

EMC Test Report

Report No.:STS2407338E03

Issued for

Shanghai UniOne Science&Technology CO., Ltd.

Building 4, No.651 Wanfang Road, Pujiang Town, Minhang
District, Shanghai, China.

Product Name: Rugged Windows Tablet

Brand Name: N/A

Model Name: GTW8103(Standard)

Series Model(s): GTW8103(Handle), GTW8103(RJ45A),
GTW8103(RJ45AH)

FCC ID: 2A96I-GTW8103

Test Standards: FCC 47 CFR Part 15: Subpart B

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Shenzhen STS Test Services Co., Ltd.

**TEST REPORT**

Applicant's Name : Shanghai UniOne Science&Technology CO., Ltd.
Address..... : Building 4, No.651 Wanfang Road, Pujiang Town, Minhang District, Shanghai, China.
Manufacturer's Name..... : Shanghai UniOne Science&Technology CO., Ltd.
Address..... : Building 4, No.651 Wanfang Road, Pujiang Town, Minhang District, Shanghai, China.

Product Description

Product Name : Rugged Windows Tablet
Brand Name : N/A
Model Name : GTW8103(Standard)
Series Model(s) : GTW8103(Handle), GTW8103(RJ45A), GTW8103(RJ45AH)

Test Standards : FCC 47 CFR Part 15: Subpart B

Test Procedure..... : ANSI C63.4-2014

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Shenzhen STS Test Services Co., Ltd.

Date of Test.....

Date of Receipt of Test Item 26 July 2024

Date of Performance of Tests 26 July 2024 ~ 13 Sep. 2024

Date of Issue..... 13 Sep. 2024

Test Result **Pass**

Testing Engineer :

Star Deng

(Star Deng)

Technical Manager :

Tony Liu

(Tony Liu)

Authorized Signatory :

Bovey Yang

(Bovey Yang)





Table of Contents

1. SUMMARY OF THE TEST RESULTS	5
1.1 TEST FACTORY	5
1.2 MEASUREMENT UNCERTAINTY	5
2. GENERAL INFORMATION	6
2.1 GENERAL DESCRIPTION OF THE EUT	6
2.2 DESCRIPTION OF THE TEST MODES	7
2.3 DESCRIPTION OF THE TEST SETUP	8
2.4 EQUIPMENTS LIST FOR ALL TEST ITEMS	10
3. EMC EMISSION TEST	11
3.1 CONDUCTED EMISSION MEASUREMENT	11
3.2 RADIATED EMISSION MEASUREMENT	17



Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	13 Sep. 2024	STS2407338E03	ALL	Initial Issue



1. SUMMARY OF THE TEST RESULTS

Test procedures according to the technical standards:

EMISSION			
Standard	Item	Result	Remarks
FCC 47 CFR Part 15: Subpart B	Conducted Emission	PASS	Meet Class B limit
	Radiated Emission	PASS	Meet Class B limit

NOTE:

(1) N/A=Not Applicable.

1.1 TEST FACTORY

Company Name:	SHENZHEN STS TEST SERVICES CO.,LTD.
Address:	101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China
Telephone:	+86-755 3688 6288
Fax:	+86-755 3688 6277
Registration No.:	FCC test Firm Registration Number: 625569
	IC test Firm Registration Number: 12108A
	A2LA Certificate No.: 4338.01

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission (9KHz-150KHz)	$\pm 2.19\text{dB}$
2	Conducted Emission (150KHz-30MHz)	$\pm 2.53\text{dB}$
3	All emissions,radiated(<1G) 30MHz-1000MHz	$\pm 4.18\text{dB}$
4	All emissions,radiated(>1G) 1GHz-6GHz	$\pm 4.90\text{dB}$
5	All emissions,radiated(>1G) 6GHz-18GHz	$\pm 5.24\text{dB}$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Rugged Windows Tablet	
Brand Name	N/A	
Model Name	GTW8103(Standard)	
Series Model(s)	GTW8103(Handle), GTW8103(RJ45A), GTW8103(RJ45AH)	
Model Difference	GTW8103(Standard) Only the host; GTW8103(Handle) Host with handle; GTW8103(RJ45A) Host with RJ45+USB 2 in 1 module; GTW8103(RJ45AH) Host with handle and RJ45+USB 2 in 1 module.	
Product Description	The EUT is a Rugged Windows Tablet ITE equipment having a primary function of either (or a combination of) entry, storage, display, retrieval, transmission, processing, switching, or control of data and/or telecommunication messages and which may be equipped with one or more ports typically for information transfer.	
Frequency Bands	Bluetooth	2402~2480 MHz
	2.4G WLAN	802.11b/g/n/ax(20MHz): 2412~2462MHz 802.11n/ax(40MHz):2422~2452MHz
	5G WLAN	802.11a/n/ac (20MHz): 5180~5240MHz 802.11n/ac (40MHz):5190~5230MHz 802.11ac (80MHz):5210
	5.8G WLAN	802.11a/n/ac (20MHz): 5745~5825MHz 802.11n /ac (40MHz):5755~5795MHz 802.11ac (80MHz):5775MHz
Modulation Mode	Bluetooth	BT BR(1Mbps): GFSK BT EDR(2Mbps): $\pi/4$ -DQPSK BT EDR(3Mbps): 8DPSK
	BLE	GFSK
	2.4G WLAN	802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM
	5G/5.8G WLAN	802.11a(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11ac(OFDM):BPSK,QPSK,16-QAM,64-QAM,256-QAM
Rating	Input: DC 19V 3.42A	
Battery	Model: BA6000 Rated Voltage:11.01V Charge Limit Voltage: 12.6V Capacity: 6000mAh Model: BA880 Rated Voltage:7.4V Charge Limit Voltage: 8.4V Capacity: 880mAh	
Hardware version number	E7255_MB_PCB_V20	
Software version number	R.NB.00.00.02	

Note: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.2 DESCRIPTION OF THE TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	Adapter + Front camera + BT Link + WLAN Link + GPS Rx + USB Transmitting + HDMI + SD Card
Mode 2	Adapter + Rear camera + BT Link + WLAN Link + GPS Rx + USB Transmitting + HDMI+ SD Card

For Conducted Test	
Final Test Mode	Description
Mode 1	Adapter + Front camera + BT Link + WLAN Link + GPS Rx + USB Transmitting + HDMI + SD Card

For Radiated Test	
Final Test Mode	Description
Mode 1	Adapter + Front camera + BT Link + WLAN Link + GPS Rx + USB Transmitting + HDMI + SD Card

Note:

1. For conducted emission test, test mode 1 was the worst case and only this mode was presented in this report.
2. For radiated emission test, test mode 1 was the worst case and only this mode was presented in this report.
3. We have be tested for all avaiable U.S. voltage and frequencies (For 120V, 50/60Hz) for which the device is capable of operation.

2.3 DESCRIPTION OF THE TEST SETUP

The EUT has been tested with associated equipment below and the test setup please refer to appendix 1 - test setup.

Model: GTW8103(Handle)

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
E-1	Adapter	N/A	N/A	N/A	NO
C-1	DC Cable	N/A	N/A	150cm	NO

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
E-2	Keyboard	HP	PR1101U	N/A	N/A
E-3	Mouse	MOTOSPEED	F66	N/A	N/A
E-4	Printer	LENOVO	LJ2400L	N/A	N/A
E-5	Display	AOC	LE24A3150/80	N/A	N/A
E-6	Display Adapter	AOC	ADP-150CH D	N/A	N/A
E-7	Mobile Phone	UNNECTO	k39tv1_64_bsp	N/A	N/A
E-8	TF Card	Sandisk	1436XF522296	N/A	N/A
C-2	USB Cable	N/A	N/A	110cm	NO
C-3	USB Cable	N/A	N/A	110cm	NO
C-4	USB Cable	N/A	N/A	100cm	NO
C-5	DC Cable	N/A	N/A	180cm	YES
C-6	HDMI Cable	N/A	N/A	150cm	NO

Model: GTW8103(RJ45AH)

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
E-1	Adapter	N/A	N/A	N/A	NO
C-1	DC Cable	N/A	N/A	150cm	NO

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
E-2	Keyboard	HP	PR1101U	N/A	N/A
E-3	Mouse	MOTOSPEED	F66	N/A	N/A
E-4	Printer	LENOVO	LJ2400L	N/A	N/A
E-5	Display	AOC	LE24A3150/80	N/A	N/A
E-6	Display Adapter	AOC	ADP-150CH D	N/A	N/A
E-7	Mobile Phone	UNNECTO	k39tv1_64_bsp	N/A	N/A
E-8	TF Card	Sandisk	1436XF522296	N/A	N/A
E-9	U-disk	PNY	M205	N/A	NO
C-2	USB Cable	N/A	N/A	110cm	NO
C-3	USB Cable	N/A	N/A	110cm	NO
C-4	USB Cable	N/A	N/A	100cm	NO
C-5	DC Cable	N/A	N/A	180cm	YES
C-6	HDMI Cable	N/A	N/A	150cm	NO
C-7	LAN Cable	N/A	N/A	150cm	NO

Note:

- (1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (2) “YES” is means “with core”; “NO” is means “without core”.

2.4 EQUIPMENTS LIST FOR ALL TEST ITEMS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
EMI Test Receiver	R&S	ESCI	101427	2023.9.25	2024.9.24
Bi-log Antenna	TESEQ	CBL6111D	45873	2023.9.27	2024.9.26
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1343	2023.9.27	2024.9.26
Pre-amplifier(1G-26.5G)	Agilent	HP8449B	3008A02383	2024.2.23	2025.2.22
Pre-amplifier(0.1M-3GHz)	EM	EM330	060665	2024.2.23	2025.2.22
Spectrum Analyzer	Agilent	N9020A	MY49100060	2023.9.26	2024.9.25
RE Cable (9K-1G)	N/A	R01	N/A	2023.9.25	2024.9.24
RE Cable (1G-26G)	N/A	R02	N/A	2023.9.25	2024.9.24
Temperature & Humidity	Mieo	HH660	N/A	2023.9.28	2024.9.27
SAC	ChengYu	9*6*6	N/A	2023.9.05	2026.9.06
Testing Software	EZ-EMC(Ver.STSLAB-03A1 RE)				

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
EMI Test Receiver	R&S	ESCI	101427	2023.9.25	2024.9.24
LISN	R&S	AIT-F01220	8130179	2023.9.25	2024.9.24
Absorbing Clamp	R&S	MDS-21	100668	2024.4.15	2025.4.14
CE Cable	N/A	C01	N/A	2023.9.25	2024.9.24
Temperature & Humidity	Mieo	HH660	N/A	2023.9.28	2024.9.27
Testing Software	EZ-EMC(Ver.STSLAB-03A1 CE)				

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

FREQUENCY (MHz)	☐ Class A (dB μ V)		☒ Class B (dB μ V)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 ~ 0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.5 ~ 5	73.00	60.00	56.00	46.00
5 ~ 30	73.00	60.00	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

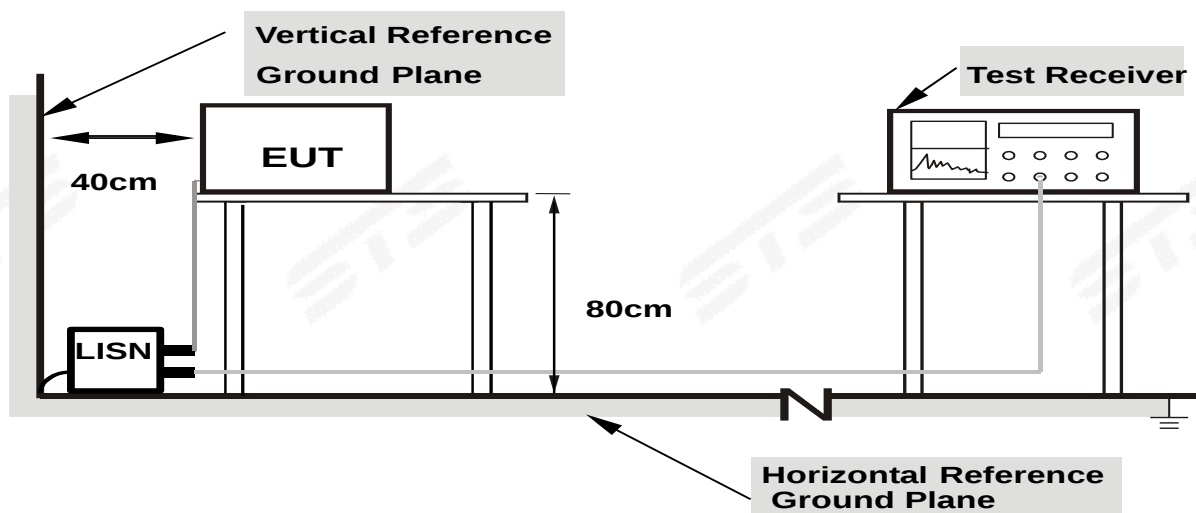
3.1.2 TEST PROCEDURE

- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



3.1.6 TEST RESULTS

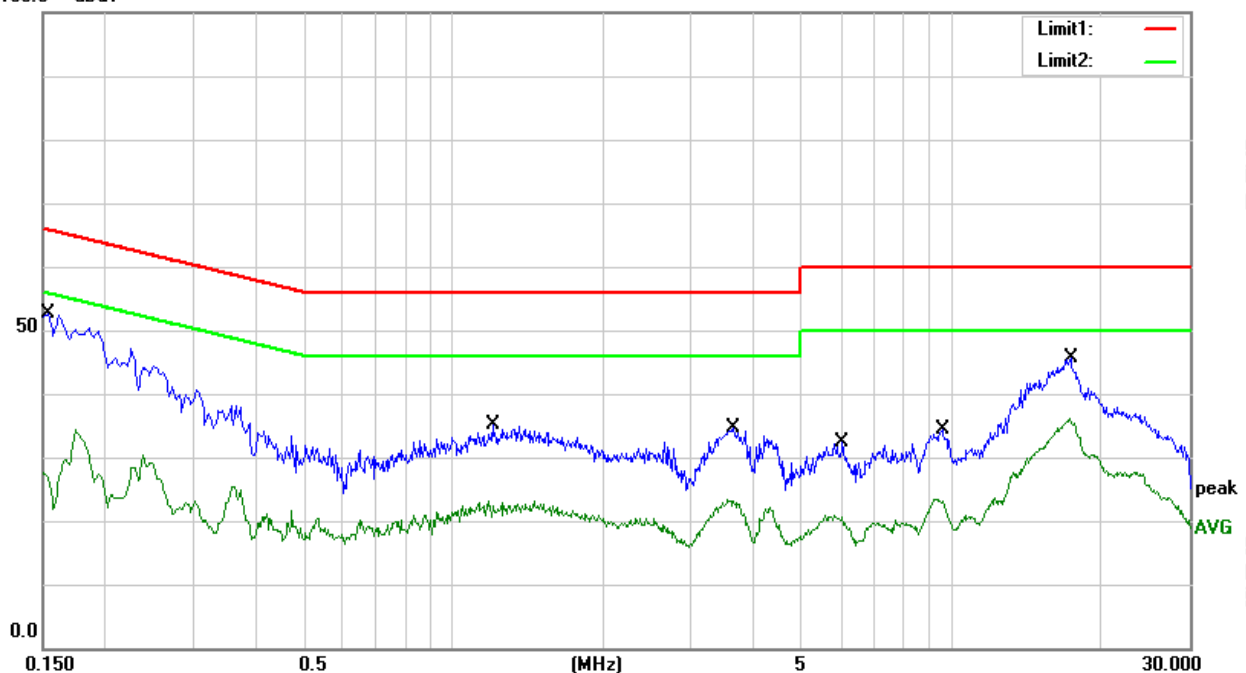
Temperature:	25.1℃	Relative Humidity:	59%
Phase:	L	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2024.08.07
Describe:	GTW8103(Handle)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1540	32.92	19.78	52.70	65.78	-13.08	QP
2	0.1540	14.62	19.78	34.40	55.78	-21.38	AVG
3	1.1980	15.35	19.78	35.13	56.00	-20.87	QP
4	1.1980	3.39	19.78	23.17	46.00	-22.83	AVG
5	3.6460	14.89	19.83	34.72	56.00	-21.28	QP
6	3.6460	3.48	19.83	23.31	46.00	-22.69	AVG
7	6.0420	12.70	19.79	32.49	60.00	-27.51	QP
8	6.0420	1.07	19.79	20.86	50.00	-29.14	AVG
9	9.5980	14.25	20.22	34.47	60.00	-25.53	QP
10	9.5980	3.20	20.22	23.42	50.00	-26.58	AVG
11	17.3100	25.07	20.45	45.52	60.00	-14.48	QP
12	17.3100	15.66	20.45	36.11	50.00	-13.89	AVG

Remark:

1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result = Reading + Factor) - Limit
3. Factor = Insertion loss + Cable loss

100.0 dBuV





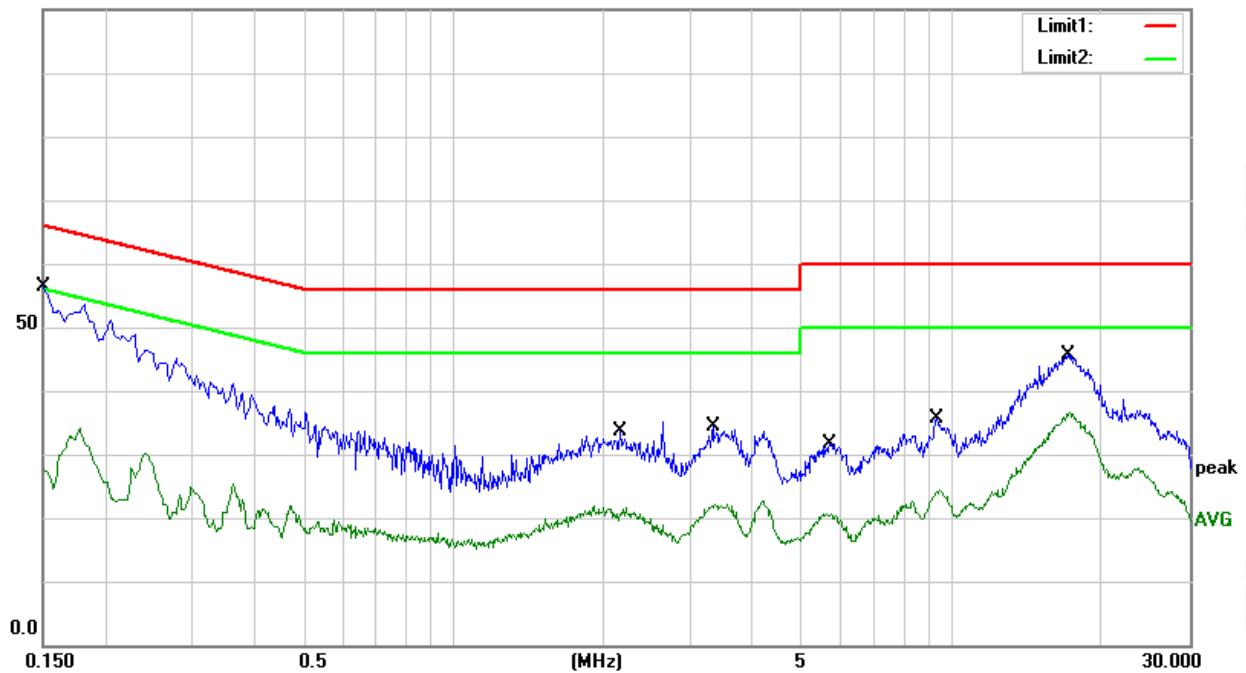
Temperature:	25.1℃	Relative Humidity:	59%
Phase:	N	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2024.08.07
Describe:	GTW8103(Handle)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	36.60	19.78	56.38	66.00	-9.62	QP
2	0.1500	14.27	19.78	34.05	56.00	-21.95	AVG
3	2.1580	13.80	19.79	33.59	56.00	-22.41	QP
4	2.1580	2.01	19.79	21.80	46.00	-24.20	AVG
5	3.3140	14.51	19.84	34.35	56.00	-21.65	QP
6	3.3140	2.76	19.84	22.60	46.00	-23.40	AVG
7	5.7100	11.95	19.80	31.75	60.00	-28.25	QP
8	5.7100	0.88	19.80	20.68	50.00	-29.32	AVG
9	9.3460	15.40	20.18	35.58	60.00	-24.42	QP
10	9.3460	4.08	20.18	24.26	50.00	-25.74	AVG
11	17.1820	25.25	20.44	45.69	60.00	-14.31	QP
12	17.1820	16.28	20.44	36.72	50.00	-13.28	AVG

Remark:

1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result = Reading + Factor) – Limit
3. Factor = Insertion loss + Cable loss

100.0 dBuV





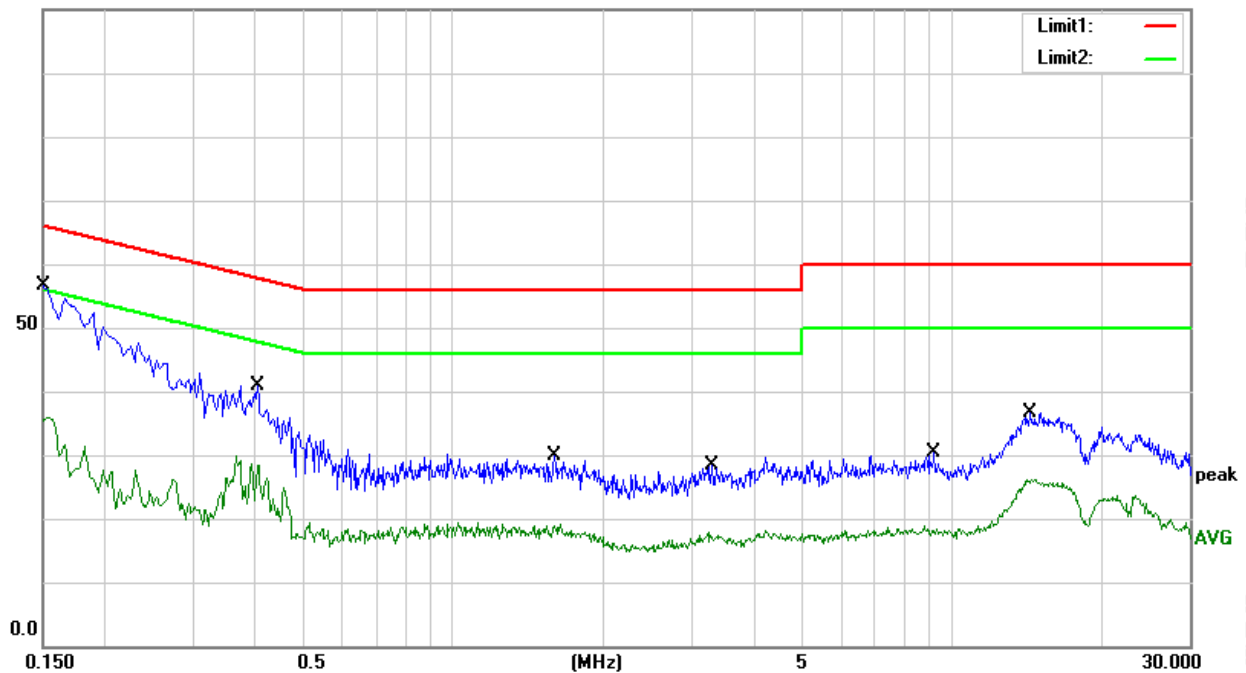
Temperature:	25.1℃	Relative Humidity:	59%
Phase:	L	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2024.08.07
Describe:	GTW8103(RJ45AH)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	36.82	19.78	56.60	66.00	-9.40	QP
2	0.1500	16.21	19.78	35.99	56.00	-20.01	AVG
3	0.4060	20.83	20.01	40.84	57.73	-16.89	QP
4	0.4060	9.77	20.01	29.78	47.73	-17.95	AVG
5	1.5940	9.98	19.78	29.76	56.00	-26.24	QP
6	1.5940	-0.76	19.78	19.02	46.00	-26.98	AVG
7	3.3020	8.48	19.84	28.32	56.00	-27.68	QP
8	3.3020	-2.09	19.84	17.75	46.00	-28.25	AVG
9	9.2140	10.27	20.17	30.44	60.00	-29.56	QP
10	9.2140	-1.33	20.17	18.84	50.00	-31.16	AVG
11	14.4180	16.23	20.36	36.59	60.00	-23.41	QP
12	14.4180	5.79	20.36	26.15	50.00	-23.85	AVG

Remark:

1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result = Reading + Factor) – Limit
3. Factor = Insertion loss + Cable loss

100.0 dBuV





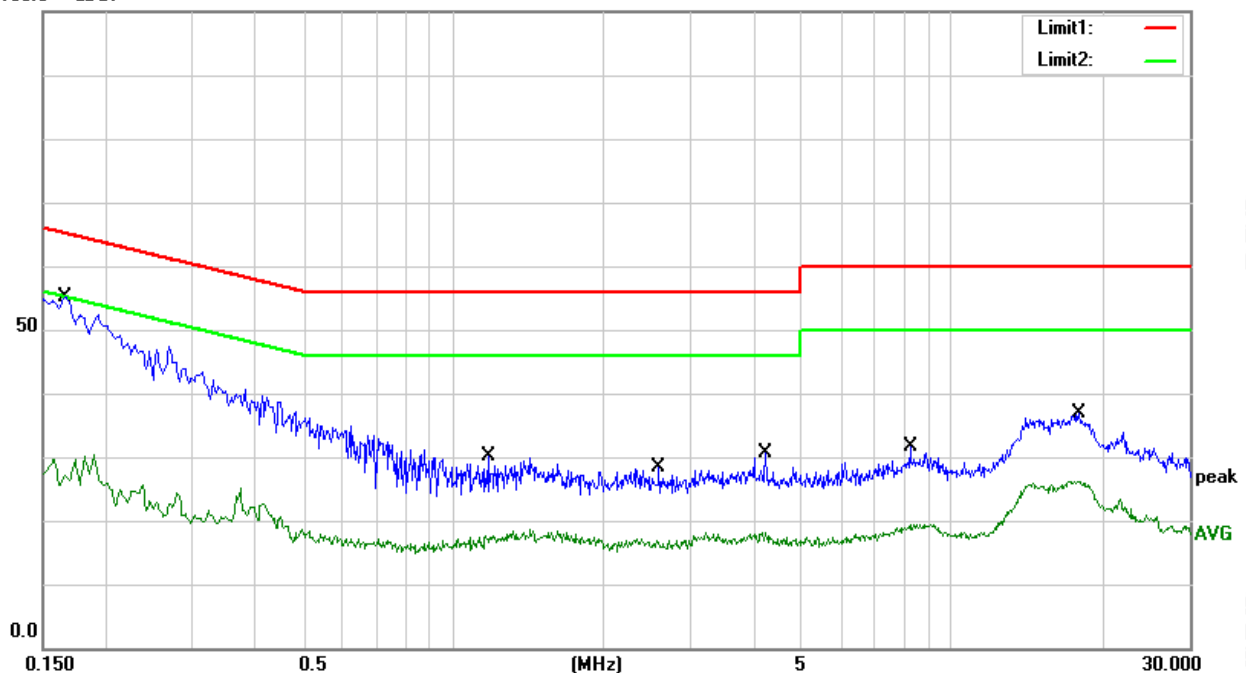
Temperature:	25.1℃	Relative Humidity:	59%
Phase:	N	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2024.08.07
Describe:	GTW8103(RJ45AH)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1660	35.45	19.78	55.23	65.16	-9.93	QP
2	0.1660	10.54	19.78	30.32	55.16	-24.84	AVG
3	1.1740	10.25	19.78	30.03	56.00	-25.97	QP
4	1.1740	-1.12	19.78	18.66	46.00	-27.34	AVG
5	2.5860	8.56	19.81	28.37	56.00	-27.63	QP
6	2.5860	-1.69	19.81	18.12	46.00	-27.88	AVG
7	4.2340	10.75	19.83	30.58	56.00	-25.42	QP
8	4.2340	-1.62	19.83	18.21	46.00	-27.79	AVG
9	8.2660	11.48	20.04	31.52	60.00	-28.48	QP
10	8.2660	-0.56	20.04	19.48	50.00	-30.52	AVG
11	17.9780	16.50	20.47	36.97	60.00	-23.03	QP
12	17.9780	5.72	20.47	26.19	50.00	-23.81	AVG

Remark:

1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result = Reading + Factor) - Limit
3. Factor = Insertion loss + Cable loss

100.0 dBuV



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS

Below 1 GHz

Measurement Method and Applied Limits:

ANSI C63.4:

Frequency (MHz)	☐ Class A		☒ Class B
	Field strength (dBuV/m) (at 10m)	Field strength (dBuV/m) (at 3m)	Field strength (dBuV/m) (at 3m)
30 ~ 88	39	49.5	40
88 ~ 216	43.5	54	43.5
216 ~ 960	46.4	56.9	46
Above 960	49.5	60	54

Above 1 GHz

Measurement Method and Applied Limits:

ANSI C63.4:

Frequency (MHz)	☐ Class A				☒ Class B	
	(dBuV/m) (at 3m)		(dBuV/m) (at 10m)		(dBuV/m) (at 3m)	
	Peak	Average	Peak	Average	Peak	Average
Above 1000	80	60	69.5	49.5	74	54

Frequency Range of Radiated Disturbance Measurement

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

Note:

- (1) The limit for radiated test was performed in the following: FCC PART 15B.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m) = 20log Emission level (uV/m).



3.2.2 TEST PROCEDURE

- a. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. EUT as the center to the edge of the auxiliary device, the distance from the maximum edge to the center of the antenna is 3 meter.
- c. The height of antenna is varied from 1 meter to 4 meter above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meter and the rotatable table was turned from 0 degrees to 360 degree to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1GHz.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

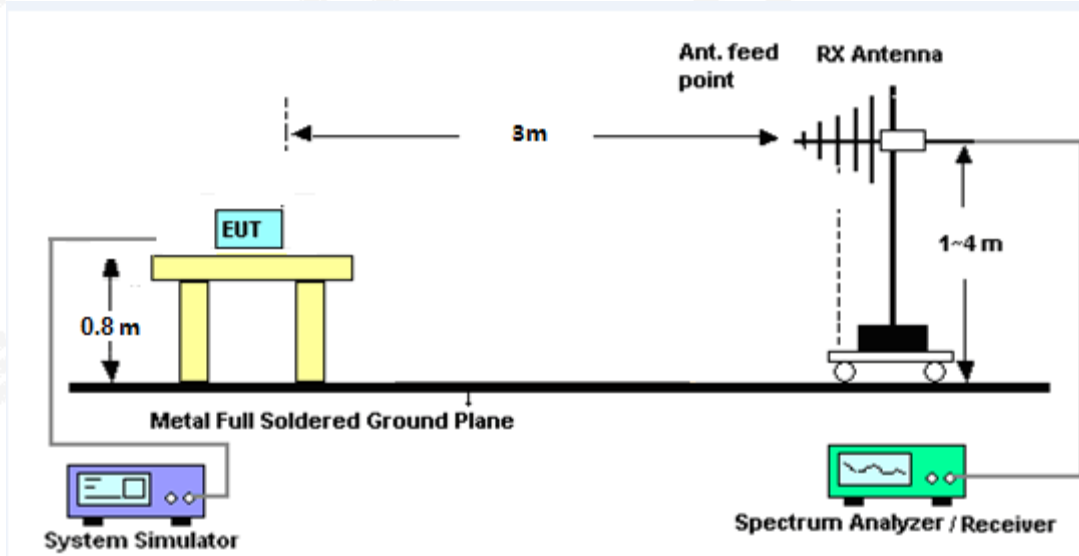
Note: Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

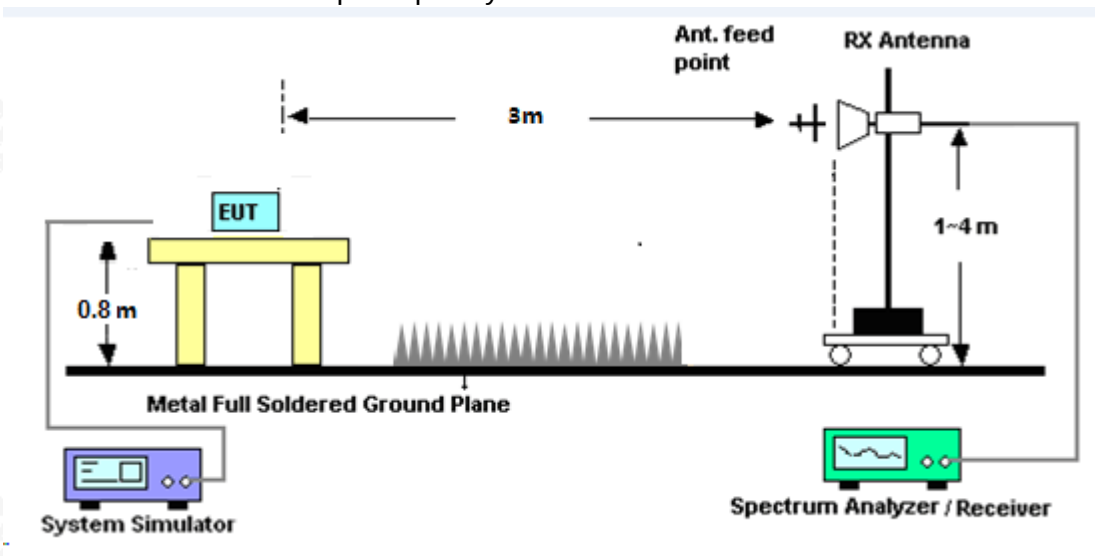
No deviation

3.2.4 TEST SETUP

(A) Radiated Emission Test-Up Frequency Below 1 GHz



(B) Radiated Emission Test-Up Frequency Above 1GHz



3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 described unless otherwise a special operating condition is specified in the following during the testing.



3.2.6 TEST RESULTS

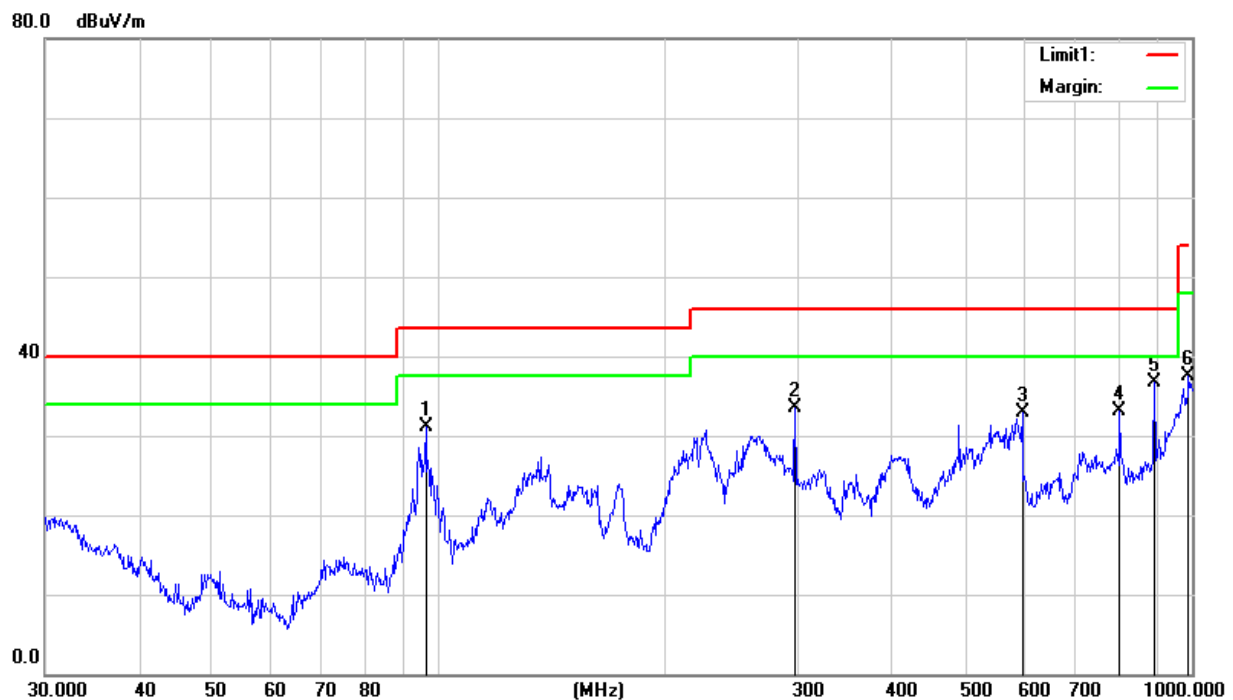
30MHz - 1000MHz

Temperature:	26.1°C	Relative Humidity:	53%
Phase:	Horizontal	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2024.08.05
Describe:	GTW8103(Handle)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	96.0986	51.61	-20.58	31.03	43.50	-12.47	QP
2	297.2241	49.79	-16.38	33.41	46.00	-12.59	QP
3	595.1327	41.53	-8.66	32.87	46.00	-13.13	QP
4	801.7862	37.89	-4.83	33.06	46.00	-12.94	QP
5	890.7278	40.58	-3.90	36.68	46.00	-9.32	QP
6	989.5354	39.55	-2.14	37.41	54.00	-16.59	QP

Remark:

1. All readings are Quasi-Peak
2. Margin = Result (Result = Reading + Factor)–Limit
3. Factor= Cable Loss +Antenna Factor–Amplifier Gain



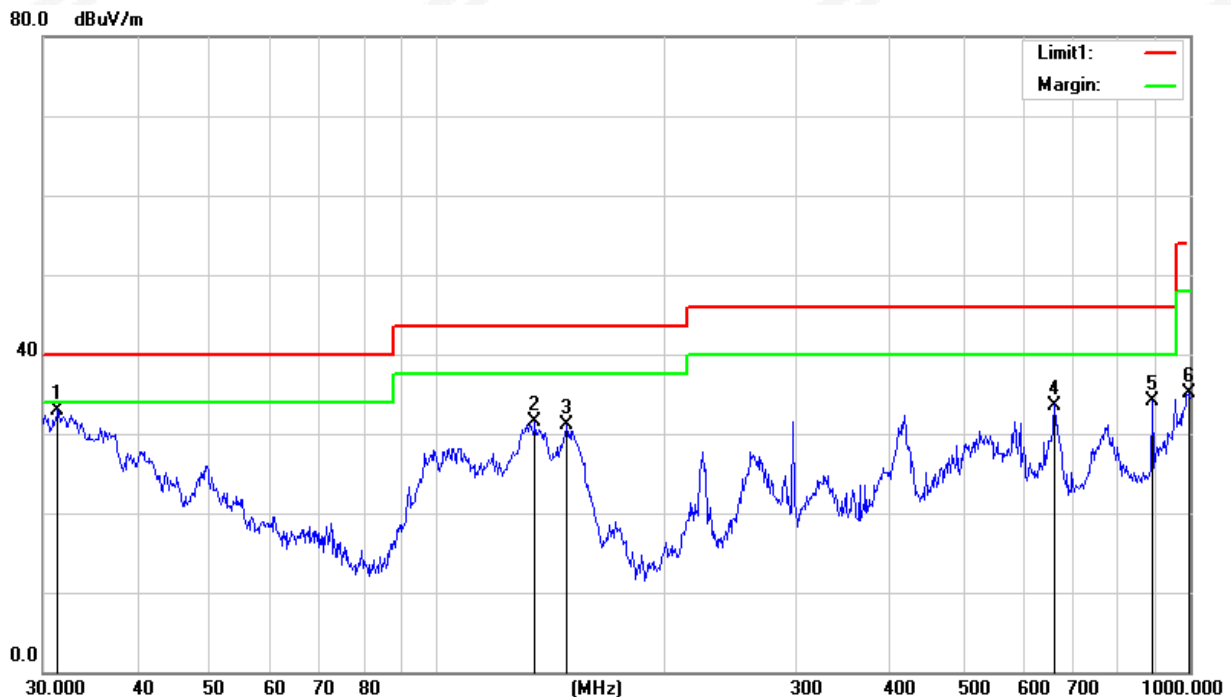


Temperature:	26.1°C	Relative Humidity:	53%
Phase:	Vertical	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2024.08.05
Describe:	GTW8103(Handle)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	31.3992	44.81	-11.81	33.00	40.00	-7.00	QP
2	135.0320	50.04	-18.45	31.59	43.50	-11.91	QP
3	148.4410	49.23	-18.18	31.05	43.50	-12.45	QP
4	661.1504	41.89	-8.29	33.60	46.00	-12.40	QP
5	890.7278	37.97	-3.90	34.07	46.00	-11.93	QP
6	996.4995	37.34	-2.16	35.18	54.00	-18.82	QP

Remark:

1. All readings are Quasi-Peak
2. Margin = Result (Result = Reading + Factor)–Limit
3. Factor= Cable Loss +Antenna Factor-Amplifier Gain



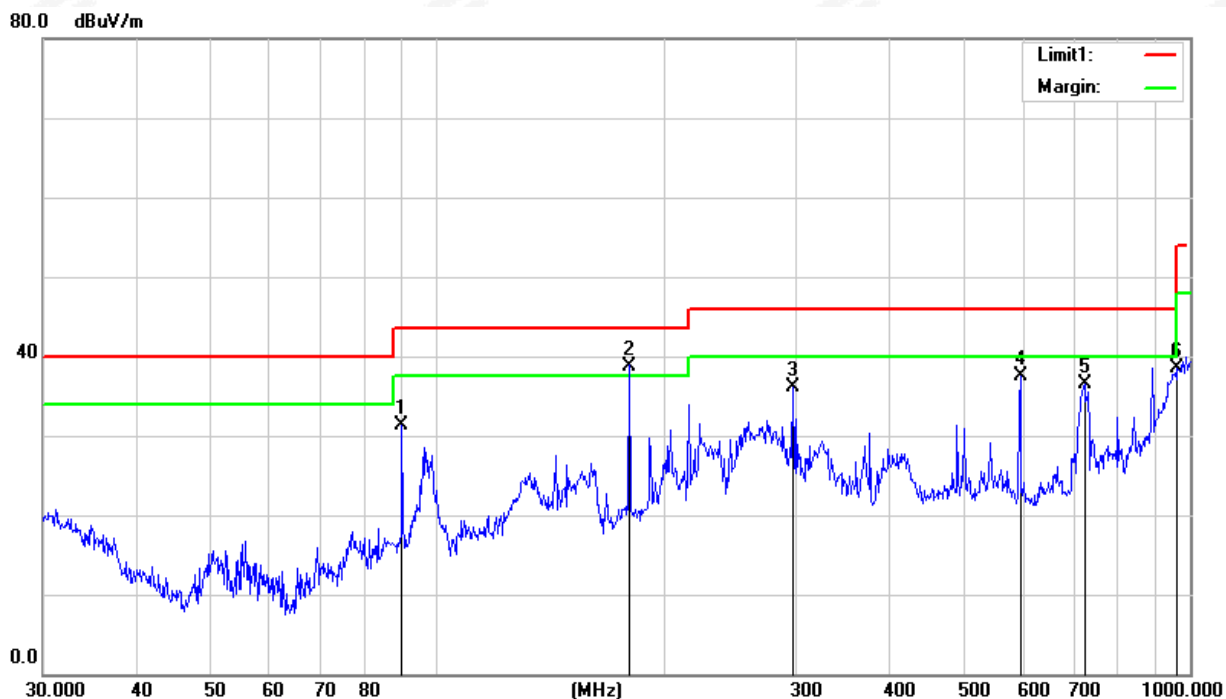


Temperature:	26.1°C	Relative Humidity:	53%
Phase:	Horizontal	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2024.08.05
Describe:	GTW8103(RJ45AH)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	89.9047	52.93	-21.56	31.37	43.50	-12.13	QP
2	180.0165	59.66	-20.86	38.80	43.50	-4.70	QP
3	297.2241	52.43	-16.38	36.05	46.00	-9.95	QP
4	595.1326	46.08	-8.66	37.42	46.00	-8.58	QP
5	724.2611	42.82	-6.22	36.60	46.00	-9.40	QP
6	962.1621	40.44	-1.92	38.52	54.00	-15.48	QP

Remark:

1. All readings are Quasi-Peak
2. Margin = Result (Result = Reading + Factor)–Limit
3. Factor= Cable Loss +Antenna Factor–Amplifier Gain



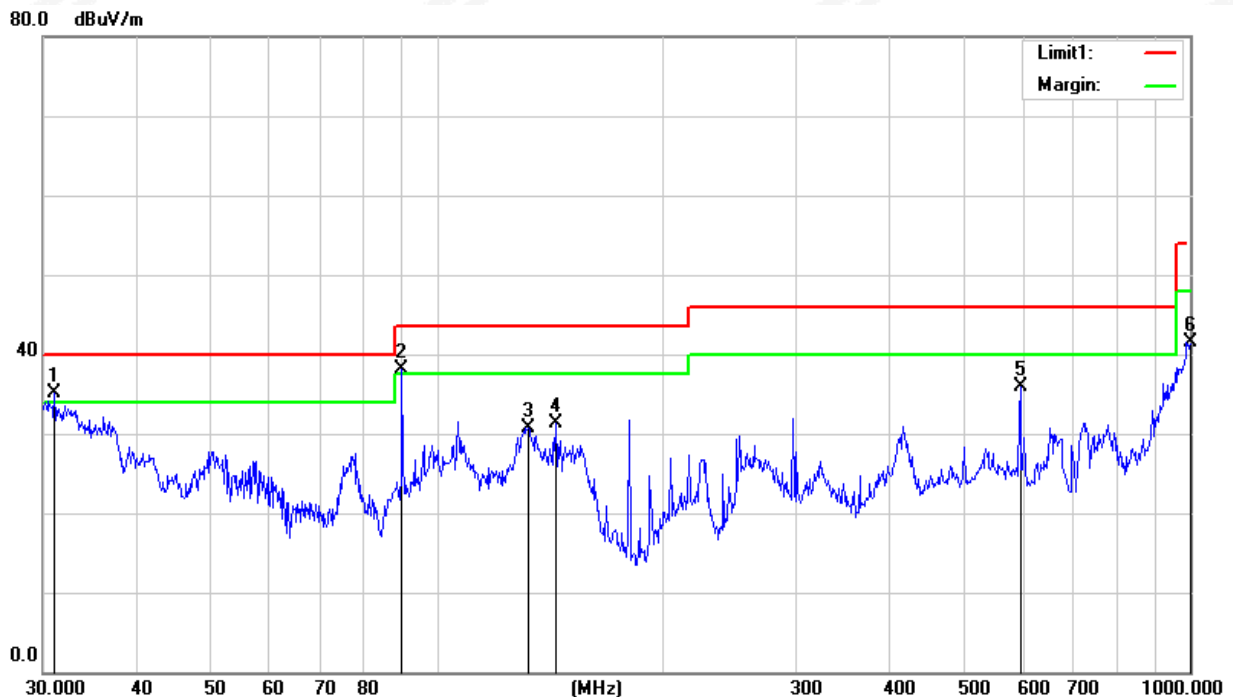


Temperature:	26.1°C	Relative Humidity:	53%
Phase:	Vertical	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2024.08.05
Describe:	GTW8103(RJ45AH)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	31.0704	46.79	-11.63	35.16	40.00	-4.84	QP
2	89.9047	59.60	-21.56	38.04	43.50	-5.46	QP
3	132.2204	48.94	-18.31	30.63	43.50	-12.87	QP
4	143.8293	49.71	-18.48	31.23	43.50	-12.27	QP
5	595.1327	44.54	-8.66	35.88	46.00	-10.12	QP
6	1000.0000	43.79	-2.19	41.60	54.00	-12.40	QP

Remark:

1. All readings are Quasi-Peak
2. Margin = Result (Result = Reading + Factor)–Limit
3. Factor= Cable Loss +Antenna Factor–Amplifier Gain





(1 GHz - 18GHz)

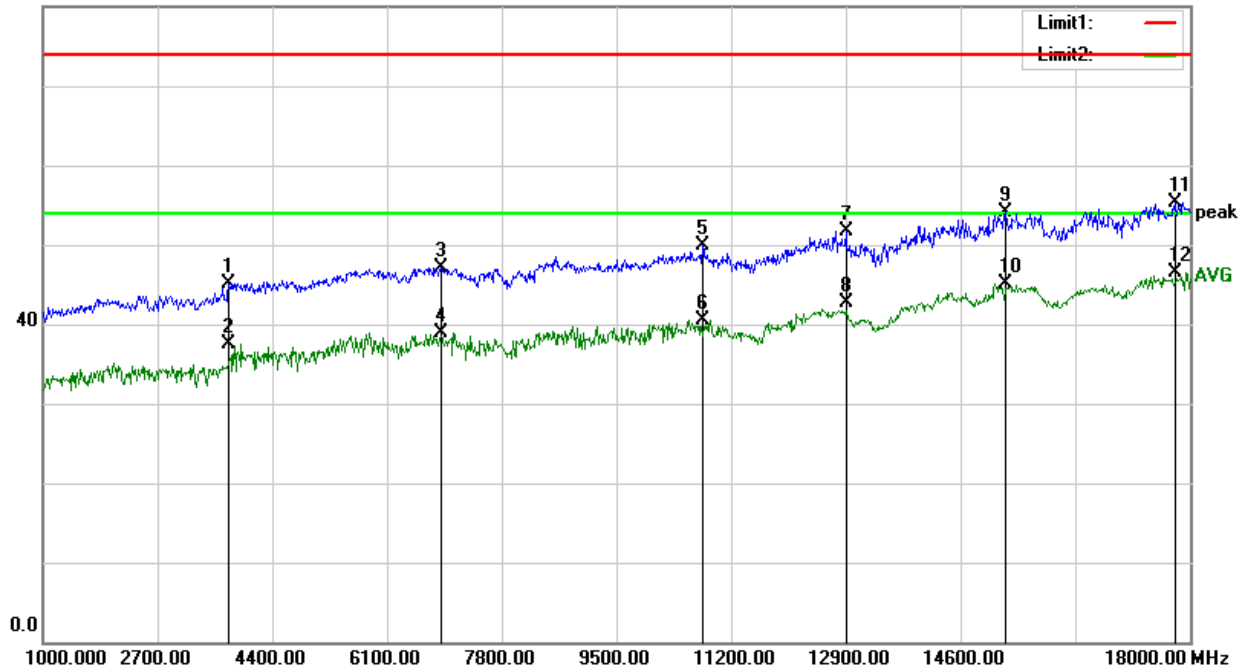
Temperature:	26.1℃	Relative Humidity:	53%
Phase:	Horizontal	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2024.08.05
Describe:	GTW8103(Handle)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	3762.500	41.45	3.74	45.19	74.00	-28.81	Peak
2	3762.500	33.78	3.74	37.52	54.00	-16.48	AVG
3	6907.500	36.51	10.57	47.08	74.00	-26.92	Peak
4	6907.500	28.32	10.57	38.89	54.00	-15.11	AVG
5	10775.000	35.83	14.03	49.86	74.00	-24.14	Peak
6	10775.000	26.44	14.03	40.47	54.00	-13.53	AVG
7	12900.000	36.40	15.37	51.77	74.00	-22.23	Peak
8	12900.000	27.34	15.37	42.71	54.00	-11.29	AVG
9	15271.500	36.41	17.60	54.01	74.00	-19.99	Peak
10	15271.500	27.46	17.60	45.06	54.00	-8.94	AVG
11	17787.500	31.14	24.24	55.38	74.00	-18.62	Peak
12	17787.500	22.18	24.24	46.42	54.00	-7.58	AVG

Remark:

1. All readings are Peak and Average values
2. Margin = Result (Result = Reading + Factor) – Limit
3. Factor = Cable Loss + Antenna Factor – Amplifier Gain

80.0 dBuV/m





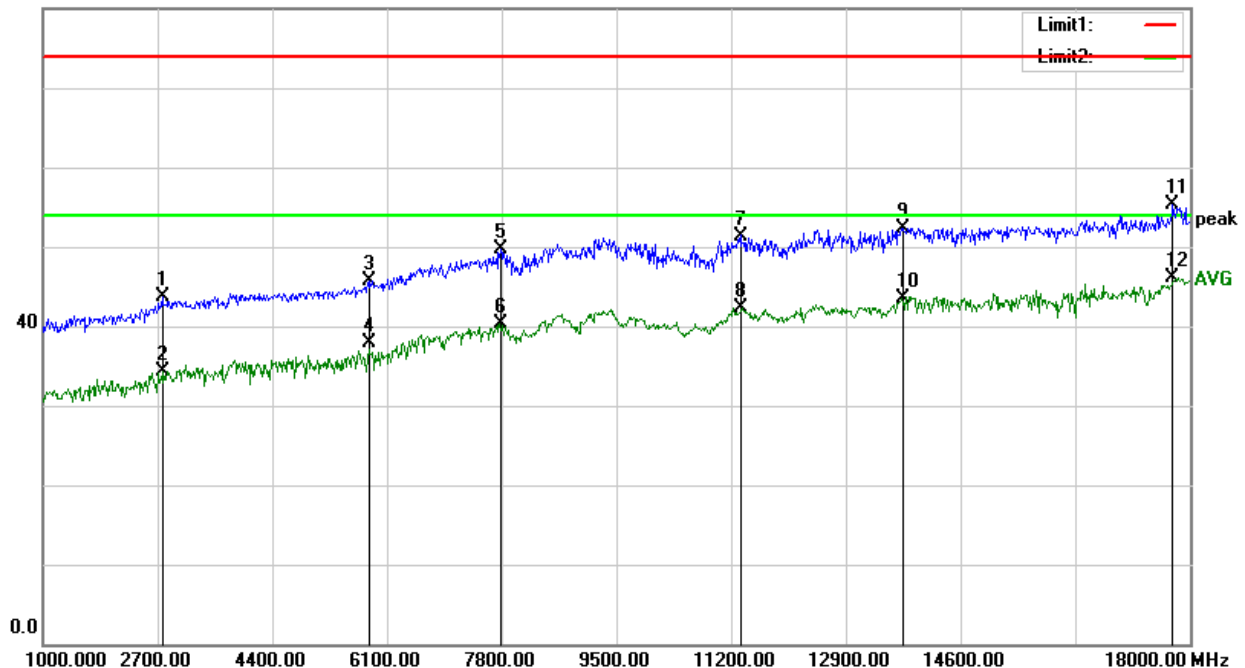
Temperature:	26.1℃	Relative Humidity:	53%
Phase:	Vertical	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2024.08.05
Describe:	GTW8103(Handle)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2768.000	42.65	1.05	43.70	74.00	-30.30	Peak
2	2768.000	33.30	1.05	34.35	54.00	-19.65	AVG
3	5853.500	38.27	7.50	45.77	74.00	-28.23	Peak
4	5853.500	30.42	7.50	37.92	54.00	-16.08	AVG
5	7783.000	38.64	11.11	49.75	74.00	-24.25	Peak
6	7783.000	29.22	11.11	40.33	54.00	-13.67	AVG
7	11336.000	37.00	14.40	51.40	74.00	-22.60	Peak
8	11336.000	27.96	14.40	42.36	54.00	-11.64	AVG
9	13758.500	35.93	16.47	52.40	74.00	-21.60	Peak
10	13758.500	27.08	16.47	43.55	54.00	-10.45	AVG
11	17753.500	31.72	23.68	55.40	74.00	-18.60	Peak
12	17753.500	22.48	23.68	46.16	54.00	-7.84	AVG

Remark:

1. All readings are Peak and Average values
2. Margin = Result (Result = Reading + Factor) – Limit
3. Factor = Cable Loss + Antenna Factor – Amplifier Gain

80.0 dBuV/m



Notes:

1. Measuring frequencies from 1 GHz to 18GHz.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak and average detector mode of the emission shown in Actual FS column.
3. The frequency emission of 18-25GHz is at least 20dB lower than the limit, and the frequency emission mainly comes from environmental noise.



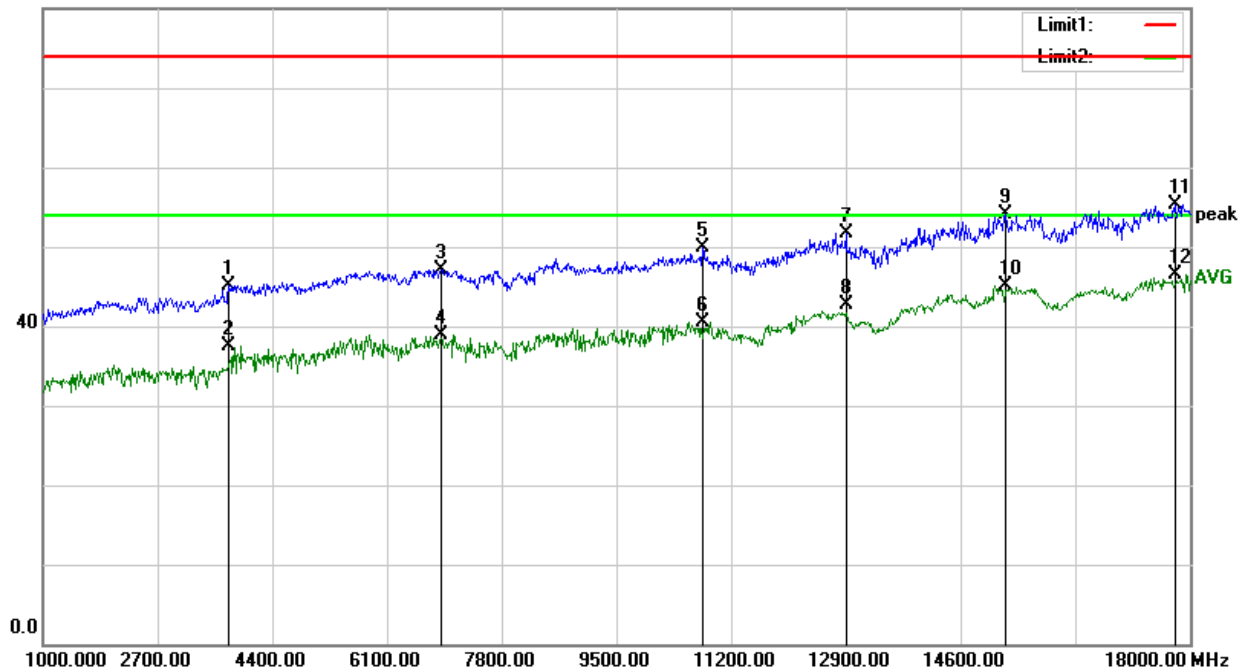
Temperature:	26.1℃	Relative Humidity:	53%
Phase:	Horizontal	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2024.08.05
Describe:	GTW8103(RJ45AH)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	3762.500	41.45	3.74	45.19	74.00	-28.81	Peak
2	3762.500	33.78	3.74	37.52	54.00	-16.48	AVG
3	6907.500	36.51	10.57	47.08	74.00	-26.92	Peak
4	6907.500	28.32	10.57	38.89	54.00	-15.11	AVG
5	10775.000	35.83	14.03	49.86	74.00	-24.14	Peak
6	10775.000	26.44	14.03	40.47	54.00	-13.53	AVG
7	12900.000	36.40	15.37	51.77	74.00	-22.23	Peak
8	12900.000	27.34	15.37	42.71	54.00	-11.29	AVG
9	15271.500	36.41	17.60	54.01	74.00	-19.99	Peak
10	15271.500	27.46	17.60	45.06	54.00	-8.94	AVG
11	17787.500	31.14	24.24	55.38	74.00	-18.62	Peak
12	17787.500	22.18	24.24	46.42	54.00	-7.58	AVG

Remark:

1. All readings are Peak and Average values
2. Margin = Result (Result = Reading + Factor) – Limit
3. Factor = Cable Loss + Antenna Factor - Amplifier Gain

80.0 dBuV/m





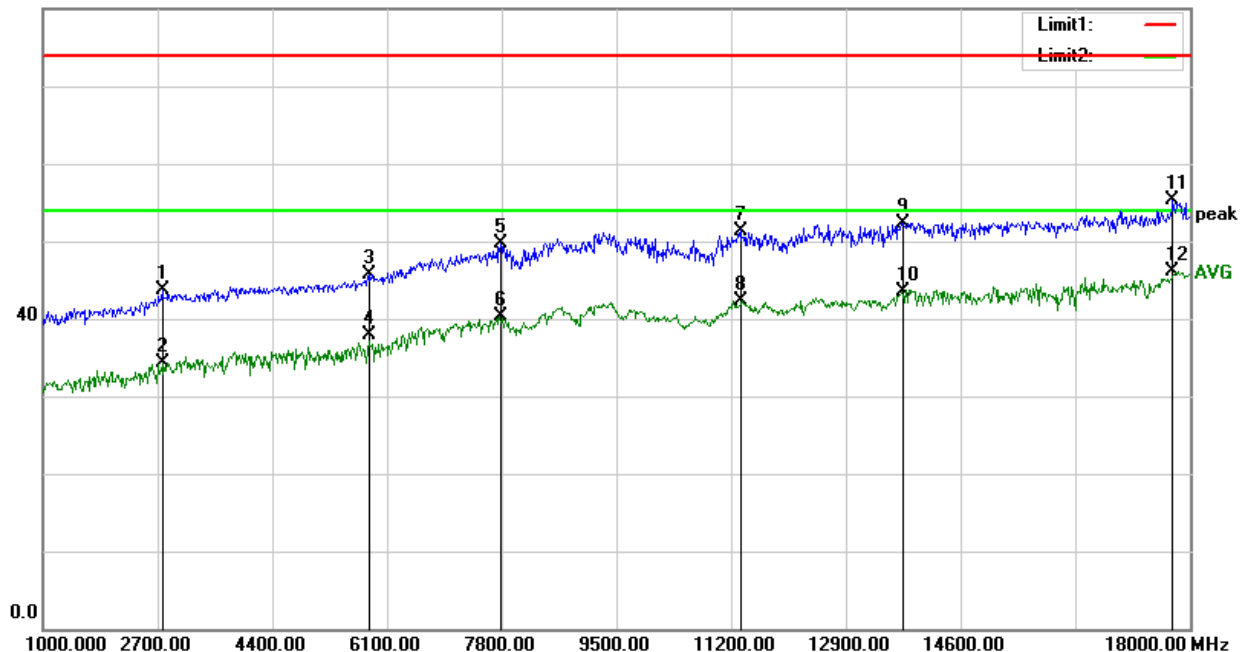
Temperature:	26.1°C	Relative Humidity:	53%
Phase:	Vertical	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2024.08.05
Describe:	GTW8103(RJ45AH)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2768.000	42.65	1.05	43.70	74.00	-30.30	Peak
2	2768.000	33.30	1.05	34.35	54.00	-19.65	AVG
3	5853.500	38.27	7.50	45.77	74.00	-28.23	Peak
4	5853.500	30.42	7.50	37.92	54.00	-16.08	AVG
5	7783.000	38.64	11.11	49.75	74.00	-24.25	Peak
6	7783.000	29.22	11.11	40.33	54.00	-13.67	AVG
7	11336.000	37.00	14.40	51.40	74.00	-22.60	Peak
8	11336.000	27.96	14.40	42.36	54.00	-11.64	AVG
9	13758.500	35.93	16.47	52.40	74.00	-21.60	Peak
10	13758.500	27.08	16.47	43.55	54.00	-10.45	AVG
11	17753.500	31.72	23.68	55.40	74.00	-18.60	Peak
12	17753.500	22.48	23.68	46.16	54.00	-7.84	AVG

Remark:

1. All readings are Peak and Average values
2. Margin = Result (Result = Reading + Factor) – Limit
3. Factor = Cable Loss + Antenna Factor – Amplifier Gain

80.0 dBuV/m



Notes:

1. Measuring frequencies from 1 GHz to 18GHz.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak and average detector mode of the emission shown in Actual FS column.
3. The frequency emission of 18-25GHz is at least 20dB lower than the limit, and the frequency emission mainly comes from environmental noise.

*****END OF THE REPORT*****