

APPENDIX B

WIR121392

FCC247_RSS247 Data

§ 15.207(a) Conducted Emissions Limits

RSS-GEN (8.8) AC Power-Line Conducted Emissions Limits

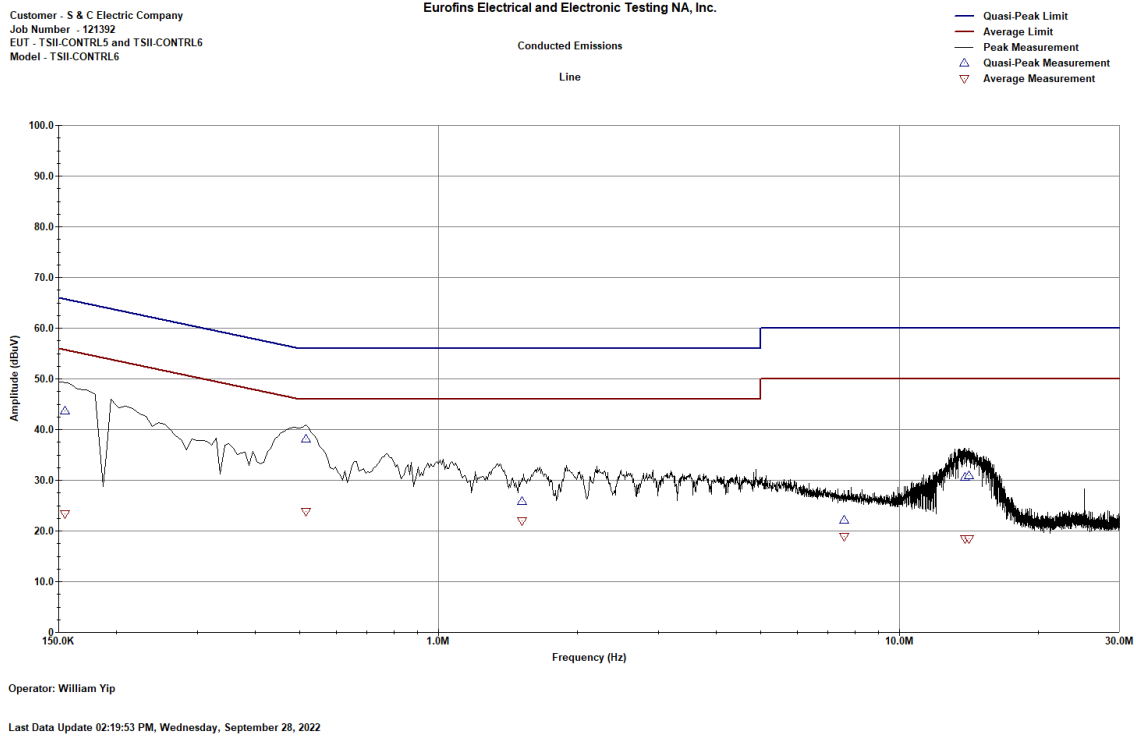


Figure 1. CEV Line

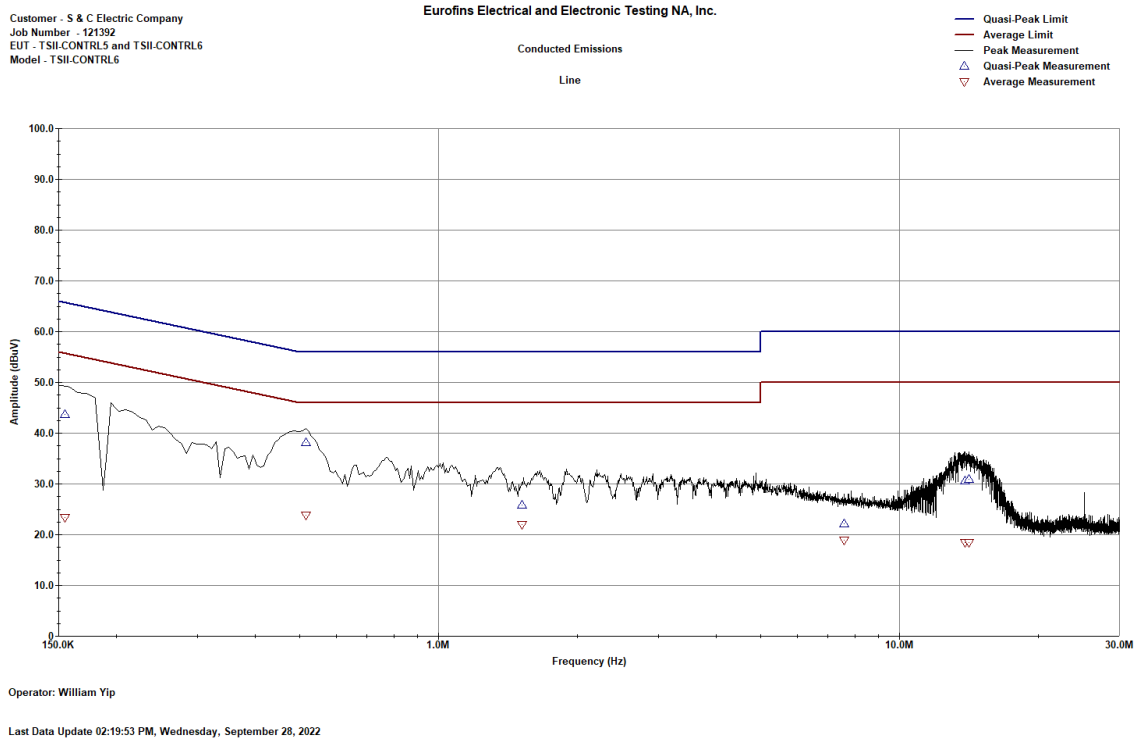


Figure 2. CEV Neutral

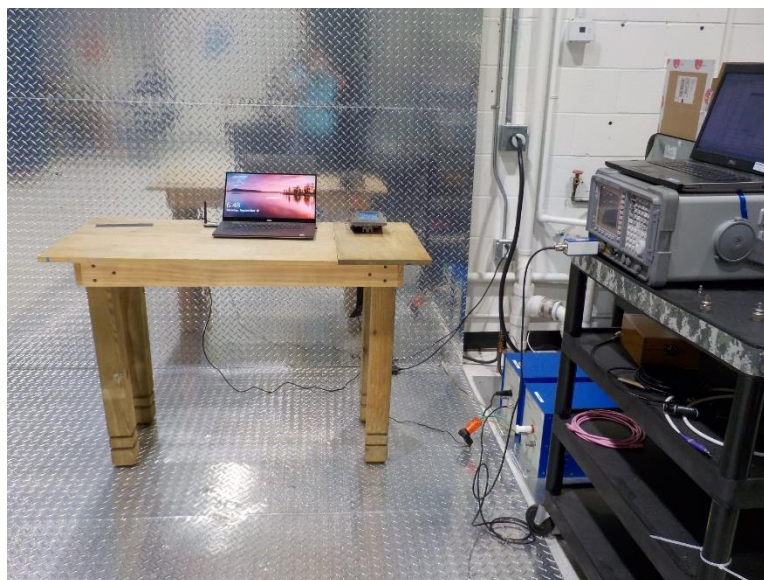


Figure 3. CEV Test Setup

§ 15.247(a)(2) -6dB Bandwidth
RSS-247 (5.2) -6dB Bandwidth
RSS-GEN (6.7) 99% Occupied Bandwidth



Figure 4. Zigbee_Low Ch_2405MHz_1MBit_Occupied Bandwidth_-6dB_Port 1.



Figure 5. Zigbee_Low Ch_2405MHz_1MBit_Occupied Bandwidth_99 percent_Port 1.



Figure 6. Zigbee_Mid Ch_2440MHz_1MBit_Occupied Bandwidth_-6dB_Port 1.



Figure 7. Zigbee_Mid Ch_2440MHz_1MBit_Occupied Bandwidth_99 percent_Port 1.



Figure 8. Zigbee_High Ch_2480MHz_1MBit_Occupied Bandwidth_-6dB_Port 1.



Figure 9. Zigbee_High Ch_2480MHz_1MBit_Occupied Bandwidth_99 percent_Port 1.

RSS-247 (6.2.4.1) Duty Cycle

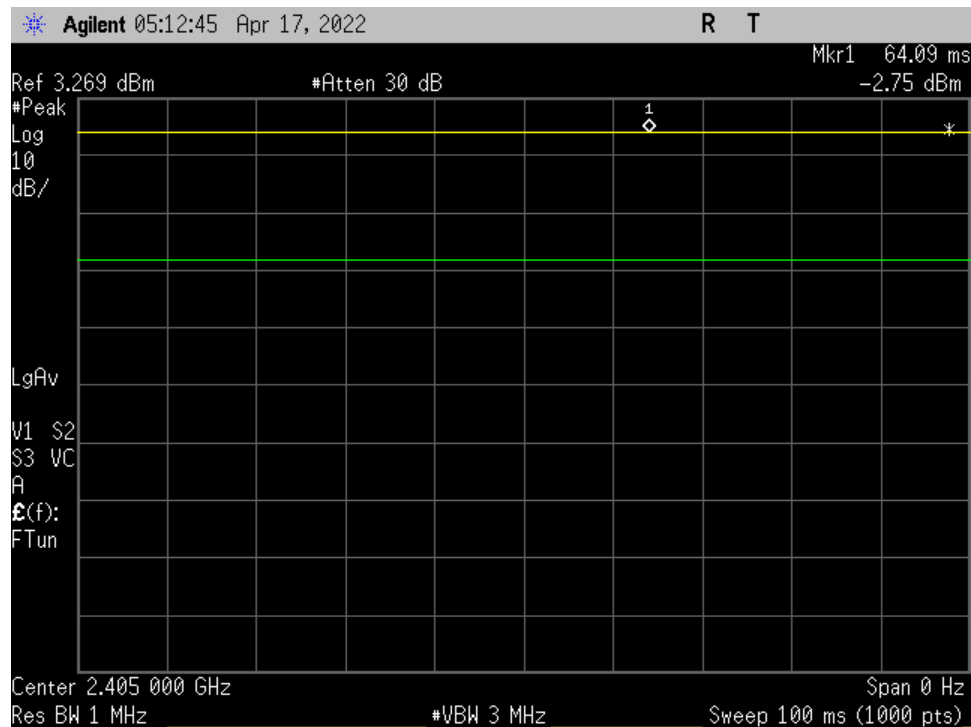


Figure 10. Zigbee_Low Ch_2405MHz_1MBit_Duty Cycle_Port 1.

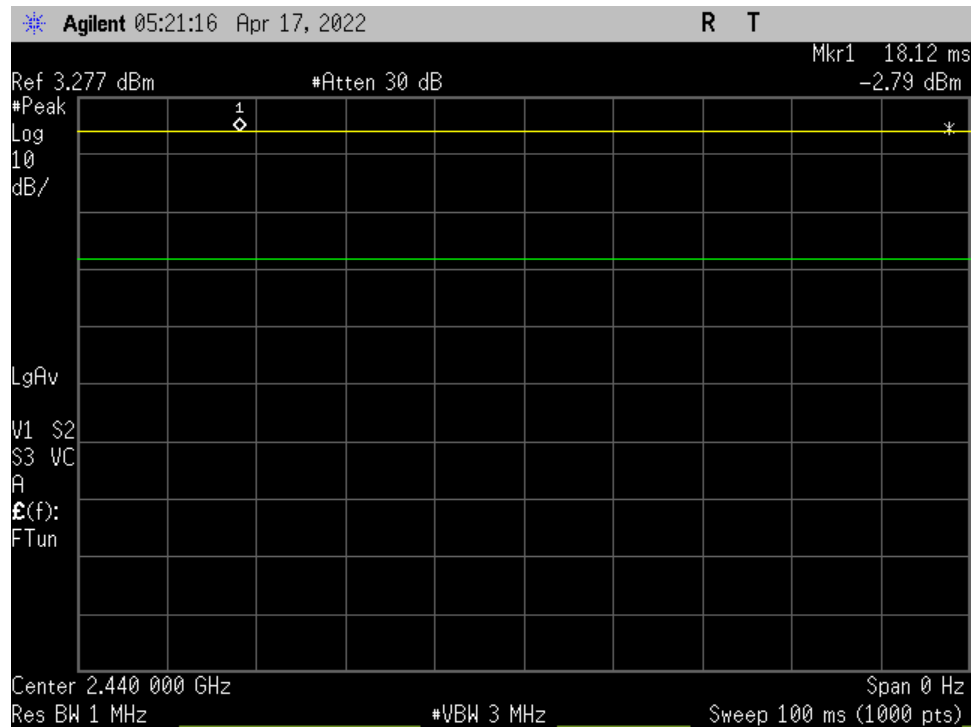


Figure 11. Zigbee_Mid Ch_2440MHz_1MBit_Duty Cycle_Port 1.

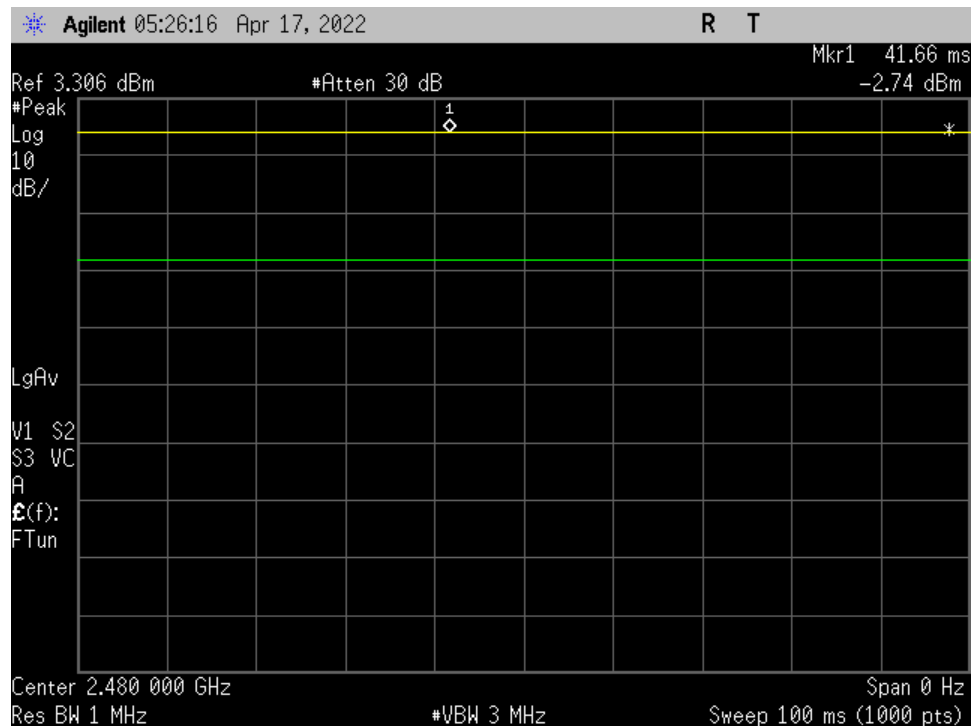


Figure 12. Zigbee_High Ch_2480MHz_1MBit_Duty Cycle_Port 1.

§ 15.247(b)
RSS-247 (5.4)

Conducted Power Output
Transmitter Output Power

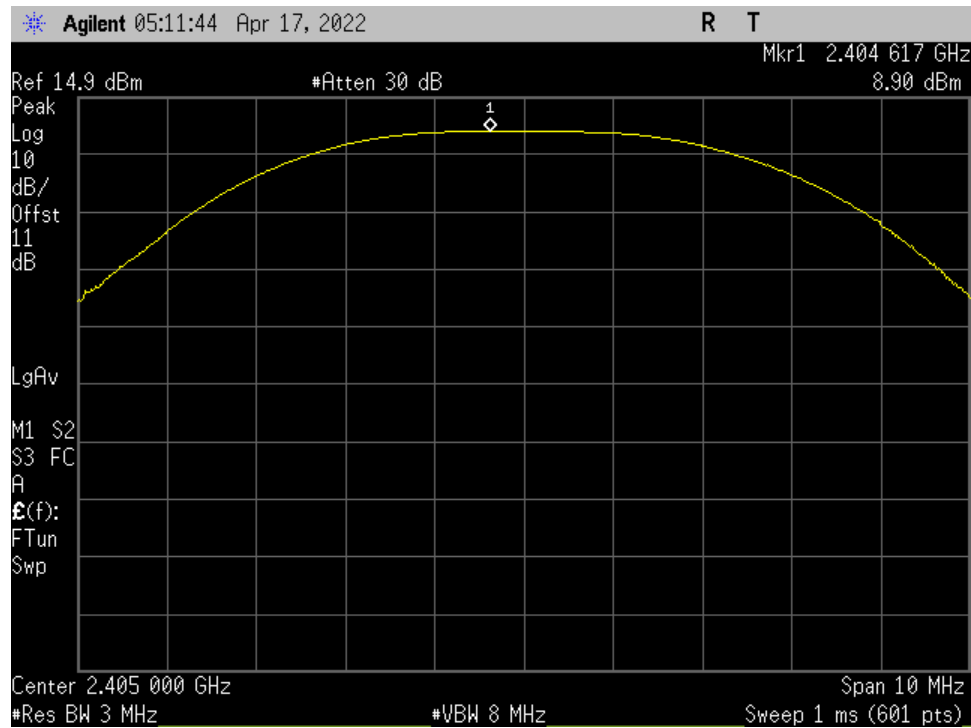


Figure 13. Zigbee_Low Ch_2405MHz_1MBit_Output Power_Port 1.

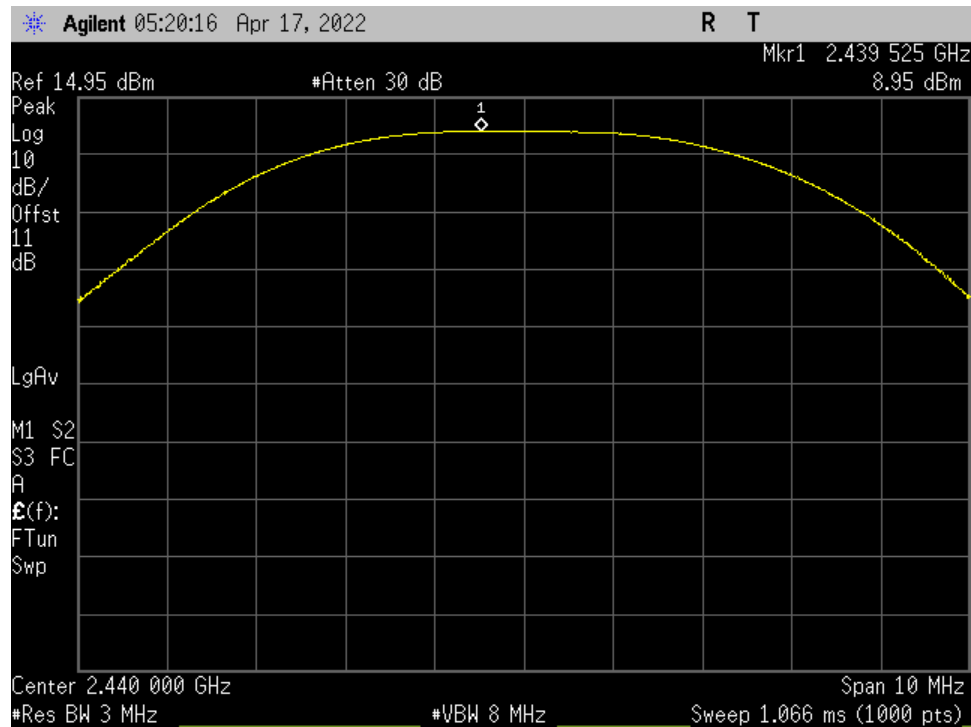


Figure 14. Zigbee_Mid Ch_2440MHz_1MBit_Output Power_Port 1.

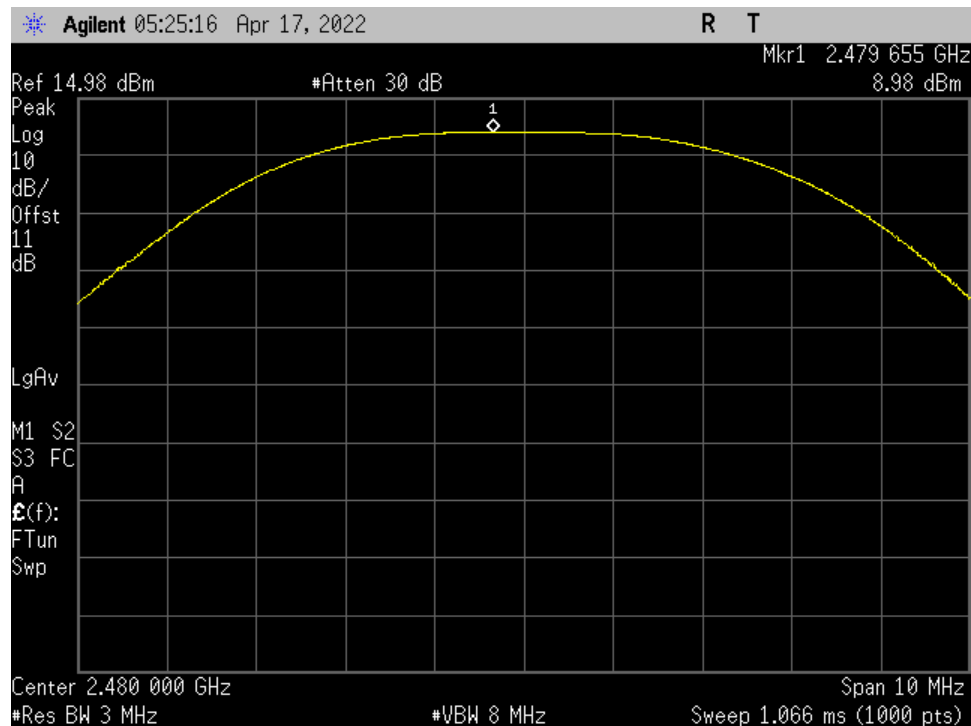


Figure 15. Zigbee_High Ch_2480MHz_1MBit_Output Power_Port 1.

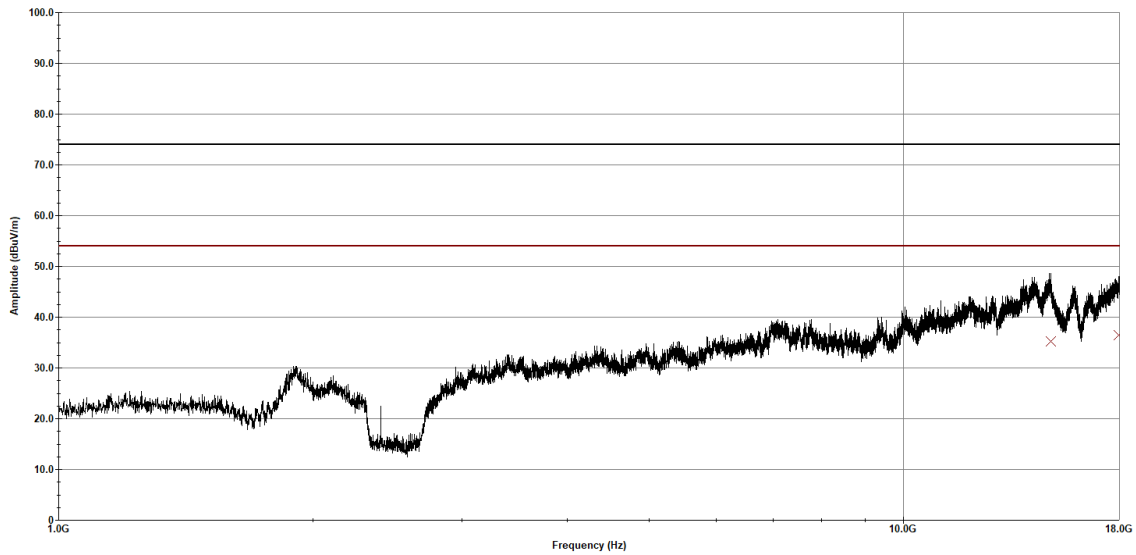
§ 15.209 Radiated Spurious Emissions Requirements and Band Edge RSS-GEN (6.13), (8.9), & (8.10) Radiated Spurious Emissions and Restricted Band

Customer - S & C Electric Company
Job Number - 121392
EUT Name - TSII-CONTRL5 & TSII-CONTRL6
TX Channel - Low (2405 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 10:46:41 AM, Tuesday, September 20, 2022

Figure 16. 15.209 Radiated Spurious Emissions_Low Channel_1-18GHz_H

Customer - S & C Electric Company
Job Number - 121392
EUT Name - TSII-CONTRL5 & TSII-CONTRL6
TX Channel - Low (2405 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 10:58:03 AM, Tuesday, September 20, 2022

Figure 17. 15.209 Radiated Spurious Emissions_Low Channel_1-18GHz_V

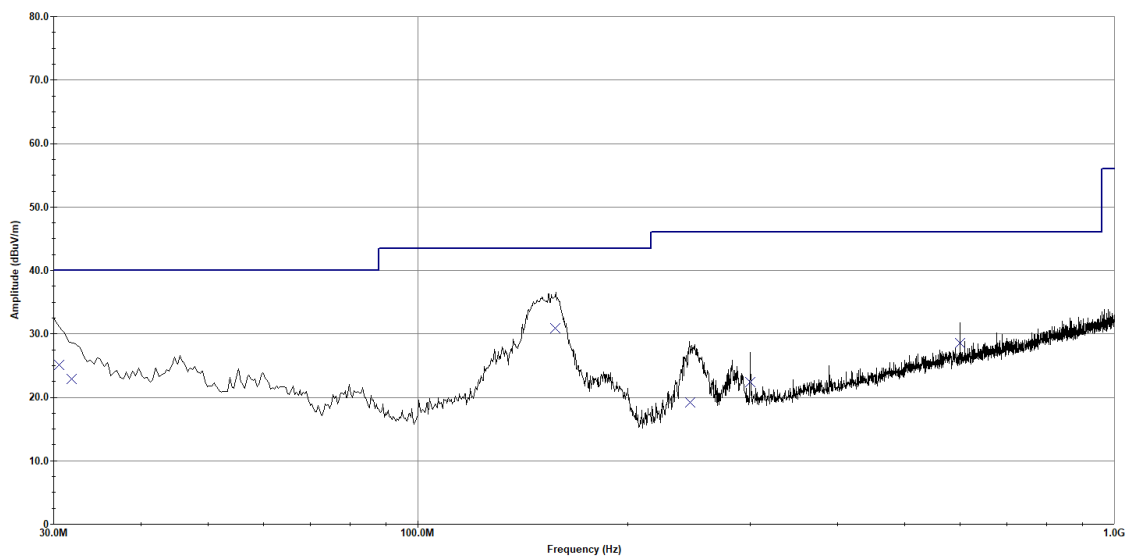
Customer - S & C Electric Company
Job Number - 121392
EUT Name - TSII-CONTRL5 and TSII-CONTRL6
TX Channel - Low (2405 MHz)

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 10:30:17 AM, Wednesday, September 21, 2022

Figure 18. 15.209 Radiated Spurious Emissions_Low Channel_30-1000MHz_H

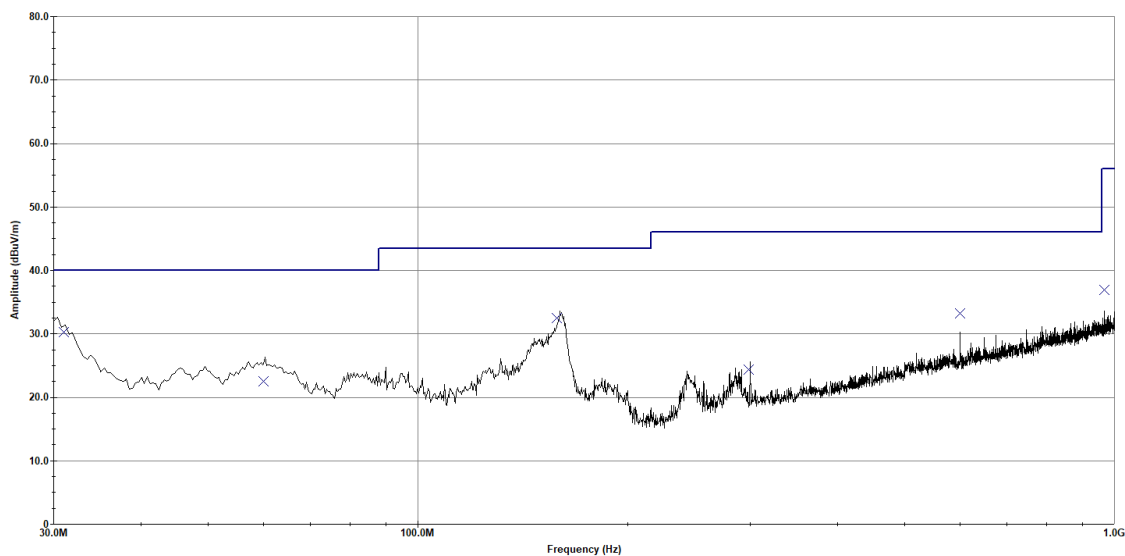
Customer - S & C Electric Company
Job Number - 121392
EUT Name - TSII-CONTRL5 and TSII-CONTRL6
TX Channel - Low (2405 MHz)

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 10:14:10 AM, Wednesday, September 21, 2022

Figure 19. 15.209 Radiated Spurious Emissions_Low Channel_30-1000MHz_V

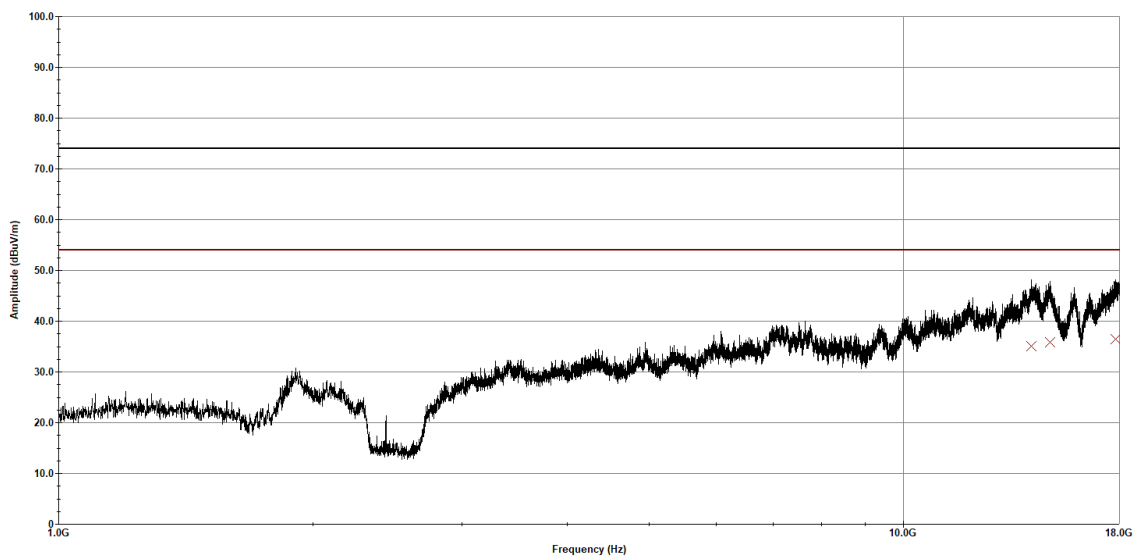
Customer - S & C Electric Company
Job Number - 121392
EUT Name - TSII-CONTRL5 & TSII-CONTRL6
TX Channel - Mid (2440 MHz)

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 11:12:56 AM, Tuesday, September 20, 2022

Figure 20. 15.209 Radiated Spurious Emissions_Mid Channel_1-18GHz_H

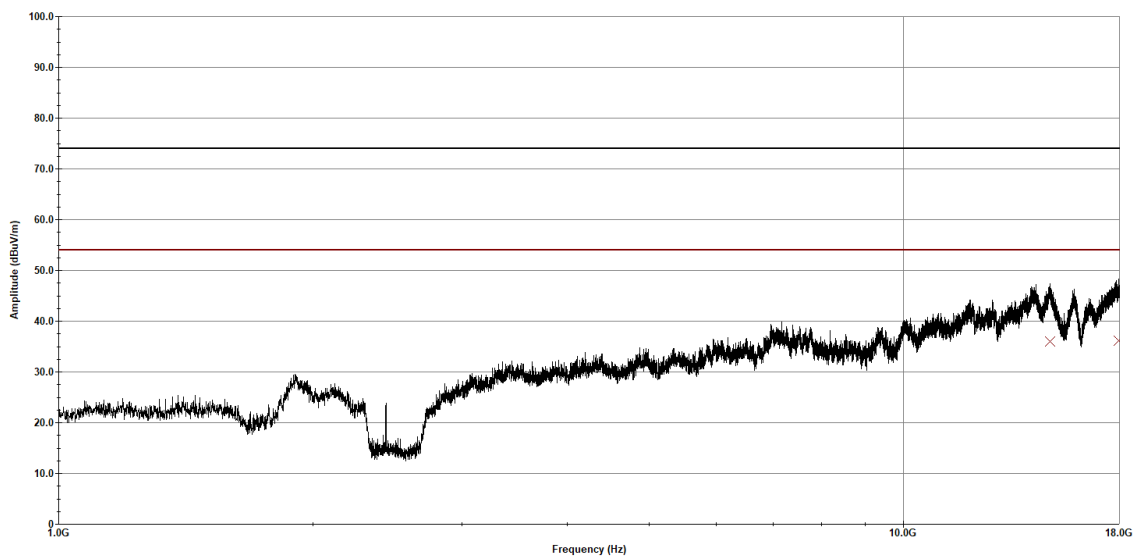
Customer - S & C Electric Company
Job Number - 121392
EUT Name - TSII-CONTRL5 & TSII-CONTRL6
TX Channel - Mid (2440 MHz)

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 11:23:04 AM, Tuesday, September 20, 2022

Figure 21. 15.209 Radiated Spurious Emissions_Mid Channel_1-18GHz_V

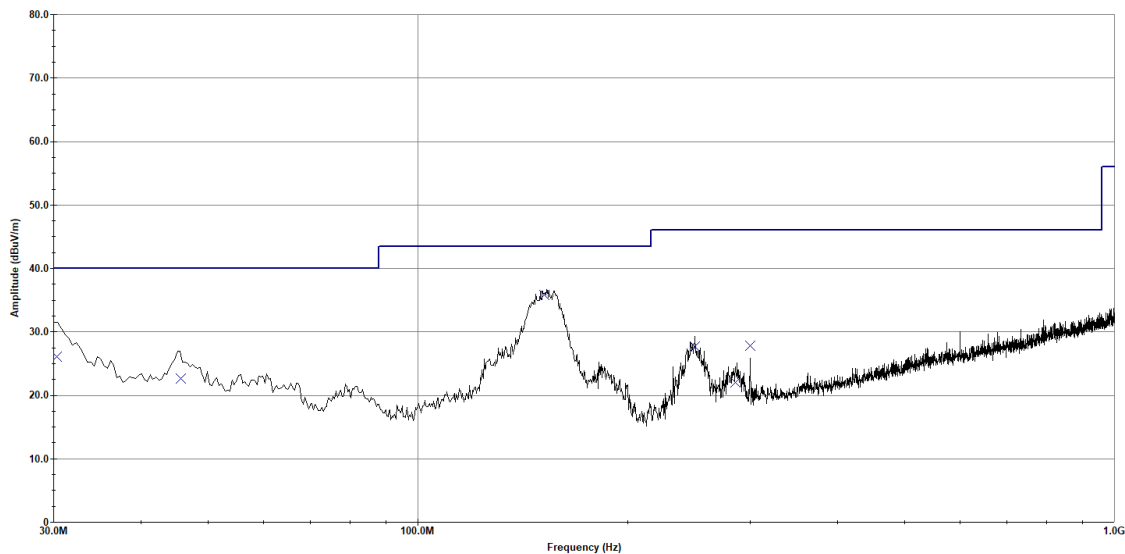
Customer - S & C Electric Company
Job Number - 121392
EUT Name - TSII-CONTROL5 and TSII-CONTROL6
TX Channel - Mid (2440 MHz)

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 11:04:51 AM, Wednesday, September 21, 2022

Figure 22. 15.209 Radiated Spurious Emissions_Mid Channel_30-1000MHz_H

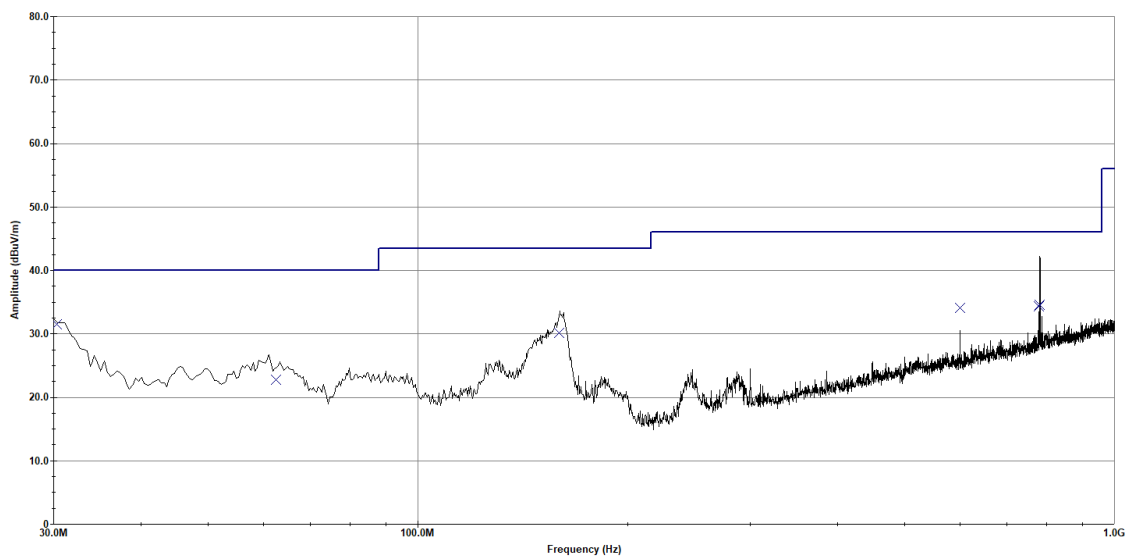
Customer - S & C Electric Company
Job Number - 121392
EUT Name - TSII-CONTRL5 and TSII-CONTRL6
TX Channel - Mid (2440 MHz)

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 11:21:38 AM, Wednesday, September 21, 2022

Figure 23. 15.209 Radiated Spurious Emissions_Mid Channel_30-1000MHz_V

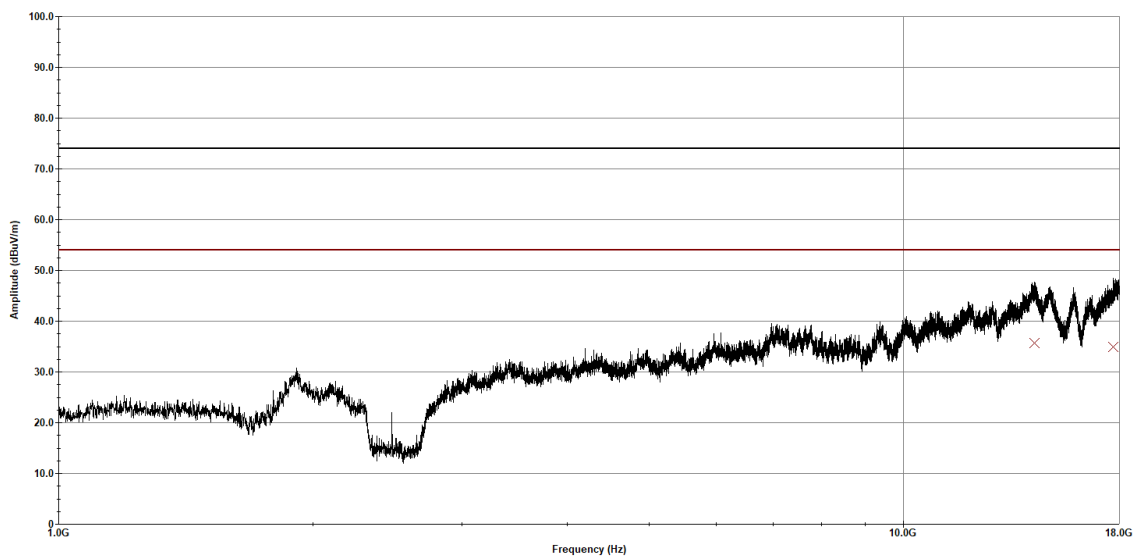
Customer - S & C Electric Company
Job Number - 121392
EUT Name - TSH-CONTRL5 & TSH-CONTRL6
TX Channel - High (2450 MHz)

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 11:37:27 AM, Tuesday, September 20, 2022

Figure 24. 15.209 Radiated Spurious Emissions_High Channel_1-18GHz_H

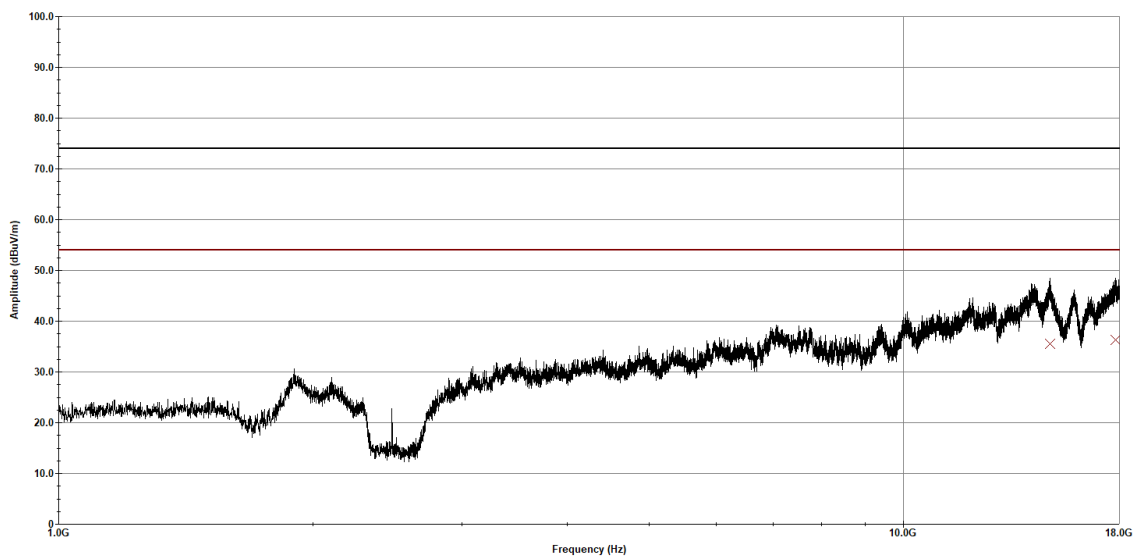
Customer - S & C Electric Company
Job Number - 121392
EUT Name - TSH-CONTRL5 & TSH-CONTRL6
TX Channel - High (2450 MHz)

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 11:48:08 AM, Tuesday, September 20, 2022

Figure 25. 15.209 Radiated Spurious Emissions_High Channel_1-18GHz_V

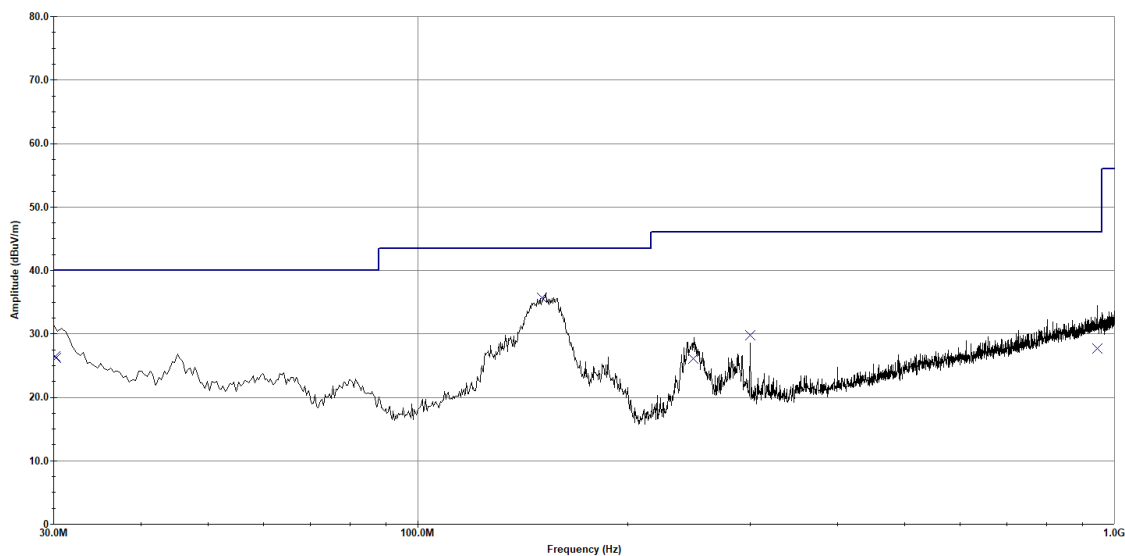
Customer - S & C Electric Company
 Job Number - 121392
 EUT Name - TSII-CONTROL5 and TSII-CONTROL6
 TX Channel - High (2450 MHz)

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 11:58:05 AM, Wednesday, September 21, 2022

Figure 26. 15.209 Radiated Spurious Emissions_High Channel_30-1000MHz_H

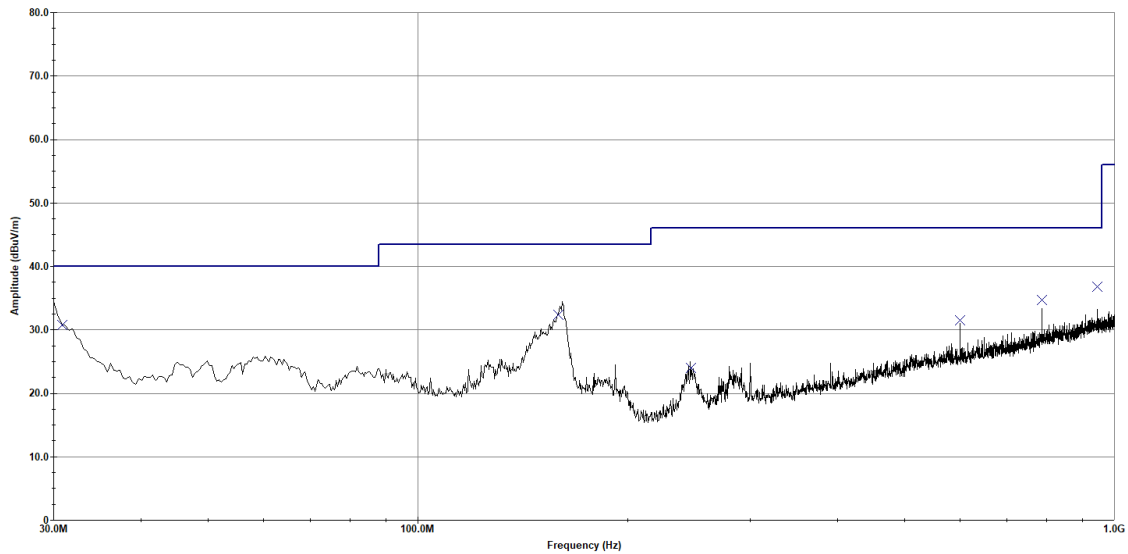
Customer - S & C Electric Company
 Job Number - 121392
 EUT Name - TSII-CONTROL5 and TSII-CONTROL6
 TX Channel - High (2450 MHz)

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 11:42:29 AM, Wednesday, September 21, 2022

Figure 27. 15.209 Radiated Spurious Emissions_High Channel_30-1000MHz_V

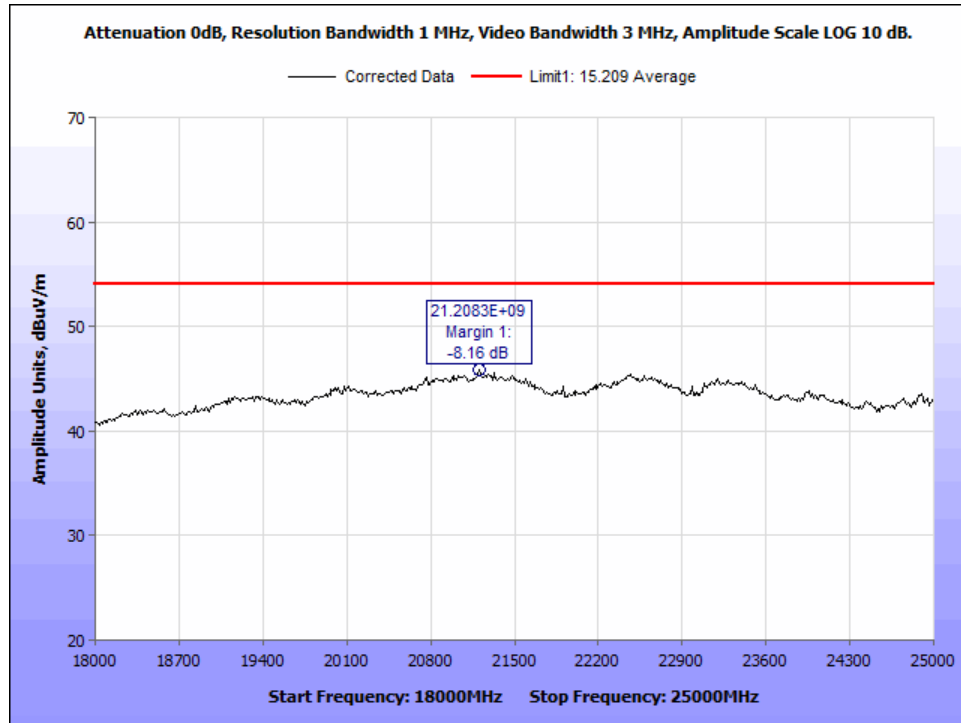


Figure 28. AVG 15.209 - Radiated Spurious Emissions_Low Channel_18-25GHz.

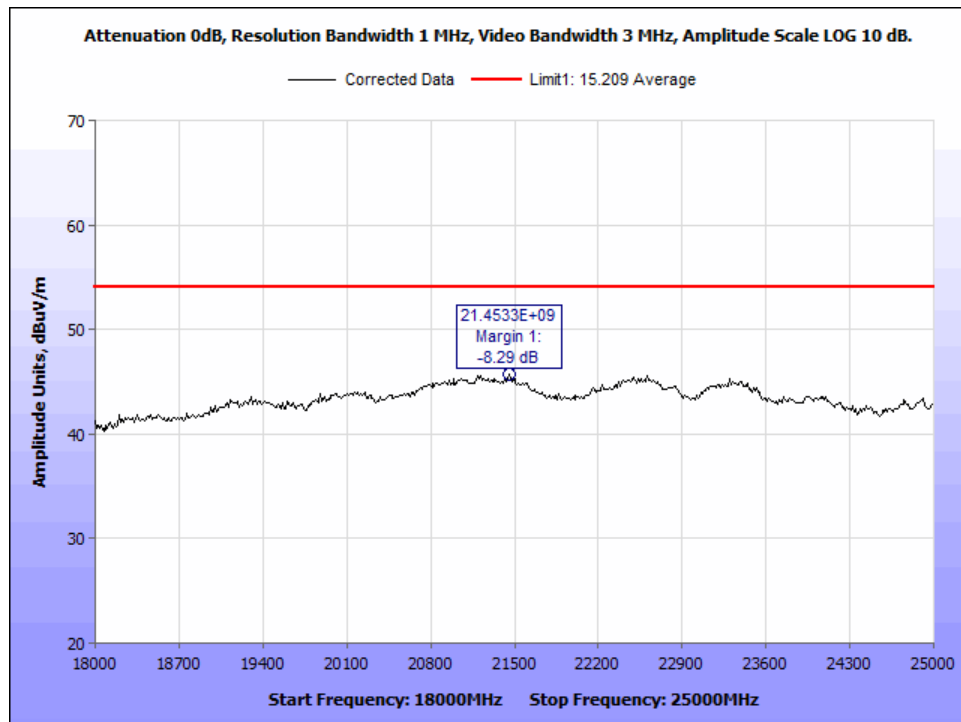


Figure 29. AVG 15.209 - Radiated Spurious Emissions_Mid Channel_18-25GHz.

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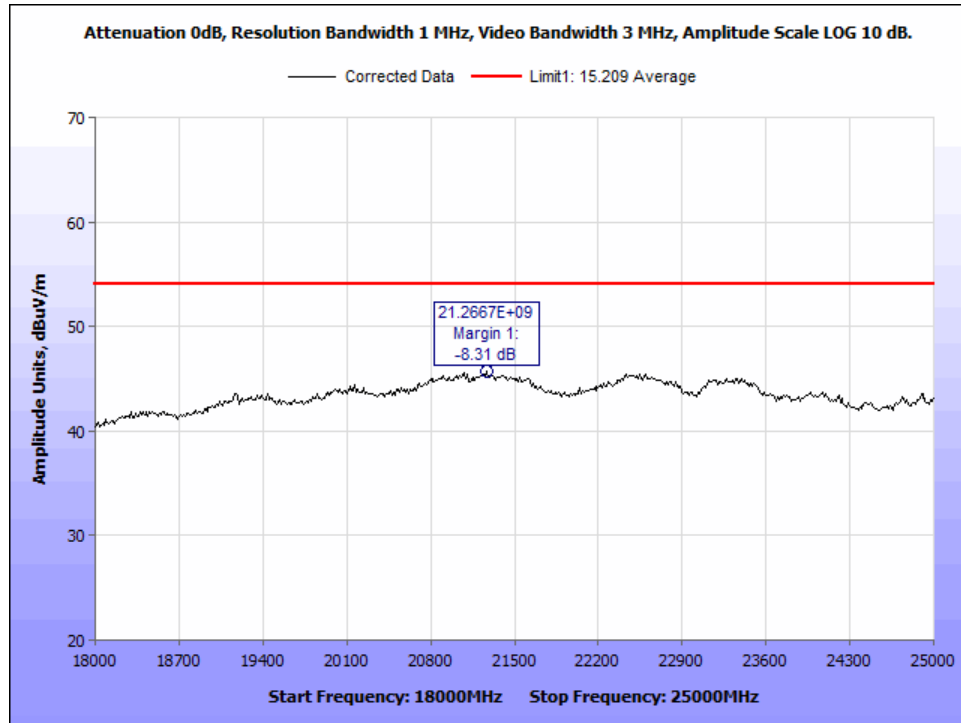


Figure 30. AVG 15.209 - Radiated Spurious Emissions_High Channel_18-25GHz.

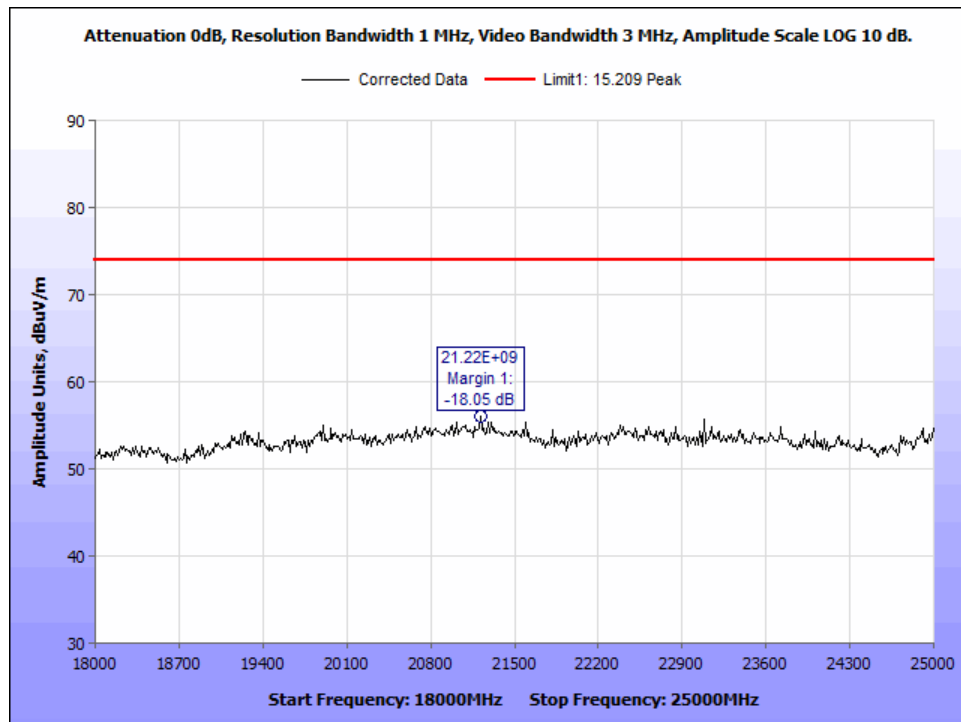


Figure 31. PK 15.209 - Radiated Spurious Emissions_Low Channel_18-25GHz.

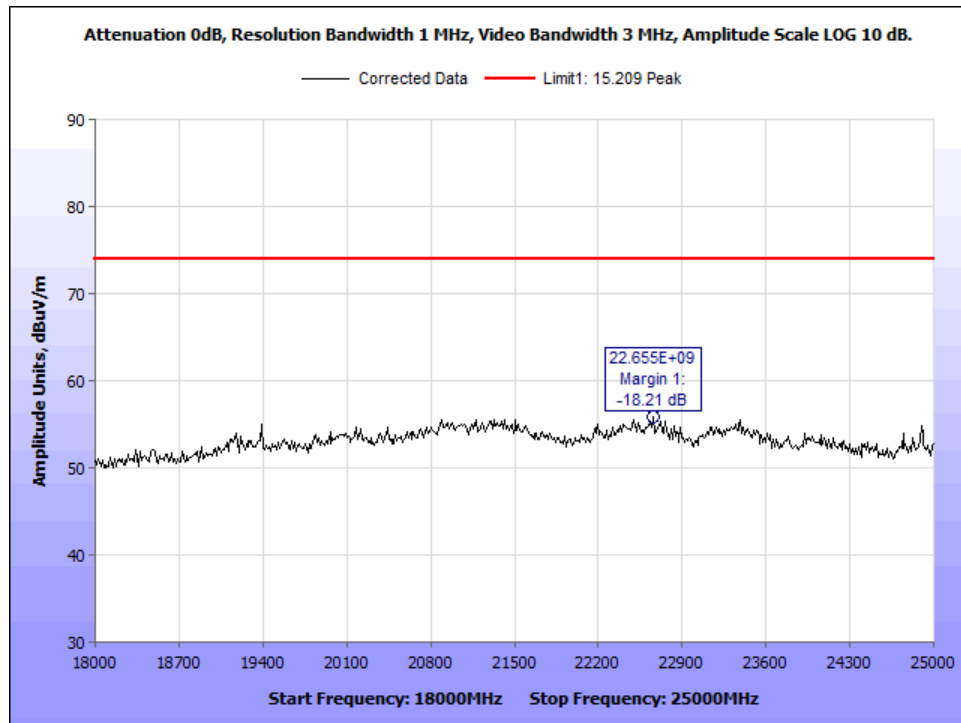


Figure 32. PK 15.209 - Radiated Spurious Emissions_Mid Channel_18-25GHz.

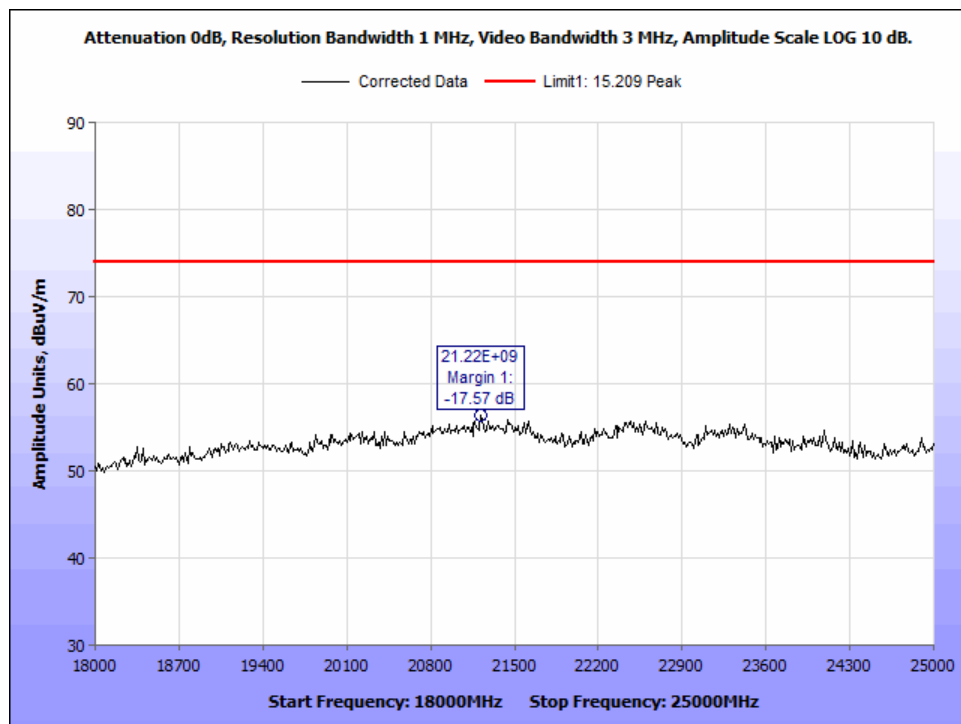


Figure 33. PK 15.209 - Radiated Spurious Emissions_High Channel_18-25GHz.

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Radiated Band Edge Measurements

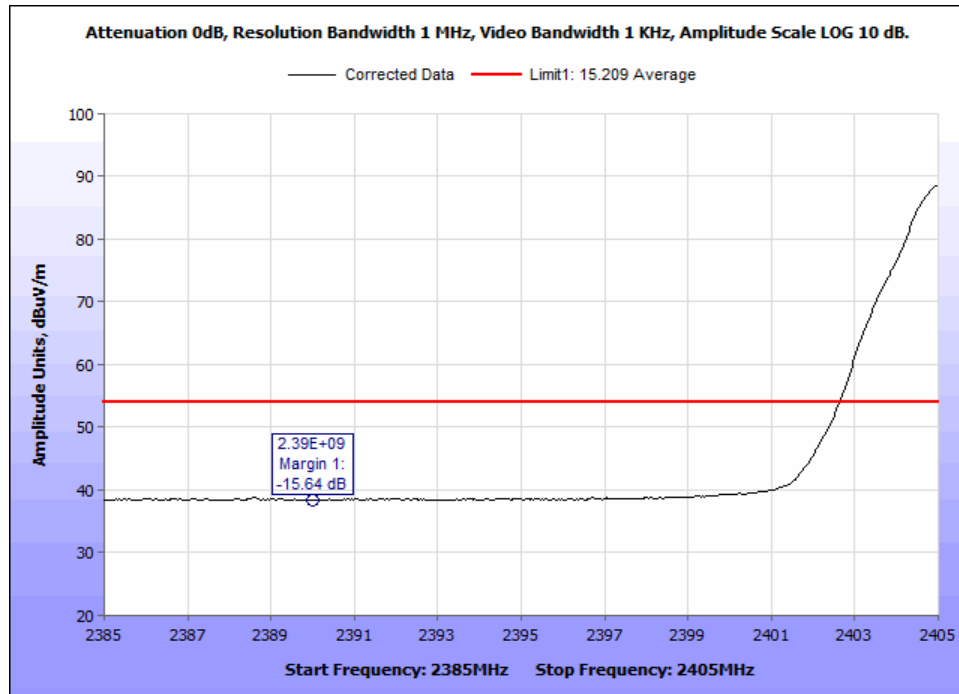


Figure 34. AVG 15.209 Low Radiated Band Edge 2390MHz_Low Channel 2405MHz.

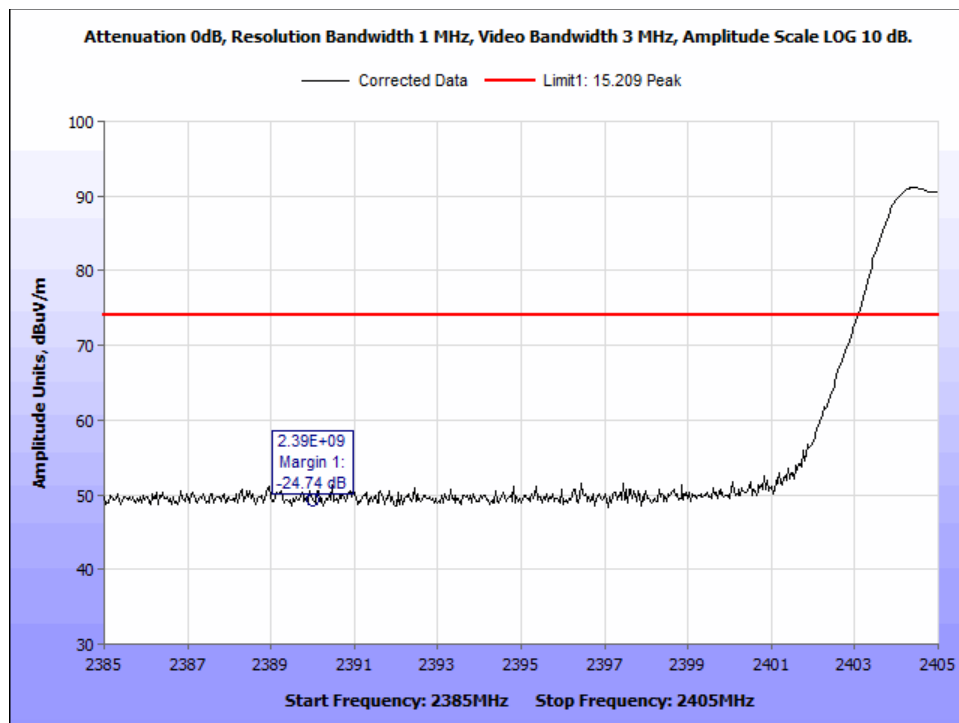


Figure 35. PK 15.209 Low Radiated Band Edge 2390MHz_Low Channel 2405MHz.

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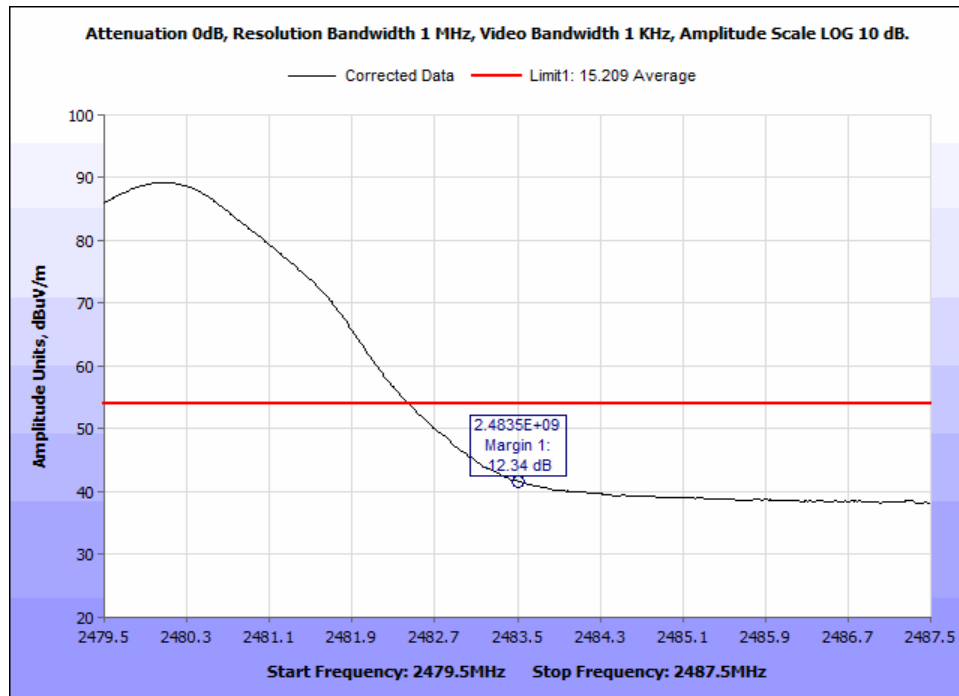


Figure 36. AVG 15.209 High Radiated Band Edge 2483.5MHz_High Channel 2480MHz.

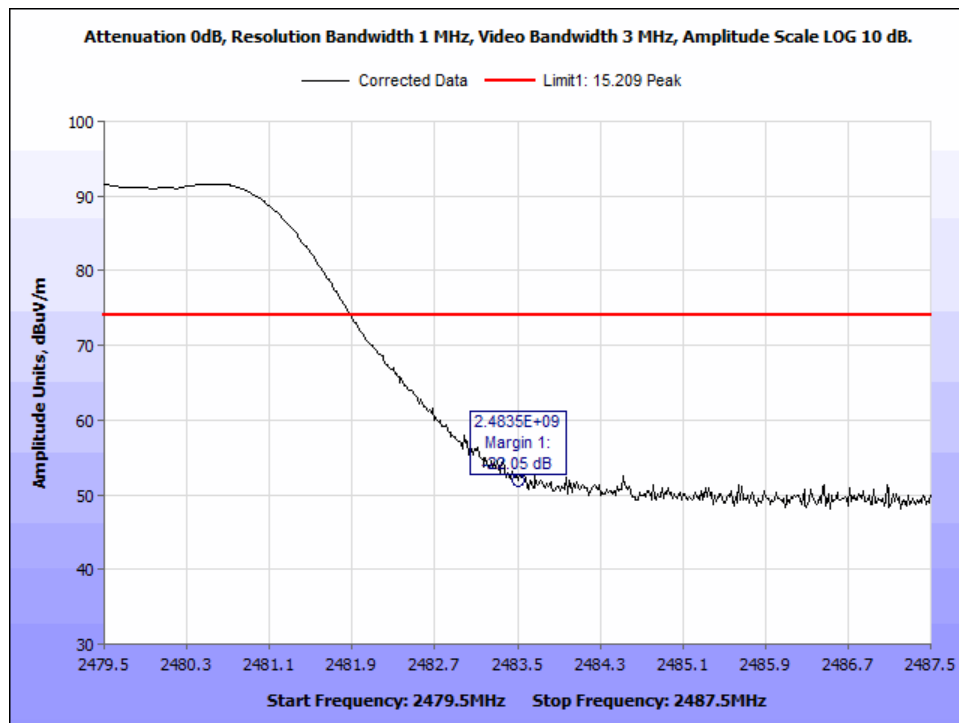


Figure 37. PK 15.209 High Radiated Band Edge 2483.5MHz_High Channel 2480MHz.

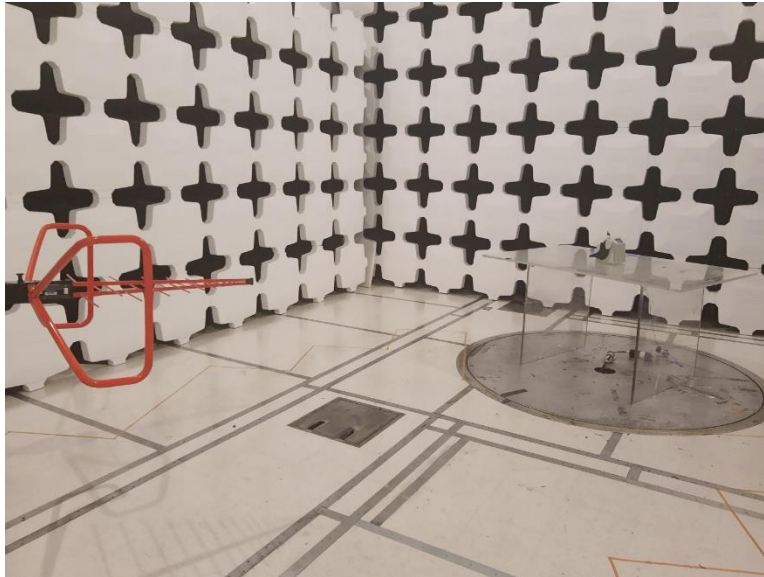


Figure 38. Radiated Emissions Setup - 30-1000MHz

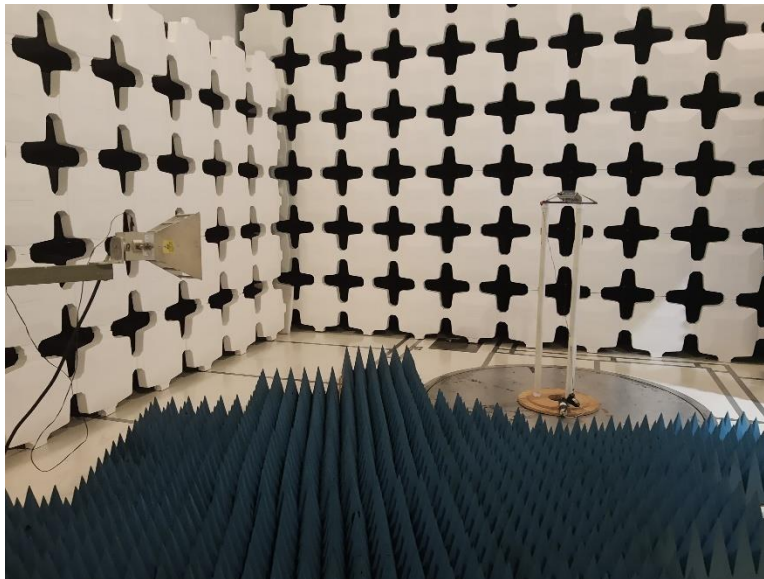


Figure 39. Radiated Emissions Setup - 1-18GHz

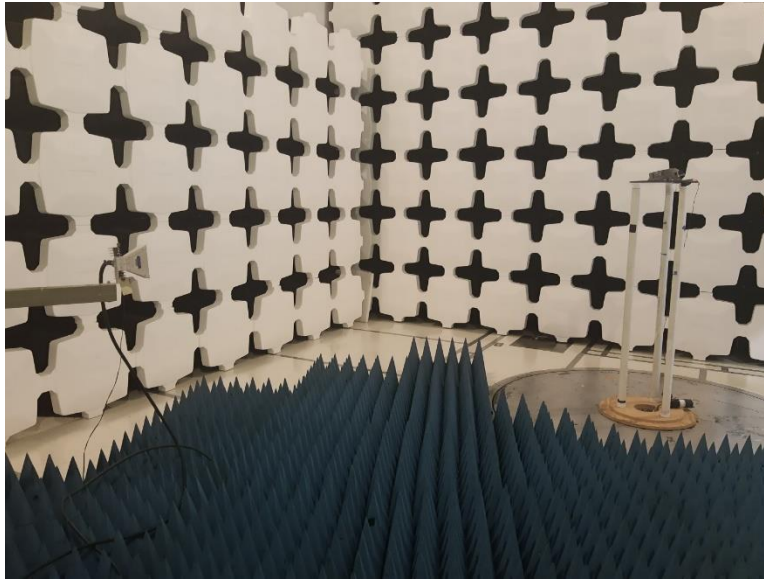


Figure 40. Radiated Emissions Setup - 18-25GHz

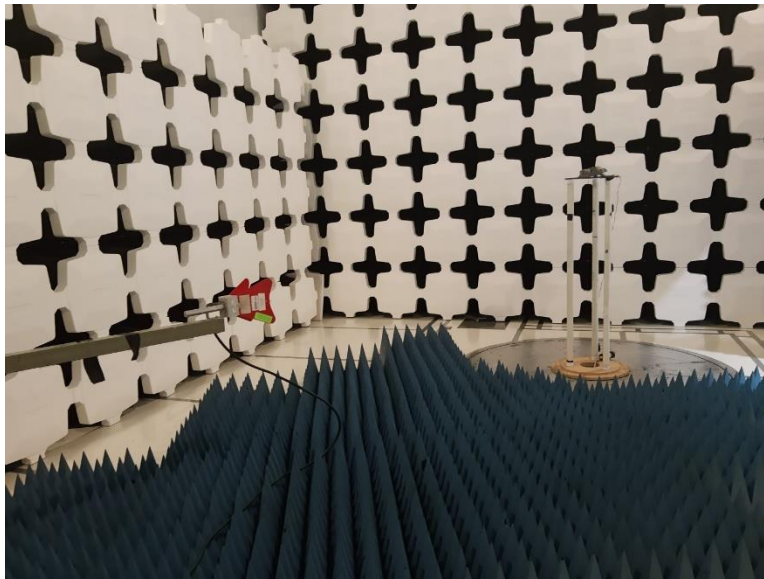


Figure 41. Radiated Emissions Setup - 2.4GHz Band Edges

§ 15.247(d)
RSS-247 (5.5)

Spurious Emissions in Non-restricted Bands
RF Conducted Spurious Emissions



Figure 42. Zigbee_Low Ch_2405MHz_1MBit_-20dBc_10-26GHz_Port 1.

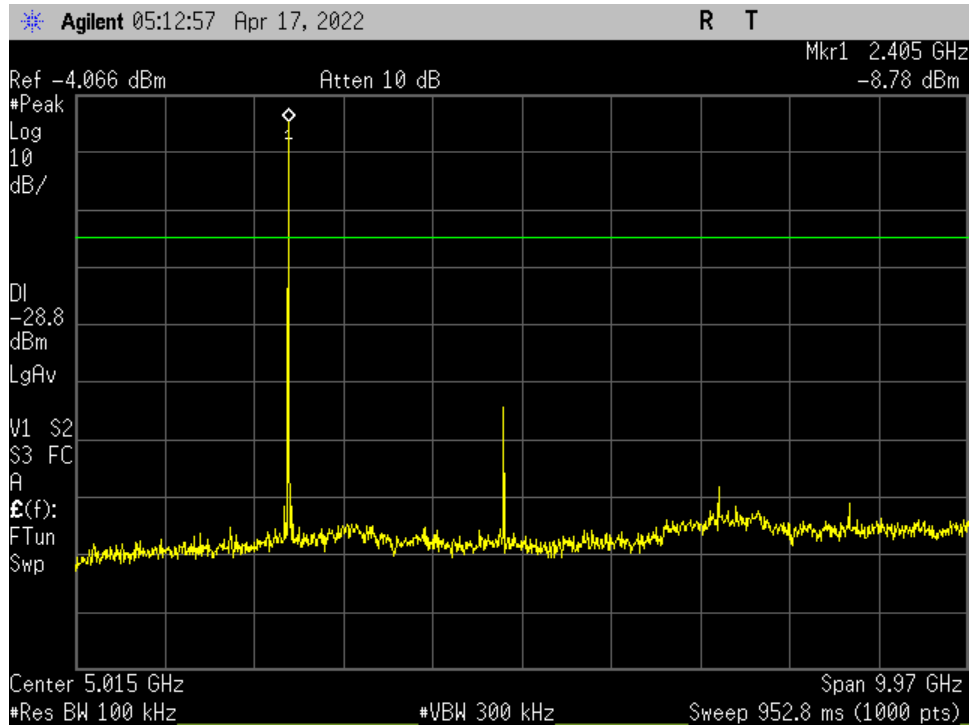


Figure 43. Zigbee_Low Ch_2405MHz_1MBit_-20dBc_30MHz-10GHz_Port 1.

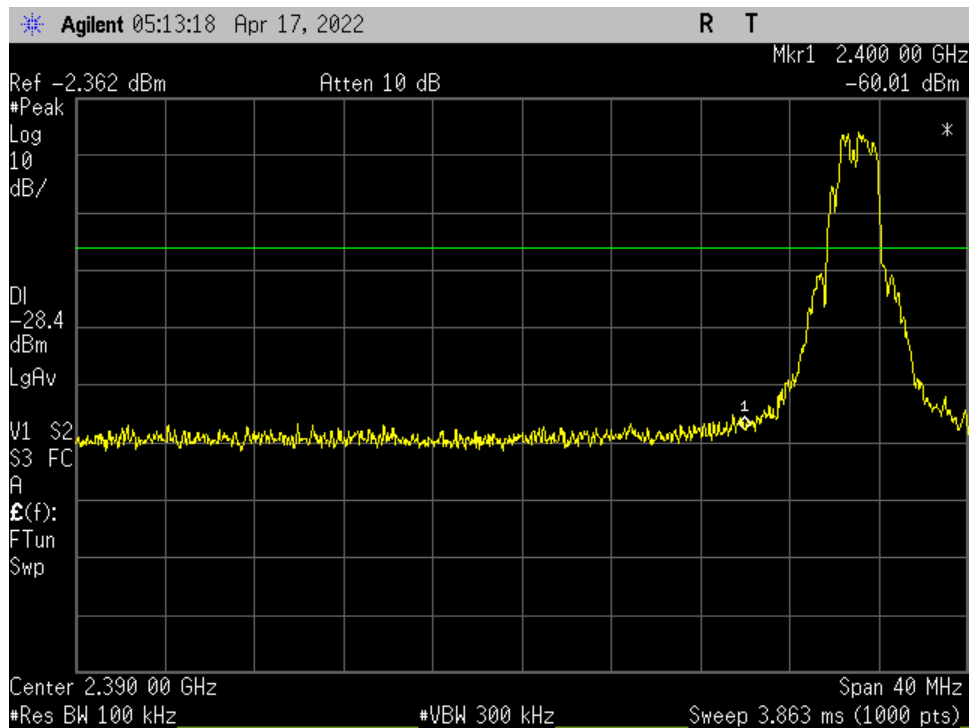


Figure 44. Zigbee_Low Ch_2405MHz_1MBit_-20dBc_Lower Band Edge_Port 1.



Figure 45. Zigbee_Mid Ch_2440MHz_1MBit_-20dBc_10-26GHz_Port 1.

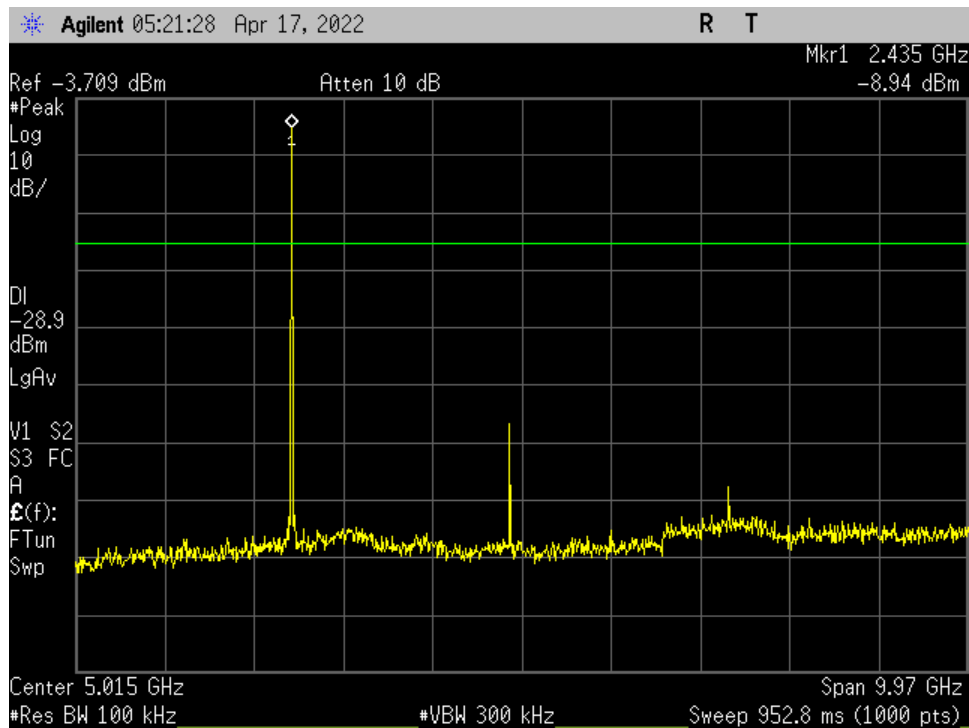


Figure 46. Zigbee_Mid Ch_2440MHz_1MBit_-20dBc_30MHz-10GHz_Port 1.

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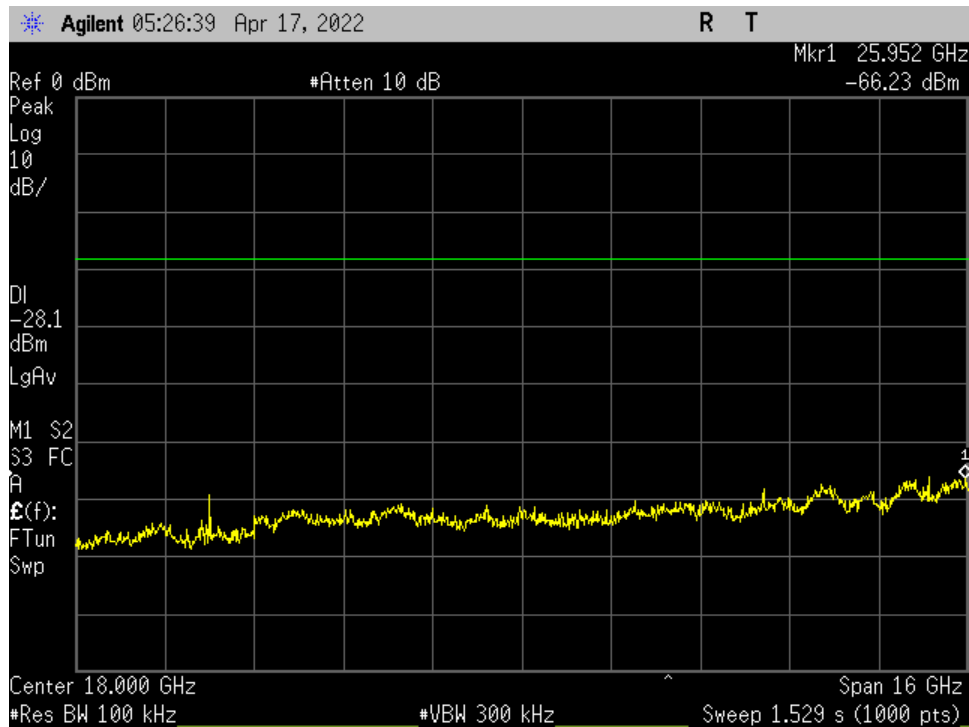


Figure 47. Zigbee_High Ch_2480MHz_1MBit_-20dBc_10-26GHz_Port 1.

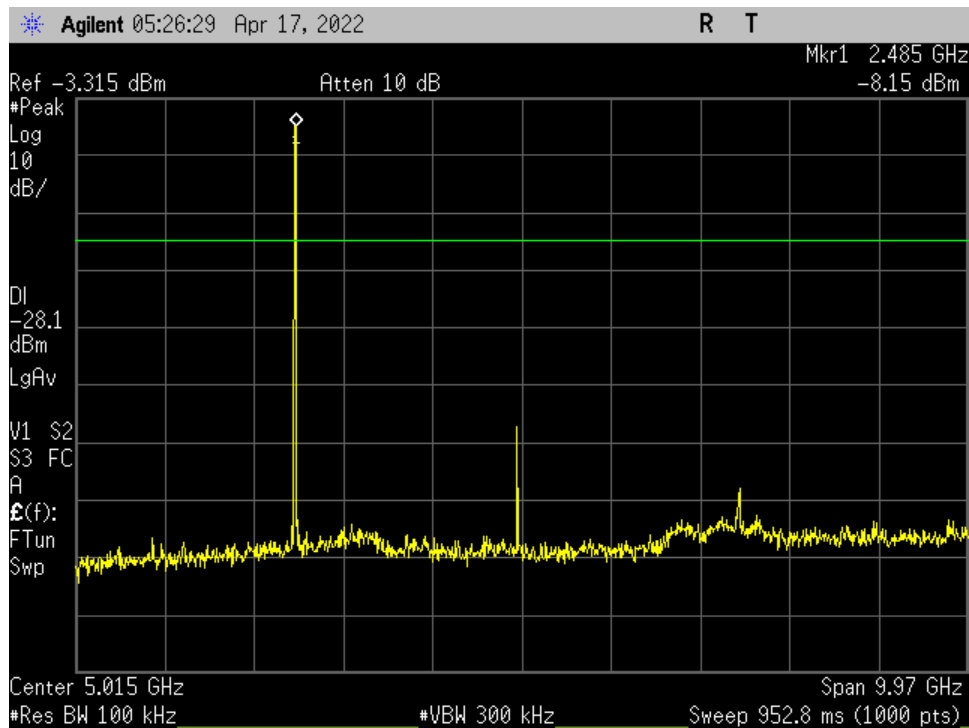


Figure 48. Zigbee_High Ch_2480MHz_1MBit_-20dBc_30MHz-10GHz_Port 1.

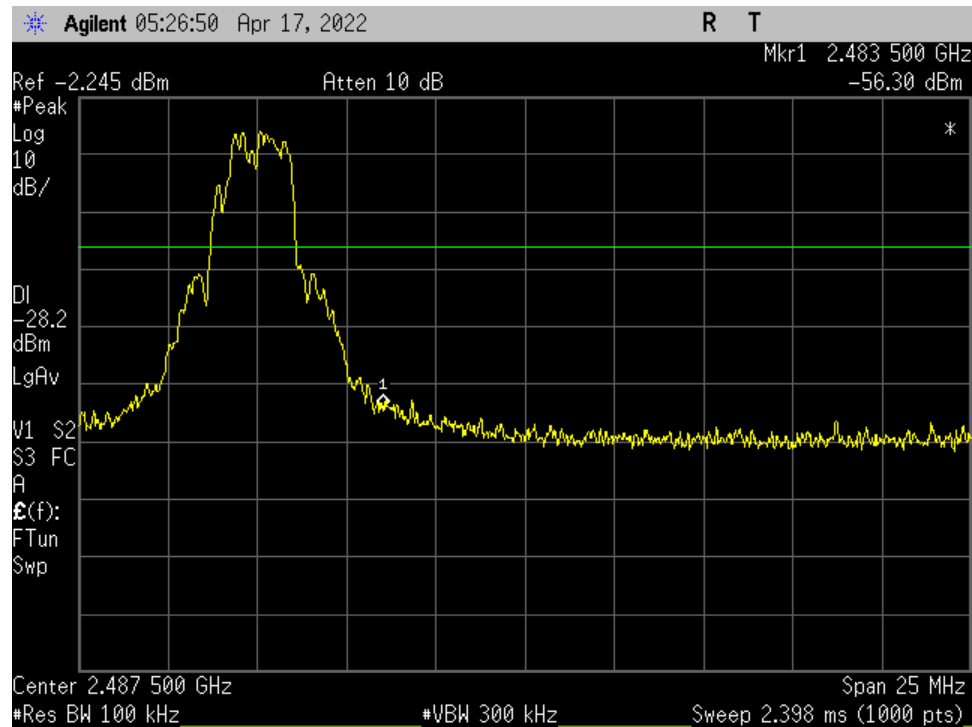


Figure 49. Zigbee_High Ch_2480MHz_1MBit_-20dBc_Upper Band Edge_Port 1.

§ 15.247(e)
RSS-247 (5.2)

Power Spectral Density
Power Spectral Density

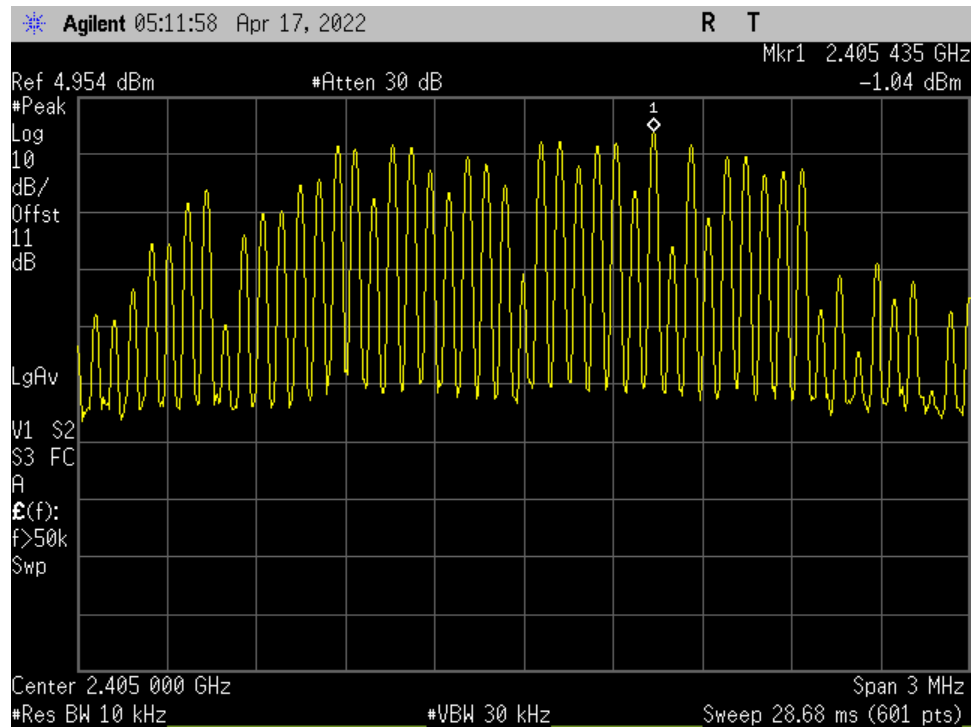


Figure 50. Zigbee_Low Ch_2405MHz_1MBit_Spectral Density_Port 1.

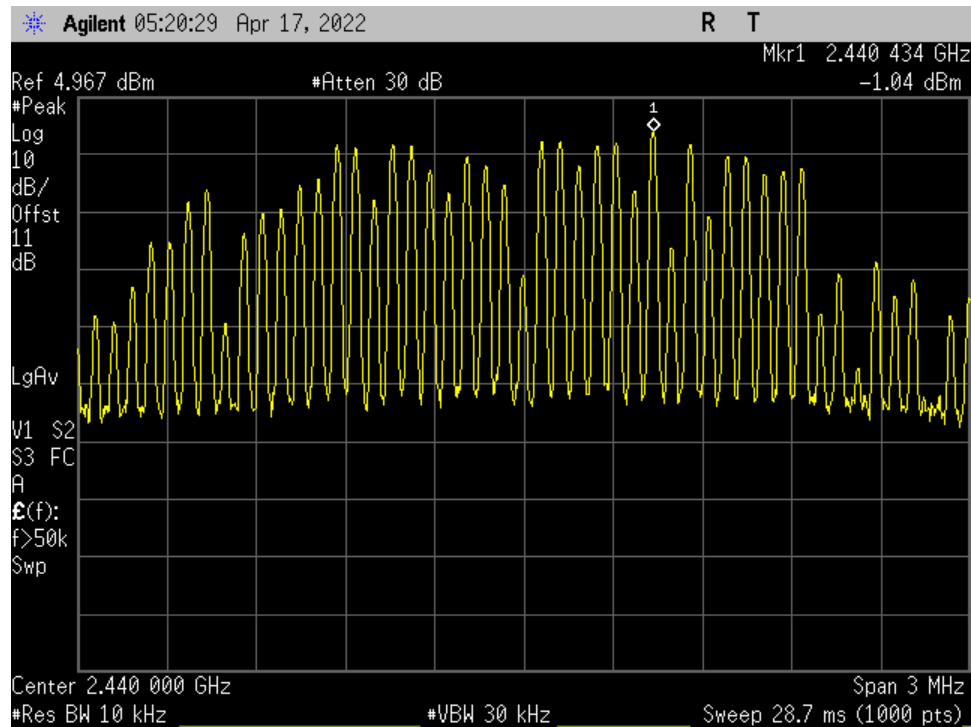


Figure 51. Zigbee_Mid Ch_2440MHz_1MBit_Spectral_Density_Port 1.

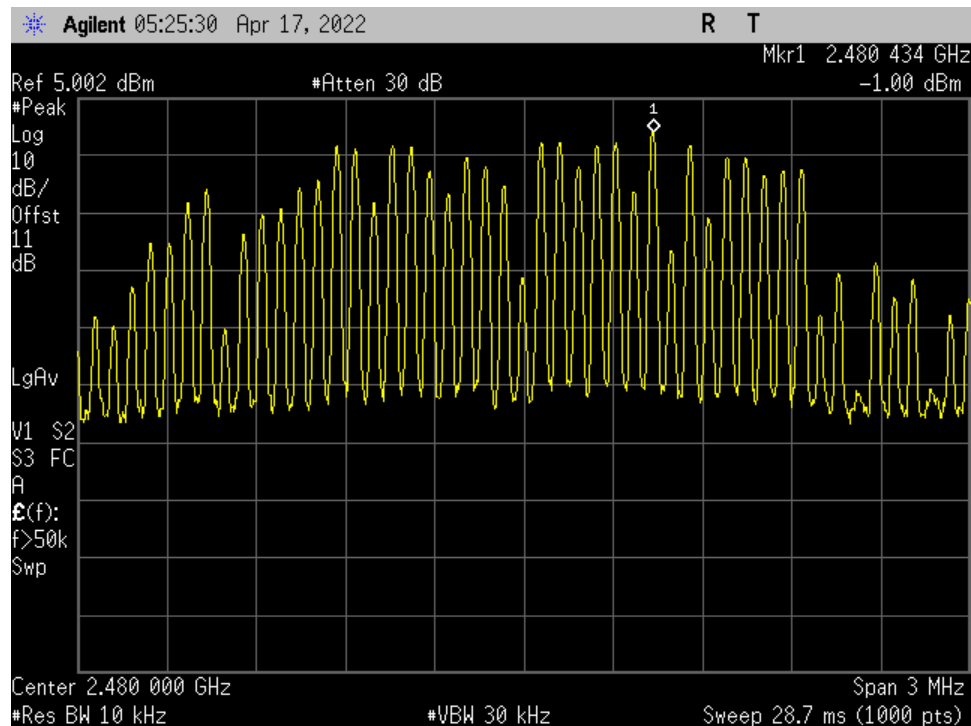


Figure 52. Zigbee_High Ch_2480MHz_1MBit_Spectral_Density_Port 1.

§ 15.247(i) Maximum Permissible Exposure
RSS-102(3.2) RF Exposure Evaluation of Devices

No additional data or photographs available.