

TEST REPORT

FCC Rules Part 15.225

Report Reference No.....: MTEB25080026

FCC ID.....: 2A397-HK568A

Compiled by
(position+printed name+signature)..: File administrators Alisa Luo



Supervised by
(position+printed name+signature)..: Test Engineer Sunny Deng



Approved by
(position+printed name+signature)..: Manager Yvette Zhou



Date of issue.....: **August 04, 2023**

Representative Laboratory Name.: Shenzhen Most Technology Service Co., Ltd.

Address.....: No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park,
Nanshan, Shenzhen, Guangdong, China.

Applicant's name.....: QINGDAO HISTONE INTELLIGENT COMMERCIAL SYSTEM CO., LTD.

Address.....: Wisdom Valley, No.8 Shengshui Road, Laoshan District, Qingdao
City, China

Test specification/ Standard.....: FCC Rules Part 15.225

TRF Originator.....: Shenzhen Most Technology Service Co., Ltd.

Shenzhen Most Technology Service Co., Ltd. All rights reserved.

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

Test item description.....: POS COMPUTER

Trade Mark.....: Histone

Manufacturer.....: QINGDAO HISTONE INTELLIGENT COMMERCIAL SYSTEM
CO., LTD.

Model/Type reference.....: HK568A

Listed Models: N/A

Modulation Type.....: ASK

Operation Frequency.....: 13.56MHz

Hardware Version.....	: HS-TGL
Software Version.....	: S724
Rating.....	: DC 24V by Adapter 24V,2.5A,60W (by Adapter 1: 100-240V~,50/60Hz,2.0A(GM60-240250-F)) 24V,2.5A,60W (by Adapter 2: 100-240V~,50-60Hz,1.8A(FSP060-DAAN3)) 24V,5A,120W (by Adapter 3: 100-240V~, 50-60Hz,1.8A(FSP120-AAAN3))
Result.....	: PASS

TEST REPORT

Equipment under Test : POS COMPUTER

Model /Type : HK568A

Listed Models : N/A

Remark : N/A

Applicant : QINGDAO HISTONE INTELLIGENT COMMERCIAL SYSTEM CO., LTD.

Address : Wisdom Valley, No.8 Shengshui Road, Laoshan District, Qingdao City, China

Manufacturer : QINGDAO HISTONE INTELLIGENT COMMERCIAL SYSTEM CO., LTD.

Address : Wisdom Valley, No.8 Shengshui Road, Laoshan District, Qingdao City, China

Test Result:	PASS
---------------------	-------------

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

Contents

1. REVISION HISTORY	5
2. TEST STANDARDS	6
3. SUMMARY	7
3.1. General Remarks	7
3.2. Product Description	7
3.3. Equipment Under Test	7
3.4. Short description of the Equipment under Test (EUT)	8
3.5. EUT operation mode	8
3.6. Block Diagram of Test Setup	8
3.7. Test Item (Equipment Under Test) Description*	8
3.8. Auxiliary Equipment (AE) Description	8
3.9. Antenna Information*	8
3.10. EUT configuration	9
3.11. Modifications	9
4. TEST ENVIRONMENT	10
4.1. Address of the test laboratory	10
4.2. Environmental conditions	10
4.3. Test Description	11
4.4. Statement of the measurement uncertainty	11
4.5. Equipments Used during the Test	12
5. TEST CONDITIONS AND RESULTS	13
5.1. AC Power Conducted Emission	13
PassNote : All test modes are performed, only the worst case is recorded in this report.	13
5.2. Radiated Emission	20
5.3. 20dB Bandwidth	31
5.4. FREQUENCY TOLERANCE	32
6. TEST SETUP PHOTOS OF THE EUT	33
7. EXTERNAL AND INTERNAL PHOTOS OF THE EUT	38

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2025.08.04	Initial Issue	Alisa Luo

2. TEST STANDARDS

The tests were performed according to following standards:

The tests were performed according to following standards:

FCC Rules Part 15.225: Operation within the band 13.110-14.010 MHz.

ANSI C63.10:2013 : American National Standard for Testing Unlicensed Wireless Devices

ANSI C63.4: 2014: –American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40GHz
Range of 9 kHz to 40GHz

3. SUMMARY

3.1. General Remarks

Date of receipt of test sample	:	2025.07.14
Testing commenced on	:	2025.07.14
Testing concluded on	:	2025.07.20

3.2. Product Description

Product Name:	POS COMPUTER
Model/Type reference:	HK568A
Power Supply:	DC 24V by Adapter 24V,2.5A,60W (by Adapter 1: 100-240V~,50/60Hz,2.0A(GM60-240250-F)) 24V,2.5A,60W (by Adapter 2: 100-240V~,50-60Hz,1.8A(FSP060-DAAN3)) 24V,5A,120W (by Adapter 3: 100-240V~, 50-60Hz,1.8A(FSP120-AAAN3))
Testing sample ID:	MTYP09929-9932
Modulation:	ASK
Operation frequency:	13.56MHZ
Channel number:	1 (declared by the client)

3.3. 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 type="radio"/> 24 V DC
		<input checked="" type="radio"/> Other (specified in blank below)	

DC 24V by Adapter
24V,2.5A,60W
(by Adapter 1: 100-240V~,50/60Hz,2.0A(GM60-240250-F))
24V,2.5A,60W
(by Adapter 2: 100-240V~,50-60Hz,1.8A(FSP060-DAAN3))
24V,5A,120W
(by Adapter 3: 100-240V~, 50-60Hz,1.8A(FSP120-AAAN3))

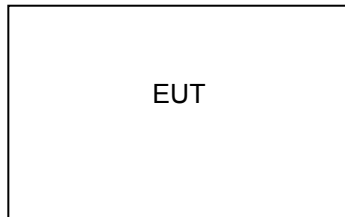
3.4. Short description of the Equipment under Test (EUT)

This is a POS COMPUTER For more details, refer to the user's manual of the EUT.

3.5. EUT operation mode

Channel	Freq.(MHz)	Note(Modulation Type)
1	13.56MHz	ASK

3.6. Block Diagram of Test Setup



3.7. Test Item (Equipment Under Test) Description*

Short designation	EUT Name	EUT Description	Serial number	Hardware status	Software status
EUT A	POS COMPUTER	HK568A(3COM second display: 15.6 inch)	/	HS-ADL-P	MADP
EUT B	POS COMPUTER	HK568A(3COM second display: 10.1 inch)	/	HS-ADL-P	MADP
EUT C	POS COMPUTER	HK568A(3COM second display: VFD)	/	HS-ADL-P	MADP
EUT D	POS COMPUTER	HK568A(2COM second display: 15.6 inch)	/	HS-ADL-P	MADP
EUT E	POS COMPUTER	HK568A(2COM second display: 10.1 inch)	/	HS-ADL-P	MADP
EUT F	POS COMPUTER	HK568A(2COM second display: VFD)	/	HS-ADL-P	MADP

*: declared by the applicant. According to customers information EUTs A and B,C,D,E,F are the same devices. Only the secondary screen size and number of COM ports are different.

3.8. Auxiliary Equipment (AE) Description

AE short designation	EUT Name (if available)	EUT Description	Serial number (if available)	Software (if used)
AE 1	/	/	/	/
AE 2	-	/	/	/

3.9 Antenna Information*

Short designation	Antenna Name	Antenna Type	Frequency Range	Serial number	Antenna Peak Gain
Antenna 1	---	/	/	---	/

Antenna 2	/	/	/	/	/

*: declared by the applicant.

3.10. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

● - supplied by the manufacturer

○ - Supplied by the lab

● ADAPTER	M/N:	FSP120-AAAN3(Adapter 3)
	Manufacturer:	FSP Group Inc.
● ADAPTER	M/N:	FSP060-DAAN3(Adapter 2)
	Manufacturer:	FSP Group Inc.
● ADAPTER	M/N:	GM60-240250-F(Adapter 1)
	Manufacturer:	FOSHAN SHUNDE GUANYUDA POWER SUPPLY CO.,LTD

3.11. Modifications

No modifications were implemented to meet testing criteria.

4. TEST ENVIRONMENT

4.1. Address of the test laboratory

Shenzhen Most Technology Service Co., Ltd.

No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China.
The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.

Test Facility

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

FCC-Registration No.: 0031192610

Shenzhen Most Technology Service Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

A2LA-Lab Cert. No.: 6343.01

Shenzhen Most Technology Service Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

4.2. Environmental conditions

Radiated Emission:

Temperature:	23 ° C
Humidity:	48 %
Atmospheric pressure:	950-1050mbar

Conducted testing:

Temperature:	24 ° C
Humidity:	45 %
Atmospheric pressure:	950-1050mbar

4.3. Test Description

FCC and IC Requirements		
FCC Part 15.203	Antenna Requirement	PASS
FCC Part 15.207	AC Power Conducted Emission	PASS
FCC Part 15.209&15.205 (a) &15.225(a,b,c,d)	Spurious Emissions	PASS
FCC Part 15.215 (c) &15.225	20dB Occupied Bandwidth	PASS
FCC Part 15.225(e)	Frequency Tolerance	PASS

Remark:

1. The measurement uncertainty is not included in the test result.
2. NA = Not Applicable; NP = Not Performed

4.4. 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 Most Technology 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 Most Technology Service Co., Ltd. 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)

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

4.5. Equipments Used during the Test

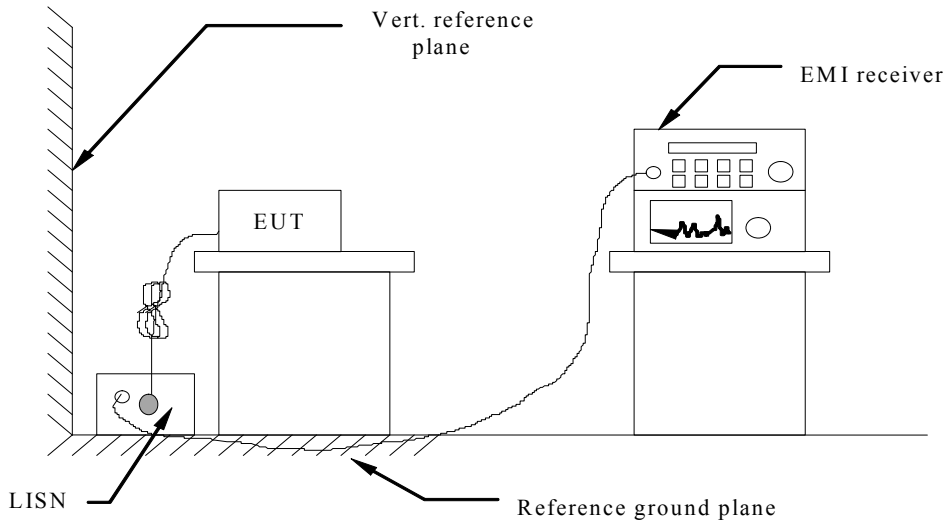
Item	Equipment	Manufacturer	Model No.	Serial No.	Firmware versions	Last Cal.
1.	L.I.S.N.	R&S	ENV216	100093	/	2025/03/04
2	Three-phase artificial power network	Schwarzback Mess	NNLK8129	8129178	/	2025/03/04
3.	Receiver	R&S	ESCI	100492	V3.0-10-2	2025/03/04
4	Receiver	R&S	ESPI	101202	V3.0-10-2	2025/03/04
5	Spectrum analyzer	Agilent	9020A	MT-E306	A14.16	2025/03/04
6	Bilong Antenna	Sunol Sciences	JB3	A121206	/	2024/08/14
7	Horn antenna	HF Antenna	HF Antenna	MT-E158	/	2025/03/16
8	Loop antenna	Beijing Daze	ZN30900B	/	/	2025/03/04
9	Horn antenna	R&S	OBH100400	26999002	/	2025/03/16
10	Wireless Communication Test Set	R&S	CMW500	/	CMW-BASE-3.7.21	2025/03/04
11	Spectrum analyzer	R&S	FSP	100019	V4.40 SP2	2025/03/04
12	High gain antenna	Schwarzbeck	LB-180400KF	MT-E389	/	2025/03/04
13	Preamplifier	Schwarzbeck	BBV 9743	MT-E390	/	2025/03/04
14	Pre-amplifier	EMCI	EMC051845S E	MT-E391	/	2025/03/04
15	Pre-amplifier	Agilent	83051A	MT-E392	/	2025/03/04
16	High pass filter unit	Tonscend	JS0806-F	MT-E393	/	2025/03/04
17	RF Cable(below1GHz)	Times	9kHz-1GHz	MT-E394	/	2025/03/04
18	RF Cable(above 1GHz)	Times	1-40G	MT-E395	/	2025/03/04
19	RF Cable (9KHz-40GHz)	Tonscend	170660	N/A	/	2025/03/04
20	Power meter	R&S	NRVS	100444	/	2025/03/04

Note: The Cal.Interval was one year.

5. TEST CONDITIONS AND RESULTS

5.1. 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 C63.10-2013.
- 2 Support equipment, if needed, was placed as per ANSI C63.10-2013
- 3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10-2013
- 4 The EUT received DC5V power, the adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5 All support equipments received AC power from a second LISN, if any.
- 6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7 Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
- 8 During the above scans, the emissions were maximized by cable manipulation.

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

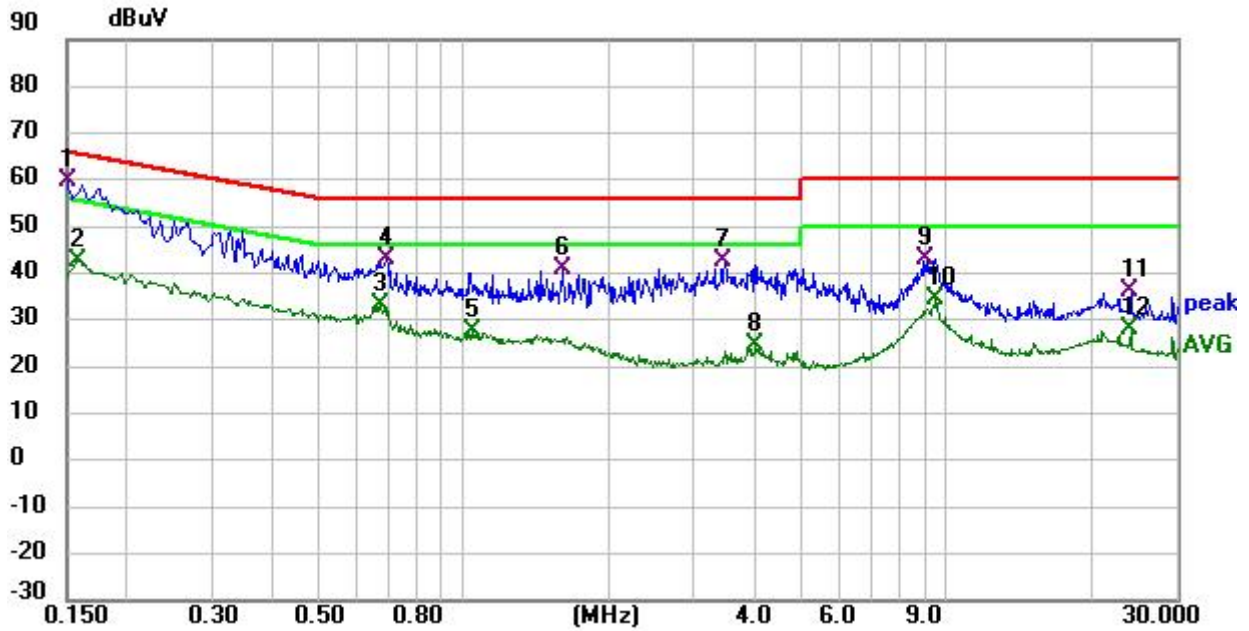
* Decreases with the logarithm of the frequency.

TEST RESULTS

Pass

Note : All test modes are performed, only the worst case is recorded in this report.

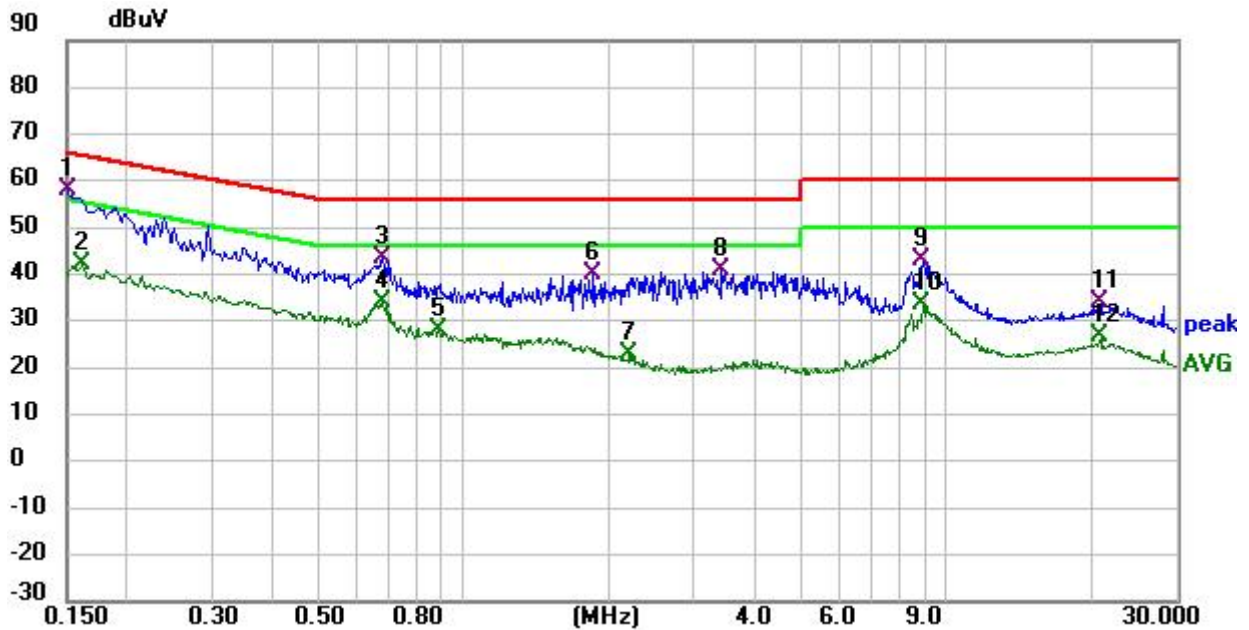
Power Supply	DC 24V by Adapter(Adapter 1)	Line	N
M/N:	HK568A(3COM second display: 15.6 inch)		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1 *	0.1500	50.22	9.60	59.82	66.00	-6.18	QP	P	
2	0.1580	33.17	9.60	42.77	55.57	-12.80	AVG	P	
3	0.6740	23.60	9.60	33.20	46.00	-12.80	AVG	P	
4	0.6900	33.28	9.60	42.88	56.00	-13.12	QP	P	
5	1.0460	18.16	9.60	27.76	46.00	-18.24	AVG	P	
6	1.6060	31.13	9.60	40.73	56.00	-15.27	QP	P	
7	3.4540	32.94	9.61	42.55	56.00	-13.45	QP	P	
8	4.0100	14.99	9.62	24.61	46.00	-21.39	AVG	P	
9	9.0659	33.36	9.68	43.04	60.00	-16.96	QP	P	
10	9.4860	24.64	9.68	34.32	50.00	-15.68	AVG	P	
11	24.0820	26.52	9.75	36.27	60.00	-23.73	QP	P	
12	24.0820	18.18	9.75	27.93	50.00	-22.07	AVG	P	

*:Maximum data x:Over limit !:over margin

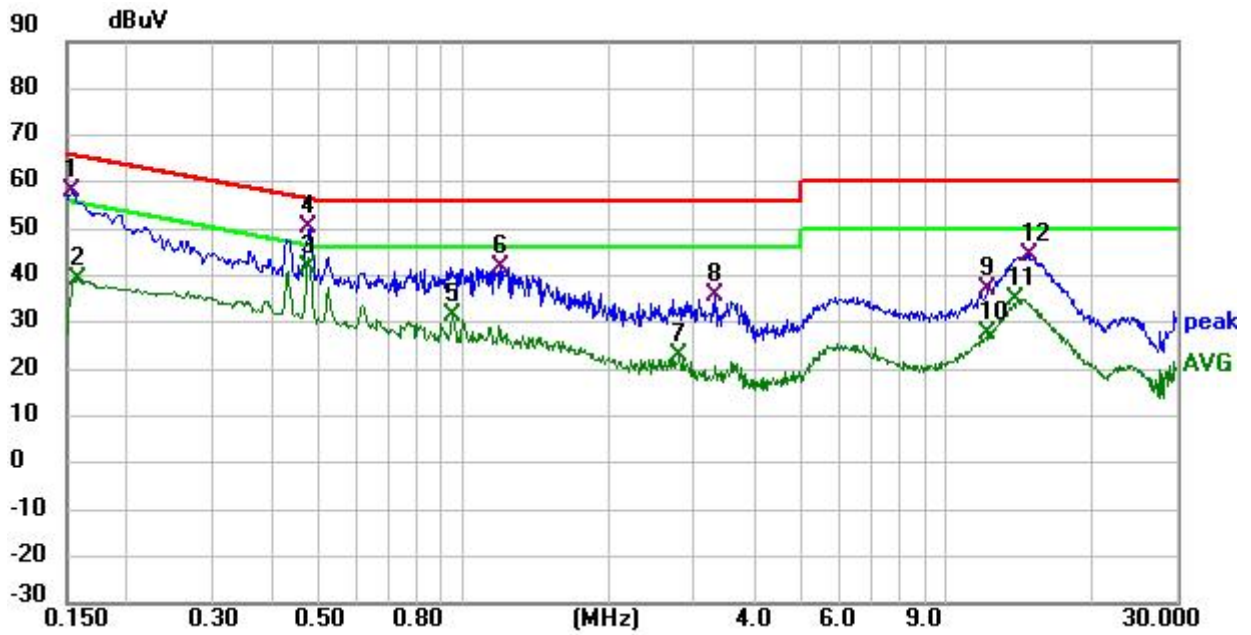
Power Supply	DC 24V by Adapter(Adapter 1)	Line	L
M/N:	HK568A(3COM second display: 15.6 inch)		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1 *	0.1500	48.37	9.60	57.97	66.00	-8.03	QP	P	
2	0.1620	32.49	9.61	42.10	55.36	-13.26	AVG	P	
3	0.6780	33.70	9.60	43.30	56.00	-12.70	QP	P	
4	0.6780	24.41	9.60	34.01	46.00	-11.99	AVG	P	
5	0.8860	18.48	9.60	28.08	46.00	-17.92	AVG	P	
6	1.8500	30.62	9.60	40.22	56.00	-15.78	QP	P	
7	2.1980	13.35	9.60	22.95	46.00	-23.05	AVG	P	
8	3.4020	31.28	9.61	40.89	56.00	-15.11	QP	P	
9	8.8820	33.26	9.68	42.94	60.00	-17.06	QP	P	
10	8.8820	23.97	9.68	33.65	50.00	-16.35	AVG	P	
11	20.8420	24.28	9.73	34.01	60.00	-25.99	QP	P	
12	20.8420	17.08	9.73	26.81	50.00	-23.19	AVG	P	

*:Maximum data x:Over limit !:over margin

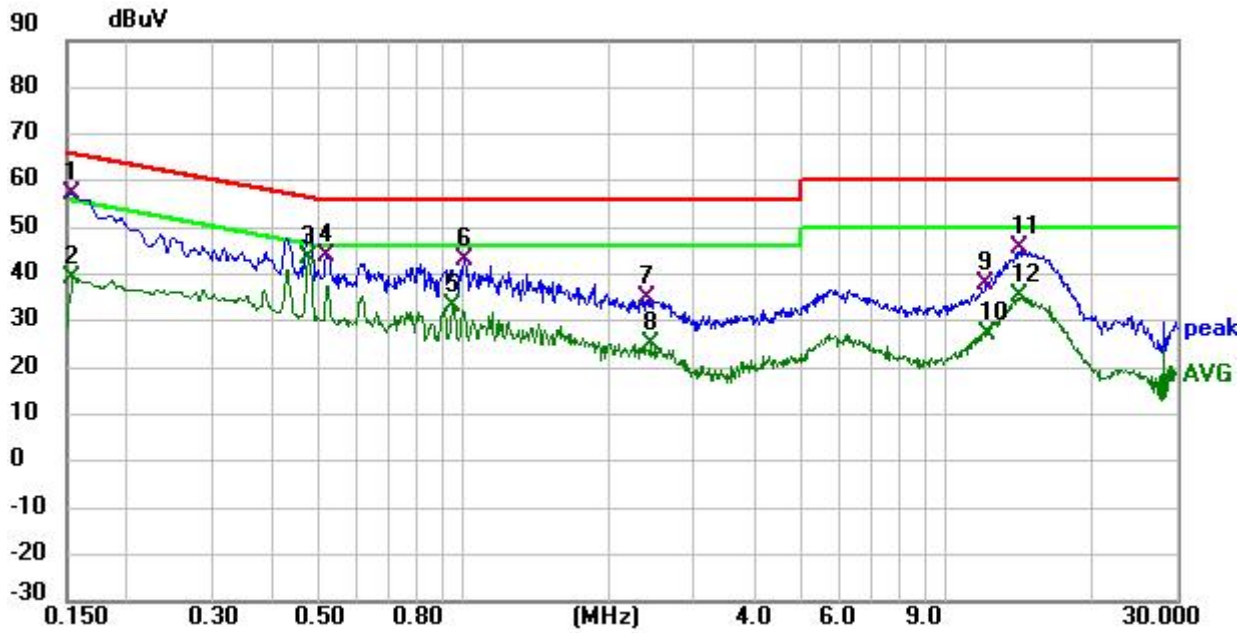
Power Supply	DC 24V by Adapter(Adapter 2)	Line	L
M/N:	HK568A(3COM second display: 15.6 inch)		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1539	48.45	9.60	58.05	65.79	-7.74	QP	P	
2	0.1580	29.46	9.60	39.06	55.57	-16.51	AVG	P	
3 *	0.4740	32.01	9.59	41.60	46.44	-4.84	AVG	P	
4	0.4780	40.81	9.59	50.40	56.37	-5.97	QP	P	
5	0.9460	21.76	9.60	31.36	46.00	-14.64	AVG	P	
6	1.1940	32.30	9.60	41.90	56.00	-14.10	QP	P	
7	2.7820	13.13	9.61	22.74	46.00	-23.26	AVG	P	
8	3.3140	26.12	9.61	35.73	56.00	-20.27	QP	P	
9	12.1660	27.26	9.69	36.95	60.00	-23.05	QP	P	
10	12.1660	17.77	9.69	27.46	50.00	-22.54	AVG	P	
11	13.9540	25.21	9.70	34.91	50.00	-15.09	AVG	P	
12	14.8740	34.49	9.70	44.19	60.00	-15.81	QP	P	

*:Maximum data x:Over limit !:over margin

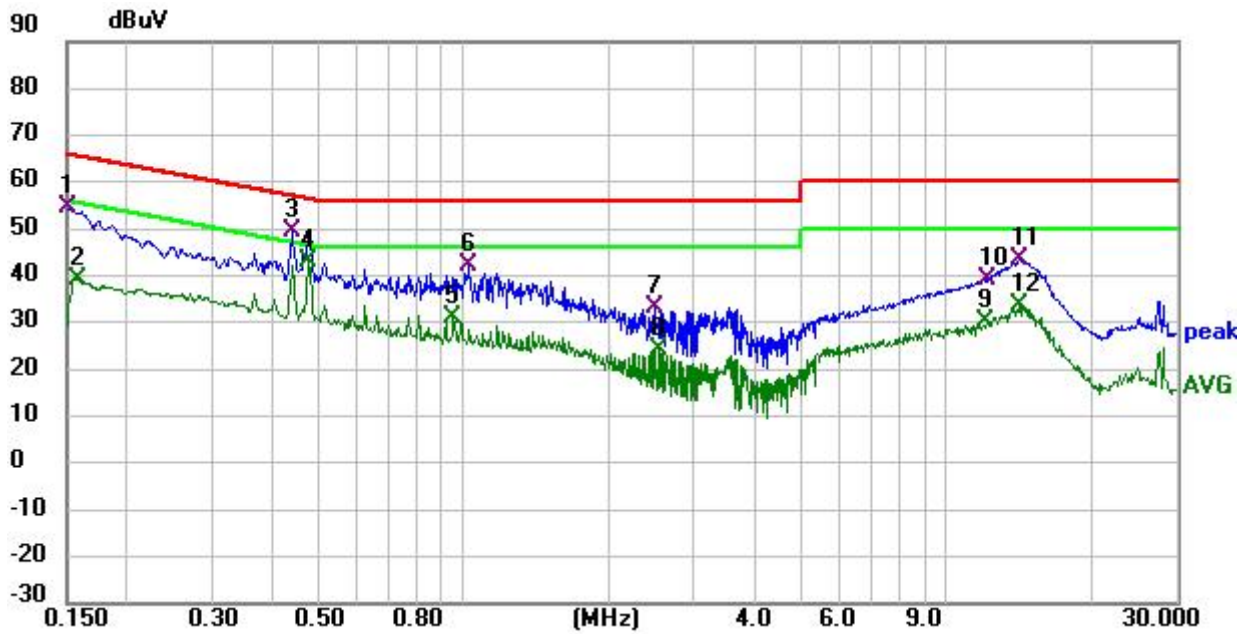
Power Supply	DC 24V by Adapter(Adapter 2)	Line	N
M/N:	HK568A(3COM second display: 15.6 inch)		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1539	47.50	9.60	57.10	65.79	-8.69	QP	P	
2	0.1539	29.46	9.60	39.06	55.79	-16.73	AVG	P	
3 *	0.4740	33.71	9.59	43.30	46.44	-3.14	AVG	P	
4	0.5180	34.51	9.59	44.10	56.00	-11.90	QP	P	
5	0.9500	23.76	9.60	33.36	46.00	-12.64	AVG	P	
6	1.0020	33.44	9.60	43.04	56.00	-12.96	QP	P	
7	2.4020	25.35	9.61	34.96	56.00	-21.04	QP	P	
8	2.4300	15.43	9.61	25.04	46.00	-20.96	AVG	P	
9	11.9980	28.45	9.69	38.14	60.00	-21.86	QP	P	
10	12.1140	17.70	9.69	27.39	50.00	-22.61	AVG	P	
11	14.2300	35.88	9.70	45.58	60.00	-14.42	QP	P	
12	14.2300	25.50	9.70	35.20	50.00	-14.80	AVG	P	

*:Maximum data x:Over limit !:over margin

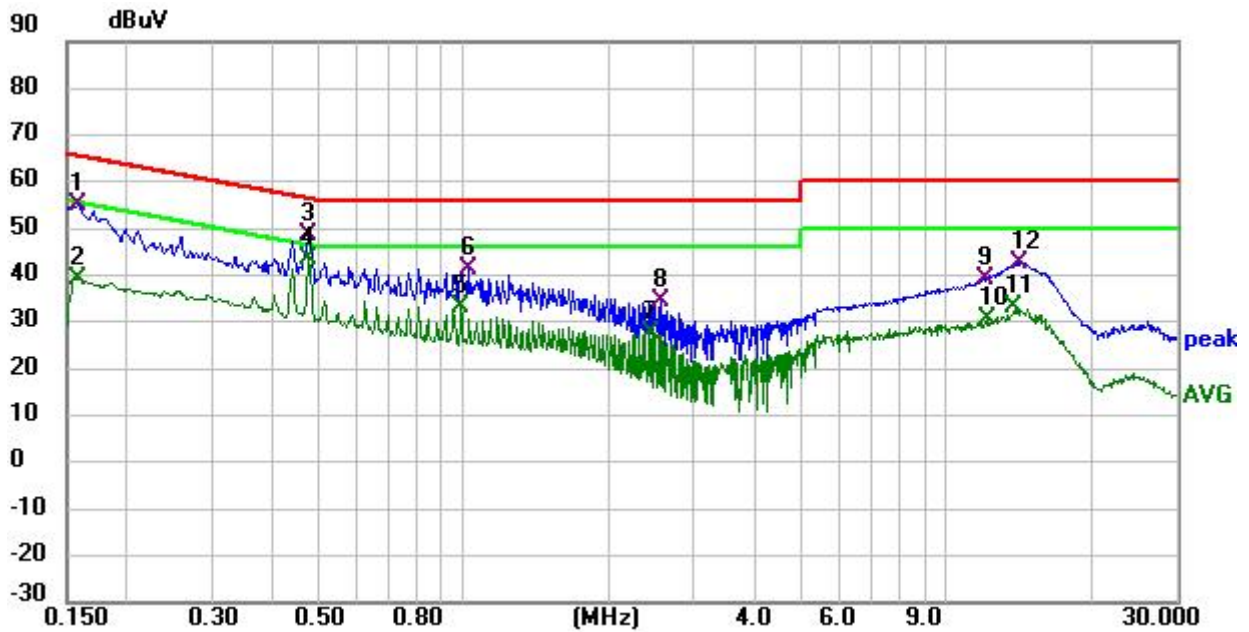
Power Supply	DC 24V by Adapter(Adapter 3)	Line	L
M/N:	HK568A(3COM second display: 15.6 inch)		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1500	44.83	9.60	54.43	66.00	-11.57	QP	P	
2	0.1580	29.73	9.60	39.33	55.57	-16.24	AVG	P	
3	0.4380	39.71	9.59	49.30	57.10	-7.80	QP	P	
4 *	0.4740	33.46	9.59	43.05	46.44	-3.39	AVG	P	
5	0.9500	21.65	9.60	31.25	46.00	-14.75	AVG	P	
6	1.0220	32.77	9.60	42.37	56.00	-13.63	QP	P	
7	2.4860	23.80	9.61	33.41	56.00	-22.59	QP	P	
8	2.5220	14.64	9.61	24.25	46.00	-21.75	AVG	P	
9	12.0940	20.68	9.69	30.37	50.00	-19.63	AVG	P	
10	12.1700	29.69	9.69	39.38	60.00	-20.62	QP	P	
11	14.1460	33.76	9.70	43.46	60.00	-16.54	QP	P	
12	14.2580	24.08	9.70	33.78	50.00	-16.22	AVG	P	

*:Maximum data x:Over limit !:over margin

Power Supply	DC 24V by Adapter(Adapter 3)	Line	N
M/N:	HK568A(3COM second display: 15.6 inch)		



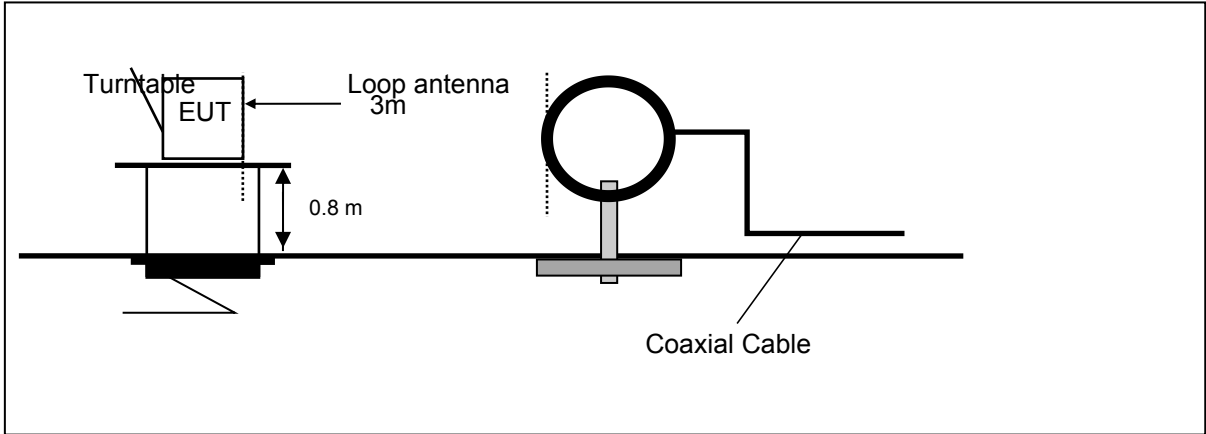
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1580	45.31	9.60	54.91	65.57	-10.66	QP	P	
2	0.1580	29.82	9.60	39.42	55.57	-16.15	AVG	P	
3	0.4740	39.15	9.59	48.74	56.44	-7.70	QP	P	
4 *	0.4740	33.72	9.59	43.31	46.44	-3.13	AVG	P	
5	0.9860	23.73	9.60	33.33	46.00	-12.67	AVG	P	
6	1.0260	31.74	9.60	41.34	56.00	-14.66	QP	P	
7	2.4500	18.06	9.61	27.67	46.00	-18.33	AVG	P	
8	2.5579	25.07	9.61	34.68	56.00	-21.32	QP	P	
9	12.0980	29.72	9.69	39.41	60.00	-20.59	QP	P	
10	12.1740	21.01	9.69	30.70	50.00	-19.30	AVG	P	
11	13.8180	23.49	9.70	33.19	50.00	-16.81	AVG	P	
12	14.2180	33.05	9.70	42.75	60.00	-17.25	QP	P	

*:Maximum data x:Over limit !:over margin

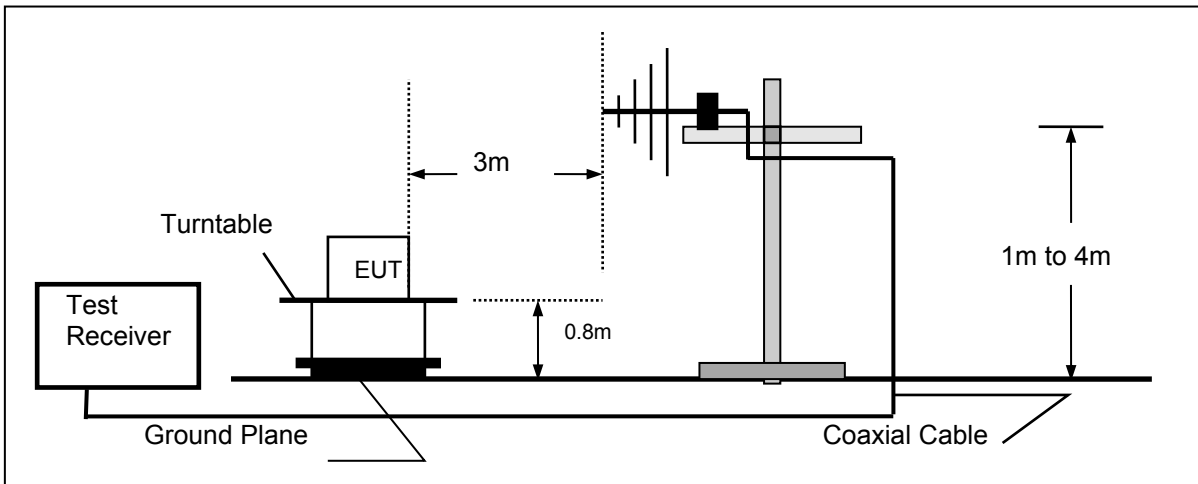
5.2. Radiated Emission

TEST CONFIGURATION

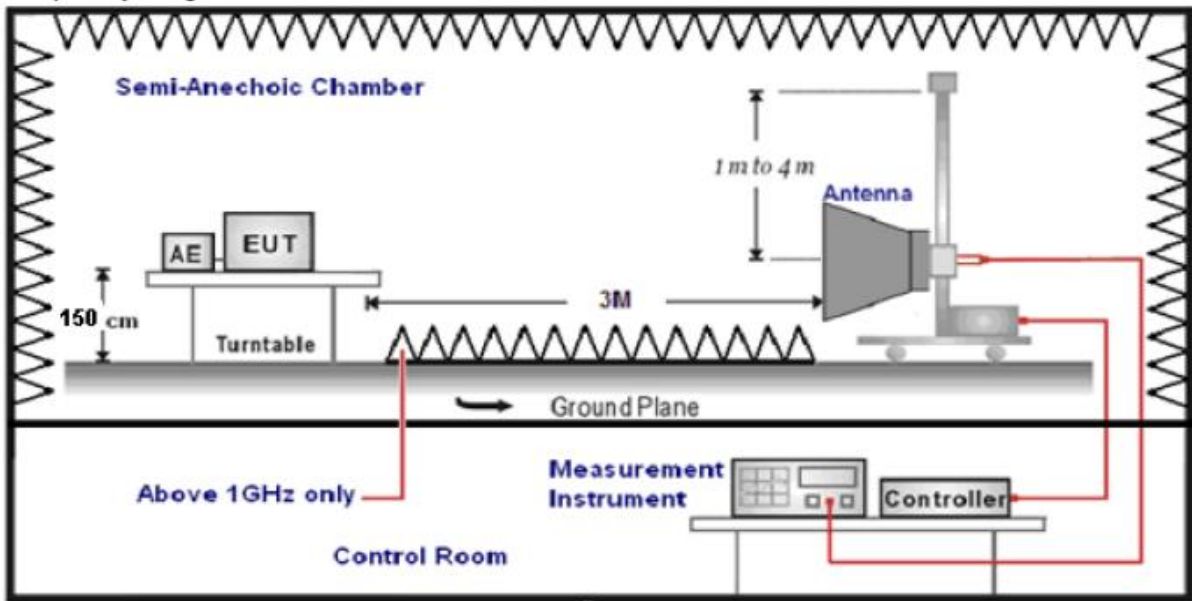
Frequency range 9 KHz – 30MHz



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 out of authorized band shall not exceed the following table at a 3 meters measurement distance.

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

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

Unwanted emissions that fall into restricted bands shall comply with the limits specified in RSS-Gen; and Unwanted emissions that do not fall within the restricted frequency bands shall comply either with the limits specified in the applicable RSS or with those specified in this RSS-Gen.

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

According to FCC Part 15.205,Rastricted bands

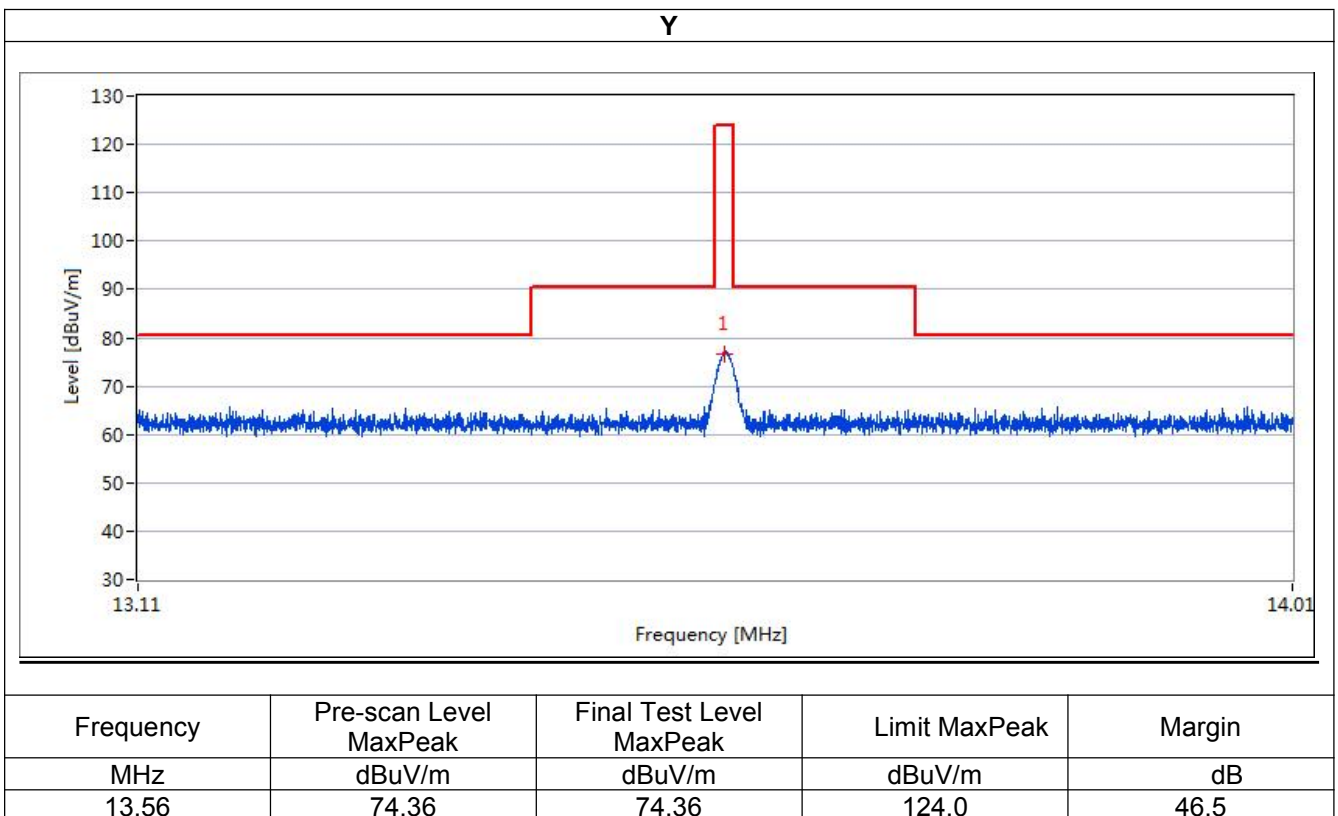
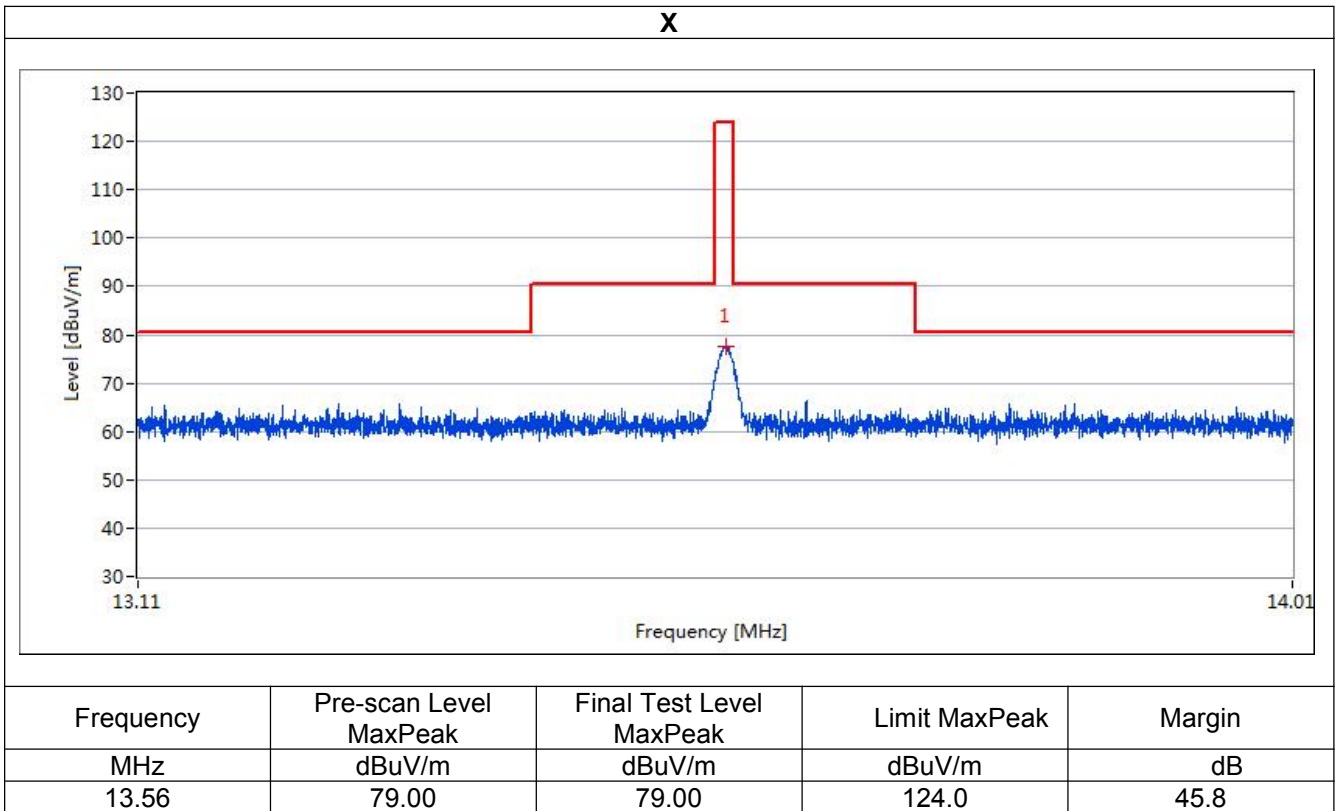
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

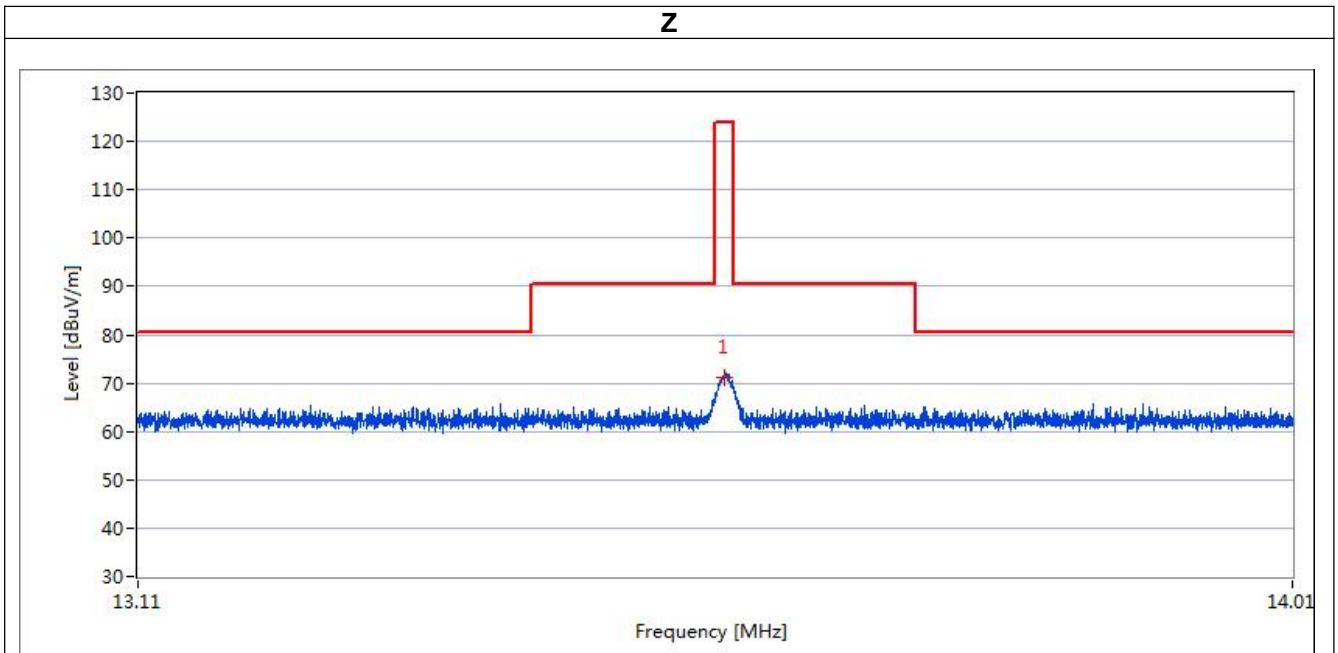
LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.225)

- (a)The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters, equal to 124dBuV/m at 3 meters.
- (b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters, equal to 90.5dBuV/m at 3 meters.
- c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters, equal to 80.5dBuV/m at 3 meters..
- (d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in § 15.209.

TEST RESULTS (BELOW 30MHz)

1: This test was performed with EUT in X, Y, Z position and the worse case was found when EUT in X position.
 2: Radiated emission test from 9 KHz to 10th harmonic of fundamental was verified, and no emission found except system noise floor in 9 KHz to 30MHz and not recorded in this report.



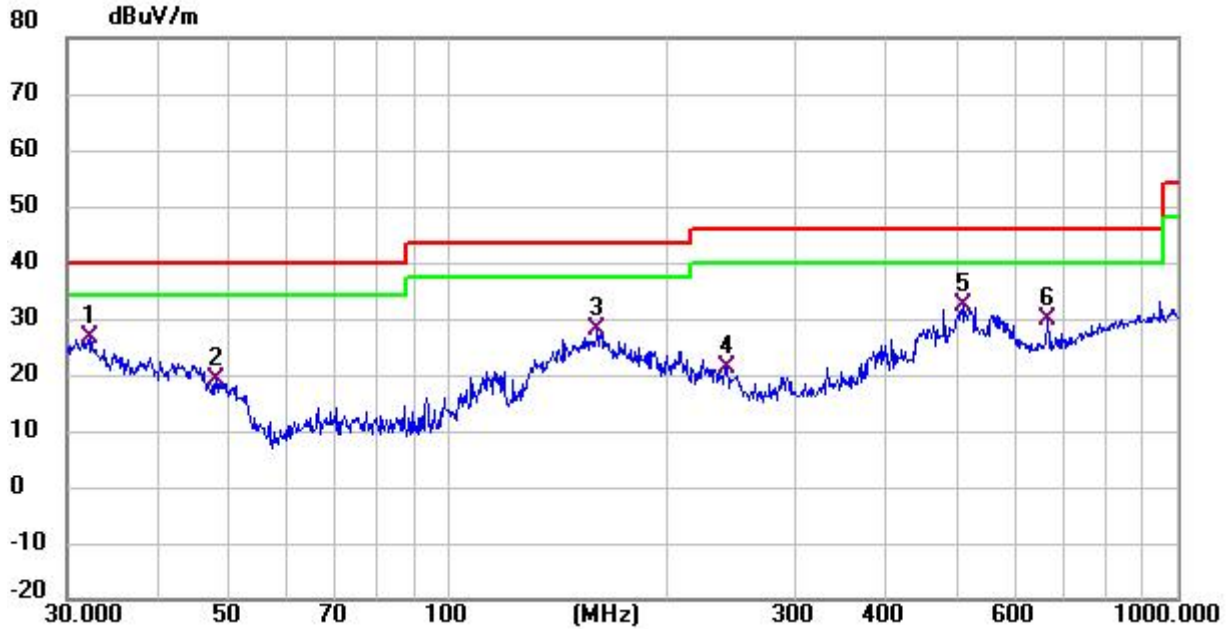


Frequency	Pre-scan Level MaxPeak	Final Test Level MaxPeak	Limit MaxPeak	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
13.56	75.41	75.41	124.0	51.5

For 30MHz-1GHz

Note : All test modes are performed, only the worst case is recorded in this report.

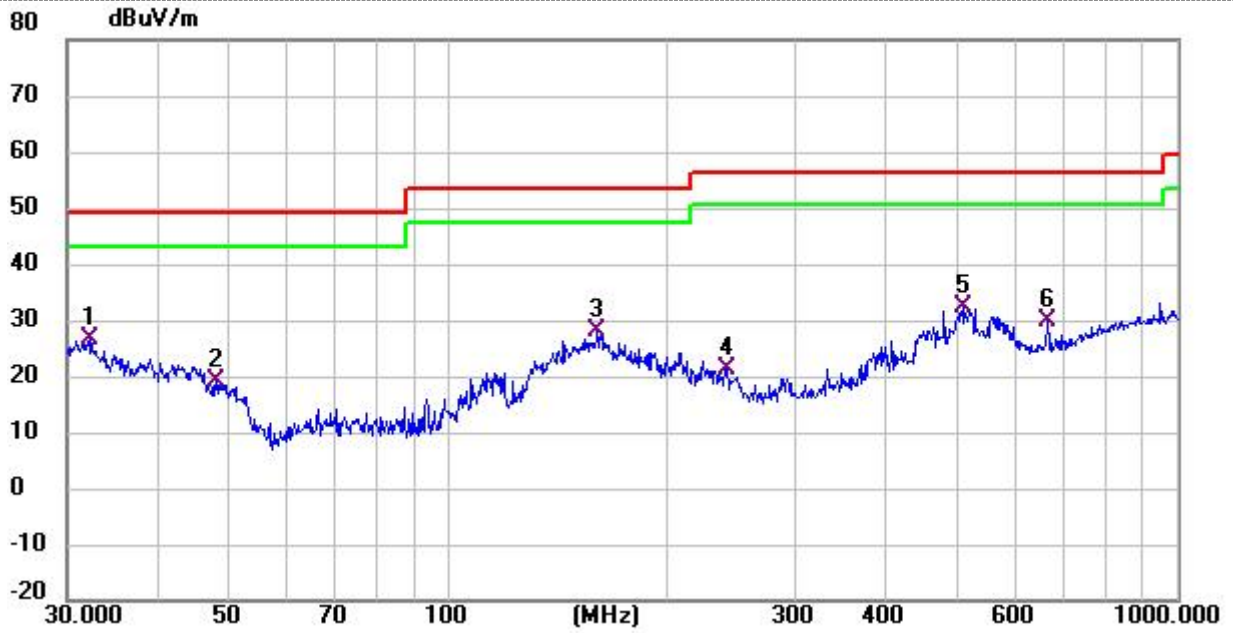
Power Supply	DC 24V by Adapter(Adapter 1)	Polarization	Horizontal
M/N:	HK568A(3COM second display: 15.6 inch)		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	32.2400	7.17	19.38	26.55	40.00	-13.45	QP	100	360	P	
2	48.1600	10.24	8.98	19.22	40.00	-20.78	QP	100	360	P	
3	160.7200	10.74	17.28	28.02	43.50	-15.48	QP	100	360	P	
4	241.8400	6.28	14.87	21.15	46.00	-24.85	QP	100	360	P	
5	508.4000	9.71	22.79	32.50	46.00	-13.50	QP	100	360	P	
6	666.5200	5.15	24.66	29.81	46.00	-16.19	QP	100	360	P	

*:Maximum data x:Over limit !:over margin

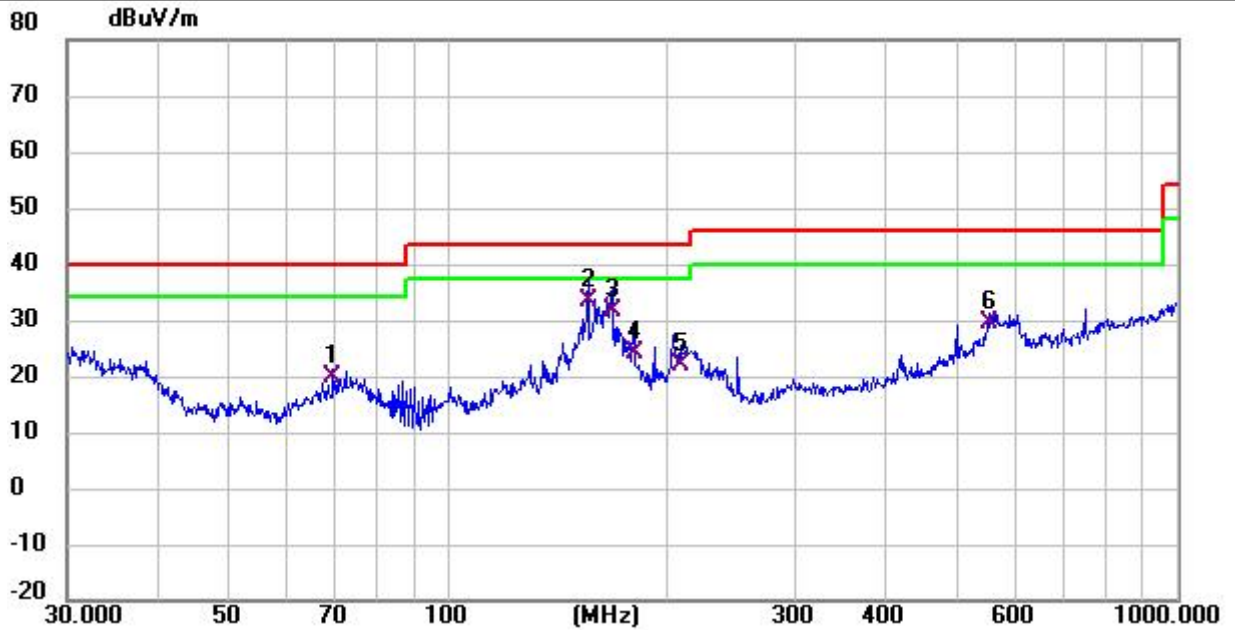
Power Supply DC 24V by Adapter(Adapter 1) Polarization Vertical
 M/N: HK568A(3COM second display: 15.6 inch)



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	32.2400	7.17	19.38	26.55	49.00	-22.45	QP	100	360	P	
2	48.1600	10.24	8.98	19.22	49.00	-29.78	QP	100	360	P	
3	160.7200	10.74	17.28	28.02	53.50	-25.48	QP	100	360	P	
4	241.8400	6.28	14.87	21.15	56.40	-35.25	QP	100	360	P	
5	508.4000	9.71	22.79	32.50	56.40	-23.90	QP	100	360	P	
6	666.5200	5.15	24.66	29.81	56.40	-26.59	QP	100	360	P	

*:Maximum data x:Over limit !:over margin

Power Supply	DC 24V by Adapter(Adapter 1)	Polarization	Horizontal
M/N:	HK568A(3COM second display: 10.1 inch)		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	69.6800	9.50	10.50	20.00	40.00	-20.00	QP	200	0	P	
2 *	155.9600	15.94	17.46	33.40	43.50	-10.10	QP	200	0	P	
3	168.0800	14.55	17.03	31.58	43.50	-11.92	QP	200	0	P	
4	180.0399	9.43	14.60	24.03	43.50	-19.47	QP	200	0	P	
5	209.2800	6.71	15.13	21.84	43.50	-21.66	QP	200	0	P	
6	555.1599	5.99	23.31	29.30	46.00	-16.70	QP	200	0	P	

*:Maximum data x:Over limit !:over margin

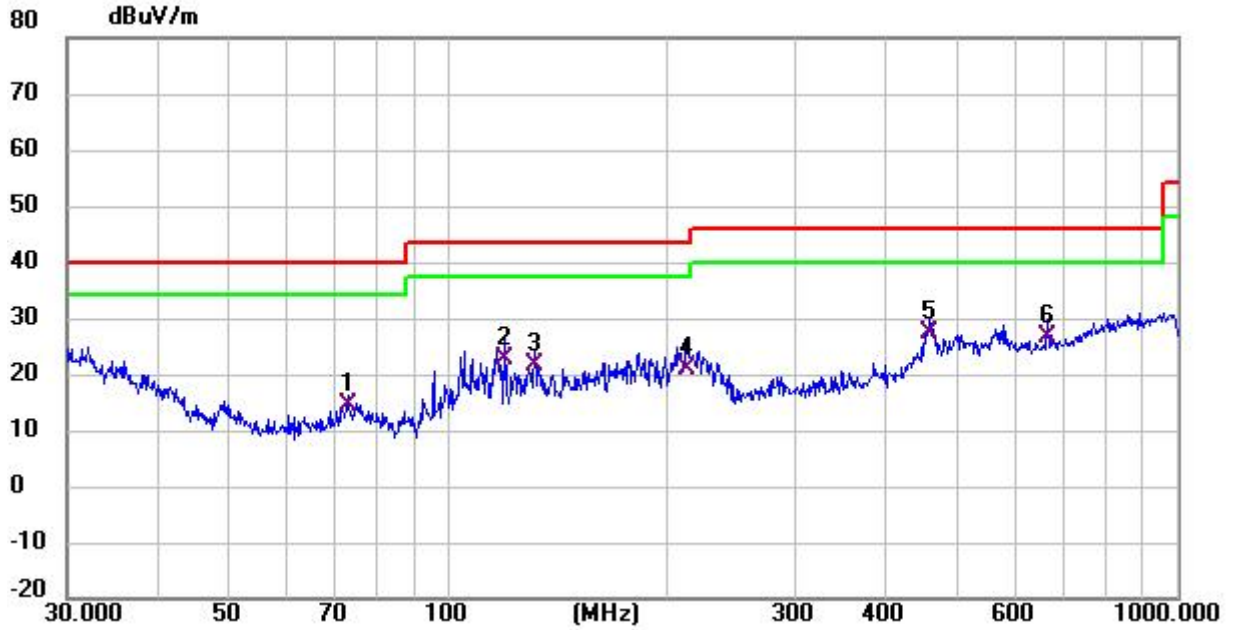
Power Supply DC 24V by Adapter(Adapter 1) Polarization Vertical
 M/N: HK568A(3COM second display: 10.1 inch)



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	40.0000	13.50	13.80	27.30	40.00	-12.70	QP	100	0	P	
2	63.7200	12.16	8.86	21.02	40.00	-18.98	QP	100	0	P	
3	143.9600	17.29	16.91	34.20	43.50	-9.30	QP	100	0	P	
4 *	155.6400	19.33	17.47	36.80	43.50	-6.70	QP	100	0	P	
5	209.0000	18.37	15.13	33.50	43.50	-10.00	QP	100	0	P	
6	421.1200	10.89	19.31	30.20	46.00	-15.80	QP	100	0	P	

*:Maximum data x:Over limit l:over margin

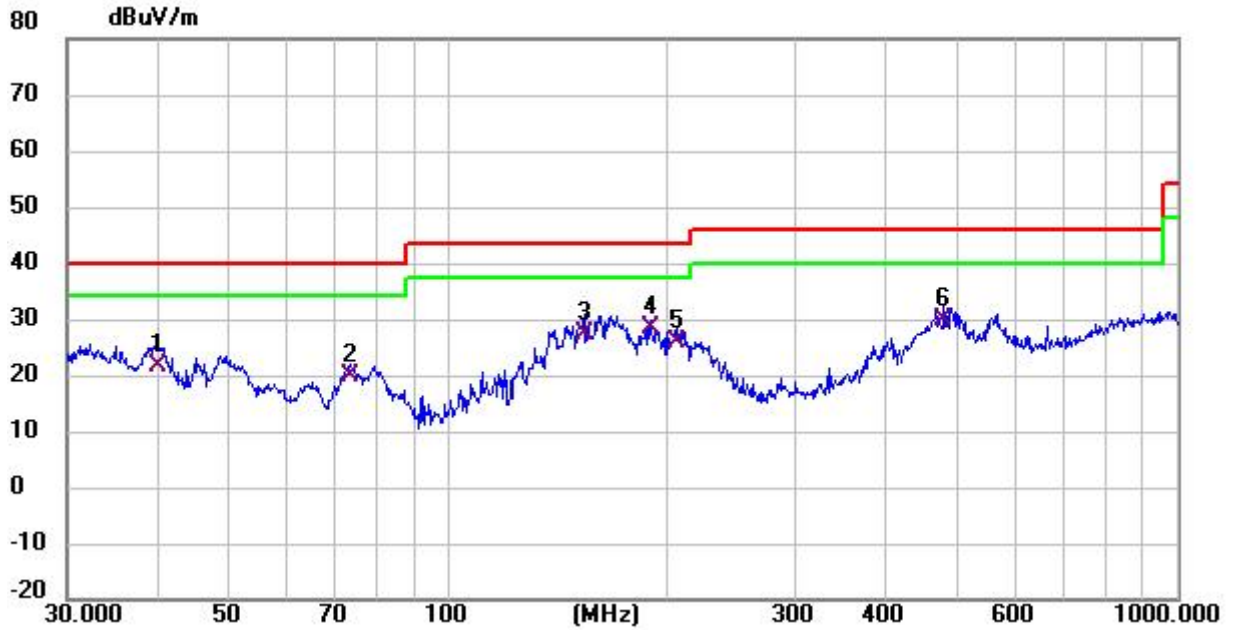
Power Supply	DC 24V by Adapter(Adapter 1)	Polarization	Horizontal
M/N:	HK568A(3COM second display: VFD)		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	73.0000	3.95	10.35	14.30	40.00	-25.70	QP	200	10	P	
2	119.9600	6.89	15.80	22.69	43.50	-20.81	QP	200	60	P	
3	131.9600	5.41	16.19	21.60	43.50	-21.90	QP	200	120	P	
4	213.2000	5.75	15.09	20.84	43.50	-22.66	QP	200	160	P	
5 *	458.6400	6.38	20.92	27.30	46.00	-18.70	QP	200	190	P	
6	664.7199	1.81	24.64	26.45	46.00	-19.55	QP	200	360	P	

*:Maximum data x:Over limit !:over margin

Power Supply DC 24V by Adapter(Adapter 1) Polarization Vertical
 M/N: HK568A(3COM second display: VFD)



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	40.2400	7.94	13.64	21.58	40.00	-18.42	QP	100	360	P	
2	73.4400	10.10	9.58	19.68	40.00	-20.32	QP	100	360	P	
3	154.2000	9.77	17.53	27.30	43.50	-16.20	QP	100	360	P	
4 *	189.8000	13.41	14.89	28.30	43.50	-15.20	QP	100	360	P	
5	206.3200	10.69	15.15	25.84	43.50	-17.66	QP	100	360	P	
6	479.9600	7.85	21.84	29.69	46.00	-16.31	QP	100	360	P	

*:Maximum data x:Over limit !:over margin

5.4. FREQUENCY TOLERANCE

TEST CONFIGURATION



TEST PROCEDURE

The EUT was placed on a turn table which is 0.8m above ground plane.

Set EUT as normal operation

Set SPA Center Frequency = fundamental frequency, RBW, VBW= 10kHz, Span=100K

Set SPA Max hold. Mark peak.

TEST RESULTS

Power Supply	Temperature(°C)	Measured Frequency (MHz)	Frequency Error (MHz)	Result(ppm)	Part 15.225 Limit
AC 240V	-20	13.560036	0.000036	2.65	+/- 0.01%(100ppm)
	20	13.560051	0.000051	3.76	+/- 0.01%(100ppm)
	50	13.560063	0.000063	4.64	+/- 0.01%(100ppm)
AC 120V	-20	13.560042	0.000042	3.09	+/- 0.01%(100ppm)
	20	13.560058	0.000058	4.27	+/- 0.01%(100ppm)
	50	13.560054	0.000054	3.98	+/- 0.01%(100ppm)
AC 100V	-20	13.560057	0.000057	4.20	+/- 0.01%(100ppm)
	20	13.560069	0.000069	5.08	+/- 0.01%(100ppm)
	50	13.560043	0.000043	3.17	+/- 0.01%(100ppm)

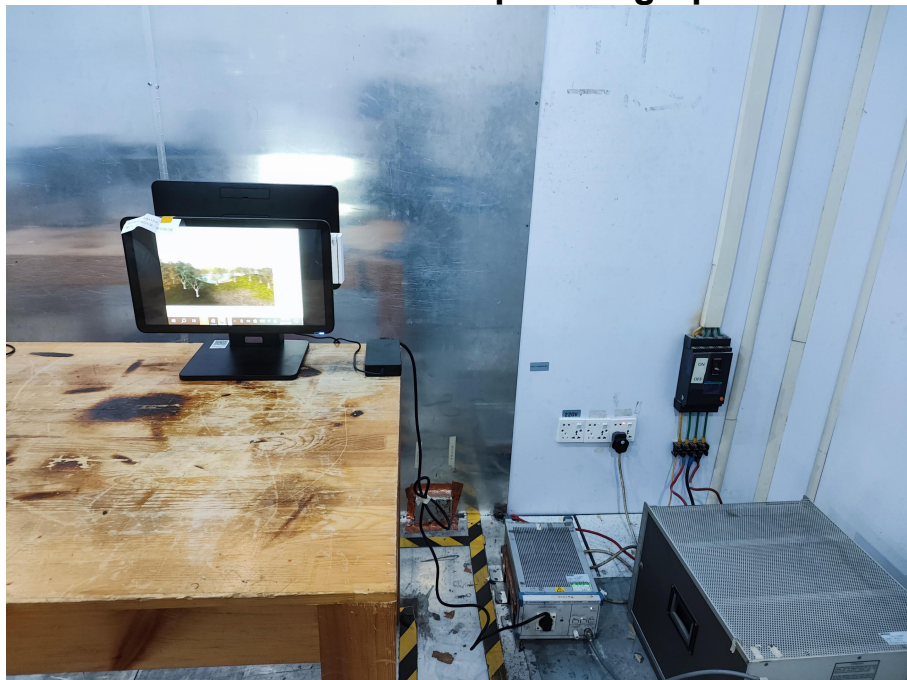
6. Test Setup Photos of the EUT

Conducted Test Setup Photograph



HK568A(second display: VFD)

Conducted Test Setup Photograph



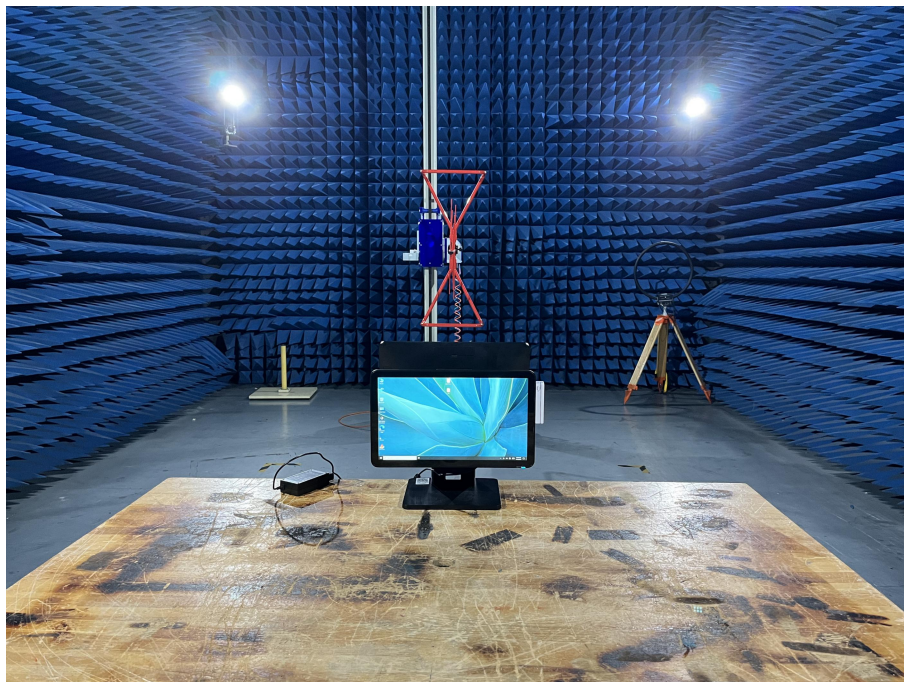
HK568A(second display: 15.6 inch)

Conducted Test Setup Photograph



HK568A(second display: 10.1 inch)

Radiated Test Setup Photograph



HK568A(second display: 15.6 inch)