

Testing Tomorrow's Technology

**CFR 47 FCC Part 2, Subpart J, and FCC Part 90, Subpart I
Certification for Private Land Mobile Radio Services,
Part 90.219 Use of signal boosters**

And

ANSI/TIA-603-E (2016), Equipment Measurement and Performance Standards

And

**Innovation, Science and Economic Development Canada, RSS-131,
Spectrum Management and Telecommunications Radio Standards
Specification, Zone Enhancers,
Clause 6 Equipment Standard specifications for zone enhancers
working with equipment certified under RSS-119**

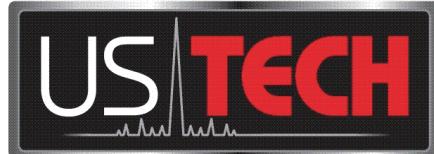
For the

**Safe-Com Wireless
Model: SAFE-0002**

**FCC ID: 2AKSM-SAFE4
IC: 22303-SAFE4**

**UST Project No: 24-0123
August 1, 2024**

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I certify that I am authorized to sign for the Test Agency and that the statements in this report and in the Exhibits attached hereto are true and correct to the best of my knowledge and belief:

US Tech (Agent Responsible for Test):

By:

Name: Alan Ghasiani

Title: Consulting Engineer/President

Date: August 1, 2024



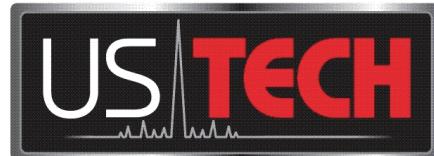
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MEASUREMENT/TECHNICAL REPORT

This report concerns (check one): Original grant X _____
Class II change _____

Reevaluation _____

Equipment type: Part 90.219 Amplifier/Signal Booster (Class B)

Applicant /Manufacturer Name and Address:

Safe-Com Wireless
21 Longview Drive
Holmdel, NJ 07733
USA

Report prepared by:

US Tech
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1 General Information

1.1 Product Description

The Equipment under Test (EUT) is the Safe-Com Wireless model SAFE-0002. The EUT is a signal booster and extends the radio coverage in areas where the propagation losses prevent reliable communication. The amplifier is designed to be used with already approved DSA systems. The model number will be followed by a defining character: A, B, Ca or Cb. This defines the tuning for that the amp has been configurated to operate in.

"A" is tuned for 138-175 MHz, "B" tuning for 380-512 MHz, "Ca" is tuned for 769-814 MHz, and "Cb" is tuned for 799-862 MHz.

For FCC Part 90.219

150.8-156.2475 MHz
157.1875-161.575 MHz
161.775-161.96 MHz
162.04-173.40 MHz
406.1-454.0 MHz
456.0-462.5375 MHz
467.74-512.0 MHz
758.0-775.0 MHz
788.0-805.0 MHz
806.0-849.0 MHz
851.0-869.0 MHz

For ISED RSS-131

150.05-174.0 MHz
406.1-430.0MHz
450.0-470.0 MHz
768.0-776.0 MHz
798.0-806.0 MHz
806.0-821.0 MHz
851.0-866.0 MHz
866.0-869.0 MHz

1.2 Related Submittal(s)/Grant(s)

There are no related submittals or grants associated with this project.

1.3 Summary of Tests

The following tests were performed:

Part	Test Description	Verdict
90.219(e)(1), 90.205(j)	RF Output Power	Pass
90.219(e)(3)	Conducted Spurious	Pass
90.219(e)(3)	Radiated Spurious	Pass
90.219(e)(4)	Input Output	Pass
KDB 935210 D05 v01r03 4.2	AGC Threshold	Recorded
KDB 935210 D05 v01r03 4.3	Out of band rejection	Recorded
90.219(e)(2)	Noise Figure	N/A

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2 Test and Measurements

2.1 Configuration of Tested System

A Block Diagram of the tested system is shown in Figure 1. All measurements are peak unless stated otherwise. The video filter associated with the spectrum analyzer was off or set to 3x the resolution bandwidth throughout the evaluation process. Interconnecting cables were manipulated as necessary to maximize emissions.

2.2 Characterization of Tested System

The samples used for testing were received by US Tech on April 28, 2024 in good condition.

2.3 Test Facility

Testing was performed at US Tech's measurement facility at 3505 Francis Circle, Alpharetta, GA. All radiated measurements were performed at US Tech's 3-meter EMC chamber measurement facility. Additional tests such as bench testing were also performed at US Tech's facility in Alpharetta, GA. This site has been fully described and registered by the FCC under Registration Number US5301. Additionally, this site has been fully described and submitted to Industry Canada (IC) and has been approved under file number 9900A-1. NVLAP code: 200162-0

2.4 Test Equipment

The test equipment used for this evaluation is listed in Table 2 below.

2.5 Modifications to Equipment under Test (EUT)

No modifications were made by US Tech to bring the EUT into compliance with the FCC limits for the transmitter portion of the EUT.

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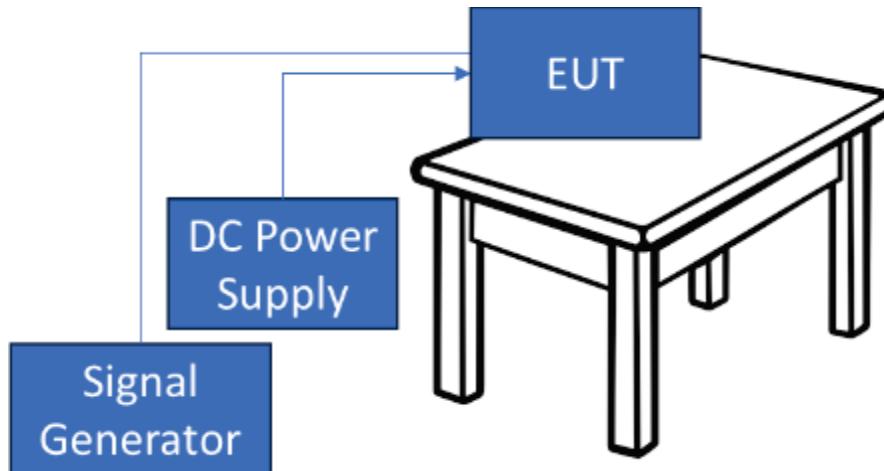


Figure 1. Block Diagram of Test Configuration

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Table 1. EUT and Peripherals

EUT MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID/ IC ID	CABLES P/D
Tuning A	SAFE-0002 - A	Engineering Sample	FCC ID: 2AKSM-SAFE4 (Pending) IC: 22303-SAFE4 (Pending)	PU
Tuning B	SAFE-0002 - B	Engineering Sample	FCC ID: 2AKSM-SAFE4 (Pending) IC: 22303-SAFE4 (Pending)	PU
Tuning Ca	SAFE-0002 - Ca	Engineering Sample	FCC ID: 2AKSM-SAFE4 (Pending) IC: 22303-SAFE4 (Pending)	PU
Tuning Cb	SAFE-0002 - Cb	Engineering Sample	FCC ID: 2AKSM-SAFE4 (Pending) IC: 22303-SAFE4 (Pending)	PU
Peripherals MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID/ IC ID	CABLES P/D
DC Bench Supply Tekpower	TP3005T	218311	None	P
Signal Generator Rohde & Schwarz	SMJ100A	*101567	None	P

U= Unshielded, S= Shielded, P= Power cable, D= Data cable

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Table 2. Test Instruments

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DUE DATE
Spectrum Analyzer	Agilent	E4407B	US41442935	9/21/2024
Spectrum Analyzer	Agilent	E4440A	MY45304803	7/21/2025
Spectrum Analyzer	Hewlett-Packard	8593E	3205A00124	3/4/2026 2yr cal
Rf Preamp 100 kHz to 1.3 GHz	Hewlett-Packard	8447D	1937A01611	7/20/2024
Rf Preamp > 1 GHz	Hewlett Packard	8449B	3008A00914	3/4/2025
Log Periodic	EMCO	3146	9305-3600	3/13/2026 2yr
Biconical	EMCO	3110B	9307-1431	1/13/2025 2yr
Horn Antenna	EMCO	3115	9107-3723	3/13/2025 2yr
Signal Generator	Rohde & Schwarz	SMJ100A	101567	3/29/2026
20 dB Attenuator	Meca	604-20-1	None	3/4/2025
20 dB Attenuator	US Tech	AT145	AT145	3/4/2025
Terminator	ALAN	50LH25	101771	Verified With Network Analyzer
Network Analyzer	Agilent	N5230A	MY45000829	12/14/2024

Note: The calibration interval of the above test instruments is 12 months, and all calibrations are traceable to NIST/USA.

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2.6 Noise (FCC Section 90.219(e)(2) and RSS-131, 6.4)

The noise figure of a signal booster must not exceed 9 dB in either direction.

The EUT is a bi-directional amplifier designed for use with approved DAS systems; this test was deemed not applicable.

2.7 Retransmitted Signals (FCC Section 90.219(e)(4) and RSS-131, 6.6)

A signal booster must be designed such that all signals when retransmitted meet the following requirements:

1. The signals are re-transmitted on the same channels as received. Minor departures from the exact provider or reference frequencies of the input signals are allowed provided that the re-transmitted signals meet the requirements of 90.213.

In this case, the EUT is exempt from meeting these requirements.

2. There is no change in the occupied bandwidth of the retransmitted signals.

The EUT meets this requirement; see the plots in the following section which show the input signal compared to the retransmitted signal.

3. The retransmitted signals continue to meet the unwanted emissions limits of Part 90.210 applicable to the corresponding received signal.

The EUT meets this requirement; see the emissions mask test data presented in the next section.

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2.8 Emission Mask Definitions (FCC Section 2.1049, 90.219(e)(4iii), 90.210, RSS-131, 6.5, RSS-119, 5.8)

The EUT is equipped with a low pass filter. Therefore, the emissions masks for equipment utilizing a low pass filter were applied.

2.8.1 Emission Mask B (FCC Part 90.210, 2.1051, RSS-119, 5.8)

Emission Mask B. For transmitters that are equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier power (P) as follows:

- (1) On any frequency removed from the assigned frequency by more than 50 percent, but not more than 100 percent of the authorized bandwidth: At least 25 dB.
- (2) On any frequency removed from the assigned frequency by more than 100 percent, but not more than 250 percent of the authorized bandwidth: At least 35 dB.
- (3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least $43 + 10 \log (P)$ dB.

2.8.2 Emission Mask D (FCC Part 90.210, 2.1051, RSS-119, 5.8)

Emission Mask D—12.5 kHz channel bandwidth equipment. For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

- (1) On any frequency from the center of the authorized bandwidth f_0 to 5.625 kHz removed from f_0 : Zero dB.
- (2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.625 kHz but no more than 12.5 kHz: At least $7.27(f_d - 2.88)$ dB.
- (3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz: At least $50 + 10 \log (P)$ dB or 70 dB, whichever is the lesser attenuation.

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2.8.3 Emission Mask E (FCC Part 90.210, 2.1051, RSS-119, 5.8)

Emission Mask E—6.25 kHz or less channel bandwidth equipment. For transmitters designed to operate with a 6.25 kHz or less bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

- (1) On any frequency from the center of the authorized bandwidth f_0 to 3.0 kHz removed from f_0 : Zero dB.
- (2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 3.0 kHz but no more than 4.6 kHz: At least $30 + 16.67(f_d - 3 \text{ kHz})$ or $55 + 10 \log(P)$ or 65 dB, whichever is the lesser attenuation.
- (3) On any frequency removed from the center of the authorized bandwidth by more than 4.6 kHz: At least $55 + 10 \log(P)$ or 65 dB, whichever is the lesser attenuation.

2.8.4 Emission Mask I (FCC Part 90.210, 2.1051, RSS-119, 5.8)

Emission Mask I. For transmitters that are equipped with an audio low pass filter, the power of any emission must be attenuated below the unmodulated carrier power of the transmitter (P) as follows:

- (1) On any frequency removed from the center of the authorized bandwidth by a displacement frequency of more than 6.8 kHz, but no more than 9.0 kHz: At least 25 dB;
- (2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency of more than 9.0 kHz, but no more than 15 kHz: At least 35 dB;
- (3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency of more than 15 kHz: At least $43 + 10 \log(P)$ dB, or 70 dB, whichever is the lesser attenuation.

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2.9 RF Power Output (FCC Section 2.1046, 90.219(e)(1), RSS-131, 6.2)

The output power capability of a signal booster must be designed for deployments providing a radiated power not exceeding 5 Watts ERP for each retransmitted channel.

The EUT was connected to a spectrum analyzer through a 20 dB power attenuator. All cables and attenuator losses were input into the spectrum analyzer as either a reference level offset or an external preamp gain correction to ensure that accurate readings were obtained.

A CW signal was utilized and transmitted through the EUT. The RF input signal was set at least 0.2 dB below the AGC threshold. The spectrum analyzer was set to the following settings: RBW= 100 kHz, Video= 3x RBW, Span of 1 MHz.

The output power levels are recorded below:

Band	Tuned Frequency	Measured Output power (dBm)	FCC max Output Power limit (5 Watt)	Margin (dB) From the output limit
VHF	*150.00 MHz	35.13	37 dBm	1.87
	*162.00 MHz	36.23	37 dBm	0.77
	**174.00 MHz	36.41	37 dBm	0.59
UHF	407.00 MHz	36.83	37 dBm	0.17
	421.00 MHz	36.96	37 dBm	0.04
	***480.00 MHz	32.75	37 dBm	4.25
	**512.00 MHz	33.32	37 dBm	3.68
	700/800 MHz			
700/800 MHz	**758.00 MHz	35.68	37 dBm	1.32
	***763.00 MHz	35.12	37 dBm	1.88
	768.00 MHz	35.74	37 dBm	1.26
	769.00 MHz	35.73	37 dBm	1.27
	775.00 MHz	35.87	37 dBm	1.13
	**788.00 MHz	35.87	37 dBm	1.13
	798.00 MHz	36.13	37 dBm	0.87
	799.00 MHz	36.15	37 dBm	0.85
	805.00 MHz	36.15	37 dBm	0.85
	806.00 MHz	36.15	37 dBm	0.85
	815.00 MHz	35.98	37 dBm	1.02
	824.00 MHz	36.10	37 dBm	0.9
	851.00 MHz	34.18	37 dBm	2.82
	860.00 MHz	34.03	37 dBm	2.97
	869.00 MHz	33.79	37 dBm	3.21

(*) = Frequencies were selected as the representative frequency to cover channels that are less than 1 MHz apart. For example, 150 MHz was used to represent 150.05 MHz (ISED) and 150.80 MHz (FCC). However, only the permitted frequency will be listed for each respective market.

(**) = Frequency selected because either ISED or FCC market permits this use.

(***) = Selected as representative middle channel for FCC permitted operation.

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2.10 Output Power Plots

The following are the Uplink Output Power Plots.

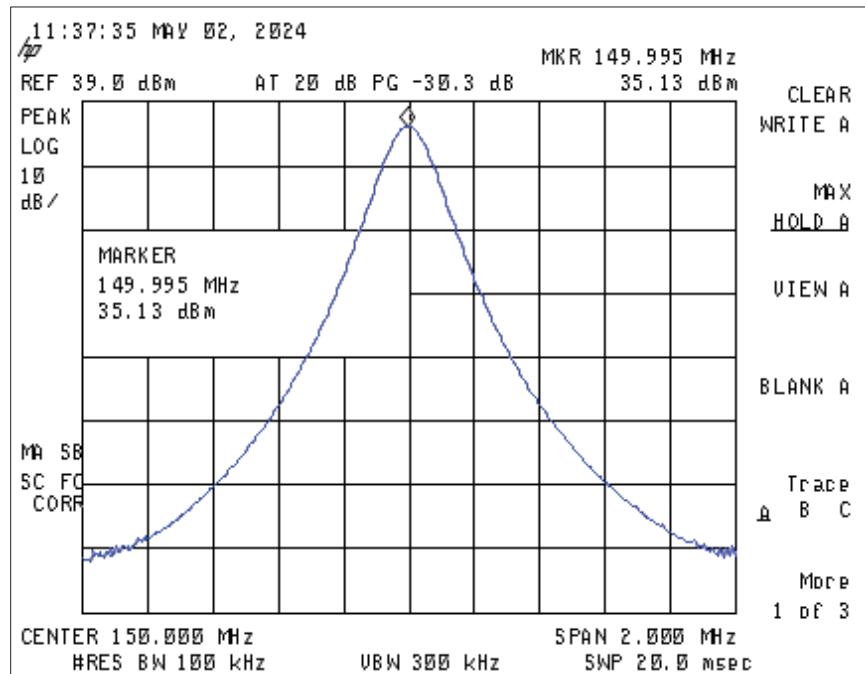


Figure 2. 150 MHz Output Power Plot

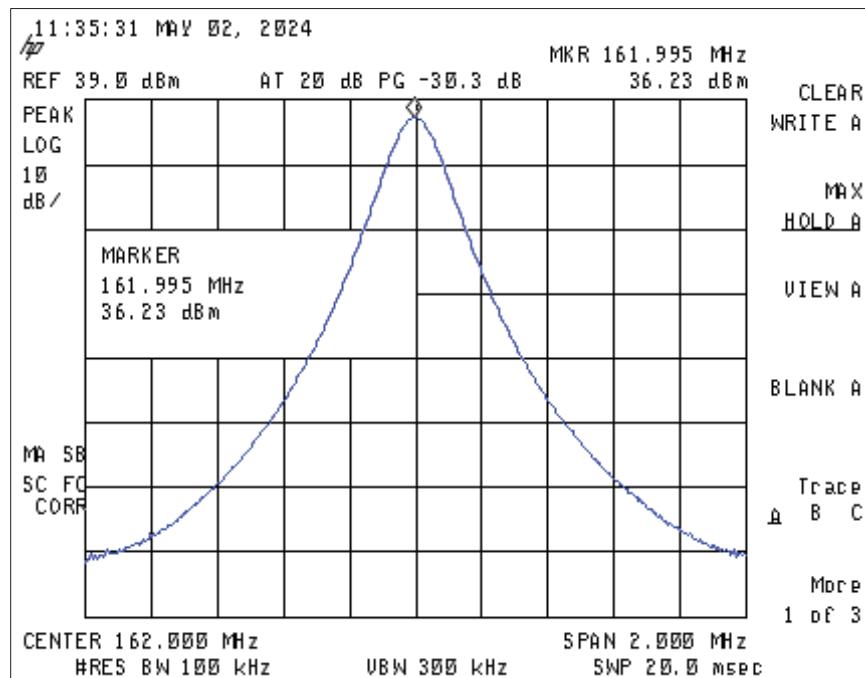


Figure 3. 162 MHz Output Power Plot

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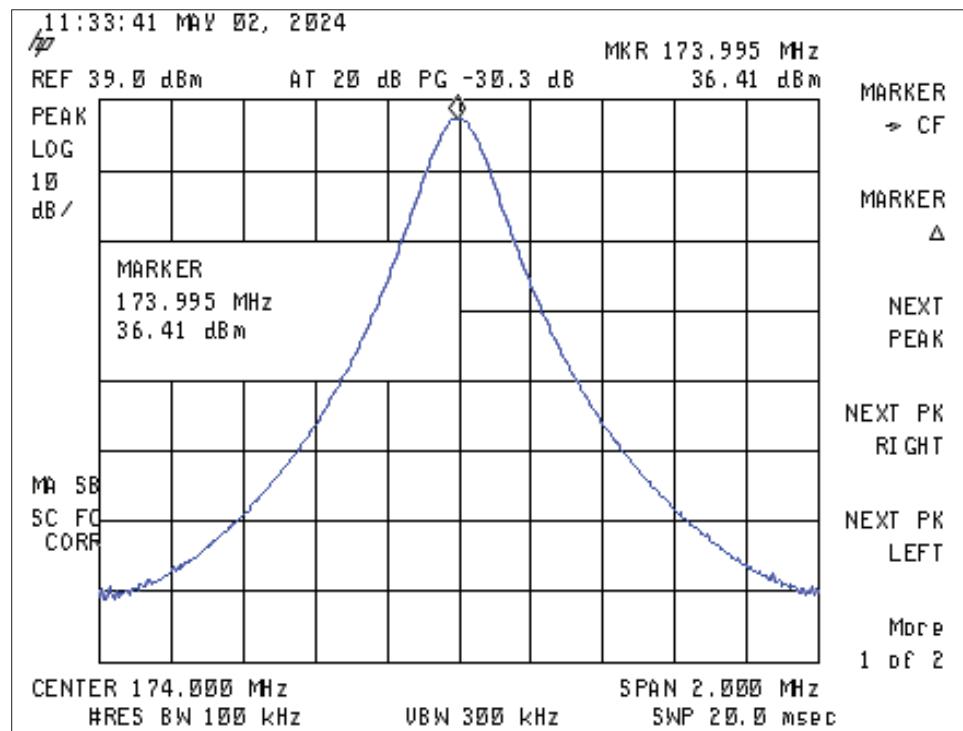


Figure 4. 174 MHz Output Power Plot

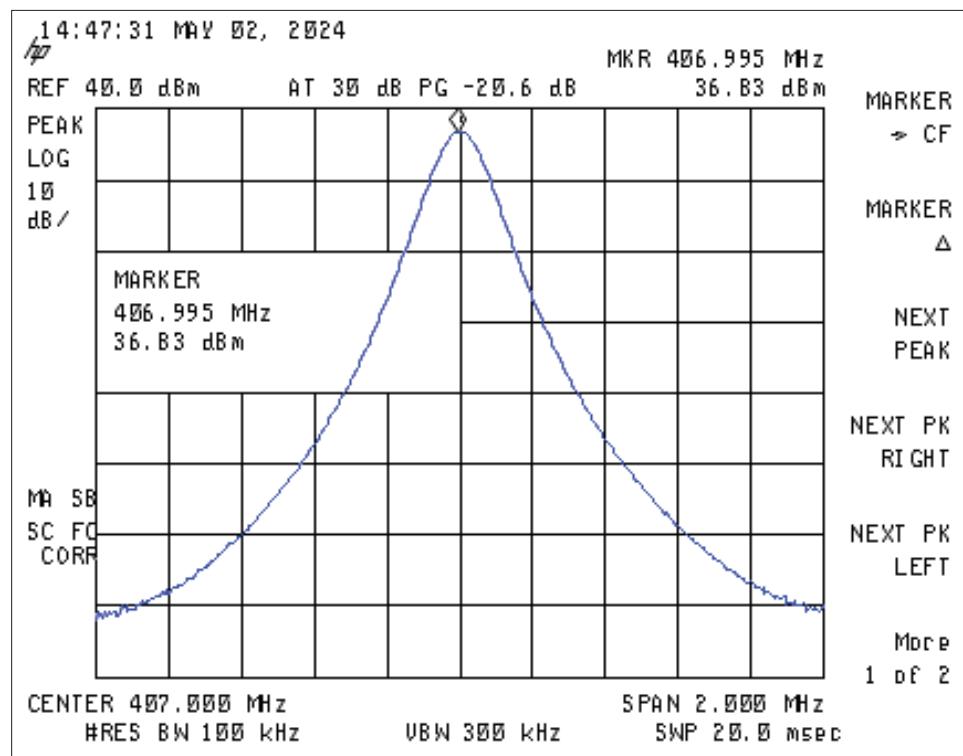


Figure 5. 407 MHz Output Power Plot

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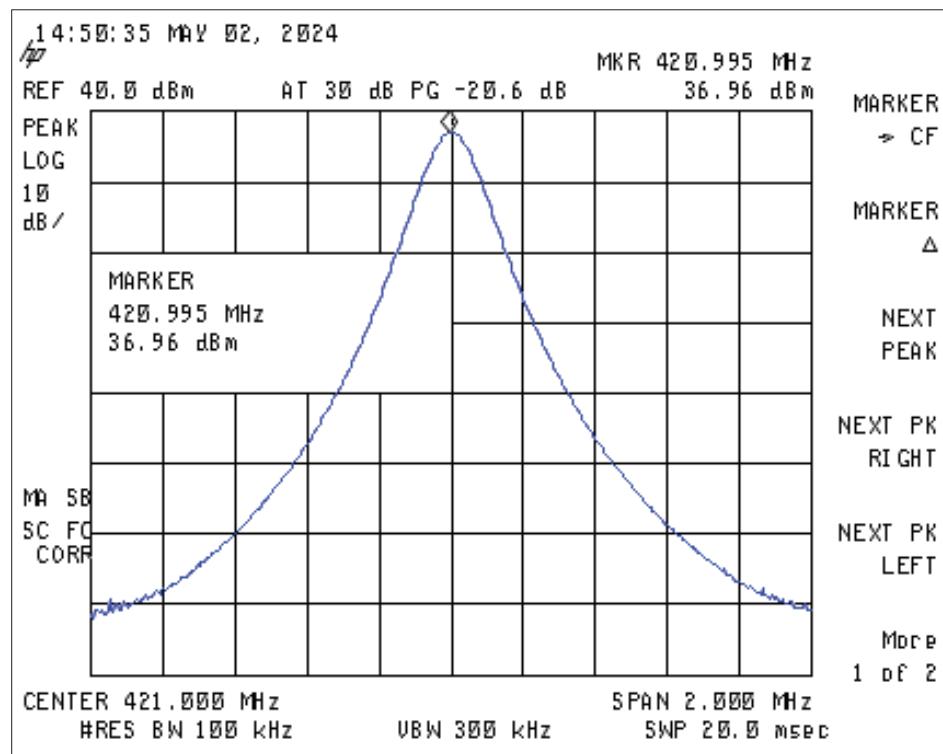


Figure 6. 421 MHz Output Power Plot

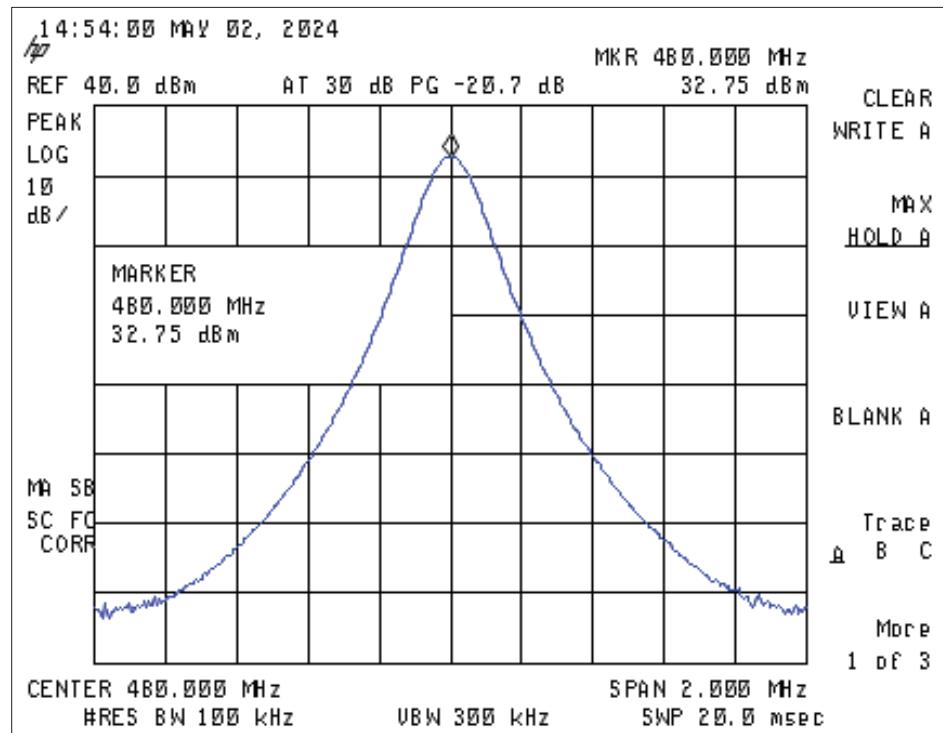


Figure 7. 480 MHz Output Power Plot

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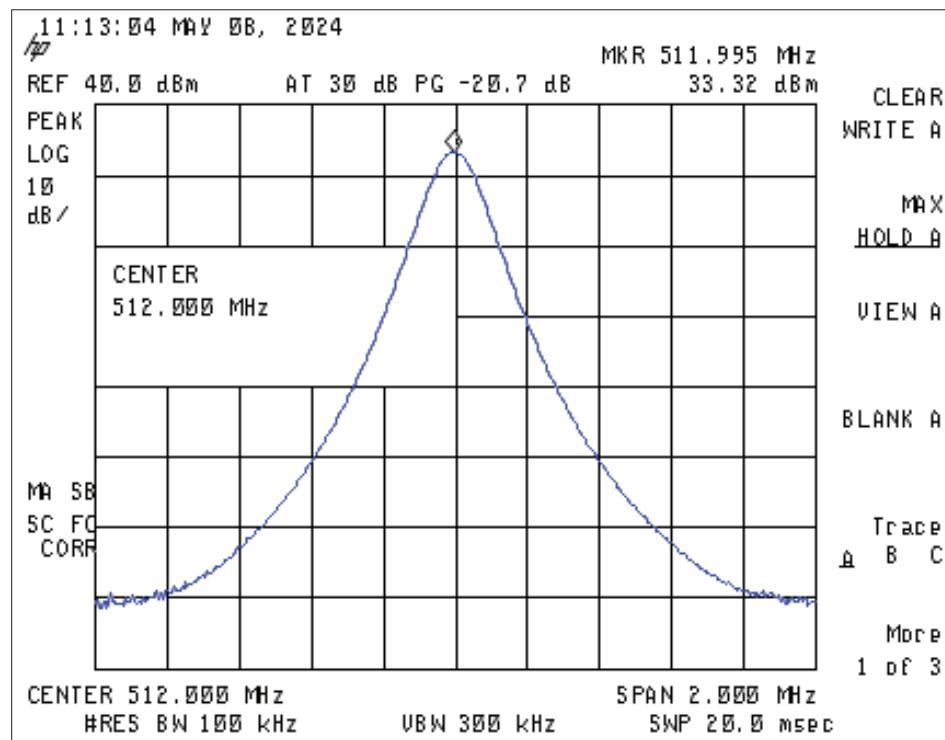


Figure 8. 512 MHz Output Power Plot

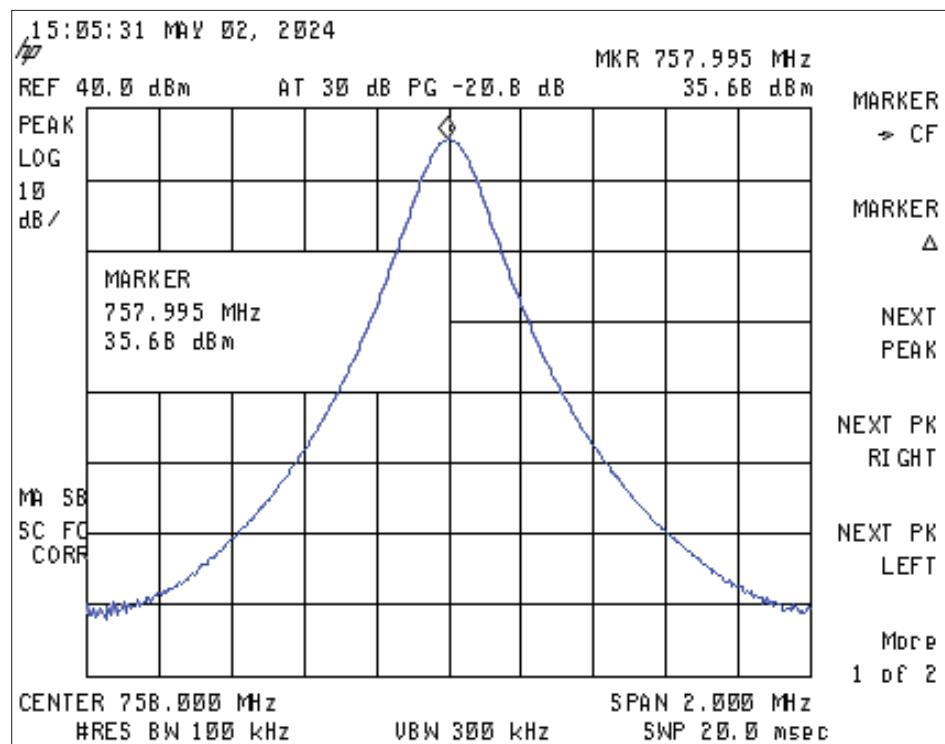


Figure 9. 758 MHz Output Power Plot

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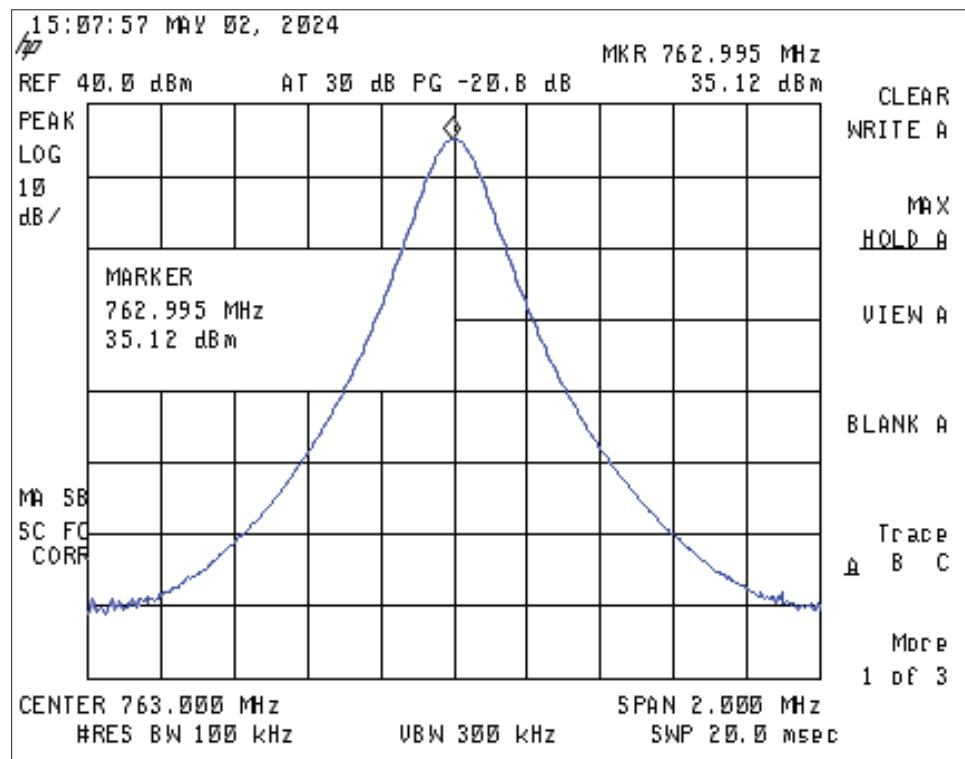


Figure 10. 763 MHz Output Power Plot

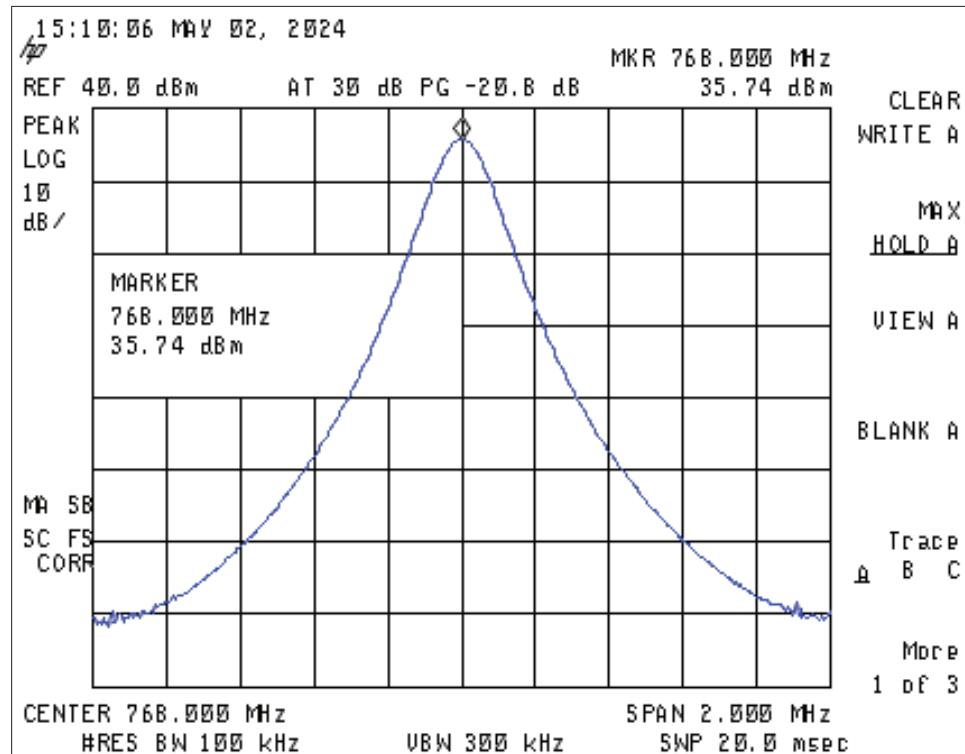


Figure 11. 768 MHz Output Power Plot

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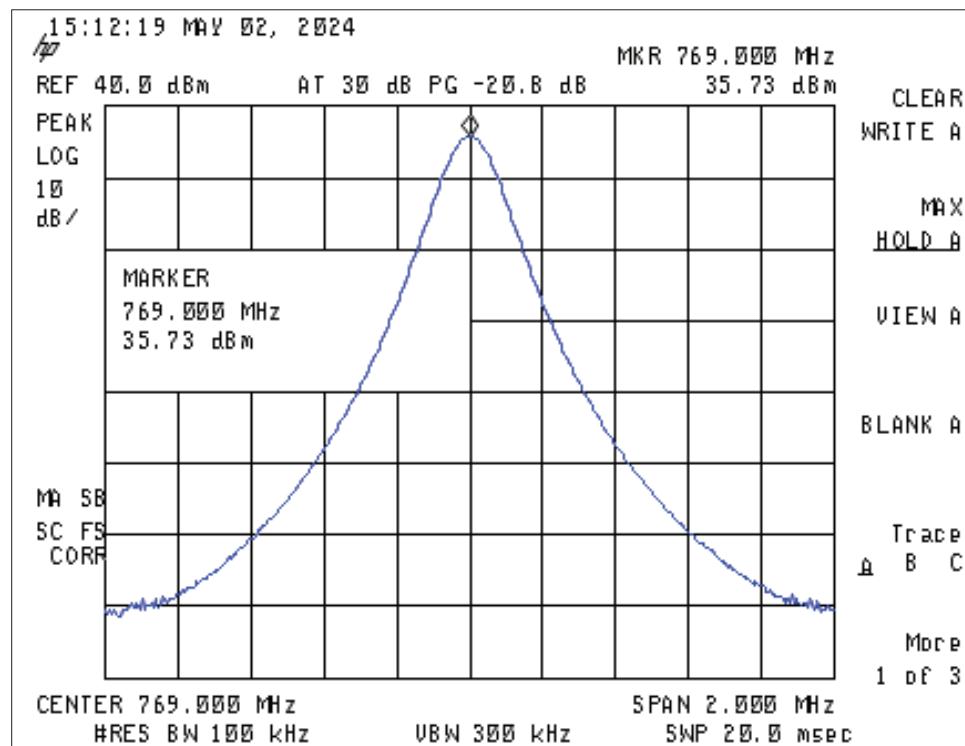


Figure 12. 769 MHz Output Power Plot

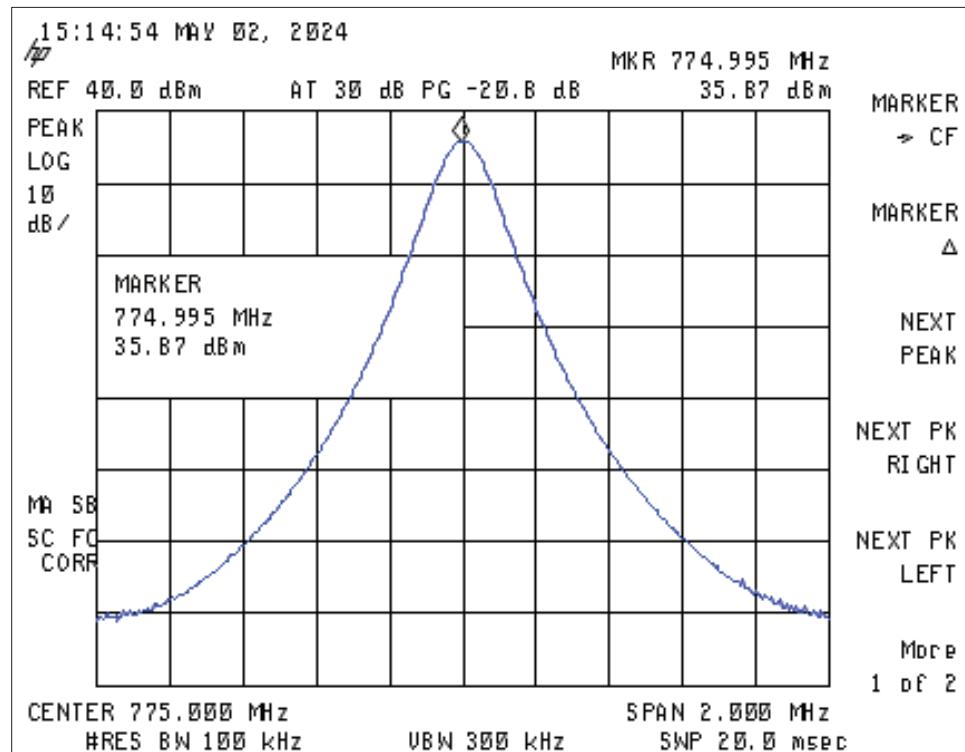


Figure 13. 775 MHz Output Power Plot

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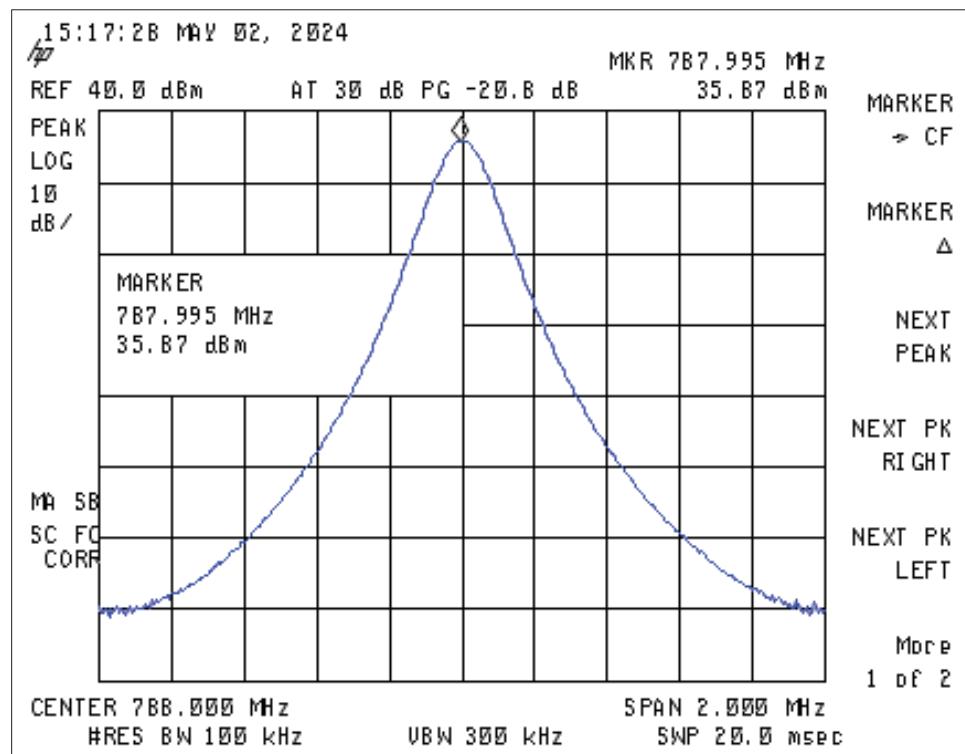


Figure 14. 788 MHz Output Power Plot

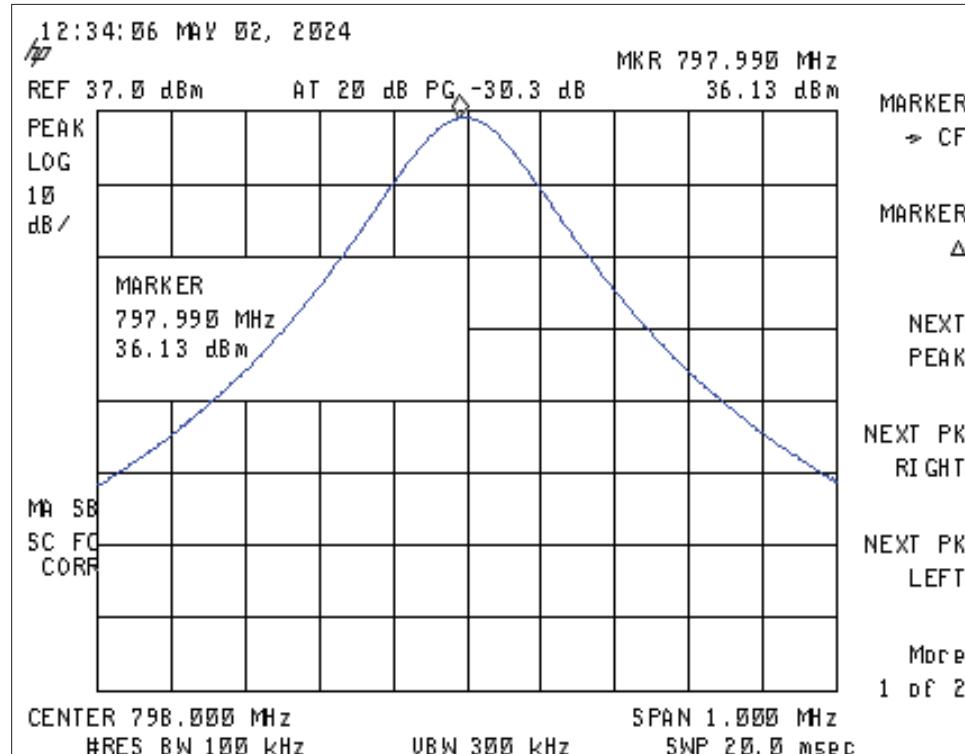


Figure 15. 798 MHz Output Power Plot

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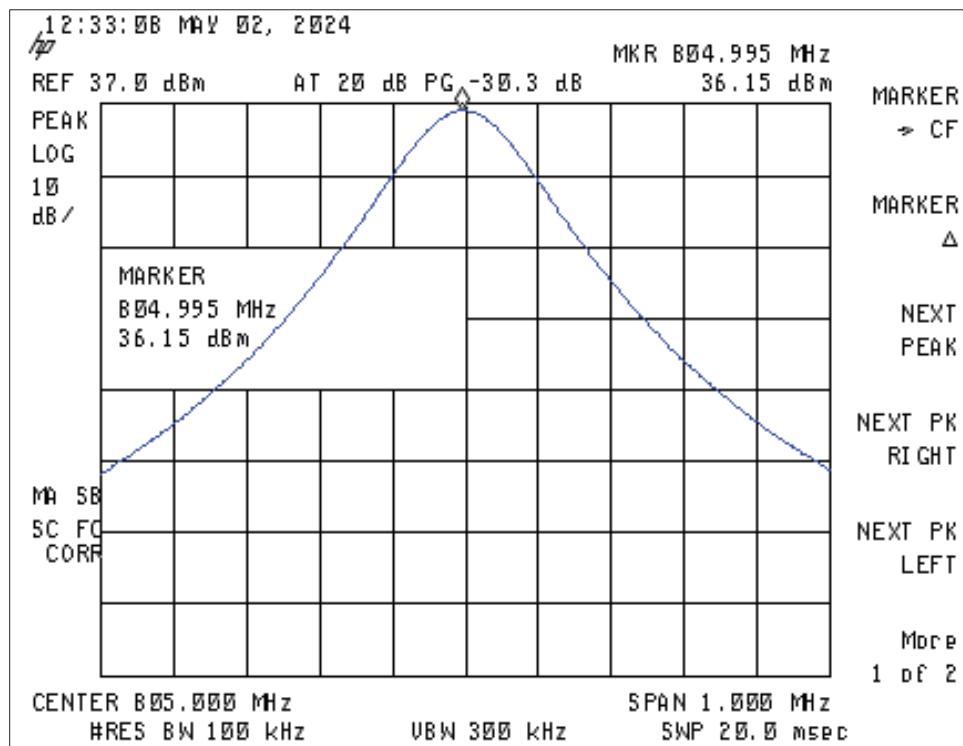


Figure 16. 799 MHz Output Power Plot

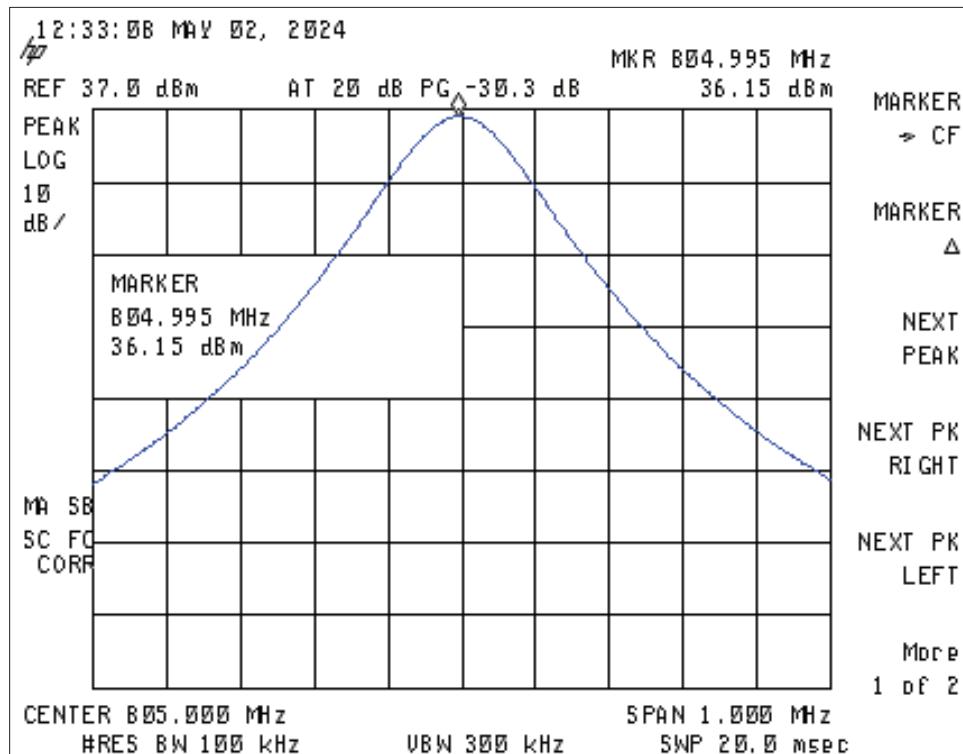


Figure 17. 805 MHz Output Power Plot

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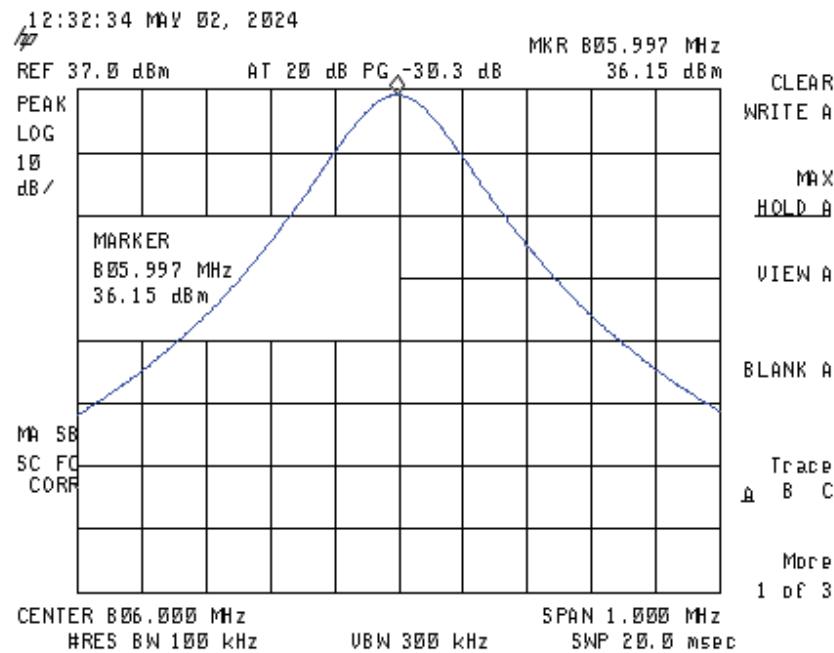


Figure 18. 806 MHz Output Power Plot

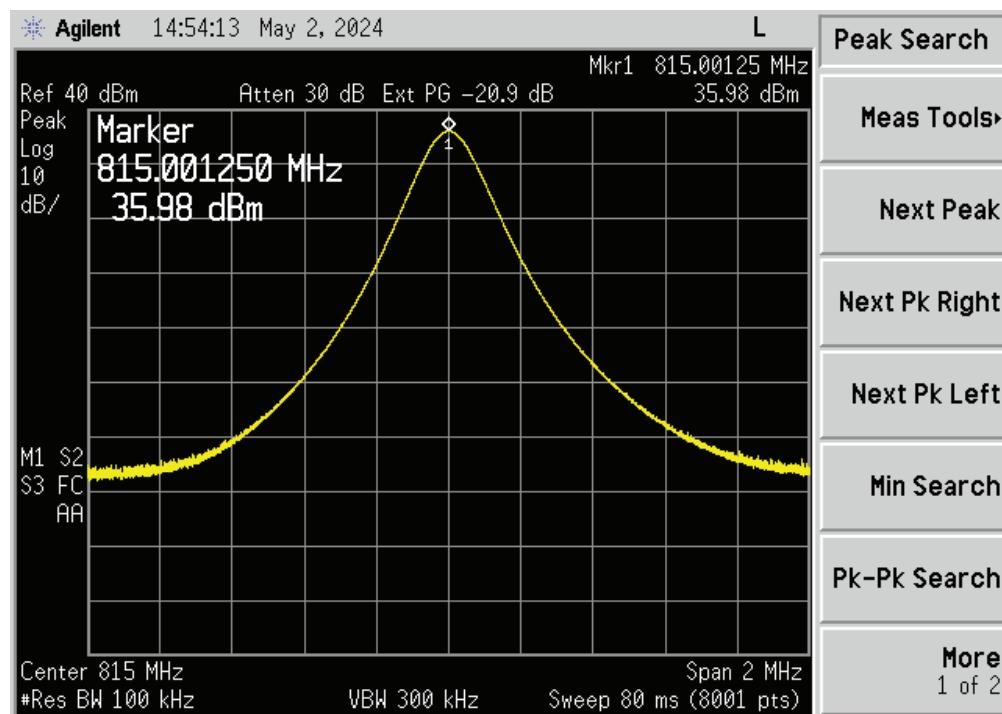


Figure 19. 815 MHz Output Power Plot

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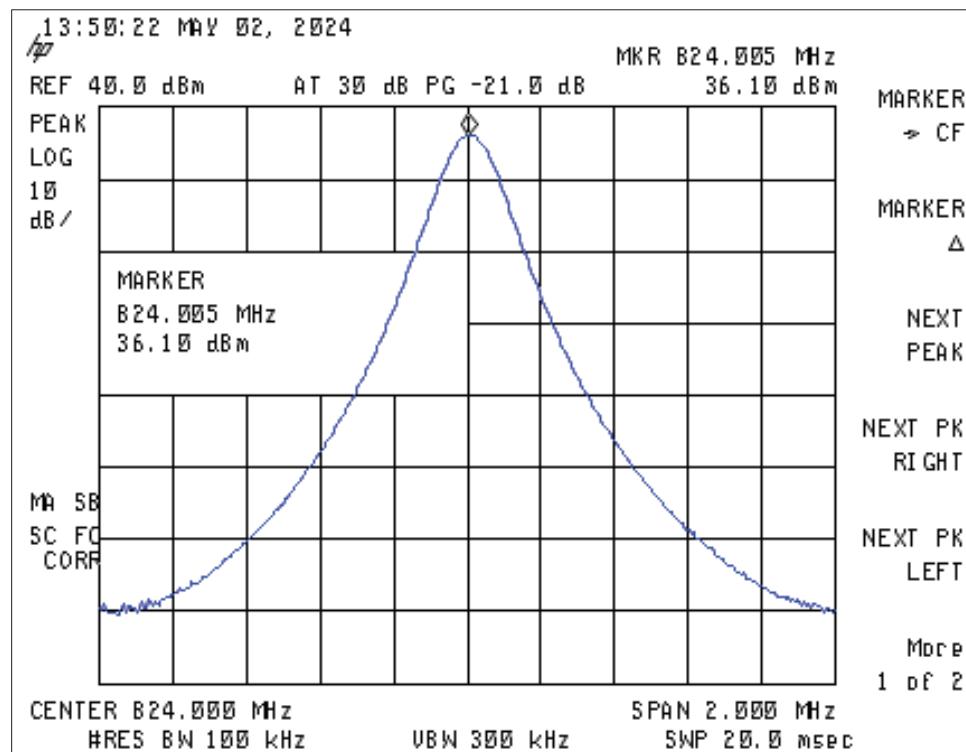


Figure 20. 824 MHz Output Power Plot

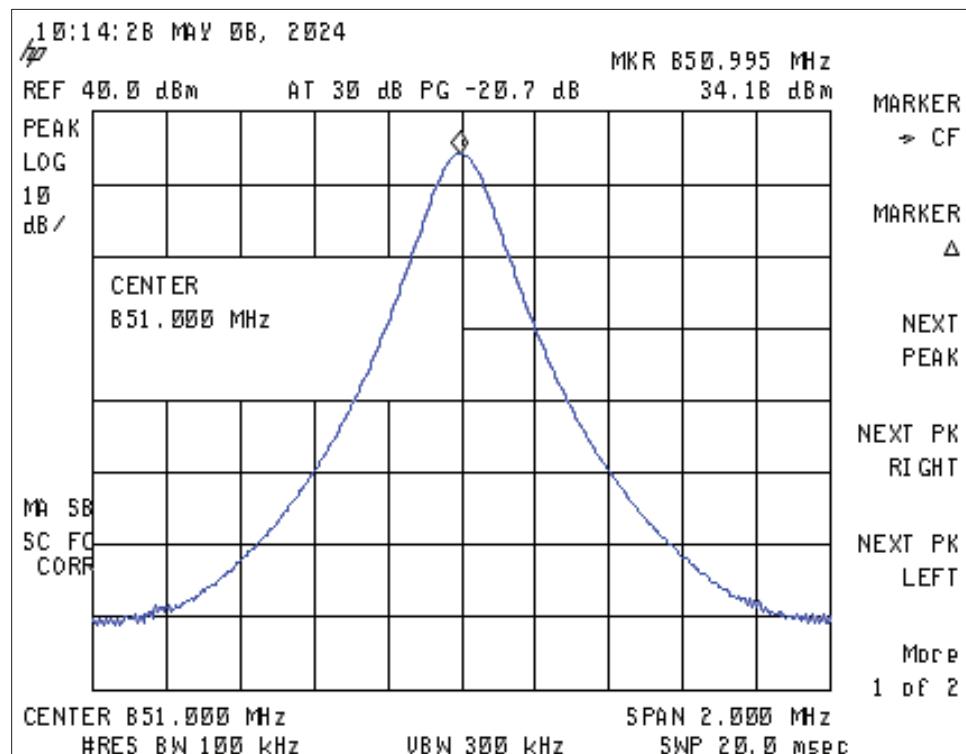


Figure 21. 851 MHz Output Power Plot

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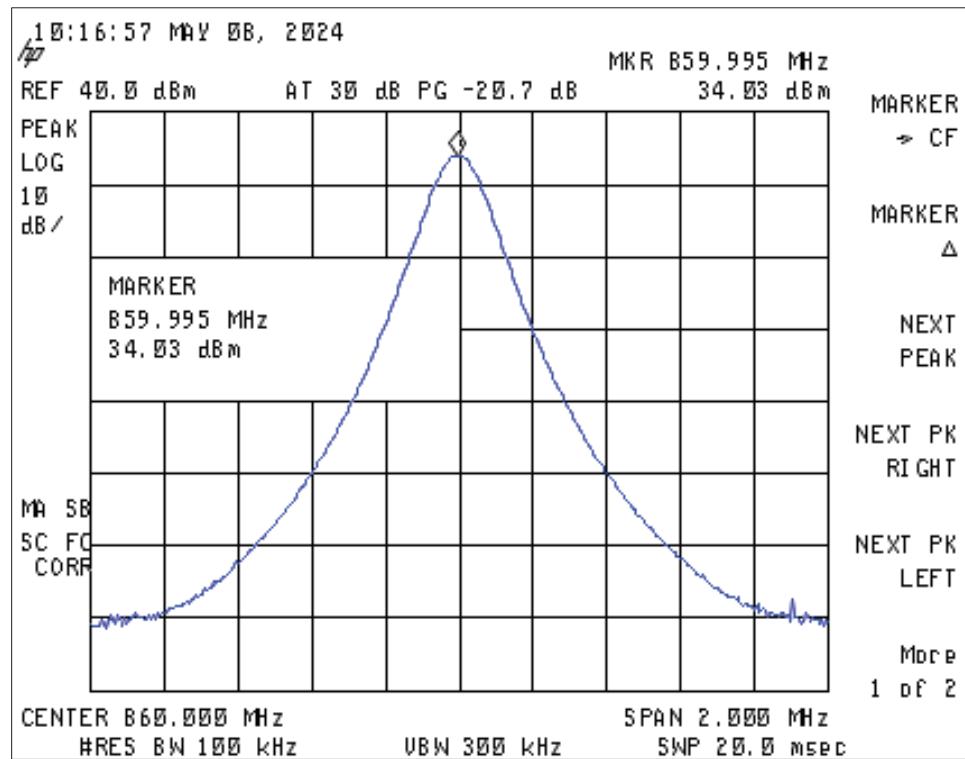


Figure 22. 860 MHz Output Power Plot

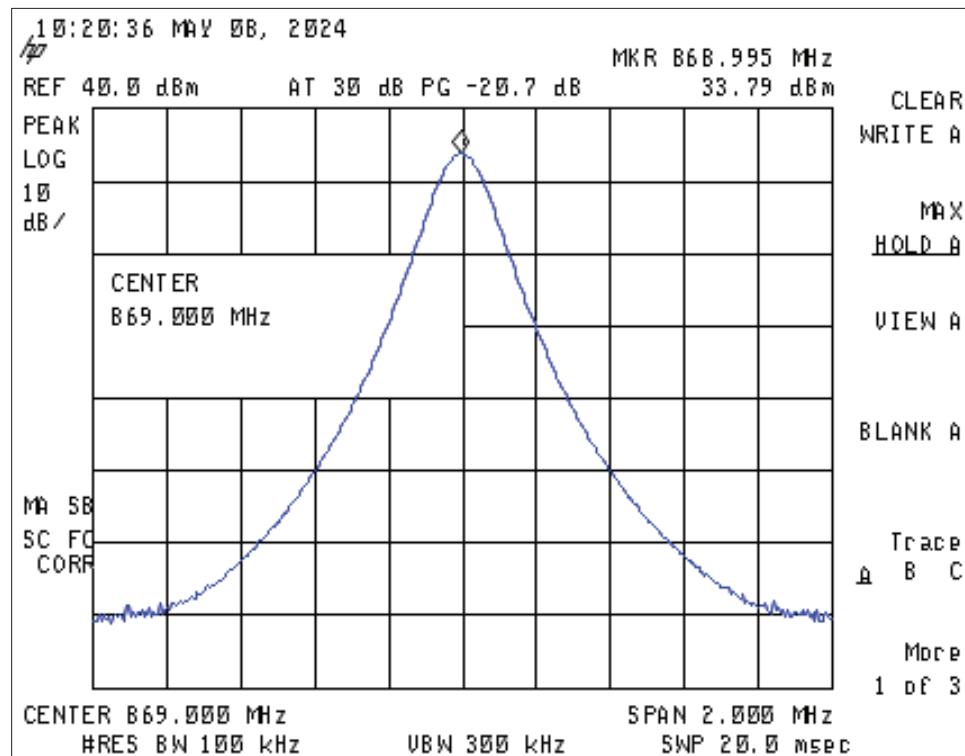


Figure 23. 869 MHz Output Power Plot

U.S. Tech Test Report:
 FCC ID:
 IC:
 Report Number:
 Issue Date:
 Customer:
 Model:

FCC Part 90 Certification
 2AKSM-SAFE4
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 24-0123
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 Safe-Com Wireless
 SAFE-0002

2.11 Emission Mask and Retransmitted Signal Measurements

The EUT was connected to a spectrum analyzer through a 20 dB attenuator. All cable and attenuator losses were input into the spectrum analyzer as a combination of reference level offset and/or external correction factor offset to ensure accurate readings were obtained. Measurements were collected to verify that the EUT meets the required emissions mask parameters as cited in section 2.10 of this test report. A reference level plot is provided to show that the retransmitted signal meets the parameters as cited in section 2.10 of this test report.

The Emissions Mask were measured with the RF input set to at least 0.2 dB below the AGC level and then at +3.0 dB above the AGC level per KDB 935210 D03 V04.

Table 3. Test Signals for PLMRS Devices

Emissions Desinator	Modulation	Occupied Bandwidth	Channel Bandwidth	Audio Frequency
16K0F3E	FM	16 kHz	25 kHz	1 kHz
11K3F3E	FM	11.3 kHz	12.5 kHz	1 kHz
4K00F1E	FM	4 kHz	6.25 kHz	1 kHz
N/A	CW	N/A	N/A	N/A

2.11.1 VHF Channels

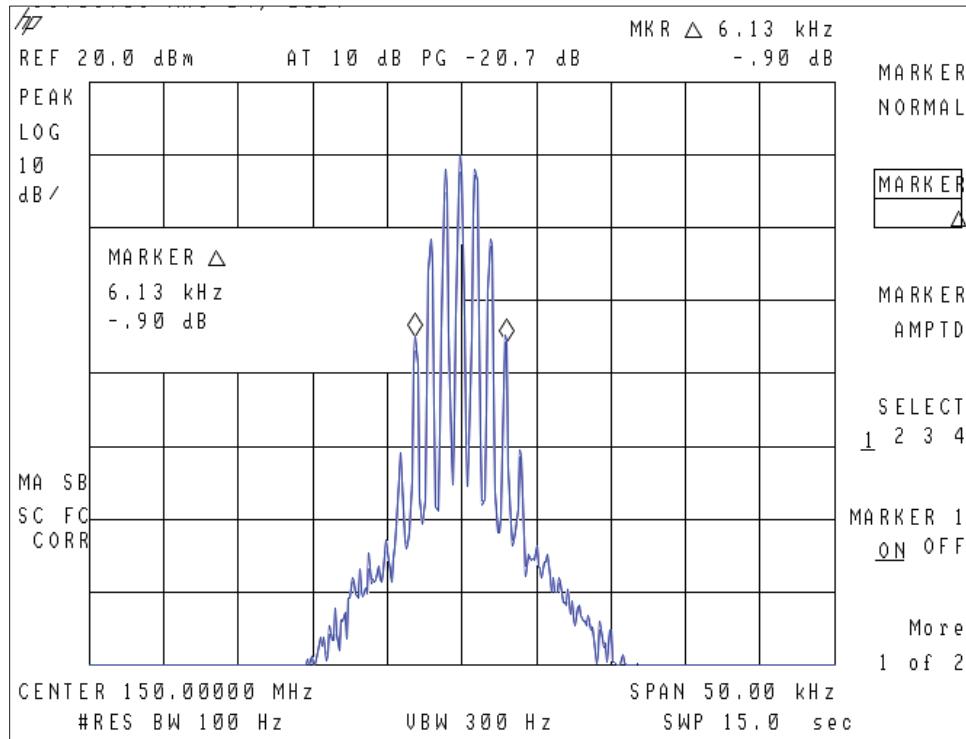
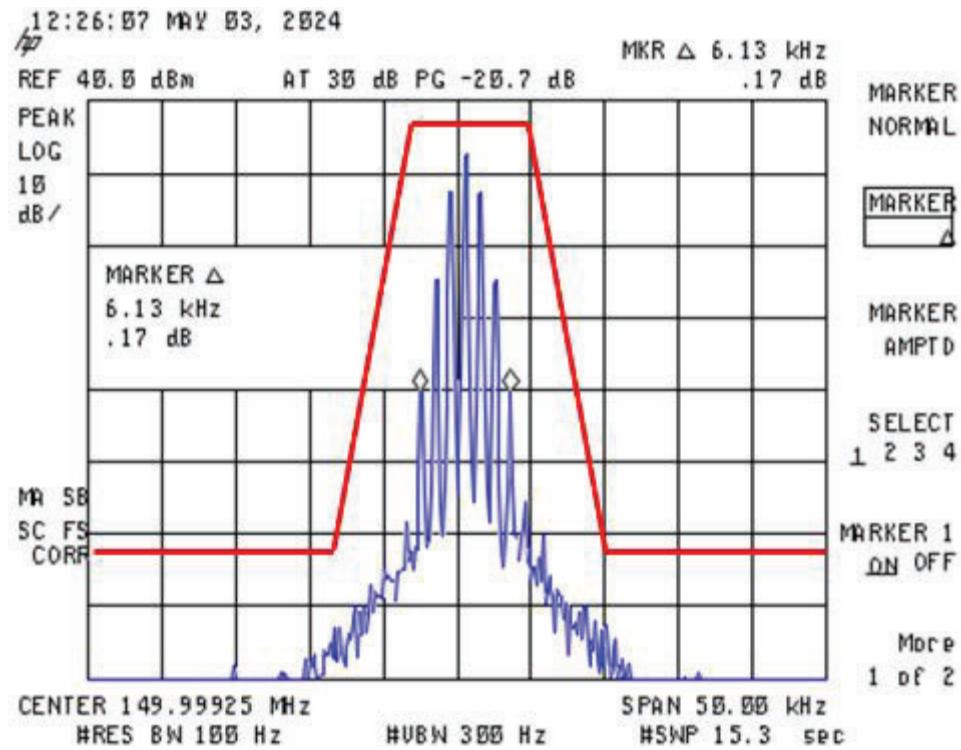


Figure 24. Input 150 MHz @ 6.25 kHz

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
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U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

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24-0123
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SAFE-0002

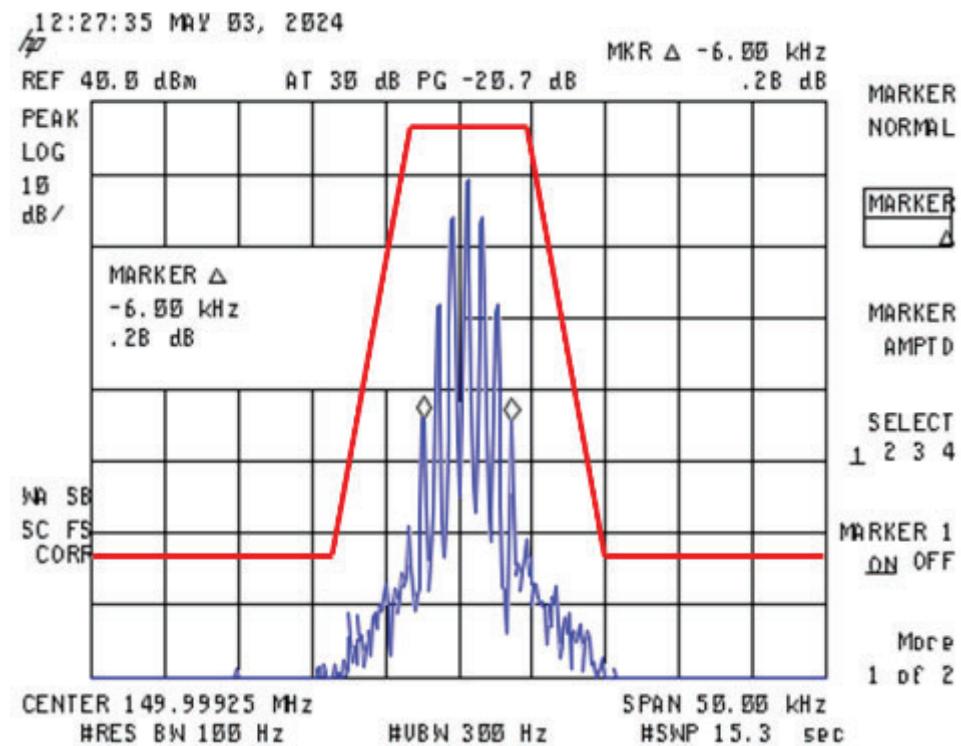


Figure 26. 150 MHz@ 6.25 kHz + 3.0 dB, Mask E

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
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24-0123
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SAFE-0002

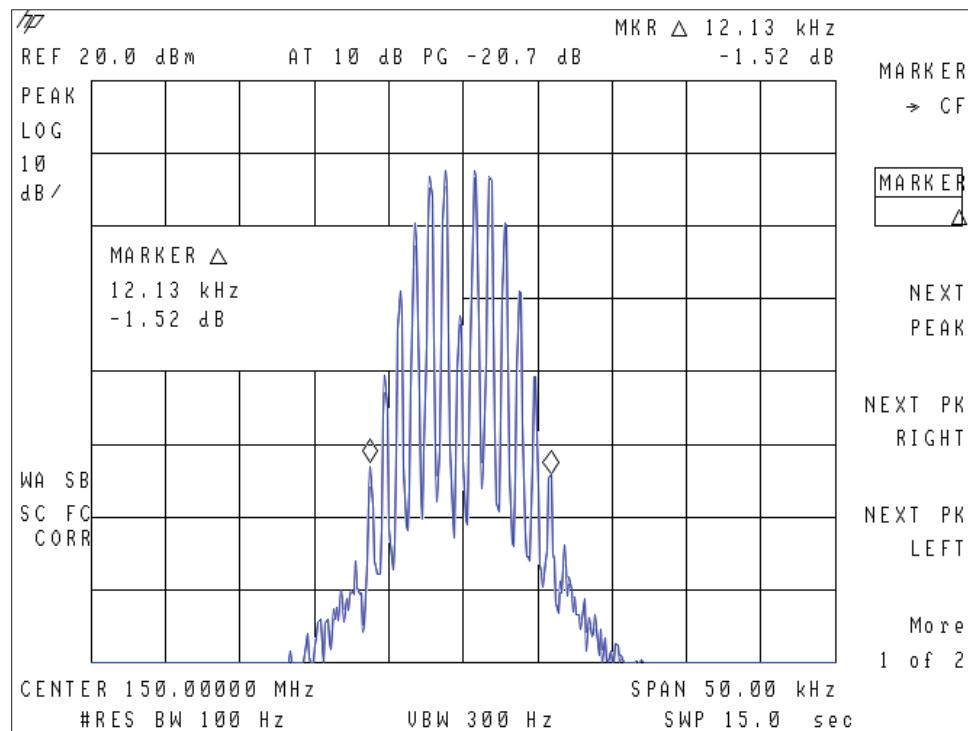


Figure 27. Input 150 MHz @ 12.5 kHz

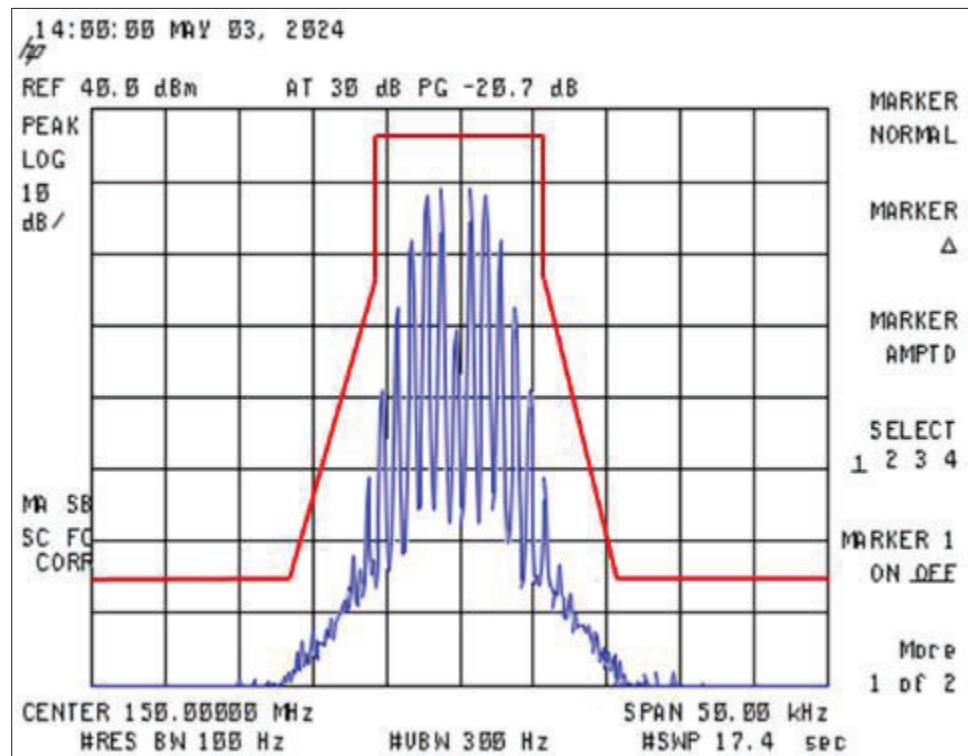


Figure 28. 150 MHz @ 12.5 kHz, Mask D

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
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Safe-Com Wireless
SAFE-0002

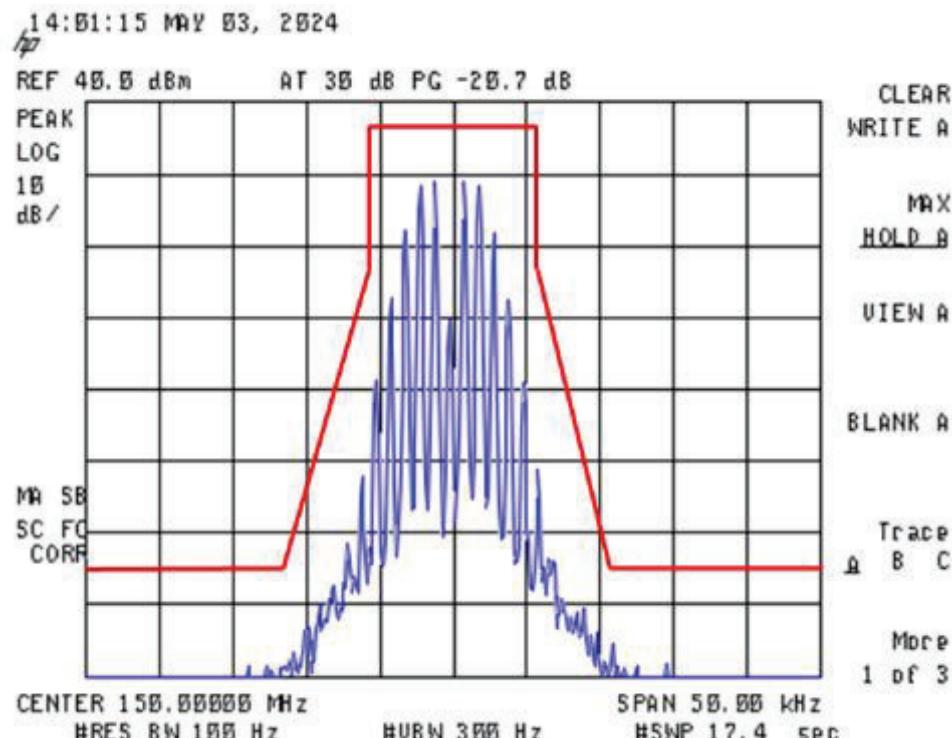


Figure 29. 150 MHz @ 12.5 kHz + 3.0 dB, Mask D

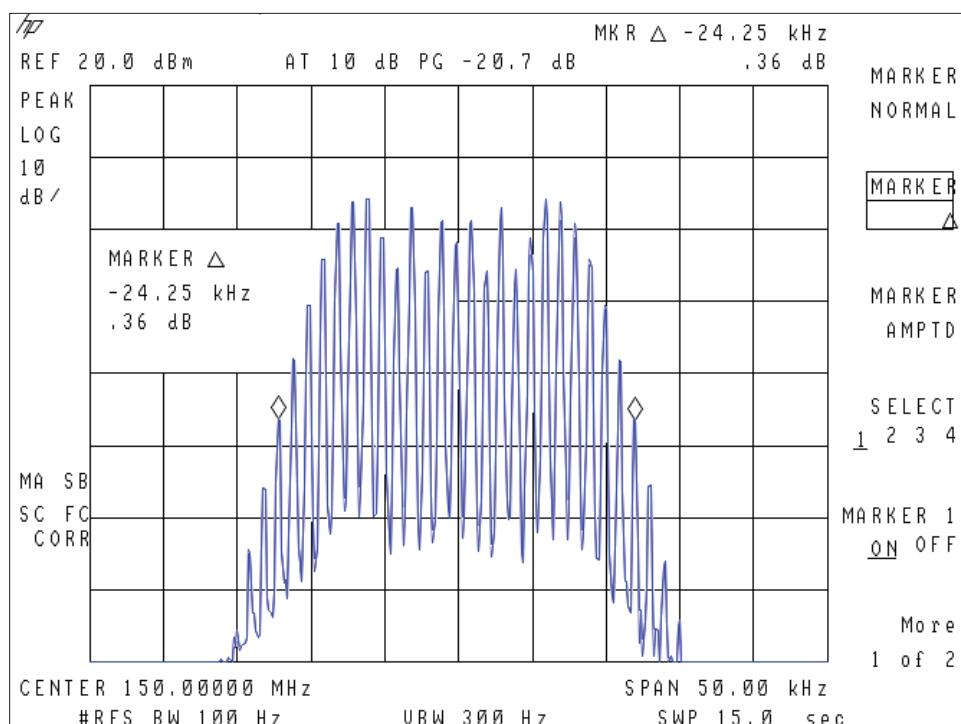


Figure 30. Input 150 MHz @ 25 kHz

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

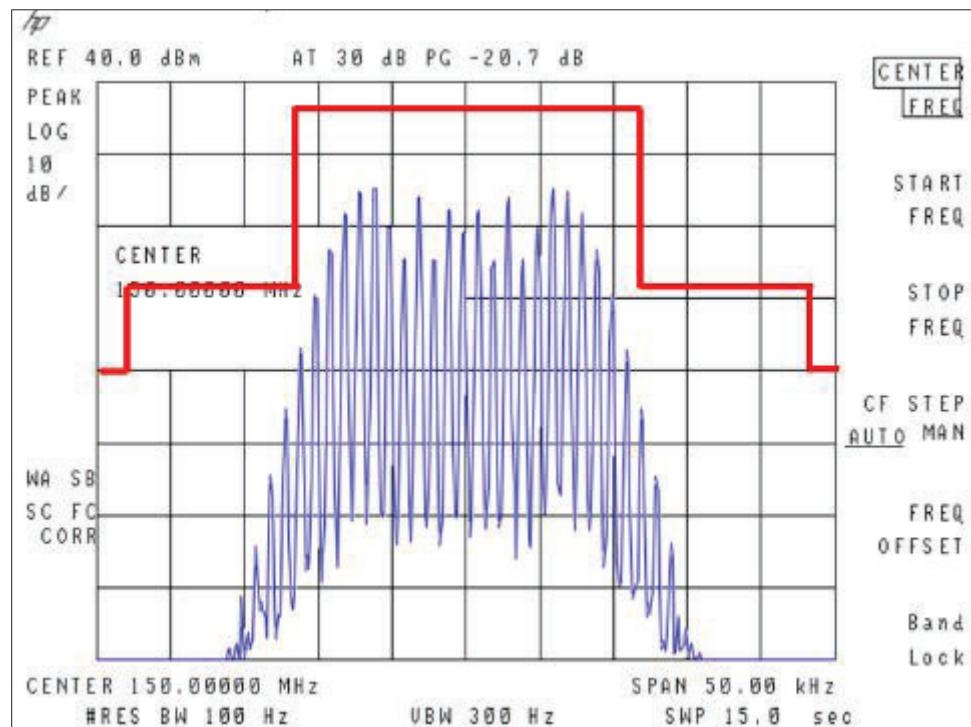


Figure 31. 150 MHz @ 25 kHz, Mask B

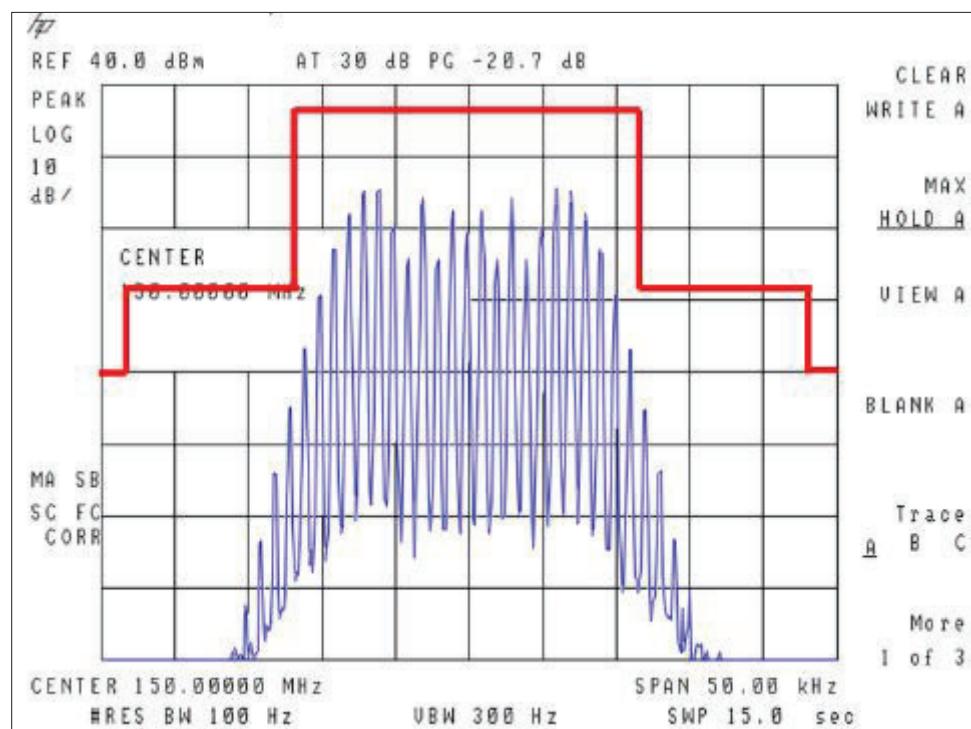


Figure 32. 150 MHz @ 25 kHz + 3.0 dB, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

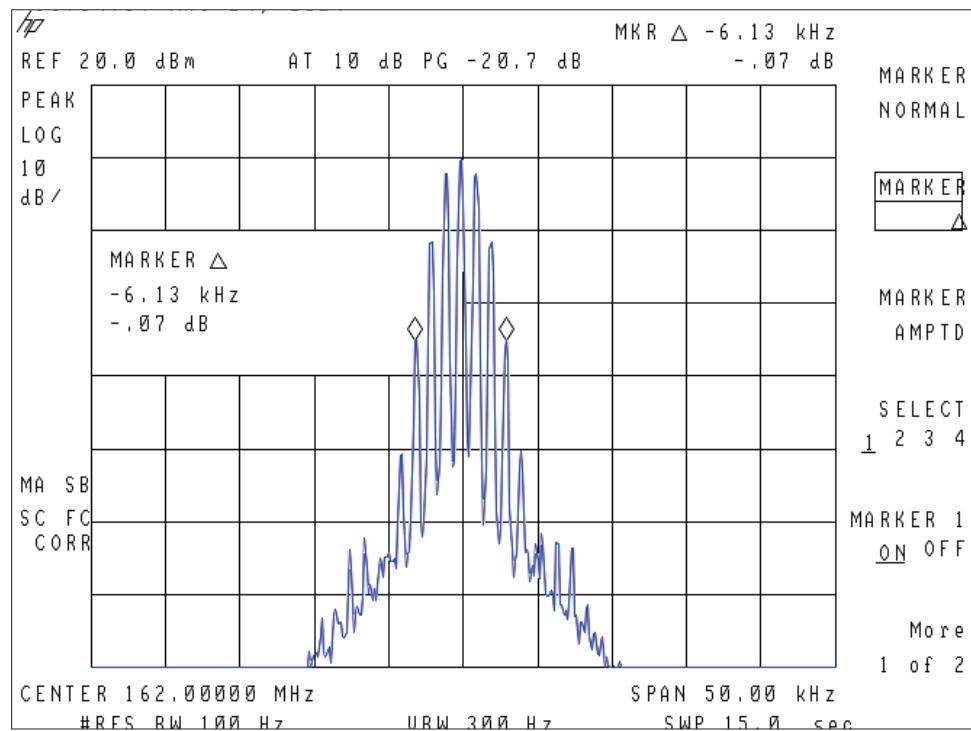


Figure 33. Input 162 MHz @ 6.25 kHz

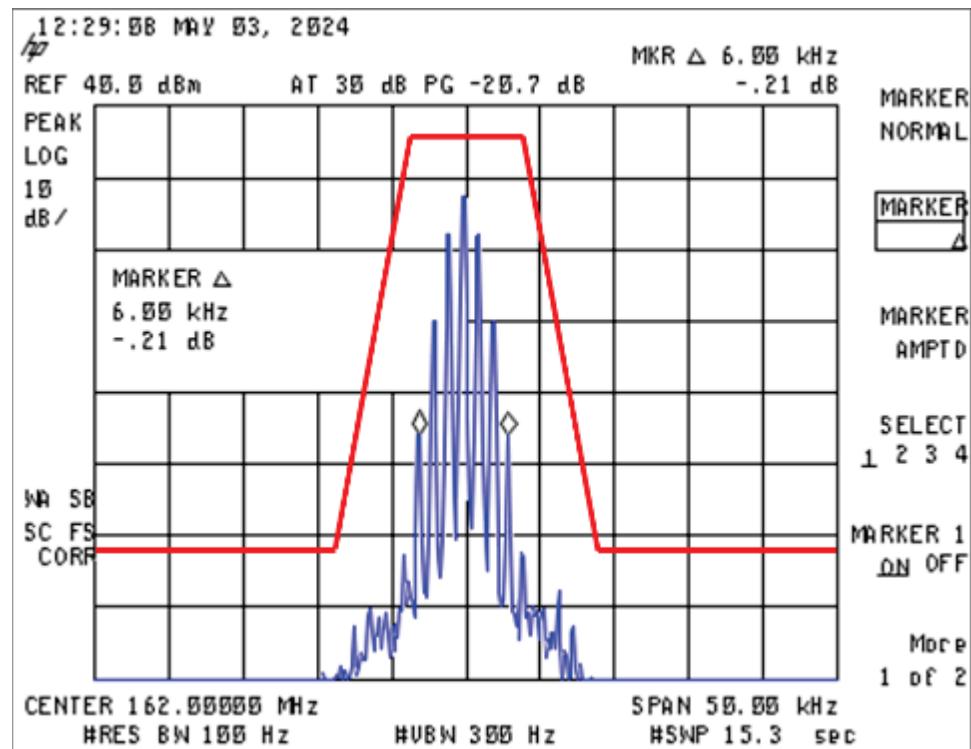


Figure 34. 162 MHz @ 6.25 kHz, Mask E

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

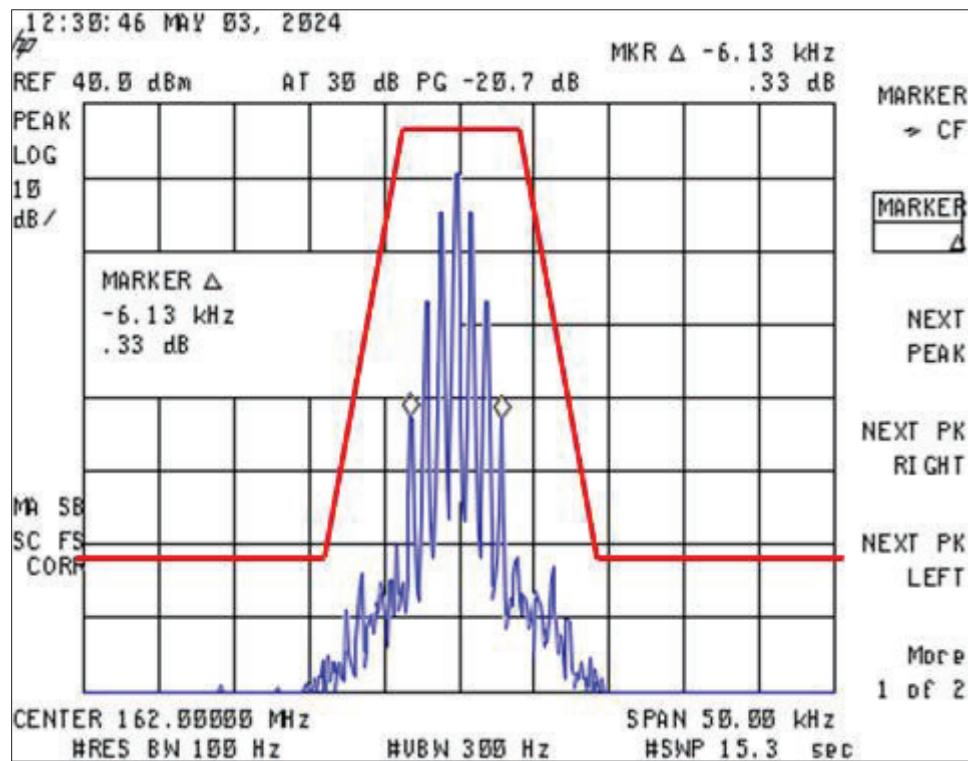


Figure 35. 162 MHz @ 6.25 kHz + 3.0 dB, Mask E

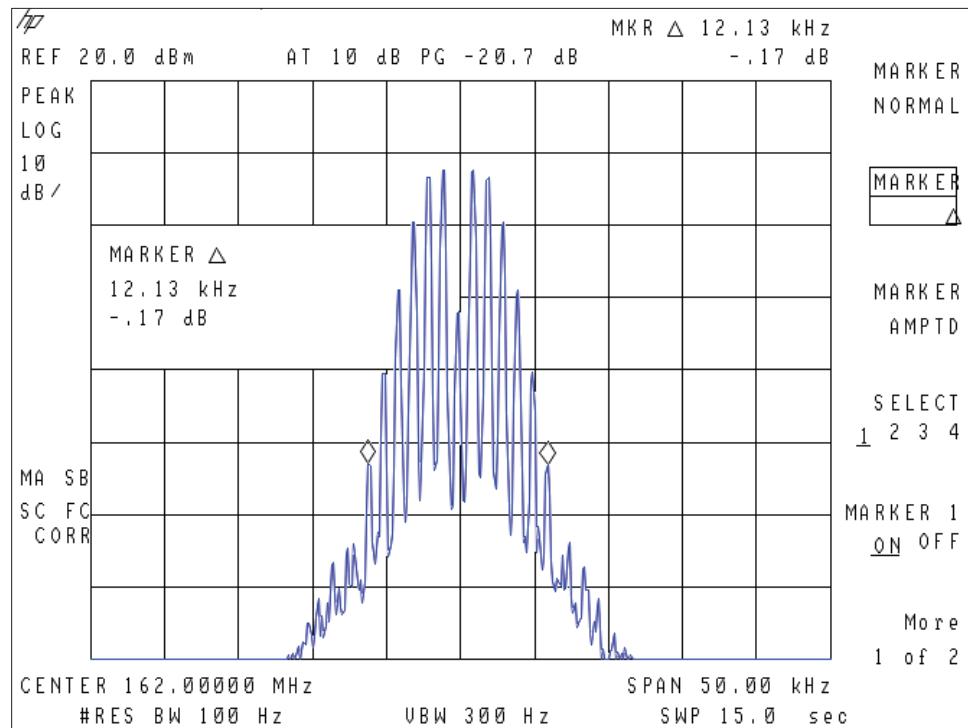


Figure 36. Input 162 MHz @ 12.5 kHz

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

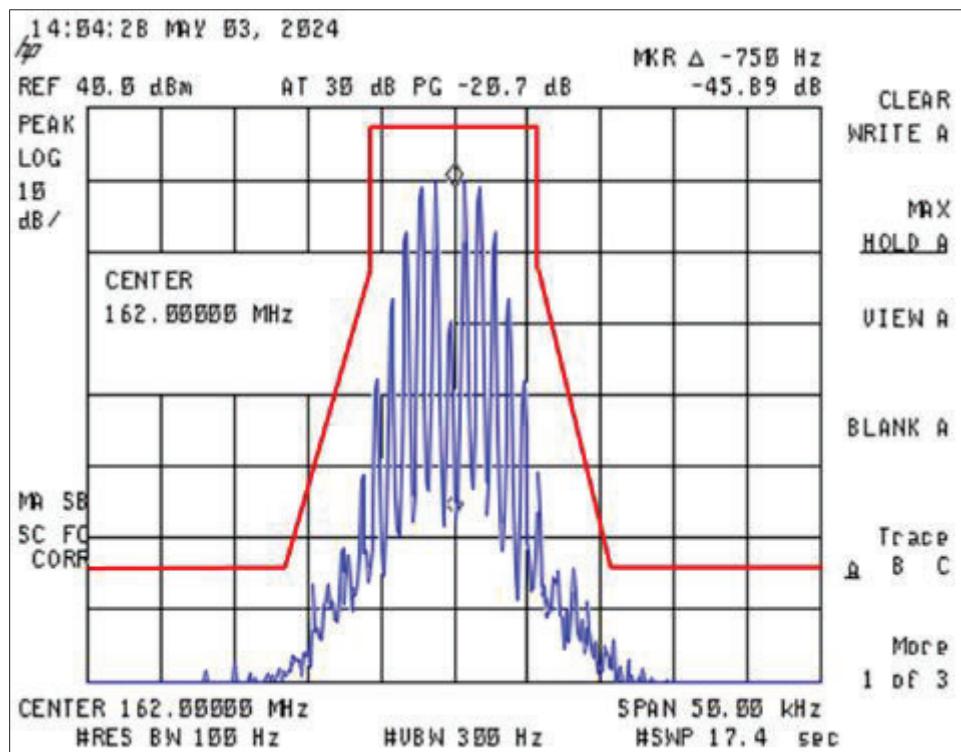


Figure 37. 162 MHz @ 12.5 kHz, Mask D

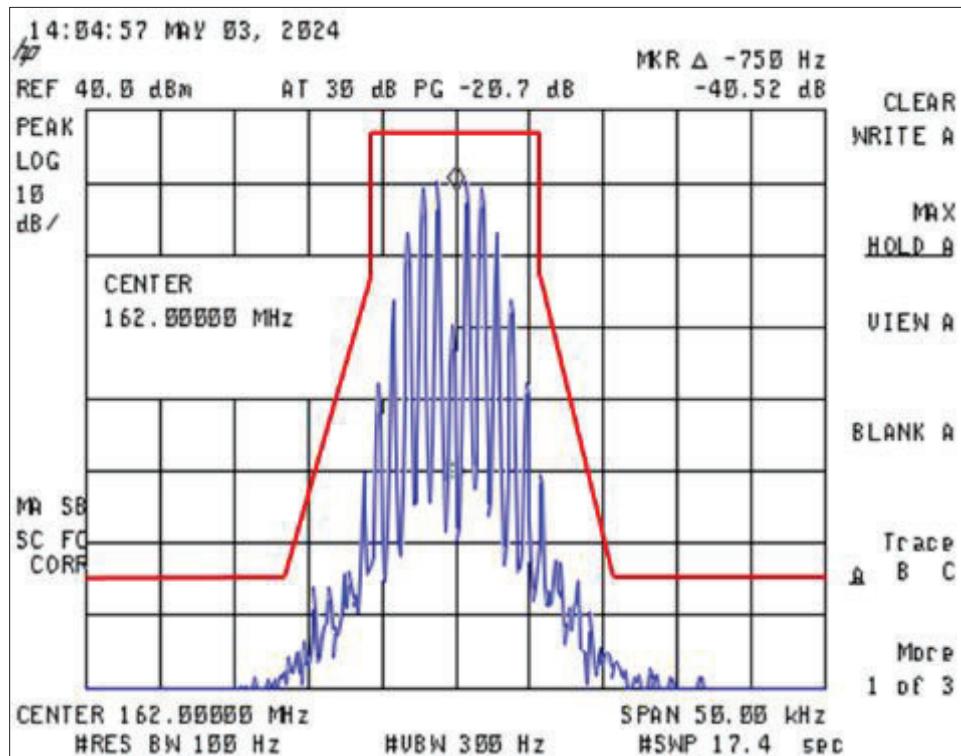


Figure 38. 162 MHz @ 12.5 kHz + 3.0 dB, Mask D

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

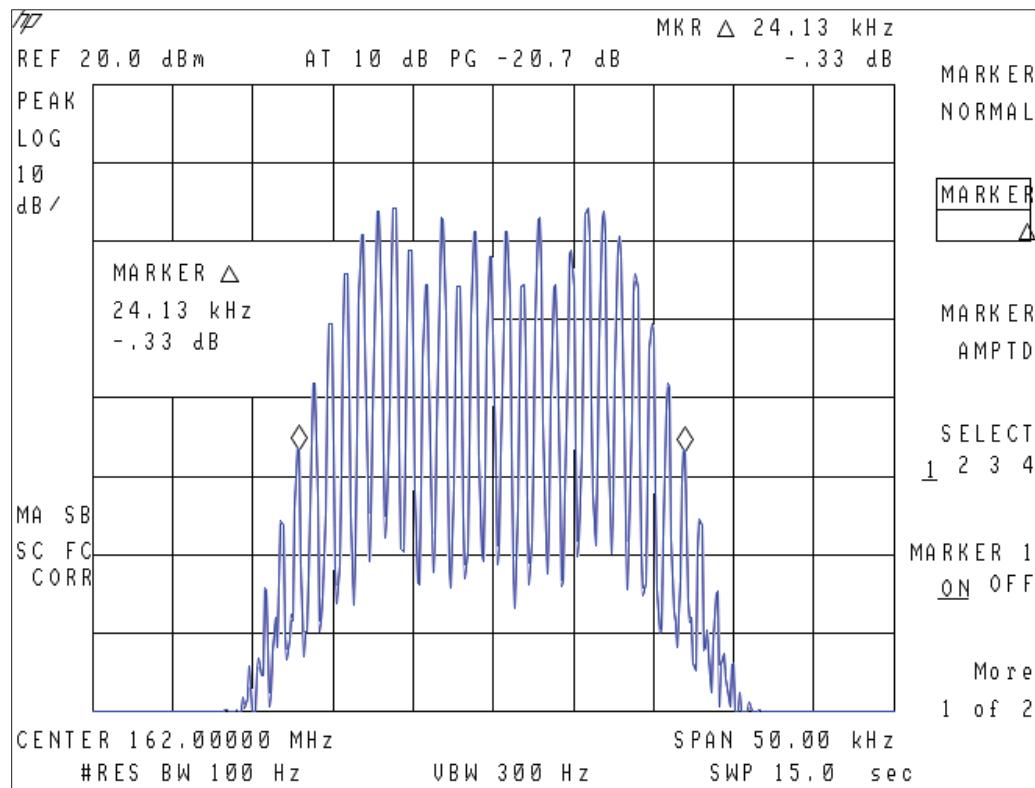


Figure 39. Input 162 MHz @ 25 kHz

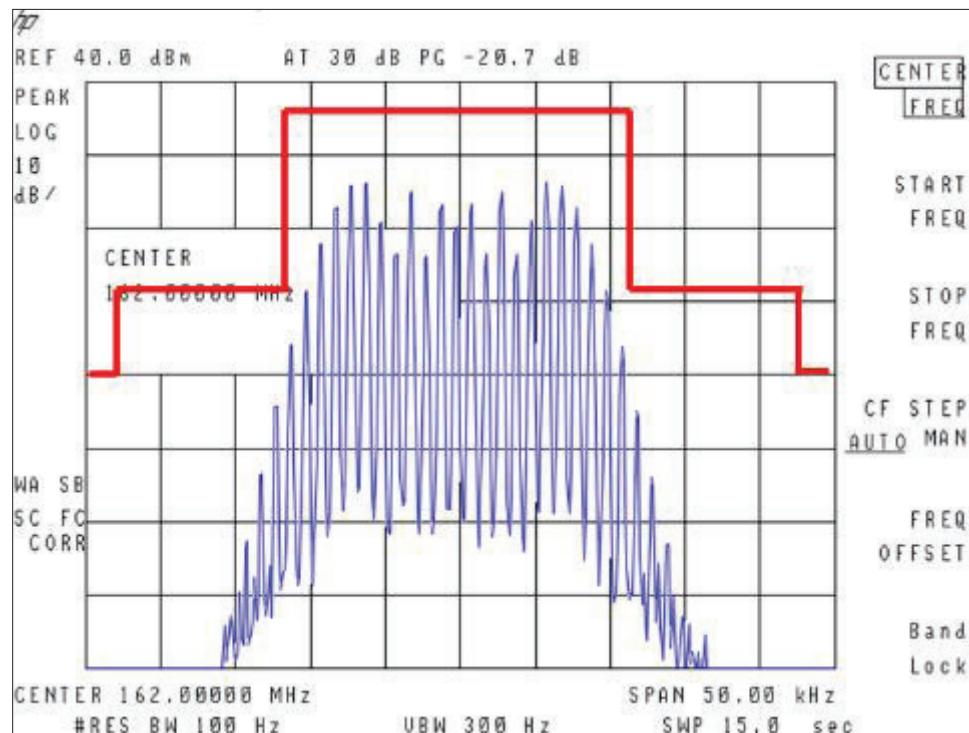


Figure 40. 162 MHz @ 25 kHz, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

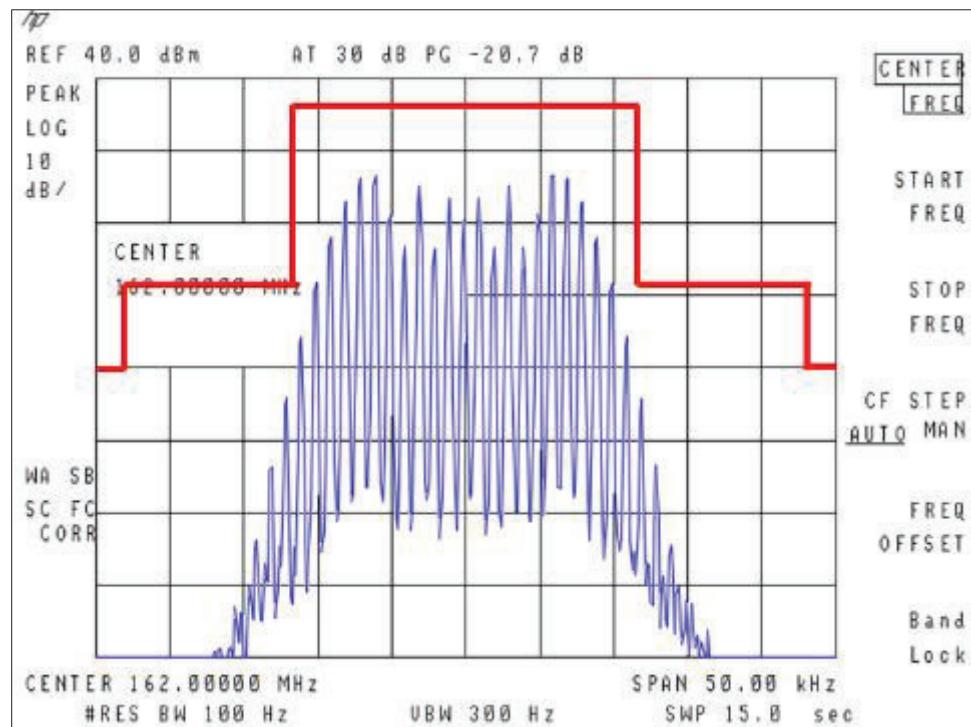


Figure 41. 162 MHz @ 25 kHz + 3.0 dB, Mask B

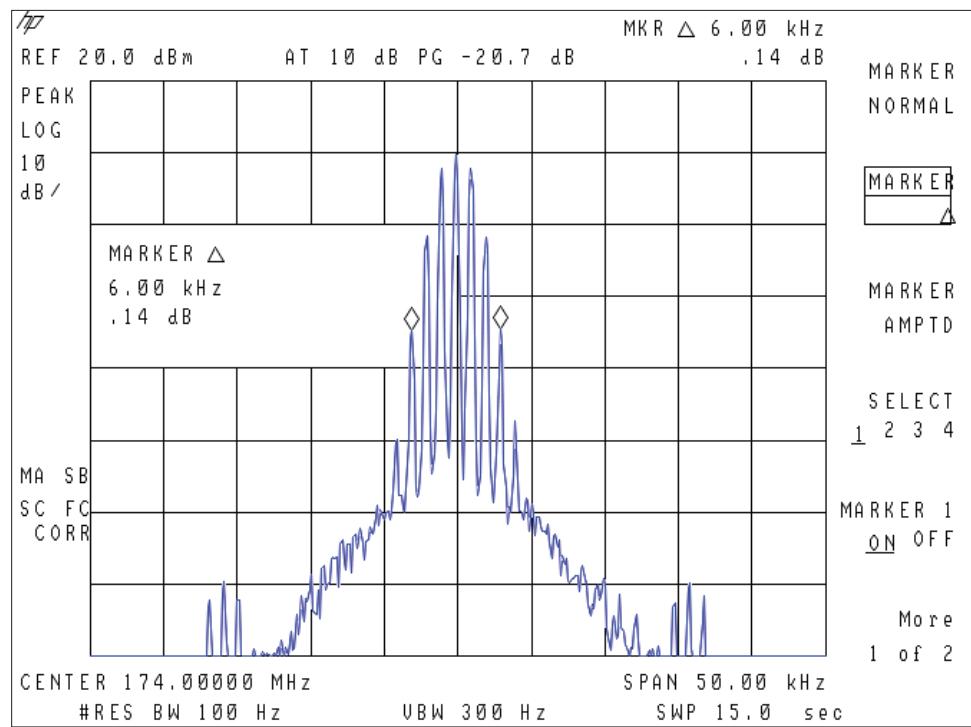


Figure 42. Input 174 MHz @ 6.25 kHz

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

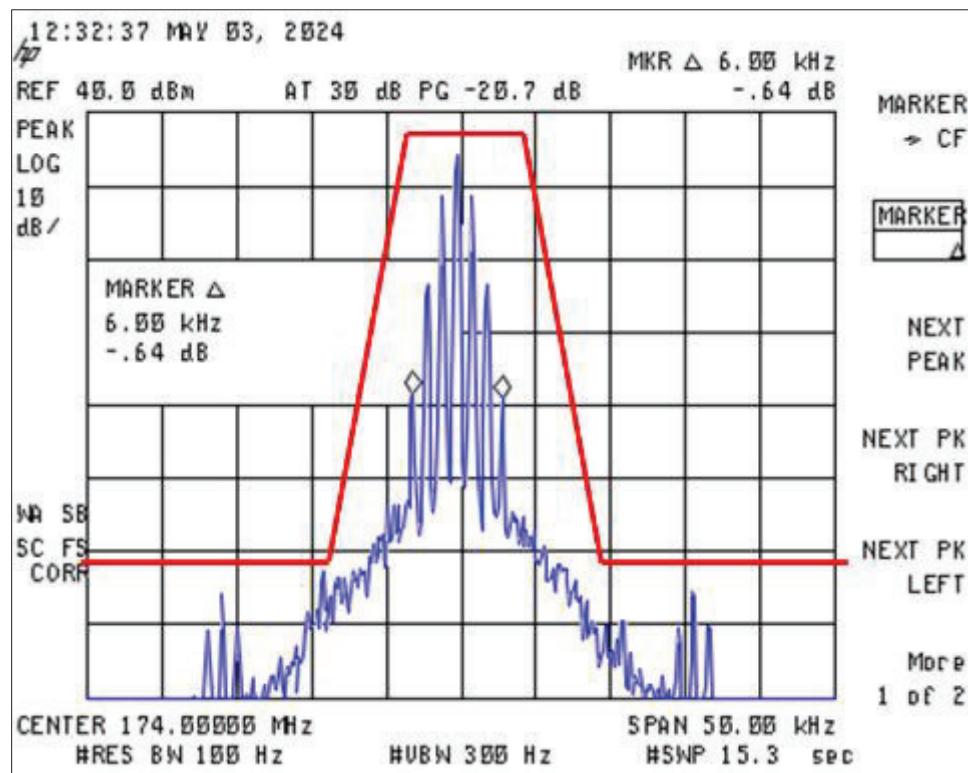


Figure 43. 174 MHz @ 6.25 kHz, Mask E

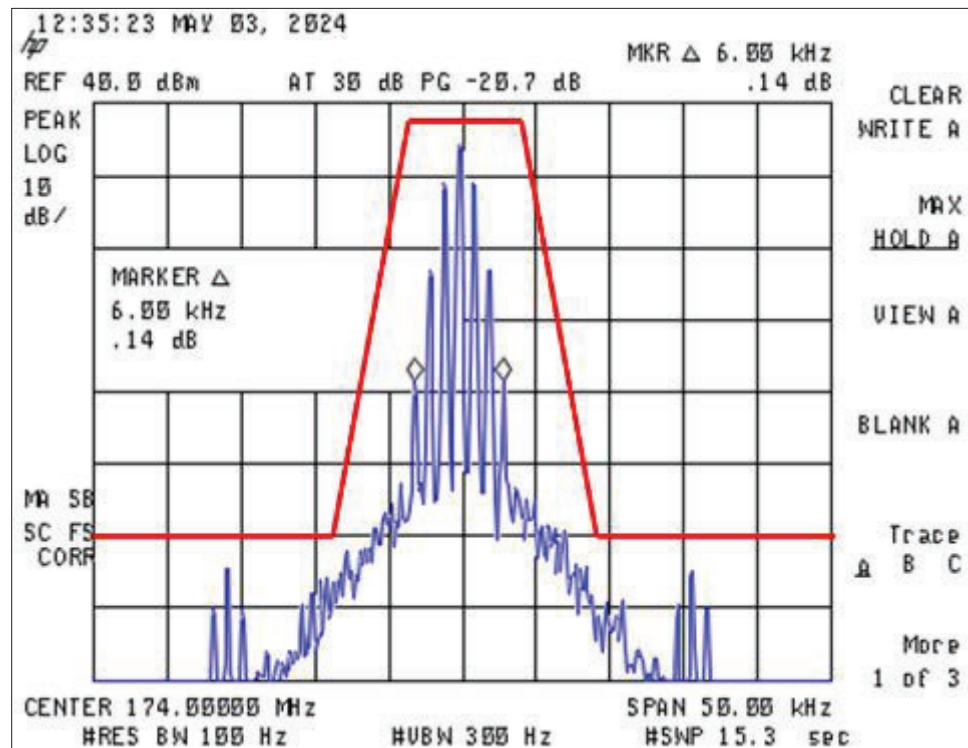


Figure 44. 174 MHz @ 6.25 kHz + 3.0 dB, Mask E

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

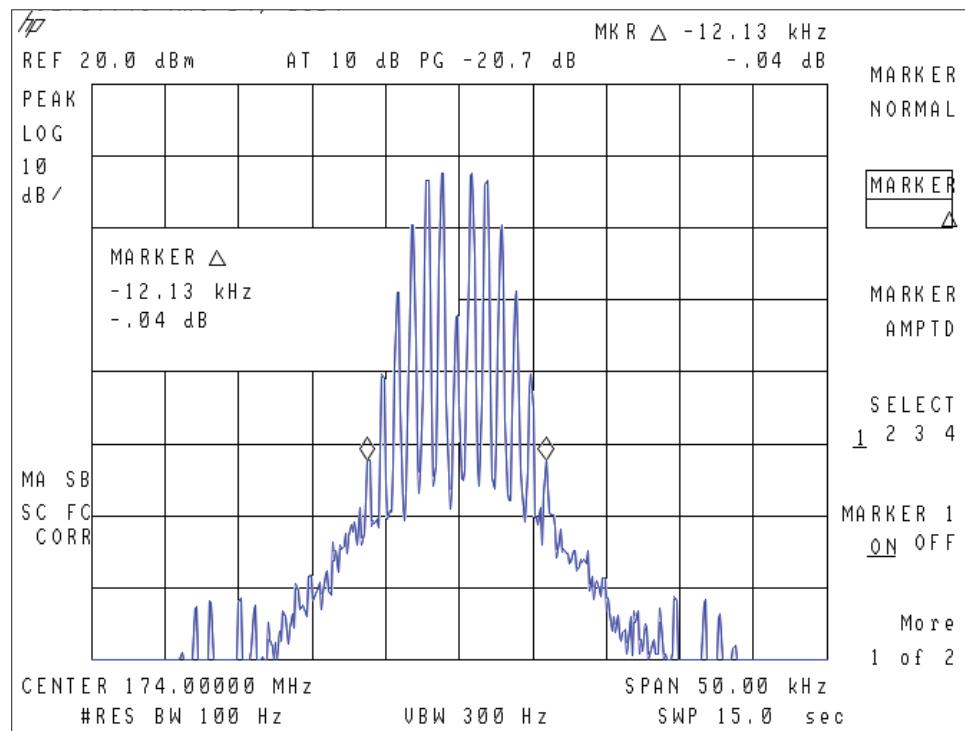


Figure 45. Input 174 MHz @ 12.5 kHz

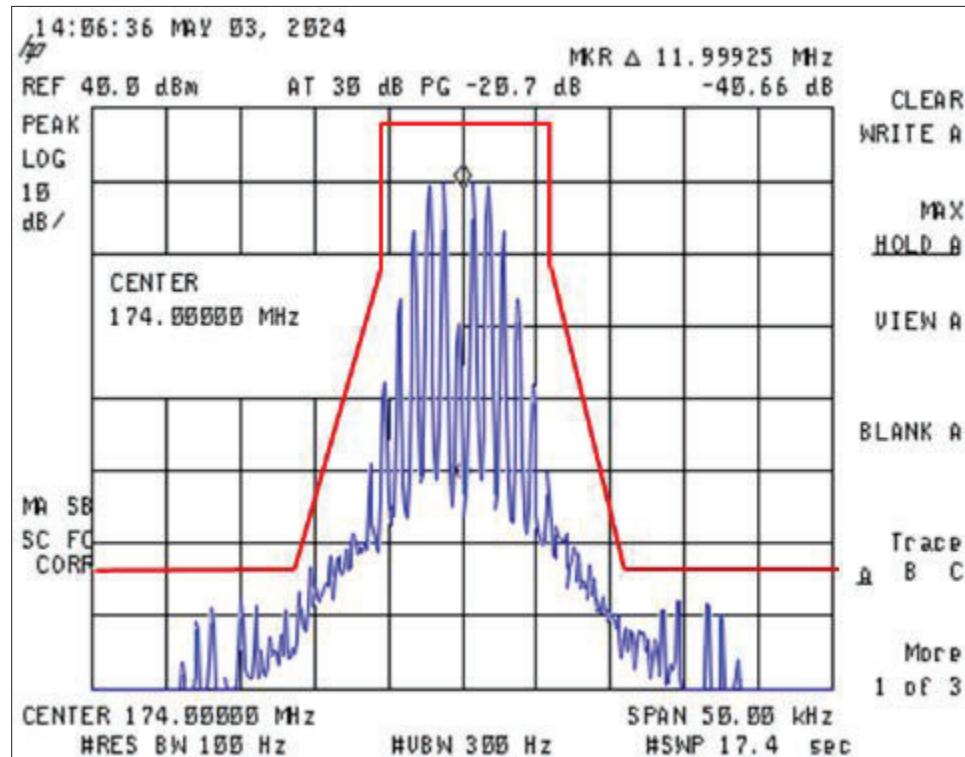


Figure 46. 174 MHz @ 12.5 kHz, Mask D

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

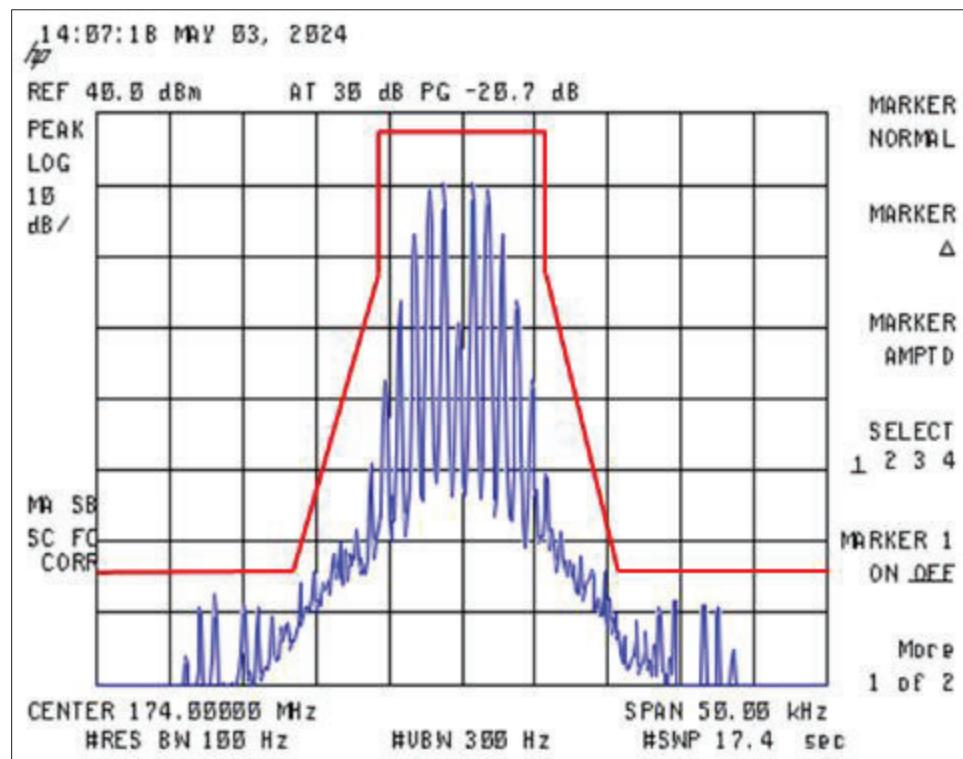


Figure 47. 174 MHz @ 12.5 kHz + 3.0 dB, Mask D

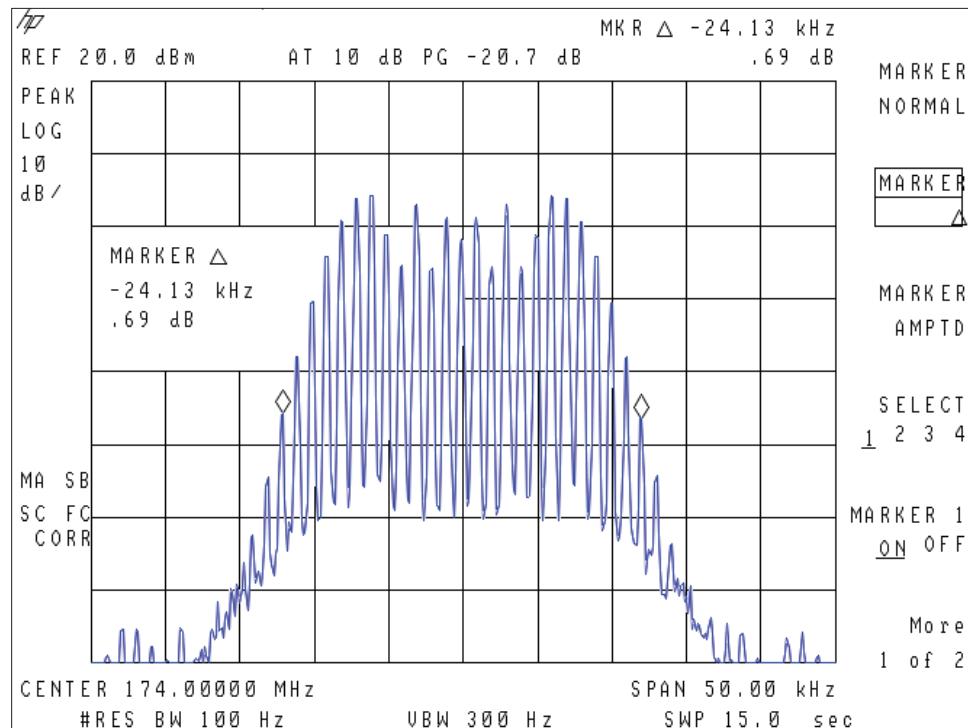


Figure 48. Input 174 MHz @ 25

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

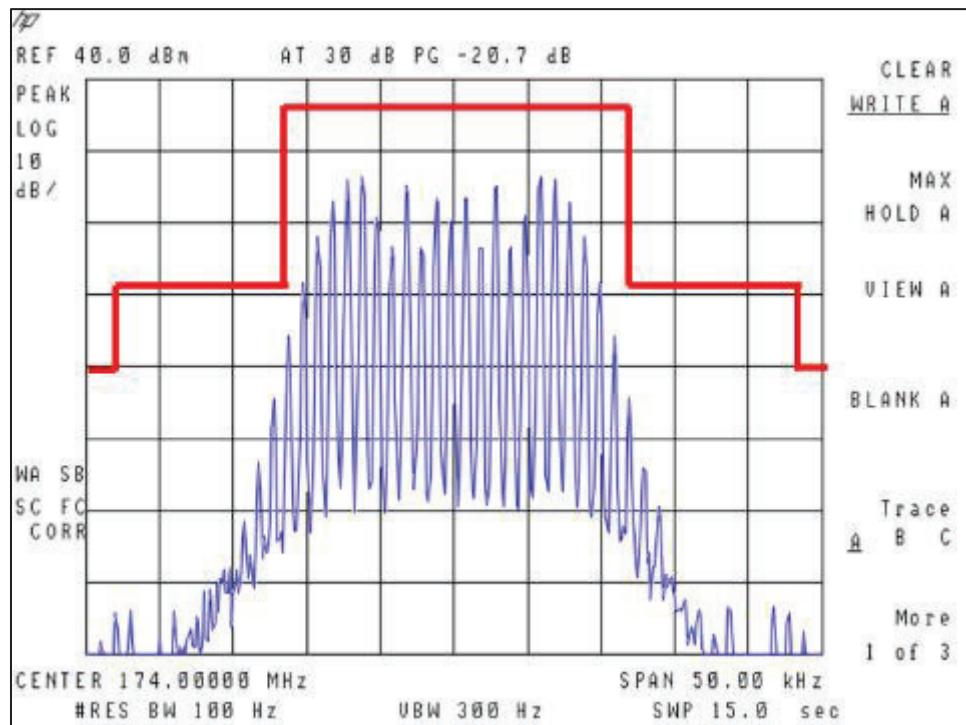


Figure 49. 174 MHz @ 25 kHz, Mask B

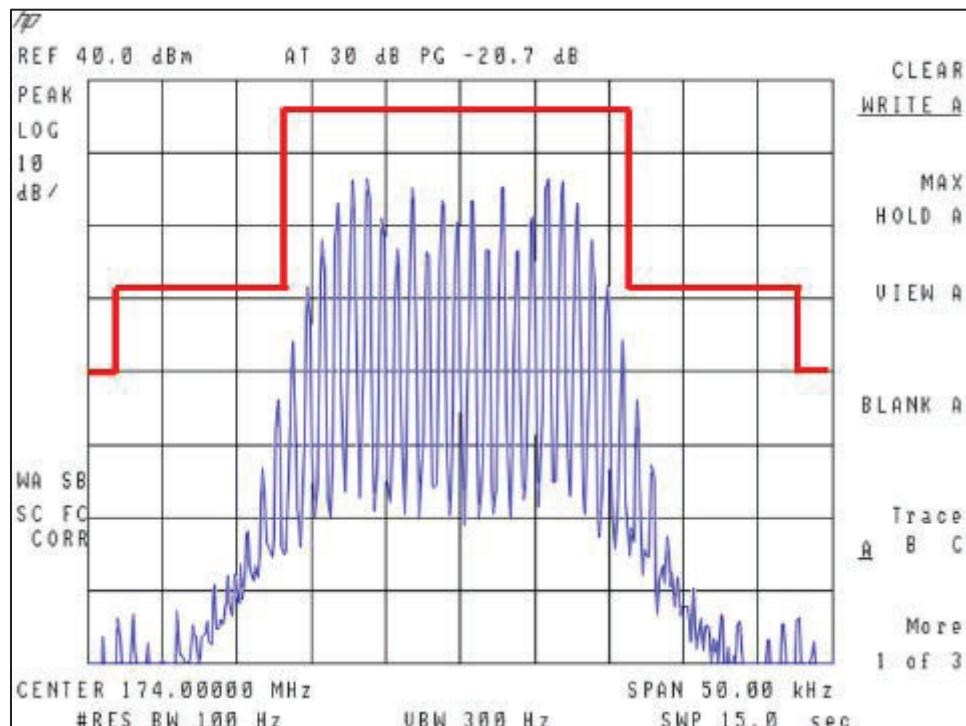


Figure 50. 174 MHz @ 25 kHz + 3.0 dB, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

2.11.2 UHF Channels

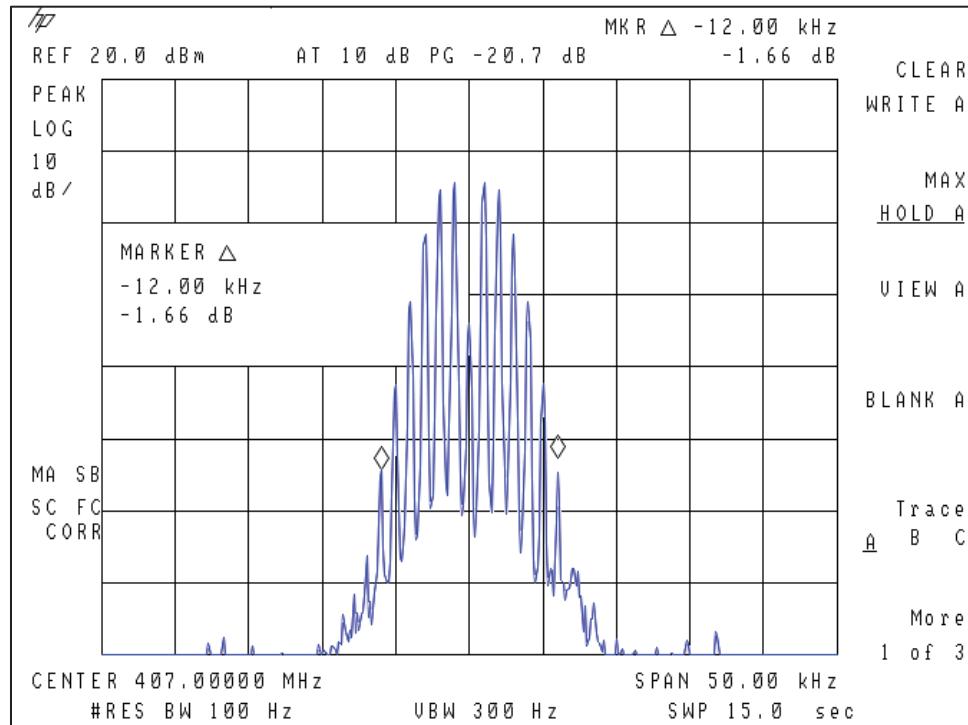


Figure 51. Input 407 MHz @ 12.5 kHz

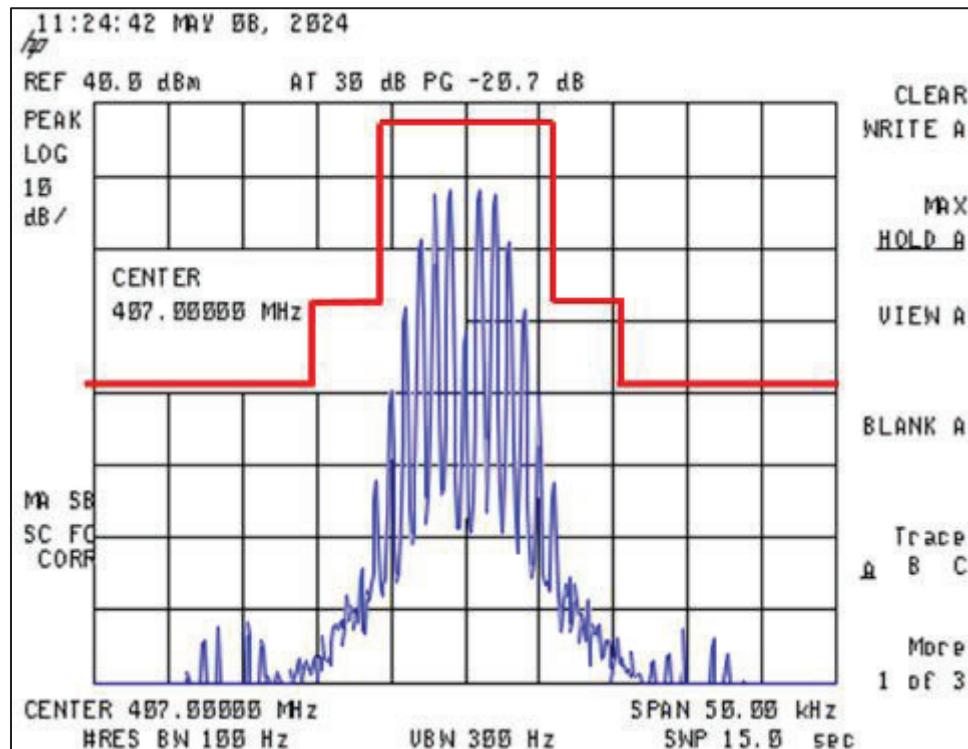


Figure 52. 407 MHz @ 12.5 kHz, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

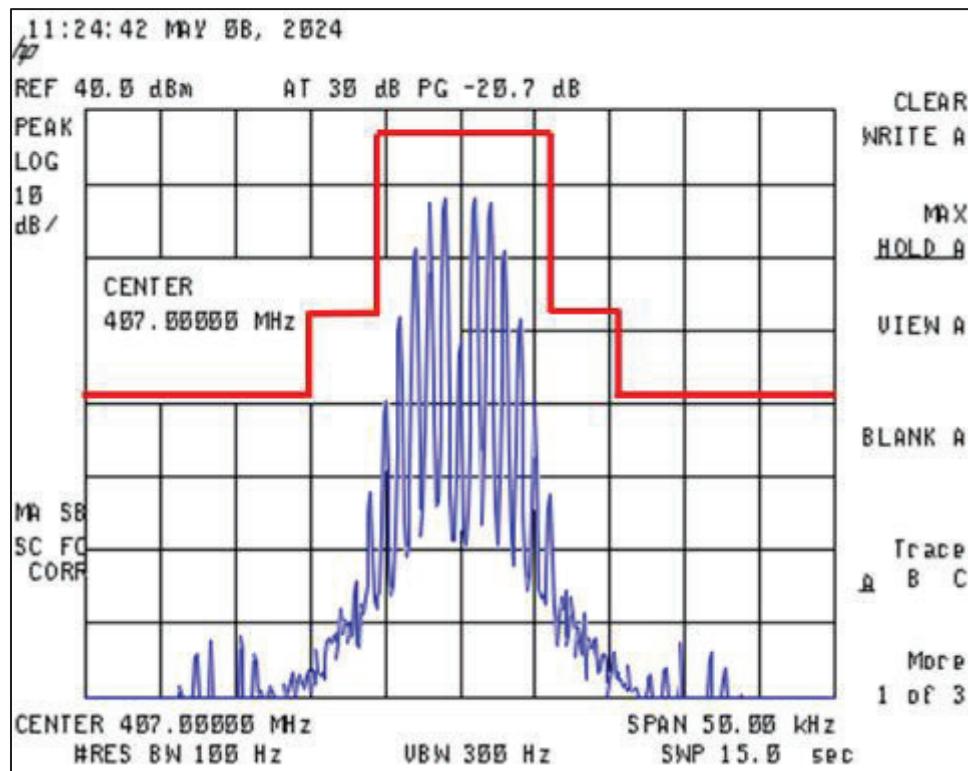


Figure 53. 407 MHz @ 12.5 kHz + 3.0 dB, Mask B

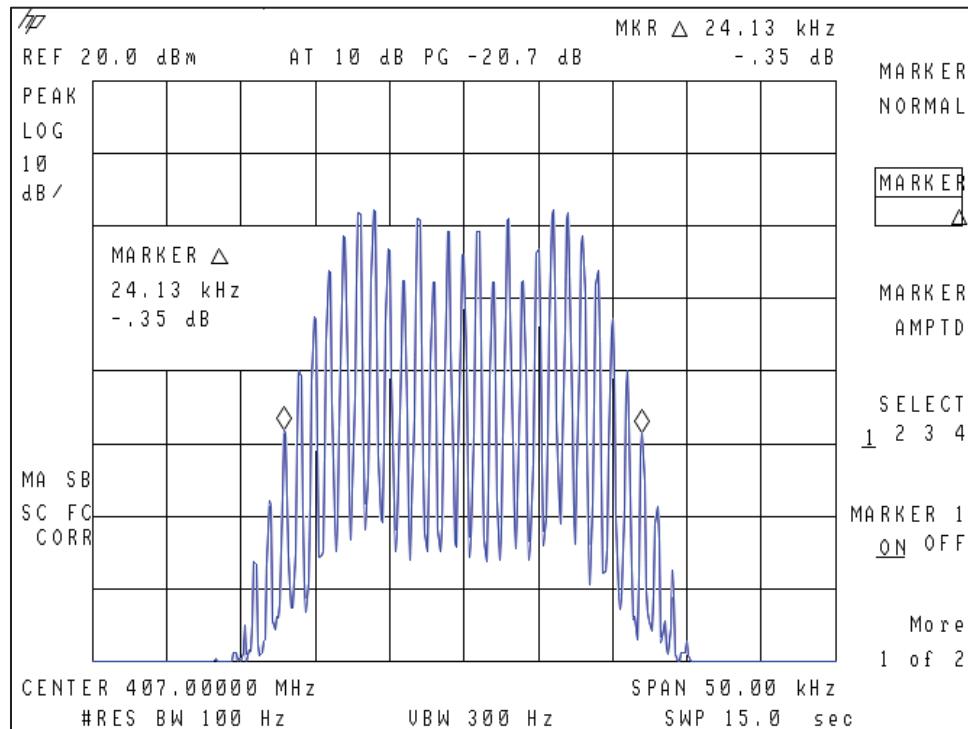


Figure 54. Input 407 MHz @ 25 kHz

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

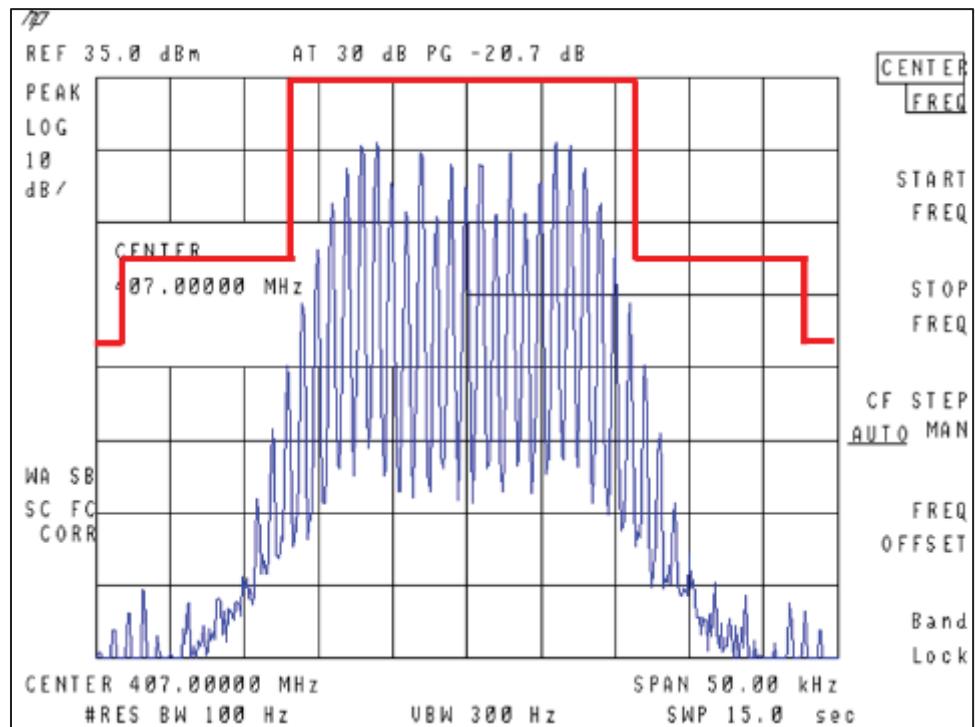


Figure 55. 407 MHz @ 25 kHz, Mask B

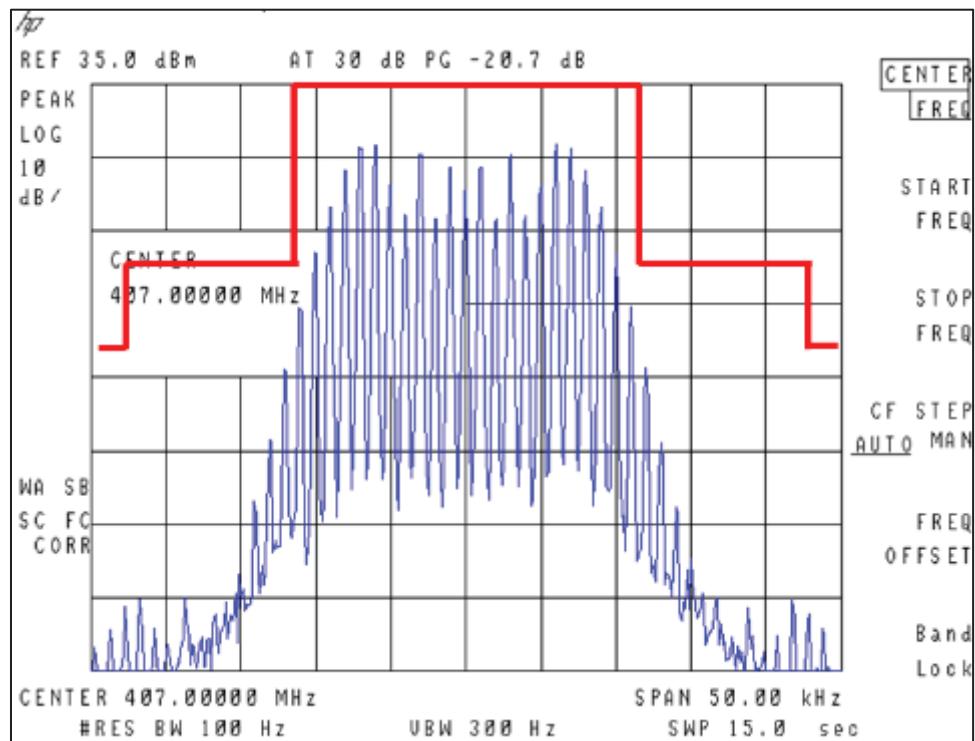


Figure 56. 407 MHz @ 25 kHz + 3.0 dB, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
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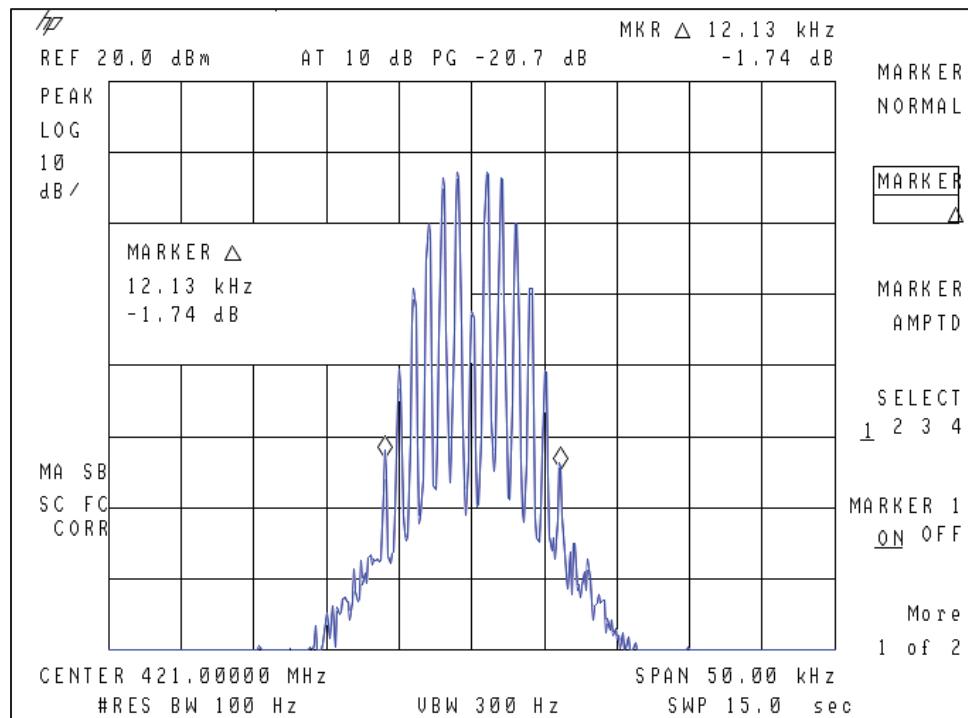


Figure 57. Input 421 MHz @ 12.5 kHz

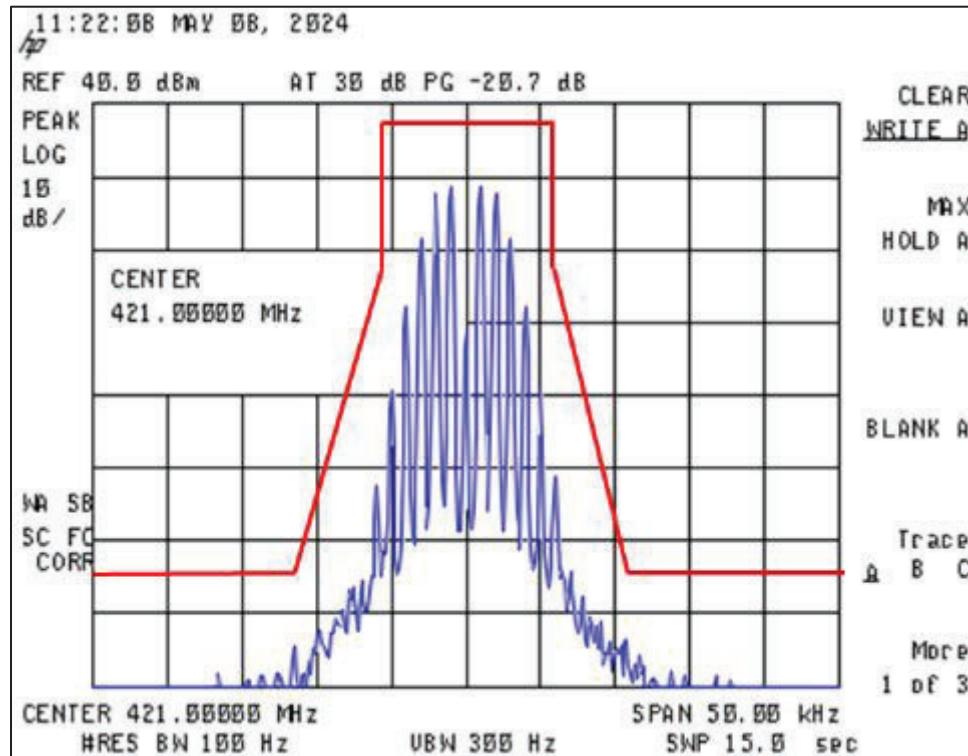


Figure 58. 421 MHz @ 12.5 kHz, Mask D

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
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22303-SAFE4
24-0123
August 1, 2024
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SAFE-0002

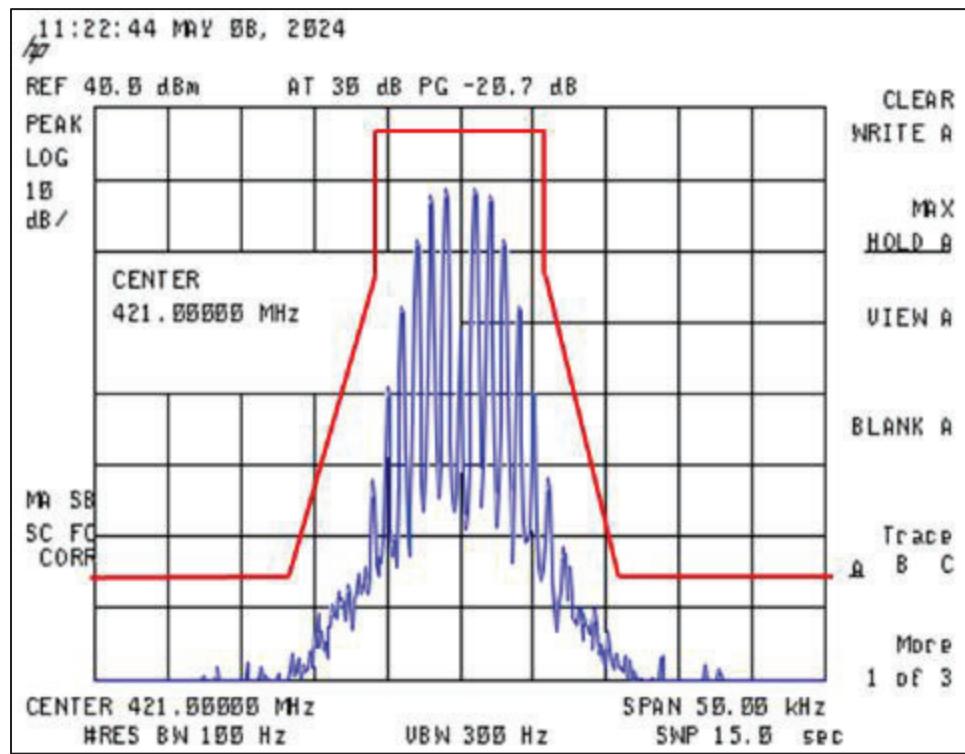


Figure 59. 421 MHz @ 12.5 kHz, +3 dB, Mask D

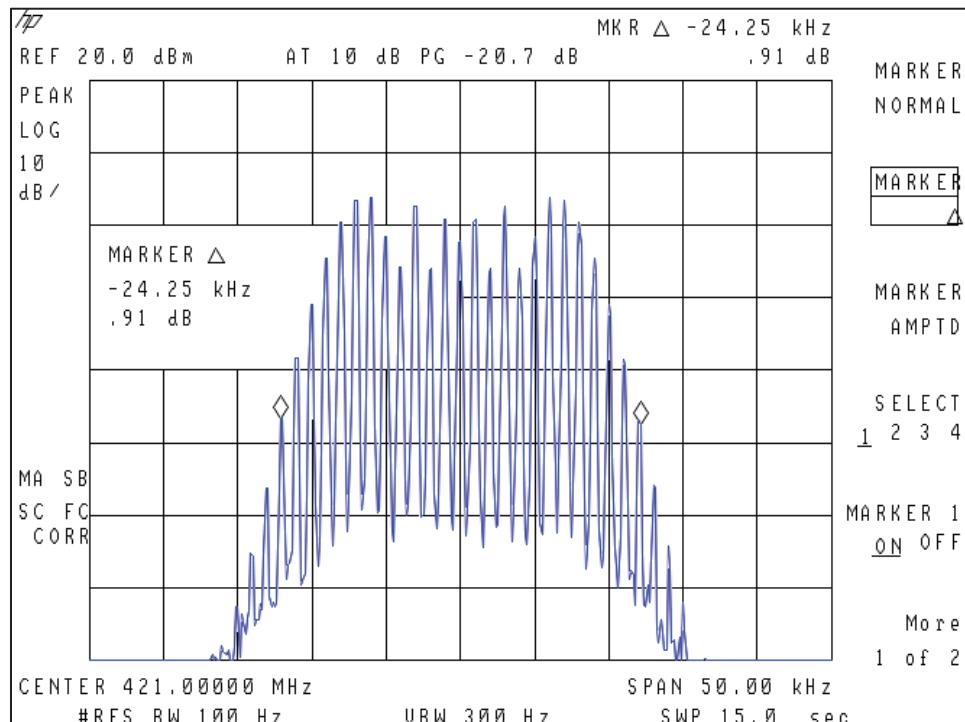


Figure 60. Input 421 MHz @ 25 kHz

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

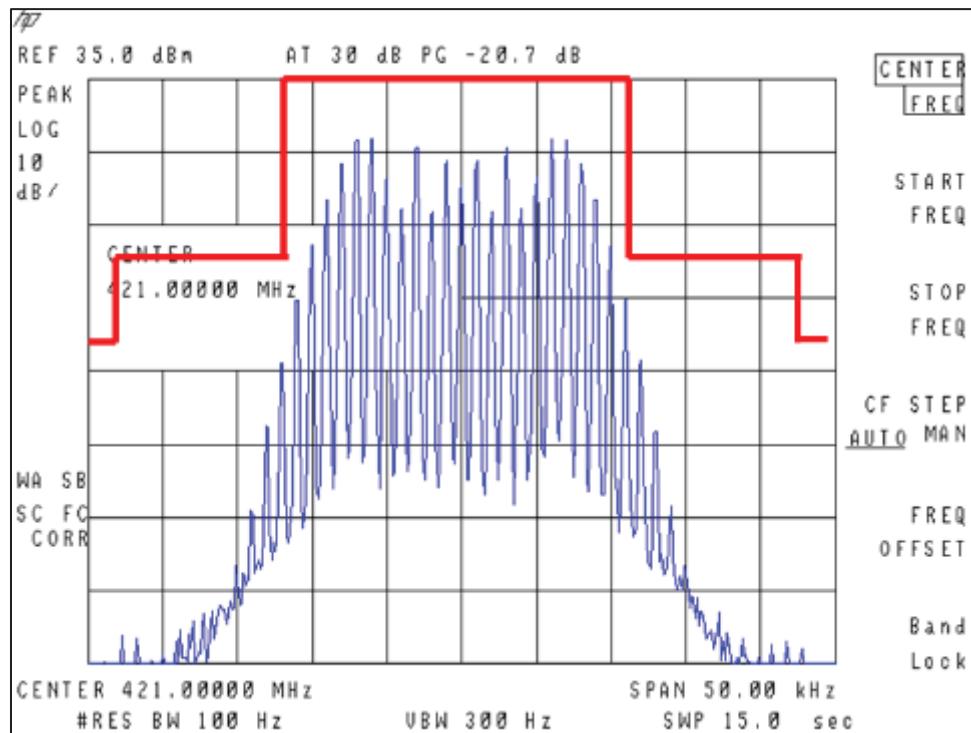


Figure 61. Input 421 MHz @ 25 kHz, Mask B

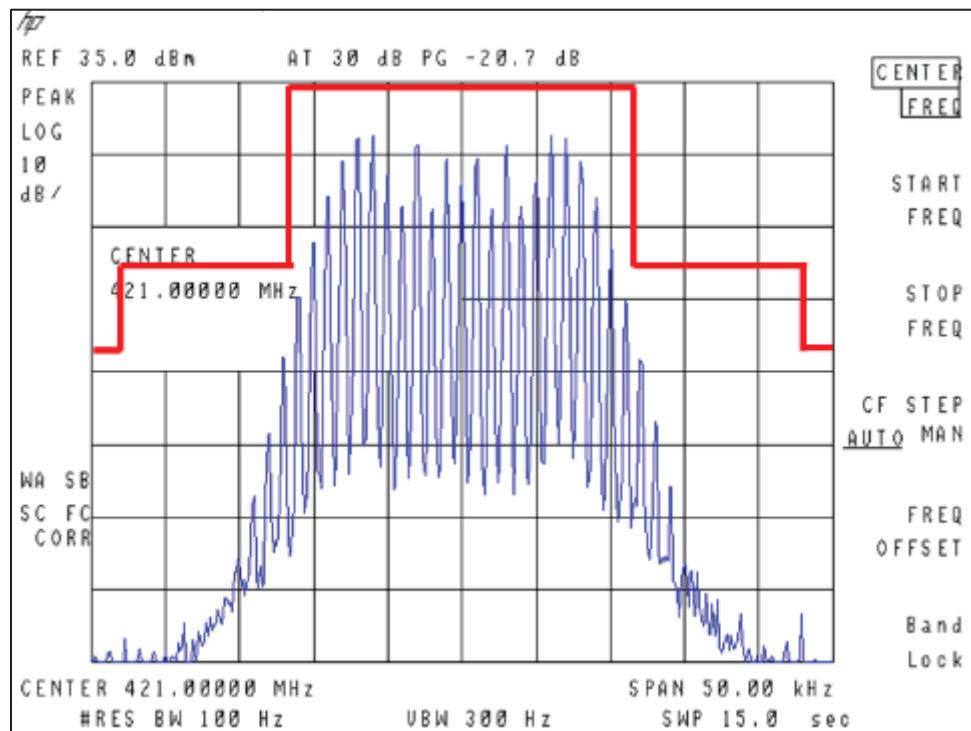


Figure 62. Input 421 MHz @ 25 kHz, +3 dB, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

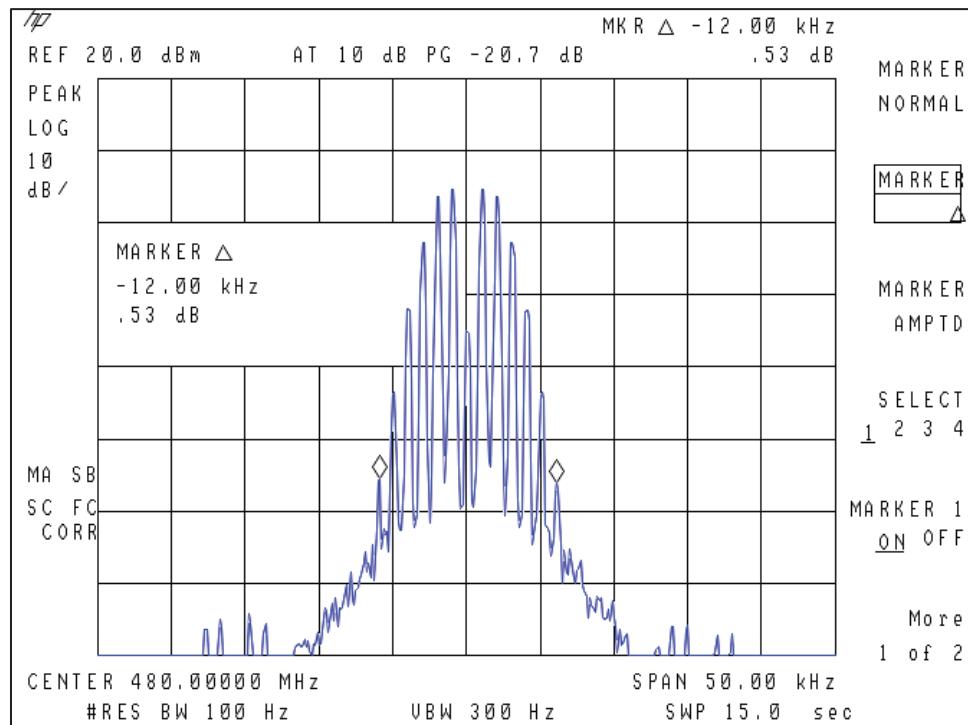


Figure 63. Input 480 MHz @ 12.5 kHz

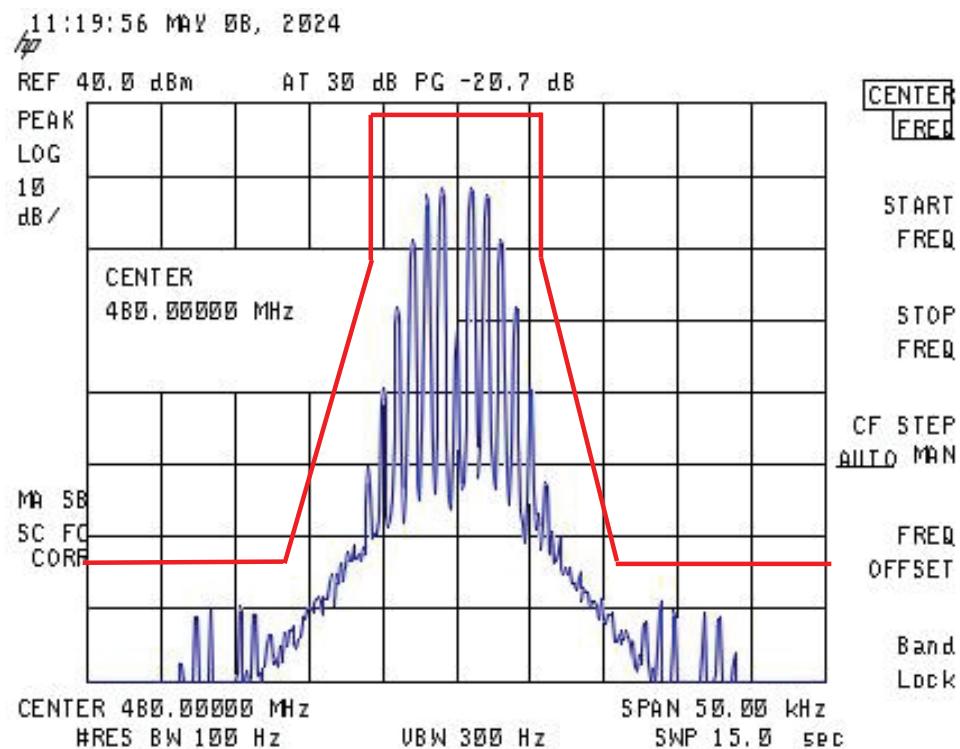


Figure 64. 480 MHz @ 12.5 kHz, Mask D

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

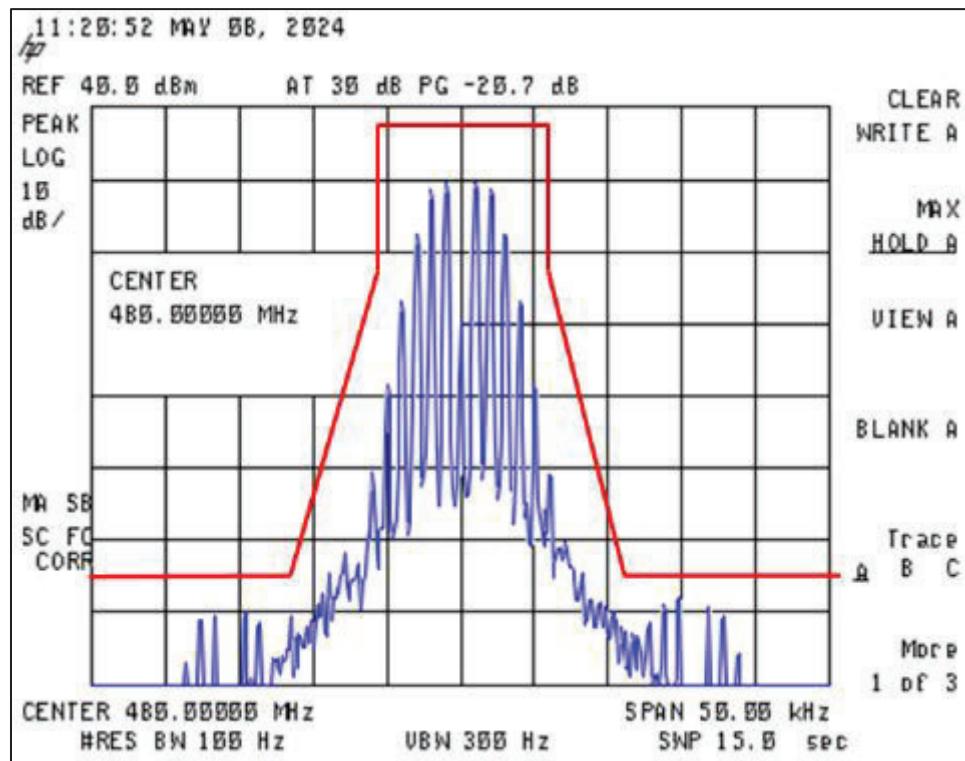


Figure 65. 480 MHz @ 12.5 kHz + 3.0 dB, Mask D

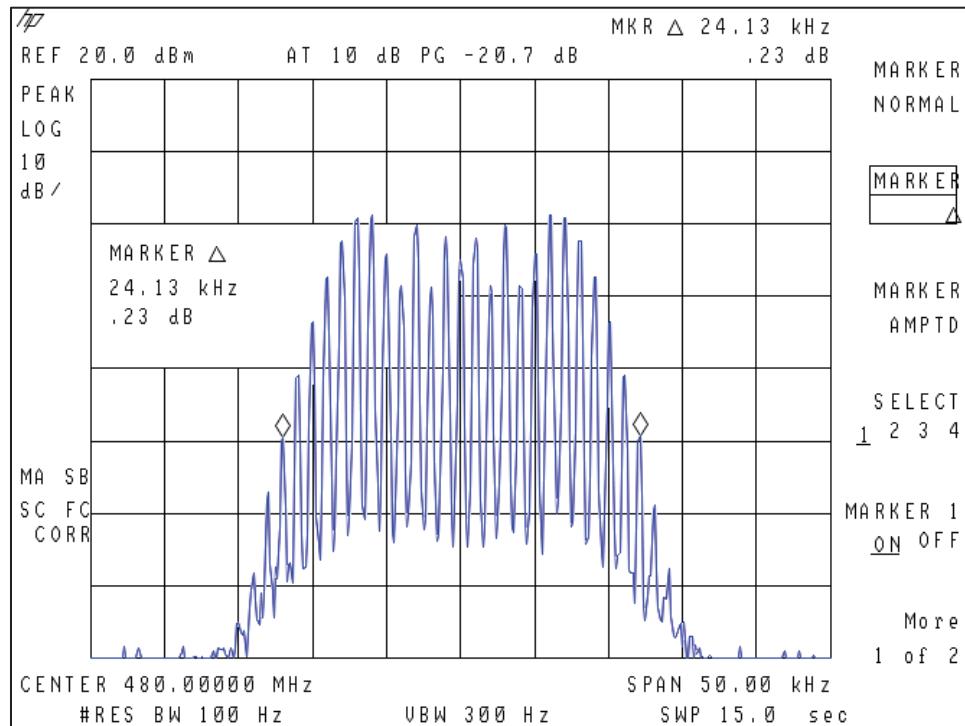


Figure 66. Input 480 MHz @ 25 kHz

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

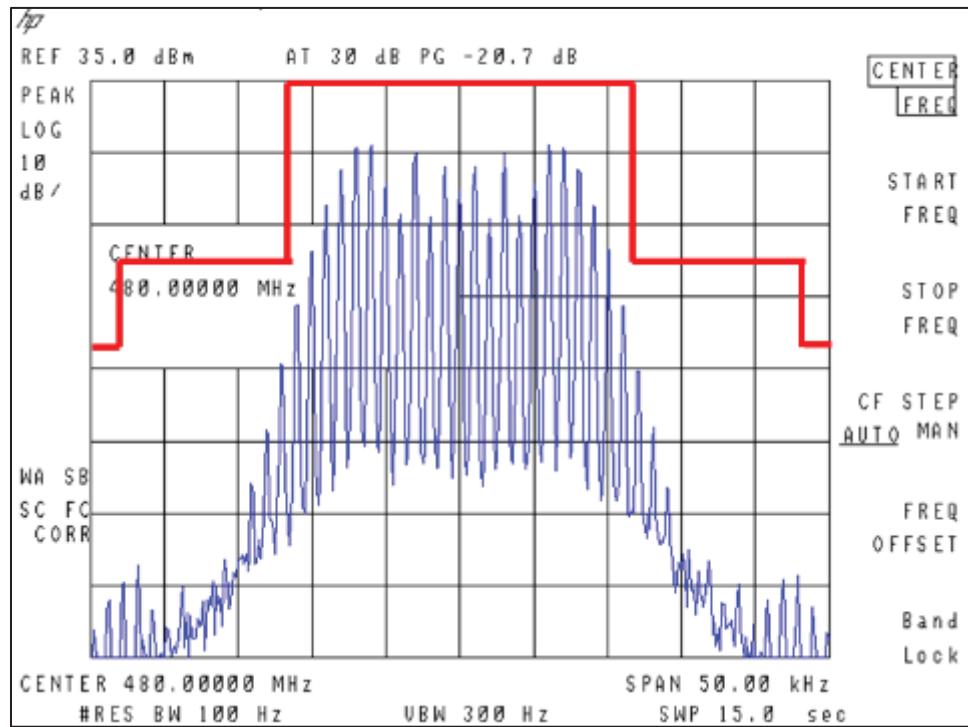


Figure 67. 480 MHz @ 25 kHz, Mask B

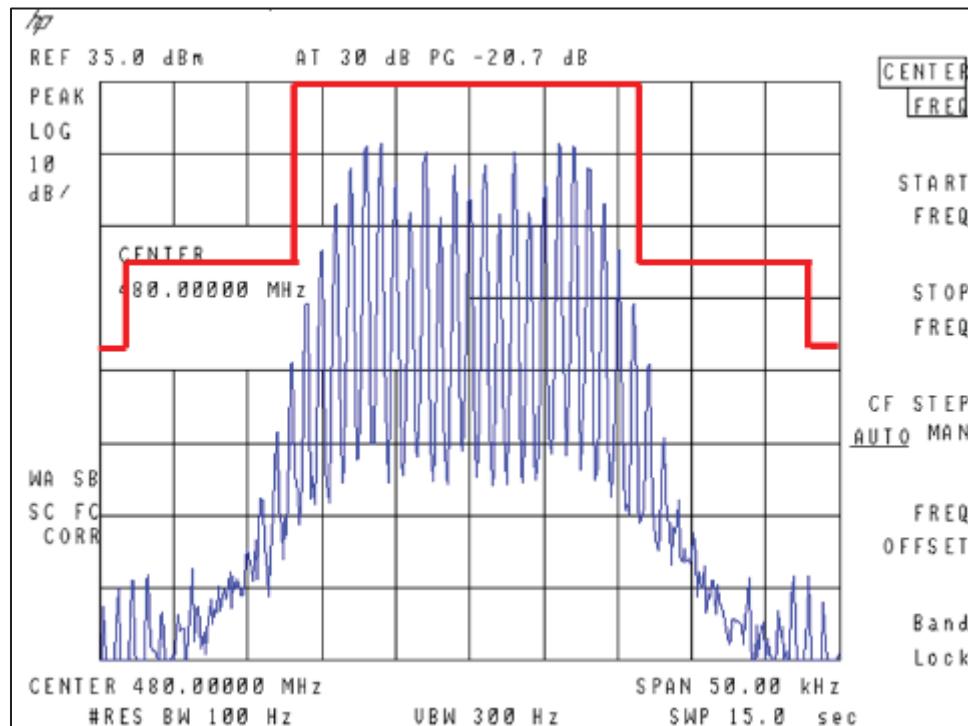


Figure 68. 480 MHz @ 25 kHz + 3.0 dB, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
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Safe-Com Wireless
SAFE-0002

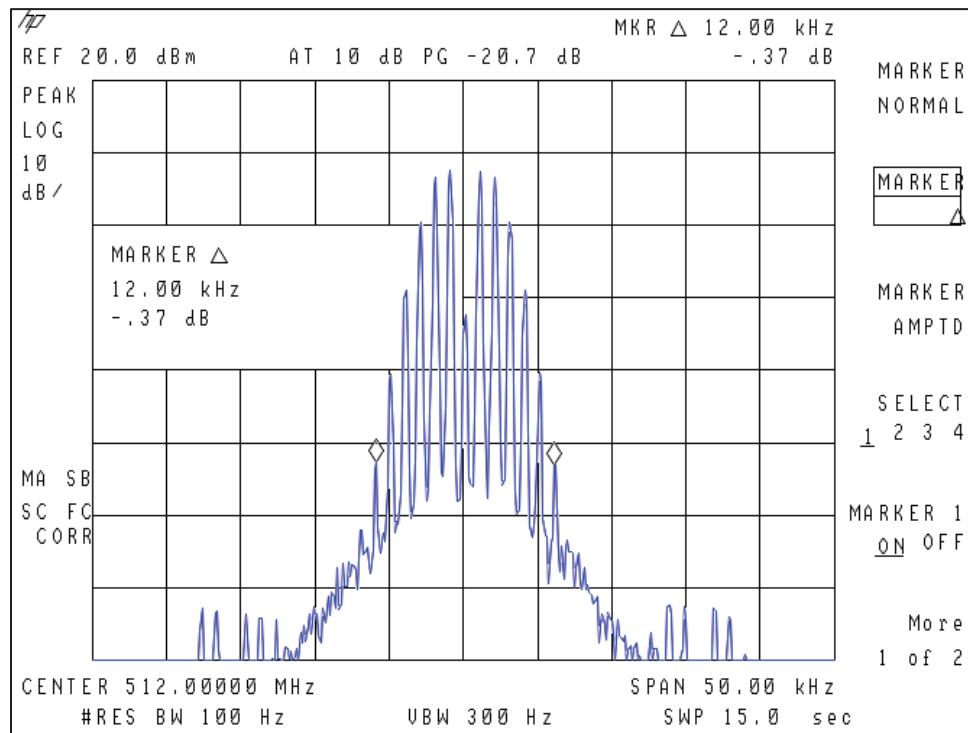


Figure 69. Input 512 MHz @ 12.5 kHz

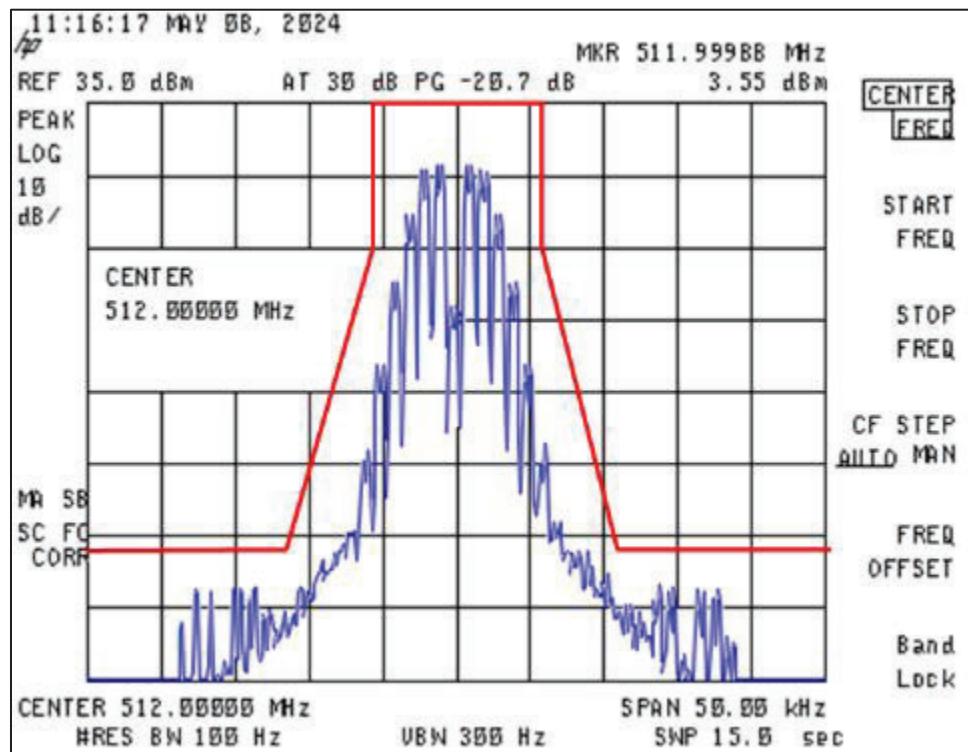


Figure 70. 512 MHz @ 12.5 kHz, Mask D

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
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SAFE-0002

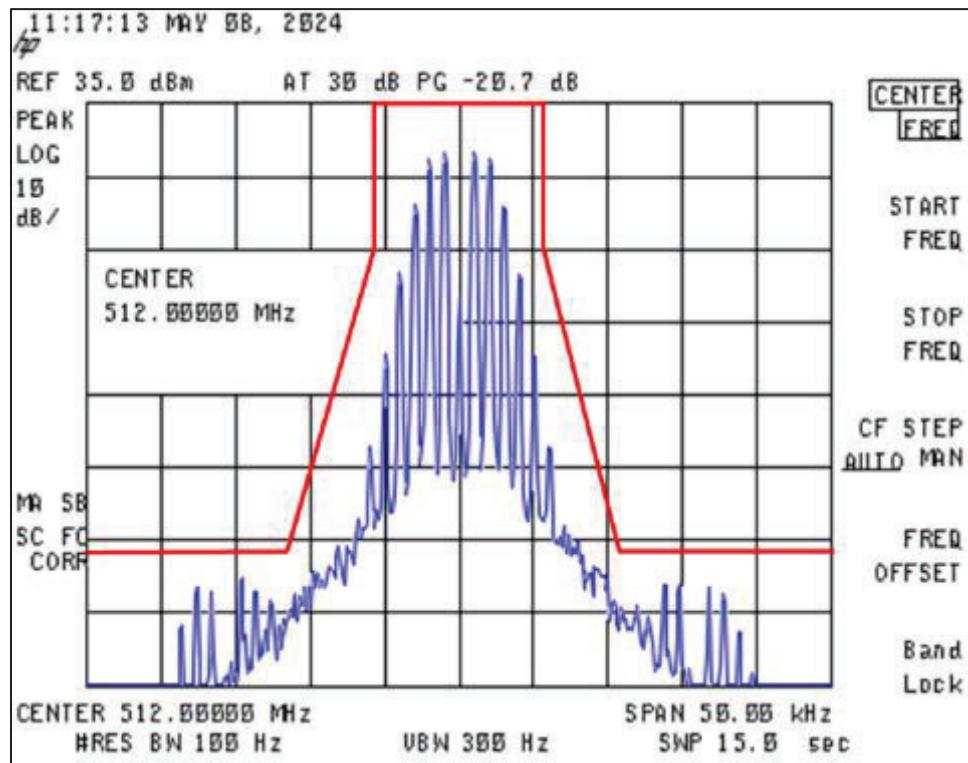


Figure 71. 512 MHz @ 12.5 kHz +3 dB, Mask D

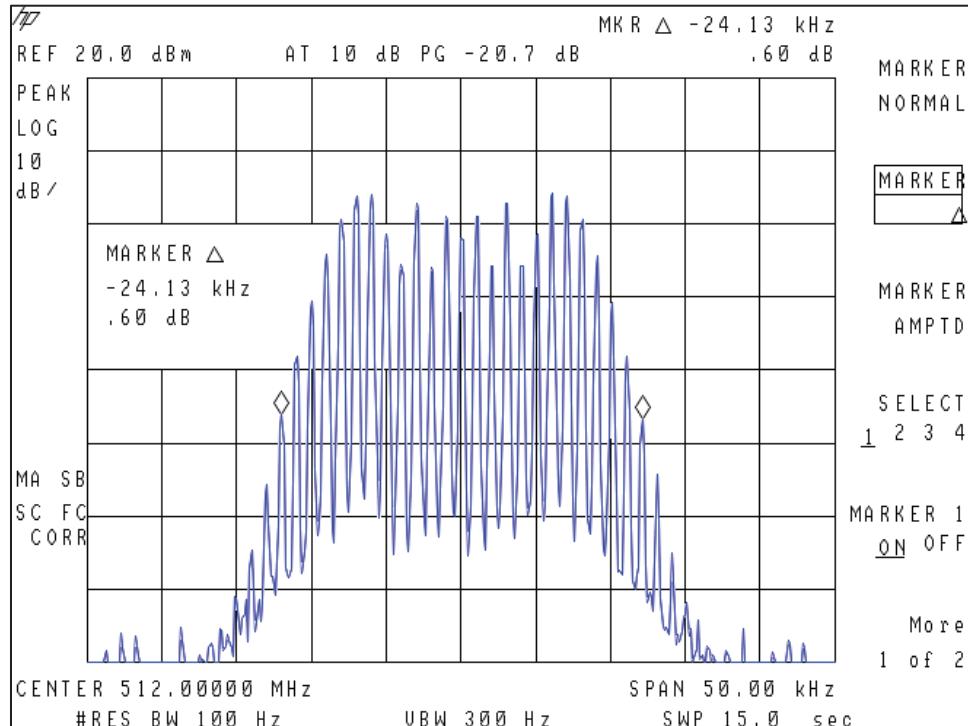


Figure 72. Input 512 MHz @ 25 kHz

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
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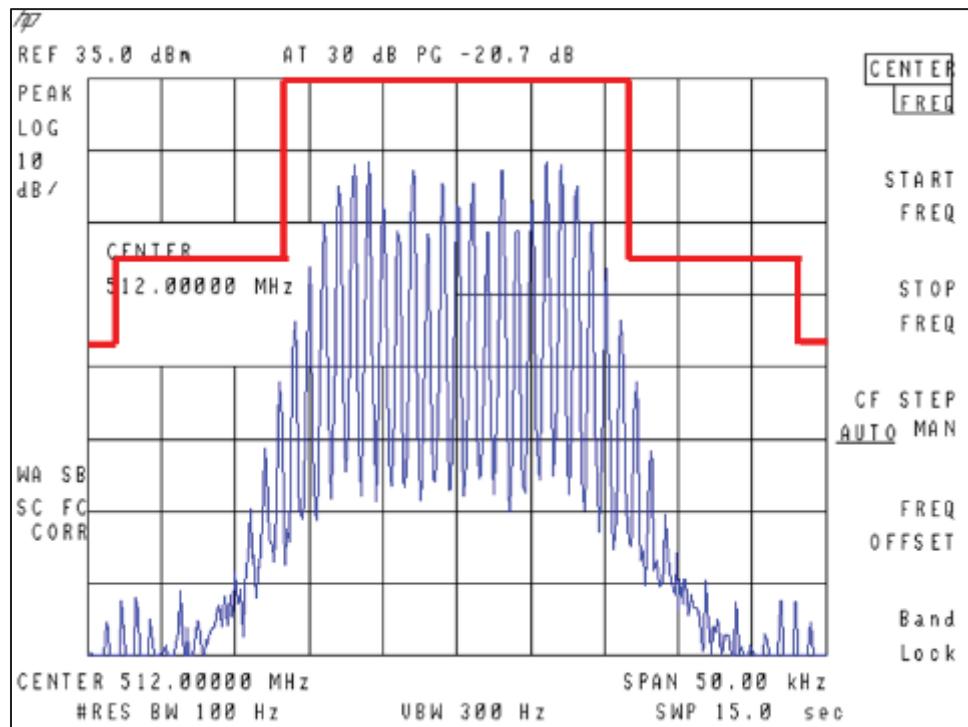


Figure 73. 512 MHz @ 25 kHz, Mask B

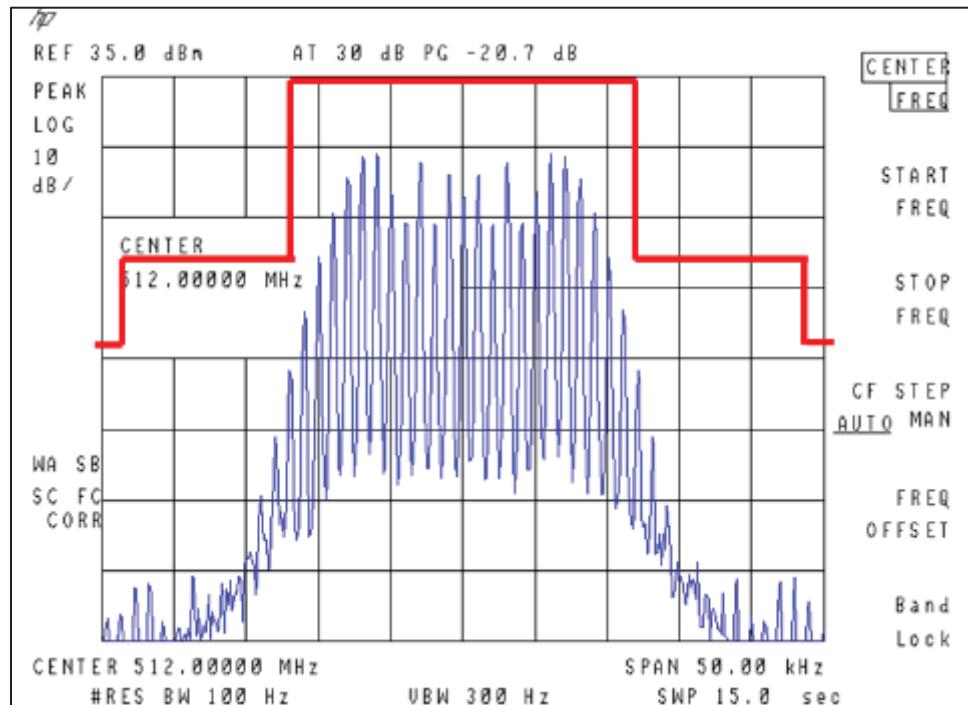


Figure 74. 512 MHz @ 25 kHz + 3.0, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
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24-0123
August 1, 2024
Safe-Com Wireless
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2.11.3 700 MHz Channels

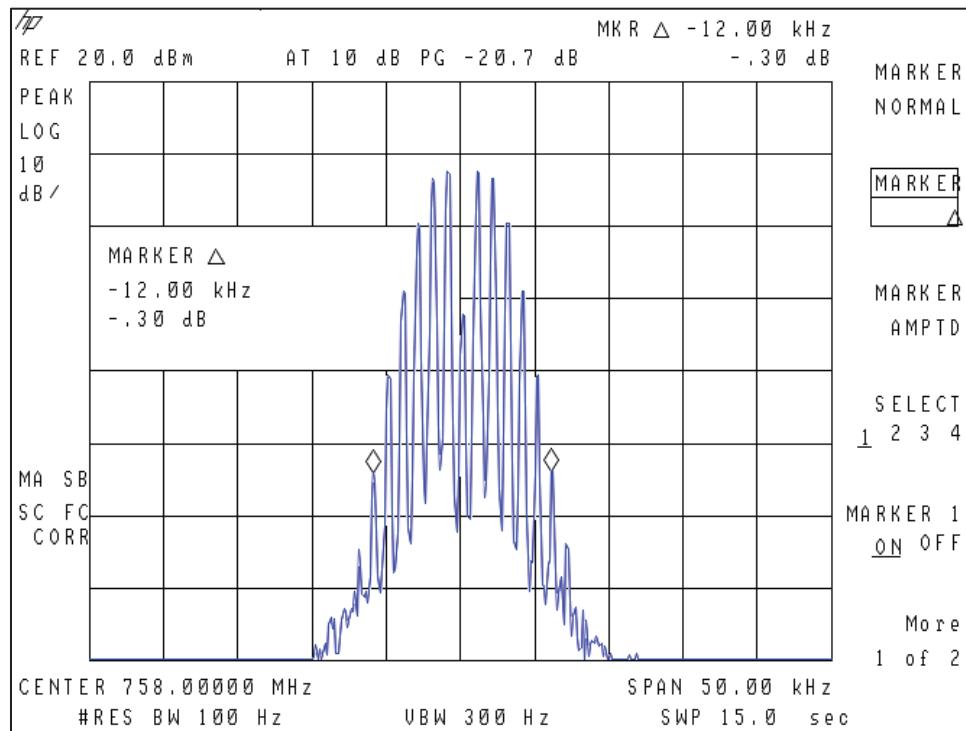


Figure 75. Input 758 MHz @ 12.5 kHz

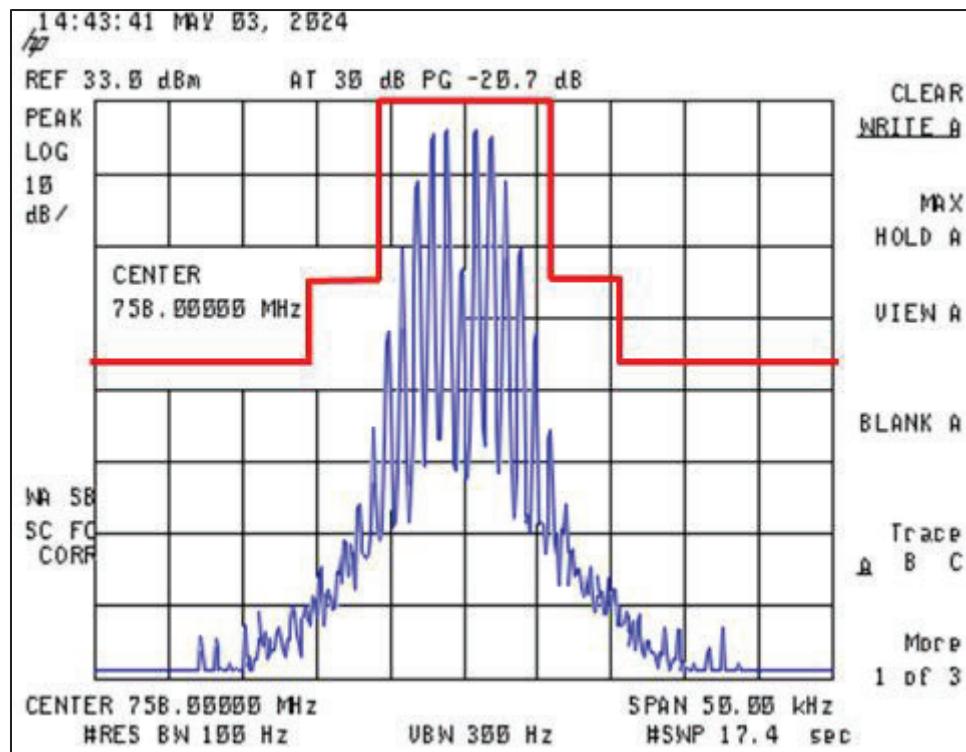


Figure 76. 758 MHz @ 12.5 kHz, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

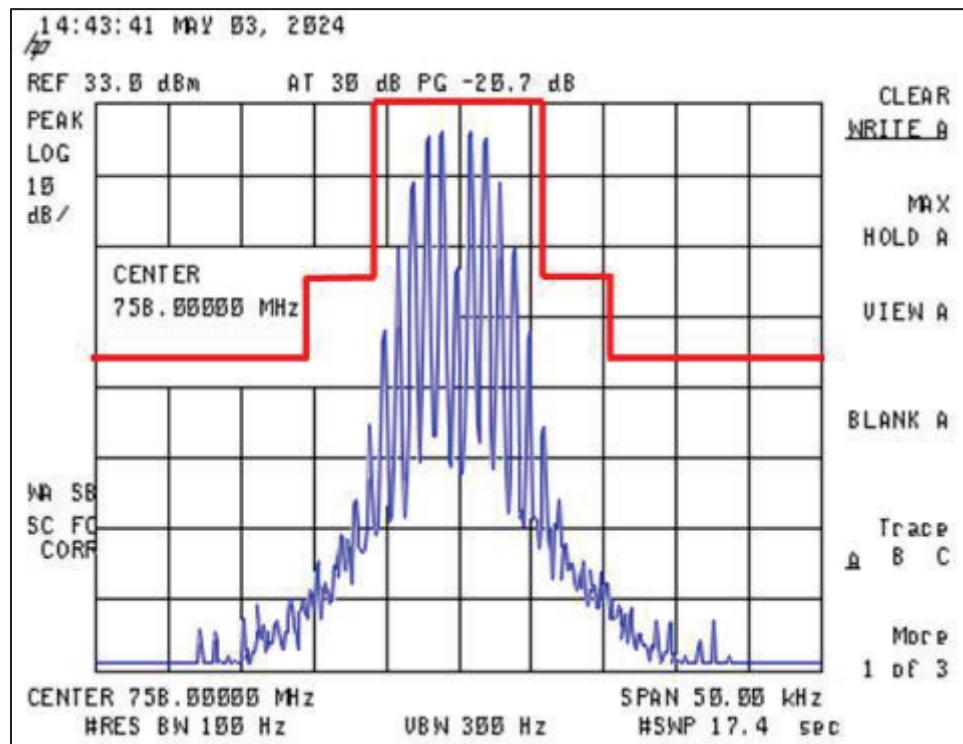


Figure 77. 758 MHz @ 12.5 kHz +3 dB, Mask B

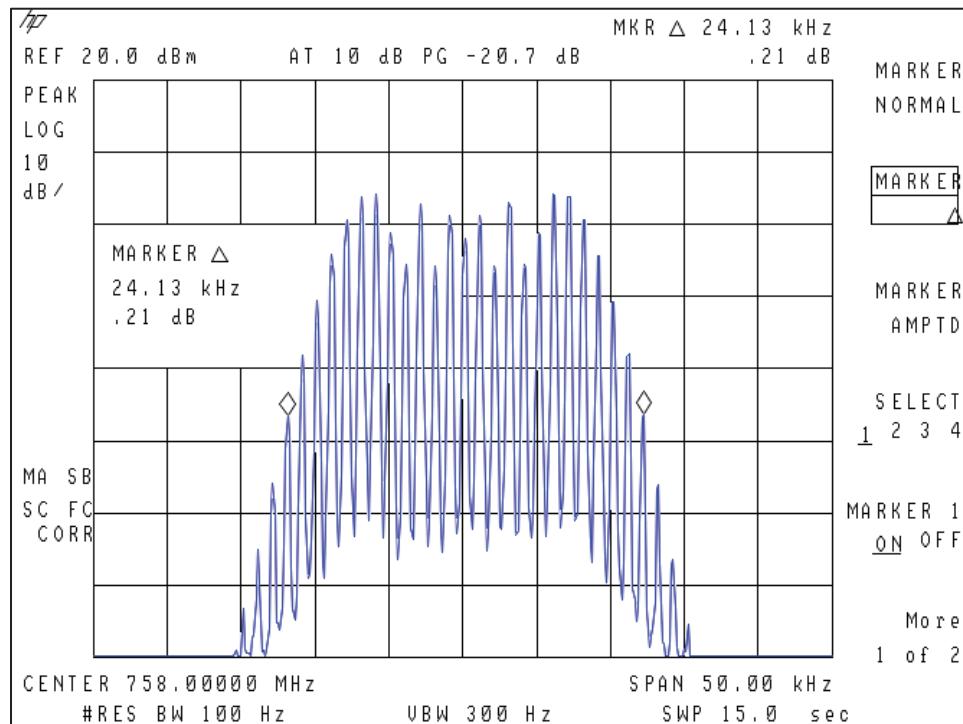


Figure 78. Input 758 MHz @ 25 kHz

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

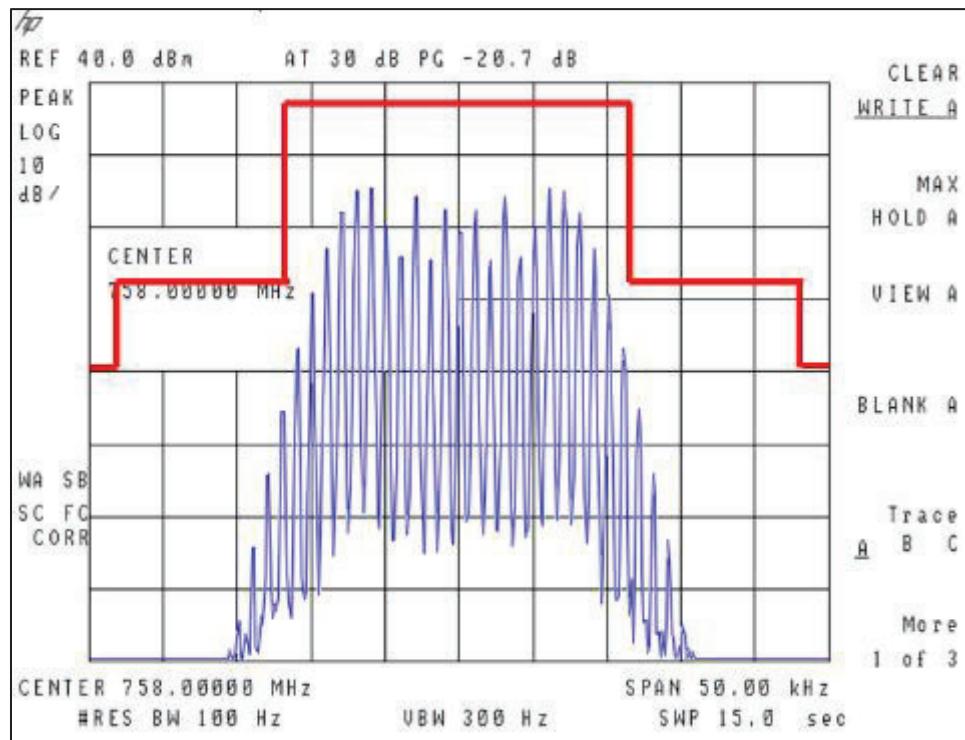


Figure 79. 758 MHz @ 25 kHz, Mask B

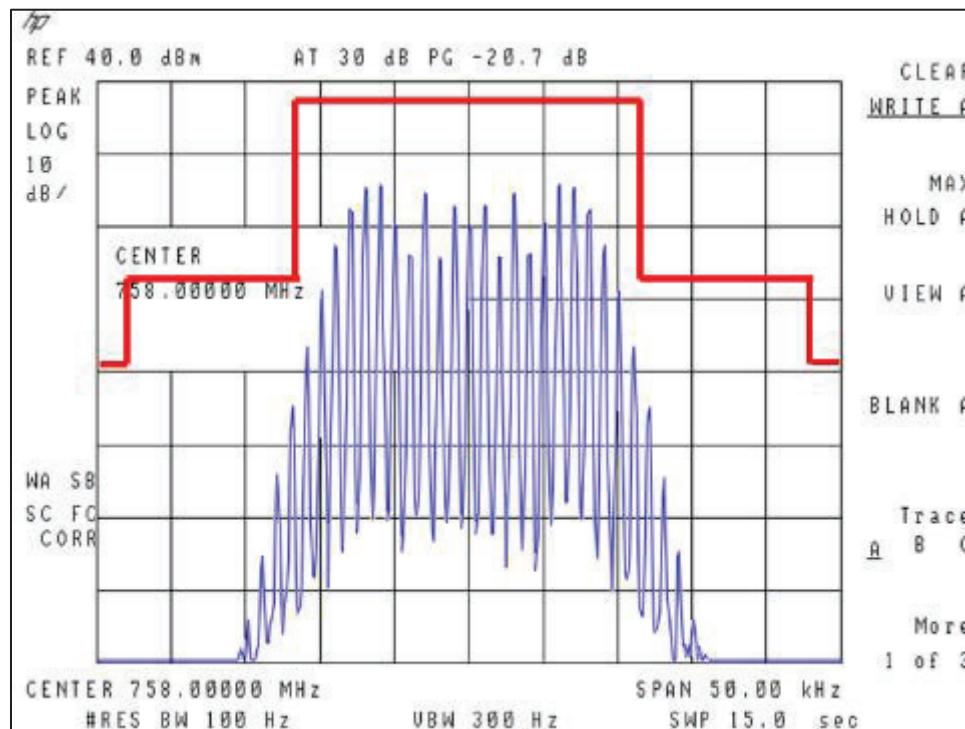


Figure 80. 758 MHz @ 25 kHz + 3 dB, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

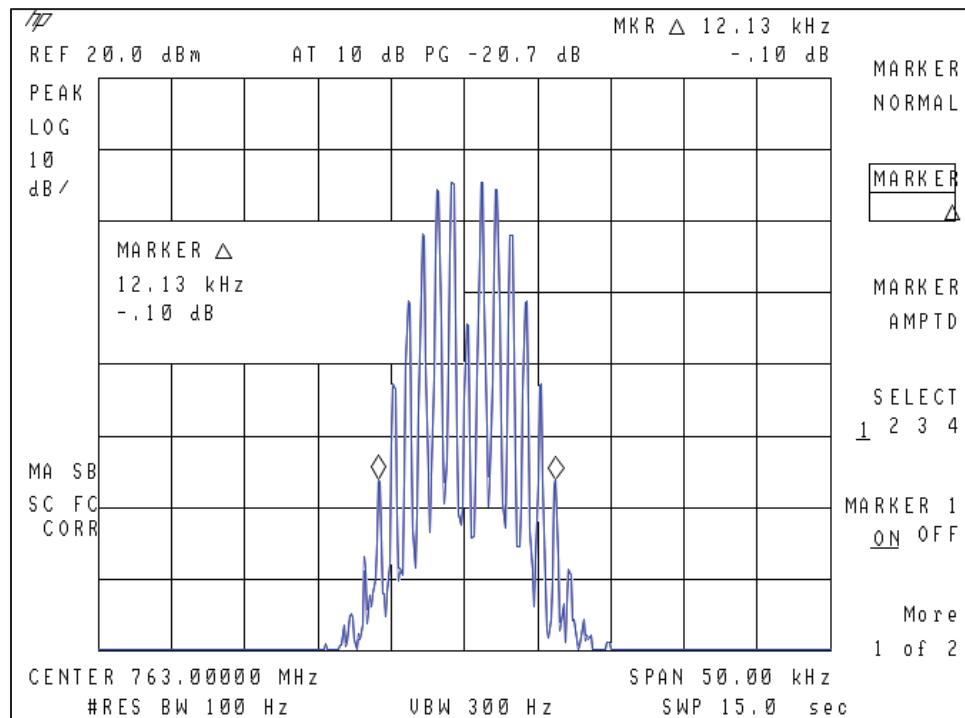


Figure 81. Input 763 MHz @ 12.5 kHz

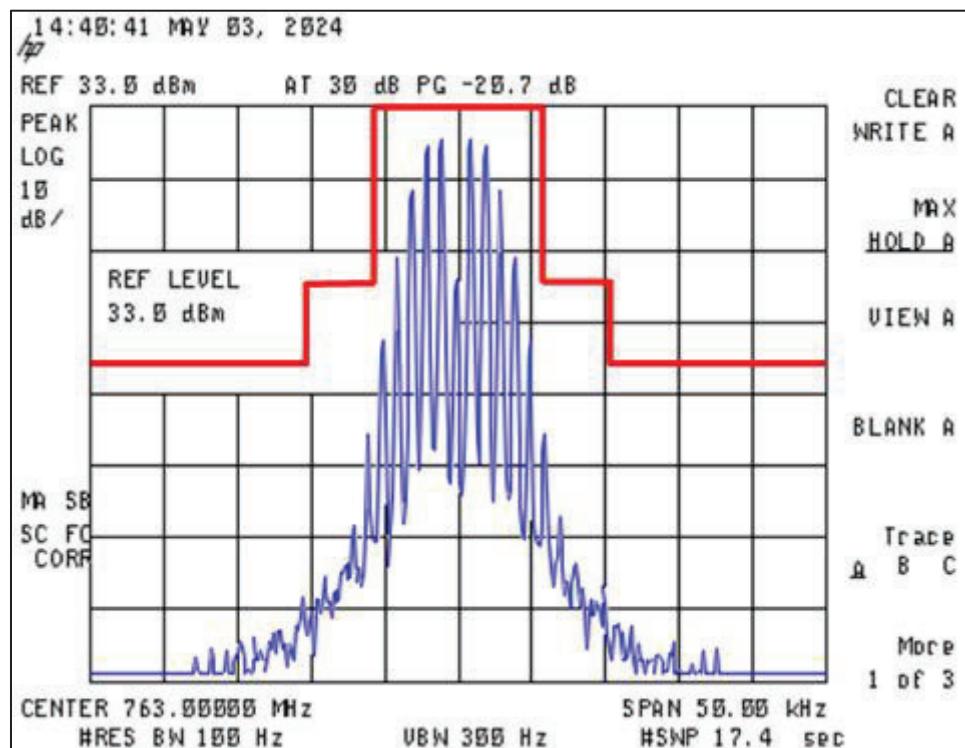


Figure 82. 763 MHz @ 12.5 kHz, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

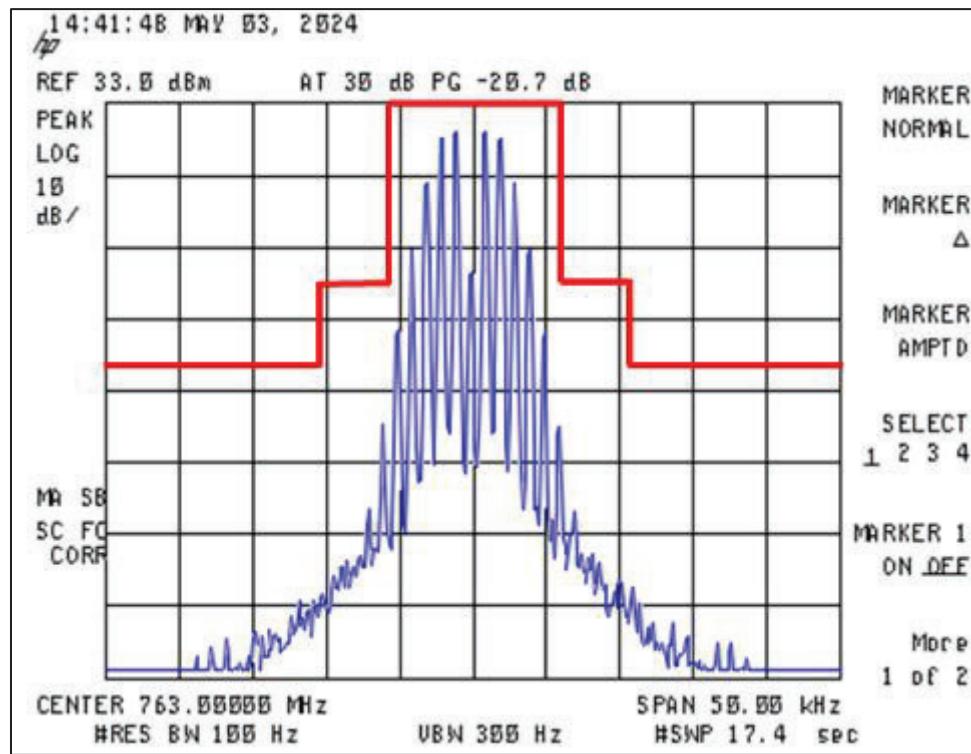


Figure 83. 763 MHz @ 12.5 kHz +3.0 dB, Mask B

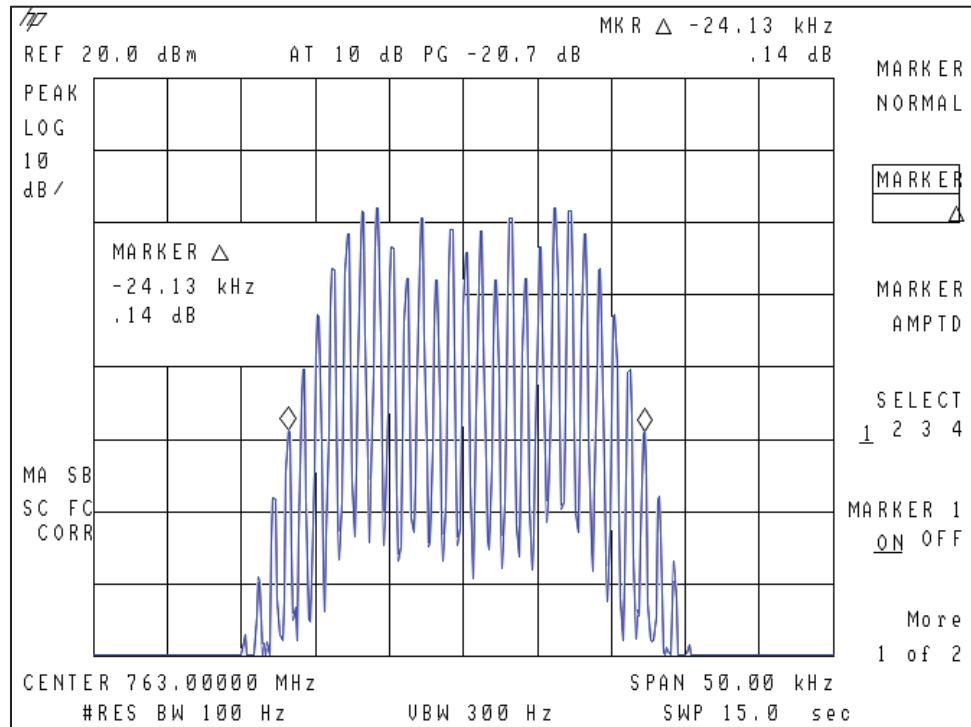


Figure 84. Input 763 MHz @ 25 kHz

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

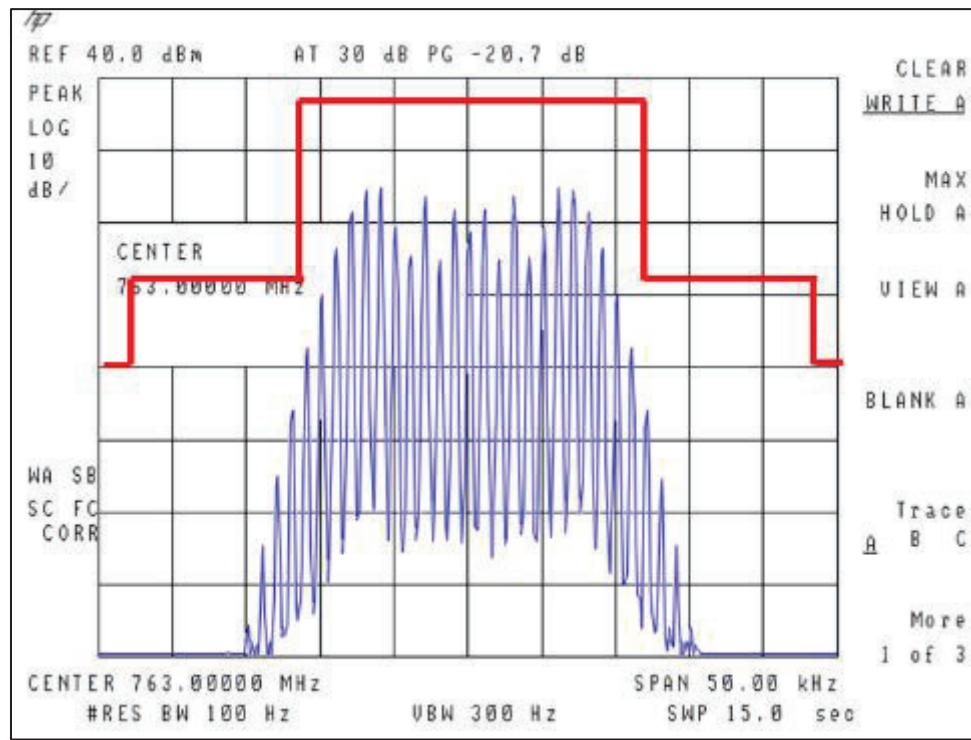


Figure 85. 763 MHz @ 25 kHz, Mask B

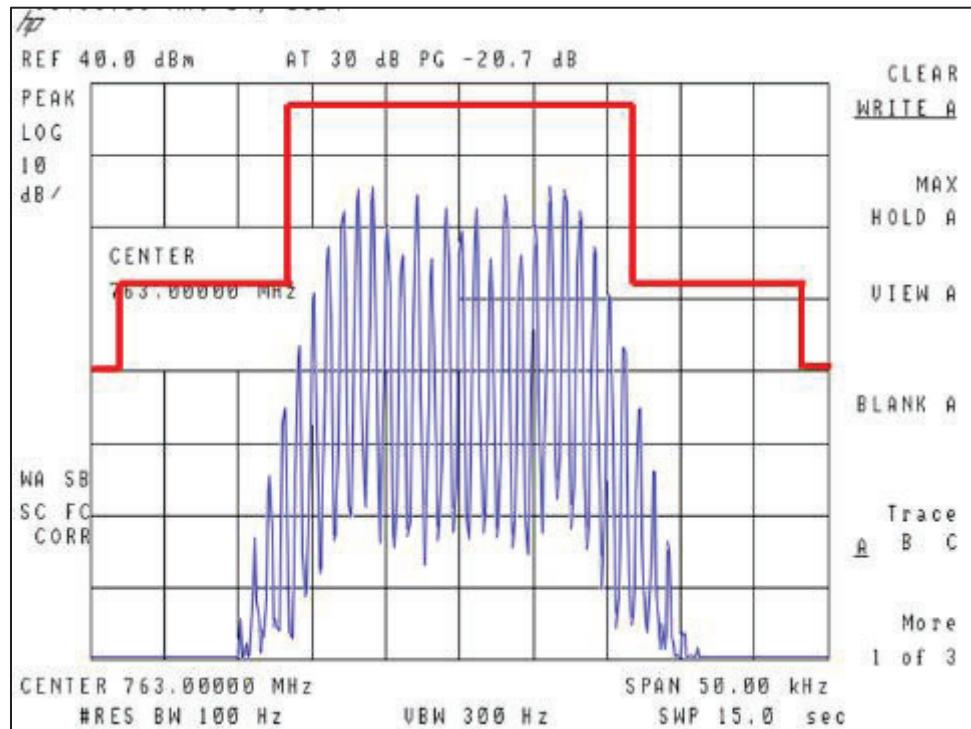


Figure 86. 763 MHz @ 25 kHz +3.0 dB, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
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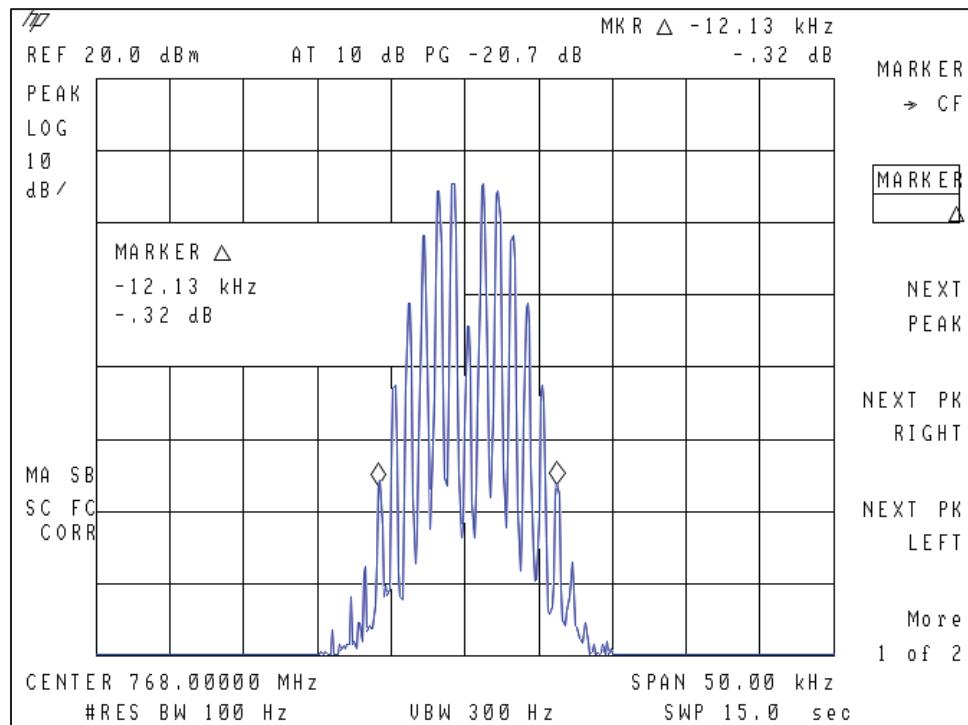


Figure 87. Input 768 MHz @ 12.5 kHz

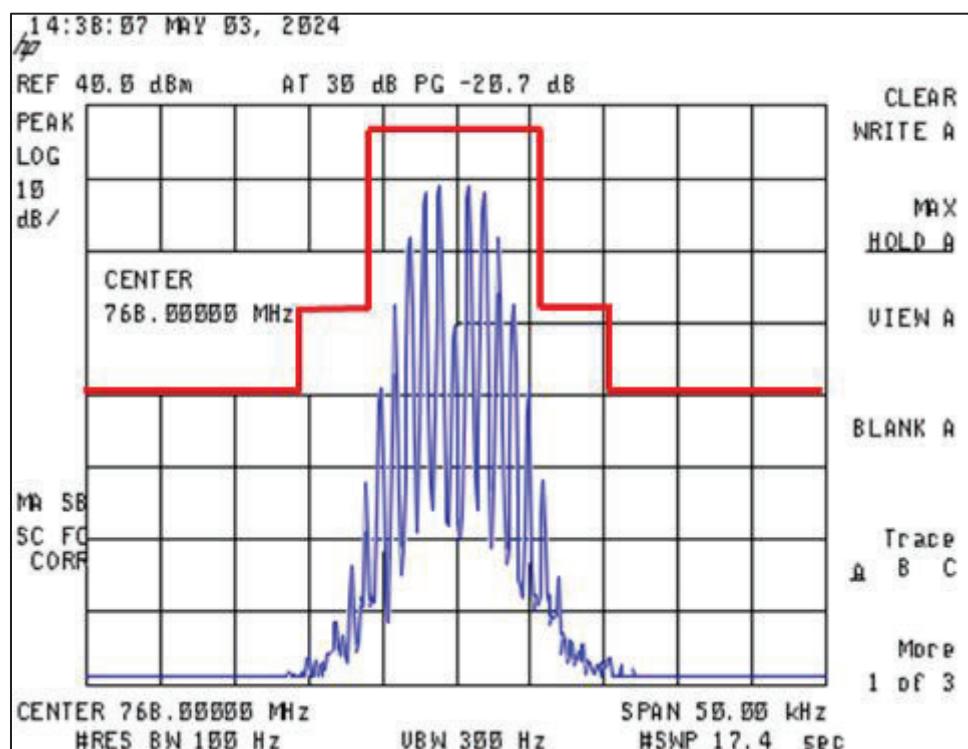


Figure 88. 768 MHz @ 12.5 kHz, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
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24-0123
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SAFE-0002

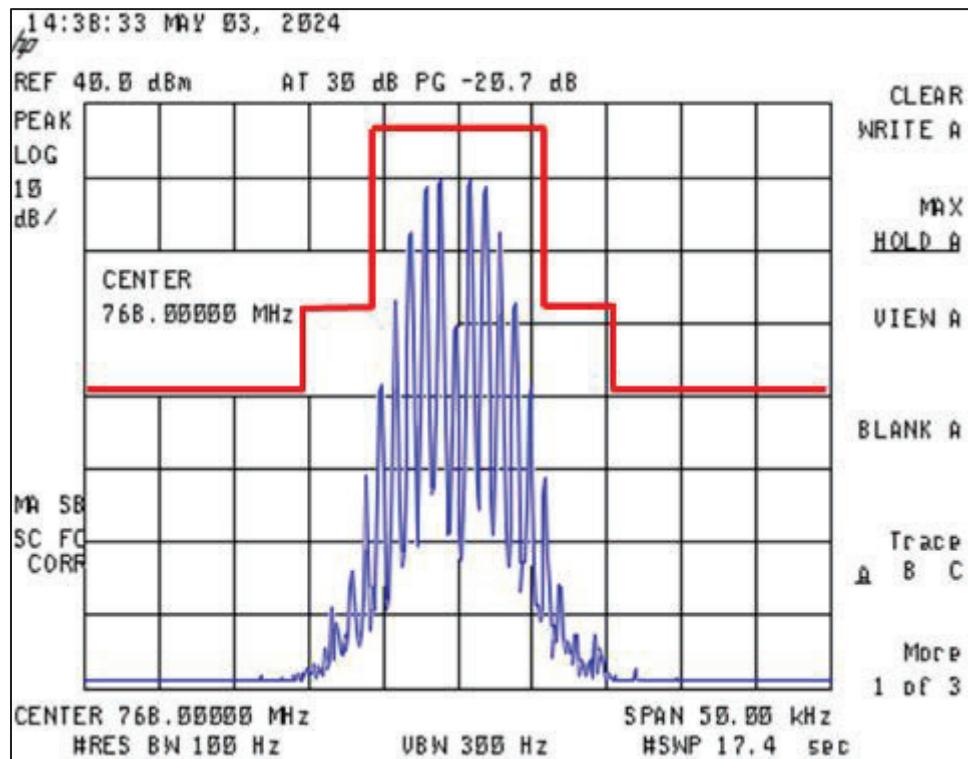


Figure 89. 768 MHz @ 12.5 kHz +3.0 dB, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
22303-SAFE4
24-0123
August 1, 2024
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SAFE-0002

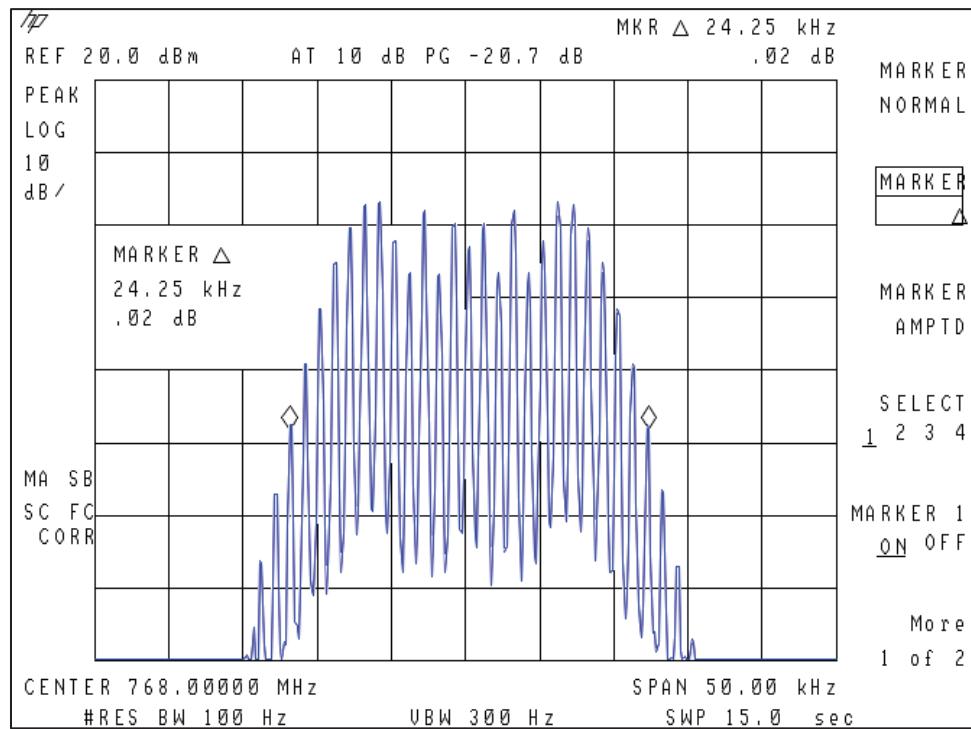


Figure 90. Input 768 MHz @ 25 kHz

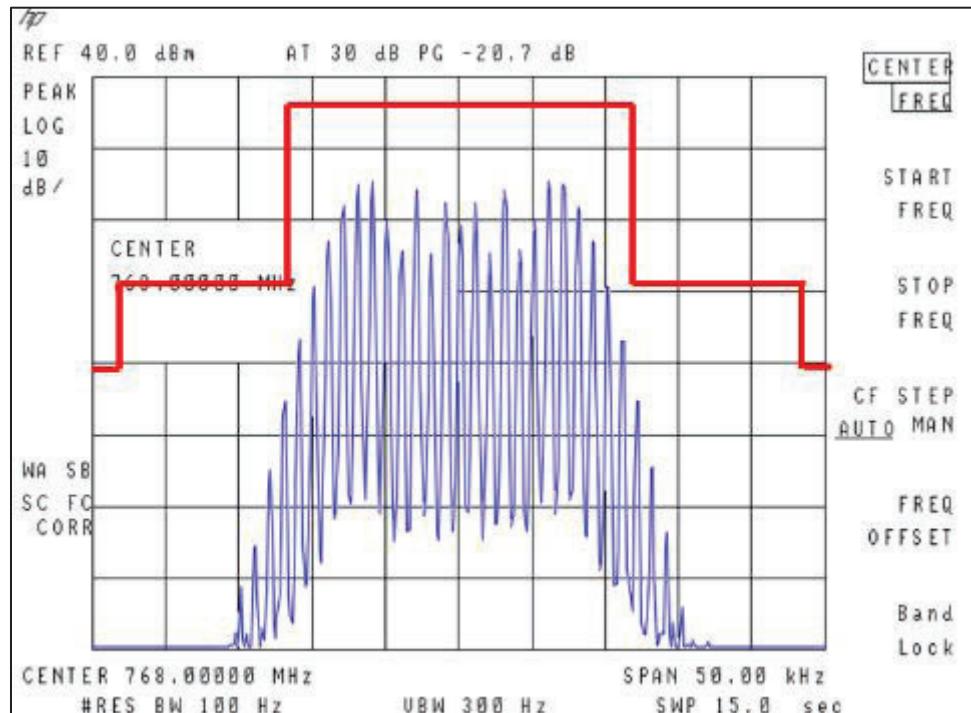


Figure 91. 768 MHz @ 25 kHz, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
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24-0123
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Safe-Com Wireless
SAFE-0002

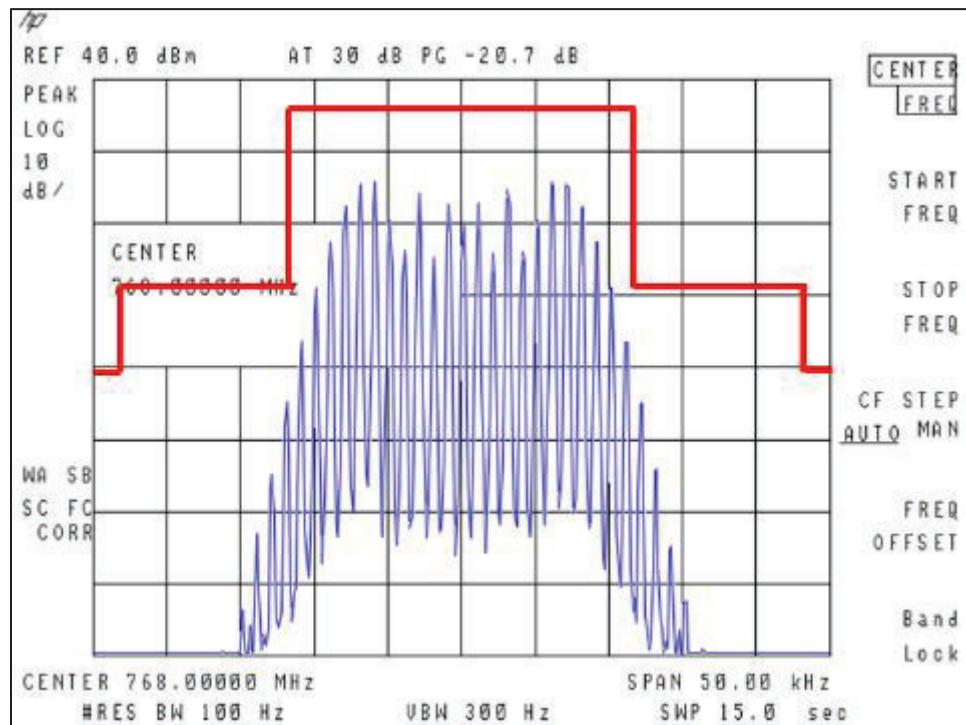


Figure 92. 768 MHz @ 25 kHz +3.0 dB, Mask B

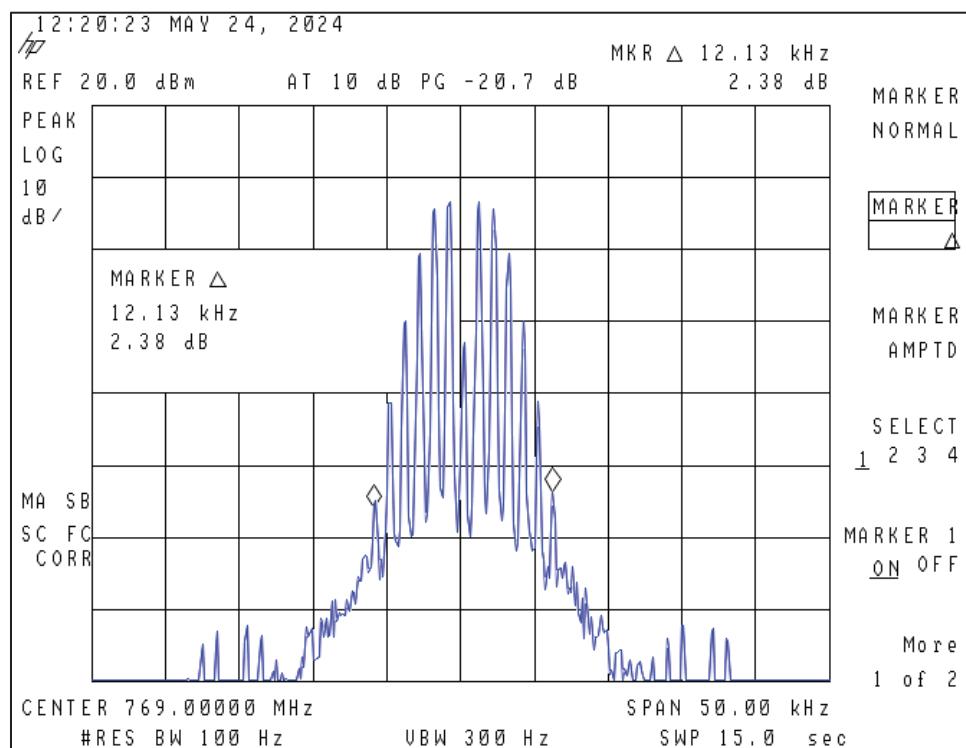


Figure 93. Input 769 MHz @ 12.5 kHz

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
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24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

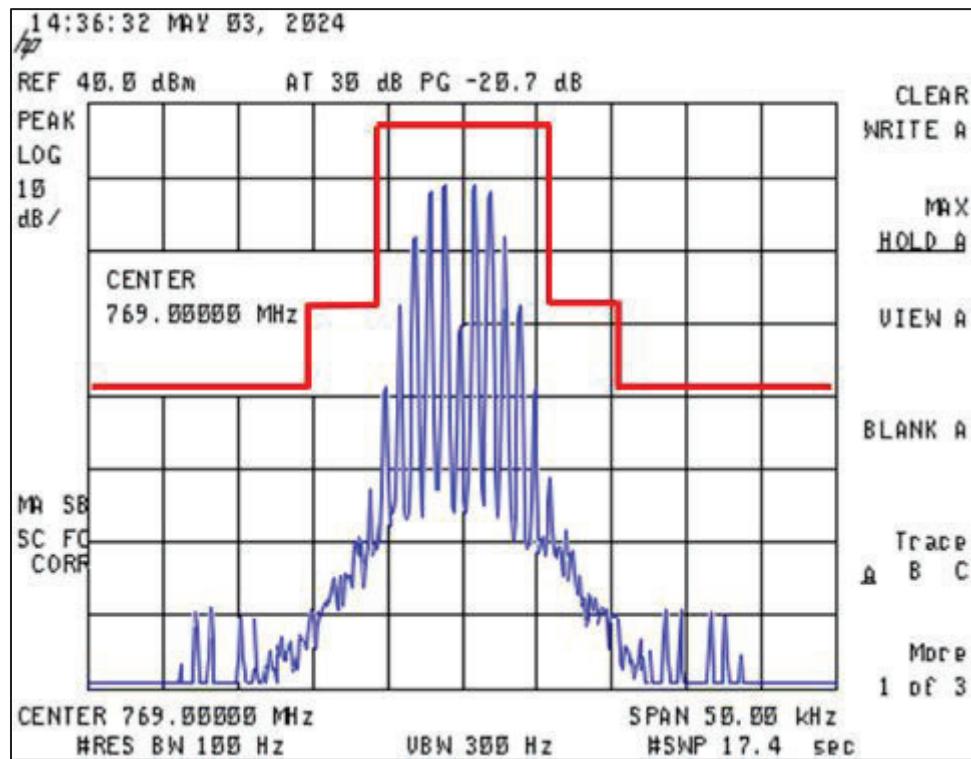


Figure 94. 769 MHz @ 12.5 kHz, Mask B

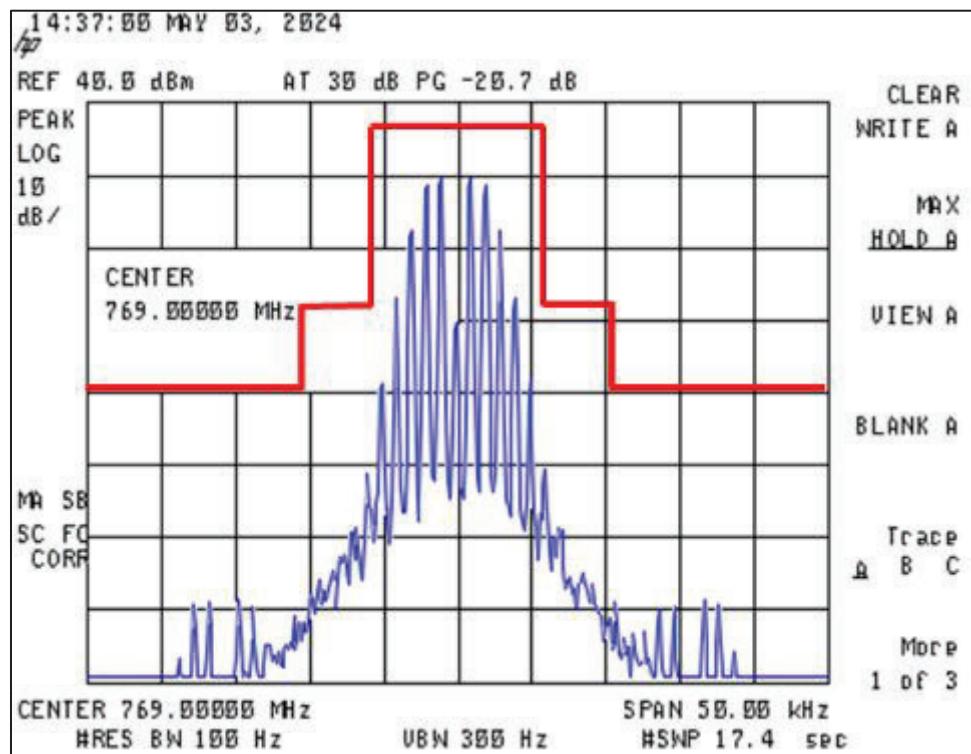


Figure 95. 769 MHz @ 12.5 kHz +3.0 dB, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
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22303-SAFE4
24-0123
August 1, 2024
Safe-Com Wireless
SAFE-0002

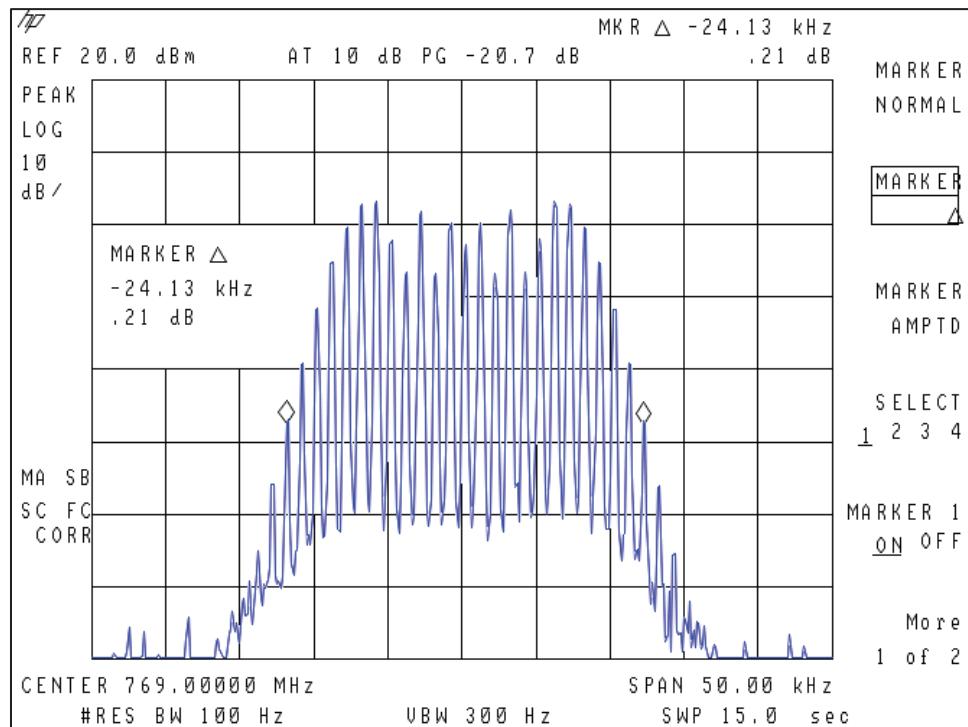


Figure 96. Input 769 MHz @ 25 kHz

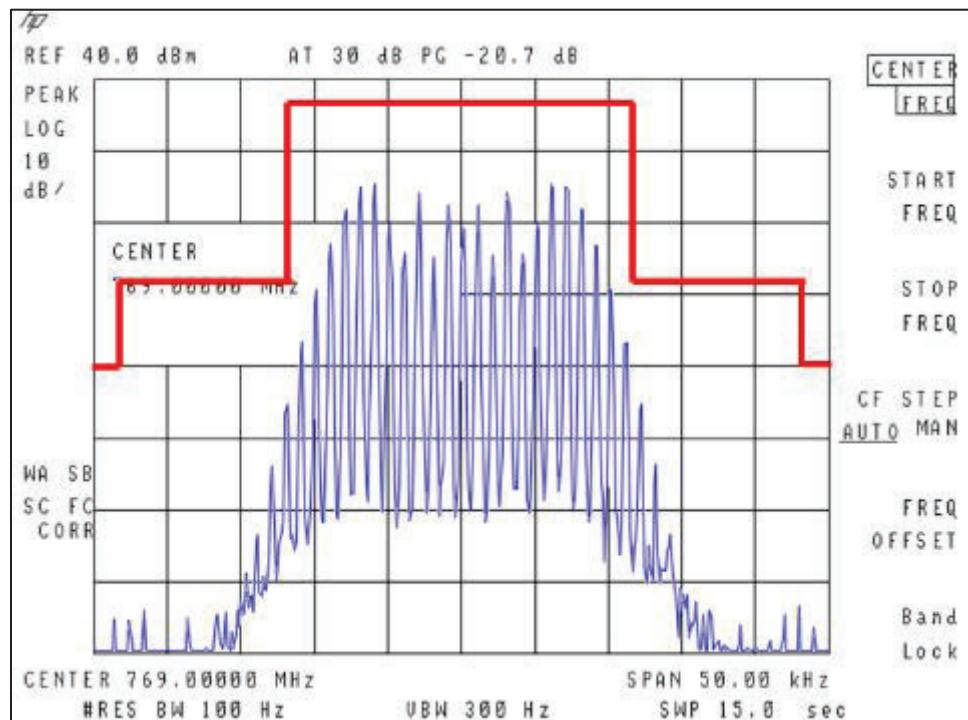


Figure 97. 769 MHz @ 25 kHz, Mask B

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
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24-0123
August 1, 2024
Safe-Com Wireless
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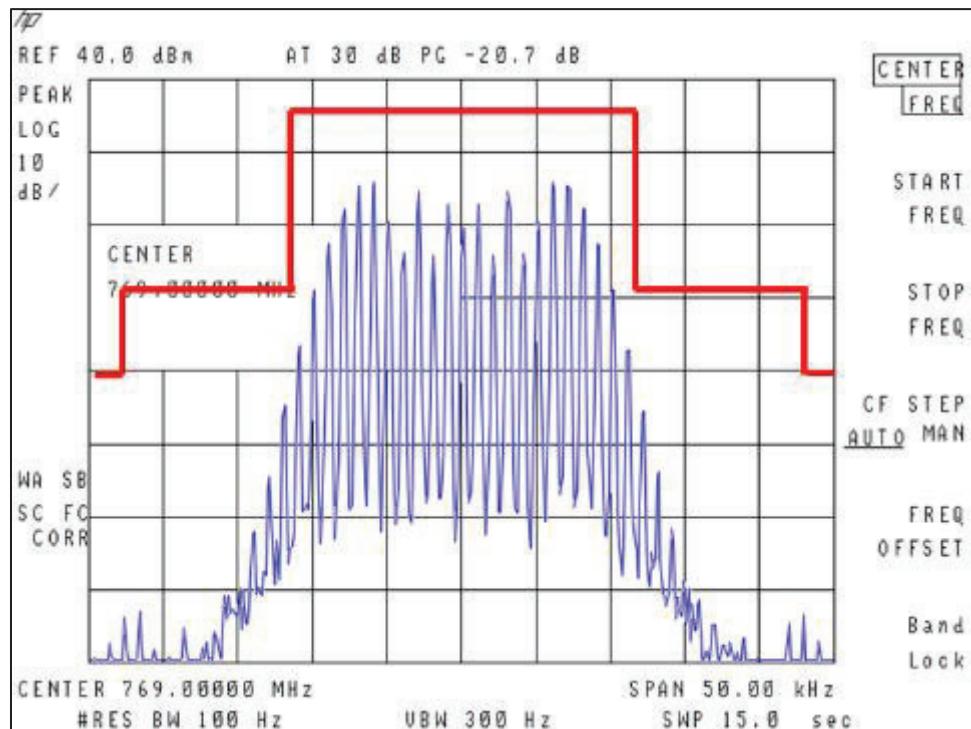


Figure 98. 769 MHz @ 25 kHz +3.0 dB, Mask B

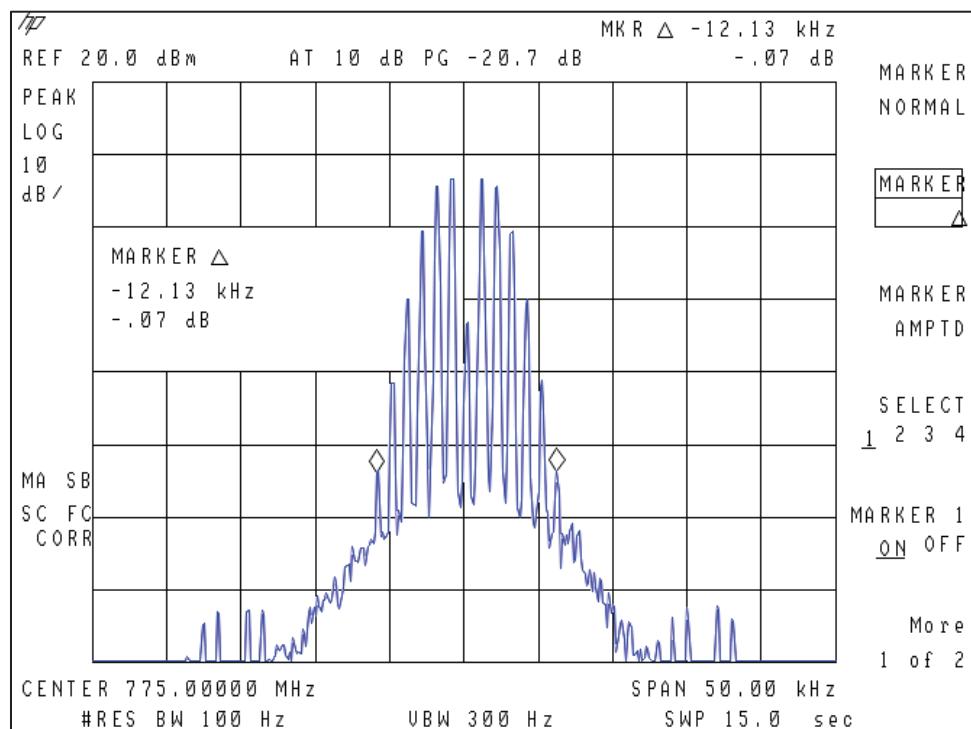


Figure 99. Input 775 MHz @ 12.5 kHz

U.S. Tech Test Report:
FCC ID:
IC:
Report Number:
Issue Date:
Customer:
Model:

FCC Part 90 Certification
2AKSM-SAFE4
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24-0123
August 1, 2024
Safe-Com Wireless
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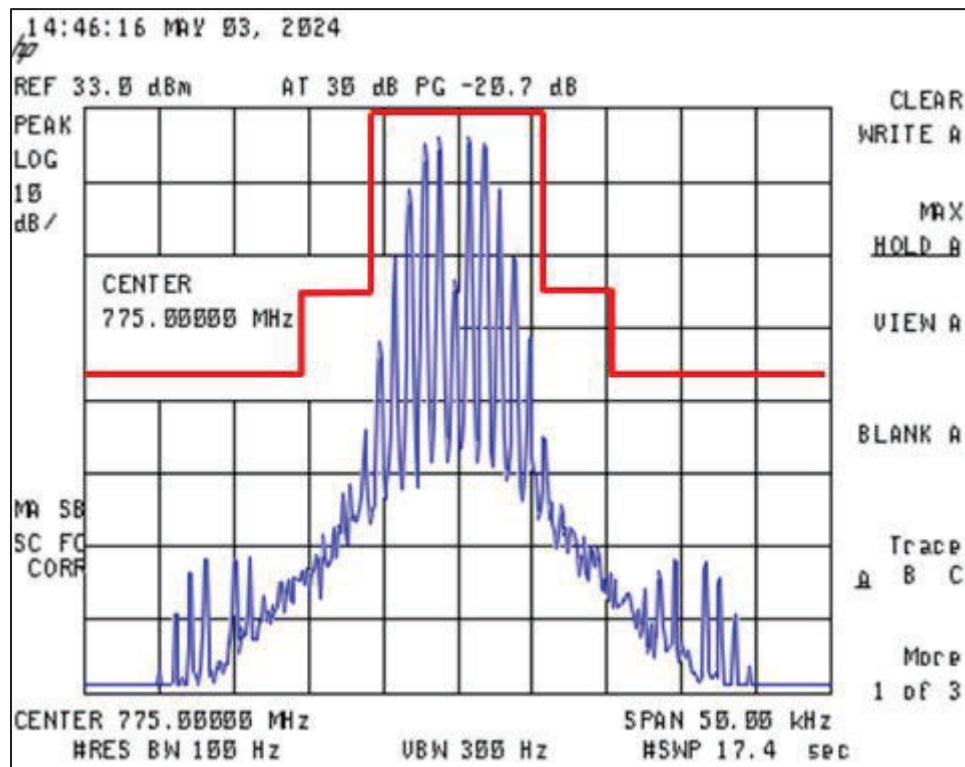


Figure 100. 775 MHz @ 12.5 MHz, Mask B

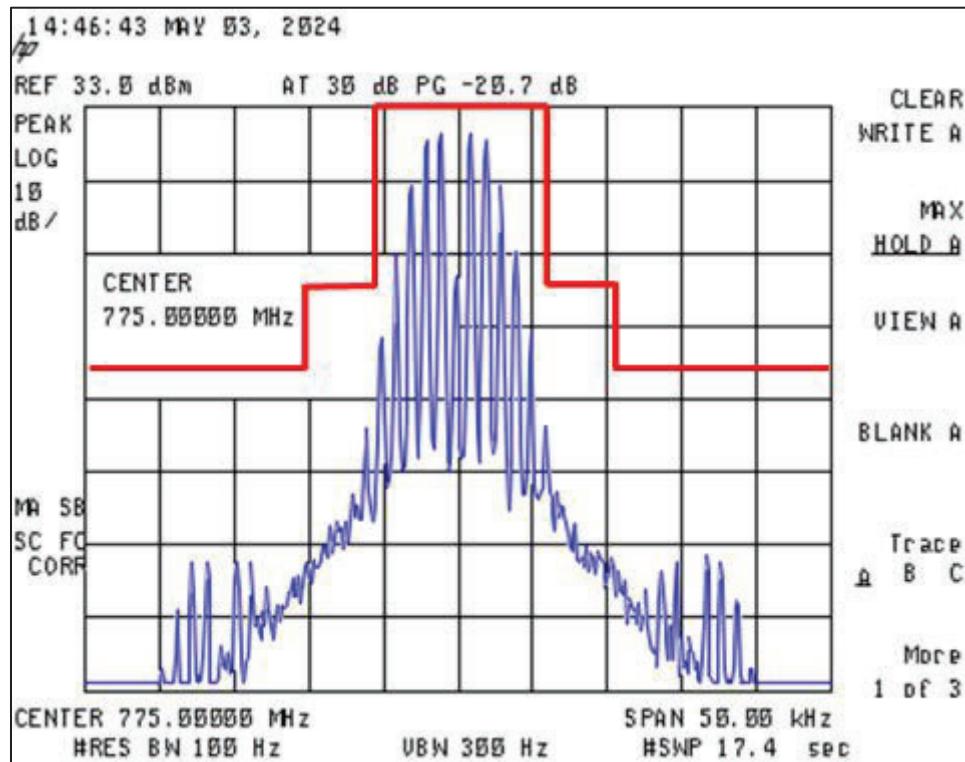


Figure 101. 775 MHz @ 12.5 kHz +3.0 dB, Mask B