

## **APPENDIX REV 1**

**WIR127472**

**FCC15.231 Data**

## Report Status Sheet

| Revision | Report Date   | Reason for Revision                                                   |
|----------|---------------|-----------------------------------------------------------------------|
| Ø        | July 10, 2023 | Initial Issue.                                                        |
| 1        | July 20, 2023 | Updated Fundamental Field Strength<br>- Test Results, Vertical table. |

## **§ 15.203      Antenna Requirement**

\* No data or photographs available.

## § 15.207(a) Conducted Emissions Limits

| Conducted Emissions Datasheet |                        |                   |                       |                    |                                                                 |           |
|-------------------------------|------------------------|-------------------|-----------------------|--------------------|-----------------------------------------------------------------|-----------|
| METrak Number                 | 127472                 |                   |                       | Test Specification | FCC Part 15, Subpart B, Section 15.107; ICES-003, Section 3.2.1 |           |
| Customer                      | Lutron Electronics     |                   |                       | Equipment Class    | Class B                                                         |           |
| EUT Name                      | Caseta Bridge          |                   |                       | Engineer           | Donald Salguero                                                 |           |
| Model/Part Number             | L-BDG2                 |                   |                       | Test Date(s)       | 6/23/2023                                                       |           |
| Serial Number                 | 6820195                |                   |                       | Temperature        | 20.2°C                                                          |           |
| Mode of Operation             | Active                 |                   |                       | Relative Humidity  | 42%                                                             |           |
| Notes:                        |                        |                   |                       |                    |                                                                 |           |
| Start Frequency               |                        | 150 kHz           |                       | Stop Frequency     |                                                                 | 30 MHz    |
| Line Under Test               |                        | Line              |                       |                    |                                                                 |           |
| Frequency                     | Quasi-Peak Measurement | Correction Factor | Corrected Measurement | Quasi-Peak Limit   | Margin                                                          | Result    |
| MHz                           | dBμV                   | dB                | dBμV                  | dBμV               | dB                                                              | Pass/Fail |
| 0.175                         | 31.52                  | 10.41             | 41.93                 | 65.28              | -23.36                                                          | PASS      |
| 0.213                         | 31.14                  | 10.28             | 41.42                 | 64.21              | -22.79                                                          | PASS      |
| 0.246                         | 32.66                  | 10.22             | 42.88                 | 63.26              | -20.38                                                          | PASS      |
| 0.279                         | 34.3                   | 10.17             | 44.47                 | 62.3               | -17.83                                                          | PASS      |
| 0.313                         | 35.81                  | 10.14             | 45.94                 | 61.35              | -15.41                                                          | PASS      |
| 0.346                         | 30.88                  | 10.12             | 40.99                 | 60.4               | -19.41                                                          | PASS      |
| Frequency                     | Average Measurement    | Correction Factor | Corrected Measurement | Average Limit      | Margin                                                          | Result    |
| MHz                           | dBμV                   | dB                | dBμV                  | dBμV               | dB                                                              | Pass/Fail |
| 0.246                         | 24.07                  | 10.22             | 34.29                 | 53.26              | -18.968                                                         | PASS      |
| 0.279                         | 26.28                  | 10.17             | 36.45                 | 52.3               | -15.856                                                         | PASS      |
| 0.317                         | 26.79                  | 10.14             | 36.93                 | 51.23              | -14.304                                                         | PASS      |
| 0.35                          | 22.4                   | 10.11             | 32.51                 | 50.28              | -17.767                                                         | PASS      |
| 0.947                         | 20.85                  | 10.03             | 30.88                 | 46                 | -15.124                                                         | PASS      |
| 12.799                        | 21.06                  | 10.23             | 31.29                 | 50                 | -18.71                                                          | PASS      |

Figure 1: CE Data [120V60Hz, Line]

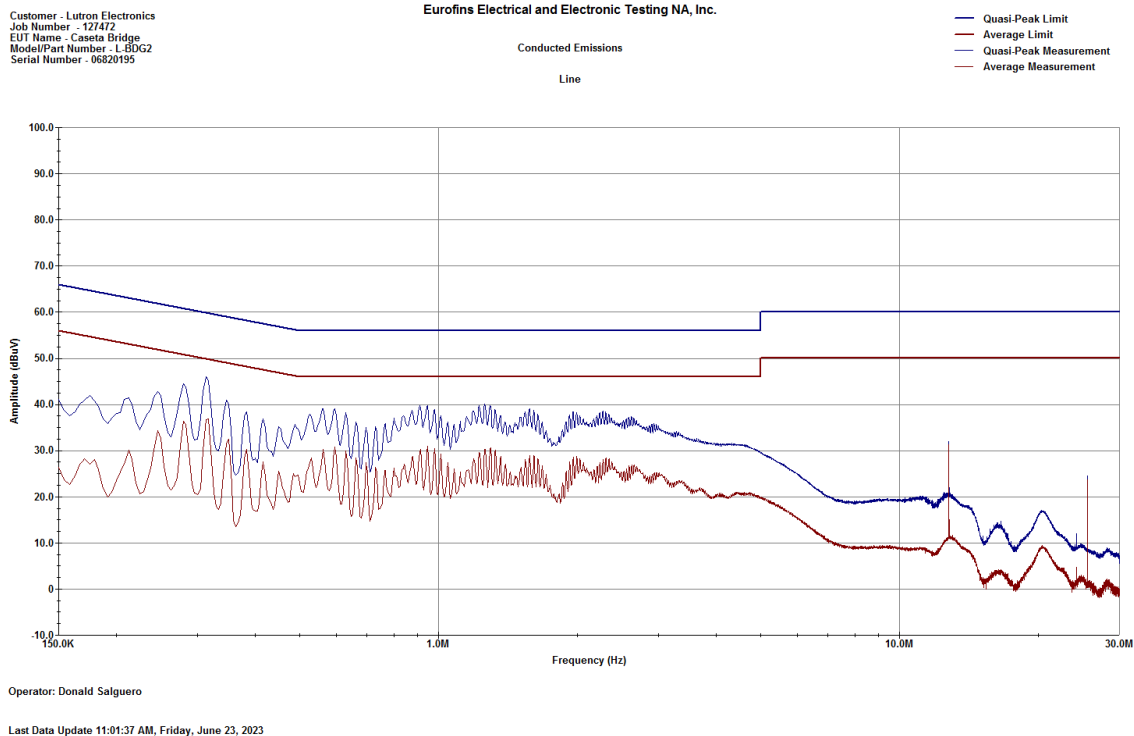


Figure 2: CE Prescan [120V60Hz, Line]

Maryland | California | Texas

[www.metlabs.com](http://www.metlabs.com)

| Conducted Emissions Datasheet |                        |                   |                       |                                                                 |         |           |
|-------------------------------|------------------------|-------------------|-----------------------|-----------------------------------------------------------------|---------|-----------|
| METrak Number                 | 127472                 |                   | Test Specification    | FCC Part 15, Subpart B, Section 15.107; ICES-003, Section 3.2.1 |         |           |
| Customer                      | Lutron Electronics     |                   | Equipment Class       | Class B                                                         |         |           |
| EUT Name                      | Caseta Bridge          |                   | Engineer              | Donald Salguero                                                 |         |           |
| Model/Part Number             | L-BDG2                 |                   | Test Date(s)          | 6/23/2023                                                       |         |           |
| Serial Number                 | 6820195                |                   | Temperature           | 20.2°C                                                          |         |           |
| Mode of Operation             | Active                 |                   | Relative Humidity     | 42%                                                             |         |           |
| Notes:                        |                        |                   |                       |                                                                 |         |           |
| Start Frequency               |                        | 150 kHz           |                       | Stop Frequency                                                  |         | 30 MHz    |
| Line Under Test               |                        | Neutral           |                       |                                                                 |         |           |
| Frequency                     | Quasi-Peak Measurement | Correction Factor | Corrected Measurement | Quasi-Peak Limit                                                | Margin  | Result    |
| MHz                           | dBμV                   | dB                | dBμV                  | dBμV                                                            | dB      | Pass/Fail |
| 0.15                          | 31.49                  | 10.51             | 42                    | 66                                                              | -24.001 | PASS      |
| 0.175                         | 31.84                  | 10.39             | 42.23                 | 65.28                                                           | -23.056 | PASS      |
| 0.213                         | 29.9                   | 10.27             | 40.17                 | 64.21                                                           | -24.045 | PASS      |
| 0.246                         | 30.16                  | 10.22             | 40.38                 | 63.26                                                           | -22.882 | PASS      |
| 0.283                         | 31.31                  | 10.16             | 41.47                 | 62.19                                                           | -20.712 | PASS      |
| 0.317                         | 31.58                  | 10.13             | 41.71                 | 61.23                                                           | -19.524 | PASS      |
| Frequency                     | Average Measurement    | Correction Factor | Corrected Measurement | Average Limit                                                   | Margin  | Result    |
| MHz                           | dBμV                   | dB                | dBμV                  | dBμV                                                            | dB      | Pass/Fail |
| 0.246                         | 17.22                  | 10.22             | 27.44                 | 53.26                                                           | -25.819 | PASS      |
| 0.283                         | 19.5                   | 10.16             | 29.67                 | 52.19                                                           | -22.519 | PASS      |
| 0.317                         | 18.54                  | 10.13             | 28.67                 | 51.23                                                           | -22.563 | PASS      |
| 0.35                          | 16.22                  | 10.11             | 26.34                 | 50.28                                                           | -23.943 | PASS      |
| 1.297                         | 15.13                  | 10.03             | 25.16                 | 46                                                              | -20.844 | PASS      |
| 12.799                        | 20.8                   | 10.23             | 31.02                 | 50                                                              | -18.975 | PASS      |

Figure 3: CE Data [120V60Hz, Neutral]

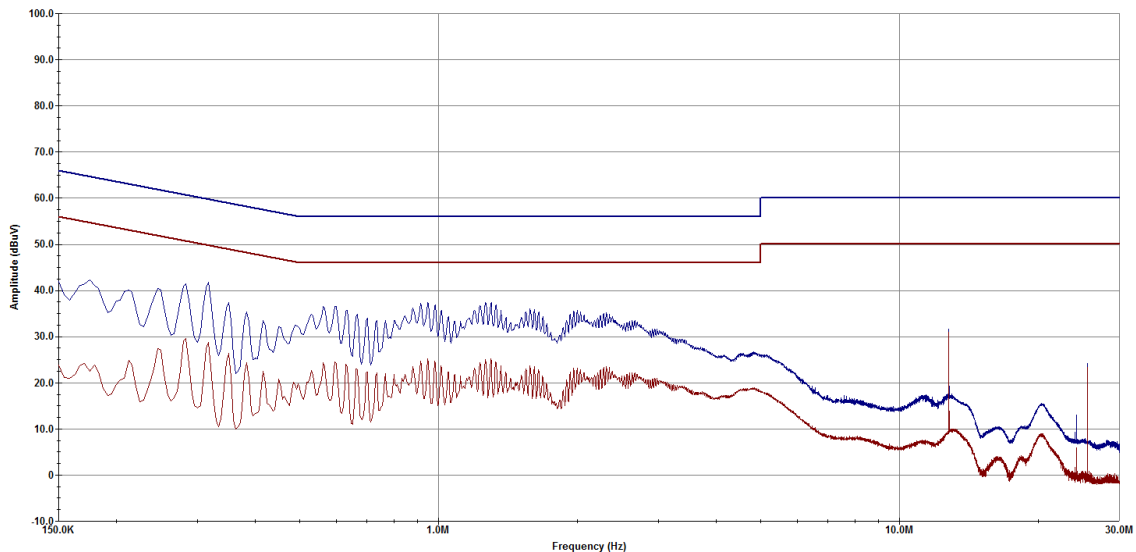
Customer - Lutron Electronics  
Job Number - 127472  
EUT Name - Caseta Bridge  
Model/Part Number - L-BDG2  
Serial Number - 6820195

Eurofins Electrical and Electronic Testing NA, Inc.

Conducted Emissions

Neutral

— Quasi-Peak Limit  
— Average Limit  
— Quasi-Peak Measurement  
— Average Measurement



Operator: Donald Salguero

Last Data Update 10:59:48 AM, Friday, June 23, 2023

Figure 4: CE Prescan [120V60Hz, Neutral]

Maryland | California | Texas

[www.metlabs.com](http://www.metlabs.com)



**Figure 5: CE Setup [Rear]**



**Figure 6: CE Setup**

## § 15.231 (a) Periodic Operation Requirements

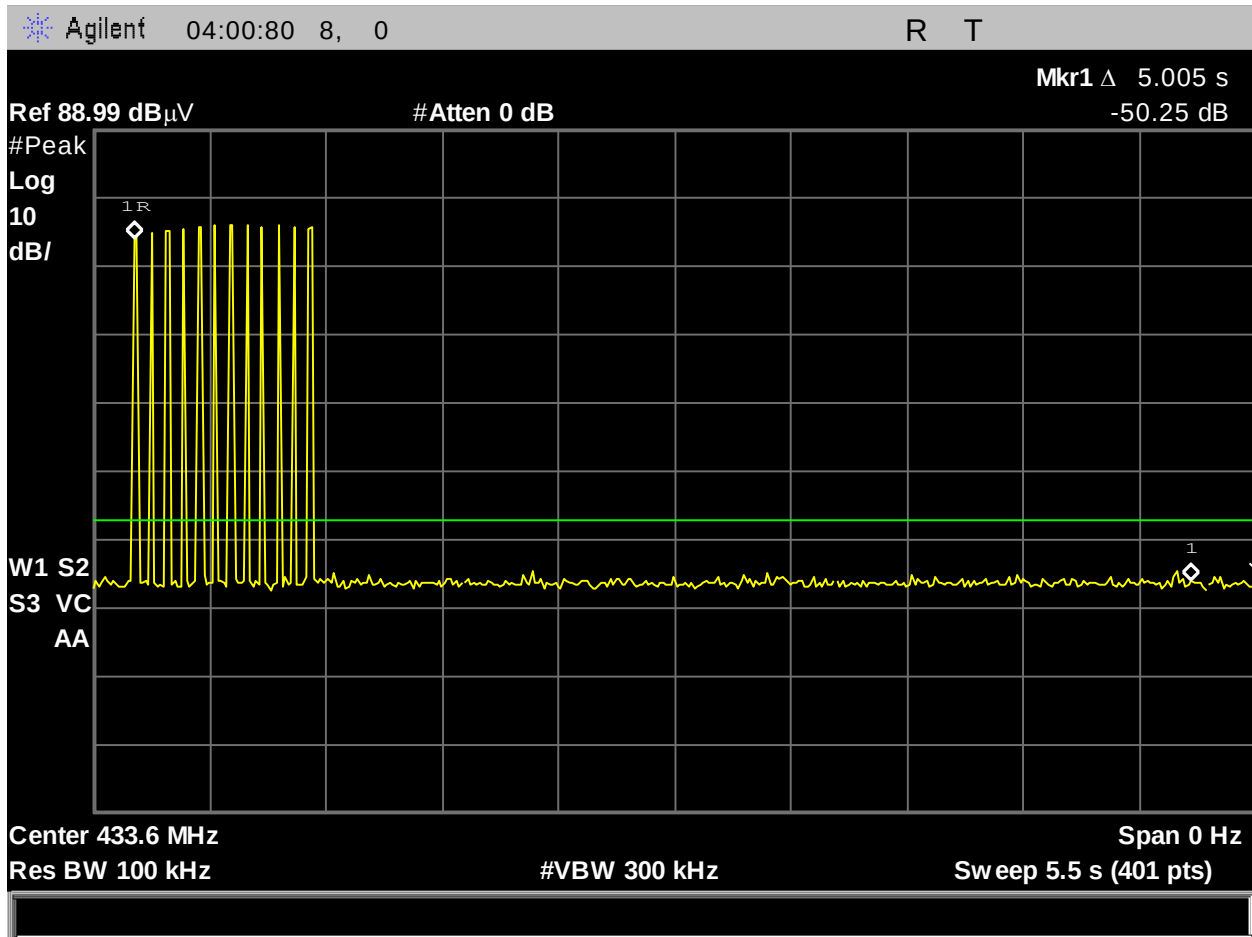


Figure 7: 5s shutdown



### § 15.231(b) Field Strength of Fundamental and Harmonics

| Frequency (MHz) | Peak Measured Field Strength (dBuV) | Antenna Factor (dB/m) | Cable Factor (dB) | Corrected Peak Field Strength (dBuV/m) | DCCF (dB) | Average Field Strength (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|-------------------------------------|-----------------------|-------------------|----------------------------------------|-----------|---------------------------------|----------------|-------------|
| 431.5           | 74.44                               | 21                    | 2.74              | 98.18                                  | -20       | 78.18                           | 80.75          | -2.57       |
| 433.6           | 74.55                               | 21.1                  | 2.74              | 98.39                                  | -20       | 78.39                           | 80.81          | -2.42       |
| 436.6           | 74.92                               | 21.3                  | 2.74              | 98.96                                  | -20       | 78.96                           | 80.91          | -1.95       |

Figure 8: Fundamental Field Strength - Test Results, Horizontal

| Frequency (MHz) | Peak Measured Field Strength (dBuV) | Antenna Factor (dB/m) | Cable Factor (dB) | Corrected Peak Field Strength (dBuV/m) | DCCF (dB) | Average Field Strength (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|-------------------------------------|-----------------------|-------------------|----------------------------------------|-----------|---------------------------------|----------------|-------------|
| 431.5           | 76.11                               | 20.8                  | 2.74              | 99.65                                  | -20       | 79.65                           | 80.75          | -1.1        |
| 433.6           | 76.76                               | 20.8                  | 2.74              | 100.3                                  | -20       | 80.3                            | 80.81          | -0.51       |
| 436.6           | 77.03                               | 21                    | 2.74              | 100.77                                 | -20       | 80.77                           | 80.91          | -0.14       |

Figure 9: Fundamental Field Strength - Test Results, Vertical

| TX Channel | Frequency (MHz) | Peak Measured Field Strength (dBuV) | Antenna Factor (dB/m) | Cable Factor (dB) | Corrected Peak Field Strength (dBuV/m) | DCCF (dB) | Average Field Strength (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|------------|-----------------|-------------------------------------|-----------------------|-------------------|----------------------------------------|-----------|---------------------------------|----------------|-------------|
| 431.5 MHz  | 862.975         | 25.56                               | 26.9                  | 3.44              | 55.90                                  | -20       | 35.90                           | 60.74          | -24.84      |
| 433.6 MHz  | 867.18          | 26.28                               | 27                    | 3.44              | 56.72                                  | -20       | 36.72                           | 60.81          | -24.09      |
| 436.6 MHz  | 873.18          | 26.16                               | 26.9                  | 3.39              | 56.45                                  | -20       | 36.45                           | 60.91          | -24.46      |

Figure 10: Harmonics Field Strength - Test Results, Horizontal

| TX Channel | Frequency (MHz) | Peak Measured Field Strength (dBuV) | Antenna Factor (dB/m) | Cable Factor (dB) | Corrected Peak Field Strength (dBuV/m) | DCCF (dB) | Average Field Strength (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|------------|-----------------|-------------------------------------|-----------------------|-------------------|----------------------------------------|-----------|---------------------------------|----------------|-------------|
| 431.5 MHz  | 862.9775        | 28.96                               | 26.1                  | 3.44              | 58.50                                  | -20       | 38.50                           | 60.74          | -22.24      |
| 433.6 MHz  | 867.18          | 33.43                               | 26.1                  | 3.44              | 62.97                                  | -20       | 42.97                           | 60.81          | -17.84      |
| 436.6 MHz  | 873.18          | 33.75                               | 26.2                  | 3.39              | 63.34                                  | -20       | 43.34                           | 60.91          | -17.57      |

Figure 11: Harmonics Field Strength - Test Results, Vertical



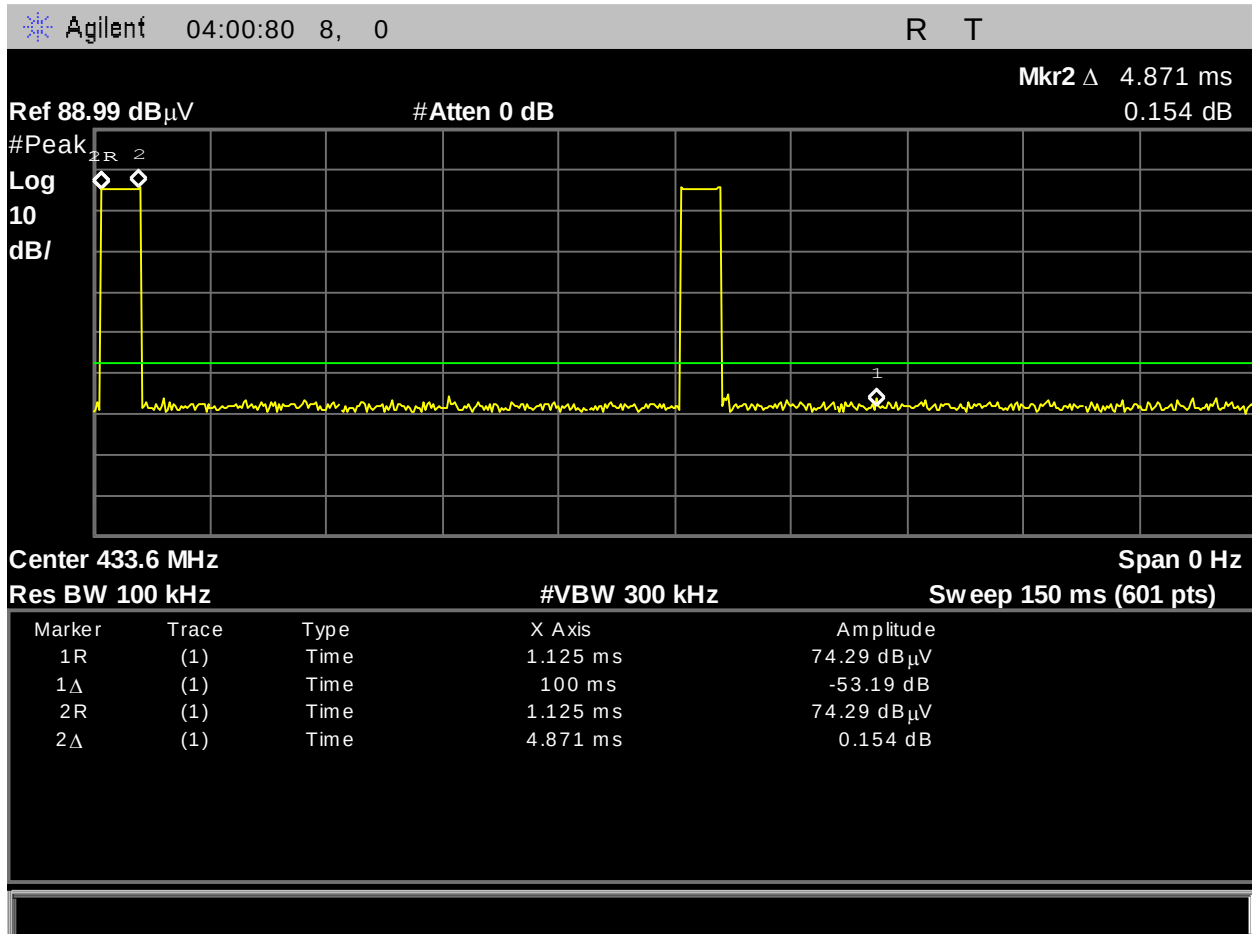


Figure 12: Duty Cycle

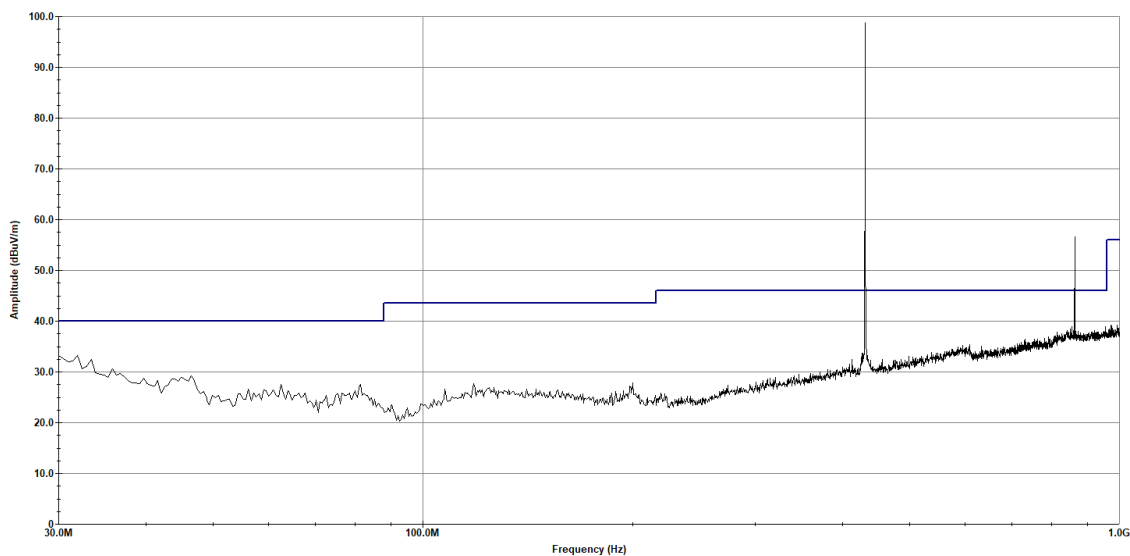
Customer - Lutron Electronics  
Job Number - 127472  
EUT Name - Caseta Bridge  
TX Channel - 431.5 MHz

**Eurofins Electrical and Electronic Testing NA, Inc.**

Radiated Emissions

Horizontal Polarization

— Test Limit - Quasi-Peak  
— Measured - Peak  
× Measured - Quasi-Peak



Operator: Donald Salguero

Last Data Update 01:49:47 PM, Thursday, June 22, 2023

**Figure 13: Radiated Spurious Emissions - Low Channel, 30-1000 MHz, Horizontal**

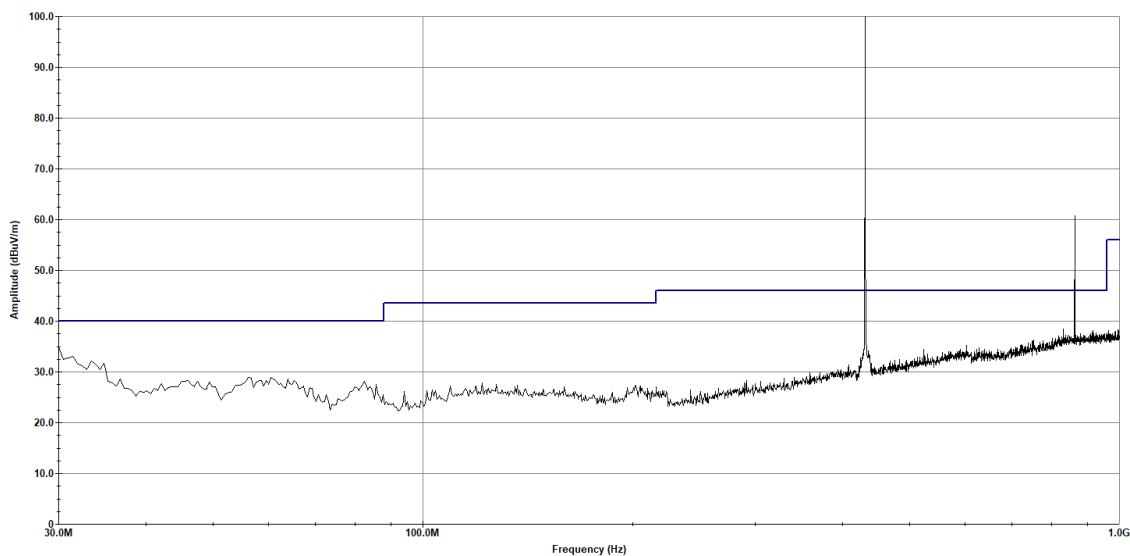
Customer - Lutron Electronics  
Job Number - 127472  
EUT Name - Caseta Bridge  
TX Channel - 431.5 MHz

Eurofins Electrical and Electronic Testing NA, Inc.

Radiated Emissions

Vertical Polarization

— Test Limit - Quasi-Peak  
— Measured - Peak  
× Measured - Quasi-Peak



Operator: Donald Salguero

Last Data Update 01:43:32 PM, Thursday, June 22, 2023

**Figure 14: Radiated Spurious Emissions - Low Channel, 30-1000 MHz, Vertical**

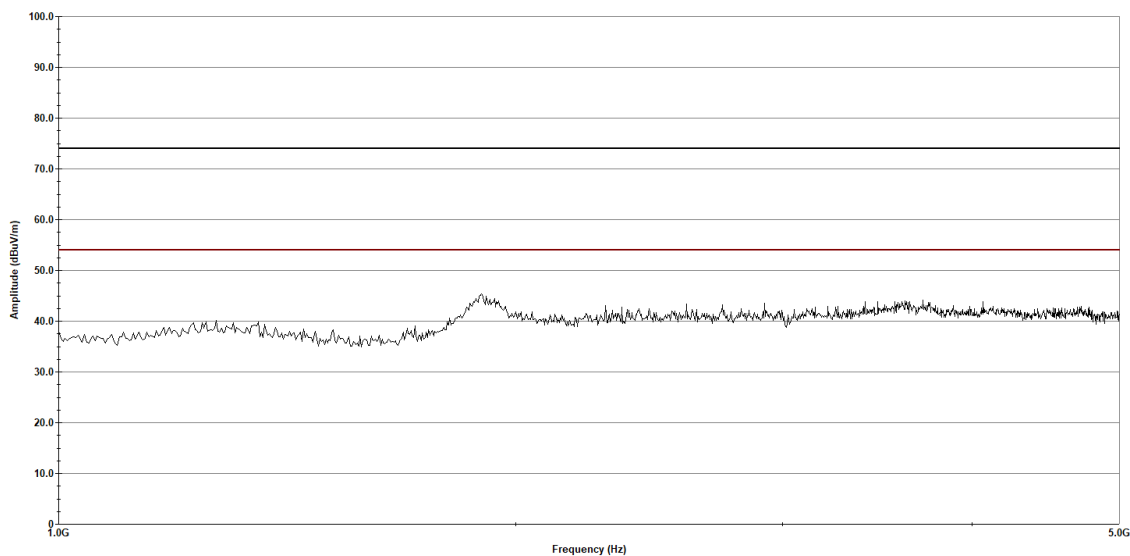
Customer - Lutron Electronics  
Job Number - 127472  
EUT Name - Caseta Bridge  
TX Frequency - 431.5 MHz

Eurofins Electrical and Electronic Testing NA, Inc.

Radiated Emissions

Horizontal Polarization

— Test Limit - Peak  
— Test Limit - Average  
— Measured - Peak  
× Measured - Average



Operator: Donald Salguero

Last Data Update 10:23:30 AM, Friday, June 23, 2023

**Figure 15: Radiated Spurious Emissions - Low Channel, 1-5 GHz, Horizontal**

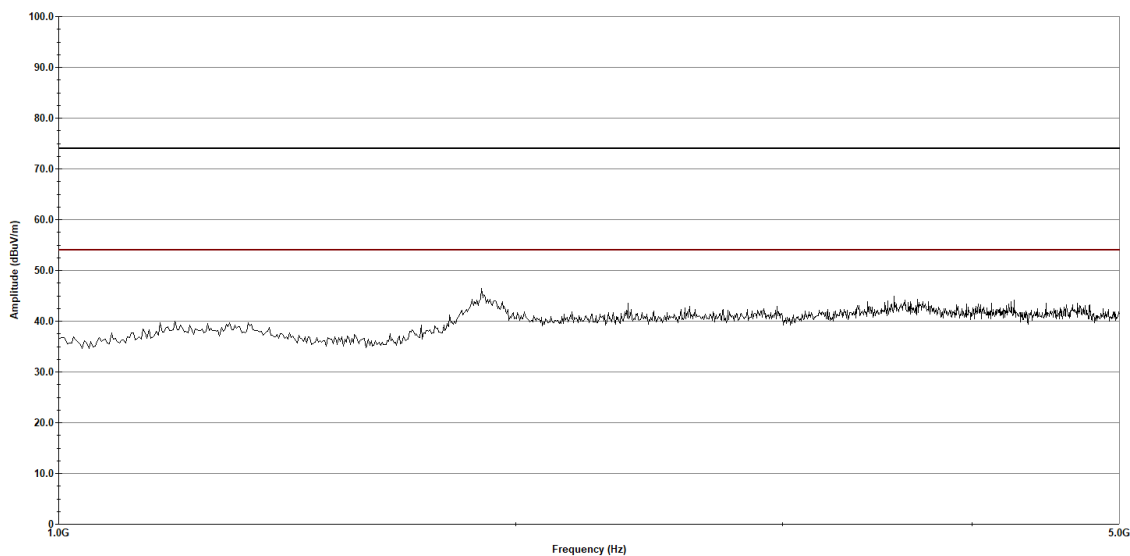
Customer - Lutron Electronics  
Job Number - 127472  
EUT Name - Caseta Bridge  
TX Frequency - 431.5 MHz

Eurofins Electrical and Electronic Testing NA, Inc.

Radiated Emissions

Vertical Polarization

— Test Limit - Peak  
— Test Limit - Average  
— Measured - Peak  
× Measured - Average



Operator: Donald Salguero

Last Data Update 10:28:53 AM, Friday, June 23, 2023

**Figure 16: Radiated Spurious Emissions - Low Channel, 1-5 GHz, Vertical**

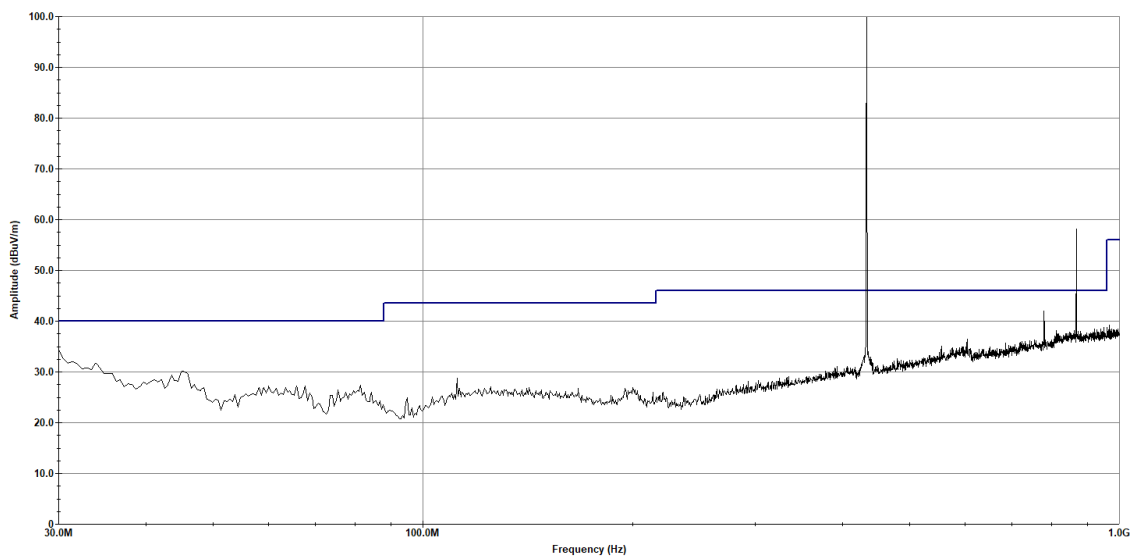
Customer - Lutron Electronics  
Job Number - 127472  
EUT Name - Caseta Bridge  
TX Channel - 433.6 MHz

Eurofins Electrical and Electronic Testing NA, Inc.

Radiated Emissions

Horizontal Polarization

— Test Limit - Quasi-Peak  
— Measured - Peak  
× Measured - Quasi-Peak



Operator: Donald Salguero

Last Data Update 02:13:01 PM, Thursday, June 22, 2023

**Figure 17: Radiated Spurious Emissions - Mid Channel, 30-1000 MHz, Horizontal**

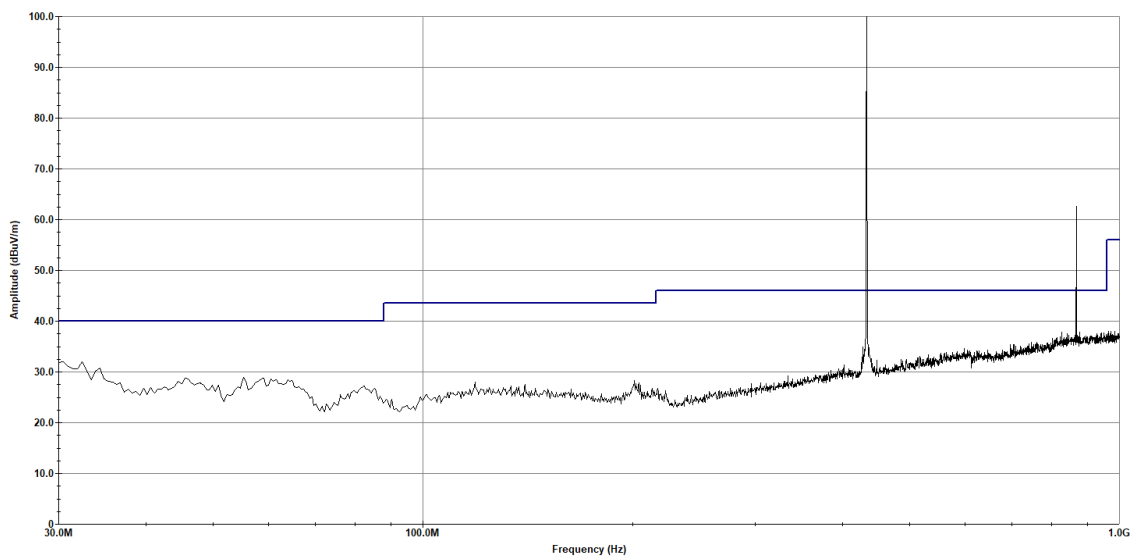
Customer - Lutron Electronics  
Job Number - 127472  
EUT Name - Caseta Bridge  
TX Channel - 433.6 MHz

Eurofins Electrical and Electronic Testing NA, Inc.

Radiated Emissions

Vertical Polarization

— Test Limit - Quasi-Peak  
— Measured - Peak  
× Measured - Quasi-Peak



Operator: Donald Salguero

Last Data Update 02:18:13 PM, Thursday, June 22, 2023

**Figure 18: Radiated Spurious Emissions - Mid Channel, 30-1000 MHz, Vertical**



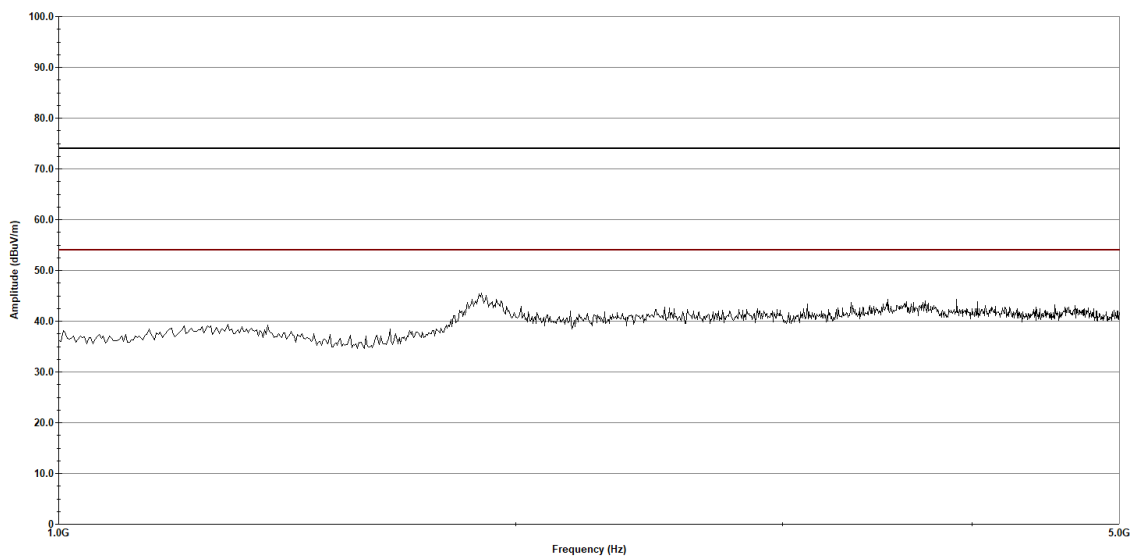
Customer - Lutron Electronics  
Job Number - 127472  
EUT Name - Caseta Bridge  
TX Frequency - 433.6 MHz

Eurofins Electrical and Electronic Testing NA, Inc.

Radiated Emissions

Horizontal Polarization

— Test Limit - Peak  
— Test Limit - Average  
— Measured - Peak  
× Measured - Average



Operator: Donald Salguero

Last Data Update 10:11:01 AM, Friday, June 23, 2023

**Figure 19: Radiated Spurious Emissions - Mid Channel, 1-5 GHz, Horizontal**

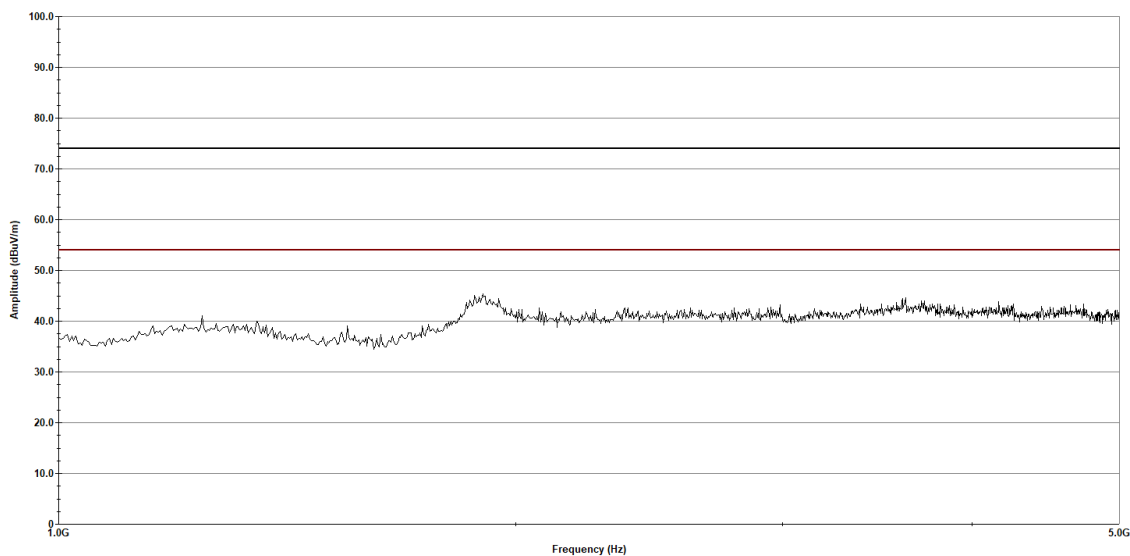
Customer - Lutron Electronics  
Job Number - 127472  
EUT Name - Caseta Bridge  
TX Frequency - 433.6 MHz

Eurofins Electrical and Electronic Testing NA, Inc.

Radiated Emissions

Vertical Polarization

— Test Limit - Peak  
— Test Limit - Average  
— Measured - Peak  
× Measured - Average



Operator: Donald Salguero

Last Data Update 10:16:05 AM, Friday, June 23, 2023

**Figure 20: Radiated Spurious Emissions - Mid Channel, 1-5 GHz, Vertical**

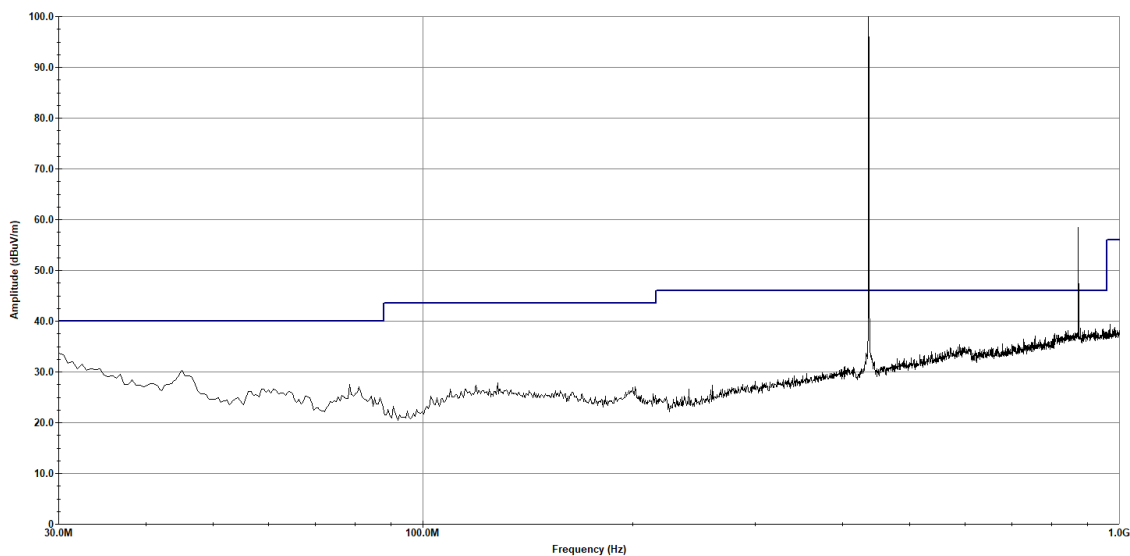
Customer - Lutron Electronics  
Job Number - 127472  
EUT Name - Caseta Bridge  
TX Channel - 435.6 MHz

Eurofins Electrical and Electronic Testing NA, Inc.

Radiated Emissions

Horizontal Polarization

— Test Limit - Quasi-Peak  
— Measured - Peak  
× Measured - Quasi-Peak



Operator: Donald Salguero

Last Data Update 02:35:57 PM, Thursday, June 22, 2023

**Figure 21: Radiated Spurious Emissions - High Channel, 30-1000 MHz, Horizontal**

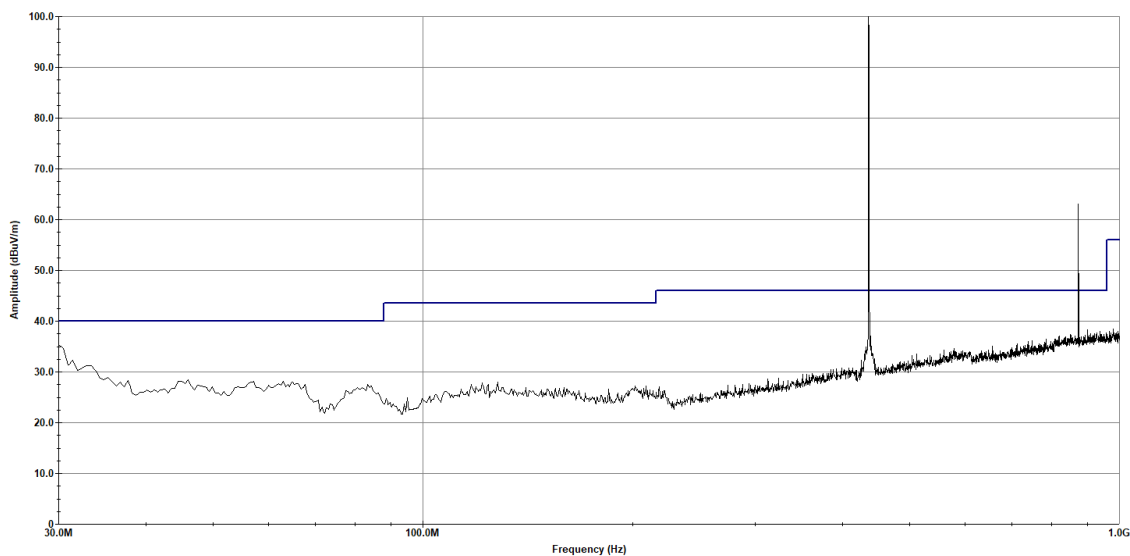
Customer - Lutron Electronics  
Job Number - 127472  
EUT Name - Caseta Bridge  
TX Channel - 435.5 MHz

Eurofins Electrical and Electronic Testing NA, Inc.

Radiated Emissions

Vertical Polarization

— Test Limit - Quasi-Peak  
— Measured - Peak  
× Measured - Quasi-Peak



Operator: Donald Salguero

Last Data Update 02:41:50 PM, Thursday, June 22, 2023

**Figure 22: Radiated Spurious Emissions - High Channel, 30-1000 MHz, Vertical**

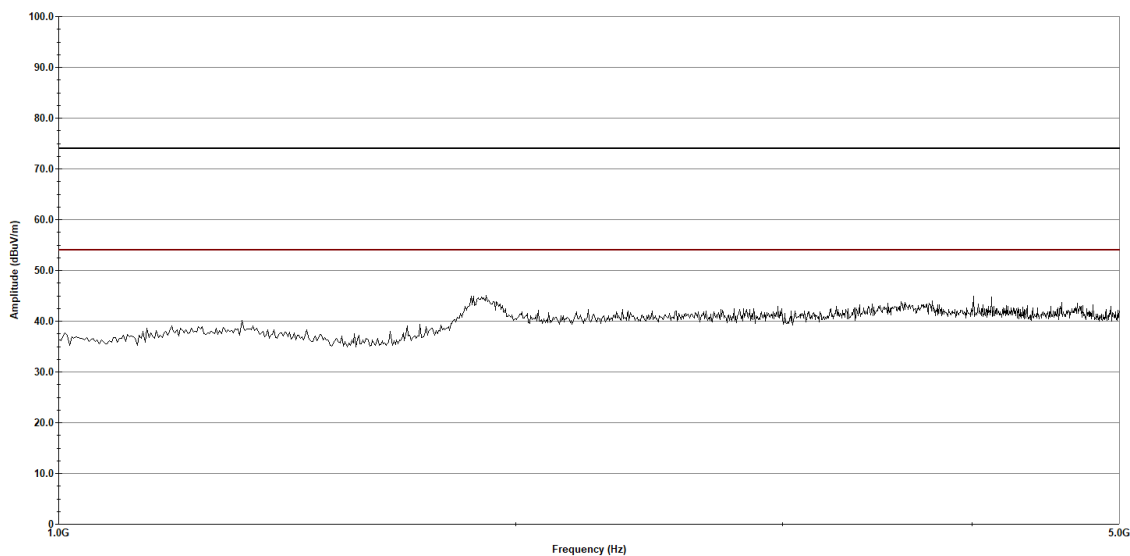
Customer - Lutron Electronics  
Job Number - 127472  
EUT Name - Caseta Bridge  
TX Frequency - 435.6 MHz

Eurofins Electrical and Electronic Testing NA, Inc.

Radiated Emissions

Horizontal Polarization

— Test Limit - Peak  
— Test Limit - Average  
— Measured - Peak  
× Measured - Average



Operator: Donald Salguero

Last Data Update 10:36:20 AM, Friday, June 23, 2023

**Figure 23: Radiated Spurious Emissions - High Channel, 1-5 GHz, Horizontal**

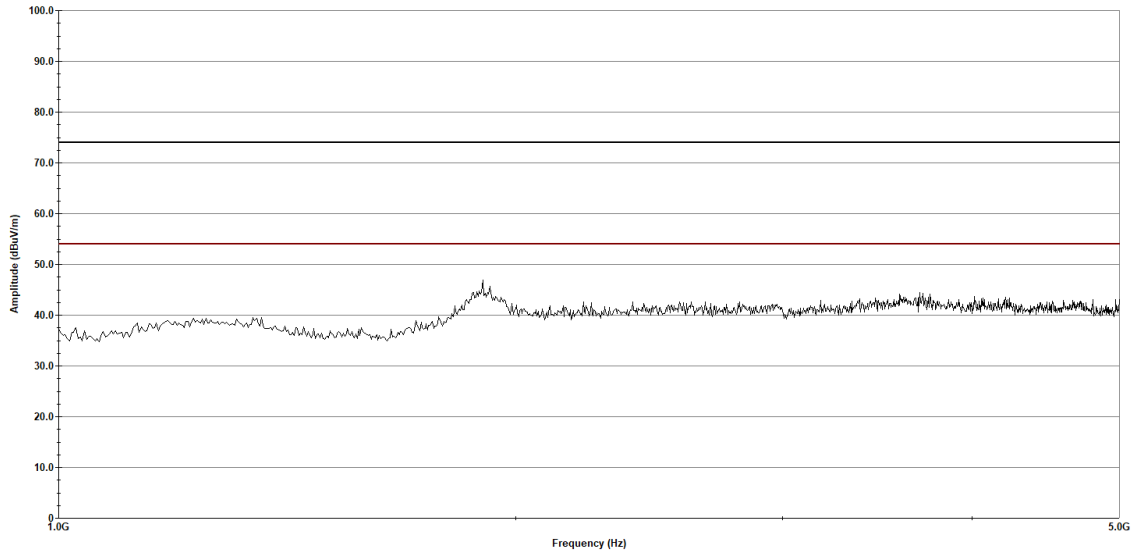
Customer - Lutron Electronics  
Job Number - 127472  
EUT Name - Caseta Bridge  
TX Frequency - 435.6 MHz

Eurofins Electrical and Electronic Testing NA, Inc.

Radiated Emissions

Vertical Polarization

— Test Limit - Peak  
— Test Limit - Average  
— Measured - Peak  
× Measured - Average



Operator: Donald Salguero

Last Data Update 10:41:30 AM, Friday, June 23, 2023

**Figure 24: Radiated Spurious Emissions - High Channel, 1-5 GHz, Vertical**

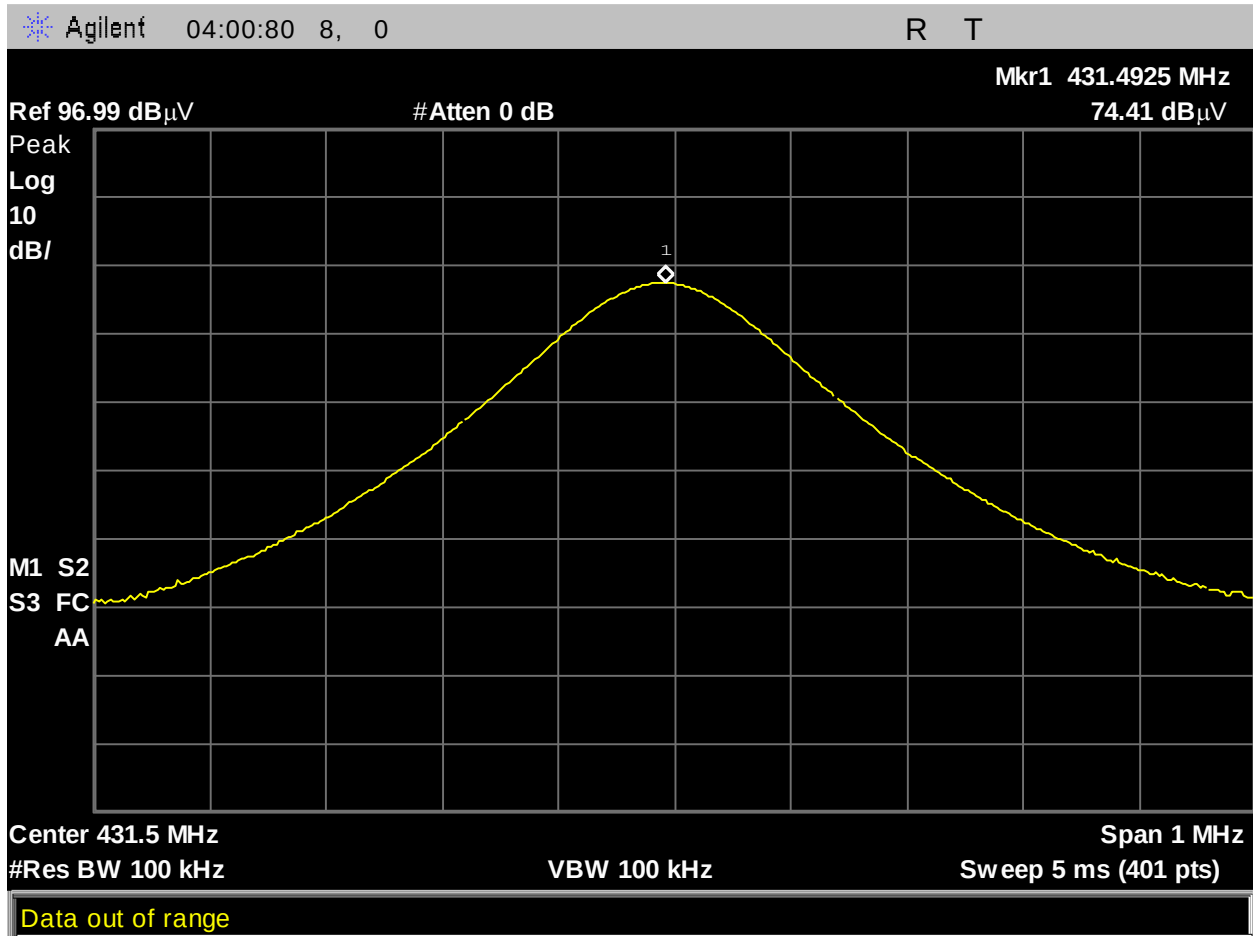


Figure 25: Uncorrected Field Strength\_431.5MHz\_H\_final

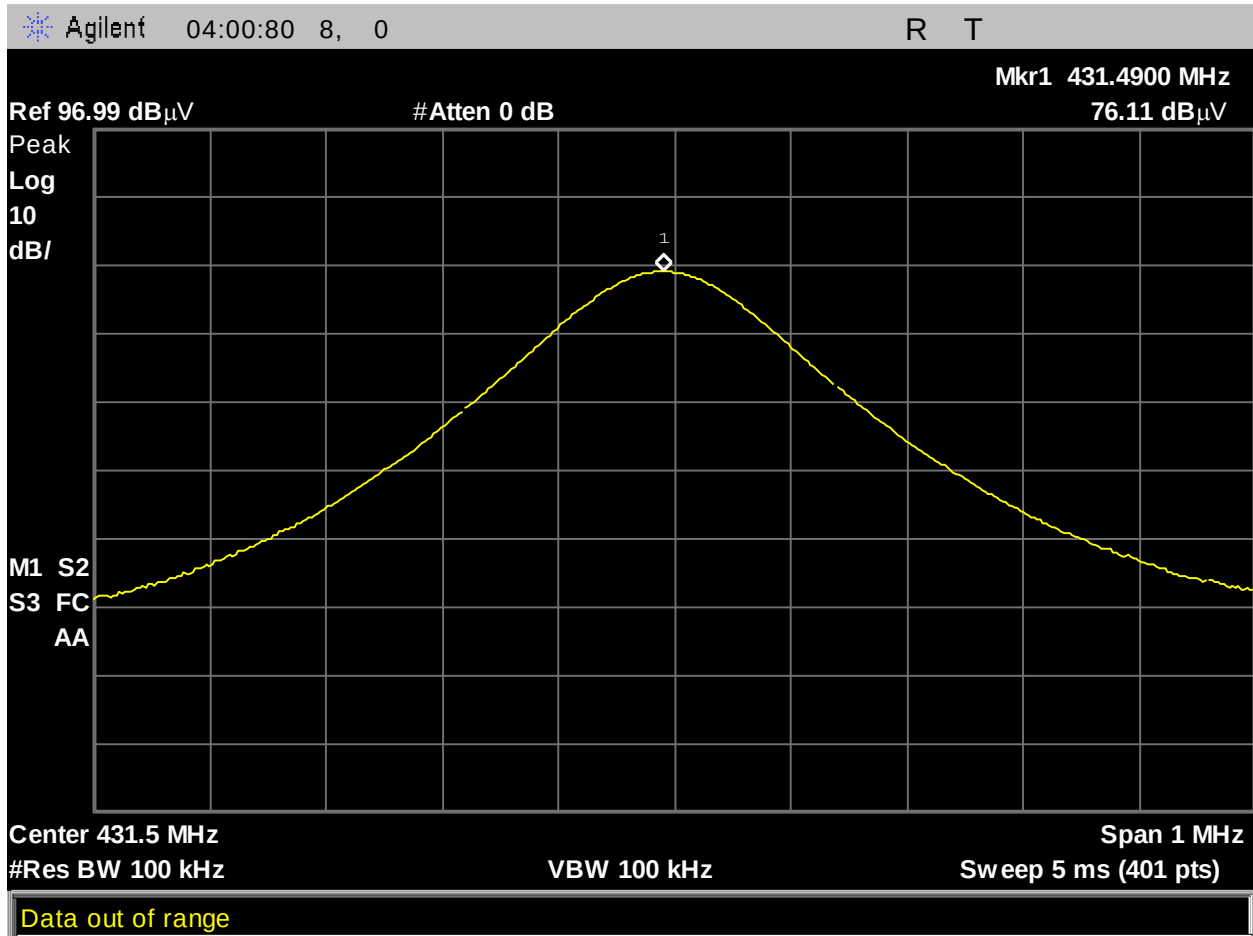


Figure 26: Uncorrected Field Strength\_431.5MHz\_V\_final



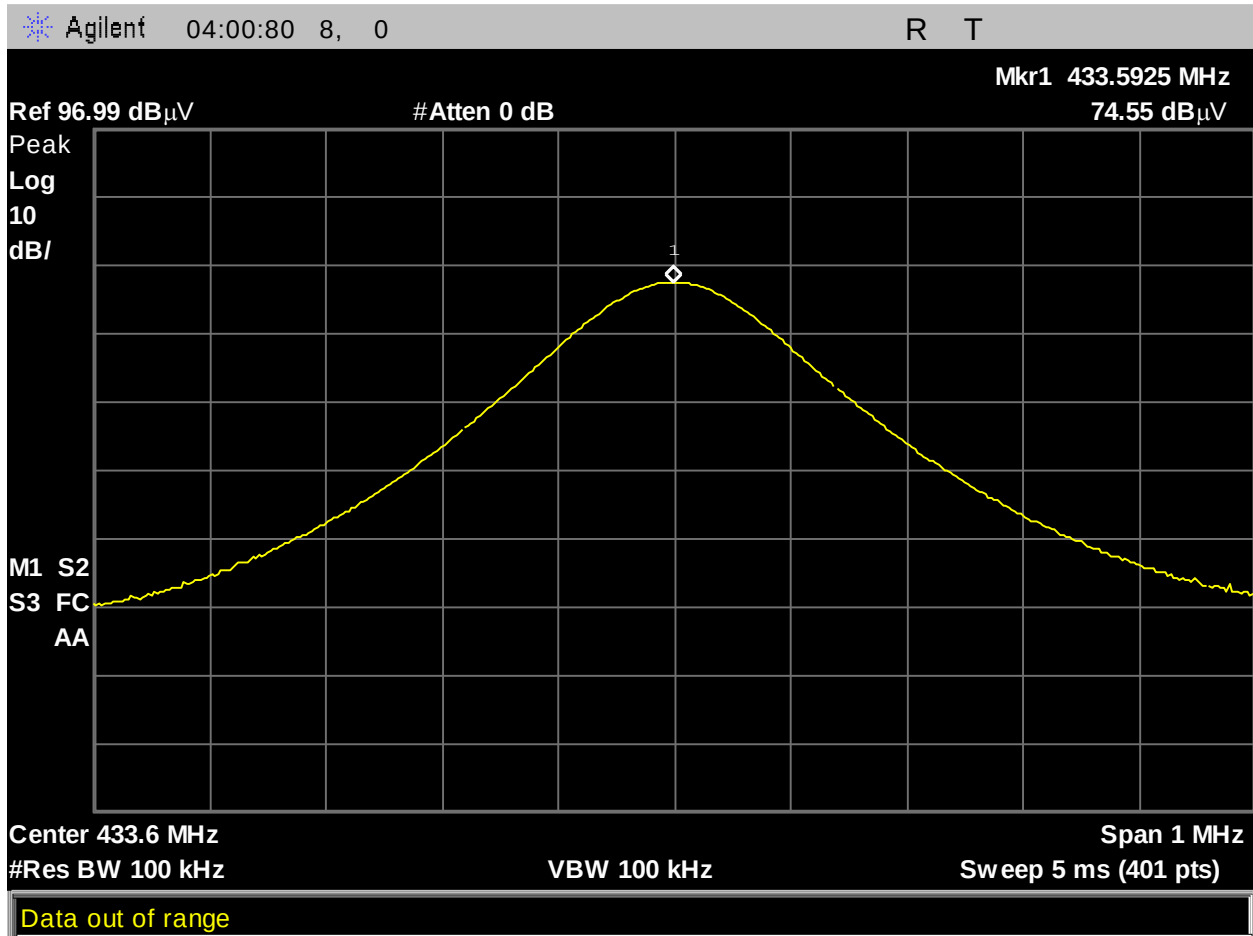


Figure 27: Uncorrected Field Strength\_433.6MHz\_H\_final

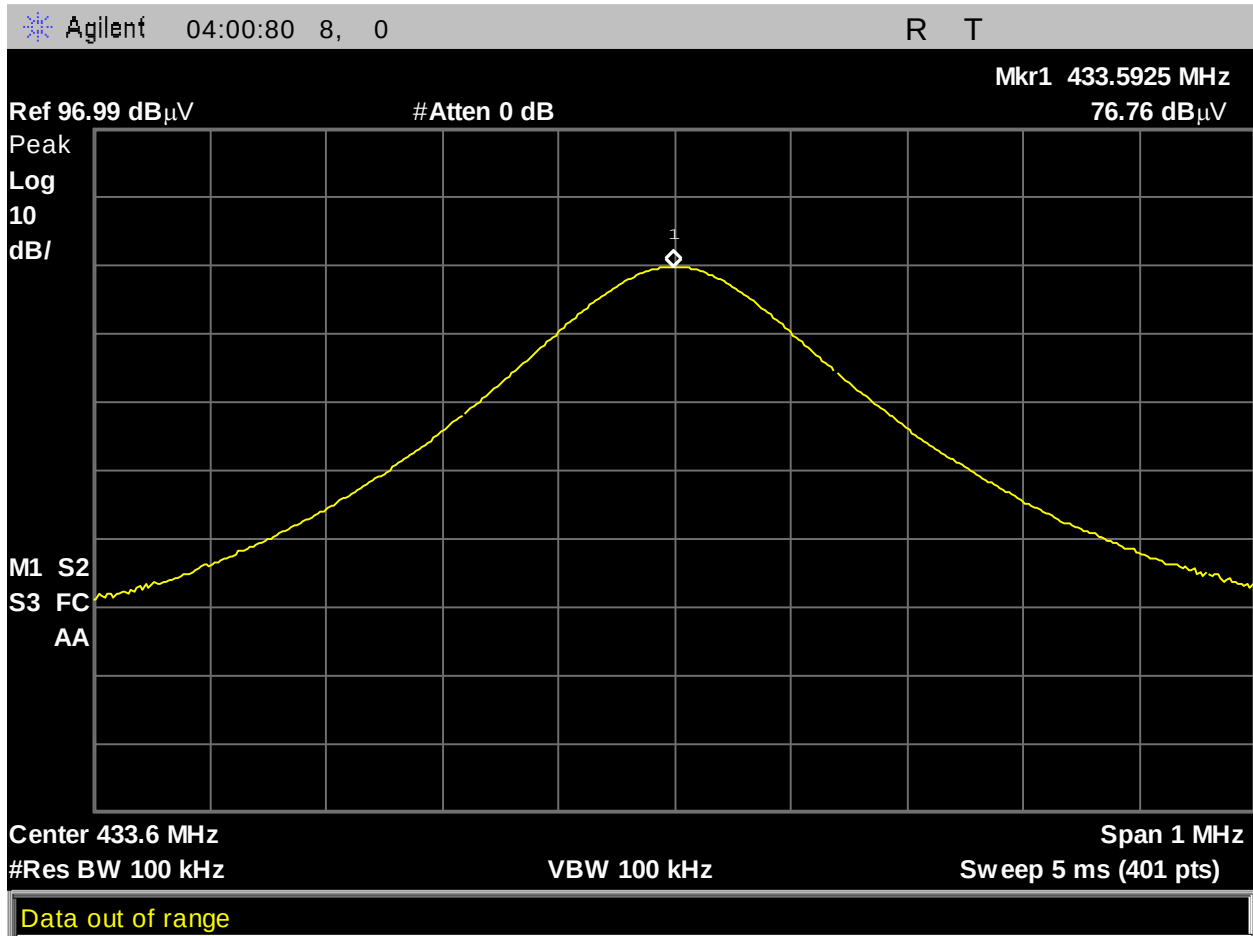


Figure 28: Uncorrected Field Strength\_433.6MHz\_V\_final

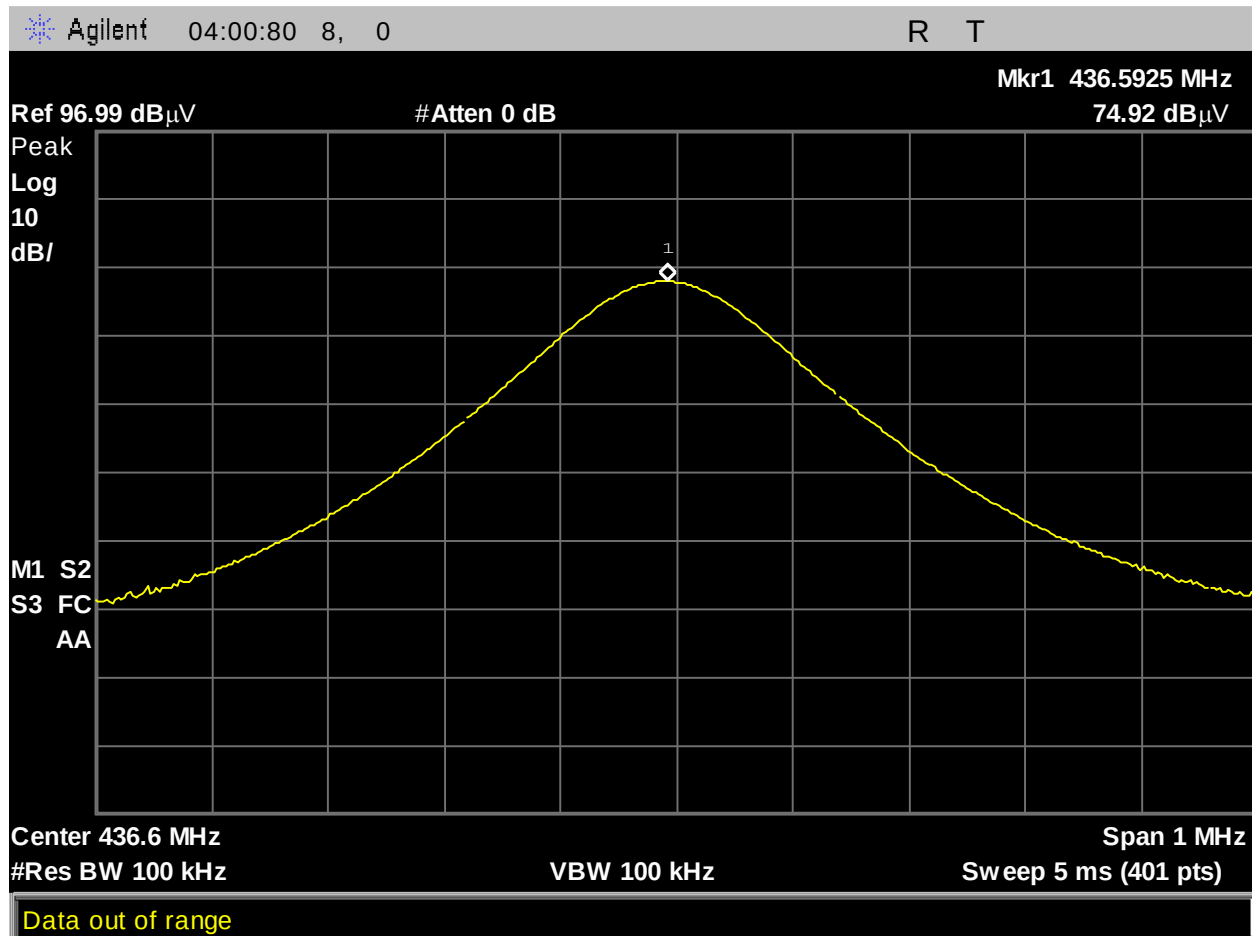


Figure 29: Uncorrected Field Strength\_436.6MHz\_H\_final

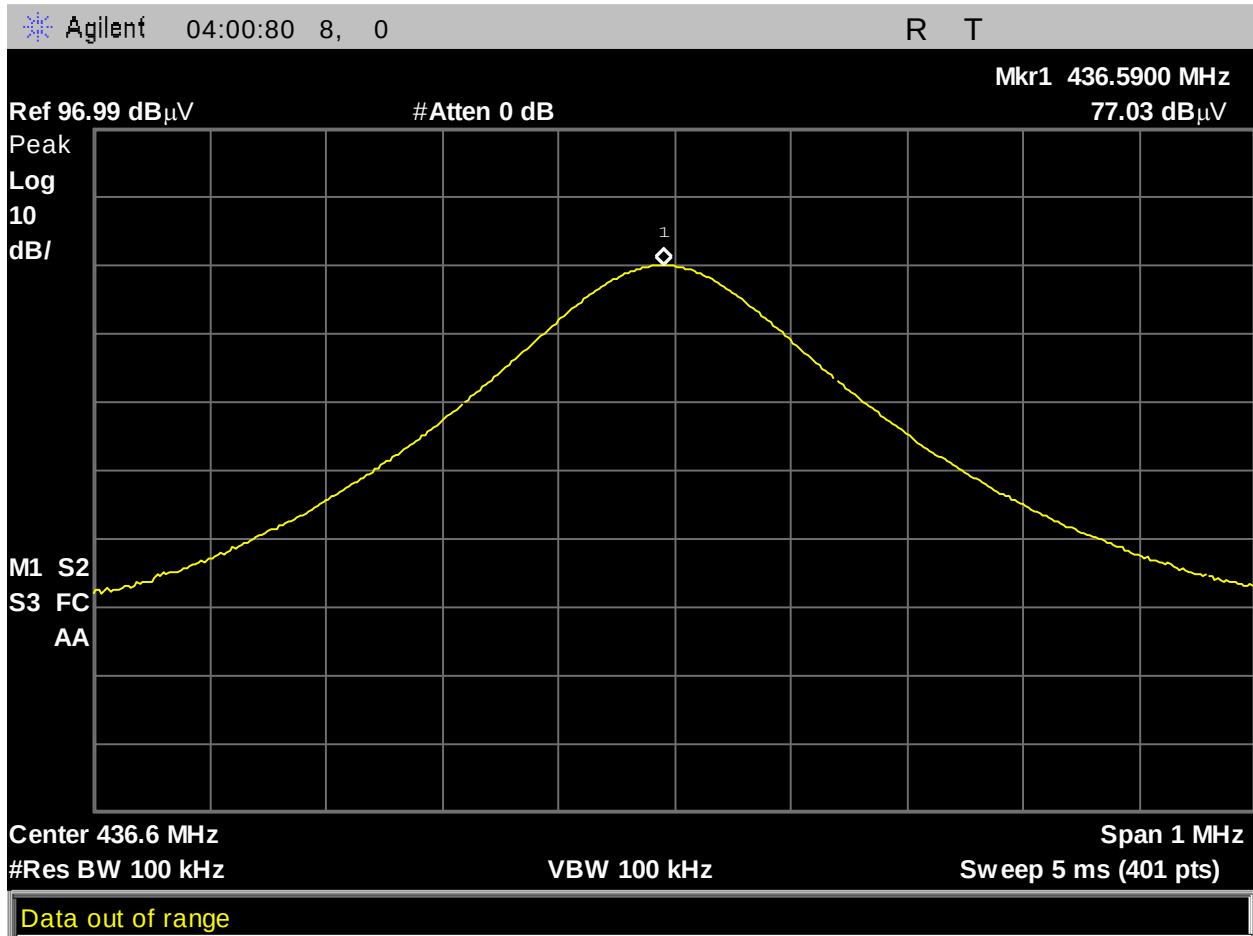
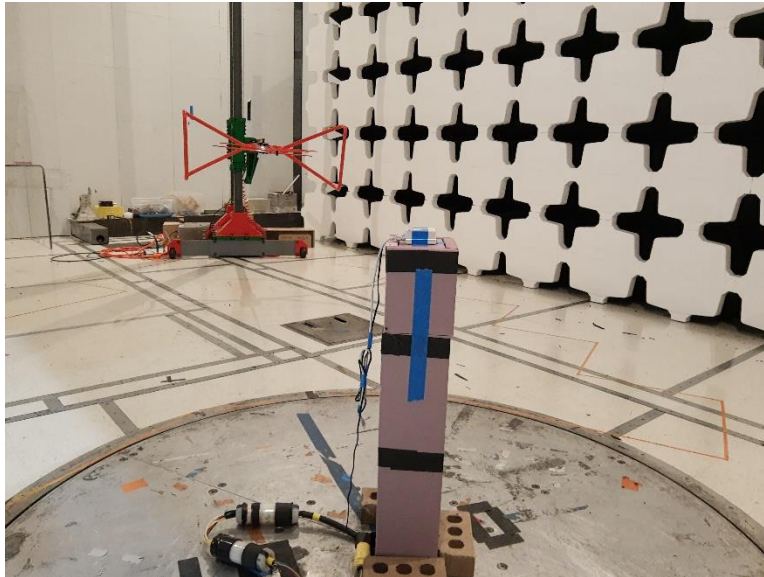
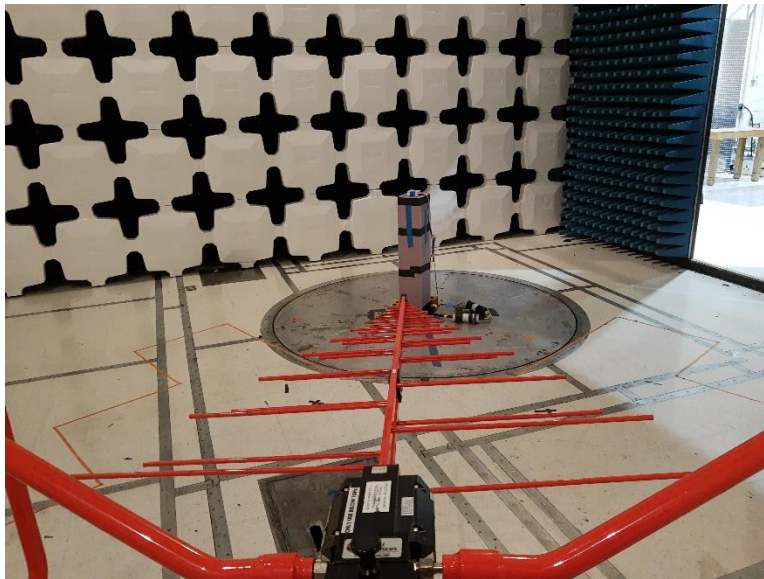


Figure 30: Uncorrected Field Strength\_436.6MHz\_V\_final



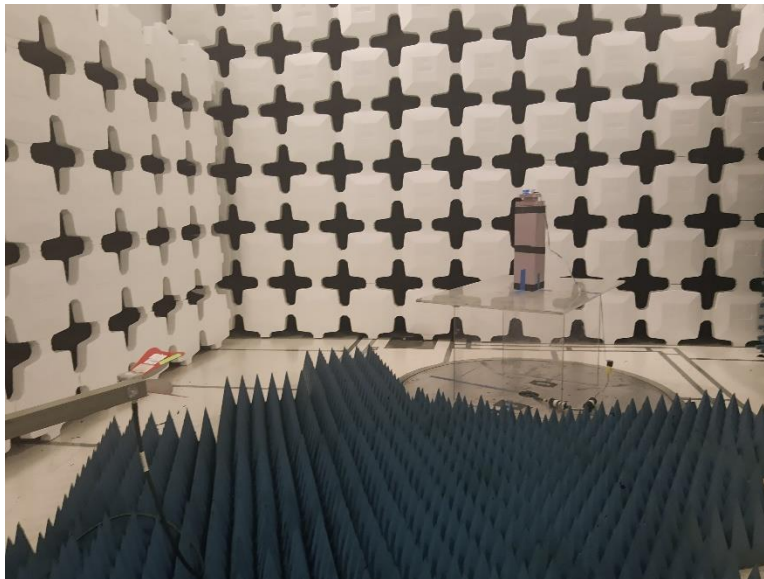
**Figure 31: RE Setup [30MHz - 1GHz, Rear]**



**Figure 32: RE Setup [30MHz - 1GHz]**



**Figure 33: RE Setup [1GHz - 5GHz, Rear]**



**Figure 34: RE Setup [1GHz - 5GHz]**

§ 15.231(c) 20 dB Bandwidth

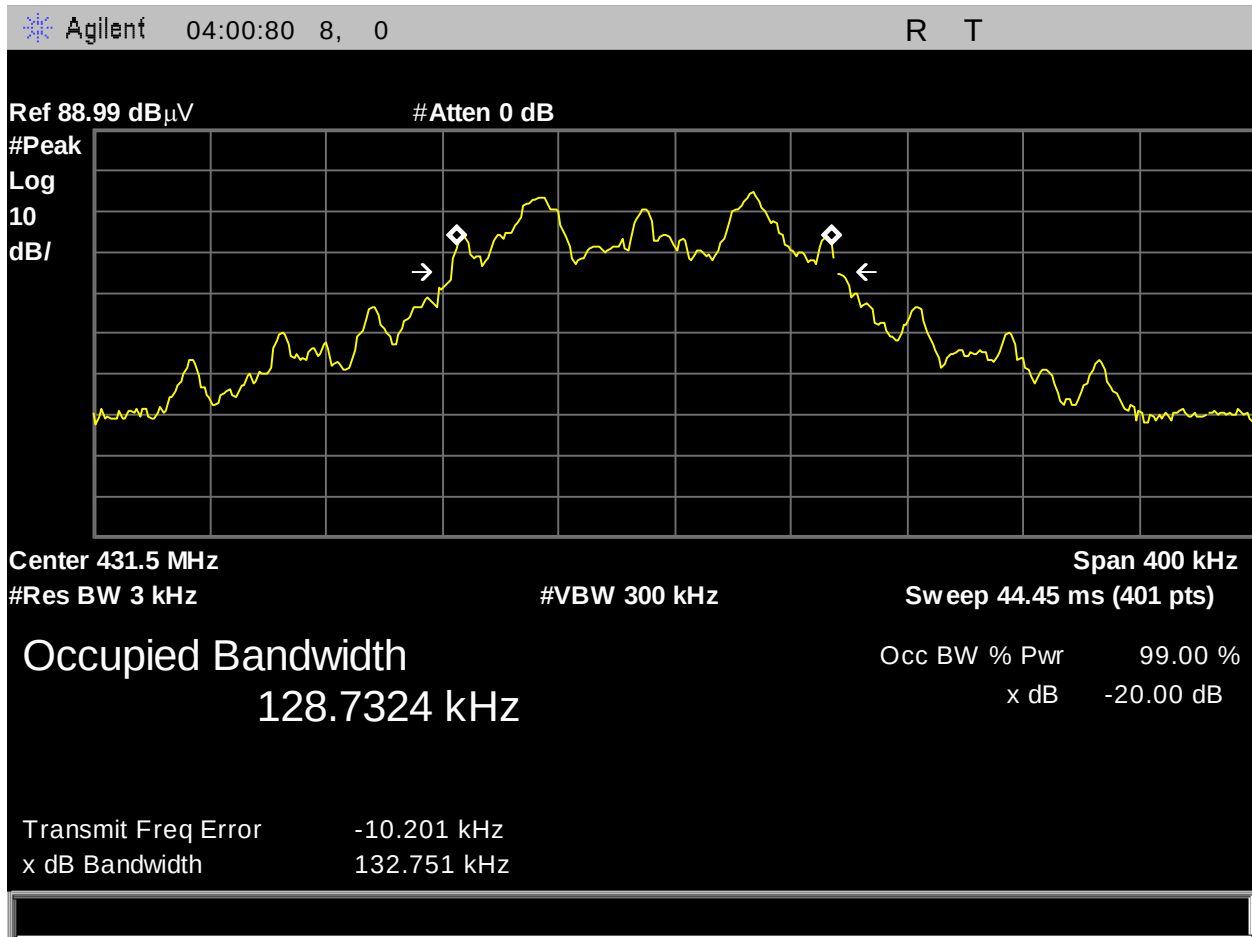


Figure 35: OBW 431.5 MHz

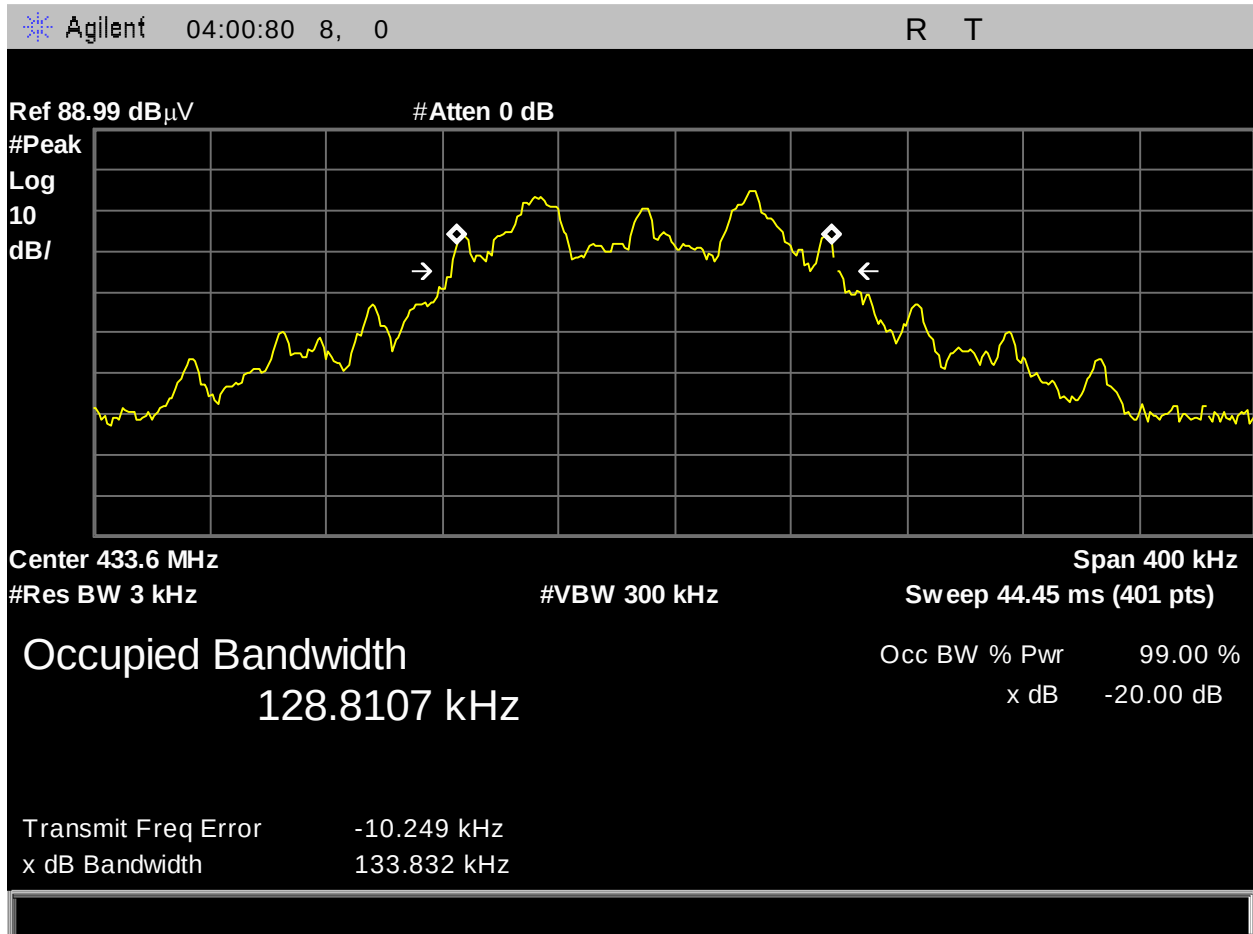


Figure 36: OBW 433.6 MHz



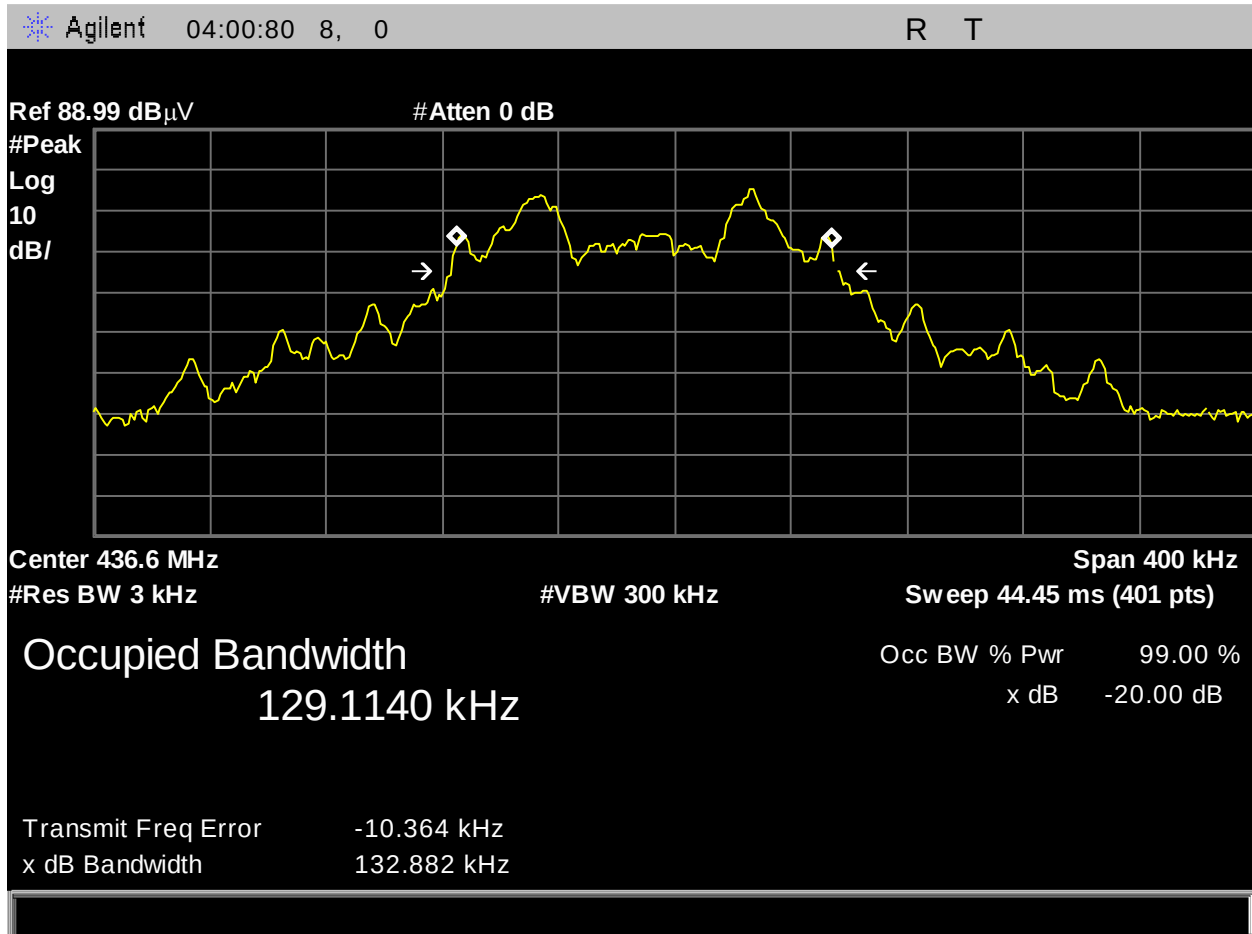


Figure 37: OBW 436.6 MHz