

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

Table of Contents

1.0 RF Power Output	
1.1 CDMA Uplink	3
1.2 TDMA Uplink	4
1.3 GSM Uplink	5
1.4 CDMA Downlink	6
1.5 TDMA Downlink	7
1.6 GSM Downlink	8
2.0 Occupied Bandwidth	
2.1 CDMA Uplink	9
2.2 TDMA Uplink	11
2.3 GSM Uplink	13
2.4 CDMA Downlink	15
2.5 TDMA Downlink	17
2.6 GSM Downlink	19
3.0 Spurious Emissions at Antenna Terminals	
3.1 CDMA Uplink	21
3.2 TDMA Uplink	23
3.3 GSM Uplink	25
3.4 CDMA Downlink	27
3.5 TDMA Downlink	29
3.6 GSM Downlink	31
4.0 Band-edge	
4.1 CDMA Uplink	33
4.2 TDMA Uplink	33
4.3 GSM Uplink	34
4.4 CDMA Downlink	35
4.5 TDMA Downlink	35
4.6 GSM Downlink	36
5.0 Intermodulation Products	
5.1 CDMA Uplink	37
5.2 TDMA Uplink	39
5.3 GSM Uplink	41
5.4 CDMA Downlink	43
5.5 TDMA Downlink	45
5.6 GSM Downlink	47

1.0 RF Power Output

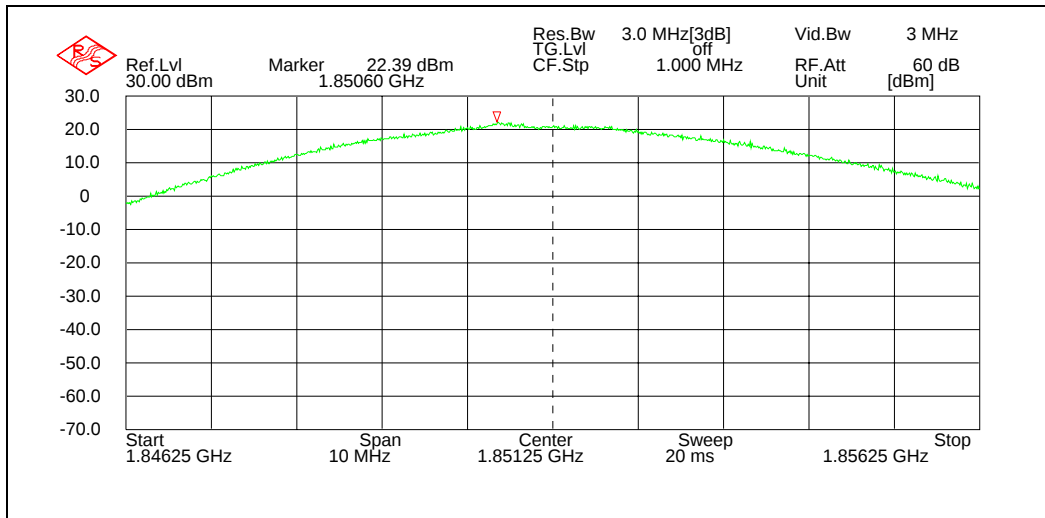


Figure 1: Peak Output Power Uplink CDMA Low Channel

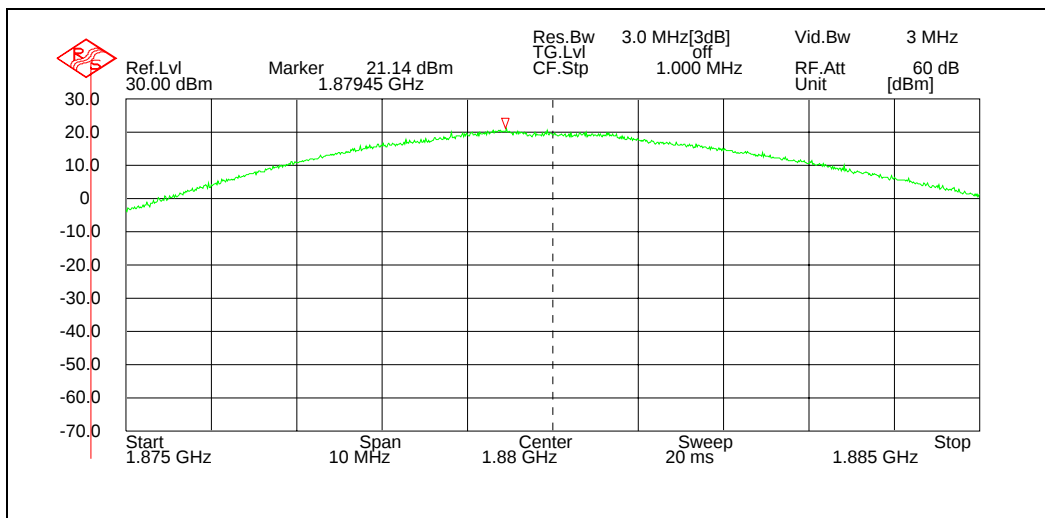


Figure 2: Peak Output Power Uplink CDMA Mid Channel

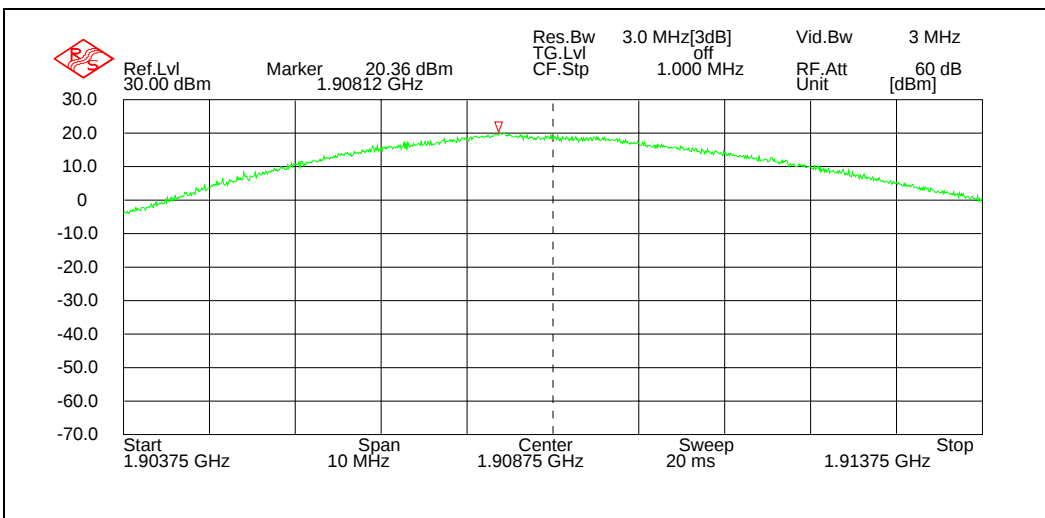


Figure 3: Peak Output Power Uplink CDMA High Channel

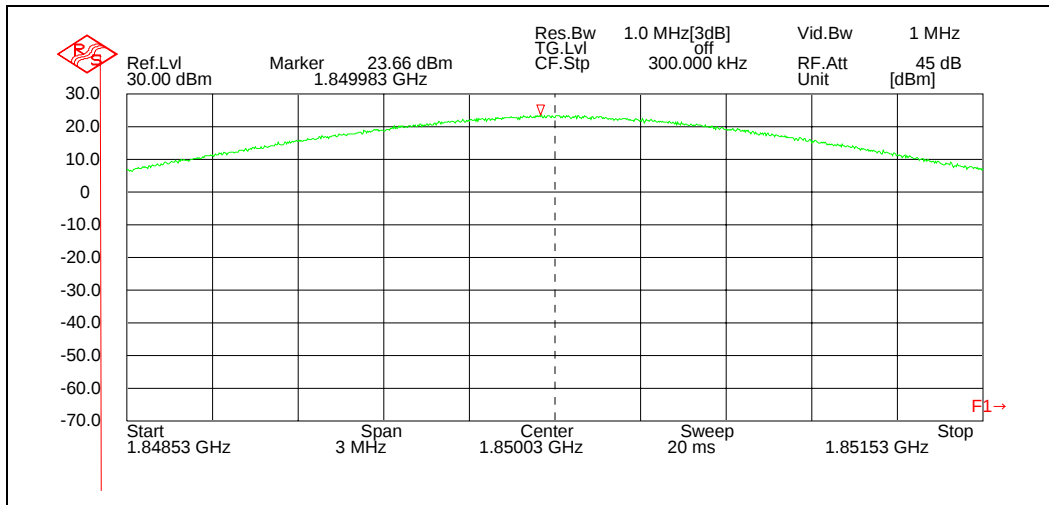


Figure 4: Peak Output Power Uplink TDMA Low Channel

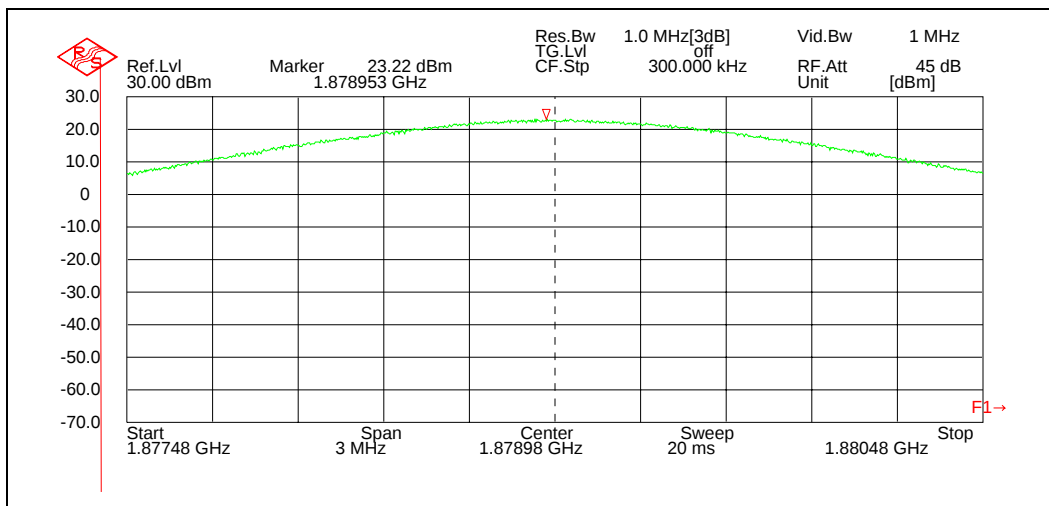


Figure 5: Peak Output Power Uplink TDMA Mid Channel

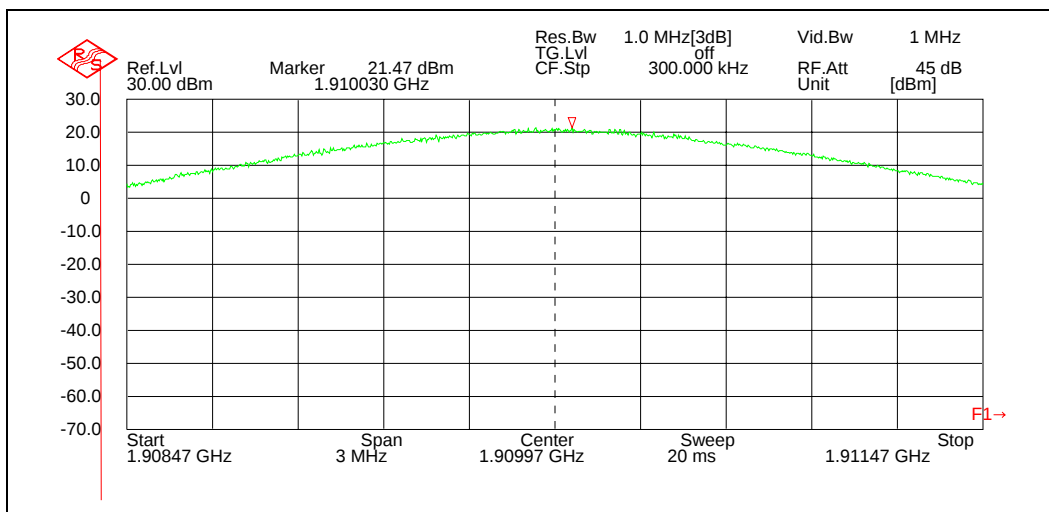


Figure 6: Peak Output Power Uplink TDMA High Channel

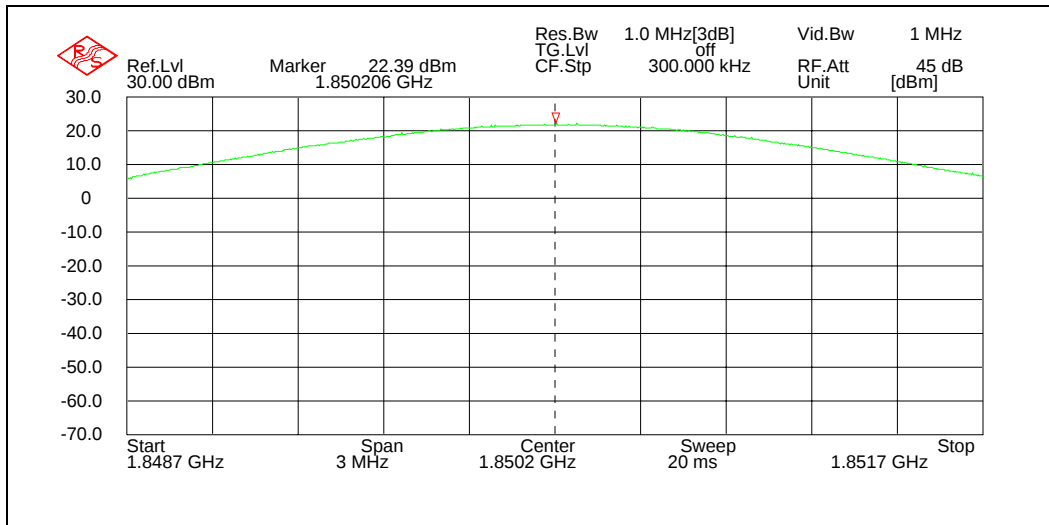


Figure 7: Peak Output Power Uplink GSM Low Channel

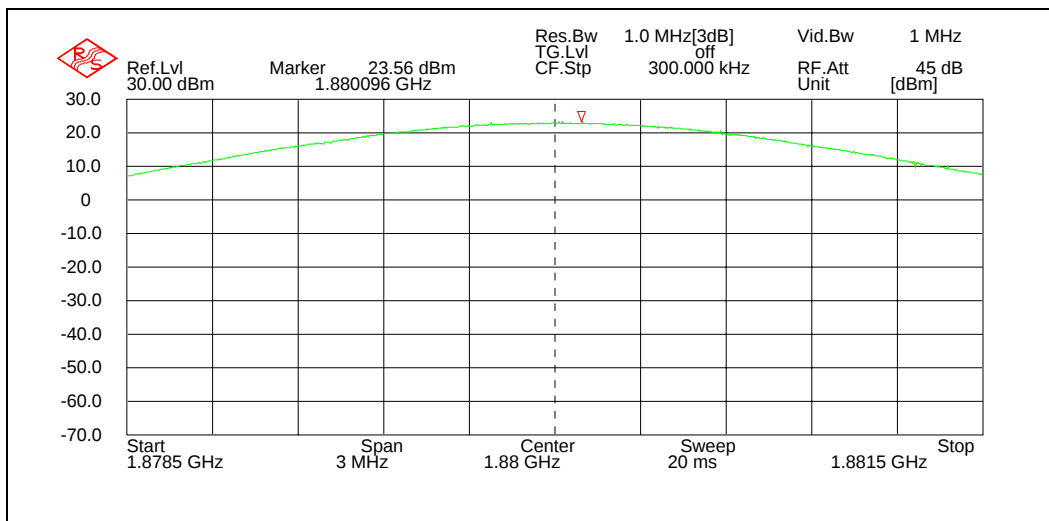


Figure 8: Peak Output Power Uplink GSM Mid Channel

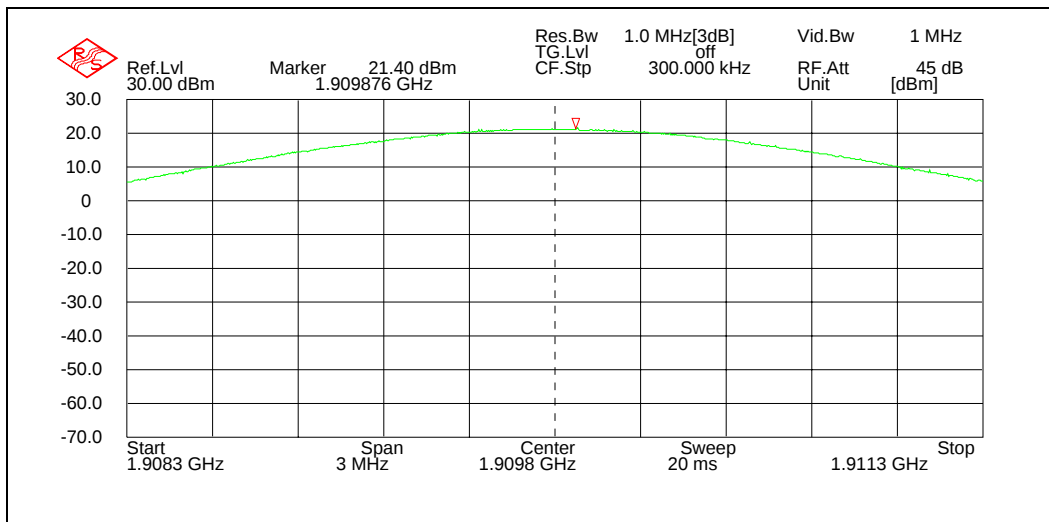


Figure 9: Peak Output Power Uplink GSM High Channel

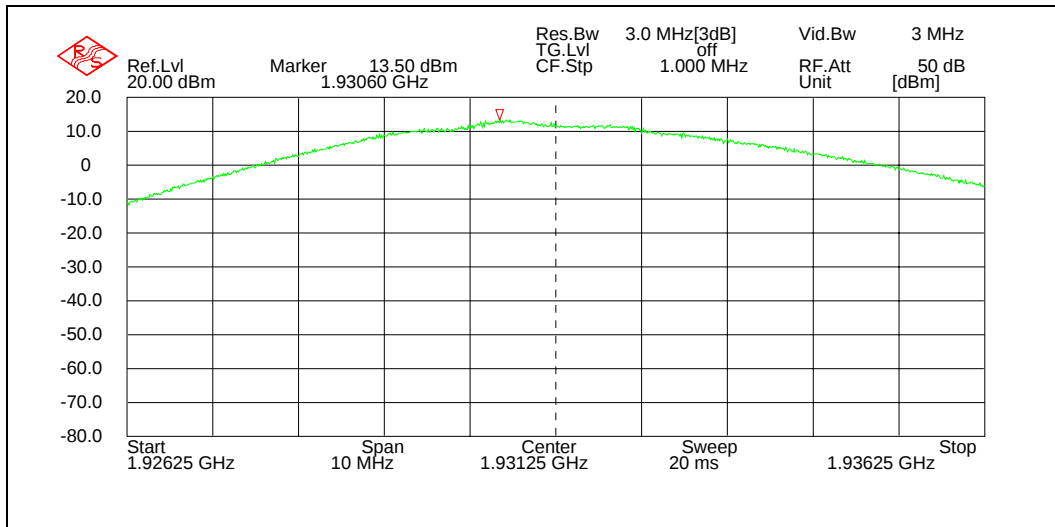


Figure 10: Peak Output Power Downlink CDMA Low Channel

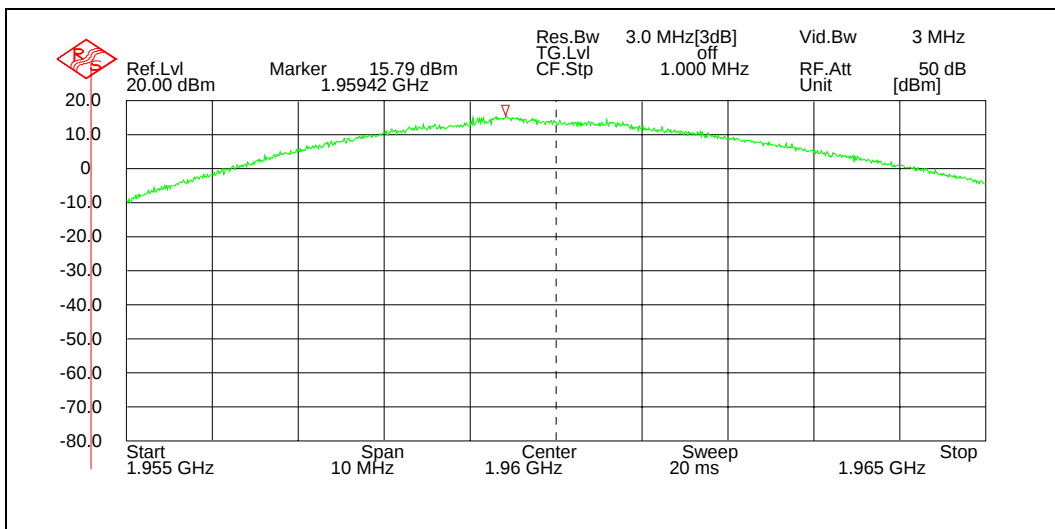


Figure 11: Peak Output Power Downlink CDMA Mid Channel

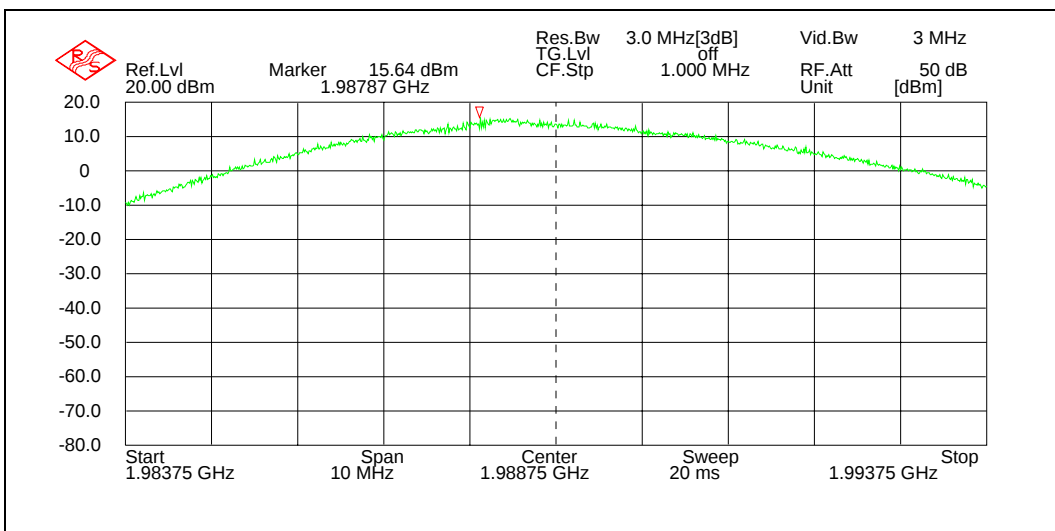


Figure 12: Peak Output Power Downlink CDMA High Channel

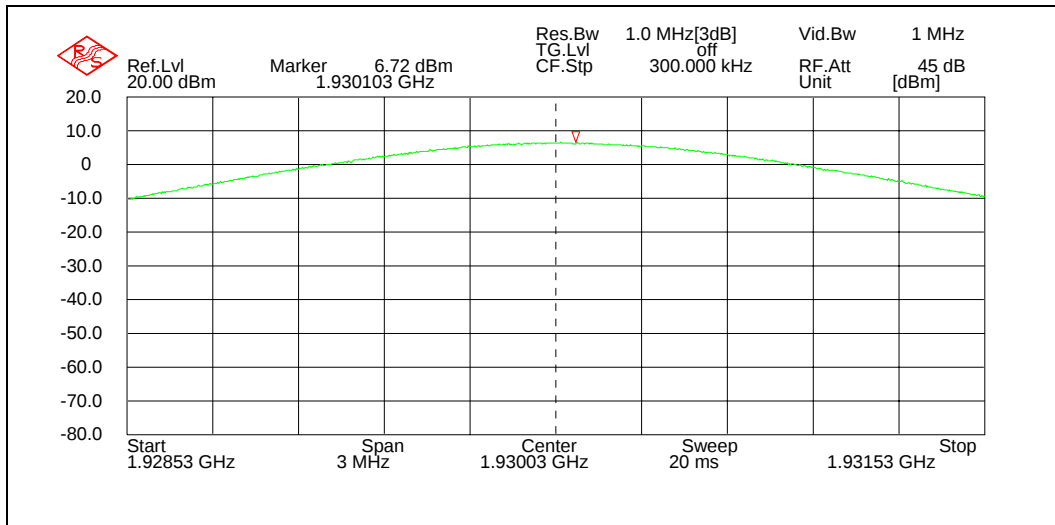


Figure 13: Peak Output Power Downlink TDMA Low Channel

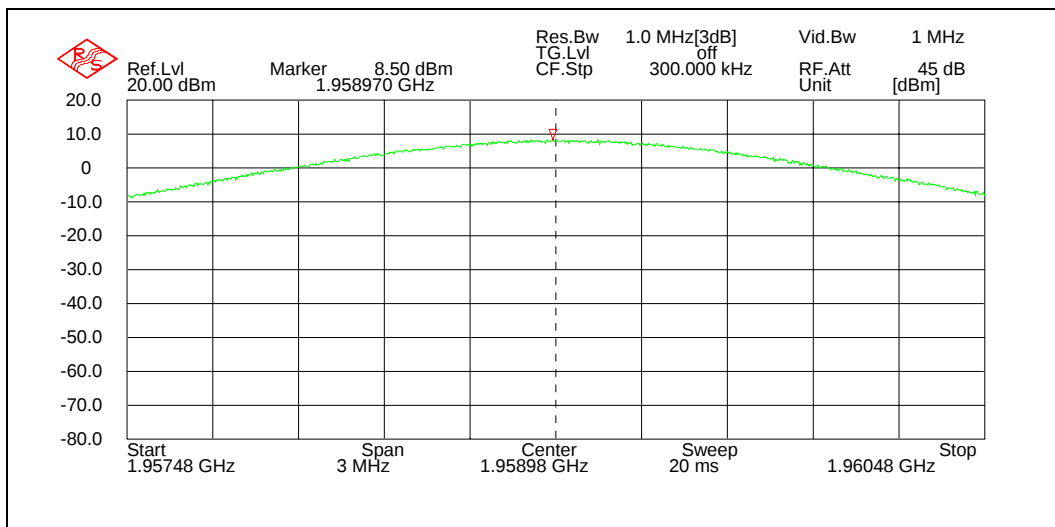


Figure 14: Peak Output Power Downlink TDMA Mid Channel

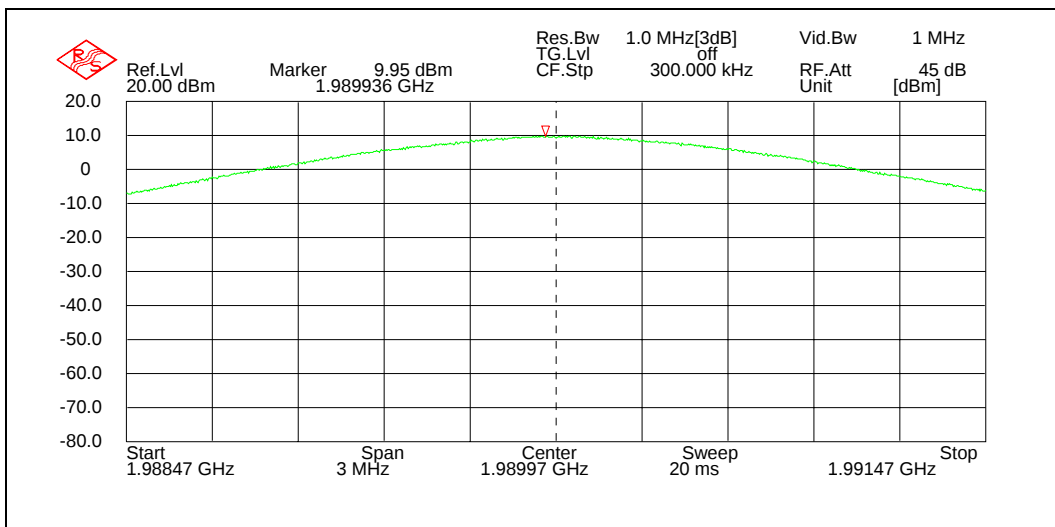


Figure 15: Peak Output Power Downlink TDMA High Channel

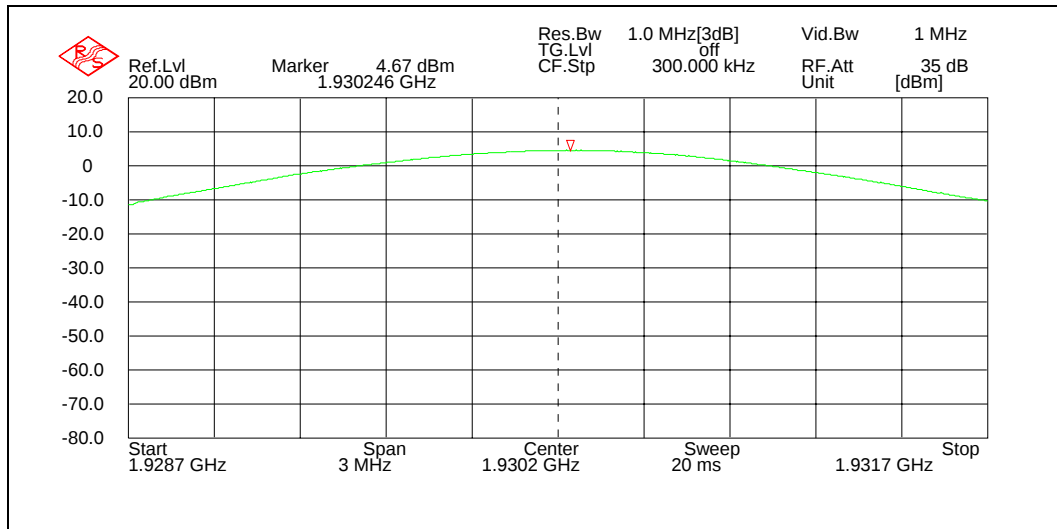


Figure 16: Peak Output Power Downlink GSM Low Channel

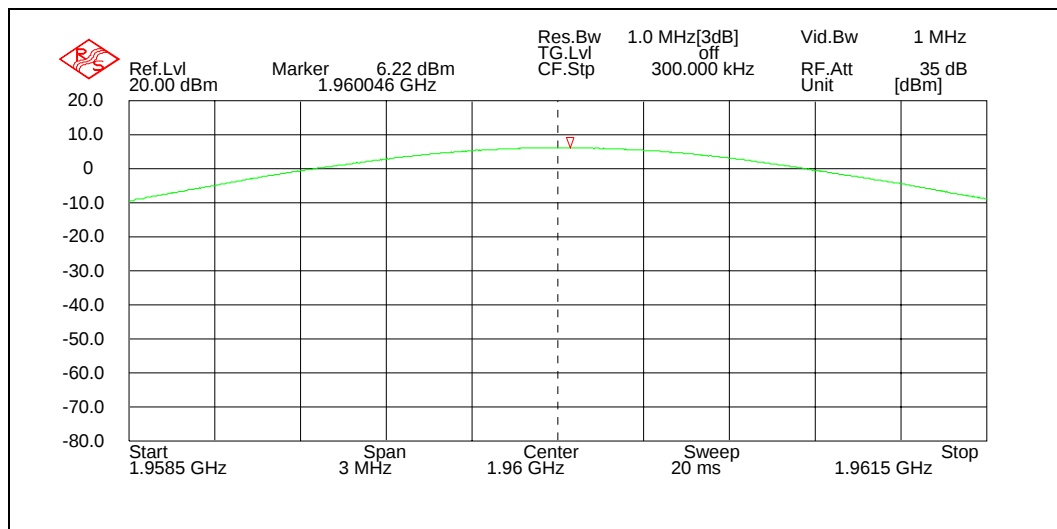


Figure 17: Peak Output Power Downlink GSM Mid Channel

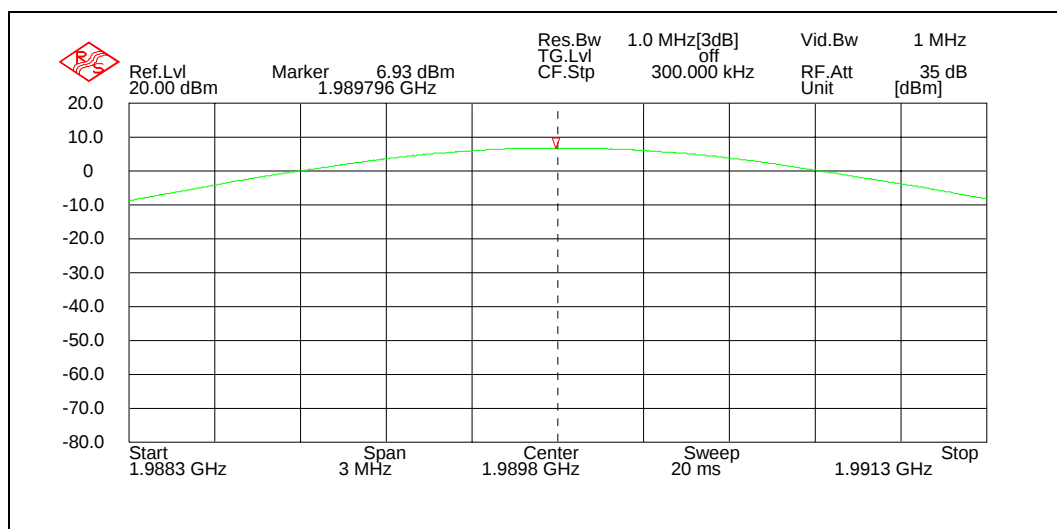


Figure 18: Peak Output Power Downlink GSM High Channel

2.0 Occupied Bandwidth

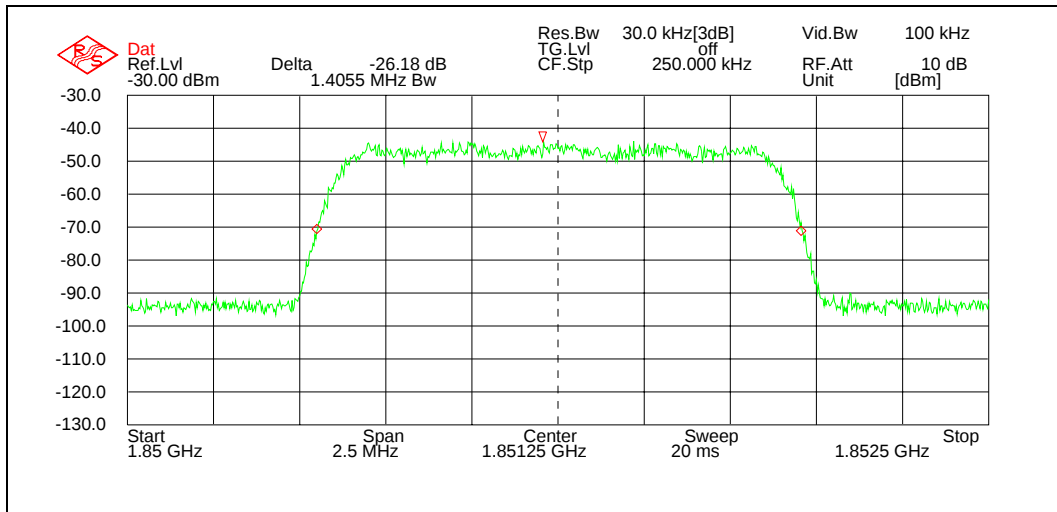


Figure 19: Occupied Bandwidth - Input Uplink CDMA Low Channel

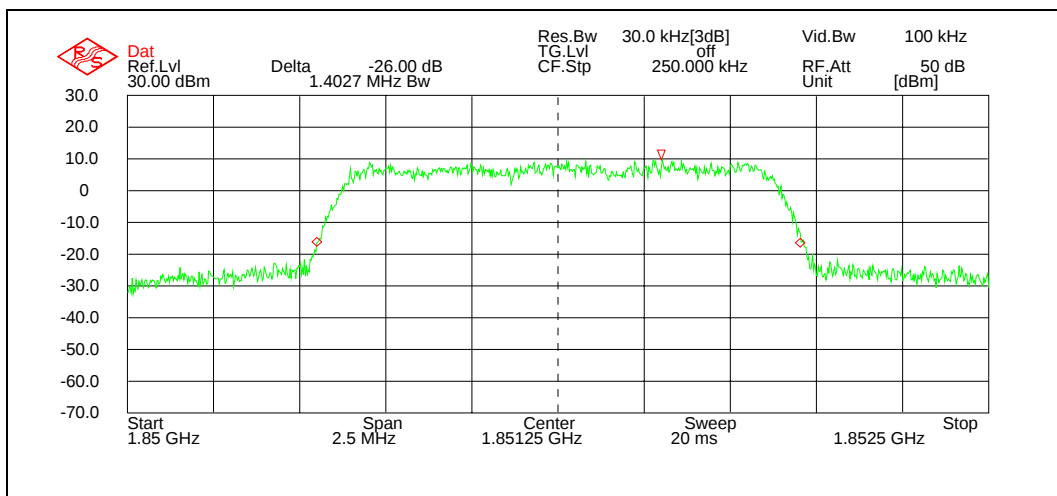


Figure 20: Occupied Bandwidth - Output Uplink CDMA Low Channel

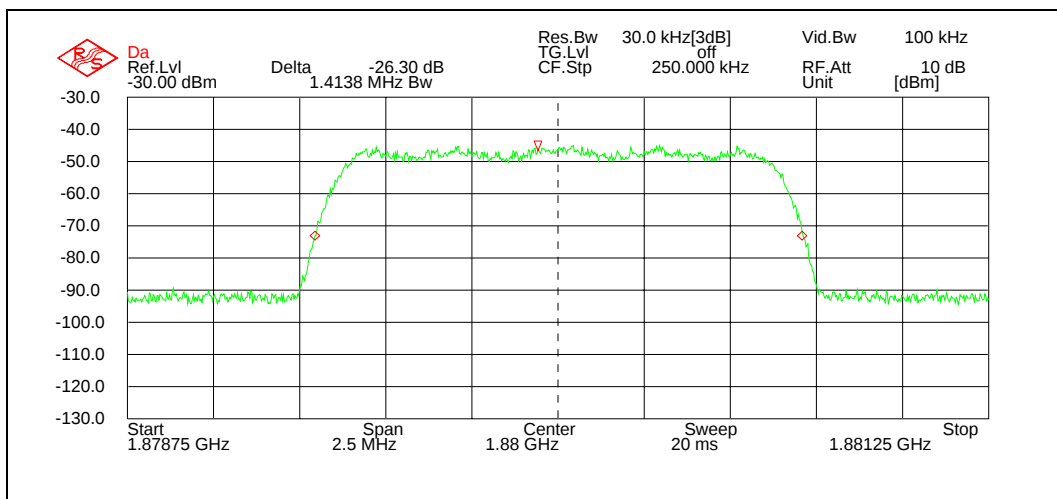
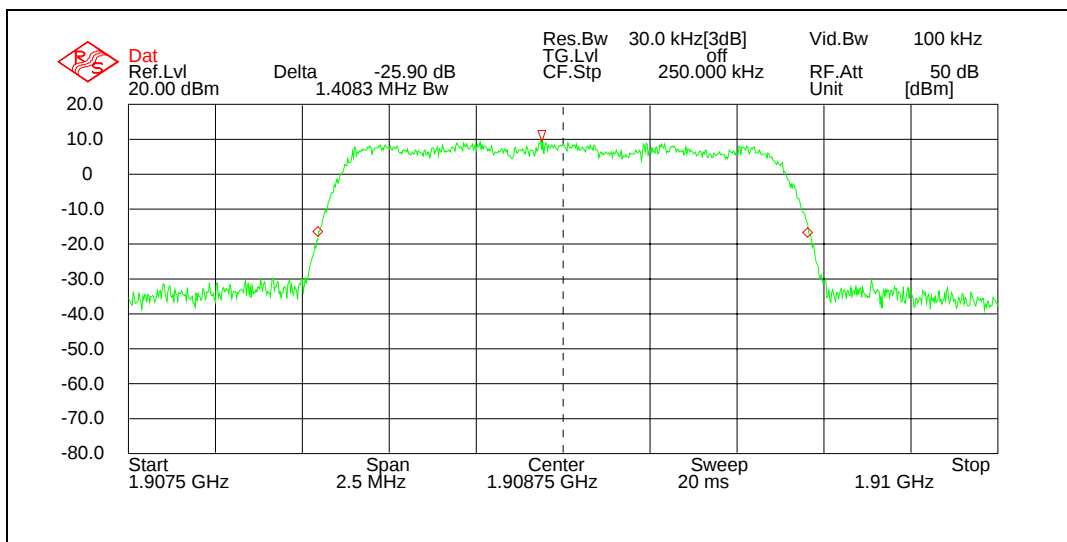
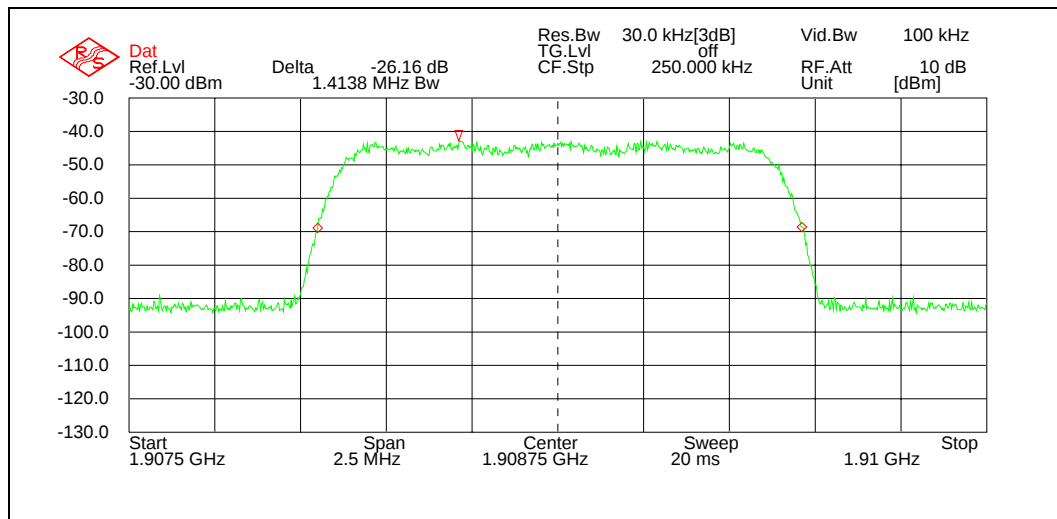
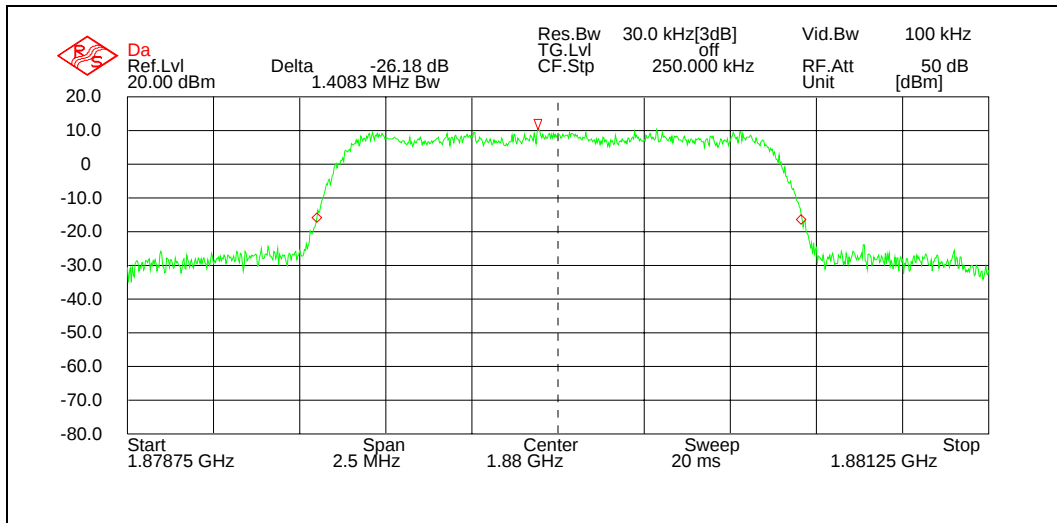


Figure 21: Occupied Bandwidth - Input Uplink CDMA Mid Channel



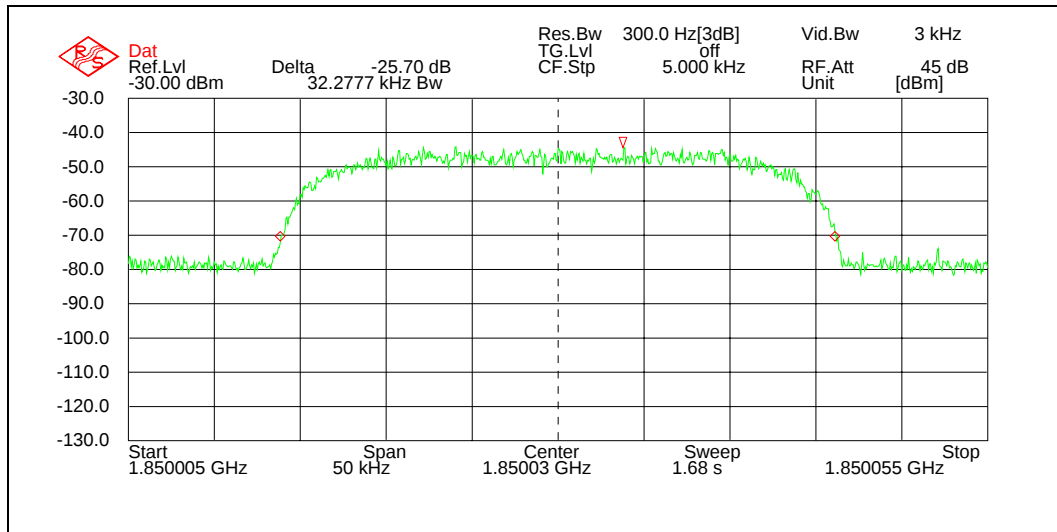


Figure 25: Occupied Bandwidth - Input Uplink TDMA Low Channel

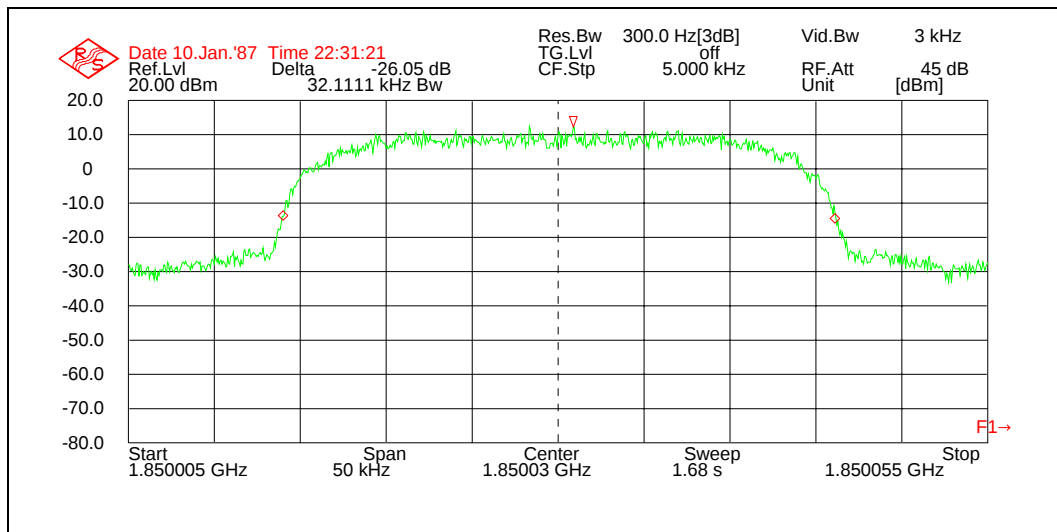


Figure 26: Occupied Bandwidth - Output Uplink TDMA Low Channel

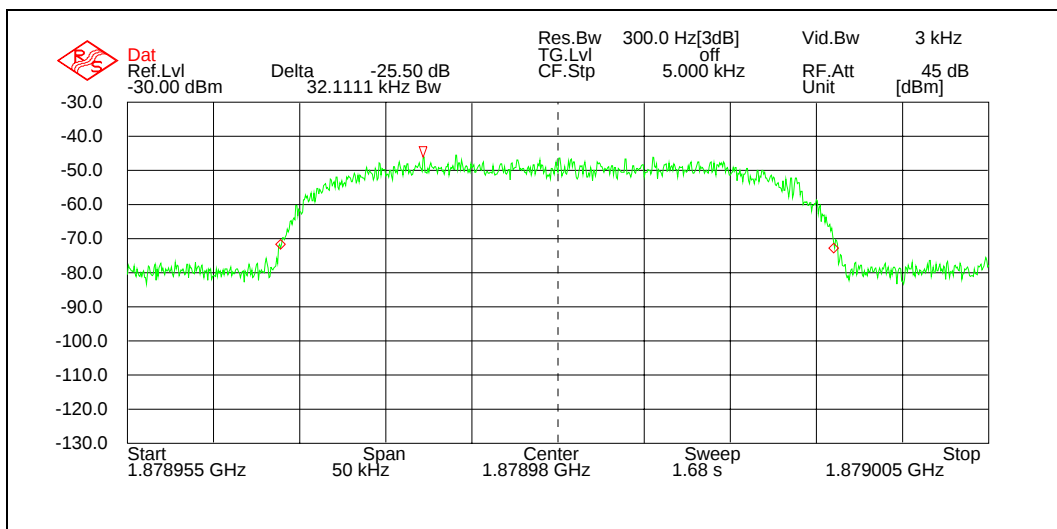


Figure 27: Occupied Bandwidth - Input Uplink TDMA Mid Channel

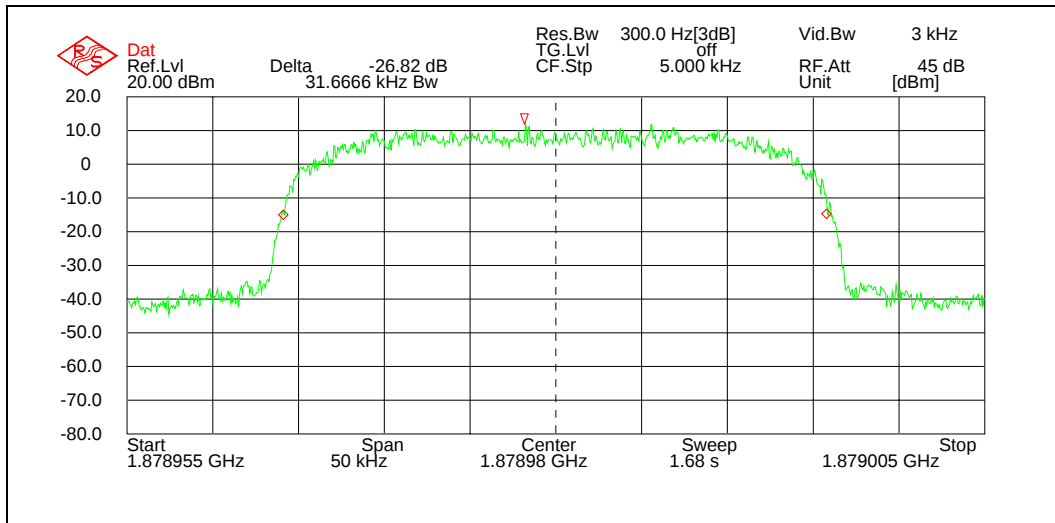


Figure 28: Occupied Bandwidth - Output Uplink TDMA Mid Channel

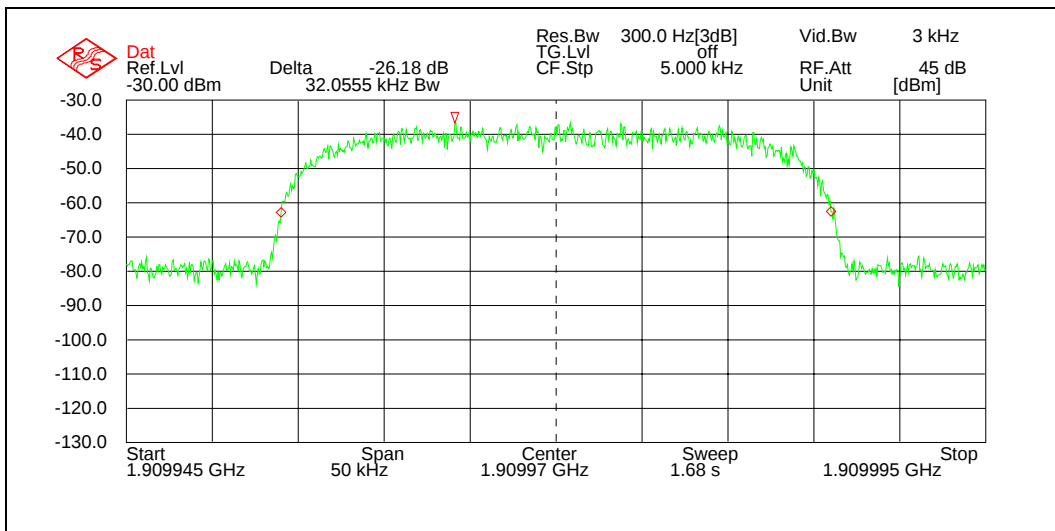


Figure 29: Occupied Bandwidth - Input Uplink TDMA High Channel

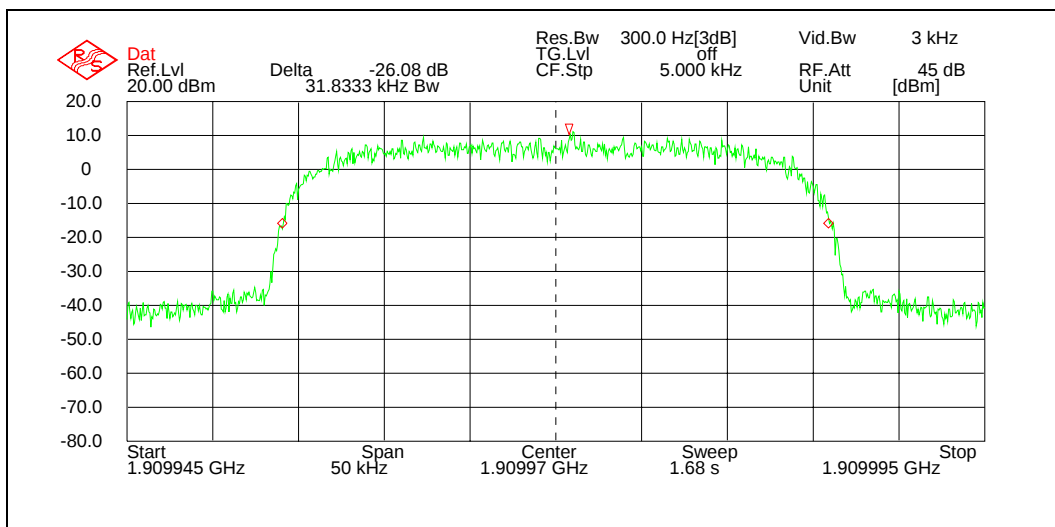


Figure 30: Occupied Bandwidth - Output Uplink TDMA High Channel

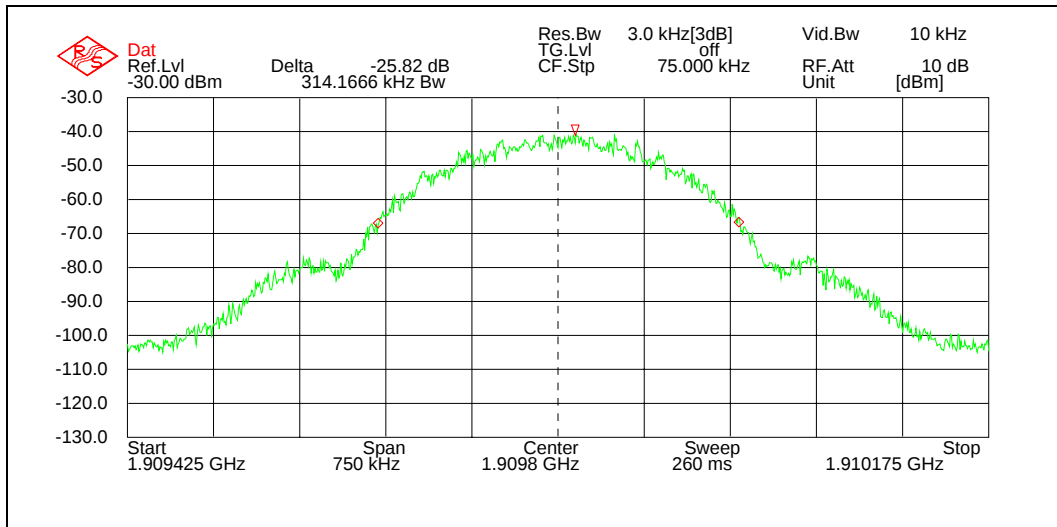


Figure 31: Occupied Bandwidth - Input Uplink GSM Low Channel

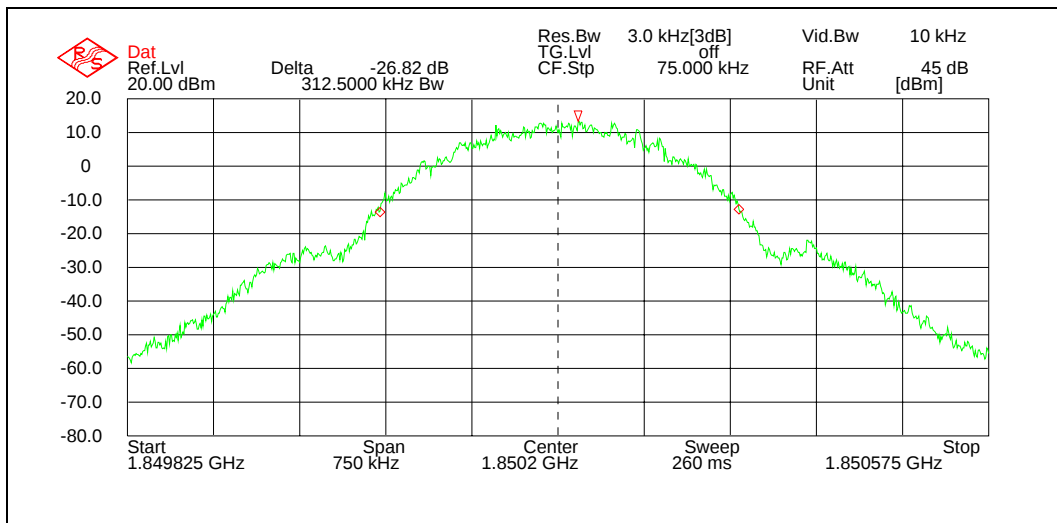


Figure 32: Occupied Bandwidth - Output Uplink GSM Low Channel

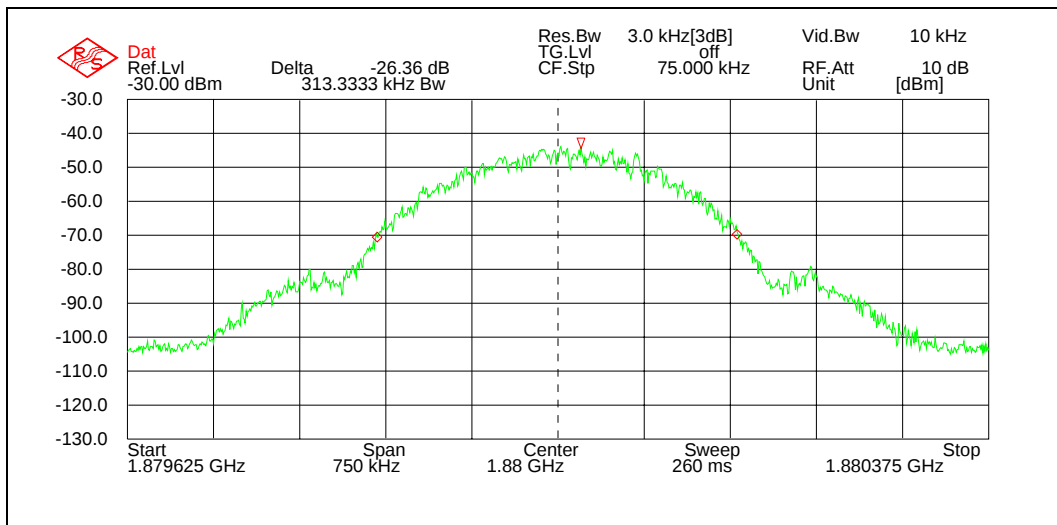


Figure 33: Occupied Bandwidth - Input Uplink GSM Mid Channel

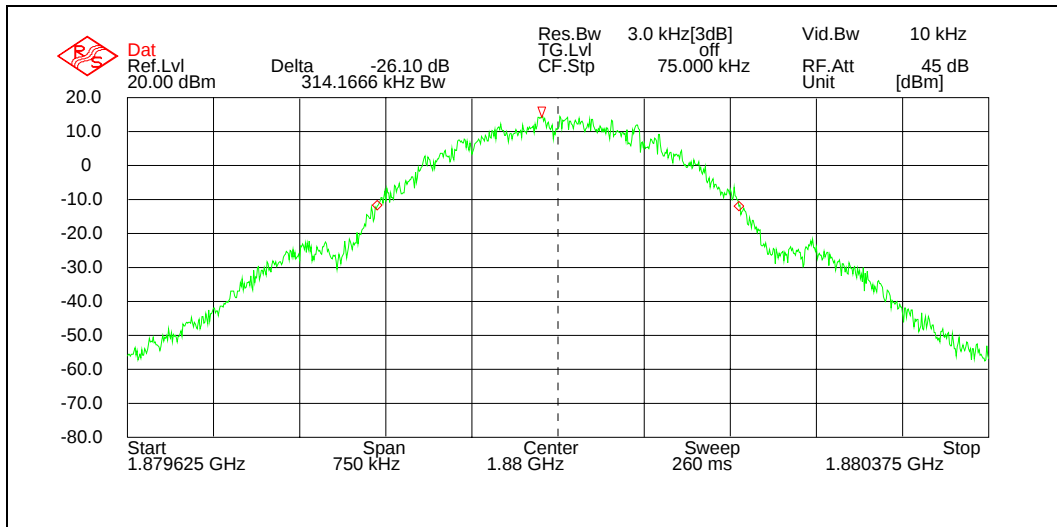


Figure 34: Occupied Bandwidth - Output Uplink GSM Mid Channel

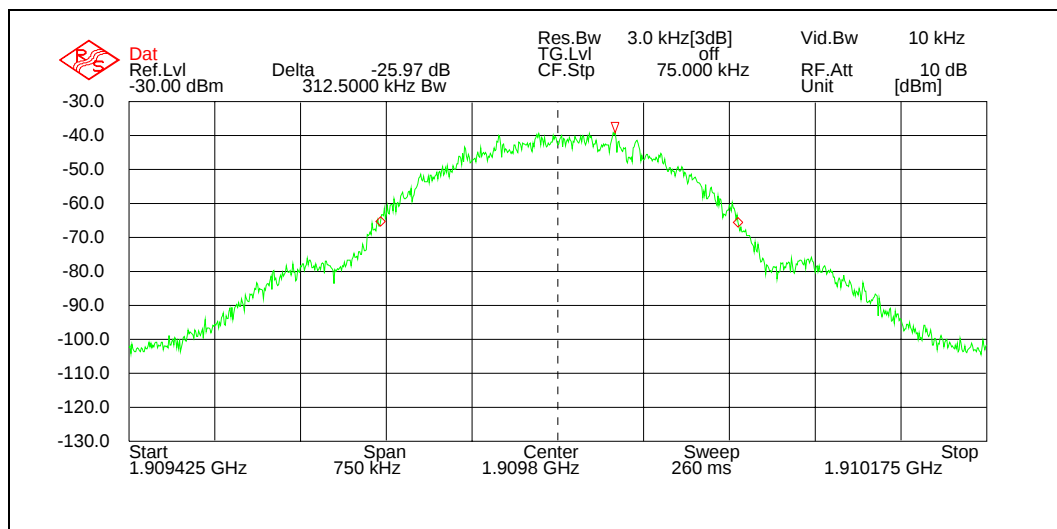


Figure 35: Occupied Bandwidth - Input Uplink GSM High Channel

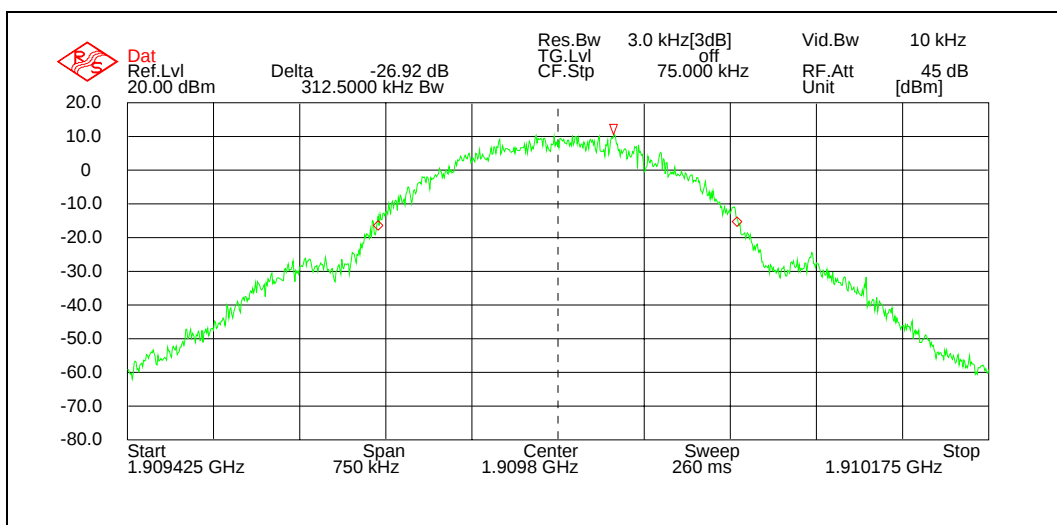


Figure 36: Occupied Bandwidth - Output Uplink GSM High Channel

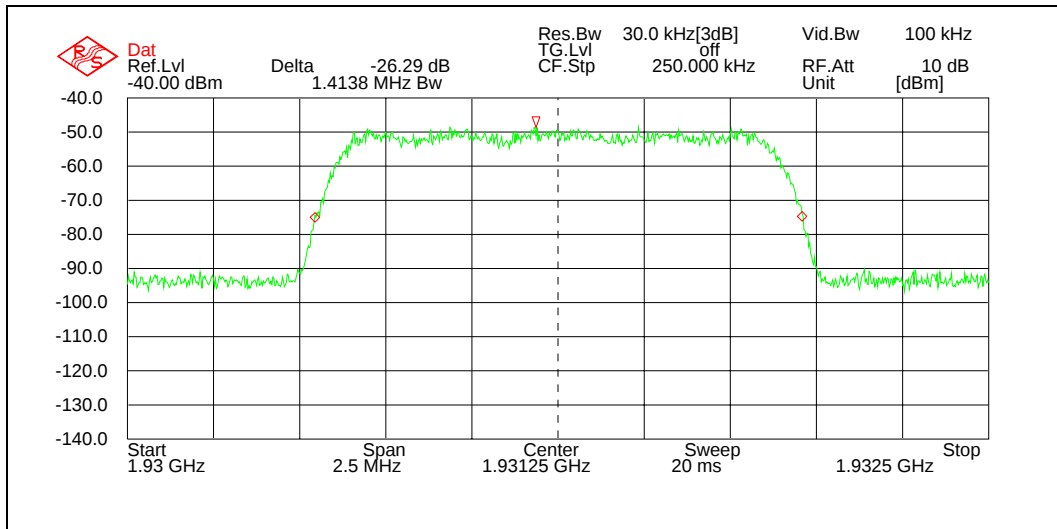


Figure 37: Occupied Bandwidth - Input Downlink CDMA Low Channel

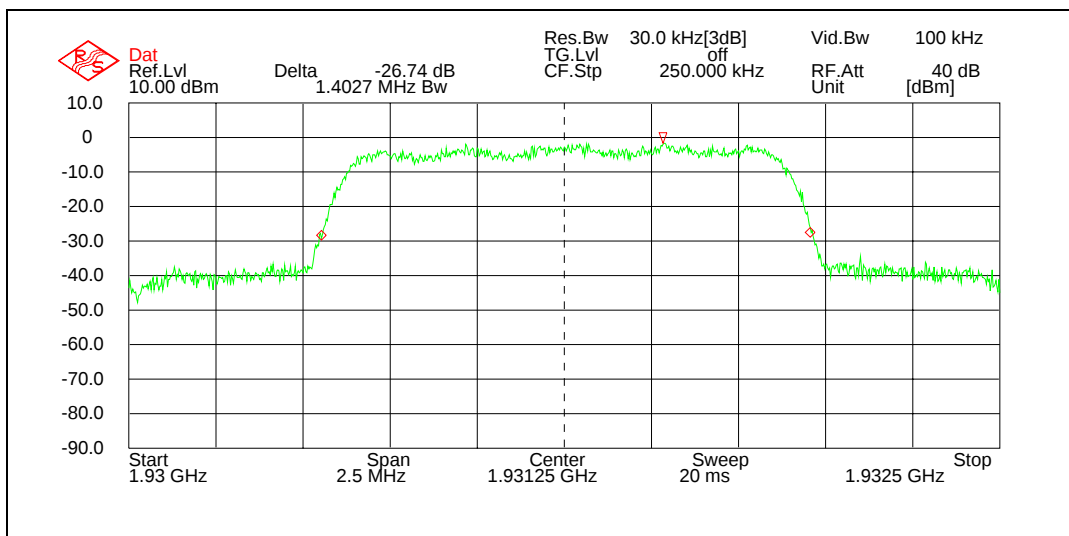


Figure 38: Occupied Bandwidth - Output Downlink CDMA Low Channel

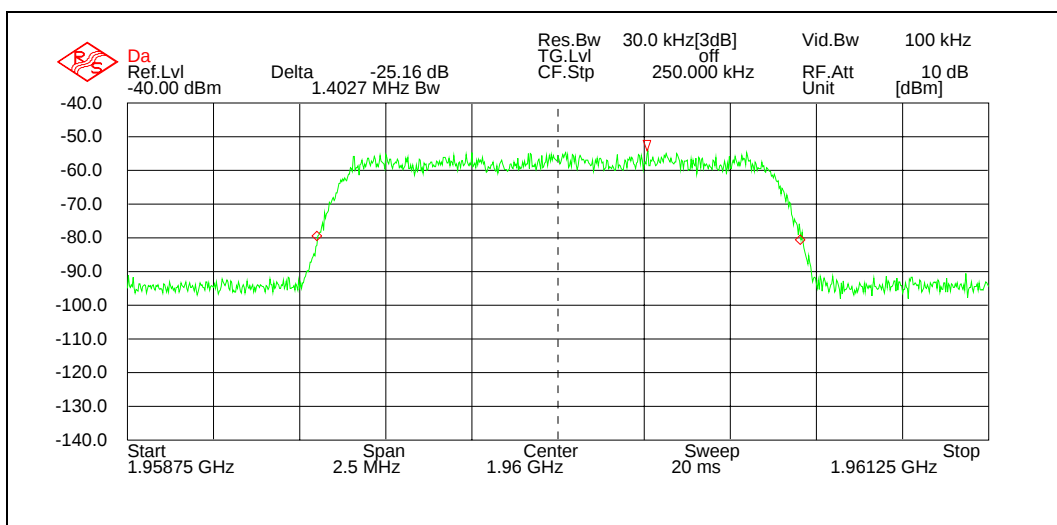


Figure 39: Occupied Bandwidth - Input Downlink CDMA Mid Channel

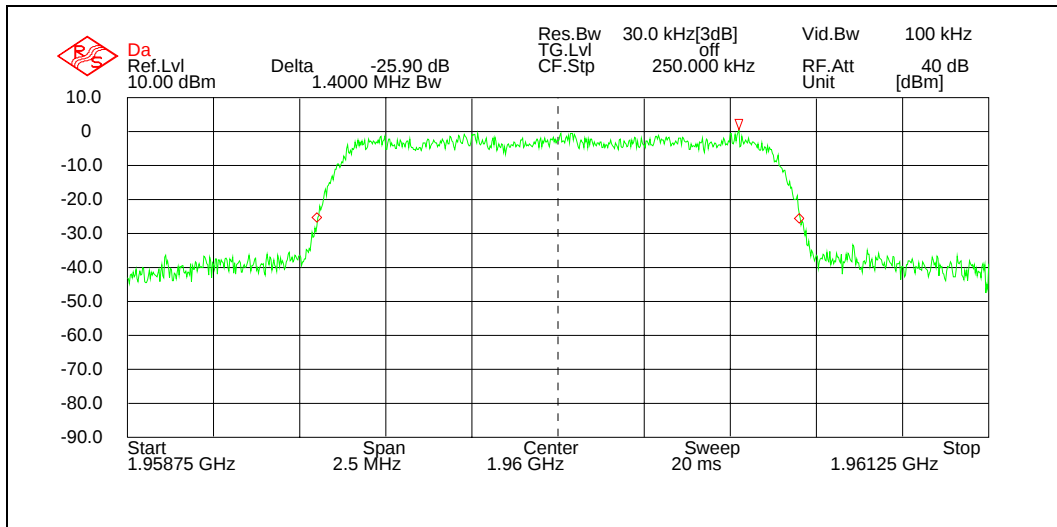


Figure 40: Occupied Bandwidth - Output Downlink CDMA Mid Channel

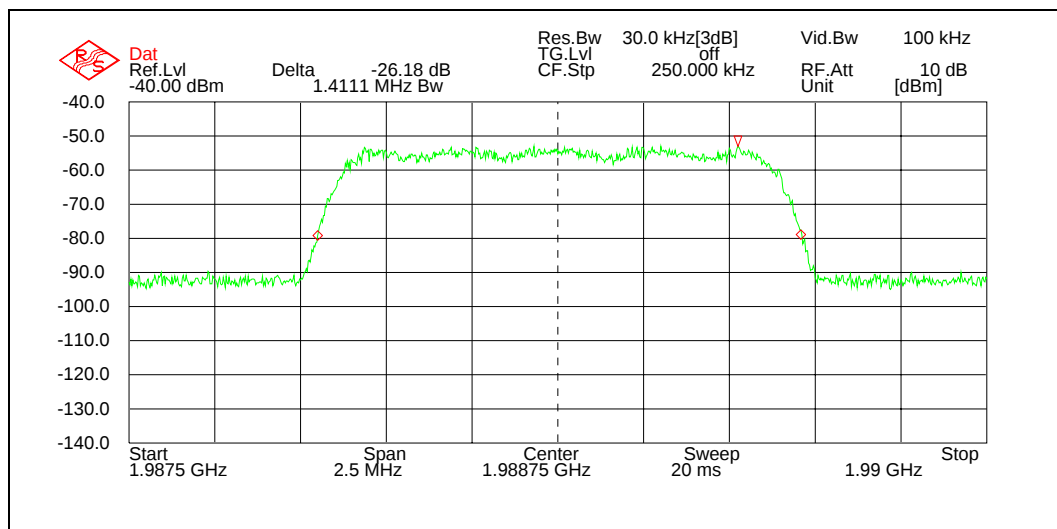


Figure 41: Occupied Bandwidth - Input Downlink CDMA High Channel

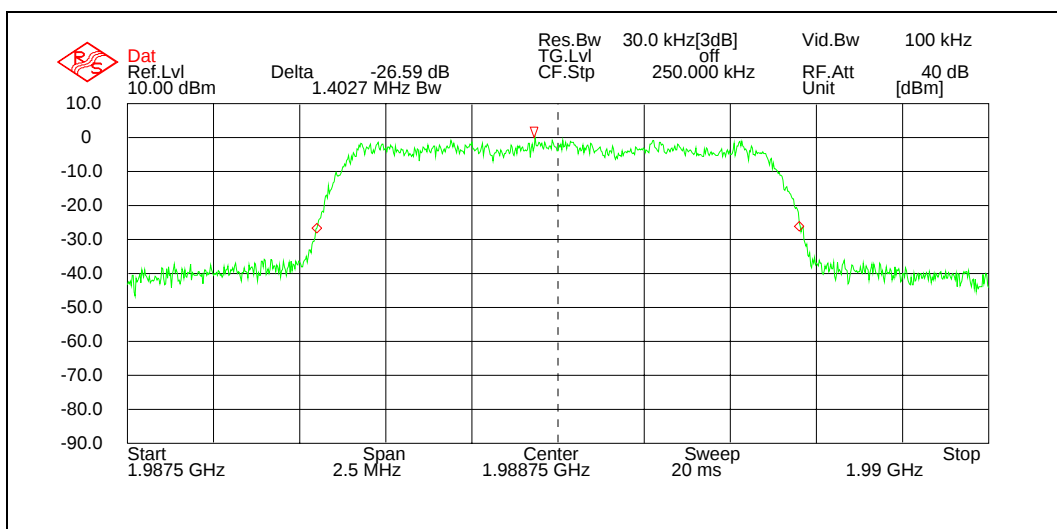


Figure 42: Occupied Bandwidth - Output Downlink CDMA High Channel

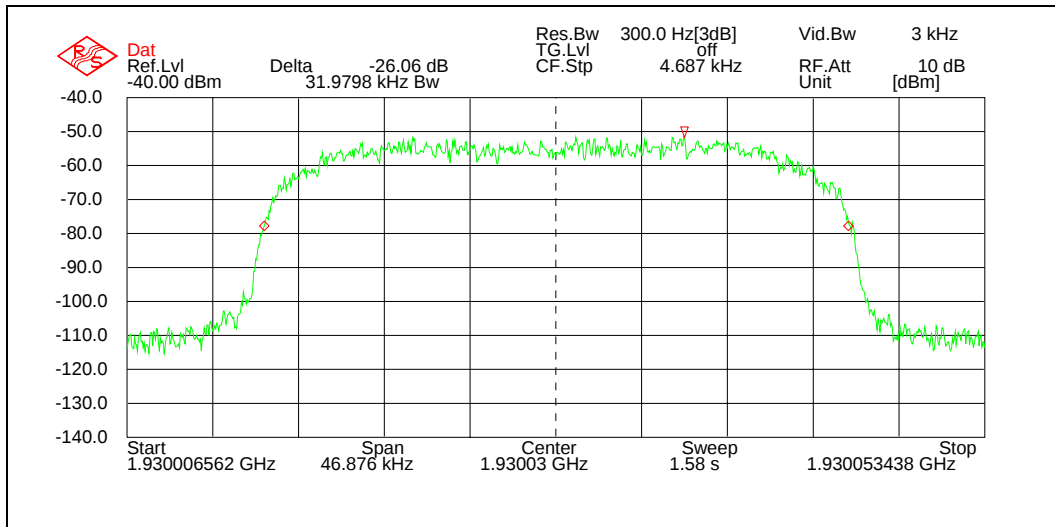


Figure 43: Occupied Bandwidth - Input Downlink TDMA Low Channel

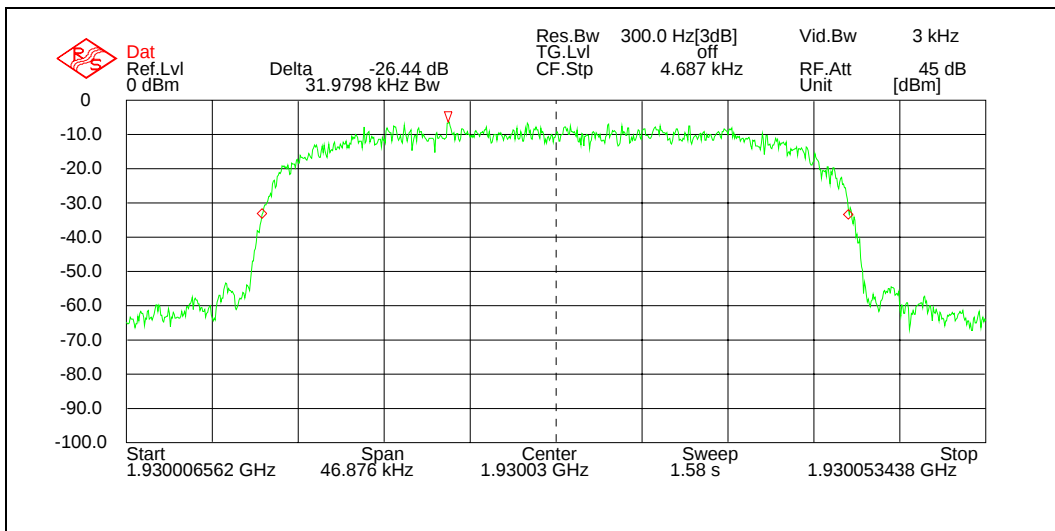


Figure 44: Occupied Bandwidth - Output Downlink TDMA Low Channel

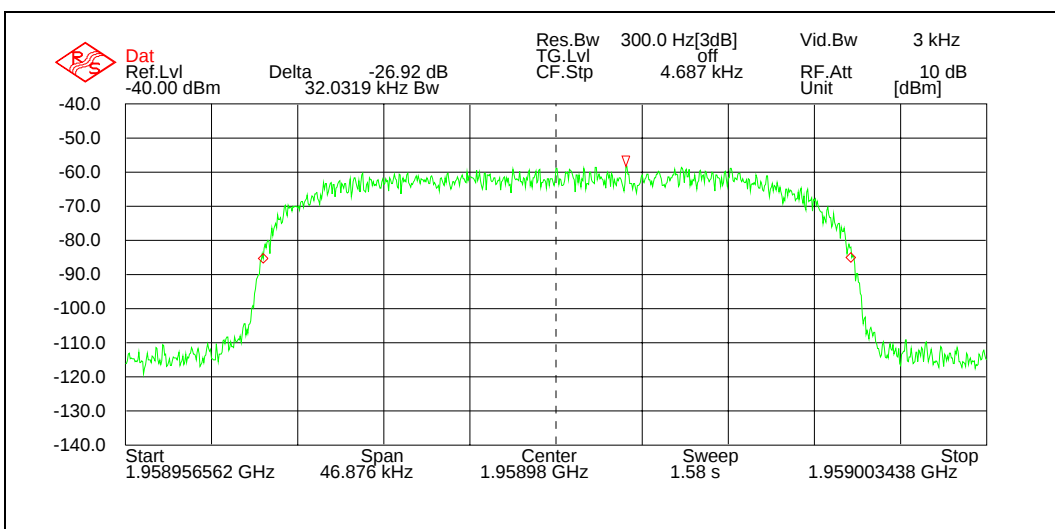


Figure 45: Occupied Bandwidth - Input Downlink TDMA Mid Channel

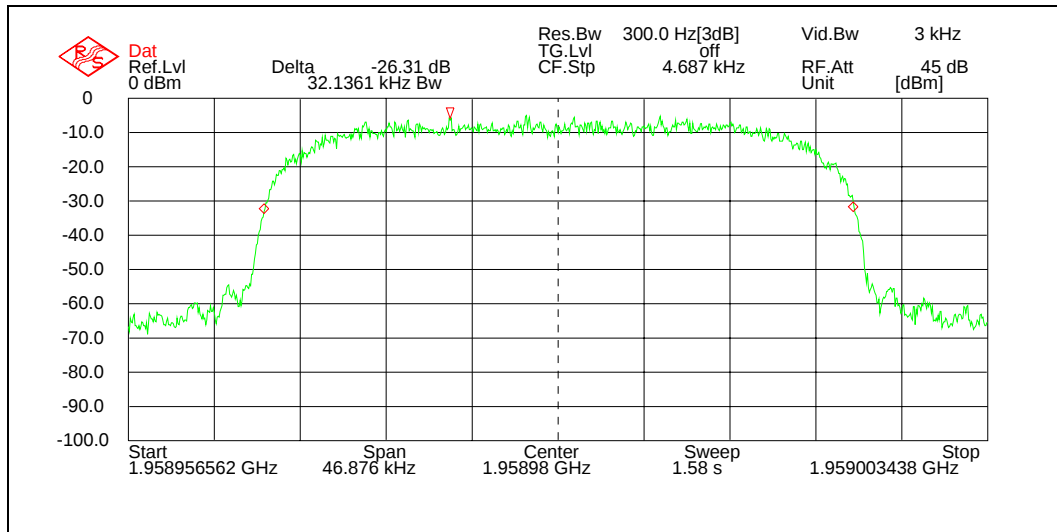


Figure 46: Occupied Bandwidth - Output Downlink TDMA Mid Channel

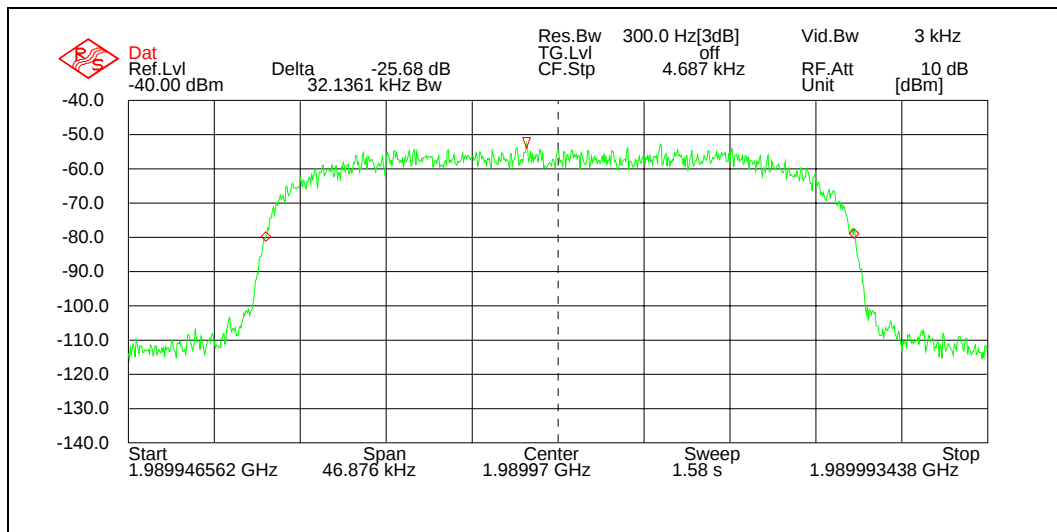


Figure 47: Occupied Bandwidth - Input Downlink TDMA High Channel

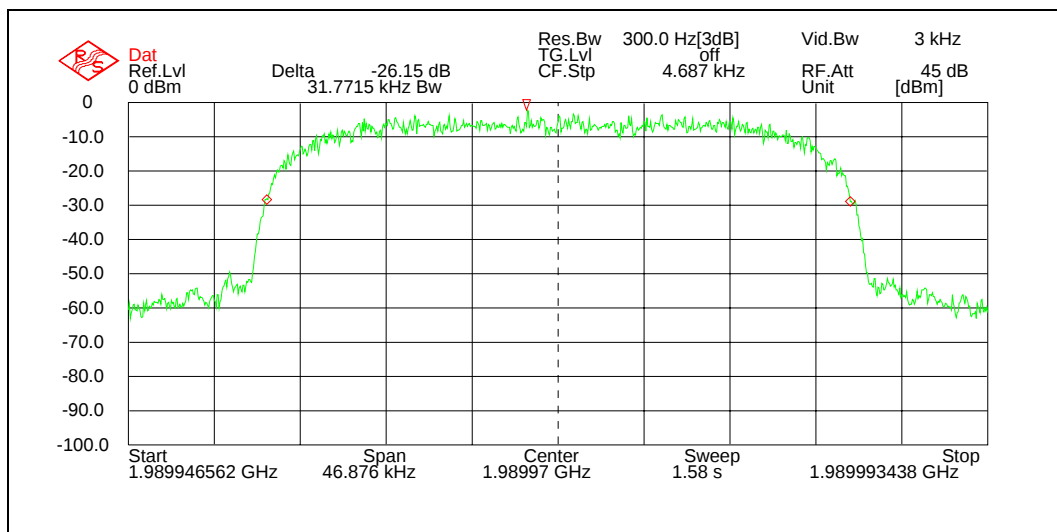


Figure 48: Occupied Bandwidth - Output Downlink TDMA High Channel

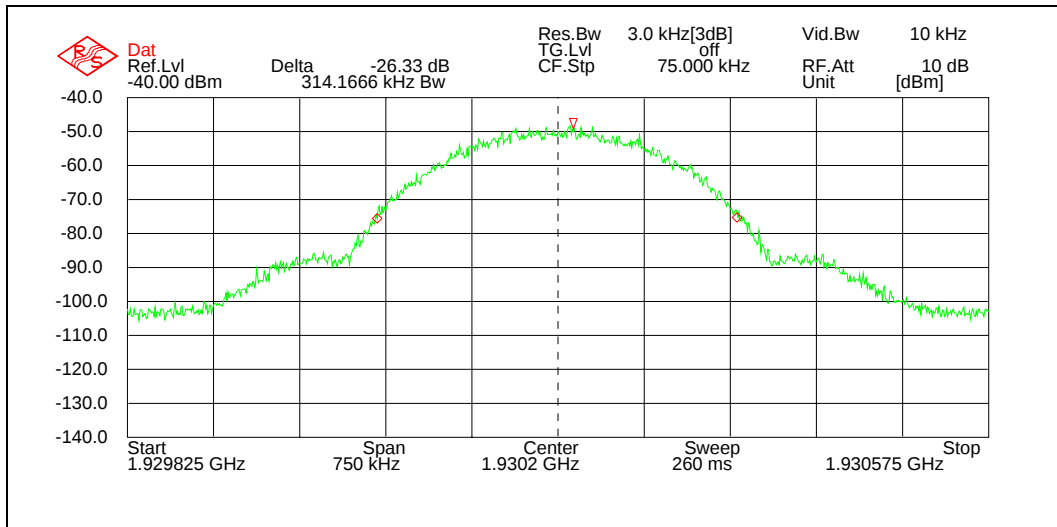


Figure 49: Occupied Bandwidth - Input Downlink GSM Low Channel

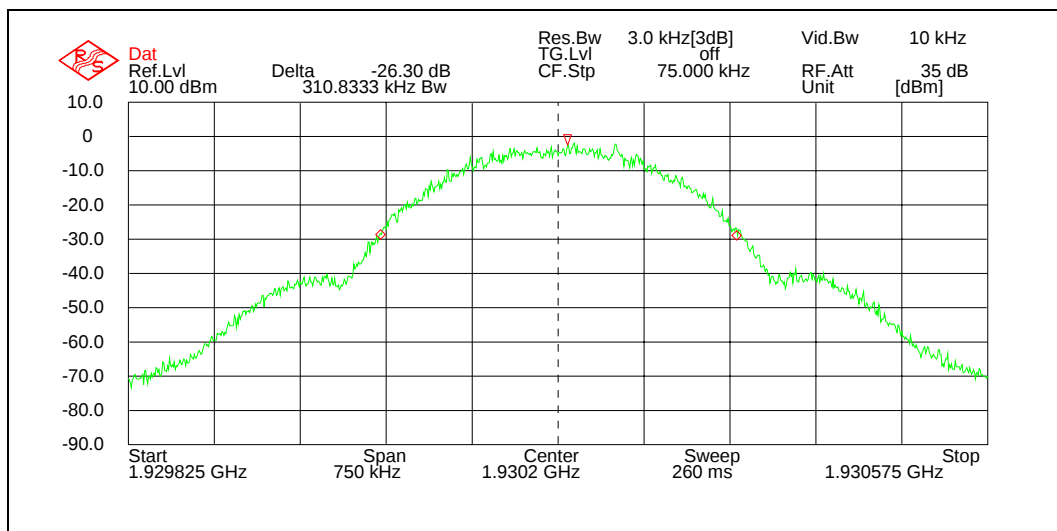


Figure 50: Occupied Bandwidth - Output Downlink GSM Low Channel

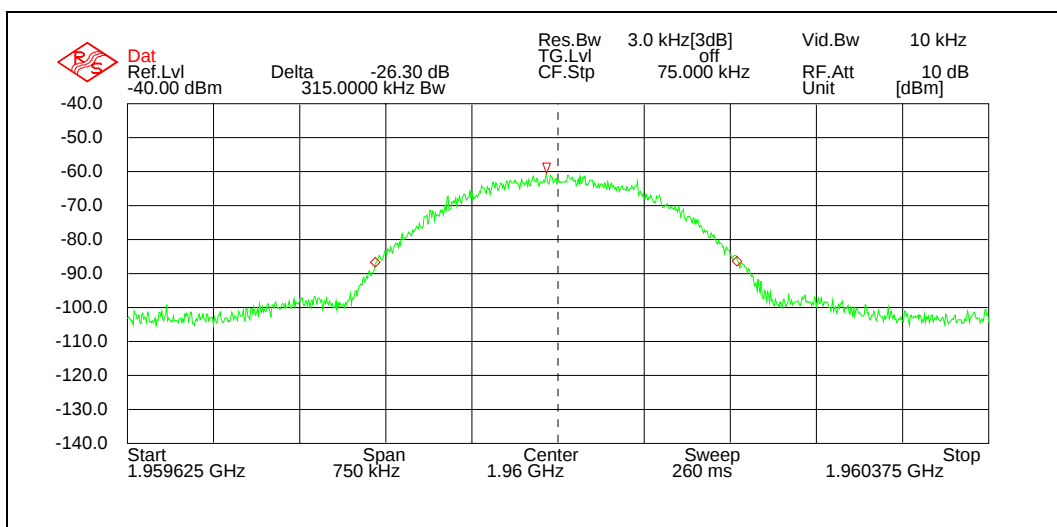


Figure 51: Occupied Bandwidth - Input Downlink GSM Mid Channel

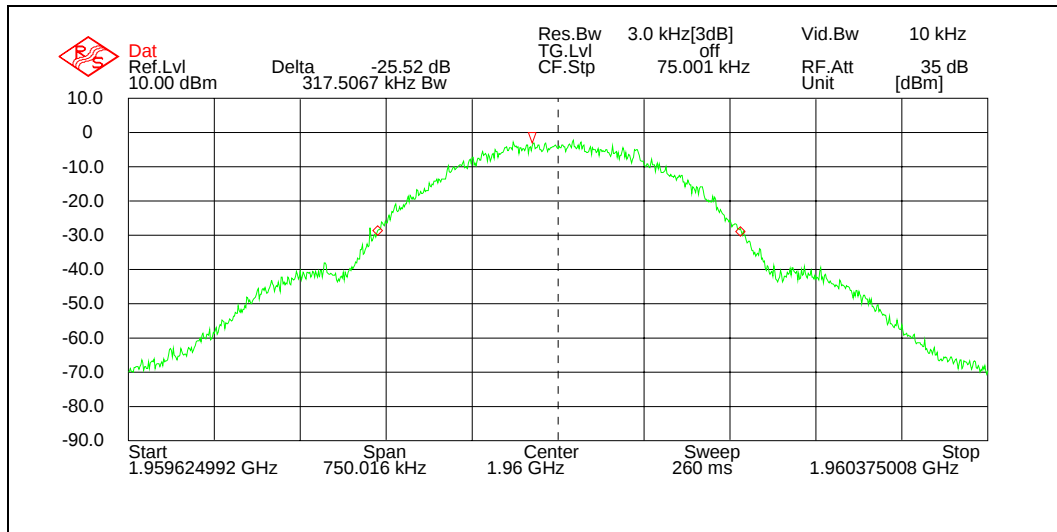


Figure 52: Occupied Bandwidth - Output Downlink GSM Mid Channel

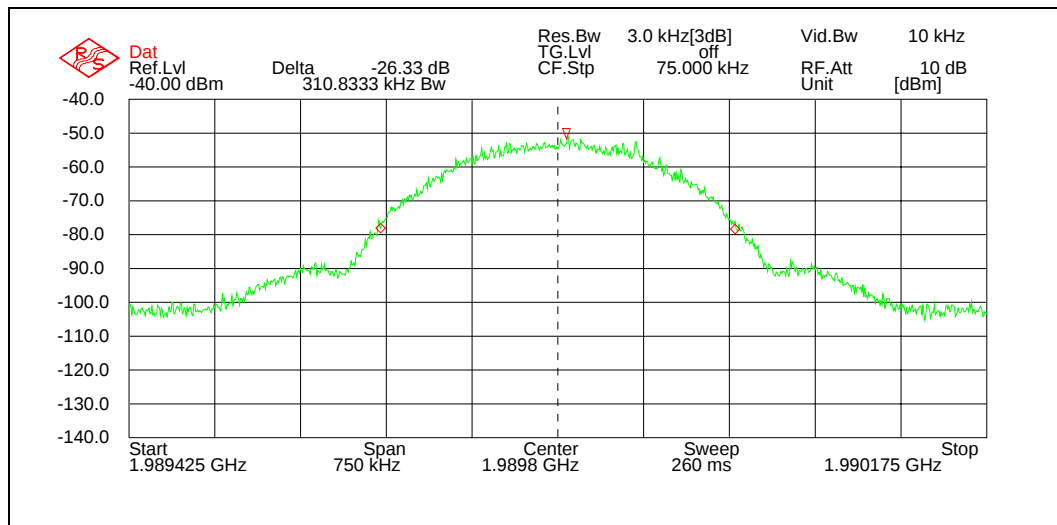


Figure 53: Occupied Bandwidth - Input Downlink GSM High Channel

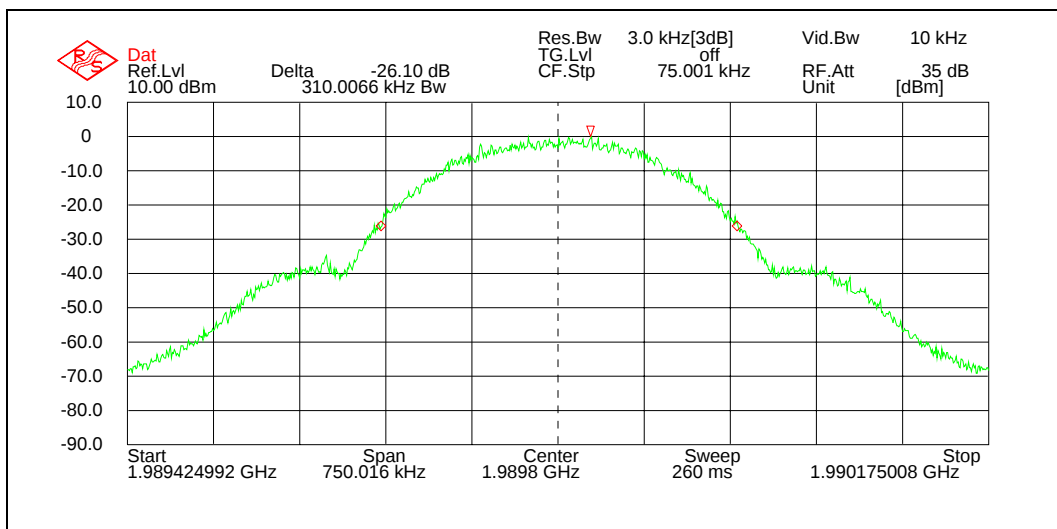


Figure 54: Occupied Bandwidth - Output Downlink GSM High Channel

3.0 Spurious Emissions at Antenna Terminals

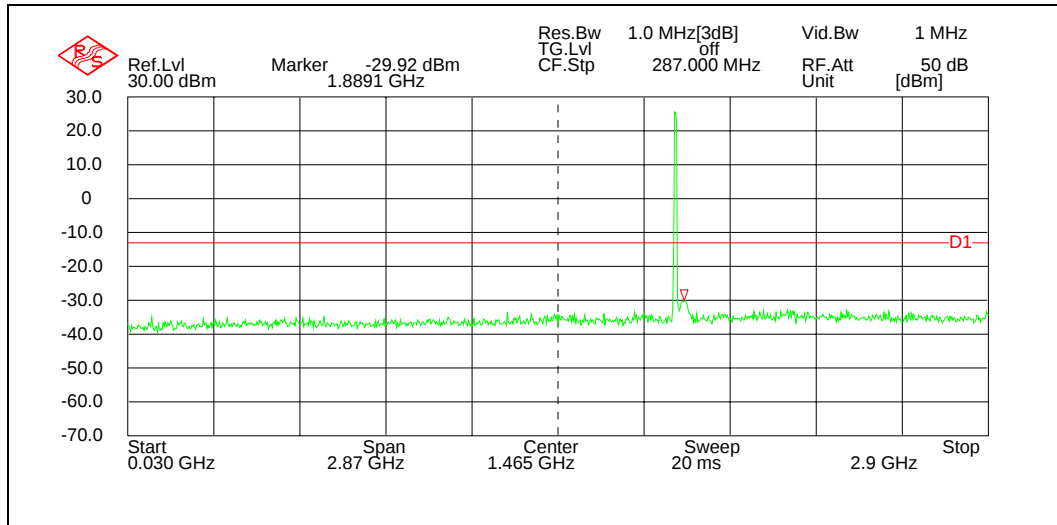


Figure 55: Spurious Emissions - Uplink CDMA Low Channel – 30 MHz to 2.9 GHz

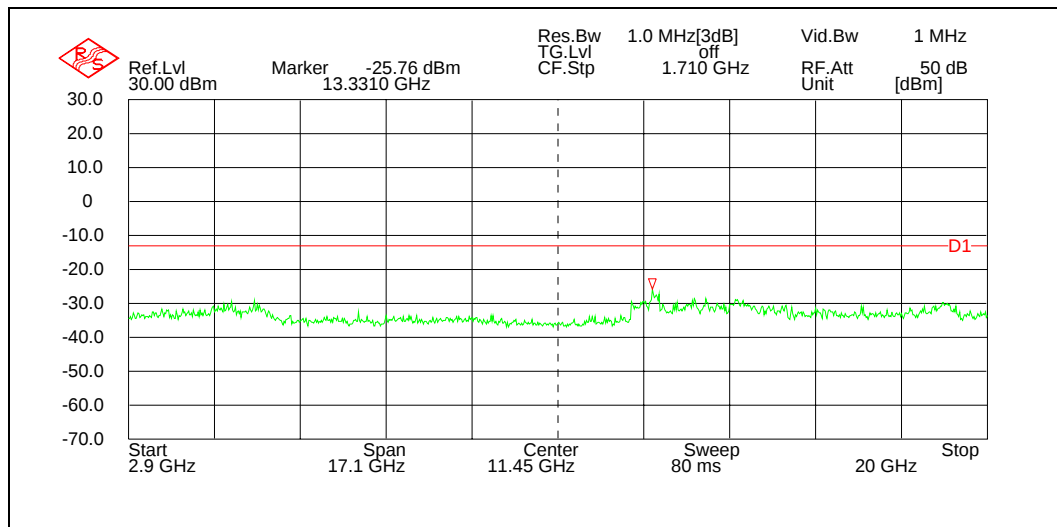


Figure 56: Spurious Emissions - Uplink CDMA Low Channel – 2.9 to 20 GHz

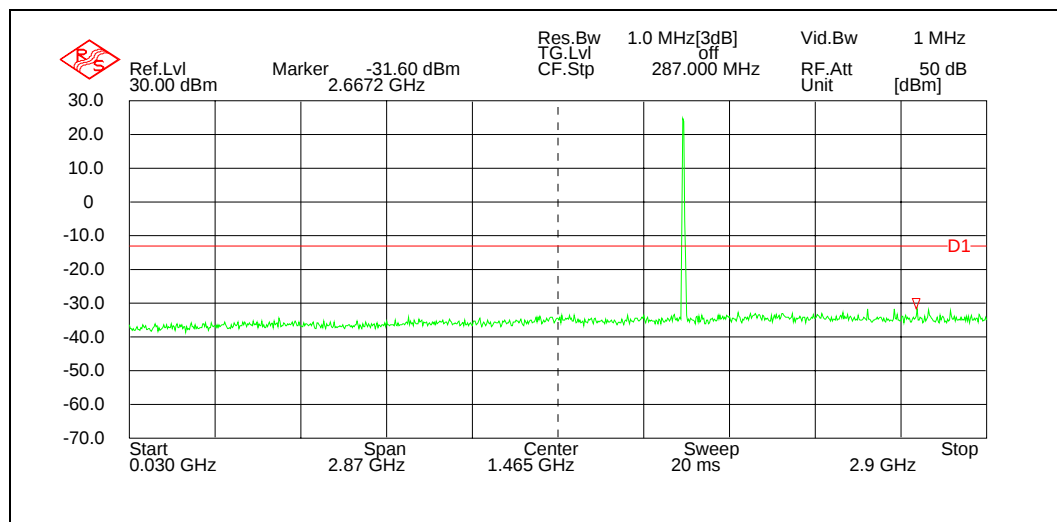
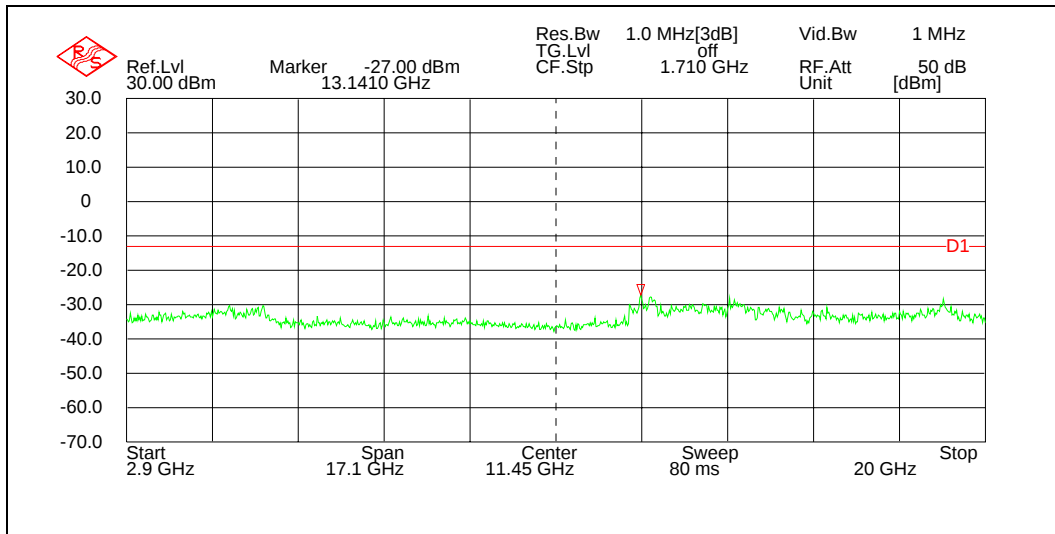
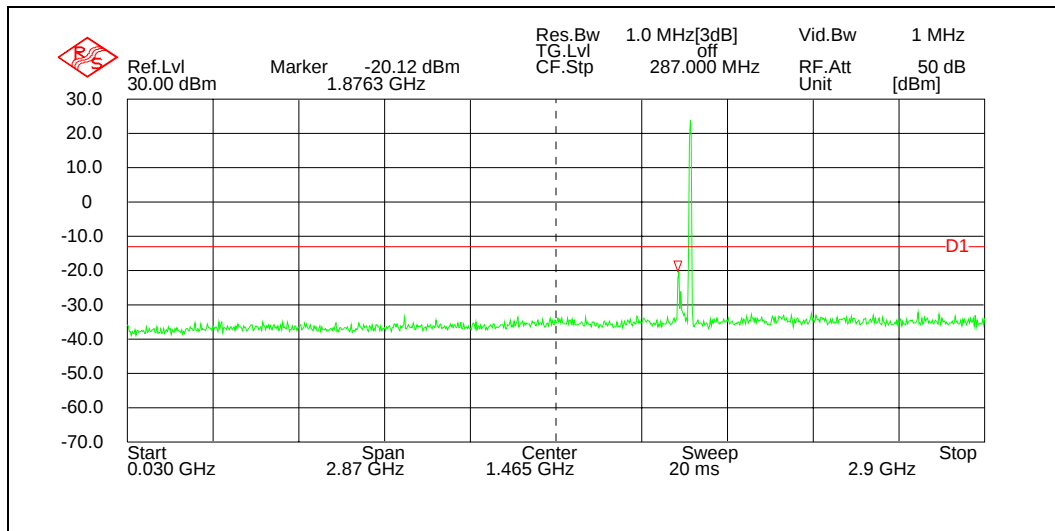
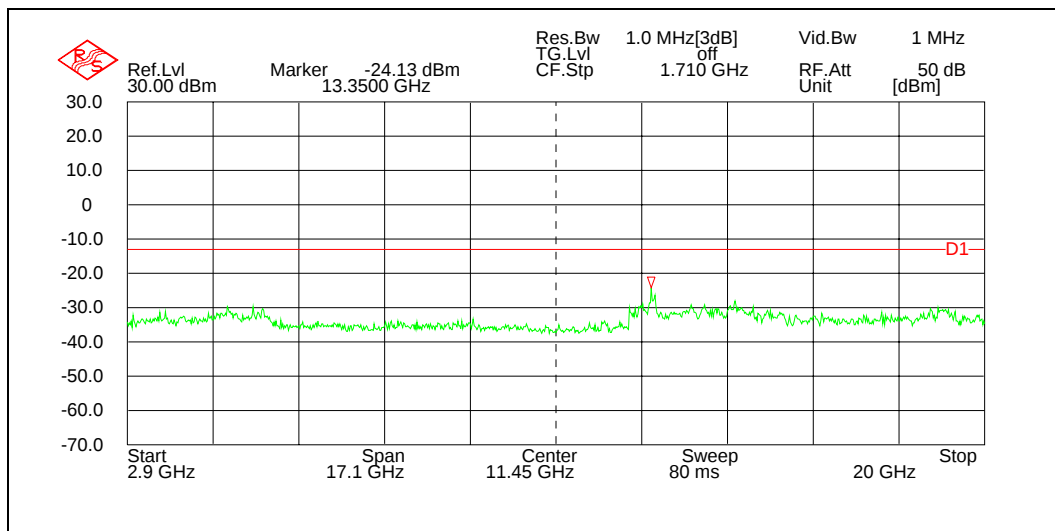
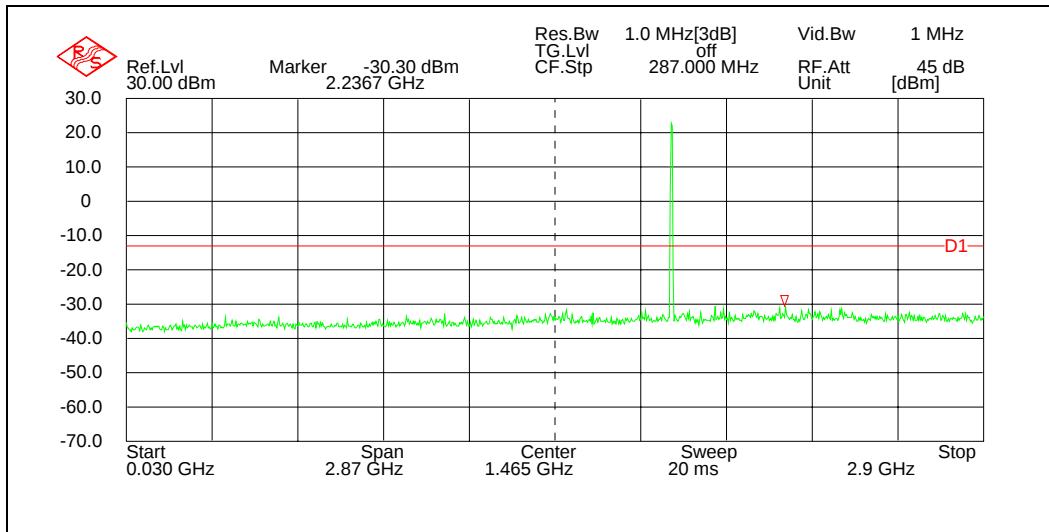
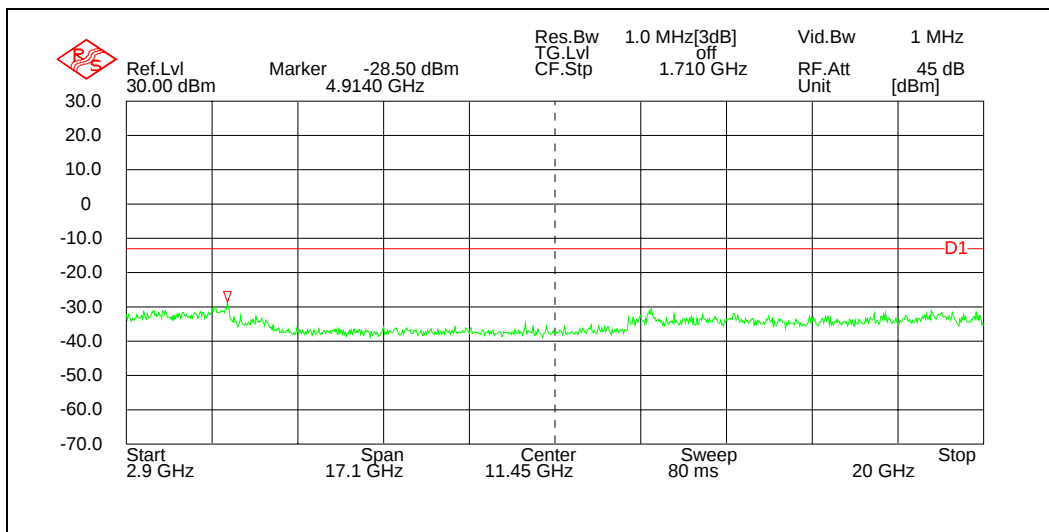
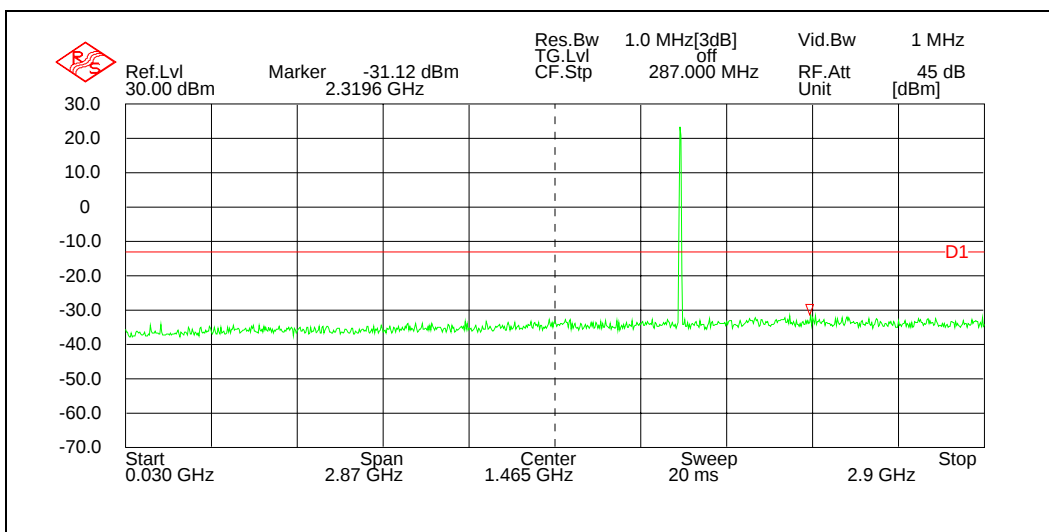


Figure 57: Spurious Emissions - Uplink CDMA Mid Channel – 30 MHz to 2.9 GHz

**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**

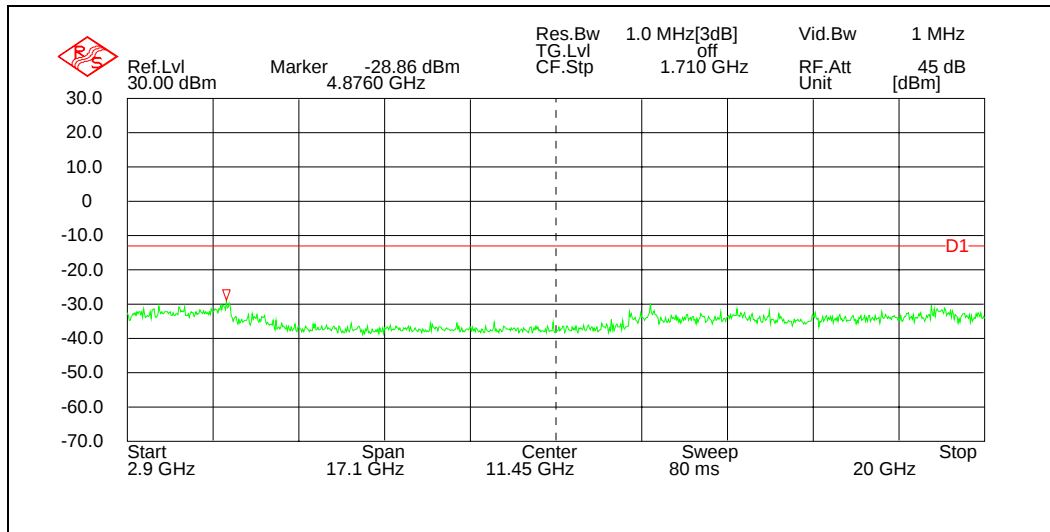


Figure 64: Spurious Emissions - Uplink TDMA Mid Channel – 2.9 to 20 GHz

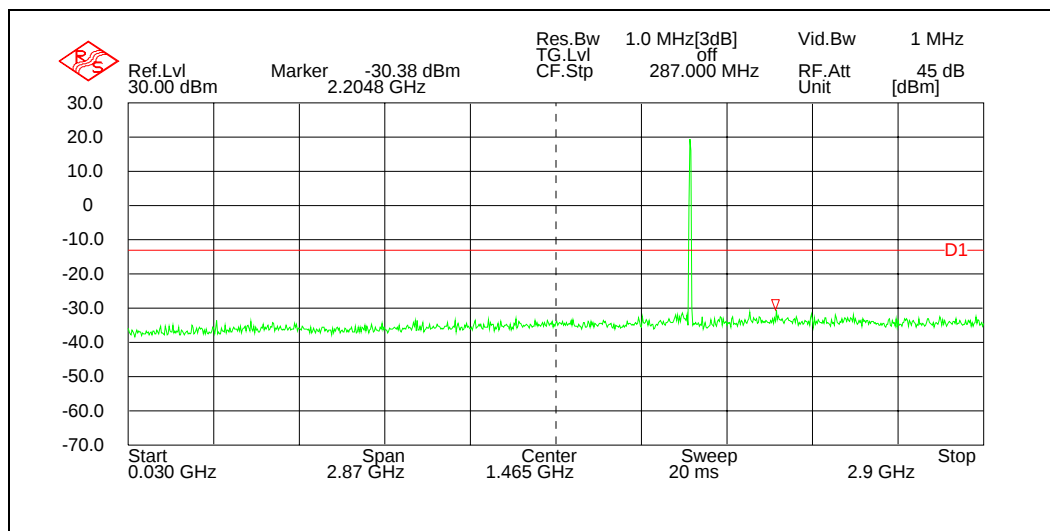


Figure 65: Spurious Emissions - Uplink TDMA High Channel – 30 MHz to 2.9 GHz

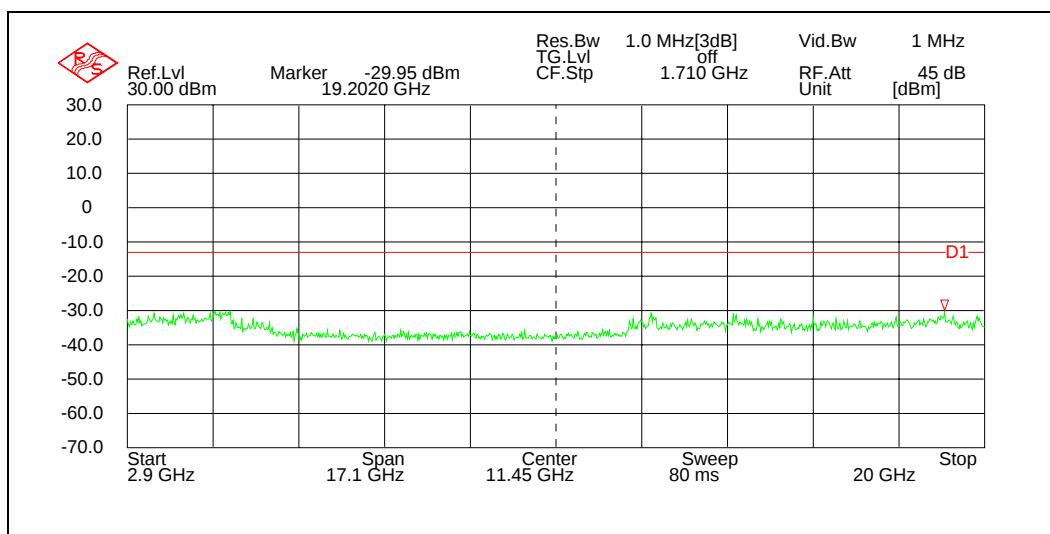


Figure 66: Spurious Emissions - Uplink TDMA High Channel – 2.9 to 20 GHz

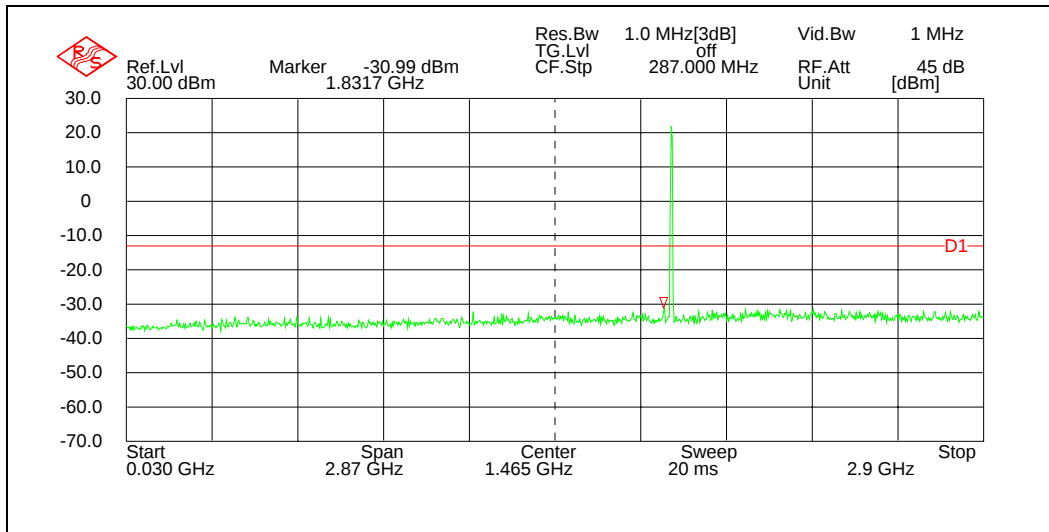


Figure 67: Spurious Emissions - Uplink GSM Low Channel – 30 MHz to 2.9 GHz

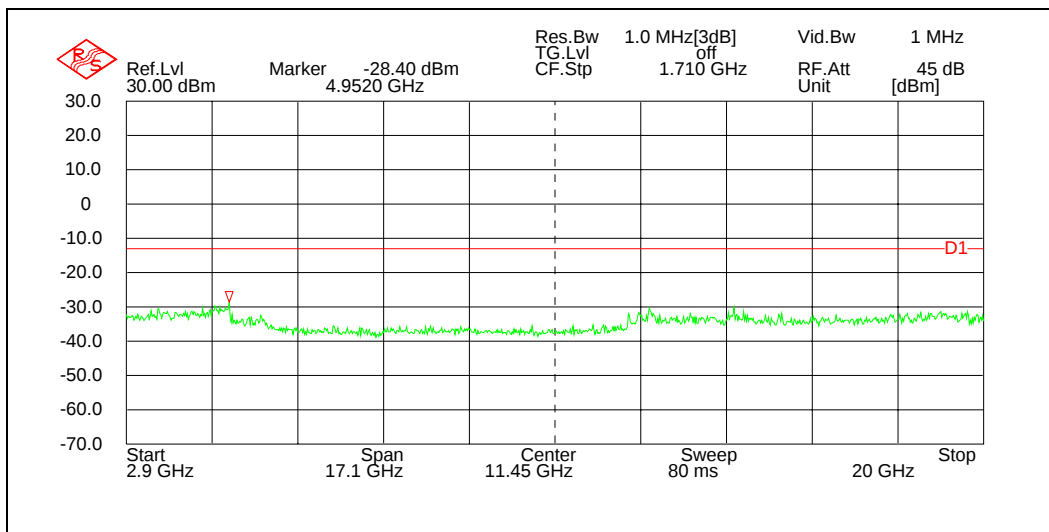


Figure 68: Spurious Emissions - Uplink GSM Low Channel – 2.9 to 20 GHz

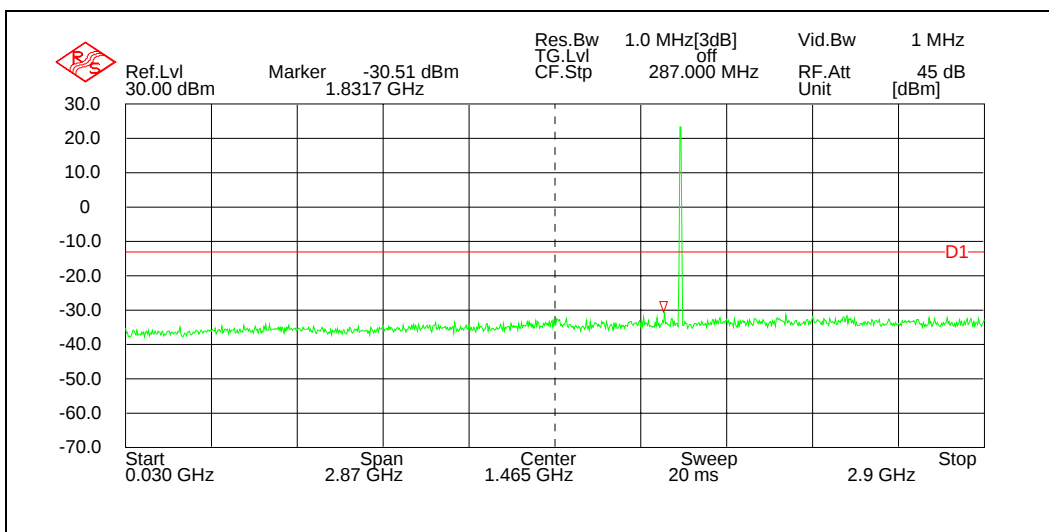


Figure 69: Spurious Emissions - Uplink GSM Mid Channel – 30 MHz to 2.9 GHz

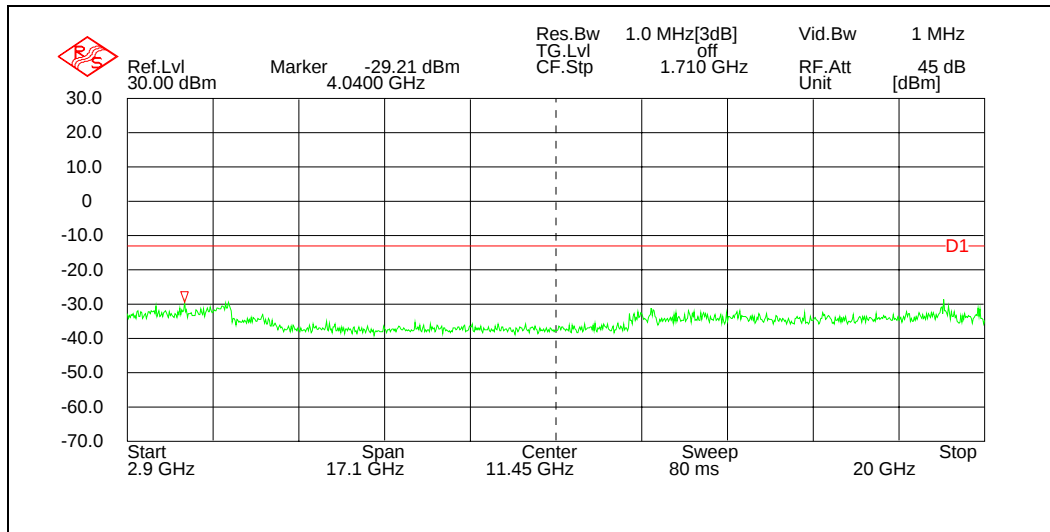


Figure 70: Spurious Emissions - Uplink GSM Mid Channel – 2.9 to 20 GHz

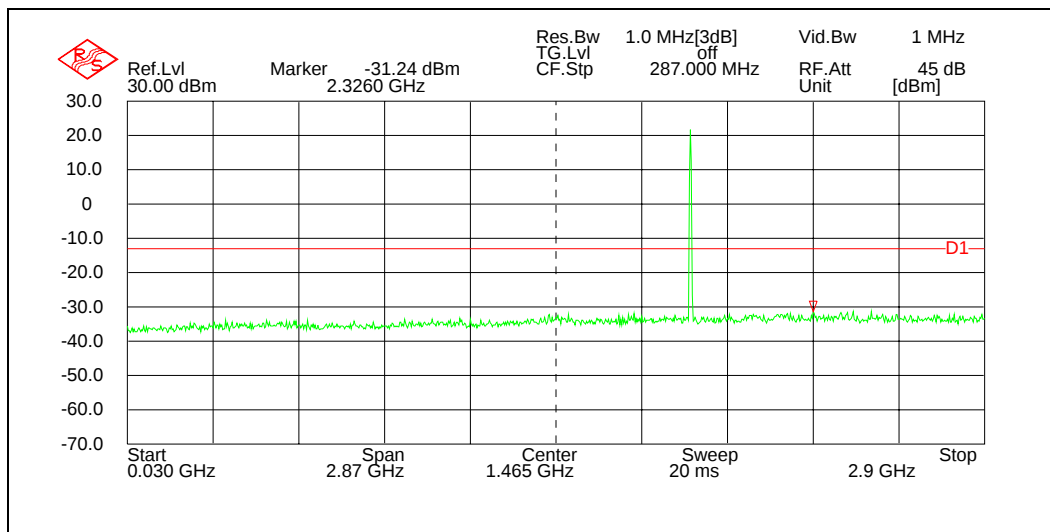


Figure 71: Spurious Emissions - Uplink GSM High Channel – 30 MHz to 2.9 GHz

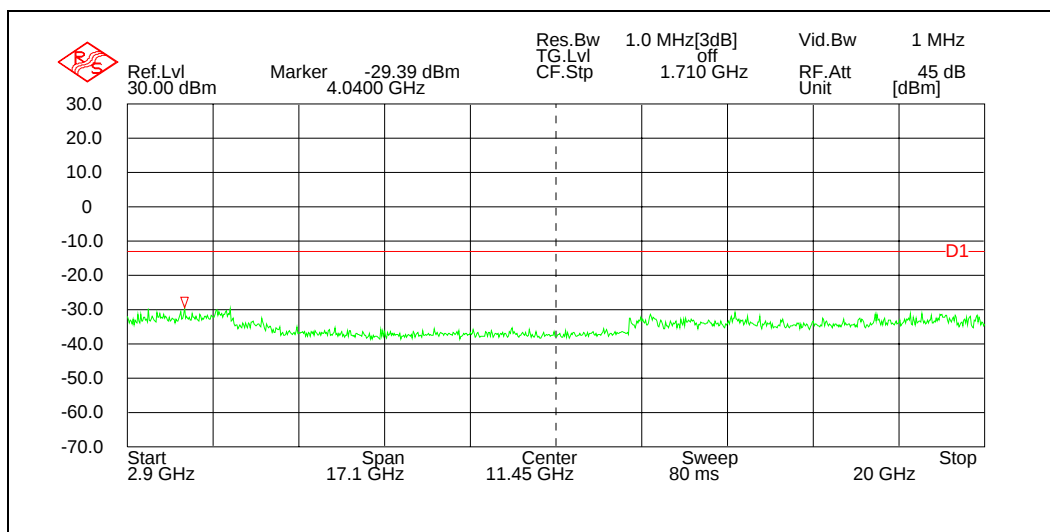


Figure 72: Spurious Emissions - Uplink GSM High Channel – 2.9 to 20 GHz

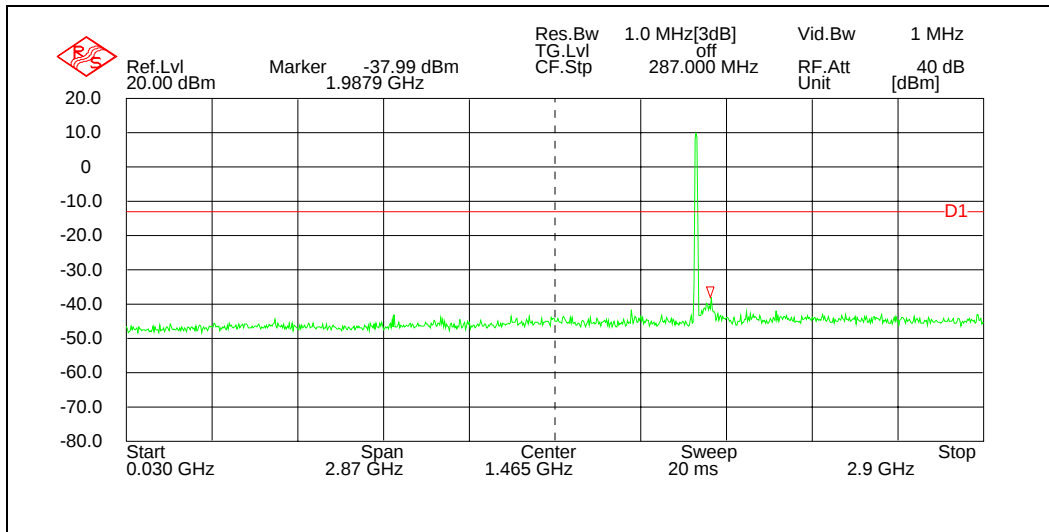


Figure 73: Spurious Emissions - Downlink CDMA Low Channel – 30 MHz to 2.9 GHz

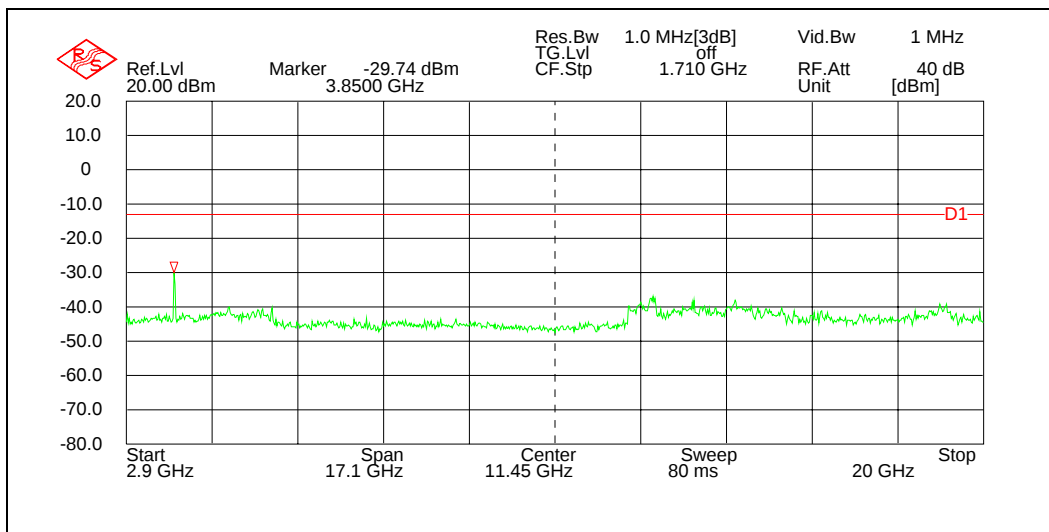


Figure 74: Spurious Emissions - Downlink CDMA Low Channel – 2.9 to 20 GHz

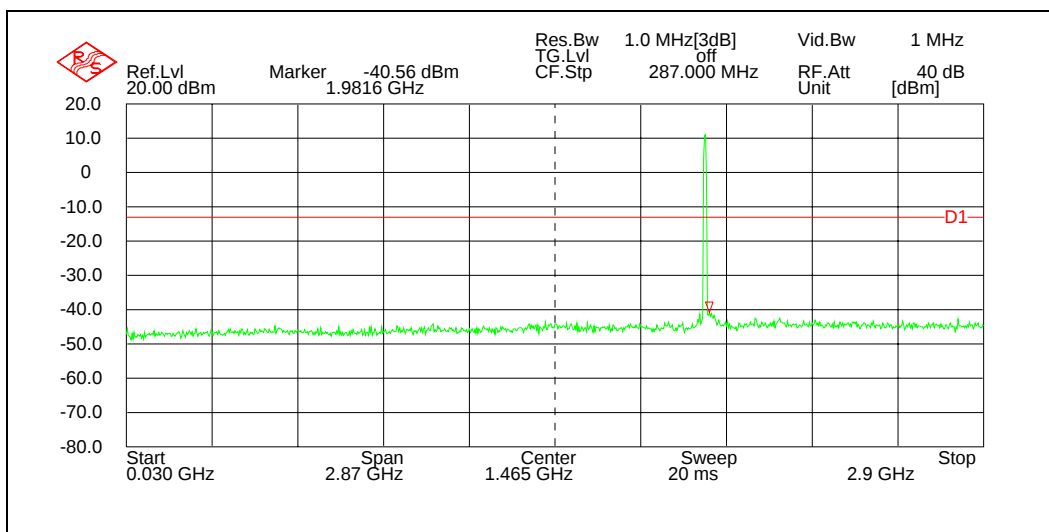


Figure 75: Spurious Emissions - Downlink CDMA Mid Channel – 30 MHz to 2.9 GHz

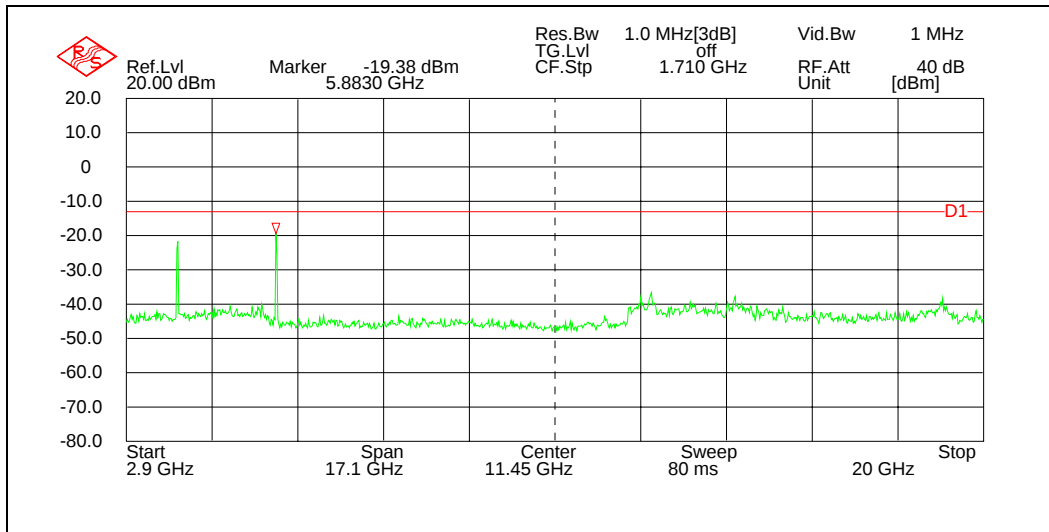


Figure 76: Spurious Emissions - Downlink CDMA Mid Channel – 2.9 to 20 GHz

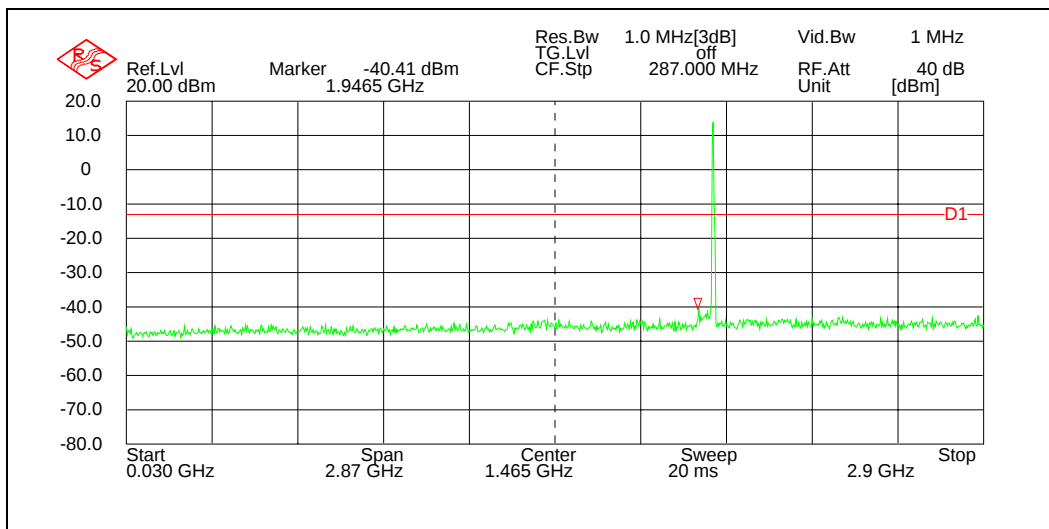


Figure 77: Spurious Emissions - Downlink CDMA High Channel – 30 MHz to 2.9 GHz

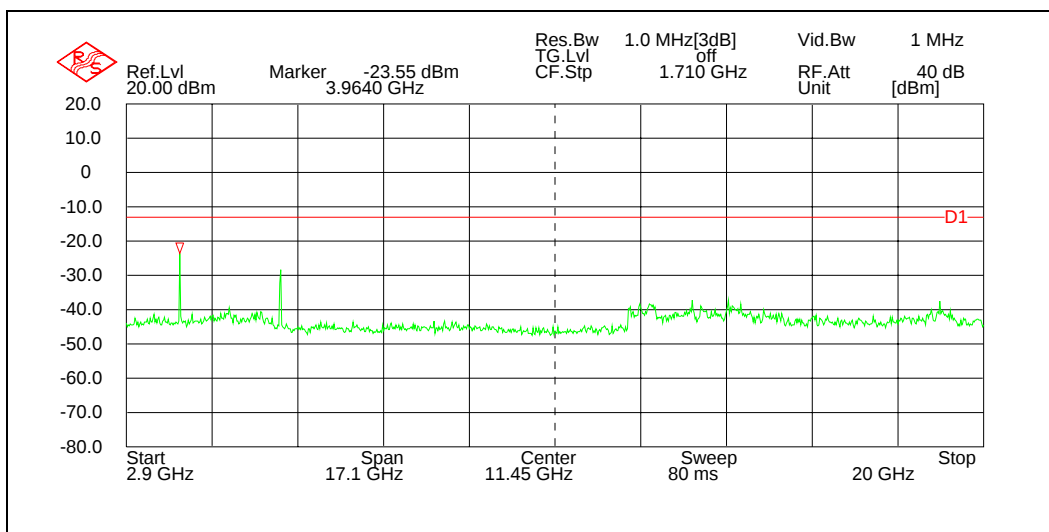


Figure 78: Spurious Emissions - Downlink CDMA High Channel – 2.9 to 20 GHz

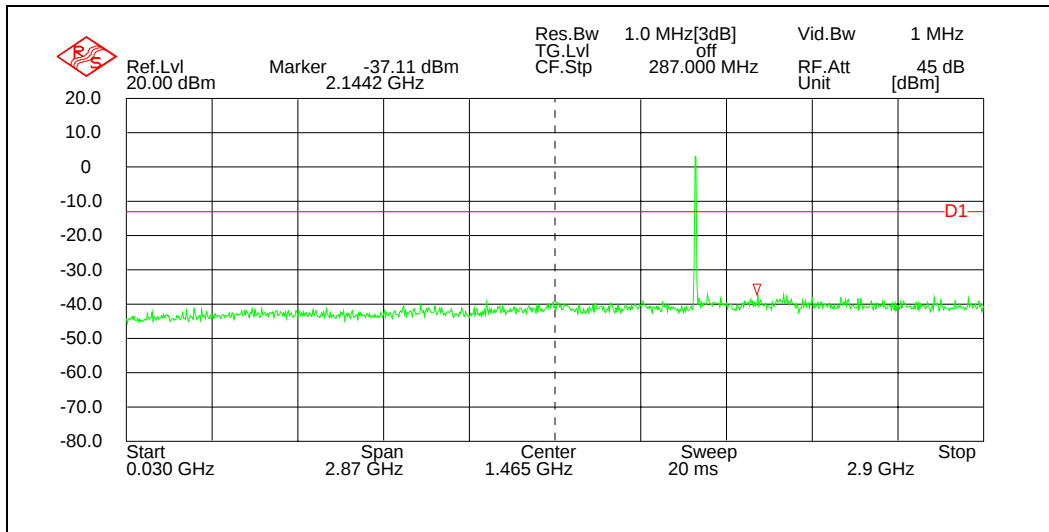


Figure 79: Spurious Emissions - Downlink TDMA Low Channel – 30 MHz to 2.9 GHz

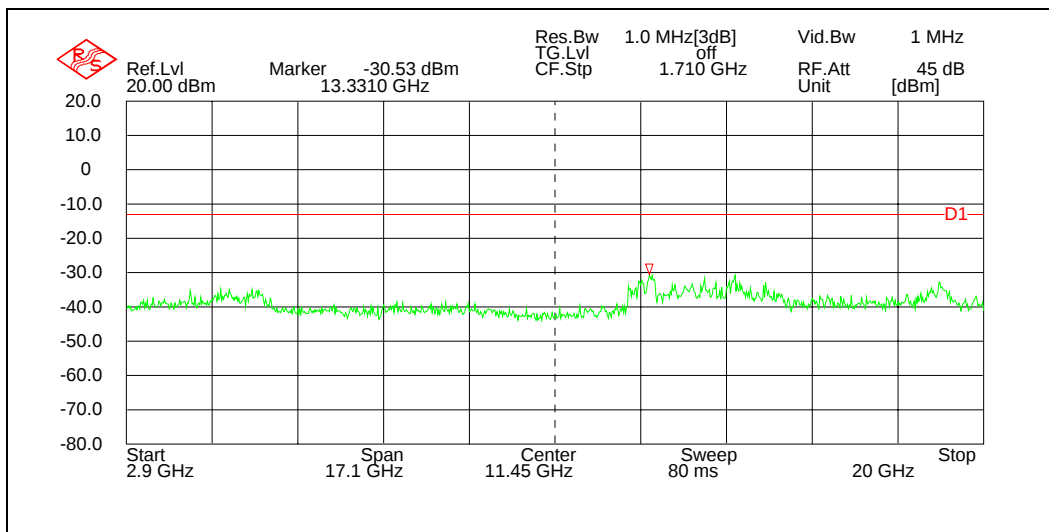


Figure 80: Spurious Emissions - Downlink TDMA Low Channel – 2.9 to 20 GHz

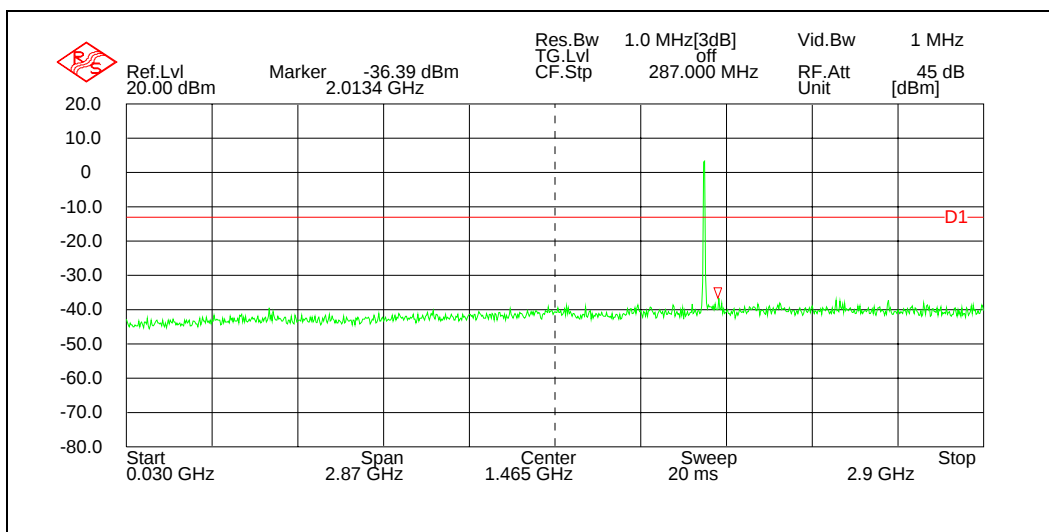
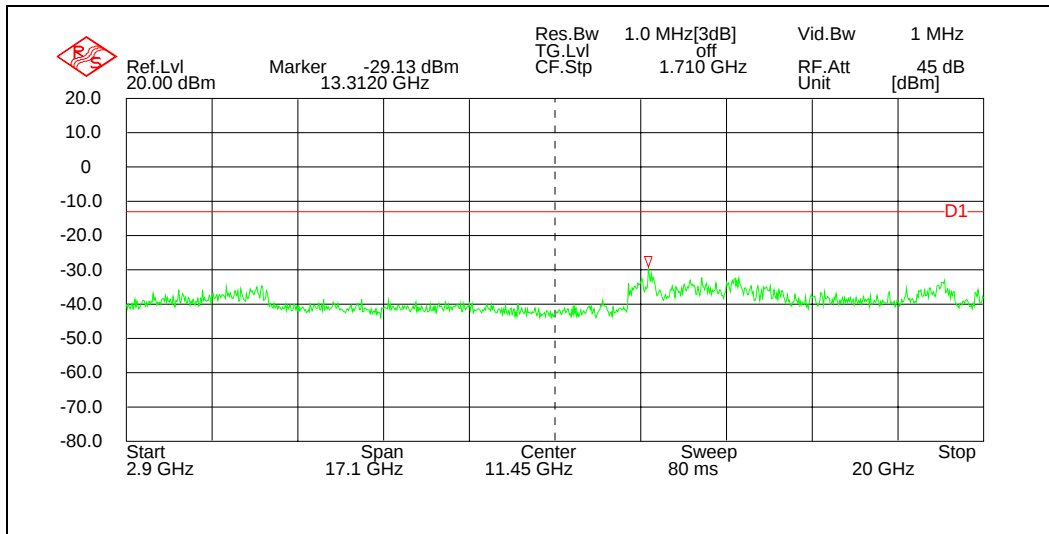
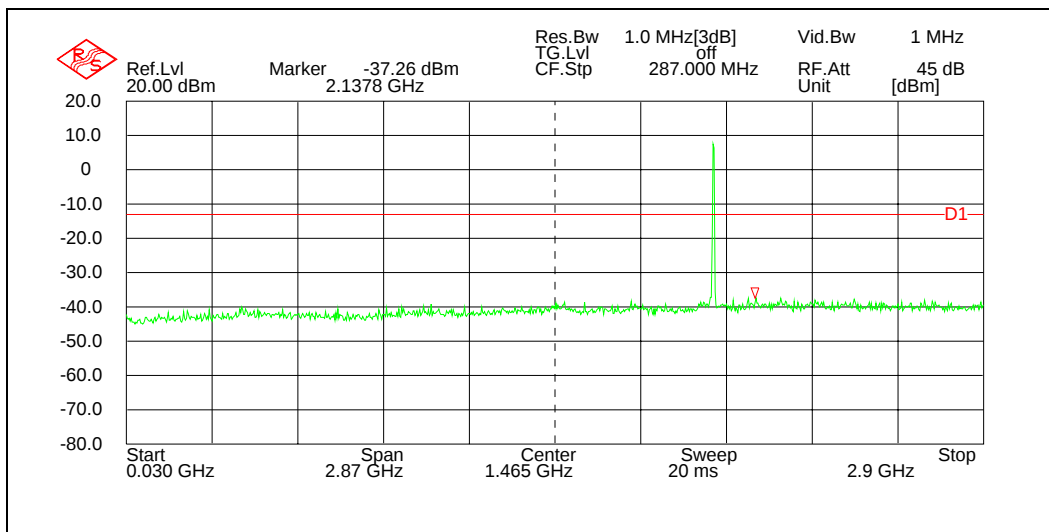
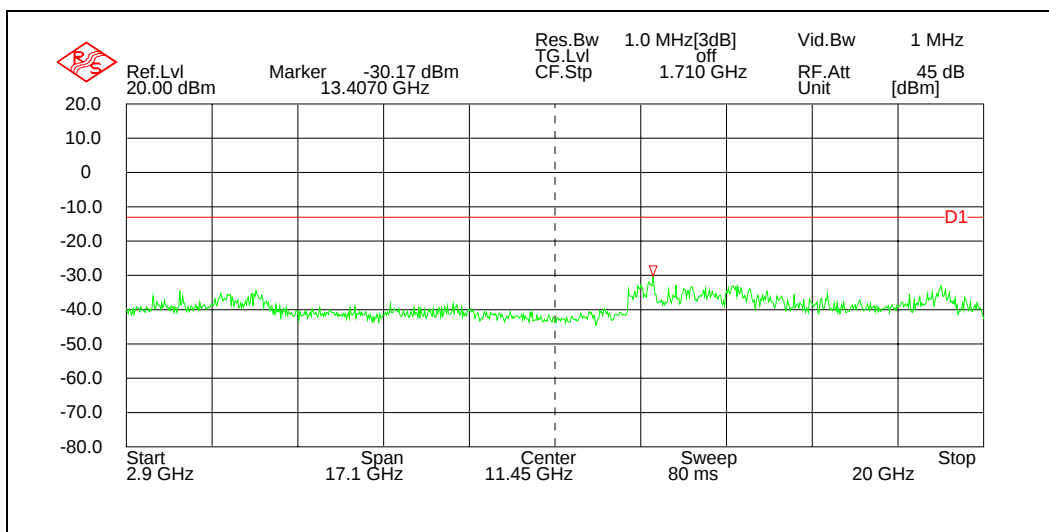


Figure 81: Spurious Emissions - Downlink TDMA Mid Channel – 30 MHz to 2.9 GHz

**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**

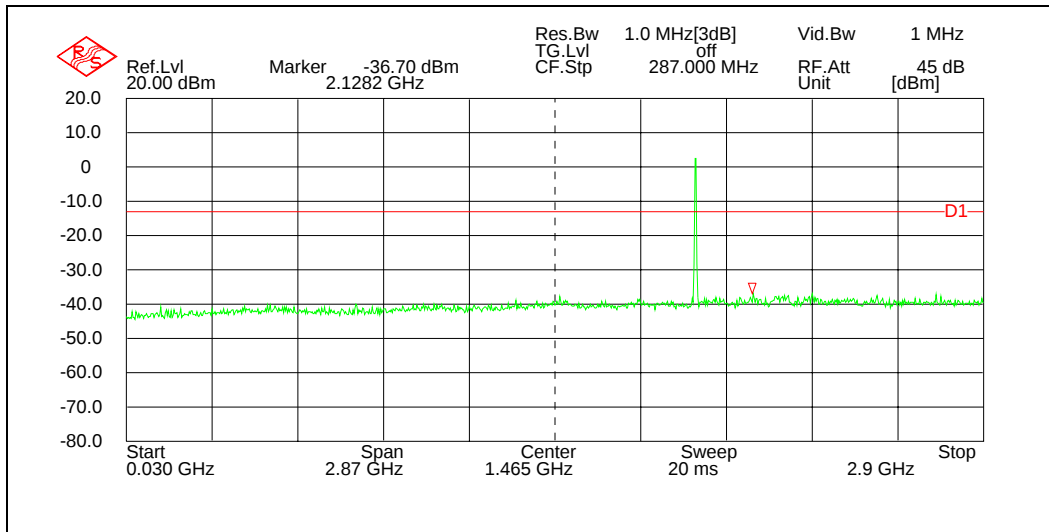


Figure 85: Spurious Emissions - Downlink GSM Low Channel – 30 MHz to 2.9 GHz

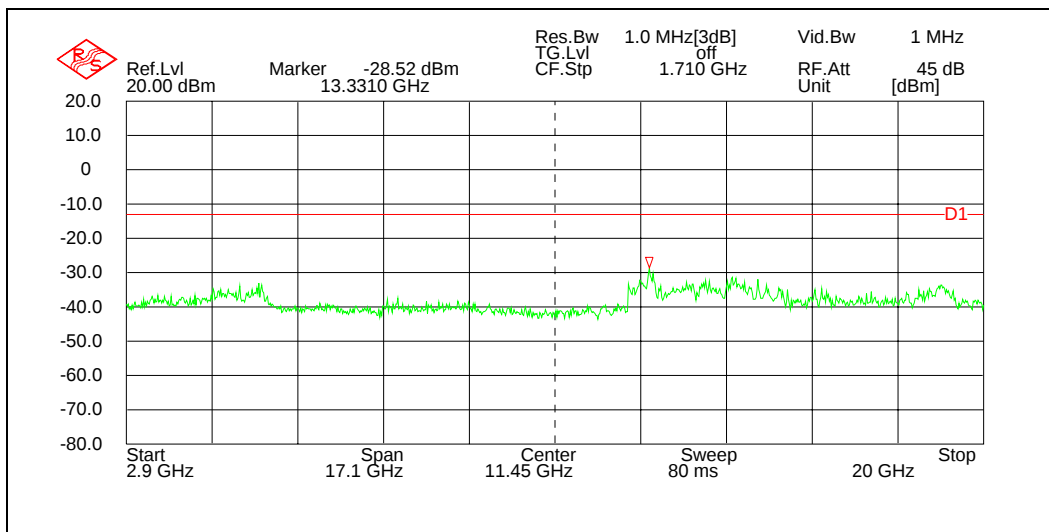


Figure 86: Spurious Emissions - Downlink GSM Low Channel – 2.9 to 20 GHz

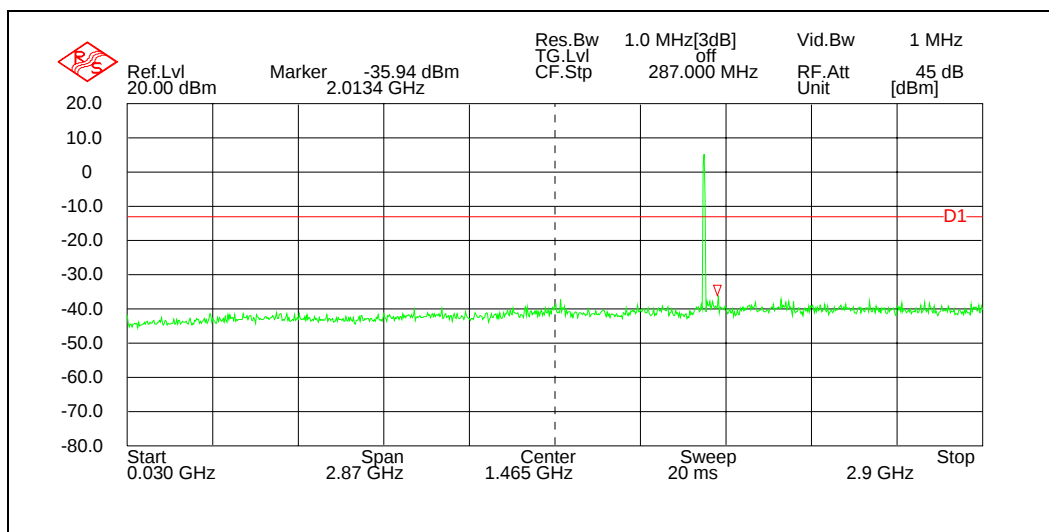
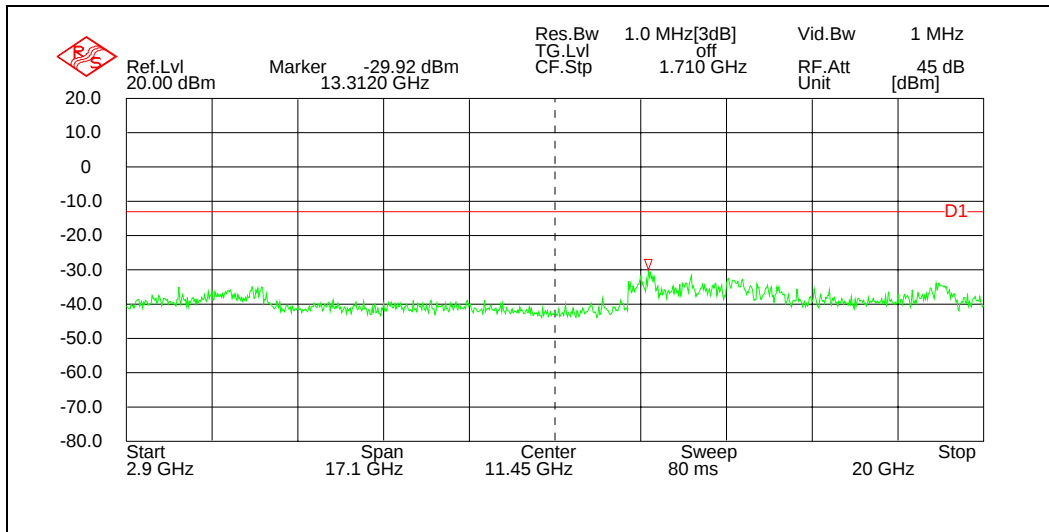
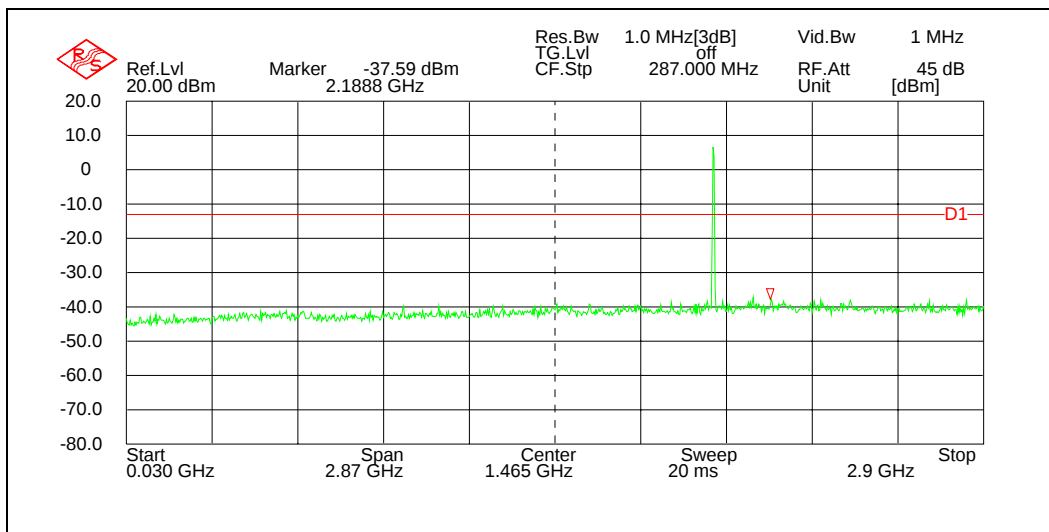
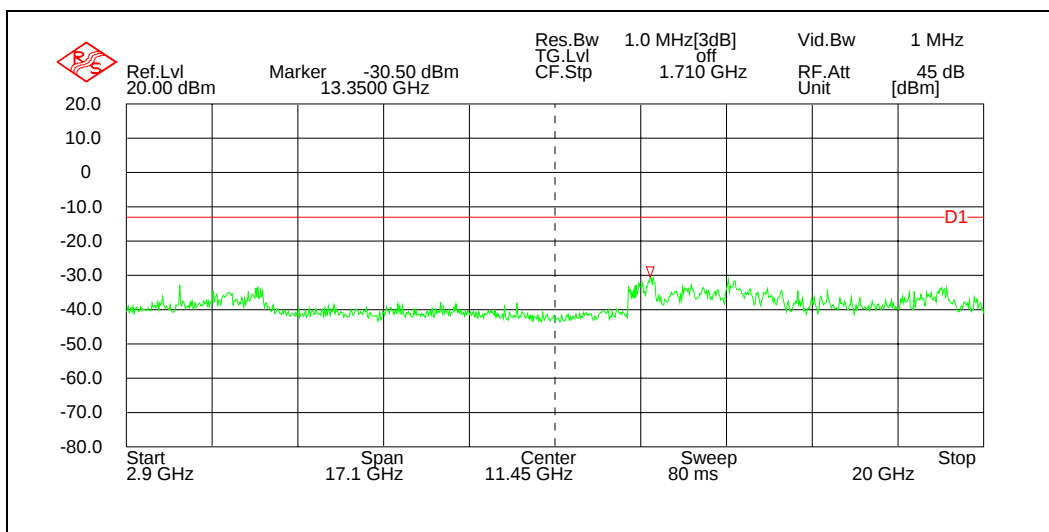


Figure 87: Spurious Emissions - Downlink GSM Mid Channel – 30 MHz to 2.9 GHz

**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

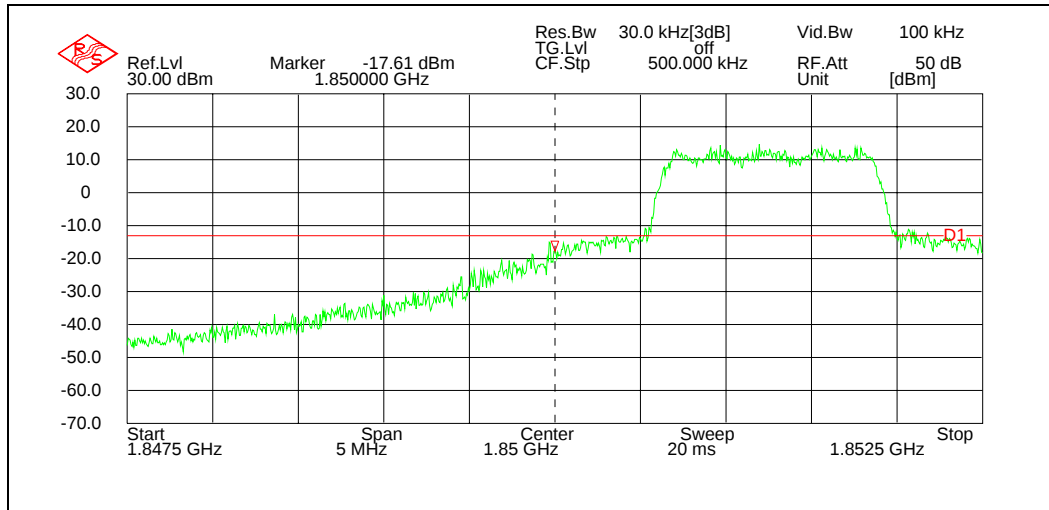


Figure 91: Band-Edge Uplink CDMA Low Channel

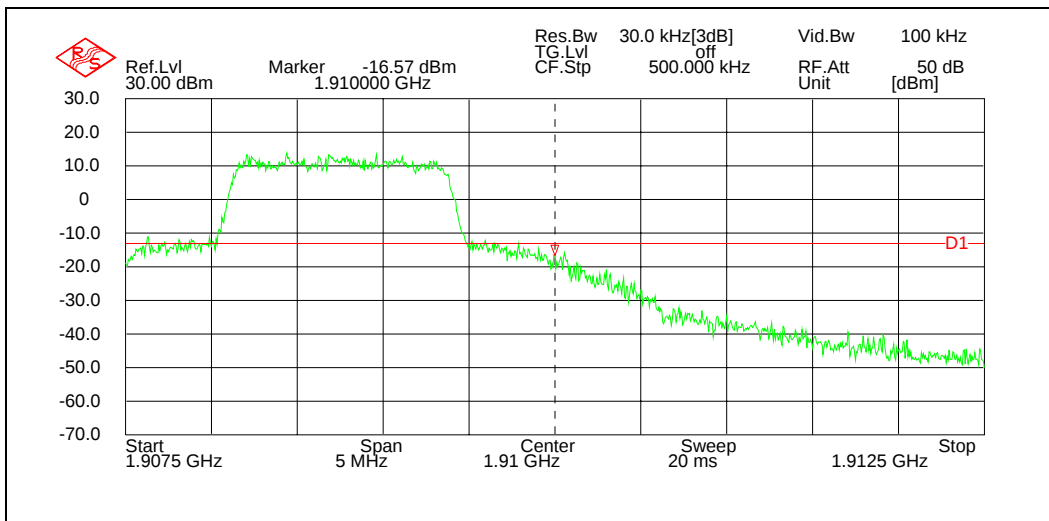


Figure 92: Band-Edge Uplink CDMA High Channel

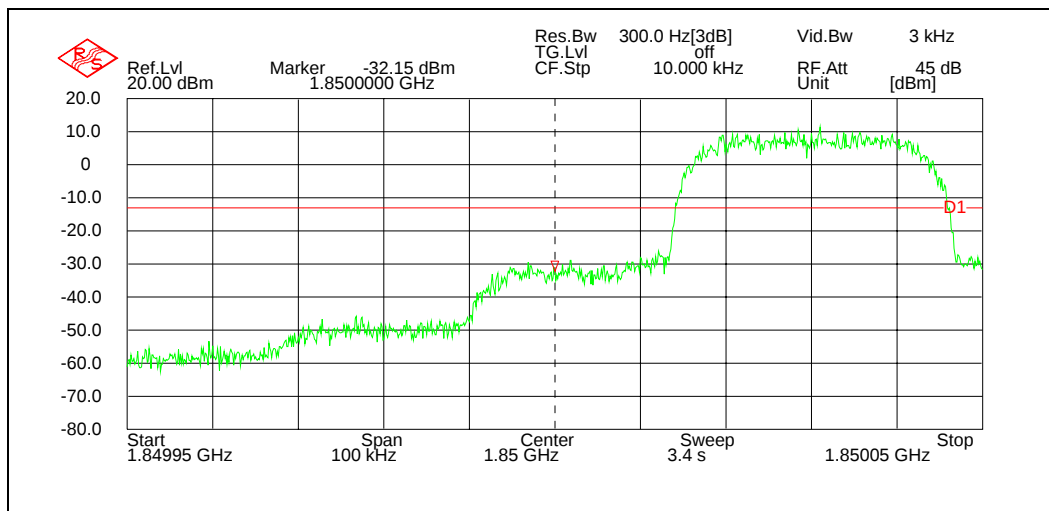


Figure 93: Band-Edge Uplink TDMA Low Channel

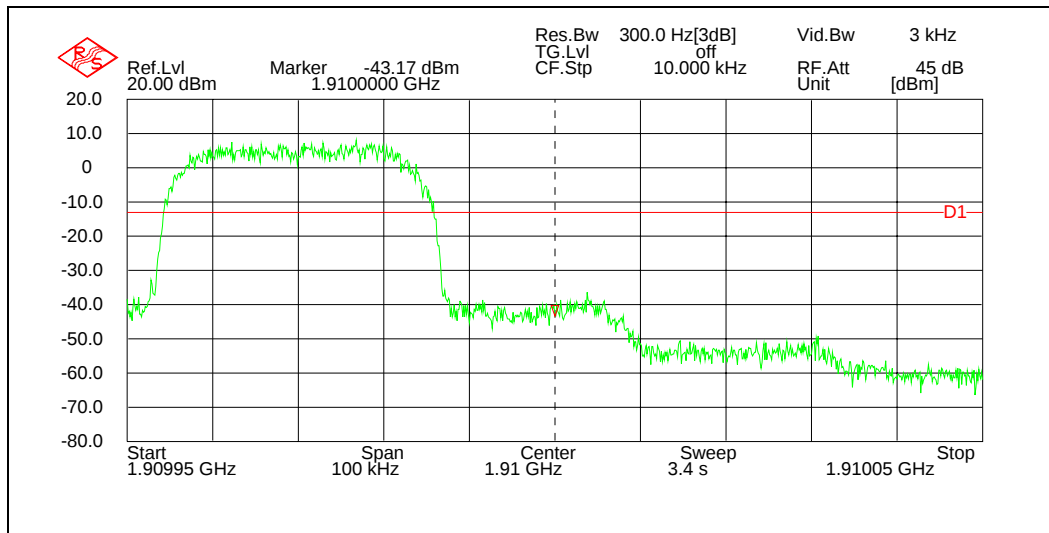


Figure 94: Band-Edge Uplink TDMA High Channel

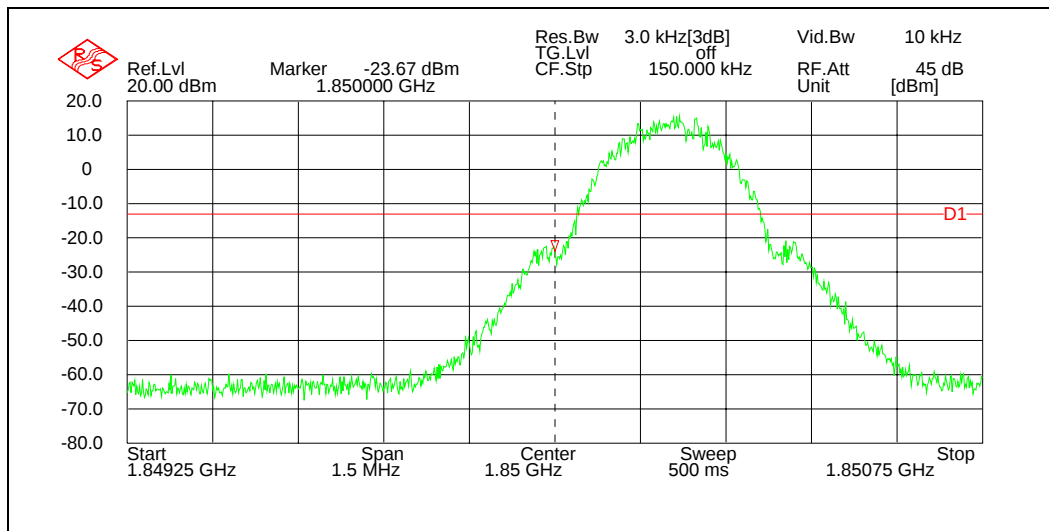


Figure 95: Band-Edge Uplink GSM Low Channel

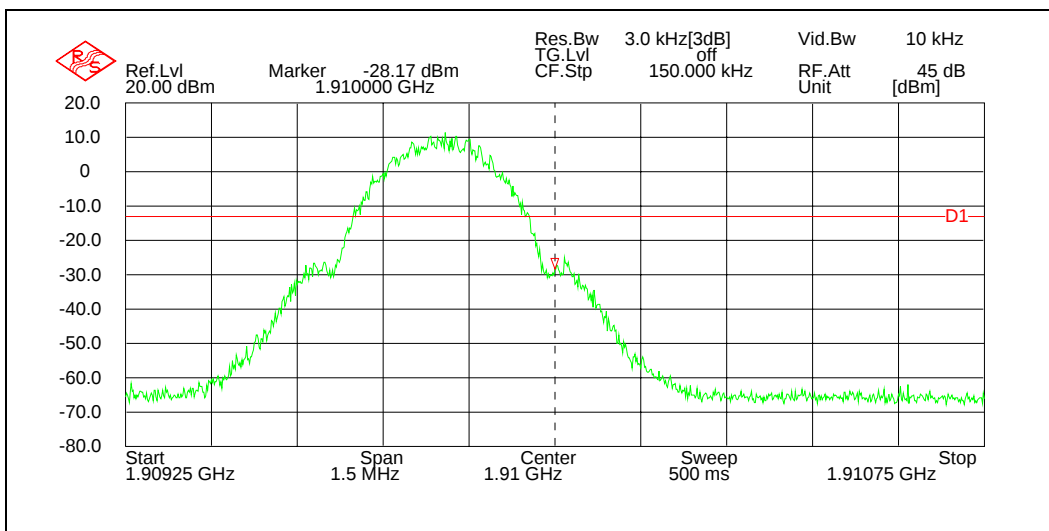


Figure 96: Band-Edge Uplink GSM High Channel

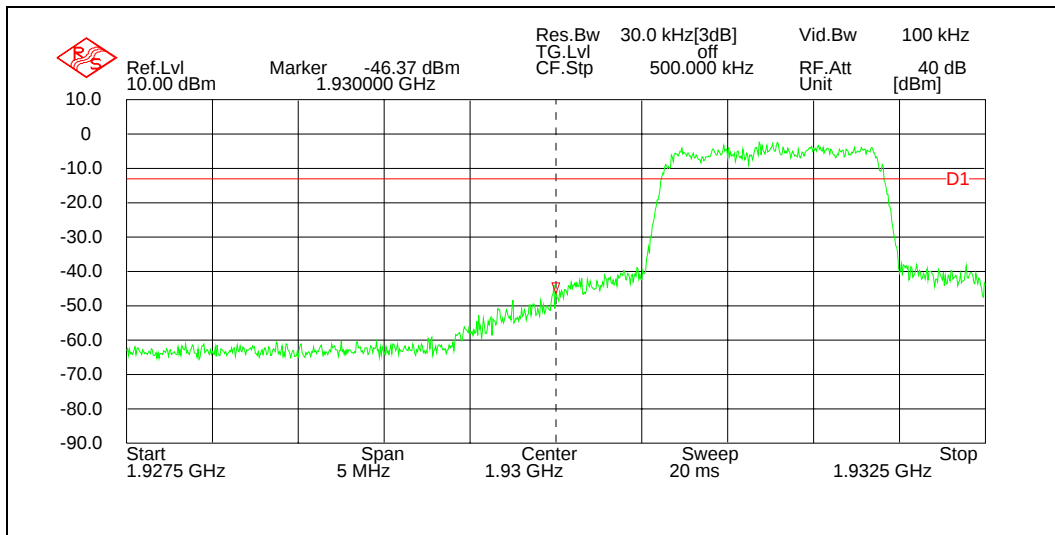


Figure 97: Band-Edge Downlink CDMA Low Channel

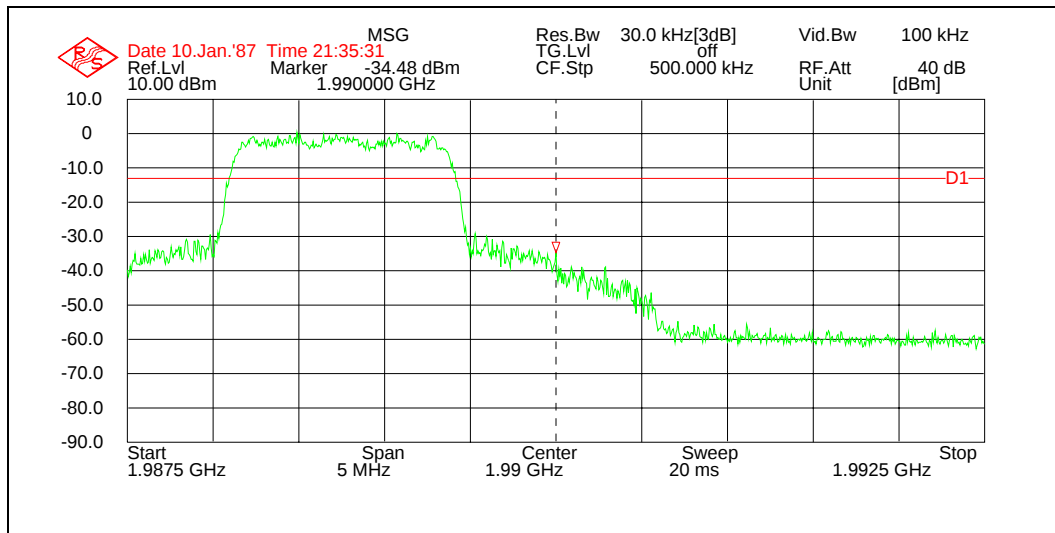


Figure 98: Band-Edge Downlink CDMA High Channel

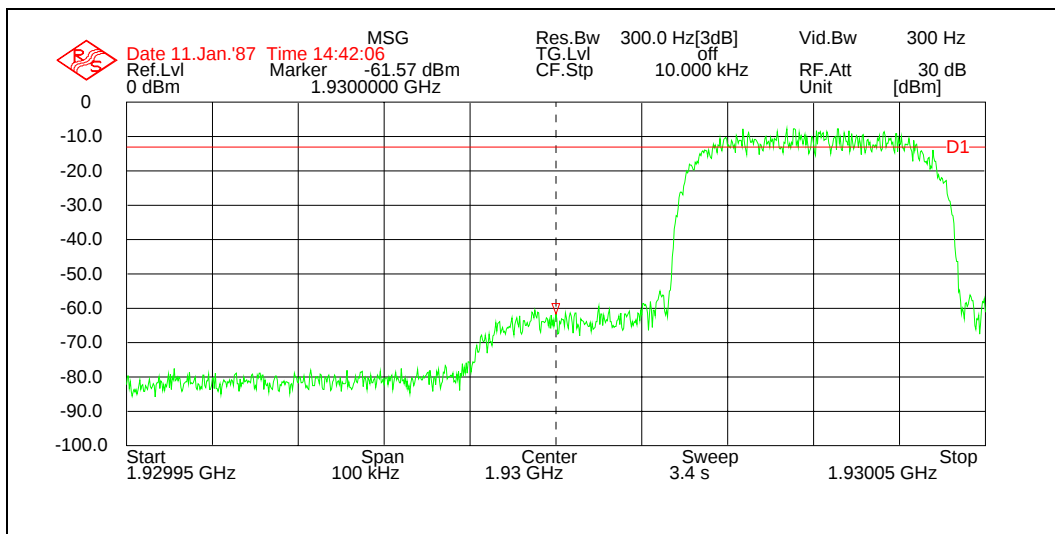


Figure 99: Band-Edge Downlink TDMA Low Channel

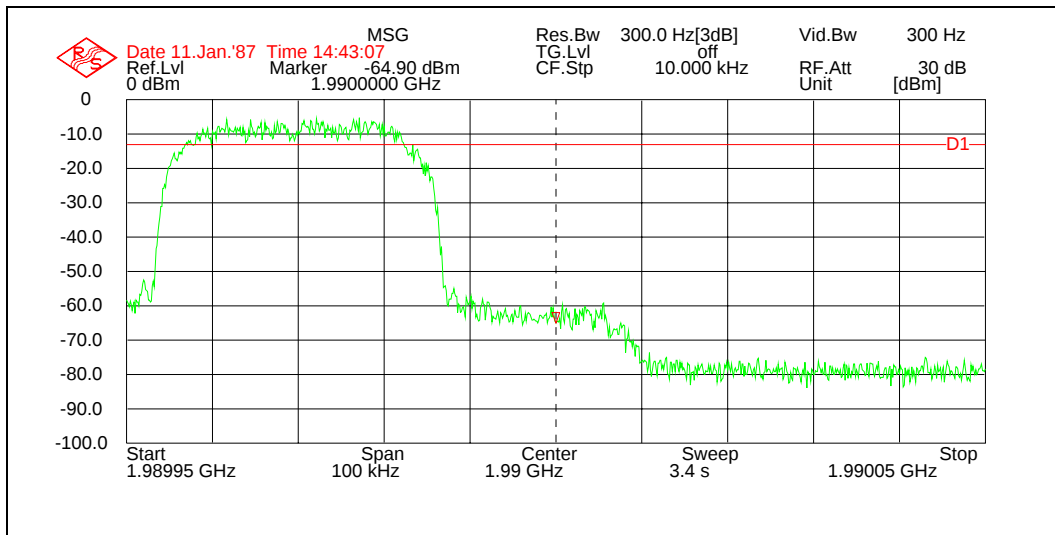


Figure 100: Band-Edge Downlink TDMA High Channel

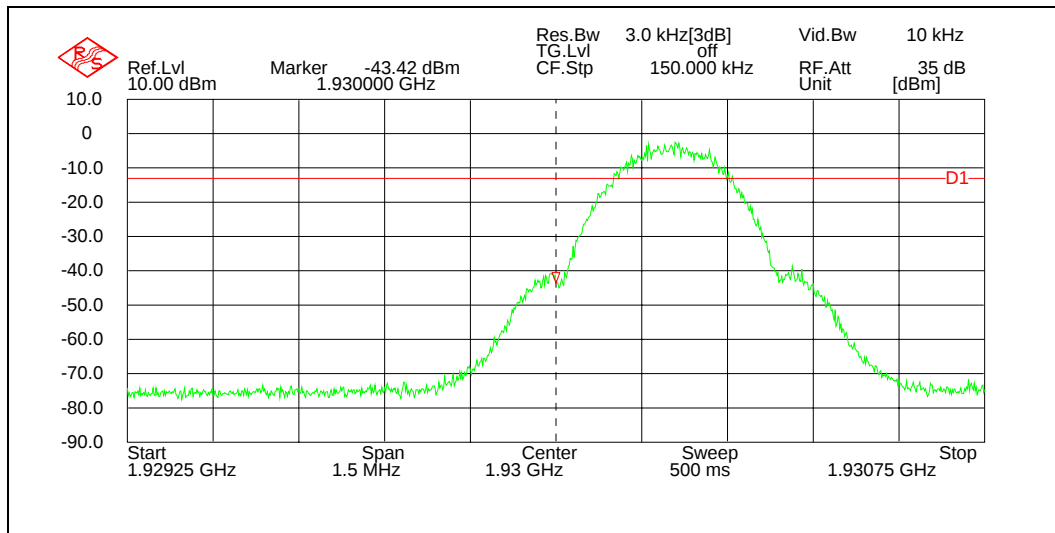


Figure 101: Band-Edge Downlink GSM Low Channel

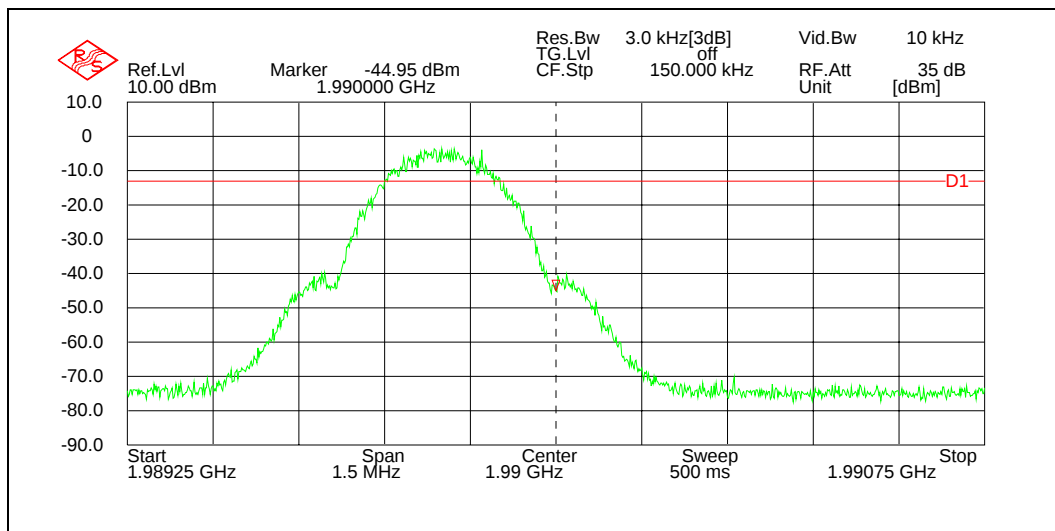


Figure 102: Band-Edge Downlink GSM High Channel

5.0 Intermodulation Products

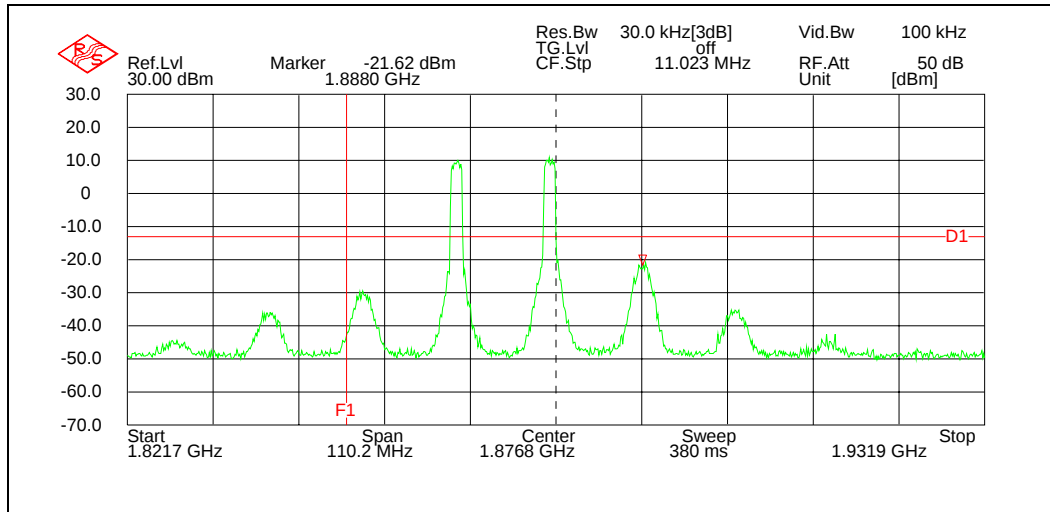


Figure 103: Intermodulation Uplink CDMA Low Band-edge

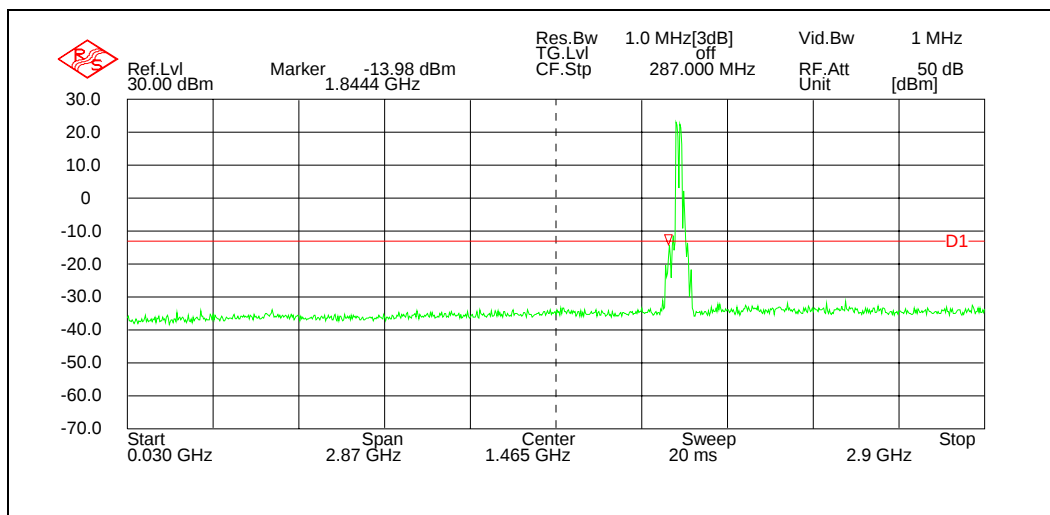


Figure 104: Intermodulation Uplink CDMA Low Band-edge - 30 MHz to 2.9 GHz

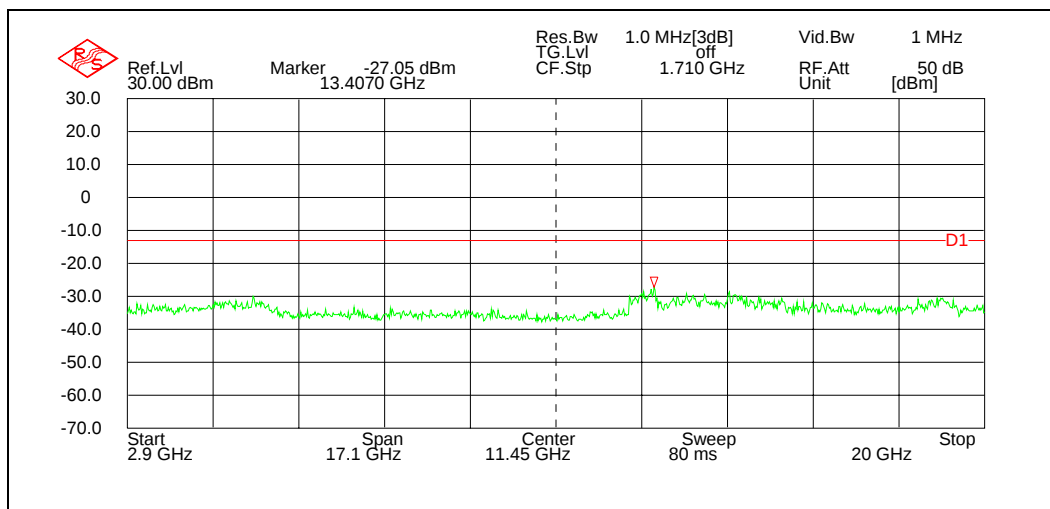


Figure 105: Intermodulation Uplink CDMA Low Band-edge – 2.9 to 20 GHz

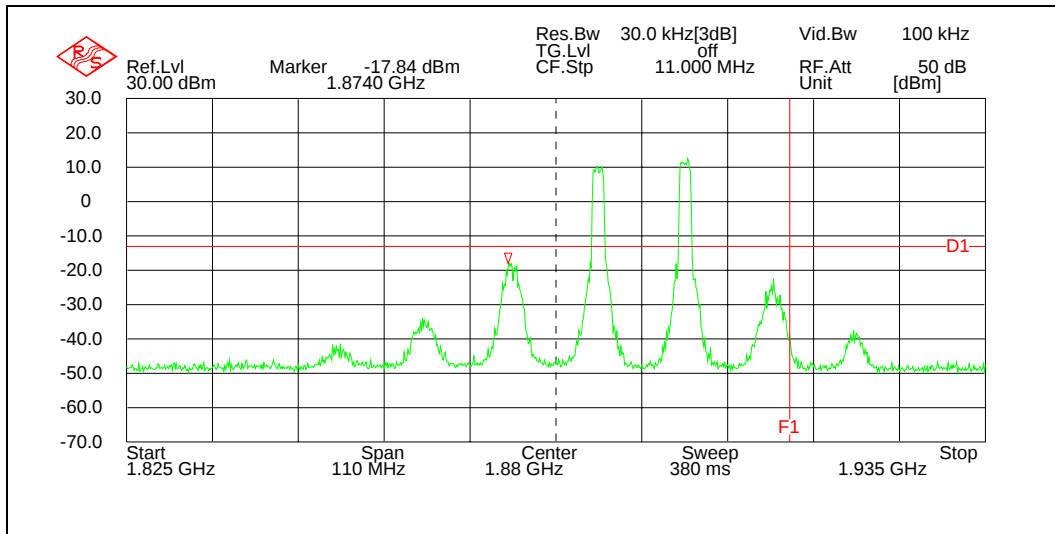


Figure 106: Intermodulation Uplink CDMA High Band-edge

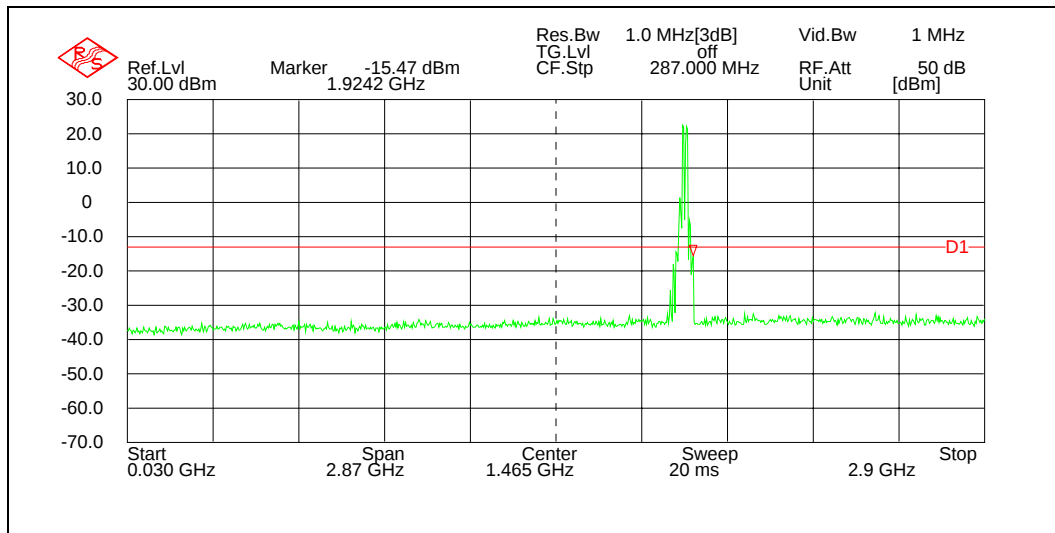


Figure 107: Intermodulation Uplink CDMA High Band-edge - 30 MHz to 2.9 GHz

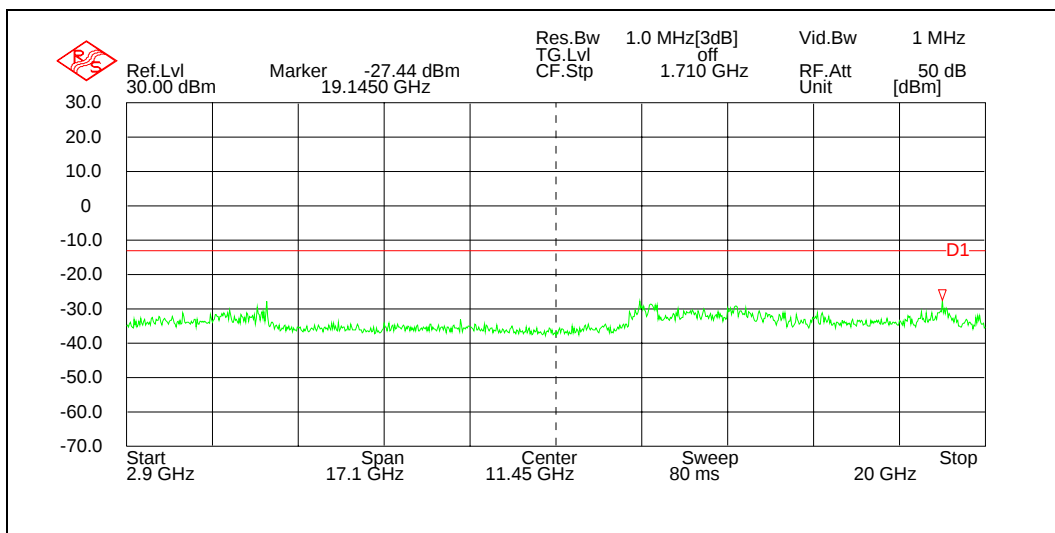


Figure 108: Intermodulation Uplink CDMA High Band-edge – 2.9 to 20 GHz

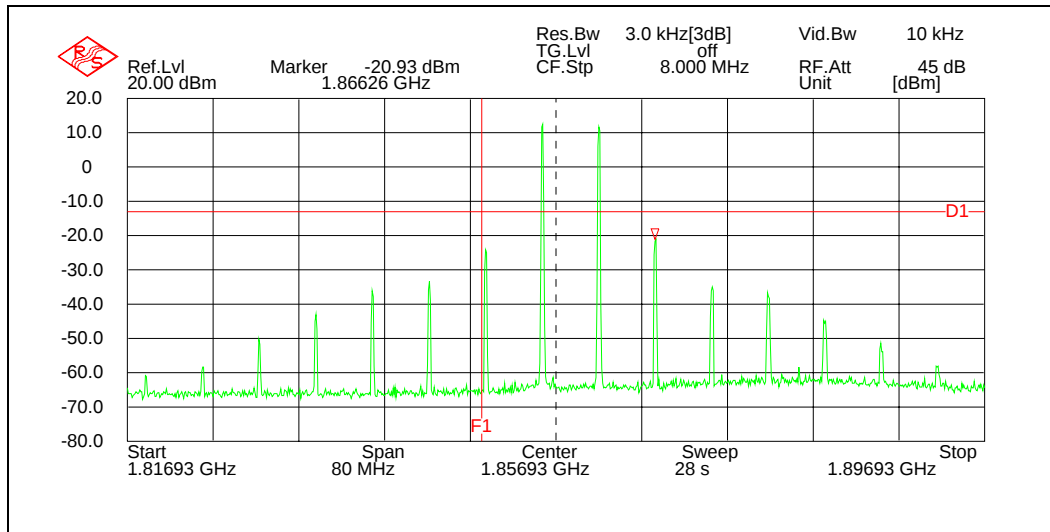


Figure 109: Intermodulation Uplink TDMA Low Band-edge

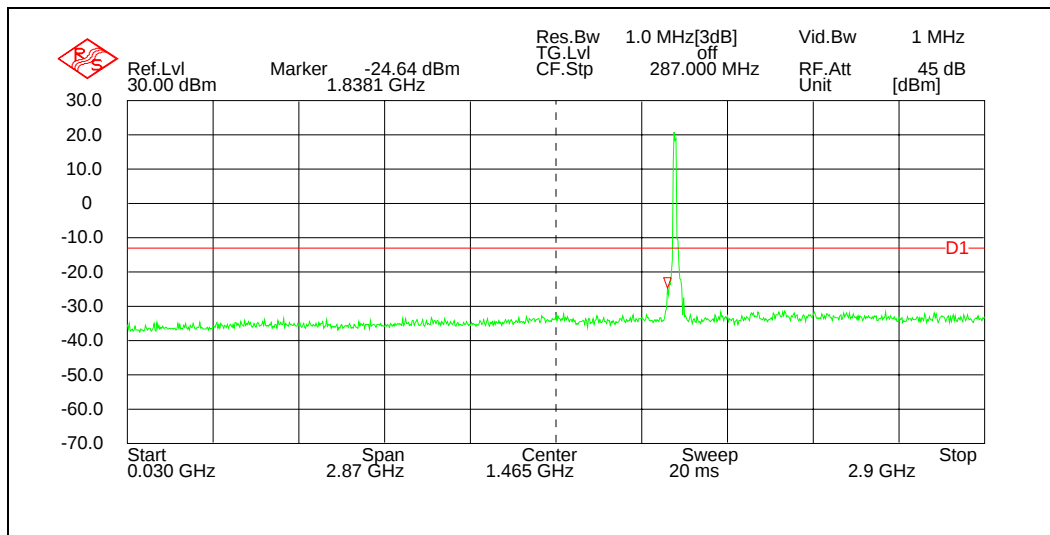


Figure 110: Intermodulation Uplink TDMA Low Band-edge - 30 MHz to 2.9 GHz

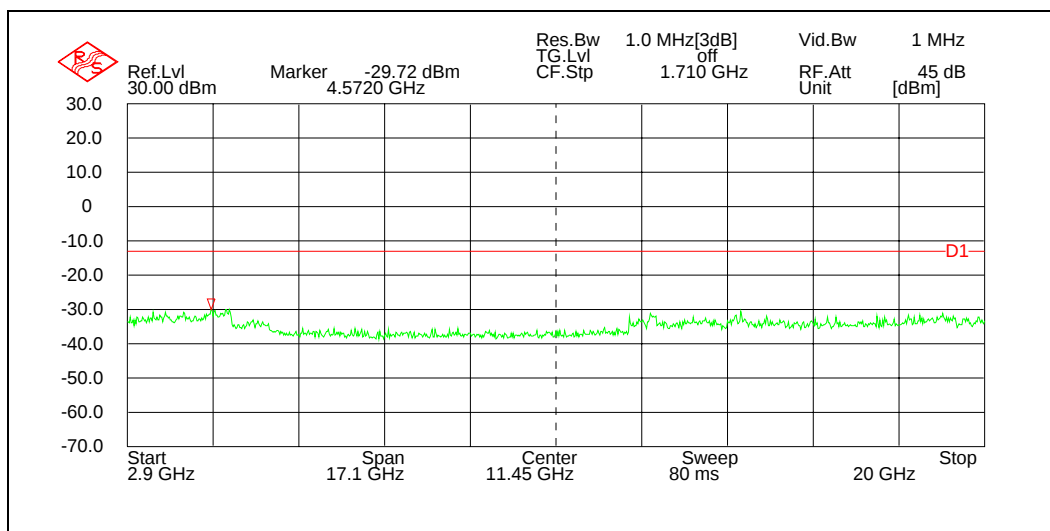


Figure 111: Intermodulation Uplink TDMA Low Band-edge - 2.9 to 20 GHz

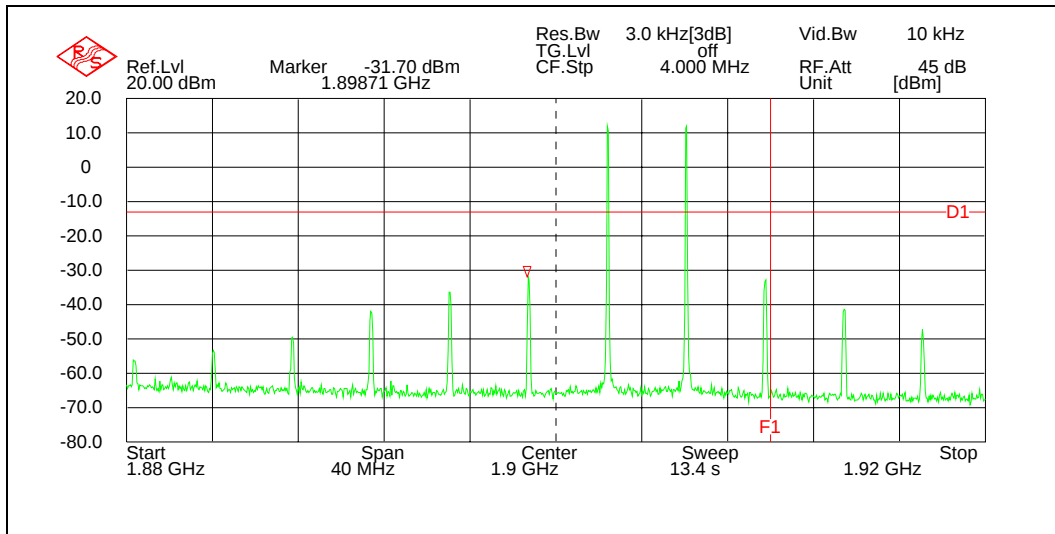


Figure 112: Intermodulation Uplink TDMA High Band-edge

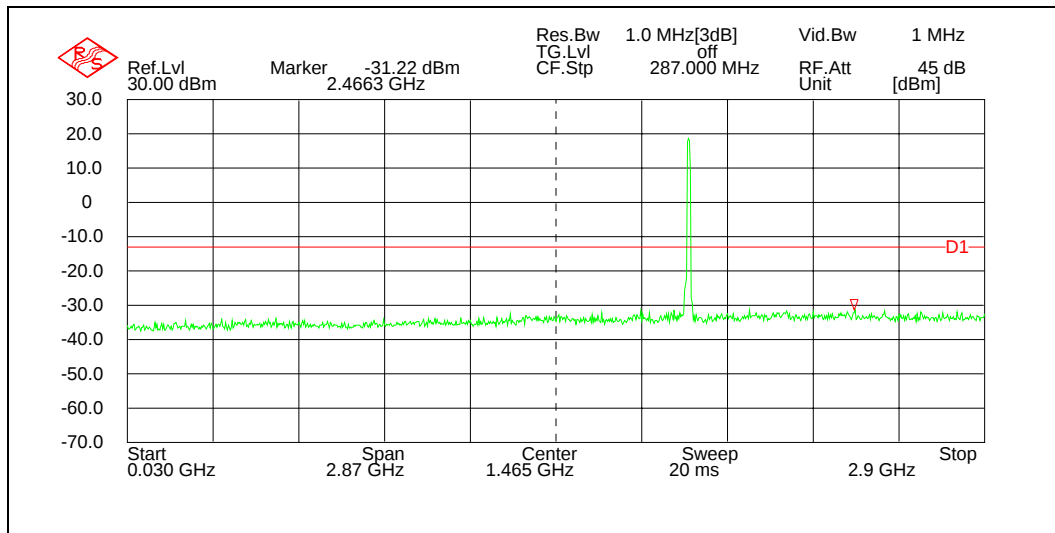


Figure 113: Intermodulation Uplink TDMA High Band-edge - 30 MHz to 2.9 GHz

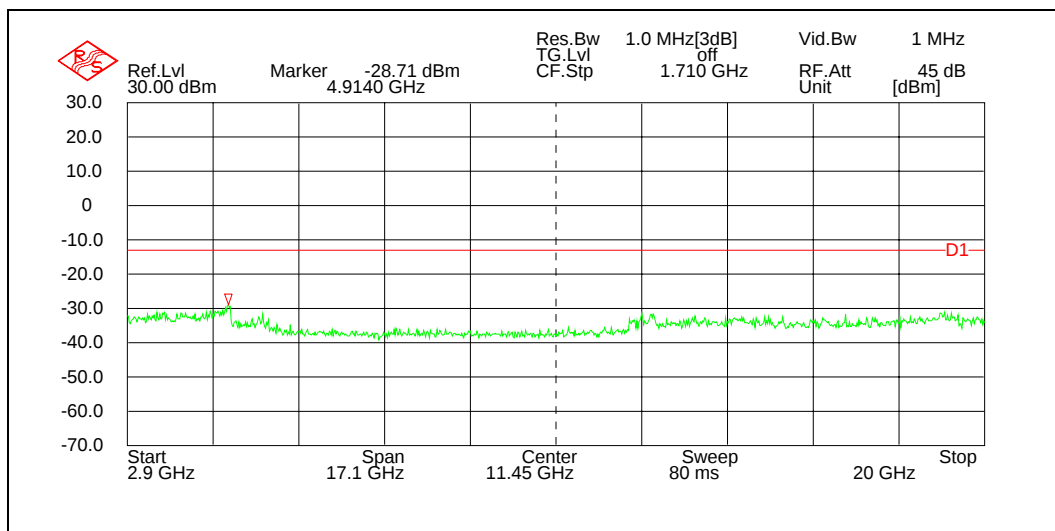


Figure 114: Intermodulation Uplink TDMA High Band-edge - 2.9 to 20 GHz

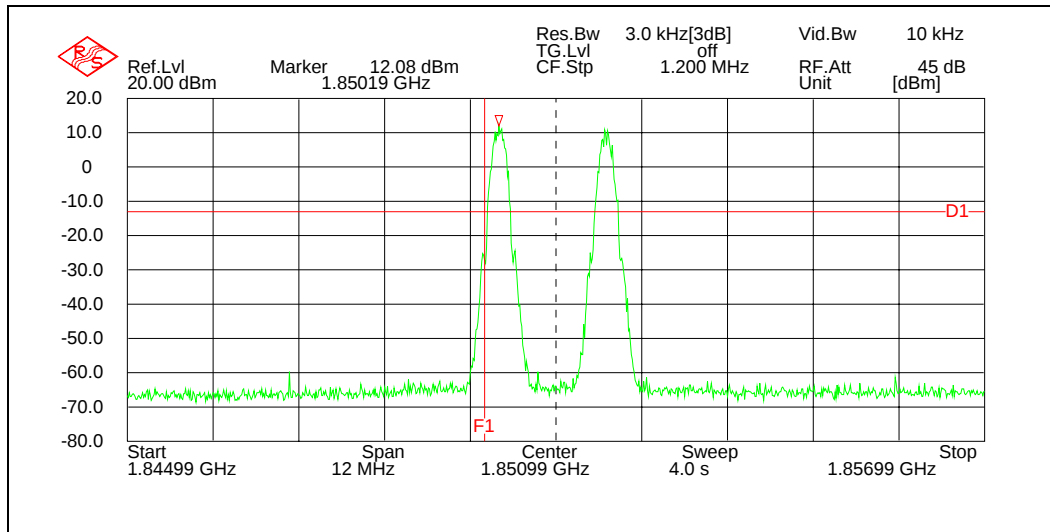


Figure 115: Intermodulation Uplink GSM Low Band-edge

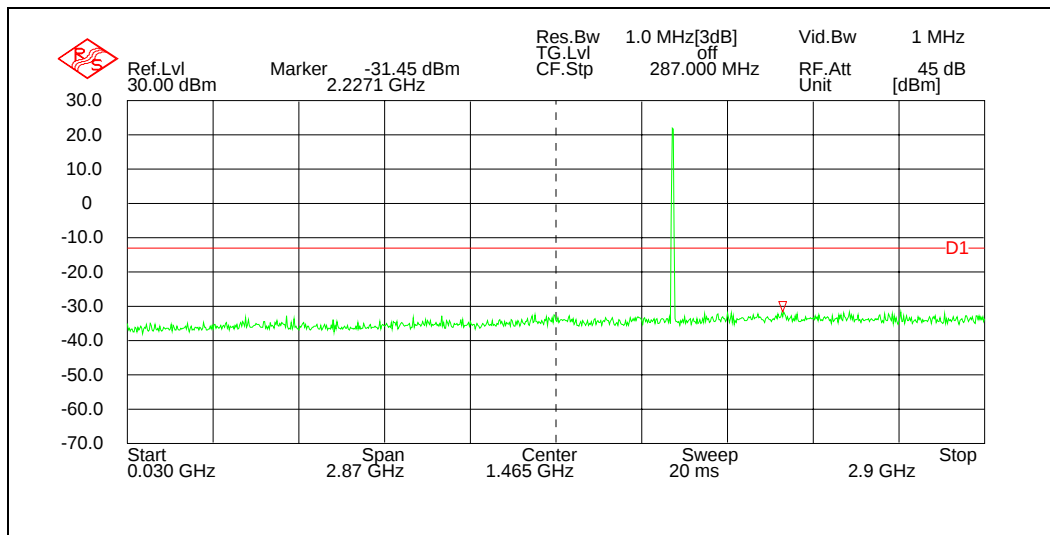


Figure 116: Intermodulation Uplink GSM Low Band-edge - 30 MHz to 2.9 GHz

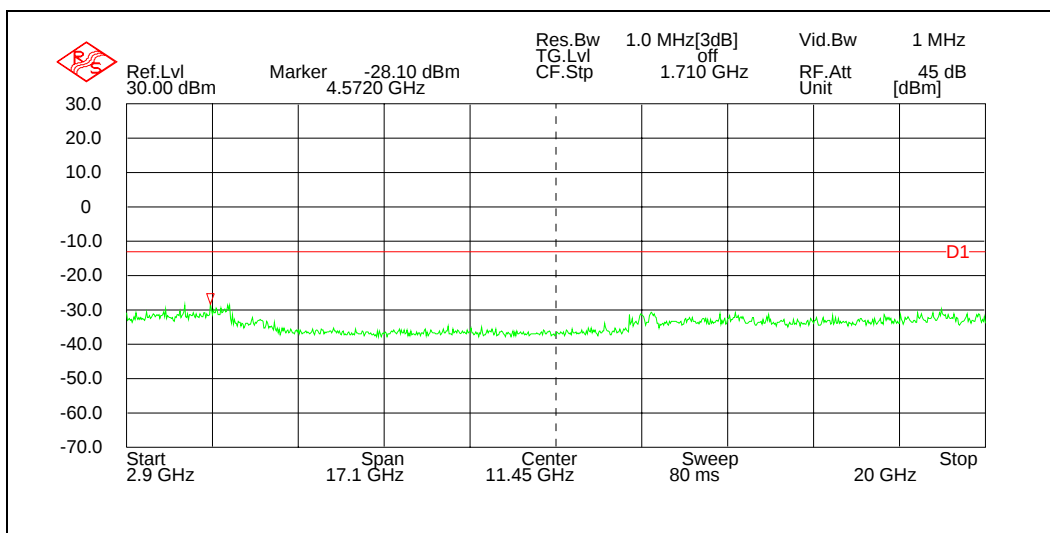


Figure 117: Intermodulation Uplink GSM Low Band-edge - 2.9 to 20 GHz

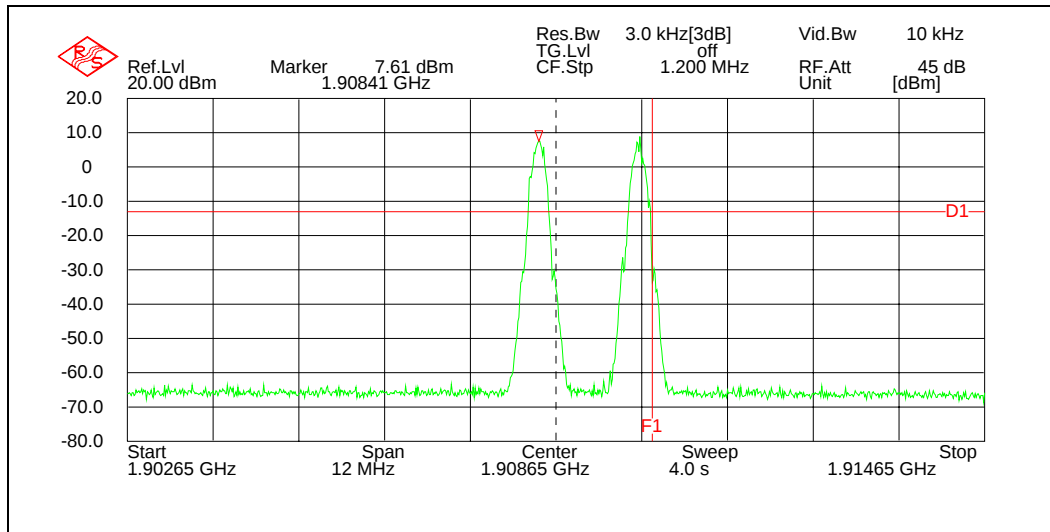


Figure 118: Intermodulation Uplink GSM High Band-edge

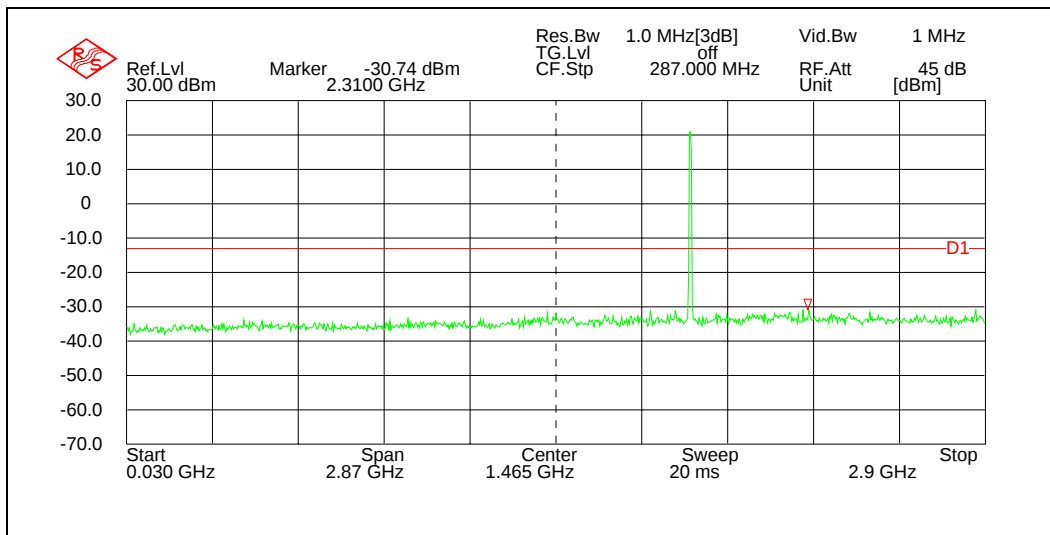


Figure 119: Intermodulation Uplink GSM High Band-edge - 30 MHz to 2.9 GHz

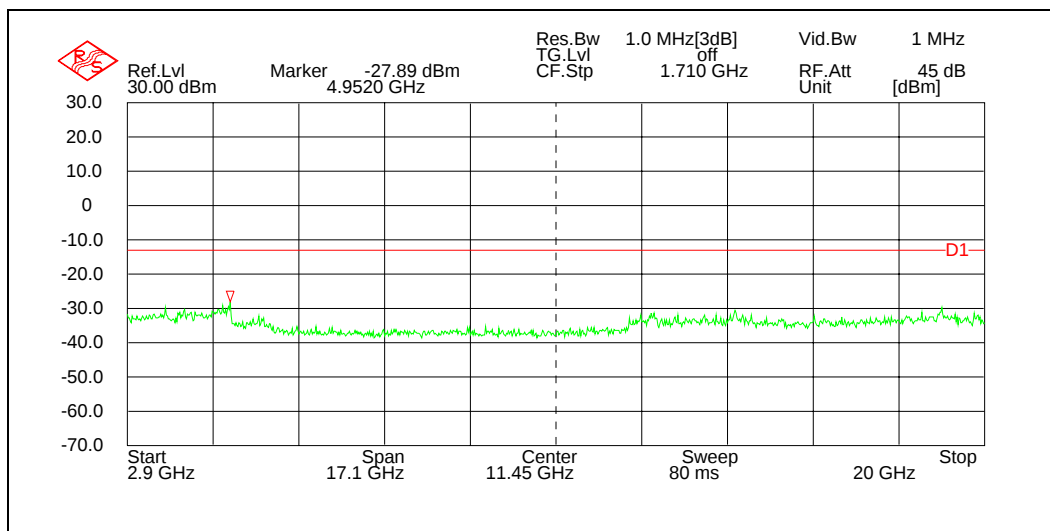


Figure 120: Intermodulation Uplink GSM High Band-edge – 2.9 to 20 GHz

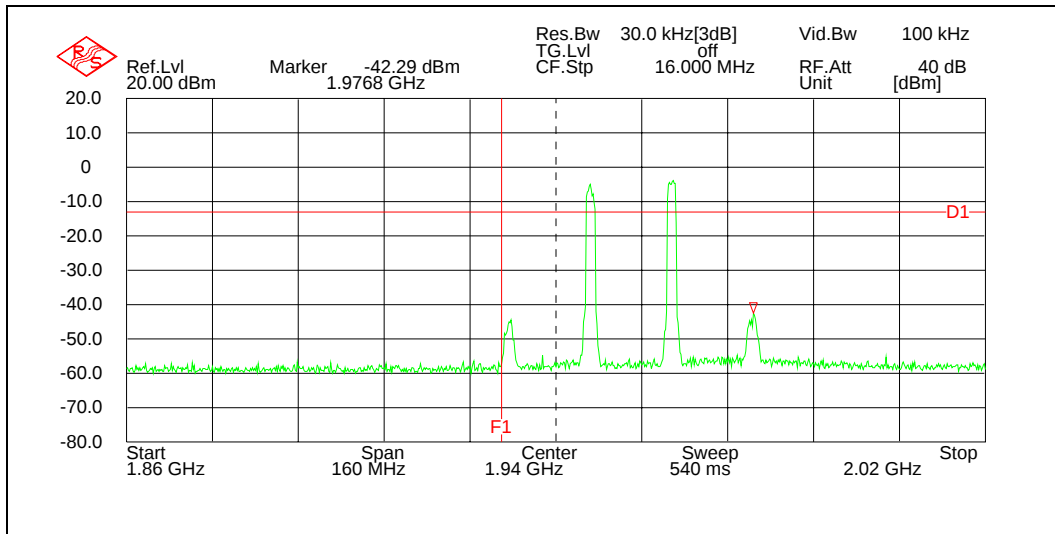


Figure 121: Intermodulation Downlink CDMA Low Band-edge

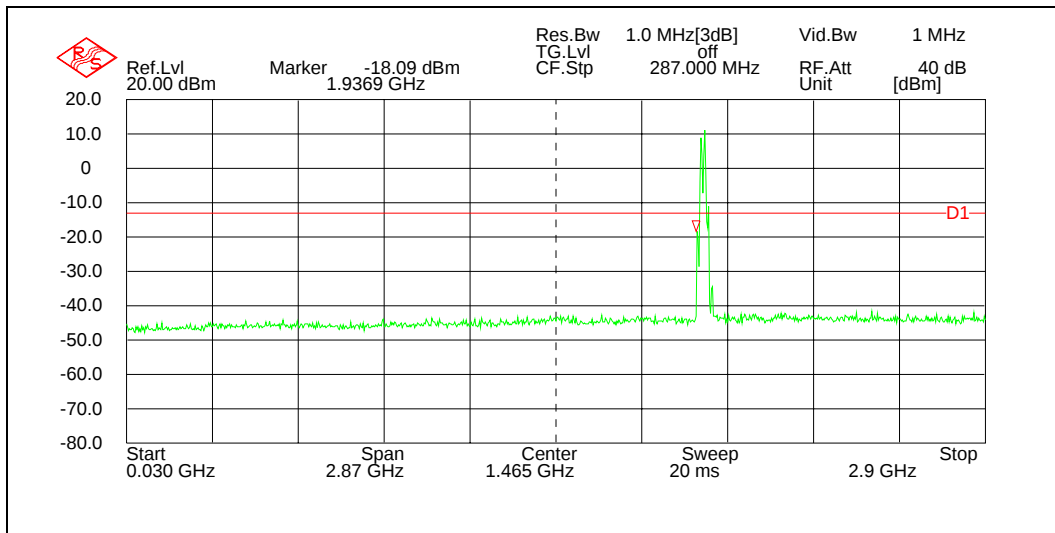


Figure 122: Intermodulation Downlink CDMA Low Band-edge - 30 MHz to 2.9 GHz

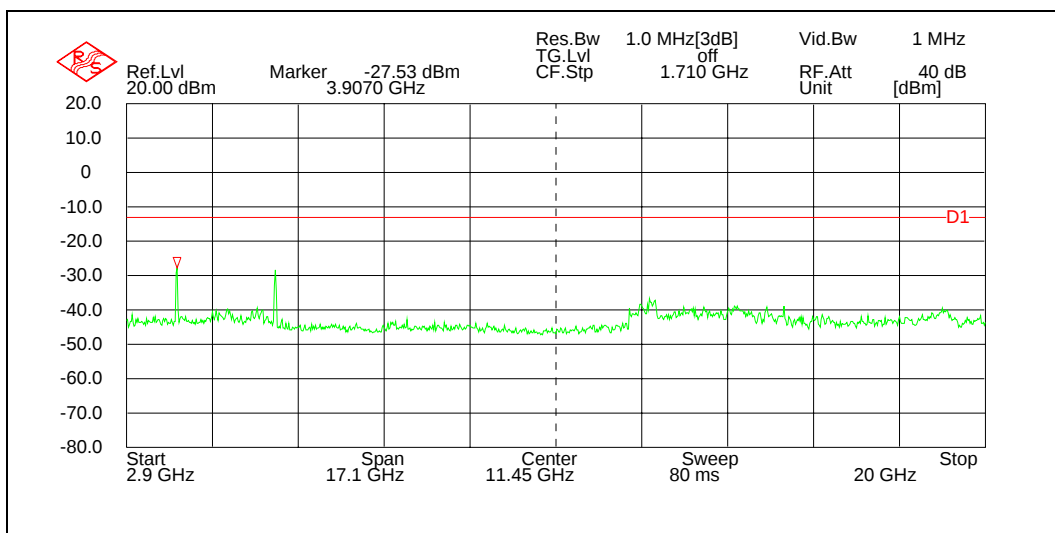


Figure 123: Intermodulation Downlink CDMA Low Band-edge – 2.9 to 20 GHz

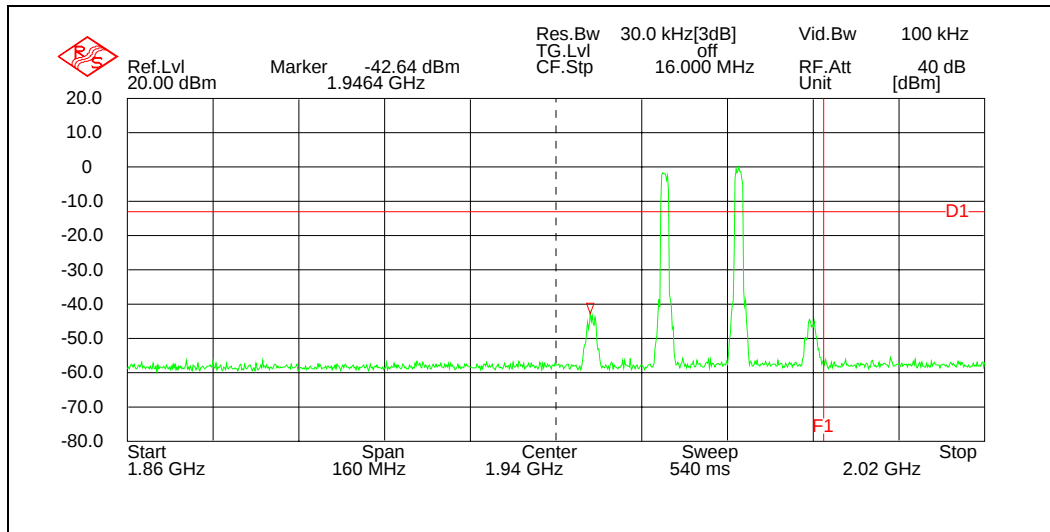


Figure 124: Intermodulation Downlink CDMA High Band-edge

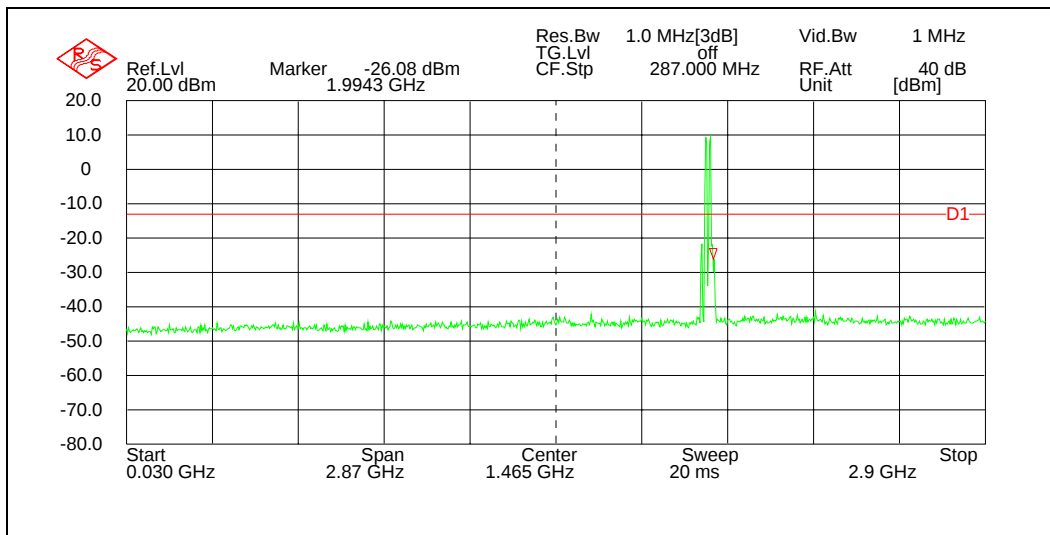


Figure 125: Intermodulation Downlink CDMA High Band-edge - 30 MHz to 2.9 GHz

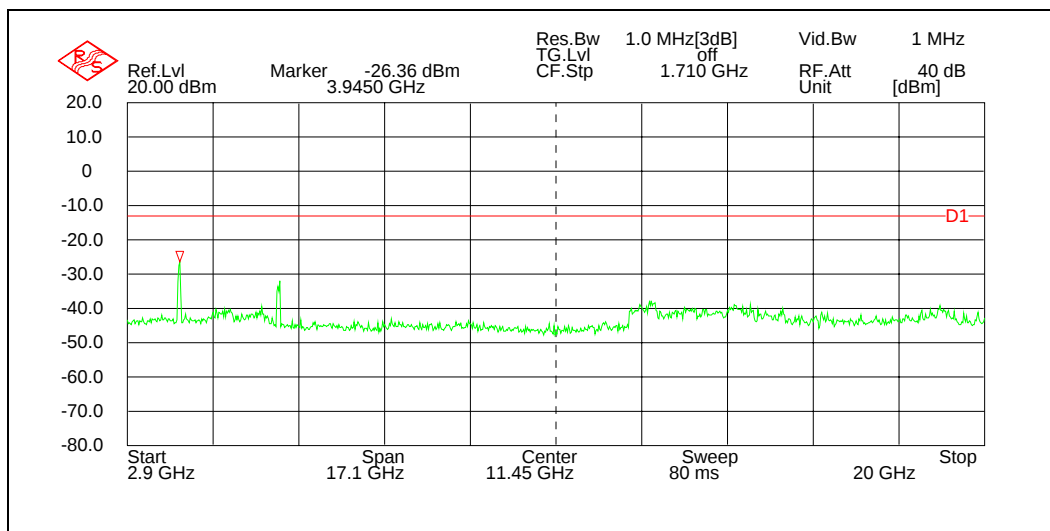


Figure 126: Intermodulation Downlink CDMA High Band-edge – 2.9 to 20 GHz

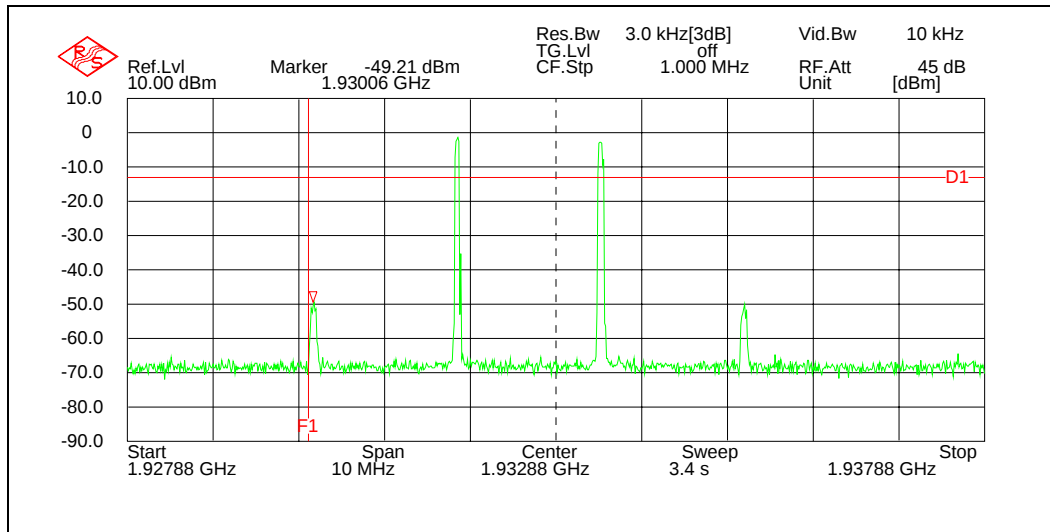


Figure 127: Intermodulation Downlink TDMA Low Band-edge

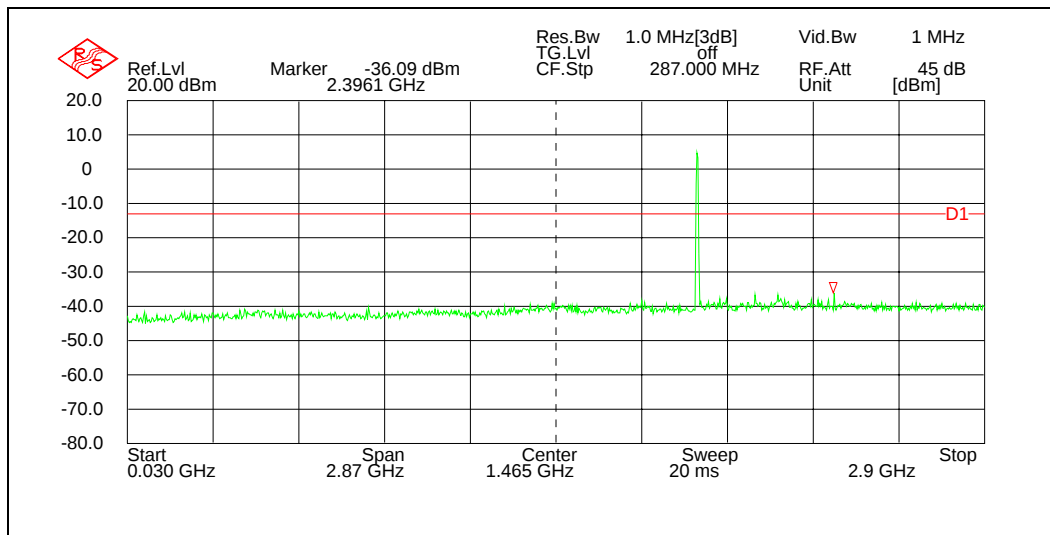


Figure 128: Intermodulation Downlink TDMA Low Band-edge - 30 MHz to 2.9 GHz

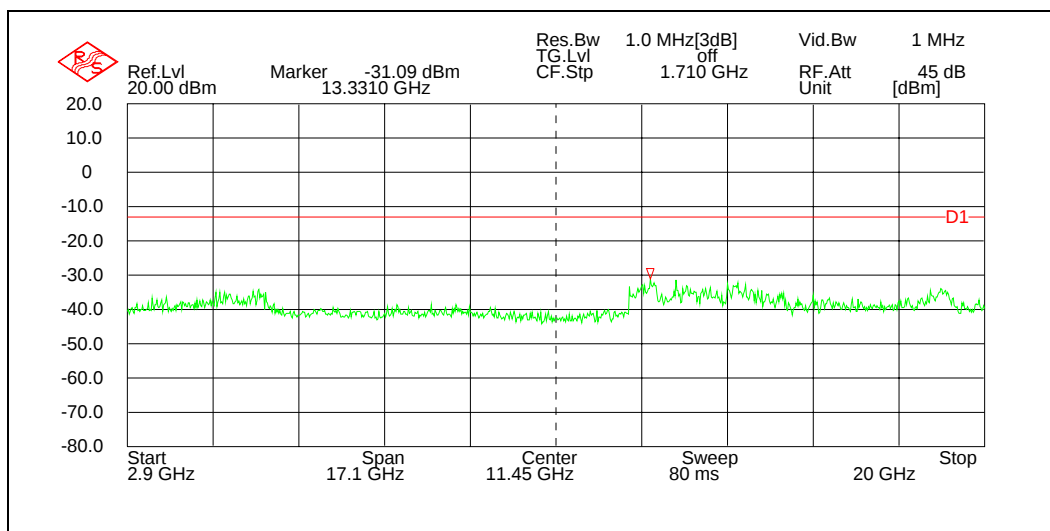


Figure 129: Intermodulation Downlink TDMA Low Band-edge – 2.9 to 20 GHz

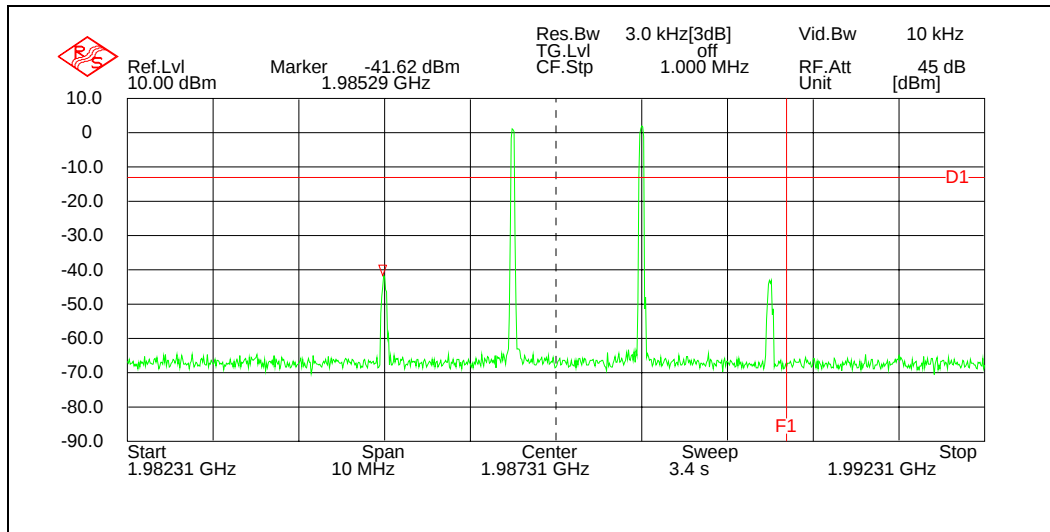


Figure 130: Intermodulation Downlink TDMA High Band-edge

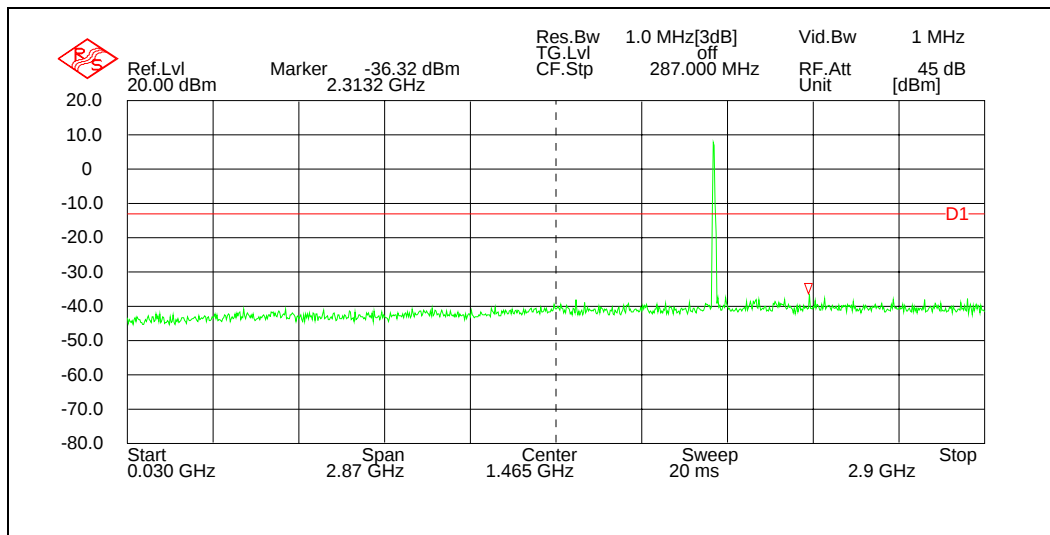


Figure 131: Intermodulation Downlink TDMA High Band-edge - 30 MHz to 2.9 GHz

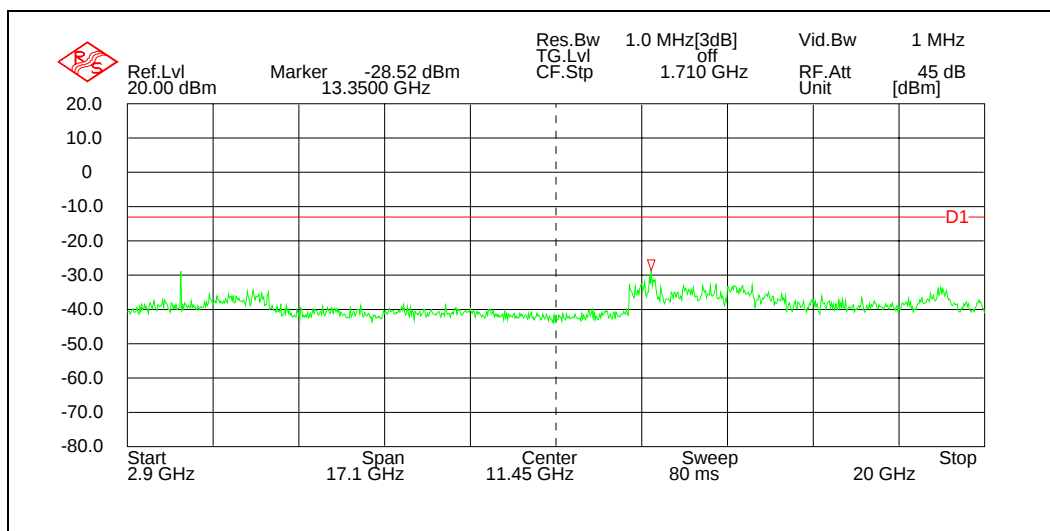


Figure 132: Intermodulation Downlink TDMA High Band-edge – 2.9 to 20 GHz

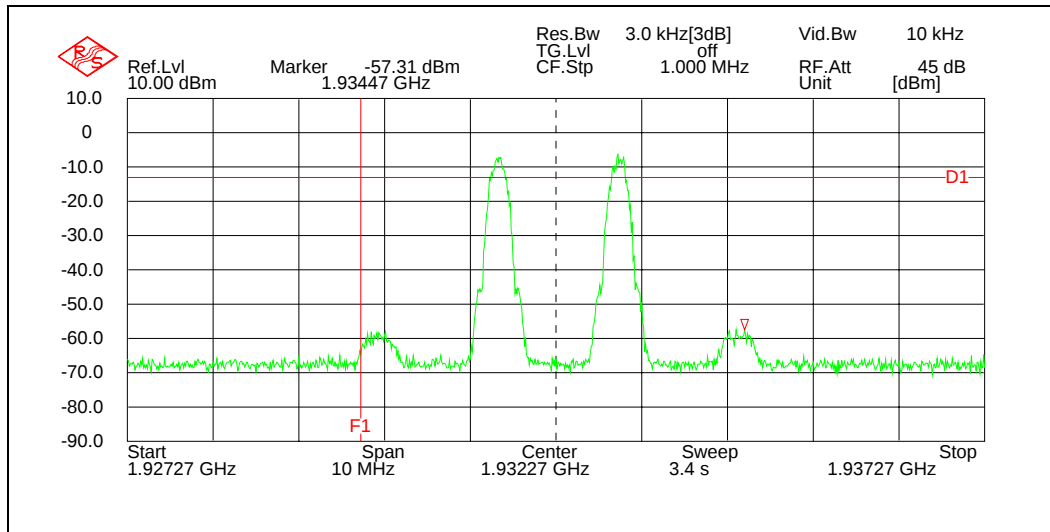


Figure 133: Intermodulation Downlink GSM Low Band-edge

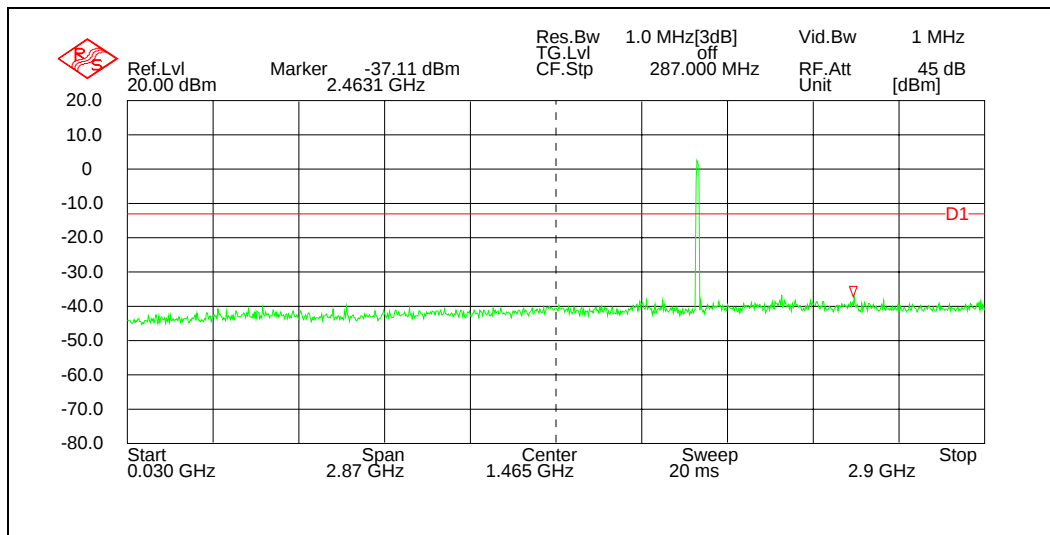


Figure 134: Intermodulation Downlink GSM Low Band-edge - 30 MHz to 2.9 GHz

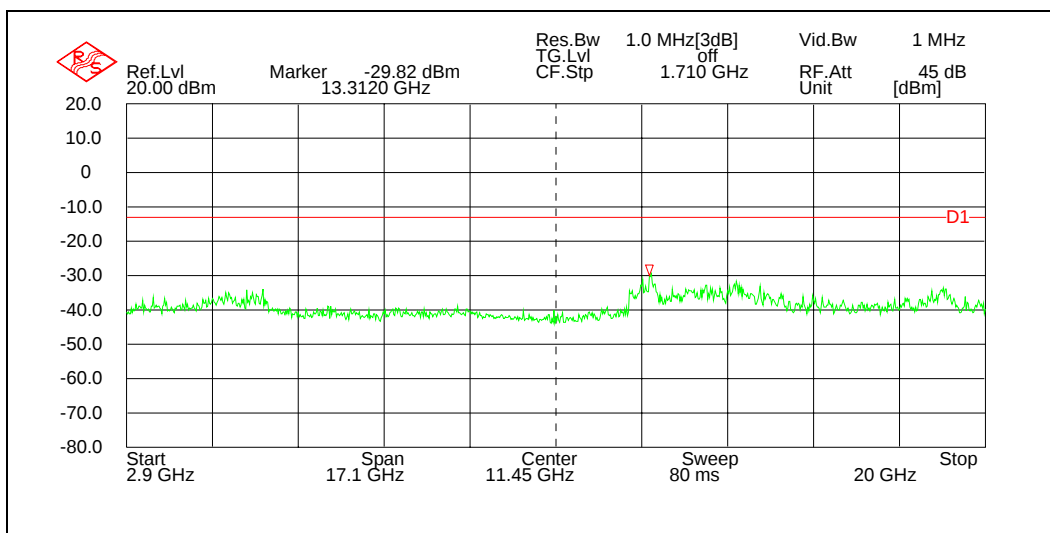


Figure 135: Intermodulation Downlink GSM Low Band-edge – 2.9 to 20 GHz

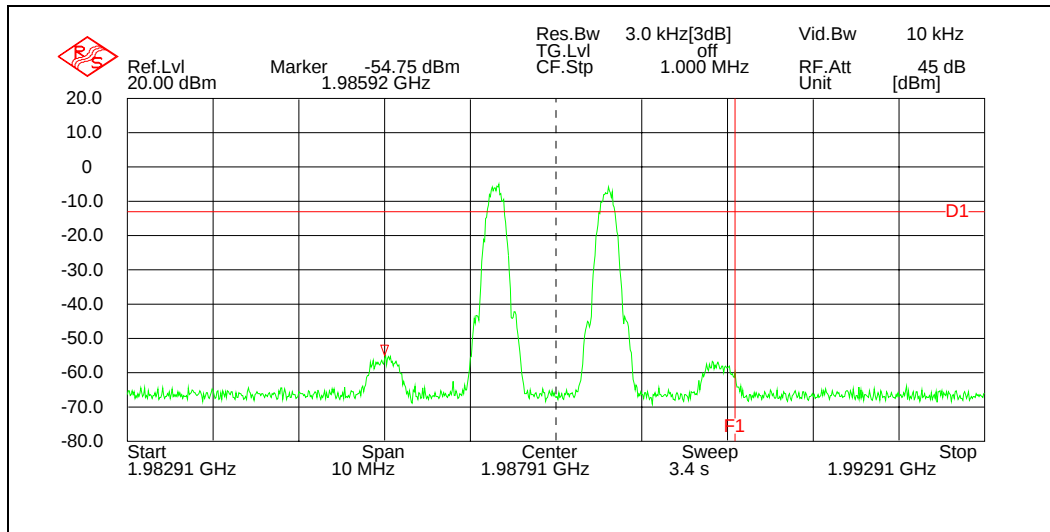


Figure 136: Intermodulation Downlink GSM High Band-edge

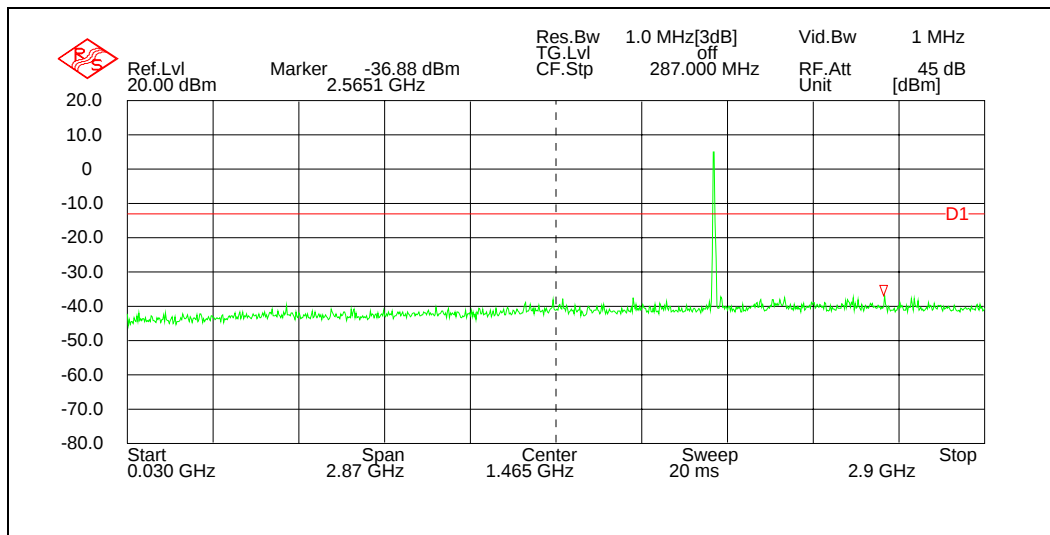


Figure 137: Intermodulation Downlink GSM High Band-edge - 30 MHz to 2.9 GHz

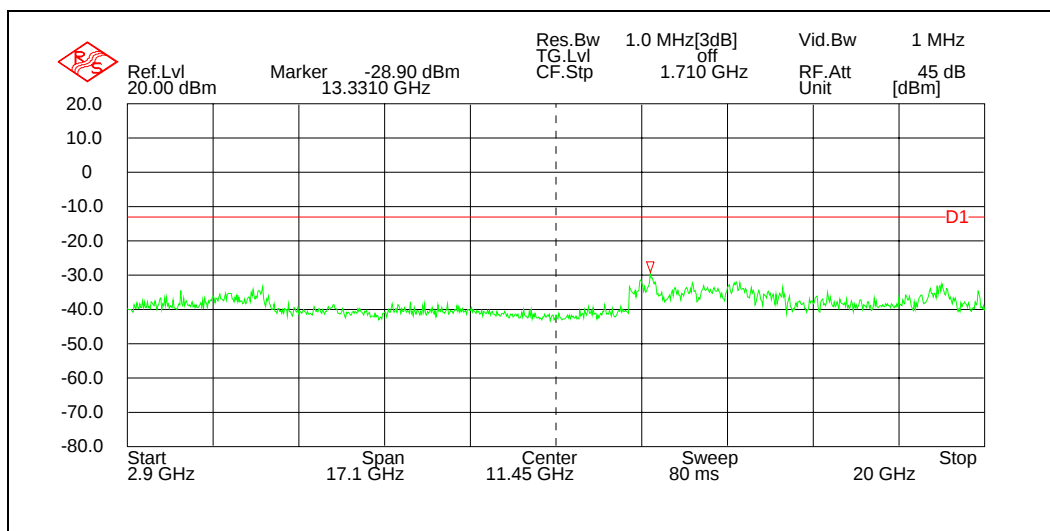


Figure 138: Intermodulation Downlink GSM High Band-edge – 2.9 to 20 GHz