

| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| | Account Manager: Dean Eriksen |
| Contact: Robert Paxman | |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

**RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
802.11a mode**

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

| | |
|---------------------------------|--|
| Date of Test: 4/8/2008 | Config. Used: 1 |
| Test Engineer: Suhaila Khushzad | Config Change: None |
| Test Location: FT Lab # 1 | EUT Voltage: Powered From Host System(3.3V DC) |

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions: Temperature: 19.9 °C
 Rel. Humidity: 36 %

Summary of Results

| Run # | Test Performed | Limit | Pass / Fail | Result / Margin |
|-------|--|-----------|-------------|--------------------------------------|
| 1 | Output Power | 15.247(b) | Pass | 15.5 dBm(35.2mW) |
| 2 | Power spectral Density (PSD) | 15.247(d) | Pass | -8.0 dBm/3kHz |
| 3 | 6dB Bandwidth | 15.247(a) | Pass | 16.25 MHz |
| 3 | 99% Bandwidth | RSS GEN | - | 17.1 MHz |
| 4 | Antenna Conducted - Out of Band Spurious | 15.247(b) | Pass | All emissions below the -30dBc limit |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

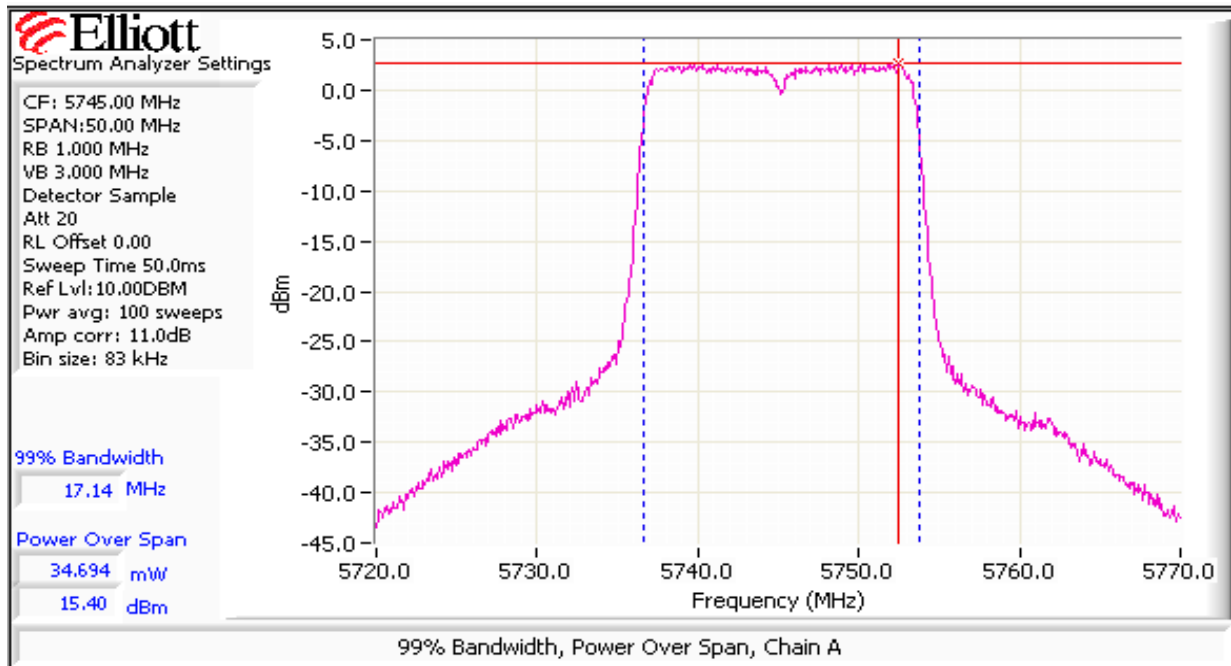
No deviations were made from the requirements of the standard.

| | |
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Run #1: Output Power

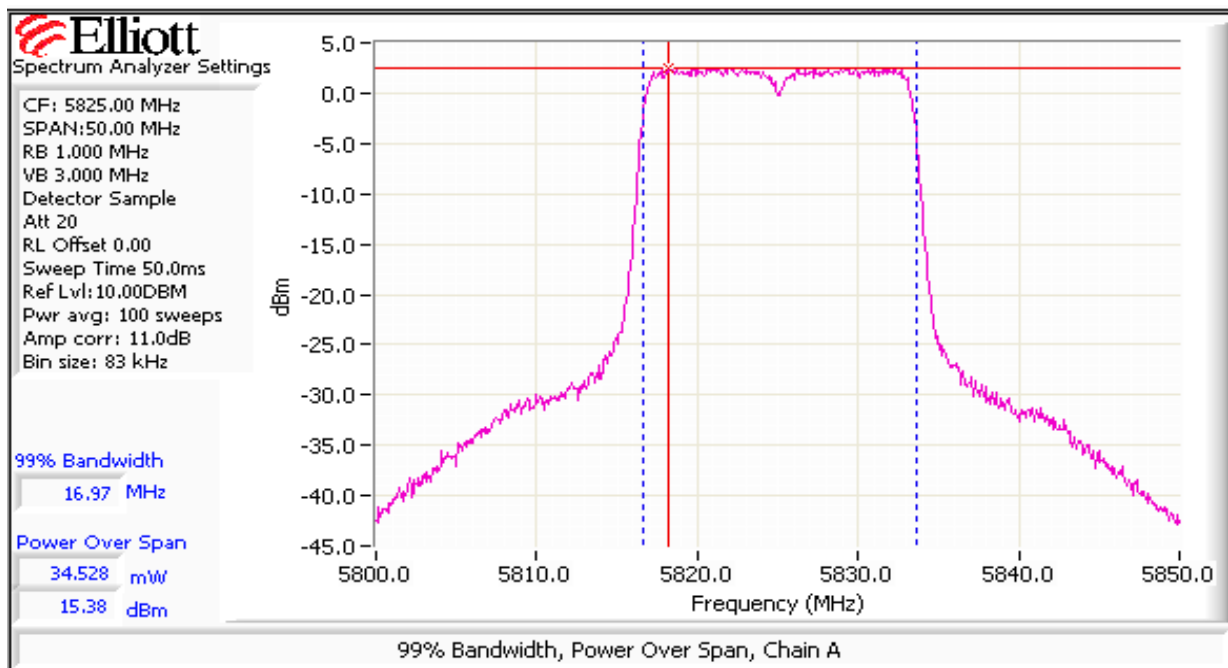
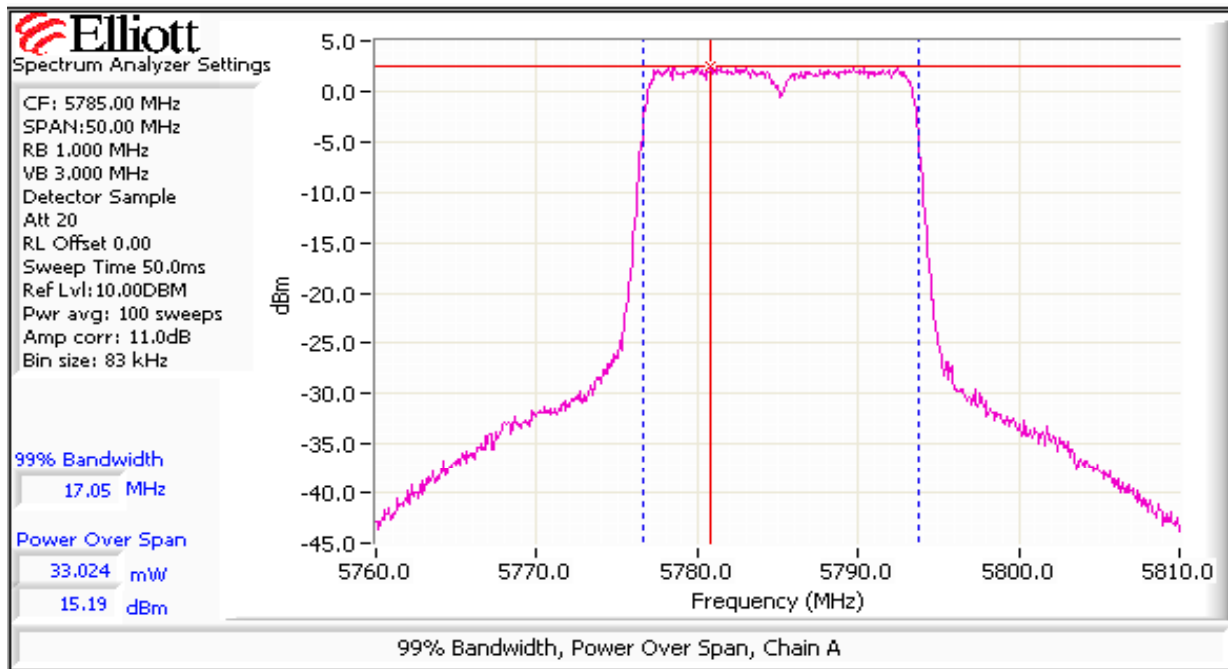
| Power Setting ² | Frequency (MHz) | Output Power | | Antenna Gain (dBi) | Result | EIRP ^{Note 2} | | Output Power | |
|----------------------------|-----------------|--------------------|------|--------------------|--------|------------------------|-------|--------------------|------|
| | | (dBm) ¹ | mW | | | dBm | W | (dBm) ³ | mW |
| 26 | 5745, Chain A | 15.4 | 34.7 | 5.0 | Pass | 20.4 | 0.110 | 16.7 | 46.8 |
| 26 | 5785, Chain A | 15.2 | 33.0 | 5.0 | Pass | 20.2 | 0.104 | 16.6 | 45.7 |
| 26.5 | 5825, Chain A | 15.4 | 34.5 | 5.0 | Pass | 20.4 | 0.109 | 16.7 | 46.8 |
| 25 | 5745, Chain B | 15.1 | 32.5 | 5.0 | Pass | 20.1 | 0.103 | 16.6 | 45.7 |
| 25.5 | 5785, Chain B | 15.2 | 33.3 | 5.0 | Pass | 20.2 | 0.105 | 16.6 | 45.7 |
| 26 | 5825, Chain B | 15.5 | 35.2 | 5.0 | Pass | 20.5 | 0.111 | 16.7 | 46.8 |
| 25.5 | 5745, Chain C | 14.9 | 31.0 | 5.0 | Pass | 19.9 | 0.098 | 16.6 | 45.7 |
| 26 | 5785, Chain C | 15.2 | 32.7 | 5.0 | Pass | 20.2 | 0.104 | 16.7 | 46.8 |
| 26.5 | 5825, Chain C | 15.3 | 34.2 | 5.0 | Pass | 20.3 | 0.108 | 16.7 | 46.8 |

- Note 1: Output power measured using a spectrum analyzer (see plots below):
 RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over 50 MHz. Spurious limit is -30dBc because this method was used.
 The output power limit is 30dBm.
- Note 2: Power setting - the software power setting used during testing, included for reference only.
- Note 3: Power measured using average power sensor and is included for manufacturer's reference only.



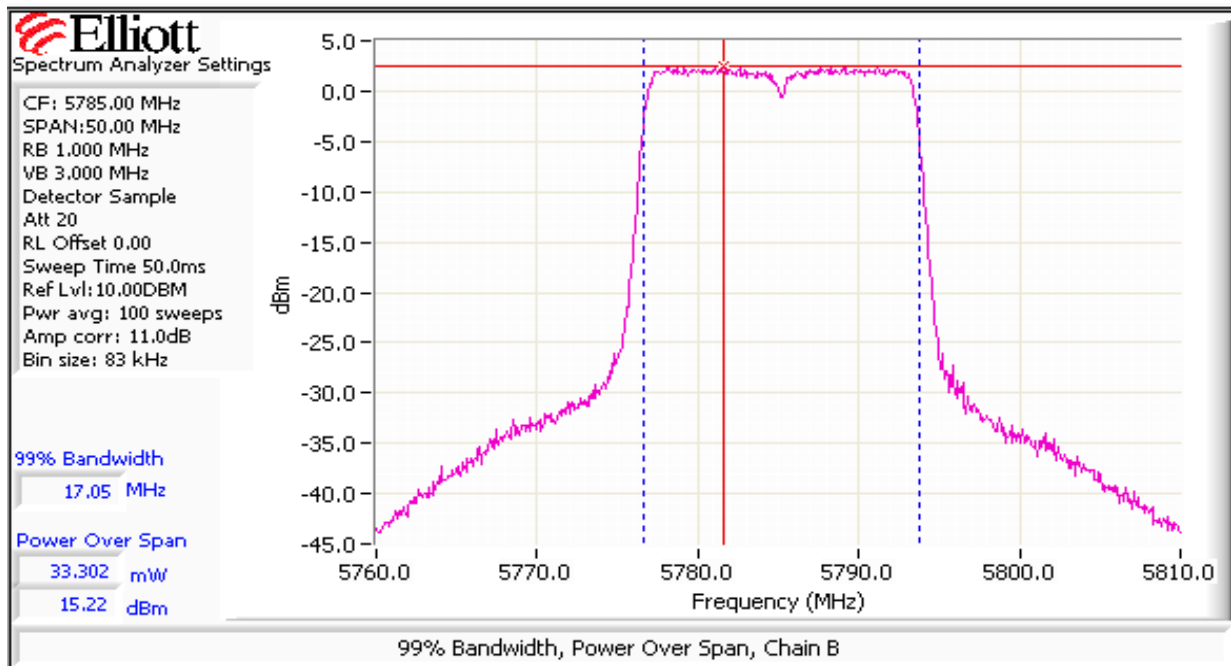
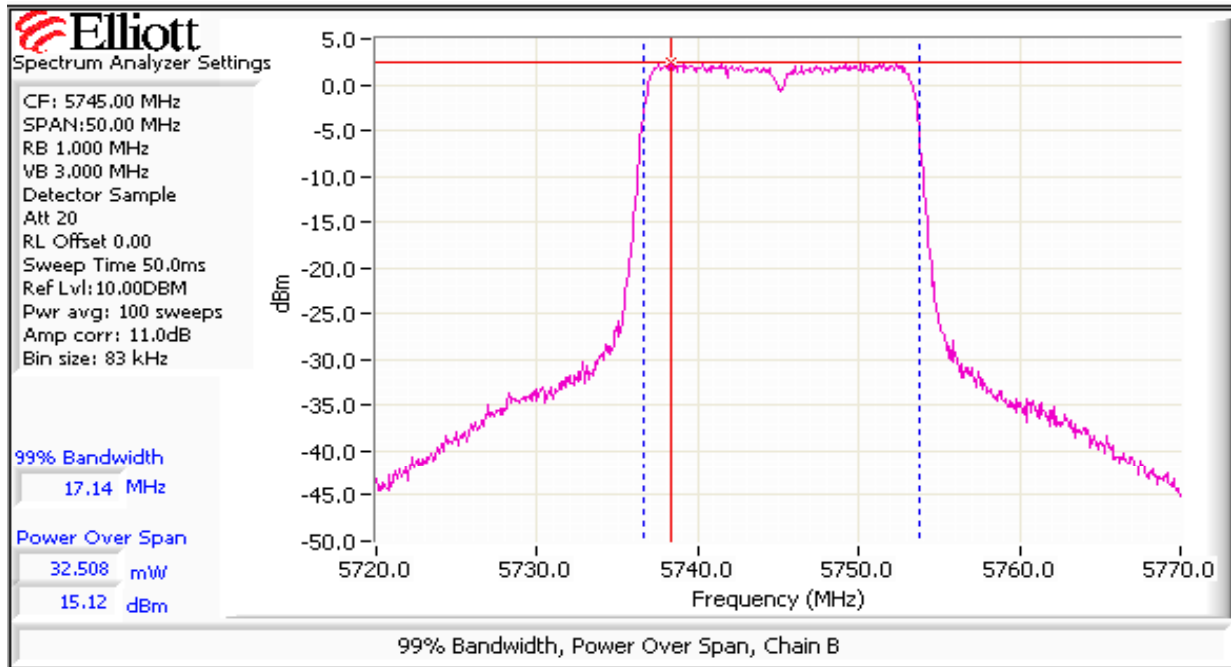
| | |
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| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #1: Output Power



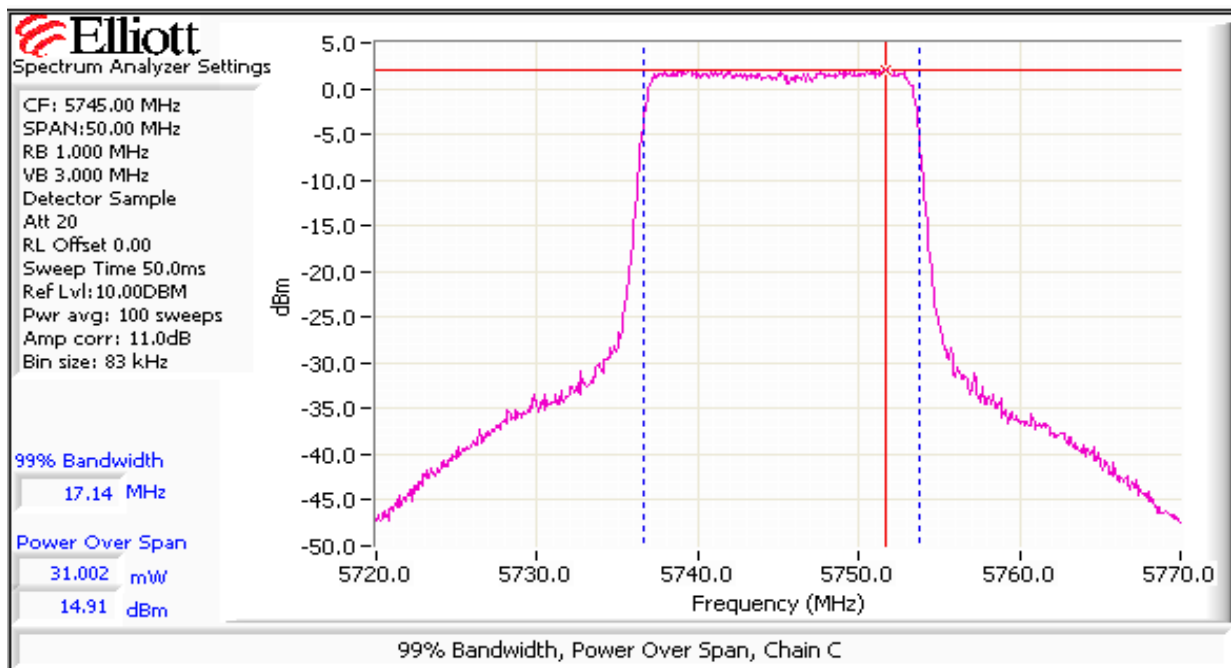
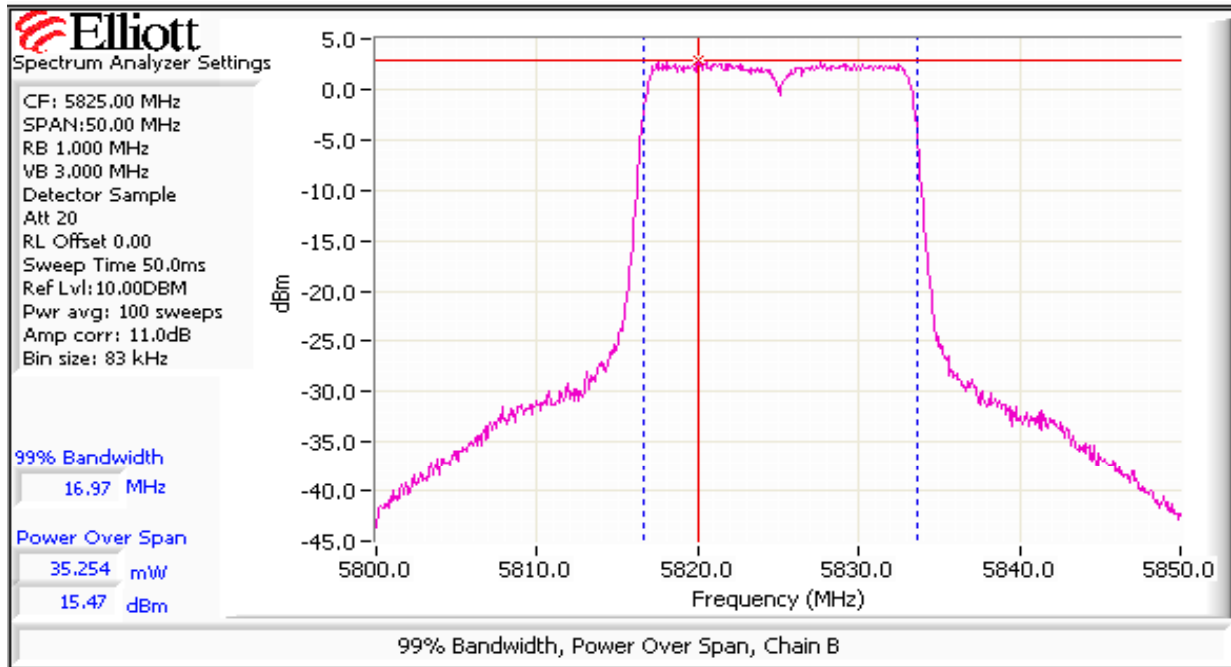
| | |
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| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #1: Output Power



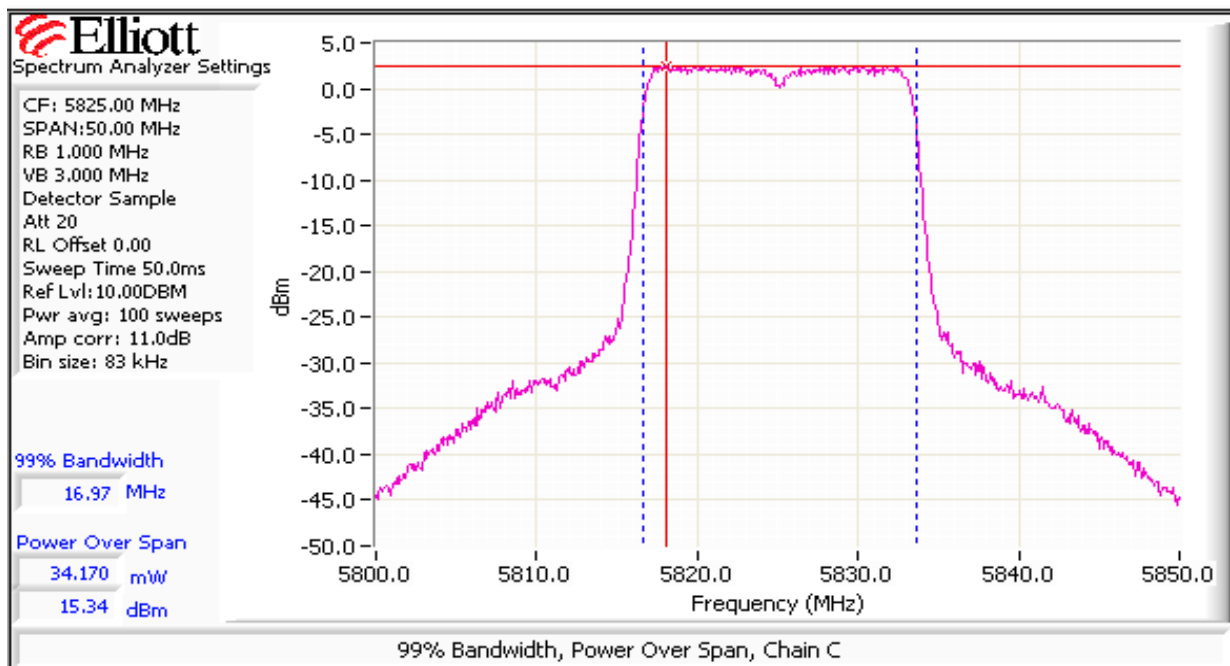
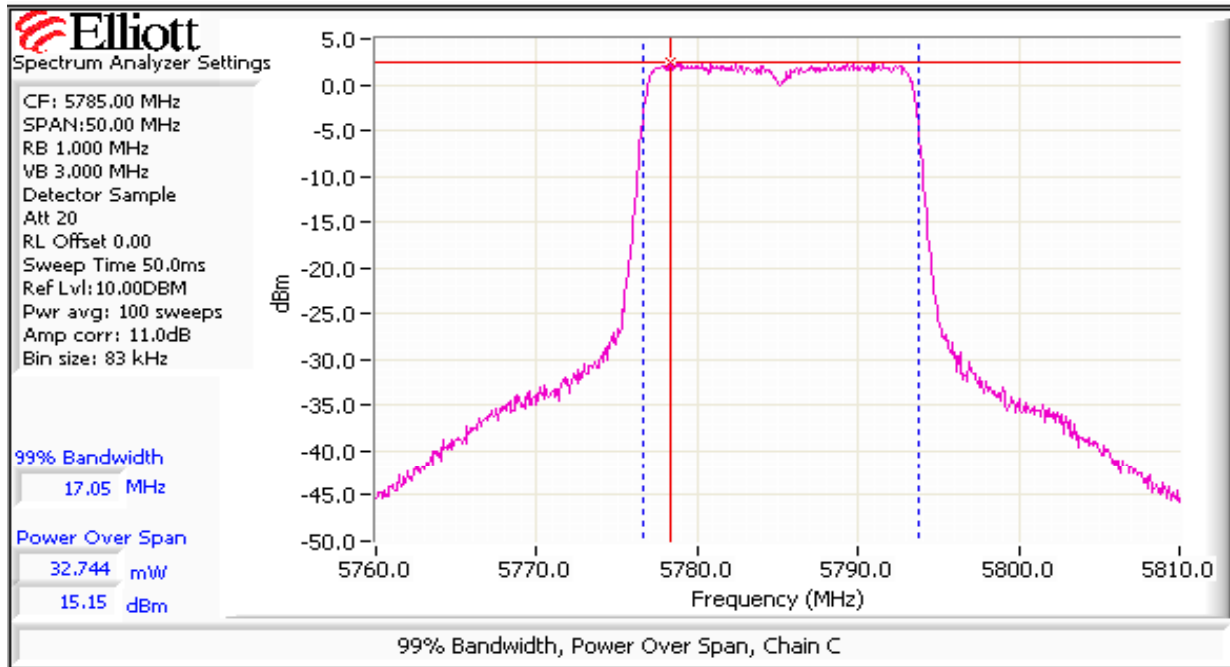
| | |
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Run #1: Output Power



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|---------------------------------|-------------------------------|
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| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #1: Output Power

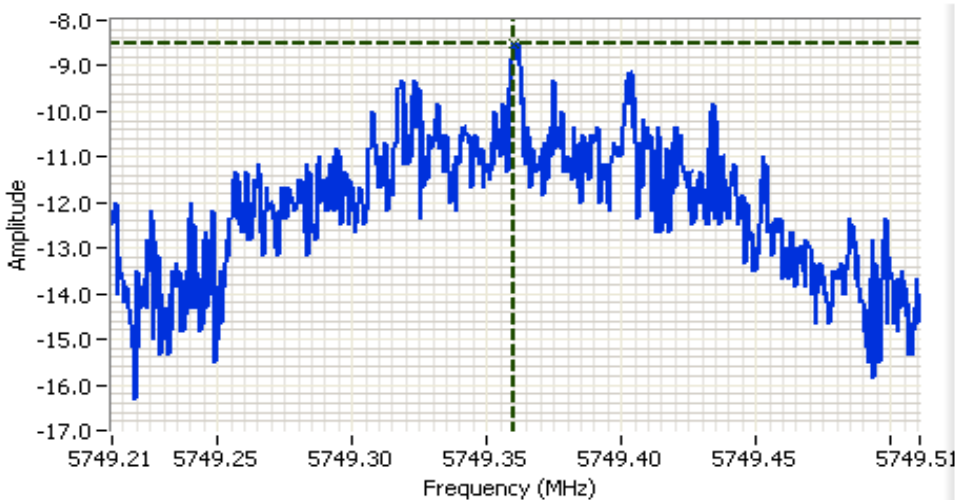


| | |
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| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #2: Power spectral Density

| Power Setting | Frequency (MHz) | PSD | Limit dBm/3kHz | Result |
|---------------|-----------------|------------------------------|-------------------|--------|
| | | (dBm/3kHz) ^{Note 1} | | |
| 26 | 5745, Chain A | -8.5 | 8.0 | Pass |
| 26 | 5785, Chain A | -8.3 | 8.0 | Pass |
| 26.5 | 5825, Chain A | -8.0 | 8.0 | Pass |
| 25 | 5745, Chain B | -9.2 | 8.0 | Pass |
| 25.5 | 5785, Chain B | -8.2 | 8.0 | Pass |
| 26 | 5825, Chain B | -8.0 | 8.0 | Pass |
| 25.5 | 5745, Chain C | -9.0 | 8.0 | Pass |
| 26 | 5785, Chain C | -8.3 | 8.0 | Pass |
| 26.5 | 5825, Chain C | -8.2 | 8.0 | Pass |

Note 1: Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.



Analyzer Settings

HP8564E,EMI
 CF: 5749.36 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

PSD :-8.50 dBm/3kHz
 5745MHz
 Chain A

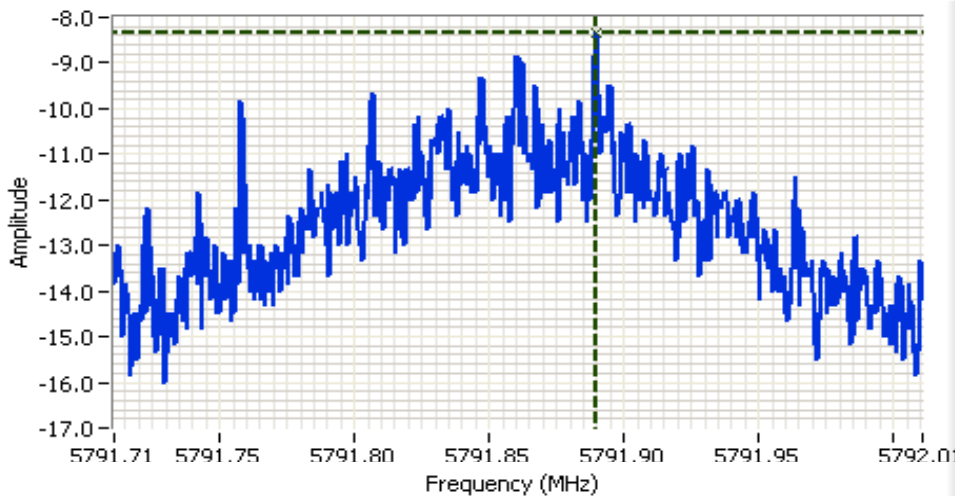
Cursor 1 5749.3598 -8.50 ⊕ ⊖ 🔒

0.0000 0.00 ⊕ ⊖ 🔒



| | |
|---------------------------------|-------------------------------|
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| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #2: Power spectral Density



Analyzer Settings

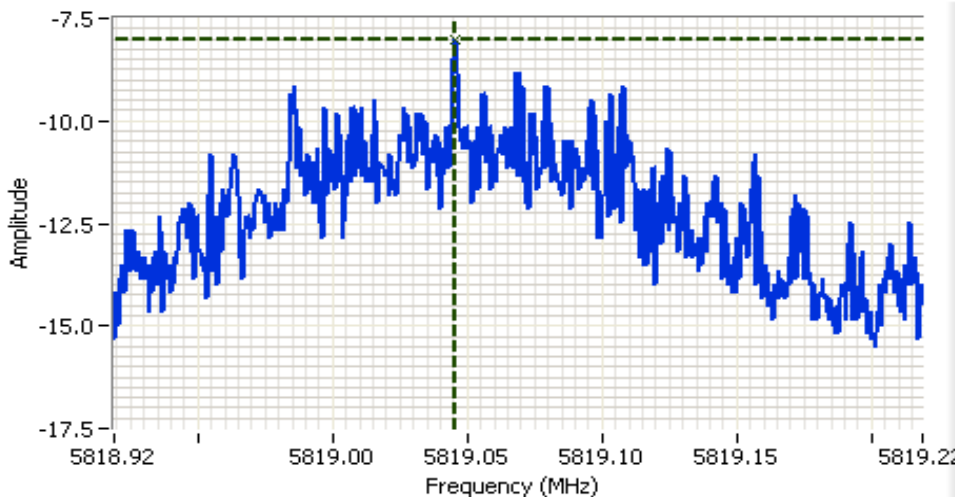
HP8564E,EMI
 CF: 5791.86 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

PSD :-8.33 dBm/3kHz
 5785MHz
 Chain A

Cursor 1 5791.8898 -8.33

0.0000 0.00



Analyzer Settings

HP8564E,EMI
 CF: 5819.07 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

PSD :-8.0 dBm/3kHz
 5825MHz
 Chain A

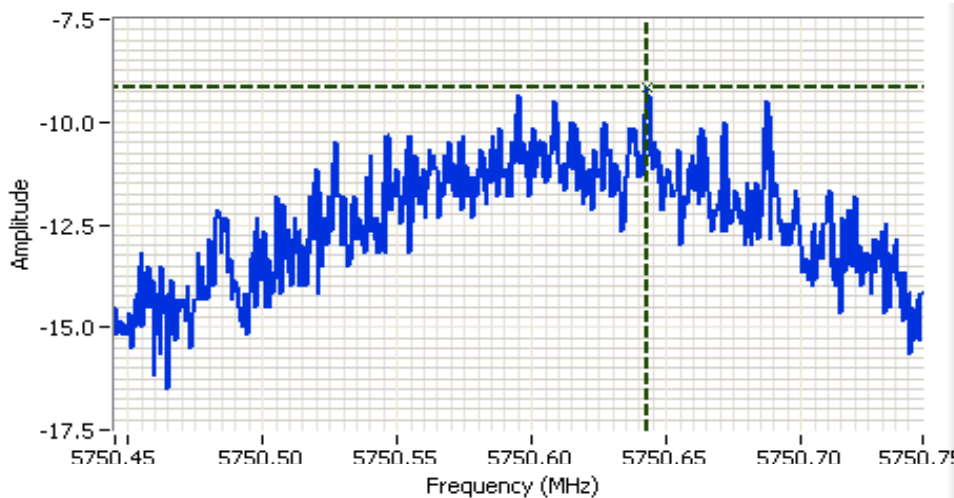
Cursor 1 5819.0453 -8.00

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
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| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #2: Power spectral Density



Analyzer Settings

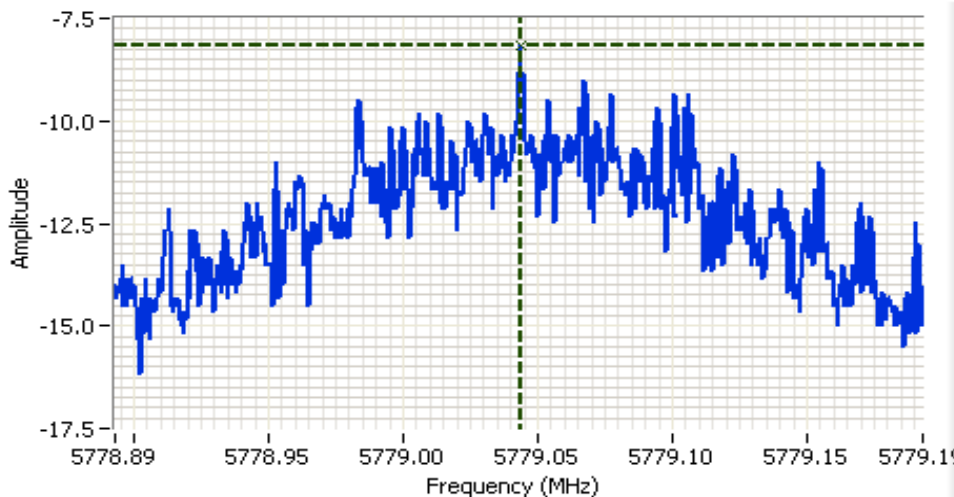
- HP8564E,EMI
- CF: 5750.60 MHz
- SPAN:300 kHz
- RB 3.00 kHz
- VB 10.00 kHz
- Detector POS
- Att 20
- RL Offset 11.00
- Sweep Time 100.0s
- Ref Lvl:21.00DBM

Comments

PSD :-9.17 dBm/3kHz
5745MHz
Chain B

Cursor 1 5750.6427 -9.17

0.0000 0.00



Analyzer Settings

- HP8564E,EMI
- CF: 5779.04 MHz
- SPAN:300 kHz
- RB 3.00 kHz
- VB 10.00 kHz
- Detector POS
- Att 20
- RL Offset 11.00
- Sweep Time 100.0s
- Ref Lvl:21.00DBM

Comments

PSD :-8.17 dBm/3kHz
5785MHz
Chain B

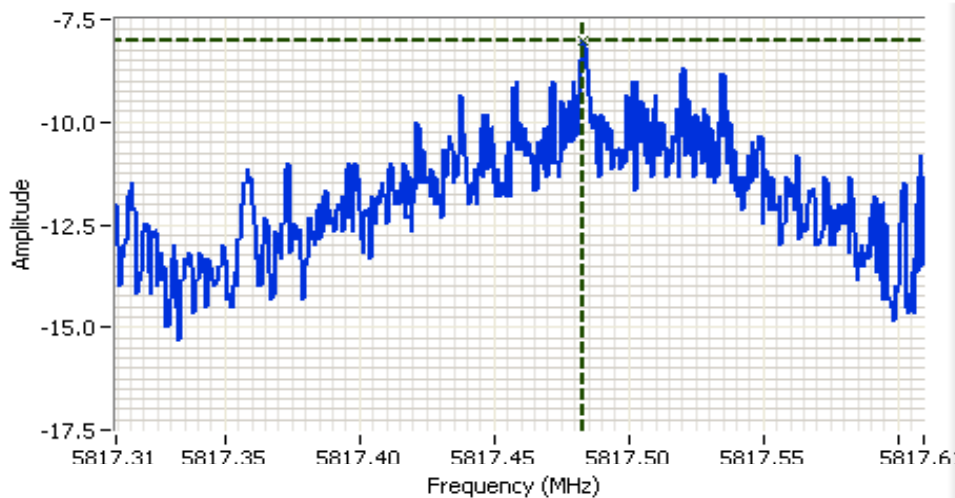
Cursor 1 5779.0435 -8.17

0.0000 0.00



| | |
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| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #2: Power spectral Density

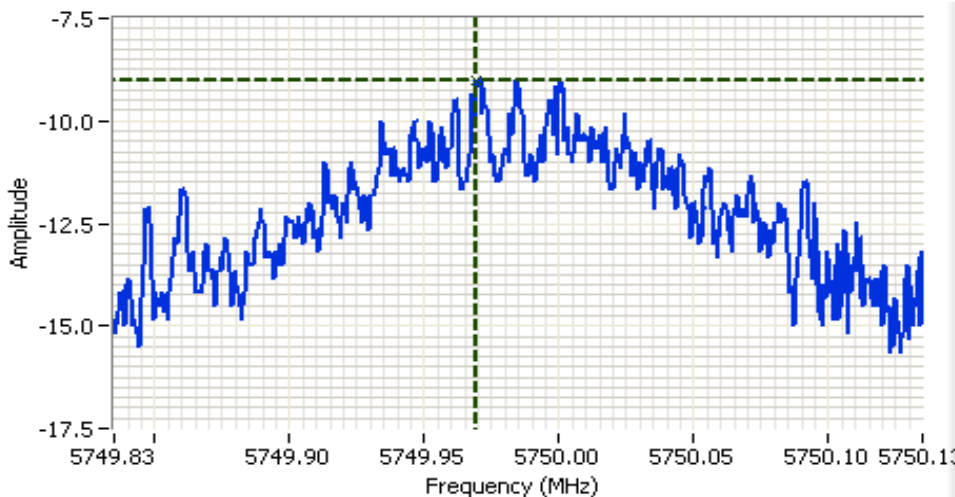


Analyzer Settings
 HP8564E,EMI
 CF: 5817.46 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments
 PSD :-8.0 dBm/3kHz
 5825MHz
 Chain B

Cursor 1 5817.4830 -8.00

0.0000 0.00



Analyzer Settings
 HP8564E,EMI
 CF: 5749.98 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments
 PSD :-9.0 dBm/3kHz
 5745MHz
 Chain C

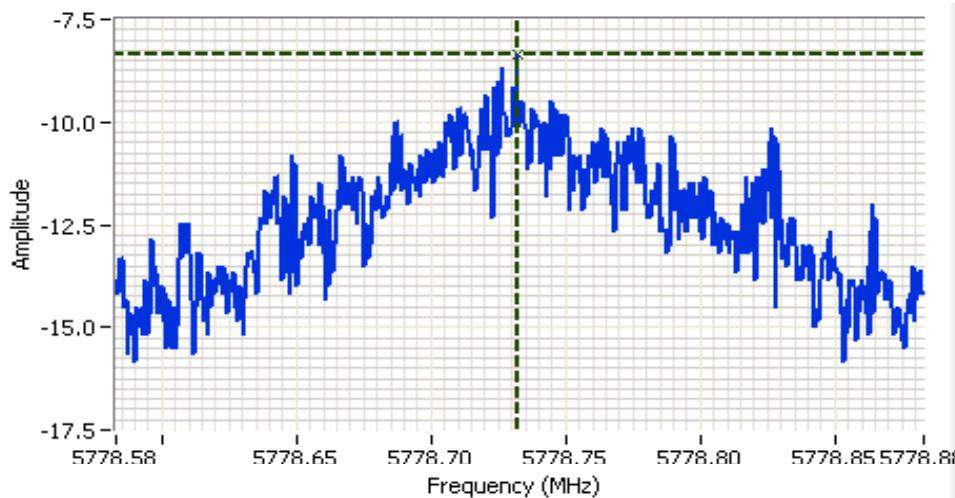
Cursor 1 5749.9694 -9.00

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #2: Power spectral Density

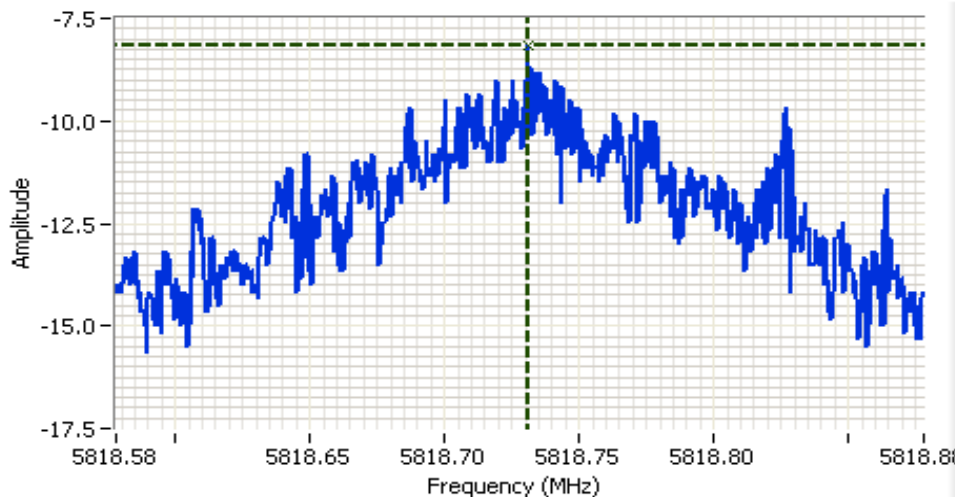


Analyzer Settings
 HP8564E,EMI
 CF: 5778.73 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments
 PSD :-8.33 dBm/3kHz
 5785MHz
 Chain C

Cursor 1 5778.7319 -8.33

0.0000 0.00



Analyzer Settings
 HP8564E,EMI
 CF: 5818.73 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments
 PSD :-8.17 dBm/3kHz
 5825MHz
 Chain C

Cursor 1 5818.7310 -8.17

0.0000 0.00



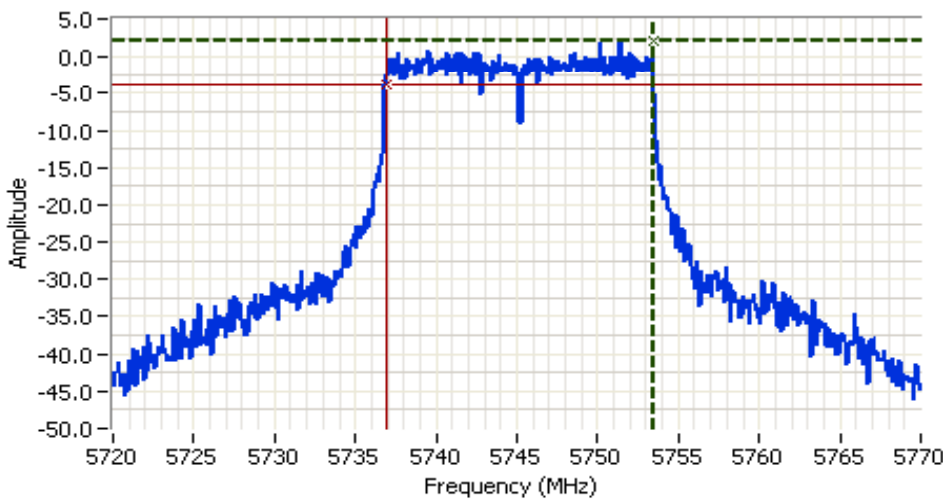
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #3: Signal Bandwidth

| Power Setting | Frequency (MHz) | Resolution Bandwidth | Bandwidth (MHz) | |
|---------------|-----------------|----------------------|-----------------|------|
| | | | 6dB | 99% |
| 26 | 5745, Chain A | 100kHz | 16.5 | 17.1 |
| 26 | 5785, Chain A | 100kHz | 16.42 | 17.1 |
| 26.5 | 5825, Chain A | 100kHz | 16.25 | 17.0 |
| 25.5 | 5785, Chain B | 100kHz | 16.58 | 17.1 |
| 26 | 5785, Chain C | 100kHz | 16.5 | 17.1 |

Note 1: 99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB

Note 2: Center channel of Chains B and C measured to verify no significant difference in signal bandwidth from Chain A.



Analyzer Settings

HP8564E,EMI
 CF: 5745.00 MHz
 SPAN:50.00 MHz
 RB 100 kHz
 VB 100 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 50.0ms
 Ref Lvl:21.00DBM

Comments

6dB Bandwidth:
 16.50 MHz
 Chain A

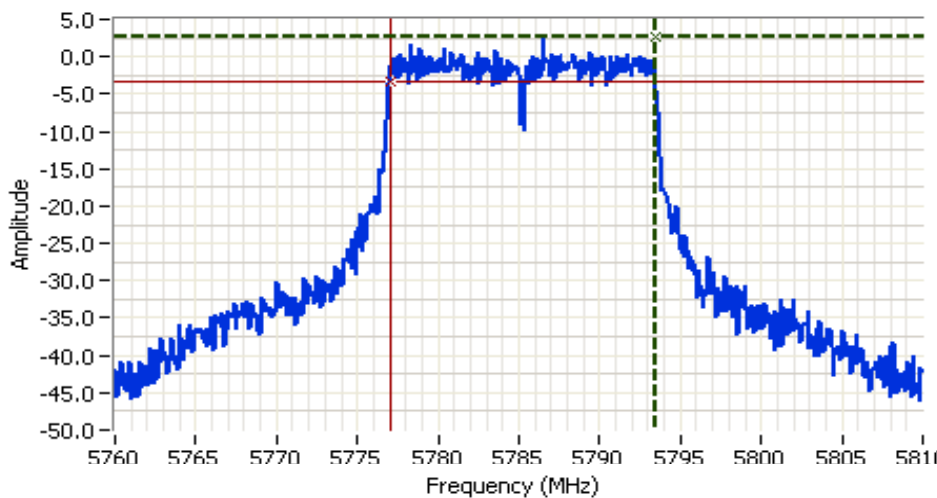
| | | | |
|----------|-----------|-------|--|
| Cursor 1 | 5753.4167 | 2.17 | |
| Cursor 2 | 5736.9167 | -3.83 | |

Delta Freq. 16.50
 Delta Amplitude 6.00



| | |
|---------------------------------|-------------------------------|
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| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #3: Signal Bandwidth

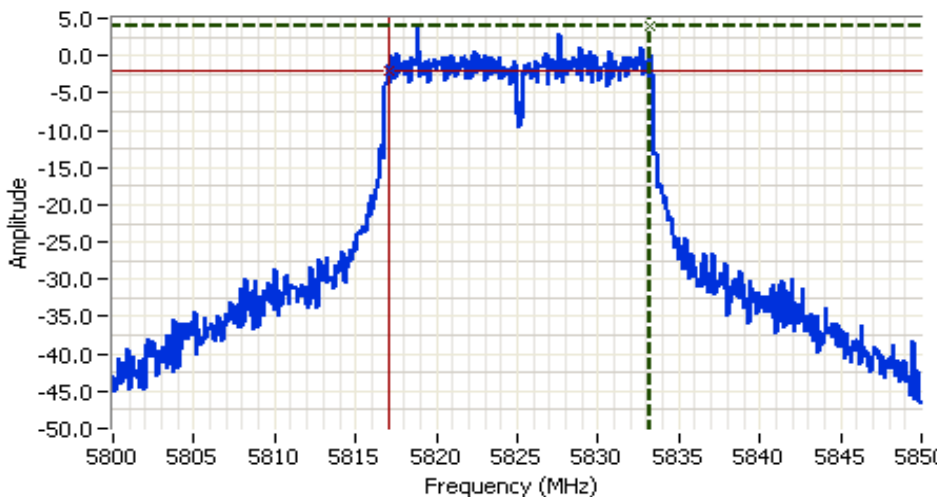


Analyzer Settings
 HP8564E,EMI
 CF: 5785.00 MHz
 SPAN:50.00 MHz
 RB 100 kHz
 VB 100 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 50.0ms
 Ref Lvl:21.00DBM

Comments
 6dB Bandwidth:
 16.42 MHz
 5785MHz, Chain A

| | | | |
|----------|-----------|-------|--|
| Cursor 1 | 5793.4167 | 2.67 | |
| Cursor 2 | 5777.0000 | -3.33 | |

Delta Freq. 16.42
 Delta Amplitude 6.00



Analyzer Settings
 HP8564E,EMI
 CF: 5825.00 MHz
 SPAN:50.00 MHz
 RB 100 kHz
 VB 100 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 50.0ms
 Ref Lvl:21.00DBM

Comments
 6dB Bandwidth:
 16.25 MHz
 5825MHz, Chain A

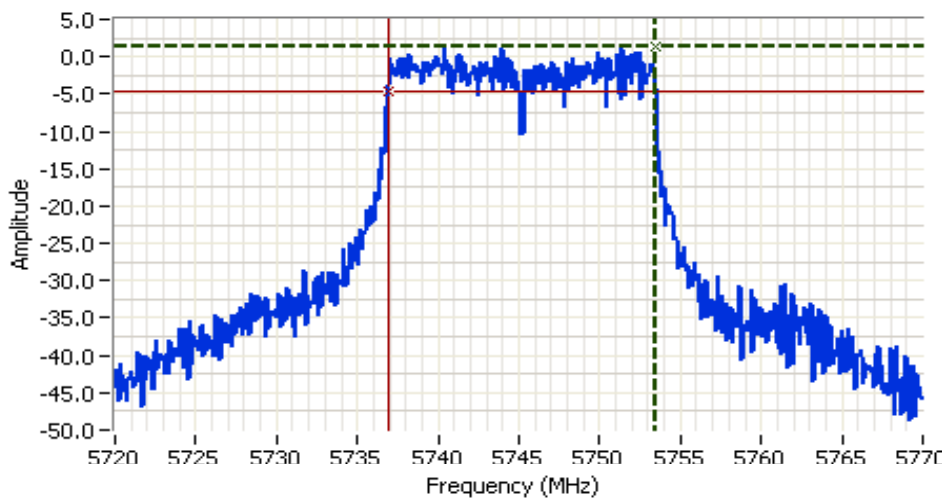
| | | | |
|----------|-----------|-------|--|
| Cursor 1 | 5833.2500 | 3.83 | |
| Cursor 2 | 5817.0000 | -2.17 | |

Delta Freq. 16.25
 Delta Amplitude 6.00



| | |
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| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #3: Signal Bandwidth

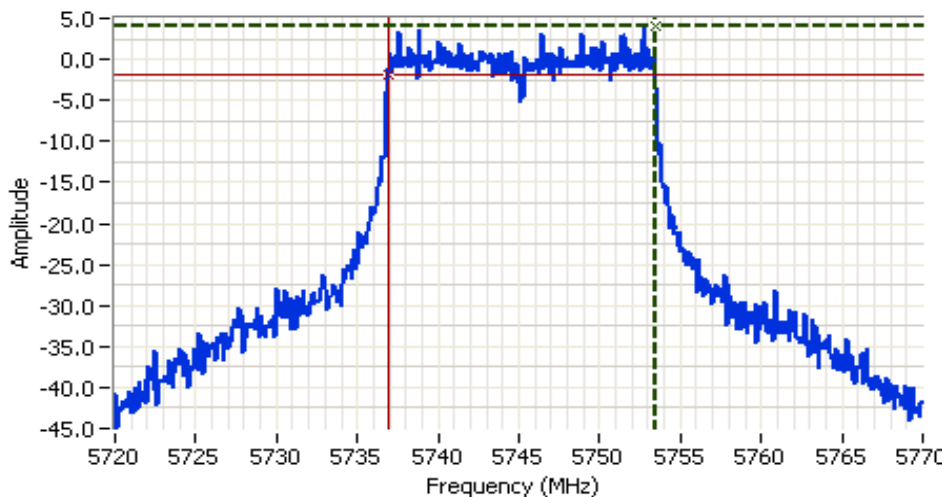


Analyzer Settings
 HP8564E,EMI
 CF: 5745.00 MHz
 SPAN:50.00 MHz
 RB 100 kHz
 VB 100 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 50.0ms
 Ref Lvl:21.00DBM

Comments
 6dB Bandwidth:
 16.58 MHz
 5745MHz, Chain B

| | | | |
|----------|-----------|-------|--|
| Cursor 1 | 5753.5000 | 1.33 | |
| Cursor 2 | 5736.9167 | -4.67 | |

Delta Freq. 16.58
 Delta Amplitude 6.00



Analyzer Settings
 HP8564E,EMI
 CF: 5745.00 MHz
 SPAN:50.00 MHz
 RB 100 kHz
 VB 100 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 50.0ms
 Ref Lvl:21.00DBM

Comments
 6dB Bandwidth:
 16.50 MHz
 5745MHz, Chain C

| | | | |
|----------|-----------|-------|--|
| Cursor 1 | 5753.4167 | 4.17 | |
| Cursor 2 | 5736.9167 | -1.83 | |

Delta Freq. 16.50
 Delta Amplitude 6.00

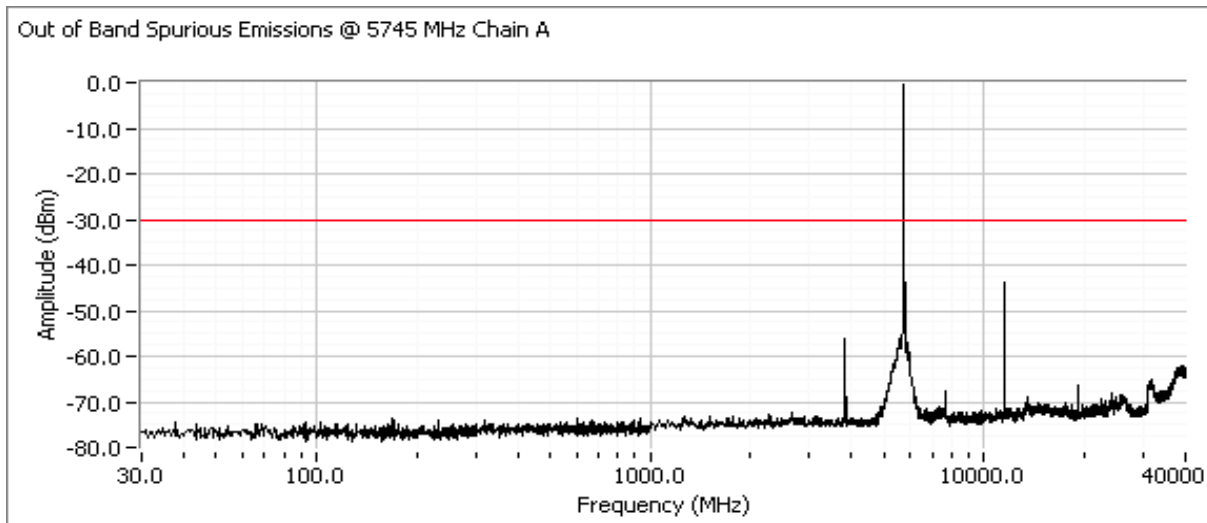


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| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #4: Out of Band Spurious Emissions
 All measured using RB = 100kHz, VB = 300kHz.

| Frequency (MHz) | Limit | Result |
|-----------------|--------|--------|
| 5745, Chain A | -30dBc | Pass |
| 5785, Chain A | -30dBc | Pass |
| 5825, Chain A | -30dBc | Pass |
| 5745, Chain B | -30dBc | Pass |
| 5785, Chain B | -30dBc | Pass |
| 5825, Chain B | -30dBc | Pass |
| 5745, Chain C | -30dBc | Pass |
| 5785, Chain C | -30dBc | Pass |
| 5825, Chain C | -30dBc | Pass |

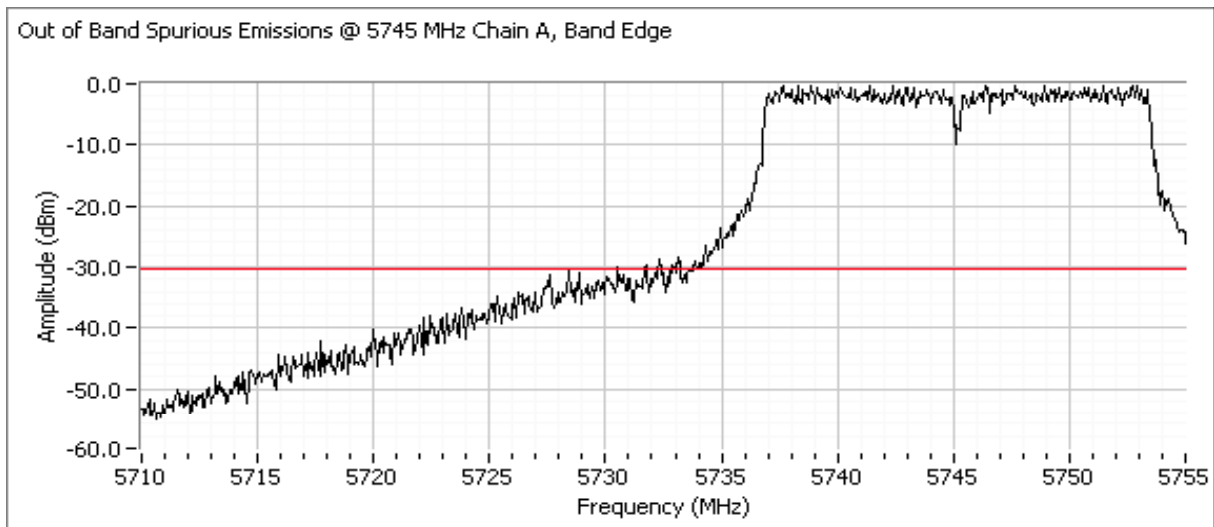
Plots for low channel, Chain A power setting(s) = 26



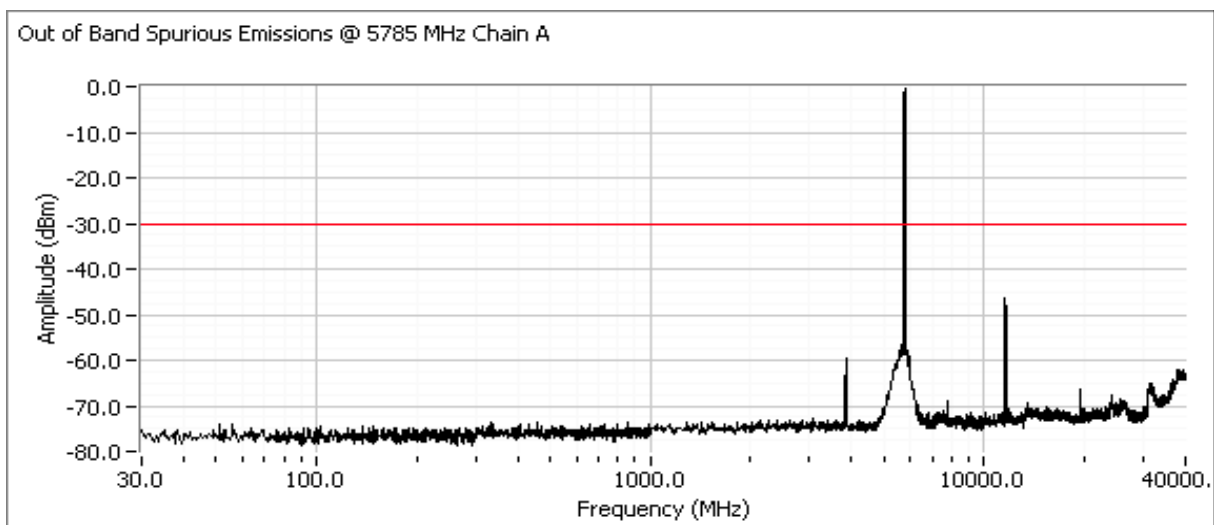
| | |
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| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #4: Out of Band Spurious Emissions

Additional plot from 5715 - 5755 MHz showing compliance with -30dBc at the band edge.



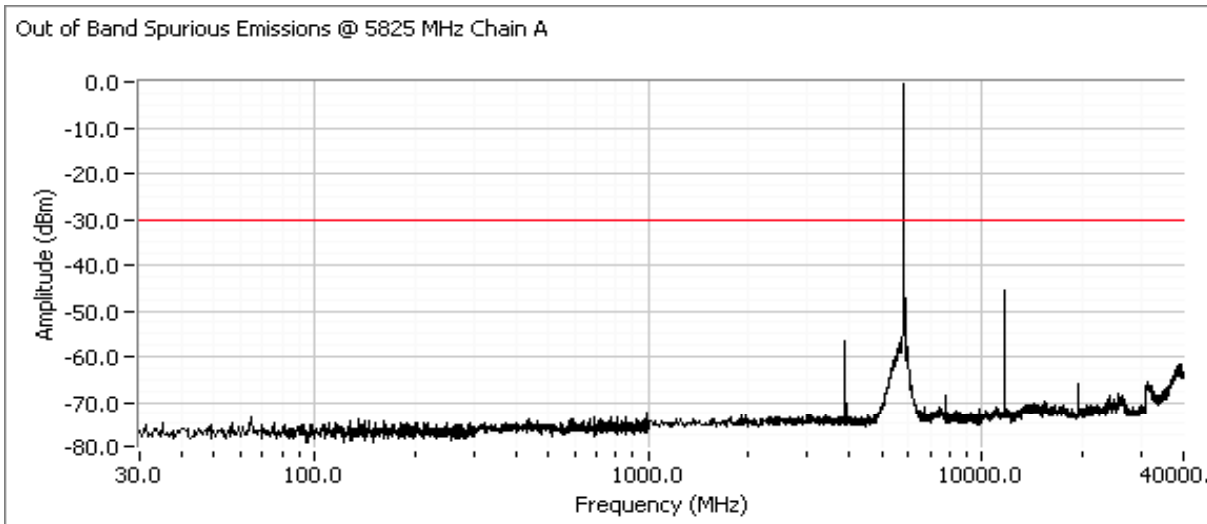
Plots for center channel, Chain A power setting(s) = 26



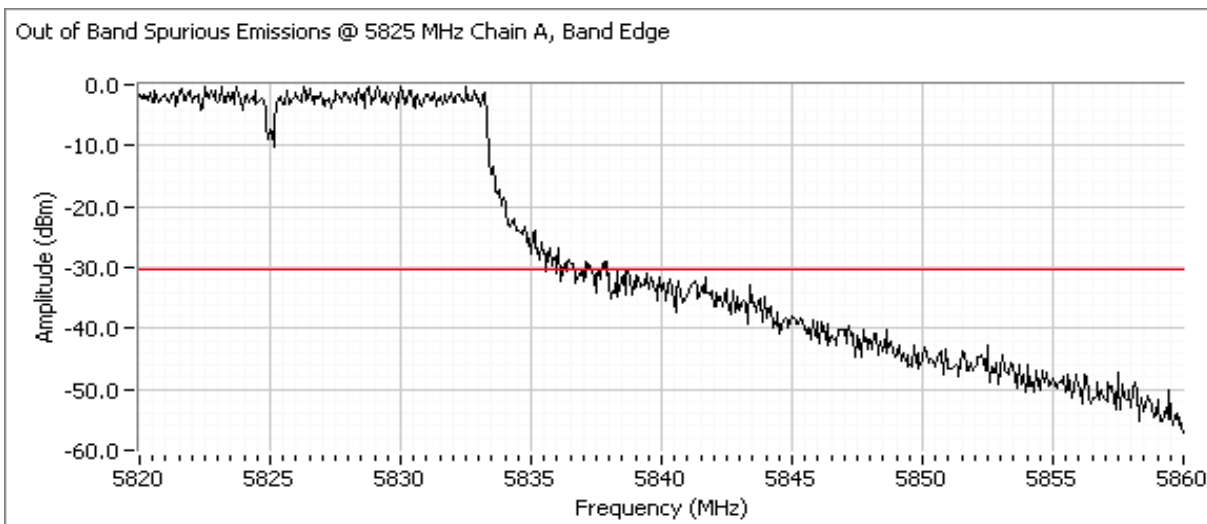
| | |
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| Client: Intel | Job Number: J70796 |
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| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #4: Out of Band Spurious Emissions

Plots for high channel, Chain A power setting(s) = 26.5



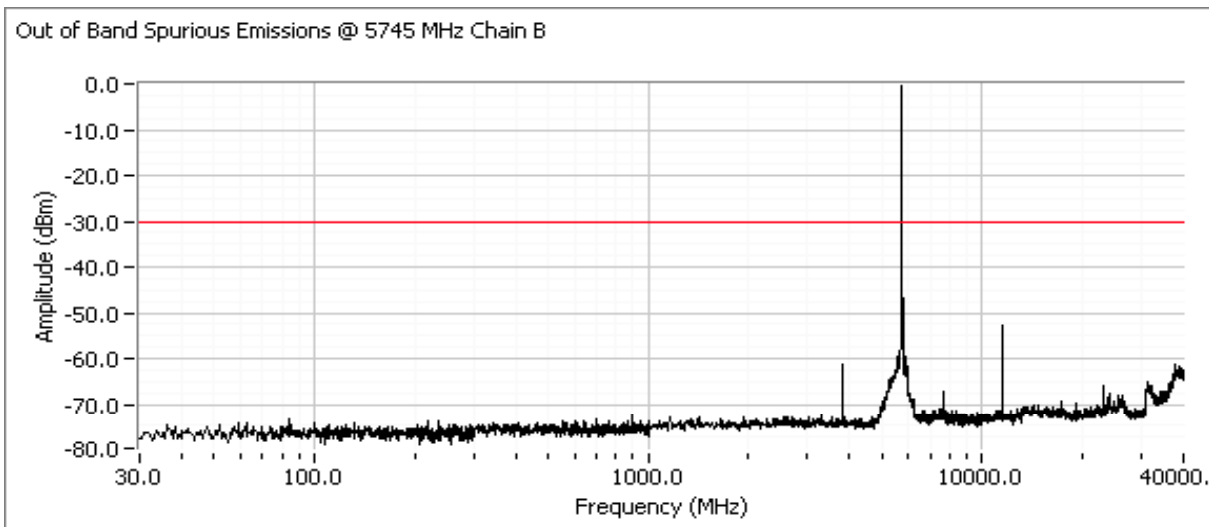
Additional plot from 5820 - 5860 MHz showing compliance with -30dBc at the band edge.



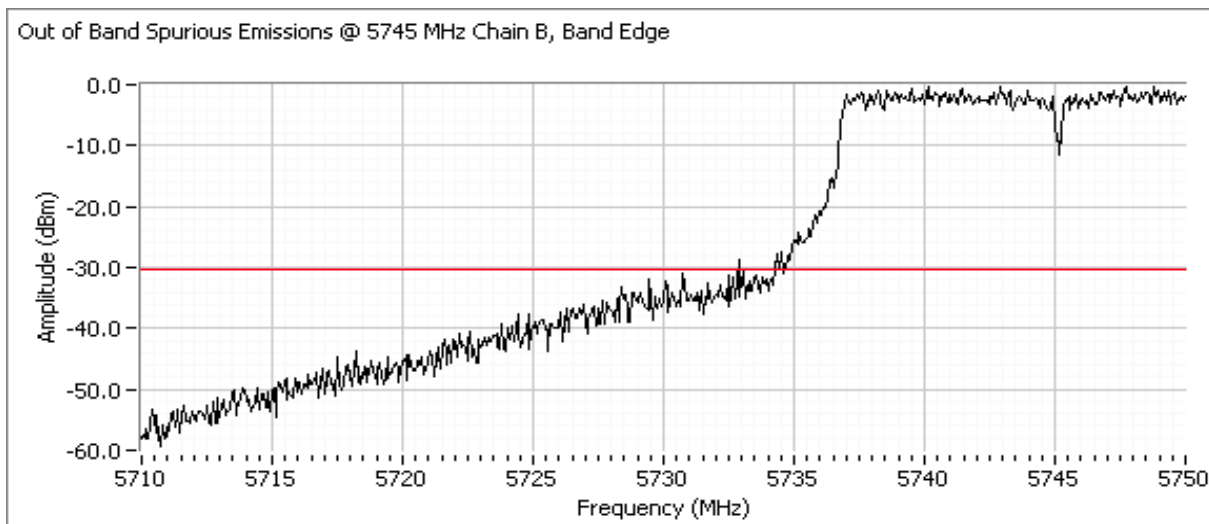
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #4: Out of Band Spurious Emissions

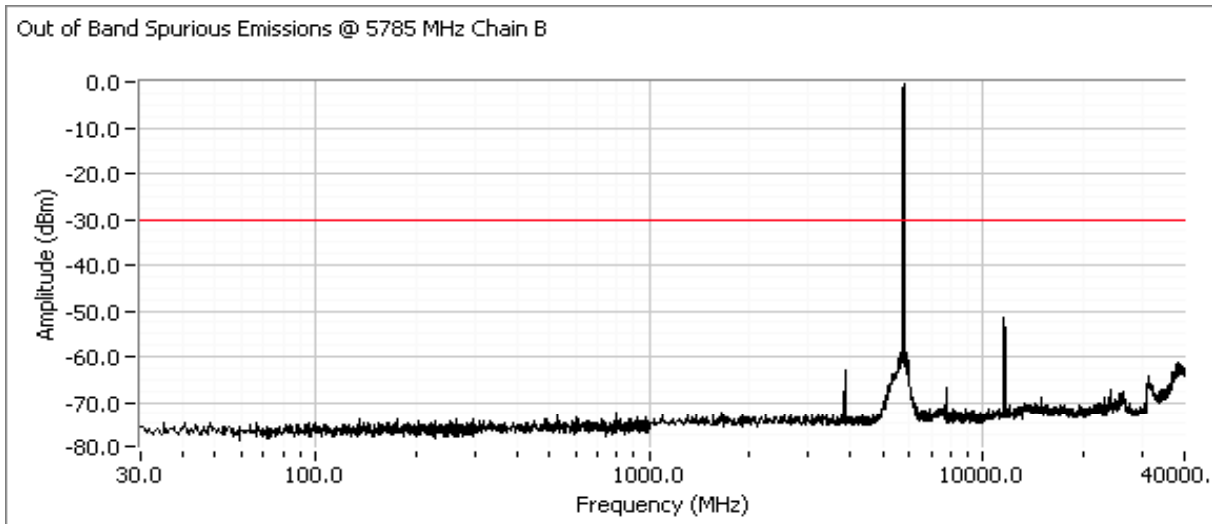
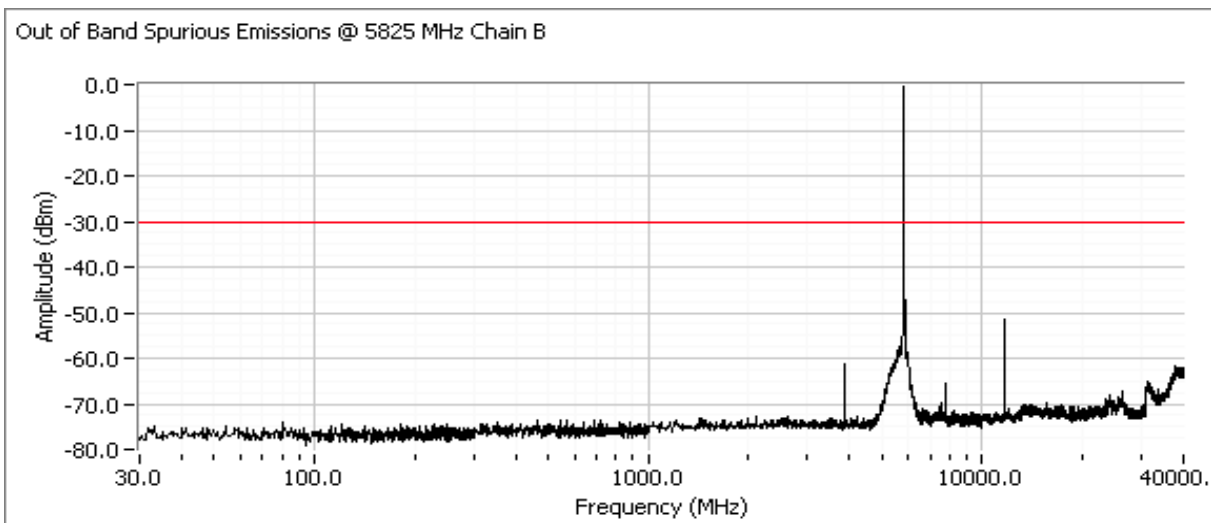
Plots for low channel, Chain B power setting(s) = 25



Additional plot from 5715 - 5755 MHz showing compliance with -30dBc at the band edge.



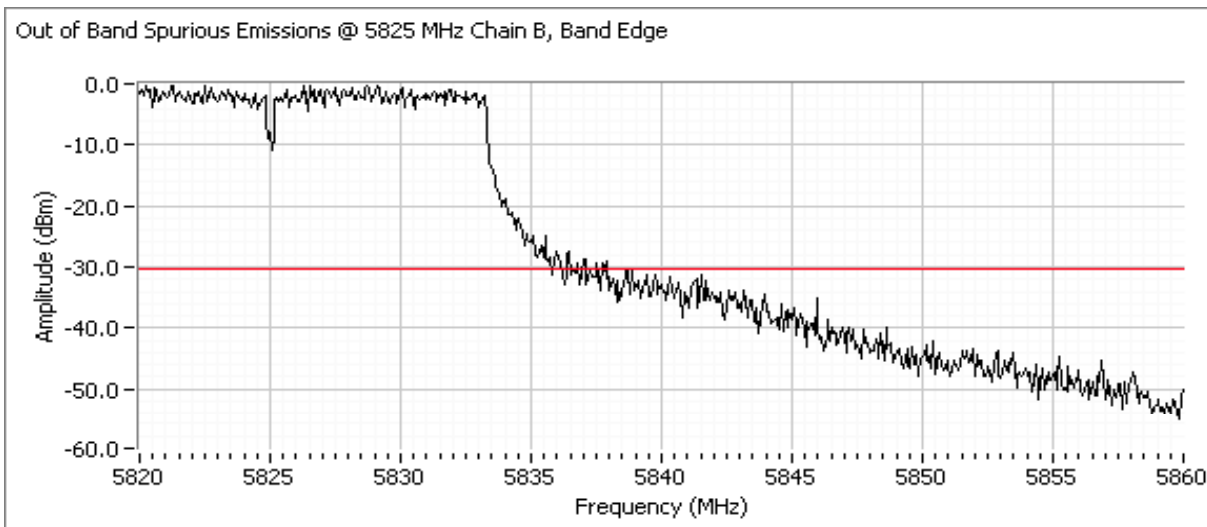
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #4: Out of Band Spurious Emissions
Plots for center channel, Chain B power setting(s) = 25.5

Plots for high channel, Chain B power setting(s) = 26


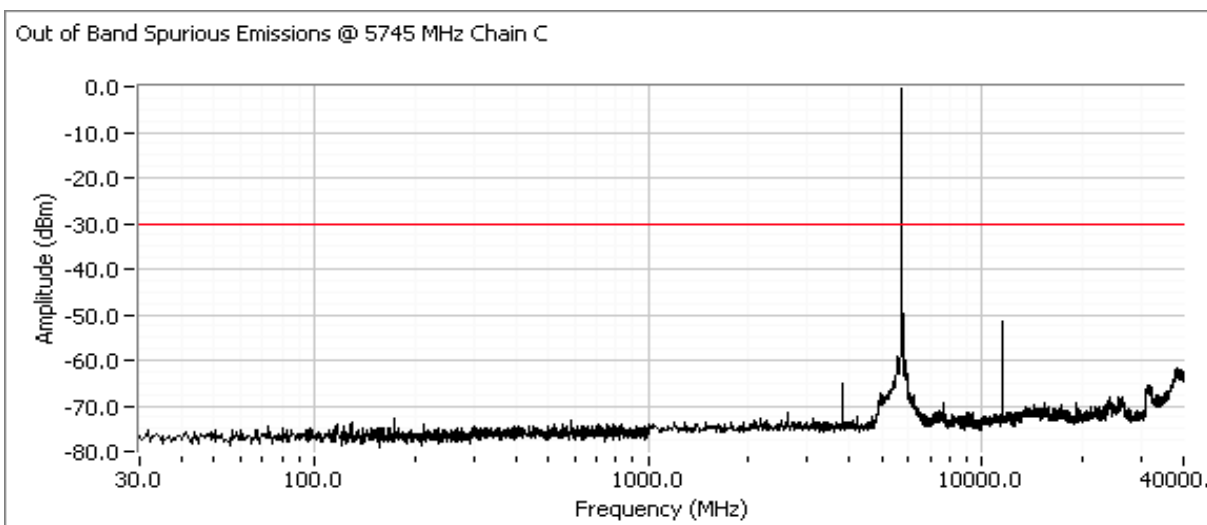
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #4: Out of Band Spurious Emissions

Additional plot from 5820 - 5860 MHz showing compliance with -30dBc at the band edge.



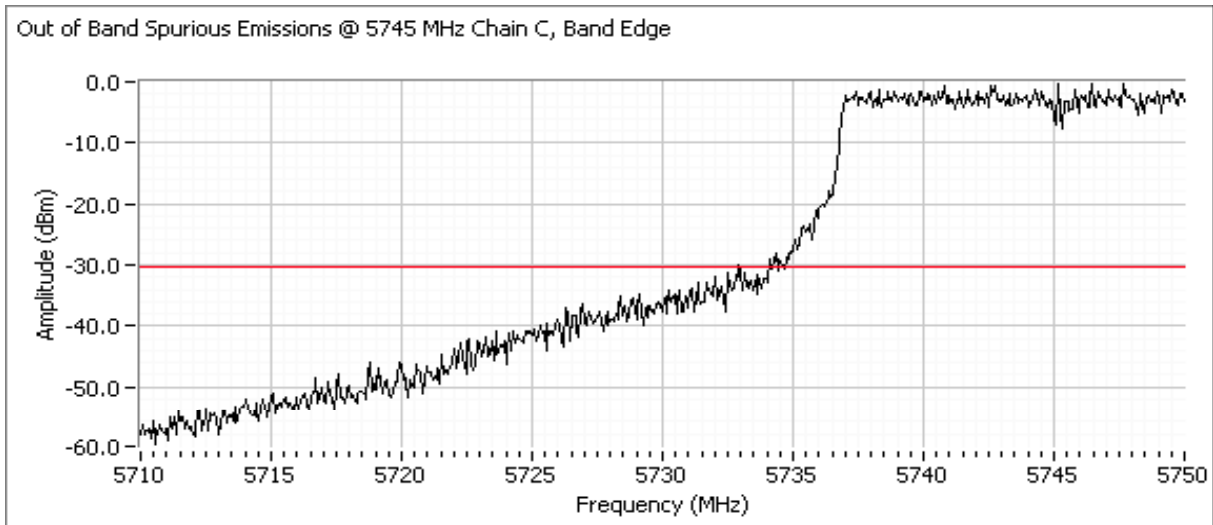
Plots for low channel, Chain C power setting(s) = 25.5



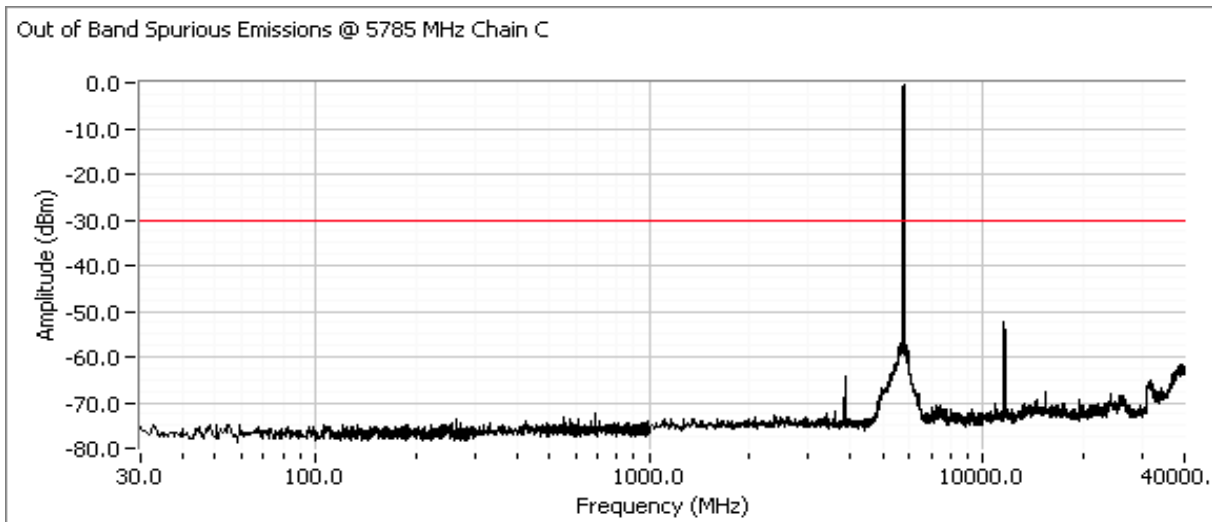
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #4: Out of Band Spurious Emissions

Additional plot from 5715 - 5755 MHz showing compliance with -30dBc at the band edge.



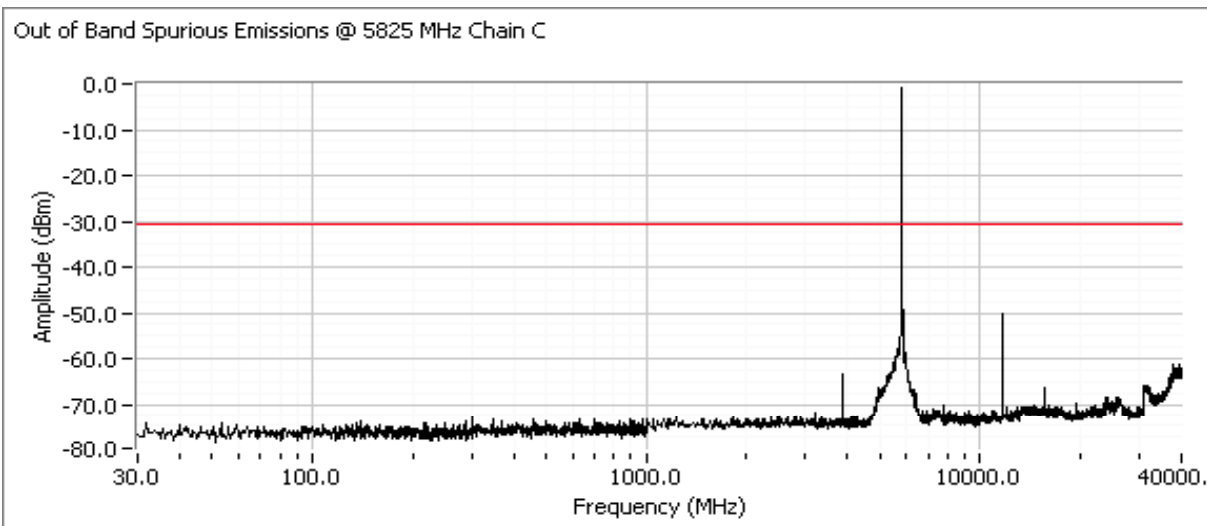
Plots for center channel, Chain C power setting(s) = 26



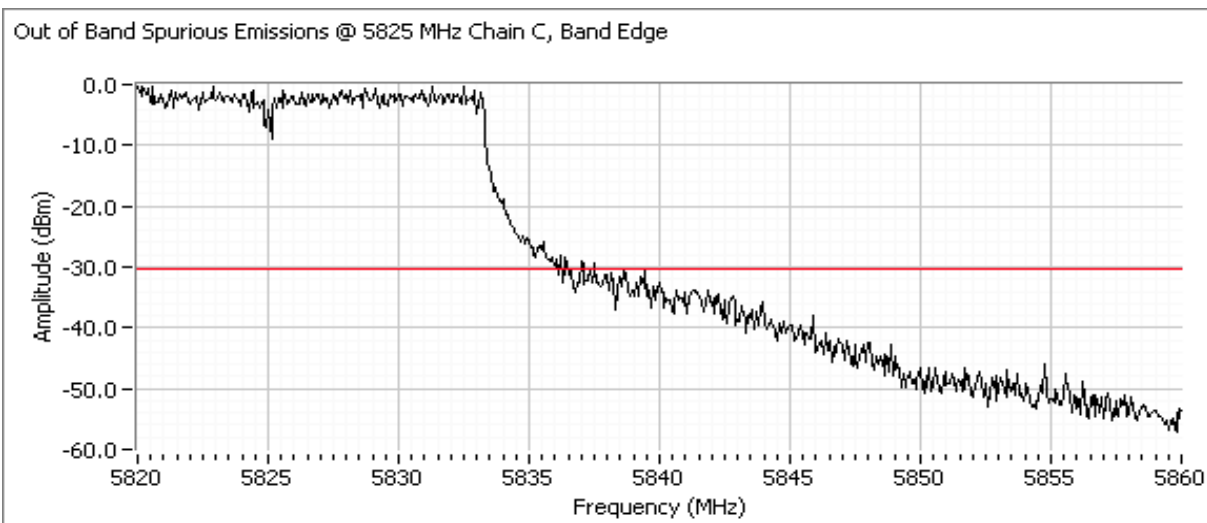
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #4: Out of Band Spurious Emissions

Plots for high channel, Chain C power setting(s) = 26.5



Additional plot from 5820 - 5860 MHz showing compliance with -30dBc at the band edge.



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| | Account Manager: Dean Eriksen |
| Contact: Robert Paxman | |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

**RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
802.11n 20MHz Single Chain**

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 4/9/2008
 Test Engineer: Rafael Varelas
 Test Location: FT Lab # 1

Config. Used: 1
 Config Change: None
 EUT Voltage: Powered From Host System(3.3V DC)

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions: Temperature: 21.4 °C
 Rel. Humidity: 35 %

Summary of Results

| Run # | Test Performed | Limit | Pass / Fail | Result / Margin |
|-------|--|-----------|-------------|--------------------------------------|
| 1 | Output Power | 15.247(b) | Pass | 15.9 dBm(38.9mW) |
| 2 | Power spectral Density (PSD) | 15.247(d) | Pass | -7.6 dBm/3kHz |
| 3 | 6dB Bandwidth | 15.247(a) | Pass | 17.7 MHz |
| 3 | 99% Bandwidth | RSS GEN | - | 18.6 MHz |
| 4 | Antenna Conducted - Out of Band Spurious | 15.247(b) | Pass | All emissions below the -30dBc limit |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

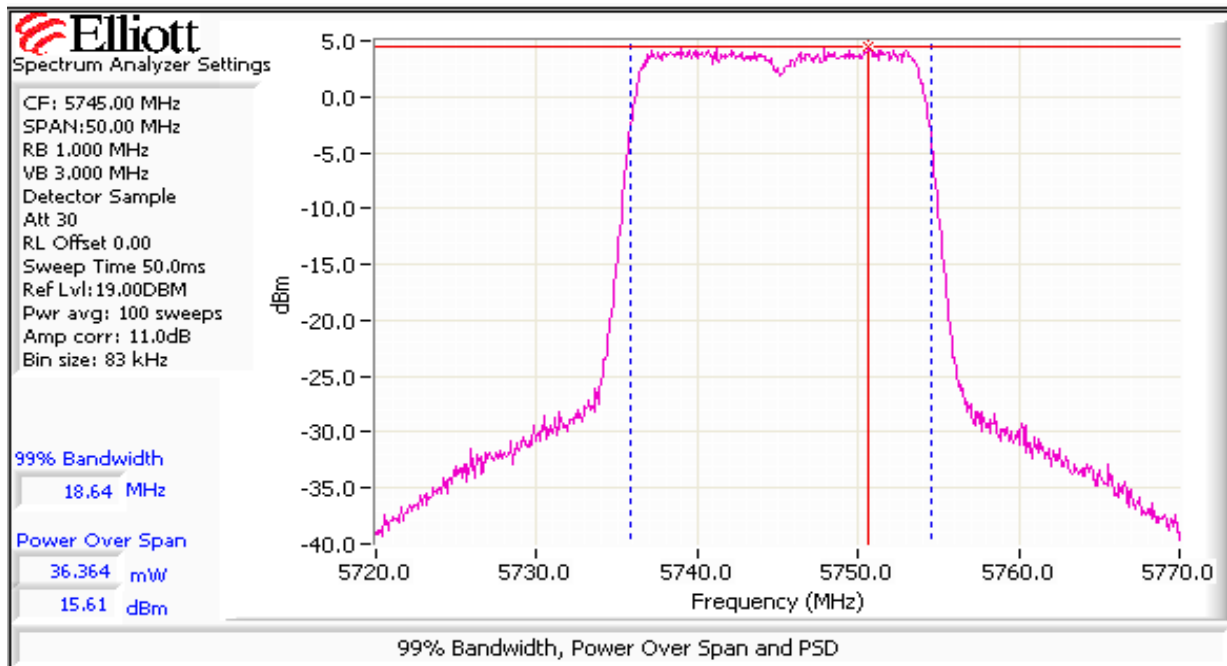
No deviations were made from the requirements of the standard.

| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| | Account Manager: Dean Eriksen |
| Contact: Robert Paxman | |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

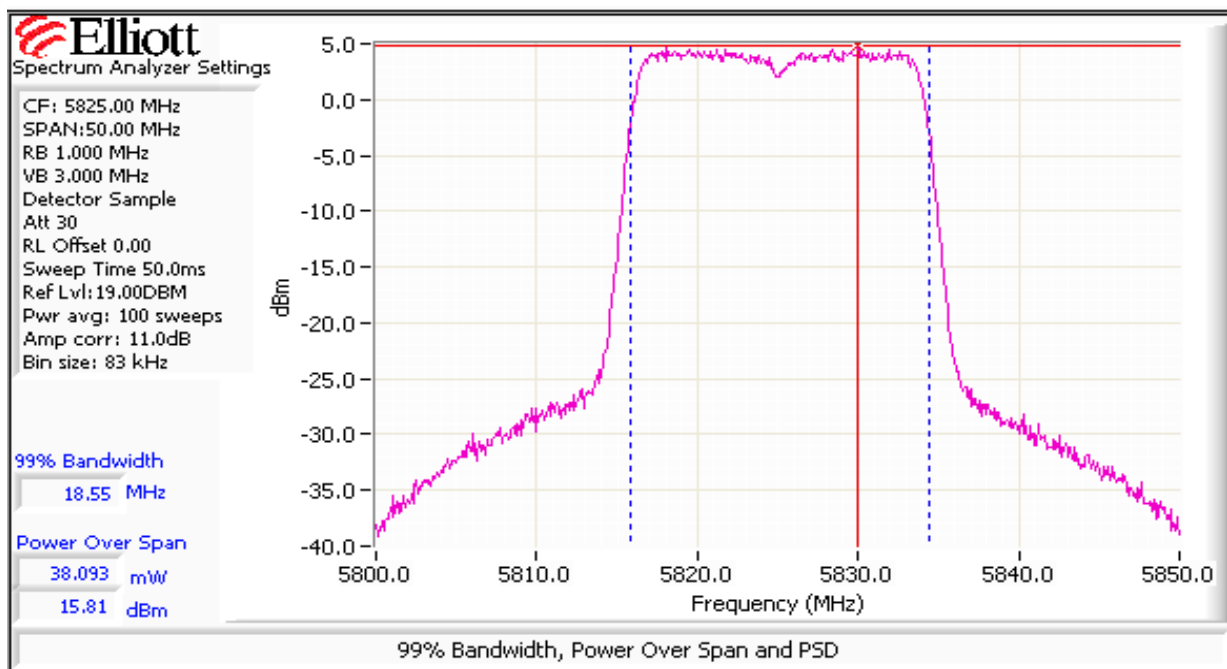
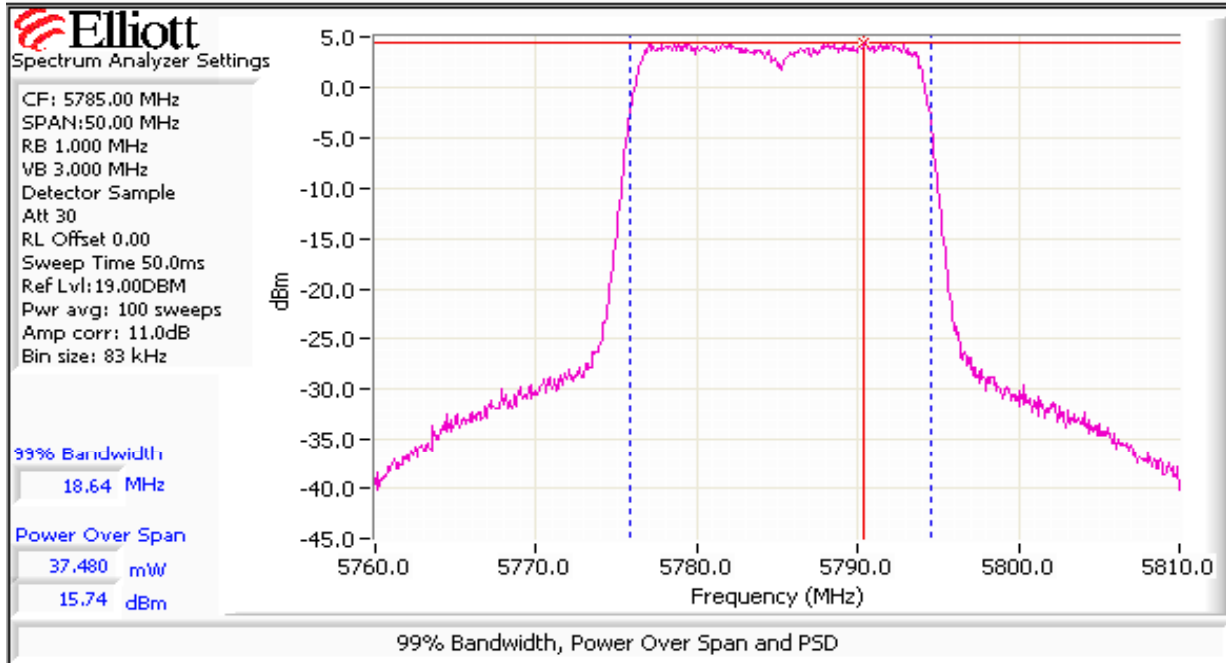
Run #1: Output Power

| Power Setting ² | Frequency (MHz) | Output Power | | Antenna Gain (dBi) | Result | EIRP ^{Note 2} | | Output Power | |
|----------------------------|-----------------|--------------------|------|--------------------|--------|------------------------|-------|--------------------|------|
| | | (dBm) ¹ | mW | | | dBm | W | (dBm) ³ | mW |
| 26 | 5745, Chain A | 15.6 | 36.3 | 5.0 | Pass | 20.6 | 0.115 | 16.7 | 46.8 |
| 26 | 5785, Chain A | 15.7 | 37.2 | 5.0 | Pass | 20.7 | 0.117 | 16.6 | 45.7 |
| 26.5 | 5825, Chain A | 15.8 | 38.0 | 5.0 | Pass | 20.8 | 0.120 | 16.7 | 46.8 |
| 25.5 | 5745, Chain B | 15.9 | 38.9 | 5.0 | Pass | 20.9 | 0.123 | 16.8 | 47.9 |
| 25.5 | 5785, Chain B | 15.5 | 35.5 | 5.0 | Pass | 20.5 | 0.112 | 16.7 | 46.8 |
| 26 | 5825, Chain B | 15.9 | 38.9 | 5.0 | Pass | 20.9 | 0.123 | 16.6 | 45.7 |
| 26 | 5745, Chain C | 15.8 | 38.0 | 5.0 | Pass | 20.8 | 0.120 | 16.6 | 45.7 |
| 26 | 5785, Chain C | 15.7 | 37.2 | 5.0 | Pass | 20.7 | 0.117 | 16.5 | 44.7 |
| 26.5 | 5825, Chain C | 15.9 | 38.9 | 5.0 | Pass | 20.9 | 0.123 | 16.7 | 46.8 |

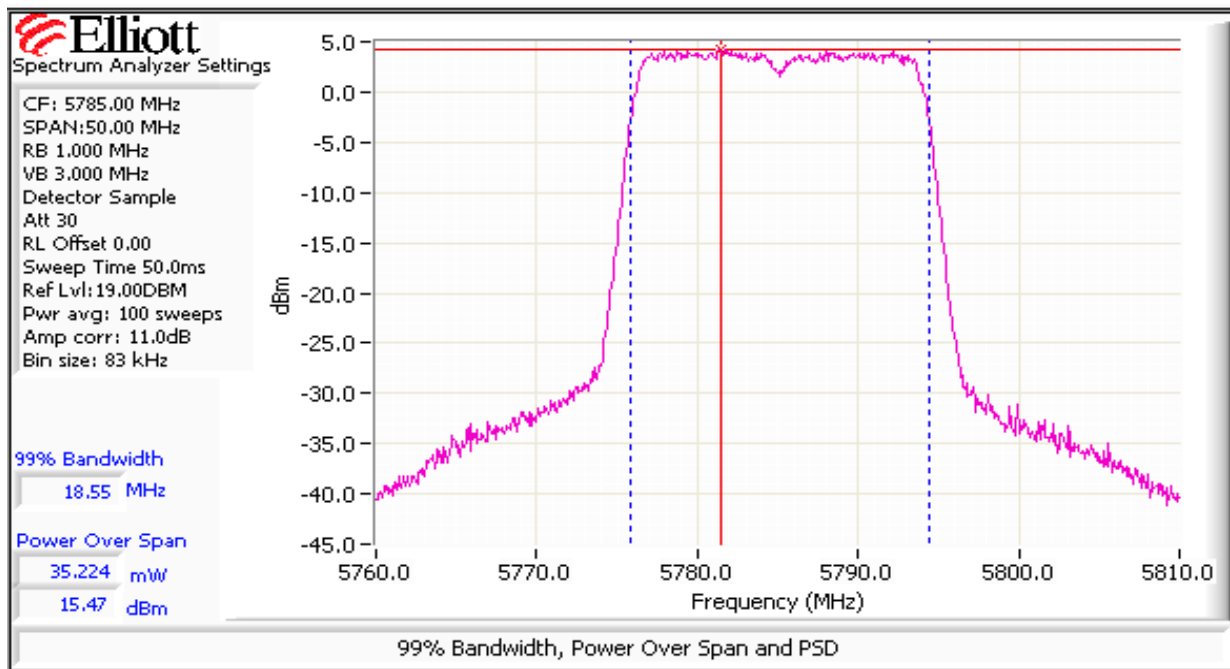
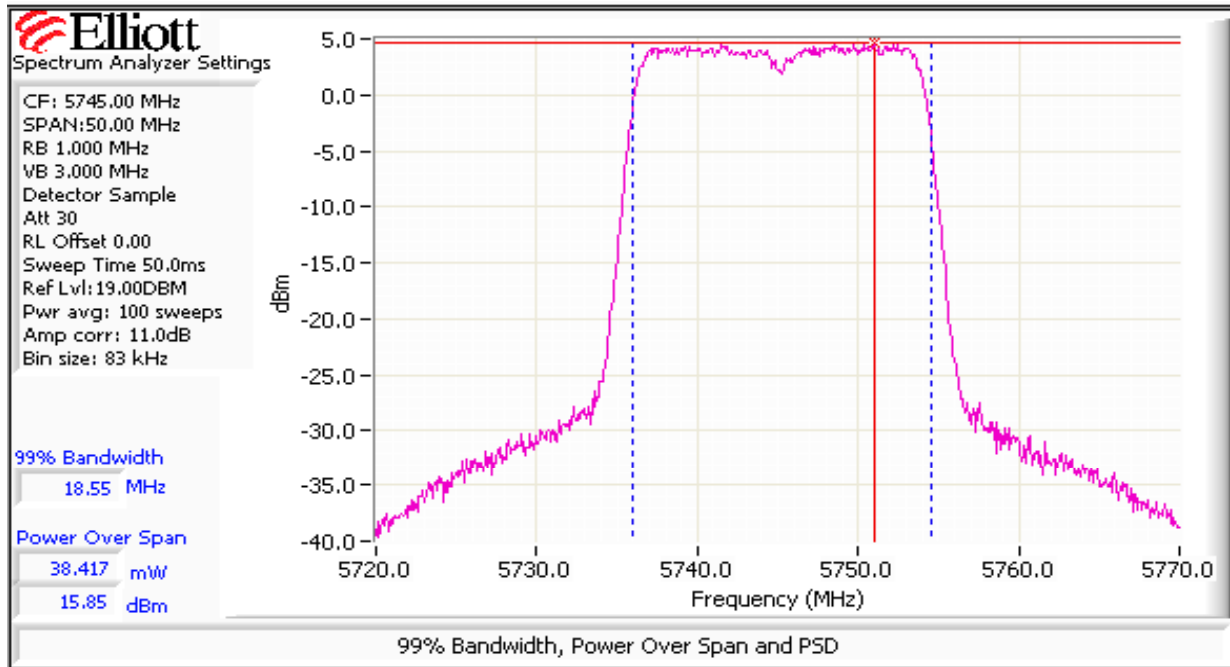
- Note 1: Output power measured using a spectrum analyzer (see plots below):
 RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over 50 MHz. Spurious limit is -30dBc because this method was used.
 The output power limit is 30dBm.
- Note 2: Power setting - the software power setting used during testing, included for reference only.
- Note 3: Power measured using average power sensor and is included for manufacturer's reference only.



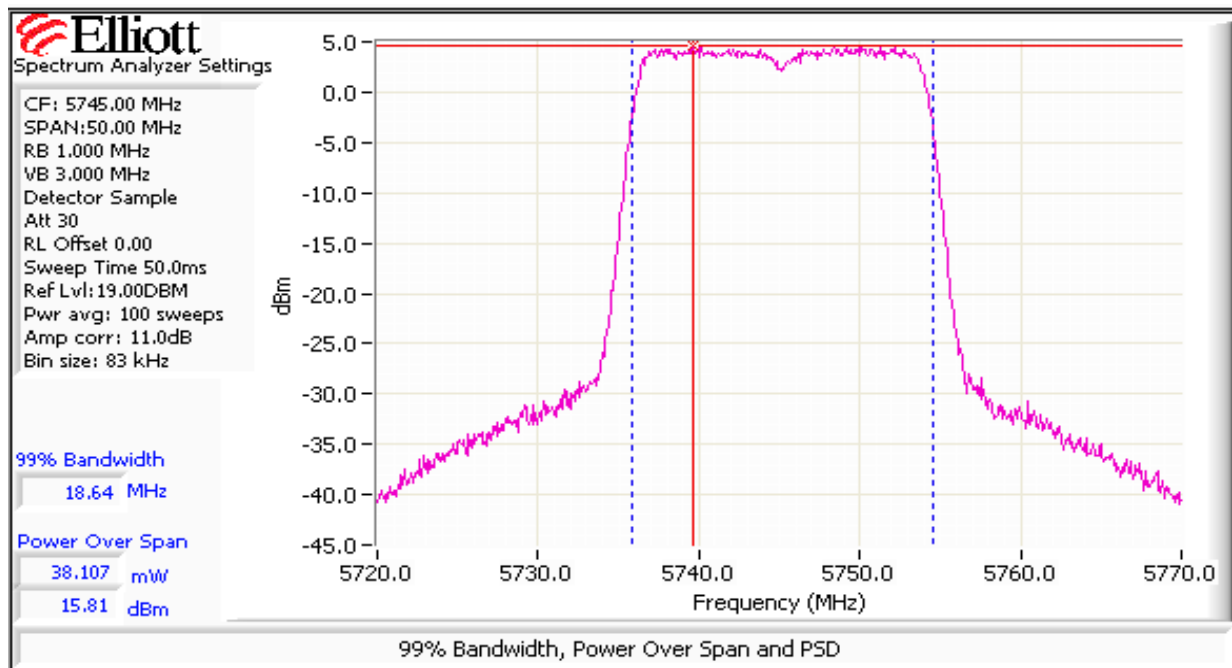
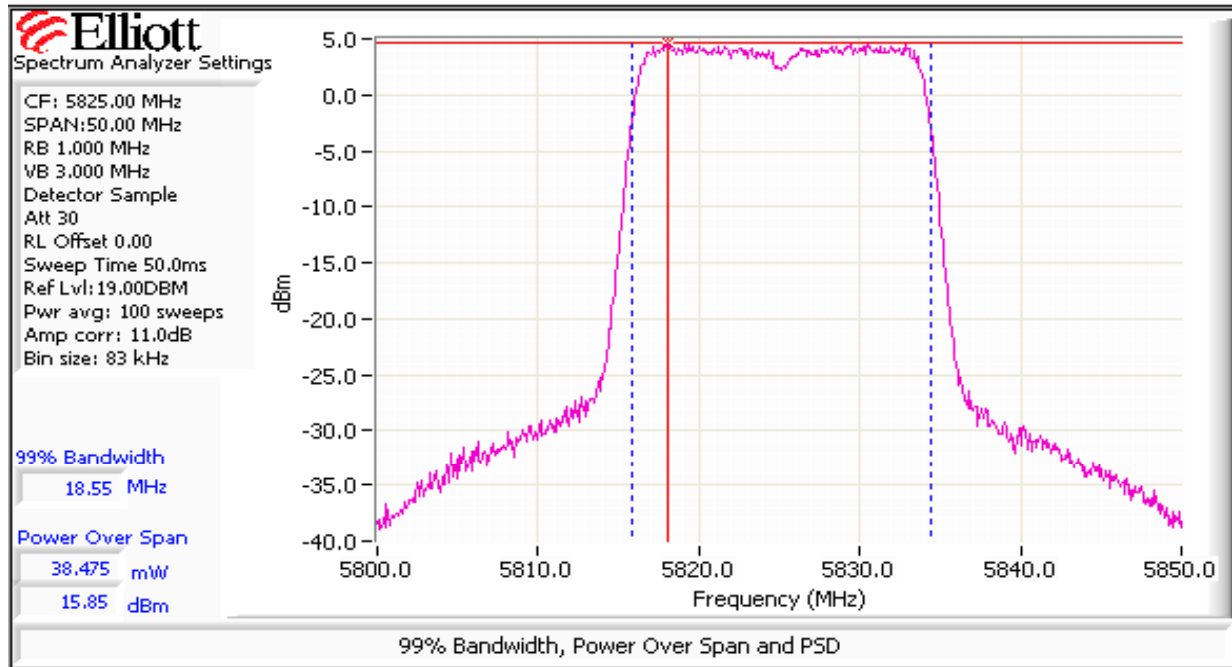
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



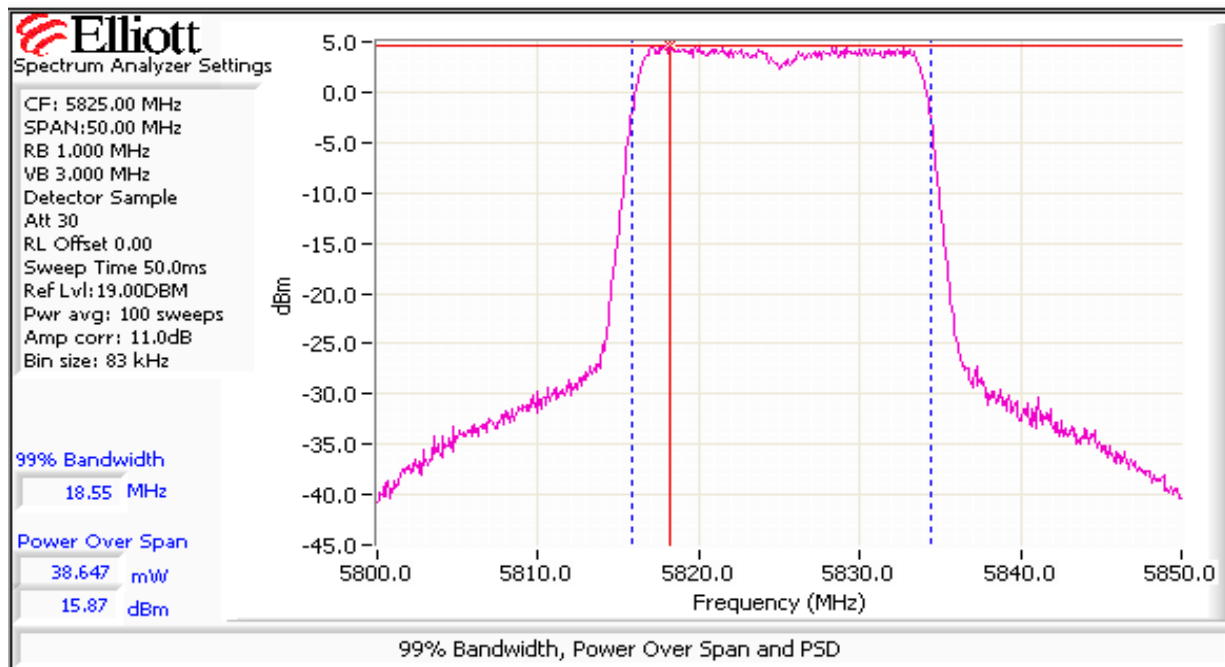
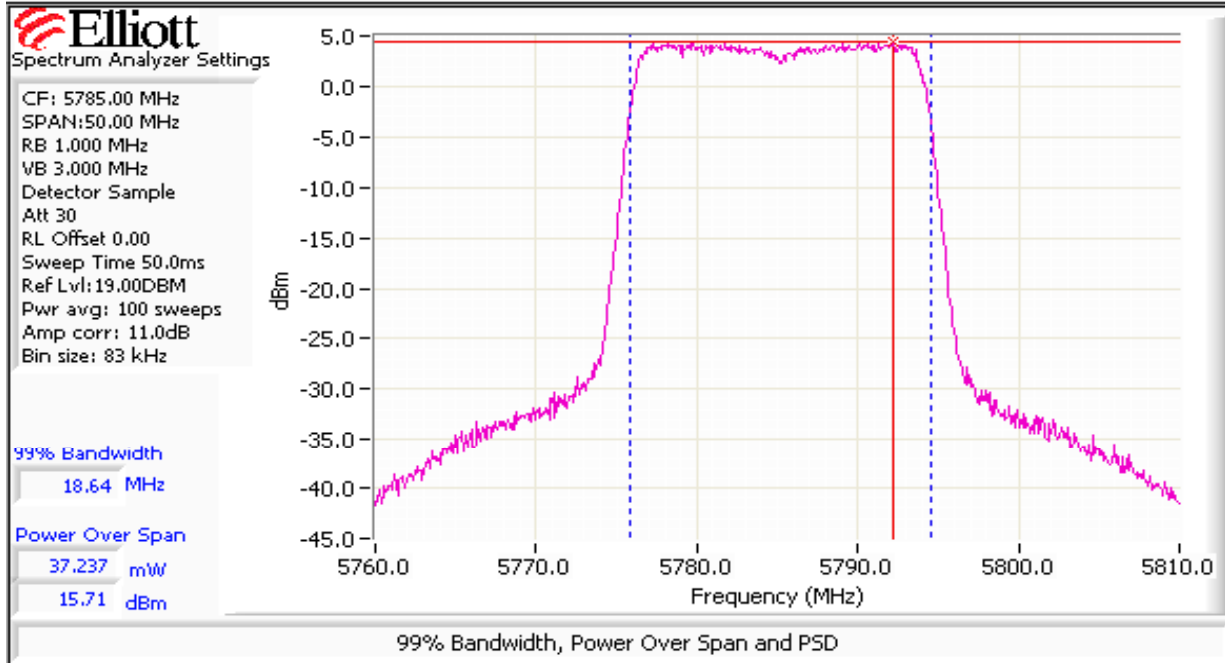
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

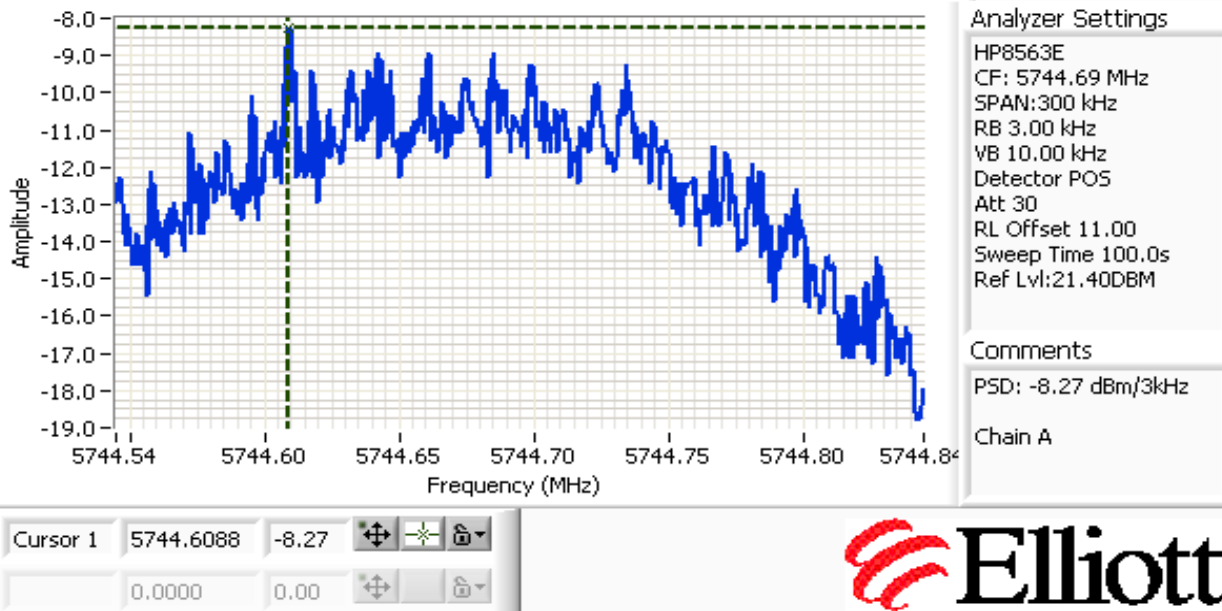


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

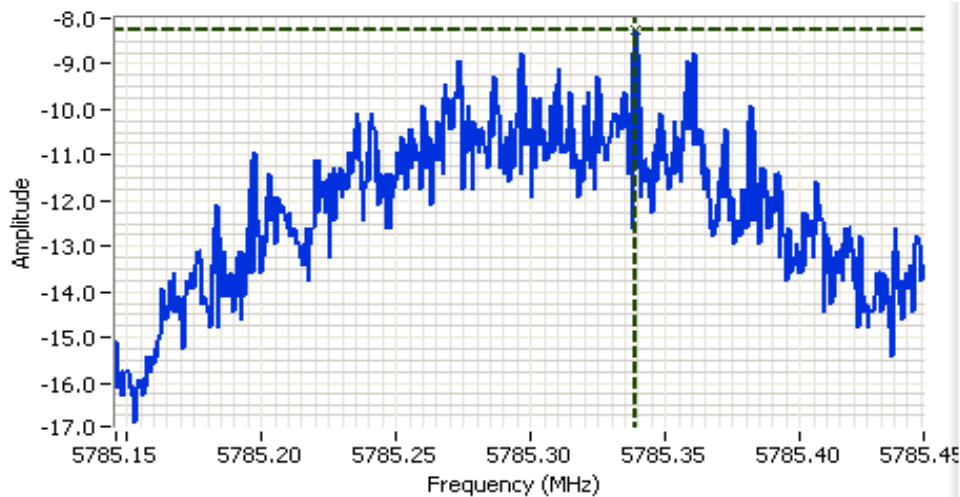
Run #2: Power spectral Density

| Power Setting | Frequency (MHz) | PSD | Limit dBm/3kHz | Result |
|---------------|-----------------|------------------------------|-------------------|--------|
| | | (dBm/3kHz) ^{Note 1} | | |
| 26 | 5745, Chain A | -8.3 | 8.0 | Pass |
| 26 | 5785, Chain A | -8.3 | 8.0 | Pass |
| 26.5 | 5825, Chain A | -7.8 | 8.0 | Pass |
| 25.5 | 5745, Chain B | -8.3 | 8.0 | Pass |
| 25.5 | 5785, Chain B | -8.6 | 8.0 | Pass |
| 26 | 5825, Chain B | -7.6 | 8.0 | Pass |
| 26 | 5745, Chain C | -8.6 | 8.0 | Pass |
| 26 | 5785, Chain C | -8.4 | 8.0 | Pass |
| 26.5 | 5825, Chain C | -8.4 | 8.0 | Pass |

Note 1: Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings

HP8563E
 CF: 5785.30 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 30
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 21.40DBM

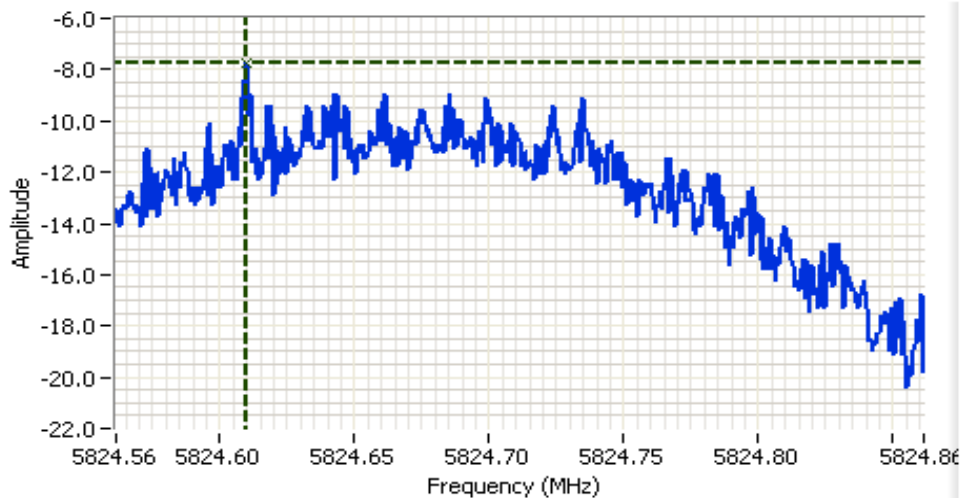
Comments

PSD: -8.27 dBm/3kHz

Chain A

Cursor 1 5785.3389 -8.27

0.0000 0.00



Analyzer Settings

HP8563E
 CF: 5824.71 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 30
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 21.40DBM

Comments

PSD: -7.77 dBm/3kHz

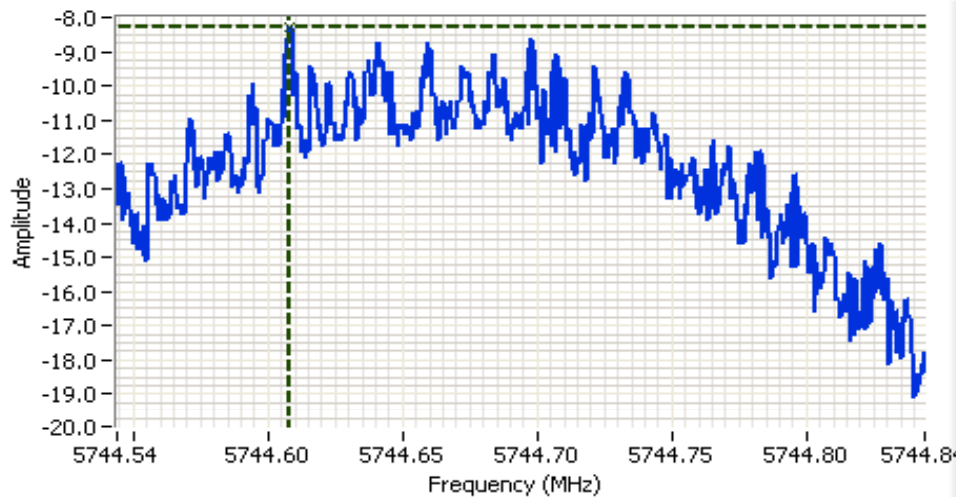
Chain A

Cursor 1 5824.6099 -7.77

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings

HP8563E
 CF: 5744.69 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 30
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.40DBM

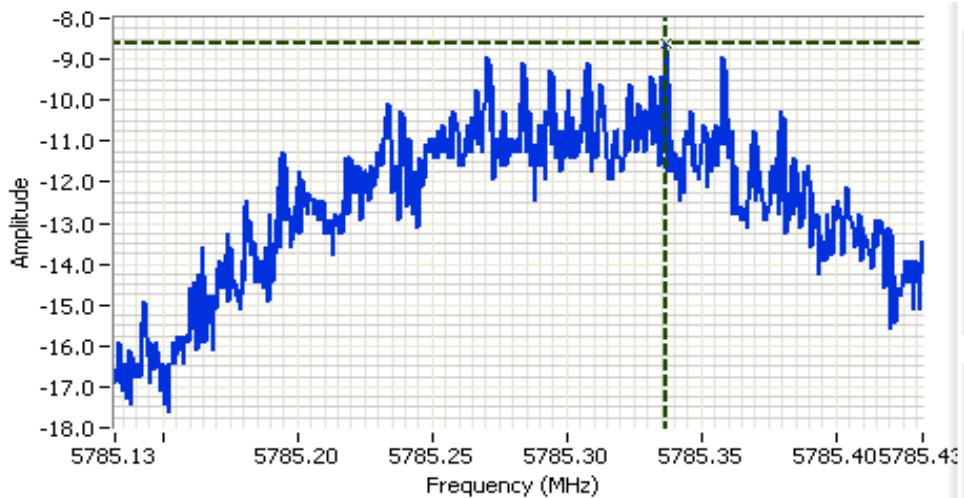
Comments

PSD: -8.27 dBm/3kHz

Chain B

Cursor 1 5744.6078 -8.27

0.0000 0.00



Analyzer Settings

HP8563E
 CF: 5785.28 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 30
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.40DBM

Comments

PSD: -8.6 dBm/3kHz

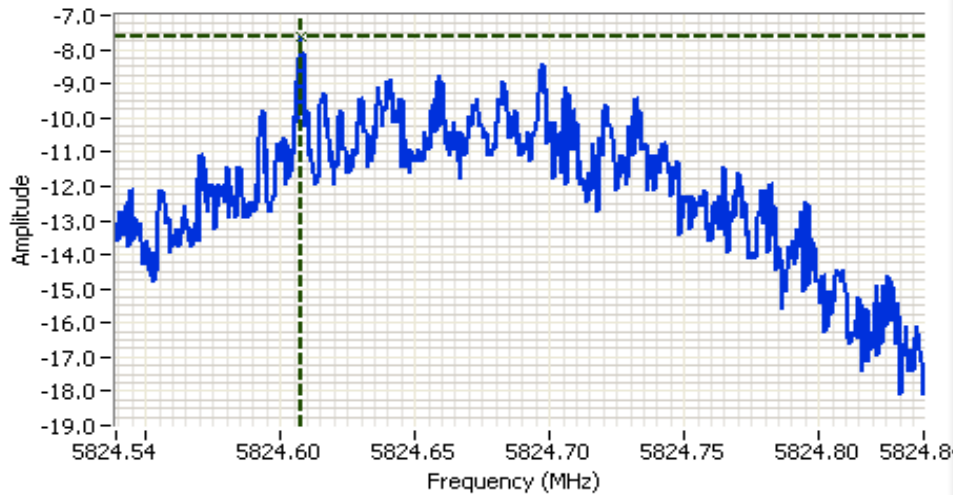
Chain B

Cursor 1 5785.3367 -8.60

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



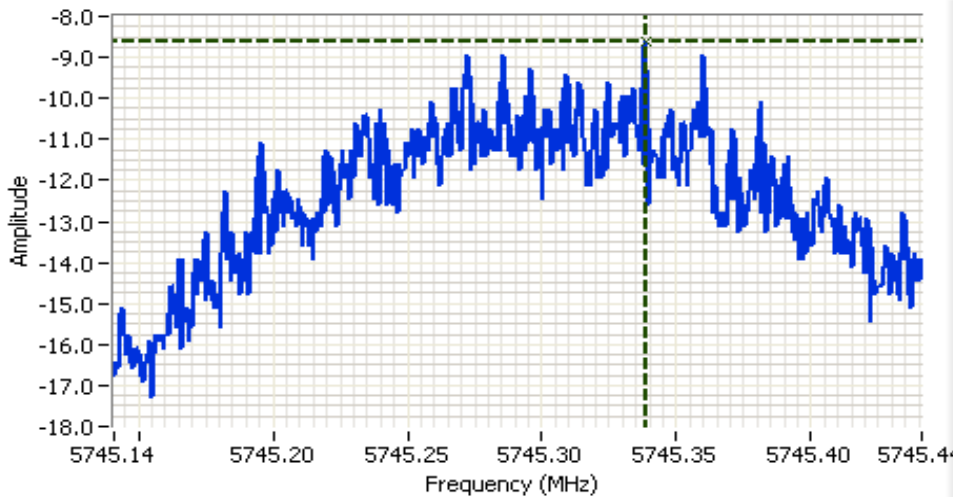
Analyzer Settings
 HP8563E
 CF: 5824.69 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 30
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.40DBM

Comments
 PSD: -7.6 dBm/3kHz

Chain B

Cursor 1 5824.6075 -7.60

0.0000 0.00



Analyzer Settings
 HP8563E
 CF: 5745.29 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 30
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.40DBM

Comments
 PSD: -8.6 dBm/3kHz

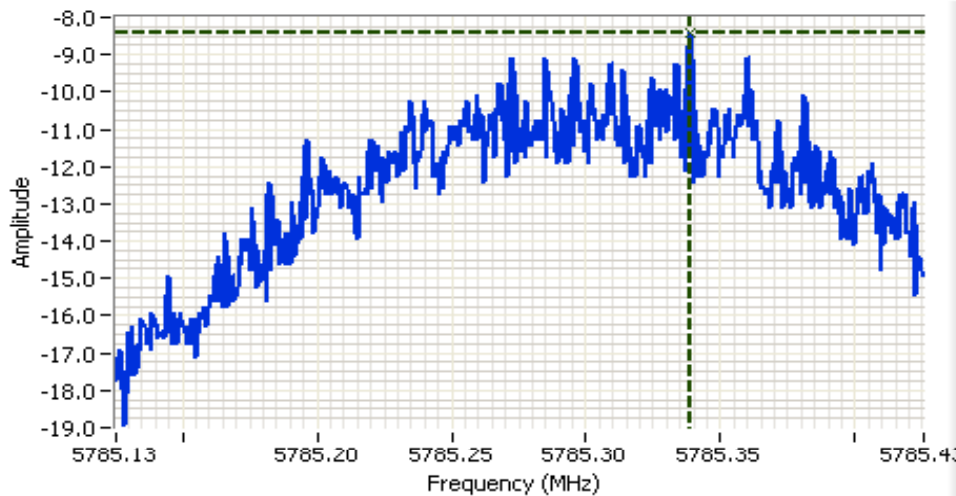
Chain C

Cursor 1 5745.3385 -8.60

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings

HP8563E
 CF: 5785.28 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 30
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.40DBM

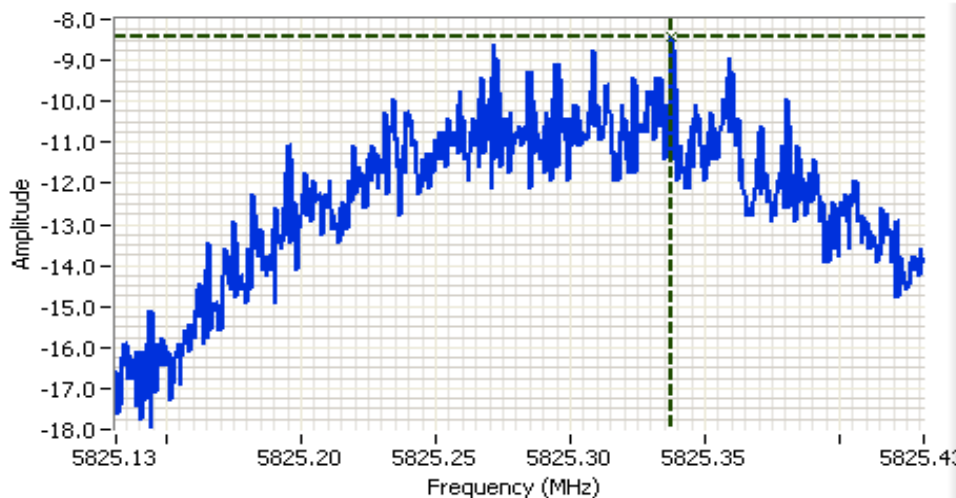
Comments

PSD: -8.43 dBm/3kHz

Chain C

Cursor 1 5785.3389 -8.43

0.0000 0.00



Analyzer Settings

HP8563E
 CF: 5825.28 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 30
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.40DBM

Comments

PSD: -8.43 dBm/3kHz

Chain C

Cursor 1 5825.3378 -8.43

0.0000 0.00

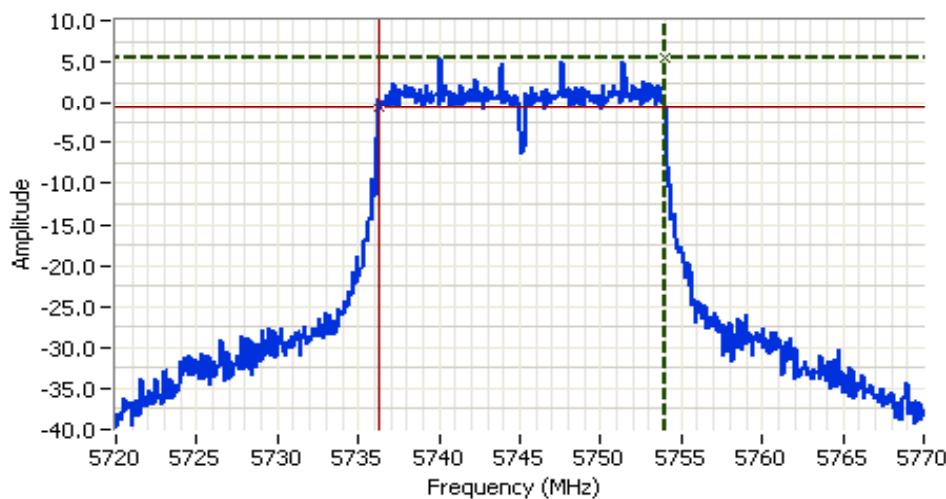


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #3: Signal Bandwidth

| Power Setting | Frequency (MHz) | Resolution Bandwidth | Bandwidth (MHz) | |
|---------------|-----------------|----------------------|-----------------|-------|
| | | | 6dB | 99% |
| 26 | 5745, Chain A | 100kHz | 17.67 | 18.64 |
| 26 | 5785, Chain A | 100kHz | 17.67 | 18.64 |
| 26.5 | 5825, Chain A | 100kHz | 17.60 | 18.55 |
| 25.5 | 5785, Chain B | 100kHz | 17.60 | 18.55 |
| 26 | 5785, Chain C | 100kHz | 17.67 | 18.64 |

- Note 1: 99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB
- Note 2: Center channel of Chains B and C measured to verify no significant difference in signal bandwidth from Chain A.



Analyzer Settings

HP8563E
 CF: 5745.00 MHz
 SPAN: 50.00 MHz
 RB 100 kHz
 VB 100 kHz
 Detector POS
 Att 30
 RL Offset 11.00
 Sweep Time 50.0ms
 Ref Lvl: 21.40DBM

Comments

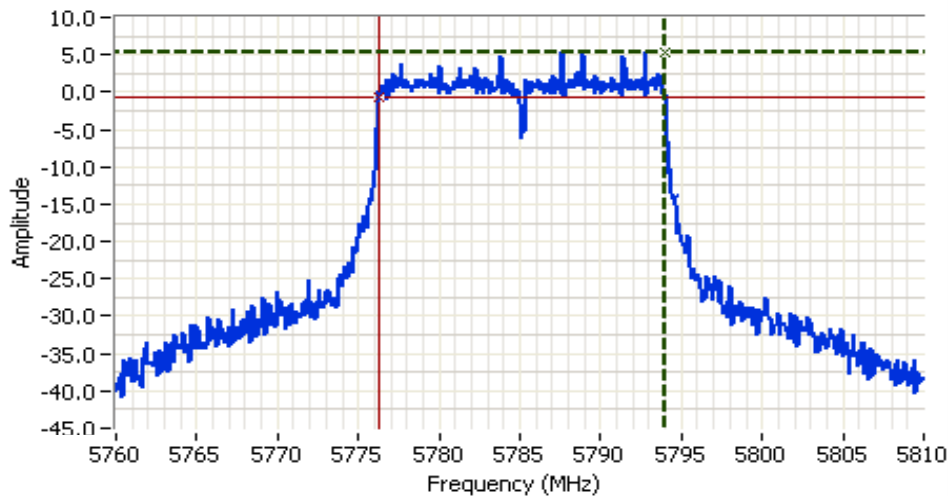
6dB Bandwidth:
 17.67 MHz

Chain A

| | | | | | |
|----------|-----------|-------|--|-----------------|-------|
| Cursor 1 | 5754.0000 | 5.40 | | Delta Freq. | 17.67 |
| Cursor 2 | 5736.3333 | -0.60 | | Delta Amplitude | 6.00 |



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings

HP8563E
 CF: 5785.00 MHz
 SPAN:50.00 MHz
 RB 100 kHz
 VB 100 kHz
 Detector POS
 Att 30
 RL Offset 11.00
 Sweep Time 50.0ms
 Ref Lvl:21.40DBM

Comments

6dB Bandwidth:
 17.67 MHz

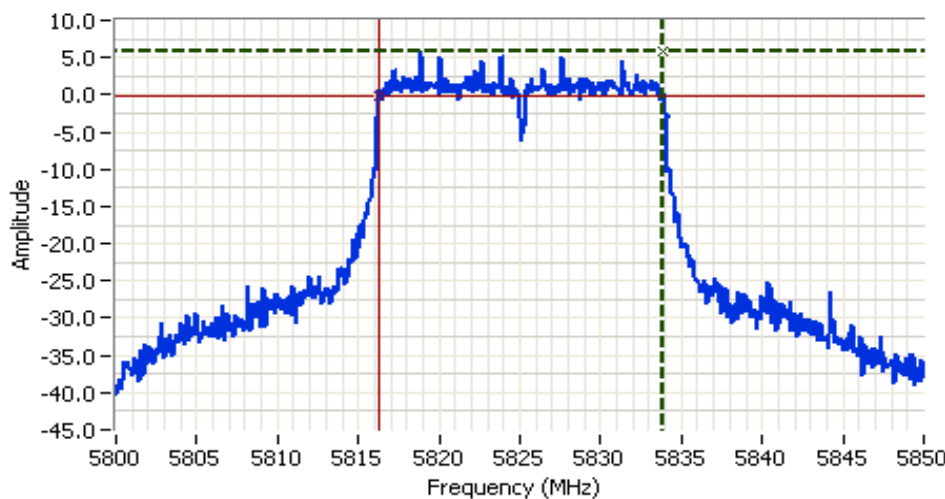
Chain A

Cursor 1 5794.0000 5.40

Cursor 2 5776.3333 -0.60

Delta Freq. 17.67

Delta Amplitude 6.00



Analyzer Settings

HP8563E
 CF: 5825.00 MHz
 SPAN:50.00 MHz
 RB 100 kHz
 VB 100 kHz
 Detector POS
 Att 30
 RL Offset 11.00
 Sweep Time 50.0ms
 Ref Lvl:21.40DBM

Comments

6dB Bandwidth:
 17.58 MHz

Chain A

Cursor 1 5833.9167 5.90

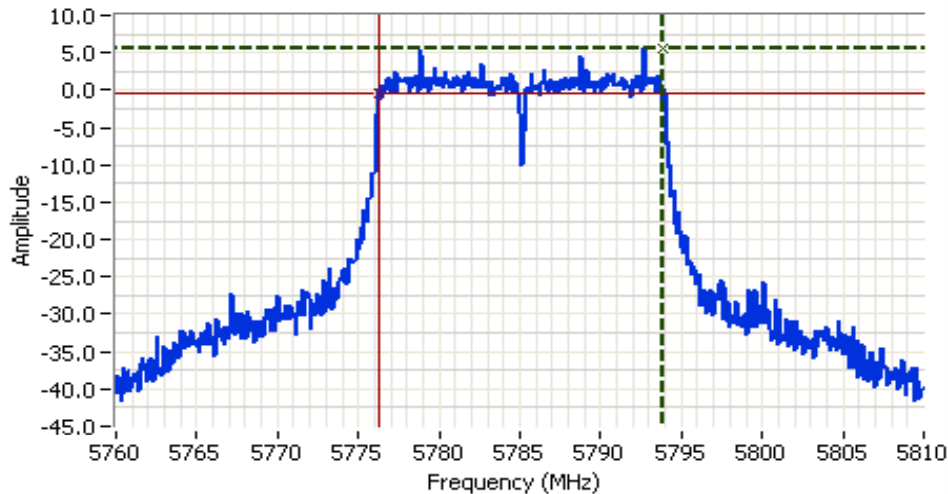
Cursor 2 5816.3333 -0.10

Delta Freq. 17.58

Delta Amplitude 6.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings

HP8563E
 CF: 5785.00 MHz
 SPAN:50.00 MHz
 RB 100 kHz
 VB 100 kHz
 Detector POS
 Att 30
 RL Offset 11.00
 Sweep Time 50.0ms
 Ref Lvl:21.40DBM

Comments

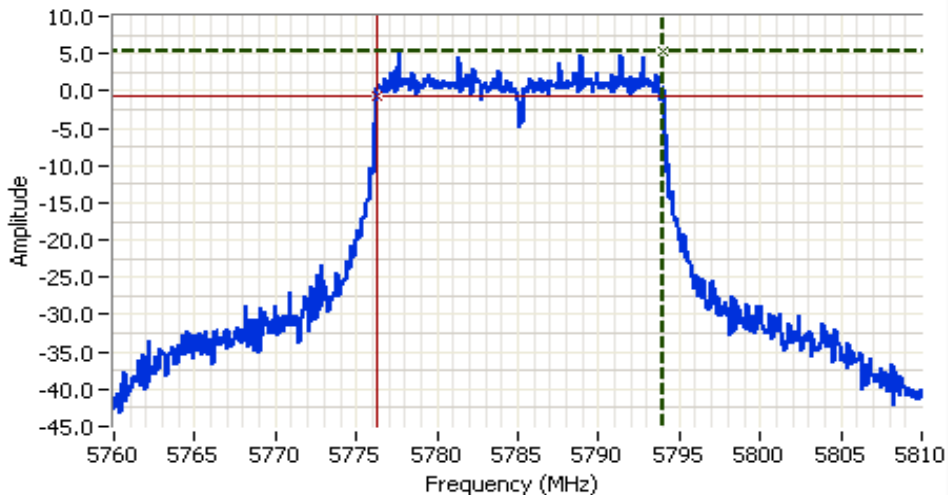
6dB Bandwidth:
 17.58 MHz

Chain B

| | | | |
|----------|-----------|-------|--|
| Cursor 1 | 5793.9167 | 5.57 | |
| Cursor 2 | 5776.3333 | -0.43 | |

Delta Freq. 17.58

Delta Amplitude 6.00



Analyzer Settings

HP8563E
 CF: 5785.00 MHz
 SPAN:50.00 MHz
 RB 100 kHz
 VB 100 kHz
 Detector POS
 Att 30
 RL Offset 11.00
 Sweep Time 50.0ms
 Ref Lvl:21.40DBM

Comments

6dB Bandwidth:
 17.67 MHz

Chain C

| | | | |
|----------|-----------|-------|--|
| Cursor 1 | 5794.0000 | 5.40 | |
| Cursor 2 | 5776.3333 | -0.60 | |

Delta Freq. 17.67

Delta Amplitude 6.00

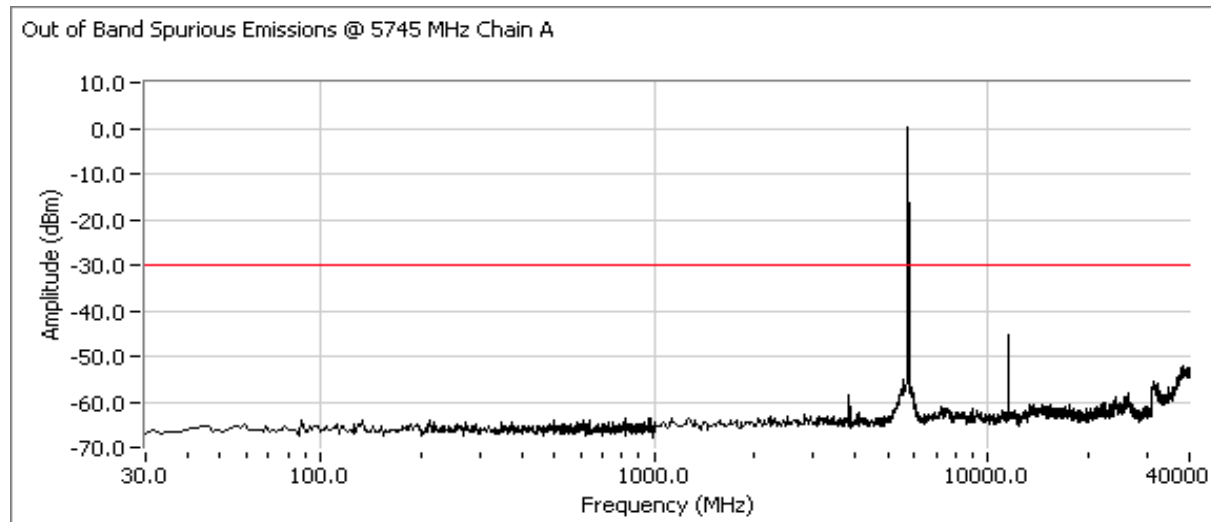


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| | Account Manager: Dean Eriksen |
| Contact: Robert Paxman | |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #4: Out of Band Spurious Emissions
 All measured using RB = 100kHz, VB = 300kHz.

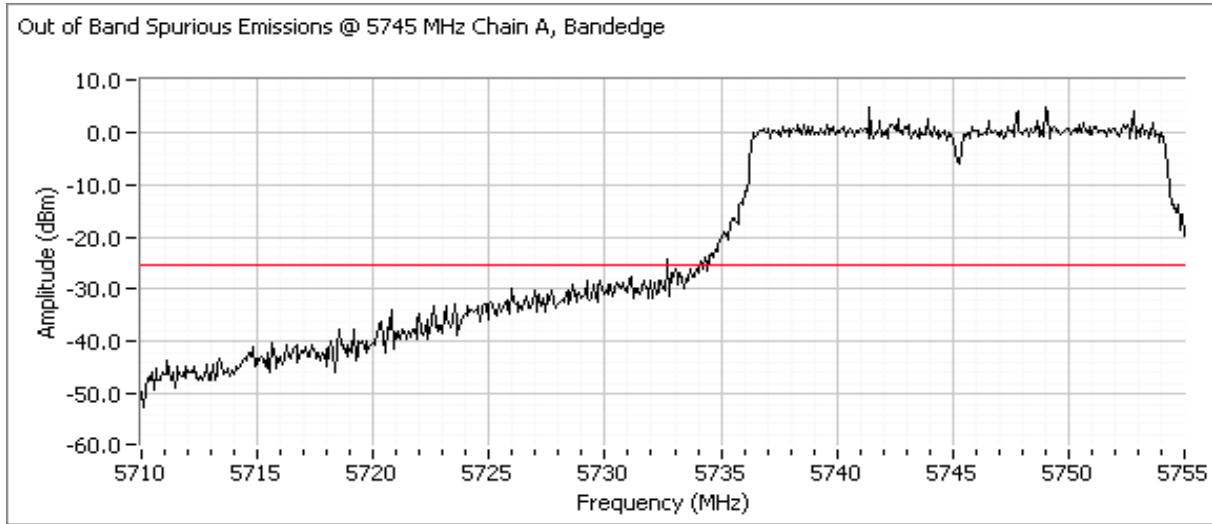
| Frequency (MHz) | Limit | Result |
|-----------------|--------|--------|
| 5745, Chain A | -30dBc | Pass |
| 5785, Chain A | -30dBc | Pass |
| 5825, Chain A | -30dBc | Pass |
| 5745, Chain B | -30dBc | Pass |
| 5785, Chain B | -30dBc | Pass |
| 5825, Chain B | -30dBc | Pass |
| 5745, Chain C | -30dBc | Pass |
| 5785, Chain C | -30dBc | Pass |
| 5825, Chain C | -30dBc | Pass |

Plots for low channel, Chain A power setting(s) = 26.0

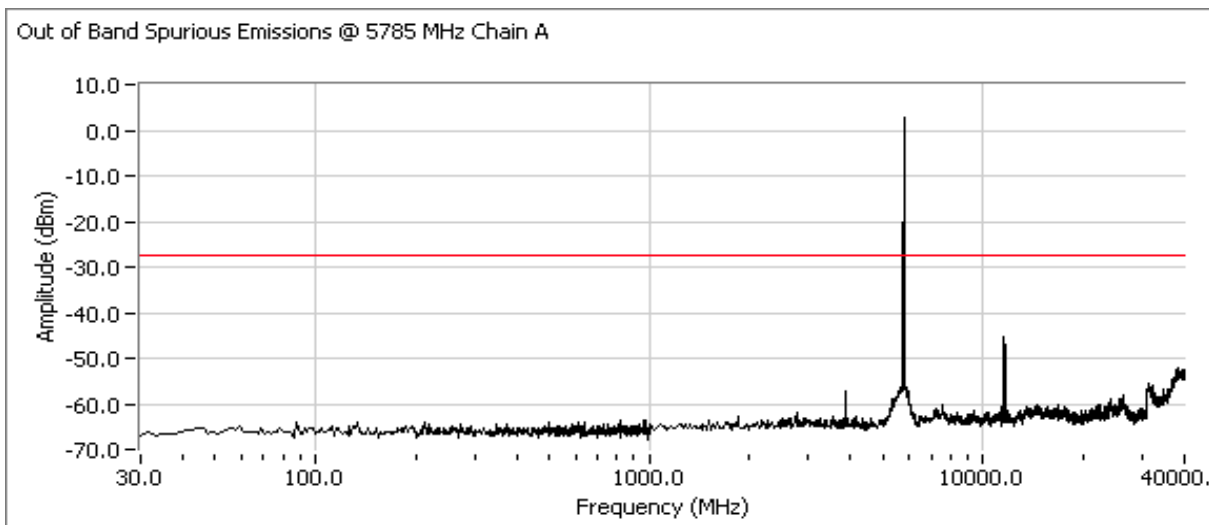


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Additional plot from 5715 - 5755 MHz showing compliance with -30dBc at the band edge.

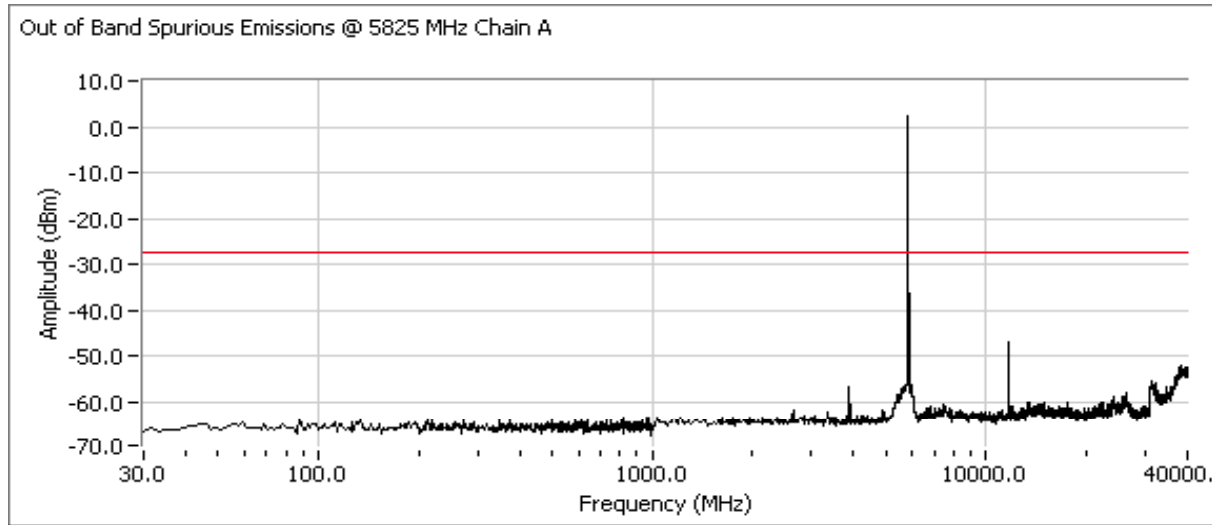


Plots for center channel, Chain A power setting(s) = 26.0

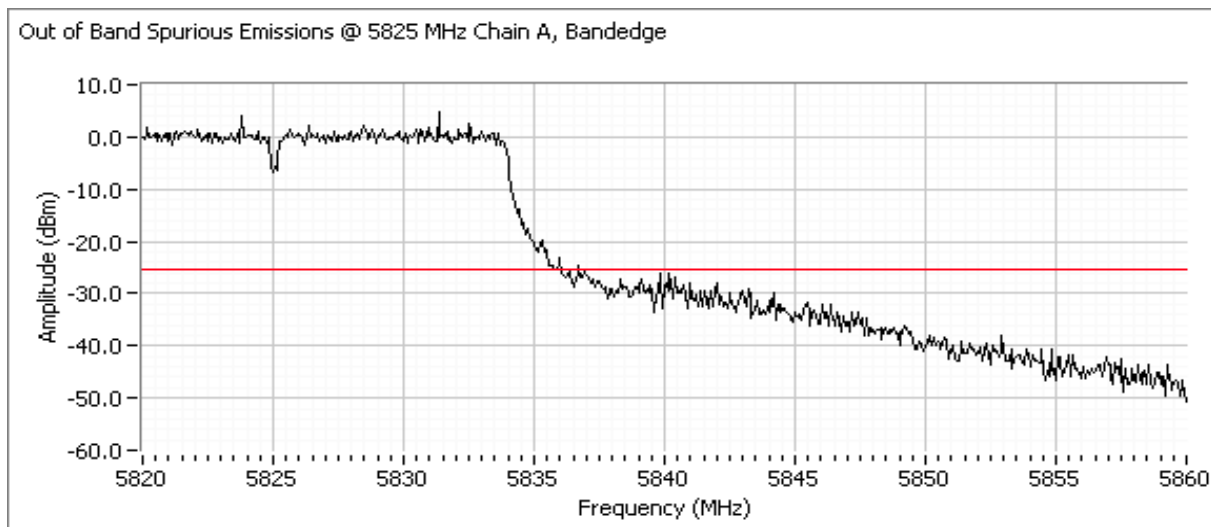


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Plots for high channel, Chain A power setting(s) = 26.5

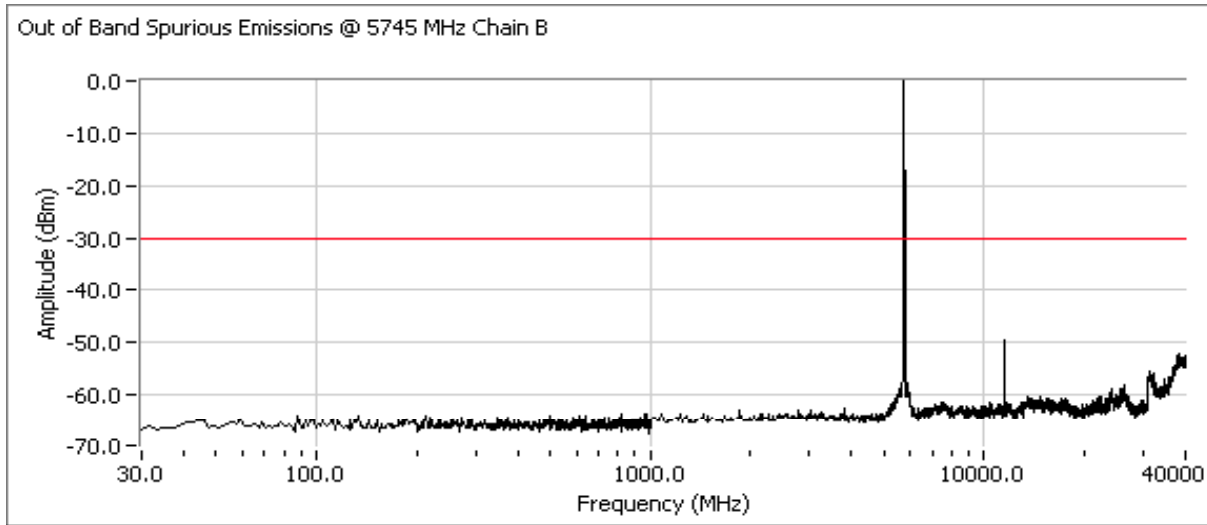


Additional plot from 5820 - 5860 MHz showing compliance with -30dBc at the band edge.

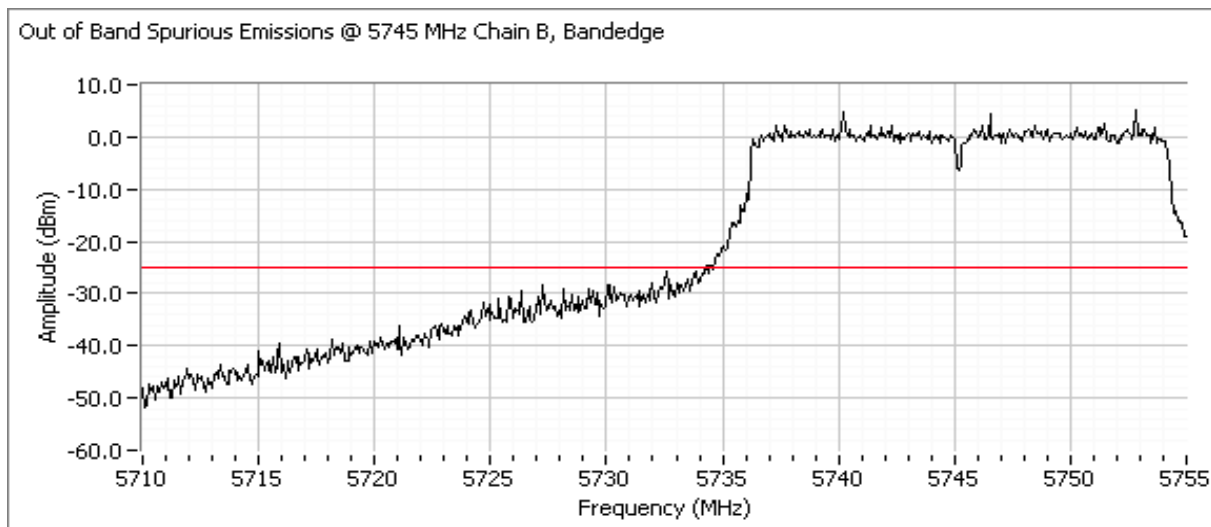


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Plots for low channel, Chain B power setting(s) = 25.5

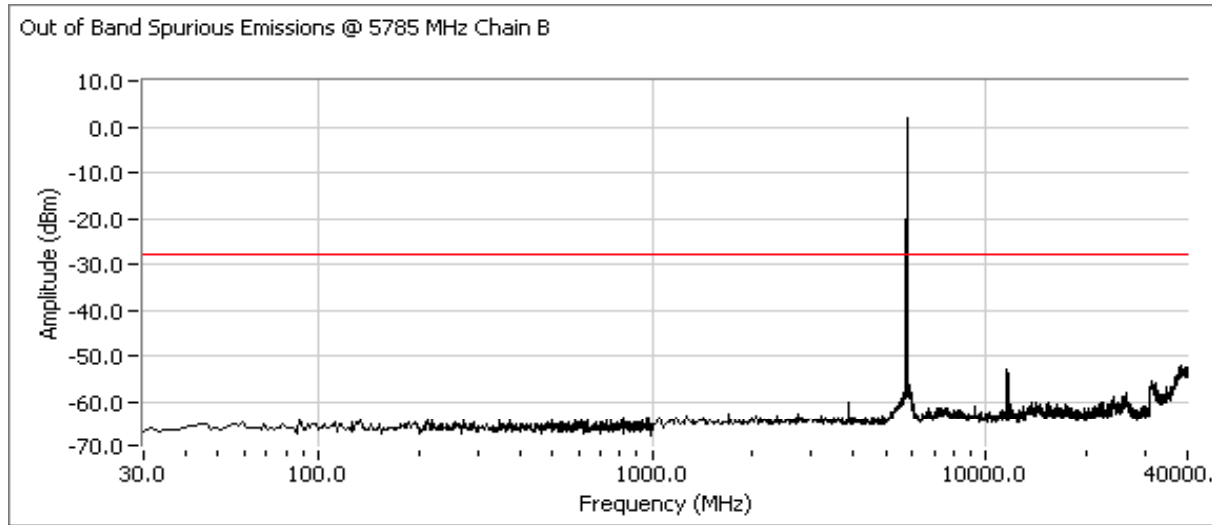


Additional plot from 5715 - 5755 MHz showing compliance with -30dBc at the band edge.

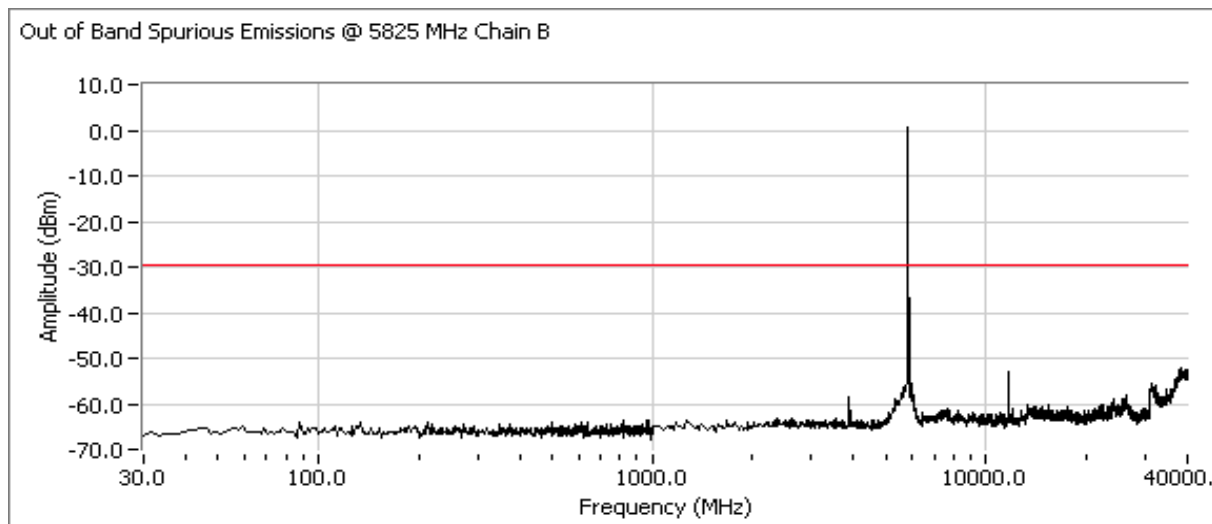


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Plots for center channel, Chain B power setting(s) = 25.5

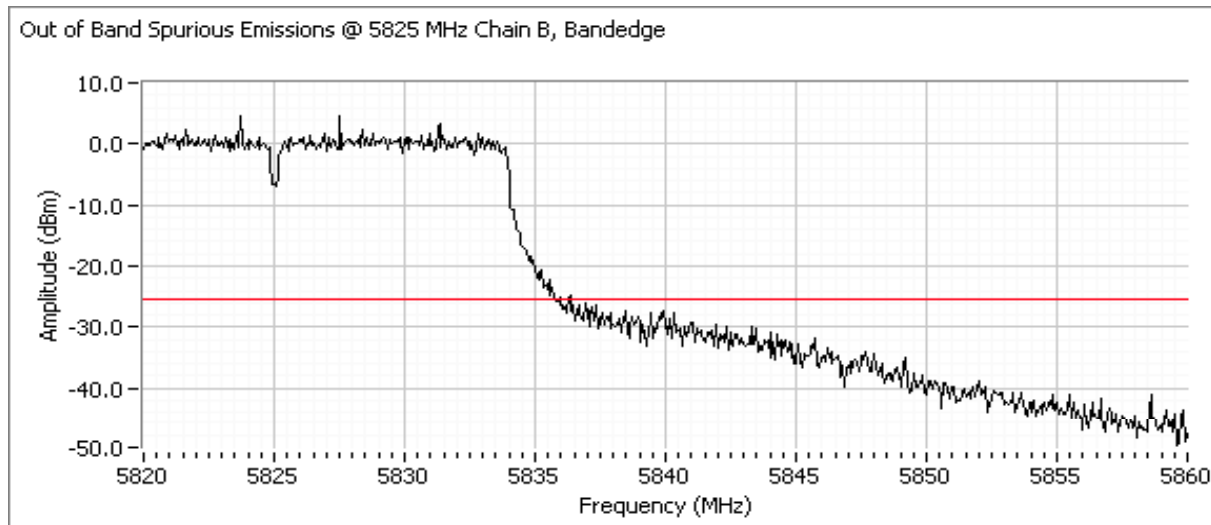


Plots for high channel, Chain B power setting(s) = 26.0

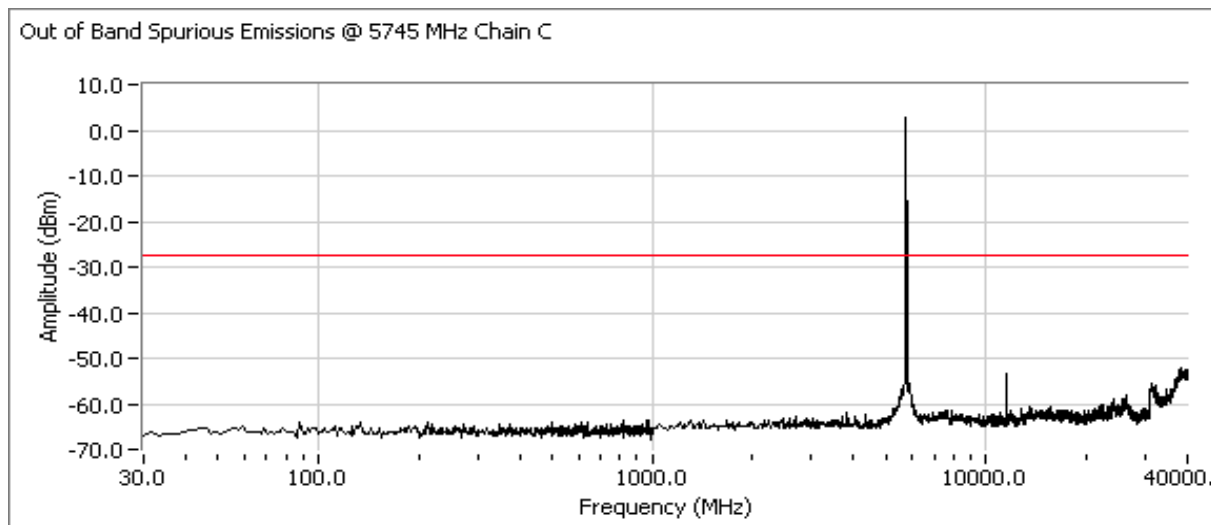


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Additional plot from 5820 - 5860 MHz showing compliance with -30dBc at the band edge.

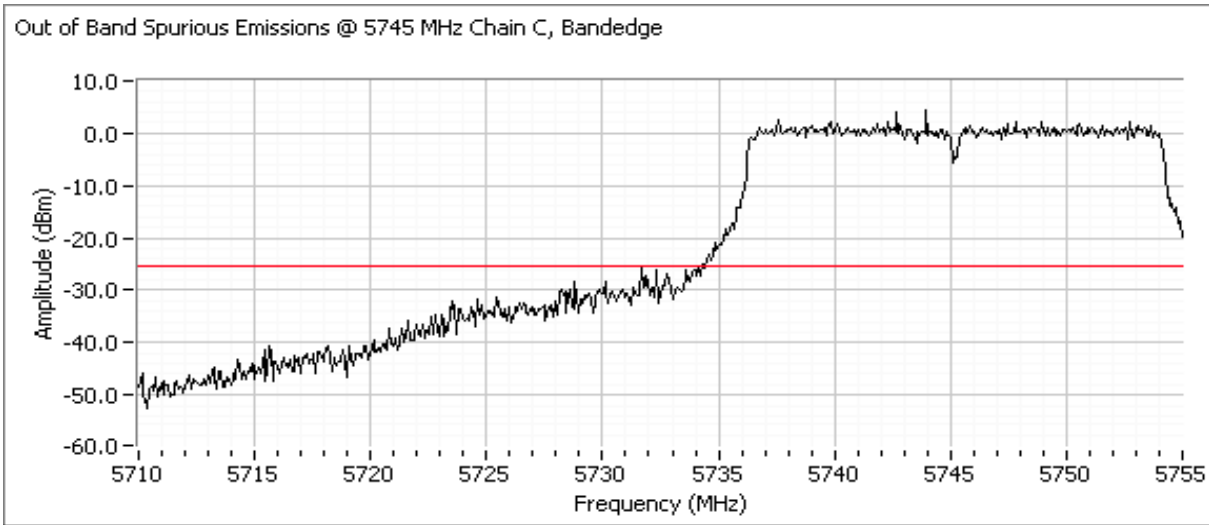


Plots for low channel, Chain C power setting(s) = 26.0

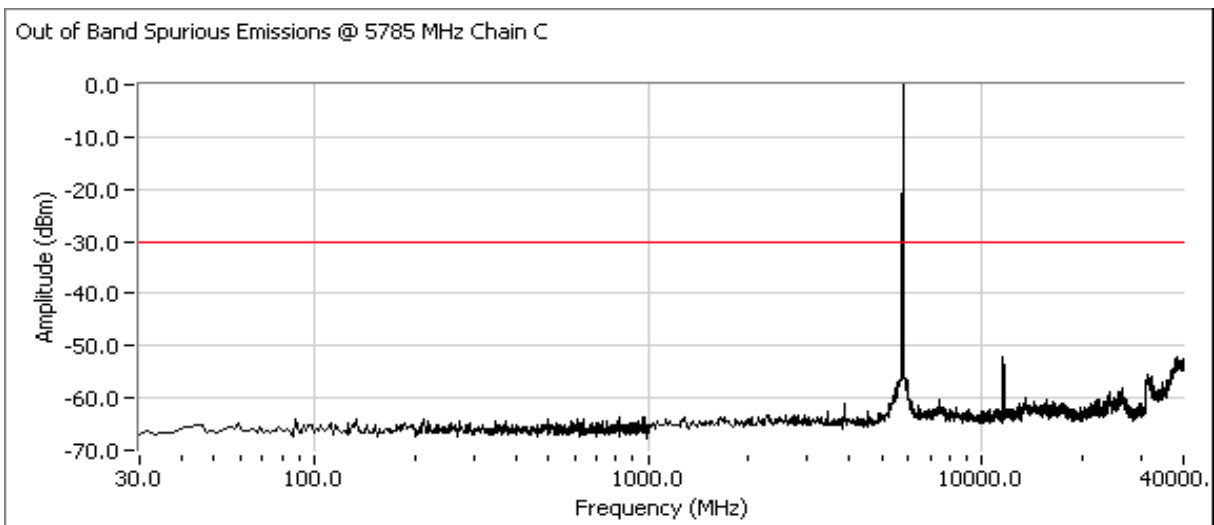


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Additional plot from 5715 - 5755 MHz showing compliance with -30dBc at the band edge.

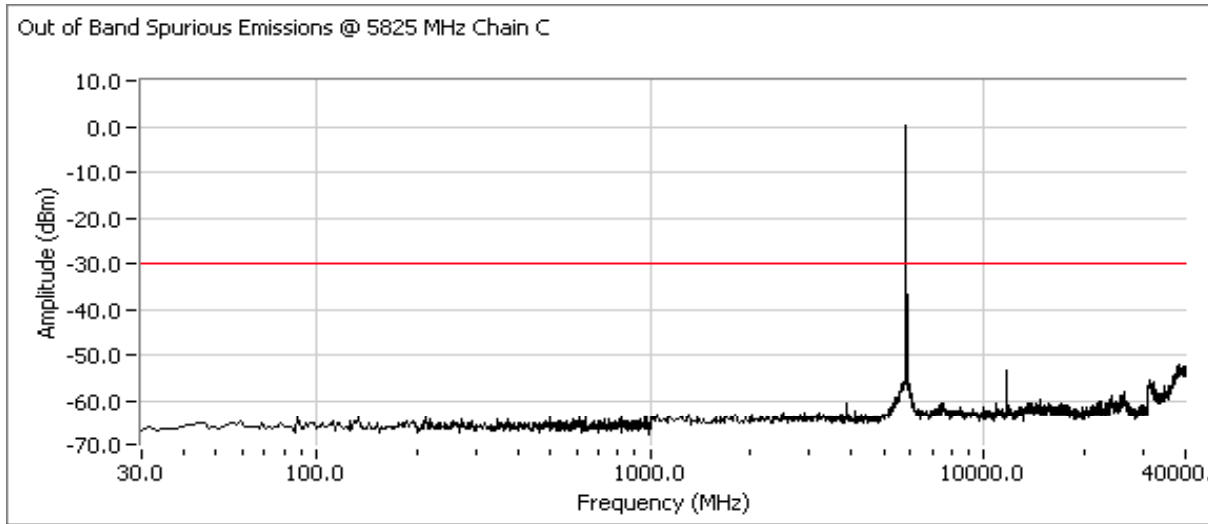


Plots for center channel, Chain C power setting(s) = 26.0

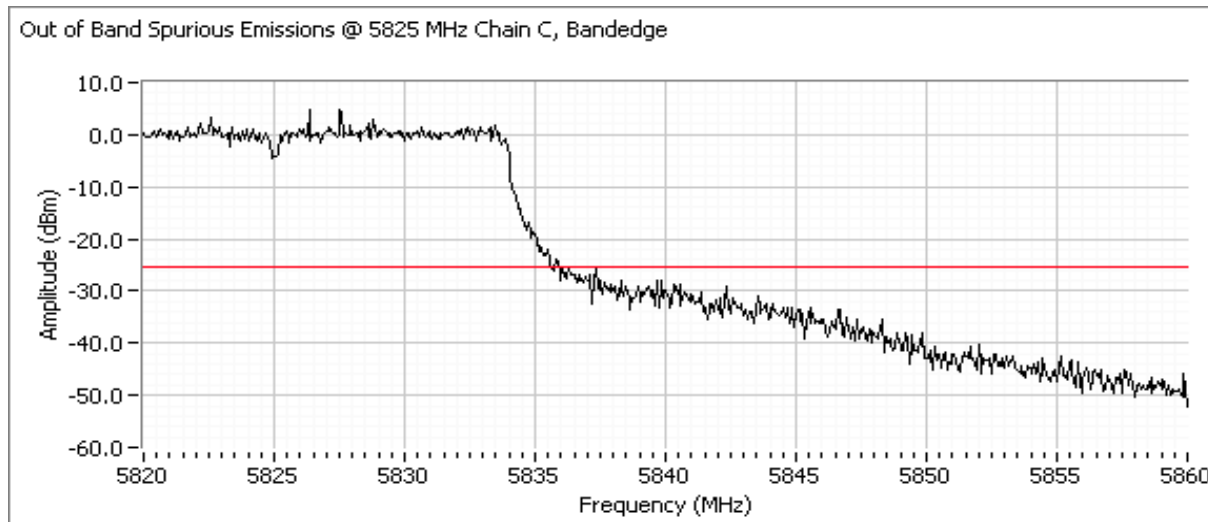


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Plots for high channel, Chain C power setting(s) = 26.5



Additional plot from 5820 - 5860 MHz showing compliance with -30dBc at the band edge.



| | | | |
|-----------|-----------------------|------------------|--------------|
| Client: | Intel | Job Number: | J70796 |
| Model: | 533-agn MMW | T-Log Number: | T71053 |
| | | Account Manager: | Dean Eriksen |
| Contact: | Robert Paxman | | |
| Standard: | FCC 15.247 / RSS -210 | Class: | N/A |

**RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
MIMO and Smart Antenna Systems, 5725 - 5850MHz
Power, PSD, Bandwidth and Spurious Emissions - 802.11n 20MHz**

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 4/18/2008

Config. Used: 1

Test Engineer: Suhaila Khushzad

Config Change: None

Test Location: FT Lab # 1

EUT Voltage: Powered From Host System(3.3V DC)

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on each chain separately.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:
Temperature: 23 °C
Rel. Humidity: 35 %

Summary of Results

| Run # | Test Performed | Limit | Pass / Fail | Result / Margin |
|-------|--|-----------|-------------|--------------------------------------|
| 1 | Output Power Chain A + B | 15.247(b) | Pass | 15.8dBm |
| 2 | Power spectral Density (PSD) Chain A + B | 15.247(d) | Pass | -7.7 dBm/3 kHz |
| 3 | Output Power Chain A + C | 15.247(b) | Pass | 16 dBm |
| 4 | PSD Chain A + C | 15.247(d) | Pass | -4.6 dBm/3kHz |
| 5 | Output Power Chain B + C | 15.247(b) | Pass | 18 dBm(63mW) |
| 6 | PSD Chain B + C | 15.247(d) | Pass | -1.1 dBm/3kHz |
| 7 | Output Power Chain A+B+C | 15.247(b) | Pass | 18 dBm(63mW) |
| 8 | PSD Chain A+B+C | 15.247(d) | Pass | -5.5dBm/3kHz |
| - | 6dB Bandwidth | 15.247(a) | | Covered by single-chain measurements |
| - | 99% Bandwidth | RSS GEN | | |
| - | Spurious emissions | 15.247(b) | | |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #1: Output Power - Dual Chain (A + B)
 Operating Mode: 802.11n 20MHz
 Transmitted signal on chain is coherent ? no

| 5745 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 27.0 | 26.5 | | | | | | |
| Output Power (dBm) ^{Note 1} | 12.4 | 12.6 | | | 15.5 dBm | 0.036 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5 | 5 | | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | 17.42 | 17.62 | | | 20.5 dBm | 0.113 W | | |

| 5785 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 27.5 | 27.0 | | | | | | |
| Output Power (dBm) ^{Note 1} | 12.64 | 12.8 | | | 15.7 dBm | 0.037 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5 | 5 | | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | 17.64 | 17.8 | | | 20.7 dBm | 0.118 W | | |

| 5825 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 28.0 | 27.5 | | | | | | |
| Output Power (dBm) ^{Note 1} | 12.61 | 12.91 | | | 15.8 dBm | 0.038 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5 | 5 | | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | 17.61 | 17.91 | | | 20.8 dBm | 0.119 W | | |

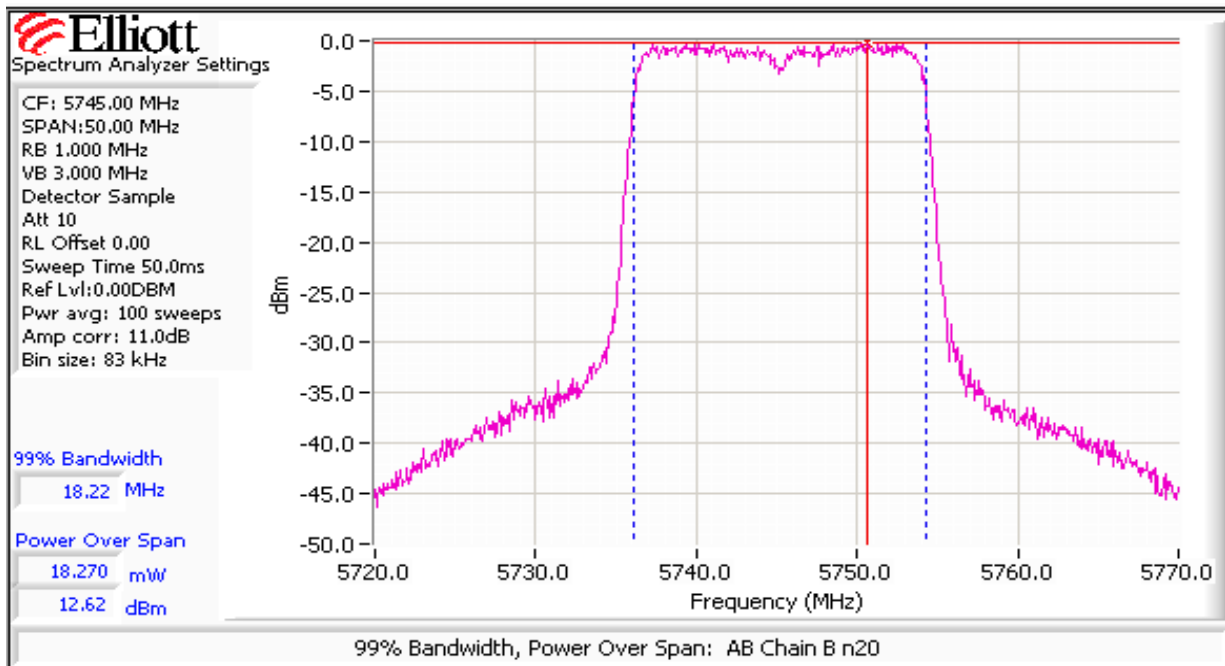
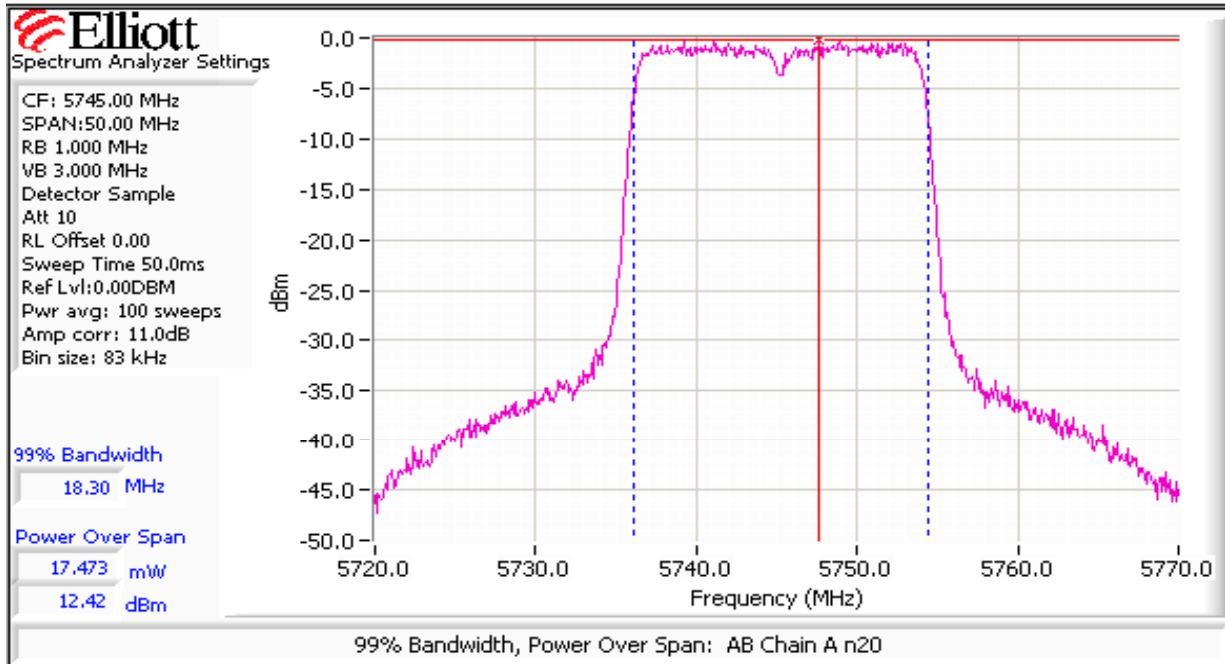
Note 1: Output power measured using a spectrum analyzer (see plots below) with RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over 50 MHz (reference method 1 of FCC DA 02-2138 for U-NII devices, August 30, 2002). Spurious limit becomes **-30dBc**.

Note 2: As there is no coherency between chains the total EIRP is the sum of the individual EIRPs and effective antenna gain equals the eirp divide by the sum of the power on each chain.



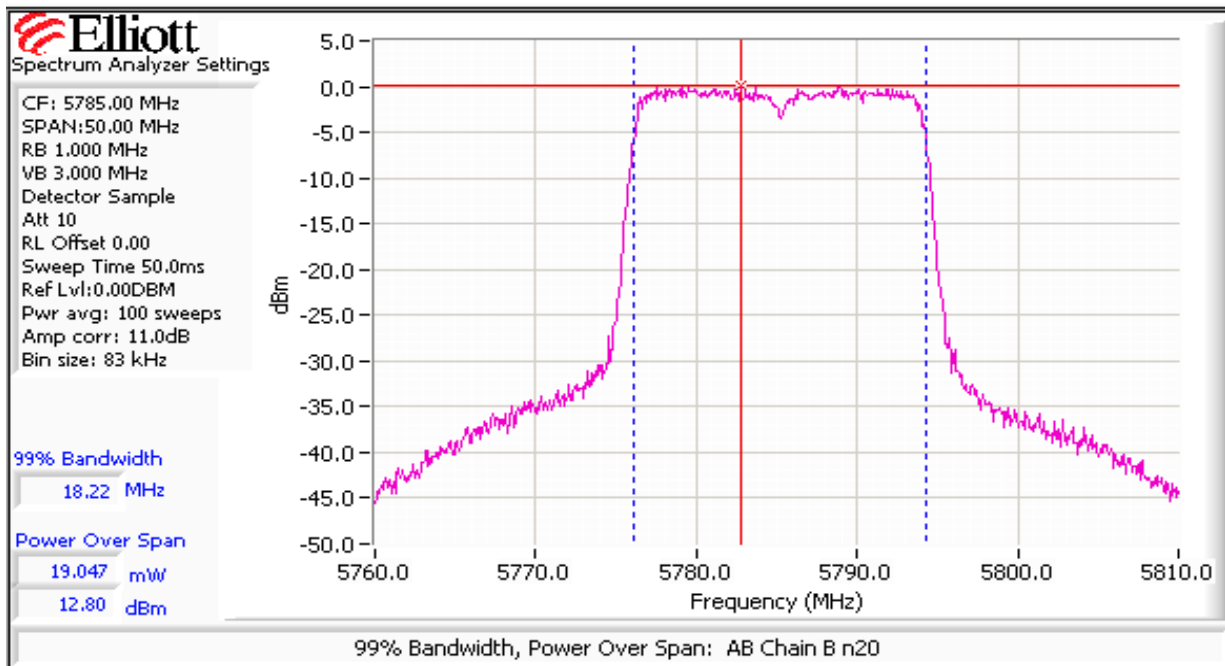
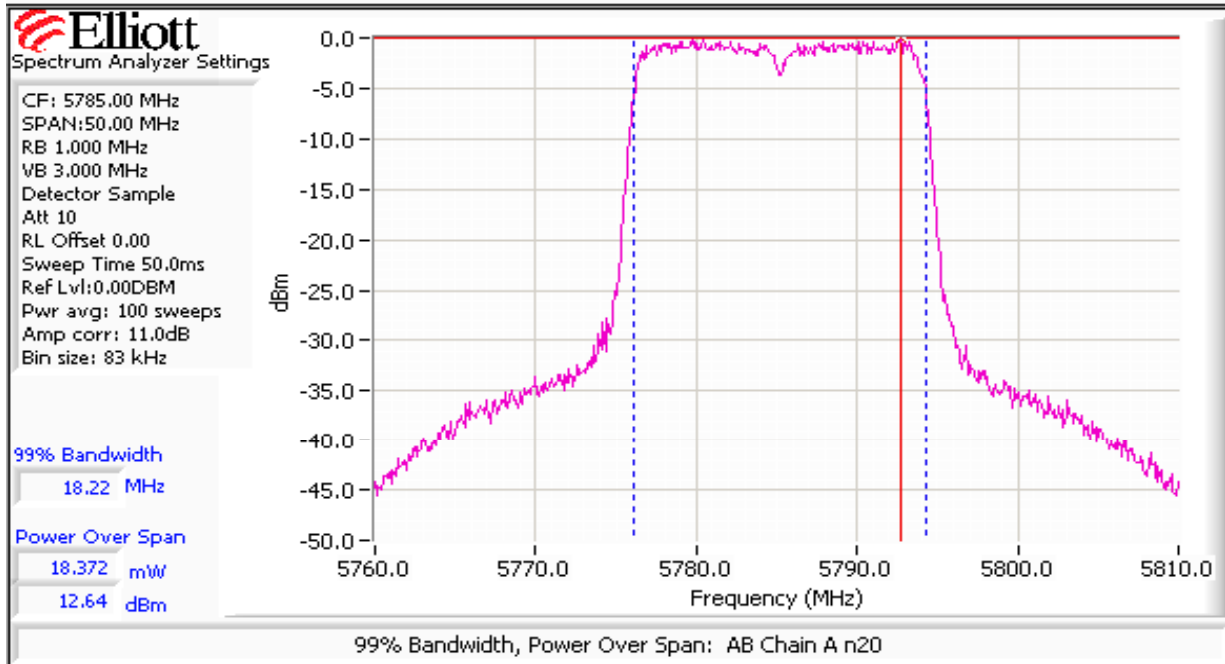
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #1: Output Power - Dual Chain (A + B)



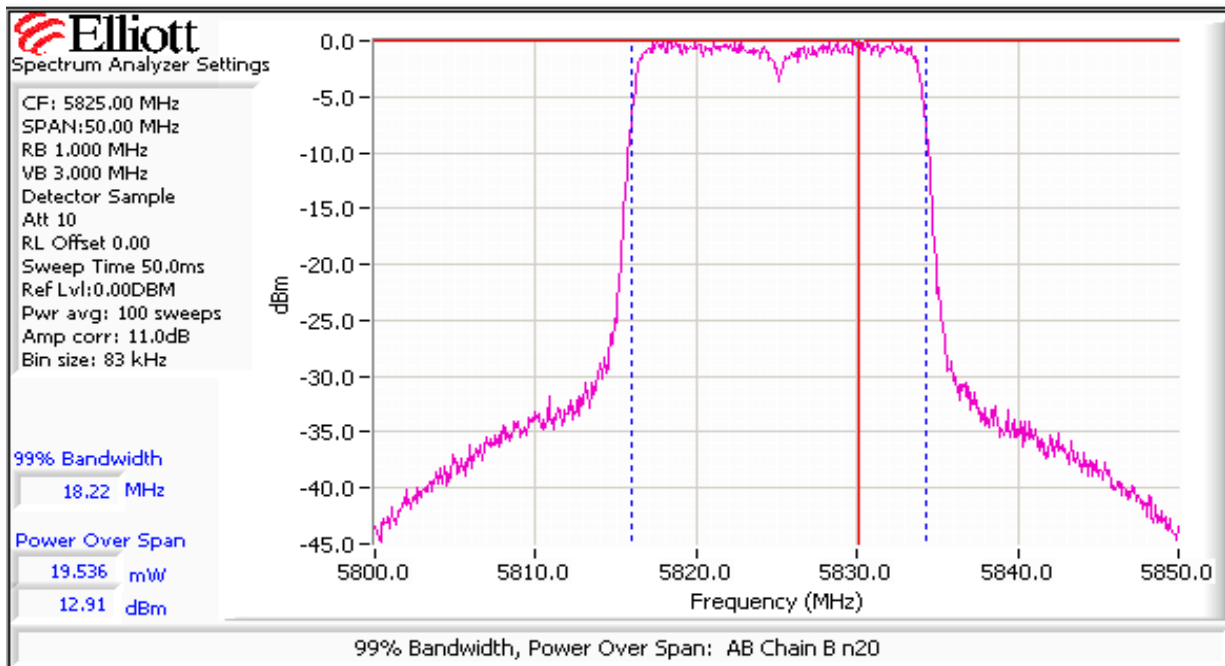
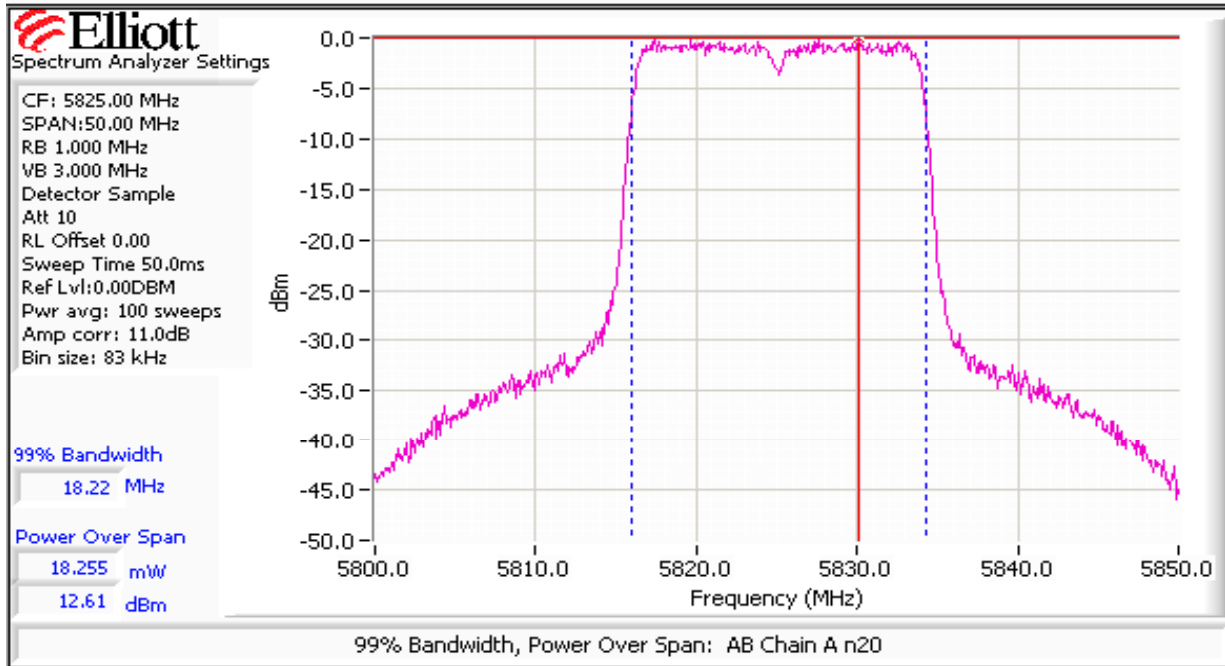
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #1: Output Power - Dual Chain (A + B)



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #1: Output Power - Dual Chain (A + B)



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #2: Power spectral Density - Chain A + B

| Power Setting | Frequency (MHz) | PSD (dBm/3kHz) ^{Note 1} | | | | Total | Limit dBm/3kHz | Result |
|---------------|-----------------|----------------------------------|---------|---------|---------|-------|----------------|--------|
| | | Chain A | Chain B | Chain C | Chain 4 | | | |
| 27, 26.5 | 5745 | -9.5 | -12.3 | | | -7.7 | 8.0 | Pass |
| 27.5, 27 | 5785 | -11.2 | -11.3 | | | -8.2 | 8.0 | Pass |
| 28, 27.5 | 5825 | -12.8 | -11.3 | | | -9.0 | 8.0 | Pass |

| | |
|---------|---|
| Note 1: | Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal. |
| Note 2: | Power setting - if a single number the same power setting was used for each chain. If multiple numbers the power setting for each chain is separated by a comma (e.g. x,y would indicate power setting x for Chain A, power setting y for Chain B. |

| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #2: Power spectral Density - Chain A + B



Analyzer Settings

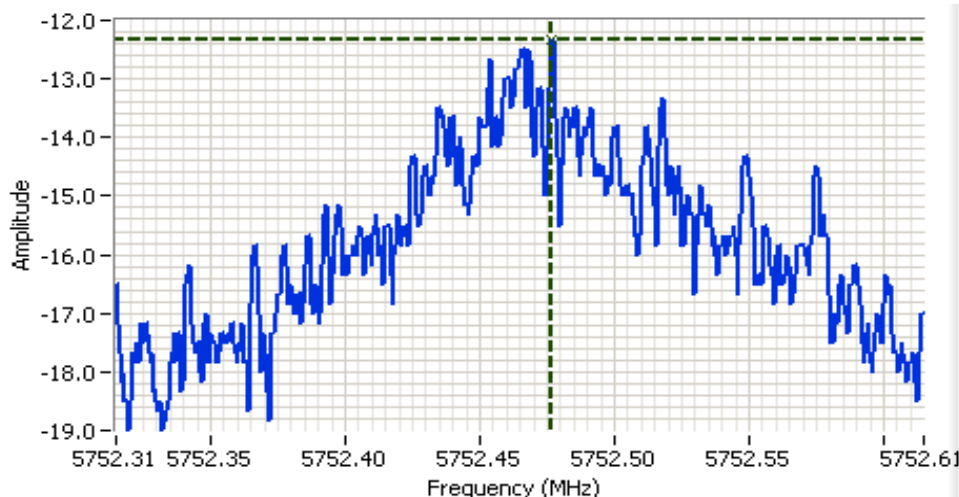
HP8564E, EMI
 CF: 5749.98 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 11.00DBM

Comments

PSD @ 5745 MHz
 AB Chain A n20

Cursor 1 5749.9775 -9.50

0.0000 0.00



Analyzer Settings

HP8564E, EMI
 CF: 5752.46 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 11.00DBM

Comments

PSD @ 5745 MHz
 AB Chain B n20

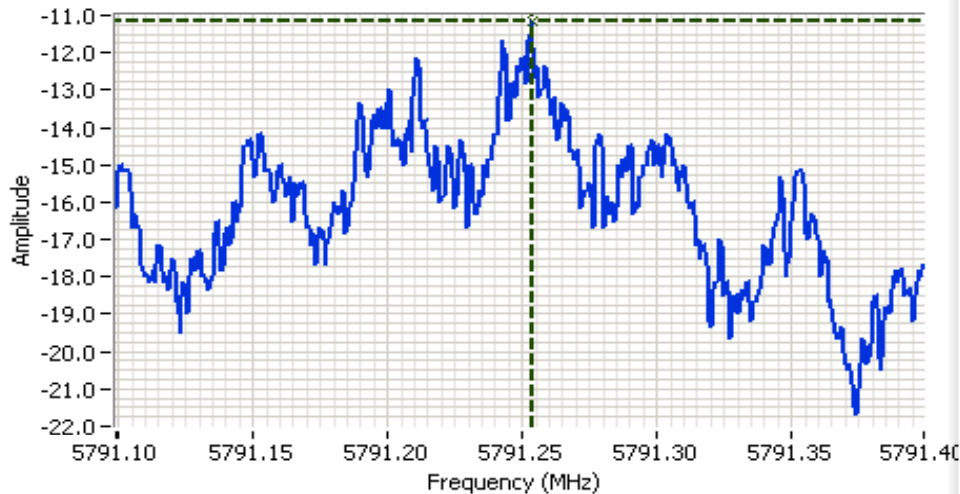
Cursor 1 5752.4768 -12.33

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #2: Power spectral Density - Chain A + B



Analyzer Settings

HP8564E, EMI
 CF: 5791.25 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 11.00DBM

Comments

PSD @ 5785 MHz
 AB Chain A n20

Cursor 1 5791.2535 -11.17

0.0000 0.00



Analyzer Settings

HP8564E, EMI
 CF: 5783.74 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 11.00DBM

Comments

PSD @ 5785 MHz
 AB Chain B n20

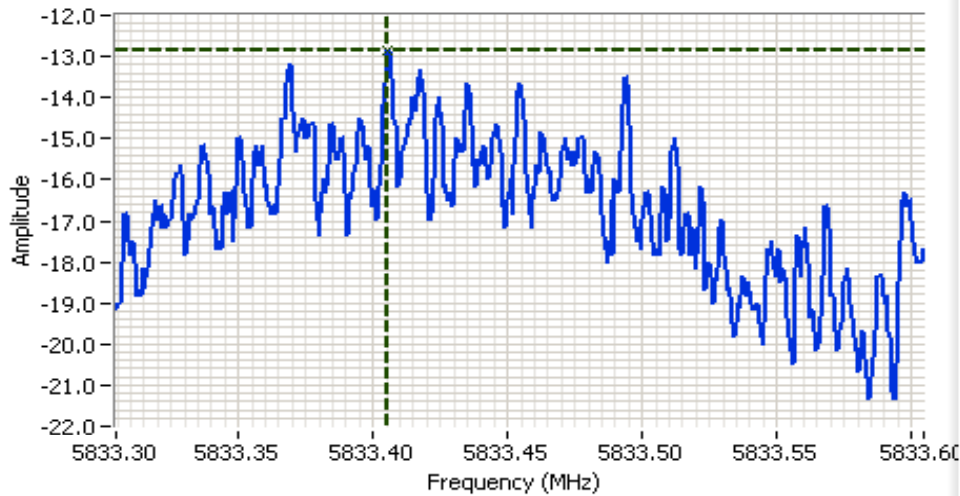
Cursor 1 5783.7358 -11.33

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #2: Power spectral Density - Chain A + B



Analyzer Settings

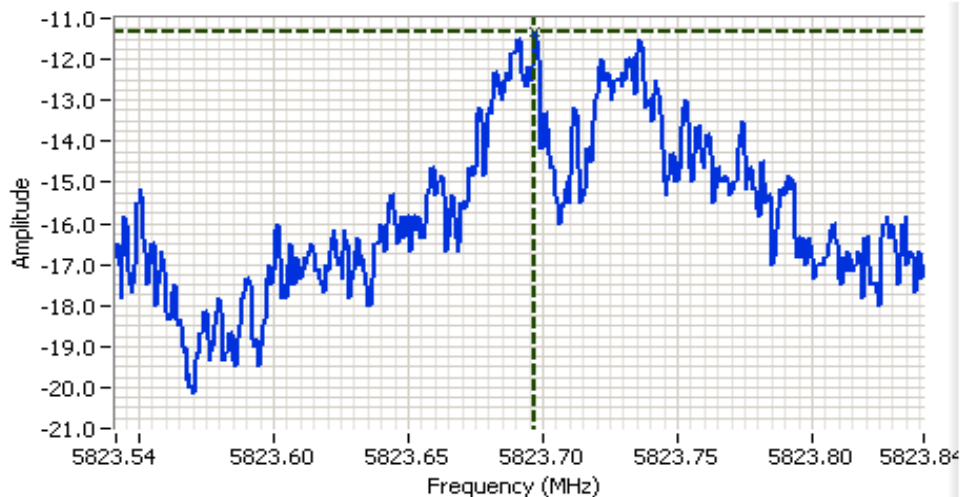
HP8564E, EMI
 CF: 5833.45 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 11.00DBM

Comments

PSD @ 5825 MHz
 AB Chain A n20

Cursor 1 5833.4056 -12.83

0.0000 0.00



Analyzer Settings

HP8564E, EMI
 CF: 5823.69 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 11.00DBM

Comments

PSD @ 5825 MHz
 AB Chain B n20

Cursor 1 5823.6969 -11.33

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #3: Output Power - Dual Chain A + C
 Operating Mode: 802.11n 20MHz
 Transmitted signal on chain is coherent ? No

| 5745 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 27.5 | | 27.5 | | | | | |
| Output Power (dBm) ^{Note 1} | 12.73 | | 13.17 | | 16.0 dBm | 0.039 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5 | | 5 | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | 17.73 | | 18.17 | | 21.0 dBm | 0.125 W | | |

| 5785 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 28.0 | | 28.0 | | | | | |
| Output Power (dBm) ^{Note 1} | 12.64 | | 12.9 | | 15.8 dBm | 0.038 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5 | | 5 | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | 17.64 | | 17.9 | | 20.8 dBm | 0.120 W | | |

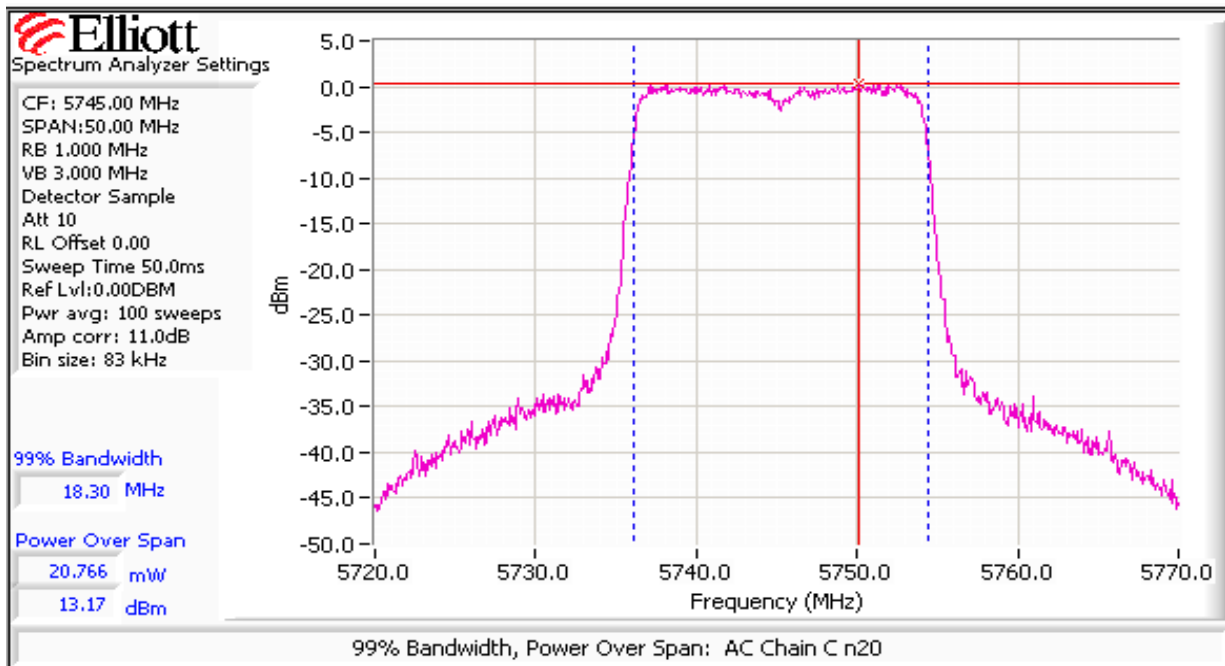
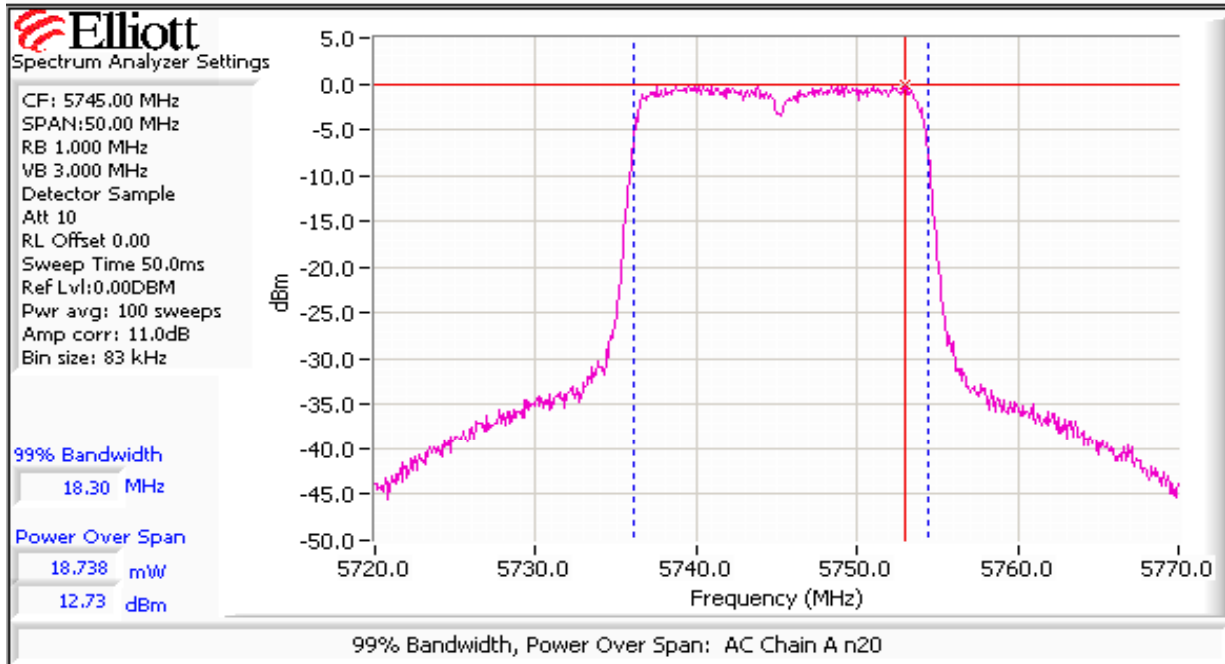
| 5825 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 28.5 | | 28.5 | | | | | |
| Output Power (dBm) ^{Note 1} | 12.76 | | 13.04 | | 15.9 dBm | 0.039 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5 | | 5 | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | 17.76 | | 18.04 | | 20.9 dBm | 0.123 W | | |

Note 1: Output power measured using a spectrum analyzer (see plots below) with RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over ??? MHz (reference method 1 of FCC DA 02-2138 for U-NII devices, August 30, 2002). Spurious limit becomes **-30dBc**.

Note 2: As there is no coherency between chains the total EIRP is the sum of the individual EIRPs and effective antenna gain equals the eirp divide by the sum of the power on each chain.

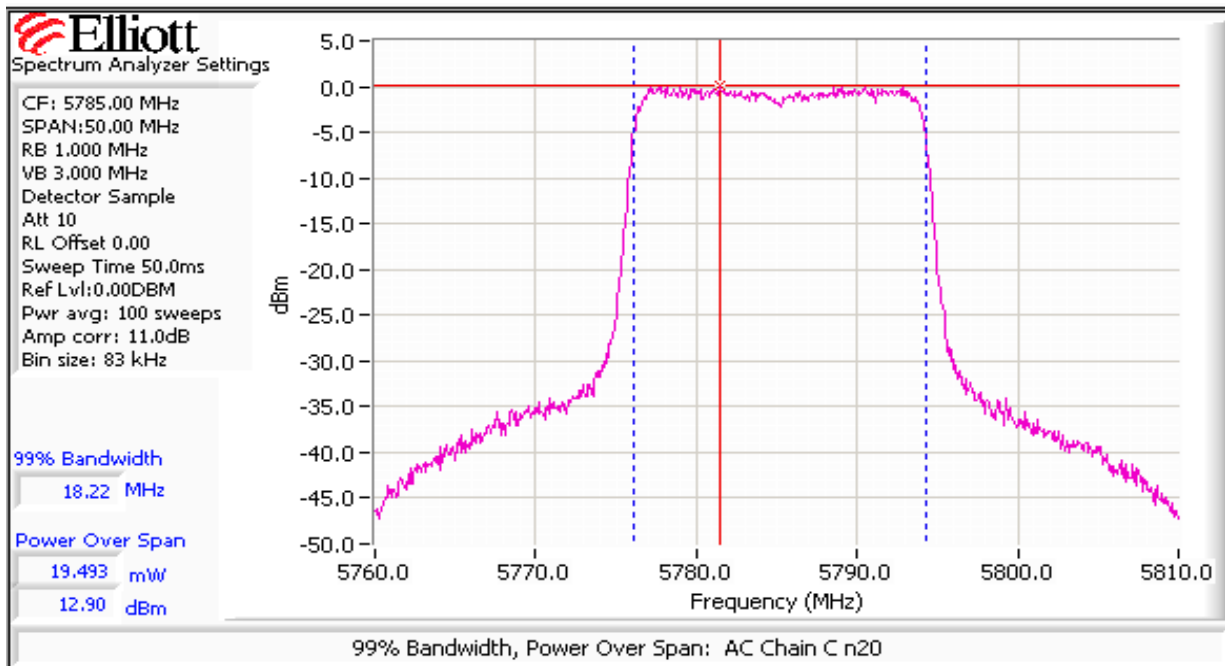
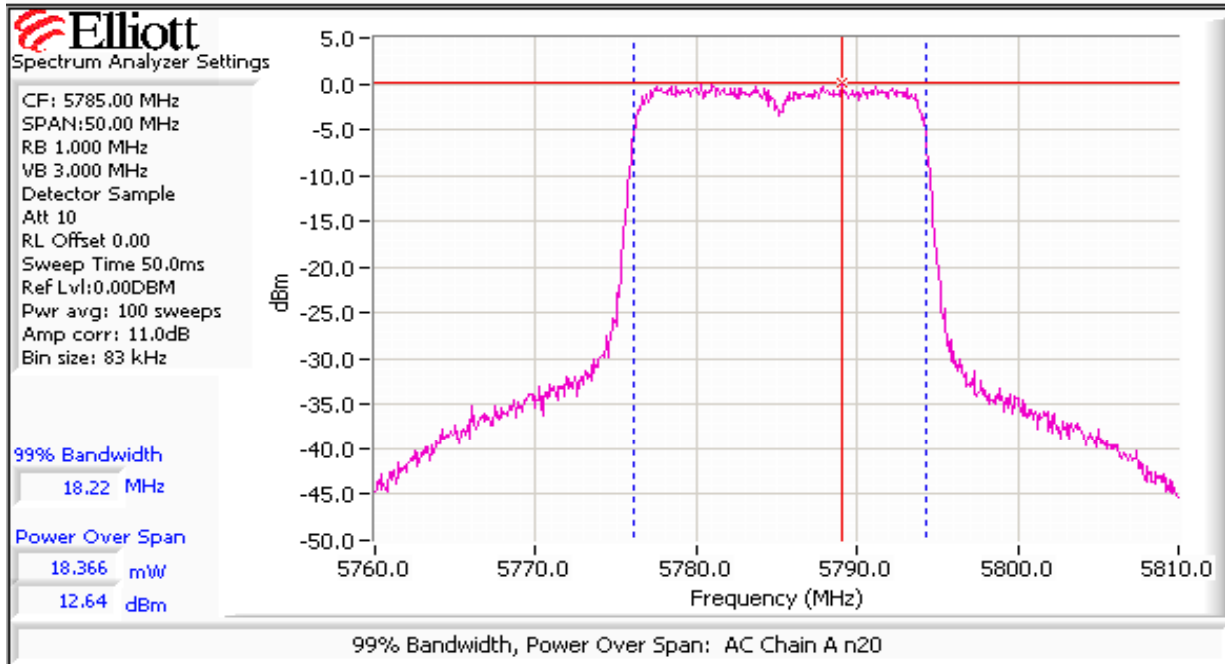
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #3: Output Power - Dual Chain A + C



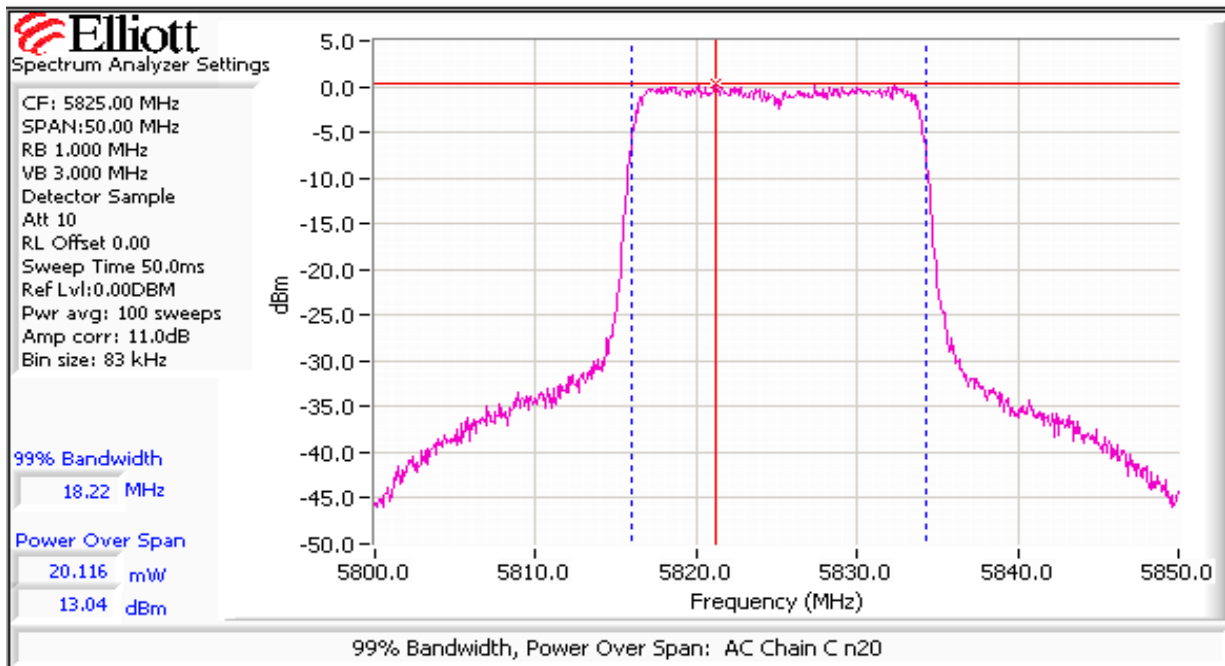
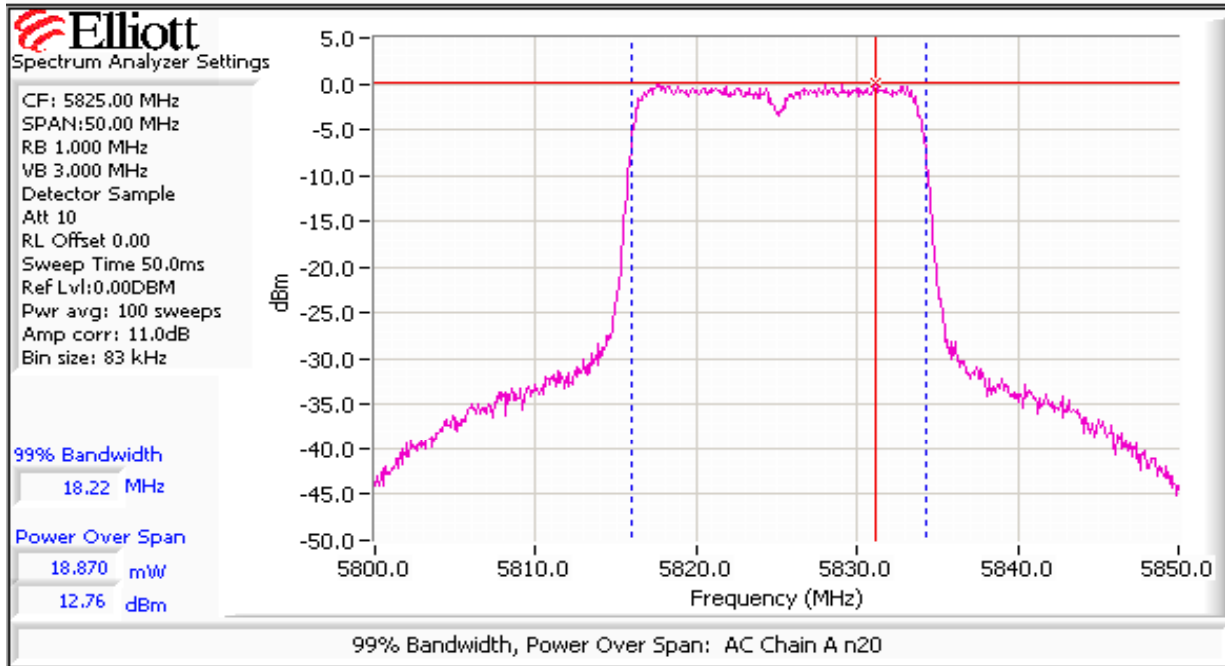
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #3: Output Power - Dual Chain A + C



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #3: Output Power - Dual Chain A + C



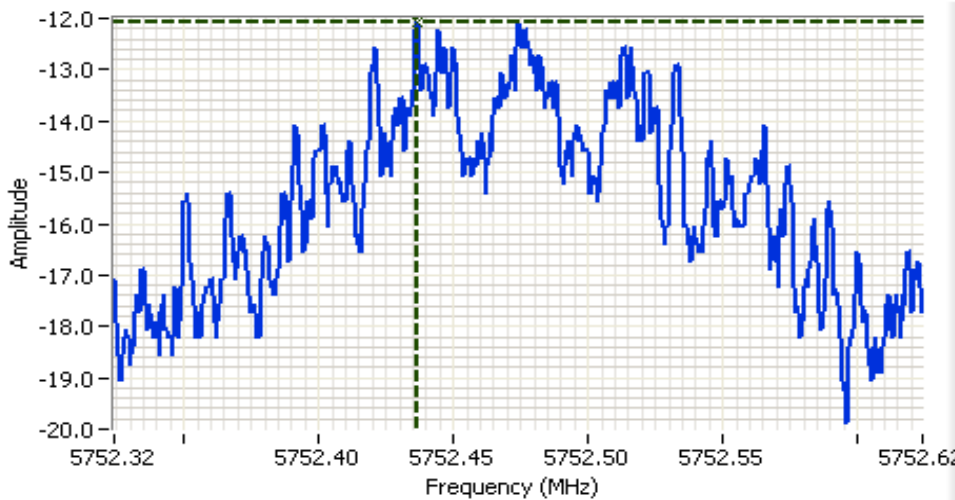
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| | Account Manager: Dean Eriksen |
| Contact: Robert Paxman | |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #4: Power spectral Density - Chain A + C

| Power Setting | Frequency (MHz) | PSD (dBm/3kHz) ^{Note 1} | | | | Total | Limit dBm/3kHz | Result |
|---------------|-----------------|----------------------------------|---------|---------|---------|-------|----------------|--------|
| | | Chain A | Chain B | Chain C | Chain 4 | | | |
| 27.5 | 5745 | -12.1 | | -10.9 | | -8.4 | 8.0 | Pass |
| 28.0 | 5785 | -13.2 | | -6.0 | | -5.2 | 8.0 | Pass |
| 28.5 | 5825 | -9.0 | | -6.5 | | -4.6 | 8.0 | Pass |

- Note 1: Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.
- Note 2: Power setting - if a single number the same power setting was used for each chain. If multiple numbers the power setting for each chain is separated by a comma (e.g. x,y would indicate power setting x for Chain A, power setting y for Chain B).

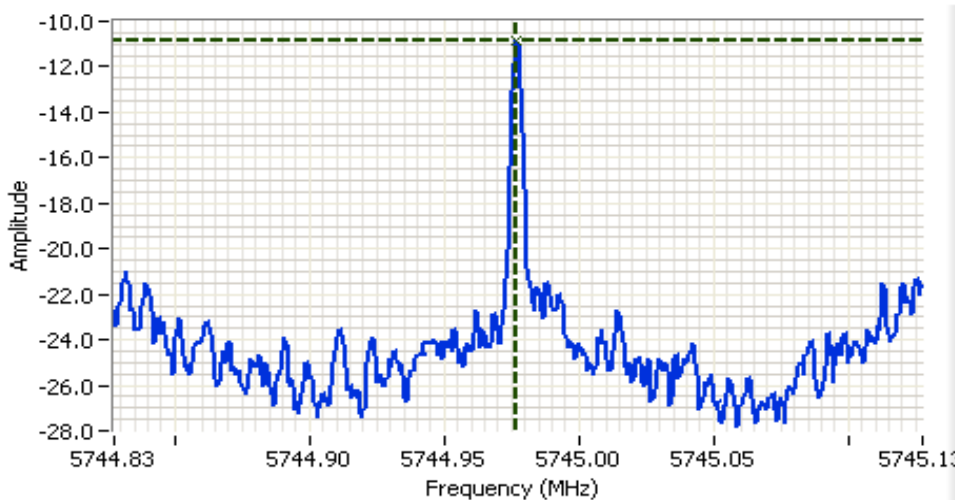
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings
 HP8564E,EMI
 CF: 5752.474 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:-9.40DBM

Comments
 PSD @ 5745 MHz
 AC Chain A n20

Cursor 1 5752.4366 -12.07 [Icons]
 0.0000 0.00 [Icons]



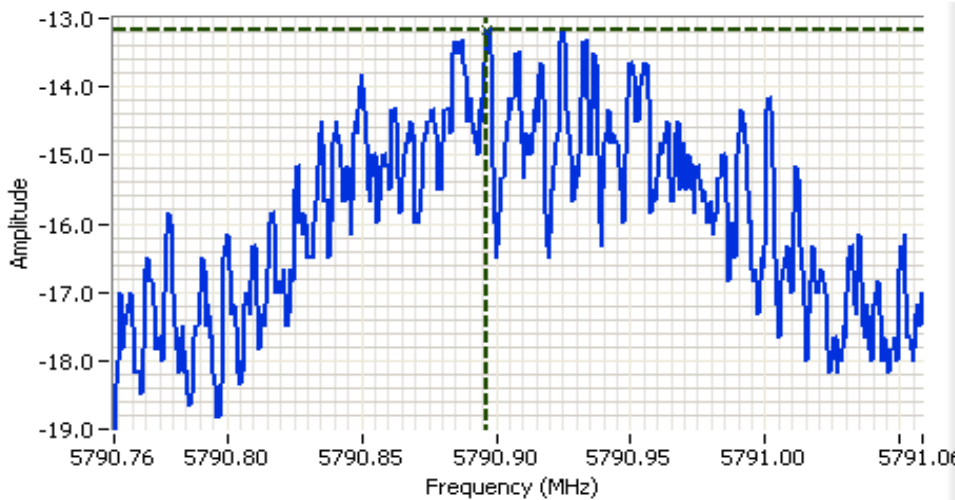
Analyzer Settings
 HP8564E,EMI
 CF: 5744.978 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:-8.70DBM

Comments
 PSD @ 5745 MHz
 AC Chain C n20

Cursor 1 5744.9770 -10.87 [Icons]
 0.0000 0.00 [Icons]



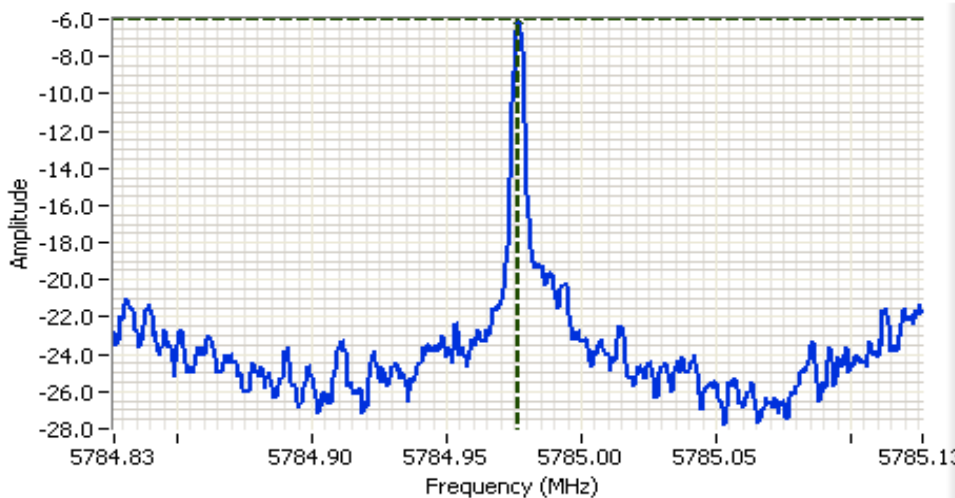
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings
 HP8564E,EMI
 CF: 5790.908 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:-9.50DBM

Comments
 PSD @ 5785 MHz
 AC Chain A n20

Cursor 1 5790.8967 -13.17 [Move] [Zoom] [Lock]
 0.0000 0.00 [Move] [Lock]



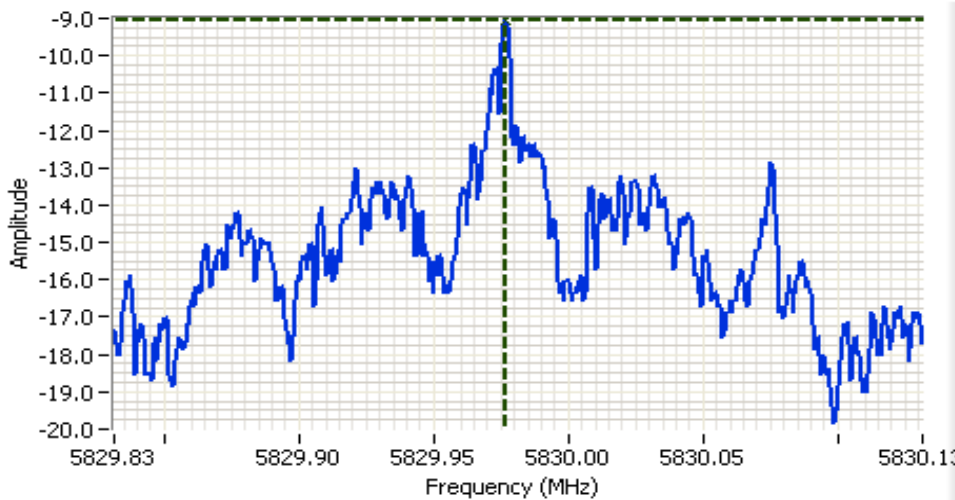
Analyzer Settings
 HP8564E,EMI
 CF: 5784.977 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:-3.00DBM

Comments
 PSD @ 5785 MHz
 AC Chain C n20

Cursor 1 5784.9766 -6.00 [Move] [Zoom] [Lock]
 0.0000 0.00 [Move] [Lock]



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

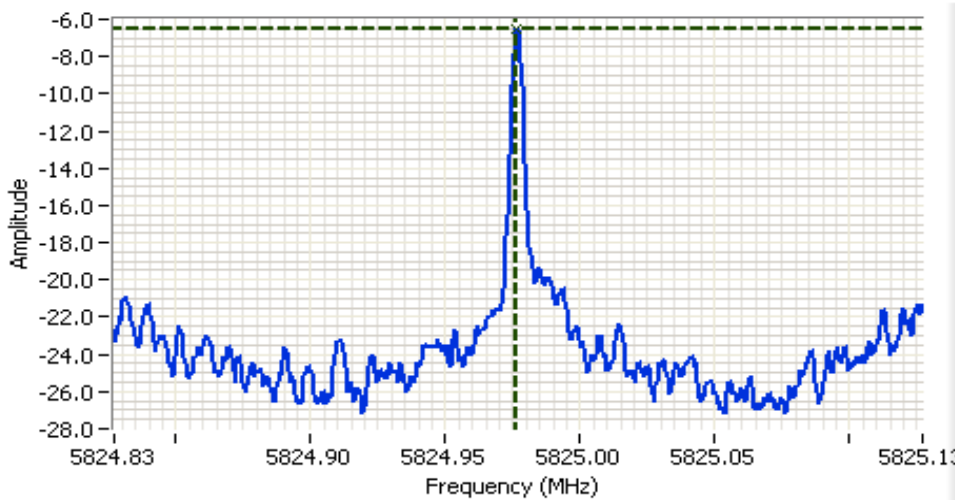


Analyzer Settings
 HP8564E,EMI
 CF: 5829.981 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:-6.70DBM

Comments
 PSD @ 5825 MHz
 AC Chain A n20

Cursor 1 5829.9764 -9.03

0.0000 0.00



Analyzer Settings
 HP8564E,EMI
 CF: 5824.977 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:-4.00DBM

Comments
 PSD @ 5825 MHz
 AC Chain C n20

Cursor 1 5824.9766 -6.50

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #5: Output Power - Dual Chain (B + C)
 Operating Mode: 802.11n 20MHz
 Transmitted signal on chain is coherent ? No

| 5745 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | | 30.5 | 31.0 | | | | | |
| Output Power (dBm) ^{Note 1} | | 14.9 | 15.0 | | 18.0 dBm | 0.063 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | | 5.0 | 5.0 | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | | 19.9 | 20.0 | | 23.0 dBm | 0.198 W | | |

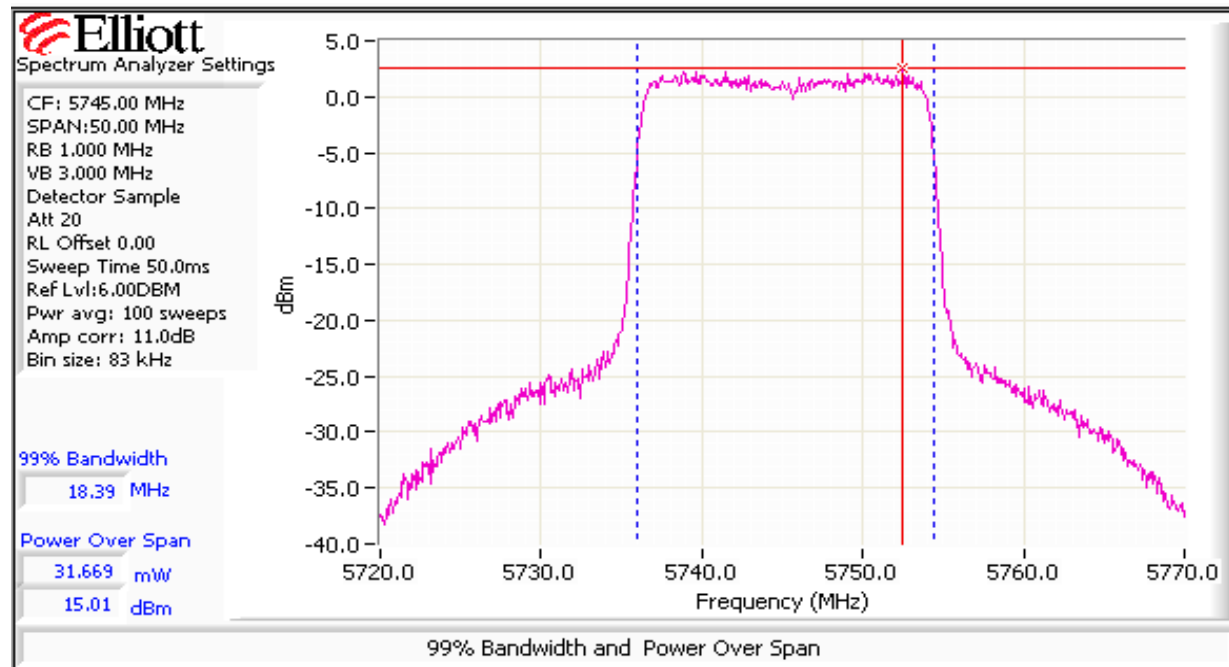
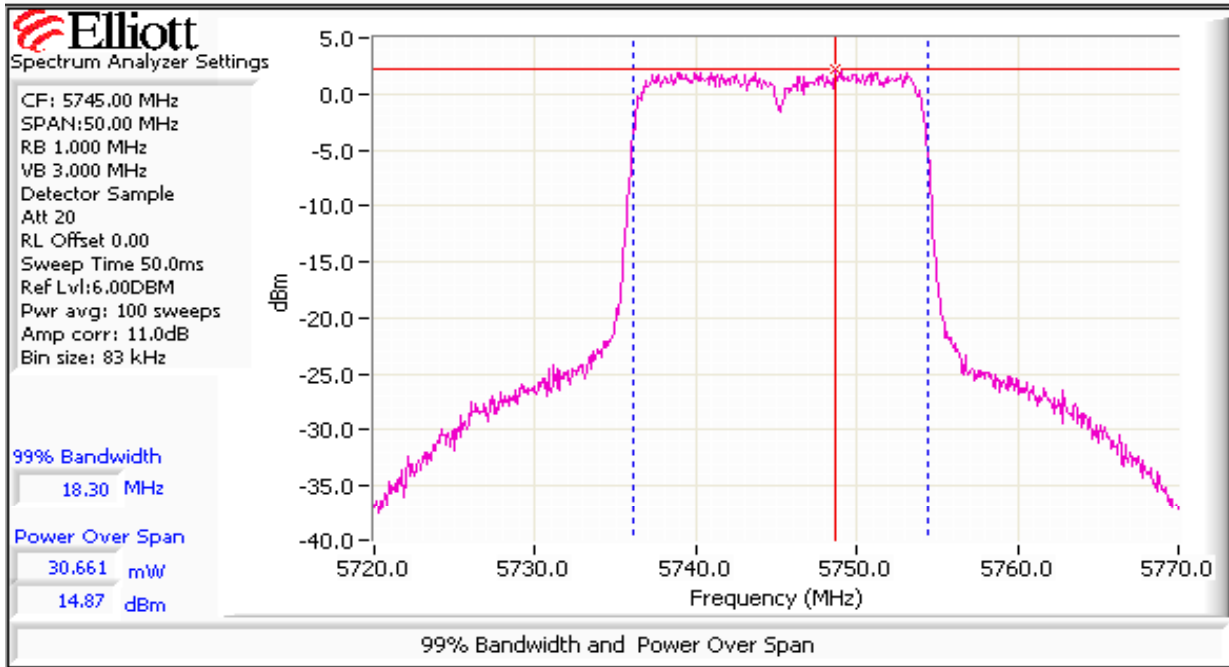
| 5785 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | | 30.5 | 31.0 | | | | | |
| Output Power (dBm) ^{Note 1} | | 14.8 | 14.8 | | 17.8 dBm | 0.060 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | | 5.0 | 5.0 | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | | 19.8 | 19.8 | | 22.8 dBm | 0.191 W | | |

| 5825 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | | 31.0 | 31.5 | | | | | |
| Output Power (dBm) ^{Note 1} | | 14.8 | 15.1 | | 18.0 dBm | 0.063 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | | 5.0 | 5.0 | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | | 19.8 | 20.1 | | 23.0 dBm | 0.198 W | | |

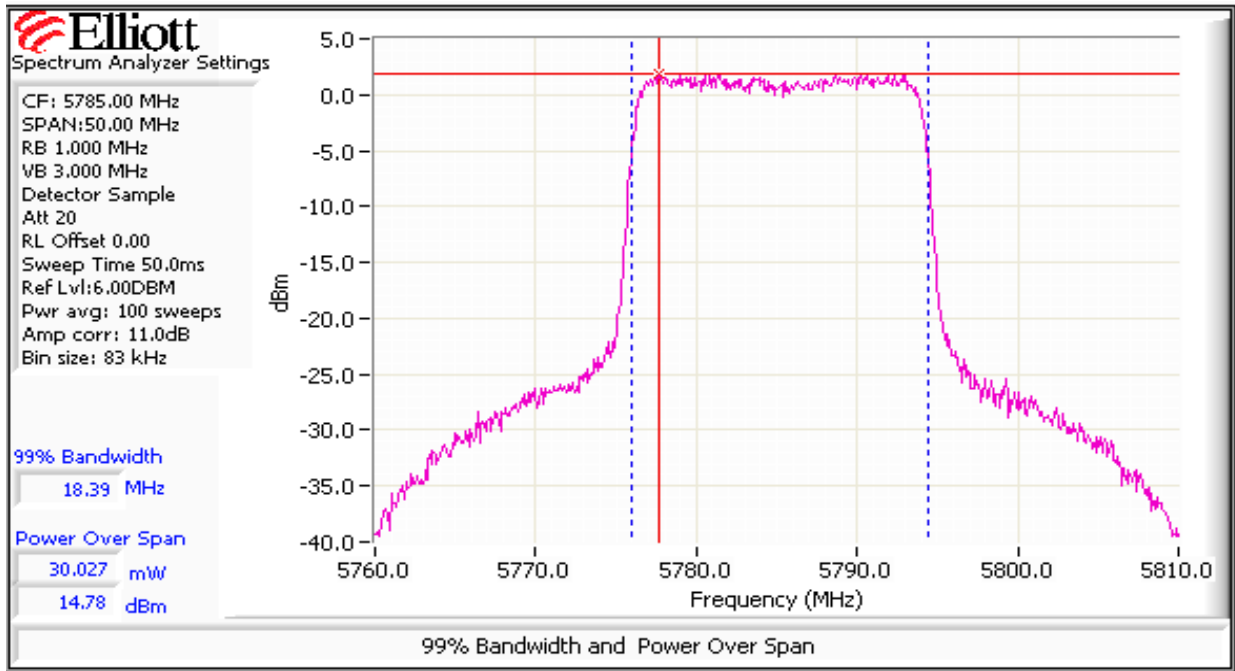
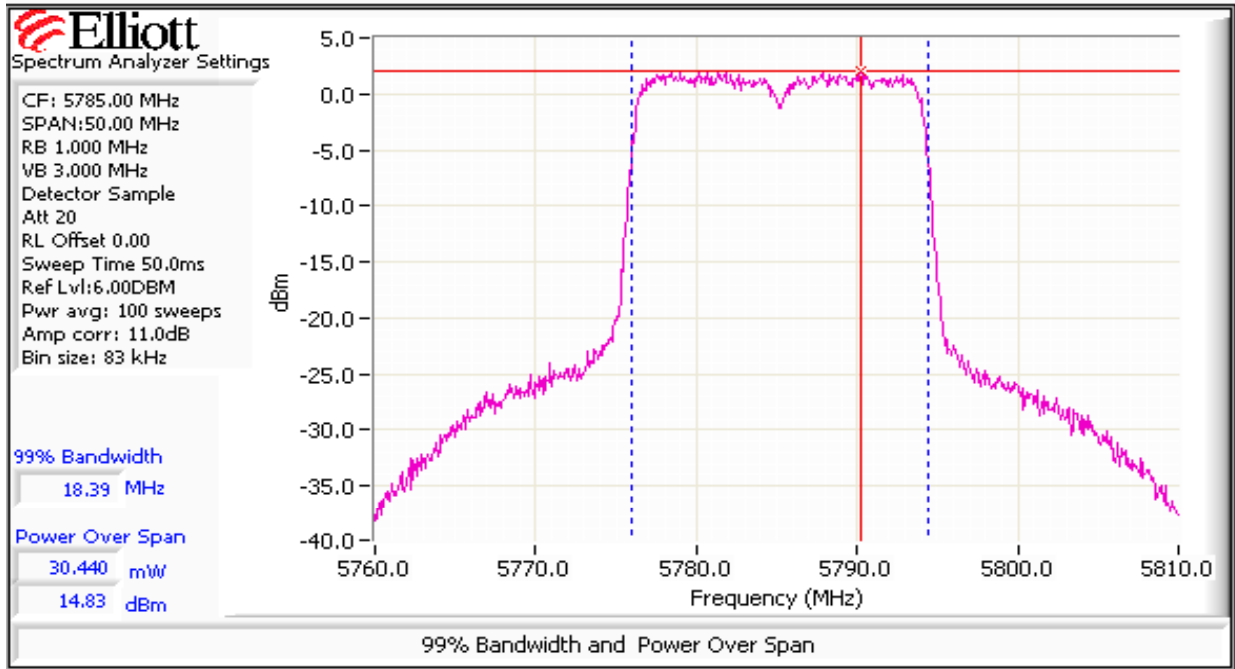
Note 1: Output power measured using a spectrum analyzer (see plots below) with RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over ??? MHz (reference method 1 of FCC DA 02-2138 for U-NII devices, August 30, 2002). Spurious limit becomes -30dBc.

Note 2: As there is no coherency between chains the total EIRP is the sum of the individual EIRPs and effective antenna gain equals the eirp divide by the sum of the power on each chain.

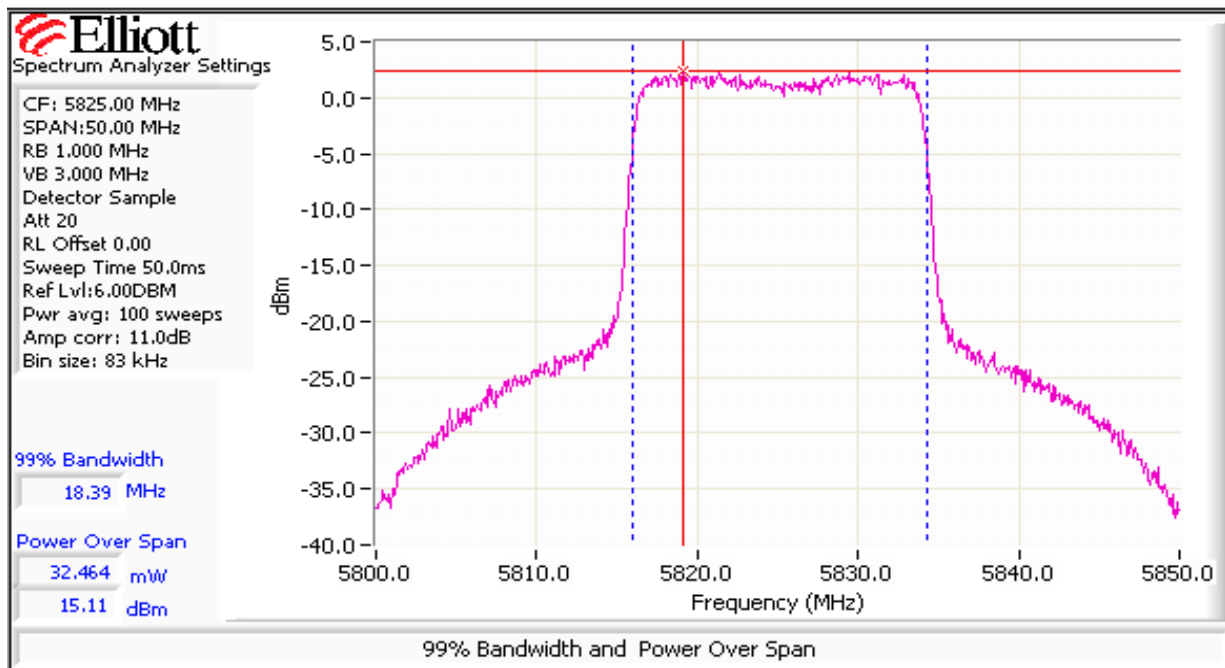
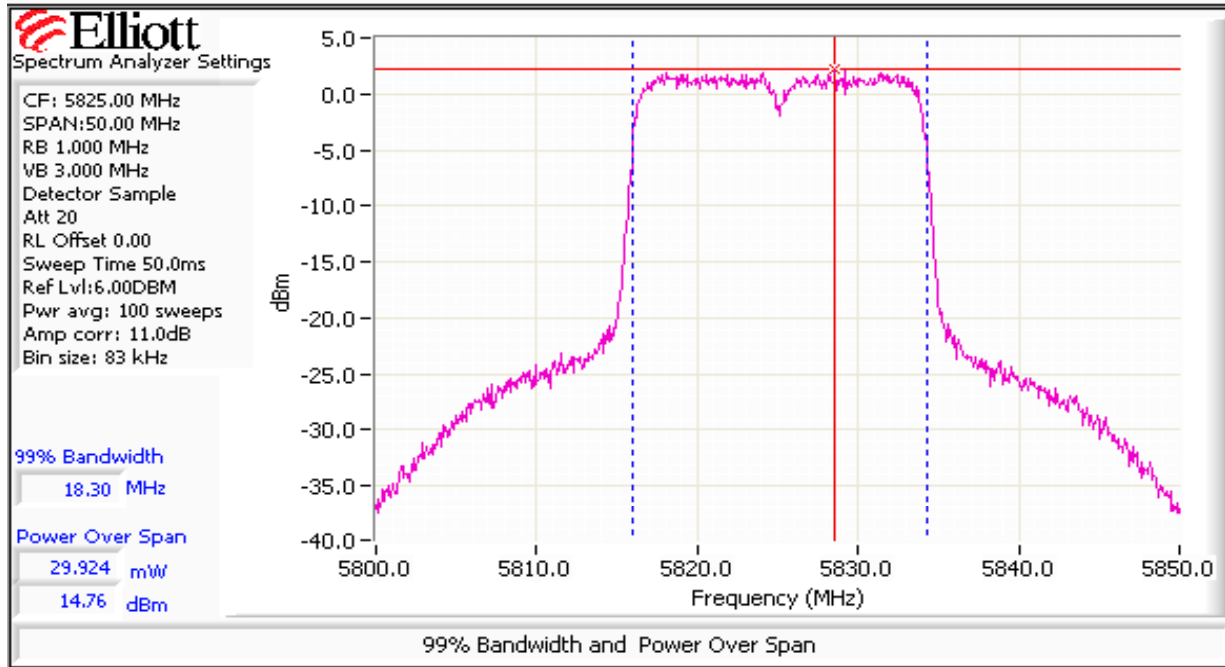
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



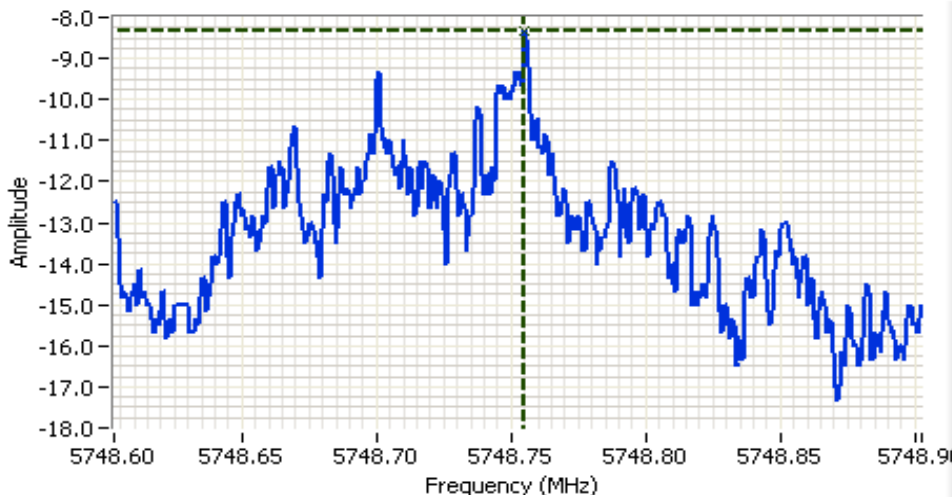
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #6: Power spectral Density - Chain B + C

| Power Setting | Frequency (MHz) | PSD (dBm/3kHz) ^{Note 1} | | | | | Limit dBm/3kHz | Result |
|---------------|-----------------|----------------------------------|---------|---------|---------|-------|----------------|--------|
| | | Chain A | Chain B | Chain C | Chain 4 | Total | | |
| 30.5/31.0 | 5745 | | -8.3 | -2.0 | | -1.1 | 8.0 | Pass |
| 30.5/31.0 | 5785 | | -9.2 | -2.2 | | -1.4 | 8.0 | Pass |
| 31.0/31.5 | 5825 | | -8.7 | -2.9 | | -1.9 | 8.0 | Pass |

- Note 1: Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.
- Note 2: Power setting - if a single number the same power setting was used for each chain. If multiple numbers the power setting for each chain is separated by a comma (e.g. x,y would indicate power setting x for Chain A, power setting y for Chain B).

| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings

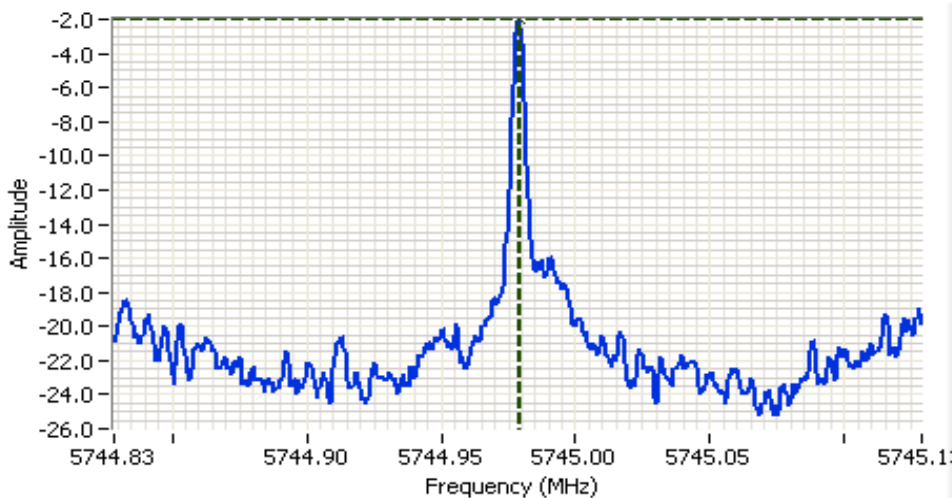
- HP8564E,EMI
- CF: 5748.752 MHz
- SPAN:300 kHz
- RB 3.00 kHz
- VB 10.00 kHz
- Detector POS
- Att 10
- RL Offset 11.00
- Sweep Time 100.0s
- Ref Lvl:-5.50DBM

Comments

- PSD @ 5745 MHz
- BC Chain B n20

Cursor 1 5748.7549 -8.33

0.0000 0.00



Analyzer Settings

- HP8564E,EMI
- CF: 5744.979 MHz
- SPAN:300 kHz
- RB 3.00 kHz
- VB 10.00 kHz
- Detector POS
- Att 10
- RL Offset 11.00
- Sweep Time 100.0s
- Ref Lvl:-0.50DBM

Comments

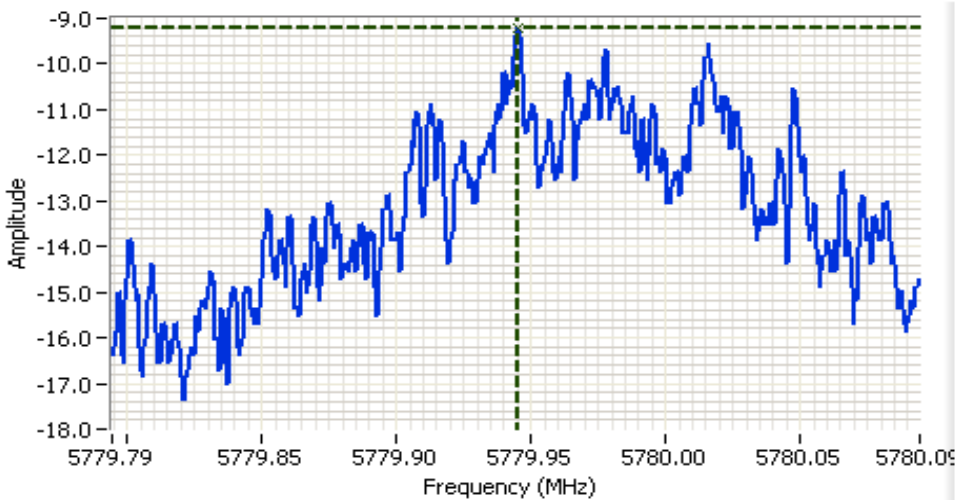
- PSD @ 5745 MHz
- BC Chain C n20

Cursor 1 5744.9790 -2.00

0.0000 0.00



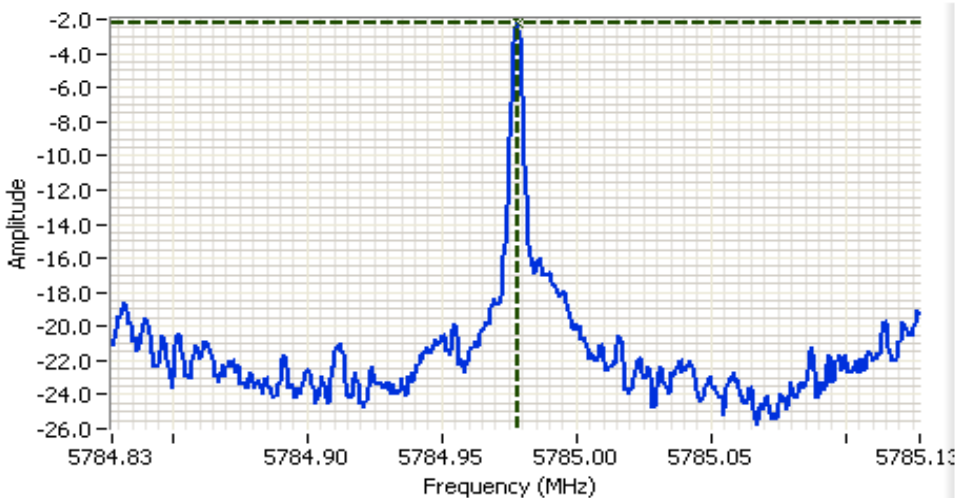
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings
 HP8564E,EMI
 CF: 5779.944 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:-2.70DBM

Comments
 PSD @ 5785 MHz
 BC Chain B n20

Cursor 1 5779.9448 -9.20 [Zoom] [Lock]
 0.0000 0.00 [Zoom] [Lock]



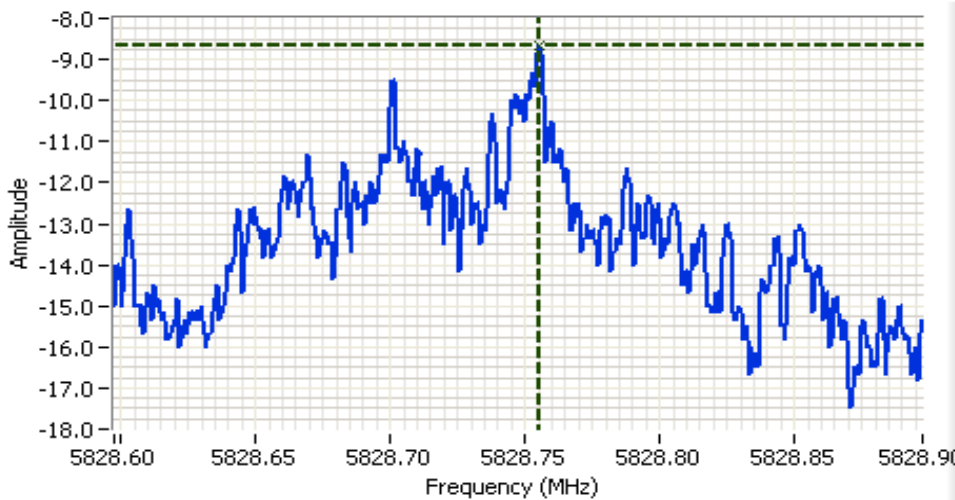
Analyzer Settings
 HP8564E,EMI
 CF: 5784.978 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:0.60DBM

Comments
 PSD @ 5785 MHz
 BC Chain C n20

Cursor 1 5784.9780 -2.23 [Zoom] [Lock]
 0.0000 0.00 [Zoom] [Lock]



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings

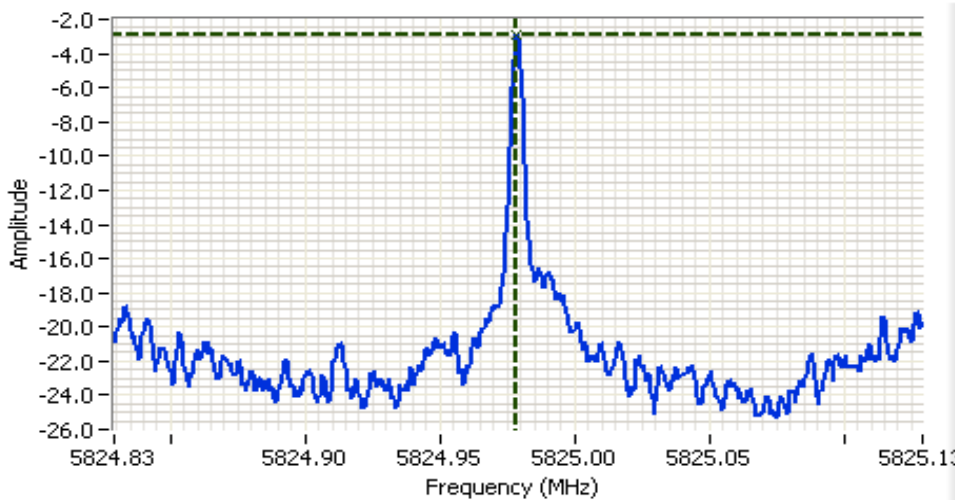
HP8564E,EMI
 CF: 5828.748 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:-5.50DBM

Comments

PSD @ 5825 MHz
 BC Chain B n20

Cursor 1 5828.7551 -8.67

0.0000 0.00



Analyzer Settings

HP8564E,EMI
 CF: 5824.979 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:0.80DBM

Comments

PSD @ 5825 MHz
 BC Chain C n20

Cursor 1 5824.9785 -2.87

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run # 7: Output Power - Three Chains (A + B + C)
 Operating Mode: 802.11n 20MHz
 Transmitted signal on chain is coherent ? No

| 5745 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 31.5 | 30.5 | 31.0 | | | | | |
| Output Power (dBm) ^{Note 1} | 12.2 | 12.95 | 12.56 | | 17.4 dBm | 0.054 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5.0 | 5.0 | 5.0 | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | 17.2 | 17.95 | 17.56 | | 22.4 dBm | 0.172 W | | |

| 5785 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 32.0 | 31.0 | 31.5 | | | | | |
| Output Power (dBm) ^{Note 1} | 13.65 | 13.12 | 12.89 | | 18.0 dBm | 0.063 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5.0 | 5.0 | 5.0 | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | 18.65 | 18.12 | 17.89 | | 23.0 dBm | 0.200 W | | |

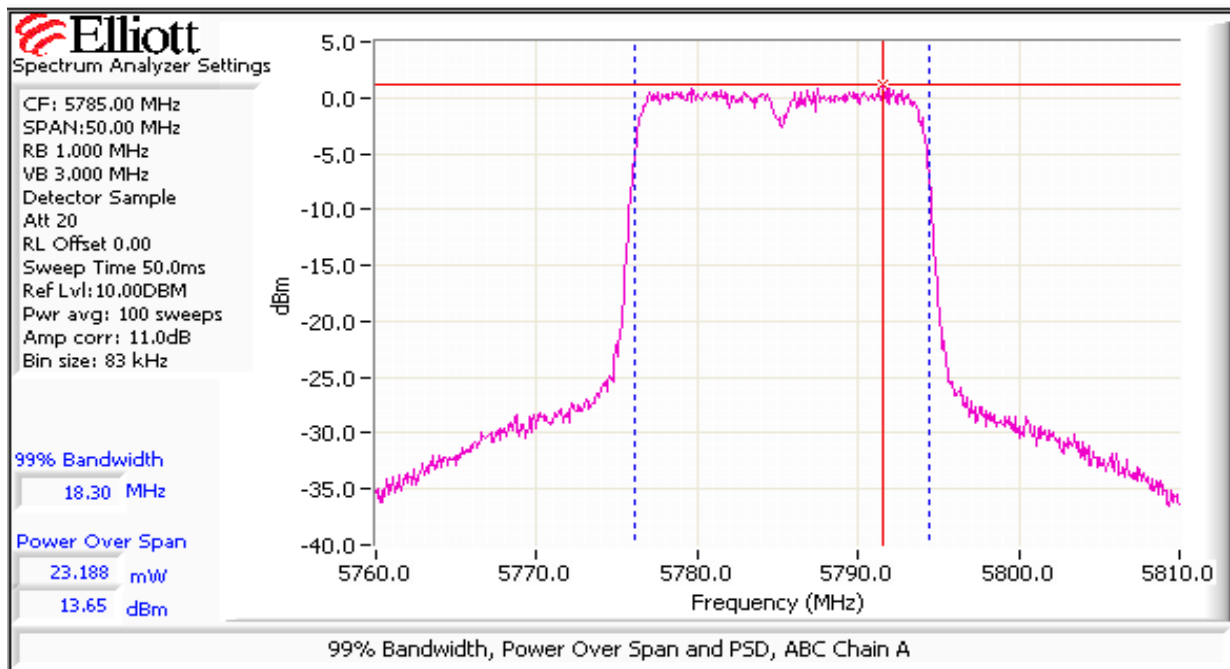
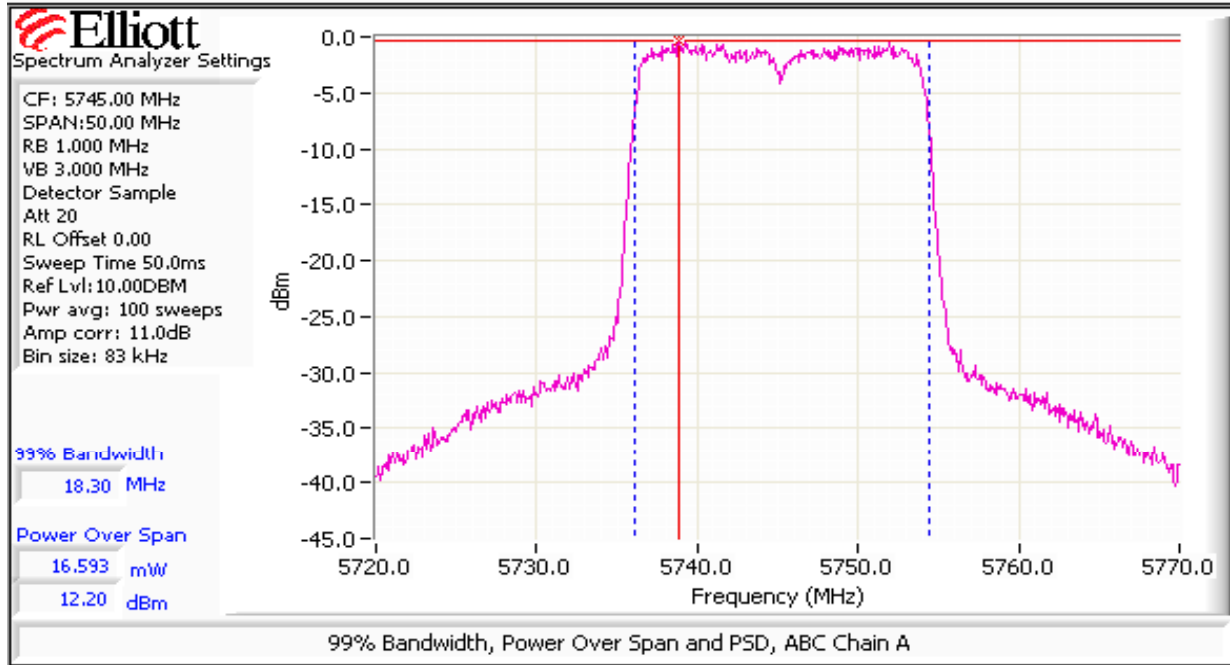
| 5825 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 32.5 | 31.0 | 32.0 | | | | | |
| Output Power (dBm) ^{Note 1} | 13.24 | 13.02 | 13.38 | | 18.0 dBm | 0.063 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5.0 | 5.0 | 5.0 | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | 18.24 | 18.02 | 18.38 | | 23.0 dBm | 0.199 W | | |

Note 1: Output power measured using a spectrum analyzer (see plots below) with RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over 50 MHz (reference method 1 of FCC DA 02-2138 for U-NII devices, August 30, 2002). Spurious limit becomes **-30dBc**.

Note 2: As there is no coherency between chains the total EIRP is the sum of the individual EIRPs and effective antenna gain equals the eirp divide by the sum of the power on each chain.

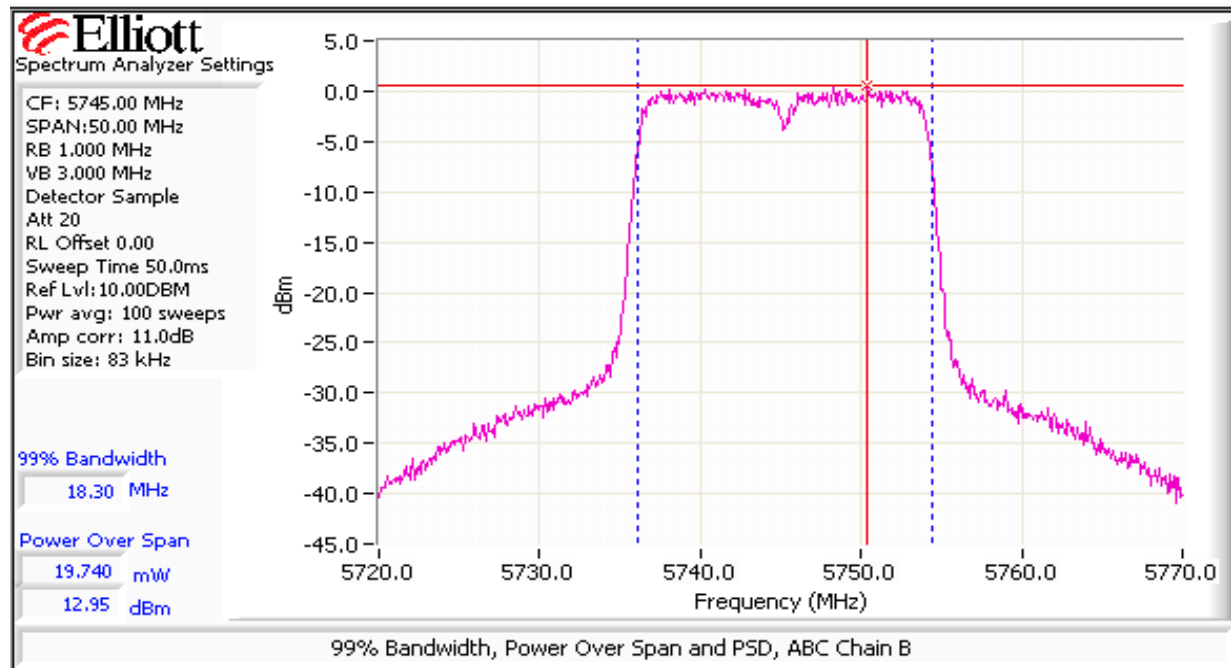
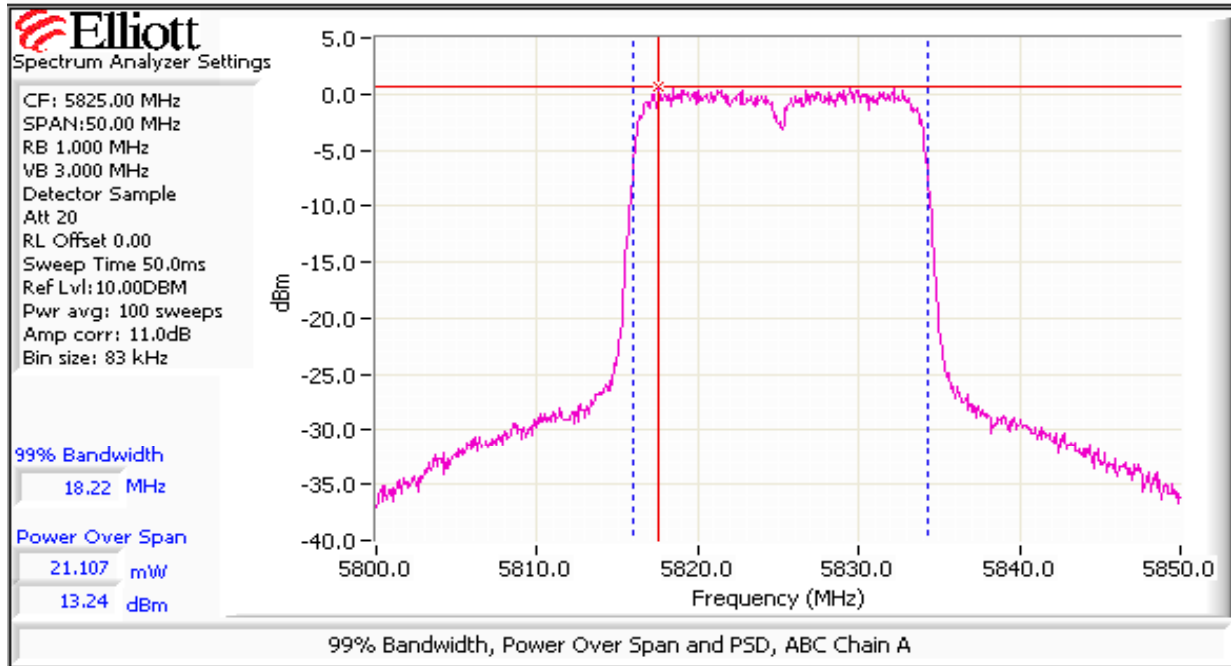
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run # 7: Output Power - Three Chains (A + B + C)



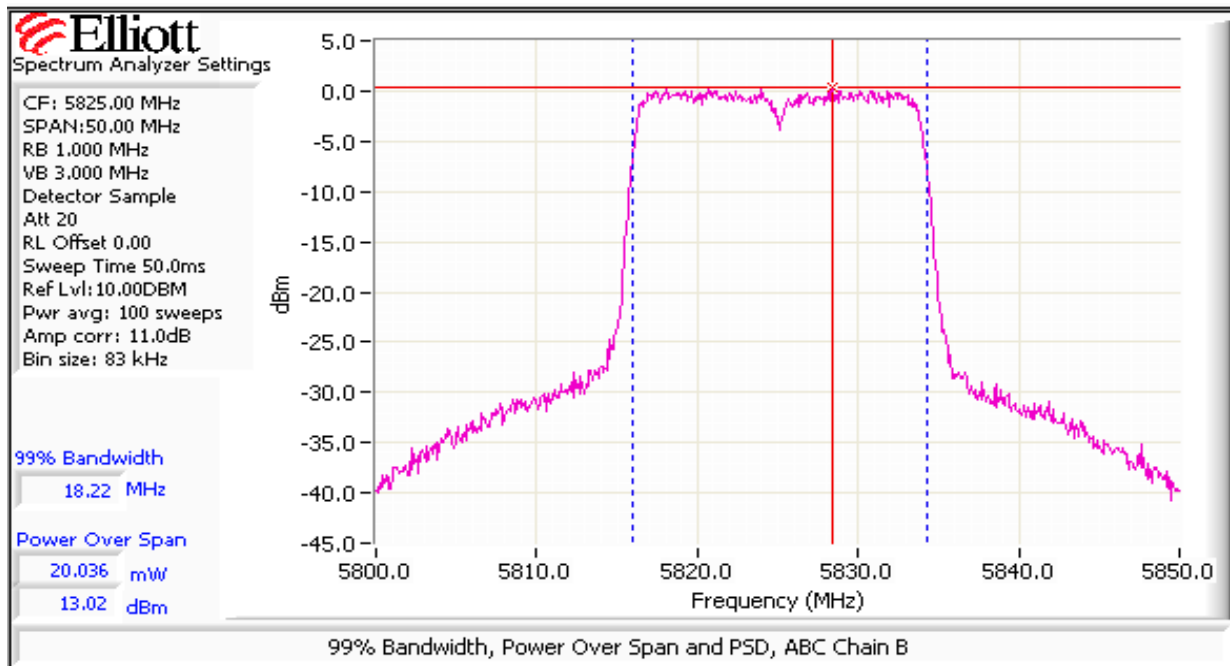
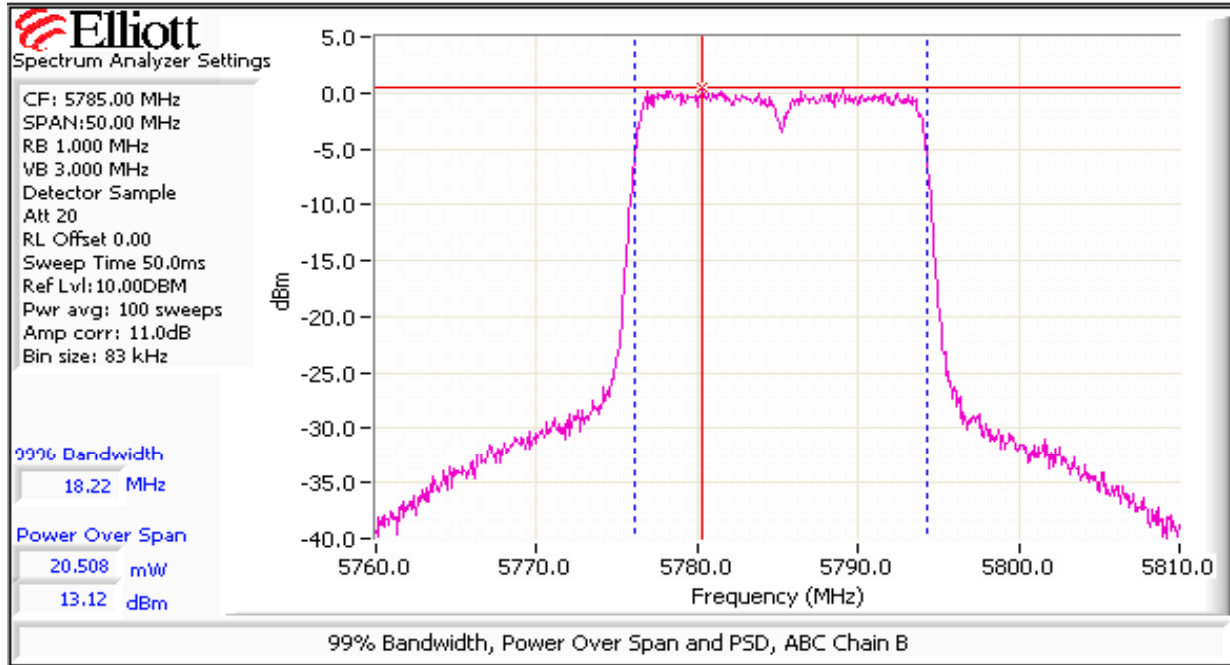
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run # 7: Output Power - Three Chains (A + B + C)



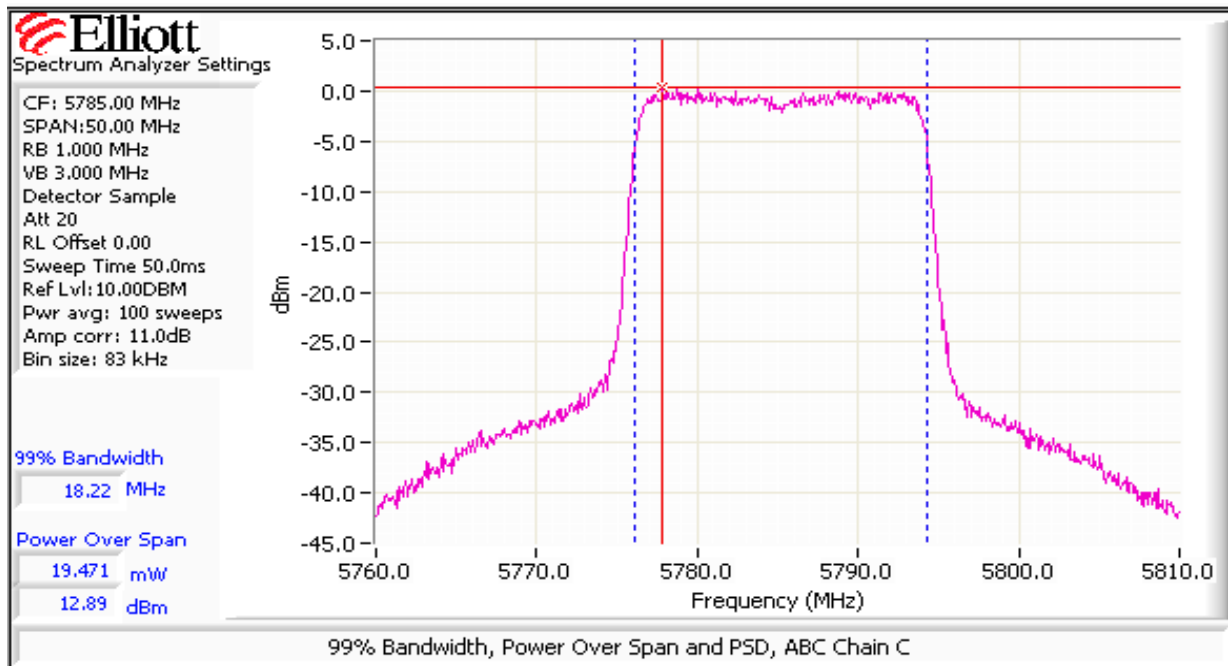
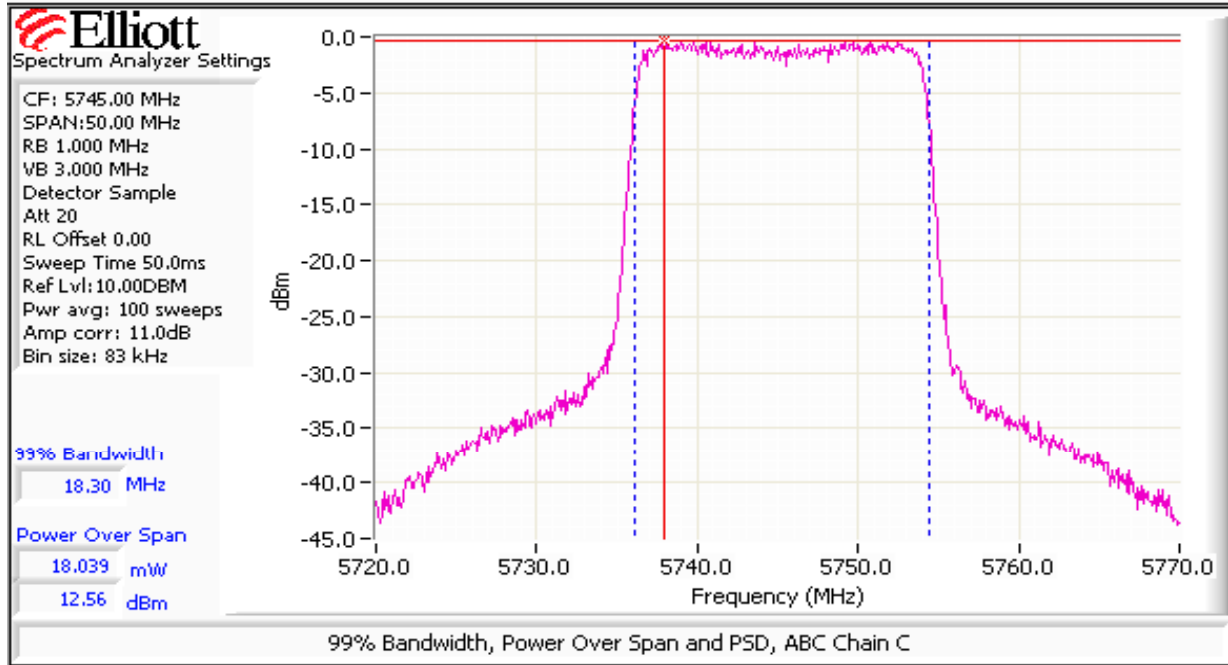
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run # 7: Output Power - Three Chains (A + B + C)



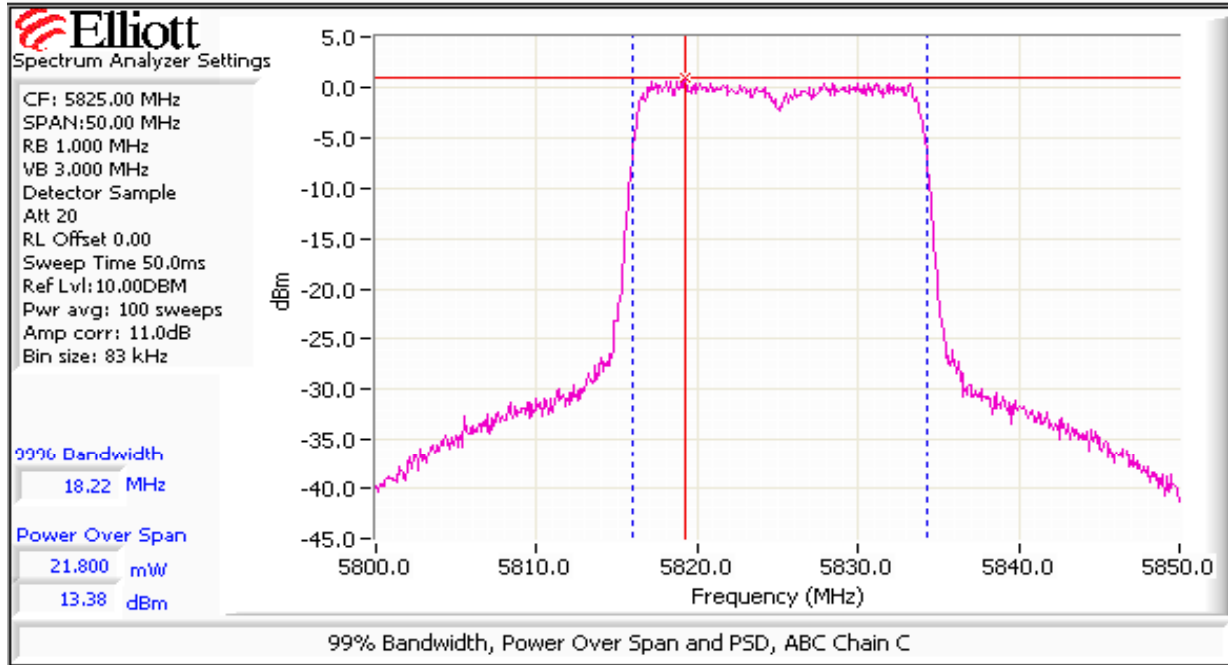
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run # 7: Output Power - Three Chains (A + B + C)



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run # 7: Output Power - Three Chains (A + B + C)

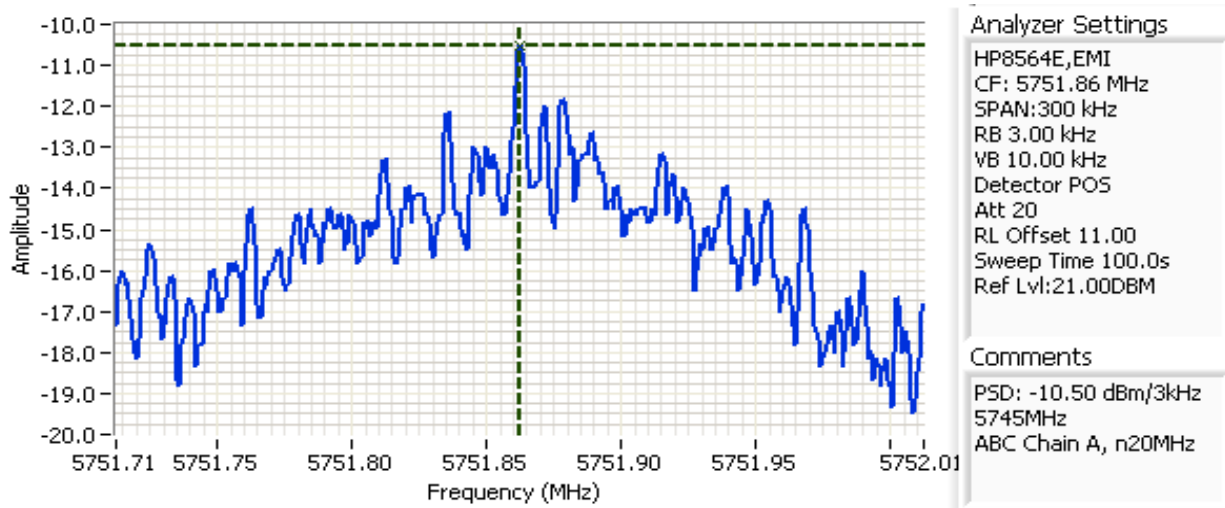


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run # 8: Power spectral Density - Chain A + B + C

| Power Setting | Frequency (MHz) | PSD (dBm/3kHz) ^{Note 1} | | | | Total | Limit dBm/3kHz | Result |
|---------------|-----------------|----------------------------------|---------|---------|---------|-------|----------------|--------|
| | | Chain A | Chain B | Chain C | Chain 4 | | | |
| 31.5,30.5,31 | 5745 | -10.5 | -11.0 | -12.8 | | -6.6 | 8.0 | Pass |
| 32,31,31.5 | 5785 | -11.8 | -9.0 | -10.3 | | -5.5 | 8.0 | Pass |
| 32.5,31,32 | 5825 | -10.5 | -11.5 | -10.7 | | -6.1 | 8.0 | Pass |

- Note 1: Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.
- Note 2: Power setting - if a single number the same power setting was used for each chain. If multiple numbers the power setting for each chain is separated by a comma (e.g. x,y would indicate power setting x for Chain A, power setting y for Chain B).



Analyzer Settings

- HP8564E,EMI
- CF: 5751.86 MHz
- SPAN:300 kHz
- RB 3.00 kHz
- VB 10.00 kHz
- Detector POS
- Att 20
- RL Offset 11.00
- Sweep Time 100.0s
- Ref Lvl:21.00DBM

Comments

- PSD: -10.50 dBm/3kHz
- 5745MHz
- ABC Chain A, n20MHz

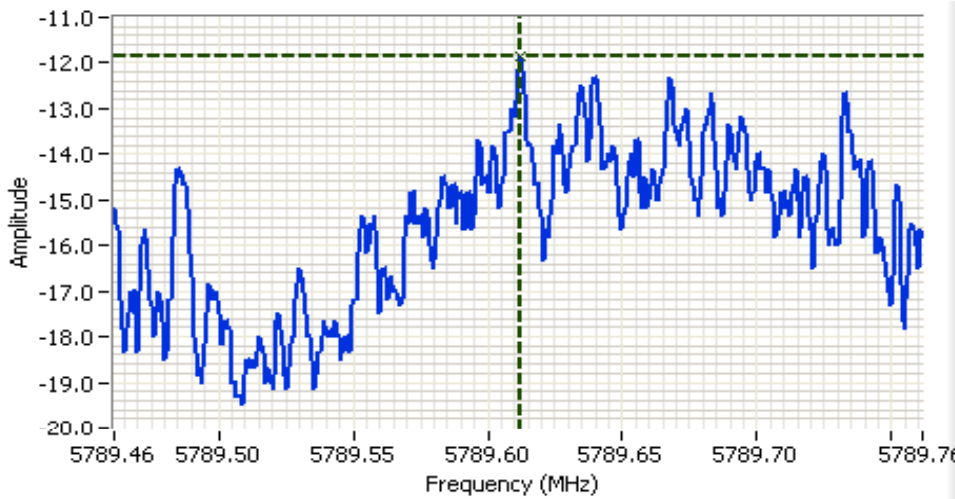
Cursor 1 5751.8623 -10.50

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run # 8: Power spectral Density - Chain A + B + C

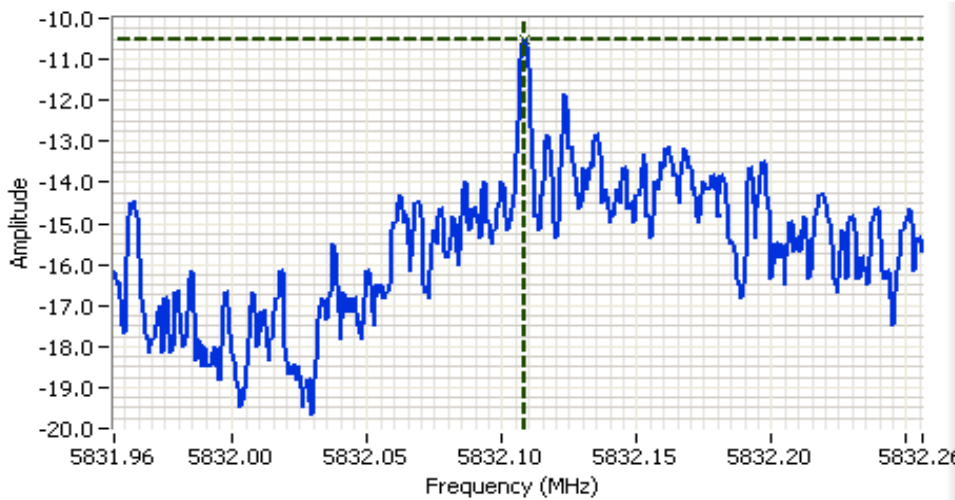


Analyzer Settings
 HP8564E,EMI
 CF: 5789.61 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments
 PSD: -11.83 dBm/3kHz
 5785MHz
 ABC Chain A, n20MHz

Cursor 1 5789.6123 -11.83

0.0000 0.00



Analyzer Settings
 HP8564E,EMI
 CF: 5832.11 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments
 PSD: -10.50 dBm/3kHz
 5825MHz
 ABC Chain A, n20MHz

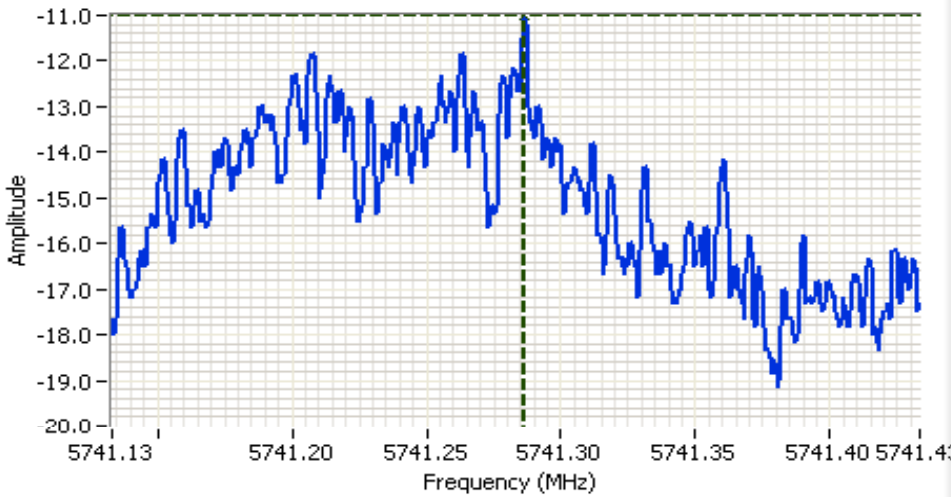
Cursor 1 5832.1080 -10.50

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run # 8: Power spectral Density - Chain A + B + C

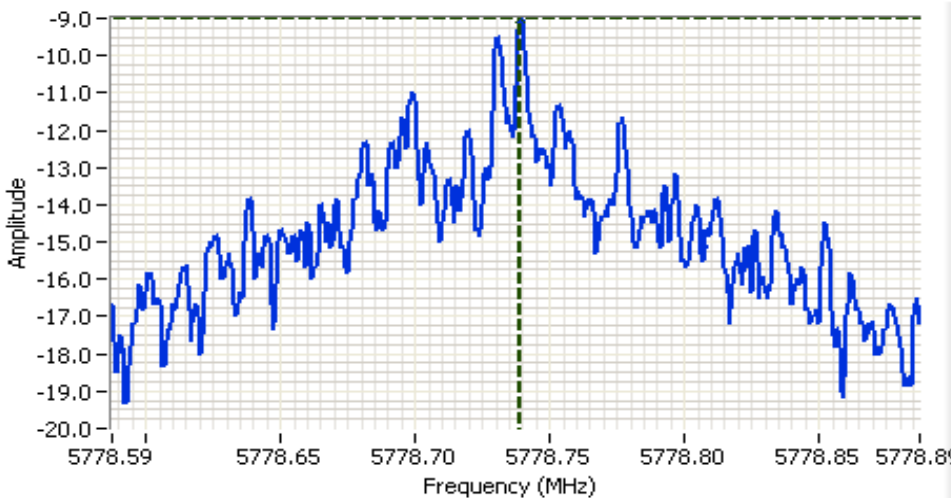


Analyzer Settings
 HP8564E,EMI
 CF: 5741.28 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments
 PSD: -11 dBm/3kHz
 5745MHz
 ABC Chain B, n2UMHz

Cursor 1 5741.2862 -11.00

0.0000 0.00



Analyzer Settings
 HP8564E,EMI
 CF: 5778.74 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments
 PSD: -9 dBm/3kHz
 5785MHz
 ABC Chain B, n20MHz

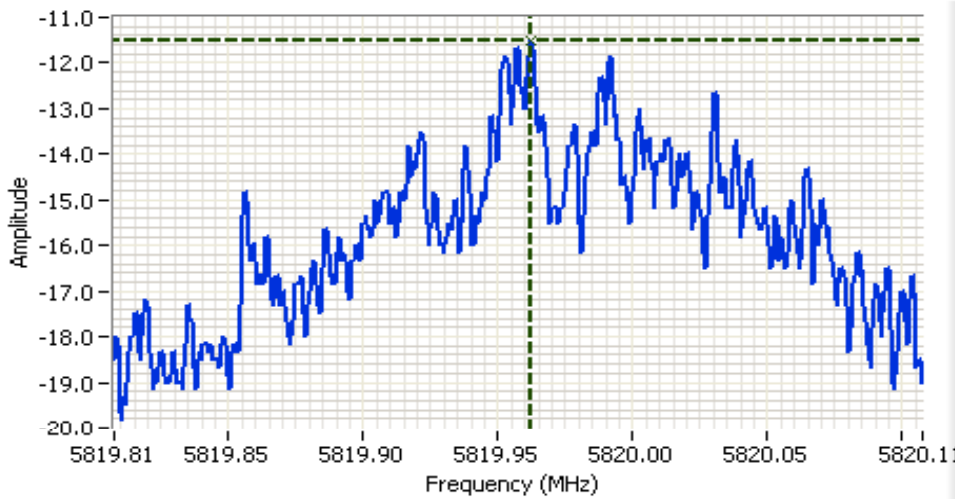
Cursor 1 5778.7388 -9.00

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run # 8: Power spectral Density - Chain A + B + C

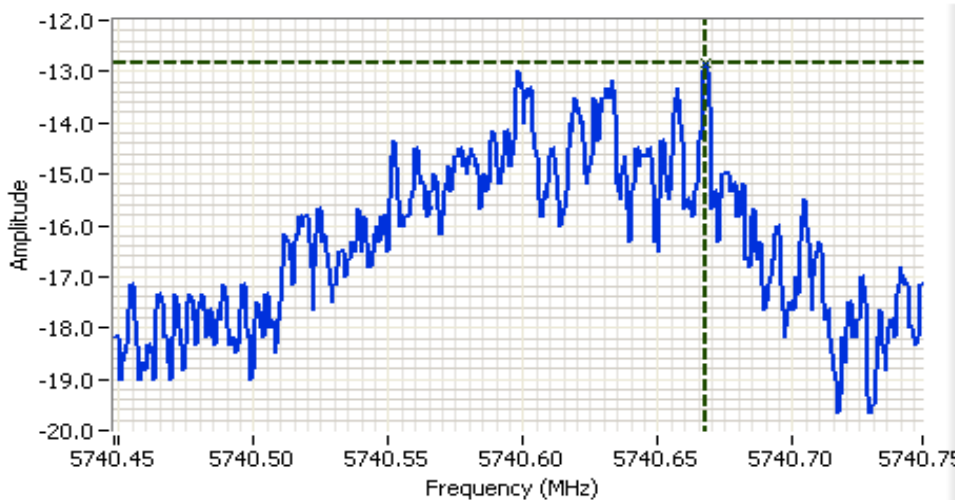


Analyzer Settings
 HP8564E,EMI
 CF: 5819.96 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments
 PSD: -11.50 dBm/3kHz
 5825MHz
 ABC Chain B, n20MHz

Cursor 1 5819.9620 -11.50

0.0000 0.00



Analyzer Settings
 HP8564E,EMI
 CF: 5740.60 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments
 PSD: -12.83 dBm/3kHz
 5745MHz
 ABC Chain C, n20MHz

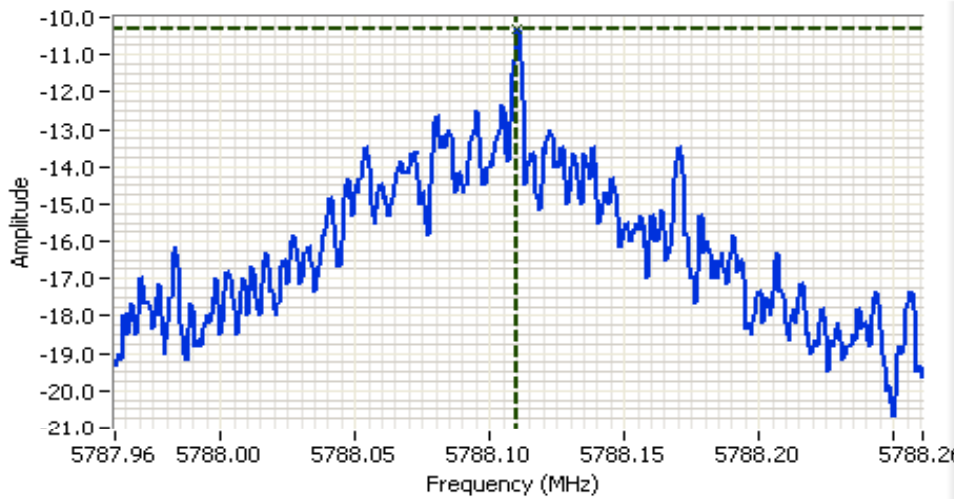
Cursor 1 5740.6676 -12.83

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

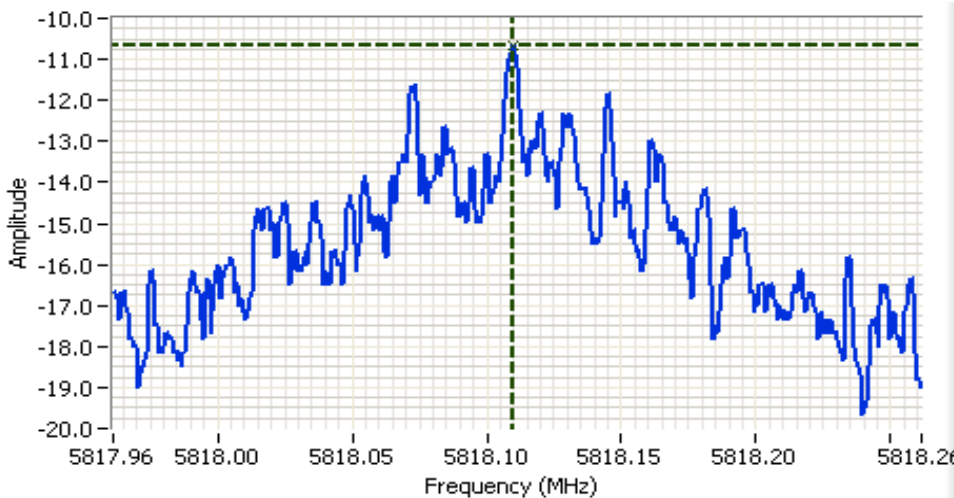
Run # 8: Power spectral Density - Chain A + B + C



Analyzer Settings
 HP8564E,EMI
 CF: 5788.11 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments
 PSD: -10.33 dBm/3kHz
 5785MHz
 ABC Chain C, n20MHz

Cursor 1 5788.1103 -10.33
 0.0000 0.00



Analyzer Settings
 HP8564E,EMI
 CF: 5818.11 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments
 PSD: -10.67 dBm/3kHz
 5825MHz
 ABC Chain C, n20MHz

Cursor 1 5818.1098 -10.67
 0.0000 0.00



| | | | |
|-----------|-----------------------|------------------|--------------|
| Client: | Intel | Job Number: | J70796 |
| Model: | 533-agn MMW | T-Log Number: | T71053 |
| | | Account Manager: | Dean Eriksen |
| Contact: | Robert Paxman | | |
| Standard: | FCC 15.247 / RSS -210 | Class: | N/A |

**RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
 \802.11n 40MHz Single Chain**

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

| | |
|-------------------------------|--|
| Date of Test: 5/7/2008 | Config. Used: 1 |
| Test Engineer: Rafael Varelas | Config Change: None |
| Test Location: FT Chamber #4 | EUT Voltage: Powered From Host System(3.3V DC) |

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions: Temperature: 20.3 °C
 Rel. Humidity: 35 %

Summary of Results

| Run # | Test Performed | Limit | Pass / Fail | Result / Margin |
|-------|------------------------------|-----------|-------------|-----------------|
| 1 | Output Power | 15.247(b) | Pass | 15dBm (31.6mW) |
| 2 | Power spectral Density (PSD) | 15.247(d) | Pass | -10.9 dBm/3kHz |
| 3 | 6dB Bandwidth | 15.247(a) | Pass | 35.8 MHz |
| 3 | 99% Bandwidth | RSS GEN | - | 36.6 MHz |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

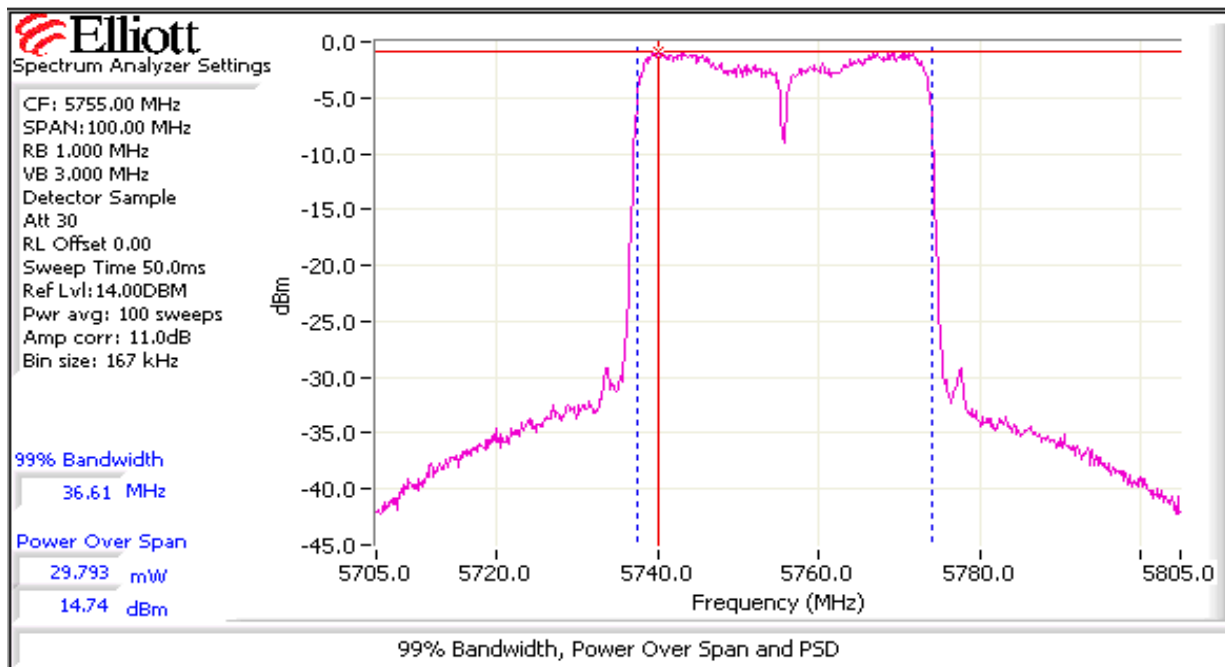
No deviations were made from the requirements of the standard.

| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| | Account Manager: Dean Eriksen |
| Contact: Robert Paxman | |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

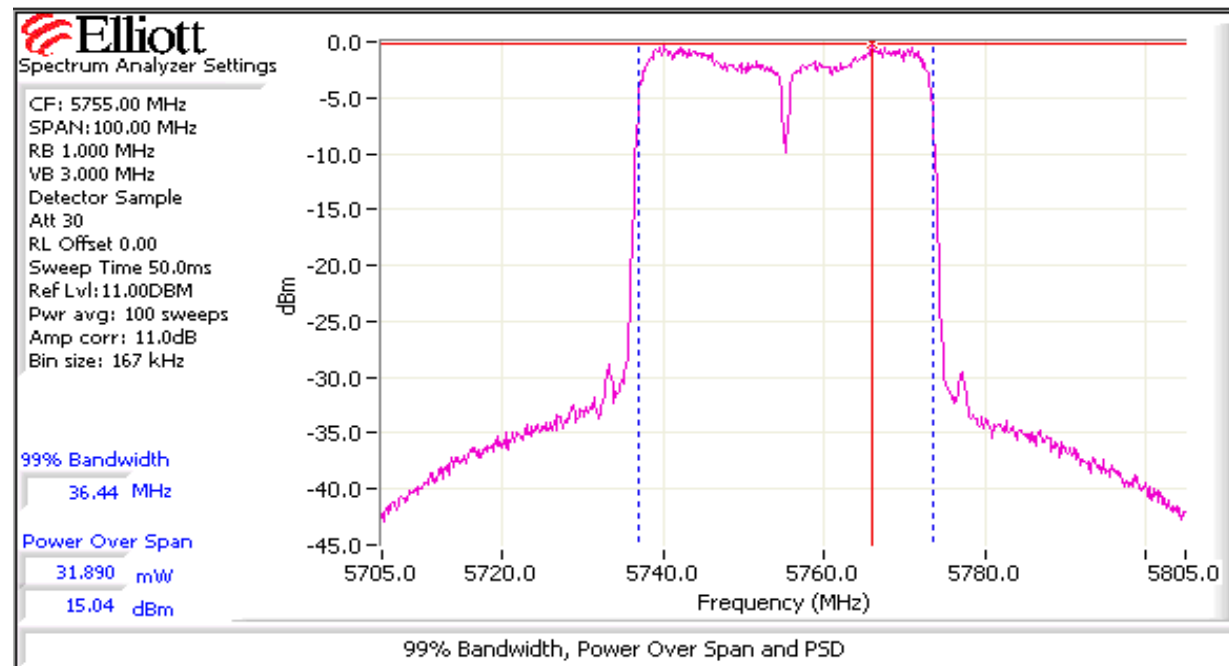
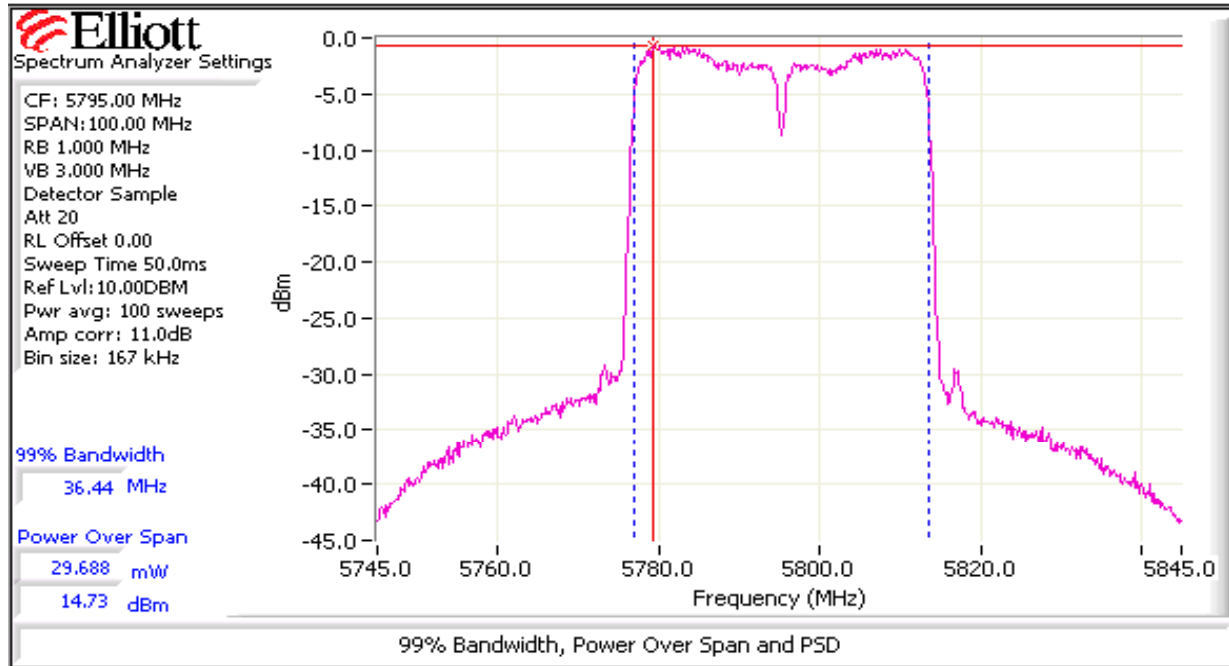
Run #1: Output Power

| Power Setting ² | Frequency (MHz) | Output Power | | Antenna Gain (dBi) | Result | EIRP ^{Note 2} | | Output Power | |
|----------------------------|-----------------|--------------------|------|--------------------|--------|------------------------|-------|--------------------|------|
| | | (dBm) ¹ | mW | | | dBm | W | (dBm) ³ | mW |
| 26.0 | 5755, Chain A | 14.7 | 29.8 | 5.0 | Pass | 19.7 | 0.094 | 16.8 | 47.9 |
| 26.0 | 5795, Chain A | 14.7 | 29.5 | 5.0 | Pass | 19.7 | 0.093 | 16.6 | 45.7 |
| 25.5 | 5755, Chain B | 15.0 | 31.6 | 5.0 | Pass | 20.0 | 0.100 | 16.8 | 47.9 |
| 25.5 | 5795, Chain B | 14.5 | 28.2 | 5.0 | Pass | 19.5 | 0.089 | 16.6 | 45.7 |
| 26.0 | 5755, Chain C | 14.8 | 29.9 | 5.0 | Pass | 19.8 | 0.094 | 16.9 | 49.0 |
| 26.0 | 5795, Chain C | 14.5 | 28.2 | 5.0 | Pass | 19.5 | 0.089 | 16.6 | 45.7 |

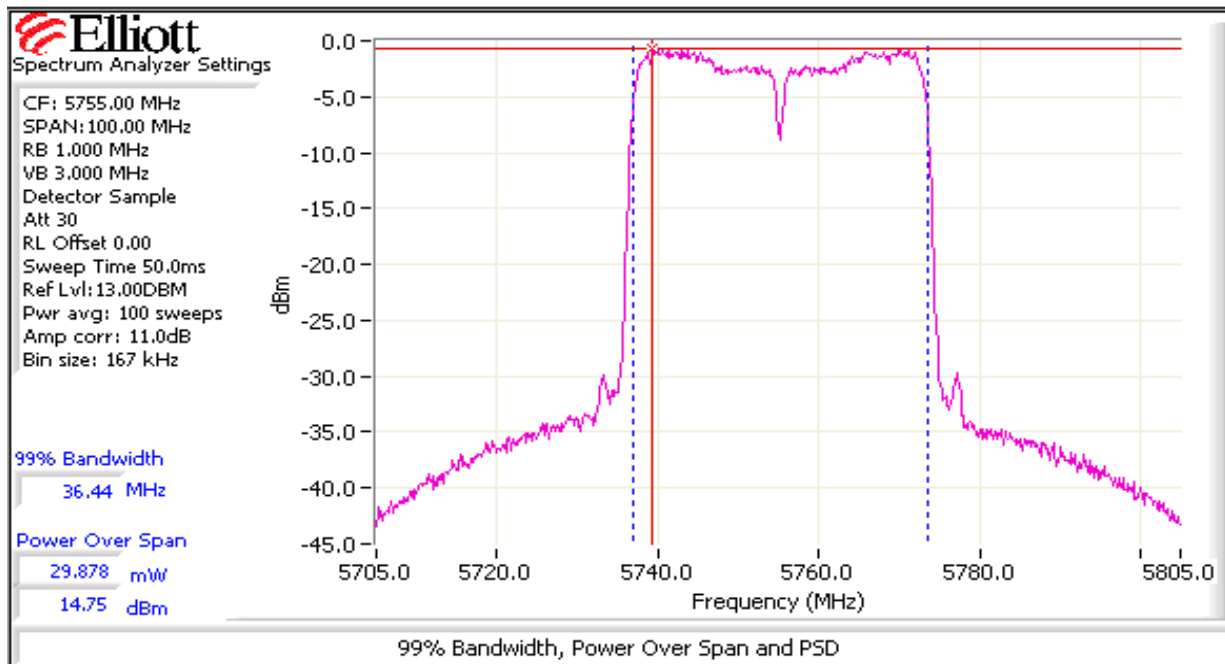
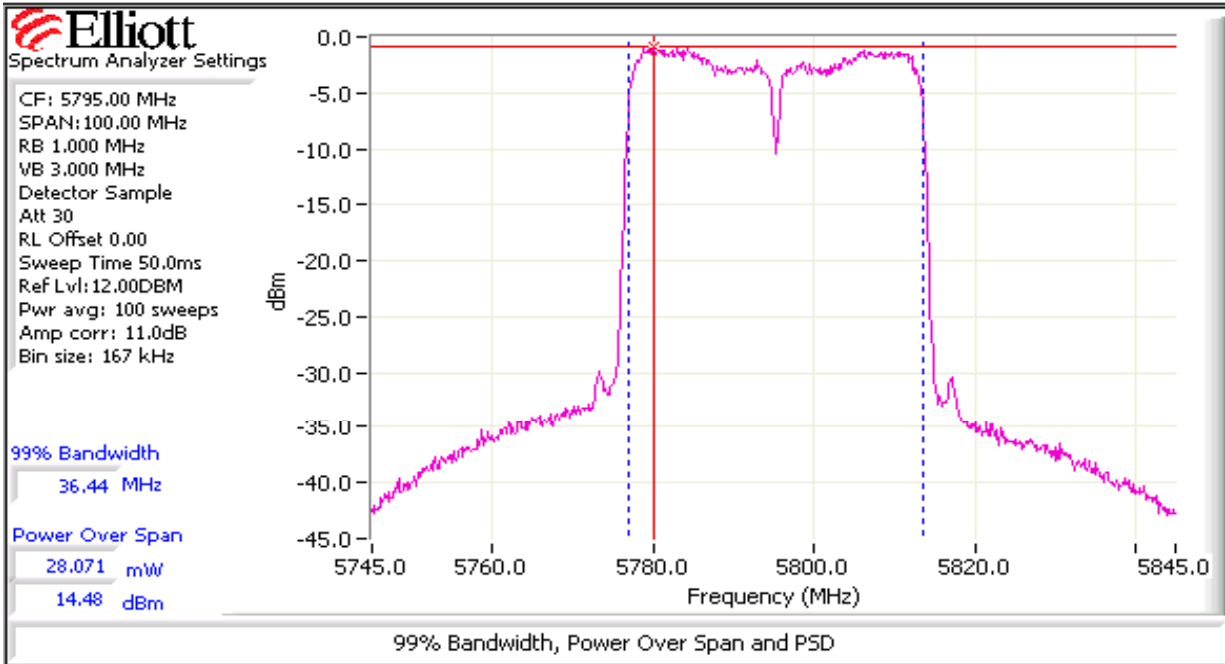
| | |
|---------|---|
| Note 1: | Output power measured using a spectrum analyzer (see plots below): RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over ??? MHz. Spurious limit is -30dBc because this method was used. The output power limit is 30dBm. |
| Note 2: | Power setting - the software power setting used during testing, included for reference only. |
| Note 3: | Power measured using average power sensor and is included for manufacturer's reference only. |



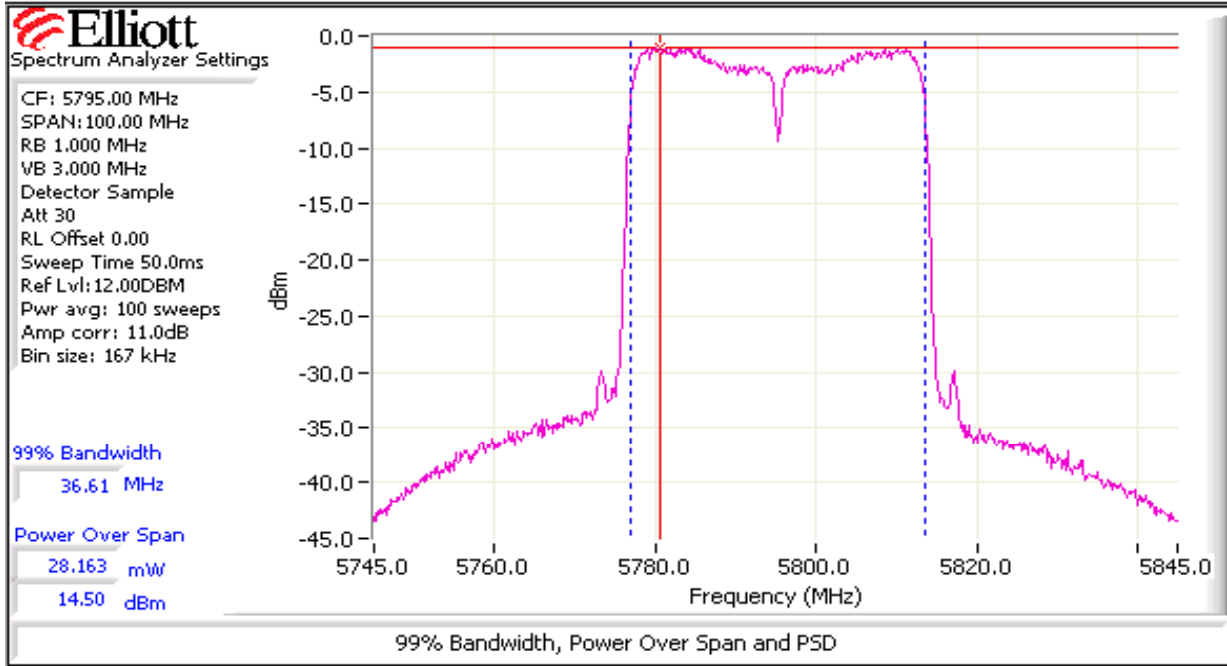
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

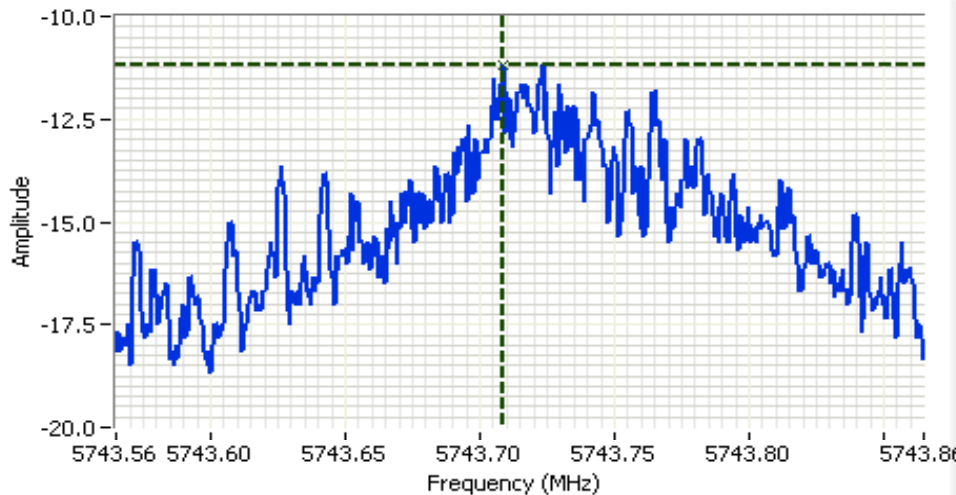


Run #2: Power spectral Density

| Power Setting | Frequency (MHz) | PSD | Limit | Result |
|---------------|-----------------|------------------------------|-------|--------|
| | | (dBm/3kHz) ^{Note 1} | | |
| 26 | 5755, Chain A | -11.2 | 8.0 | Pass |
| 26 | 5795, Chain A | -12.3 | 8.0 | Pass |
| 25.5 | 5755, Chain B | -10.9 | 8.0 | Pass |
| 25.5 | 5795, Chain B | -12.3 | 8.0 | Pass |
| 26 | 5755, Chain C | -12.4 | 8.0 | Pass |
| 26 | 5795, Chain C | -11.2 | 8.0 | Pass |

Note 1: Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.

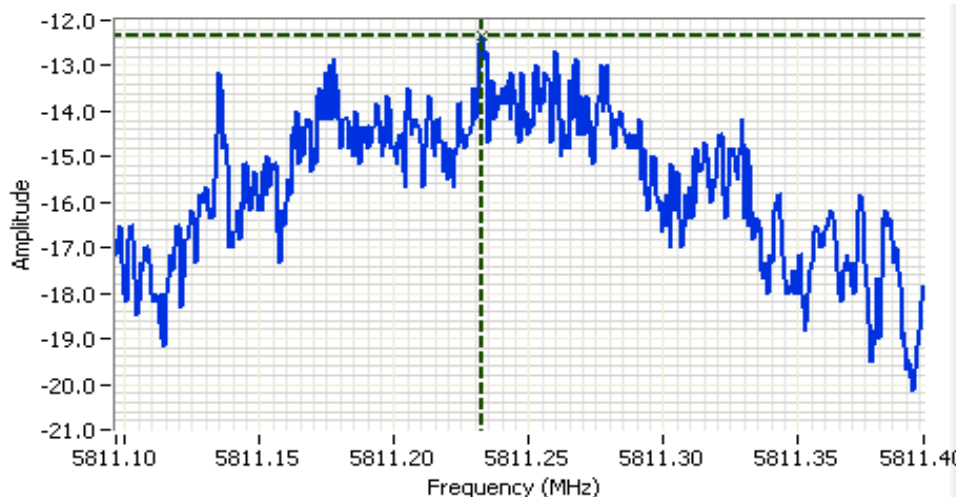
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings
 HP8564E,EMI
 CF: 5743.71 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:9.00DBM

Comments
 PSD=-11.17 dBm/3kHz
 5755 MHz

Cursor 1 5743.7088 -11.17
 0.0000 0.00



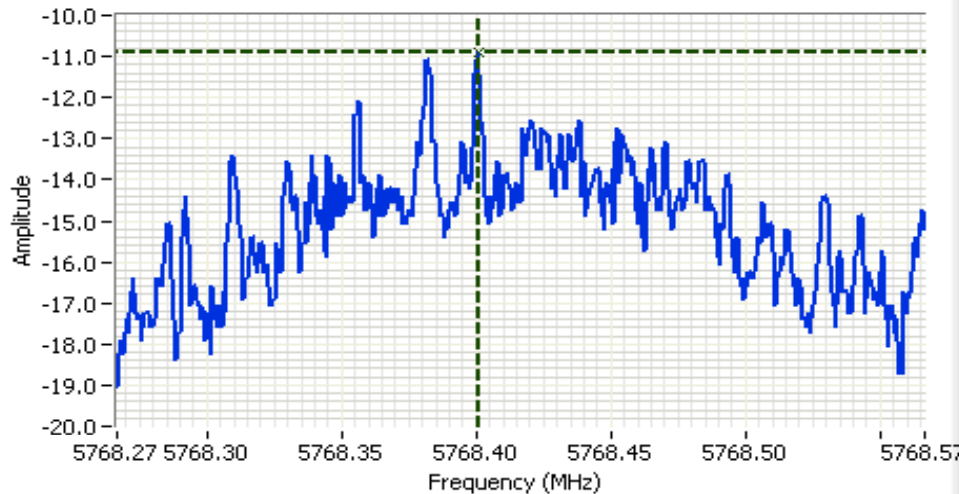
Analyzer Settings
 HP8564E,EMI
 CF: 5811.25 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:11.00DBM

Comments
 PSD=-12.3 dBm/3kHz
 5795 MHz

Cursor 1 5811.2326 -12.33
 0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

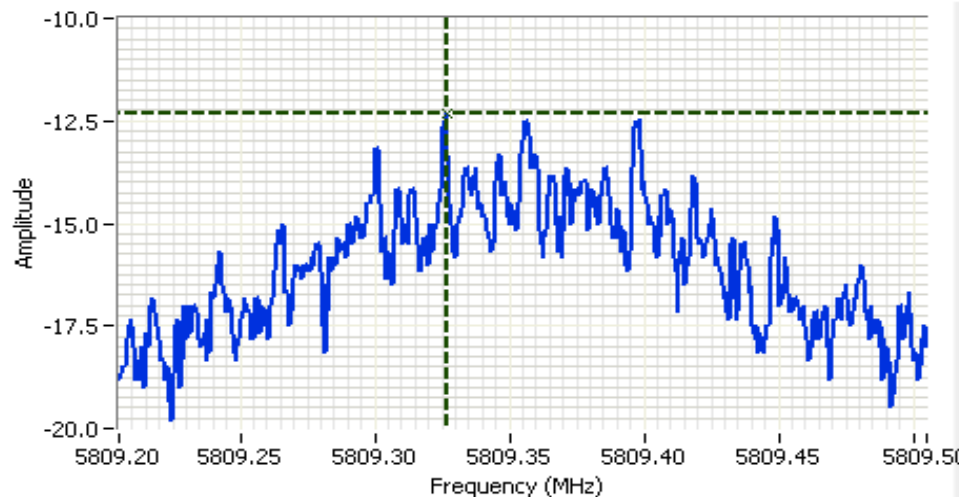
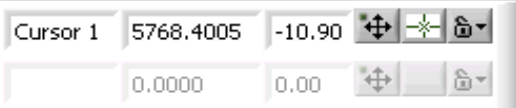


Analyzer Settings

HP8564E,EMI
 CF: 5768.42 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:18.60DBM

Comments

PSD=-10.9 dBm/3kHz
 5755 MHz

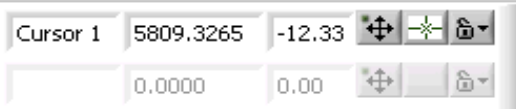


Analyzer Settings

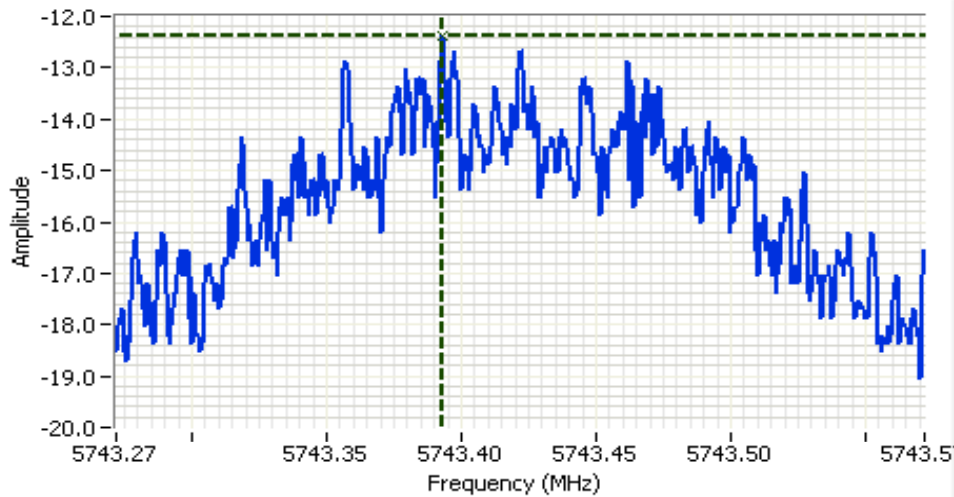
HP8564E,EMI
 CF: 5809.35 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:12.50DBM

Comments

PSD=-12.3 dBm/3kHz
 5795 MHz



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



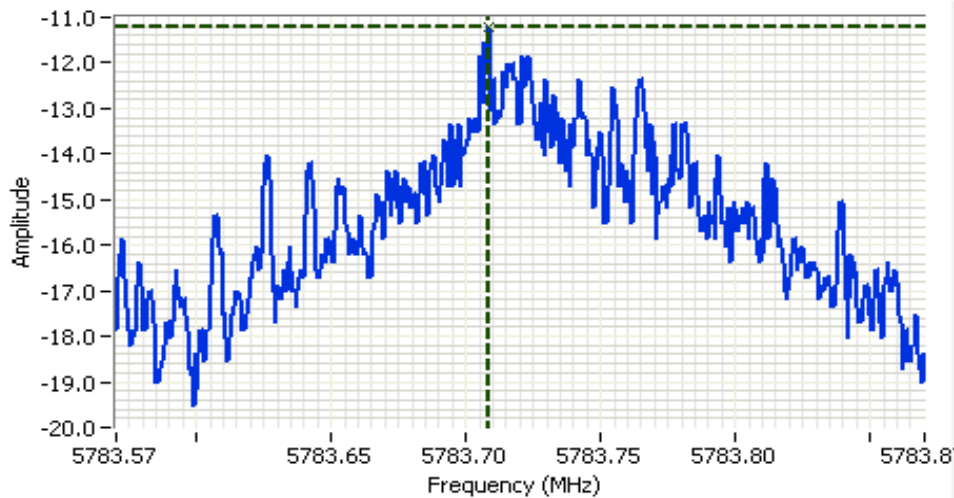
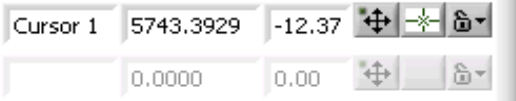
Analyzer Settings

HP8564E,EMI
 CF: 5743.42 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:16.30DBM

Comments

PSD=-12.37 dBm/3kHz

5755 MHz



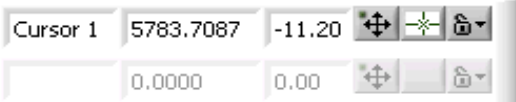
Analyzer Settings

HP8564E,EMI
 CF: 5783.72 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:16.30DBM

Comments

PSD=-11.2 dBm/3kHz

5795 MHz



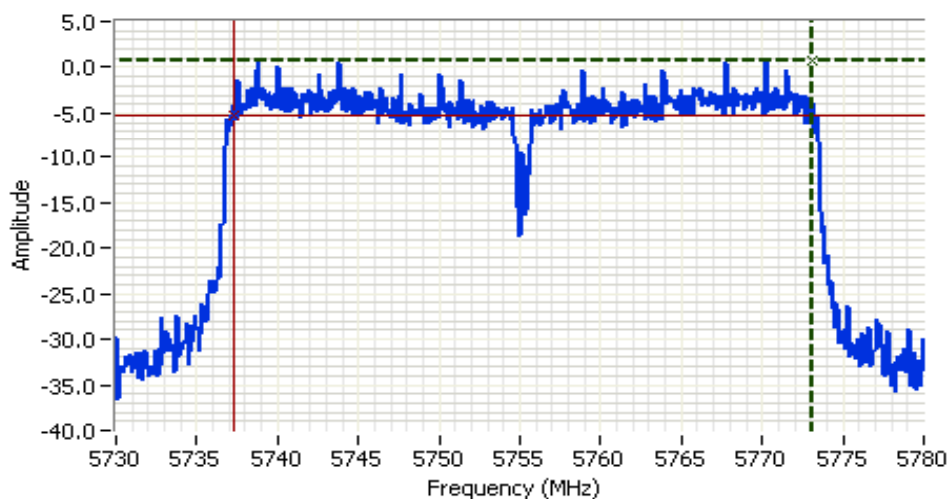
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #3: Signal Bandwidth

| Power Setting | Frequency (MHz) | Resolution Bandwidth | Bandwidth (MHz) | |
|---------------|-----------------|----------------------|-----------------|------|
| | | | 6dB | 99% |
| 26 | 5755, Chain A | 100kHz | 35.75 | 36.6 |
| 26 | 5795, Chain A | 100kHz | 35.5 | 36.4 |
| 25.5 | 5795, Chain B | 100kHz | 35.58 | 36.4 |
| 26 | 5795, Chain C | 100kHz | 35.67 | 36.6 |

Note 1: 99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB

Note 2: Center channel of Chains B and C measured to verify no significant difference in signal bandwidth from Chain A.



Analyzer Settings

HP8564E, EMI
 CF: 5755.00 MHz
 SPAN: 50.00 MHz
 RB 100 kHz
 VB 100 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 50.0ms
 Ref Lvl: 11.00DBM

Comments

6dB Bandwidth:
 35.75 MHz
 5755 MHz

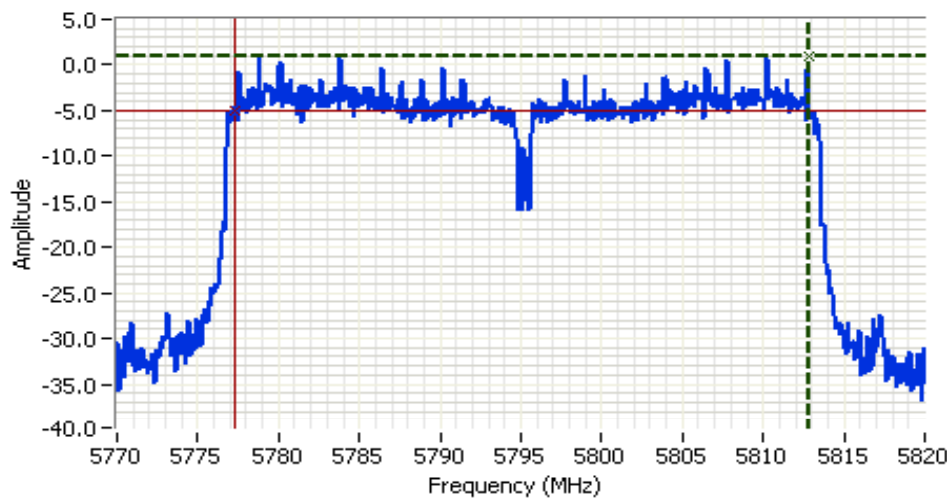
| | | | |
|----------|-----------|-------|---------|
| Cursor 1 | 5773.0833 | 0.83 | ⊕ ⊖ ⊞ ⊚ |
| Cursor 2 | 5737.3333 | -5.17 | ⊕ ⊖ ⊞ ⊚ |

Delta Freq. 35.75

Delta Amplitude 6.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings

HP8564E,EMI
 CF: 5795.00 MHz
 SPAN:50.00 MHz
 RB 100 kHz
 VB 100 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 50.0ms
 Ref Lvl:11.00DBM

Comments

6dB Bandwidth:
 35.50 MHz

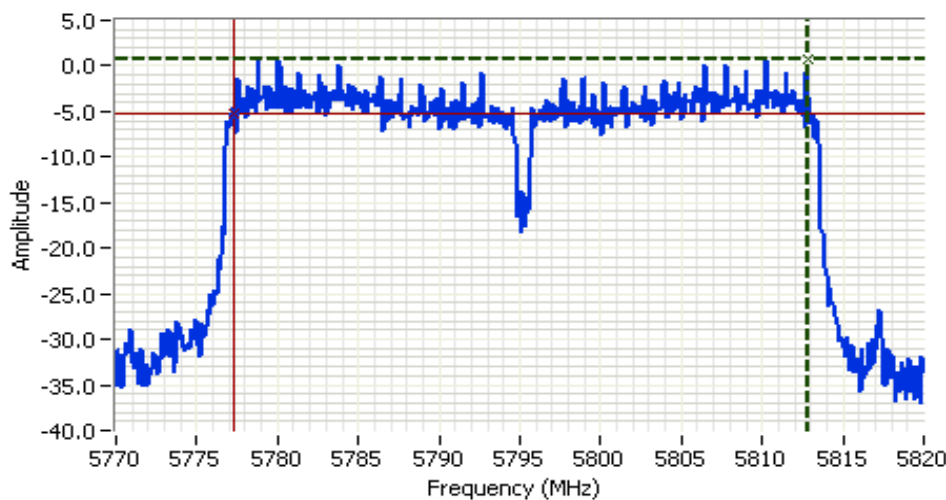
5795 MHz

Cursor 1 5812.8333 1.00

Cursor 2 5777.3333 -5.00

Delta Freq. 35.50

Delta Amplitude 6.00



Analyzer Settings

HP8564E,EMI
 CF: 5795.00 MHz
 SPAN:50.00 MHz
 RB 100 kHz
 VB 100 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 50.0ms
 Ref Lvl:12.50DBM

Comments

6dB Bandwidth:
 35.58 MHz

5795 MHz

Cursor 1 5812.8333 0.83

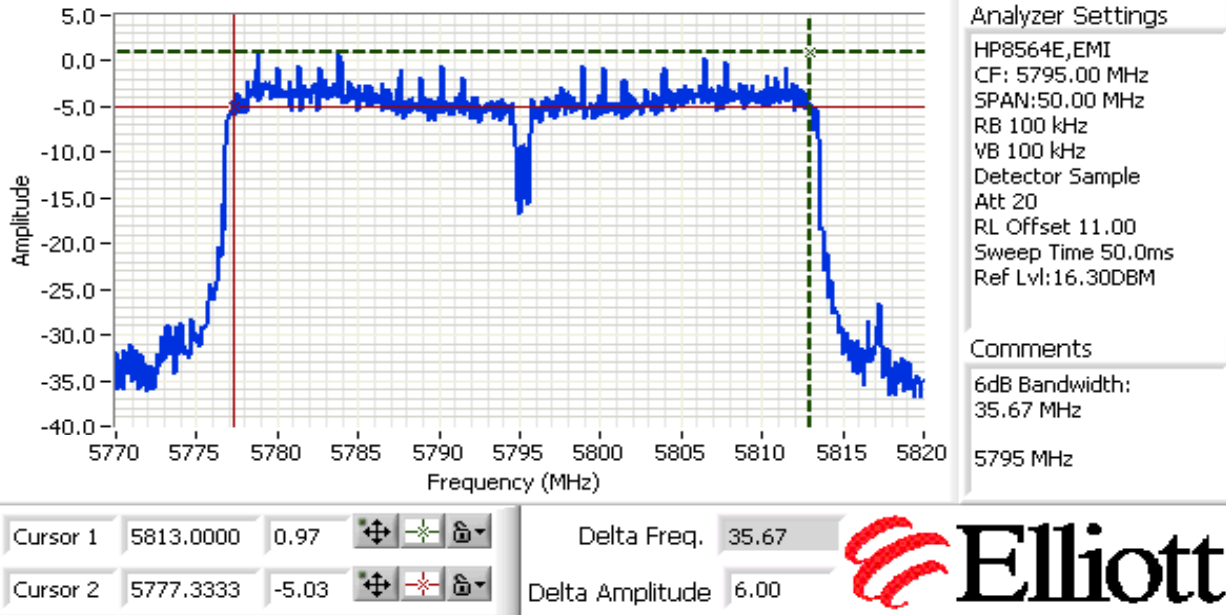
Cursor 2 5777.2500 -5.17

Delta Freq. 35.58

Delta Amplitude 6.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

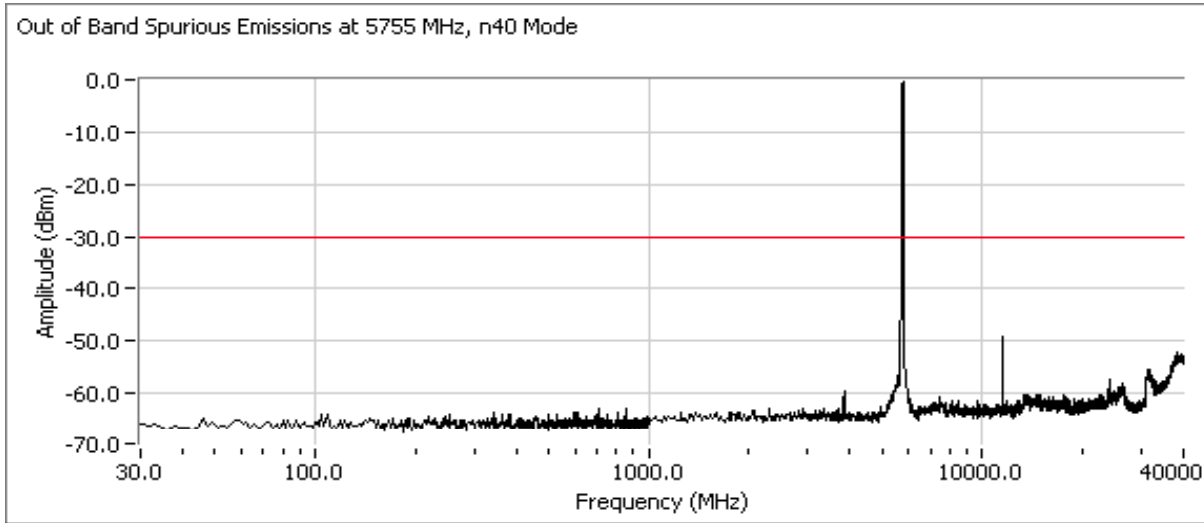


Run #4: Out of Band Spurious Emissions
 All measured using RB = 100kHz, VB = 300kHz.

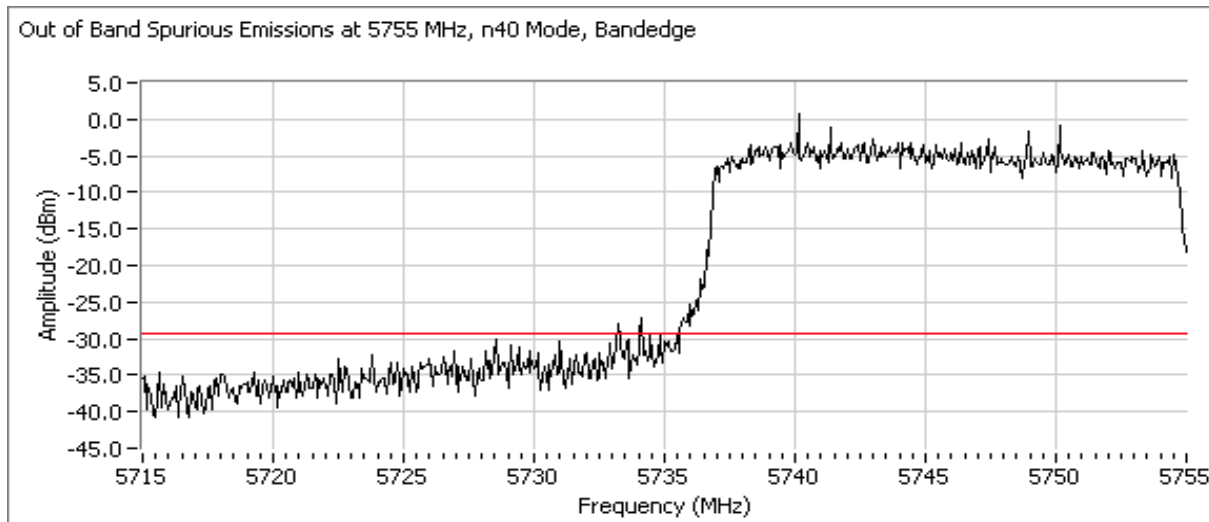
| Frequency (MHz) | Limit | Result |
|-----------------|--------|--------|
| 5755, Chain A | -30dBc | Pass |
| 5795, Chain A | -30dBc | Pass |
| 5755, Chain B | -30dBc | Pass |
| 5795, Chain B | -30dBc | Pass |
| 5755, Chain C | -30dBc | Pass |
| 5795, Chain C | -30dBc | Pass |

| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Plots for low channel, Chain A power setting(s) = 26.0

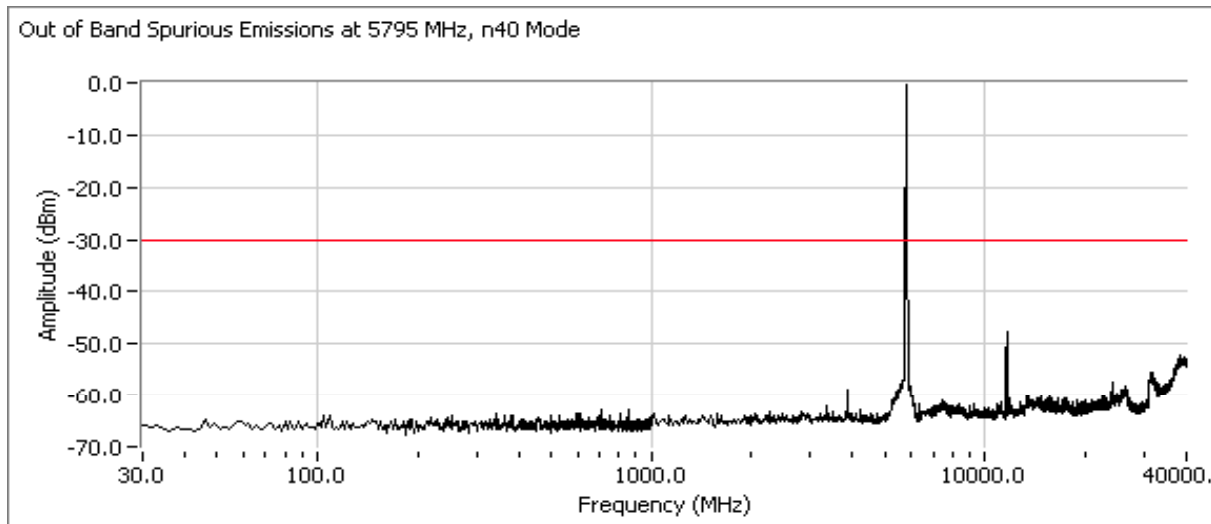


Additional plot from 5715 - 5755 MHz showing compliance with -30dBc at the band edge.

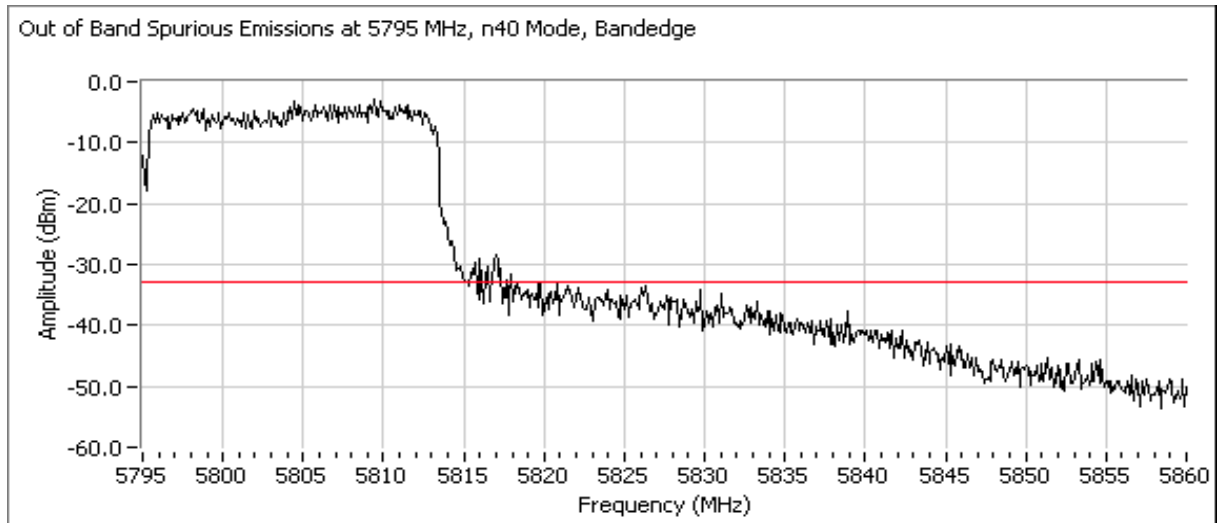


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Plots for high channel, Chain A power setting(s) = 26.0

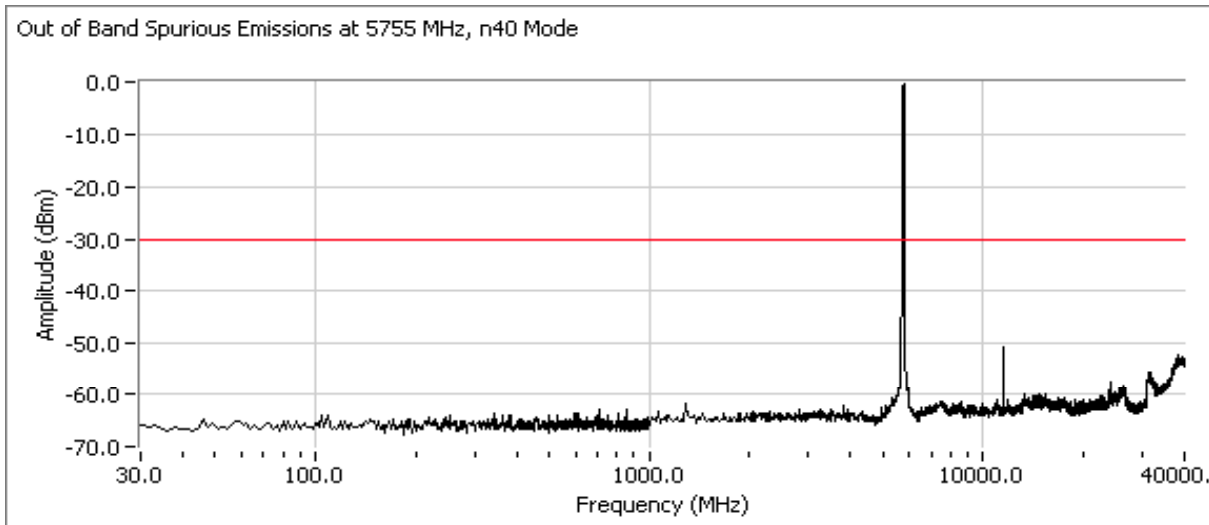


Additional plot from 5820 - 5860 MHz showing compliance with -30dBc at the band edge.

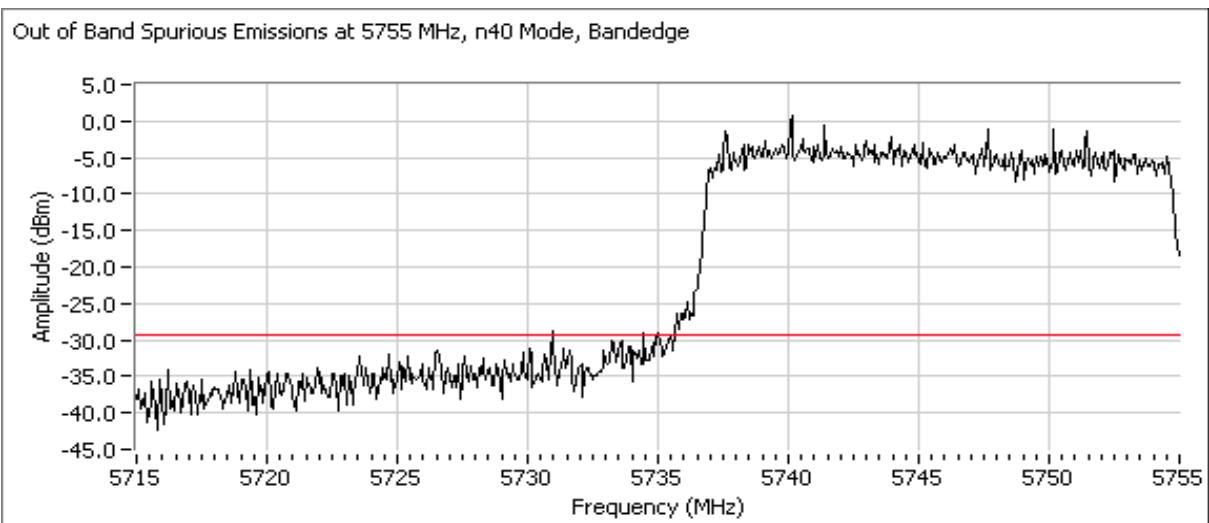


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Plots for low channel, Chain B power setting(s) = 25.5

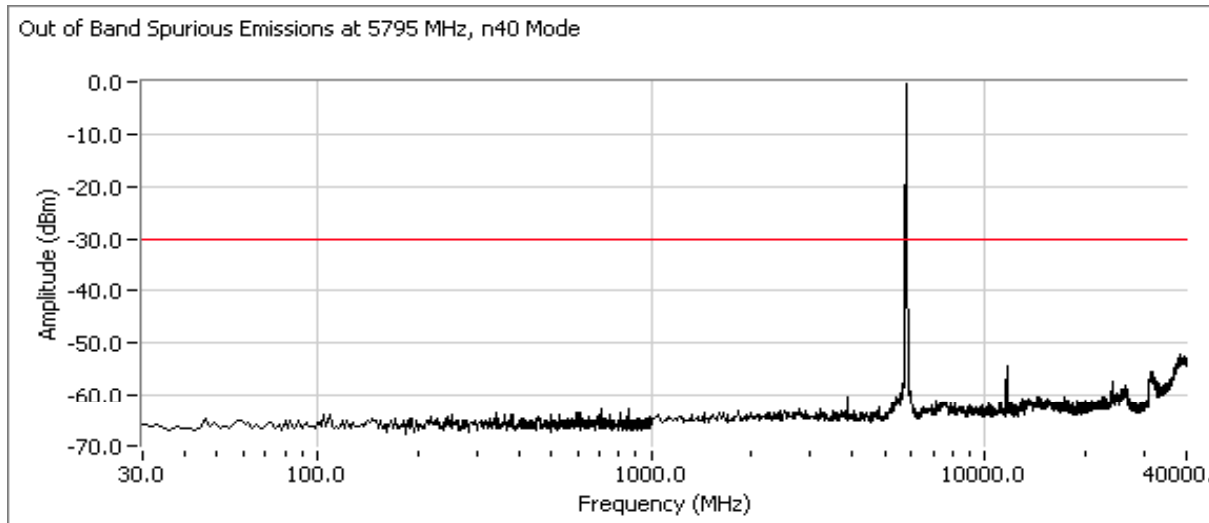


Additional plot from 5715 - 5755 MHz showing compliance with -30dBc at the band edge.

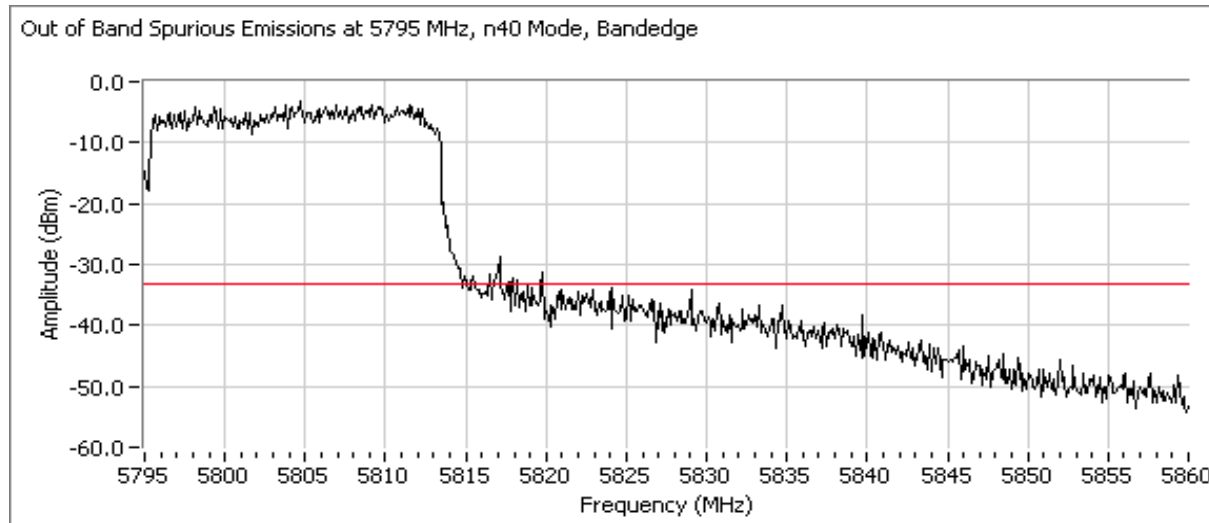


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Plots for high channel, Chain B power setting(s) = 25.5

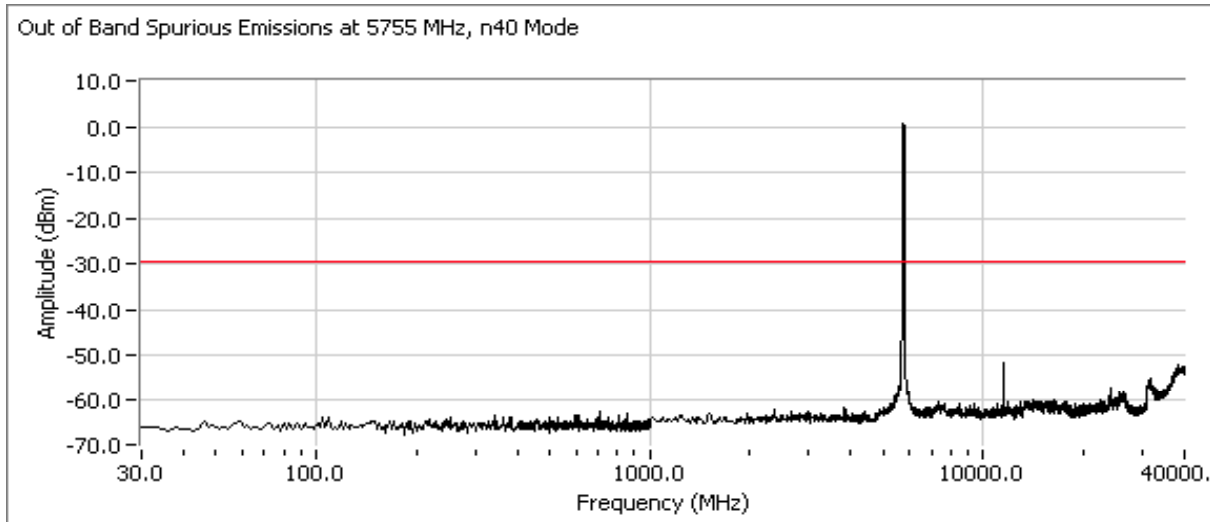


Additional plot from 5820 - 5860 MHz showing compliance with -30dBc at the band edge.

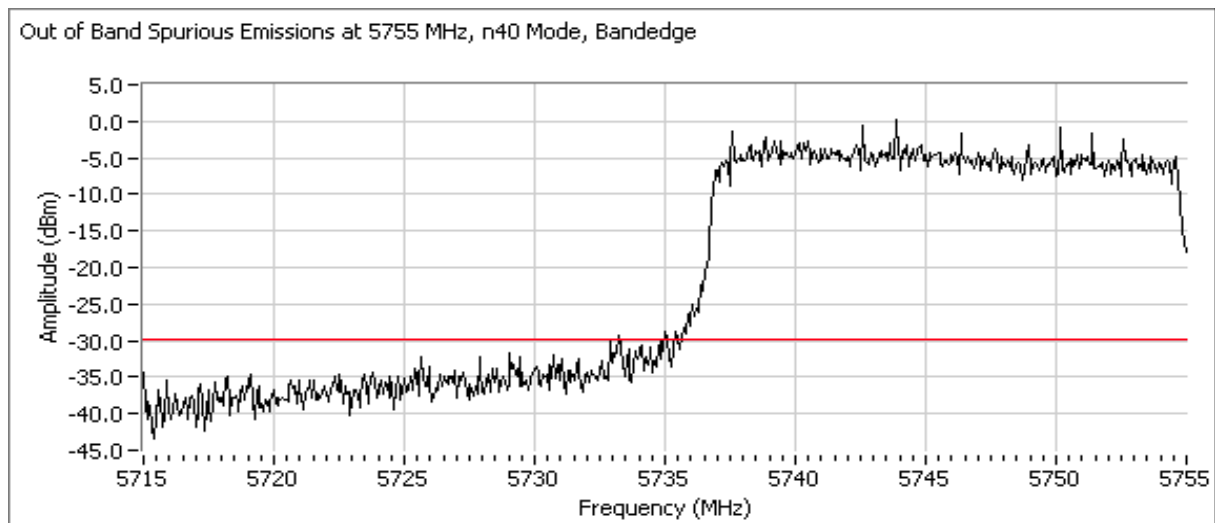


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Plots for low channel, Chain C power setting(s) = 26.0

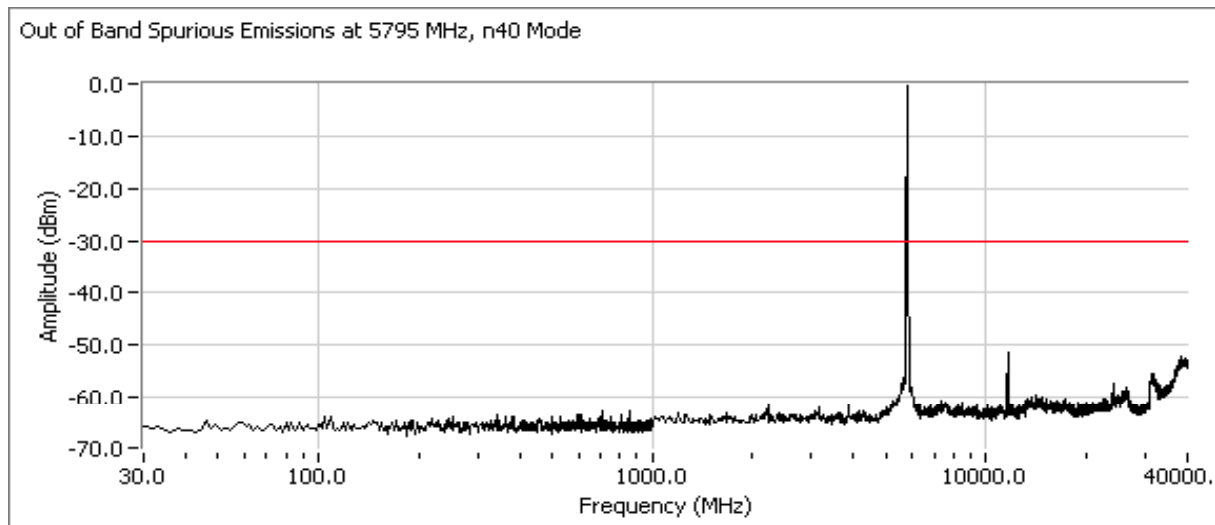


Additional plot from 5715 - 5755 MHz showing compliance with -30dBc at the band edge.

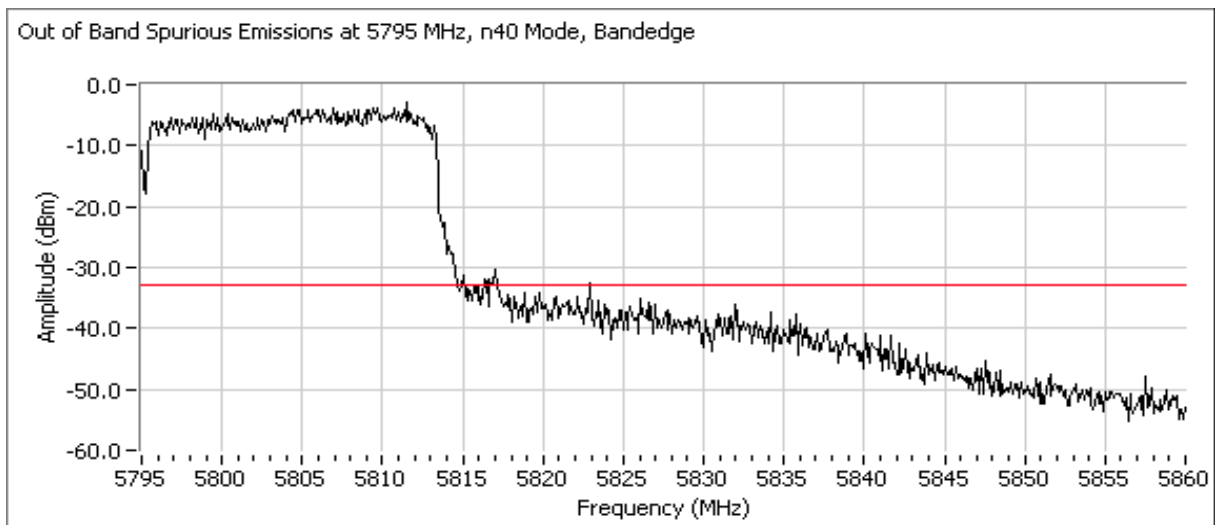


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Plots for high channel, Chain C power setting(s) = 26.0



Additional plot from 5820 - 5860 MHz showing compliance with -30dBc at the band edge.



| | | | |
|-----------|-----------------------|------------------|--------------|
| Client: | Intel | Job Number: | J70796 |
| Model: | 533-agn MMW | T-Log Number: | T71053 |
| | | Account Manager: | Dean Eriksen |
| Contact: | Robert Paxman | | |
| Standard: | FCC 15.247 / RSS -210 | Class: | N/A |

RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
MIMO and Smart Antenna Systems, 5725 - 5850 MHz
Power, PSD, Bandwidth and Spurious Emissions - 802.11n 40MHz

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

| | |
|-------------------------------|--|
| Date of Test: 5/7/2008 | Config. Used: 1 |
| Test Engineer: Rafael Varelas | Config Change: None |
| Test Location: FT Chamber #4 | EUT Voltage: Powered From Host System(3.3V DC) |

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on each chain separately. All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions: Temperature: 20.3 °C
 Rel. Humidity: 35 %

Summary of Results

| Run # | Test Performed | Limit | Pass / Fail | Result / Margin |
|-------|--|-----------|-------------|--------------------------------------|
| 1 | Output Power Chain A + B | 15.247(b) | Pass | 17.9dBm (61mW) |
| 2 | Power spectral Density (PSD) Chain A + B | 15.247(d) | Pass | -8.5 dBm/3kHz |
| 3 | Output Power Chain A + C | 15.247(b) | Pass | 16.1dBm |
| 4 | PSD Chain A + C | 15.247(d) | Pass | -11.0 dBm/3kHz |
| 5 | Output Power Chain B + C | 15.247(b) | Pass | 15.5dBm |
| 6 | PSD Chain B + C | 15.247(d) | Pass | -11.5 dBm/3kHz |
| 7 | Output Power Chain A+B+C | 15.247(b) | Pass | 18.3dBm |
| 8 | PSD Chain A+B+C | 15.247(d) | Pass | -9.7 dBm/3kHz |
| - | 6dB Bandwidth | 15.247(a) | | Covered by single-chain measurements |
| - | 99% Bandwidth | RSS GEN | | |
| - | Spurious emissions | 15.247(b) | | |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

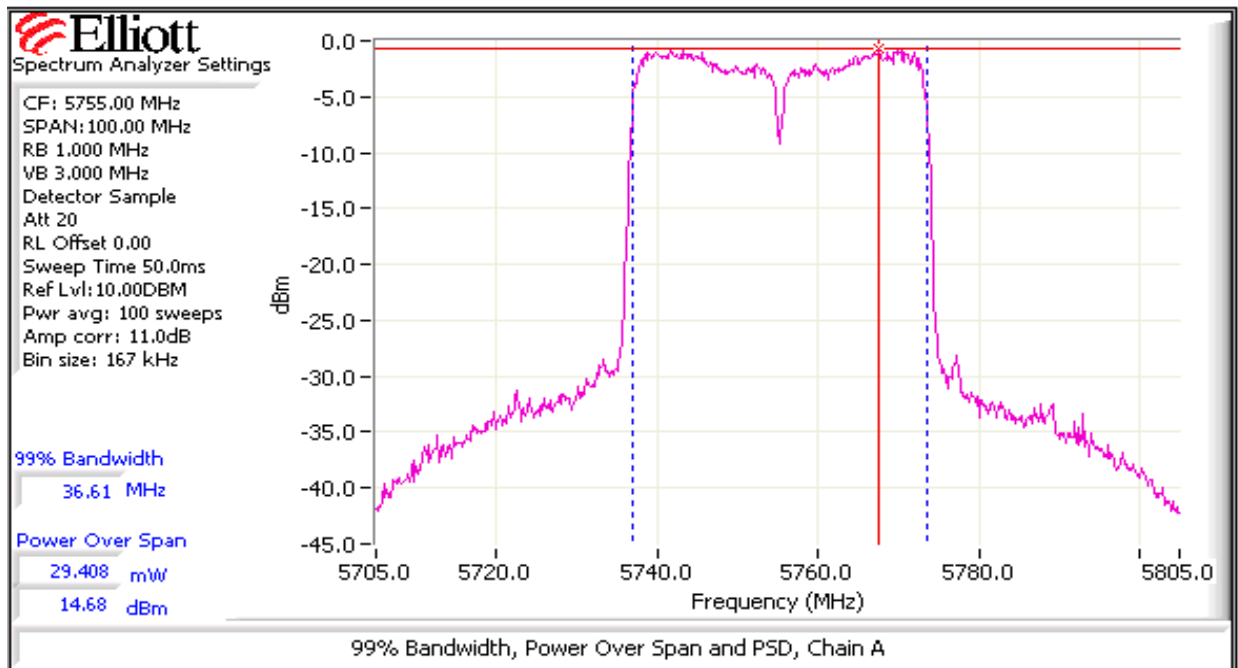
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #1: Output Power - Dual Chain (A + B)
 Operating Mode: 802.11n 20MHz
 Transmitted signal on chain is coherent ? no

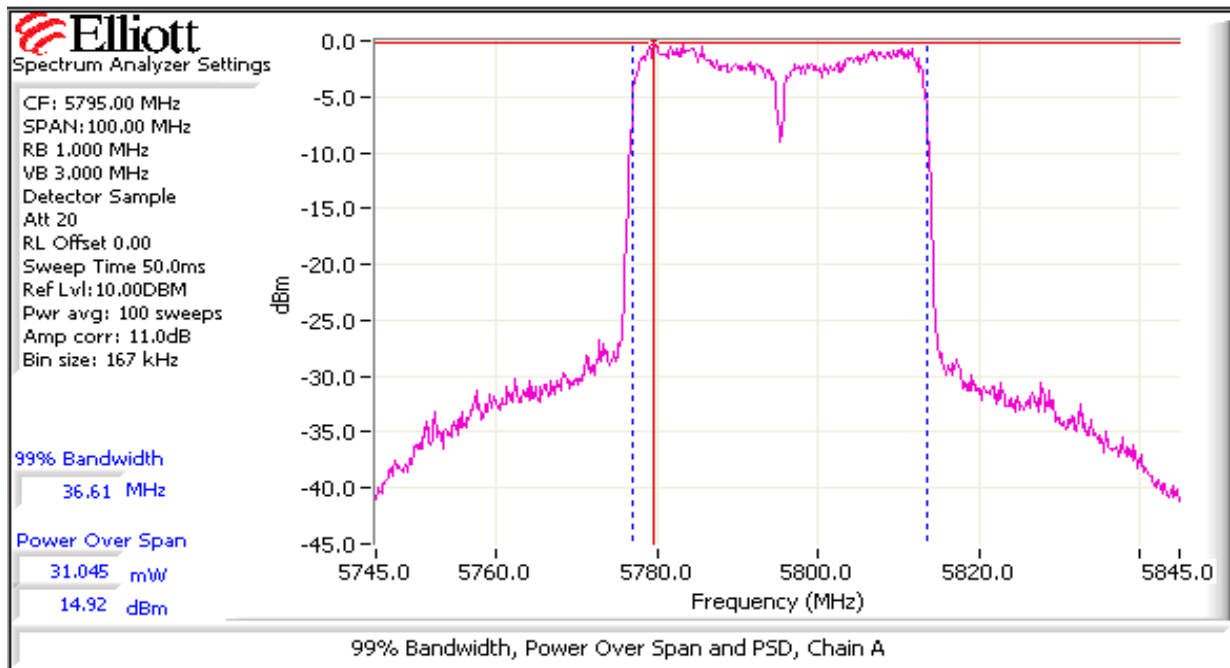
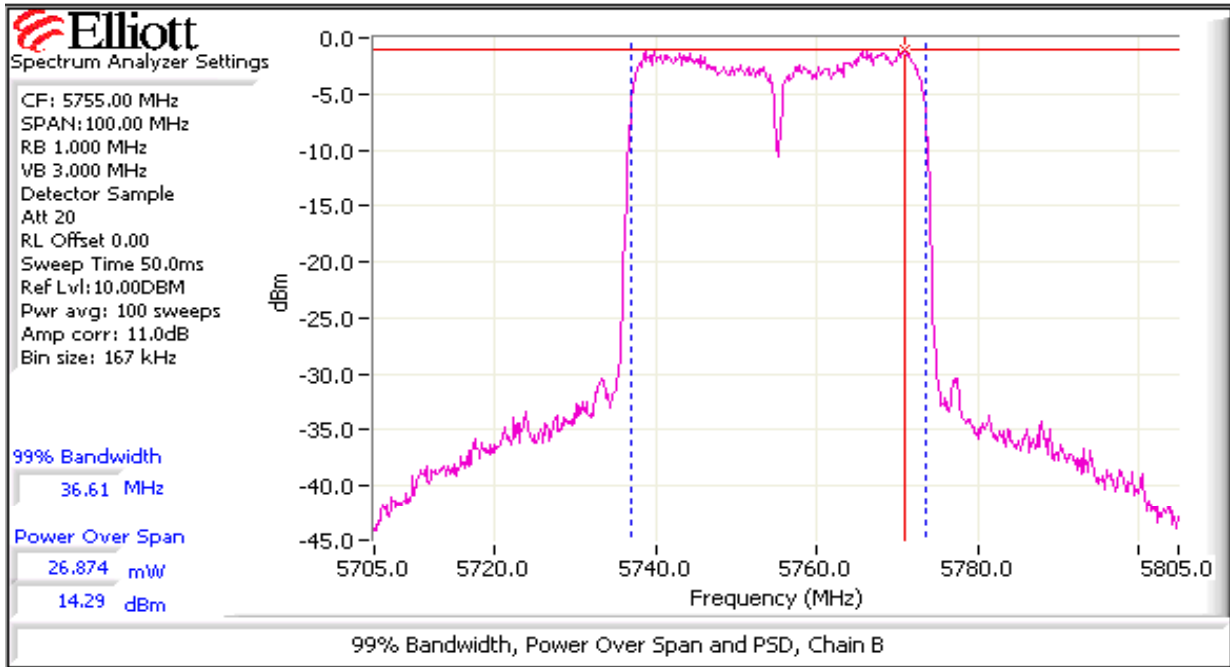
| 5755 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 28.0 | 27.0 | | | | | | |
| Output Power (dBm) ^{Note 1} | 14.7 | 14.3 | | | 17.5 dBm | 0.056 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5 | 5 | | | | | Pass | |
| eirp (dBm) ^{Note 2} | 19.7 | 19.3 | | | 22.5 dBm | 0.178 W | | |

| 5795 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 28.5 | 27.5 | | | | | | |
| Output Power (dBm) ^{Note 1} | 14.9 | 14.8 | | | 17.9 dBm | 0.061 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5 | 5 | | | | | Pass | |
| eirp (dBm) ^{Note 2} | 19.9 | 19.8 | | | 22.9 dBm | 0.193 W | | |

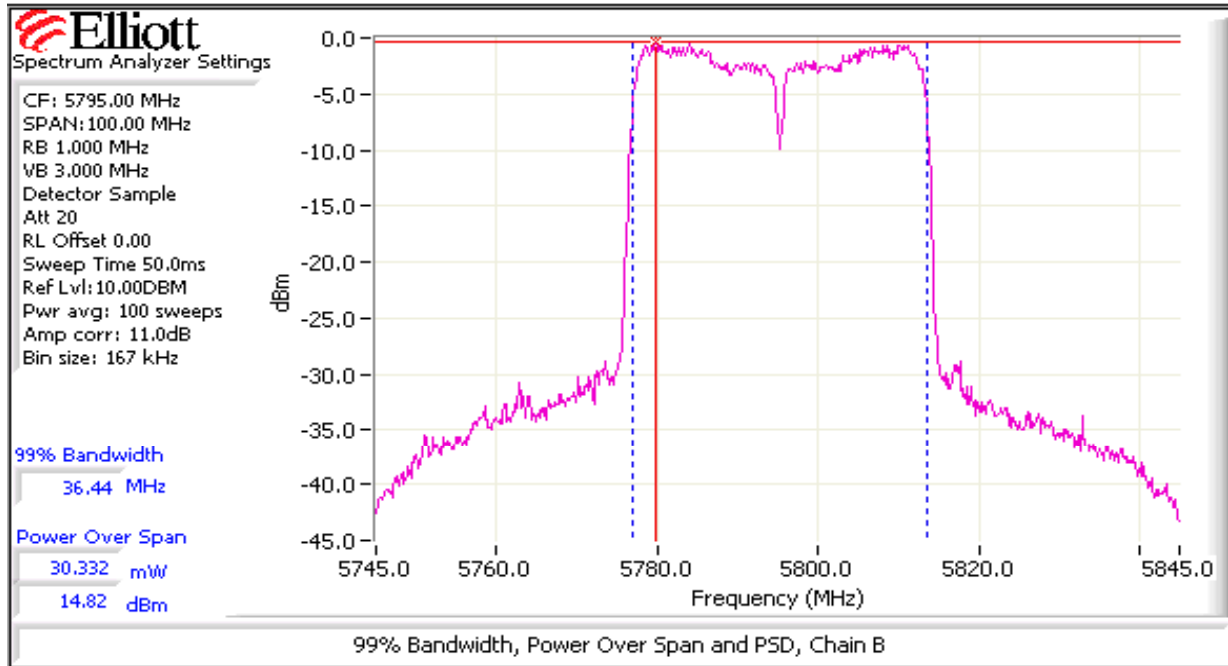
- Note 1: Output power measured using a spectrum analyzer (see plots below) with RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over ??? MHz (reference method 1 of FCC DA 02-2138 for U-NII devices, August 30, 2002). Spurious limit becomes **-30dBc**.
- Note 2: As there is no coherency between chains the total EIRP is the sum of the individual EIRPs and effective antenna gain equals the eirp divide by the sum of the power on each chain.



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

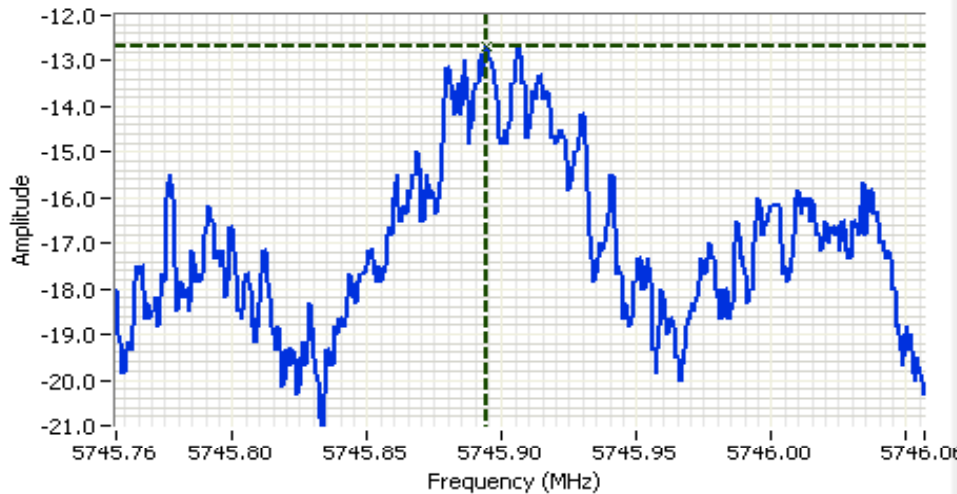


Run #2: Power spectral Density - Chain A + B

| Power Setting | Frequency (MHz) | PSD (dBm/3kHz) ^{Note 1} | | | | Total | Limit dBm/3kHz | Result |
|---------------|-----------------|----------------------------------|---------|---------|---------|-------|----------------|--------|
| | | Chain A | Chain B | Chain C | Chain 4 | | | |
| 28,27 | 5755 | -12.7 | -12.7 | | | -9.7 | 8.0 | Pass |
| 28.5,27.5 | 5795 | -12.0 | -11.0 | | | -8.5 | 8.0 | Pass |

- Note 1: Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.
- Note 2: Power setting - if a single number the same power setting was used for each chain. If multiple numbers the power setting for each chain is separated by a comma (e.g. x,y would indicate power setting x for Chain A, power setting y for Chain B).

| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings

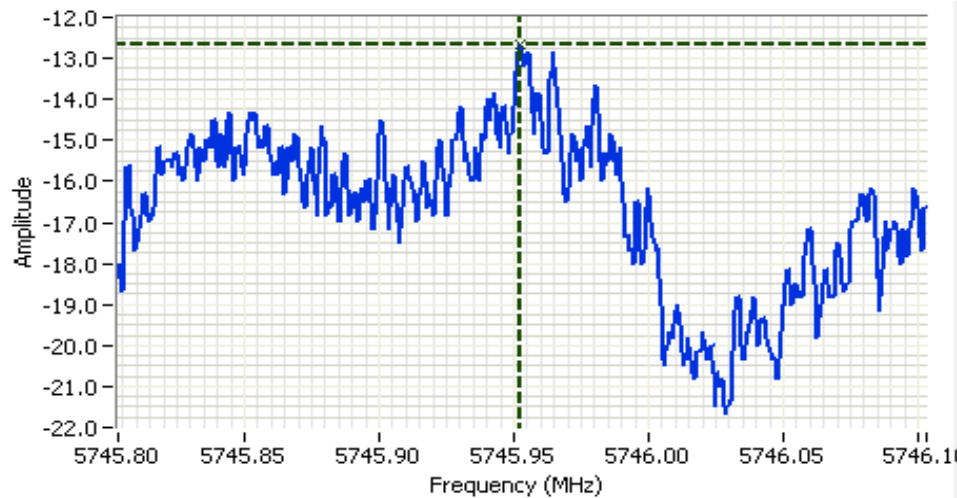
HP8564E,EMI
 CF: 5745.91 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

PSD= -12.67 dBm/3kHz
 5755 MHz
 Chain A

Cursor 1 5745.8942 -12.67

0.0000 0.00



Analyzer Settings

HP8564E,EMI
 CF: 5745.95 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

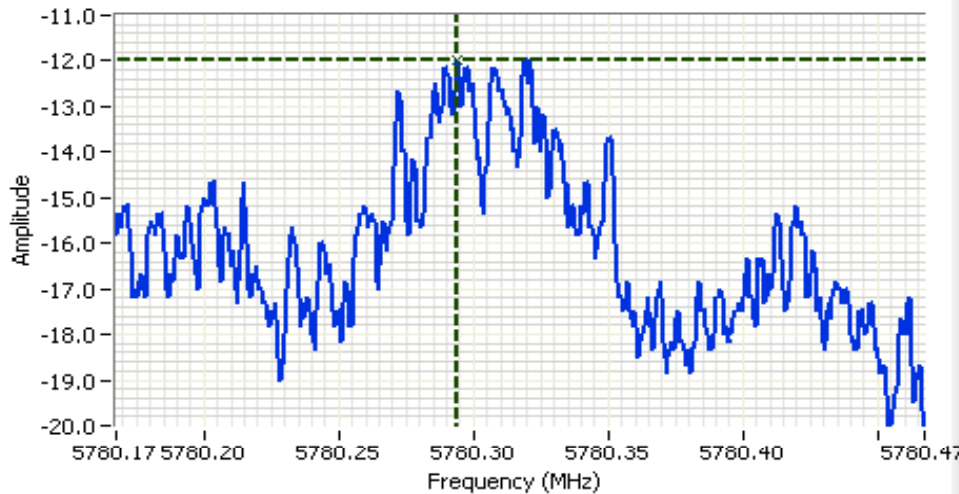
PSD= -12.67 dBm/3kHz
 5755 MHz
 Chain B

Cursor 1 5745.9521 -12.67

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |



Analyzer Settings

HP8564E,EMI
 CF: 5780.32 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

PSD= -12.0 dBm/3kHz
 5795 MHz
 Chain A

Cursor 1 5780.2939 -12.00

0.0000 0.00



Analyzer Settings

HP8564E,EMI
 CF: 5780.60 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector Sample
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

PSD= -11.0 dBm/3kHz
 5795 MHz
 Chain B

Cursor 1 5780.6037 -11.00

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #3: Output Power - Dual Chain A + C

Operating Mode: 802.11n 40MHz

Transmitted signal on chain is coherent ? No

Date of Test: 5/8/2008

Test Engineer: Suhaila Khushzad

Test Location: FT Radio Lab

Config. Used: 1

Config Change: None

EUT Voltage: Powered From Host System(3.3V DC)

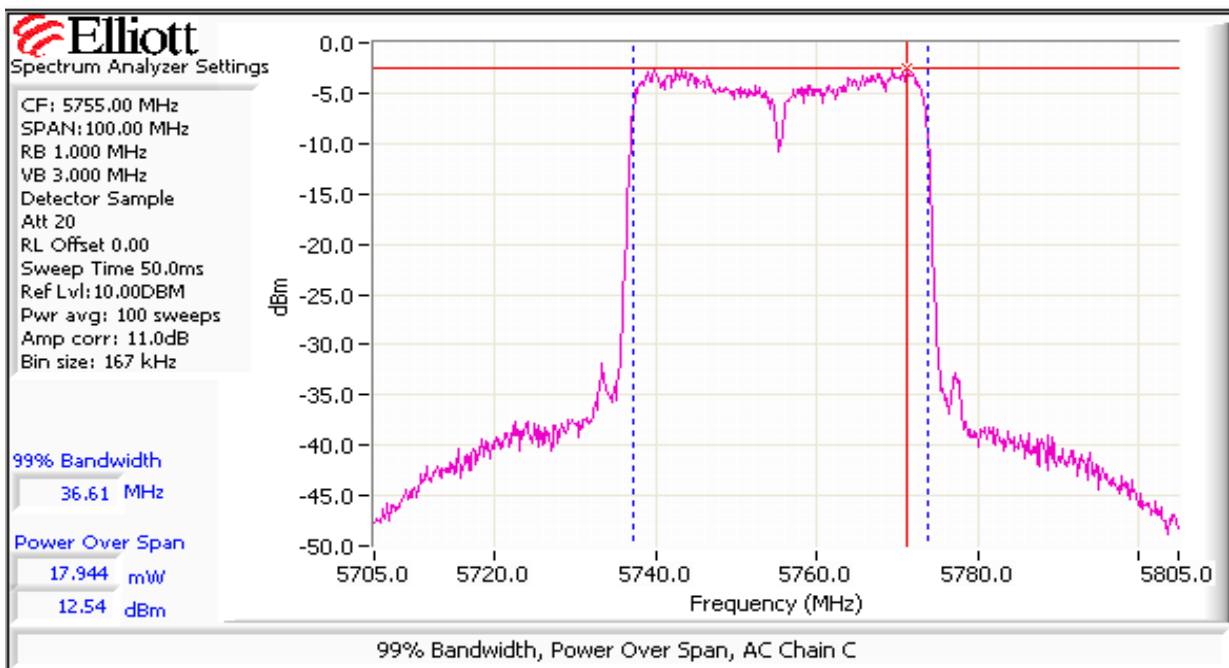
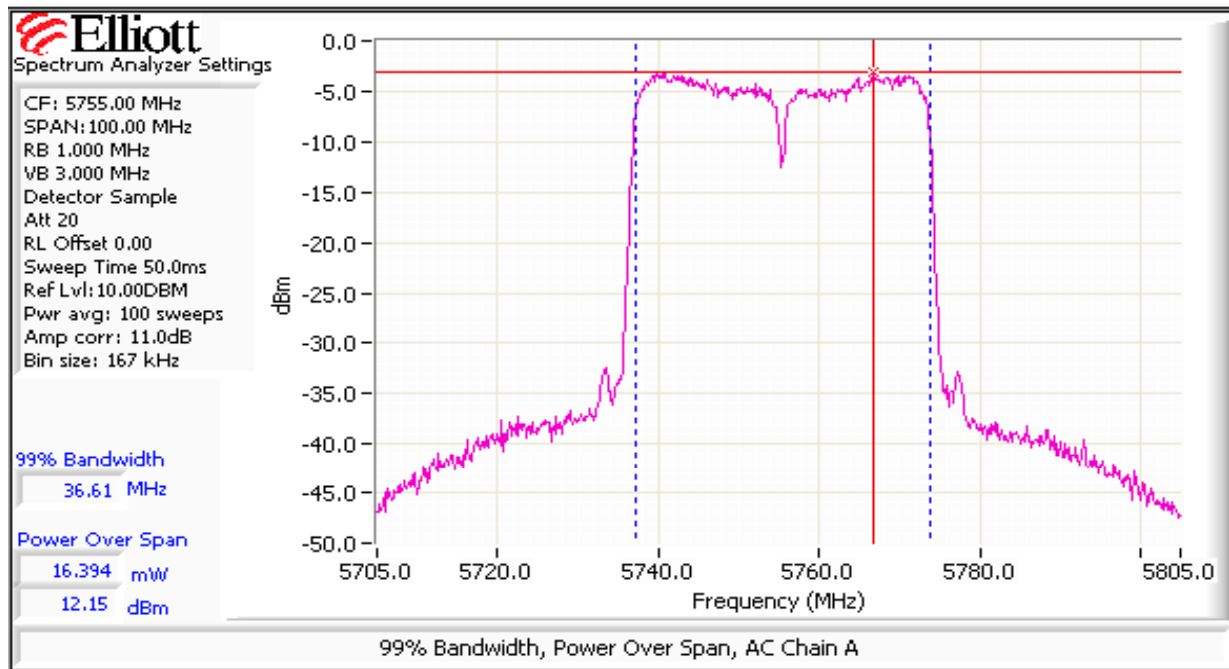
| 5755 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 26.5 | | 26.5 | | | | | |
| Output Power (dBm) ^{Note 1} | 12.15 | | 12.54 | | 15.4 dBm | 0.034 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5 | | 5 | | | | Pass | |
| eirp (dBm) ^{Note 2} | 17.15 | | 17.54 | | 20.4 dBm | 0.109 W | | |

| 5795 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 27.5 | | 27.0 | | | | | |
| Output Power (dBm) ^{Note 1} | 13.51 | | 12.64 | | 16.1 dBm | 0.041 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5 | | 5 | | | | Pass | |
| eirp (dBm) ^{Note 2} | 18.51 | | 17.64 | | 21.1 dBm | 0.129 W | | |

| | |
|---------|---|
| Note 1: | Output power measured using a spectrum analyzer (see plots below) with RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over 100 MHz (reference method 1 of FCC DA 02-2138 for U-NII devices, August 30, 2002). Spurious limit becomes -30dBc . |
| Note 2: | As there is no coherency between chains the total EIRP is the sum of the individual EIRPs and effective antenna gain equals the eirp divide by the sum of the power on each chain. |

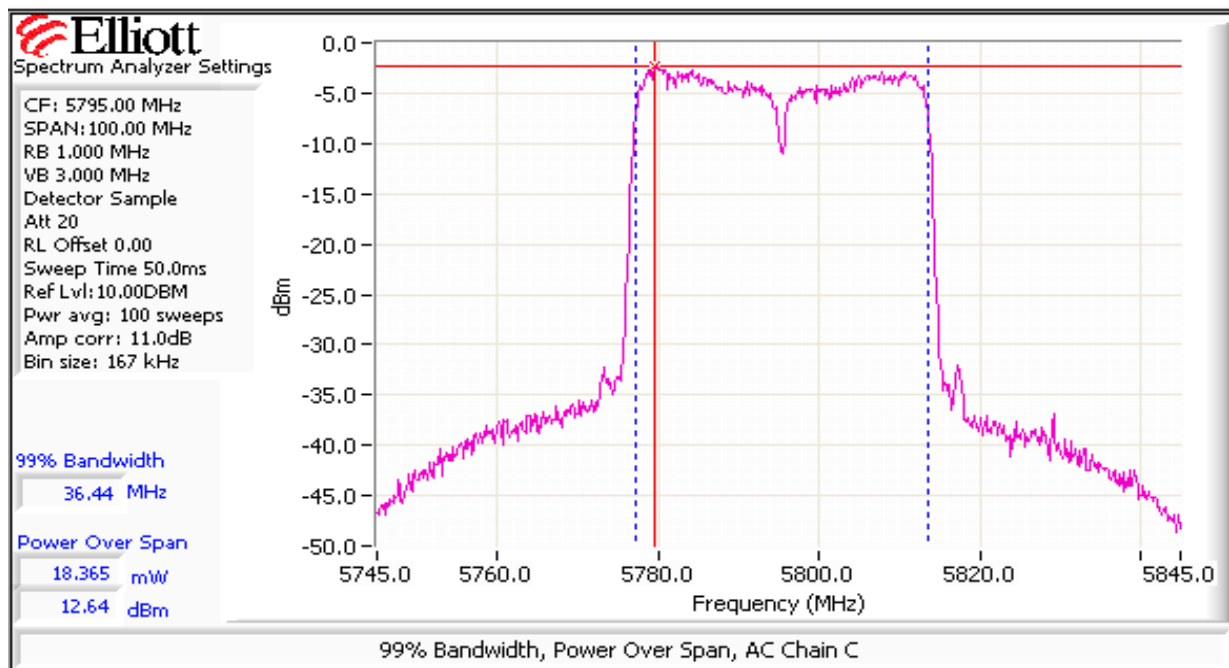
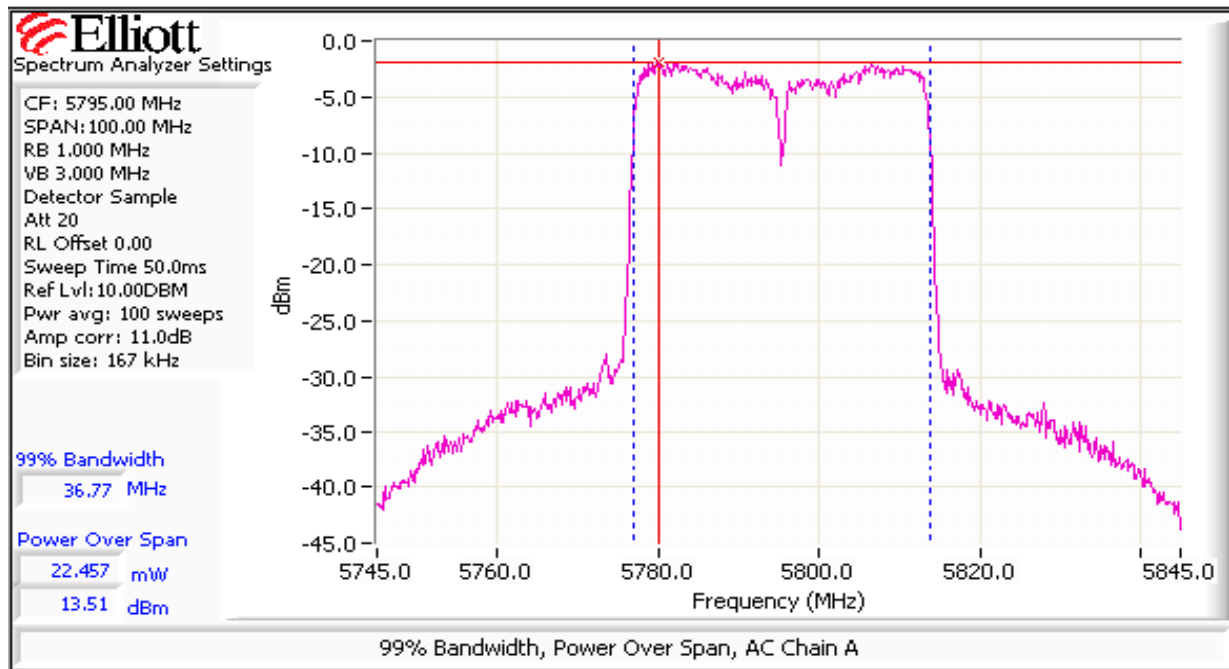
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #3: Output Power - Dual Chain A + C



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #3: Output Power - Dual Chain A + C

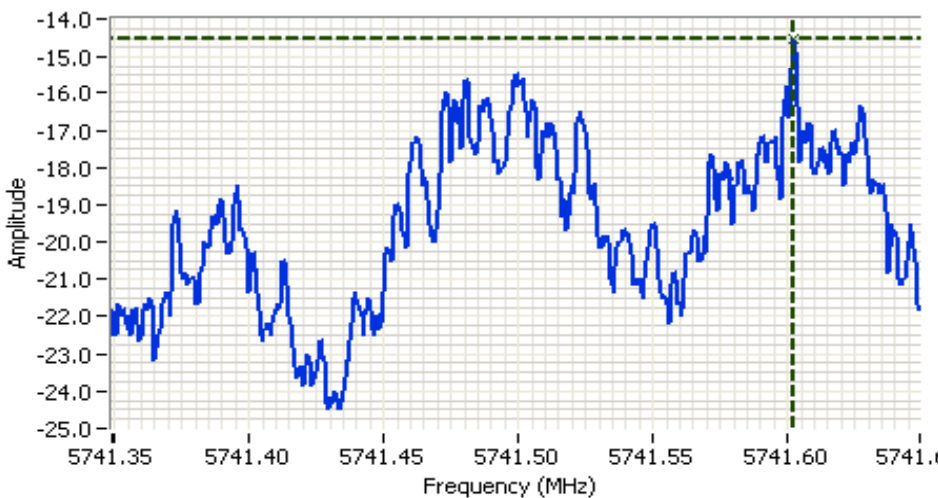


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #4: Power spectral Density - Chain A + C

| Power Setting | Frequency (MHz) | PSD (dBm/3kHz) ^{Note 1} | | | | Total | Limit dBm/3kHz | Result |
|---------------|-----------------|----------------------------------|---------|---------|---------|-------|----------------|--------|
| | | Chain A | Chain B | Chain C | Chain 4 | | | |
| 26.5, 26.5 | 5755 | -14.5 | | -13.5 | | -11.0 | 8.0 | Pass |
| 27.5, 27 | 5795 | -14.2 | | -14.7 | | -11.4 | 8.0 | Pass |

- Note 1: Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.
- Note 2: Power setting - if a single number the same power setting was used for each chain. If multiple numbers the power setting for each chain is separated by a comma (e.g. x,y would indicate power setting x for Chain A, power setting y for Chain B).



Analyzer Settings

HP8564E,EMI
 CF: 5741.50 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

PSD: 14.5dBm/3kHz
 AC Chain A, n40MHz
 5755 MHz

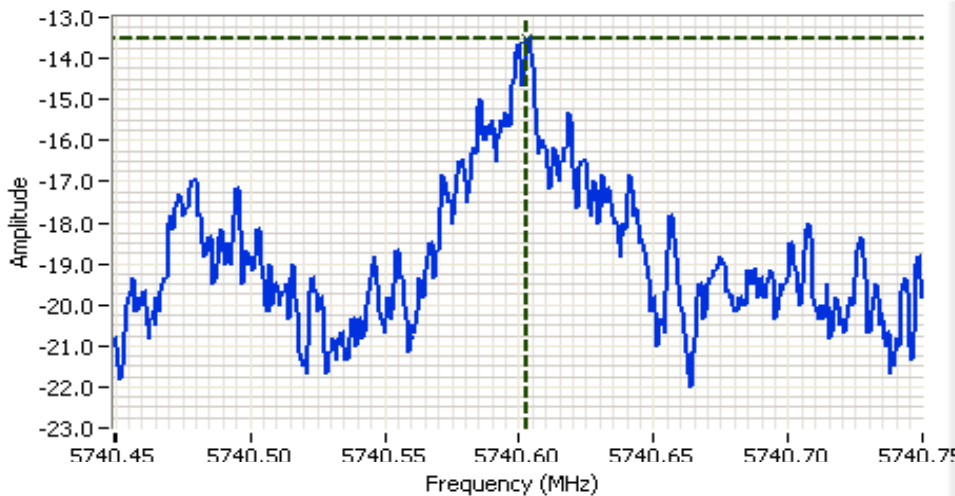
Cursor 1 5741.6025 -14.50

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #4: Power spectral Density - Chain A + C



Analyzer Settings

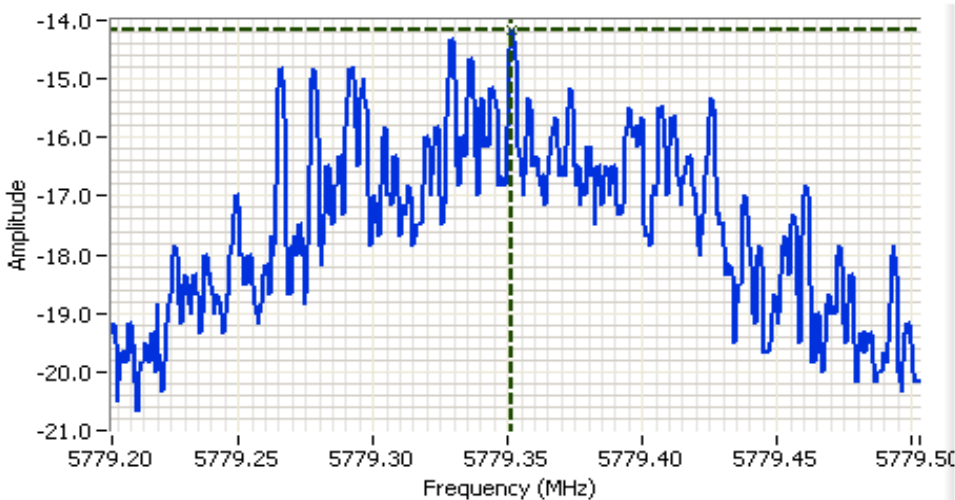
HP8564E,EMI
 CF: 5740.60 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

PSD: -13.5dBm/3kHz
 AC Chain C, n40MHz

5755 MHz

Cursor 1 5740.6031 -13.50



Analyzer Settings

HP8564E,EMI
 CF: 5779.35 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

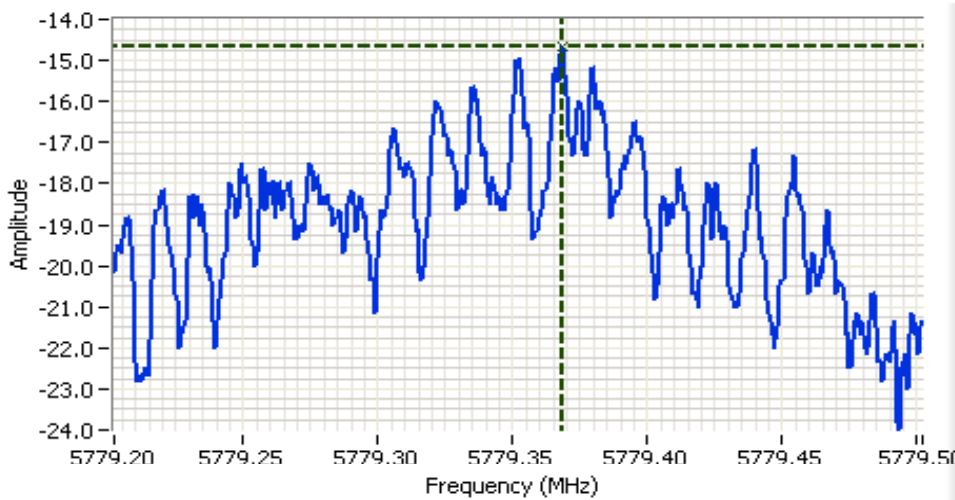
PSD: -14.17 dBm/3kHz
 AC Chain A, n40MHz
 5795 MHz

Cursor 1 5779.3515 -14.17



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #4: Power spectral Density - Chain A + C



Analyzer Settings

HP8564E,EMI
 CF: 5779.35 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

PSD: -14.67 dBm/3kHz
 AC Chain C, n40MHz
 5795 MHz

Cursor 1 5779.3686 -14.67

0.0000 0.00



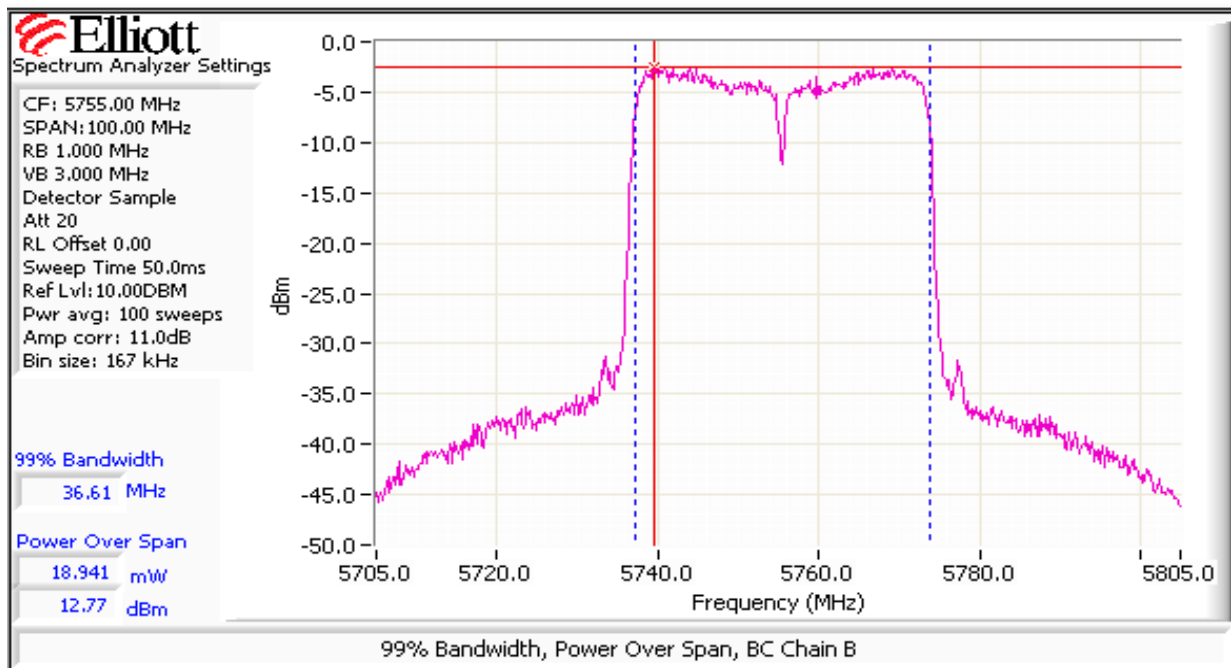
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #5: Output Power - Dual Chain (B + C)
 Operating Mode: 802.11n 40MHz
 Transmitted signal on chain is coherent ? No

| 5755 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | | 26.5 | 26.5 | | | | | |
| Output Power (dBm) ^{Note 1} | | 12.77 | 12.16 | | 15.5 dBm | 0.035 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | | 5 | 5 | | 5.0 dBi | | Pass | |
| eirp (dBm) ^{Note 2} | | 17.77 | 17.16 | | 20.5 dBm | 0.112 W | | |

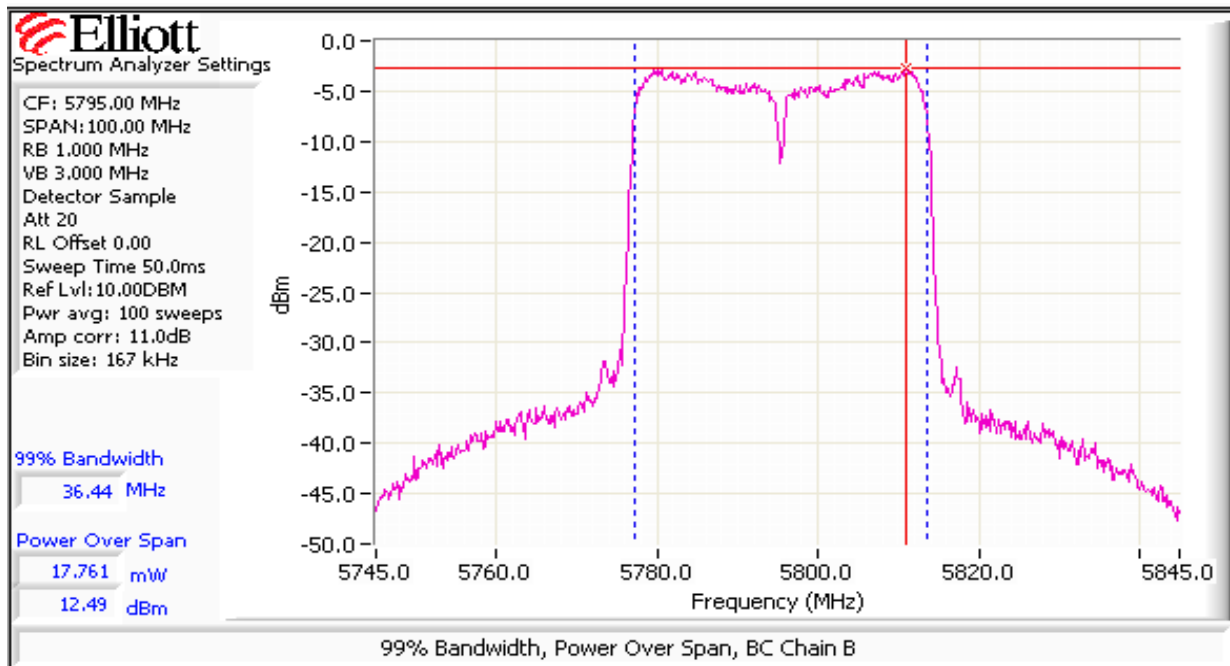
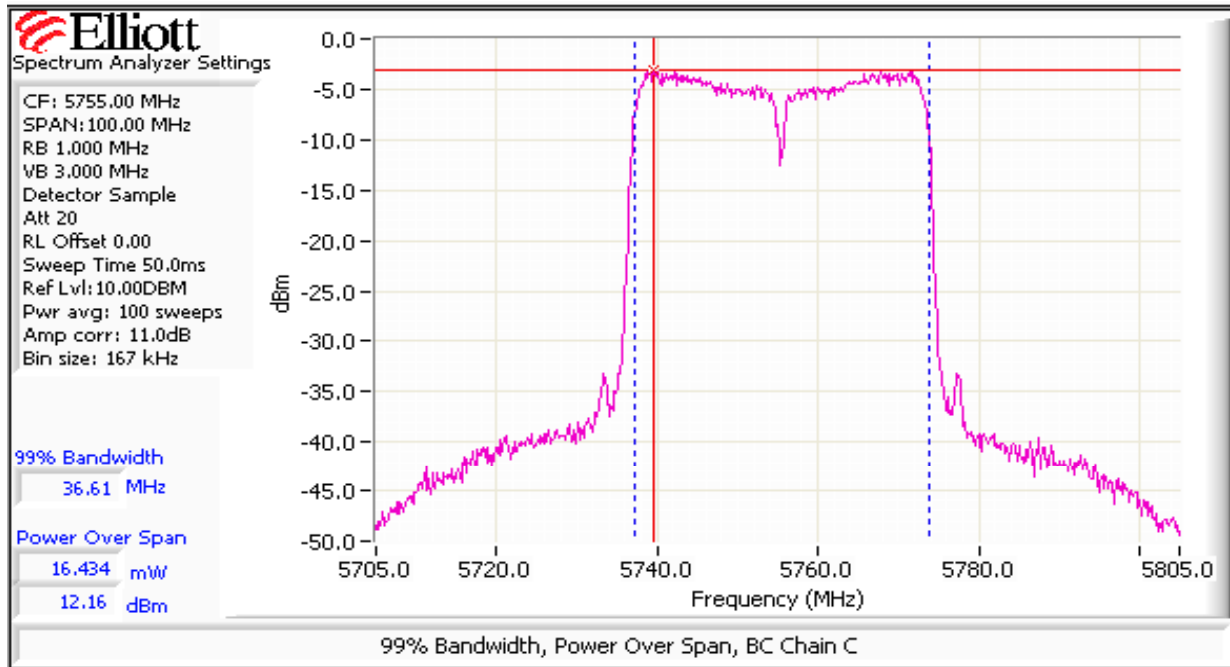
| 5795 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | | 26.5 | 27.0 | | | | | |
| Output Power (dBm) ^{Note 1} | | 12.49 | 12.12 | | 15.3 dBm | 0.034 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | | 5 | 5 | | 5.0 dBi | | Pass | |
| eirp (dBm) ^{Note 2} | | 17.49 | 17.12 | | 20.3 dBm | 0.108 W | | |

- Note 1: Output power measured using a spectrum analyzer (see plots below) with RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over 100 MHz (reference method 1 of FCC DA 02-2138 for U-NII devices, August 30, 2002). Spurious limit becomes -30dBc.
- Note 2: As there is no coherency between chains the total EIRP is the sum of the individual EIRPs and effective antenna gain equals the eirp divide by the sum of the power on each chain.



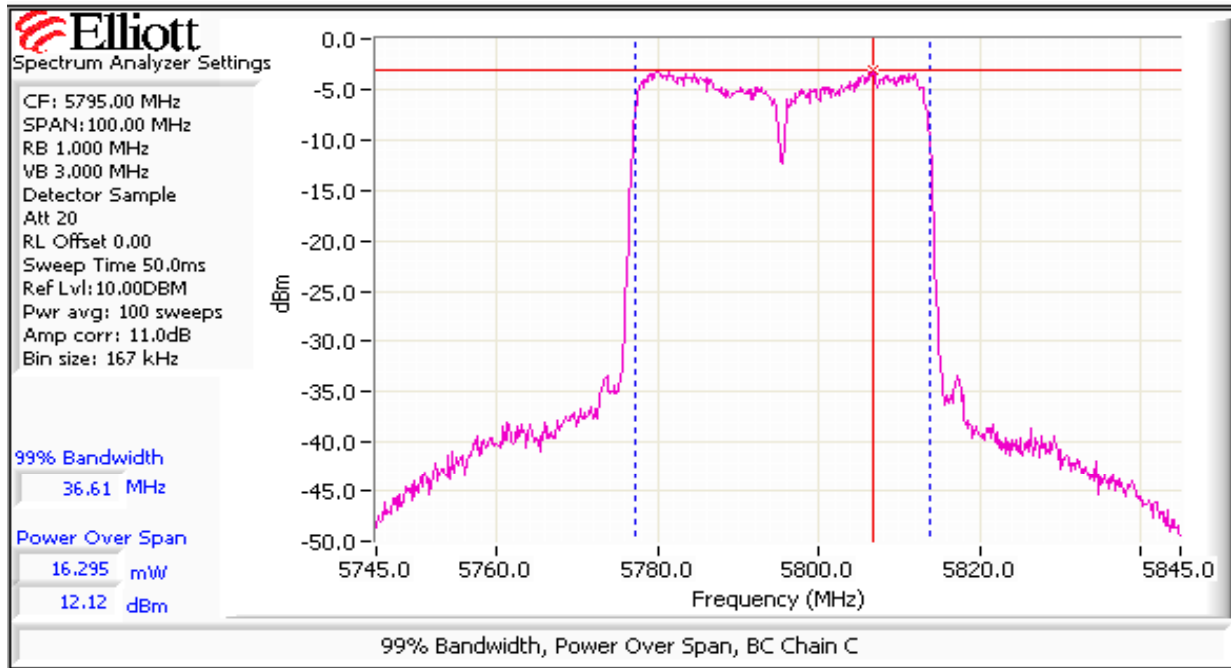
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #5: Output Power - Dual Chain (B + C)



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #5: Output Power - Dual Chain (B + C)

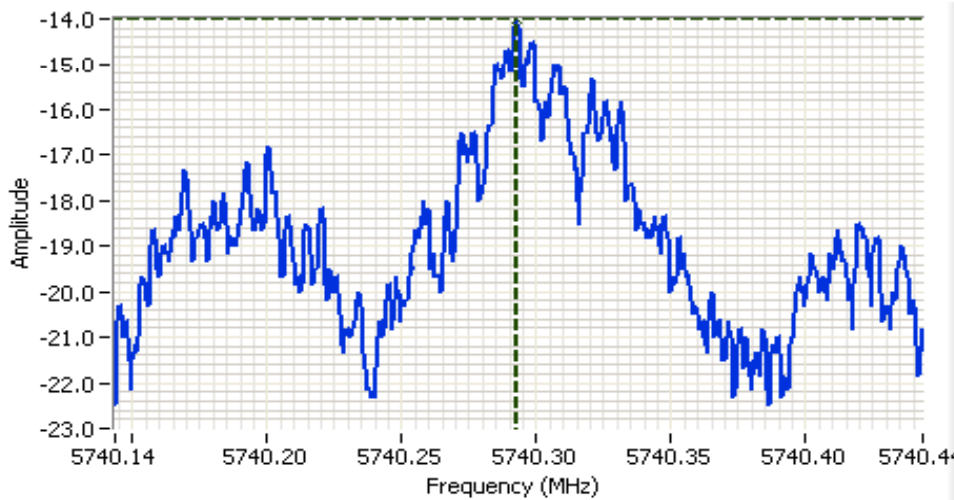


| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #6: Power spectral Density - Chain B + C

| Power Setting | Frequency (MHz) | PSD (dBm/3kHz) ^{Note 1} | | | | Total | Limit dBm/3kHz | Result |
|---------------|-----------------|----------------------------------|---------|---------|---------|-------|----------------|--------|
| | | Chain A | Chain B | Chain C | Chain 4 | | | |
| 26.5, 26.5 | 5755 | | -14.0 | -15.7 | | -11.7 | 8.0 | Pass |
| 26.5, 27 | 5795 | | -15.0 | -14.0 | | -11.5 | 8.0 | Pass |

- Note 1: Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.
- Note 2: Power setting - if a single number the same power setting was used for each chain. If multiple numbers the power setting for each chain is separated by a comma (e.g. x,y would indicate power setting x for Chain A, power setting y for Chain B).



Analyzer Settings

HP8564E,EMI
 CF: 5740.29 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

PSD: -14.0 dBm/3kHz
 BC Chain B, n40MHz
 5755 MHz

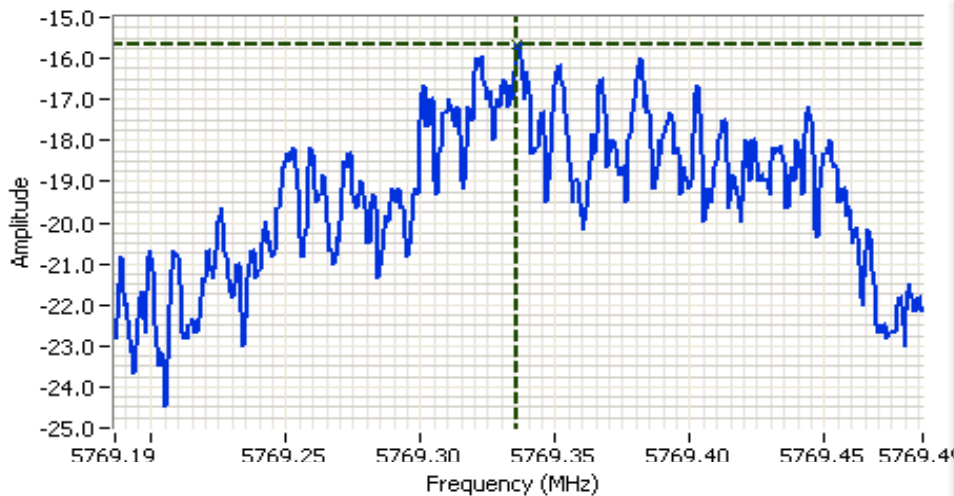
Cursor 1 5740.2925 -14.00

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #6: Power spectral Density - Chain B + C



Analyzer Settings

HP8564E,EMI
 CF: 5769.34 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

PSD: -15.67 dBm/3kHz
 BC Chain C, n40MHz
 5755 MHz

Cursor 1 5769.3359 -15.67

0.0000 0.00



Analyzer Settings

HP8564E,EMI
 CF: 5779.70 MHz
 SPAN:300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 20
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl:21.00DBM

Comments

PSD: -15.0 dBm/3kHz
 BC Chain B, n40MHz
 5795 MHz

Cursor 1 5779.7022 -15.00

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #6: Power spectral Density - Chain B + C



Analyzer Settings

- HP8564E,EMI
- CF: 5810.00 MHz
- SPAN:300 kHz
- RB 3.00 kHz
- VB 10.00 kHz
- Detector POS
- Att 20
- RL Offset 11.00
- Sweep Time 100.0s
- Ref Lvl:21.00DBM

Comments

- PSD: -14.0 dBm/3kHz
- BC Chain C, n40MHz
- 5795 MHz

| | | | | | |
|----------|-----------|--------|---|---|---|
| Cursor 1 | 5809.9850 | -14.00 | ↕ | ✖ | 🔒 |
| | 0.0000 | 0.00 | ↕ | ✖ | 🔒 |



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #7: Output Power - Three Chains (A + B + C)
 Operating Mode: 802.11n 40MHz
 Transmitted signal on chain is coherent ? No

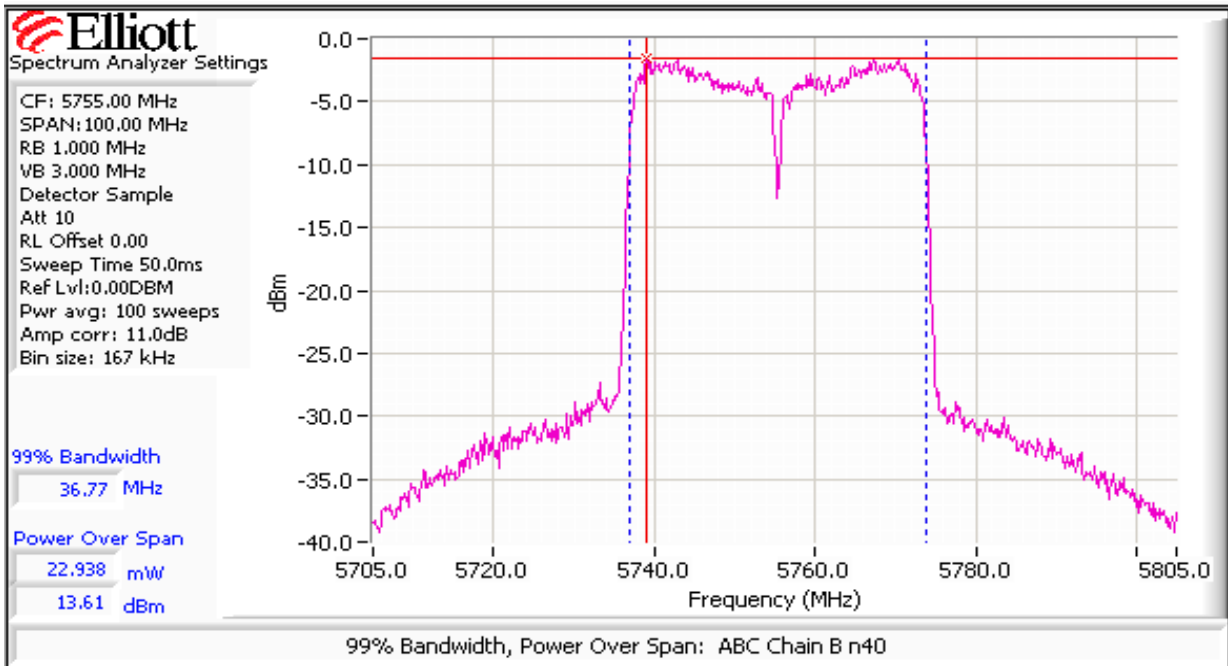
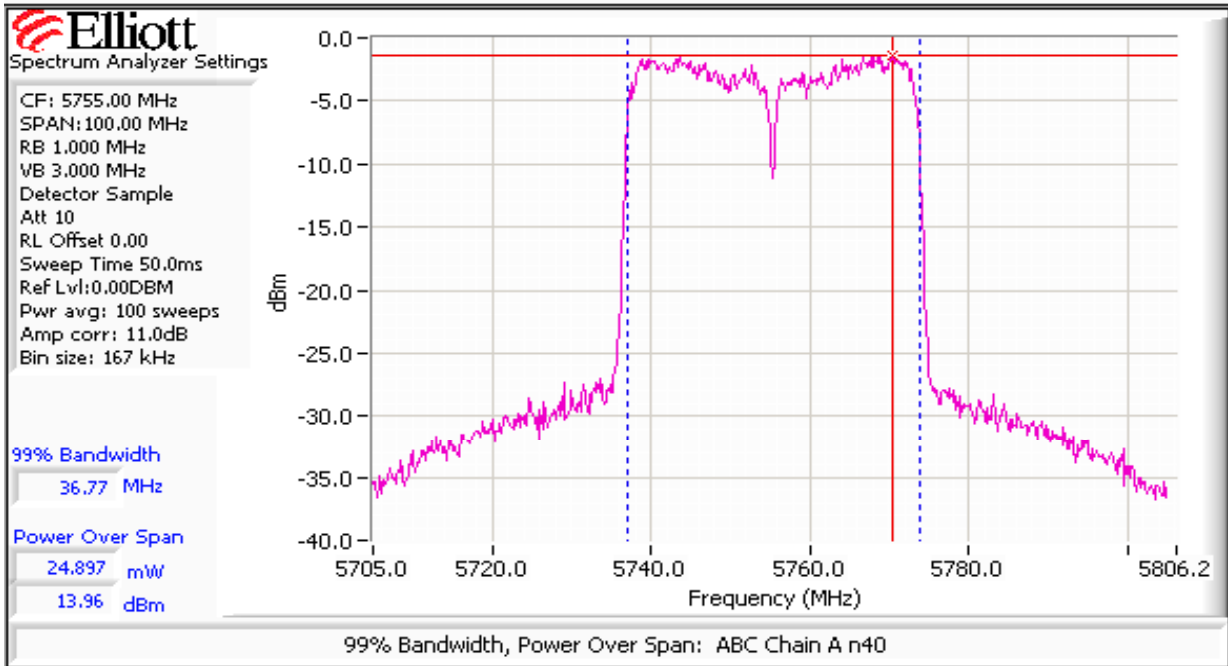
| 5755 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 31.0 | 30.5 | 31.0 | | | | | |
| Output Power (dBm) ^{Note 1} | 13.96 | 13.61 | 13.03 | | 18.3 dBm | 0.068 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5 | 5 | 5 | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | 18.96 | 18.61 | 18.03 | | 23.3 dBm | 0.215 W | | |

| 5795 MHz | Chain A | Chain B | Chain C | Chain 4 | Total Across All Chains | | Limit | |
|--------------------------------------|---------|---------|---------|---------|-------------------------|---------|----------|---------|
| Power Setting ^{Note 3} | 31.5 | 30.5 | 31.0 | | | | | |
| Output Power (dBm) ^{Note 1} | 13.02 | 12.91 | 12.71 | | 17.7 dBm | 0.058 W | 30.0 dBm | 1.000 W |
| Antenna Gain (dBi) ^{Note 2} | 5 | 5 | 5 | | | 5.0 dBi | Pass | |
| eirp (dBm) ^{Note 2} | 18.02 | 17.91 | 17.71 | | 22.7 dBm | 0.184 W | | |

| | |
|---------|---|
| Note 1: | Output power measured using a spectrum analyzer (see plots below) with RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over 100 MHz (reference method 1 of FCC DA 02-2138 for U-NII devices, August 30, 2002). Spurious limit becomes -30dBc . |
| Note 2: | As there is no coherency between chains the total EIRP is the sum of the individual EIRPs and effective antenna gain equals the eirp divide by the sum of the power on each chain. |

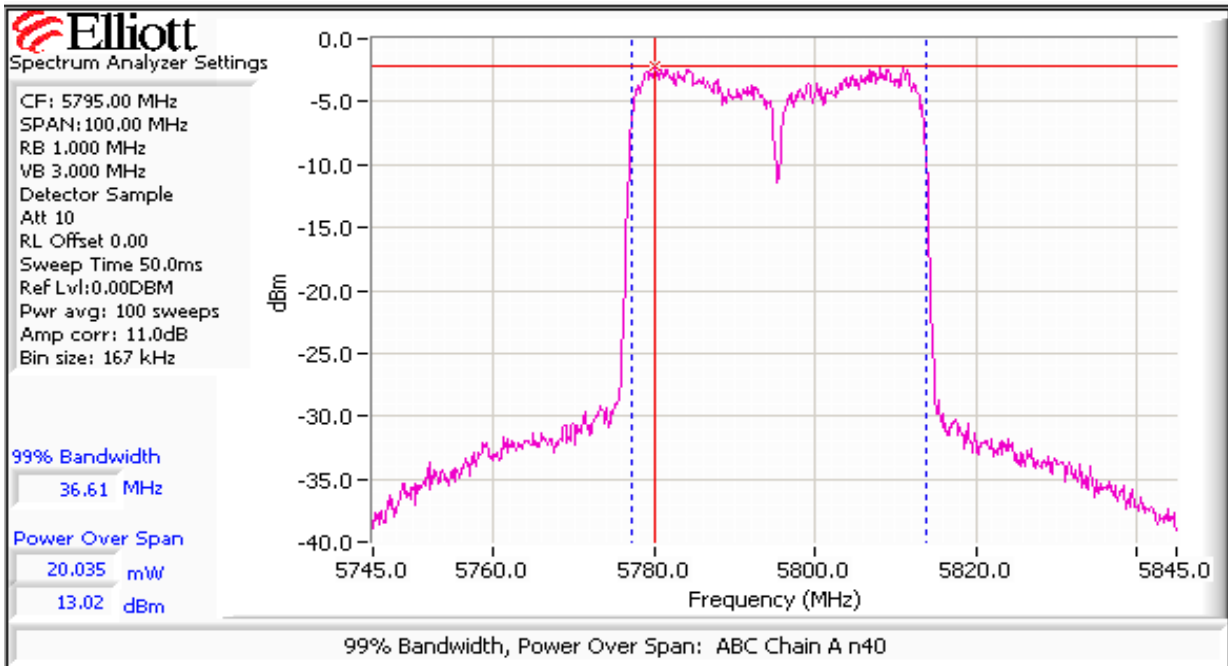
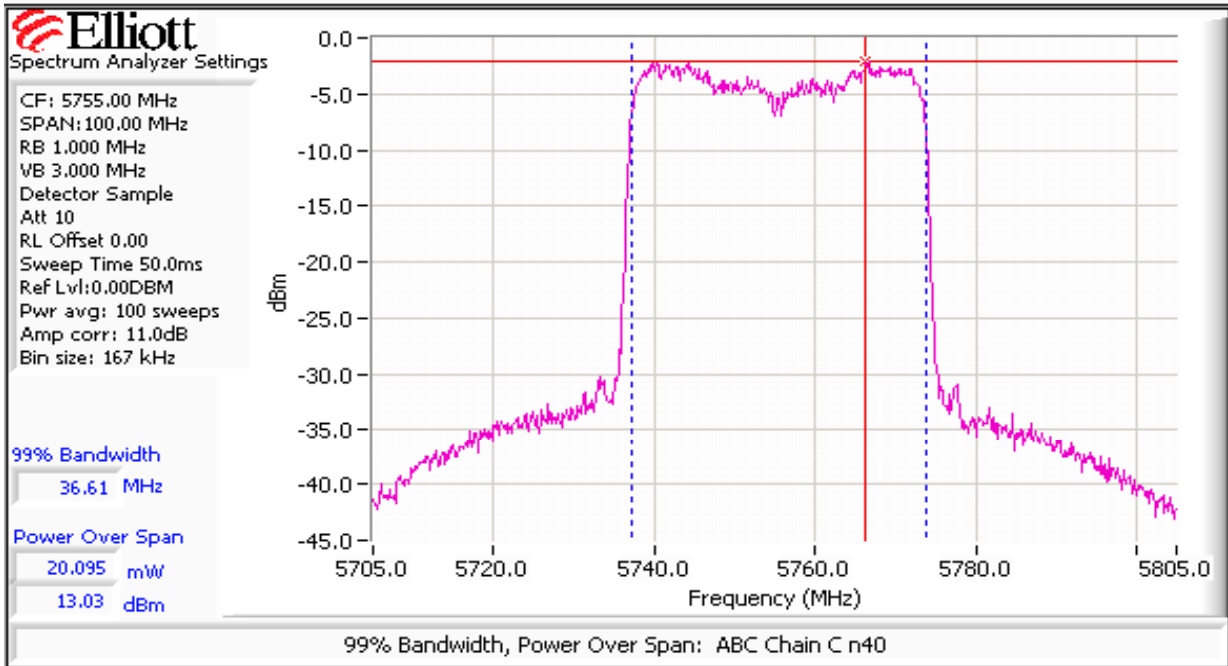
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #7: Output Power - Three Chains (A + B + C)



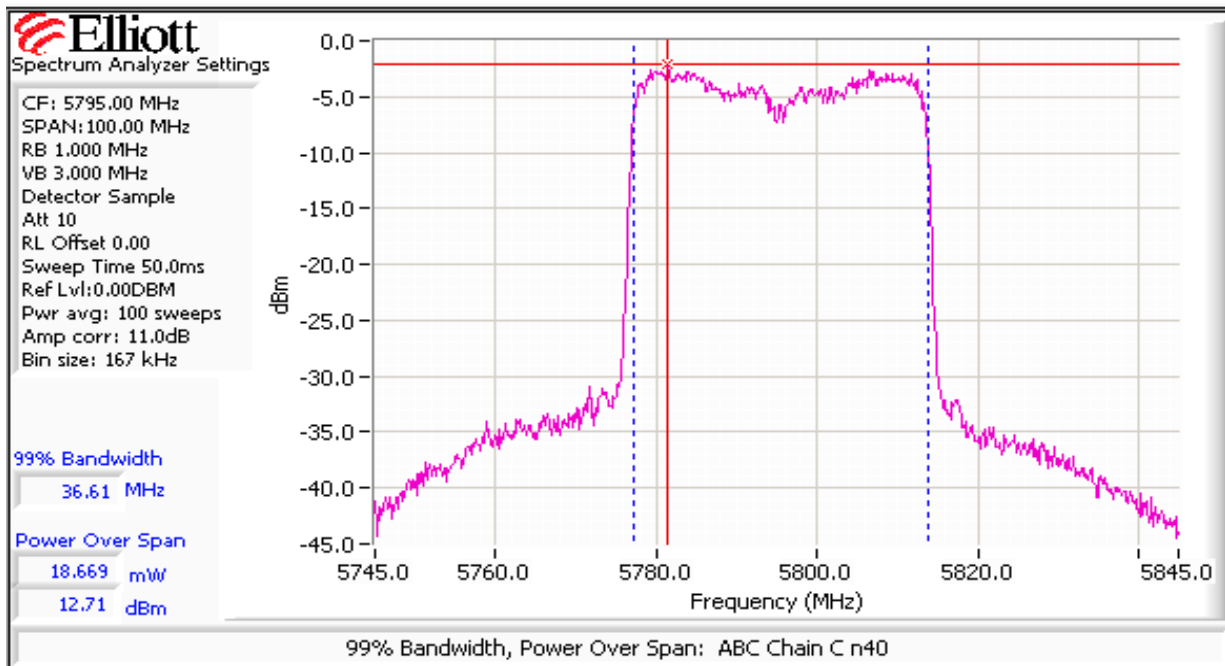
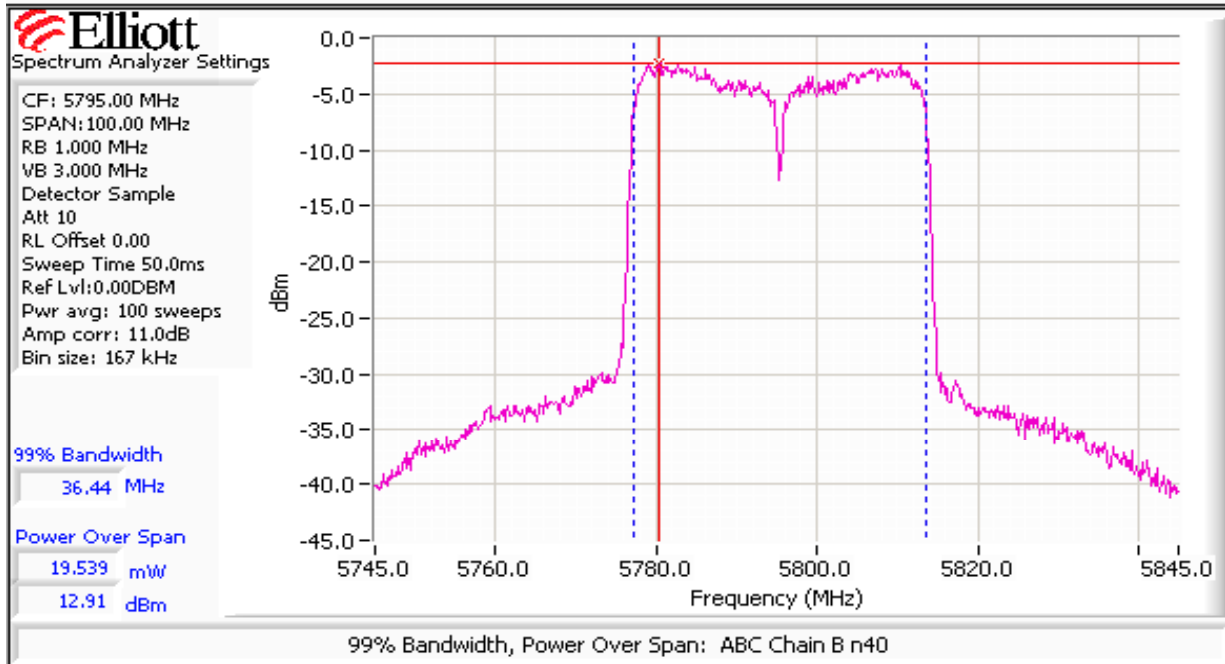
| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #7: Output Power - Three Chains (A + B + C)



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #7: Output Power - Three Chains (A + B + C)



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

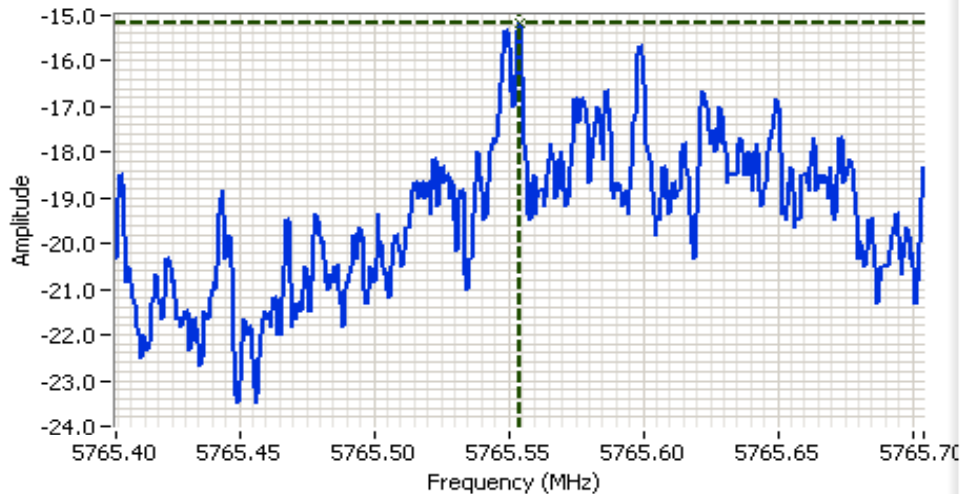
Run #8: Power spectral Density - Chain A + B + C

| Power Setting | Frequency (MHz) | PSD (dBm/3kHz) ^{Note 1} | | | | Total | Limit dBm/3kHz | Result |
|---------------|-----------------|----------------------------------|---------|---------|---------|-------|----------------|--------|
| | | Chain A | Chain B | Chain C | Chain 4 | | | |
| 31/30.5/31 | 5755 | -15.2 | -15.2 | -15.3 | | -10.5 | 8.0 | Pass |
| 31.5/30.5/31 | 5795 | -14.8 | -15.3 | -13.5 | | -9.7 | 8.0 | Pass |

| | |
|---------|---|
| Note 1: | Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal. |
| Note 2: | Power setting - if a single number the same power setting was used for each chain. If multiple numbers the power setting for each chain is separated by a comma (e.g. x,y would indicate power setting x for Chain A, power setting y for Chain B). |

| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #8: Power spectral Density - Chain A + B + C

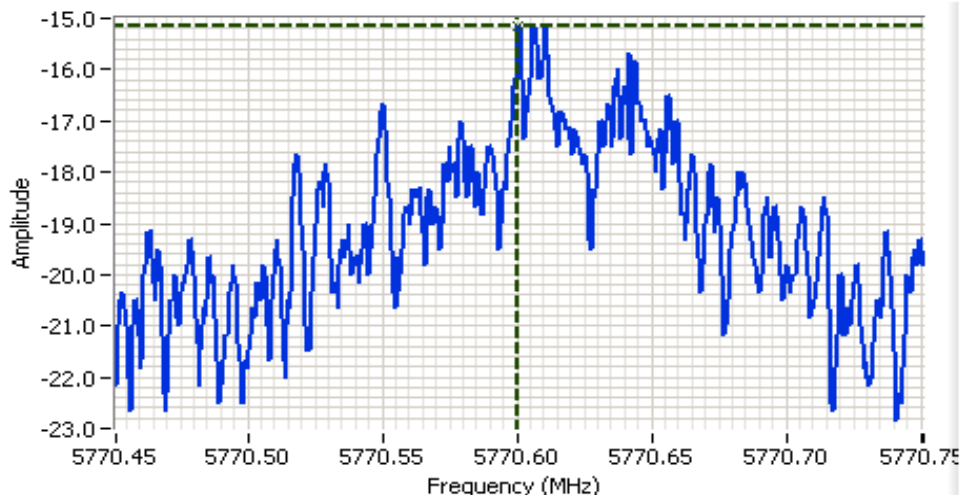
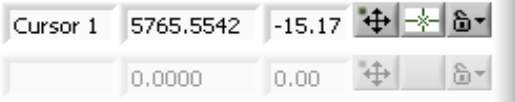


Analyzer Settings

HP8564E, EMI
 CF: 5765.55 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 11.00DBM

Comments

PSD @ 5755 MHz
 ABC Chain A n40

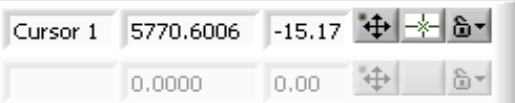


Analyzer Settings

HP8564E, EMI
 CF: 5770.60 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 11.00DBM

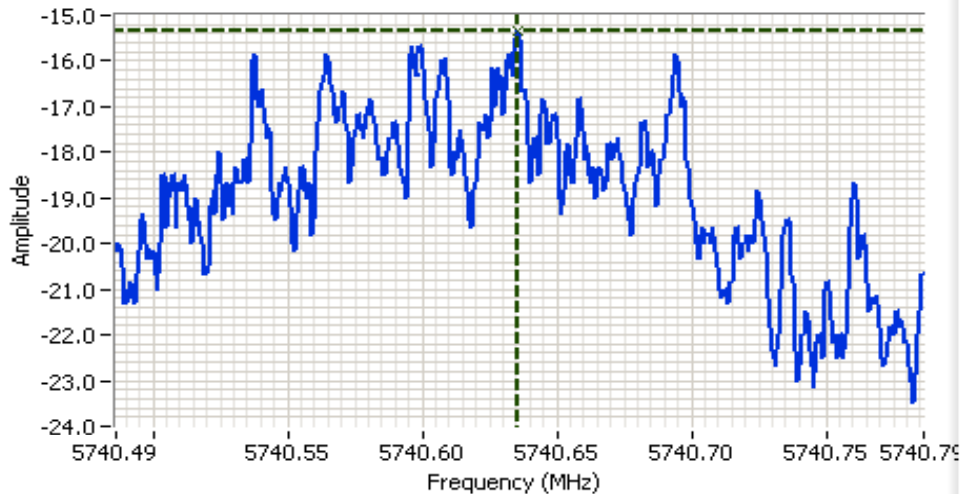
Comments

PSD @ 5755 MHz
 ABC Chain B n40



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #8: Power spectral Density - Chain A + B + C



Analyzer Settings

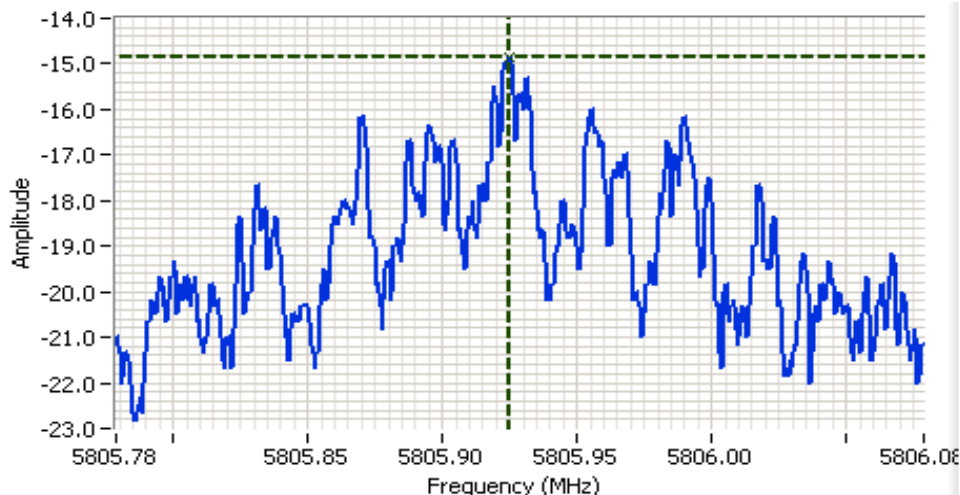
HP8564E, EMI
 CF: 5740.64 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 11.00DBM

Comments

PSD @ 5755 MHz
 ABC Chain C n40

Cursor 1 5740.6357 -15.33

0.0000 0.00



Analyzer Settings

HP8564E, EMI
 CF: 5805.93 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 11.00DBM

Comments

PSD @ 5795 MHz
 ABC Chain A n40

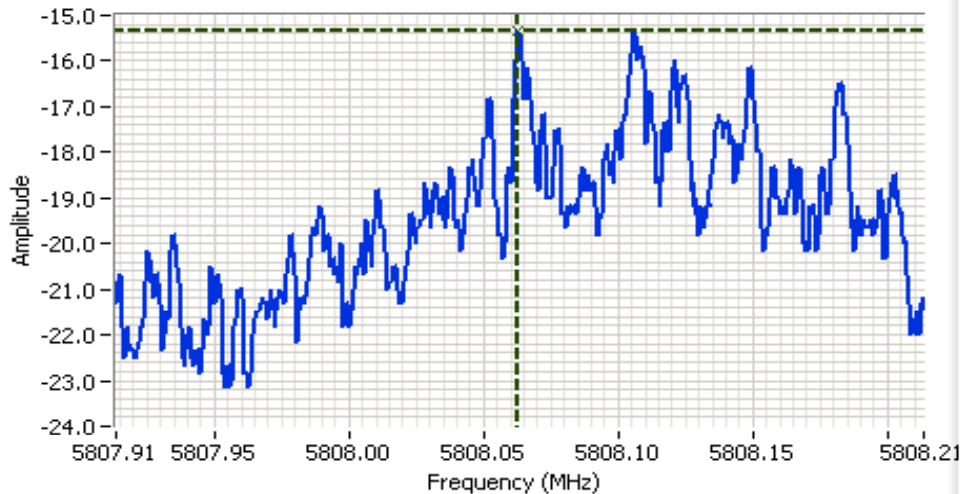
Cursor 1 5805.9247 -14.83

0.0000 0.00



| | |
|---------------------------------|-------------------------------|
| Client: Intel | Job Number: J70796 |
| Model: 533-agn MMW | T-Log Number: T71053 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC 15.247 / RSS -210 | Class: N/A |

Run #8: Power spectral Density - Chain A + B + C



Analyzer Settings

HP8564E, EMI
 CF: 5808.06 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 11.00DBM

Comments

PSD @ 5795 MHz
 ABC Chain B n40

Cursor 1 5808.0625 -15.33

0.0000 0.00



Analyzer Settings

HP8564E, EMI
 CF: 5779.97 MHz
 SPAN: 300 kHz
 RB 3.00 kHz
 VB 10.00 kHz
 Detector POS
 Att 10
 RL Offset 11.00
 Sweep Time 100.0s
 Ref Lvl: 11.00DBM

Comments

PSD @ 5795 MHz
 ABC Chain C n40

Cursor 1 5779.9697 -13.50

0.0000 0.00

