FCC Test Report
(Co-Located)

Report No.:	RF180919D02-5
FCC ID:	P27-SOR4105T
Test Model:	SOR4105T
Received Date:	Dec. 27, 2017
Test Date:	Nov. 26 ~ 28, 2018
Issued Date:	Dec. 12, 2018
Applicant:	Sercomm Corp.
Address:	8F, No. 3-1, YuanQu St., NanKang, Taipei 115, Taiwan, R.O.C. (NanKang Software Park)
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)
FCC Registration / Designation Number:	198487 / TW2021

Testing Laboratory
2021

Table of Contents

Release Control Record **3**

1 Certificate of Conformity **4**

2 Summary of Test Results **5**

2.1 Measurement Uncertainty 5
2.2 Modification Record 5

3 General Information **6**

3.1 General Description of EUT 6
3.2 Test Mode Applicability and Tested Channel Detail 9
3.3 Description of Support Units 10
3.3.1 Configuration of System under Test 10
3.4 General Description of Applied Standard 11

4 Test Types and Results **12**

4.1 Radiated Emission and Bandedge Measurement 12
4.1.1 Limits of Radiated Emission and Bandedge Measurement 12
4.1.2 Test Instruments 13
4.1.3 Test Procedure 14
4.1.4 Deviation from Test Standard 14
4.1.5 Test Setup 15
4.1.6 EUT Operating Condition 16
4.1.7 Test Results 17

5 Pictures of Test Arrangements **44**

Appendix – Information on the Testing Laboratories **45**

Release Control Record

Issue No.	Description	Date Issued
RF180919D02-5	Original release.	Dec. 12, 2018

1 Certificate of Conformity

Product:	Harman Magic Box
Brand:	Sprint & Harman Kardon
Test Model:	SOR4105T
Sample Status:	Engineering sample
Applicant:	Sercomm Corp.
Test Date:	Nov. 26 ~ 28, 2018
Standard:	47 CFR FCC Part 15, Subpart C (Section 15.247) 47 CFR FCC Part 15, Subpart E (Section 15.407) FCC Part 27, Subpart C, M FCC Part 24, Subpart E 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 : Annie Chang , **Date:** Dec. 12, 2018

Annie Chang / Senior Specialist

Approved by : Rex. Lai , **Date:** Dec. 12, 2018

Rex Lai / Associate Technical Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247), 47 CFR FCC Part 15, Subpart E (Section 15.407), FCC Part 27, Subpart C, M, FCC Part 24, Subpart E			
FCC Clause	Test Item	Result	Remarks
15.205 15.209 15.247(d) 2.1053 27.53(m)(4)(6) 24.238	Radiated Emissions Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.02dB at 5005.00MHz.

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) (±)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	2.38 dB
	30MHz ~ 1000MHz	5.54 dB
Radiated Emissions above 1 GHz	Above 1GHz	5.48 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Harman Magic Box	
Brand	Sprint & Harman Kardon	
Test Model	SOR4105T	
Status of EUT	Engineering sample	
Power Supply Rating	12Vdc from adapter	
Modulation Type	WLAN	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only.
	LTE	QPSK, 16QAM, 64QAM
Modulation Technology	WLAN	DSSS,OFDM
Transfer Rate	WLAN	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11b: up to 11Mbps 802.11g: up to 54Mbps 802.11n: up to 300Mbps 802.11ac: up to 866.6Mbps
Operating Frequency	WLAN	2412~2462MHz, 5180~5240MHz, 5745~5825MHz
Frequency Range	LTE Band 25	Channel Bandwidth 5MHz: 1852.5~1912.5MHz Channel Bandwidth 10MHz: 1855~1910MHz
	LTE Band 41 (CPE)	Channel Bandwidth 5MHz: 2502.5~2567.5MHz, 2622.5~2687.5MHz Channel Bandwidth 10MHz: 2505.0~2565.0MHz, 2625.0~2685.0MHz Channel Bandwidth 15MHz: 2507.5~2562.5MHz, 2627.5~2682.5MHz Channel Bandwidth 20MHz: 2510.0~2560.0MHz, 2630.0~2680.0MHz
	LTE Band 41 (BTS)	Channel Bandwidth 20MHz: 2510~2560MHz, 2630~2680MHz
Number of Channel	WLAN	**2412~2462MHz:** 11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz) **5180~5240MHz:** 4 for 802.11a, 802.11n (20MHz), 802.11ac (20MHz) 2 for 802.11n (40MHz), 802.11ac (40MHz) 1 for 802.11ac (80MHz) **5745~5825MHz:** 5 for 802.11a, 802.11n (20MHz) 802.11ac (20MHz) 2 for 802.11n (40MHz) 802.11ac (40MHz) 1 for 802.11ac (80MHz)
Output Power	WLAN	**2412~2462MHz**: 403.211mW **5180~5240MHz:** 337.311mW **5745~5825MHz:** 368.686mW

Max. EIRP Power	LTE Band 25	Channel Bandwidth 5MHz: 722.770mW (28.59dBm) Channel Bandwidth 10MHz: 783.430mW (28.94Bm)
	LTE Band 41 (CPE)	Channel Bandwidth: 5MHz: 935.406mW (29.71dBm) Channel Bandwidth: 10MHz: 1402.814mW (31.47dBm) Channel Bandwidth: 15MHz: 1618.080mW (32.09dBm) Channel Bandwidth: 20MHz: 1541.700mW (31.88dBm)
	LTE Band 41 (BTS)	Channel Bandwidth 20MHz: 2510~2560MHz: 887.156mW (29.48dBm), 2630~2680MHz: 887.156mW (29.48dBm)
Antenna Type	WLAN	**2412~2462MHz:** Ant.1: Dipole antenna with 2.76dBi gain Ant.2: Dipole antenna with 3.63dBi gain **5180~5240MHz:** Ant.1: Dipole antenna with 3.10dBi gain Ant.2: Dipole antenna with 3.61dBi gain **5745~5825MHz:** Ant.1: Dipole antenna with 3.60dBi gain Ant.2: Dipole antenna with 3.07dBi gain
	LTE Band 25	Ant. 1: Dipole antenna with 5.41dBi gain Ant. 6: Dipole antenna with 5.37dBi gain
	LTE Band 41 (CPE)	Ant. 1: Dipole antenna with 5.57dBi gain Ant. 3: Dipole antenna with 5.44dBi gain Ant. 5: Dipole antenna with 4.99dBi gain Ant. 7: Dipole antenna with 5.07dBi gain
	LTE Band 41 (BTS)	Ant. 1: Dipole antenna with 6.20dBi gain Ant. 2: Dipole antenna with 6.80dBi gain
Antenna Connector	I-PEX	
Accessory Device	Refer to user's manual	
Data Cable Supplied	N/A	

Note:

1. The EUT contains a certified Samsung WiFi module (FCC ID: A3LSIP005AFS30).
2. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

Modulation Mode	TX Function
802.11a	2TX
802.11b	2TX
802.11g	2TX
802.11n (20MHz)	2TX
802.11n (40MHz)	2TX
802.11ac (20MHz)	2TX
802.11ac (40MHz)	2TX
802.11ac (80MHz)	2TX

3. The EUT uses following adapter.

Brand	CWT
Model	2ABF060F
AC Input Power	100-240V, 50/60H, 1.7A
DC Output Power	12V, 5A
Power Line	Non-shielded AC 3-Pin cable (3.5m) Non-shielded DC cable (1.5m)

4. The directional gain table:

Frequency Band (MHz)	Max. Gain (dBi)
2412-2462	6.22
5180-5240	6.37
5745-5825	6.35

Note:

(i) If transmit signals are *correlated*, then

Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}]$ dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

5. BTS Band 41 low band and CPE Band 41 low band cannot transmit at same time.
BTS Band 41 high band and CPE Band 41 high band cannot transmit at same time.
CPE mode & Sercomm WiFi module cannot transmit at same time.
Sercomm WiFi module 2.4GHz & 5.0GHz cannot transmit at same time.
Samsung WiFi module 2.4GHz & 5.0GHz & BT cannot transmit at same time.
Sercomm WiFi module 2.4GHz and Samsung WiFi module 2.4GHz cannot transmit at same time.
Sercomm WiFi module 5.0GHz and Samsung WiFi module 5.0GHz cannot transmit at same time.

6. The Cross-Palarized antenna is as follows:

LTE Band 25	Antenna port		TX Function	
Vertical	Ant. 6		CDD	
Horizontal	Ant. 1			
LTE Band 41_BTS	Antenna port		TX Function	
Vertical	Ant. 2		CDD	
Horizontal	Ant. 1			
LTE Band 41	Antenna port		TX Function	
Vertical	Ant3	Ant5	MIMO	CDD
Horizontal	Ant1	Ant7	MIMO	

7. 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 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To		Description
	RE≥1G	RE<1G	
-	√	√	-

Where **RE≥1G:** Radiated Emission above 1GHz **RE<1G:** Radiated Emission below 1GHz

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	Mode
-	BTS Band 41 (High) + CPE Band 25 + Samsung module (2.4G WiFi + Zigbee)
-	BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (2.4G WiFi + Zigbee)
-	BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (5.0G WiFi + Zigbee)
-	BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (Bluetooth + Zigbee)
-	BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (Bluetooth LE + Zigbee)
-	BTS Band 41 (High) + Sercomm module (5.0G WiFi) + Samsung module (Bluetooth LE + Zigbee)
-	BTS Band 41 (High) + Sercomm module (5.0G WiFi) + Samsung module (2.4G WiFi + Zigbee)
-	BTS Band 41 (High) + Sercomm module (2.4G WiFi) + Samsung module (5.0G WiFi + Zigbee)
-	BTS Band 41 (High) + Sercomm module (2.4G WiFi) + Samsung module (Bluetooth + Zigbee)

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	Mode
-	BTS Band 41 (High) + CPE Band 25 + Samsung module (2.4G WiFi + Zigbee)
-	BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (2.4G WiFi + Zigbee)
-	BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (5.0G WiFi + Zigbee)
-	BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (Bluetooth + Zigbee)
-	BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (Bluetooth LE + Zigbee)
-	BTS Band 41 (High) + Sercomm module (5.0G WiFi) + Samsung module (Bluetooth LE + Zigbee)
-	BTS Band 41 (High) + Sercomm module (5.0G WiFi) + Samsung module (2.4G WiFi + Zigbee)
-	BTS Band 41 (High) + Sercomm module (2.4G WiFi) + Samsung module (5.0G WiFi + Zigbee)
-	BTS Band 41 (High) + Sercomm module (2.4G WiFi) + Samsung module (Bluetooth + Zigbee)

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE≥1G	26deg. C, 76%RH	120Vac, 60Hz	Ian Chang
RE<1G	27deg. C, 75%RH	120Vac, 60Hz	Ian Chang

3.3 Description of Support Units

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

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook PC	SONY	SVS151A12P	275548477001024	FCC DoC Approved	Provided by Lab
B.	Notebook PC	DELL	PP27L	8SNZ12S	FCC DoC Approved	Provided by Lab
C.	Notebook PC	ASUS	PU401L	ECNXBC012528528	FCC DoC Approved	Provided by Lab

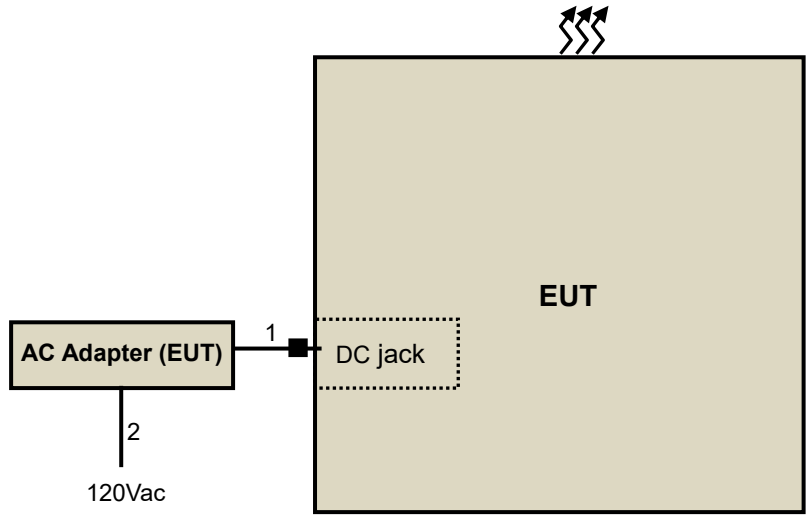
Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Items A~C acted as communication partners to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC cable	1	1.5	N	1	Supplied by client
2.	AC cable	1	3.5	N	0	Supplied by client

Note: The core(s) is(are) originally attached to the cable(s).

3.3.1 Configuration of System under Test



3.4 General Description of Applied Standard

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 v05
KDB 662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2013

FCC Part 15, Subpart E (15.407)
KDB 789033 D02 General UNII Test Procedure New Rules v02r01
KDB 662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2013

FCC 47 CFR Part 2
FCC 47 CFR Part 24
KDB 971168 D01 Power Meas License Digital Systems v03r01
ANSI/TIA/EIA-603-E 2016
ANSI 63.26-2015

FCC 47 CFR Part 2
FCC 47 CFR Part 27
KDB 971168 D01 Power Meas License Digital Systems v03r01
ANSI/TIA/EIA-603-E 2016
ANSI 63.26-2015

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.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

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

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
HP Preamplifier	8447D	2432A03504	Feb. 21, 2018	Feb. 20, 2019
HP Preamplifier	8449B	3008A01201	Feb. 22, 2018	Feb. 21, 2019
MITEQ Preamplifier	AMF-6F-260400-33-8P	892164	Feb. 21, 2018	Feb. 20, 2019
Agilent TEST RECEIVER	N9038A	MY51210129	Feb. 6, 2018	Feb. 5, 2019
Schwarzbeck Antenna	VULB 9168	139	Nov. 29, 2017	Nov. 28, 2018
Schwarzbeck Antenna	VHBA 9123	480	May 19, 2017	May 18, 2019
Schwarzbeck Horn Antenna	BBHA-9170	212	Dec. 1, 2017	Nov. 30, 2018
Schwarzbeck Horn Antenna	BBHA 9120-D1	D130	Dec. 1, 2017	Nov. 30, 2018
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. 4, 2018	Jun. 3, 2019
KEYSIGHT Spectrum Analyzer	N9030A	MY54490260	Aug. 3, 2018	Aug. 2, 2019
Loop Antenna EMCI	LPA600	270	Aug. 11, 2017	Aug. 10, 2019
EMCO Horn Antenna	3115	00028257	Nov. 30, 2017	Nov. 29, 2018
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
Anritsu Power Sensor	MA2411B	0738404	Apr. 26, 2018	Apr. 25, 2019
Anritsu Power Meter	ML2495A	0842014	Apr. 26, 2018	Apr. 25, 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. The Industry Canada Reference No. IC 7450E-6.

4.1.3 Test Procedure

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 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:

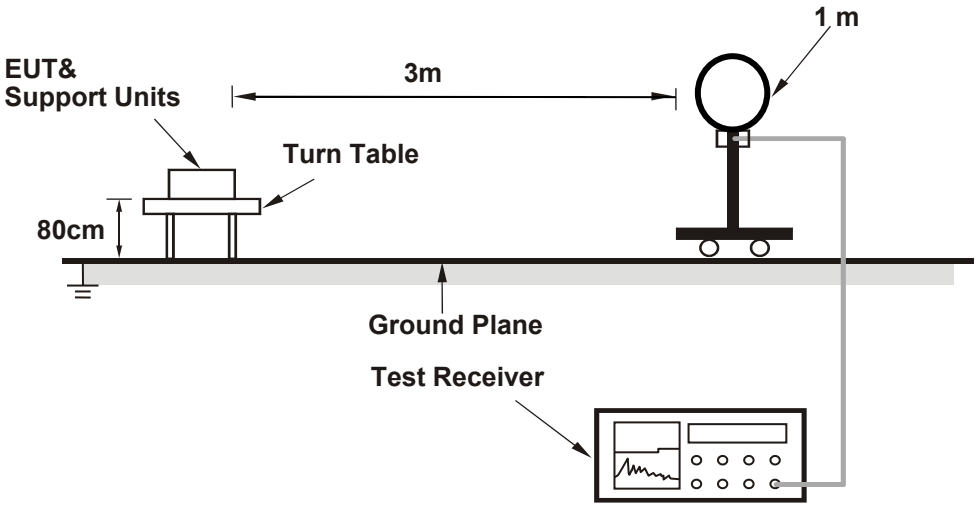
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

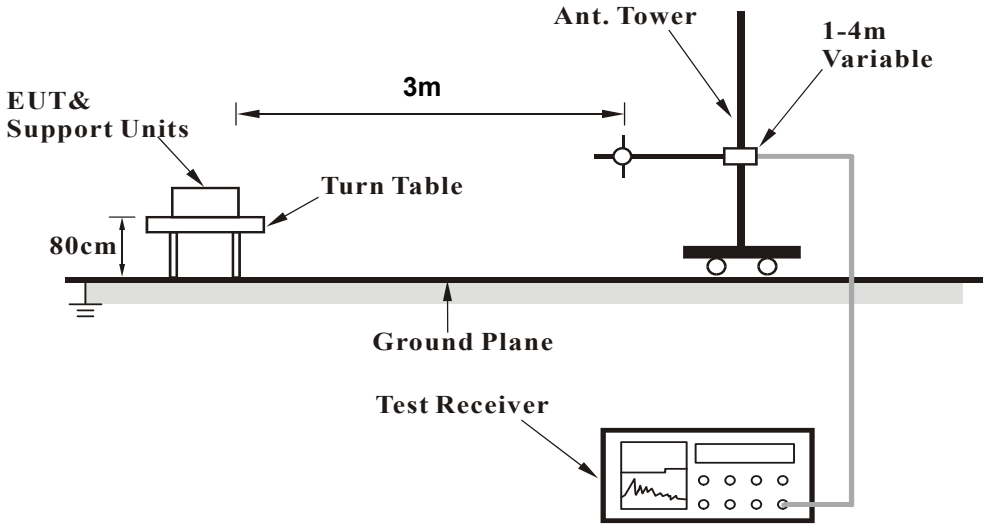
No deviation.

4.1.5 Test Setup

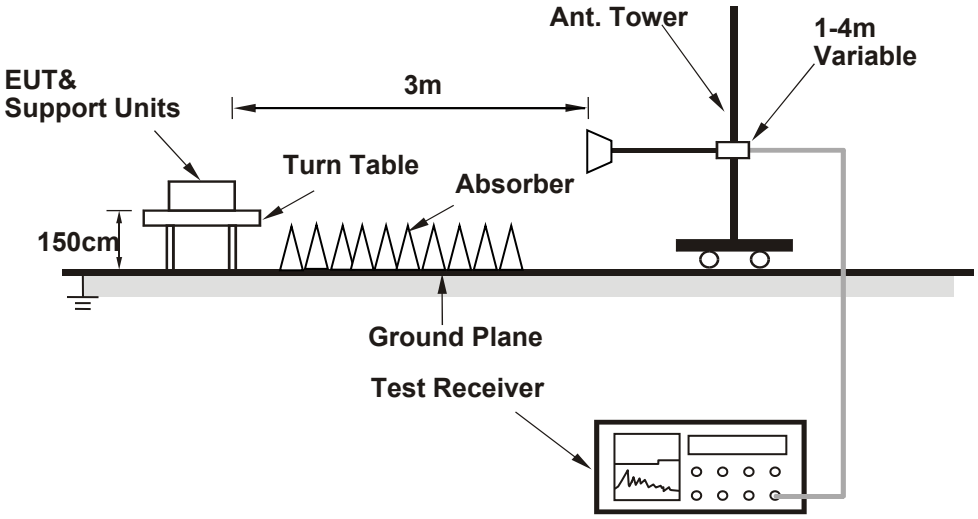
For Radiated emission below 30MHz



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 Condition

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

4.1.7 Test Results

ABOVE 1GHz DATA

BTS Band 41 (High) + CPE Band 25 + Samsung module (2.4G WiFi + Zigbee)

Frequency Range	1GHz ~ 40GHz	**Detector Function**	Peak (PK) 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	2390.00	52.68 PK	74.00	-21.32	2.22 H	230	54.18	-1.50
2	2390.00	38.61 AV	54.00	-15.39	2.22 H	230	40.11	-1.50
3	*2405.00	99.64 PK			2.22 H	230	101.23	-1.59
4	*2405.00	93.64 AV			2.22 H	230	95.23	-1.59
5	*2412.00	97.79 PK			2.88 H	196	99.41	-1.62
6	*2412.00	86.67 AV			2.88 H	196	88.29	-1.62
7	3765.00	53.51 PK	74.00	-20.49	2.04 H	318	50.78	2.73
8	3765.00	49.92 AV	54.00	-4.08	2.04 H	318	47.19	2.73
9	4810.00	43.49 PK	74.00	-30.51	1.50 H	133	38.74	4.75
10	4810.00	29.33 AV	54.00	-24.67	1.50 H	133	24.58	4.75
11	4824.00	42.96 PK	74.00	-31.04	1.92 H	280	38.17	4.79
12	4824.00	29.05 AV	54.00	-24.95	1.92 H	280	24.26	4.79
13	#5260.00	46.70 PK	70.20	-23.5	2.12 H	184	42.18	4.52
14	#5260.00	36.61 AV	54.00	-17.39	2.12 H	184	32.09	4.52
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	54.93 PK	74.00	-19.07	2.03 V	133	56.43	-1.50
2	2390.00	41.68 AV	54.00	-12.32	2.03 V	133	43.18	-1.50
3	*2405.00	108.03 PK			1.86 V	177	109.62	-1.59
4	*2405.00	100.95 AV			1.86 V	177	102.54	-1.59
5	*2412.00	102.56 PK			2.03 V	133	104.18	-1.62
6	*2412.00	91.64 AV			2.03 V	133	93.26	-1.62
7	3765.00	52.24 PK	74.00	-21.76	1.54 V	119	49.51	2.73
8	3765.00	47.92 AV	54.00	-6.08	1.54 V	119	45.19	2.73
9	4810.00	42.59 PK	74.00	-31.41	1.55 V	17	37.84	4.75
10	4810.00	28.33 AV	54.00	-25.67	1.55 V	17	23.58	4.75
11	4824.00	42.05 PK	74.00	-31.95	1.77 V	208	37.26	4.79
12	4824.00	28.42 AV	54.00	-25.58	1.77 V	208	23.63	4.79
13	#5260.00	45.77 PK	70.20	-24.43	1.54 V	62	41.25	4.52
14	#5260.00	31.97 AV	54.00	-22.03	1.54 V	62	27.45	4.52

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 radiated frequency is out of the restricted band.

BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (2.4G WiFi + Zigbee)

Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	2390.00	52.82 PK	74.00	-21.18	2.24 H	226	54.32	-1.50
2	2390.00	38.74 AV	54.00	-15.26	2.24 H	226	40.24	-1.50
3	*2405.00	100.09 PK			2.24 H	226	101.68	-1.59
4	*2405.00	94.13 AV			2.24 H	226	95.72	-1.59
5	*2412.00	97.86 PK			2.81 H	190	99.48	-1.62
6	*2412.00	86.81 AV			2.81 H	190	88.43	-1.62
7	4810.00	43.61 PK	74.00	-30.39	1.57 H	124	38.86	4.75
8	4810.00	29.44 AV	54.00	-24.56	1.57 H	124	24.69	4.75
9	4824.00	43.25 PK	74.00	-30.75	1.85 H	269	38.46	4.79
10	4824.00	28.67 AV	54.00	-25.33	1.85 H	269	23.88	4.79
11	5005.00	56.46 PK	74.00	-17.54	1.97 H	336	51.69	4.77
12	**5005.00**	**52.98 AV**	**54.00**	**-1.02**	**1.97 H**	**336**	**48.21**	**4.77**
13	#5260.00	47.02 PK	70.20	-23.18	2.07 H	171	42.50	4.52
14	#5260.00	36.54 AV	54.00	-17.46	2.07 H	171	32.02	4.52
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	55.31 PK	74.00	-18.69	1.99 V	129	56.81	-1.50
2	2390.00	41.71 AV	54.00	-12.29	1.99 V	129	43.21	-1.50
3	*2405.00	108.15 PK			1.84 V	174	109.74	-1.59
4	*2405.00	101.23 AV			1.84 V	174	102.82	-1.59
5	*2412.00	102.71 PK			1.99 V	128	104.33	-1.62
6	*2412.00	91.81 AV			1.99 V	128	93.43	-1.62
7	4810.00	42.25 PK	74.00	-31.75	1.52 V	3	37.50	4.75
8	4810.00	28.39 AV	54.00	-25.61	1.52 V	3	23.64	4.75
9	4824.00	41.94 PK	74.00	-32.06	1.67 V	231	37.15	4.79
10	4824.00	28.36 AV	54.00	-25.64	1.67 V	231	23.57	4.79
11	5005.00	54.89 PK	74.00	-19.11	2.46 V	28	50.12	4.77
12	5005.00	52.67 AV	54.00	-1.33	2.46 V	28	47.90	4.77
13	#5260.00	45.64 PK	70.20	-24.56	1.43 V	49	41.12	4.52
14	#5260.00	32.38 AV	54.00	-21.62	1.43 V	49	27.86	4.52

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 radiated frequency is out of the restricted band.

BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (5.0G WiFi + Zigbee)

Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	2390.00	52.76 PK	68.20	-15.44	2.25 H	228	54.26	-1.50
2	2390.00	38.69 AV	54.00	-15.31	2.25 H	228	40.19	-1.50
3	*2405.00	99.98 PK			2.25 H	228	101.57	-1.59
4	*2405.00	93.75 AV			2.25 H	228	95.34	-1.59
5	4810.00	43.49 PK	74.00	-30.51	1.62 H	129	38.74	4.75
6	4810.00	29.41 AV	54.00	-24.59	1.62 H	129	24.66	4.75
7	5005.00	55.79 PK	74.00	-18.21	2.01 H	334	51.02	4.77
8	5005.00	52.58 AV	54.00	-1.42	2.01 H	334	47.81	4.77
9	*5240.00	96.16 PK			2.16 H	160	91.51	4.65
10	*5240.00	86.03 AV			2.16 H	160	81.38	4.65
11	#5260.00	46.68 PK	68.20	-21.52	2.15 H	184	42.16	4.52
12	#5260.00	36.25 AV	54.00	-17.75	2.15 H	184	31.73	4.52
13	5350.00	55.41 PK	74.00	-18.59	2.16 H	160	50.91	4.50
14	5350.00	40.96 AV	54.00	-13.04	2.16 H	160	36.46	4.50
15	#10480.00	54.82 PK	68.20	-13.38	1.66 H	226	38.16	16.66
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	55.05 PK	68.20	-13.15	1.89 V	179	56.55	-1.50
2	2390.00	41.52 AV	54.00	-12.48	1.89 V	179	43.02	-1.50
3	*2405.00	107.86 PK			1.89 V	179	109.45	-1.59
4	*2405.00	101.04 AV			1.89 V	179	102.63	-1.59
5	4810.00	42.30 PK	74.00	-31.70	1.59 V	26	37.55	4.75
6	4810.00	28.22 AV	54.00	-25.78	1.59 V	26	23.47	4.75
7	5005.00	54.73 PK	74.00	-19.27	2.55 V	36	49.96	4.77
8	5005.00	52.28 AV	54.00	-1.72	2.55 V	36	47.51	4.77
9	*5240.00	101.28 PK			3.10 V	184	96.63	4.65
10	*5240.00	90.23 AV			3.10 V	184	85.58	4.65
11	#5260.00	45.40 PK	68.20	-22.80	1.55 V	59	40.88	4.52
12	#5260.00	31.78 AV	54.00	-22.22	1.55 V	59	27.26	4.52
13	#10480.00	56.32 PK	68.20	-11.88	1.94 V	251	39.66	16.66

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 radiated frequency is out of the restricted band.

BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (Bluetooth + Zigbee)

Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	2390.00	52.99 PK	74.00	-21.01	2.29 H	230	54.49	-1.50
2	2390.00	38.89 AV	54.00	-15.11	2.29 H	230	40.39	-1.50
3	*2405.00	99.99 PK			2.29 H	230	101.58	-1.59
4	*2405.00	93.67 AV			2.29 H	230	95.26	-1.59
5	*2441.00	94.01 PK			1.50 H	194	95.77	-1.76
6	*2441.00	92.60 AV			1.50 H	194	94.36	-1.76
7	4810.00	43.41 PK	74.00	-30.59	1.63 H	136	38.66	4.75
8	4810.00	29.64 AV	54.00	-24.36	1.63 H	136	24.89	4.75
9	4882.00	44.53 PK	74.00	-29.47	2.06 H	188	39.66	4.87
10	4882.00	30.03 AV	54.00	-23.97	2.06 H	188	25.16	4.87
11	5005.00	56.00 PK	74.00	-18.00	2.02 H	340	51.23	4.77
12	5005.00	52.65 AV	54.00	-1.35	2.02 H	340	47.88	4.77
13	#5260.00	46.67 PK	70.20	-23.53	2.10 H	176	42.15	4.52
14	#5260.00	36.52 AV	54.00	-17.48	2.10 H	176	32.00	4.52
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	53.95 PK	74.00	-20.05	1.66 V	188	55.45	-1.50
2	2390.00	42.19 AV	54.00	-11.81	1.66 V	188	43.69	-1.50
3	*2405.00	106.87 PK			1.66 V	188	108.46	-1.59
4	*2405.00	100.39 AV			1.66 V	188	101.98	-1.59
5	*2441.00	99.27 PK			1.97 V	130	101.03	-1.76
6	*2441.00	97.86 AV			1.97 V	130	99.62	-1.76
7	4810.00	43.41 PK	74.00	-30.59	1.55 V	19	38.66	4.75
8	4810.00	29.71 AV	54.00	-24.29	1.55 V	19	24.96	4.75
9	4882.00	45.12 PK	74.00	-28.88	1.67 V	264	40.25	4.87
10	4882.00	31.20 AV	54.00	-22.80	1.67 V	264	26.33	4.87
11	5005.00	54.64 PK	74.00	-19.36	2.57 V	39	49.87	4.77
12	5005.00	52.06 AV	54.00	-1.94	2.57 V	39	47.29	4.77
13	#5260.00	45.81 PK	70.20	-24.39	1.55 V	69	41.29	4.52
14	#5260.00	32.75 AV	54.00	-21.25	1.55 V	69	28.23	4.52

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 radiated frequency is out of the restricted band.

BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (Bluetooth LE + Zigbee)

Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	2390.00	53.13 PK	74.00	-20.87	2.19 H	220	54.63	-1.50
2	2390.00	39.02 AV	54.00	-14.98	2.19 H	220	40.52	-1.50
3	*2405.00	99.65 PK			2.19 H	220	101.24	-1.59
4	*2405.00	94.18 AV			2.19 H	220	95.77	-1.59
5	*2440.00	93.30 PK			1.51 H	194	95.05	-1.75
6	*2440.00	92.34 AV			1.51 H	194	94.09	-1.75
7	4810.00	43.52 PK	74.00	-30.48	1.62 H	137	38.77	4.75
8	4810.00	29.27 AV	54.00	-24.73	1.62 H	137	24.52	4.75
9	4880.00	47.03 PK	74.00	-26.97	1.67 H	234	42.16	4.87
10	4880.00	32.03 AV	54.00	-21.97	1.67 H	234	27.16	4.87
11	5005.00	55.91 PK	74.00	-18.09	1.91 H	324	51.14	4.77
12	5005.00	52.49 AV	54.00	-1.51	1.91 H	324	47.72	4.77
13	#5260.00	46.68 PK	70.20	-23.52	2.18 H	185	42.16	4.52
14	#5260.00	36.31 AV	54.00	-17.69	2.18 H	185	31.79	4.52
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	54.08 PK	74.00	-19.92	2.06 V	122	55.58	-1.50
2	2390.00	40.66 AV	54.00	-13.34	2.06 V	122	42.16	-1.50
3	*2405.00	107.42 PK			2.06 V	122	109.01	-1.59
4	*2405.00	100.67 AV			2.06 V	122	102.26	-1.59
5	*2440.00	98.27 PK			2.01 V	137	100.02	-1.75
6	*2440.00	97.51 AV			2.01 V	137	99.26	-1.75
7	4810.00	42.78 PK	74.00	-31.22	1.68 V	18	38.03	4.75
8	4810.00	28.74 AV	54.00	-25.26	1.68 V	18	23.99	4.75
9	4880.00	48.05 PK	74.00	-25.95	1.99 V	105	43.18	4.87
10	4880.00	33.46 AV	54.00	-20.54	1.99 V	105	28.59	4.87
11	5005.00	54.72 PK	74.00	-19.28	2.50 V	39	49.95	4.77
12	5005.00	52.03 AV	54.00	-1.97	2.50 V	39	47.26	4.77
13	#5260.00	45.40 PK	70.20	-24.80	1.58 V	62	40.88	4.52
14	#5260.00	32.04 AV	54.00	-21.96	1.58 V	62	27.52	4.52

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 radiated frequency is out of the restricted band.

BTS Band 41 (High) + Sercomm module (5.0G WiFi)+ Samsung module (Bluetooth LE + Zigbee)

Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	2390.00	53.24 PK	68.20	-14.96	2.10 H	229	54.74	-1.50
2	2390.00	38.96 AV	54.00	-15.04	2.10 H	229	40.46	-1.50
3	*2405.00	99.70 PK			2.10 H	229	101.29	-1.59
4	*2405.00	94.27 AV			2.10 H	229	95.86	-1.59
5	*2440.00	93.66 PK			1.53 H	206	95.41	-1.75
6	*2440.00	92.38 AV			1.53 H	206	94.13	-1.75
7	4810.00	42.43 PK	74.00	-31.57	1.59 H	145	37.68	4.75
8	4810.00	29.63 AV	54.00	-24.37	1.59 H	145	24.88	4.75
9	4880.00	47.19 PK	74.00	-26.81	1.72 H	228	42.32	4.87
10	4880.00	32.15 AV	54.00	-21.85	1.72 H	228	27.28	4.87
11	#5260.00	46.88 PK	68.20	-21.32	2.23 H	192	42.36	4.52
12	#5260.00	36.29 AV	54.00	-17.71	2.23 H	192	31.77	4.52
13	#5620.15	64.23 PK	68.20	-3.97	1.72 H	291	59.27	4.96
14	*5825.00	111.99 PK			1.72 H	291	105.88	6.11
15	*5825.00	102.14 AV			1.72 H	291	96.03	6.11
16	#5999.36	65.44 PK	68.20	-2.76	1.72 H	291	59.04	6.40
17	11650.00	54.57 PK	74.00	-19.43	1.96 H	239	37.42	17.15
18	11650.00	44.04 AV	54.00	-9.96	1.96 H	239	26.89	17.15
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)	CORRECTIO N FACTOR (dB/m)
1	2390.00	53.76 PK	68.20	-14.44	2.10 V	129	55.26	-1.50
2	2390.00	40.37 AV	54.00	-13.63	2.10 V	129	41.87	-1.50
3	*2405.00	107.28 PK			2.10 V	129	108.87	-1.59
4	*2405.00	100.37 AV			2.10 V	129	101.96	-1.59
5	*2440.00	98.24 PK			1.99 V	140	99.99	-1.75
6	*2440.00	97.10 AV			1.99 V	140	98.85	-1.75
7	4810.00	43.16 PK	74.00	-30.84	1.71 V	28	38.41	4.75
8	4810.00	28.64 AV	54.00	-25.36	1.71 V	28	23.89	4.75
9	4880.00	48.08 PK	74.00	-25.92	2.06 V	110	43.21	4.87
10	4880.00	33.32 AV	54.00	-20.68	2.06 V	110	28.45	4.87
11	#5260.00	45.09 PK	68.20	-23.11	1.61 V	78	40.57	4.52
12	#5260.00	32.01 AV	54.00	-21.99	1.61 V	78	27.49	4.52
13	#5648.26	63.49 PK	68.20	-4.71	1.56 V	23	58.46	5.03
14	*5825.00	108.65 PK			1.56 V	23	102.54	6.11
15	*5825.00	98.47 AV			1.56 V	23	92.36	6.11
16	#5985.62	65.53 PK	68.20	-2.67	1.56 V	23	59.17	6.36
17	11650.00	55.41 PK	74.00	-18.59	2.03 V	228	38.26	17.15
18	11650.00	44.37 AV	54.00	-9.63	2.03 V	228	27.22	17.15

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 radiated frequency is out of the restricted band.

TS Band 41 (High) + Sercomm module (5.0G WiFi) + Samsung module (2.4G WiFi + Zigbee)

Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	2390.00	52.66 PK	68.20	-15.54	2.34 H	218	54.16	-1.50
2	2390.00	38.50 AV	54.00	-15.50	2.34 H	218	40.00	-1.50
3	*2405.00	99.83 PK			2.34 H	218	101.42	-1.59
4	*2405.00	94.03 AV			2.34 H	218	95.62	-1.59
5	*2412.00	98.00 PK			2.88 H	184	99.62	-1.62
6	*2412.00	86.97 AV			2.88 H	184	88.59	-1.62
7	4810.00	43.50 PK	74.00	-30.50	1.69 H	144	38.75	4.75
8	4810.00	29.37 AV	54.00	-24.63	1.69 H	144	24.62	4.75
9	4824.00	43.56 PK	74.00	-30.44	1.92 H	270	38.77	4.79
10	4824.00	28.75 AV	54.00	-25.25	1.92 H	270	23.96	4.79
11	#5260.00	46.86 PK	68.20	-21.34	2.10 H	188	42.34	4.52
12	#5260.00	36.47 AV	54.00	-17.53	2.10 H	188	31.95	4.52
13	#5618.67	64.12 PK	68.20	-4.08	1.62 H	290	59.16	4.96
14	*5825.00	111.83 PK			1.62 H	290	105.72	6.11
15	*5825.00	102.07 AV			1.62 H	290	95.96	6.11
16	#5996.32	65.49 PK	68.20	-2.71	1.62 H	290	59.11	6.38
17	11650.00	54.57 PK	74.00	-19.43	1.88 H	231	37.42	17.15
18	11650.00	44.34 AV	54.00	-9.66	1.88 H	231	27.19	17.15
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	55.05 PK	68.20	-13.15	2.06 V	136	56.55	-1.50
2	2390.00	41.68 AV	54.00	-12.32	2.06 V	136	43.18	-1.50
3	#2405.00	107.67 PK	68.20	39.47	1.86 V	177	109.26	-1.59
4	#2405.00	100.95 AV	54.00	46.95	1.86 V	177	102.54	-1.59
5	*2412.00	102.56 PK			2.06 V	136	104.18	-1.62
6	*2412.00	91.64 AV			2.06 V	136	93.26	-1.62
7	4810.00	42.24 PK	74.00	-31.76	1.48 V	26	37.49	4.75
8	4810.00	28.41 AV	54.00	-25.59	1.48 V	26	23.66	4.75
9	4824.00	42.27 PK	74.00	-31.73	1.72 V	229	37.48	4.79
10	4824.00	28.48 AV	54.00	-25.52	1.72 V	229	23.69	4.79
11	#5260.00	45.78 PK	68.20	-22.42	1.51 V	59	41.26	4.52
12	#5260.00	32.43 AV	54.00	-21.57	1.51 V	59	27.91	4.52
13	#5638.84	63.79 PK	68.20	-4.41	1.58 V	28	58.78	5.01
14	*5825.00	108.58 PK			1.58 V	28	102.47	6.11
15	*5825.00	98.49 AV			1.58 V	28	92.38	6.11
16	#5991.36	65.35 PK	68.20	-2.85	1.58 V	28	58.97	6.38
17	11650.00	54.60 PK	74.00	-19.40	1.98 V	251	37.45	17.15
18	11650.00	44.59 AV	54.00	-9.41	1.98 V	251	27.44	17.15

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 radiated frequency is out of the restricted band.

BTS Band 41 (High) + Sercomm module (2.4G WiFi) + Samsung module (5.0G WiFi + Zigbee)

Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	2390.00	52.69 PK	68.20	-15.51	2.20 H	236	54.19	-1.50
2	2390.00	38.56 AV	54.00	-15.44	2.20 H	236	40.06	-1.50
3	*2405.00	99.64 PK			2.20 H	236	101.23	-1.59
4	*2405.00	93.49 AV			2.20 H	236	95.08	-1.59
5	*2437.00	110.04 PK			1.36 H	182	111.78	-1.74
6	*2437.00	107.77 AV			1.36 H	182	109.51	-1.74
7	4810.00	43.27 PK	74.00	-30.73	1.66 H	133	38.52	4.75
8	4810.00	29.04 AV	54.00	-24.96	1.66 H	133	24.29	4.75
9	4874.00	43.31 PK	74.00	-30.69	2.66 H	319	38.44	4.87
10	4874.00	32.30 AV	54.00	-21.70	2.66 H	319	27.43	4.87
11	*5240.00	96.13 PK			2.20 H	167	91.48	4.65
12	*5240.00	85.67 AV			2.20 H	167	81.02	4.65
13	#5260.00	46.55 PK	68.20	-21.65	2.19 H	191	42.03	4.52
14	#5260.00	36.07 AV	54.00	-17.93	2.19 H	191	31.55	4.52
15	#10480.00	54.92 PK	68.20	-13.28	1.59 H	238	38.26	16.66
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	54.92 PK	68.20	-13.28	1.91 V	185	56.42	-1.50
2	2390.00	41.38 AV	54.00	-12.62	1.91 V	185	42.88	-1.50
3	*2405.00	108.15 PK			1.91 V	185	109.74	-1.59
4	*2405.00	101.00 AV			1.91 V	185	102.59	-1.59
5	*2437.00	113.11 PK			1.90 V	13	114.85	-1.74
6	*2437.00	110.29 AV			1.90 V	13	112.03	-1.74
7	4810.00	42.59 PK	74.00	-31.41	1.63 V	41	37.84	4.75
8	4810.00	28.43 AV	54.00	-25.57	1.63 V	41	23.68	4.75
9	4874.00	44.89 PK	74.00	-29.11	1.57 V	188	40.02	4.87
10	4874.00	34.43 AV	54.00	-19.57	1.57 V	188	29.56	4.87
11	*5240.00	101.08 PK			3.08 V	189	96.43	4.65
12	*5240.00	89.67 AV			3.08 V	189	85.02	4.65
13	#5260.00	45.26 PK	68.20	-22.94	1.67 V	85	40.74	4.52
14	#5260.00	31.75 AV	54.00	-22.25	1.67 V	85	27.23	4.52
15	#10480.00	56.24 PK	68.20	-11.96	1.92 V	250	39.58	16.66

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 radiated frequency is out of the restricted band.

BTS Band 41 (High) + Sercomm module (2.4G WiFi) + Samsung module (Bluetooth + Zigbee)

Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) 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	2390.00	52.79 PK	74.00	-21.21	2.31 H	239	54.29	-1.50
2	2390.00	38.94 AV	54.00	-15.06	2.31 H	239	40.44	-1.50
3	*2405.00	99.88 PK			2.31 H	239	101.47	-1.59
4	*2405.00	93.80 AV			2.31 H	239	95.39	-1.59
5	*2437.00	109.61 PK			1.35 H	186	111.35	-1.74
6	*2437.00	108.10 AV			1.35 H	186	109.84	-1.74
7	*2441.00	93.67 PK			1.55 H	203	95.43	-1.76
8	*2441.00	92.26 AV			1.55 H	203	94.02	-1.76
9	4810.00	43.19 PK	74.00	-30.81	1.58 H	144	38.44	4.75
10	4810.00	29.43 AV	54.00	-24.57	1.58 H	144	24.68	4.75
11	4874.00	42.98 PK	74.00	-31.02	2.66 H	318	38.11	4.87
12	4874.00	32.03 AV	54.00	-21.97	2.66 H	318	27.16	4.87
13	4882.00	44.39 PK	74.00	-29.61	2.10 H	182	39.52	4.87
14	4882.00	29.98 AV	54.00	-24.02	2.10 H	182	25.11	4.87
15	#5260.00	46.84 PK	70.20	-23.36	2.18 H	184	42.32	4.52
16	#5260.00	37.03 AV	54.00	-16.97	2.18 H	184	32.51	4.52
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	53.76 PK	74.00	-20.24	1.60 V	178	55.26	-1.50
2	2390.00	41.97 AV	54.00	-12.03	1.60 V	178	43.47	-1.50
3	*2405.00	107.19 PK			1.60 V	178	108.78	-1.59
4	*2405.00	100.44 AV			1.60 V	178	102.03	-1.59
5	*2437.00	113.07 PK			1.81 V	18	114.81	-1.74
6	*2437.00	110.41 AV			1.81 V	18	112.15	-1.74
7	*2441.00	99.15 PK			2.03 V	138	100.91	-1.76
8	*2441.00	97.74 AV			2.03 V	138	99.50	-1.76
9	4810.00	43.22 PK	74.00	-30.78	1.67 V	84	38.47	4.75
10	4810.00	29.11 AV	54.00	-24.89	1.67 V	84	24.36	4.75
11	4874.00	45.03 PK	74.00	-28.97	1.50 V	200	40.16	4.87
12	4874.00	34.45 AV	54.00	-19.55	1.50 V	200	29.58	4.87
13	4882.00	45.06 PK	74.00	-28.94	1.70 V	258	40.19	4.87
14	4882.00	31.75 AV	54.00	-22.25	1.70 V	258	26.88	4.87
15	#5260.00	46.04 PK	70.20	-24.16	1.58 V	79	41.52	4.52
16	#5260.00	33.18 AV	54.00	-20.82	1.58 V	79	28.66	4.52

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 radiated frequency is out of the restricted band.

BELOW 1GHz WORST-CASE DATA

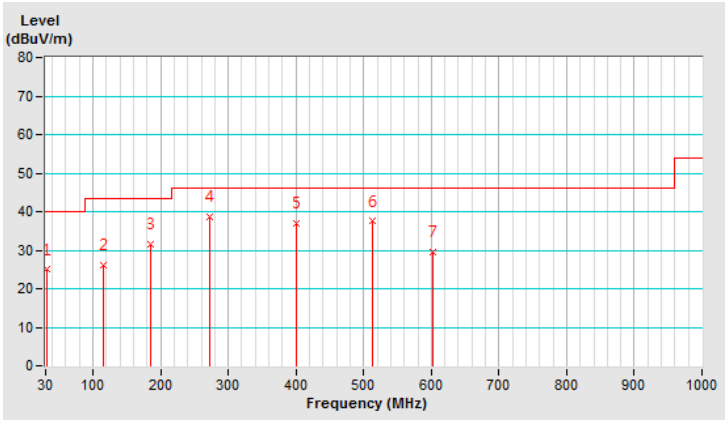
BTS Band 41 (High) + CPE Band 25 + Samsung module (2.4G WiFi + Zigbee)

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	31.16	24.93 QP	40.00	-15.07	2.36 H	358	33.73	-8.80
2	114.39	26.09 QP	43.50	-17.41	1.88 H	100	36.03	-9.94
3	184.81	31.61 QP	43.50	-11.89	1.94 H	264	40.52	-8.91
4	273.18	38.57 QP	46.00	-7.43	2.16 H	204	44.64	-6.07
5	401.27	37.11 QP	46.00	-8.89	1.00 H	209	40.47	-3.36
6	513.84	37.52 QP	46.00	-8.48	1.54 H	192	38.49	-0.97
7	601.62	29.52 QP	46.00	-16.48	1.74 H	242	28.66	0.86

REMARKS:

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

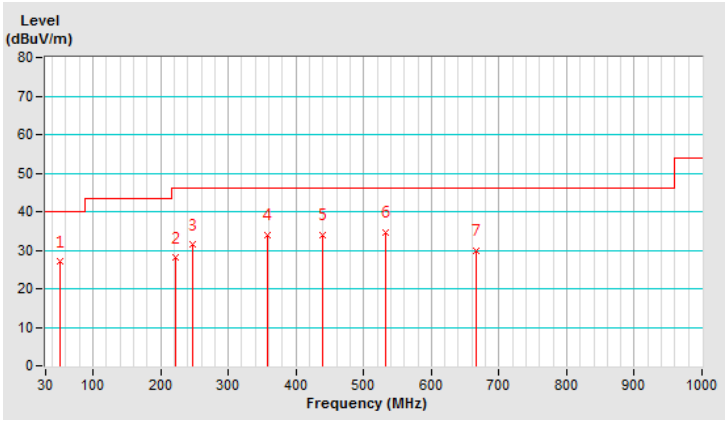


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	51.68	27.03 QP	40.00	-12.97	1.24 V	339	34.03	-7.00
2	221.09	28.05 QP	46.00	-17.95	1.96 V	144	37.39	-9.34
3	248.15	31.37 QP	46.00	-14.63	1.37 V	176	38.80	-7.43
4	358.44	33.85 QP	46.00	-12.15	1.18 V	171	38.06	-4.21
5	439.29	33.85 QP	46.00	-12.15	1.33 V	220	35.96	-2.11
6	531.64	34.50 QP	46.00	-11.50	1.00 V	105	35.30	-0.80
7	667.00	29.97 QP	46.00	-16.03	1.98 V	142	27.98	1.99

REMARKS:

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



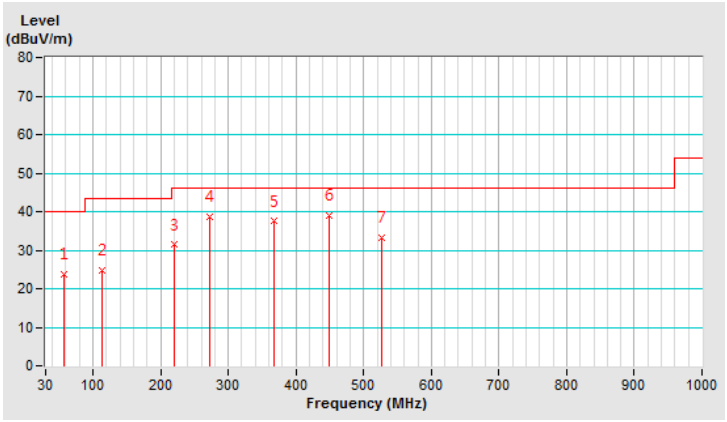
BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (2.4G WiFi + Zigbee)

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	57.06	23.86 QP	40.00	-16.14	1.95 H	100	31.14	-7.28
2	112.89	24.84 QP	43.50	-18.66	2.15 H	105	34.97	-10.13
3	220.70	31.36 QP	46.00	-14.64	2.41 H	123	40.70	-9.34
4	273.18	38.57 QP	46.00	-7.43	1.06 H	204	44.64	-6.07
5	366.93	37.50 QP	46.00	-8.50	1.52 H	204	41.44	-3.94
6	449.28	39.10 QP	46.00	-6.90	2.26 H	247	41.11	-2.01
7	527.08	33.19 QP	46.00	-12.81	1.00 H	202	33.98	-0.79

REMARKS:

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

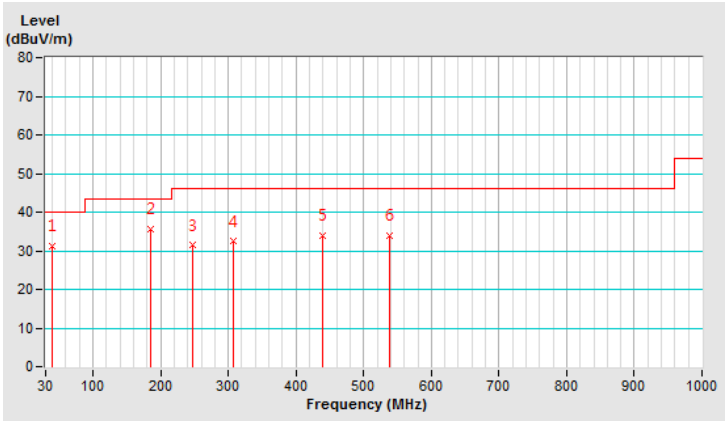


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	38.78	31.32 QP	40.00	-8.68	1.63 V	341	39.28	-7.96
2	184.57	35.52 QP	43.50	-7.98	1.37 V	230	44.40	-8.88
3	248.15	31.37 QP	46.00	-14.63	1.18 V	176	38.80	-7.43
4	307.81	32.41 QP	46.00	-13.59	1.87 V	360	37.41	-5.00
5	439.29	33.85 QP	46.00	-12.15	1.15 V	220	35.96	-2.11
6	538.33	34.00 QP	46.00	-12.00	2.64 V	100	34.74	-0.74

REMARKS:

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



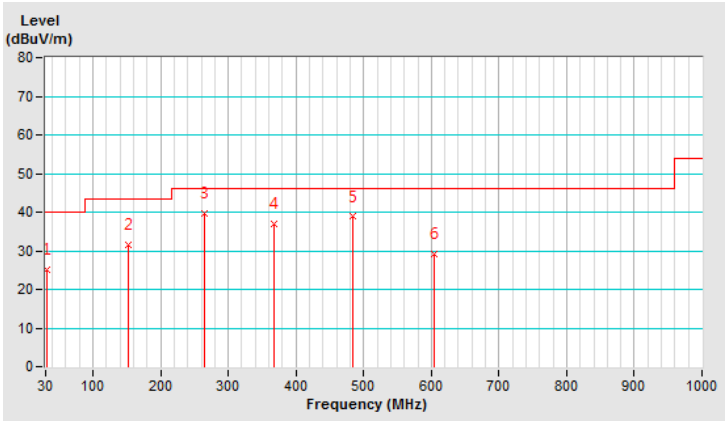
BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (5.0G WiFi + Zigbee)

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	31.23	25.06 QP	40.00	-14.94	1.52 H	358	33.85	-8.79
2	152.66	31.58 QP	43.50	-11.92	1.84 H	135	38.50	-6.92
3	265.06	39.58 QP	46.00	-6.42	2.34 H	219	46.15	-6.57
4	366.84	36.89 QP	46.00	-9.11	2.08 H	204	40.83	-3.94
5	484.85	38.88 QP	46.00	-7.12	1.88 H	217	40.35	-1.47
6	603.46	29.15 QP	46.00	-16.85	1.67 H	44	28.29	0.86

REMARKS:

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

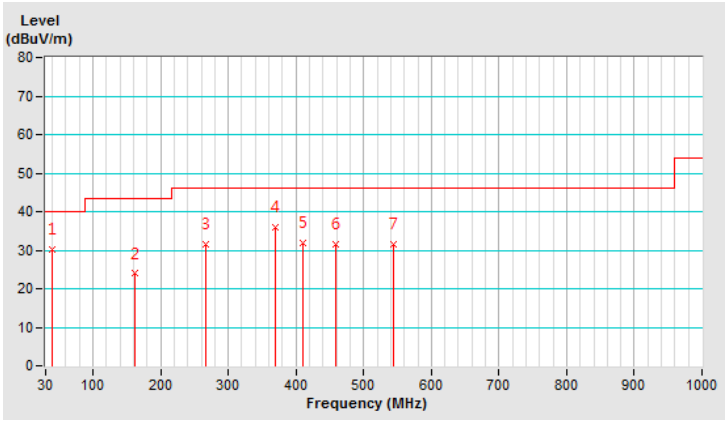


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	39.99	30.27 QP	40.00	-9.73	1.61 V	65	38.04	-7.77
2	161.73	23.96 QP	43.50	-19.54	2.05 V	260	30.89	-6.93
3	266.10	31.68 QP	46.00	-14.32	1.94 V	360	38.17	-6.49
4	368.82	36.02 QP	46.00	-9.98	2.67 V	157	39.90	-3.88
5	410.34	31.93 QP	46.00	-14.07	1.18 V	238	35.11	-3.18
6	458.59	31.68 QP	46.00	-14.32	1.67 V	233	33.71	-2.03
7	544.25	31.50 QP	46.00	-14.50	1.55 V	26	32.03	-0.53

REMARKS:

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



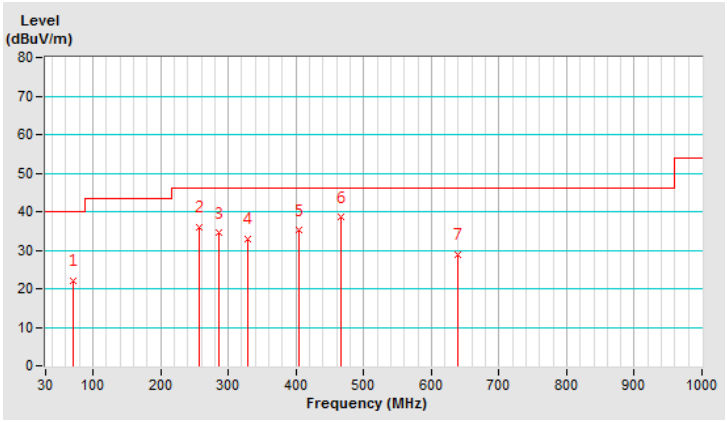
BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (Bluetooth + Zigbee)

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	71.37	22.00 QP	40.00	-18.00	2.18 H	128	31.25	-9.25
2	256.88	35.89 QP	46.00	-10.11	1.69 H	247	42.91	-7.02
3	285.98	34.42 QP	46.00	-11.58	1.82 H	219	39.98	-5.56
4	328.47	32.86 QP	46.00	-13.14	2.00 H	128	37.41	-4.55
5	404.61	35.16 QP	46.00	-10.84	1.60 H	214	38.46	-3.30
6	467.32	38.48 QP	46.00	-7.52	1.77 H	232	40.31	-1.83
7	639.26	28.78 QP	46.00	-17.22	1.00 H	54	27.14	1.64

REMARKS:

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

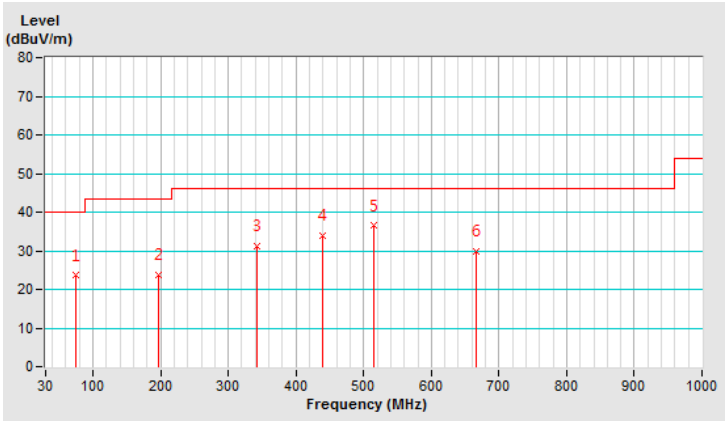


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	73.89	23.62 QP	40.00	-16.38	1.42 V	108	33.46	-9.84
2	197.76	23.65 QP	43.50	-19.85	1.87 V	311	33.44	-9.79
3	342.24	31.29 QP	46.00	-14.71	1.06 V	144	35.81	-4.52
4	439.29	33.85 QP	46.00	-12.15	1.94 V	220	35.96	-2.11
5	515.73	36.47 QP	46.00	-9.53	1.27 V	108	37.43	-0.96
6	667.00	29.97 QP	46.00	-16.03	1.25 V	142	27.98	1.99

REMARKS:

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



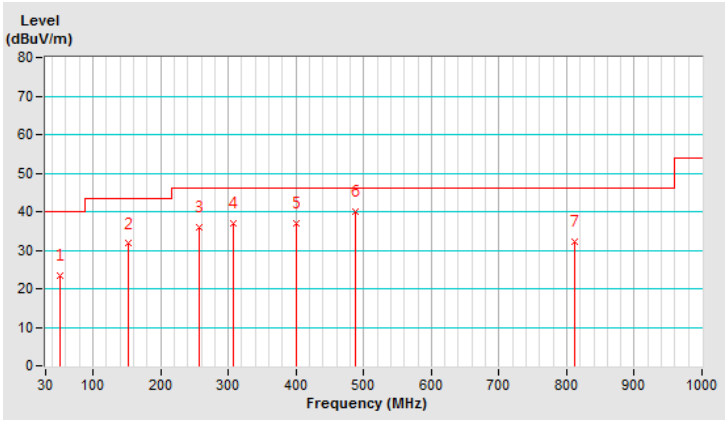
BTS Band 41 (High) + CPE Band 41 (Low) + Samsung module (Bluetooth LE + Zigbee)

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	51.58	23.38 QP	40.00	-16.62	2.61 H	7	30.38	-7.00
2	152.71	31.70 QP	43.50	-11.80	1.97 H	135	38.62	-6.92
3	256.88	35.89 QP	46.00	-10.11	1.88 H	247	42.91	-7.02
4	307.08	37.09 QP	46.00	-8.91	1.72 H	130	42.11	-5.02
5	401.27	37.11 QP	46.00	-8.89	1.69 H	209	40.47	-3.36
6	**488.62**	**39.98 QP**	**46.00**	**-6.02**	**1.82 H**	**197**	**41.38**	**-1.40**
7	810.85	32.31 QP	46.00	-13.69	1.90 H	318	27.99	4.32

REMARKS:

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

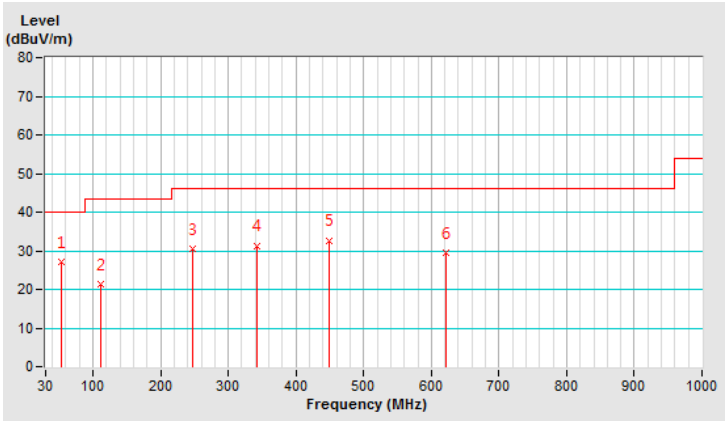


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	53.04	27.00 QP	40.00	-13.00	1.08 V	26	34.11	-7.11
2	111.38	21.20 QP	43.50	-22.30	1.75 V	100	31.46	-10.26
3	246.36	30.37 QP	46.00	-15.63	1.46 V	201	37.87	-7.50
4	342.24	31.29 QP	46.00	-14.71	1.23 V	144	35.81	-4.52
5	449.96	32.54 QP	46.00	-13.46	2.23 V	360	34.55	-2.01
6	622.62	29.34 QP	46.00	-16.66	1.98 V	4	27.90	1.44

REMARKS:

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



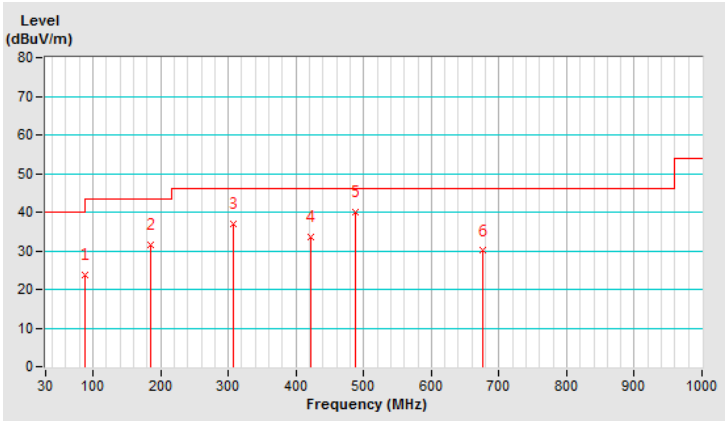
BTS Band 41 (High) + Sercomm module (5.0G WiFi) + Samsung module (Bluetooth LE + Zigbee)

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	88.20	23.89 QP	43.50	-19.61	2.30 H	96	36.44	-12.55
2	184.81	31.61 QP	43.50	-11.89	1.78 H	264	40.52	-8.91
3	307.08	37.09 QP	46.00	-8.91	1.45 H	130	42.11	-5.02
4	422.56	33.61 QP	46.00	-12.39	1.63 H	199	36.37	-2.76
5	488.62	39.98 QP	46.00	-6.02	2.08 H	197	41.38	-1.40
6	675.68	30.02 QP	46.00	-15.98	1.91 H	160	27.95	2.07

REMARKS:

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

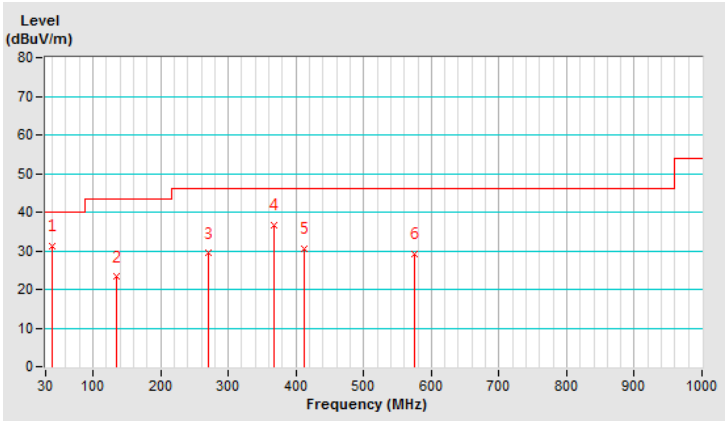


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	38.78	31.32 QP	40.00	-8.68	1.67 V	341	39.28	-7.96
2	134.52	23.28 QP	43.50	-20.22	1.25 V	247	31.35	-8.07
3	271.29	29.37 QP	46.00	-16.63	1.80 V	19	35.55	-6.18
4	367.12	36.77 QP	46.00	-9.23	1.96 V	169	40.70	-3.93
5	412.03	30.49 QP	46.00	-15.51	2.09 V	240	33.62	-3.13
6	574.46	29.08 QP	46.00	-16.92	2.28 V	122	28.98	0.10

REMARKS:

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



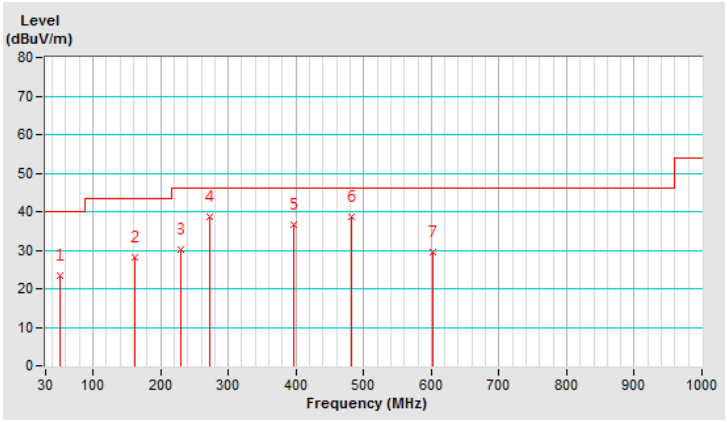
BTS Band 41 (High) + Sercomm module (5.0G WiFi) + Samsung module (2.4G WiFi + Zigbee)

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	51.58	23.38 QP	40.00	-16.62	1.98 H	7	30.38	-7.00
2	161.05	28.14 QP	43.50	-15.36	1.73 H	138	35.03	-6.89
3	229.77	30.27 QP	46.00	-15.73	2.15 H	244	39.66	-9.39
4	273.18	38.57 QP	46.00	-7.43	1.88 H	204	44.64	-6.07
5	397.19	36.73 QP	46.00	-9.27	2.41 H	194	40.13	-3.40
6	481.24	38.67 QP	46.00	-7.33	1.03 H	234	40.20	-1.53
7	601.62	29.52 QP	46.00	-16.48	1.44 H	242	28.66	0.86

REMARKS:

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

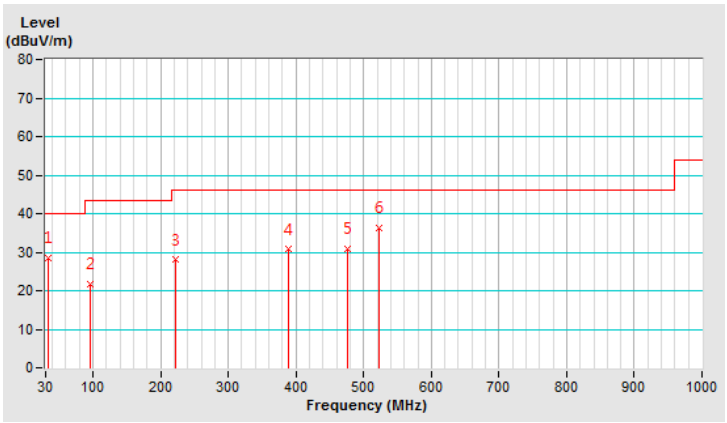


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	34.51	28.51 QP	40.00	-11.49	1.26 V	196	37.06	-8.55
2	96.69	21.74 QP	43.50	-21.76	1.84 V	201	33.97	-12.23
3	221.09	28.05 QP	46.00	-17.95	1.05 V	144	37.39	-9.34
4	388.22	30.74 QP	46.00	-15.26	2.19 V	154	34.21	-3.47
5	476.73	30.92 QP	46.00	-15.08	2.28 V	233	32.54	-1.62
6	522.66	36.26 QP	46.00	-9.74	1.74 V	98	37.10	-0.84

REMARKS:

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



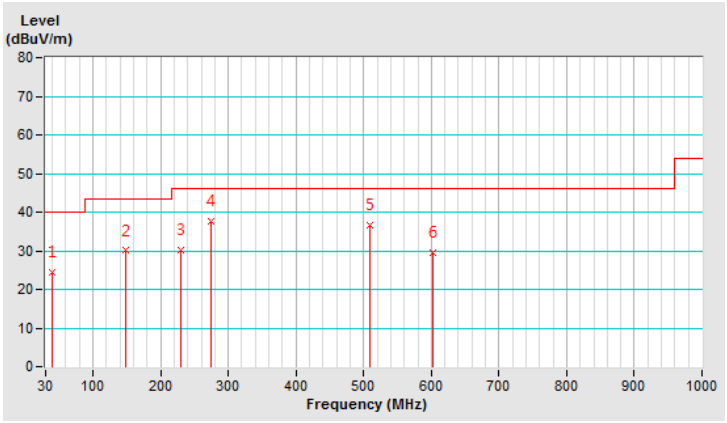
BTS Band 41 (High) + Sercomm module (2.4G WiFi) + Samsung module (5.0G WiFi + Zigbee)

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	40.52	24.36 QP	40.00	-15.64	2.39 H	68	32.04	-7.68
2	149.07	30.04 QP	43.50	-13.46	2.18 H	78	36.95	-6.91
3	229.77	30.27 QP	46.00	-15.73	1.94 H	244	39.66	-9.39
4	274.97	37.67 QP	46.00	-8.33	1.08 H	214	43.63	-5.96
5	510.10	36.63 QP	46.00	-9.37	1.42 H	199	37.62	-0.99
6	601.62	29.52 QP	46.00	-16.48	1.43 H	242	28.66	0.86

REMARKS:

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

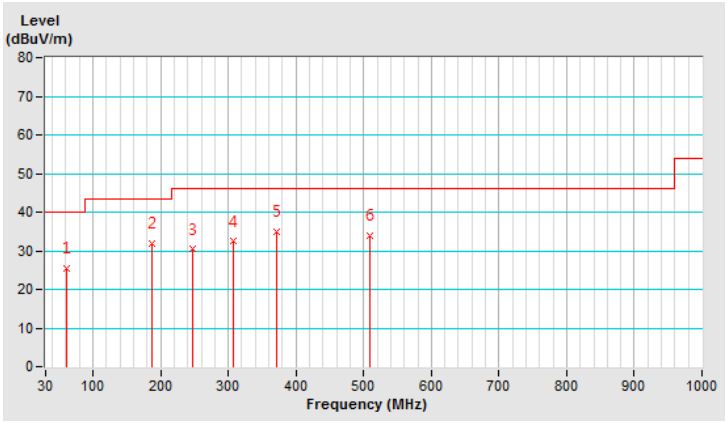


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	60.89	25.52 QP	40.00	-14.48	1.81 V	11	33.13	-7.61
2	186.56	32.03 QP	43.50	-11.47	1.69 V	247	41.12	-9.09
3	246.36	30.37 QP	46.00	-15.63	1.77 V	201	37.87	-7.50
4	307.81	32.41 QP	46.00	-13.59	2.36 V	360	37.41	-5.00
5	370.91	34.93 QP	46.00	-11.07	2.15 V	179	38.75	-3.82
6	509.67	34.00 QP	46.00	-12.00	2.41 V	118	34.99	-0.99

REMARKS:

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



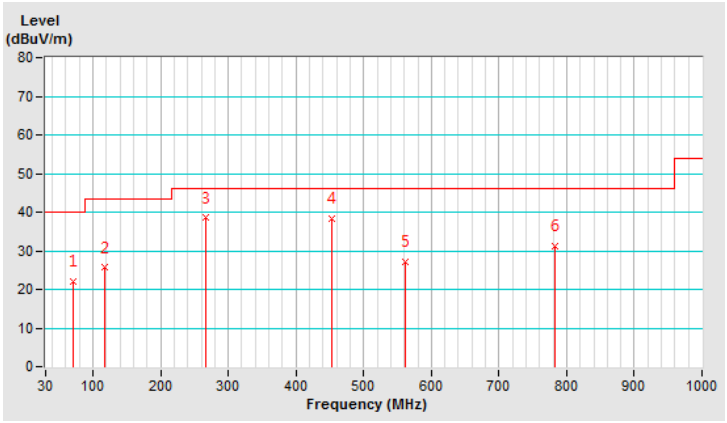
BTS Band 41 (High) + Sercomm module (2.4G WiFi) + Samsung module (Bluetooth + Zigbee)

Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	71.37	22.00 QP	40.00	-18.00	1.84 H	128	31.25	-9.25
2	116.38	25.62 QP	43.50	-17.88	2.41 H	108	35.38	-9.76
3	266.39	38.55 QP	46.00	-7.45	1.10 H	219	45.04	-6.49
4	453.78	38.23 QP	46.00	-7.77	2.03 H	239	40.26	-2.03
5	560.69	27.25 QP	46.00	-18.75	1.57 H	194	27.52	-0.27
6	783.40	31.29 QP	46.00	-14.71	1.32 H	281	27.33	3.96

REMARKS:

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

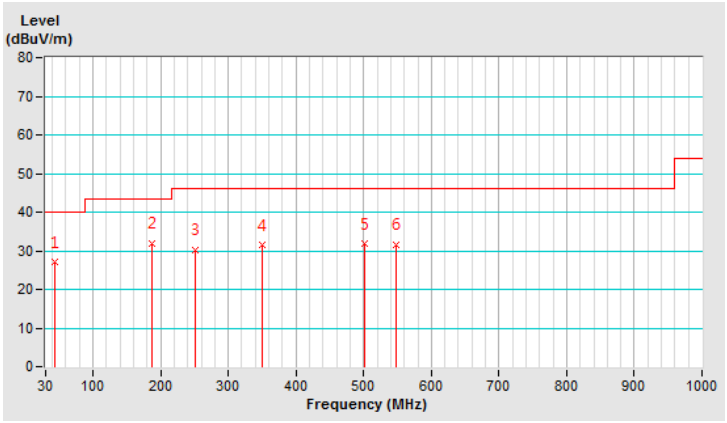


Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	42.95	27.03 QP	40.00	-12.97	2.25 V	267	34.45	-7.42
2	186.56	32.03 QP	43.50	-11.47	1.72 V	247	41.12	-9.09
3	251.74	30.27 QP	46.00	-15.73	3.06 V	181	37.56	-7.29
4	349.71	31.37 QP	46.00	-14.63	1.89 V	162	35.74	-4.37
5	500.98	31.70 QP	46.00	-14.30	1.58 V	110	32.90	-1.20
6	547.35	31.49 QP	46.00	-14.51	1.91 V	319	31.98	-0.49

REMARKS:

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



5 Pictures of Test Arrangements

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

Appendix – Information on the Testing Laboratories

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

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

Linko EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety
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.

--- END ---