

MOBILE DEVICES BUSINESS

PRODUCT SAFETY AND COMPLIANCE **EMC LABORATORY**

EMC TEST REPORT - Addendum

Test Report Number - 21624-1BT

Report Date - 26-02-2008

The test results contained herein relate only to the model(s) identified. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical characteristics.

Technician:

Name: Uffe Lund Svejgaard Test: 2008-02-12 to 2008-02-26

As the responsible EMC Engineer, I hereby declare that the model tested as specified in this report conforms to the requirements indicated.

Par H. dela

Signature:

Name: Per K. Nielsen

Title: Sr. Staff Engineer

Date: 26-02-2008

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FCC Registration Number: 863448 IC Registration Number: 109AP-1

ADR Testing Service location ADR AL ISO/IEC-1725:2005 accredited by UKAS

Test Report Number: 21624-1

FCD-1756, Rev 1

1 of 32

EXHIBIT 6A2

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| APPLICANT: MOTOROLA INC | FCC ID: IHDP56HT1 |
|---------------------------------------|-----------------------|
| | |
| Marker-Delta X-Orientation-RBW=50kHz, | VBW=Auto – Max hold32 |

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Test Report Details

Tests Performed By: Motorola A/S

Product Safety and Compliance Group

Lindholm Brygge 35

9400 Nr.Sundby Fax (45) 7219-5002

Phone: (45) 7219-5000

Motorola PCS FRN: 0016105769 FCC Registration Number: 863448 IC Registration Number: 109AP-1

Tests Requested By: Motorola Inc.

Mobile Devices business 600 North US Hwy 45 Libertyville, IL 60048

Product Type: Cell phone with Bluetooth

Form factor: Flip (lid)

Signaling Capability: Quadra band 850/900/1800/1900 GSM with

Edge class 10 and GPRS class 10, Bluetooth

class 2, aGPS, FM radio.

Serial Numbers: IMEI - 356457010001651

FCC ID: IHDP56HT1

Project number: 21624-1

Testing Complete Date: 26-02-2008

Test Report Number: 21624-1

Applicable Standards

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

| Χ | _Part 15 Subpart C - Intentional Radiators |
|---|---|
| | Part 22 Subpart H - Public Mobile Services |
| | Part 24 - Personal Communications Services |
| | Part 27 - Wireless Communications Service |
| | Part 90 - Private Land Mobile Radio Service |
| | |

Applicable Standards: ANSI 63.4-2003, RSS-GEN, RSS-210 (Bluetooth).

DA 00-705, "Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems" published by the Federal Communications Commission was also used in the testing of this product.

The following tests were performed according to the regulations:

- The spurious radiated emission requirements of § 15.247(d) of CFR47
 Part 15 2006, specifically" radiated emissions which fall in the restricted
 bands, as defined in Section 15.205(a), must also comply with the
 radiated emission limits specified in Section 15.209(a) (see Section
 15.205(c)).
- Under this project only 30 to 1000MHz, 1 to 25GHz radiated emissions and radiated band-edge measurements were performed.
- For frequencies below 1 GHz a 100 kHz RBW is used and above 1 GHz a 1 MHz RBW is used.

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Summary of Testing

| Test | Test Name | Pass/Fail |
|--------|---|------------------------|
| 1 2 | Field Strength of Spurious Emissions Band-edge Compliance of RF Radiated Emissions | Pass Pass (*) |
| Test | Test Name | Results |
| 1 2 | Field Strength of Spurious Emissions Band-edge Compliance of RF Radiated Emissions | See plots See plots |

^(*) The Marker-Delta Method rule as per DA 00-705 handled in appendix-1 was applied.

The margin with respect to the limit is the minimum margin for all modes and bands. () indicates the margin at which the product exceeds the limit.

General and Special Conditions

The test sample was tested using a fully charged battery when applicable. Where a battery could not be used due to the need for a controlled variation of input voltage, an external power supply was utilized.

All testing was done in an indoor controlled environment with an average temperature of 20.7° C +- 1° C and relative humidity of 31.2% +-4% over the dates used for testing.

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Equipment and Cable Configurations

The test sample was tested in a stand-alone configuration that is representative of typical use.

Measuring Equipment and Calibration Information

Equipment related to the semi-anechoic chamber testing:

| Equipment Model/type Serial Operational | | | | Date of |
|---|------------------------|--------|--------------------|-------------|
| | | number | range | calibration |
| EMI analyzers | ESIB 26 | 100179 | 20 Hz – 26.5 GHz | 15.05.07 |
| | ESU 40 | 100040 | 20 Hz – 40 GHz | 24.04.07 |
| Pre Amplifiers | EA PA-02: | 800002 | (1 – 26 GHz) | 26.06.07 |
| | (JCA12-300 | | 1 GHz – 2 GHz | |
| | JCA218-4003 | | 2 GHz – 18 GHz | |
| | JCA48-300 | | 4 GHz – 8 GHz | |
| | JCA1826-431 | | 18 GHz – 26 GHz | |
| | JCA1218-500) | | 12 GHz – 18 GHz | |
| | Sonoma 310N | 185680 | 9 kHz – 1 GHz | 19.06.07 |
| | AFS4-02001800-35-ULN | 805815 | 2 GHz – 18 GHz | 24.10.07 |
| | (Mounted on EMCO 3115) | | | |
| | JSA-18004000-30-5A | 965195 | 18 GHz – 40 GHz | 22.08.07 |
| | (Mounted on EMCO 3116) | | | |
| | JCA 2640-4000 | 102 | 18 – 40 GHz | 22.08.07 |
| | (Mounted on EMCO 3116) | | | |
| Radio com. Tester | CMU 200 | 112434 | GSM | 10.05.07 |
| | | | 850/900/1800/1900 | |
| | | | IS95, | |
| | | | UMTS, CDMA, | |
| | | | Bluetooth | |
| High pass filter | K&L 3DH1-3000/T13000- | 8 | (2700 - 20000 MHz) | 24.10.07 |
| | 0/0 | | | |
| | (Mounted on EMCO 3115) | | | |
| Attenuator | Weinschel 54A-6 (6dB) | T8887 | DC – 40 GHz | 22.08.07 |
| | (Mounted on EMCO 3116) | | | |
| | H&S 6603.19AA (3dB) | na | DC-18 GHz | 24.10.07 |
| | (Mounted on EMCO 3115) | | | |

Equipment related to carrier spectrum testing:

| Equipment | Model/type | Serial | Serial Operational number range | |
|-----------------------|------------|------------|--|-------------------------|
| Spectrum analysers | FSEA | 845097/004 | 20 Hz – 3.5 GHz | calibration 23.04.07 |
| Radio com. Tester | CMU 200 | 834639/003 | GSM 850/900/1800/1900 IS95, UMTS, Bluetooth | 14.11.07 |

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The antennas used in the various tests are listed in the below table. All the log-periodic antennas are used as communication and link establishment antennas for (GSM, UMTS, CDMA, FM and/or Bluetooth).

| Antenna | Type | Serial | Operational | Date of |
|--|-----------|----------|-----------------|-------------|
| | | number | range | calibration |
| Hybrid-log periodic | HLP 3003C | 080200 | 30 MHz – 3 GHz | 30.07.07 |
| Log-periodic (link) | LPDA 8030 | 090200 | 800 MHz – 3 GHz | (na) |
| Log-periodic (link) | LPDA 8030 | 090100 | 800 MHz – 3 GHz | (na) |
| Log-periodic (link) | PLP 3003 | 021701 | 300 MHz – 3 GHz | (na) |
| Horn (link) | AT4002A | 28548 | 800 MHz – 5 GHz | (na) |
| Horn (link) | AT4002A | 28547 | 800 MHz – 5 GHz | (na) |
| Double ridged horn | EMCO 3115 | 00071502 | 1 GHz – 18 GHz | 07.05.07 |
| w. 3 GHz HP-filter + 1x 2-18 GHz pre- | | | | |
| amp+3dB attenuator. | | | | |
| Double rigid horn w. 2x 18-40 GHz pre- | EMCO 3116 | 71564 | 18 GHz – 40 GHz | 07.05.07 |
| amp+6dB attenuator. | | | | |

All equipment is on a one-year calibration cycle except for link antennas.

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Description of Bluetooth (BT) Transmitter

The 21624-1 cell phone sample offers Bluetooth as a feature. The Bluetooth spread-spectrum, frequency hopping transceiver is designed to operate between 2400 and 2483 MHz. The Bluetooth antenna is mounted on the PCB inside of the EUT. The antenna installation is permanent. For a more thorough description of the functionality please refer to Exhibit 12 of this package.

As a Bluetooth transmitter, it is designed operate with other Bluetooth devices as defined by the industrial standard. In this application, the test sample is battery-operated.

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Measurement Procedures and Data

FIELD STRENGTH OF SPURIOUS EMISSIONS

CFR Part 2.1053, 15.247(d), 15.249

Measurement Procedure

The test sample is placed inside the semi-anechoic chamber on a polystyrene table at the turntable center. For each spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters and the turntable is rotated 360 degrees to obtain a maximum reading on the spectrum analyzer. This is repeated for both horizontal and vertical polarizations of the receive antenna.

Field Strength (dB μ V/m) = EMI Receiver Level (dB μ V) + Cable Loss (dB) - Amplifier Gain (dB) + Filter loss (dB) + Antenna Correction Factor (3/m)

A fully charged battery was used for the supply voltage.

The used standard battery type was BK60 with model number SNN5795A.

The test sample was operated during the measurements under the following conditions:

- Tests were performed at low, mid and high channels.
- Tests were performed in both horizontal and vertical polarity.
- Investigation of maximum radiation orientation and position of the product sample to determine test orientations angles.
 - Tests were performed with the sample orientated along X, Y and Z orthogonal axis based on findings.
 - Tests were performed with the test sample placed in worst case position either open or closed based on form factor. Verification tests were performed for the other position.

Measurement Results

For peak emissions detected above 1 GHz, only those emissions that are higher than the AVG limit line plus 8 dB are selected for final emission analysis.

Attached results:

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Maximum radiating position and orientation

The test sample was placed on top of a none-conductive pedestal in lid open position and a Bluetooth link towards the communication test set was established. The test sample was scanned with a log-periodic antenna connected to a spectrum analyzer over the whole sphere and the maximum radiation orientation was determined to be the X orientation in horizontal polarity.

With the test sample clamshell lid closed it was determined that the open position caused maximum radiation in the Bluetooth band.

A check of carrier on the Bluetooth center channel 39 was performed to determine the expected maximum radiation of any Bluetooth harmonics for the test sample with clamshell lid open/closed placed in orientation X.

Open:

Title: FCC 15.247(c)
File: A1600 (DYD) 21624 (8.53)(ESIB) FCC15.247 BT2400 Tch-mid_X 2008-02-11 Carrier -PK
Operator: ADR_AAL_EMC_TL1, usv001
EUT Type: A1600 (DYD), IMEI:356457010001651.
EUT Condition: Board Rev:P6, SW Rew: R542_G_11.60.33R_11.60.33R
Comments: FCC 15.247(o)(1) Bluetooth (BT) emission in TCH mode.
BT channel 39 (2402 MHz) up/do in test mode. Orientation X=H
HLP 3003C antenna (30MHz - 3 GHz). Peak detector used.

A1600 (DYD) 21624 -Carrier (X) -Table

02/12/08 12:48:57 Sequence: Final Measurements

02/12/08 13:07:23 Sequence: Final Measurements

| Freq (MHz) | Freq (Max) (MHz) | (PK) EMI (dBuV/m) | (1) Limit (dBuV/m) | (PK) Margin Lim1 (dB) | Ttbl Agl (deg) | Pol. |
|---------------|---------------------|----------------------|-----------------------|--------------------------|-------------------|------|
| 2441.00 | 2440.83 | 100.21 | 120.00 | -19.79 | 116.40 | Н |
| 2441.00 | 2440.84 | 84.40 | 120.00 | -35.60 | 13.40 | V |

Closed:

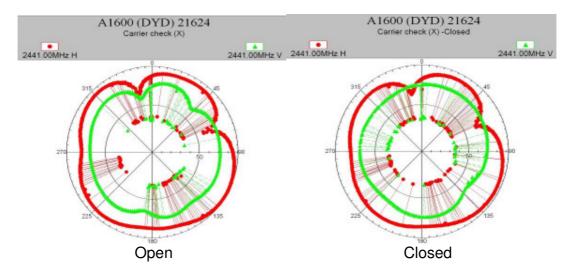
Title: FCC 15.247(c)
File: A1600 (DYD) 21624 (8.53)(ESIB) FCC15.247 BT2400 Tch-mid_X 2008-02-11 Carrier -PK -Closed Operator: ADR_AAL_EMC_TL1,usv001
EUT Type: A1600 (DYD), IMEI:356457010001651.
EUT Condition: Board Rev: P6, SW Rew: R542_G_11.60.33R_11.60.33R
Comments: FCC 15.247(c)(1) Bluetooth (BT) emission in TCH mode.

EUT Condition: Board Rev: P6, SW Rew: R542_G_11.60.33R_11.60.33R Comments: FCC 15.247(o)(1) Bluetooth (BT) emission in TCH mode. BT channel 39 (2402 MHz) up/do in test mode. Orientation X=H HLP 3003C antenna (30MHz - 3 GHz). Peak detector used.

A1600 (DYD) 21624 -Carrier (X) -Table -Closed

| Freq (MHz) | Freq (Max) (MHz) | (PK) EMI (dBµV/m) | (1) Limit (dBµV/m) | (PK) Margin Lim1 (dB) | Ttbl Agl (deg) | Pol. |
|---------------|---------------------|----------------------|-----------------------|--------------------------|-------------------|------|
| 2441.00 | 2440.83 | 98.78 | 120.00 | -21.22 | 115.70 | Н |
| 244 1.00 | 2440.84 | 83.09 | 120.00 | -36.91 | 31.20 | V |

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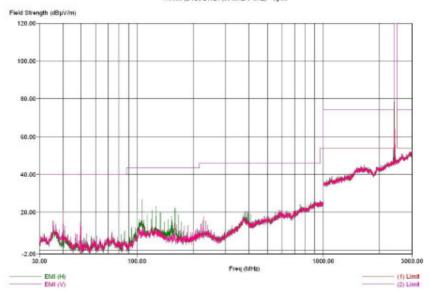
The Bluetooth radiated TX power is measured to 2.81 dBm on channel 39 with RBW = 1 MHz.

There were no discernible emissions above the noise floor for 30-3000MHz for Low, Mid and High Channels and all polarizations in Bluetooth band

Only one worst case plot for each test frequency are shown in the below plots in the range from $30 \, \text{MHz} - 3000 \, \text{MHz}$.

Test Report Number: 21624-1

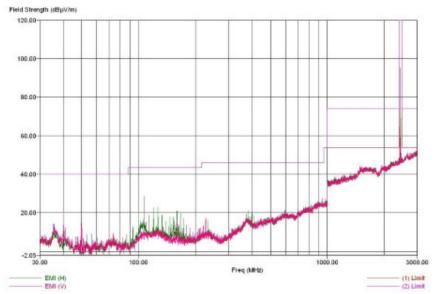
A1600 (DVD) 21624 (30 MHz-3 GHz) - Open



30-3000 MHz Low Channel Dual Polarization X

Title: PCC 15.247(c) 02/12/08 13:51:53
File: ALSOU (NTD) 21624 (8.53)(BSIB) FCC15.247 BT24D0 Tch-mid_X 2008-02-Sequence: Preliminary Scan Operator: ADR AAL EMC TIL, uswOol.
EUT Type: A1600 (DVD), IMEX:356457010001651.
EUT Type: A1600 (DVD), IMEX:356457010001651.
EUT Condition: Board Rev: P6. 8W Rev: R542 6 11.60.33R 11.60.33R
Comments: FCC 15.247(c)(1) Blustooth (BT) emission in FCH mode.
ET channel 39 [244 MM:) uy/do in test mode. Orientation X-M
HLP 3003C antenna (30MHz - 3 SMz), Peak detector used.

A1600 (DYD) 21624 (30 MHz-3 GHz) - Open

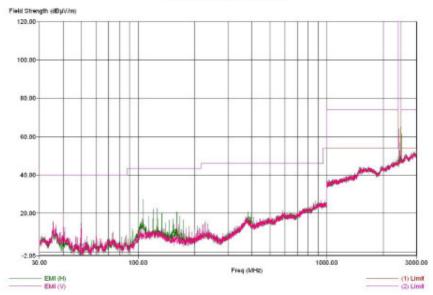


30-3000 MHz Middle Channel Dual Polarization X

Test Report Number: 21624-1 FCD-1756, Rev 1

Title: FCC 15,247(c) 02/12/08 14:12:12
File: AlGOO (DVD) 21624 (9.52)(ESIB) FCC15,247 BT2400 Tcb-bgh_X 2008-02-Sequence: Preliminary Scan Operator: ADR AAL ENC Til, usv001
BUT Type: AlGOO (DVD), INEX:356457010001654.
BUT Opdition: Board Rev: F6, 5W Rew: R542 G 11,60,33R 11,60,33R
Comments: FCC 15,247(c)(1) Blustcoth (BT) emission in TCH mode.
BUT channel 78 (2480 MEX) upode in test mode. Ordentation X-et
HLF 3003C antenna (30MHz - 3 GHz), Feak detector used.

A1600 (DYD) 21624 (30 MHz-3 GHz) - Open

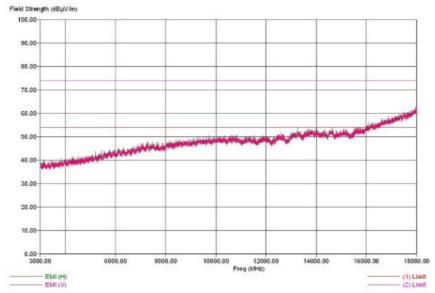


30-3000 MHz High Channel Dual Polarization X

Test Report Number: 21624-1 FCD-1756, Rev 1

Title: PCC 15.247(c) 02/13/08 10:25:23
File: A1600 [BVD] 21224 [9.53][ESIR) FCC15.247 BT2400 Tch-low_X 2009-02-Sequence: Preliminary Scan Coperator: ADR AAL HMC FCH, usw001
EUT Type: A1600 [DVD], THEI:356457010001651.
EUT Condition: Board Rev: P6. 5W Rew: R542 G 11.60.23R 11.60.23R
Comments: FCC 15.247(c) (1) Bluetooth (BT) emission in TCH mode.
BT Channel 0 [2402 MH2] By760 in test mode. Orientation N=H
EMCO 3115 antenna [36Hz - 186Hz]. Peak detector used.

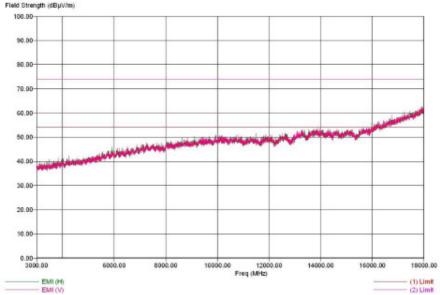
A1600 (DYD) 21624 (3 GHz-18 GHz) -Open



3-18 GHz Low Channel Dual Polarization X

Title: PCC 15.247(c) 02/13/08 14:11:44
Pile: Al600 (DYD) 21624 (8.53)(ESIB) PCC15.247 BT2400 Tch-low_Y 2008-02-Sequence: Preliminary Scan
Operator: ADR AAL EMC TLL, USV001
BUT Type: Al600 (DYD), IMBI:356457010001651,
BUT Condition: Beard Rev: P6. SW Rew: R542 G 11.60.33R 11.60.33R
Comments: FCC 15.247(c) [1] Bluetooth (BT) emission in TCH mode.
BT channel 0 (2402 MBr) up/do in test mode. Orientation Y=H
EMCO 3115 antenna (3GMr - 18GMr). Peak detector used.

A1600 (DYD) 21624 (3 GHz-18 GHz) -Open

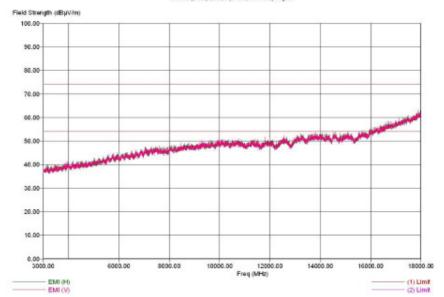


3-18 GHz Low Channel Dual Polarization Y

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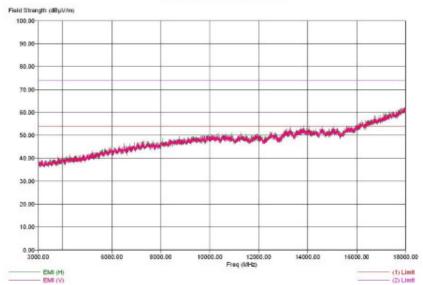
Title: FCC 15.247(c) 02/12/08 18:90:11
File: A1600 (DVD) 21624 (8.53)(BSIB) FCC15.247 BI2400 Tch-low_E 2008-02-sequence: Freliminary Scan
Operator: ADR ANL EMC TLL usv601
EUT Type: A1600 (DVD), IMEE: 156457010001651.
EUT Condition: Board new: P6. 5M Rew: E42 G 11.60.33R 11.60.33R
Comments: FCC 15.247(c)(1) Bluetooth (BT) emission in TCH mode.
BT Channel 0 (2408 MFH) upv6b in test mode. Orientation S-H
EUTO 3113 antenna (SEM) upv6b (BTM). Feek detactor used.

A1600 (DYD) 21624 (3 GHz-18 GHz) -Open



3-18 GHz Low Channel Dual Polarization Z

A1600 (DYD) 21624 (3 GHz-18 GHz) -Open

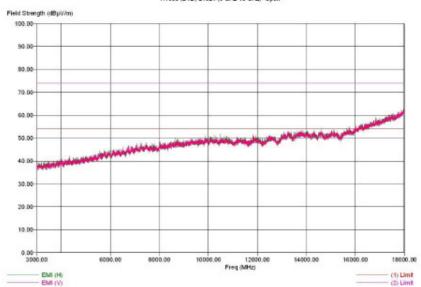


3-18 GHz Middle Channel Dual Polarization X

Test Report Number: 21624-1 16 of FCD-1756, Rev 1

Title: PCC 15.247(c) 02/13/08 14:33:45
File: A1600 (DTD) 21624 18.53)(ESIB) FCC15.247 E72400 Tcb-mid_Y 2008-02-5equence: Preliminary Scan
Operator: ADR AAL EMC Til, usy601
EUT Type: A1600 (DTD), IMEX:556497010001651.
EUT Condition: Board Rev: PC, SW Rev: R542 6 11.60.33R 11.60.33R
Commants: PCC 15.247(c)(1) Bluetocth (BT) emission in TCH mode.
BT Channel 39 (2441 MEE) up/do in test mode. Orientation Y=H
EMIO 2115 antenna [26Hz - 16Hz], Peak detector used.

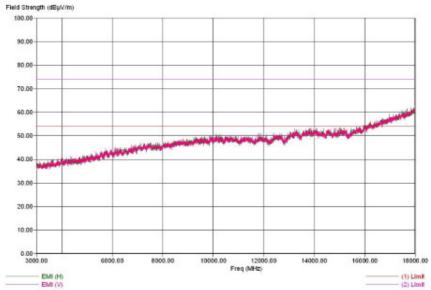
A1600 (DYD) 21624 (3 GHz-18 GHz) -Open



3-18 GHz Middle Channel Dual Polarization Y

Title: PCC 15.247(c) 02/13/08 09:27:32
File: Al600 107D1 21624 18.531(BSIB) PCC15.247 B72400 7ch-mid_S 2008-02-Sequence: Preliminary Scan Operator: ADR AAL MEM Til, usw001
EUT Type: Al600 (DVD), IMEX:956457010001651.
EUT Condition: Board Rev: P6. 9% Rev: R442 6 11.60.33% 11.60.33%
Comments: PCC 15.247(c) (1) Blustooth (87) emission in TCH mode.
BT channel 39 (2441 MM2) up/do in test mode. Orientation E=M
EMCO 3115 antenna | 39612 - 189Hz], Peak detector used.

A 1600 (DYD) 21624 (3 GHz-18 GHz) -Open



3-18 GHz Middle Channel Dual Polarization Z

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Title: FCC 15.247(c)

File: A1600 (BYD) 21624 (0.53)(ESIS) FCC15.247 BI2400 Tch-hgh_X 2008-02-sequence: Freliminary Scan Operator: ADR AAL BHC FLL, uswooll

BUT Type: A1600 (BYD): IMEX:356457010001651.

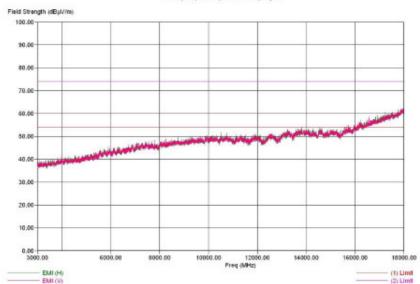
BUT Condition: Board Rev: F6, 5W Rew: R542 G 11.60.33R 11.60.33R

Comments: FCC 15.247(c) (i) Bluetooth (BT) emission in TCH mode.

BT channel 78 (2400 MEX) uydo in test mode. Orientation X-44

EMCO 3115 antenna (3cHz - 188MZ): reak detector used.

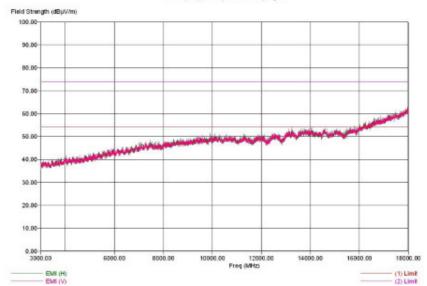
A 1600 (DYD) 21624 (3 GHz-18 GHz) -Open



3-18 GHz High Channel Dual Polarization X

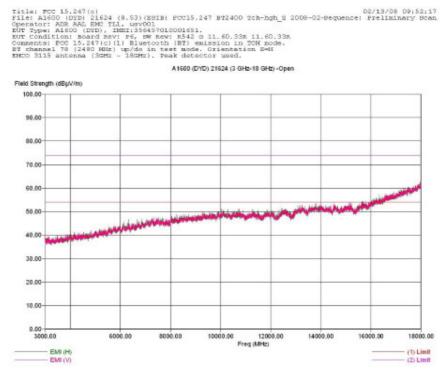
Title: FCC 15.247(c) 02/13/08 14:58:42
File: Al600 (DVD) 21624 (8.52)(ESIR) FCC15.247 B72400 Tch-bgh_Y 2008-02-Sequence: Preliminary Scan
Coperator: ADE ADA EMT Thi, usv001
EUI Type: Al600 (DVD). IMBI:356457010001651.
EUI Condition: Beard Bev: F6. NW Rev: 542 c 11.60.358 11.60.358
Comments: FCC 15.247(c)(1) Bluetooth (BT) emission in TCH mode.
EUI channel 78 (2480 MHz) up/do in test mode. Orientation Y=H
EMCO 3115 antenna (368z - 1964z), Feak detector used.

A1600 (DYD) 21624 (3 GHz-18 GHz) -Open



3-18 GHz High Channel Dual Polarization Y

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3-18 GHz High Channel Dual Polarization ${\bf Z}$

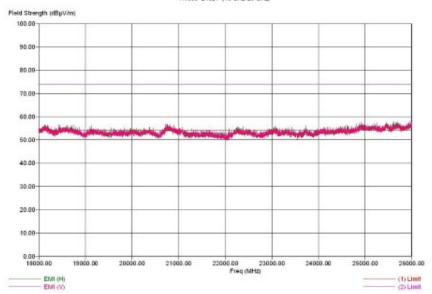
There were no discernible emissions above the noise floor for 18000-25000MHz for Low, Mid and High Channels and all polarizations in Bluetooth band

Only one worst case plot for each test frequency are shown in the below plots in the range from 18000 MHz - 26000 MHz.

Test Report Number: 21624-1 FCD-1756, Rev 1

Title: FCC 15.24T(c) 02/14/08 15:15:17
File: A1600 21624 (8.53)(RSIB) FCC15.247 B12400 Tch-low_X 2008-02-12 -isequence: Preliminary Scan Operator: ADR AAL BHC TLL usv001
EUT Type: A1600 (DVD), IMHE:356457010001651.
EUT Condition: Board nev: P6, EM nev: B542 o 11.60.33R 11.60.33R
Comments: F0C 15.24T(c) (1) Bluetooth (B2! emission in TCH mode.
BT channel 0 (2402 MHz) up/do in test mode. Orientation X=H
EMCO 3116 antenna (180Hz = 250Hz). Peak detector used.

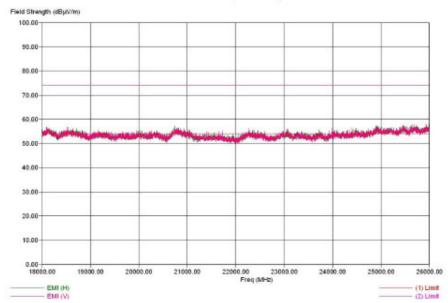
A1600 21624 (18 GHz-25 GHz)



18-25 GHz Low Channel Dual Polarization X

Title: FCC 15.247(c) 02/14/08 15:31:55
File: A1600 21624 (8.53)(ESIB) FCC15.247 BT2400 Tch-mid_X 2008-02-12 -ISequence: Preliminary Scan Operator: A16 AAL EM: Thi, usv001
EUT Type: A1600 (DYD), HKB1:356457010001651.
EUT Condition: Board Rev: F6, 8W Rew: R542 6 11.60.33R 11.60.33R
Comments: FCC 15.247(c)(1) Bluetooth (BT) emission in TCH mode.
BT channel 39 (2441 MHz) up/do in test mode. Orientation X=H
EMOO 3116 antenna (18GHz - 25GHz). Feak detector used.

A1600 21624 (18 GHz-25 GHz)

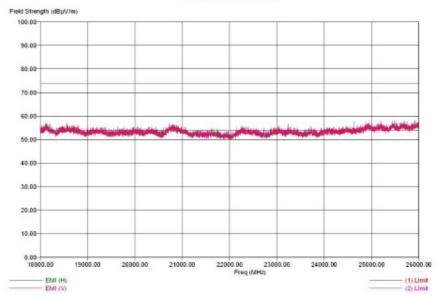


18-25 GHz Middle Channel Dual Polarization X

Test Report Number: 21624-1 20 of 32 EXHIBIT 6A2

Title: PCC 18,247(c) 02/14/08 15:51:09
Pile: Al600 21624 (8.52)(RSIR) FOC15.247 RT2400 Tch-hgb_X 2008-02-12 -Requence: Preliminary Scan
Operator: ARR ARL EME TLL, usw001
BUT type: Al600 (PTD), RESI:356457010001651.
BUT condition: Board Rev: PC, SW Rev: R542 6 11,60,33R 11,40,33R
Commants: FCC 15.247(c)(1) Risetooth (RT) emission in TCH mode.
BUT channel 78 (2480 MME) upvdo in test node. Orientation X=40
EMCO 3116 antenna (180Hz - 250Hz). Peak detector used.

A1600 21624 (18 GHz-25 GHz)



18-25 GHz High Channel Dual Polarization X

Test Report Number: 21624-1 21 of 32 EXHIBIT 6A2 FCD-1756, Rev 1

BAND-EDGE COMPLIANCE OF RF RADIATED EMISSIONS

CFR Part 15.247

Measurement Procedure

The test sample is placed inside the semi-anechoic chamber on a polystyrene table at the turntable center. Test is repeated for both horizontal and vertical polarizations of the receive antenna.

Field Strength (dB μ V/m) = EMI Receiver Level (dB μ V) + Cable Loss (dB) + Filter Loss (dB) - Amplifier Gain (dB) + Antenna Correction Factor (3/m)

The test sample was operated in Bluetooth single channel test mode. A fully charged battery was used for the supply voltage.

Measurement Results

Comments:

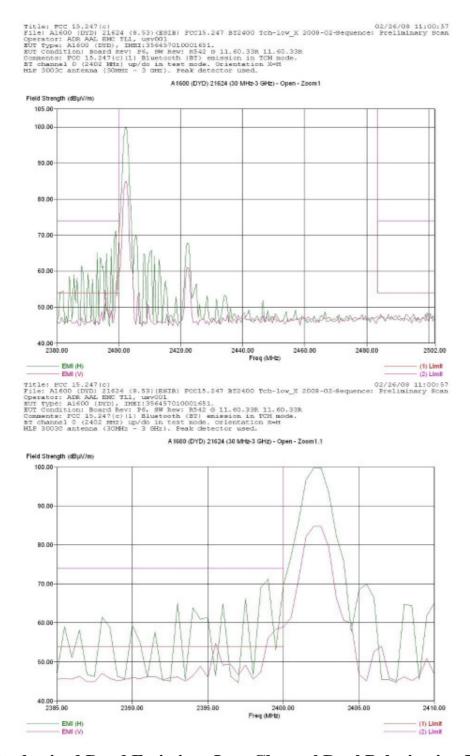
The band edge measurements crossing the corner for the low channel with respect to the average limit line is acceptable when applying the FCC rule specified in CFR 47 part 15.35(b) for the use of peak detector above 1 GHz. The peak detector limit line has been added to the graphical plots.

See Attached:

Test Report Number: 21624-1 22 of 32 EXHIBIT 6A2

APPLICANT: MOTOROLA INC

FCC ID: IHDP56HT1



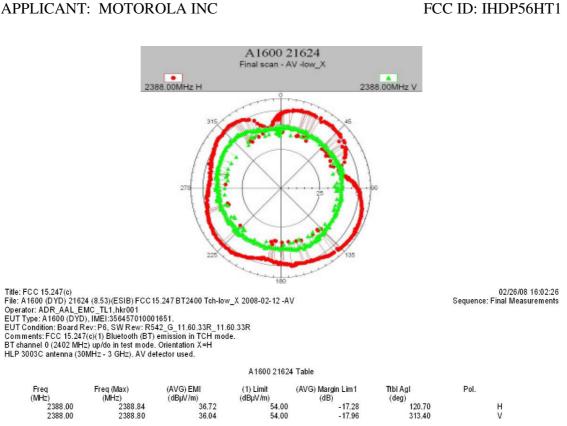
Authorized Band Emissions Low Channel Dual Polarization X

Test Report Number: 21624-1 FCD-1756, Rev 1

23 of 32

EXHIBIT 6A2

APPLICANT: MOTOROLA INC



Authorized Band Emissions Low Channel Dual Polarization X -**Emission check**

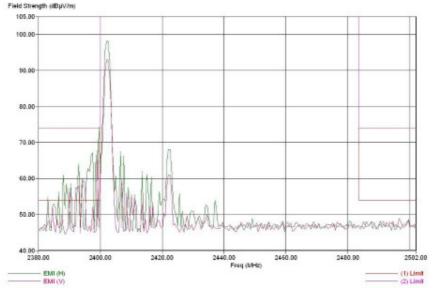
24 of 32 Test Report Number: 21624-1 **EXHIBIT 6A2**

FCD-1756, Rev 1

Freq (MHz) 2388.00 2388.00

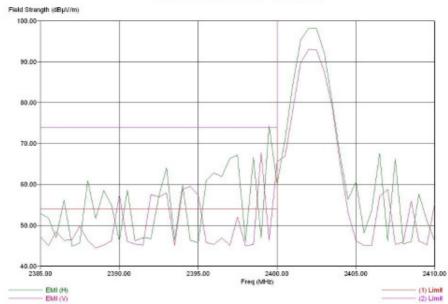
Title: FCC 15.247(c) 02/26/08 11:20:42 Pile: Al&OO (DVTO) 21624 (9.58)[ESIB) FCC15.247 BT2400 Tch-low_Y 2008-02-Sequence: Preliminary Scan Operator: ADR AAL EMC Til, usv001 BUT Type: Al&OO (DVD), IMEX:356457010001654. BUT operation: Board Rev: F6. 8W Rew: R542 G 11.60.33R 11.60.33R Comments: FCC 15.247(c)(1) Blustooth (BT) emission in TCH mode. BT channel 0 (2402 MHz) up/do in test node, orientation Y=H HLF 3003C antenna (30MHz - 3 GHz), Peak detector used.

A1600 (DYD) 21624 (30 MHz-3 GHz) - Open - Zoom1



Title: FCC 15.247(c) 02/26/08 11:20:42
File: Al600 (DYD) 21624 (8.53)(B81B) FCC15.247 BF2400 Tch-low_Y 2008-02-9equence: Freliminary Scan Operator: ADR AAL BMC TL1, usv001
EUT type: Al600 (DYD), TMSI:354870(10001651, EUT type: Al600 (DYD), TMSI:354870(10001651, EUT Condition: Board Rev: P6. 5W Rev: R542 0 11.60.33R 11.60.33R
Comments: FCC 15.247(c)(1) Bluetooth (BT) emission in TCH mode.
BT Channel 0 (2402 MHz) up/do in test mode. Orientation Y=H
HLF 3003C antenna (300MHz - 3 GHz), Feak detector used.

A 1600 (DYD) 21624 (30 MHz-3 GHz) - Open - Zoom1.1



Authorized Band Emissions Low Channel Dual Polarization Y

Test Report Number: 21624-1 FCD-1756, Rev 1

Title: FCC 15,247(c) 02/26/08 11:51:19
File: A1600 (DYD) 21624 (8.53)(ESIB) FCC15.247 BT2400 Tch-low_2 2008-D2-Sequence: Freliminary Scan Operator: ADR AAL NWC TLI, usw001.

EUT Type: A1600 (DYD), DMBI:356457010001651.

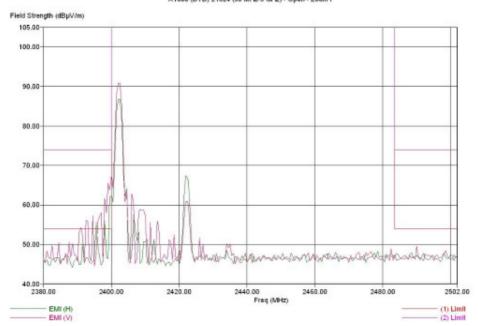
EUT Condition: Board Rev: P6, SW Rew: R542 G 11.60.33R 11.60.33R

Comments: FCC 15.247(c)(1) Elustooth (BT) emission in TCH mode.

BT channel 0 (2402 MHz) up/do in test mode. Orientation E-H

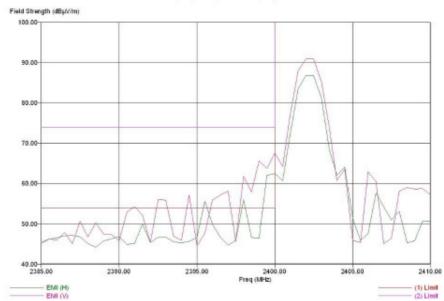
HLP 3003C antenna (30MHz - 3 GHz). Peak detector used.

A1600 (DYD) 21624 (30 MHz-3 GHz) - Open - Zoom1



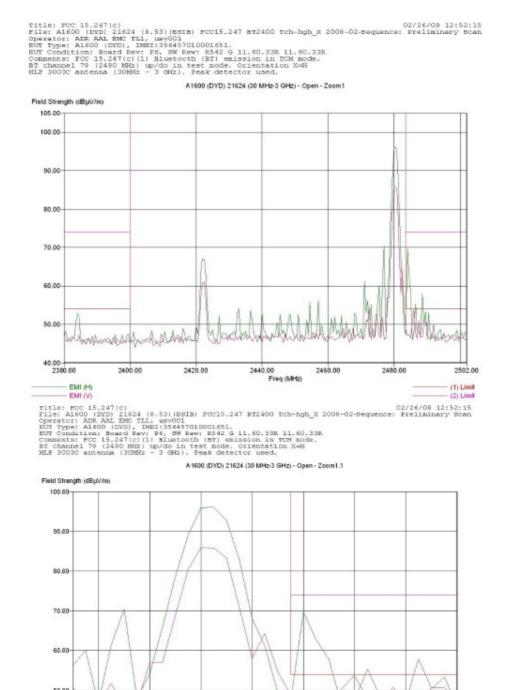
Fitle: FCC 15.247(c) 02/26/08 11:51:19
Fite: A1600 [FMD] 21624 (8.53) [ESIB) FCC15.247 BI2400 Tch-low_Z 2008-02-Sequence: Preliminary Scan Operator: ADR AAL BEM ILI, usv001
EUI Type: A1600 [DVD], IMBE:356457010001651.
EUI Condition: Board Rev: F6. SW Rew: B542 6 11.60.33R 11.60.33R
Comments: FCC 15.247(c) [1] Bluetoth (BT) emission in TCH mode.
BT channel 0 [2402 HHz) ug/do in test mode. Orientation E=H
HLP 3003C antenna (2008Hz - 3 GHz). Feak detector used.

A 1600 (DYD) 21624 (30 MHz-3 GHz) - Open - Zoom1.1



Authorized Band Emissions Low Channel Dual Polarization Z

Test Report Number: 21624-1 FCD-1756, Rev 1



Authorized Band Emissions High Channel Dual Polarization X

2482.00 2484.00 Freq (MHz)

2486.00

2488.00

2490.00

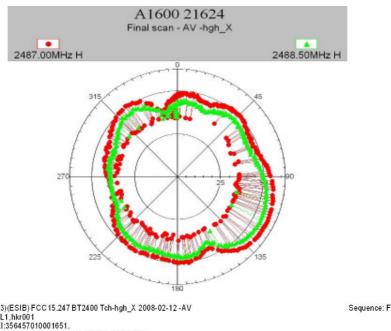
Test Report Number: 21624-1 27 of 32 EXHIBIT 6A2

FCD-1756, Rev 1

2475.00

2478.00

2480.00



Title: FCC 15.247(e)
File: A1600 (DYD) 21624 (8.53)(ESIB) FCC15.247 BT2400 Tch-hgh_X 2008-02-12 -AV
Operator: ADR_AAL_EMC_TL1,hkr001
EUT Type: A1600 (DYD), IMEI:356457010001651.
EUT Condition: Board Rev: P6, SW Rew: R542_G_11.60.33R_11.60.33R
Comments: FCC 15.247(e)(1) Bluetooth (BT) emission in TCH mode.
BT channel 78 (2480 MHz) up/do in test mode. Orientation X=H
HLP 3003C antenna (30MHz - 3 GHz). AV detector used.

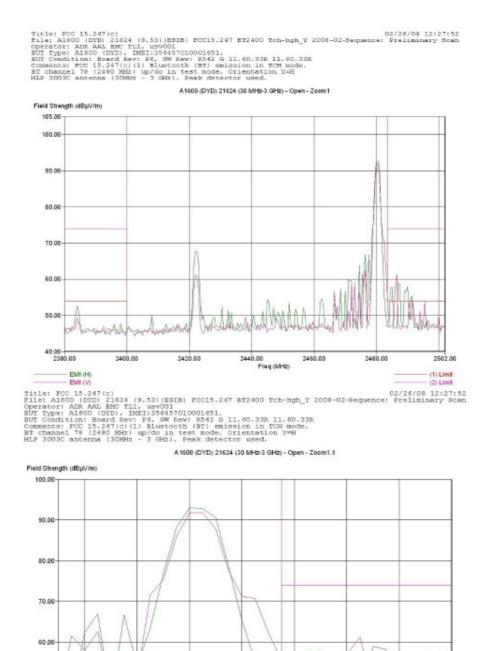
02/26/08 17:04:12 Sequence: Final Measurements

A1600 21624 Table

| Freq (MHz) | Freq (Max) (MHz) | (AVG) EMI (dBµV/m) | (1) Limit (dBµV/m) | (AVG) Margin Lim1 (dB) | Ttbl Agl (deg) | Pol. |
|---------------|---------------------|-----------------------|-----------------------|---------------------------|-------------------|------|
| 2487.00 | 2485.27 | 36.71 | 54.00 | -17.29 | 116.10 | H |
| 2488.50 | 2487.57 | 36.65 | 54.00 | -17.35 | 119.40 | Н |

Authorized Band Emissions High Channel Dual Polarization X – Emission check

Test Report Number: 21624-1 28 of 32 EXHIBIT 6A2



Authorized Band Emissions High Channel Dual Polarization Y

2482.00

Test Report Number: 21624-1 FCD-1756, Rev 1

50.00

40.00

2478.00

2480.00

2484.00

Freq (MHz)

2486.00

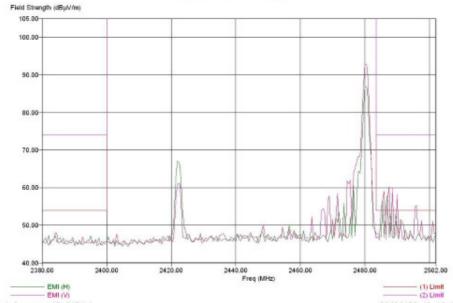
2488.00

2490.00

EXHIBIT 6A2

Fitle: PCC 15.247(c) 02/26/08 12:10:13
Fite: A1600 (DVD) 21624 | 8.53) | BESIB} | FCC15.247 | BT2400 | Tch-hgh_S | 2008-02-Sequence: Preliminary Scan Operator: ARR AAL EMN THI, usv001
EUT Type: A1600 (DVD), IMSI:35645/010001651.
EUT Condition: Board Rav: P6, 5% Raw: E542 & 11.60.3% 11.60.3% Comments: FCC 15.247(c) (1) | Blustooth (BT) | emission in TCH mode.
BT channel 78 (2480 MMs) up/de in test mode. Orientation E=M
MLP 3003C antenna | 30MTz - 3 GMZ|. Peak detector used.

A1600 (DYD) 21624 (30 MHz-3 GHz) - Open - Zoom1



Title: FCC 15.247(e) 02/26/08 12:10:13

File: AlGOO (DYD) 21624 (8.53)(ESIB) FCC15.247 BT2400 Fch-hgh_S 2008-02-Sequence: Preliminary Scan Operator: ADR AAL EMC 711, usv001

BUT Type: AlGOO (DYD), TMEI:356457010001651.

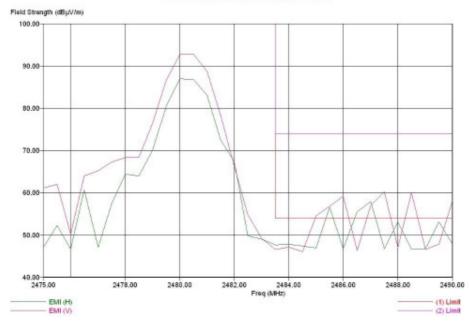
BUT Condition: Board Rav: P6, SW Rav: R542 G 11.60.3SR 11.60.3SR.

Comments: FCC 15.247(c)(1) Bluetooth (BT) emission in FCH mode.

BI channel 78 (2480 MHz) up/do in test mode. Orientation 2=H

HLP 3003C antenna (30MHz - 3 GHz). Peak detector used.

A 1600 (DYD) 21624 (30 MHz-3 GHz) - Open - Zoom1.1



Authorized Band Emissions High Channel Dual Polarization Z

Test Report Number: 21624-1 30 of 32

PICTURES

The pictures related to the above test results are placed in the associated report denoted as EXHIBIT 7A2.

APPENDIX

Appendix- 1 Marker-Delta Method

The Bluetooth low channel band edge performance is further evaluated using the Marker-Delta Method described in FCC guideline DA 00-705.

The in-band field strength was measured as described in Step-1 using and RBW=VBW=1MHz - Peak detector and RBW=VBW=1MHz - Average detector.

Carrier X-Orientation-RBW=VBW=1MHz – PK detector

```
Title: FCC 15.247(c)
File: A1600 (DYD) 21624 (8.53) (ESIB) FCC 15.247 BT2400 Tch-low_Y 2008-02-11 Carrier -AVG (RBW=1MHz) (VBW=1MHz)

Operator: ADR_AAL_EMC_TL1.usv001
EUT Type: A1600 (DYD), IMEI:356457010001651.
EUT Condition: Board Rev: P6, SW Rew: R542_G_11.60.33R_11.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.33R_1.60.
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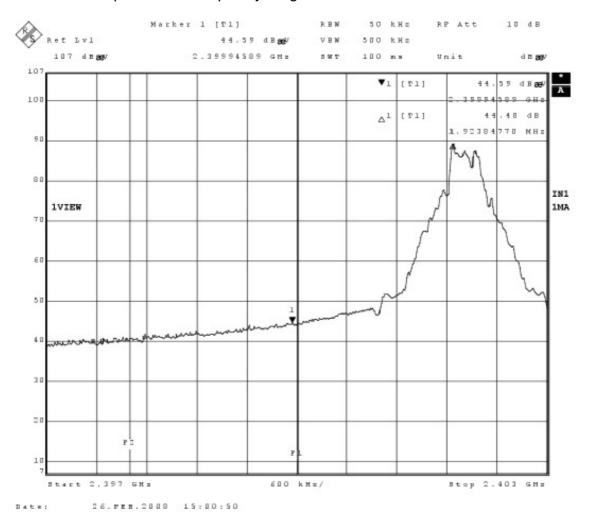
Carrier X-Orientation-RBW=VBW=1MHz - AVG detector

The frequency 2406.99 was selected as peak reference point in order to minimize the span of the Step-2 measurement.

Test Report Number: 21624-1 31 of 32 EXHIBIT 6A2

In Step-2 the band edge is measured from 2397 MHz - 2403 MHz, using an RBW of 1% equals 60 kHz, so the RBW=50kHz, VBW=Auto were selected for the measurement.

The carrier peak was detected and the delta marker function was used to record the maximum peak in the frequency range from 2398 MHz to 2400 MHz.



Marker-Delta X-Orientation-RBW=50kHz, VBW=Auto - Max hold

Reading the graph indicates the worst case value to -44.48 dBc in the frequency range from 2398 MHz – 2400 MHz.

The maximum peak field strength in the frequency band from 2398 MHz to 2400 MHz is then $99.09~\text{dB}\mu\text{V/m} - 44.48~\text{dB} = 54.61~\text{dB}\mu\text{V/m}.$

End of Test Report

Test Report Number: 21624-1 32 of 32 EXHIBIT 6A2