

FCC Test Report (Z-Wave)

Report No.: RF180830E03A-4

FCC ID: 2APLE18300394

Test Model: VMB5000

Received Date: Sep. 04, 2018

Test Date: Sep. 26 to Oct. 15, 2018

Issued Date: Nov. 01, 2018

Applicant: Arlo Technologies, Inc.

Address: 2200 Faraday Ave. Suite 150, Carlsbad, CA 92008, United States

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.

**FCC Registration /
Designation Number:** 723255 / TW2022



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Release Control Record

Issue No.	Description	Date Issued
RF180830E03A-4	Original release.	Nov. 01, 2018

1 Certificate of Conformity

Product: Alro Gen5 Entry Hub

Brand: Arlo

Test Model: VMB5000

Sample Status: ENGINEERING SAMPLE

Applicant: Arlo Technologies, Inc.

Test Date: Sep. 26 to Oct. 15, 2018

Standards: 47 CFR FCC Part 15, Subpart C (Section 15.249)
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 : Phoenix Huang, **Date:** Nov. 01, 2018
Phoenix Huang / Specialist

Approved by : May Chen, **Date:** Nov. 01, 2018
May Chen / Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (SECTION 15.249)			
FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -13.78dB at 0.15000MHz.
15.209 15.249 15.249 (d)	Radiated Emission Test Band Edge Measurement Limit: 50dB less than the peak value of fundamental frequency or meet radiated emission limit in section 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -0.1dB at 908.42MHz.
15.215 (c)	20dB Bandwidth	PASS	Meet the requirement of limit
15.203	Antenna Requirement	PASS	No antenna connector is used.

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) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.84 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.53 dB
	1GHz ~ 6GHz	5.08 dB
Radiated Emissions above 1 GHz	6GHz ~ 18GHz	4.98 dB
	18GHz ~ 40GHz	5.19 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT (Z-Wave)

Product	Alro Gen5 Entry Hub
Brand	Arlo
Test Model	VMB5000
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	12Vdc from power adapter
Modulation Type	FSK
Transfer Rate	9.6/40/100 kbps
Operating Frequency	908.4 ~ 916MHz
Number of Channel	3
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x1
Data Cable Supplied	NA

Note:

- There are WLAN, Z-Wave, Zigbee and Sub-GHz technology used for the EUT. The EUT has below radios as following table:

Radio 1	Radio 2	Radio 3	Radio 4
WLAN (2.4GHz+5GHz band)	Z-Wave	Zigbee	Sub-GHz

- Simultaneously transmission condition.

Condition	Technology				
1	WLAN 2.4GHz	WLAN 5GHz	Z-Wave	Zigbee	Sub-GHz

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

- The EUT must be supplied with a power adapter and following different models could be chosen as following table:

No.	Brand	Model No.	P/N No.	Spec.
1	NETGEAR	AD2076F10	332-10993-01	Input: 100-120Vac, 0.56A, 50/60Hz Output: 12Vdc, 1.5A DC output cable (Unshielded, 1.8m)
2	NETGEAR	AD2067M20	332-11074-01	Input: 100-240Vac, 1.0A, 50/60Hz Output: 12Vdc, 2.5A DC output cable (Unshielded, 1.8m)
3	NETGEAR	2ABB018F 1 NJ	332-10927-01	Input: 100-120Vac, 0.6A, 50/60Hz Output: 12Vdc, 1.5A DC output cable (Unshielded, 1.8m)
4	NETGEAR	P030WM120B	332-10345-02	Input: 100-240Vac, 1.0A, 50/60Hz Output: 12Vdc, 2.5A DC output cable (Unshielded, 1.8m)

Note: From the above models, the worst radiated emission and AC power conducted emission test was found in **Adapter 2**. Therefore only the test data of the modes were recorded in this report.

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

Sub-GHz							
Ant No.	Brand	Model	Antenna Gain (dBi)	Frequency rang (MHz)	Antenna type	Connector type	
1	NA	902P00214N0	1.5	860~930	PIFA	NA	
Z-Wave							
Ant No.	Brand	Model	Antenna Gain (dBi)	Frequency rang (MHz)	Antenna type	Connector type	
1	NA	902P00213N0	2.5	860~930	PIFA	NA	
Zigbee							
Ant No.	Brand	Model	Antenna Gain (dBi)	Frequency rang (GHz)	Antenna type	Connector type	
1	INPAQ TECHNOLOGY CO., LTD.	ACA-5036-A2-CC-S	3.5	2.4~2.4835	CHIP	NA	
WLAN							
Ant No.	Brand	Model	Antenna Net Gain (dBi)	Frequency rang (GHz)	Antenna type	Connector type	Cable Length (mm)
1	NA	9 07X01052X0	2.5	2.4~2.4835	Dipole	i-pex	75
			1.8	5.15~5.25			
			2	5.25~5.35			
			2.2	5.47~5.725			
			1.6	5.725~5.85			
2	NA	9 07X00747X19	2.5	2.4~2.4835	Dipole	i-pex	90
			2.2	5.15~5.25			
			1.2	5.25~5.35			
			3.2	5.47~5.725			
			3.5	5.725~5.85			

5. 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

3 channels are provided to this EUT:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	908.4 (9.6kbps)	3	916 (100kbps)
2	908.4 (40kbps)		

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz & Bandedge Measurement
RE<1G: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission
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 TYPE
1 to 3	1, 2, 3	FSK

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 TYPE
1 to 3	1, 2, 3	FSK

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 TYPE
1 to 3	1	FSK

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.

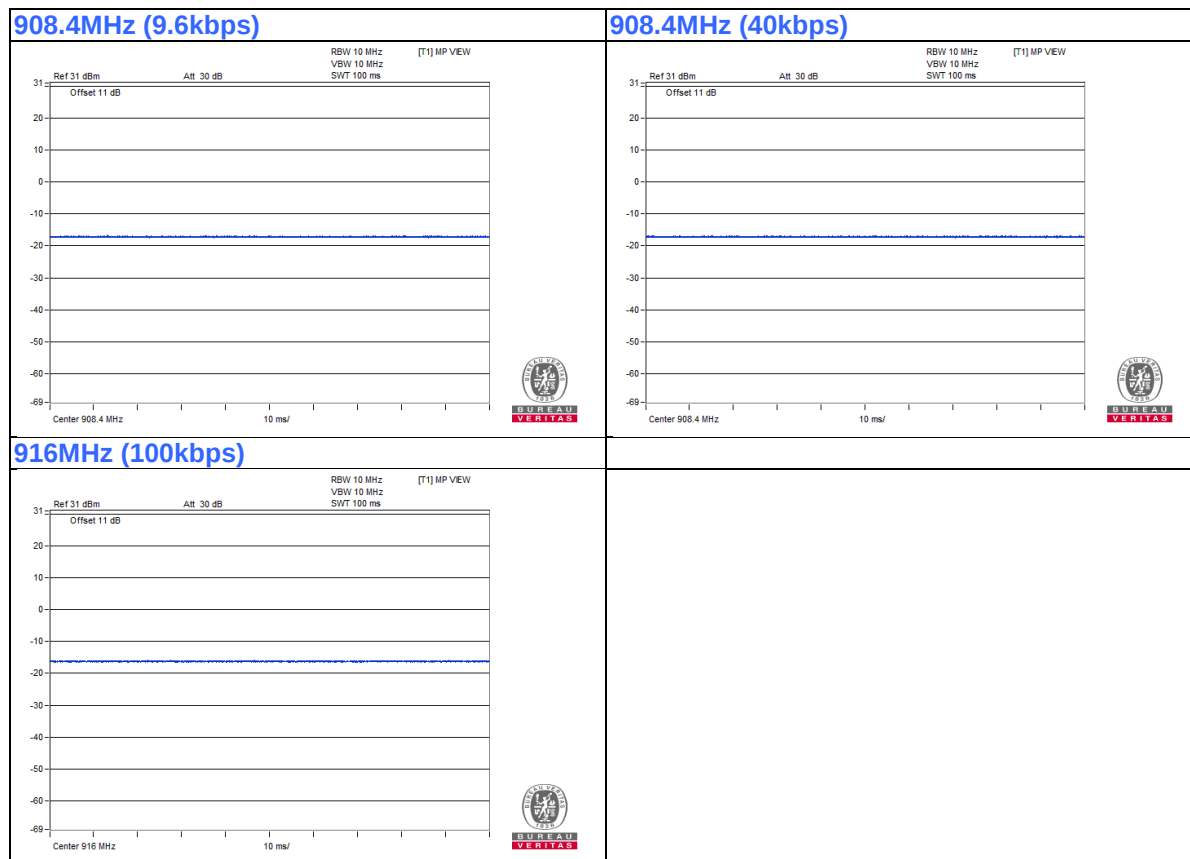
AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE
1 to 3	1, 2, 3	FSK

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE $\geq$ 1G	24deg. C, 63%RH	120Vac, 60Hz	Andy Ho
RE<1G	23deg. C, 68%RH	120Vac, 60Hz	Andy Ho
PLC	25deg. C, 75%RH	120Vac, 60Hz	Andy Ho
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is 100 %, duty factor is not required.



3.4 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.

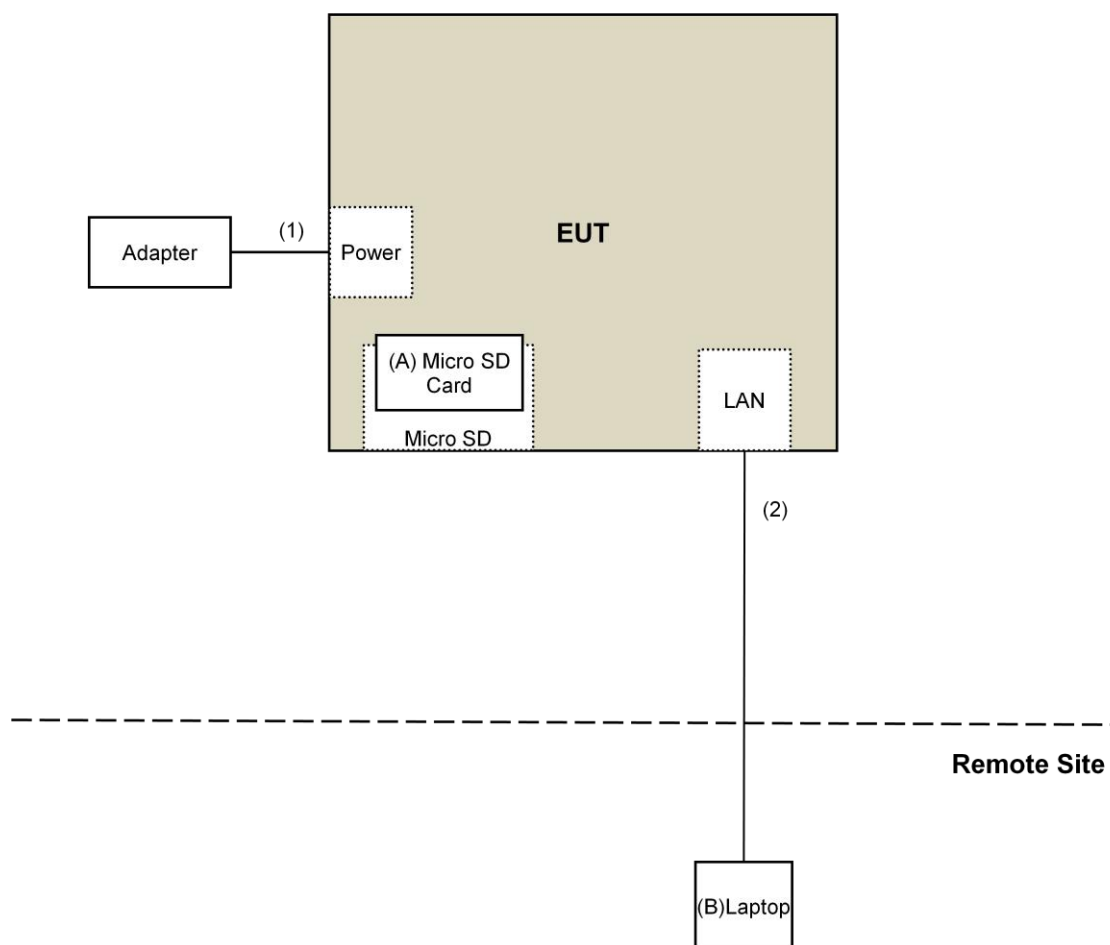
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	MicroSD Card	SanDisk	8GB	NA	NA	Provided by Lab
B.	Laptop	DELL	E6420	B92T3R1	FCC DoC	Provided by Lab

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.	DC Cable	1	1.8	No	0	Supplied by client
2.	RJ-45 Cable	1	10	No	0	Provided by Lab

3.4.1 Configuration of System under Test



3.5 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 (15.249)

ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
902 ~ 928 MHz	50	500
2400 ~ 2483.5 MHz	50	500
5725 ~ 5875 MHz	50	500
24 ~ 24.25 GHz	250	2500

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits as below table, whichever is the lesser attenuation

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	$2400/F(\text{kHz})$	300
0.490 ~ 1.705	$24000/F(\text{kHz})$	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

For Radiated emission (Below 1GHz):

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	July 12, 2018	July 11, 2019
Pre-Amplifier EMCI	EMC001340	980142	Feb. 09, 2018	Feb. 08, 2019
Loop Antenna ^(*) Electro-Metrics	EM-6879	264	Dec. 16, 2016	Dec. 15, 2018
RF Cable	NA	LOOPCAB-001	Jan. 15, 2018	Jan. 14, 2019
RF Cable	NA	LOOPCAB-002	Jan. 15, 2018	Jan. 14, 2019
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	May 05, 2018	May 04, 2019
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 29, 2017	Nov. 28, 2018
RF Cable	8D	966-3-1	Mar. 20, 2018	Mar. 19, 2019
RF Cable	8D	966-3-2	Mar. 20, 2018	Mar. 19, 2019
RF Cable	8D	966-3-3	Mar. 20, 2018	Mar. 19, 2019
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Oct. 03, 2017	Oct. 02, 2018
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA

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. The test was performed in 966 Chamber No. 3.
4. The CANADA Site Registration No. is 20331-1
5. Loop antenna was used for all emissions below 30 MHz.
6. Tested Date: Sep. 26, 2018

For other test items:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	July 12, 2018	July 11, 2019
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Dec. 12, 2017	Dec. 11, 2018
Pre-Amplifier EMCI	EMC12630SE	980384	Jan. 29, 2018	Jan. 28, 2019
RF Cable	EMC104-SM-SM-1200	160922	Jan. 29, 2018	Jan. 28, 2019
RF Cable	EMC104-SM-SM-2000	150317	Jan. 29, 2018	Jan. 28, 2019
RF Cable	EMC104-SM-SM-5000	150322	Jan. 29, 2018	Jan. 28, 2019
Spectrum Analyzer Keysight	N9030A	MY54490679	July 23, 2018	July 22, 2019
Pre-Amplifier EMCI	EMC184045SE	980386	Jan. 29, 2018	Jan. 28, 2019
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Dec. 14, 2017	Dec. 13, 2018
RF Cable	EMC102-KM-KM-1200	160924	Jan. 29, 2018	Jan. 28, 2019
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	June 20, 2018	June 19, 2019

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 test was performed in 966 Chamber No. 3.
3. The CANADA Site Registration No. is 20331-1
4. Tested Date: Oct. 11 to 15, 2018

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. Parallel, perpendicular, and ground-parallel orientations 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:

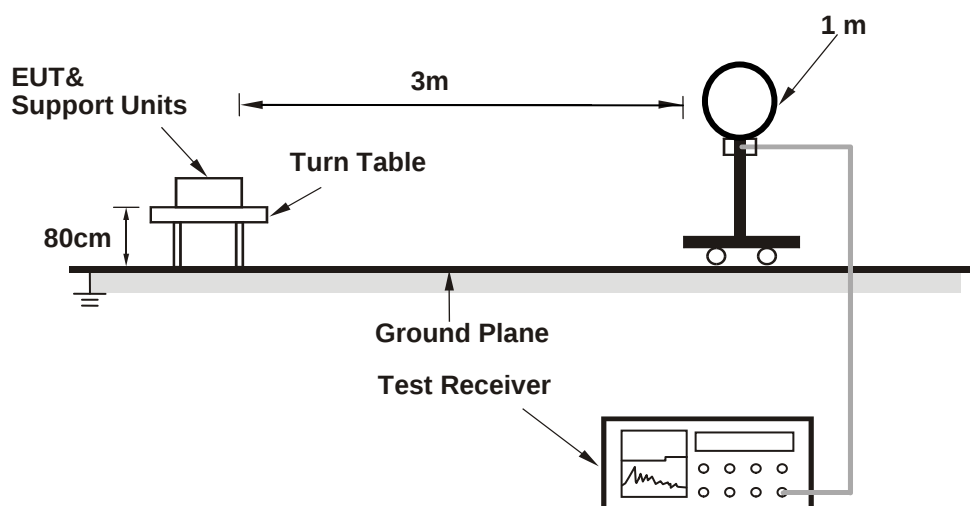
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $\geq 98\%$) 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

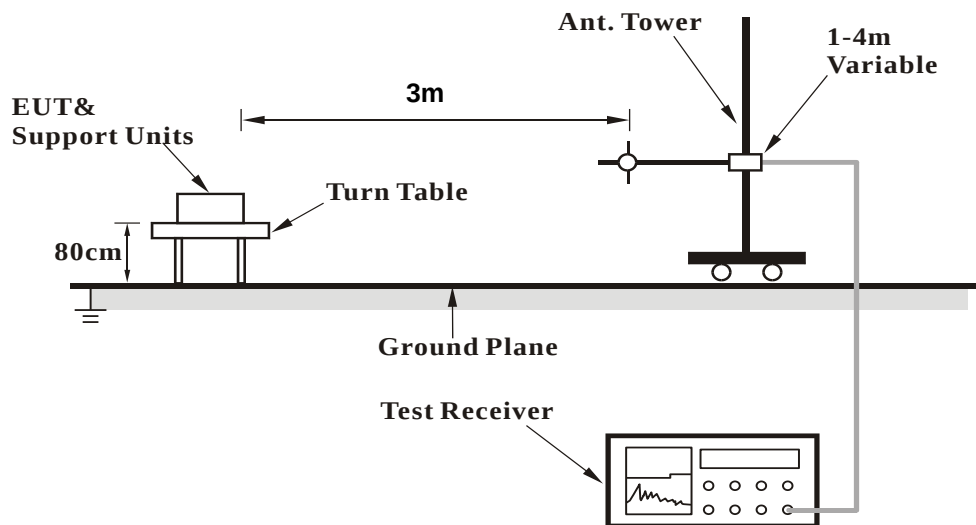
No deviation.

4.1.5 Test Setup

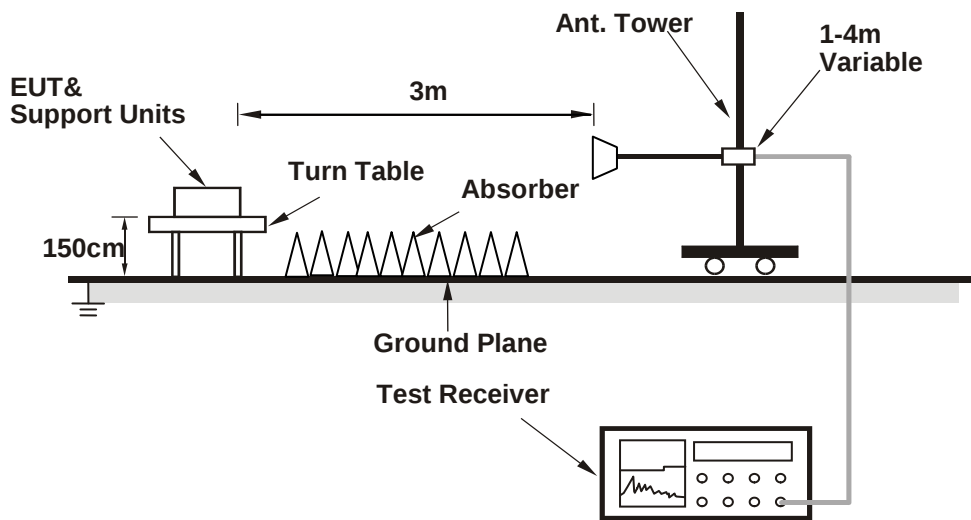
For Radiated emission below 30MHz



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. Connected the EUT with the Laptop which is placed on remote site.
- b. Controlling software (Run teraturn paste TX command) has been activated to set the EUT on specific status.

4.1.7 Test Results

Above 1GHz Data:

CHANNEL	TX Channel 1	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	1816.80	42.1 PK	74.0	-31.9	1.50 H	196	47.5	-5.4
2	1816.80	28.8 AV	54.0	-25.2	1.50 H	196	34.2	-5.4
3	2725.20	44.2 PK	74.0	-29.8	1.52 H	184	46.1	-1.9
4	2725.20	31.9 AV	54.0	-22.1	1.52 H	184	33.8	-1.9
5	3633.60	45.7 PK	74.0	-28.3	1.56 H	210	46.4	-0.7
6	3633.60	33.5 AV	54.0	-20.5	1.56 H	210	34.2	-0.7
7	4542.00	47.2 PK	74.0	-26.8	1.55 H	192	46.2	1.0
8	4542.00	35.1 AV	54.0	-18.9	1.55 H	192	34.1	1.0
9	5450.40	48.9 PK	74.0	-25.1	1.53 H	165	46.2	2.7
10	5450.40	35.8 AV	54.0	-18.2	1.53 H	165	33.1	2.7
11	6358.80	49.6 PK	74.0	-24.4	1.48 H	241	44.9	4.7
12	6358.80	37.6 AV	54.0	-16.4	1.48 H	241	32.9	4.7
13	7267.20	53.2 PK	74.0	-20.8	1.50 H	198	45.4	7.8
14	7267.20	40.8 AV	54.0	-13.2	1.50 H	198	33.0	7.8
15	8175.60	53.8 PK	74.0	-20.2	1.64 H	221	45.4	8.4
16	8175.60	42.1 AV	54.0	-11.9	1.64 H	221	33.7	8.4
17	9084.00	54.2 PK	74.0	-19.8	1.51 H	349	44.7	9.5
18	9084.00	42.3 AV	54.0	-11.7	1.51 H	349	32.8	9.5
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	1816.80	42.7 PK	74.0	-31.3	1.30 V	360	48.1	-5.4
2	1816.80	33.8 AV	54.0	-20.2	1.30 V	360	39.2	-5.4
3	2725.20	44.3 PK	74.0	-29.7	1.49 V	360	46.2	-1.9
4	2725.20	32.1 AV	54.0	-21.9	1.49 V	360	34.0	-1.9
5	3633.60	46.2 PK	74.0	-27.8	1.53 V	358	46.9	-0.7
6	3633.60	33.5 AV	54.0	-20.5	1.53 V	358	34.2	-0.7
7	4542.00	47.8 PK	74.0	-26.2	1.52 V	349	46.8	1.0
8	4542.00	35.2 AV	54.0	-18.8	1.52 V	349	34.2	1.0
9	5450.40	49.2 PK	74.0	-24.8	1.53 V	338	46.5	2.7
10	5450.40	36.1 AV	54.0	-17.9	1.53 V	338	33.4	2.7
11	6358.80	50.1 PK	74.0	-23.9	1.56 V	340	45.4	4.7
12	6358.80	37.8 AV	54.0	-16.2	1.56 V	340	33.1	4.7
13	7267.20	54.1 PK	74.0	-19.9	1.49 V	335	46.3	7.8
14	7267.20	41.2 AV	54.0	-12.8	1.49 V	335	33.4	7.8
15	8175.60	54.3 PK	74.0	-19.7	1.53 V	343	45.9	8.4
16	8175.60	42.6 AV	54.0	-11.4	1.53 V	343	34.2	8.4
17	9084.00	54.9 PK	74.0	-19.1	1.52 V	351	45.4	9.5
18	9084.00	42.6 AV	54.0	-11.4	1.52 V	351	33.1	9.5

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 2	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	1816.80	42.6 PK	74.0	-31.4	1.48 H	208	48.0	-5.4
2	1816.80	29.2 AV	54.0	-24.8	1.48 H	208	34.6	-5.4
3	2725.20	44.0 PK	74.0	-30.0	1.47 H	174	45.9	-1.9
4	2725.20	31.9 AV	54.0	-22.1	1.47 H	174	33.8	-1.9
5	3633.60	45.8 PK	74.0	-28.2	1.58 H	216	46.5	-0.7
6	3633.60	33.7 AV	54.0	-20.3	1.58 H	216	34.4	-0.7
7	4542.00	47.7 PK	74.0	-26.3	1.50 H	189	46.7	1.0
8	4542.00	35.4 AV	54.0	-18.6	1.50 H	189	34.4	1.0
9	5450.40	49.0 PK	74.0	-25.0	1.50 H	154	46.3	2.7
10	5450.40	35.8 AV	54.0	-18.2	1.50 H	154	33.1	2.7
11	6358.80	49.8 PK	74.0	-24.2	1.52 H	247	45.1	4.7
12	6358.80	38.0 AV	54.0	-16.0	1.52 H	247	33.3	4.7
13	7267.20	53.4 PK	74.0	-20.6	1.53 H	208	45.6	7.8
14	7267.20	41.1 AV	54.0	-12.9	1.53 H	208	33.3	7.8
15	8175.60	53.4 PK	74.0	-20.6	1.64 H	228	45.0	8.4
16	8175.60	41.8 AV	54.0	-12.2	1.64 H	228	33.4	8.4
17	9084.00	54.5 PK	74.0	-19.5	1.54 H	346	45.0	9.5
18	9084.00	42.5 AV	54.0	-11.5	1.54 H	346	33.0	9.5
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	1816.80	42.9 PK	74.0	-31.1	1.29 V	357	48.3	-5.4
2	1816.80	33.8 AV	54.0	-20.2	1.29 V	357	39.2	-5.4
3	2725.20	44.1 PK	74.0	-29.9	1.47 V	360	46.0	-1.9
4	2725.20	32.1 AV	54.0	-21.9	1.47 V	360	34.0	-1.9
5	3633.60	45.8 PK	74.0	-28.2	1.47 V	360	46.5	-0.7
6	3633.60	33.3 AV	54.0	-20.7	1.47 V	360	34.0	-0.7
7	4542.00	47.8 PK	74.0	-26.2	1.57 V	354	46.8	1.0
8	4542.00	35.4 AV	54.0	-18.6	1.57 V	354	34.4	1.0
9	5450.40	49.8 PK	74.0	-24.2	1.53 V	341	47.1	2.7
10	5450.40	36.5 AV	54.0	-17.5	1.53 V	341	33.8	2.7
11	6358.80	49.7 PK	74.0	-24.3	1.53 V	343	45.0	4.7
12	6358.80	37.6 AV	54.0	-16.4	1.53 V	343	32.9	4.7
13	7267.20	53.8 PK	74.0	-20.2	1.51 V	333	46.0	7.8
14	7267.20	41.0 AV	54.0	-13.0	1.51 V	333	33.2	7.8
15	8175.60	53.5 PK	74.0	-20.5	1.54 V	346	45.1	8.4
16	8175.60	42.1 AV	54.0	-11.9	1.54 V	346	33.7	8.4
17	9084.00	55.0 PK	74.0	-19.0	1.48 V	339	45.5	9.5
18	9084.00	42.9 AV	54.0	-11.1	1.48 V	339	33.4	9.5

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 3	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	1832.00	42.8 PK	74.0	-31.2	1.49 H	191	48.2	-5.4
2	1832.00	29.2 AV	54.0	-24.8	1.49 H	191	34.6	-5.4
3	2748.00	44.2 PK	74.0	-29.8	1.52 H	184	46.1	-1.9
4	2748.00	32.1 AV	54.0	-21.9	1.52 H	184	34.0	-1.9
5	3664.00	46.0 PK	74.0	-28.0	1.62 H	201	46.6	-0.6
6	3664.00	33.6 AV	54.0	-20.4	1.62 H	201	34.2	-0.6
7	4580.00	47.7 PK	74.0	-26.3	1.53 H	180	46.5	1.2
8	4580.00	35.5 AV	54.0	-18.5	1.53 H	180	34.3	1.2
9	5496.00	48.7 PK	74.0	-25.3	1.51 H	173	46.2	2.5
10	5496.00	35.8 AV	54.0	-18.2	1.51 H	173	33.3	2.5
11	6412.00	49.2 PK	74.0	-24.8	1.53 H	227	44.4	4.8
12	6412.00	37.1 AV	54.0	-16.9	1.53 H	227	32.3	4.8
13	7328.00	53.4 PK	74.0	-20.6	1.56 H	193	45.5	7.9
14	7328.00	41.0 AV	54.0	-13.0	1.56 H	193	33.1	7.9
15	8244.00	53.7 PK	74.0	-20.3	1.65 H	211	45.4	8.3
16	8244.00	41.8 AV	54.0	-12.2	1.65 H	211	33.5	8.3
17	9160.00	54.0 PK	74.0	-20.0	1.46 H	353	44.2	9.8
18	9160.00	42.0 AV	54.0	-12.0	1.46 H	353	32.2	9.8
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	1832.00	42.6 PK	74.0	-31.4	1.28 V	360	48.0	-5.4
2	1832.00	33.9 AV	54.0	-20.1	1.28 V	360	39.3	-5.4
3	2748.00	44.2 PK	74.0	-29.8	1.53 V	360	46.1	-1.9
4	2748.00	32.2 AV	54.0	-21.8	1.53 V	360	34.1	-1.9
5	3664.00	46.4 PK	74.0	-27.6	1.54 V	351	47.0	-0.6
6	3664.00	33.7 AV	54.0	-20.3	1.54 V	351	34.3	-0.6
7	4580.00	47.5 PK	74.0	-26.5	1.48 V	334	46.3	1.2
8	4580.00	35.2 AV	54.0	-18.8	1.48 V	334	34.0	1.2
9	5496.00	48.7 PK	74.0	-25.3	1.56 V	329	46.2	2.5
10	5496.00	35.8 AV	54.0	-18.2	1.56 V	329	33.3	2.5
11	6412.00	49.8 PK	74.0	-24.2	1.59 V	332	45.0	4.8
12	6412.00	37.5 AV	54.0	-16.5	1.59 V	332	32.7	4.8
13	7328.00	54.0 PK	74.0	-20.0	1.49 V	340	46.1	7.9
14	7328.00	41.2 AV	54.0	-12.8	1.49 V	340	33.3	7.9
15	8244.00	54.1 PK	74.0	-19.9	1.58 V	331	45.8	8.3
16	8244.00	42.2 AV	54.0	-11.8	1.58 V	331	33.9	8.3
17	9160.00	55.6 PK	74.0	-18.4	1.50 V	356	45.8	9.8
18	9160.00	43.0 AV	54.0	-11.0	1.50 V	356	33.2	9.8

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

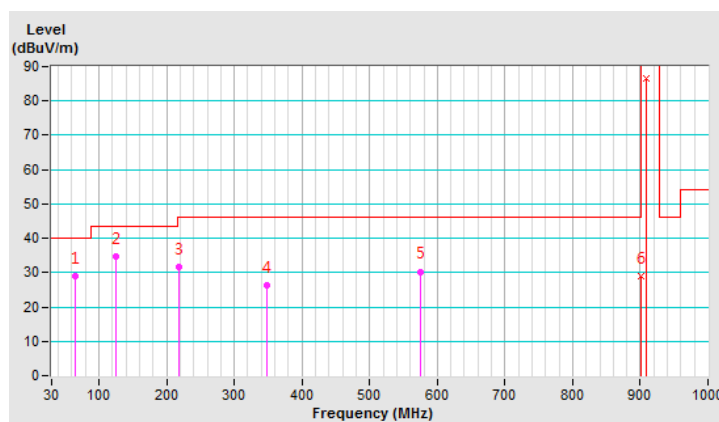
Below 1GHz Data:

CHANNEL	TX Channel 1	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	64.53	28.8 QP	40.0	-11.2	3.00 H	261	38.0	-9.2
2	125.01	34.6 QP	43.5	-8.9	3.00 H	86	43.9	-9.3
3	217.89	31.5 QP	46.0	-14.5	1.50 H	262	42.3	-10.8
4	347.84	26.4 QP	46.0	-19.6	1.50 H	131	32.1	-5.7
5	574.78	30.3 QP	46.0	-15.7	2.00 H	1	30.8	-0.5
6	902.00	28.8 QP	46.0	-17.2	1.02 H	332	23.7	5.1
7	*908.40	86.5 QP	94.0	-7.5	1.02 H	332	81.3	5.2

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.
6. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

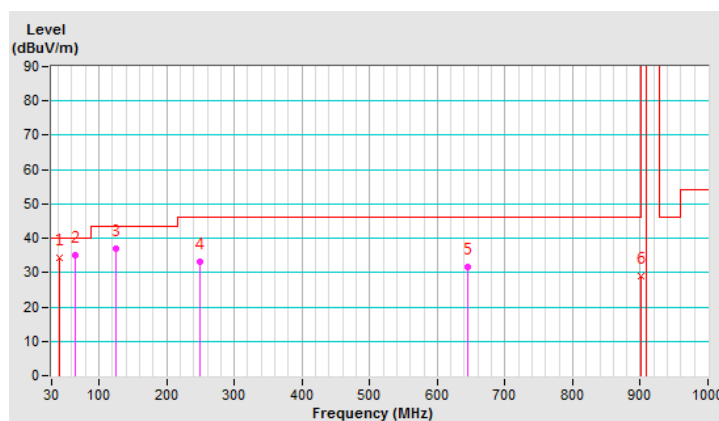


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	41.70	34.4 QP	40.0	-5.6	1.02 V	0	42.5	-8.1
2	65.57	35.1 QP	40.0	-4.9	1.00 V	286	44.5	-9.4
3	125.01	37.0 QP	43.5	-6.5	1.00 V	240	46.3	-9.3
4	250.00	33.2 QP	46.0	-12.8	1.50 V	360	42.1	-8.9
5	644.33	31.7 QP	46.0	-14.3	1.00 V	172	30.5	1.2
6	902.00	29.1 QP	46.0	-16.9	1.13 V	128	24.0	5.1
7	*908.40	93.8 QP	94.0	-0.2	1.13 V	128	88.6	5.2

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.
6. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

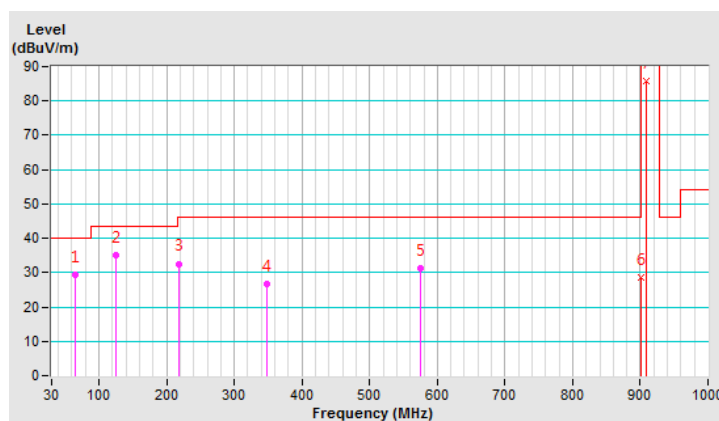


CHANNEL	TX Channel 2	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	64.53	29.2 QP	40.0	-10.8	2.50 H	149	38.4	-9.2
2	124.99	35.2 QP	43.5	-8.3	2.50 H	187	44.5	-9.3
3	217.89	32.6 QP	46.0	-13.4	2.00 H	314	43.4	-10.8
4	347.84	26.8 QP	46.0	-19.2	1.50 H	226	32.5	-5.7
5	574.78	31.2 QP	46.0	-14.8	2.00 H	221	31.7	-0.5
6	902.00	28.6 QP	46.0	-17.4	1.02 H	331	23.5	5.1
7	*908.37	85.9 QP	94.0	-8.1	1.02 H	331	80.7	5.2

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.
6. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

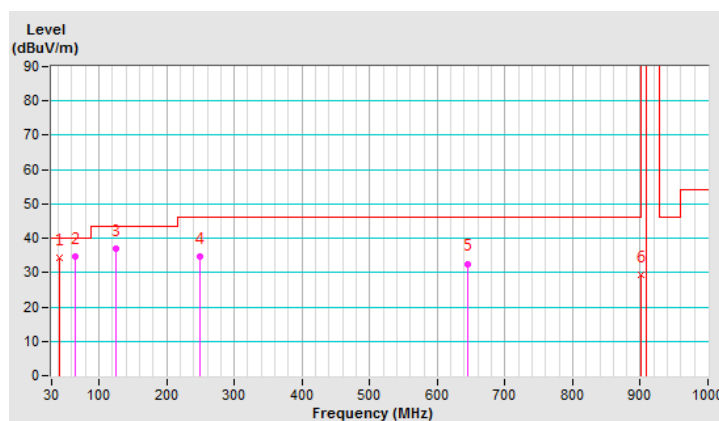


CHANNEL	TX Channel 2	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	41.70	34.2 QP	40.0	-5.8	1.00 V	19	42.3	-8.1
2	65.57	34.6 QP	40.0	-5.4	1.00 V	115	44.0	-9.4
3	125.01	37.0 QP	43.5	-6.5	1.10 V	225	46.3	-9.3
4	250.00	34.6 QP	46.0	-11.4	2.00 V	187	43.5	-8.9
5	644.33	32.6 QP	46.0	-13.4	1.50 V	148	31.4	1.2
6	902.00	29.2 QP	46.0	-16.8	1.10 V	113	24.1	5.1
7	*908.42	93.9 QP	94.0	-0.1	1.10 V	113	88.7	5.2

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.
6. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

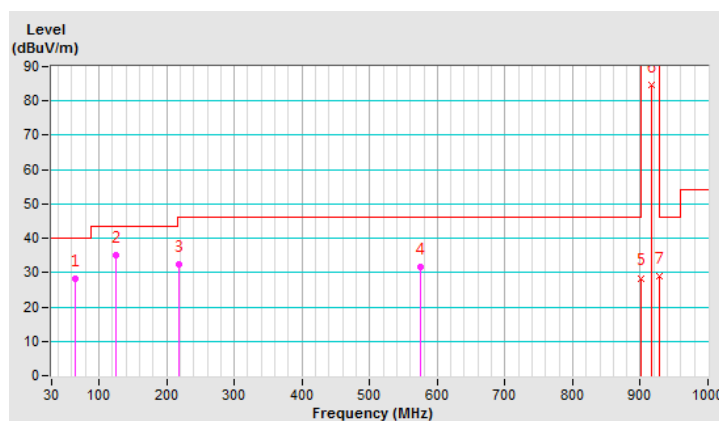


CHANNEL	TX Channel 3	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	64.52	28.1 QP	40.0	-11.9	2.50 H	149	37.3	-9.2
2	125.01	35.2 QP	43.5	-8.3	2.50 H	116	44.5	-9.3
3	217.89	32.4 QP	46.0	-13.6	1.50 H	225	43.2	-10.8
4	574.81	31.6 QP	46.0	-14.4	2.00 H	224	32.1	-0.5
5	902.00	28.4 QP	46.0	-17.6	1.60 H	332	23.3	5.1
6	*916.02	84.8 QP	94.0	-9.2	1.60 H	332	79.6	5.2
7	928.00	29.1 QP	46.0	-16.9	1.60 H	332	23.8	5.3

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.
6. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

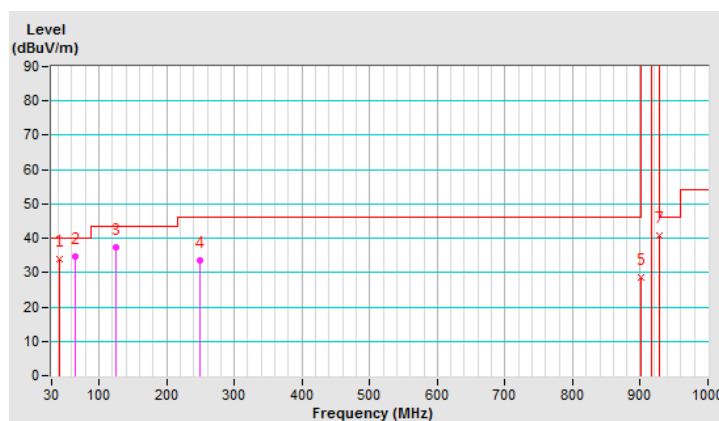


CHANNEL	TX Channel 3	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	41.70	33.8 QP	40.0	-6.2	1.00 V	16	41.9	-8.1
2	65.57	34.6 QP	40.0	-5.4	1.00 V	115	44.0	-9.4
3	125.01	37.2 QP	43.5	-6.3	1.00 V	156	46.5	-9.3
4	249.99	33.6 QP	46.0	-12.4	1.50 V	269	42.5	-8.9
5	902.00	28.6 QP	46.0	-17.4	1.08 V	113	23.5	5.1
6	*915.97	93.8 QP	94.0	-0.2	1.08 V	113	88.6	5.2
7	928.00	40.8 QP	46.0	-5.2	1.08 V	113	35.5	5.3

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.
6. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



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	Nov. 01, 2017	Oct. 31, 2018
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Nov. 15, 2017	Nov. 14, 2018
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100072	June 04, 2018	June 03, 2019
50 ohms Terminator	N/A	EMC-04	Nov. 01, 2017	Oct. 31, 2018
RF Cable	5D-FB	COCCAB-001	Sep. 28, 2018	Sep. 27, 2019
Fixed attenuator EMCI	STI02-2200-10	003	Mar. 16, 2018	Mar. 15, 2019
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 Conduction 1.
- 3 Tested Date: Oct. 10, 2018

4.2.3 Test Procedures

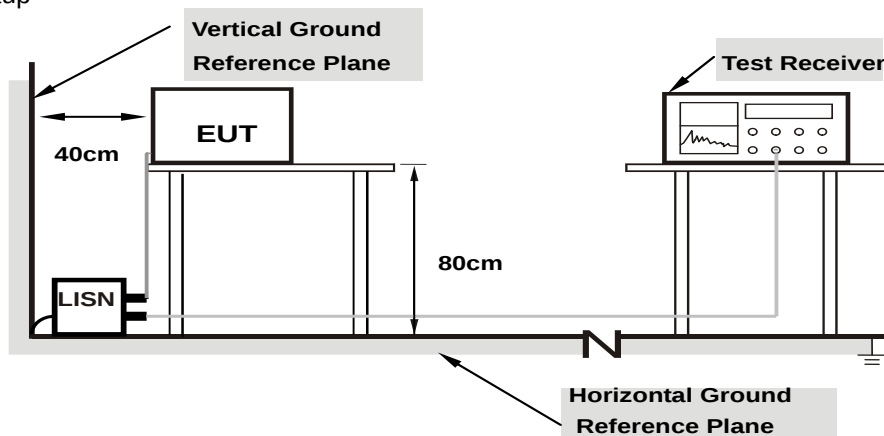
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- 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 Conditions

Same as 4.1.6.

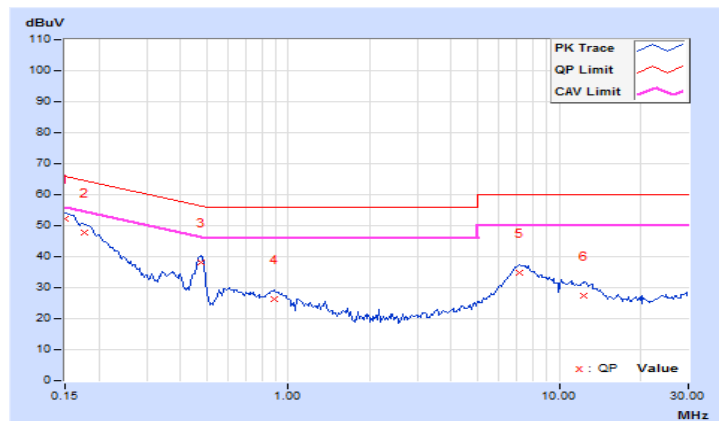
4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.05	42.09	25.47	52.14	35.52	66.00	56.00	-13.86	-20.48
2	0.17734	10.06	37.83	24.51	47.89	34.57	64.61	54.61	-16.72	-20.04
3	0.47813	10.13	28.19	18.69	38.32	28.82	56.37	46.37	-18.05	-17.55
4	0.89219	10.16	16.12	12.34	26.28	22.50	56.00	46.00	-29.72	-23.50
5	7.14063	10.53	24.46	19.29	34.99	29.82	60.00	50.00	-25.01	-20.18
6	12.35156	10.87	16.65	10.68	27.52	21.55	60.00	50.00	-32.48	-28.45

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

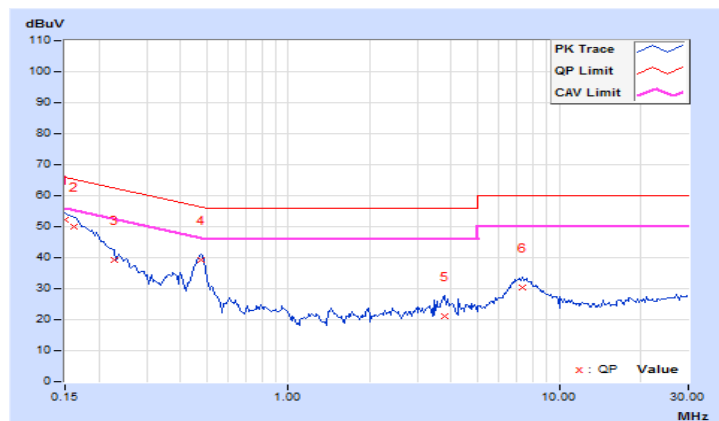


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.95	42.27	24.93	52.22	34.88	66.00	56.00	-13.78	-21.12
2	0.16172	9.96	40.16	23.10	50.12	33.06	65.38	55.38	-15.26	-22.32
3	0.22812	9.98	29.34	14.76	39.32	24.74	62.52	52.52	-23.20	-27.78
4	0.47422	10.02	29.29	22.47	39.31	32.49	56.44	46.44	-17.13	-13.95
5	3.75781	10.18	10.88	0.20	21.06	10.38	56.00	46.00	-34.94	-35.62
6	7.32813	10.38	19.86	14.31	30.24	24.69	60.00	50.00	-29.76	-25.31

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 20dB Bandwidth Measurement

4.3.1 Limits of 20dB Bandwidth Measurement

The 20dB bandwidth shall be specified in operating frequency band.

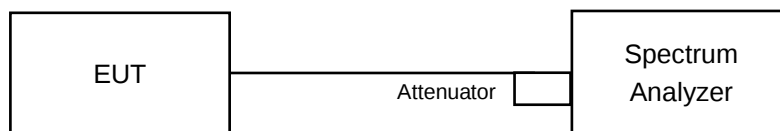
4.3.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.3 Test Procedure

The bandwidth of the fundamental frequency was measured by spectrum analyzer with 3kHz RBW and 10kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

4.3.4 Test Setup



4.3.5 Deviation from Test Standard

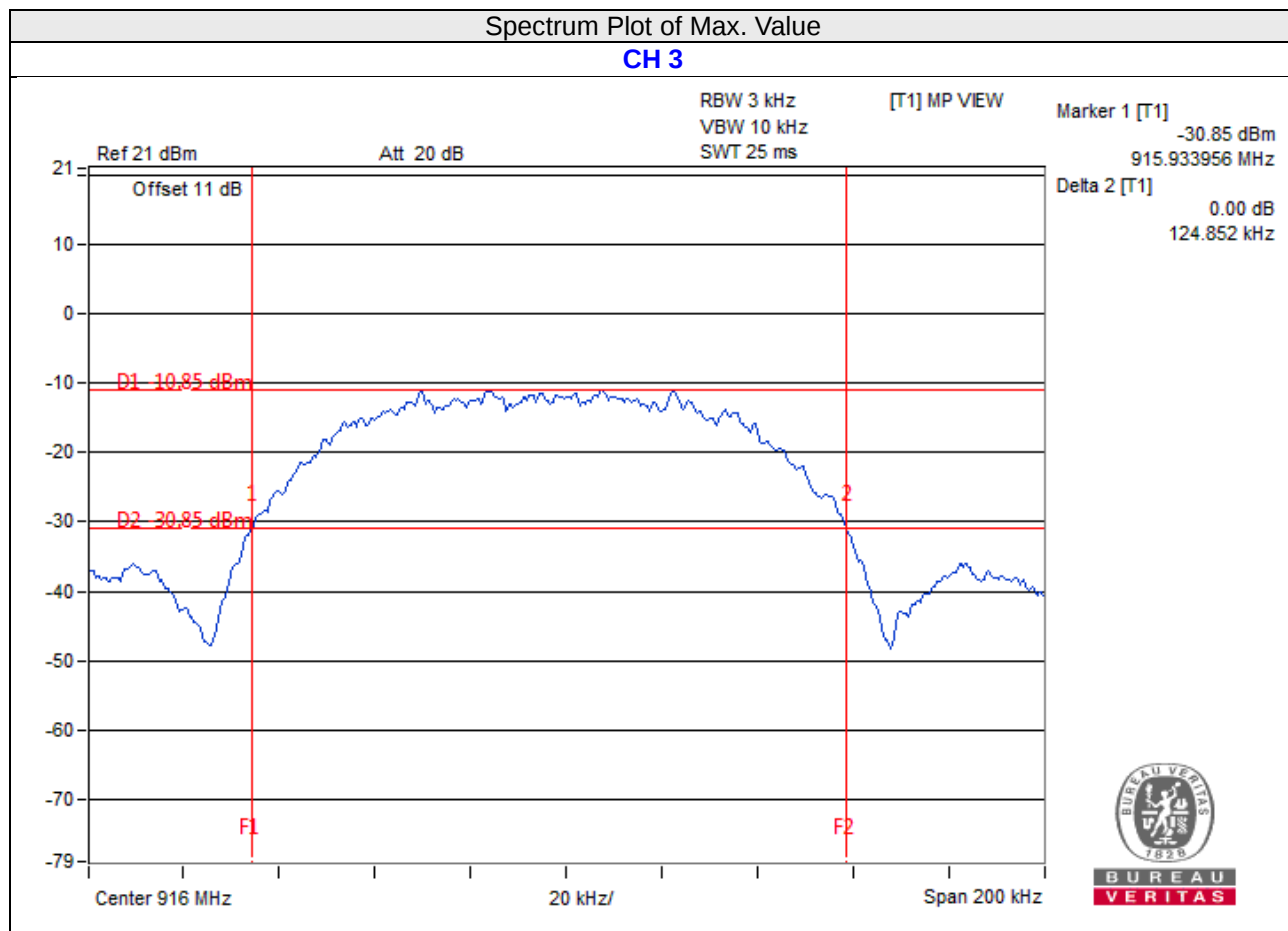
No deviation.

4.3.6 EUT Operating Condition

Set the EUT under transmission condition continuously at specific channel frequency.

4.3.7 Test Results

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
1	908.4	0.10
2	908.4	0.10
3	916	0.12



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 FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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

Linkou 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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