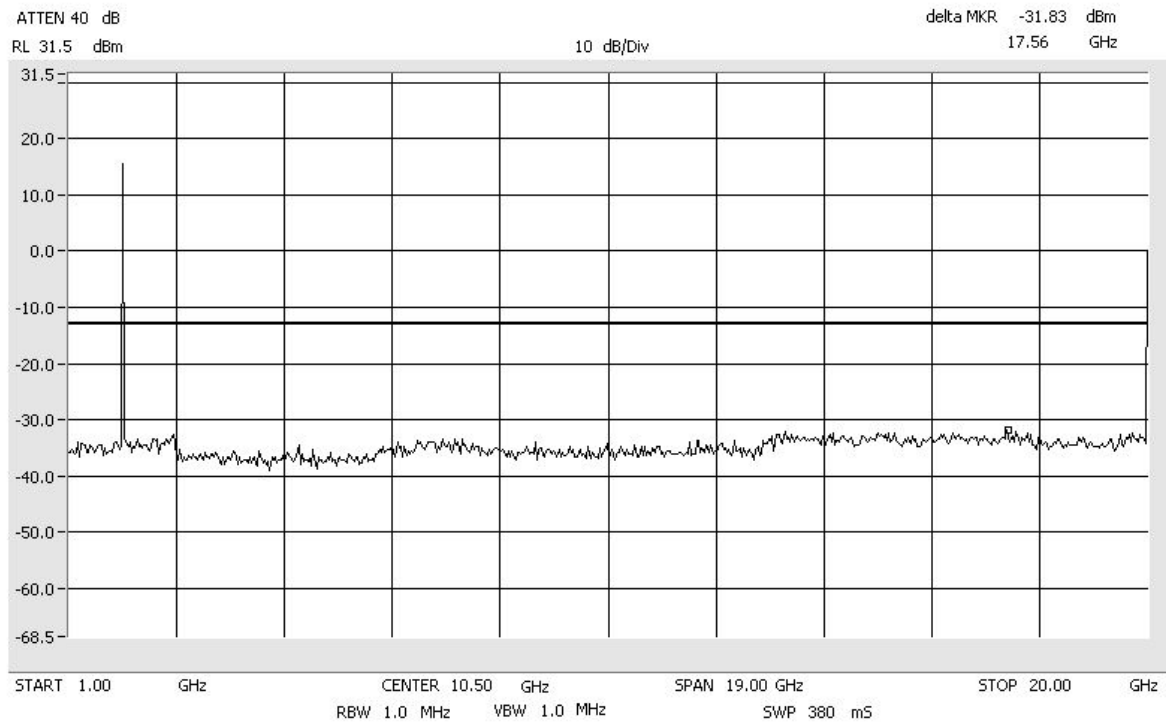
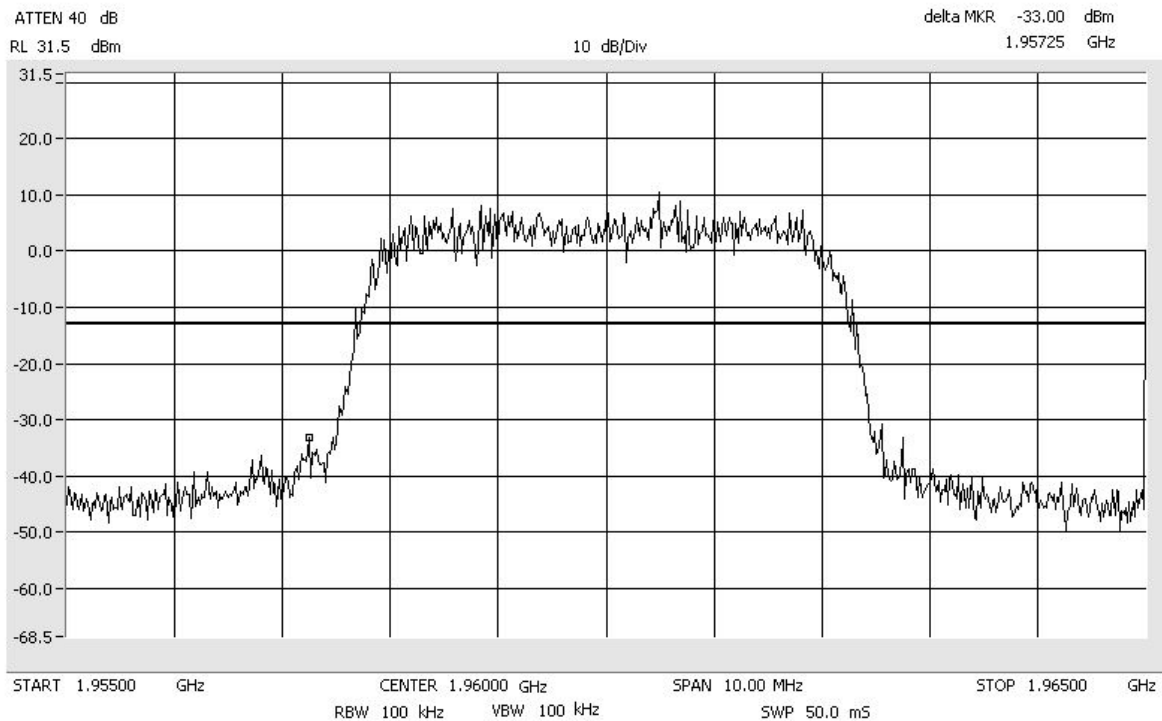


Conducted Emissions
Span: 1 GHz to 20 GHz

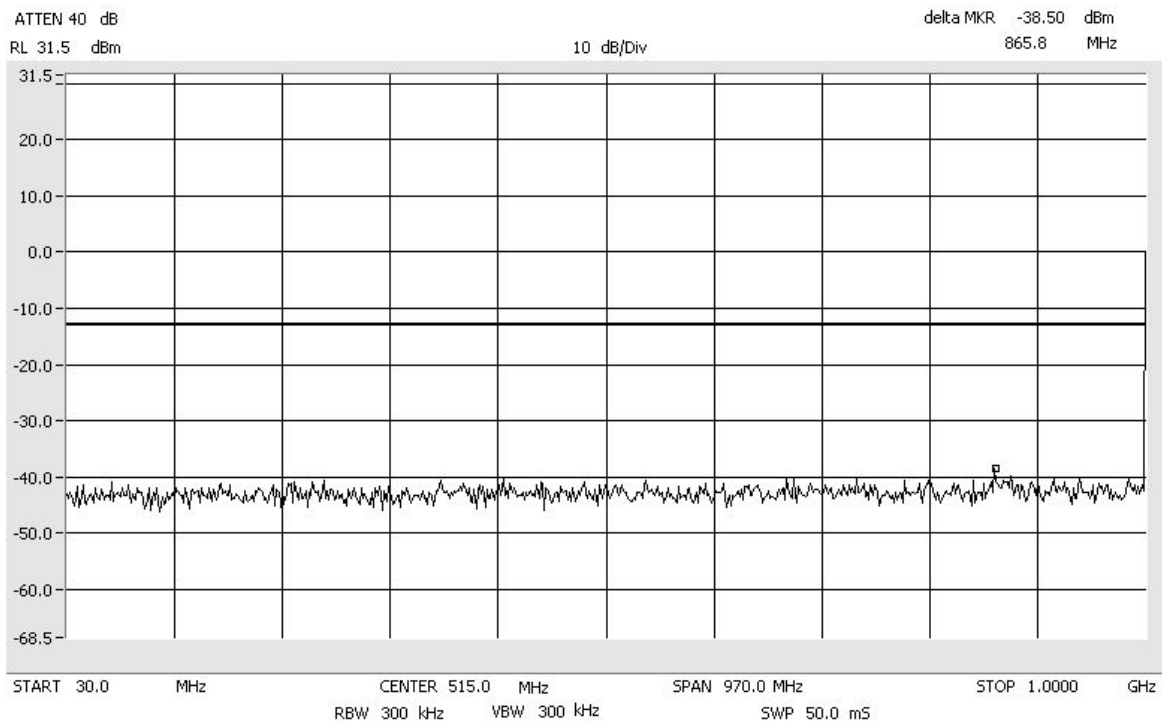
GSM PCS
RBW/VBW: 1 MHz



Conducted Emissions WCDMA PCS
Center: 1960 MHz Span: 10 MHz RBW/VBW: 100 kHz



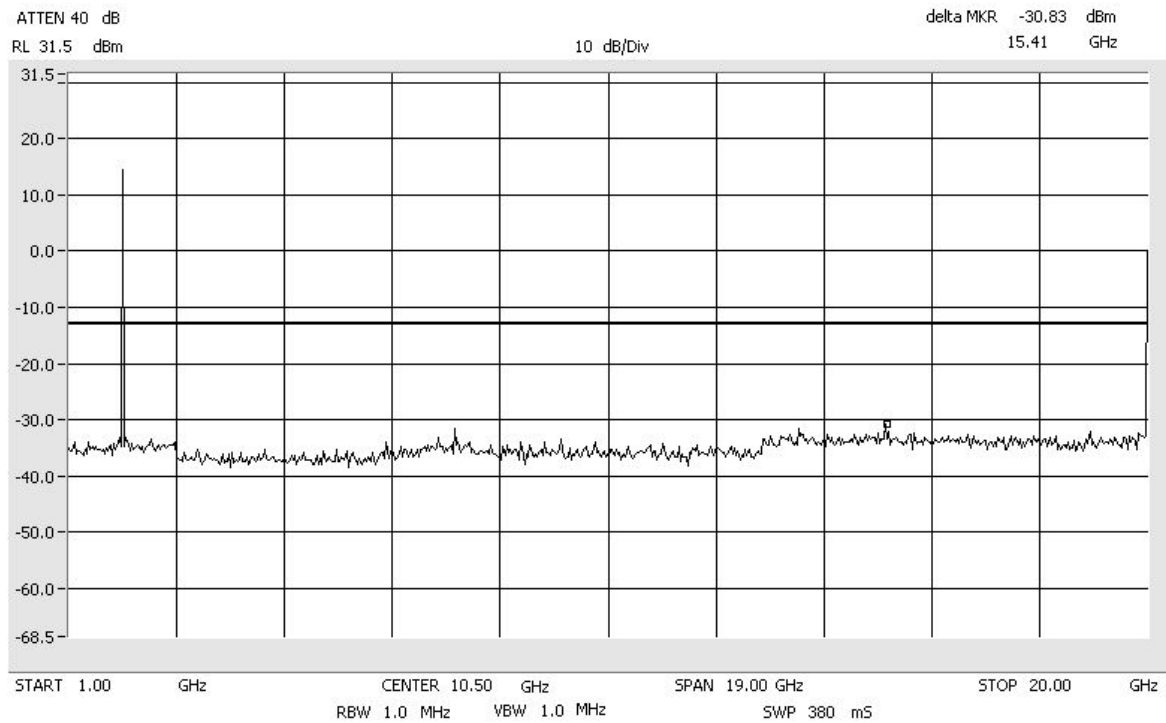
Conducted Emissions WCDMA PCS
Span: 30 MHz to 1 GHz RBW/VBW: 300 kHz



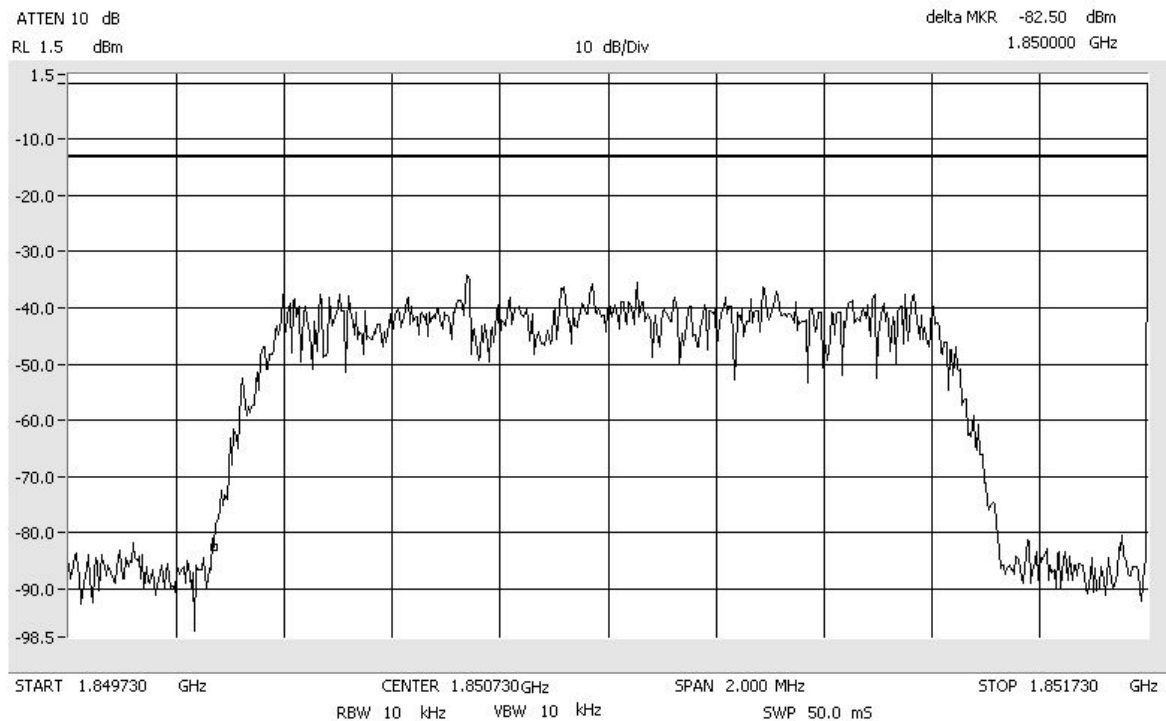
Conducted Emissions
Span: 1 GHz to 20 GHz

WCDMA
RBW/VBW: 1 MHz

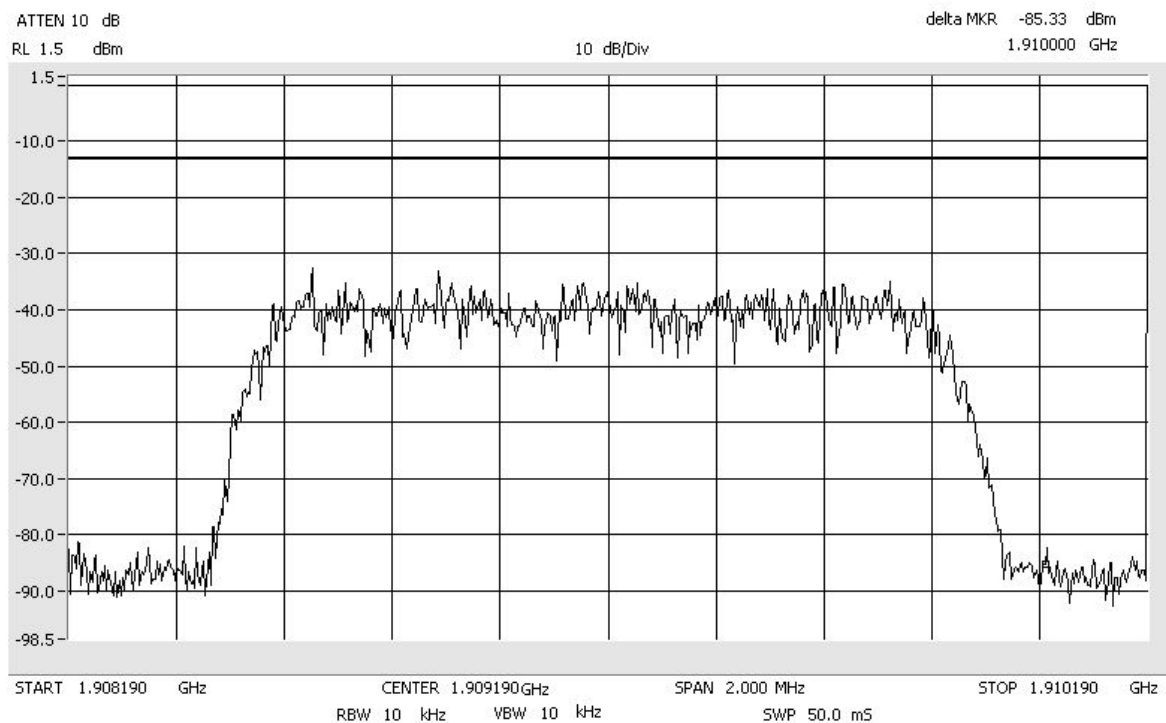
PCS



Band_Edge CDMA2000
Center: 1850.73 MHz Span: 2 MHz RBW: 10 kHz VBW: 10 kHz

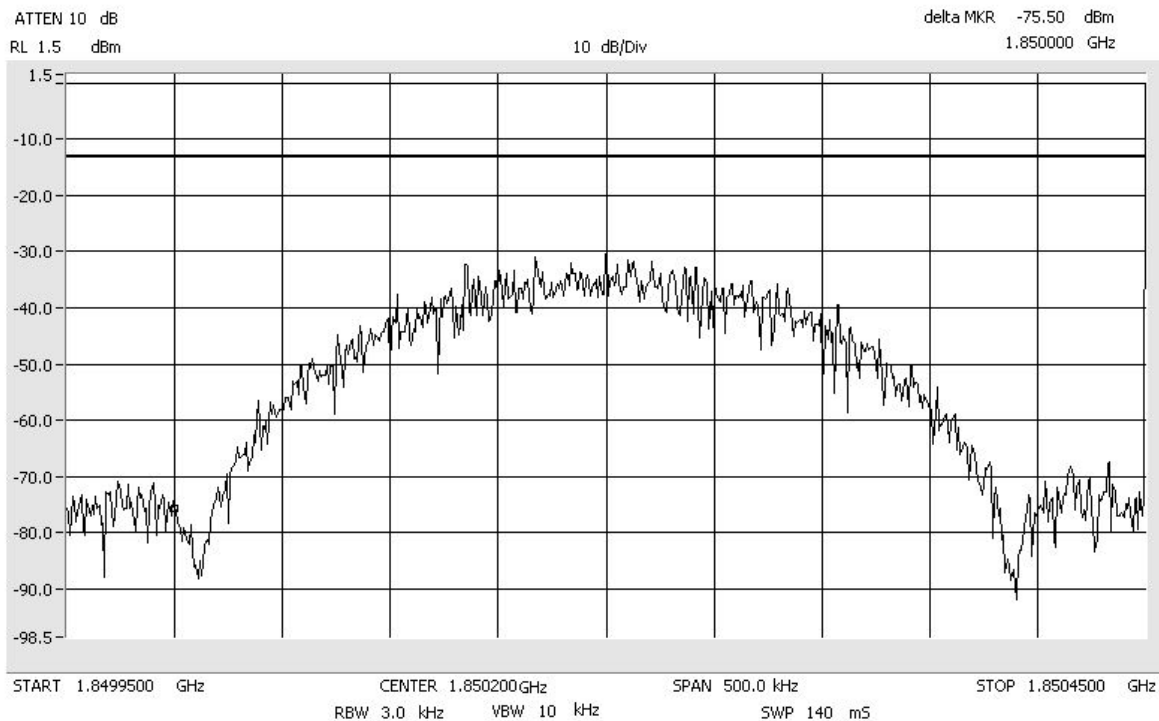


Band_Edge CDMA2000
Center: 1909.19 MHz Span: 2 MHz RBW: 10 kHz VBW: 10 kHz



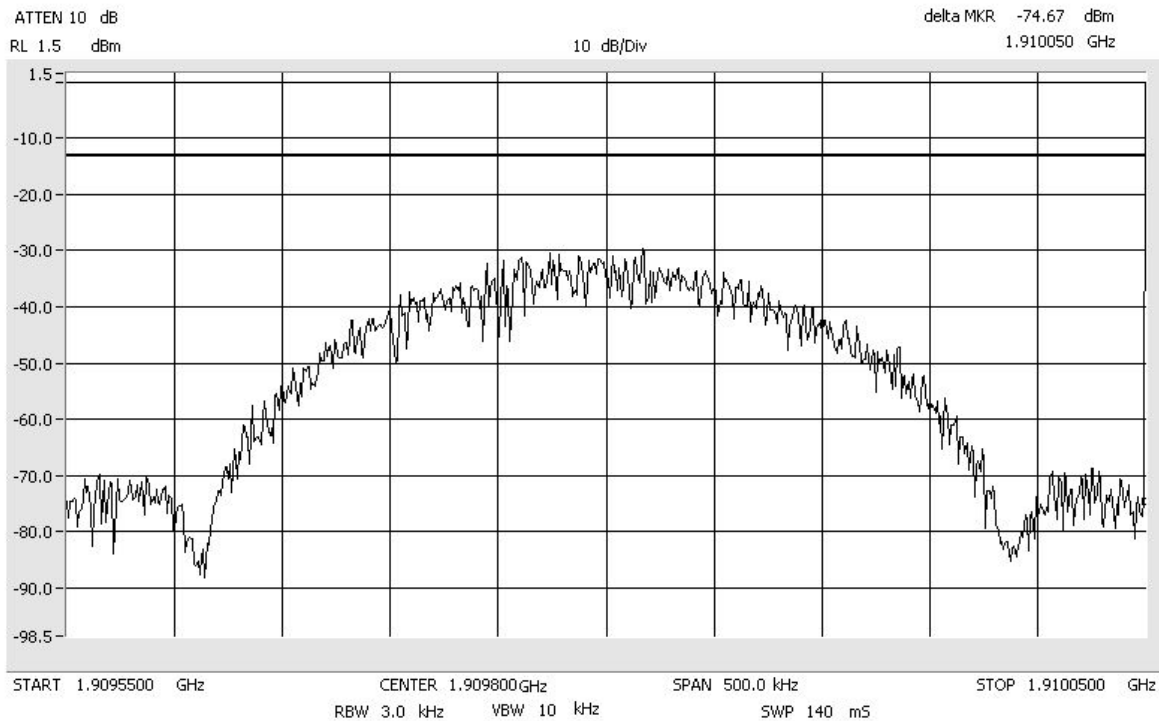
Band_Edge
Center: 1850.2 MHz Span: 500 kHz

EDGE
RBW: 3 kHz VBW: 10 kHz



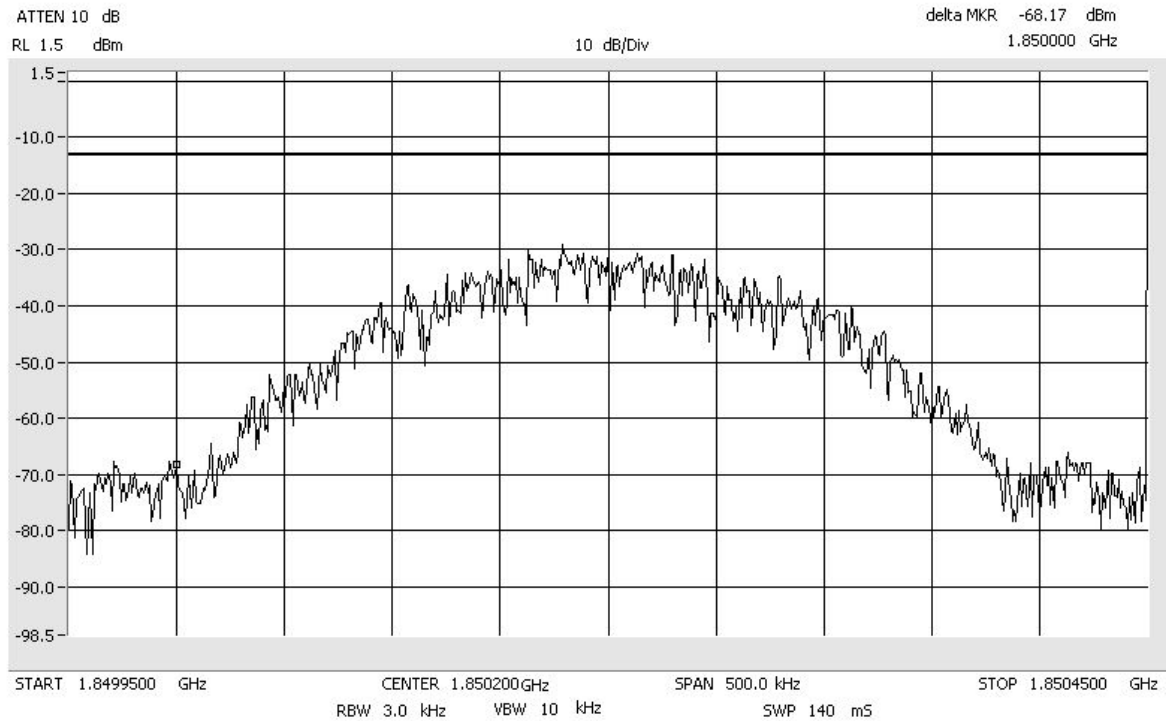
Band_Edge
Center: 1909.8 MHz Span: 500 kHz

EDGE
RBW: 3 kHz VBW: 10 kHz



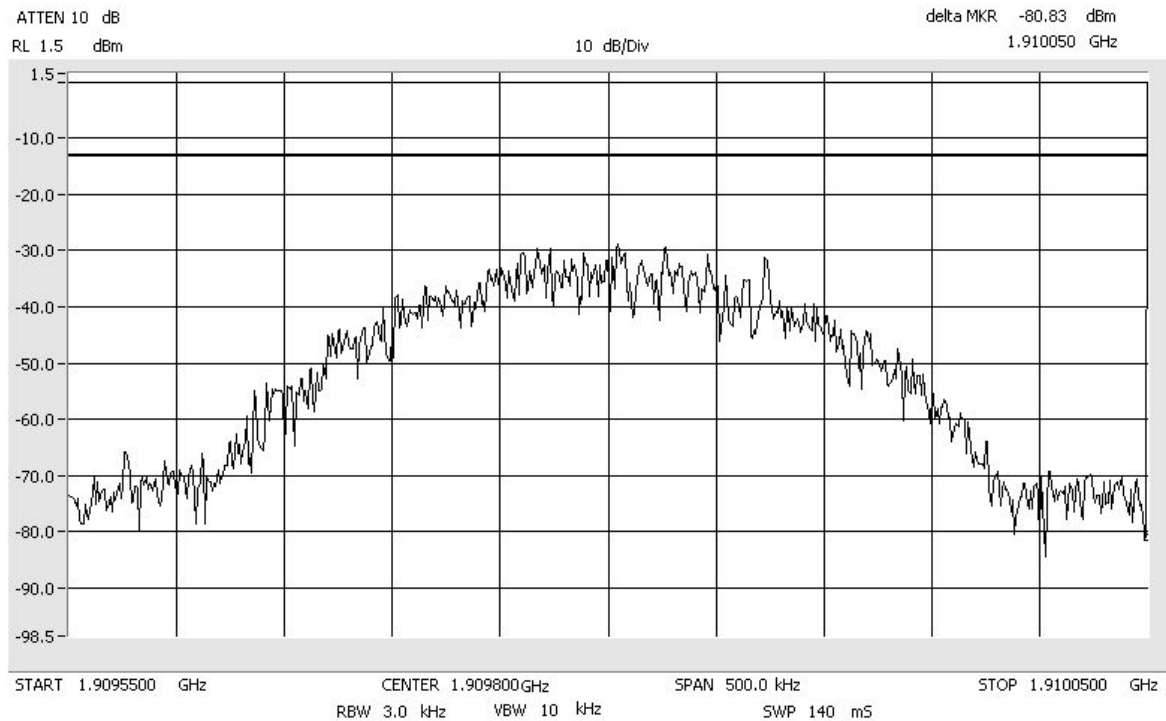
Band_Edge
Center: 1850.2 MHz Span: 500 kHz

GSM
RBW: 3 kHz VBW: 10 kHz



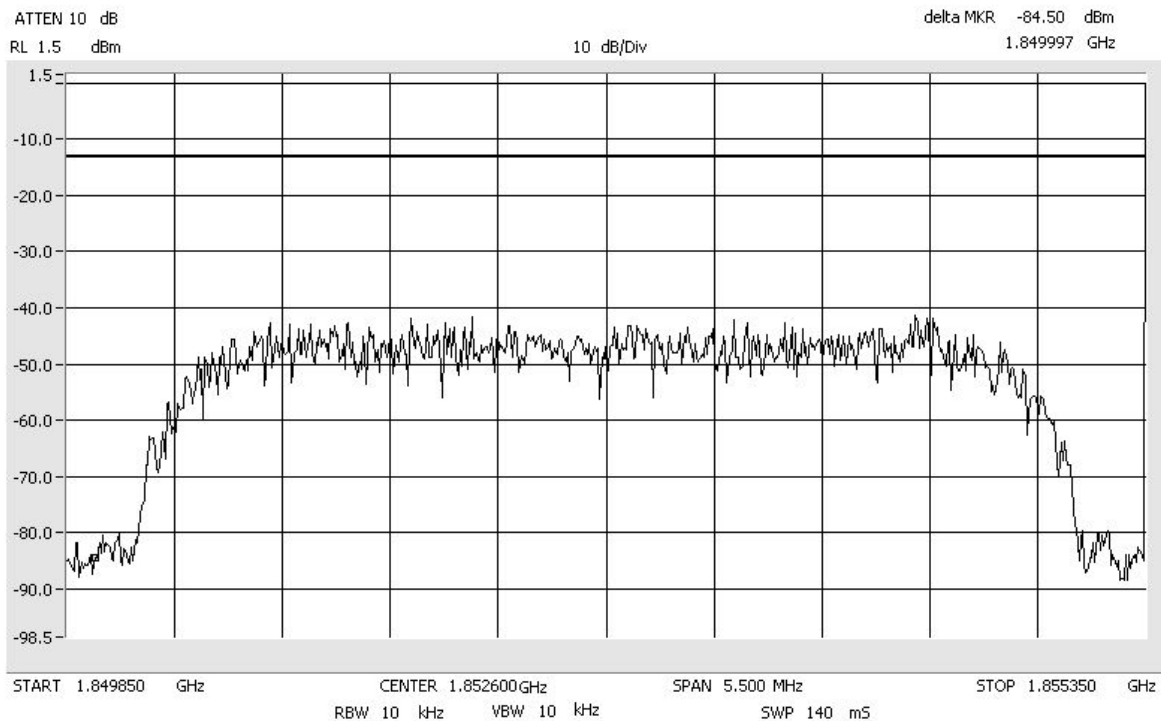
Band_Edge
Center: 1909.8 MHz Span: 500 kHz

GSM
RBW: 3 kHz VBW: 10 kHz



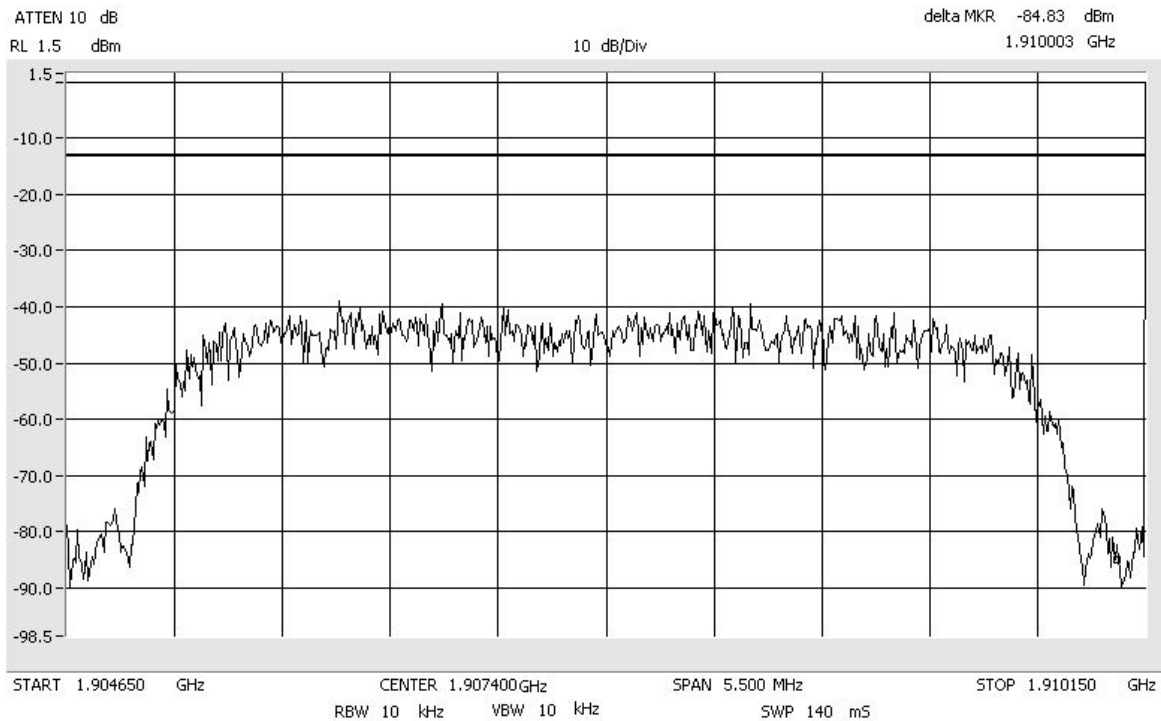
Band_Edge
Center: 1852.6 MHz Span: 5.5 MHz

WCDMA
RBW: 10 kHz VBW: 10 kHz

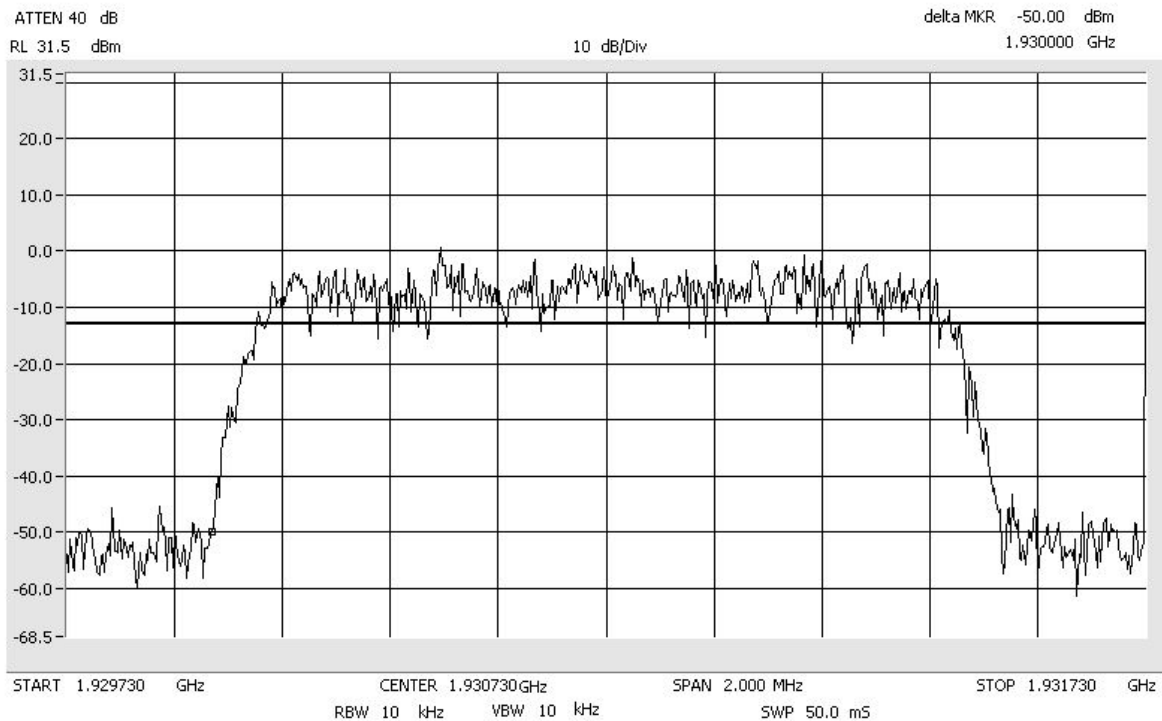


Band_Edge
Center: 1907.4 MHz Span: 5.5 MHz

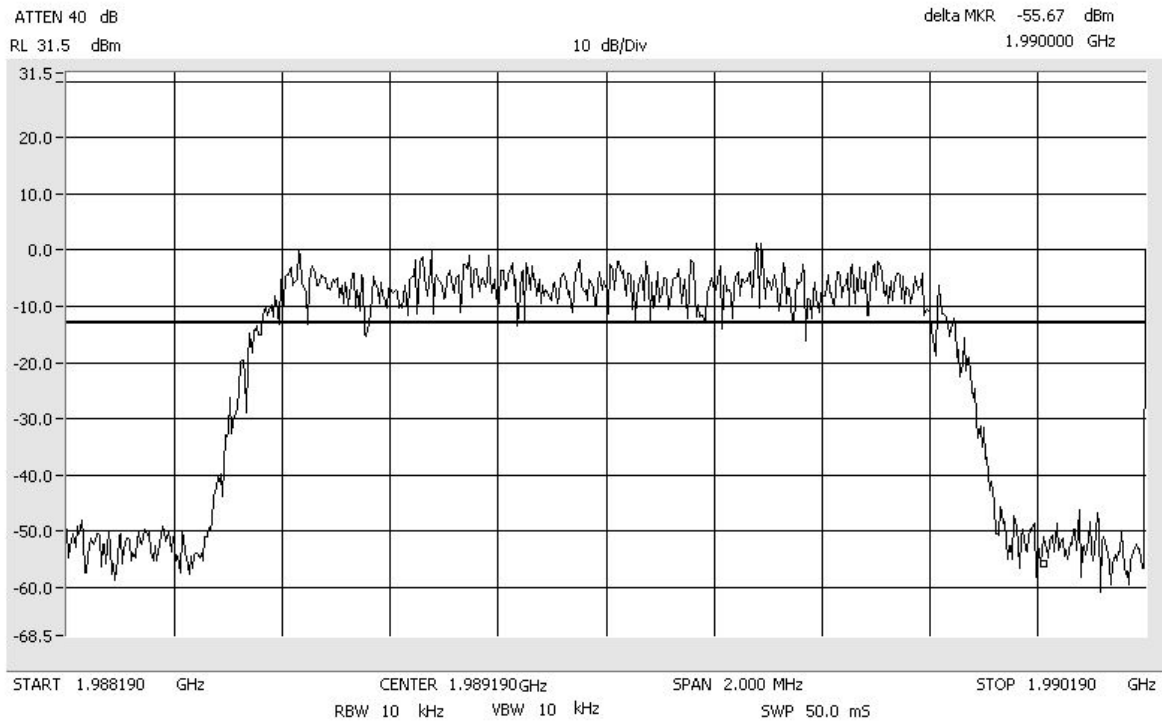
WCDMA
RBW: 10 kHz VBW: 10 kHz



Band_Edge CDMA2000
Center: 1930.73 MHz Span: 2 MHz RBW: 10 kHz VBW: 10 kHz

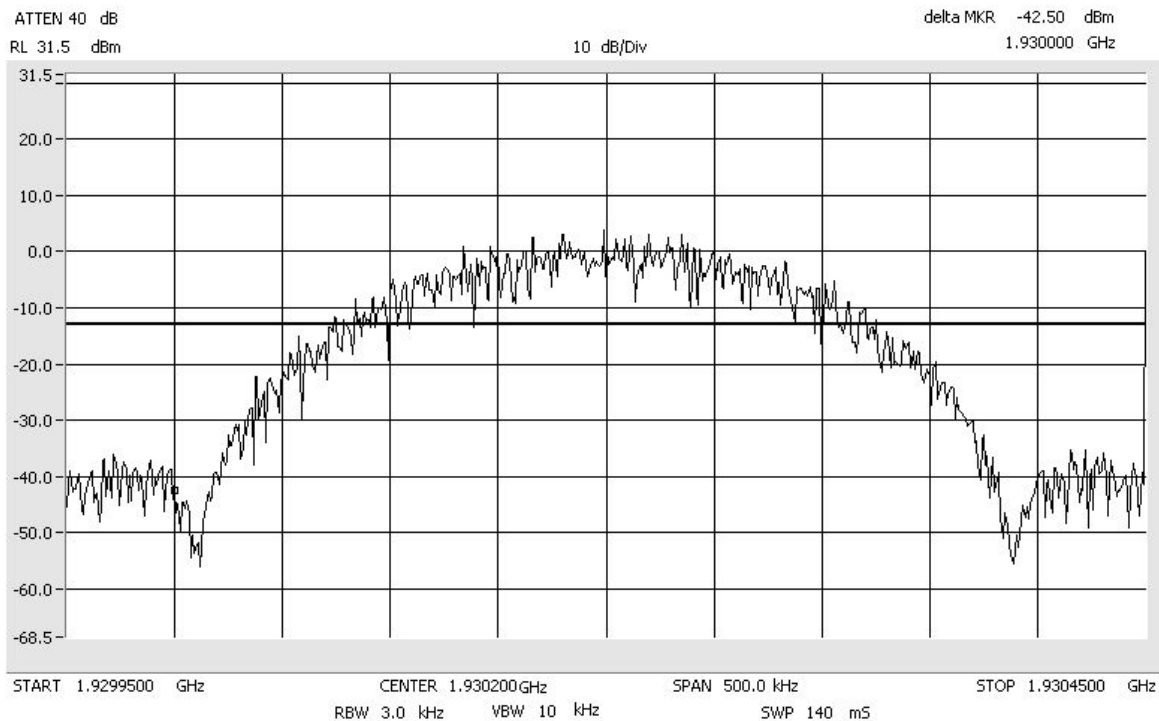


Band_Edge CDMA2000
Center: 1989.19 MHz Span: 2 MHz RBW: 10 kHz VBW: 10 kHz



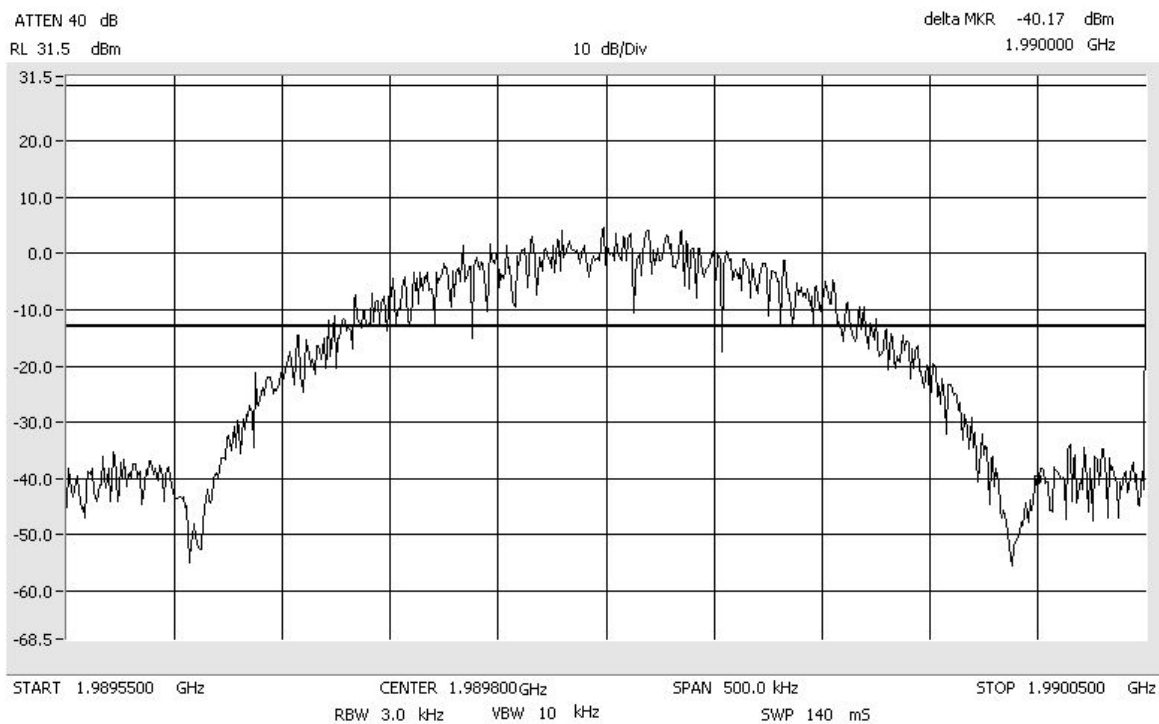
Band_Edge
Center: 1930.2 MHz Span: 500 kHz

EDGE
RBW: 3 kHz VBW: 10 kHz



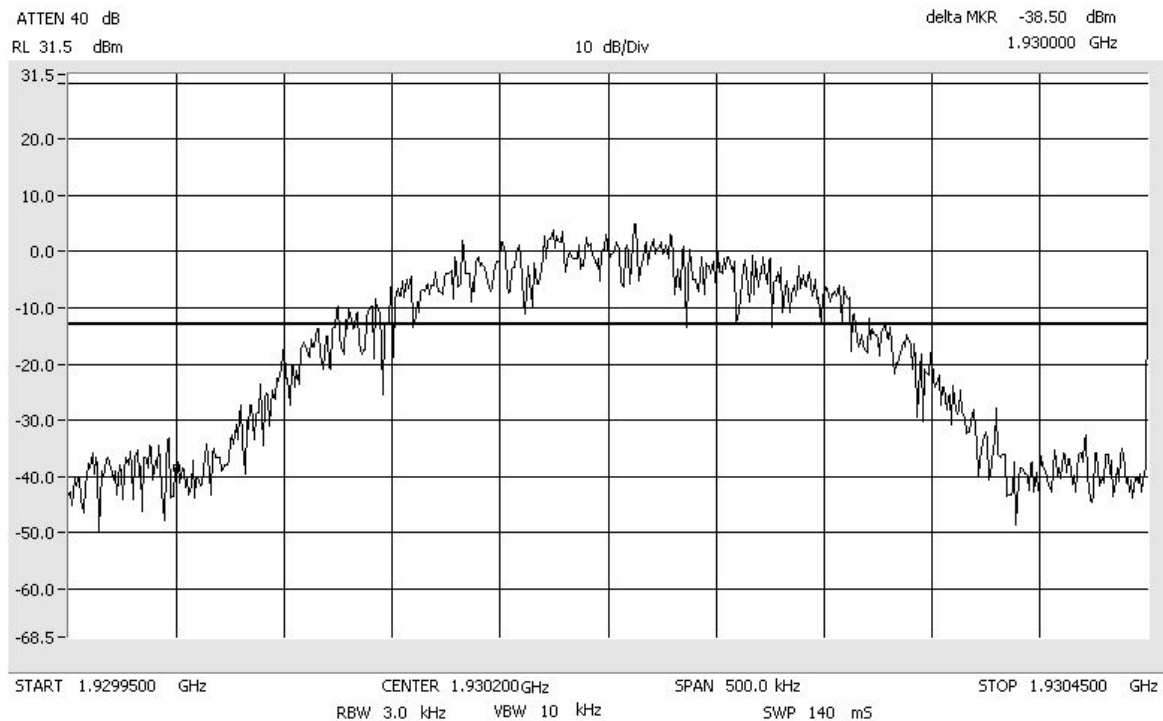
Band_Edge
Center: 1989.8 MHz Span: 500 kHz

EDGE
RBW: 3 kHz VBW: 10 kHz



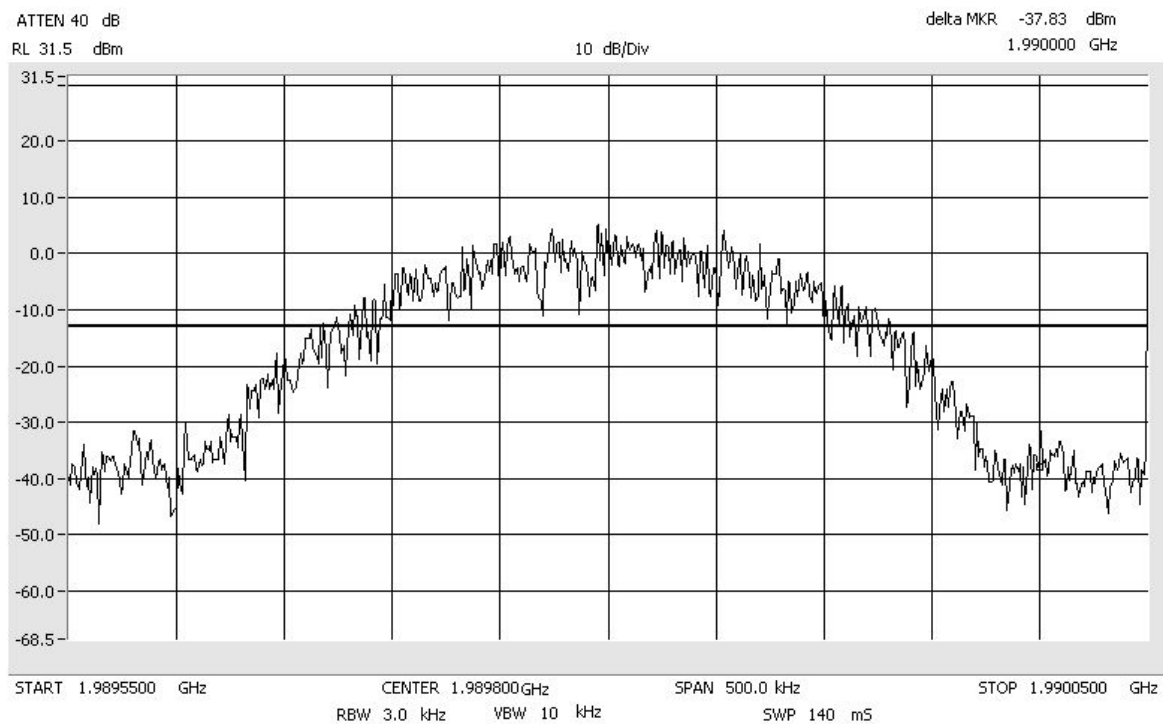
Band_Edge
Center: 1930.2 MHz Span: 500 kHz

GSM
RBW: 3 kHz VBW: 10 kHz



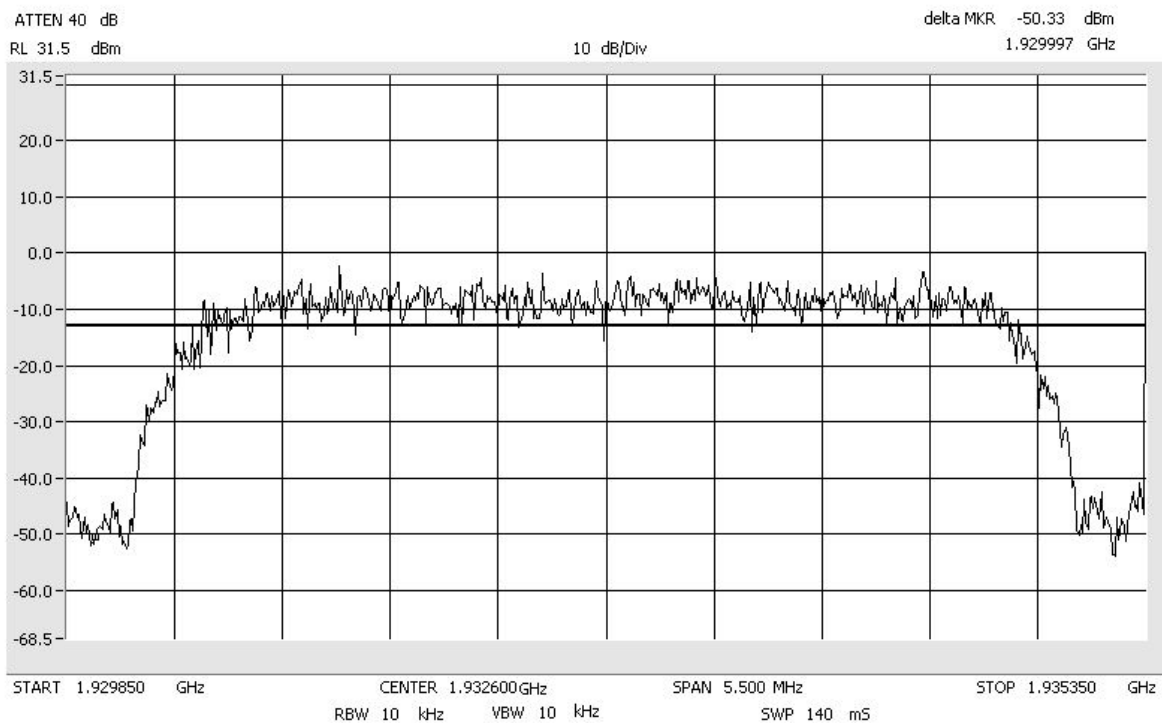
Band_Edge
Center: 1989.8 MHz Span: 500 kHz

GSM
RBW: 3 kHz VBW: 10 kHz



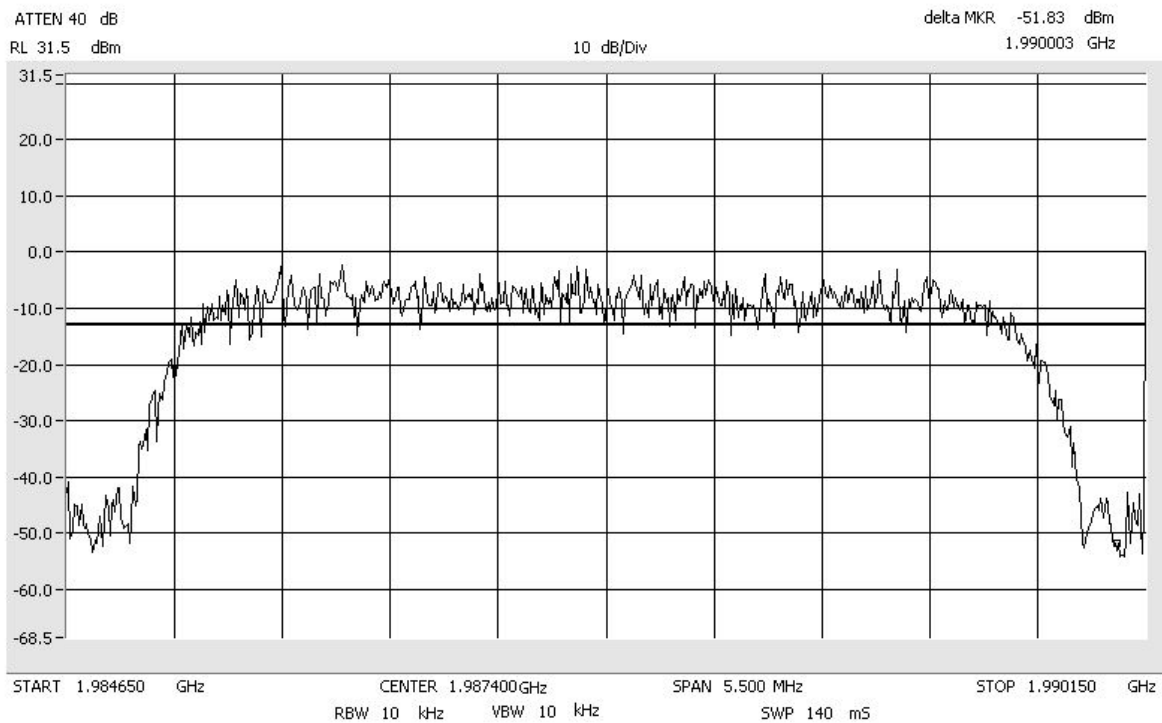
Band_Edge
Center: 1932.6 MHz Span: 5.5 MHz

WCDMA
RBW: 10 kHz VBW: 10 kHz



Band_Edge
Center: 1987.4 MHz Span: 5.5 MHz

WCDMA
RBW: 10 kHz VBW: 10 kHz



7.2 Conducted Output Power Test

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[Back to Conducted Output Power; Section 5.1.1](#)

*Note: The EUT is a fixed repeater and not a base station.

This measurement was made as a direct conducted emission measurement. The output from the EUT antenna connector was connected to the power meter. The carrier output, below, was conducted using a single CDMA2000, EDGE, GSM and WCDMA signal generator. The power meter level was offset to compensate for attenuators and cable loss between the EUT and the power meter.

A signal was used at the low, mid and high parts of the selected band.

CDMA2000	0.0163 mWatts	EDGE	0.0167 mWatts
Carrier Frequency	Carrier Output	Carrier Frequency	Carrier Output
1850.7 MHz	<u>-17.89</u> dBm	1850.2 MHz	<u>-18.17</u> dBm
1880.0 MHz	<u>-18.17</u> dBm	1880.0 MHz	<u>-18.23</u> dBm
1909.3 MHz	<u>-18.08</u> dBm	1909.8 MHz	<u>-17.77</u> dBm

GSM	0.0156 mWatts	WCDMA	0.0197 mWatts
Carrier Frequency	Carrier Output	Carrier Frequency	Carrier Output
1850.2 MHz	<u>-18.40</u> dBm	1852.5 MHz	<u>-17.06</u> dBm
1880.0 MHz	<u>-18.21</u> dBm	1880.0 MHz	<u>-18.13</u> dBm
1909.8 MHz	<u>-18.07</u> dBm	1907.5 MHz	<u>-17.23</u> dBm

CDMA2000	271.64 mWatts	EDGE	261.21 mWatts
Carrier Frequency	Carrier Output	Carrier Frequency	Carrier Output
1930.7 MHz	<u>21.99</u> dBm	1930.2 MHz	<u>23.57</u> dBm
1960.0 MHz	<u>24.34</u> dBm	1960.0 MHz	<u>24.17</u> dBm
1989.3 MHz	<u>23.88</u> dBm	1989.8 MHz	<u>23.67</u> dBm

GSM	255.27 mWatts	WCDMA	228.03 mWatts
Carrier Frequency	Carrier Output	Carrier Frequency	Carrier Output
1930.2 MHz	<u>22.79</u> dBm	1930.5 MHz	<u>23.23</u> dBm
1960.0 MHz	<u>24.07</u> dBm	1960.0 MHz	<u>23.58</u> dBm
1989.8 MHz	<u>22.93</u> dBm	1987.5 MHz	<u>23.30</u> dBm

7.3 Frequency Stability Test

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[Back to Frequency Stability; Section 5.1.1](#)

Host/Expansion	RAU			
Input Voltage	Input Voltage	Carrier Frequency	Measured Frequency	Meets Requirements?
100 VAC	45.9 VDC	1850.200 MHz	1850.200 MHz	Yes
170 VAC	54 VDC	1850.200 MHz	1850.200 MHz	Yes
240 VAC	62.1 VDC	1850.200 MHz	1850.200 MHz	Yes
100 VAC	45.9 VDC	1880.000 MHz	1880.000 MHz	Yes
170 VAC	54 VDC	1880.000 MHz	1880.000 MHz	Yes
240 VAC	62.1 VDC	1880.000 MHz	1880.000 MHz	Yes
100 VAC	45.9 VDC	1909.800 MHz	1909.800 MHz	Yes
170 VAC	54 VDC	1909.800 MHz	1909.800 MHz	Yes
240 VAC	62.1 VDC	1909.800 MHz	1909.800 MHz	Yes
Temperature		Carrier Frequency	Measured Frequency	Meets Requirements?
-30 Deg. C		1850.200 MHz	1850.200 MHz	Yes
-20 Deg. C		1850.200 MHz	1850.200 MHz	Yes
-10 Deg. C		1850.200 MHz	1850.200 MHz	Yes
0 Deg. C		1850.200 MHz	1850.200 MHz	Yes
10 Deg. C		1850.200 MHz	1850.200 MHz	Yes
20 Deg. C		1850.200 MHz	1850.200 MHz	Yes
30 Deg. C		1850.200 MHz	1850.200 MHz	Yes
40 Deg. C		1850.200 MHz	1850.200 MHz	Yes
50 Deg. C		1850.200 MHz	1850.200 MHz	Yes
-30 Deg. C		1880.000 MHz	1880.000 MHz	Yes
-20 Deg. C		1880.000 MHz	1880.000 MHz	Yes
-10 Deg. C		1880.000 MHz	1880.000 MHz	Yes
0 Deg. C		1880.000 MHz	1880.000 MHz	Yes
10 Deg. C		1880.000 MHz	1880.000 MHz	Yes
20 Deg. C		1880.000 MHz	1880.000 MHz	Yes
30 Deg. C		1880.000 MHz	1880.000 MHz	Yes
40 Deg. C		1880.000 MHz	1880.000 MHz	Yes
50 Deg. C		1880.000 MHz	1880.000 MHz	Yes
-30 Deg. C		1909.800 MHz	1909.800 MHz	Yes
-20 Deg. C		1909.800 MHz	1909.800 MHz	Yes
-10 Deg. C		1909.800 MHz	1909.800 MHz	Yes
0 Deg. C		1909.800 MHz	1909.800 MHz	Yes
10 Deg. C		1909.800 MHz	1909.800 MHz	Yes
20 Deg. C		1909.800 MHz	1909.800 MHz	Yes
30 Deg. C		1909.800 MHz	1909.800 MHz	Yes
40 Deg. C		1909.800 MHz	1909.800 MHz	Yes
50 Deg. C		1909.800 MHz	1909.800 MHz	Yes

Host/Expansion	RAU			
Input Voltage	Input Voltage	Carrier Frequency	Measured Frequency	Meets Requirements?
100 VAC	45.9 VDC	1930.200 MHz	1930.200 MHz	Yes
170 VAC	54 VDC	1930.200 MHz	1930.200 MHz	Yes
240 VAC	62.1 VDC	1930.200 MHz	1930.200 MHz	Yes
100 VAC	45.9 VDC	1960.000 MHz	1960.000 MHz	Yes
170 VAC	54 VDC	1960.000 MHz	1960.000 MHz	Yes
240 VAC	62.1 VDC	1960.000 MHz	1960.000 MHz	Yes
100 VAC	45.9 VDC	1989.800 MHz	1989.800 MHz	Yes
170 VAC	54 VDC	1989.800 MHz	1989.800 MHz	Yes
240 VAC	62.1 VDC	1989.800 MHz	1989.800 MHz	Yes
Temperature		Carrier Frequency	Measured Frequency	Meets Requirements?
-30 Deg. C		1930.200 MHz	1930.200 MHz	Yes
-20 Deg. C		1930.200 MHz	1930.200 MHz	Yes
-10 Deg. C		1930.200 MHz	1930.200 MHz	Yes
0 Deg. C		1930.200 MHz	1930.200 MHz	Yes
10 Deg. C		1930.200 MHz	1930.200 MHz	Yes
20 Deg. C		1930.200 MHz	1930.200 MHz	Yes
30 Deg. C		1930.200 MHz	1930.200 MHz	Yes
40 Deg. C		1930.200 MHz	1930.200 MHz	Yes
50 Deg. C		1930.200 MHz	1930.200 MHz	Yes
-30 Deg. C		1960.000 MHz	1960.000 MHz	Yes
-20 Deg. C		1960.000 MHz	1960.000 MHz	Yes
-10 Deg. C		1960.000 MHz	1960.000 MHz	Yes
0 Deg. C		1960.000 MHz	1960.000 MHz	Yes
10 Deg. C		1960.000 MHz	1960.000 MHz	Yes
20 Deg. C		1960.000 MHz	1960.000 MHz	Yes
30 Deg. C		1960.000 MHz	1960.000 MHz	Yes
40 Deg. C		1960.000 MHz	1960.000 MHz	Yes
50 Deg. C		1960.000 MHz	1960.000 MHz	Yes
-30 Deg. C		1989.800 MHz	1989.800 MHz	Yes
-20 Deg. C		1989.800 MHz	1989.800 MHz	Yes
-10 Deg. C		1989.800 MHz	1989.800 MHz	Yes
0 Deg. C		1989.800 MHz	1989.800 MHz	Yes
10 Deg. C		1989.800 MHz	1989.800 MHz	Yes
20 Deg. C		1989.800 MHz	1989.800 MHz	Yes
30 Deg. C		1989.800 MHz	1989.800 MHz	Yes
40 Deg. C		1989.800 MHz	1989.800 MHz	Yes
50 Deg. C		1989.800 MHz	1989.800 MHz	Yes

7.4 Intermodulation Test

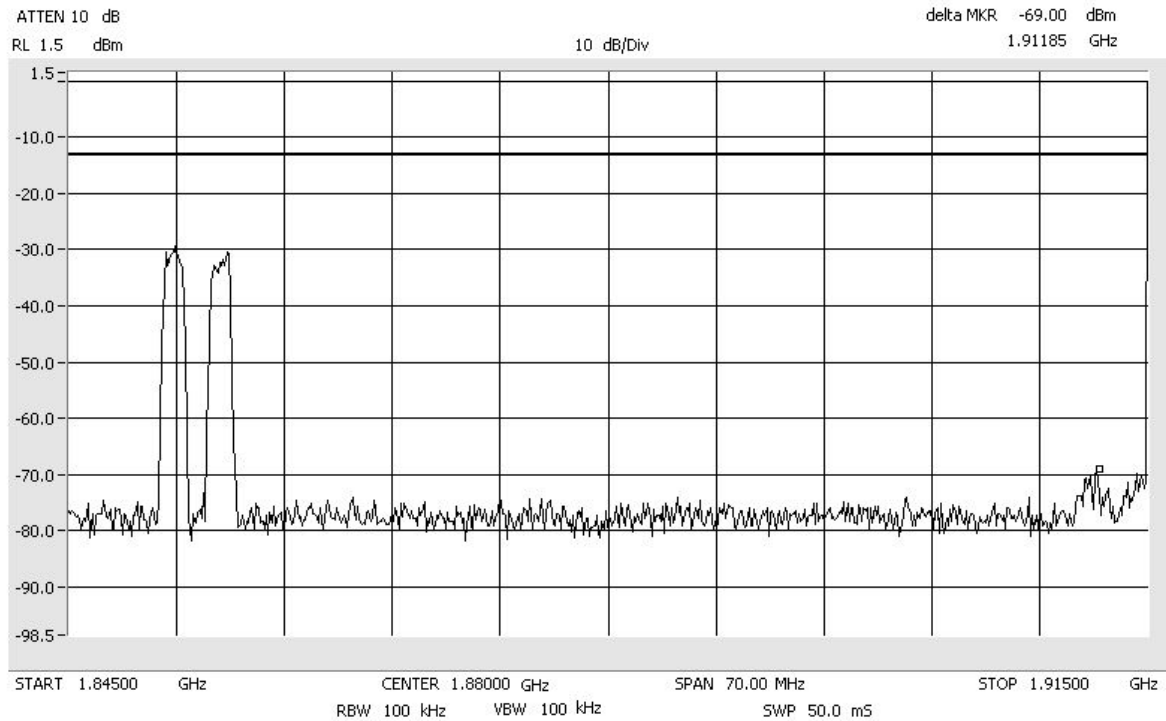
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[Back to Emission Limits; Section 5.1.3](#)

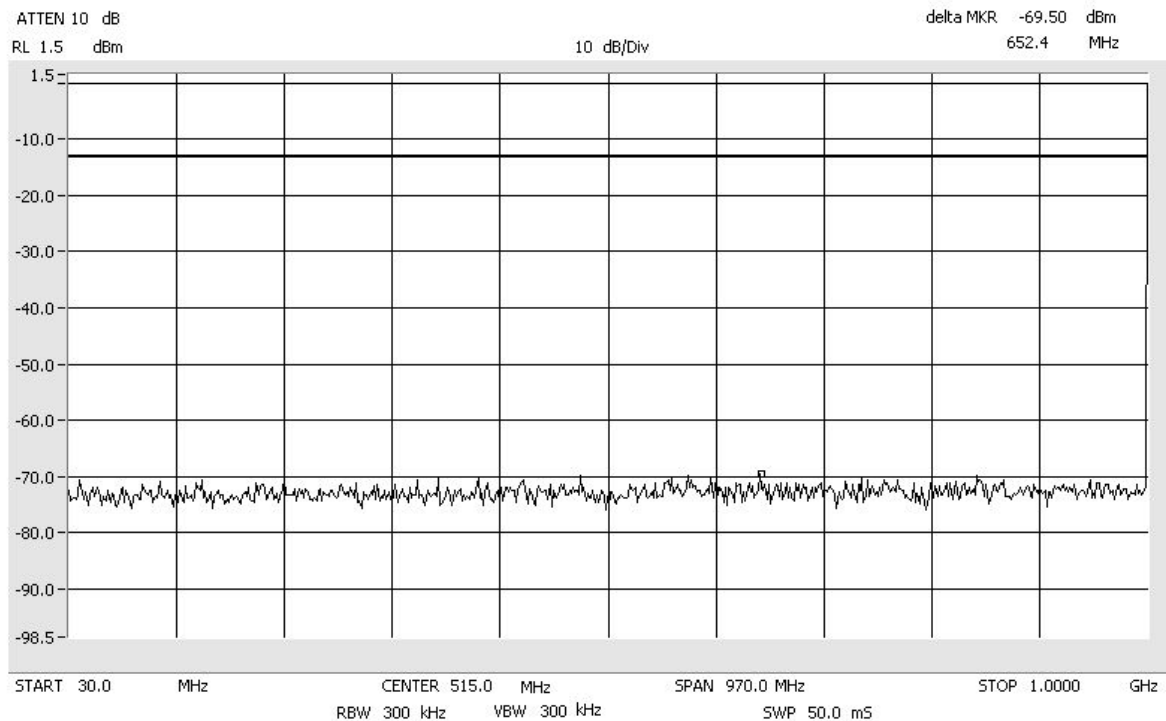
The inter-modulation products test was performed for the EUT. Three tests were performed with the modulation type. Test 1 was with 2 signals input to the EUT at lower end channels. Test 2 was with 2 signals input to the EUT at upper end channels. Test 3 was with 2 signals input to the EUT at upper and lower end channels. The modulation types tested were CDMA2000, EDGE, GSM and WCDMA. An investigation was made from 30 MHz to the 10th Harmonic of the highest fundamental frequency (~20 GHz). The following plots show the results.

Results:
(See Plots)

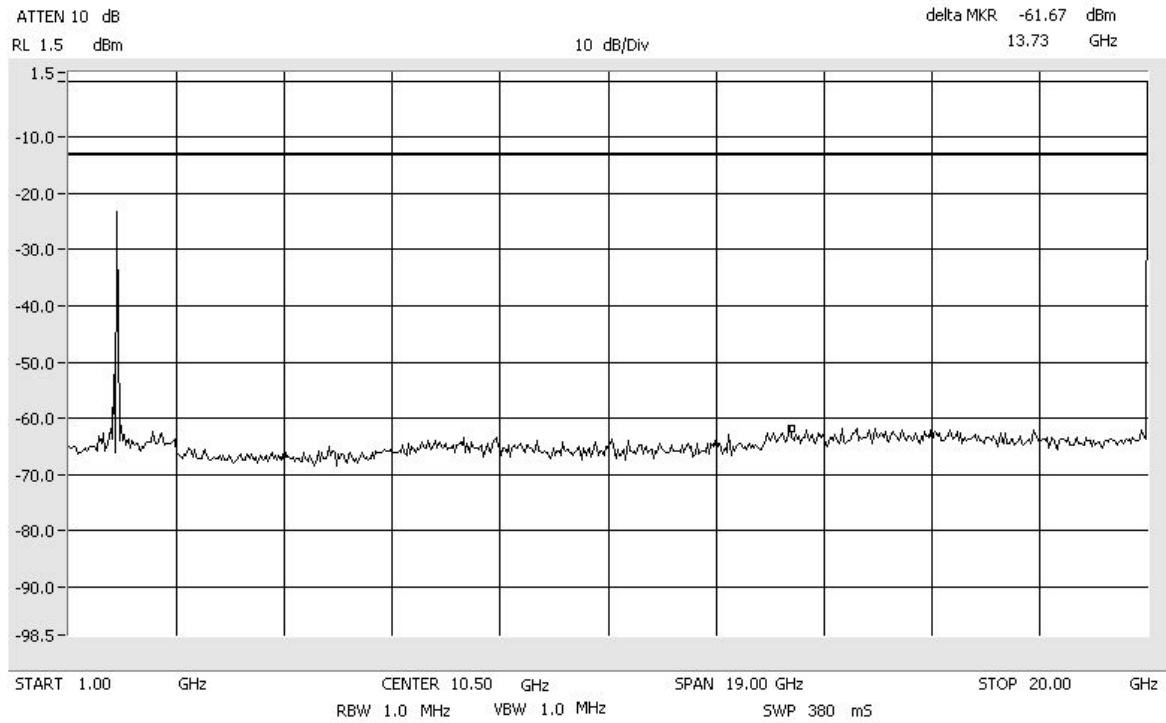
Intermodulation CDMA2000_Low PCS
Center: 1880 MHz Span: 70 MHz RBW/VBW: 100 kHz



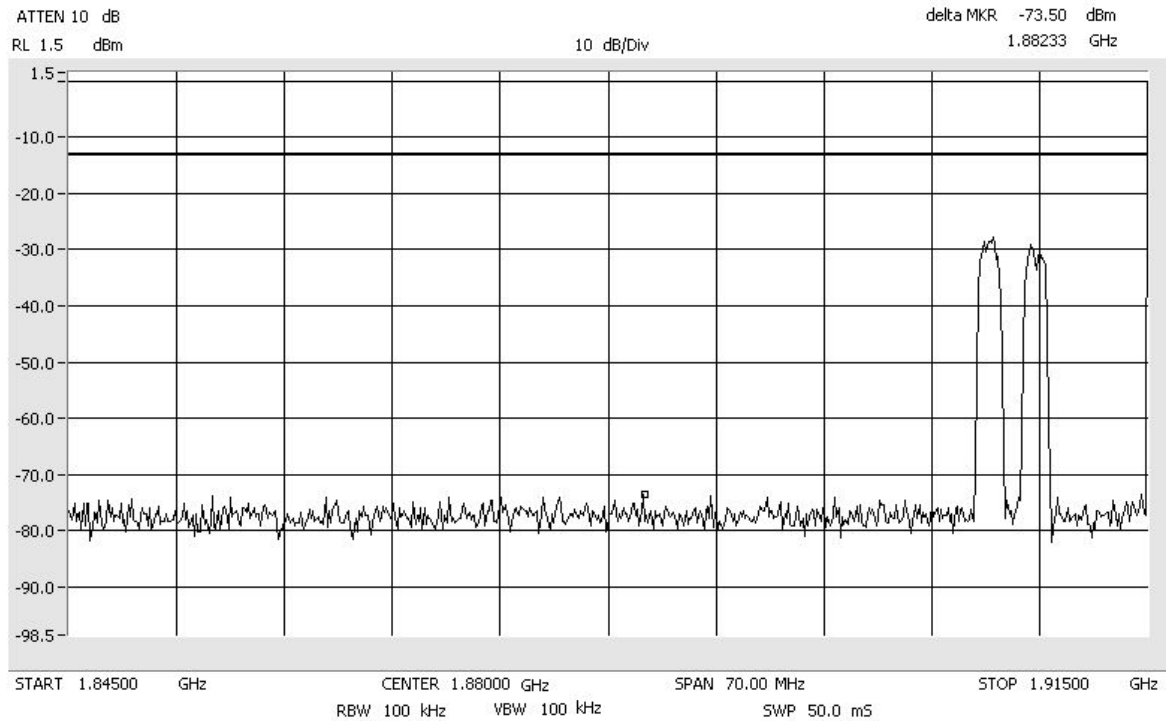
Intermodulation CDMA2000_Low PCS
Span: 30 MHz to 1 GHz RBW/VBW: 300 kHz



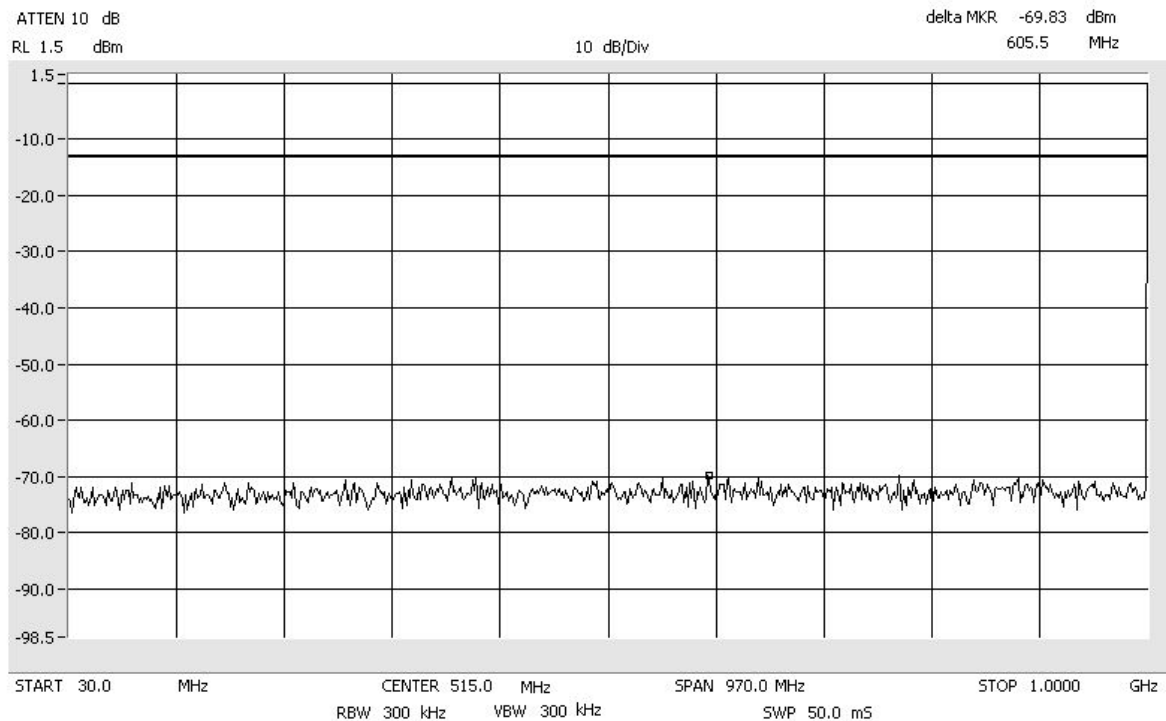
Intermodulation CDMA2000_Low PCS
Span: 1 GHz to 20 GHz RBW/VBW: 1 MHz



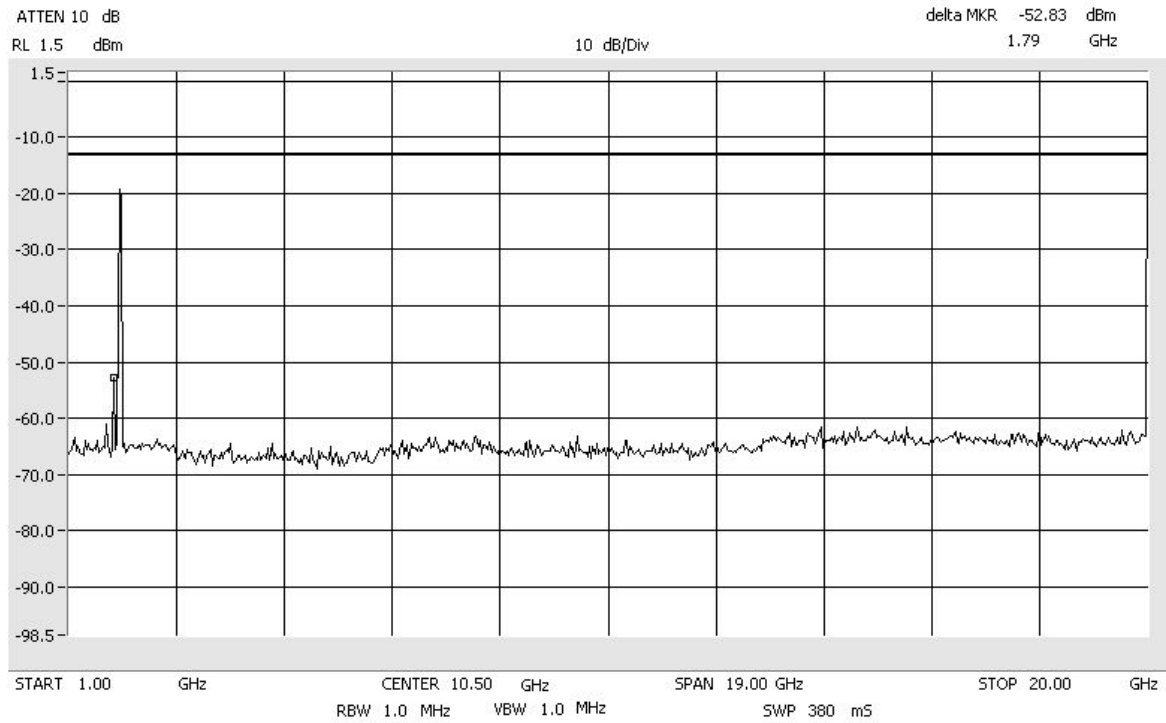
Intermodulation CDMA2000_High PCS
Center: 1880 MHz Span: 70 MHz RBW/VBW: 100 kHz



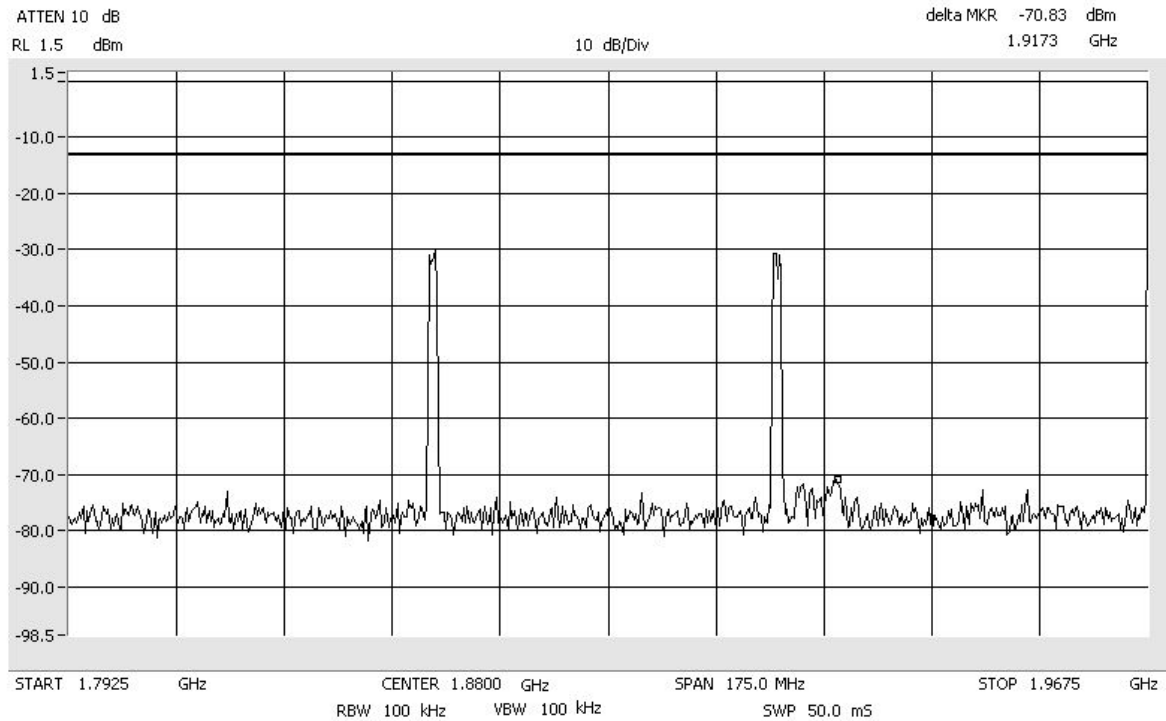
Intermodulation CDMA2000_High PCS
Span: 30 MHz to 1 GHz RBW/VBW: 300 kHz



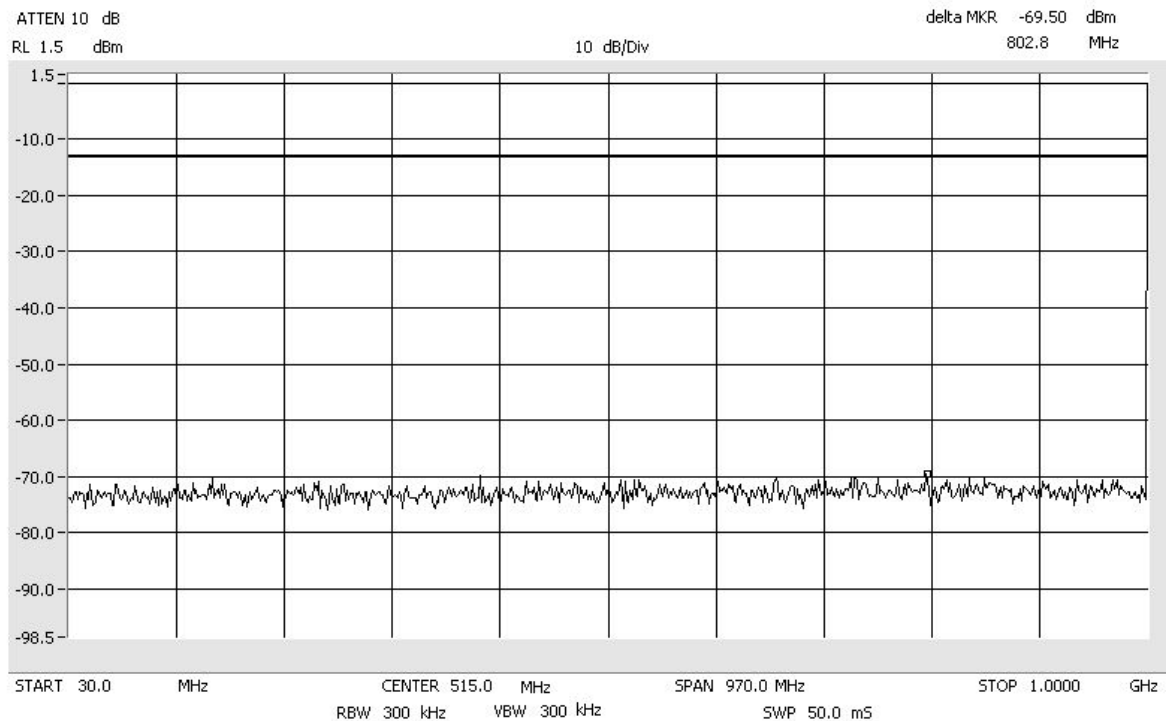
Intermodulation CDMA2000_High PCS
Span: 1 GHz to 20 GHz RBW/VBW: 1 MHz



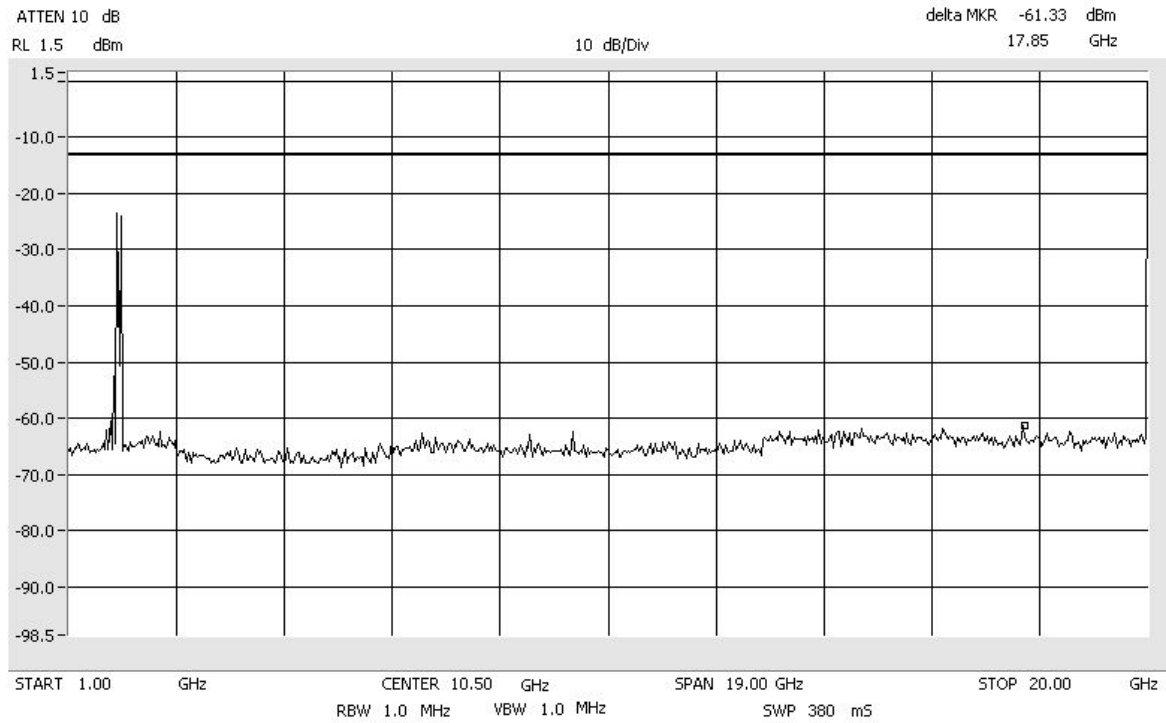
Intermodulation CDMA2000_Apart PCS
Center: 1880 MHz Span: 175 MHz RBW/VBW: 100 kHz



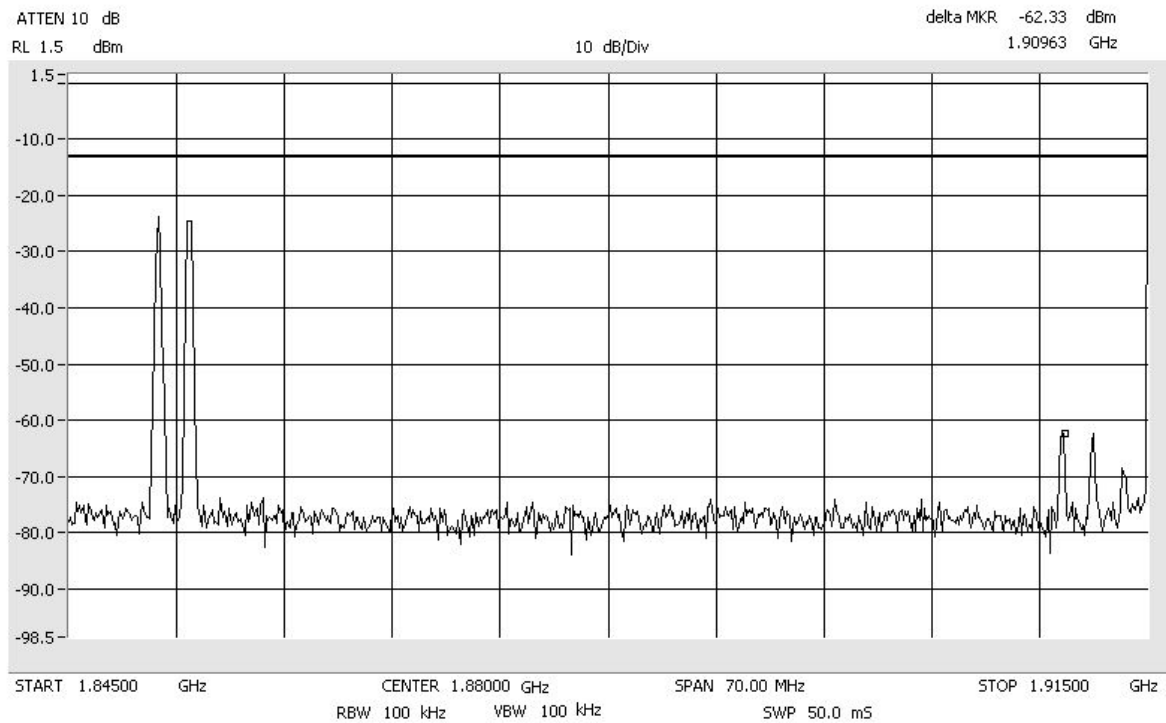
Intermodulation CDMA2000_Apart PCS
Span: 30 MHz to 1 GHz RBW/VBW: 300 kHz



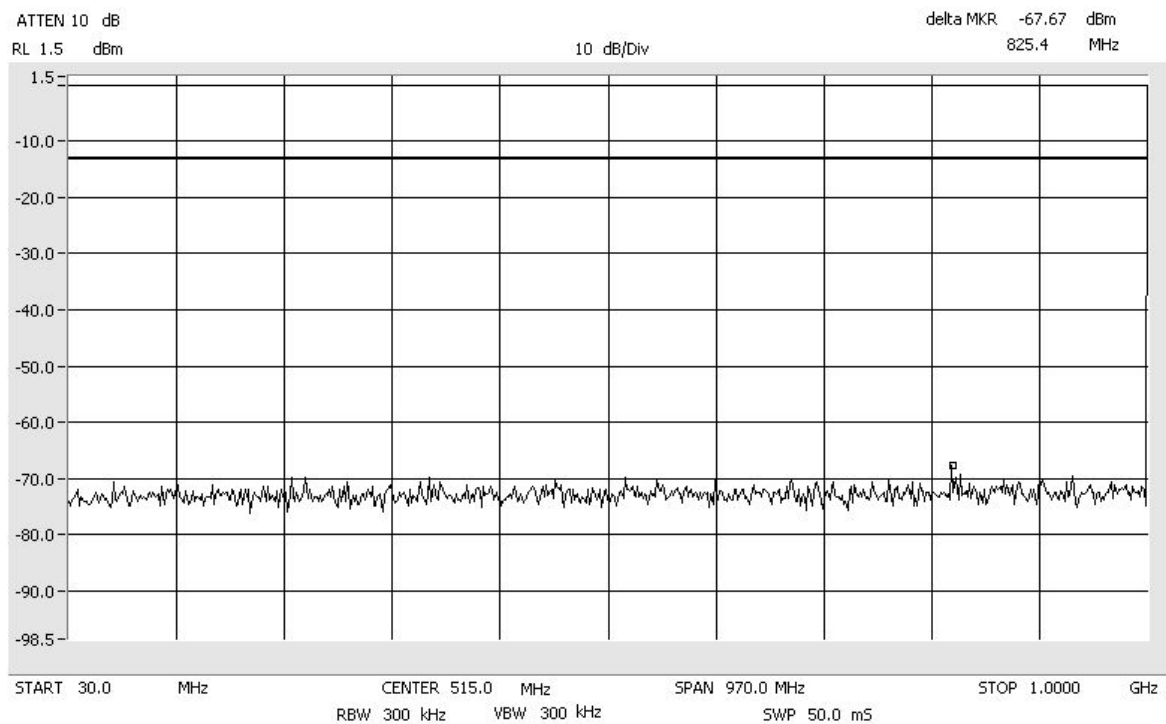
Intermodulation CDMA2000_Apart PCS
Span: 1 GHz to 20 GHz RBW/VBW: 1 MHz



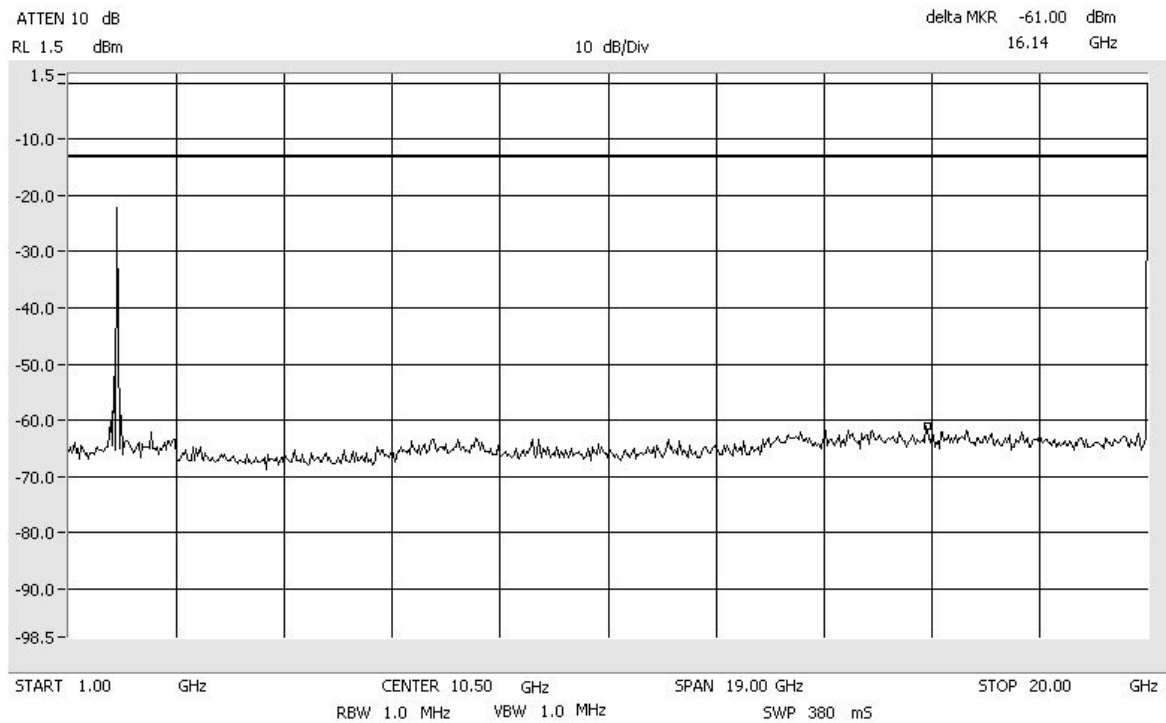
Intermodulation EDGE_Low PCS
Center: 1880 MHz Span: 70 MHz RBW/VBW: 100 kHz



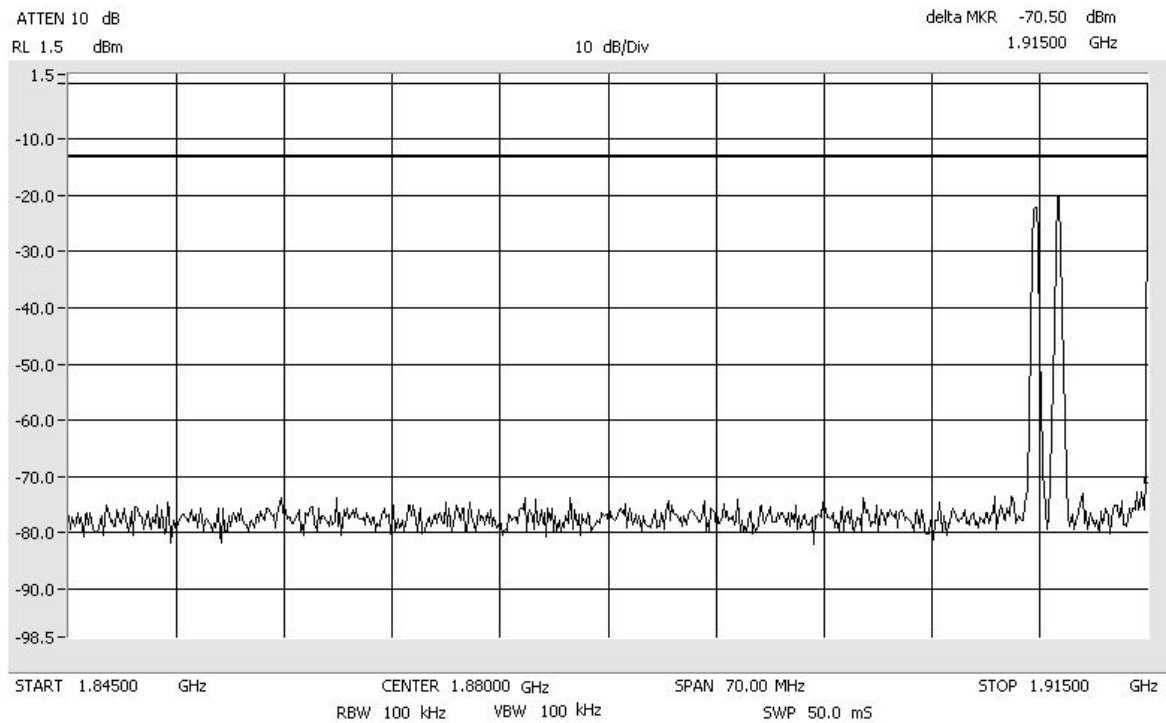
Intermodulation EDGE_Low PCS
Span: 30 MHz to 1 GHz RBW/VBW: 300 kHz



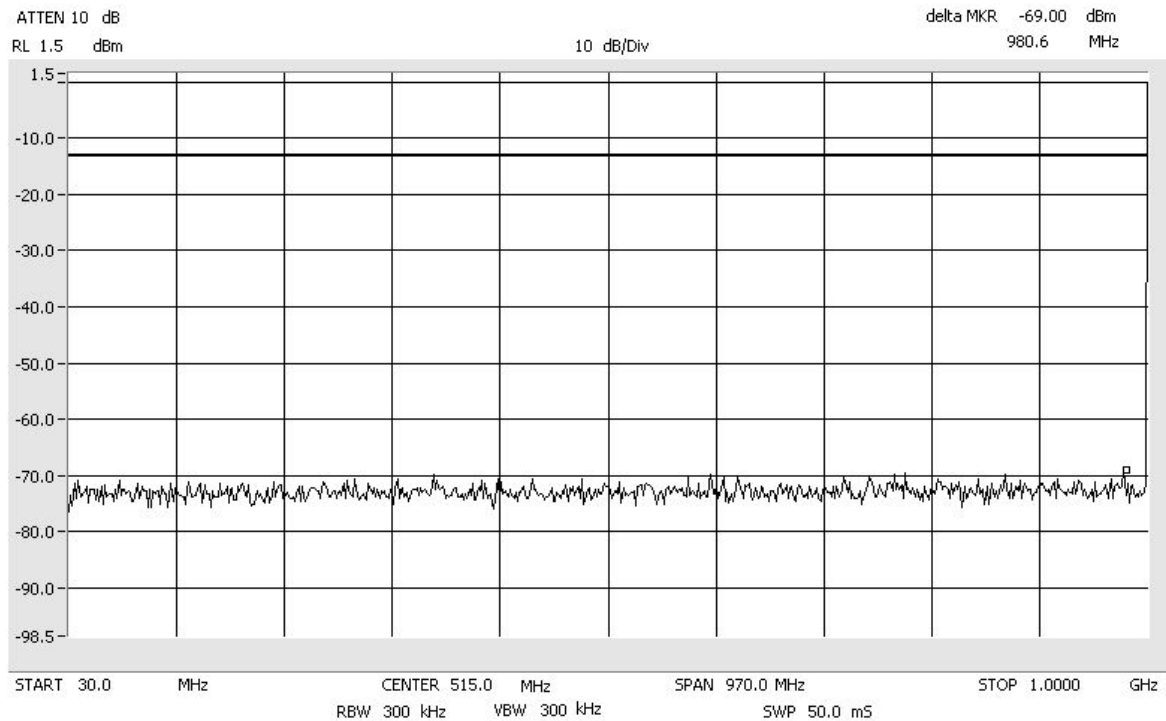
Intermodulation EDGE_Low PCS
Span: 1 GHz to 20 GHz RBW/VBW: 1 MHz



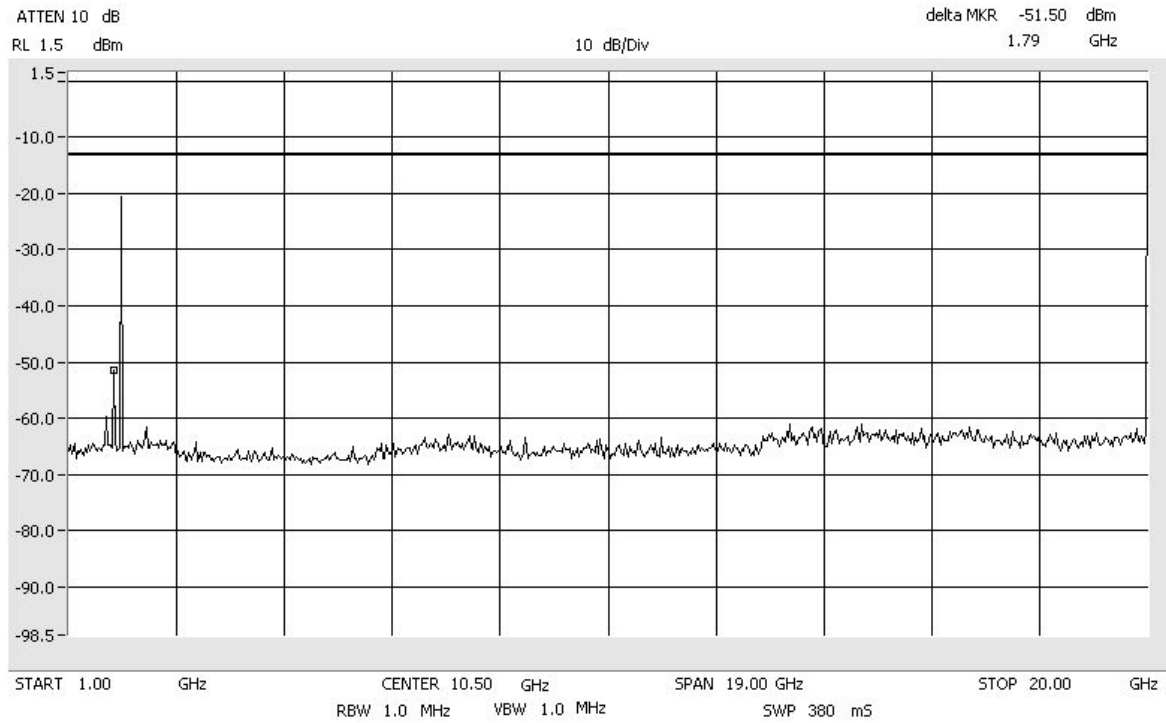
Intermodulation EDGE_High PCS
Center: 1880 MHz Span: 70 MHz RBW/VBW: 100 kHz



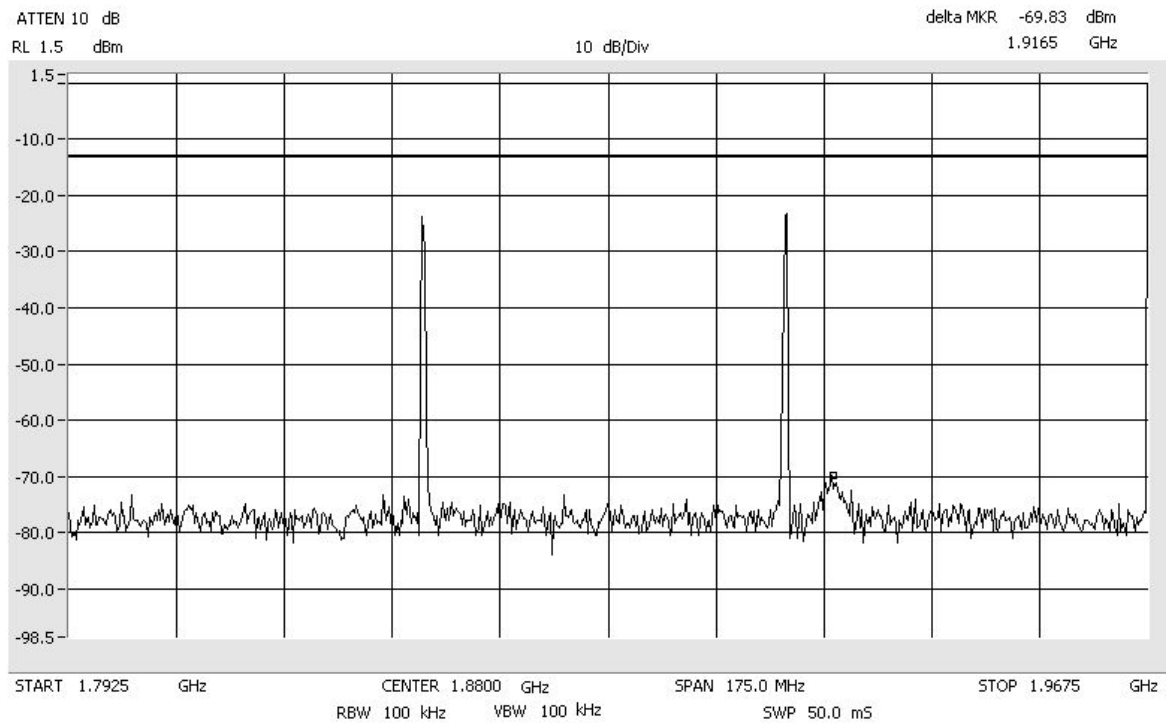
Intermodulation EDGE_High PCS
Span: 30 MHz to 1 GHz RBW/VBW: 300 kHz



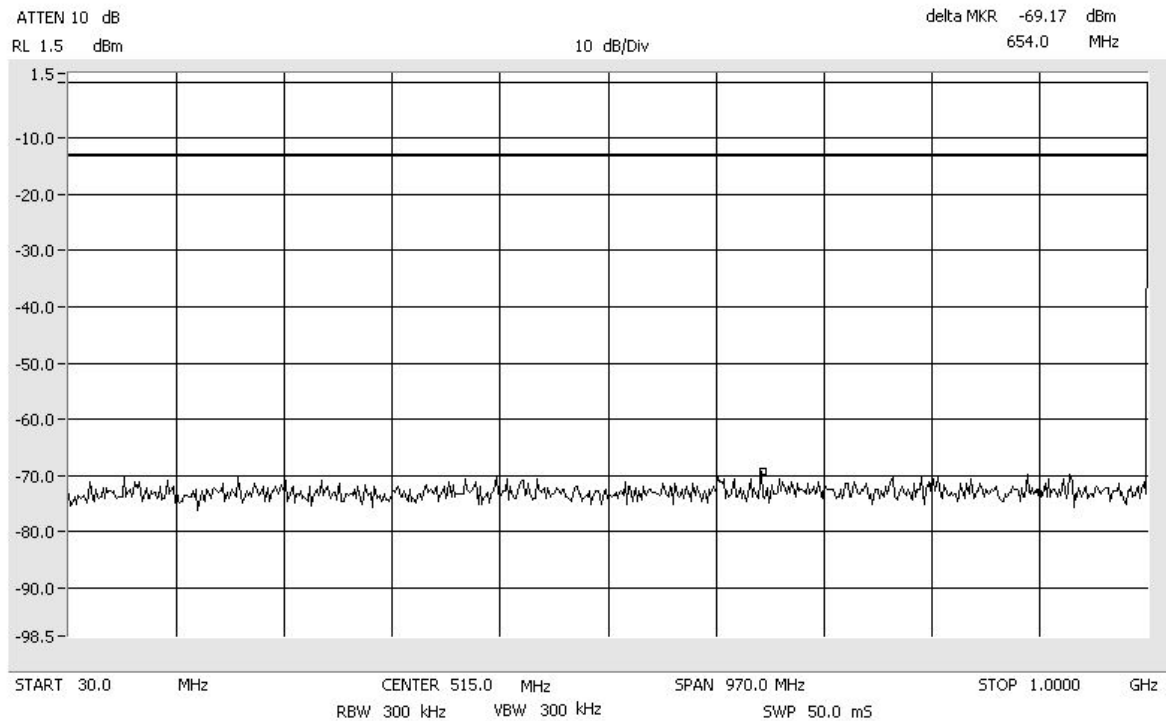
Intermodulation EDGE_High PCS
Span: 1 GHz to 20 GHz RBW/VBW: 1 MHz



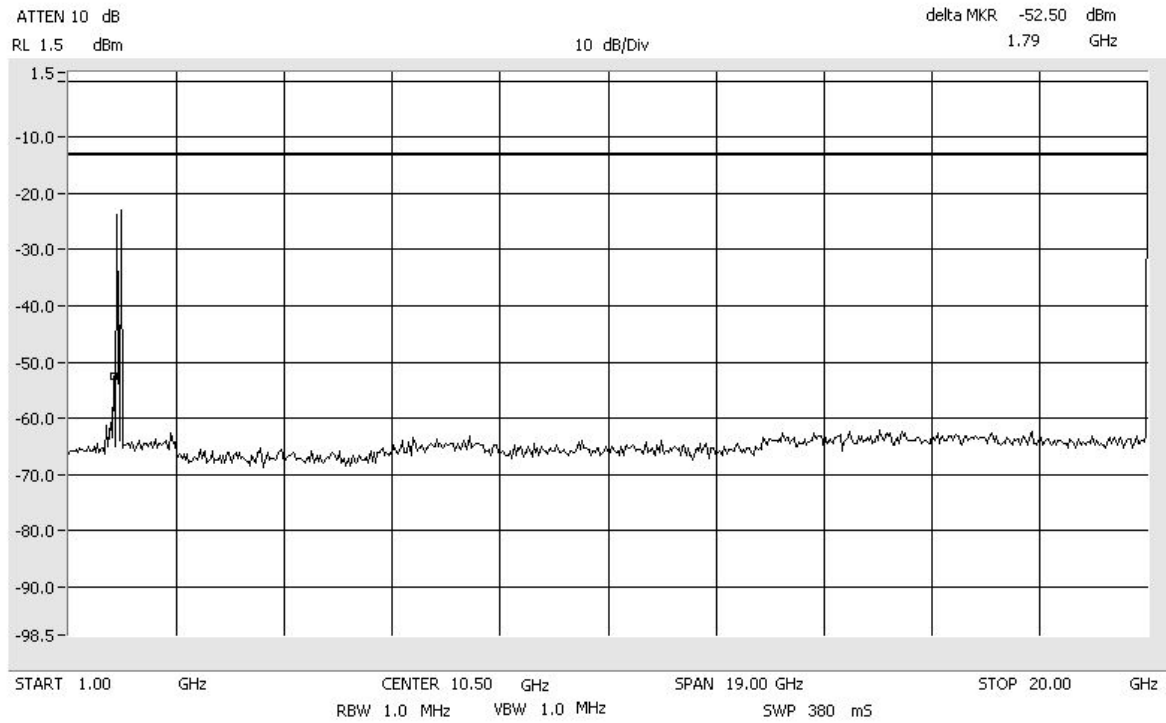
Intermodulation EDGE_Apart PCS
Center: 1880 MHz Span: 175 MHz RBW/VBW: 100 kHz



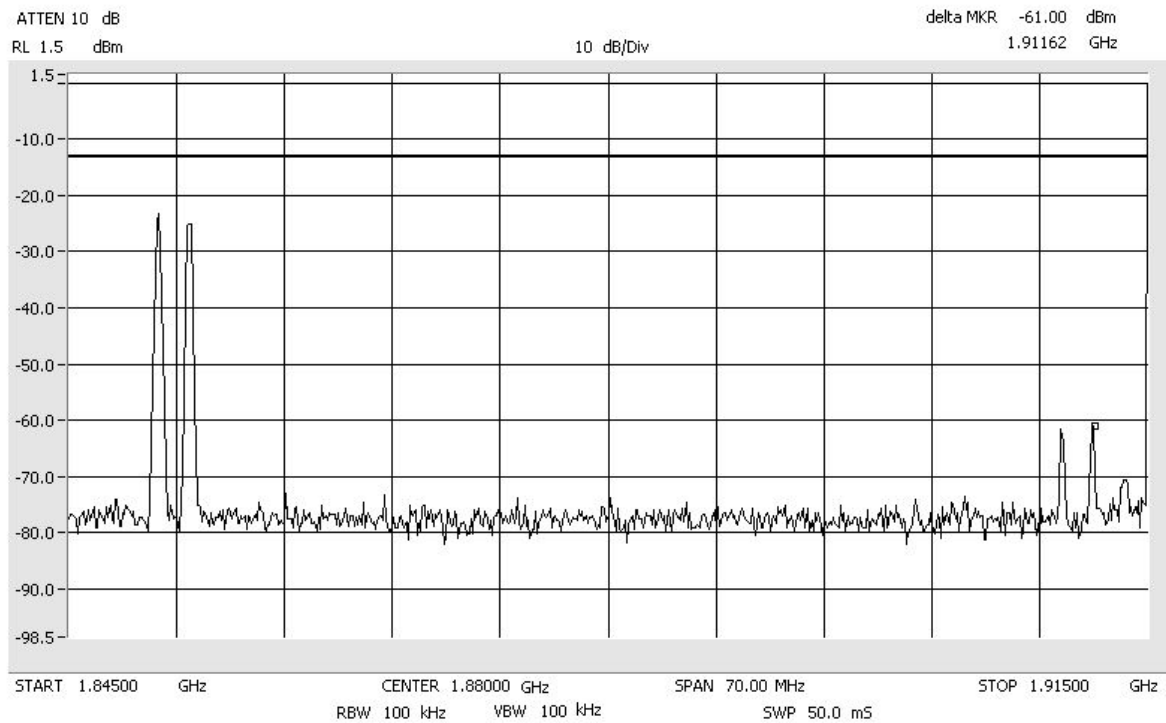
Intermodulation EDGE_Apart PCS
Span: 30 MHz to 1 GHz RBW/VBW: 300 kHz



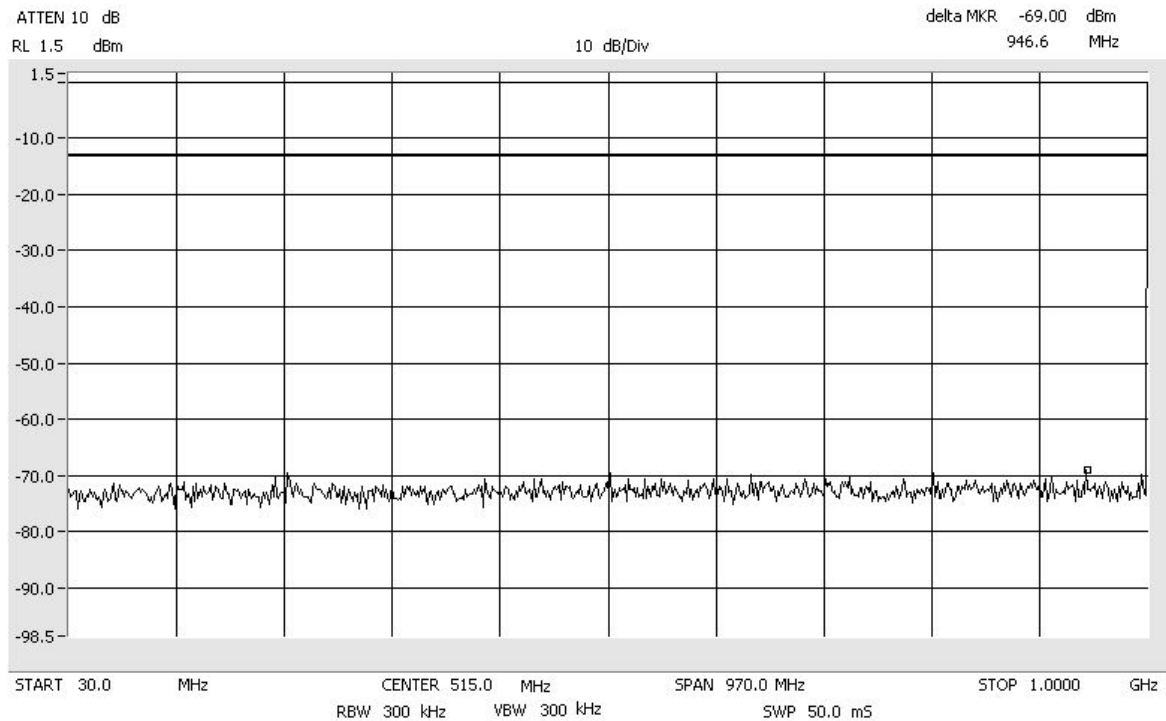
Intermodulation EDGE_Apart PCS
Span: 1 GHz to 20 GHz RBW/VBW: 1 MHz



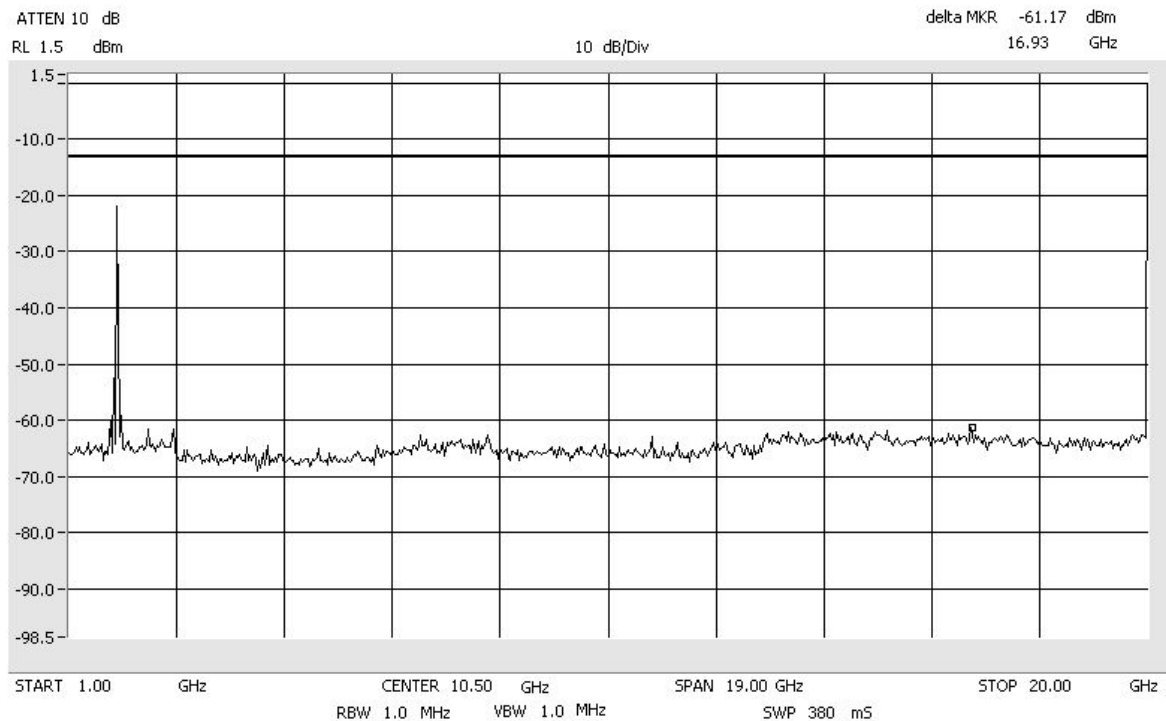
Intermodulation GSM_Low PCS
Center: 1880 MHz Span: 70 MHz RBW/VBW: 100 kHz



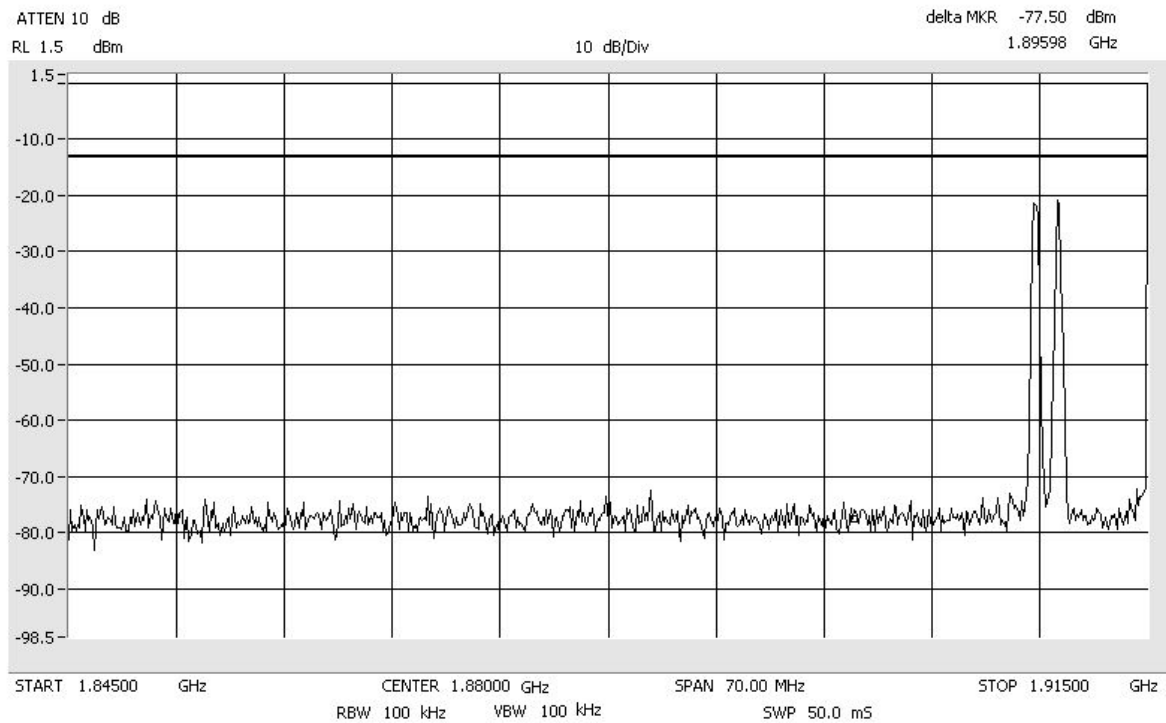
Intermodulation GSM_Low PCS
Span: 30 MHz to 1 GHz RBW/VBW: 300 kHz



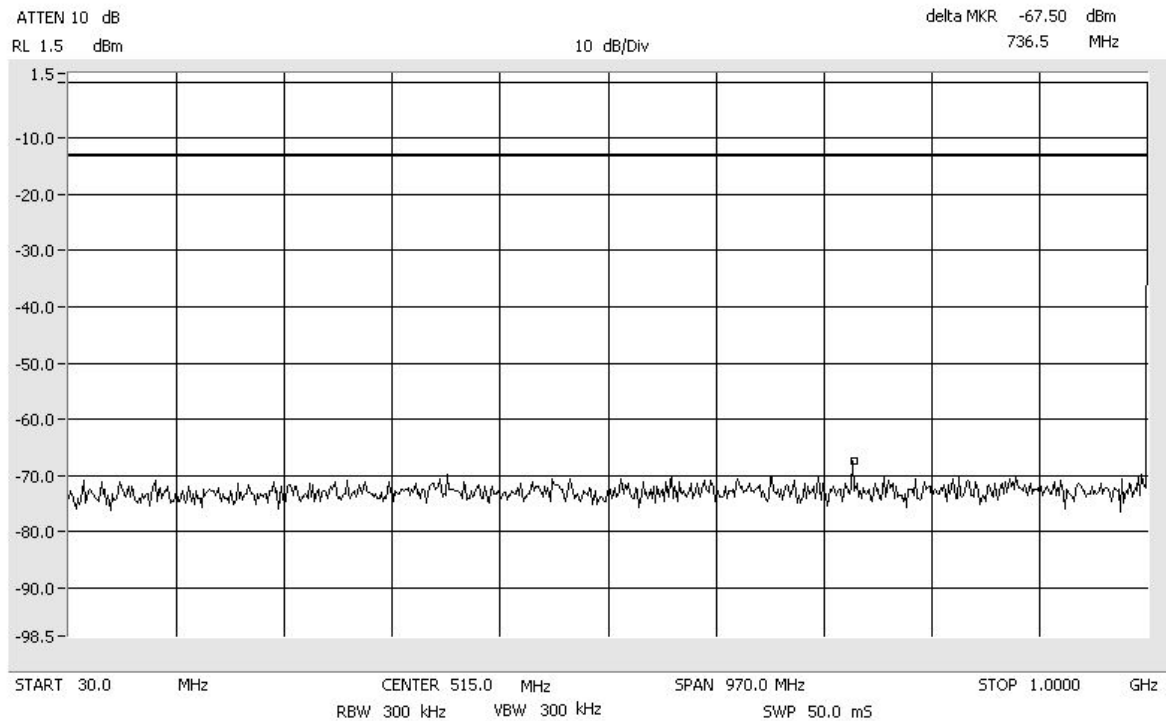
Intermodulation GSM_Low PCS
Span: 1 GHz to 20 GHz RBW/VBW: 1 MHz



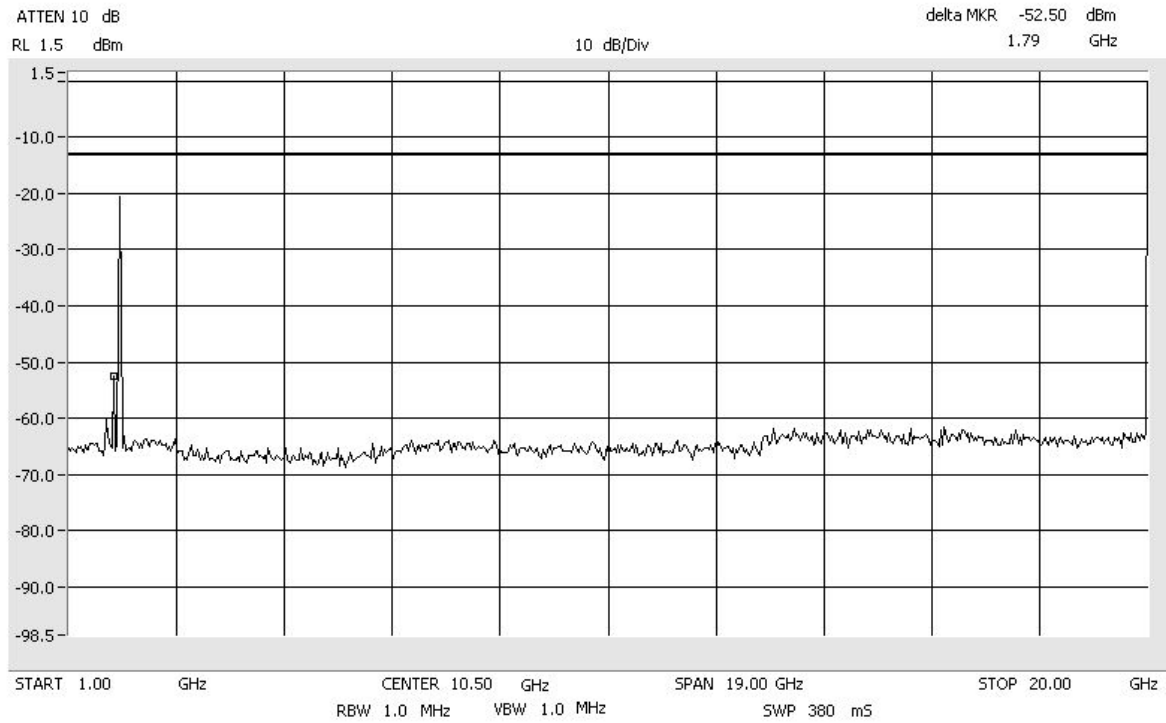
Intermodulation GSM_High PCS
Center: 1880 MHz Span: 70 MHz RBW/VBW: 100 kHz



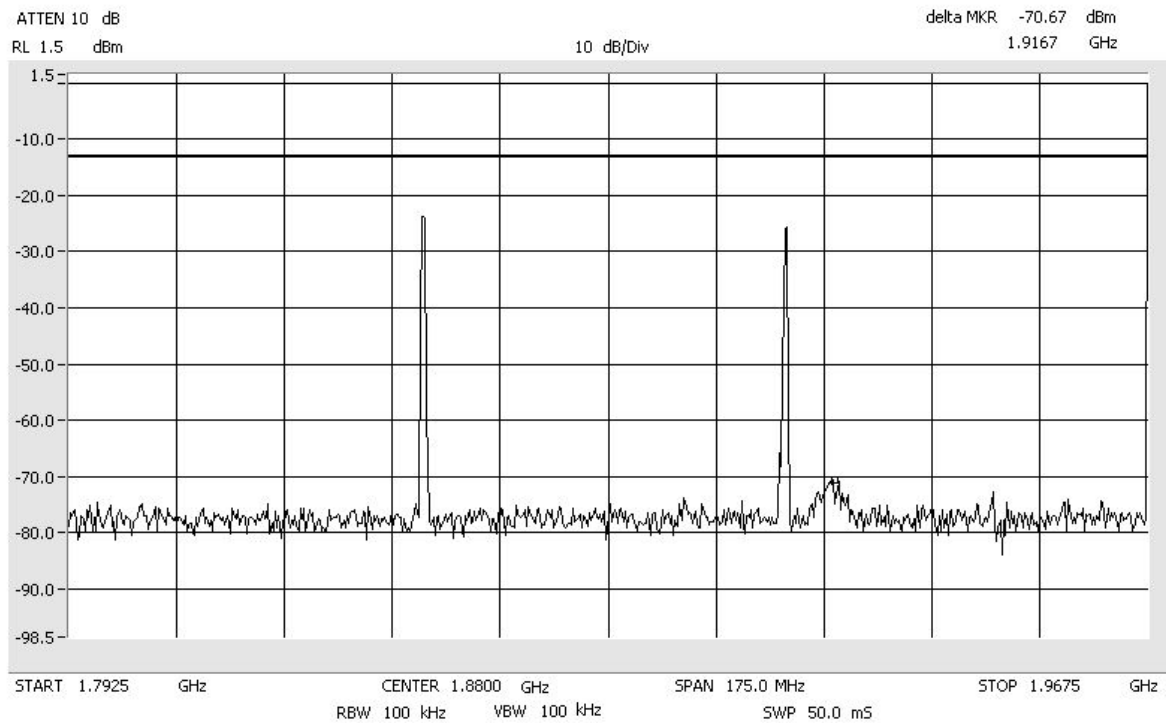
Intermodulation GSM_High PCS
Span: 30 MHz to 1 GHz RBW/VBW: 300 kHz



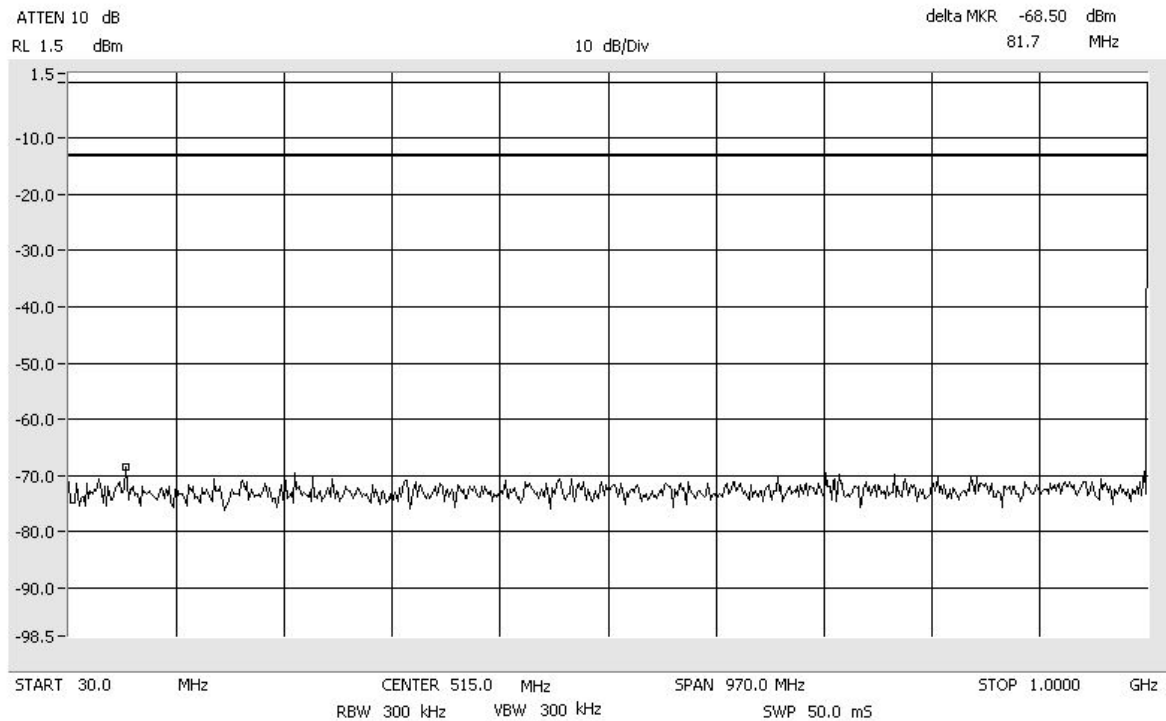
Intermodulation GSM_High PCS
Span: 1 GHz to 20 GHz RBW/VBW: 1 MHz



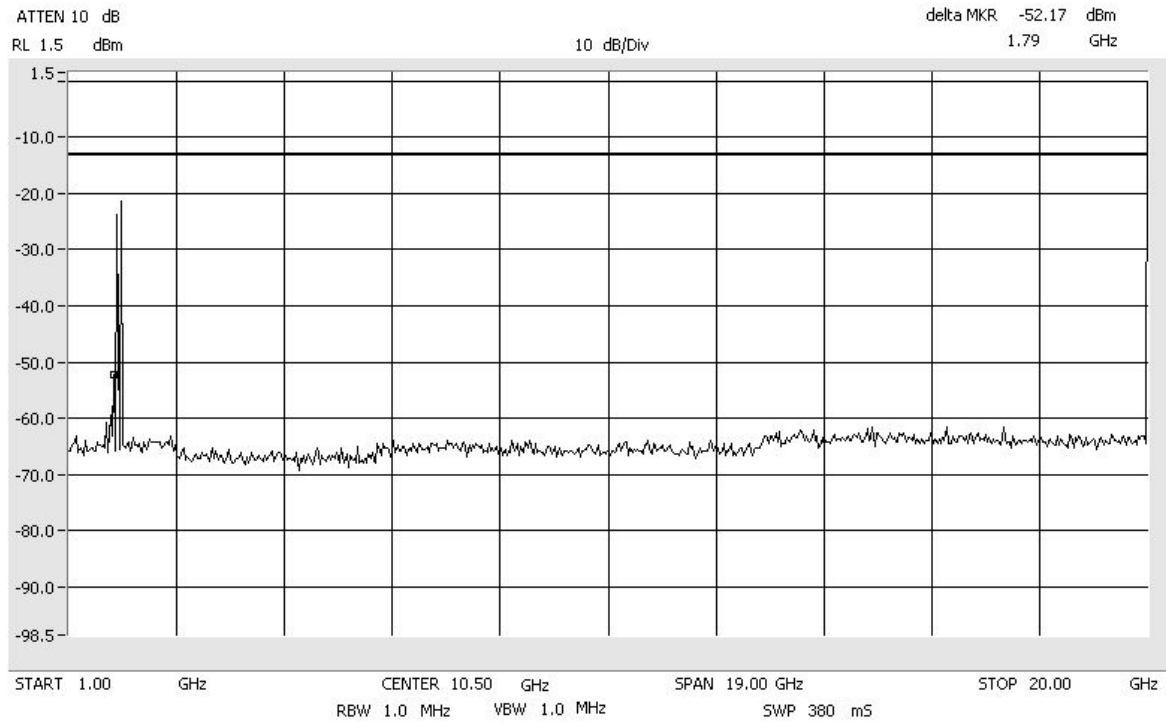
Intermodulation GSM_Apart PCS
Center: 1880 MHz Span: 175 MHz RBW/VBW: 100 kHz



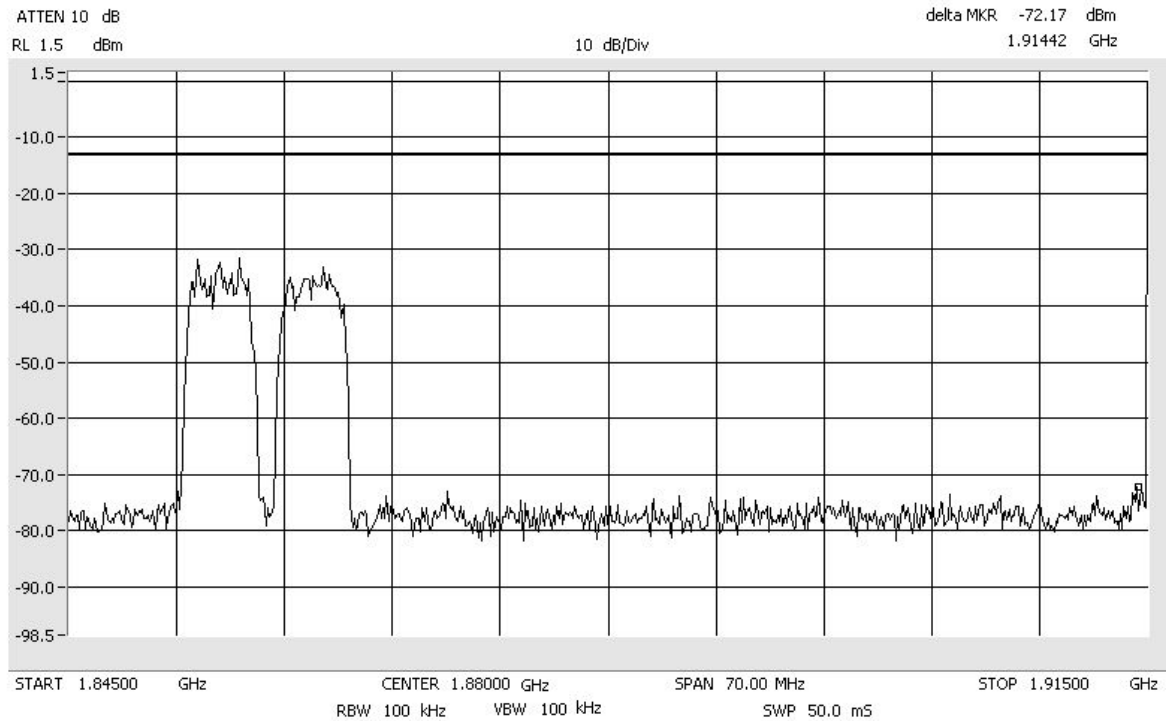
Intermodulation GSM_Apart PCS
Span: 30 MHz to 1 GHz RBW/VBW: 300 kHz



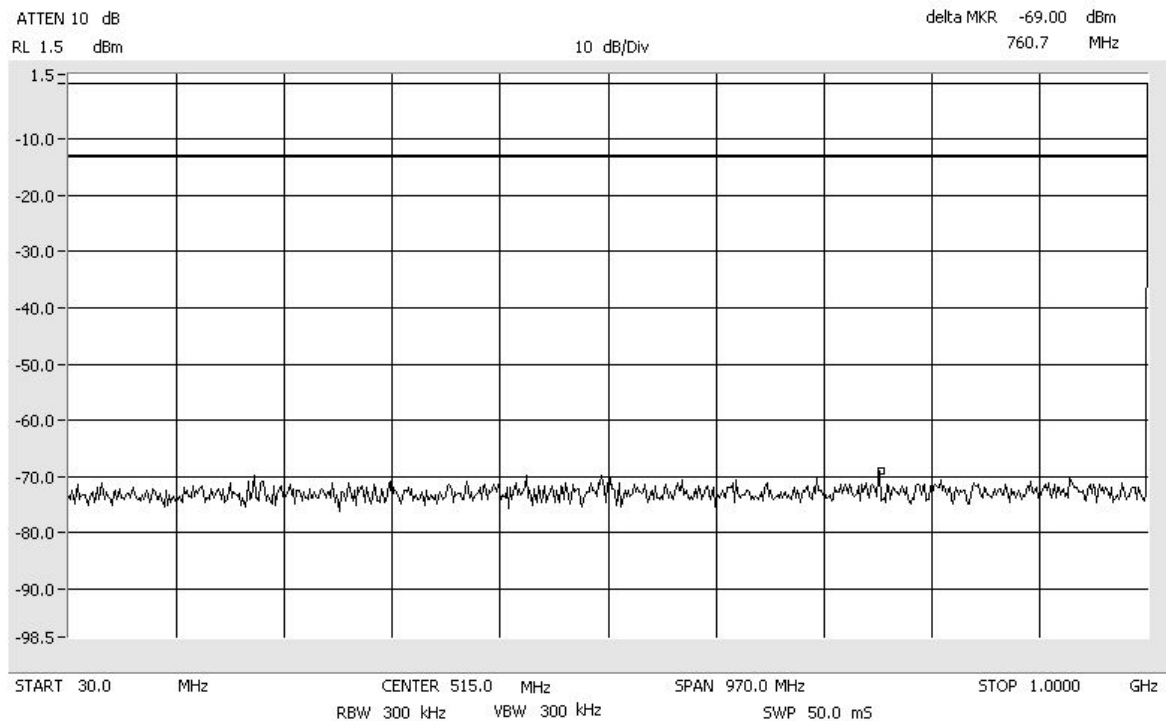
Intermodulation GSM_Apart PCS
Span: 1 GHz to 20 GHz RBW/VBW: 1 MHz



Intermodulation WCDMA_Low PCS
Center: 1880 MHz Span: 70 MHz RBW/VBW: 100 kHz



Intermodulation WCDMA_Low PCS
Span: 30 MHz to 1 GHz RBW/VBW: 300 kHz



Intermodulation
Span: 1 GHz to 20 GHz

WCDMA_Low PCS
RBW/VBW: 1 MHz

