

FCC Part 24E Transmitter Certification

Test Report

FCC ID: DNY020MPFC

FCC Rule Part: CFR 47 Part 24 Subpart E

ACS Report Number: 07-0092-24E-A

Manufacturer: EMS Wireless
Equipment Type: PCS Bi-Directional Repeater
Tradename: MirrorCell® II
Model: 020MPFC

Test Begin Date: May 2, 2007

Test End Date: May 7, 2007

Report Issue Date: May 8, 2007



FOR THE SCOPE OF ACCREDITATION UNDER LAB Code 200612


Prepared by: _____
Jeff Woods
Wireless Certifications Engineer
ACS, Inc.


Reviewed by: _____
J. Kirby Munroe
Manager Wireless Certifications
ACS, Inc.

This test report shall not be reproduced except in full. This report may be reproduced in part with prior written consent of ACS, Inc. The results contained in this report are representative of the sample(s) submitted for evaluation.

This report contains **32** pages

Table of Contents

1.0 Occupied Bandwidth

1.1 Uplink	3
1.2 Downlink	6

2.0 Spurious Emissions at Antenna Terminals and Inter-modulation Products

2.1 CDMA Uplink	9
2.2 TDMA Uplink	12
2.3 GSM Uplink	15
2.4 CDMA Downlink	18
2.5 TDMA Downlink	21
2.6 GSM Downlink	24

3.0 Band-edge

3.1 CDMA Uplink	27
3.2 TDMA Uplink	28
3.3 GSM Uplink	29
3.4 CDMA Downlink	30
3.5 TDMA Downlink	31
3.6 GSM Downlink	32

1.0 Occupied Bandwidth (Input vs. Output)

1.1 Uplink

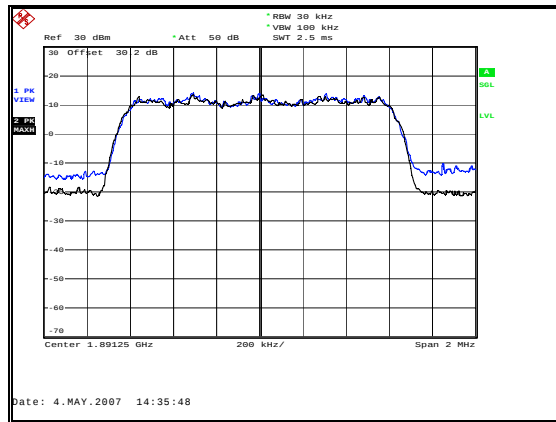


Figure 1: Occupied Bandwidth - Uplink CDMA Low Channel

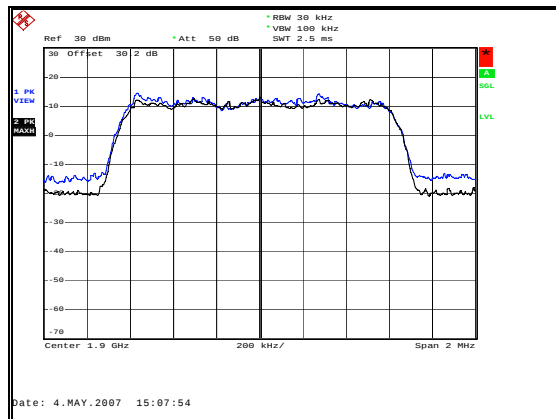


Figure 2: Occupied Bandwidth - Uplink CDMA Mid Channel

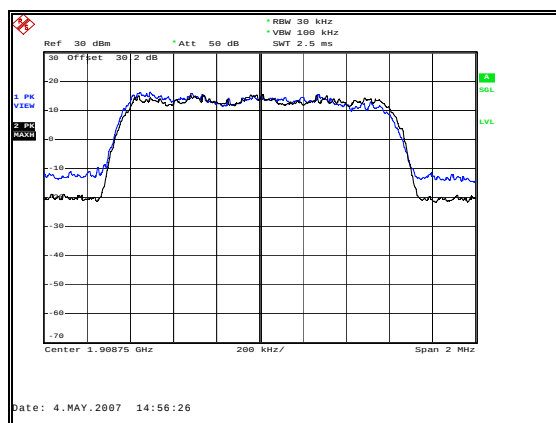


Figure 3: Occupied Bandwidth - Uplink CDMA High Channel

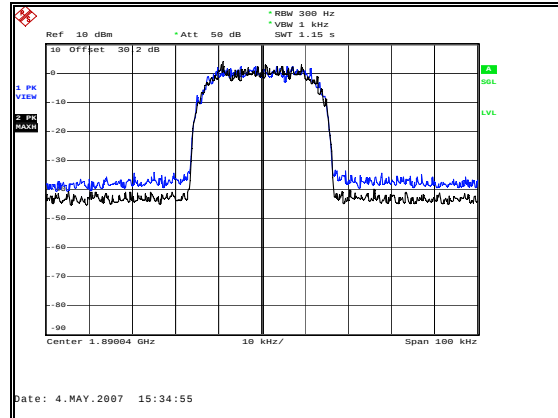


Figure 4: Occupied Bandwidth - Uplink TDMA Low Channel

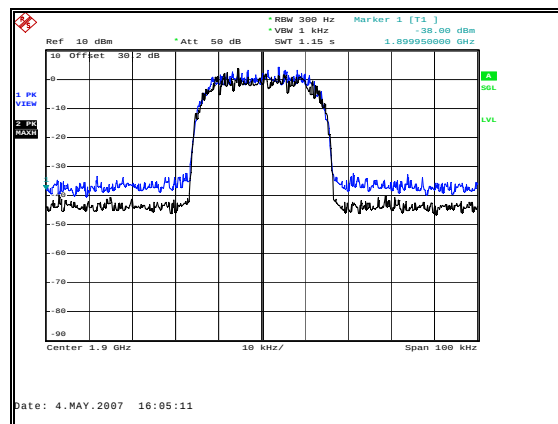


Figure 5: Occupied Bandwidth - Uplink TDMA Mid Channel

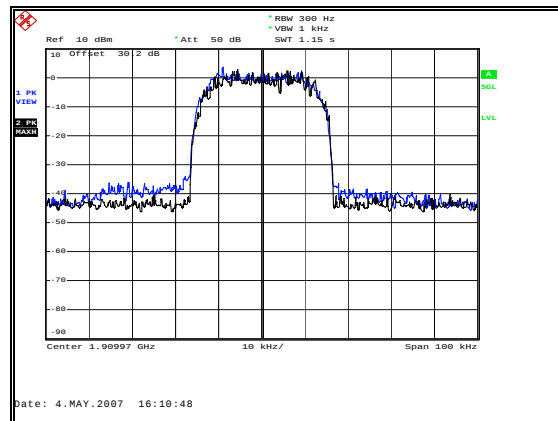


Figure 6: Occupied Bandwidth - Uplink TDMA High Channel

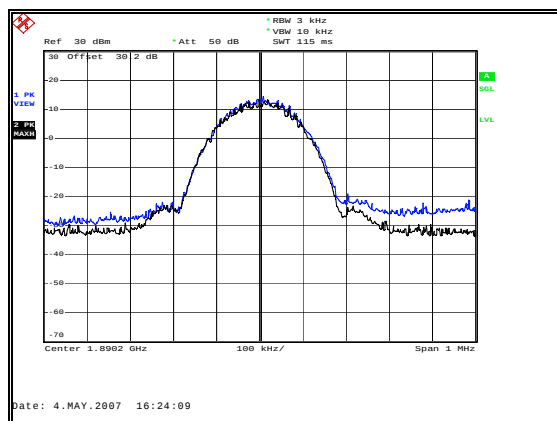


Figure 7: Occupied Bandwidth - Uplink GSM Low Channel

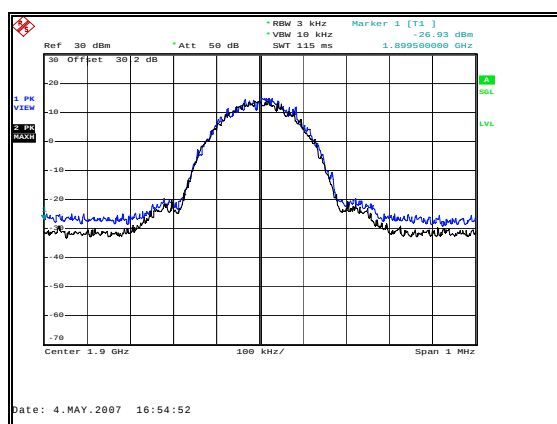


Figure 8: Occupied Bandwidth - Uplink GSM Mid Channel

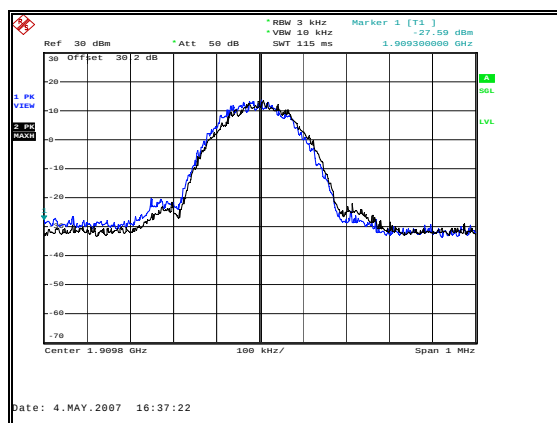


Figure 9: Occupied Bandwidth - Uplink GSM High Channel

1.2 Downlink

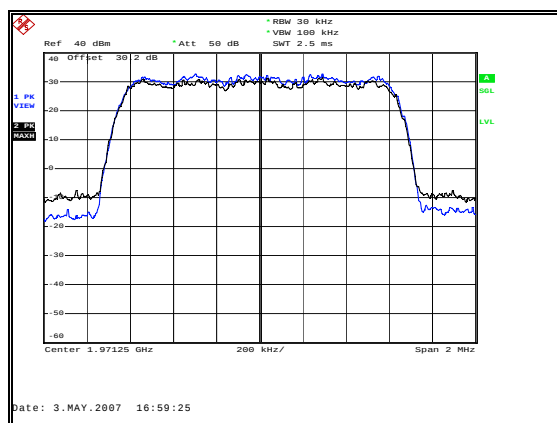


Figure 10: Occupied Bandwidth - Downlink CDMA Low Channel

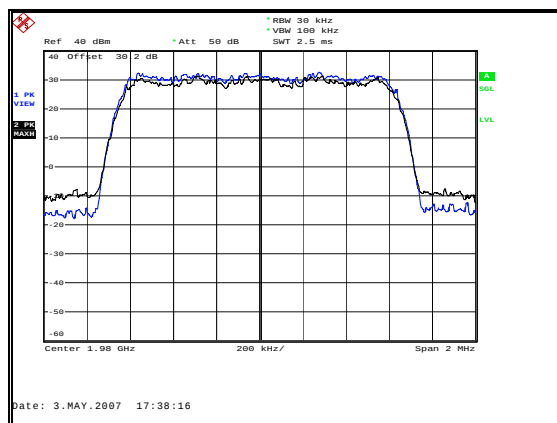


Figure 11: Occupied Bandwidth - Downlink CDMA Mid Channel

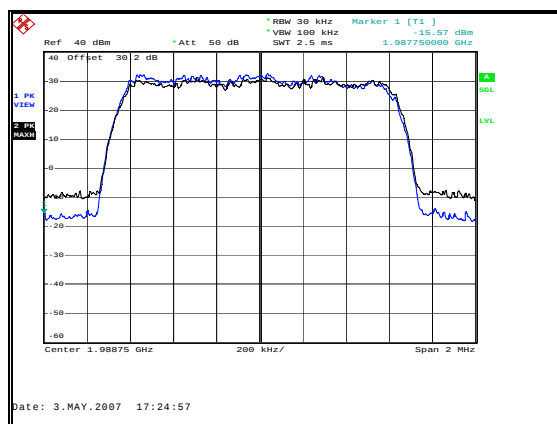


Figure 12: Occupied Bandwidth - Downlink CDMA High Channel

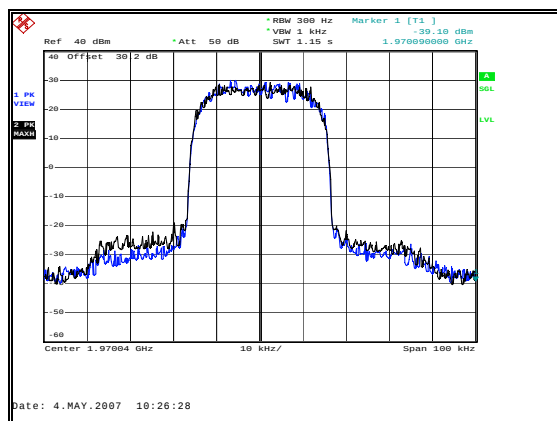


Figure 13: Occupied Bandwidth - Downlink TDMA Low Channel

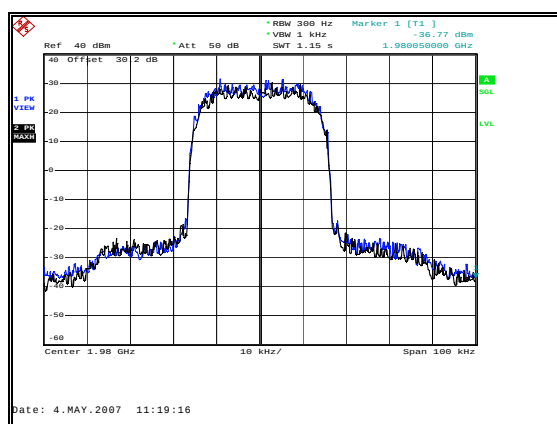


Figure 14: Occupied Bandwidth - Downlink TDMA Mid Channel

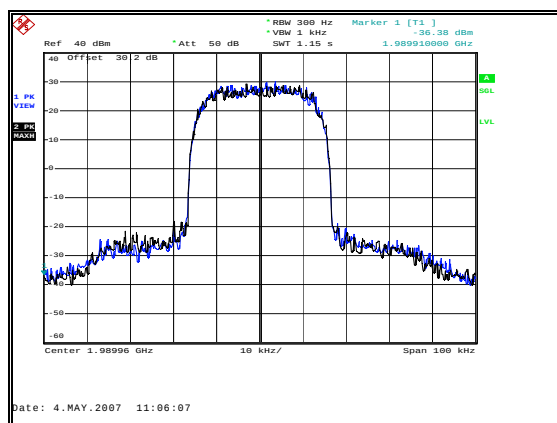


Figure 15: Occupied Bandwidth - Downlink TDMA High Channel

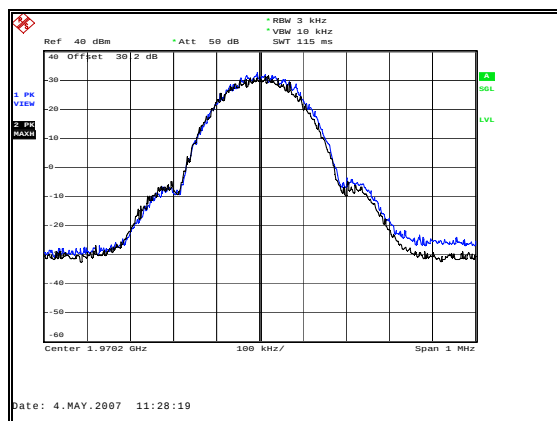


Figure 16: Occupied Bandwidth - Downlink GSM Low Channel

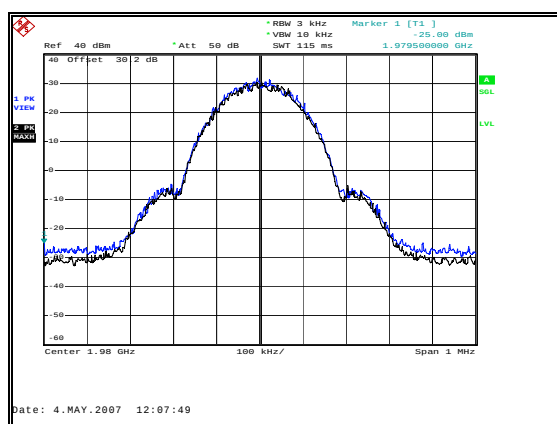


Figure 17: Occupied Bandwidth - Downlink GSM Mid Channel

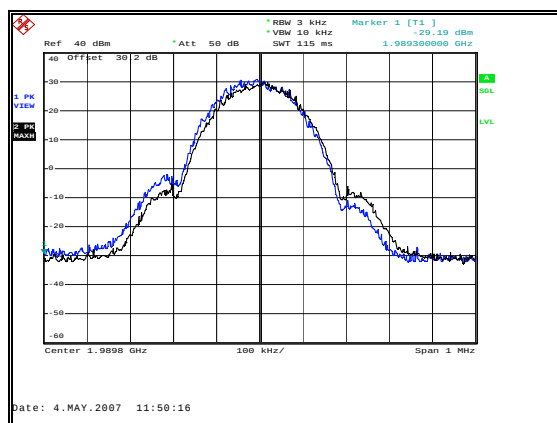


Figure 18: Occupied Bandwidth - Downlink GSM High Channel

2.0 Spurious Emissions at Antenna Terminals and Inter-modulation Products

2.1 CDMA Uplink

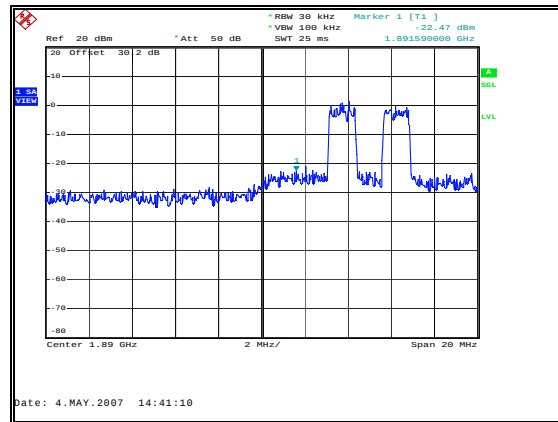


Figure 19: Spurious Emissions - Uplink CDMA Low Channel – Inter-modulation In Band

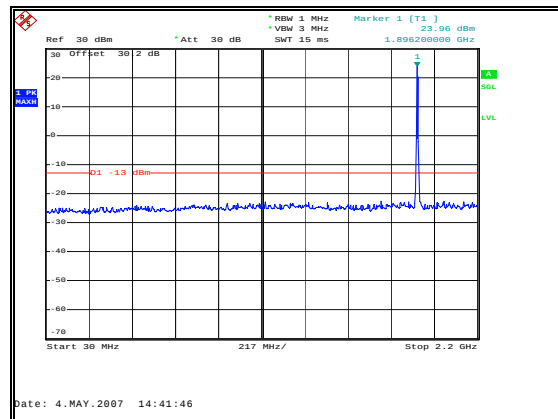


Figure 20: Spurious Emissions - Uplink CDMA Low Channel – Inter-modulation - 30MHz to 2.2GHz

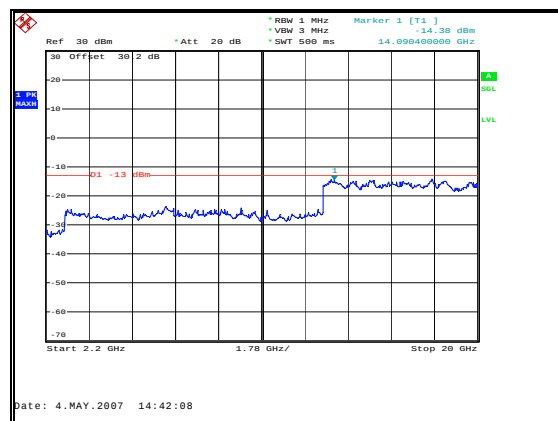


Figure 21: Spurious Emissions - Uplink CDMA Low Channel – Inter-modulation – 2.2 to 20GHz

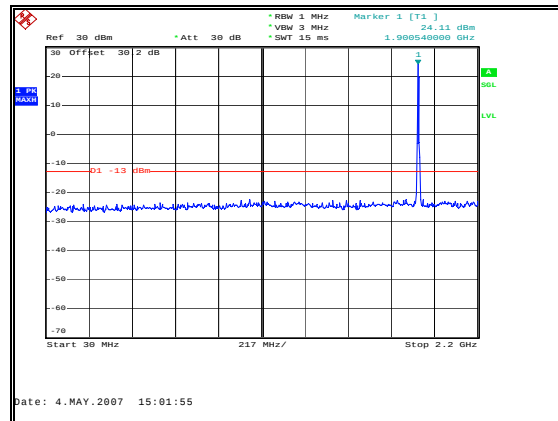


Figure 22: Spurious Emissions - Uplink CDMA Mid Channel – 30MHz to 2.2GHz

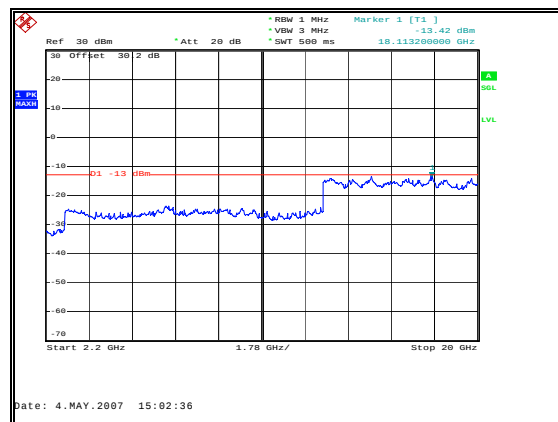


Figure 23: Spurious Emissions - Uplink CDMA Mid Channel – 2.2 to 20GHz

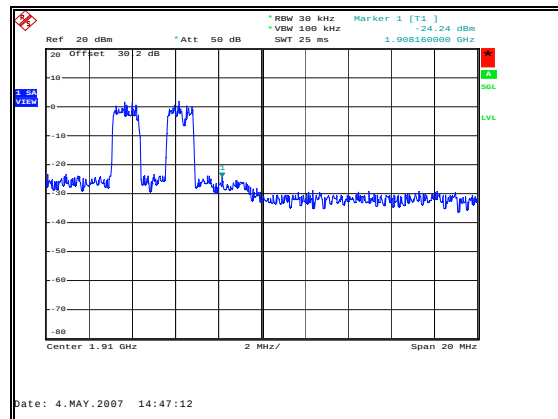


Figure 24: Spurious Emissions - Uplink CDMA High Channel – Inter-modulation In Band

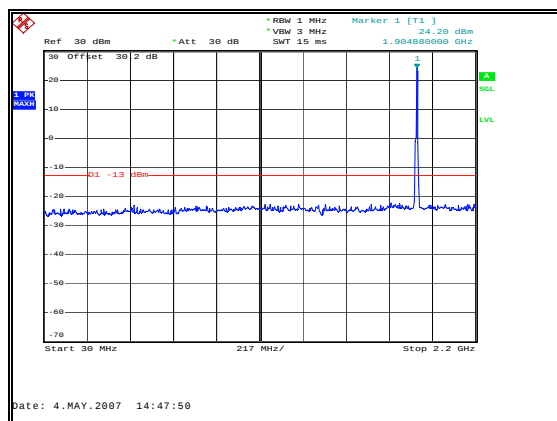


Figure 25: Spurious Emissions - Uplink CDMA High Channel – Inter-modulation - 30MHz to 2.2GHz

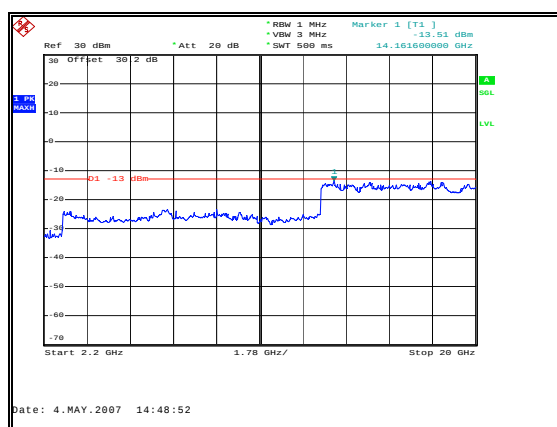


Figure 26: Spurious Emissions - Uplink CDMA High Channel – Inter-modulation – 2.2 to 20GHz

2.2 TDMA Uplink

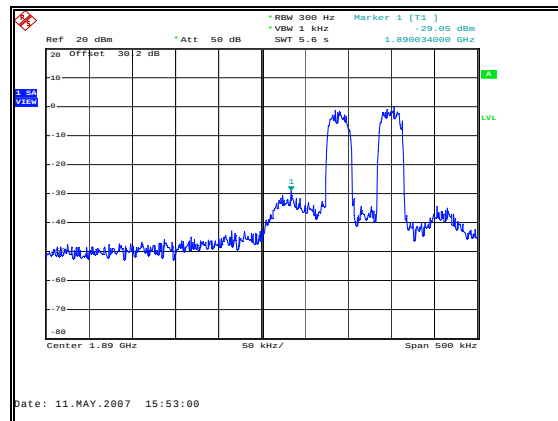


Figure 27: Spurious Emissions - Uplink TDMA Low Channel – Inter-modulation In Band

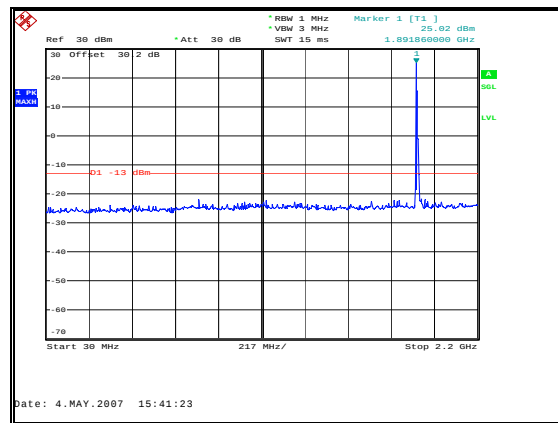


Figure 28: Spurious Emissions - Uplink TDMA Low Channel – Inter-modulation - 30MHz to 2.2GHz

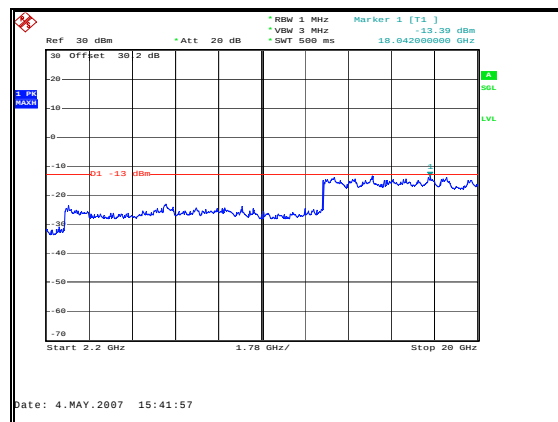


Figure 29: Spurious Emissions - Uplink TDMA Low Channel – Inter-modulation – 2.2 to 20GHz

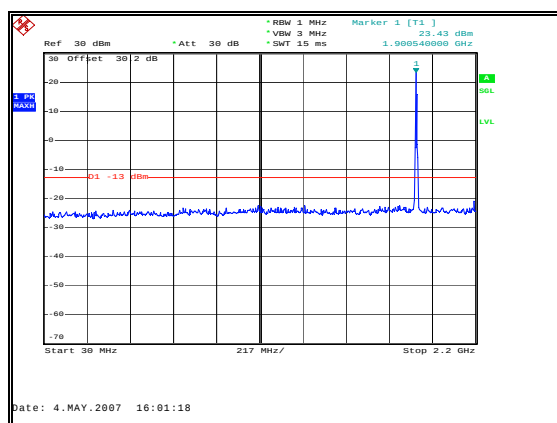


Figure 30: Spurious Emissions - Uplink TDMA Mid Channel – 30MHz to 2.2GHz

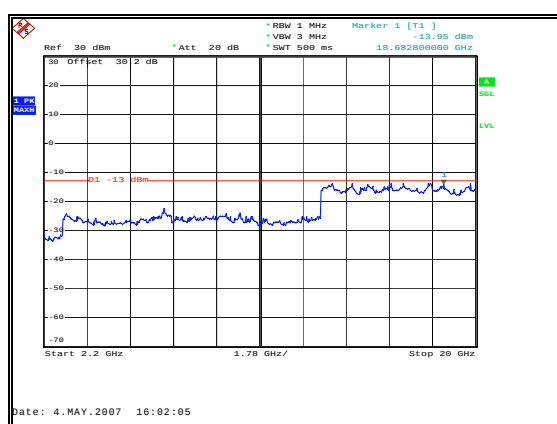


Figure 31: Spurious Emissions - Uplink TDMA Mid Channel – 2.2 to 20GHz

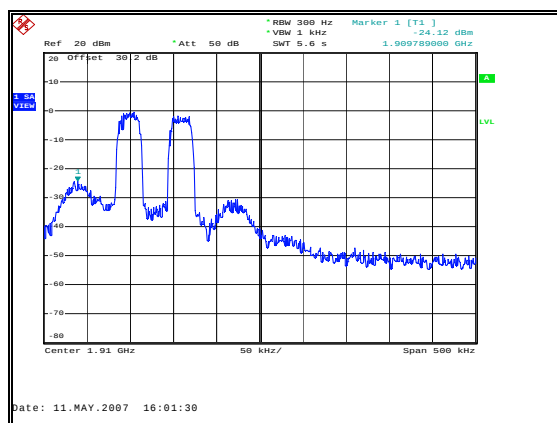


Figure 32: Spurious Emissions - Uplink TDMA High Channel – Inter-modulation In Band

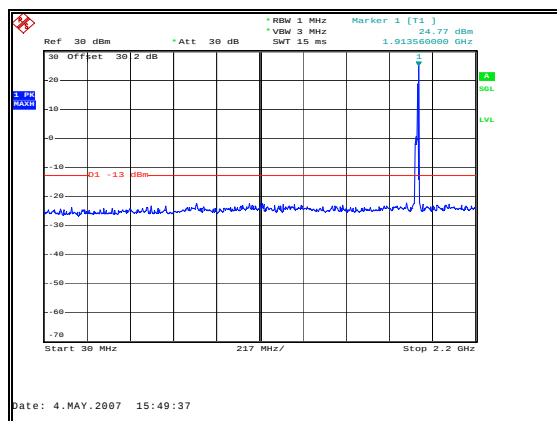


Figure 33: Spurious Emissions - Uplink TDMA High Channel – Inter-modulation - 30MHz to 2.2GHz

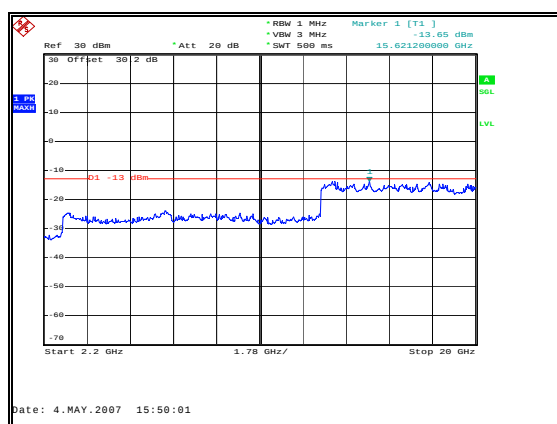


Figure 34: Spurious Emissions - Uplink TDMA High Channel – Inter-modulation – 2.2 to 20GHz

2.3 GSM Uplink

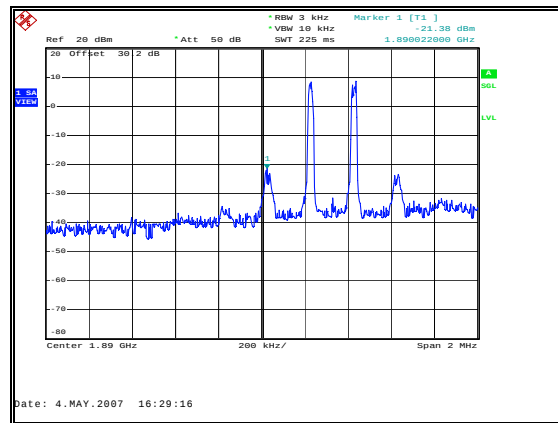


Figure 35: Spurious Emissions - Uplink GSM Low Channel – Inter-modulation In Band

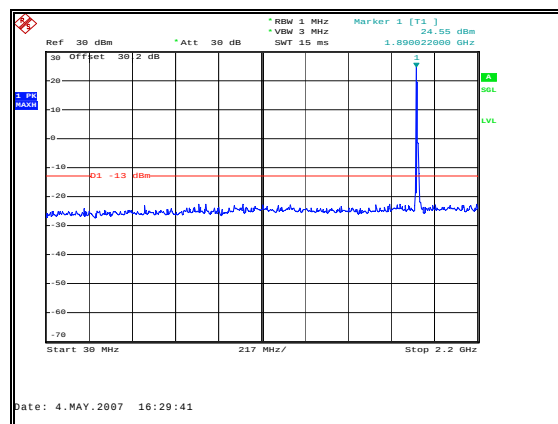


Figure 36: Spurious Emissions - Uplink GSM Low Channel – Inter-modulation - 30MHz to 2.2GHz

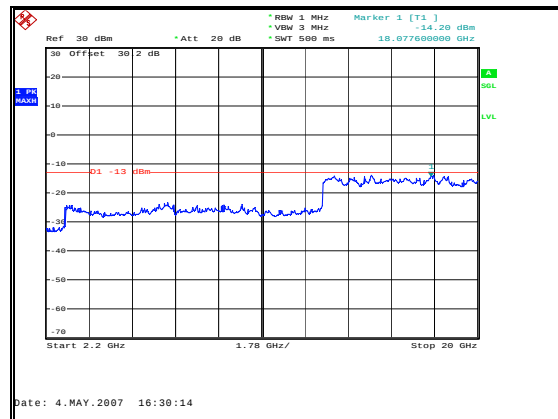


Figure 37: Spurious Emissions - Uplink GSM Low Channel – Inter-modulation – 2.2 to 20GHz

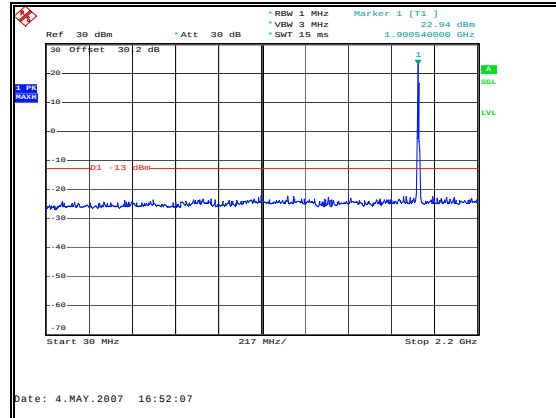


Figure 38: Spurious Emissions - Uplink GSM Mid Channel – 30MHz to 2.2GHz

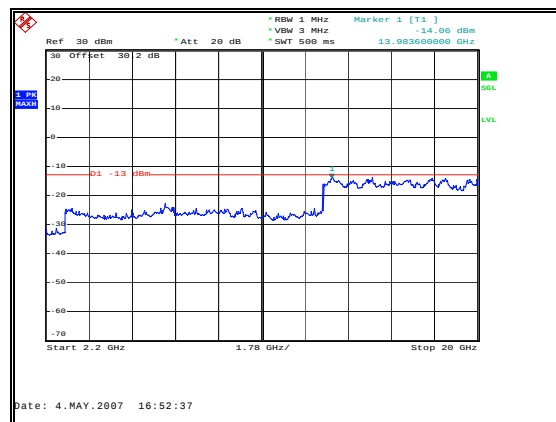


Figure 39: Spurious Emissions - Uplink GSM Mid Channel – 2.2 to 20GHz

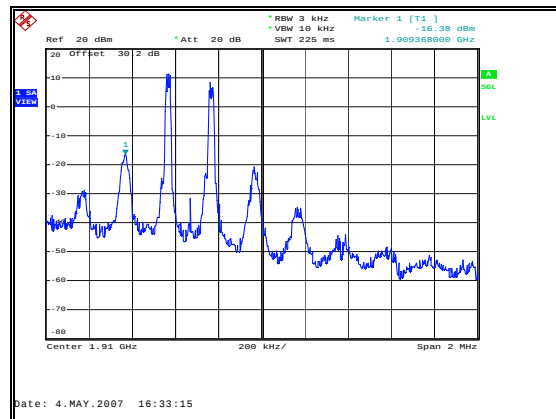


Figure 40: Spurious Emissions - Uplink GSM High Channel – Inter-modulation In Band

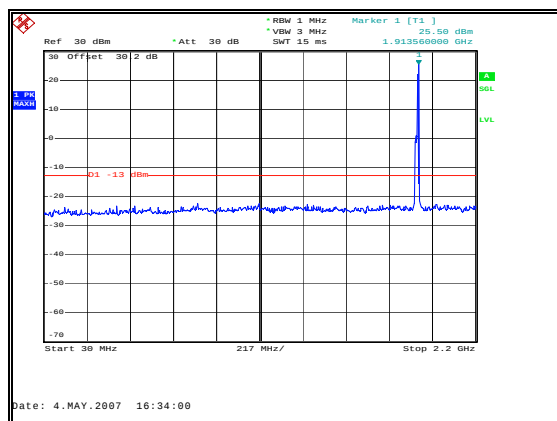


Figure 41: Spurious Emissions - Uplink GSM High Channel – Inter-modulation - 30MHz to 2.2GHz

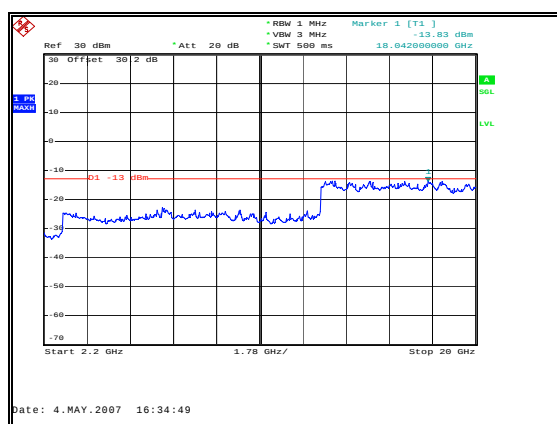


Figure 42: Spurious Emissions - Uplink GSM High Channel – Inter-modulation – 2.2 to 20GHz

2.4 CDMA Downlink

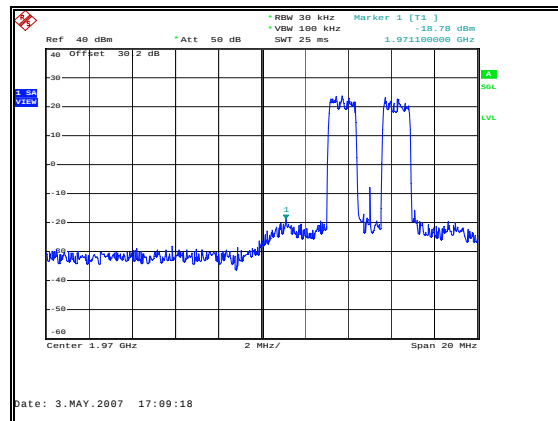


Figure 43: Spurious Emissions - Downlink CDMA Low Channel – Inter-modulation In Band

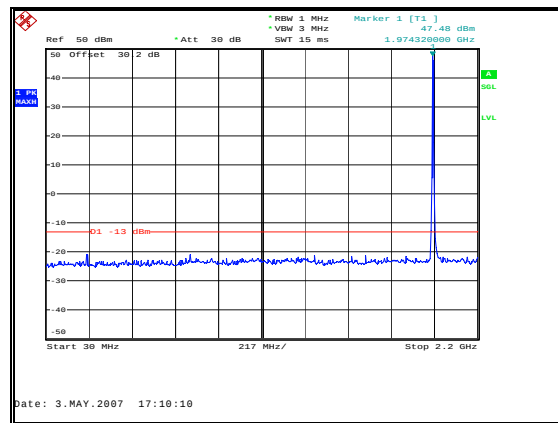


Figure 44: Spurious Emissions-Downlink CDMA Low Channel-Inter-modulation-30MHz to 2.2GHz

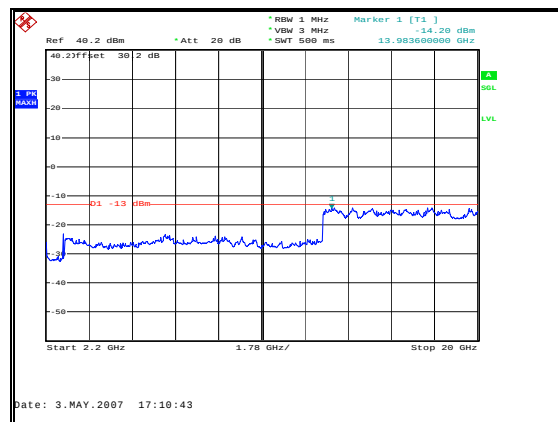


Figure 45: Spurious Emissions - Downlink CDMA Low Channel – Inter-modulation – 2.2 to 20GHz

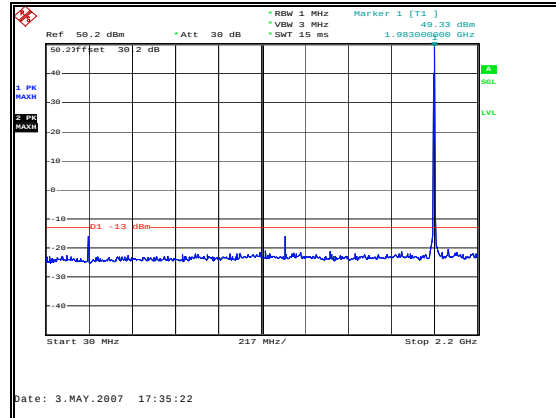


Figure 46: Spurious Emissions - Downlink CDMA Mid Channel – 30MHz to 2.2GHz

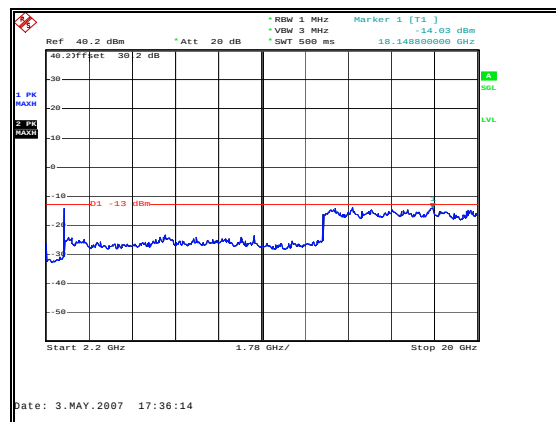


Figure 47: Spurious Emissions - Downlink CDMA Mid Channel – 2.2 to 20GHz

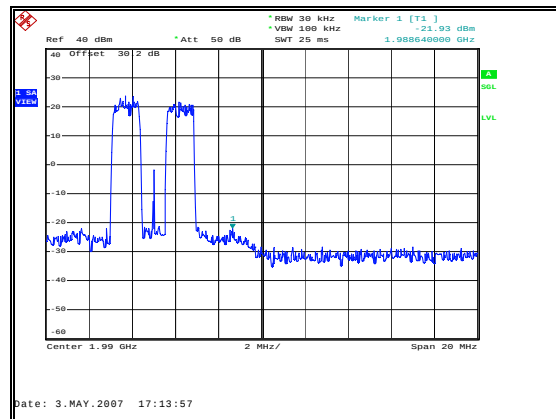


Figure 48: Spurious Emissions - Downlink CDMA High Channel – Inter-modulation In Band

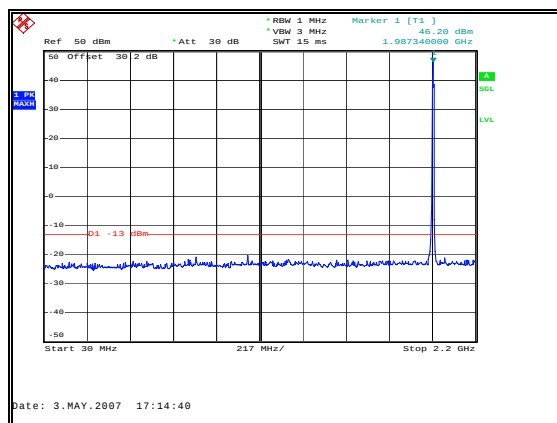


Figure 49: Spurious Emissions-Downlink CDMA High Channel-Inter-modulation-30MHz to 2.2GHz

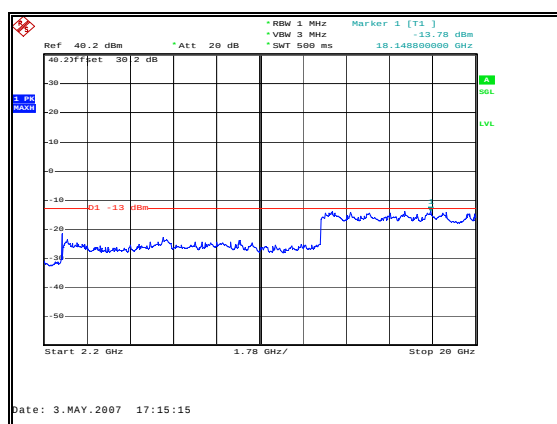


Figure 50: Spurious Emissions - Downlink CDMA High Channel – Inter-modulation – 2.2 to 20GHz

2.5 TDMA Downlink

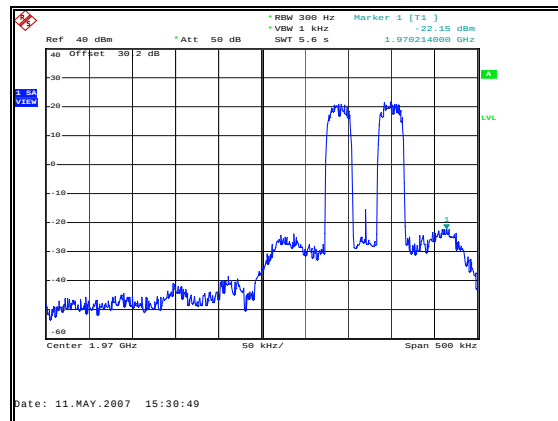


Figure 51: Spurious Emissions - Downlink TDMA Low Channel – Inter-modulation In Band

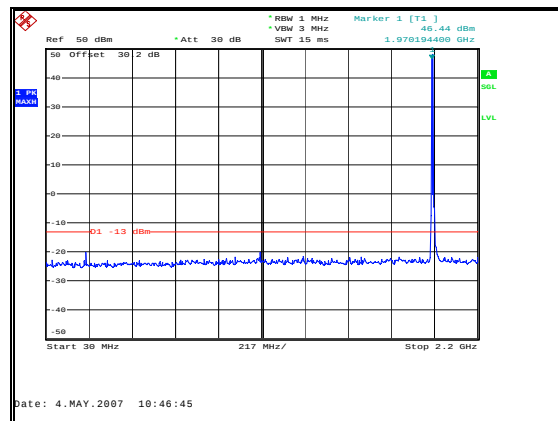


Figure 52: Spurious Emissions - Downlink TDMA Low Channel–Inter-modulation-30MHz to 2.2GHz

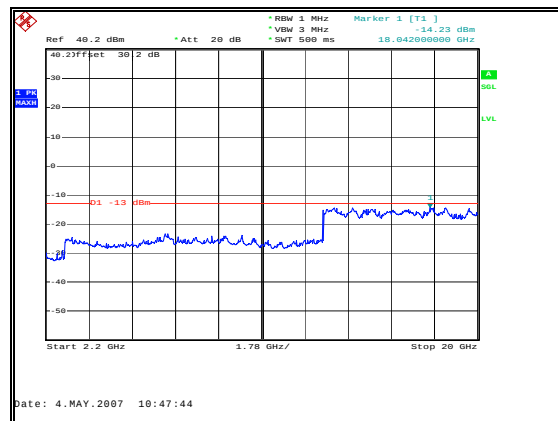


Figure 53: Spurious Emissions - Downlink TDMA Low Channel – Inter-modulation – 2.2 to 20GHz

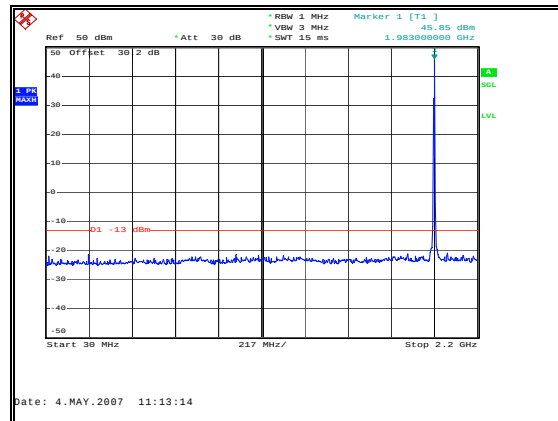


Figure 54: Spurious Emissions - Downlink TDMA Mid Channel – 30MHz to 2.2GHz

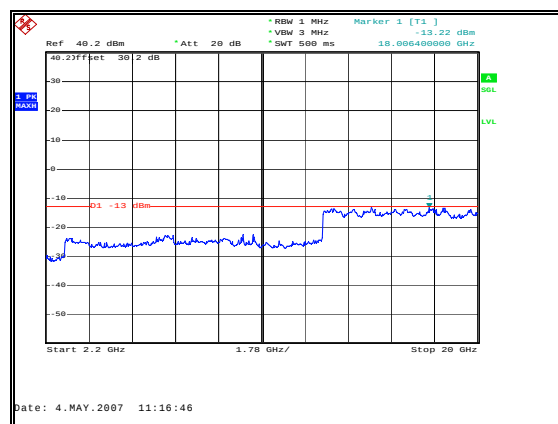


Figure 55: Spurious Emissions - Downlink TDMA Mid Channel – 2.2 to 20GHz

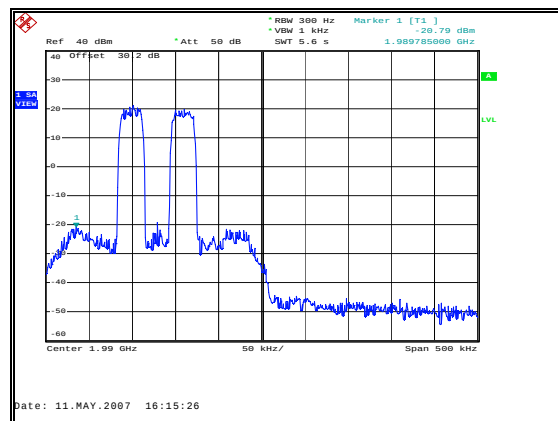


Figure 56: Spurious Emissions - Downlink TDMA High Channel – Inter-modulation In Band

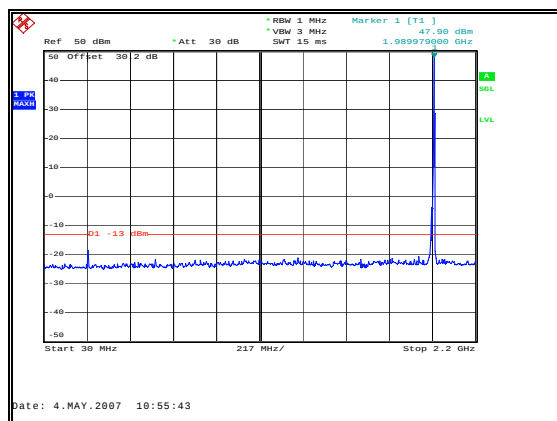


Figure 57: Spurious Emissions-Downlink TDMA High Channel-Inter-modulation-30MHz to 2.2GHz

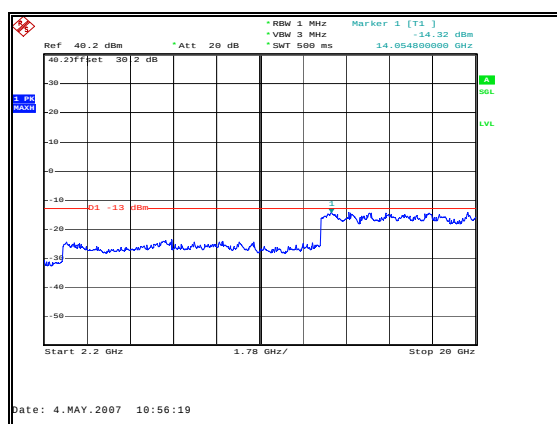


Figure 58: Spurious Emissions - Downlink TDMA High Channel – Inter-modulation – 2.2 to 20GHz

2.6 GSM Downlink

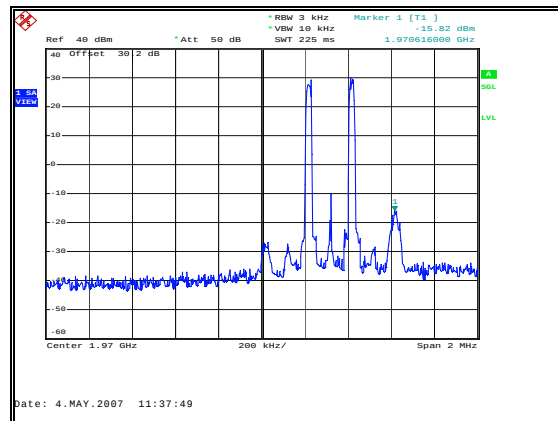


Figure 59: Spurious Emissions - Downlink GSM Low Channel – Inter-modulation In Band

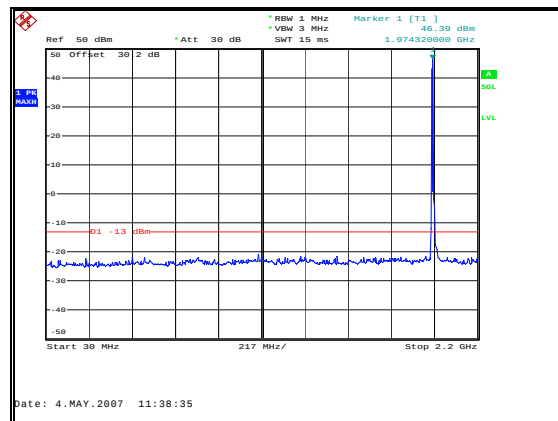


Figure 60: Spurious Emissions - Downlink GSM Low Channel – Inter-modulation-30MHz to 2.2GHz

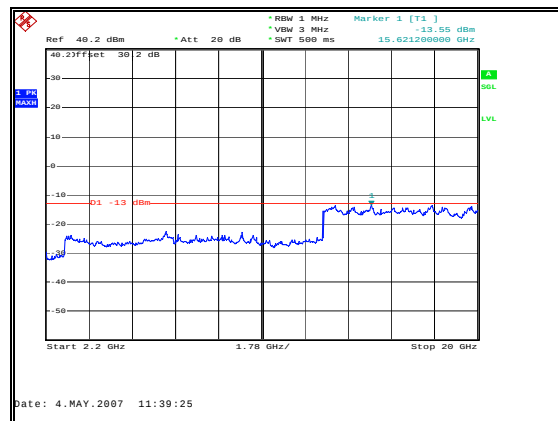


Figure 61: Spurious Emissions - Downlink GSM Low Channel – Inter-modulation – 2.2 to 20GHz

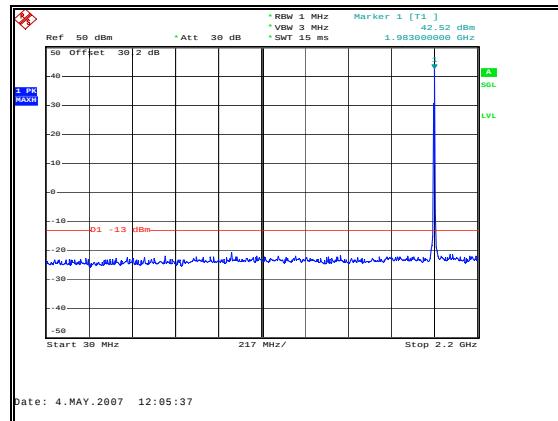


Figure 62: Spurious Emissions - Downlink GSM Mid Channel – 30MHz to 2.2GHz

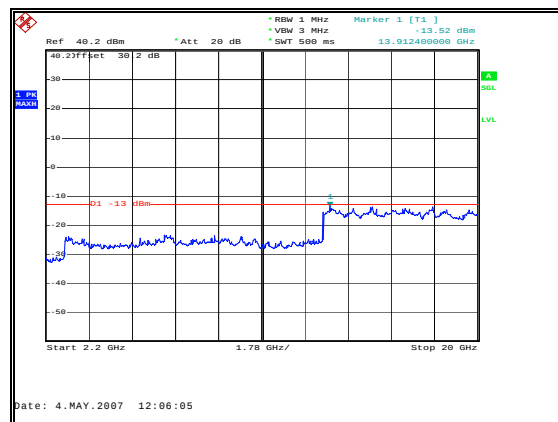


Figure 63: Spurious Emissions - Downlink GSM Mid Channel – 2.2 to 20GHz

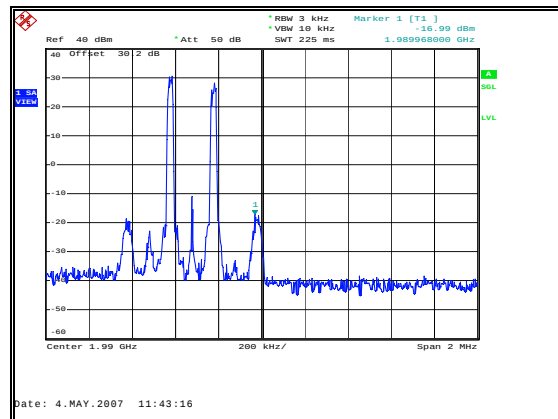


Figure 64: Spurious Emissions - Downlink GSM High Channel – Inter-modulation In Band

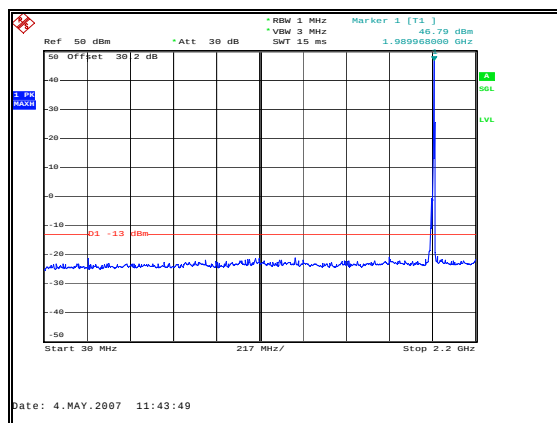


Figure 65: Spurious Emissions - Downlink GSM High Channel –Inter-modulation-30MHz to 2.2GHz

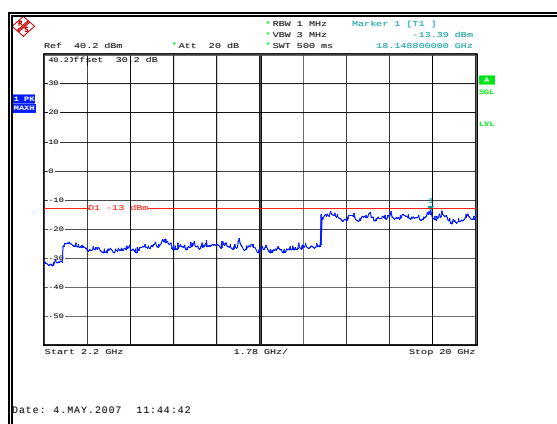


Figure 66: Spurious Emissions - Downlink GSM High Channel – Inter-modulation – 2.2 to 20GHz

3.0 Band-edge

3.1 CDMA Uplink

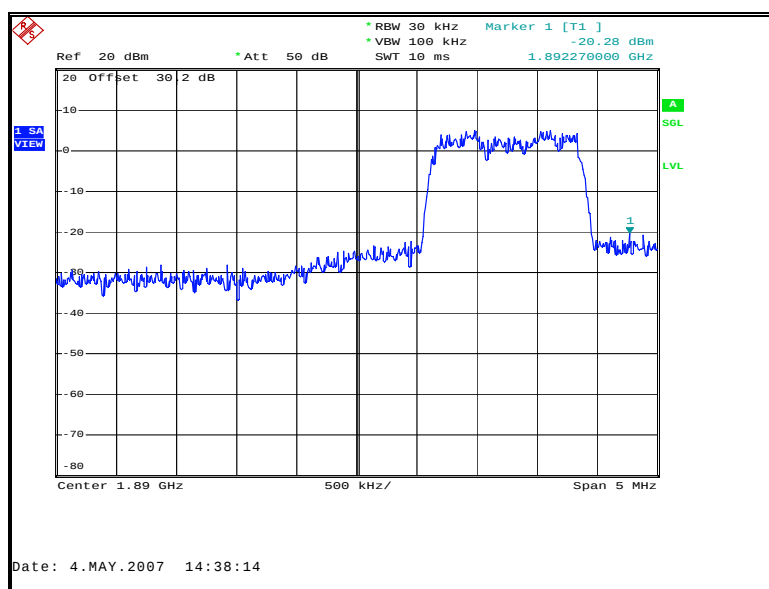


Figure 67: Band-Edge Uplink CDMA Low Channel

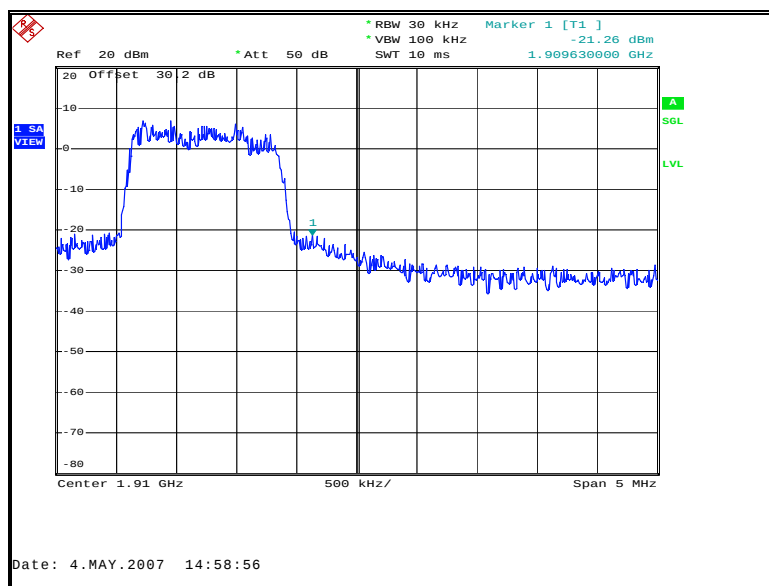


Figure 68: Band-Edge Uplink CDMA High Channel

3.2 TDMA Uplink

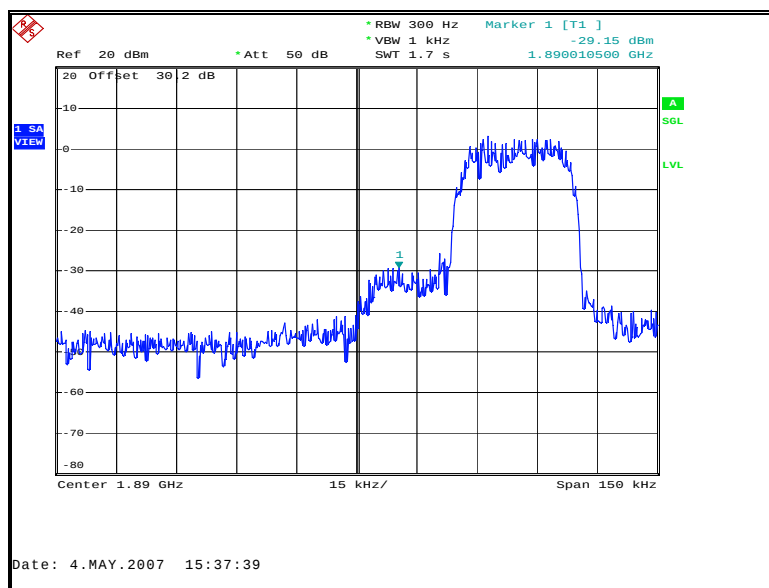


Figure 69: Band-Edge Uplink TDMA Low Channel

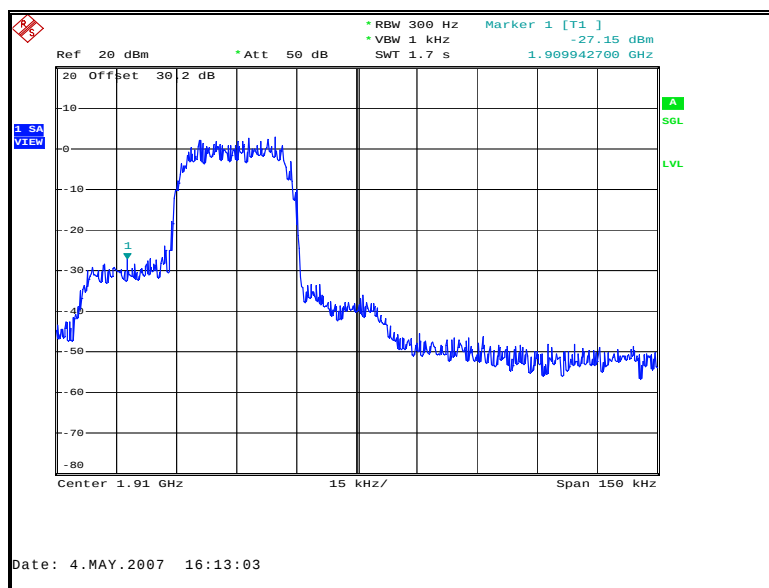


Figure 70: Band-Edge Uplink TDMA High Channel

3.3 GSM Uplink

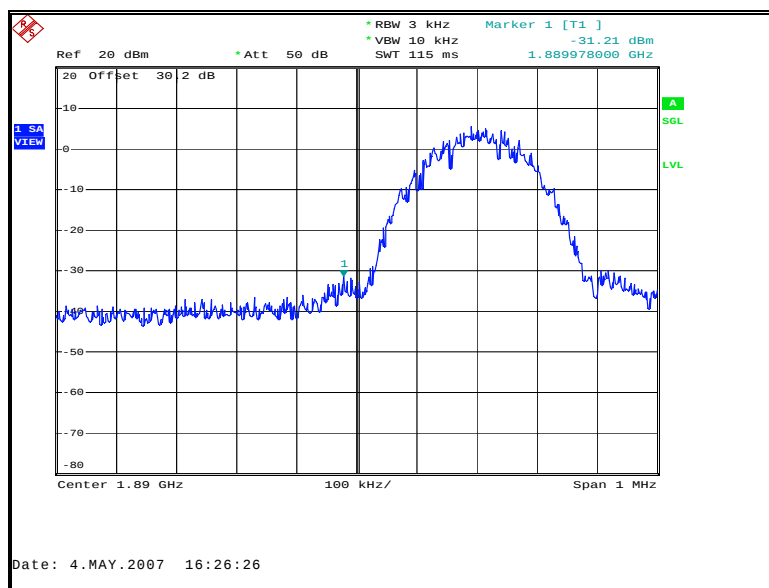


Figure 71: Band-Edge Uplink GSM Low Channel

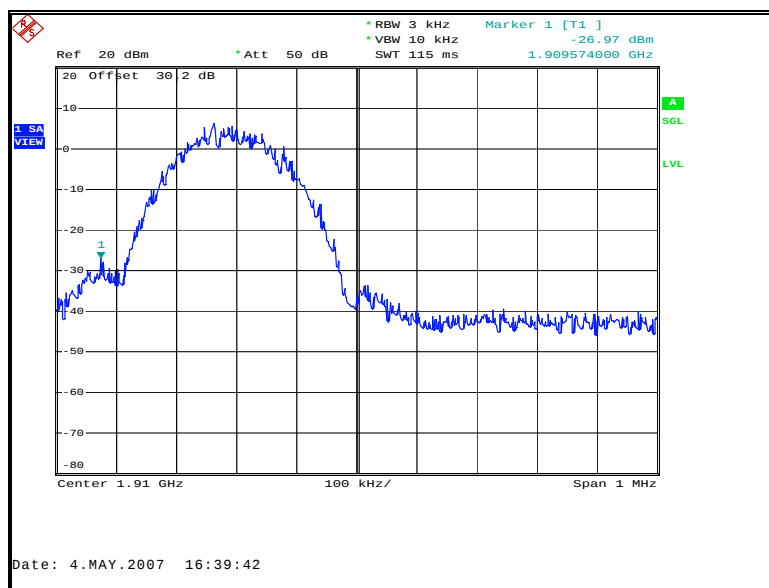


Figure 72: Band-Edge Uplink GSM High Channel

3.4 CDMA Downlink

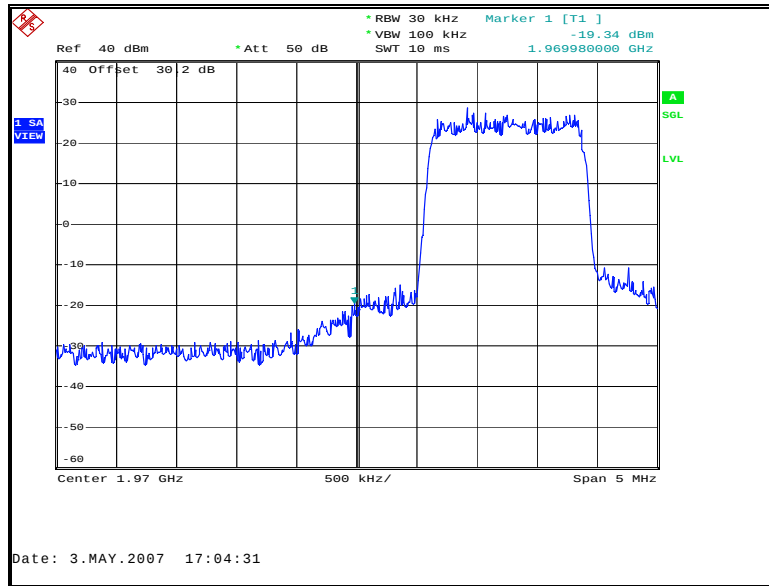


Figure 73: Band-Edge Downlink CDMA Low Channel

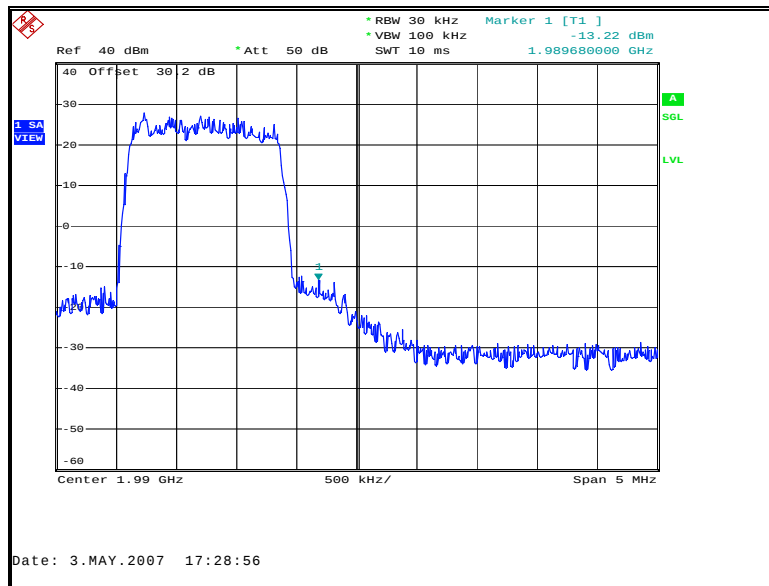


Figure 74: Band-Edge Downlink CDMA High Channel

3.5 TDMA Downlink

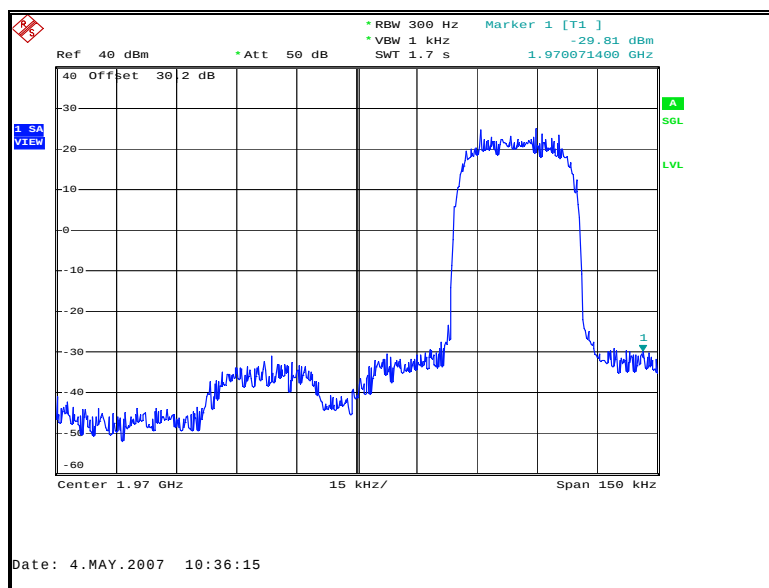


Figure 75: Band-Edge Downlink TDMA Low Channel

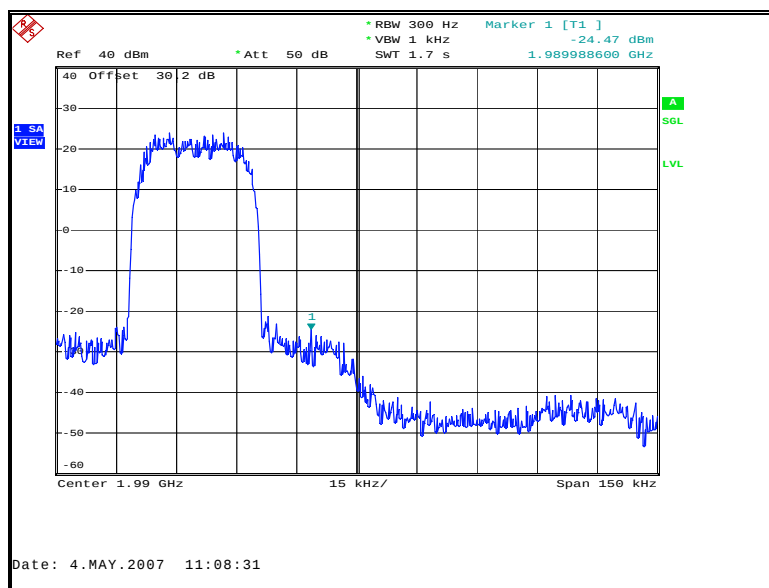


Figure 76: Band-Edge Downlink TDMA High Channel

3.6 GSM Downlink

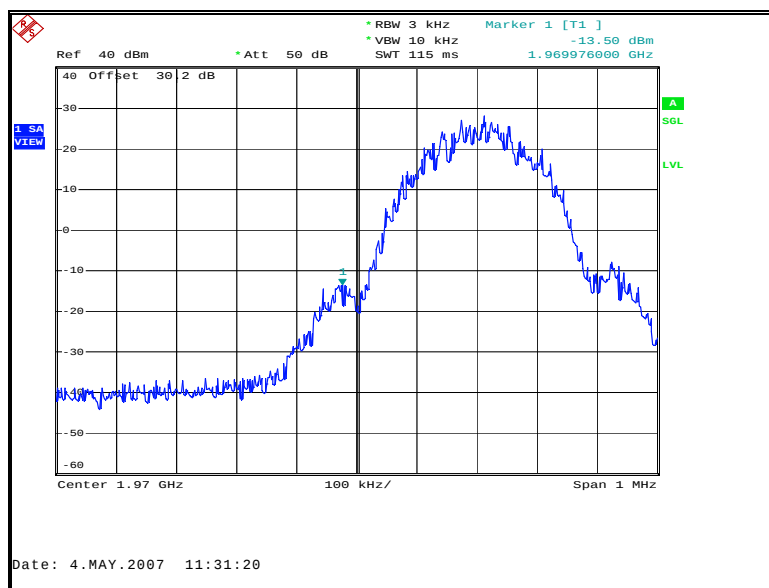


Figure 77: Band-Edge Downlink GSM Low Channel

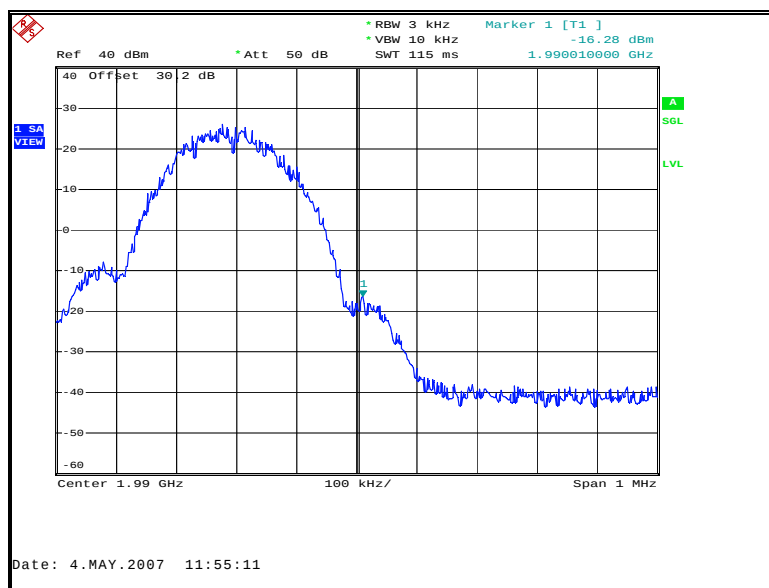


Figure 78: Band-Edge Downlink GSM High Channel

END REPORT