Mobile Devices business
iDEN Mobile Devices Operations

RF Test Report

FCC Rule Parts: 15C (WiFi)
Industry Canada: RSS-Gen, RSS-210

Product Name: i940
FCC ID: IHDP56MH1
IC ID: 109O-P56MH1

Date: August 2, 2011

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Test Report Details

Tests Performed by:	TIMCO Engineering Laboratory details in report FCC Registration Number: **95517** Industry Canada Number: **2056A**
Signaling Capabilities:	802.11b/g Wi-Fi Transceiver (2.4 GHz ISM)
FCC ID:	IHDP56MH1
IC ID:	109O-P56MH1

Applicable Standards

All tests and measurements indicated in this document were performed in accordance with the United States Code of Federal Regulations, Title 47 Part 2, Sub-part J, as well as the following parts:

X	Part 15 Subpart C – Radio Frequency Devices.
X	RSS-210 – Low-power License-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment.

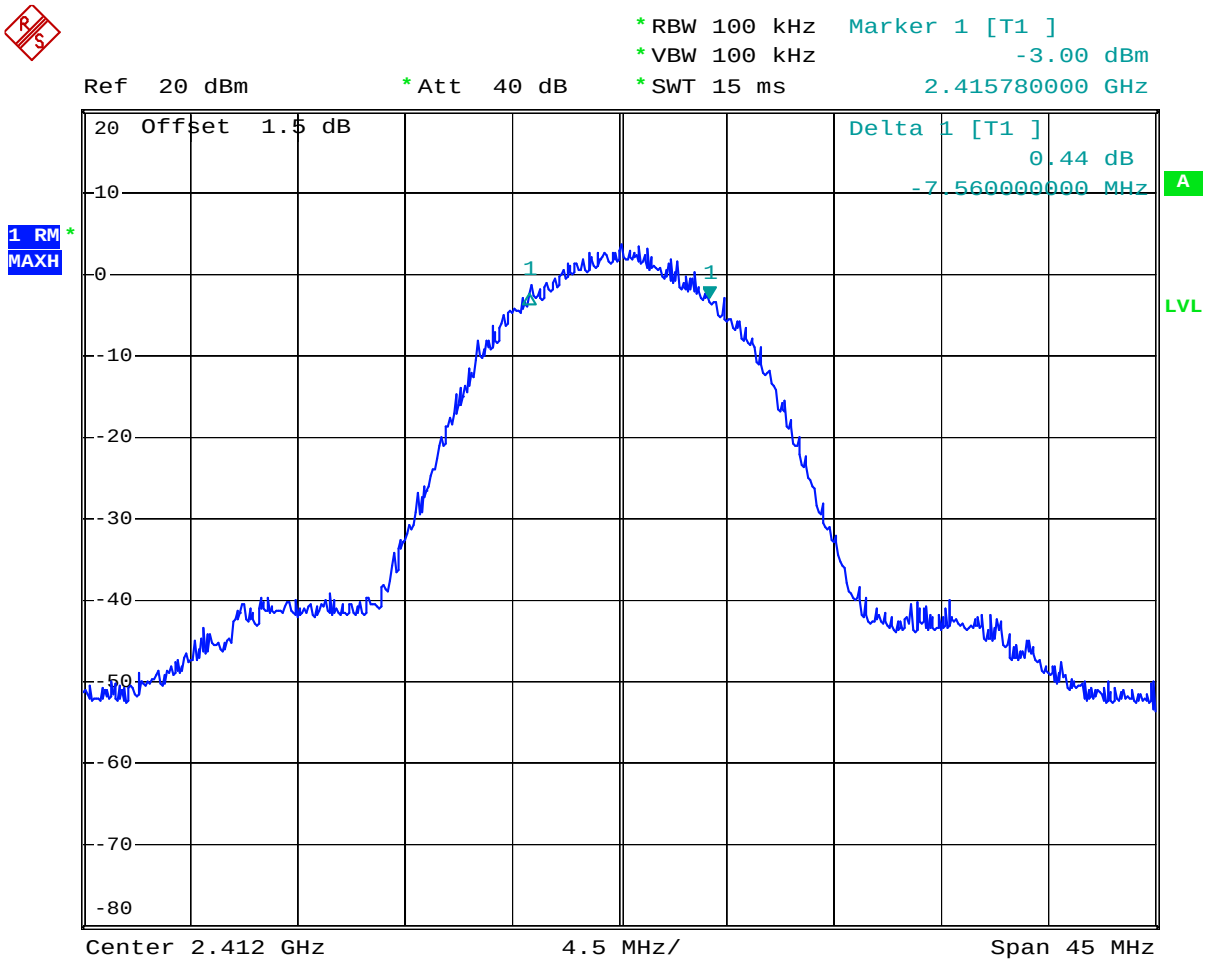
Applicable Standards: TIA/EIA-603-A, TIA/EIA-603-B, TIA/EIA-603-C, and ANSI C63.4-2009.

Exhibit 6d: IEEE802.11b/g Wi-Fi Measured Data– Pursuant 47 CFR 2.1041; RSS-Gen Section 3.

Wi-Fi/WLAN conducted measurement setup and procedure is provided in Exhibit 7.

6d.1. Spectrum Bandwidth (IEEE 802.11b) – Pursuant 47 CFR 15.247(a)(1); RSS-210 Section A8.1.

The 20 dB bandwidth of the emission is 14.0 MHz.



Date: 7.JUL.2011 16:01:37

Figure 6d.1-1: Plot of 6 dB bandwidth (Channel 1, 11 Mbps data rate)

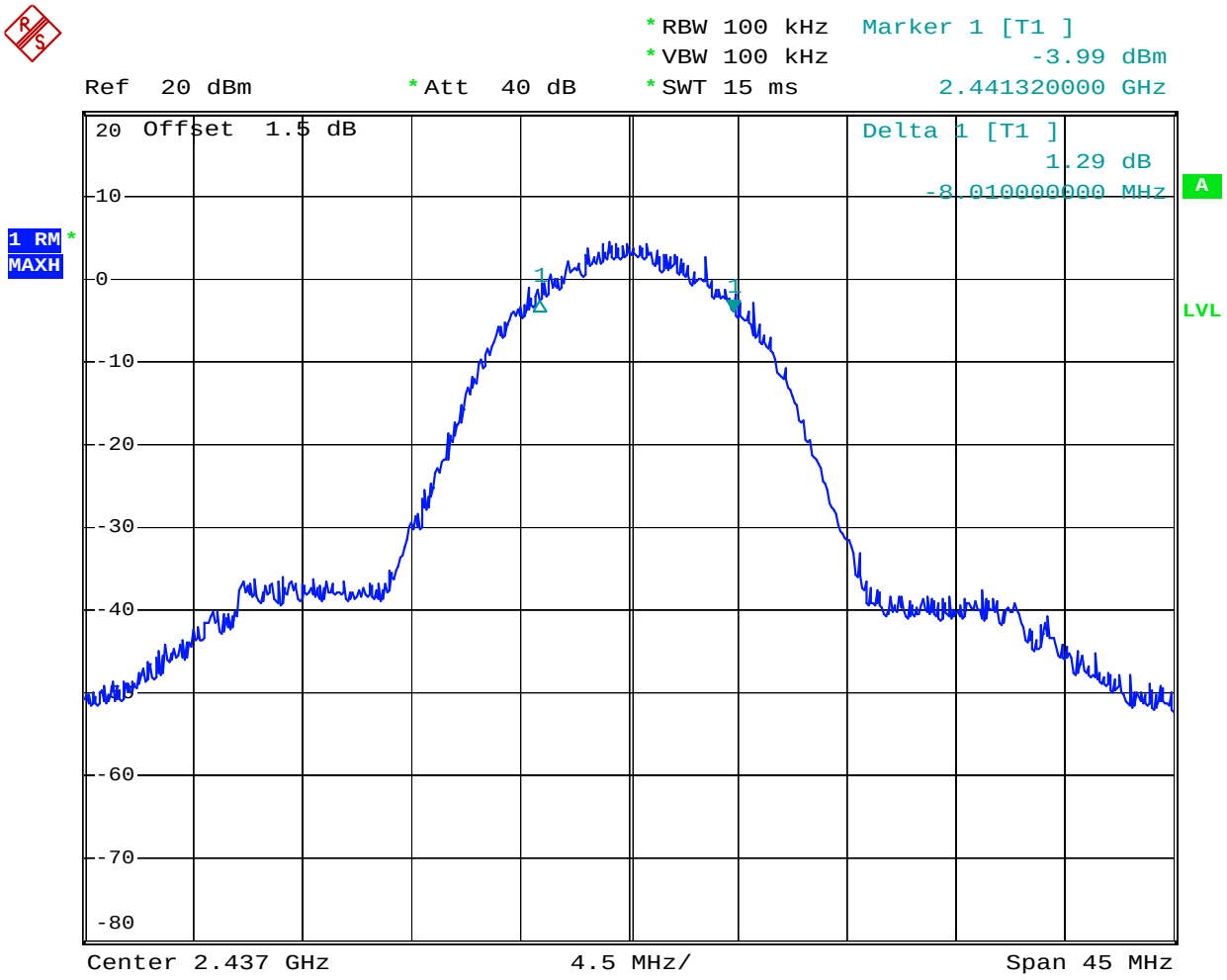


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Figure 6d.1-2: Plot of 6 dB bandwidth (Channel 6, 11 Mbps data rate)

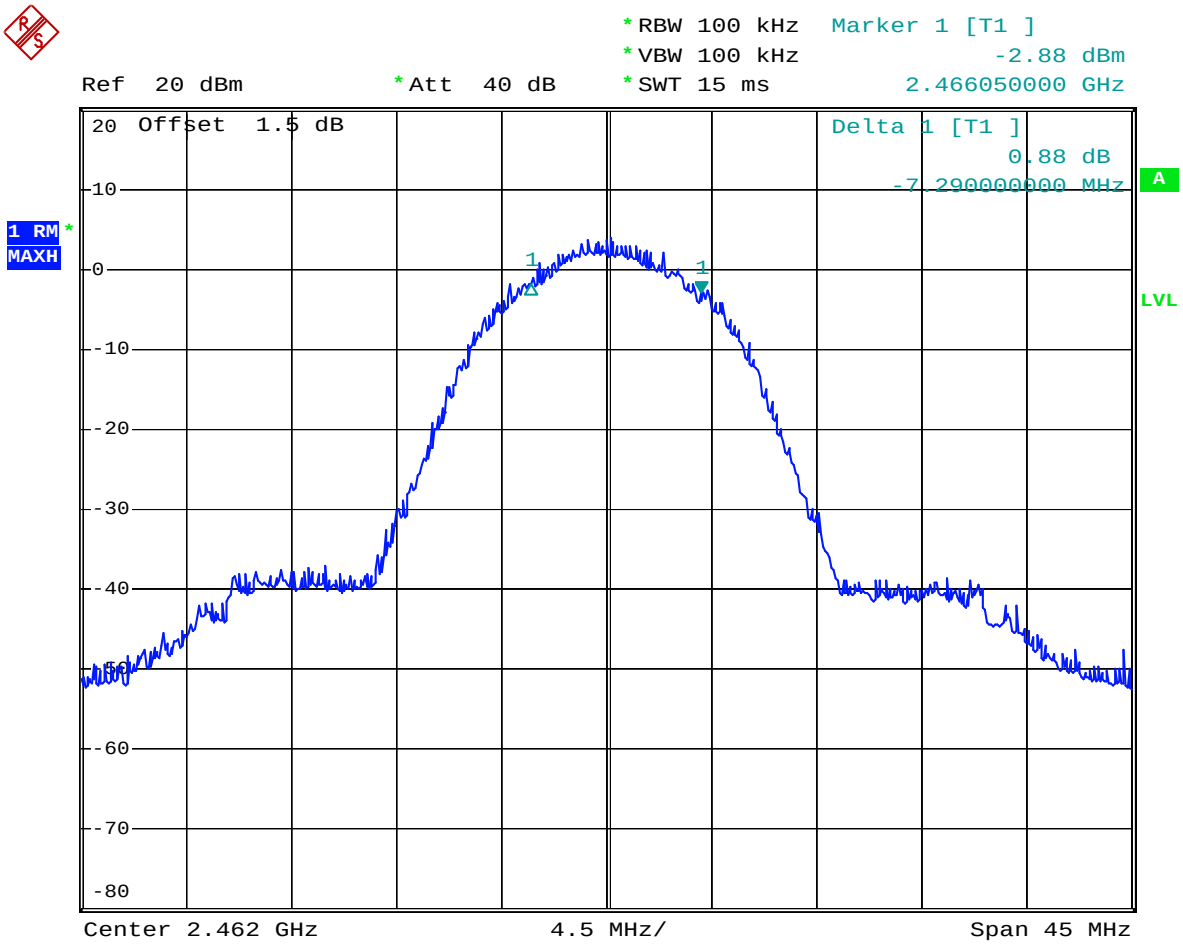

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Figure 6d.1-3: Plot of 6 dB bandwidth (Channel 11, 11 Mbps data rate)

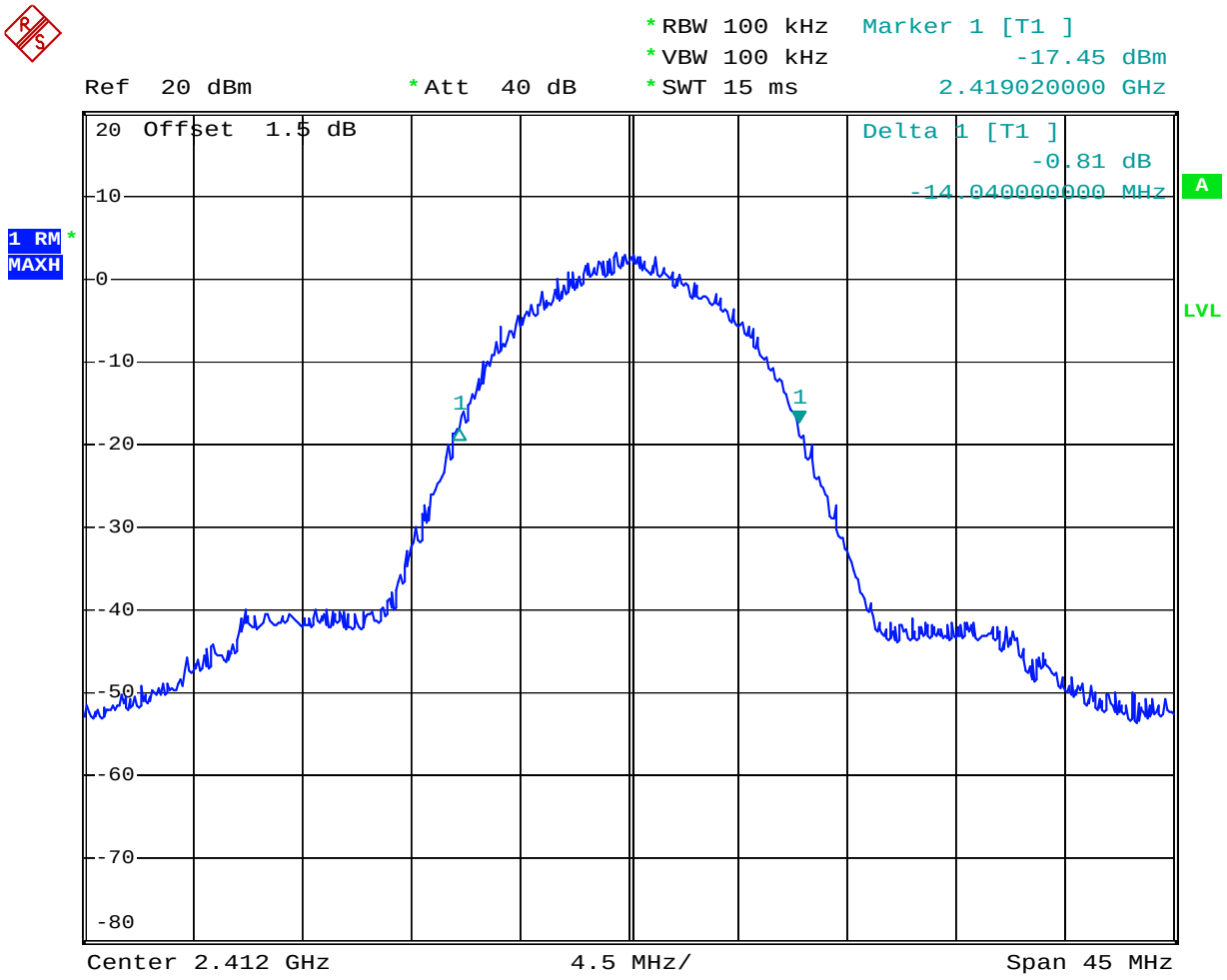

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Figure 6d.1-4: Plot of 20 dB bandwidth (Channel 1, 11 Mbps data rate)

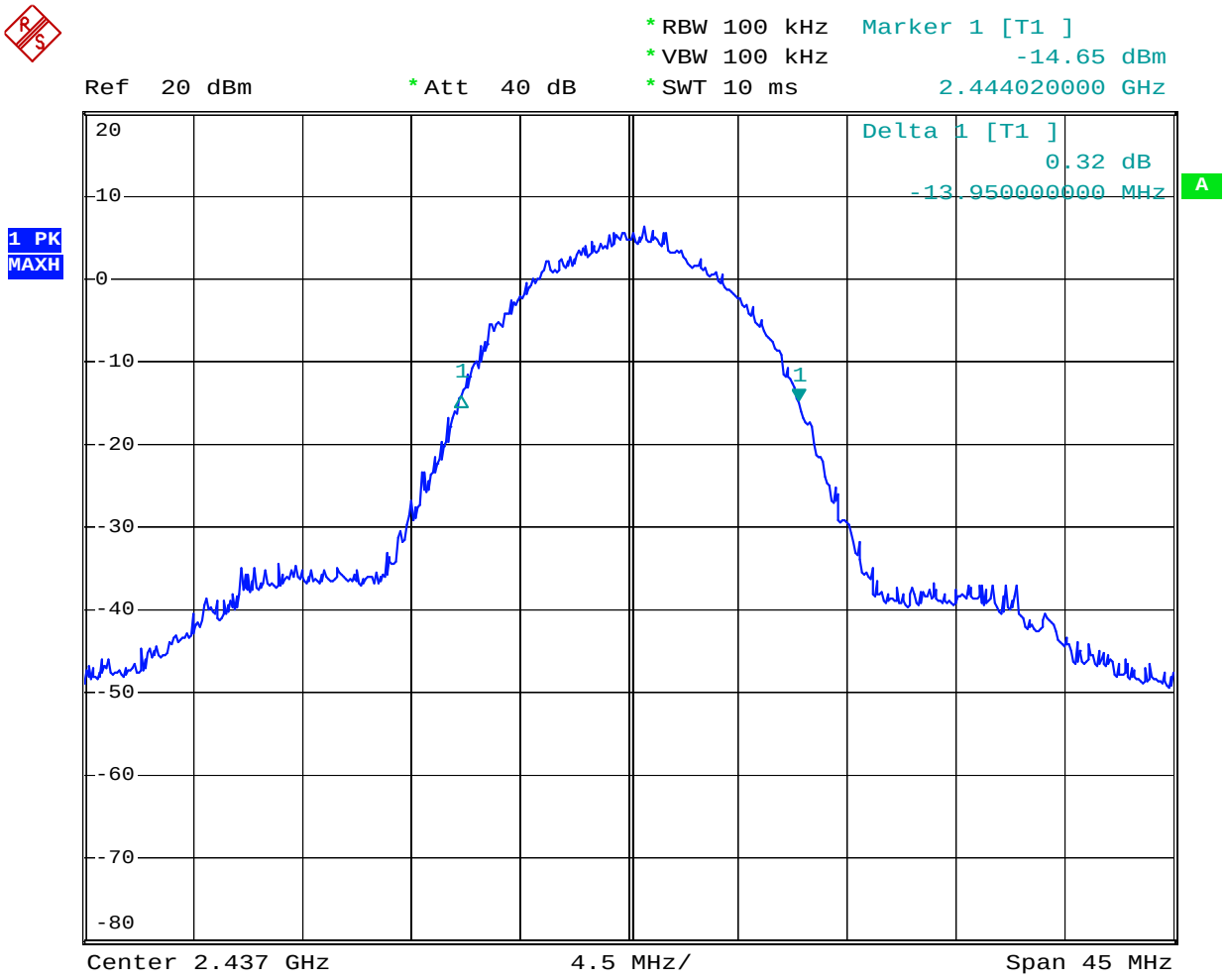

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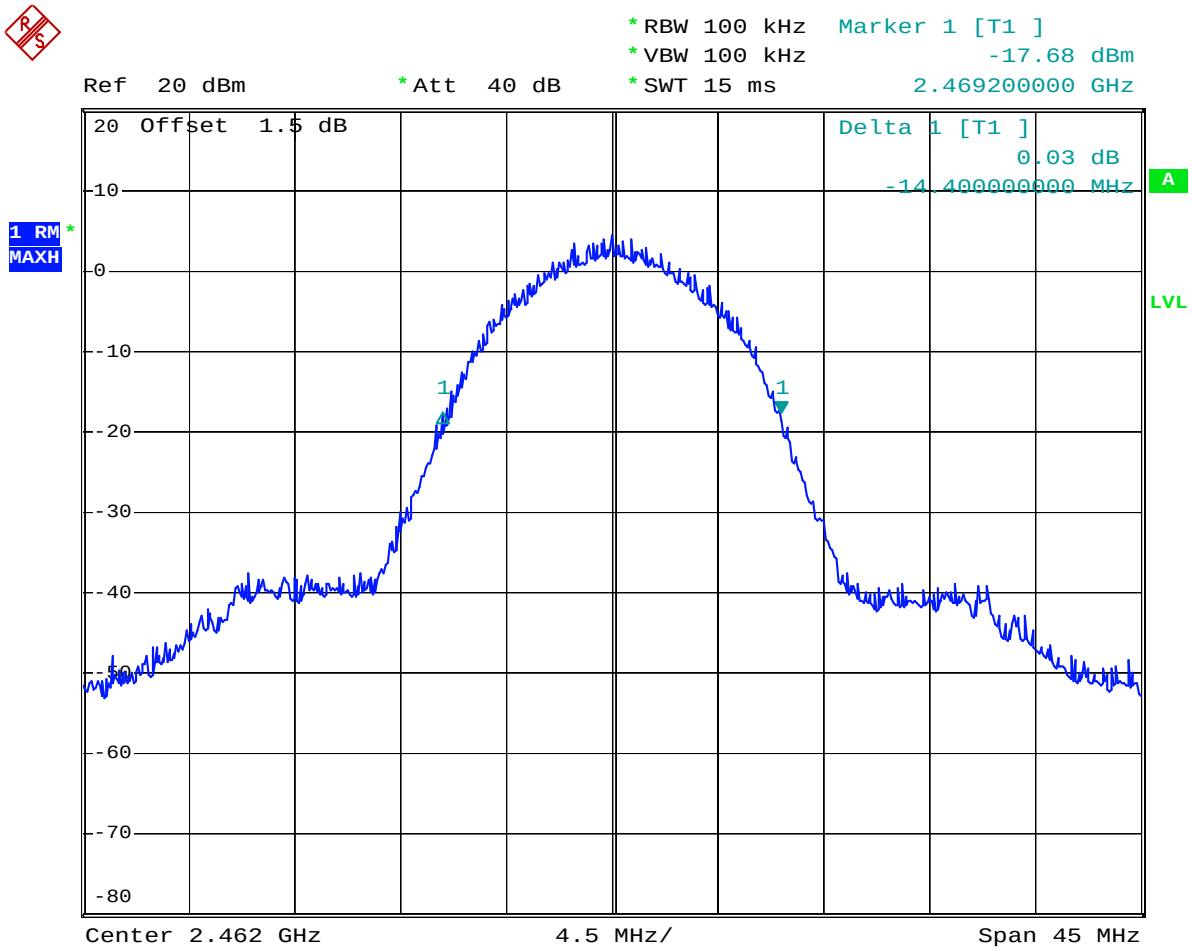
Figure 6d.1-5: Plot of 20 dB bandwidth (Channel 6, 11 Mbps data rate)



Date: 7.JUL.2011 16:11:01

Figure 6d.1-6: Plot of 20 dB bandwidth (Channel 11, 11 Mbps data rate)

6d.2. Spectrum Bandwidth (IEEE 802.11g) – Pursuant 47 CFR 15.247(a)(1); RSS-210 Section A8.1.

The 20 dB bandwidth of the emission is 17.0 MHz.

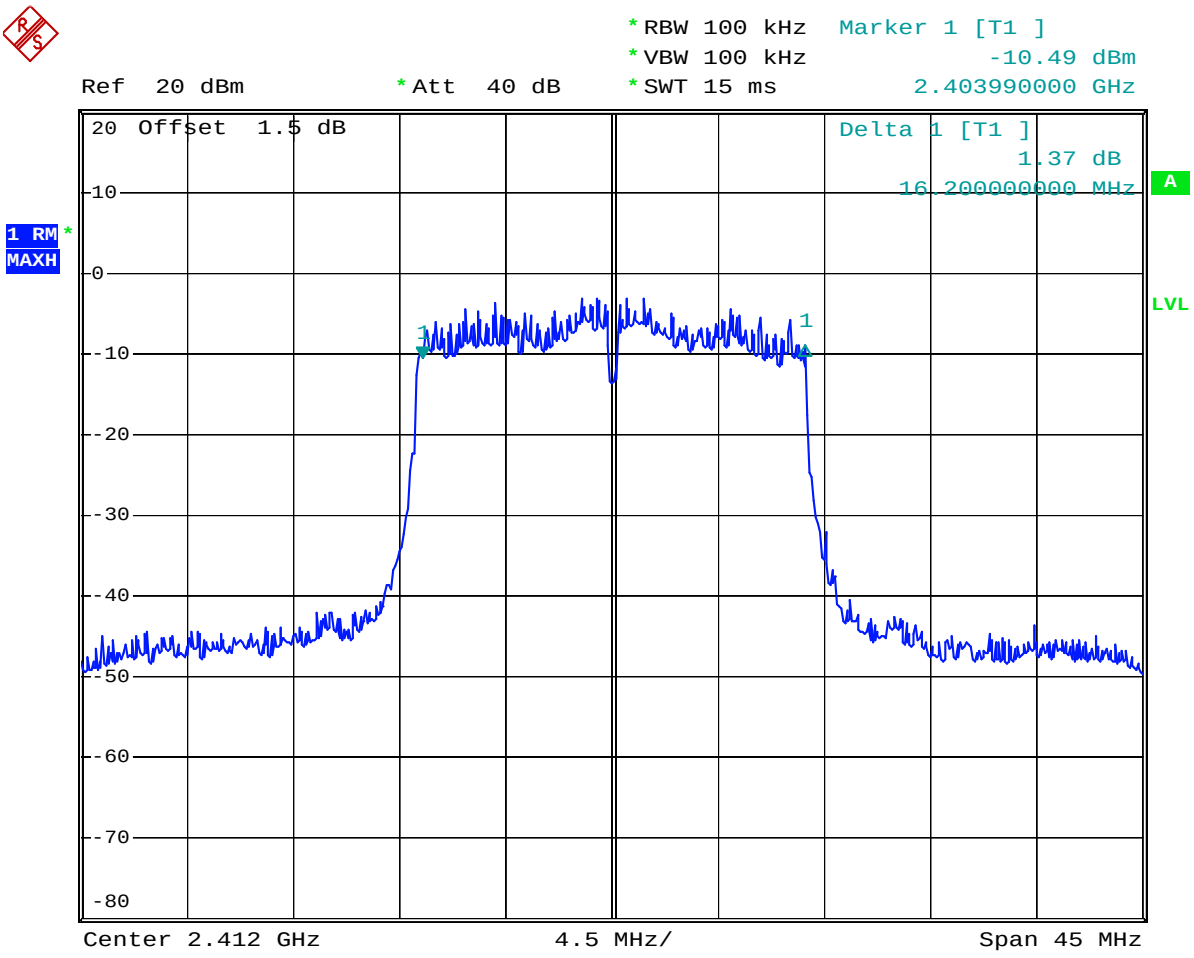


Figure 6d.2-1: Plot of 6 dB bandwidth (Channel 1, 54 Mbps data rate)

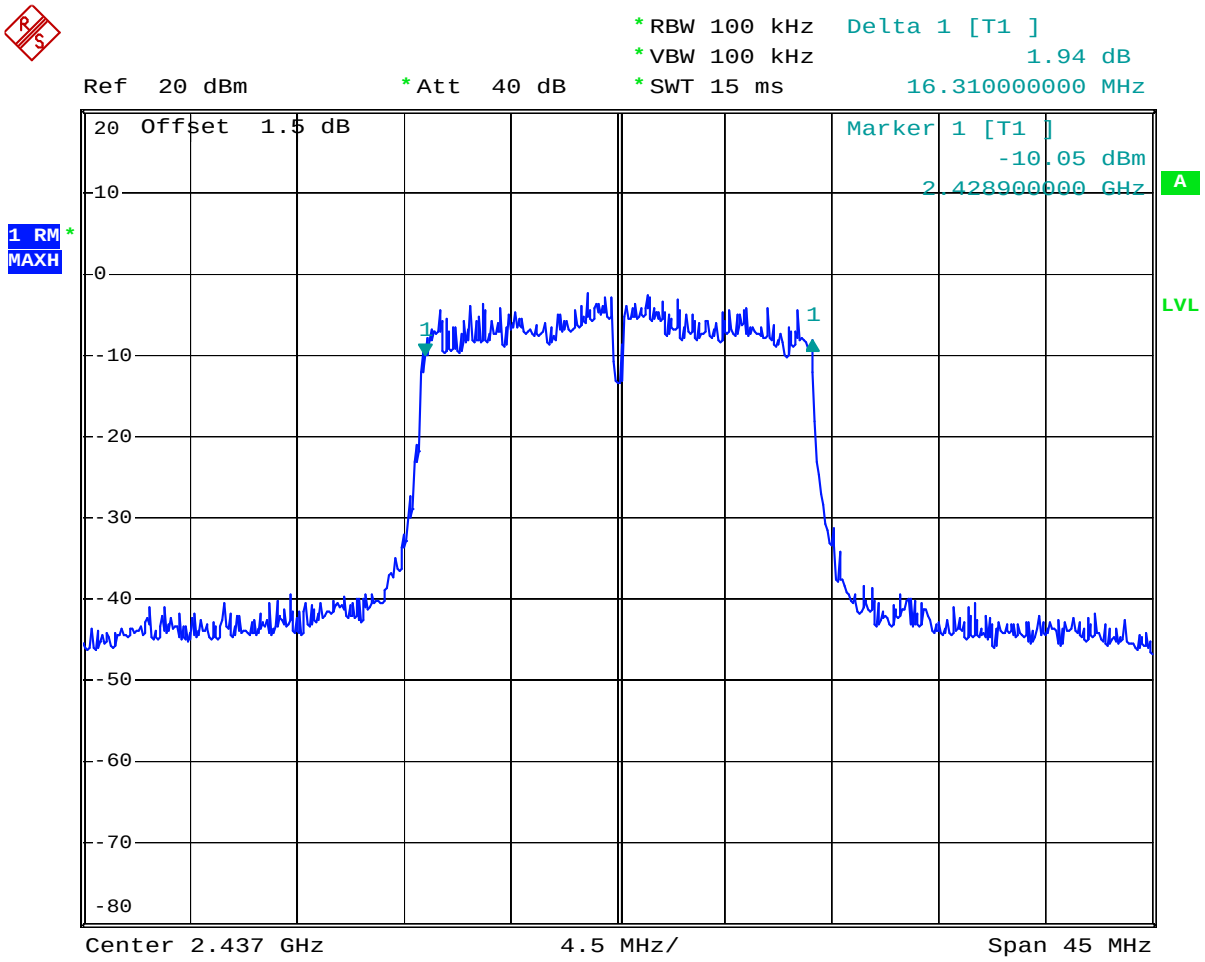


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Figure 6d.2-2: Plot of 6 dB bandwidth (Channel 6, 54 Mbps data rate)

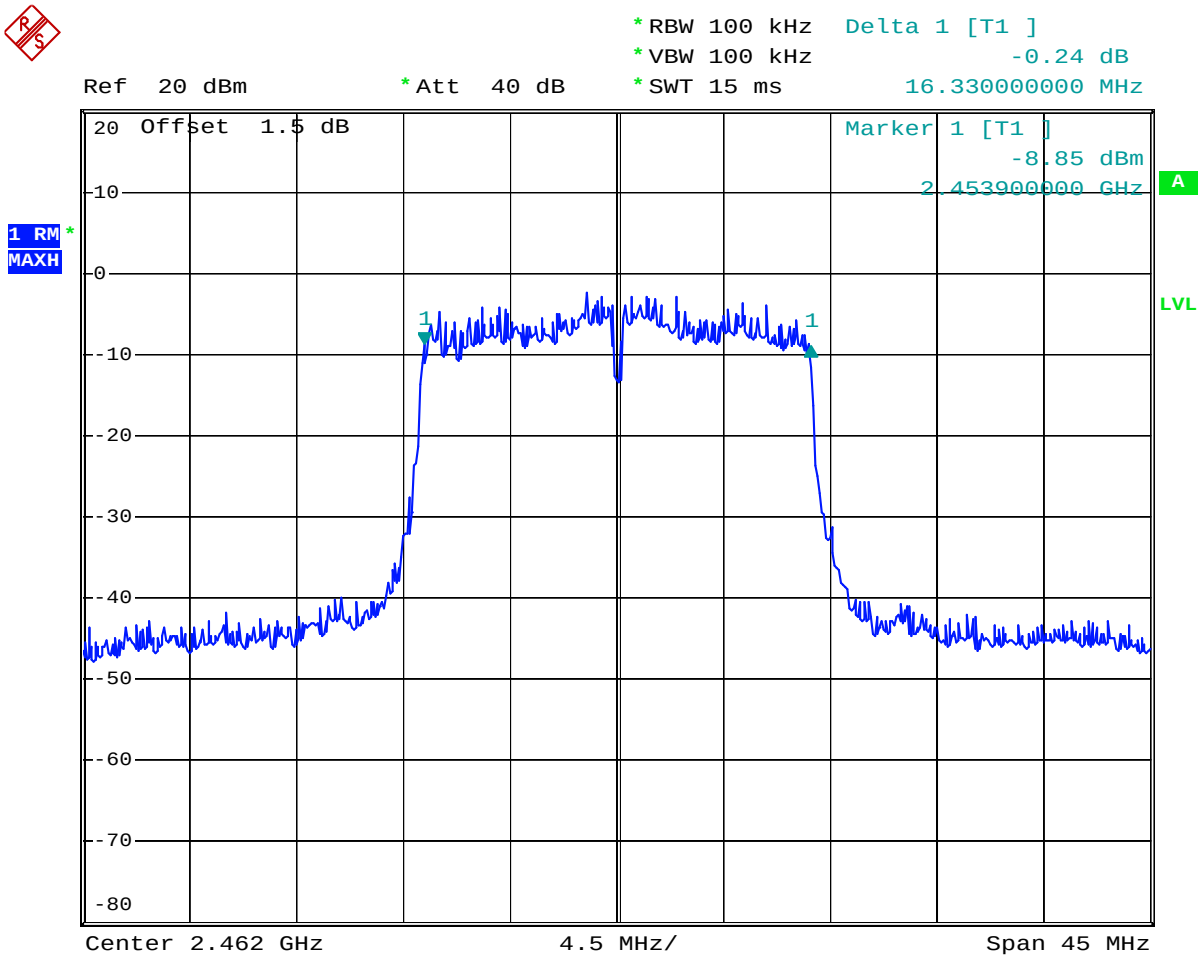

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Figure 6d.2-3: Plot of 6 dB bandwidth (Channel 11, 54 Mbps data rate)

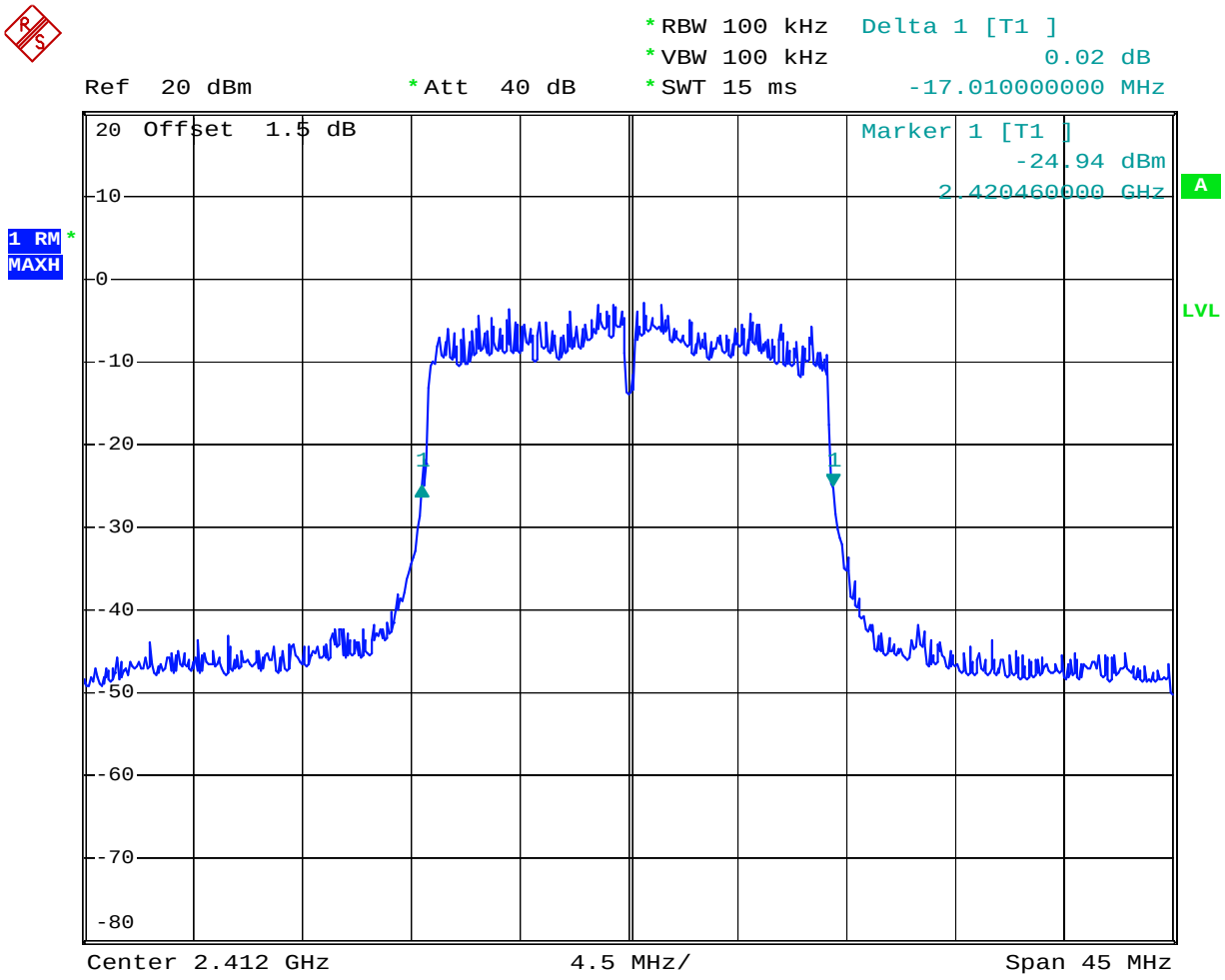

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Figure 6d.2-4: Plot of 20 dB bandwidth (Channel 1, 54 Mbps data rate)

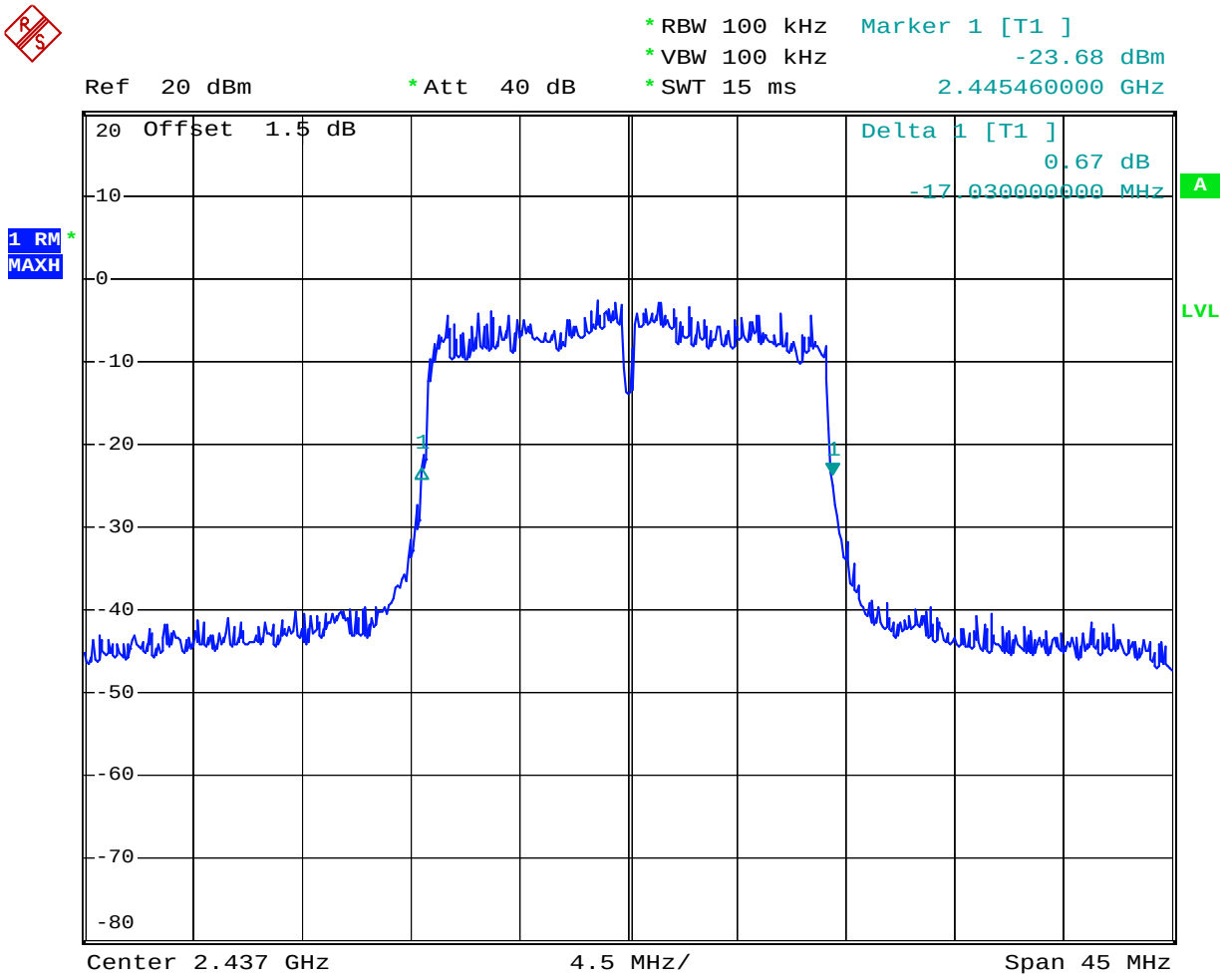

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Figure 6d.2-5: Plot of 20 dB bandwidth (Channel 6, 54 Mbps data rate)

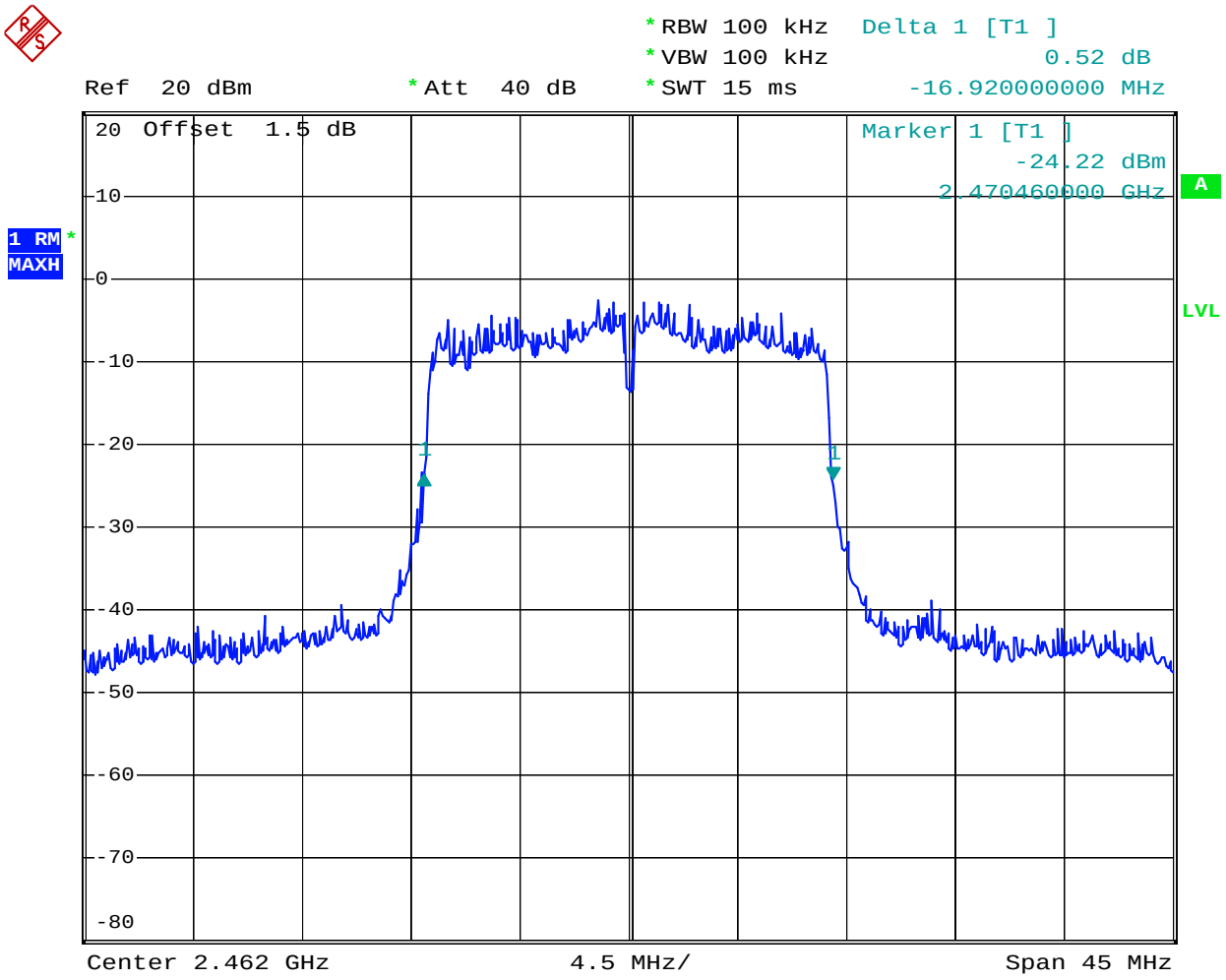

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Figure 6d.2-6: Plot of 20 dB bandwidth (Channel 11, 54 Mbps data rate)

6d.3. Peak Output Power – Pursuant 47 CFR 15.247; RSS-210.

The peak output power is 18.01 dBm, which is equivalent to 63.2 mW.

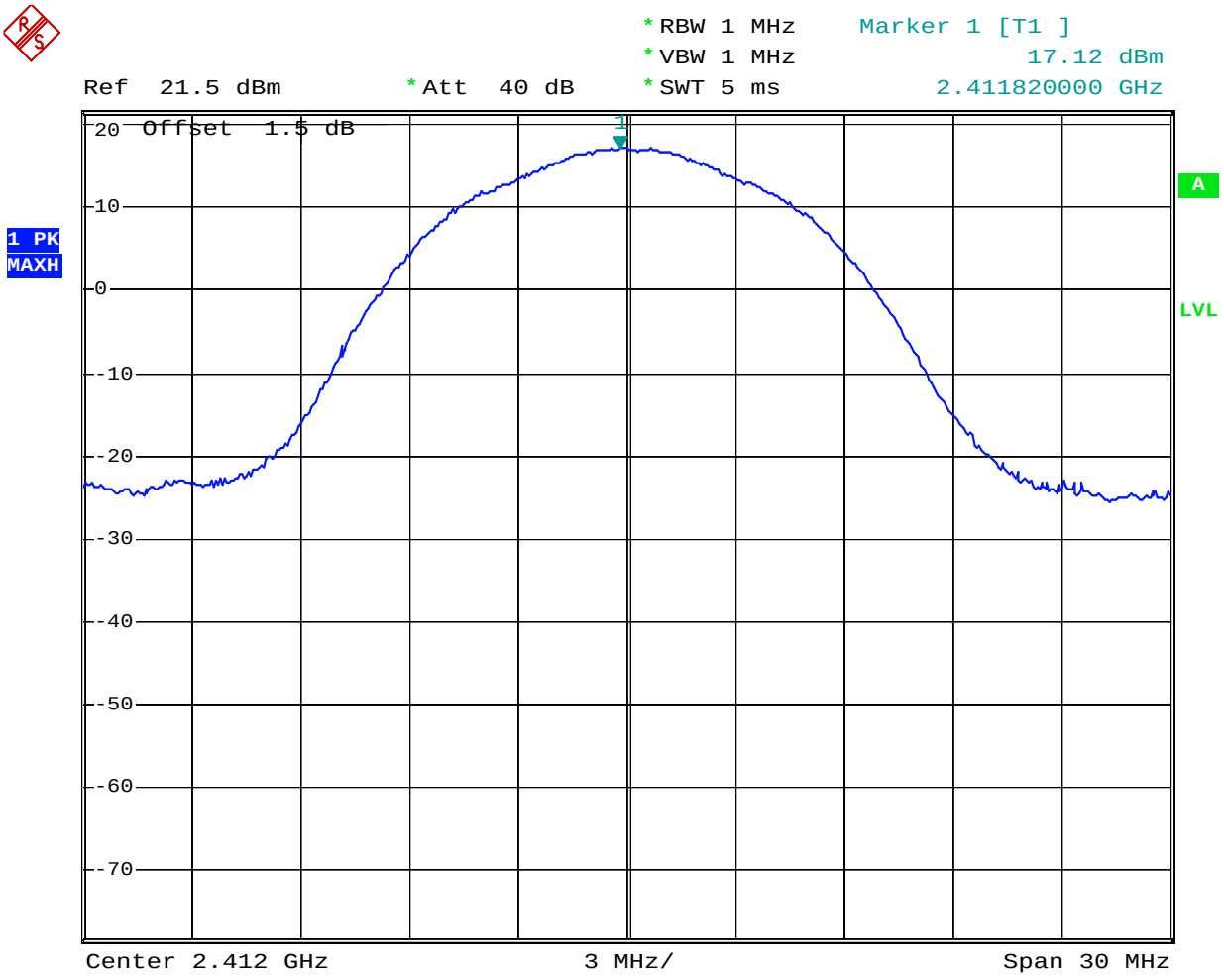

Figure 6d.3-1: Peak Output Power (Channel 1, 11 Mbps data rate)

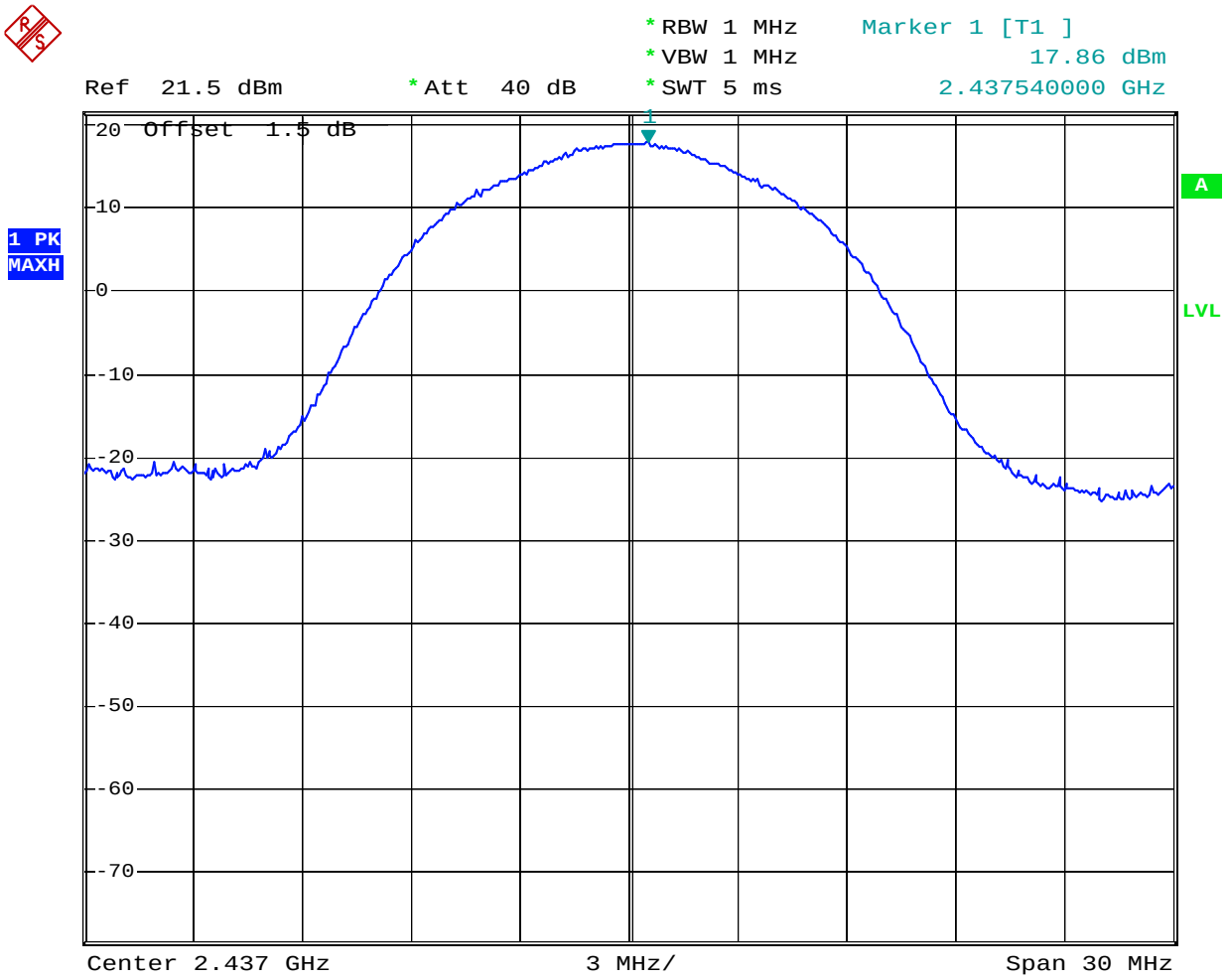

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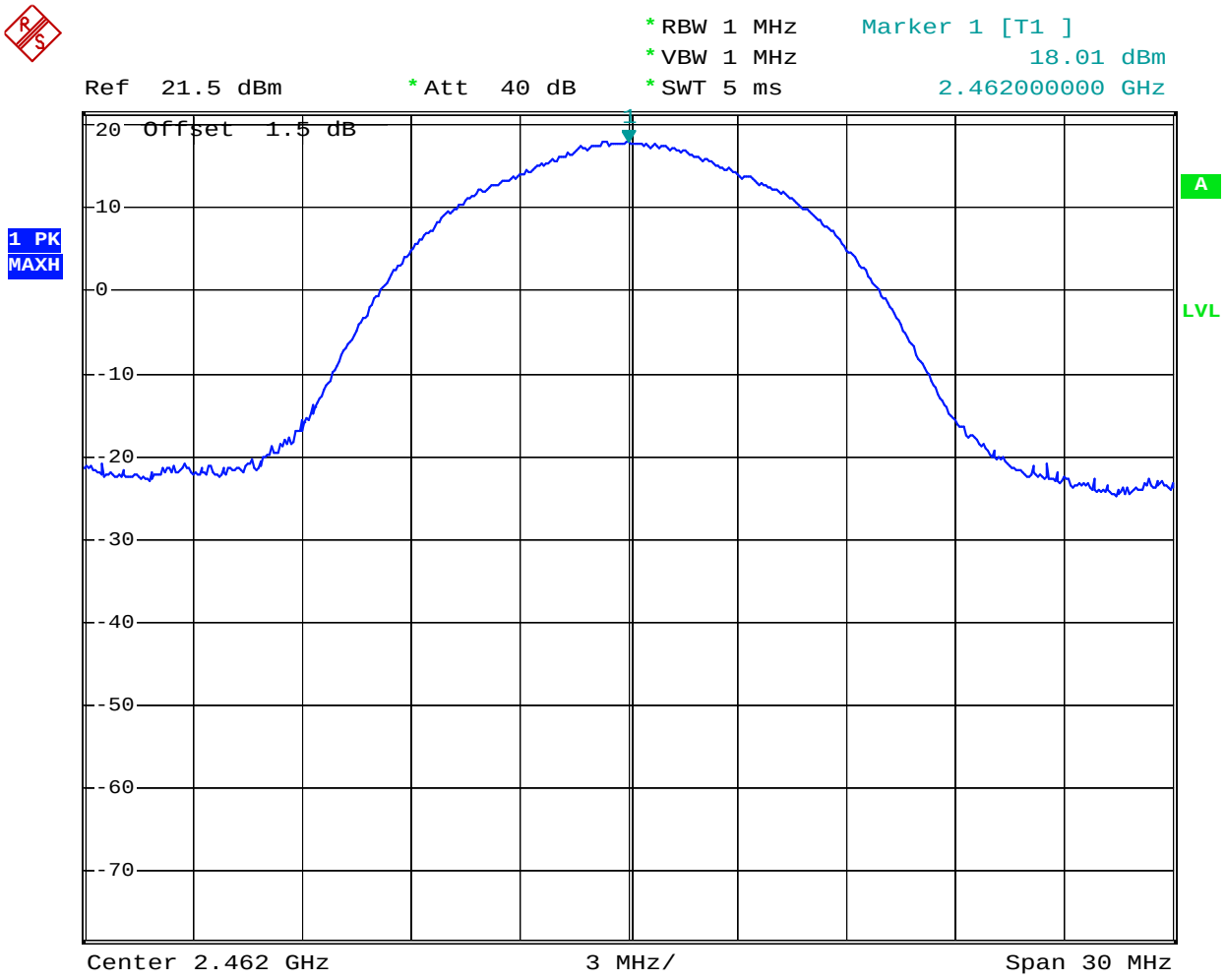
Figure 6d.3-2: Peak Output Power (Channel 6, 11 Mbps data rate)



Date: 8.JUL.2011 10:05:53

Figure 6d.3-3: Peak Output Power (Channel 11, 11 Mbps data rate)

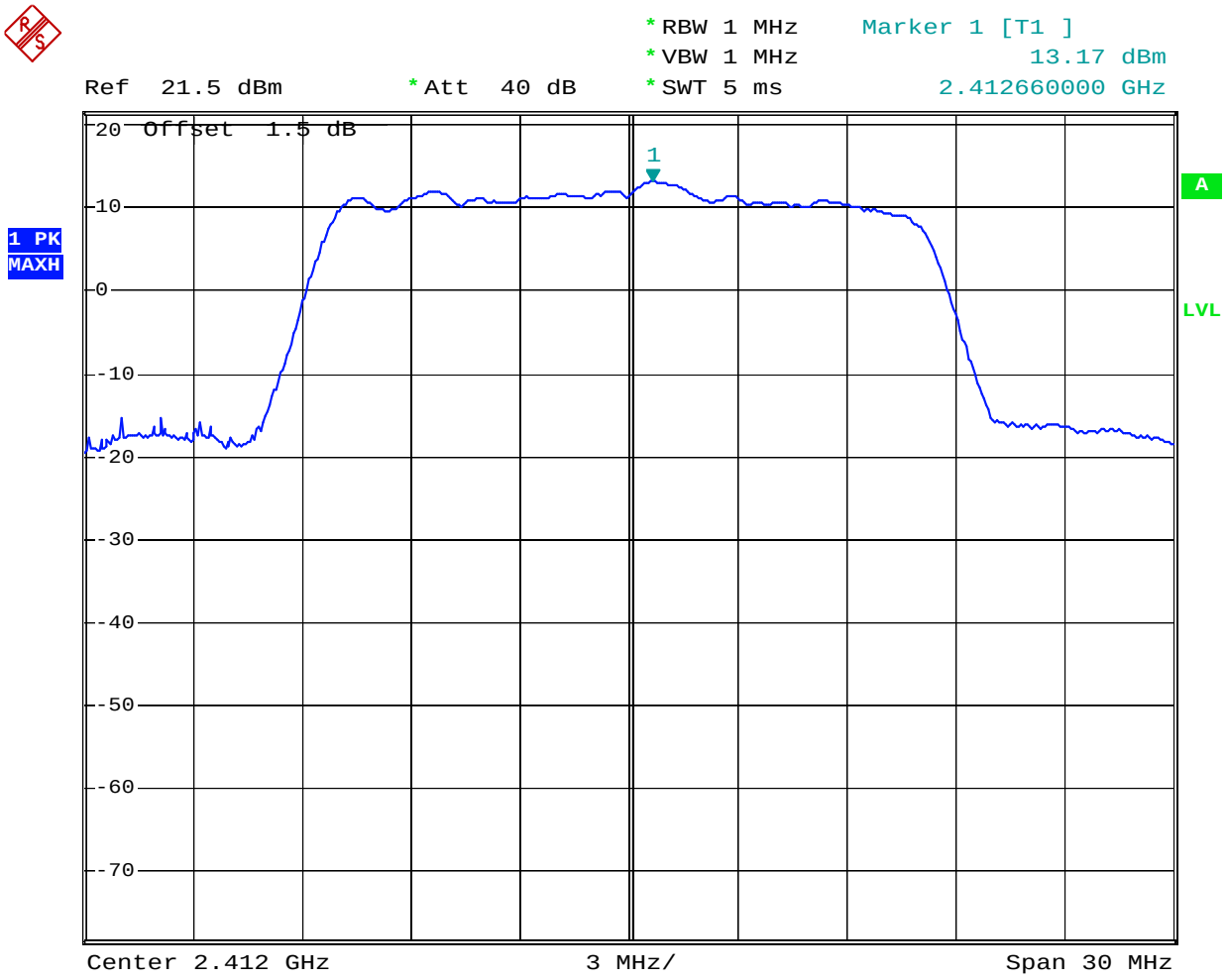


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Figure 6d.3-4: Peak Output Power (Channel 1, 54 Mbps data rate)

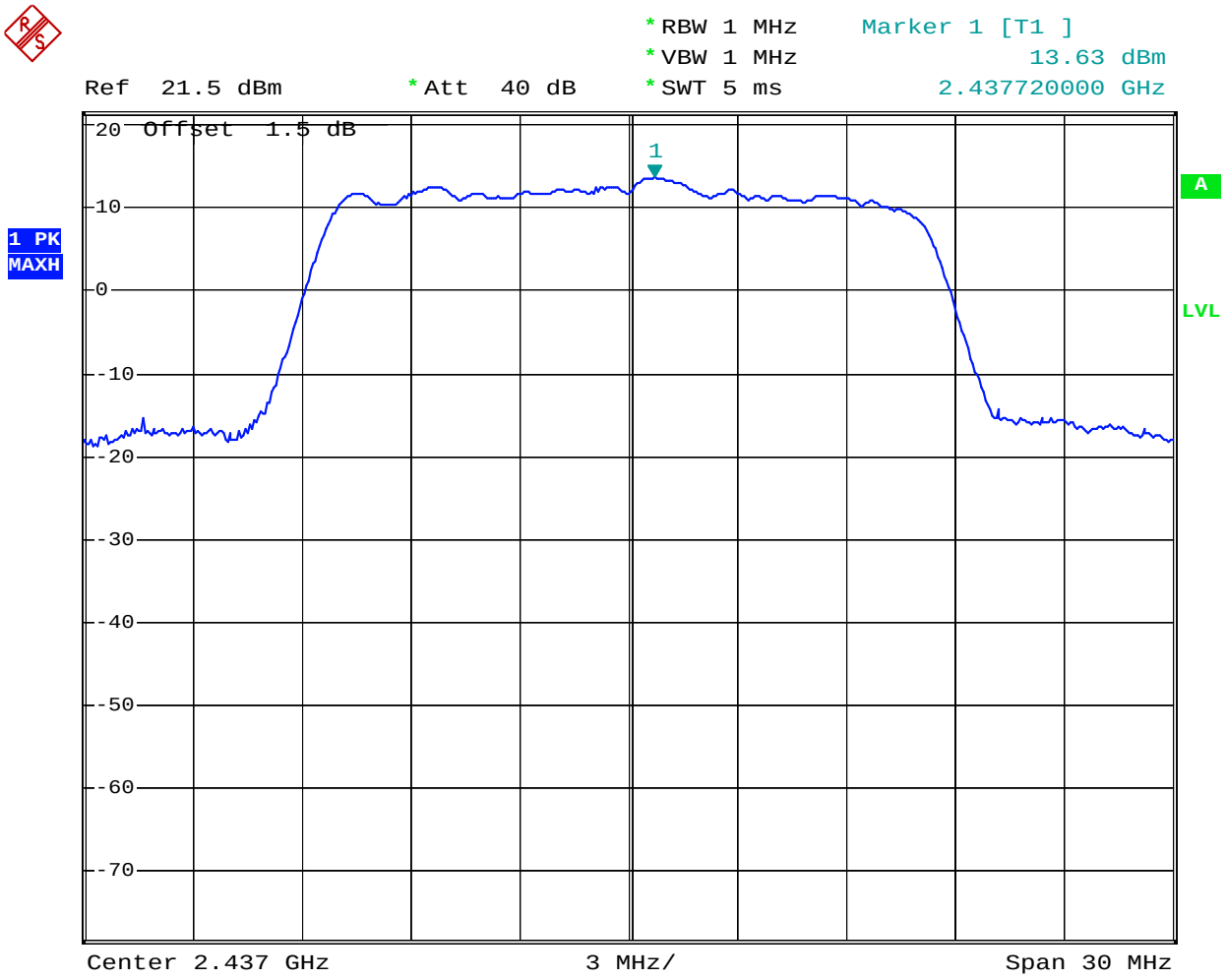

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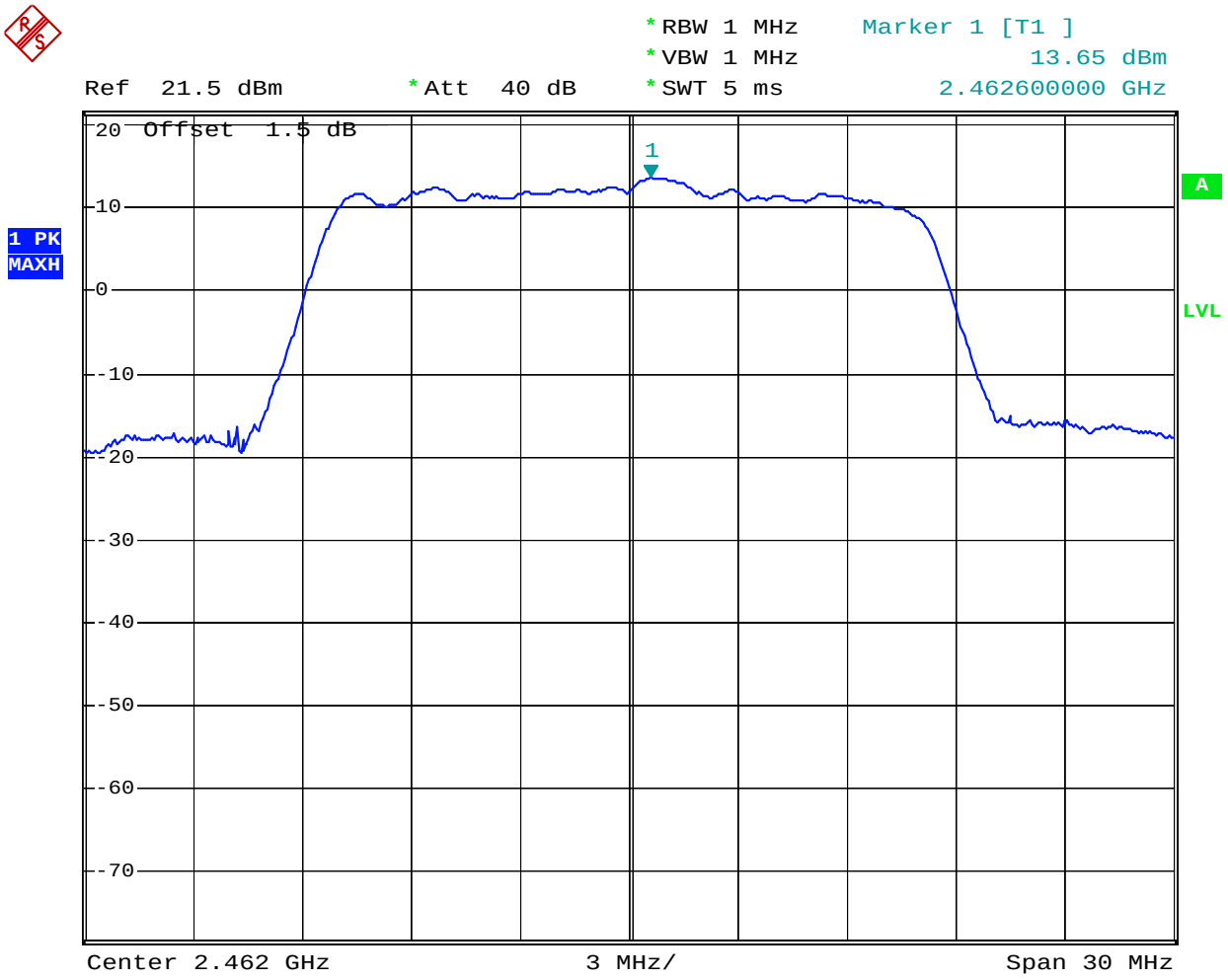
Figure 6d.3-5: Peak Output Power (Channel 6, 54 Mbps data rate)



Date: 8.JUL.2011 10:09:13

Figure 6d.3-6: Peak Output Power (Channel 11, 54 Mbps data rate)

6d.4. Power Spectral Density – Pursuant 47 CFR 15.247(d); RSS-210.

The measured results are given in the tables below:

Table 6d4-1: IEEE 802.11b (11 Mbps data rate)		
2412 MHz	**2437 MHz**	**2462 MHz**
-2.96 dBm	-2.64 dBm	-2.52 dBm

Table 6d4-2: IEEE 802.11g (54 Mbps data rate)		
2412 MHz	**2437 MHz**	**2462 MHz**
-15.78 dBm	-16.10 dBm	-15.36 dBm

6d.5. Conducted Spurious Emissions – Pursuant 47 CFR 15.247(d); RSS-210 Section A8.1.

Criterion: In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

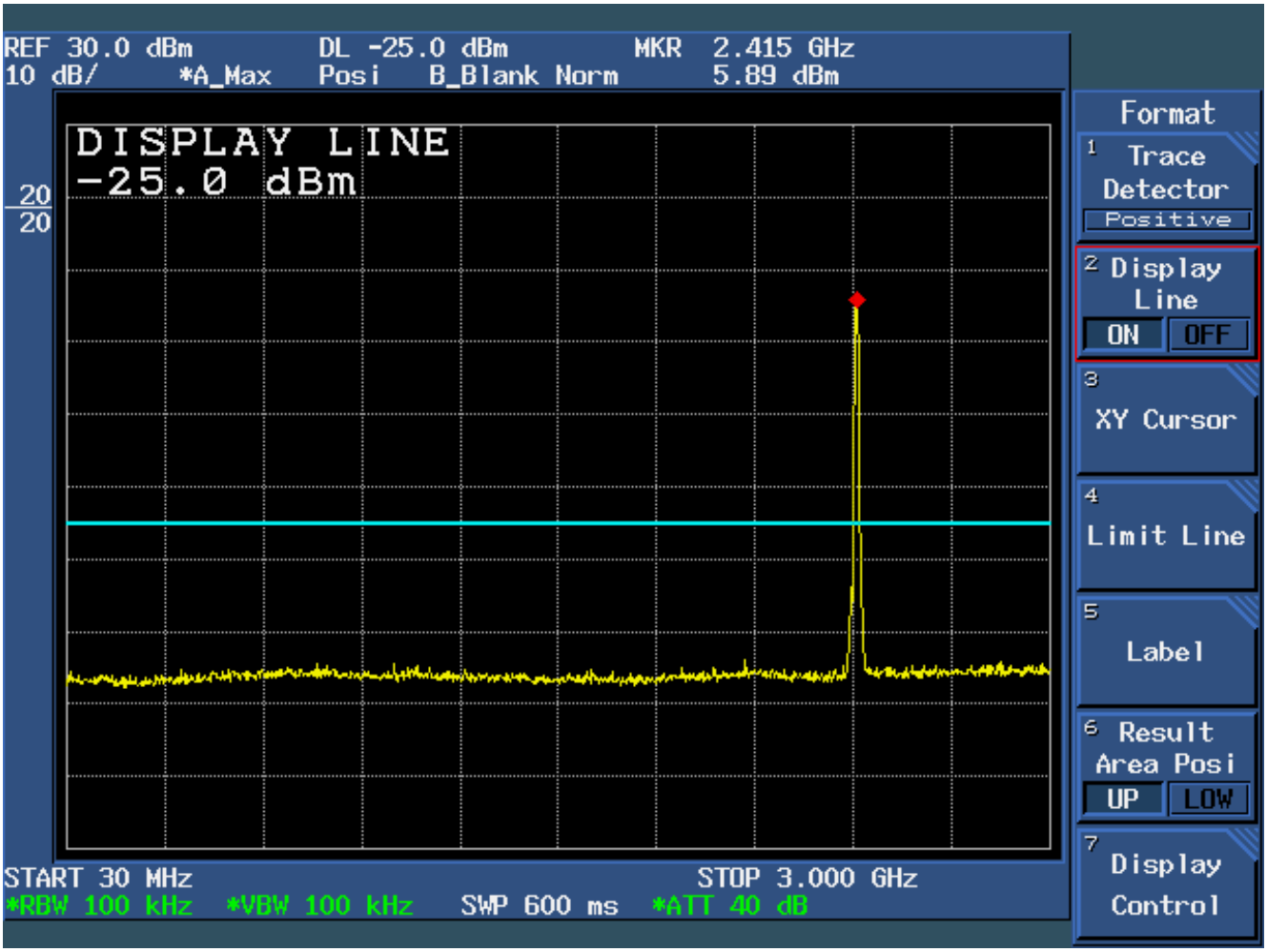


Figure 6d.5-1: Plot of Conducted Spurious Emissions, 30 – 3000 MHz (11 Mbps data rate, Ch 1).

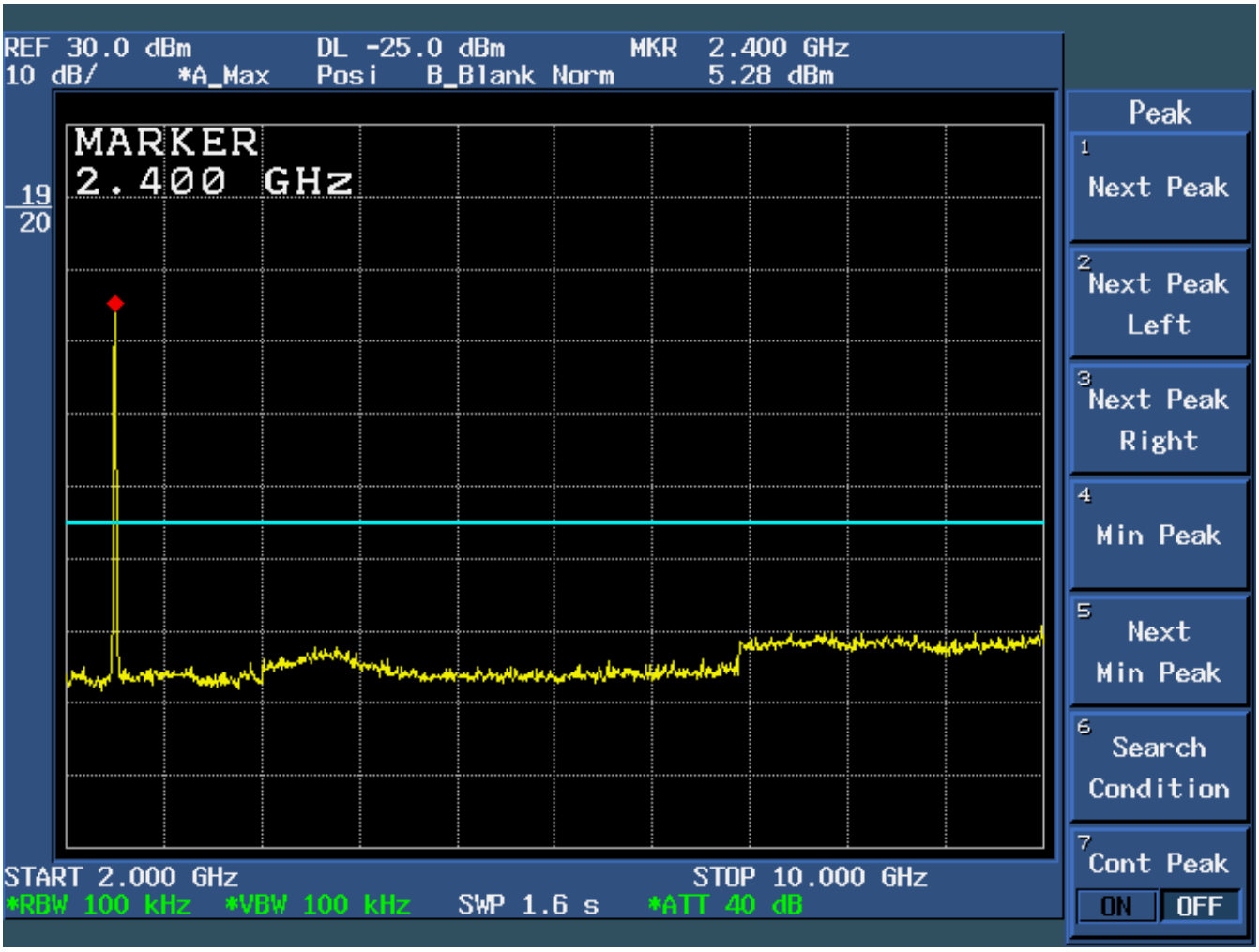


Figure 6d.5-2: Plot of Conducted Spurious Emissions, 2 – 10 GHz (11 Mbps data rate, Ch 1).

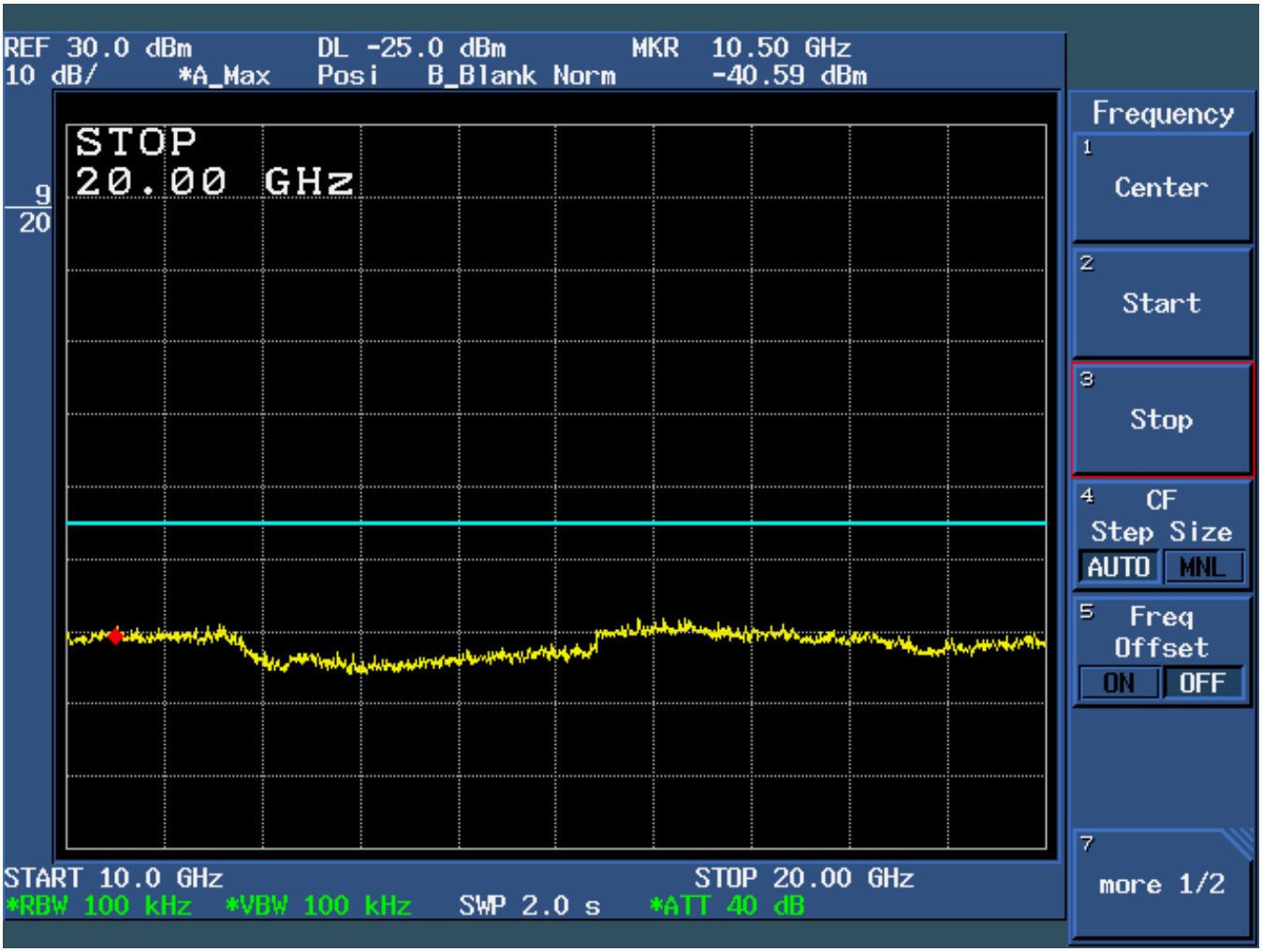


Figure 6d.5-3: Plot of Conducted Spurious Emissions, 10 – 20 GHz (11 Mbps data rate, Ch 1).

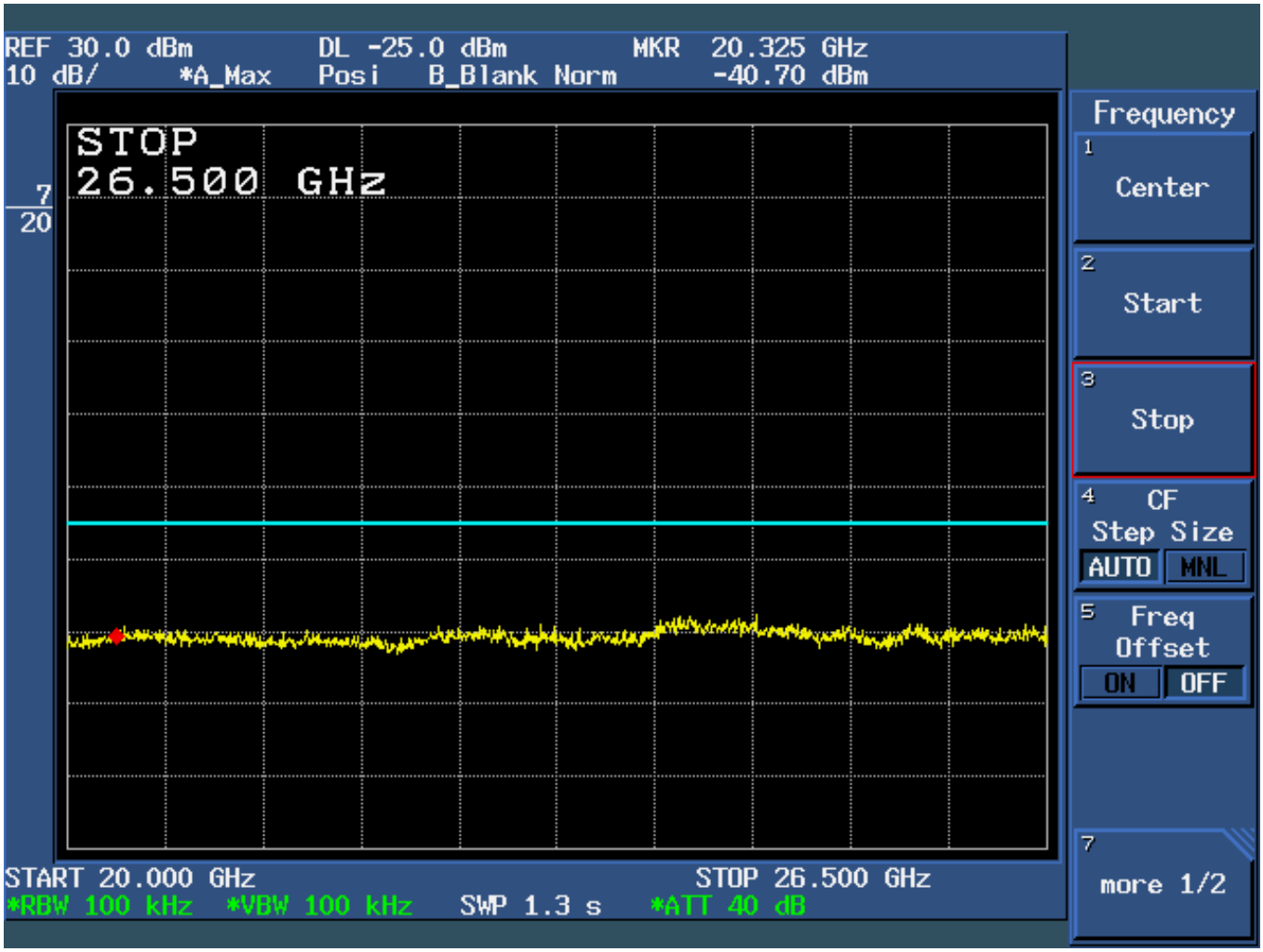


Figure 6d.5-4: Plot of Conducted Spurious Emissions, 20 – 26.5 GHz (11 Mbps data rate, Ch 1).

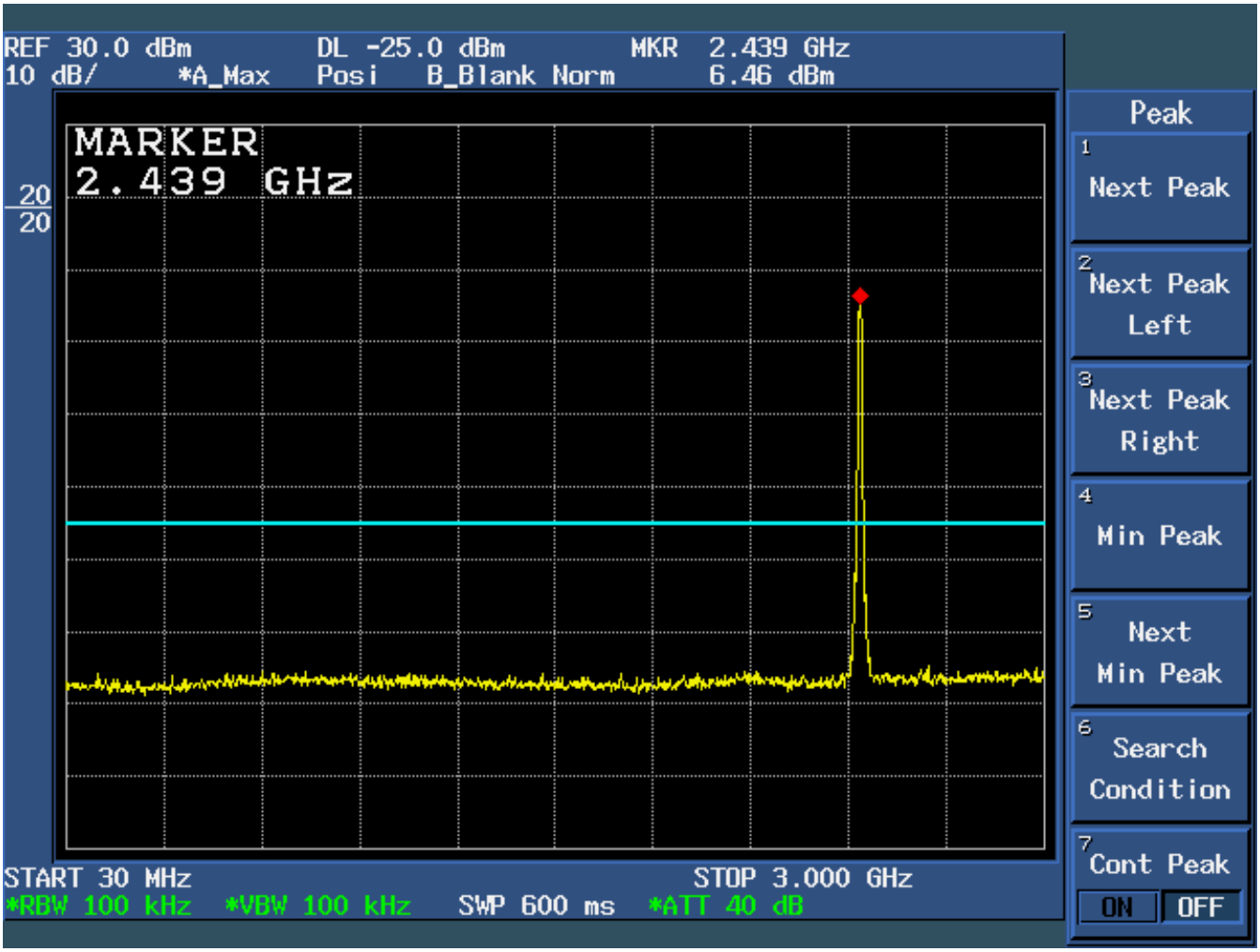


Figure 6d.5-5: Plot of Conducted Spurious Emissions, 30 – 3000 MHz (11 Mbps data rate, Ch 6).

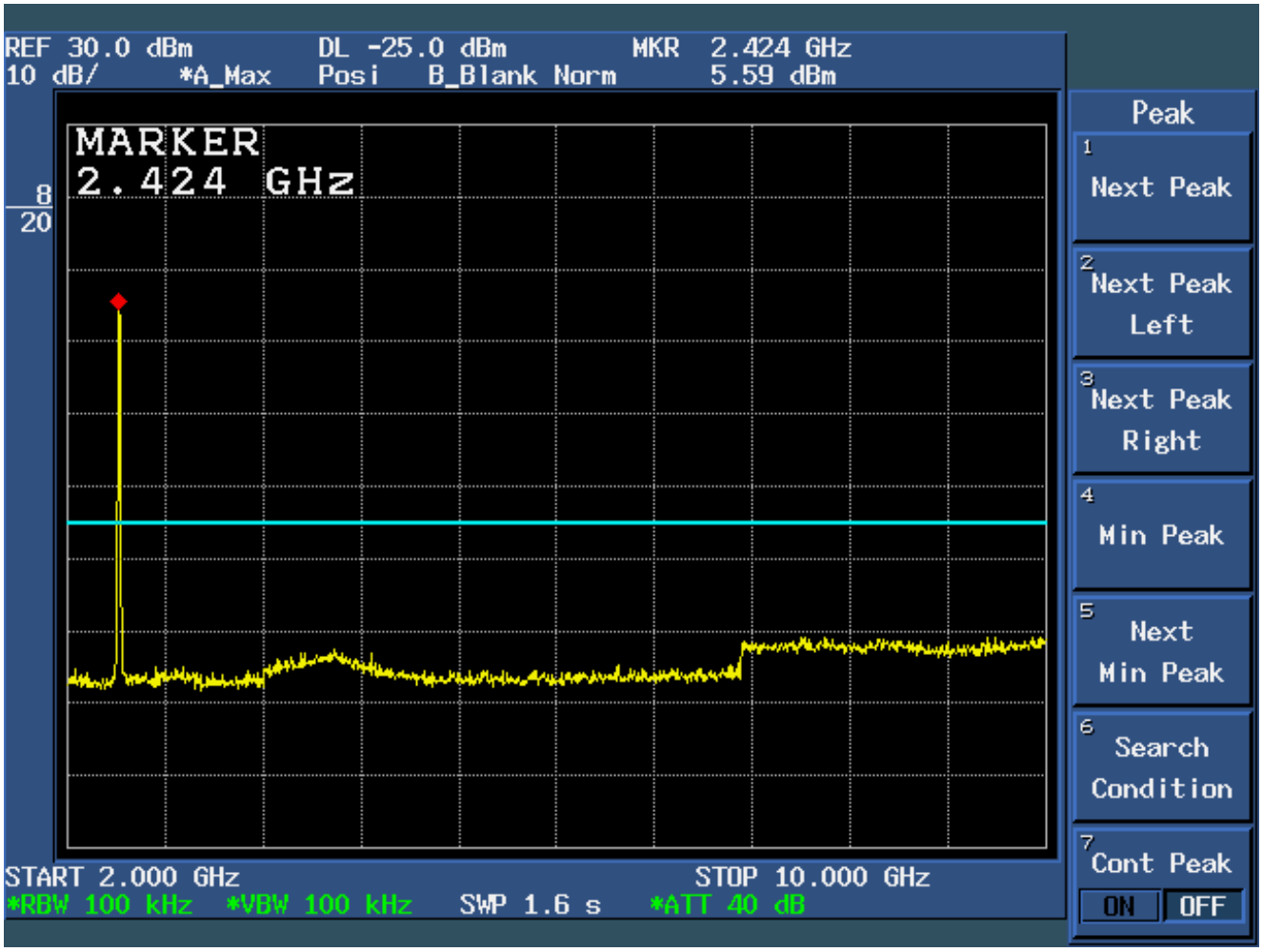


Figure 6d.5-6: Plot of Conducted Spurious Emissions, 2 – 10 GHz (11 Mbps data rate, Ch 6).

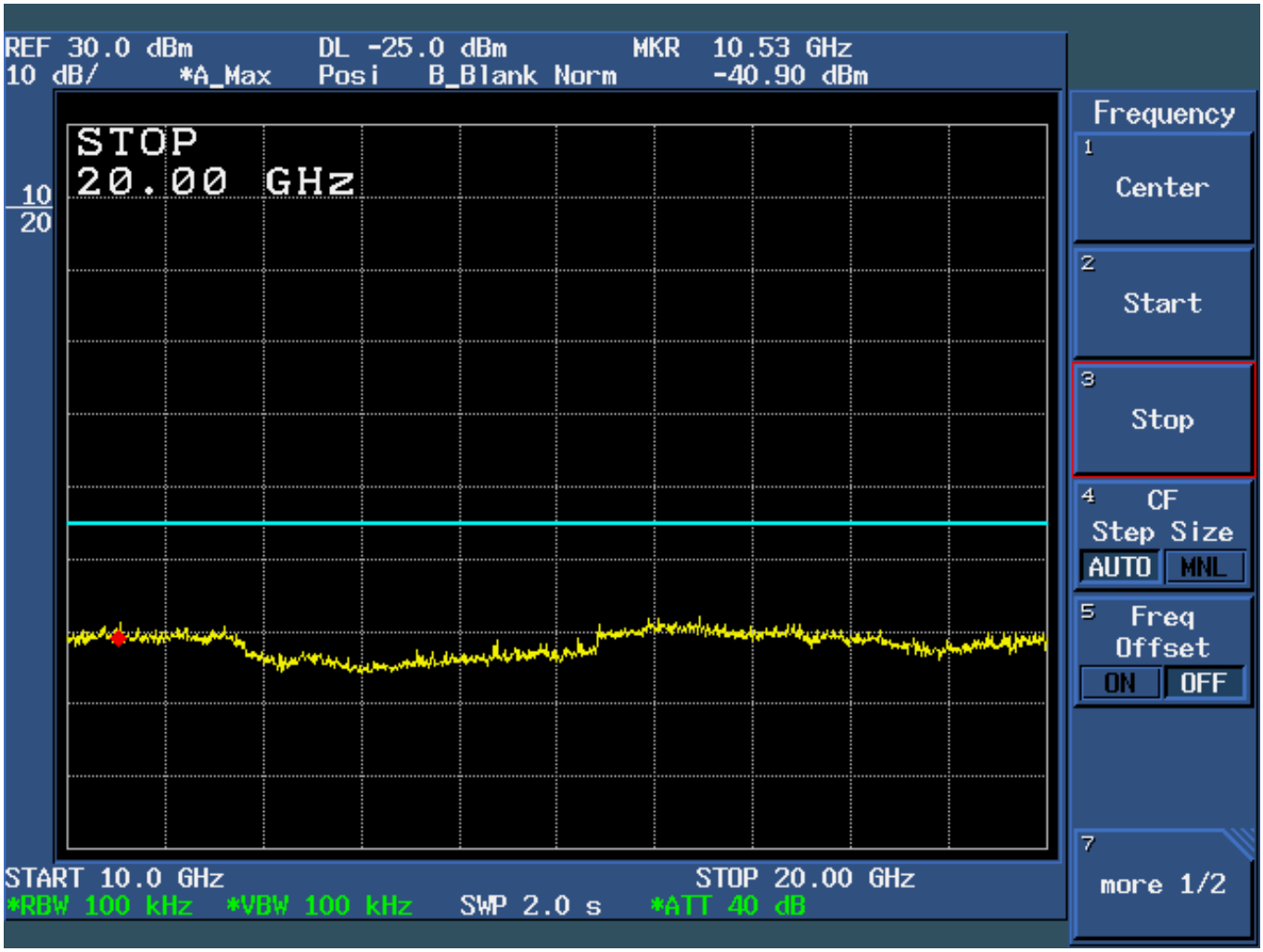


Figure 6d.5-7: Plot of Conducted Spurious Emissions, 10 – 20 GHz (11 Mbps data rate, Ch 6).

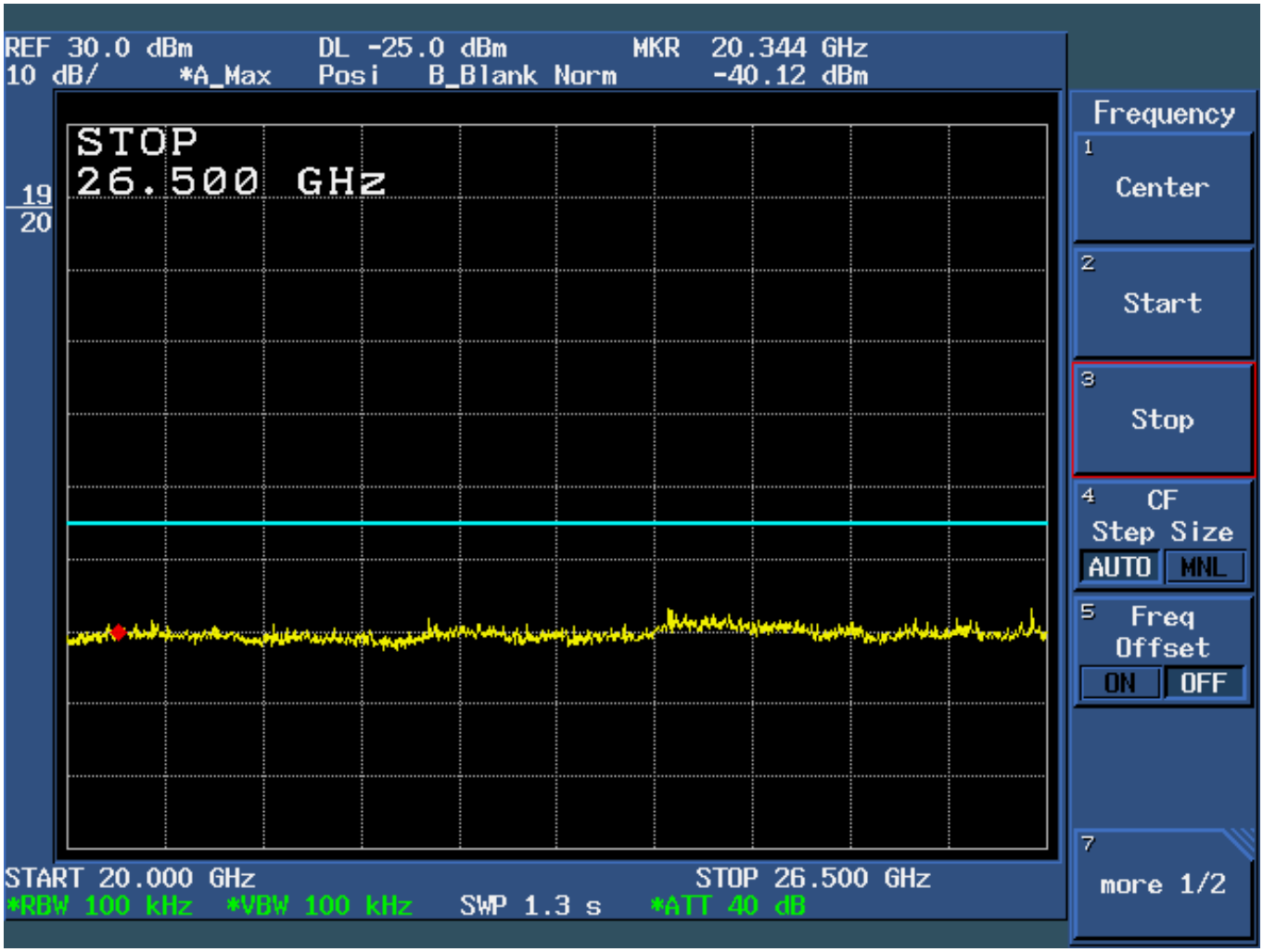


Figure 6d.5-8: Plot of Conducted Spurious Emissions, 20 – 26.5 GHz (11 Mbps data rate, Ch 6).

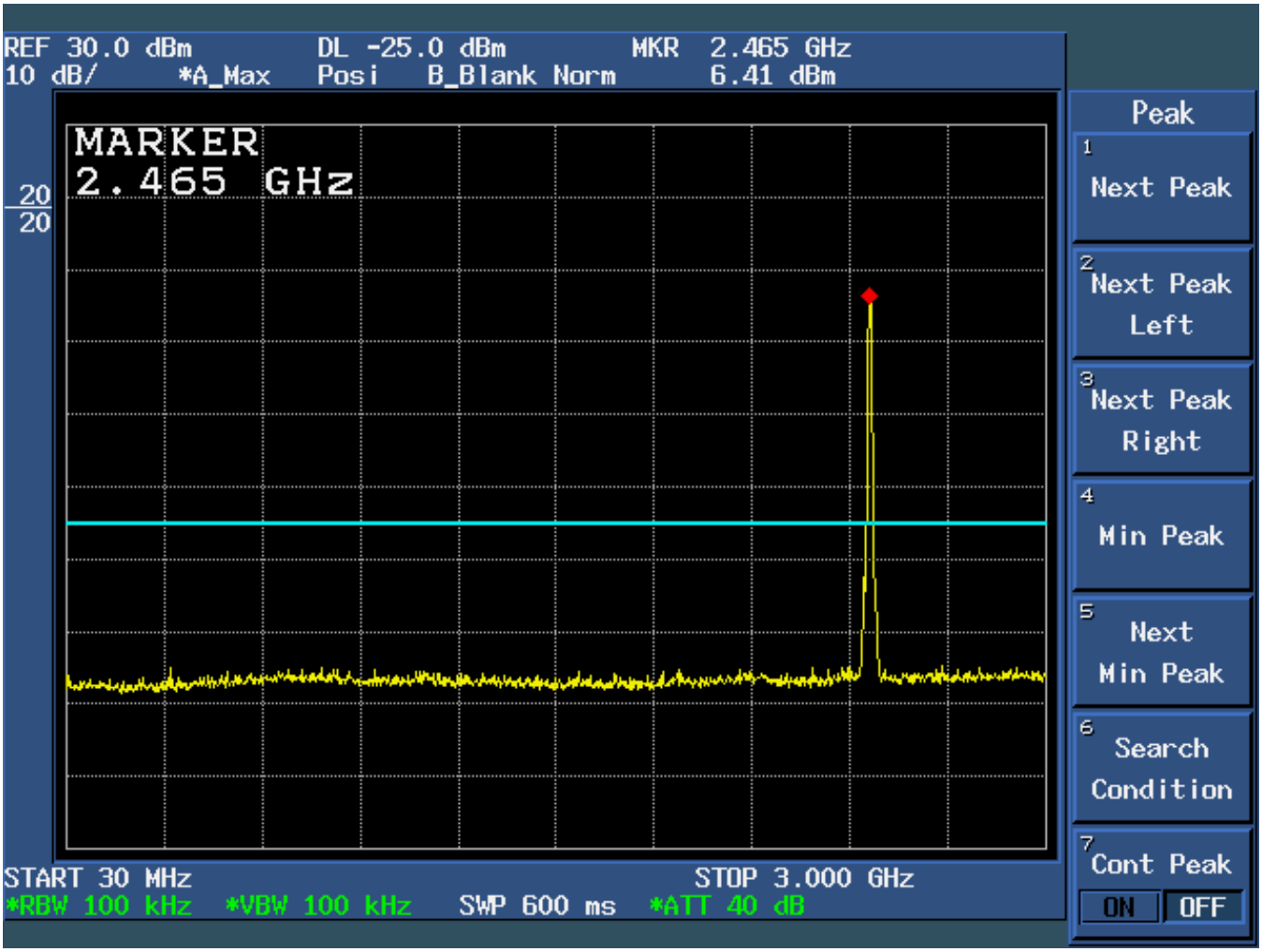


Figure 6d.5-9: Plot of Conducted Spurious Emissions, 30 – 3000 MHz (11 Mbps data rate, Ch 11).

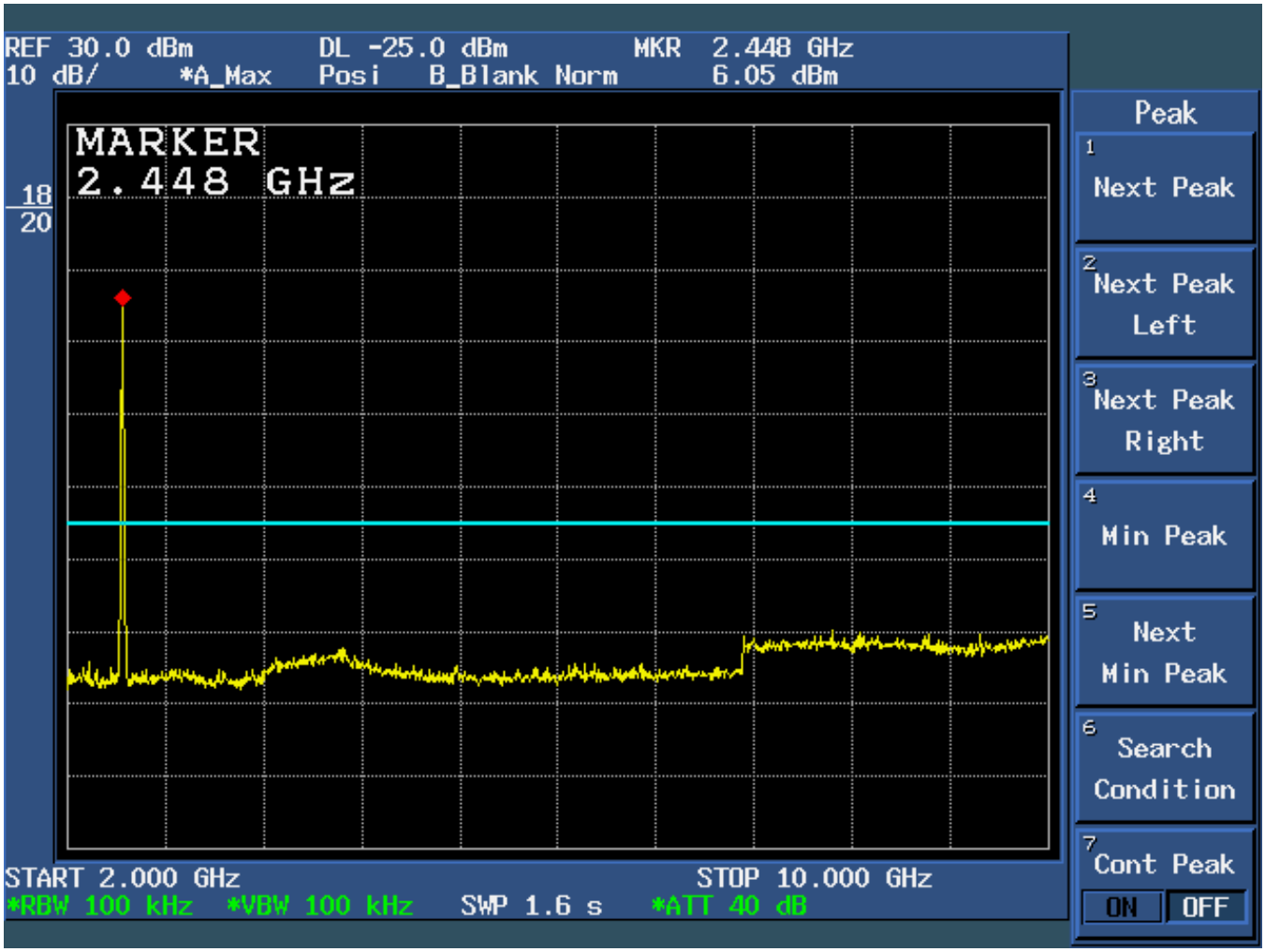


Figure 6d.5-10: Plot of Conducted Spurious Emissions, 2 – 10 GHz (11 Mbps data rate, Ch 11).

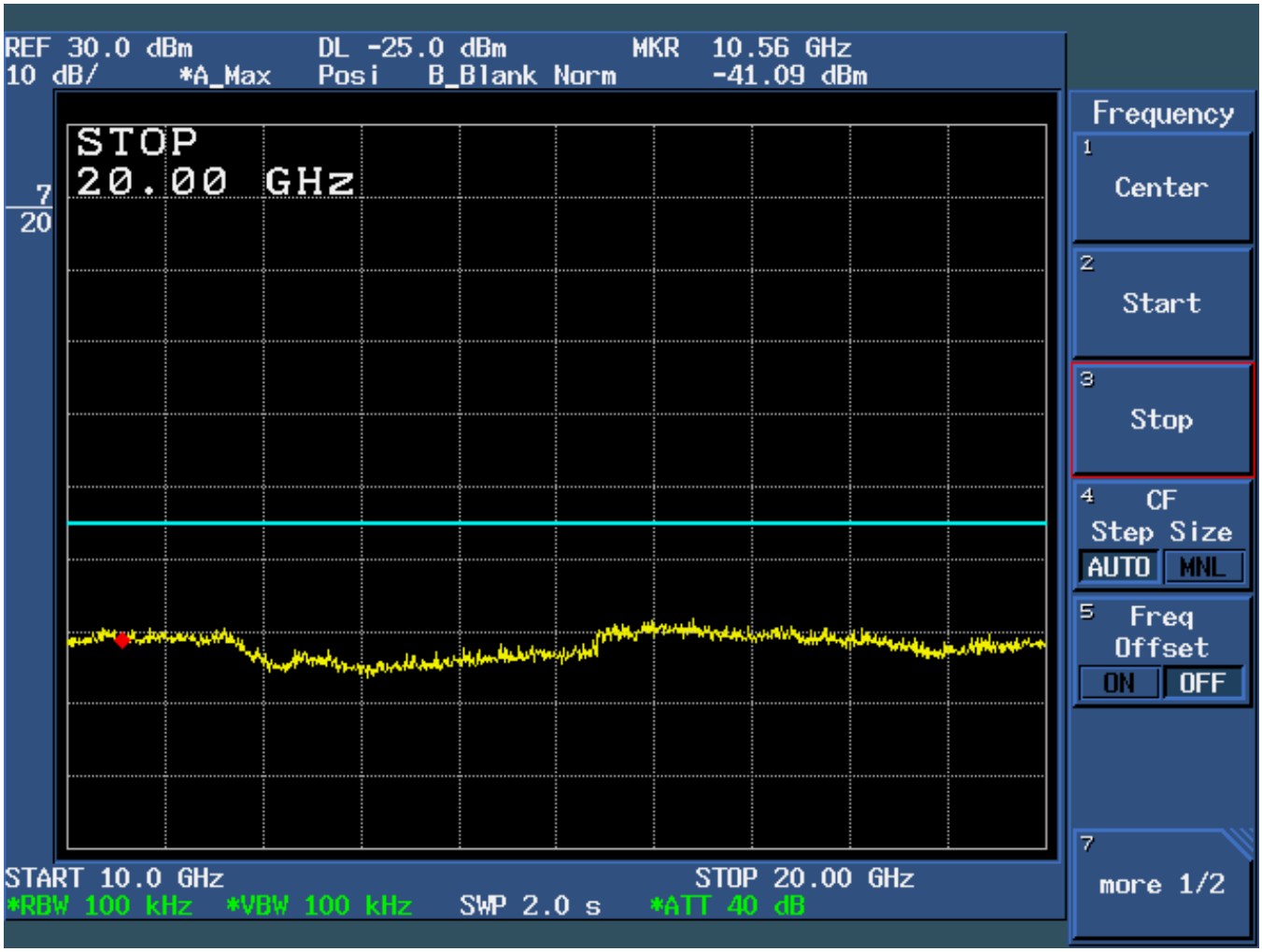


Figure 6d.5-11: Plot of Conducted Spurious Emissions, 10 – 20 GHz (11 Mbps data rate, Ch 11).

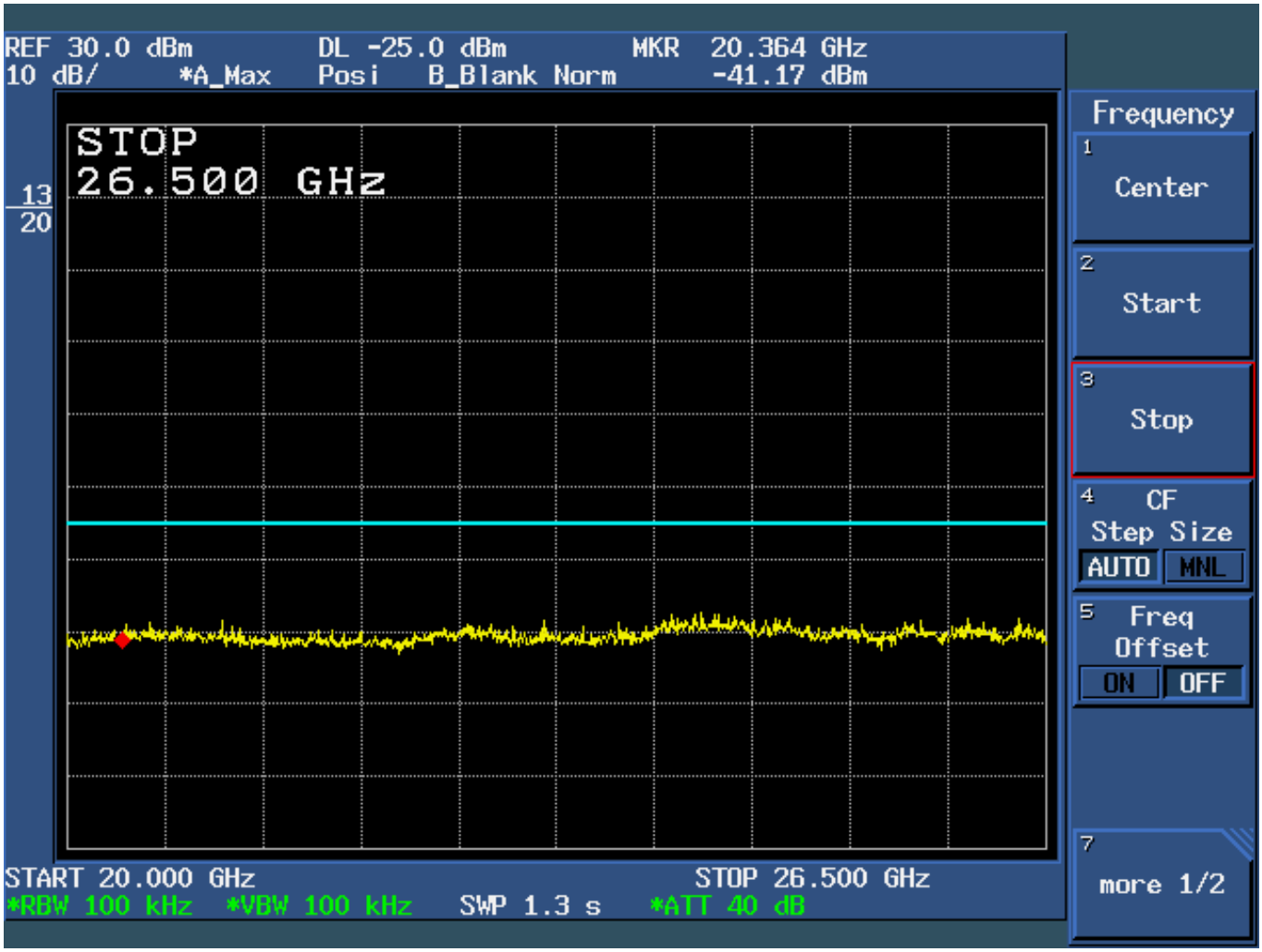


Figure 6d.5-12: Plot of Conducted Spurious Emissions, 20 – 26.5 GHz (5 Mbps data rate, Ch 11).

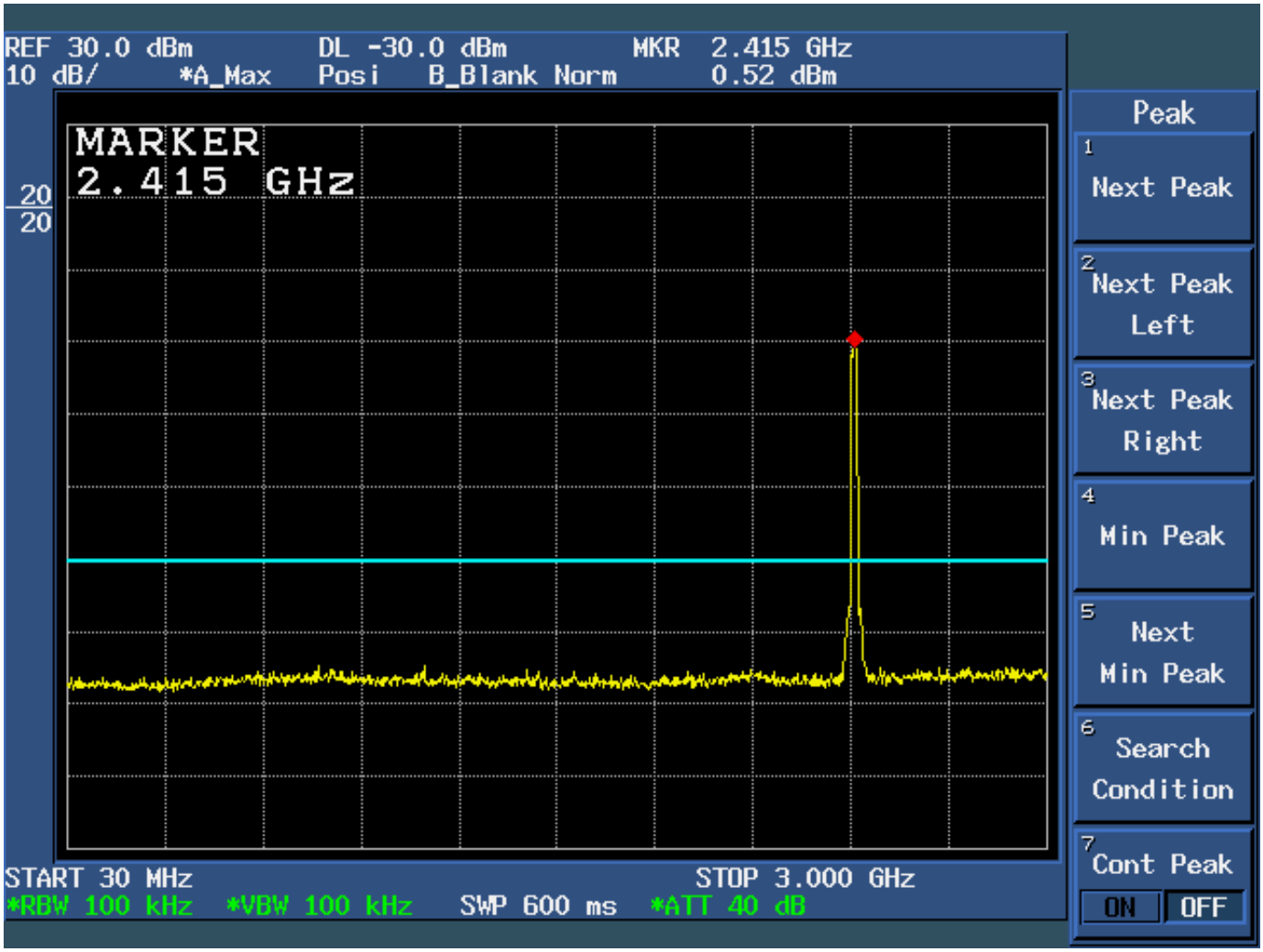


Figure 6d.5-13: Plot of Conducted Spurious Emissions, 30 – 3000 MHz (54 Mbps data rate, Ch 1).

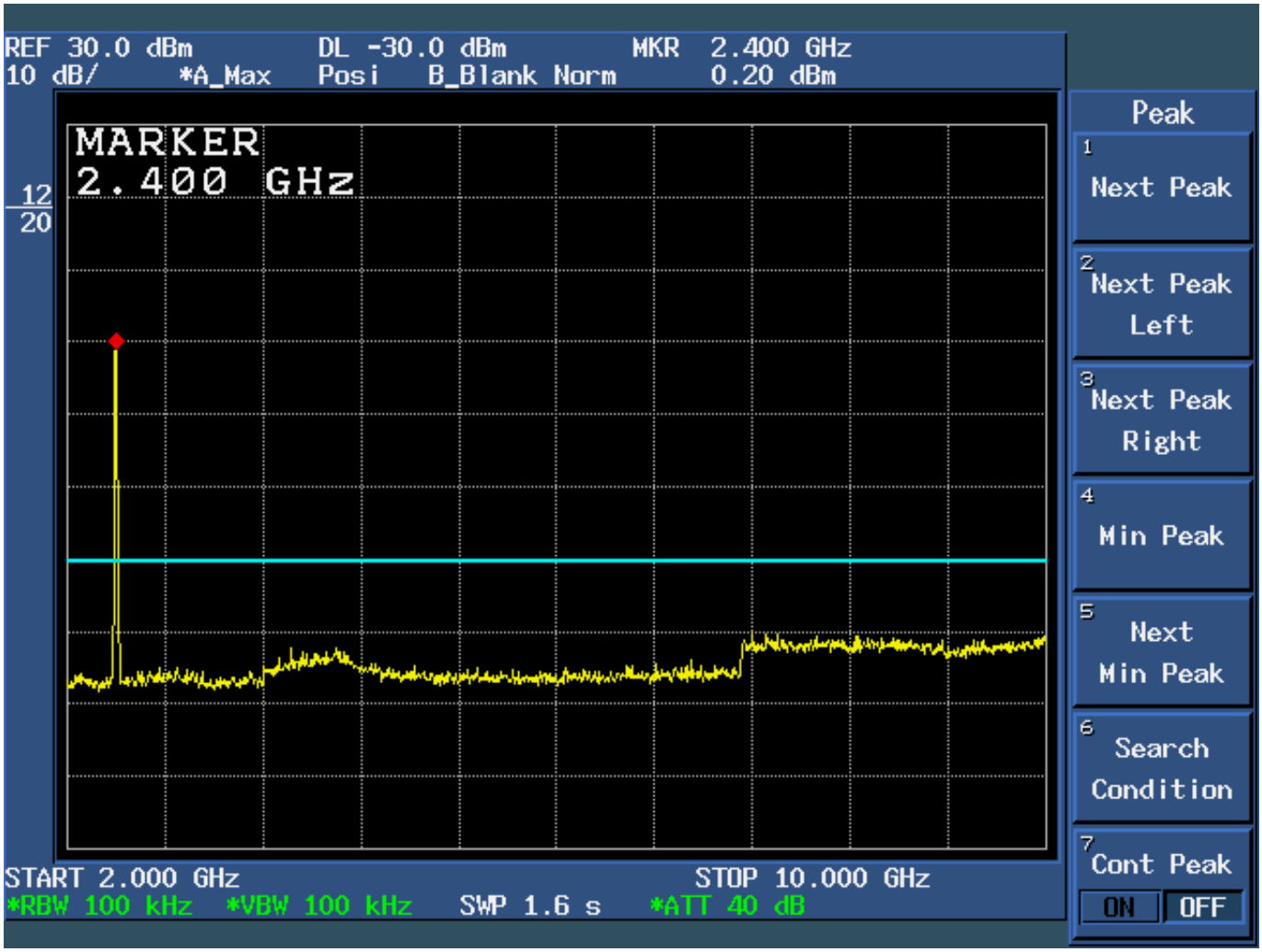


Figure 6d.5-14: Plot of Conducted Spurious Emissions, 2 – 10 GHz (54 Mbps data rate, Ch 1).

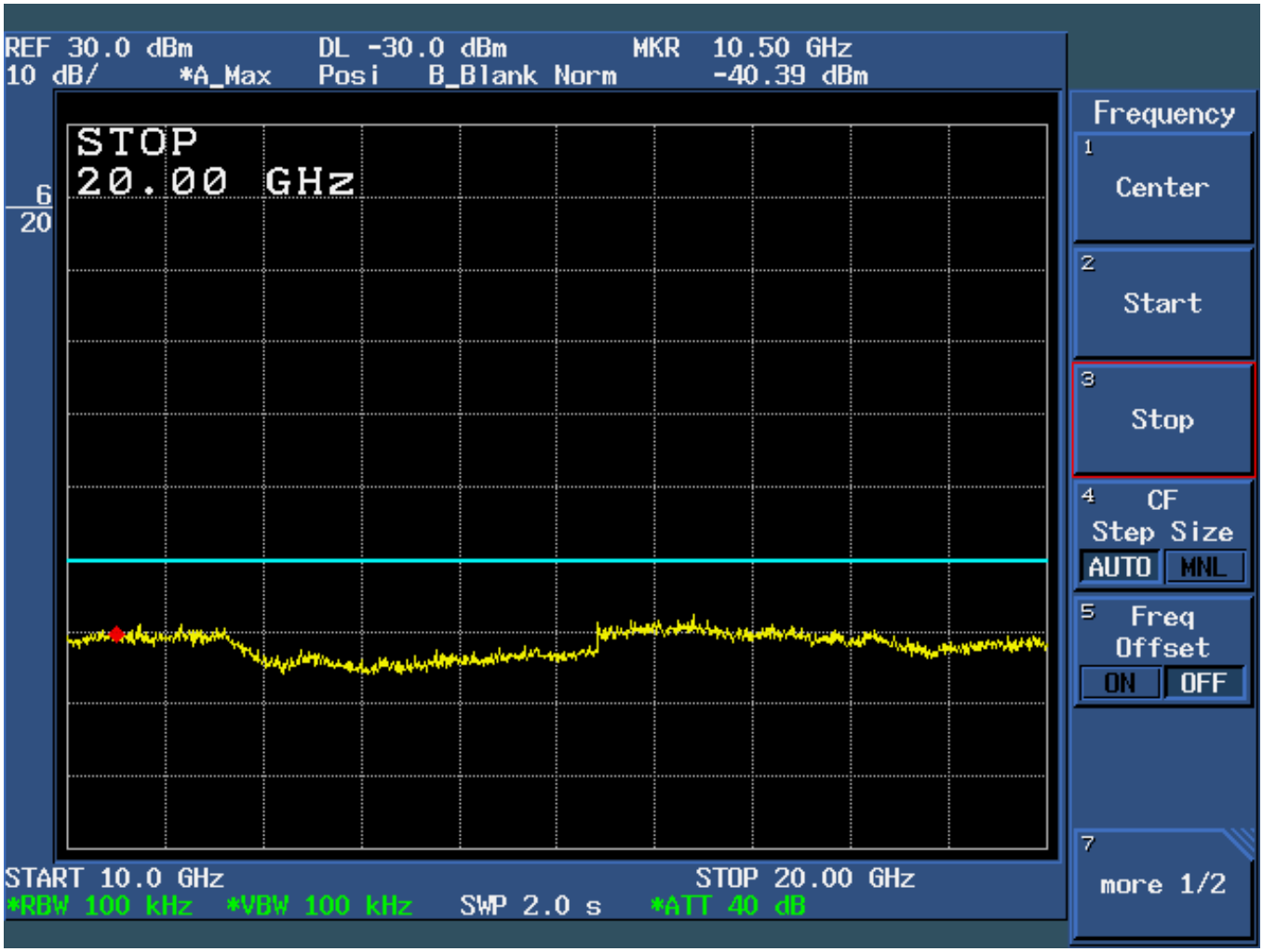


Figure 6d.5-15: Plot of Conducted Spurious Emissions, 10 – 20 GHz (54 Mbps data rate, Ch 1).

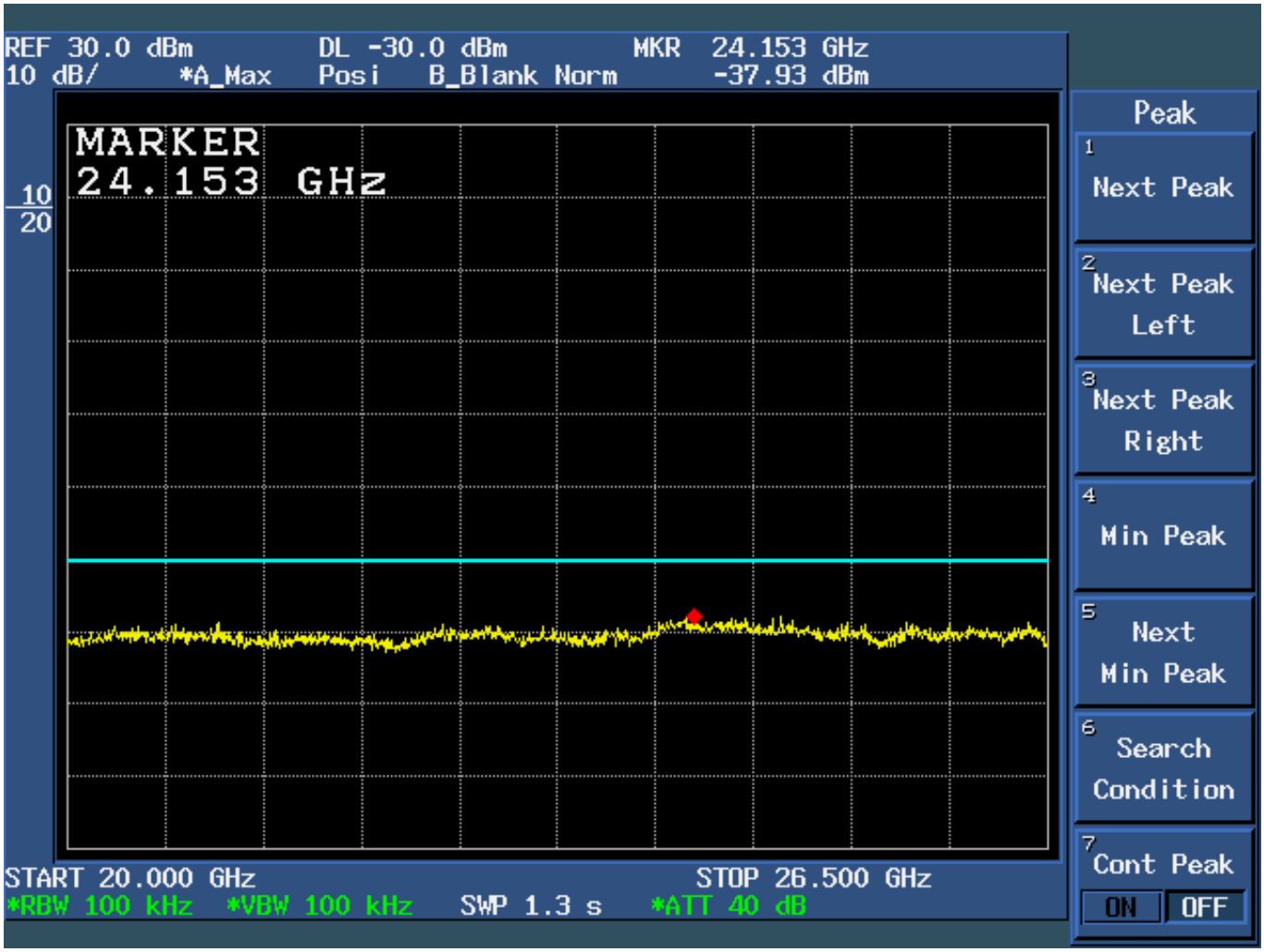


Figure 6d.5-16: Plot of Conducted Spurious Emissions, 20 – 26.5 GHz (54 Mbps data rate, Ch 1).

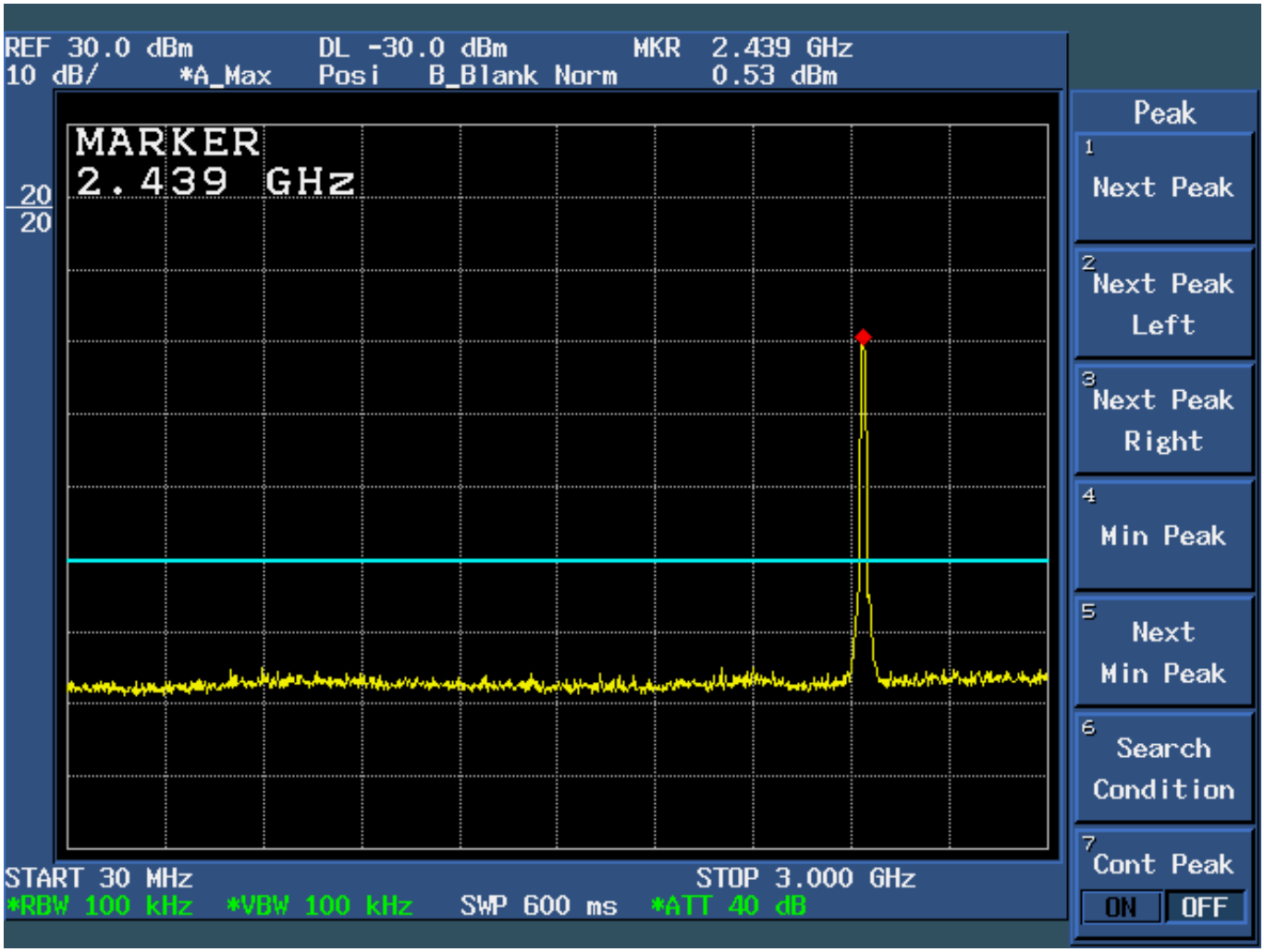


Figure 6d.5-17: Plot of Conducted Spurious Emissions, 30 – 3000 MHz (54 Mbps data rate, Ch 6).

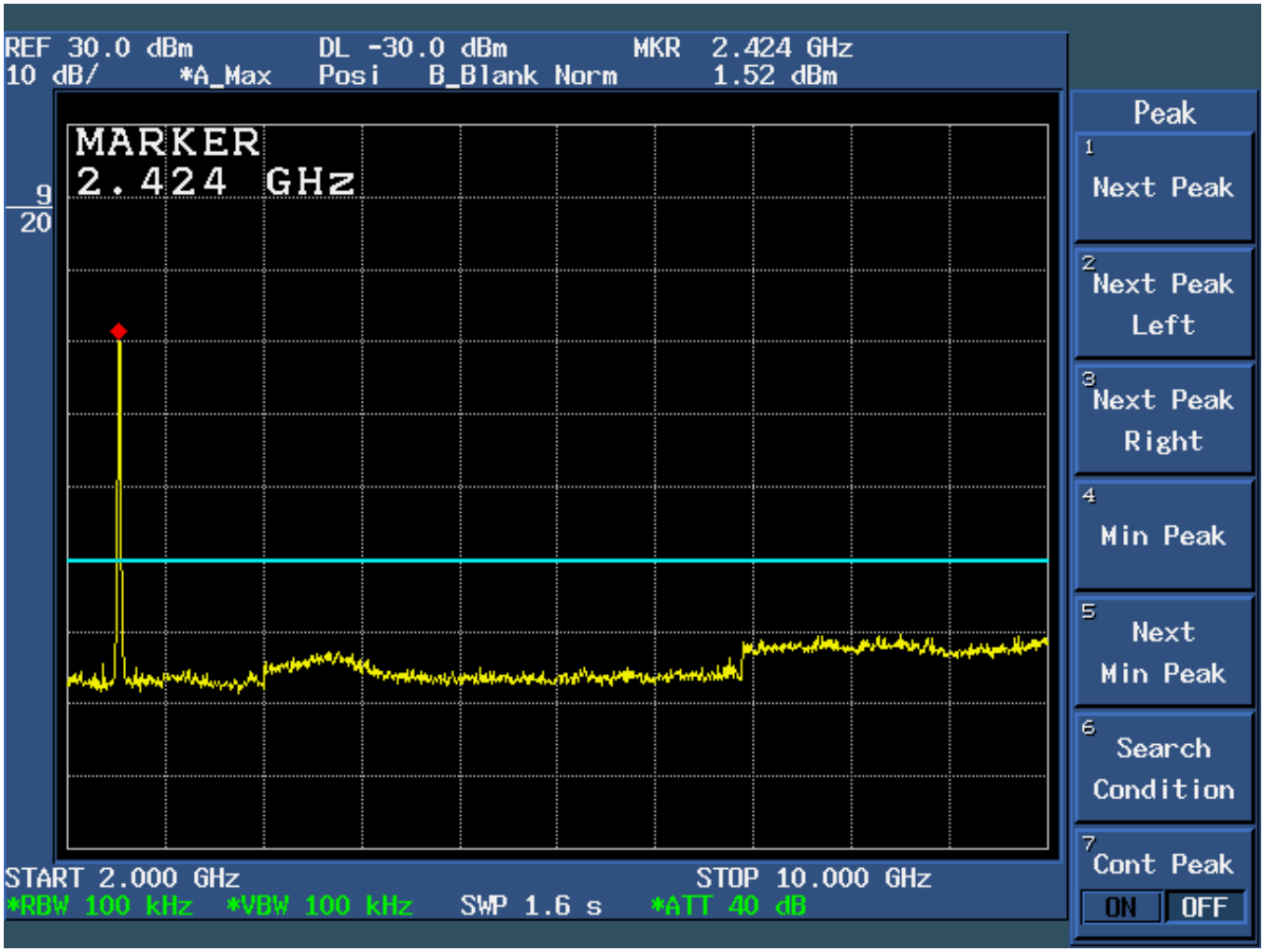


Figure 6d.5-18: Plot of Conducted Spurious Emissions, 2 – 10 GHz (54 Mbps data rate, Ch 6).

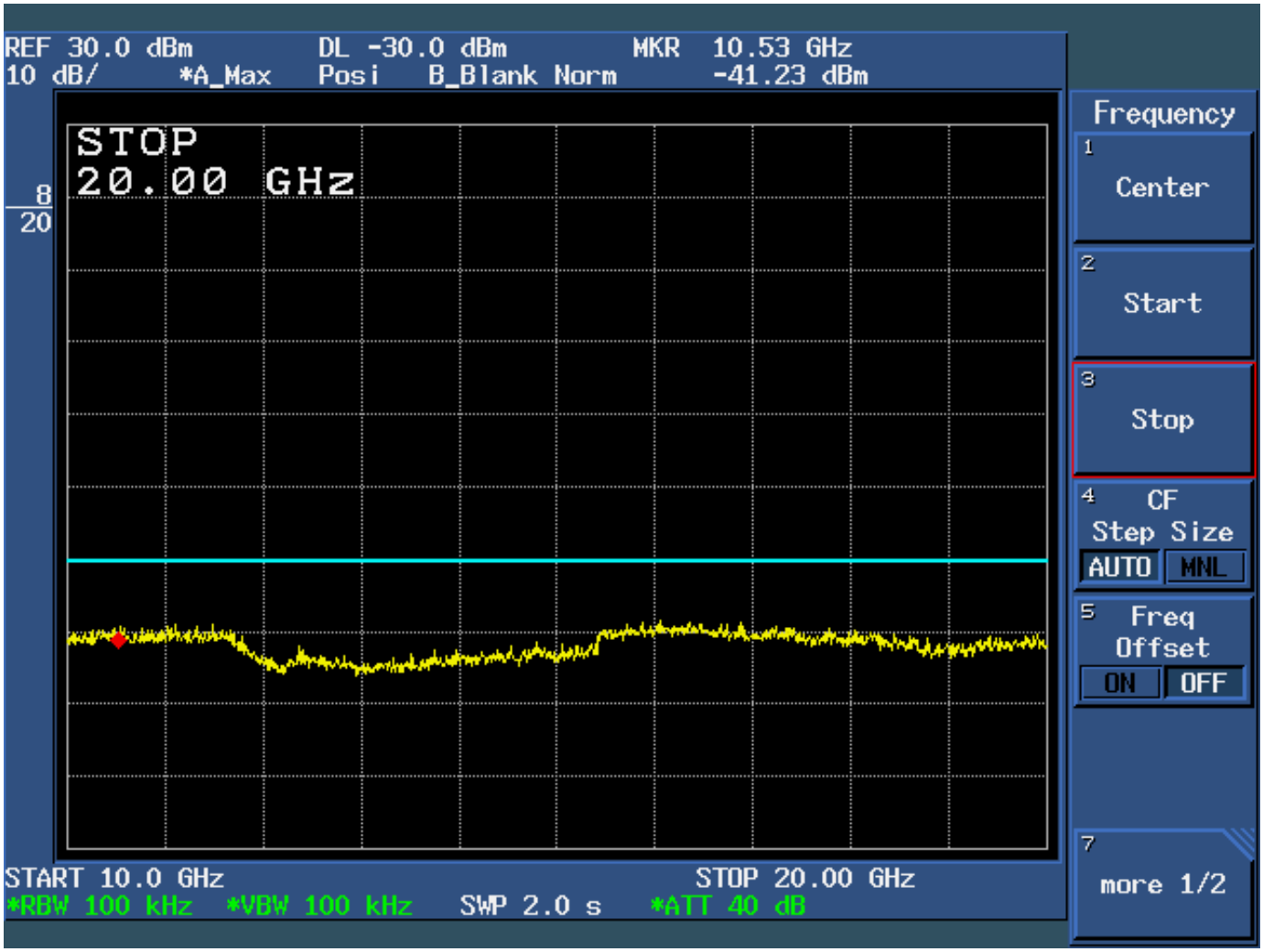


Figure 6d.5-19: Plot of Conducted Spurious Emissions, 10 – 20 GHz (54 Mbps data rate, Ch 6).

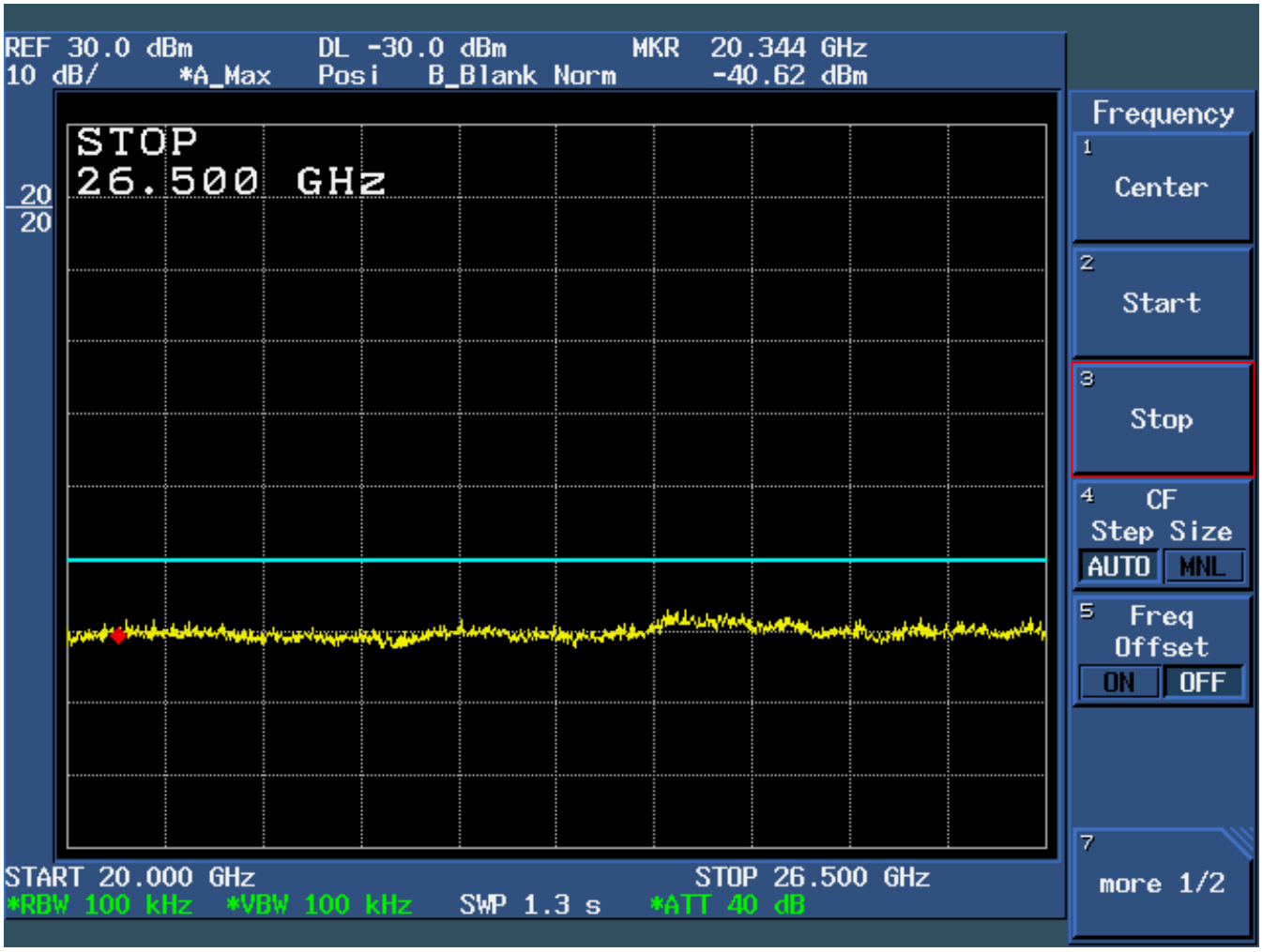


Figure 6d.5-20: Plot of Conducted Spurious Emissions, 20 – 26.5 GHz (54 Mbps data rate, Ch 6).

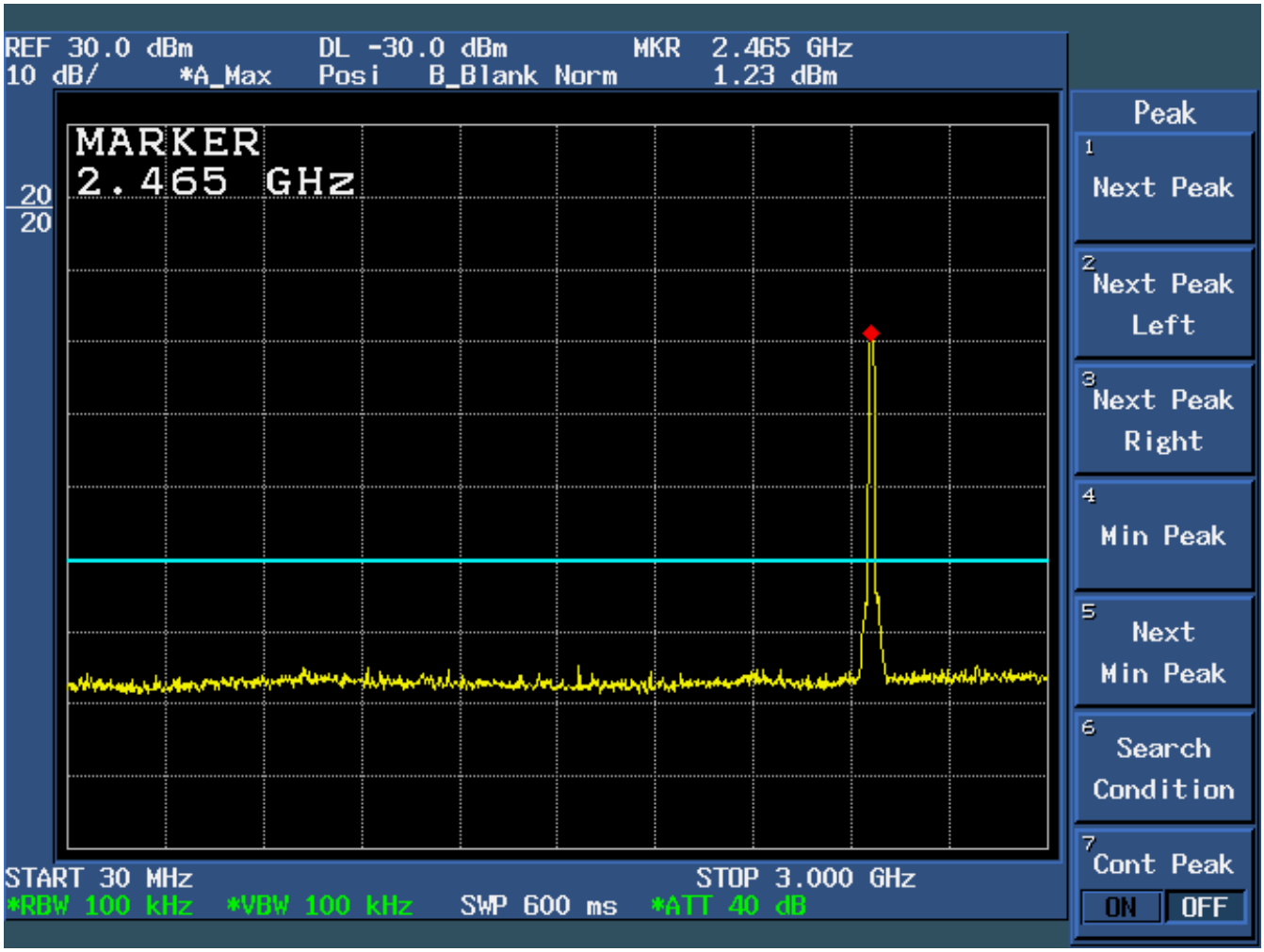


Figure 6d.5-21: Plot of Conducted Spurious Emissions, 30 – 3000 MHz (54 Mbps data rate, Ch 11).

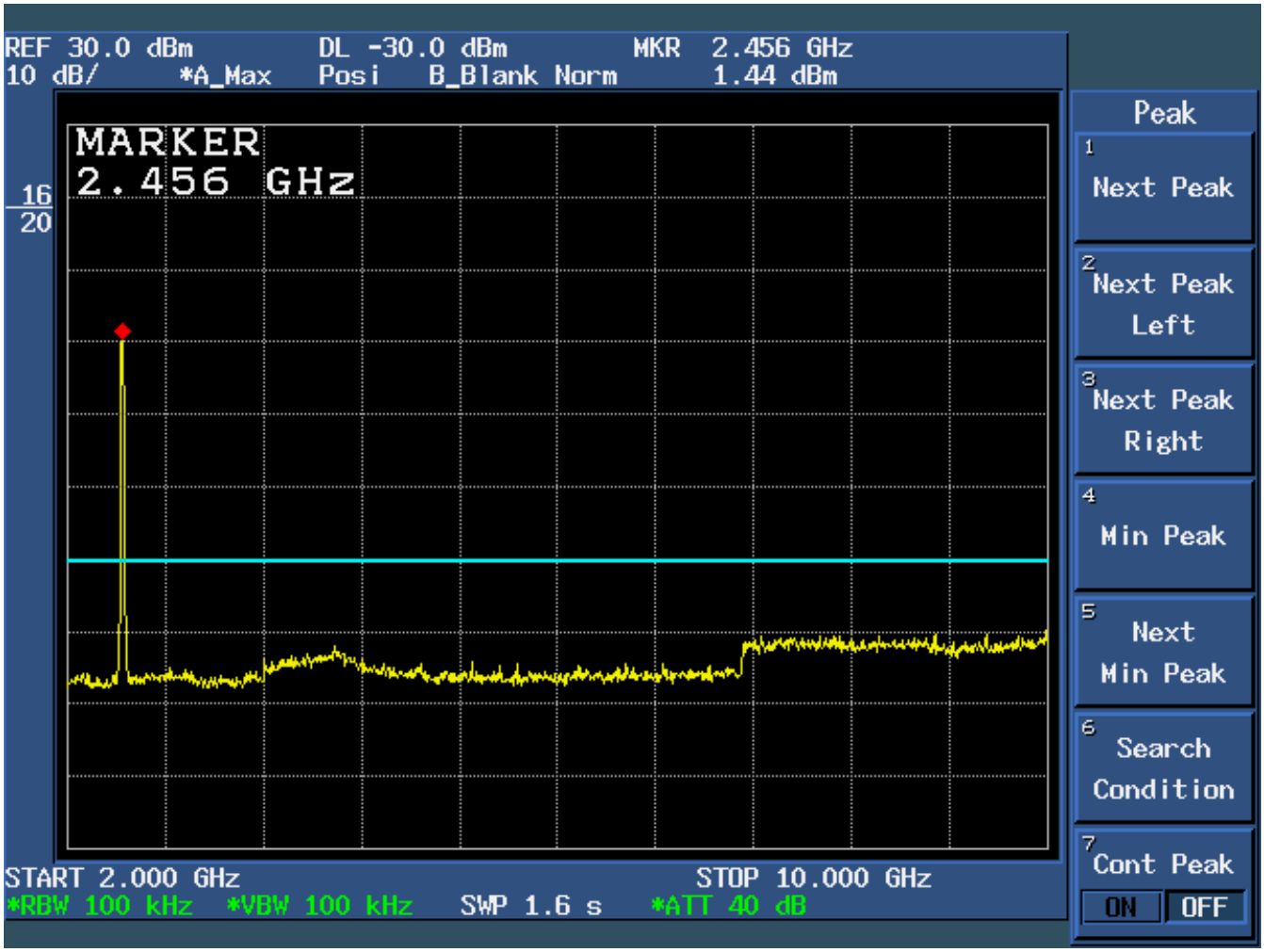


Figure 6d.5-22: Plot of Conducted Spurious Emissions, 2 – 10 GHz (54 Mbps data rate, Ch 11).

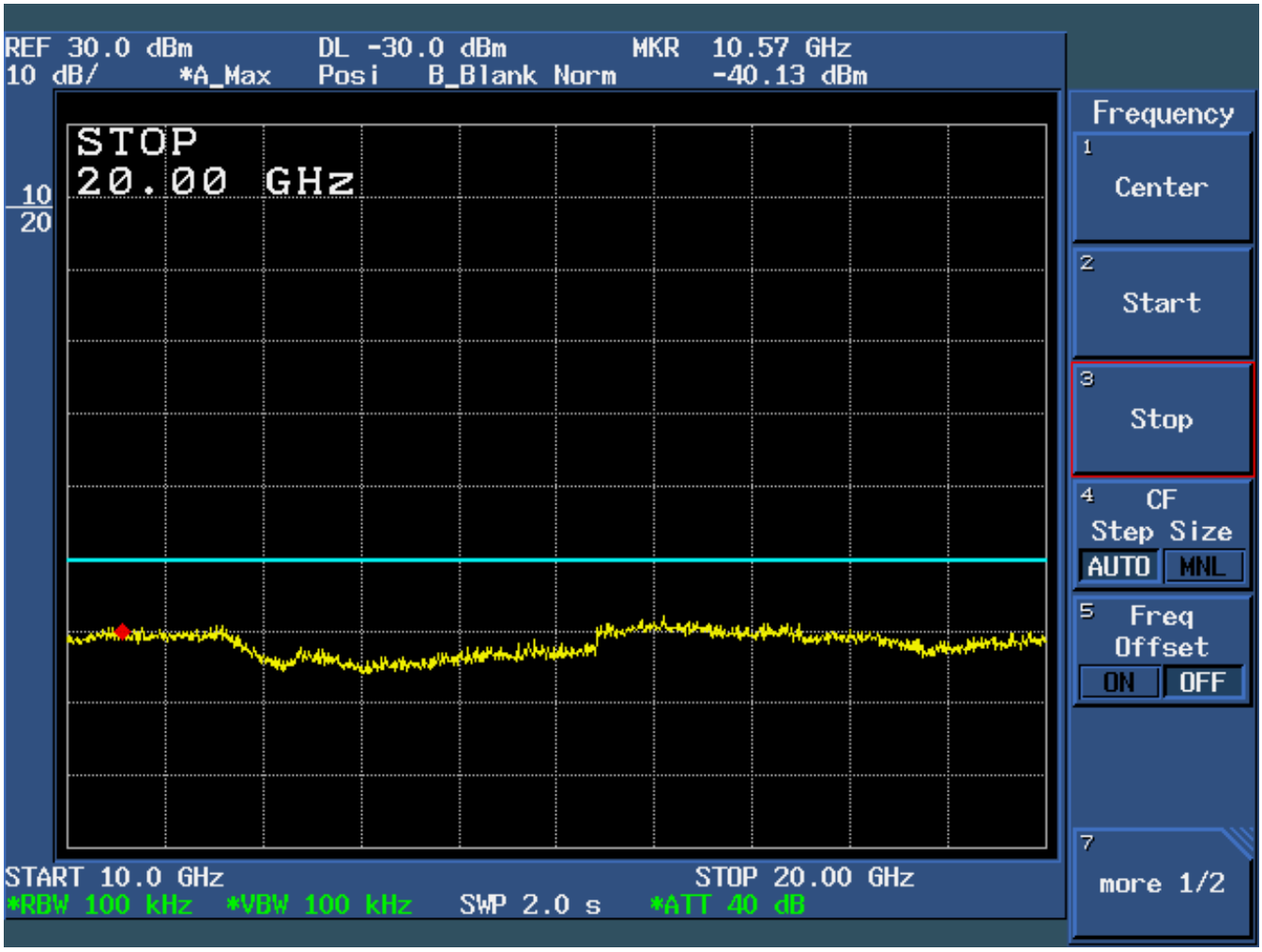


Figure 6d.5-23: Plot of Conducted Spurious Emissions, 10 – 20 GHz (54 Mbps data rate, Ch 11).

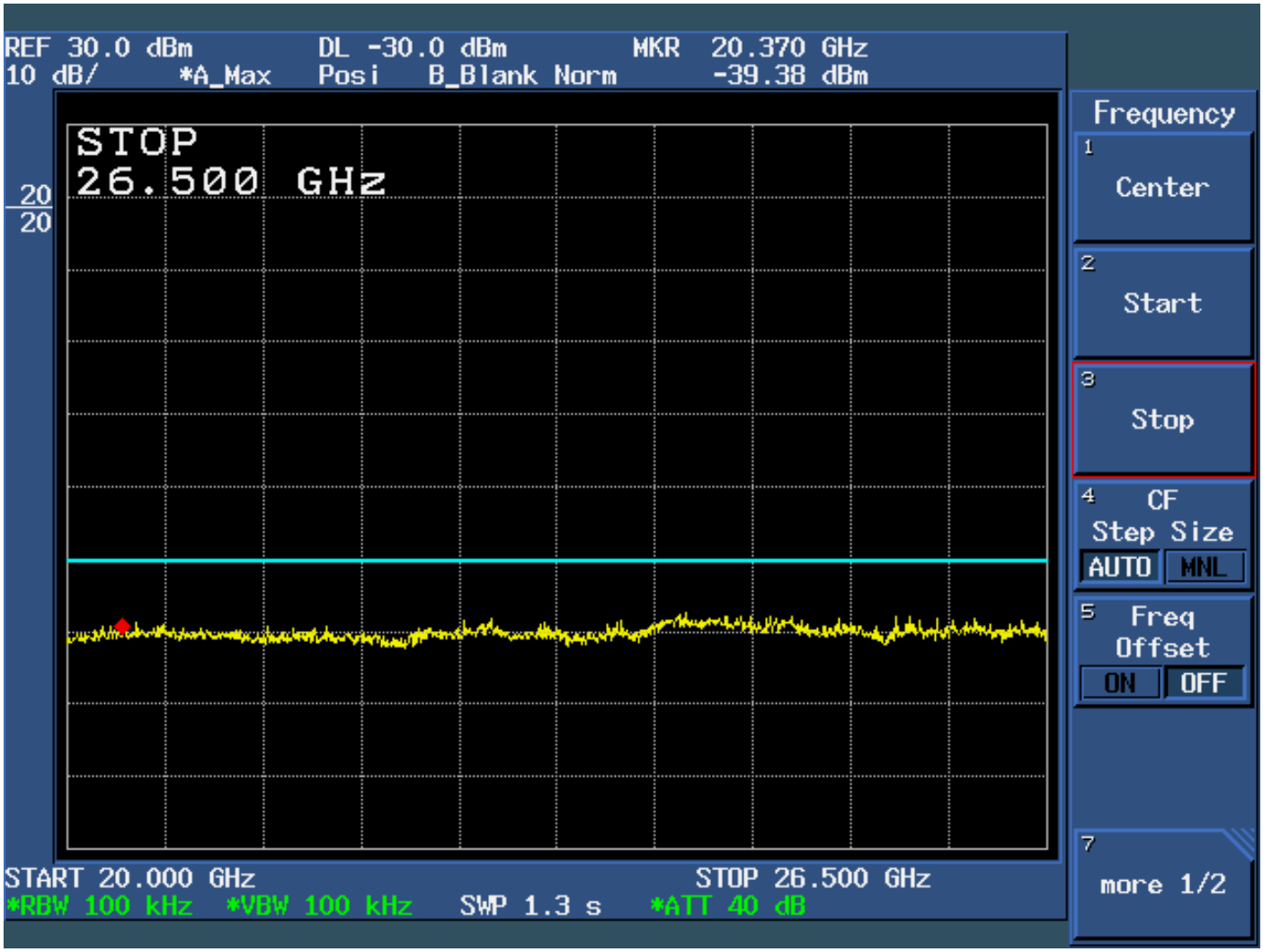


Figure 6d.5-24: Plot of Conducted Spurious Emissions, 20 – 26.5 GHz (54 Mbps data rate, Ch 11).

6d.6. Band-Edge Compliance of RF Conducted Emissions – Pursuant 47 CFR 15.247(d); RSS-210 Section A8.1.

Criterion: In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

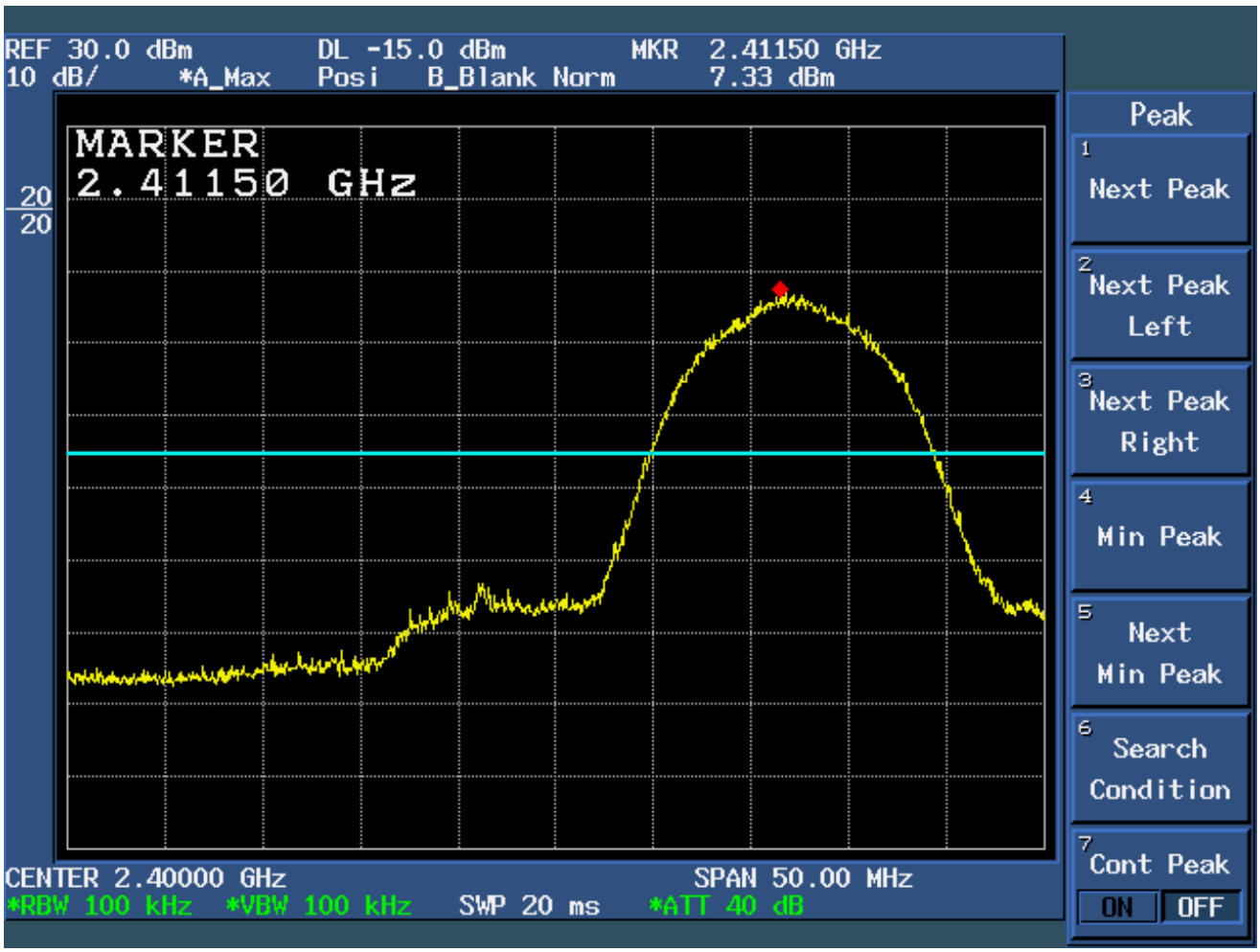


Figure 6d.6-1: Plot of Lower Band Edge Spurious Emission (11 Mbps data rate).

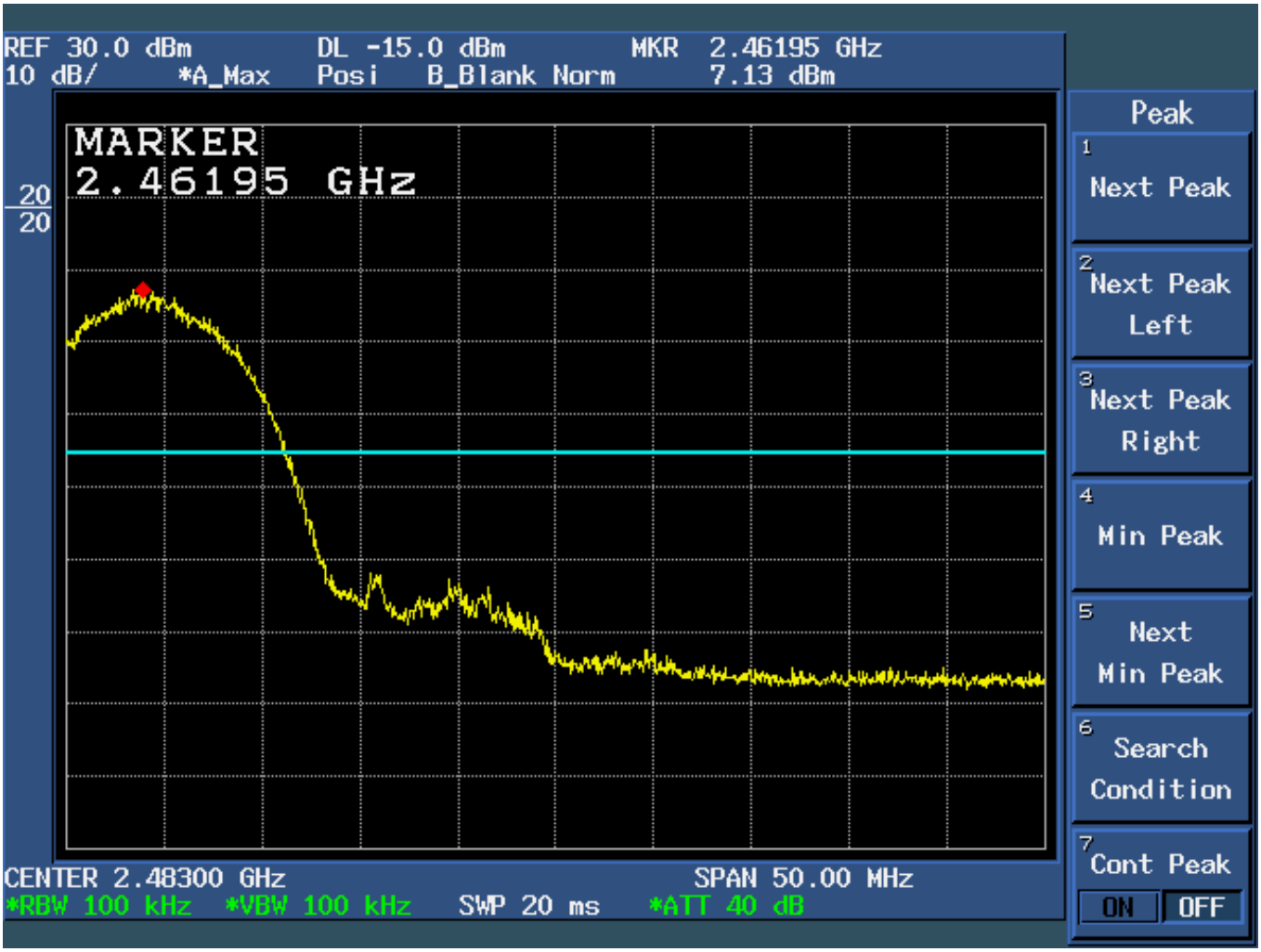


Figure 6d.6-2: Plot of Upper Band Edge Spurious Emission (11 Mbps data rate).

Figure 6d.6-3: Plot of Lower Band Edge Spurious Emission (54 Mbps data rate).

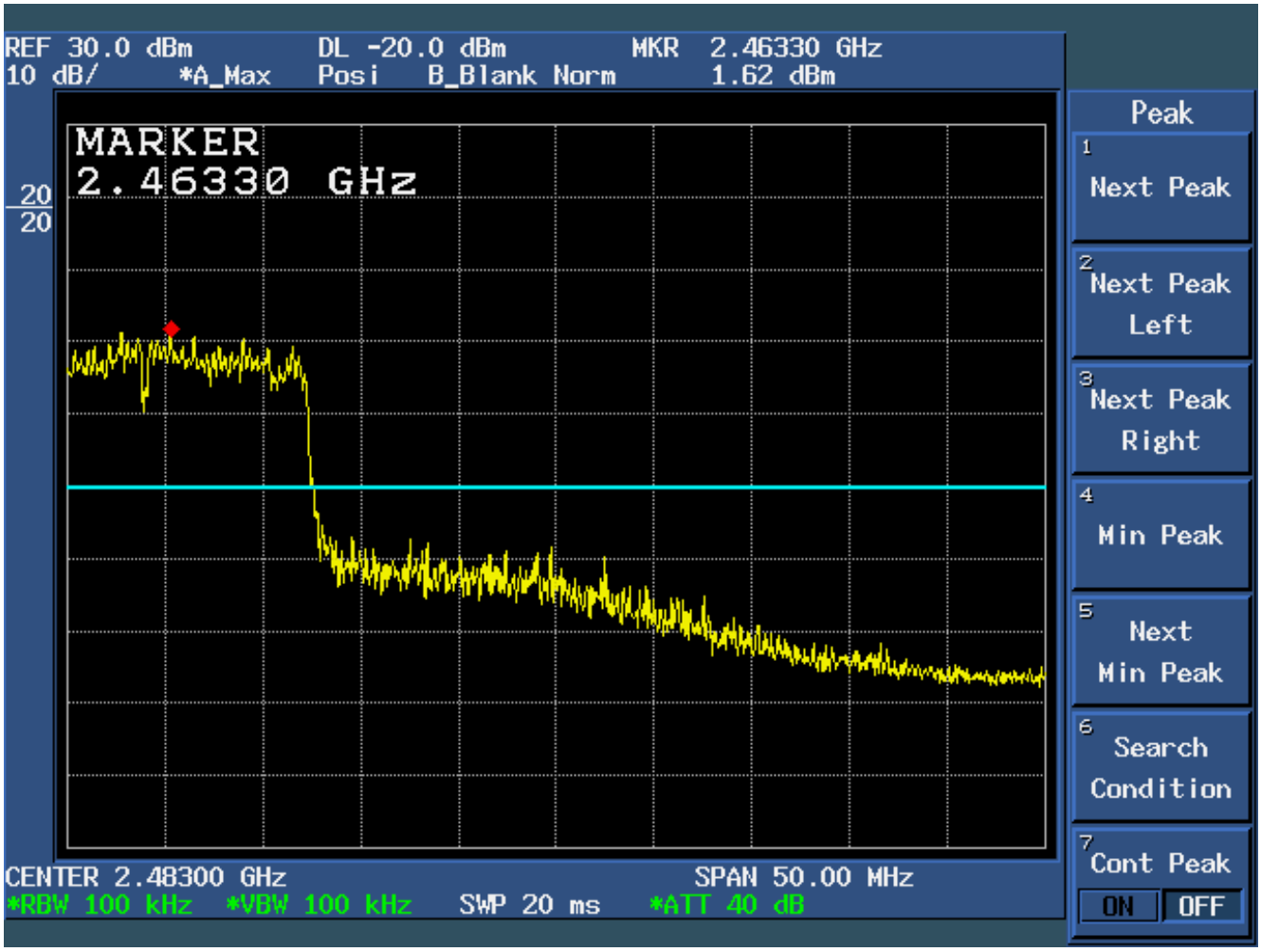


Figure 6d.6-4: Plot of Upper Band Edge Spurious Emission (54 Mbps data rate).