



BUREAU
VERITAS

Test Report No.: W7L-P23010024RF02



FCC TEST REPORT (Part 15, Subpart C)

Applicant:	PAX Technology Limited
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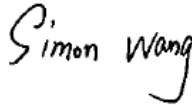

Manufacturer or Supplier:	PAX Computer Technology (Shenzhen) Co., Ltd.
Address:	401 and 402, Building 3, Shenzhen Software Park, Nanshan District, Shenzhen City, Guangdong Province, P.R.C
Product:	Smart Mobile Payment Terminal
Brand Name:	PAX
Model Name:	A930RTX
FCC ID:	V5PA930RTX
Date of tests:	Jan. 16, 2023 ~ Feb. 15, 2023

The tests have been carried out according to the requirements of the following standard:

FCC Part 15, Subpart C, Section 15.247

ANSI C63.10-2013

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Simon Wang Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
	
Date: Feb. 15, 2023	Date: Feb. 15, 2023

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

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TABLE OF CONTENTS

RELEASE CONTROL RECORD	4
1 SUMMARY OF TEST RESULTS.....	5
1.1 MEASUREMENT UNCERTAINTY	6
2 GENERAL INFORMATION	7
2.1 GENERAL DESCRIPTION OF EUT	7
2.2 DESCRIPTION OF TEST MODES	9
2.2.1 CONFIGURATION OF SYSTEM UNDER TEST	10
2.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL.....	10
2.3 DUTY CYCLE OF TEST SIGNAL	14
2.4 GENERAL DESCRIPTION OF APPLIED STANDARDS	15
2.5 DESCRIPTION OF SUPPORT UNITS	15
3 TEST TYPES AND RESULTS.....	16
3.1 CONDUCTED EMISSION MEASUREMENT	16
3.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT	16
3.1.2 TEST INSTRUMENTS.....	16
3.1.3 TEST PROCEDURES	17
3.1.4 DEVIATION FROM TEST STANDARD	17
3.1.5 TEST SETUP	18
3.1.6 EUT OPERATING CONDITIONS	18
3.1.7 TEST RESULTS	19
3.2 RADIATED EMISSION MEASUREMENT	21
3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT	21
3.2.2 TEST INSTRUMENTS.....	22
3.2.3 TEST PROCEDURES	23
3.2.4 DEVIATION FROM TEST STANDARD	23
3.2.5 TEST SETUP	24
3.2.6 EUT OPERATING CONDITIONS	25
3.2.7 TEST RESULTS	26
3.3 6 DB BANDWIDTH MEASUREMENT	46
3.3.1 LIMITS OF 6DB BANDWIDTH MEASUREMENT	46
3.3.2 TEST INSTRUMENTS.....	46
3.3.3 TEST PROCEDURE.....	46
3.3.4 DEVIATION FROM TEST STANDARD	47



**BUREAU
VERITAS**

Test Report No.: W7L-P23010024RF02

3.3.5	TEST SETUP	47
3.3.6	EUT OPERATING CONDITIONS	47
3.3.7	TEST RESULTS	48
3.4	CONDUCTED OUTPUT POWER.....	49
3.4.1	LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT	49
3.4.2	TEST SETUP	49
3.4.3	TEST INSTRUMENTS.....	49
3.4.4	TEST PROCEDURES	49
3.4.5	DEVIATION FROM TEST STANDARD	49
3.4.6	EUT OPERATING CONDITIONS	49
3.4.7	TEST RESULTS	50
3.4.7.1	MAXIMUM PEAK OUTPUT POWER	50
3.4.7.2	AVERAGE OUTPUT POWER (FOR REFERENCE).....	51
3.5	POWER SPECTRAL DENSITY MEASUREMENT	52
3.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	52
3.5.2	TEST SETUP	52
3.5.3	TEST INSTRUMENTS.....	52
3.5.4	TEST PROCEDURE.....	52
3.5.5	DEVIATION FROM TEST STANDARD	52
3.5.6	EUT OPERATING CONDITION	52
3.5.7	TEST RESULTS	53
3.6	OUT OF BAND EMISSION MEASUREMENT	54
3.6.1	LIMITS OF OUT OF BAND EMISSION MEASUREMENT	54
3.6.2	TEST SETUP	54
3.6.3	TEST INSTRUMENTS.....	54
3.6.4	TEST PROCEDURE.....	54
3.6.5	DEVIATION FROM TEST STANDARD	55
3.6.6	EUT OPERATING CONDITION	55
3.6.7	TEST RESULTS	55
4	PHOTOGRAPHS OF THE TEST CONFIGURATION	56
5	MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB57	
6	APPENDIX 1 WLAN 2.4G	58
7	APPENDIX 2 BLE	102



**BUREAU
VERITAS**

Test Report No.: W7L-P23010024RF02

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P23010024RF02	Original release	Feb. 15, 2023



1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)		
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT
15.207	AC Power Conducted Emission	Compliance
15.205 15.209	Radiated Emissions	Compliance
15.247(d)	Out of band Emission Measurement	Compliance
15.247(a)(2)	6dB bandwidth	Compliance
15.247(b)	Conducted Output power	Compliance
15.247(e)	Power Spectral Density	Compliance
15.203	Antenna Requirement	Compliance

Note : 1.Except RSE, other data please refer to Appendix 1 (for WIFI-2.4G) and Appendix 2 (for BLE).
 2. Only the worse data were report.



1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
AC Power Conducted emissions	±2.70dB
Radiated emissions (9KHz~30MHz)	±2.68dB
Radiated emissions (30MHz~1GHz)	±4.98dB
Radiated emissions (1GHz ~6GHz)	±4.70dB
Radiated emissions (6GHz ~18GHz)	±4.60dB
Radiated emissions (18GHz ~40GHz)	±4.12dB
Conducted emissions	±4.01dB
Occupied Channel Bandwidth	±43.58KHz
Conducted Output power	±2.06dB
Power Spectral Density	±0.85 dB

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



2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Smart Mobile Payment Terminal
BRAND NAME	PAX
MODEL NAME	A930RTX
NOMINAL VOLTAGE	5.0Vdc(adapter or host equipment) 7.2Vdc (Li-ion, battery)
MODULATION	DSSS, OFDM, GFSK
TRANSMISSION RATE	802.11b: 11/ 5.5/ 2.0 / 1.0 Mbps 802.11g: 54/ 48/ 36 / 24 / 18 / 9/ 6 Mbps 802.11n20: up to 72.2 Mbps BT_LE: 1 Mbps
OPERATING FREQUENCY	2412-2462MHz for 11b/g/n(HT20) 2402-2480MHz for BT-LE(GFSK)
MAX. OUTPUT POWER	WLAN: 185.35mW (Maximum) BT-LE: 4.90mW (Maximum)
ANTENNA TYPE	PIFA Antenna with 2.15dBi gain
HW VERSION	A930RTX
SW VERSION	N/A
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	USB cable: non-shielded cable, with w/o ferrite core, 1.0 meter



NOTE:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the user’s manual.
2. The EUT incorporates a SISO function. Physically, the EUT provides one transmitter and one receiver.

MODULATION MODE	TX/RX FUNCTION
802.11b	1TX /1RX
802.11g	1TX /1RX
802.11n (20MHz)	1TX /1RX
BT_LE(1MHz)	1TX /1RX

3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

List of Accessory:

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
Battery	VEKEN	N/A	YW-003C	Capacity : 7.2Vdc, 3350mAh
AC Adapter	PAX	Shenzhen Sorghum red Electronics Technology Co.,Ltd	GLH50E2000HW	I/P: 100-240Vac, 0.4A, O/P: 5.0Vdc, 2A
USB Cable	N/A	N/A	N/A	Signal Line,1.0meter



2.2 DESCRIPTION OF TEST MODES

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

40 channels are provided for BT-LE (GFSK):

CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480



2.2.1 CONFIGURATION OF SYSTEM UNDER TEST

Please see section 5 photographs of the test configuration for reference.

2.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned on Y axis for radiated emission. Following test modes were selected for the final test, and the final worst case is marked in boldface and recorded in the report:

EUT CONFIGURE MODE	APPLICABLE TO				MODE
	RE<1G	RE≥1G	PLC	APCM	
-	√	√	√	√	-

Where **RE<1G**: Radiated Emission below 1GHz **RE≥1G**: Radiated Emission above 1GHz
PLC: Power Line Conducted Emission **APCM**: Antenna Port Conducted Measurement

NOTE: No need to concern of Conducted Emission due to the EUT is powered by battery.

RADIATED EMISSION TEST (BELOW 1GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11n HT20	1 to 11	11	OFDM	MCS0
BT-LE	0 to 39	39	GFSK	1.0



RADIATED EMISSION TEST (ABOVE 1GHz):

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	1.0
802.11g	1 to 11	1, 6, 11	OFDM	6.0
802.11n HT20	1 to 11	1, 6, 11	OFDM	MCS0
BT-LE	0 to 39	0,19, 39	GFSK	1

POWER LINE CONDUCTED EMISSION TEST

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11n HT20	1 to 11	1	OFDM	MCS0



BANDEDGE MEASUREMENT:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	1.0
802.11g	1 to 11	1, 6, 11	OFDM	6.0
802.11n HT20	1 to 11	1, 6, 11	OFDM	MCS0
BT-LE	0 to 39	0,19, 39	GFSK	1



ANTENNA PORT CONDUCTED MEASUREMENT:

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	1.0
802.11g	1 to 11	1, 6, 11	OFDM	6.0
802.11n HT20	1 to 11	1, 6, 11	OFDM	MCS0
BT-LE	0 to 39	0,19, 39	GFSK	1

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	TEST VOLTAGE	TESTED BY
RE<1G	23deg. C, 56%RH	DC 5V By Adapter	Jace Hu
RE≥1G	23deg. C, 56%RH	DC 5V By Adapter	Jace Hu
PLC	25deg. C, 52%RH	DC 5V By Adapter	Carl Xie
APCM	25deg. C, 60%RH	DC 7.2V By Battery	James Fu



2.3 Duty Cycle of Test Signal

Please Refer to Appendix1/2 Of this test report.

WORST-CASE DATA:

Measured Duty Cycle		
Mode		Duty Cycle [%]
		ANT1
WIFI 2.4GHz	11B	99.53
	11G	96.55
	11N20	96.32
BT LE	BT4.0	37.5

Note:

Duty cycle of test signal is < 98%, duty factor shall be considered.



2.4 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C, Section 15.247

KDB 558074 D01 DTS Meas Guidance v05r02

ANSI C63.10-2013

Note :

1. All test items have been performed and recorded as per the above standards.
2. The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (Certification). The test report has been issued separately.

2.5 DESCRIPTION OF SUPPORT UNITS

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.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Desktop	Lenovo	M73 SFF	PC04GRQV	N/A
2	Desktop	Lenovo	M73 SFF	PC06CS27	N/A
3	Laptop	Lenovo	Thinkpad T450	PC-049PT1	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	AC Line: Unshielded, Detachable 1.5m
2	AC Line: Unshielded, Detachable 1.5m
3	AC Line: Unshielded, Detachable 1.5m



3 TEST TYPES AND RESULTS

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBµV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

- NOTE:**
- 1.The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.1.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR3	101900	Feb. 15,22	Feb. 14,23
EMI Test Receiver	Rohde&Schwarz	ESR3	101900	Feb. 14,23	Feb. 13,24
EMC32 test software	Rohde&Schwarz	EMC32	NA	NA	NA
LISN network	Rohde&Schwarz	ENV216	101922	Mar. 04,22	Mar. 03,23

- NOTE:**
1. The test was performed in CE shielded room.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.



3.1.3 TEST PROCEDURES

- a. 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.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

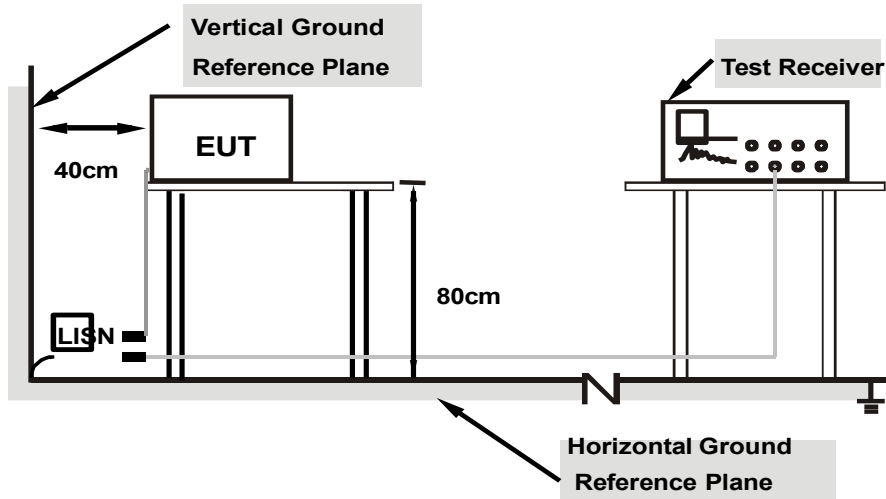
NOTE: All modes of operation were investigated and the worst-case emissions are reported.

3.1.4 DEVIATION FROM TEST STANDARD

No deviation.



3.1.5 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

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.1.6 EUT OPERATING CONDITIONS

- a. Turned on the power and connected of all equipment.
- b. EUT was operated according to the type used was description in manufacturer's specifications or the User's Manual.



3.1.7 TEST RESULTS

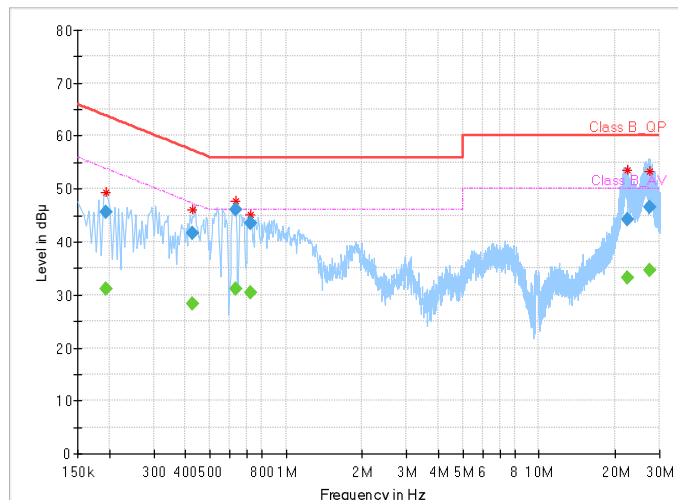
CONDUCTED WORST-CASE DATA:

Frequency Range	150KHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	Environmental Conditions	26deg. C, 51%RH
Tested By	Carl Xie		

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.194000	---	31.02	53.86	22.84	L1	ON	9.7
0.194000	45.51	---	63.86	18.35	L1	ON	9.7
0.428000	---	28.31	47.29	18.98	L1	ON	9.7
0.428000	41.71	---	57.29	15.58	L1	ON	9.7
0.632000	---	31.04	46.00	14.96	L1	ON	9.7
0.632000	46.07	---	56.00	9.93	L1	ON	9.7
0.724000	---	30.38	46.00	15.62	L1	ON	9.7
0.724000	43.42	---	56.00	12.58	L1	ON	9.7
22.412000	---	33.14	50.00	16.86	L1	ON	9.8
22.412000	44.29	---	60.00	15.71	L1	ON	9.8
27.304000	---	34.60	50.00	15.40	L1	ON	9.8
27.304000	46.55	---	60.00	13.45	L1	ON	9.8

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Limit value -Emission level
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.

Full Spectrum





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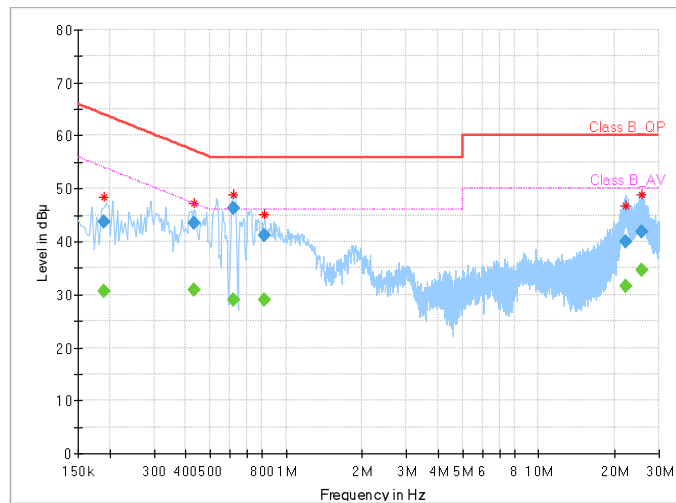
Test Report No.: W7L-P23010024RF02

Frequency Range	150KHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	Environmental Conditions	26deg. C, 51%RH
Tested By	Carl Xie		

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.190000	---	30.65	54.04	23.39	N	ON	9.7
0.190000	43.81	---	64.04	20.23	N	ON	9.7
0.432000	---	30.80	47.21	16.41	N	ON	9.7
0.432000	43.62	---	57.21	13.59	N	ON	9.7
0.616000	---	29.10	46.00	16.90	N	ON	9.7
0.616000	46.25	---	56.00	9.75	N	ON	9.7
0.820000	---	29.05	46.00	16.95	N	ON	9.7
0.820000	41.24	---	56.00	14.76	N	ON	9.7
22.100000	---	31.66	50.00	18.34	N	ON	9.9
22.100000	40.00	---	60.00	20.00	N	ON	9.9
25.544000	---	34.64	50.00	15.36	N	ON	9.9
25.544000	41.84	---	60.00	18.16	N	ON	9.9

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Limit value -Emission level
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.

Full Spectrum





3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	May. 19,20	May. 18,23
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Mar. 06,22	Mar. 05,23
Horn Antenna	ETS-LINDGREN	3117	00168692	Mar. 06,22	Mar. 05,23
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Aug. 27, 22	Aug. 26, 23
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	JS1120-3	3.2.06	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 02,22	Jun. 01,23
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Feb. 21,22	Feb. 20,23
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May.12,22	May.11,23
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.12,22	May.11,23
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb. 21,22	Feb.20,23
DC Source	Kikusui/JP	PMX18-5A	0000001	Aug. 24,22	Aug. 23,23
Power Meter	Anritsu	ML2495A	1506002	Feb. 22,22	Feb. 21,23
Power Sensor	Anritsu	MA2411B	1339352	May. 14,22	May. 13,23
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep. 04,22	Sep. 03,23

- NOTE:**
1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
 2. The test was performed in 3m Chamber.
 3. The FCC Site Registration No. is 525120; The Designation No. is CN1171.



3.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters 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 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using fresh batteries. The turntable was rotated to maximize the emission level.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

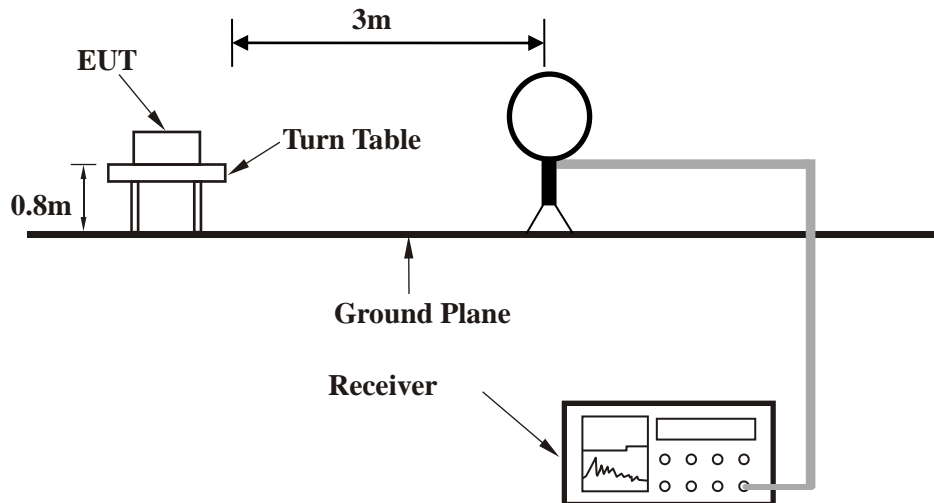
3.2.4 DEVIATION FROM TEST STANDARD

No deviation

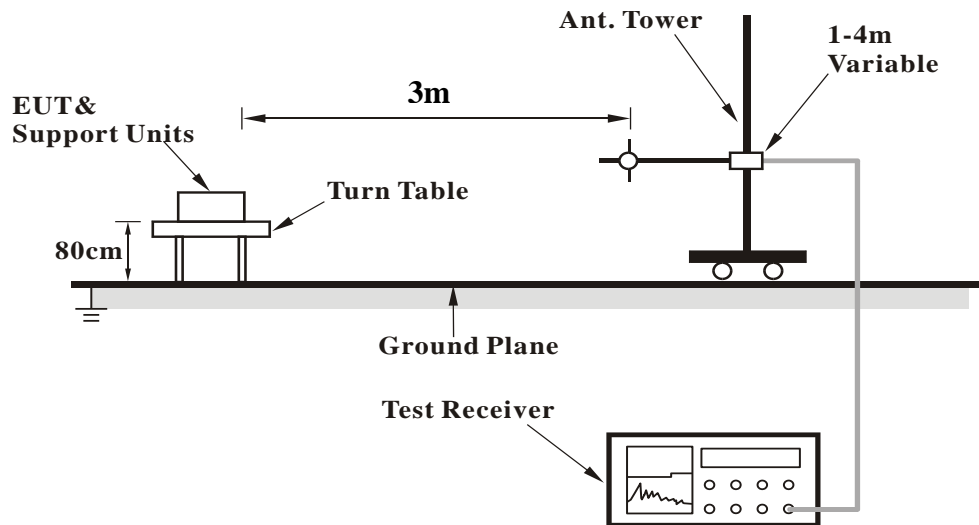


3.2.5 TEST SETUP

<Frequency Range 9KHz~30MHz >

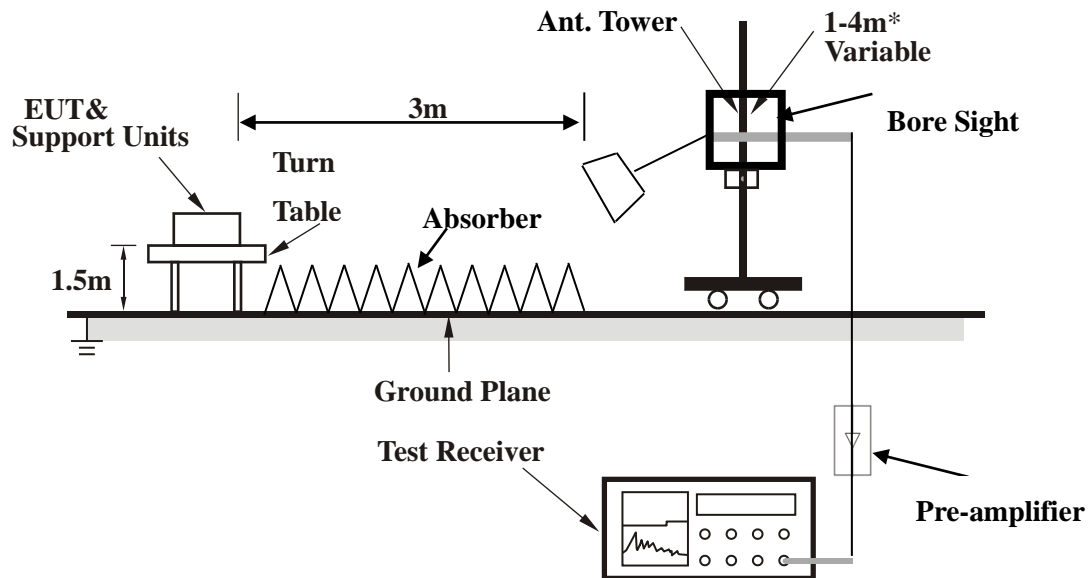


< Frequency Range 30MHz~1GHz >





<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.2.6 EUT OPERATING CONDITIONS

- Set the EUT under full load condition and placed them on a testing table.
- Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
- The necessary accessories enable the EUT in full functions.



3.2.7 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

BELOW 1GHz WORST-CASE DATA:

30 MHz – 1GHz data:

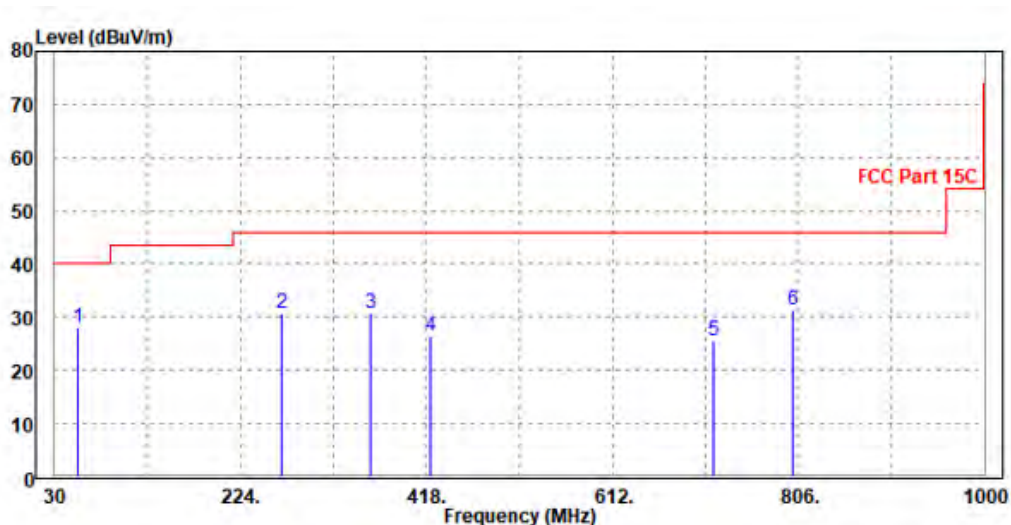
802.11n (20MHz)

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
55.220	27.90	54.76	40.00	-12.10	9.68	0.43	36.97	172	50	QP
266.680	30.81	52.55	46.00	-15.19	13.67	0.86	36.27	177	40	QP
359.800	30.81	50.84	46.00	-15.19	15.32	1.01	36.36	103	12	QP
422.850	26.49	45.22	46.00	-19.51	16.63	1.11	36.47	190	4	QP
716.760	25.65	39.64	46.00	-20.35	21.73	1.49	37.21	152	241	QP
800.180	31.37	44.59	46.00	-14.63	22.40	1.58	37.20	123	217	QP

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.





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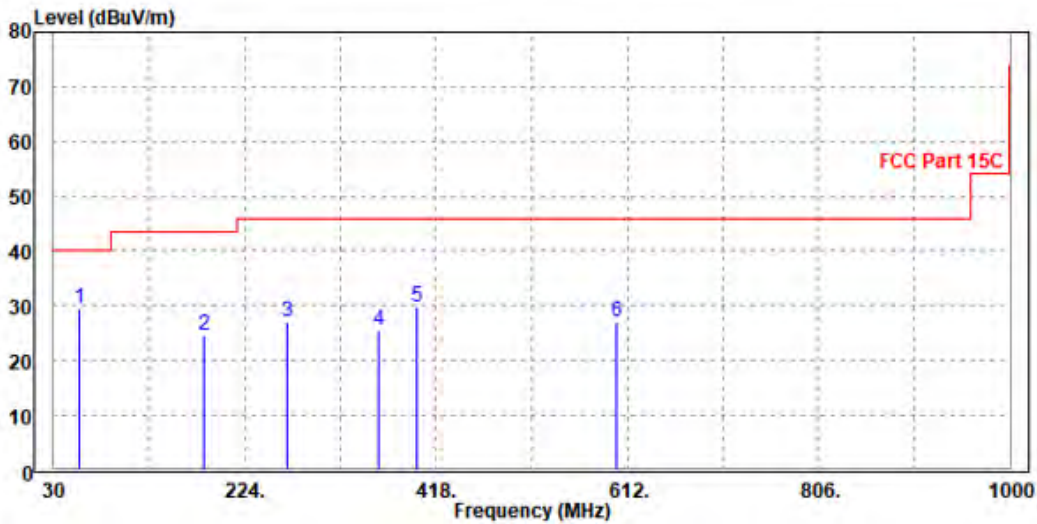
Test Report No.: W7L-P23010024RF02

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.190	29.50	57.01	40.00	-10.50	9.02	0.43	36.96	117	321	QP
183.260	24.61	49.03	43.50	-18.89	11.25	0.71	36.38	121	164	QP
266.680	27.20	49.54	46.00	-18.80	13.07	0.86	36.27	133	208	QP
359.800	25.67	45.64	46.00	-20.33	15.38	1.01	36.36	180	303	QP
398.600	29.81	48.89	46.00	-16.19	16.27	1.07	36.42	189	228	QP
600.360	27.14	43.03	46.00	-18.86	19.60	1.36	36.85	124	106	QP

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.





ABOVE 1GHz WORST-CASE DATA:

Note: 1. For radiated emissions testing , the full testing range of different modes have been scanned , only the worst case harmonic data is reported in the sheet.

2. All other emissions were greater than 20dB below the limit was not recorded

802.11b:

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	53.57	61.61	74.00	-20.43	31.75	6.18	45.97	168	353	Peak
2390.000	47.55	55.59	54.00	-6.45	31.75	6.18	45.97	168	353	Average
2412.000	107.39	115.32	/	/	31.82	6.21	45.96	119	88	Peak
2412.000	106.53	114.46	/	/	31.82	6.21	45.96	119	88	Average
2483.500	51.06	58.63	74.00	-22.94	32.05	6.31	45.93	172	146	Peak
2483.500	44.00	51.57	54.00	-10.00	32.05	6.31	45.93	172	146	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	54.52	62.17	74.00	-19.48	32.14	6.18	45.97	176	137	Peak
2390.000	47.39	55.04	54.00	-6.61	32.14	6.18	45.97	176	137	Average
2412.000	105.68	113.24	/	/	32.19	6.21	45.96	127	25	Peak
2412.000	104.77	112.33	/	/	32.19	6.21	45.96	127	25	Average
2483.500	52.08	59.34	74.00	-21.92	32.36	6.31	45.93	175	195	Peak
2483.500	44.37	51.63	54.00	-9.63	32.36	6.31	45.93	175	195	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 2412MHz: Fundamental frequency.



CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	51.25	59.29	74.00	-22.75	31.75	6.18	45.97	129	119	Peak
2390.000	43.81	51.85	54.00	-10.19	31.75	6.18	45.97	129	119	Average
2437.000	104.95	112.76	/	/	31.90	6.24	45.95	148	48	Peak
2437.000	103.94	111.75	/	/	31.90	6.24	45.95	148	48	Average
2483.500	52.35	59.92	74.00	-21.65	32.05	6.31	45.93	138	115	Peak
2483.500	44.20	51.77	54.00	-9.80	32.05	6.31	45.93	138	115	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	51.94	59.59	74.00	-22.06	32.14	6.18	45.97	128	191	Peak
2390.000	44.21	51.86	54.00	-9.79	32.14	6.18	45.97	128	191	Average
2437.000	104.58	112.04	/	/	32.25	6.24	45.95	162	352	Peak
2437.000	103.51	110.97	/	/	32.25	6.24	45.95	162	352	Average
2483.500	51.52	58.78	74.00	-22.48	32.36	6.31	45.93	129	48	Peak
2483.500	44.65	51.91	54.00	-9.35	32.36	6.31	45.93	129	48	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 2437MHz: Fundamental frequency.



CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	51.49	59.53	74.00	-22.51	31.75	6.18	45.97	177	75	Peak
2390.000	43.83	51.87	54.00	-10.17	31.75	6.18	45.97	177	75	Average
2462.000	107.12	114.80	/	/	31.98	6.28	45.94	131	276	Peak
2462.000	106.36	114.04	/	/	31.98	6.28	45.94	131	276	Average
2483.500	53.88	61.45	74.00	-20.12	32.05	6.31	45.93	160	197	Peak
2483.500	45.96	53.53	54.00	-8.04	32.05	6.31	45.93	160	197	Average

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	51.18	58.83	74.00	-22.82	32.14	6.18	45.97	132	244	Peak
2390.000	43.82	51.47	54.00	-10.18	32.14	6.18	45.97	132	244	Average
2462.000	106.02	113.37	/	/	32.31	6.28	45.94	166	112	Peak
2462.000	105.13	112.48	/	/	32.31	6.28	45.94	166	112	Average
2483.500	52.74	60.00	74.00	-21.26	32.36	6.31	45.93	140	12	Peak
2483.500	45.23	52.49	54.00	-8.77	32.36	6.31	45.93	140	12	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 2462MHz: Fundamental frequency.



802.11g

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSIO N LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	62.90	70.94	74.00	-11.10	31.75	6.18	45.97	179	147	Peak
2390.000	50.79	58.83	54.00	-3.21	31.75	6.18	45.97	179	147	Average
2412.000	107.18	115.11	/	/	31.82	6.21	45.96	131	164	Peak
2412.000	98.99	106.92	/	/	31.82	6.21	45.96	131	164	Average
2483.500	50.92	58.49	74.00	-23.08	32.05	6.31	45.93	184	138	Peak
2483.500	43.15	50.72	54.00	-10.85	32.05	6.31	45.93	184	138	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSIO N LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	62.44	70.09	74.00	-11.56	32.14	6.18	45.97	198	251	Peak
2390.000	50.08	57.73	54.00	-3.92	32.14	6.18	45.97	198	251	Average
2412.000	106.73	114.29	/	/	32.19	6.21	45.96	174	123	Peak
2412.000	98.28	105.84	/	/	32.19	6.21	45.96	174	123	Average
2483.500	52.30	59.56	74.00	-21.70	32.36	6.31	45.93	204	270	Peak
2483.500	43.59	50.85	54.00	-10.41	32.36	6.31	45.93	204	270	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 2412MHz: Fundamental frequency.



CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	51.24	59.28	74.00	-22.76	31.75	6.18	45.97	111	225	Peak
2390.000	42.85	50.89	54.00	-11.15	31.75	6.18	45.97	111	225	Average
2437.000	107.24	115.05	/	/	31.90	6.24	45.95	115	232	Peak
2437.000	98.99	106.80	/	/	31.90	6.24	45.95	115	232	Average
2483.500	51.27	58.84	74.00	-22.73	32.05	6.31	45.93	123	347	Peak
2483.500	43.12	50.69	54.00	-10.88	32.05	6.31	45.93	123	347	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	51.91	59.56	74.00	-22.09	32.14	6.18	45.97	183	283	Peak
2390.000	43.40	51.05	54.00	-10.60	32.14	6.18	45.97	183	283	Average
2437.000	105.16	112.62	/	/	32.25	6.24	45.95	159	164	Peak
2437.000	96.98	104.44	/	/	32.25	6.24	45.95	159	164	Average
2483.500	52.62	59.88	74.00	-21.38	32.36	6.31	45.93	179	85	Peak
2483.500	43.78	51.04	54.00	-10.22	32.36	6.31	45.93	179	85	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 2437MHz: Fundamental frequency.



CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	52.38	60.42	74.00	-21.62	31.75	6.18	45.97	110	184	Peak
2390.000	42.84	50.88	54.00	-11.16	31.75	6.18	45.97	110	184	Average
2462.000	105.39	113.07	/	/	31.98	6.28	45.94	181	15	Peak
2462.000	97.04	104.72	/	/	31.98	6.28	45.94	181	15	Average
2483.500	62.69	70.26	74.00	-11.31	32.05	6.31	45.93	105	60	Peak
2483.500	50.86	58.43	54.00	-3.14	32.05	6.31	45.93	105	60	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	51.93	59.58	74.00	-22.07	32.14	6.18	45.97	182	128	Peak
2390.000	43.10	50.75	54.00	-10.90	32.14	6.18	45.97	182	128	Average
2462.000	104.25	111.60	/	/	32.31	6.28	45.94	124	347	Peak
2462.000	96.07	103.42	/	/	32.31	6.28	45.94	124	347	Average
2483.500	63.02	70.28	74.00	-10.98	32.36	6.31	45.93	181	252	Peak
2483.500	50.80	58.06	54.00	-3.20	32.36	6.31	45.93	181	252	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 2462MHz: Fundamental frequency.



802.11n (20MHz)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	61.71	69.75	74.00	-12.29	31.75	6.18	45.97	106	349	Peak
2390.000	50.80	58.84	54.00	-3.20	31.75	6.18	45.97	106	349	Average
2412.000	106.23	114.16	/	/	31.82	6.21	45.96	179	305	Peak
2412.000	98.15	106.08	/	/	31.82	6.21	45.96	179	305	Average
2483.500	52.20	59.77	74.00	-21.80	32.05	6.31	45.93	113	234	Peak
2483.500	42.92	50.49	54.00	-11.08	32.05	6.31	45.93	113	234	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	61.72	69.37	74.00	-12.28	32.14	6.18	45.97	152	156	Peak
2390.000	49.40	57.05	54.00	-4.60	32.14	6.18	45.97	152	156	Average
2412.000	105.15	112.71	/	/	32.19	6.21	45.96	199	216	Peak
2412.000	97.38	104.94	/	/	32.19	6.21	45.96	199	216	Average
2483.500	51.36	58.62	74.00	-22.64	32.36	6.31	45.93	165	244	Peak
2483.500	43.68	50.94	54.00	-10.32	32.36	6.31	45.93	165	244	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 2412MHz: Fundamental frequency.



CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	50.94	58.98	74.00	-23.06	31.75	6.18	45.97	130	110	Peak
2390.000	42.71	50.75	54.00	-11.29	31.75	6.18	45.97	130	110	Average
2437.000	104.97	112.78	/	/	31.90	6.24	45.95	127	172	Peak
2437.000	97.59	105.40	/	/	31.90	6.24	45.95	127	172	Average
2483.500	51.52	59.09	74.00	-22.48	32.05	6.31	45.93	138	122	Peak
2483.500	43.27	50.84	54.00	-10.73	32.05	6.31	45.93	138	122	Average

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	52.00	59.65	74.00	-22.00	32.14	6.18	45.97	115	183	Peak
2390.000	43.19	50.84	54.00	-10.81	32.14	6.18	45.97	115	183	Average
2437.000	103.30	110.76	/	/	32.25	6.24	45.95	122	242	Peak
2437.000	95.18	102.64	/	/	32.25	6.24	45.95	122	242	Average
2483.500	51.13	58.39	74.00	-22.87	32.36	6.31	45.93	104	260	Peak
2483.500	43.74	51.00	54.00	-10.26	32.36	6.31	45.93	104	260	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 2437MHz: Fundamental frequency.



CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	50.95	58.99	74.00	-23.05	31.75	6.18	45.97	163	351	Peak
2390.000	42.53	50.57	54.00	-11.47	31.75	6.18	45.97	163	351	Average
2462.000	104.28	111.96	/	/	31.98	6.28	45.94	107	343	Peak
2462.000	96.43	104.11	/	/	31.98	6.28	45.94	107	343	Average
2483.500	64.39	71.96	74.00	-9.61	32.05	6.31	45.93	168	103	Peak
2483.500	50.91	58.48	54.00	-3.09	32.05	6.31	45.93	168	103	Average
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390.000	50.70	58.35	74.00	-23.30	32.14	6.18	45.97	123	136	Peak
2390.000	42.83	50.48	54.00	-11.17	32.14	6.18	45.97	123	136	Average
2462.000	103.30	110.65	/	/	32.31	6.28	45.94	115	38	Peak
2462.000	95.46	102.81	/	/	32.31	6.28	45.94	115	38	Average
2483.500	64.96	72.22	74.00	-9.04	32.36	6.31	45.93	131	135	Peak
2483.500	50.85	58.11	54.00	-3.15	32.36	6.31	45.93	131	135	Average

REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 2462MHz: Fundamental frequency.



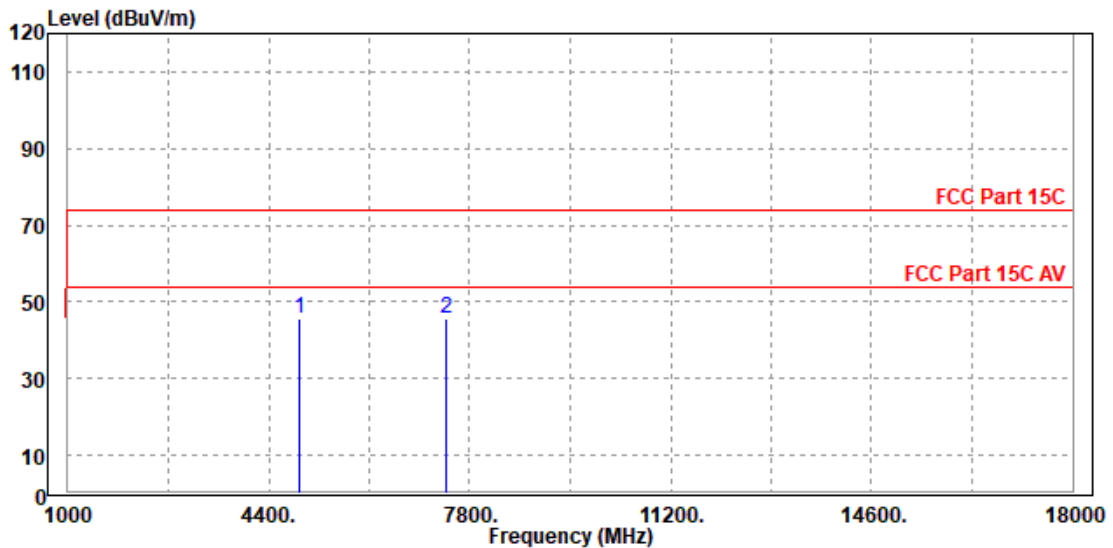
Worst case harmonic:

802.11n (20MHz)

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

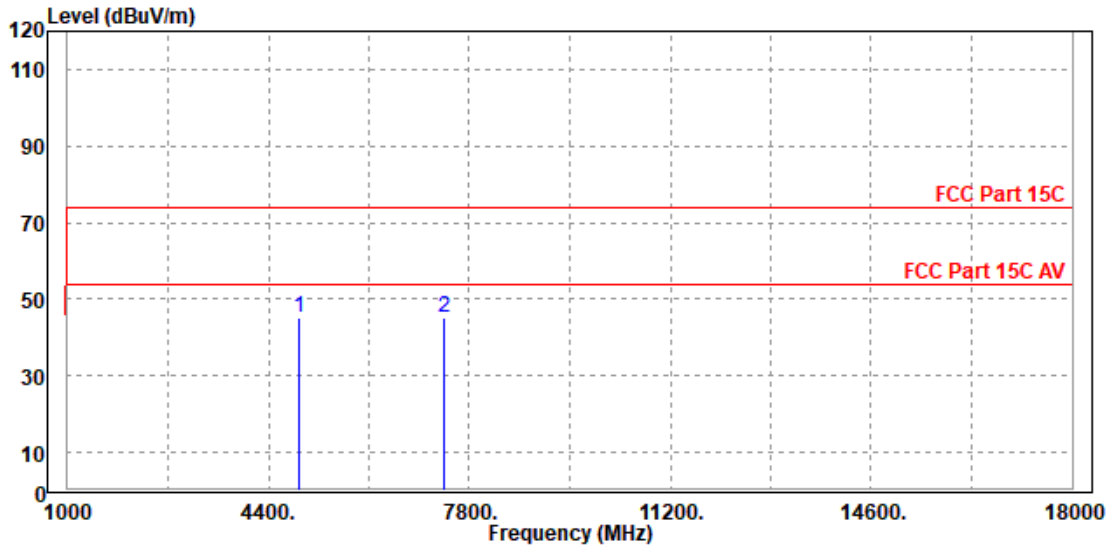
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m		
1	4924.000	45.51	46.77	74.00	-28.49	-1.26	Peak	Horizontal
2 PP	7392.000	45.73	43.80	74.00	-28.27	1.93	Peak	Horizontal





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBuV/m	dBuV	dBuV/m	dB	dB/m		
1	PP 4927.000	45.37	46.43	74.00	-28.63	-1.06	Peak	Vertical
2	7386.000	45.09	43.11	74.00	-28.91	1.98	Peak	Vertical



REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Emission level – Limit value.
- 2462MHz: Fundamental frequency.
- For frequency above 18GHz, the emission was tested 20db below the limit so the data not recorded in the sheet.



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VERITAS**

Test Report No.: W7L-P23010024RF02

BELOW 1GHz WORST-CASE DATA:

30 MHz – 1GHz data:

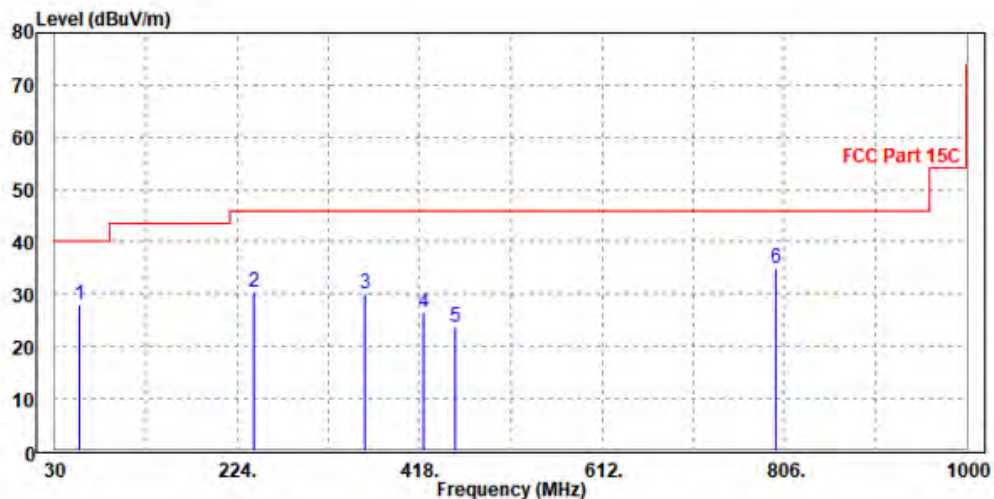
BT-LE_1M

CHANNEL	TX Channel 39	ODETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.190	28.06	55.01	40.00	-11.94	9.58	0.43	36.96	117	165	QP
242.430	30.27	52.56	46.00	-15.73	13.17	0.82	36.28	180	301	QP
359.800	30.18	50.21	46.00	-15.82	15.32	1.01	36.36	175	28	QP
422.850	26.45	45.18	46.00	-19.55	16.63	1.11	36.47	104	305	QP
455.830	23.58	41.69	46.00	-22.42	17.26	1.16	36.53	151	2	QP
796.300	34.98	48.23	46.00	-11.02	22.37	1.58	37.20	159	254	QP

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value





**BUREAU
VERITAS**

Test Report No.: W7L-P23010024RF02

CHANNEL	TX Channel 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
56.190	28.90	56.41	40.00	-11.10	9.02	0.43	36.96	101	314	QP
180.350	24.22	48.70	43.50	-19.28	11.21	0.71	36.40	190	47	QP
265.710	25.46	47.83	46.00	-20.54	13.04	0.86	36.27	120	219	QP
399.570	28.05	47.11	46.00	-17.95	16.29	1.07	36.42	145	276	QP
600.360	27.66	43.55	46.00	-18.34	19.60	1.36	36.85	129	263	QP
796.300	31.69	45.75	46.00	-14.31	21.56	1.58	37.20	137	234	QP

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

