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Dates of Tests : Aug 07 ~ Aug 17, 2009
Test Report S/N: LR500190908A
Test Site : LTA CO., LTD

CERTIFICATION OF COMPLIANCE

FCC ID.

XBQ-S7

APPLICANT

YUKYUNG TECHNOLOGIES INC.

| | | |
|---------------------------|---|---|
| Equipment Class | : | Part 15 Spread Spectrum Transmitter (DSS) |
| Manufacturing Description | : | MID(MOBILE INTERNET DEVICE) |
| Manufacturer | : | YUKYUNG TECHNOLOGIES INC. |
| Model name | : | S7 |
| Variant Model name | : | S7 PREMIUM S |
| Test Device Serial No.: | : | Identical prototype |
| Rule Part(s) | : | FCC Part 15.247 Subpart C; ANSI C-63.4-2003 |
| Frequency Range | : | 2402 ~ 2480MHz |
| RF power | : | Max 2.87dBm - Conducted |
| Data of issue | : | Aug 17, 2009 |

This test report is issued under the authority of:

Dong-Min JUNG, Technical Manager

The test was supervised by:

Kyung-Taek LEE, Test Engineer

This test result only responds to the tested sample. It is not allowed to copy this report even partly without the allowance of the test laboratory. This report must not be used by the applicant to claim product endorsement by any agency.



NVLAP LAB Code.: 200723-0

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1. General information's

1-1 Test Performed

Company name : LTA Co., Ltd.
 Address : 243, Jubug-ri, Yangji-Myeon, Youngin-Si, Kyunggi-Do, Korea. 449-822
 Web site : <http://www.ltalab.com>
 E-mail : chahn@ltalab.com
 Telephone : +82-31-323-6008
 Facsimile : +82-31-323-6010

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the “General requirements for the competents of calibration and testing laboratory”.

1-2 Accredited agencies

LTA Co., Ltd. is approved to perform EMC testing by the following agencies:

| Agency | Country | Accreditation No. | Validity | Reference |
|--------|---------|-------------------|------------|---------------------|
| NVLAP | U.S.A | 200723-0 | 2009-09-30 | ECT accredited Lab. |
| RRL | KOREA | KR0049 | 2011-06-20 | EMC accredited Lab. |
| FCC | U.S.A | 610755 | 2011-04-22 | FCC filing |
| VCCI | JAPAN | R2133, C2307 | 2011-06-21 | VCCI registration |
| IC | CANADA | IC5799 | 2010-05-03 | IC filing |

2. Information's about test item

2-1 Client & Manufacturer

Company name : YUKYUNG TECHNOLOGIES INC.
 Address : 200-11, Anyang-Dong, Manan-Ku, Anyang-Si, Kyunggi-Do, Korea
 Tel / Fax : TEL No : +82-31-463-6906 / FAX No : +82-31-445-5995

2-2 Equipment Under Test (EUT)

Trade name : MID(MOBILE INTERNET DEVICE)
 FCC ID : XBQ-S7
 Model name : S7
 Variant Model name : S7 PREMIUM S
 Serial number : Identical prototype
 Date of receipt : Aug 05, 2009
 EUT condition : Pre-production, not damaged
 Antenna type : Chip antenna with Max. 2.0dBi gain
 Frequency Range : 2402 ~ 2480MHz
 RF output power : Max 2.87dBm - Conducted
 Number of channels : 79
 Channel spacing : 1MHz
 Channel Access Protocol : Frequency Hopping Spread Spectrum (FHSS)
 Type of Modulation : Basic Mode(GFSK), EDR Mode(Pi/4 DQPSK, 8DPSK)
 Power Source for Batt. : Battery Pack: 7.4V (Li-Ion Polymer RECHARGEABLE BATTERY)
 Power Source for Adaptor. : Input: 100-240VAC, 0.4A Output: 9.5VDC, 2.84A

2-3 Tested frequency

| | LOW | MID | HIGH |
|-----------------|------|------|------|
| Frequency (MHz) | 2402 | 2441 | 2480 |

2-4 Ancillary Equipment

| Equipment | Model No. | Serial No. | Manufacturer |
|--------------|------------------|-----------------|--------------|
| PC | HP Compaq dx7400 | CNG8330J9R | HP |
| MONITOR | HPL1710 | CNC816QH92 | HP |
| Keyboard | SK-8115 | 68A-04Q6 | DELL |
| Mouse | MO56UO | 520107013 | DELL |
| PRINTER | STYLUS C65 | N/A | EPSON |
| TV moniter | LE23R18(R) | 63343HDP901399E | SAMSUNG |
| EARPHONE | N/A | N/A | N/A |
| SD CARD | MMC | N/A | KINGMAX |
| USB Memories | MICROVALUT | 08N18NDDV | SONY |
| USB Memories | CRUZERMICRO | N/A | SANDISK |
| MIC | N/A | N/A | AIWA |

3. Test Report

3.1 Summary of tests

| FCC Part Section(s) | Parameter | Limit | Test Condition | Status (note 1) |
|------------------------|----------------------------------|-------------------|-------------------|--------------------|
| 15.247(a) | Carrier Frequency Separation | > 25 kHz | Conducted | C |
| 15.247(a) | Number of Hopping Frequencies | > 15 hops | | C |
| 15.247(a) | 20 dB Bandwidth 99% Bandwidth | > 1.5 MHz | | C |
| 15.247 | Dwell Time | < 0.4 seconds | | C |
| 15.247(b) | Transmitter Output Power | < 250 mWatt | | C |
| 15.247(d) | Conducted Spurious emission | > 20 dBc | | C |
| 15.247(d) | Band Edge | > 20 dBc | | C |
| 15.249 / 15.209 | Field Strength of Harmonics | < 54 dBuV (at 3m) | Radiated | C |
| 15.109 | Field Strength | - | | C |
| 15.207 / 15.107 | AC Conducted Emissions | EN 55022 | Line Conducted | C |
| 15.203 | Antenna requirement | - | - | C |

Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable

Note 2: The data in this test report are traceable to the national or international standards.

→ Antenna Requirement

The YUKYUNG TECHNOLOGIES INC. FCC ID: XBQ-S7 unit complies with the requirement of §15.203. The antenna is connected to inside of EUT. And type is Chip antenna.

The sample was tested according to the following specification:

FCC Parts 15.247; ANSI C-63.4-2003

3.2 Transmitter requirements

3.2.1 Carrier Frequency Separation

Procedure:

The carrier frequency separation was measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function enabled.

After the trace being stable, the reading value between the peaks of the adjacent channels using the marker-delta function was recorded as the measurement results.

The spectrum analyzer is set to:

Span = 3 MHz (wide enough to capture the peaks of two adjacent channels)

RBW = 10 kHz (1% of the span or more) Sweep = auto

VBW = 10 kHz Detector function = peak

Trace = max hold

Measurement Data:

| Test Results | |
|------------------------------------|----------|
| Carrier Frequency Separation (MHz) | Result |
| 1.0188 | Complies |

- See next pages for actual measured spectrum plots.

Minimum Standard:

The EUT shall have hopping channel carrier frequencies separated by a minimum of 25kHz or two-thirds of 20dB bandwidth of the hopping channel, whichever is greater.

Measurement Setup

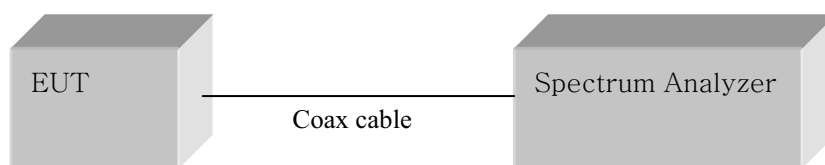


Figure 1: Measurement setup for the carrier frequency separation

Carrier Frequency Separation

Basic Mode



EDR Mode



3.2.2 Number of Hopping Frequencies

Procedure:

The number of hopping frequencies was measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function enabled.

To get higher resolution, four frequency ranges within the 2400 ~ 2483.5 MHz FH band were examined.

The spectrum analyzer is set to:

Frequency range 1: Start = 2400.0MHz, Stop = 2441.5 MHz

 2: Start = 2441.5MHz, Stop = 2483.5 MHz

RBW = 100 kHz (1% of the span or more) Sweep = auto

VBW = 100 kHz (VBW \geq RBW) Detector function = peak

Trace = max hold Span > 40MHz

Measurement Data: Complies

| | |
|---|----|
| Total number of Hopping Channels | 79 |
|---|----|

- See next pages for actual measured spectrum plots.

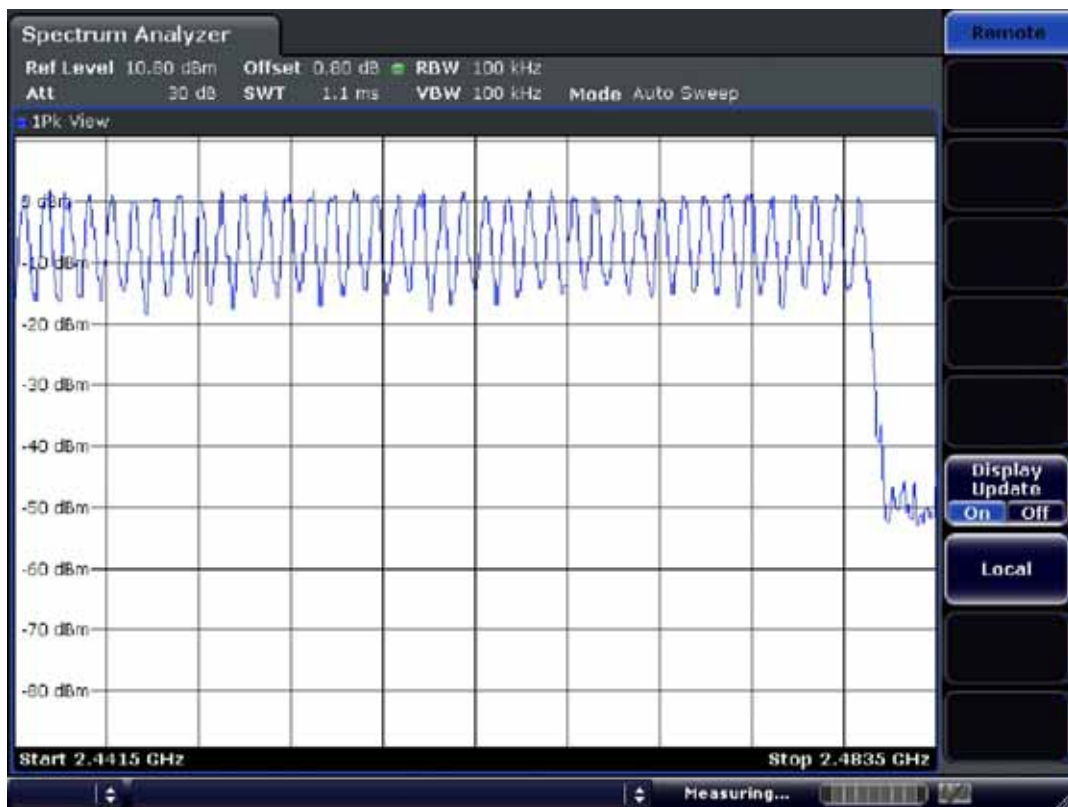
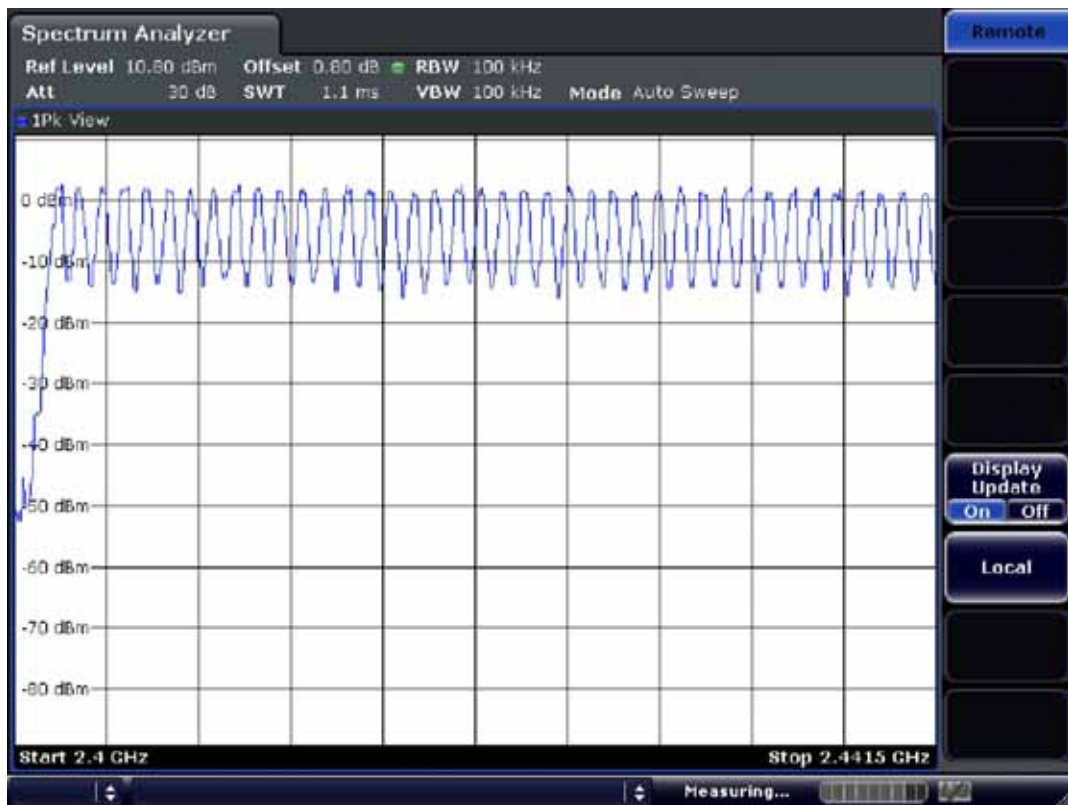
Minimum Standard:

At least 15 hops

Measurement Setup

Same as the Chapter 3.2.1 (Figure 1)

Number of Hopping Frequencies



3.2.3 20 dB Bandwidth

Procedure:

The bandwidth at 20 dB below the highest inband spectral density was measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function disabled at the highest, middle and the lowest available channels..

After the trace being stable, Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth of the emission.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

Span = 3 MHz (approximately 2 or 3 times of the 20 dB bandwidth)

RBW = 30 kHz

Sweep = auto

VBW = 30 kHz (VBW \geq RBW)

Detector function = peak

Trace = max hold

dB/Div = 5dB

Measurement Data: Basic Mode

| Frequency (MHz) | Channel No. | Test Results(MHz) | |
|--------------------|-------------|-------------------|---------------|
| | | 20dB Bandwidth | 99% Bandwidth |
| 2402 | 0 | 0.846 | 0.877 |
| 2441 | 39 | 0.842 | 0.877 |
| 2480 | 78 | 0.899 | 0.877 |

Measurement Data: EDR Mode

| Frequency (MHz) | Channel No. | Test Results(MHz) | |
|--------------------|-------------|-------------------|---------------|
| | | 20dB Bandwidth | 99% Bandwidth |
| 2402 | 0 | 1.211 | 1.151 |
| 2441 | 39 | 1.255 | 1.151 |
| 2480 | 78 | 1.211 | 1.155 |

- See next pages for actual measured spectrum plots.

Minimum Standard:

N/A

Measurement Setup

Same as the Chapter 3.2.1 (Figure 1)

Channel 1 of basic mode
20 dB Bandwidth



99% Bandwidth



Channel 2 of basic mode
20 dB Bandwidth



99% Bandwidth



Channel 3 of basic mode**20 dB Bandwidth****99% Bandwidth**

Channel 1 at EDR mode
20 dB Bandwidth



99% Bandwidth



Channel 2 at EDR mode**20 dB Bandwidth****99% Bandwidth**

Channel 3 at EDR mode**20 dB Bandwidth****99% Bandwidth**

3.2.4 Time of Occupancy (Dwell Time)

Procedure:

The dwell time was measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function enabled.

The spectrum analyzer is set to:

Center frequency = 2441 MHz

Span = zero

RBW = 1 MHz

VBW = 1 MHz (VBW \geq RBW)

Trace = max hold

Detector function = peak

Measurement Data:

| Mode | Number of transmission in a 31.6s (79Hopping*0.4) | Length of Transmission Time (msec) | Result (msec) | Limit (msec) |
|---------------|---|---------------------------------------|------------------|-----------------|
| DH1 | 30(Times / 3sec) *10.533 = 315.99 | 0.525 | 165.895 | 400 |
| DH3 | 15(Times / 3sec) *10.533 = 158.00 | 1.787 | 282.346 | 400 |
| DH5 | 10(Times / 3sec) *10.533 = 105.33 | 3.041 | 320.309 | 400 |
| EDR 3Mbps DH5 | 10(Times / 3sec) *10.533 = 105.33 | 3.051 | 321.362 | 400 |

- See next pages for actual measured spectrum plots.
- dwell time = {(number of hopping per second / number of slot) x duration time per channel} x 0.4 ms

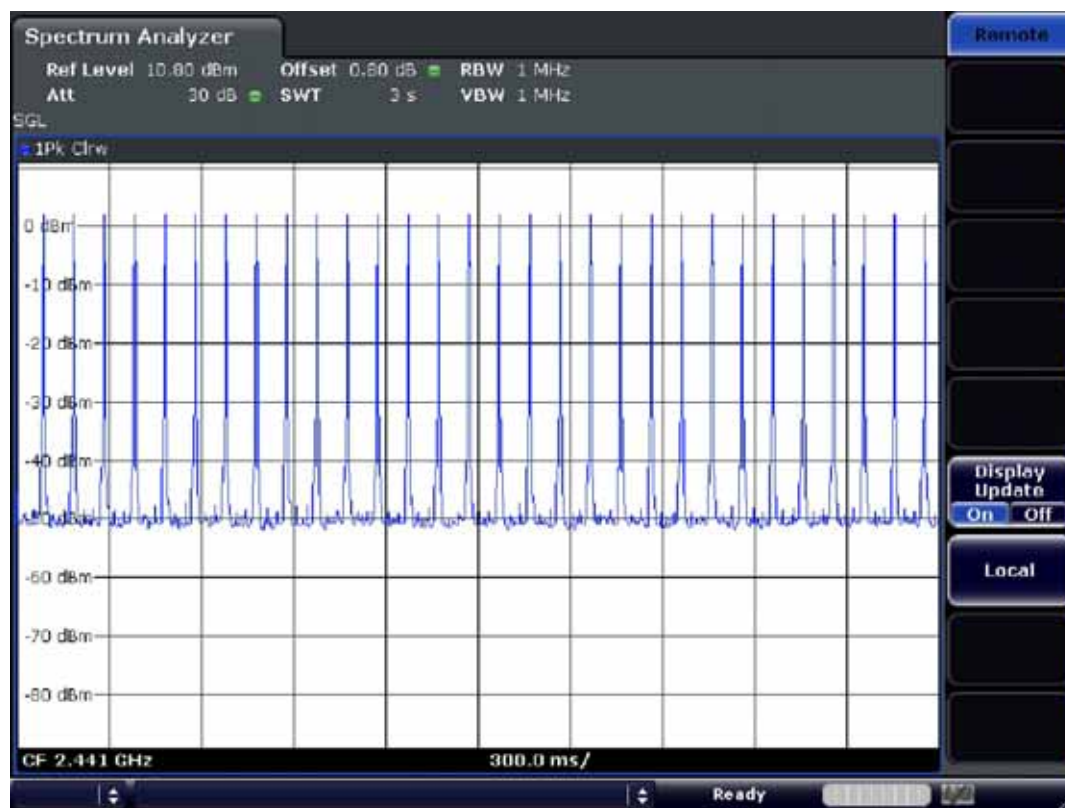
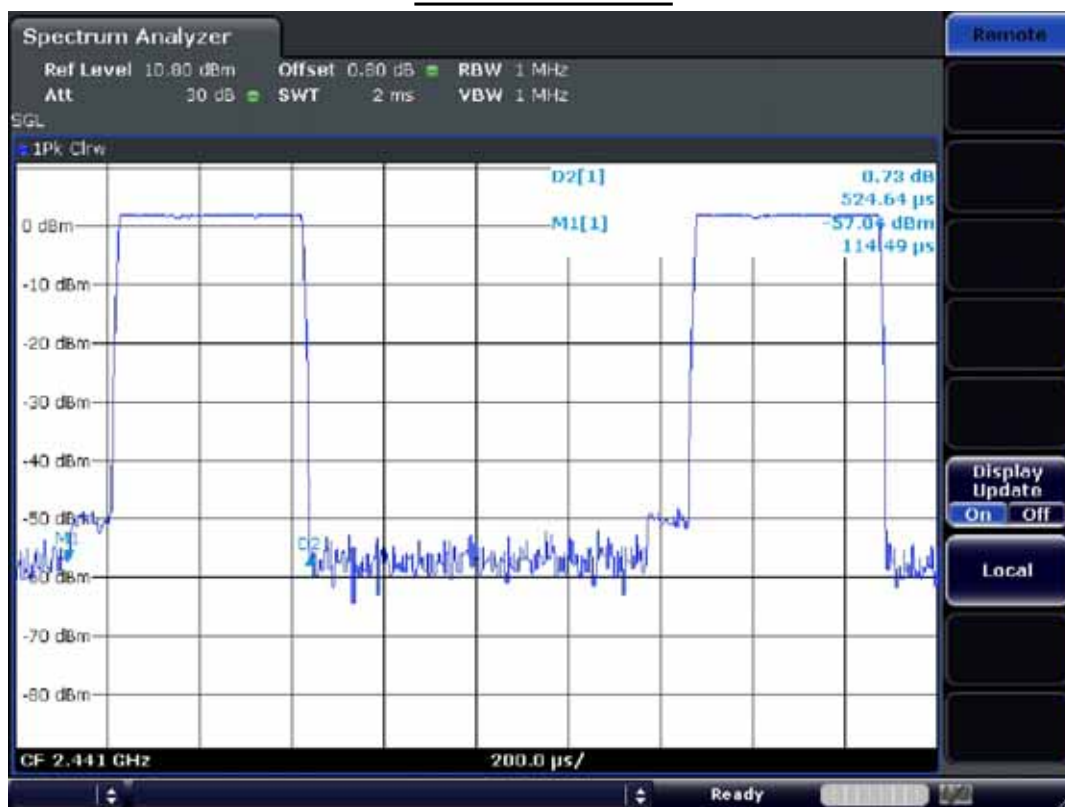
Minimum Standard:

0.4 seconds within a 30 second period per any frequency

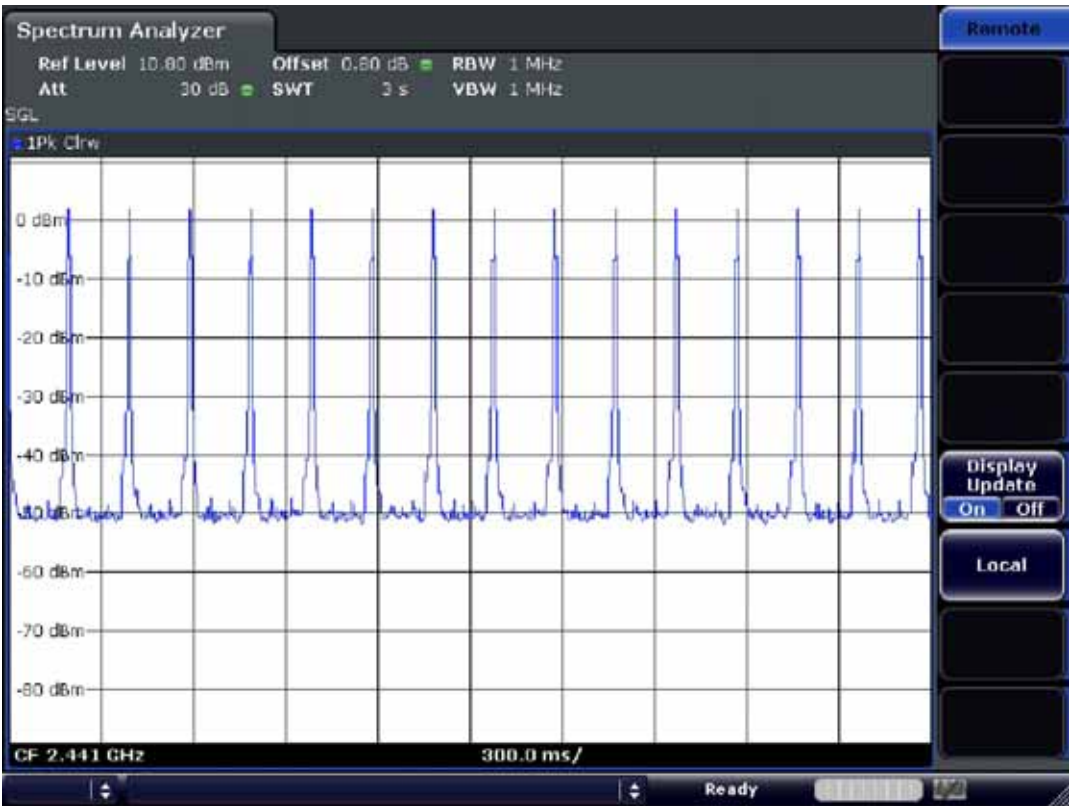
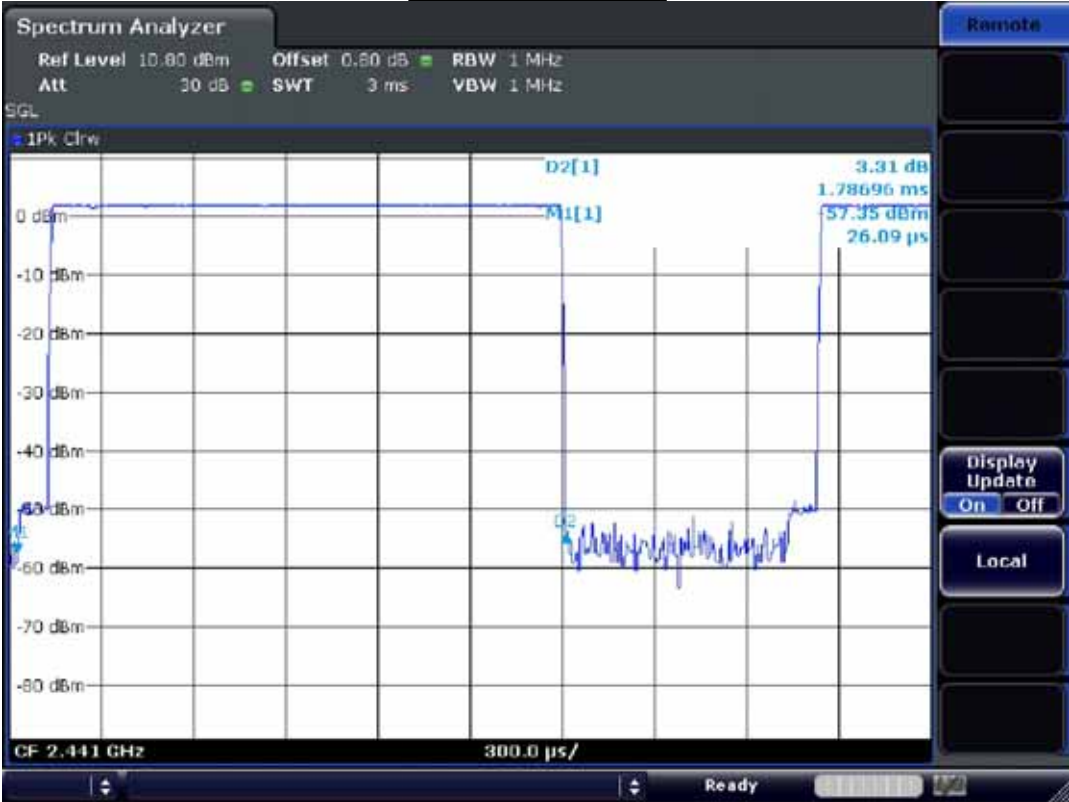
Measurement Setup

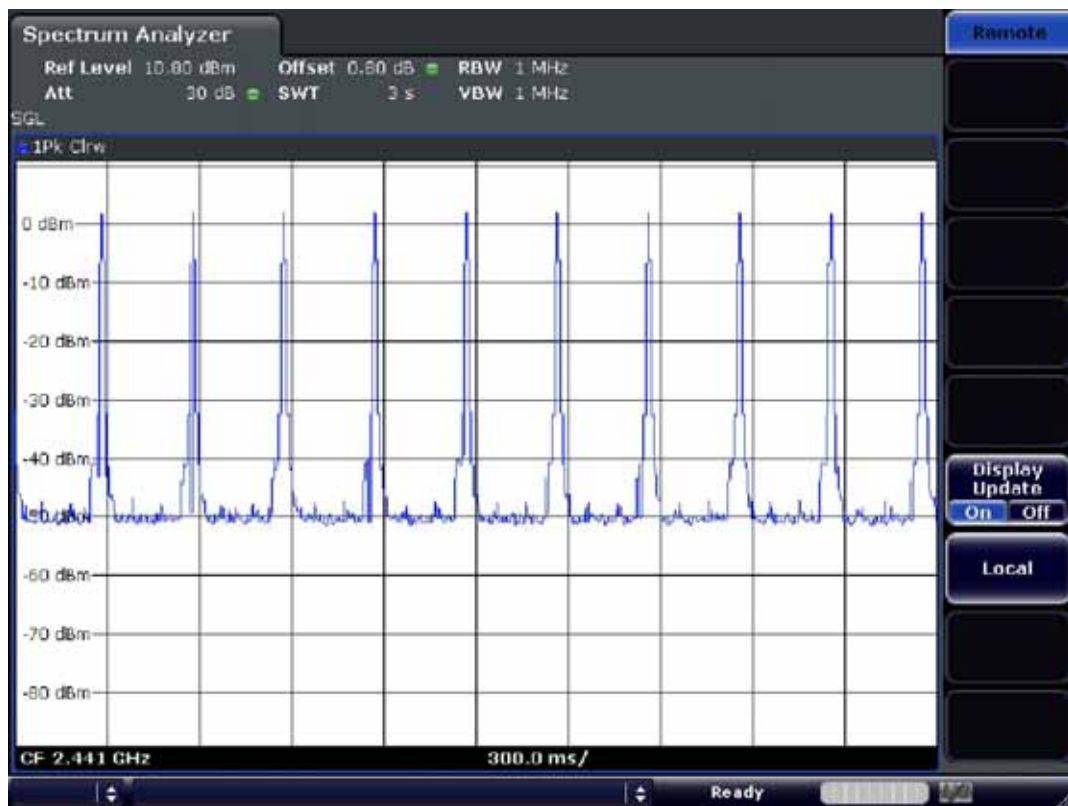
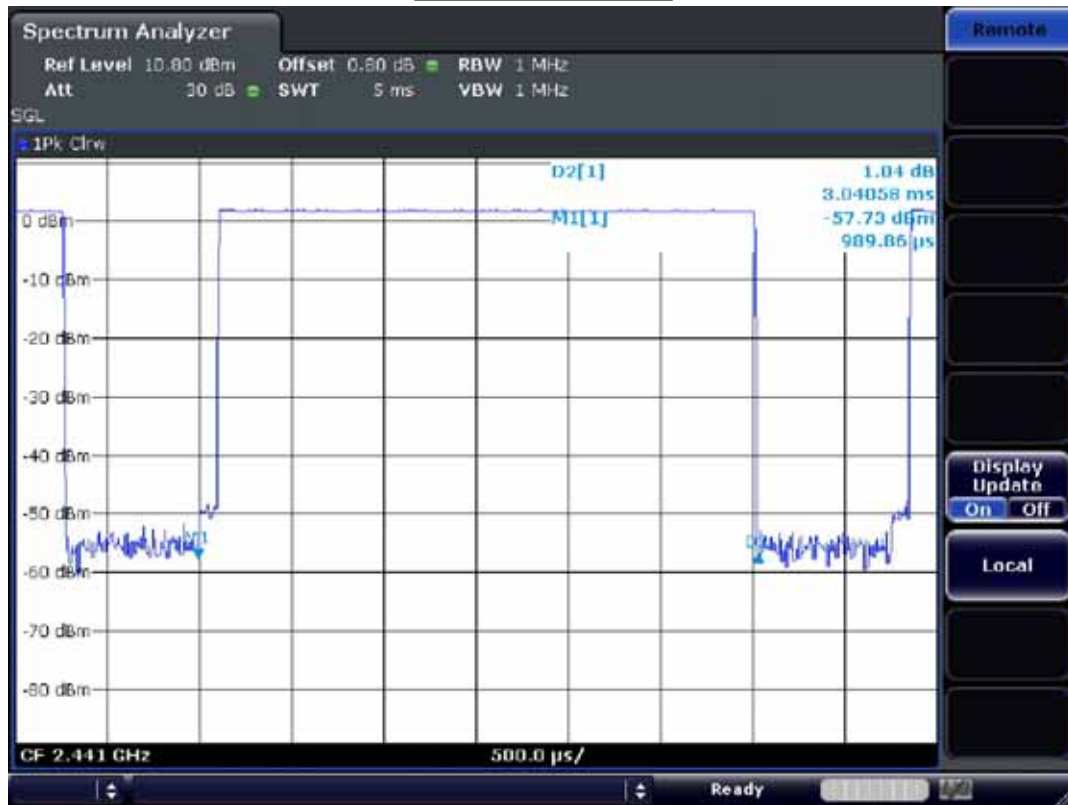
Same as the Chapter 3.2.1 (Figure 1)

DH1 at basic mode

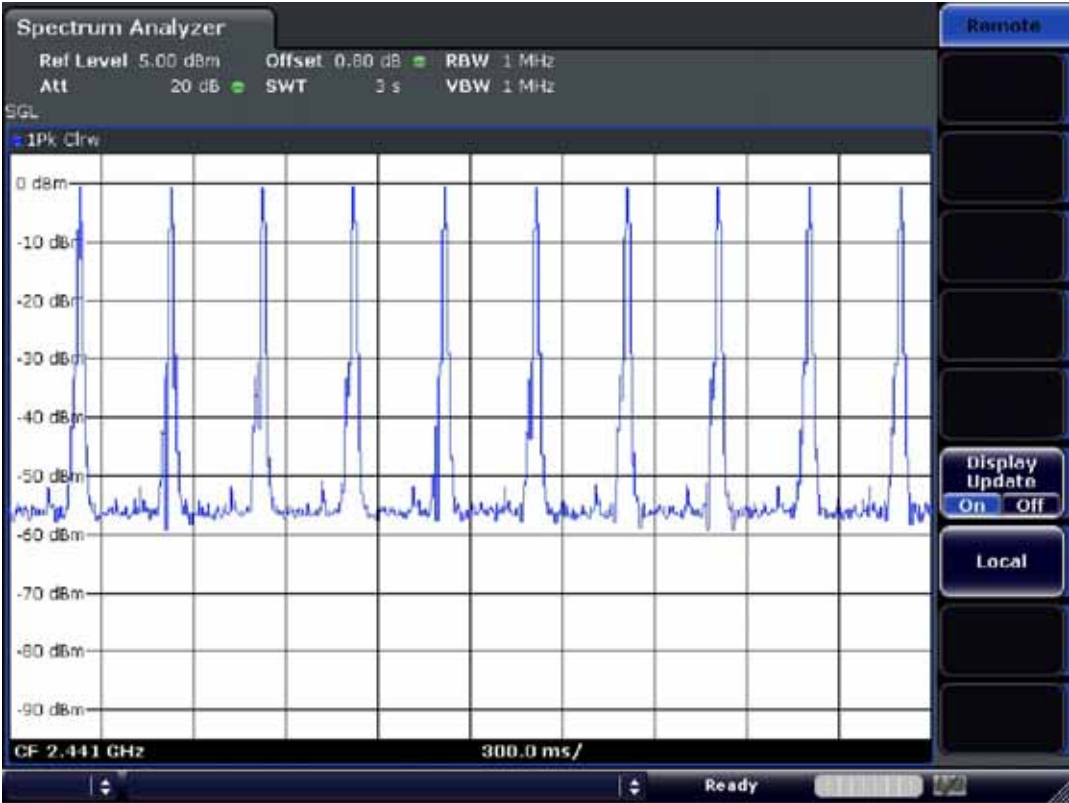


DH3 at basic mode



DH5 at basic mode

DH5 at EDR mode with 3Mbps



3.2.5 Transmitter Output Power

Procedure:

The peak output power was measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function disabled at the highest, middle and the lowest available channels..

After the trace being stable, Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

Span = 20 MHz (approximately 5 times of the 20 dB bandwidth)

RBW = 3 MHz (greater than the 20dB bandwidth of the emission being measured)

VBW = 3 MHz (VBW \geq RBW)

Detector function = peak

Trace = max hold

Sweep = auto

Measurement Data: Basic Mode

| Frequency (MHz) | Ch. | Test Results | | |
|--------------------|-----|--------------|------|----------|
| | | dBm | mW | Result |
| 2402 | 0 | 2.87 | 1.94 | Complies |
| 2441 | 39 | 1.90 | 1.55 | Complies |
| 2480 | 78 | 1.86 | 1.53 | Complies |

Measurement Data: EDR Mode

| Frequency (MHz) | Ch. | Test Results | | |
|--------------------|-----|--------------|------|----------|
| | | dBm | mW | Result |
| 2402 | 0 | 0.80 | 1.20 | Complies |
| 2441 | 39 | -0.25 | 0.94 | Complies |
| 2480 | 78 | -0.39 | 0.91 | Complies |

- See next pages for actual measured spectrum plots.

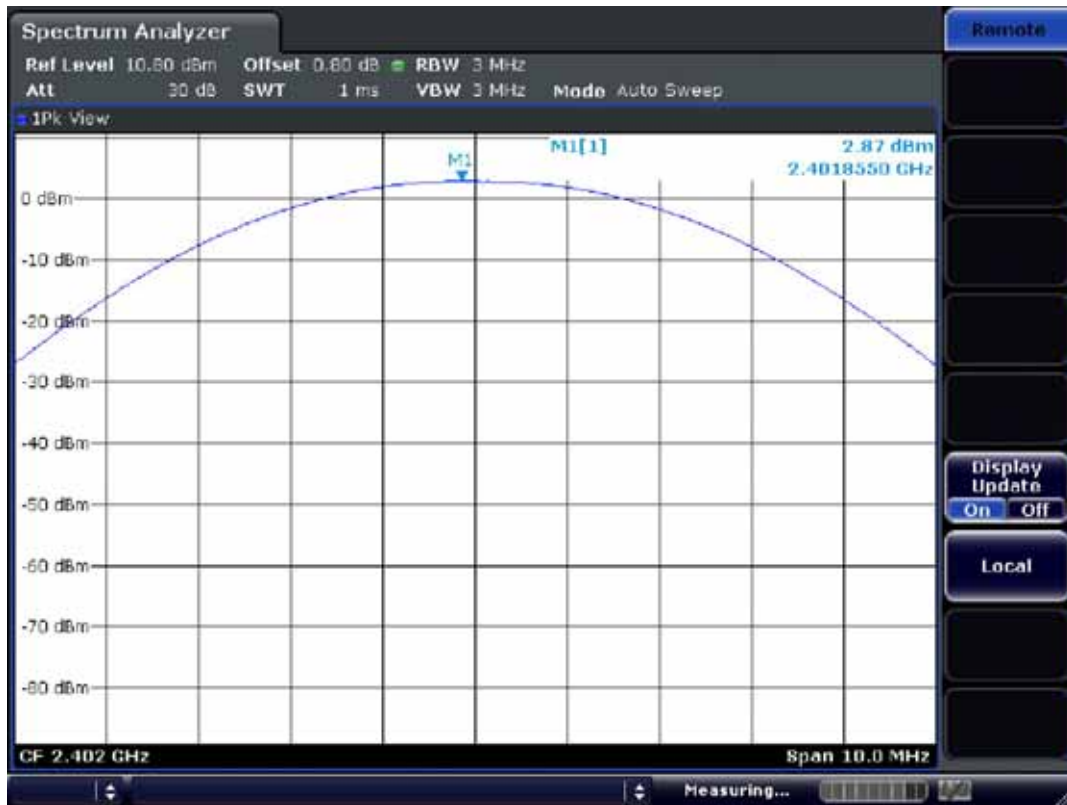
| | |
|--------------------------|----------|
| Minimum Standard: | < 250 mW |
|--------------------------|----------|

Measurement Setup

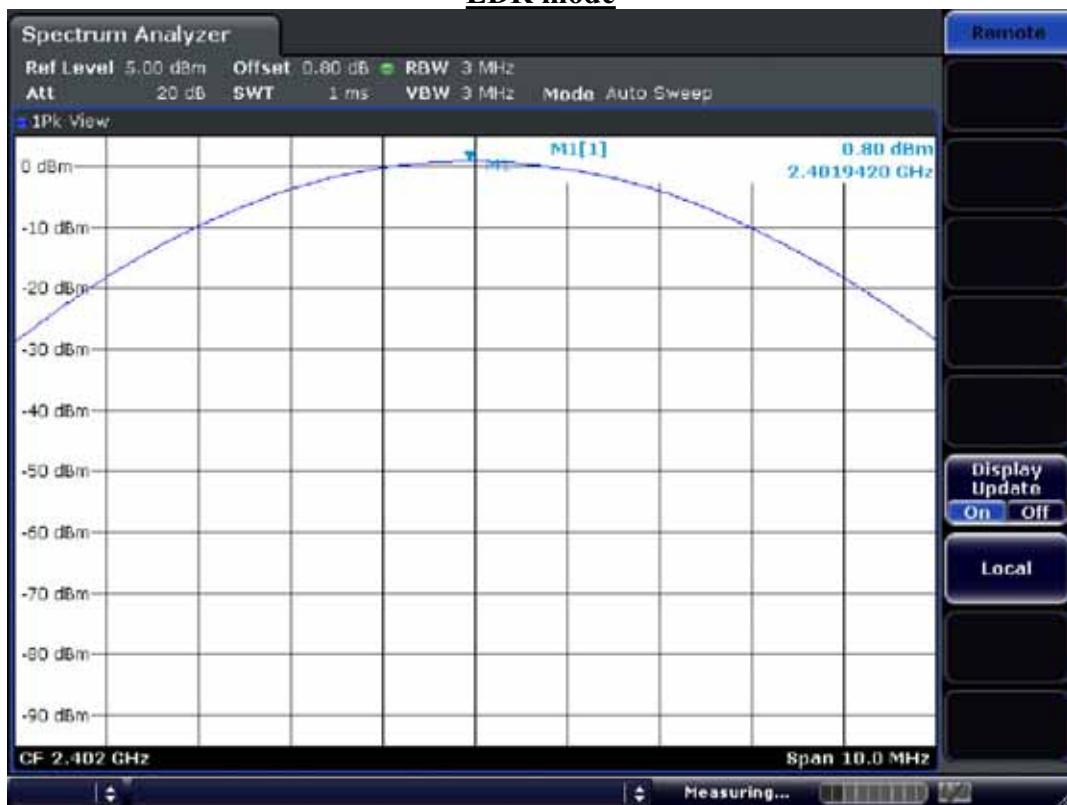
Same as the Chapter 3.2.1 (Figure 1)

Channel 1

Basic mode

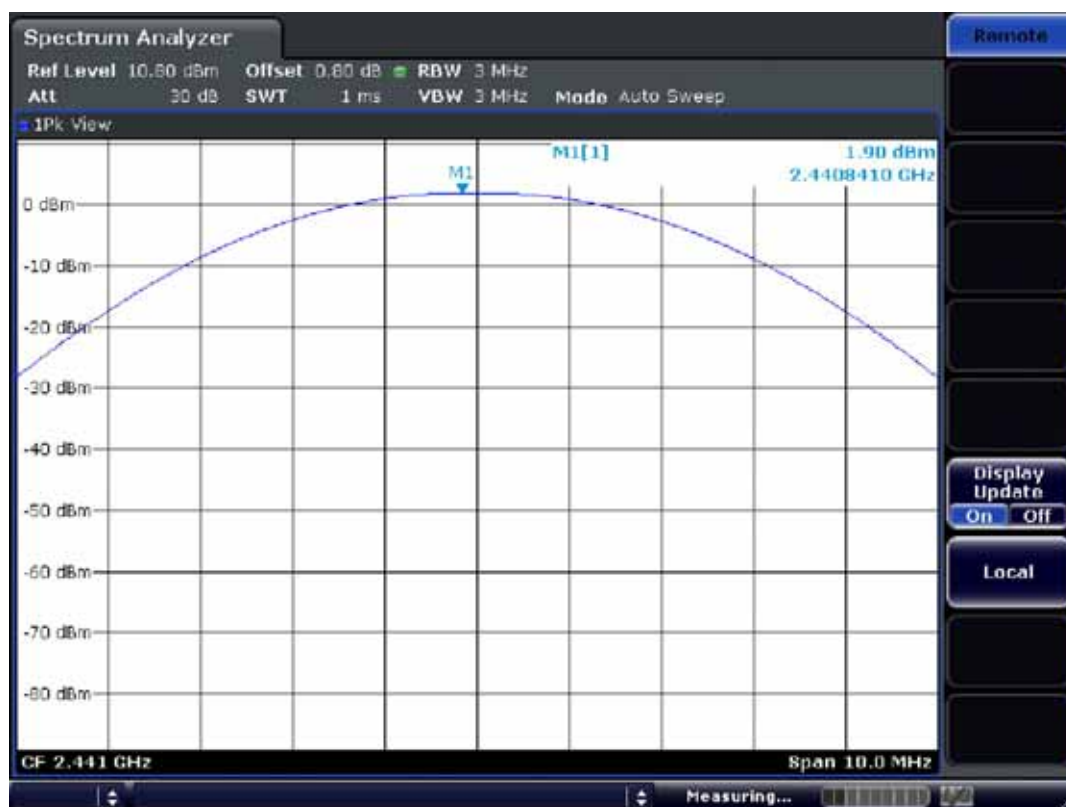


EDR mode

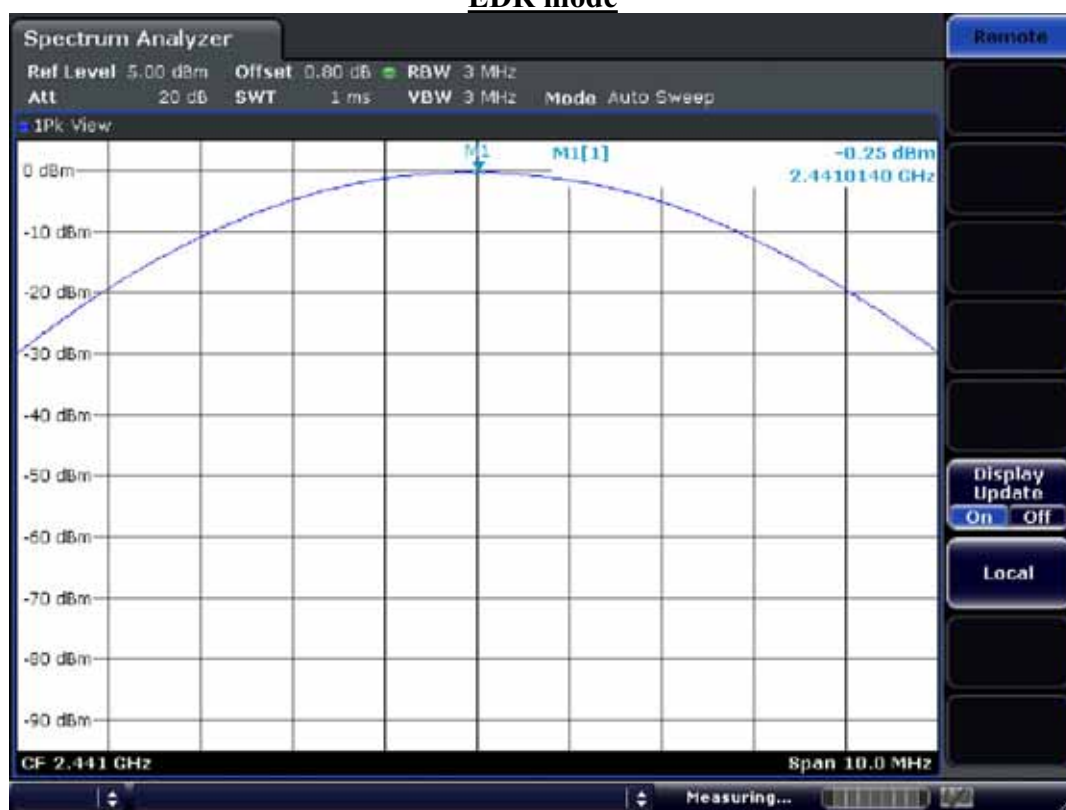


Channel 2

Basic mode

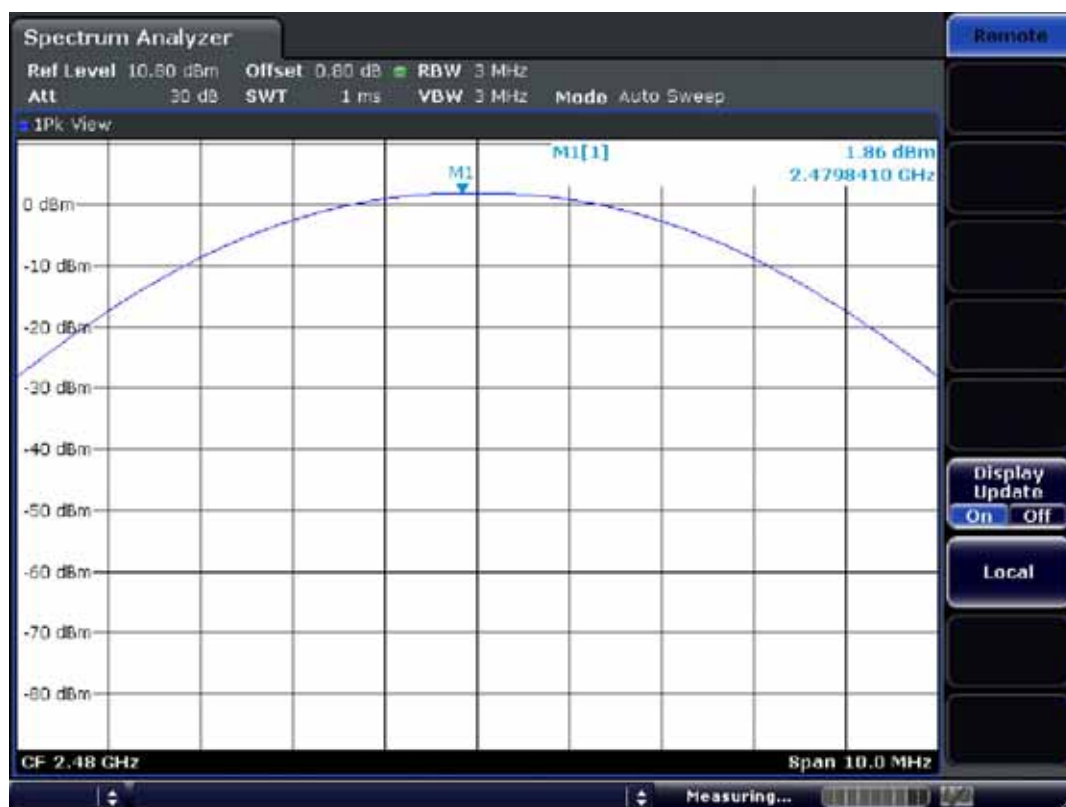


EDR mode

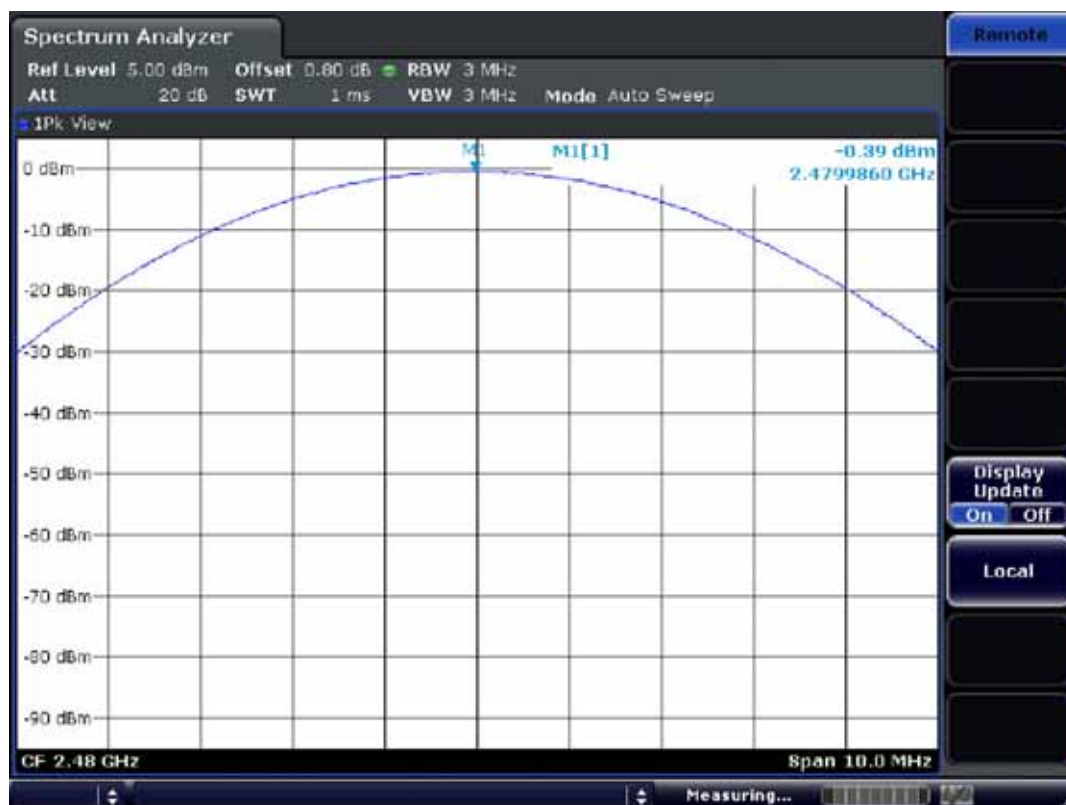


Channel 3

Basic mode



EDR mode



3.2.6 Band Edge

Procedure:

The bandwidth at 20dB down from the highest inband spectral density is measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function disabled at the highest, middle and the lowest available channels.

After the trace being stable, Use the marker-to-peak function to measure 20 dB down both sides of the intentional emission.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 100 kHz

VBW = 100 kHz

Span = 10 MHz

Detector function = peak

Trace = max hold

Sweep = auto

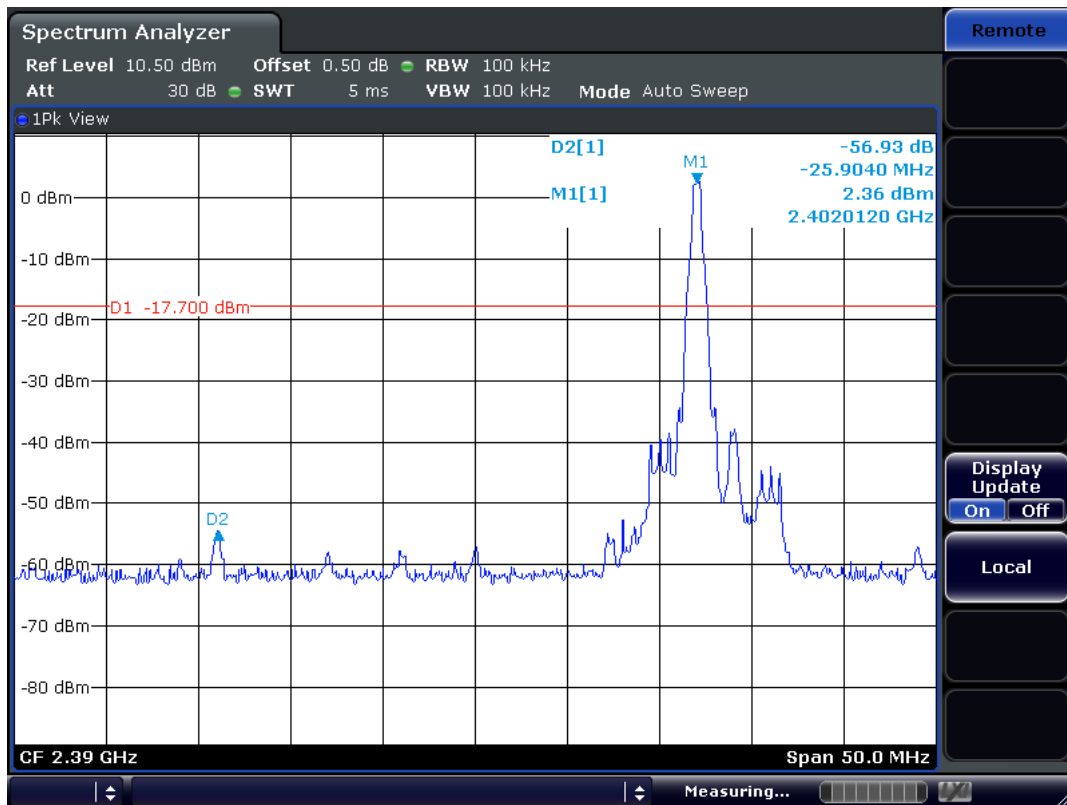
Measurement Data: Complies

- All conducted emission in any 100kHz bandwidth outside of the spread spectrum band was at least 20dB lower than the highest inband spectral density. Therefore the applying equipment meets the requirement.
- See next pages for actual measured spectrum plots.

| | |
|--------------------------|----------|
| Minimum Standard: | > 20 dBc |
|--------------------------|----------|

Measurement Setup

Same as the Chapter 3.2.1 (Figure 1)

Band – edge of Basic Mode**Lower edge****Upper edge**

Band-edges in the restricted band 2483.5 ~ 2500 MHz measurement**- Document DA 00-705 Marker Delta Method**

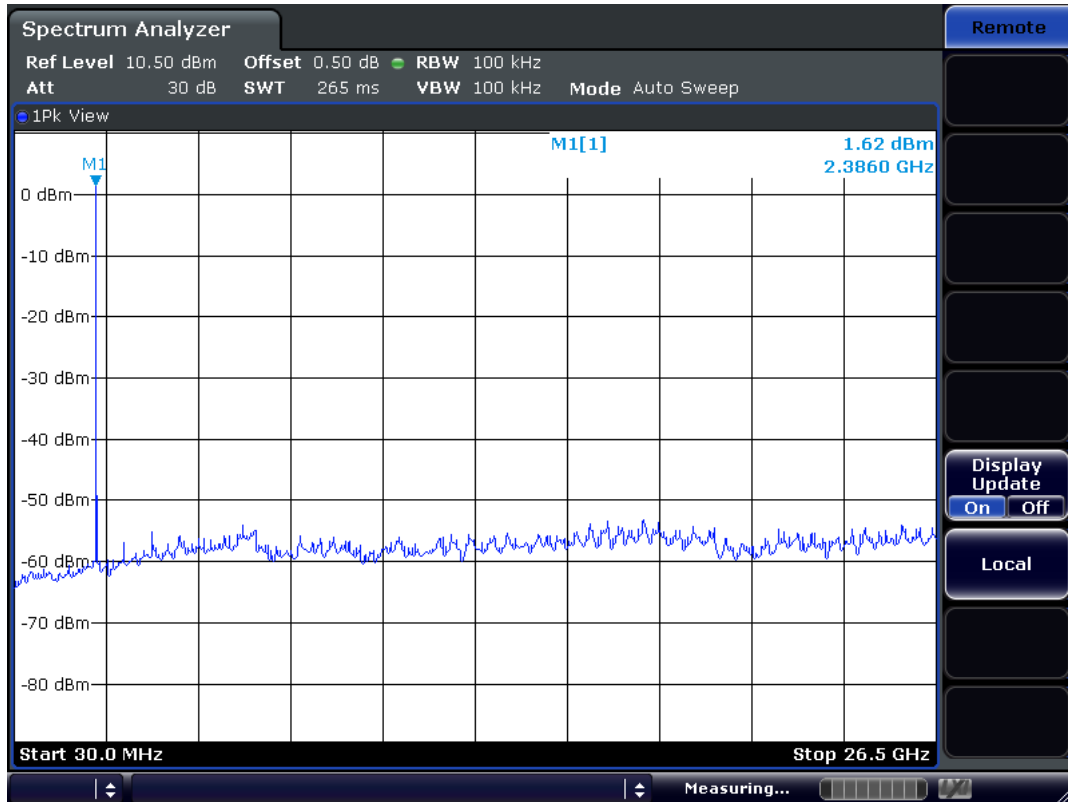
| Frequency (MHz) | Detect mode | Pol. | Reading (dBuV/m) | T.F (dB) | Step 1 Data | delta | Step 3 Data | Limit |
|--------------------|----------------|------|---------------------|-------------|----------------|-------|----------------|-------|
| 2483.5 | PK | H | 99.17 | 1.1 | 100.27 | 46.96 | 53.31 | 74 |
| | AV | H | 87.70 | 1.1 | 88.80 | 46.96 | 41.84 | 54 |

Note) Step 1 = Reading + T.F

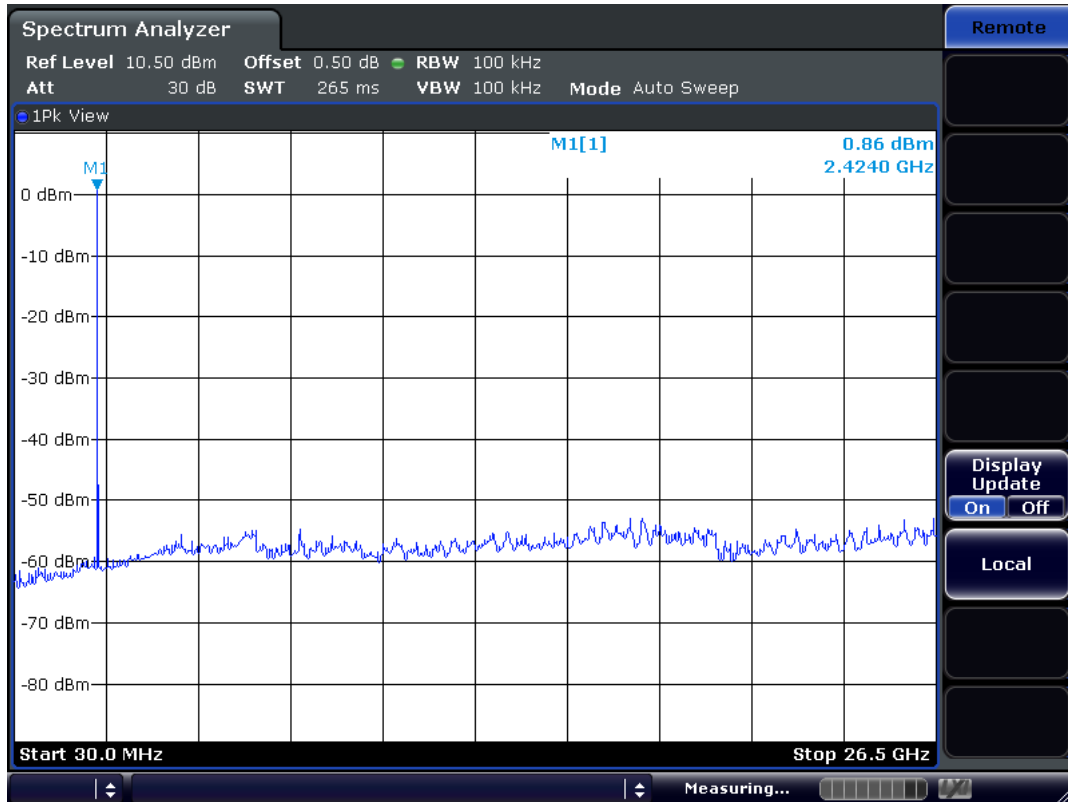
(T.F = Ant.F + Cable loss – PreAmp Gain)

Step 3 = Step 1 – Delta Value

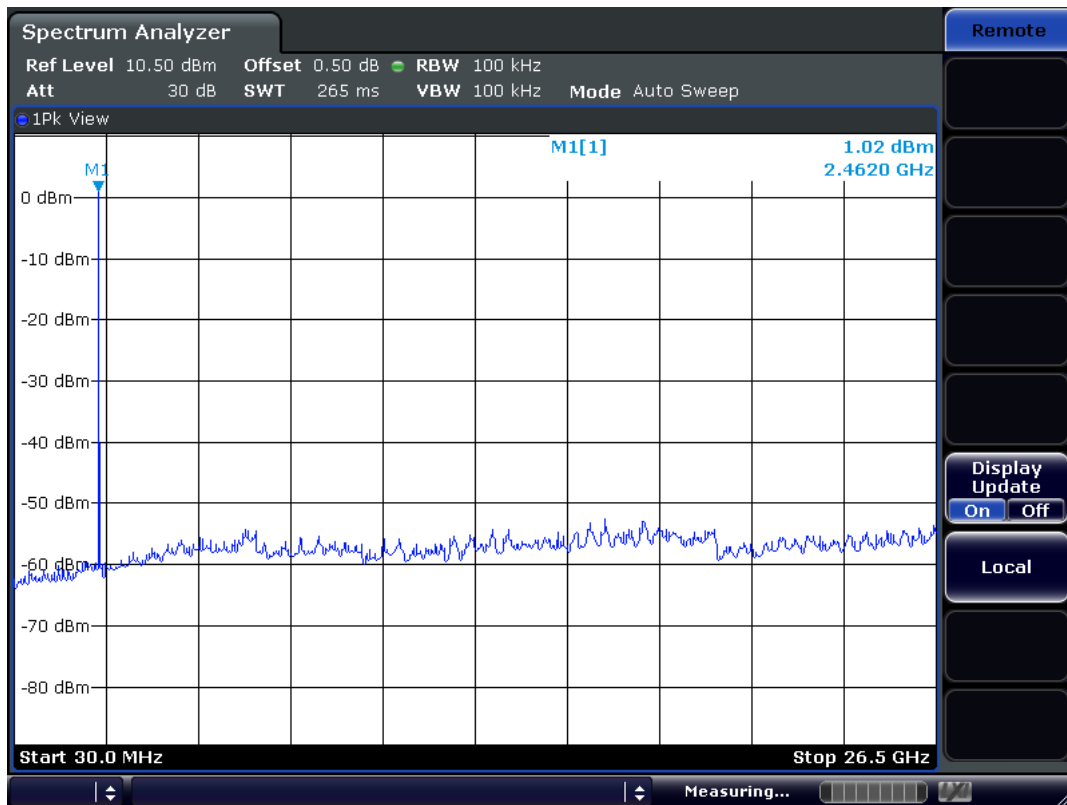
Unwanted Emission – Low channel
Frequency Range = 30 MHz ~ 26.5 GHz



Unwanted Emission – Middle channel
Frequency Range = 30 MHz ~ 26.5 GHz



Unwanted Emission – High channel
Frequency Range = 30 MHz ~ 26.5 GHz



3.2.7 Field Strength of Harmonics

Procedure:

The EUT was placed on a 0.8m high wooden table inside a shielded enclosure. An antenna was placed near the EUT and measurements of frequencies and amplitudes of field strengths were recorded for reference during final measurements. For final radiated testing, measurements were performed in OATS. Measurements were performed with the EUT oriented in 3 orthogonal axis and rotated 360 degrees to determine worst-case orientation for maximum emissions.

The spectrum analyzer is set to:

Center frequency = the worst channel

Frequency Range = 30 MHz ~ 10th harmonic.

RBW = 100 kHz (30MHz ~ 1 GHz)

= 1 MHz (1 GHz ~ 10th harmonic)

Span = 100 MHz

Trace = max hold

Peak:VBW \geq RBW

Average:VBW=10Hz

Detector function = Peak and Average

Sweep = auto

Measurement Data: Complies

- Refer to the next page.
- No other emissions were detected at a level greater than 10dB below limit.
- The three antennas were used with this EUT during the Testing.

Minimum Standard: FCC Part 15.209(a)

| Frequency (MHz) | Limit (uV/m) @ 3m |
|-----------------|-------------------|
| 30 ~ 88 | 100 ** |
| 88 ~ 216 | 150 ** |
| 216 ~ 960 | 200 ** |
| Above 960 | 500 |

** Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88MHz, 174-216MHz or 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

Measurement Data:**1. PEAK data**

| Low channel | | Mid channel | | High channel | |
|--|----------------|-----------------|----------------|-----------------|----------------|
| Frequency (MHz) | Level (dBuV/m) | Frequency (MHz) | Level (dBuV/m) | Frequency (MHz) | Level (dBuV/m) |
| - | - | - | - | - | - |
| No emissions were detected at a level greater than 20dB below limit. | | | | | |
| - | - | - | - | - | - |
| Measurement uncertainty | | ± 6 dB | | | |

No other emissions were detected at a level greater than 20dB below limit.

2. AVERAGE data

| Low channel | | Mid channel | | High channel | |
|--|----------------|-----------------|----------------|-----------------|----------------|
| Frequency (MHz) | Level (dBuV/m) | Frequency (MHz) | Level (dBuV/m) | Frequency (MHz) | Level (dBuV/m) |
| - | - | - | - | - | - |
| No emissions were detected at a level greater than 20dB below limit. | | | | | |
| - | - | - | - | - | - |
| Measurement uncertainty | | ± 6 dB | | | |

No other emissions were detected at a level greater than 20dB below limit.

Radiated Emissions – PC+FILE UP/ DOWN+MOVIE+"H" +SD Mode

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Gyeonggi-do 449-822 Korea
Tel :+82-31-3236008,9
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EUT/Model No.: S7

TEST MODE: PC+FILE+MOVIE+"H"+SD mode

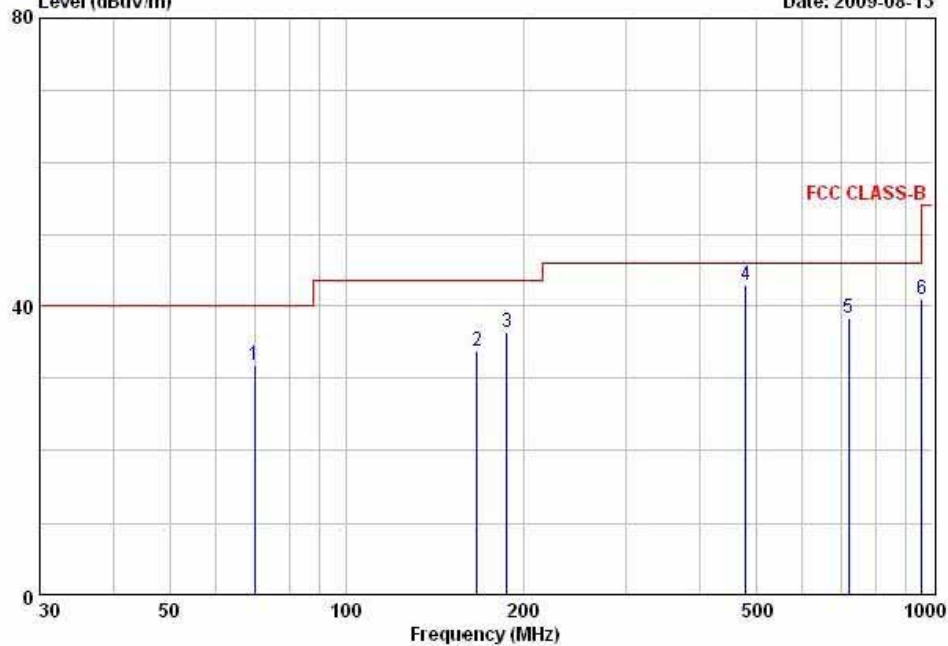
Temp Humi : 24 / 61

Tested by: KIM.K.I

Data: 69

Level (dBuV/m)

Date: 2009-08-13



| | Freq | Reading | C.F | Result | Limit | Margin | Height | Angle | Polarity |
|---|--------|---------|--------|--------|--------|--------|--------|-------|------------|
| | MHz | dBuV/m | dB/m | dBuV/m | dBuV/m | dB | cm | deg | |
| 1 | 69.83 | 47.60 | -15.86 | 31.74 | 40.00 | 8.26 | 110 | 214 | VERTICAL |
| 2 | 166.56 | 45.60 | -11.72 | 33.88 | 43.50 | 9.62 | 241 | 195 | HORIZONTAL |
| 3 | 187.52 | 48.60 | -12.14 | 36.46 | 43.50 | 7.04 | 144 | 262 | HORIZONTAL |
| 4 | 480.13 | 48.50 | -5.66 | 42.84 | 46.00 | 3.16 | 100 | 360 | HORIZONTAL |
| 5 | 720.53 | 39.10 | -0.72 | 38.38 | 46.00 | 7.62 | 214 | 205 | HORIZONTAL |
| 6 | 960.26 | 38.50 | 2.51 | 41.01 | 54.00 | 12.99 | 100 | 152 | HORIZONTAL |

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions – BLUETOOTH Mode

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EUT/Model No.: S7

TEST MODE: BLUETOOTH mode

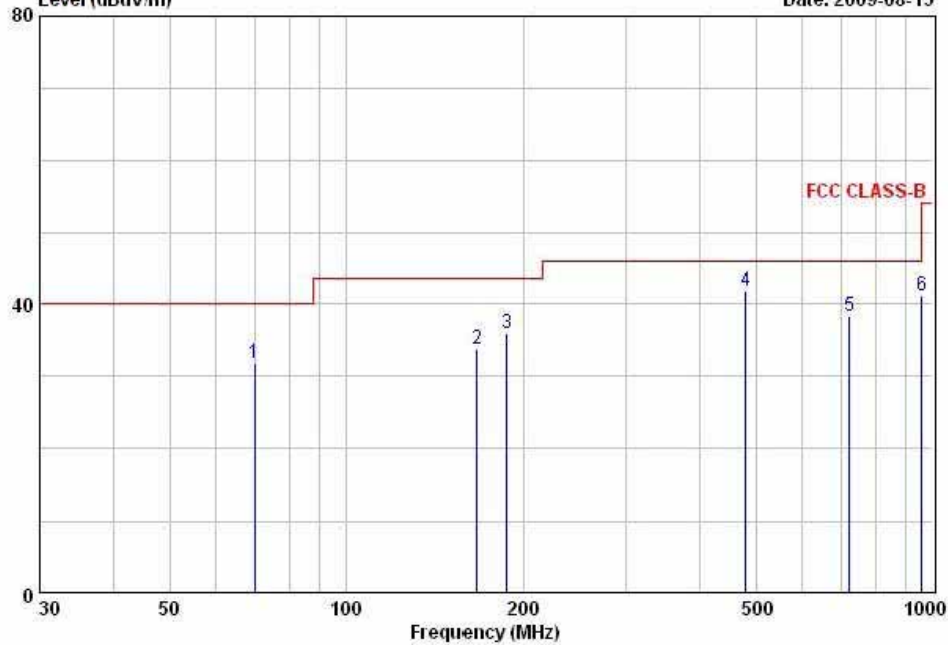
Temp Humi : 26 / 57

Tested by: KIM.K.I

Data: 138

Level (dBuV/m)

Date: 2009-08-13



| | Freq | Reading | C.F | Result | Limit | Margin | Height | Angle | Polarity |
|---|--------|---------|--------|--------|--------|--------|--------|-------|------------|
| | MHz | dBuV/m | dB/m | dBuV/m | dBuV/m | dB | cm | deg | |
| 1 | 69.85 | 47.60 | -15.87 | 31.73 | 40.00 | 8.27 | 100 | 241 | VERTICAL |
| 2 | 166.54 | 45.60 | -11.72 | 33.88 | 43.50 | 9.62 | 241 | 324 | HORIZONTAL |
| 3 | 187.51 | 48.20 | -12.14 | 36.06 | 43.50 | 7.44 | 148 | 163 | HORIZONTAL |
| 4 | 480.13 | 47.60 | -5.66 | 41.94 | 46.00 | 4.06 | 100 | 135 | HORIZONTAL |
| 5 | 720.53 | 39.00 | -0.72 | 38.28 | 46.00 | 7.72 | 230 | 182 | HORIZONTAL |
| 6 | 960.52 | 38.60 | 2.52 | 41.12 | 54.00 | 12.88 | 100 | 183 | HORIZONTAL |

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

3.2.8 AC Conducted Emissions

Procedure:

The conducted emissions are measured in the shielded room with a spectrum analyzer in peak hold. While the measurement, EUT had its hopping function disabled at the middle channels in line with Section 15.31(m). Emissions closest to the limit are measured in the quasi-peak mode (QP) with the tuned receiver using a bandwidth of 9 kHz. The emissions are maximized further by cable manipulation and Exerciser operation. The highest emissions relative to the limit are listed.

Measurement Data: Complies

- See next pages for actual measured spectrum plots.
- No emissions were detected at a level greater than 10dB below limit.

Minimum Standard: FCC Part 15.207(a)/EN 55022

| Frequency Range (MHz) | Conducted Limit (dBuV) | |
|--------------------------|------------------------|------------|
| | Quasi-Peak | Average |
| 0.15 ~ 0.5 | 66 to 56 * | 56 to 46 * |
| 0.5 ~ 5 | 56 | 46 |
| 5 ~ 30 | 60 | 50 |

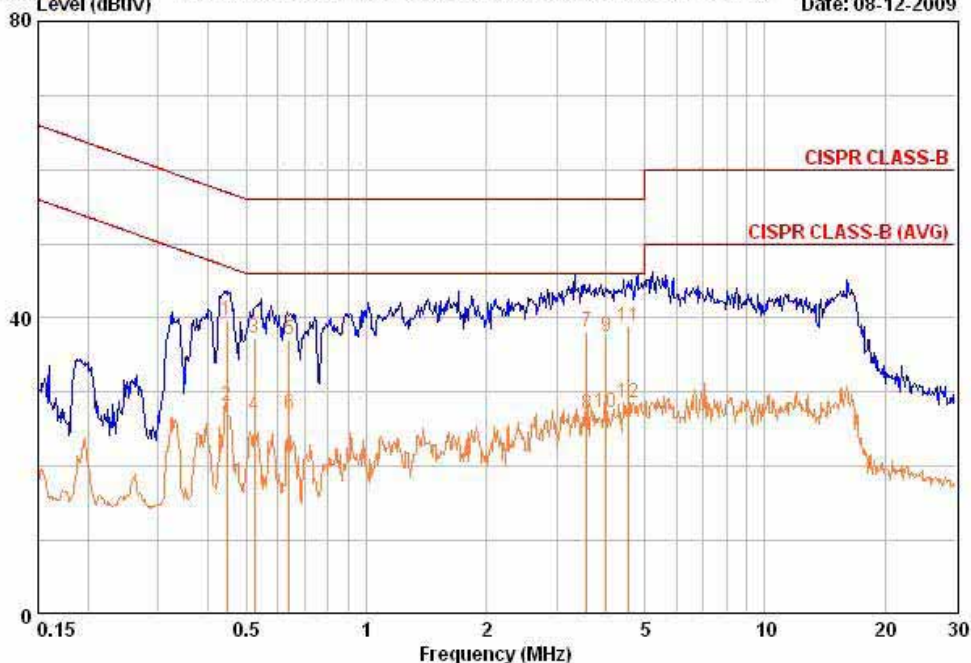
* Decreases with the logarithm of the frequency

AC Conducted Emissions – PC+FILE UP/ DOWN+MOVIE+”H” +SD – Line

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Fax:+82-31-323-6010

| | |
|---------------------------------------|-------------------------|
| EUT / Model No. : S7 | Phase : LINE |
| Test Mode : PC+FILE+MOVIE+”H”+SD mode | Test Power : 120 / 60 |
| Temp./Humi. : 25 / 57 | Test Engineer : KIM.K.I |

Data: 192 Level (dBuV) File: D:\Conducted Data\2009\LTA_Conduction_0907_1.EMI (326) Date: 08-12-2009



| Freq | RD | RD | C.F | Result | Result | Limit | Limit | Margin | Margin |
|-------|-------|-------|------|--------|--------|-------|-------|--------|--------|
| MHz | QP | AV | dB | QP | AV | QP | AV | QP | AV |
| | dBuV | dBuV | | dBuV | dBuV | dBuV | dBuV | dB | dB |
| 0.446 | 29.95 | 18.55 | 9.67 | 39.62 | 28.22 | 56.95 | 46.95 | 17.33 | 18.73 |
| 0.524 | 27.65 | 17.05 | 9.72 | 37.37 | 26.77 | 56.00 | 46.00 | 18.63 | 19.23 |
| 0.639 | 27.34 | 17.14 | 9.78 | 37.12 | 26.92 | 56.00 | 46.00 | 18.88 | 19.08 |
| 3.577 | 28.14 | 17.14 | 9.93 | 38.07 | 27.07 | 56.00 | 46.00 | 17.93 | 18.93 |
| 3.991 | 27.44 | 17.34 | 9.95 | 37.39 | 27.29 | 56.00 | 46.00 | 18.61 | 18.71 |
| 4.555 | 28.75 | 18.55 | 9.96 | 38.71 | 28.51 | 56.00 | 46.00 | 17.29 | 17.49 |

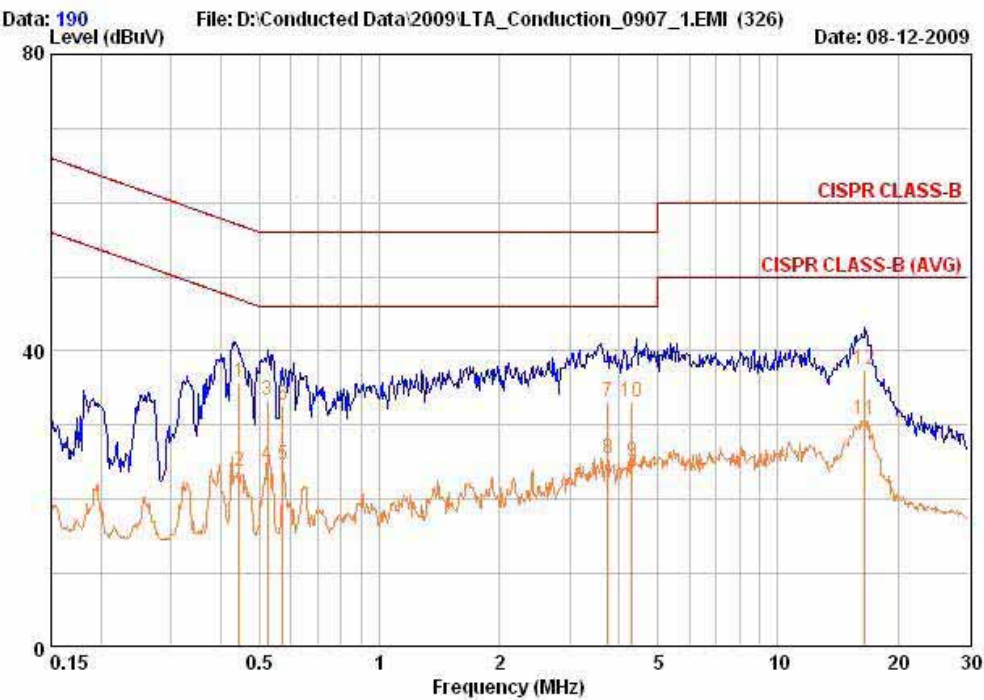
Remarks: C.F (Correction Factor) = Insertion loss + Cable loss

AC Conducted Emissions – PC+FILE UP/ DOWN+MOVIE+”H” +SD – Neutral



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Fax:+82-31-323-6010

| | | | |
|------------------|-----------------------------|---------------|------------|
| EUT / Model No.: | S7 | Phase | : NEUTRAL |
| Test Mode | : PC+FILE+MOVIE+”H”+SD mode | Test Power | : 120 / 60 |
| Temp./Humi. | : 25 / 57 | Test Engineer | : KIM.K.I |



| Freq | RD | RD | C.F | Result | Result | Limit | Limit | Margin | Margin |
|--------|-------|-------|-------|--------|--------|-------|-------|--------|--------|
| MHz | QP | AV | dB | QP | AV | QP | AV | QP | AV |
| 0.445 | 26.05 | 14.15 | 9.70 | 35.75 | 23.85 | 56.97 | 46.97 | 21.21 | 23.11 |
| 0.524 | 23.65 | 14.95 | 9.71 | 33.35 | 24.65 | 56.00 | 46.00 | 22.65 | 21.35 |
| 0.573 | 23.04 | 14.94 | 9.75 | 32.79 | 24.69 | 56.00 | 46.00 | 23.21 | 21.31 |
| 3.751 | 23.14 | 15.44 | 9.96 | 33.10 | 25.40 | 56.00 | 46.00 | 22.90 | 20.60 |
| 4.302 | 23.24 | 15.24 | 9.91 | 33.15 | 25.15 | 56.00 | 46.00 | 22.85 | 20.85 |
| 16.505 | 27.11 | 20.31 | 10.35 | 37.46 | 30.66 | 60.00 | 50.00 | 22.54 | 19.34 |

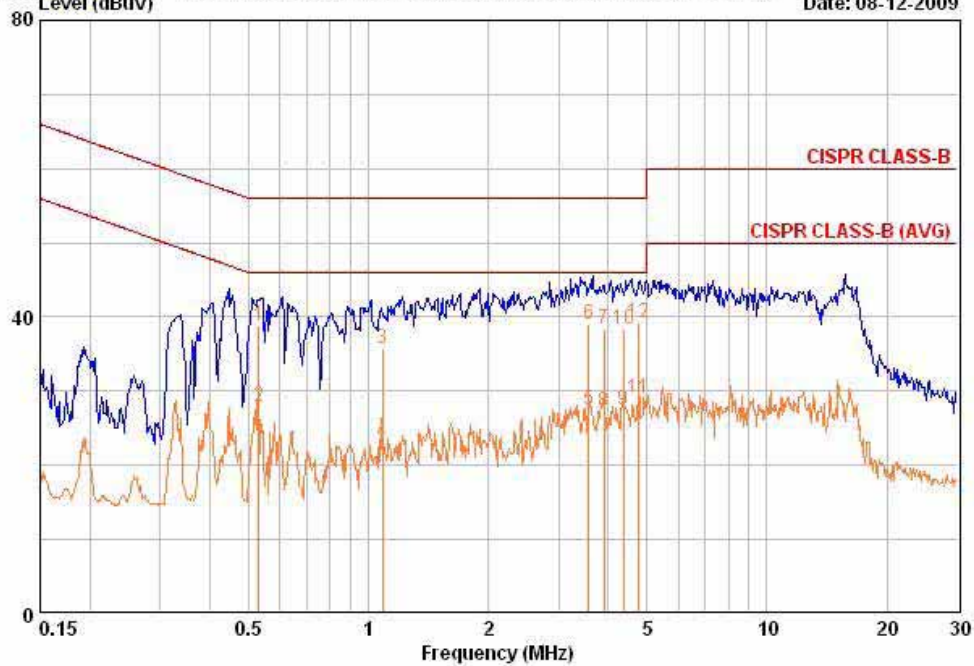
Remarks: C.F (Correction Factor) = Insertion loss + Cable loss

AC Conducted Emissions – BLUETOOTH – Line

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Fax: +82-31-323-6010

| | |
|----------------------------|-------------------------|
| EUT / Model No. : S7 | Phase : LINE |
| Test Mode : BLUETOOTH mode | Test Power : 120 / 60 |
| Temp./Humi. : 25 / 57 | Test Engineer : KIM.K.I |

Data: 184 Level (dBuV) File: D:\Conducted Data\2009\LTA_Conduction_0907_1.EMI (326) Date: 08-12-2009



| Freq | RD | RD | C.F | Result | Result | Limit | Limit | Margin | Margin |
|-------|-------|-------|------|--------|--------|-------|-------|--------|--------|
| MHz | QP | AV | dB | QP | AV | QP | AV | QP | AV |
| | dBuV | dBuV | | dBuV | dBuV | dBuV | dBuV | dB | dB |
| 0.531 | 29.15 | 18.25 | 9.73 | 38.88 | 27.98 | 56.00 | 46.00 | 17.12 | 18.02 |
| 1.085 | 26.05 | 13.35 | 9.79 | 35.84 | 23.14 | 56.00 | 46.00 | 20.16 | 22.86 |
| 3.572 | 29.14 | 17.44 | 9.93 | 39.07 | 27.37 | 56.00 | 46.00 | 16.93 | 18.63 |
| 3.895 | 28.44 | 17.24 | 9.94 | 38.38 | 27.18 | 56.00 | 46.00 | 17.62 | 18.82 |
| 4.360 | 28.44 | 17.54 | 9.96 | 38.40 | 27.50 | 56.00 | 46.00 | 17.60 | 18.50 |
| 4.748 | 29.25 | 19.05 | 9.97 | 39.22 | 29.02 | 56.00 | 46.00 | 16.78 | 16.98 |

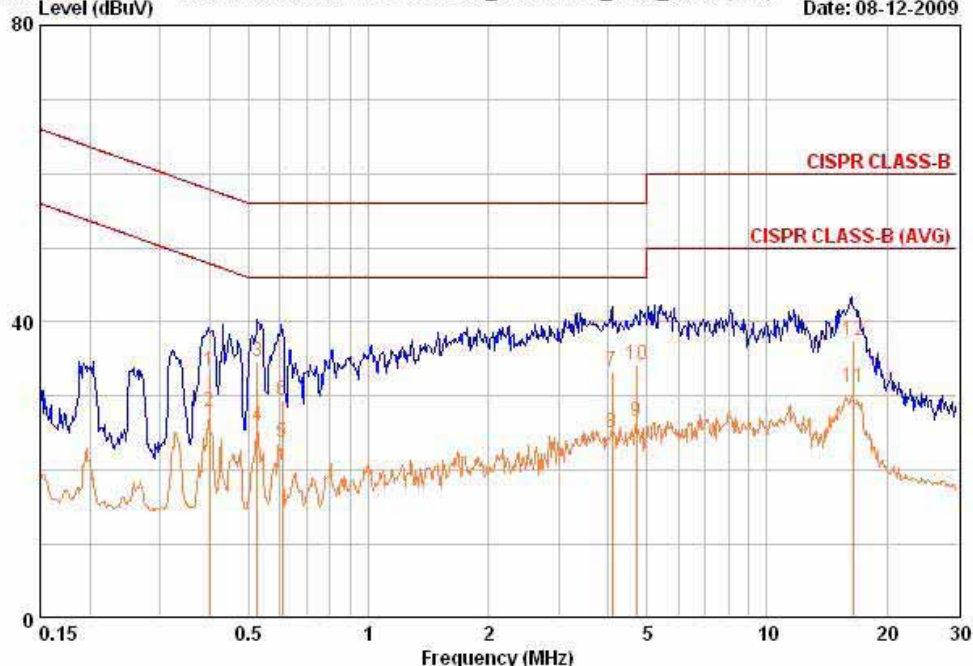
Remarks: C.F (Correction Factor) = Insertion loss + Cable loss

AC Conducted Emissions – BLUETOOTH – Neutral

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Fax: +82-31-323-6010

| | |
|----------------------------|-------------------------|
| EUT / Model No. : S7 | Phase : NEUTRAL |
| Test Mode : BLUETOOTH mode | Test Power : 120 / 60 |
| Temp./Humi. : 25 / 57 | Test Engineer : KIM.K.I |

Data: 188 Level (dBuV) File: D:\Conducted Data\2009\LTA_Conduction_0907_1.EMI (326) Date: 08-12-2009



| Freq | RD | RD | C.F | Result | Result | Limit | Limit | Margin | Margin |
|--------|-------|-------|-------|--------|--------|-------|-------|--------|--------|
| MHz | QP | AV | dB | QP | AV | QP | AV | QP | AV |
| | dBuV | dBuV | | dBuV | dBuV | dBuV | dBuV | dB | dB |
| 0.400 | 23.66 | 18.06 | 9.75 | 33.41 | 27.81 | 57.85 | 47.85 | 24.45 | 20.05 |
| 0.526 | 24.95 | 16.15 | 9.71 | 34.66 | 25.86 | 56.00 | 46.00 | 21.34 | 20.14 |
| 0.607 | 19.64 | 14.04 | 9.77 | 29.41 | 23.81 | 56.00 | 46.00 | 26.59 | 22.19 |
| 4.085 | 23.34 | 15.04 | 9.93 | 33.27 | 24.97 | 56.00 | 46.00 | 22.73 | 21.03 |
| 4.704 | 24.35 | 16.65 | 9.93 | 34.27 | 26.57 | 56.00 | 46.00 | 21.73 | 19.43 |
| 16.436 | 27.10 | 20.90 | 10.35 | 37.45 | 31.25 | 60.00 | 50.00 | 22.55 | 18.75 |

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss

APPENDIX

TEST EQUIPMENT USED FOR TESTS

| | Description | Model No. | Serial No. | Manufacturer | Next Cal. Date |
|----|--------------------------|-------------|---------------|---------------|----------------|
| 1 | Spectrum Analyzer | FSV-30 | 100757 | R&S | Feb-10 |
| 2 | Spectrum Analyzer | 8563E | 3425A02505 | HP | Apr-10 |
| 3 | Spectrum Analyzer | 8594E | 3710A04074 | HP | Oct-09 |
| 4 | Signal Generator | 8648C | 3623A02597 | HP | Apr-10 |
| 5 | Signal Generator | 83711B | US34490456 | HP | Apr-10 |
| 6 | Attenuator (3dB) | 8491A | 37822 | HP | Oct-09 |
| 7 | Attenuator (10dB) | 8491A | 63196 | HP | Oct-09 |
| 8 | Attenuator (30dB) | 8498A | 1801A06689 | HP | Oct-09 |
| 9 | EMI Test Receiver | ESVD | 843748/001 | R&S | Apr-10 |
| 10 | Horn Antenna(18 ~ 40GHz) | SAS-574 | 154 | Schwarzbeck | Nov-10 |
| 11 | Horn Antenna(18 ~ 40GHz) | SAS-574 | 155 | Schwarzbeck | Nov-10 |
| 12 | RF Amplifier | 8447D | 2949A02670 | HP | Oct-10 |
| 13 | RF Amplifier | 8449B | 3008A02126 | HP | Apr-10 |
| 14 | Test Receiver | ESHS10 | 828404/009 | R&S | Apr-10 |
| 15 | TRILOG Antenna | VULB 9160 | 9160-3212 | SCHWARZBECK | Apr-11 |
| 16 | Log.-Per. Antenna | VULP 9118 | 9118 A 401 | SCHWARZBECK | Apr-11 |
| 17 | Biconical Antenna | BBA 9106 | VHA 9103-2315 | SCHWARZBECK | Apr-11 |
| 18 | Horn Antenna | 3115 | 00055005 | ETS LINDGREN | Mar-11 |
| 19 | Horn Antenna | BBHA 9120D | 9120D122 | SCHWARZBECK | Dec-11 |
| 20 | Dipole Antenna | VHA9103 | 2116 | SCHWARZBECK | Nov-09 |
| 21 | Dipole Antenna | VHA9103 | 2117 | SCHWARZBECK | Nov-09 |
| 22 | Dipole Antenna | VHA9105 | 2261 | SCHWARZBECK | Nov-09 |
| 23 | Dipole Antenna | VHA9105 | 2262 | SCHWARZBECK | Nov-09 |
| 24 | Hygro-Thermograph | THB-36 | 0041557-01 | ISUZU | Apr-10 |
| 25 | Splitter (SMA) | ZFSC-2-2500 | SF617800326 | Mini-Circuits | - |
| 26 | RF Switch | MP59B | 6200414971 | ANRITSU | - |
| 27 | Power Divider | 11636A | 6243 | HP | Oct-09 |
| 28 | DC Power Supply | 6622A | 3448A03079 | HP | Oct-09 |
| 29 | Frequency Counter | 5342A | 2826A12411 | HP | Apr-10 |
| 30 | Power Meter | EPM-441A | GB32481702 | HP | Apr-10 |
| 31 | Power Sensor | 8481A | 2702A64048 | HP | Apr-10 |
| 32 | Audio Analyzer | 8903B | 3729A18901 | HP | Oct-09 |
| 33 | Modulation Analyzer | 8901B | 3749A05878 | HP | Oct-09 |
| 34 | TEMP & HUMIDITY Chamber | YJ-500 | LTAS06041 | JinYoung Tech | Oct-09 |
| 35 | LOOP-ANTENNA | FMZB 1516 | 151602/94 | SCHWARZBECK | Mar-11 |
| 36 | Stop Watch | HS-3 | 601Q09R | CASIO | Apr-10 |
| 37 | LISN | ENV216 | 100408 | R&S | Oct-09 |