

10.9 TX spurious emissions radiated

Description:

Measurement of the radiated spurious emissions in transmit mode. The measurement is performed at lowest, middle and highest channel.

Measurement:

| Measurement parameter | |
|-----------------------|---|
| Detector: | Quasi Peak below 1 GHz (alternative Peak) Peak above 1 GHz / RMS |
| Sweep time: | Auto |
| Resolution bandwidth: | F < 1 GHz: 100 kHz F > 1 GHz: 1 MHz |
| Video bandwidth: | F < 1 GHz: 100 kHz F > 1 GHz: ≥ 3 MHz /10 Hz |
| Span: | 30 MHz to 40 GHz |
| Trace-Mode: | Max Hold / Average with 100 counts + 20 log (1 / X) for duty cycle lower than 100 % |

Limits:

| TX Spurious Emissions Radiated | | |
|--------------------------------|-------------------------|----------------------|
| §15.209 | | |
| Frequency (MHz) | Field Strength (dBµV/m) | Measurement distance |
| 30 - 88 | 30.0 | 10 |
| 88 – 216 | 33.5 | 10 |
| 216 – 960 | 36.0 | 10 |
| Above 960 | 54.0 | 3 |
| §15.407 | | |
| Outside the restricted bands! | -27 dBm / MHz | |

Results: OFDM / a – mode

| TX Spurious Emissions Radiated [dBµV/m] / dBm | | | | | | | | |
|---|----------|-------------------|---------|----------|-------------------|---|----------|-------------------|
| OFDM a – mode | | | | | | | | |
| Lowest 5180 MHz | | | -/- | | | Highest 5240 MHz | | |
| F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] |
| For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | -/- | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | |
| For emissions above 1 GHz, please take a look at the plots. | | | -/- | | | For emissions above 1 GHz, please take a look at the plots. | | |
| | | | | | | | | |
| Measurement uncertainty | | | ± 3 dB | | | | | |

| TX Spurious Emissions Radiated [dBµV/m] / dBm | | | | | | | | |
|---|----------|-------------------|---------|----------|-------------------|---|----------|-------------------|
| OFDM a – mode | | | | | | | | |
| Lowest 5260 MHz | | | -/- | | | Highest 5320 MHz | | |
| F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] |
| For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | -/- | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | |
| For emissions above 1 GHz, please take a look at the plots. | | | -/- | | | For emissions above 1 GHz, please take a look at the plots. | | |
| | | | | | | | | |
| Measurement uncertainty | | | ± 3 dB | | | | | |

| TX Spurious Emissions Radiated [dBµV/m] / dBm | | | | | | | | |
|---|----------|-------------------|---|----------|-------------------|---|----------|-------------------|
| OFDM a – mode | | | | | | | | |
| Lowest 5500 MHz | | | Middle 5600 MHz | | | Highest 5700 MHz | | |
| F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] |
| For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | |
| For emissions above 1 GHz, please take a look at the plots. | | | For emissions above 1 GHz, please take a look at the plots. | | | For emissions above 1 GHz, please take a look at the plots. | | |
| | | | | | | | | |
| Measurement uncertainty | | | ± 3 dB | | | | | |

Result: Passed

Results: OFDM / n/ac – modeHT20

| TX Spurious Emissions Radiated [dBµV/m] / dBm | | | | | | | | |
|---|----------|-------------------|---------|----------|-------------------|---|----------|-------------------|
| OFDM n/ac – mode HT20 | | | | | | | | |
| Lowest 5180 MHz | | | -/- | | | Highest 5240 MHz | | |
| F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] |
| For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | -/- | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | |
| For emissions above 1 GHz, please take a look at the plots. | | | -/- | | | For emissions above 1 GHz, please take a look at the plots. | | |
| | | | | | | | | |
| Measurement uncertainty | | | ± 3 dB | | | | | |

| TX Spurious Emissions Radiated [dBµV/m] / dBm | | | | | | | | |
|---|----------|-------------------|---------|----------|-------------------|---|----------|-------------------|
| OFDM n/ac – mode HT20 | | | | | | | | |
| Lowest 5260 MHz | | | -/- | | | Highest 5320 MHz | | |
| F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] |
| For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | -/- | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | |
| For emissions above 1 GHz, please take a look at the plots. | | | -/- | | | For emissions above 1 GHz, please take a look at the plots. | | |
| | | | | | | | | |
| Measurement uncertainty | | | ± 3 dB | | | | | |

| TX Spurious Emissions Radiated [dBµV/m] / dBm | | | | | | | | |
|---|----------|-------------------|---|----------|-------------------|---|----------|-------------------|
| OFDM n/ac – mode HT20 | | | | | | | | |
| Lowest 5500 MHz | | | Middle 5600 MHz | | | Highest 5700 MHz | | |
| F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] |
| For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | |
| For emissions above 1 GHz, please take a look at the plots. | | | For emissions above 1 GHz, please take a look at the plots. | | | For emissions above 1 GHz, please take a look at the plots. | | |
| | | | | | | | | |
| Measurement uncertainty | | | ± 3 dB | | | | | |

Result: Passed

Results: OFDM / n/ac – modeHT40

| TX Spurious Emissions Radiated [dB μ V/m] / dBm | | | | | | | | |
|---|----------|-------------------------|---|----------|-------------------------|---|----------|-------------------------|
| OFDM n/ac – mode HT40 | | | | | | | | |
| Lowest 5190 MHz | | | Middle 5230 MHz | | | Highest 5270 MHz | | |
| F [MHz] | Detector | Level [dB μ V/m] | F [MHz] | Detector | Level [dB μ V/m] | F [MHz] | Detector | Level [dB μ V/m] |
| For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | |
| For emissions above 1 GHz, please take a look at the plots. | | | For emissions above 1 GHz, please take a look at the plots. | | | For emissions above 1 GHz, please take a look at the plots. | | |
| | | | | | | | | |
| Measurement uncertainty | | | ± 3 dB | | | | | |

| TX Spurious Emissions Radiated [dB μ V/m] / dBm | | | | | | | | |
|---|----------|-------------------------|---|----------|-------------------------|---|----------|-------------------------|
| OFDM n/ac – mode HT40 | | | | | | | | |
| Lowest 5310 MHz | | | Middle 5510 MHz | | | Highest 5590 MHz | | |
| F [MHz] | Detector | Level [dB μ V/m] | F [MHz] | Detector | Level [dB μ V/m] | F [MHz] | Detector | Level [dB μ V/m] |
| For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | |
| For emissions above 1 GHz, please take a look at the plots. | | | For emissions above 1 GHz, please take a look at the plots. | | | For emissions above 1 GHz, please take a look at the plots. | | |
| | | | | | | | | |
| Measurement uncertainty | | | ± 3 dB | | | | | |

Results: OFDM / ac – modeHT80

| TX Spurious Emissions Radiated [dBµV/m] / dBm | | | | | | | | |
|---|----------|-------------------|---------|----------|-------------------|---|----------|-------------------|
| OFDM ac – mode HT80 | | | | | | | | |
| Lowest 5210 MHz | | | | | | Highest 5290 MHz | | |
| F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] |
| For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | -/- | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | |
| For emissions above 1 GHz, please take a look at the plots. | | | -/- | | | For emissions above 1 GHz, please take a look at the plots. | | |
| | | | | | | | | |
| Measurement uncertainty | | | ± 3 dB | | | | | |

| TX Spurious Emissions Radiated [dBµV/m] / dBm | | | | | | | | |
|---|----------|-------------------|---------|----------|-------------------|---|----------|-------------------|
| OFDM ac – mode HT80 | | | | | | | | |
| Lowest 5530 MHz | | | | | | Highest 5610 MHz | | |
| F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] | F [MHz] | Detector | Level [dBµV/m] |
| For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | | -/- | | | For emissions below 1 GHz please take a look at the table below the 1 GHz plot. | | |
| For emissions above 1 GHz, please take a look at the plots. | | | -/- | | | For emissions above 1 GHz, please take a look at the plots. | | |
| | | | | | | | | |
| Measurement uncertainty | | | ± 3 dB | | | | | |

Result: Passed

Plots: OFDM / a – mode

Plot 1: 30 MHz to 1 GHz, 5180 MHz, vertical & horizontal polarization

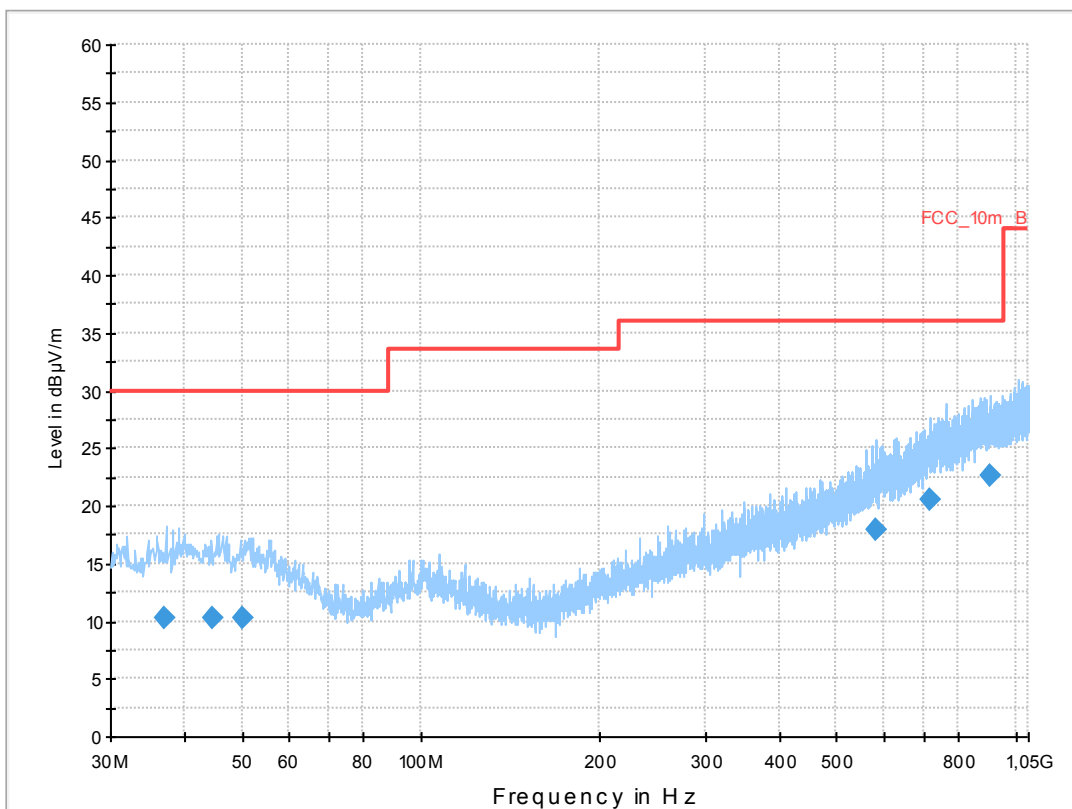
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN a-mode TX Ch 36
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

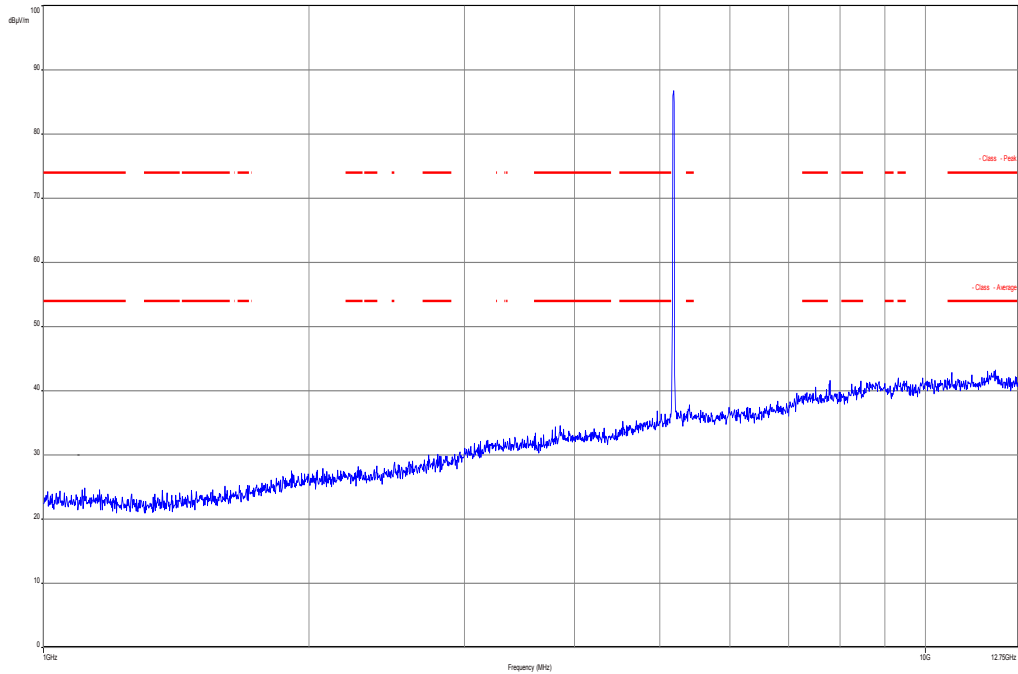
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



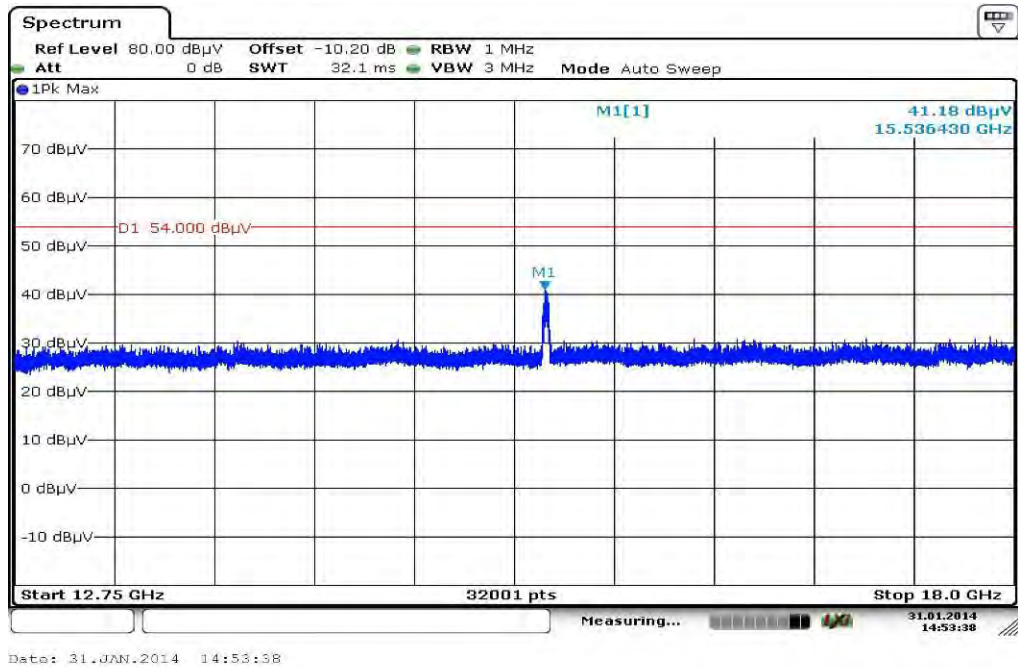
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 36.907200 | 10.2 | 1000.0 | 120.000 | 170.0 | H | 178.0 | 13.2 | 19.8 | 30.0 | |
| 44.713500 | 10.3 | 1000.0 | 120.000 | 170.0 | V | 280.0 | 13.3 | 19.7 | 30.0 | |
| 49.955100 | 10.2 | 1000.0 | 120.000 | 170.0 | H | 261.0 | 13.4 | 19.8 | 30.0 | |
| 583.635150 | 17.9 | 1000.0 | 120.000 | 170.0 | V | 280.0 | 20.3 | 18.1 | 36.0 | |
| 719.908500 | 20.5 | 1000.0 | 120.000 | 170.0 | H | 88.0 | 23.0 | 15.5 | 36.0 | |
| 909.434100 | 22.6 | 1000.0 | 120.000 | 170.0 | V | 265.0 | 25.2 | 13.4 | 36.0 | |

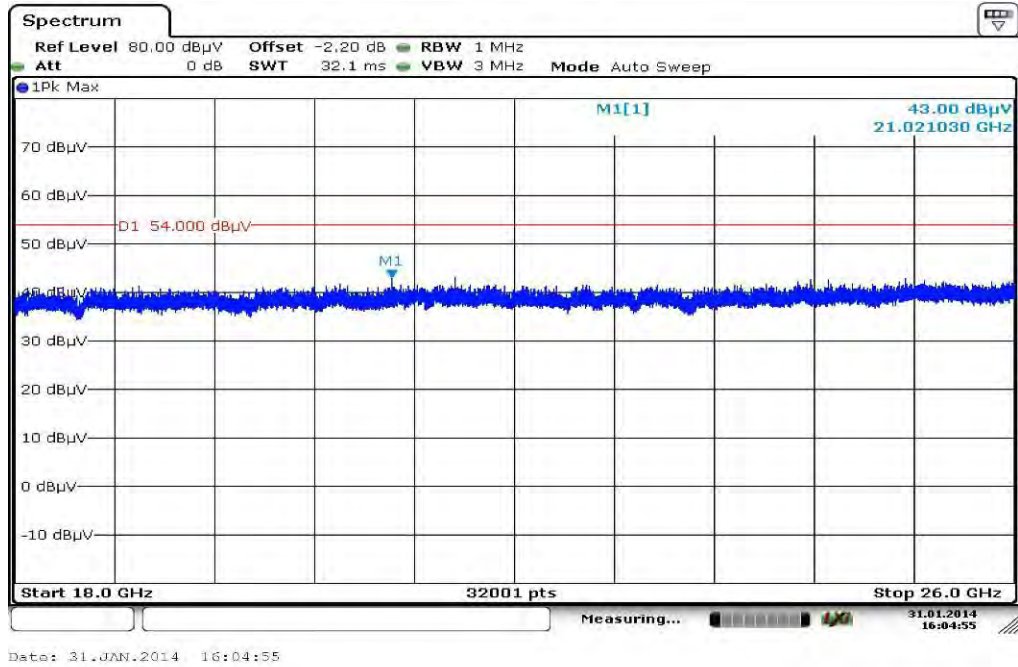
Plot 2: 1 GHz to 12.75 GHz, 5180 MHz, vertical & horizontal polarization



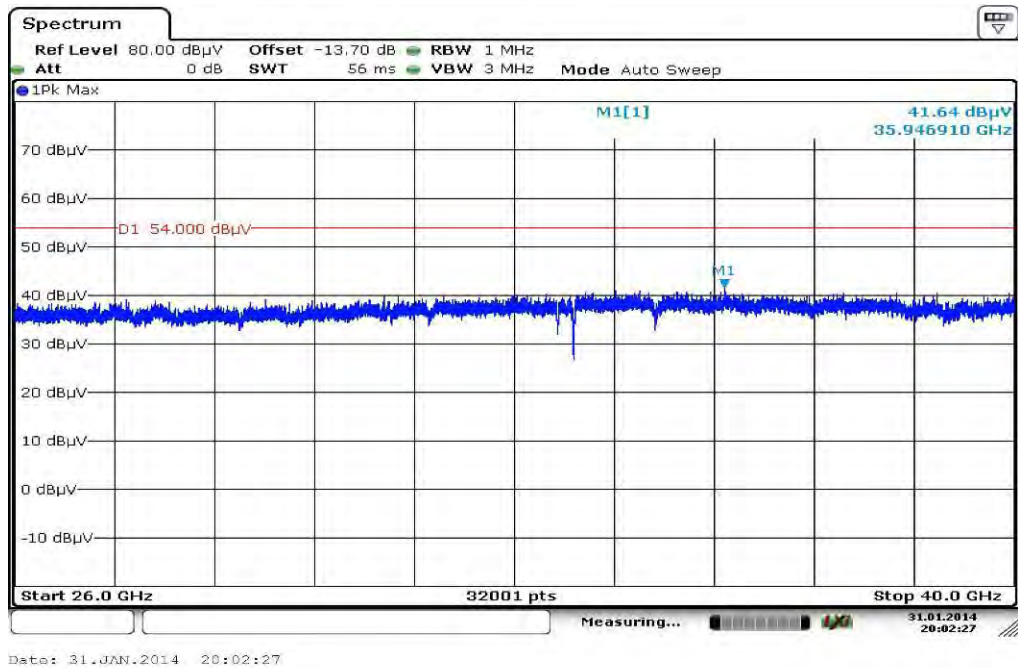
Plot 3: 12 GHz to 18 GHz, 5180 MHz, vertical & horizontal polarization



Plot 4: 18 GHz to 26 GHz, 5180 MHz, vertical & horizontal polarization



Plot 5: 26 GHz to 40 GHz, 5180 MHz, vertical & horizontal polarization



Plot 6: 30 MHz to 1 GHz, 5240 MHz, vertical & horizontal polarization

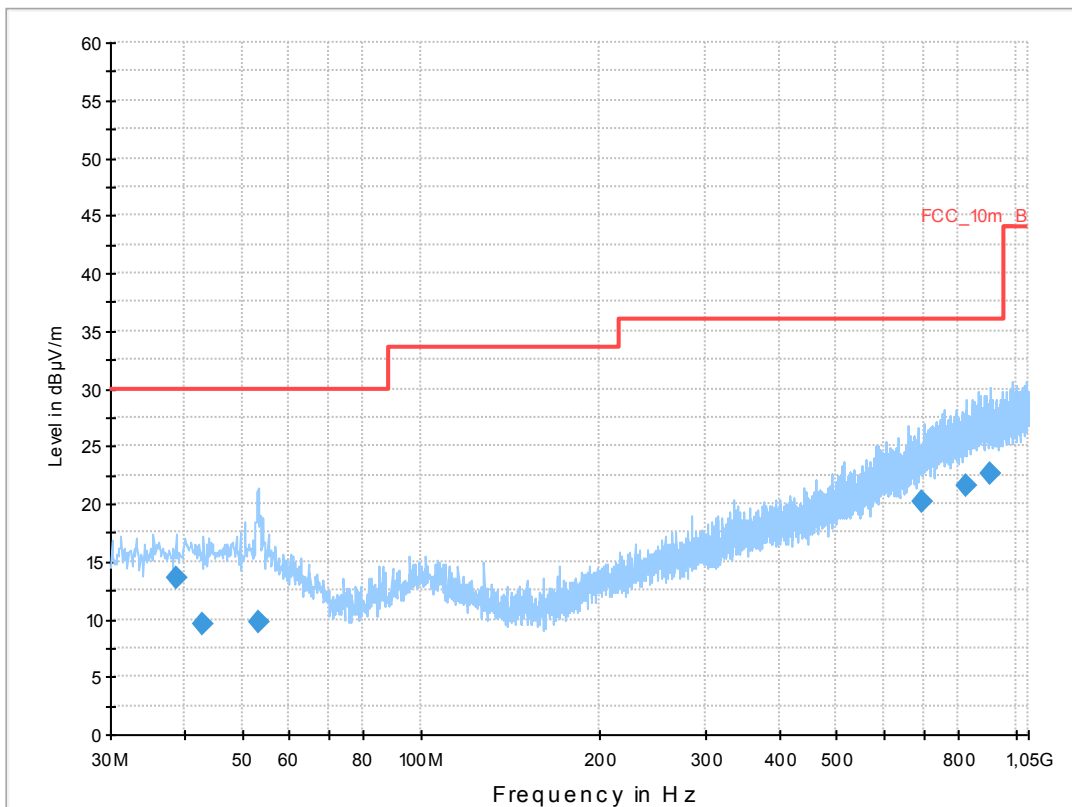
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN a-mode TX Ch 48
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

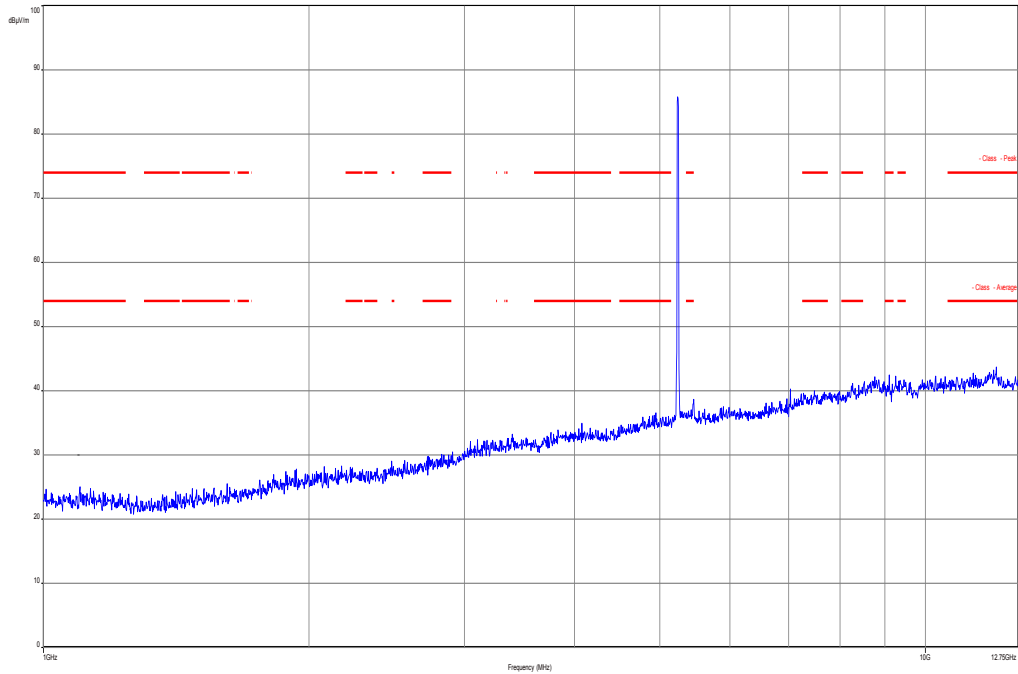
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



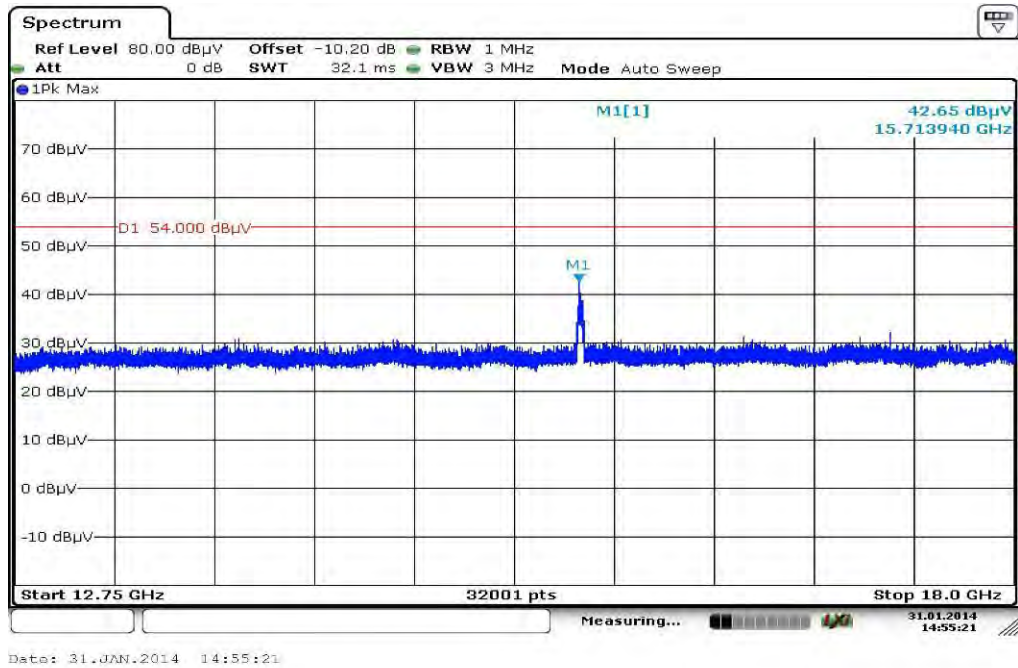
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 38.691900 | 13.7 | 1000.0 | 120.000 | 98.0 | V | 265.0 | 13.3 | 16.4 | 30.0 | |
| 42.820350 | 9.6 | 1000.0 | 120.000 | 170.0 | V | 178.0 | 13.3 | 20.4 | 30.0 | |
| 53.404350 | 9.8 | 1000.0 | 120.000 | 104.0 | V | 280.0 | 13.0 | 20.2 | 30.0 | |
| 698.529450 | 20.1 | 1000.0 | 120.000 | 133.0 | H | 2.0 | 22.5 | 15.9 | 36.0 | |
| 823.011300 | 21.6 | 1000.0 | 120.000 | 151.0 | H | 100.0 | 24.2 | 14.4 | 36.0 | |
| 906.410100 | 22.7 | 1000.0 | 120.000 | 170.0 | V | 261.0 | 25.2 | 13.3 | 36.0 | |

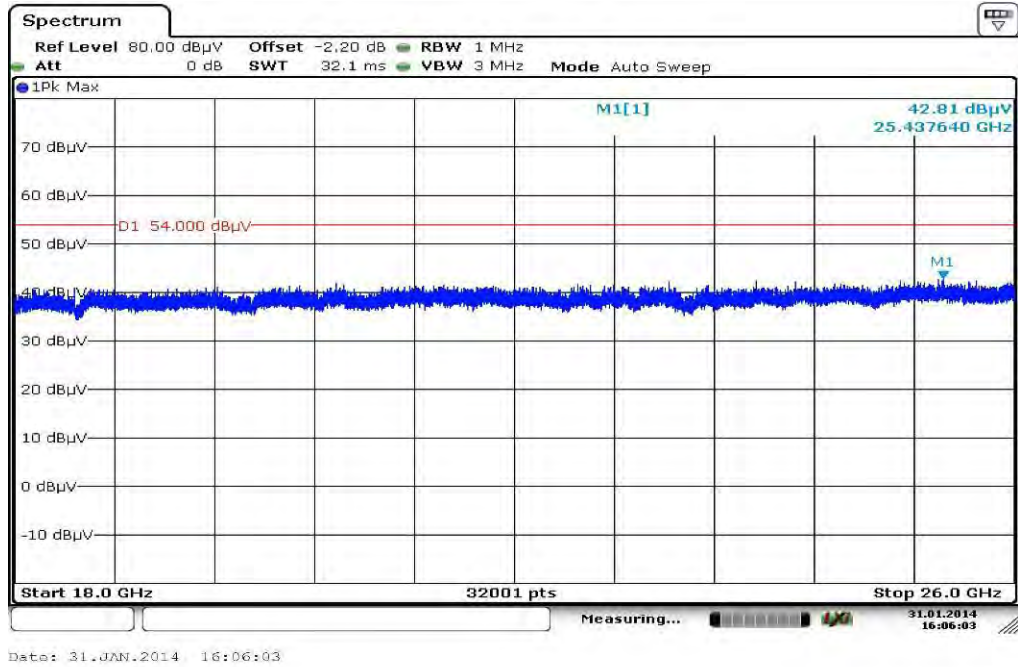
Plot 7: 1 GHz to 12.75 GHz, 5240 MHz, vertical & horizontal polarization



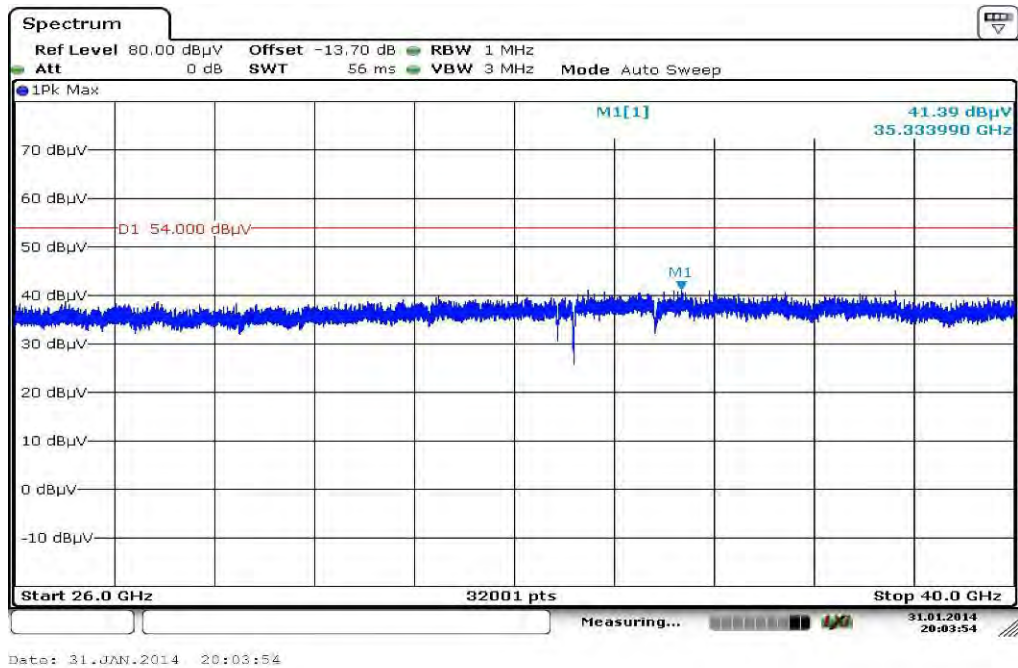
Plot 8: 12 GHz to 18 GHz, 5240 MHz, vertical & horizontal polarization



Plot 9: 18 GHz to 26 GHz, 5240 MHz, vertical & horizontal polarization



Plot 10: 26 GHz to 40 GHz, 5240 MHz, vertical & horizontal polarization



Plot 11: 30 MHz to 1 GHz, 5260 MHz, vertical & horizontal polarization

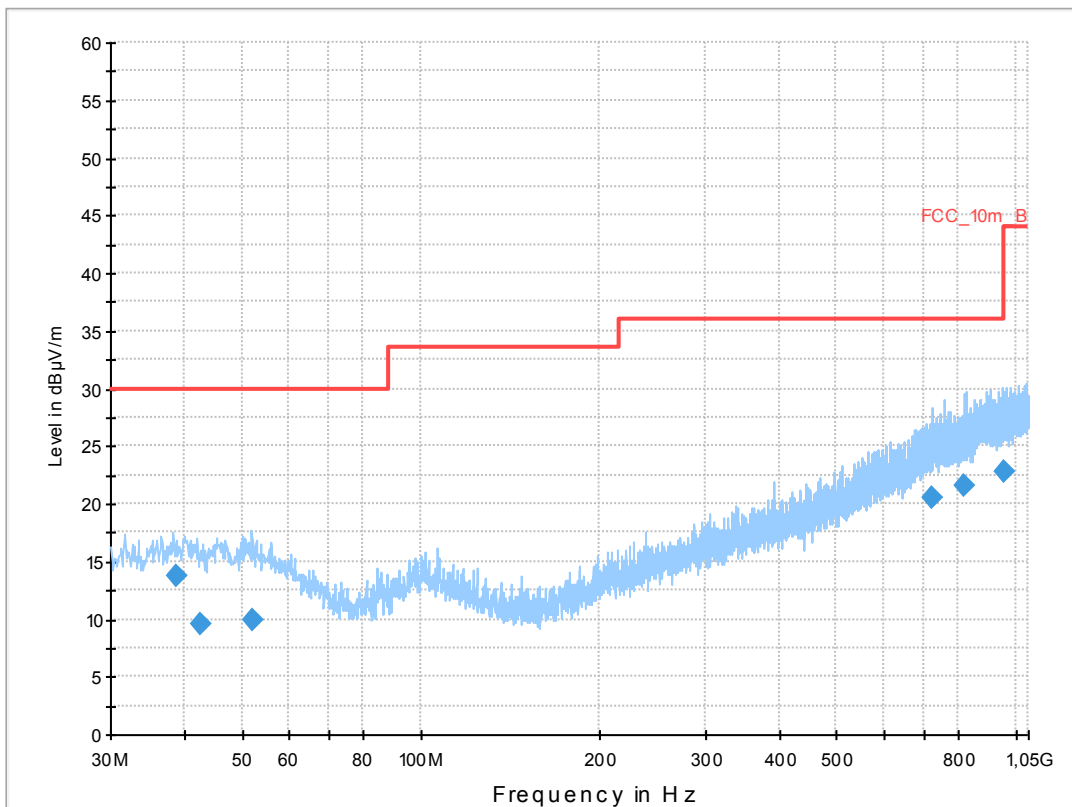
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN a-mode TX Ch 52
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

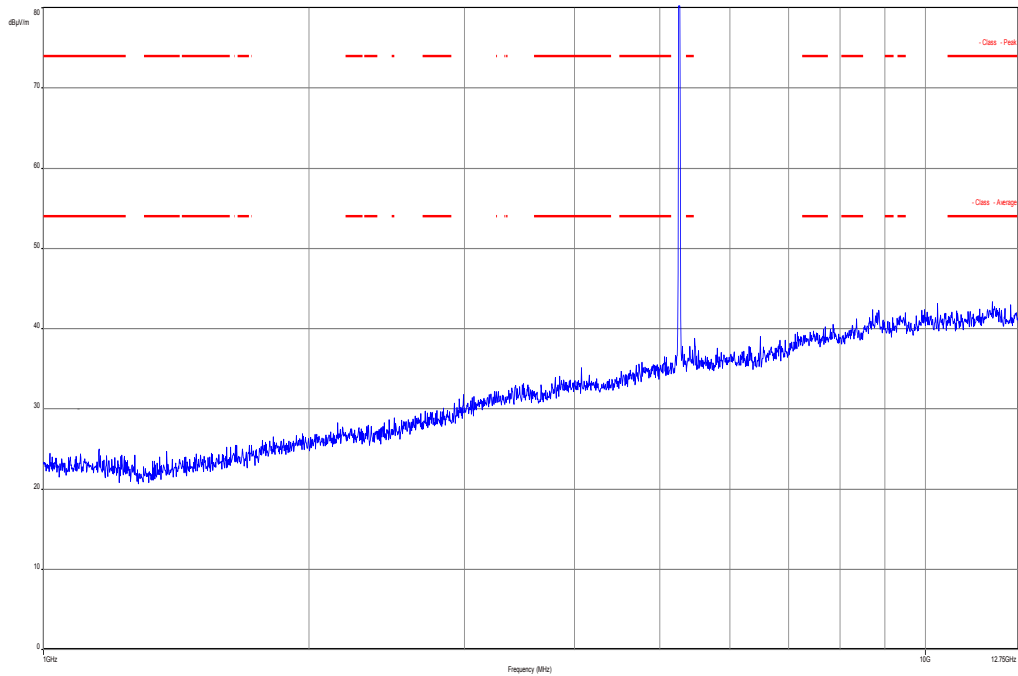
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



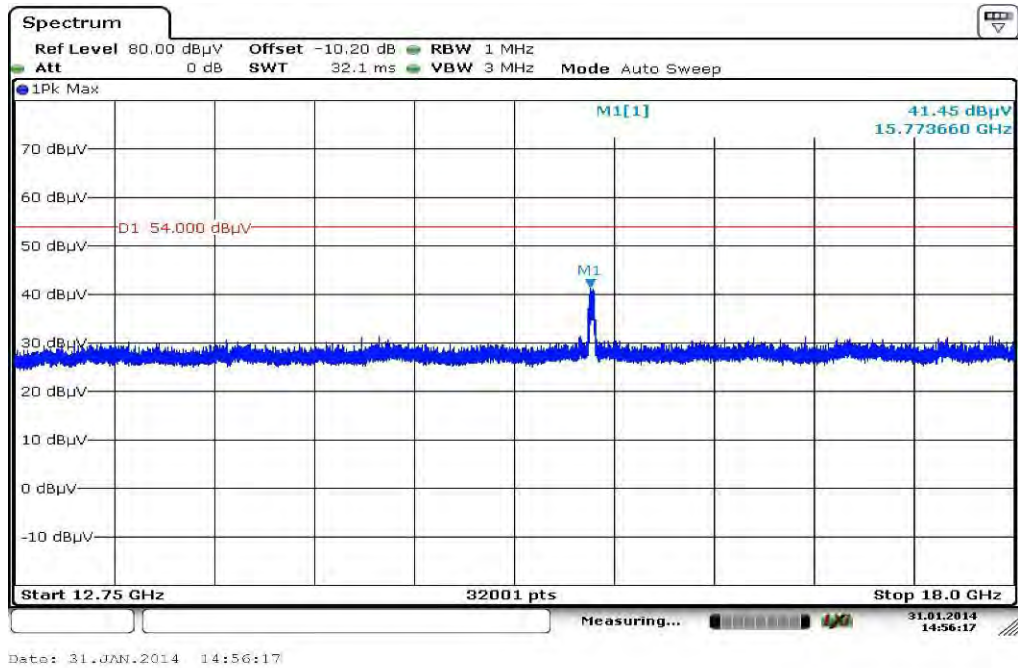
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 38.704200 | 13.7 | 1000.0 | 120.000 | 120.0 | V | 272.0 | 13.3 | 16.3 | 30.0 | |
| 42.529950 | 9.6 | 1000.0 | 120.000 | 170.0 | H | 100.0 | 13.3 | 20.4 | 30.0 | |
| 52.210500 | 9.9 | 1000.0 | 120.000 | 98.0 | H | 260.0 | 13.2 | 20.1 | 30.0 | |
| 724.640550 | 20.6 | 1000.0 | 120.000 | 170.0 | V | 269.0 | 23.1 | 15.4 | 36.0 | |
| 819.838800 | 21.6 | 1000.0 | 120.000 | 170.0 | V | 272.0 | 24.1 | 14.4 | 36.0 | |
| 953.181900 | 22.8 | 1000.0 | 120.000 | 133.0 | H | 10.0 | 25.4 | 13.2 | 36.0 | |

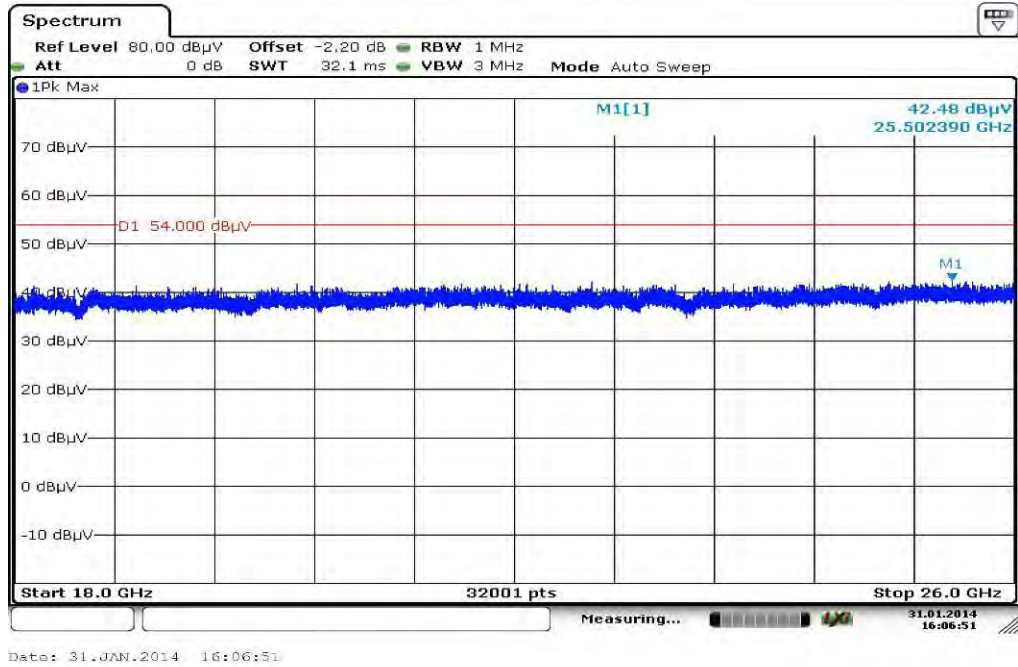
Plot 12: 1 GHz to 12.75 GHz, 5260 MHz, vertical & horizontal polarization



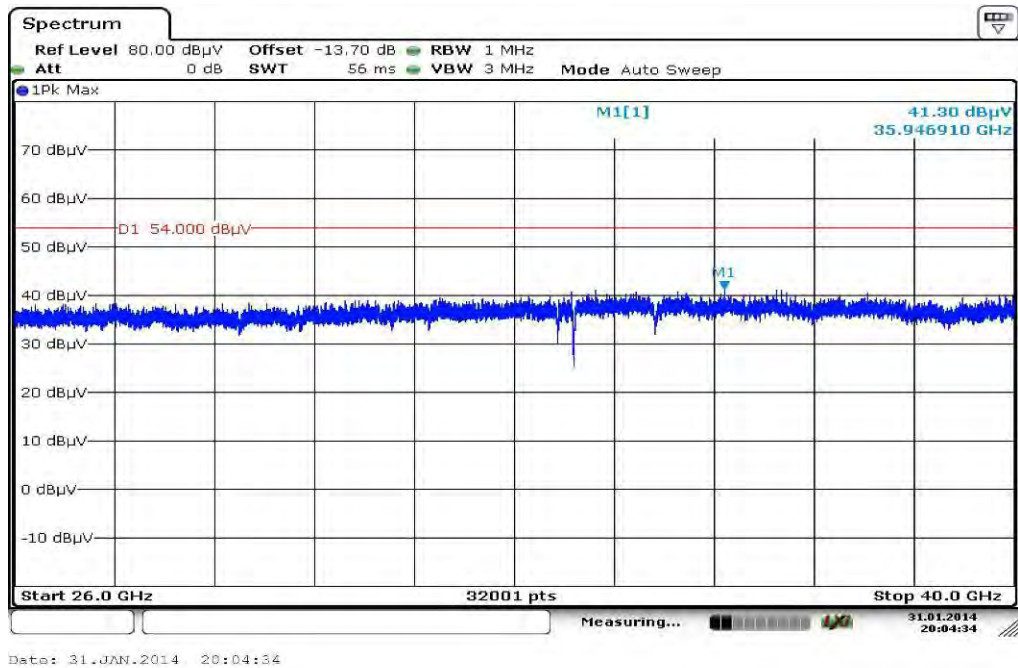
Plot 13: 12 GHz to 18 GHz, 5260 MHz, vertical & horizontal polarization



Plot 14: 18 GHz to 26 GHz, 5260 MHz, vertical & horizontal polarization



Plot 15: 26 GHz to 40 GHz, 5260 MHz, vertical & horizontal polarization



Plot 16: 30 MHz to 1 GHz, 5320 MHz, vertical & horizontal polarization

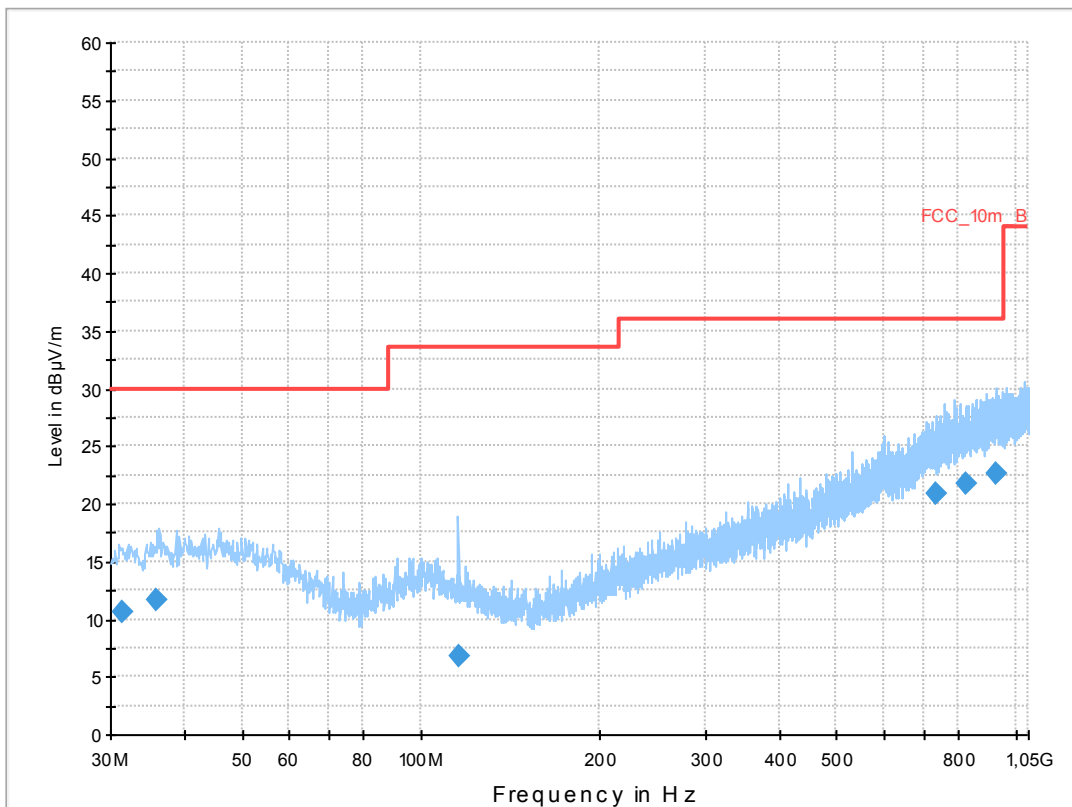
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN a-mode TX Ch 64
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

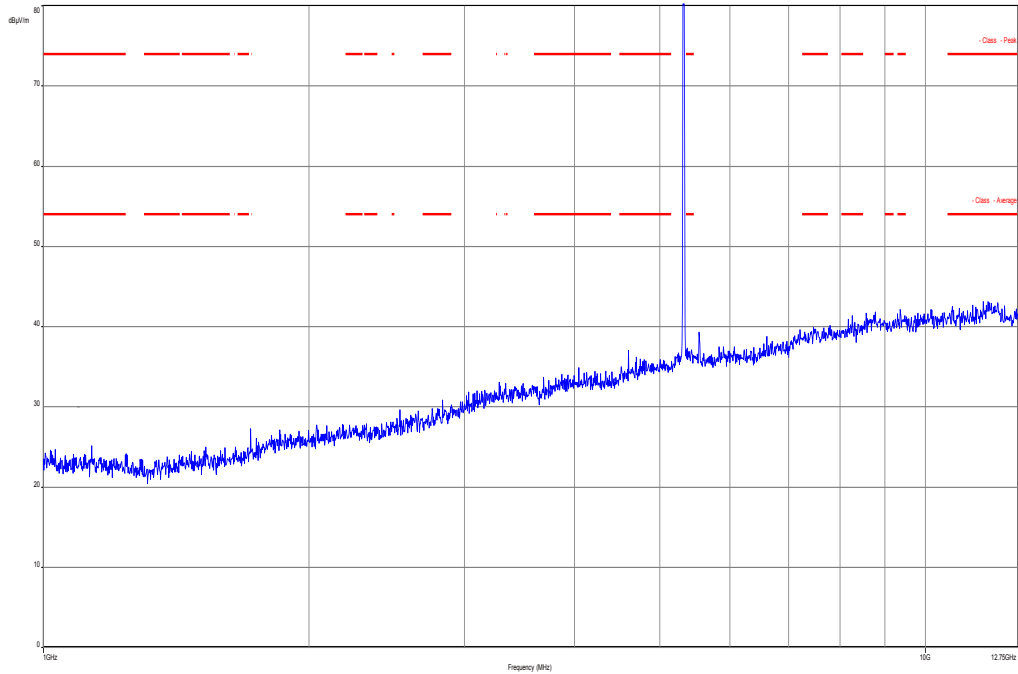
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



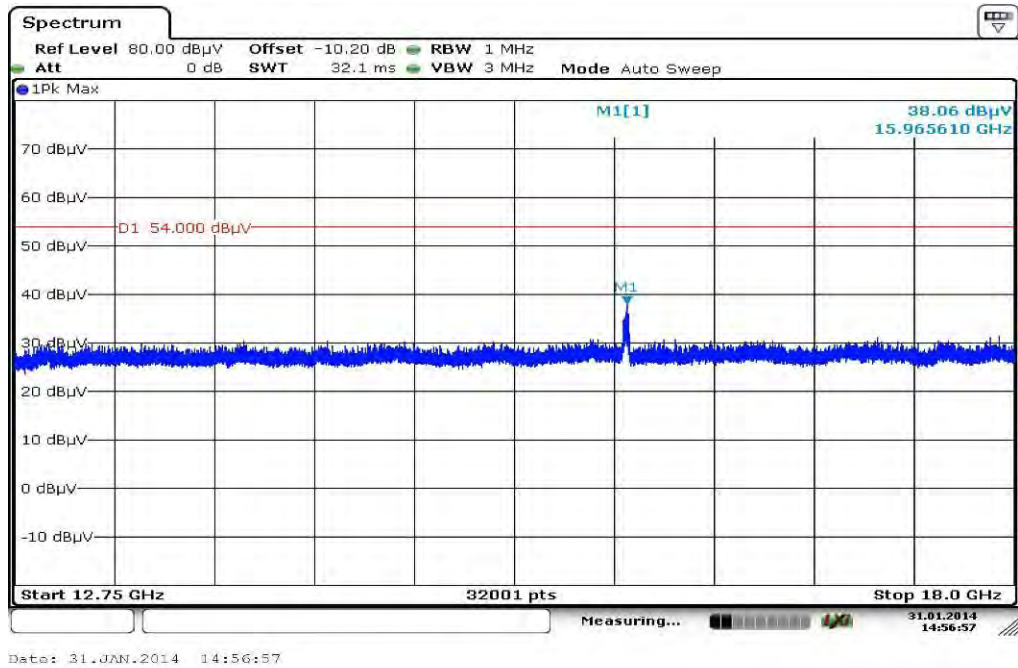
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 31.409550 | 10.7 | 1000.0 | 120.000 | 160.0 | V | 100.0 | 12.7 | 19.3 | 30.0 | |
| 35.980350 | 11.6 | 1000.0 | 120.000 | 170.0 | V | 92.0 | 13.1 | 18.4 | 30.0 | |
| 115.587300 | 6.7 | 1000.0 | 120.000 | 153.0 | V | 100.0 | 10.6 | 26.8 | 33.5 | |
| 734.169300 | 20.9 | 1000.0 | 120.000 | 170.0 | H | 10.0 | 23.3 | 15.1 | 36.0 | |
| 825.537150 | 21.8 | 1000.0 | 120.000 | 170.0 | H | -5.0 | 24.2 | 14.2 | 36.0 | |
| 924.291750 | 22.7 | 1000.0 | 120.000 | 170.0 | H | 265.0 | 25.3 | 13.3 | 36.0 | |

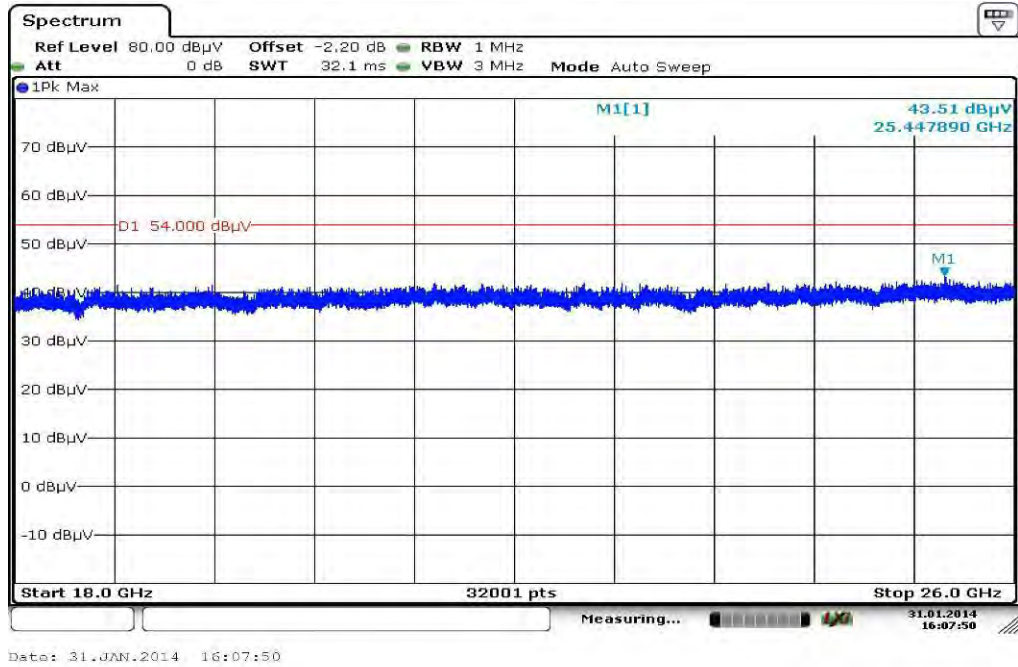
Plot 17: 1 GHz to 12.75 GHz, 5320 MHz, vertical & horizontal polarization



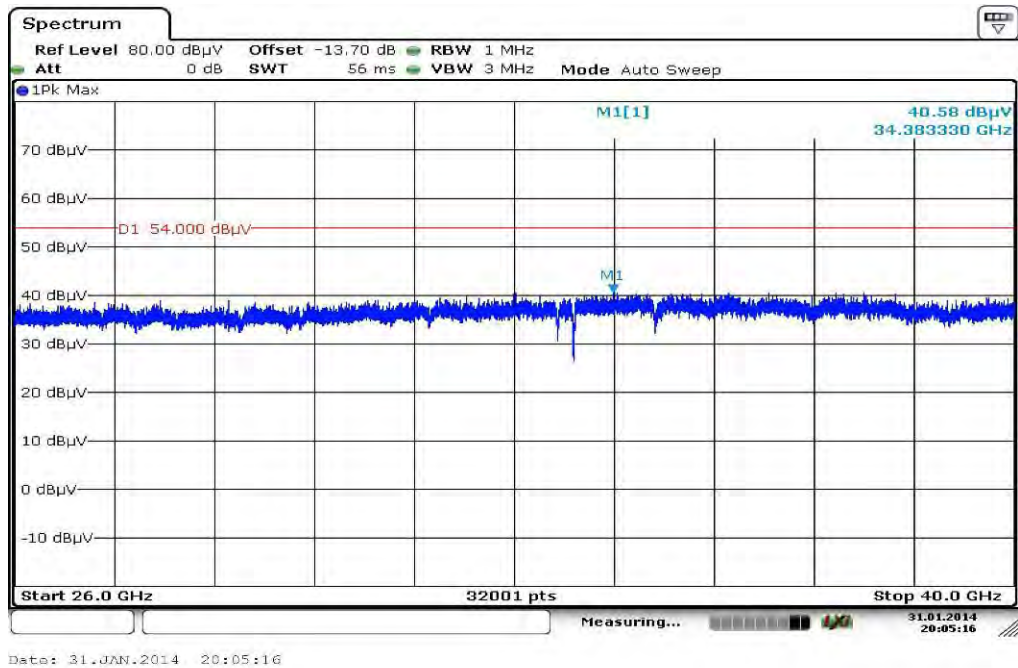
Plot 18: 12 GHz to 18 GHz, 5320 MHz, vertical & horizontal polarization



Plot 19: 18 GHz to 26 GHz, 5320 MHz, vertical & horizontal polarization



Plot 20: 26 GHz to 40 GHz, 5320 MHz, vertical & horizontal polarization



Plot 21: 30 MHz to 1 GHz, 5500 MHz, vertical & horizontal polarization

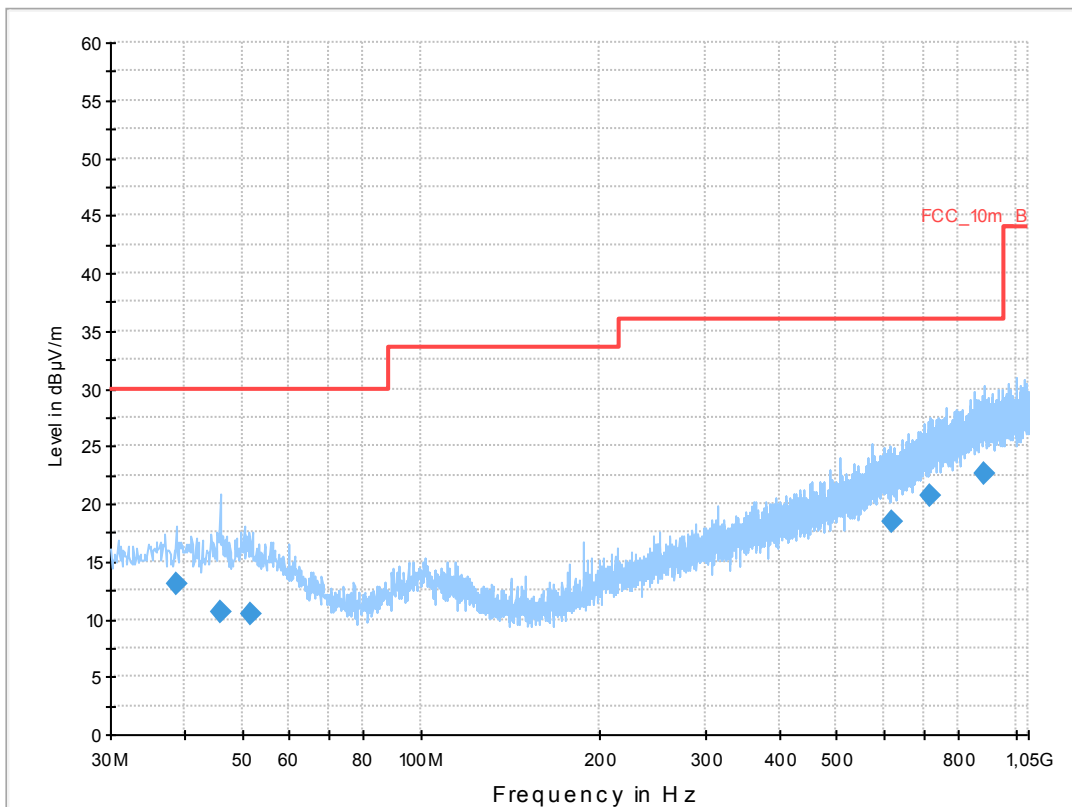
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN a-mode TX Ch 100
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

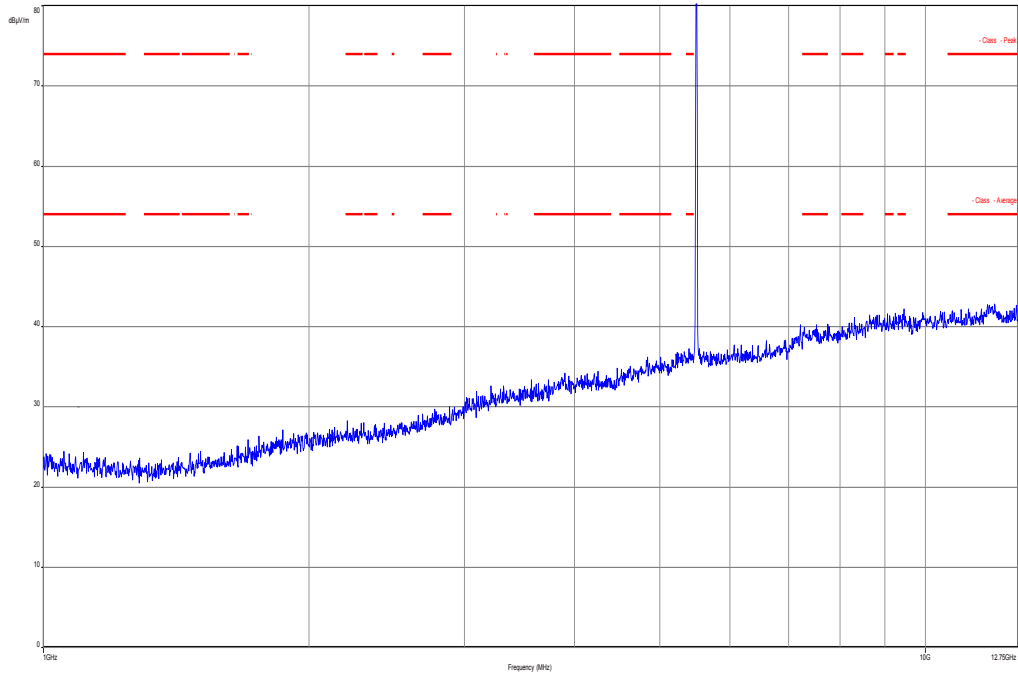
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



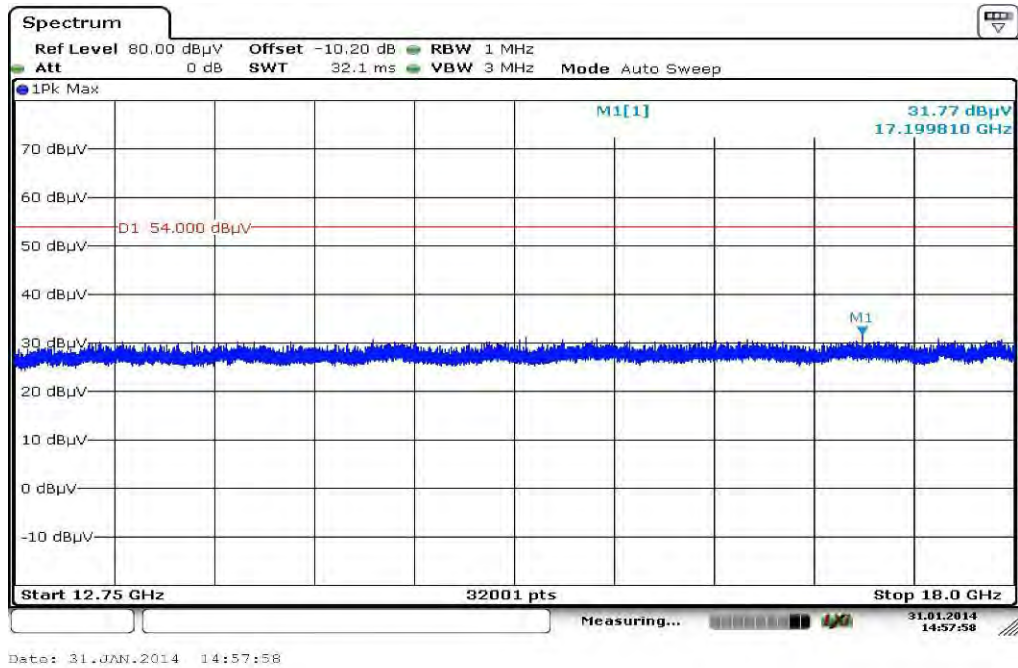
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 38.728350 | 13.1 | 1000.0 | 120.000 | 133.0 | V | 2.0 | 13.3 | 16.9 | 30.0 | |
| 45.834450 | 10.7 | 1000.0 | 120.000 | 162.0 | H | 170.0 | 13.3 | 19.3 | 30.0 | |
| 51.610050 | 10.4 | 1000.0 | 120.000 | 170.0 | H | 100.0 | 13.2 | 19.6 | 30.0 | |
| 617.102700 | 18.5 | 1000.0 | 120.000 | 104.0 | V | 272.0 | 20.9 | 17.5 | 36.0 | |
| 720.000000 | 20.7 | 1000.0 | 120.000 | 170.0 | V | 92.0 | 23.0 | 15.3 | 36.0 | |
| 884.565300 | 22.6 | 1000.0 | 120.000 | 170.0 | H | 2.0 | 25.0 | 13.4 | 36.0 | |

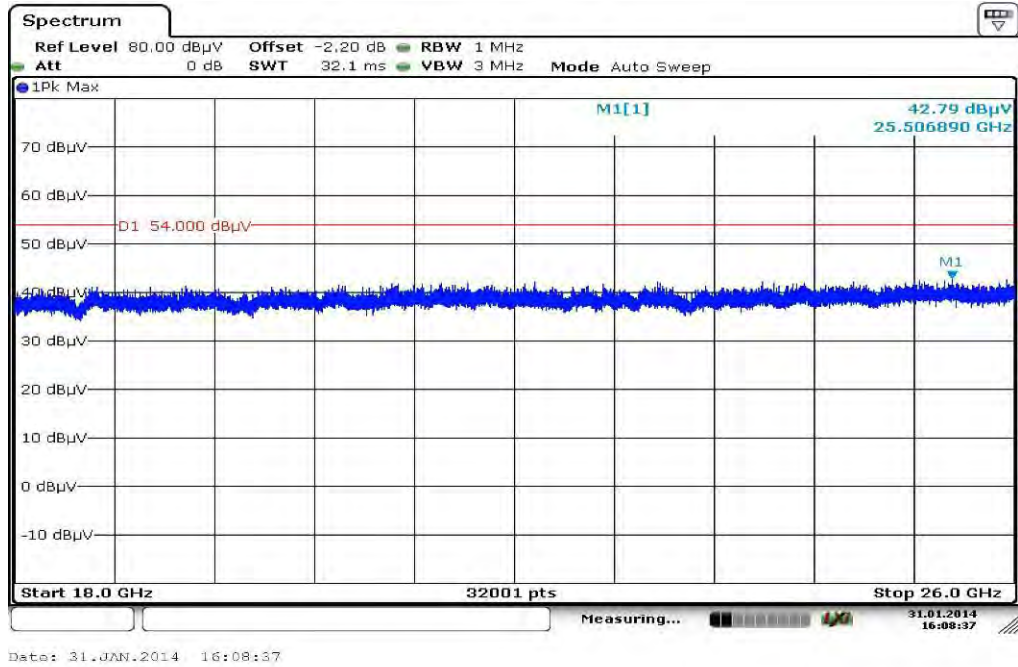
Plot 22: 1 GHz to 12.75 GHz, 5500 MHz, vertical & horizontal polarization



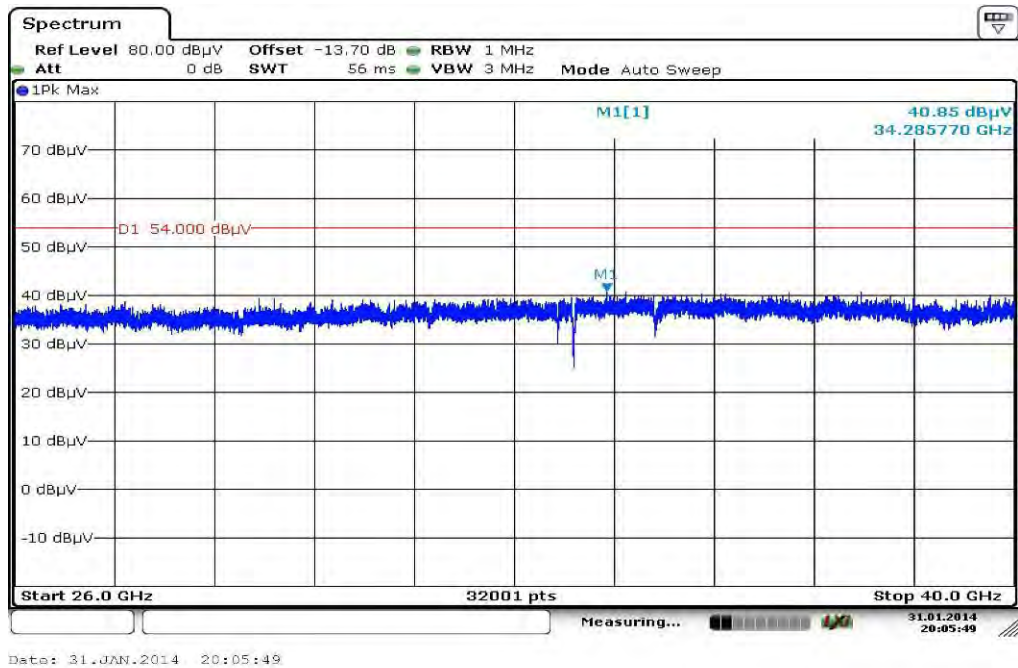
Plot 23: 12 GHz to 18 GHz, 5500 MHz, vertical & horizontal polarization



Plot 24: 18 GHz to 26 GHz, 5500 MHz, vertical & horizontal polarization



Plot 25: 26 GHz to 40 GHz, 5500 MHz, vertical & horizontal polarization



Plot 26: 30 MHz to 1 GHz, 5600 MHz, vertical & horizontal polarization

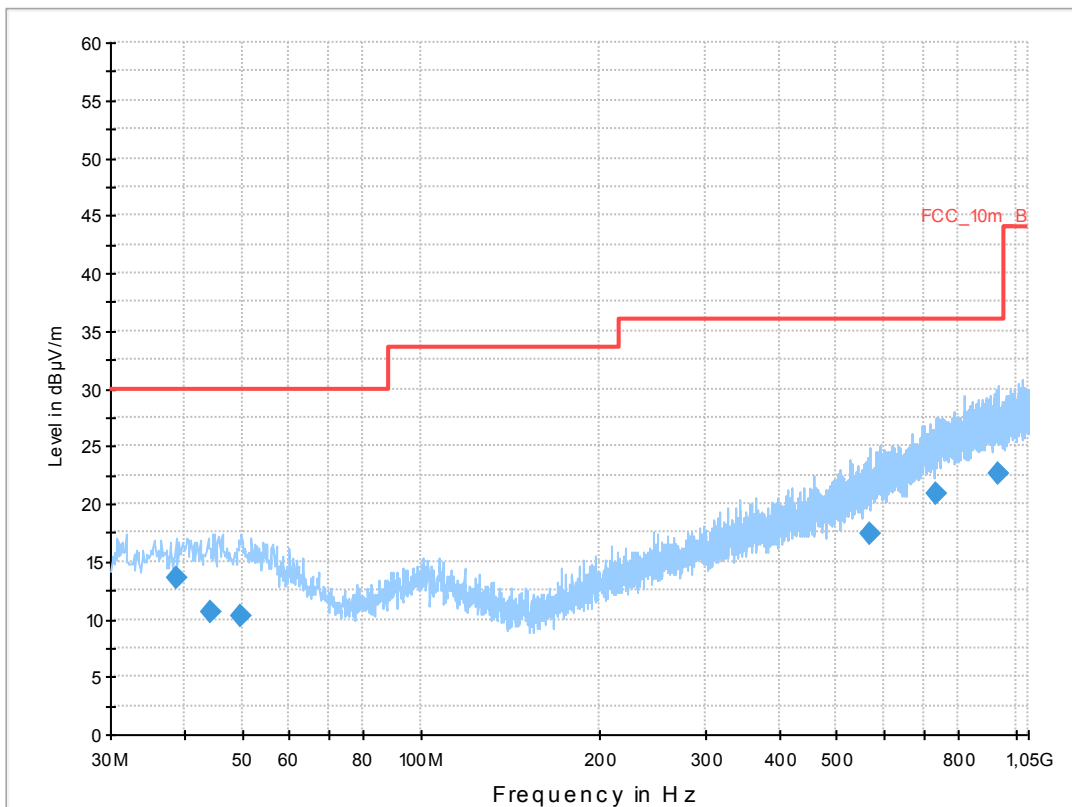
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN a-mode TX Ch 120
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

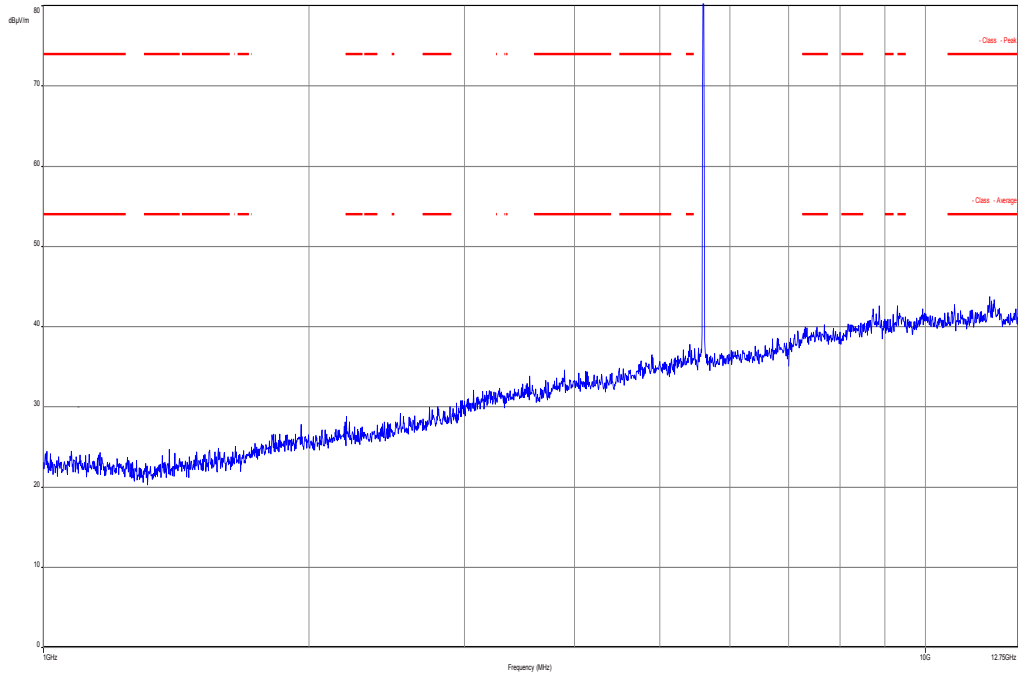
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



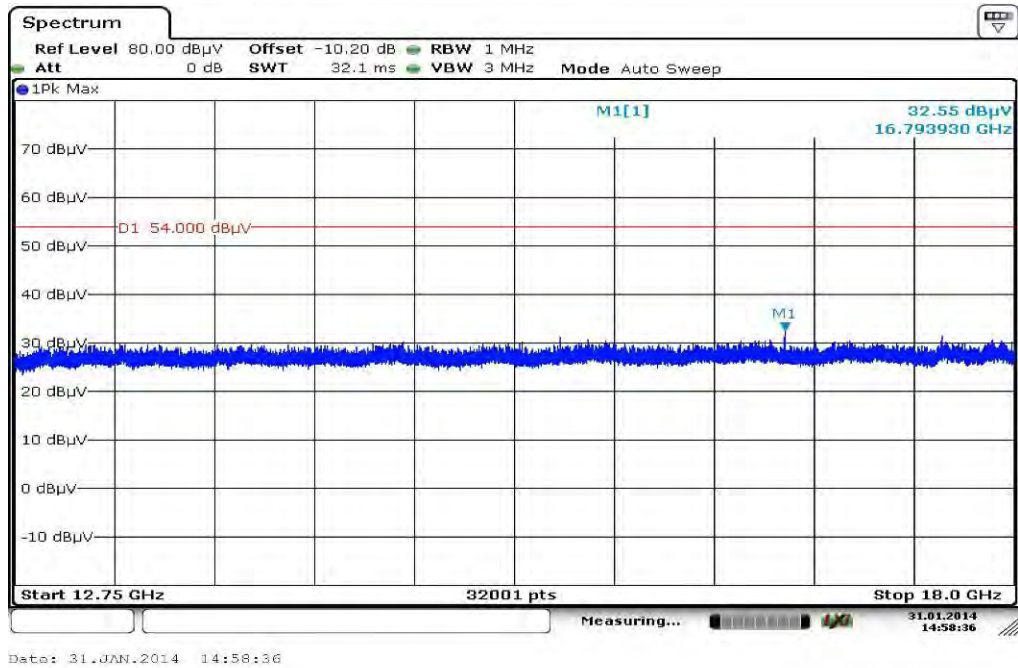
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 38.705850 | 13.5 | 1000.0 | 120.000 | 170.0 | V | 265.0 | 13.3 | 16.5 | 30.0 | |
| 44.159850 | 10.7 | 1000.0 | 120.000 | 104.0 | V | 280.0 | 13.3 | 19.3 | 30.0 | |
| 49.835550 | 10.2 | 1000.0 | 120.000 | 170.0 | V | 10.0 | 13.4 | 19.8 | 30.0 | |
| 568.866450 | 17.3 | 1000.0 | 120.000 | 170.0 | V | 81.0 | 19.9 | 18.7 | 36.0 | |
| 734.931300 | 20.9 | 1000.0 | 120.000 | 170.0 | H | 280.0 | 23.3 | 15.1 | 36.0 | |
| 935.004000 | 22.6 | 1000.0 | 120.000 | 170.0 | V | 280.0 | 25.3 | 13.4 | 36.0 | |

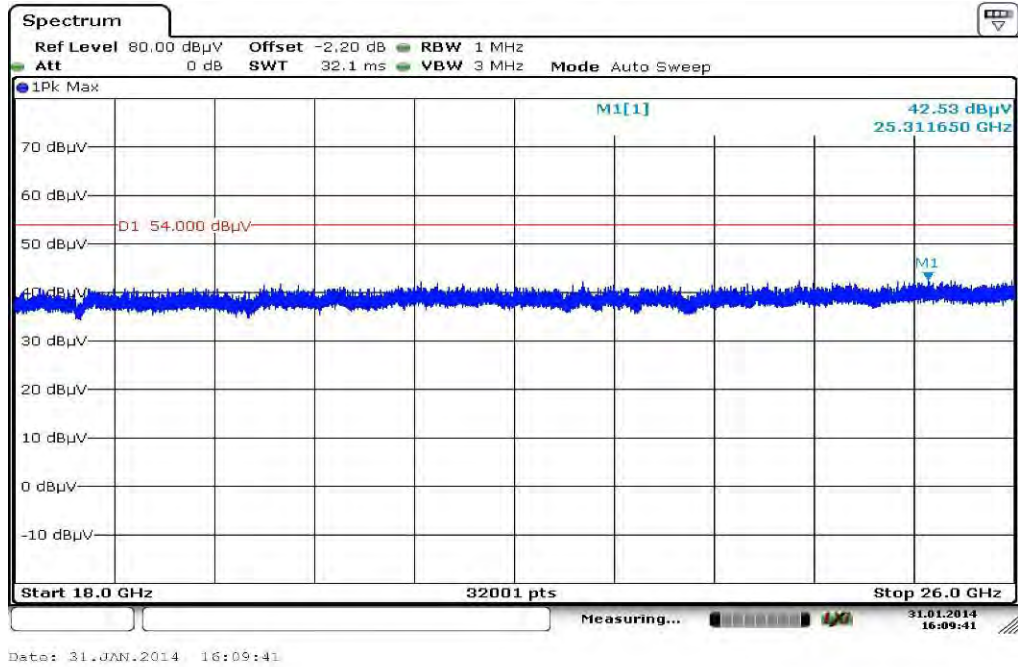
Plot 27: 1 GHz to 12.75 GHz, 5600 MHz, vertical & horizontal polarization



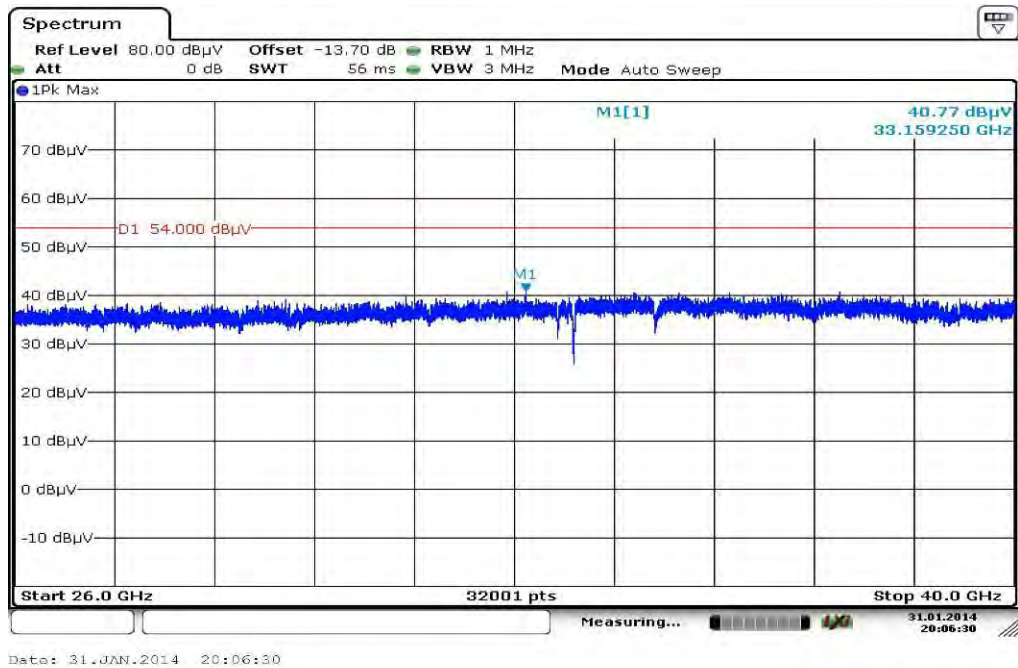
Plot 28: 12 GHz to 18 GHz, 5600 MHz, vertical & horizontal polarization



Plot 29: 18 GHz to 26 GHz, 5600 MHz, vertical & horizontal polarization



Plot 30: 26 GHz to 40 GHz, 5600 MHz, vertical & horizontal polarization



Plot 31: 30 MHz to 1 GHz, 5700 MHz, vertical & horizontal polarization

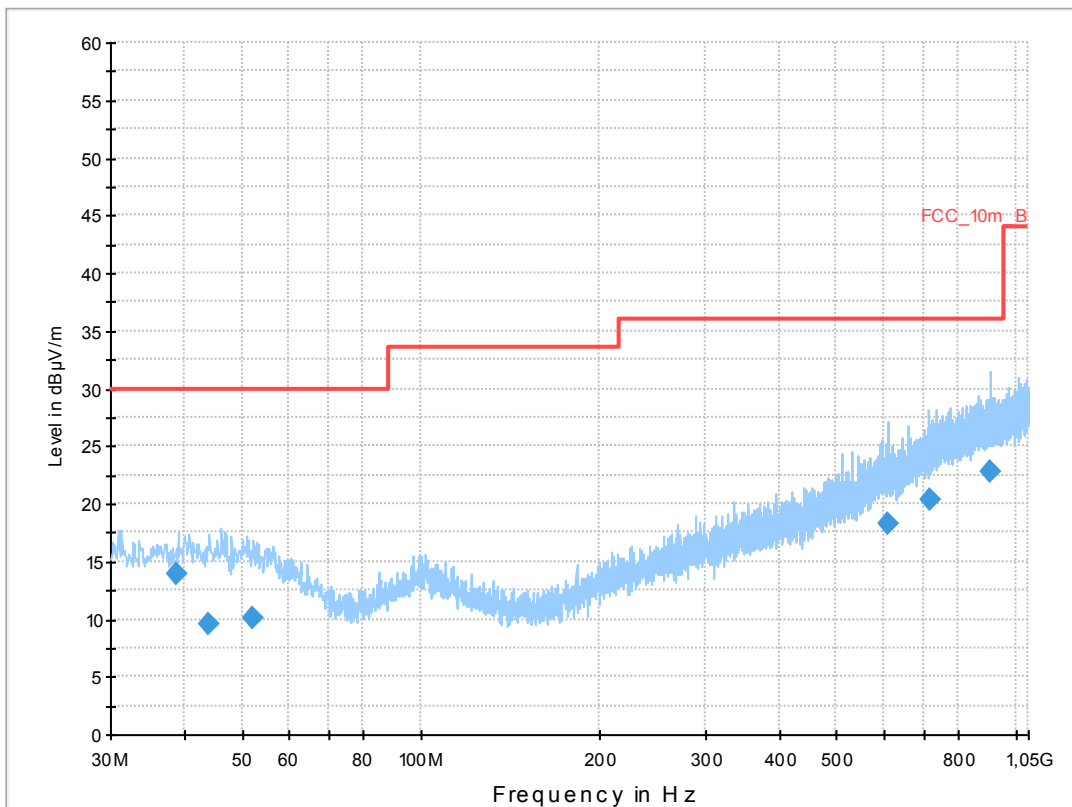
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN a-mode TX Ch 140
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

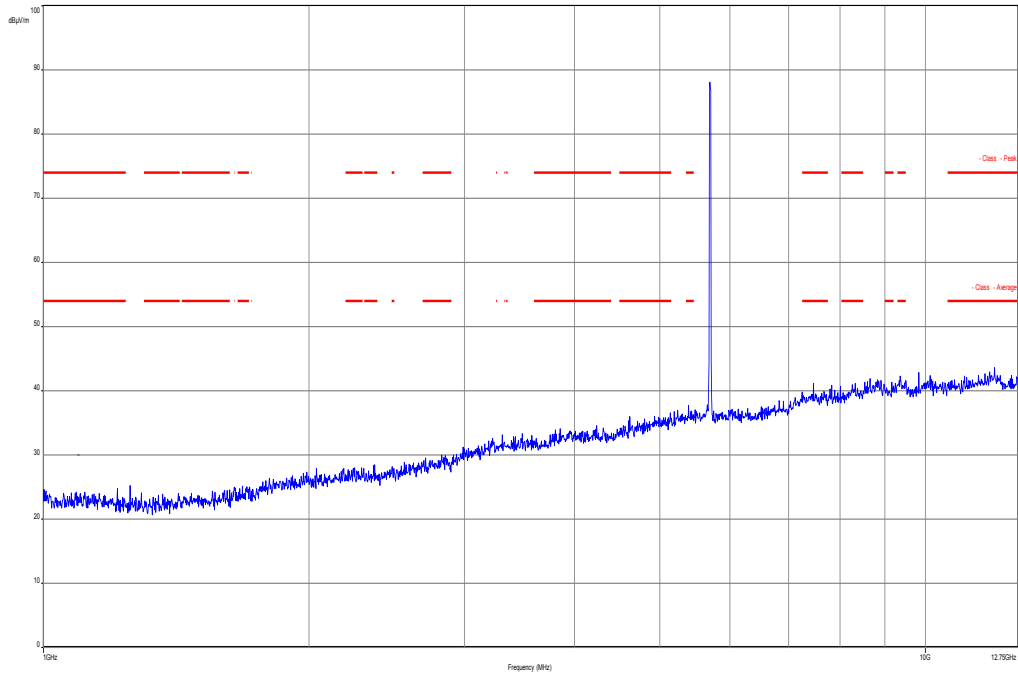
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



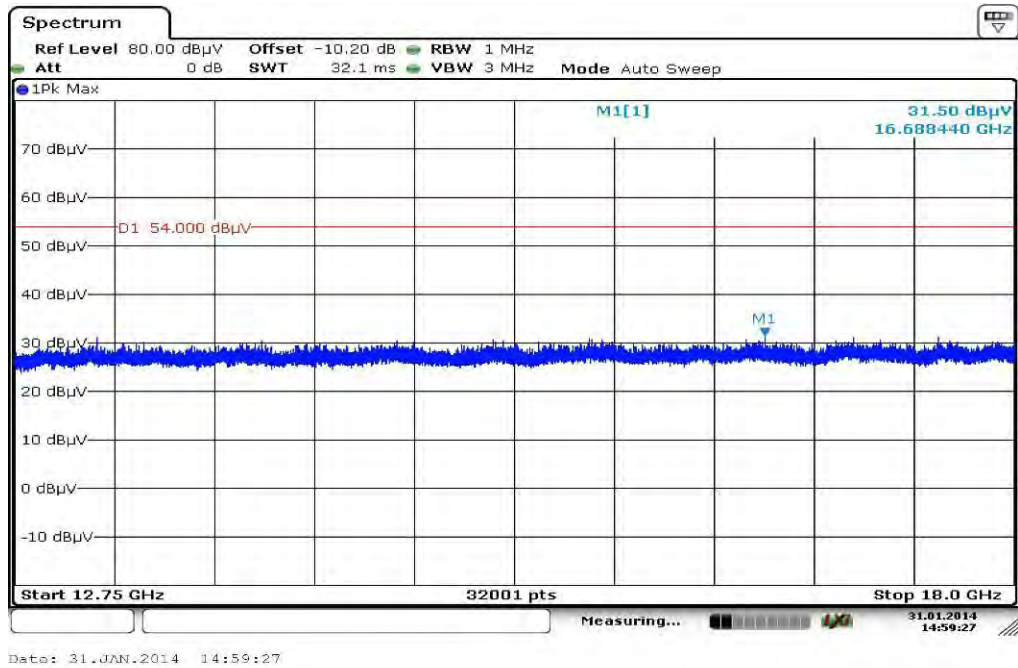
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 38.712000 | 13.9 | 1000.0 | 120.000 | 98.0 | V | 88.0 | 13.3 | 16.1 | 30.0 | |
| 43.890450 | 9.5 | 1000.0 | 120.000 | 98.0 | H | 10.0 | 13.3 | 20.5 | 30.0 | |
| 52.165950 | 10.2 | 1000.0 | 120.000 | 170.0 | V | 260.0 | 13.2 | 19.8 | 30.0 | |
| 607.794750 | 18.3 | 1000.0 | 120.000 | 120.0 | H | 88.0 | 20.8 | 17.7 | 36.0 | |
| 715.414800 | 20.4 | 1000.0 | 120.000 | 170.0 | V | 2.0 | 22.9 | 15.6 | 36.0 | |
| 909.010800 | 22.7 | 1000.0 | 120.000 | 120.0 | V | 280.0 | 25.2 | 13.3 | 36.0 | |

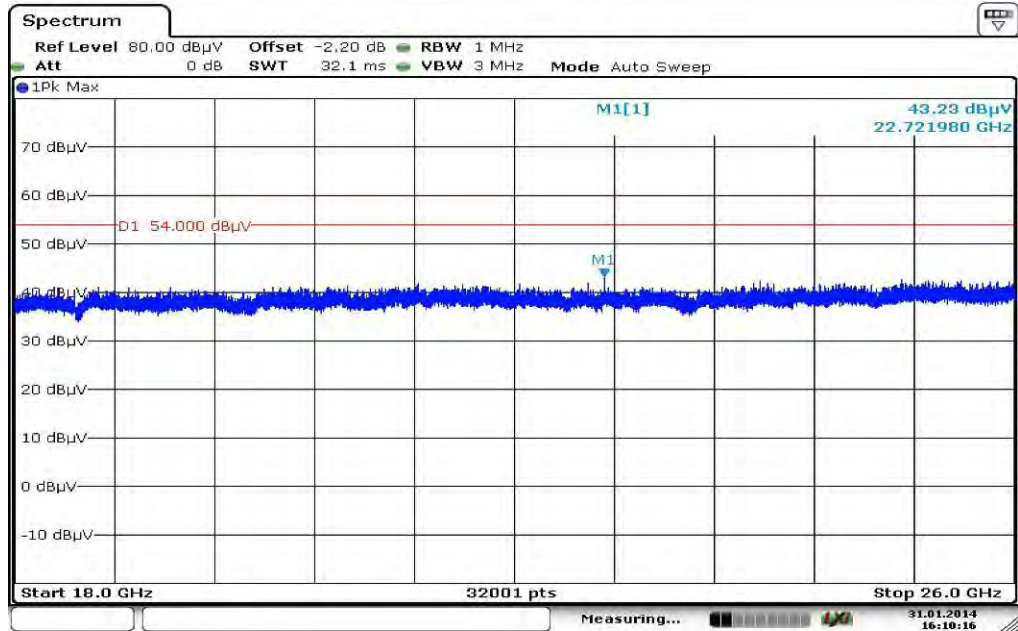
Plot 32: 1 GHz to 12.75 GHz, 5700 MHz, vertical & horizontal polarization



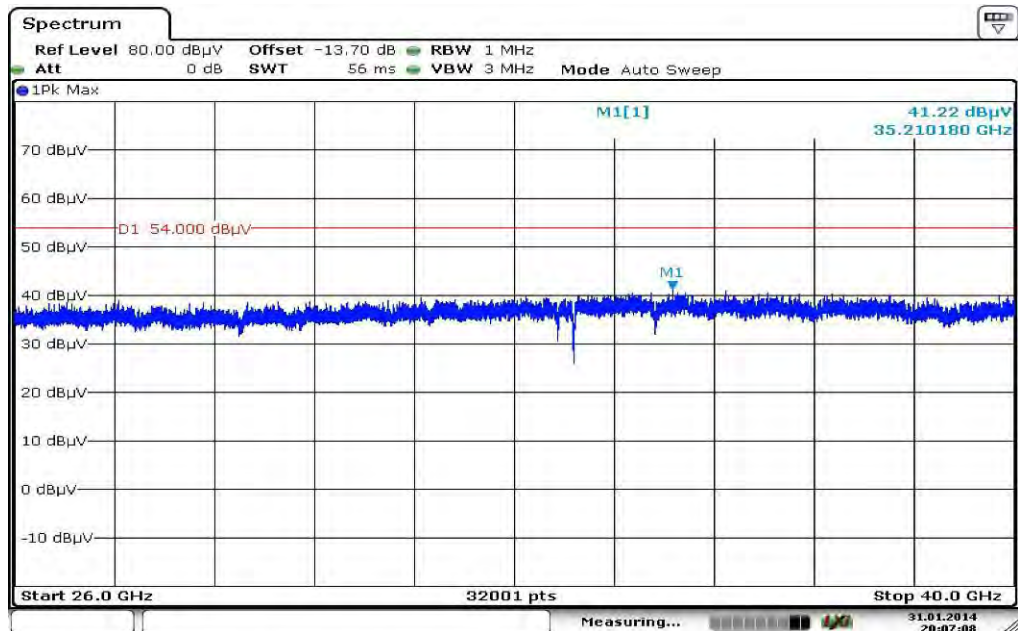
Plot 33: 12 GHz to 18 GHz, 5700 MHz, vertical & horizontal polarization



Plot 34: 18 GHz to 26 GHz, 5700 MHz, vertical & horizontal polarization



Plot 35: 26 GHz to 40 GHz, 5700 MHz, vertical & horizontal polarization



Plots: OFDM / n/ac – mode HT20

Plot 1: 30 MHz to 1 GHz, 5180 MHz, vertical & horizontal polarization

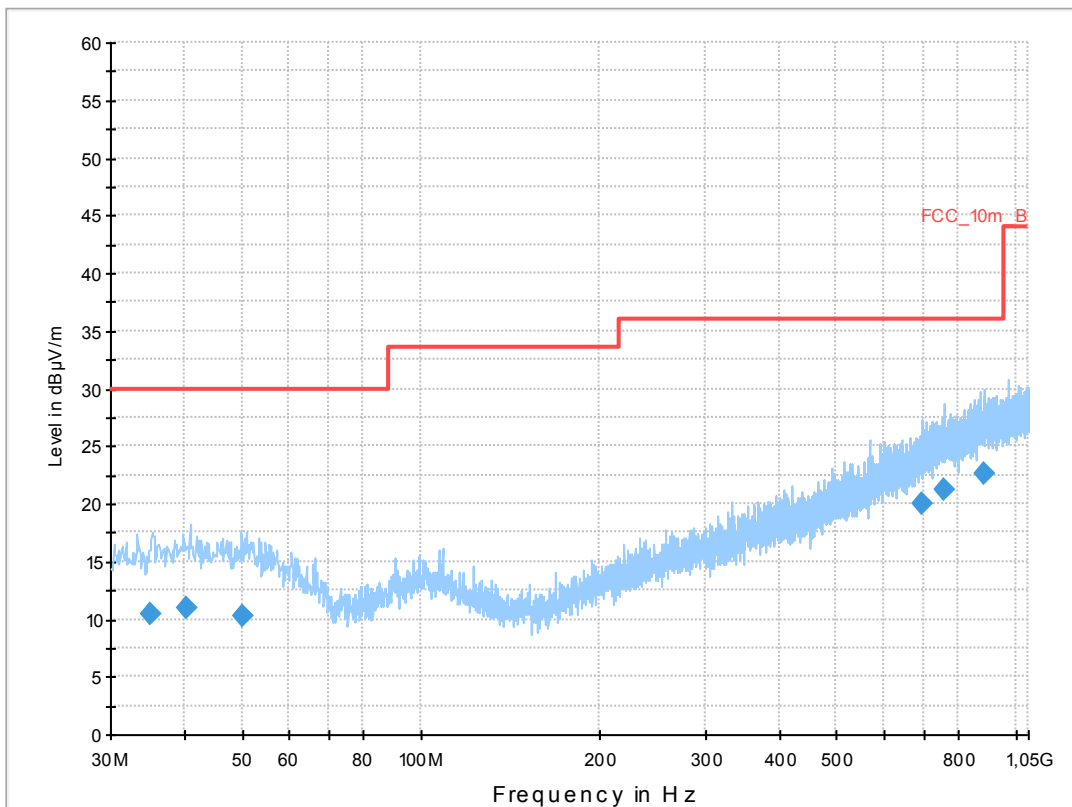
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN n-mode (HT20) TX Ch 36
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

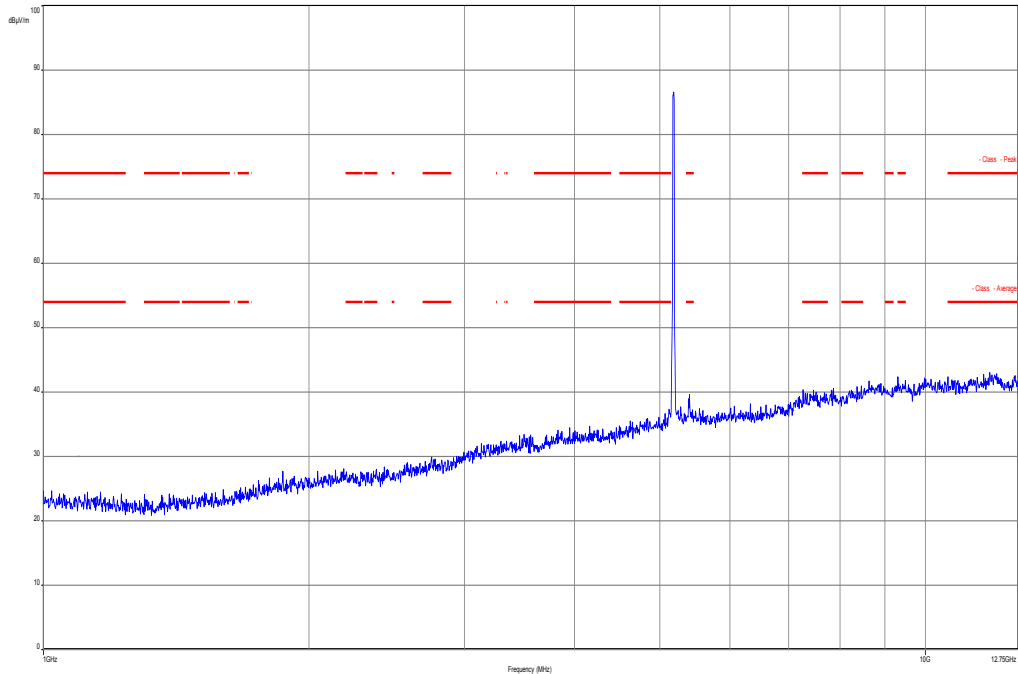
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



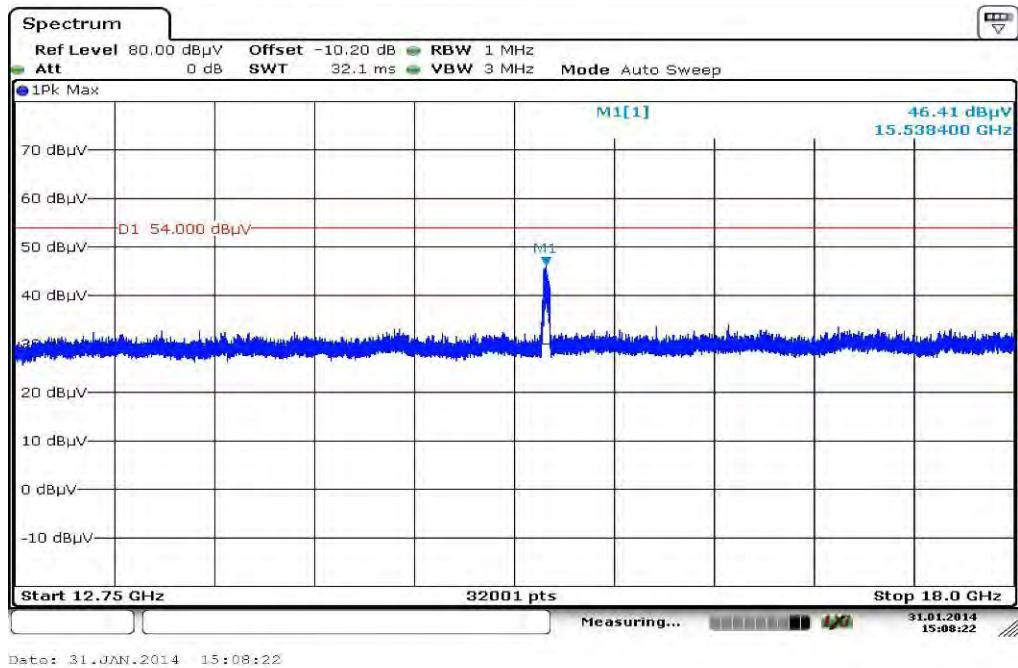
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 35.094150 | 10.4 | 1000.0 | 120.000 | 112.0 | V | 92.0 | 13.0 | 19.6 | 30.0 | |
| 40.304850 | 10.9 | 1000.0 | 120.000 | 170.0 | V | 100.0 | 13.4 | 19.1 | 30.0 | |
| 50.063550 | 10.3 | 1000.0 | 120.000 | 152.0 | V | 100.0 | 13.4 | 19.7 | 30.0 | |
| 694.782600 | 19.9 | 1000.0 | 120.000 | 121.0 | V | 100.0 | 22.4 | 16.1 | 36.0 | |
| 757.450650 | 21.2 | 1000.0 | 120.000 | 105.0 | V | 100.0 | 23.7 | 14.8 | 36.0 | |
| 887.816700 | 22.6 | 1000.0 | 120.000 | 170.0 | H | 10.0 | 25.0 | 13.4 | 36.0 | |

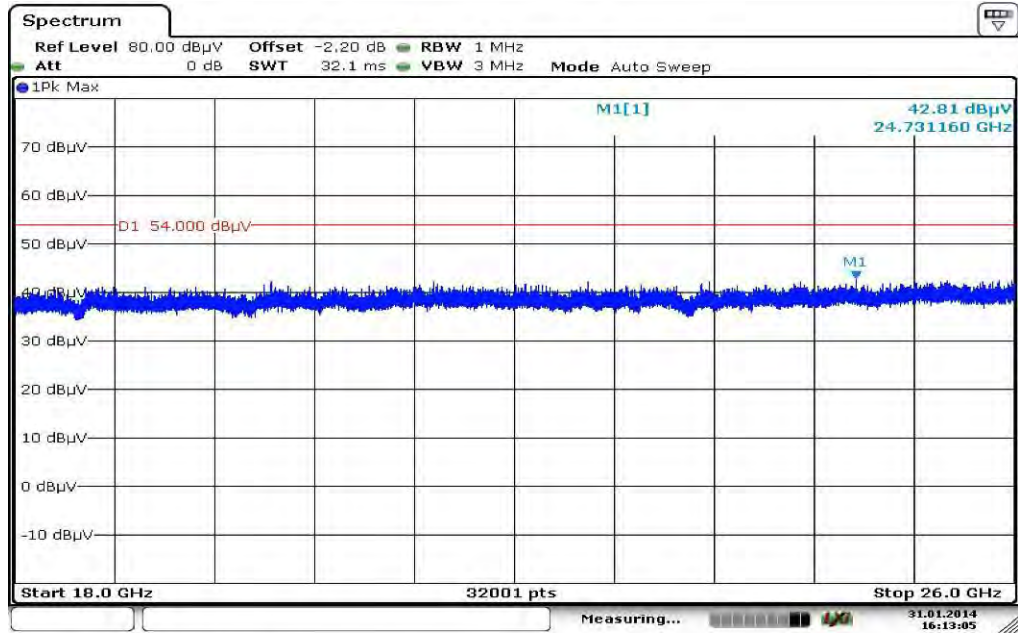
Plot 2: 1 GHz to 12.75 GHz, 5180 MHz, vertical & horizontal polarization



Plot 3: 12 GHz to 18 GHz, 5180 MHz, vertical & horizontal polarization

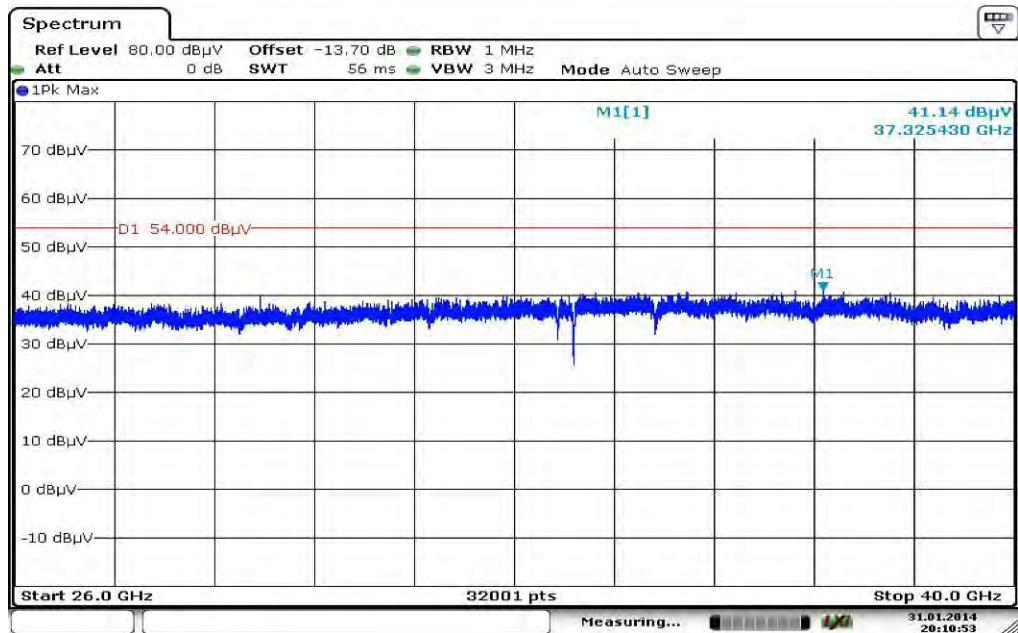


Plot 4: 18 GHz to 26 GHz, 5180 MHz, vertical & horizontal polarization



Date: 31.JAN.2014 16:13:05

Plot 5: 26 GHz to 40 GHz, 5180 MHz, vertical & horizontal polarization



Date: 31.JAN.2014 20:10:53

Plot 6: 30 MHz to 1 GHz, 5240 MHz, vertical & horizontal polarization

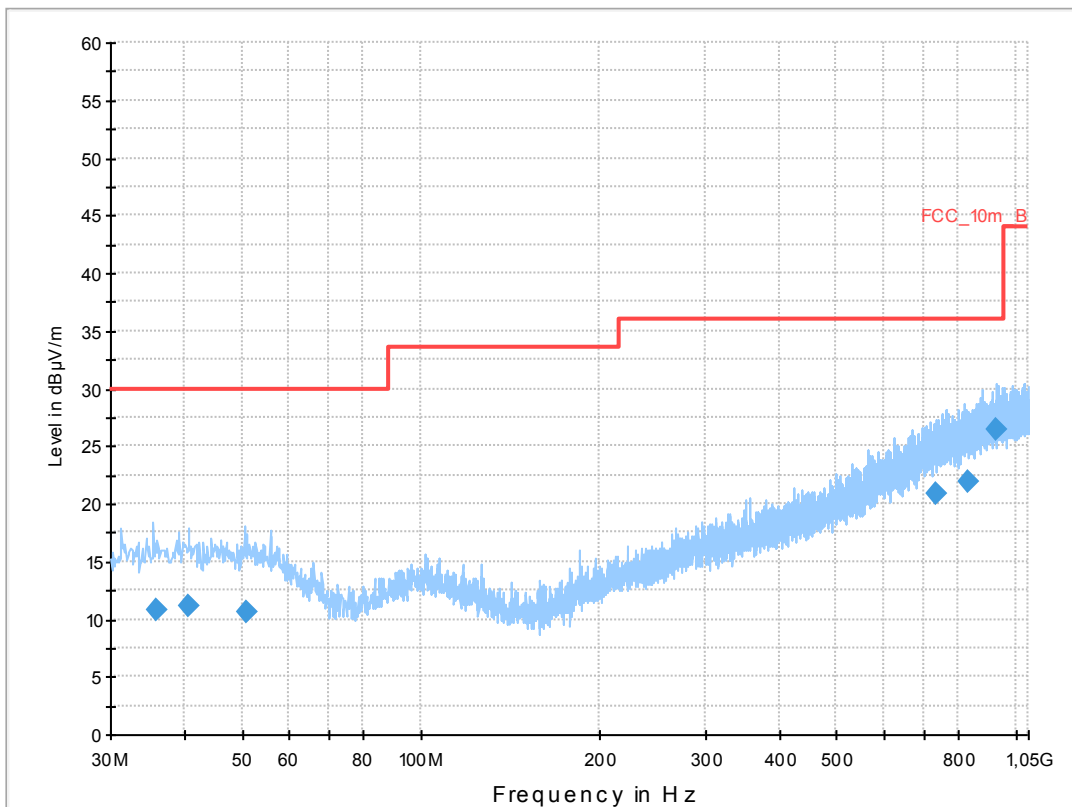
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN n-mode (HT20) TX Ch 48
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

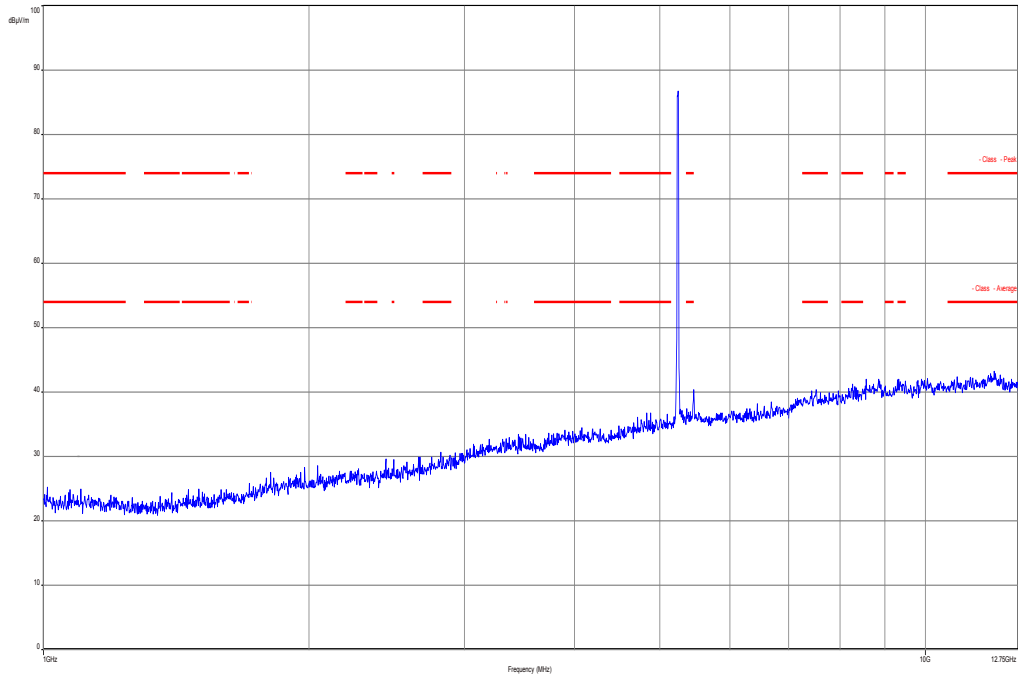
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



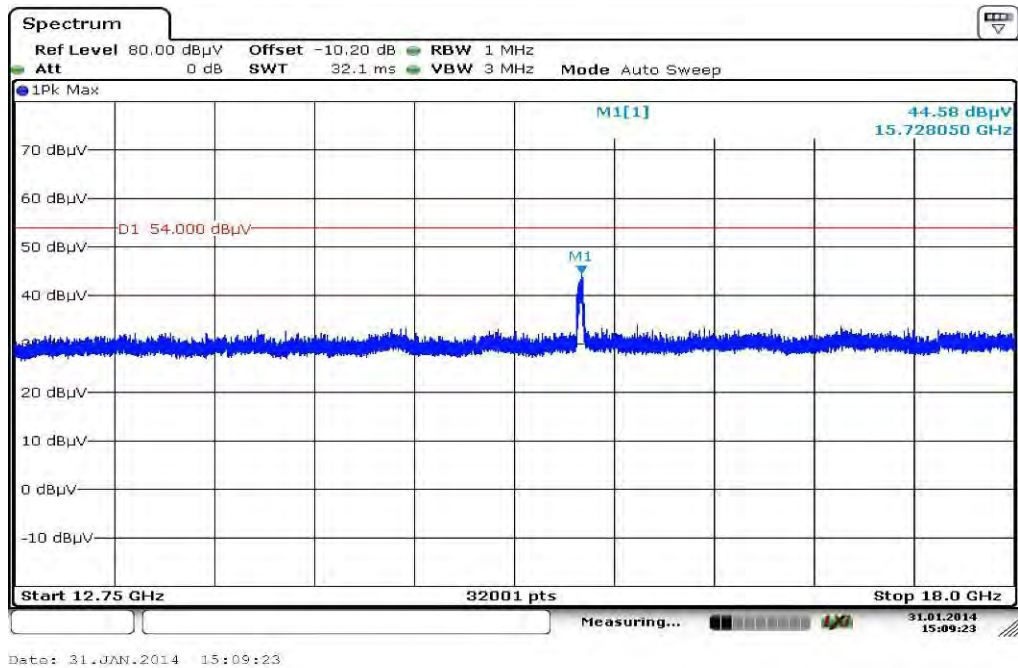
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 35.881350 | 10.7 | 1000.0 | 120.000 | 170.0 | V | 10.0 | 13.1 | 19.3 | 30.0 | |
| 40.514700 | 11.1 | 1000.0 | 120.000 | 121.0 | V | 178.0 | 13.4 | 18.9 | 30.0 | |
| 50.885400 | 10.5 | 1000.0 | 120.000 | 145.0 | H | 80.0 | 13.3 | 19.5 | 30.0 | |
| 734.983050 | 20.9 | 1000.0 | 120.000 | 170.0 | H | 80.0 | 23.3 | 15.1 | 36.0 | |
| 832.573500 | 21.8 | 1000.0 | 120.000 | 98.0 | H | 182.0 | 24.3 | 14.2 | 36.0 | |
| 927.385350 | 26.5 | 1000.0 | 120.000 | 98.0 | V | 280.0 | 25.3 | 9.5 | 36.0 | |

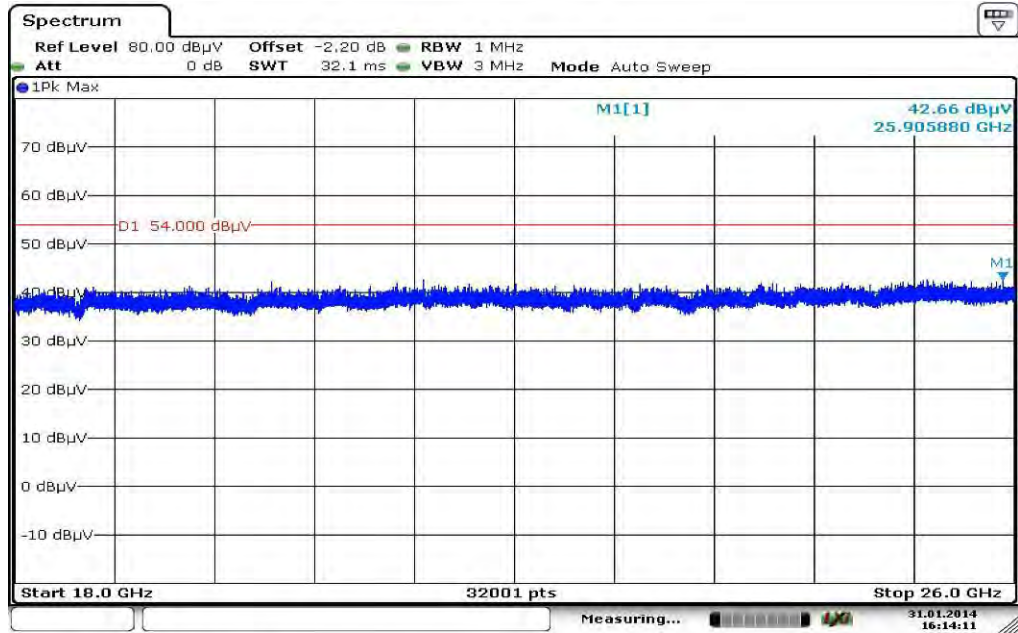
Plot 7: 1 GHz to 12.75 GHz, 5240 MHz, vertical & horizontal polarization



Plot 8: 12 GHz to 18 GHz, 5240 MHz, vertical & horizontal polarization

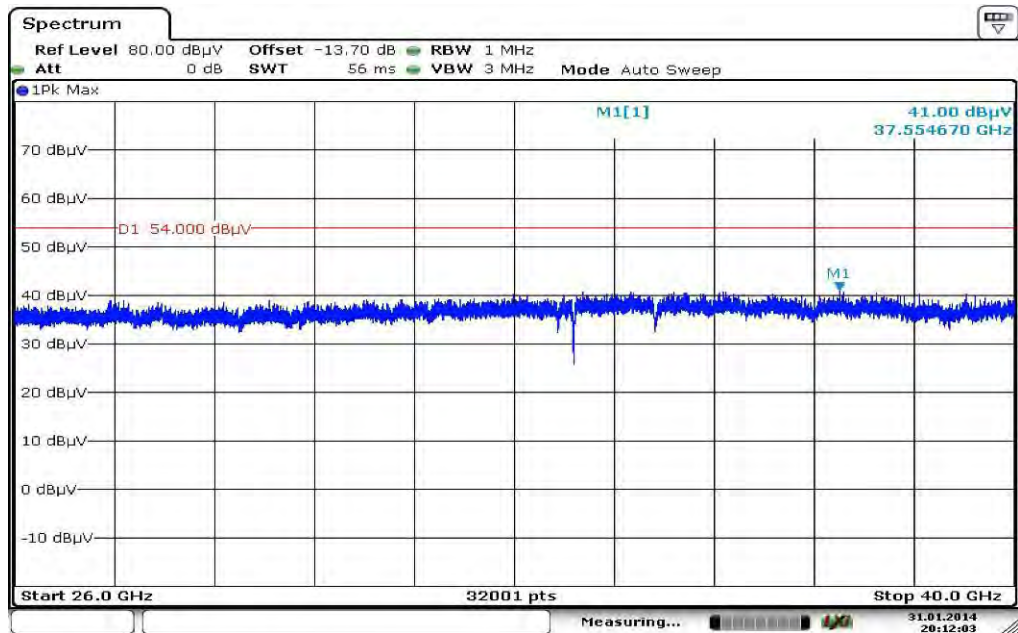


Plot 9: 18 GHz to 26 GHz, 5240 MHz, vertical & horizontal polarization



Date: 31.JAN.2014 16:14:11

Plot 10: 26 GHz to 40 GHz, 5240 MHz, vertical & horizontal polarization



Date: 31.JAN.2014 20:12:03

Plot 11: 30 MHz to 1 GHz, 5260 MHz, vertical & horizontal polarization

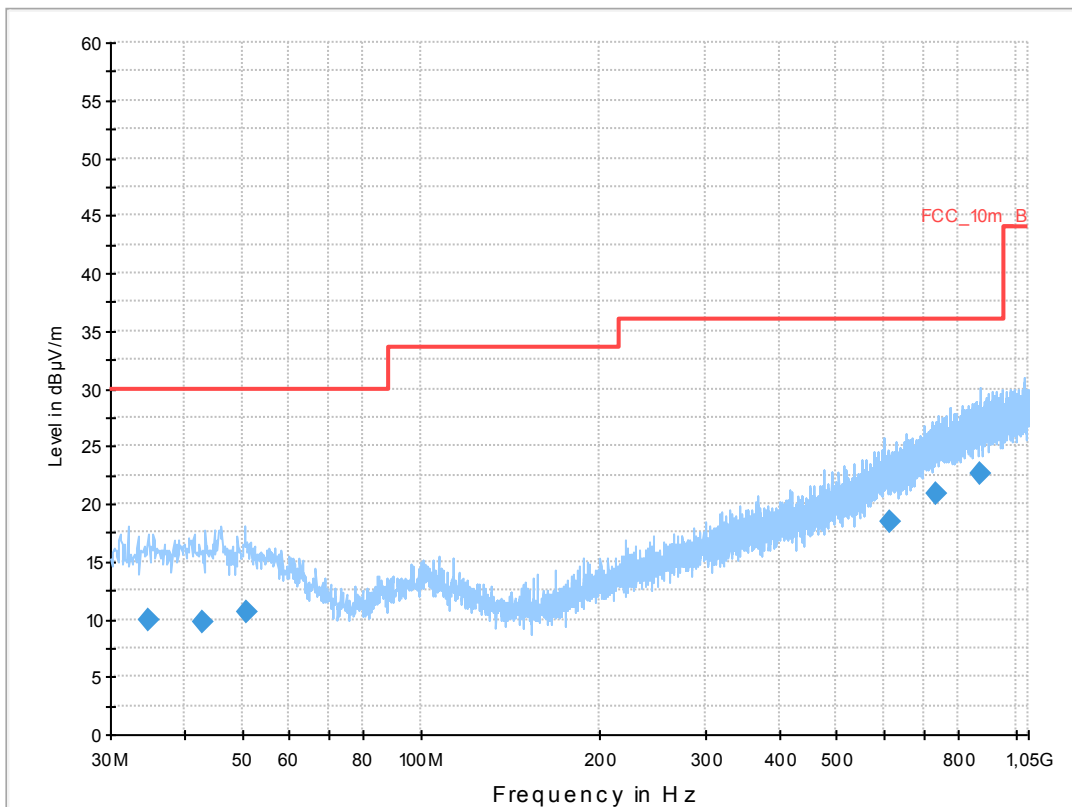
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN n-mode (HT20) TX Ch 52
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

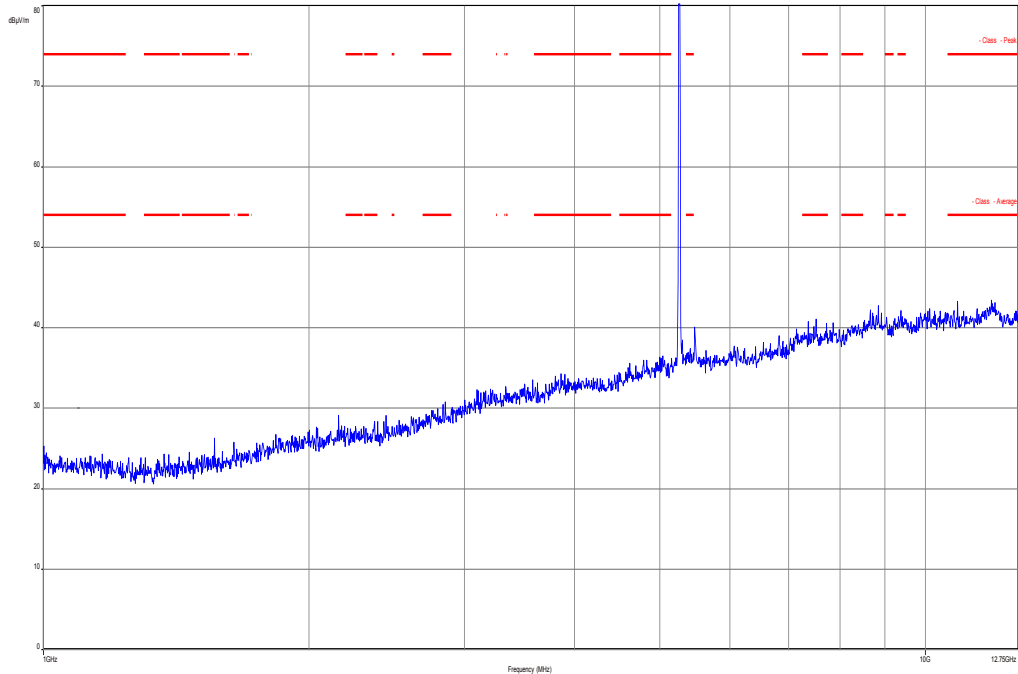
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



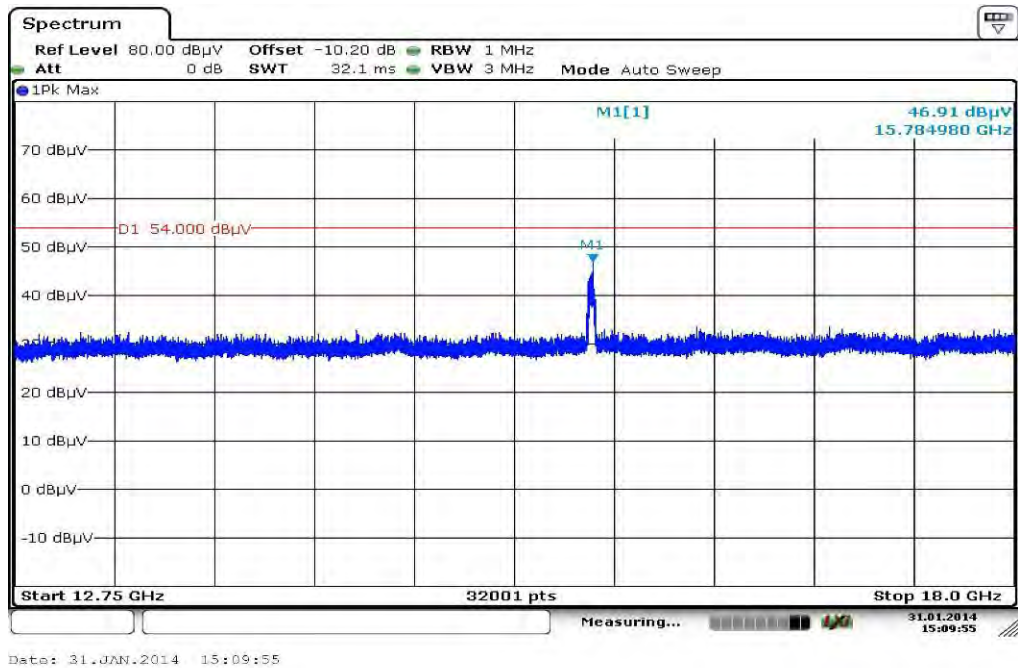
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 34.788000 | 10.0 | 1000.0 | 120.000 | 143.0 | H | 92.0 | 13.0 | 20.0 | 30.0 | |
| 43.014300 | 9.8 | 1000.0 | 120.000 | 112.0 | V | 190.0 | 13.3 | 20.2 | 30.0 | |
| 50.711850 | 10.6 | 1000.0 | 120.000 | 170.0 | V | -10.0 | 13.3 | 19.4 | 30.0 | |
| 612.423450 | 18.4 | 1000.0 | 120.000 | 144.0 | V | 182.0 | 20.9 | 17.6 | 36.0 | |
| 732.494550 | 20.8 | 1000.0 | 120.000 | 170.0 | V | -10.0 | 23.3 | 15.2 | 36.0 | |
| 873.299850 | 22.5 | 1000.0 | 120.000 | 144.0 | V | 265.0 | 24.9 | 13.5 | 36.0 | |

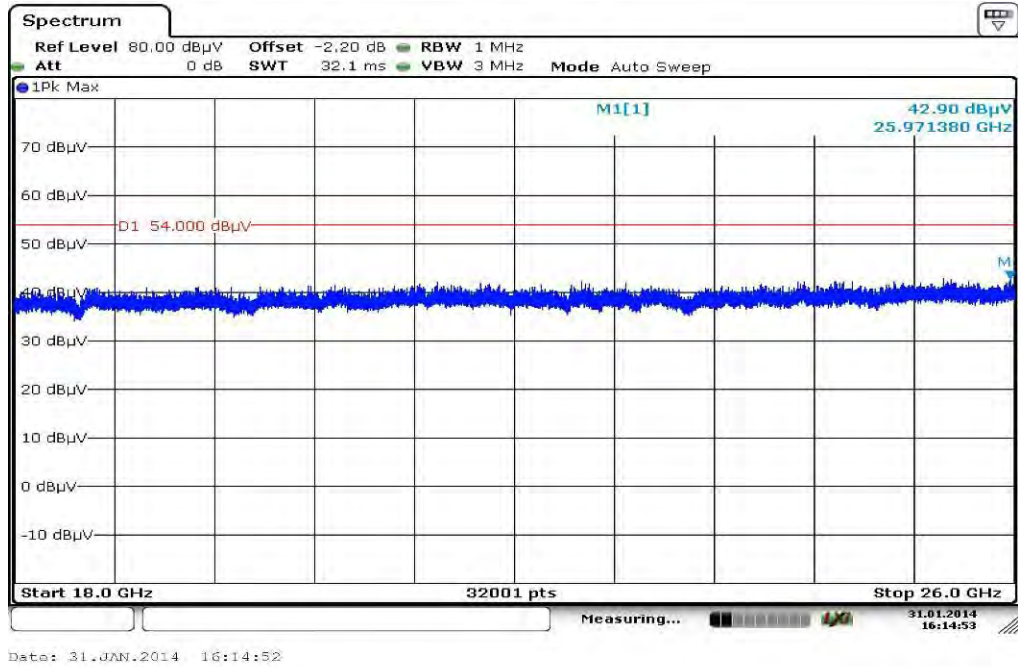
Plot 12: 1 GHz to 12.75 GHz, 5260 MHz, vertical & horizontal polarization



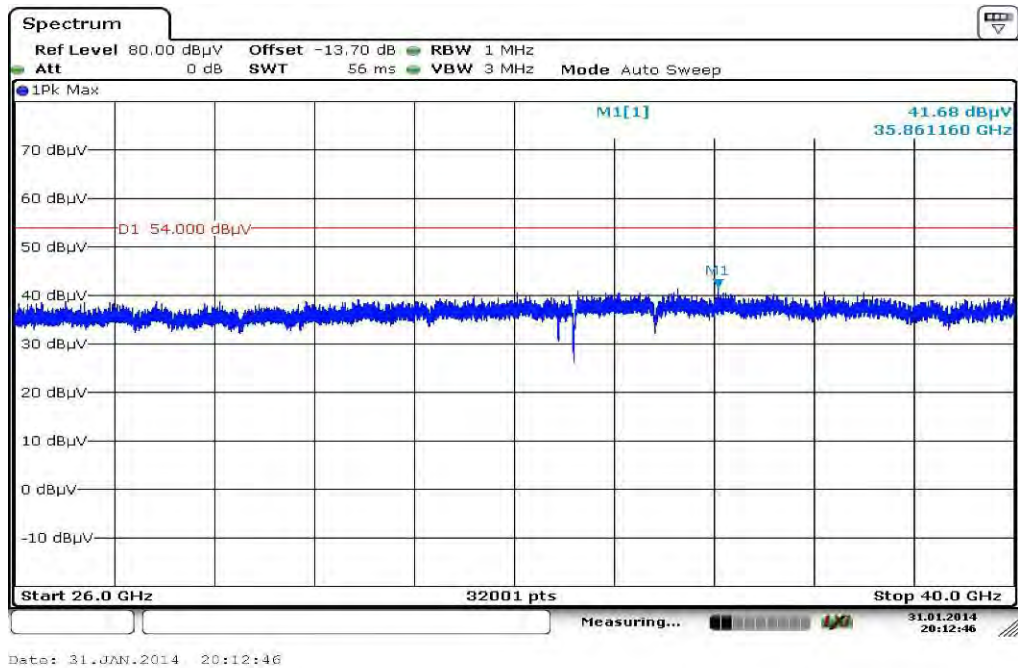
Plot 13: 12 GHz to 18 GHz, 5260 MHz, vertical & horizontal polarization



Plot 14: 18 GHz to 26 GHz, 5260 MHz, vertical & horizontal polarization



Plot 15: 26 GHz to 40 GHz, 5260 MHz, vertical & horizontal polarization



Plot 16: 30 MHz to 1 GHz, 5320 MHz, vertical & horizontal polarization

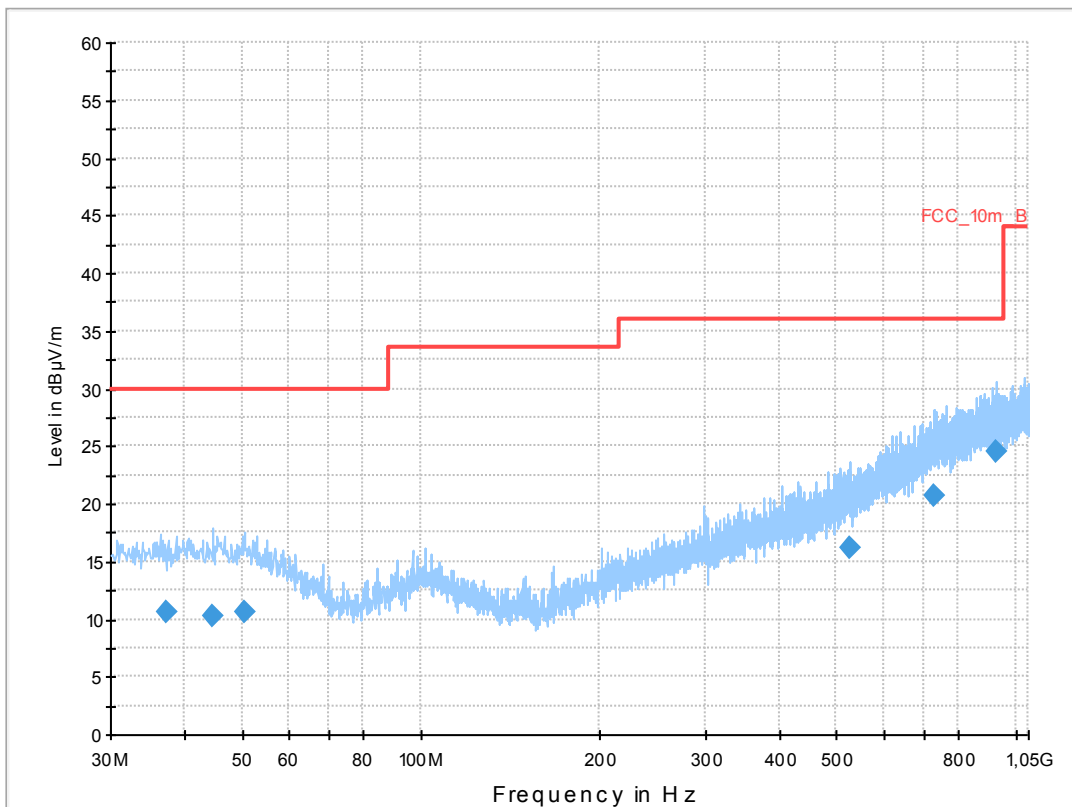
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN n-mode (HT20) TX Ch 64
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

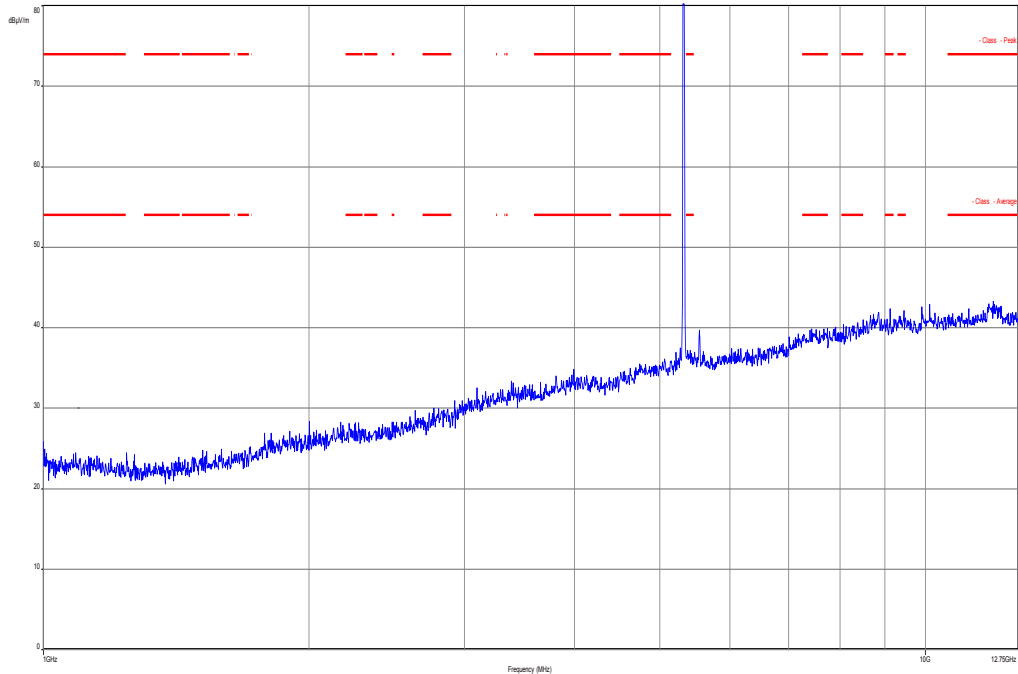
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



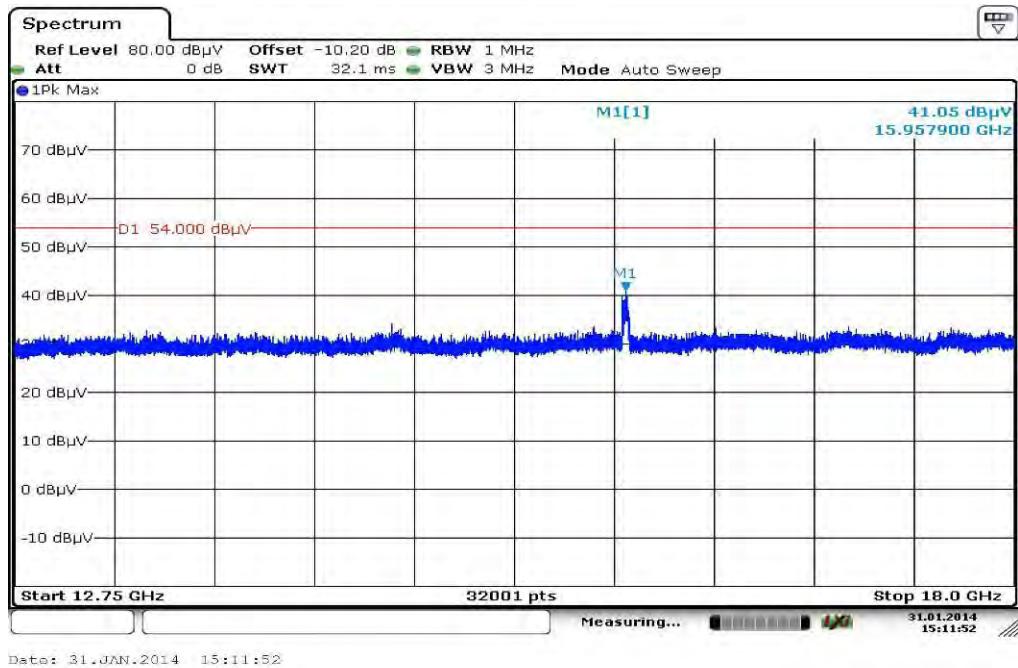
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 37.350150 | 10.6 | 1000.0 | 120.000 | 98.0 | V | 0.0 | 13.2 | 19.4 | 30.0 | |
| 44.551650 | 10.2 | 1000.0 | 120.000 | 144.0 | V | 190.0 | 13.3 | 19.8 | 30.0 | |
| 50.447400 | 10.6 | 1000.0 | 120.000 | 170.0 | V | 270.0 | 13.3 | 19.4 | 30.0 | |
| 525.211200 | 16.2 | 1000.0 | 120.000 | 170.0 | V | 170.0 | 19.0 | 19.8 | 36.0 | |
| 728.163900 | 20.8 | 1000.0 | 120.000 | 104.0 | H | 81.0 | 23.2 | 15.2 | 36.0 | |
| 927.297450 | 24.6 | 1000.0 | 120.000 | 152.0 | V | 171.0 | 25.3 | 11.4 | 36.0 | |

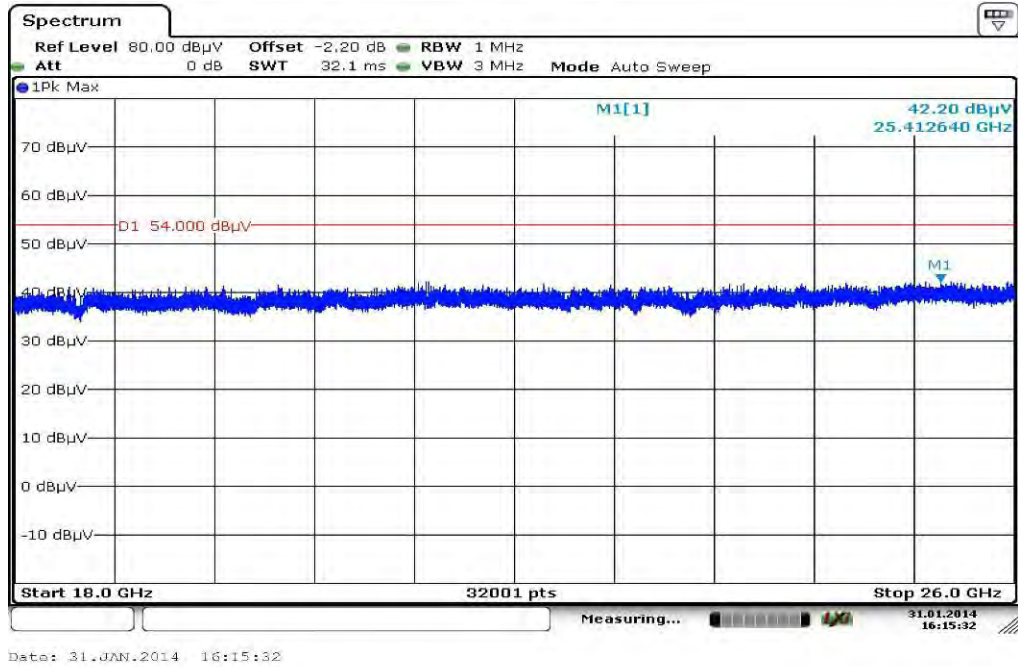
Plot 17: 1 GHz to 12.75 GHz, 5320 MHz, vertical & horizontal polarization



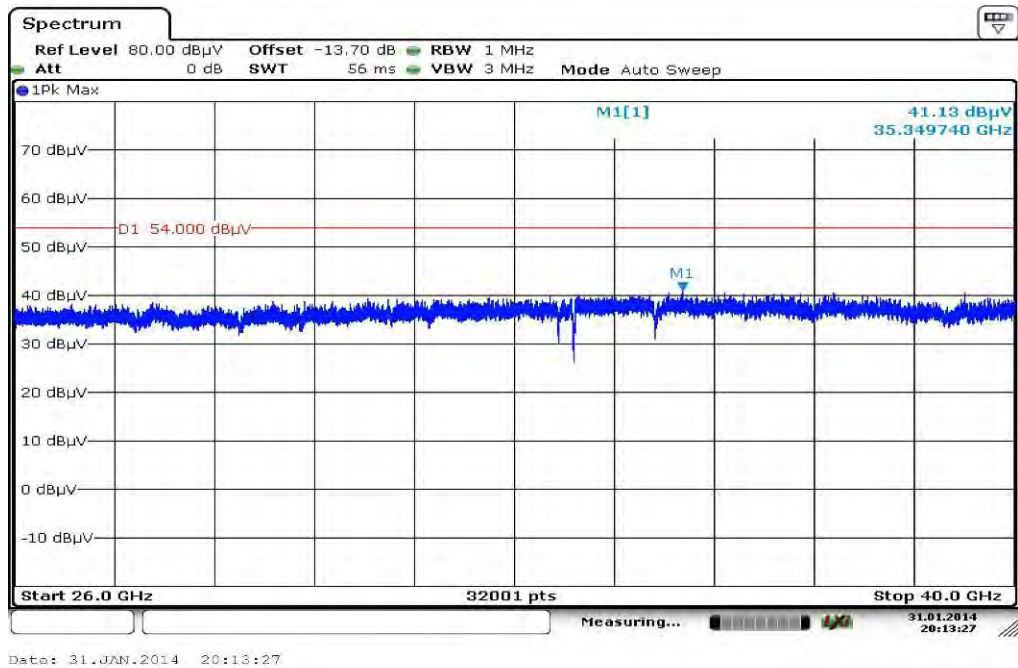
Plot 18: 12 GHz to 18 GHz, 5320 MHz, vertical & horizontal polarization



Plot 19: 18 GHz to 26 GHz, 5320 MHz, vertical & horizontal polarization



Plot 20: 26 GHz to 40 GHz, 5320 MHz, vertical & horizontal polarization



Plot 21: 30 MHz to 1 GHz, 5500 MHz, vertical & horizontal polarization

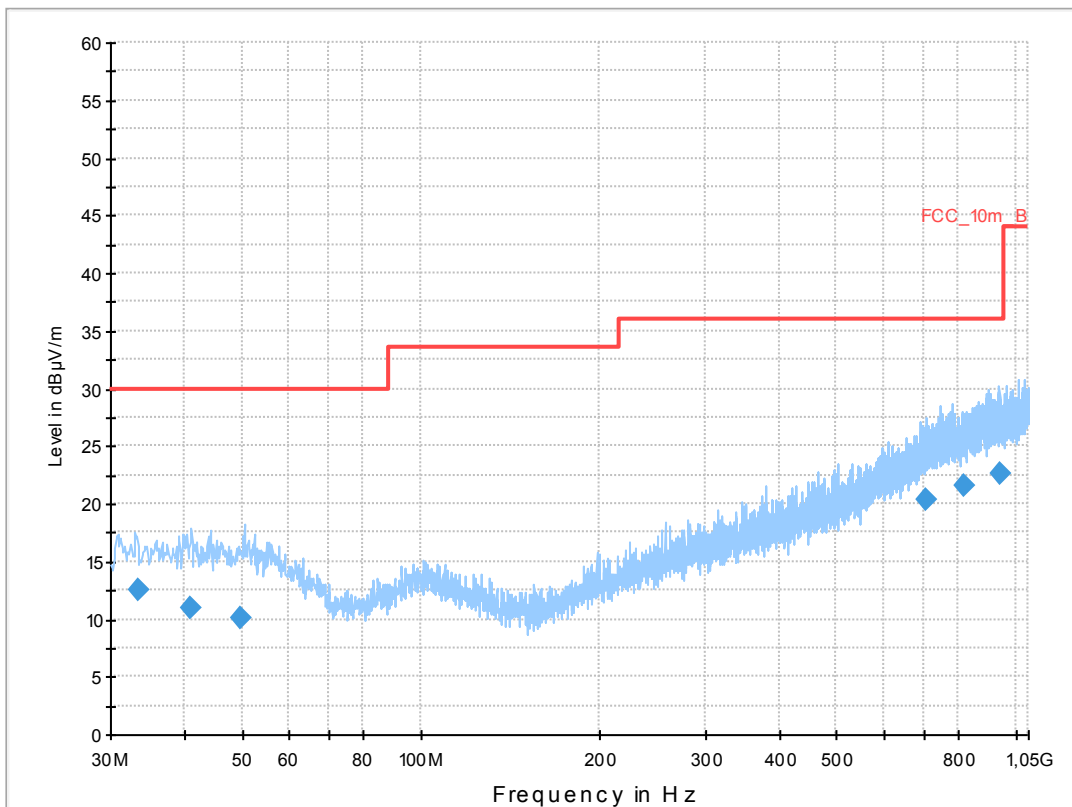
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN n-mode (HT20) TX Ch 100
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

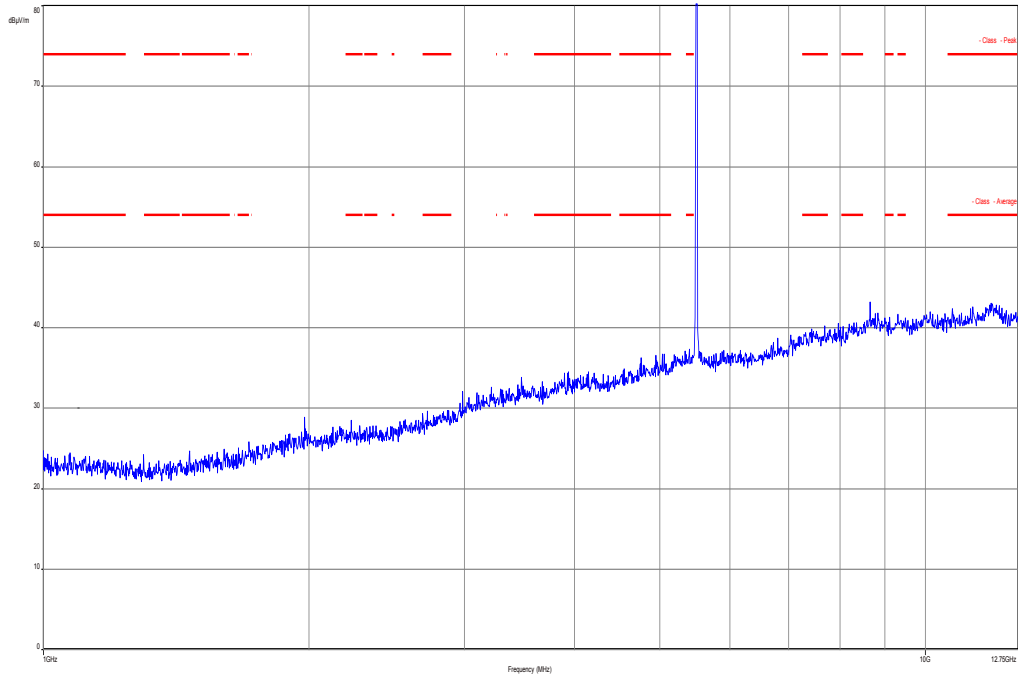
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



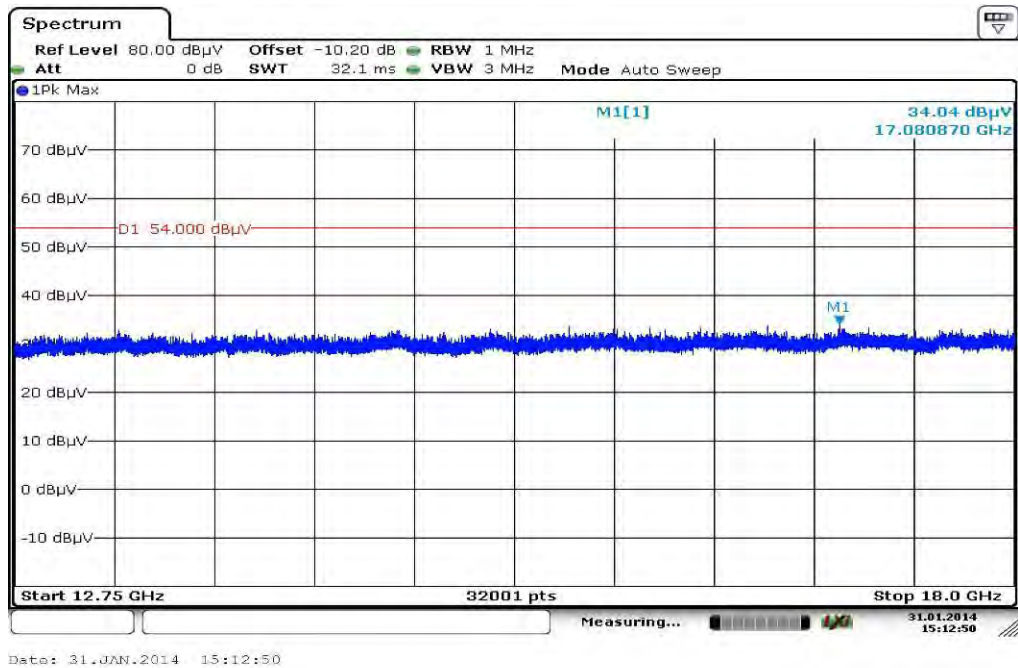
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 33.383550 | 12.5 | 1000.0 | 120.000 | 120.0 | V | 88.0 | 12.9 | 17.5 | 30.0 | |
| 40.920600 | 10.9 | 1000.0 | 120.000 | 143.0 | V | 260.0 | 13.4 | 19.1 | 30.0 | |
| 49.803600 | 10.1 | 1000.0 | 120.000 | 170.0 | H | 92.0 | 13.4 | 19.9 | 30.0 | |
| 707.788050 | 20.3 | 1000.0 | 120.000 | 170.0 | V | 86.0 | 22.7 | 15.7 | 36.0 | |
| 820.609350 | 21.6 | 1000.0 | 120.000 | 170.0 | V | 80.0 | 24.1 | 14.4 | 36.0 | |
| 938.726100 | 22.7 | 1000.0 | 120.000 | 126.0 | V | 81.0 | 25.3 | 13.3 | 36.0 | |

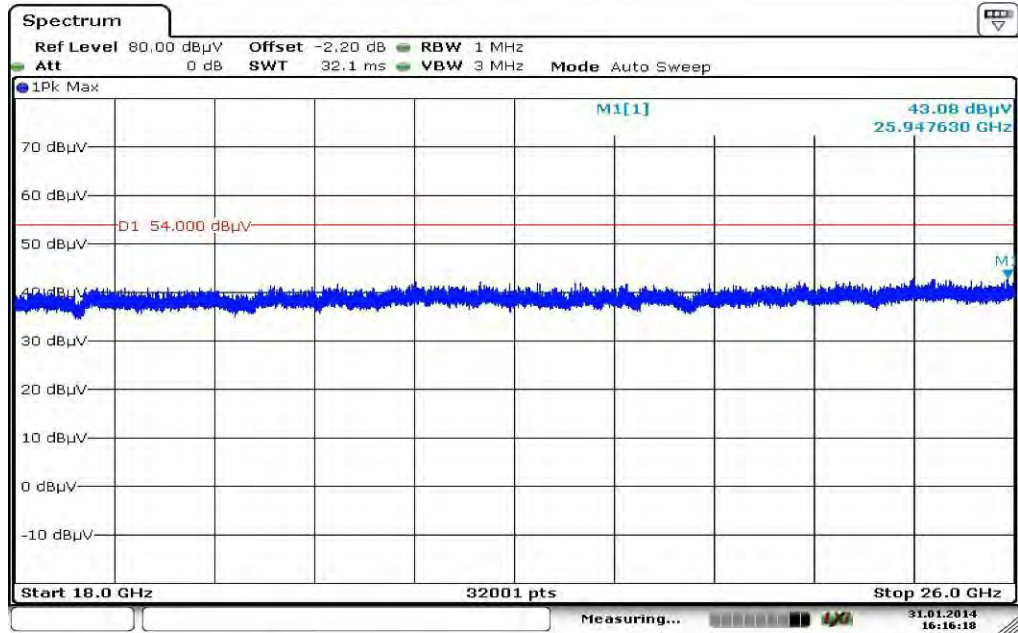
Plot 22: 1 GHz to 12.75 GHz, 5500 MHz, vertical & horizontal polarization



Plot 23: 12 GHz to 18 GHz, 5500 MHz, vertical & horizontal polarization

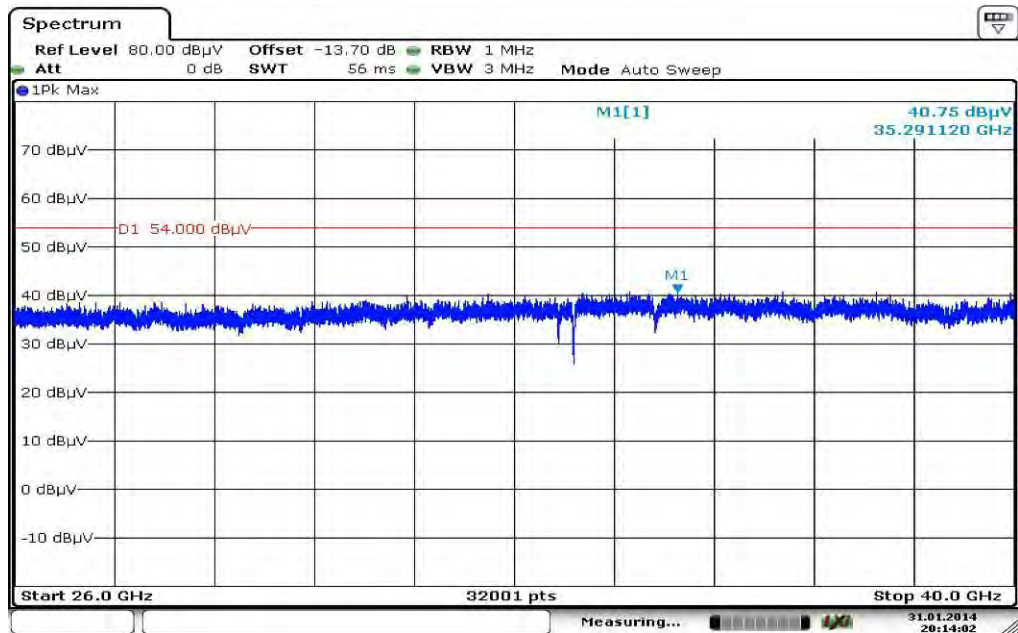


Plot 24: 18 GHz to 26 GHz, 5500 MHz, vertical & horizontal polarization



Date: 31.JAN.2014 16:16:18

Plot 25: 26 GHz to 40 GHz, 5500 MHz, vertical & horizontal polarization



Date: 31.JAN.2014 20:14:02

Plot 26: 30 MHz to 1 GHz, 5600 MHz, vertical & horizontal polarization

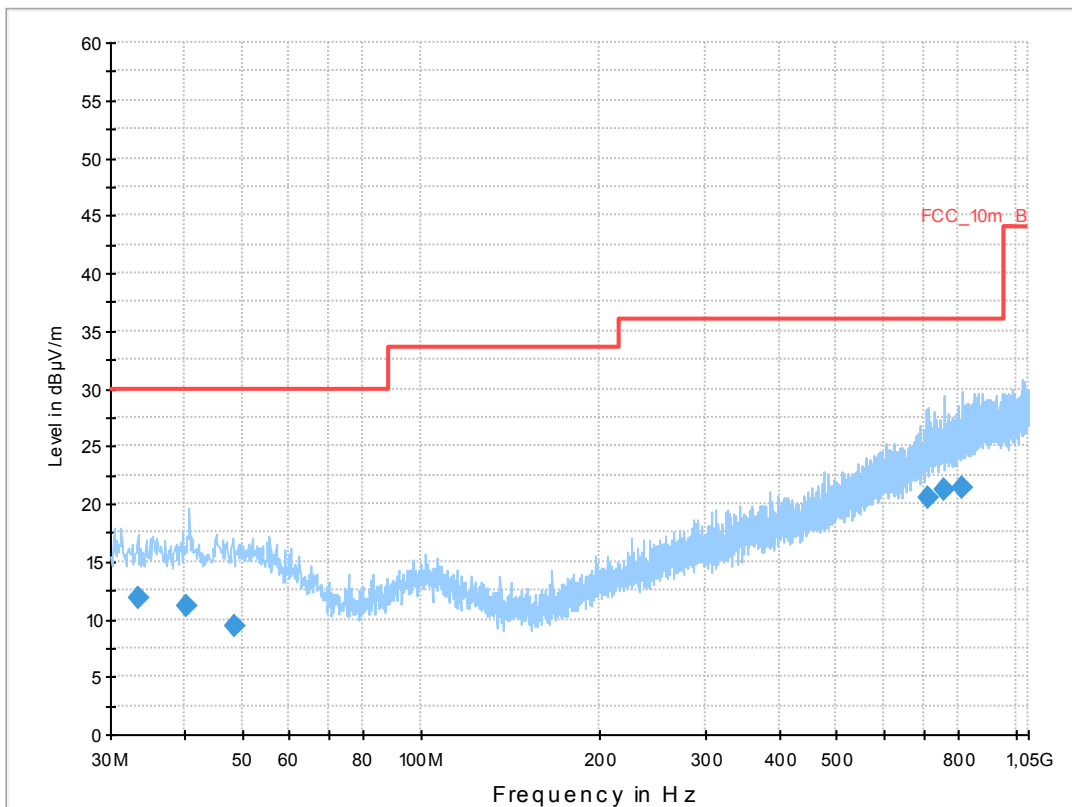
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN n-mode (HT20) TX Ch 120
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

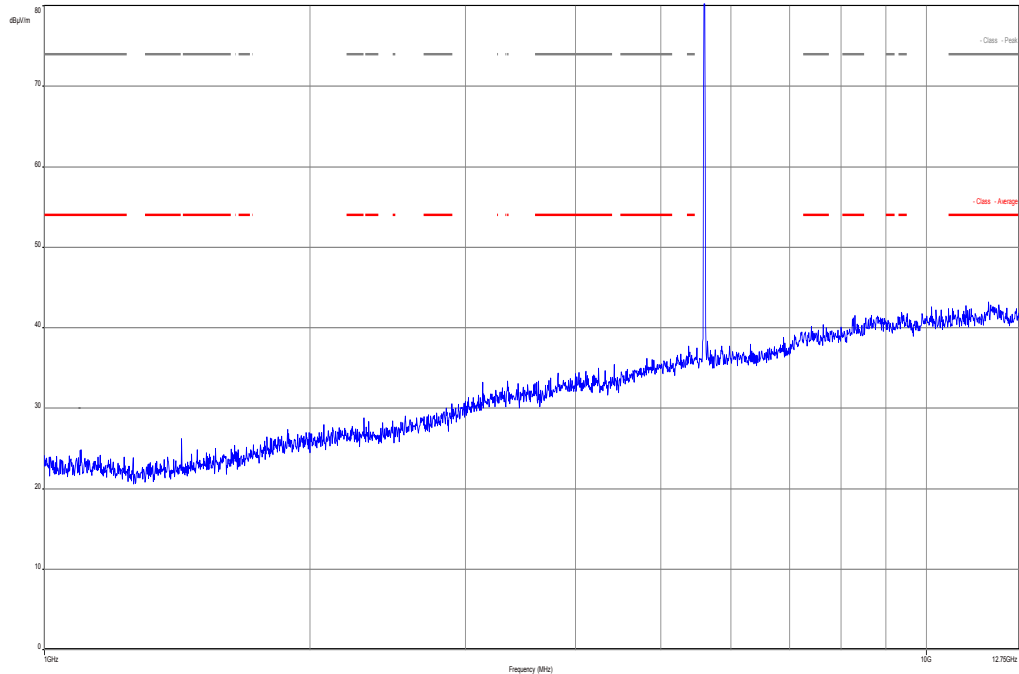
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



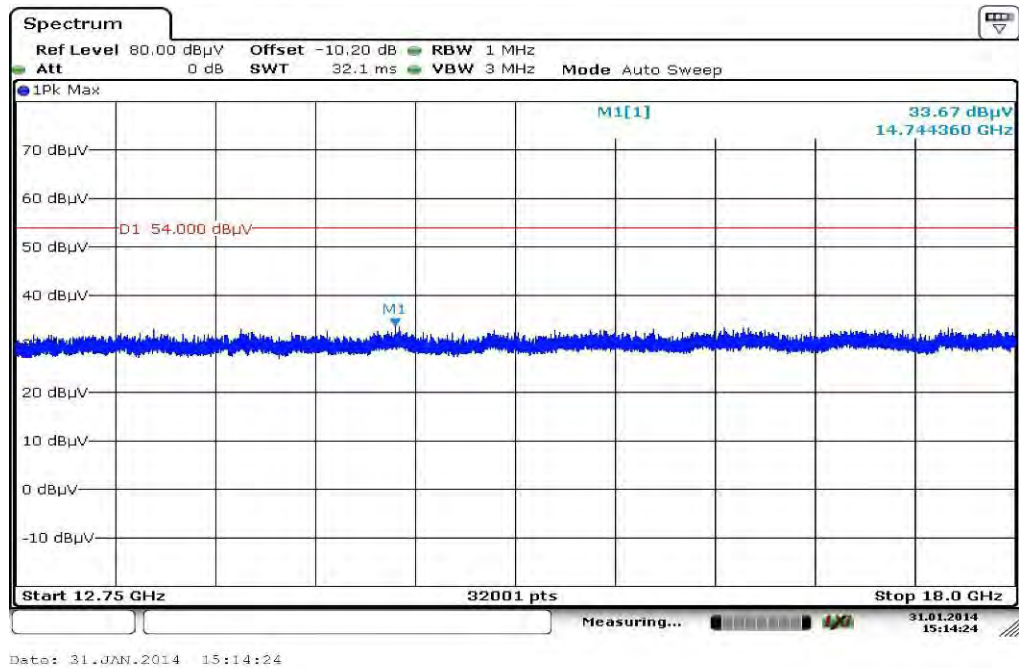
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 33.318900 | 11.8 | 1000.0 | 120.000 | 170.0 | V | 100.0 | 12.9 | 18.2 | 30.0 | |
| 40.325100 | 11.1 | 1000.0 | 120.000 | 170.0 | V | 10.0 | 13.4 | 18.9 | 30.0 | |
| 48.457950 | 9.4 | 1000.0 | 120.000 | 155.0 | V | 280.0 | 13.3 | 20.6 | 30.0 | |
| 710.954550 | 20.4 | 1000.0 | 120.000 | 98.0 | H | 92.0 | 22.8 | 15.6 | 36.0 | |
| 756.347550 | 21.2 | 1000.0 | 120.000 | 170.0 | V | 280.0 | 23.7 | 14.8 | 36.0 | |
| 811.375200 | 21.4 | 1000.0 | 120.000 | 170.0 | V | -10.0 | 24.0 | 14.6 | 36.0 | |

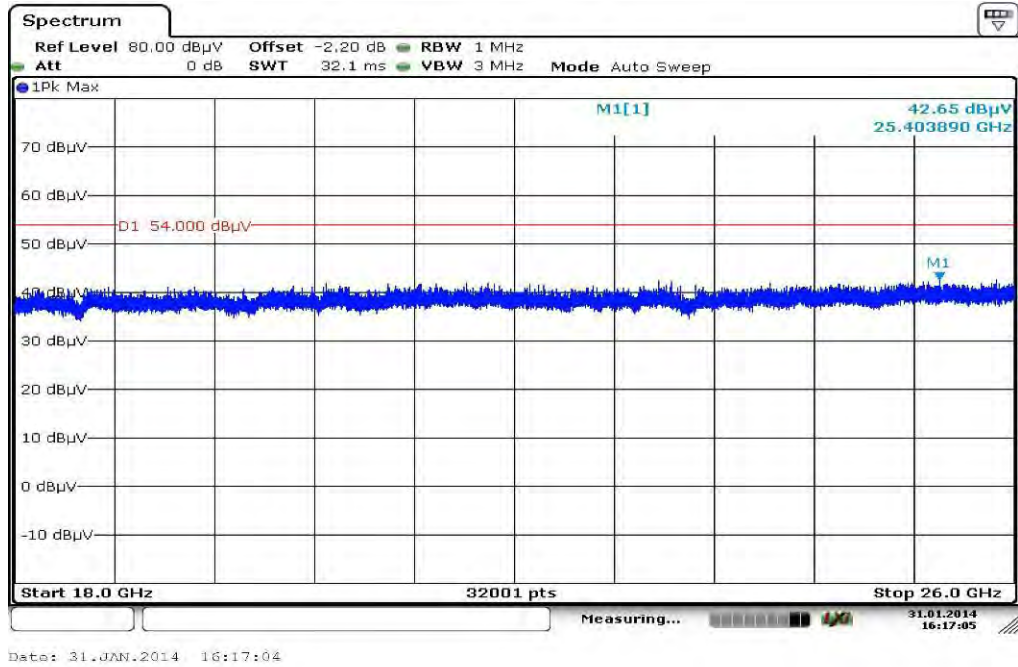
Plot 27: 1 GHz to 12.75 GHz, 5600 MHz, vertical & horizontal polarization



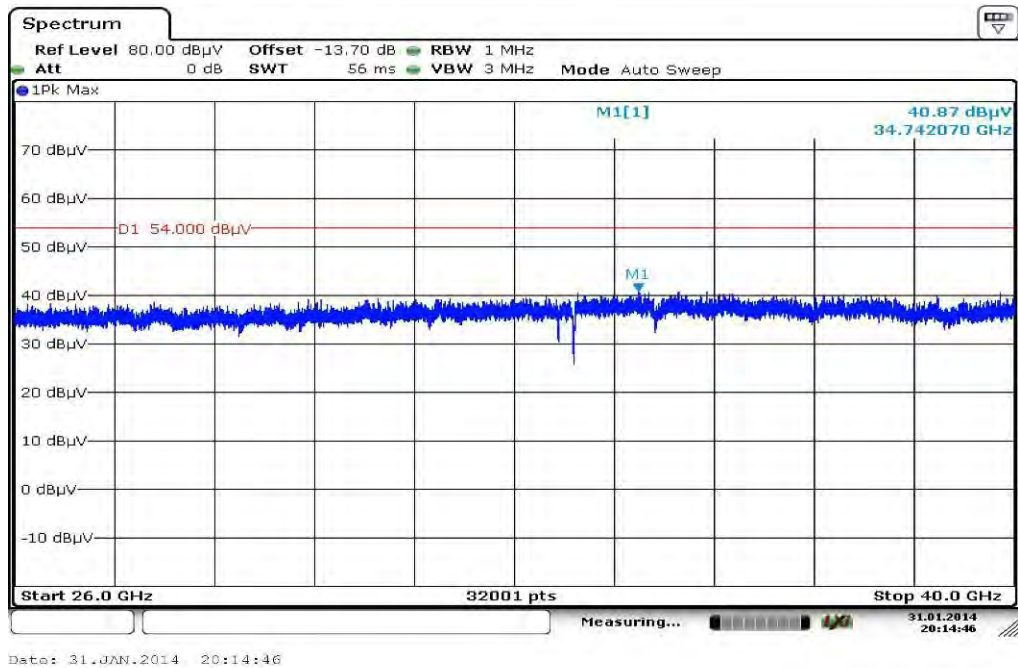
Plot 28: 12 GHz to 18 GHz, 5600 MHz, vertical & horizontal polarization



Plot 29: 18 GHz to 26 GHz, 5600 MHz, vertical & horizontal polarization



Plot 30: 26 GHz to 40 GHz, 5600 MHz, vertical & horizontal polarization



Plot 31: 30 MHz to 1 GHz, 5700 MHz, vertical & horizontal polarization

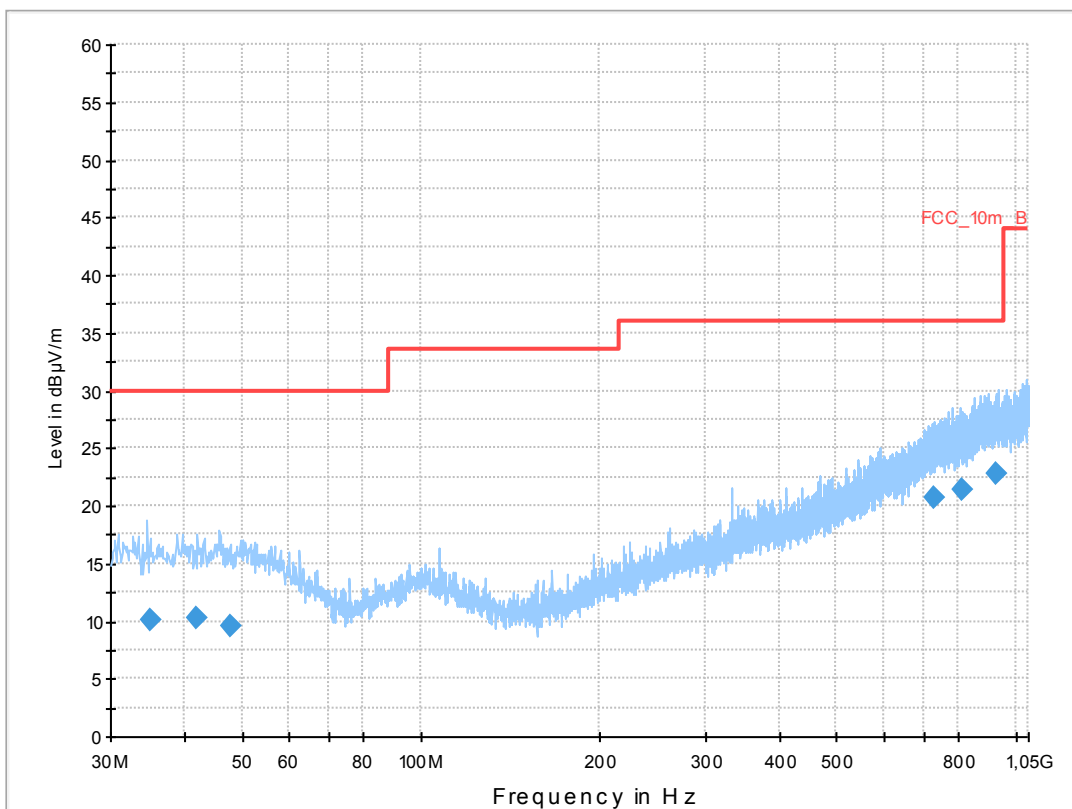
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN n-mode (HT20) TX Ch 140
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

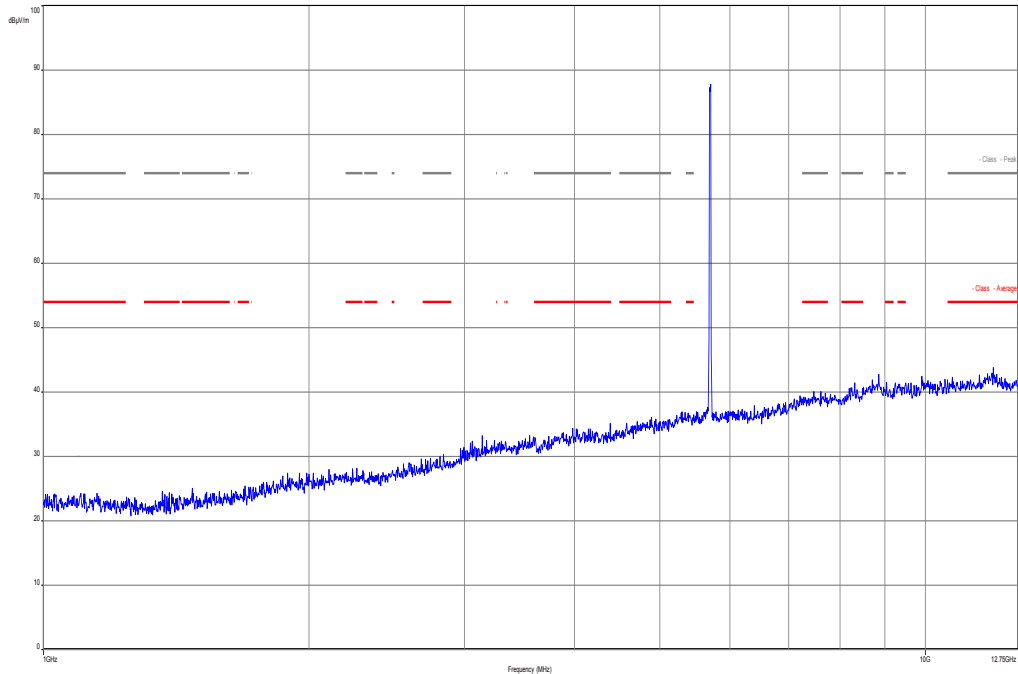
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



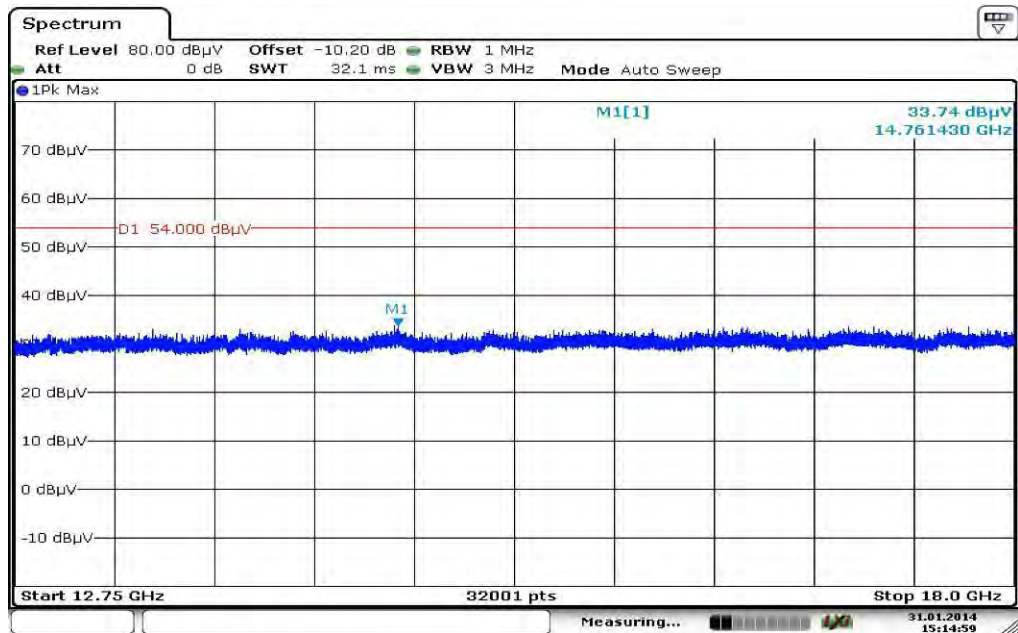
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 34.926600 | 10.1 | 1000.0 | 120.000 | 170.0 | V | 175.0 | 13.0 | 19.9 | 30.0 | |
| 41.917500 | 10.2 | 1000.0 | 120.000 | 135.0 | V | 3.0 | 13.4 | 19.8 | 30.0 | |
| 47.654400 | 9.5 | 1000.0 | 120.000 | 143.0 | H | 182.0 | 13.3 | 20.5 | 30.0 | |
| 727.646700 | 20.7 | 1000.0 | 120.000 | 170.0 | H | -2.0 | 23.1 | 15.3 | 36.0 | |
| 811.420800 | 21.4 | 1000.0 | 120.000 | 170.0 | H | 100.0 | 24.0 | 14.6 | 36.0 | |
| 930.909000 | 22.7 | 1000.0 | 120.000 | 170.0 | V | 81.0 | 25.3 | 13.3 | 36.0 | |

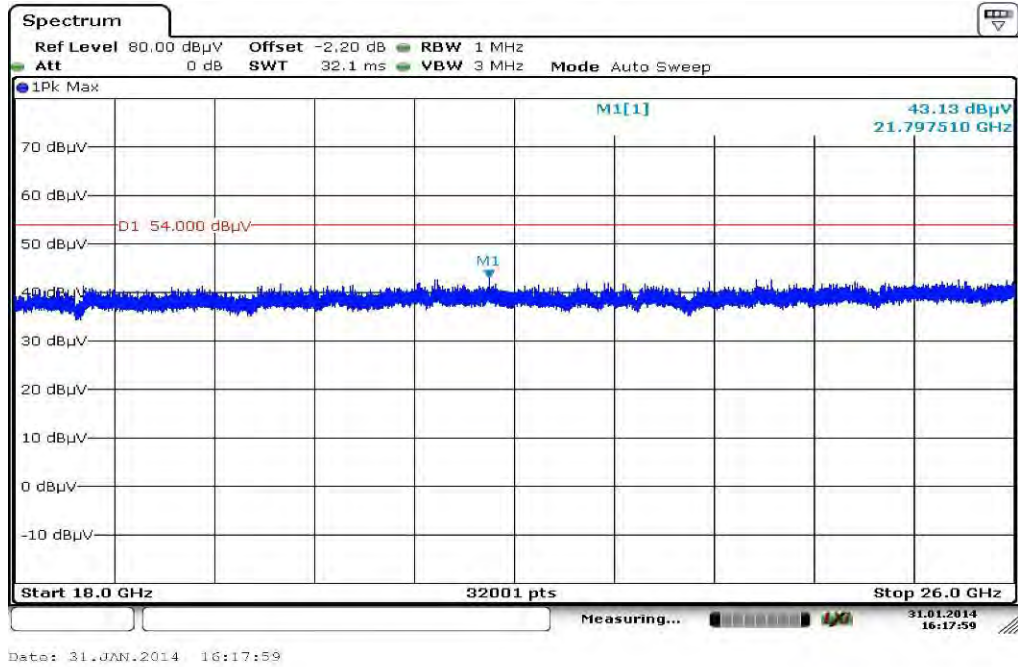
Plot 32: 1 GHz to 12.75 GHz, 5700 MHz, vertical & horizontal polarization



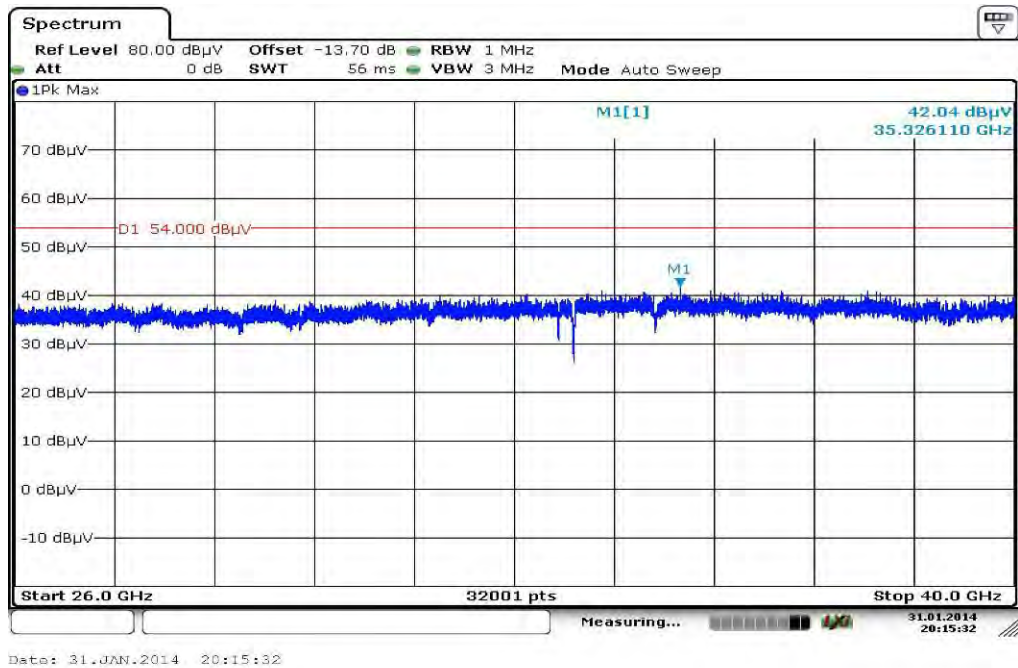
Plot 33: 12 GHz to 18 GHz, 5700 MHz, vertical & horizontal polarization



Plot 34: 18 GHz to 26 GHz, 5700 MHz, vertical & horizontal polarization



Plot 35: 26 GHz to 40 GHz, 5700 MHz, vertical & horizontal polarization



Plots: OFDM / n/ac – mode HT40

Plot 1: 30 MHz to 1 GHz, 5190 MHz, vertical & horizontal polarization

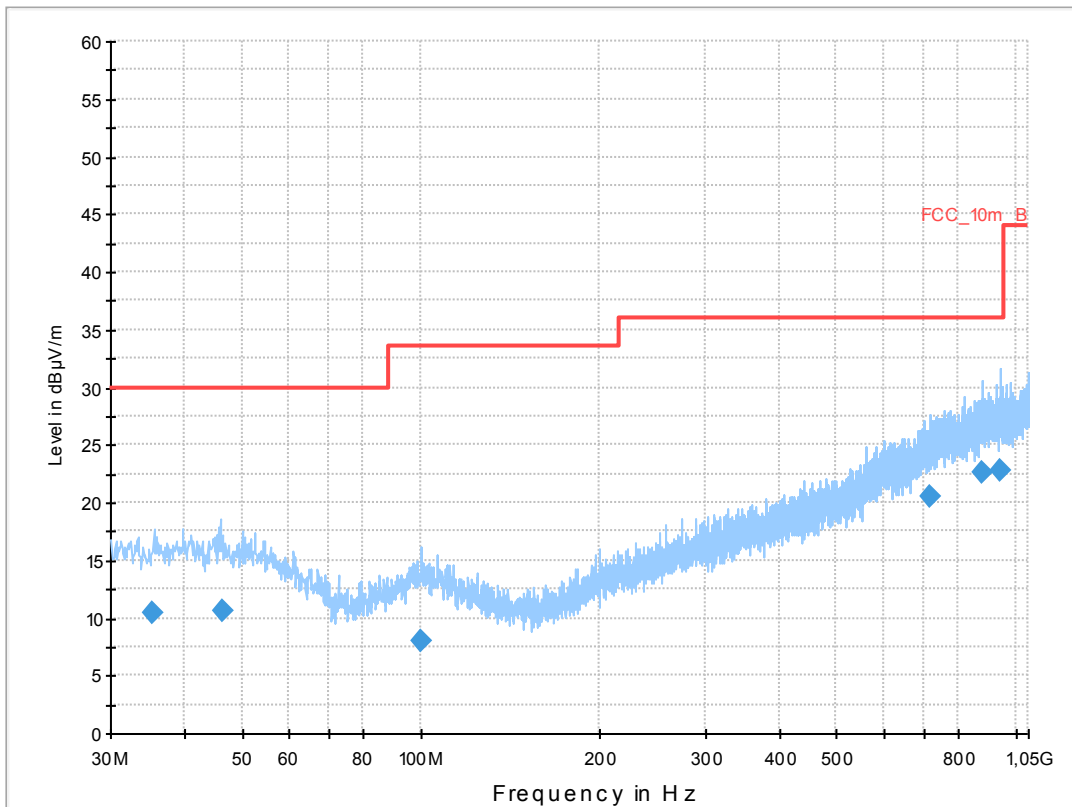
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 B class B @ 10 m
 Operating Conditions: WLAN n-mode (HT40) TX Ch 38
 Operator Name: Wolsdorfer
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

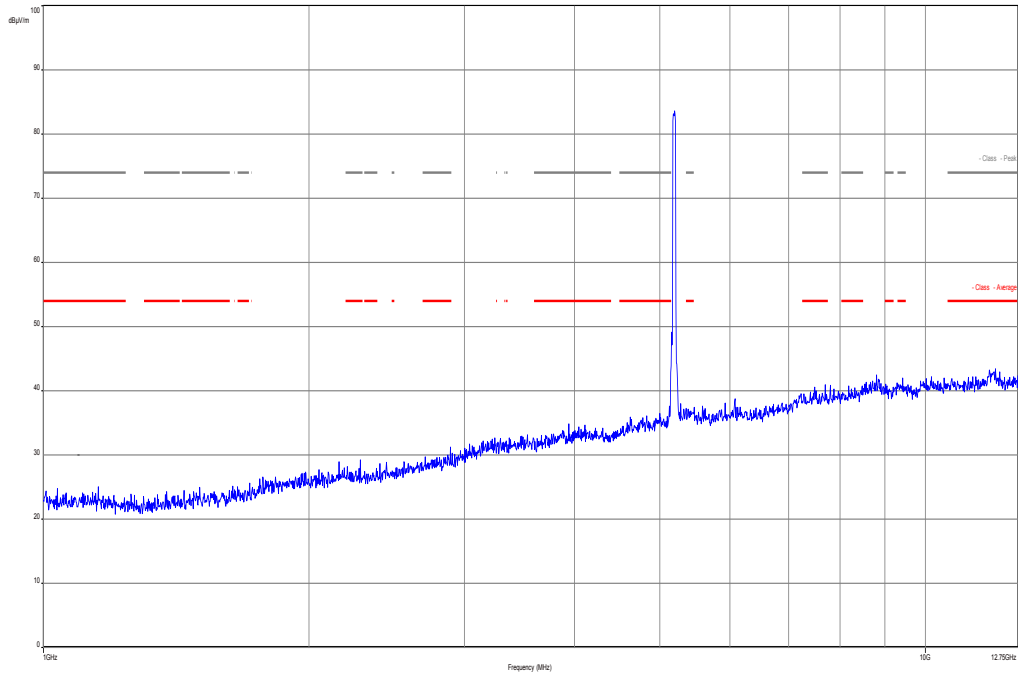
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



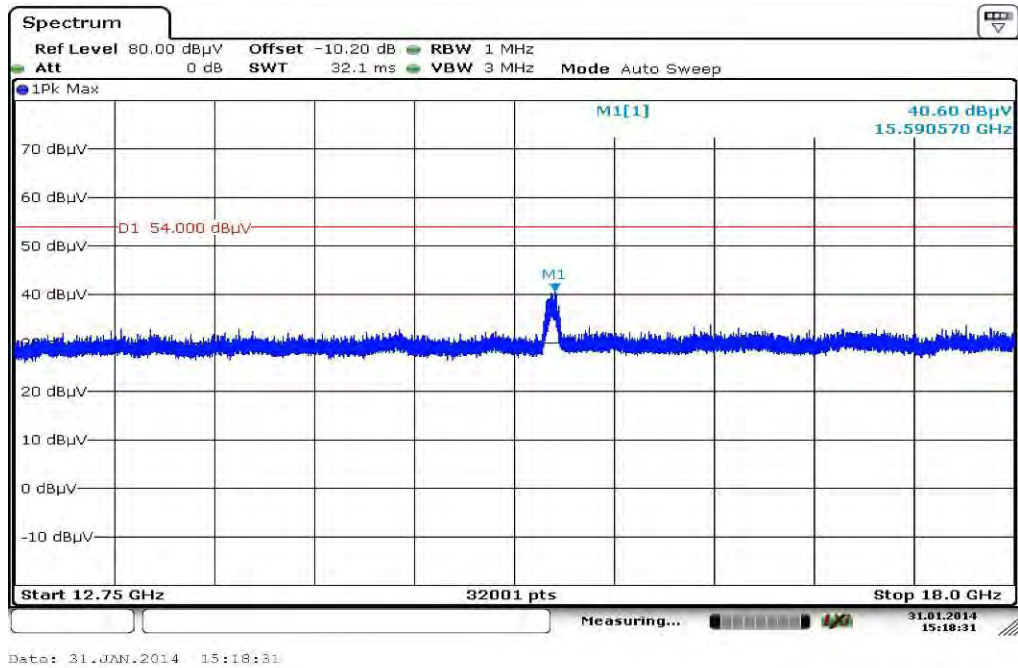
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 35.432550 | 10.5 | 1000.0 | 120.000 | 153.0 | H | 280.0 | 13.1 | 19.5 | 30.0 | |
| 46.377600 | 10.6 | 1000.0 | 120.000 | 143.0 | V | 272.0 | 13.3 | 19.4 | 30.0 | |
| 99.656100 | 8.0 | 1000.0 | 120.000 | 148.0 | V | 178.0 | 11.9 | 25.5 | 33.5 | |
| 715.993350 | 20.5 | 1000.0 | 120.000 | 170.0 | H | 171.0 | 22.9 | 15.5 | 36.0 | |
| 878.366100 | 22.6 | 1000.0 | 120.000 | 170.0 | H | 100.0 | 24.9 | 13.4 | 36.0 | |

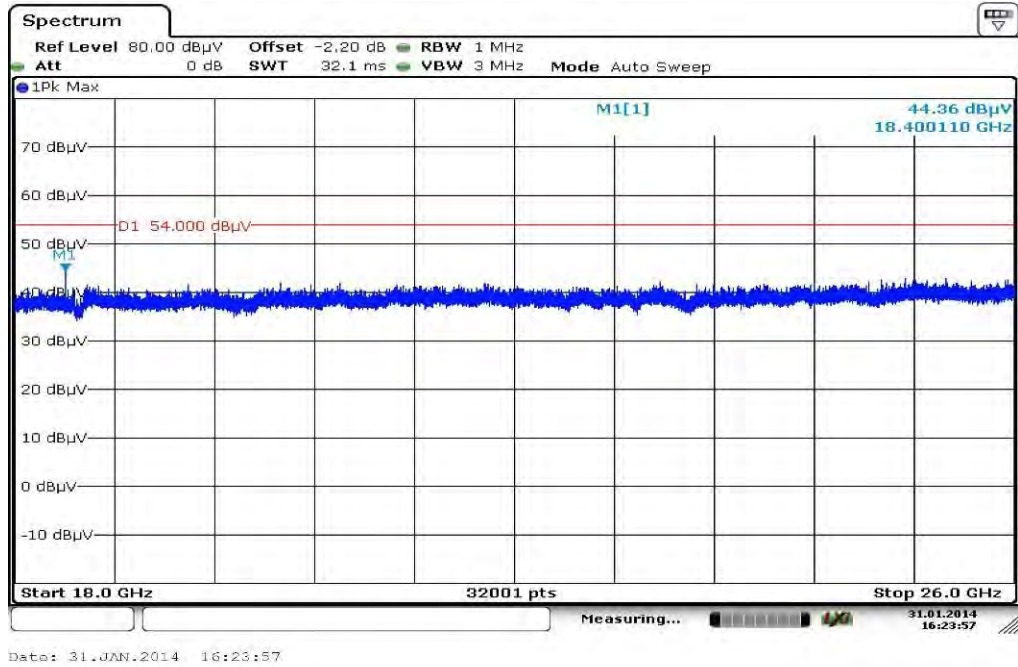
Plot 2: 1 GHz to 12.75 GHz, 5190 MHz, vertical & horizontal polarization



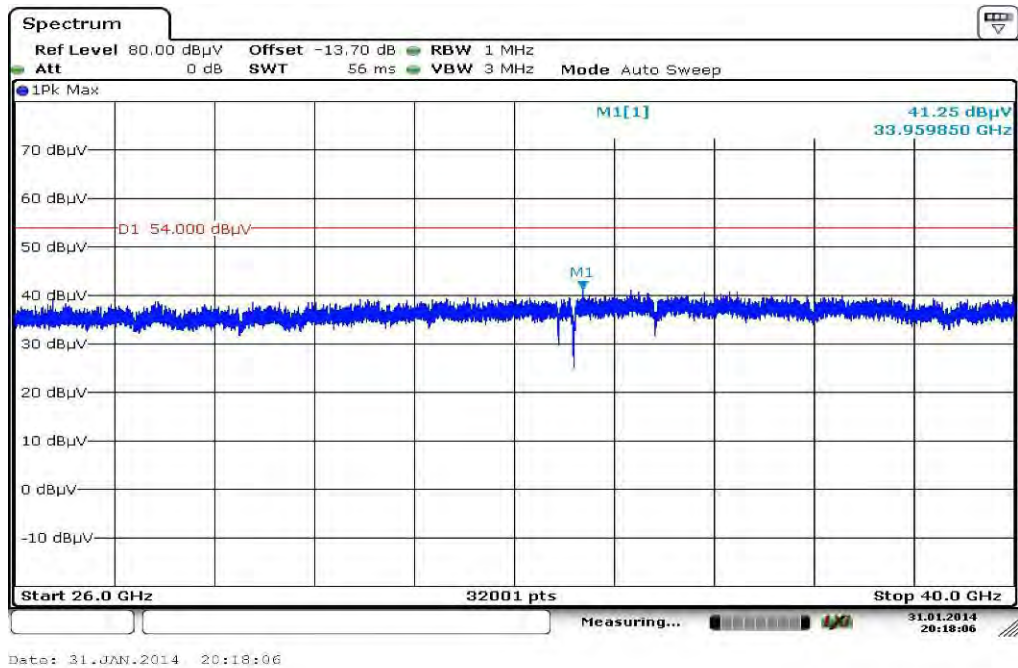
Plot 3: 12 GHz to 18 GHz, 5190 MHz, vertical & horizontal polarization



Plot 4: 18 GHz to 26 GHz, 5190 MHz, vertical & horizontal polarization



Plot 5: 26 GHz to 40 GHz, 5190 MHz, vertical & horizontal polarization



Plot 6: 30 MHz to 1 GHz, 5230 MHz, vertical & horizontal polarization

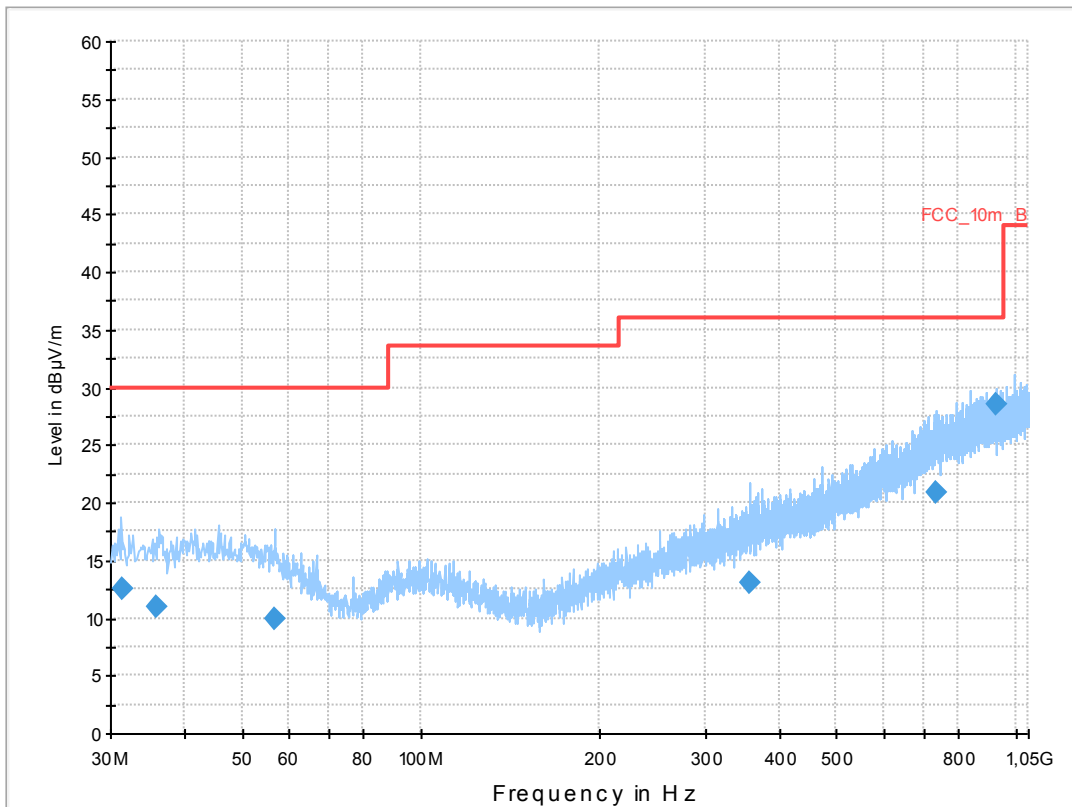
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN n-mode (HT40) TX Ch 46
 Operator Name: Wolsdorfer
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

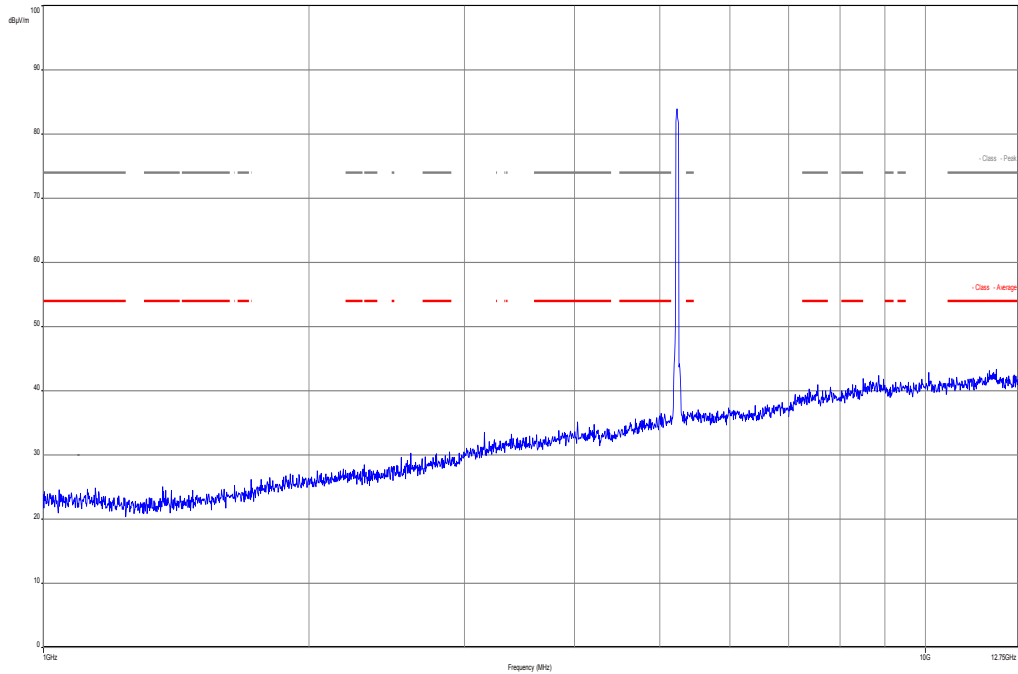
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



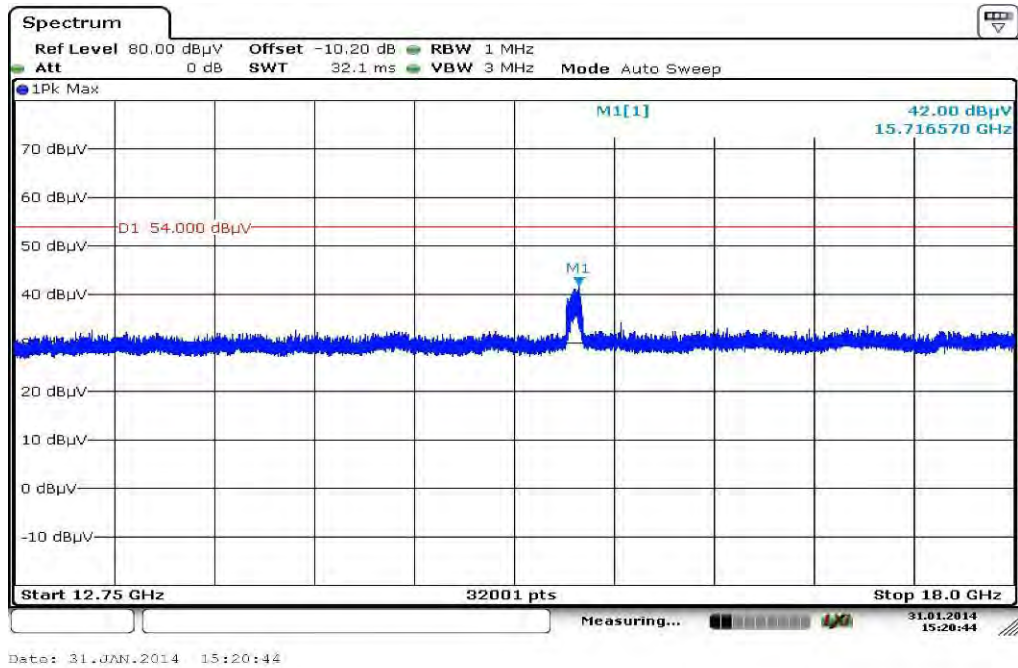
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 31.344750 | 12.6 | 1000.0 | 120.000 | 170.0 | V | 268.0 | 12.6 | 17.4 | 30.0 | |
| 35.822550 | 10.9 | 1000.0 | 120.000 | 170.0 | V | 183.0 | 13.1 | 19.1 | 30.0 | |
| 56.727750 | 9.9 | 1000.0 | 120.000 | 121.0 | V | 81.0 | 12.4 | 20.1 | 30.0 | |
| 357.360900 | 13.0 | 1000.0 | 120.000 | 170.0 | V | 170.0 | 16.2 | 23.0 | 36.0 | |
| 732.131700 | 20.9 | 1000.0 | 120.000 | 170.0 | V | 10.0 | 23.2 | 15.1 | 36.0 | |

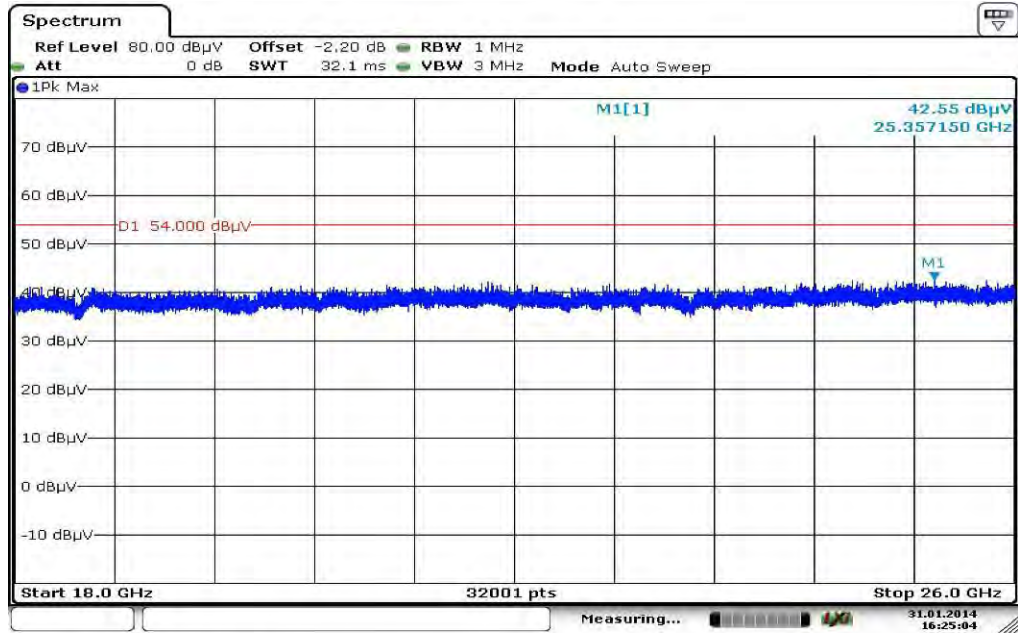
Plot 7: 1 GHz to 12.75 GHz, 5230 MHz, vertical & horizontal polarization



Plot 8: 12 GHz to 18 GHz, 5230 MHz, vertical & horizontal polarization

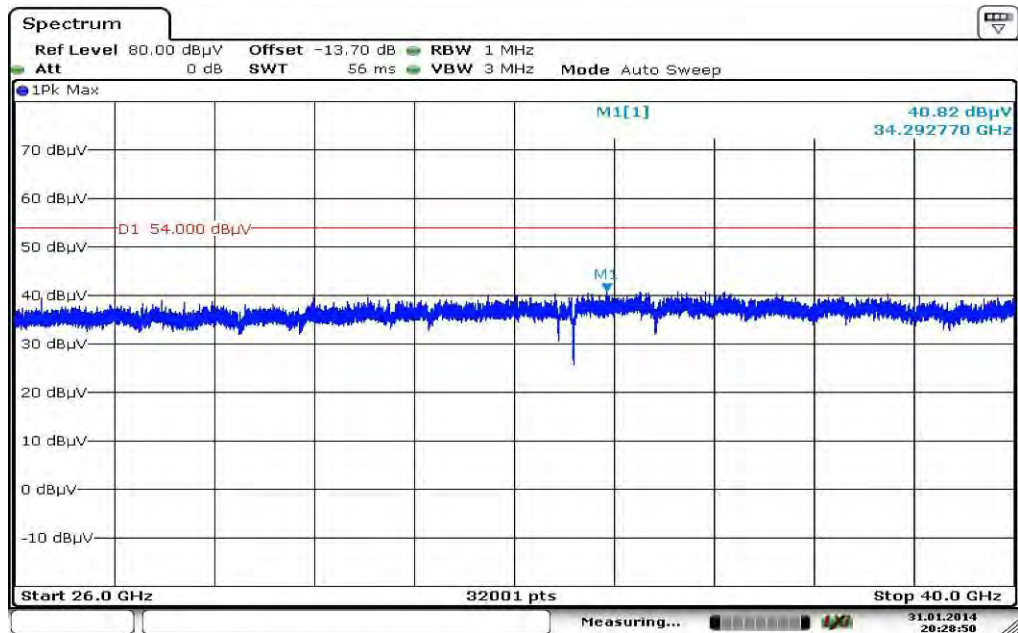


Plot 9: 18 GHz to 26 GHz, 5230 MHz, vertical & horizontal polarization



Date: 31.JAN.2014 16:25:04

Plot 10: 26 GHz to 40 GHz, 5230 MHz, vertical & horizontal polarization



Date: 31.JAN.2014 20:28:50

Plot 11: 30 MHz to 1 GHz, 5270 MHz, vertical & horizontal polarization

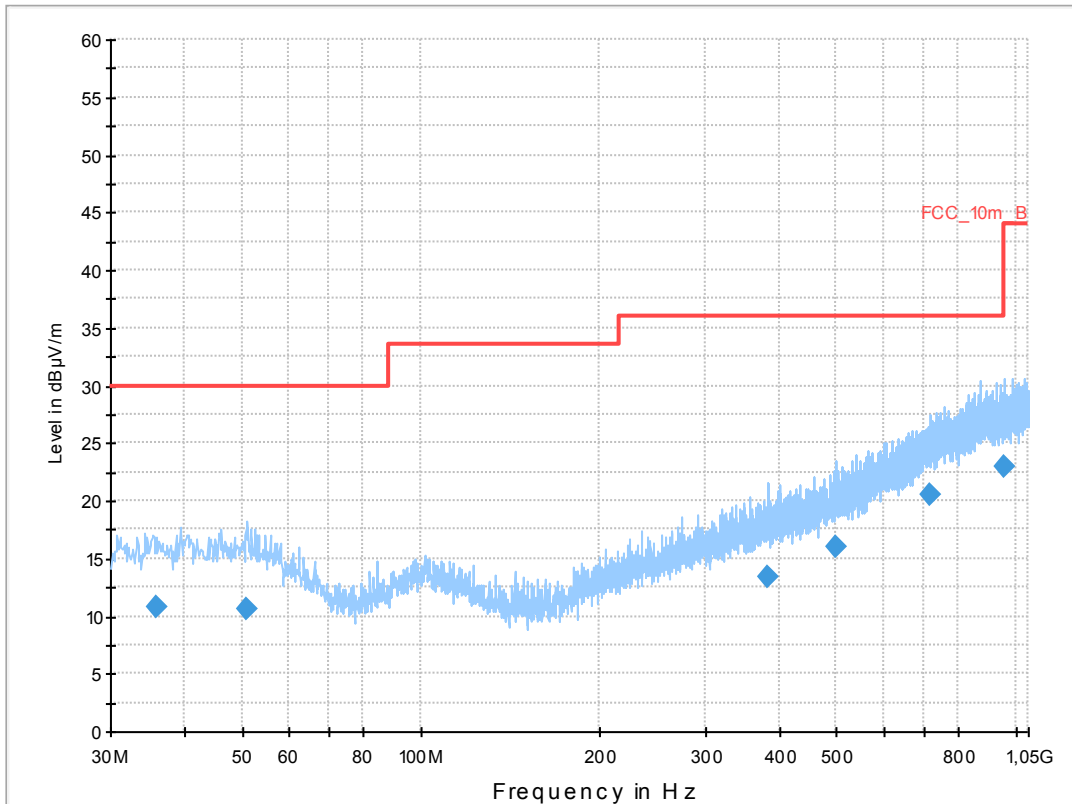
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN n-mode (HT40) TX Ch 54
 Operator Name: Wolsdorfer
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

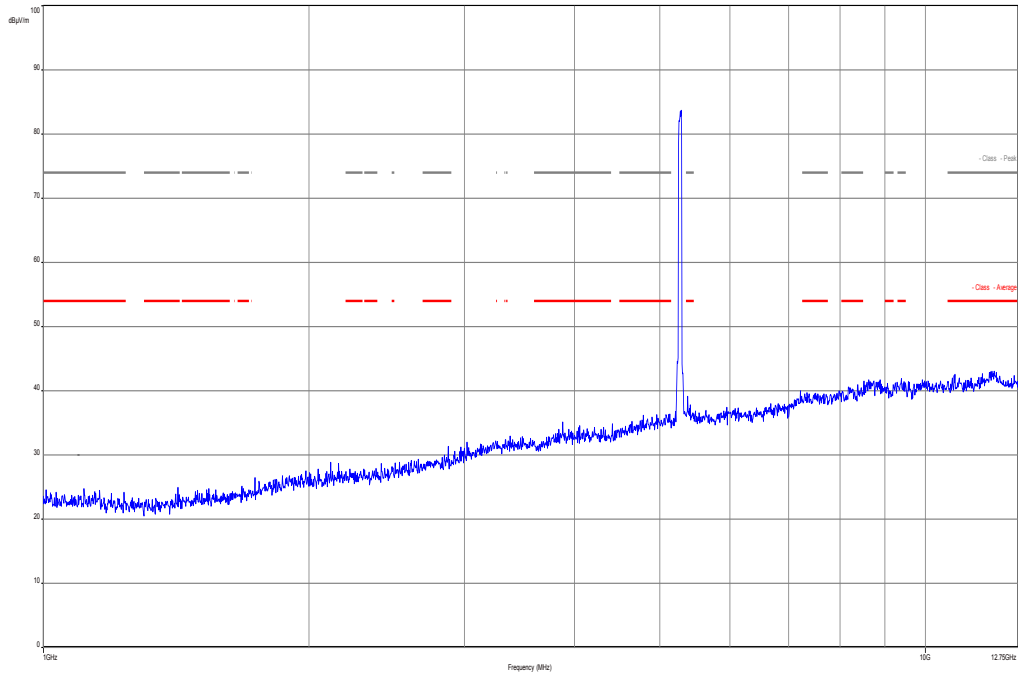
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



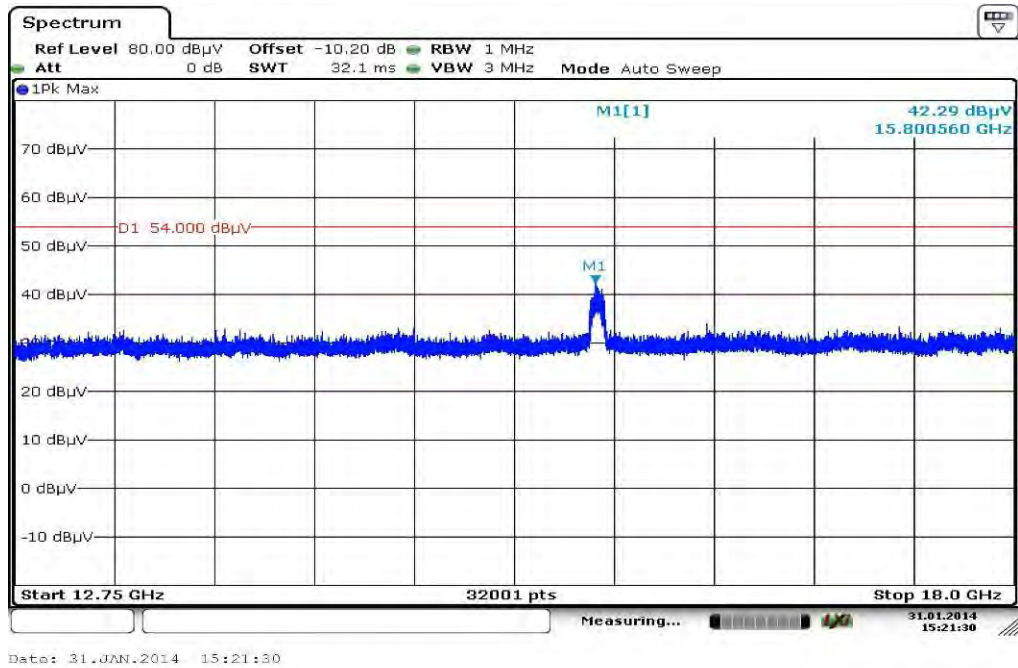
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 35.828550 | 10.8 | 1000.0 | 120.000 | 114.0 | V | 178.0 | 13.1 | 19.2 | 30.0 | |
| 50.805900 | 10.6 | 1000.0 | 120.000 | 135.0 | H | 190.0 | 13.3 | 19.4 | 30.0 | |
| 381.757950 | 13.5 | 1000.0 | 120.000 | 170.0 | V | -2.0 | 16.6 | 22.5 | 36.0 | |
| 497.980350 | 16.0 | 1000.0 | 120.000 | 170.0 | V | 100.0 | 18.7 | 20.0 | 36.0 | |
| 717.421500 | 20.6 | 1000.0 | 120.000 | 170.0 | V | 100.0 | 22.9 | 15.4 | 36.0 | |
| 954.566250 | 22.9 | 1000.0 | 120.000 | 134.0 | V | 10.0 | 25.4 | 13.1 | 36.0 | |

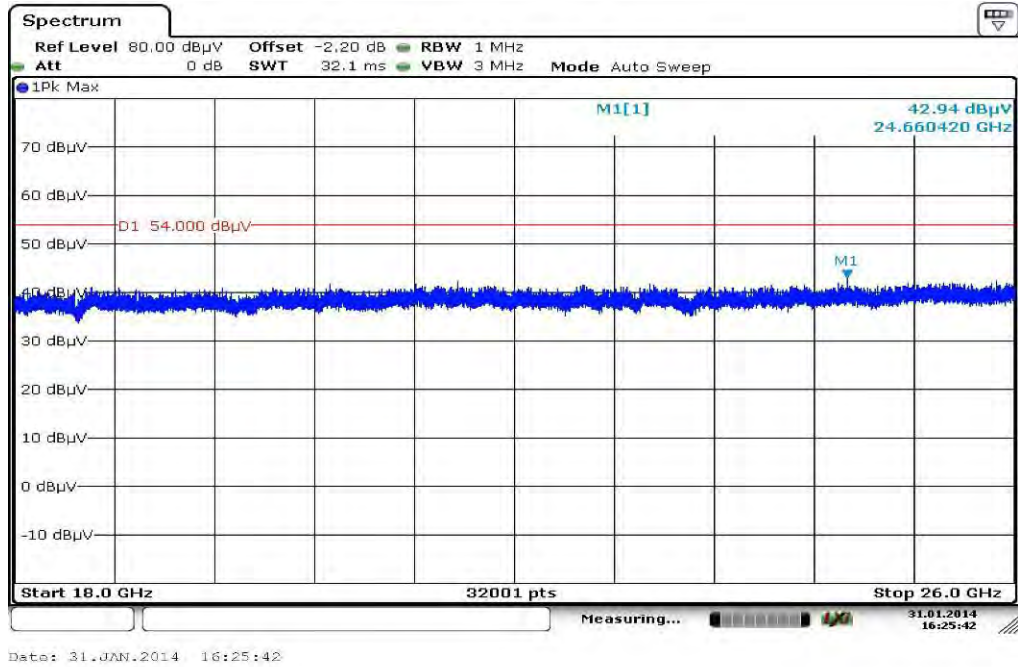
Plot 12: 1 GHz to 12.75 GHz, 5270 MHz, vertical & horizontal polarization



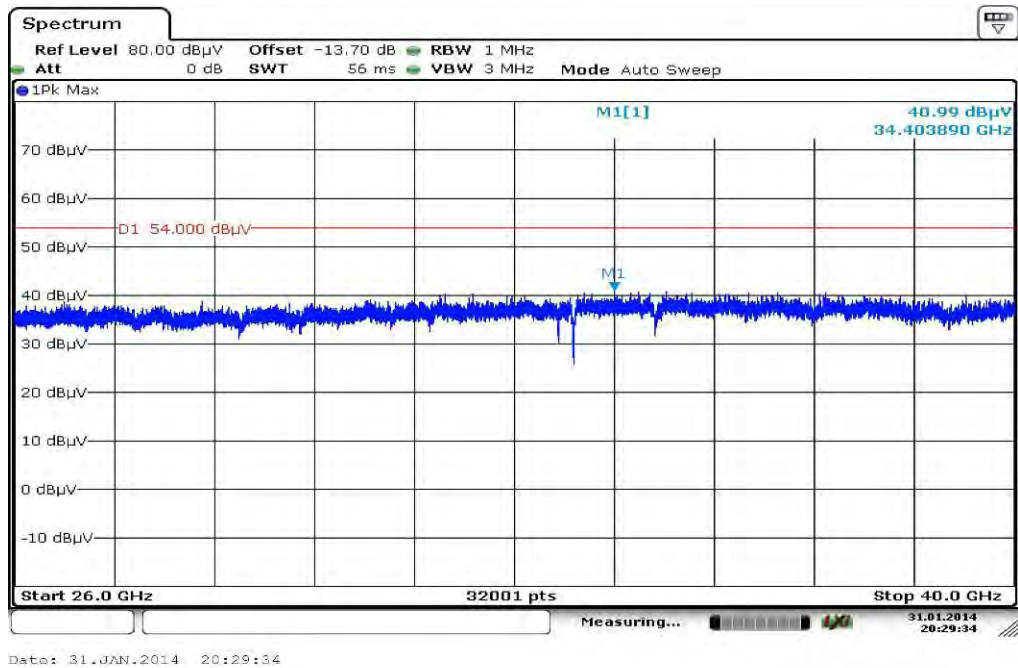
Plot 13: 12 GHz to 18 GHz, 5270 MHz, vertical & horizontal polarization



Plot 14: 18 GHz to 26 GHz, 5270 MHz, vertical & horizontal polarization



Plot 15: 26 GHz to 40 GHz, 5270 MHz, vertical & horizontal polarization



Plot 16: 30 MHz to 1 GHz, 5310 MHz, vertical & horizontal polarization

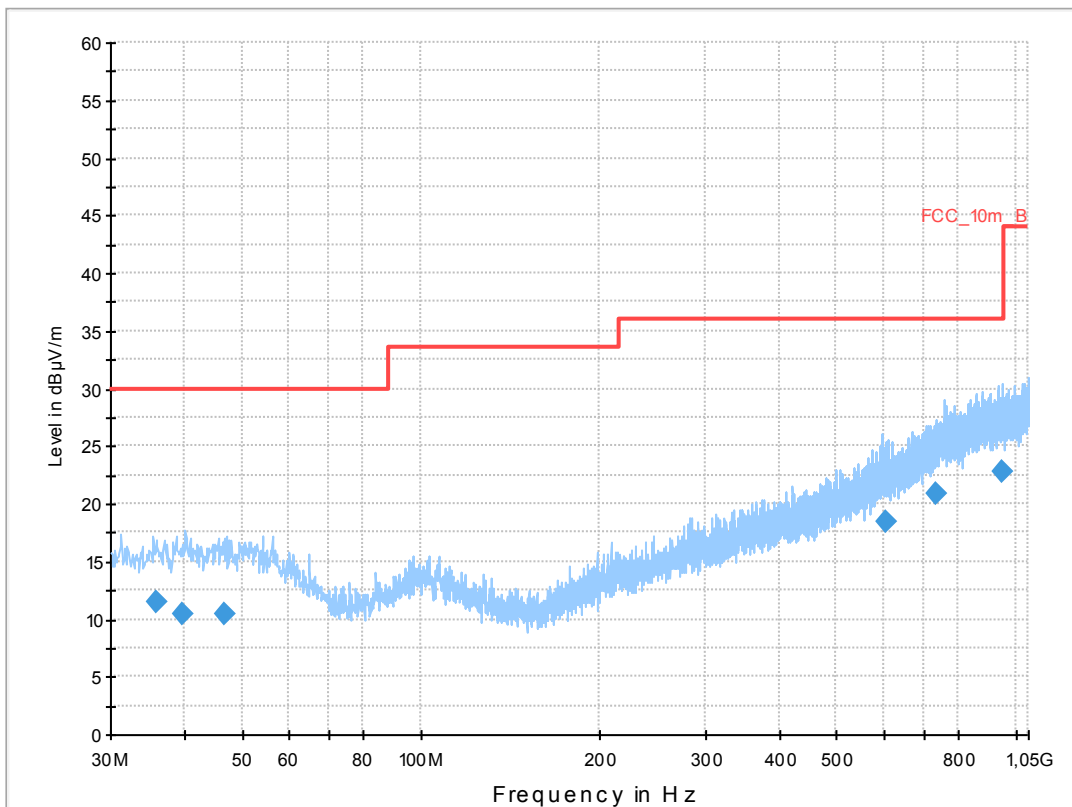
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN n-mode (HT40) TX Ch 62
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

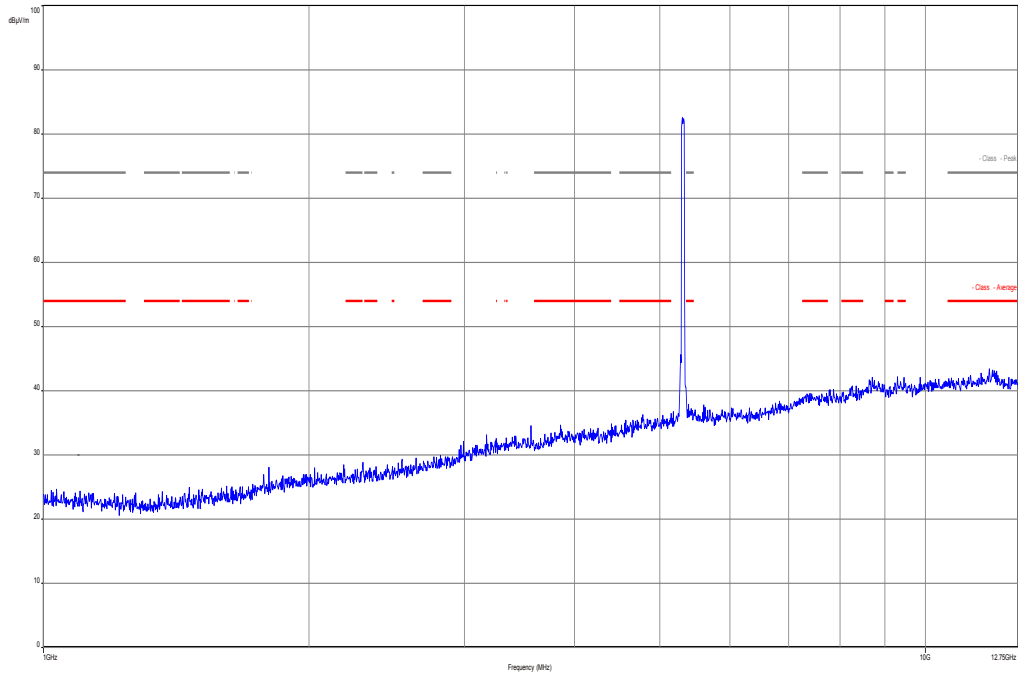
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



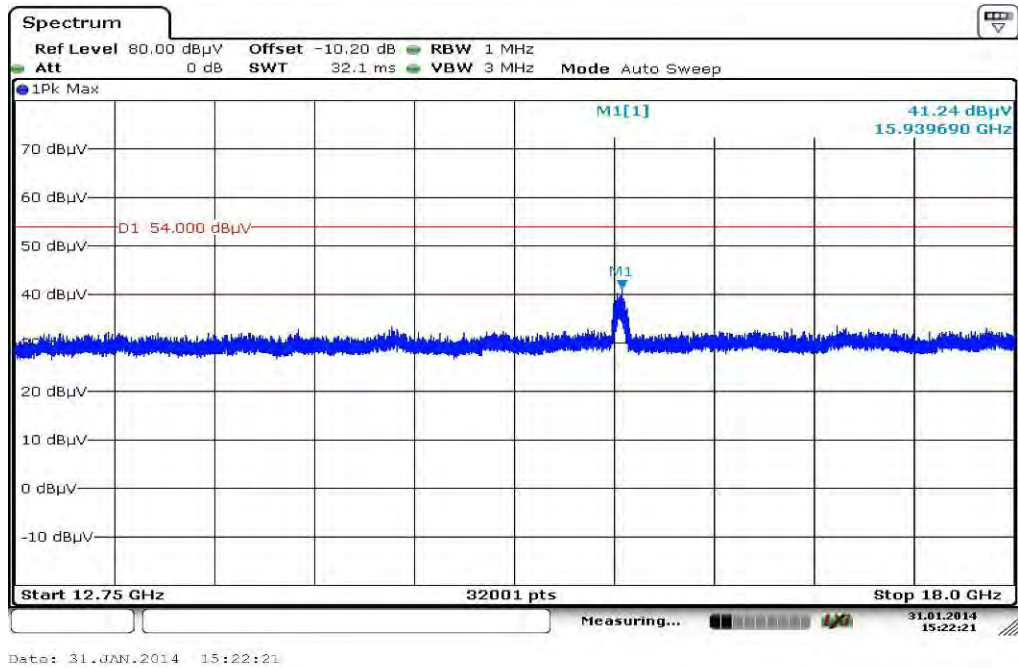
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 35.986500 | 11.5 | 1000.0 | 120.000 | 170.0 | V | 190.0 | 13.1 | 18.5 | 30.0 | |
| 39.695550 | 10.5 | 1000.0 | 120.000 | 170.0 | V | 183.0 | 13.4 | 19.5 | 30.0 | |
| 46.516800 | 10.5 | 1000.0 | 120.000 | 98.0 | V | 190.0 | 13.3 | 19.5 | 30.0 | |
| 604.395300 | 18.4 | 1000.0 | 120.000 | 170.0 | H | -9.0 | 20.8 | 17.6 | 36.0 | |
| 731.881650 | 20.8 | 1000.0 | 120.000 | 170.0 | H | 261.0 | 23.2 | 15.2 | 36.0 | |
| 947.773800 | 22.8 | 1000.0 | 120.000 | 170.0 | H | 260.0 | 25.3 | 13.2 | 36.0 | |

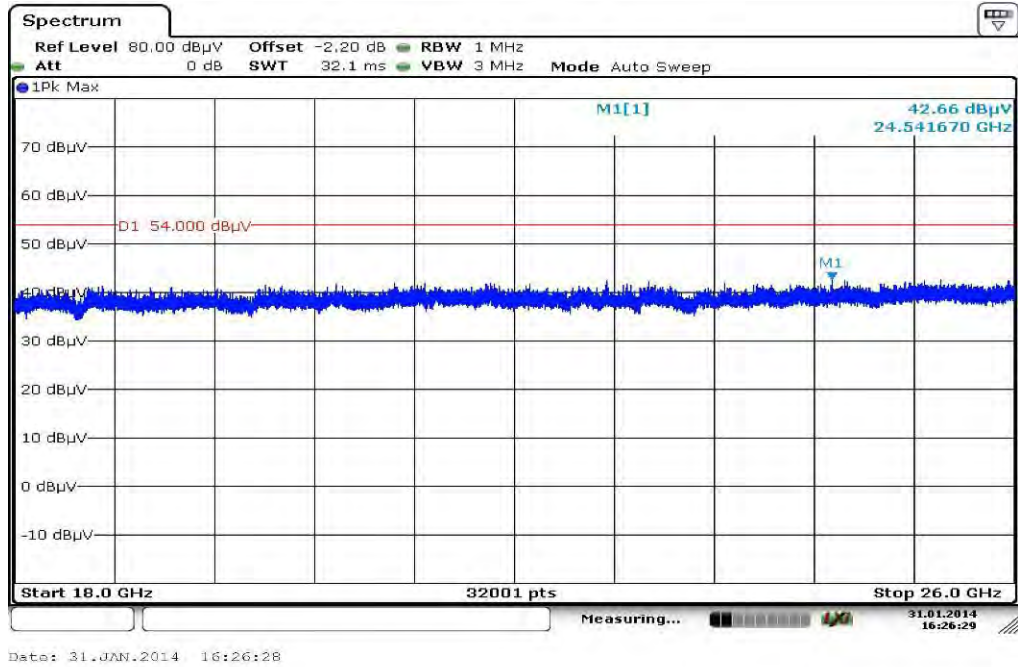
Plot 17: 1 GHz to 12.75 GHz, 5310 MHz, vertical & horizontal polarization



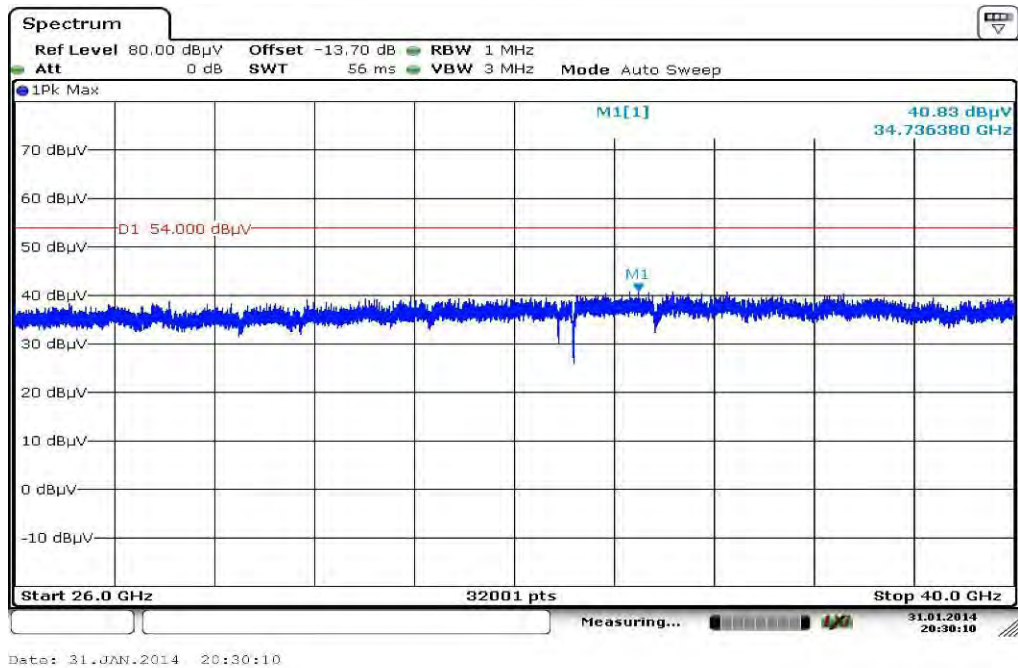
Plot 18: 12 GHz to 18 GHz, 5310 MHz, vertical & horizontal polarization



Plot 19: 18 GHz to 26 GHz, 5310 MHz, vertical & horizontal polarization



Plot 20: 26 GHz to 40 GHz, 5310 MHz, vertical & horizontal polarization



Plot 21: 30 MHz to 1 GHz, 5510 MHz, vertical & horizontal polarization

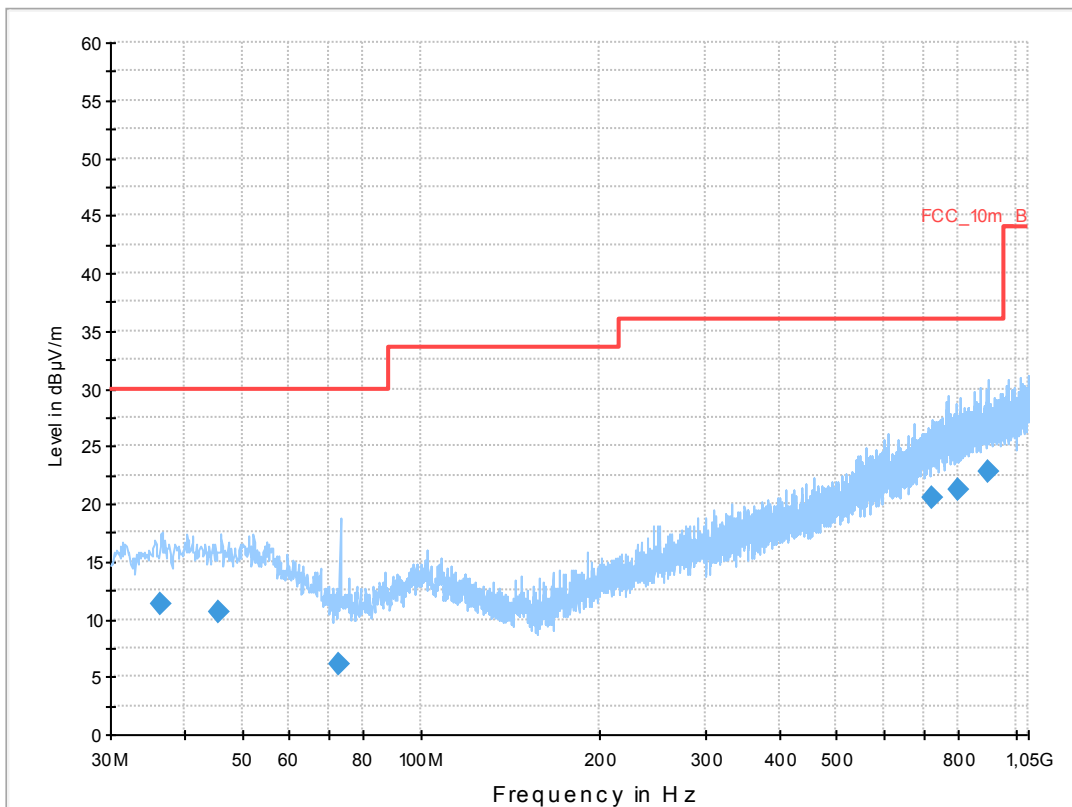
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN n-mode (HT40) TX Ch 102
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

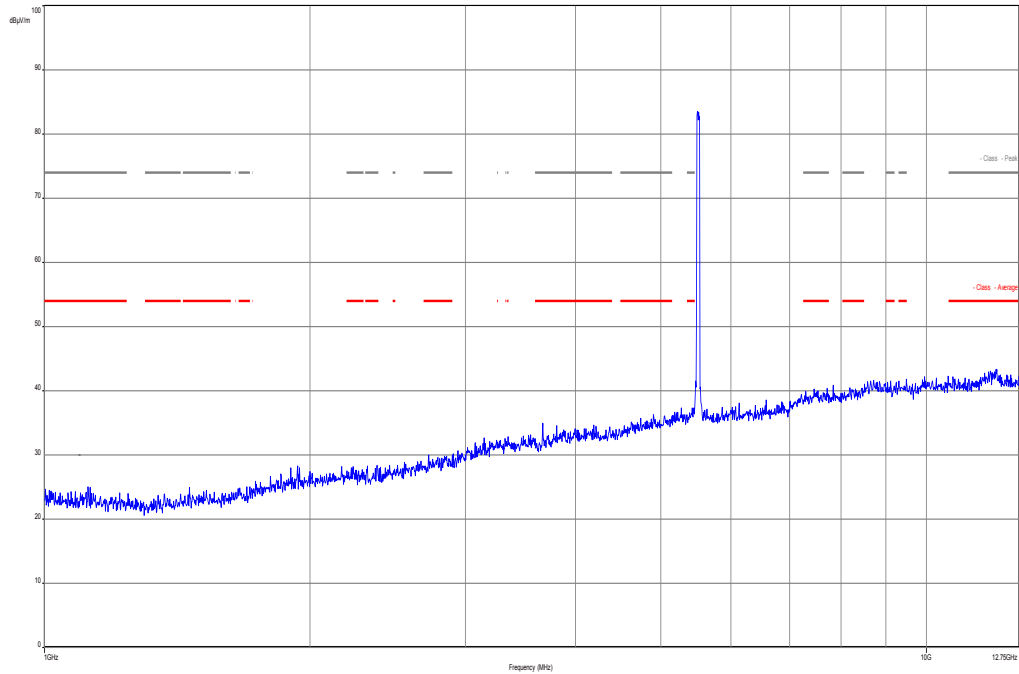
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



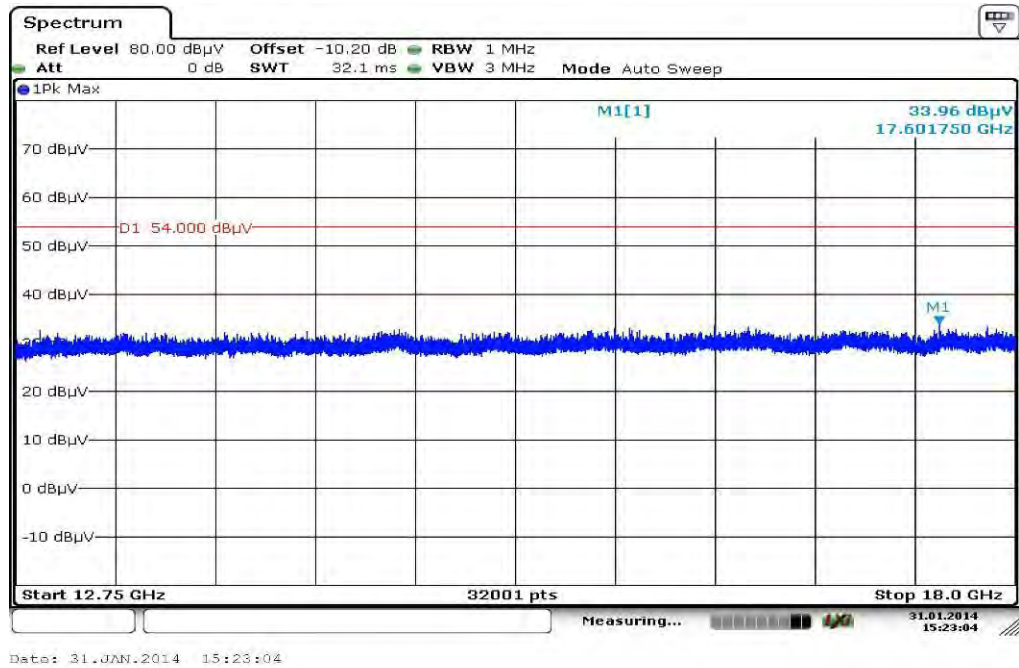
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 36.421650 | 11.3 | 1000.0 | 120.000 | 132.0 | V | 10.0 | 13.1 | 18.7 | 30.0 | |
| 45.644700 | 10.7 | 1000.0 | 120.000 | 170.0 | H | 10.0 | 13.3 | 19.3 | 30.0 | |
| 72.908100 | 6.0 | 1000.0 | 120.000 | 130.0 | V | -10.0 | 9.2 | 24.0 | 30.0 | |
| 724.749600 | 20.5 | 1000.0 | 120.000 | 170.0 | H | 100.0 | 23.1 | 15.5 | 36.0 | |
| 803.248200 | 21.3 | 1000.0 | 120.000 | 131.0 | H | -9.0 | 23.9 | 14.7 | 36.0 | |
| 898.659000 | 22.7 | 1000.0 | 120.000 | 160.0 | V | 90.0 | 25.2 | 13.3 | 36.0 | |

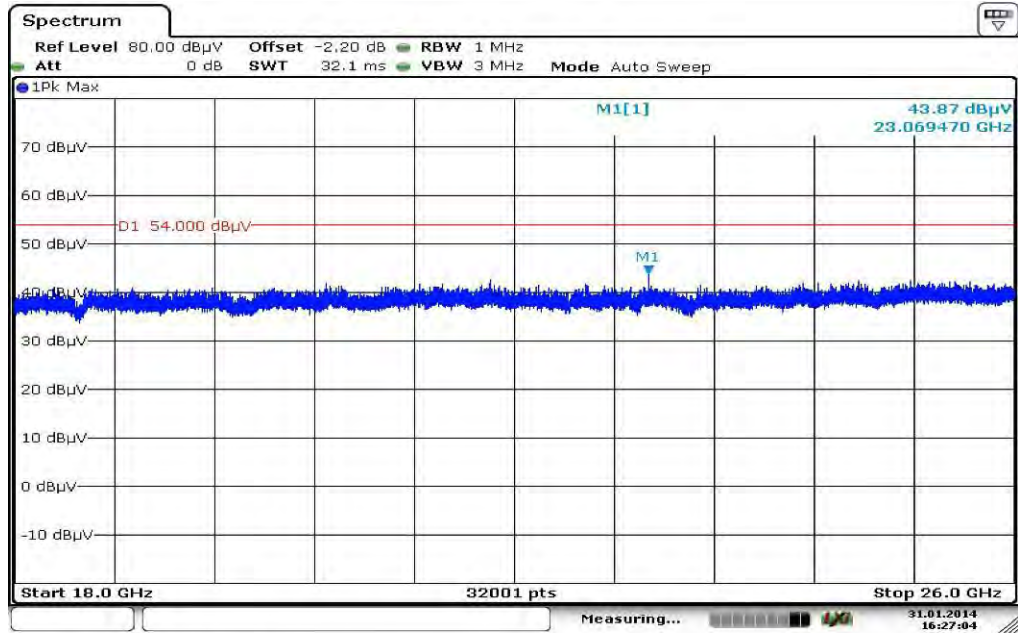
Plot 22: 1 GHz to 12.75 GHz, 5510 MHz, vertical & horizontal polarization



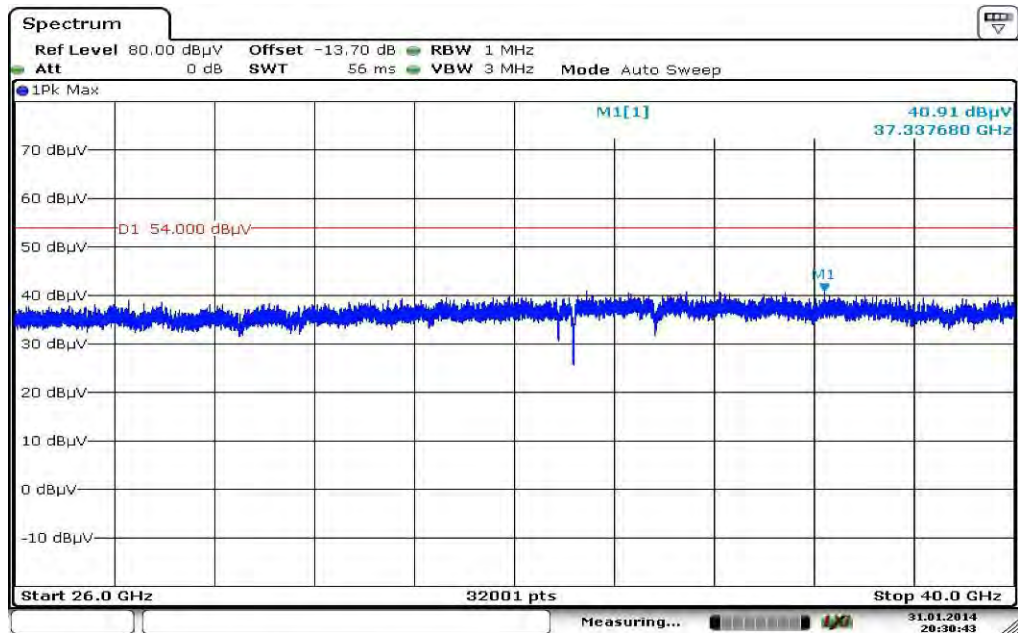
Plot 23: 12 GHz to 18 GHz, 5510 MHz, vertical & horizontal polarization



Plot 24: 18 GHz to 26 GHz, 5510 MHz, vertical & horizontal polarization



Plot 25: 26 GHz to 40 GHz, 5510 MHz, vertical & horizontal polarization



Plot 26: 30 MHz to 1 GHz, 5590 MHz, vertical & horizontal polarization

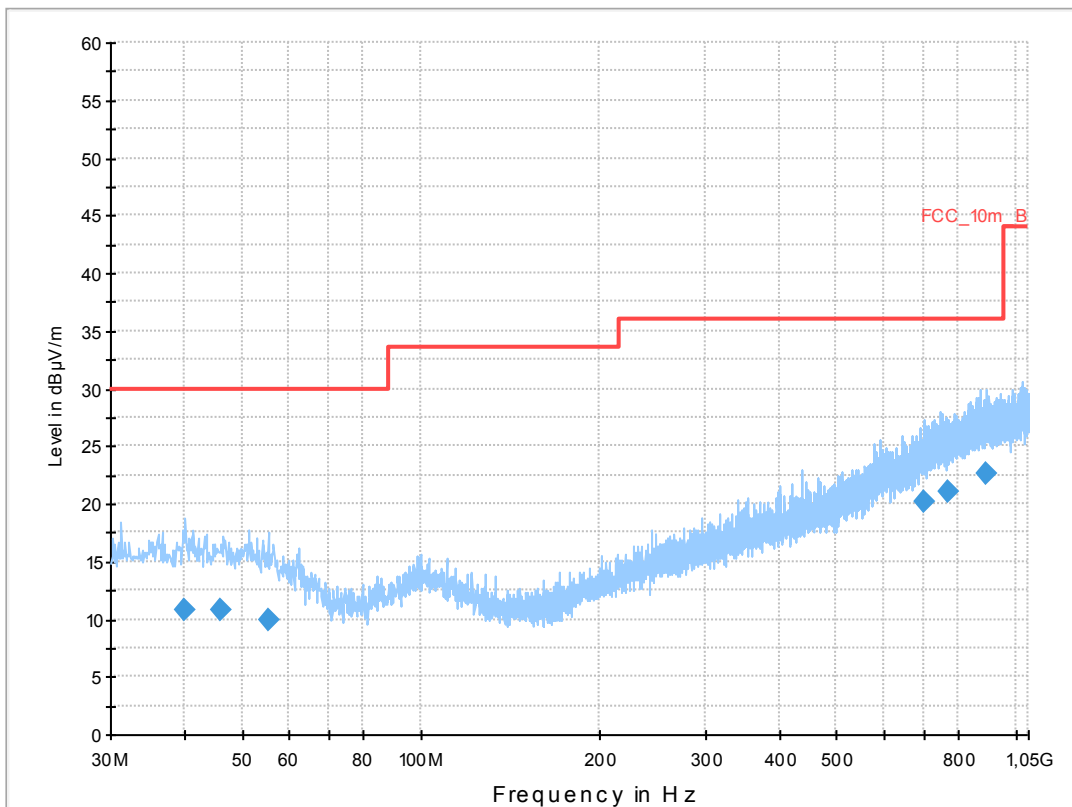
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN n-mode (HT40) TX Ch 118
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

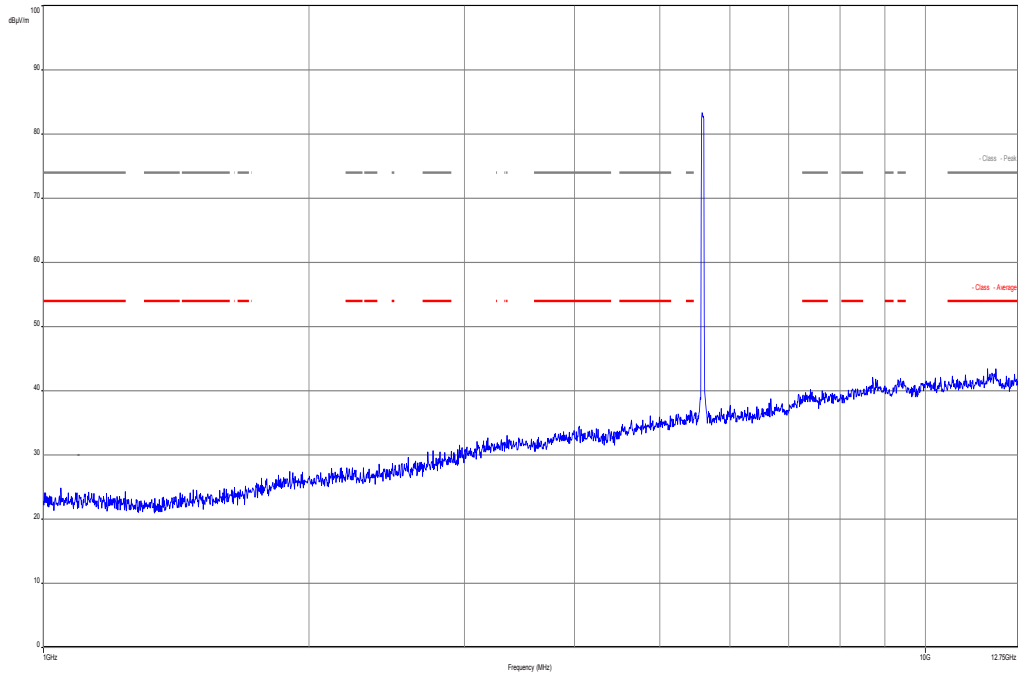
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



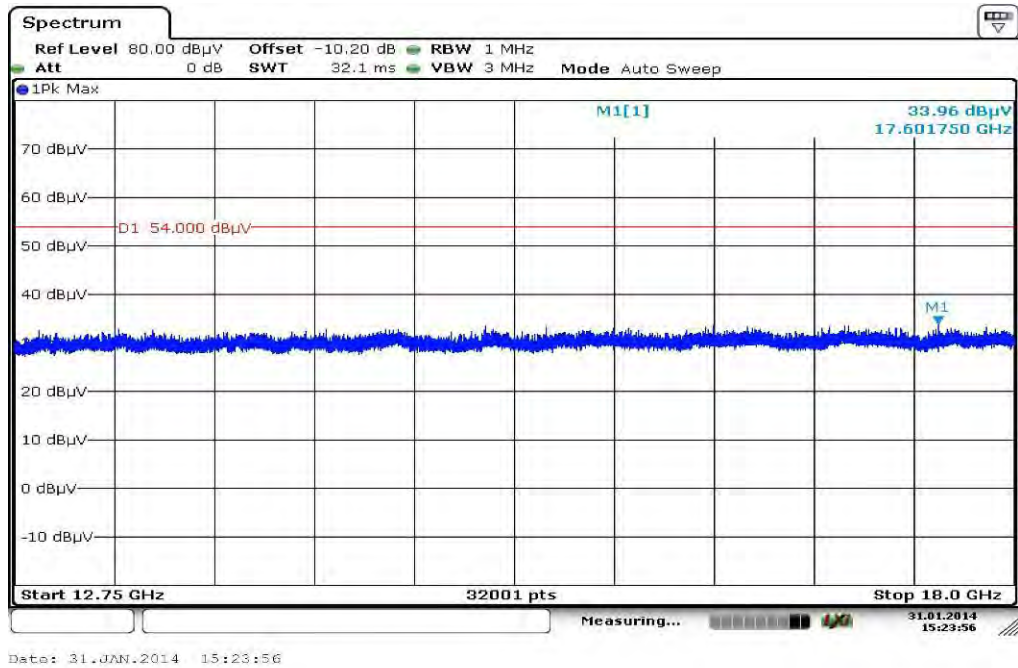
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 39.968250 | 10.7 | 1000.0 | 120.000 | 145.0 | H | 190.0 | 13.4 | 19.3 | 30.0 | |
| 45.943950 | 10.8 | 1000.0 | 120.000 | 170.0 | V | 270.0 | 13.3 | 19.2 | 30.0 | |
| 55.462800 | 9.8 | 1000.0 | 120.000 | 170.0 | H | 88.0 | 12.8 | 20.2 | 30.0 | |
| 698.931150 | 20.1 | 1000.0 | 120.000 | 170.0 | H | 280.0 | 22.5 | 15.9 | 36.0 | |
| 769.678650 | 21.1 | 1000.0 | 120.000 | 170.0 | H | 182.0 | 23.7 | 14.9 | 36.0 | |
| 895.087050 | 22.6 | 1000.0 | 120.000 | 170.0 | V | 100.0 | 25.1 | 13.4 | 36.0 | |

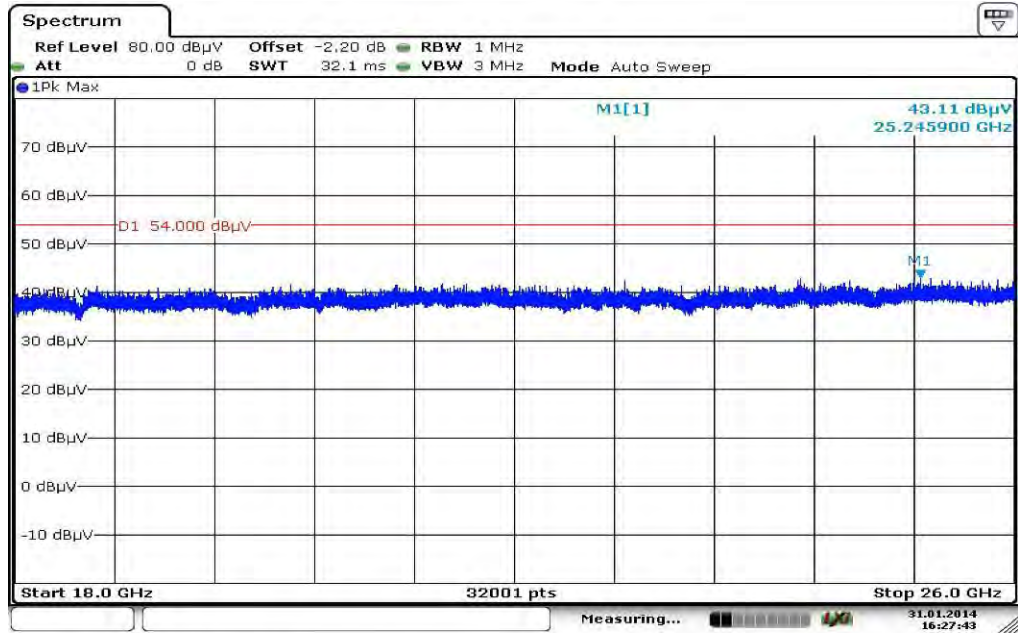
Plot 27: 1 GHz to 12.75 GHz, 5590 MHz, vertical & horizontal polarization



Plot 28: 12 GHz to 18 GHz, 5590 MHz, vertical & horizontal polarization

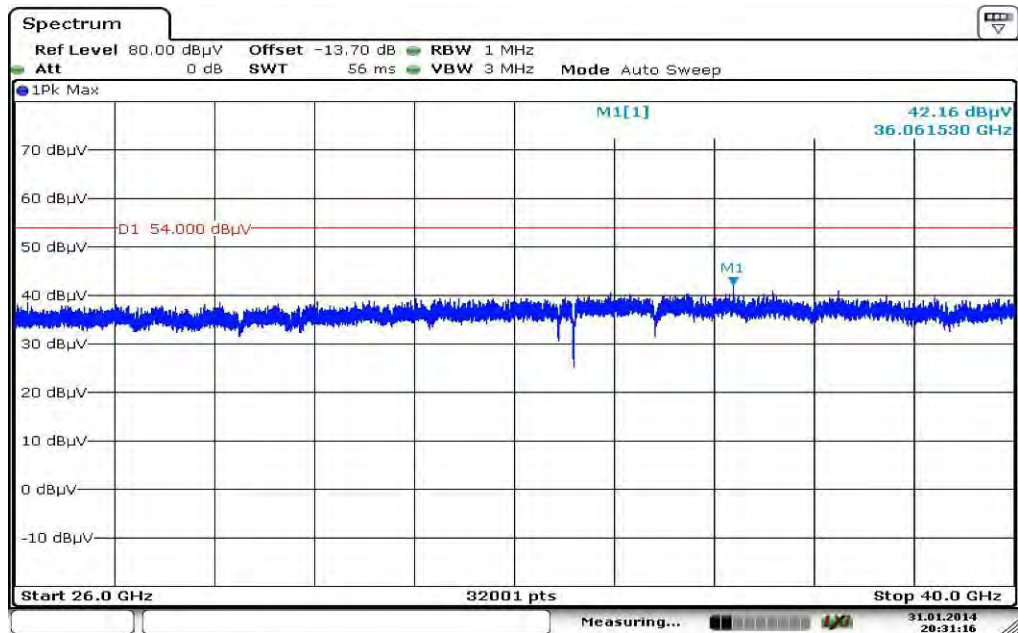


Plot 29: 18 GHz to 26 GHz, 5590 MHz, vertical & horizontal polarization



Date: 31.JAN.2014 16:27:43

Plot 30: 26 GHz to 40 GHz, 5590 MHz, vertical & horizontal polarization



Date: 31.JAN.2014 20:31:16

Plot 31: 30 MHz to 1 GHz, 5670 MHz, vertical & horizontal polarization

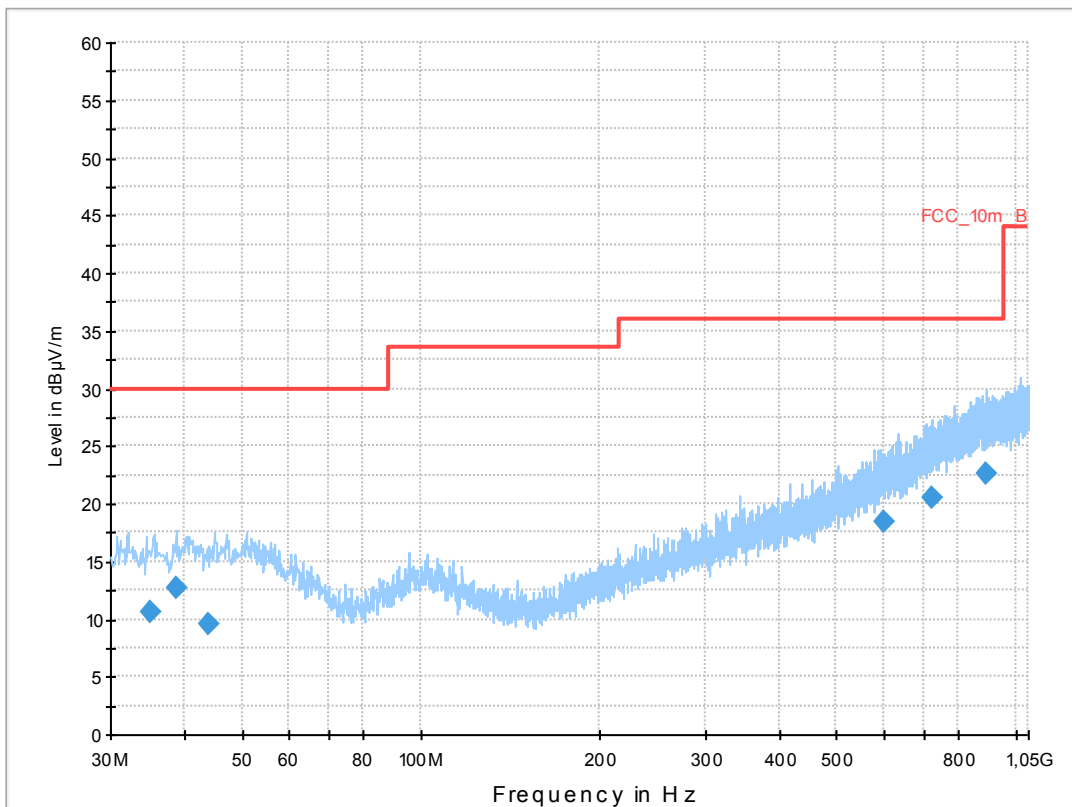
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN n-mode (HT40) TX Ch 134
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

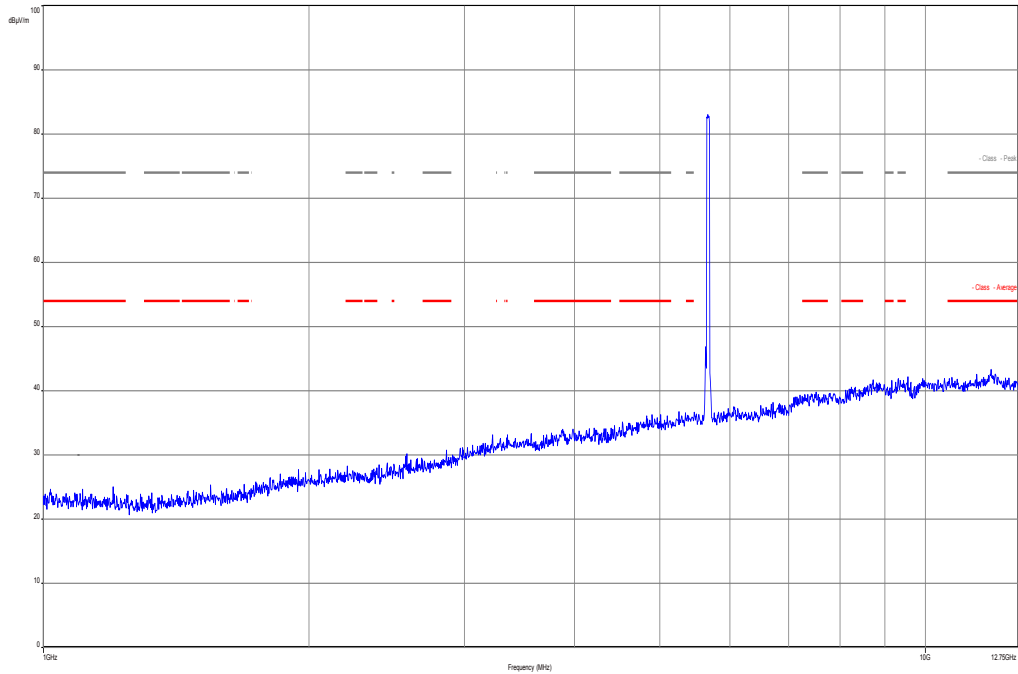
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



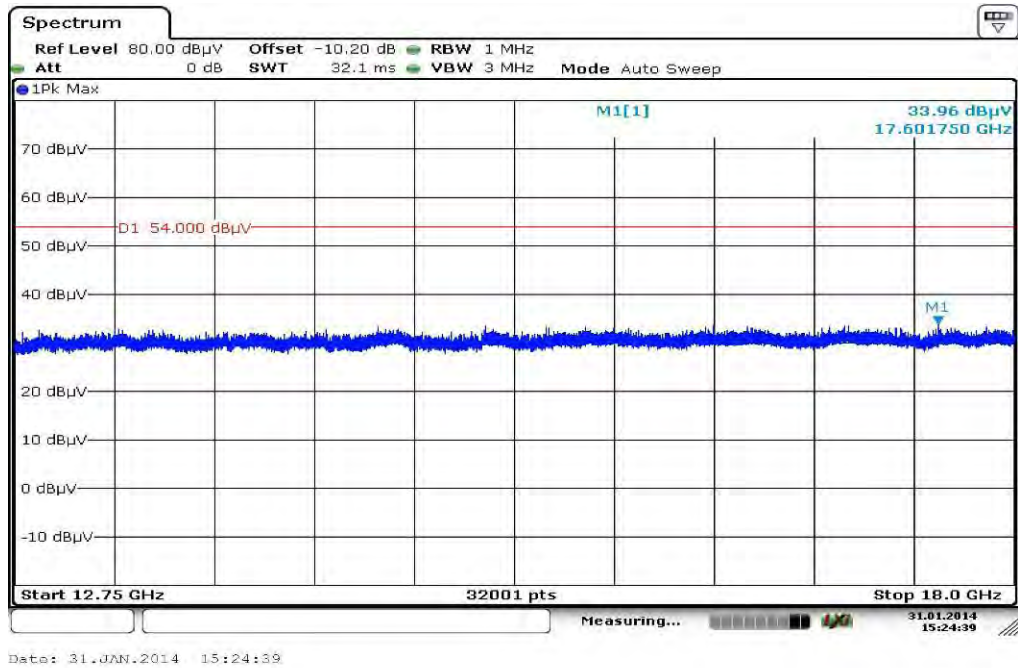
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 35.012850 | 10.6 | 1000.0 | 120.000 | 170.0 | V | 171.0 | 13.0 | 19.4 | 30.0 | |
| 38.737500 | 12.7 | 1000.0 | 120.000 | 104.0 | V | 270.0 | 13.3 | 17.3 | 30.0 | |
| 43.775700 | 9.5 | 1000.0 | 120.000 | 170.0 | H | 2.0 | 13.3 | 20.5 | 30.0 | |
| 602.236350 | 18.4 | 1000.0 | 120.000 | 170.0 | V | 93.0 | 20.8 | 17.6 | 36.0 | |
| 723.085650 | 20.6 | 1000.0 | 120.000 | 143.0 | V | 170.0 | 23.0 | 15.4 | 36.0 | |
| 892.026450 | 22.6 | 1000.0 | 120.000 | 170.0 | H | 280.0 | 25.1 | 13.4 | 36.0 | |

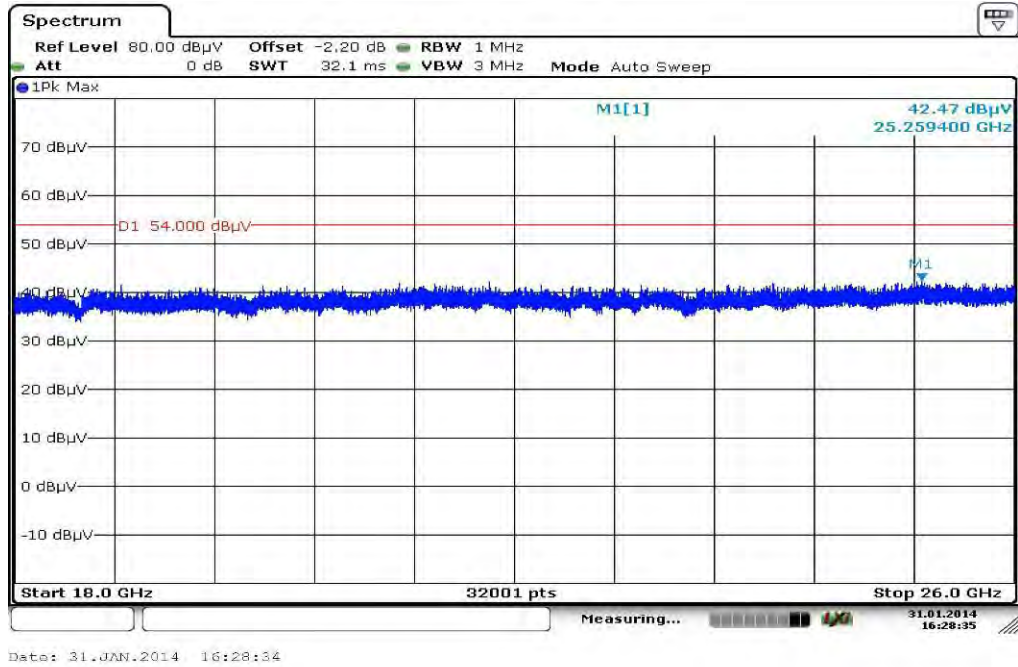
Plot 32: 1 GHz to 12.75 GHz, 5670 MHz, vertical & horizontal polarization



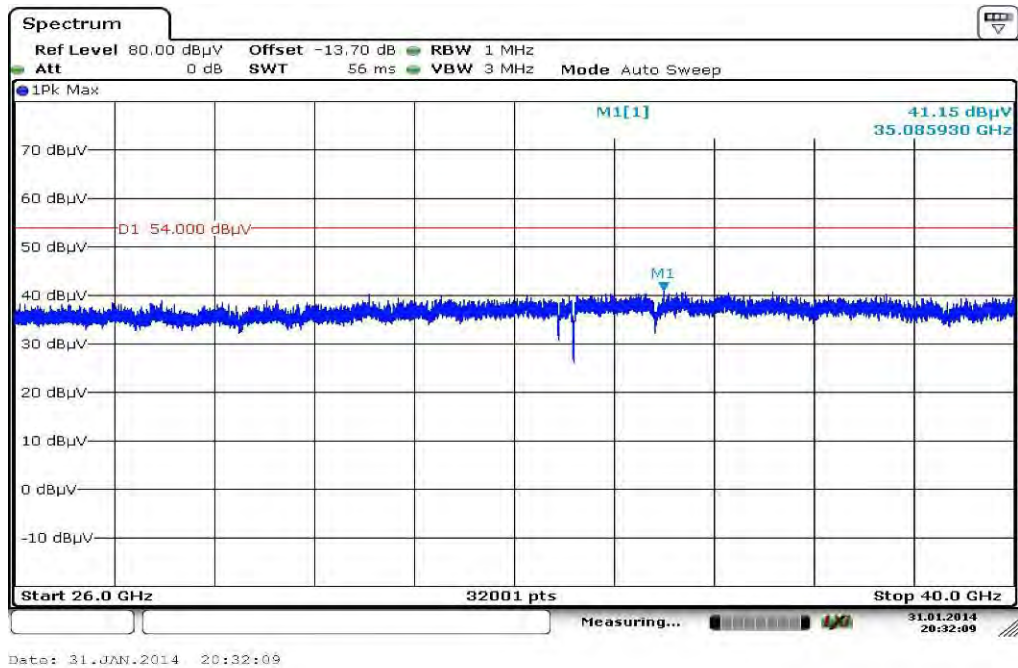
Plot 33: 12 GHz to 18 GHz, 5670 MHz, vertical & horizontal polarization



Plot 34: 18 GHz to 26 GHz, 5670 MHz, vertical & horizontal polarization



Plot 35: 26 GHz to 40 GHz, 5670 MHz, vertical & horizontal polarization



Plots: OFDM / ac – mode HT80

Plot 1: 30 MHz to 1 GHz, 5210 MHz, vertical & horizontal polarization

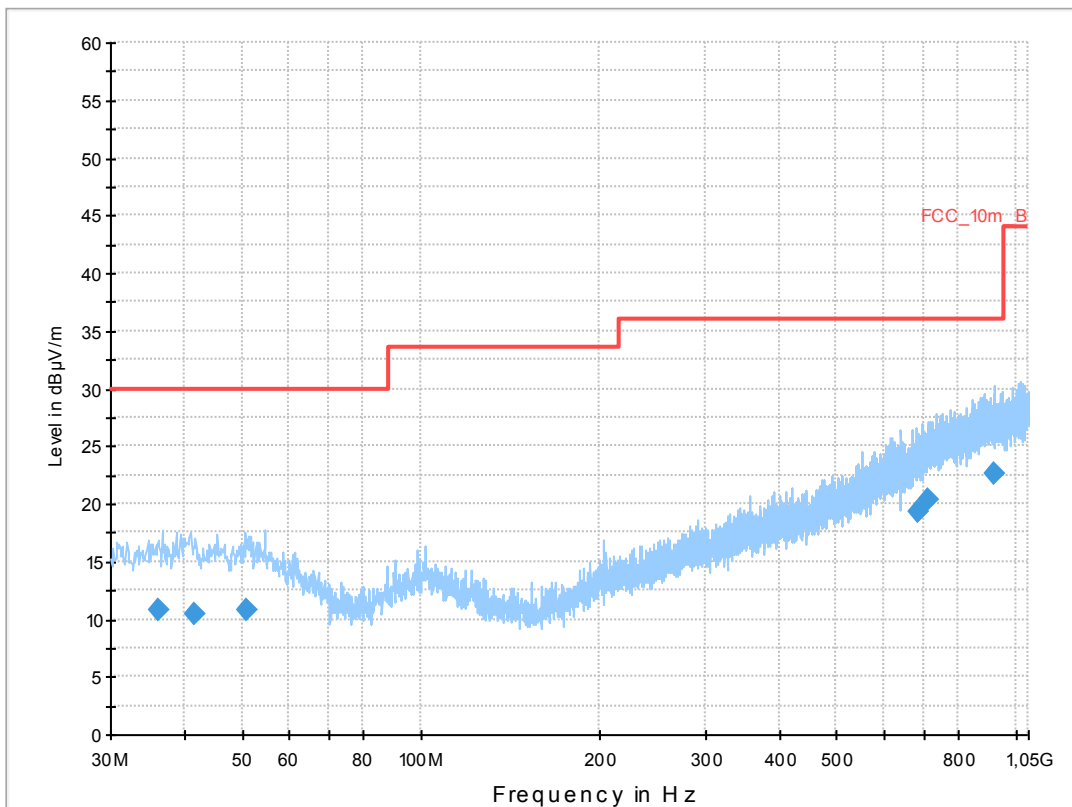
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN ac-mode (HT80) TX Ch 42
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

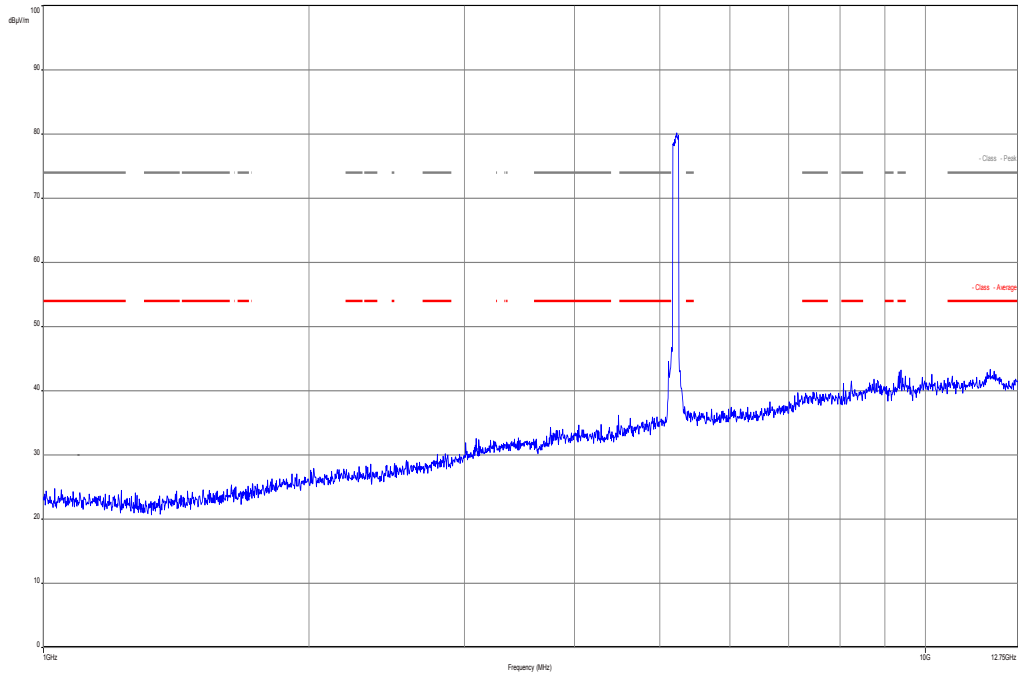
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



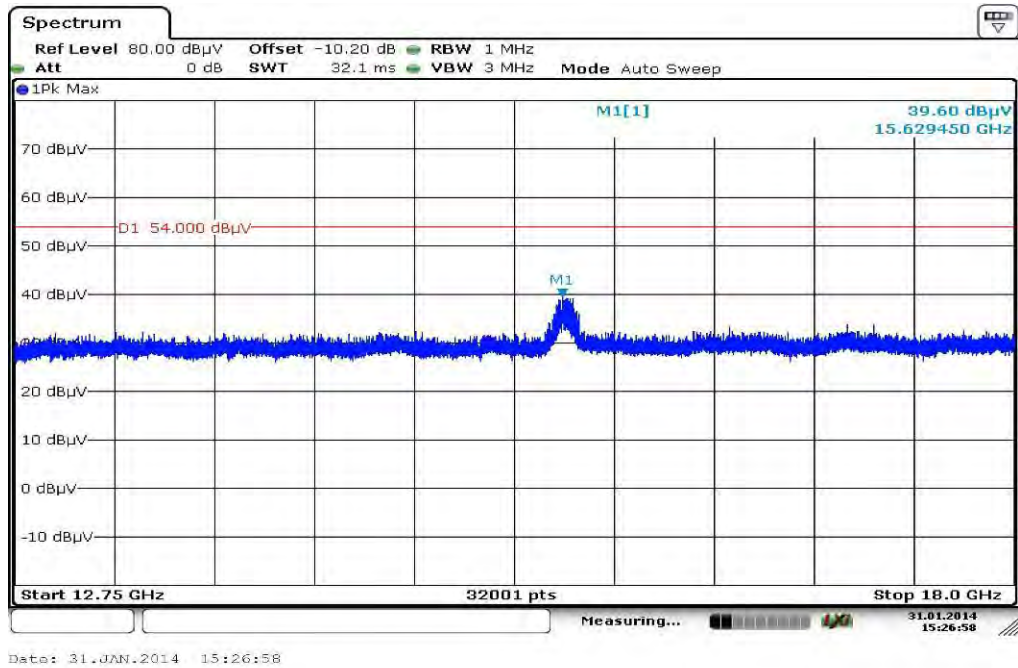
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 36.076800 | 10.8 | 1000.0 | 120.000 | 143.0 | V | 100.0 | 13.1 | 19.2 | 30.0 | |
| 41.404650 | 10.5 | 1000.0 | 120.000 | 170.0 | H | 10.0 | 13.4 | 19.5 | 30.0 | |
| 51.041700 | 10.7 | 1000.0 | 120.000 | 170.0 | V | -9.0 | 13.3 | 19.3 | 30.0 | |
| 686.312500 | 19.3 | 1000.0 | 120.000 | 135.0 | V | 173.0 | 25.0 | 16.7 | 36.0 | |
| 712.063500 | 20.4 | 1000.0 | 120.000 | 121.0 | H | 280.0 | 22.8 | 15.6 | 36.0 | |
| 918.311400 | 22.6 | 1000.0 | 120.000 | 170.0 | V | -3.0 | 25.3 | 13.4 | 36.0 | |

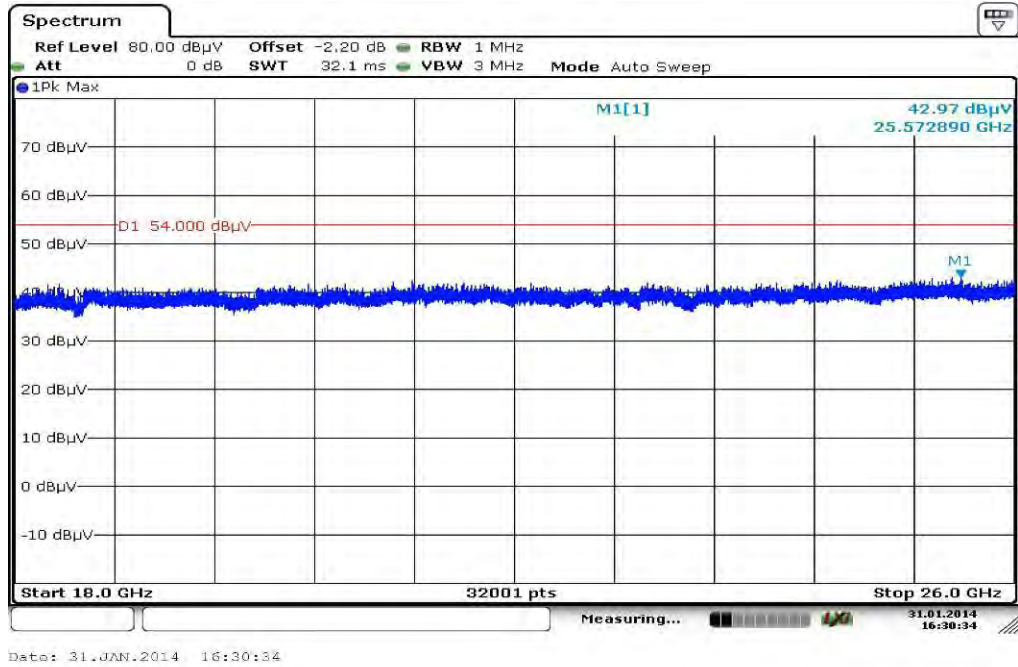
Plot 2: 1 GHz to 12.75 GHz, 5210 MHz, vertical & horizontal polarization



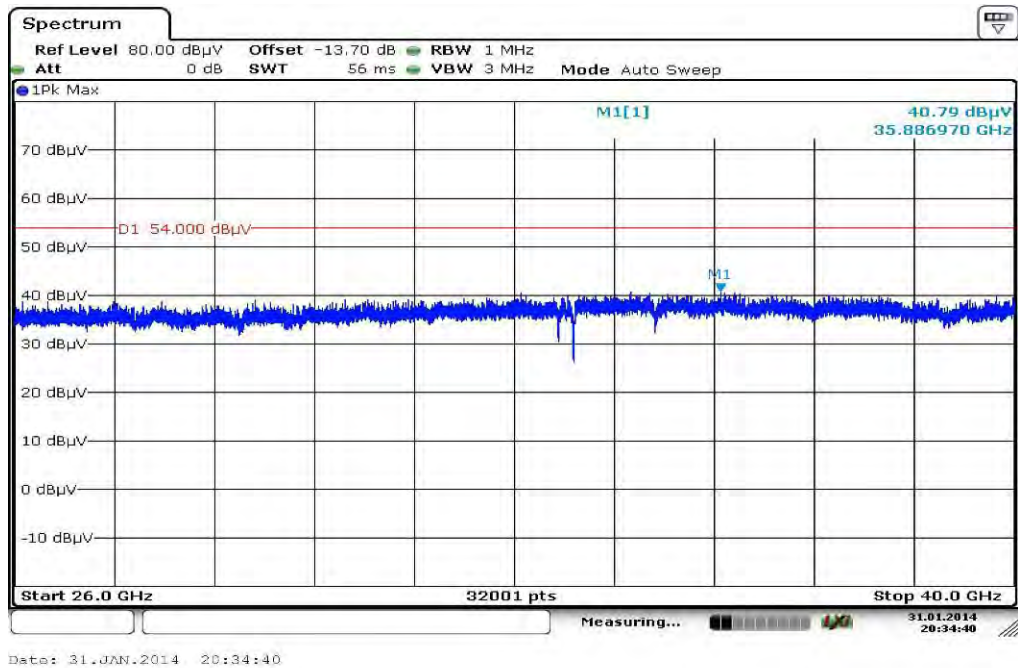
Plot 3: 12 GHz to 18 GHz, 5210 MHz, vertical & horizontal polarization



Plot 4: 18 GHz to 26 GHz, 5210 MHz, vertical & horizontal polarization



Plot 5: 26 GHz to 40 GHz, 5210 MHz, vertical & horizontal polarization



Plot 6: 30 MHz to 1 GHz, 5290 MHz, vertical & horizontal polarization

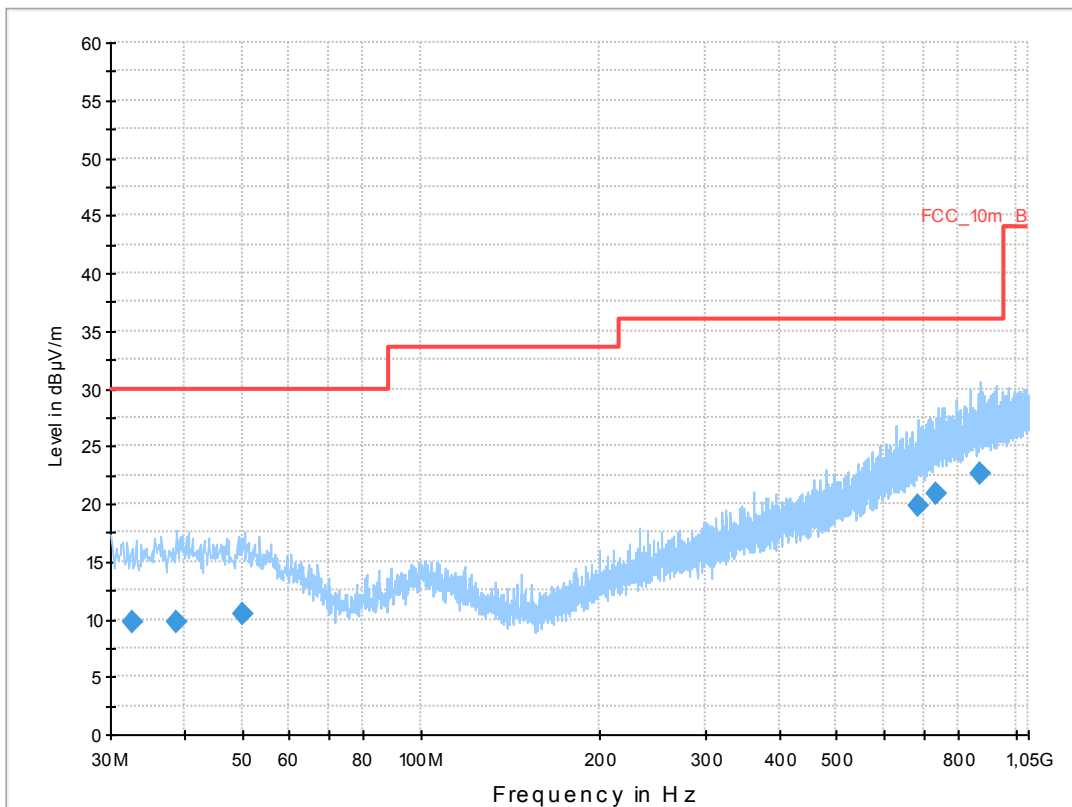
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN ac-mode (HT80) TX Ch 58
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

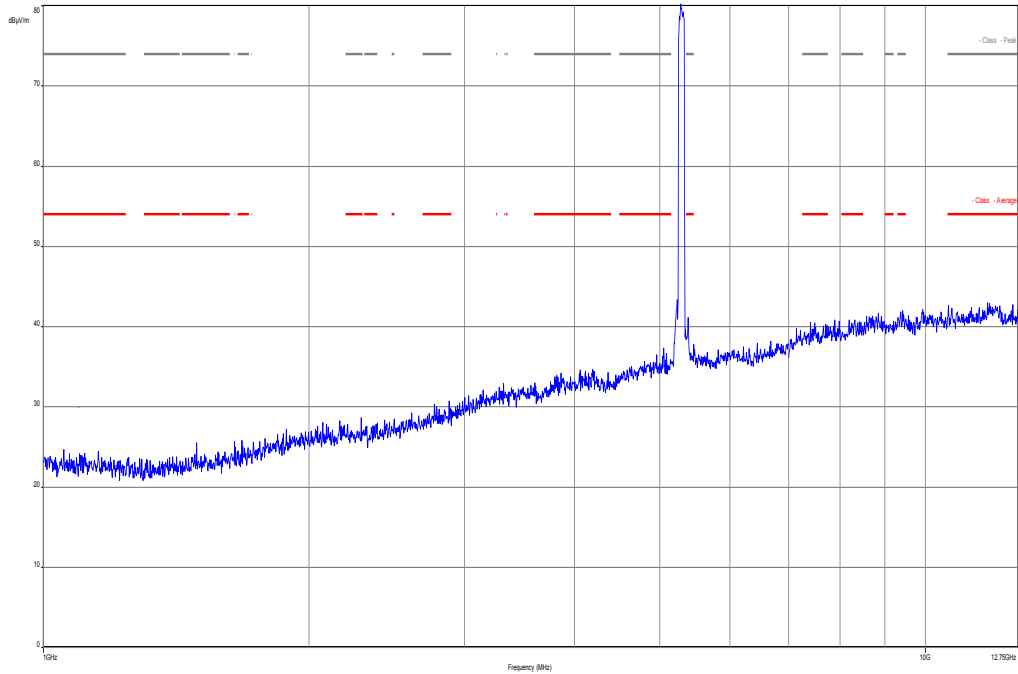
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



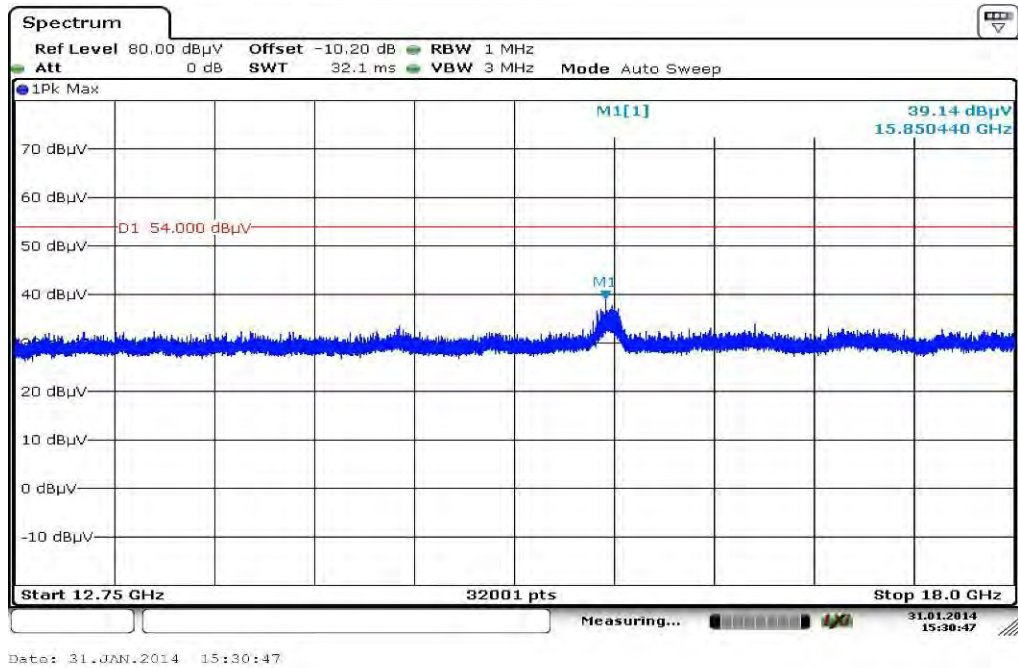
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 32.608650 | 9.7 | 1000.0 | 120.000 | 98.0 | H | 178.0 | 12.8 | 20.3 | 30.0 | |
| 38.837100 | 9.8 | 1000.0 | 120.000 | 170.0 | V | 175.0 | 13.3 | 20.2 | 30.0 | |
| 50.179500 | 10.4 | 1000.0 | 120.000 | 104.0 | H | 100.0 | 13.4 | 19.6 | 30.0 | |
| 687.649350 | 19.8 | 1000.0 | 120.000 | 120.0 | H | 260.0 | 22.2 | 16.2 | 36.0 | |
| 733.424550 | 20.9 | 1000.0 | 120.000 | 170.0 | V | 85.0 | 23.3 | 15.1 | 36.0 | |
| 872.630550 | 22.5 | 1000.0 | 120.000 | 170.0 | H | 100.0 | 24.8 | 13.5 | 36.0 | |

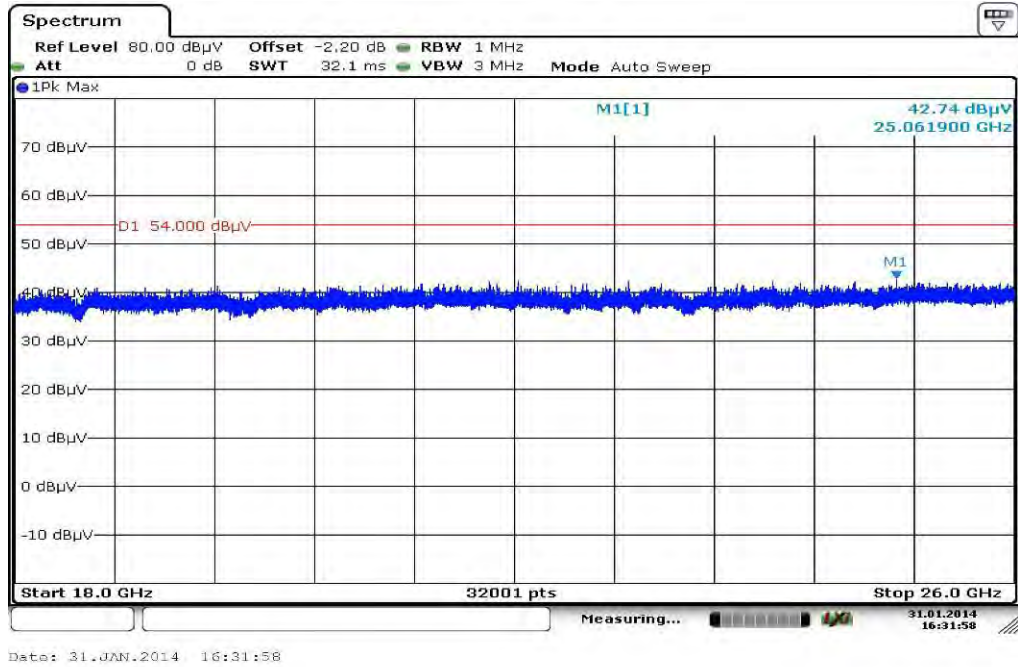
Plot 7: 1 GHz to 12.75 GHz, 5290 MHz, vertical & horizontal polarization



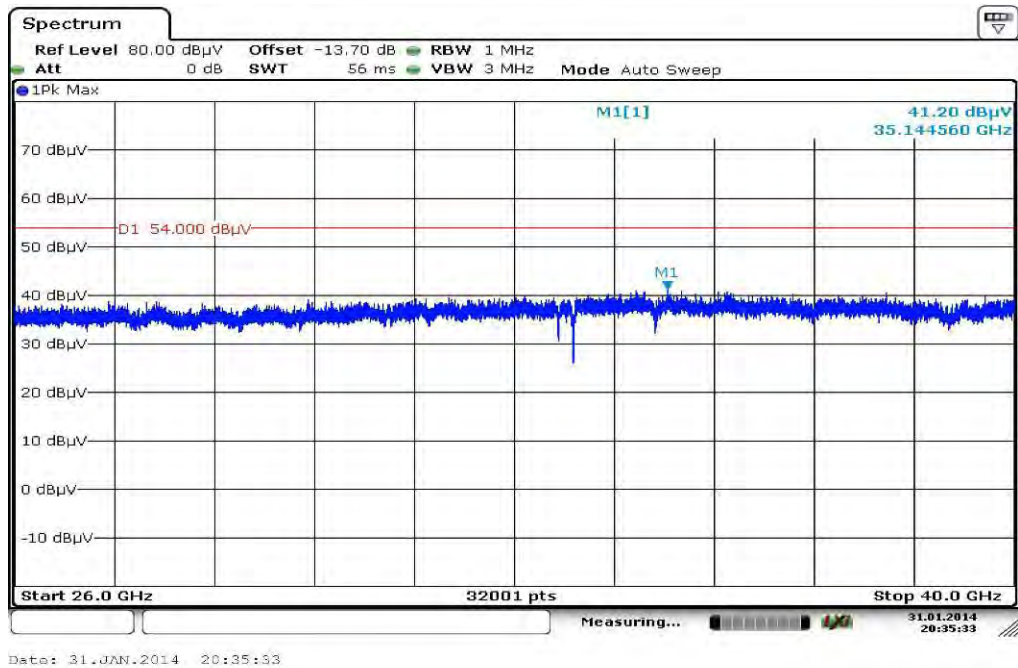
Plot 8: 12 GHz to 18 GHz, 5290 MHz, vertical & horizontal polarization



Plot 9: 18 GHz to 26 GHz, 5290 MHz, vertical & horizontal polarization



Plot 10: 26 GHz to 40 GHz, 5290 MHz, vertical & horizontal polarization



Plot 11: 30 MHz to 1 GHz, 5530 MHz, vertical & horizontal polarization

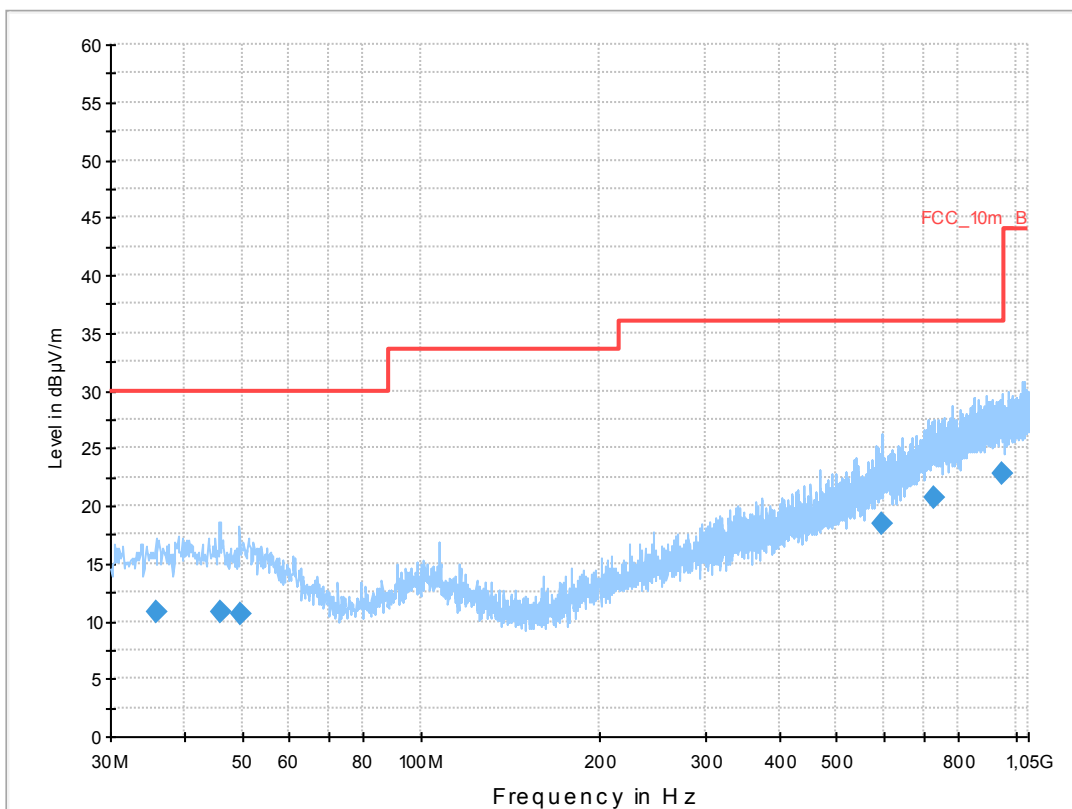
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN ac-mode (HT80) TX Ch 106
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

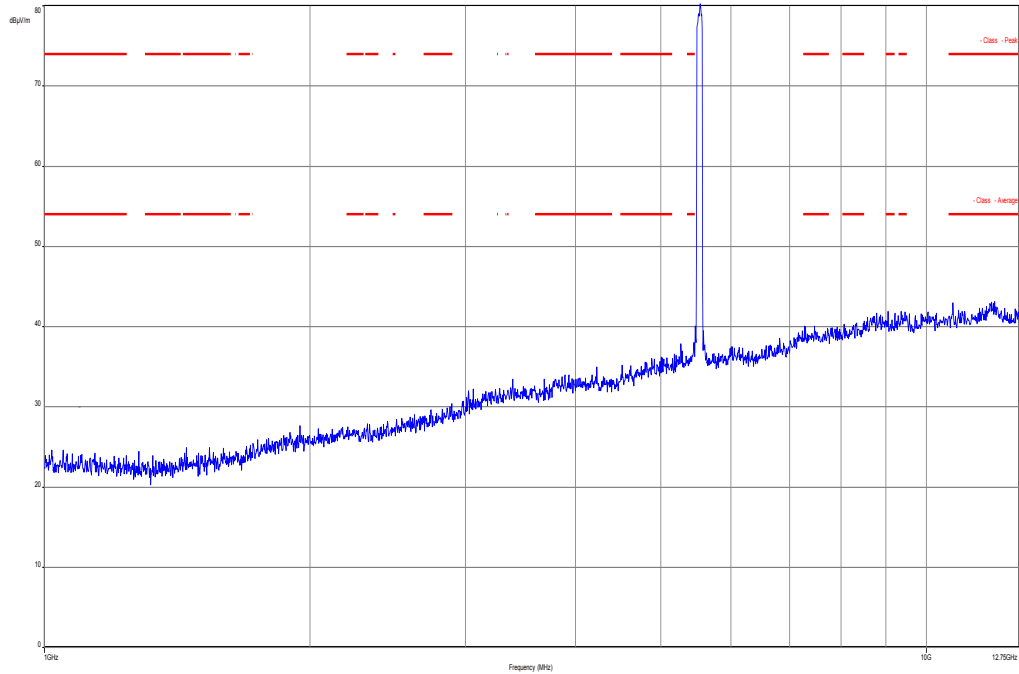
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



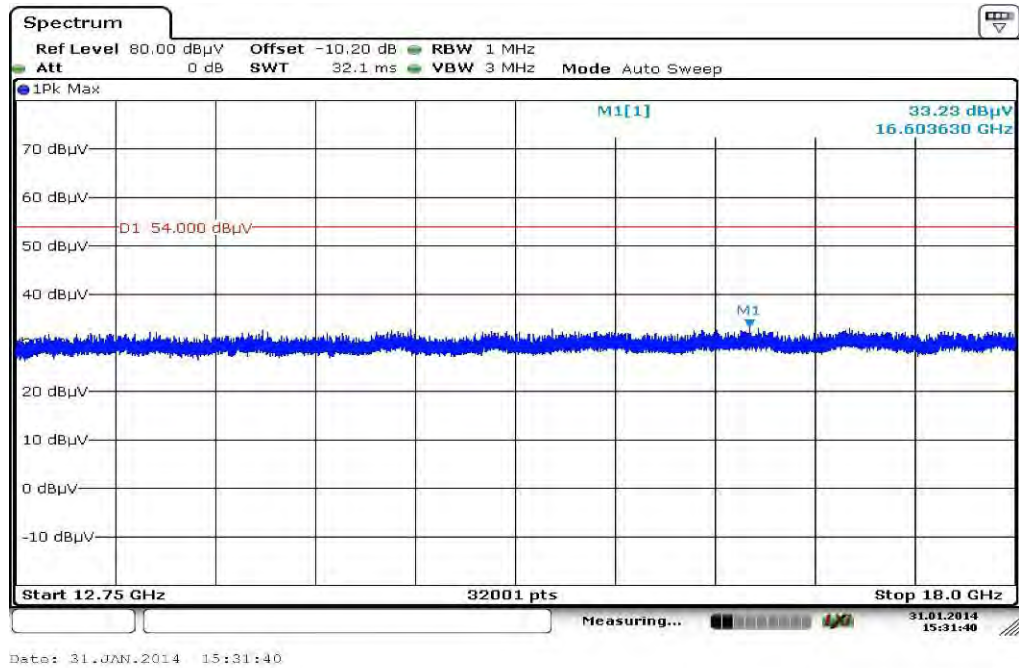
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 35.767200 | 10.7 | 1000.0 | 120.000 | 112.0 | H | 171.0 | 13.1 | 19.3 | 30.0 | |
| 45.955200 | 10.8 | 1000.0 | 120.000 | 98.0 | H | 182.0 | 13.3 | 19.2 | 30.0 | |
| 49.762200 | 10.6 | 1000.0 | 120.000 | 98.0 | V | 280.0 | 13.4 | 19.4 | 30.0 | |
| 596.748150 | 18.4 | 1000.0 | 120.000 | 98.0 | H | 10.0 | 20.7 | 17.6 | 36.0 | |
| 728.790900 | 20.8 | 1000.0 | 120.000 | 121.0 | H | 81.0 | 23.2 | 15.2 | 36.0 | |
| 949.578900 | 22.7 | 1000.0 | 120.000 | 98.0 | V | 10.0 | 25.4 | 13.3 | 36.0 | |

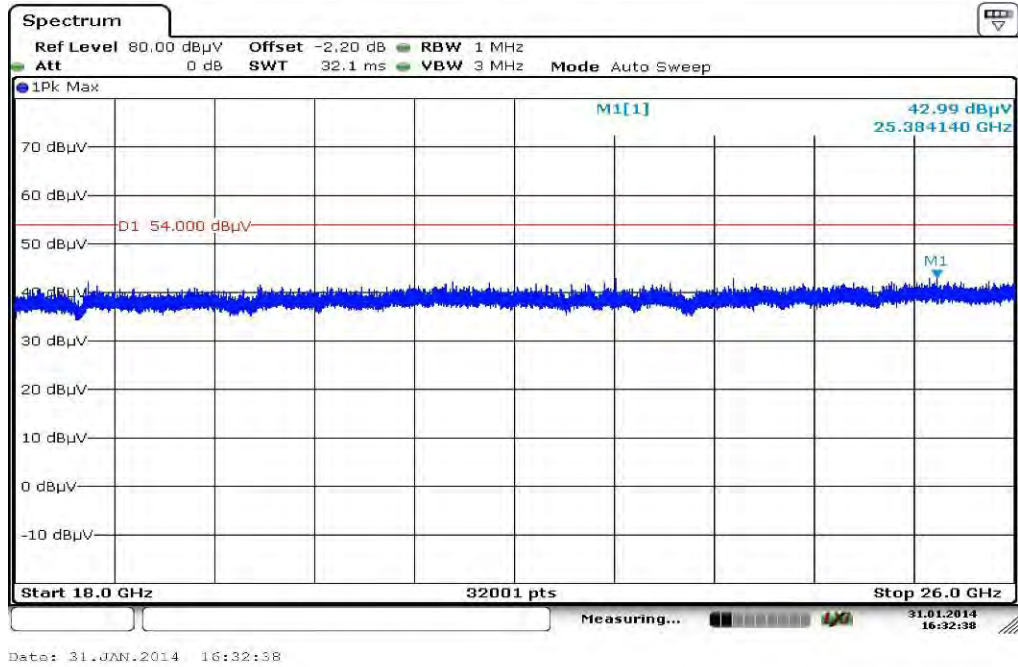
Plot 12: 1 GHz to 12.75 GHz, 5530 MHz, vertical & horizontal polarization



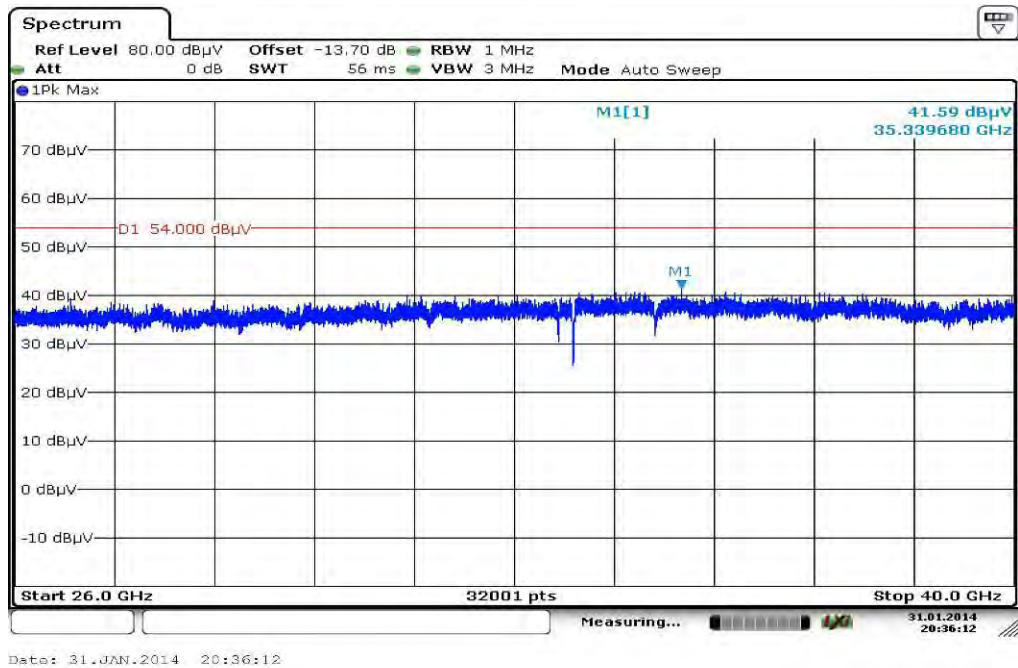
Plot 13: 12 GHz to 18 GHz, 5530 MHz, vertical & horizontal polarization



Plot 14: 18 GHz to 26 GHz, 5530 MHz, vertical & horizontal polarization



Plot 15: 26 GHz to 40 GHz, 5530 MHz, vertical & horizontal polarization



Plot 16: 30 MHz to 1 GHz, 5610 MHz, vertical & horizontal polarization

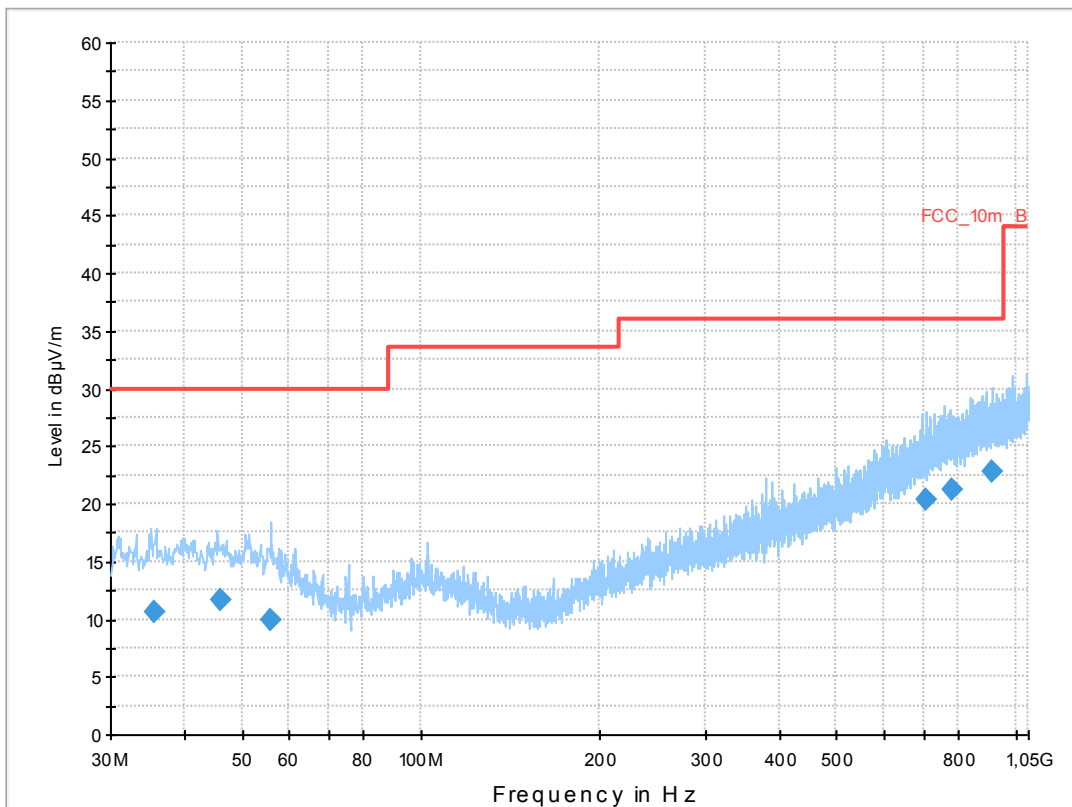
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: WLAN ac-mode (HT80) TX Ch 122
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

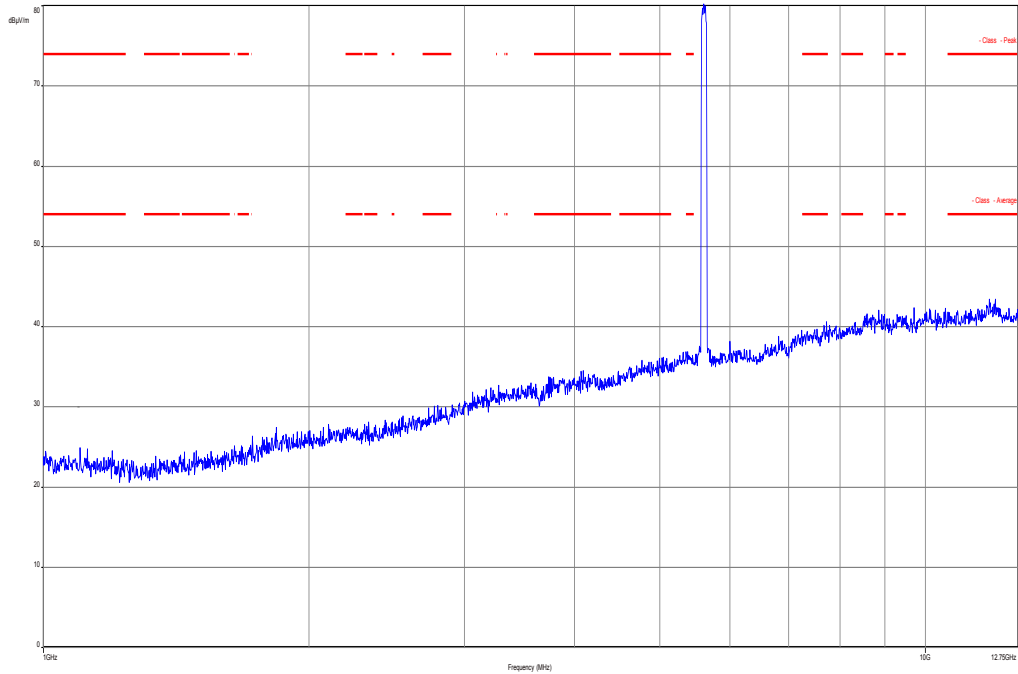
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



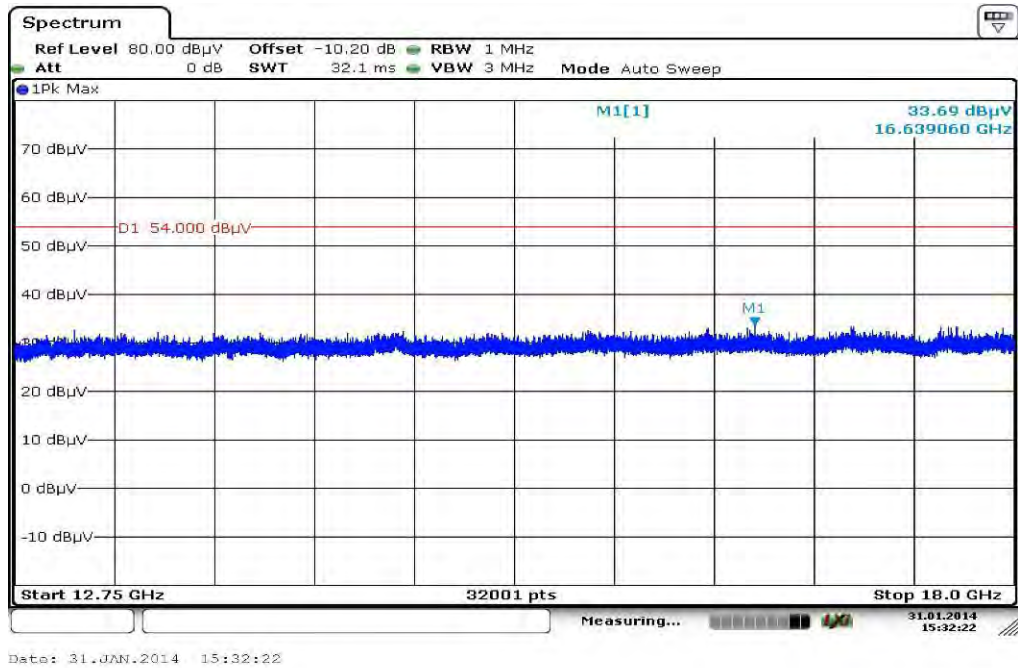
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 35.488050 | 10.6 | 1000.0 | 120.000 | 170.0 | H | 280.0 | 13.1 | 19.4 | 30.0 | |
| 45.963900 | 11.7 | 1000.0 | 120.000 | 104.0 | V | -2.0 | 13.3 | 18.3 | 30.0 | |
| 55.818450 | 9.9 | 1000.0 | 120.000 | 120.0 | H | 2.0 | 12.7 | 20.1 | 30.0 | |
| 706.789200 | 20.3 | 1000.0 | 120.000 | 170.0 | H | 3.0 | 22.7 | 15.7 | 36.0 | |
| 782.163300 | 21.2 | 1000.0 | 120.000 | 98.0 | V | 170.0 | 23.7 | 14.8 | 36.0 | |
| 914.159700 | 22.7 | 1000.0 | 120.000 | 98.0 | H | 280.0 | 25.2 | 13.3 | 36.0 | |

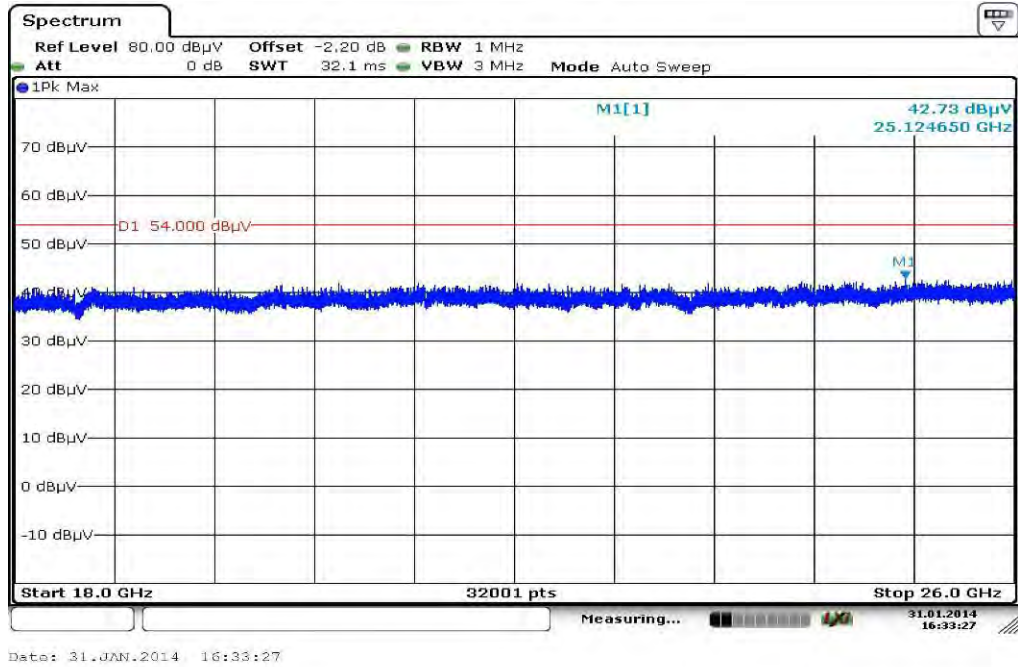
Plot 17: 1 GHz to 12.75 GHz, 5610 MHz, vertical & horizontal polarization



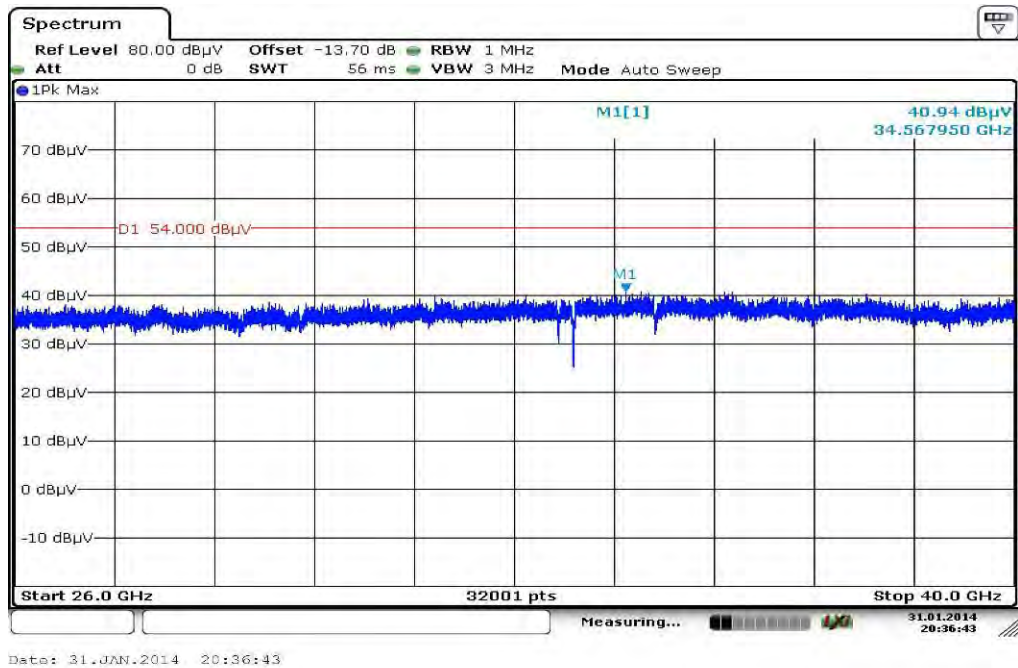
Plot 18: 12 GHz to 18 GHz, 5610 MHz, vertical & horizontal polarization



Plot 19: 18 GHz to 26 GHz, 5610 MHz, vertical & horizontal polarization



Plot 20: 26 GHz to 40 GHz, 5610 MHz, vertical & horizontal polarization



10.10 RX spurious emissions radiated

Description:

Measurement of the radiated spurious emissions in idle/receive mode.

Measurement:

| Measurement parameter | |
|-----------------------|---|
| Detector: | Quasi Peak below 1 GHz (alternative Peak) Peak above 1 GHz / RMS |
| Sweep time: | Auto |
| Resolution bandwidth: | F < 1 GHz: 100 kHz F > 1 GHz: 1 MHz |
| Video bandwidth: | F < 1 GHz: 100 kHz F > 1 GHz: ≥ 3 MHz /10 Hz |
| Span: | 30 MHz to 40 GHz |
| Trace-Mode: | Max Hold / Average with 100 counts + 20 log (1 / X) for duty cycle lower than 100 % |

Limits:

| RX Spurious Emissions Radiated | | |
|--------------------------------|-------------------------|----------------------|
| Frequency (MHz) | Field Strength (dBµV/m) | Measurement distance |
| 30 - 88 | 30.0 | 10 |
| 88 – 216 | 33.5 | 10 |
| 216 – 960 | 36.0 | 10 |
| Above 960 | 54.0 | 3 |

Results:

| RX Spurious Emissions Radiated [dBµV/m] | | |
|---|----------|----------------|
| F [MHz] | Detector | Level [dBµV/m] |
| No peaks detected. | | |
| | | |
| Measurement uncertainty | ± 3 dB | |

Result: Passed

Note: The limit was recalculated with 20 dB / decade (Part 15.31) for all radiated spurious emissions 30 MHz to 1 GHz from 3 meter limit to a 10 meter distance. (40dB/decade for emissions < 30MHz)

Plots: RX / Idle – mode

Plot 1: 30 MHz to 1 GHz, vertical & horizontal polarization

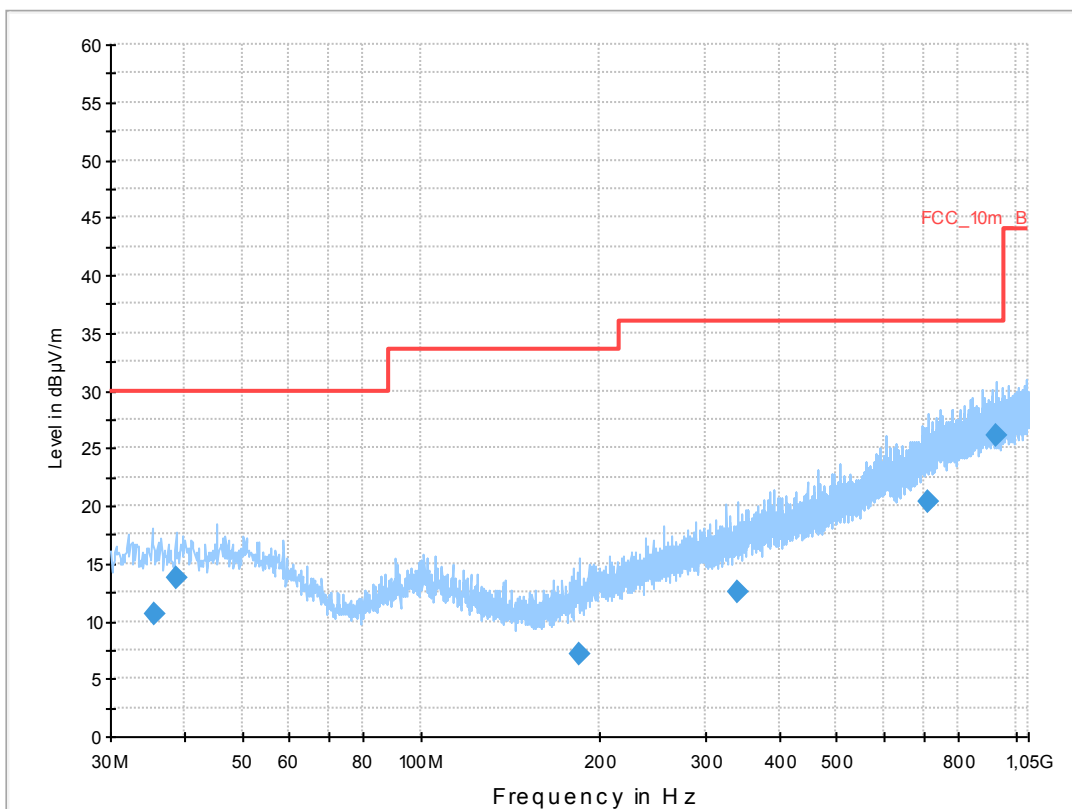
Common Information

EUT: PY7TS-0020
 Serial Number: CB51268FN3
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: wlan idle
 Operator Name: Wolsdorfer
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Receiver: [ESC1 3]
 Level Unit: dBµV/m

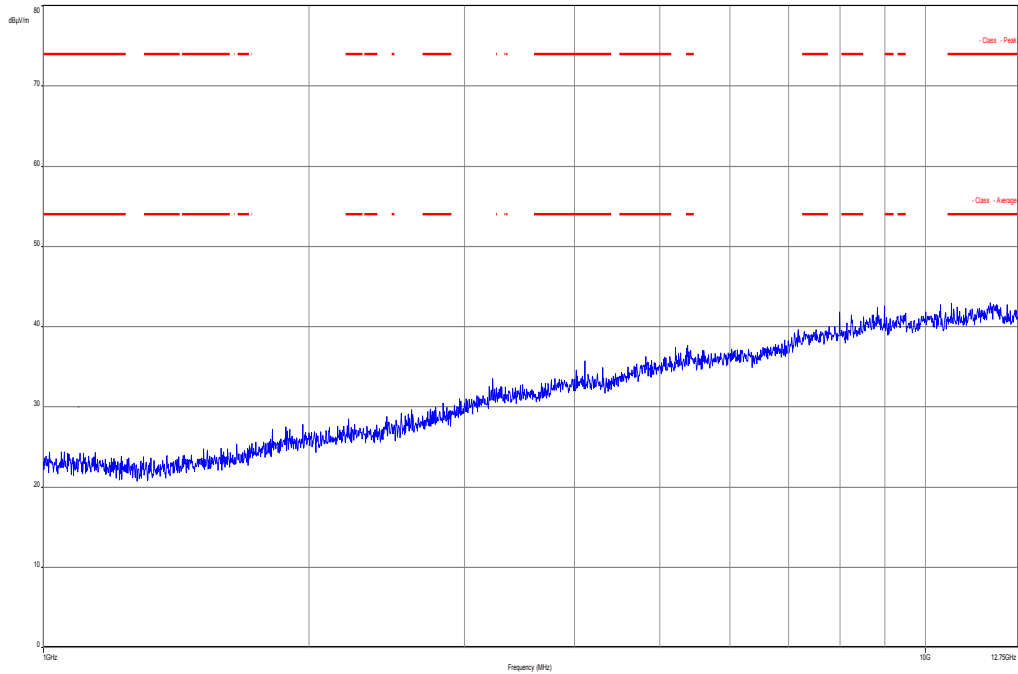
| Subrange | Step Size | Detectors | IF BW | Meas. Time | Preamp |
|----------------|-----------|-----------|---------|------------|--------|
| 30 MHz - 2 GHz | 60 kHz | QPK | 120 kHz | 1 s | 20 dB |



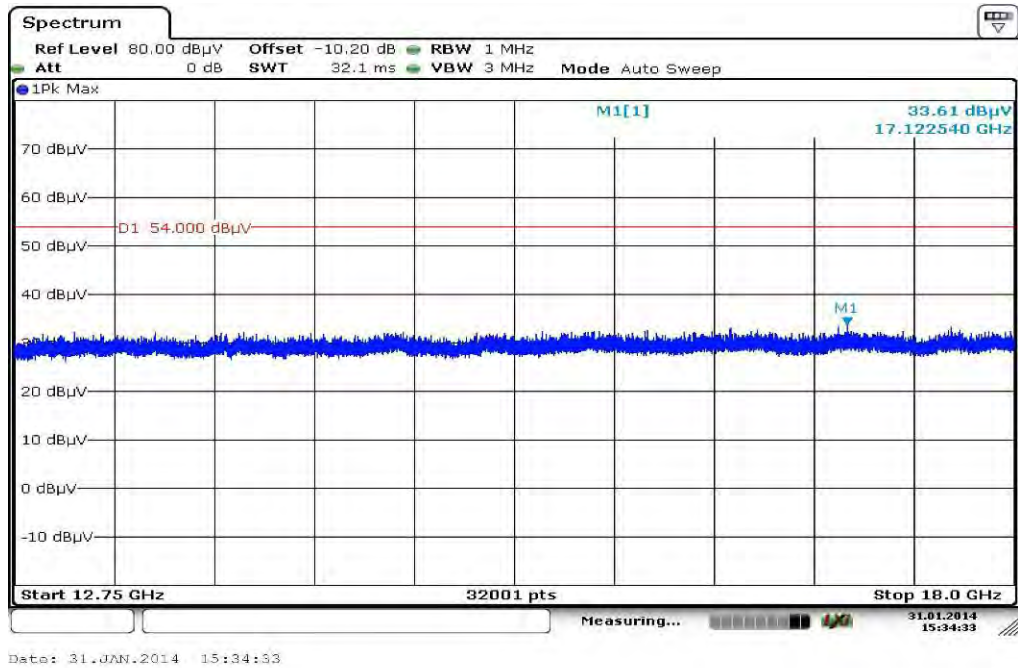
Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|-----------------|--------------------|-----------------|-----------------|-------------|--------------|---------------|------------|-------------|----------------|---------|
| 35.511750 | 10.6 | 1000.0 | 120.000 | 132.0 | H | 190.0 | 13.1 | 19.4 | 30.0 | |
| 38.696250 | 13.7 | 1000.0 | 120.000 | 98.0 | V | 268.0 | 13.3 | 16.3 | 30.0 | |
| 183.855600 | 7.2 | 1000.0 | 120.000 | 170.0 | H | 190.0 | 10.7 | 26.3 | 33.5 | |
| 340.353600 | 12.6 | 1000.0 | 120.000 | 98.0 | V | 180.0 | 15.8 | 23.4 | 36.0 | |
| 714.690600 | 20.4 | 1000.0 | 120.000 | 121.0 | H | 0.0 | 22.8 | 15.6 | 36.0 | |
| 927.418500 | 26.0 | 1000.0 | 120.000 | 98.0 | V | 260.0 | 25.3 | 10.0 | 36.0 | |

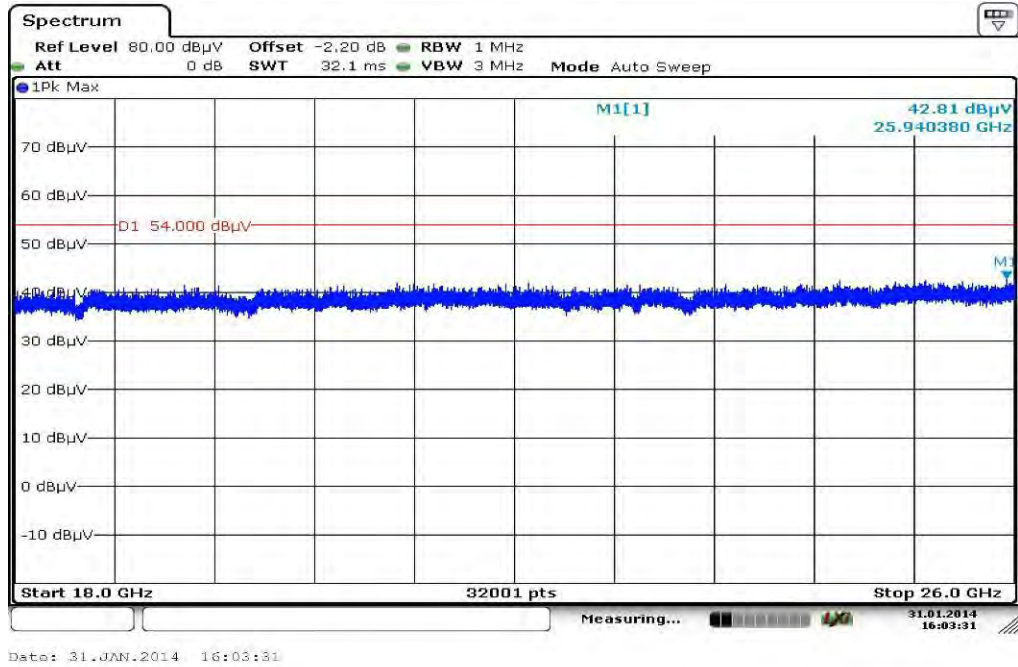
Plot 2: 1 GHz to 12.75 GHz, vertical & horizontal polarization



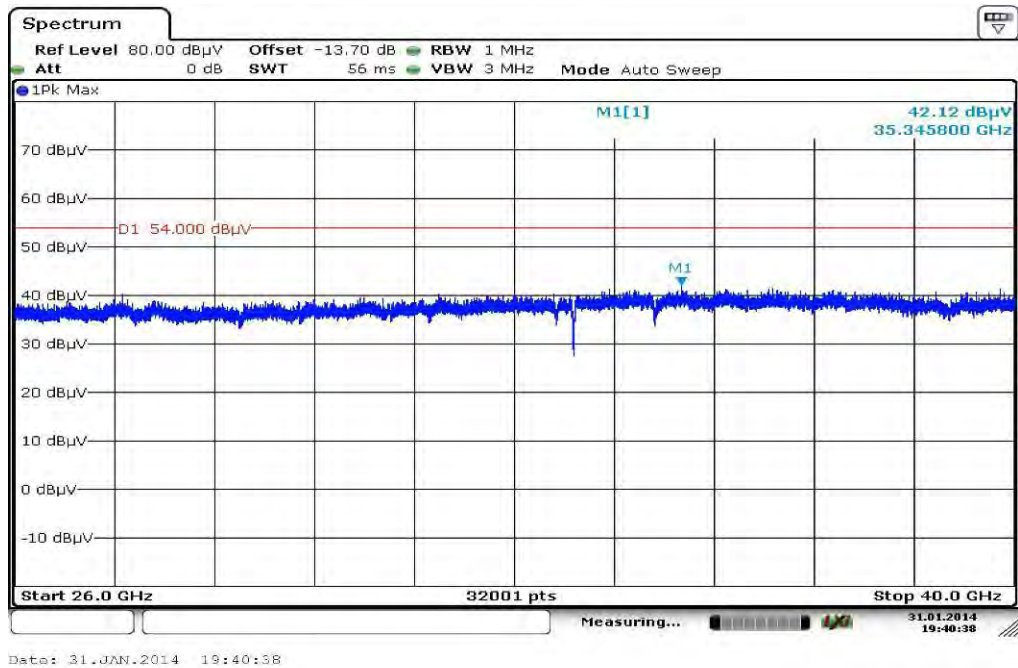
Plot 3: 12 GHz to 18 GHz, vertical & horizontal polarization



Plot 4: 18 GHz to 26 GHz, vertical & horizontal polarization



Plot 5: 26 GHz to 40 GHz, vertical & horizontal polarization



10.11 Spurious emissions radiated < 30 MHz

Description:

Measurement of the radiated spurious emissions in transmit mode and receive mode below 30 MHz. The EUT is set first to middle channel. This measurement is representative for all channels and modes. If critical peaks are found the lowest channel and the highest channel will be measured too. Then the EUT is set to receive or idle mode. The limits are recalculated to a measurement distance of 3 m with 40 dB/decade according CFR Part 2.

Measurement:

| Measurement parameter | |
|-----------------------|--|
| Detector: | Peak / Quasi Peak |
| Sweep time: | Auto |
| Video bandwidth: | F < 150 kHz: 200 Hz F > 150 kHz: 9 kHz |
| Resolution bandwidth: | F < 150 kHz: 1 kHz F > 150 kHz: 100 kHz |
| Span: | 9 kHz to 30 MHz |
| Trace-Mode: | Max Hold |

Limits:

| Spurious Emissions Radiated < 30 MHz | | |
|--------------------------------------|-------------------------|----------------------|
| Frequency (MHz) | Field Strength (dBµV/m) | Measurement distance |
| 0.009 – 0.490 | 2400/F(kHz) | 300 |
| 0.490 – 1.705 | 24000/F(kHz) | 30 |
| 1.705 – 30.0 | 30 | 30 |

Results:

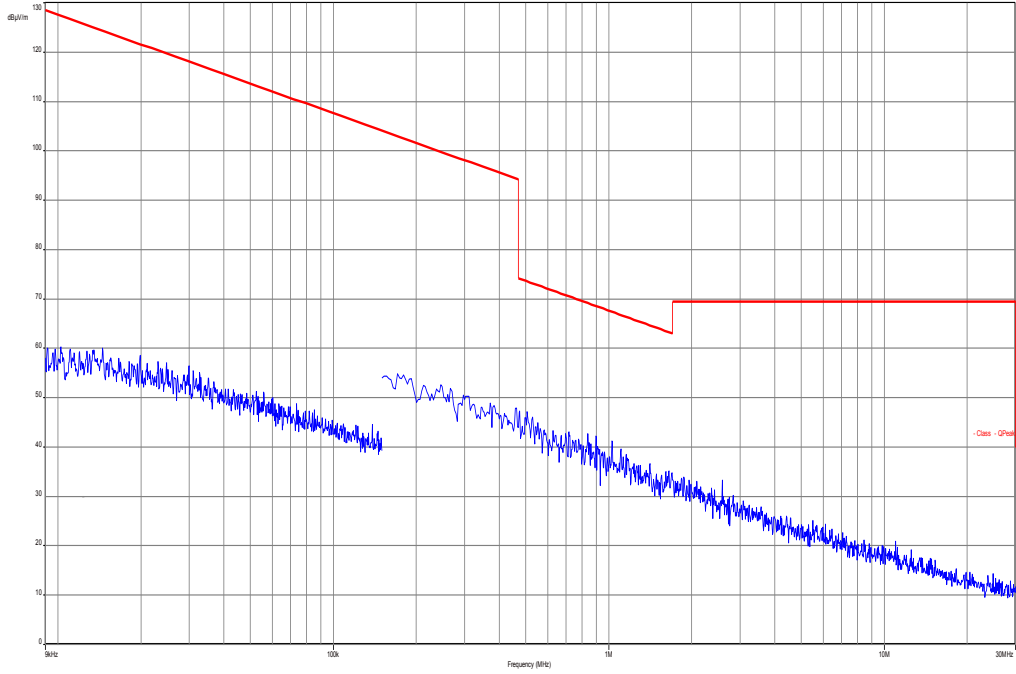
| Spurious Emissions Radiated < 30 MHz [dBµV/m] | | |
|---|----------|----------------|
| F [MHz] | Detector | Level [dBµV/m] |
| No peaks detected. | | |
| Measurement uncertainty | ± 3 dB | |

Result: Passed

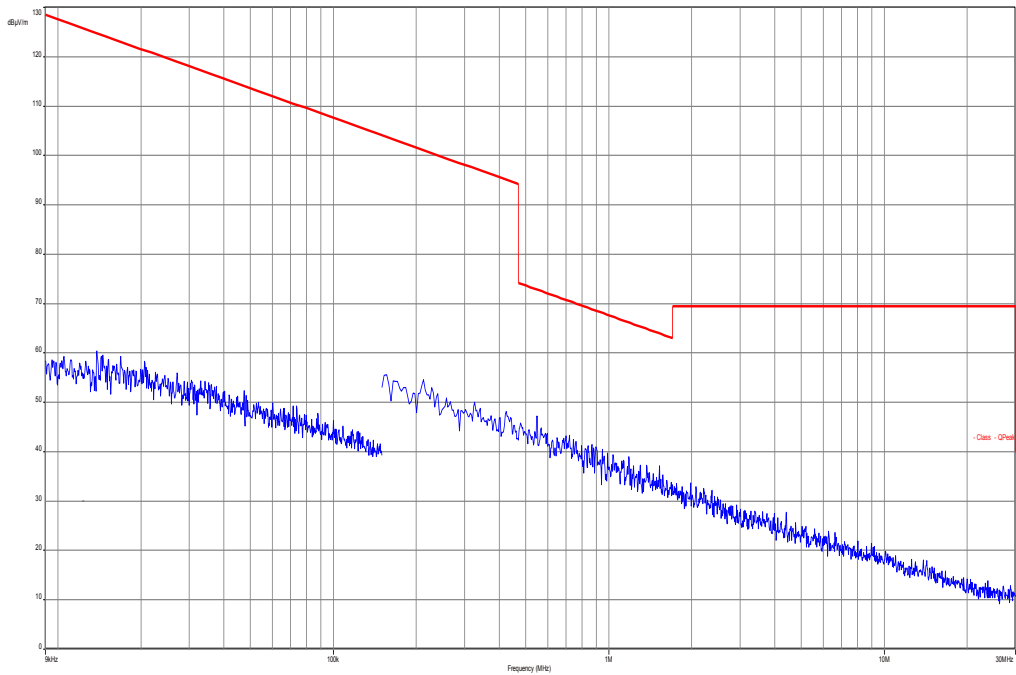
Note: The limit was recalculated with 20 dB / decade (Part 15.31) for all radiated spurious emissions 30 MHz to 1 GHz from 3 meter limit to a 10 meter distance. (40dB/decade for emissions < 30MHz)

Plots:

Plot 1: 9 kHz to 30 MHz, TX mode



Plot 2: 9 kHz to 30 MHz, RX mode



10.12 Spurious emissions conducted < 30 MHz

Description:

Measurement of the conducted spurious emissions in transmit mode below 30 MHz. The EUT is set to middle channel. If critical peaks are found the lowest channel and the highest channel will be measured too. Both power lines, phase and neutral line, are measured. Found peaks are remeasured with average and quasi peak detection to show compliance to the limits.

Measurement:

| Measurement parameter | |
|-----------------------|-----------------------------|
| Detector: | Peak - Quasi Peak / Average |
| Sweep time: | Auto |
| Video bandwidth: | F > 150 kHz: 9 kHz |
| Resolution bandwidth: | F > 150 kHz: 100 kHz |
| Span: | 150 kHz to 30 MHz |
| Trace-Mode: | Max Hold |

Limits:

| Spurious Emissions Conducted < 30 MHz | | |
|---------------------------------------|---------------------------|------------------------|
| Frequency (MHz) | Quasi-Peak (dB μ V/m) | Average (dB μ V/m) |
| 0.15 – 0.5 | 66 to 56* | 56 to 46* |
| 0.5 – 5 | 56 | 46 |
| 5 – 30.0 | 60 | 50 |

*Decreases with the logarithm of the frequency

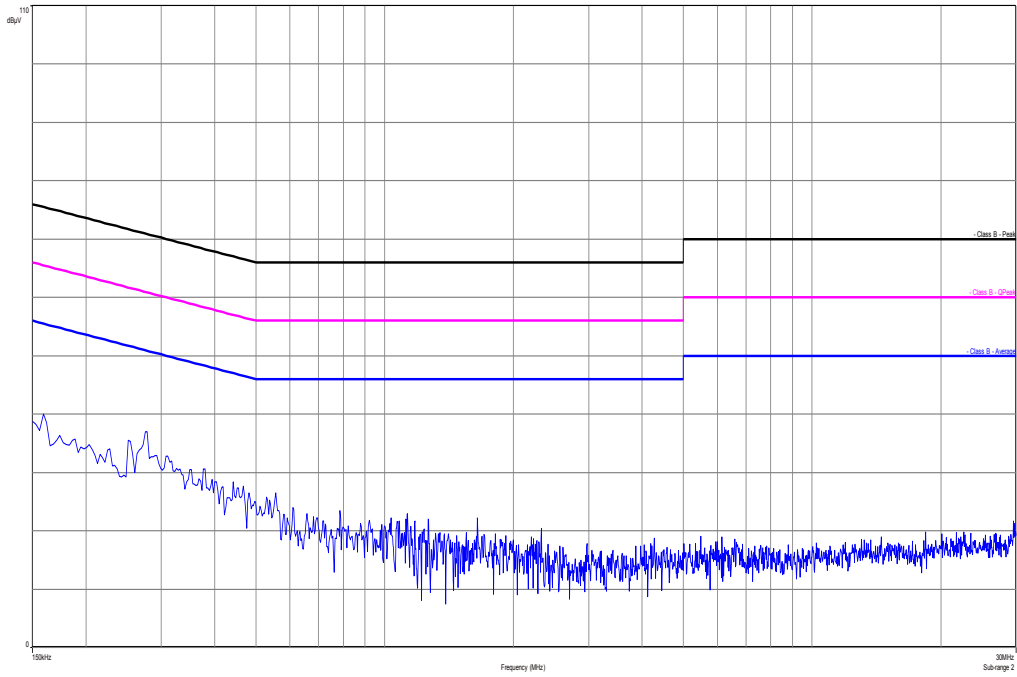
Results:

| Spurious Emissions Conducted < 30 MHz [dB μ V/m] | | |
|--|----------|----------------------|
| F [MHz] | Detector | Level [dB μ V/m] |
| No critical peaks detected. | | |
| Measurement uncertainty | ± 3 dB | |

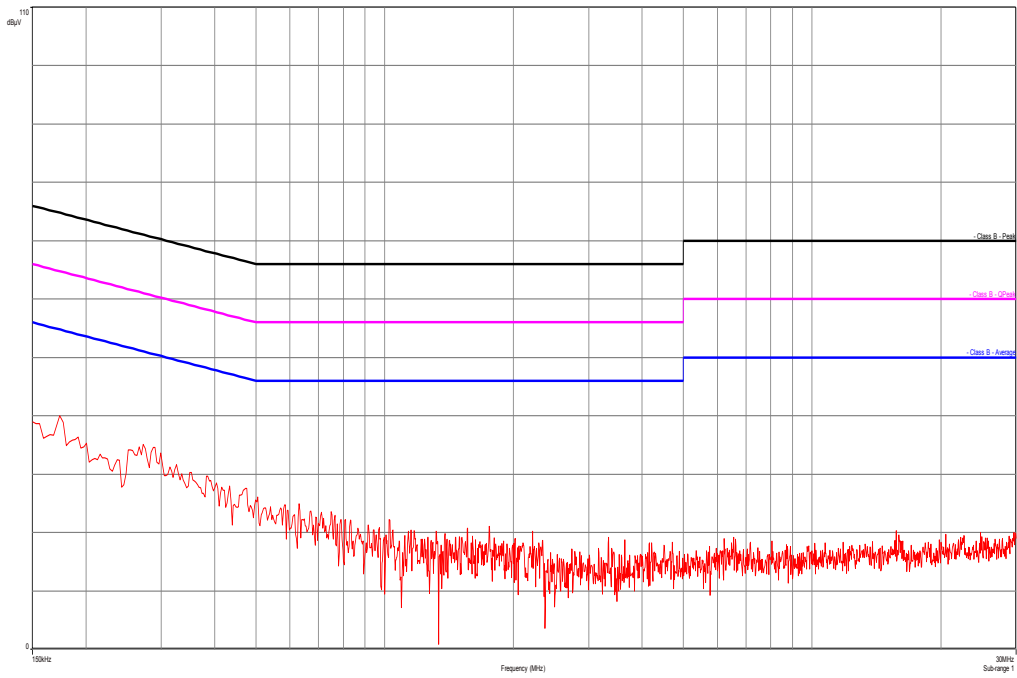
Result: Passed

Plots:

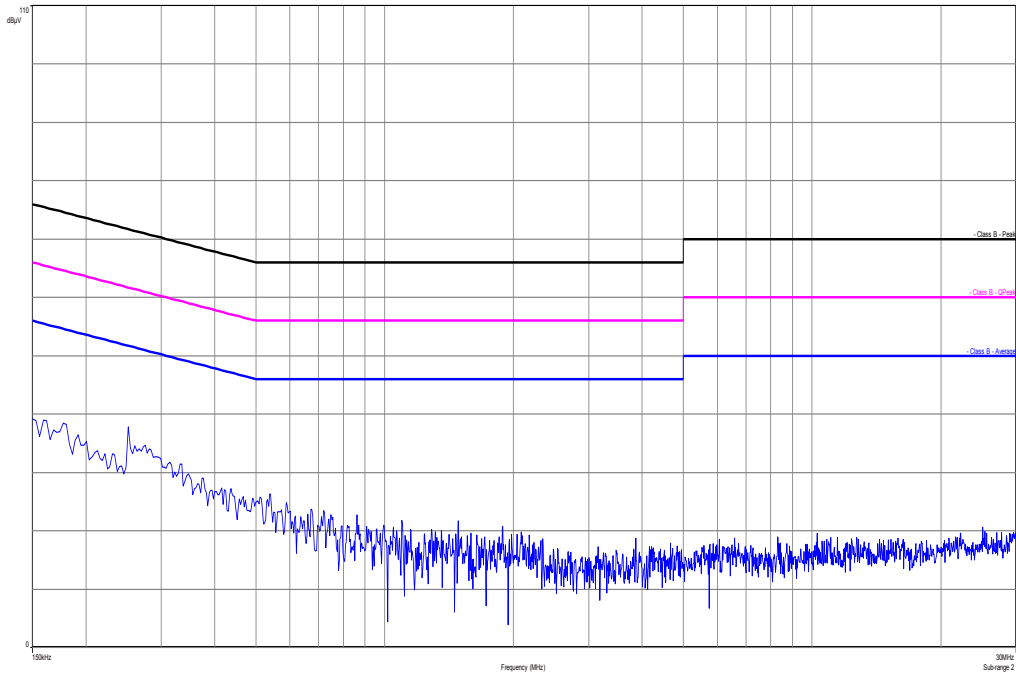
Plot 1: 150 kHz to 30 MHz / phase Line, TX mode



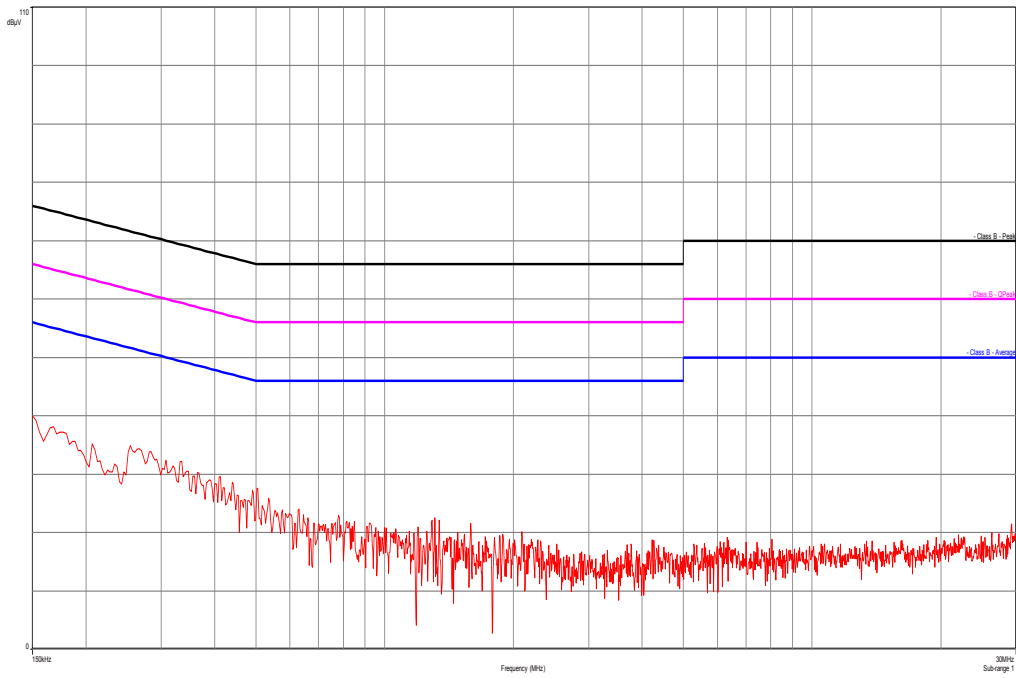
Plot 2: 150 kHz to 30 MHz / neutral Line, TX mode



Plot 3: 150 kHz to 30 MHz / phase Line, RX mode



Plot 4: 150 kHz to 30 MHz / neutral Line, RX mode



11 Test equipment and ancillaries used for tests

Typically, the calibrations of the test apparatus are commissioned to and performed by an accredited calibration laboratory. The calibration intervals are determined in accordance with the DIN EN ISO/IEC 17025. In addition to the external calibrations, the laboratory executes comparison measurements with other calibrated test systems or effective verifications. Weekly chamber inspections and range calibrations are performed. Where possible, rf-generating and signalling equipment as well as measuring receivers and analyzers are connected to an external high-precision 10 MHz reference (GPS-based or rubidium frequency standard).

In order to simplify the identification of the equipment used at some special tests, some items of test equipment and ancillaries can be provided with an identifier or number in the equipment list below (Lab/Item).

| No. | Lab / Item | Equipment | Type | Manufact. | Serial No. | INV. No Cetecom | Kind of Calibration | Last Calibration | Next Calibration |
|-----|------------|--|---------------------------------|----------------------|------------|--------------------|------------------------|---------------------|---------------------|
| 1 | 11b | Microwave System Amplifier, 0.5-26.5 GHz | 83017A | HP Meßtechnik | 00419 | 300002268 | ev | | |
| 2 | A026 | Std. Gain Horn Antenna 12.4 to 18.0 GHz | 639 | Narda | 8402 | 300000787 | k | 22.07.2013 | 22.07.2015 |
| 3 | A029 | Std. Gain Horn Antenna 18.0 to 26.5 GHz | 638 | Narda | 8205 | 300002442 | k | 19.07.2013 | 19.07.2015 |
| 4 | A031 | Std. Gain Horn Antenna 26.5 to 40.0 GHz | 637 | Narda | | 300000510 | k | 19.07.2013 | 19.07.2015 |
| 5 | n. a. | Broadband Low Noise Amplifier 18-50 GHz | CBL18503 070-XX | CERNEX | 19338 | 300004273 | ne | | |
| 6 | n. a. | Signal Analyzer 40 GHz | FSV40 | R&S | 101042 | 300004517 | k | 21.01.2014 | 21.01.2015 |
| 7 | n. a. | Double-Ridged Waveguide Horn Antenna 1-18.0GHz | 3115 | EMCO | 8812-3088 | 300001032 | vIK!! | 08.05.2013 | 08.05.2015 |
| 8 | n. a. | Anechoic chamber | FAC 3/5m | MWB / TDK | 87400/02 | 300000996 | ev | | |
| 9 | n. a. | Switch / Control Unit | 3488A | HP Meßtechnik | * | 300000199 | ne | | |
| 10 | 9 | Artificial Mains 9 kHz to 30 MHz | ESH3-Z5 | R&S | 828576/020 | 300001210 | Ve | 06.01.2012 | 30.01.2015 |
| 11 | n. a. | Switch / Control Unit | 3488A | HP Meßtechnik | 2719A15013 | 300001156 | ne | | |
| 12 | 9 | Isolating Transformer | MPL IEC625 Bus Regeltrennt ravo | Erfi | 91350 | 300001155 | ne | | |
| 13 | n. a. | Three-Way Power Splitter, 50 Ohm | 11850C | HP Meßtechnik | | 300000997 | ne | | |
| 14 | 90 | Active Loop Antenna 10 kHz to 30 MHz | 6502 | Kontron Psychotech | 8905-2342 | 300000256 | k | 13.06.2013 | 13.06.2015 |
| 15 | n. a. | Amplifier | js42-00502650-28-5a | Parzich GMBH | 928979 | 300003143 | ne | | |
| 16 | n. a. | Highpass Filter | WHKX7.0/1 8G-8SS | Wainwright | 18 | 300003789 | ne | | |
| 17 | n. a. | TRILOG Broadband Test-Antenna 30 MHz - 3 GHz | VULB9163 | Schwarzbeck | 371 | 300003854 | vIK!! | 14.10.2011 | 14.10.2014 |
| 18 | n. a. | MXE EMI Receiver 20 Hz bis 26,5 GHz | N9038A | Agilent Technologies | MY51210197 | 300004405 | k | 21.02.2013 | 21.02.2014 |
| 19 | 45 | Switch-Unit | 3488A | HP Meßtechnik | 2719A14505 | 300000368 | g | | |
| 20 | n. a. | EMI Test Receiver | ESCI 3 | R&S | 100083 | 300003312 | k | 27.01.2014 | 27.01.2015 |
| 21 | n. a. | Antenna Tower | Model 2175 | ETS-LINDGREN | 64762 | 300003745 | izw | | |
| 22 | n. a. | Positioning Controller | Model 2090 | ETS-LINDGREN | 64672 | 300003746 | izw | | |
| 23 | n. a. | Turntable | Model | ETS- | 44583 | 300003747 | izw | | |

| | | | | | | | | | |
|----|-------|---|----------|-----------------|-----|-----------|---|------------|------------|
| | | Interface-Box | 105637 | LINDGREN | | | | | |
| 24 | n. a. | TRILOG Broadband Test-Antenna 30 MHz - 3 GHz | VULB9163 | Schwarzbe ck | 295 | 300003787 | k | 12.04.2012 | 12.04.2014 |

Agenda: Kind of Calibration

| | | | |
|------|--|-----|--|
| k | calibration / calibrated | EK | limited calibration |
| ne | not required (k, ev, izw, zw not required) | zw | cyclical maintenance (external cyclical maintenance) |
| ev | periodic self verification | izw | internal cyclical maintenance |
| Ve | long-term stability recognized | g | blocked for accredited testing |
| vlk! | Attention: extended calibration interval | | |
| NK! | Attention: not calibrated | *) | next calibration ordered / currently in progress |

12 Observations

No observations exceeding those reported with the single test cases have been made.

Annex A Document history

| Version | Applied changes | Date of release |
|---------|--|-----------------|
| | Initial release | 2014-02-06 |
| -A | Type name removed on customer request. | 2014-02-13 |

Annex B Further information**Glossary**

| | | |
|----------|---|--|
| AVG | - | Average |
| DUT | - | Device under test |
| EMC | - | Electromagnetic Compatibility |
| EN | - | European Standard |
| EUT | - | Equipment under test |
| ETSI | - | European Telecommunications Standard Institute |
| FCC | - | Federal Communication Commission |
| FCC ID | - | Company Identifier at FCC |
| HW | - | Hardware |
| IC | - | Industry Canada |
| Inv. No. | - | Inventory number |
| N/A | - | Not applicable |
| PP | - | Positive peak |
| QP | - | Quasi peak |
| S/N | - | Serial number |
| SW | - | Software |

Annex C Accreditation Certificate

Front side of certificate



Back side of certificate



Note:

The current certificate including annex is published on our website (see link below) or may be received from CETECOM ICT Services on request.

<http://www.cetecom.com/eu/de/cetecom-group/europa/deutschland-saarbruecken/akkreditierungen.html>