



## 9.2 MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment       | Manufacturer | Type No.     | Serial No. | Calibrated until |
|------|-------------------------|--------------|--------------|------------|------------------|
| 1    | Spectrum Analyzer       | R&S          | FSP-40       | 100129     | Oct. 01, 2013    |
| 2    | Horn Antenna            | Schwarzbeck  | BBHA 9120    | D-325      | Apr. 16, 2013    |
| 3    | Microwave Pre_amplifier | Agilent      | 8449B        | 3008A01714 | Apr. 17, 2013    |
| 4    | Microflex Cable         | N/A          | N/A          | 1m         | Apr. 14, 2013    |
| 5    | Microflex Cable         | AISI         | S104-SMAP-1  | 10m        | Apr. 14, 2013    |
| 6    | Microflex Cable         | N/A          | N/A          | 3m         | Apr. 14, 2013    |
| 7    | Test Cable              | N/A          | LMR-400      | 966_12m    | May. 15, 2013    |
| 8    | Test Cable              | N/A          | LMR-400      | 966_3m     | May. 15, 2013    |
| 9    | Pre-Amplifier           | EMC          | EMC-330      | 980001     | May. 31, 2013    |
| 10   | Log-Bicon Antenna       | Schwarzbeck  | VULB9168-352 | 9168-352   | Jun. 12, 2013    |

Remark: "N/A" denotes No Model Name, No Serial No. or No Calibration specified.

## 9.3 MEASURING INSTRUMENTS SETTING

| Spectrum Analyzer                     | Parameter Setting                              |
|---------------------------------------|--|
| Attenuation                           | Auto   |
| Start Frequency                       | 1000 MHz                                       |
| Stop Frequency                        | 10th carrier harmonic                          |
| RB / VB (emission in restricted band) | 1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average |
| RB / VB (other emission)              | 1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average |



## 9.4 TEST PROCEDURES

- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1 GHz. For frequencies above 1 GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m Semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.
- g. The testing follows the guidelines in ANSI C63.4 and FCC Public Notice DA 00-705 Measurement Guidelines. In case the emission is fail due to the used RBW/VBW is too wide, marker-delta method of FCC Public Notice DA 00-705 will be followed.

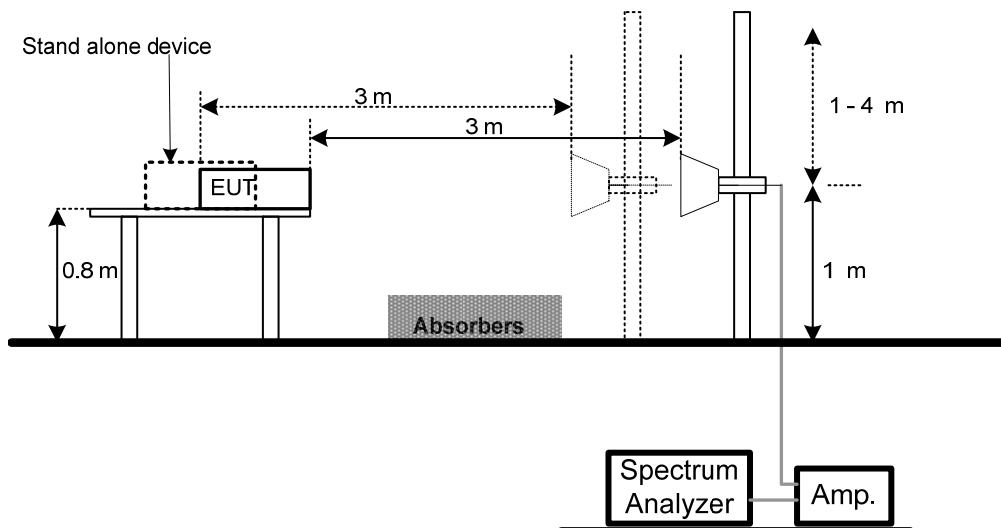
### NOTE:

- a. Reading in which marked as Peak means measurements by using are Peak Mode with instrument setting in RBW= 1 MHz, VBW= 1 MHz, Swp. Time = Auto.  
Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW= 1 MHz, VBW= 10 Hz, Swp. Time = Auto.
- b. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform.

## 9.5 DEVIATION FROM TEST STANDARD

No deviation

## 9.6 TEST SETUP LAYOUT





## **9.7 EUT OPERATING CONDITIONS**

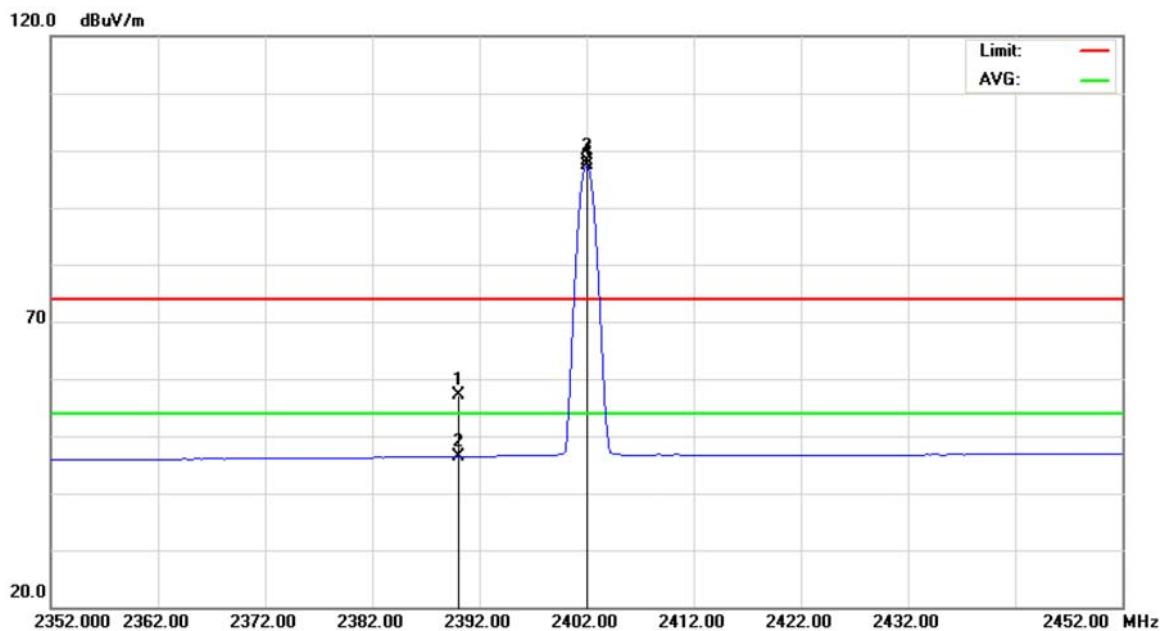
The EUT tested system was configured as the statements of 5.6 Unless otherwise a special operating condition is specified in the follows during the testing.



## 9.8 TEST RESULTS

|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2402 MHz |                   |       |

**Polarization: Vertical**

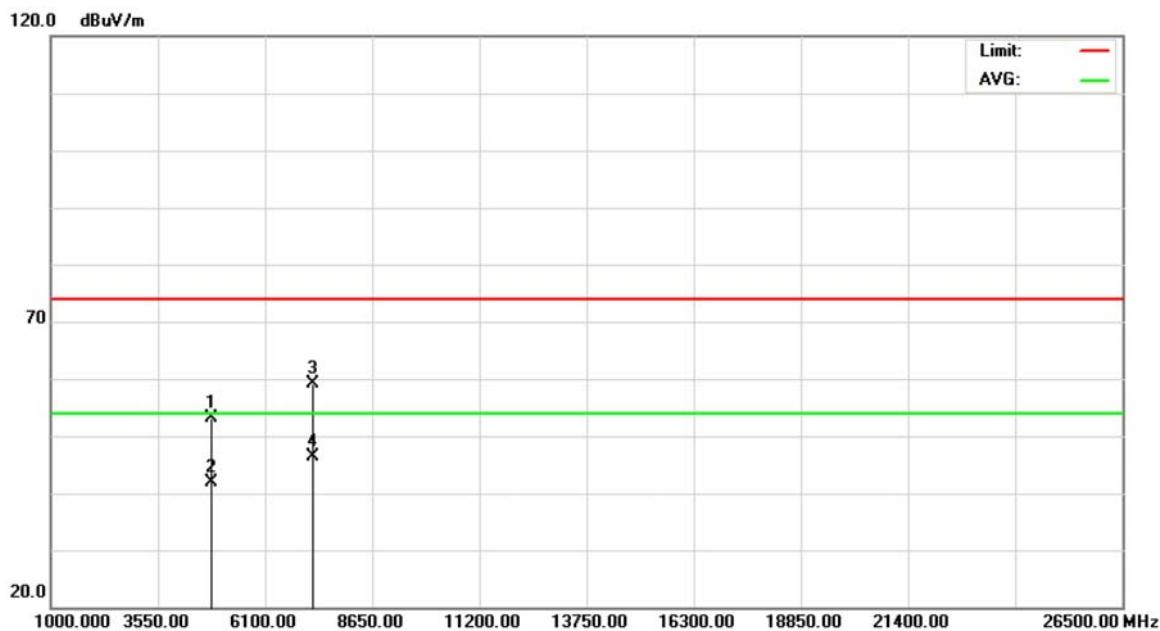


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |         |
| 1   |     | 2390.000 | 23.85   | 33.25   | 57.10    | 74.00 | -16.90 | peak    |
| 2   |     | 2390.000 | 13.11   | 33.25   | 46.36    | 54.00 | -7.64  | AVG     |
| 3   | X   | 2402.000 | 64.79   | 33.31   | 98.10    | 74.00 | 24.10  | peak    |
| 4   | *   | 2402.000 | 64.07   | 33.31   | 97.38    | 54.00 | 43.38  | AVG     |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2402 MHz |                   |       |

**Polarization: Vertical**

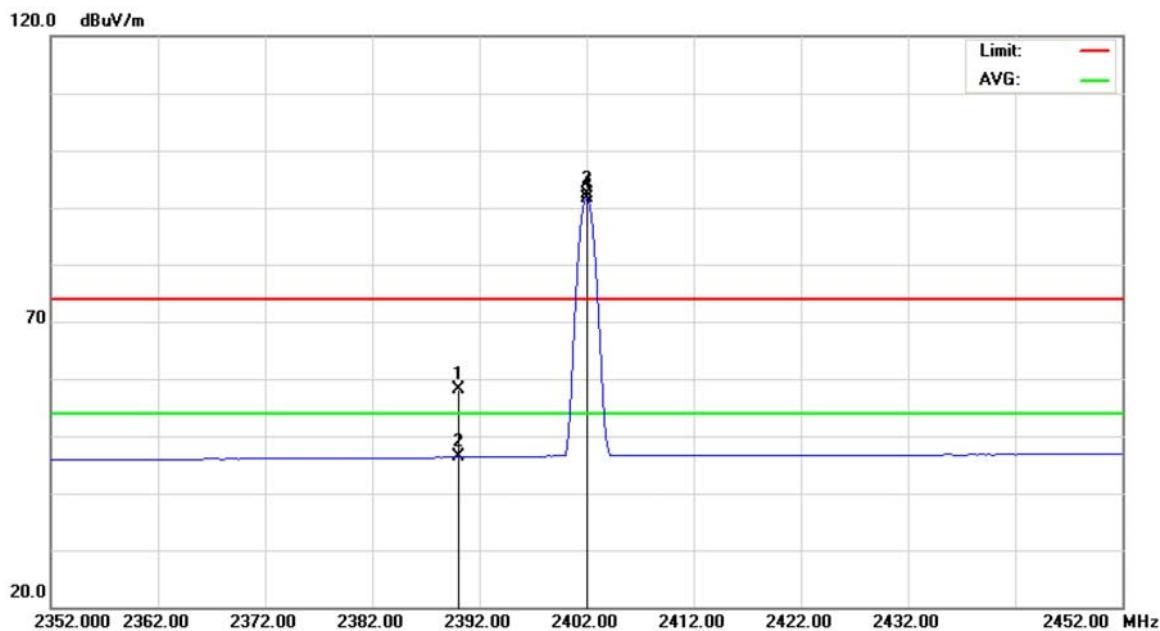


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 4804.038 | 44.51   | 8.54    | 53.05    | 74.00 | -20.95 | peak     |         |
| 2   |     | 4804.038 | 33.28   | 8.54    | 41.82    | 54.00 | -12.18 | AVG      |         |
| 3   |     | 7207.150 | 42.89   | 16.18   | 59.07    | 74.00 | -14.93 | peak     |         |
| 4   | *   | 7207.150 | 30.29   | 16.18   | 46.47    | 54.00 | -7.53  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2402 MHz |                   |       |

**Polarization: Horizontal**

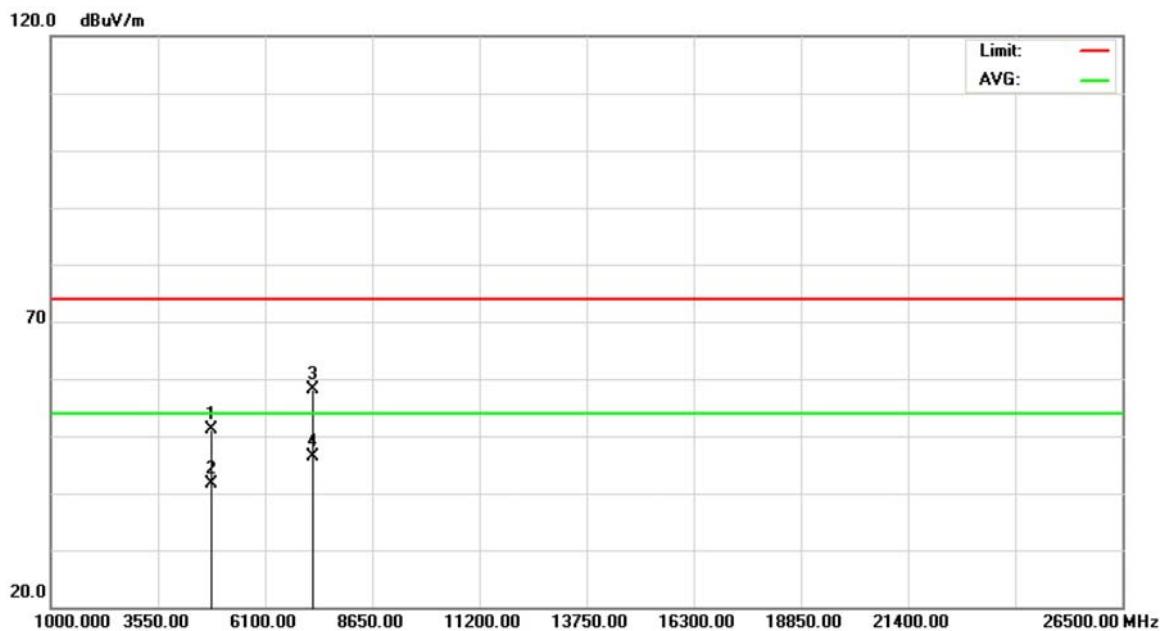


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 2390.000 | 24.90   | 33.25   | 58.15    | 74.00 | -15.85 | peak     |         |
| 2   |     | 2390.000 | 13.04   | 33.25   | 46.29    | 54.00 | -7.71  | AVG      |         |
| 3   | X   | 2402.000 | 59.04   | 33.31   | 92.35    | 74.00 | 18.35  | peak     |         |
| 4   | *   | 2402.000 | 58.27   | 33.31   | 91.58    | 54.00 | 37.58  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2402 MHz |                   |       |

**Polarization: Horizontal**

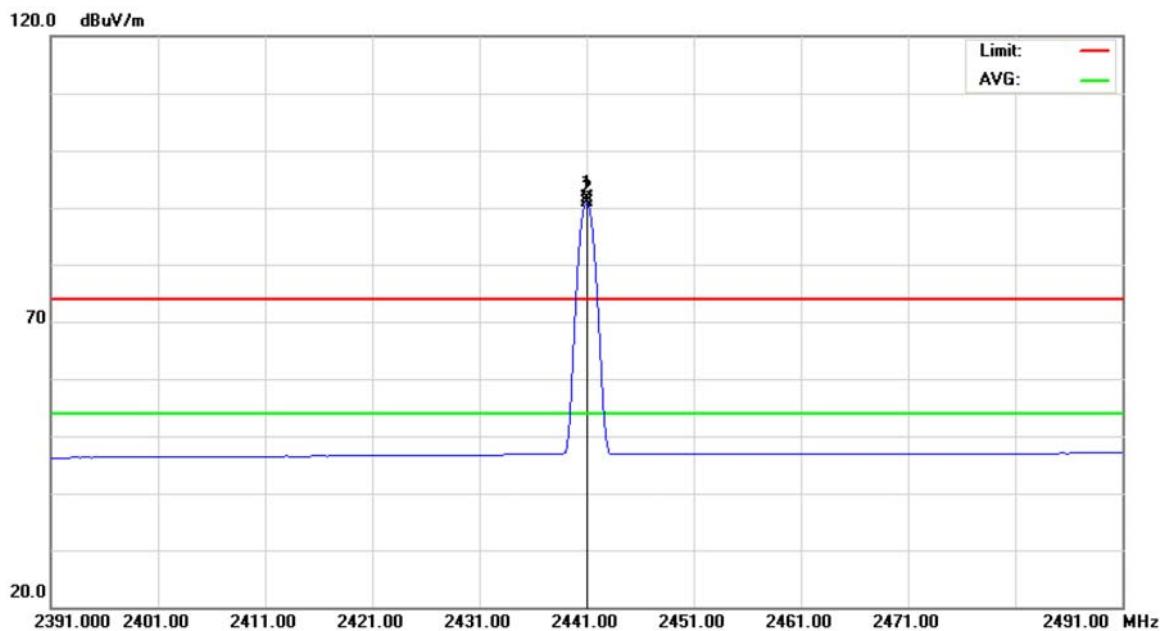


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 4803.950 | 42.58   | 8.54    | 51.12    | 74.00 | -22.88 | peak     |         |
| 2   |     | 4803.950 | 33.11   | 8.54    | 41.65    | 54.00 | -12.35 | AVG      |         |
| 3   |     | 7208.163 | 42.04   | 16.18   | 58.22    | 74.00 | -15.78 | peak     |         |
| 4   | *   | 7208.163 | 30.31   | 16.18   | 46.49    | 54.00 | -7.51  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2441 MHz |                   |       |

**Polarization: Vertical**

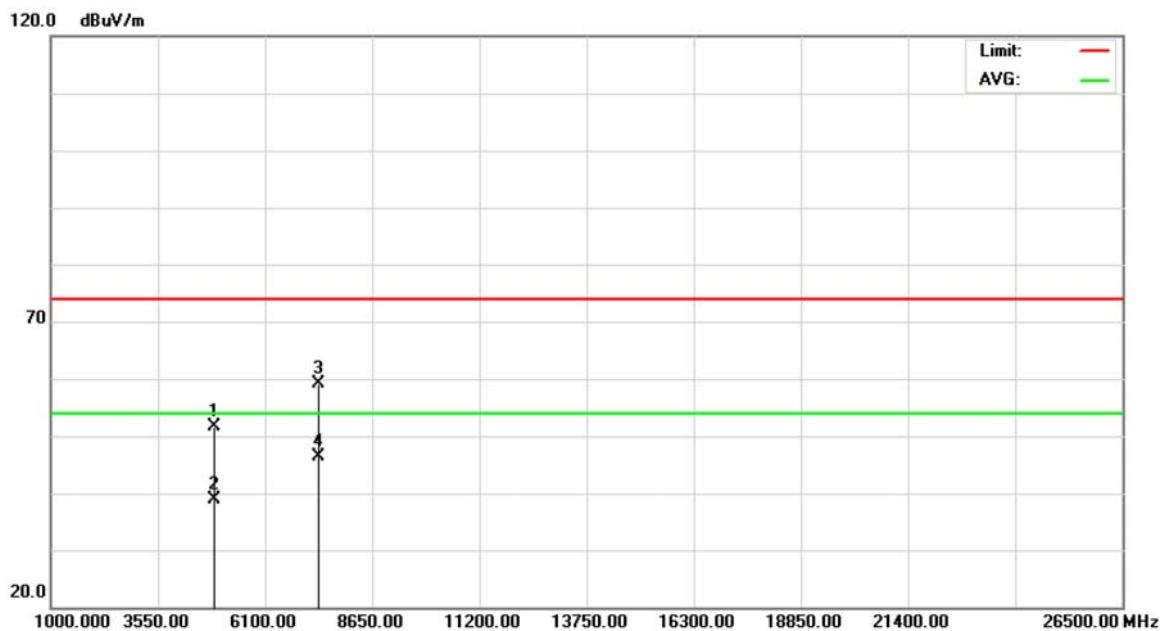


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over  | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|-------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |       |          |         |
| 1   | X   | 2441.000 | 58.01   | 33.52   | 91.53    | 74.00 | 17.53 | peak     |         |
| 2   | *   | 2441.000 | 57.31   | 33.52   | 90.83    | 54.00 | 36.83 | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2441 MHz |                   |       |

**Polarization: Vertical**

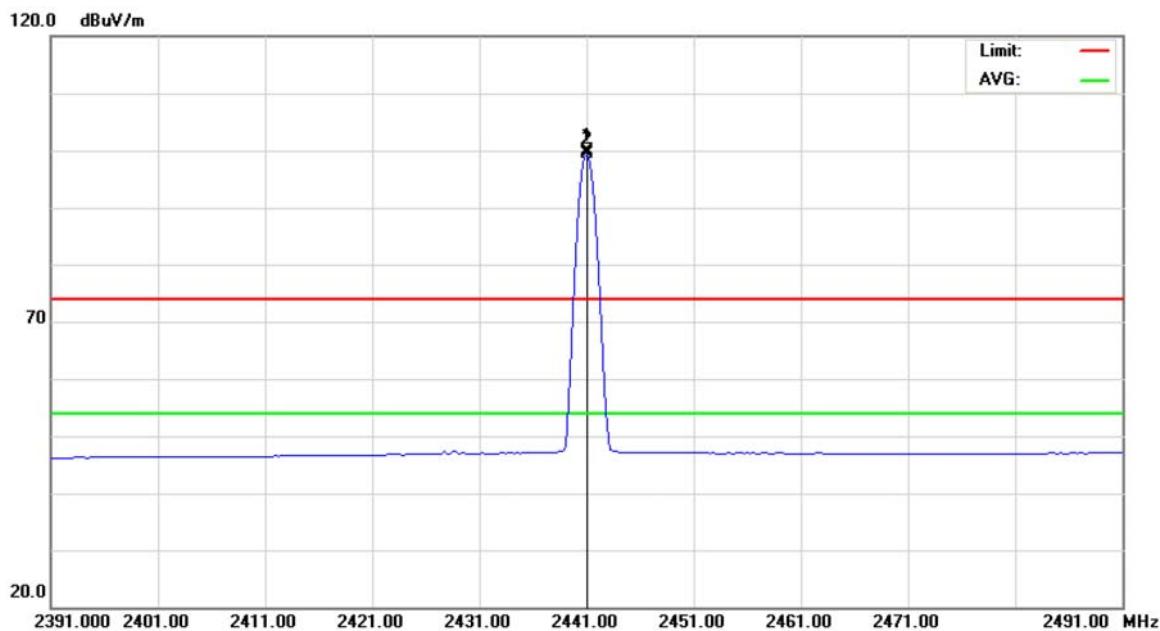


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 4881.763 | 42.90   | 8.81    | 51.71    | 74.00 | -22.29 | peak     |         |
| 2   |     | 4881.763 | 30.17   | 8.81    | 38.98    | 54.00 | -15.02 | AVG      |         |
| 3   |     | 7322.388 | 42.50   | 16.58   | 59.08    | 74.00 | -14.92 | peak     |         |
| 4   | *   | 7322.388 | 29.90   | 16.58   | 46.48    | 54.00 | -7.52  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2441 MHz |                   |       |

**Polarization: Horizontal**

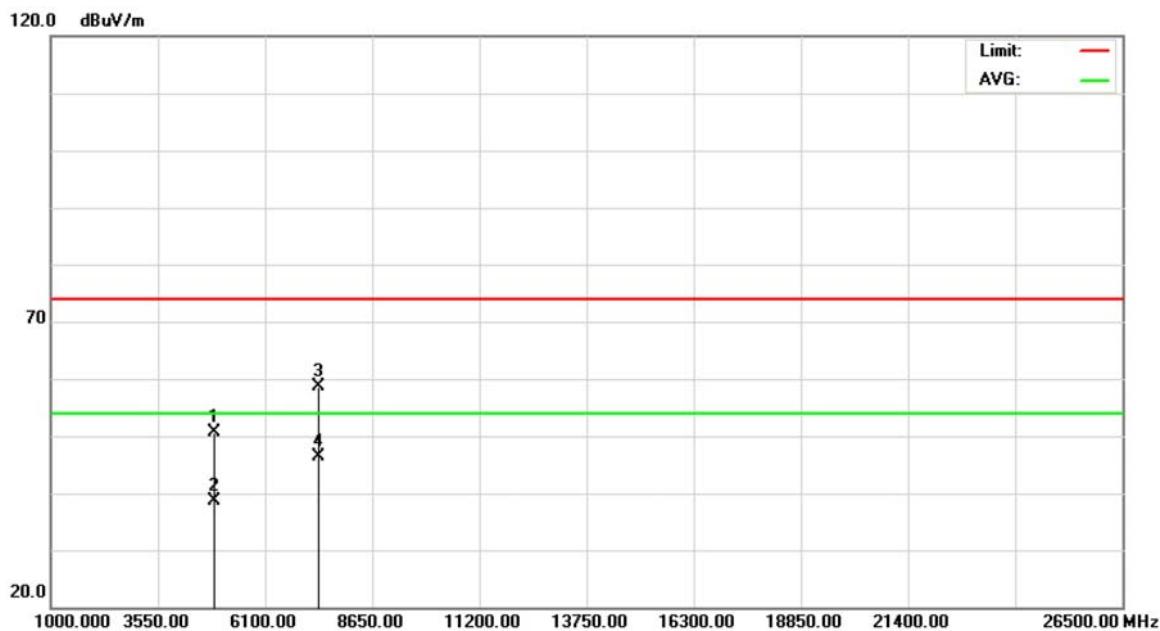


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over       |
|-----|-----|----------|---------|---------|----------|-------|------------|
|     |     |          | Level   | Factor  | ment     |       |            |
| 1   | X   | 2441.000 | 66.34   | 33.52   | 99.86    | 74.00 | 25.86 peak |
| 2   | *   | 2441.000 | 65.74   | 33.52   | 99.26    | 54.00 | 45.26 AVG  |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2441 MHz |                   |       |

**Polarization: Horizontal**

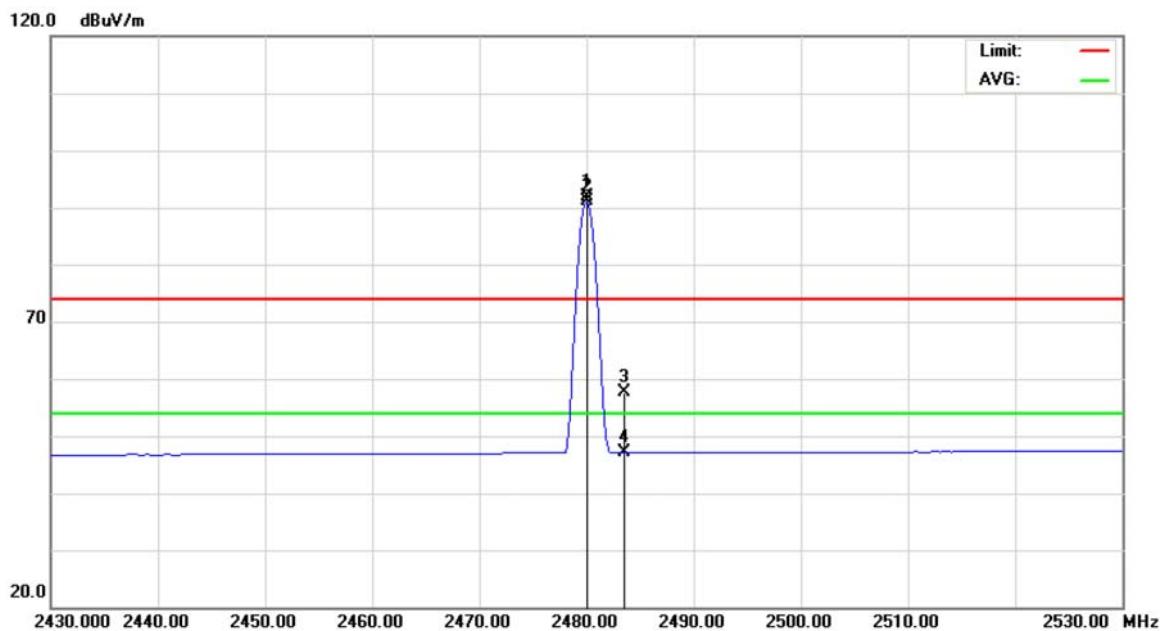


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 4882.025 | 41.82   | 8.81    | 50.63    | 74.00 | -23.37 | peak     |         |
| 2   |     | 4882.025 | 29.94   | 8.81    | 38.75    | 54.00 | -15.25 | AVG      |         |
| 3   |     | 7322.462 | 42.04   | 16.58   | 58.62    | 74.00 | -15.38 | peak     |         |
| 4   | *   | 7322.462 | 29.87   | 16.58   | 46.45    | 54.00 | -7.55  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2480 MHz |                   |       |

Polarization: Vertical

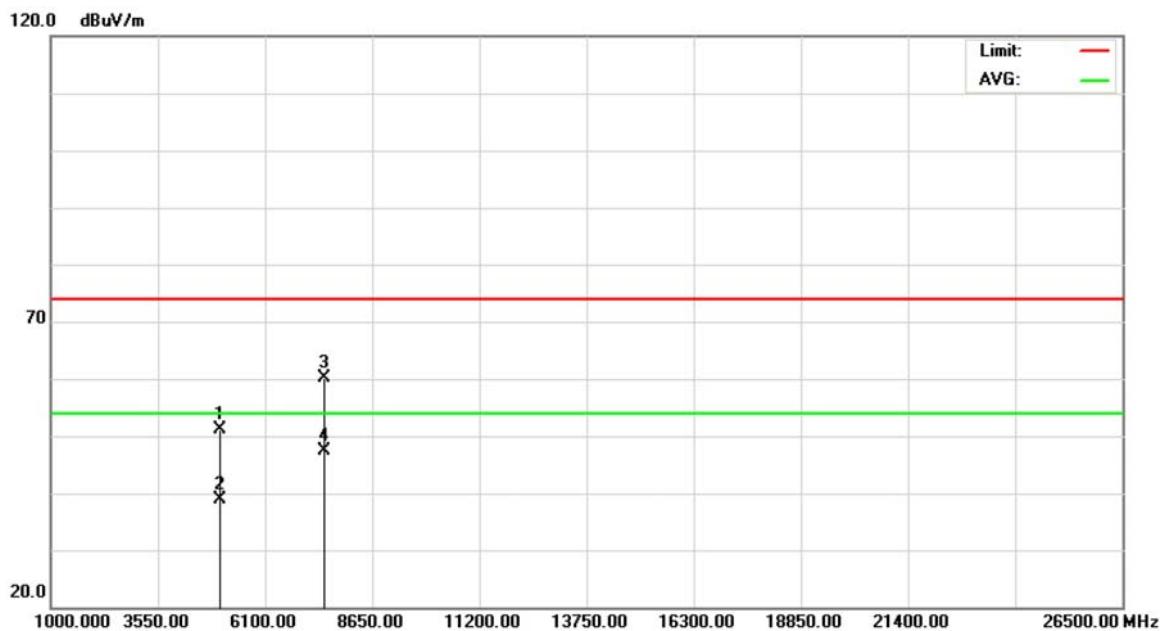


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   | X   | 2480.000 | 58.11   | 33.73   | 91.84    | 74.00 | 17.84  | peak     |         |
| 2   | *   | 2480.000 | 57.32   | 33.73   | 91.05    | 54.00 | 37.05  | AVG      |         |
| 3   |     | 2483.500 | 24.00   | 33.75   | 57.75    | 74.00 | -16.25 | peak     |         |
| 4   |     | 2483.500 | 13.36   | 33.75   | 47.11    | 54.00 | -6.89  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2480 MHz |                   |       |

**Polarization: Vertical**

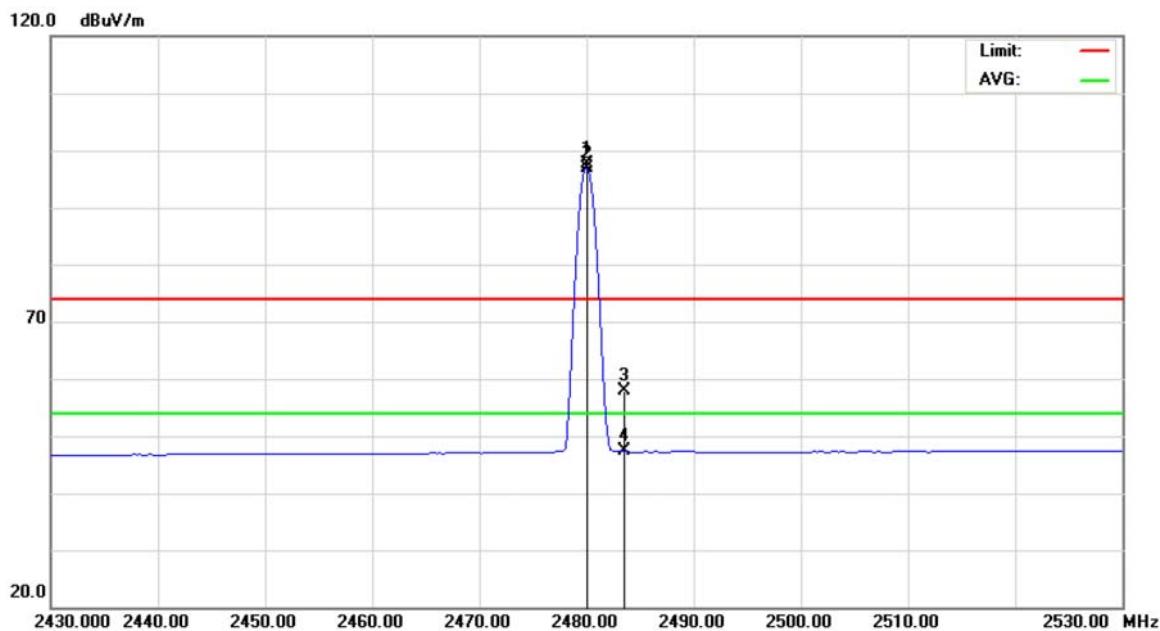


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 4959.962 | 42.07   | 9.07    | 51.14    | 74.00 | -22.86 | peak     |         |
| 2   |     | 4959.962 | 29.86   | 9.07    | 38.93    | 54.00 | -15.07 | AVG      |         |
| 3   |     | 7441.288 | 43.17   | 16.99   | 60.16    | 74.00 | -13.84 | peak     |         |
| 4   | *   | 7441.288 | 30.51   | 16.99   | 47.50    | 54.00 | -6.50  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2480 MHz |                   |       |

**Polarization: Horizontal**

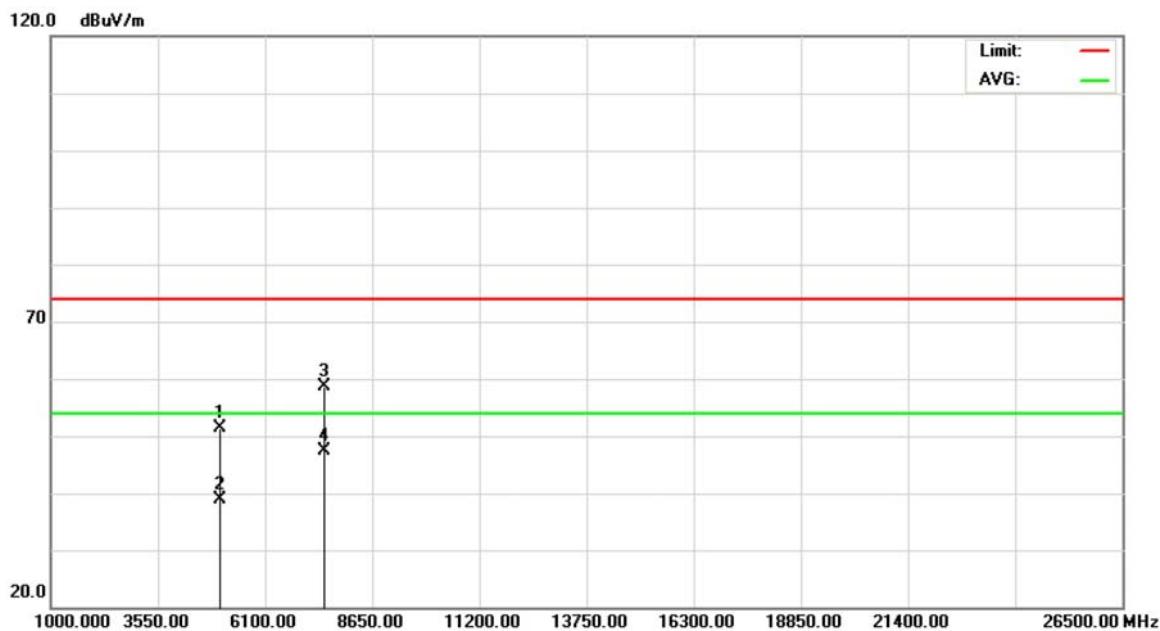


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |         |
| 1   | X   | 2480.000 | 63.82   | 33.73   | 97.55    | 74.00 | 23.55  | peak    |
| 2   | *   | 2480.000 | 63.27   | 33.73   | 97.00    | 54.00 | 43.00  | AVG     |
| 3   |     | 2483.500 | 24.15   | 33.75   | 57.90    | 74.00 | -16.10 | peak    |
| 4   |     | 2483.500 | 13.54   | 33.75   | 47.29    | 54.00 | -6.71  | AVG     |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2480 MHz |                   |       |

**Polarization: Horizontal**

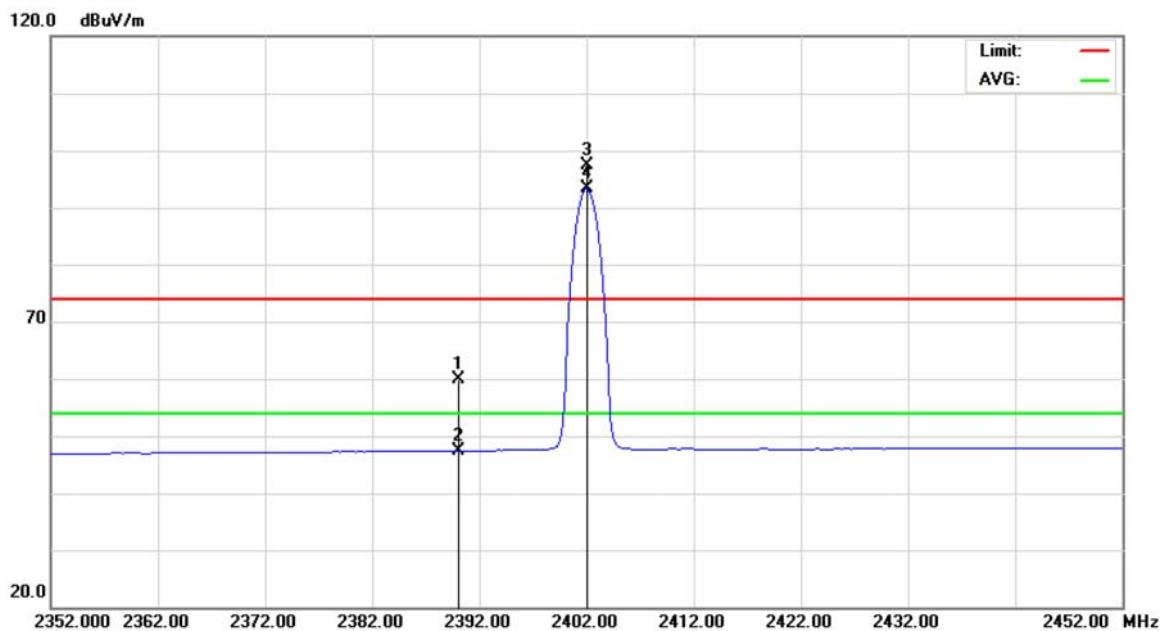


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 4960.712 | 42.23   | 9.08    | 51.31    | 74.00 | -22.69 | peak     |         |
| 2   |     | 4960.712 | 29.77   | 9.08    | 38.85    | 54.00 | -15.15 | AVG      |         |
| 3   |     | 7438.975 | 41.57   | 16.98   | 58.55    | 74.00 | -15.45 | peak     |         |
| 4   | *   | 7438.975 | 30.49   | 16.98   | 47.47    | 54.00 | -6.53  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2402 MHz |                   |       |

Polarization: Vertical

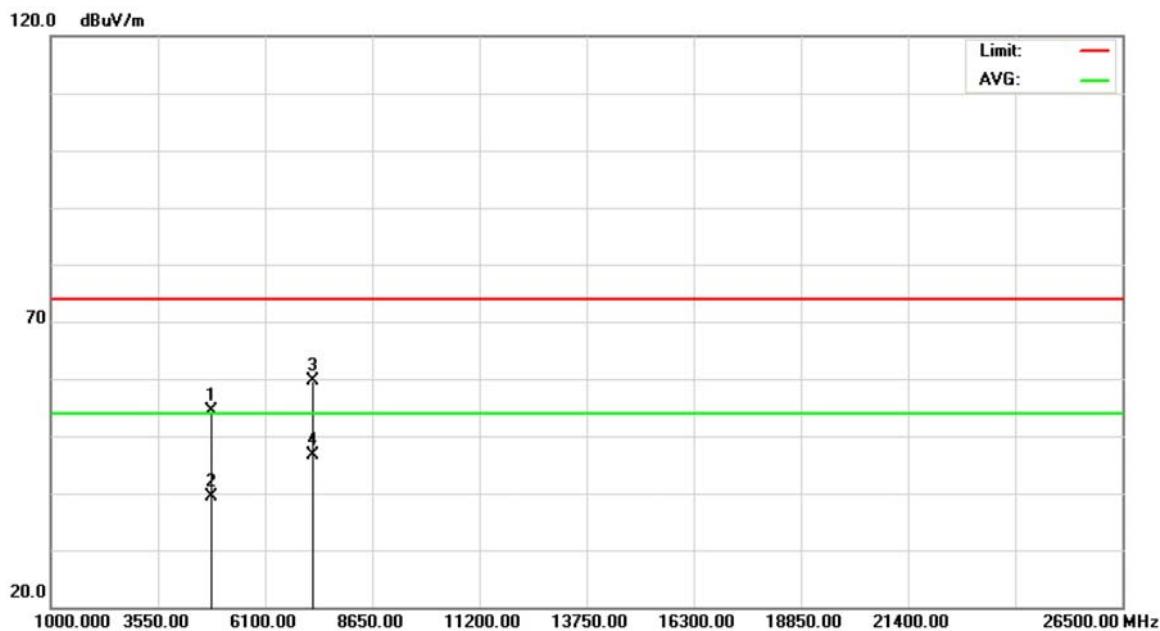


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 2390.000 | 25.80   | 34.09   | 59.89    | 74.00 | -14.11 | peak     |         |
| 2   |     | 2390.000 | 13.31   | 34.09   | 47.40    | 54.00 | -6.60  | AVG      |         |
| 3   | X   | 2402.000 | 63.22   | 34.16   | 97.38    | 74.00 | 23.38  | peak     |         |
| 4   | *   | 2402.000 | 59.13   | 34.16   | 93.29    | 54.00 | 39.29  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2402 MHz |                   |       |

Polarization: Vertical

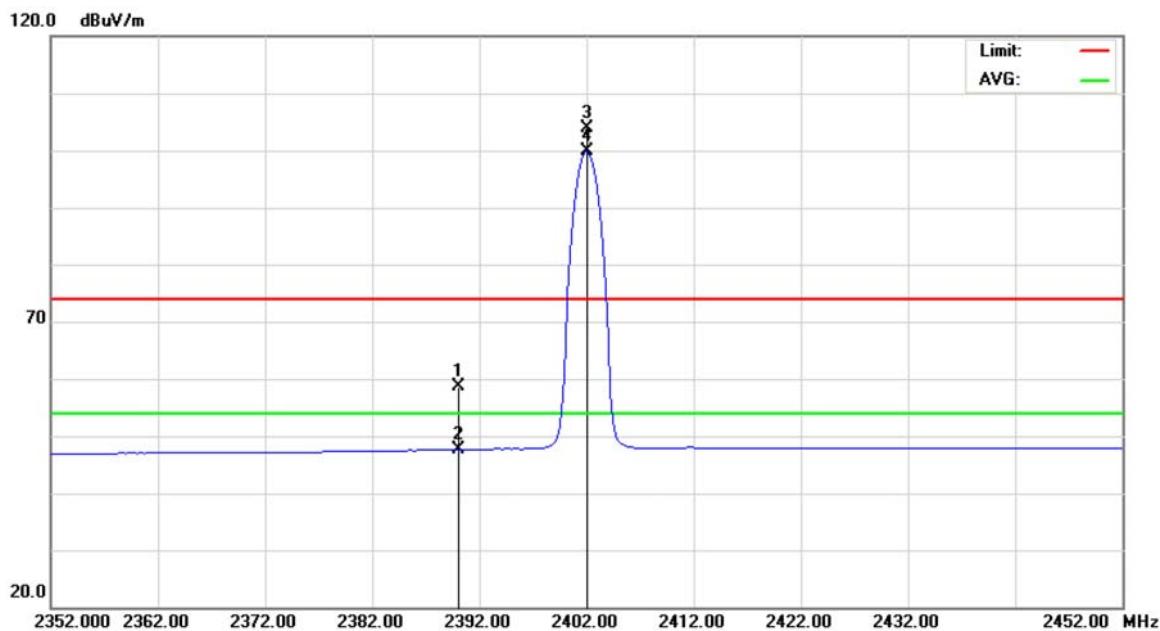


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 4803.913 | 46.00   | 8.26    | 54.26    | 74.00 | -19.74 | peak     |         |
| 2   |     | 4803.913 | 31.23   | 8.26    | 39.49    | 54.00 | -14.51 | AVG      |         |
| 3   |     | 7208.337 | 43.34   | 16.29   | 59.63    | 74.00 | -14.37 | peak     |         |
| 4   | *   | 7208.337 | 30.40   | 16.29   | 46.69    | 54.00 | -7.31  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2402 MHz |                   |       |

**Polarization: Horizontal**

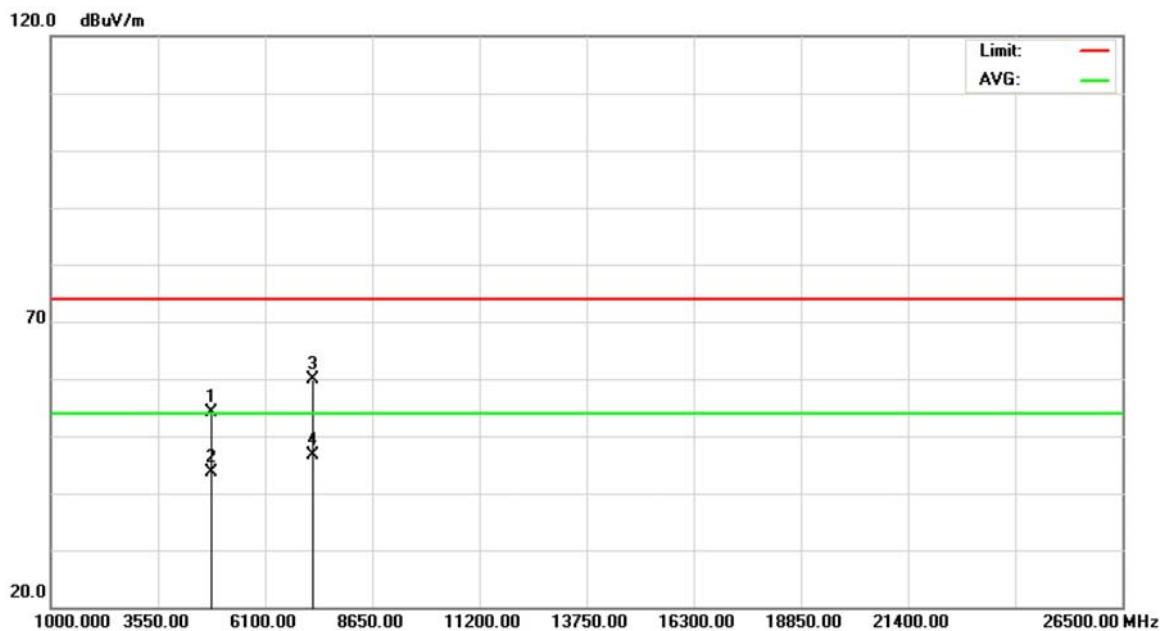


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |         |
| 1   |     | 2390.000 | 24.65   | 34.09   | 58.74    | 74.00 | -15.26 | peak    |
| 2   |     | 2390.000 | 13.48   | 34.09   | 47.57    | 54.00 | -6.43  | AVG     |
| 3   | X   | 2402.000 | 69.68   | 34.16   | 103.84   | 74.00 | 29.84  | peak    |
| 4   | *   | 2402.000 | 65.60   | 34.16   | 99.76    | 54.00 | 45.76  | AVG     |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2402 MHz |                   |       |

**Polarization: Horizontal**

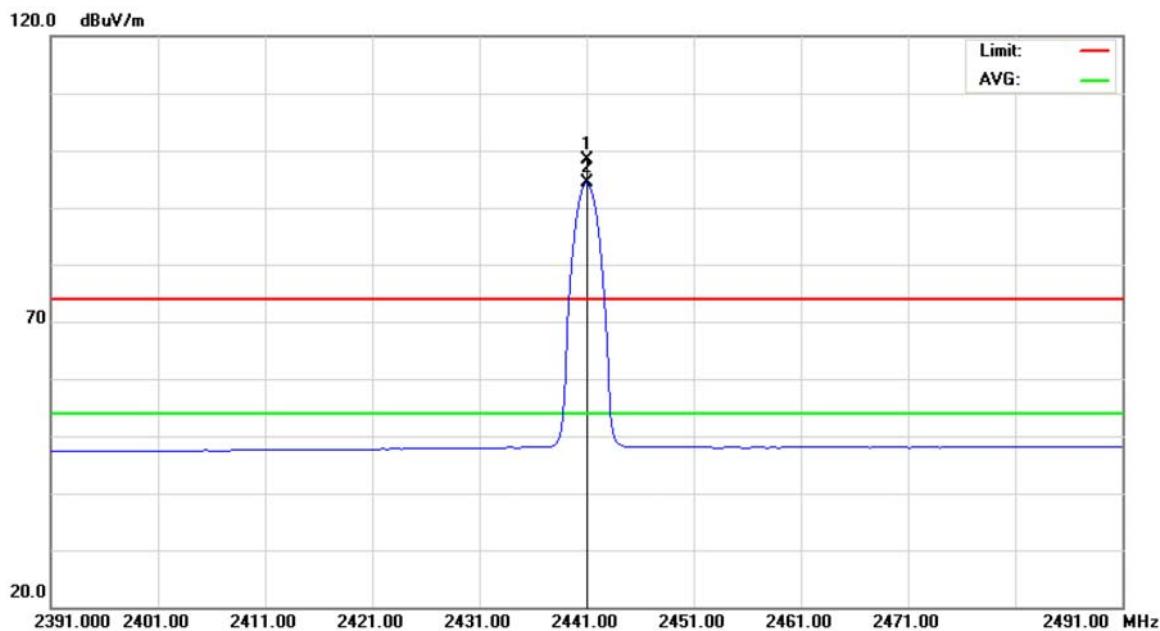


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 4803.962 | 45.91   | 8.26    | 54.17    | 74.00 | -19.83 | peak     |         |
| 2   |     | 4803.962 | 35.28   | 8.26    | 43.54    | 54.00 | -10.46 | AVG      |         |
| 3   |     | 7208.263 | 43.71   | 16.29   | 60.00    | 74.00 | -14.00 | peak     |         |
| 4   | *   | 7208.263 | 30.36   | 16.29   | 46.65    | 54.00 | -7.35  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2441 MHz |                   |       |

**Polarization: Vertical**

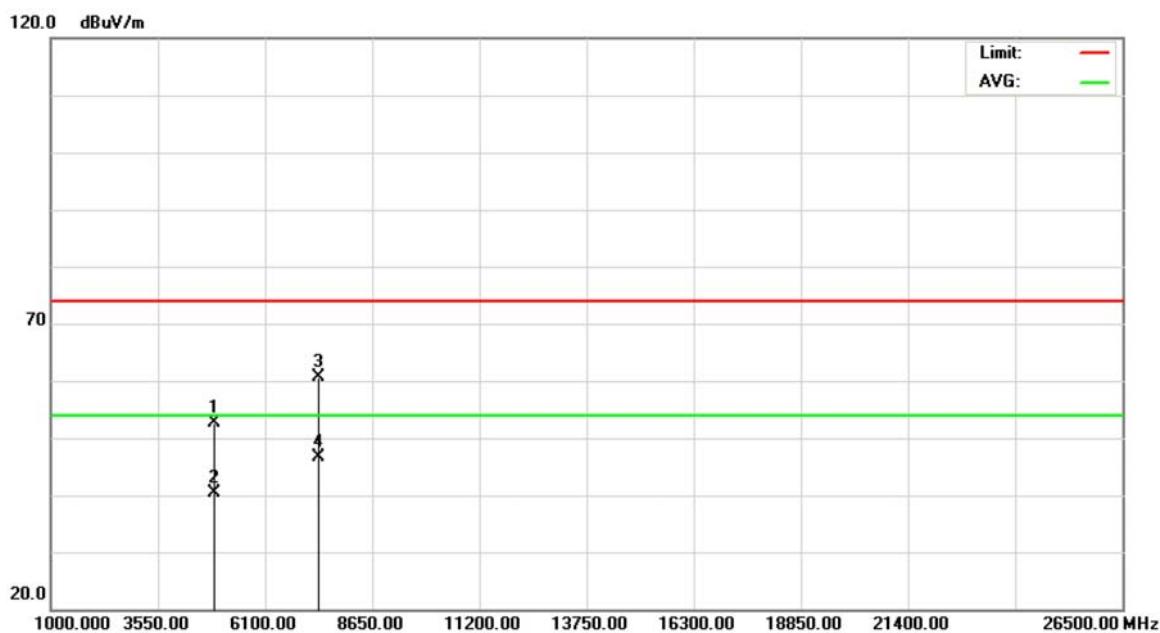


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over  | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|-------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |       |          |         |
| 1   | X   | 2441.000 | 63.93   | 34.37   | 98.30    | 74.00 | 24.30 | peak     |         |
| 2   | *   | 2441.000 | 59.89   | 34.37   | 94.26    | 54.00 | 40.26 | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2441 MHz |                   |       |

**Polarization: Vertical**

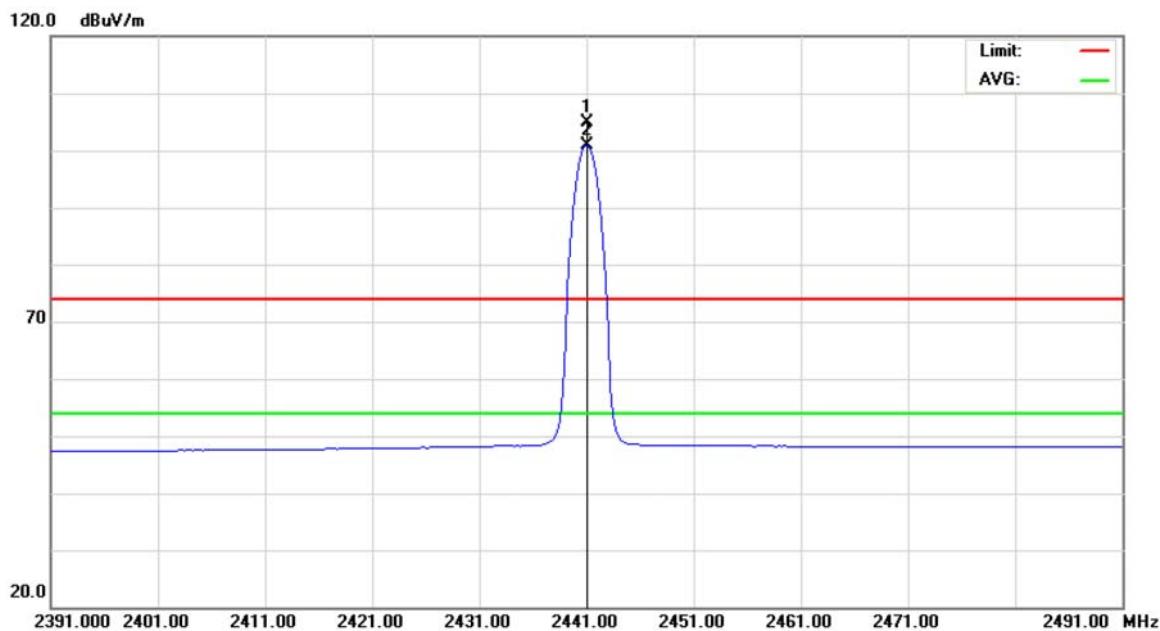


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 4881.962 | 44.11   | 8.42    | 52.53    | 74.00 | -21.47 | peak     |         |
| 2   |     | 4881.962 | 31.98   | 8.42    | 40.40    | 54.00 | -13.60 | AVG      |         |
| 3   |     | 7321.112 | 43.98   | 16.75   | 60.73    | 74.00 | -13.27 | peak     |         |
| 4   | *   | 7321.112 | 29.87   | 16.75   | 46.62    | 54.00 | -7.38  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2441 MHz |                   |       |

**Polarization: Horizontal**

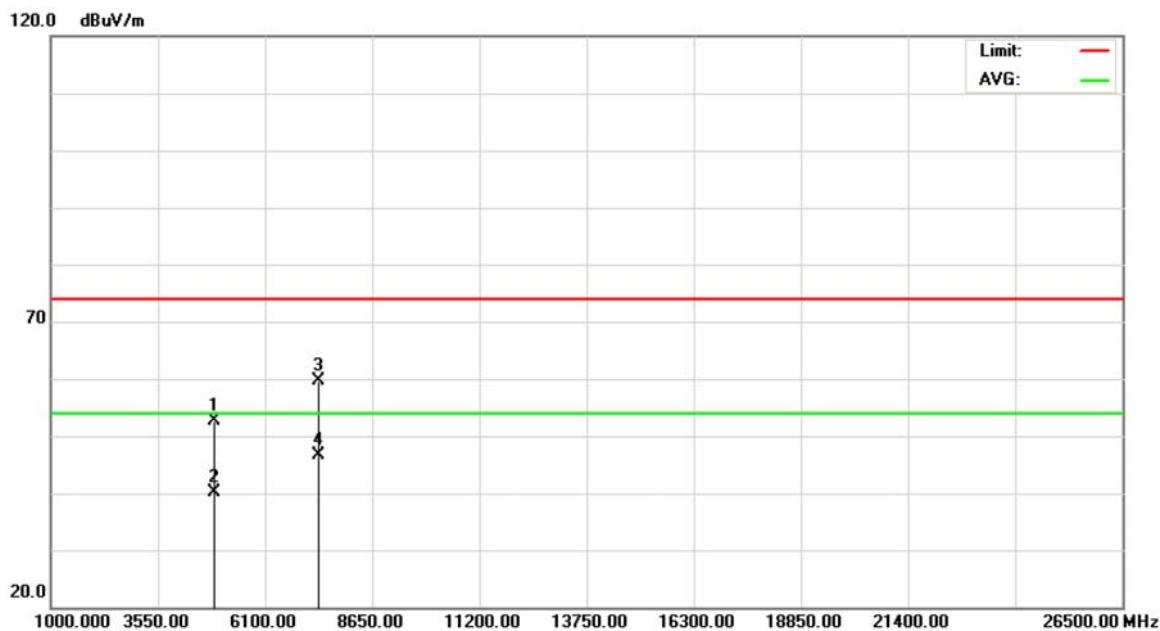


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over       |
|-----|-----|----------|---------|---------|----------|-------|------------|
|     |     |          | Level   | Factor  | ment     |       |            |
| 1   | X   | 2441.000 | 70.63   | 34.37   | 105.00   | 74.00 | 31.00 peak |
| 2   | *   | 2441.000 | 66.59   | 34.37   | 100.96   | 54.00 | 46.96 AVG  |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2441 MHz |                   |       |

**Polarization: Horizontal**

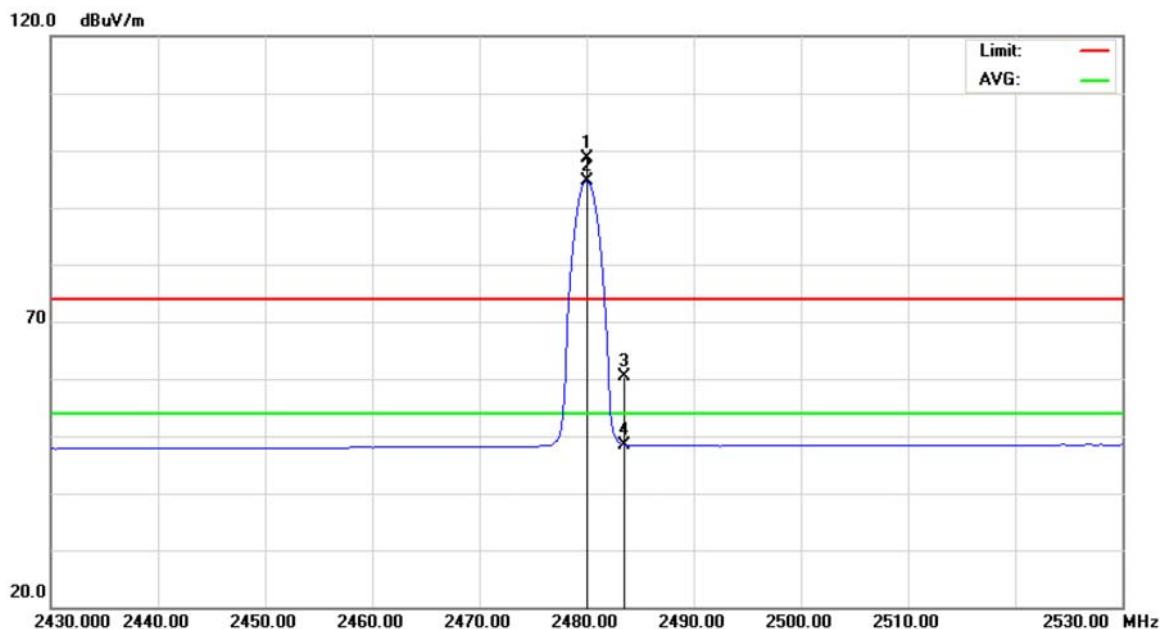


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 4882.000 | 44.32   | 8.42    | 52.74    | 74.00 | -21.26 | peak     |         |
| 2   |     | 4882.000 | 31.75   | 8.42    | 40.17    | 54.00 | -13.83 | AVG      |         |
| 3   |     | 7322.212 | 42.97   | 16.75   | 59.72    | 74.00 | -14.28 | peak     |         |
| 4   | *   | 7322.212 | 29.80   | 16.75   | 46.55    | 54.00 | -7.45  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2480 MHz |                   |       |

Polarization: Vertical

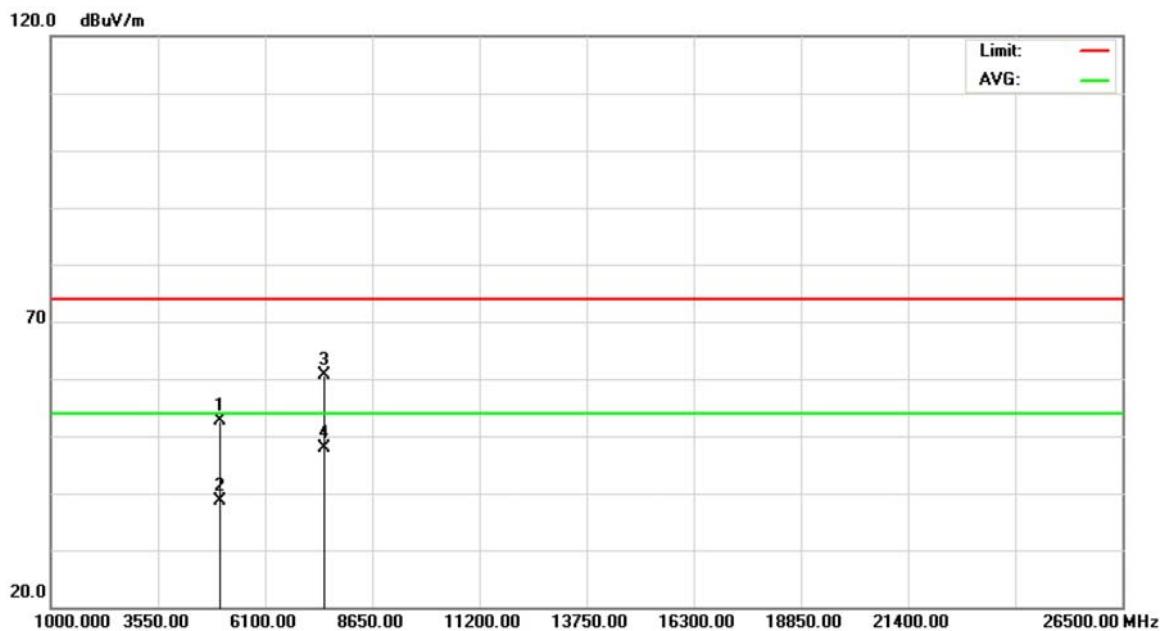


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   | X   | 2480.000 | 64.13   | 34.58   | 98.71    | 74.00 | 24.71  | peak     |         |
| 2   | *   | 2480.000 | 60.05   | 34.58   | 94.63    | 54.00 | 40.63  | AVG      |         |
| 3   |     | 2483.500 | 25.88   | 34.60   | 60.48    | 74.00 | -13.52 | peak     |         |
| 4   |     | 2483.500 | 13.85   | 34.60   | 48.45    | 54.00 | -5.55  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2480 MHz |                   |       |

**Polarization: Vertical**

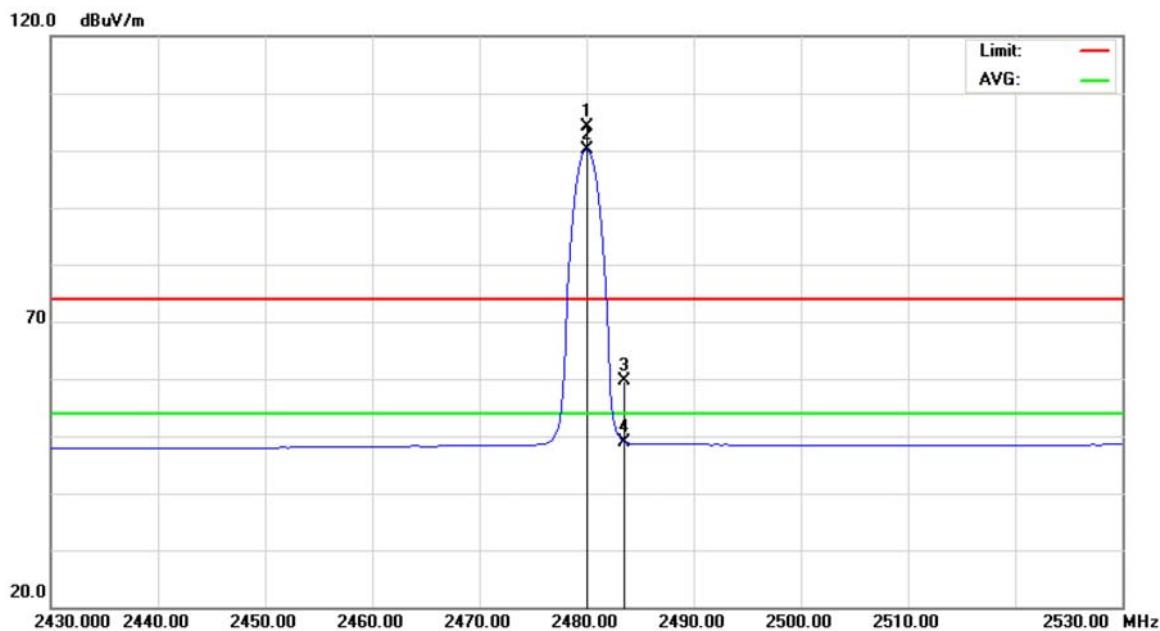


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 4959.788 | 44.15   | 8.58    | 52.73    | 74.00 | -21.27 | peak     |         |
| 2   |     | 4959.788 | 30.13   | 8.58    | 38.71    | 54.00 | -15.29 | AVG      |         |
| 3   |     | 7440.800 | 43.45   | 17.23   | 60.68    | 74.00 | -13.32 | peak     |         |
| 4   | *   | 7440.800 | 30.58   | 17.23   | 47.81    | 54.00 | -6.19  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2480 MHz |                   |       |

**Polarization: Horizontal**

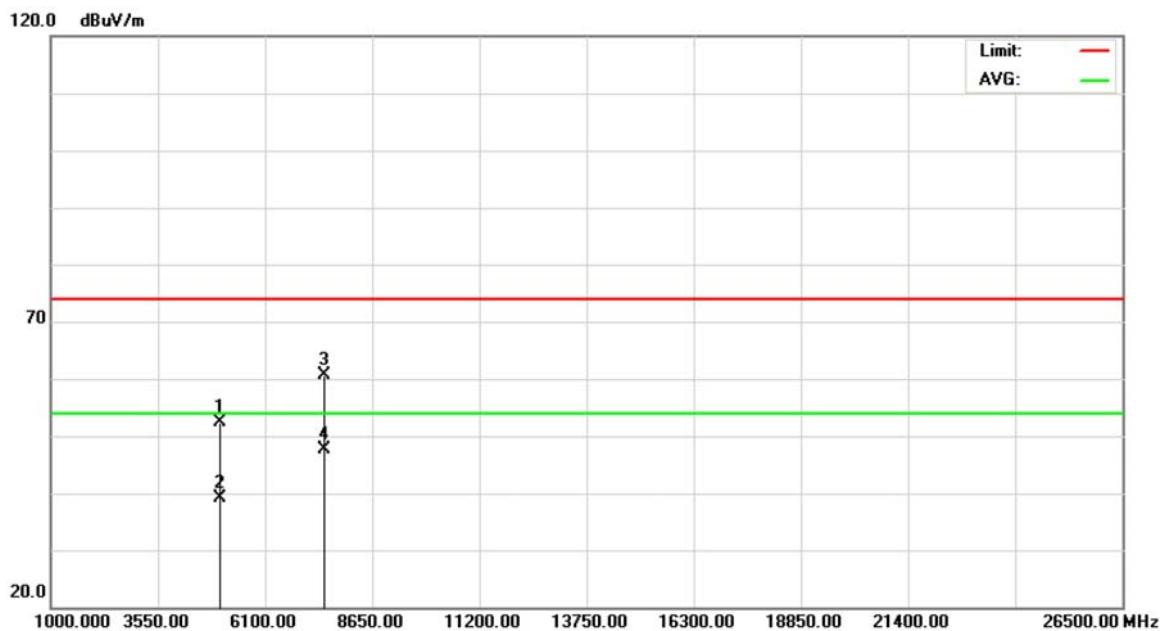


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   | X   | 2480.000 | 69.63   | 34.58   | 104.21   | 74.00 | 30.21  | peak     |         |
| 2   | *   | 2480.000 | 65.60   | 34.58   | 100.18   | 54.00 | 46.18  | AVG      |         |
| 3   |     | 2483.500 | 25.14   | 34.60   | 59.74    | 74.00 | -14.26 | peak     |         |
| 4   |     | 2483.500 | 14.37   | 34.60   | 48.97    | 54.00 | -5.03  | AVG      |         |



|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 60%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2480 MHz |                   |       |

**Polarization: Horizontal**



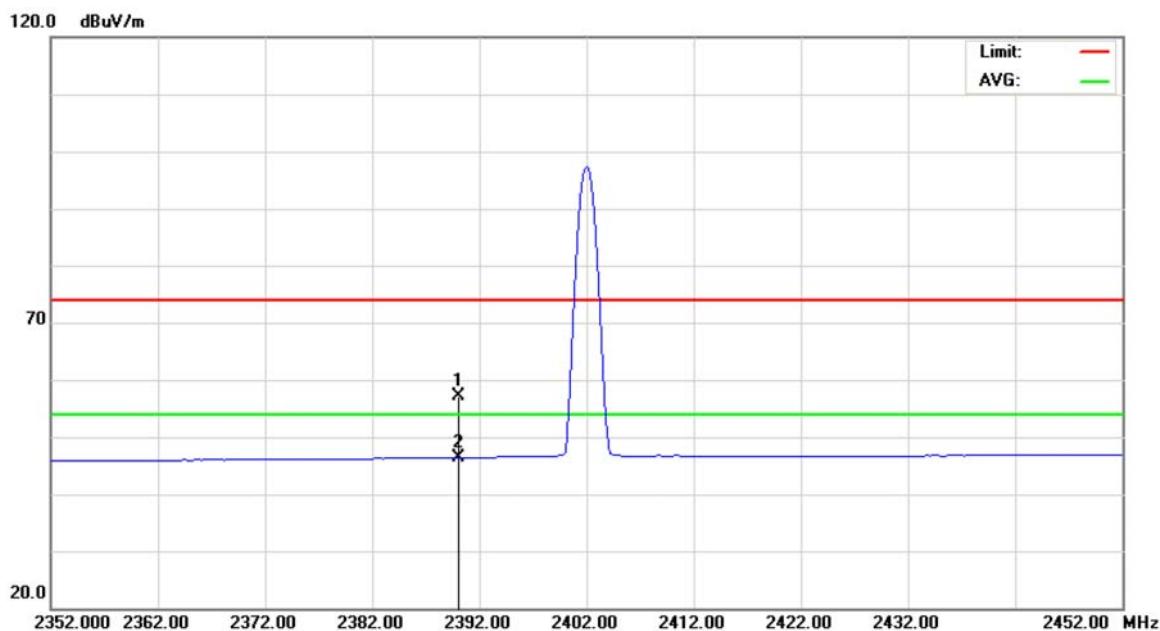
| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 4959.900 | 43.87   | 8.58    | 52.45    | 74.00 | -21.55 | peak     |         |
| 2   |     | 4959.900 | 30.62   | 8.58    | 39.20    | 54.00 | -14.80 | AVG      |         |
| 3   |     | 7440.663 | 43.41   | 17.23   | 60.64    | 74.00 | -13.36 | peak     |         |
| 4   | *   | 7440.663 | 30.51   | 17.23   | 47.74    | 54.00 | -6.26  | AVG      |         |



## 9.9 TEST RESULTS (RESTRICTED BANDS)

|              |   |                   |       |
|--------------|---|-------------------|-------|
| E.U.T        | PDA Scanner   | Model Name        | HT682 |
| Temperature  | 24°C  | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz  |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2402 MHz   |                   |       |
| NOTE         | The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz. |                   |       |

### Polarization: Vertical

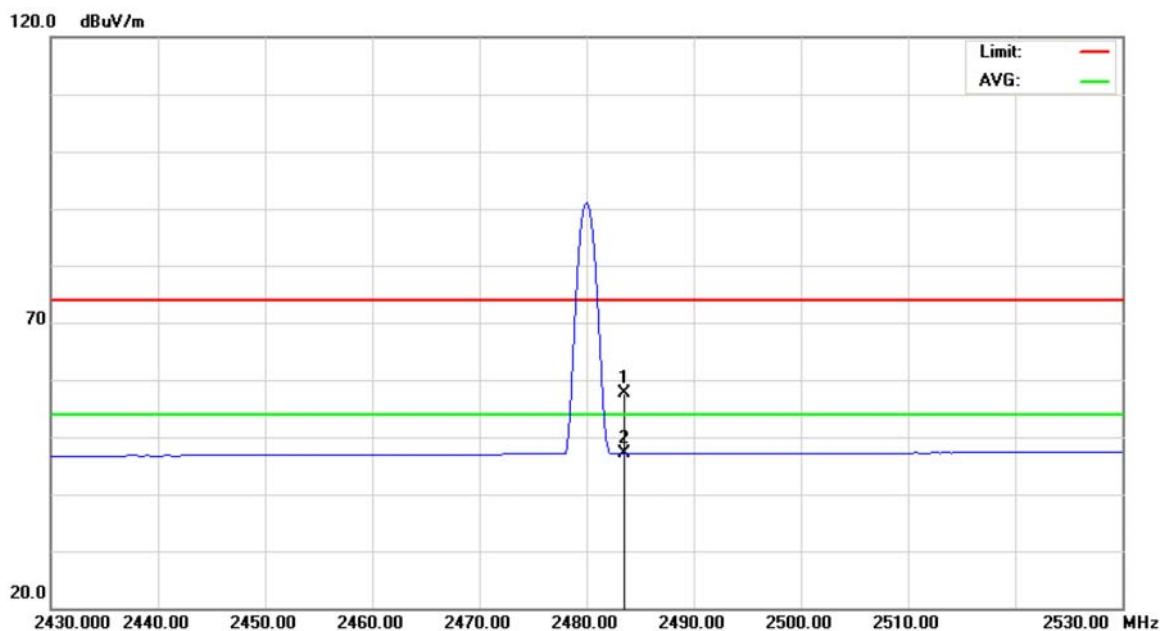


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 2390.000 | 23.85   | 33.25   | 57.10    | 74.00 | -16.90 | peak     |         |
| 2   | *   | 2390.000 | 13.11   | 33.25   | 46.36    | 54.00 | -7.64  | AVG      |         |



|              |  |                   |       |
|--------------|--|-------------------|-------|
| E.U.T        | PDA Scanner  | Model Name        | HT682 |
| Temperature  | 24°C   | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz   |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2480 MHz  |                   |       |
| NOTE         | The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz. |                   |       |

## Polarization: Vertical

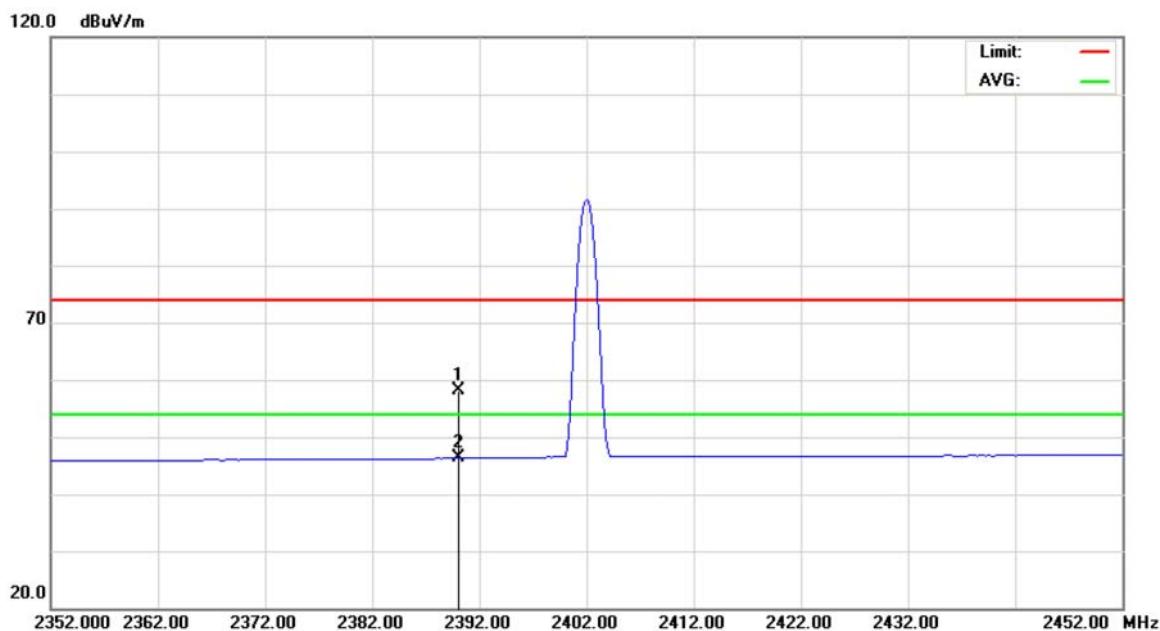


| No. | Mk. | Freq.<br>MHz | Reading       | Correct      | Measure-       | Limit | Over   | Detector | Comment |
|-----|-----|--------------|---------------|--------------|----------------|-------|--------|----------|---------|
|     |     |              | Level<br>dBuV | Factor<br>dB | ment<br>dBuV/m |       |        |          |         |
| 1   |     | 2483.500     | 24.00         | 33.75        | 57.75          | 74.00 | -16.25 | peak     |         |
| 2   | *   | 2483.500     | 13.36         | 33.75        | 47.11          | 54.00 | -6.89  | Avg      |         |



|              |   |                   |       |
|--------------|---|-------------------|-------|
| E.U.T        | PDA Scanner   | Model Name        | HT682 |
| Temperature  | 24°C  | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz  |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2402 MHz   |                   |       |
| NOTE         | The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz. |                   |       |

**Polarization: Horizontal**

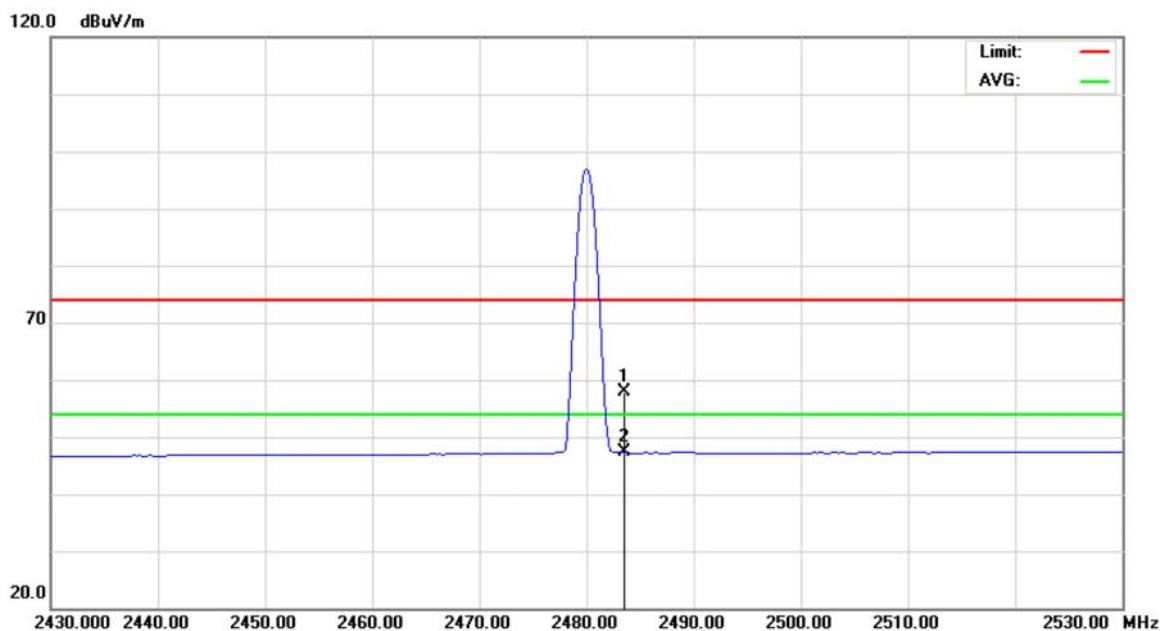


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 2390.000 | 24.90   | 33.25   | 58.15    | 74.00 | -15.85 | peak     |         |
| 2   | *   | 2390.000 | 13.04   | 33.25   | 46.29    | 54.00 | -7.71  | AVG      |         |



|              |  |                   |       |
|--------------|--|-------------------|-------|
| E.U.T        | PDA Scanner  | Model Name        | HT682 |
| Temperature  | 24°C   | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz   |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2480 MHz  |                   |       |
| NOTE         | The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz. |                   |       |

**Polarization: Horizontal**

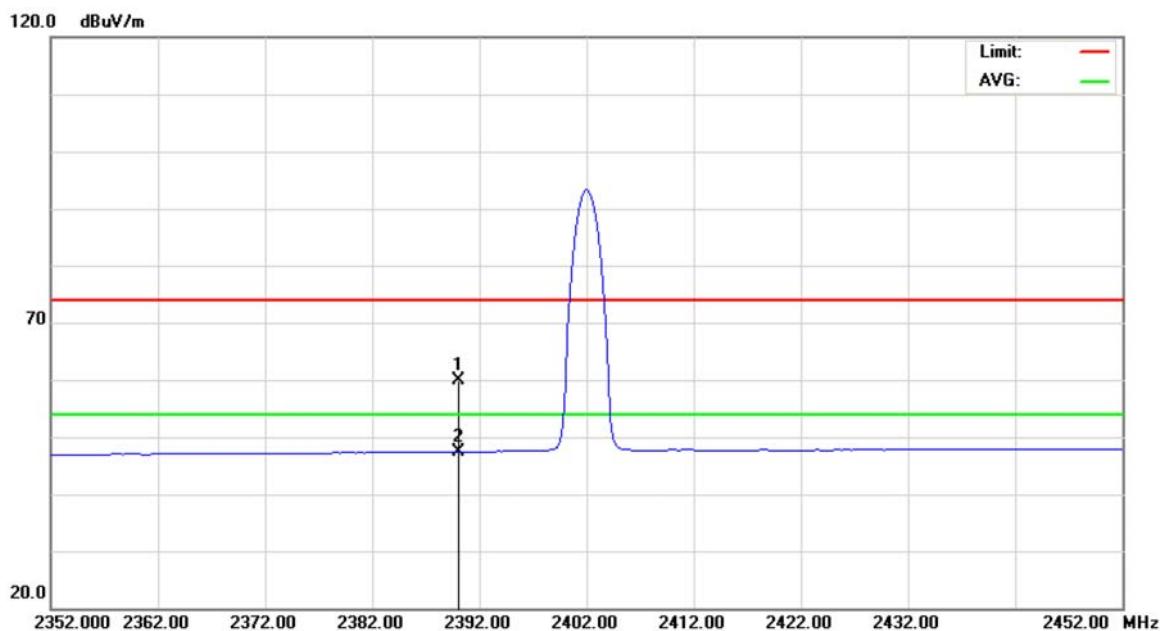


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit  | Over   | Comment  |
|-----|-----|----------|---------|---------|----------|--------|--------|----------|
|     |     |          | Level   | Factor  | ment     |        |        |          |
|     |     | MHz      | dBuV    | dB      | dBuV/m   | dBuV/m | dB     | Detector |
| 1   |     | 2483.500 | 24.15   | 33.75   | 57.90    | 74.00  | -16.10 | peak     |
| 2   | *   | 2483.500 | 13.54   | 33.75   | 47.29    | 54.00  | -6.71  | AVG      |



|              |   |                   |       |
|--------------|---|-------------------|-------|
| E.U.T        | PDA Scanner   | Model Name        | HT682 |
| Temperature  | 24°C  | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz  |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2402 MHz   |                   |       |
| NOTE         | The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz. |                   |       |

**Polarization: Vertical**

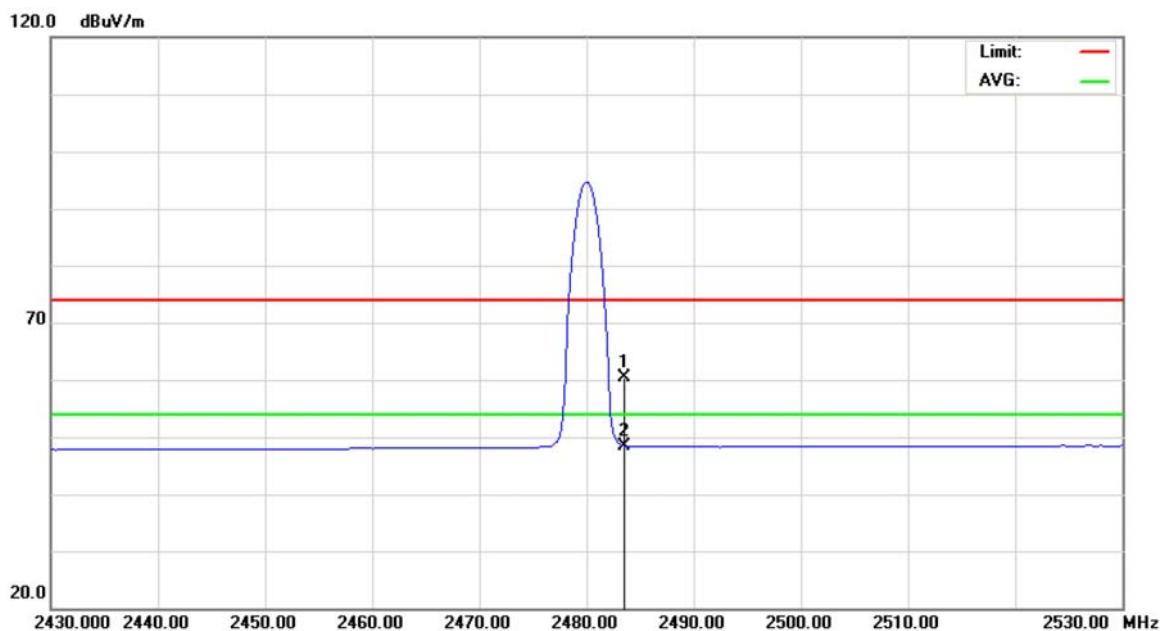


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 2390.000 | 25.80   | 34.09   | 59.89    | 74.00 | -14.11 | peak     |         |
| 2   | *   | 2390.000 | 13.31   | 34.09   | 47.40    | 54.00 | -6.60  | AVG      |         |



|              |  |                   |       |
|--------------|--|-------------------|-------|
| E.U.T        | PDA Scanner  | Model Name        | HT682 |
| Temperature  | 24°C   | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz   |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2480 MHz  |                   |       |
| NOTE         | The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz. |                   |       |

### Polarization: Vertical

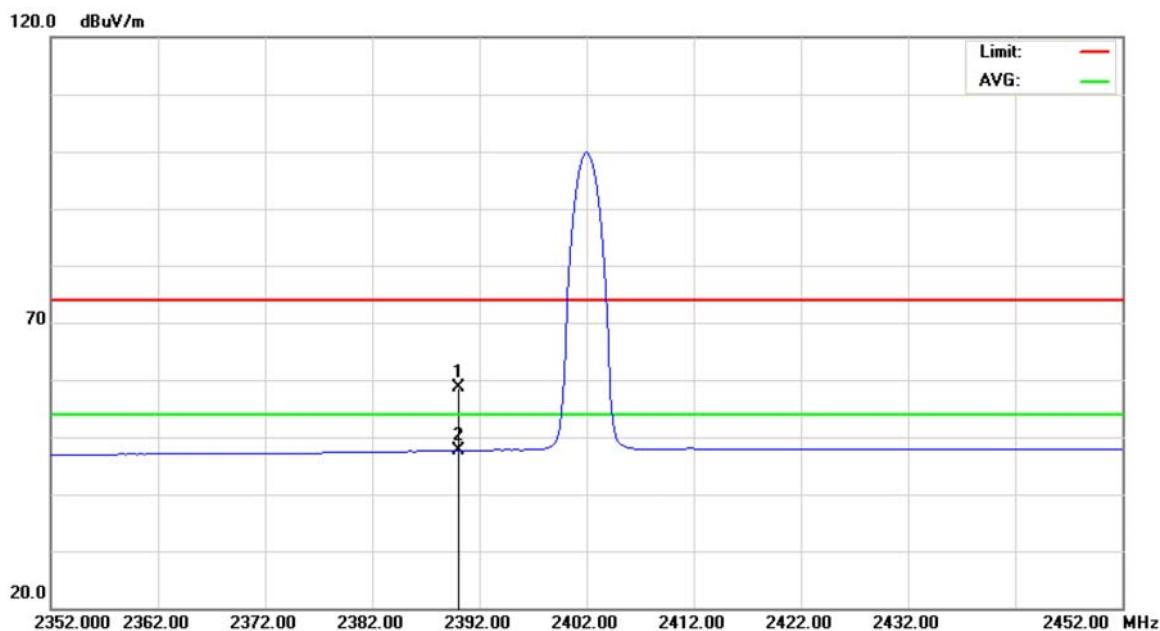


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 2483.500 | 25.88   | 34.60   | 60.48    | 74.00 | -13.52 | peak     |         |
| 2   | *   | 2483.500 | 13.85   | 34.60   | 48.45    | 54.00 | -5.55  | Avg      |         |



|              |   |                   |       |
|--------------|---|-------------------|-------|
| E.U.T        | PDA Scanner   | Model Name        | HT682 |
| Temperature  | 24°C  | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz  |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2402 MHz   |                   |       |
| NOTE         | The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz. |                   |       |

**Polarization: Horizontal**

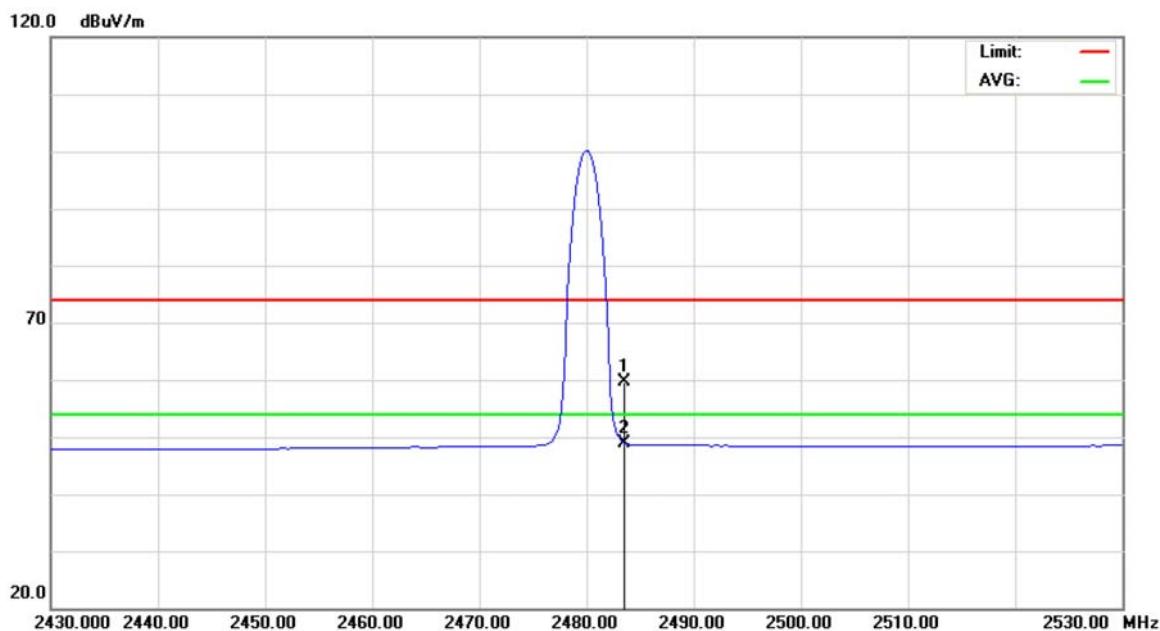


| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 2390.000 | 24.65   | 34.09   | 58.74    | 74.00 | -15.26 | peak     |         |
| 2   | *   | 2390.000 | 13.48   | 34.09   | 47.57    | 54.00 | -6.43  | AVG      |         |



|              |  |                   |       |
|--------------|--|-------------------|-------|
| E.U.T        | PDA Scanner  | Model Name        | HT682 |
| Temperature  | 24°C   | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz   |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2480 MHz  |                   |       |
| NOTE         | The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz. |                   |       |

**Polarization: Horizontal**



| No. | Mk. | Freq.    | Reading | Correct | Measure- | Limit | Over   | Detector | Comment |
|-----|-----|----------|---------|---------|----------|-------|--------|----------|---------|
|     |     |          | Level   | Factor  | ment     |       |        |          |         |
| 1   |     | 2483.500 | 25.14   | 34.60   | 59.74    | 74.00 | -14.26 | peak     |         |
| 2   | *   | 2483.500 | 14.37   | 34.60   | 48.97    | 54.00 | -5.03  | Avg      |         |



## 10 NUMBER OF HOPPING FREQUENCY

### 10.1 LIMIT

| Test Item                 | Frequency Range (MHz) | Limit                          |
|---------------------------|-----------------------|--------------------------------|
| Number of Hopping Channel | 2400-2483.5           | shall use at least 15 channels |

### 10.2 MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------|--------------|----------|------------|------------------|
| 1    | Spectrum Analyzer | R&S          | FSP-40   | 100129     | Oct. 01, 2013    |

NOTE: **N/A:** denotes No Model Name, No Serial No. or No Calibration specified.

### 10.3 MEASURING INSTRUMENTS SETTING

| Spectrum Analyzer | Parameter Setting           |
|-------------------|-----------------------------|
| Attenuation       | Auto                        |
| Span Frequency    | > Operating Frequency Range |
| RB                | 100 kHz                     |
| VB                | 100 kHz                     |
| Detector          | Peak                        |
| Trace             | Max Hold                    |
| Sweep Time        | Auto                        |

### 10.4 TEST PROCEDURES

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting: RBW= 100 kHz, VBW=100 kHz, Sweep time = Auto.

### 10.5 TEST SETUP LAYOUT



### 10.6 DEVIATION FROM TEST STANDARD

No deviation

### 10.7 EUT OPERATING CONDITIONS

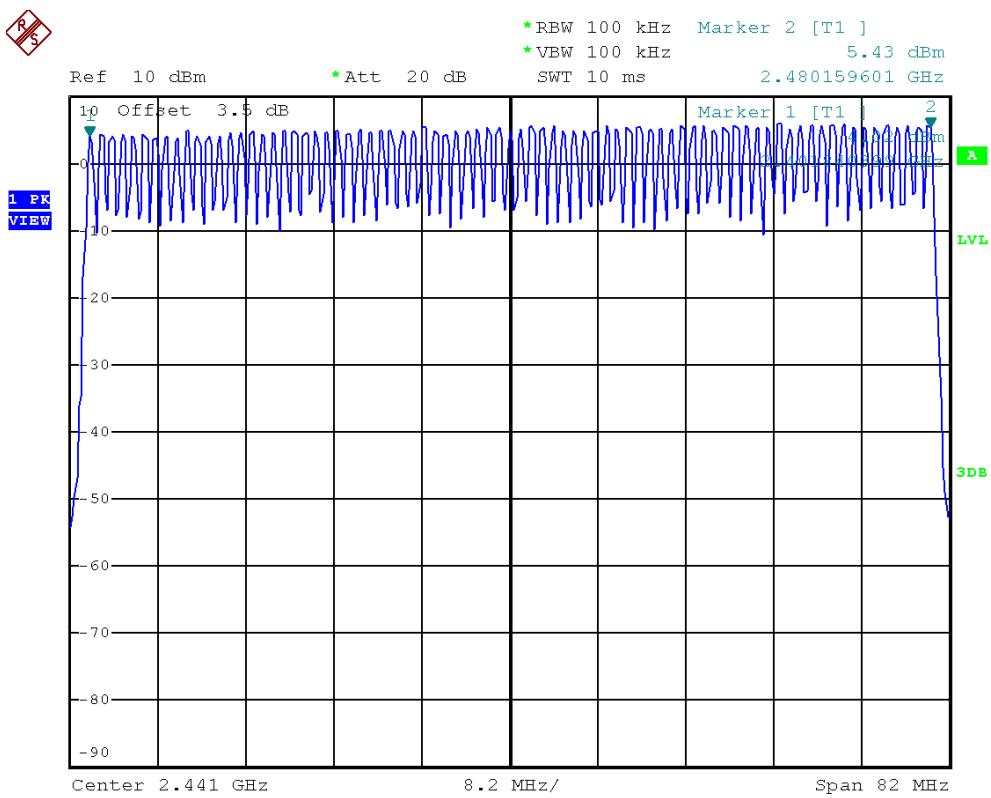
The EUT tested system was configured as the statements of 5.6 Unless otherwise a special operating condition is specified in the follows during the testing.



## 10.8 TEST RESULTS

|              |                  |                   |       |
|--------------|------------------|-------------------|-------|
| E.U.T        | PDA Scanner      | Model Name        | HT682 |
| Temperature  | 24°C             | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz     |                   |       |
| Test Mode    | Bluetooth/1 Mbps |                   |       |

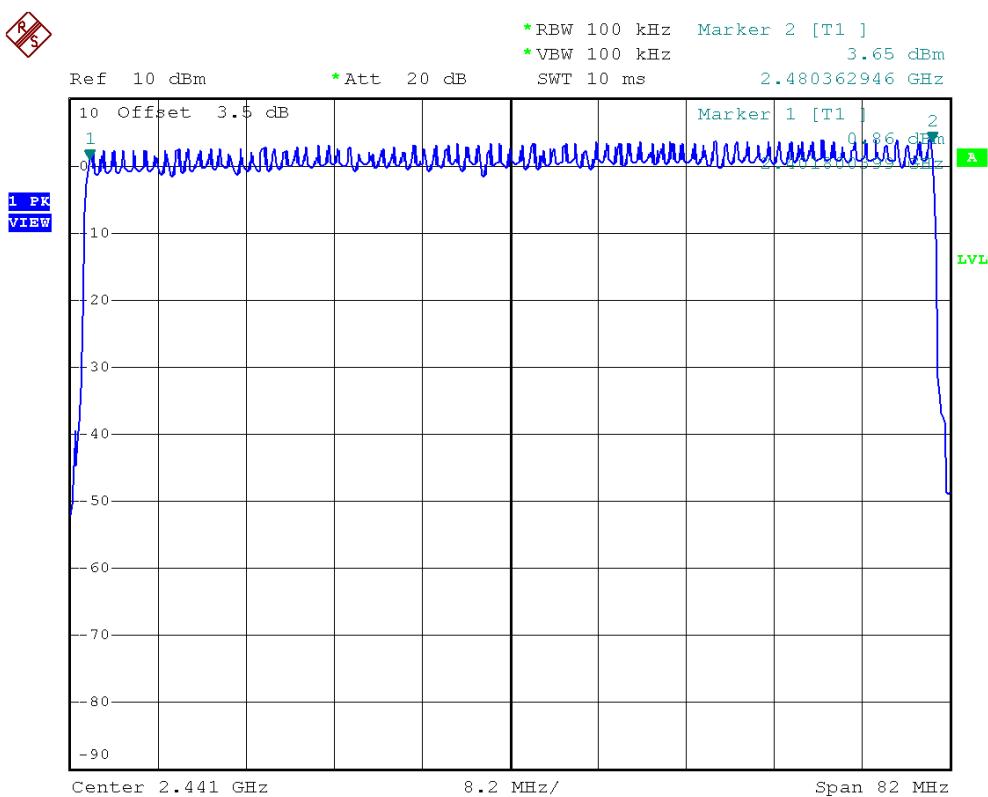
| Number of Hopping Channel | Limit | Result |
|---------------------------|-------|--------|
| 79                        | 15    | Pass   |





|              |                  |                   |       |
|--------------|------------------|-------------------|-------|
| E.U.T        | PDA Scanner      | Model Name        | HT682 |
| Temperature  | 24°C             | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz     |                   |       |
| Test Mode    | Bluetooth/3 Mbps |                   |       |

| Number of Hopping Channel | Limit | Result |
|---------------------------|-------|--------|
| 79                        | 15    | Pass   |





## 11 AVERAGE TIME OF OCCUPANCY

### 11.1 LIMIT

| Test Item                 | Frequency Range (MHz) | Limit   |
|---------------------------|-----------------------|---|
| Average time of occupancy | 2400-2483.5           | shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. |

### 11.2 MEASUREMENT INSTRUMENTS LIST

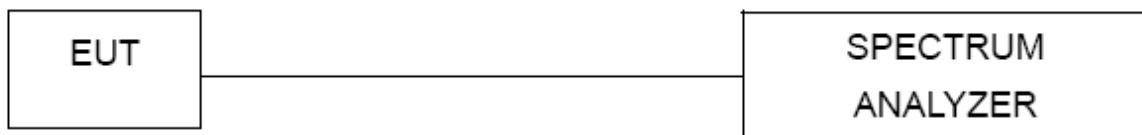
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------|--------------|----------|------------|------------------|
| 1    | Spectrum Analyzer | R&S          | FSP-40   | 100129     | Oct. 01, 2013    |

NOTE: **N/A**: denotes No Model Name, No Serial No. or No Calibration specified.

### 11.3 TEST PROCEDURES

- a. The transmitter output (antenna port) was connected to the spectrum analyzer
- b. Set RBW of spectrum analyzer to 100 kHz and VBW to 100 kHz.
- c. Use a video trigger with the trigger level set to enable triggering only on full pulses.
- d. Sweep Time is more than once pulse time.
- e. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
- f. Measure the maximum time duration of one single pulse.
- g. Set the EUT for DH5, DH3 and DH1 packet transmitting.
- h. Measure the maximum time duration of one single pulse.
- i. DH5 Packet permit maximum  $1600 / 79 / 6 = 3.37$  hops per second in each channel (5 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times  $3.37 \times 31.6 = 106.6$  within 31.6 seconds.
- j. DH3 Packet permit maximum  $1600 / 79 / 4 = 5.06$  hops per second in each channel (3 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times  $5.06 \times 31.6 = 160$  within 31.6 seconds.
- k. DH1 Packet permit maximum  $1600 / 79 / 2 = 10.12$  hops per second in each channel (1 time slot RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times  $10.12 \times 31.6 = 320$  within 31.6 seconds.

### 11.4 TEST SETUP LAYOUT



### 11.5 DEVIATION FROM TEST STANDARD

No deviation



## **11.6 EUT OPERATING CONDITIONS**

The EUT tested system was configured as the statements of 5.6 Unless otherwise a special operating condition is specified in the follows during the testing.

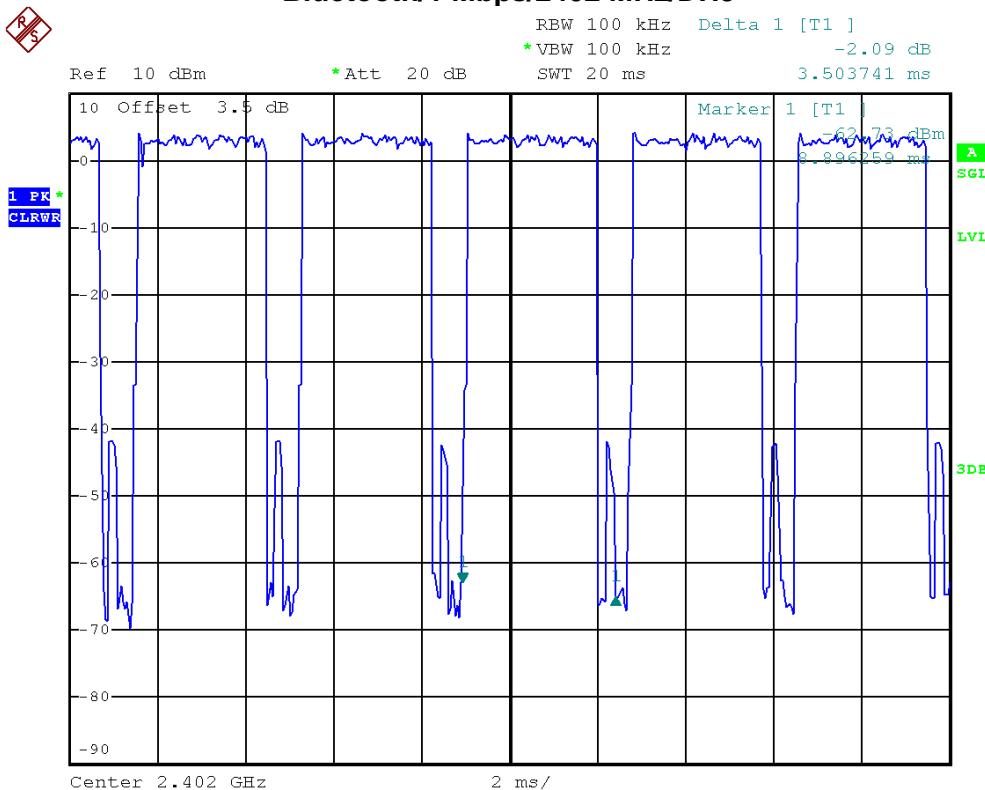


## 11.7 TEST RESULTS

|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2402 MHz |                   |       |

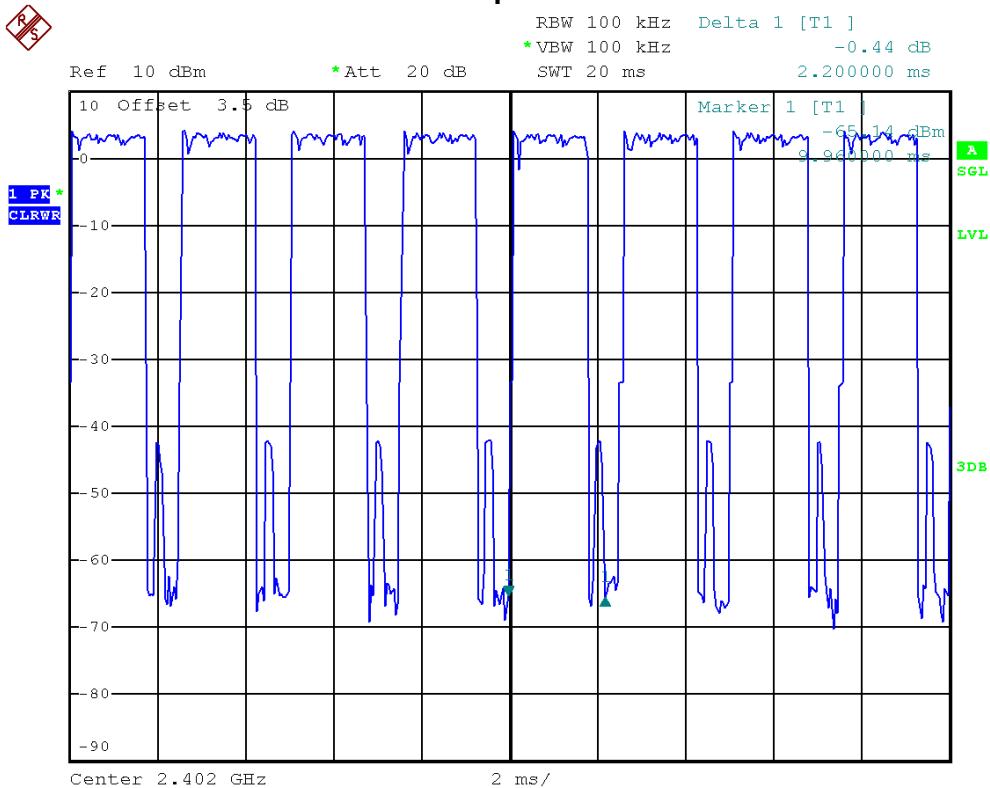
| Data Packet | Frequency | Pulse Duration (ms) | Dwell Time (s) | Limit (s) | Result |
|-------------|-----------|---------------------|----------------|-----------|--------|
| DH5         | 2402 MHz  | 3.5037              | 0.3737         | 0.4       | PASS   |
| DH3         | 2402 MHz  | 2.2000              | 0.3520         | 0.4       | PASS   |
| DH1         | 2402 MHz  | 1.0006              | 0.3202         | 0.4       | PASS   |

**Bluetooth/1 Mbps/2402 MHz/DH5**

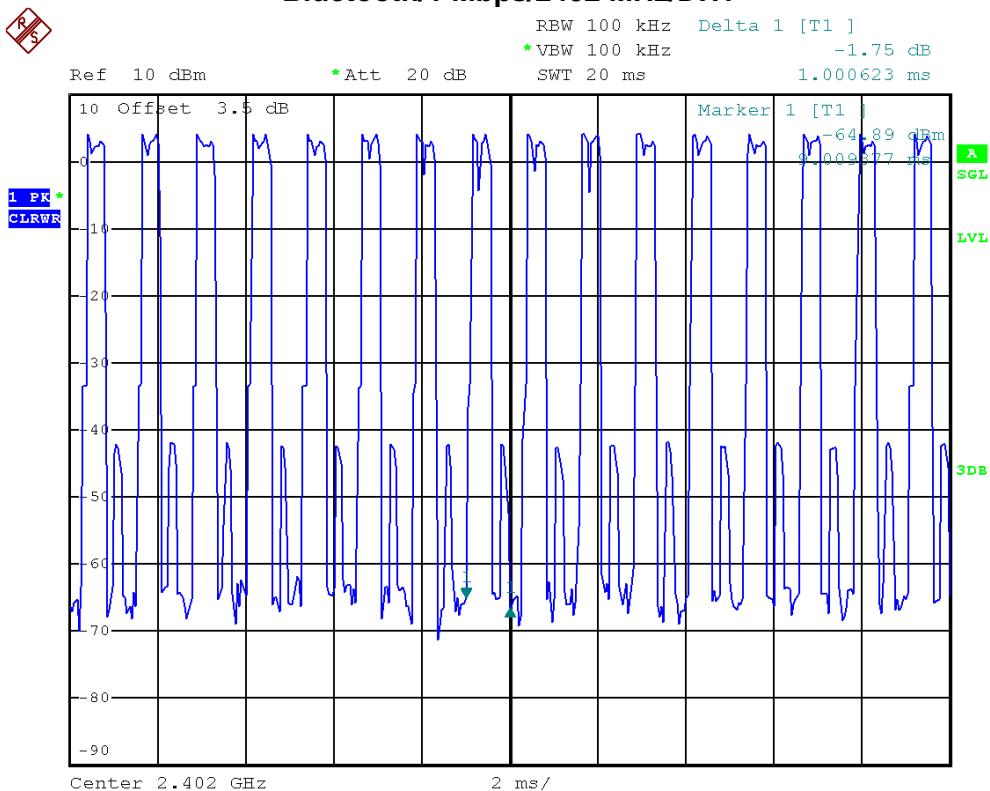




Bluetooth/1 Mbps/2402 MHz/DH3



Bluetooth/1 Mbps/2402 MHz/DH1

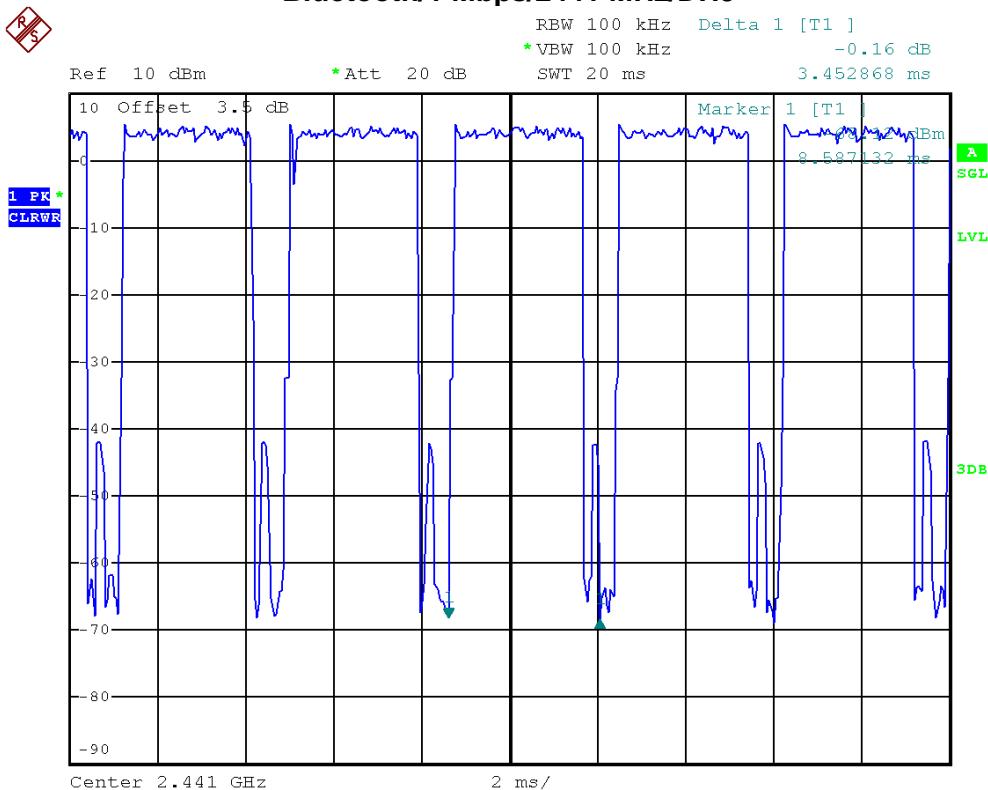




|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2441 MHz |                   |       |

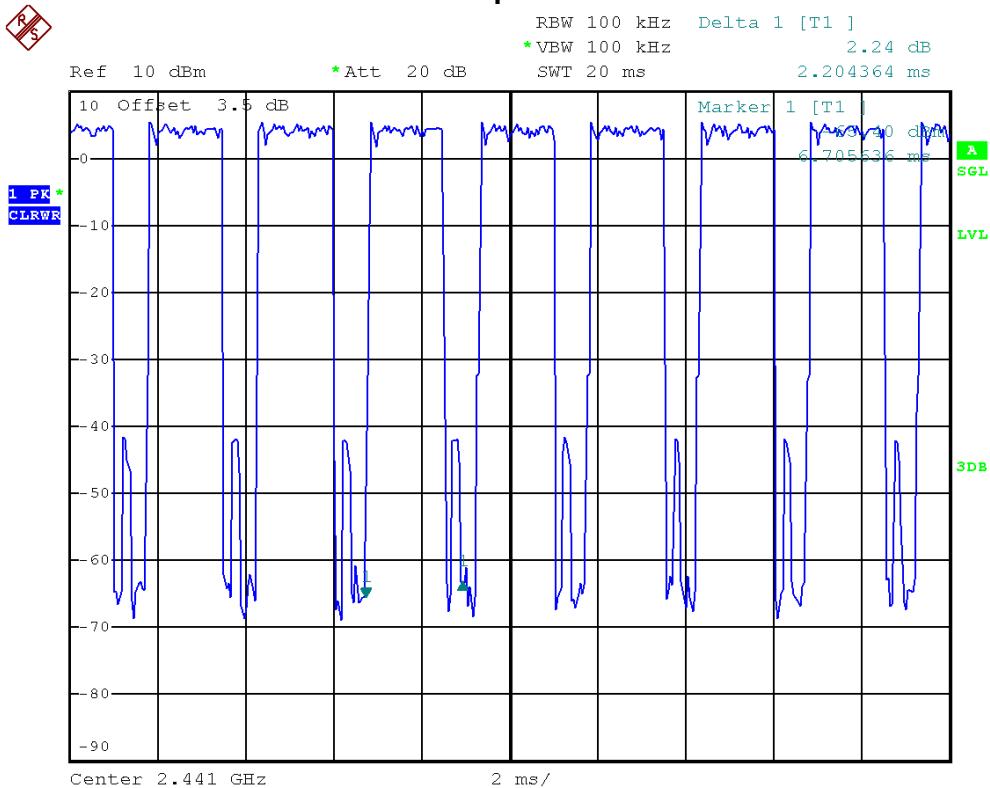
| Data Packet | Frequency | Pulse Duration (ms) | Dwell Time (s) | Limit (s) | Result |
|-------------|-----------|---------------------|----------------|-----------|--------|
| DH5         | 2441 MHz  | 3.4529              | 0.3683         | 0.4       | PASS   |
| DH3         | 2441 MHz  | 2.2044              | 0.3527         | 0.4       | PASS   |
| DH1         | 2441 MHz  | 0.9626              | 0.3080         | 0.4       | PASS   |

**Bluetooth/1 Mbps/2441 MHz/DH5**

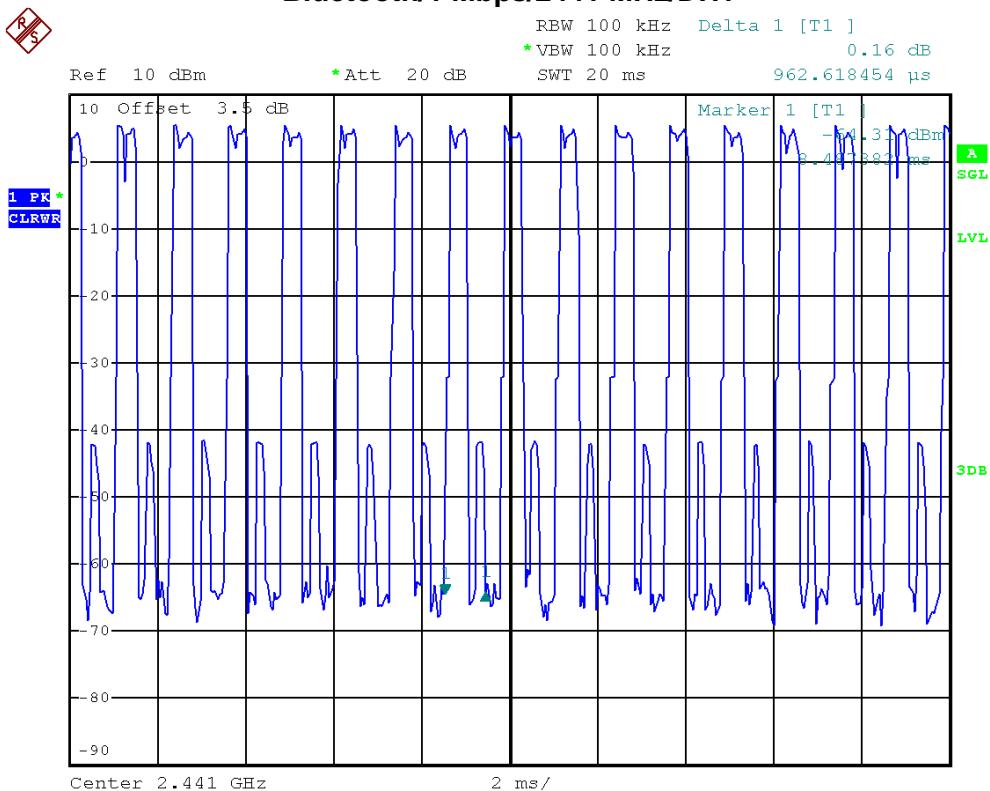




Bluetooth/1 Mbps/2441 MHz/DH3



Bluetooth/1 Mbps/2441 MHz/DH1

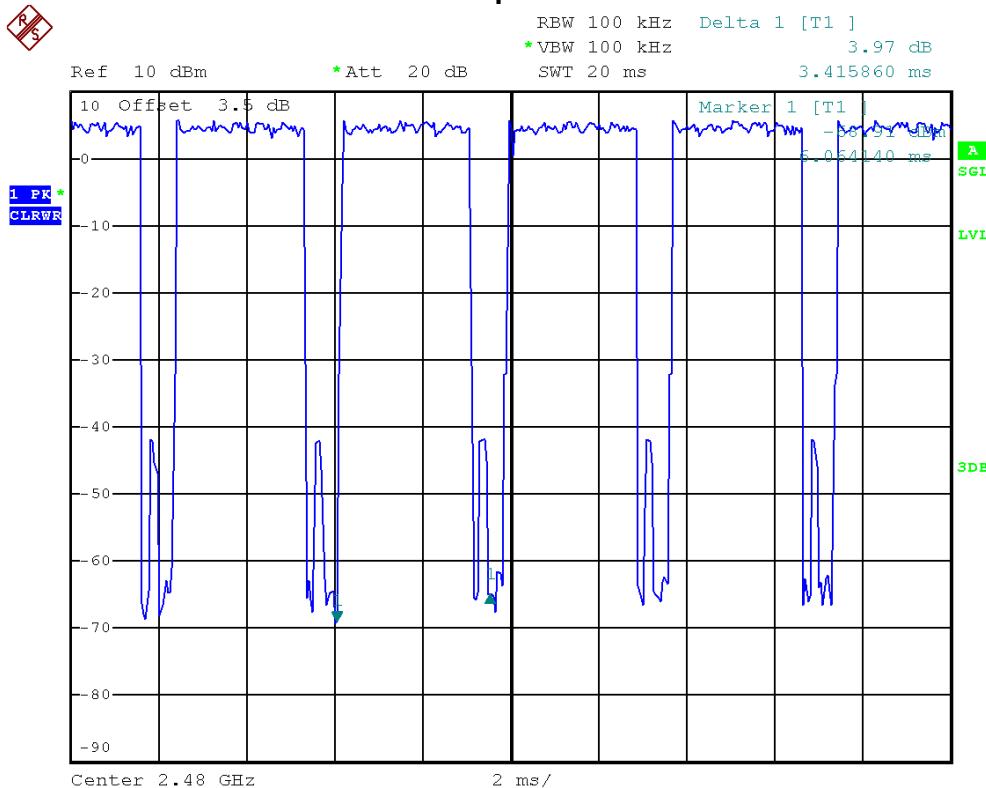




|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/1 Mbps/2480 MHz |                   |       |

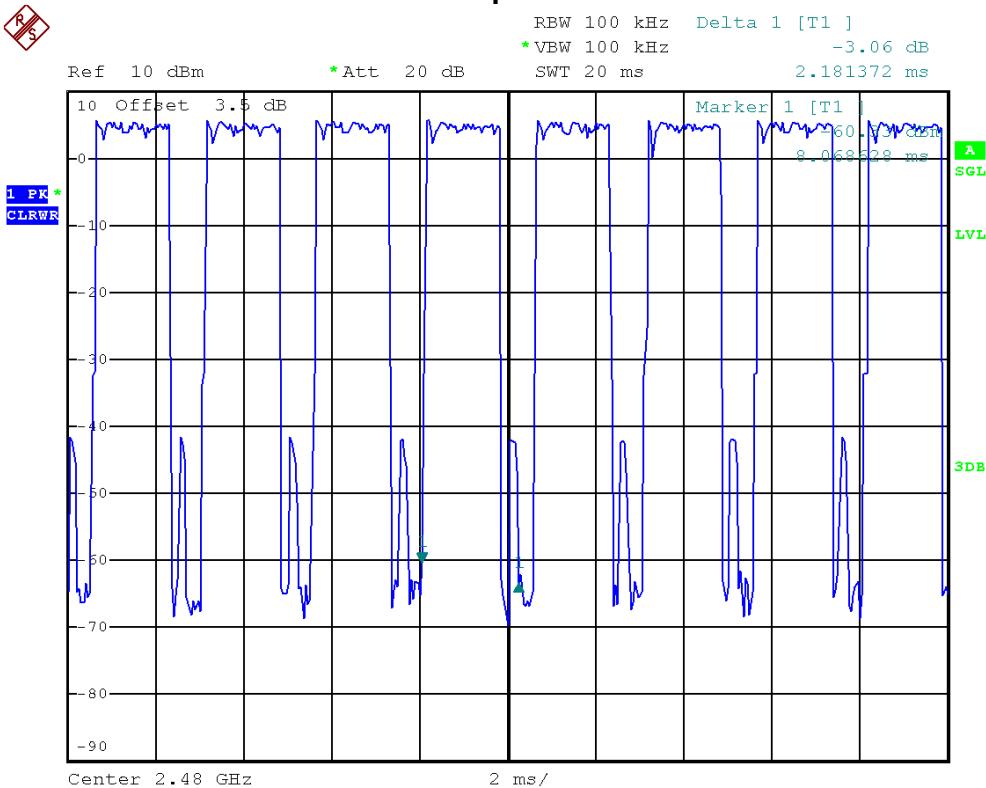
| Data Packet | Frequency | Pulse Duration (ms) | Dwell Time (s) | Limit (s) | Result |
|-------------|-----------|---------------------|----------------|-----------|--------|
| DH5         | 2480 MHz  | 3.4159              | 0.3644         | 0.4       | PASS   |
| DH3         | 2480 MHz  | 2.1814              | 0.3490         | 0.4       | PASS   |
| DH1         | 2480 MHz  | 0.9405              | 0.3010         | 0.4       | PASS   |

#### Bluetooth/1 Mbps/2480 MHz/DH5

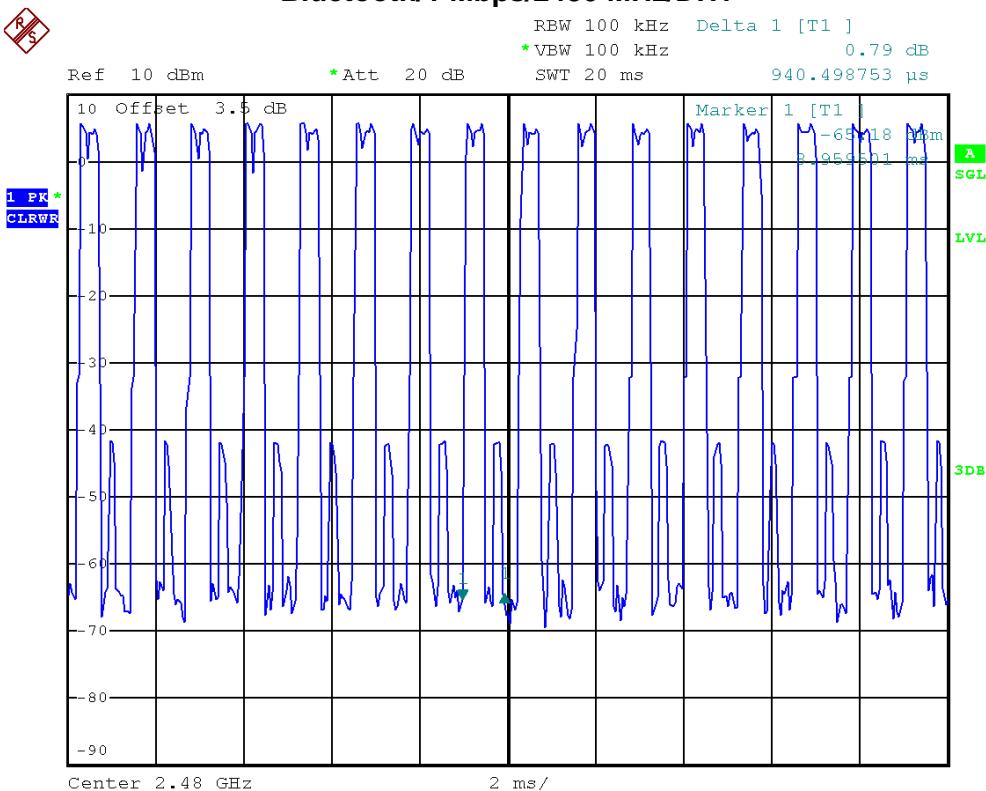




Bluetooth/1 Mbps/2480 MHz/DH3



Bluetooth/1 Mbps/2480 MHz/DH1

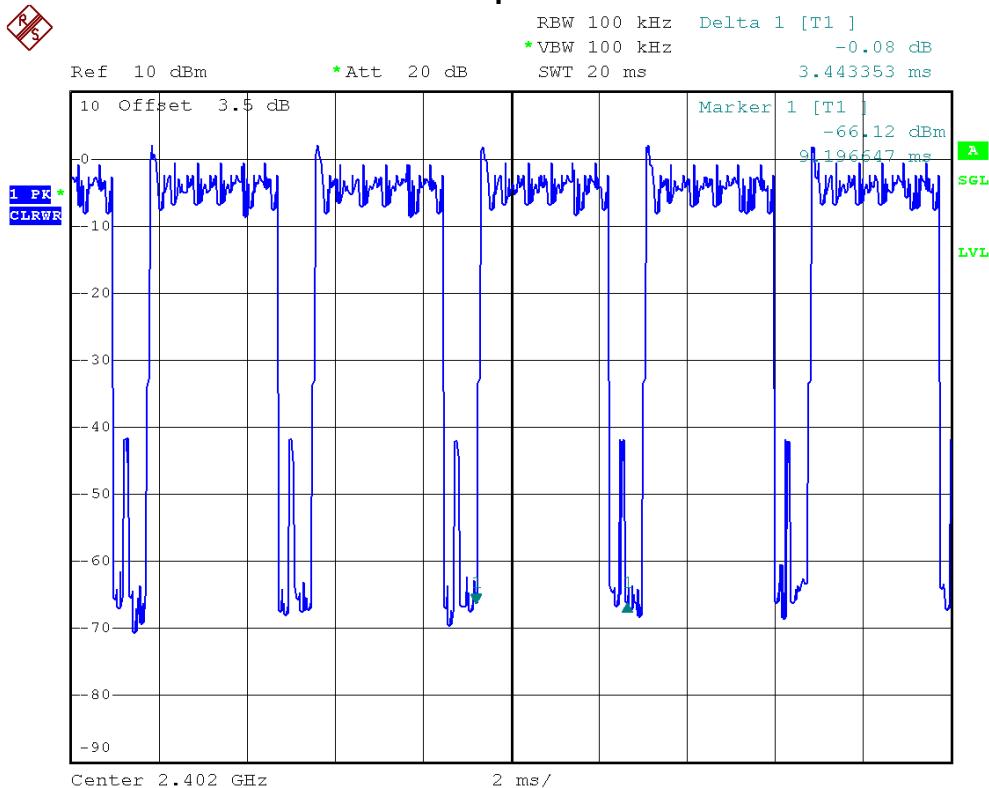




|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2402 MHz |                   |       |

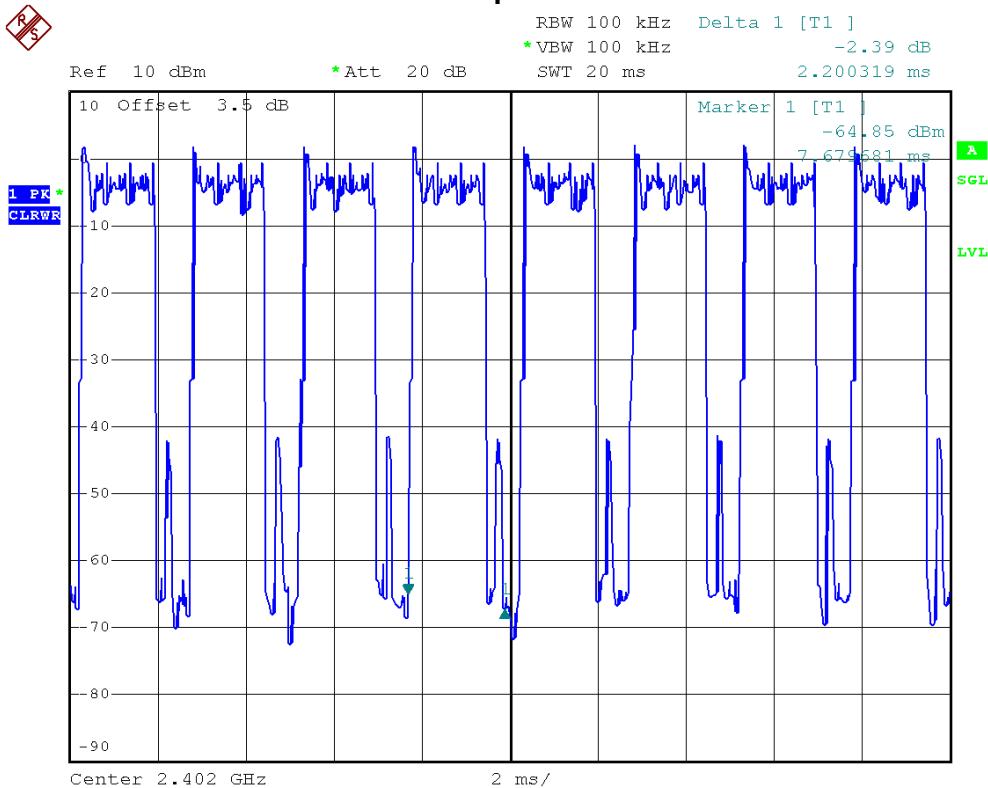
| Data Packet | Frequency | Pulse Duration (ms) | Dwell Time (s) | Limit (s) | Result |
|-------------|-----------|---------------------|----------------|-----------|--------|
| DH5         | 2402 MHz  | 3.4434              | 0.3673         | 0.4       | PASS   |
| DH3         | 2402 MHz  | 2.2003              | 0.3521         | 0.4       | PASS   |
| DH1         | 2402 MHz  | 0.9605              | 0.3074         | 0.4       | PASS   |

#### Bluetooth/3 Mbps/2402 MHz/DH5

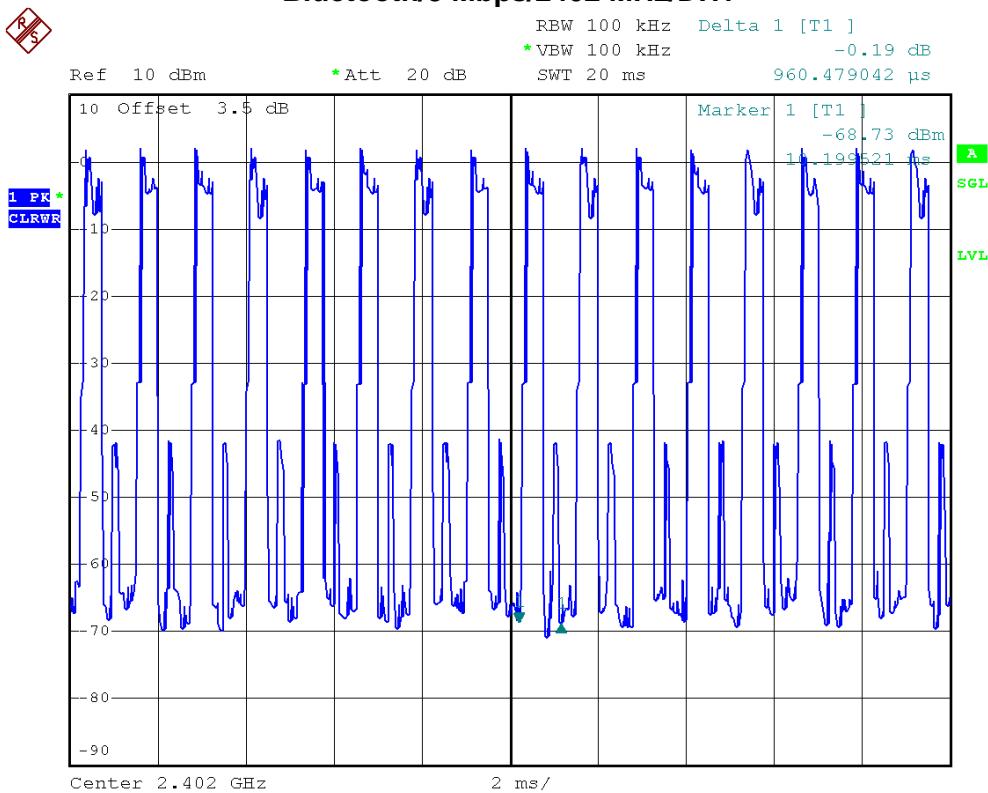




Bluetooth/3 Mbps/2402 MHz/DH3



Bluetooth/3 Mbps/2402 MHz/DH1

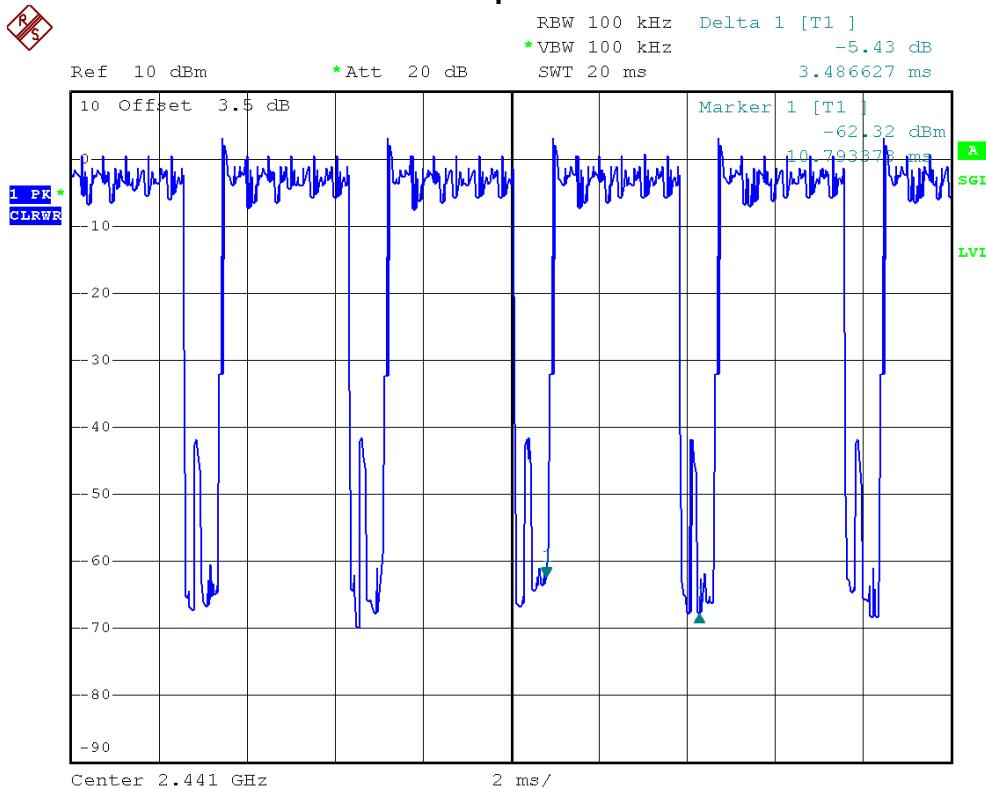




|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2441 MHz |                   |       |

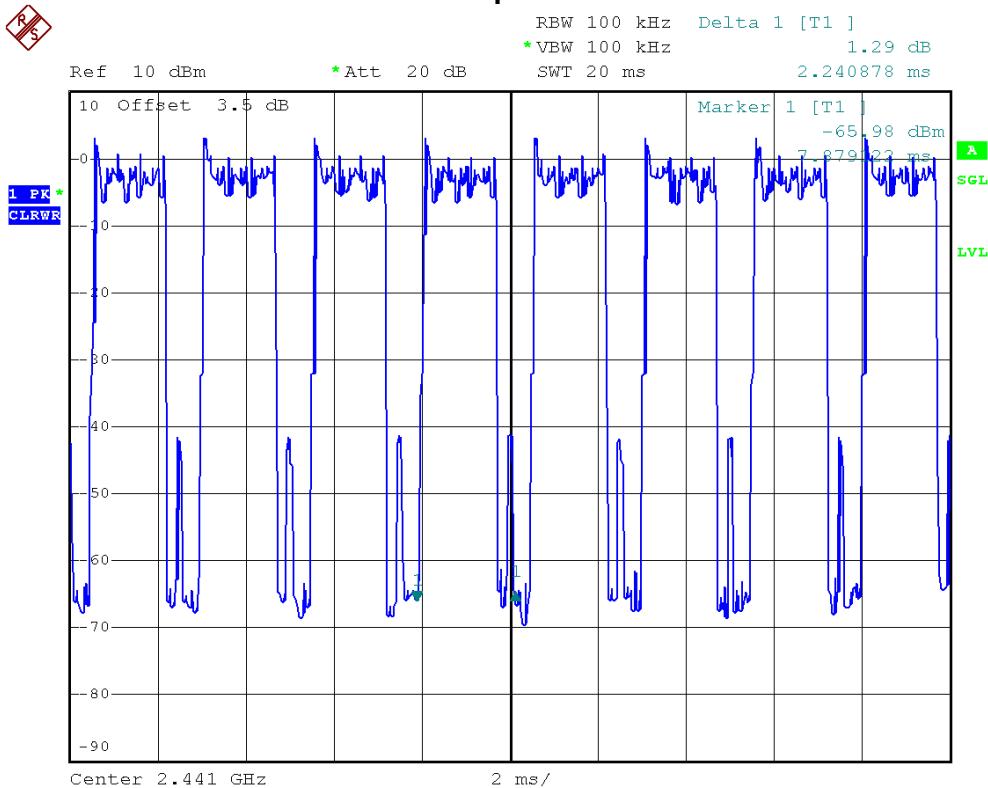
| Data Packet | Frequency | Pulse Duration (ms) | Dwell Time (s) | Limit (s) | Result |
|-------------|-----------|---------------------|----------------|-----------|--------|
| DH5         | 2441 MHz  | 3.4866              | 0.3719         | 0.4       | PASS   |
| DH3         | 2441 MHz  | 2.2409              | 0.3585         | 0.4       | PASS   |
| DH1         | 2441 MHz  | 0.9602              | 0.3073         | 0.4       | PASS   |

#### Bluetooth/3 Mbps/2441 MHz/DH5

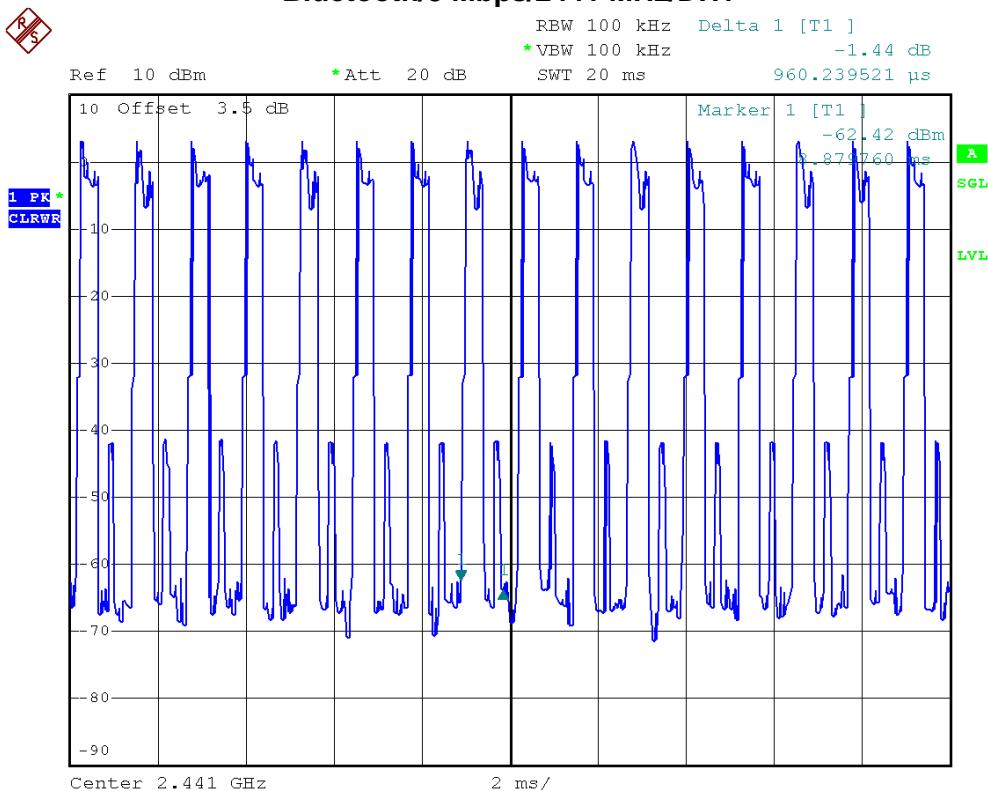




Bluetooth/3 Mbps/2441 MHz/DH3



Bluetooth/3 Mbps/2441 MHz/DH1

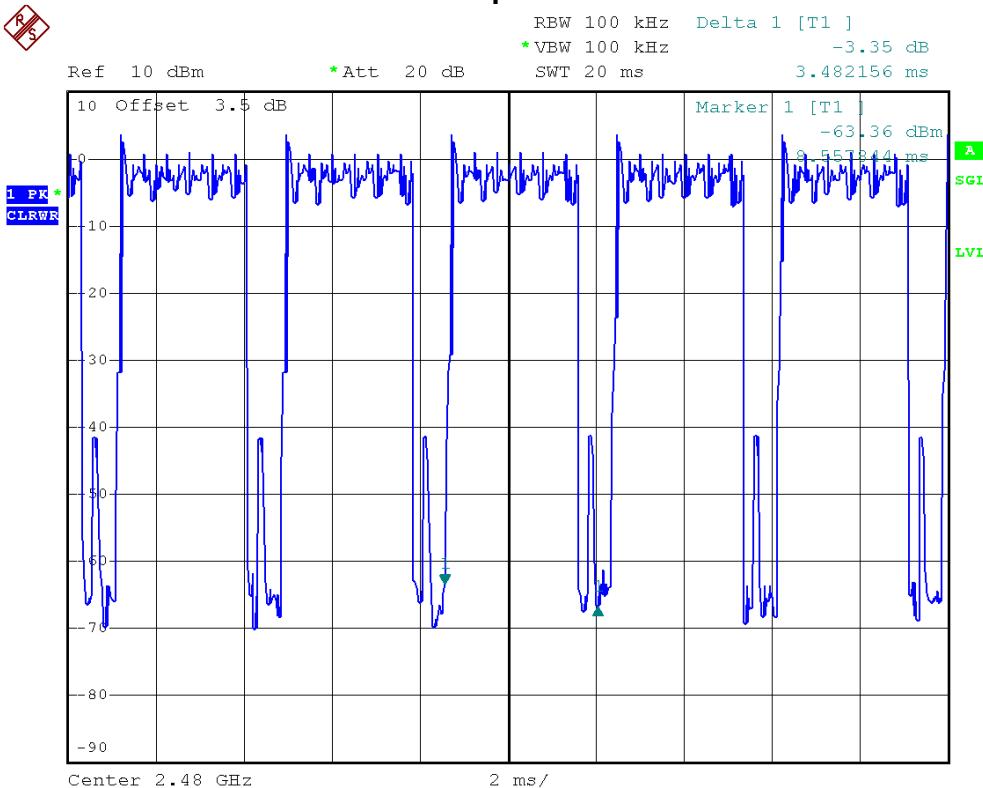




|              |                           |                   |       |
|--------------|---------------------------|-------------------|-------|
| E.U.T        | PDA Scanner               | Model Name        | HT682 |
| Temperature  | 26°C                      | Relative Humidity | 46%   |
| Test Voltage | AC 120V/60Hz              |                   |       |
| Test Mode    | Bluetooth/3 Mbps/2480 MHz |                   |       |

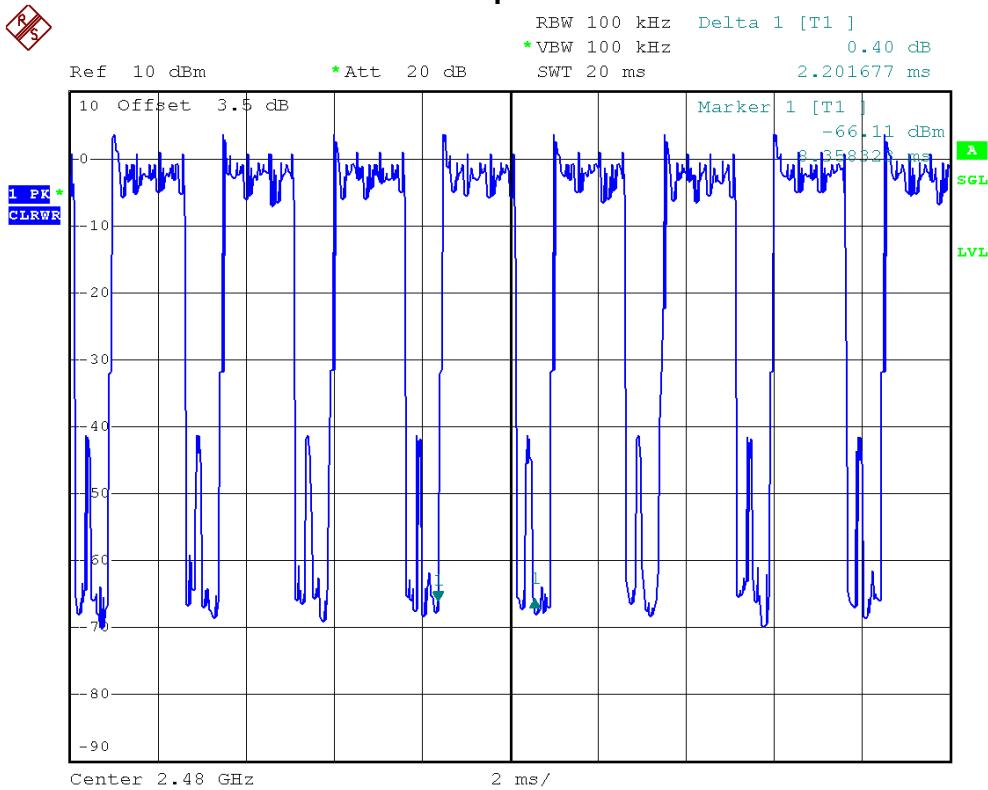
| Data Packet | Frequency | Pulse Duration (ms) | Dwell Time (s) | Limit (s) | Result |
|-------------|-----------|---------------------|----------------|-----------|--------|
| DH5         | 2480 MHz  | 3.4822              | 0.3714         | 0.4       | PASS   |
| DH3         | 2480 MHz  | 2.2017              | 0.3523         | 0.4       | PASS   |
| DH1         | 2480 MHz  | 0.9621              | 0.3079         | 0.4       | PASS   |

#### Bluetooth/3 Mbps/2480 MHz/DH5

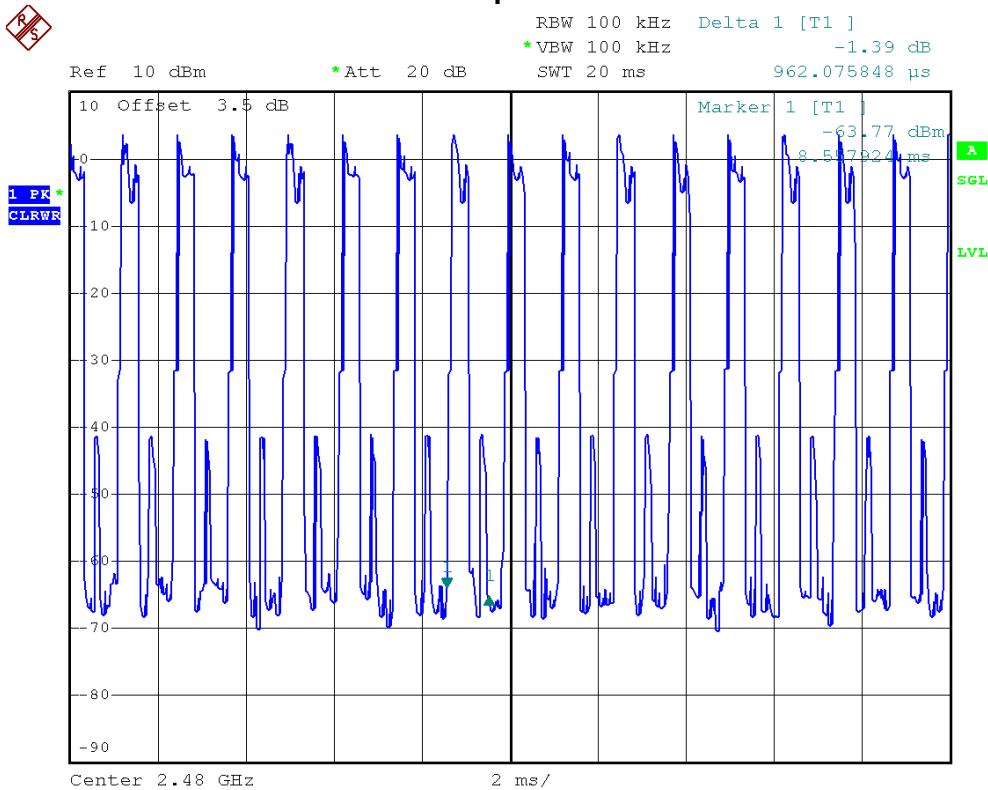




Bluetooth/3 Mbps/2480 MHz/DH3



Bluetooth/3 Mbps/2480 MHz/DH1





## 12 RF EXPOSURE COMPLIANCE

### 12.1 LIMIT

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

#### (A) Limits for Occupational / Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|--|--|
| 0.3-3.0               | 614                               | 1.63                              | (100)*                                   | 6  |
| 3.0-30                | 1842 / f                          | 4.89 / f                          | (900 / f)*                               | 6  |
| 30-300                | 61.4                              | 0.163                             | 1.0                                      | 6  |
| 300-1500              |                                   |                                   | F/300                                    | 6  |
| 1500-100,000          |                                   |                                   | 5  | 6  |

#### (B) Limits for General Population / Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|--|--|
| 0.3-1.34              | 614                               | 1.63                              | (100)*                                   | 30   |
| 1.34-30               | 824/f                             | 2.19/f                            | (180/f)*                                 | 30   |
| 30-300                | 27.5                              | 0.073                             | 0.2                                      | 30   |
| 300-1500              |                                   |                                   | F/1500                                   | 30   |
| 1500-100,000          |                                   |                                   | 1.0                                      | 30   |

NOTE: f = frequency in MHz ; \*Plane-wave equivalent power density.

### 12.2 MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment  | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|--------------------|--------------|----------|------------|------------------|
| 1    | Power Meter        | Anritsu      | ML2495A  | 1128008    | Jul. 22, 2013    |
| 2    | Power Meter Sensor | Anritsu      | MA2411B  | 1126001    | Jul. 22, 2013    |

NOTE: **N/A**: denotes No Model Name, No Serial No. or No Calibration specified.

### 12.3 MPE CALCULATION METHOD

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d}$$

**E** = Electric field (V/m)

**P** = Peak RF output power (W)

**G** = EUT Antenna numeric gain (numeric)

**d** = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained



#### **12.4 TEST SETUP LAYOUT**



#### **12.5 DEVIATION FROM TEST STANDARD**

No deviation

#### **12.6 EUT OPERATING CONDITIONS**

The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.

#### **12.7 TEST RESULTS**

The power is so low so there is no need for RF calculations.