

FCC Part 22 Transmitter Certification

Test Report

FCC ID: SO4YX500-CEL

FCC Rule Part: CFR 47 Part 22 Subpart H

ACS Report Number: 05-0343-22H-A

Manufacturer: Wireless Extenders
Equipment Type: Cell Band Bi-Directional Booster
Model: YX500-CEL

Test Begin Date: September 27, 2005

Test End Date: September 30, 2005

Report Issue Date: October 10, 2005



FOR THE SCOPE OF ACCREDITATION UNDER LAB Code 200612


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Engineering Manager
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This report contains 31 pages

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1.0 Occupied Bandwidth (Input vs. Output)

1.1 Uplink

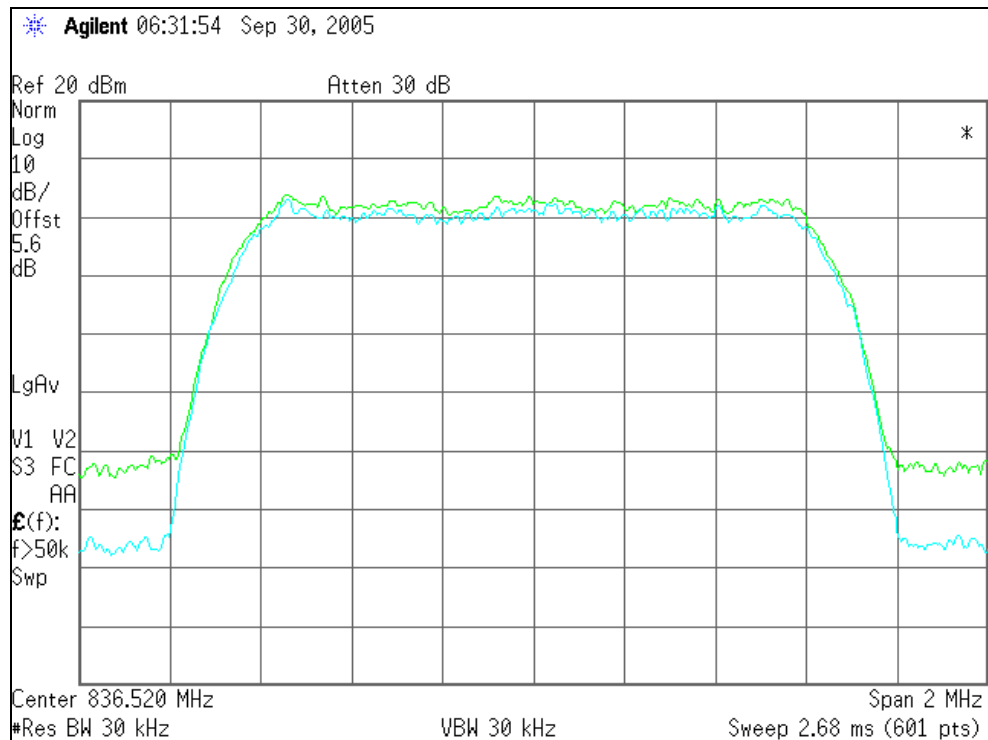


Figure 1: Occupied Bandwidth - Uplink CDMA Mid Channel

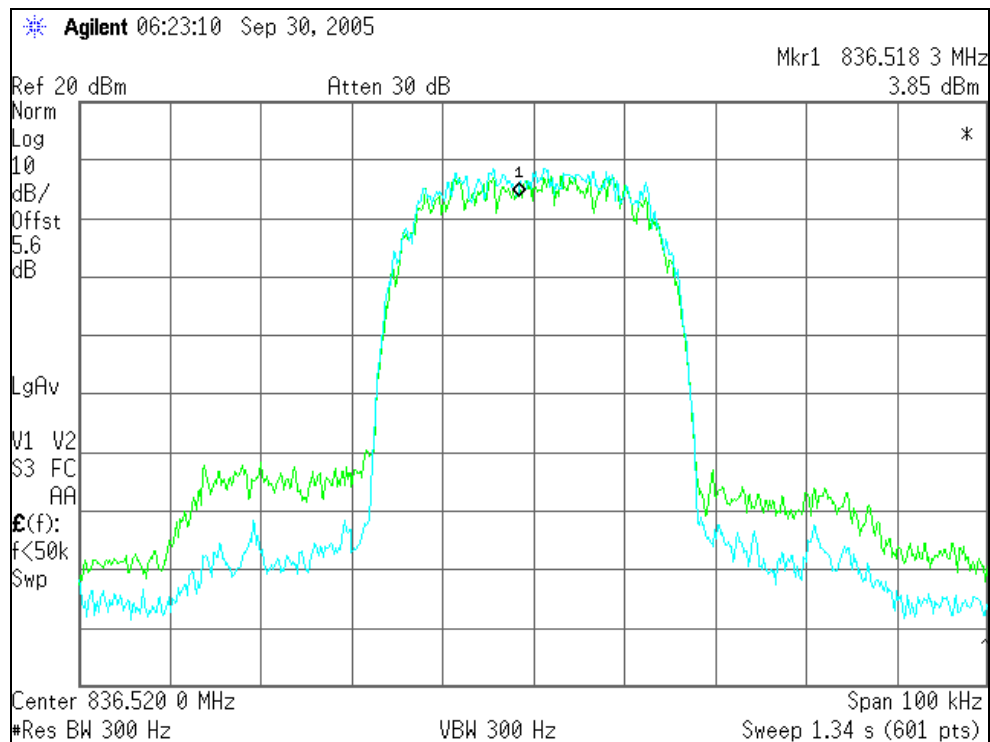


Figure 2: Occupied Bandwidth - Uplink TDMA Mid Channel

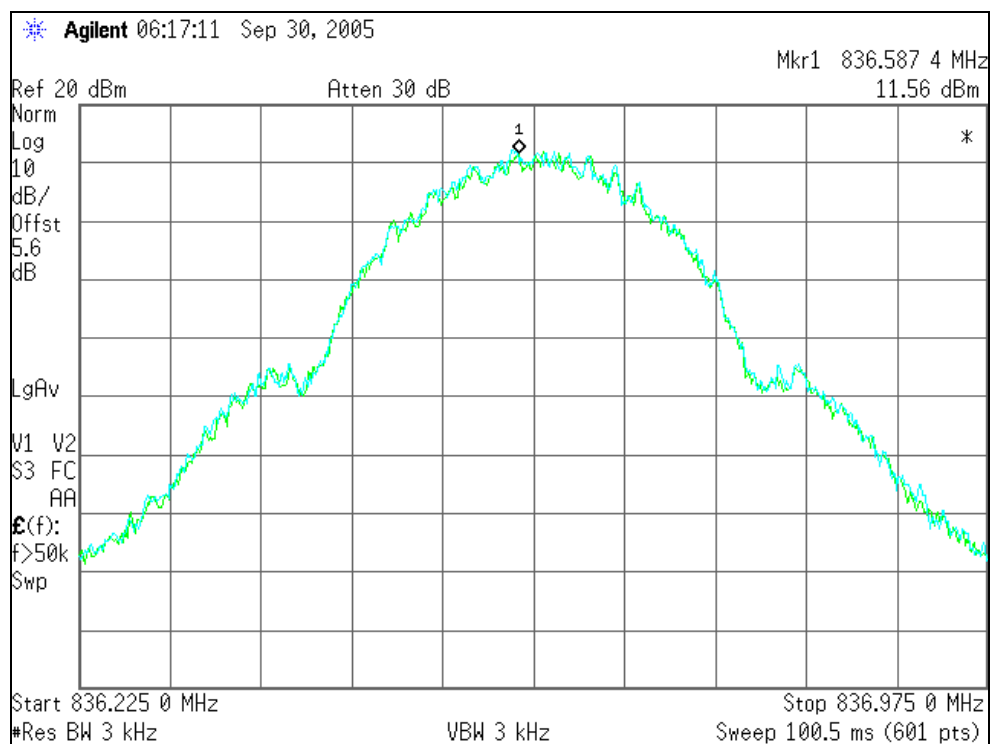


Figure 3: Occupied Bandwidth - Uplink GSM Mid Channel

1.2 Downlink

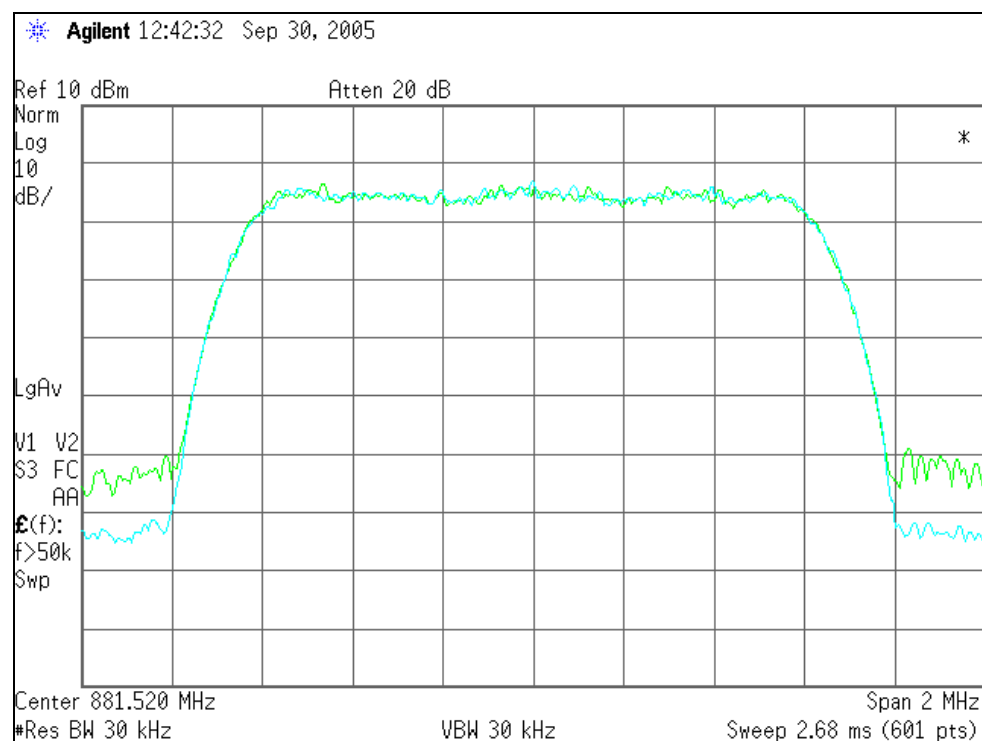


Figure 4: Occupied Bandwidth - Downlink CDMA Mid Channel

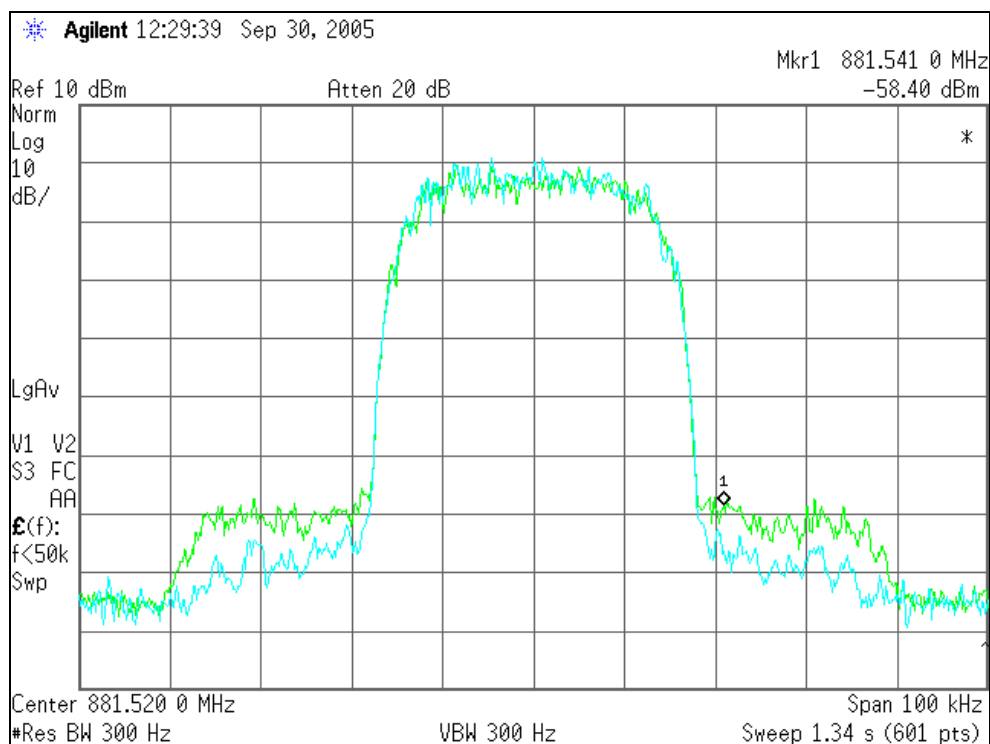


Figure 5: Occupied Bandwidth - Downlink TDMA Mid Channel

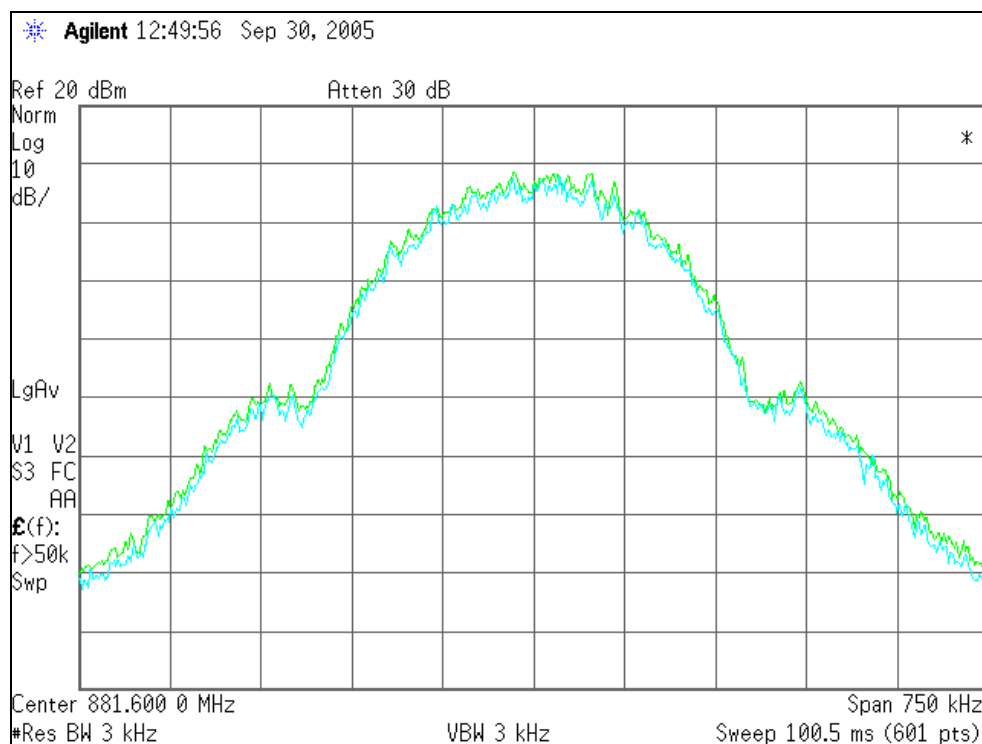


Figure 6: Occupied Bandwidth - Downlink GSM Mid Channel

2.0 Spurious Emissions at Antenna Terminals and Inter-modulation Products

2.1 CDMA Uplink

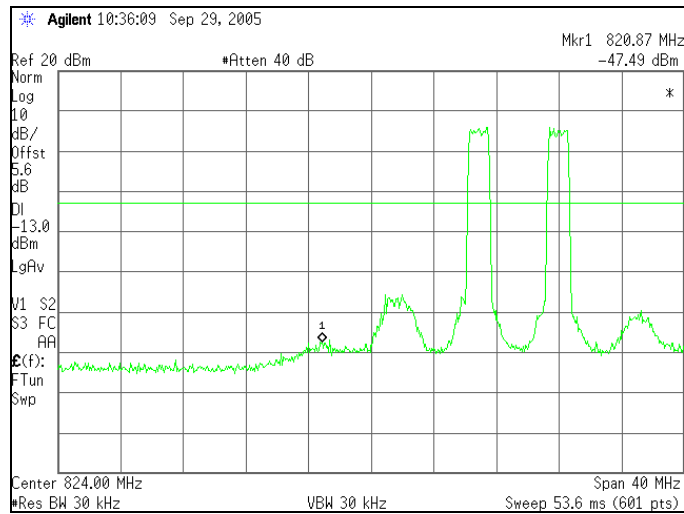


Figure 7: Spurious Emissions - Uplink CDMA Low Channel – In Band

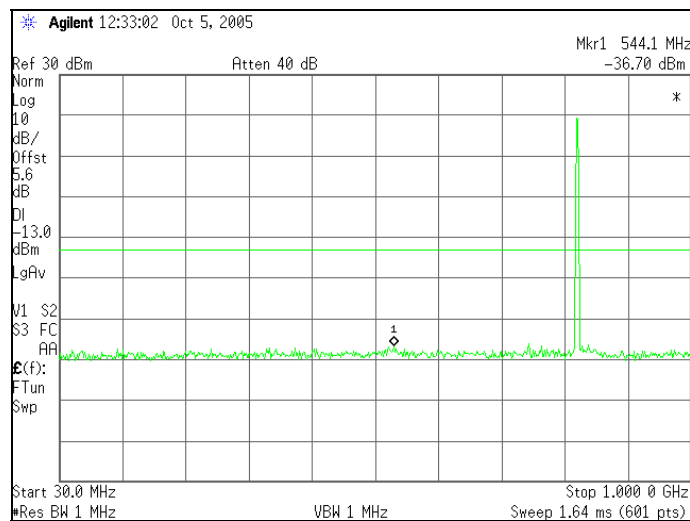


Figure 8: Spurious Emissions - Uplink CDMA Low Channel – 30 MHz to 2.9 GHz

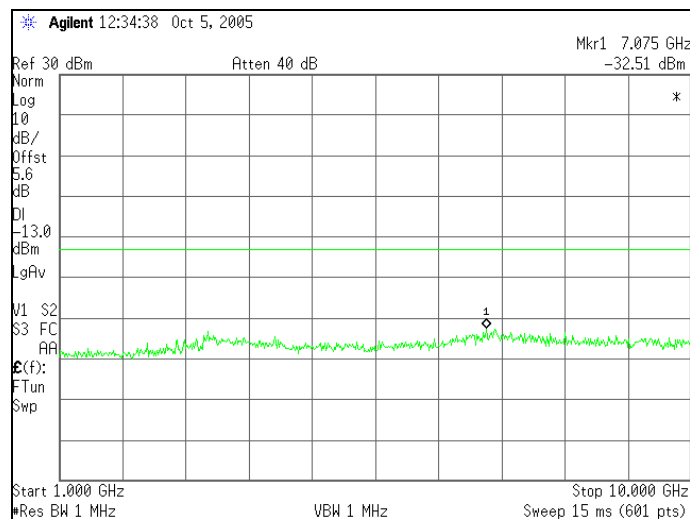
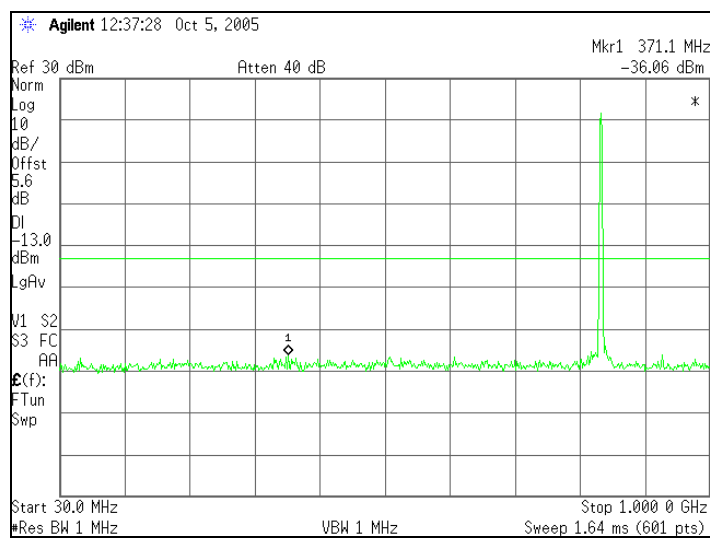
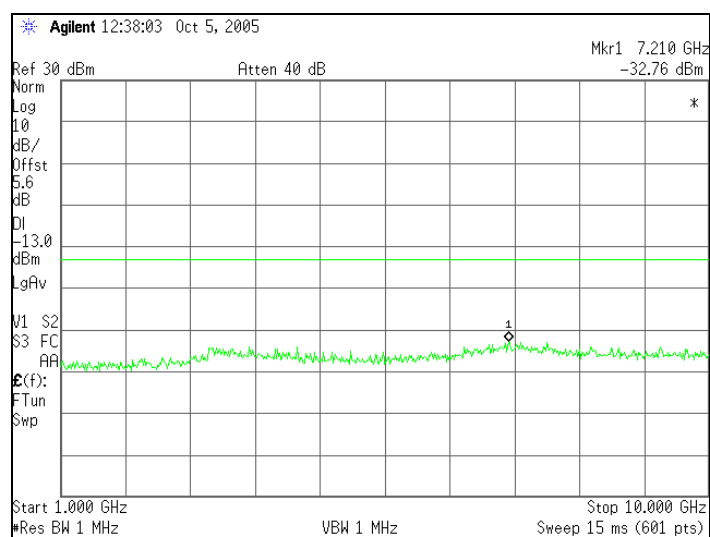


Figure 9: Spurious Emissions - Uplink CDMA Low Channel – 2.9 to 10 GHz

**Figure 10: Spurious Emissions - Uplink CDMA Mid Channel – 30 MHz to 2.9 GHz****Figure 11: Spurious Emissions - Uplink CDMA Mid Channel – 2.9 to 10 GHz**

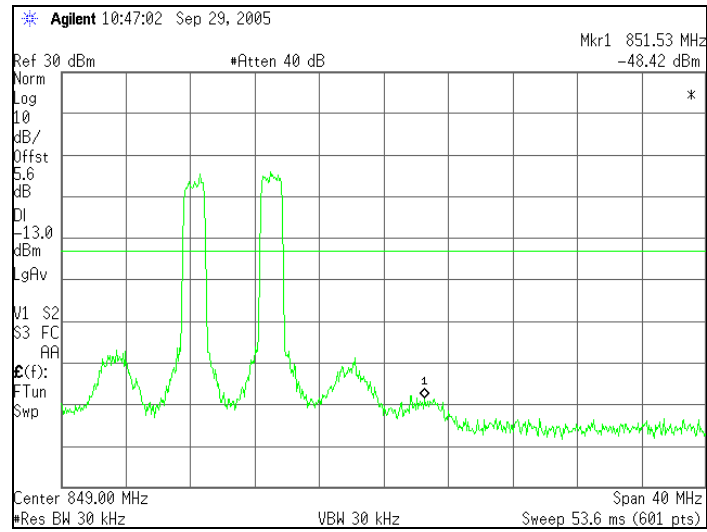


Figure 12: Spurious Emissions - Uplink CDMA High Channel – In Band

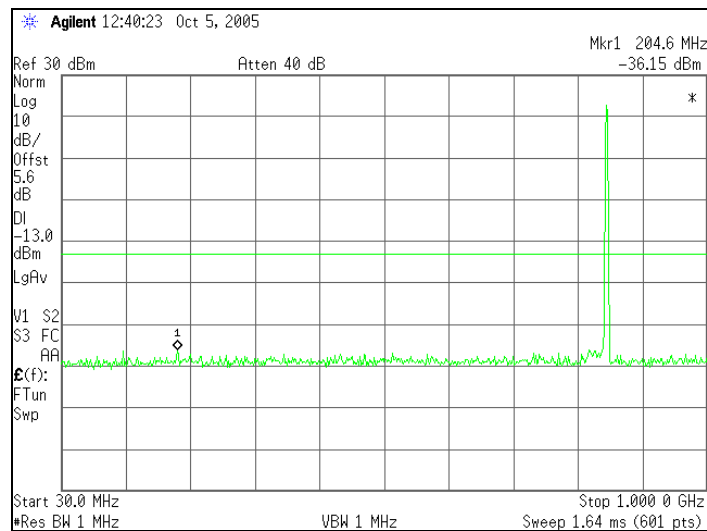


Figure 13: Spurious Emissions - Uplink CDMA High Channel – 30 MHz to 2.9 GHz

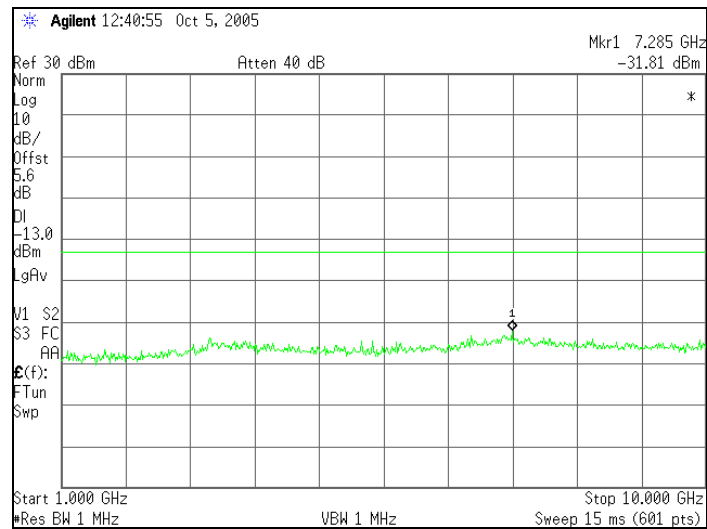


Figure 14: Spurious Emissions - Uplink CDMA High Channel – 2.9 to 10 GHz

2.2 TDMA Uplink

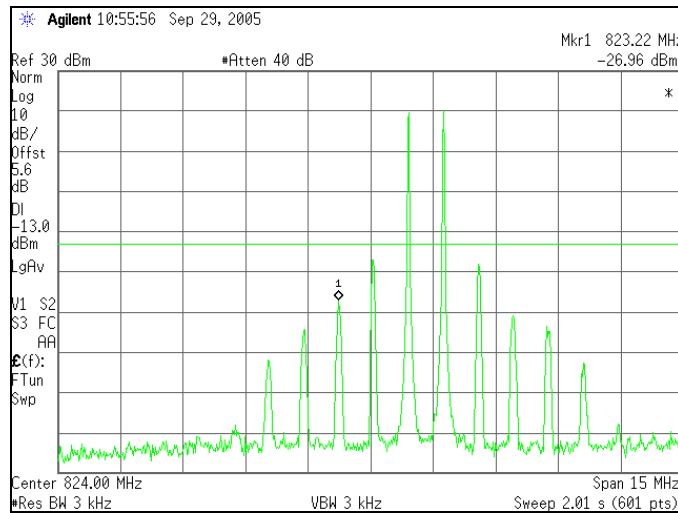


Figure 15: Spurious Emissions - Uplink TDMA Low Channel – In Band

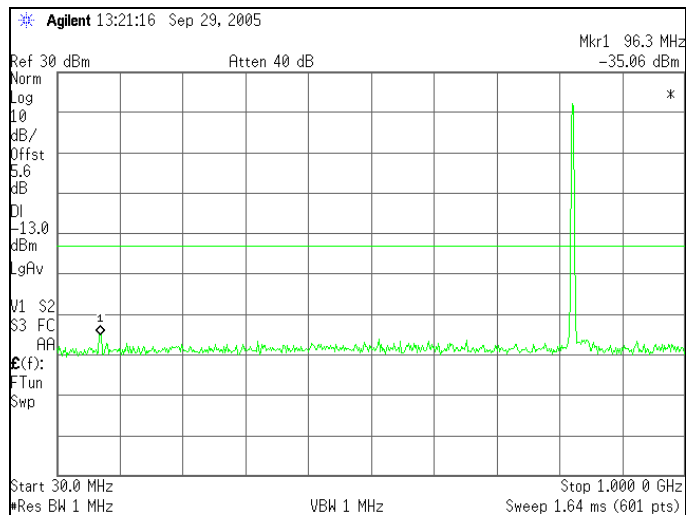


Figure 16: Spurious Emissions - Uplink TDMA Low Channel – 30 MHz to 2.9 GHz

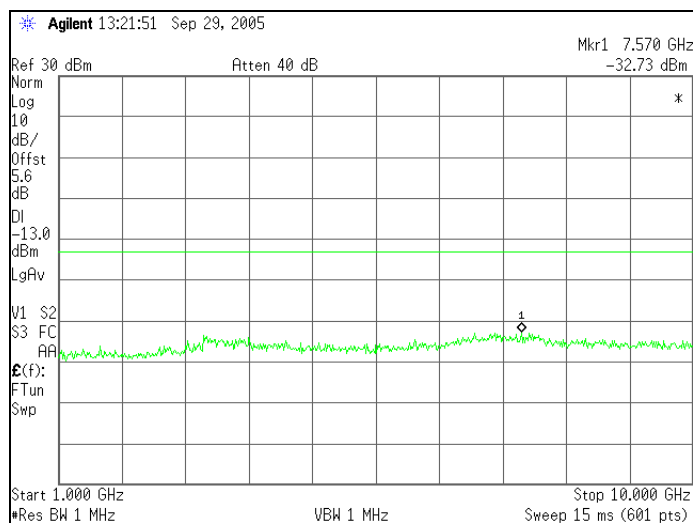


Figure 17: Spurious Emissions - Uplink TDMA Low Channel – 2.9 to 10 GHz

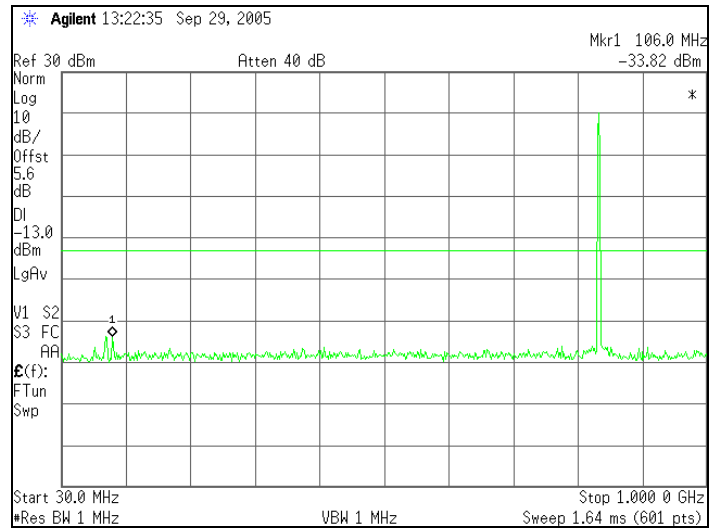


Figure 18: Spurious Emissions - Uplink TDMA Mid Channel – 30 MHz to 2.9 GHz

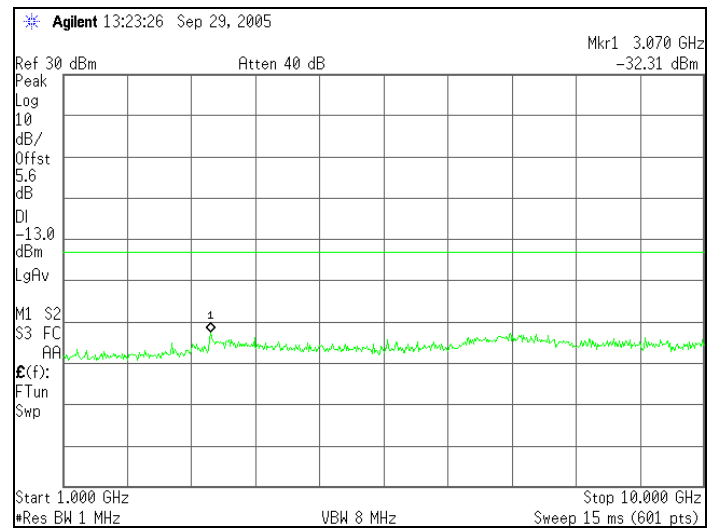


Figure 19: Spurious Emissions - Uplink TDMA Mid Channel – 2.9 to 10 GHz

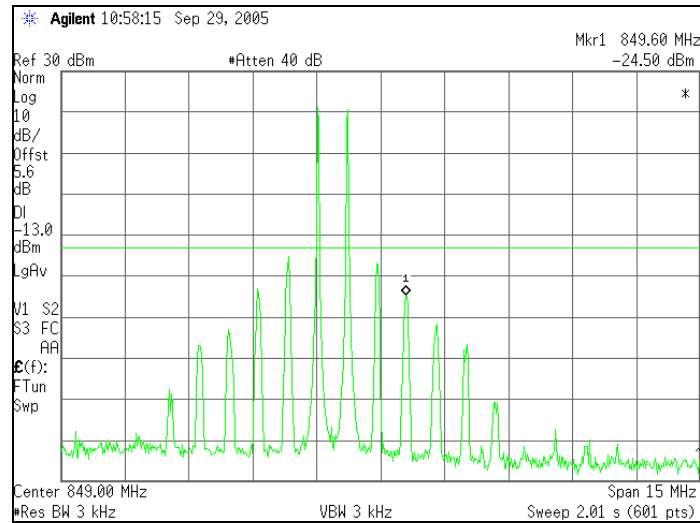


Figure 20: Spurious Emissions - Uplink TDMA High Channel – In Band

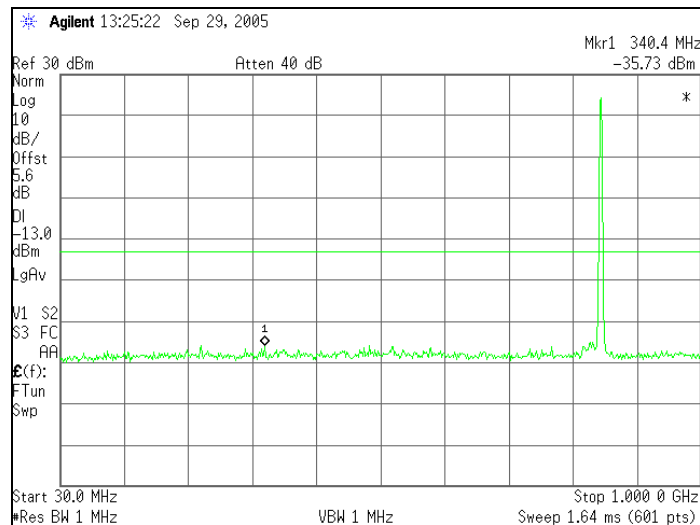


Figure 21: Spurious Emissions - Uplink TDMA High Channel – 30 MHz to 2.9 GHz

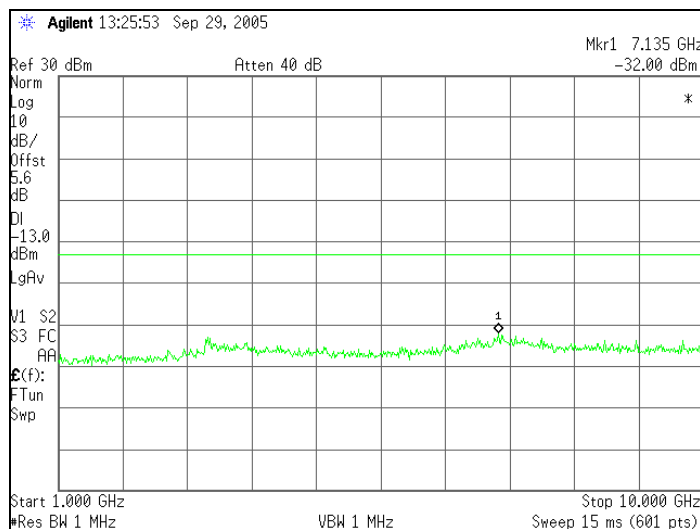


Figure 22: Spurious Emissions - Uplink TDMA High Channel – 2.9 to 10 GHz

2.3 CW Uplink – Covers FM (GSM and F1D)

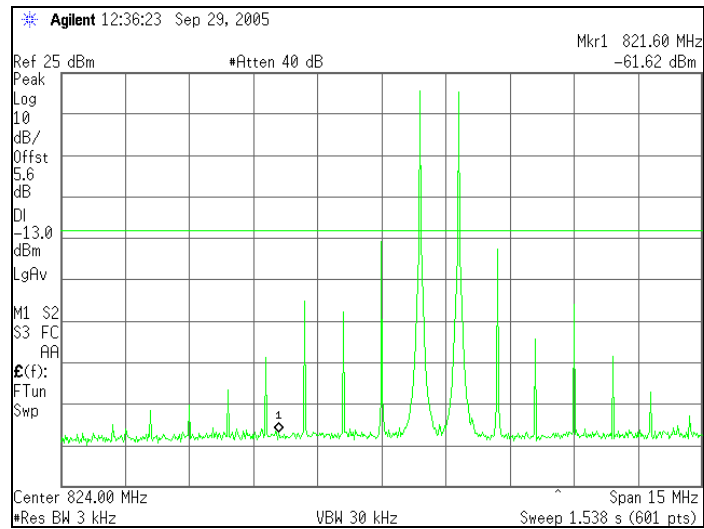


Figure 23: Spurious Emissions - Uplink CW Low Channel – In Band

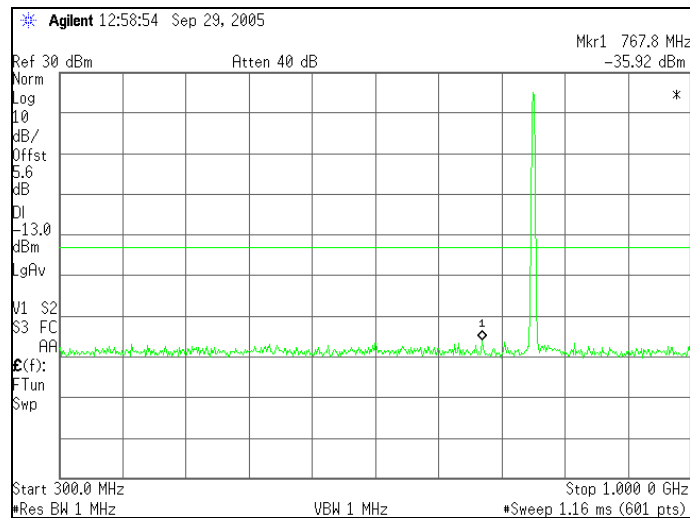


Figure 24: Spurious Emissions - Uplink CW Low Channel – 30 MHz to 2.9 GHz

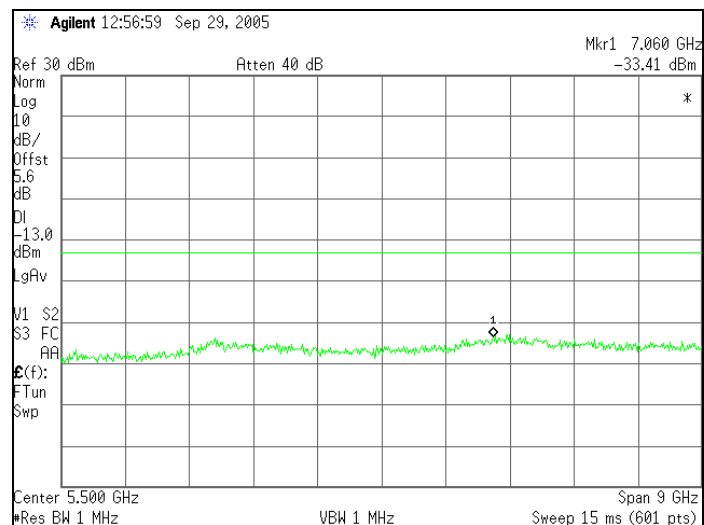


Figure 25: Spurious Emissions - Uplink CW Low Channel – 2.9 to 10 GHz

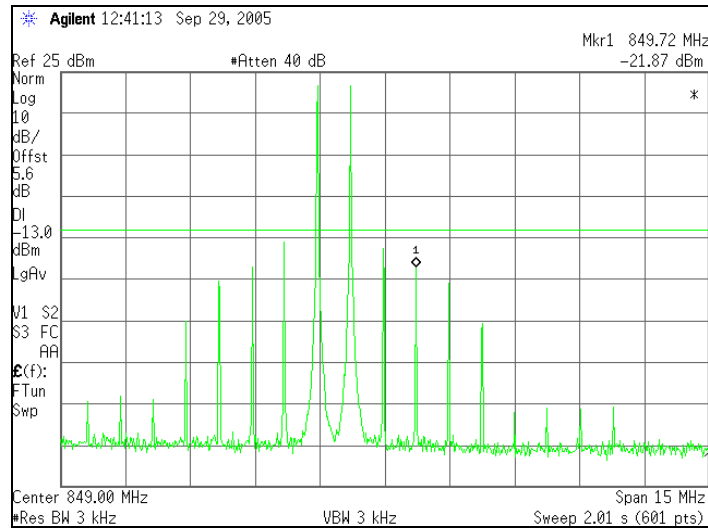


Figure 26: Spurious Emissions - Uplink CW High Channel – In Band

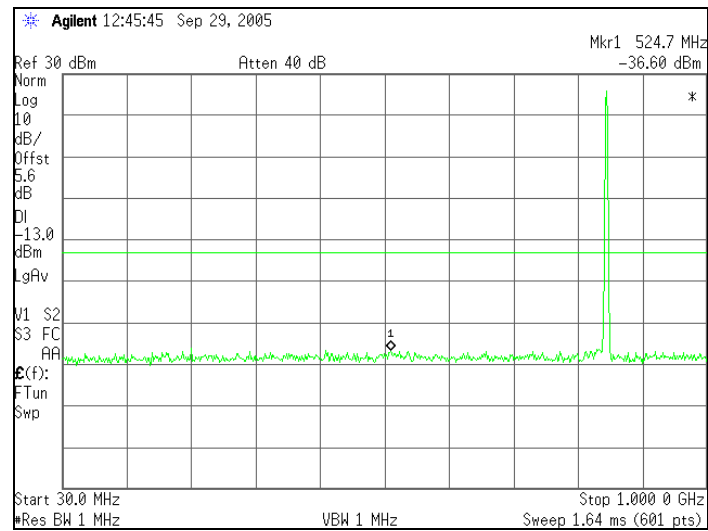


Figure 27: Spurious Emissions - Uplink CW High Channel – 30 MHz to 2.9 GHz

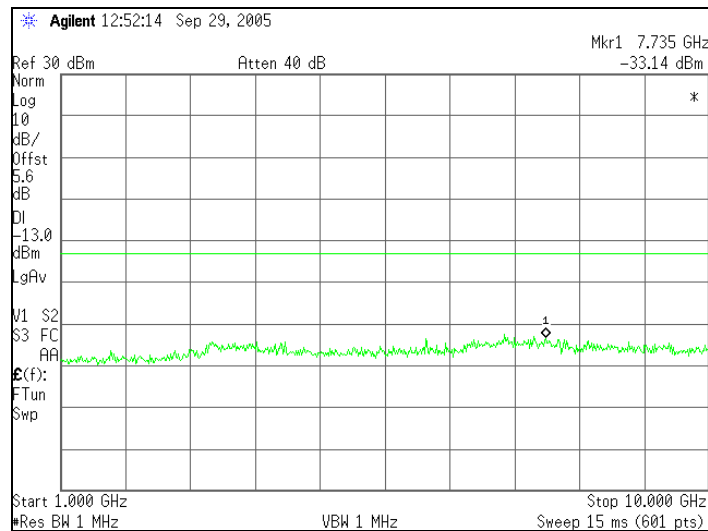


Figure 28: Spurious Emissions - Uplink CW High Channel – 2.9 to 10 GHz

2.4 GSM Uplink

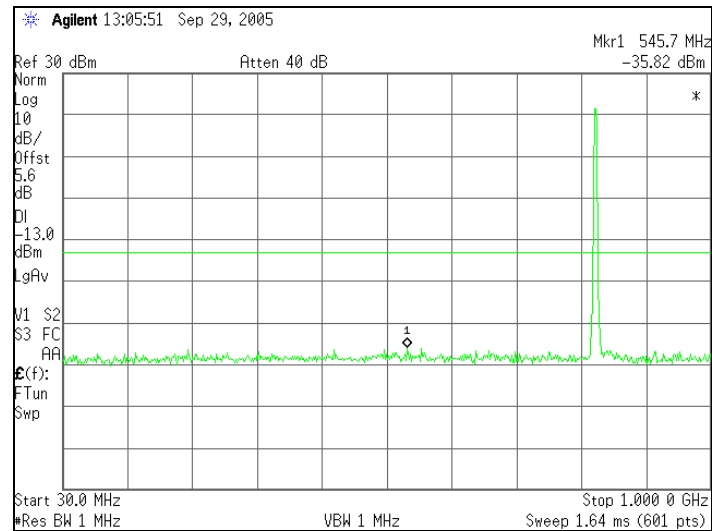


Figure 29: Spurious Emissions - Uplink GSM Low Channel – 30 MHz to 2.9 GHz

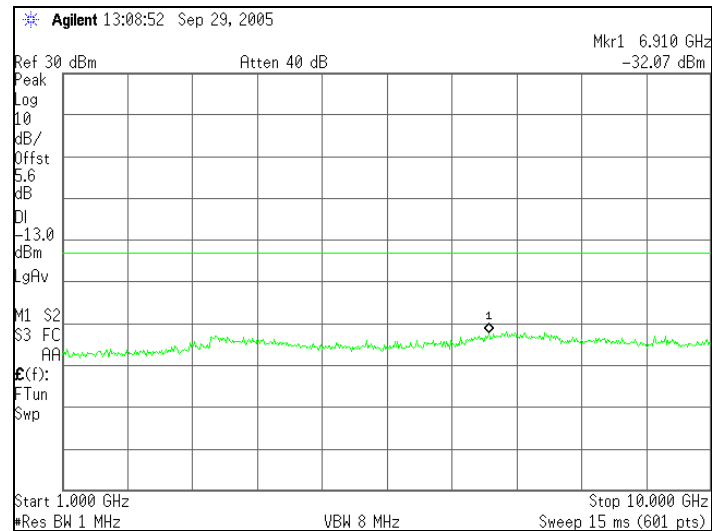


Figure 30: Spurious Emissions - Uplink GSM Low Channel – 2.9 to 10 GHz

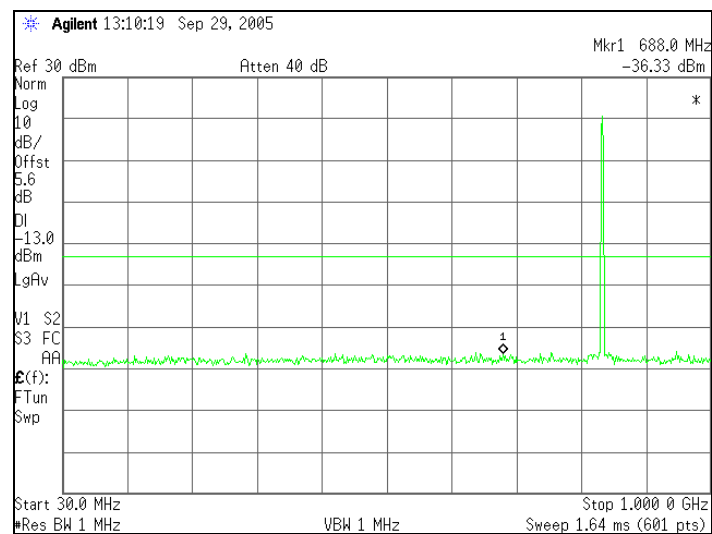


Figure 31: Spurious Emissions - Uplink GSM Mid Channel – 30 MHz to 2.9 GHz

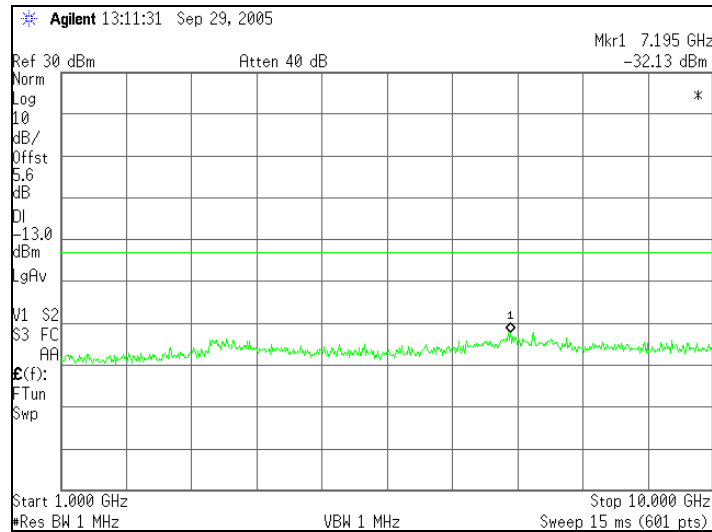


Figure 32: Spurious Emissions - Uplink GSM Mid Channel – 2.9 to 10 GHz

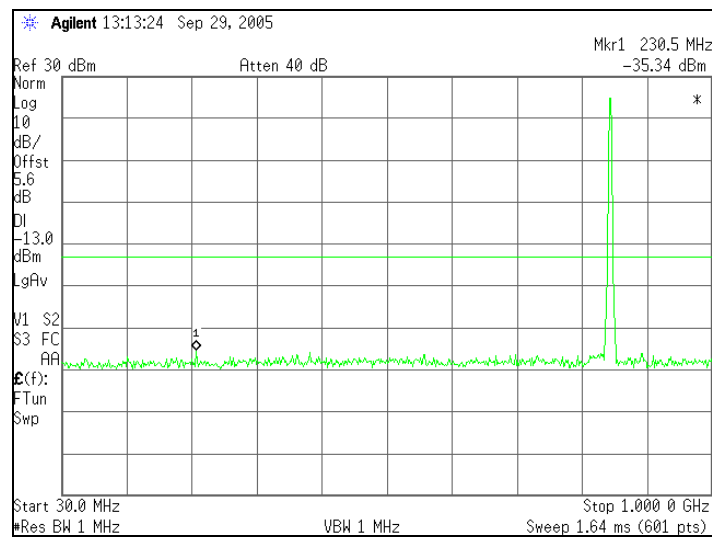


Figure 33: Spurious Emissions - Uplink GSM High Channel – 30 MHz to 2.9 GHz

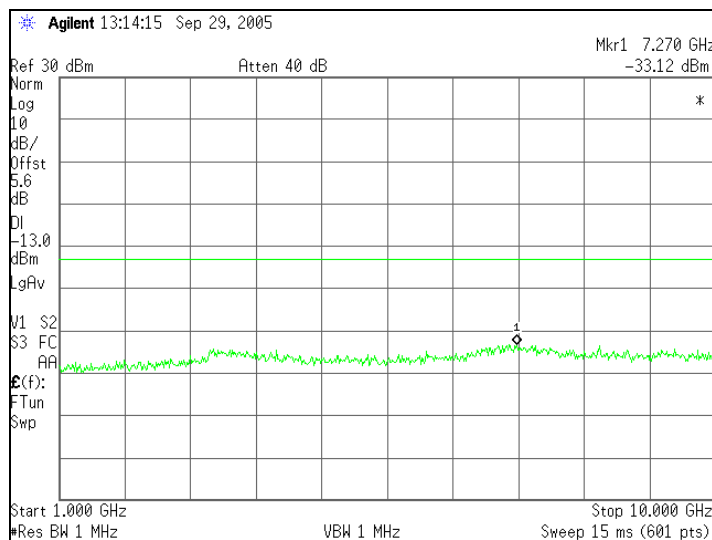


Figure 34: Spurious Emissions - Uplink GSM High Channel – 2.9 to 10 GHz

2.5 CDMA Downlink

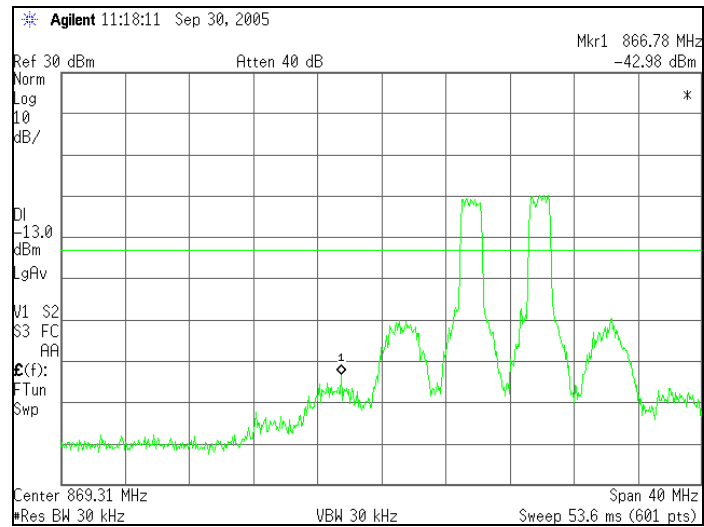


Figure 35: Spurious Emissions - Downlink CDMA Low Channel - In Band

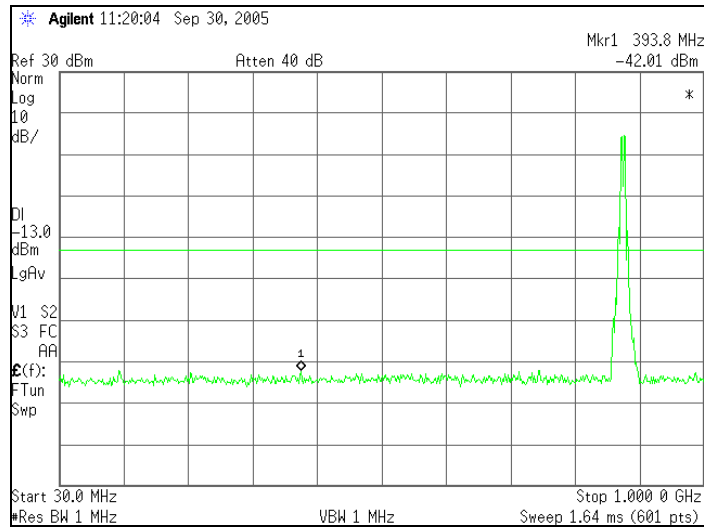


Figure 36: Spurious Emissions - Downlink CDMA Low Channel - 30 MHz to 2.9 GHz

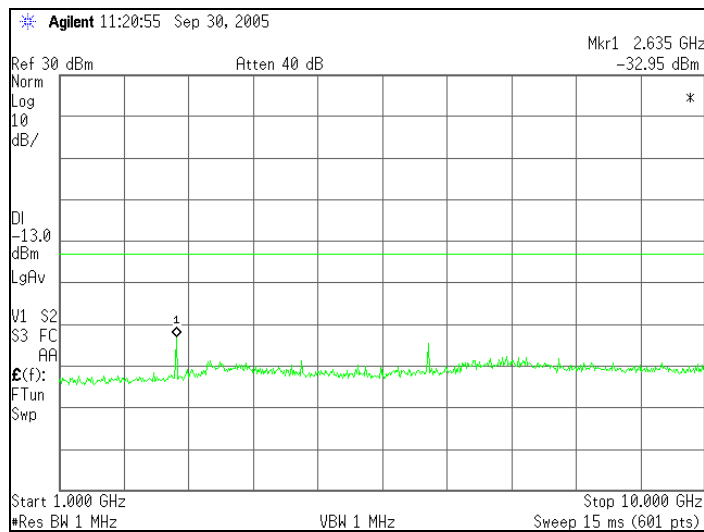
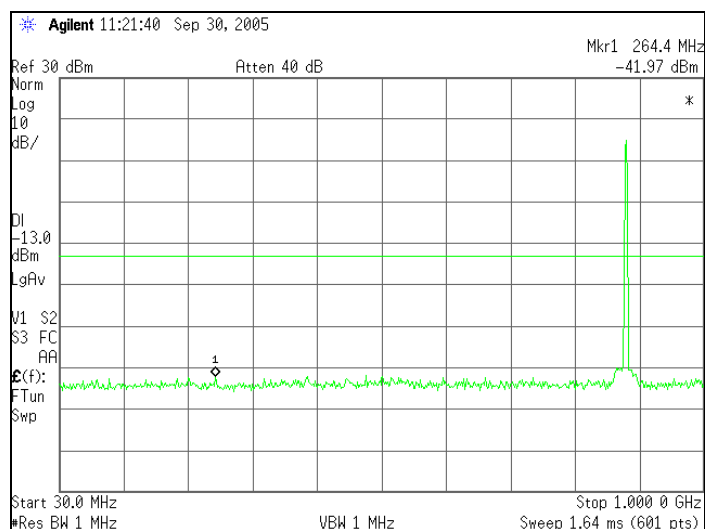
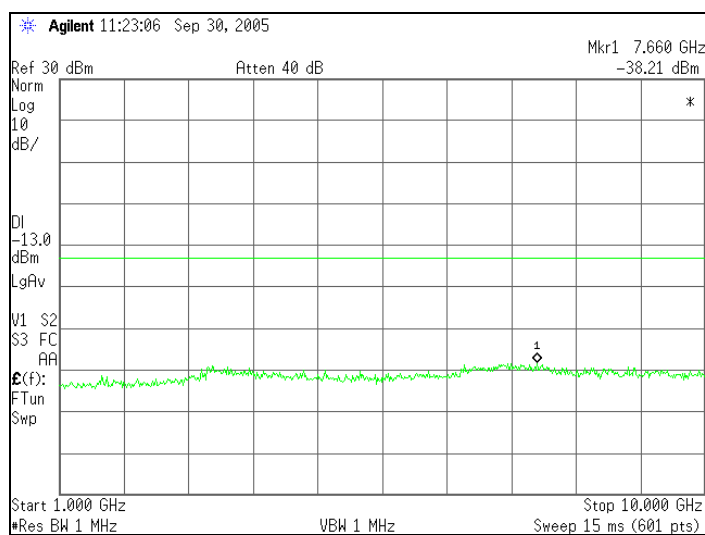


Figure 37: Spurious Emissions - Downlink CDMA Low Channel - 2.9 to 10 GHz

**Figure 38: Spurious Emissions - Downlink CDMA Mid Channel – 30 MHz to 2.9 GHz****Figure 39: Spurious Emissions - Downlink CDMA Mid Channel – 2.9 to 10 GHz**

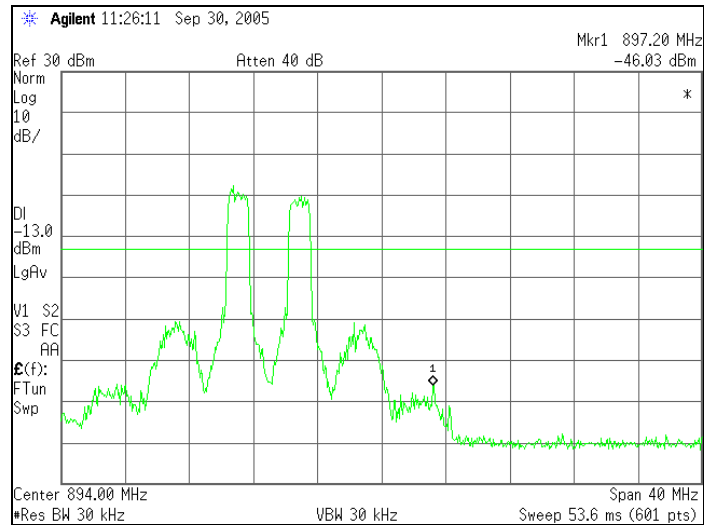


Figure 40: Spurious Emissions - Downlink CDMA High Channel – In Band

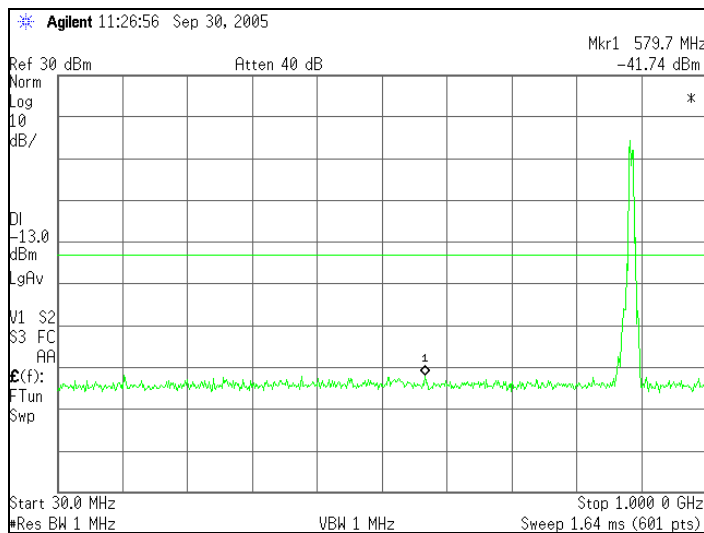


Figure 41: Spurious Emissions - Downlink CDMA High Channel – 30 MHz to 2.9 GHz

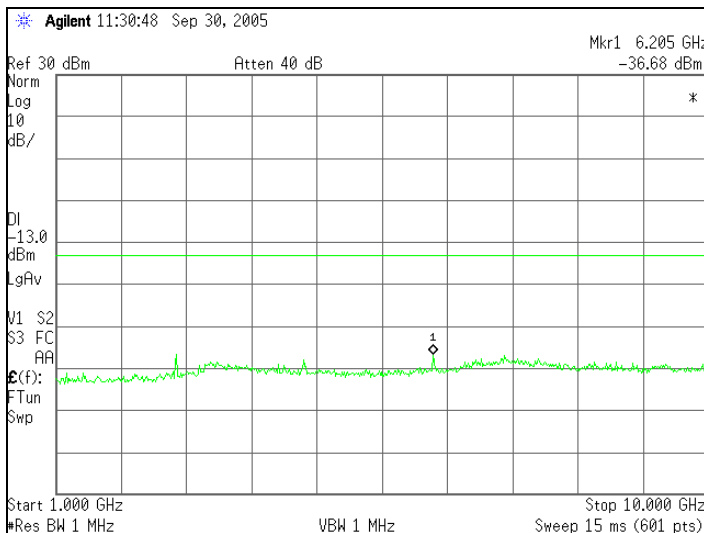


Figure 42: Spurious Emissions - Downlink CDMA High Channel – 2.9 to 10 GHz

2.6 TDMA Downlink

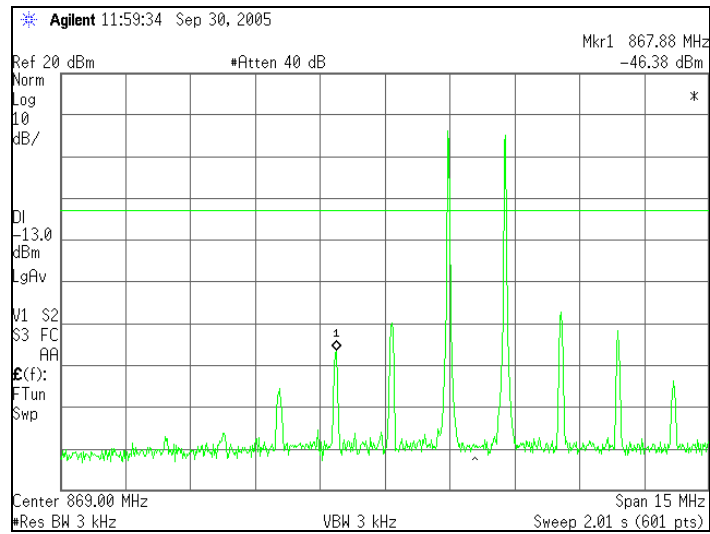


Figure 43: Spurious Emissions - Downlink TDMA Low Channel – In Band

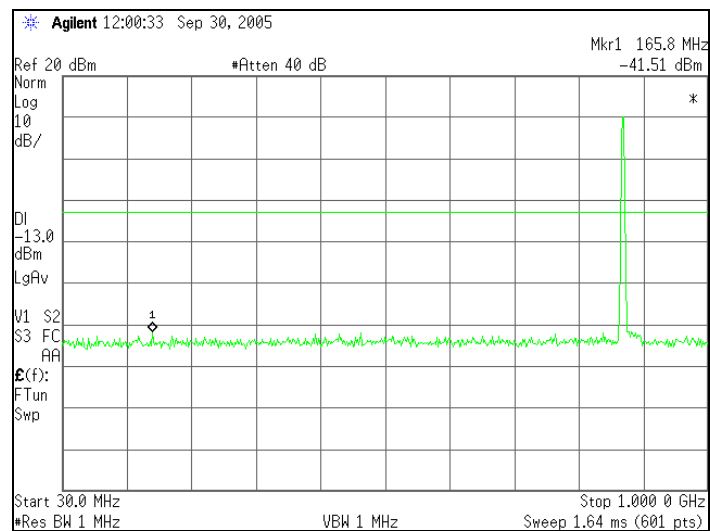


Figure 44: Spurious Emissions - Downlink TDMA Low Channel – 30 MHz to 2.9 GHz

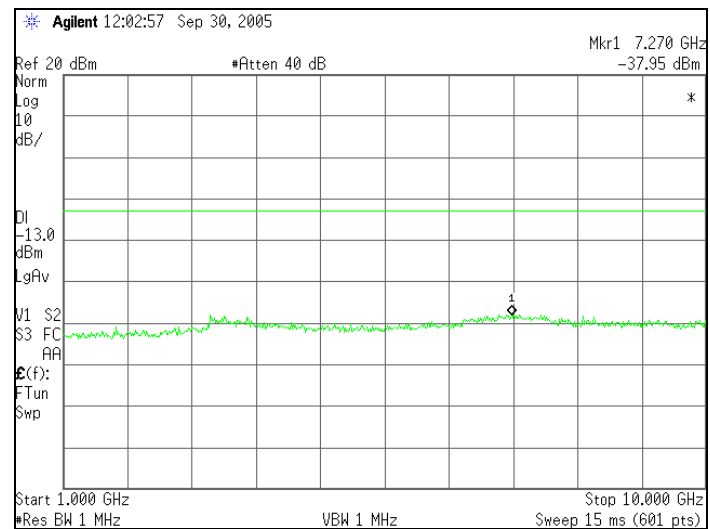
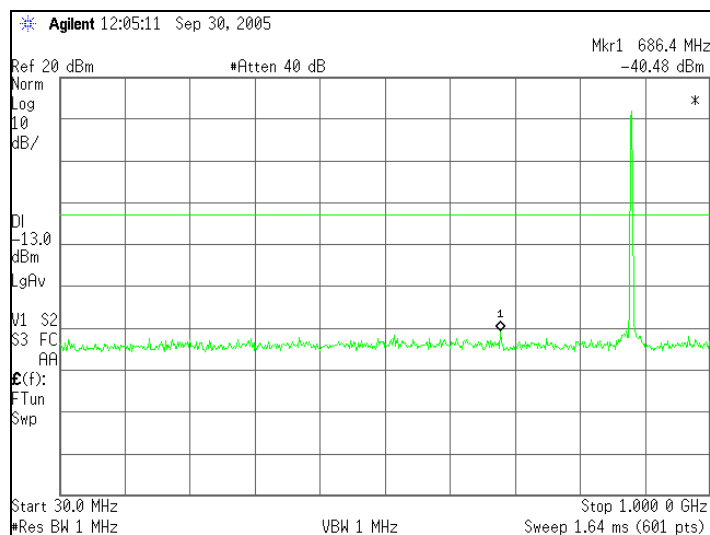
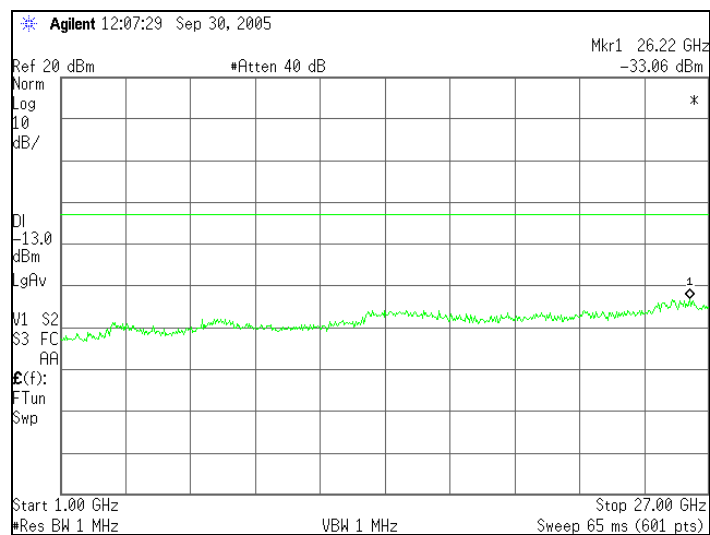


Figure 45: Spurious Emissions - Downlink TDMA Low Channel – 2.9 to 10 GHz

**Figure 46: Spurious Emissions - Downlink TDMA Mid Channel – 30 MHz to 2.9 GHz****Figure 47: Spurious Emissions - Downlink TDMA Mid Channel – 2.9 to 10 GHz**

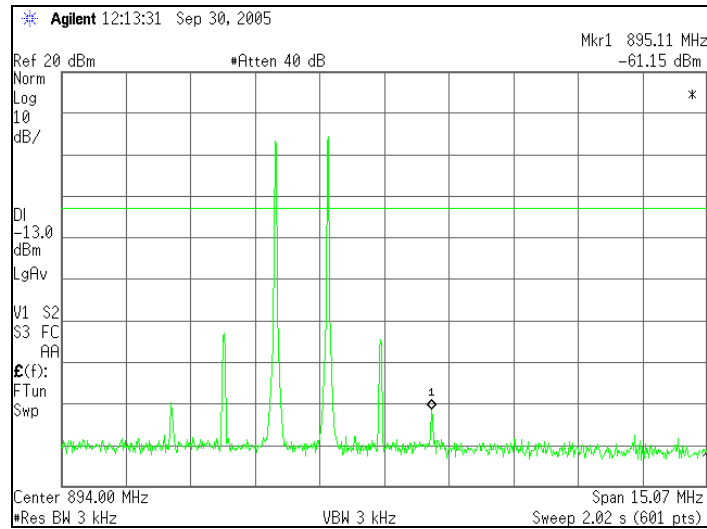


Figure 48: Spurious Emissions - Downlink TDMA High Channel – In Band

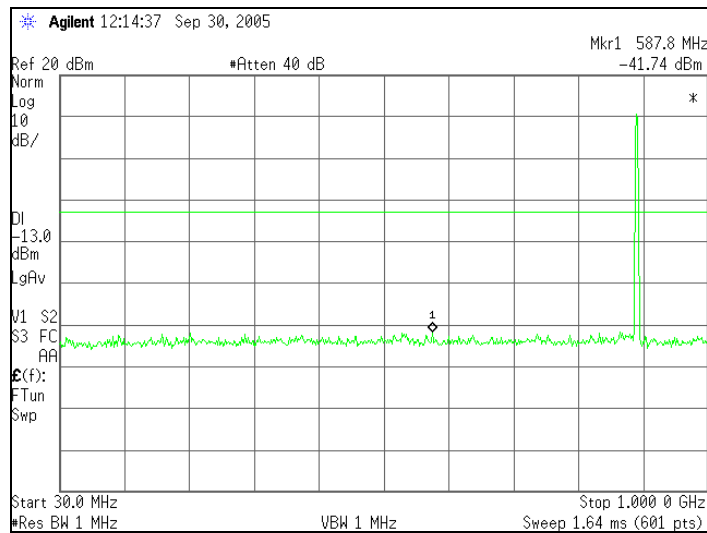


Figure 49: Spurious Emissions - Downlink TDMA High Channel – 30 MHz to 2.9 GHz

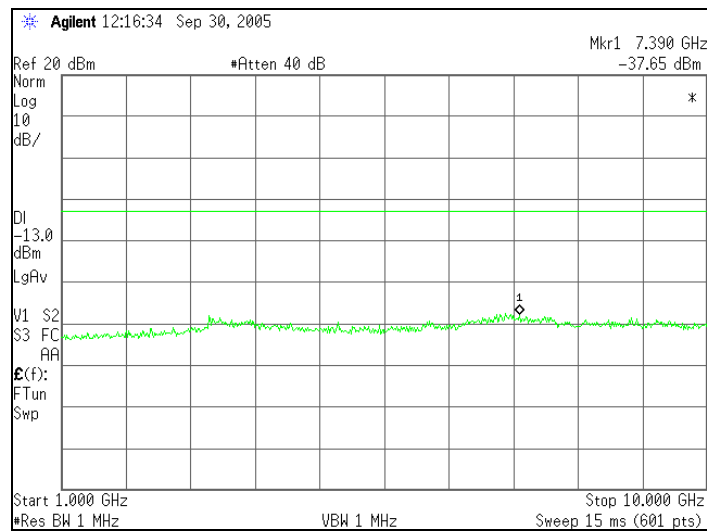


Figure 50: Spurious Emissions - Downlink TDMA High Channel – 2.9 to 10 GHz

2.7 CW Downlink – Covers FM (GSM and F1D)

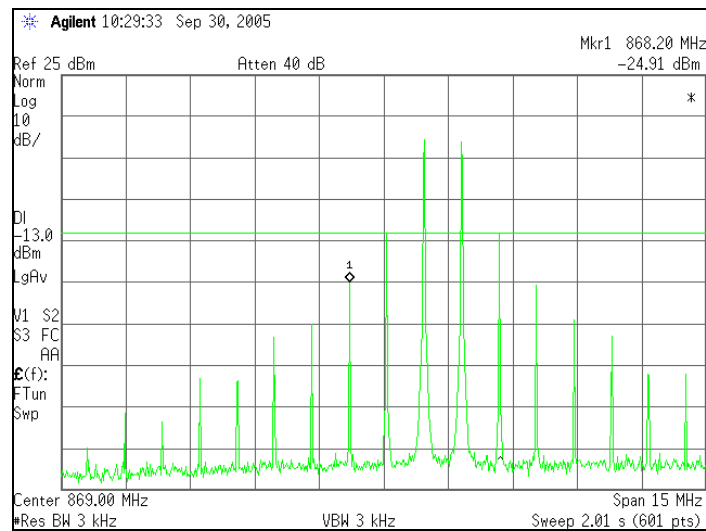


Figure 51: Spurious Emissions – Downlink CW Low Channel – In Band

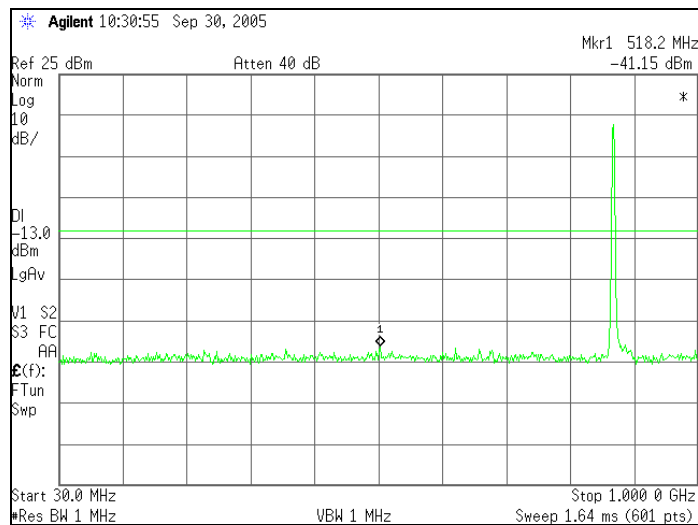


Figure 52: Spurious Emissions – Downlink CW Low Channel – 30 MHz to 2.9 GHz

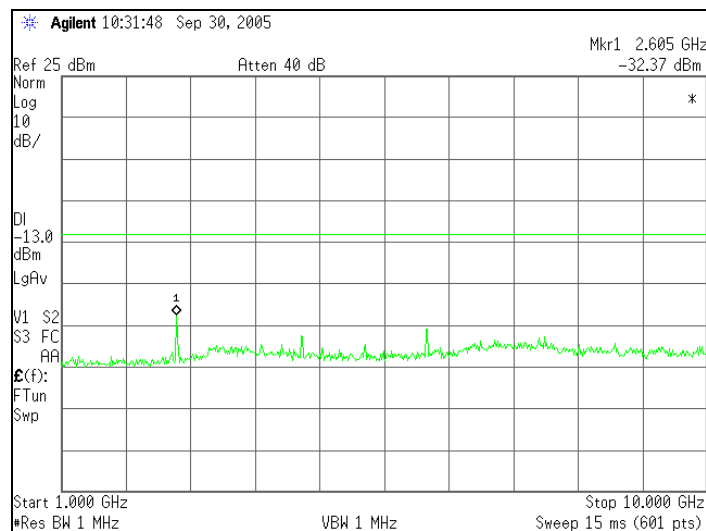


Figure 53: Spurious Emissions – Downlink CW Low Channel – 2.9 to 10 GHz

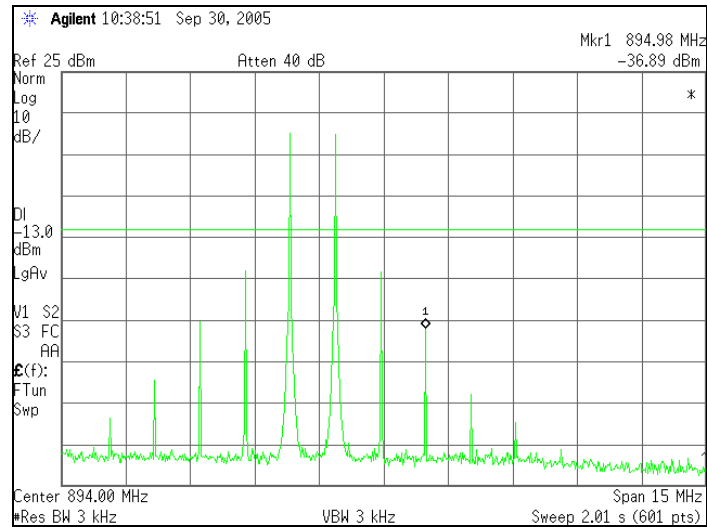


Figure 54: Spurious Emissions – Downlink CW High Channel – In Band

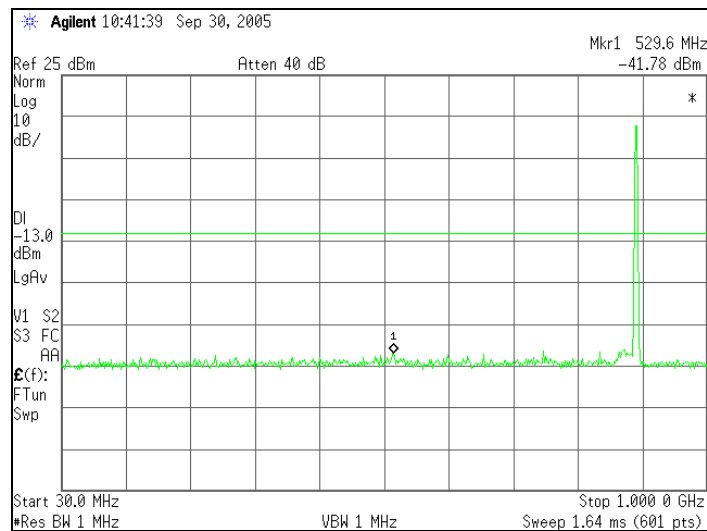


Figure 55: Spurious Emissions – Downlink CW High Channel – 30 MHz to 2.9 GHz

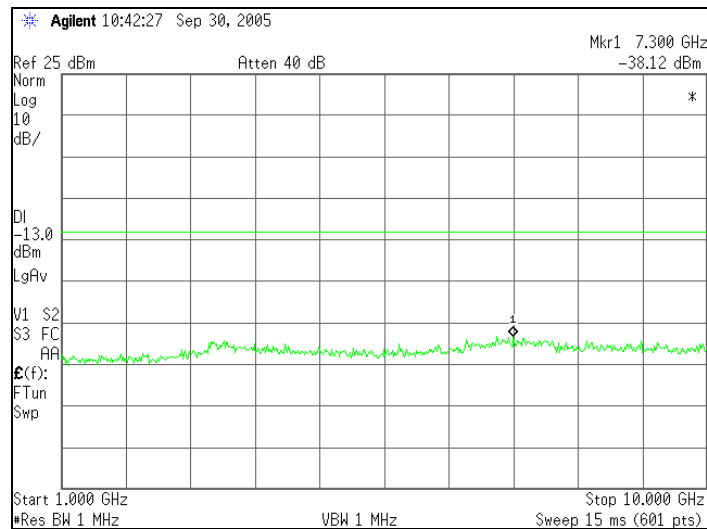


Figure 56: Spurious Emissions – Downlink CW High Channel – 2.9 to 10 GHz

2.8 GSM Downlink

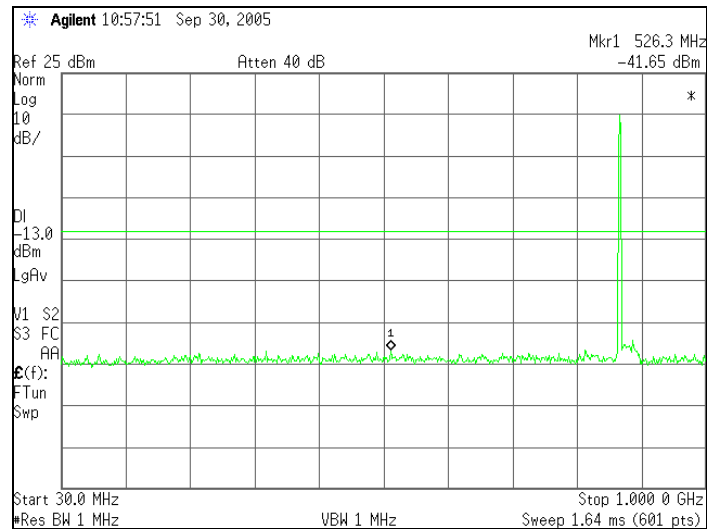


Figure 57: Spurious Emissions - Downlink GSM Low Channel – 30 MHz to 2.9 GHz

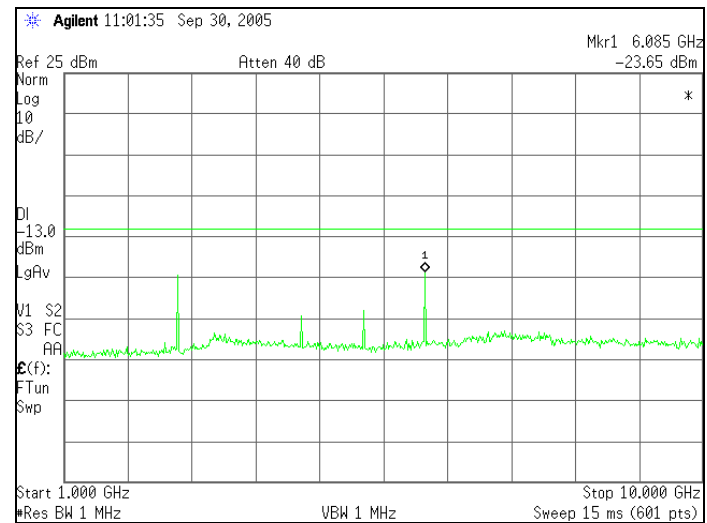


Figure 58: Spurious Emissions - Downlink GSM Low Channel – 2.9 to 10 GHz

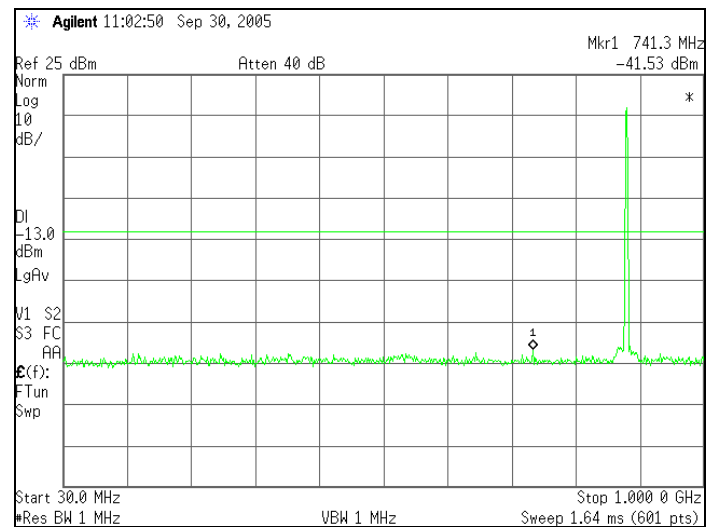


Figure 59: Spurious Emissions - Downlink GSM Mid Channel – 30 MHz to 2.9 GHz

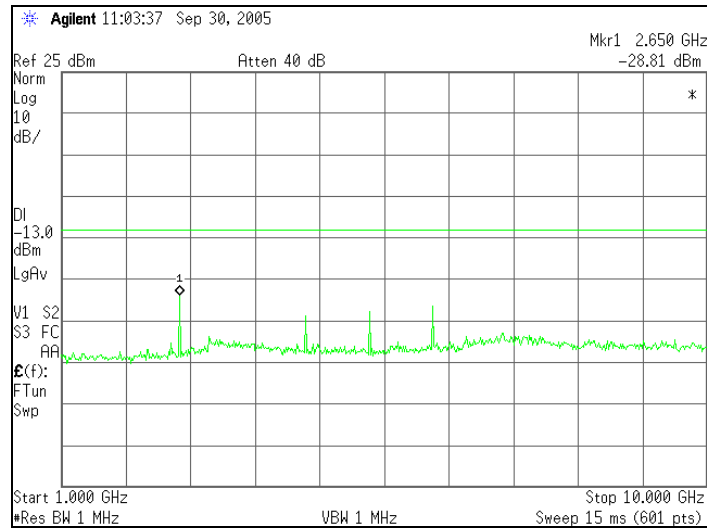


Figure 60: Spurious Emissions - Downlink GSM Mid Channel – 2.9 to 10 GHz

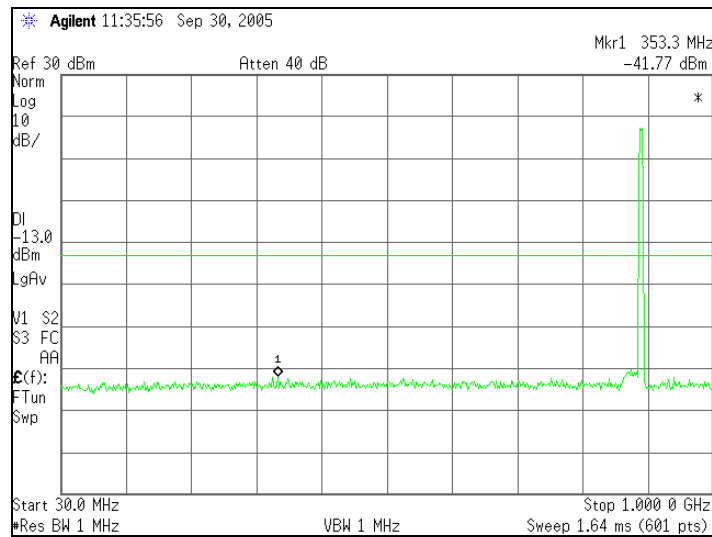


Figure 61: Spurious Emissions - Downlink GSM High Channel – 30 MHz to 2.9 GHz

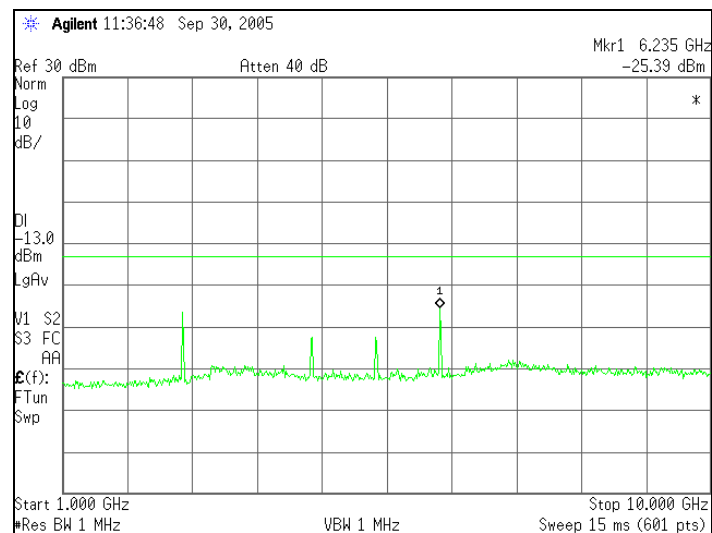


Figure 62: Spurious Emissions - Downlink GSM High Channel – 2.9 to 10 GHz

3.0 Band-edge

3.1 CDMA Uplink

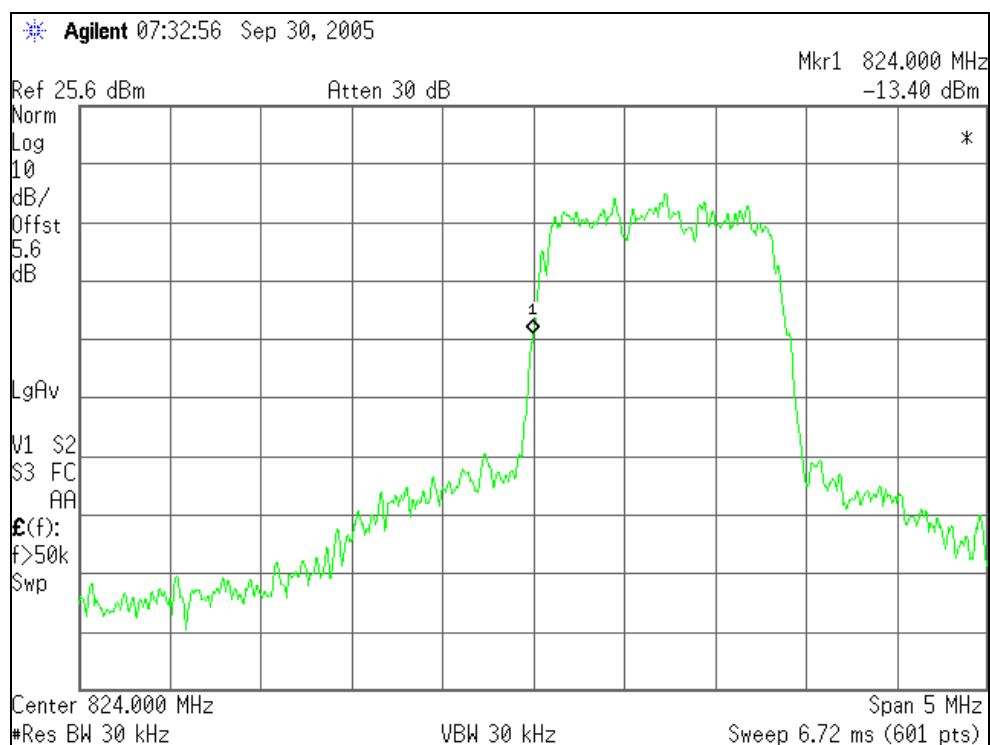


Figure 63: Band-Edge Uplink CDMA Low Channel

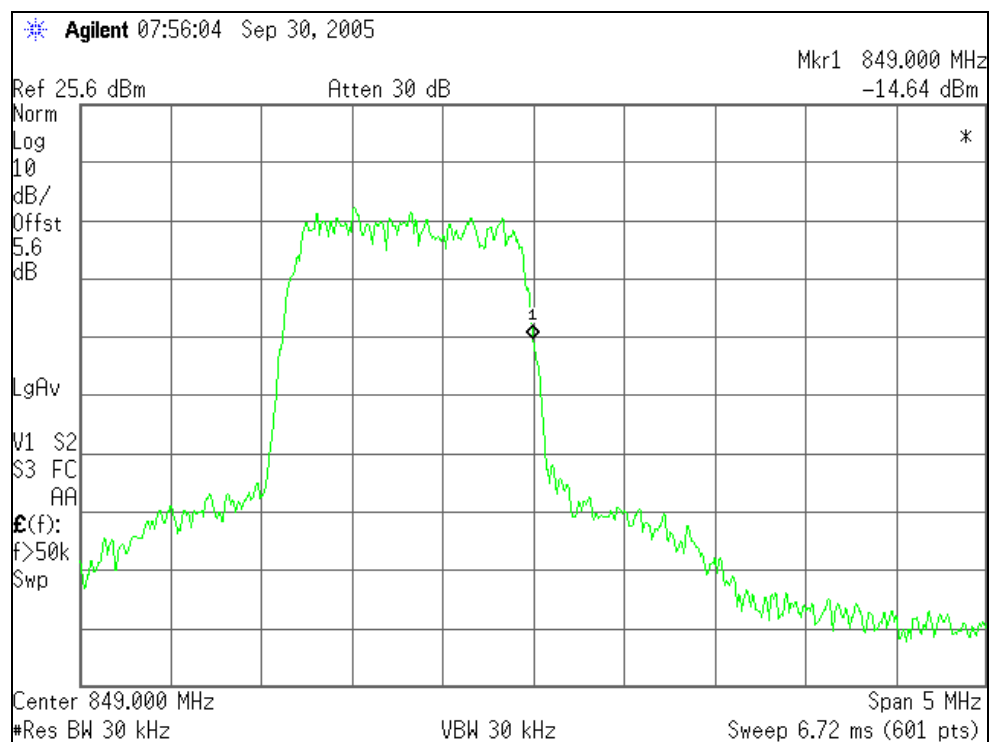


Figure 64: Band-Edge Uplink CDMA High Channel

3.2 TDMA Uplink

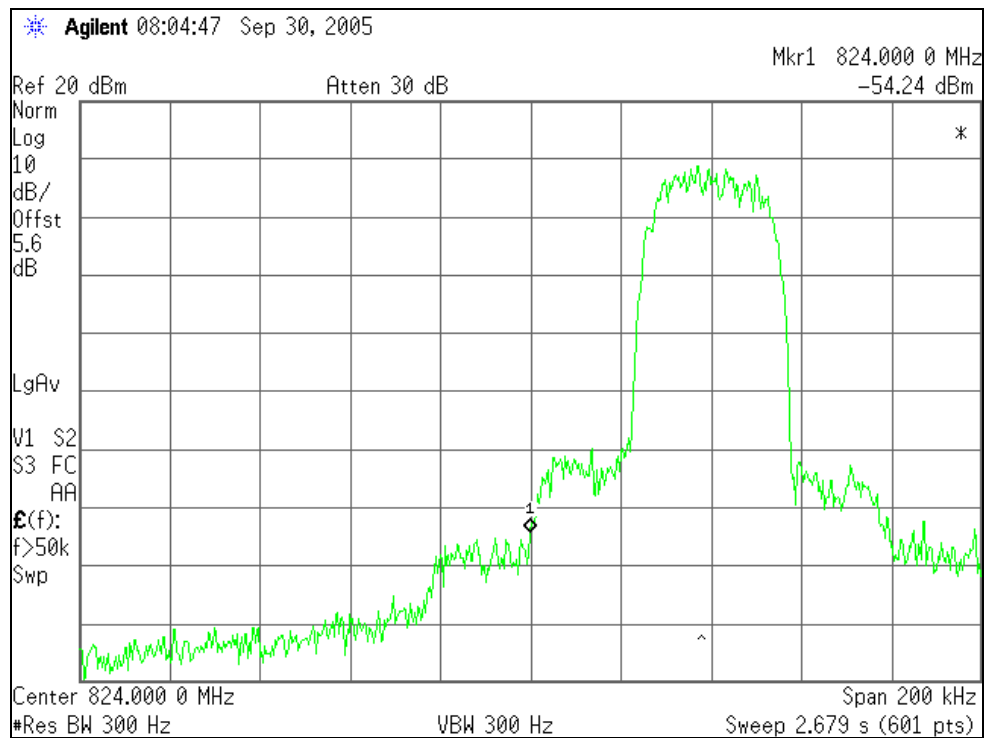


Figure 65: Band-Edge Uplink TDMA Low Channel

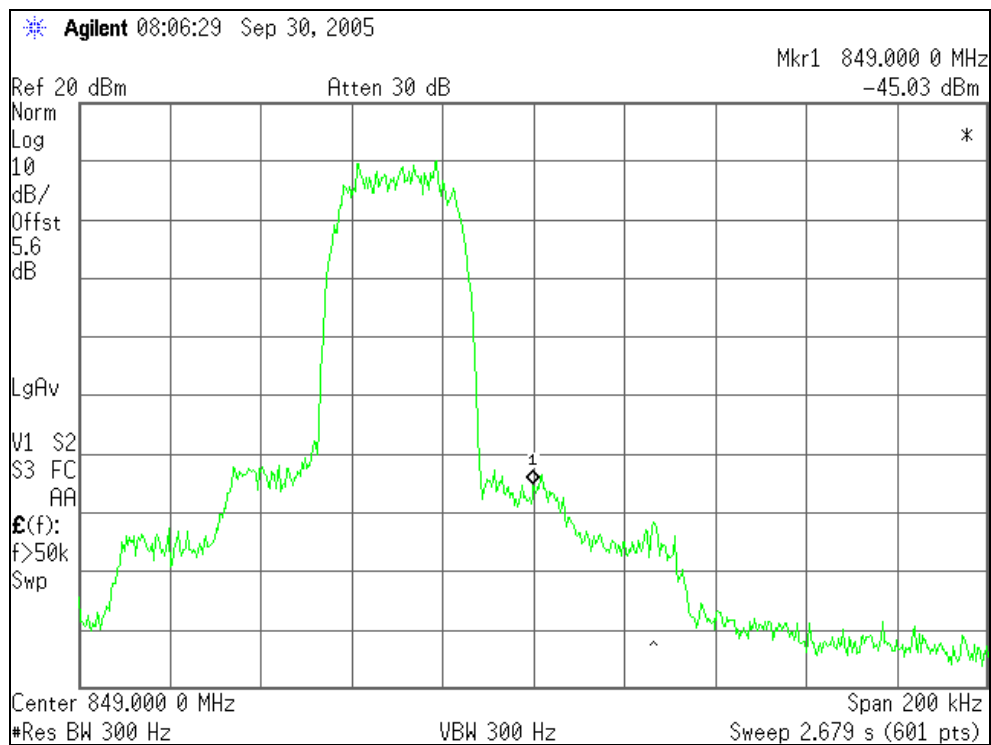


Figure 66: Band-Edge Uplink TDMA High Channel

3.3 GSM Uplink

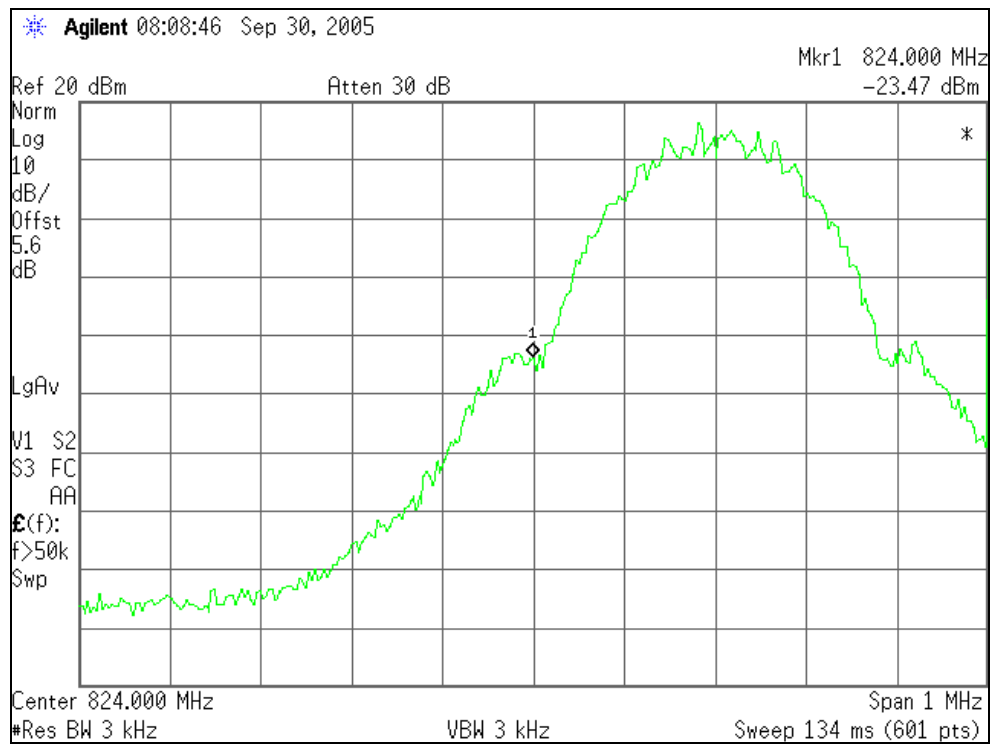


Figure 67: Band-Edge Uplink GSM Low Channel

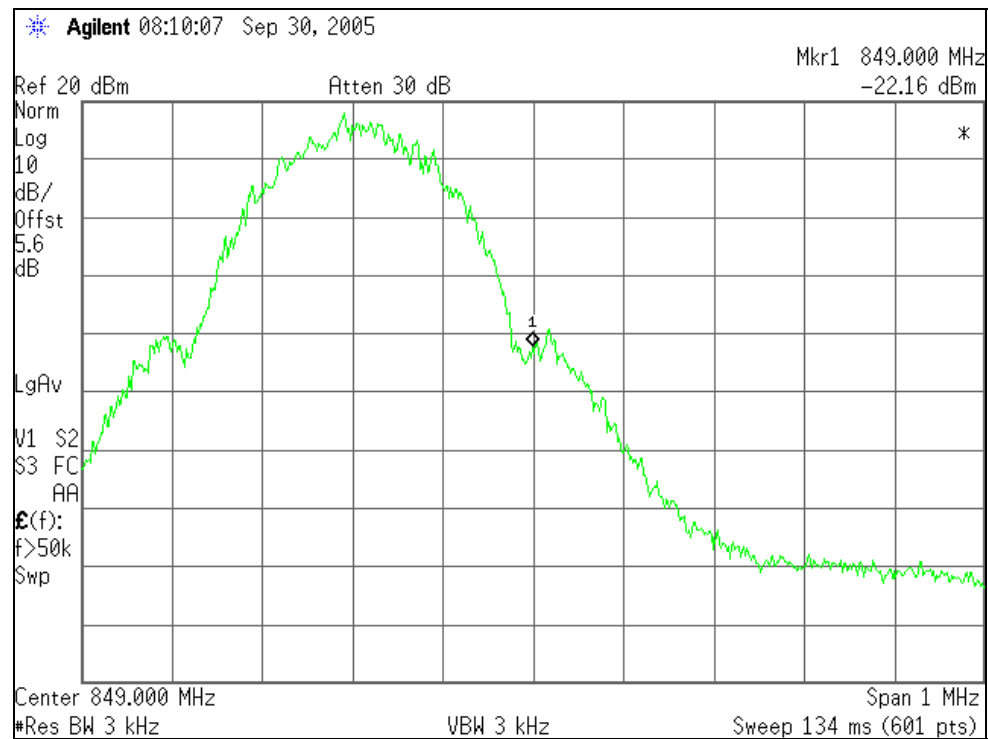


Figure 68: Band-Edge Uplink GSM High Channel

3.4 CDMA Downlink

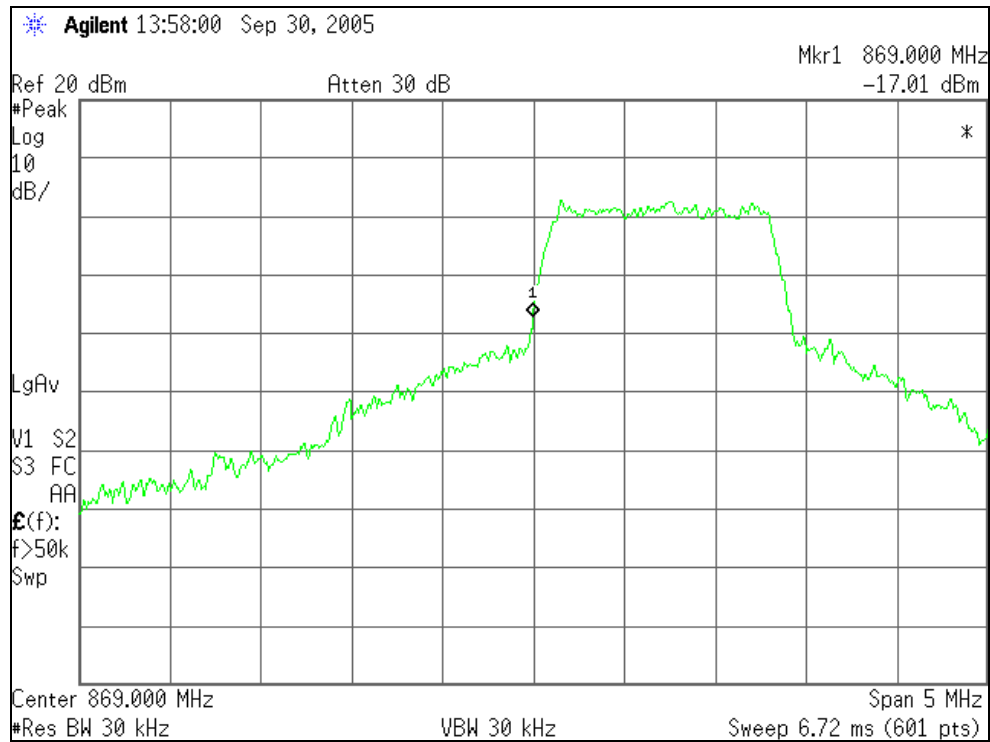


Figure 69: Band-Edge Downlink CDMA Low Channel

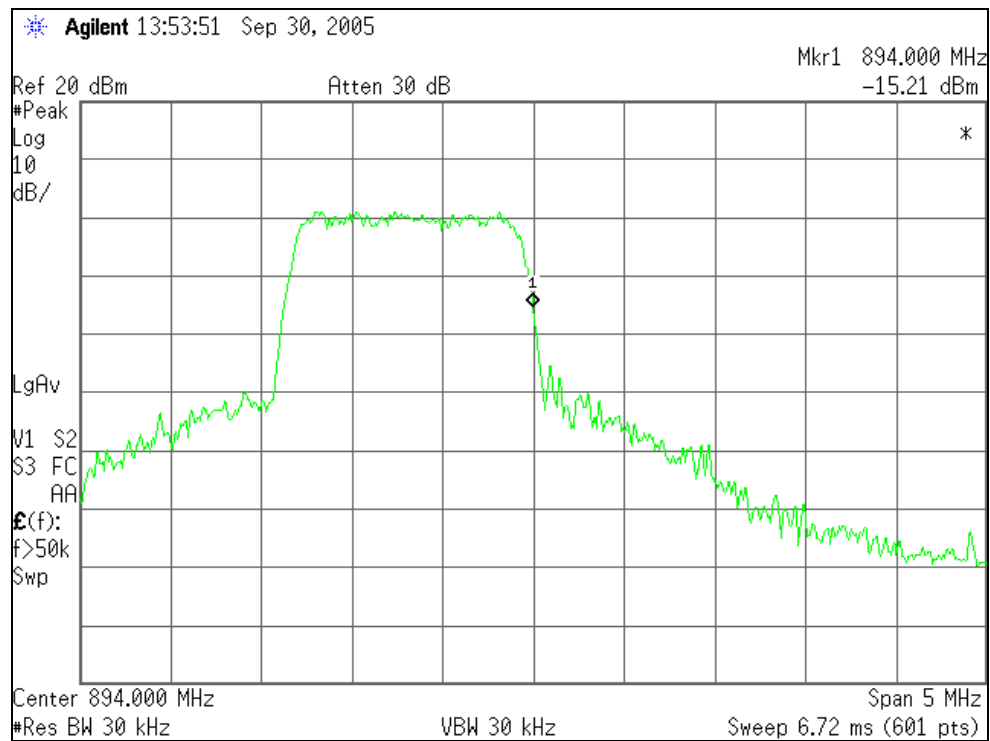


Figure 70: Band-Edge Downlink CDMA High Channel

3.5 TDMA Downlink

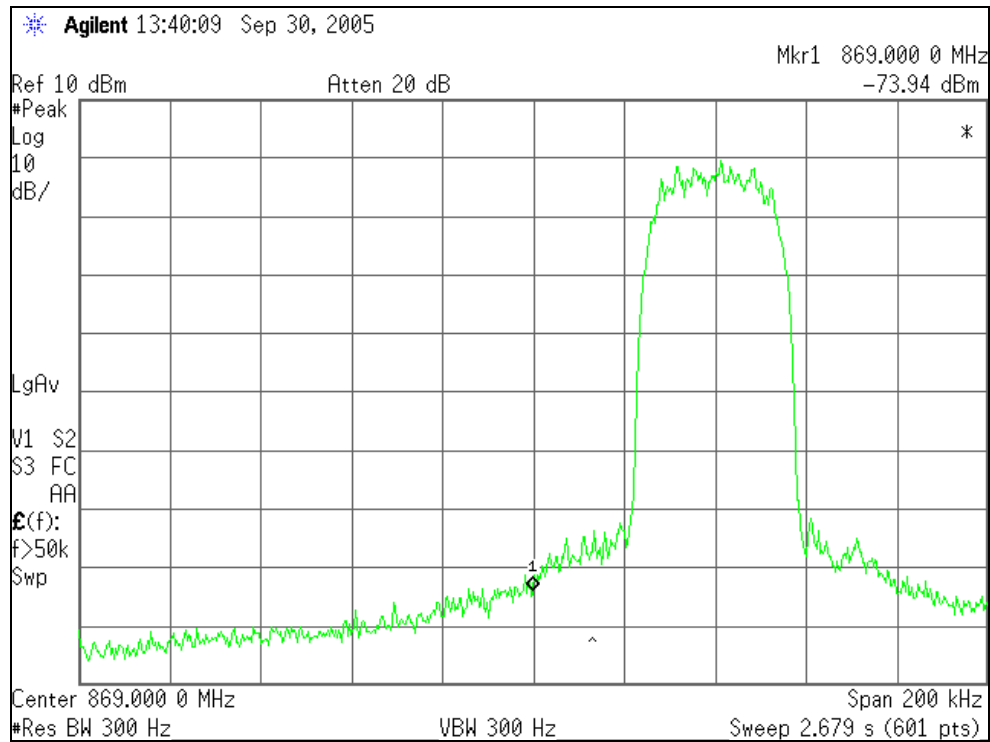


Figure 71: Band-Edge Downlink TDMA Low Channel

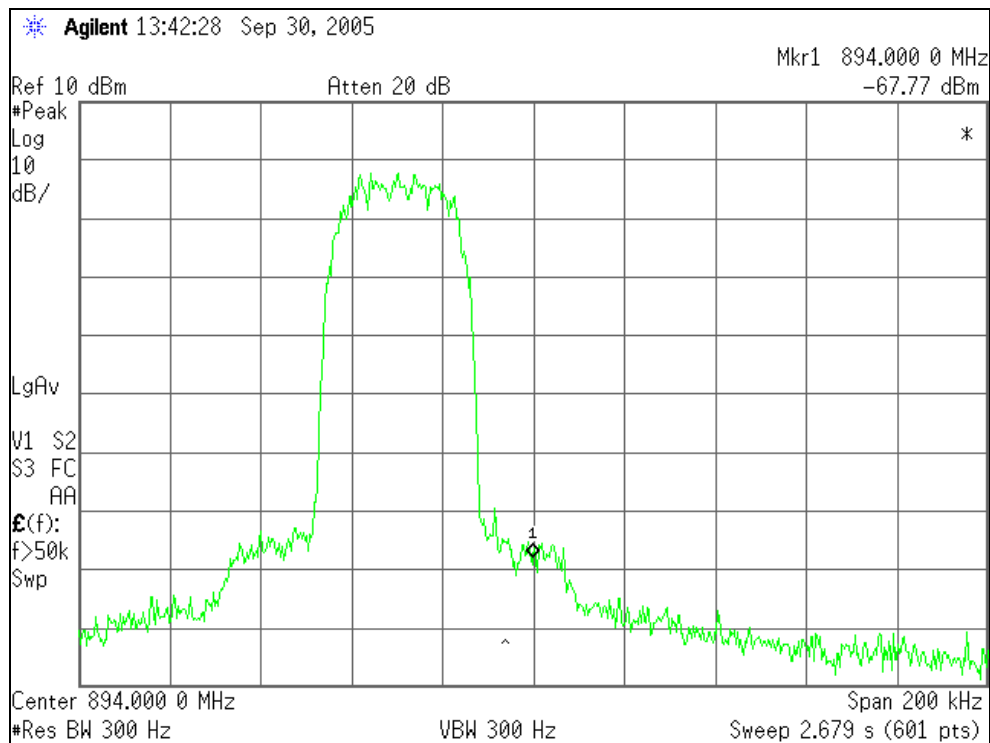


Figure 72: Band-Edge Downlink TDMA High Channel

3.6 GSM Downlink

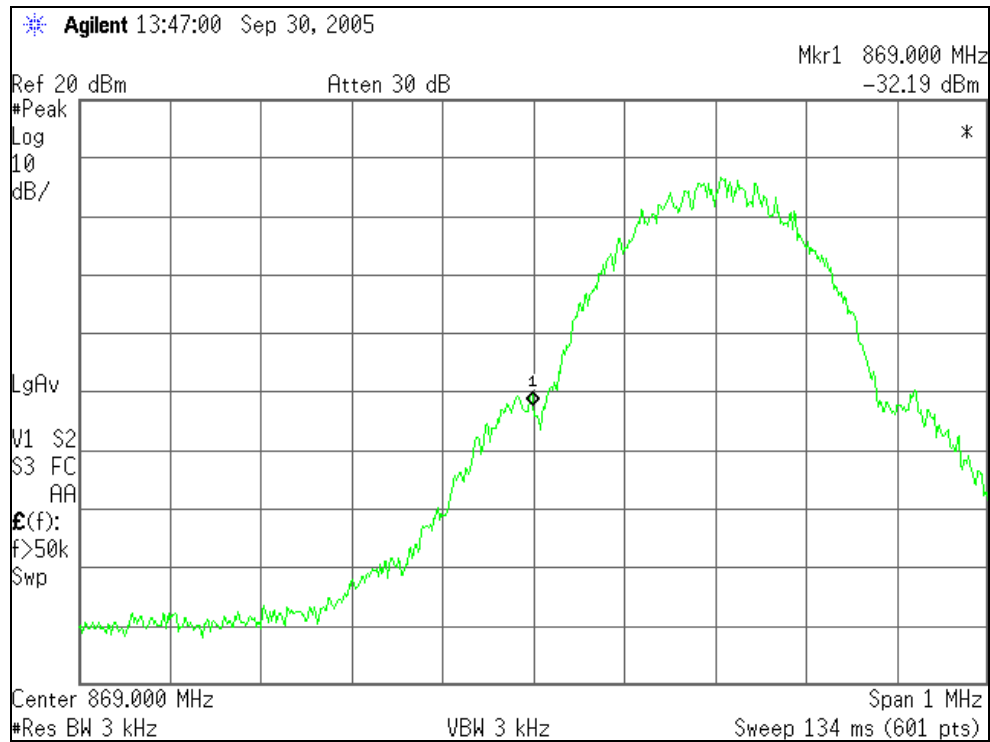


Figure 73: Band-Edge Downlink GSM Low Channel

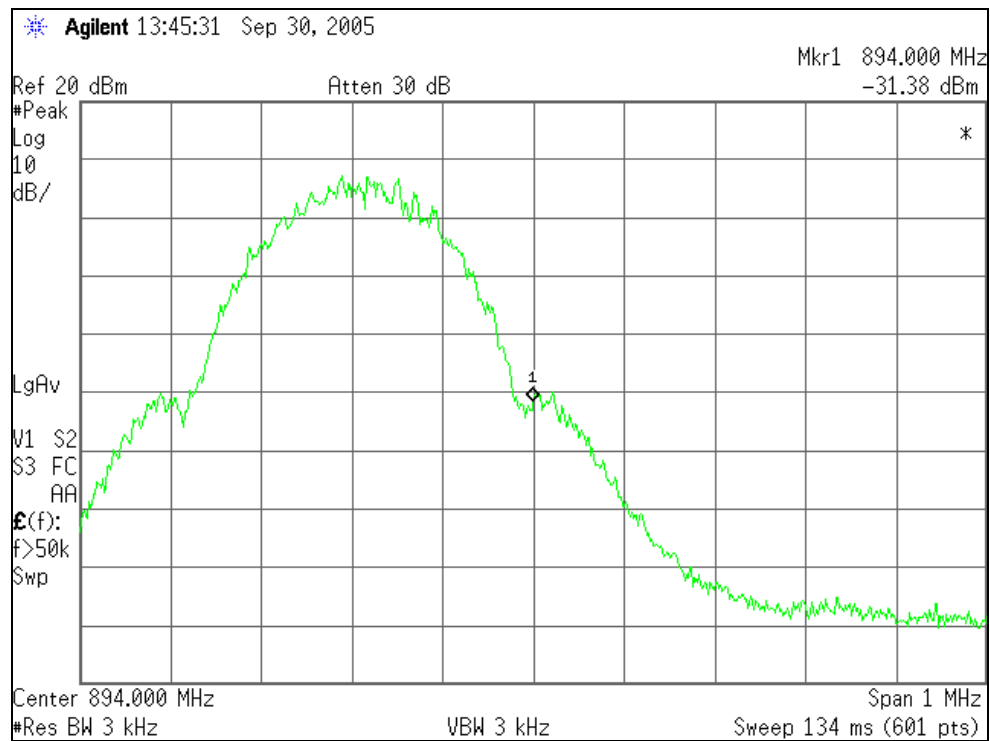


Figure 74: Band-Edge Downlink GSM High Channel

END REPORT