

FCC Part 24 Transmitter Certification

Test Report

FCC ID: SO4YX500-PCS

FCC Rule Part: CFR 47 Part 24 Subpart E

ACS Report Number: 04-0364-24E-A

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

Test Begin Date: November 08, 2004

Test End Date: December 3, 2004

Report Issue Date: December 6, 2004



FOR THE SCOPE OF ACCREDITATION UNDER LAB Code 200612

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This report contains 48 pages

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1.0 RF Power Output

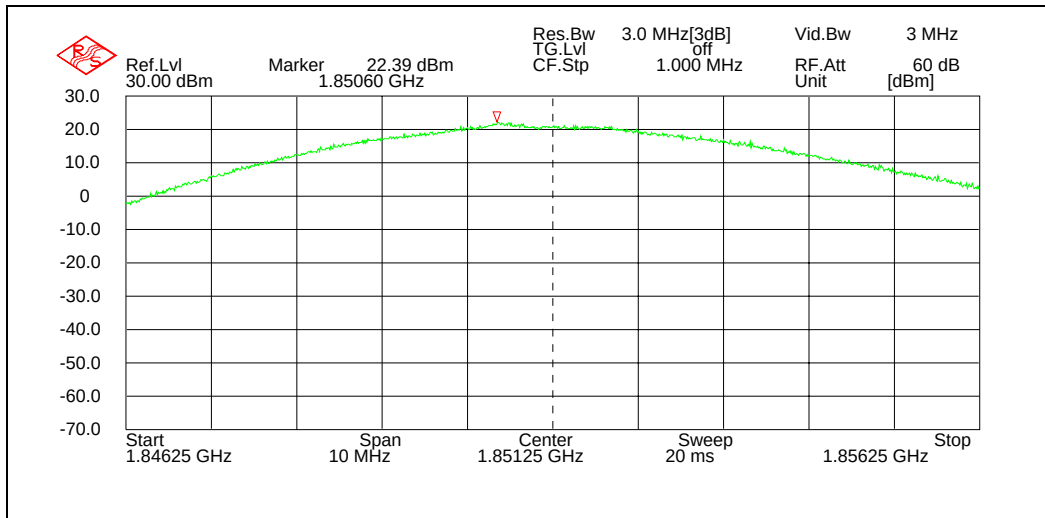


Figure 1: Peak Output Power Uplink CDMA Low Channel

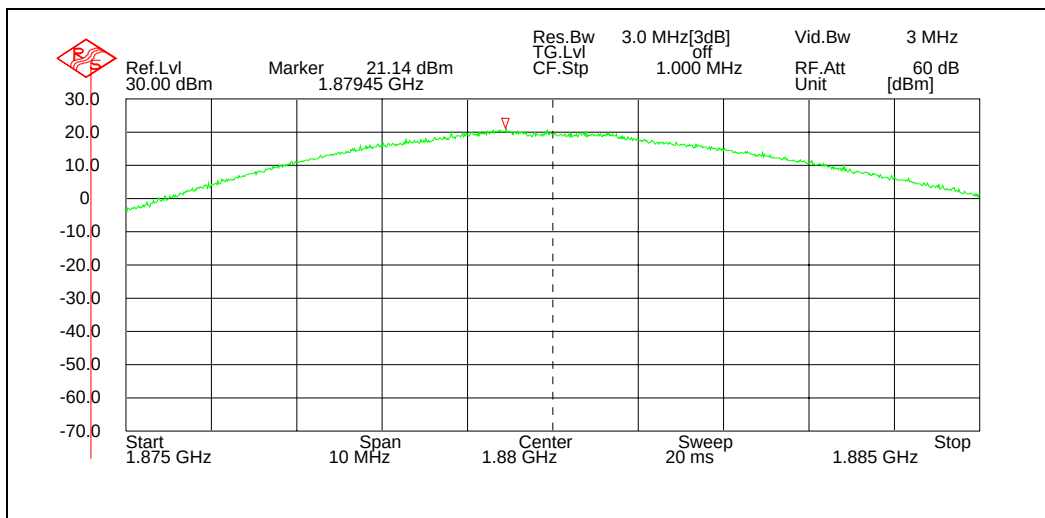


Figure 2: Peak Output Power Uplink CDMA Mid Channel

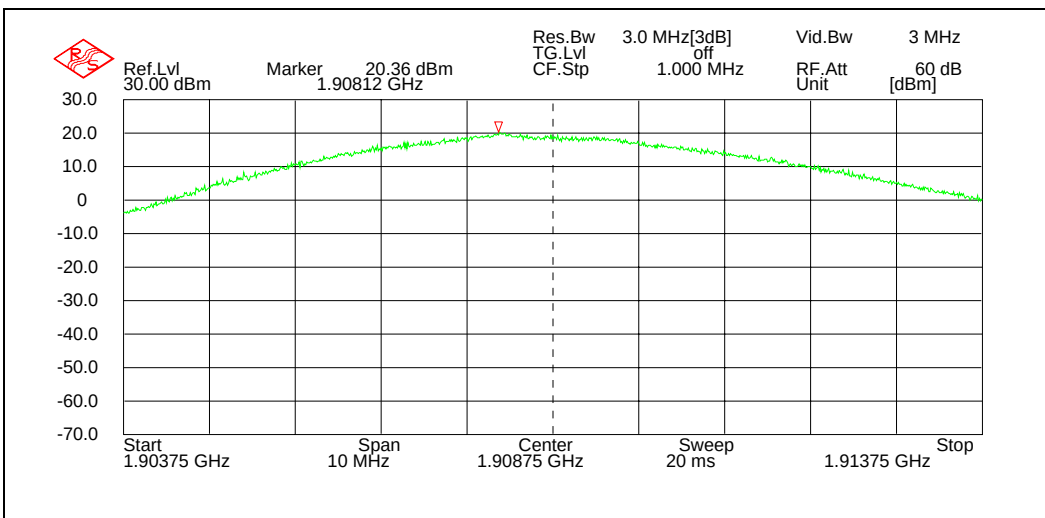


Figure 3: Peak Output Power Uplink CDMA High Channel

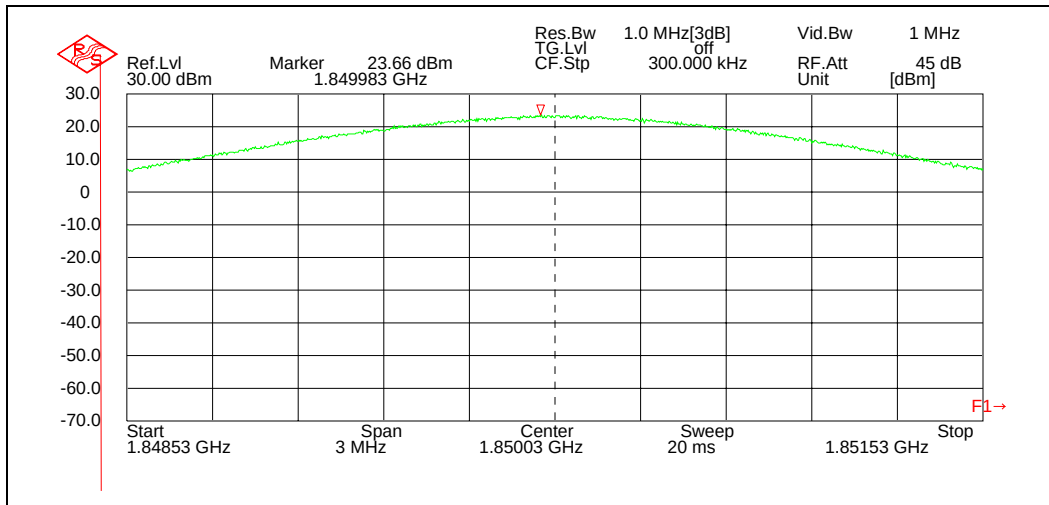


Figure 4: Peak Output Power Uplink TDMA Low Channel

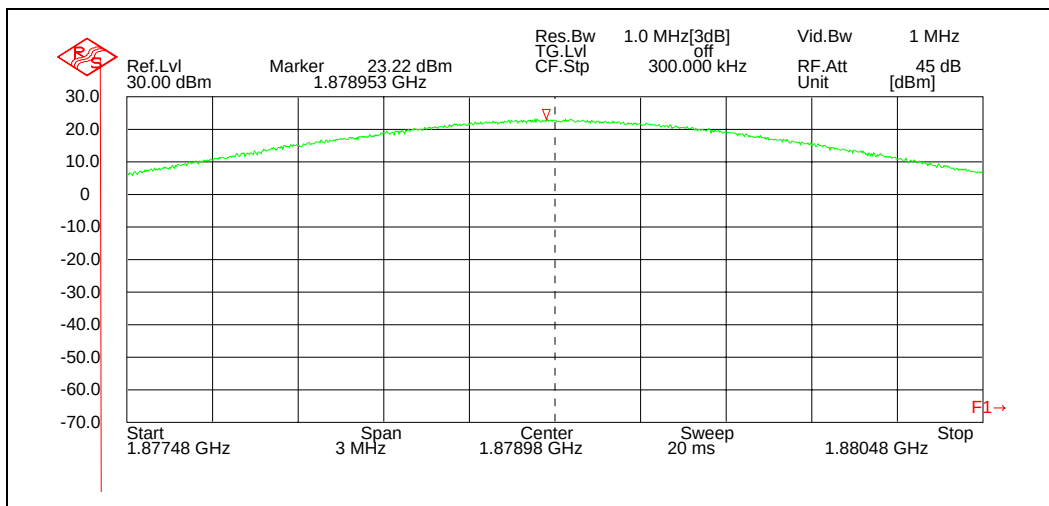


Figure 5: Peak Output Power Uplink TDMA Mid Channel

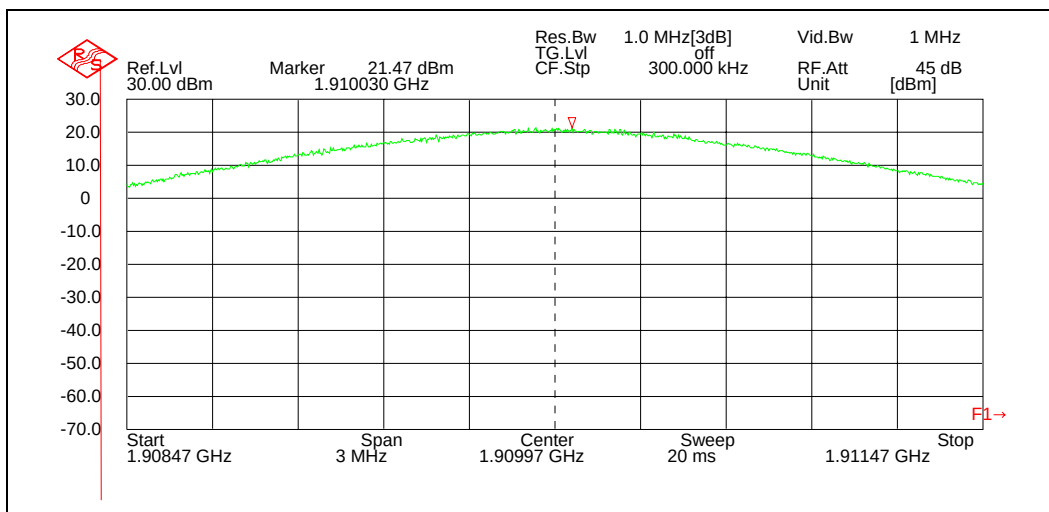


Figure 6: Peak Output Power Uplink TDMA High Channel

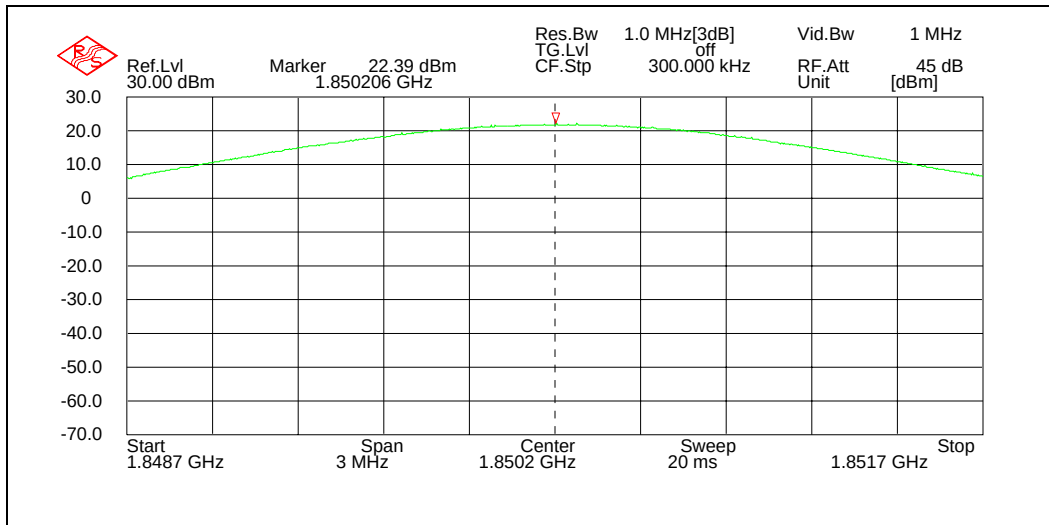


Figure 7: Peak Output Power Uplink GSM Low Channel

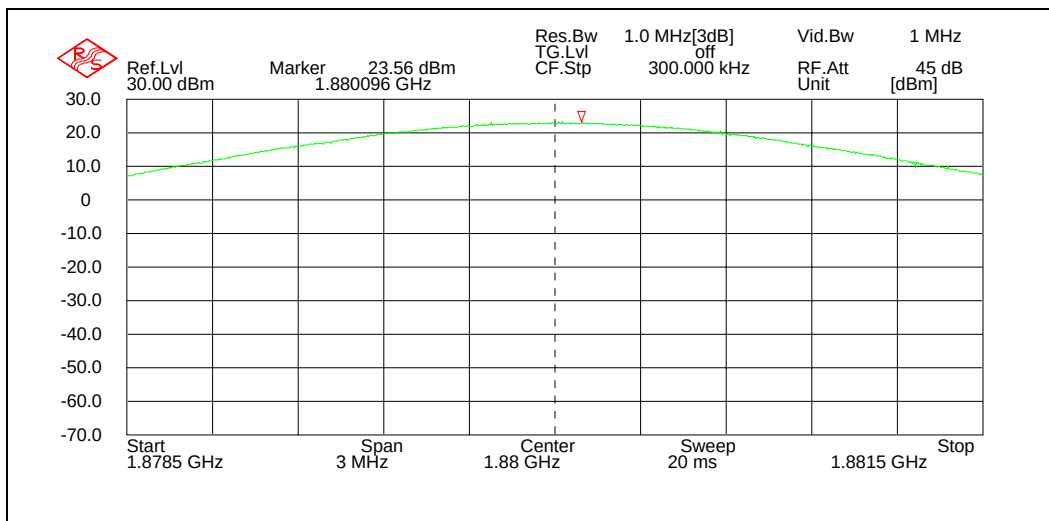


Figure 8: Peak Output Power Uplink GSM Mid Channel

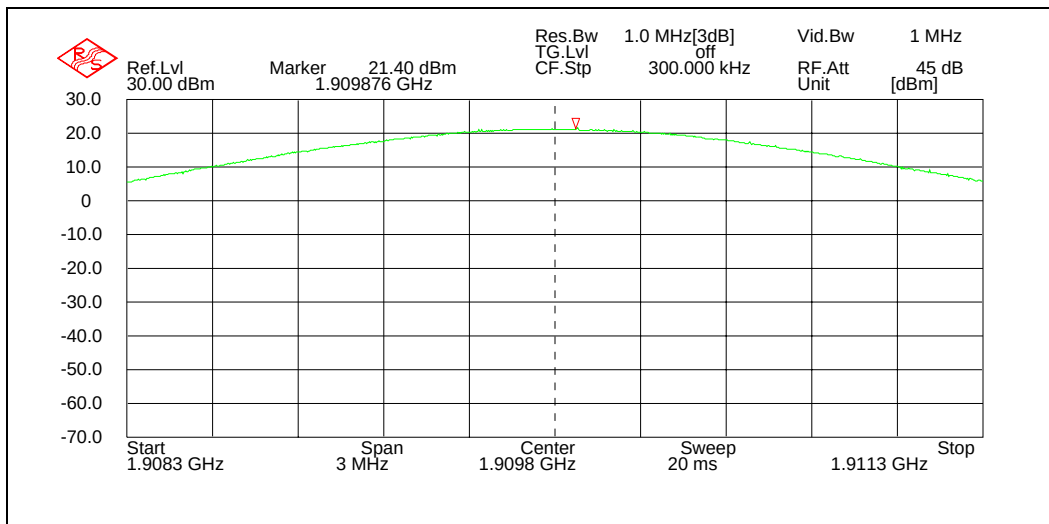


Figure 9: Peak Output Power Uplink GSM High Channel

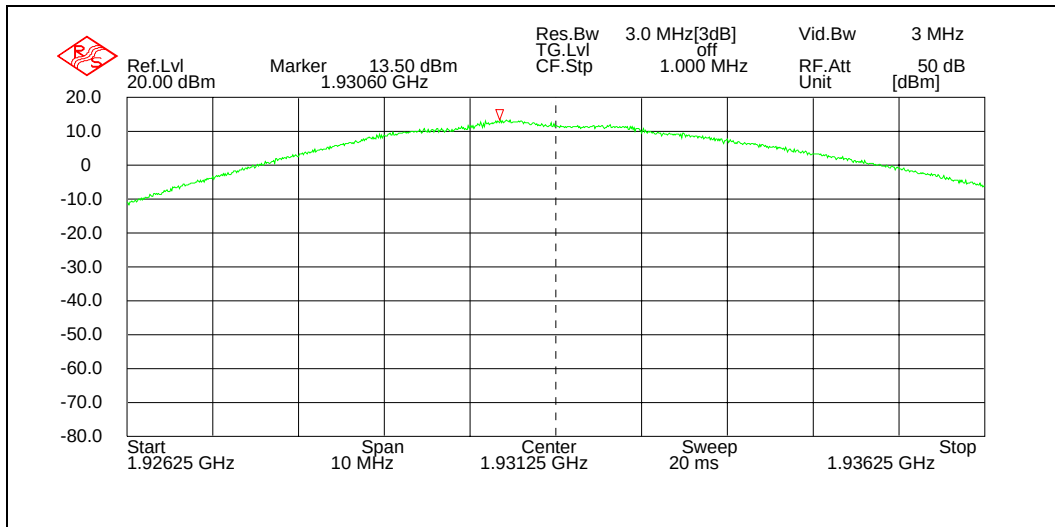


Figure 10: Peak Output Power Downlink CDMA Low Channel

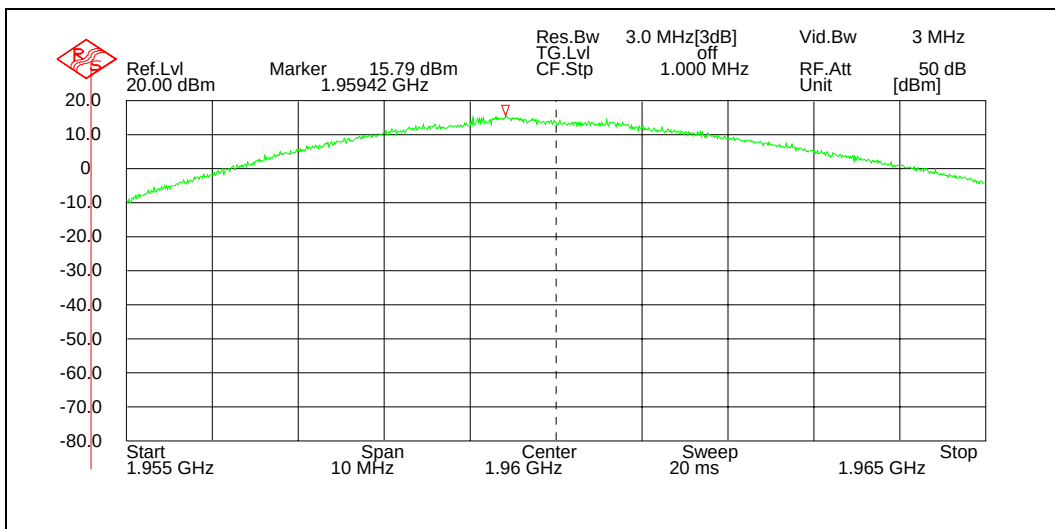


Figure 11: Peak Output Power Downlink CDMA Mid Channel

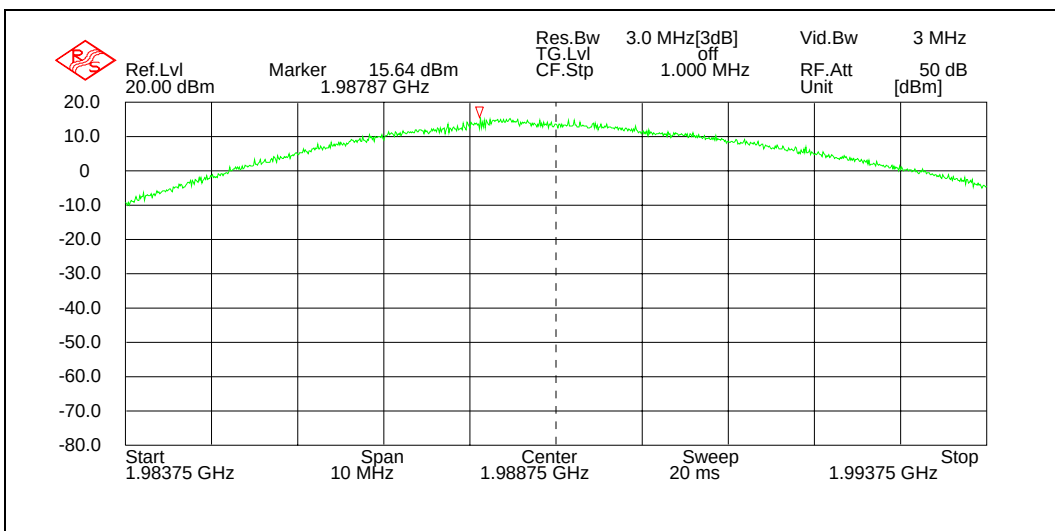


Figure 12: Peak Output Power Downlink CDMA High Channel

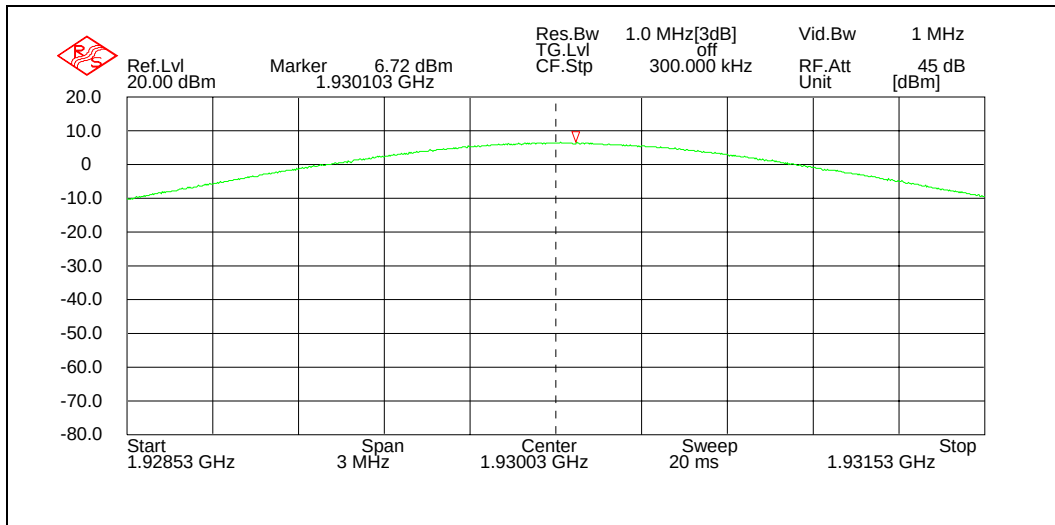


Figure 13: Peak Output Power Downlink TDMA Low Channel

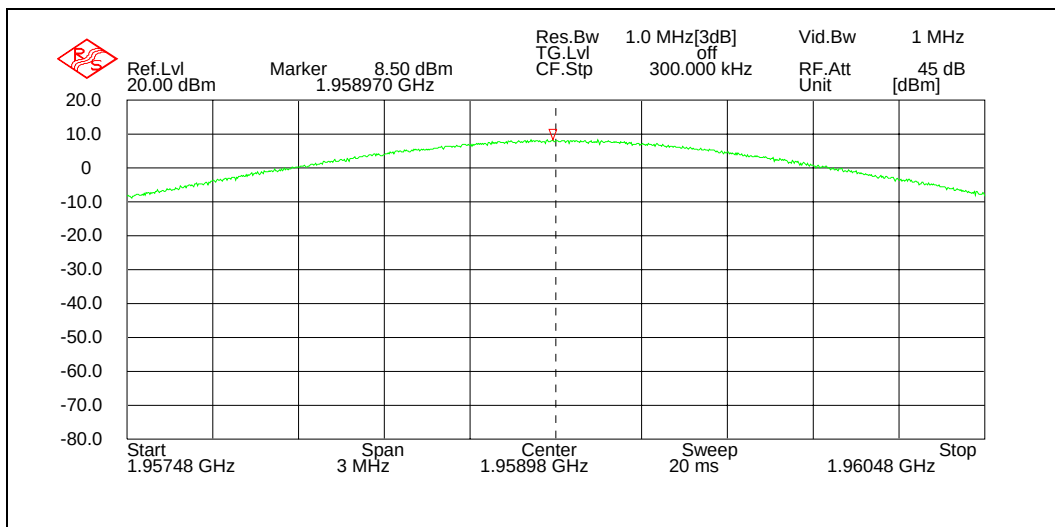


Figure 14: Peak Output Power Downlink TDMA Mid Channel

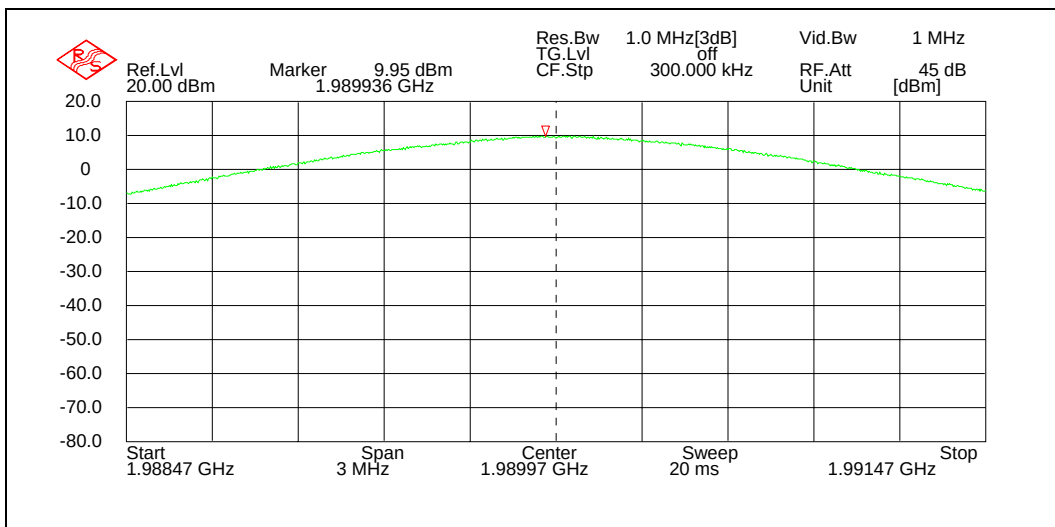


Figure 15: Peak Output Power Downlink TDMA High Channel

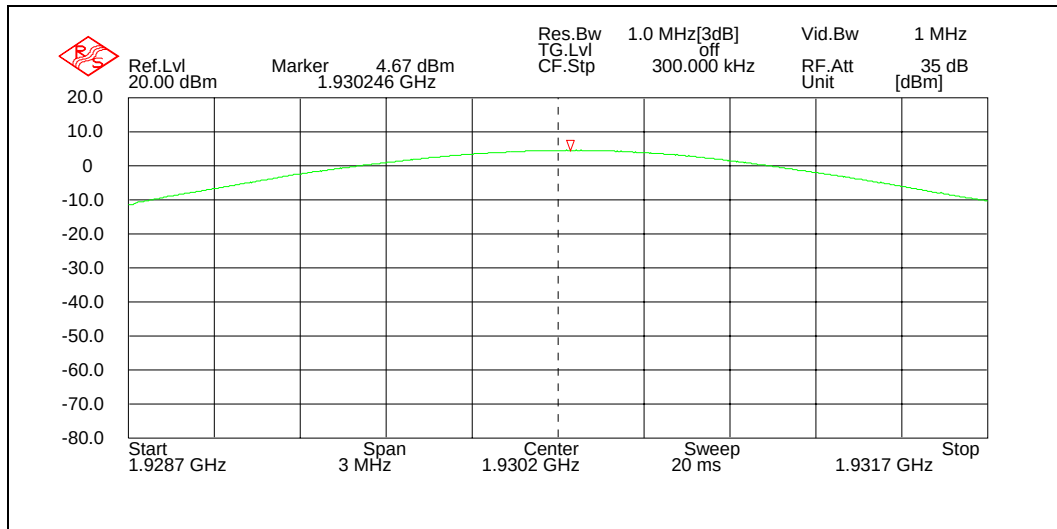


Figure 16: Peak Output Power Downlink GSM Low Channel

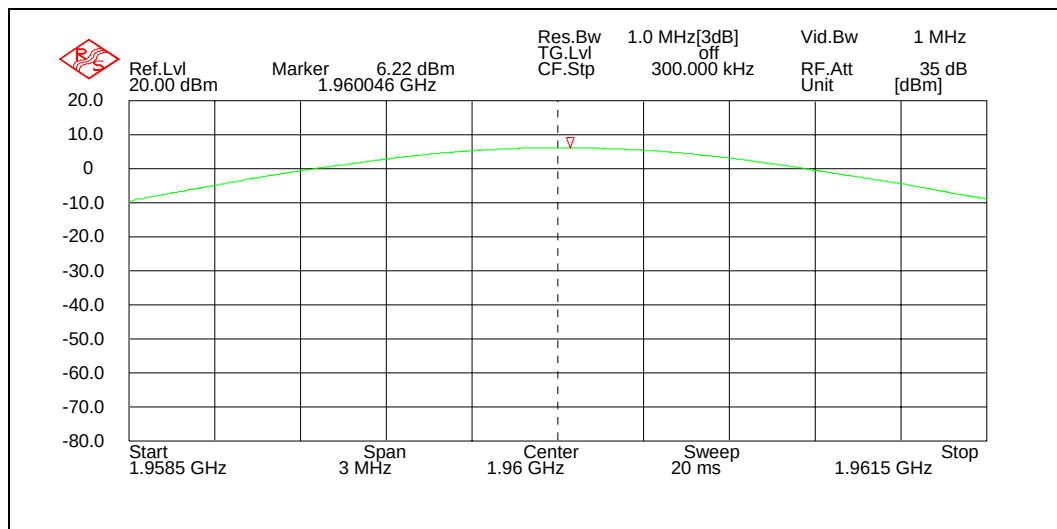


Figure 17: Peak Output Power Downlink GSM Mid Channel

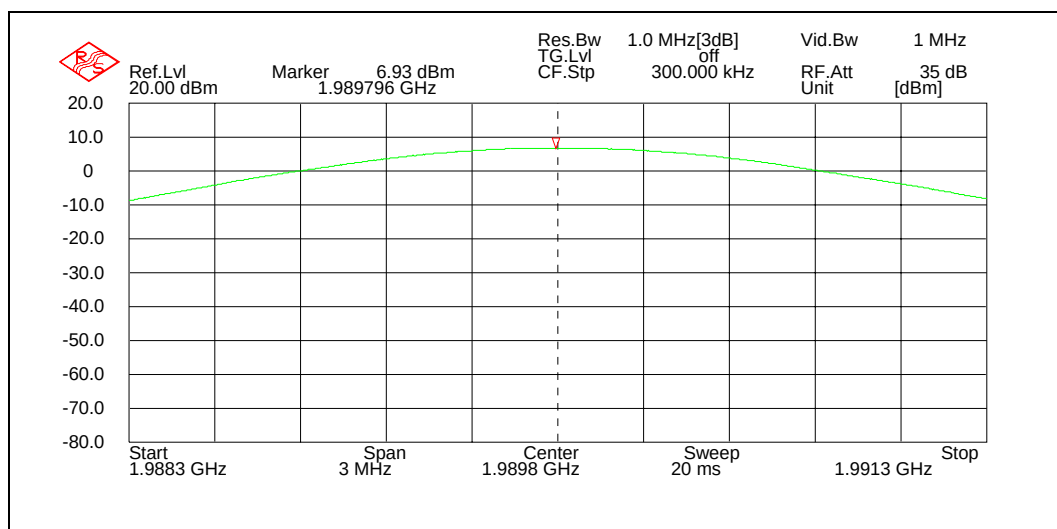


Figure 18: Peak Output Power Downlink GSM High Channel

2.0 Occupied Bandwidth

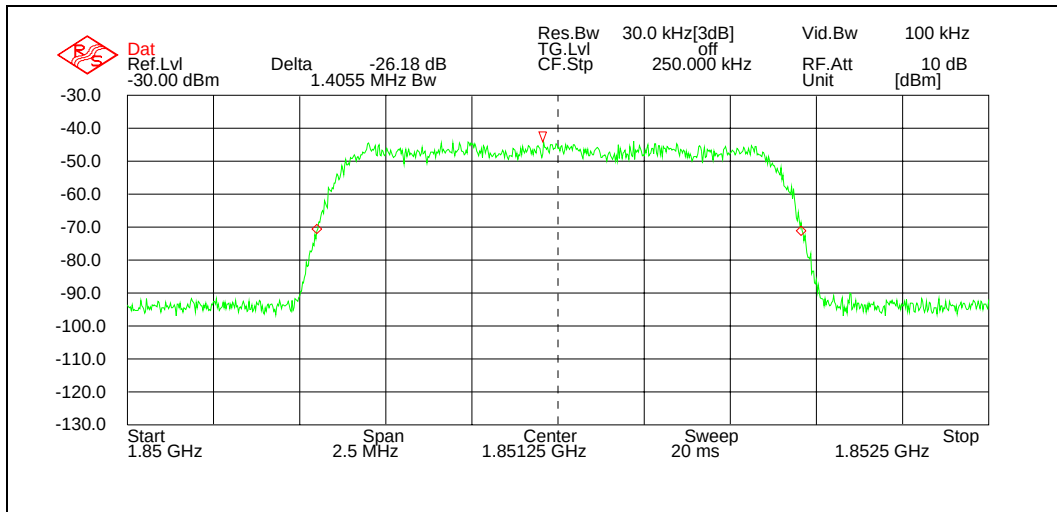


Figure 19: Occupied Bandwidth - Input Uplink CDMA Low Channel

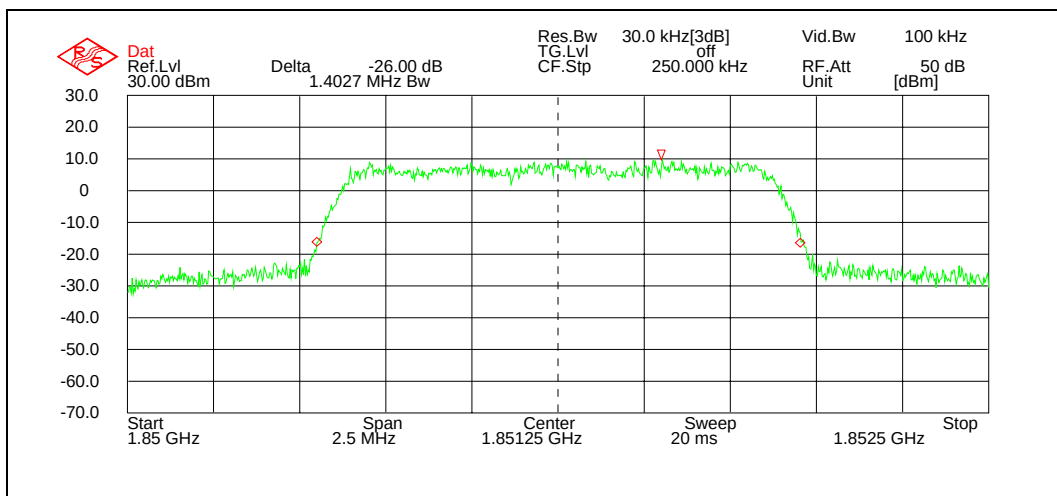


Figure 20: Occupied Bandwidth - Output Uplink CDMA Low Channel

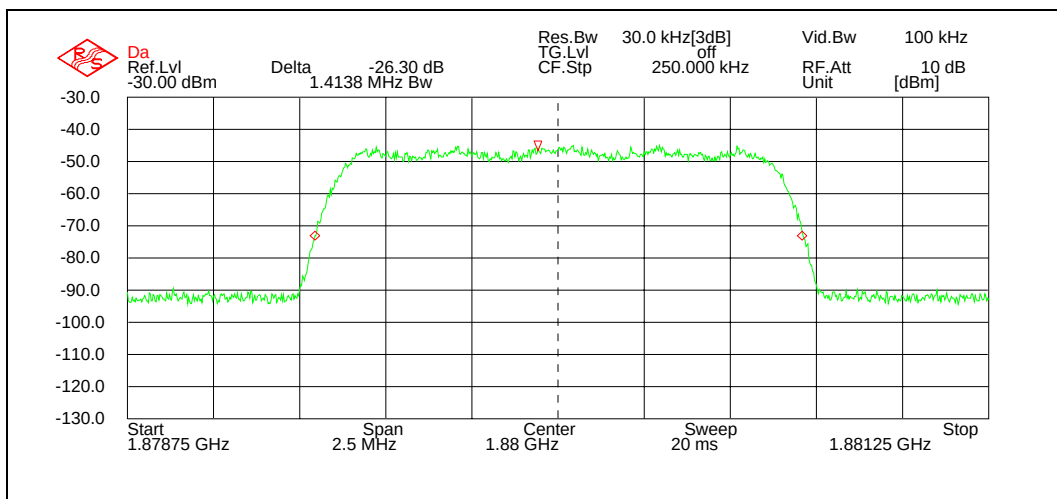
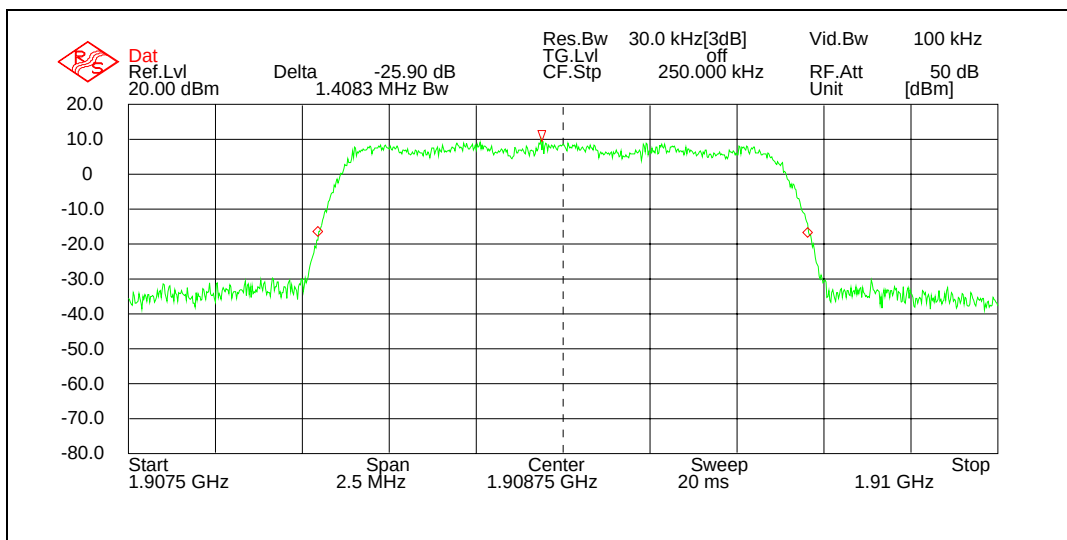
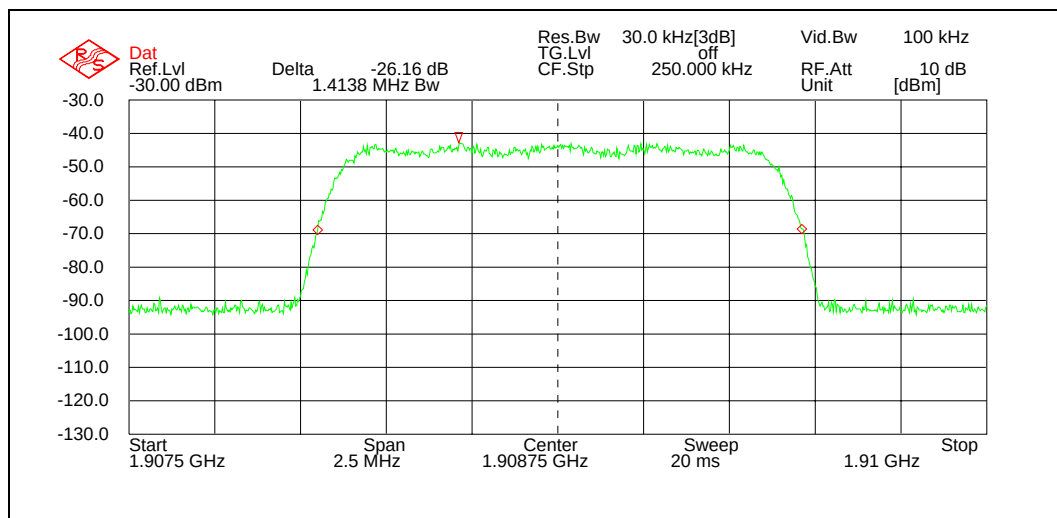
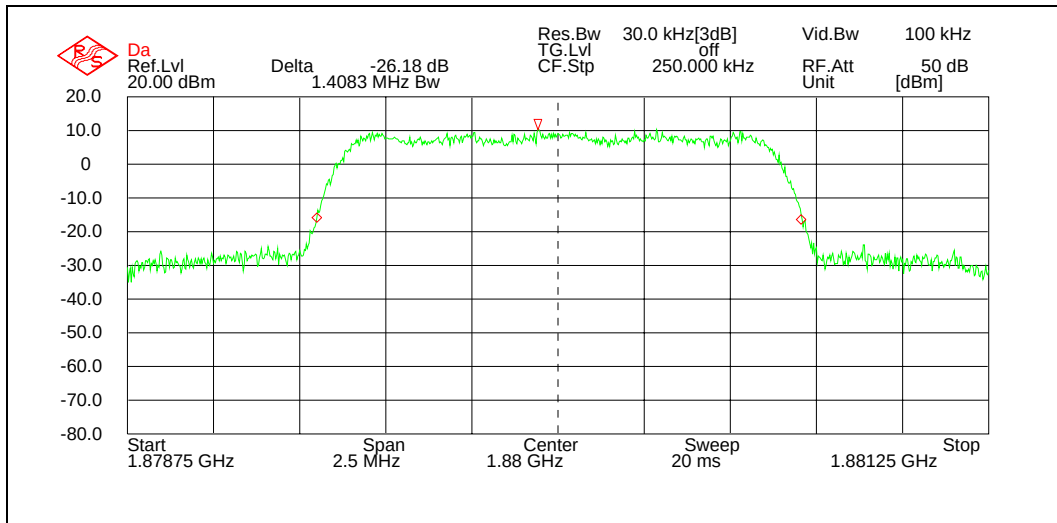


Figure 21: Occupied Bandwidth - Input Uplink CDMA Mid Channel



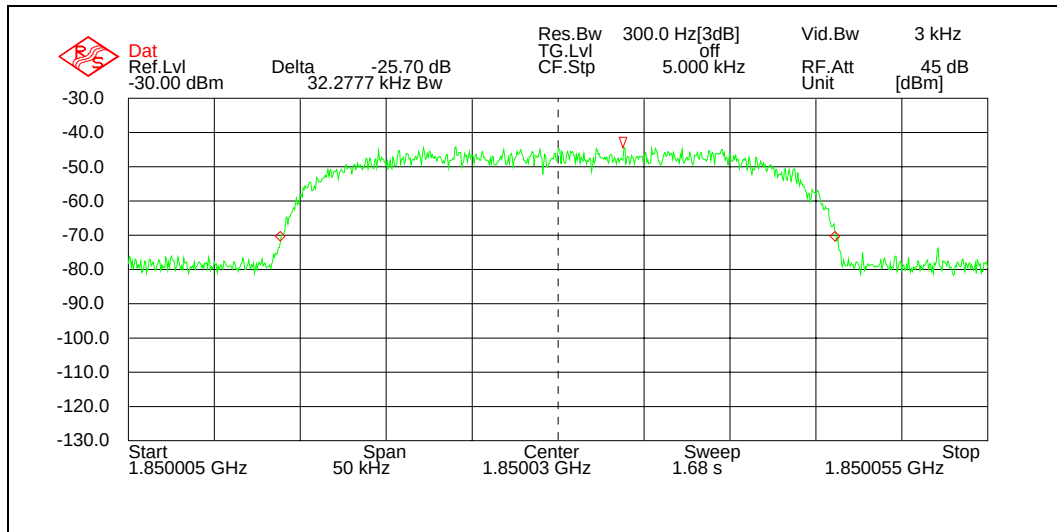


Figure 25: Occupied Bandwidth - Input Uplink TDMA Low Channel

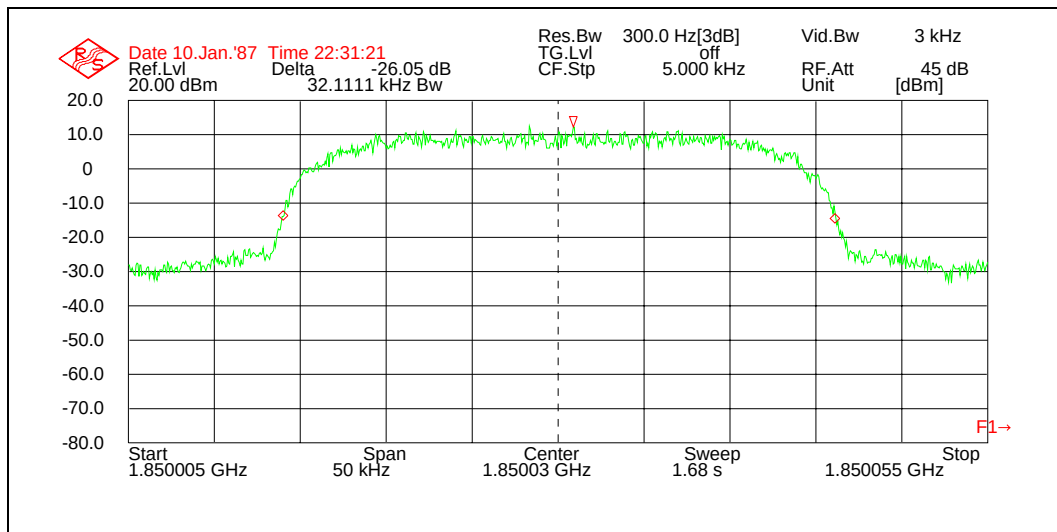


Figure 26: Occupied Bandwidth - Output Uplink TDMA Low Channel

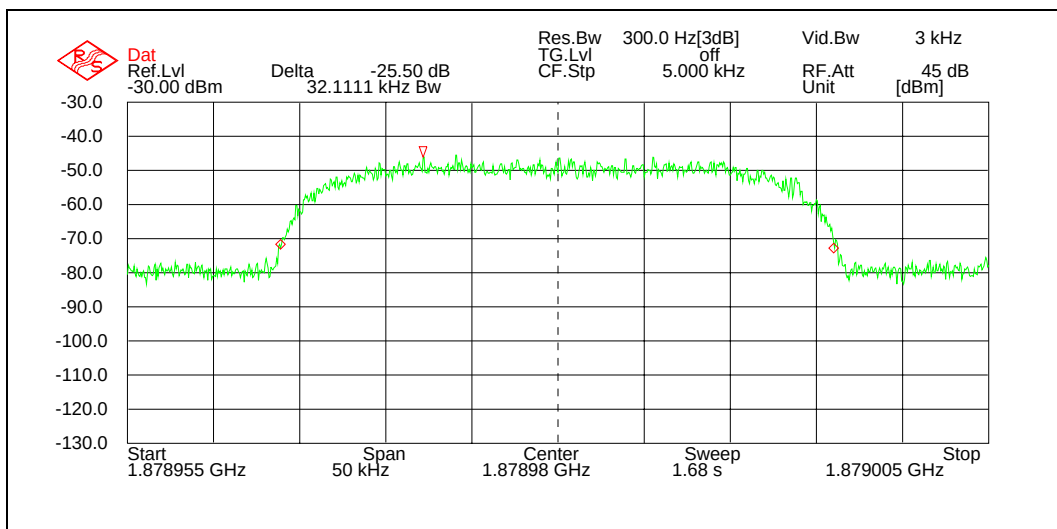


Figure 27: Occupied Bandwidth - Input Uplink TDMA Mid Channel

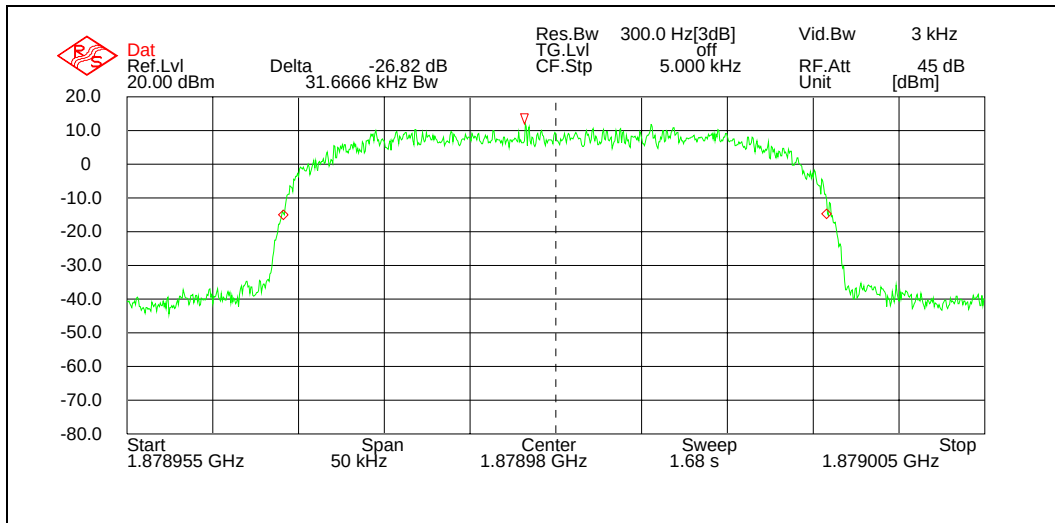


Figure 28: Occupied Bandwidth - Output Uplink TDMA Mid Channel

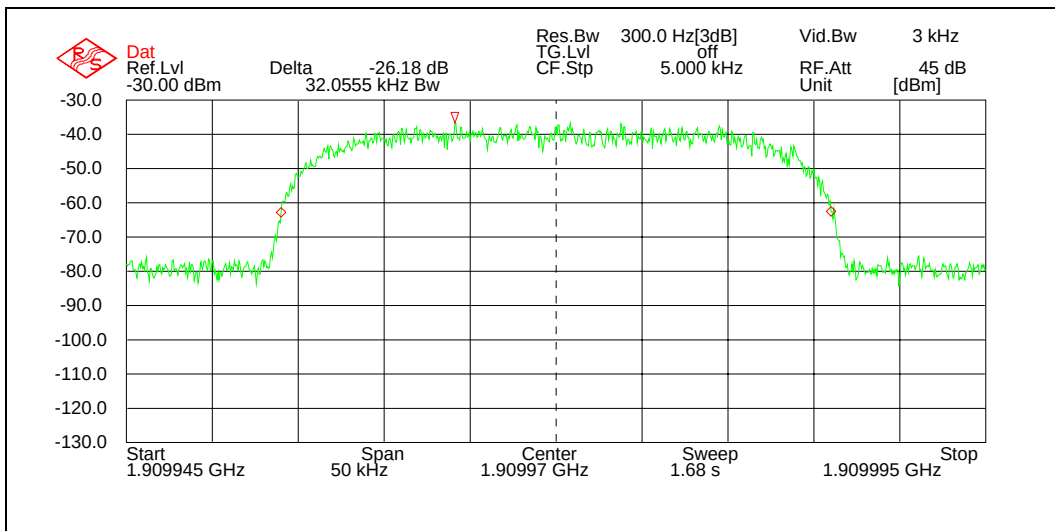


Figure 29: Occupied Bandwidth - Input Uplink TDMA High Channel

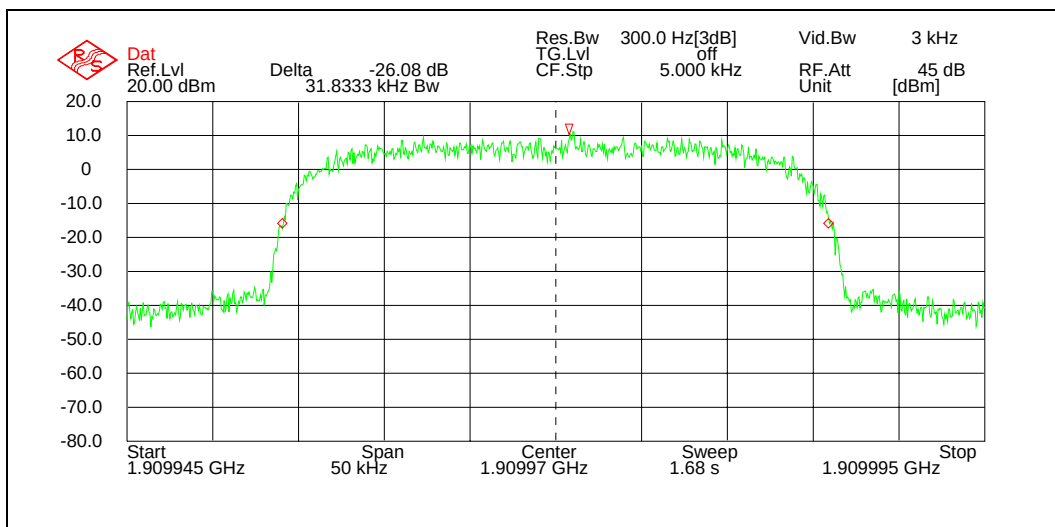


Figure 30: Occupied Bandwidth - Output Uplink TDMA High Channel

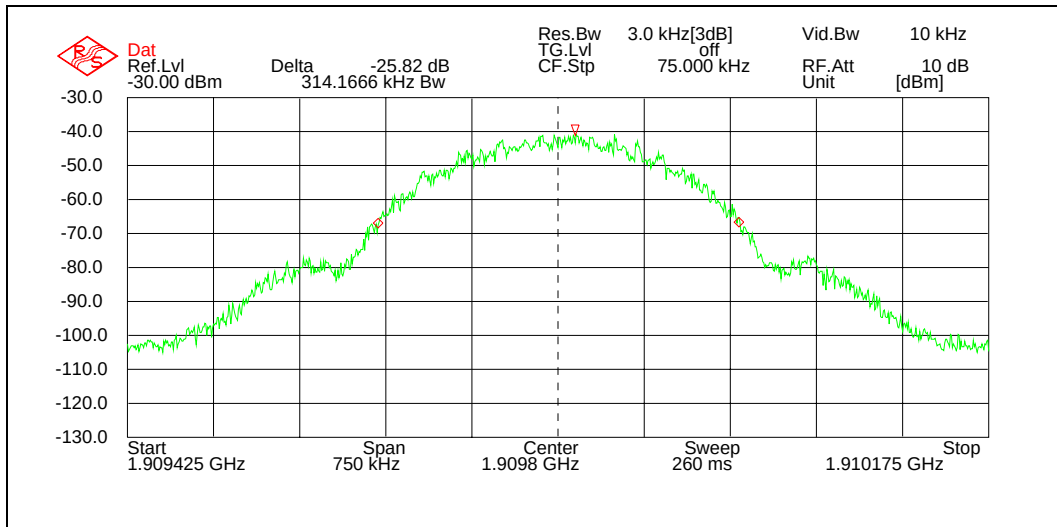


Figure 31: Occupied Bandwidth - Input Uplink GSM Low Channel

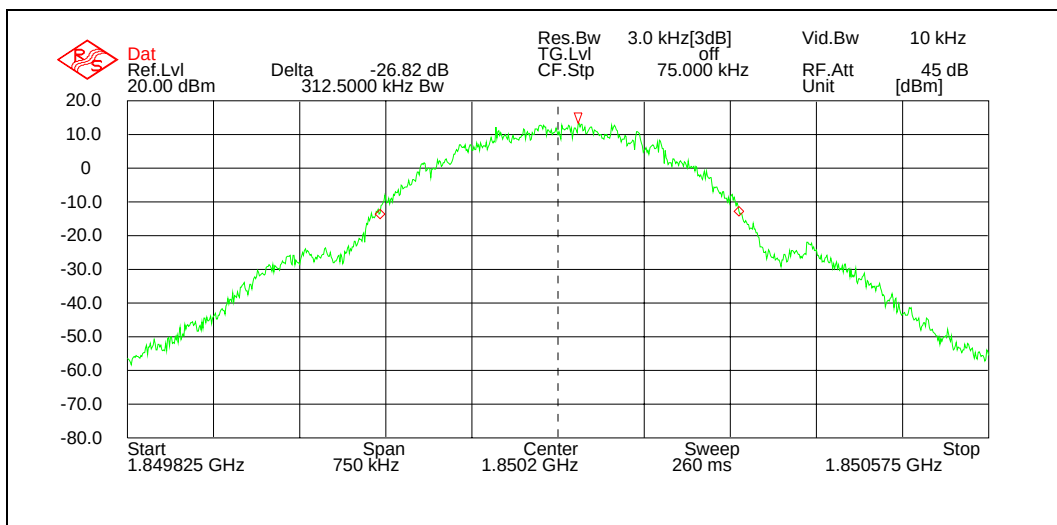


Figure 32: Occupied Bandwidth - Output Uplink GSM Low Channel

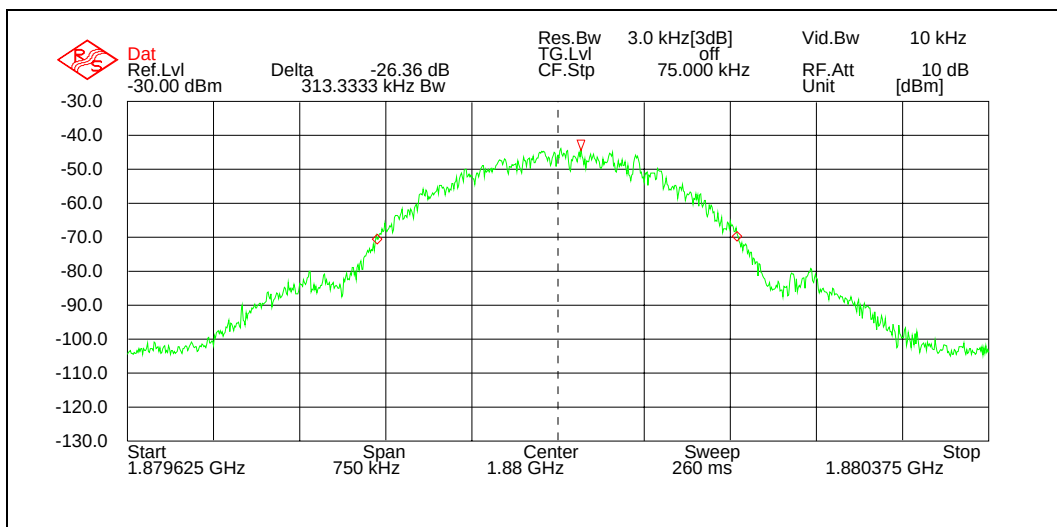
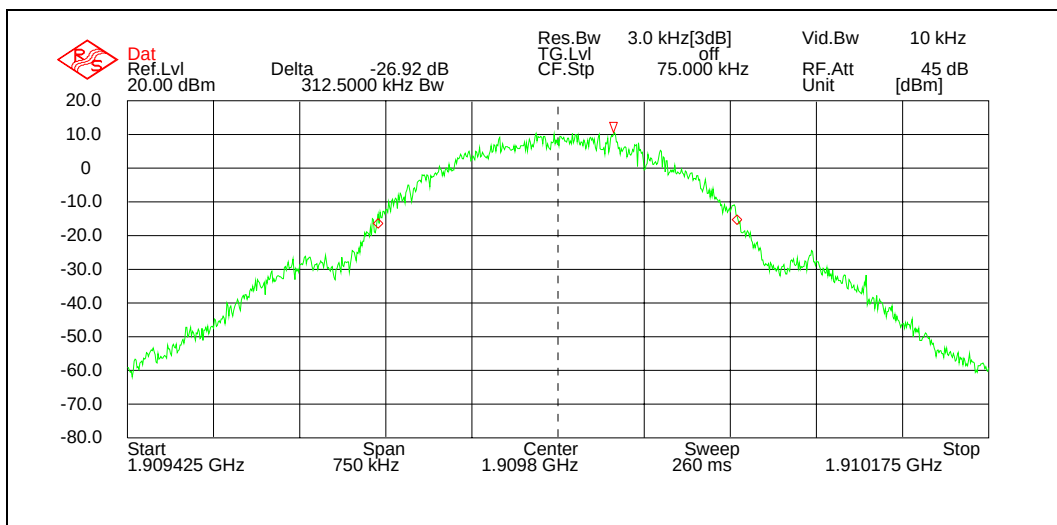
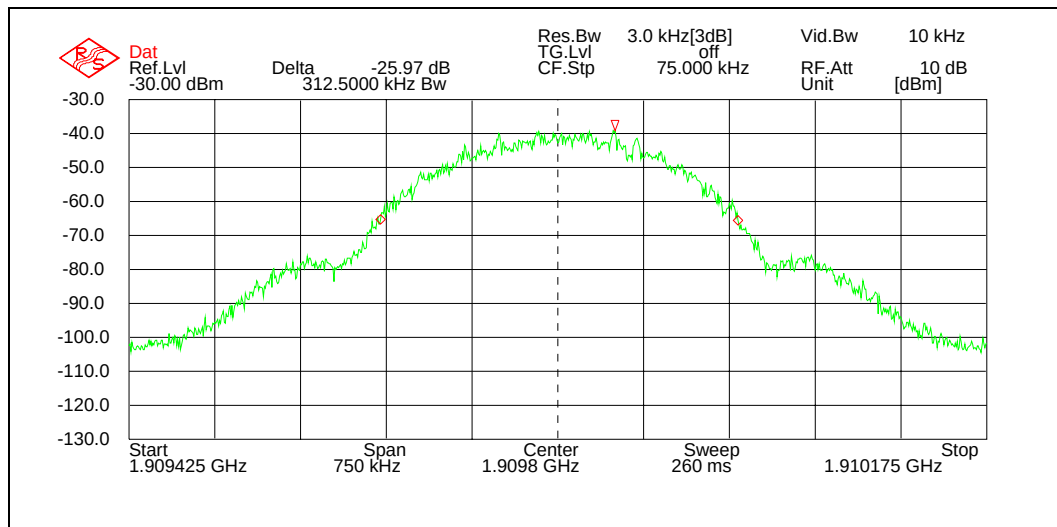
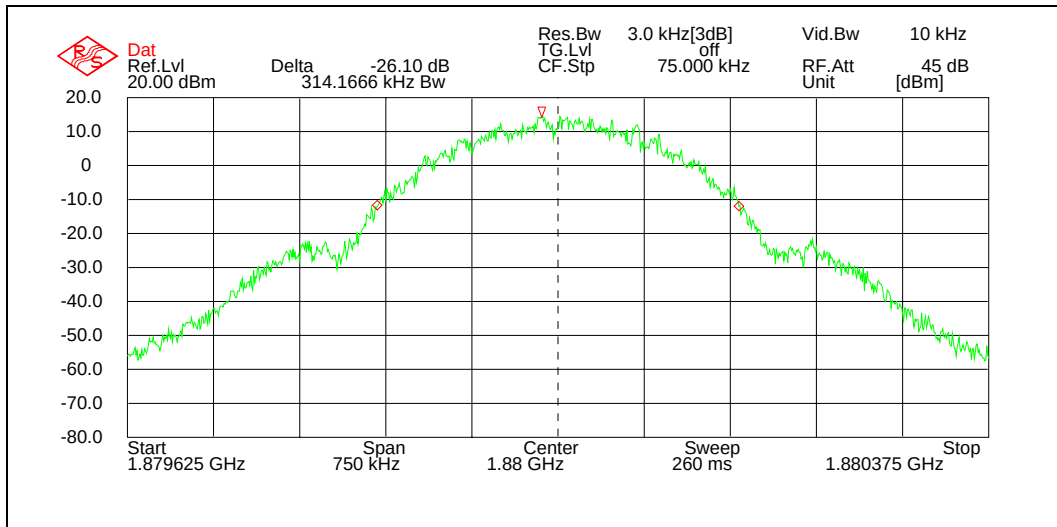


Figure 33: Occupied Bandwidth - Input Uplink GSM Mid Channel



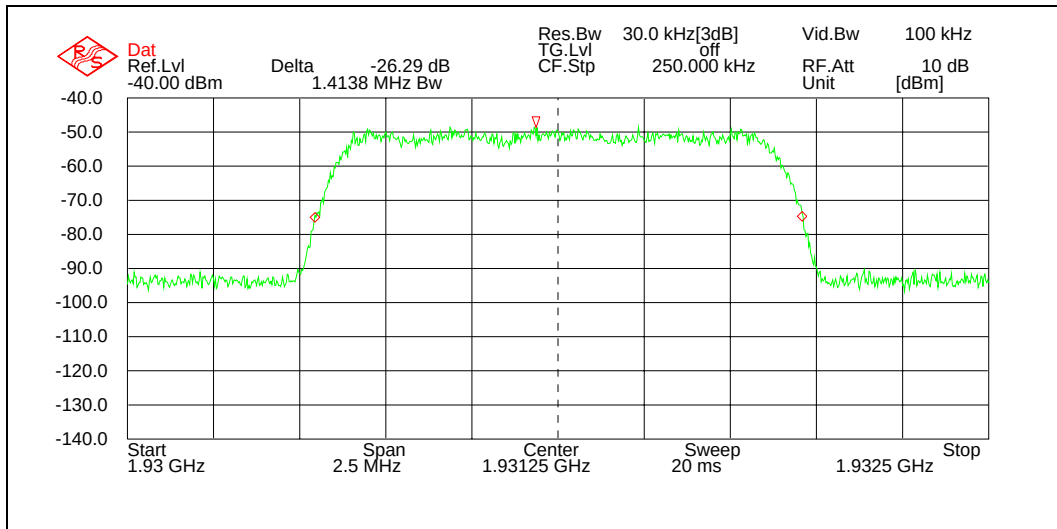


Figure 37: Occupied Bandwidth - Input Downlink CDMA Low Channel

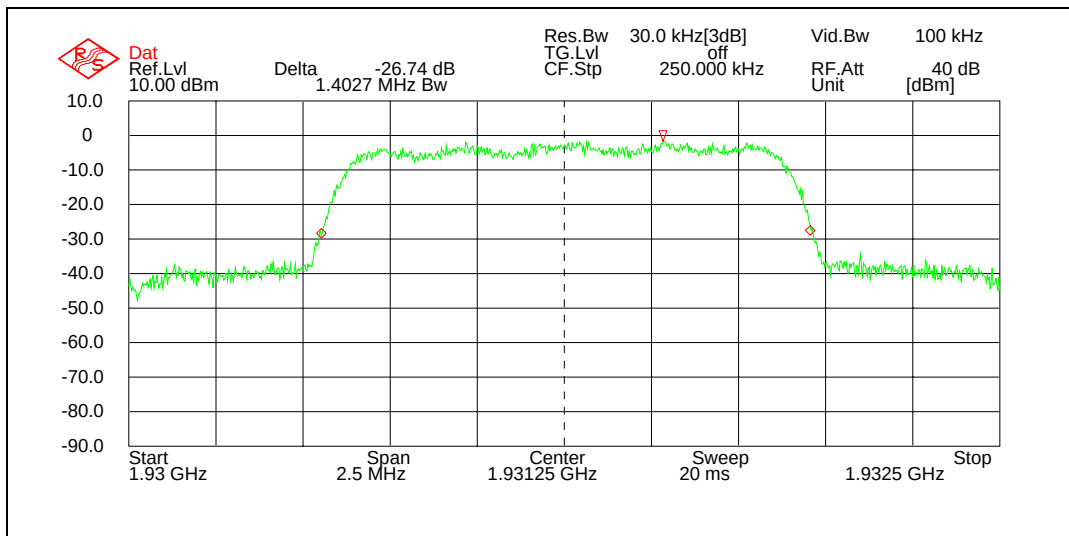


Figure 38: Occupied Bandwidth - Output Downlink CDMA Low Channel

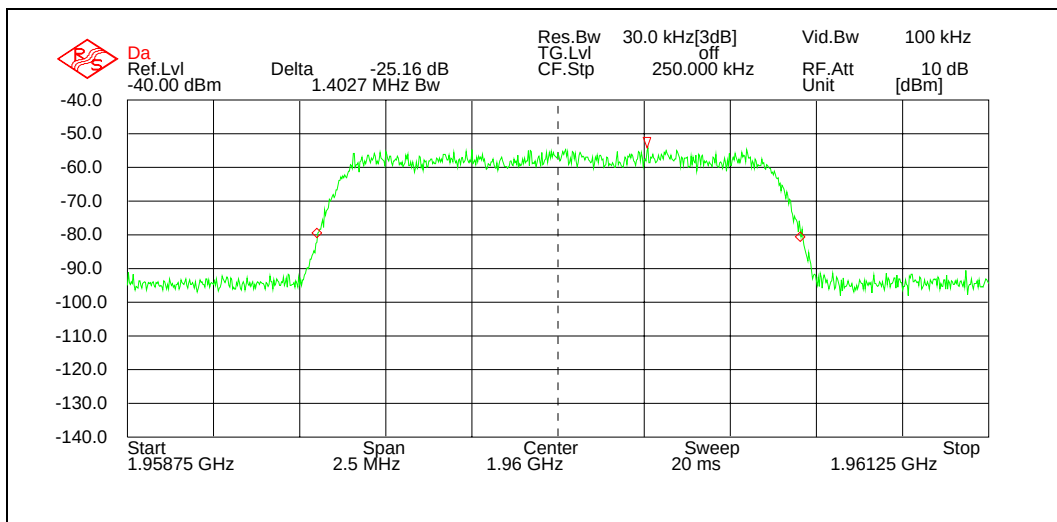


Figure 39: Occupied Bandwidth - Input Downlink CDMA Mid Channel

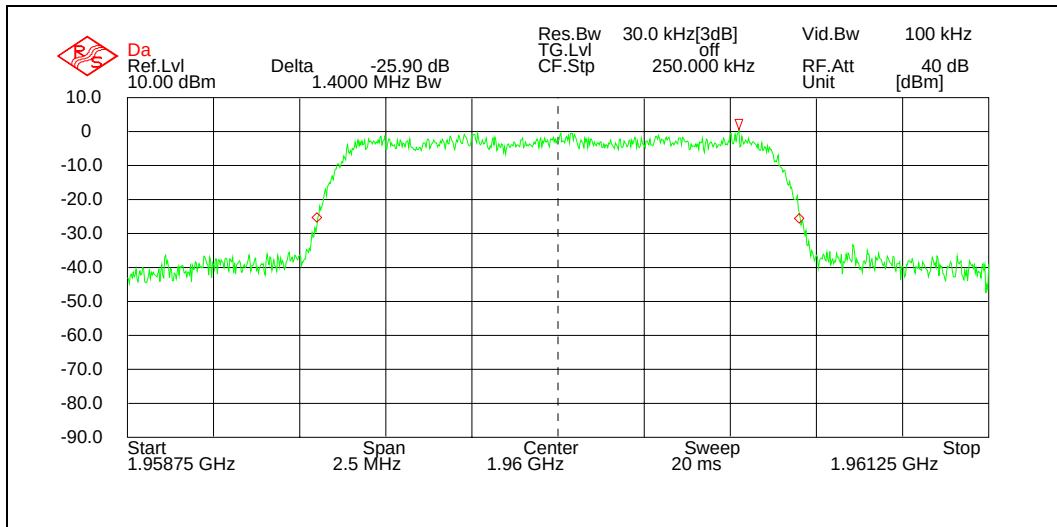


Figure 40: Occupied Bandwidth - Output Downlink CDMA Mid Channel

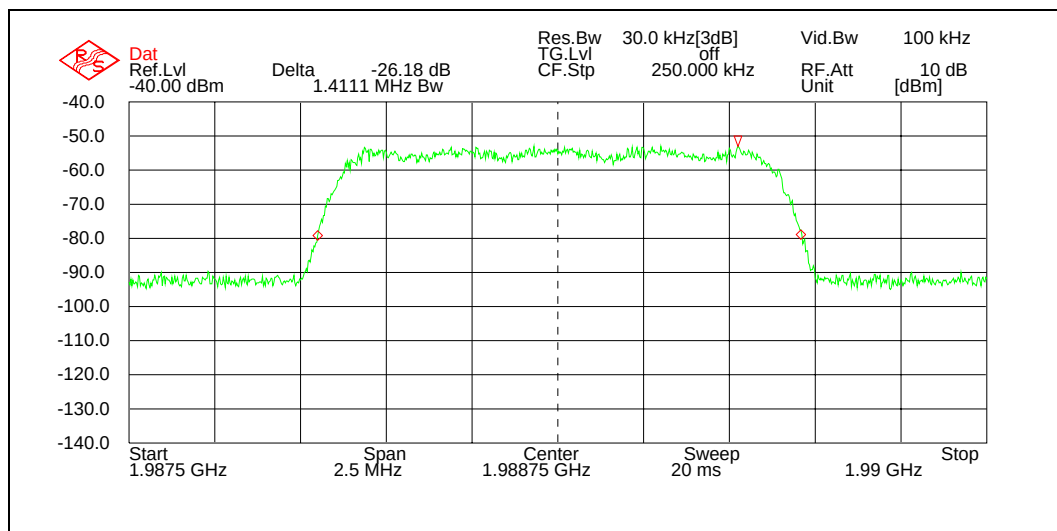


Figure 41: Occupied Bandwidth - Input Downlink CDMA High Channel

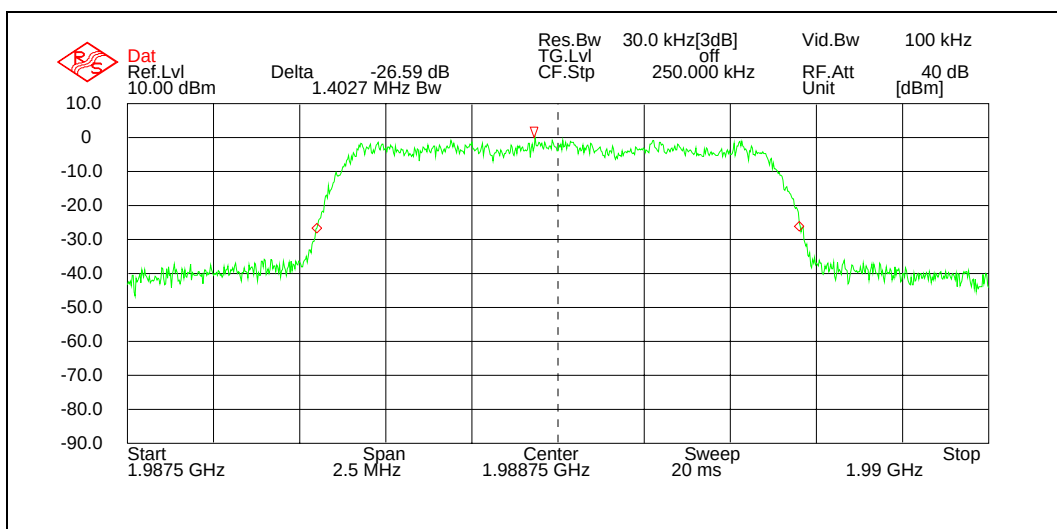


Figure 42: Occupied Bandwidth - Output Downlink CDMA High Channel

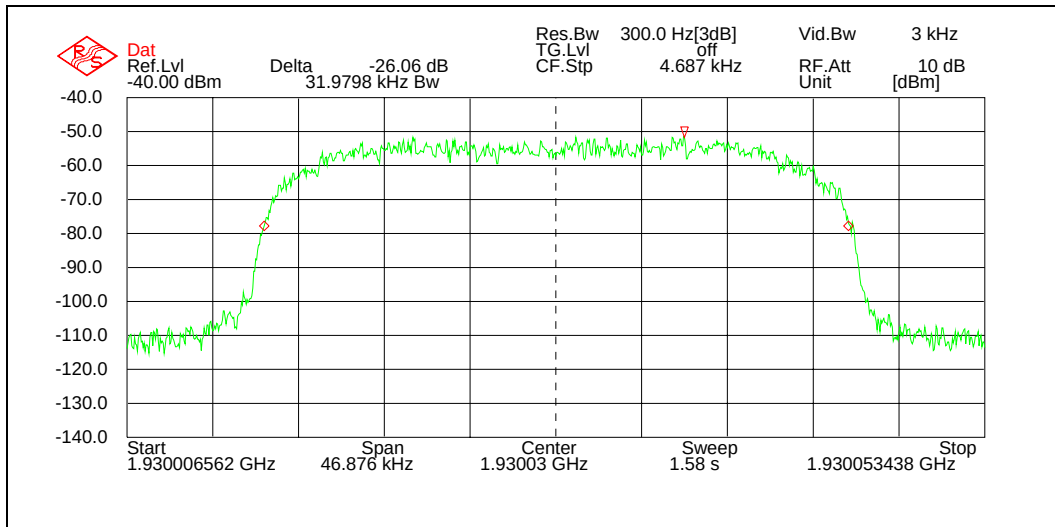


Figure 43: Occupied Bandwidth - Input Downlink TDMA Low Channel

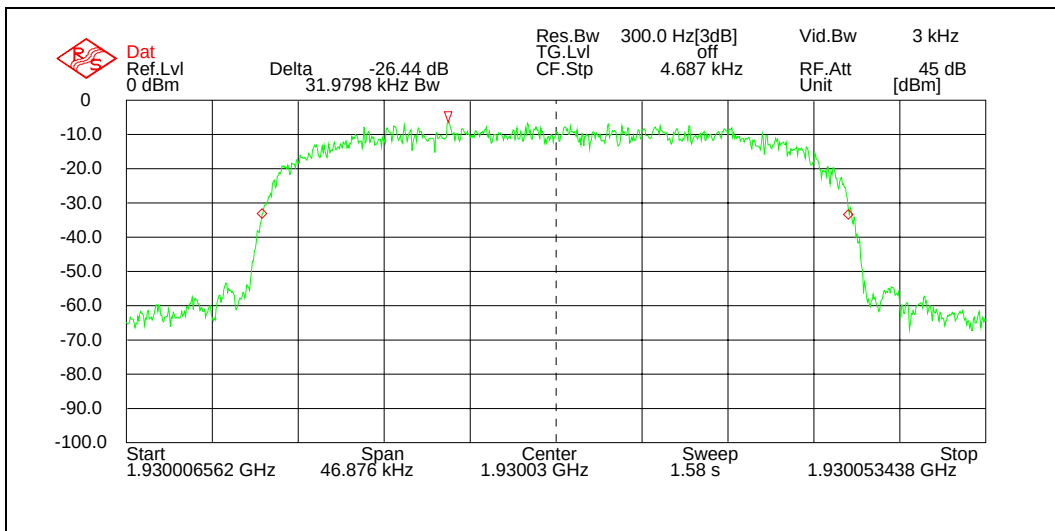


Figure 44: Occupied Bandwidth - Output Downlink TDMA Low Channel

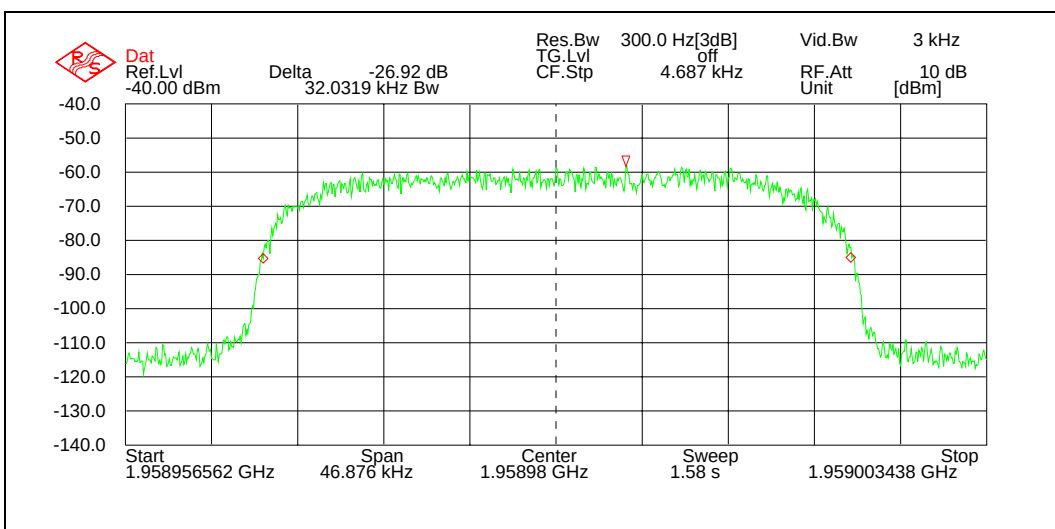


Figure 45: Occupied Bandwidth - Input Downlink TDMA Mid Channel

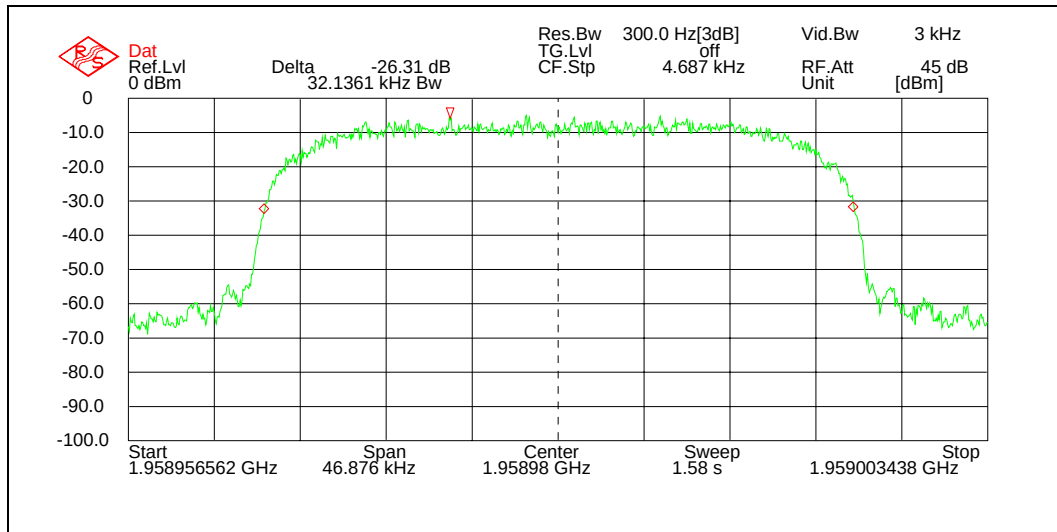


Figure 46: Occupied Bandwidth - Output Downlink TDMA Mid Channel

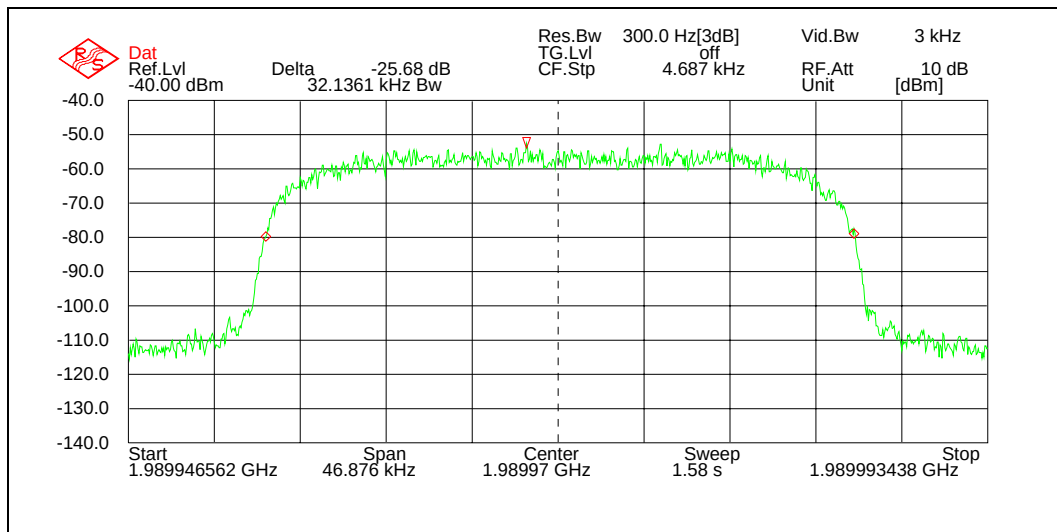


Figure 47: Occupied Bandwidth - Input Downlink TDMA High Channel

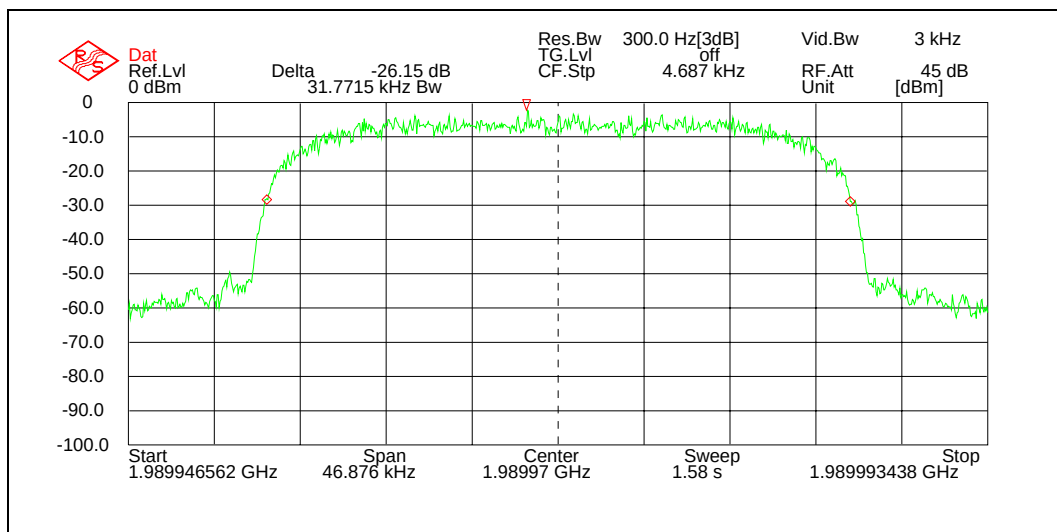


Figure 48: Occupied Bandwidth - Output Downlink TDMA High Channel

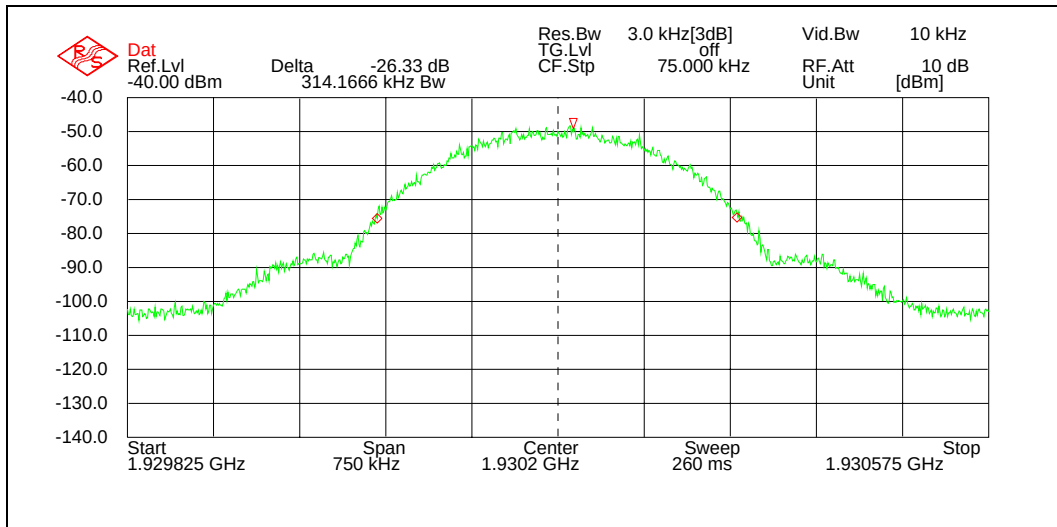


Figure 49: Occupied Bandwidth - Input Downlink GSM Low Channel

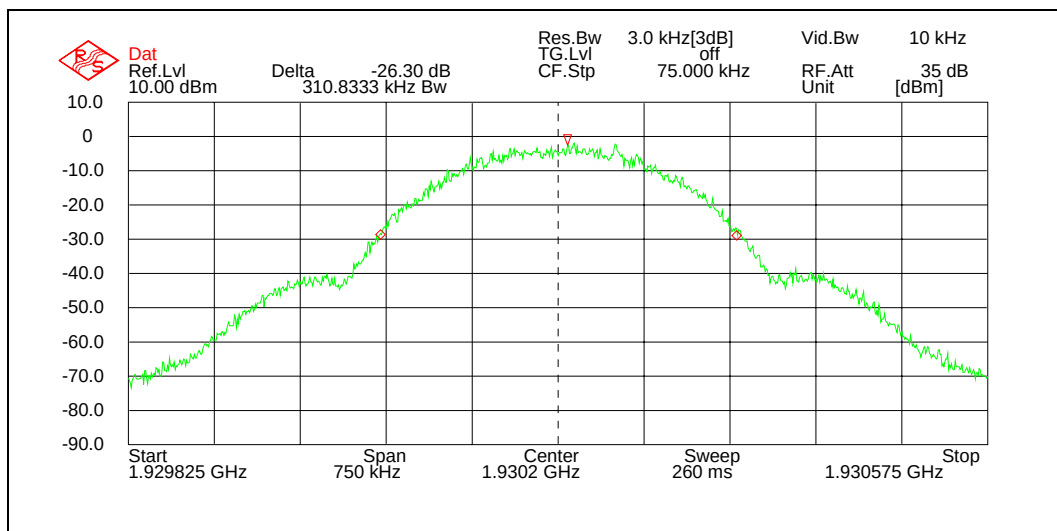


Figure 50: Occupied Bandwidth - Output Downlink GSM Low Channel

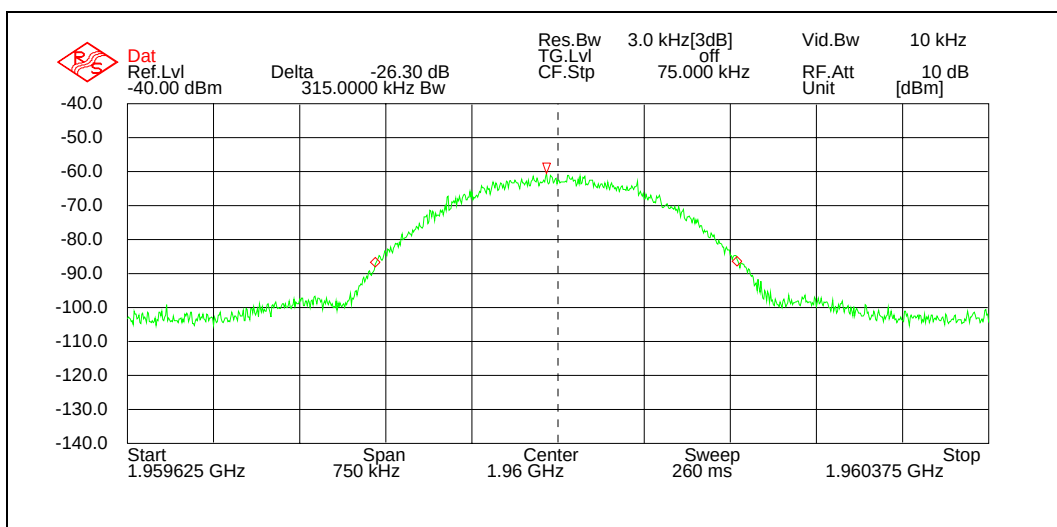


Figure 51: Occupied Bandwidth - Input Downlink GSM Mid Channel

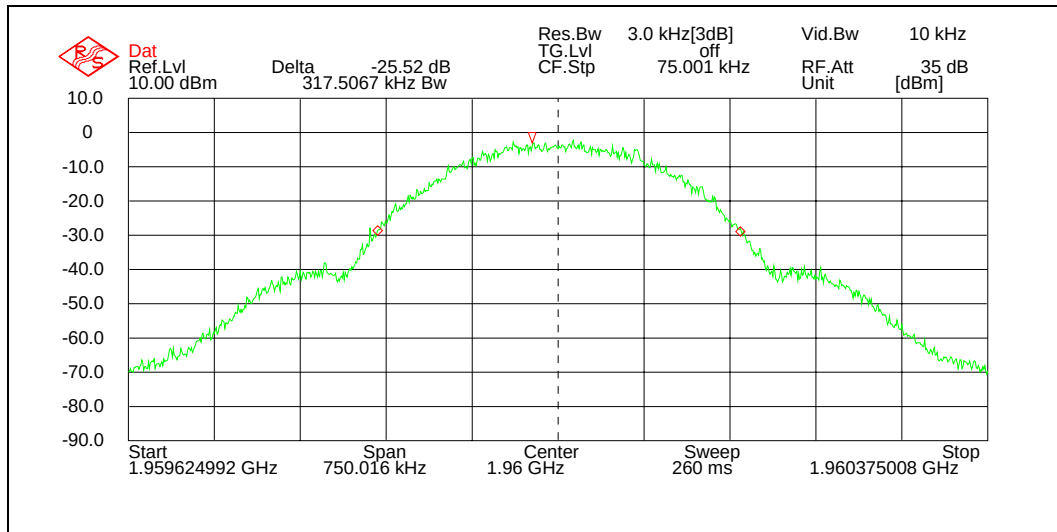


Figure 52: Occupied Bandwidth - Output Downlink GSM Mid Channel

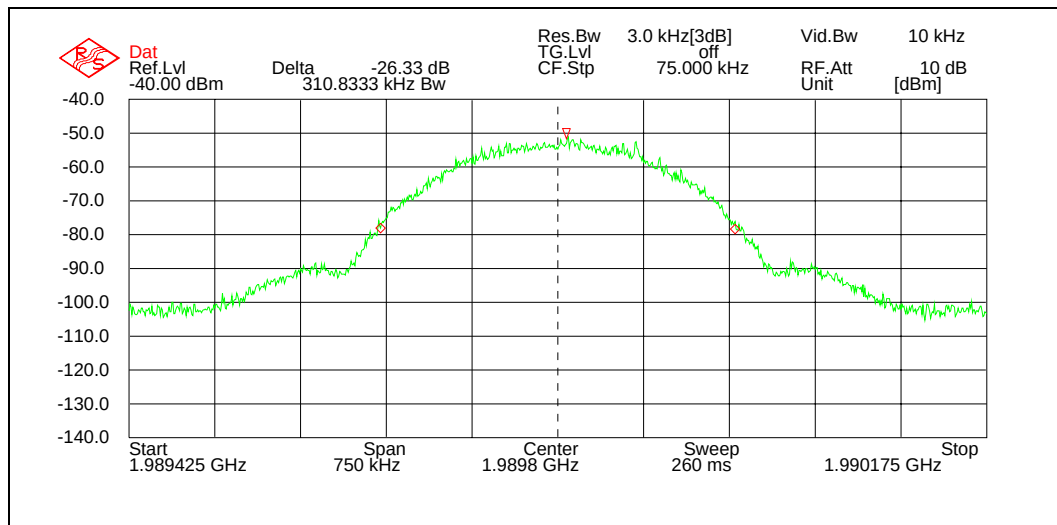


Figure 53: Occupied Bandwidth - Input Downlink GSM High Channel

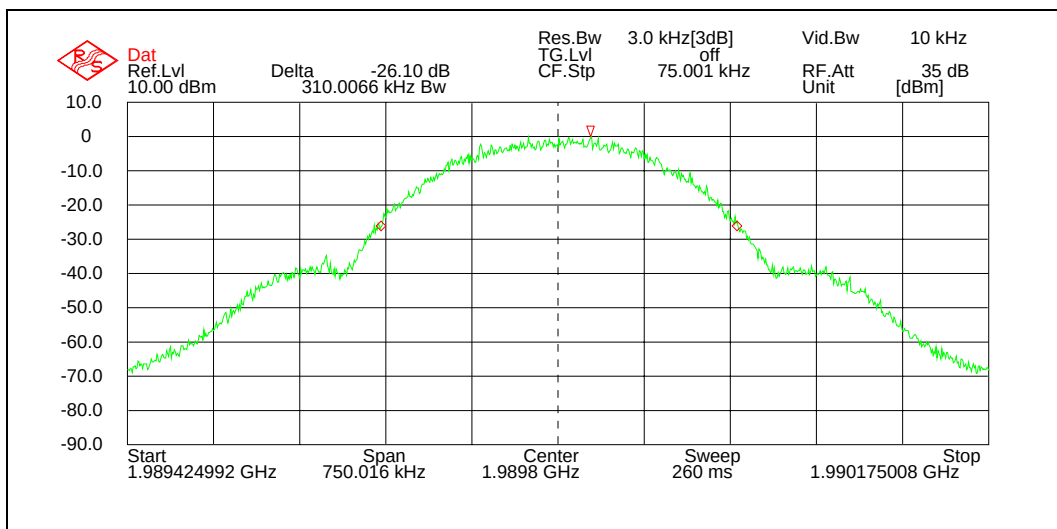


Figure 54: Occupied Bandwidth - Output Downlink GSM High Channel

3.0 Spurious Emissions at Antenna Terminals

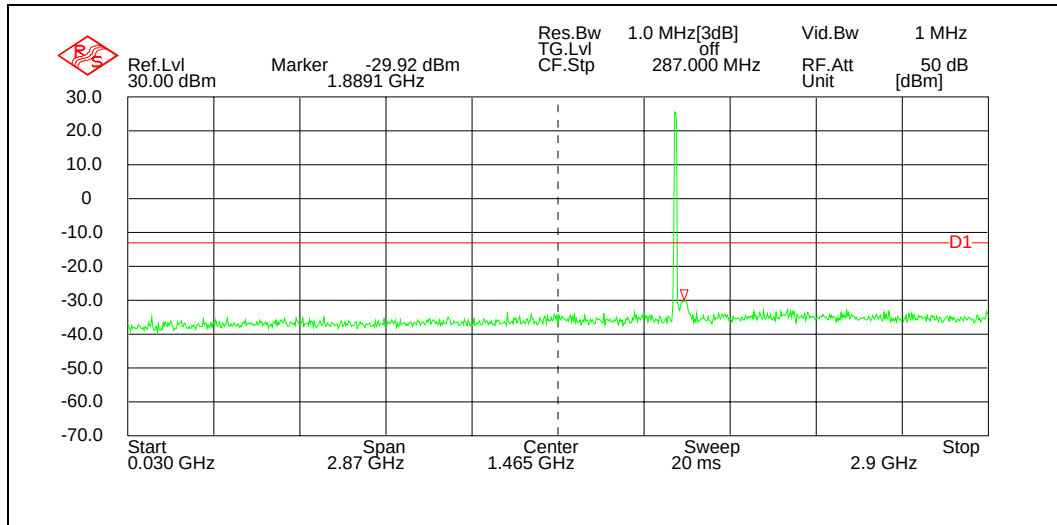


Figure 55: Spurious Emissions - Uplink CDMA Low Channel – 30 MHz to 2.9 GHz

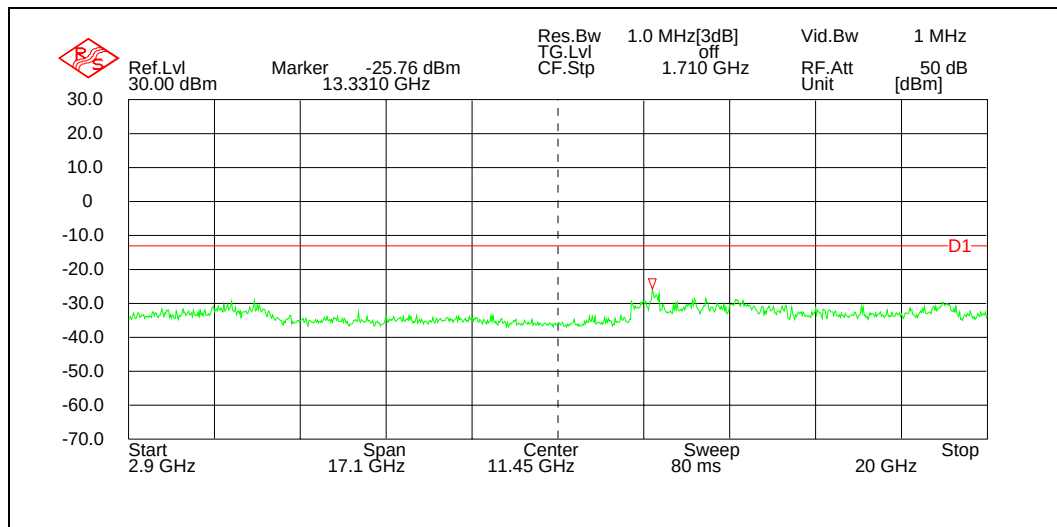


Figure 56: Spurious Emissions - Uplink CDMA Low Channel – 2.9 to 20 GHz

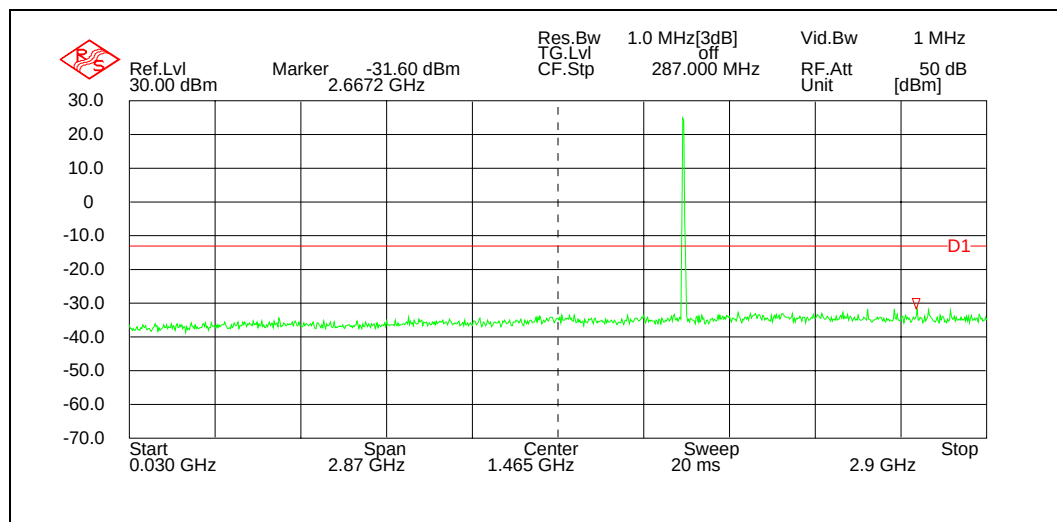
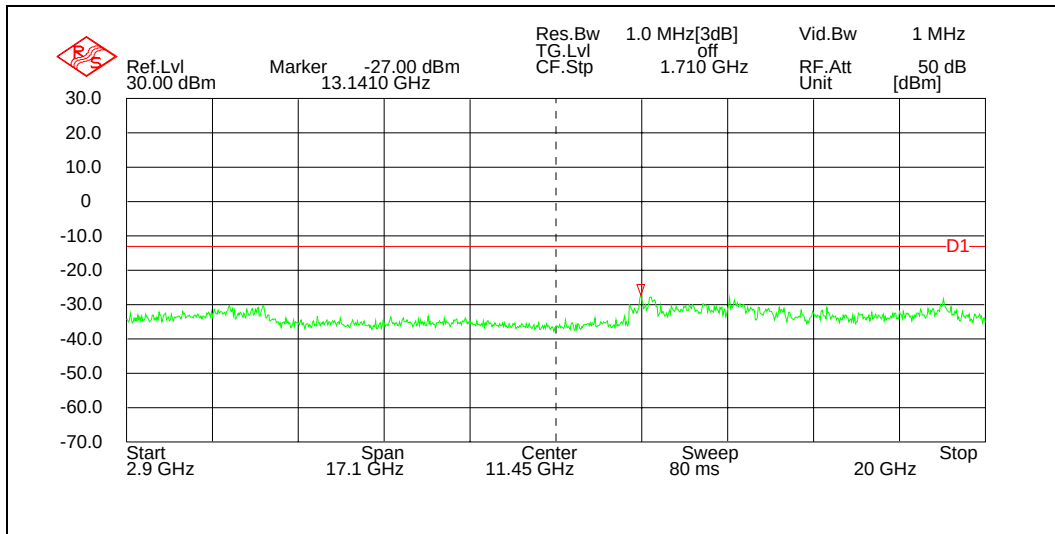
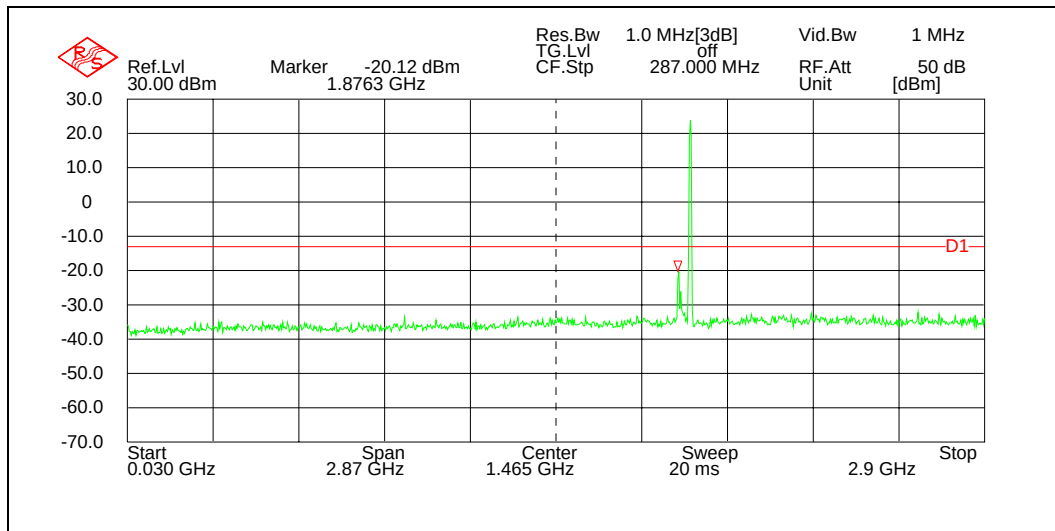
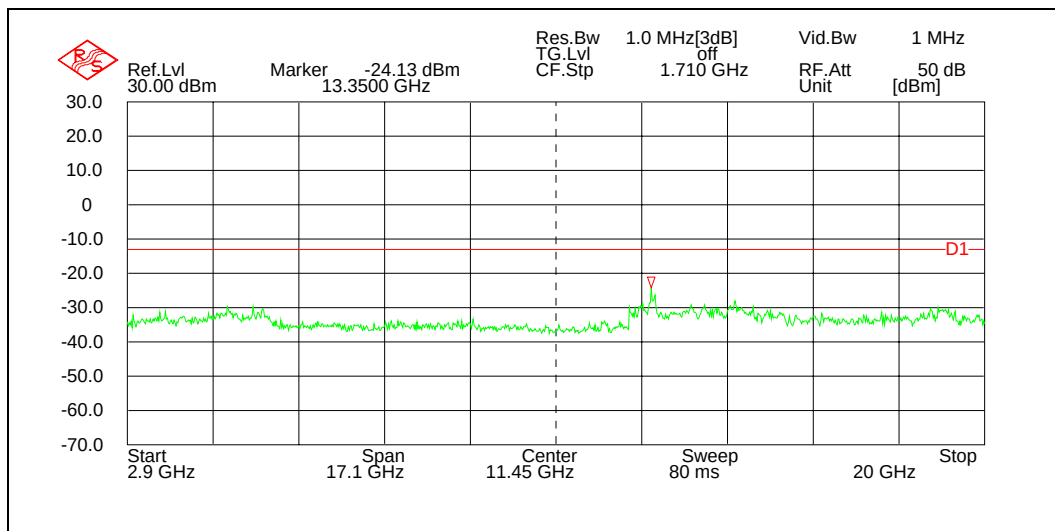
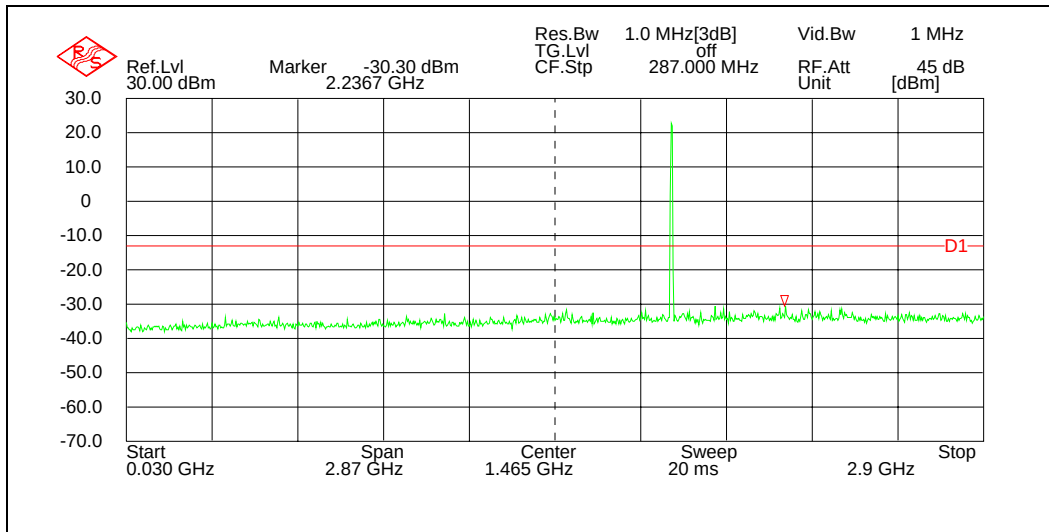
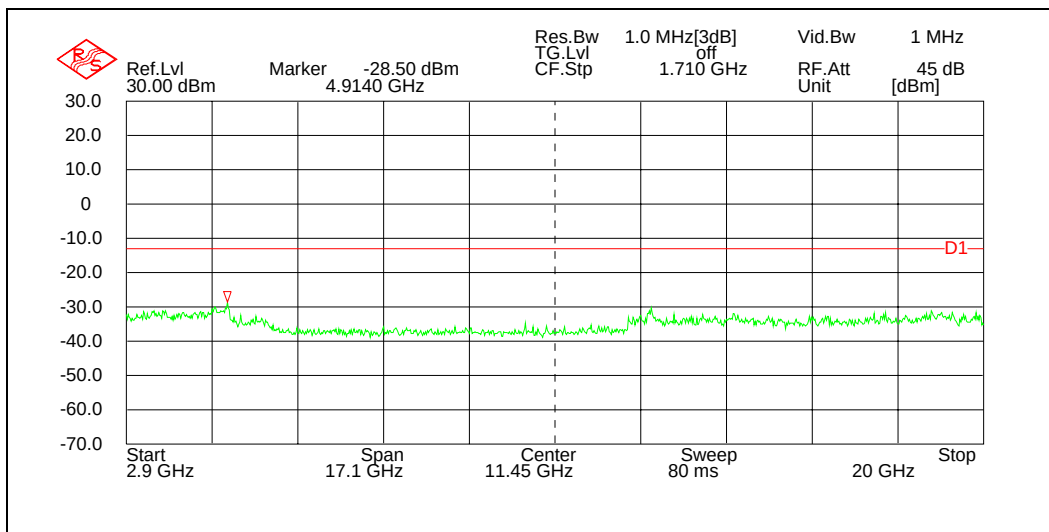
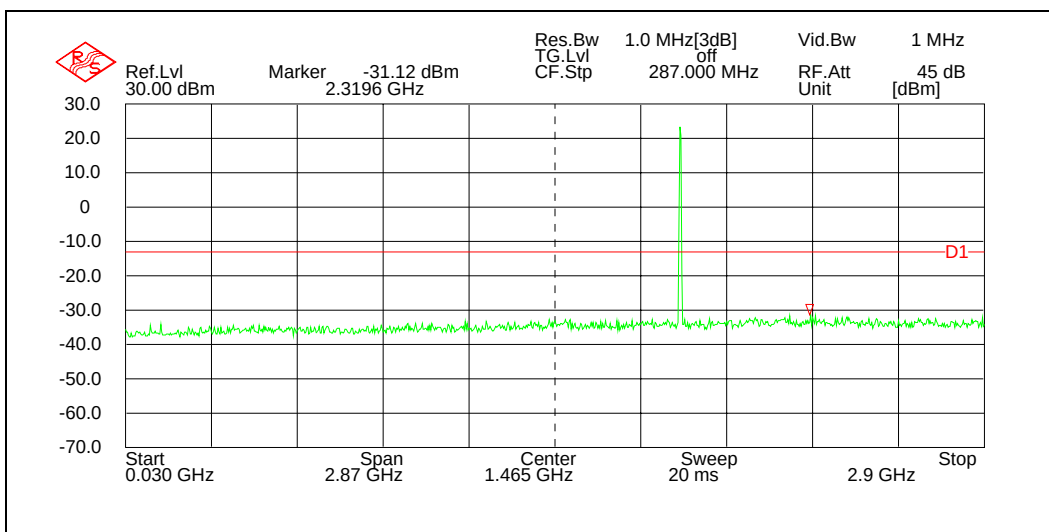


Figure 57: Spurious Emissions - Uplink CDMA Mid Channel – 30 MHz to 2.9 GHz

**Figure 58: Spurious Emissions - Uplink CDMA Mid Channel – 2.9 to 20 GHz****Figure 59: Spurious Emissions - Uplink CDMA High Channel – 30 MHz to 2.9 GHz****Figure 60: Spurious Emissions - Uplink CDMA High Channel – 2.9 to 20 GHz**

**Figure 61: Spurious Emissions - Uplink TDMA Low Channel – 30 MHz to 2.9 GHz****Figure 62: Spurious Emissions - Uplink TDMA Low Channel – 2.9 to 20 GHz****Figure 63: Spurious Emissions - Uplink TDMA Mid Channel – 30 MHz to 2.9 GHz**

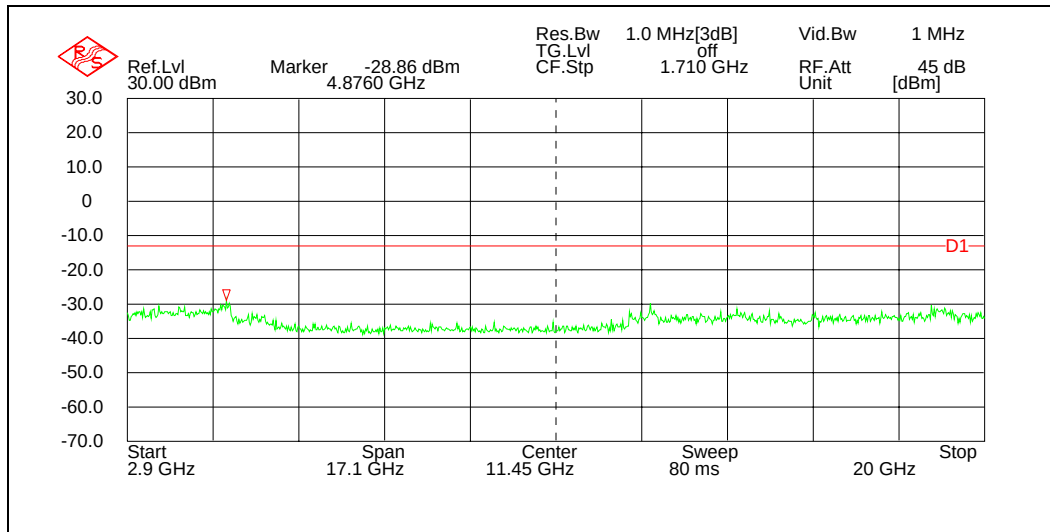


Figure 64: Spurious Emissions - Uplink TDMA Mid Channel – 2.9 to 20 GHz

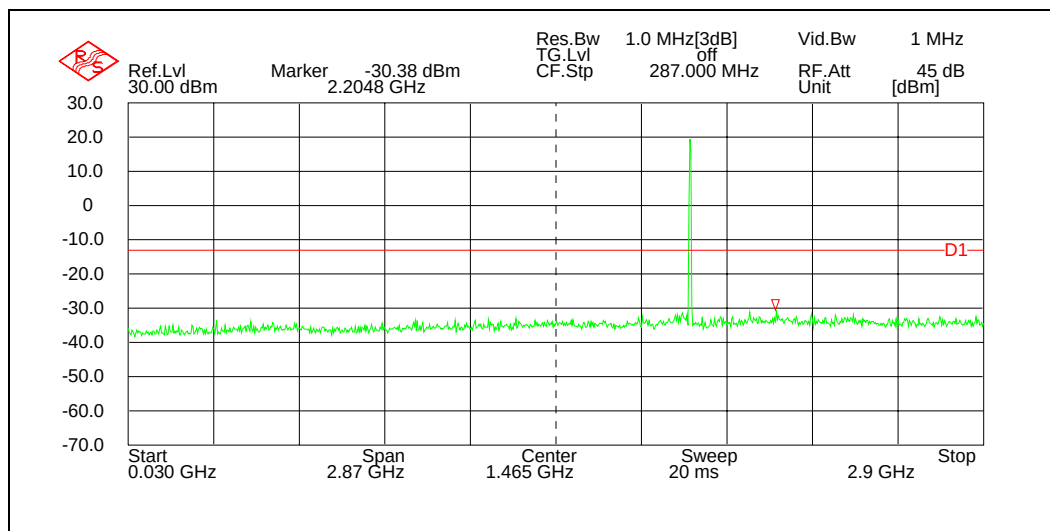


Figure 65: Spurious Emissions - Uplink TDMA High Channel – 30 MHz to 2.9 GHz

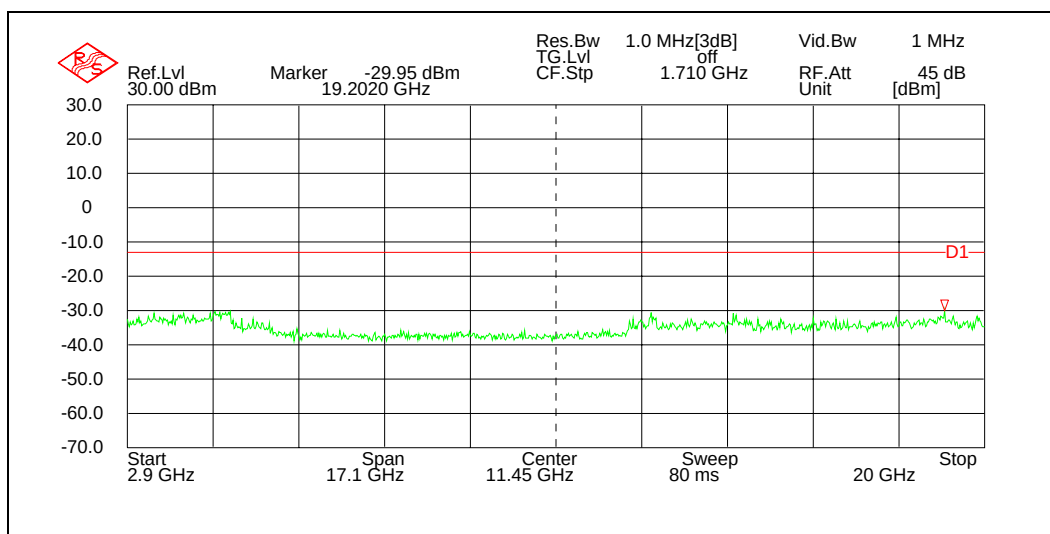


Figure 66: Spurious Emissions - Uplink TDMA High Channel – 2.9 to 20 GHz

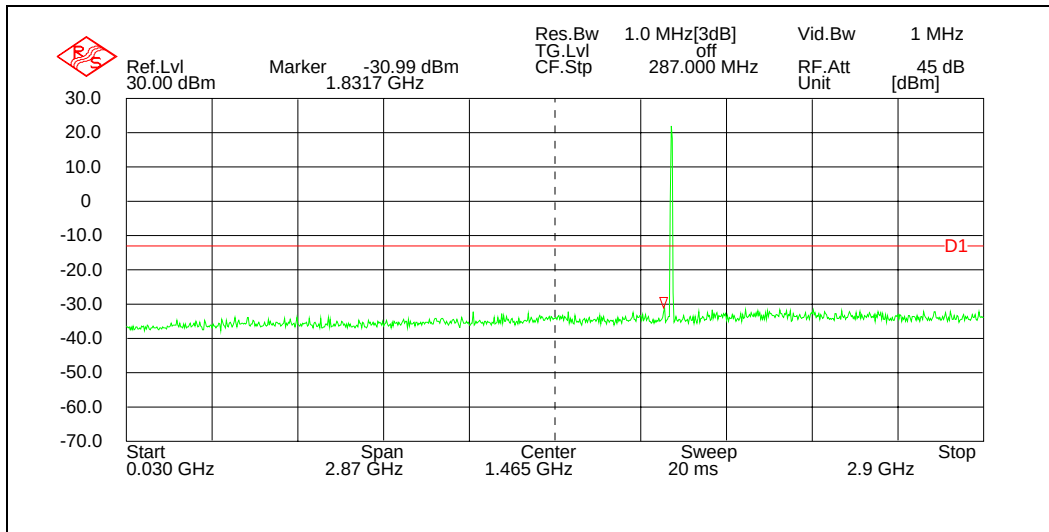


Figure 67: Spurious Emissions - Uplink GSM Low Channel – 30 MHz to 2.9 GHz

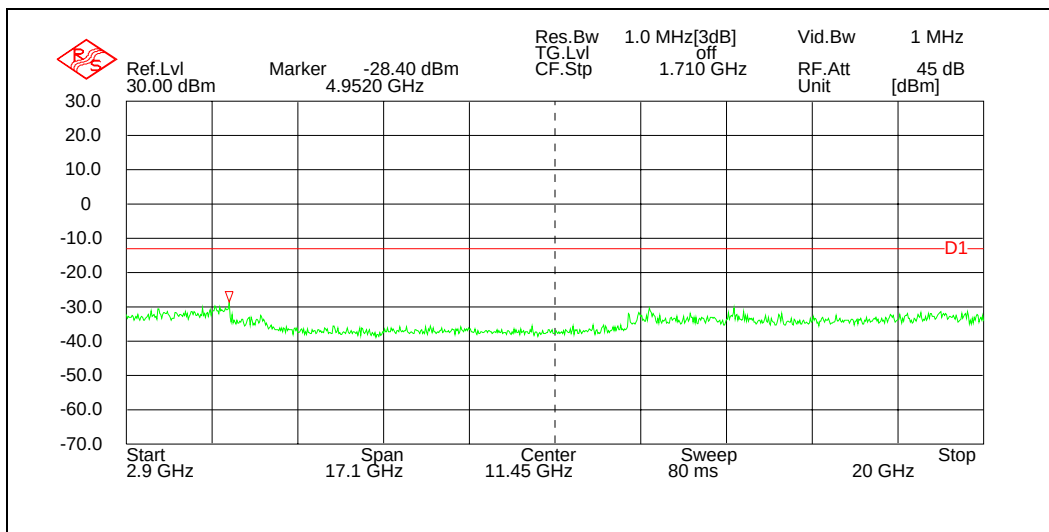


Figure 68: Spurious Emissions - Uplink GSM Low Channel – 2.9 to 20 GHz

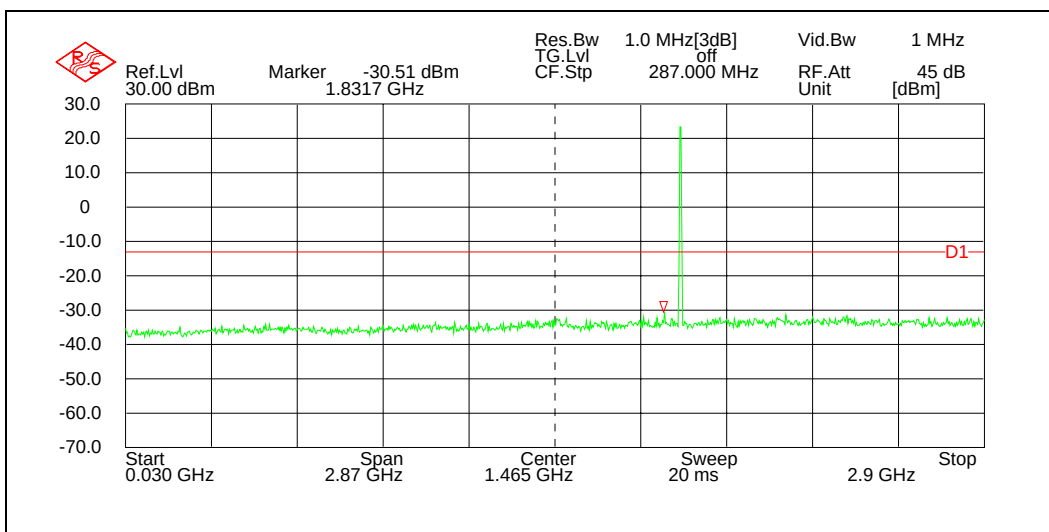


Figure 69: Spurious Emissions - Uplink GSM Mid Channel – 30 MHz to 2.9 GHz

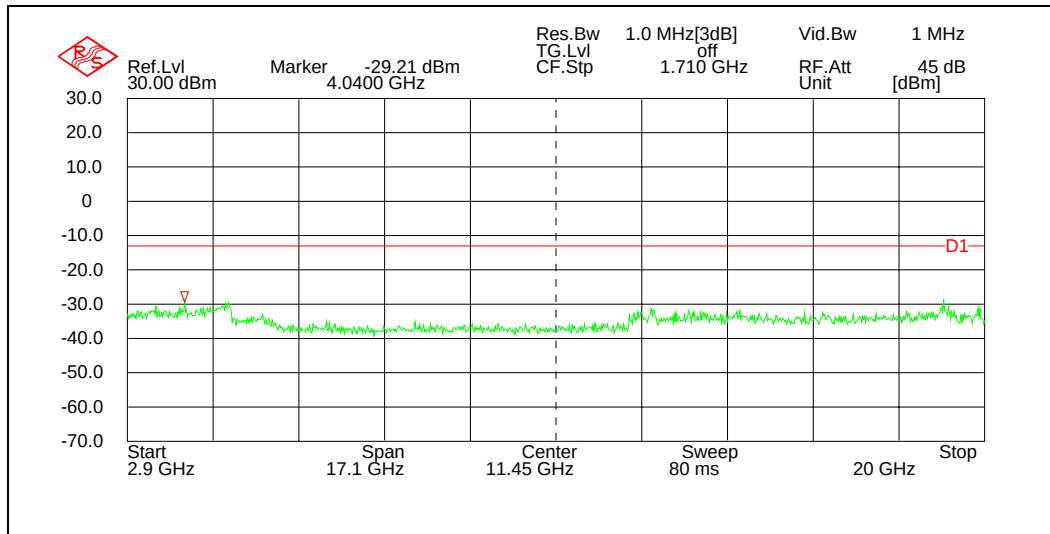


Figure 70: Spurious Emissions - Uplink GSM Mid Channel – 2.9 to 20 GHz

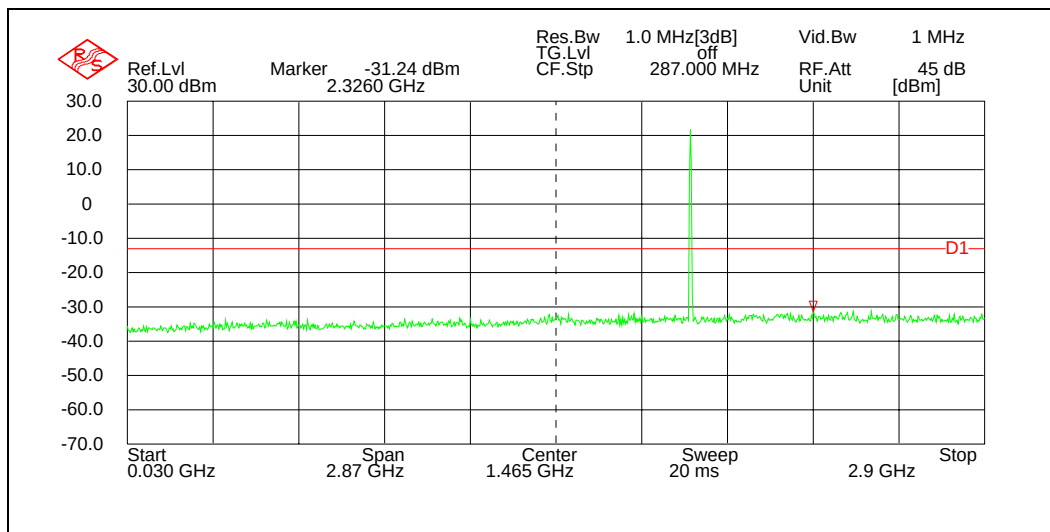


Figure 71: Spurious Emissions - Uplink GSM High Channel – 30 MHz to 2.9 GHz

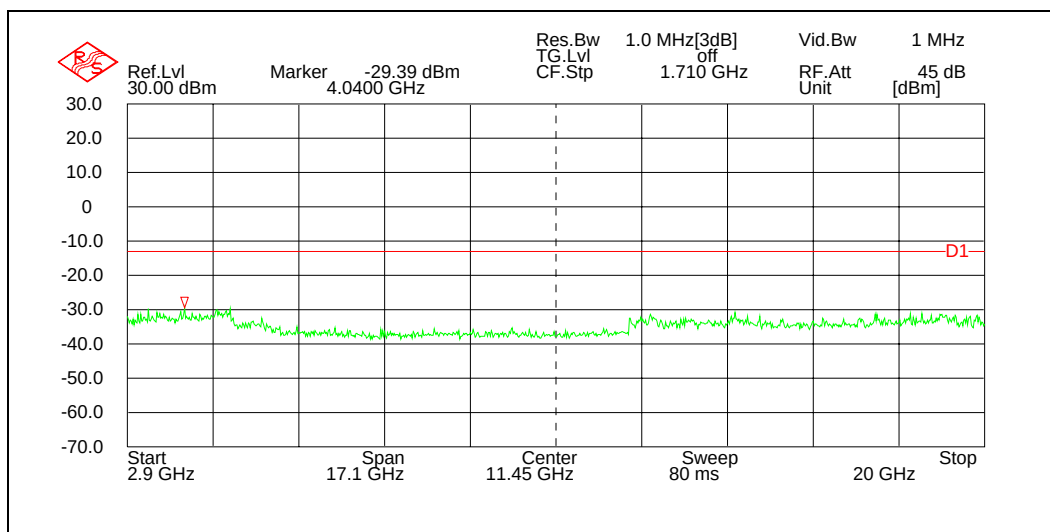


Figure 72: Spurious Emissions - Uplink GSM High Channel – 2.9 to 20 GHz

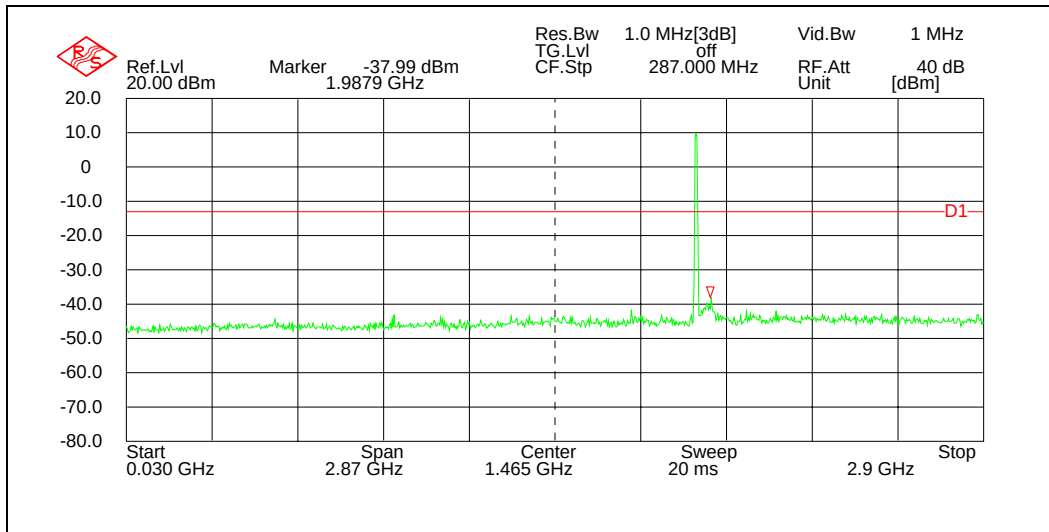


Figure 73: Spurious Emissions - Downlink CDMA Low Channel – 30 MHz to 2.9 GHz

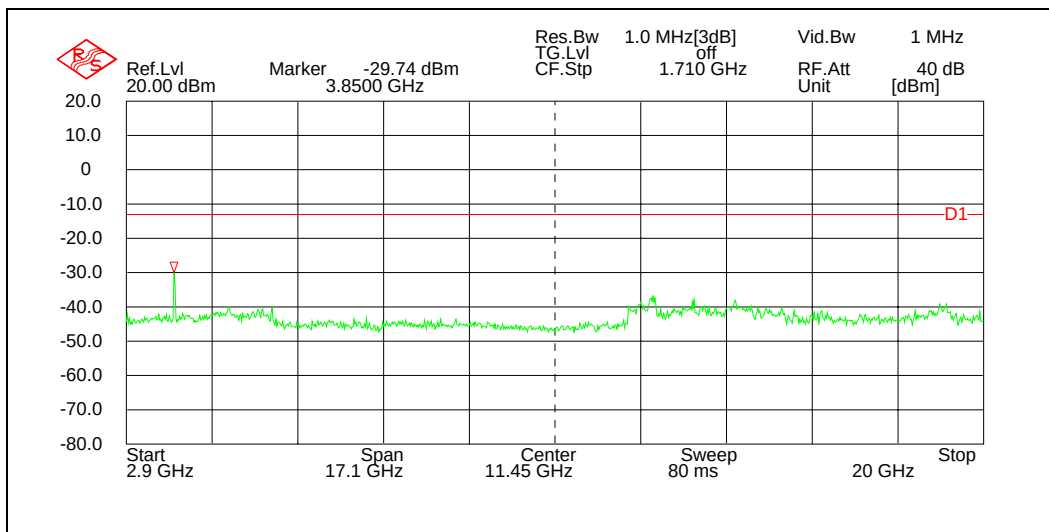


Figure 74: Spurious Emissions - Downlink CDMA Low Channel – 2.9 to 20 GHz

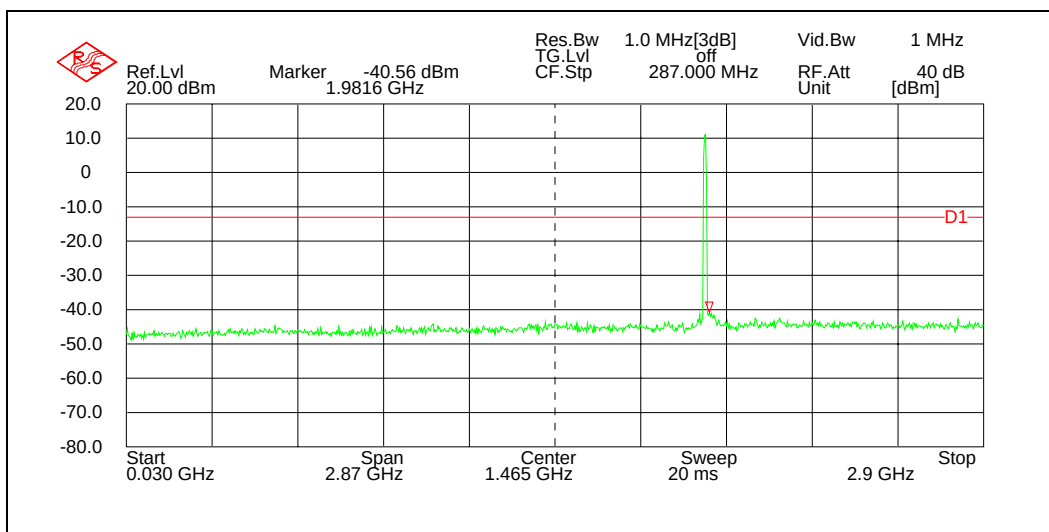


Figure 75: Spurious Emissions - Downlink CDMA Mid Channel – 30 MHz to 2.9 GHz

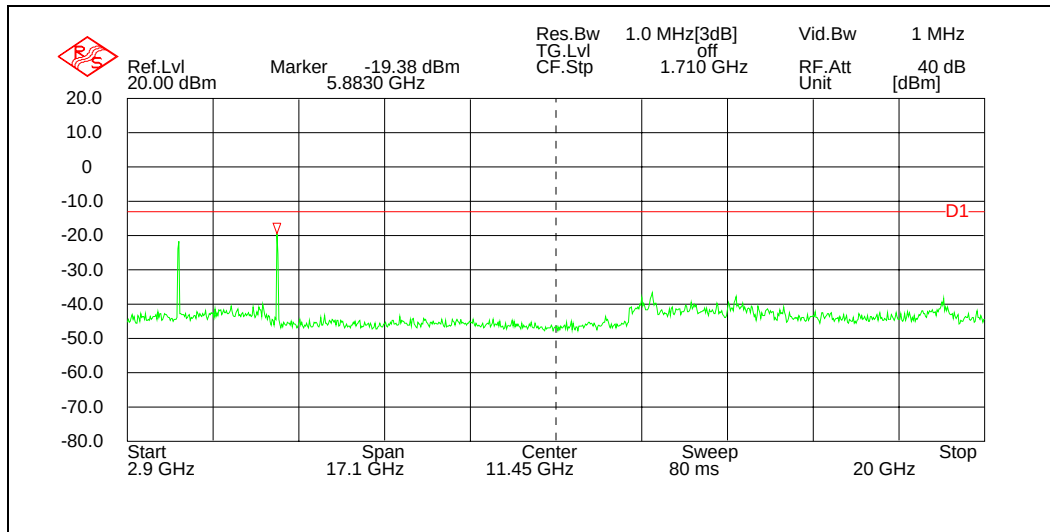


Figure 76: Spurious Emissions - Downlink CDMA Mid Channel – 2.9 to 20 GHz

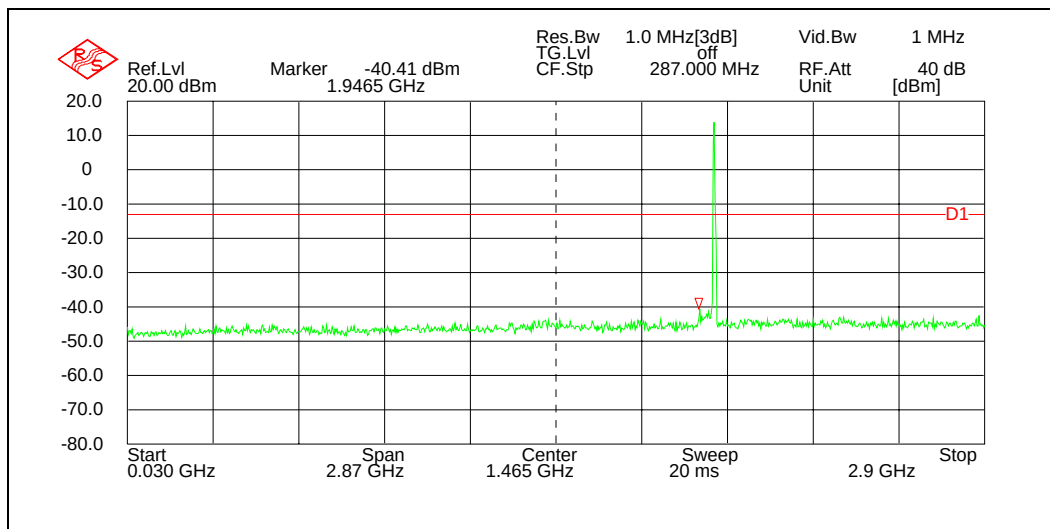


Figure 77: Spurious Emissions - Downlink CDMA High Channel – 30 MHz to 2.9 GHz

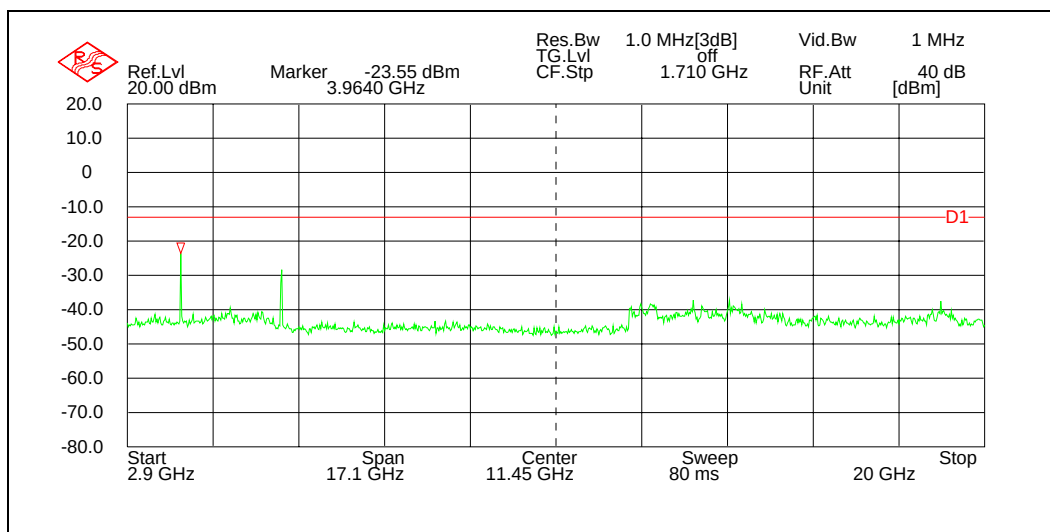


Figure 78: Spurious Emissions - Downlink CDMA High Channel – 2.9 to 20 GHz

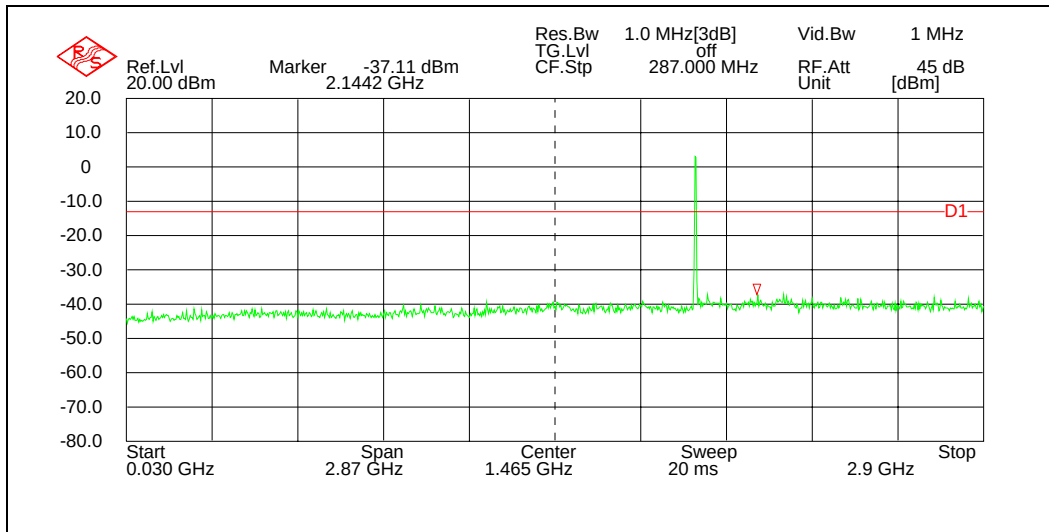


Figure 79: Spurious Emissions - Downlink TDMA Low Channel – 30 MHz to 2.9 GHz

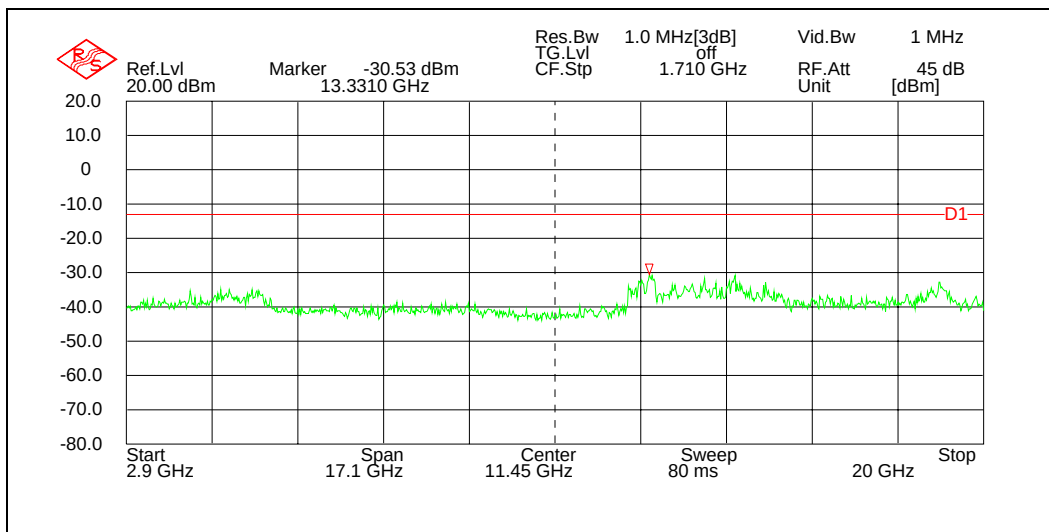


Figure 80: Spurious Emissions - Downlink TDMA Low Channel – 2.9 to 20 GHz

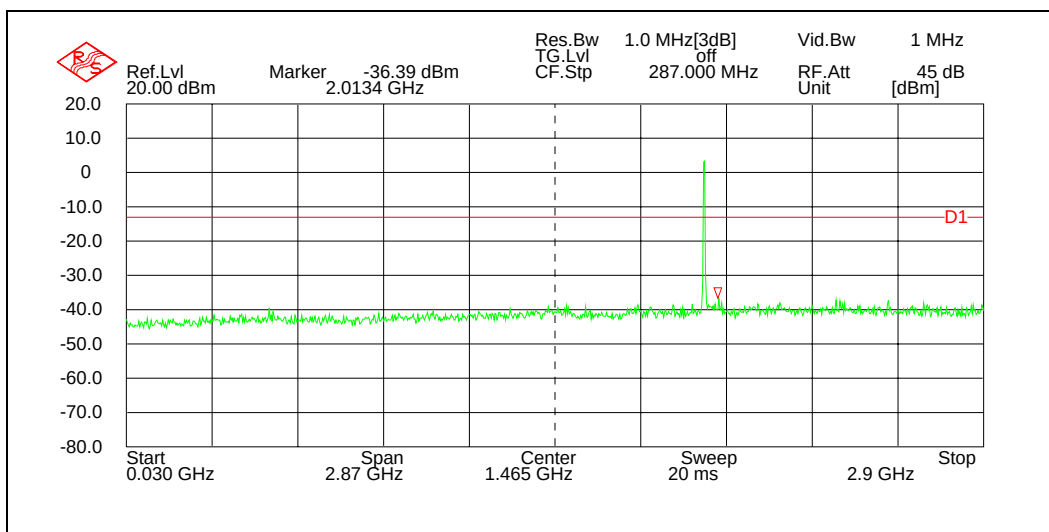
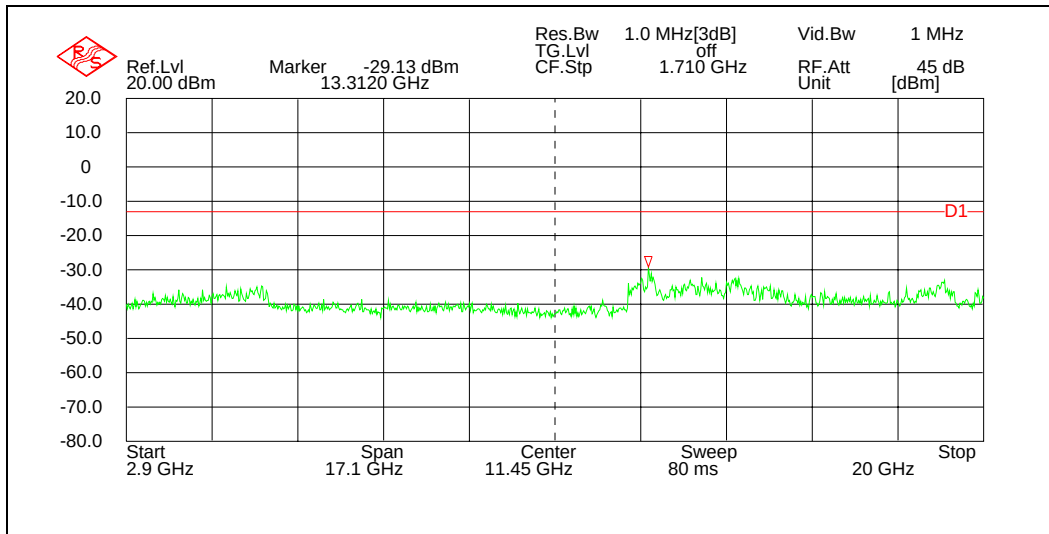
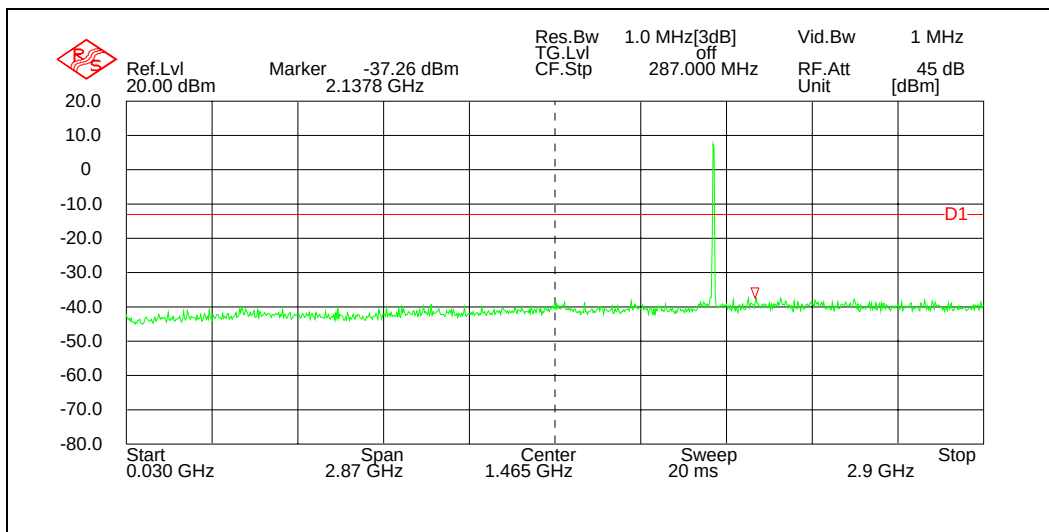
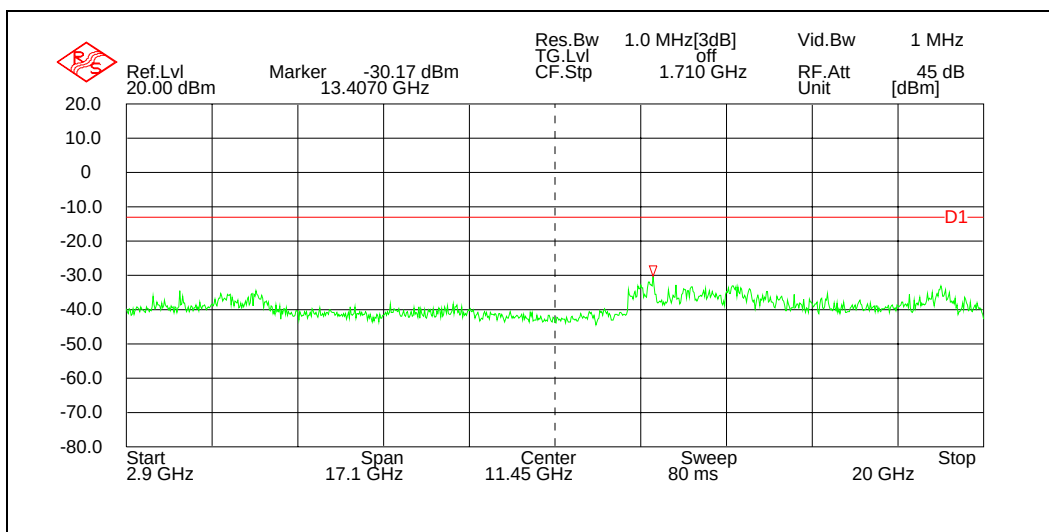


Figure 81: Spurious Emissions - Downlink TDMA Mid Channel – 30 MHz to 2.9 GHz

**Figure 82: Spurious Emissions - Downlink TDMA Mid Channel – 2.9 to 20 GHz****Figure 83: Spurious Emissions - Downlink TDMA High Channel – 30 MHz to 2.9 GHz****Figure 84: Spurious Emissions - Downlink TDMA High Channel – 2.9 to 20 GHz**

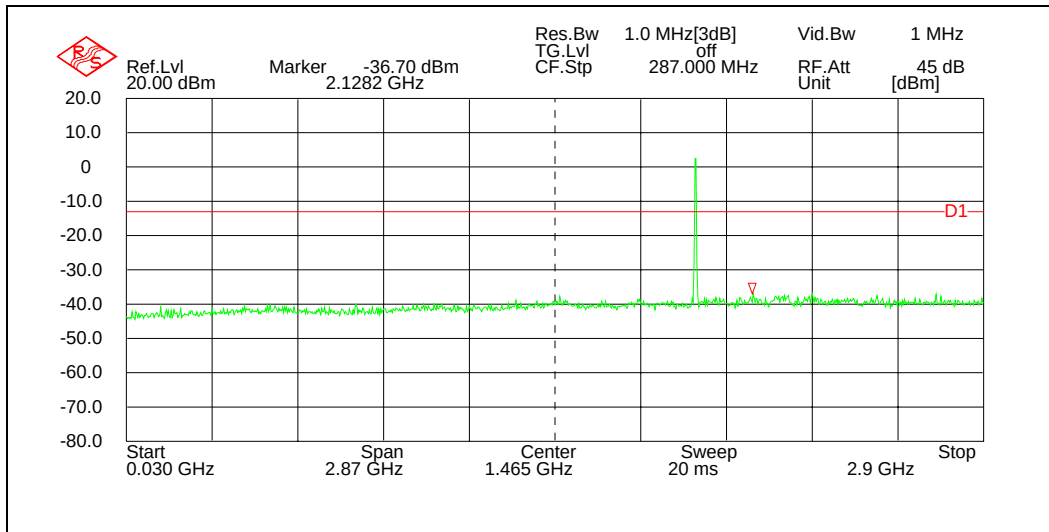


Figure 85: Spurious Emissions - Downlink GSM Low Channel – 30 MHz to 2.9 GHz

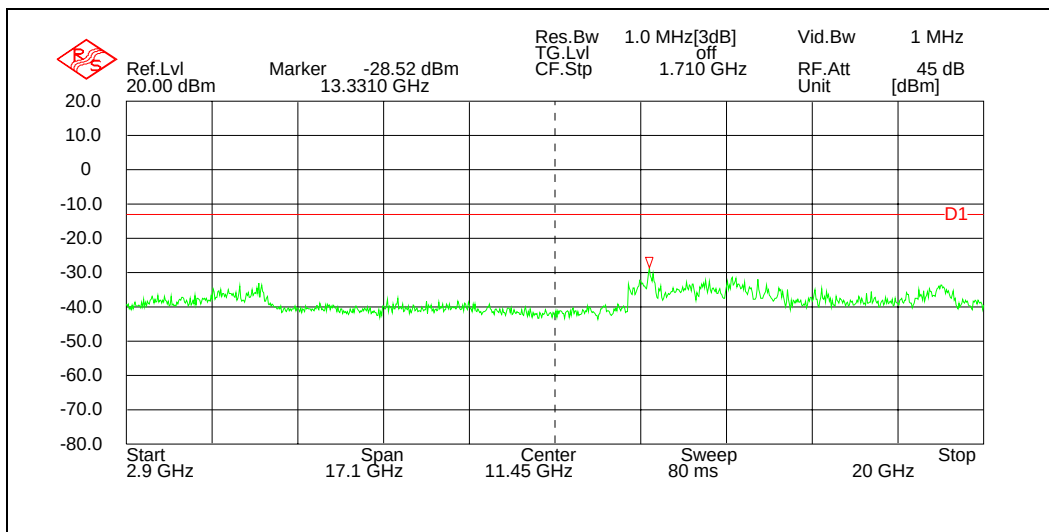


Figure 86: Spurious Emissions - Downlink GSM Low Channel – 2.9 to 20 GHz

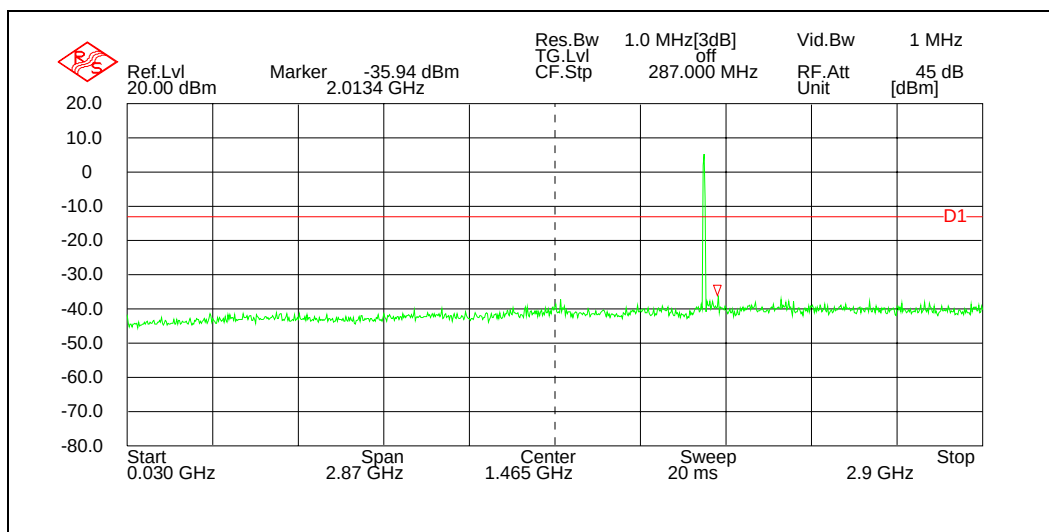
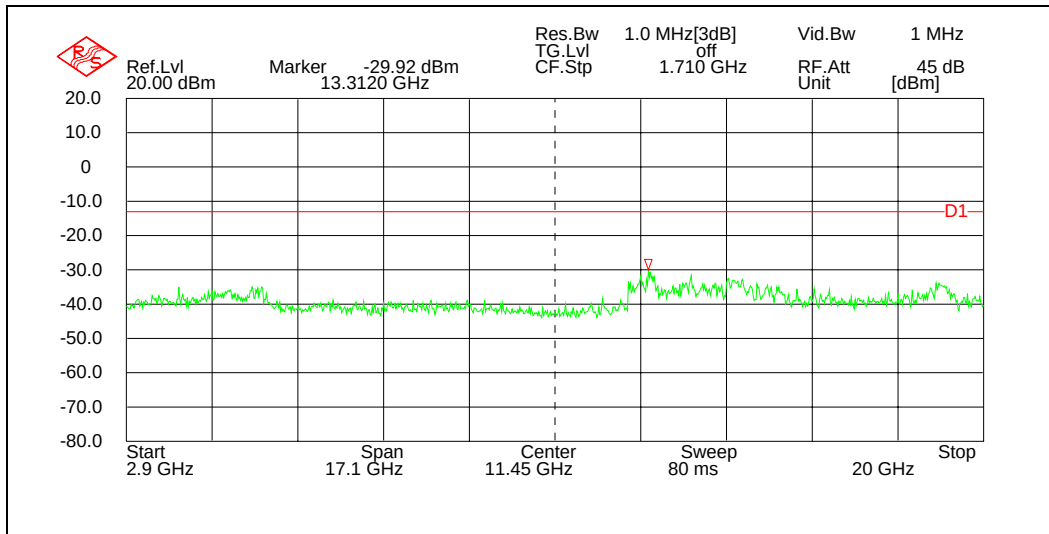
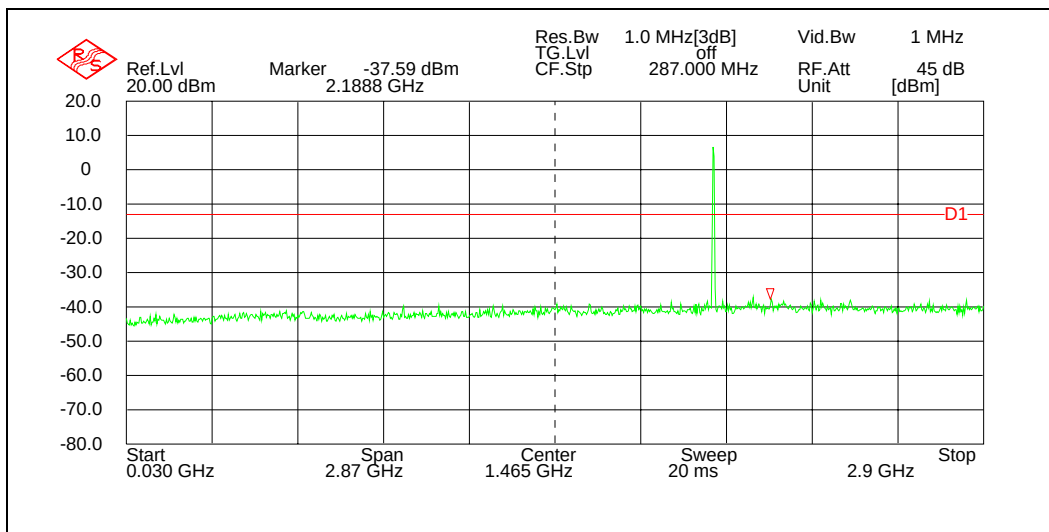
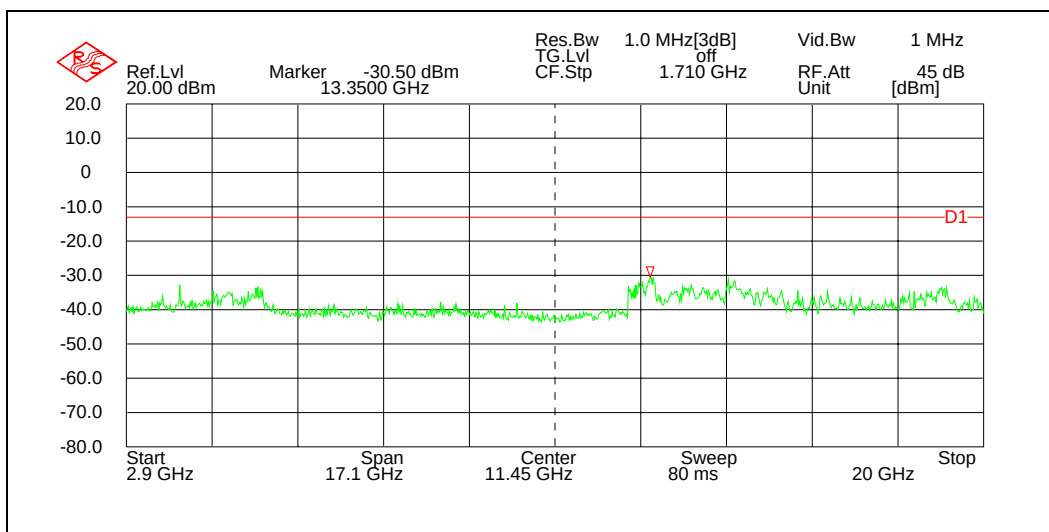


Figure 87: Spurious Emissions - Downlink GSM Mid Channel – 30 MHz to 2.9 GHz

**Figure 88: Spurious Emissions - Downlink GSM Mid Channel – 2.9 to 20 GHz****Figure 89: Spurious Emissions - Downlink GSM High Channel – 30 MHz to 2.9 GHz****Figure 90: Spurious Emissions - Downlink GSM High Channel – 2.9 to 20 GHz**

4.0 Band-edge

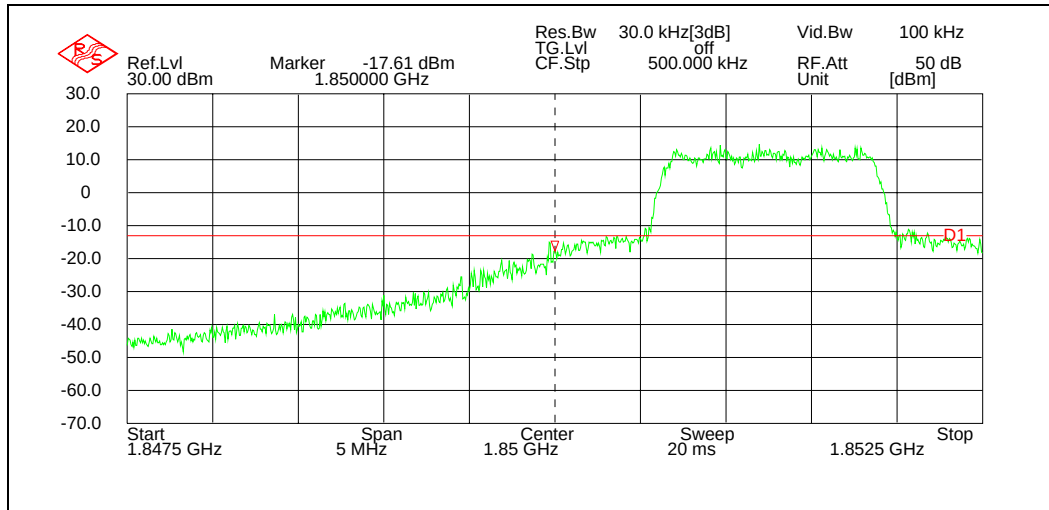


Figure 91: Band-Edge Uplink CDMA Low Channel

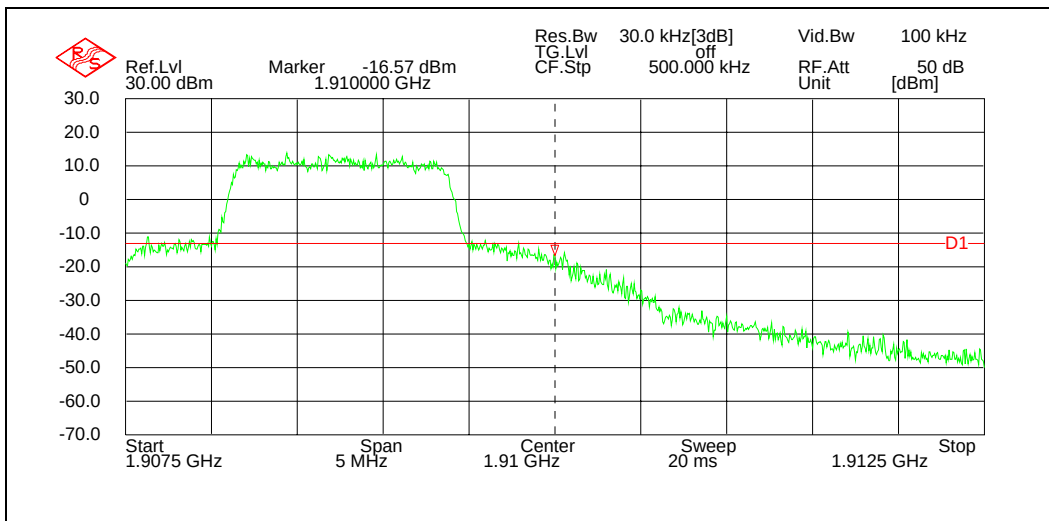


Figure 92: Band-Edge Uplink CDMA High Channel

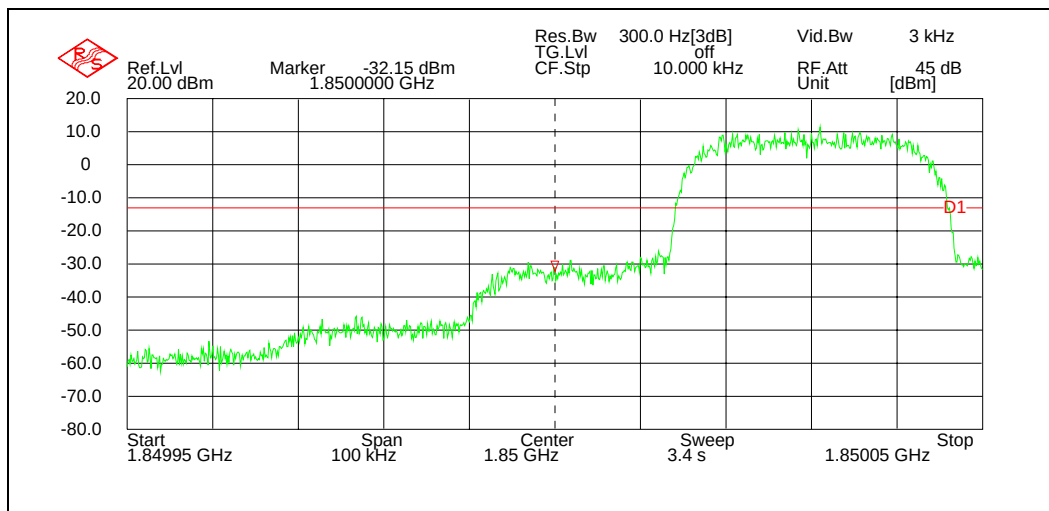


Figure 93: Band-Edge Uplink TDMA Low Channel

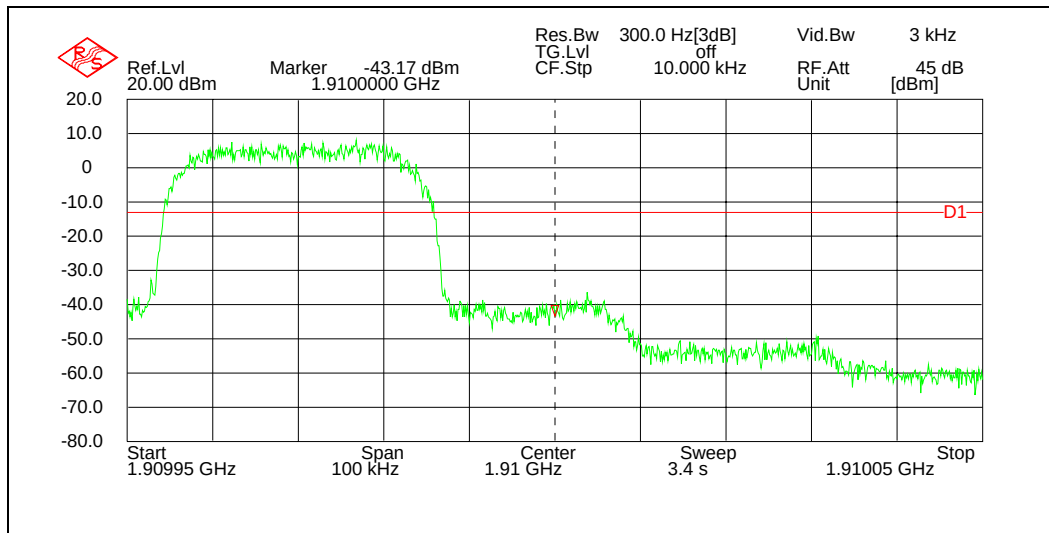


Figure 94: Band-Edge Uplink TDMA High Channel

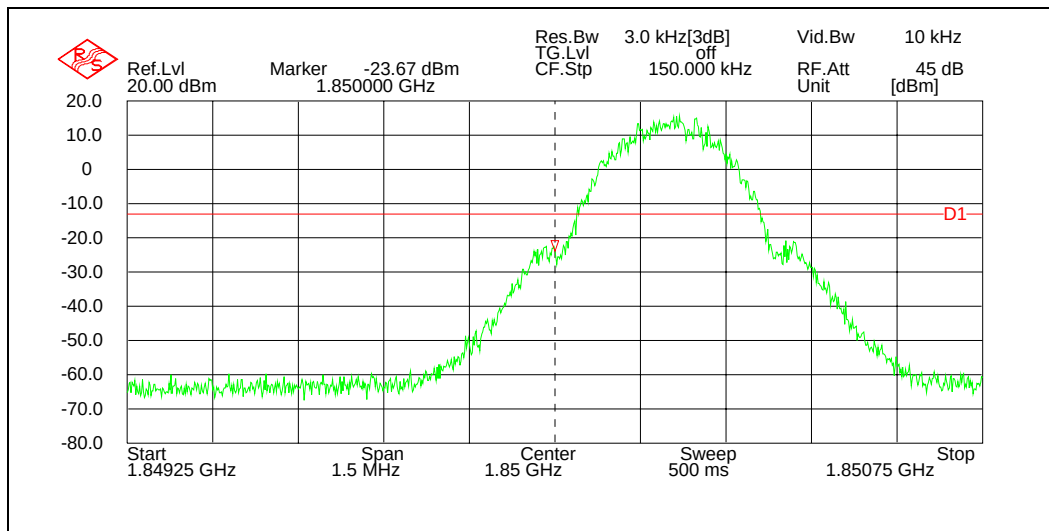


Figure 95: Band-Edge Uplink GSM Low Channel

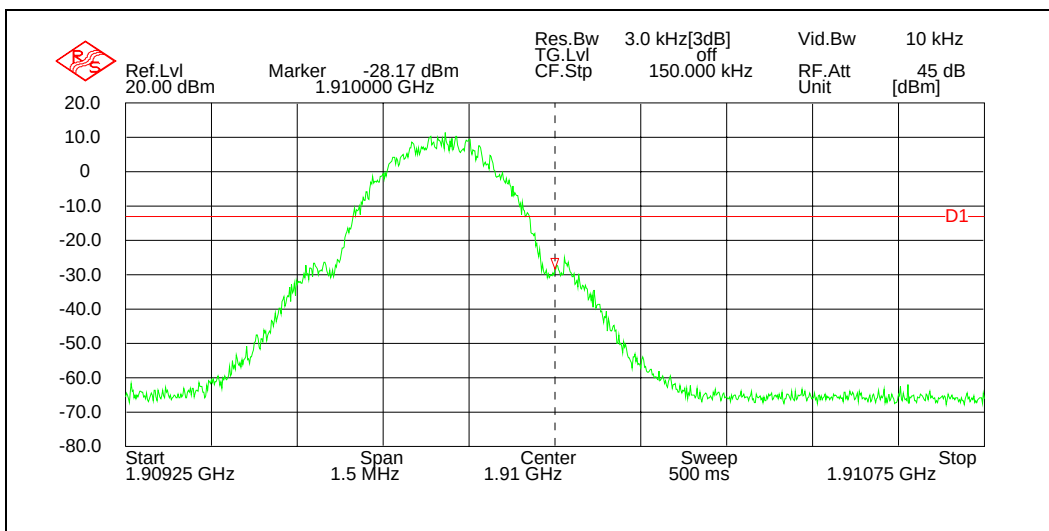


Figure 96: Band-Edge Uplink GSM High Channel

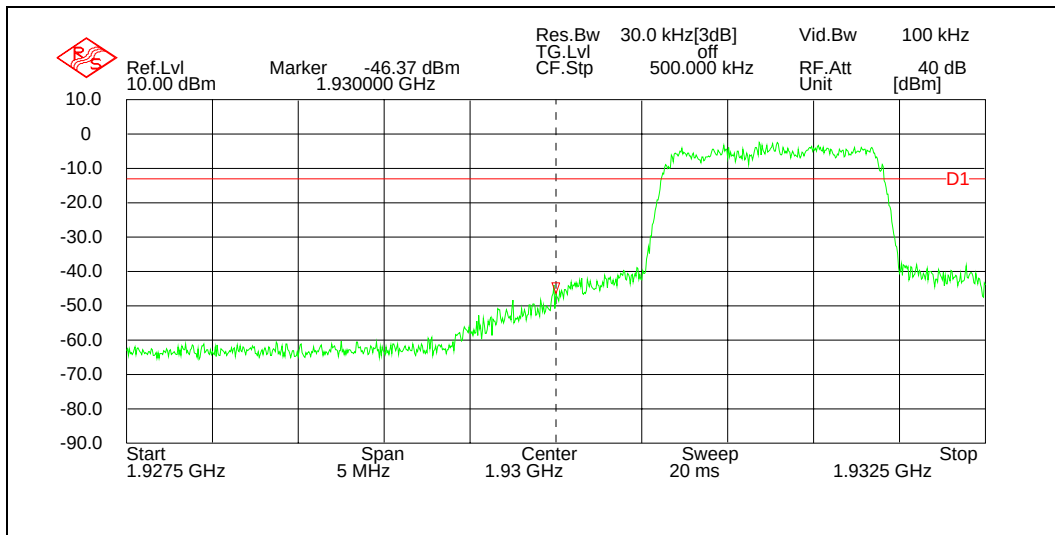


Figure 97: Band-Edge Downlink CDMA Low Channel

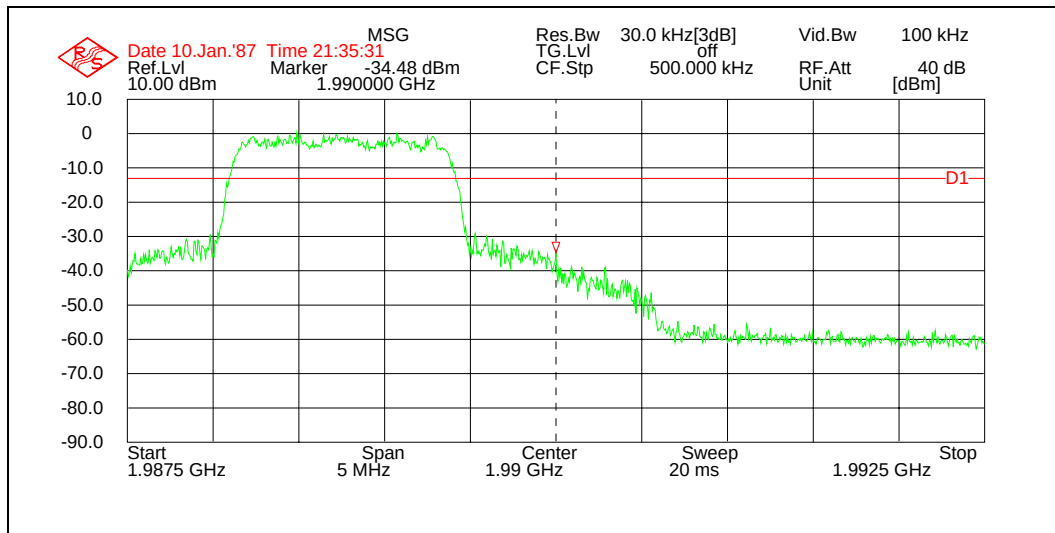


Figure 98: Band-Edge Downlink CDMA High Channel

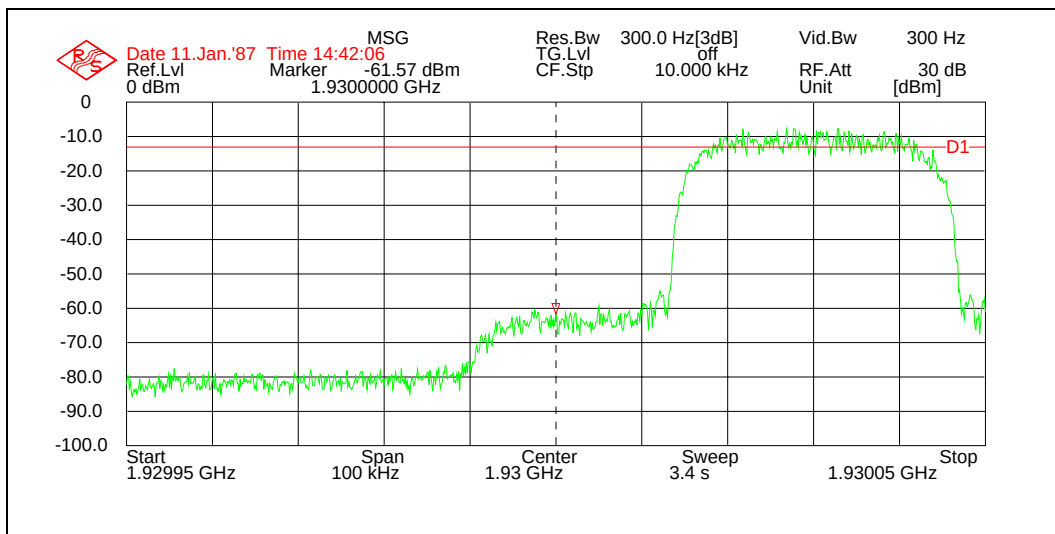


Figure 99: Band-Edge Downlink TDMA Low Channel

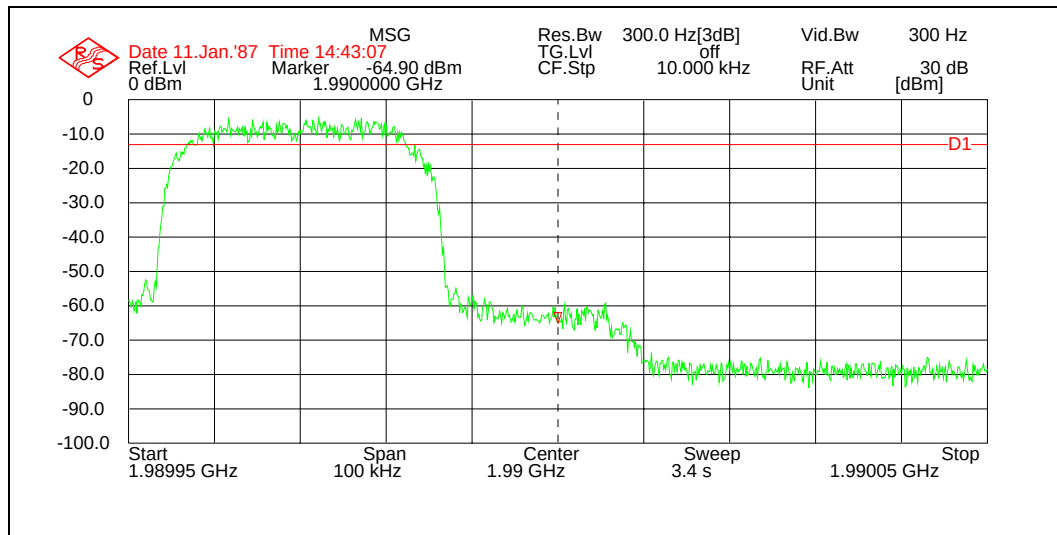


Figure 100: Band-Edge Downlink TDMA High Channel

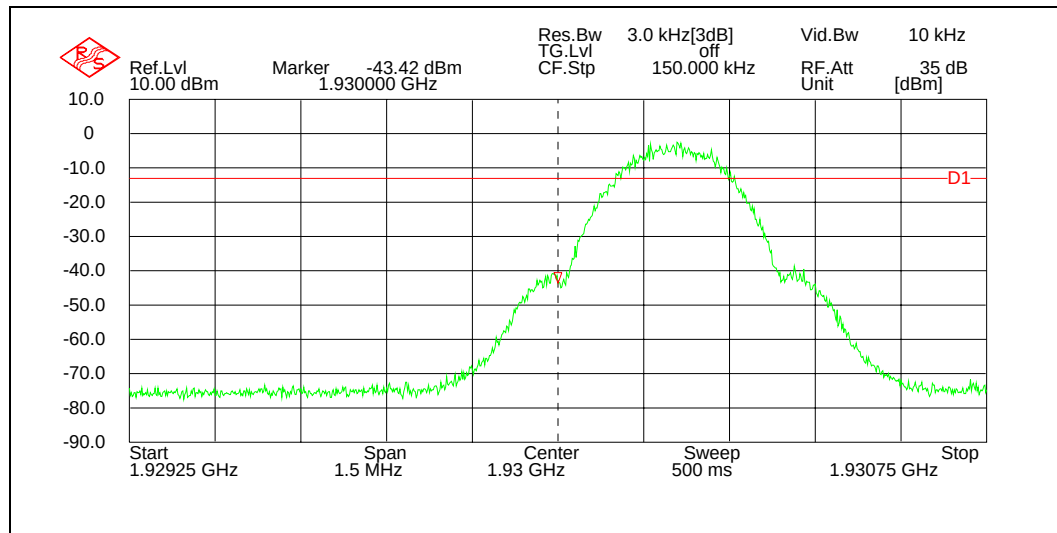


Figure 101: Band-Edge Downlink GSM Low Channel

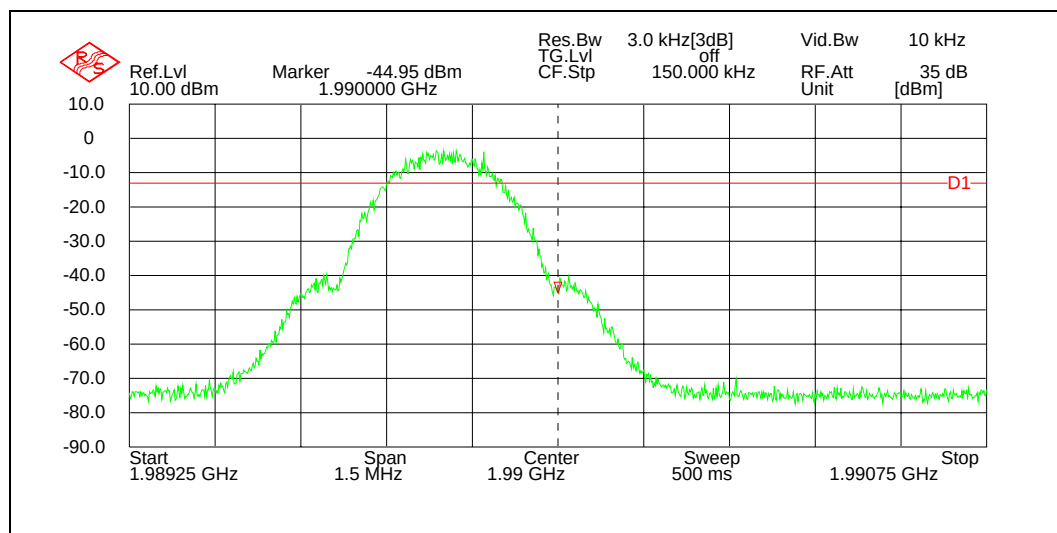


Figure 102: Band-Edge Downlink GSM High Channel

5.0 Intermodulation Products

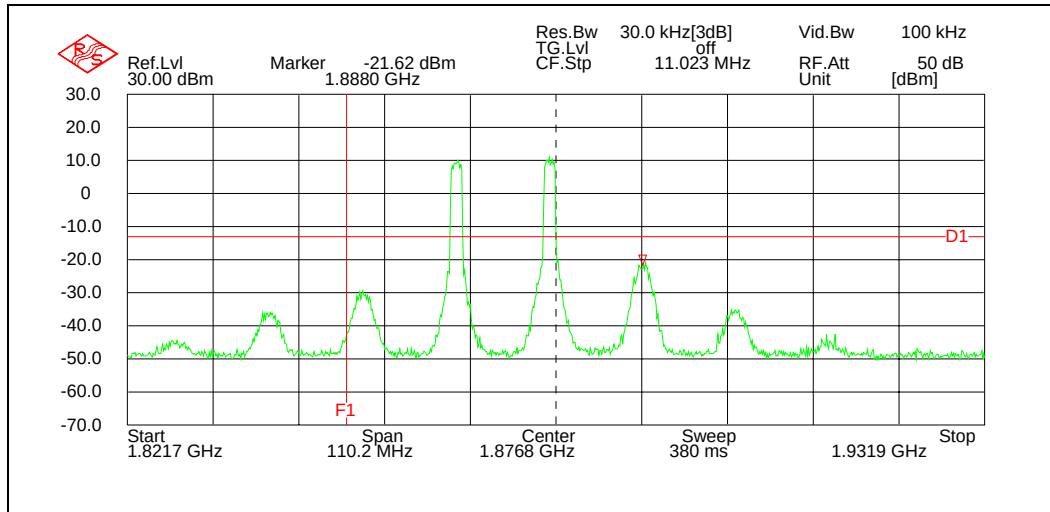


Figure 103: Intermodulation Uplink CDMA Low Band-edge

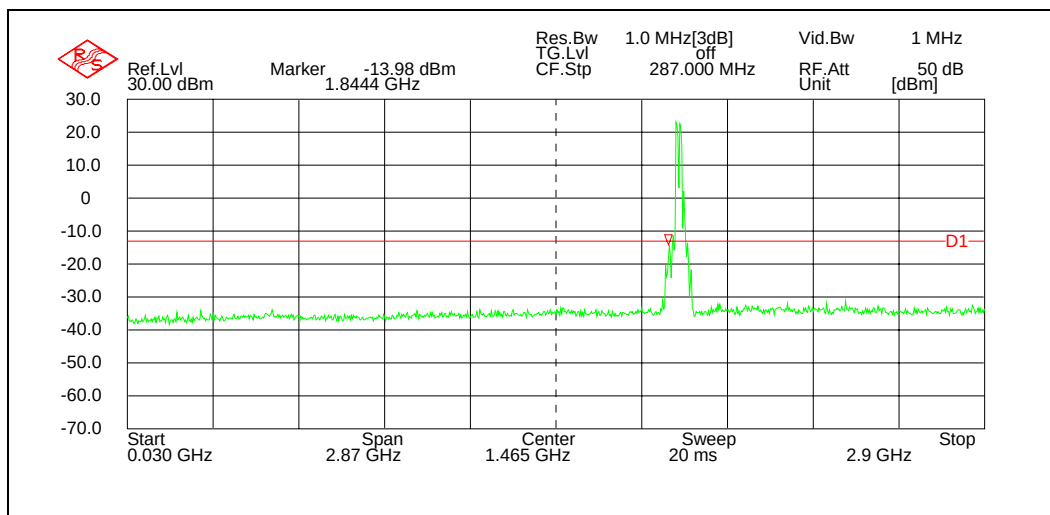


Figure 104: Intermodulation Uplink CDMA Low Band-edge - 30 MHz to 2.9 GHz

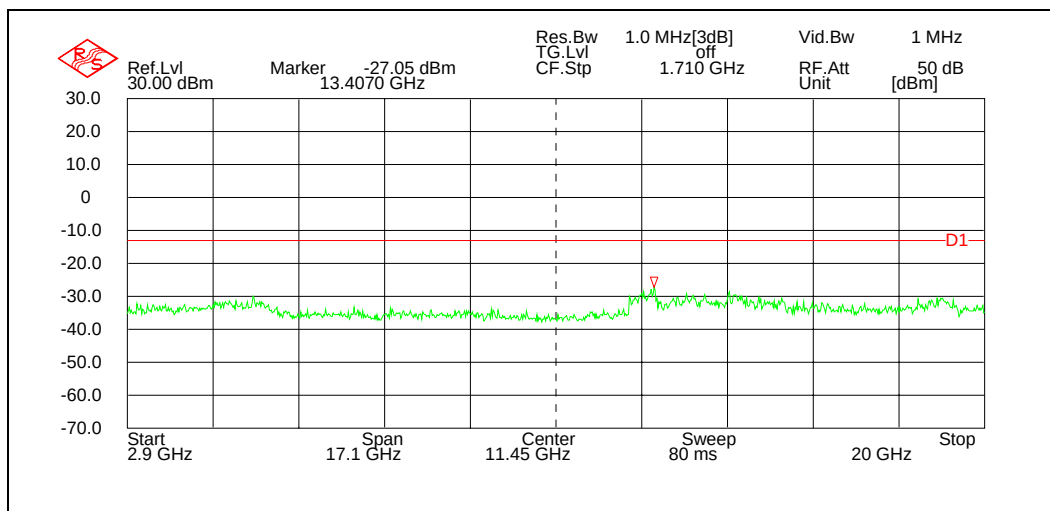


Figure 105: Intermodulation Uplink CDMA Low Band-edge – 2.9 to 20 GHz

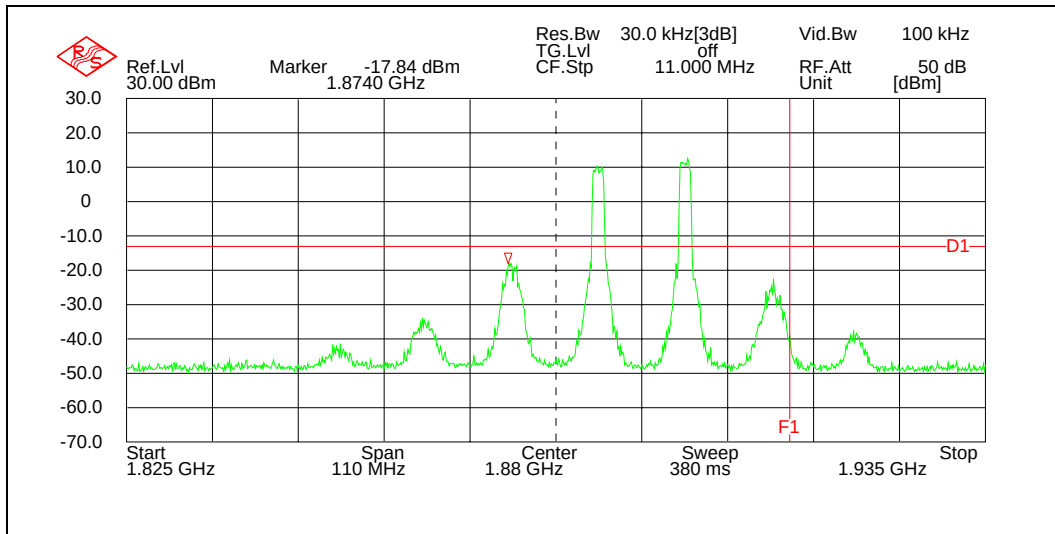


Figure 106: Intermodulation Uplink CDMA High Band-edge

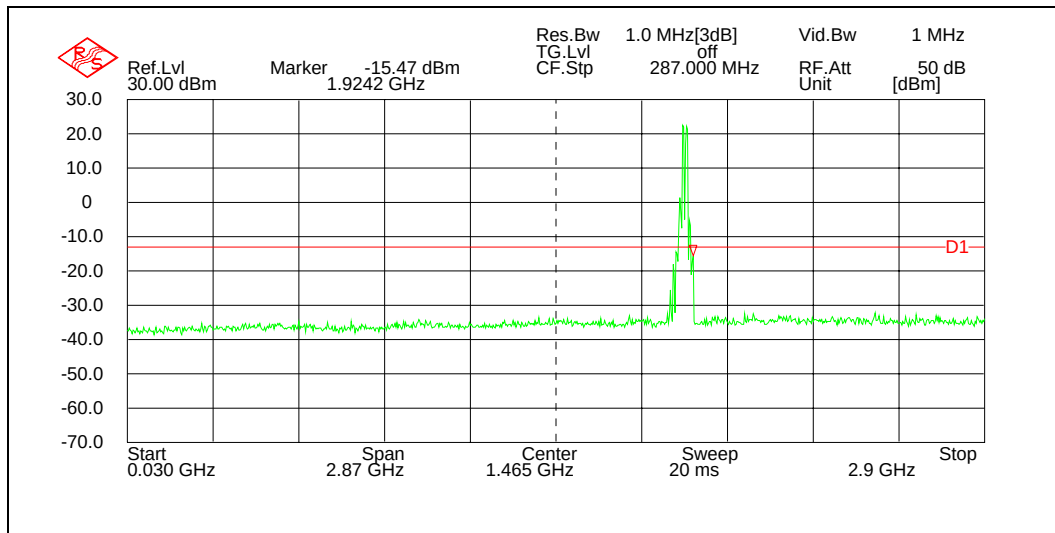


Figure 107: Intermodulation Uplink CDMA High Band-edge - 30 MHz to 2.9 GHz

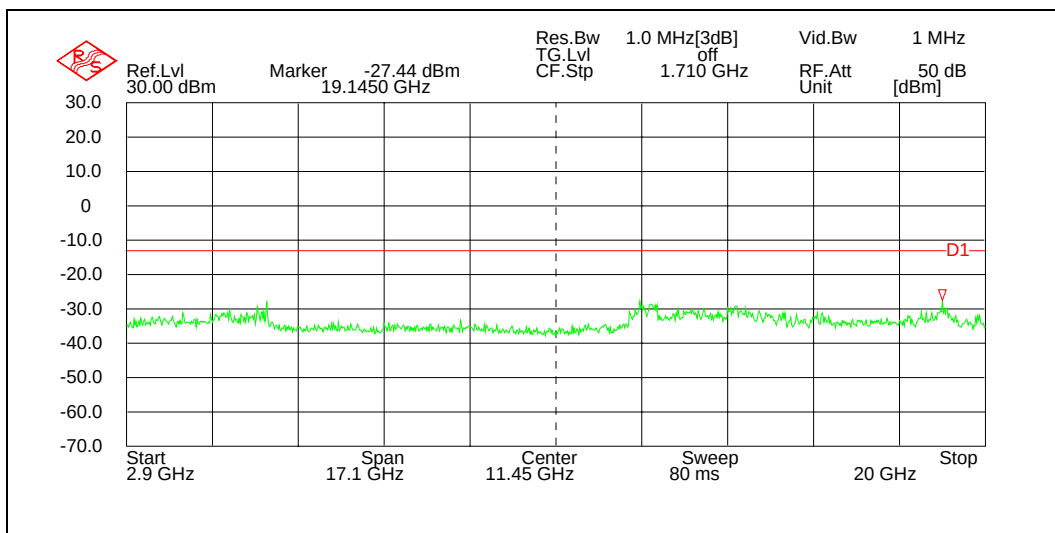


Figure 108: Intermodulation Uplink CDMA High Band-edge – 2.9 to 20 GHz

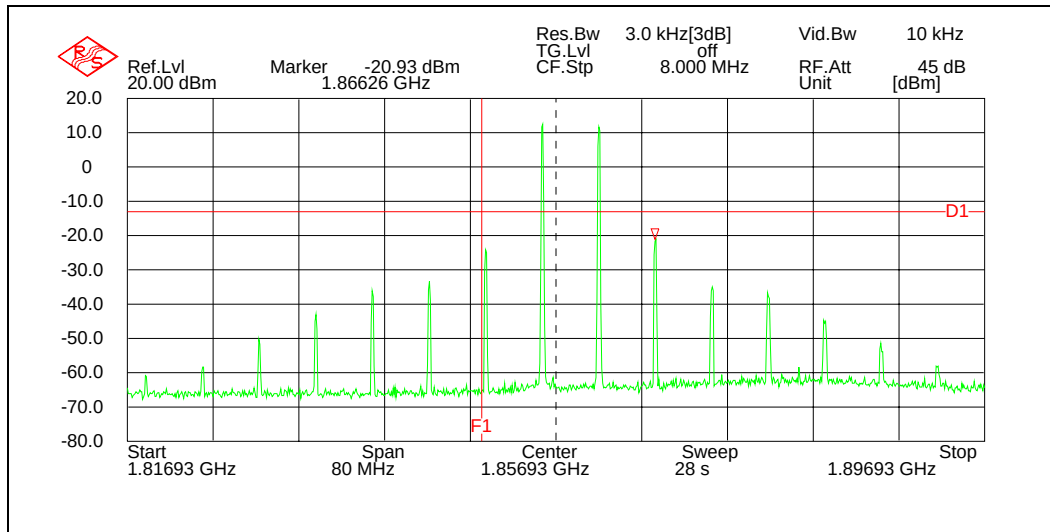


Figure 109: Intermodulation Uplink TDMA Low Band-edge

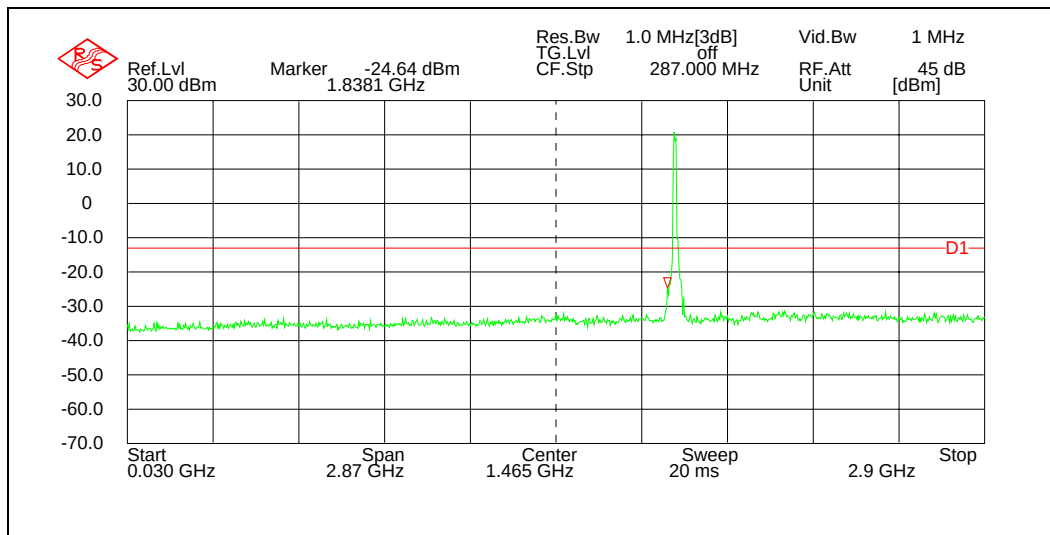


Figure 110: Intermodulation Uplink TDMA Low Band-edge - 30 MHz to 2.9 GHz

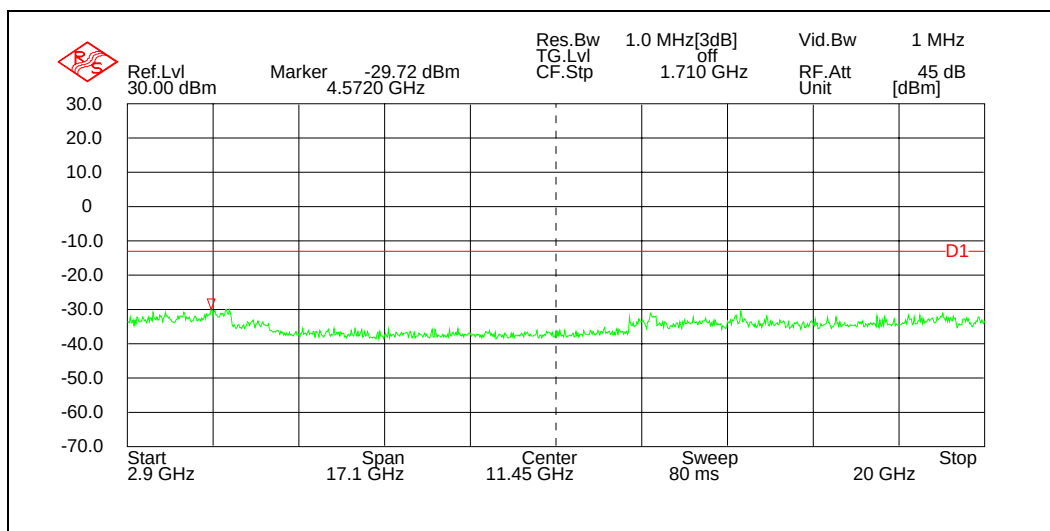


Figure 111: Intermodulation Uplink TDMA Low Band-edge - 2.9 to 20 GHz

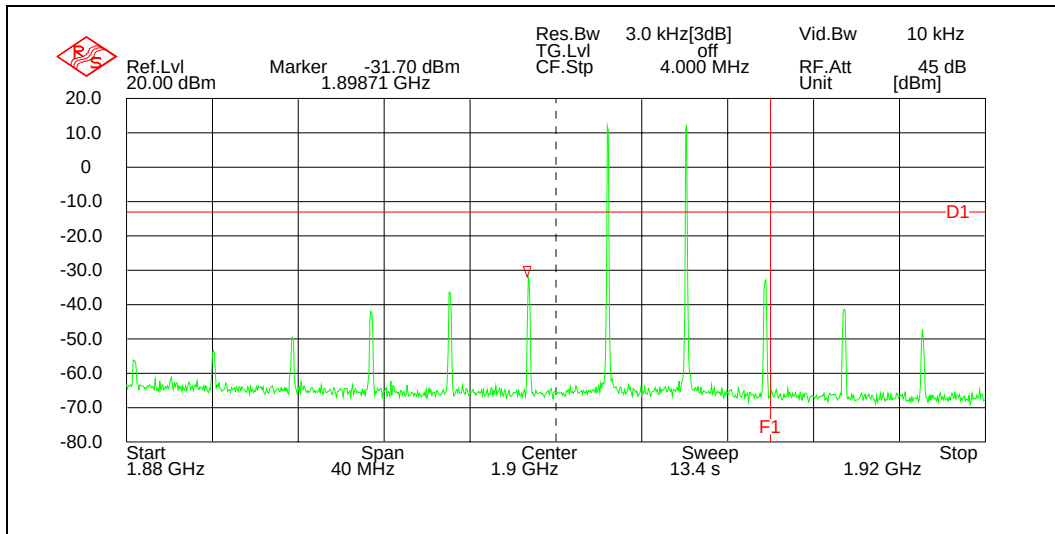


Figure 112: Intermodulation Uplink TDMA High Band-edge

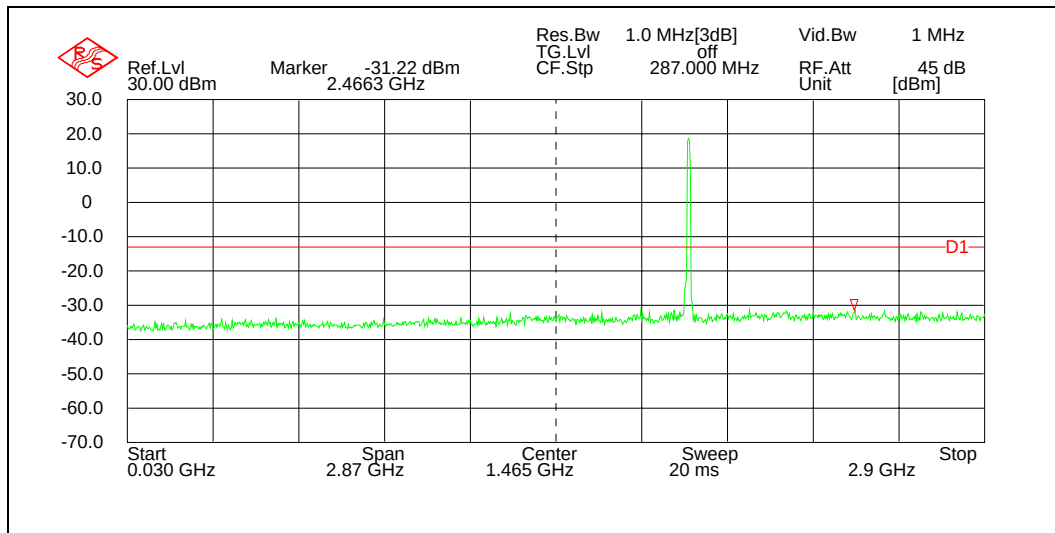


Figure 113: Intermodulation Uplink TDMA High Band-edge - 30 MHz to 2.9 GHz

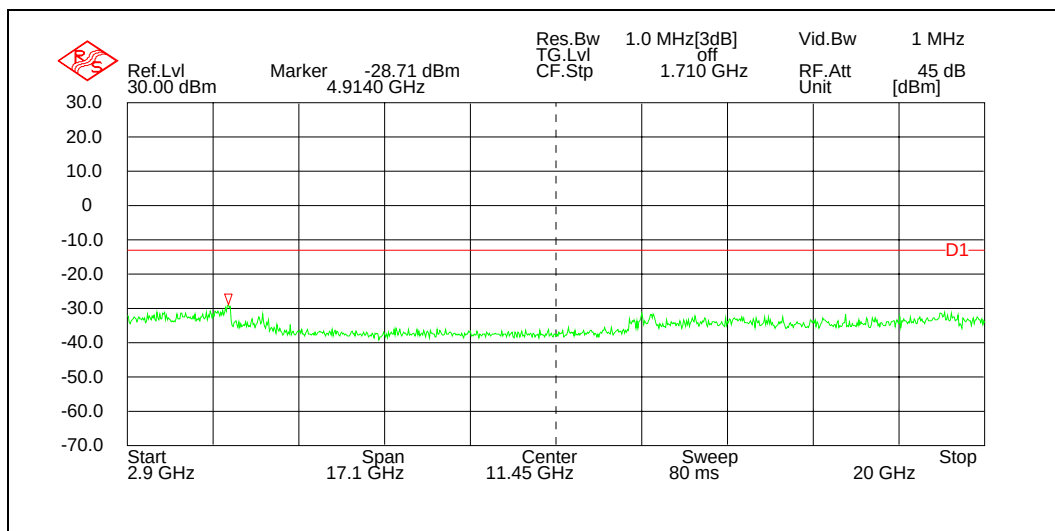


Figure 114: Intermodulation Uplink TDMA High Band-edge - 2.9 to 20 GHz

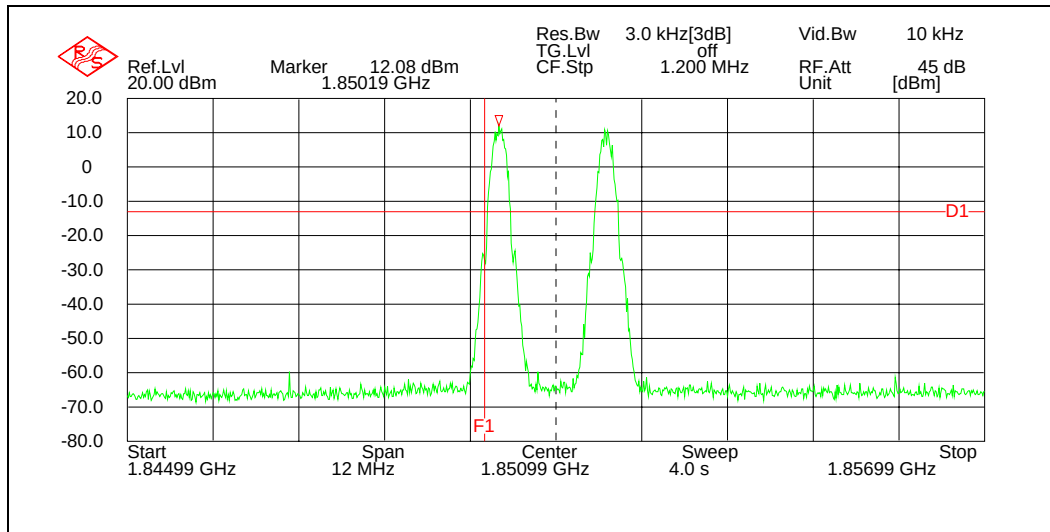


Figure 115: Intermodulation Uplink GSM Low Band-edge

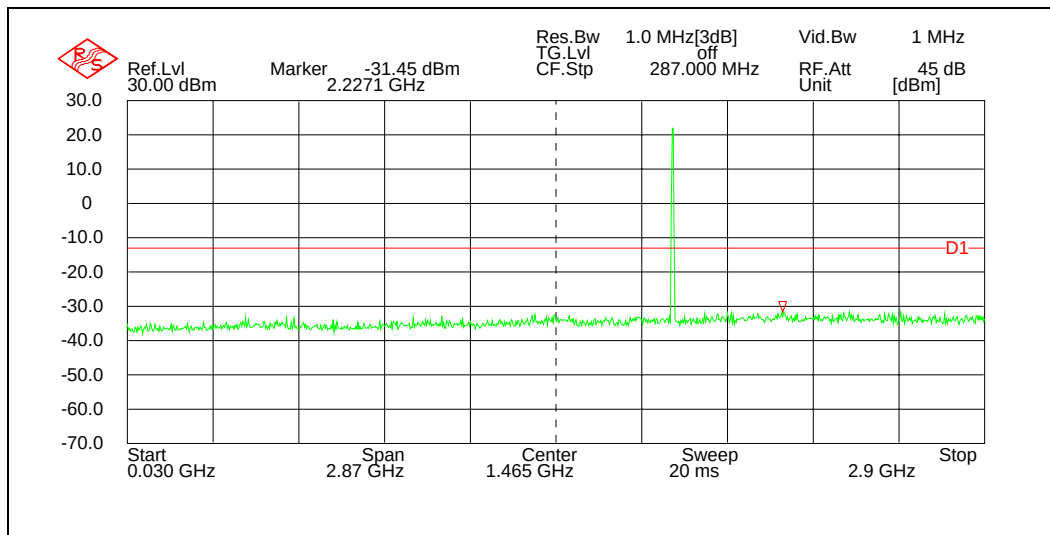


Figure 116: Intermodulation Uplink GSM Low Band-edge - 30 MHz to 2.9 GHz

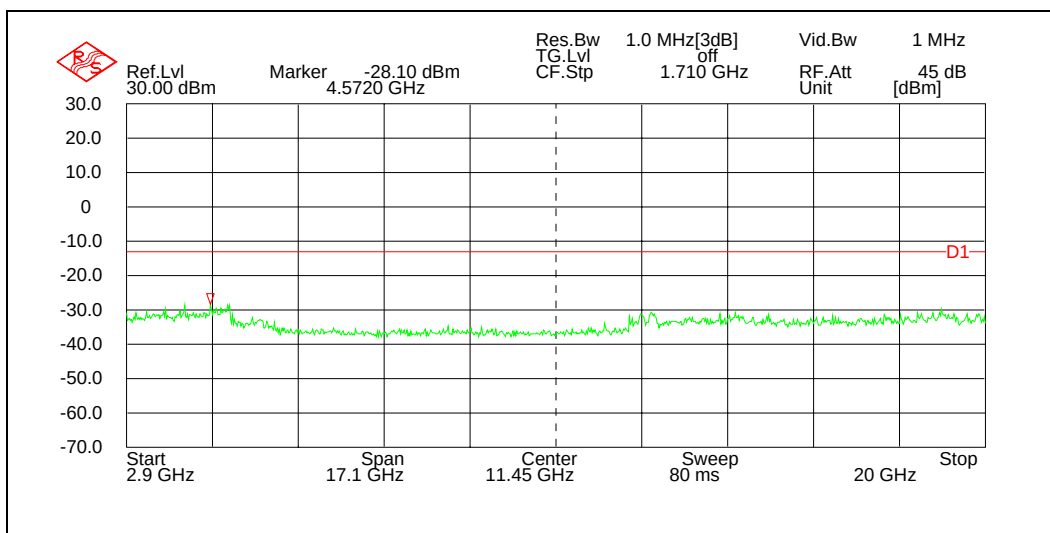


Figure 117: Intermodulation Uplink GSM Low Band-edge - 2.9 to 20 GHz

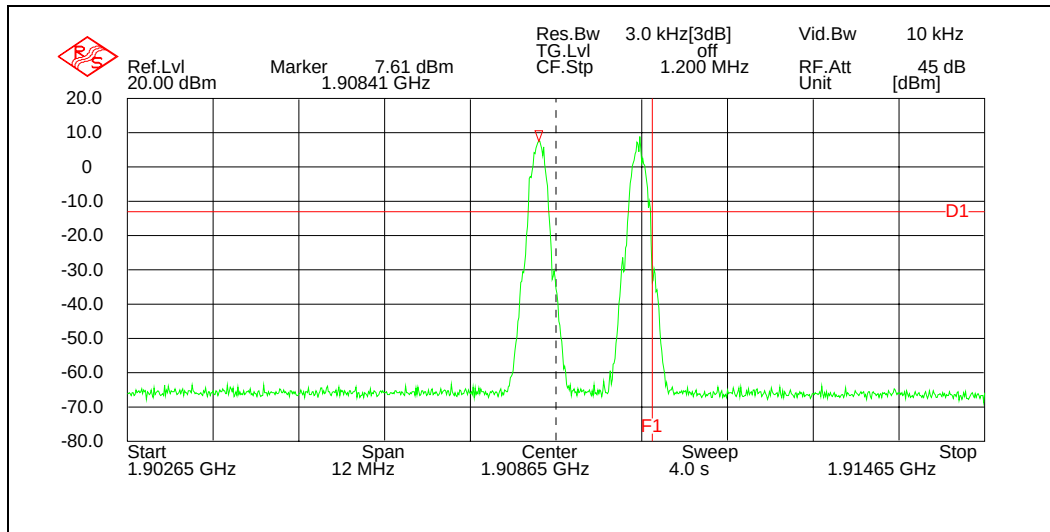


Figure 118: Intermodulation Uplink GSM High Band-edge

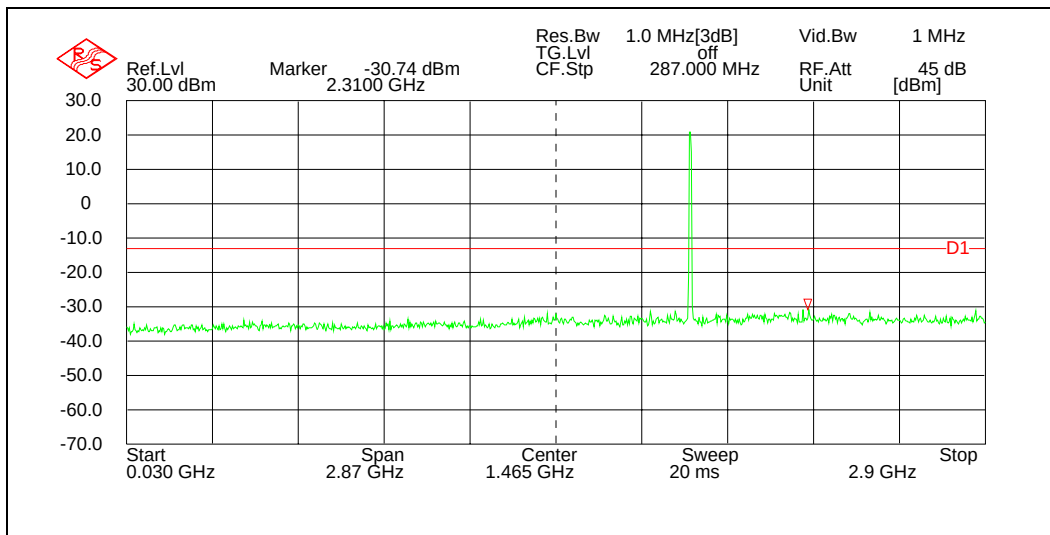


Figure 119: Intermodulation Uplink GSM High Band-edge - 30 MHz to 2.9 GHz

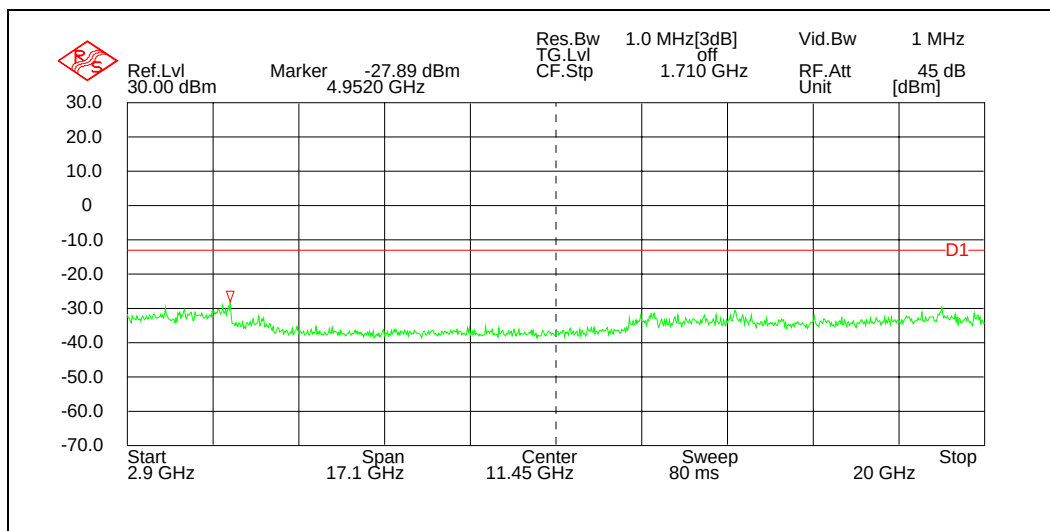


Figure 120: Intermodulation Uplink GSM High Band-edge - 2.9 to 20 GHz

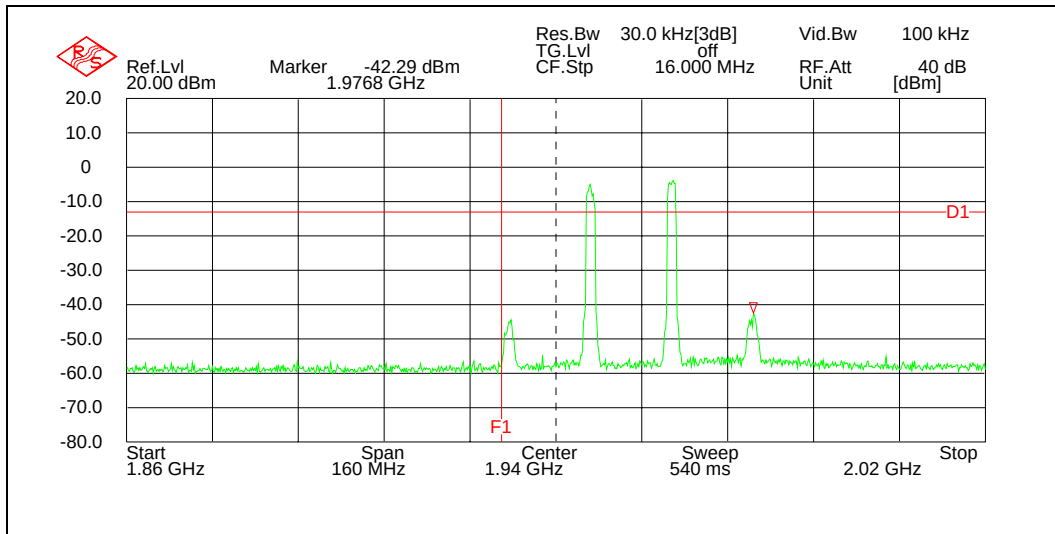


Figure 121: Intermodulation Downlink CDMA Low Band-edge

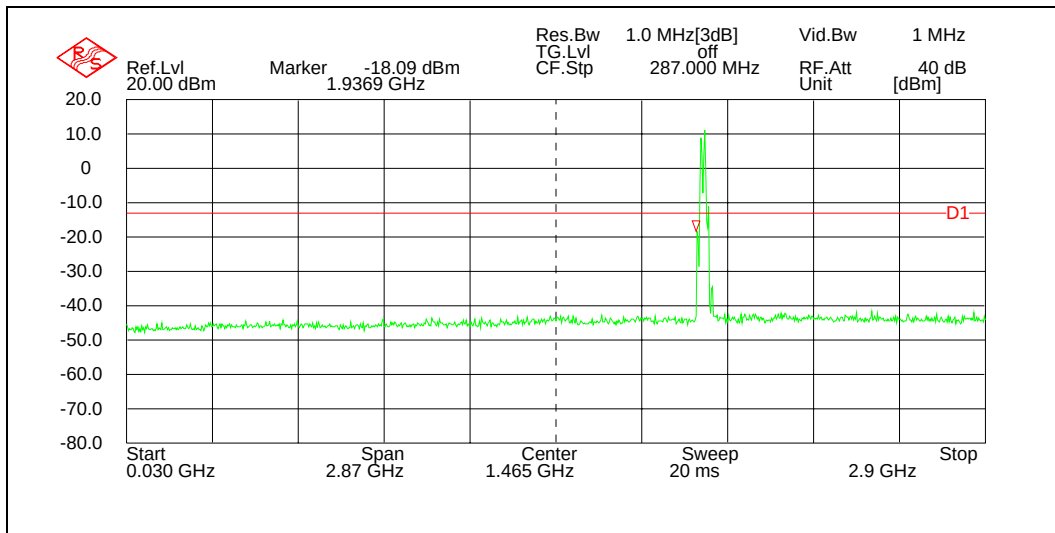


Figure 122: Intermodulation Downlink CDMA Low Band-edge - 30 MHz to 2.9 GHz

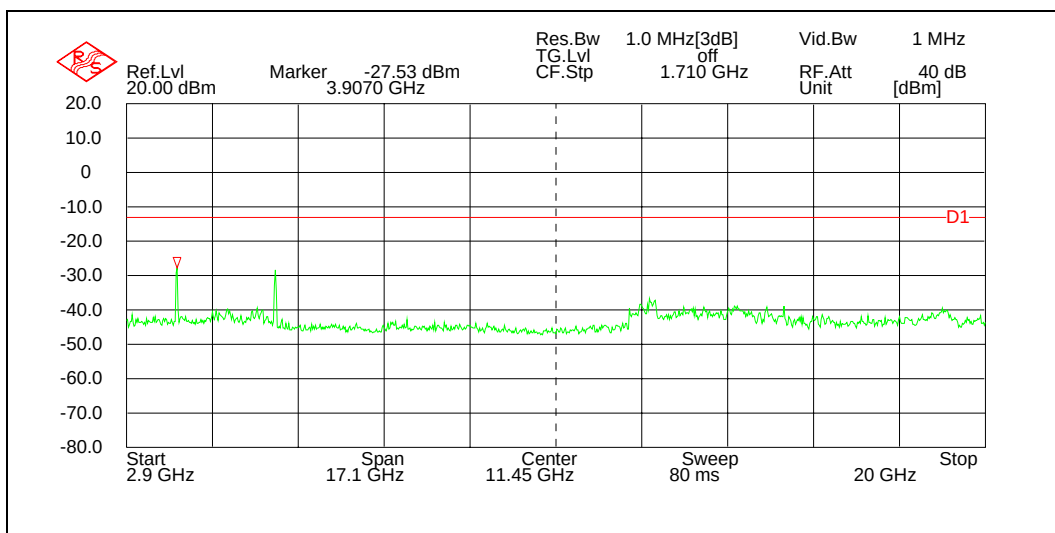


Figure 123: Intermodulation Downlink CDMA Low Band-edge – 2.9 to 20 GHz

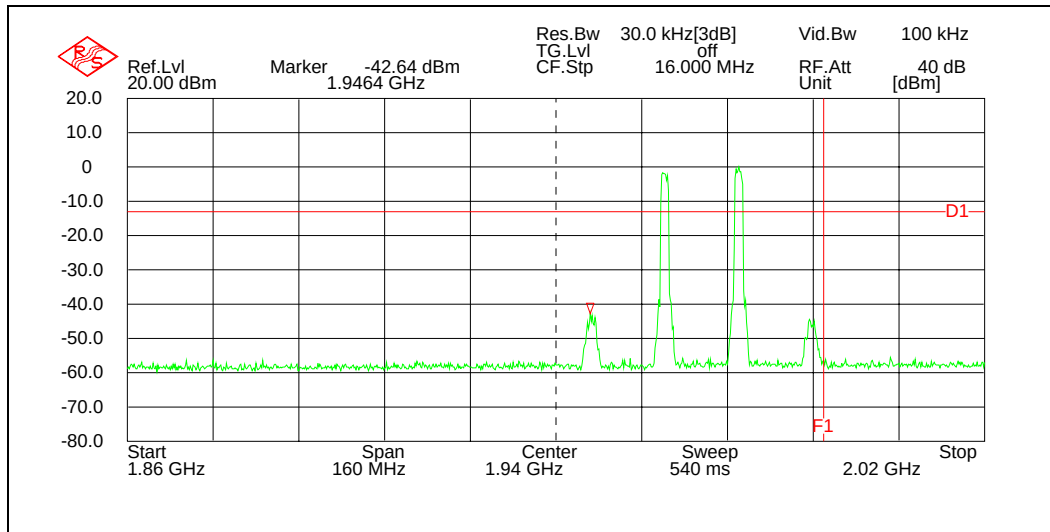


Figure 124: Intermodulation Downlink CDMA High Band-edge

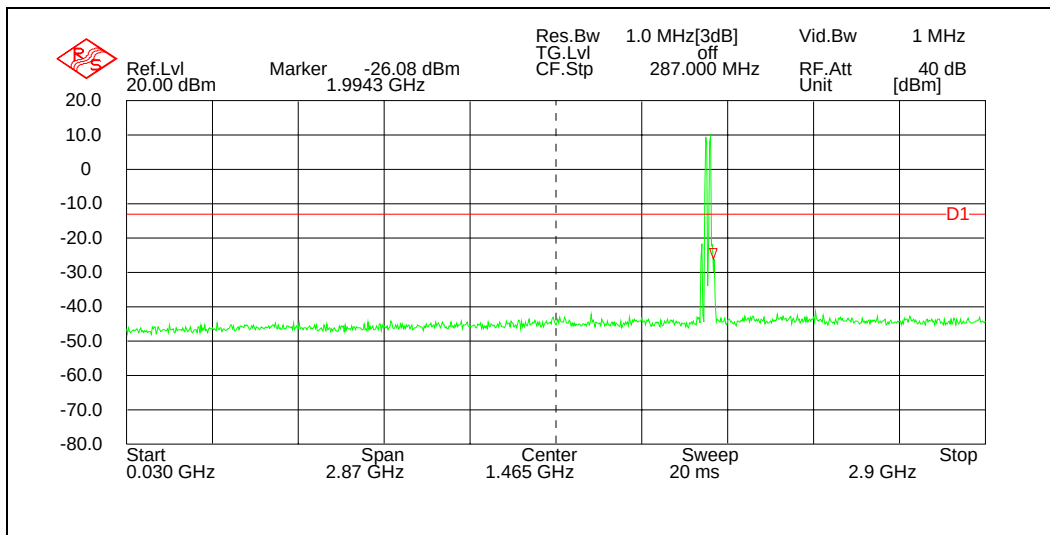


Figure 125: Intermodulation Downlink CDMA High Band-edge - 30 MHz to 2.9 GHz

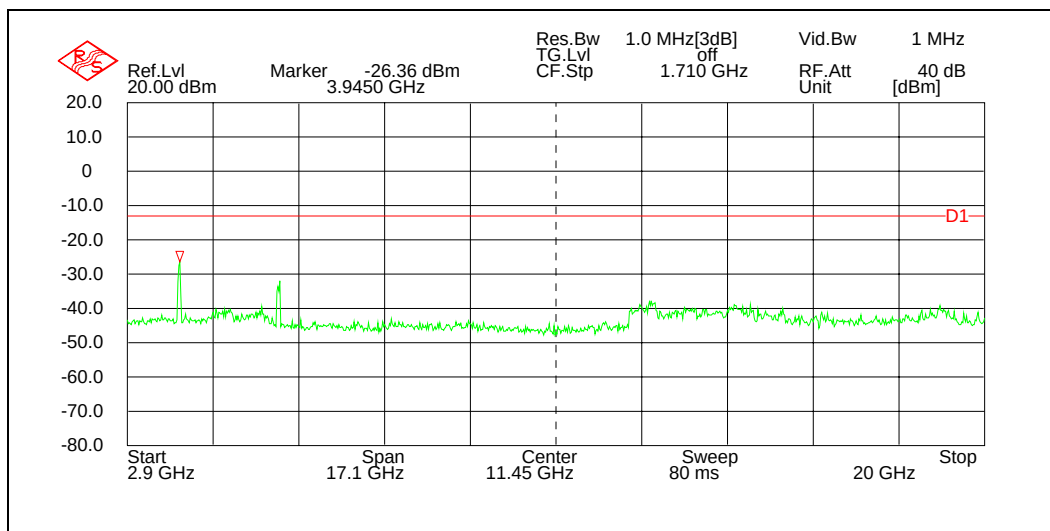


Figure 126: Intermodulation Downlink CDMA High Band-edge – 2.9 to 20 GHz

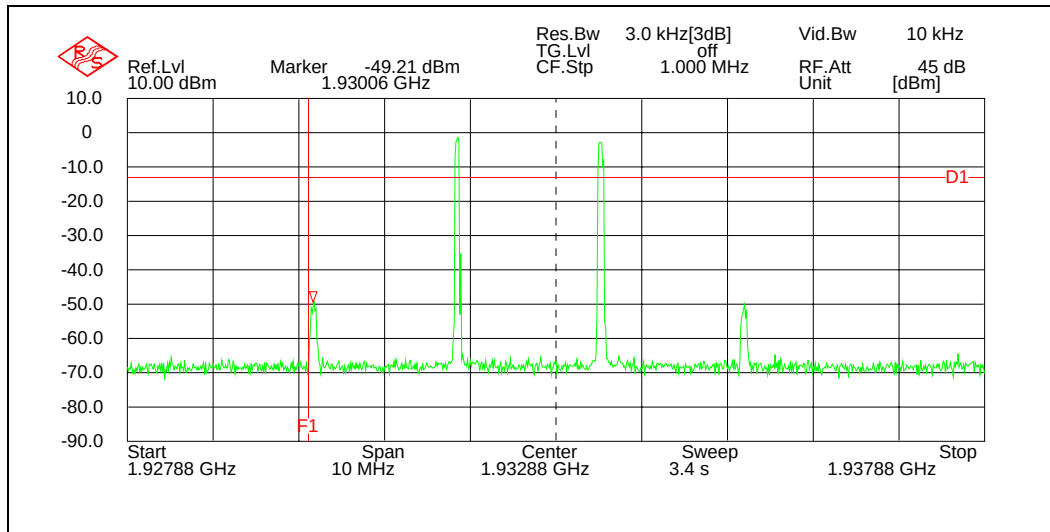


Figure 127: Intermodulation Downlink TDMA Low Band-edge

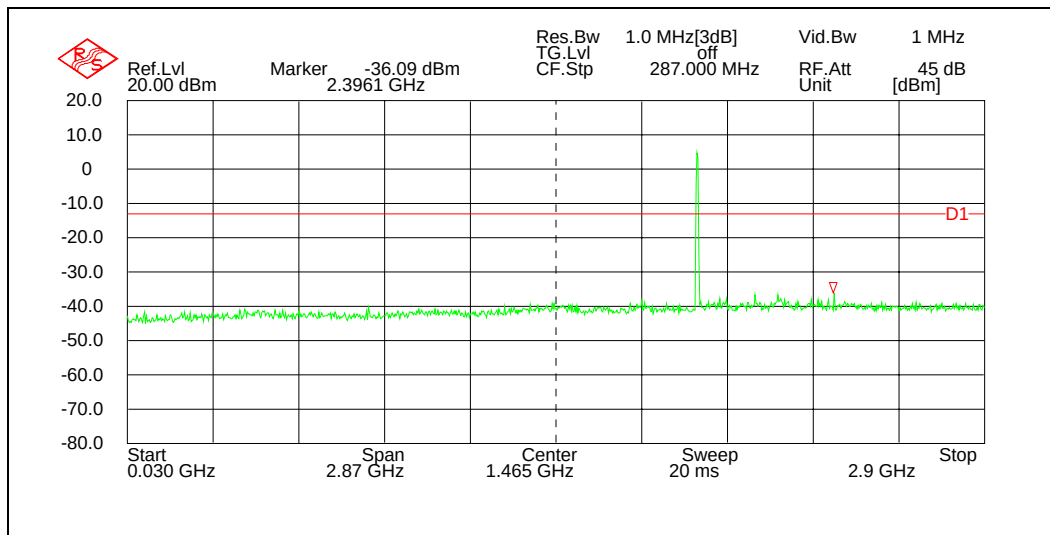


Figure 128: Intermodulation Downlink TDMA Low Band-edge - 30 MHz to 2.9 GHz

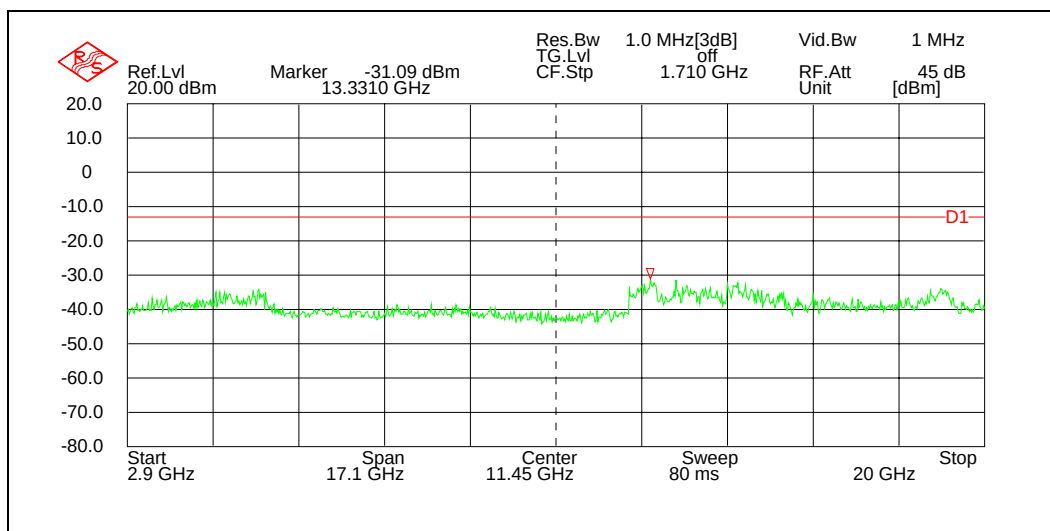


Figure 129: Intermodulation Downlink TDMA Low Band-edge - 2.9 to 20 GHz

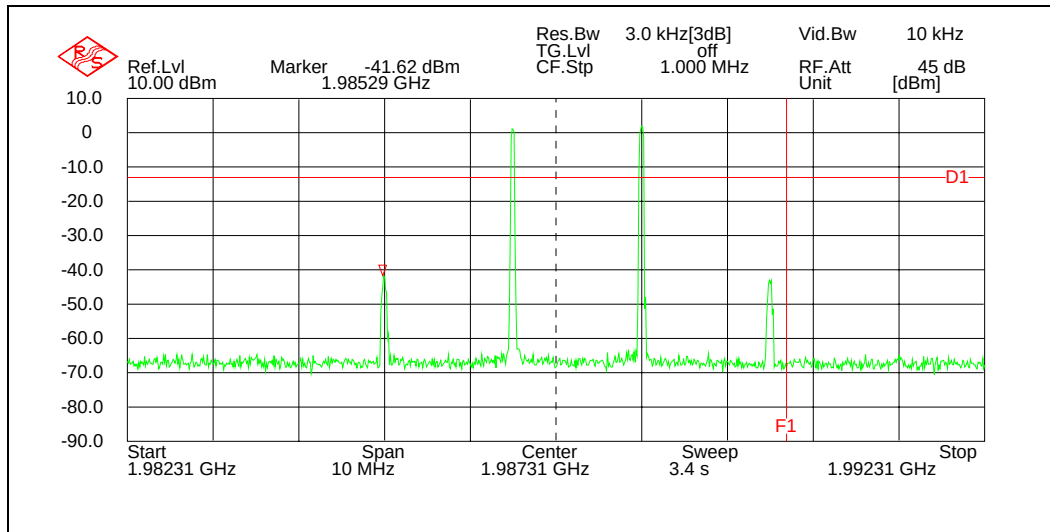


Figure 130: Intermodulation Downlink TDMA High Band-edge

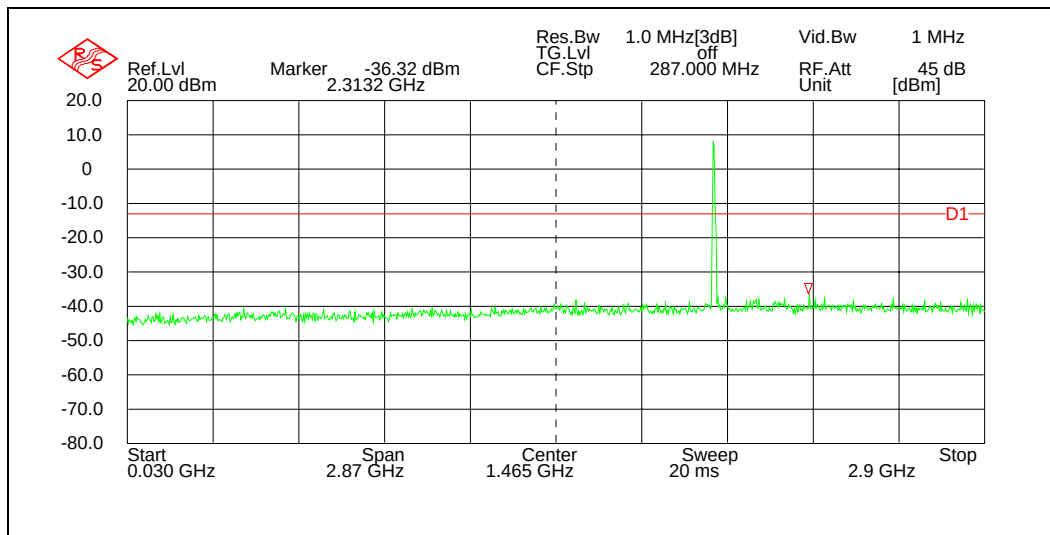


Figure 131: Intermodulation Downlink TDMA High Band-edge - 30 MHz to 2.9 GHz

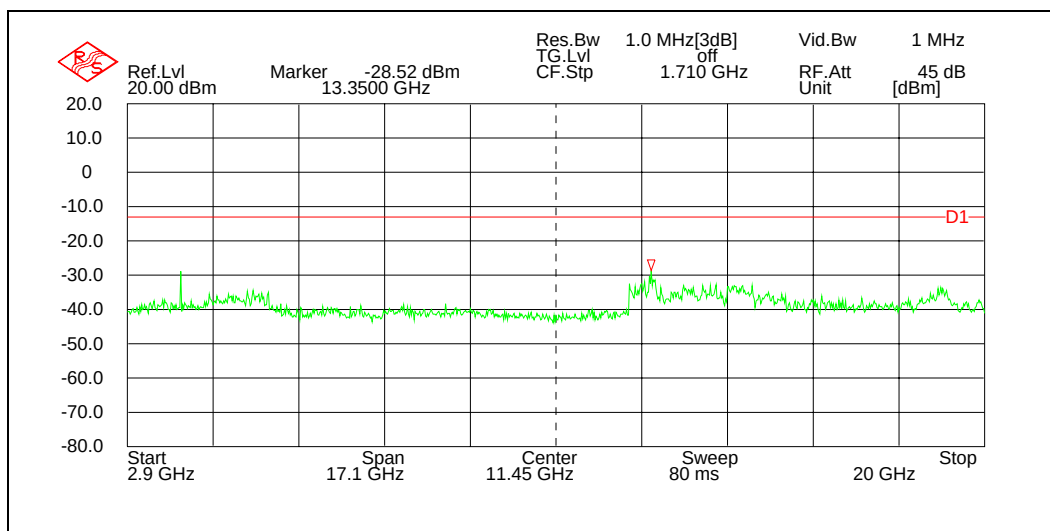


Figure 132: Intermodulation Downlink TDMA High Band-edge – 2.9 to 20 GHz

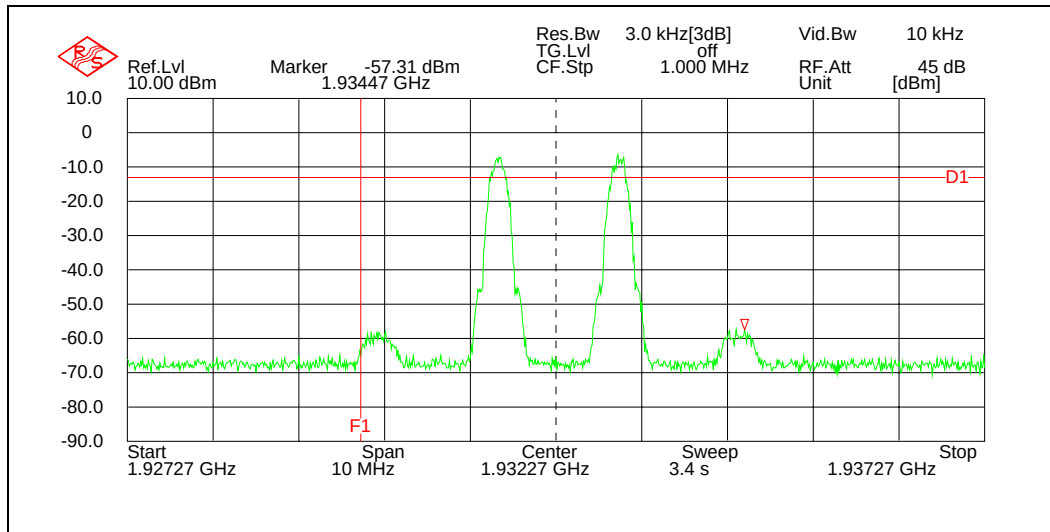


Figure 133: Intermodulation Downlink GSM Low Band-edge

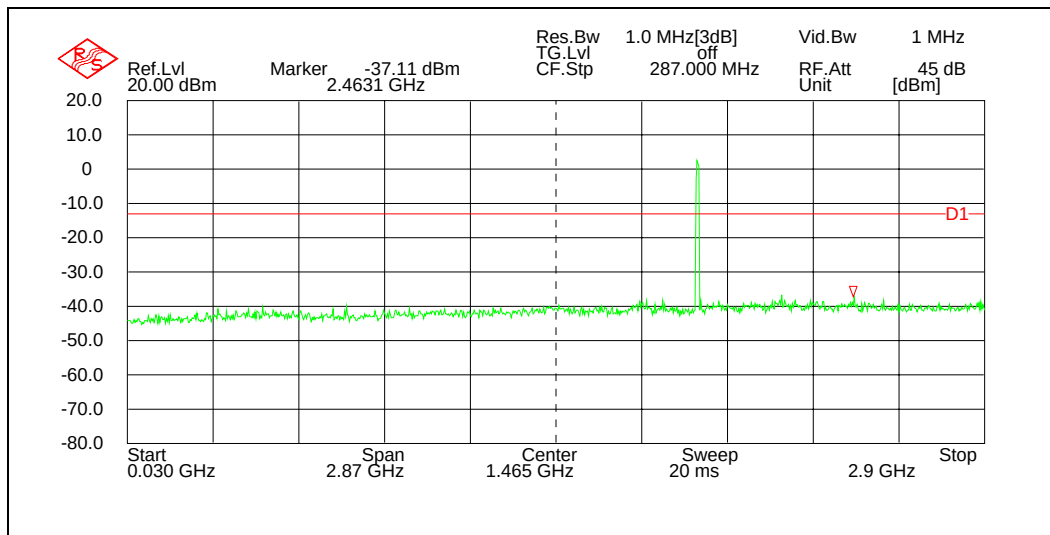


Figure 134: Intermodulation Downlink GSM Low Band-edge - 30 MHz to 2.9 GHz

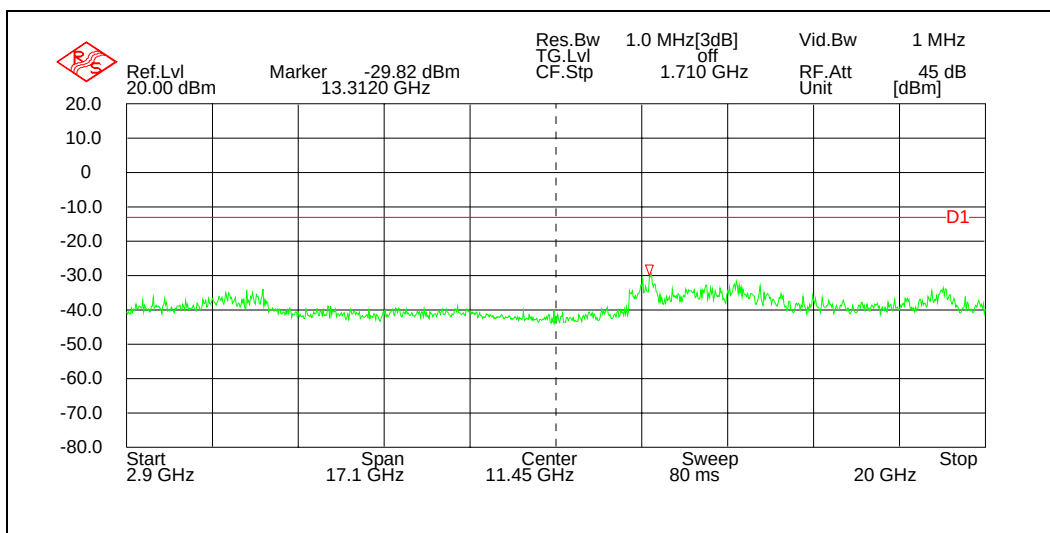


Figure 135: Intermodulation Downlink GSM Low Band-edge – 2.9 to 20 GHz

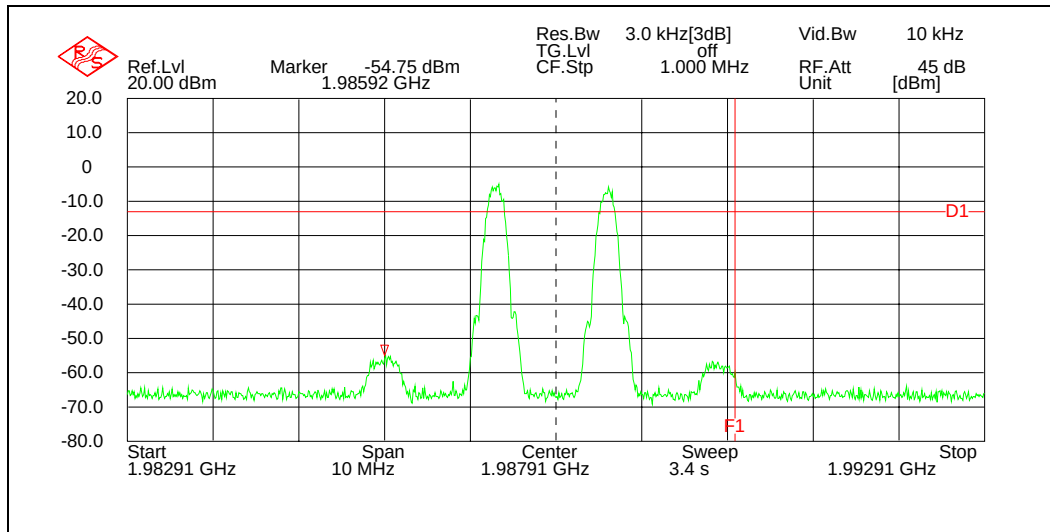


Figure 136: Intermodulation Downlink GSM High Band-edge

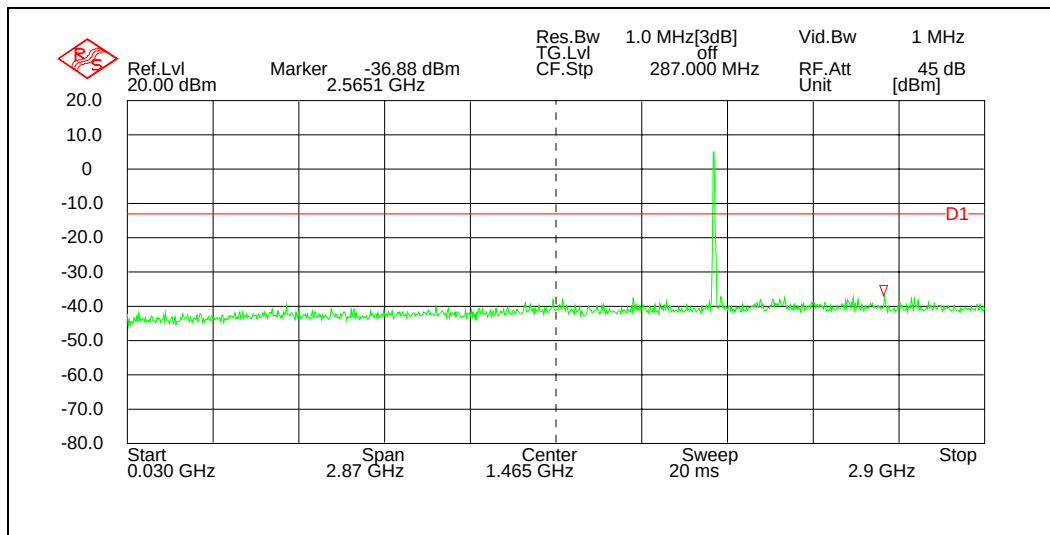


Figure 137: Intermodulation Downlink GSM High Band-edge - 30 MHz to 2.9 GHz

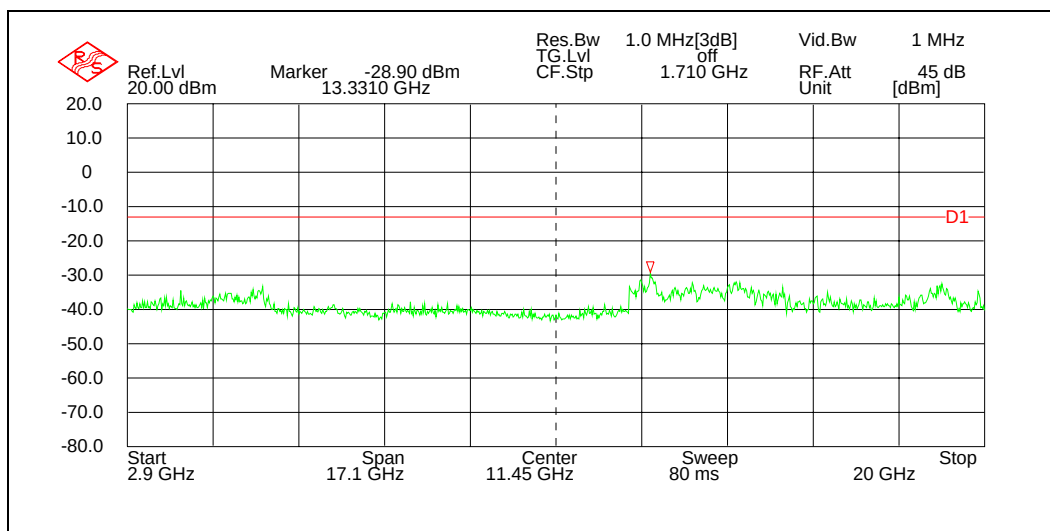


Figure 138: Intermodulation Downlink GSM High Band-edge – 2.9 to 20 GHz