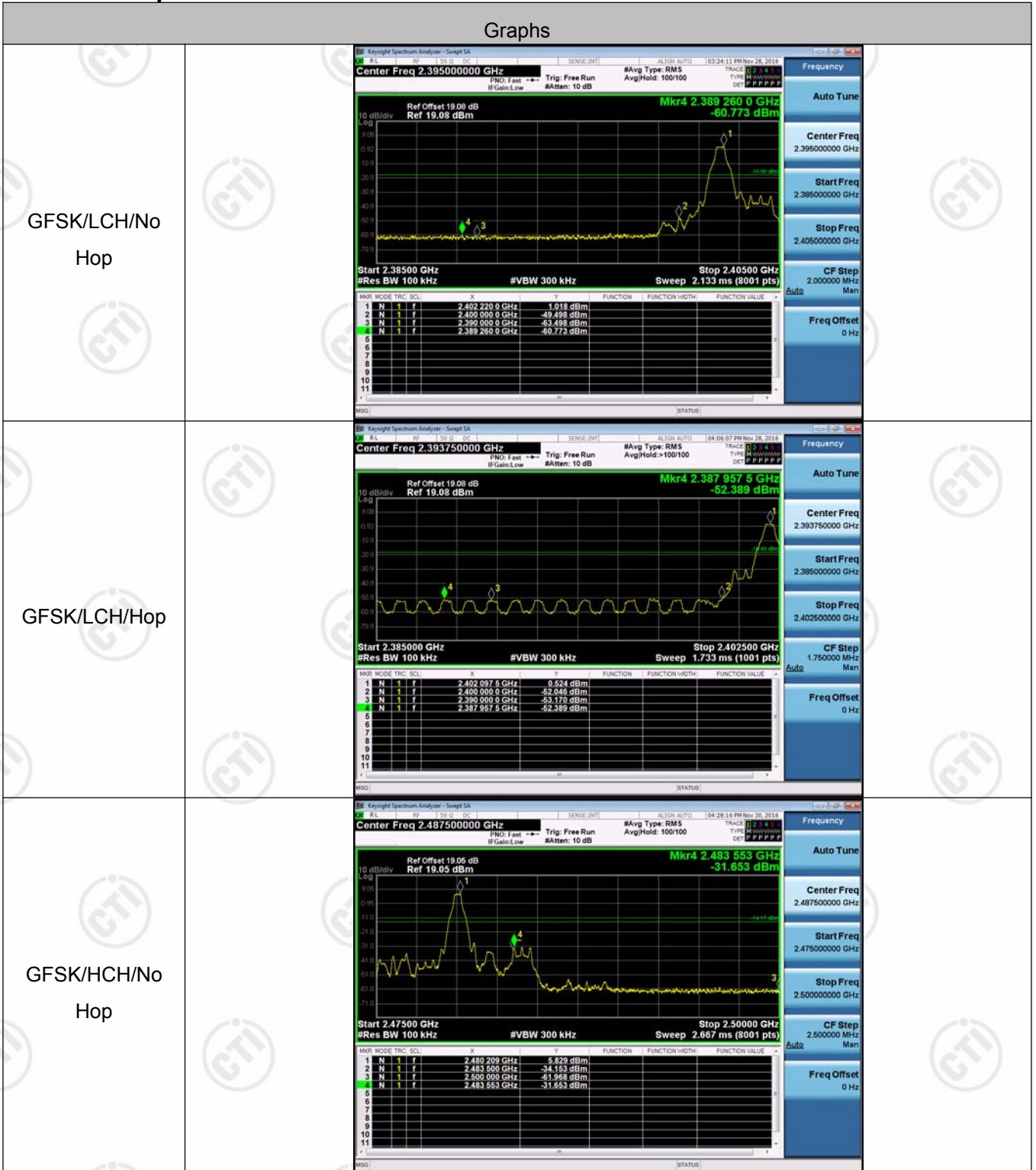


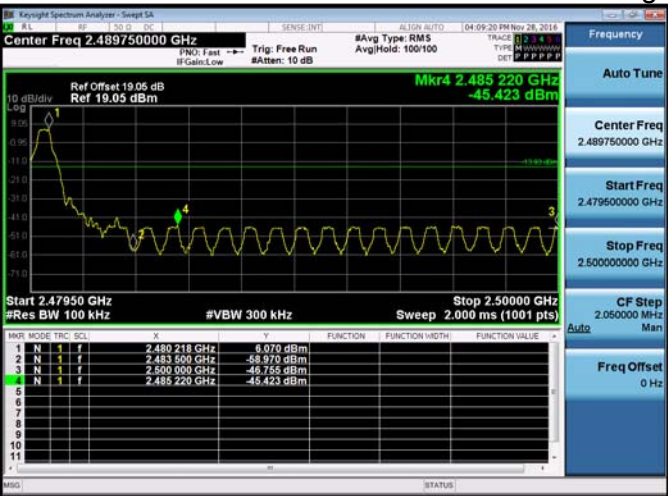
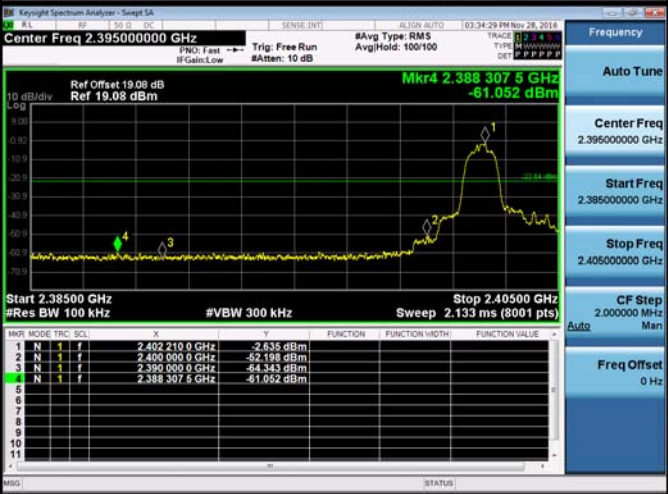
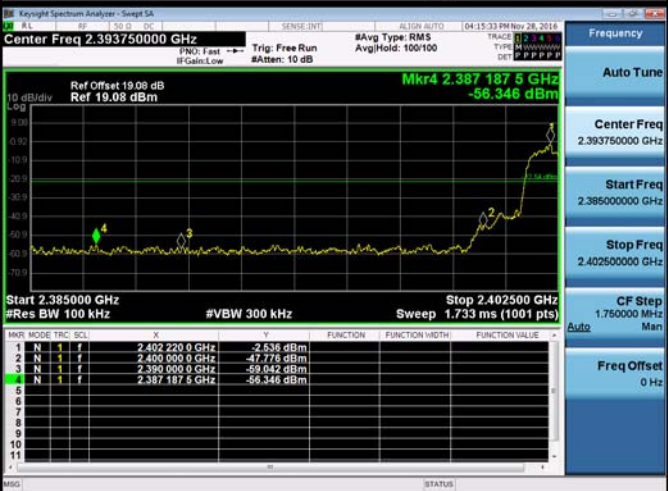
Appendix F): Band-edge for RF Conducted Emissions

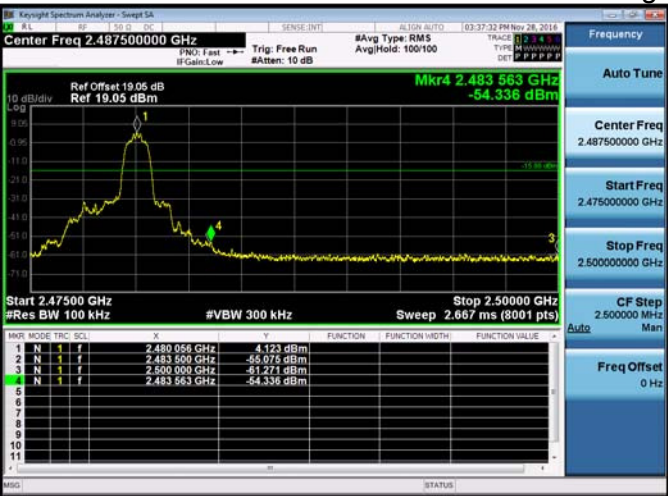
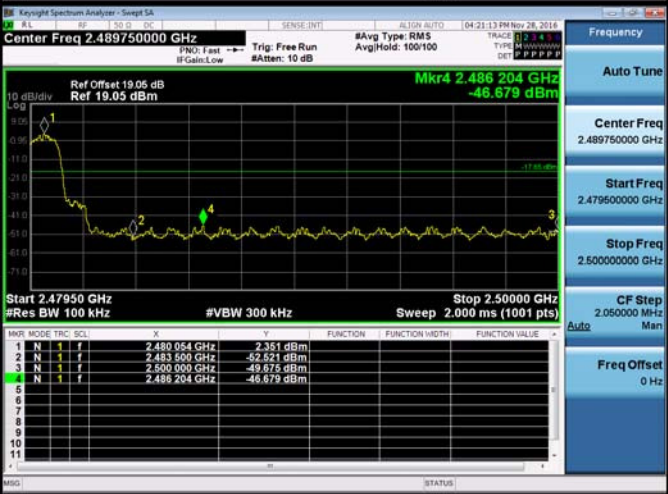
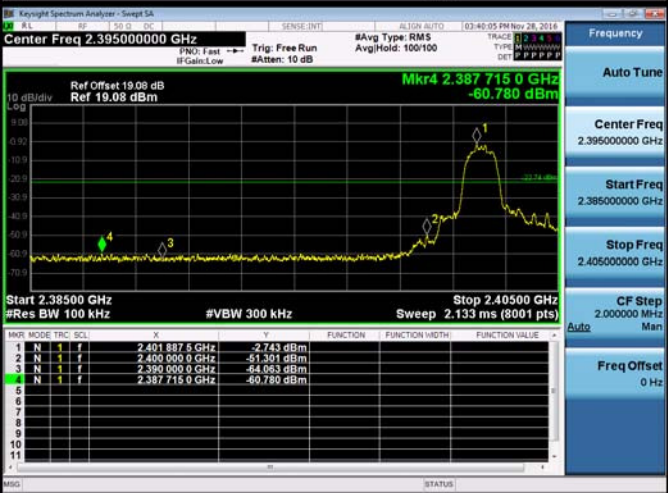
Result Table

| Mode | Channel | Carrier Frequency [MHz] | Carrier Power [dBm] | Frequency Hopping | Max Spurious Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|-------------------------|---------------------|-------------------|--------------------------|-------------|---------|
| GFSK | LCH | 2402 | 1.018 | Off | -60.773 | -18.98 | PASS |
| | | | 0.524 | On | -52.389 | -19.48 | PASS |
| GFSK | HCH | 2480 | 5.829 | Off | -31.653 | -14.17 | PASS |
| | | | 6.070 | On | -45.423 | -13.93 | PASS |
| $\pi/4$ DQPSK | LCH | 2402 | -2.635 | Off | -61.052 | -22.64 | PASS |
| | | | -2.536 | On | -56.346 | -22.54 | PASS |
| $\pi/4$ DQPSK | HCH | 2480 | 4.123 | Off | -54.336 | -15.88 | PASS |
| | | | 2.351 | On | -46.679 | -17.65 | PASS |
| 8DPSK | LCH | 2402 | -2.743 | Off | -60.780 | -22.74 | PASS |
| | | | -2.533 | On | -55.639 | -22.53 | PASS |
| 8DPSK | HCH | 2480 | 4.215 | Off | -53.072 | -15.79 | PASS |
| | | | 4.010 | On | -46.768 | -15.99 | PASS |

Test Graph



| | |
|--|--|
| <p>GFSK/HCH/Hop</p> |  |
| <p>$\pi/4$DQPSK/LCH/ No Hop</p> |  |
| <p>$\pi/4$DQPSK/LCH/ Hop</p> |  |

| <p>$\pi/4$DQPSK/HCH/ No Hop</p> |  <table border="1" data-bbox="630 582 1181 728"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.480056 GHz</td> <td>4.123 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>2.483500 GHz</td> <td>-55.075 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>2.500000 GHz</td> <td>-51.271 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>1</td> <td>f</td> <td>2.483563 GHz</td> <td>-54.336 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | MNR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE | 1 | N | 1 | f | 2.480056 GHz | 4.123 dBm | | | | 2 | N | 1 | f | 2.483500 GHz | -55.075 dBm | | | | 3 | N | 1 | f | 2.500000 GHz | -51.271 dBm | | | | 4 | N | 1 | f | 2.483563 GHz | -54.336 dBm | | | |
|--|---|-----|------|---------------|-------------|----------|----------------|----------------|----------------|----------------|---|---|---|---|---------------|------------|--|--|--|---|---|---|---|--------------|-------------|--|--|--|---|---|---|---|--------------|-------------|--|--|--|---|---|---|---|--------------|-------------|--|--|--|
| MNR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | N | 1 | f | 2.480056 GHz | 4.123 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | N | 1 | f | 2.483500 GHz | -55.075 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | N | 1 | f | 2.500000 GHz | -51.271 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | N | 1 | f | 2.483563 GHz | -54.336 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>$\pi/4$DQPSK/HCH/ Hop</p> |  <table border="1" data-bbox="630 1075 1181 1220"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.480054 GHz</td> <td>2.351 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>2.483000 GHz</td> <td>-52.521 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>2.500000 GHz</td> <td>-49.675 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>1</td> <td>f</td> <td>2.486204 GHz</td> <td>-46.679 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | MNR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE | 1 | N | 1 | f | 2.480054 GHz | 2.351 dBm | | | | 2 | N | 1 | f | 2.483000 GHz | -52.521 dBm | | | | 3 | N | 1 | f | 2.500000 GHz | -49.675 dBm | | | | 4 | N | 1 | f | 2.486204 GHz | -46.679 dBm | | | |
| MNR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | N | 1 | f | 2.480054 GHz | 2.351 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | N | 1 | f | 2.483000 GHz | -52.521 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | N | 1 | f | 2.500000 GHz | -49.675 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | N | 1 | f | 2.486204 GHz | -46.679 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>8DPSK/LCH/No Hop</p> |  <table border="1" data-bbox="630 1568 1181 1713"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.4018875 GHz</td> <td>-2.743 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>2.400000 GHz</td> <td>-61.301 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>2.380000 GHz</td> <td>-64.063 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>1</td> <td>f</td> <td>2.387715 GHz</td> <td>-60.780 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | MNR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE | 1 | N | 1 | f | 2.4018875 GHz | -2.743 dBm | | | | 2 | N | 1 | f | 2.400000 GHz | -61.301 dBm | | | | 3 | N | 1 | f | 2.380000 GHz | -64.063 dBm | | | | 4 | N | 1 | f | 2.387715 GHz | -60.780 dBm | | | |
| MNR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | N | 1 | f | 2.4018875 GHz | -2.743 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | N | 1 | f | 2.400000 GHz | -61.301 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | N | 1 | f | 2.380000 GHz | -64.063 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | N | 1 | f | 2.387715 GHz | -60.780 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| <p>8DPSK/LCH/Hop</p> | <p>Key Screenshot Data:</p> <ul style="list-style-type: none"> Center Freq: 2.393750000 GHz Mkr4: 2.3870650 GHz, -55.639 dBm Start Freq: 2.385000000 GHz Stop Freq: 2.402500000 GHz Res BW: 100 kHz VBW: 300 kHz Sweep: 1.733 ms (1001 pts) <table border="1"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.4022200 GHz</td> <td>-2.533 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>2.4000000 GHz</td> <td>-47.363 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>2.3990000 GHz</td> <td>-58.914 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>1</td> <td>f</td> <td>2.3870650 GHz</td> <td>-55.639 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | MNR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE | 1 | N | 1 | f | 2.4022200 GHz | -2.533 dBm | | | | 2 | N | 1 | f | 2.4000000 GHz | -47.363 dBm | | | | 3 | N | 1 | f | 2.3990000 GHz | -58.914 dBm | | | | 4 | N | 1 | f | 2.3870650 GHz | -55.639 dBm | | | |
|-------------------------|---|-----|------|---------------|-------------|----------|----------------|----------------|----------------|----------------|---|---|---|---|---------------|------------|--|--|--|---|---|---|---|---------------|-------------|--|--|--|---|---|---|---|---------------|-------------|--|--|--|---|---|---|---|---------------|-------------|--|--|--|
| MNR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | N | 1 | f | 2.4022200 GHz | -2.533 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | N | 1 | f | 2.4000000 GHz | -47.363 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | N | 1 | f | 2.3990000 GHz | -58.914 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | N | 1 | f | 2.3870650 GHz | -55.639 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>8DPSK/HCH/No Hop</p> | <p>Key Screenshot Data:</p> <ul style="list-style-type: none"> Center Freq: 2.487500000 GHz Mkr4: 2.483547 GHz, -53.072 dBm Start Freq: 2.475000000 GHz Stop Freq: 2.500000000 GHz Res BW: 100 kHz VBW: 300 kHz Sweep: 2.667 ms (8001 pts) <table border="1"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.480056 GHz</td> <td>4.215 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>2.483500 GHz</td> <td>-53.625 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>2.500000 GHz</td> <td>-62.139 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>1</td> <td>f</td> <td>2.483547 GHz</td> <td>-53.072 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | MNR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE | 1 | N | 1 | f | 2.480056 GHz | 4.215 dBm | | | | 2 | N | 1 | f | 2.483500 GHz | -53.625 dBm | | | | 3 | N | 1 | f | 2.500000 GHz | -62.139 dBm | | | | 4 | N | 1 | f | 2.483547 GHz | -53.072 dBm | | | |
| MNR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | N | 1 | f | 2.480056 GHz | 4.215 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | N | 1 | f | 2.483500 GHz | -53.625 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | N | 1 | f | 2.500000 GHz | -62.139 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | N | 1 | f | 2.483547 GHz | -53.072 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>8DPSK/HCH/Hop</p> | <p>Key Screenshot Data:</p> <ul style="list-style-type: none"> Center Freq: 2.489750000 GHz Mkr4: 2.493235 GHz, -46.768 dBm Start Freq: 2.479500000 GHz Stop Freq: 2.500000000 GHz Res BW: 100 kHz VBW: 300 kHz Sweep: 2.000 ms (1001 pts) <table border="1"> <thead> <tr> <th>MNR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.489218 GHz</td> <td>4.010 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>2.483500 GHz</td> <td>-52.939 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>2.500000 GHz</td> <td>-48.550 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>1</td> <td>f</td> <td>2.493235 GHz</td> <td>-46.768 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | MNR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE | 1 | N | 1 | f | 2.489218 GHz | 4.010 dBm | | | | 2 | N | 1 | f | 2.483500 GHz | -52.939 dBm | | | | 3 | N | 1 | f | 2.500000 GHz | -48.550 dBm | | | | 4 | N | 1 | f | 2.493235 GHz | -46.768 dBm | | | |
| MNR | MODE | TRC | SCL | X | Y | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | N | 1 | f | 2.489218 GHz | 4.010 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | N | 1 | f | 2.483500 GHz | -52.939 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | N | 1 | f | 2.500000 GHz | -48.550 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | N | 1 | f | 2.493235 GHz | -46.768 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Appendix G): RF Conducted Spurious Emissions

Result Table

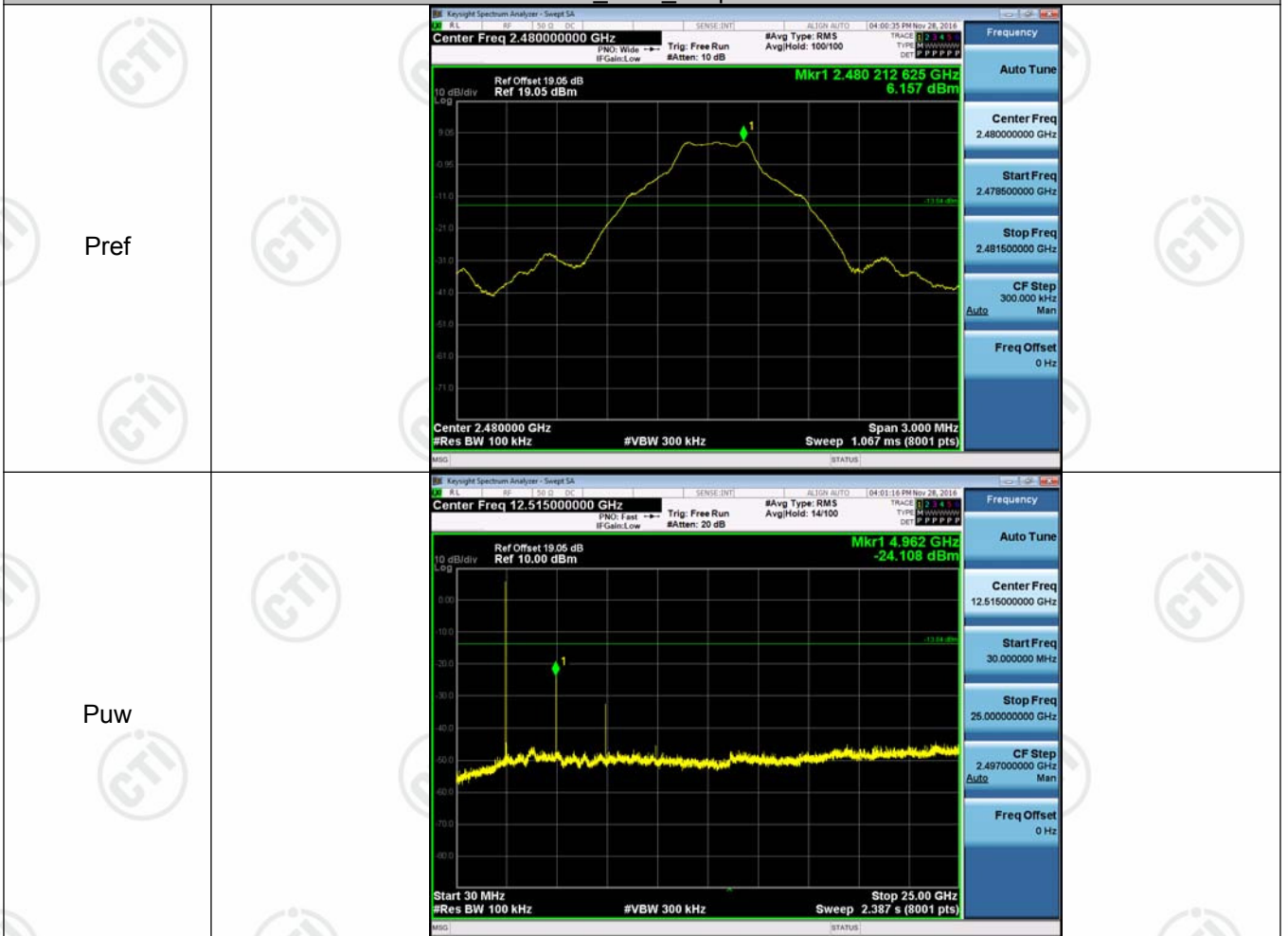
| Mode | Channel | Pref [dBm] | Puw[dBm] | Verdict |
|---------------|---------|------------|----------|---------|
| GFSK | LCH | 0.908 | <Limit | PASS |
| GFSK | MCH | 4.148 | <Limit | PASS |
| GFSK | HCH | 6.157 | <Limit | PASS |
| $\pi/4$ DQPSK | LCH | -2.639 | <Limit | PASS |
| $\pi/4$ DQPSK | MCH | 1.332 | <Limit | PASS |
| $\pi/4$ DQPSK | HCH | 4.043 | <Limit | PASS |
| 8DPSK | LCH | -2.559 | <Limit | PASS |
| 8DPSK | MCH | 1.337 | <Limit | PASS |
| 8DPSK | HCH | 4.121 | <Limit | PASS |

Test Graph

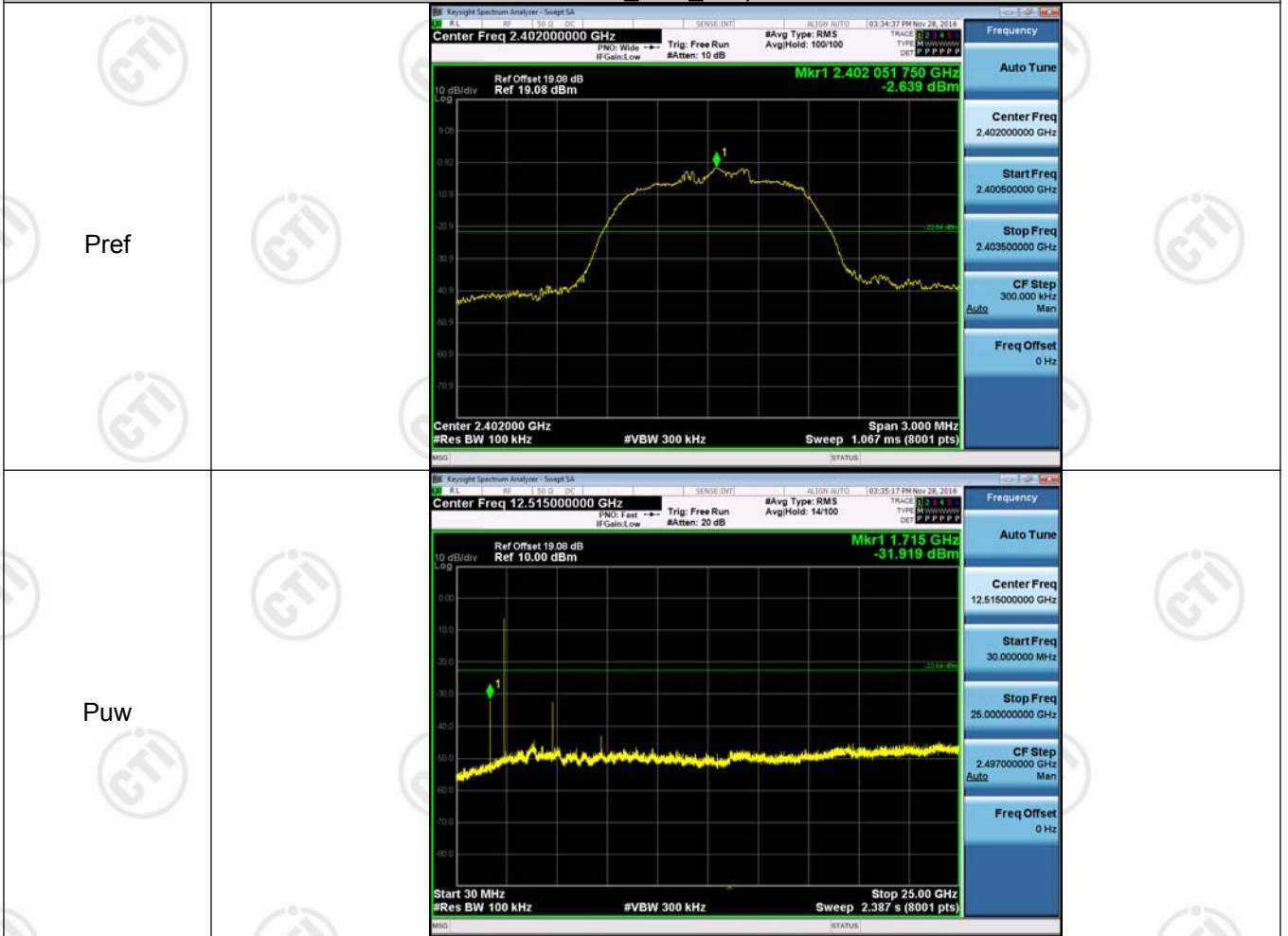


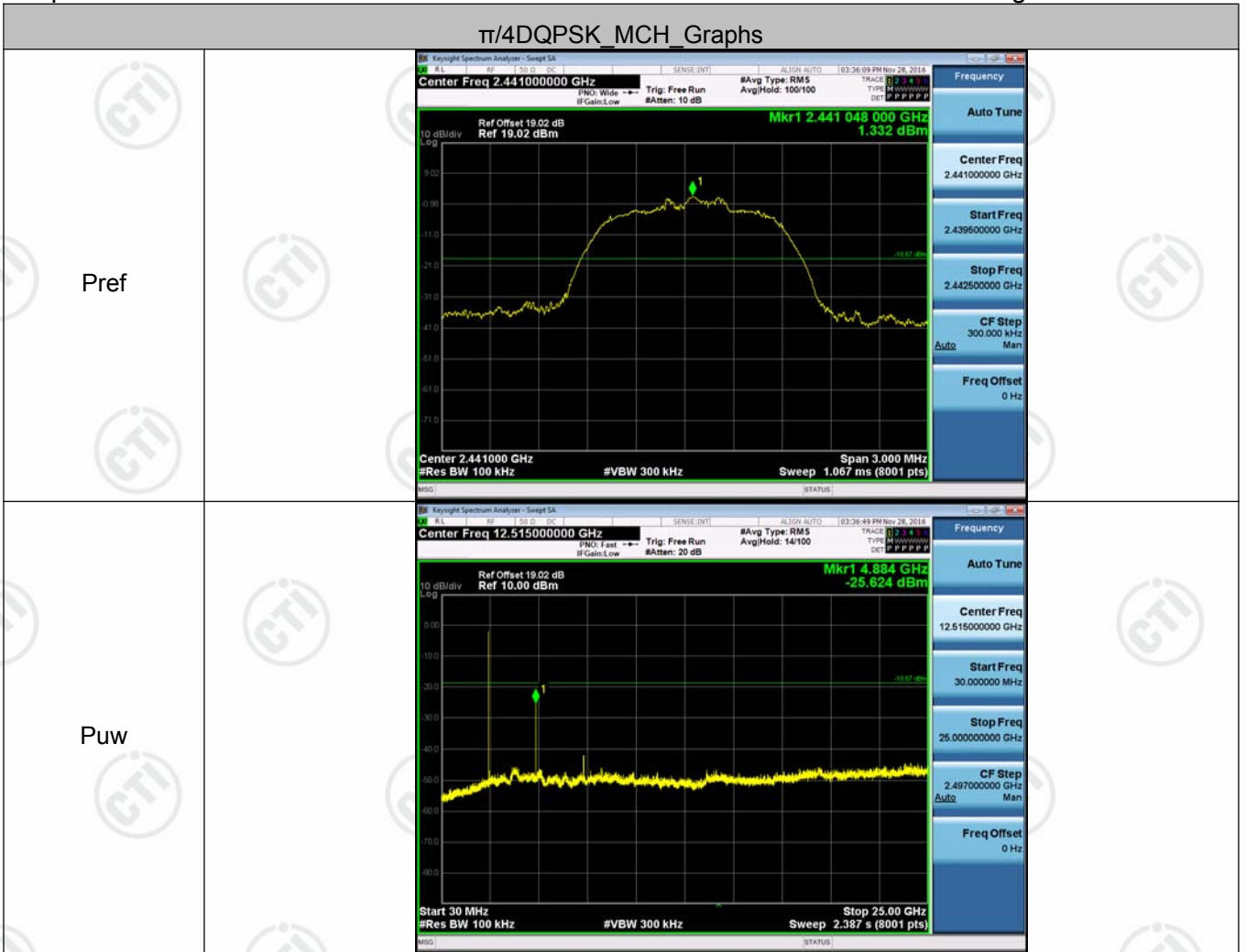


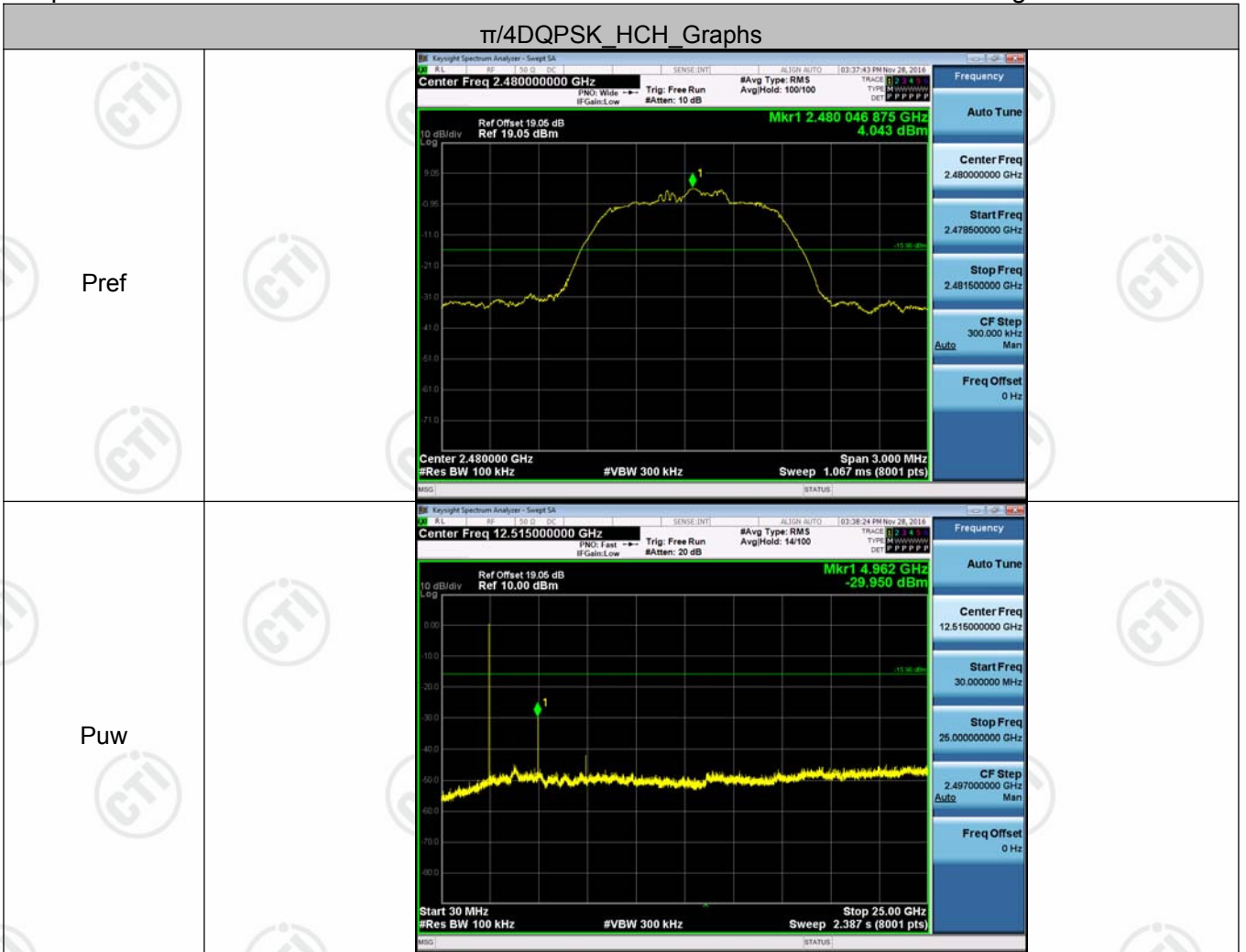
GFSK_HCH_Graphs



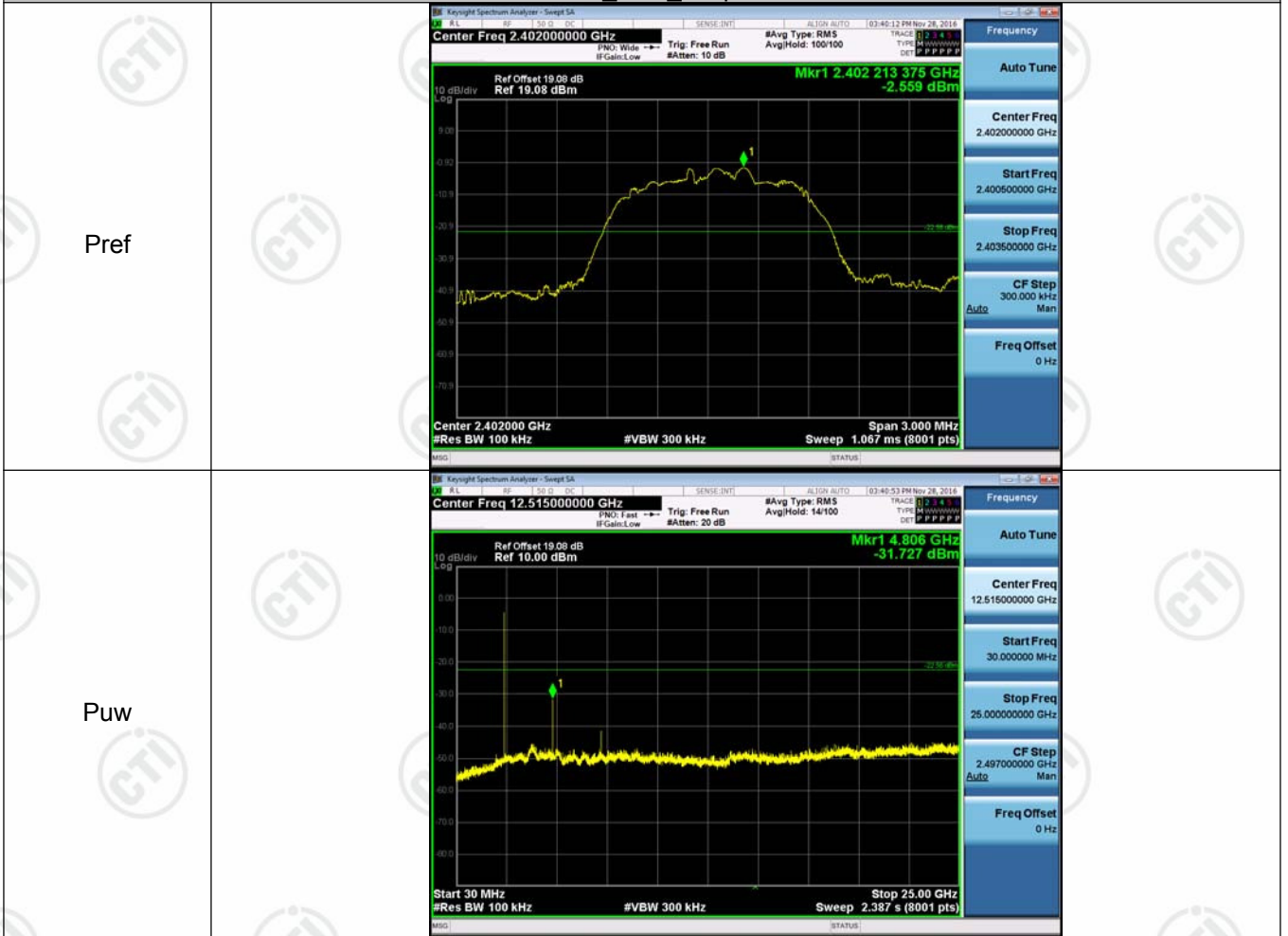
$\pi/4$ DQPSK_LCH_Graphs



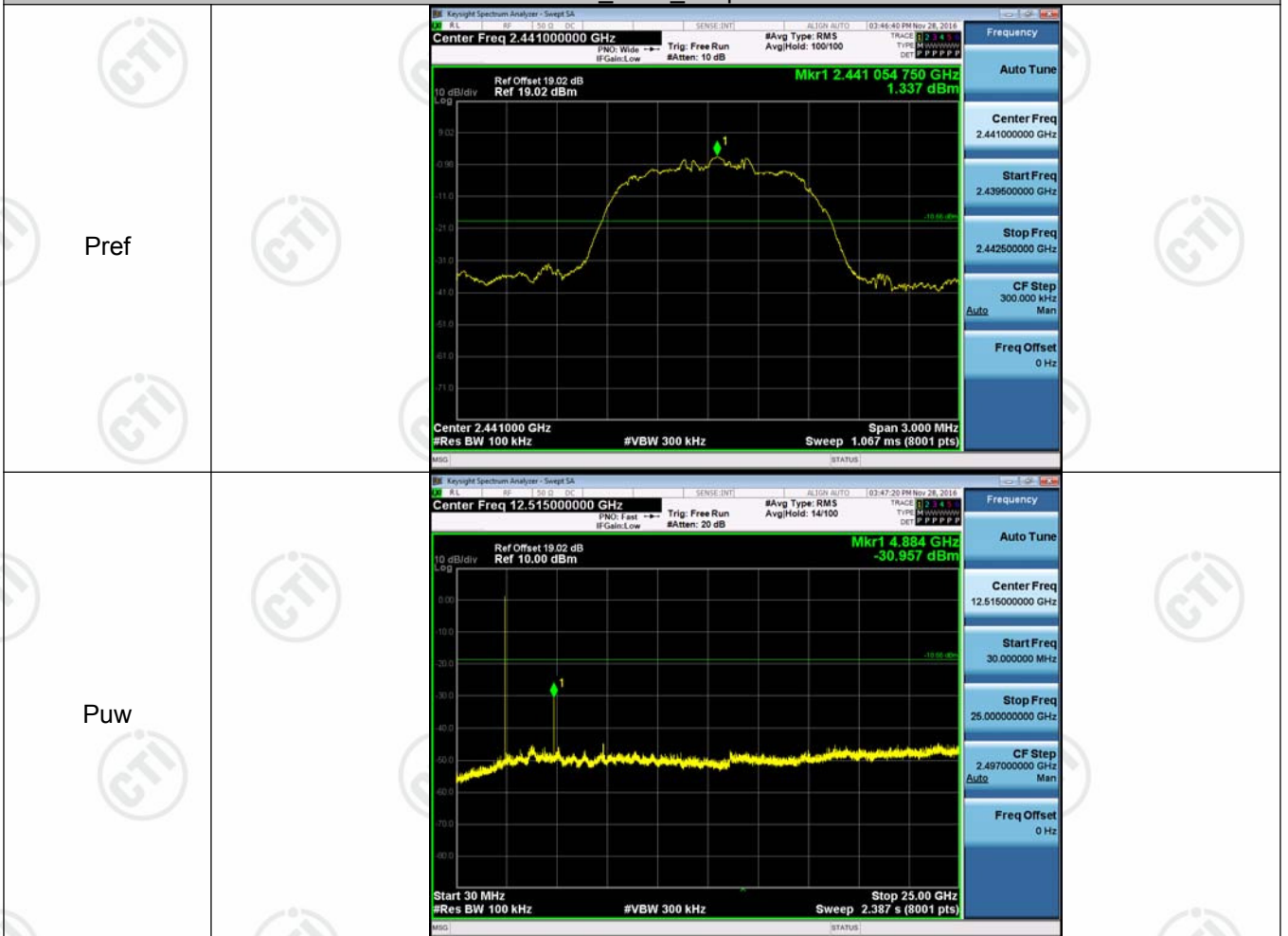


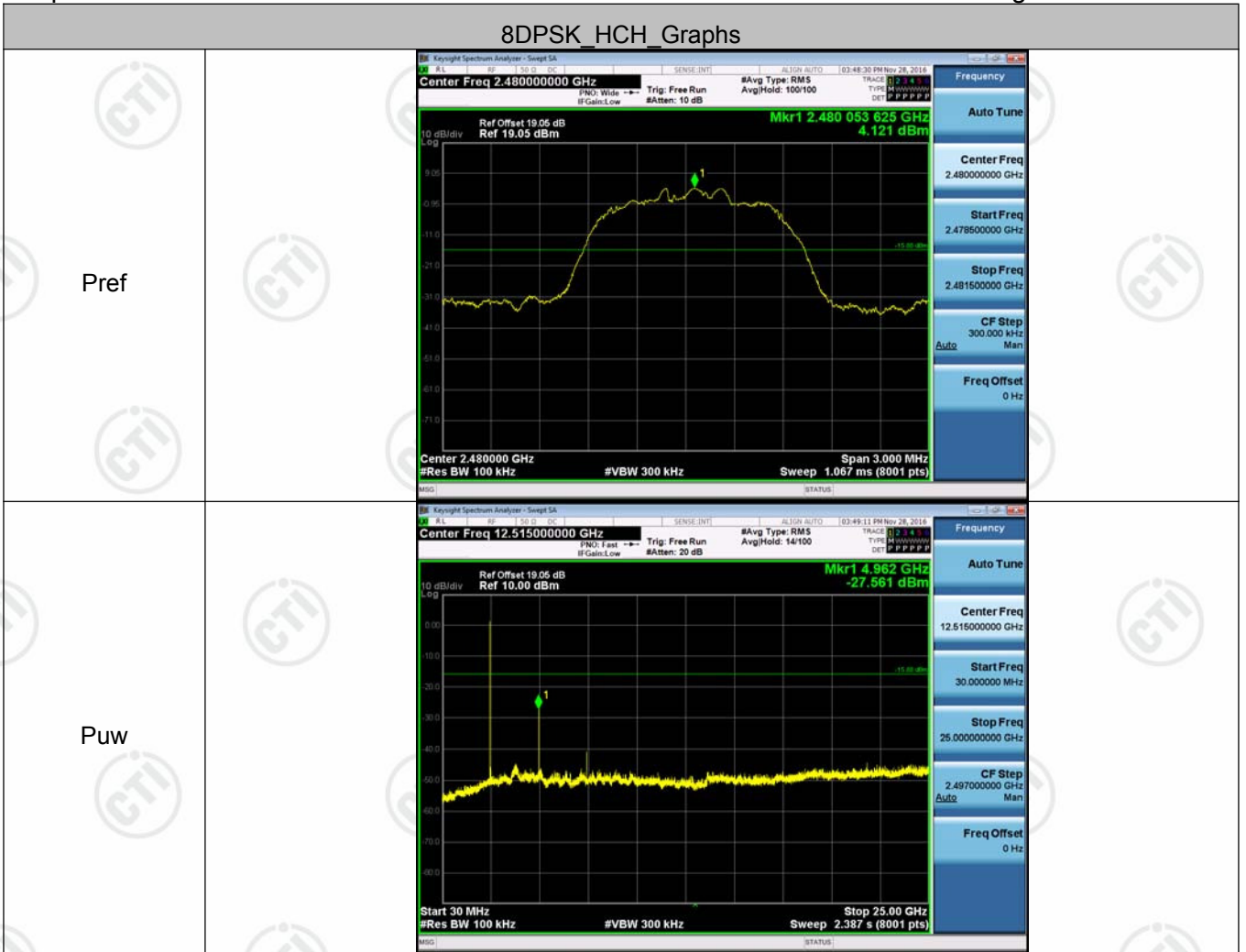


8DPSK_LCH_Graphs



8DPSK_MCH_Graphs





Appendix H): Pseudorandom Frequency Hopping Sequence

| | |
|---|---|
| Test Requirement: | 47 CFR Part 15C Section 15.247 (a)(1) requirement: |
| <p>Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.</p> <p>Alternatively. Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a Pseudorandom ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.</p> | |
| <p>EUT Pseudorandom Frequency Hopping Sequence</p> | |
| <p>The pseudorandom sequence may be generated in a nine-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. And the result is fed back to the input of the first stage. The sequence begins with the first ONE of 9 consecutive ONES; i.e. the shift register is initialized with nine ones.</p> <ul style="list-style-type: none"> • Number of shift register stages: 9 • Length of pseudo-random sequence: $2^9 - 1 = 511$ bits • Longest sequence of zeros: 8 (non-inverted signal) <div data-bbox="316 999 1370 1146" style="text-align: center;"> </div> <p style="text-align: center;"><i>Linear Feedback Shift Register for Generation of the PRBS sequence</i></p> <p>An example of Pseudorandom Frequency Hopping Sequence as follow:</p> <div data-bbox="288 1245 1273 1391" style="text-align: center;"> </div> <p>Each frequency used equally on the average by each transmitter. The system receivers have input bandwidths that match the hopping channel bandwidths of their Corresponding transmitters and shift frequencies in synchronization with the transmitted signals.</p> <p>The device does not have the ability to be coordinated with other FHSS systems in an effort to avoid the simultaneous occupancy of individual hopping frequencies by multiple transmitters.</p> | |

Appendix I): Antenna Requirement

15.203 requirement:

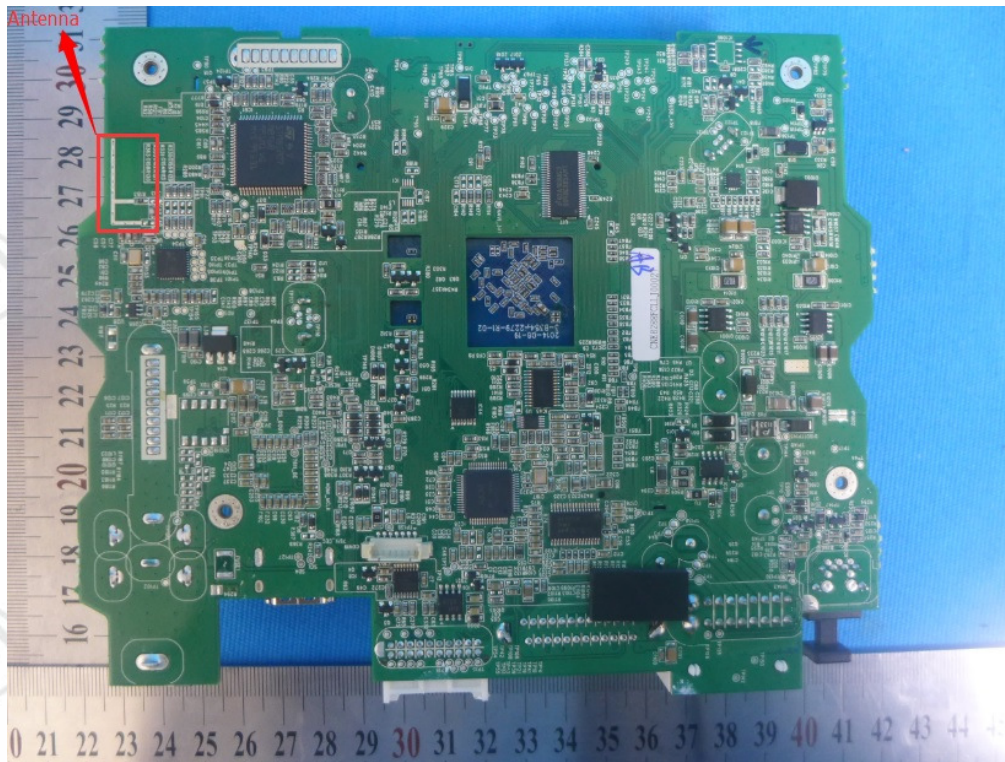
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

The antenna is PCB Inverted-F Antenna and no consideration of replacement. The best case gain of the antenna is 0dBi.

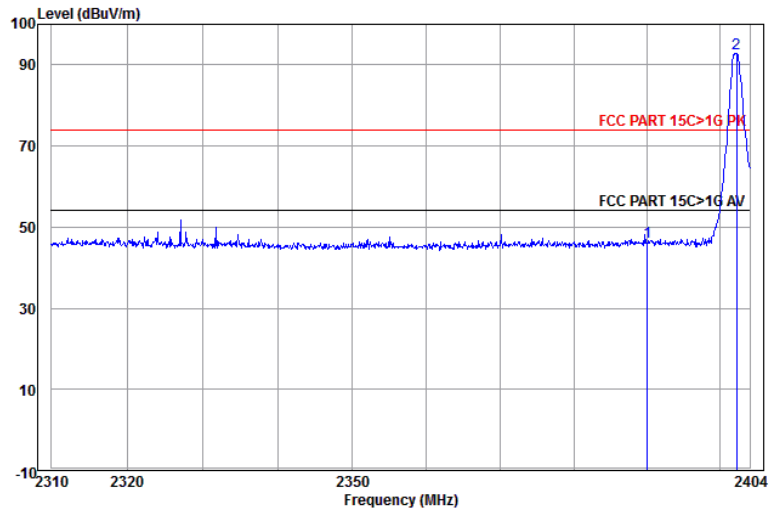


Appendix J): Restricted bands around fundamental frequency (Radiated)

| Receiver Setup: | <table border="1"> <thead> <tr> <th>Frequency</th> <th>Detector</th> <th>RBW</th> <th>VBW</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>30MHz-1GHz</td> <td>Quasi-peak</td> <td>120kHz</td> <td>300kHz</td> <td>Quasi-peak</td> </tr> <tr> <td rowspan="2">Above 1GHz</td> <td>Peak</td> <td>1MHz</td> <td>3MHz</td> <td>Peak</td> </tr> <tr> <td>Peak</td> <td>1MHz</td> <td>10Hz</td> <td>Average</td> </tr> </tbody> </table> | Frequency | Detector | RBW | VBW | Remark | 30MHz-1GHz | Quasi-peak | 120kHz | 300kHz | Quasi-peak | Above 1GHz | Peak | 1MHz | 3MHz | Peak | Peak | 1MHz | 10Hz | Average | |
|-----------------|--|------------------|--------------------------|------------|-------------|--------|------------------|--------------|--------|------------------|---------------|------------|------------------|-------------|------|------------------|------------|------|---------------|---------|------------|
| Frequency | Detector | RBW | VBW | Remark | | | | | | | | | | | | | | | | | |
| 30MHz-1GHz | Quasi-peak | 120kHz | 300kHz | Quasi-peak | | | | | | | | | | | | | | | | | |
| Above 1GHz | Peak | 1MHz | 3MHz | Peak | | | | | | | | | | | | | | | | | |
| | Peak | 1MHz | 10Hz | Average | | | | | | | | | | | | | | | | | |
| Test Procedure: | <p>Below 1GHz test procedure as below:</p> <ol style="list-style-type: none"> The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel <p>Above 1GHz test procedure as below:</p> <ol style="list-style-type: none"> Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter). b. Test the EUT in the lowest channel , the Highest channel The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case. Repeat above procedures until all frequencies measured was complete. | | | | | | | | | | | | | | | | | | | | |
| Limit: | <table border="1"> <thead> <tr> <th>Frequency</th> <th>Limit (dBμV/m @3m)</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>30MHz-88MHz</td> <td>40.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td>88MHz-216MHz</td> <td>43.5</td> <td>Quasi-peak Value</td> </tr> <tr> <td>216MHz-960MHz</td> <td>46.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td>960MHz-1GHz</td> <td>54.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td rowspan="2">Above 1GHz</td> <td>54.0</td> <td>Average Value</td> </tr> <tr> <td>74.0</td> <td>Peak Value</td> </tr> </tbody> </table> | Frequency | Limit (dB μ V/m @3m) | Remark | 30MHz-88MHz | 40.0 | Quasi-peak Value | 88MHz-216MHz | 43.5 | Quasi-peak Value | 216MHz-960MHz | 46.0 | Quasi-peak Value | 960MHz-1GHz | 54.0 | Quasi-peak Value | Above 1GHz | 54.0 | Average Value | 74.0 | Peak Value |
| Frequency | Limit (dB μ V/m @3m) | Remark | | | | | | | | | | | | | | | | | | | |
| 30MHz-88MHz | 40.0 | Quasi-peak Value | | | | | | | | | | | | | | | | | | | |
| 88MHz-216MHz | 43.5 | Quasi-peak Value | | | | | | | | | | | | | | | | | | | |
| 216MHz-960MHz | 46.0 | Quasi-peak Value | | | | | | | | | | | | | | | | | | | |
| 960MHz-1GHz | 54.0 | Quasi-peak Value | | | | | | | | | | | | | | | | | | | |
| Above 1GHz | 54.0 | Average Value | | | | | | | | | | | | | | | | | | | |
| | 74.0 | Peak Value | | | | | | | | | | | | | | | | | | | |

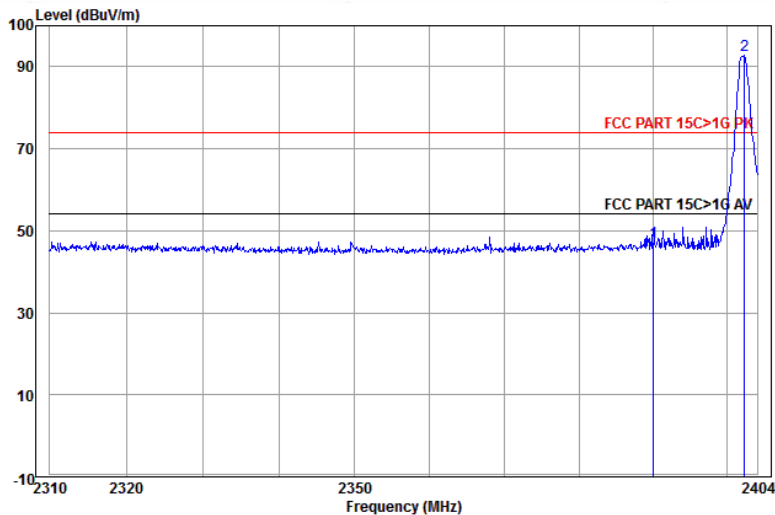
Test plot as follows:

| | | | |
|----------------------|----------------------|--------------------------|--------------|
| Worse case mode: | GFSK(1-DH5) | | |
| Frequency: 2390.0MHz | Test channel: Lowest | Polarization: Horizontal | Remark: Peak |



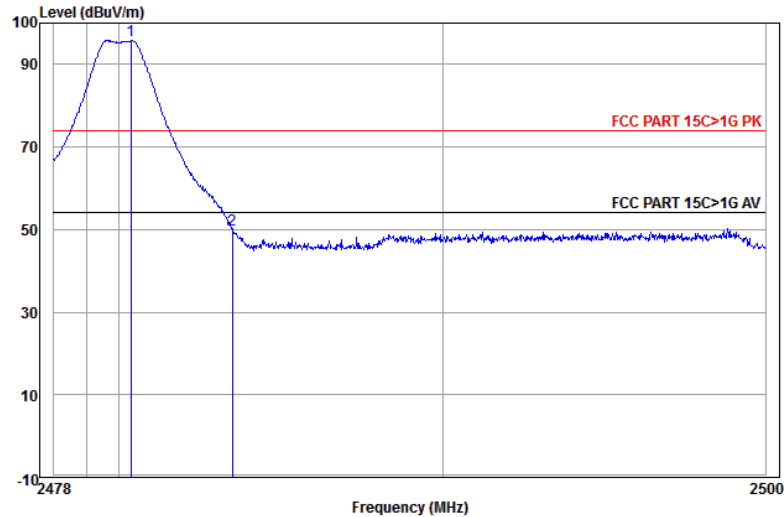
| | Ant Freq | Cable Factor | Preamp Loss | Read Level | Read Level | Limit Line | Over Limit | Pol/Phase | Remark |
|------|----------|--------------|-------------|------------|------------|------------|------------|-----------|------------|
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | |
| 1 | 2390.000 | 32.53 | 4.28 | 34.39 | 43.91 | 46.33 | 74.00 | -27.67 | Horizontal |
| 2 pp | 2402.179 | 32.56 | 4.31 | 34.39 | 90.35 | 92.83 | 74.00 | 18.83 | Horizontal |

| | | | |
|----------------------|----------------------|------------------------|--------------|
| Worse case mode: | GFSK(1-DH5) | | |
| Frequency: 2390.0MHz | Test channel: Lowest | Polarization: Vertical | Remark: Peak |



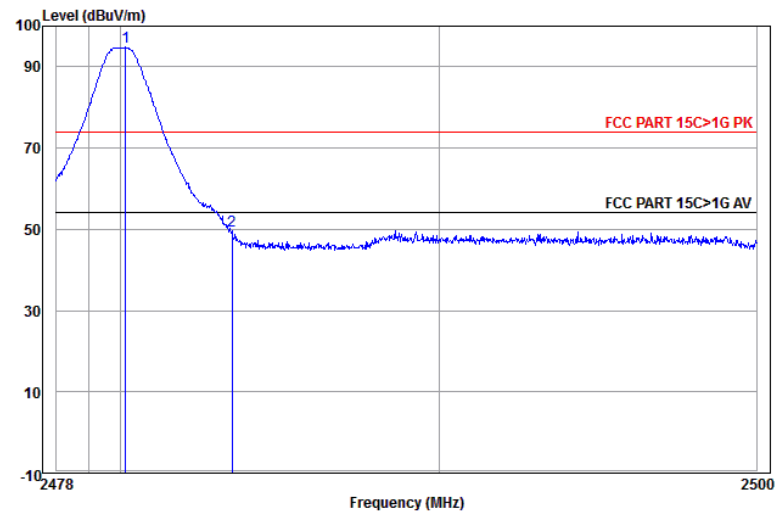
| | Ant Freq | Cable Factor | Preamp Loss | Read Level | Read Level | Limit Line | Over Limit | Pol/Phase | Remark |
|------|----------|--------------|-------------|------------|------------|------------|------------|-----------|----------|
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | |
| 1 | 2390.000 | 32.53 | 4.28 | 34.39 | 44.73 | 47.15 | 74.00 | -26.85 | Vertical |
| 2 pp | 2402.275 | 32.56 | 4.31 | 34.39 | 90.21 | 92.69 | 74.00 | 18.69 | Vertical |

| | | | |
|----------------------|-----------------------|--------------------------|--------------|
| Worse case mode: | GFSK(1-DH5) | | |
| Frequency: 2483.5MHz | Test channel: Highest | Polarization: Horizontal | Remark: Peak |



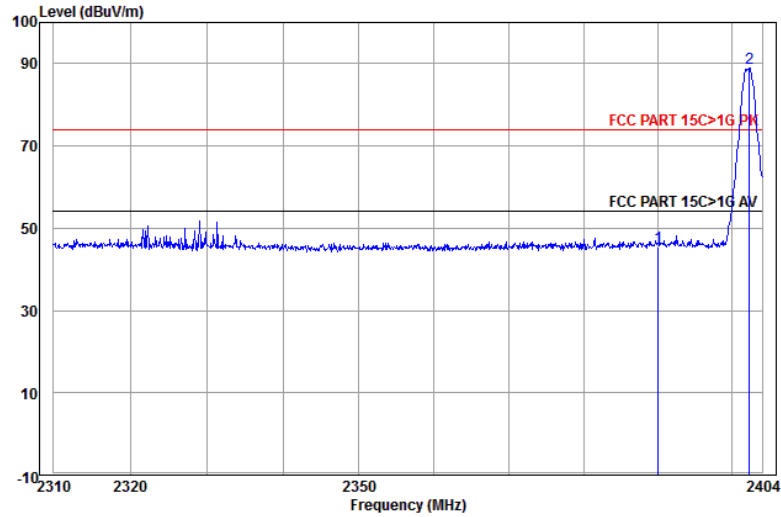
| | Ant Freq | Cable Factor | Preamp Loss | Preamp Factor | Read Level | Read Level | Limit Line | Over Limit | Pol/Phase | Remark |
|------|----------|--------------|-------------|---------------|------------|------------|------------|------------|------------|--------|
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | | |
| 1 pp | 2480.367 | 32.71 | 4.50 | 34.41 | 92.98 | 95.78 | 74.00 | 21.78 | Horizontal | |
| 2 | 2483.500 | 32.71 | 4.51 | 34.41 | 47.06 | 49.87 | 74.00 | -24.13 | Horizontal | |

| | | | |
|----------------------|-----------------------|------------------------|--------------|
| Worse case mode: | GFSK(1-DH5) | | |
| Frequency: 2483.5MHz | Test channel: Highest | Polarization: Vertical | Remark: Peak |



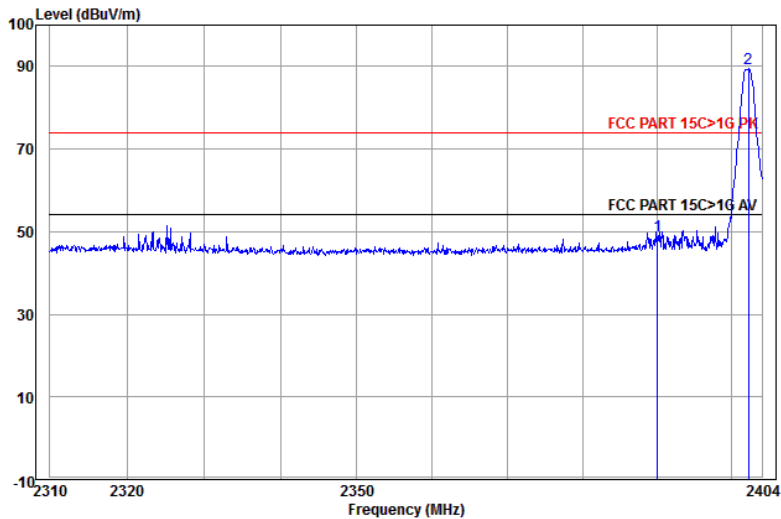
| | Ant Freq | Cable Factor | Preamp Loss | Preamp Factor | Read Level | Read Level | Limit Line | Over Limit | Pol/Phase | Remark |
|------|----------|--------------|-------------|---------------|------------|------------|------------|------------|-----------|--------|
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | | |
| 1 pp | 2480.169 | 32.71 | 4.50 | 34.41 | 91.98 | 94.78 | 74.00 | 20.78 | Vertical | |
| 2 | 2483.500 | 32.71 | 4.51 | 34.41 | 46.76 | 49.57 | 74.00 | -24.43 | Vertical | |

| | | | |
|----------------------|----------------------|--------------------------|--------------|
| Worse case mode: | π/4DQPSK(2-DH5) | | |
| Frequency: 2390.0MHz | Test channel: Lowest | Polarization: Horizontal | Remark: Peak |



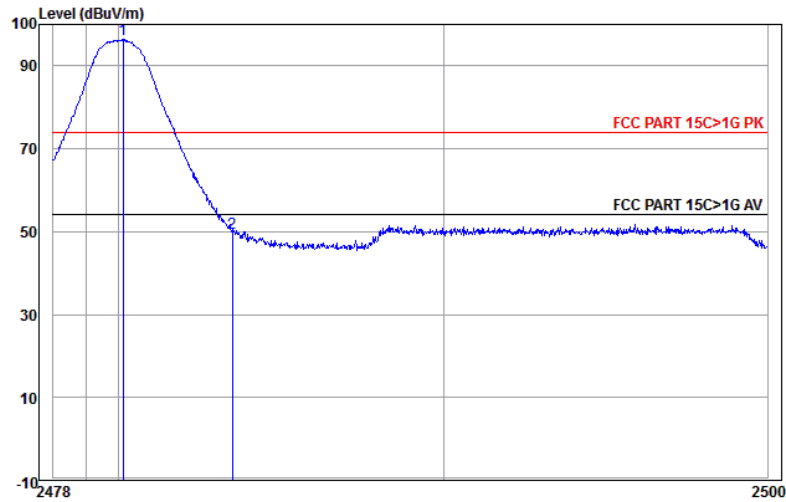
| | Freq | Ant Factor | Cable Loss | Preamp Factor | Read Level | Level | Limit Line | Over Limit | Pol/Phase | Remark |
|------|----------|------------|------------|---------------|------------|--------|------------|------------|------------|--------|
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | | |
| 1 | 2390.000 | 32.53 | 4.28 | 34.39 | 42.98 | 45.40 | 74.00 | -28.60 | Horizontal | |
| 2 pp | 2402.275 | 32.56 | 4.31 | 34.39 | 86.39 | 88.87 | 74.00 | 14.87 | Horizontal | |

| | | | |
|----------------------|----------------------|------------------------|--------------|
| Worse case mode: | π/4DQPSK(2-DH5) | | |
| Frequency: 2390.0MHz | Test channel: Lowest | Polarization: Vertical | Remark: Peak |



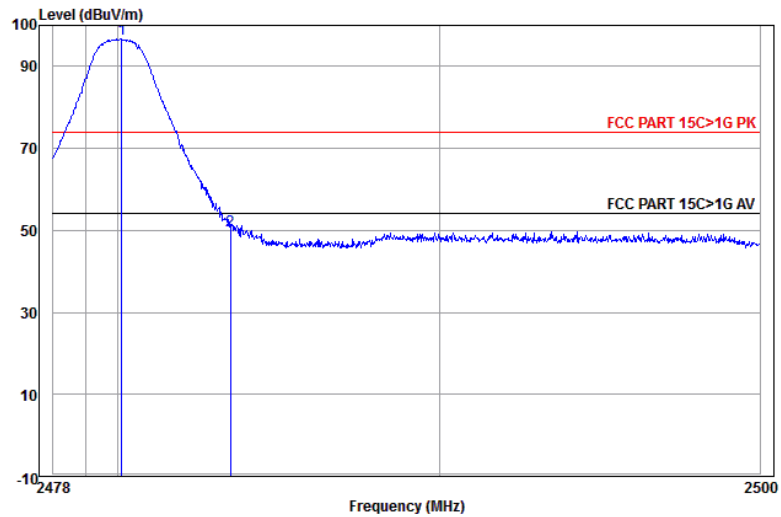
| | Freq | Ant Factor | Cable Loss | Preamp Factor | Read Level | Level | Limit Line | Over Limit | Pol/Phase | Remark |
|------|----------|------------|------------|---------------|------------|--------|------------|------------|-----------|--------|
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | | |
| 1 | 2390.000 | 32.53 | 4.28 | 34.39 | 46.56 | 48.98 | 74.00 | -25.02 | Vertical | |
| 2 pp | 2402.179 | 32.56 | 4.31 | 34.39 | 86.97 | 89.45 | 74.00 | 15.45 | Vertical | |

| | | | |
|----------------------|-----------------------|--------------------------|--------------|
| Worse case mode: | π/4DQPSK(2-DH5) | | |
| Frequency: 2483.5MHz | Test channel: Highest | Polarization: Horizontal | Remark: Peak |



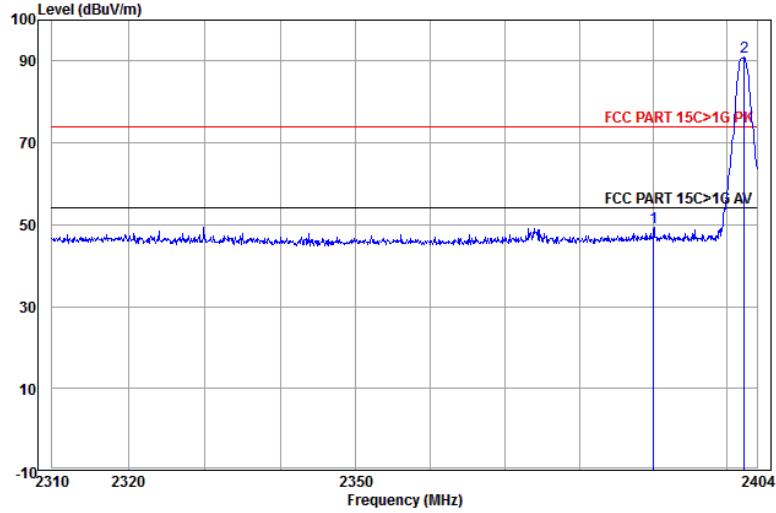
| | | Frequency (MHz) | | | | | | | | |
|----|----------|-----------------|------------|---------------|------------|--------|------------|------------|------------|--------|
| pp | MHz | Ant Factor | Cable Loss | Preamp Factor | Read Level | Level | Limit Line | Over Limit | Pol/Phase | Remark |
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | | |
| 1 | 2480.147 | 32.71 | 4.50 | 34.41 | 93.53 | 96.33 | 74.00 | 22.33 | Horizontal | |
| 2 | 2483.500 | 32.71 | 4.51 | 34.41 | 46.97 | 49.78 | 74.00 | -24.22 | Horizontal | |

| | | | |
|----------------------|-----------------------|------------------------|--------------|
| Worse case mode: | π/4DQPSK(2-DH5) | | |
| Frequency: 2483.5MHz | Test channel: Highest | Polarization: Vertical | Remark: Peak |



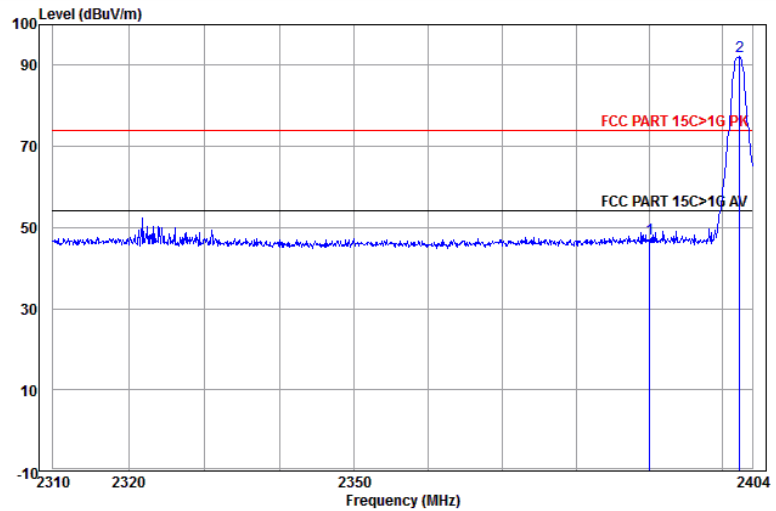
| | | Frequency (MHz) | | | | | | | | |
|----|----------|-----------------|------------|---------------|------------|--------|------------|------------|-----------|--------|
| pp | MHz | Ant Factor | Cable Loss | Preamp Factor | Read Level | Level | Limit Line | Over Limit | Pol/Phase | Remark |
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | | |
| 1 | 2480.125 | 32.71 | 4.50 | 34.41 | 93.79 | 96.59 | 74.00 | 22.59 | Vertical | |
| 2 | 2483.500 | 32.71 | 4.51 | 34.41 | 47.16 | 49.97 | 74.00 | -24.03 | Vertical | |

| | | | |
|----------------------|----------------------|--------------------------|--------------|
| Worse case mode: | 8DPSK(3-DH5) | | |
| Frequency: 2390.0MHz | Test channel: Lowest | Polarization: Horizontal | Remark: Peak |



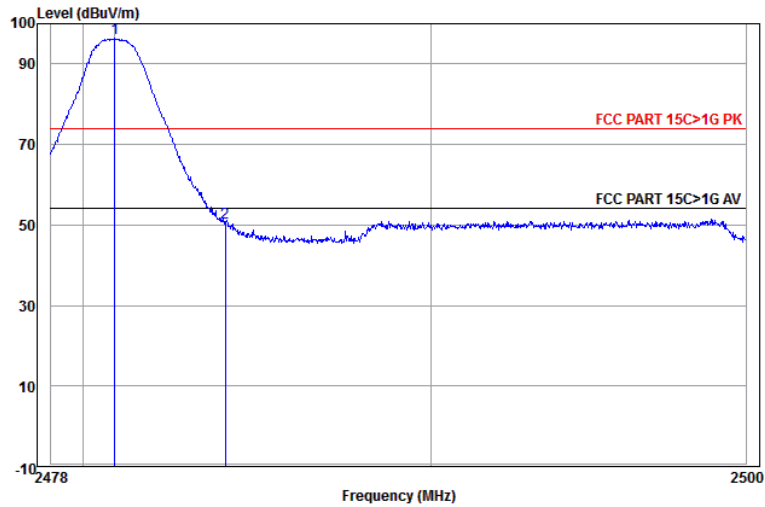
| | Ant Freq | Cable Factor | Preamp Loss | Read Level | Limit Level | Over Line | Over Limit | Pol/Phase | Remark |
|------|----------|--------------|-------------|------------|-------------|-----------|------------|-----------|------------|
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | |
| 1 | 2390.000 | 32.53 | 4.28 | 34.39 | 46.78 | 49.20 | 74.00 | -24.80 | Horizontal |
| 2 pp | 2402.275 | 32.56 | 4.31 | 34.39 | 88.40 | 90.88 | 74.00 | 16.88 | Horizontal |

| | | | |
|----------------------|----------------------|------------------------|--------------|
| Worse case mode: | 8DPSK(3-DH5) | | |
| Frequency: 2390.0MHz | Test channel: Lowest | Polarization: Vertical | Remark: Peak |



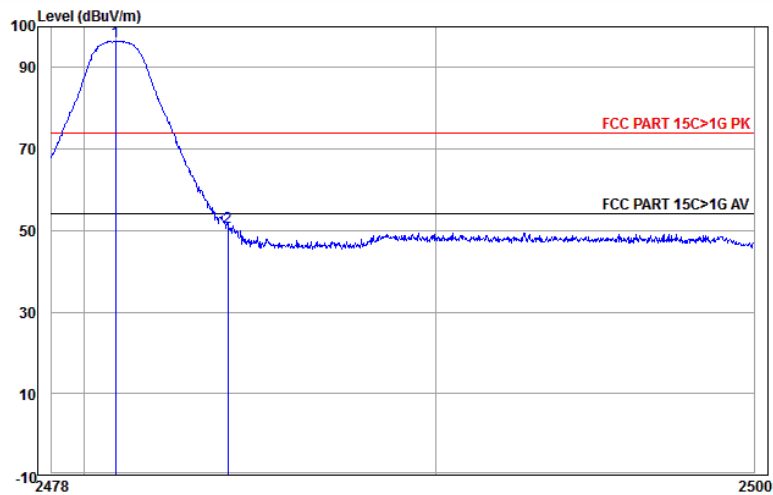
| | Ant Freq | Cable Factor | Preamp Loss | Read Level | Limit Level | Over Line | Over Limit | Pol/Phase | Remark |
|------|----------|--------------|-------------|------------|-------------|-----------|------------|-----------|----------|
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | |
| 1 | 2390.000 | 32.53 | 4.28 | 34.39 | 44.74 | 47.16 | 74.00 | -26.84 | Vertical |
| 2 pp | 2402.275 | 32.56 | 4.31 | 34.39 | 89.67 | 92.15 | 74.00 | 18.15 | Vertical |

| | | | |
|----------------------|-----------------------|--------------------------|--------------|
| Worse case mode: | 8DPSK(3-DH5) | | |
| Frequency: 2483.5MHz | Test channel: Highest | Polarization: Horizontal | Remark: Peak |



| | Ant Freq | Cable Factor | Preamp Loss | Read Level | Read Level | Limit Line | Over Limit | Pol/Phase | Remark |
|------|----------|--------------|-------------|------------|------------|------------|------------|-----------|------------|
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | |
| 1 pp | 2480.016 | 32.71 | 4.50 | 34.41 | 93.51 | 96.31 | 74.00 | 22.31 | Horizontal |
| 2 | 2483.500 | 32.71 | 4.51 | 34.41 | 47.77 | 50.58 | 74.00 | -23.42 | Horizontal |

| | | | |
|----------------------|-----------------------|------------------------|--------------|
| Worse case mode: | 8DPSK(3-DH5) | | |
| Frequency: 2483.5MHz | Test channel: Highest | Polarization: Vertical | Remark: Peak |



| | Ant Freq | Cable Factor | Preamp Loss | Read Level | Read Level | Limit Line | Over Limit | Pol/Phase | Remark |
|------|----------|--------------|-------------|------------|------------|------------|------------|-----------|----------|
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | |
| 1 pp | 2479.994 | 32.71 | 4.50 | 34.41 | 93.70 | 96.50 | 74.00 | 22.50 | Vertical |
| 2 | 2483.500 | 32.71 | 4.51 | 34.41 | 48.04 | 50.85 | 74.00 | -23.15 | Vertical |

Note:

1) Through Pre-scan transmitter mode with all kind of modulation and all kind of data type, find the 1-DH5 of data type is the worse case of GFSK modulation type, the 2-DH5 of data type is the worse case of $\pi/4$ DQPSK modulation type, the 3-DH5 of data type is the worse case of 8DPSK modulation type in transmitter mode.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Pre-amplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading - Correct Factor

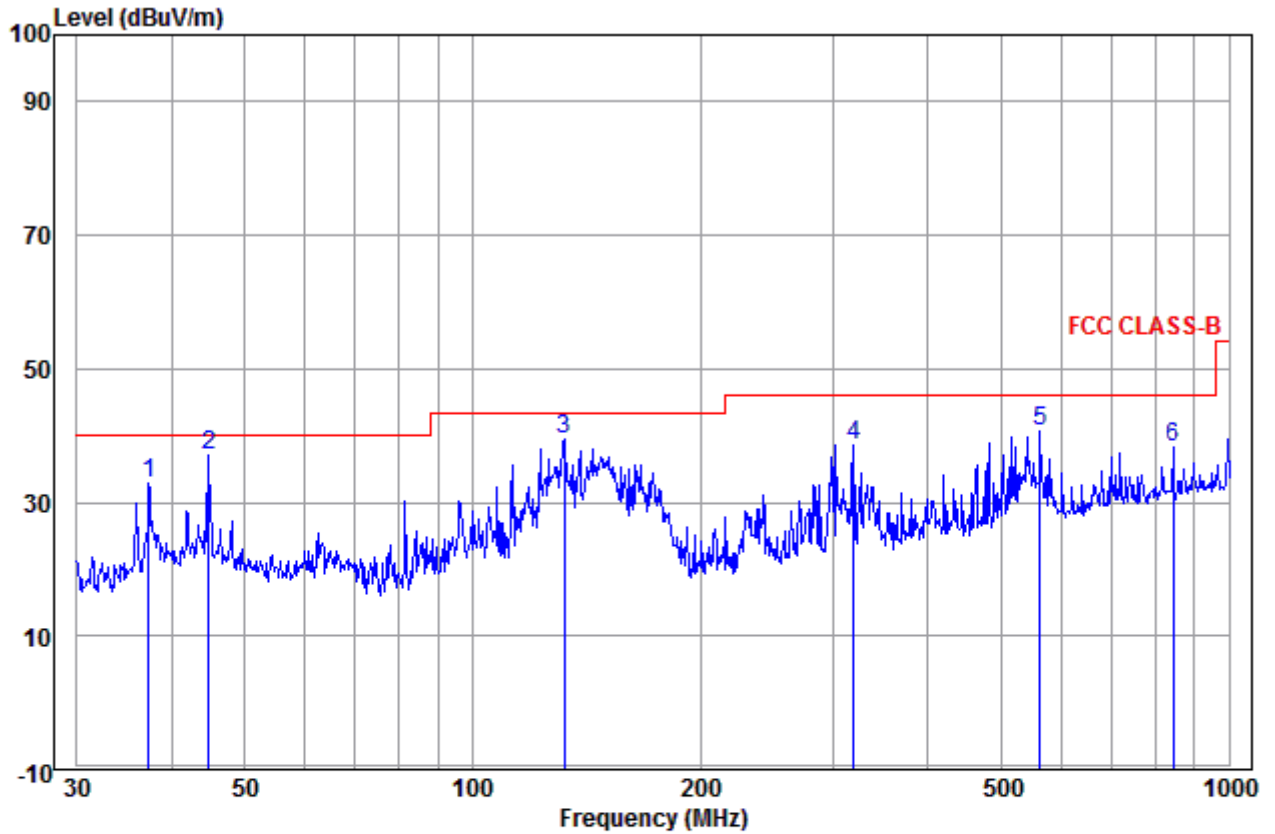
Correct Factor = Pre-amplifier Factor - Antenna Factor - Cable Factor

Appendix K): Radiated Spurious Emissions

| | | | | | |
|--|-------------------|----------------------------------|----------------------|------------|--------------------------|
| Receiver Setup: | Frequency | Detector | RBW | VBW | Remark |
| | 0.009MHz-0.090MHz | Peak | 10kHz | 30kHz | Peak |
| | 0.009MHz-0.090MHz | Average | 10kHz | 30kHz | Average |
| | 0.090MHz-0.110MHz | Quasi-peak | 10kHz | 30kHz | Quasi-peak |
| | 0.110MHz-0.490MHz | Peak | 10kHz | 30kHz | Peak |
| | 0.110MHz-0.490MHz | Average | 10kHz | 30kHz | Average |
| | 0.490MHz -30MHz | Quasi-peak | 10kHz | 30kHz | Quasi-peak |
| | 30MHz-1GHz | Quasi-peak | 120kHz | 300kHz | Quasi-peak |
| | Above 1GHz | Peak | 1MHz | 3MHz | Peak |
| Peak | | 1MHz | 10Hz | Average | |
| Test Procedure: | | | | | |
| Below 1GHz test procedure as below: | | | | | |
| <p>a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</p> <p>b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</p> <p>c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</p> <p>d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</p> <p>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</p> <p>f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</p> | | | | | |
| Above 1GHz test procedure as below: | | | | | |
| <p>g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).</p> <p>h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel</p> <p>i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.</p> <p>j. Repeat above procedures until all frequencies measured was complete.</p> | | | | | |
| Limit: | Frequency | Field strength (microvolt/meter) | Limit (dB μ V/m) | Remark | Measurement distance (m) |
| | 0.009MHz-0.490MHz | 2400/F(kHz) | - | - | 300 |
| | 0.490MHz-1.705MHz | 24000/F(kHz) | - | - | 30 |
| | 1.705MHz-30MHz | 30 | - | - | 30 |
| | 30MHz-88MHz | 100 | 40.0 | Quasi-peak | 3 |
| | 88MHz-216MHz | 150 | 43.5 | Quasi-peak | 3 |
| | 216MHz-960MHz | 200 | 46.0 | Quasi-peak | 3 |
| | 960MHz-1GHz | 500 | 54.0 | Quasi-peak | 3 |
| | Above 1GHz | 500 | 54.0 | Average | 3 |
| <p>Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.</p> | | | | | |

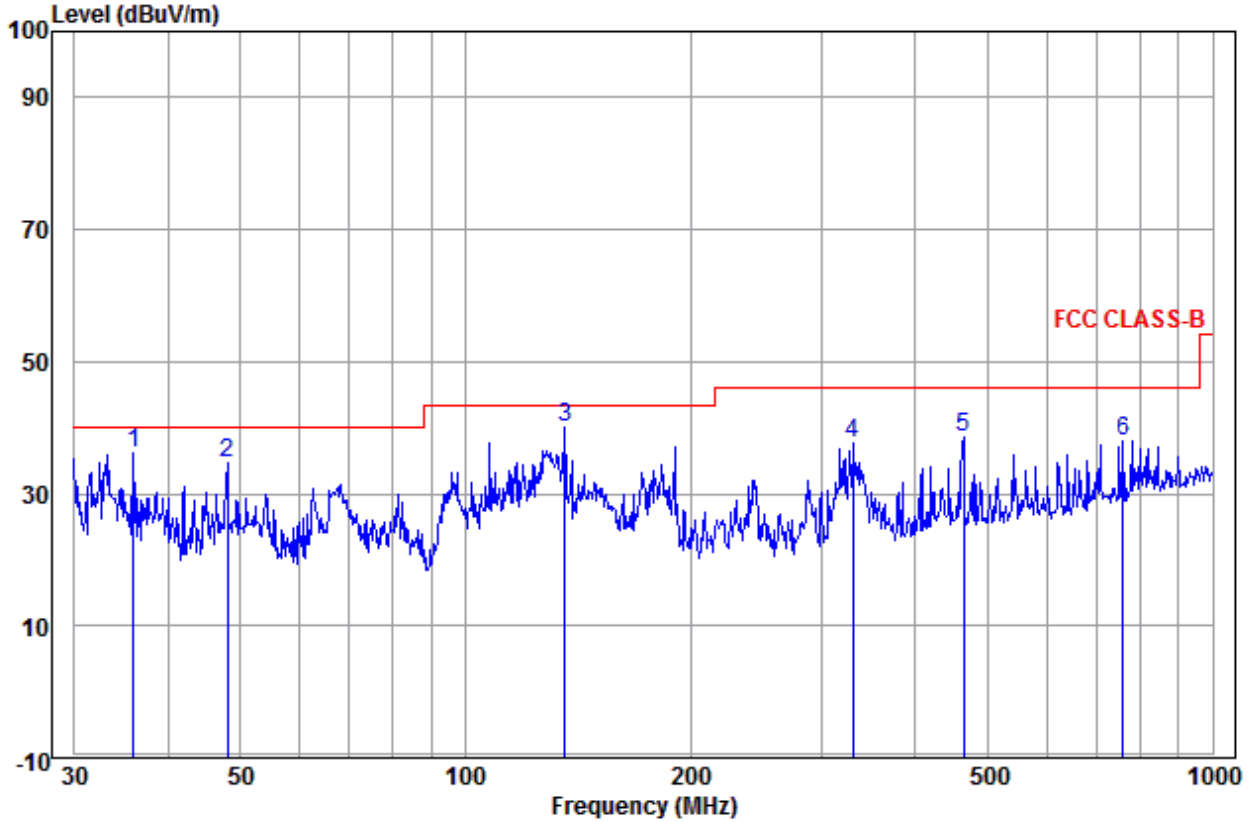
**Radiated Spurious Emissions test Data:
Radiated Emission below 1GHz**

| | | |
|-----------------|--------------|------------|
| 30MHz~1GHz (QP) | | |
| Test mode: | Transmitting | Horizontal |



| | Ant Freq | Ant Factor | Cable Loss | Read Level | Limit Level | Over Limit | Pol/Phase | Remark |
|------|----------|------------|------------|------------|-------------|------------|-----------|------------|
| | MHz | dB/m | dB | dBuV | dBuV/m | dBuV/m | dB | |
| 1 | 37.285 | 13.78 | 0.69 | 18.33 | 32.80 | 40.00 | -7.20 | Horizontal |
| 2 pp | 44.743 | 14.65 | 0.97 | 21.34 | 36.96 | 40.00 | -3.04 | Horizontal |
| 3 | 132.221 | 10.79 | 1.58 | 27.09 | 39.46 | 43.50 | -4.04 | Horizontal |
| 4 | 318.817 | 14.01 | 2.51 | 22.06 | 38.58 | 46.00 | -7.42 | Horizontal |
| 5 | 562.662 | 18.65 | 3.29 | 18.82 | 40.76 | 46.00 | -5.24 | Horizontal |
| 6 | 845.088 | 21.87 | 4.15 | 12.13 | 38.15 | 46.00 | -7.85 | Horizontal |

| | | |
|------------|--------------|----------|
| Test mode: | Transmitting | Vertical |
|------------|--------------|----------|



| | Ant Freq | Cable Factor | Cable Loss | Read Level | Limit Level | Over Limit | Pol/Phase | Remark |
|------|----------|--------------|------------|------------|-------------|------------|-----------|----------|
| | MHz | dB/m | dB | dBuV | dBuV/m | dBuV/m | dB | |
| 1 | 36.001 | 13.58 | 0.77 | 21.73 | 36.08 | 40.00 | -3.92 | Vertical |
| 2 | 47.994 | 14.93 | 1.24 | 18.38 | 34.55 | 40.00 | -5.45 | Vertical |
| 3 pp | 135.982 | 10.55 | 1.58 | 28.01 | 40.14 | 43.50 | -3.36 | Vertical |
| 4 | 330.195 | 14.31 | 2.59 | 20.78 | 37.68 | 46.00 | -8.32 | Vertical |
| 5 | 463.970 | 17.48 | 3.03 | 17.99 | 38.50 | 46.00 | -7.50 | Vertical |
| 6 | 758.041 | 21.10 | 3.98 | 12.90 | 37.98 | 46.00 | -8.02 | Vertical |

Transmitter Emission above 1GHz

| Worse case mode: | | GFSK(1-DH5) | | Test channel: | | Lowest | Remark: Peak | | |
|------------------|-----------------------|-----------------|------------------|-------------------|---------------------------|---------------------|-----------------|--------|-----------------|
| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Gain (dB) | Read Level (dBμV) | Final Test Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Result | Antenna Polaxis |
| 1115.673 | 30.02 | 2.41 | 35.06 | 45.94 | 43.31 | 74.00 | -30.69 | Pass | H |
| 1333.284 | 30.53 | 2.66 | 34.83 | 48.04 | 46.40 | 74.00 | -27.60 | Pass | H |
| 1668.044 | 31.18 | 2.98 | 34.54 | 45.57 | 45.19 | 74.00 | -28.81 | Pass | H |
| 4804.000 | 34.69 | 5.11 | 34.35 | 44.22 | 49.67 | 74.00 | -24.33 | Pass | H |
| 7206.000 | 36.42 | 6.66 | 34.90 | 37.59 | 45.77 | 74.00 | -28.23 | Pass | H |
| 9608.000 | 37.88 | 7.73 | 35.08 | 36.26 | 46.79 | 74.00 | -27.21 | Pass | H |
| 1057.599 | 29.86 | 2.34 | 35.13 | 49.25 | 46.32 | 74.00 | -27.68 | Pass | V |
| 1222.743 | 30.28 | 2.54 | 34.94 | 47.46 | 45.34 | 74.00 | -28.66 | Pass | V |
| 1617.862 | 31.09 | 2.93 | 34.58 | 46.01 | 45.45 | 74.00 | -28.55 | Pass | V |
| 4804.000 | 34.69 | 5.11 | 34.35 | 40.23 | 45.68 | 74.00 | -28.32 | Pass | V |
| 7206.000 | 36.42 | 6.66 | 34.90 | 39.42 | 47.60 | 74.00 | -26.40 | Pass | V |
| 9608.000 | 37.88 | 7.73 | 35.08 | 38.65 | 49.18 | 74.00 | -24.82 | Pass | V |

| Worse case mode: | | GFSK(1-DH5) | | Test channel: | | Middle | Remark: Peak | | |
|------------------|-----------------------|-----------------|------------------|-------------------|---------------------------|---------------------|-----------------|--------|-----------------|
| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Gain (dB) | Read Level (dBμV) | Final Test Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Result | Antenna Polaxis |
| 1112.837 | 30.01 | 2.41 | 35.06 | 47.10 | 44.46 | 74.00 | -29.54 | Pass | H |
| 1326.513 | 30.52 | 2.66 | 34.83 | 46.79 | 45.14 | 74.00 | -28.86 | Pass | H |
| 2076.259 | 31.88 | 3.45 | 34.32 | 45.12 | 46.13 | 74.00 | -27.87 | Pass | H |
| 4882.000 | 34.85 | 5.08 | 34.33 | 40.98 | 46.58 | 74.00 | -27.42 | Pass | H |
| 7323.000 | 36.43 | 6.77 | 34.90 | 37.39 | 45.69 | 74.00 | -28.31 | Pass | H |
| 9764.000 | 38.05 | 7.60 | 35.05 | 37.52 | 48.12 | 74.00 | -25.88 | Pass | H |
| 1195.049 | 30.21 | 2.51 | 34.97 | 48.42 | 46.17 | 74.00 | -27.83 | Pass | V |
| 1476.193 | 30.82 | 2.81 | 34.69 | 44.52 | 43.46 | 74.00 | -30.54 | Pass | V |
| 1918.716 | 31.58 | 3.17 | 34.35 | 44.24 | 44.64 | 74.00 | -29.36 | Pass | V |
| 4882.000 | 34.85 | 5.08 | 34.33 | 39.97 | 45.57 | 74.00 | -28.43 | Pass | V |
| 7357.326 | 36.44 | 6.80 | 34.90 | 37.52 | 45.86 | 74.00 | -28.14 | Pass | V |
| 9764.000 | 38.05 | 7.60 | 35.05 | 36.20 | 46.80 | 74.00 | -27.20 | Pass | V |

| Worse case mode: | | GFSK(1-DH5) | | Test channel: | | Highest | Remark: Peak | | |
|------------------|-----------------------|-----------------|------------------|-------------------------|---------------------------------|---------------------------|-----------------|--------|-----------------|
| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Gain (dB) | Read Level (dB μ V) | Final Test Level (dB μ V/m) | Limit Line (dB μ V/m) | Over Limit (dB) | Result | Antenna Polaxis |
| 1210.356 | 30.25 | 2.53 | 34.95 | 47.19 | 45.02 | 74.00 | -28.98 | Pass | H |
| 1655.354 | 31.15 | 2.97 | 34.55 | 45.69 | 45.26 | 74.00 | -28.74 | Pass | H |
| 2081.550 | 31.89 | 3.47 | 34.32 | 44.74 | 45.78 | 74.00 | -28.22 | Pass | H |
| 4960.000 | 35.02 | 5.05 | 34.31 | 39.73 | 45.49 | 74.00 | -28.51 | Pass | H |
| 7440.000 | 36.45 | 6.88 | 34.90 | 41.02 | 49.45 | 74.00 | -24.55 | Pass | H |
| 9920.000 | 38.22 | 7.47 | 35.02 | 37.46 | 48.13 | 74.00 | -25.87 | Pass | H |
| 1057.599 | 29.86 | 2.34 | 35.13 | 48.41 | 45.48 | 74.00 | -28.52 | Pass | V |
| 1276.818 | 30.41 | 2.60 | 34.88 | 47.32 | 45.45 | 74.00 | -28.55 | Pass | V |
| 1958.189 | 31.64 | 3.20 | 34.33 | 44.81 | 45.32 | 74.00 | -28.68 | Pass | V |
| 4960.000 | 35.02 | 5.05 | 34.31 | 44.29 | 50.05 | 74.00 | -23.95 | Pass | V |
| 7440.000 | 36.45 | 6.88 | 34.90 | 40.85 | 49.28 | 74.00 | -24.72 | Pass | V |
| 9920.000 | 38.22 | 7.47 | 35.02 | 37.38 | 48.05 | 74.00 | -25.95 | Pass | V |

| Worse case mode: | | π /4DQPSK(2-DH5) | | Test channel: | | Lowest | Remark: Peak | | |
|------------------|-----------------------|----------------------|------------------|-------------------------|---------------------------------|---------------------------|-----------------|--------|-----------------|
| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Gain (dB) | Read Level (dB μ V) | Final Test Level (dB μ V/m) | Limit Line (dB μ V/m) | Over Limit (dB) | Result | Antenna Polaxis |
| 1057.599 | 29.86 | 2.34 | 35.13 | 47.18 | 44.25 | 74.00 | -29.75 | Pass | H |
| 1399.353 | 30.67 | 2.73 | 34.76 | 45.82 | 44.46 | 74.00 | -29.54 | Pass | H |
| 1828.125 | 31.44 | 3.10 | 34.42 | 45.19 | 45.31 | 74.00 | -28.69 | Pass | H |
| 4804.000 | 34.69 | 5.11 | 34.35 | 43.53 | 48.98 | 74.00 | -25.02 | Pass | H |
| 7206.000 | 36.42 | 6.66 | 34.90 | 41.75 | 49.93 | 74.00 | -24.07 | Pass | H |
| 9608.000 | 37.88 | 7.73 | 35.08 | 37.69 | 48.22 | 74.00 | -25.78 | Pass | H |
| 1057.599 | 29.86 | 2.34 | 35.13 | 48.56 | 45.63 | 74.00 | -28.37 | Pass | V |
| 1273.572 | 30.40 | 2.60 | 34.89 | 46.51 | 44.62 | 74.00 | -29.38 | Pass | V |
| 1899.278 | 31.55 | 3.16 | 34.37 | 46.68 | 47.02 | 74.00 | -26.98 | Pass | V |
| 4804.000 | 34.69 | 5.11 | 34.35 | 43.38 | 48.83 | 74.00 | -25.17 | Pass | V |
| 7206.000 | 36.42 | 6.66 | 34.90 | 40.95 | 49.13 | 74.00 | -24.87 | Pass | V |
| 9608.000 | 37.88 | 7.73 | 35.08 | 38.34 | 48.87 | 74.00 | -25.13 | Pass | V |

| Worse case mode: | | $\pi/4$ DQPSK(2-DH5) | | Test channel: | | Middle | Remark: Peak | | |
|------------------|-----------------------|----------------------|------------------|-------------------------|---------------------------------|---------------------------|-----------------|--------|-----------------|
| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Gain (dB) | Read Level (dB μ V) | Final Test Level (dB μ V/m) | Limit Line (dB μ V/m) | Over Limit (dB) | Result | Antenna Polaxis |
| 1135.731 | 30.07 | 2.44 | 35.03 | 46.37 | 43.85 | 74.00 | -30.15 | Pass | H |
| 1329.894 | 30.52 | 2.66 | 34.83 | 47.75 | 46.10 | 74.00 | -27.90 | Pass | H |
| 2024.074 | 31.76 | 3.30 | 34.31 | 44.30 | 45.05 | 74.00 | -28.95 | Pass | H |
| 4882.000 | 34.85 | 5.08 | 34.33 | 45.16 | 50.76 | 74.00 | -23.24 | Pass | H |
| 7323.000 | 36.43 | 6.77 | 34.90 | 41.94 | 50.24 | 74.00 | -23.76 | Pass | H |
| 9764.000 | 38.05 | 7.60 | 35.05 | 38.34 | 48.94 | 74.00 | -25.06 | Pass | H |
| 1195.049 | 30.21 | 2.51 | 34.97 | 46.87 | 44.62 | 74.00 | -29.38 | Pass | V |
| 1561.221 | 30.99 | 2.88 | 34.62 | 45.54 | 44.79 | 74.00 | -29.21 | Pass | V |
| 1993.395 | 31.69 | 3.23 | 34.30 | 45.27 | 45.89 | 74.00 | -28.11 | Pass | V |
| 4882.000 | 34.85 | 5.08 | 34.33 | 42.25 | 47.85 | 74.00 | -26.15 | Pass | V |
| 7323.000 | 36.43 | 6.77 | 34.90 | 41.74 | 50.04 | 74.00 | -23.96 | Pass | V |
| 9764.000 | 38.05 | 7.60 | 35.05 | 37.13 | 47.73 | 74.00 | -26.27 | Pass | V |

| Worse case mode: | | $\pi/4$ DQPSK(2-DH5) | | Test channel: | | Highest | Remark: Peak | | |
|------------------|-----------------------|----------------------|------------------|-------------------------|---------------------------------|---------------------------|-----------------|--------|-----------------|
| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Gain (dB) | Read Level (dB μ V) | Final Test Level (dB μ V/m) | Limit Line (dB μ V/m) | Over Limit (dB) | Result | Antenna Polaxis |
| 1079.357 | 29.92 | 2.37 | 35.10 | 47.39 | 44.58 | 74.00 | -29.42 | Pass | H |
| 1329.894 | 30.52 | 2.66 | 34.83 | 45.48 | 43.83 | 74.00 | -30.17 | Pass | H |
| 1988.327 | 31.68 | 3.22 | 34.31 | 45.56 | 46.15 | 74.00 | -27.85 | Pass | H |
| 4960.000 | 35.02 | 5.05 | 34.31 | 42.30 | 48.06 | 74.00 | -25.94 | Pass | H |
| 7440.000 | 36.45 | 6.88 | 34.90 | 41.72 | 50.15 | 74.00 | -23.85 | Pass | H |
| 9920.000 | 38.22 | 7.47 | 35.02 | 38.71 | 49.38 | 74.00 | -24.62 | Pass | H |
| 1057.599 | 29.86 | 2.34 | 35.13 | 48.54 | 45.61 | 74.00 | -28.39 | Pass | V |
| 1343.505 | 30.55 | 2.67 | 34.82 | 45.25 | 43.65 | 74.00 | -30.35 | Pass | V |
| 2065.715 | 31.85 | 3.42 | 34.32 | 44.15 | 45.10 | 74.00 | -28.90 | Pass | V |
| 4960.000 | 35.02 | 5.05 | 34.31 | 42.78 | 48.54 | 74.00 | -25.46 | Pass | V |
| 7440.000 | 36.45 | 6.88 | 34.90 | 41.11 | 49.54 | 74.00 | -24.46 | Pass | V |
| 9920.000 | 38.22 | 7.47 | 35.02 | 38.72 | 49.39 | 74.00 | -24.61 | Pass | V |

| Worse case mode: | | 8DPSK(3-DH5) | | Test channel: | | Lowest | Remark: Peak | | |
|------------------|-----------------------|-----------------|------------------|-------------------------|---------------------------------|---------------------------|-----------------|--------|-----------------|
| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Gain (dB) | Read Level (dB μ V) | Final Test Level (dB μ V/m) | Limit Line (dB μ V/m) | Over Limit (dB) | Result | Antenna Polaxis |
| 1110.008 | 30.00 | 2.41 | 35.06 | 48.43 | 45.78 | 74.00 | -28.22 | Pass | H |
| 1333.284 | 30.53 | 2.66 | 34.83 | 47.80 | 46.16 | 74.00 | -27.84 | Pass | H |
| 1918.716 | 31.58 | 3.17 | 34.35 | 45.12 | 45.52 | 74.00 | -28.48 | Pass | H |
| 4804.000 | 34.69 | 5.11 | 34.35 | 43.43 | 48.88 | 74.00 | -25.12 | Pass | H |
| 7206.000 | 36.42 | 6.66 | 34.90 | 41.93 | 50.11 | 74.00 | -23.89 | Pass | H |
| 9608.000 | 37.88 | 7.73 | 35.08 | 39.83 | 50.36 | 74.00 | -23.64 | Pass | H |
| 1060.295 | 29.87 | 2.34 | 35.12 | 49.26 | 46.35 | 74.00 | -27.65 | Pass | V |
| 1222.743 | 30.28 | 2.54 | 34.94 | 47.59 | 45.47 | 74.00 | -28.53 | Pass | V |
| 4804.000 | 34.69 | 5.11 | 34.35 | 40.78 | 46.23 | 74.00 | -27.77 | Pass | V |
| 6017.064 | 35.91 | 7.41 | 34.31 | 40.89 | 49.90 | 74.00 | -24.10 | Pass | V |
| 7206.000 | 36.42 | 6.66 | 34.90 | 42.82 | 51.00 | 74.00 | -23.00 | Pass | V |
| 9608.000 | 37.88 | 7.73 | 35.08 | 38.55 | 49.08 | 74.00 | -24.92 | Pass | V |

| Worse case mode: | | 8DPSK(3-DH5) | | Test channel: | | Middle | Remark: Peak | | |
|------------------|-----------------------|-----------------|------------------|-------------------------|---------------------------------|---------------------------|-----------------|--------|-----------------|
| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Gain (dB) | Read Level (dB μ V) | Final Test Level (dB μ V/m) | Limit Line (dB μ V/m) | Over Limit (dB) | Result | Antenna Polaxis |
| 1095.969 | 29.96 | 2.39 | 35.08 | 48.56 | 45.83 | 74.00 | -28.17 | Pass | H |
| 1378.143 | 30.63 | 2.71 | 34.78 | 46.12 | 44.68 | 74.00 | -29.32 | Pass | H |
| 1823.477 | 31.43 | 3.10 | 34.42 | 47.28 | 47.39 | 74.00 | -26.61 | Pass | H |
| 4882.000 | 34.85 | 5.08 | 34.33 | 43.90 | 49.50 | 74.00 | -24.50 | Pass | H |
| 7323.000 | 36.43 | 6.77 | 34.90 | 41.71 | 50.01 | 74.00 | -23.99 | Pass | H |
| 9764.000 | 38.05 | 7.60 | 35.05 | 37.85 | 48.45 | 74.00 | -25.55 | Pass | H |
| 1060.295 | 29.87 | 2.34 | 35.12 | 48.79 | 45.88 | 74.00 | -28.12 | Pass | V |
| 1487.509 | 30.85 | 2.82 | 34.68 | 47.10 | 46.09 | 74.00 | -27.91 | Pass | V |
| 1894.450 | 31.54 | 3.15 | 34.37 | 50.25 | 50.57 | 74.00 | -23.43 | Pass | V |
| 4882.000 | 34.85 | 5.08 | 34.33 | 41.28 | 46.88 | 74.00 | -27.12 | Pass | V |
| 7323.000 | 36.43 | 6.77 | 34.90 | 42.07 | 50.37 | 74.00 | -23.63 | Pass | V |
| 9764.000 | 38.05 | 7.60 | 35.05 | 36.58 | 47.18 | 74.00 | -26.82 | Pass | V |

| Worse case mode: | | 8DPSK(3-DH5) | | Test channel: | | Highest | Remark: Peak | | |
|------------------|-----------------------|-----------------|------------------|-------------------------|---------------------------------|---------------------------|-----------------|--------|-----------------|
| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Gain (dB) | Read Level (dB μ V) | Final Test Level (dB μ V/m) | Limit Line (dB μ V/m) | Over Limit (dB) | Result | Antenna Polaxis |
| 1101.563 | 29.98 | 2.40 | 35.07 | 46.61 | 43.92 | 74.00 | -30.08 | Pass | H |
| 1385.177 | 30.64 | 2.72 | 34.78 | 44.81 | 43.39 | 74.00 | -30.61 | Pass | H |
| 1561.221 | 30.99 | 2.88 | 34.62 | 45.15 | 44.40 | 74.00 | -29.60 | Pass | H |
| 4960.000 | 35.02 | 5.05 | 34.31 | 39.38 | 45.14 | 74.00 | -28.86 | Pass | H |
| 7440.000 | 36.45 | 6.88 | 34.90 | 39.34 | 47.77 | 74.00 | -26.23 | Pass | H |
| 9920.000 | 38.22 | 7.47 | 35.02 | 38.09 | 48.76 | 74.00 | -25.24 | Pass | H |
| 1195.049 | 30.21 | 2.51 | 34.97 | 48.31 | 46.06 | 74.00 | -27.94 | Pass | V |
| 1498.912 | 30.87 | 2.83 | 34.67 | 46.08 | 45.11 | 74.00 | -28.89 | Pass | V |
| 1846.834 | 31.47 | 3.12 | 34.40 | 45.29 | 45.48 | 74.00 | -28.52 | Pass | V |
| 4960.000 | 35.02 | 5.05 | 34.31 | 43.28 | 49.04 | 74.00 | -24.96 | Pass | V |
| 7440.000 | 36.45 | 6.88 | 34.90 | 41.85 | 50.28 | 74.00 | -23.72 | Pass | V |
| 9920.000 | 38.22 | 7.47 | 35.02 | 37.52 | 48.19 | 74.00 | -25.81 | Pass | V |

Note:

1) Pre-scan transmitting mode with all kind of modulation and all kind of data type, find the 1-DH5 of data type is the worse case of GFSK modulation type, the 2-DH5 of data type is the worse case of $\pi/4$ DQPSK modulation type, the 3-DH5 of data type is the worse case of 8DPSK modulation type in transmitter mode.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Pre-amplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading - Correct Factor

Correct Factor = Pre-amplifier Factor - Antenna Factor - Cable Factor

3) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

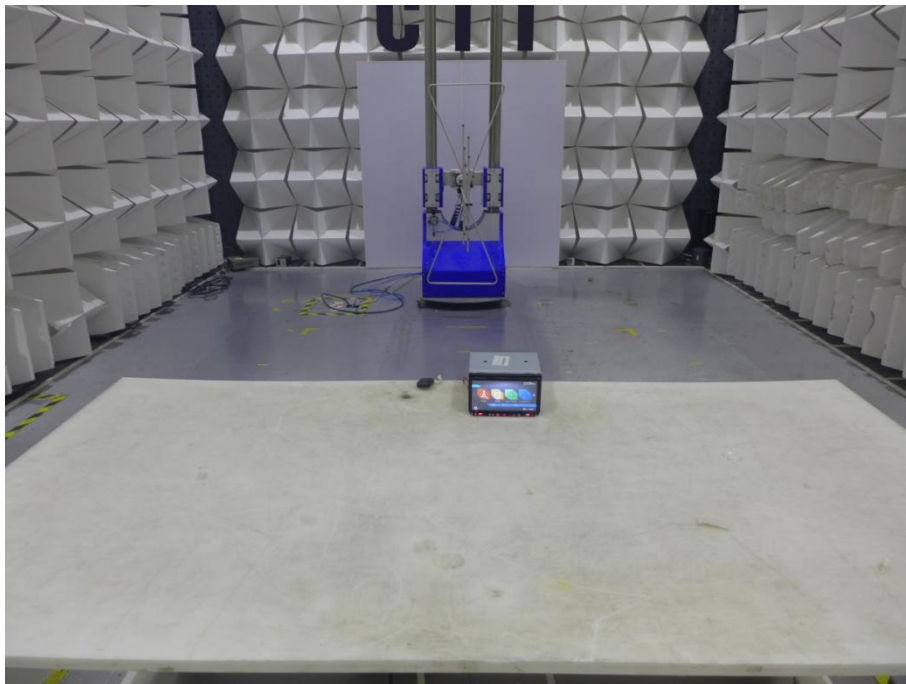
4) As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak values are measured.

PHOTOGRAPHS OF TEST SETUP

Test Model No.: NX807



Radiated spurious emission Test Setup-1(Below 30MHz)



Radiated spurious emission Test Setup-2(30MHz-1GHz)



Radiated spurious emission Test Setup-3(Above 1GHz)

PHOTOGRAPHS OF EUT Constructional Details

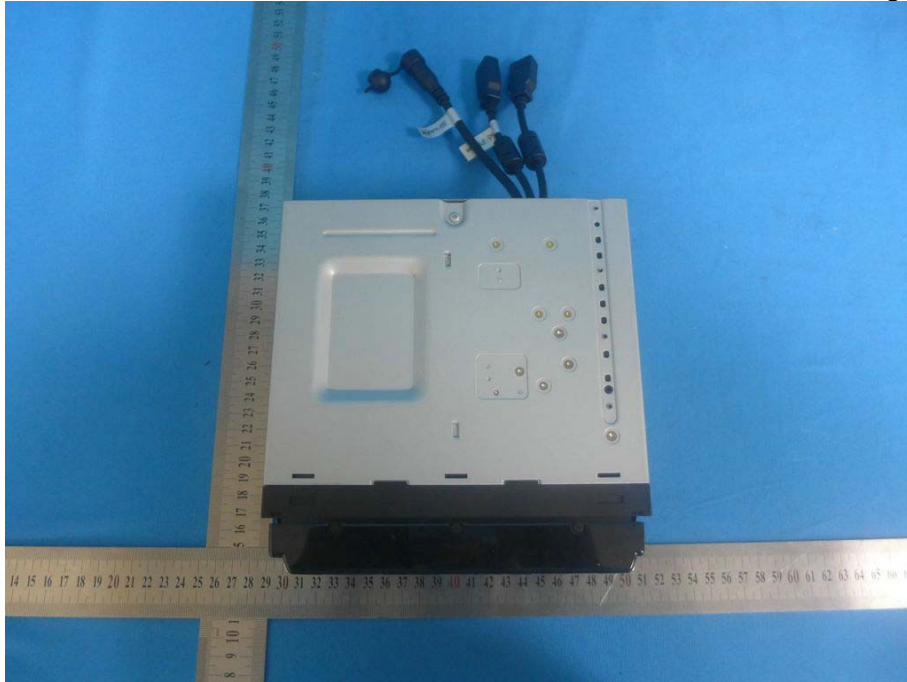
Test Model No.: NX807



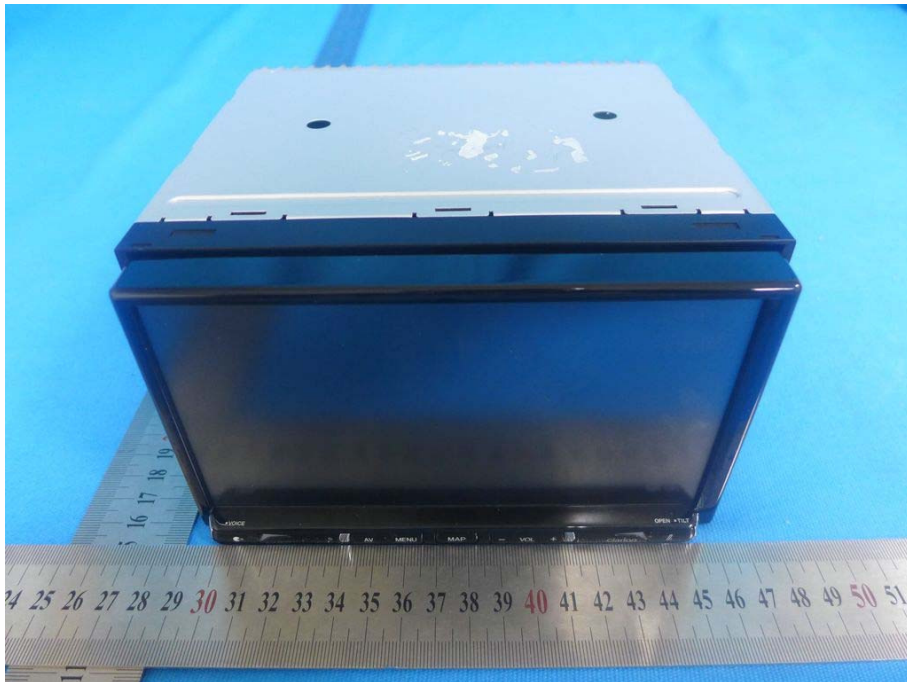
View of Product-1



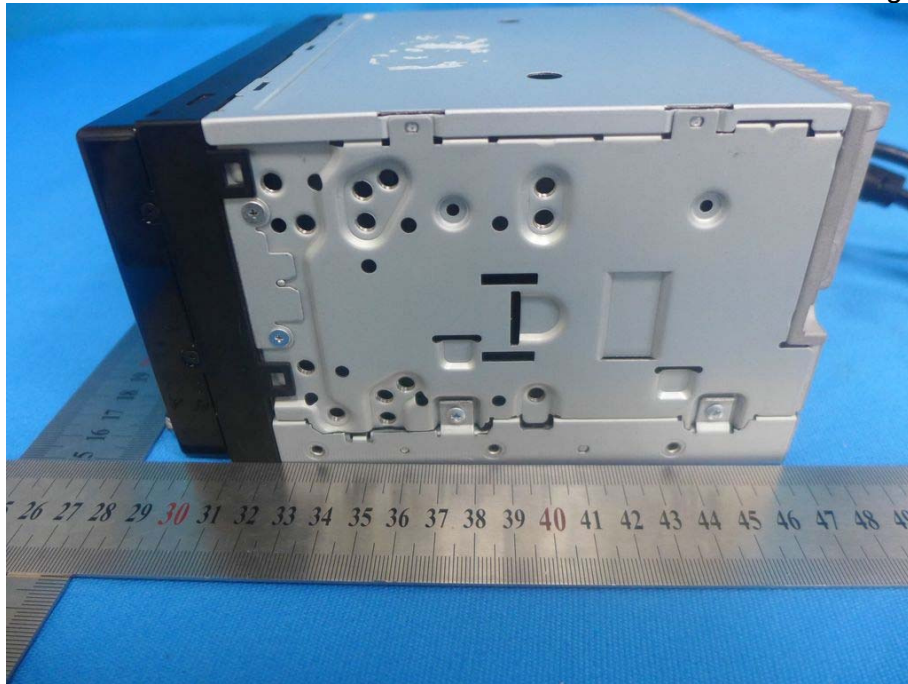
View of Product-2



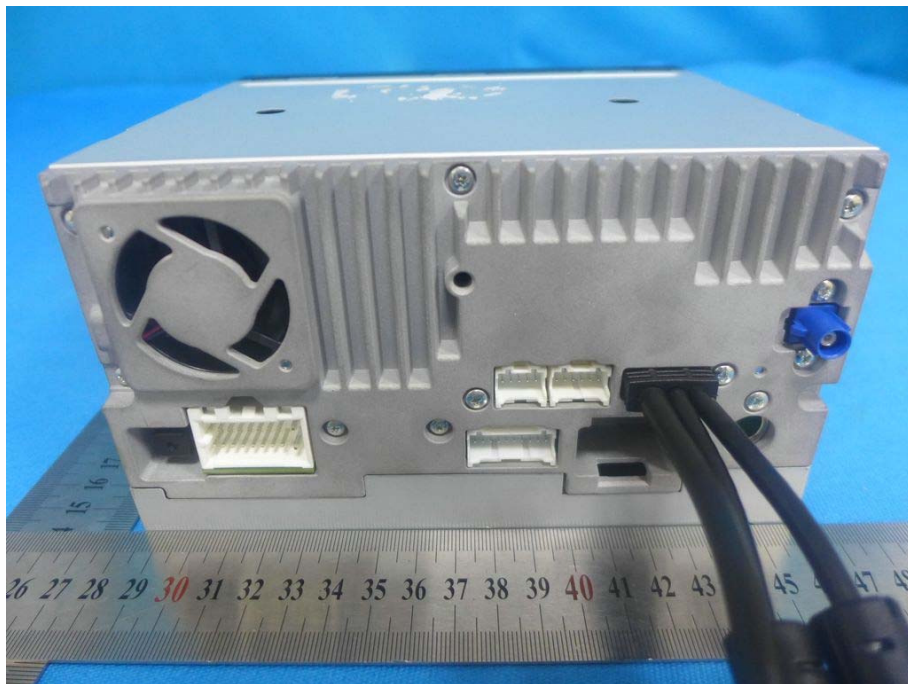
View of Product-3



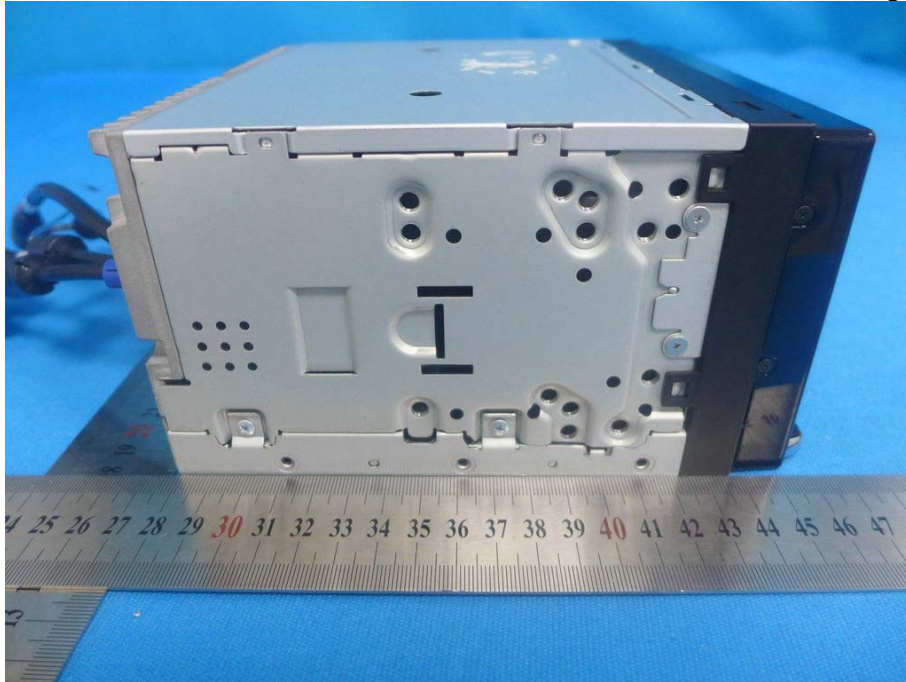
View of Product-4



View of Product-5



View of Product-6



View of Product-7



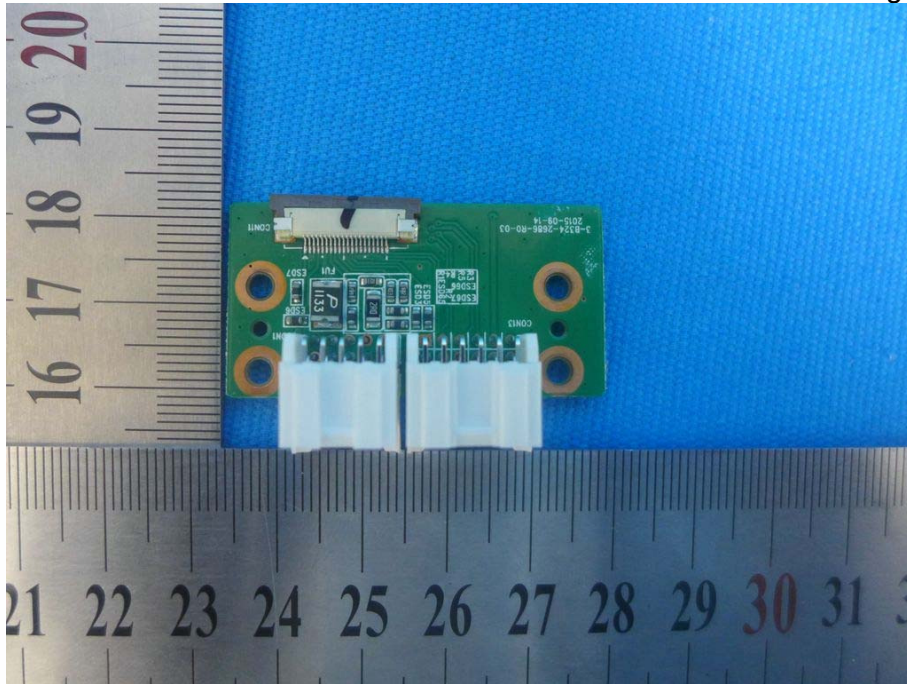
View of Product-8



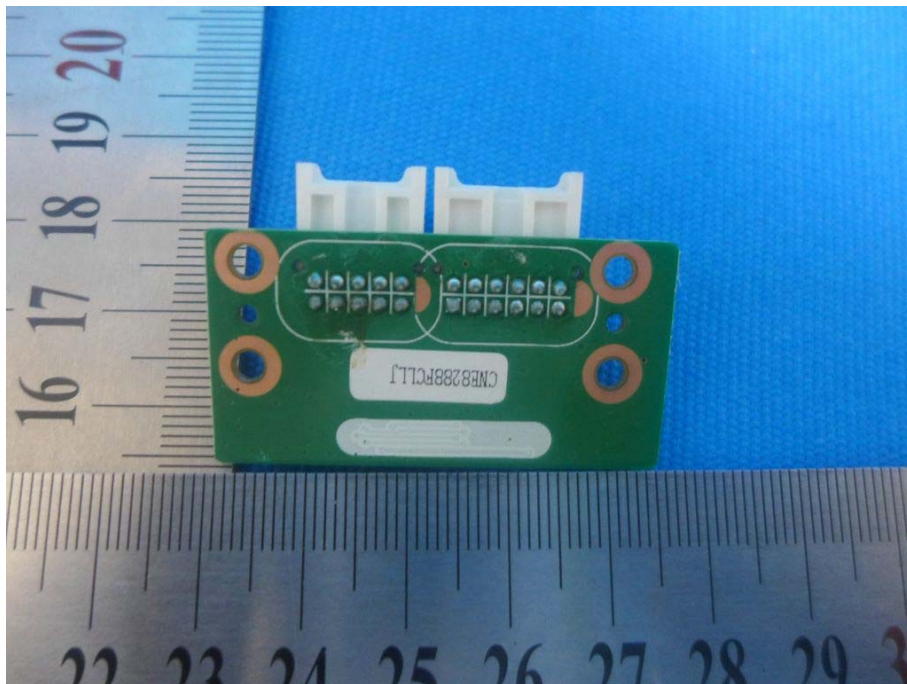
View of Product-9



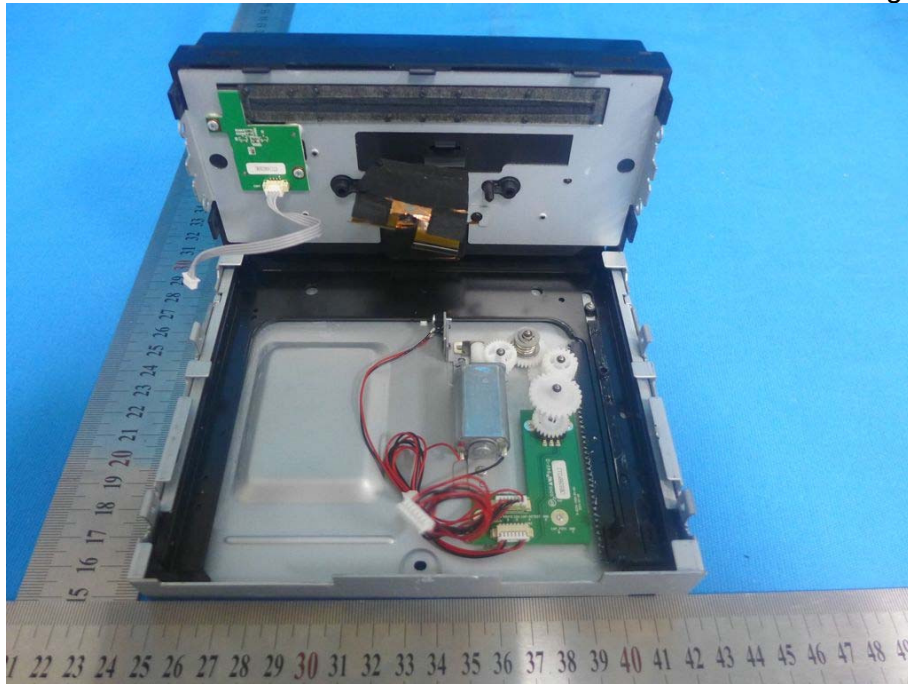
View of Product-10



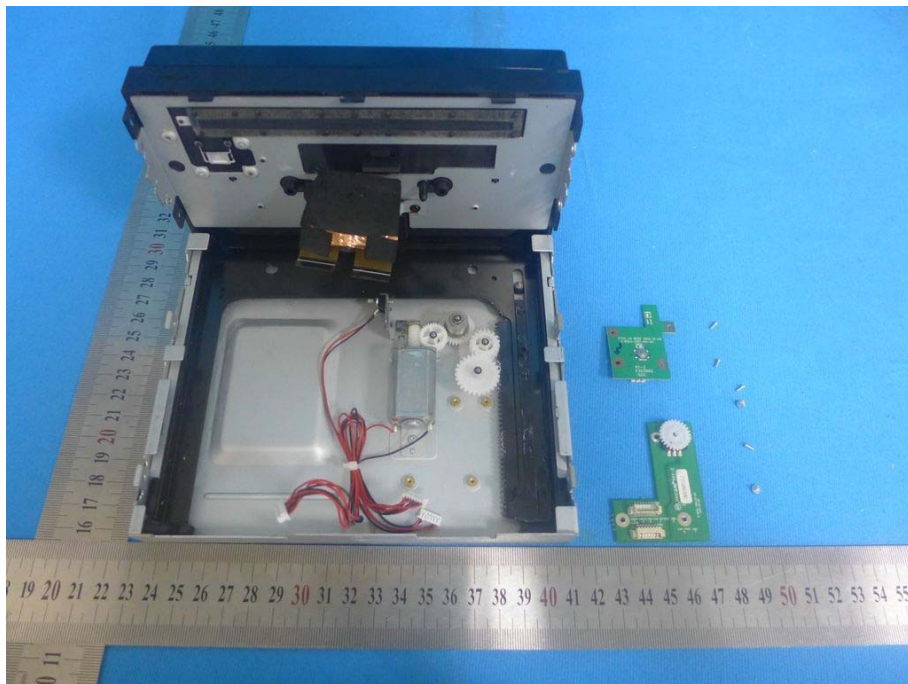
View of Product-11



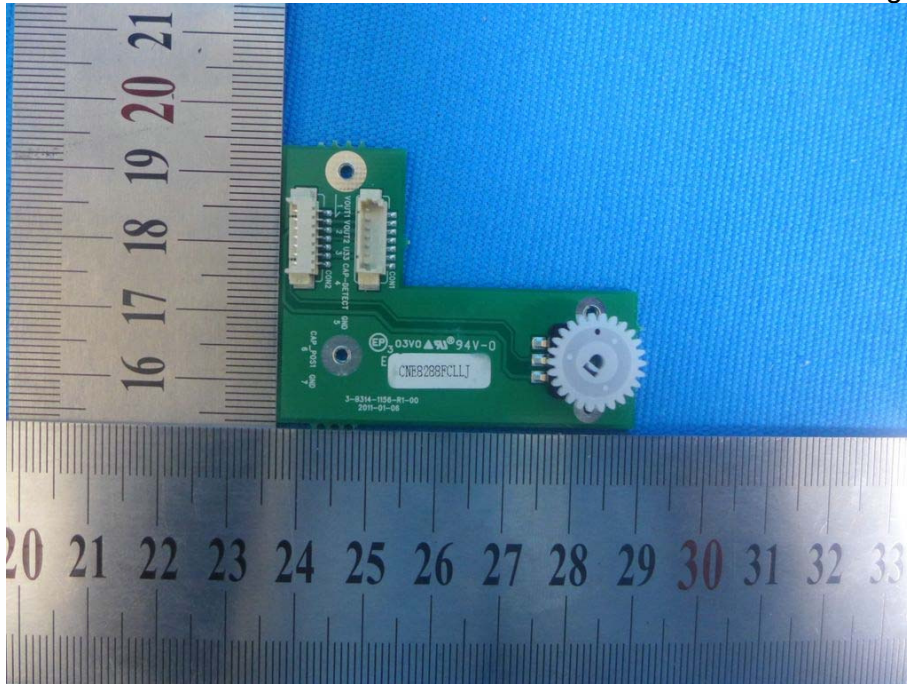
View of Product-12



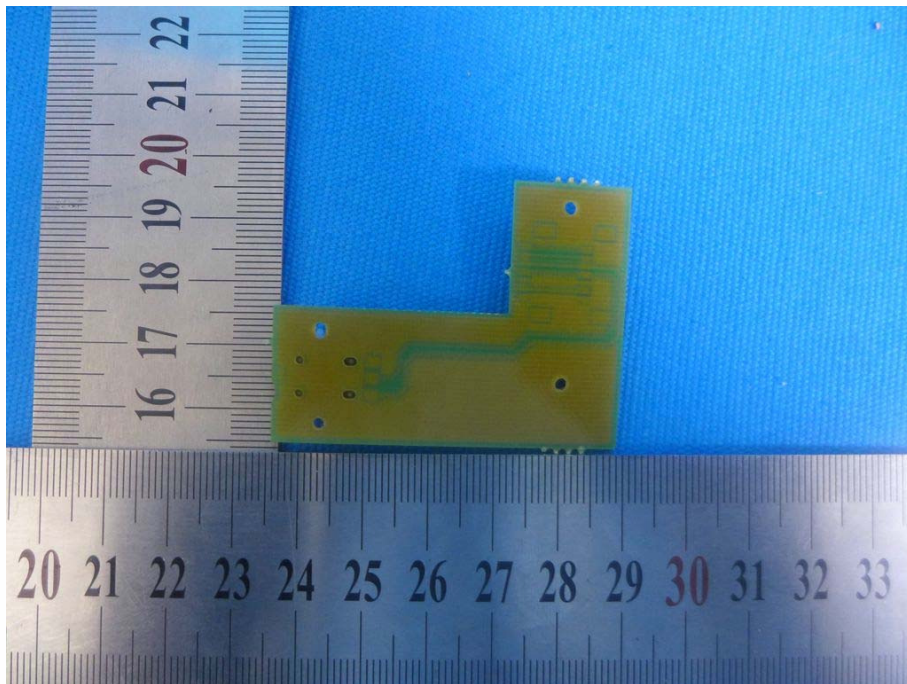
View of Product-13



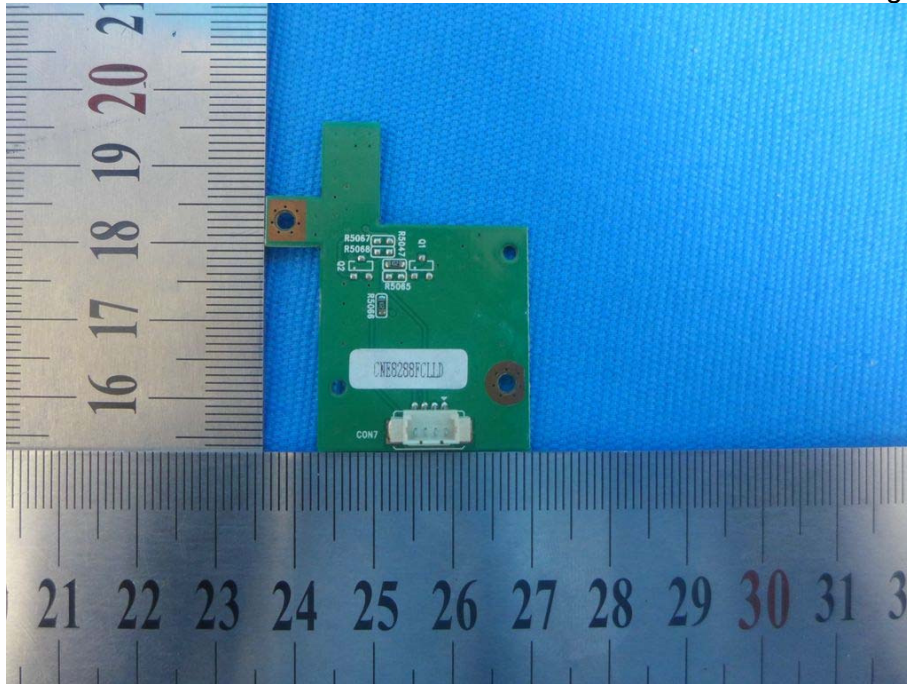
View of Product-14



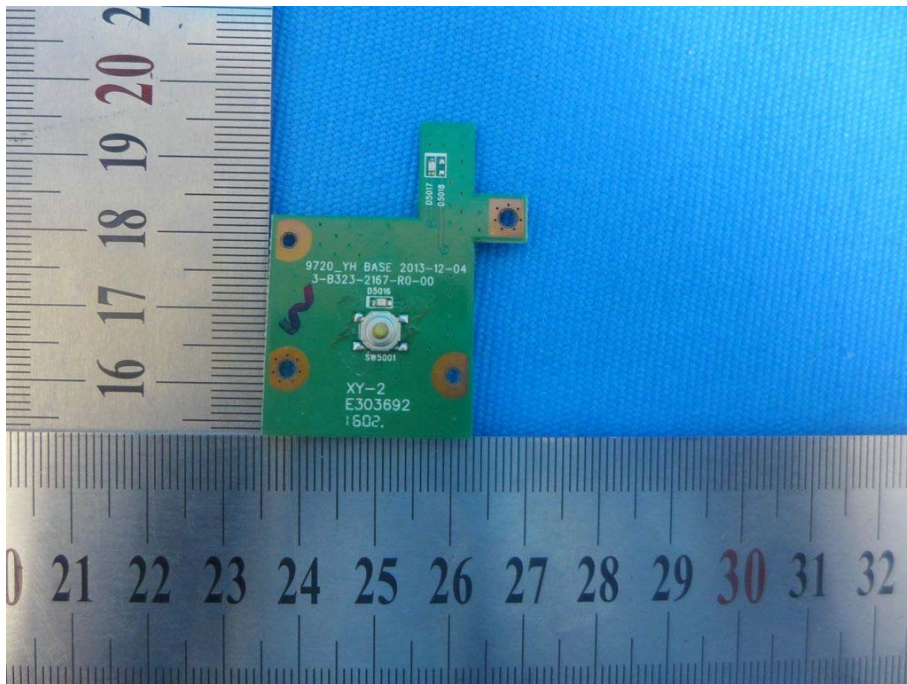
View of Product-15



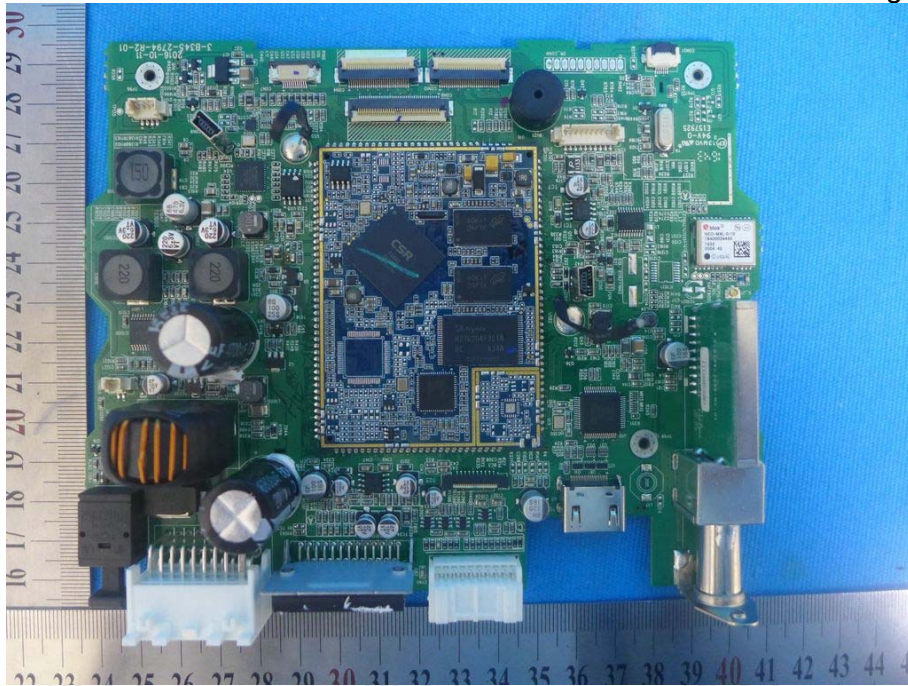
View of Product-16



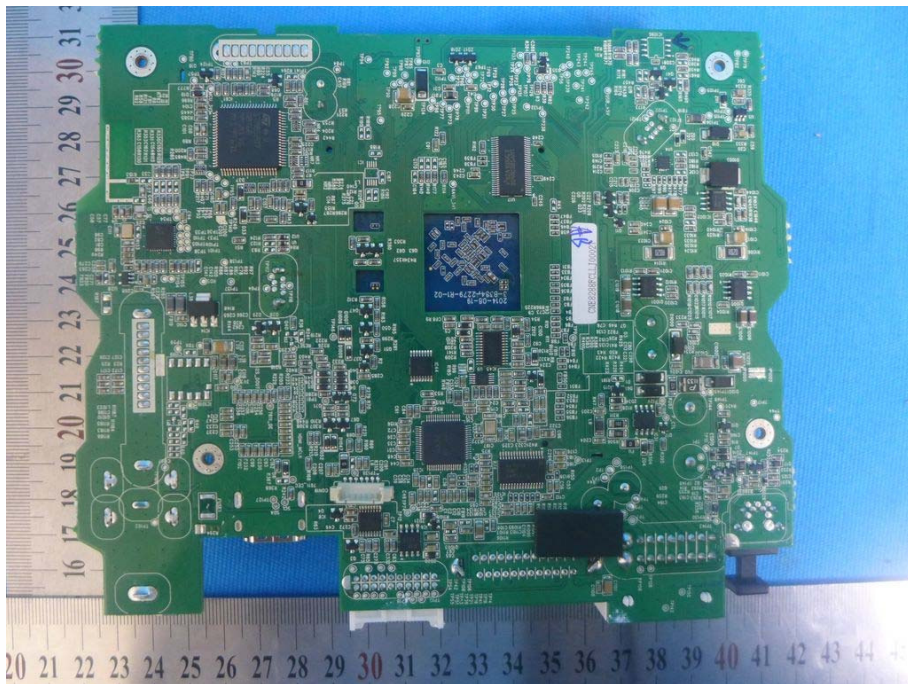
View of Product-17



View of Product-18



View of Product-19



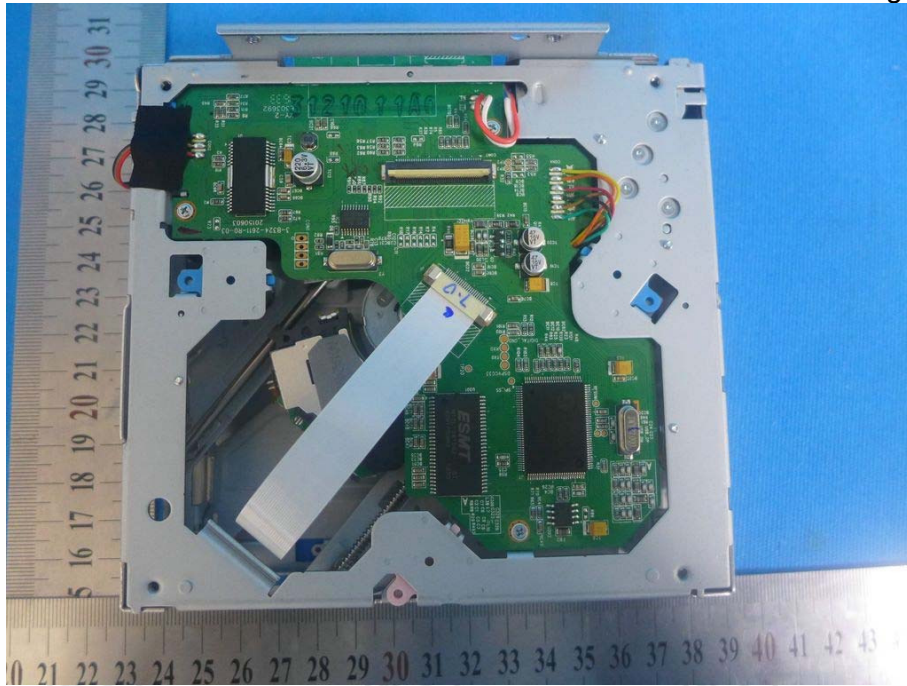
View of Product-20



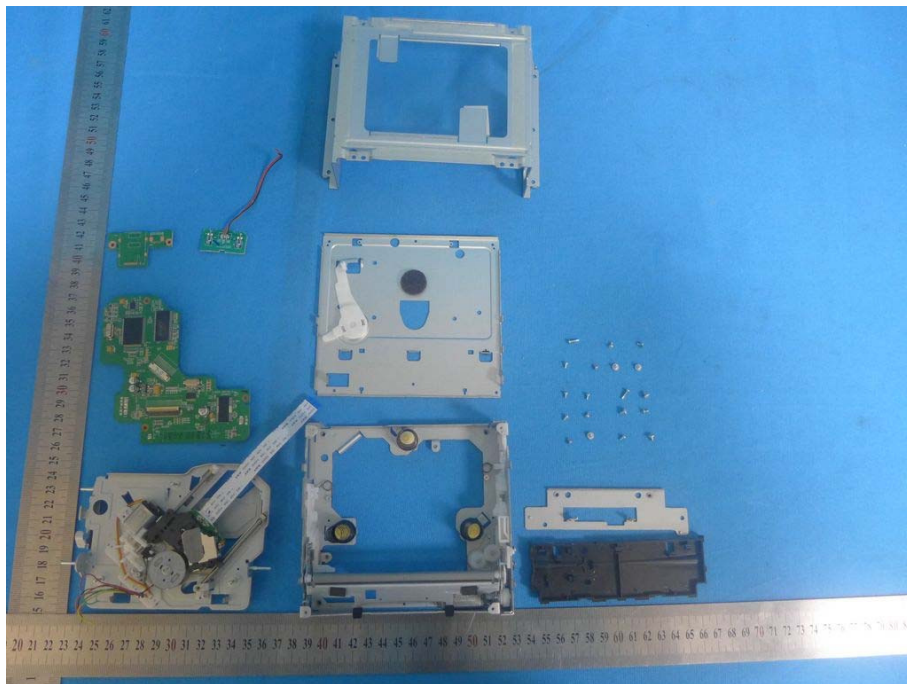
View of Product-21



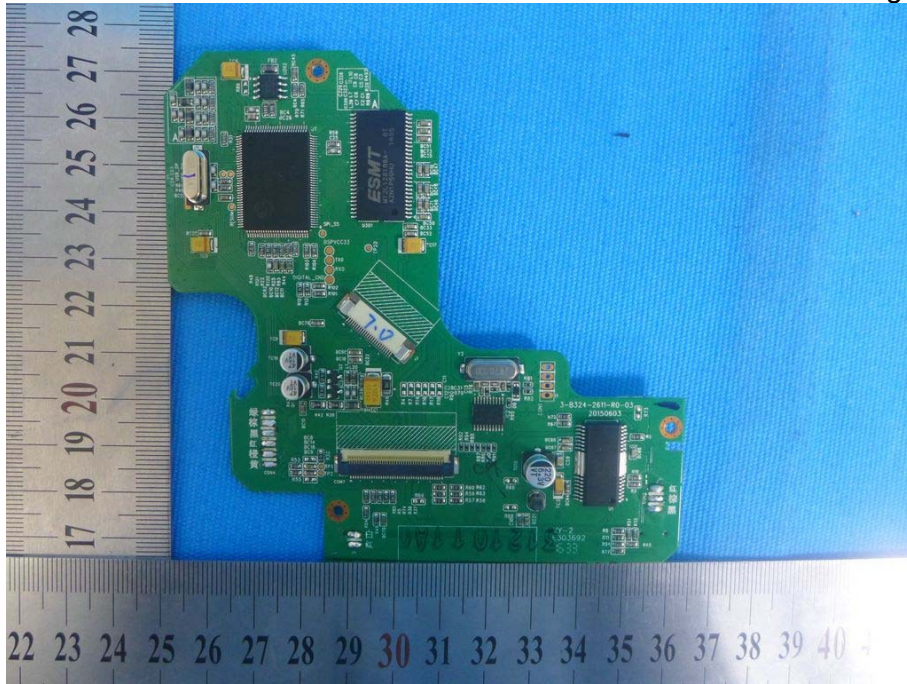
View of Product-22



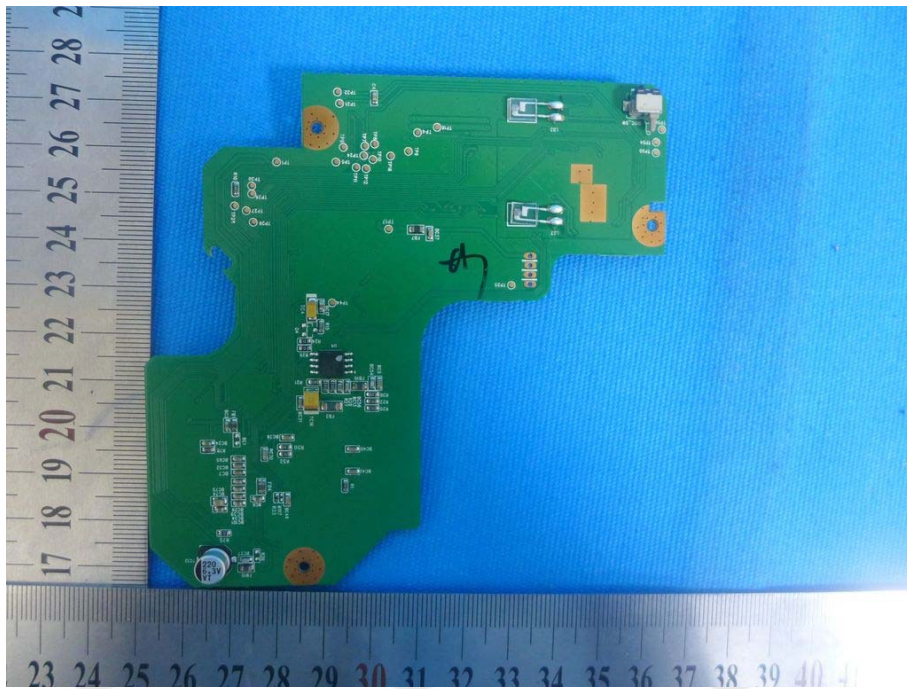
View of Product-23



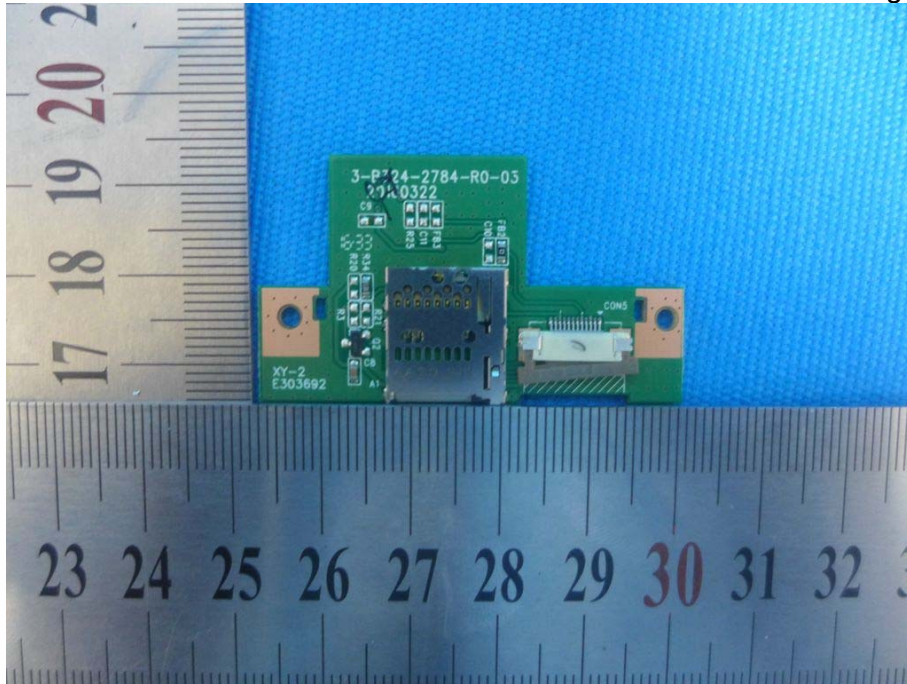
View of Product-24



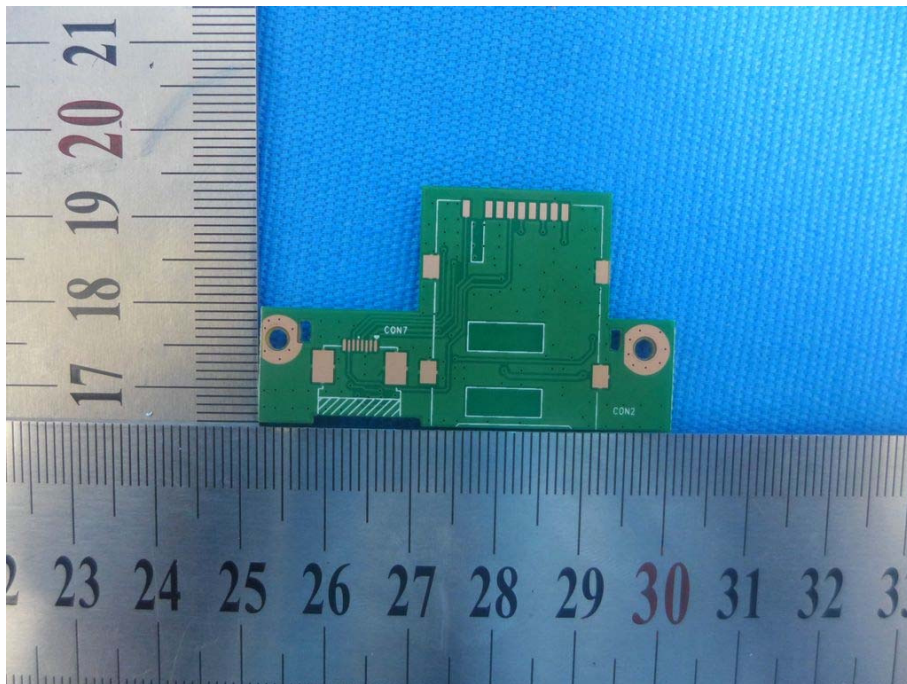
View of Product-25



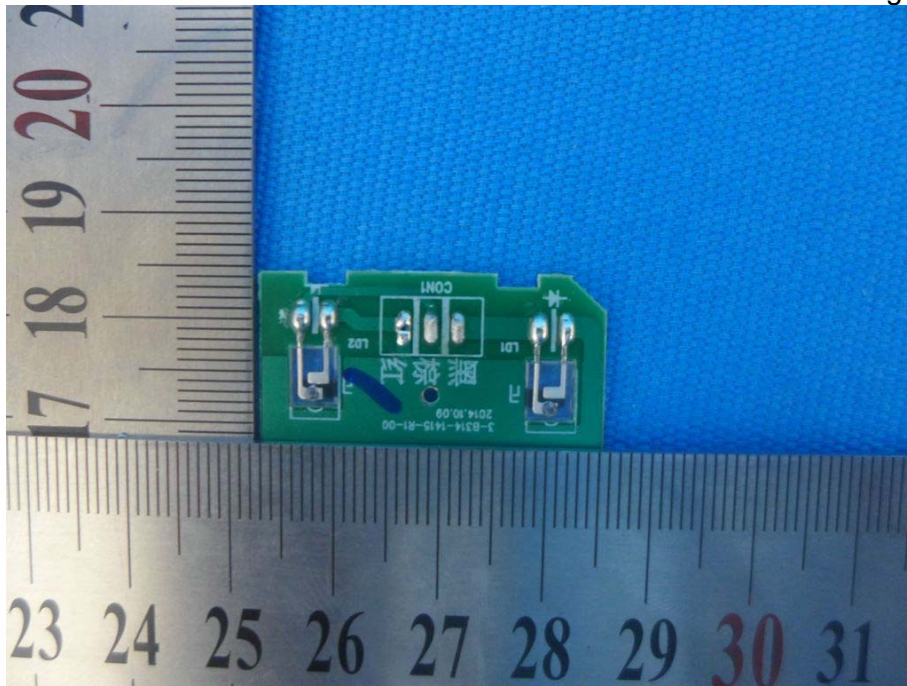
View of Product-26



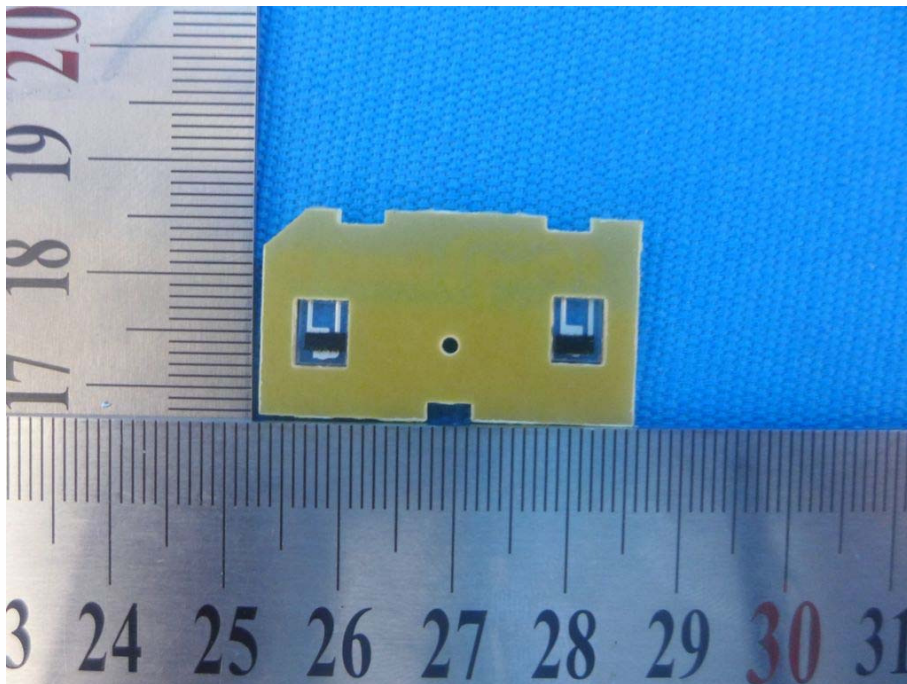
View of Product-27



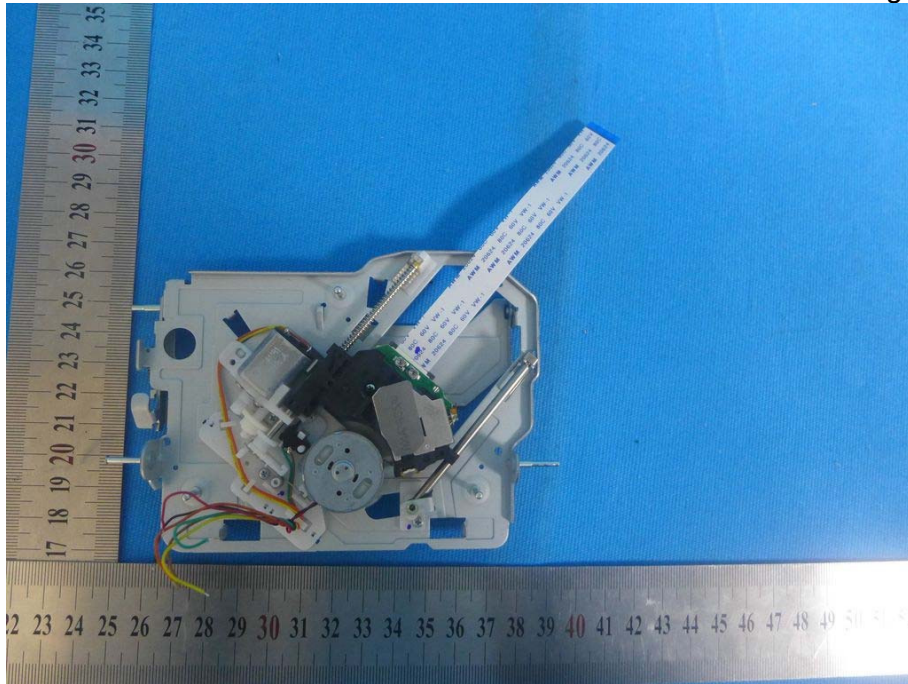
View of Product-28



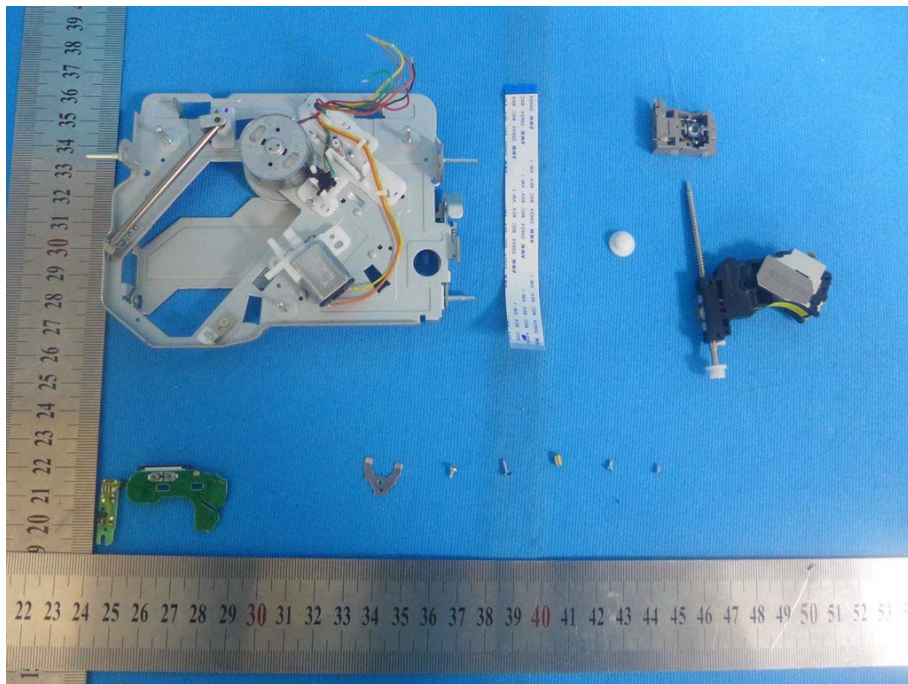
View of Product-29



View of Product-30



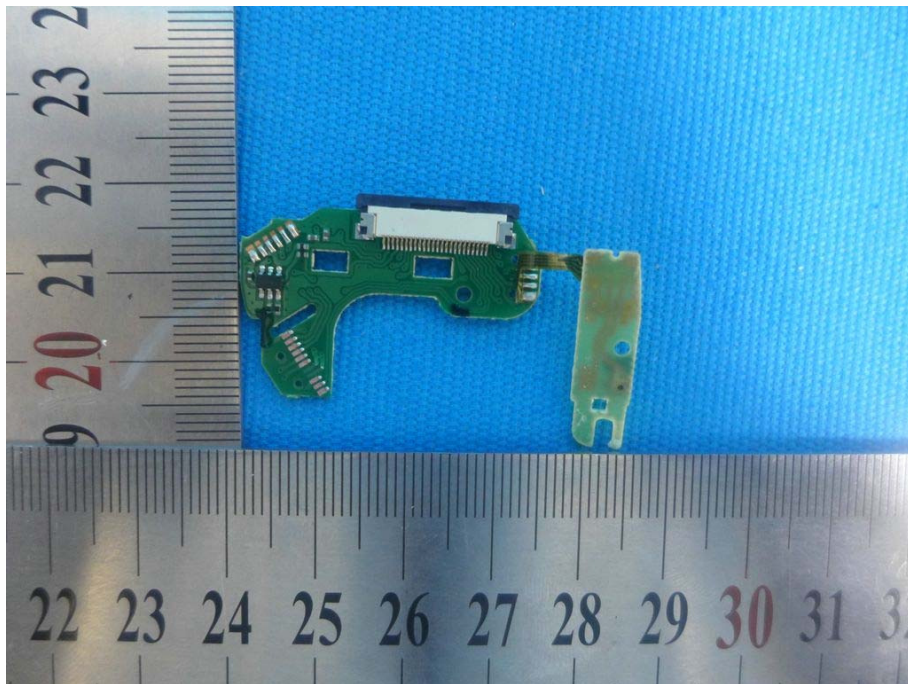
View of Product-31



View of Product-32



View of Product-33



View of Product-34

*** End of Report ***

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