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FCC TEST REPORT

REPORT NO.: RF110907E02S-2

MODEL NO.: AR5B22

FCC ID: PPD-AR5B22

IC: 4104A-AR5B22

RECEIVED: Jan. 23, 2013

TESTED: Jan. 29 to Feb. 06, 2013

ISSUED: Feb. 22, 2013

APPLICANT: Qualcomm Atheros, Inc.

ADDRESS: 1700 Technology Drive, San Jose, CA 95110

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

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RELEASE CONTROL RECORD

| ISSUE NO. | REASON FOR CHANGE | DATE ISSUED |
|----------------|-------------------|---------------|
| RF110907E02S-2 | Original release | Feb. 22, 2013 |



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1 CERTIFICATION

PRODUCT : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
BRAND NAME : Atheros
MODEL NO. : AR5B22
TEST SAMPLE : R&D SAMPLE
APPLICANT : Qualcomm Atheros, Inc.
TESTED : Jan. 29 to Feb. 06, 2013
STANDARDS : FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10-2009
Canada RSS-210 Issue 8 (2010-12)
Canada RSS-Gen Issue 3 (2010-12)

The above equipment (Model: AR5B22) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and was in compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : , **DATE:** Feb. 22, 2013
(Lori Chung, Specialist)

APPROVED BY : , **DATE:** Feb. 22, 2013
(May Chen, Deputy Manager)

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2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| APPLIED STANDARD: FCC Part 15, Subpart C; RSS-210; RSS-Gen | | | | |
|--|-----------------|--------------------------------|--------|---|
| STANDARD SECTION | | TEST TYPE AND LIMIT | RESULT | REMARK |
| FCC Part 15 | RSS-Gen RSS-210 | | | |
| 15.207 | RSS-Gen 7.2.4 | AC Power Conducted Emission | PASS | Meet the requirement of limit. Minimum passing margin is -6.78dB at 0.18906MHz. |
| 15.247(b) | RSS-210 A8.4(2) | Maximum Peak Output Power | PASS | Meet the requirement of limit. |
| 15.247(d) | RSS-210 A8.5 | Transmitter Radiated Emissions | PASS | Meet the requirement of limit. Minimum passing margin is -3.4dB at 65.20MHz. |

NOTE:

1. Frequency Hopping System operating in 2400-2483.5MHz band and the output power less than 125mW. The hopping channel carrier frequencies separated by a minimum of 25kHz or two-thirds of the 20dB bandwidth of hopping channel whichever is greater.
2. This report is prepared for FCC class II change and IC reassessment change. Only conducted emission / radiated emission / conducted power were presented in this test report.

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:

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

| Measurement | Value |
|-----------------------------------|---------|
| Conducted emissions | 2.98 dB |
| Radiated emissions (30MHz-1GHz) | 5.63 dB |
| Radiated emissions (1GHz -6GHz) | 3.73 dB |
| Radiated emissions (6GHz -18GHz) | 3.90 dB |
| Radiated emissions (18GHz -40GHz) | 4.11 dB |



3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

| | |
|-----------------------|--|
| PRODUCT | PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card |
| MODEL NO. | AR5B22 |
| FCC ID | PPD-AR5B22 |
| IC | 4104A-AR5B22 |
| POWER SUPPLY | DC 3.3V from host equipment |
| MODULATION TYPE | GFSK, $\pi/4$ -DQPSK, 8DPSK |
| MODULATION TECHNOLOGY | FHSS |
| OPRTAING FREQUENCY | 2402MHz ~ 2480MHz |
| NUMBER OF CHANNEL | 79 |
| MAXIMUM OUTPUT POWER | GFSK: 2.350 mW 8DPSK: 4.786 mW |
| ANTENNA TYPE | See item 3.2 |
| ANTENNA CONNECTOR | See item 3.2 |
| DATA CABLE | NA |
| I/O PORTS | NA |
| ASSOCIATED DEVICES | NA |

NOTE:

1. This report is prepared for FCC class II permissive change and IC reassessment change. The difference compared with the Report No.: RF110907E02I-2 R1 design is as the following information:

u BOM Changed.

- a. 5G TX chain0: C42=0.2pF
 - b. 5G RX chain0: C126=1.3nH, C122=2.2pF
 - c. 2G TX chain1: C119=1.3pF, C130=1.3pF
 - d. 2G, 5G RX chain1: L23=L21=0.1pF, C57=C60=1nH, L22=2nH, C55=1nH, C129=0.4pF, R25=1.8nH, L9=L47=3.6nH, C135=1pF, C52=3pF
2. There are Bluetooth technology and WLAN technology used for the EUT. < the WLAN test data please refer to Report No. "RF110907E02S & RF110907E02S-1 ">
 3. The Bluetooth supports version 4.0.

4. The device has three configurations (working mode)
 - a. WLAN only (2x2 MIMO)
 - b. BT+WLAN (2x2 MIMO) with reduced power on WLAN
 - c. BT+WLAN (1x1 mode on a/b/g only, chain 0 is used for BT and chain 1 is used for WLAN)
5. This device support the power back off (For WLAN only mode.) for WLAN/BT coexist mode. The WiFi output power will reduce 5dB from Maximum power for WLAN and BT simultaneously transmission.
6. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

3.2 DESCRIPTION OF ANTENNA

There is one set of antenna provided to this EUT, please refer to the following table:

| No. | Brand | Model | Antenna Type | Connector | Antenna Gain (dBi)< included cable loss> | | | |
|-----|-------|--------------|--------------|-----------|--|----------------------|-----------------------|------------------------|
| | | | | | For 2.4GHz | For 5GHz (5.15~5.35) | For 5GHz (5.47~5.725) | For 5GHz (5.725~5.850) |
| 1&2 | WNC | 81.EBJ15.005 | PIFA | IPEX | 3.62 | 3.08 | 4.76 | 4.76 |

Cable Loss:

| No. | Brand | Model | Cable Loss(dB) | | | | Cable Length |
|-----|-------|--------------|----------------|----------------------|-----------------------|------------------------|--------------|
| | | | For 2.4GHz | For 5GHz (5.15~5.35) | For 5GHz (5.47~5.725) | For 5GHz (5.725~5.850) | |
| 1&2 | WNC | 81.EBJ15.005 | 1.15 | 1.70 | 1.74 | 1.79 | 300 |

Note: Above antenna gains of antenna are Total (H+V).

3.3 DESCRIPTION OF TEST MODES

For Bluetooth 2.1+ EDR: 79

Seventy-nine channels are provided to this EUT.

| Channel | Freq. (MHz) | Channel | Freq. (MHz) | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|---------|----------------|---------|----------------|---------|----------------|---------|----------------|
| 0 | 2402 | 20 | 2422 | 40 | 2442 | 60 | 2462 |
| 1 | 2403 | 21 | 2423 | 41 | 2443 | 61 | 2463 |
| 2 | 2404 | 22 | 2424 | 42 | 2444 | 62 | 2464 |
| 3 | 2405 | 23 | 2425 | 43 | 2445 | 63 | 2465 |
| 4 | 2406 | 24 | 2426 | 44 | 2446 | 64 | 2466 |
| 5 | 2407 | 25 | 2427 | 45 | 2447 | 65 | 2467 |
| 6 | 2408 | 26 | 2428 | 46 | 2448 | 66 | 2468 |
| 7 | 2409 | 27 | 2429 | 47 | 2449 | 67 | 2469 |
| 8 | 2410 | 28 | 2430 | 48 | 2450 | 68 | 2470 |
| 9 | 2411 | 29 | 2431 | 49 | 2451 | 69 | 2471 |
| 10 | 2412 | 30 | 2432 | 50 | 2452 | 70 | 2472 |
| 11 | 2413 | 31 | 2433 | 51 | 2453 | 71 | 2473 |
| 12 | 2414 | 32 | 2434 | 52 | 2454 | 72 | 2474 |
| 13 | 2415 | 33 | 2435 | 53 | 2455 | 73 | 2475 |
| 14 | 2416 | 34 | 2436 | 54 | 2456 | 74 | 2476 |
| 15 | 2417 | 35 | 2437 | 55 | 2457 | 75 | 2477 |
| 16 | 2418 | 36 | 2438 | 56 | 2458 | 76 | 2478 |
| 17 | 2419 | 37 | 2439 | 57 | 2459 | 77 | 2479 |
| 18 | 2420 | 38 | 2440 | 58 | 2460 | 78 | 2480 |
| 19 | 2421 | 39 | 2441 | 59 | 2461 | | |

3.4 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL:

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

Where **PLC**: Power Line Conducted Emission

RE < 1G: Radiated Emission below 1GHz

RE ≥ 1G: Radiated Emission above 1GHz

APCM: Antenna Port Conducted Measurement

Power Line Conducted Emission Test:

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

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

| Available Channel | Tested Channel | Modulation Type | Packet Type |
|-------------------|----------------|-----------------|-------------|
| 0 to 78 | 39 | 8DPSK | DH5 |

Radiated Emission Test (Below 1 GHz):

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

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

| Available Channel | Tested Channel | Modulation Type | Packet Type |
|-------------------|----------------|-----------------|-------------|
| 0 to 78 | 39 | 8DPSK | DH5 |

Radiated Emission Test (Above 1 GHz):

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

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

| Available Channel | Tested Channel | Modulation Type | Packet Type |
|-------------------|----------------|-----------------|-------------|
| 0 to 78 | 0, 39, 78 | GFSK | DH5 |
| 0 to 78 | 0, 39, 78 | 8DPSK | DH5 |

Antenna Port Conducted Measurement:

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

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

| Available Channel | Tested Channel | Modulation Type | Packet Type |
|-------------------|----------------|-----------------|-------------|
| 0 to 78 | 0, 39, 78 | GFSK | DH5 |
| 0 to 78 | 0, 39, 78 | 8DPSK | DH5 |



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TEST CONDITION:

| APPLICABLE TO | ENVIRONMENTAL CONDITIONS | INPUT POWER (SYSTEM) | TESTED BY |
|--------------------|--------------------------|----------------------|--------------|
| PLC | 22deg. C, 56%RH | 120Vac, 60Hz | Jason Huang |
| RE<1G | 23deg. C, 65%RH | 120Vac, 60Hz | Robert Cheng |
| RE ³ 1G | 25deg. C, 67%RH | 120Vac, 60Hz | Robert Cheng |
| APCM | 25deg. C, 60%RH | 120Vac, 60Hz | Robert Cheng |

3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart C (Section 15.247)

558074 D01 DTS Meas Guidance v02

ANSI C63.10-2009

Canada RSS-210 Issue 8 (2010-12)

Canada RSS-Gen Issue 3 (2010-12)

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

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

3.6 DESCRIPTION OF SUPPORT UNITS

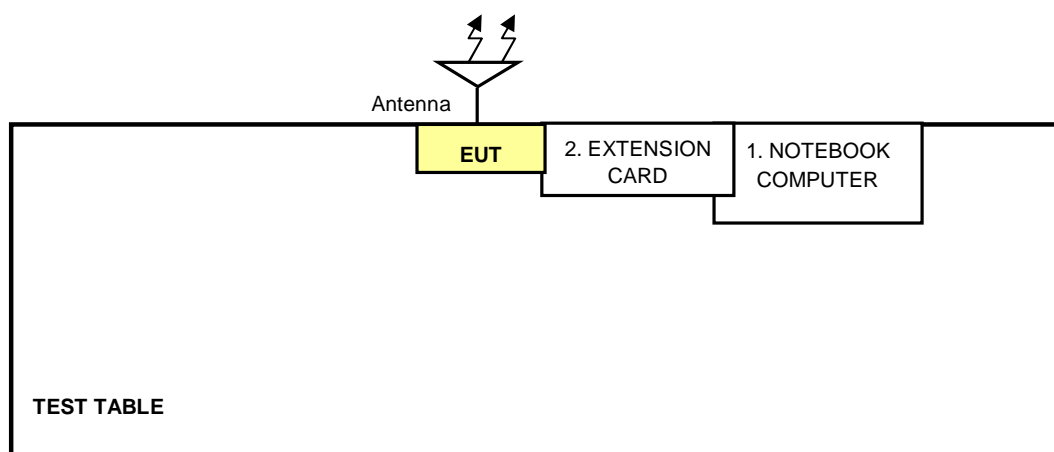
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| No. | Product | Brand | Model No. | Serial No. | FCC ID |
|-----|-------------------|---------|-----------|------------|---------|
| 1 | NOTEBOOK COMPUTER | DELL | PP32LA | FSLB32S | FCC DoC |
| 2 | EXTENSION CARD | Atheros | NA | NA | NA |

| No. | Signal cable description |
|-----|--------------------------|
| 1 | NA |
| 2 | NA |

Note: The power cords of the above support units were unshielded (1.8m).

3.7 CONFIGURATION OF SYSTEM UNDER TEST



4 TEST PROCEDURES AND RESULTS

4.1 MAXIMUM PEAK OUTPUT POWER

4.1.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Limit is 125mW.

4.1.2 INSTRUMENTS

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|----------------------------|-----------|------------|-----------------|------------------|
| SPECTRUM ANALYZER R&S | FSP40 | 100036 | Jan. 21, 2013 | Jan. 20, 2014 |

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. Tested date : Feb. 04, 2013

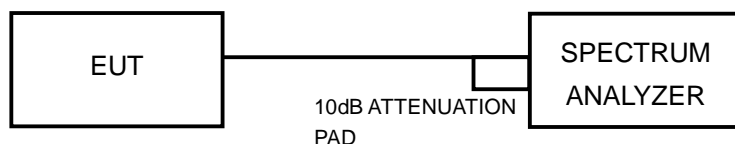
4.1.3 TEST PROCEDURES

- a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- c. The center frequency of the spectrum analyzer is set to the fundamental frequency and using 3MHz RBW and 10 MHz VBW.
- d. Measure the captured power within the band and recording the plot.
- e. Repeat above procedures until all frequencies required were complete.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



For the actual test configuration, please refer to the related Item – Photographs of the Test Configuration.

4.1.6 EUT OPERATING CONDITION

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

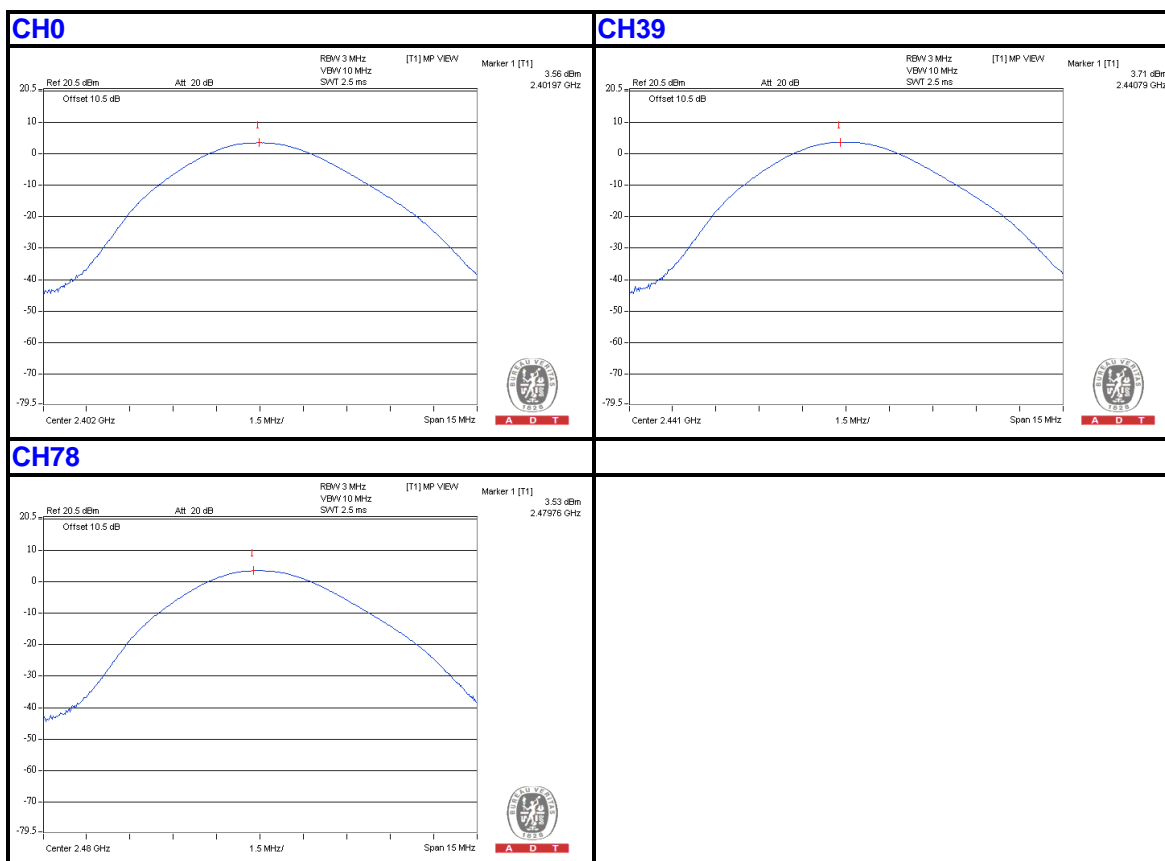


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4.1.7 TEST RESULTS

| CHANNEL | FREQUENCY (MHz) | OUTPUT POWER (mW) | | OUTPUT POWER (dBm) | | POWER LIMIT (mW) | PASS / FAIL |
|---------|-----------------|-------------------|-------|--------------------|-------|------------------|-------------|
| | | GFSK | 8DPSK | GFSK | 8DPSK | | |
| 0 | 2402 | 2.270 | 4.519 | 3.56 | 6.55 | 125 | PASS |
| 39 | 2441 | 2.350 | 4.786 | 3.71 | 6.80 | 125 | PASS |
| 78 | 2480 | 2.254 | 4.613 | 3.53 | 6.64 | 125 | PASS |

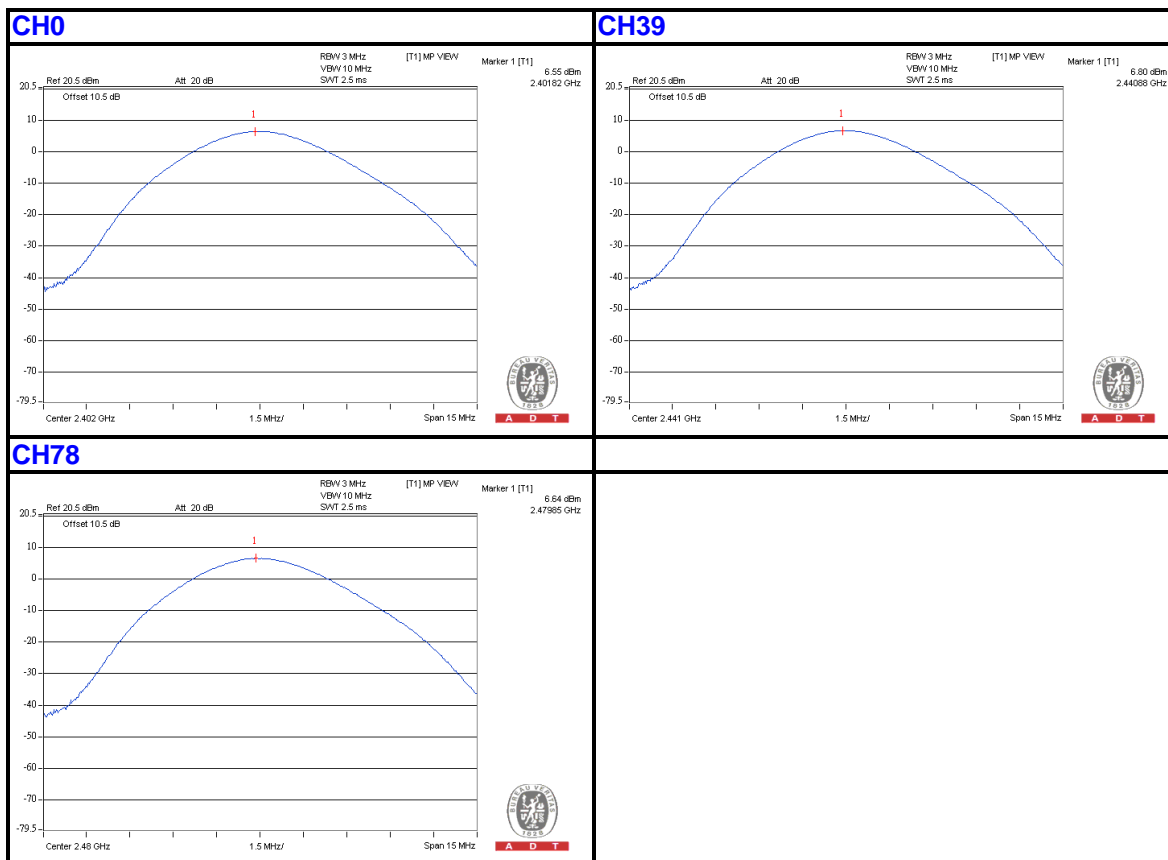
For GFSK





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For 8DPSK



4.2 AVERAGE OUTPUT POWER

4.2.1 FOR REFERENCE.

4.2.2 INSTRUMENTS

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|----------------------------|-----------|------------|-----------------|------------------|
| Power Meter | ML2495A | 0824006 | May 10, 2012 | May 09, 2013 |
| Average Power Sensor | MA2411B | 0738172 | May 10, 2012 | May 09, 2013 |

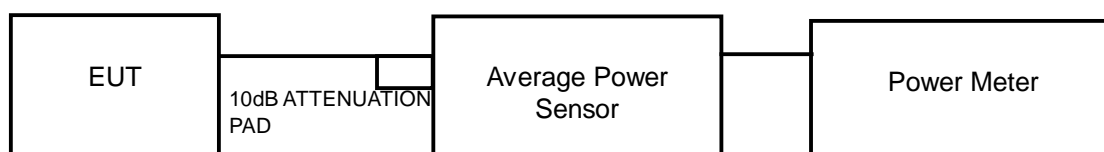
Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. Tested date : Feb. 04, 2013

4.2.3 TEST PROCEDURES

1. The transmitter output was connected to the power meter through an attenuator, the bandwidth of the fundamental frequency was measured with the power meter.
2. Record the average power level.

4.2.4 TEST SETUP



4.2.5 EUT OPERATING CONDITION

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



4.2.6 TEST RESULTS

| CHANNEL | FREQUENCY (MHz) | AVERAGE POWER OUTPUT (dBm) | |
|---------|--------------------|-------------------------------|-------|
| | | GFSK | 8DPSK |
| 0 | 2402 | 3.54 | 3.68 |
| 39 | 2441 | 3.76 | 3.96 |
| 78 | 2480 | 3.54 | 3.69 |

4.3 RADIATED EMISSION MEASUREMENT

4.3.1 LIMITS OF RADIATED EMISSION 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. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

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4.3.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|---|--------------------------|-------------------------------------|-----------------|------------------|
| Spectrum Analyzer Agilent | E4446A | MY48250254 | July 09, 2012 | July 08, 2013 |
| Pre-Selector Agilent | N9039A | MY46520311 | July 09, 2012 | July 08, 2013 |
| Signal Generator Agilent | N5181A | MY49060517 | July 09, 2012 | July 08, 2013 |
| Pre-Amplifier Mini-Circuits | ZFL-1000VH2 B | AMP-ZFL-03 | Nov. 14, 2012 | Nov. 13, 2013 |
| Pre-Amplifier Agilent | 8449B | 3008A02578 | June 26, 2012 | June 25, 2013 |
| Pre-Amplifier SPACEK LABS | SLKKa-48-6 | 9K16 | Nov. 14, 2012 | Nov. 13, 2013 |
| Trilog Broadband Antenna SCHWARZBECK | VULB 9168 | 9168-360 | Apr. 09, 2012 | Apr. 08, 2013 |
| Horn_Antenna AISI | AIH.8018 | 0000320091110 | Nov. 19, 2012 | Nov. 18, 2013 |
| Horn_Antenna SCHWARZBECK | BBHA 9170 | 9170-424 | Oct. 12, 2012 | Oct. 11, 2013 |
| RF Cable | NA | RF104-201 RF104-203 RF104-204 | Dec. 25, 2012 | Dec. 24, 2013 |
| RF Cable | NA | CHGCAB_001 | Oct. 06, 2012 | Oct. 05, 2013 |
| Software | ADT_Radiated _V8.7.05 | NA | NA | NA |
| Antenna Tower & Turn Table CT | NA | 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 horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in 966 Chamber No. G.
4. The FCC Site Registration No. is 966073.
5. The VCCI Site Registration No. is G-137.
6. The CANADA Site Registration No. is IC 7450H-2.
7. Tested Date: Jan. 29 to Feb. 06, 2013

4.3.3 TEST PROCEDURES

- 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. 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.

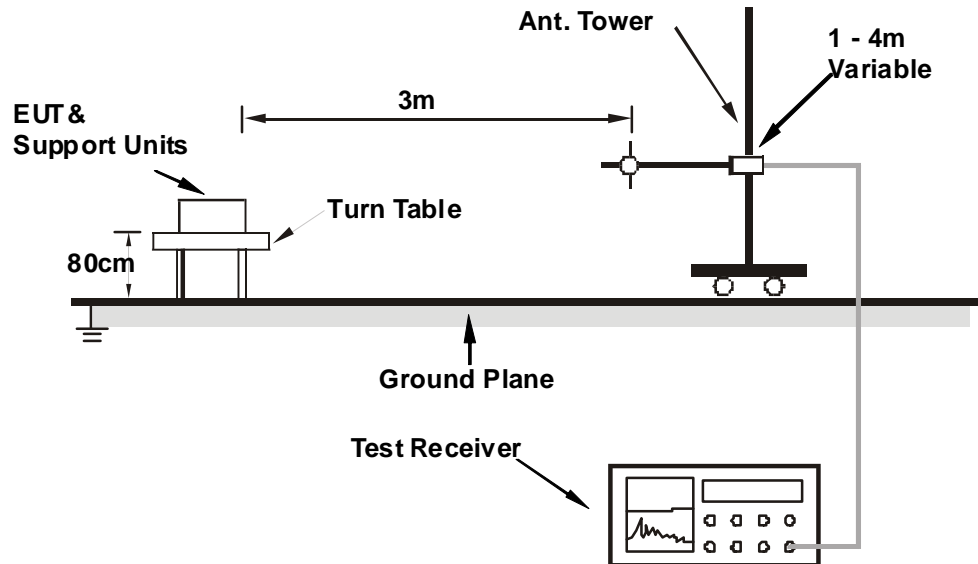
NOTE:

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 10 Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.3.6 EUT OPERATING CONDITIONS

1. Connect the EUT with the support unit 1 (Notebook Computer) which is placed on a testing table.
2. The communication partner run test program “Jupiter.exe [V1 0 B20]” to enable EUT under transmission/receiving condition continuously at specific channel frequency.



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4.3.7 TEST RESULTS

BELOW 1GHz WORST-CASE DATA

BT_8DPSK

| | | | |
|------------------------|---------------|------------------------------|-----------------|
| CHANNEL | TX Channel 39 | DETECTOR FUNCTION | Quasi-Peak (QP) |
| FREQUENCY RANGE | Below 1GHz | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO. | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1 | 65.20 | 36.6 QP | 40.0 | -3.4 | 1.44 H | 23 | 23.44 | 13.12 |
| 2 | 71.00 | 35.6 QP | 40.0 | -4.4 | 1.66 H | 311 | 23.25 | 12.34 |
| 3 | 166.40 | 39.5 QP | 43.5 | -4.0 | 1.45 H | 97 | 25.56 | 13.93 |
| 4 | 298.30 | 39.8 QP | 46.0 | -6.2 | 1.00 H | 345 | 24.60 | 15.22 |
| 5 | 369.80 | 37.4 QP | 46.0 | -8.6 | 1.65 H | 210 | 20.33 | 17.09 |
| 6 | 399.30 | 37.1 QP | 46.0 | -9.0 | 1.00 H | 214 | 19.21 | 17.84 |
| 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 | 36.10 | 33.1 QP | 40.0 | -6.9 | 1.00 V | 99 | 19.83 | 13.23 |
| 2 | 144.00 | 35.4 QP | 43.5 | -8.1 | 1.25 V | 177 | 21.02 | 14.36 |
| 3 | 184.00 | 36.9 QP | 43.5 | -6.6 | 1.55 V | 199 | 24.26 | 12.60 |
| 4 | 371.00 | 37.4 QP | 46.0 | -8.6 | 1.33 V | 299 | 20.26 | 17.12 |
| 5 | 395.00 | 38.4 QP | 46.0 | -7.6 | 1.00 V | 88 | 20.63 | 17.73 |
| 6 | 739.65 | 35.1 QP | 46.0 | -10.9 | 1.00 V | 54 | 10.37 | 24.71 |

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



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ABOVE 1GHz DATA

BT_GFSK

| | | | |
|-----------------|--------------|----------------------|--------------|
| CHANNEL | TX Channel 0 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | 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 | 57.1 PK | 74.0 | -16.9 | 1.39 H | 278 | 25.12 | 31.98 |
| 2 | 2390.00 | 44.1 AV | 54.0 | -9.9 | 1.39 H | 278 | 12.12 | 31.98 |
| 3 | *2402.00 | 94.4 PK | | | 1.39 H | 278 | 62.37 | 32.03 |
| 4 | *2402.00 | 85.5 AV | | | 1.39 H | 278 | 53.47 | 32.03 |
| 5 | 4804.00 | 50.6 PK | 74.0 | -23.4 | 1.00 H | 130 | 11.07 | 39.53 |
| 6 | 4804.00 | 38.5 AV | 54.0 | -15.5 | 1.00 H | 130 | -1.03 | 39.53 |
| 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 | 57.6 PK | 74.0 | -16.4 | 1.00 V | 246 | 25.62 | 31.98 |
| 2 | 2390.00 | 44.1 AV | 54.0 | -9.9 | 1.00 V | 246 | 12.12 | 31.98 |
| 3 | *2402.00 | 98.4 PK | | | 1.00 V | 246 | 66.37 | 32.03 |
| 4 | *2402.00 | 88.7 AV | | | 1.00 V | 246 | 56.67 | 32.03 |
| 5 | 4804.00 | 50.4 PK | 74.0 | -23.6 | 1.00 V | 82 | 10.87 | 39.53 |
| 6 | 4804.00 | 37.6 AV | 54.0 | -16.4 | 1.00 V | 82 | -1.93 | 39.53 |

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).
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 39 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | 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 | *2441.00 | 94.5 PK | | | 1.43 H | 285 | 62.37 | 32.13 |
| 2 | *2441.00 | 85.8 AV | | | 1.43 H | 285 | 53.67 | 32.13 |
| 3 | 4882.00 | 50.1 PK | 74.0 | -23.9 | 1.04 H | 151 | 10.38 | 39.72 |
| 4 | 4882.00 | 38.2 AV | 54.0 | -15.8 | 1.04 H | 151 | -1.52 | 39.72 |
| 5 | 7323.00 | 53.6 PK | 74.0 | -20.4 | 1.04 H | 158 | 6.02 | 47.58 |
| 6 | 7323.00 | 42.0 AV | 54.0 | -12.0 | 1.04 H | 158 | -5.58 | 47.58 |
| 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 | *2441.00 | 98.3 PK | | | 1.00 V | 249 | 66.17 | 32.13 |
| 2 | *2441.00 | 88.4 AV | | | 1.00 V | 249 | 56.27 | 32.13 |
| 3 | 4882.00 | 50.1 PK | 74.0 | -23.9 | 1.00 V | 55 | 10.38 | 39.72 |
| 4 | 4882.00 | 38.2 AV | 54.0 | -15.8 | 1.00 V | 55 | -1.52 | 39.72 |
| 5 | 7323.00 | 53.3 PK | 74.0 | -20.7 | 1.00 V | 142 | 5.72 | 47.58 |
| 6 | 7323.00 | 42.2 AV | 54.0 | -11.8 | 1.00 V | 142 | -5.38 | 47.58 |

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).
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 78 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | 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 | *2480.00 | 93.9 PK | | | 1.44 H | 301 | 61.67 | 32.23 |
| 2 | *2480.00 | 85.2 AV | | | 1.44 H | 301 | 52.97 | 32.23 |
| 3 | 2483.50 | 57.7 PK | 74.0 | -16.3 | 1.44 H | 301 | 25.46 | 32.24 |
| 4 | 2483.50 | 44.4 AV | 54.0 | -9.6 | 1.44 H | 301 | 12.16 | 32.24 |
| 5 | 4960.00 | 49.7 PK | 74.0 | -24.3 | 1.00 H | 149 | 9.75 | 39.95 |
| 6 | 4960.00 | 37.8 AV | 54.0 | -16.2 | 1.00 H | 149 | -2.15 | 39.95 |
| 7 | 7440.00 | 53.7 PK | 74.0 | -20.3 | 1.05 H | 168 | 6.30 | 47.40 |
| 8 | 7440.00 | 42.3 AV | 54.0 | -11.7 | 1.05 H | 168 | -5.10 | 47.40 |
| 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 | 97.8 PK | | | 1.00 V | 241 | 65.57 | 32.23 |
| 2 | *2480.00 | 88.0 AV | | | 1.00 V | 241 | 55.77 | 32.23 |
| 3 | 2483.50 | 56.9 PK | 74.0 | -17.1 | 1.00 V | 241 | 24.66 | 32.24 |
| 4 | 2483.50 | 44.3 AV | 54.0 | -9.7 | 1.00 V | 241 | 12.06 | 32.24 |
| 5 | 4960.00 | 49.2 PK | 74.0 | -24.8 | 1.00 V | 62 | 9.25 | 39.95 |
| 6 | 4960.00 | 37.8 AV | 54.0 | -16.2 | 1.00 V | 62 | -2.15 | 39.95 |
| 7 | 7440.00 | 53.9 PK | 74.0 | -20.1 | 1.00 V | 147 | 6.50 | 47.40 |
| 8 | 7440.00 | 42.2 AV | 54.0 | -11.8 | 1.00 V | 147 | -5.20 | 47.40 |

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).
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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BT_8DPSK

| | | | |
|-----------------|--------------|----------------------|--------------|
| CHANNEL | TX Channel 0 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | 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 | 57.2 PK | 74.0 | -16.8 | 1.11 H | 108 | 25.22 | 31.98 |
| 2 | 2390.00 | 46.6 AV | 54.0 | -7.4 | 1.11 H | 108 | 14.62 | 31.98 |
| 3 | *2402.00 | 98.2 PK | | | 1.11 H | 108 | 66.17 | 32.03 |
| 4 | *2402.00 | 84.2 AV | | | 1.11 H | 108 | 52.17 | 32.03 |
| 5 | 4804.00 | 50.6 PK | 74.0 | -23.4 | 1.00 H | 156 | 11.07 | 39.53 |
| 6 | 4804.00 | 37.9 AV | 54.0 | -16.1 | 1.00 H | 156 | -1.63 | 39.53 |
| 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 | 57.0 PK | 74.0 | -17.0 | 1.00 V | 167 | 25.02 | 31.98 |
| 2 | 2390.00 | 46.0 AV | 54.0 | -8.0 | 1.00 V | 167 | 14.02 | 31.98 |
| 3 | *2402.00 | 101.2 PK | | | 1.00 V | 167 | 69.17 | 32.03 |
| 4 | *2402.00 | 86.3 AV | | | 1.00 V | 167 | 54.27 | 32.03 |
| 5 | 4804.00 | 49.2 PK | 74.0 | -24.8 | 1.04 V | 64 | 9.67 | 39.53 |
| 6 | 4804.00 | 37.0 AV | 54.0 | -17.0 | 1.04 V | 64 | -2.53 | 39.53 |

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).
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 39 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | 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 | *2441.00 | 98.0 PK | | | 1.14 H | 92 | 65.87 | 32.13 |
| 2 | *2441.00 | 83.9 AV | | | 1.14 H | 92 | 51.77 | 32.13 |
| 3 | 4882.00 | 49.5 PK | 74.0 | -24.5 | 1.00 H | 147 | 9.78 | 39.72 |
| 4 | 4882.00 | 37.5 AV | 54.0 | -16.5 | 1.00 H | 147 | -2.22 | 39.72 |
| 5 | 7323.00 | 54.9 PK | 74.0 | -19.1 | 1.00 H | 171 | 7.32 | 47.58 |
| 6 | 7323.00 | 43.0 AV | 54.0 | -11.0 | 1.00 H | 171 | -4.58 | 47.58 |
| 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 | *2441.00 | 101.0 PK | | | 1.00 V | 179 | 68.87 | 32.13 |
| 2 | *2441.00 | 86.2 AV | | | 1.00 V | 179 | 54.07 | 32.13 |
| 3 | 4882.00 | 49.8 PK | 74.0 | -24.2 | 1.00 V | 62 | 10.08 | 39.72 |
| 4 | 4882.00 | 37.6 AV | 54.0 | -16.4 | 1.00 V | 62 | -2.12 | 39.72 |
| 5 | 7323.00 | 54.2 PK | 74.0 | -19.8 | 1.00 V | 158 | 6.62 | 47.58 |
| 6 | 7323.00 | 42.2 AV | 54.0 | -11.8 | 1.00 V | 158 | -5.38 | 47.58 |

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).
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 78 | DETECTOR FUNCTION | Peak (PK) |
| FREQUENCY RANGE | 1GHz ~ 25GHz | | 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 | *2480.00 | 97.9 PK | | | 1.16 H | 85 | 65.67 | 32.23 |
| 2 | *2480.00 | 84.2 AV | | | 1.16 H | 85 | 51.97 | 32.23 |
| 3 | 2483.50 | 56.0 PK | 74.0 | -18.0 | 1.11 H | 117 | 23.76 | 32.24 |
| 4 | 2483.50 | 46.1 AV | 54.0 | -7.9 | 1.11 H | 117 | 13.86 | 32.24 |
| 5 | 4960.00 | 50.3 PK | 74.0 | -23.7 | 1.00 H | 143 | 10.35 | 39.95 |
| 6 | 4960.00 | 37.8 AV | 54.0 | -16.2 | 1.00 H | 143 | -2.15 | 39.95 |
| 7 | 7440.00 | 53.4 PK | 74.0 | -20.6 | 1.00 H | 145 | 6.00 | 47.40 |
| 8 | 7440.00 | 41.9 AV | 54.0 | -12.1 | 1.00 H | 145 | -5.50 | 47.40 |
| 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 | 101.5 PK | | | 1.00 V | 170 | 69.27 | 32.23 |
| 2 | *2480.00 | 86.5 AV | | | 1.00 V | 170 | 54.27 | 32.23 |
| 3 | 2483.50 | 56.6 PK | 74.0 | -17.4 | 1.00 V | 170 | 24.36 | 32.24 |
| 4 | 2483.50 | 44.0 AV | 54.0 | -10.0 | 1.00 V | 170 | 11.76 | 32.24 |
| 5 | 4960.00 | 50.1 PK | 74.0 | -23.9 | 1.00 V | 49 | 10.15 | 39.95 |
| 6 | 4960.00 | 37.4 AV | 54.0 | -16.6 | 1.00 V | 49 | -2.55 | 39.95 |
| 7 | 7440.00 | 53.0 PK | 74.0 | -21.0 | 1.00 V | 163 | 5.60 | 47.40 |
| 8 | 7440.00 | 41.6 AV | 54.0 | -12.4 | 1.00 V | 163 | -5.80 | 47.40 |

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

4.4 CONDUCTED EMISSION MEASUREMENT

4.4.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

| FREQUENCY OF EMISSION (MHz) | CONDUCTED LIMIT (dB μ V) | |
|-----------------------------|------------------------------|----------|
| 0.15-0.5 0.5-5 5-30 | Quasi-peak | Average |
| | 66 to 56 | 56 to 46 |
| | 56 60 | 46 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 0.50 MHz.

4.4.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|---|-------------------------|------------|-----------------|------------------|
| Test Receiver | ESCS 30 | 100375 | Mar. 12, 2012 | Mar. 11, 2013 |
| Line-Impedance Stabilization Network (for EUT) SCHWARZBECK | NSLK8127 | 8127-522 | Sep. 06, 2012 | Sep. 05, 2013 |
| Line-Impedance Stabilization Network (for Peripheral) | ENV216 | 100072 | June 08, 2012 | June 07, 2013 |
| RF Cable (JYEBAO) | 5DFB | COCCAB-001 | Aug. 28, 2012 | Aug. 27, 2013 |
| 50 ohms Terminator | 50 | EMC-3 | Sep. 25, 2012 | Sep. 24, 2013 |
| Software ADT | BV ADT_Cond_V7.3.7.3 | 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 Shielded Room No. C.
3. The VCCI Con C Registration No. is C-3611.
4. Tested Date: Jan. 30, 2013

4.4.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN.
- b. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- c. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- d. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit – 20dB) were not recorded.

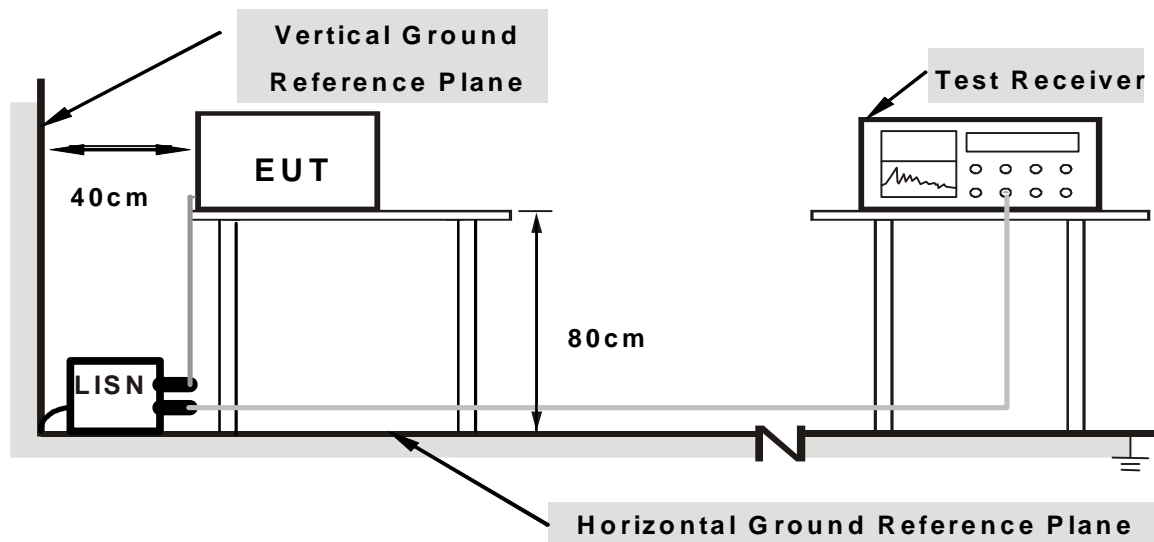
NOTE:

1. The resolution bandwidth of test receiver is 9kHz for Quasi-peak detection (QP) & Average detection (AV).

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



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

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.4.6 EUT OPERATING CONDITIONS

Same as the 4.3.6

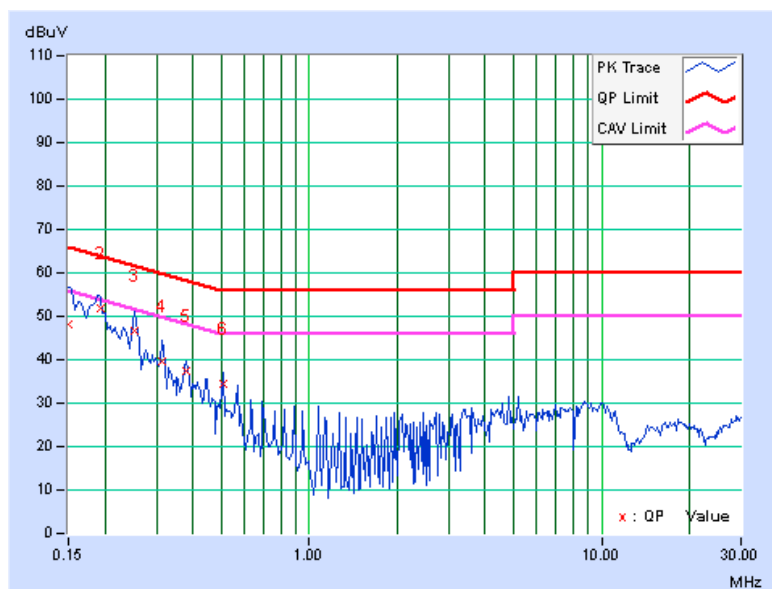
4.4.7 TEST RESULTS

| PHASE | Line (L) | DETECTOR FUNCTION | Quasi-Peak (QP) / Average (AV) |
|-------|----------|-------------------|--------------------------------|
|-------|----------|-------------------|--------------------------------|

| 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 | 0.15000 | 0.11 | 48.03 | 19.63 | 48.14 | 19.74 | 66.00 | 56.00 | -17.86 | -36.26 |
| 2 | 0.19297 | 0.12 | 51.69 | 45.41 | 51.81 | 45.53 | 63.91 | 53.91 | -12.10 | -8.38 |
| 3 | 0.25156 | 0.13 | 46.67 | 40.07 | 46.80 | 40.20 | 61.71 | 51.71 | -14.91 | -11.51 |
| 4 | 0.31406 | 0.14 | 39.52 | 34.77 | 39.66 | 34.91 | 59.86 | 49.86 | -20.20 | -14.95 |
| 5 | 0.38047 | 0.16 | 37.37 | 33.30 | 37.53 | 33.46 | 58.27 | 48.27 | -20.74 | -14.81 |
| 6 | 0.50547 | 0.17 | 34.10 | 31.57 | 34.27 | 31.74 | 56.00 | 46.00 | -21.73 | -14.26 |

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.

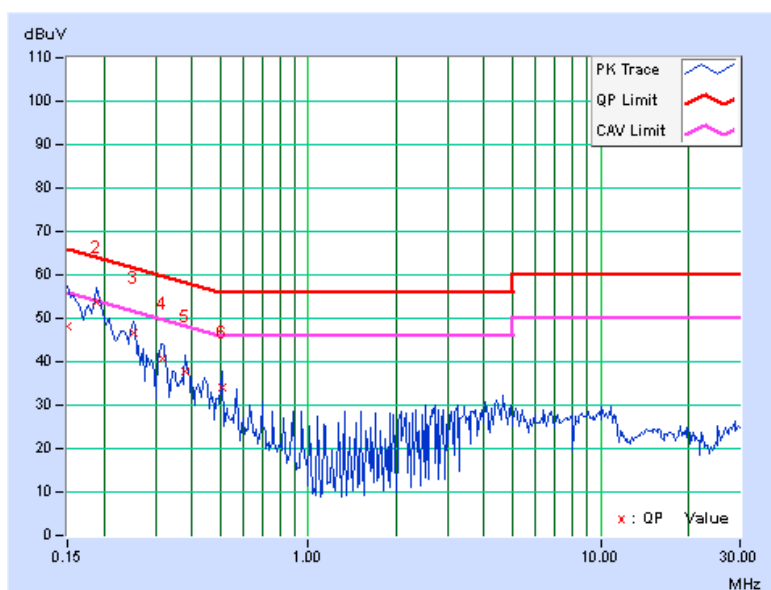


| | | | |
|-------|-------------|-------------------|--------------------------------|
| PHASE | Neutral (N) | DETECTOR FUNCTION | Quasi-Peak (QP) / Average (AV) |
|-------|-------------|-------------------|--------------------------------|

| 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 | 0.15000 | 0.09 | 48.08 | 19.98 | 48.17 | 20.07 | 66.00 | 56.00 | -17.83 | -35.93 |
| 2 | 0.18906 | 0.10 | 53.50 | 47.20 | 53.60 | 47.30 | 64.08 | 54.08 | -10.48 | -6.78 |
| 3 | 0.25156 | 0.11 | 46.69 | 40.35 | 46.80 | 40.46 | 61.71 | 51.71 | -14.90 | -11.24 |
| 4 | 0.31797 | 0.13 | 40.46 | 35.62 | 40.59 | 35.75 | 59.76 | 49.76 | -19.17 | -14.01 |
| 5 | 0.38047 | 0.15 | 37.55 | 33.36 | 37.70 | 33.51 | 58.27 | 48.27 | -20.57 | -14.76 |
| 6 | 0.50547 | 0.15 | 34.06 | 32.11 | 34.21 | 32.26 | 56.00 | 46.00 | -21.79 | -13.74 |

REMARKS:

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



5 PHOTOGRAPHS OF THE TEST CONFIGURATION

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



A D T

6 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:

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

7 APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

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