42.39	46.00	3.61	100	301	PK	Vertical	PASS			

Note:1. Result  $(dB\mu V/m) = Reading(dB\mu V/m) + Factor (dB)$ .

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Adapter: CYSE65-240250



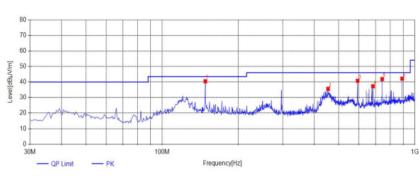
Sus	Suspected List												
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark		
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]					
1	243.885	45.25	-8.96	36.29	46.00	9.71	100	288	PK	Horizonta	PASS		
2	296.75	50.07	-7.56	42.51	46.00	3.49	100	288	PK	Horizonta	PASS		
3	445.645	41.20	-3.91	37.29	46.00	8.71	100	264	PK	Horizonta	PASS		
4	594.055	36.15	-0.60	35.55	46.00	10.45	100	62	PK	Horizonta	PASS		
5	742.95	37.89	1.13	39.02	46.00	6.98	100	49	PK	Horizonta	PASS		
6	891.36	40.55	1.98	42.53	46.00	3.47	100	311	PK	Horizonta	PASS		

Note:1. Result  $(dB\mu V/m) = Reading(dB\mu V/m) + Factor (dB)$ .

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

#### Vertical





Suspected List Margin Angle requency [MHz] Detector Polarity Remark NO. 148.34 259 PK PASS 54.71 -14.22 40.49 43.50 3.01 100 Vertical 2 PASS 453.89 39.33 -3.74 35.59 46.00 10.41 100 360 PK Vertical 3 594.055 41.41 -0.60 40.81 46.00 5.19 83 Vertical PASS 683.295 36.79 PΚ PASS 4 0.49 37.28 46.00 8.72 100 106 Vertical 5 742.95 40.76 1.13 41.89 46.00 4.11 100 229 Vertical PASS 6 891.36 40.22 1.98 42.20 46.00 3.80 100 352 PK Vertical PASS

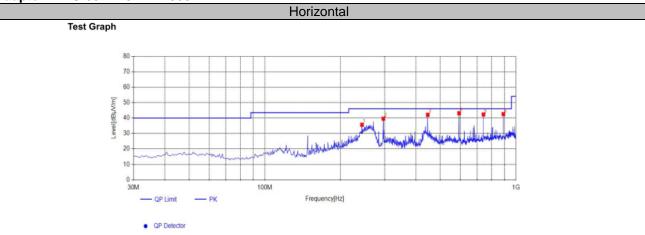
Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

QP Detector

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#### **Version D:**

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

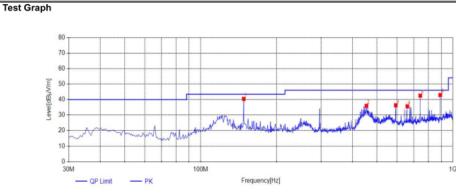


Sus	Suspected List													
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark			
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]						
1	243.885	44.63	-8.96	35.67	46.00	10.33	100	307	PK	Horizonta	PASS			
2	296.75	47.18	-7.56	39.62	46.00	6.38	100	142	PK	Horizonta	PASS			
3	445.645	46.02	-3.91	42.11	46.00	3.89	100	185	PK	Horizonta	PASS			
4	594.055	43.74	-0.60	43.14	46.00	2.86	100	72	PK	Horizonta	PASS			
5	742.95	41.17	1.13	42.30	46.00	3.70	100	248	PK	Horizonta	PASS			
6	891.36	40.58	1.98	42.56	46.00	3.44	100	317	PK	Horizonta	PASS			

Note:1. Result ( $dB\mu V/m$ ) = Reading( $dB\mu V/m$ ) + Factor (dB) .

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

#### Vertical



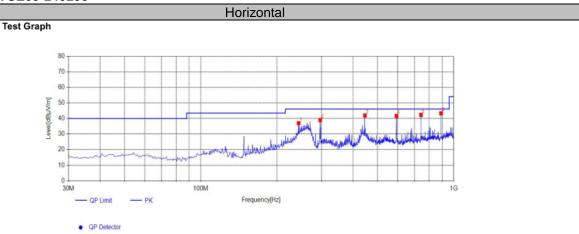
Sus	Suspected List												
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark		
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]					
1	148.34	54.68	-14.22	40.46	43.50	3.04	100	294	PK	Vertical	PASS		
2	454.375	39.69	-3.73	35.96	46.00	10.04	100	0	PK	Vertical	PASS		
3	594.055	36.96	-0.60	36.36	46.00	9.64	100	125	PK	Vertical	PASS		
4	660.015	35.40	0.28	35.68	46.00	10.32	100	102	PK	Vertical	PASS		
5	742.465	41.39	1.13	42.52	46.00	3.48	100	221	PK	Vertical	PASS		
6	891.36	40.97	1.98	42.95	46.00	3.05	100	92	PK	Vertical	PASS		

Note:1. Result ( $dB\mu V/m$ ) = Reading( $dB\mu V/m$ ) + Factor (dB) .

QP Detector

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Adapter: CYSE65-240250



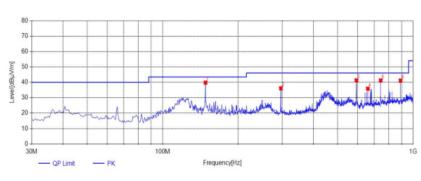
Sus	Suspected List												
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark		
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]					
1	243.885	45.90	-8.96	36.94	46.00	9.06	100	276	PK	Horizonta	PASS		
2	296.75	46.53	-7.56	38.97	46.00	7.03	100	326	PK	Horizonta	PASS		
3	445.645	45.85	-3.91	41.94	46.00	4.06	100	150	PK	Horizonta	PASS		
4	594.055	42.23	-0.60	41.63	46.00	4.37	100	256	PK	Horizonta	PASS		
5	742.465	41.12	1.13	42.25	46.00	3.75	100	343	PK	Horizonta	PASS		
6	891.36	41.33	1.98	43.31	46.00	2.69	100	64	PK	Horizonta	PASS		

Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

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

#### Vertical





QP Detector

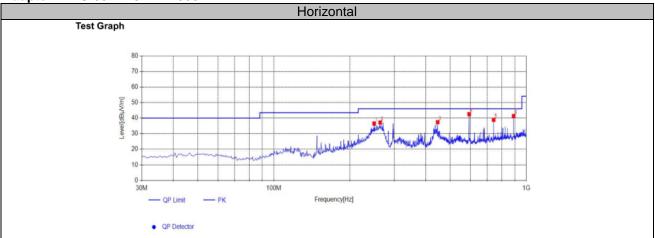
Sus	Suspected List												
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark		
	,	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]					
1	148.34	54.03	-14.22	39.81	43.50	3.69	100	311	PK	Vertical	PASS		
2	296.75	43.72	-7.56	36.16	46.00	9.84	100	360	PK	Vertical	PASS		
3	594.055	41.93	-0.60	41.33	46.00	4.67	100	119	PK	Vertical	PASS		
4	660.015	35.62	0.28	35.90	46.00	10.10	100	102	PK	Vertical	PASS		
5	742.465	40.12	1.13	41.25	46.00	4.75	100	165	PK	Vertical	PASS		
6	891.36	39.15	1.98	41.13	46.00	4.87	100	125	PK	Vertical	PASS		

Note:1. Result  $(dB\mu V/m) = Reading(dB\mu V/m) + Factor (dB)$ .

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#### Version E:

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

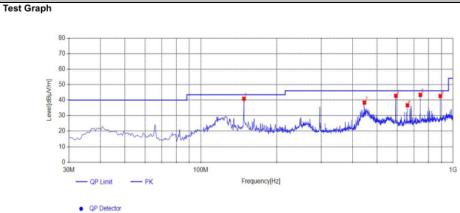


Sus	Suspected List												
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark		
		[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]					
1	249.705	45.27	-8.72	36.55	46.00	9.45	100	278	PK	Horizonta	PASS		
2	263.77	45.34	-8.12	37.22	46.00	8.78	100	338	PK	Horizonta	PASS		
3	445.645	41.34	-3.91	37.43	46.00	8.57	100	165	PK	Horizonta	PASS		
4	594.055	43.18	-0.60	42.58	46.00	3.42	100	56	PK	Horizonta	PASS		
5	742.465	37.78	1.13	38.91	46.00	7.09	100	271	PK	Horizonta	PASS		
6	891.36	39.40	1.98	41.38	46.00	4.62	100	334	PK	Horizonta	PASS		

Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

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

#### Vertical

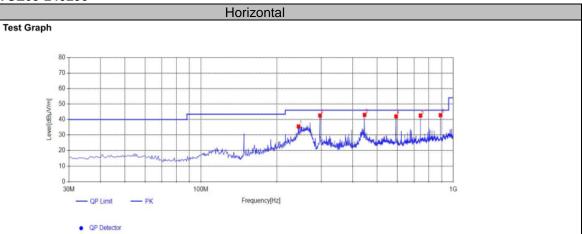


Sus	Suspected List												
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark		
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]					
1	148.34	55.16	-14.22	40.94	43.50	2.56	100	358	PK	Vertical	PASS		
2	445.645	42.34	-3.91	38.43	46.00	7.57	100	126	PK	Vertical	PASS		
3	594.055	43.38	-0.60	42.78	46.00	3.22	100	356	PK	Vertical	PASS		
4	660.015	36.44	0.28	36.72	46.00	9.28	100	106	PK	Vertical	PASS		
5	742.465	42.24	1.13	43.37	46.00	2.63	100	331	PK	Vertical	PASS		
6	891.36	40.68	1.98	42.66	46.00	3.34	100	79	PK	Vertical	PASS		

Note:1. Result  $(dB\mu V/m) = Reading(dB\mu V/m) + Factor (dB)$ .

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Adapter: CYSE65-240250

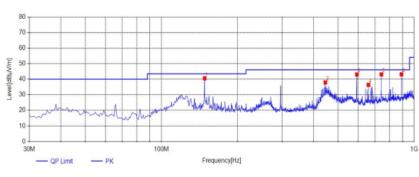


Sus	Suspected List														
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark				
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]							
1	1 243.885 44.53 -8.96 35.57 46.00 10.43 100 68 PK Horizonta PASS														
2	296.75	50.14	-7.56	42.58	46.00	3.42	100	270	PK	Horizonta	PASS				
3	445.645	46.92	-3.91	43.01	46.00	2.99	100	171	PK	Horizonta	PASS				
4	594.055	42.65	-0.60	42.05	46.00	3.95	100	54	PK	Horizonta	PASS				
5	742.465	41.43	1.13	42.56	46.00	3.44	100	324	PK	Horizonta	PASS				
6	891.36	40.86	1.98	42.84	46.00	3.16	100	21	PK	Horizonta	PASS				

Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

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

# Vertical Test Graph



QP Detector

Sus	Suspected List													
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark			
	[]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]						
1	148.34	54.83	-14.22	40.61	43.50	2.89	100	252	PK	Vertical	PASS			
2	445.645	41.86	-3.91	37.95	46.00	8.05	100	352	PK	Vertical	PASS			
3	594.055	43.69	-0.60	43.09	46.00	2.91	100	109	PK	Vertical	PASS			
4	660.015	36.11	0.28	36.39	46.00	9.61	100	123	PK	Vertical	PASS			
5	742.465	41.97	1.13	43.10	46.00	2.90	100	329	PK	Vertical	PASS			
6	891.36	41.20	1.98	43.18	46.00	2.82	100	89	PK	Vertical	PASS			

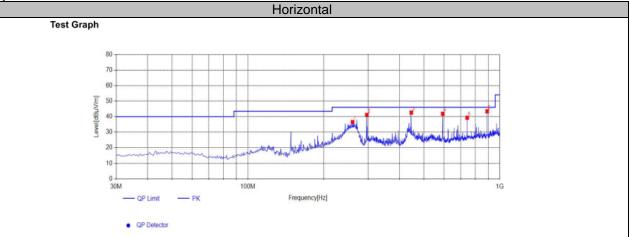
Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

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

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### Version F:

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



Sus	pected Lis	st													
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark				
	(	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]							
1	1 260.375 44.83 -8.26 36.57 46.00 9.43 100 268 PK Horizonta PASS														
2	296.75	48.69	-7.56	41.13	46.00	4.87	100	66	PK	Horizonta	PASS				
3	445.645	46.56	-3.91	42.65	46.00	3.35	100	23	PK	Horizonta	PASS				
4	594.055	42.53	-0.60	41.93	46.00	4.07	100	63	PK	Horizonta	PASS				
5	742.465	38.20	1.13	39.33	46.00	6.67	100	50	PK	Horizonta	PASS				
6	891.36	41.50	1.98	43.48	46.00	2.52	100	344	PK	Horizonta	PASS				

Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

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

#### Vertical



QP Detector

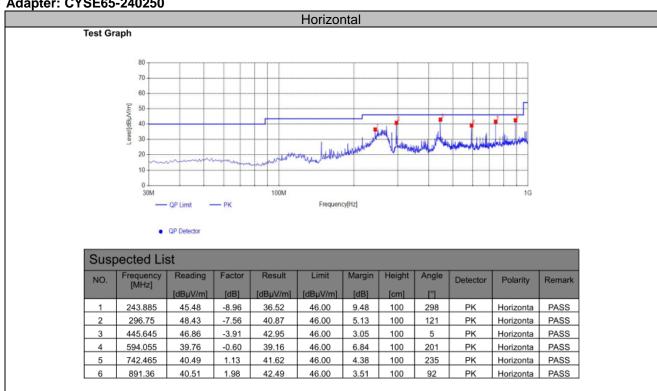
Sus	pected Li	st									
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark
	[	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	[°]			
1	148.34	54.95	-14.22	40.73	43.50	2.77	100	274	PK	Vertical	PASS
2	445.645	38.82	-3.91	34.91	46.00	11.09	100	102	PK	Vertical	PASS
3	594.055	43.49	-0.60	42.89	46.00	3.11	100	6	PK	Vertical	PASS
4	683.295	35.52	0.49	36.01	46.00	9.99	100	109	PK	Vertical	PASS
5	742.465	41.84	1.13	42.97	46.00	3.03	100	218	PK	Vertical	PASS
6	891.36	40.92	1.98	42.90	46.00	3.10	100	142	PK	Vertical	PASS

Frequency[Hz]

Note:1. Result (dB $\mu$ V/m) = Reading(dB $\mu$ V/m) + Factor (dB) .

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

Adapter: CYSE65-240250



Note:1. Result  $(dB\mu V/m) = Reading(dB\mu V/m) + Factor (dB)$ .

Note:1. Result  $(dB\mu V/m) = Reading(dB\mu V/m) + Factor (dB)$ .

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

#### Vertical Test Graph 50 .evel[dBµV/m] 40 30 20 100M Frequency[Hz] - QP Limit QP Detector Suspected List Reading requency [MHz] Factor Result Limit Margin Height Angle Detector Polarity Remark [dBµV/m] [dBµV/m] [°] 148.34 55.02 -14.22 40.80 43.50 2.70 100 355 PK Vertical PASS 454.86 38.86 35.14 10.86 100 13 Vertical PASS 594.055 -0.60 36.59 46.00 9.41 100 120 PK PASS 3 37.19 Vertical 660.015 36.19 0.28 36.47 46.00 9.53 100 96 PK Vertical PASS 5 742.465 39.87 1.13 41.00 46.00 5.00 100 156 PK Vertical PASS 6 891.36 41.74 1.98 43.72 46.00 100 96 Vertical PASS

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).

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

#### For 1GHz to 25GHz

BT LE Channel 0 / 2402 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4804.00	50.56	32.44	30.25	7.95	60.70	74.00	-13.30	Peak	Horizontal
4804.00	35.75	32.44	30.25	7.95	45.89	54.00	-8.11	Average	Horizontal
4804.00	51.30	31.60	36.50	7.00	53.40	74.00	-20.60	Peak	Vertical
4804.00	35.36	31.60	36.50	7.00	37.46	54.00	-16.54	Average	Vertical

#### Channel 19 / 2440 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4880.00	50.71	32.52	30.31	8.12	61.04	74.00	-12.96	Peak	Horizontal
4880.00	37.94	32.52	30.31	8.12	48.27	54.00	-5.73	Average	Horizontal
4880.00	51.12	31.02	36.50	7.60	53.24	74.00	-20.76	Peak	Vertical
4880.00	35.35	31.02	36.50	7.60	37.47	54.00	-16.53	Average	Vertical

#### Channel 39 / 2480 MHz

	Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
	4960.00	50.20	32.68	30.27	7.88	60.49	74.00	-13.51	Peak	Horizontal
Ī	4960.00	36.07	32.68	30.27	7.88	46.36	54.00	-7.64	Average	Horizontal
	4960.00	51.94	31.58	36.20	7.82	55.14	74.00	-18.86	Peak	Vertical
Ī	4960.00	38.20	31.58	36.20	7.82	41.40	54.00	-12.60	Average	Vertical

Note: All modes were tested and the worst mode was recorded in the report (version A\_Adapter: ADS-65HI-19A-124060F\_NFC antenna Model:DS2-52).

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BT LE Channel 0 / 2402 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4804.00	50.19	32.44	30.25	7.95	60.33	74.00	-13.67	Peak	Horizontal
4804.00	35.38	32.44	30.25	7.95	45.52	54.00	-8.48	Average	Horizontal
4804.00	50.21	31.60	36.50	7.00	52.31	74.00	-21.69	Peak	Vertical
4804.00	35.06	31.60	36.50	7.00	37.16	54.00	-16.84	Average	Vertical

#### Channel 19 / 2440 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4880.00	50.33	32.52	30.31	8.12	60.66	74.00	-13.34	Peak	Horizontal
4880.00	37.77	32.52	30.31	8.12	48.10	54.00	-5.90	Average	Horizontal
4880.00	49.51	31.02	36.50	7.60	51.63	74.00	-22.37	Peak	Vertical
4880.00	35.64	31.02	36.50	7.60	37.76	54.00	-16.24	Average	Vertical

#### Channel 39 / 2480 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4960.00	50.79	32.68	30.27	7.88	61.08	74.00	-12.92	Peak	Horizontal
4960.00	35.87	32.68	30.27	7.88	46.16	54.00	-7.84	Average	Horizontal
4960.00	52.25	31.58	36.20	7.82	55.45	74.00	-18.55	Peak	Vertical
4960.00	37.02	31.58	36.20	7.82	40.22	54.00	-13.78	Average	Vertical

Note: All modes were tested and the worst mode was recorded in the report (version B\_Adapter: ADS-65HI-19A-124060F\_NFC antenna Model:DS2-52).

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BT LE Channel 0 / 2402 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4804.00	51.16	32.44	30.25	7.95	61.30	74.00	-12.70	Peak	Horizontal
4804.00	35.17	32.44	30.25	7.95	45.31	54.00	-8.69	Average	Horizontal
4804.00	50.40	31.60	36.50	7.00	52.50	74.00	-21.50	Peak	Vertical
4804.00	36.17	31.60	36.50	7.00	38.27	54.00	-15.73	Average	Vertical

#### Channel 19 / 2440 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4880.00	49.81	32.52	30.31	8.12	60.14	74.00	-13.86	Peak	Horizontal
4880.00	36.91	32.52	30.31	8.12	47.24	54.00	-6.76	Average	Horizontal
4880.00	51.29	31.02	36.50	7.60	53.41	74.00	-20.59	Peak	Vertical
4880.00	35.82	31.02	36.50	7.60	37.94	54.00	-16.06	Average	Vertical

#### Channel 39 / 2480 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4960.00	50.07	32.68	30.27	7.88	60.36	74.00	-13.64	Peak	Horizontal
4960.00	35.53	32.68	30.27	7.88	45.82	54.00	-8.18	Average	Horizontal
4960.00	52.36	31.58	36.20	7.82	55.56	74.00	-18.44	Peak	Vertical
4960.00	37.18	31.58	36.20	7.82	40.38	54.00	-13.62	Average	Vertical

Note: All modes were tested and the worst mode was recorded in the report (version C\_Adapter: ADS-65HI-19A-124060F\_NFC antenna Model:DS2-52).

BT LE Channel 0 / 2402 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4804.00	49.46	32.44	30.25	7.95	59.60	74.00	-14.40	Peak	Horizontal
4804.00	36.07	32.44	30.25	7.95	46.21	54.00	-7.79	Average	Horizontal
4804.00	51.14	31.60	36.50	7.00	53.24	74.00	-20.76	Peak	Vertical
4804.00	35.67	31.60	36.50	7.00	37.77	54.00	-16.23	Average	Vertical

#### Channel 19 / 2440 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4880.00	49.27	32.52	30.31	8.12	59.60	74.00	-14.40	Peak	Horizontal
4880.00	36.79	32.52	30.31	8.12	47.12	54.00	-6.88	Average	Horizontal
4880.00	50.65	31.02	36.50	7.60	52.77	74.00	-21.23	Peak	Vertical
4880.00	35.50	31.02	36.50	7.60	37.62	54.00	-16.38	Average	Vertical

#### Channel 39 / 2480 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4960.00	50.89	32.68	30.27	7.88	61.18	74.00	-12.82	Peak	Horizontal
4960.00	36.76	32.68	30.27	7.88	47.05	54.00	-6.95	Average	Horizontal
4960.00	50.78	31.58	36.20	7.82	53.98	74.00	-20.02	Peak	Vertical
4960.00	37.27	31.58	36.20	7.82	40.47	54.00	-13.53	Average	Vertical

Note: All modes were tested and the worst mode was recorded in the report (version D\_Adapter: ADS-65HI-19A-124060F\_NFC antenna Model:DS2-52).

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BT LE Channel 0 / 2402 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4804.00	50.90	32.44	30.25	7.95	61.04	74.00	-12.96	Peak	Horizontal
4804.00	34.98	32.44	30.25	7.95	45.12	54.00	-8.88	Average	Horizontal
4804.00	50.73	31.60	36.50	7.00	52.83	74.00	-21.17	Peak	Vertical
4804.00	36.04	31.60	36.50	7.00	38.14	54.00	-15.86	Average	Vertical

Channel 19 / 2440 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4880.00	49.82	32.52	30.31	8.12	60.15	74.00	-13.85	Peak	Horizontal
4880.00	37.88	32.52	30.31	8.12	48.21	54.00	-5.79	Average	Horizontal
4880.00	51.24	31.02	36.50	7.60	53.36	74.00	-20.64	Peak	Vertical
4880.00	34.81	31.02	36.50	7.60	36.93	54.00	-17.07	Average	Vertical

Channel 39 / 2480 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4960.00	51.80	32.68	30.27	7.88	62.09	74.00	-11.91	Peak	Horizontal
4960.00	36.91	32.68	30.27	7.88	47.20	54.00	-6.80	Average	Horizontal
4960.00	52.58	31.58	36.20	7.82	55.78	74.00	-18.22	Peak	Vertical
4960.00	37.90	31.58	36.20	7.82	41.10	54.00	-12.90	Average	Vertical

Note: All modes were tested and the worst mode was recorded in the report (version E\_Adapter: ADS-65HI-19A-124060F\_NFC antenna Model:DS2-52).

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BT LE Channel 0 / 2402 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4804.00	49.68	32.44	30.25	7.95	59.82	74.00	-14.18	Peak	Horizontal
4804.00	35.67	32.44	30.25	7.95	45.81	54.00	-8.19	Average	Horizontal
4804.00	50.55	31.60	36.50	7.00	52.65	74.00	-21.35	Peak	Vertical
4804.00	36.15	31.60	36.50	7.00	38.25	54.00	-15.75	Average	Vertical

#### Channel 19 / 2440 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4880.00	50.09	32.52	30.31	8.12	60.42	74.00	-13.58	Peak	Horizontal
4880.00	36.31	32.52	30.31	8.12	46.64	54.00	-7.36	Average	Horizontal
4880.00	50.23	31.02	36.50	7.60	52.35	74.00	-21.65	Peak	Vertical
4880.00	36.63	31.02	36.50	7.60	38.75	54.00	-15.25	Average	Vertical

#### Channel 39 / 2480 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4960.00	50.99	32.68	30.27	7.88	61.28	74.00	-12.72	Peak	Horizontal
4960.00	36.23	32.68	30.27	7.88	46.52	54.00	-7.48	Average	Horizontal
4960.00	50.95	31.58	36.20	7.82	54.15	74.00	-19.85	Peak	Vertical
4960.00	37.40	31.58	36.20	7.82	40.60	54.00	-13.40	Average	Vertical

Note: All modes were tested and the worst mode was recorded in the report (version F\_Adapter: ADS-65HI-19A-124060F\_NFC antenna Model:DS2-52).

#### Notes:

- 1). Measuring frequencies from 9 KHz~10<sup>th</sup> harmonic or 26.5GHz (which is less), No emission found between lowest internal used/generated frequency to 30MHz.
- 2). Radiated emissions measured in frequency range from 9 KHz~10<sup>th</sup> harmonic or 26.5GHz (which is less) were made with an instrument using Peak detector mode.
- 3). Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4). Measured= Reading- Pre. Fac.+ Ant. Fac.+ Cab. Loss
- 5). Margin = Measured- Limit

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#### 4.3. Maximum Peak Output Power

#### **TEST CONFIGURATION**



#### **TEST PROCEDURE**

According to KDB 558074 D01 15.247 Measurement Guidance v05r02 Section 8.3.1 Maximum peak conducted output power, 8.3.1.3 The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

#### <u>LIMIT</u>

The Maximum Peak Output Power Measurement is 30dBm.

#### **TEST RESULTS**

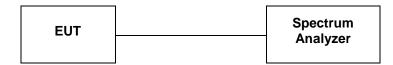
For reporting purpose only.

Please refer to Appendix B.3.

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#### 4.4. Power Spectral Density

#### **TEST CONFIGURATION**



#### **TEST PROCEDURE**

- 1.Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
- 2.Set the RBW =3 kHz.
- 3.Set the VBW =10 KHz.
- 4. Set the span to 1.5 times the DTS channel bandwidth.
- 5.Detector = peak.
- 6.Sweep time = auto couple.
- 7. Trace mode =  $\max$  hold.
- 8. Allow trace to fully stabilize.
- 9.Use the peak marker function to determine the maximum power level.
- 10.If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.
- 11. The resulting peak PSD level must be 8 dBm.

#### **LIMIT**

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

#### **TEST RESULTS**

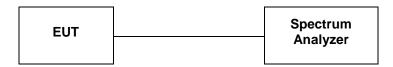
For reporting purpose only.

Please refer to Appendix B.4.

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#### 4.5. 99% and 6dB Bandwidth

#### **TEST CONFIGURATION**



#### **TEST PROCEDURE**

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW=100 KHz and VBW=300KHz. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB. According to KDB 558074 D01 DTS Meas Guidance v05r02 for one of the following procedures may be used to determine the modulated DTS device signal bandwidth.

- 1. Set RBW = 100 kHz.
- 2. Set the video bandwidth (VBW) ≥ 3 RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.
- 7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

#### LIMIT

For digital modulation systems, the minimum 6 dB bandwidth shall be at least 500 kHz

#### **TEST RESULTS**

For reporting purpose only.

Please refer to Appendix B.1.

Please refer to Appendix B.2.

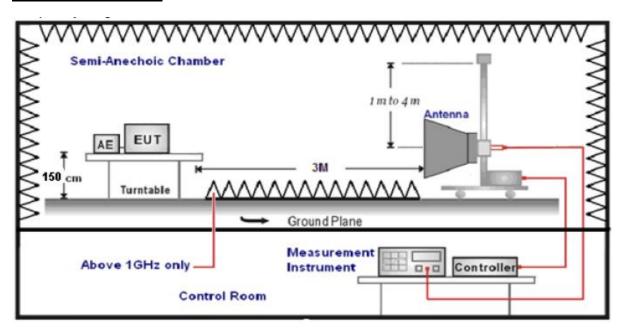
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#### 4.6. Conducted Spurious Emissions and Band Edge Compliance of RF Emission

#### **TEST REQUIREMENT**

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

#### **TEST CONFIGURATION**



#### **TEST PROCEDURE**

- 1. The EUT was placed on a turn table which is 1.5m above ground plane.
- 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 distance between test antenna and EUT was 3 meter:
- 6. Setting test receiver/spectrum as following table states:

Test Frequency range	Test Receiver/Spectrum Setting	Detector
1GHz-40GHz	Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto	Peak

#### LIMIT

Below -20dB of the highest emission level in operating band.

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

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### **TEST RESULTS**

#### 4.6.1 For Conducted at Restricted Band Measurement

For reporting purpose only.

Please refer to Appendix B.7.

#### 4.6.2 For Conducted Bandedge Measurement

For reporting purpose only.

Please refer to Appendix B.5.

#### 4.6.3 For Conducted Spurious Emissions Measurement

For reporting purpose only.

Please refer to Appendix B.6.

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#### 4.7. Antenna Requirement

#### **Standard Applicable**

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

And according to FCC 47 CFR Section 15.247 (c), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

#### **Test Result**

The antenna used for this product is Internal Antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 2.05dBi.

Reference to the Internal photos.

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## 5. TEST SETUP PHOTOS OF THE EUT

Reference to the Test Report: GTS20241101002-1-01.

6. EXTERNAL AND INTERNAL PHOTOS OF THE	EUT
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Reference to the Test Report: GTS20241101002-1-01.
End of Report