

FCC Test Report

Report No.: RF150203E03E

FCC ID: MAD-RU00-M03

Test Model: RU00-M04

Series Model: RU00-M04-XXXX (X= 0~9 , A~Z , Configuration Code)

Received Date: Aug. 21, 2017

Test Date: Aug. 31 to Sep. 08, 2017

Issued Date: Sep. 22, 2017

Applicant: Microelectronics Technology Inc.

Address: 1, Innovation Road II, Hsinchu Science-based Industrial Park, Hsinchu, Taiwan, R.O.C.

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.



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Release Control Record

Issue No.	Description	Date Issued
RF150203E03E	Original release.	Sep. 22, 2017

1 Certificate of Conformity

Product: RFID HP-SIP Module

Brand: MTI

Test Model: RU00-M04

Series Model: RU00-M04-XXXX (X= 0~9 , A~Z , Configuration Code)


Sample Status: ENGINEERING SAMPLE

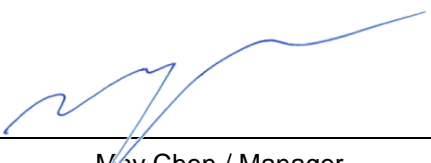
Applicant: Microelectronics Technology Inc.

Test Date: Aug. 31 to Sep. 08, 2017

Standards: 47 CFR FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10: 2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by :  _____ , **Date:** Sep. 22, 2017
Wendy Wu / Specialist

Approved by :  _____ , **Date:** Sep. 22, 2017
May Chen / Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (SECTION 15.247)			
FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -15.68dB at 0.54063MHz.
15.247(b)	Maximum Peak Output Power	PASS	Meet the requirement of limit.
15.205 & 209 & 15.247(d)	Radiated Emissions & Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -5.0dB at 83.96MHz
15.203	Antenna Requirement	PASS	Antenna connector is SMA Female not a standard connector.

2.1 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	Frequency	Expanded Uncertainty (k=2) (\pm)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.84 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.32 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.14 dB
	6GHz ~ 18GHz	5.04 dB
	18GHz ~ 40GHz	5.25 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	RFID HP-SIP Module
Brand	MTI
Test Model	RU00-M04
Series Model	RU00-M04-XXXX (X= 0~9 , A~Z , Configuration Code)
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	DC 5V from host equipment
Modulation Type	ASK
Modulation Technology	FHSS
Operating Frequency	902.75MHz ~ 927.25MHz
Number of Channel	50
Output Power	946.237mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Data Cable Supplied	NA

Note:

- This report is prepared for FCC Class II change. The difference compared with the Report No.: RF150203E03 design changed is as the following:
 - ◆ Add PCBA board under the original module board for difference interface required.
 - ◆ Add two antenna ports.
 - ◆ Change Test Model and Series Model.

Original		
Brand	Model Name	Description
MTI	RU00-M03	X= 0~9 , A~Z , Configuration Code
	RU00-M03-XXXX	
Newly		
Brand	Model Name	Description
MTI	RU00-M04	X= 0~9 , A~Z , Configuration Code
	RU00-M04-XXXX	

From the above models, model: RU00-M04 was selected as representative model for the test and its data was recorded in this report.

- According to above conditions, only Output Power, Conducted emissions and Radiated emissions test item need to be performed. And all data was verified to meet the requirements.
- The EUT has three different Link Profile designs as following table:

Type No	Link Profile
1	PR_ASK/M4/250KHz
2	DSB_ASK/FM0/40KHz
3	DSB_ASK/FM0/400KHz

4. The antenna provided to the EUT, please refer to the following table:

Antenna Type	Gain(dBi) (Include cable loss)	Antenna Connector	Cable Loss(dB)	Frequency range (MHz to MHz)
Patch	5.25	SMA Female	0.75	902~928

Note:

1. The EUT has four chain ports (chain 0 / chain 1 / chain 2 / chain 3) and can connect any one to function. When one chain port functions, another don't any function.
2. From the above conditions, the worst cases were found in **Chain 3**. Therefore only the test data of the mode was recorded in this report.

5. The EUT incorporates a SISO function.

MODULATION MODE	TX & RX CONFIGURATION	
Mode A	1TX	1RX

6. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 Description of Test Modes

50 channels are provided to this EUT.

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
0	902.75	21	913.25	42	923.75
1	903.25	22	913.75	43	924.25
2	903.75	23	914.25	44	924.75
3	904.25	24	914.75	45	925.25
4	904.75	25	915.25	46	925.75
5	905.25	26	915.75	47	926.25
6	905.75	27	916.25	48	926.75
7	906.25	28	916.75	49	927.25
8	906.75	29	917.25		
9	907.25	30	917.75		
10	907.75	31	918.25		
11	908.25	32	918.75		
12	908.75	33	919.25		
13	909.25	34	919.75		
14	909.75	35	920.25		
15	910.25	36	920.75		
16	910.75	37	921.25		
17	911.25	38	921.75		
18	911.75	39	922.25		
19	912.25	40	922.75		
20	912.75	41	923.25		

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE \geq 1G	RE $<$ 1G	PLC	APCM	
1	√	√	√	√	With Link Profile design: Type 1
2	√	√	-	√	With Link Profile design: Type 2
3	√	√	-	√	With Link Profile design: Type 3

Where **RE \geq 1G**: Radiated Emission above 1GHz
PLC: Power Line Conducted Emission

RE $<$ 1G: Radiated Emission below 1GHz
APCM: Antenna Port Conducted Measurement

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.

Available Channel	Tested Channel	Modulation Technology	Modulation Technology
0 to 49	0, 24, 49	FHSS	ASK

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.

Available Channel	Tested Channel	Modulation Technology	Modulation Technology
0 to 49	0, 24, 49	FHSS	ASK

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.

Available Channel	Tested Channel	Modulation Technology	Modulation Technology
0 to 49	0	FHSS	ASK

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.

Available Channel	Tested Channel	Modulation Technology	Modulation Technology
0 to 49	0, 24, 49	FHSS	ASK

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE \geq 1G	24deg. C, 66%RH	120Vac, 60Hz	Weiwei Lo
RE<1G	22deg. C, 67%RH	120Vac, 60Hz	Weiwei Lo
PLC	25deg. C, 75%RH	120Vac, 60Hz	Andy Ho
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 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.

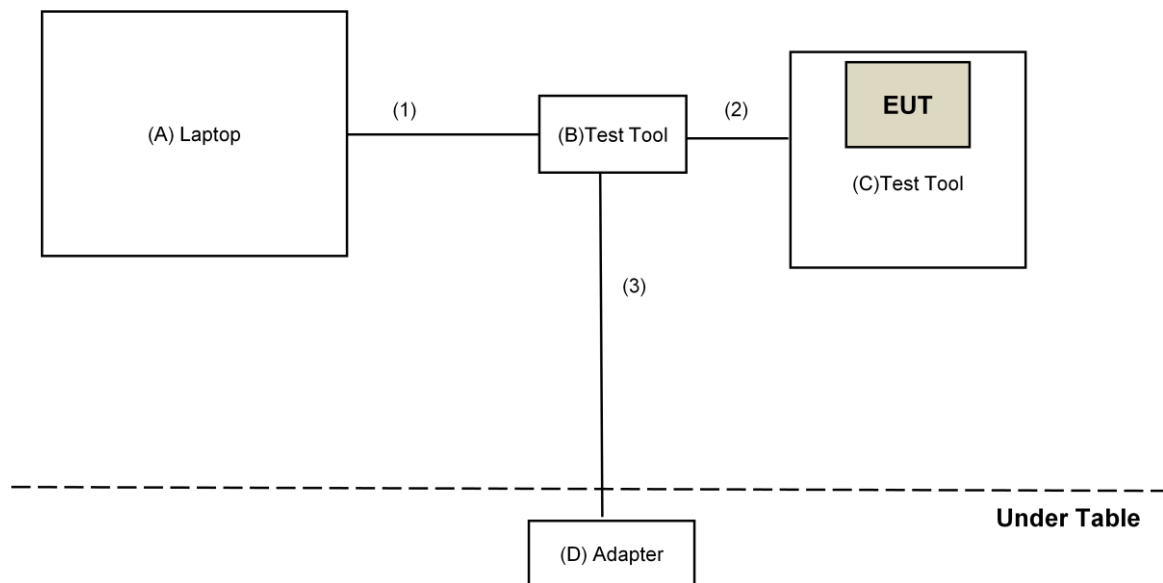
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	DELL	E5440	6FC7F12	FCC DoC	Provided by Lab
B.	Test Tool	MTI	NA	NA	NA	Supplied by client(for RF Setup)
C.	Test Tool	MTI	NA	NA	NA	Supplied by client(for RF Setup)
D.	Adapter	LTD	TR15RA050	TR15RA050-01E03 Level V	NA	Supplied by client

Note:

1. All power cords of the above support units are non-shielded (1.8m).

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Cable	1	1	Yes	0	Supplied by client(for RF Setup)
2.	Console Cable	1	1	No	0	Supplied by client(for RF Setup)
3.	DC Cable	1	1.8	No	0	Supplied by client

3.3.1 Configuration of System under Test



3.4 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 (15.247)

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

Note: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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. 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.

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	July 12, 2017	July 11, 2018
Pre-Amplifier ^(*) EMCI	EMC001340	980142	Jan. 20, 2016	Jan. 19, 2018
Loop Antenna ^(*) Electro-Metrics	EM-6879	264	Dec. 16, 2016	Dec. 15, 2018
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 17, 2017	Jan. 16, 2018
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	May 06, 2017	May 05, 2018
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Dec. 29, 2016	Dec. 28, 2017
RF Cable	8D	966-3-1 966-3-2 966-3-3	Apr. 01, 2017	Mar. 31, 2018
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Oct. 05, 2016	Oct. 04, 2017
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Dec. 28, 2016	Dec. 27, 2017
Pre-Amplifier EMCI	EMC12630SE	980384	Feb. 02, 2017	Feb. 01, 2018
RF Cable	EMC104-SM-SM-1200 EMC104-SM-SM-2000 EMC104-SM-SM-5000	160922 150317 150322	Feb. 02, 2017 Mar. 29, 2017 Mar. 29, 2017	Feb. 01, 2018 Mar. 28, 2018 Mar. 28, 2018
Spectrum Analyzer Keysight	N9030A	MY54490679	July 25, 2017	July 24, 2018
Pre-Amplifier EMCI	EMC184045SE	980386	Feb. 02, 2017	Feb. 01, 2018
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Dec. 15, 2016	Dec. 14, 2017
RF Cable	SUCOFLEX 102	36432/2 36433/2	Jan. 15, 2017	Jan. 14, 2018
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Spectrum Analyzer R&S	FSV40	100964	July 1, 2017	June 30, 2018

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. *The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Loop antenna was used for all emissions below 30 MHz.
4. The test was performed in 966 Chamber No. 3.
5. The CANADA Site Registration No. is 20331-1.
6. Tested Date: Aug. 31 to Sep. 01, 2017.

4.1.3 Test Procedures

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. 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. Both X and Y axes of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case 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 Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 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 height of antenna 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 quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

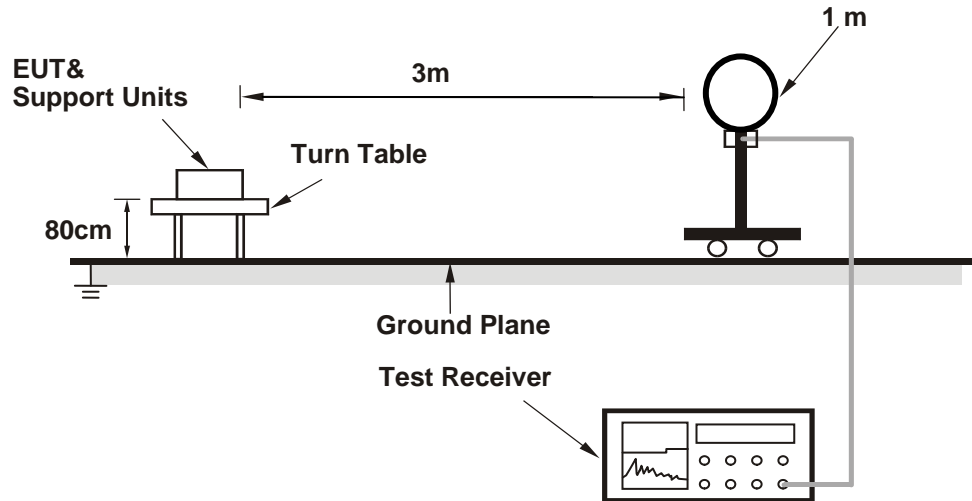
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

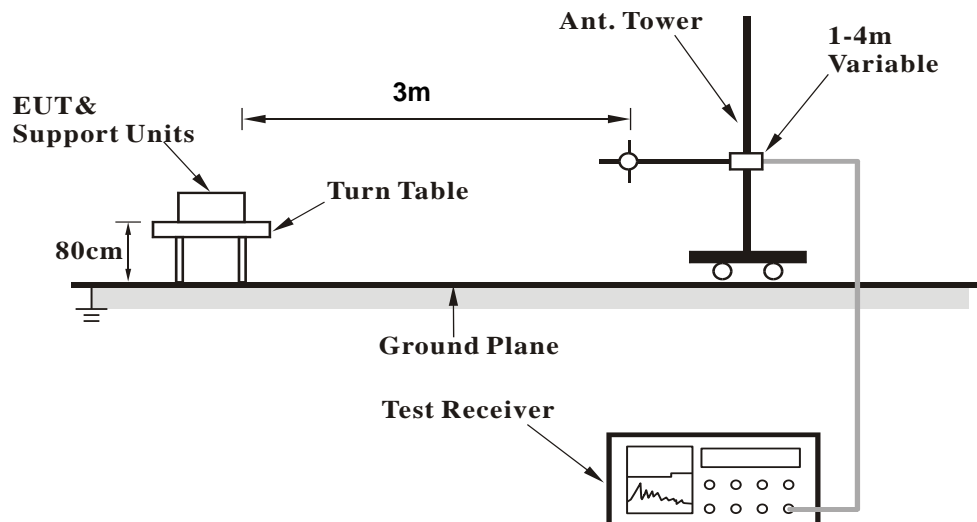
No deviation.

4.1.5 Test Setup

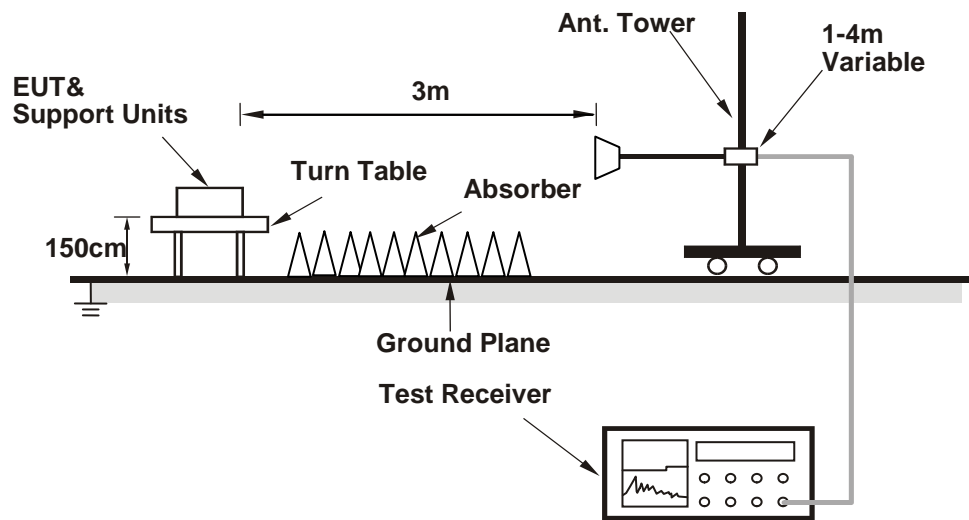
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

- a. Placed the EUT on the testing table.
- b. Controlling software (MTI\MTI RFID Explorer v1.2.6) has been activated to set the EUT on specific status.

4.1.7 Test Results (Mode 1)

Below 1GHz Data:

CHANNEL	TX Channel 0	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	96.11	29.8 QP	43.5	-13.7	2.00 H	360	42.9	-13.1
2	143.90	33.3 QP	43.5	-10.2	1.50 H	257	41.5	-8.2
3	179.94	30.9 QP	43.5	-12.6	2.00 H	0	40.6	-9.7
4	251.96	29.5 QP	46.0	-16.5	1.00 H	161	39.1	-9.6
5	287.95	30.9 QP	46.0	-15.1	1.50 H	360	38.8	-7.9
6	372.60	36.1 QP	46.0	-9.9	1.00 H	203	42.0	-5.9
7	902.00	55.9 QP	110.2	-54.3	1.18 H	163	24.9	31.0
8*	902.75	130.2 QP			1.18 H	163	99.2	31.0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	83.86	30.3 QP	40.0	-9.7	1.00 V	218	44.1	-13.8
2	144.10	28.4 QP	43.5	-15.1	1.00 V	257	36.6	-8.2
3	180.06	27.0 QP	43.5	-16.5	2.00 V	66	36.7	-9.7
4	251.69	29.0 QP	46.0	-17.0	1.00 V	112	38.6	-9.6
5	400.35	33.9 QP	46.0	-12.1	1.00 V	8	39.2	-5.3
6	515.61	32.9 QP	46.0	-13.1	1.00 V	360	35.6	-2.7
7	902.00	56.4 QP	110.2	-53.8	1.39 V	183	25.4	31.0
8*	902.75	130.2 QP			1.39 V	183	99.2	31.0

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

CHANNEL	TX Channel 24	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	83.98	30.4 QP	40.0	-9.6	2.00 H	157	44.2	-13.8
2	119.94	28.6 QP	43.5	-14.9	1.50 H	94	38.7	-10.1
3	143.93	33.9 QP	43.5	-9.6	1.50 H	0	42.1	-8.2
4	180.18	32.7 QP	43.5	-10.8	1.50 H	328	42.4	-9.7
5	209.84	29.1 QP	43.5	-14.4	1.50 H	360	40.6	-11.5
6	383.95	38.3 QP	46.0	-7.7	1.00 H	205	44.0	-5.7
7*	914.75	130.9 QP			1.13 H	167	99.5	31.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	53.98	27.9 QP	40.0	-12.1	1.00 V	58	36.0	-8.1
2	84.13	31.6 QP	40.0	-8.4	2.00 V	172	45.4	-13.8
3	119.92	28.8 QP	43.5	-14.7	1.00 V	138	38.9	-10.1
4	144.05	30.0 QP	43.5	-13.5	1.00 V	258	38.2	-8.2
5	420.62	35.5 QP	46.0	-10.5	1.00 V	312	40.2	-4.7
6	799.84	36.5 QP	46.0	-9.5	1.00 V	342	34.5	2.0
7*	914.75	129.8 QP			1.41 V	171	98.4	31.4

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
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 49	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	83.93	30.5 QP	40.0	-9.5	2.00 H	169	44.3	-13.8
2	95.98	31.8 QP	43.5	-11.7	2.00 H	263	44.9	-13.1
3	143.85	35.6 QP	43.5	-7.9	2.00 H	0	43.8	-8.2
4	180.03	33.5 QP	43.5	-10.0	2.00 H	23	43.2	-9.7
5	389.99	36.1 QP	46.0	-9.9	1.00 H	191	41.7	-5.6
6	587.85	34.3 QP	46.0	-11.7	1.50 H	293	35.4	-1.1
7*	927.25	130.5 QP			1.12 H	167	98.9	31.6
8	928.00	56.1 QP	110.5	-54.4	1.12 H	167	24.5	31.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	55.03	28.8 QP	40.0	-11.2	1.50 V	94	37.1	-8.3
2	83.96	35.0 QP	40.0	-5.0	1.50 V	188	48.8	-13.8
3	144.02	29.1 QP	43.5	-14.4	1.00 V	262	37.3	-8.2
4	279.99	27.7 QP	46.0	-18.3	1.00 V	359	35.9	-8.2
5	419.96	36.2 QP	46.0	-9.8	1.00 V	294	41.0	-4.8
6	697.65	30.8 QP	46.0	-15.2	1.00 V	12	30.3	0.5
7*	927.25	129.3 QP			1.33 V	173	97.7	31.6
8	928.00	55.9 QP	109.3	-53.4	1.33 V	173	24.3	31.6

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
5. " * ": Fundamental frequency.

Above 1GHz Data:

CHANNEL	TX Channel 0	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 10GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2708.25	47.6 PK	74.0	-26.4	2.25 H	293	48.5	-0.9
2	2708.25	44.2 AV	54.0	-9.8	2.25 H	293	45.1	-0.9
3	3611.00	46.0 PK	74.0	-28.0	1.95 H	360	45.2	0.8
4	3611.00	41.7 AV	54.0	-12.3	1.95 H	360	40.9	0.8
5	4513.75	38.5 PK	74.0	-35.5	1.48 H	1	36.0	2.5
6	4513.75	25.8 AV	54.0	-28.2	1.48 H	1	23.3	2.5
7	5416.50	43.3 PK	74.0	-30.7	1.37 H	217	39.2	4.1
8	5416.50	35.6 AV	54.0	-18.4	1.37 H	217	31.5	4.1
9	#7222.00	50.3 PK	74.0	-23.7	2.64 H	258	41.4	8.9
10	#7222.00	45.5 AV	54.0	-8.5	2.64 H	258	36.6	8.9
11	8124.75	49.9 PK	74.0	-24.1	3.23 H	204	39.6	10.3
12	8124.75	40.2 AV	54.0	-13.8	3.23 H	204	29.9	10.3
13	9027.50	48.2 PK	74.0	-25.8	3.63 H	257	37.6	10.6
14	9027.50	38.6 AV	54.0	-15.4	3.63 H	257	28.0	10.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2708.25	49.4 PK	74.0	-24.6	1.46 V	338	50.3	-0.9
2	2708.25	46.3 AV	54.0	-7.7	1.46 V	338	47.2	-0.9
3	3611.00	45.7 PK	74.0	-28.3	1.44 V	329	44.9	0.8
4	3611.00	42.4 AV	54.0	-11.6	1.44 V	329	41.6	0.8
5	4513.75	37.6 PK	74.0	-36.4	2.10 V	236	35.1	2.5
6	4513.75	26.8 AV	54.0	-27.2	2.10 V	236	24.3	2.5
7	5416.50	47.0 PK	74.0	-27.0	1.45 V	307	42.9	4.1
8	5416.50	40.1 AV	54.0	-13.9	1.45 V	307	36.0	4.1
9	#7222.00	50.6 PK	74.0	-23.4	2.91 V	220	41.7	8.9
10	#7222.00	45.1 AV	54.0	-8.9	2.91 V	220	36.2	8.9
11	8124.75	48.0 PK	74.0	-26.0	2.39 V	135	37.7	10.3
12	8124.75	42.7 AV	54.0	-11.3	2.39 V	135	32.4	10.3
13	9027.50	44.5 PK	74.0	-29.5	2.68 V	202	33.9	10.6
14	9027.50	35.3 AV	54.0	-18.7	2.68 V	202	24.7	10.6

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
5. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 24	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 10GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2744.25	47.5 PK	74.0	-26.5	2.30 H	307	48.4	-0.9
2	2744.25	44.0 AV	54.0	-10.0	2.30 H	307	44.9	-0.9
3	3659.00	46.3 PK	74.0	-27.7	1.98 H	360	45.6	0.7
4	3659.00	42.0 AV	54.0	-12.0	1.98 H	360	41.3	0.7
5	4573.75	37.8 PK	74.0	-36.2	1.47 H	12	35.3	2.5
6	4573.75	25.4 AV	54.0	-28.6	1.47 H	12	22.9	2.5
7	#5488.50	43.4 PK	74.0	-30.6	1.32 H	216	39.2	4.2
8	#5488.50	35.9 AV	54.0	-18.1	1.32 H	216	31.7	4.2
9	7318.00	50.5 PK	74.0	-23.5	2.63 H	271	41.6	8.9
10	7318.00	45.8 AV	54.0	-8.2	2.63 H	271	36.9	8.9
11	8232.75	50.1 PK	74.0	-23.9	3.27 H	204	39.8	10.3
12	8232.75	40.1 AV	54.0	-13.9	3.27 H	204	29.8	10.3
13	9147.50	48.1 PK	74.0	-25.9	3.65 H	273	37.5	10.6
14	9147.50	38.7 AV	54.0	-15.3	3.65 H	273	28.1	10.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2744.25	49.7 PK	74.0	-24.3	1.52 V	354	50.6	-0.9
2	2744.25	46.4 AV	54.0	-7.6	1.52 V	354	47.3	-0.9
3	3659.00	45.8 PK	74.0	-28.2	1.41 V	329	45.1	0.7
4	3659.00	42.7 AV	54.0	-11.3	1.41 V	329	42.0	0.7
5	4573.75	38.1 PK	74.0	-35.9	2.15 V	229	35.6	2.5
6	4573.75	27.2 AV	54.0	-26.8	2.15 V	229	24.7	2.5
7	#5488.50	46.5 PK	74.0	-27.5	1.47 V	316	42.3	4.2
8	#5488.50	39.7 AV	54.0	-14.3	1.47 V	316	35.5	4.2
9	7318.00	50.7 PK	74.0	-23.3	2.88 V	234	41.8	8.9
10	7318.00	45.0 AV	54.0	-9.0	2.88 V	234	36.1	8.9
11	8232.75	47.6 PK	74.0	-26.4	2.38 V	143	37.3	10.3
12	8232.75	42.4 AV	54.0	-11.6	2.38 V	143	32.1	10.3
13	9147.50	45.0 PK	74.0	-29.0	2.67 V	212	34.4	10.6
14	9147.50	35.8 AV	54.0	-18.2	2.67 V	212	25.2	10.6

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
5. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 49	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 10GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2781.75	48.4 PK	74.0	-25.6	2.30 H	298	49.2	-0.8
2	2781.75	44.7 AV	54.0	-9.3	2.30 H	298	45.5	-0.8
3	3709.00	46.1 PK	74.0	-27.9	1.97 H	354	45.3	0.8
4	3709.00	42.1 AV	54.0	-11.9	1.97 H	354	41.3	0.8
5	4636.25	38.5 PK	74.0	-35.5	1.50 H	3	35.9	2.6
6	4636.25	25.6 AV	54.0	-28.4	1.50 H	3	23.0	2.6
7	#5563.50	43.1 PK	74.0	-30.9	1.37 H	220	38.9	4.2
8	#5563.50	35.2 AV	54.0	-18.8	1.37 H	220	31.0	4.2
9	7418.00	49.9 PK	74.0	-24.1	2.64 H	268	40.8	9.1
10	7418.00	45.4 AV	54.0	-8.6	2.64 H	268	36.3	9.1
11	8345.25	49.8 PK	74.0	-24.2	3.29 H	192	39.5	10.3
12	8345.25	40.3 AV	54.0	-13.7	3.29 H	192	30.0	10.3
13	#9272.50	49.0 PK	74.0	-25.0	3.60 H	270	38.2	10.8
14	#9272.50	39.1 AV	54.0	-14.9	3.60 H	270	28.3	10.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2781.75	49.0 PK	74.0	-25.0	1.40 V	332	49.8	-0.8
2	2781.75	45.9 AV	54.0	-8.1	1.40 V	332	46.7	-0.8
3	3709.00	46.2 PK	74.0	-27.8	1.49 V	320	45.4	0.8
4	3709.00	42.7 AV	54.0	-11.3	1.49 V	320	41.9	0.8
5	4636.25	38.1 PK	74.0	-35.9	2.08 V	225	35.5	2.6
6	4636.25	27.1 AV	54.0	-26.9	2.08 V	225	24.5	2.6
7	#5563.50	47.2 PK	74.0	-26.8	1.45 V	301	43.0	4.2
8	#5563.50	40.1 AV	54.0	-13.9	1.45 V	301	35.9	4.2
9	7418.00	50.9 PK	74.0	-23.1	2.88 V	225	41.8	9.1
10	7418.00	45.3 AV	54.0	-8.7	2.88 V	225	36.2	9.1
11	8345.25	48.0 PK	74.0	-26.0	2.35 V	137	37.7	10.3
12	8345.25	42.7 AV	54.0	-11.3	2.35 V	137	32.4	10.3
13	#9272.50	43.8 PK	74.0	-30.2	2.70 V	197	33.0	10.8
14	#9272.50	34.9 AV	54.0	-19.1	2.70 V	197	24.1	10.8

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
5. " # ": The radiated frequency is out of the restricted band.

4.1.8 Test Results (Mode 2)

Below 1GHz Data:

CHANNEL	TX Channel 0	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	95.98	27.7 QP	43.5	-15.8	2.00 H	3	40.8	-13.1
2	119.94	28.3 QP	43.5	-15.2	2.00 H	10	38.4	-10.1
3	143.90	30.9 QP	43.5	-12.6	1.50 H	0	39.1	-8.2
4	179.94	34.5 QP	43.5	-9.0	1.50 H	336	44.2	-9.7
5	374.01	36.5 QP	46.0	-9.5	1.00 H	224	42.4	-5.9
6	587.73	32.2 QP	46.0	-13.8	1.00 H	270	33.3	-1.1
7	902.00	60.0 QP	110.6	-50.6	1.12 H	171	29.0	31.0
8*	902.75	130.6 QP			1.12 H	171	99.6	31.0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	55.10	28.2 QP	40.0	-11.8	1.00 V	113	36.5	-8.3
2	83.93	32.5 QP	40.0	-7.5	1.50 V	222	46.3	-13.8
3	144.05	30.5 QP	43.5	-13.0	1.00 V	282	38.7	-8.2
4	270.27	29.4 QP	46.0	-16.6	1.00 V	282	38.1	-8.7
5	347.87	32.2 QP	46.0	-13.8	1.50 V	307	38.7	-6.5
6	396.42	35.2 QP	46.0	-10.8	1.50 V	274	40.6	-5.4
7	902.00	59.3 QP	109.8	-50.5	1.00 V	178	28.3	31.0
8*	902.75	129.8 QP			1.00 V	178	98.8	31.0

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
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 24	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	96.06	30.6 QP	43.5	-12.9	2.00 H	213	43.7	-13.1
2	119.97	30.4 QP	43.5	-13.1	1.50 H	214	40.5	-10.1
3	143.95	32.4 QP	43.5	-11.1	2.00 H	253	40.6	-8.2
4	179.89	30.6 QP	43.5	-12.9	2.00 H	0	40.3	-9.7
5	379.32	36.5 QP	46.0	-9.5	1.00 H	203	42.3	-5.8
6	587.31	31.9 QP	46.0	-14.1	1.50 H	220	33.1	-1.2
7*	914.75	131.0 QP			1.13 H	173	99.6	31.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	84.00	34.8 QP	40.0	-5.2	1.50 V	211	48.6	-13.8
2	143.81	29.0 QP	43.5	-14.5	1.00 V	348	37.2	-8.2
3	251.72	27.4 QP	46.0	-18.6	1.00 V	102	37.0	-9.6
4	344.98	36.3 QP	46.0	-9.7	1.00 V	101	42.8	-6.5
5	395.71	35.3 QP	46.0	-10.7	1.00 V	303	40.7	-5.4
6	587.68	30.5 QP	46.0	-15.5	1.50 V	164	31.6	-1.1
7*	914.75	129.9 QP			1.41 V	174	98.5	31.4

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
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 49	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	96.06	27.4 QP	43.5	-16.1	2.00 H	248	40.5	-13.1
2	119.99	31.1 QP	43.5	-12.4	1.50 H	223	41.2	-10.1
3	143.95	32.7 QP	43.5	-10.8	2.00 H	81	40.9	-8.2
4	156.08	32.8 QP	43.5	-10.7	2.00 H	132	41.1	-8.3
5	180.01	34.8 QP	43.5	-8.7	1.50 H	124	44.5	-9.7
6	371.46	37.6 QP	46.0	-8.4	1.00 H	212	43.5	-5.9
7*	927.25	130.3 QP			1.10 H	166	98.7	31.6
8	928.00	60.2 QP	110.3	-50.1	1.10 H	166	28.6	31.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	83.88	33.1 QP	40.0	-6.9	1.50 V	48	46.9	-13.8
2	143.81	32.2 QP	43.5	-11.3	1.50 V	13	40.4	-8.2
3	247.11	27.1 QP	46.0	-18.9	1.00 V	299	36.8	-9.7
4	411.09	38.8 QP	46.0	-7.2	1.00 V	325	43.9	-5.1
5	599.22	31.6 QP	46.0	-14.4	2.00 V	128	32.5	-0.9
6	799.72	34.9 QP	46.0	-11.1	1.50 V	360	32.9	2.0
7*	927.25	129.5 QP			1.37 V	171	97.9	31.6
8	928.00	59.4 QP	109.5	-50.1	1.37 V	171	27.8	31.6

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
5. " * ": Fundamental frequency.

Above 1GHz Data:

CHANNEL	TX Channel 0	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 10GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2708.25	48.9 PK	74.0	-25.1	3.18 H	288	49.8	-0.9
2	2708.25	46.2 AV	54.0	-7.8	3.18 H	288	47.1	-0.9
3	3611.00	46.4 PK	74.0	-27.6	1.91 H	360	45.6	0.8
4	3611.00	42.0 AV	54.0	-12.0	1.91 H	360	41.2	0.8
5	4513.75	38.6 PK	74.0	-35.4	1.53 H	155	36.1	2.5
6	4513.75	25.7 AV	54.0	-28.3	1.53 H	155	23.2	2.5
7	5416.50	43.4 PK	74.0	-30.6	1.38 H	209	39.3	4.1
8	5416.50	35.5 AV	54.0	-18.5	1.38 H	209	31.4	4.1
9	#7222.00	50.2 PK	74.0	-23.8	2.64 H	254	41.3	8.9
10	#7222.00	45.6 AV	54.0	-8.4	2.64 H	254	36.7	8.9
11	8124.75	49.8 PK	74.0	-24.2	3.22 H	200	39.5	10.3
12	8124.75	40.1 AV	54.0	-13.9	3.22 H	200	29.8	10.3
13	9027.50	48.3 PK	74.0	-25.7	3.66 H	248	37.7	10.6
14	9027.50	38.5 AV	54.0	-15.5	3.66 H	248	27.9	10.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2708.25	49.5 PK	74.0	-24.5	1.48 V	349	50.4	-0.9
2	2708.25	46.2 AV	54.0	-7.8	1.48 V	349	47.1	-0.9
3	3611.00	45.6 PK	74.0	-28.4	1.46 V	335	44.8	0.8
4	3611.00	42.5 AV	54.0	-11.5	1.46 V	335	41.7	0.8
5	4513.75	37.4 PK	74.0	-36.6	2.15 V	237	34.9	2.5
6	4513.75	26.7 AV	54.0	-27.3	2.15 V	237	24.2	2.5
7	5416.50	46.8 PK	74.0	-27.2	1.46 V	319	42.7	4.1
8	5416.50	39.7 AV	54.0	-14.3	1.46 V	319	35.6	4.1
9	#7222.00	51.0 PK	74.0	-23.0	2.93 V	220	42.1	8.9
10	#7222.00	45.4 AV	54.0	-8.6	2.93 V	220	36.5	8.9
11	8124.75	48.2 PK	74.0	-25.8	2.36 V	143	37.9	10.3
12	8124.75	42.9 AV	54.0	-11.1	2.36 V	143	32.6	10.3
13	9027.50	44.7 PK	74.0	-29.3	2.73 V	214	34.1	10.6
14	9027.50	35.4 AV	54.0	-18.6	2.73 V	214	24.8	10.6

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
5. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 24	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 10GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2744.25	48.3 PK	74.0	-25.7	3.22 H	275	49.2	-0.9
2	2744.25	45.9 AV	54.0	-8.1	3.22 H	275	46.8	-0.9
3	3659.00	46.5 PK	74.0	-27.5	1.90 H	360	45.8	0.7
4	3659.00	42.2 AV	54.0	-11.8	1.90 H	360	41.5	0.7
5	4573.75	38.5 PK	74.0	-35.5	1.50 H	140	36.0	2.5
6	4573.75	25.8 AV	54.0	-28.2	1.50 H	140	23.3	2.5
7	#5488.50	43.5 PK	74.0	-30.5	1.41 H	195	39.3	4.2
8	#5488.50	35.5 AV	54.0	-18.5	1.41 H	195	31.3	4.2
9	7318.00	49.6 PK	74.0	-24.4	2.66 H	261	40.7	8.9
10	7318.00	45.2 AV	54.0	-8.8	2.66 H	261	36.3	8.9
11	8232.75	49.9 PK	74.0	-24.1	3.20 H	216	39.6	10.3
12	8232.75	40.2 AV	54.0	-13.8	3.20 H	216	29.9	10.3
13	9147.50	48.6 PK	74.0	-25.4	3.66 H	235	38.0	10.6
14	9147.50	38.9 AV	54.0	-15.1	3.66 H	235	28.3	10.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2744.25	49.6 PK	74.0	-24.4	1.41 V	328	50.5	-0.9
2	2744.25	46.4 AV	54.0	-7.6	1.41 V	328	47.3	-0.9
3	3659.00	45.9 PK	74.0	-28.1	1.40 V	336	45.2	0.7
4	3659.00	42.6 AV	54.0	-11.4	1.40 V	336	41.9	0.7
5	4573.75	37.3 PK	74.0	-36.7	2.13 V	247	34.8	2.5
6	4573.75	26.7 AV	54.0	-27.3	2.13 V	247	24.2	2.5
7	#5488.50	46.6 PK	74.0	-27.4	1.45 V	313	42.4	4.2
8	#5488.50	40.0 AV	54.0	-14.0	1.45 V	313	35.8	4.2
9	7318.00	51.0 PK	74.0	-23.0	2.87 V	226	42.1	8.9
10	7318.00	45.2 AV	54.0	-8.8	2.87 V	226	36.3	8.9
11	8232.75	47.4 PK	74.0	-26.6	2.44 V	124	37.1	10.3
12	8232.75	42.3 AV	54.0	-11.7	2.44 V	124	32.0	10.3
13	9147.50	45.3 PK	74.0	-28.7	2.68 V	210	34.7	10.6
14	9147.50	35.8 AV	54.0	-18.2	2.68 V	210	25.2	10.6

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
5. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 49	DETECTOR FUNCTION	Peak (PK) Average (AV)
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ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2781.75	49.2 PK	74.0	-24.8	3.15 H	279	50.0	-0.8
2	2781.75	46.4 AV	54.0	-7.6	3.15 H	279	47.2	-0.8
3	3709.00	46.2 PK	74.0	-27.8	1.96 H	354	45.4	0.8
4	3709.00	41.7 AV	54.0	-12.3	1.96 H	354	40.9	0.8
5	4636.25	37.9 PK	74.0	-36.1	1.54 H	143	35.3	2.6
6	4636.25	25.2 AV	54.0	-28.8	1.54 H	143	22.6	2.6
7	#5563.50	43.1 PK	74.0	-30.9	1.44 H	200	38.9	4.2
8	#5563.50	35.1 AV	54.0	-18.9	1.44 H	200	30.9	4.2
9	7418.00	49.9 PK	74.0	-24.1	2.60 H	266	40.8	9.1
10	7418.00	45.3 AV	54.0	-8.7	2.60 H	266	36.2	9.1
11	8345.25	49.4 PK	74.0	-24.6	3.17 H	184	39.1	10.3
12	8345.25	39.9 AV	54.0	-14.1	3.17 H	184	29.6	10.3
13	#9272.50	48.6 PK	74.0	-25.4	3.63 H	236	37.8	10.8
14	#9272.50	38.7 AV	54.0	-15.3	3.63 H	236	27.9	10.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2781.75	49.3 PK	74.0	-24.7	1.41 V	334	50.1	-0.8
2	2781.75	45.9 AV	54.0	-8.1	1.41 V	334	46.7	-0.8
3	3709.00	46.1 PK	74.0	-27.9	1.44 V	334	45.3	0.8
4	3709.00	42.6 AV	54.0	-11.4	1.44 V	334	41.8	0.8
5	4636.25	37.8 PK	74.0	-36.2	2.10 V	236	35.2	2.6
6	4636.25	27.2 AV	54.0	-26.8	2.10 V	236	24.6	2.6
7	#5563.50	46.4 PK	74.0	-27.6	1.45 V	305	42.2	4.2
8	#5563.50	39.7 AV	54.0	-14.3	1.45 V	305	35.5	4.2
9	7418.00	51.0 PK	74.0	-23.0	2.85 V	228	41.9	9.1
10	7418.00	45.5 AV	54.0	-8.5	2.85 V	228	36.4	9.1
11	8345.25	47.9 PK	74.0	-26.1	2.42 V	149	37.6	10.3
12	8345.25	42.8 AV	54.0	-11.2	2.42 V	149	32.5	10.3
13	#9272.50	45.2 PK	74.0	-28.8	2.64 V	208	34.4	10.8
14	#9272.50	35.8 AV	54.0	-18.2	2.64 V	208	25.0	10.8

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
5. " # ": The radiated frequency is out of the restricted band.

4.1.9 Test Results (Mode 3)

Below 1GHz Data:

CHANNEL	TX Channel 0	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	95.86	29.0 QP	43.5	-14.5	1.50 H	270	42.1	-13.1
2	143.90	30.7 QP	43.5	-12.8	1.00 H	102	38.9	-8.2
3	156.05	31.8 QP	43.5	-11.7	1.00 H	104	40.1	-8.3
4	179.84	33.5 QP	43.5	-10.0	1.50 H	142	43.2	-9.7
5	263.67	33.2 QP	46.0	-12.8	1.50 H	297	42.1	-8.9
6	385.87	37.1 QP	46.0	-8.9	1.00 H	194	42.8	-5.7
7	902.00	58.8 QP	110.4	-51.6	1.13 H	172	27.8	31.0
8*	902.75	130.4 QP			1.13 H	172	99.4	31.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	54.93	28.3 QP	40.0	-11.7	1.00 V	108	36.6	-8.3
2	83.93	32.1 QP	40.0	-7.9	1.00 V	360	45.9	-13.8
3	143.93	34.4 QP	43.5	-9.1	1.00 V	248	42.6	-8.2
4	155.98	29.8 QP	43.5	-13.7	1.00 V	212	38.1	-8.3
5	312.05	31.3 QP	46.0	-14.7	1.50 V	49	38.4	-7.1
6	397.24	35.6 QP	46.0	-10.4	1.50 V	267	41.0	-5.4
7	902.00	58.9 QP	110.1	-51.2	1.45 V	173	27.9	31.0
8*	902.75	130.1 QP			1.45 V	173	99.1	31.0

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
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 24	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	120.02	30.6 QP	43.5	-12.9	1.00 H	360	40.7	-10.1
2	143.90	32.4 QP	43.5	-11.1	2.00 H	87	40.6	-8.2
3	180.13	32.4 QP	43.5	-11.1	1.50 H	12	42.1	-9.7
4	246.09	31.7 QP	46.0	-14.3	1.50 H	327	41.4	-9.7
5	385.84	36.9 QP	46.0	-9.1	1.00 H	102	42.6	-5.7
6	588.07	31.5 QP	46.0	-14.5	1.00 H	267	32.6	-1.1
7*	914.75	130.5 QP			1.09 H	177	99.1	31.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	55.15	28.3 QP	40.0	-11.7	1.50 V	124	36.6	-8.3
2	83.88	32.2 QP	40.0	-7.8	1.50 V	237	46.0	-13.8
3	144.07	30.4 QP	43.5	-13.1	1.00 V	265	38.6	-8.2
4	398.99	34.9 QP	46.0	-11.1	1.00 V	331	40.2	-5.3
5	515.80	32.6 QP	46.0	-13.4	1.00 V	310	35.2	-2.6
6	587.26	32.9 QP	46.0	-13.1	1.00 V	350	34.1	-1.2
7*	914.75	129.8 QP			1.38 V	180	98.4	31.4

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
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 49	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	95.89	27.8 QP	43.5	-15.7	2.00 H	2	40.9	-13.1
2	119.99	29.5 QP	43.5	-14.0	1.50 H	221	39.6	-10.1
3	144.05	30.4 QP	43.5	-13.1	2.00 H	258	38.6	-8.2
4	155.98	32.9 QP	43.5	-10.6	2.00 H	142	41.2	-8.3
5	180.01	33.1 QP	43.5	-10.4	1.00 H	360	42.8	-9.7
6	373.94	37.4 QP	46.0	-8.6	1.00 H	227	43.3	-5.9
7*	927.25	130.4 QP			1.13 H	173	98.8	31.6
8	928.00	60.2 QP	110.4	-50.2	1.13 H	173	28.6	31.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	55.10	28.1 QP	40.0	-11.9	1.00 V	102	36.4	-8.3
2	84.00	34.4 QP	40.0	-5.6	1.00 V	191	48.2	-13.8
3	144.05	30.7 QP	43.5	-12.8	1.00 V	258	38.9	-8.2
4	266.92	26.9 QP	46.0	-19.1	1.50 V	266	35.6	-8.7
5	329.73	29.9 QP	46.0	-16.1	1.50 V	308	36.4	-6.5
6	410.94	35.3 QP	46.0	-10.7	1.00 V	326	40.4	-5.1
7*	927.25	129.7 QP			1.36 V	172	98.1	31.6
8	928.00	59.4 QP	109.7	-50.3	1.36 V	172	27.8	31.6

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
5. " * ": Fundamental frequency.

Above 1GHz Data:

CHANNEL	TX Channel 0	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 10GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2708.25	47.8 PK	74.0	-26.2	3.34 H	277	48.7	-0.9
2	2708.25	42.8 AV	54.0	-11.2	3.34 H	277	43.7	-0.9
3	3611.00	45.4 PK	74.0	-28.6	2.09 H	360	44.6	0.8
4	3611.00	41.5 AV	54.0	-12.5	2.09 H	360	40.7	0.8
5	4513.75	37.0 PK	74.0	-37.0	1.54 H	35	34.5	2.5
6	4513.75	24.8 AV	54.0	-29.2	1.54 H	35	22.3	2.5
7	5416.50	43.3 PK	74.0	-30.7	1.43 H	199	39.2	4.1
8	5416.50	36.0 AV	54.0	-18.0	1.43 H	199	31.9	4.1
9	#7222.00	49.1 PK	74.0	-24.9	2.59 H	269	40.2	8.9
10	#7222.00	44.8 AV	54.0	-9.2	2.59 H	269	35.9	8.9
11	8124.75	49.2 PK	74.0	-24.8	3.23 H	237	38.9	10.3
12	8124.75	39.6 AV	54.0	-14.4	3.23 H	237	29.3	10.3
13	9027.50	47.9 PK	74.0	-26.1	3.67 H	232	37.3	10.6
14	9027.50	38.6 AV	54.0	-15.4	3.67 H	232	28.0	10.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2708.25	48.5 PK	74.0	-25.5	1.38 V	329	49.4	-0.9
2	2708.25	43.2 AV	54.0	-10.8	1.38 V	329	44.1	-0.9
3	3611.00	45.7 PK	74.0	-28.3	1.37 V	310	44.9	0.8
4	3611.00	42.0 AV	54.0	-12.0	1.37 V	310	41.2	0.8
5	4513.75	36.8 PK	74.0	-37.2	2.07 V	210	34.3	2.5
6	4513.75	26.0 AV	54.0	-28.0	2.07 V	210	23.5	2.5
7	5416.50	47.6 PK	74.0	-26.4	1.42 V	301	43.5	4.1
8	5416.50	40.8 AV	54.0	-13.2	1.42 V	301	36.7	4.1
9	#7222.00	51.3 PK	74.0	-22.7	3.00 V	220	42.4	8.9
10	#7222.00	45.3 AV	54.0	-8.7	3.00 V	220	36.4	8.9
11	8124.75	48.1 PK	74.0	-25.9	2.45 V	166	37.8	10.3
12	8124.75	43.5 AV	54.0	-10.5	2.45 V	166	33.2	10.3
13	9027.50	44.3 PK	74.0	-29.7	2.66 V	171	33.7	10.6
14	9027.50	35.5 AV	54.0	-18.5	2.66 V	171	24.9	10.6

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
5. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 24	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 10GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2744.25	47.9 PK	74.0	-26.1	3.39 H	276	48.8	-0.9
2	2744.25	42.8 AV	54.0	-11.2	3.39 H	276	43.7	-0.9
3	3659.00	45.3 PK	74.0	-28.7	2.04 H	360	44.6	0.7
4	3659.00	41.4 AV	54.0	-12.6	2.04 H	360	40.7	0.7
5	4573.75	36.9 PK	74.0	-37.1	1.57 H	43	34.4	2.5
6	4573.75	25.0 AV	54.0	-29.0	1.57 H	43	22.5	2.5
7	#5488.50	43.0 PK	74.0	-31.0	1.42 H	192	38.8	4.2
8	#5488.50	35.6 AV	54.0	-18.4	1.42 H	192	31.4	4.2
9	7318.00	49.9 PK	74.0	-24.1	2.64 H	285	41.0	8.9
10	7318.00	45.3 AV	54.0	-8.7	2.64 H	285	36.4	8.9
11	8232.75	49.3 PK	74.0	-24.7	3.27 H	234	39.0	10.3
12	8232.75	39.5 AV	54.0	-14.5	3.27 H	234	29.2	10.3
13	9147.50	48.2 PK	74.0	-25.8	3.69 H	246	37.6	10.6
14	9147.50	39.0 AV	54.0	-15.0	3.69 H	246	28.4	10.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2744.25	48.4 PK	74.0	-25.6	1.42 V	350	49.3	-0.9
2	2744.25	43.3 AV	54.0	-10.7	1.42 V	350	44.2	-0.9
3	3659.00	45.0 PK	74.0	-29.0	1.40 V	319	44.3	0.7
4	3659.00	41.5 AV	54.0	-12.5	1.40 V	319	40.8	0.7
5	4573.75	36.8 PK	74.0	-37.2	2.03 V	197	34.3	2.5
6	4573.75	26.2 AV	54.0	-27.8	2.03 V	197	23.7	2.5
7	#5488.50	48.1 PK	74.0	-25.9	1.37 V	287	43.9	4.2
8	#5488.50	41.1 AV	54.0	-12.9	1.37 V	287	36.9	4.2
9	7318.00	51.0 PK	74.0	-23.0	3.06 V	223	42.1	8.9
10	7318.00	45.2 AV	54.0	-8.8	3.06 V	223	36.3	8.9
11	8232.75	47.6 PK	74.0	-26.4	2.46 V	174	37.3	10.3
12	8232.75	43.0 AV	54.0	-11.0	2.46 V	174	32.7	10.3
13	9147.50	44.2 PK	74.0	-29.8	2.70 V	163	33.6	10.6
14	9147.50	35.5 AV	54.0	-18.5	2.70 V	163	24.9	10.6

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
5. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 49	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 10GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2781.75	47.2 PK	74.0	-26.8	3.43 H	291	48.0	-0.8
2	2781.75	42.1 AV	54.0	-11.9	3.43 H	291	42.9	-0.8
3	3709.00	45.7 PK	74.0	-28.3	2.11 H	360	44.9	0.8
4	3709.00	41.9 AV	54.0	-12.1	2.11 H	360	41.1	0.8
5	4636.25	36.5 PK	74.0	-37.5	1.48 H	40	33.9	2.6
6	4636.25	24.5 AV	54.0	-29.5	1.48 H	40	21.9	2.6
7	#5563.50	43.4 PK	74.0	-30.6	1.42 H	204	39.2	4.2
8	#5563.50	36.2 AV	54.0	-17.8	1.42 H	204	32.0	4.2
9	7418.00	48.9 PK	74.0	-25.1	2.60 H	256	39.8	9.1
10	7418.00	44.7 AV	54.0	-9.3	2.60 H	256	35.6	9.1
11	8345.25	49.1 PK	74.0	-24.9	3.24 H	236	38.8	10.3
12	8345.25	39.4 AV	54.0	-14.6	3.24 H	236	29.1	10.3
13	#9272.50	48.4 PK	74.0	-25.6	3.63 H	228	37.6	10.8
14	#9272.50	39.0 AV	54.0	-15.0	3.63 H	228	28.2	10.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2781.75	48.2 PK	74.0	-25.8	1.44 V	337	49.0	-0.8
2	2781.75	43.1 AV	54.0	-10.9	1.44 V	337	43.9	-0.8
3	3709.00	45.6 PK	74.0	-28.4	1.33 V	309	44.8	0.8
4	3709.00	41.9 AV	54.0	-12.1	1.33 V	309	41.1	0.8
5	4636.25	36.7 PK	74.0	-37.3	2.04 V	196	34.1	2.6
6	4636.25	26.0 AV	54.0	-28.0	2.04 V	196	23.4	2.6
7	#5563.50	47.0 PK	74.0	-27.0	1.48 V	302	42.8	4.2
8	#5563.50	40.3 AV	54.0	-13.7	1.48 V	302	36.1	4.2
9	7418.00	51.3 PK	74.0	-22.7	3.06 V	230	42.2	9.1
10	7418.00	45.6 AV	54.0	-8.4	3.06 V	230	36.5	9.1
11	8345.25	48.1 PK	74.0	-25.9	2.49 V	177	37.8	10.3
12	8345.25	43.2 AV	54.0	-10.8	2.49 V	177	32.9	10.3
13	#9272.50	43.8 PK	74.0	-30.2	2.61 V	171	33.0	10.8
14	#9272.50	35.2 AV	54.0	-18.8	2.61 V	171	24.4	10.8

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
5. " # ": The radiated frequency is out of the restricted band.

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	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.

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	Oct. 24, 2016	Oct. 23, 2017
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 26, 2016	Oct. 25, 2017
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100072	June 03, 2017	June 02, 2018
50 ohms Terminator	N/A	EMC-02	Sep. 29, 2016	Sep. 28, 2017
RF Cable	5D-FB	COCCAB-001	Sep. 30, 2016	Sep. 29, 2017
10 dB PAD Mini-Circuits	HAT-10+	CONATT-004	June 18, 2017	June 17, 2018
Software BVADT	BVADT_Cond_V7.3.7.4	NA	NA	NA

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. 1.
3. Tested Date: Sep. 08, 2017

4.2.3 Test Procedures

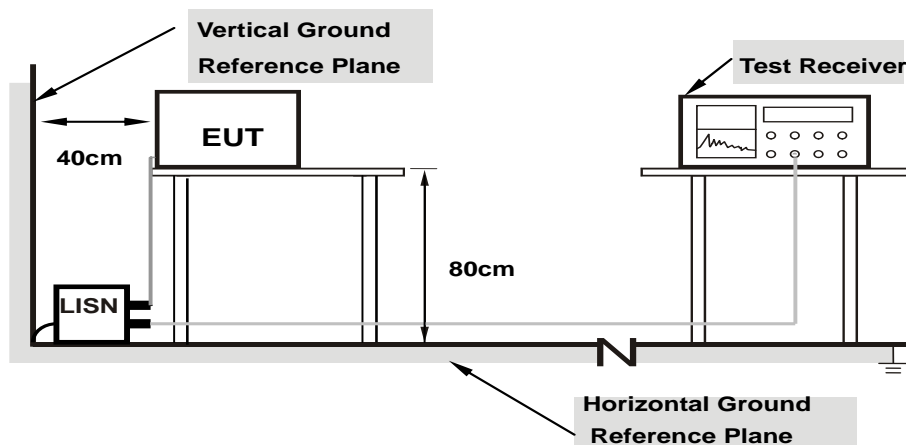
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling 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: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation From Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Condition

Same as 4.1.6.

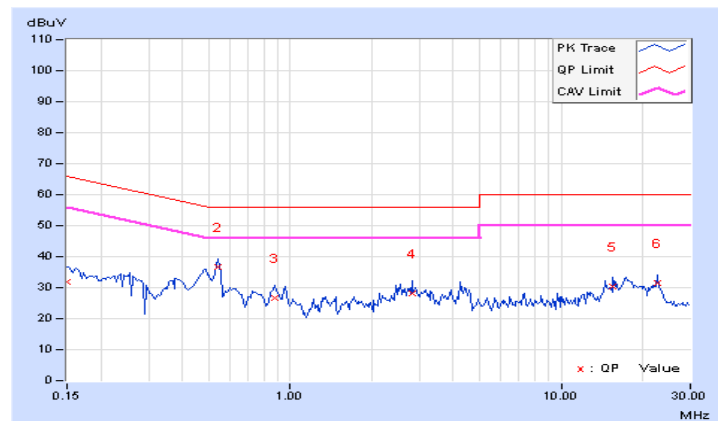
4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor (dB)	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.08	21.73	10.60	31.81	20.68	66.00	56.00	-34.19	-35.32
2	0.54063	10.13	26.65	20.19	36.78	30.32	56.00	46.00	-19.22	-15.68
3	0.87266	10.15	16.39	10.54	26.54	20.69	56.00	46.00	-29.46	-25.31
4	2.83203	10.25	17.76	10.73	28.01	20.98	56.00	46.00	-27.99	-25.02
5	15.55469	11.23	19.32	14.05	30.55	25.28	60.00	50.00	-29.45	-24.72
6	22.69922	11.62	19.98	16.91	31.60	28.53	60.00	50.00	-28.40	-21.47

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

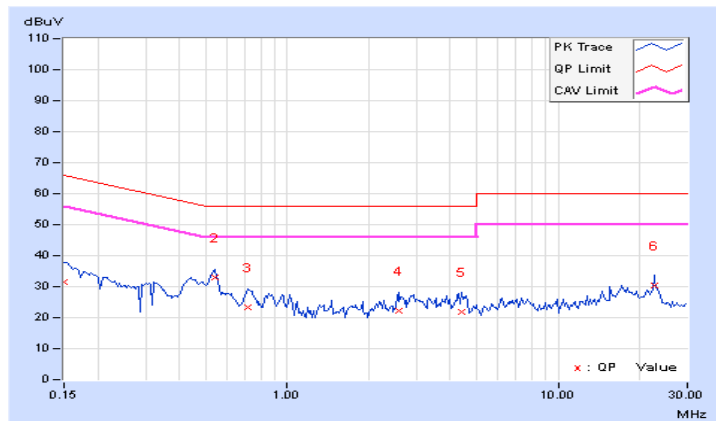


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	
1	0.15000	10.07	21.29	5.97	31.36	16.04	66.00	56.00	-34.64	-39.96
2	0.54063	10.12	22.74	16.33	32.86	26.45	56.00	46.00	-23.14	-19.55
3	0.71641	10.12	13.12	3.75	23.24	13.87	56.00	46.00	-32.76	-32.13
4	2.58984	10.23	12.01	4.73	22.24	14.96	56.00	46.00	-33.76	-31.04
5	4.41406	10.30	11.53	4.83	21.83	15.13	56.00	46.00	-34.17	-30.87
6	22.70703	11.28	19.09	13.82	30.37	25.10	60.00	50.00	-29.63	-24.90

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

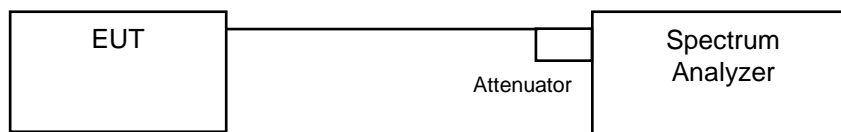


4.3 Maximum Output Power

4.3.1 Limits of Maximum Output Power Measurement

CONDITION	OUTPUT POWER	APPLICATION
hopping channels ≥ 50	1 W	v
hopping channels ≥ 25 & ≤ 50	0.25W	x

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

- a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- c. The center frequency of the spectrum analyzer is set to the fundamental frequency and using 30kHz RBW and 100 kHz VBW.
- d. Measure the captured power within the band and recording the plot.
- e. Repeat above procedures until all frequencies required were complete.

4.3.5 Deviation from Test Standard

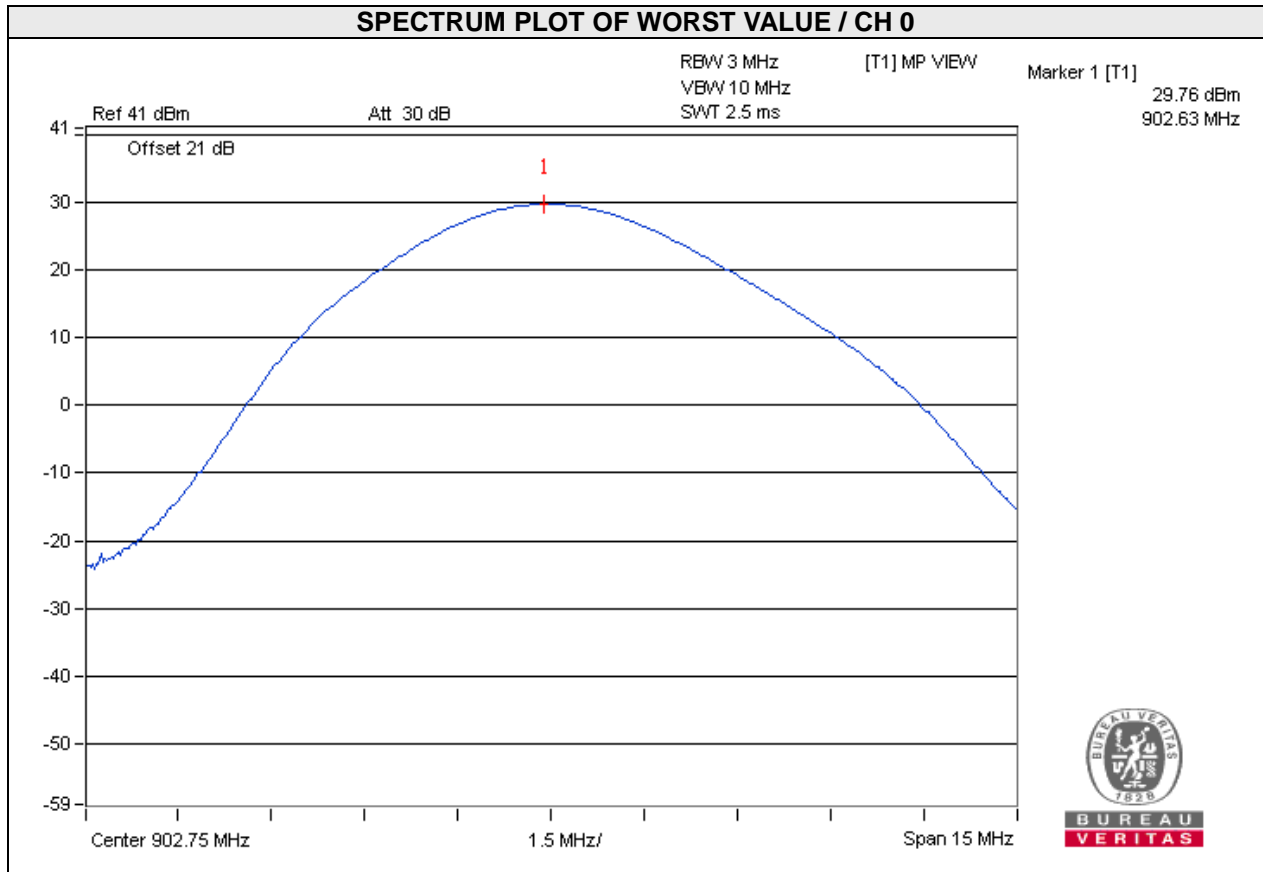
No deviation.

4.3.6 EUT Operating Condition

The software provided by client enabled the EUT to transmit and receive data at lowest and highest channel frequencies individually.

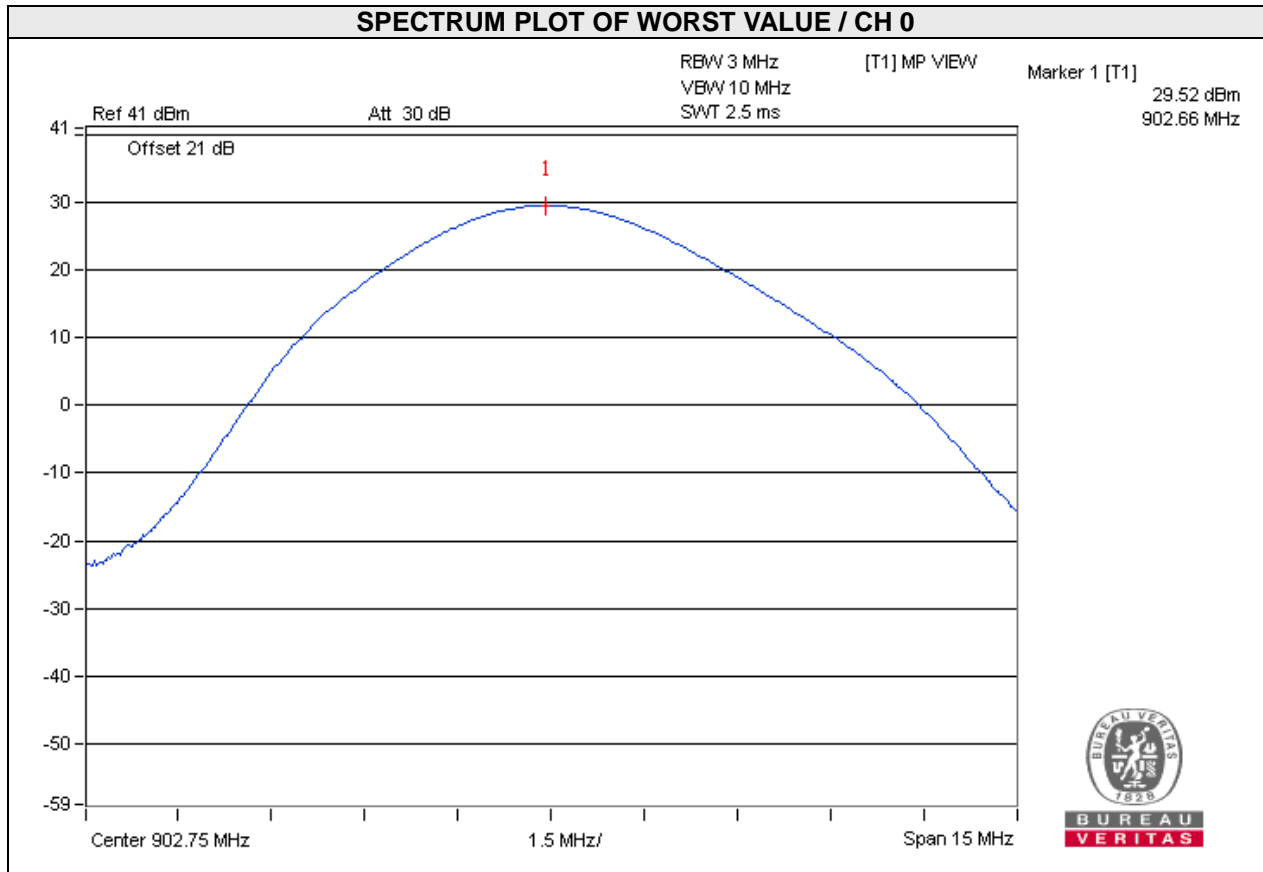
4.3.7 Test Results (Mode 1)

CHANNEL	Frequency (MHz)	Output Power (mW)	Output Power (dBm)	Power Limit (dBm)	Pass / Fail
0	902.75	946.237	29.76	30.00	Pass
24	914.75	914.113	29.61	30.00	Pass
49	927.25	895.365	29.52	30.00	Pass



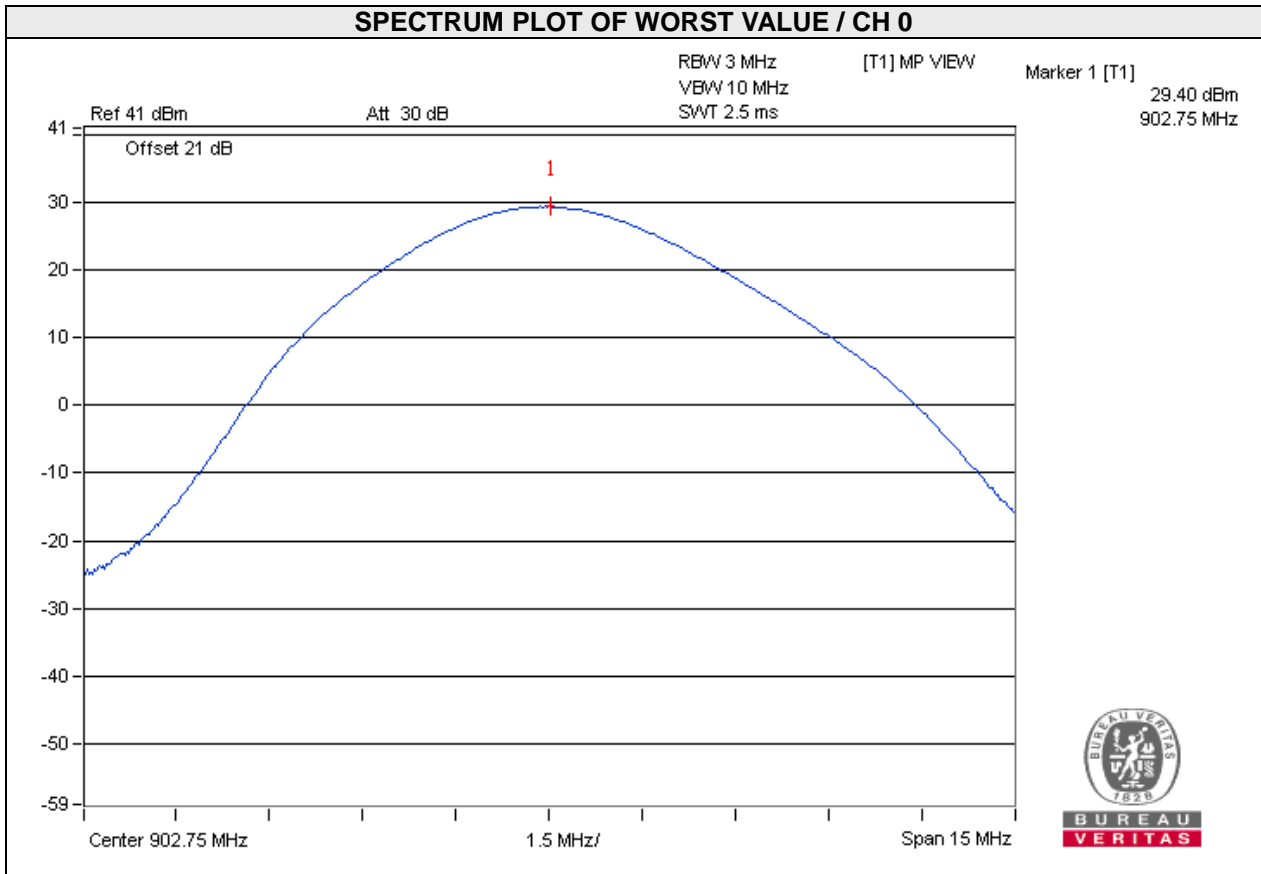
4.3.8 Test Results (Mode 2)

CHANNEL	Frequency (MHz)	Output Power (mW)	Output Power (dBm)	Power Limit (dBm)	Pass / Fail
0	902.75	895.365	29.52	30.00	Pass
24	914.75	859.014	29.34	30.00	Pass
49	927.25	839.46	29.24	30.00	Pass



4.3.9 Test Results (Mode 3)

CHANNEL	Frequency (MHz)	Output Power (mW)	Output Power (dBm)	Power Limit (dBm)	Pass / Fail
0	902.75	870.964	29.40	30.00	Pass
24	914.75	866.962	29.38	30.00	Pass
49	927.25	855.067	29.32	30.00	Pass



5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

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