

FCC Test Report

Report No.: RF181115C24-7

FCC ID: 2ARXKVHE09

Test Model: VHE09

Series Model: VHE09XXX (X=A-Z, 0-9, blank or "-")

Received Date: Nov. 15, 2018

Test Date: Apr. 18 ~ May 27, 2019

Issued Date: May 29, 2019

Applicant: Veea Inc

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

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FCC Registration / Designation Number: 788550 / TW0003



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Release Control Record

Issue No.	Description	Date Issued
RF181115C24-7	Original release.	May 29, 2019

1 Certificate of Conformity

Product: veeaHub

Brand: 

Test Model: VHE09

Series Model: VHE09XXX (X=A-Z, 0-9, blank or "-")

Sample Status: Engineering sample

Applicant: Veea Inc

Test Date: Apr. 18 ~ May 27, 2019

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 RF characteristics under the conditions specified in this report.

Prepared by :  , **Date:** May 29, 2019
Pettie Chen / Senior Specialist

Approved by :  , **Date:** May 29, 2019
Bruce Chen / Project Engineer

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 -2.58dB at 0.50264MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.1dB at 49.34MHz.
15.247(d)	Antenna Port Emission	Pass	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	Pass	Meet the requirement of limit.
15.247(b)	Conducted power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Dipole antenna: Antenna connector is RP-SMA-Male not a standard connector. Chip antenna: No antenna connector is used. PIFA antenna: Antenna connector is U.FL not a standard connector.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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	2.94 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.86 dB
	200MHz ~ 1000MHz	3.87 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	veeaHub
Brand	veeaHub 
Test Model	VHE09
Series Model	VHE09XXX (X=A-Z, 0-9, blank or "-")
Model Difference	Marketing purposes
Sample Status	Engineering sample
Nominal Voltage	48Vdc (Adapter and PoE)
Modulation Type	GFSK
Transfer Rate	LE 4.0: 1Mbps LE 5.0: 2Mbps
Operating Frequency	2402~2480MHz
Number of Channel	40
Channel Spacing	2MHz
Output Power	LE 4.0: 0.343mW LE 5.0: 0.341mW
Antenna Type	Dipole antenna with 4.1dBi gain Chip antenna with 6dBi gain PIFA antenna with 2.2dBi gain
Antenna Connector	Dipole antenna: RP-SMA-Male Chip antenna: NA PIFA antenna: U.FL
Accessory Device	Adapter
Cable Supplied	NA

Note:

1. The EUT uses following adapter and PoE. (Support unit)

Adapter	
Brand	EDAC Power Electronics Co., Ltd.
Model	EA1062SGR-480
Input Power	100-240Vac ~2.5A, 50-60Hz
Output Power	48Vdc / 1.35A
Power Line	1.2m DC cable with one core

PoE	
Model	APOE02-WM
Output Power	48Vdc

2. The EUT with Chip antenna (with maximum gain) was chosen for the Antenna Port Conducted Measurement tests.
3. WLAN, zigbee and Bluetooth technology can transmit at same time.

3.2 Description of Test Modes

40 channels are provided to this EUT:

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

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to				Description	
	RE $\geq$ 1G	RE<1G	PLC	APCM	Antenna	Power
A1	√	√	√	-	Dipole Antenna	Power from adapter
A2	-	√	√	-		Power from PoE
B1	√	√	√	√	Chip Antenna	Power from adapter
B2	-	√	√	-		Power from PoE
C1	√	√	√	-	PIFA Antenna	Power from adapter
C2	-	√	√	-		Power from PoE

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

Note:

1. The antenna had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on Y-plane.
2. The EUT with Chip antenna (with maximum gain) was chosen for the Antenna Port Conducted Measurement tests.

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.

EUT Configure Mode	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A1, B1, C1	0 to 39	0, 19, 39	GFSK	1

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.

EUT Configure Mode	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A1, A2, B1, B2, C1, C2	0 to 39	39	GFSK	1

Power Line Conducted Emission Test:

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

EUT Configure Mode	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A1, A2, B1, B2, C1, C2	0 to 39	39	GFSK	1

Antenna Port Conducted Measurement:

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

EUT Configure Mode	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
B1	0 to 39	0, 19, 39	GFSK	1

Test Condition:

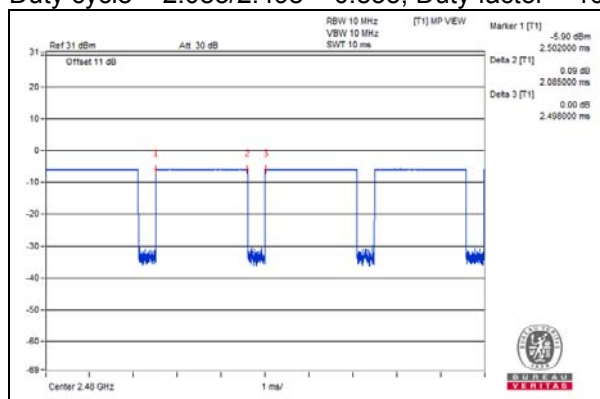
Applicable to	Environmental Conditions	Input Power	Tested by
RE $\geq$ 1G	23 deg. C, 69% RH	120Vac, 60Hz	Ian Chang
RE $<$ 1G	24 deg. C, 69% RH	120Vac, 60Hz 48Vdc	Adair Peng
PLC	22 deg. C, 66% RH	120Vac, 60Hz 48Vdc	Adair Peng
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Alan Wu

3.1 Duty Cycle of Test Signal

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

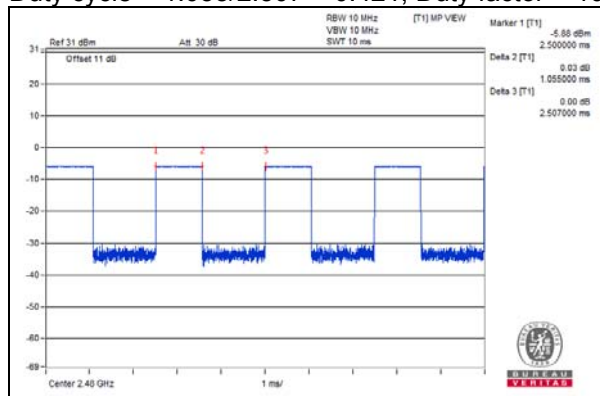
BT LE 4.0

Duty cycle = $2.085/2.498 = 0.835$, Duty factor = $10 * \log(1/0.835) = 0.78$



BT LE 5.0

Duty cycle = $1.055/2.507 = 0.421$, Duty factor = $10 * \log(1/0.421) = 3.76$



3.2 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.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	Load	NA	NA	NA	NA	-
C.	USB Flash	HP	v250W	04	NA	-
D.	USB Flash	HP	v250W	05	NA	-
E.	USB Flash	HP	v250W	06	NA	-
F.	PoE	NA	APOE02-WM	NA	NA	Provided by manufacturer

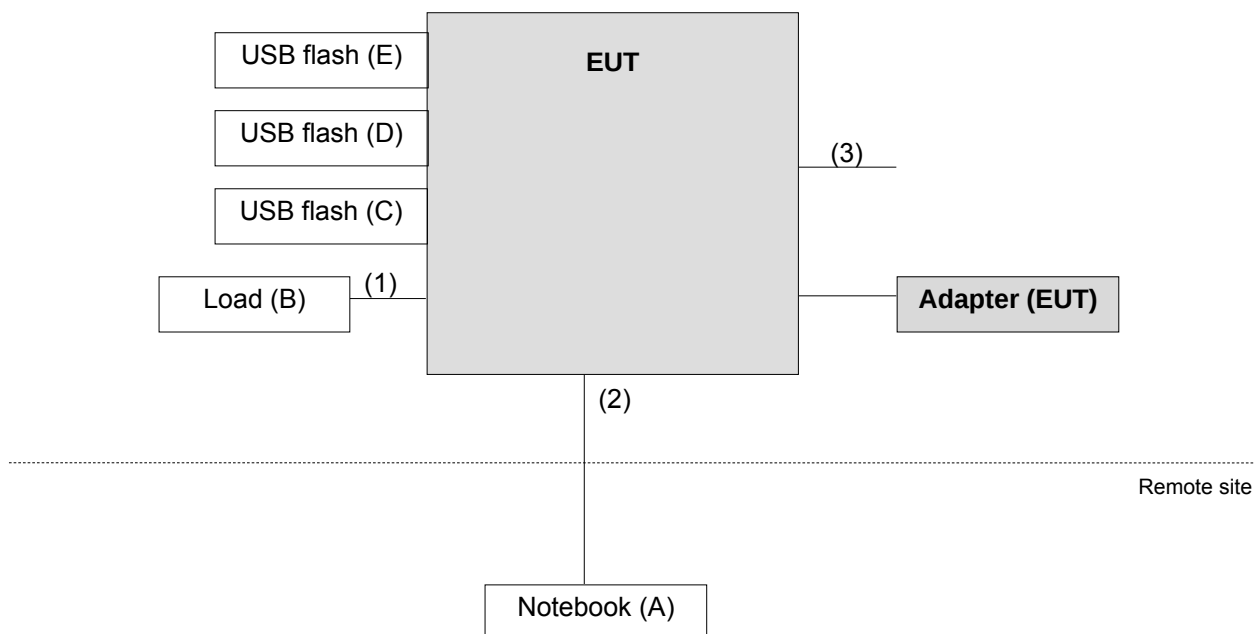
Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

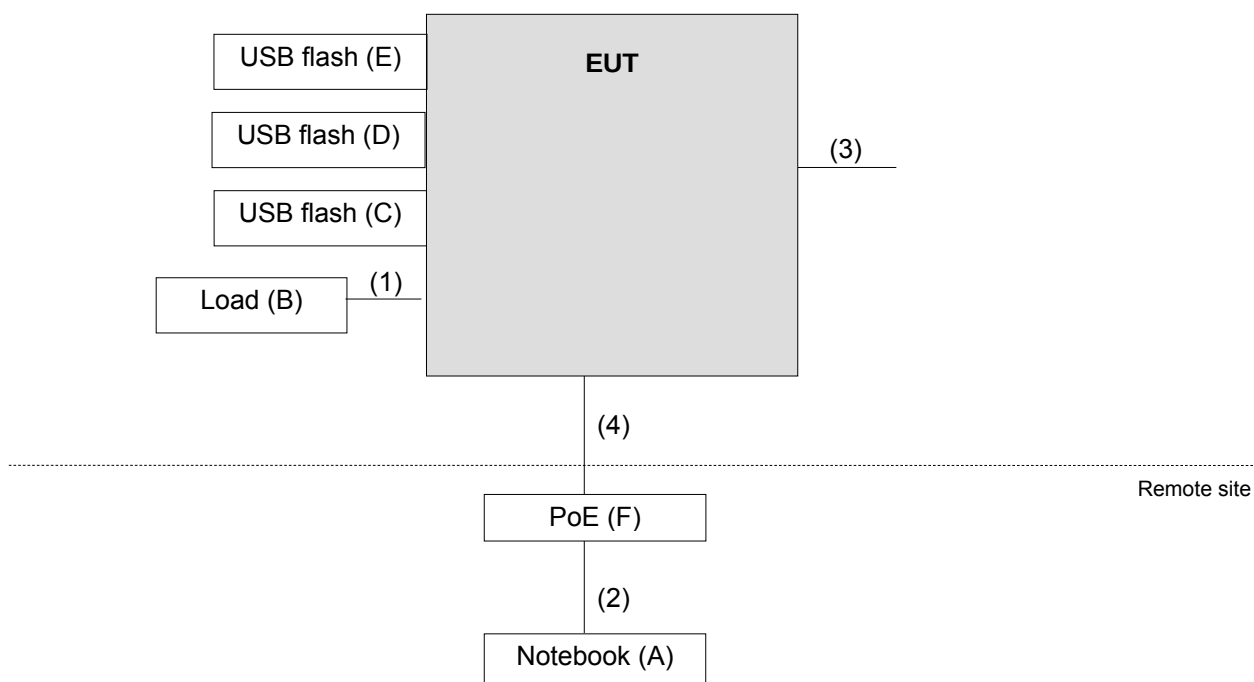
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45 cable	1	1.5	N	0	Cat5e
2.	RJ45 cable	1	6	N	0	Cat5e
3.	Console cable	1	2	N	0	-
4.	RJ45 cable	1	1.5	N	0	Cat5e

3.2.1 Configuration of System under Test

Test Mode A1, B1, C1



Test Mode A2, B2, C2



3.3 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)

KDB 558074 D01 15.247 Meas Guidance v05r02

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

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.	Cal. Date	Cal. Due
HP Preamplifier	8447D	2432A03504	Feb. 20, 2019	Feb. 19, 2020
HP Preamplifier	8449B	3008A01201	Feb. 21, 2019	Feb. 20, 2020
MITEQ Preamplifier	AMF-6F-260400-33-8P	892164	Feb. 20, 2019	Feb. 19, 2020
Agilent TEST RECEIVER	N9038A	MY51210129	Mar. 05, 2019	Mar. 04, 2020
Schwarzbeck Antenna	VULB 9168	139	Nov. 26, 2018	Nov. 25, 2019
Schwarzbeck Horn Antenna	BBHA-9170	212	Nov. 25, 2018	Nov. 24, 2019
Schwarzbeck Horn Antenna	BBHA 9120-D1	D130	Nov. 25, 2018	Nov. 24, 2019
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	Radiated_V7.6.15.9.5	NA	NA	NA
SUHNER RF cable With 4dB PAD	SF102	Cable-CH6-01	Aug. 13, 2018	Aug. 12, 2019
SUHNER RF cable With 3/4dB PAD	SF102	Cable-CH8-3.6m	Aug. 13, 2018	Aug. 12, 2019
KEYSIGHT MIMO Powermeasurement Test set	U2021XA	U2021XA-001	Jun. 04, 2018	Jun. 03, 2019
KEYSIGHT Spectrum Analyzer	N9030A	MY54490260	Aug. 03, 2018	Aug. 02, 2019
Loop Antenna EMCI	LPA600	270	Aug. 11, 2017	Aug. 10, 2019
EMCO Horn Antenna	3115	00028257	Nov. 25, 2018	Nov. 24, 2019
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	NA	NA
ROHDE & SCHWARZ Spectrum Analyzer	FSV40	101042	Sep. 27, 2018	Sep. 26, 2019
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY551 90004/MY55190007/ MY55210005	Jul. 17, 2018	Jul. 16, 2019

NOTE: 1. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to NML/ROC and NIST/USA.

2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

3. The test was performed in Chamber No. 6.

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:

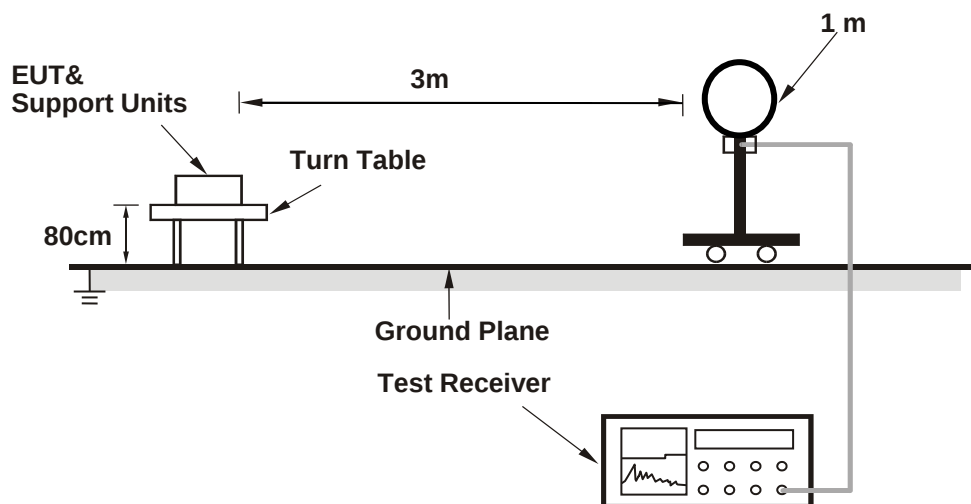
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

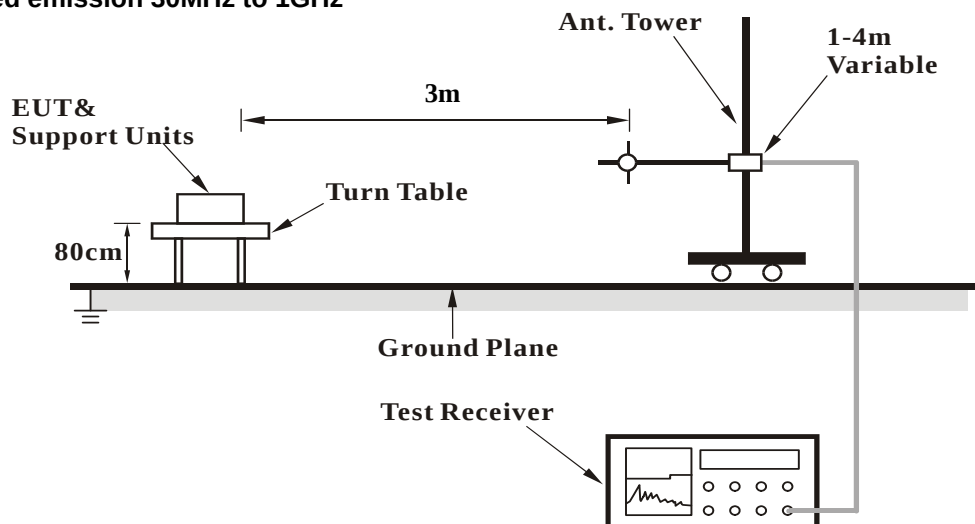
No deviation.

4.1.5 Test Setup

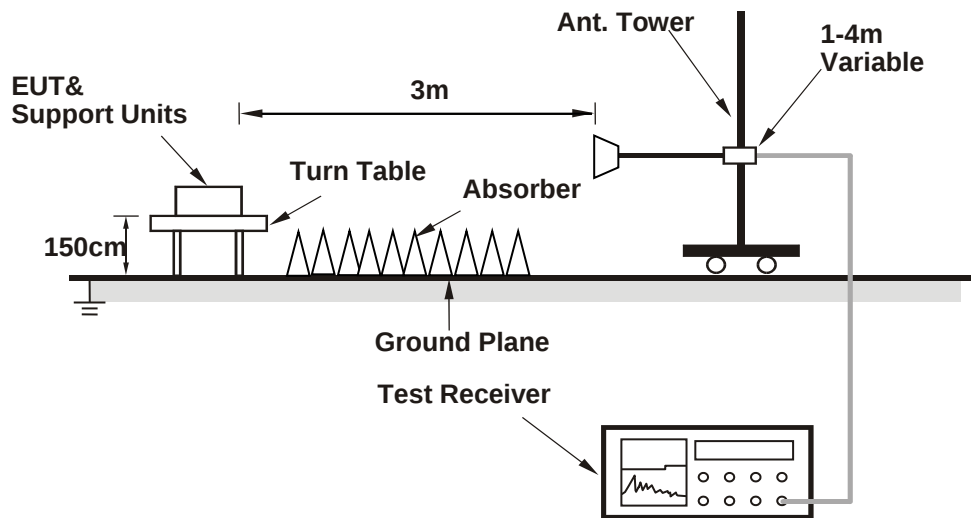
For Radiated emission below 30MHz



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

4.1.7 Test Results

Above 1GHz Data:

BT LE 4.0

CHANNEL	TX Channel 0	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	A1

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	2390.00	57.40 PK	74.00	-16.60	1.48 H	343	57.62	-0.22
2	2390.00	41.33 AV	54.00	-12.67	1.48 H	343	41.55	-0.22
3	*2402.00	91.20 PK			1.48 H	343	91.42	-0.22
4	*2402.00	90.20 AV			1.48 H	343	90.42	-0.22
5	4804.00	50.04 PK	74.00	-23.96	2.57 H	147	43.57	6.47
6	4804.00	35.09 AV	54.00	-18.91	2.57 H	147	28.62	6.47
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	2390.00	56.08 PK	74.00	-17.92	3.56 V	266	56.30	-0.22
2	2390.00	41.45 AV	54.00	-12.55	3.56 V	266	41.67	-0.22
3	*2402.00	89.19 PK			3.56 V	266	89.41	-0.22
4	*2402.00	86.80 AV			3.56 V	266	87.02	-0.22
5	4804.00	48.02 PK	74.00	-25.98	1.42 V	321	41.55	6.47
6	4804.00	33.22 AV	54.00	-20.78	1.42 V	321	26.75	6.47

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 19	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	A1

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	*2440.00	95.52 PK			1.44 H	344	95.72	-0.20
2	*2440.00	90.59 AV			1.44 H	344	90.79	-0.20
3	4880.00	48.90 PK	74.00	-25.10	2.56 H	148	42.74	6.16
4	4880.00	34.04 AV	54.00	-19.96	2.56 H	148	27.88	6.16
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	*2440.00	93.02 PK			3.55 V	264	93.22	-0.20
2	*2440.00	88.09 AV			3.55 V	264	88.29	-0.20
3	4880.00	47.18 PK	74.00	-26.82	1.44 V	322	41.02	6.16
4	4880.00	32.30 AV	54.00	-21.70	1.44 V	322	26.14	6.16

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 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	A1

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	*2480.00	92.40 PK			1.55 H	345	92.57	-0.17
2	*2480.00	91.30 AV			1.55 H	345	91.47	-0.17
3	2483.50	67.14 PK	74.00	-6.86	1.55 H	345	67.30	-0.16
4	2483.50	44.31 AV	54.00	-9.69	1.55 H	345	44.47	-0.16
5	4960.00	49.45 PK	74.00	-24.55	2.55 H	243	43.27	6.18
6	4960.00	34.32 AV	54.00	-19.68	2.55 H	243	28.14	6.18
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	*2480.00	89.99 PK			3.51 V	268	90.16	-0.17
2	*2480.00	89.27 AV			3.51 V	268	89.44	-0.17
3	2483.50	66.06 PK	74.00	-7.94	3.51 V	268	66.22	-0.16
4	2483.50	43.47 AV	54.00	-10.53	3.51 V	268	43.63	-0.16
5	4960.00	47.40 PK	74.00	-26.60	1.45 V	328	41.22	6.18
6	4960.00	32.71 AV	54.00	-21.29	1.45 V	328	26.53	6.18

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 0	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	B1

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	2390.00	54.37 PK	74.00	-19.63	3.78 H	9	54.59	-0.22
2	2390.00	40.19 AV	54.00	-13.81	3.78 H	9	40.41	-0.22
3	*2402.00	84.69 PK			3.78 H	9	84.91	-0.22
4	*2402.00	83.56 AV			3.78 H	9	83.78	-0.22
5	4804.00	47.02 PK	74.00	-26.98	1.63 H	234	40.55	6.47
6	4804.00	34.22 AV	54.00	-19.78	1.63 H	234	27.75	6.47
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	2390.00	54.47 PK	74.00	-19.53	1.49 V	287	54.69	-0.22
2	2390.00	40.56 AV	54.00	-13.44	1.49 V	287	40.78	-0.22
3	*2402.00	88.66 PK			1.49 V	287	88.88	-0.22
4	*2402.00	87.46 AV			1.49 V	287	87.68	-0.22
5	4804.00	47.69 PK	74.00	-26.31	1.88 V	229	41.22	6.47
6	4804.00	34.83 AV	54.00	-19.17	1.88 V	229	28.36	6.47

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 19	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	B1

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	*2440.00	83.36 PK			3.80 H	11	83.56	-0.20
2	*2440.00	82.76 AV			3.80 H	11	82.96	-0.20
3	4880.00	46.79 PK	74.00	-27.21	1.69 H	289	40.63	6.16
4	4880.00	33.77 AV	54.00	-20.23	1.69 H	289	27.61	6.16
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	*2440.00	87.27 PK			1.80 V	291	87.47	-0.20
2	*2440.00	86.04 AV			1.80 V	291	86.24	-0.20
3	4880.00	47.36 PK	74.00	-26.64	1.57 V	241	41.20	6.16
4	4880.00	34.80 AV	54.00	-19.20	1.57 V	241	28.64	6.16

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 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	B1

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	*2480.00	81.39 PK			3.69 H	11	81.56	-0.17
2	*2480.00	80.42 AV			3.69 H	11	80.59	-0.17
3	2483.50	57.46 PK	74.00	-16.54	3.69 H	11	57.62	-0.16
4	2483.50	40.44 AV	54.00	-13.56	3.69 H	11	40.60	-0.16
5	4960.00	46.73 PK	74.00	-27.27	1.84 H	152	40.55	6.18
6	4960.00	33.87 AV	54.00	-20.13	1.84 H	152	27.69	6.18
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	*2480.00	85.46 PK			1.77 V	290	85.63	-0.17
2	*2480.00	84.38 AV			1.77 V	290	84.55	-0.17
3	2483.50	60.46 PK	74.00	-13.54	1.77 V	290	60.62	-0.16
4	2483.50	41.90 AV	54.00	-12.10	1.77 V	290	42.06	-0.16
5	4960.00	47.44 PK	74.00	-26.56	1.55 V	236	41.26	6.18
6	4960.00	35.14 AV	54.00	-18.86	1.55 V	236	28.96	6.18

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 0	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	C1

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	2390.00	61.10 PK	74.00	-12.90	1.63 H	13	28.20	32.90
2	2390.00	47.60 AV	54.00	-6.40	1.63 H	13	14.70	32.90
3	*2402.00	96.90 PK			1.60 H	7	64.00	32.90
4	*2402.00	95.40 AV			1.60 H	7	62.50	32.90
5	4804.00	44.80 PK	74.00	-29.20	1.85 H	229	41.00	3.80
6	4804.00	31.60 AV	54.00	-22.40	1.85 H	229	27.80	3.80
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	2390.00	60.90 PK	74.00	-13.10	1.99 V	22	28.00	32.90
2	2390.00	47.60 AV	54.00	-6.40	1.99 V	22	14.70	32.90
3	*2402.00	91.80 PK			1.91 V	21	58.90	32.90
4	*2402.00	90.10 AV			1.91 V	21	57.20	32.90
5	4804.00	45.00 PK	74.00	-29.00	2.21 V	209	41.20	3.80
6	4804.00	31.80 AV	54.00	-22.20	2.21 V	209	28.00	3.80

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 19	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	C1

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	*2440.00	95.00 PK			1.27 H	8	62.10	32.90
2	*2440.00	93.20 AV			1.27 H	8	60.30	32.90
3	4880.00	45.70 PK	74.00	-28.30	1.93 H	240	42.10	3.60
4	4880.00	32.00 AV	54.00	-22.00	1.93 H	240	28.40	3.60
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	*2440.00	89.00 PK			1.96 V	24	56.10	32.90
2	*2440.00	87.40 AV			1.96 V	24	54.50	32.90
3	4880.00	45.60 PK	74.00	-28.40	2.15 V	197	42.00	3.60
4	4880.00	31.70 AV	54.00	-22.30	2.15 V	197	28.10	3.60

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 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	C1

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	*2480.00	92.80 PK			1.08 H	13	59.80	33.00
2	*2480.00	90.90 AV			1.08 H	13	57.90	33.00
3	2483.50	67.00 PK	74.00	-7.00	1.17 H	10	34.00	33.00
4	2483.50	48.70 AV	54.00	-5.30	1.17 H	10	15.70	33.00
5	4960.00	46.70 PK	74.00	-27.30	1.89 H	239	42.80	3.90
6	4960.00	32.80 AV	54.00	-21.20	1.89 H	239	28.90	3.90
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	*2480.00	86.00 PK			2.45 V	19	53.00	33.00
2	*2480.00	84.00 AV			2.45 V	19	51.00	33.00
3	2483.50	61.60 PK	74.00	-12.40	2.29 V	23	28.60	33.00
4	2483.50	47.90 AV	54.00	-6.10	2.29 V	23	14.90	33.00
5	4960.00	46.40 PK	74.00	-27.60	2.23 V	209	42.50	3.90
6	4960.00	32.40 AV	54.00	-21.60	2.23 V	209	28.50	3.90

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.

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CHANNEL	TX Channel 0	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	A1

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	2390.00	56.94 PK	74.00	-17.06	1.46 H	343	57.16	-0.22
2	2390.00	41.30 AV	54.00	-12.70	1.46 H	343	41.52	-0.22
3	*2402.00	91.20 PK			1.46 H	343	91.42	-0.22
4	*2402.00	88.66 AV			1.46 H	343	88.88	-0.22
5	4804.00	50.34 PK	74.00	-23.66	2.56 H	144	43.87	6.47
6	4804.00	35.43 AV	54.00	-18.57	2.56 H	144	28.96	6.47
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	2390.00	55.90 PK	74.00	-18.10	3.55 V	264	56.12	-0.22
2	2390.00	40.16 AV	54.00	-13.84	3.55 V	264	40.38	-0.22
3	*2402.00	89.25 PK			3.55 V	264	89.47	-0.22
4	*2402.00	86.03 AV			3.55 V	264	86.25	-0.22
5	4804.00	48.04 PK	74.00	-25.96	1.43 V	322	41.57	6.47
6	4804.00	33.32 AV	54.00	-20.68	1.43 V	322	26.85	6.47

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 19	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	A1

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	*2440.00	91.50 PK			1.45 H	343	91.70	-0.20
2	*2440.00	88.64 AV			1.45 H	343	88.84	-0.20
3	4880.00	48.92 PK	74.00	-25.08	2.55 H	151	42.76	6.16
4	4880.00	33.58 AV	54.00	-20.42	2.55 H	151	27.42	6.16
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	*2440.00	89.65 PK			3.54 V	267	89.85	-0.20
2	*2440.00	86.25 AV			3.54 V	267	86.45	-0.20
3	4880.00	47.03 PK	74.00	-26.97	1.43 V	321	40.87	6.16
4	4880.00	31.30 AV	54.00	-22.70	1.43 V	321	25.14	6.16

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 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	A1

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	*2480.00	92.54 PK			1.56 H	350	92.71	-0.17
2	*2480.00	89.42 AV			1.56 H	350	89.59	-0.17
3	2483.50	68.13 PK	74.00	-5.87	1.56 H	350	68.29	-0.16
4	2483.50	47.96 AV	54.00	-6.04	1.56 H	350	48.12	-0.16
5	4960.00	49.40 PK	74.00	-24.60	2.47 H	248	43.22	6.18
6	4960.00	34.22 AV	54.00	-19.78	2.47 H	248	28.04	6.18
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	*2480.00	90.21 PK			3.55 V	262	90.38	-0.17
2	*2480.00	86.97 AV			3.55 V	262	87.14	-0.17
3	2483.50	67.69 PK	74.00	-6.31	3.55 V	262	67.85	-0.16
4	2483.50	47.71 AV	54.00	-6.29	3.55 V	262	47.87	-0.16
5	4960.00	47.35 PK	74.00	-26.65	1.41 V	330	41.17	6.18
6	4960.00	32.93 AV	54.00	-21.07	1.41 V	330	26.75	6.18

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 0	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	B1

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	2390.00	53.91 PK	74.00	-20.09	3.74 H	12	54.13	-0.22
2	2390.00	39.78 AV	54.00	-14.22	3.74 H	12	40.00	-0.22
3	*2402.00	84.36 PK			3.74 H	12	84.58	-0.22
4	*2402.00	82.04 AV			3.74 H	12	82.26	-0.22
5	4804.00	46.11 PK	74.00	-27.89	1.94 H	239	39.64	6.47
6	4804.00	33.70 AV	54.00	-20.30	1.94 H	239	27.23	6.47
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	2390.00	54.34 PK	74.00	-19.66	1.67 V	291	54.56	-0.22
2	2390.00	40.41 AV	54.00	-13.59	1.67 V	291	40.63	-0.22
3	*2402.00	88.77 PK			1.67 V	291	88.99	-0.22
4	*2402.00	86.15 AV			1.67 V	291	86.37	-0.22
5	4804.00	47.02 PK	74.00	-26.98	1.88 V	241	40.55	6.47
6	4804.00	35.16 AV	54.00	-18.84	1.88 V	241	28.69	6.47

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 19	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	B1

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	*2440.00	83.45 PK			3.79 H	8	83.65	-0.20
2	*2440.00	80.86 AV			3.79 H	8	81.06	-0.20
3	4880.00	45.69 PK	74.00	-28.31	1.78 H	145	39.53	6.16
4	4880.00	33.84 AV	54.00	-20.16	1.78 H	145	27.68	6.16
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	*2440.00	87.09 PK			1.80 V	289	87.29	-0.20
2	*2440.00	83.98 AV			1.80 V	289	84.18	-0.20
3	4880.00	47.00 PK	74.00	-27.00	1.52 V	261	40.84	6.16
4	4880.00	34.65 AV	54.00	-19.35	1.52 V	261	28.49	6.16

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 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	B1

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	*2480.00	80.42 PK			3.77 H	16	80.59	-0.17
2	*2480.00	76.72 AV			3.77 H	16	76.89	-0.17
3	2483.50	56.71 PK	74.00	-17.29	3.77 H	16	56.87	-0.16
4	2483.50	39.95 AV	54.00	-14.05	3.77 H	16	40.11	-0.16
5	4960.00	45.81 PK	74.00	-28.19	1.88 H	254	39.63	6.18
6	4960.00	33.47 AV	54.00	-20.53	1.88 H	254	27.29	6.18
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	*2480.00	84.74 PK			1.78 V	289	84.91	-0.17
2	*2480.00	81.75 AV			1.78 V	289	81.92	-0.17
3	2483.50	59.99 PK	74.00	-14.01	1.78 V	289	60.15	-0.16
4	2483.50	43.37 AV	54.00	-10.63	1.78 V	289	43.53	-0.16
5	4960.00	47.02 PK	74.00	-26.98	1.58 V	129	40.84	6.18
6	4960.00	34.52 AV	54.00	-19.48	1.58 V	129	28.34	6.18

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 0	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	C1

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	2390.00	61.20 PK	74.00	-12.80	1.41 H	15	28.30	32.90
2	2390.00	47.80 AV	54.00	-6.20	1.41 H	15	14.90	32.90
3	*2402.00	95.90 PK			1.32 H	7	63.00	32.90
4	*2402.00	92.40 AV			1.32 H	7	59.50	32.90
5	4804.00	45.30 PK	74.00	-28.70	1.79 H	221	41.50	3.80
6	4804.00	31.70 AV	54.00	-22.30	1.79 H	221	27.90	3.80
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	2390.00	59.90 PK	74.00	-14.10	2.66 V	18	27.00	32.90
2	2390.00	47.70 AV	54.00	-6.30	2.66 V	18	14.80	32.90
3	*2402.00	90.70 PK			2.55 V	23	57.80	32.90
4	*2402.00	87.10 AV			2.55 V	23	54.20	32.90
5	4804.00	44.90 PK	74.00	-29.10	1.99 V	199	41.10	3.80
6	4804.00	30.90 AV	54.00	-23.10	1.99 V	199	27.10	3.80

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 19	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	C1

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	*2440.00	94.90 PK			1.27 H	10	62.00	32.90
2	*2440.00	90.80 AV			1.27 H	10	57.90	32.90
3	4880.00	45.80 PK	74.00	-28.20	1.89 H	230	42.20	3.60
4	4880.00	32.20 AV	54.00	-21.80	1.89 H	230	28.60	3.60
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	*2440.00	88.90 PK			2.49 V	21	56.00	32.90
2	*2440.00	84.90 AV			2.49 V	21	52.00	32.90
3	4880.00	45.40 PK	74.00	-28.60	2.13 V	203	41.80	3.60
4	4880.00	31.50 AV	54.00	-22.50	2.13 V	203	27.90	3.60

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 39	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz	TEST MODE	C1

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	*2480.00	92.80 PK			1.23 H	11	59.80	33.00
2	*2480.00	88.70 AV			1.23 H	11	55.70	33.00
3	2483.50	67.30 PK	74.00	-6.70	1.37 H	19	34.30	33.00
4	2483.50	50.00 AV	54.00	-4.00	1.37 H	19	17.00	33.00
5	4960.00	45.90 PK	74.00	-28.10	1.74 H	222	42.00	3.90
6	4960.00	32.70 AV	54.00	-21.30	1.74 H	222	28.80	3.90
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	*2480.00	86.00 PK			2.62 V	20	53.00	33.00
2	*2480.00	81.90 AV			2.62 V	20	48.90	33.00
3	2483.50	62.00 PK	74.00	-12.00	2.51 V	29	29.00	33.00
4	2483.50	48.20 AV	54.00	-5.80	2.51 V	29	15.20	33.00
5	4960.00	46.40 PK	74.00	-27.60	2.02 V	195	42.50	3.90
6	4960.00	32.80 AV	54.00	-21.20	2.02 V	195	28.90	3.90

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.

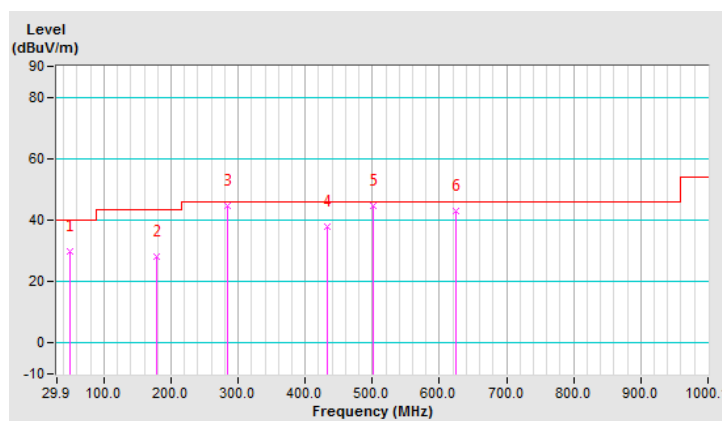
Below 1GHz worst-case data:

CHANNEL	TX Channel 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	A1

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	49.34	29.7 QP	40.0	-10.3	2.00 H	132	39.4	-9.7
2	177.67	28.2 QP	43.5	-15.3	1.49 H	253	38.2	-10.0
3	284.60	44.8 QP	46.0	-1.2	1.00 H	83	52.5	-7.7
4	432.37	37.9 QP	46.0	-8.1	1.49 H	13	42.4	-4.5
5	500.42	44.5 QP	46.0	-1.5	1.49 H	16	48.1	-3.6
6	624.85	43.0 QP	46.0	-3.0	1.00 H	284	43.7	-0.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

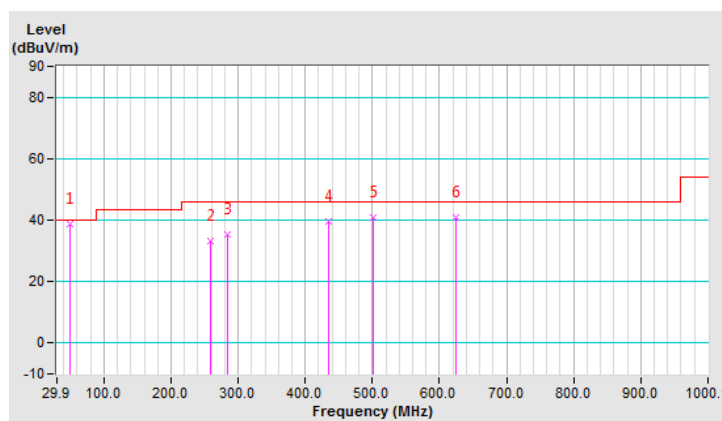


CHANNEL	TX Channel 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	A1

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	49.34	38.9 QP	40.0	-1.1	1.01 V	16	48.6	-9.7
2	259.33	33.1 QP	46.0	-12.9	1.51 V	5	42.0	-8.9
3	284.60	35.2 QP	46.0	-10.8	1.51 V	56	42.9	-7.7
4	434.31	39.6 QP	46.0	-6.4	1.01 V	16	44.1	-4.5
5	500.42	40.8 QP	46.0	-5.2	1.01 V	303	44.4	-3.6
6	624.85	40.7 QP	46.0	-5.3	1.01 V	357	41.4	-0.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

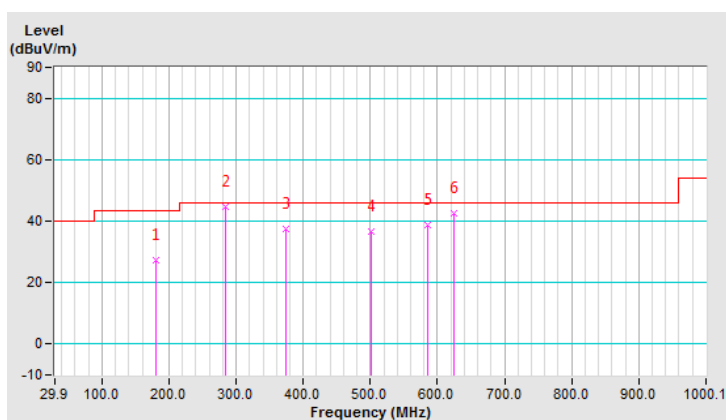


CHANNEL	TX Channel 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	A2

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	179.61	27.3 QP	43.5	-16.2	1.00 H	33	37.5	-10.2
2	284.60	44.8 QP	46.0	-1.2	1.00 H	67	52.5	-7.7
3	374.04	37.4 QP	46.0	-8.6	1.50 H	132	43.3	-5.9
4	500.42	36.5 QP	46.0	-9.5	1.00 H	3	40.1	-3.6
5	585.97	38.7 QP	46.0	-7.3	2.00 H	3	40.2	-1.5
6	624.85	42.5 QP	46.0	-3.5	1.00 H	42	43.2	-0.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

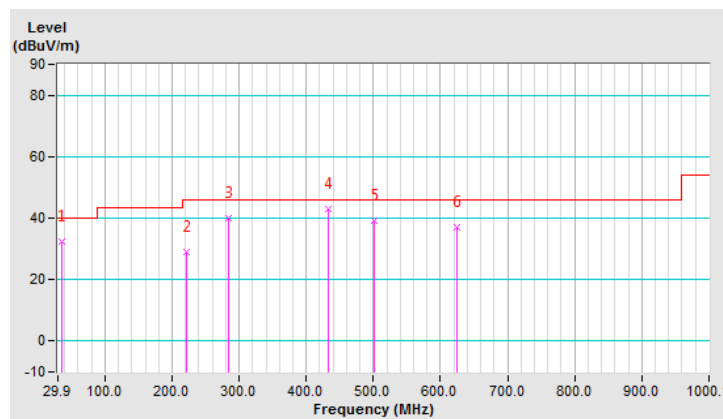


CHANNEL	TX Channel 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	A2

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	35.73	32.2 QP	40.0	-7.8	1.50 V	205	43.3	-11.1
2	222.38	28.8 QP	46.0	-17.2	1.50 V	335	39.4	-10.6
3	284.60	40.0 QP	46.0	-6.0	1.00 V	199	47.7	-7.7
4	432.37	42.8 QP	46.0	-3.2	1.00 V	351	47.3	-4.5
5	500.42	39.3 QP	46.0	-6.7	1.50 V	22	42.9	-3.6
6	624.85	36.9 QP	46.0	-9.1	2.00 V	22	37.6	-0.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

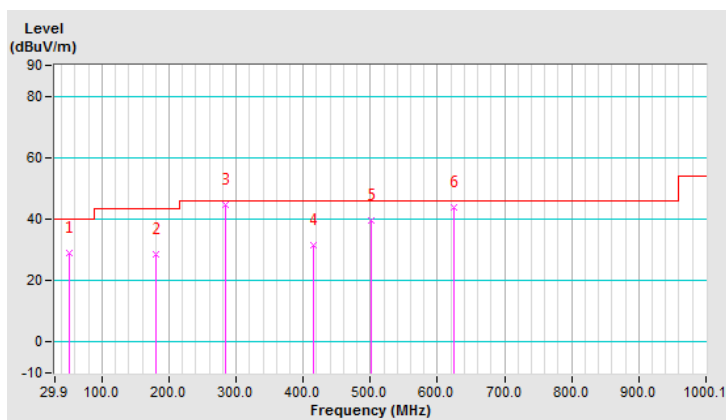


CHANNEL	TX Channel 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	B1

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	51.29	28.9 QP	40.0	-11.1	1.50 H	103	38.6	-9.7
2	179.61	28.4 QP	43.5	-15.1	1.00 H	238	38.6	-10.2
3	284.60	44.6 QP	46.0	-1.4	1.00 H	94	52.3	-7.7
4	414.87	31.6 QP	46.0	-14.4	2.00 H	312	36.9	-5.3
5	500.42	39.7 QP	46.0	-6.3	1.50 H	106	43.3	-3.6
6	624.85	44.0 QP	46.0	-2.0	1.00 H	29	44.7	-0.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

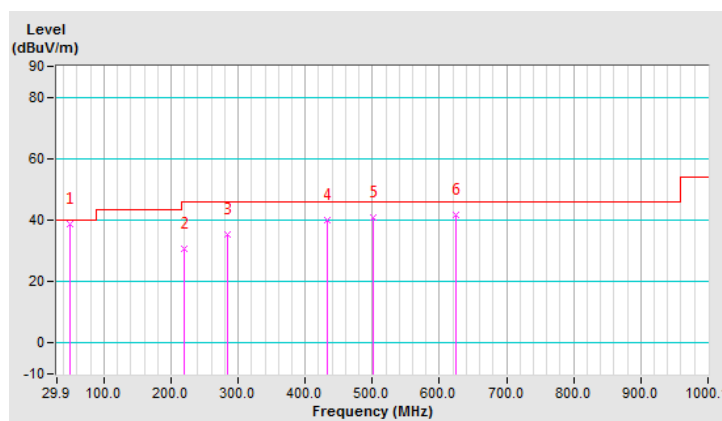


CHANNEL	TX Channel 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	B1

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	49.34	38.6 QP	40.0	-1.4	1.50 V	9	48.3	-9.7
2	220.44	30.8 QP	46.0	-15.2	1.00 V	334	41.4	-10.6
3	284.60	35.3 QP	46.0	-10.7	1.50 V	51	43.0	-7.7
4	432.37	40.2 QP	46.0	-5.8	1.00 V	3	44.7	-4.5
5	500.42	41.0 QP	46.0	-5.0	2.00 V	317	44.6	-3.6
6	624.85	41.6 QP	46.0	-4.4	1.00 V	49	42.3	-0.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

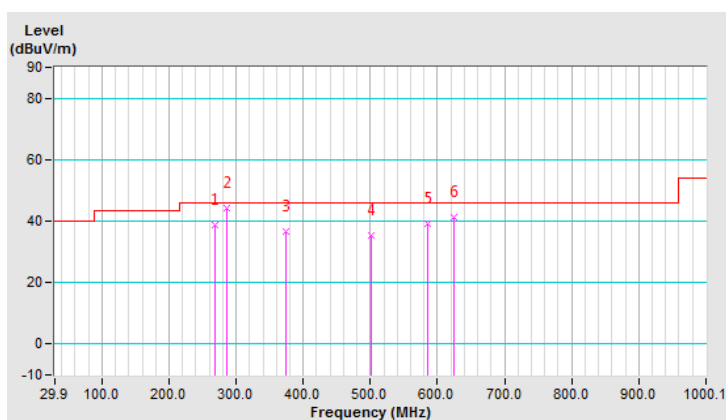


CHANNEL	TX Channel 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	B2

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	269.05	38.8 QP	46.0	-7.2	1.50 H	61	47.1	-8.3
2	286.55	44.1 QP	46.0	-1.9	1.00 H	62	51.7	-7.6
3	374.04	36.6 QP	46.0	-9.4	2.00 H	141	42.5	-5.9
4	500.42	35.3 QP	46.0	-10.7	1.50 H	17	38.9	-3.6
5	585.97	39.1 QP	46.0	-6.9	1.00 H	26	40.6	-1.5
6	624.85	41.4 QP	46.0	-4.6	1.00 H	83	42.1	-0.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

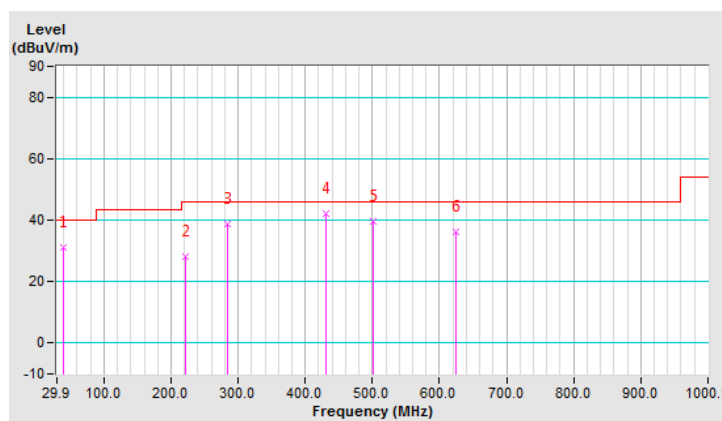


CHANNEL	TX Channel 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	B2

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	39.62	31.1 QP	40.0	-8.9	1.50 V	246	41.5	-10.4
2	222.38	28.2 QP	46.0	-17.8	1.50 V	338	38.8	-10.6
3	284.60	38.9 QP	46.0	-7.1	1.00 V	193	46.6	-7.7
4	430.42	42.1 QP	46.0	-3.9	1.00 V	12	46.7	-4.6
5	500.42	39.6 QP	46.0	-6.4	2.00 V	9	43.2	-3.6
6	624.85	36.3 QP	46.0	-9.7	1.00 V	348	37.0	-0.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

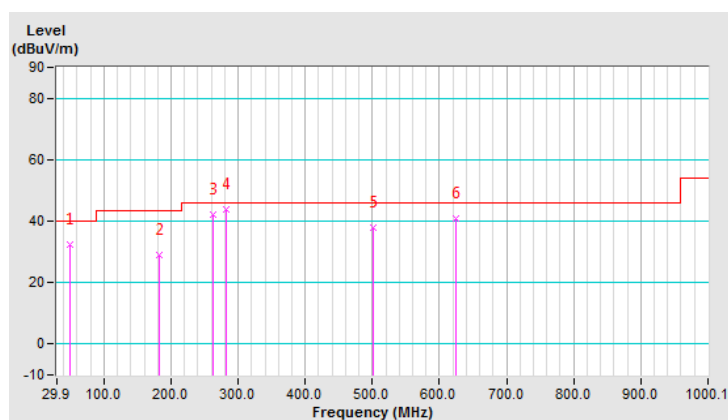


CHANNEL	TX Channel 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	C1

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	49.34	32.5 QP	40.0	-7.5	1.50 H	101	42.2	-9.7
2	181.55	29.0 QP	43.5	-14.5	1.50 H	101	39.4	-10.4
3	263.21	42.2 QP	46.0	-3.8	1.00 H	85	50.8	-8.6
4	282.66	43.9 QP	46.0	-2.1	1.00 H	311	51.7	-7.8
5	500.42	37.9 QP	46.0	-8.1	1.50 H	333	41.5	-3.6
6	624.85	40.9 QP	46.0	-5.1	1.00 H	144	41.6	-0.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

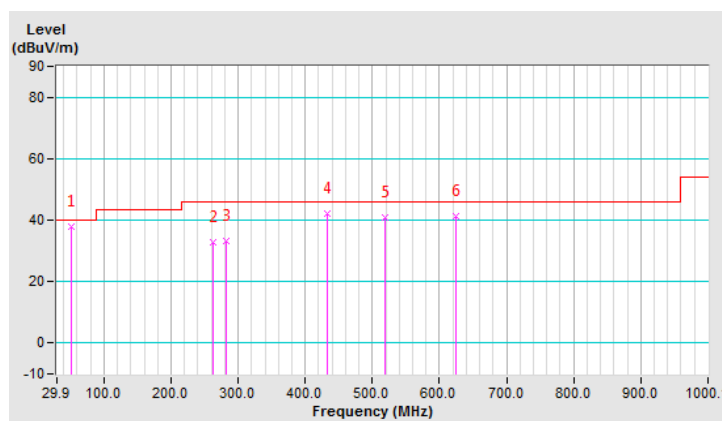


CHANNEL	TX Channel 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	C1

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	51.29	38.0 QP	40.0	-2.0	1.50 V	349	47.7	-9.7
2	263.21	32.7 QP	46.0	-13.3	1.00 V	201	41.3	-8.6
3	282.66	33.3 QP	46.0	-12.7	1.00 V	221	41.1	-7.8
4	432.37	42.1 QP	46.0	-3.9	2.00 V	314	46.6	-4.5
5	519.86	40.9 QP	46.0	-5.1	1.50 V	15	44.2	-3.3
6	624.85	41.2 QP	46.0	-4.8	1.00 V	22	41.9	-0.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

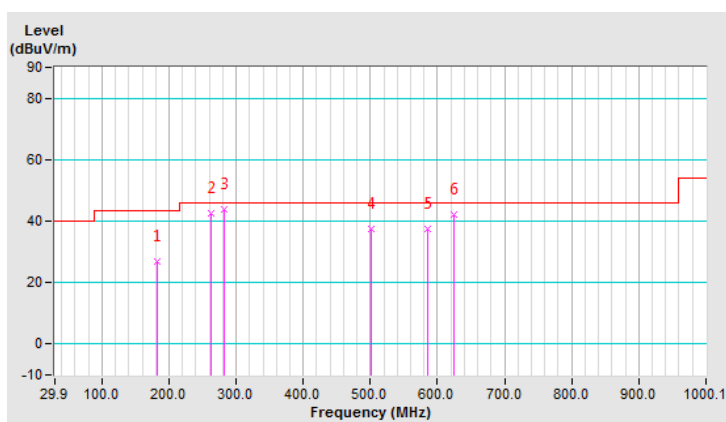


CHANNEL	TX Channel 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	C2

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	181.55	26.8 QP	43.5	-16.7	1.50 H	69	37.2	-10.4
2	263.21	42.4 QP	46.0	-3.6	1.50 H	78	51.0	-8.6
3	282.66	43.9 QP	46.0	-2.1	1.00 H	78	51.7	-7.8
4	500.42	37.3 QP	46.0	-8.7	1.00 H	343	40.9	-3.6
5	585.97	37.6 QP	46.0	-8.4	2.00 H	21	39.1	-1.5
6	624.85	42.2 QP	46.0	-3.8	1.00 H	51	42.9	-0.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.

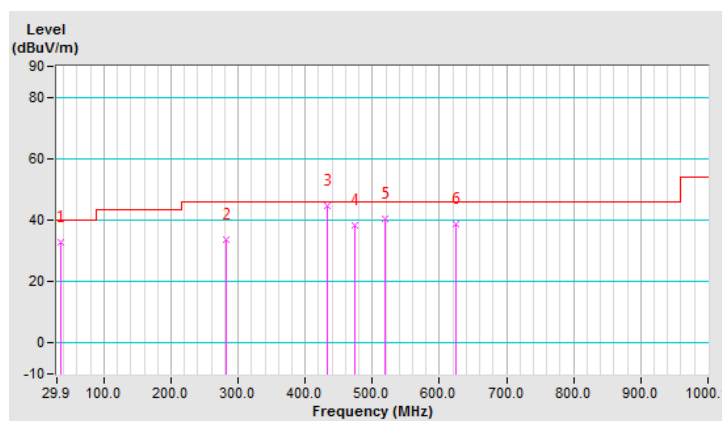


CHANNEL	TX Channel 39	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	TEST MODE	C2

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	35.73	32.8 QP	40.0	-7.2	2.00 V	126	43.9	-11.1
2	282.66	33.8 QP	46.0	-12.2	1.50 V	50	41.6	-7.8
3	432.37	44.8 QP	46.0	-1.2	1.00 V	13	49.3	-4.5
4	473.20	38.2 QP	46.0	-7.8	1.50 V	13	42.3	-4.1
5	519.86	40.3 QP	46.0	-5.7	1.00 V	4	43.6	-3.3
6	624.85	38.9 QP	46.0	-7.1	1.00 V	13	39.6	-0.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. 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.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCS 30	100288	Jan. 03, 2019	Jan. 02, 2020
RF signal cable Woken	5D-FB	Cable-cond1-01	Sep. 05, 2018	Sep. 04, 2019
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 21, 2019	Feb. 20, 2020
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 19, 2018	Aug. 18, 2019
Software ADT	BV ADT_Conc_ V7.3.7.4	NA	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 test was performed in HwaYa Shielded Room 1.

3. The VCCI Site Registration No. is C-12040.

4.2.3 Test Procedures

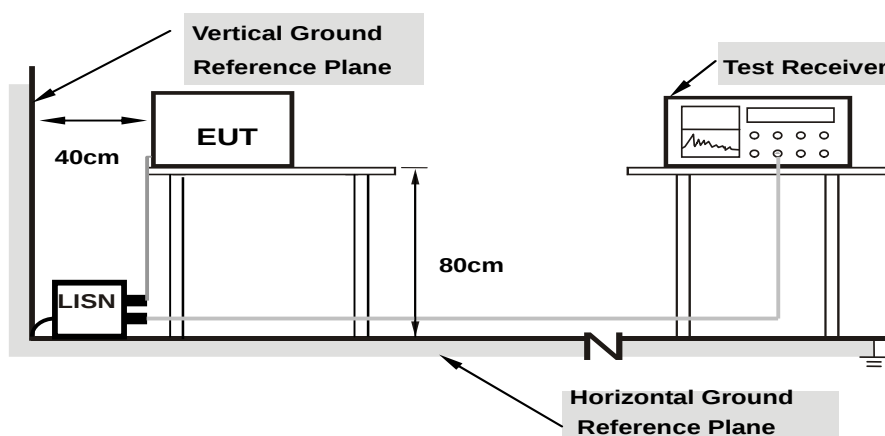
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance 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 item 4.1.6.

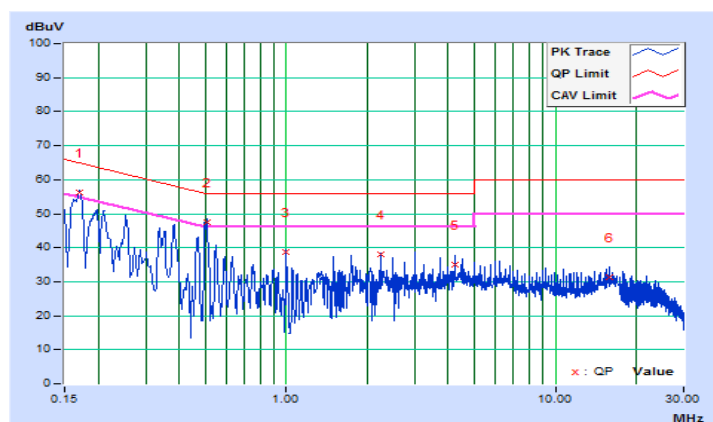
4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A1		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16977	9.69	46.43	36.17	56.12	45.86	64.97	54.97	-8.85	-9.11
2	0.50600	9.68	37.94	32.54	47.62	42.22	56.00	46.00	-8.38	-3.78
3	0.99800	9.67	28.93	26.39	38.60	36.06	56.00	46.00	-17.40	-9.94
4	2.24600	9.71	28.39	27.26	38.10	36.97	56.00	46.00	-17.90	-9.03
5	4.24200	9.75	25.37	23.17	35.12	32.92	56.00	46.00	-20.88	-13.08
6	15.97000	9.91	21.33	17.18	31.24	27.09	60.00	50.00	-28.76	-22.91

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.

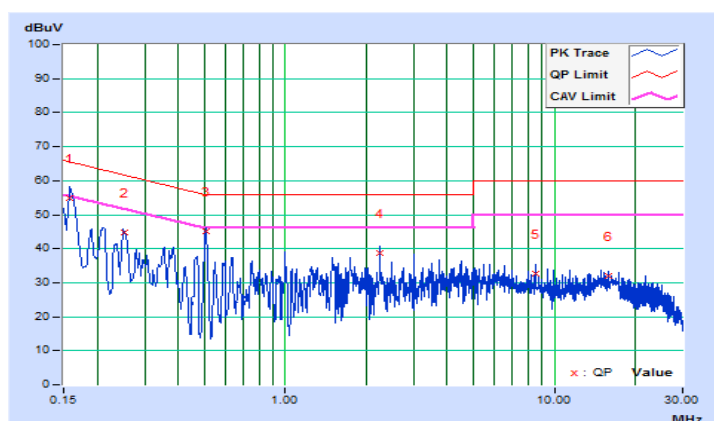


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A1		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15811	9.66	45.23	28.15	54.89	37.81	65.56	55.56	-10.67	-17.75
2	0.25400	9.66	34.96	28.39	44.62	38.05	61.63	51.63	-17.01	-13.58
3	0.50600	9.65	35.31	32.54	44.96	42.19	56.00	46.00	-11.04	-3.81
4	2.24600	9.68	28.98	27.26	38.66	36.94	56.00	46.00	-17.34	-9.06
5	8.48600	9.82	22.93	19.88	32.75	29.70	60.00	50.00	-27.25	-20.30
6	15.97400	9.94	21.99	18.39	31.93	28.33	60.00	50.00	-28.07	-21.67

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.

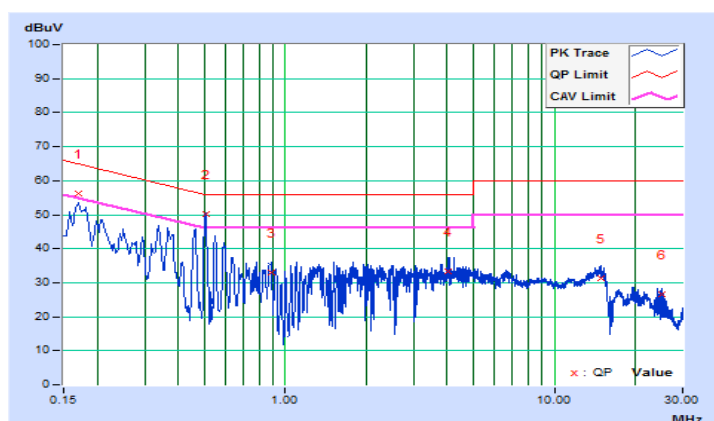


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A2		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17000	9.69	46.62	36.01	56.31	45.70	64.96	54.96	-8.65	-9.26
2	0.50530	9.68	40.45	33.69	50.13	43.37	56.00	46.00	-5.87	-2.63
3	0.88600	9.67	23.34	12.73	33.01	22.40	56.00	46.00	-22.99	-23.60
4	4.01000	9.75	23.47	11.46	33.22	21.21	56.00	46.00	-22.78	-24.79
5	15.00200	9.91	21.38	15.41	31.29	25.32	60.00	50.00	-28.71	-24.68
6	25.24600	9.94	16.50	15.22	26.44	25.16	60.00	50.00	-33.56	-24.84

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.

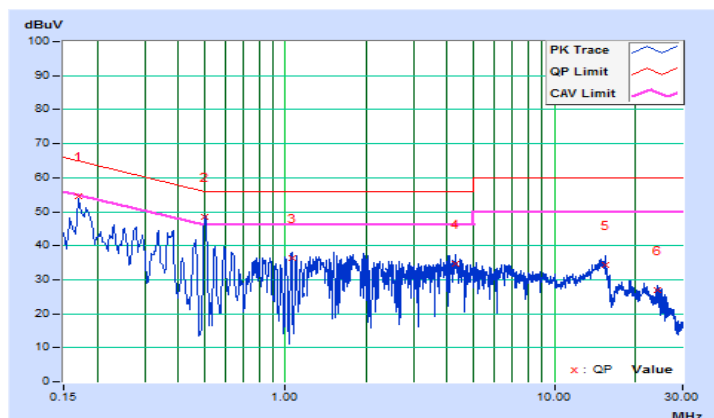


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A2		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17000	9.66	44.79	34.88	54.45	44.54	64.96	54.96	-10.51	-10.42
2	0.50264	9.65	38.94	32.57	48.59	42.22	56.00	46.00	-7.41	-3.78
3	1.05800	9.64	26.65	20.81	36.29	30.45	56.00	46.00	-19.71	-15.55
4	4.30200	9.73	24.97	13.90	34.70	23.63	56.00	46.00	-21.30	-22.37
5	15.49800	9.94	24.33	18.69	34.27	28.63	60.00	50.00	-25.73	-21.37
6	24.24600	10.02	16.76	14.67	26.78	24.69	60.00	50.00	-33.22	-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.

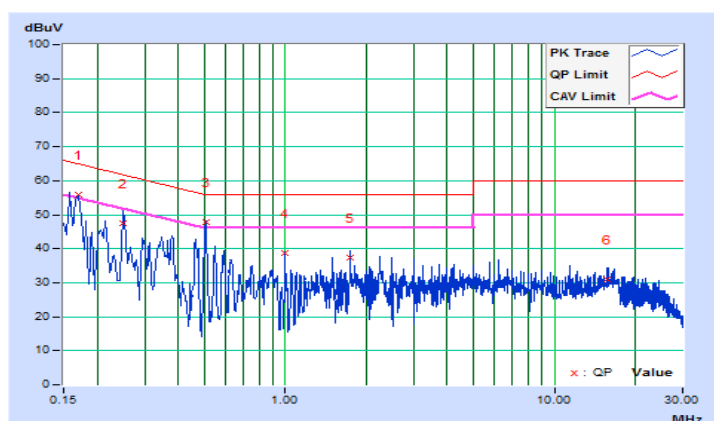


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B1		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17000	9.69	46.32	36.11	56.01	45.80	64.96	54.96	-8.95	-9.16
2	0.25006	9.68	37.70	32.73	47.38	42.41	61.76	51.76	-14.38	-9.35
3	0.50600	9.68	37.98	33.21	47.66	42.89	56.00	46.00	-8.34	-3.11
4	0.99800	9.67	28.89	27.54	38.56	37.21	56.00	46.00	-17.44	-8.79
5	1.74600	9.69	27.70	27.34	37.39	37.03	56.00	46.00	-18.61	-8.97
6	15.71800	9.91	21.07	16.93	30.98	26.84	60.00	50.00	-29.02	-23.16

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.

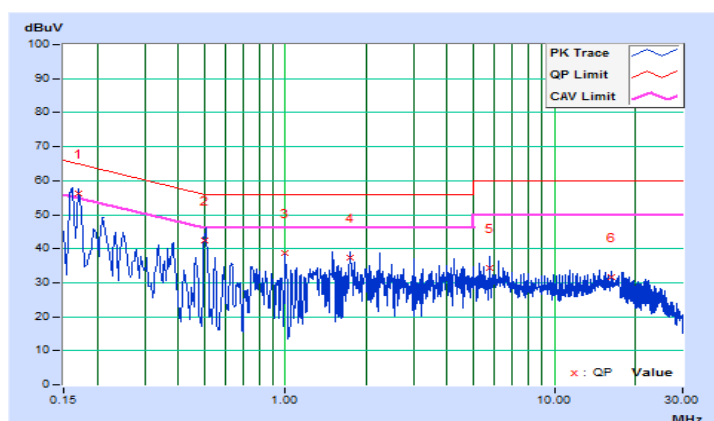


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B1		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17000	9.66	46.45	33.97	56.11	43.63	64.96	54.96	-8.85	-11.33
2	0.50000	9.65	32.61	26.92	42.26	36.57	56.00	46.00	-13.74	-9.43
3	0.99800	9.64	29.06	28.55	38.70	38.19	56.00	46.00	-17.30	-7.81
4	1.74767	9.66	27.66	26.97	37.32	36.63	56.00	46.00	-18.68	-9.37
5	5.73800	9.76	24.67	22.59	34.43	32.35	60.00	50.00	-25.57	-17.65
6	16.21800	9.95	21.84	18.09	31.79	28.04	60.00	50.00	-28.21	-21.96

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.

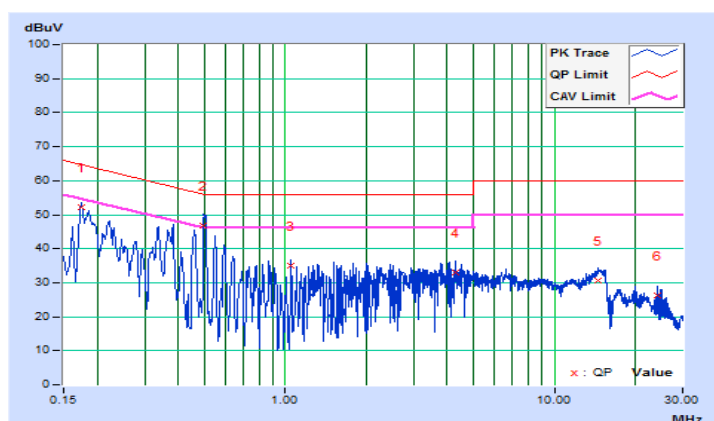


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B2		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17400	9.69	42.42	33.77	52.11	43.46	64.77	54.77	-12.66	-11.31
2	0.49800	9.68	37.07	30.55	46.75	40.23	56.03	46.03	-9.28	-5.80
3	1.05400	9.67	25.39	22.78	35.06	32.45	56.00	46.00	-20.94	-13.55
4	4.29800	9.76	23.16	12.88	32.92	22.64	56.00	46.00	-23.08	-23.36
5	14.59400	9.90	20.69	13.21	30.59	23.11	60.00	50.00	-29.41	-26.89
6	24.24600	9.94	16.43	15.09	26.37	25.03	60.00	50.00	-33.63	-24.97

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.

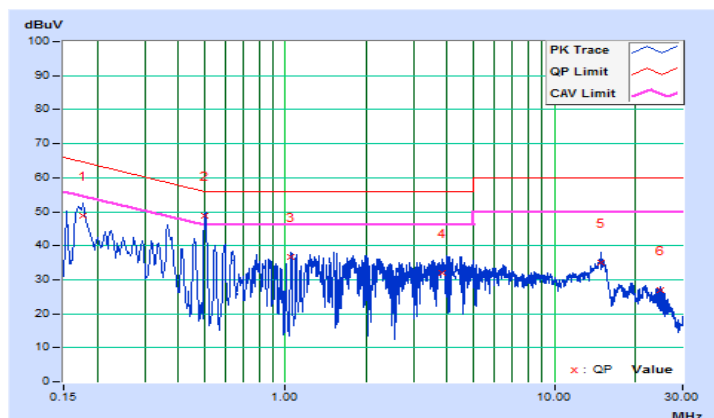


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B2		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17754	9.66	39.27	32.92	48.93	42.58	64.60	54.60	-15.67	-12.02
2	0.50264	9.65	39.01	33.77	48.66	43.42	56.00	46.00	-7.34	-2.58
3	1.05384	9.64	27.16	24.87	36.80	34.51	56.00	46.00	-19.20	-11.49
4	3.80600	9.72	22.22	13.21	31.94	22.93	56.00	46.00	-24.06	-23.07
5	14.99800	9.93	25.15	18.57	35.08	28.50	60.00	50.00	-24.92	-21.50
6	24.74622	10.02	16.98	15.80	27.00	25.82	60.00	50.00	-33.00	-24.18

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.

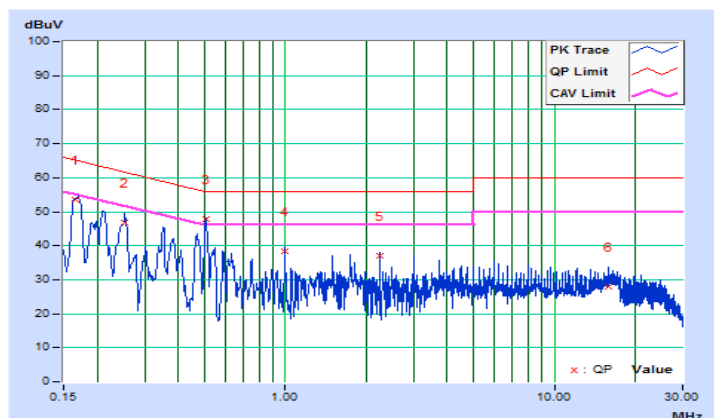


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C1		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16535	9.69	43.75	33.35	53.44	43.04	65.19	55.19	-11.75	-12.15
2	0.25405	9.68	37.10	29.02	46.78	38.70	61.62	51.62	-14.84	-12.92
3	0.50600	9.68	38.02	33.54	47.70	43.22	56.00	46.00	-8.30	-2.78
4	0.99800	9.67	28.66	26.97	38.33	36.64	56.00	46.00	-17.67	-9.36
5	2.24600	9.71	27.25	25.96	36.96	35.67	56.00	46.00	-19.04	-10.33
6	15.95400	9.91	18.09	11.49	28.00	21.40	60.00	50.00	-32.00	-28.60

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.

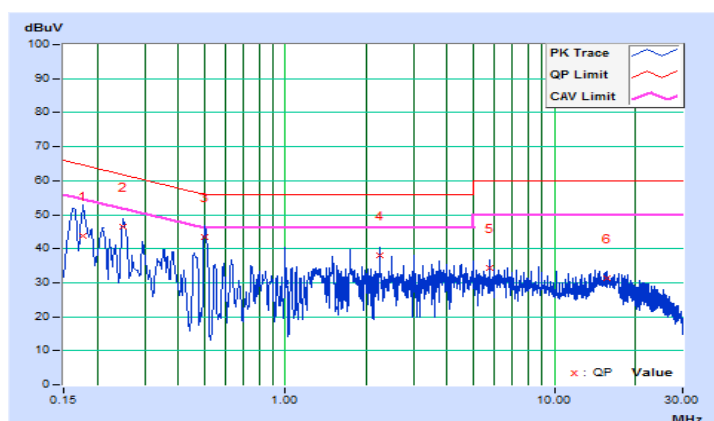


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C1		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17801	9.66	34.19	19.44	43.85	29.10	64.58	54.58	-20.73	-25.48
2	0.25006	9.66	36.68	32.51	46.34	42.17	61.76	51.76	-15.42	-9.59
3	0.49869	9.65	33.70	27.72	43.35	37.37	56.02	46.02	-12.67	-8.65
4	2.24600	9.68	28.45	26.66	38.13	36.34	56.00	46.00	-17.87	-9.66
5	5.73800	9.76	24.66	22.27	34.42	32.03	60.00	50.00	-25.58	-17.97
6	15.71400	9.94	21.42	17.72	31.36	27.66	60.00	50.00	-28.64	-22.34

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.

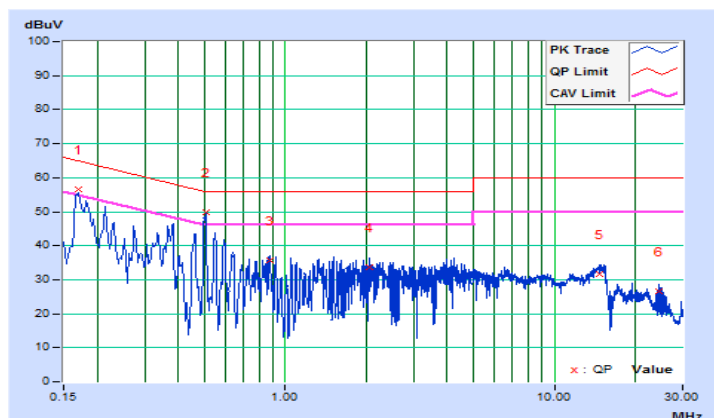


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C2		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16932	9.69	46.94	36.12	56.63	45.81	64.99	54.99	-8.36	-9.18
2	0.50663	9.68	40.25	32.87	49.93	42.55	56.00	46.00	-6.07	-3.45
3	0.87405	9.67	26.10	20.60	35.77	30.27	56.00	46.00	-20.23	-15.73
4	2.06200	9.70	23.92	18.32	33.62	28.02	56.00	46.00	-22.38	-17.98
5	14.78600	9.90	21.71	12.08	31.61	21.98	60.00	50.00	-28.39	-28.02
6	24.49400	9.94	16.78	15.66	26.72	25.60	60.00	50.00	-33.28	-24.40

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.

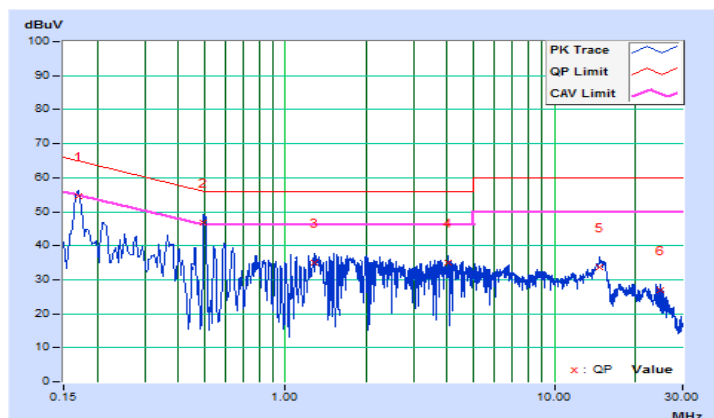


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C2		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16932	9.66	44.94	34.31	54.60	43.97	64.99	54.99	-10.39	-11.02
2	0.49800	9.65	37.11	31.11	46.76	40.76	56.03	46.03	-9.27	-5.27
3	1.28600	9.65	25.41	18.37	35.06	28.02	56.00	46.00	-20.94	-17.98
4	4.01800	9.72	25.31	13.52	35.03	23.24	56.00	46.00	-20.97	-22.76
5	14.75000	9.93	23.87	16.93	33.80	26.86	60.00	50.00	-26.20	-23.14
6	24.74622	10.02	16.98	15.77	27.00	25.79	60.00	50.00	-33.00	-24.21

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.

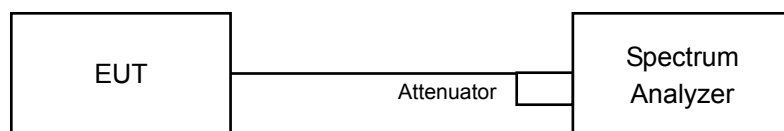


4.3 6dB Bandwidth Measurement

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

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

- Set resolution bandwidth (RBW) = 100kHz.
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

4.3.5 Deviation from Test Standard

No deviation.

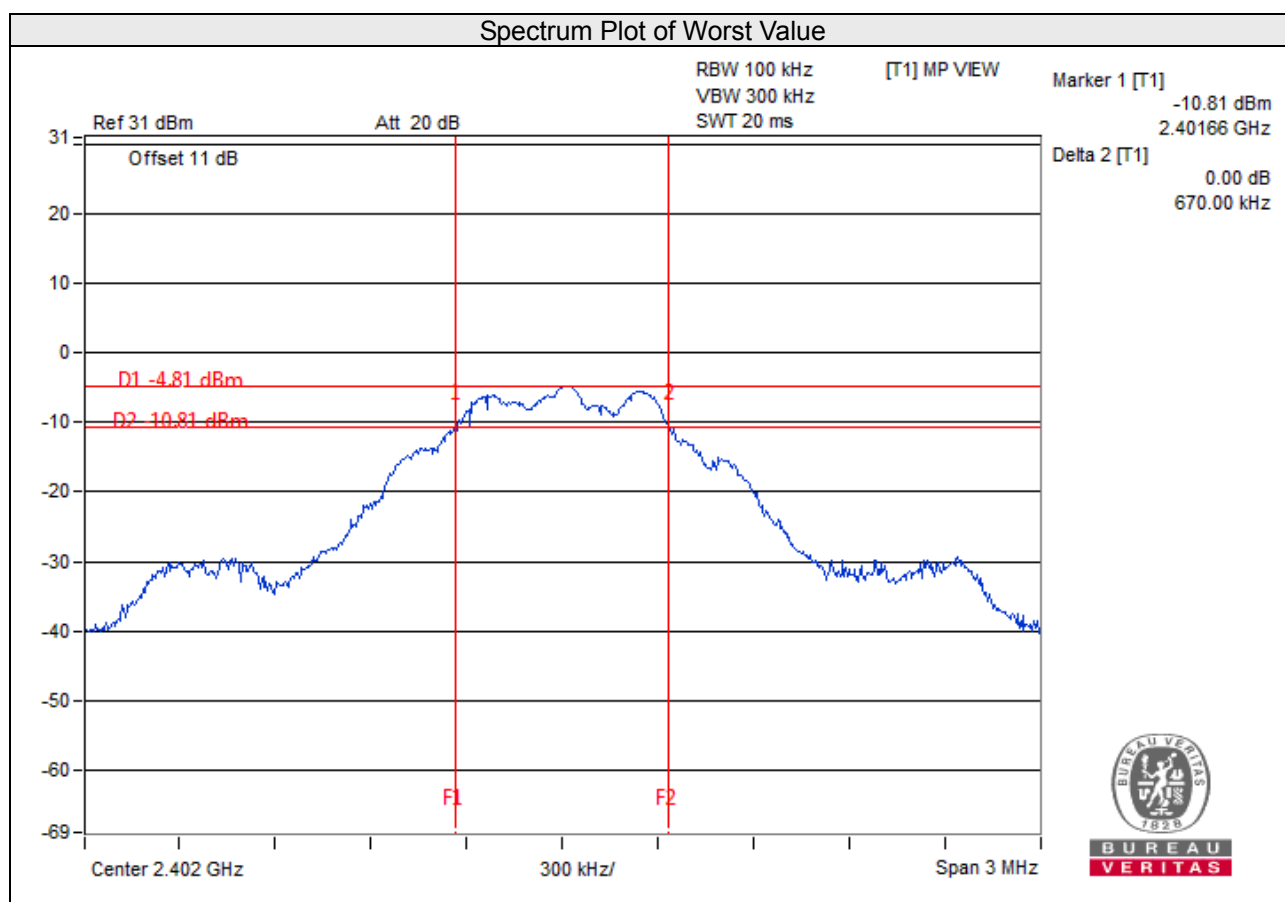
4.3.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 Test Result

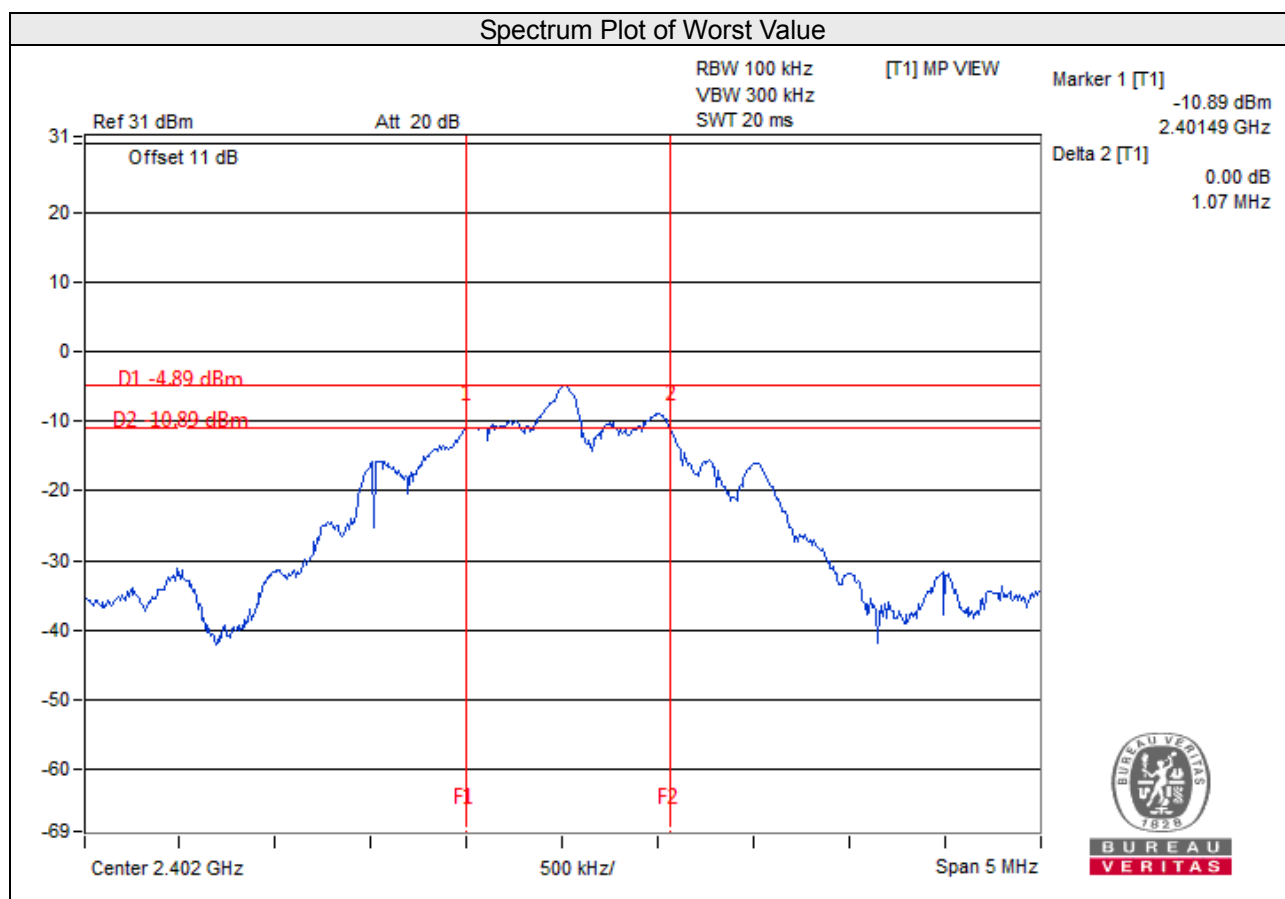
BT LE 4.0

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
0	2402	0.67	0.5	Pass
19	2440	0.73	0.5	Pass
39	2480	0.72	0.5	Pass



BT LE 5.0

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
0	2402	1.07	0.5	Pass
19	2440	1.10	0.5	Pass
39	2480	1.12	0.5	Pass

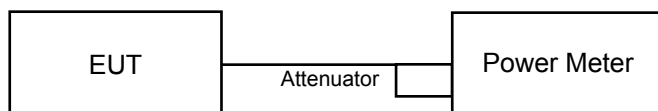


4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedures

For Peak Power

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

For Average Power

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value..

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

Same as item 4.3.6.

4.4.7 Test Results

For Peak Power

BT LE 4.0

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
0	2402	0.343	-4.65	30	Pass
19	2440	0.288	-5.41	30	Pass
39	2480	0.246	-6.09	30	Pass

BT LE 5.0

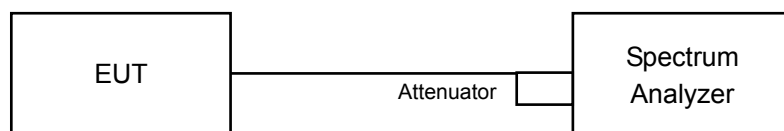
Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
0	2402	0.341	-4.67	30	Pass
19	2440	0.280	-5.53	30	Pass
39	2480	0.245	-6.11	30	Pass

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

- Set analyzer center frequency to DTS channel center frequency.
- Set the span to 1.5 times the DTS bandwidth.
- Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set the VBW $\geq 3 \times \text{RBW}$.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level within the RBW.

4.5.5 Deviation from Test Standard

No deviation.

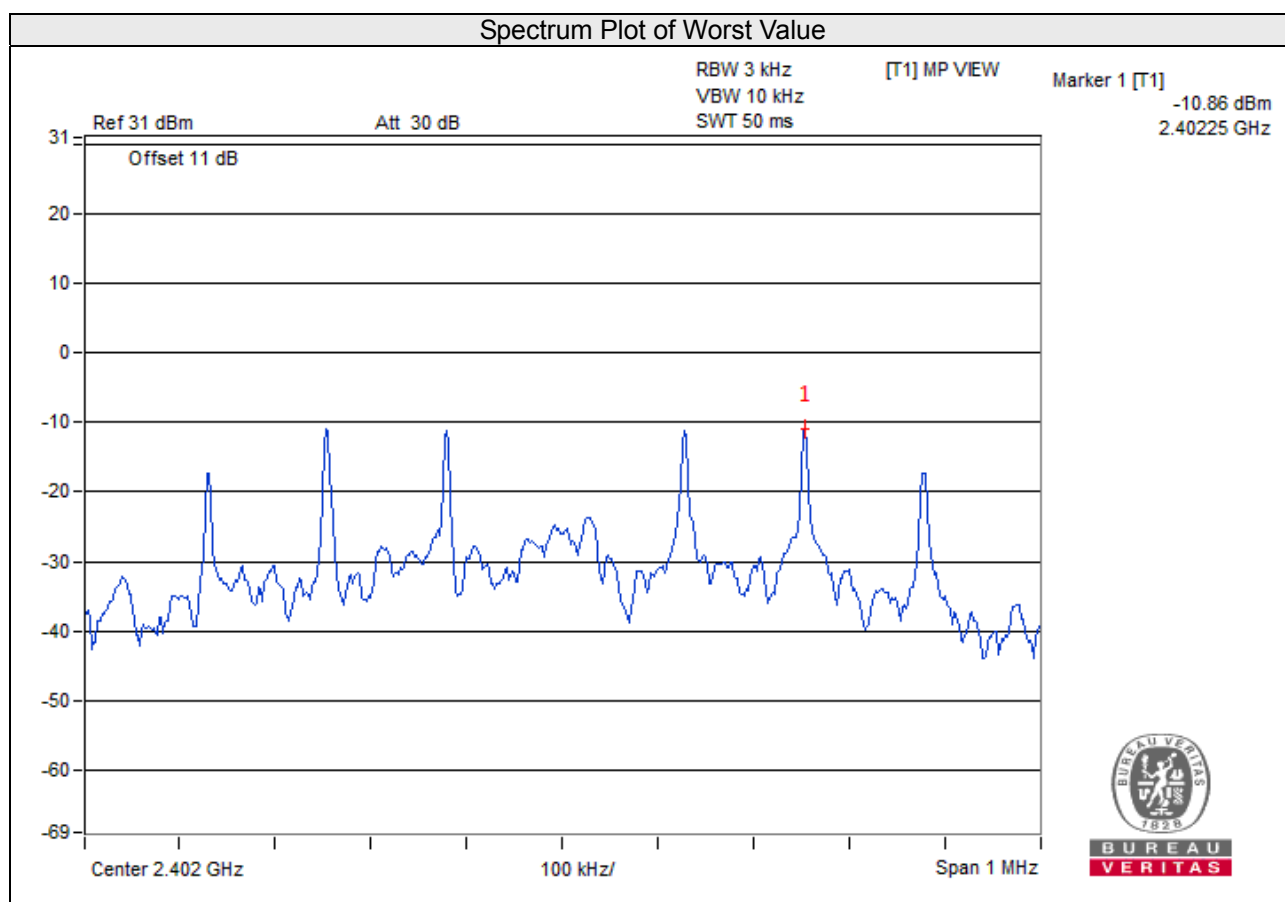
4.5.6 EUT Operating Condition

Same as item 4.3.6

4.5.7 Test Results

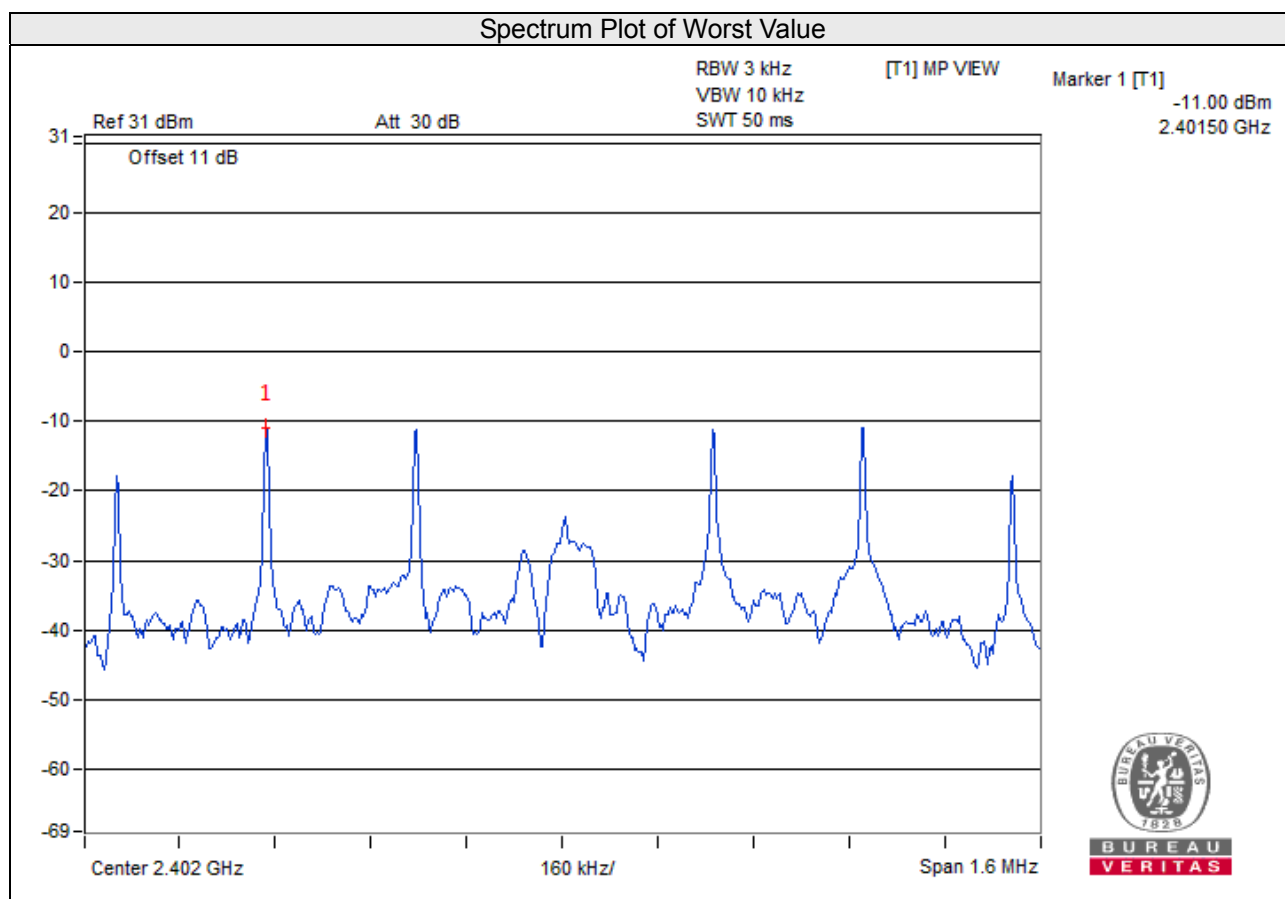
BT LE 4.0

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	2402	-10.86	8	Pass
19	2440	-11.18	8	Pass
39	2480	-12.09	8	Pass



BT LE 5.0

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass / Fail
0	2402	-11.00	8	Pass
19	2440	-11.15	8	Pass
39	2480	-12.05	8	Pass

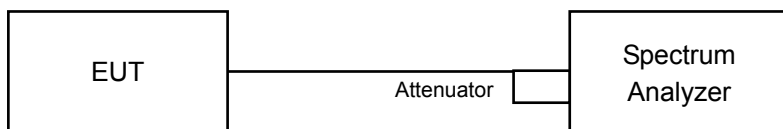


4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted Out of Band Emission Measurement

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

Measurement Procedure REF

- Set the RBW = 100 kHz.
- Set the VBW $\geq$ 300 kHz.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

Measurement Procedure OOB

- Set RBW = 100 kHz.
- Set VBW $\geq$ 300 kHz.
- Detector = peak.
- Sweep = auto couple.
- Trace Mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level.

4.6.5 Deviation from Test Standard

No deviation.

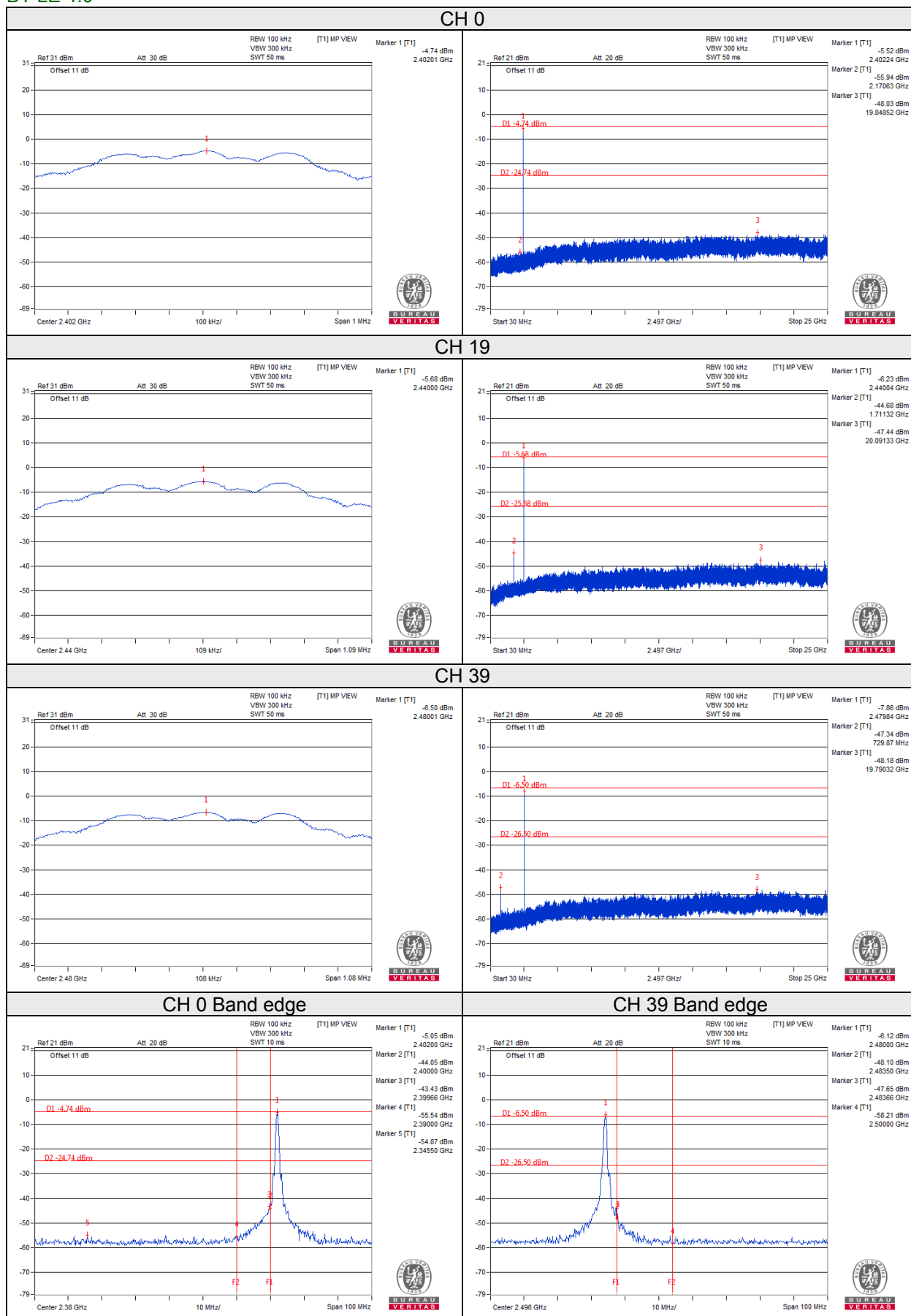
4.6.6 EUT Operating Condition

Same as item 4.3.6

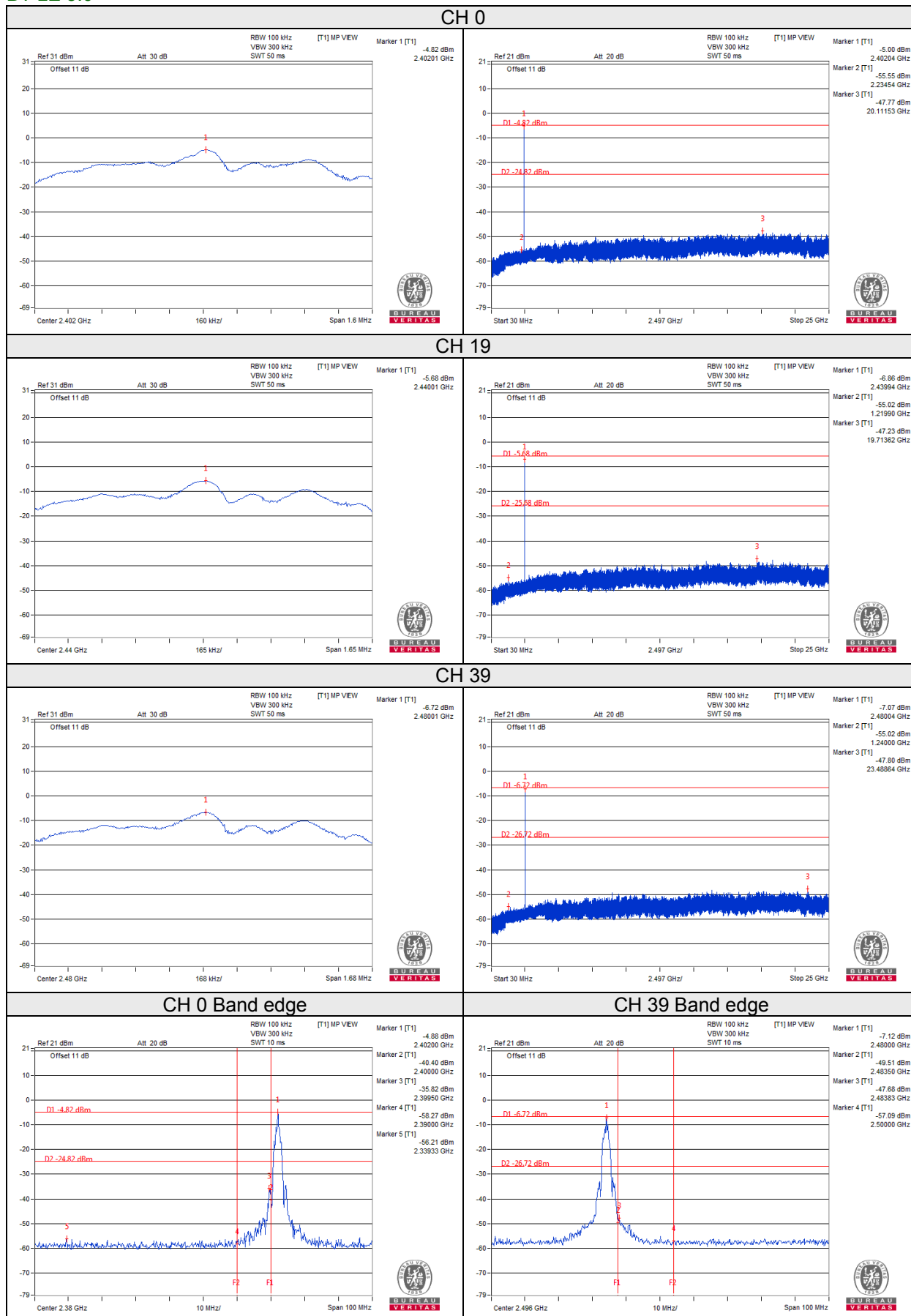
4.6.7 Test Results

The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

BT LE 4.0



BT LE 5.0



5 Pictures of Test Arrangements

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

Appendix – Information of 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 and approved according to ISO/IEC 17025.

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

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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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