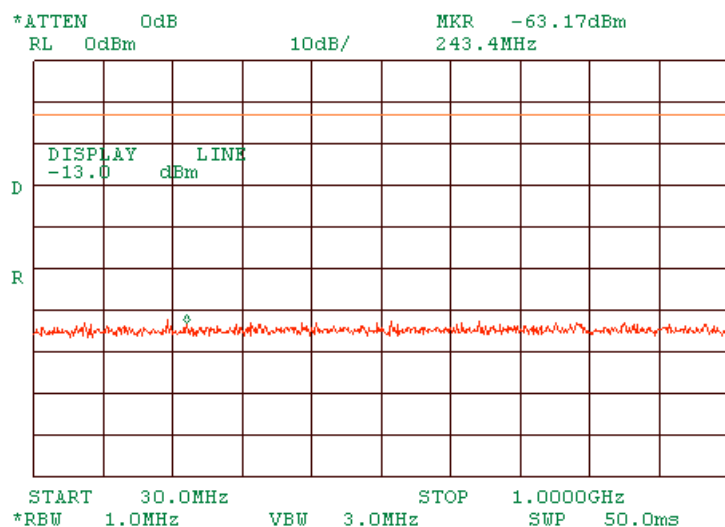
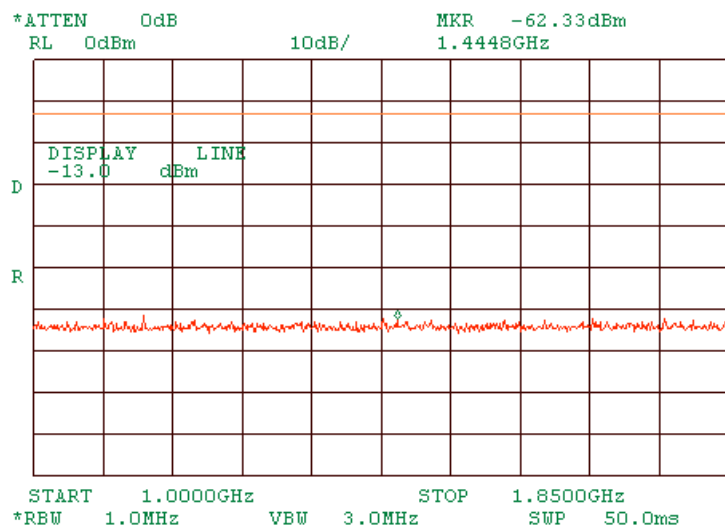


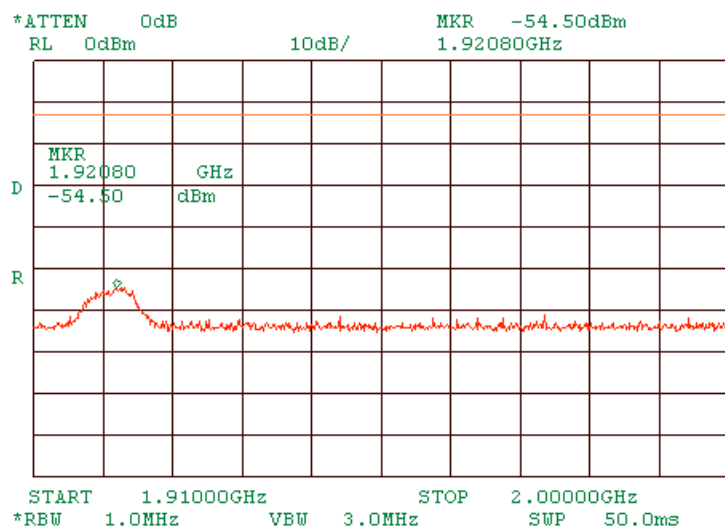
CDMA transmit mode 30 – 1000 MHz.



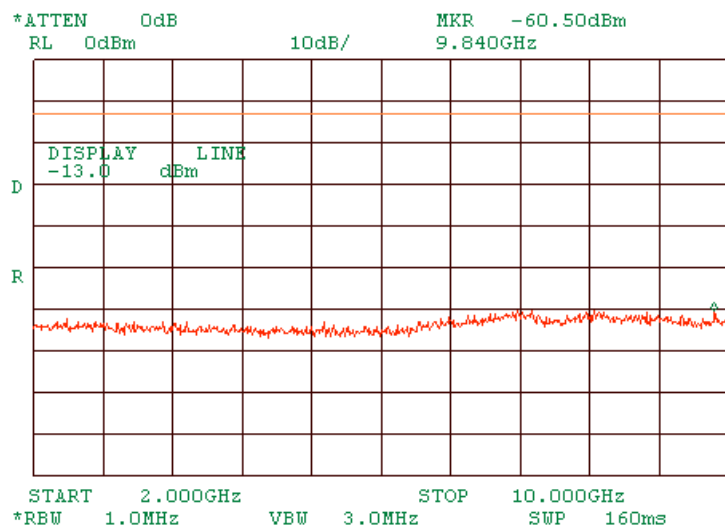
CDMA transmit mode 1000 – 1850 MHz.



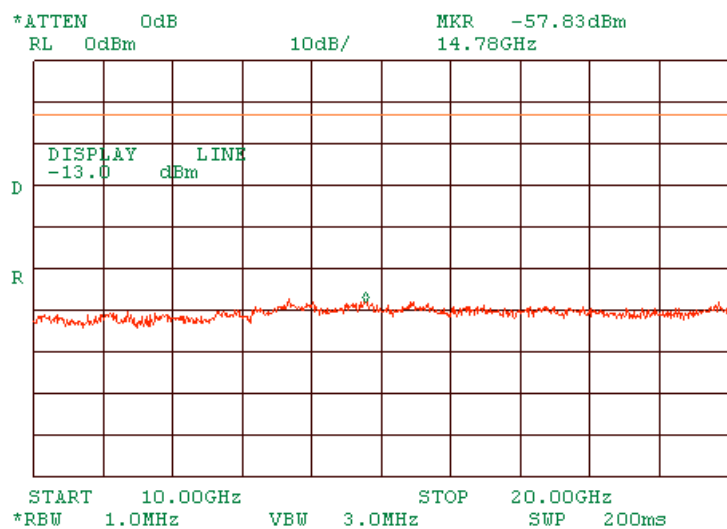
CDMA transmit mode 1910 – 2000 MHz.



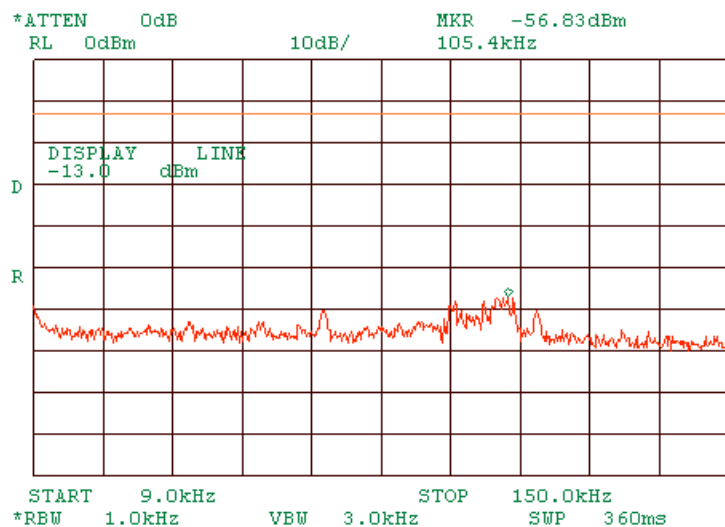
CDMA transmit mode 2000 – 10000 MHz.



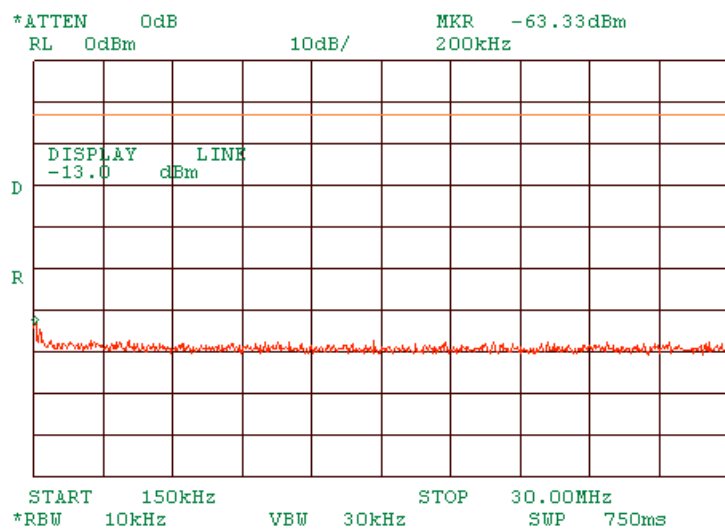
CDMA transmit mode 10000 – 20000 MHz.



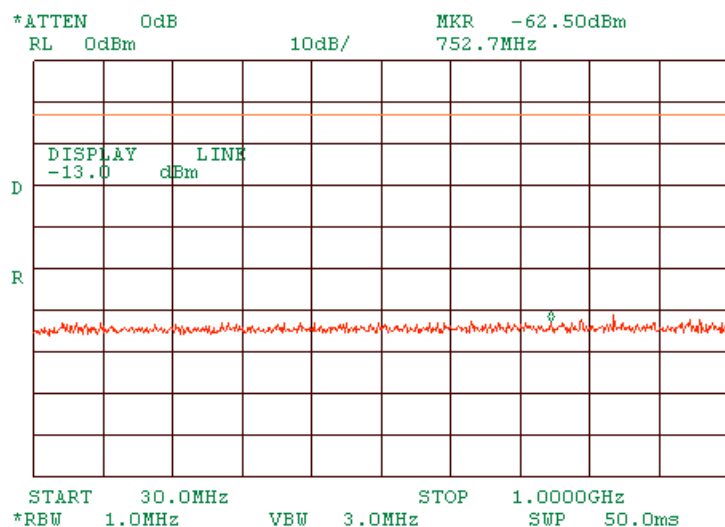
Modulation = QPSK
Bit Rate = 1.288 Mbps
IP = -50 dBm
CDMA transmit mode 9 – 150 kHz.



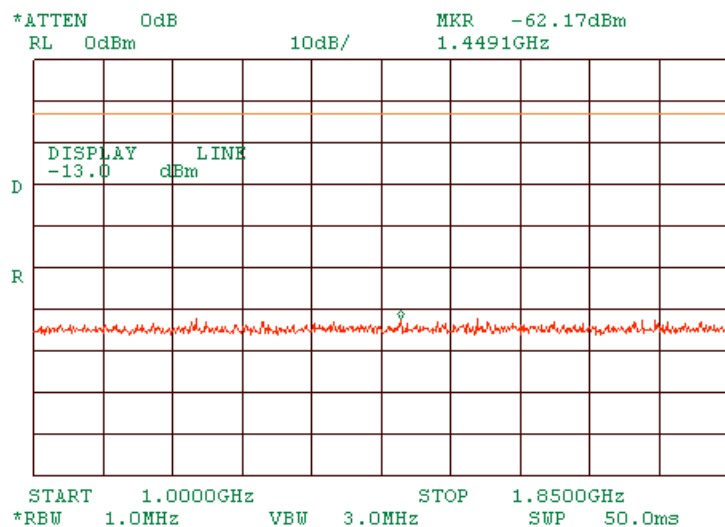
CDMA transmit mode 0.150 – 30 MHz.



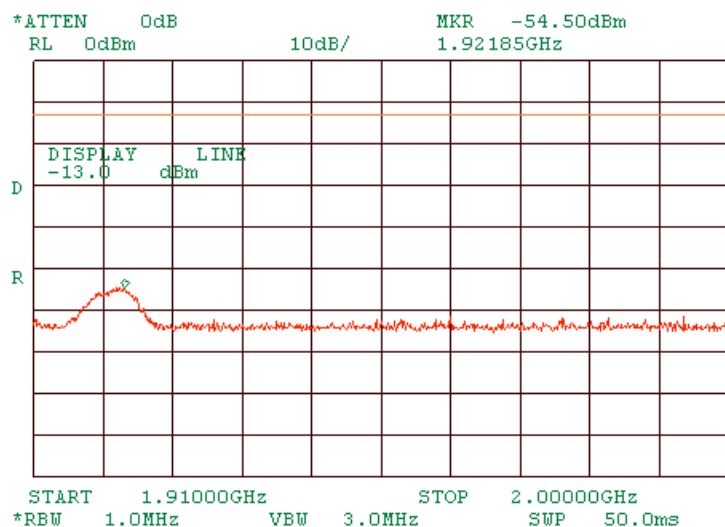
CDMA transmit mode 30 – 1000 MHz.



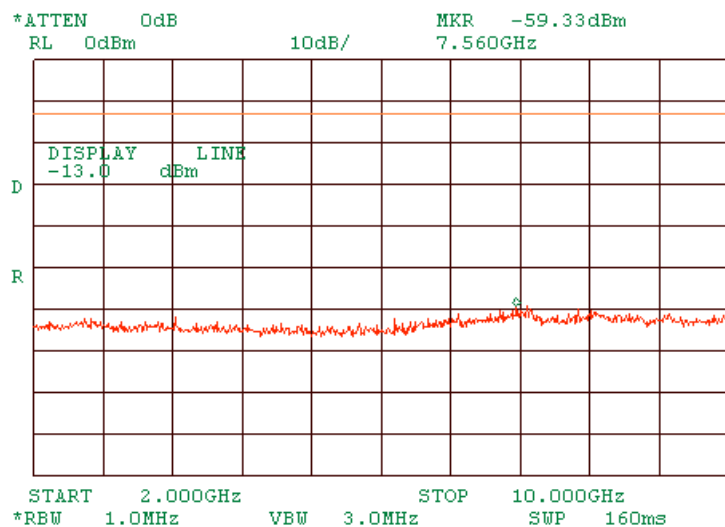
CDMA transmit mode 1000 – 1850 MHz.



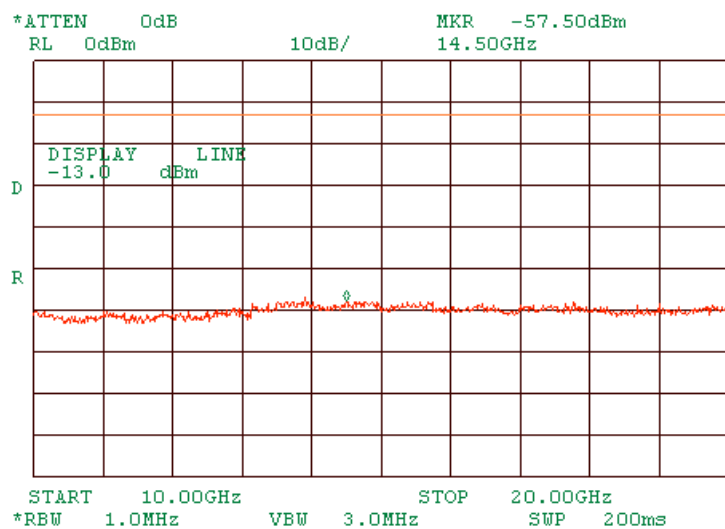
CDMA transmit mode 1910 – 2000 MHz.



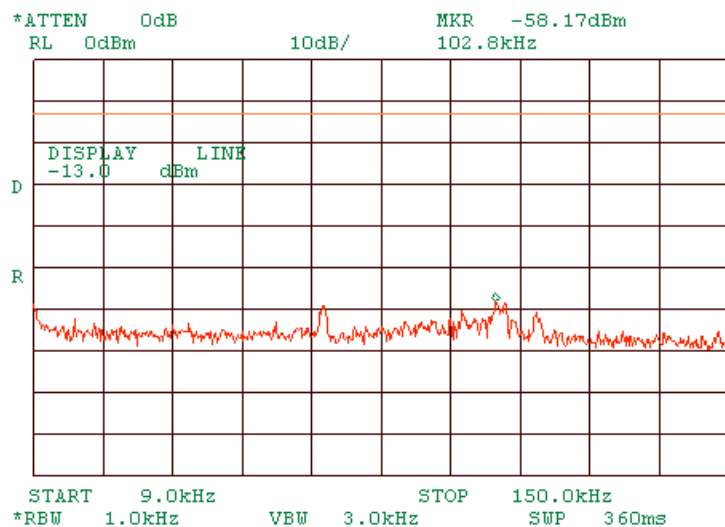
CDMA transmit mode 2000 – 10000 MHz.



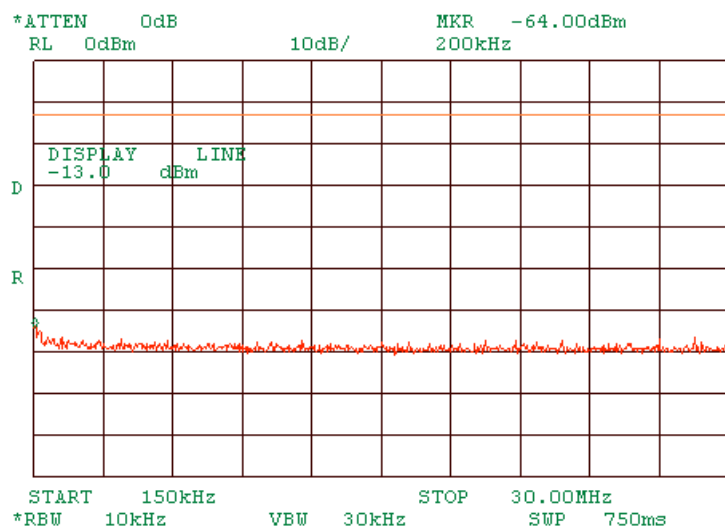
CDMA transmit mode 10000 – 20000 MHz.



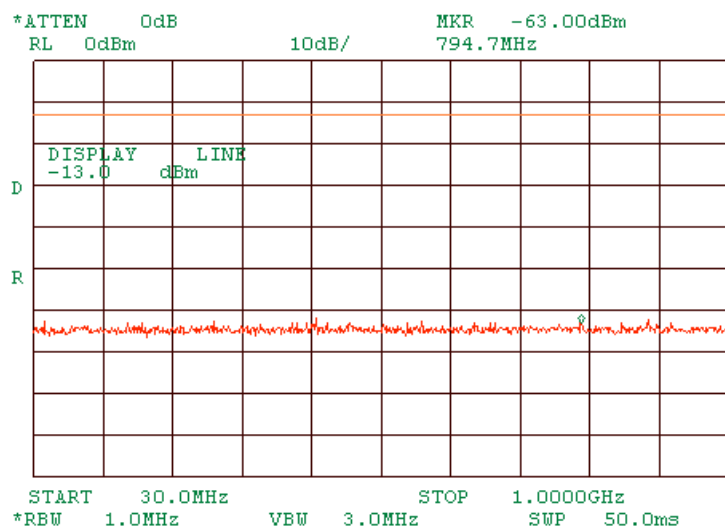
Modulation = OQPSK
 Bit Rate = 1.288 Mbps
 IP = -50 dBm
 CDMA transmit mode 9 – 150 kHz.



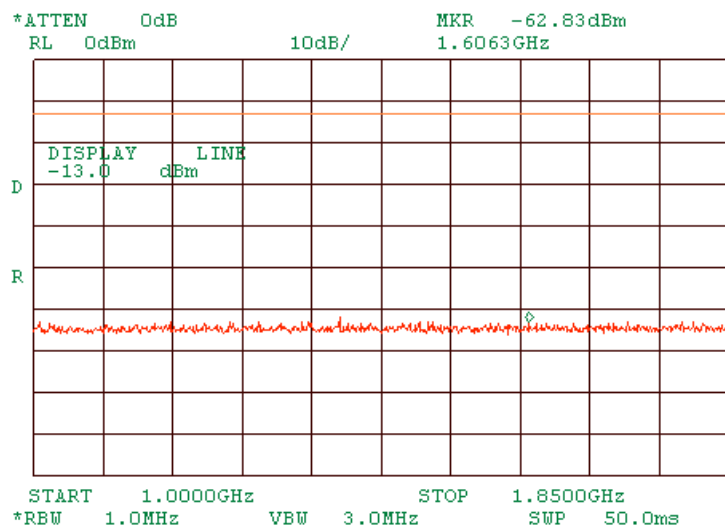
CDMA transmit mode 0.150 – 30 MHz.



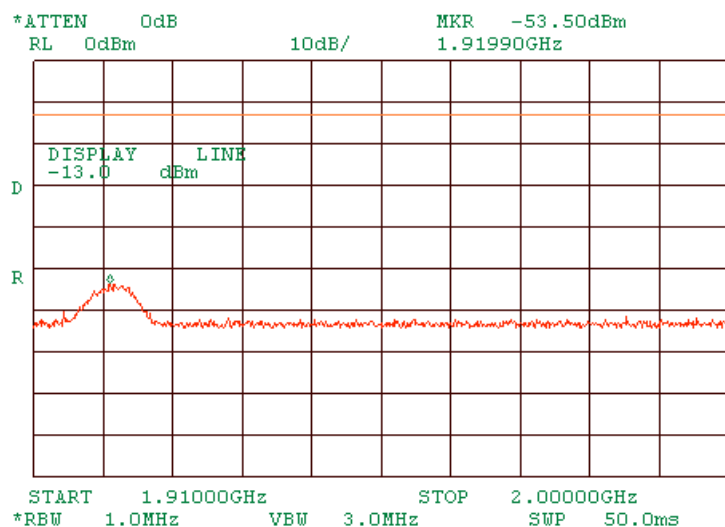
CDMA transmit mode 30 – 1000 MHz.



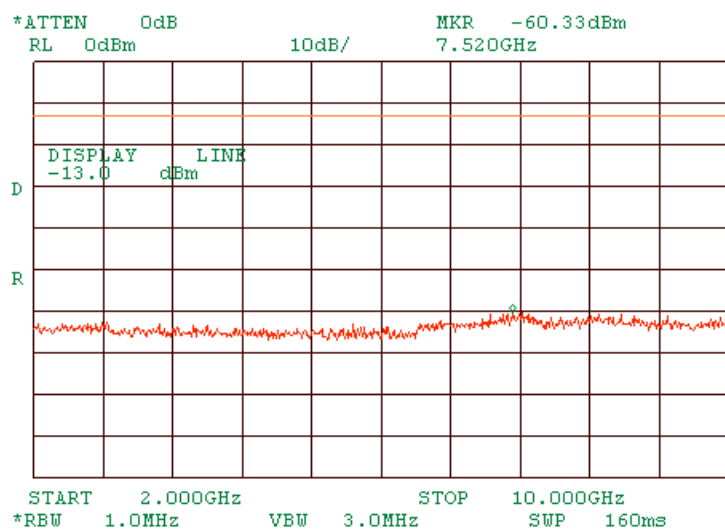
CDMA transmit mode 1000 – 1850 MHz.



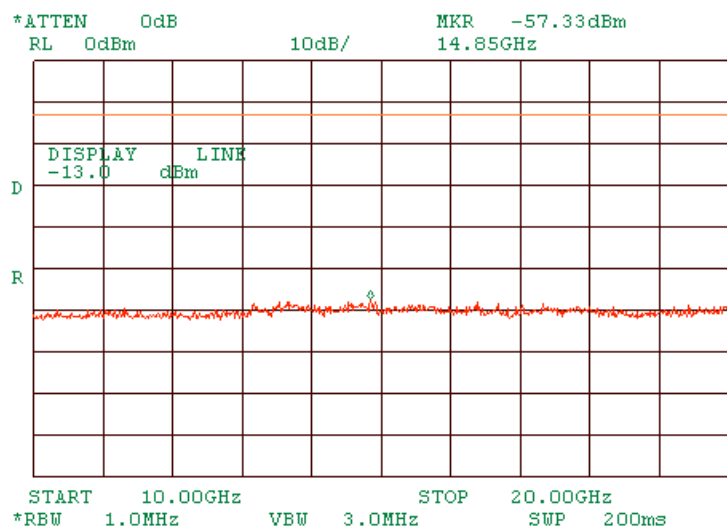
CDMA transmit mode 1910 – 2000 MHz.



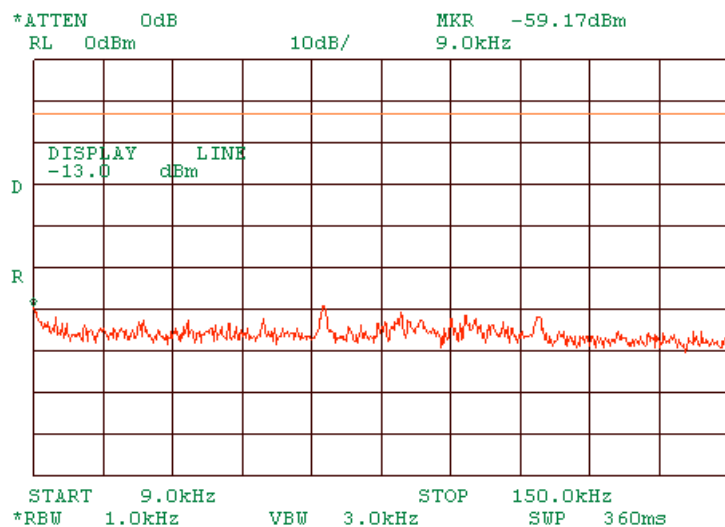
CDMA transmit mode 2000 – 10000 MHz.



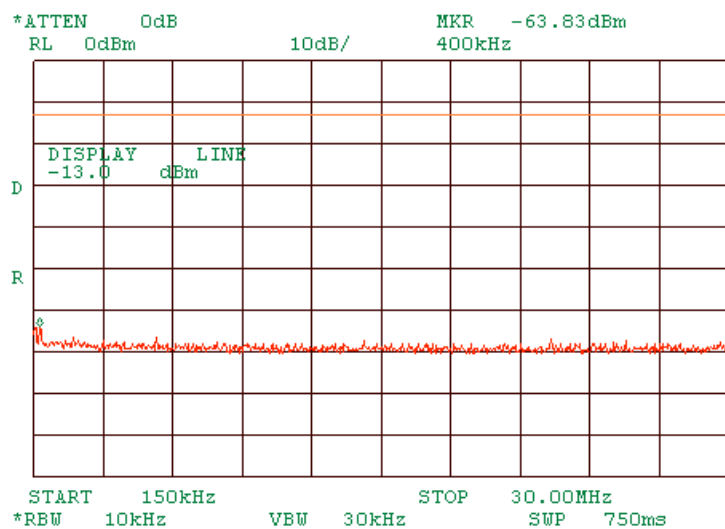
CDMA transmit mode 10000 – 20000 MHz.



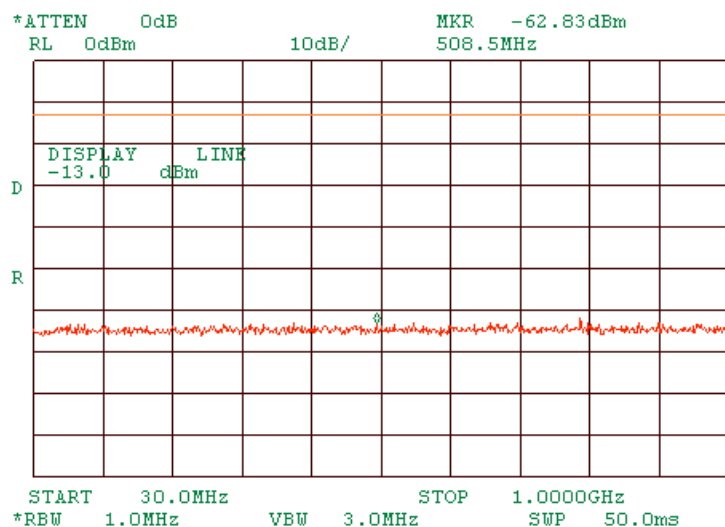
Modulation = OQPSK
 Bit Rate = 1.288 Mbps
 IP = -25 dBm
 CDMA transmit mode 9 – 150 kHz.



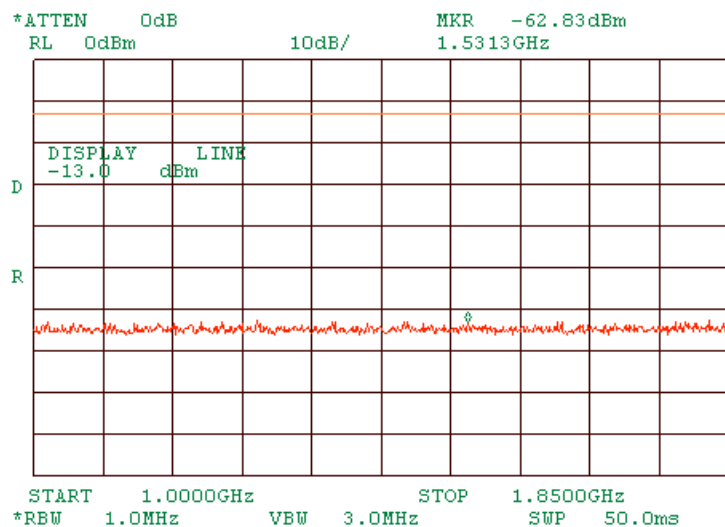
CDMA transmit mode 0.150 – 30 MHz.



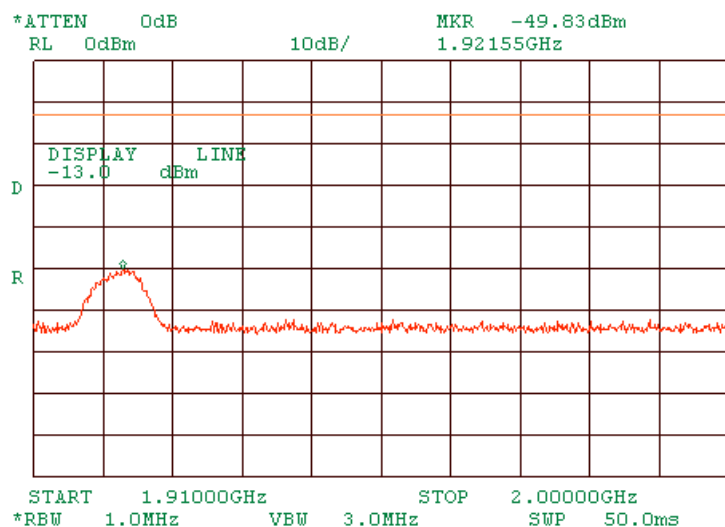
CDMA transmit mode 30 – 1000 MHz.



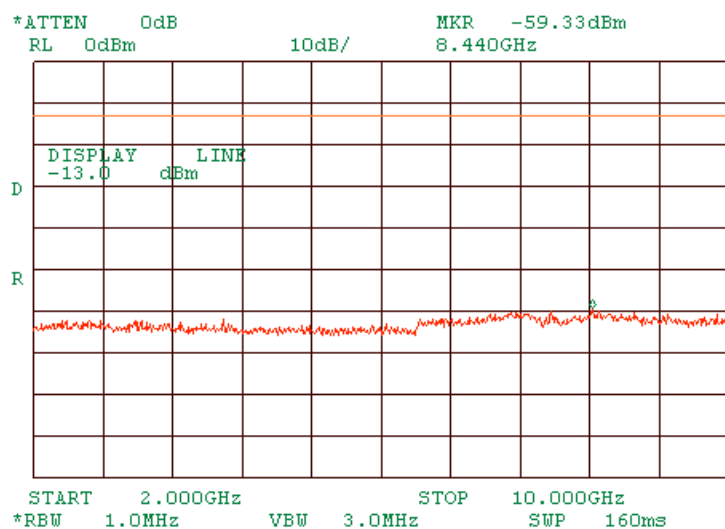
CDMA transmit mode 1000 – 1850 MHz.



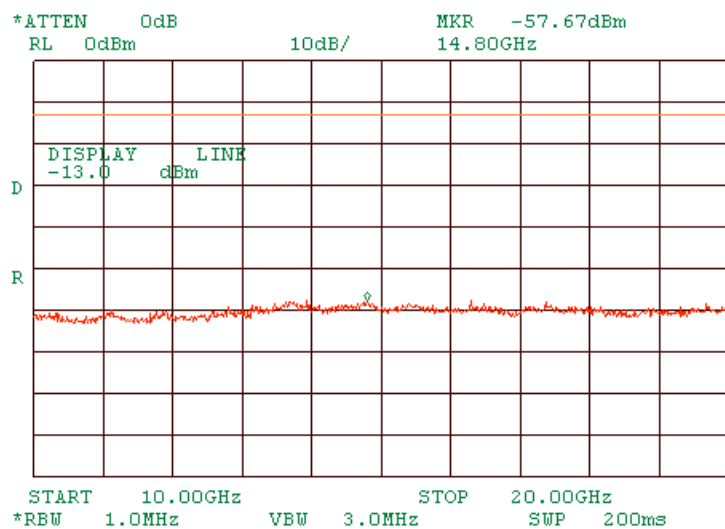
CDMA transmit mode 1910 – 2000 MHz.



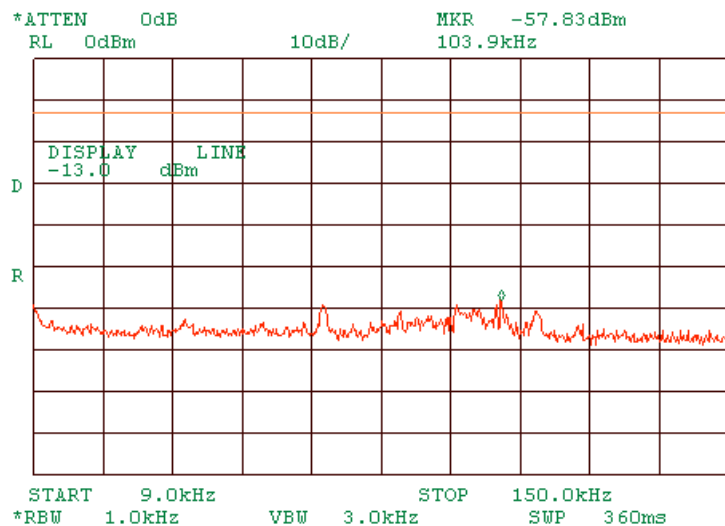
CDMA transmit mode 2000 – 10000 MHz.



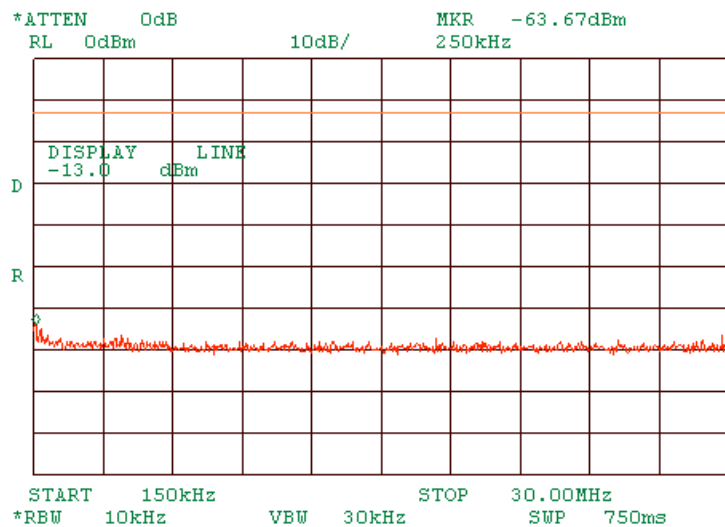
CDMA transmit mode 10000 – 20000 MHz.



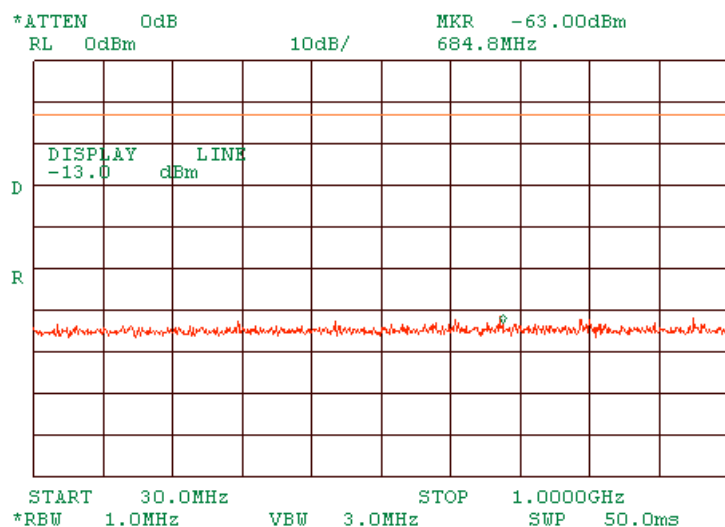
Modulation = FM
 Deviation = 5kHz
 Rate = 2500Hz
 IP = -25 dBm
 FM transmit mode 9 – 150 kHz.



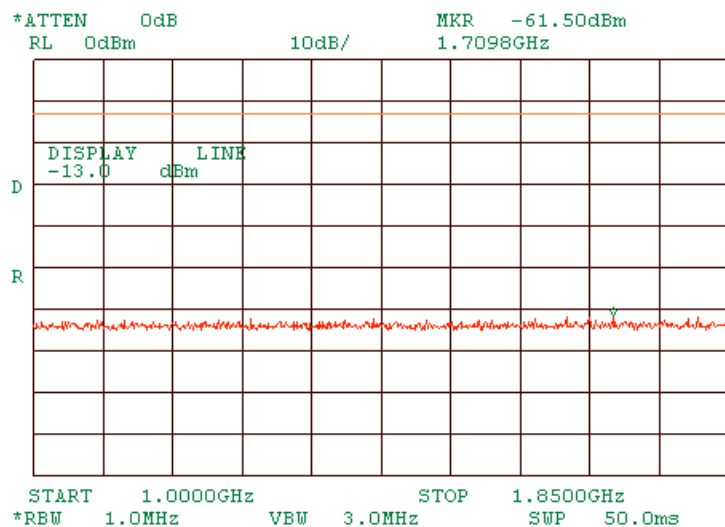
FM transmit mode 0.150 – 30 MHz.



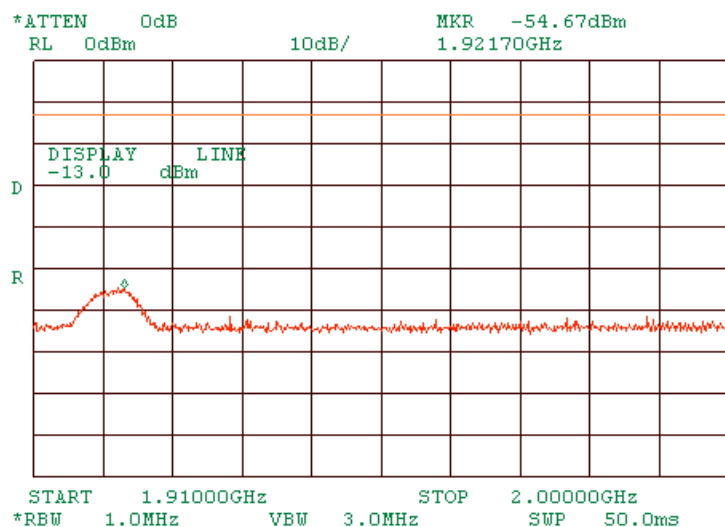
FM transmit mode 30 – 1000 MHz.



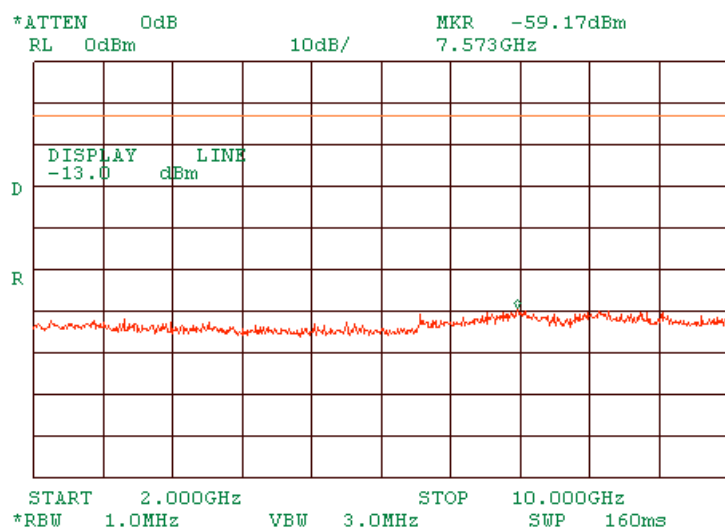
FM transmit mode 1000 – 1850 MHz.



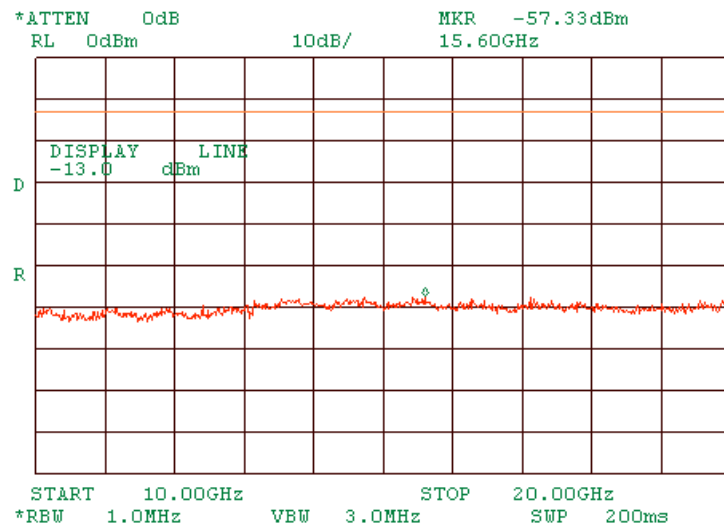
FM transmit mode 1910 – 2000 MHz.



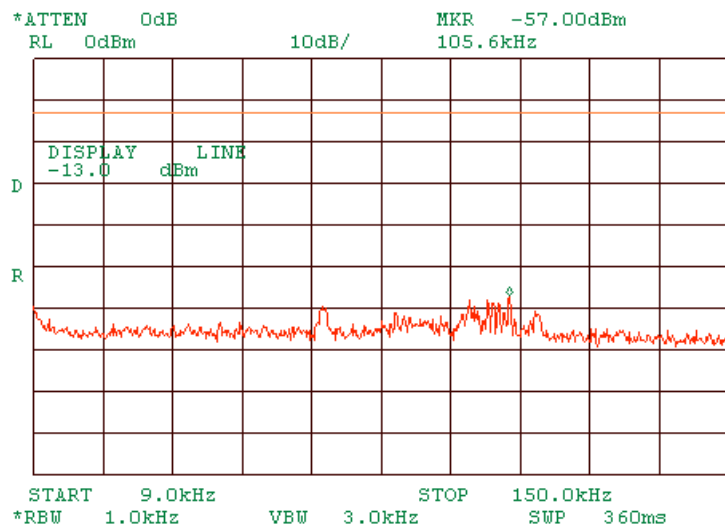
FM transmit mode 2000 – 10000 MHz.



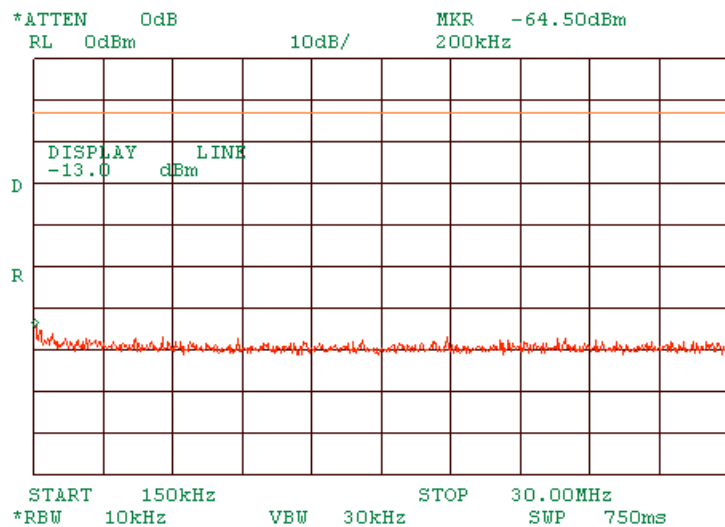
FM transmit mode 10000 – 20000 MHz.



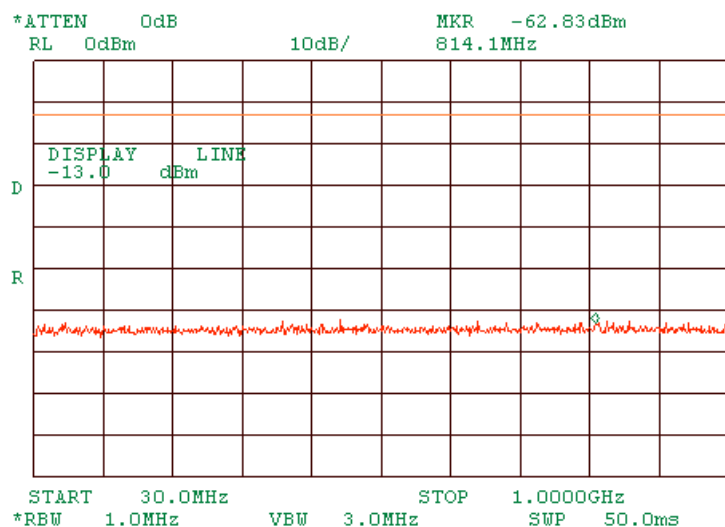
Modulation = FM
 Deviation = 5kHz
 Rate = 2500Hz
 IP = -50 dBm
 FM transmit mode 9 – 150 kHz.



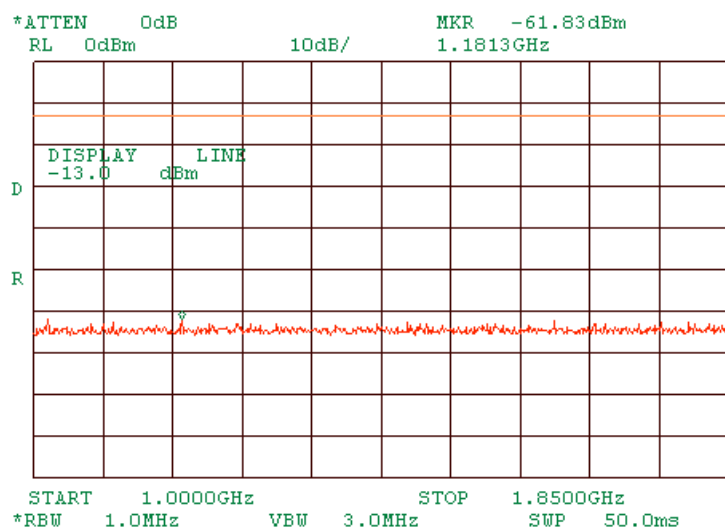
FM transmit mode 0.150 – 30 MHz.



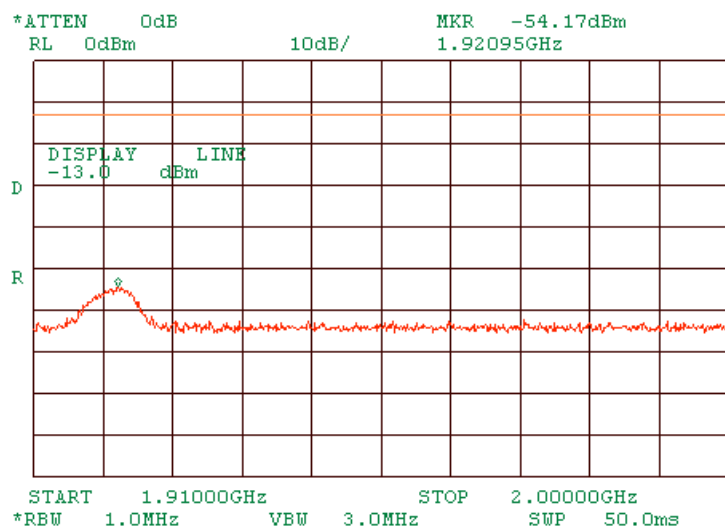
FM transmit mode 30 – 1000 MHz.



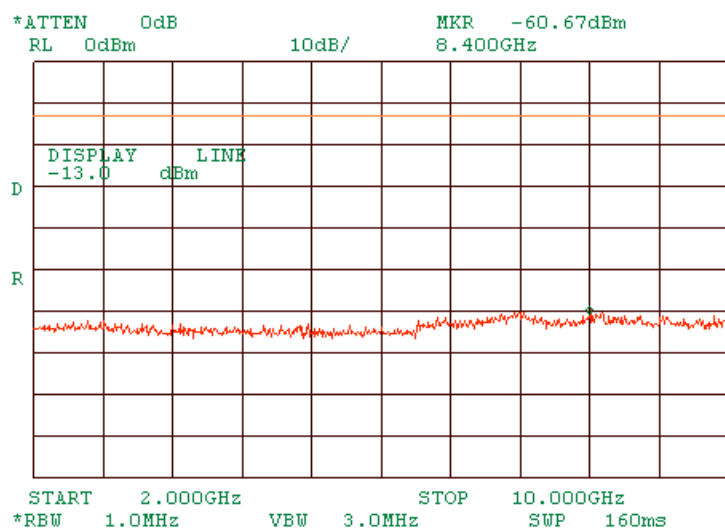
FM transmit mode 1000 – 1850 MHz.



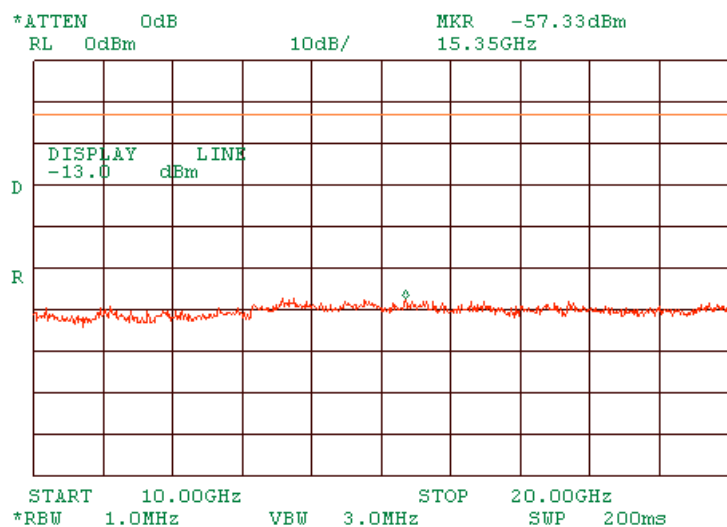
FM transmit mode 1910 – 2000 MHz.



FM transmit mode 2000 – 10000 MHz.



FM transmit mode 10000 – 20000 MHz.

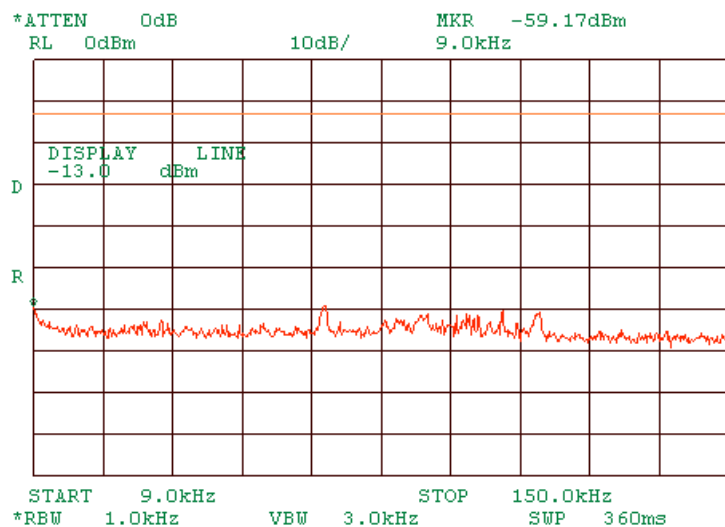


Modulation = PI/4 DQPSK

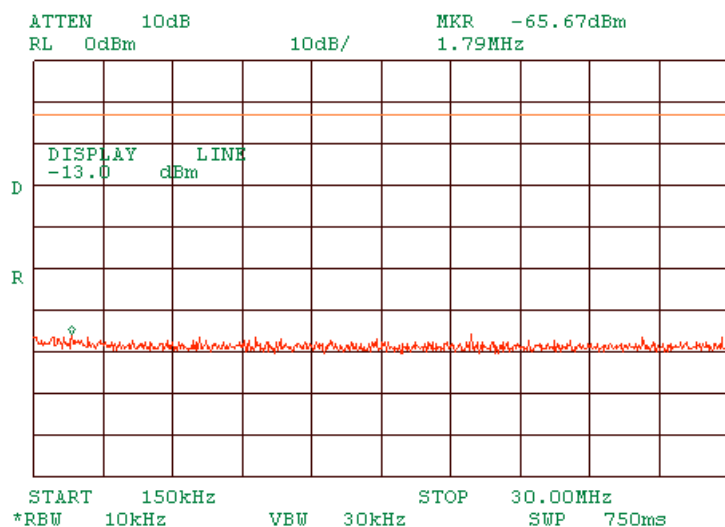
Bit Rate = 48.6 kbps

IP = -50 dBm

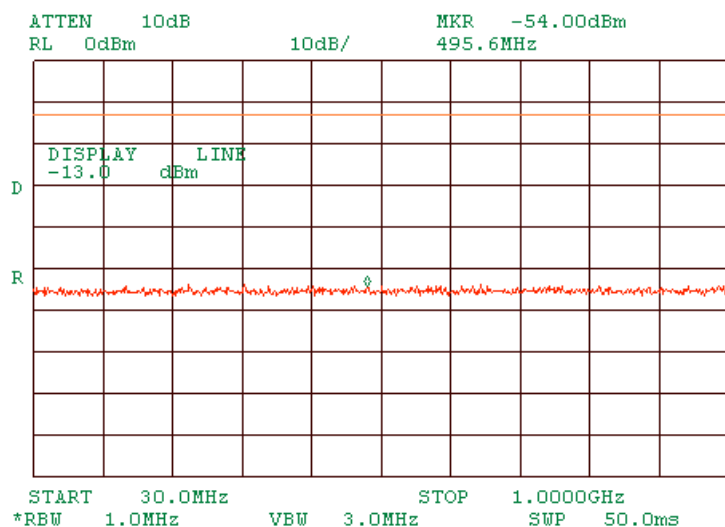
TDMA transmit mode 9 – 150 kHz.



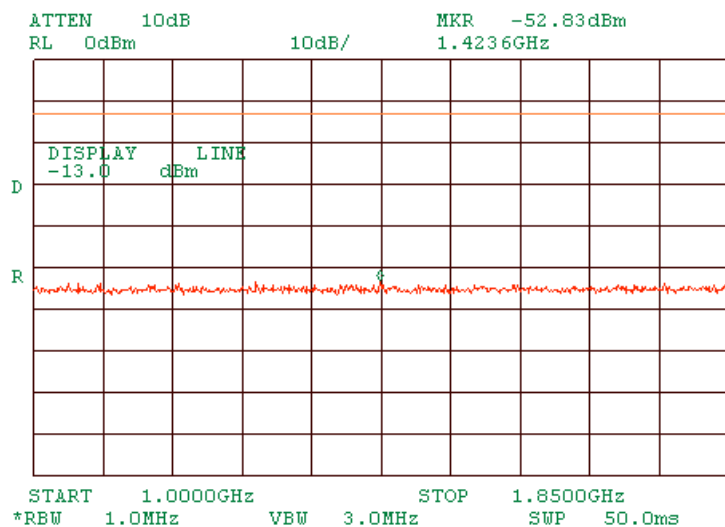
TDMA transmit mode 0.150 – 30 MHz.



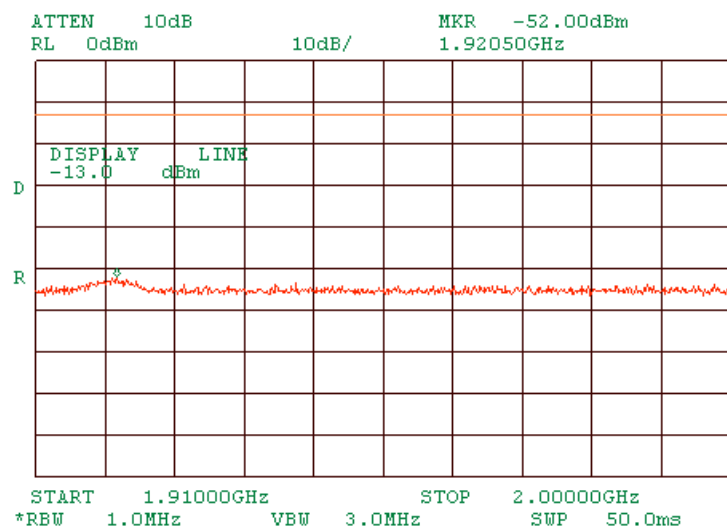
TDMA transmit mode 30 – 1000 MHz.



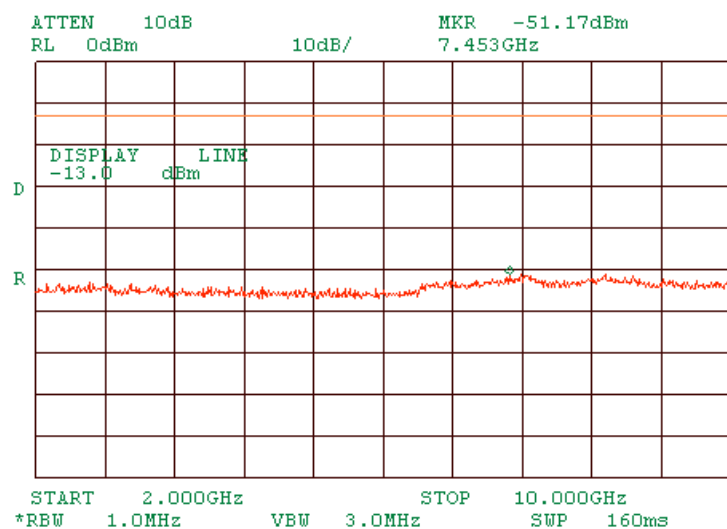
TDMA transmit mode 1000 – 1850 MHz.



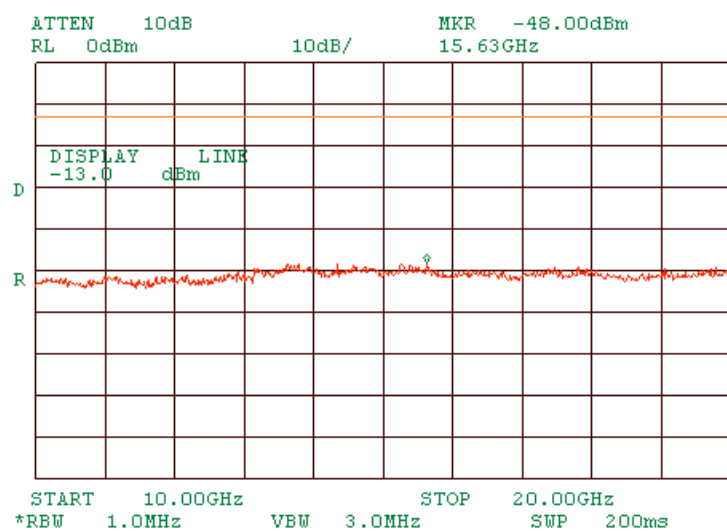
TDMA transmit mode 1910 – 2000 MHz.



TDMA transmit mode 2000 – 10000 MHz.



TDMA transmit mode 10000 – 20000 MHz.

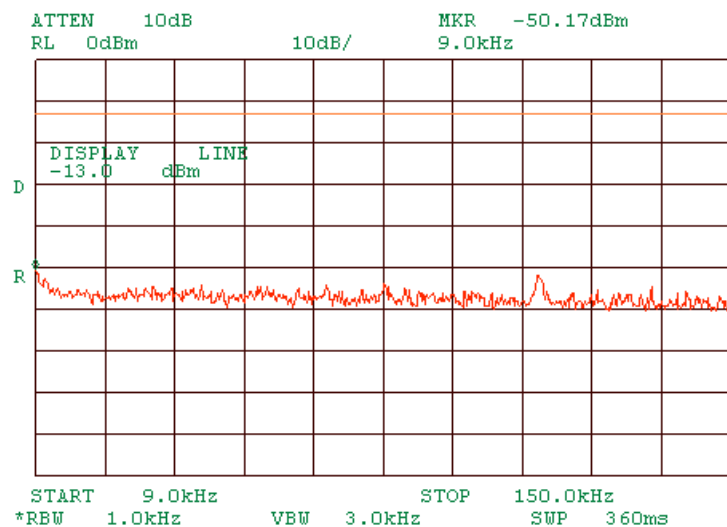


Modulation = PI/4 DQPSK

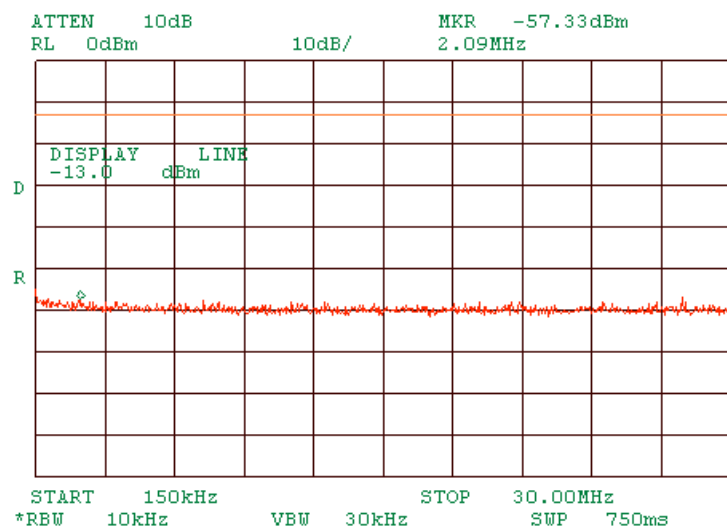
Bit Rate = 48.6 kbps

IP = -25 dBm

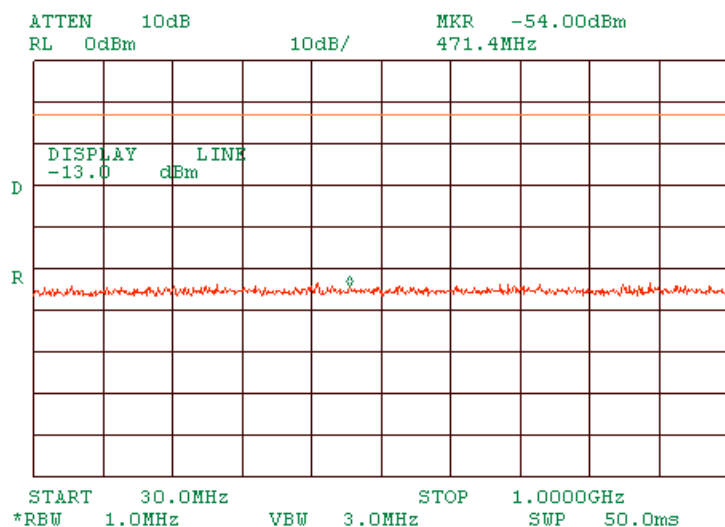
TDMA transmit mode 9 – 150 kHz.



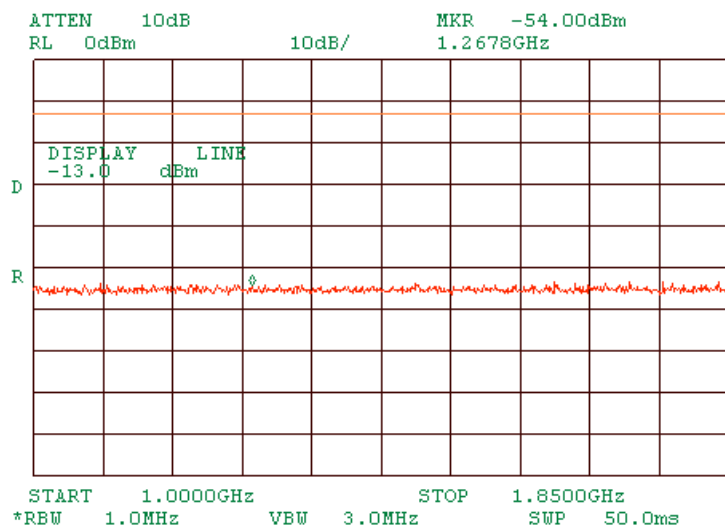
TDMA transmit mode 0.150 – 30 MHz.



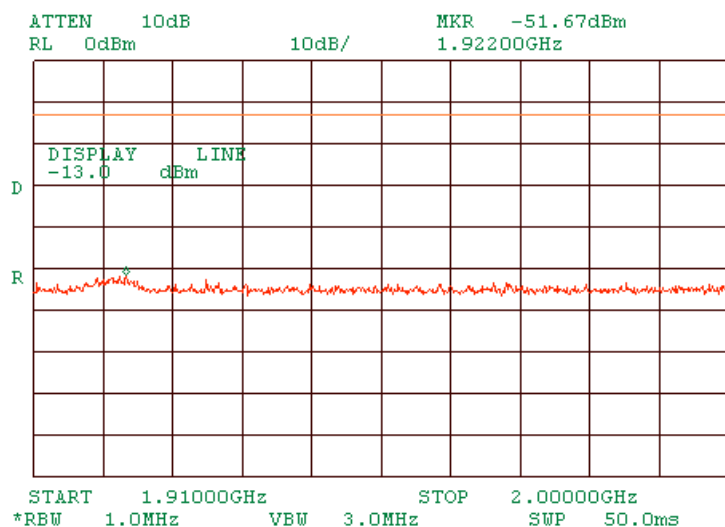
TDMA transmit mode 30 – 1000 MHz.



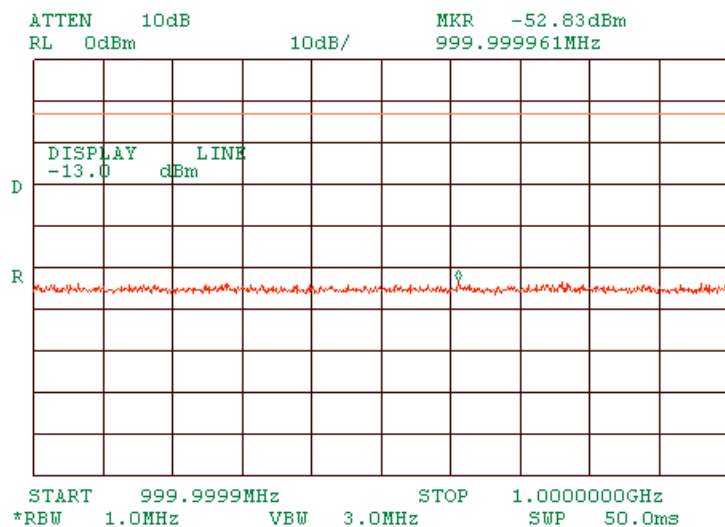
TDMA transmit mode 1000 – 1850 MHz.



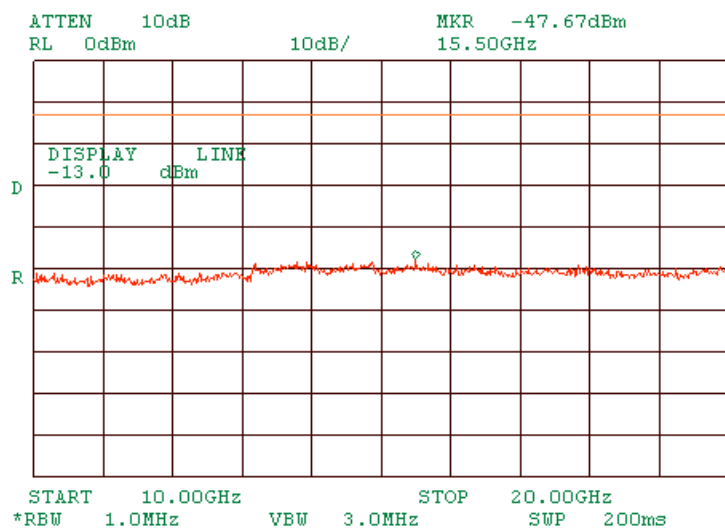
TDMA transmit mode 1910 – 2000 MHz.



TDMA transmit mode 2000 – 10000 MHz.



TDMA transmit mode 10000 – 20000 MHz.

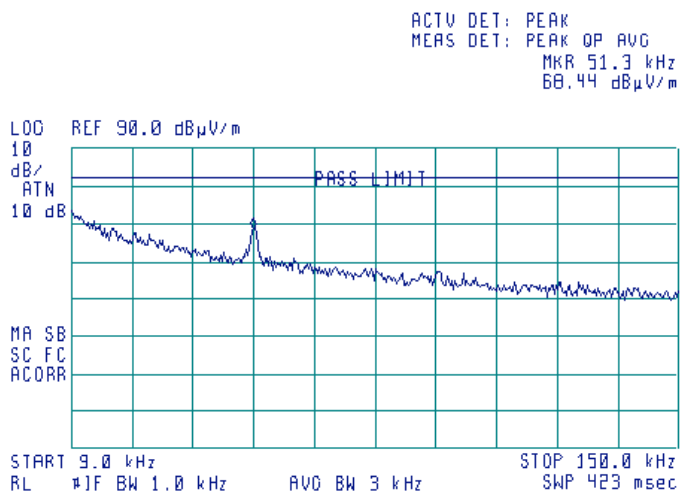


Date 18 May 2004
Test Radiated spurious emissions
Project 15867, Mobile Access 1200 + Mobile Access 1000
Humidity 46%
Temperature 24 C
Air pressure 1014hPa
Test equipment 521, 1947, 121, 589, 603
Assigned band Downlink: 1930 – 1990MHz Uplink: 1850 – 1910MHz
IP = input power
Op = output power
G = gain
Mod = input modulation

Radiated spurious emissions DOWNLINK

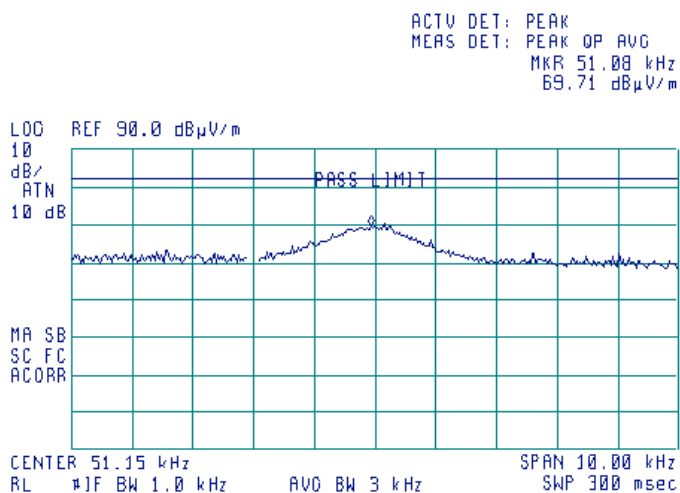
IP = 36 dBm
CW transmit mode 9 – 150 kHz.

12:06:37 MAY 18, 2004

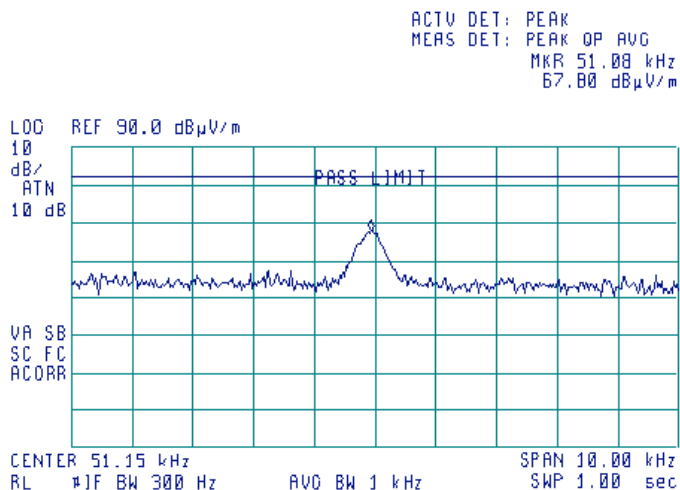


CW transmit mode Spurious.

11:56:42 MAY 18, 2004

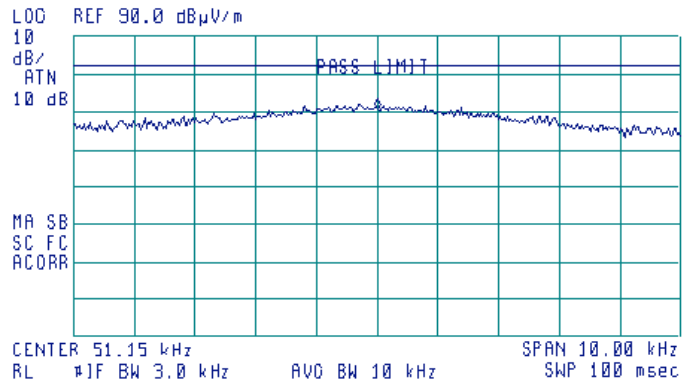


11:58:13 MAY 18, 2004



11:59:07 MAY 18, 2004

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 51.15 kHz
70.64 dBμV/m

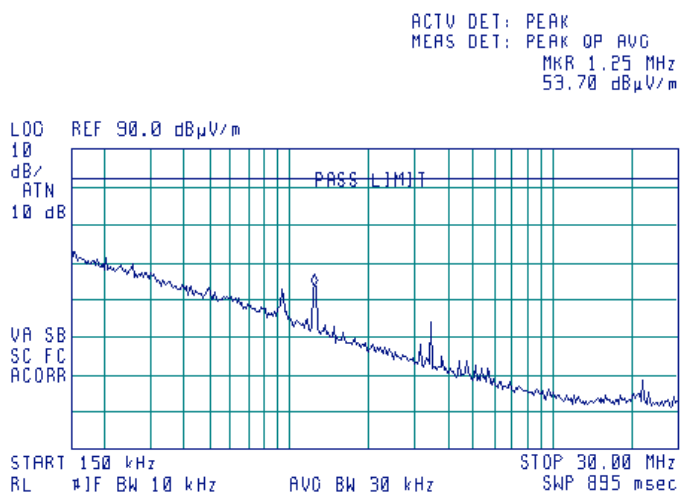


The signal is a narrow band signal. No need to apply the factor.
The source for the spurious is a power supply.

Signal	Freq (MHz)	Peak Amp (dBμV/m)	Peak - Lim1 (dB)	QP Amp (dBμV/m)	QP - Lim1 (dB)	LimitLine1 (dBμV/m)	Corrections (dB)	Pol.	Height (m)	Az. (deg)
2	0.051468	71.44	-10.79	67.03	-15.20	82.23	13.80	V	1.1	224

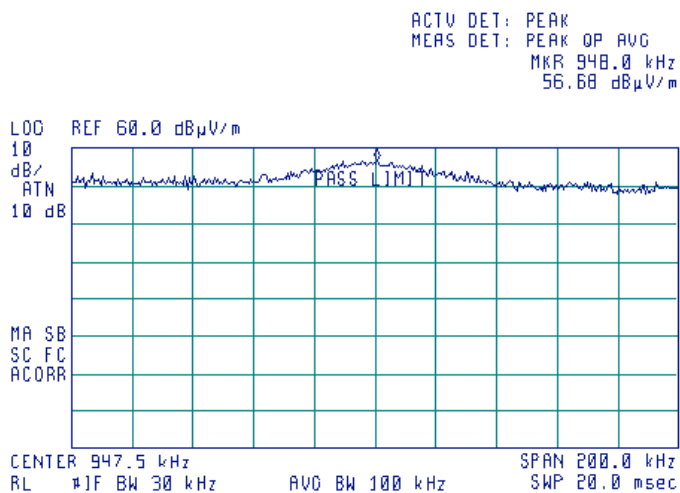
CW transmit mode 0.150 – 30 MHz.

13:29:21 MAY 18, 2004



CW transmit mode spurious.

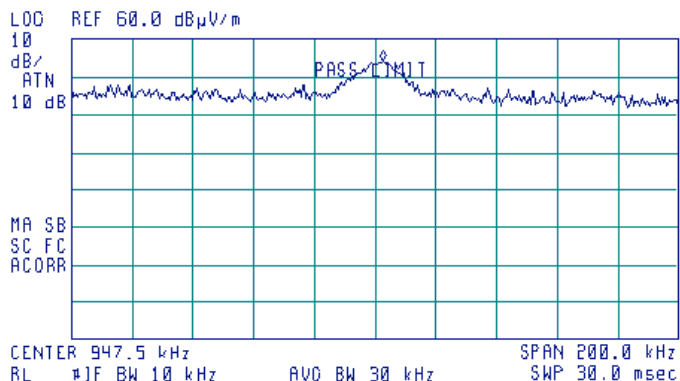
13:20:46 MAY 18, 2004



CW transmit mode spurious.

13:21:53 MAY 18, 2004

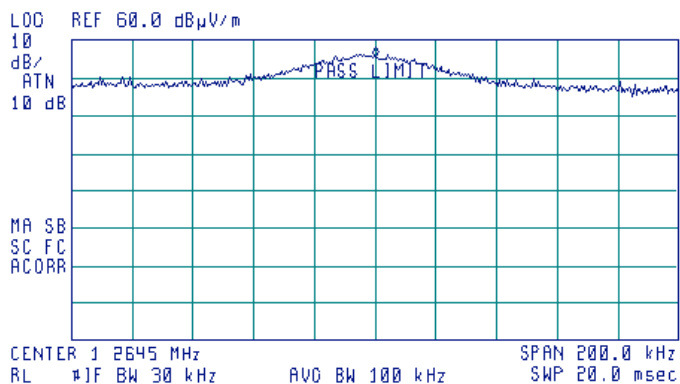
ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 950.0 kHz
54.24 dB μ V/m



CW transmit mode spurious.

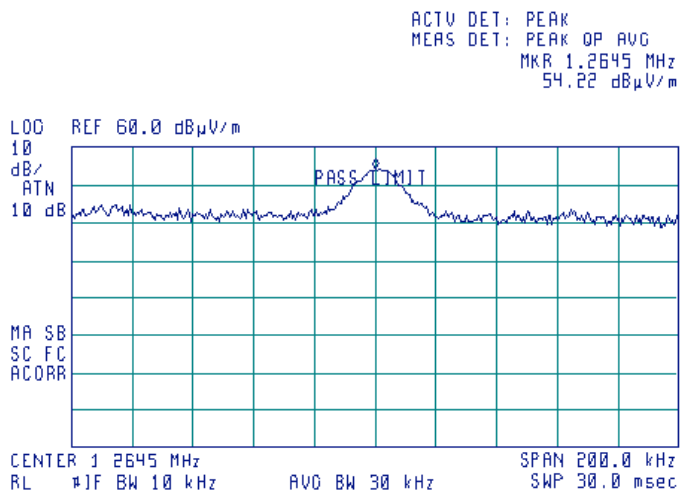
13:17:34 MAY 18, 2004

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 1.2645 MHz
55.50 dB μ V/m



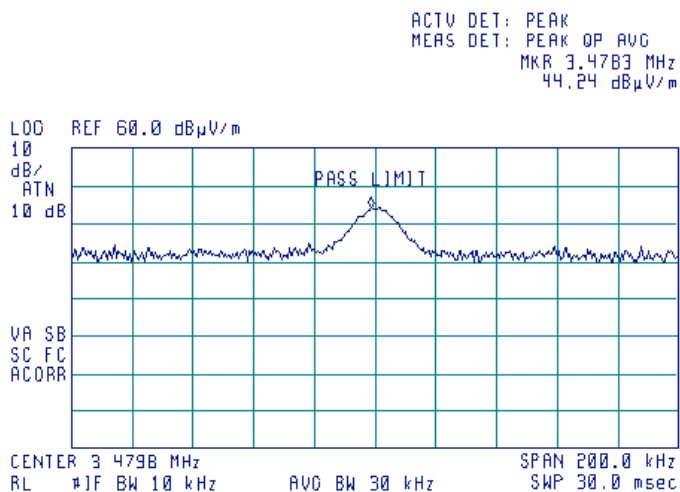
CW transmit mode spurious.

13:16:26 MAY 18, 2004



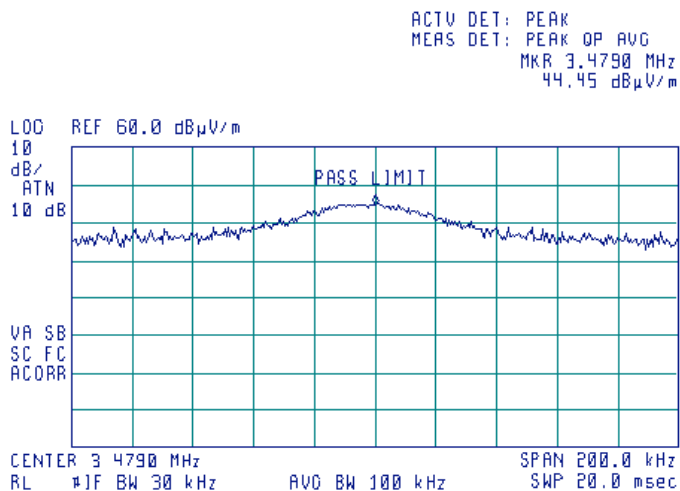
CW transmit mode spurious.

13:15:33 MAY 18, 2004



CW transmit mode spurious.

13:19:11 MAY 18, 2004



Narrow band signals, no need to add 20 dB integration factor.

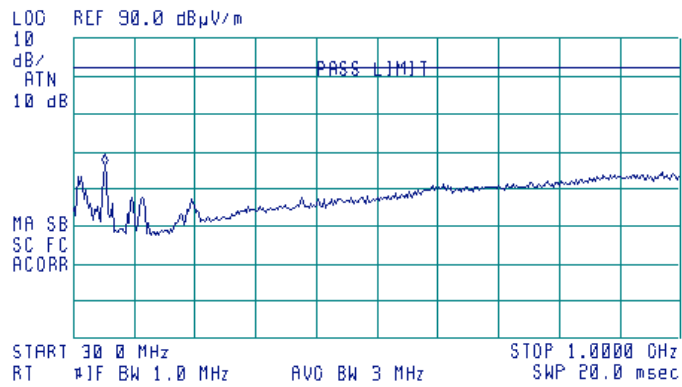
Signal from power supply

Signal	Freq (MHz)	Peak Amp (dBuV/m)	Peak - Lim1 (dB)	QP Amp (dBuV/m)	QP - Lim1 (dB)	LimitLine1 (dBuV/m)	Pol	Height (m)	Az (deg)
1	0.939700	57.08	-25.15	54.49	-27.74	82.23	V	1.1	216
2	1.266000	55.10	-27.13	53.35	-28.88	82.23	V	1.1	220
3	3.479750	45.08	-37.15	43.32	-38.91	82.23	V	1.1	210

CW transmit mode 30 – 1000 MHz.

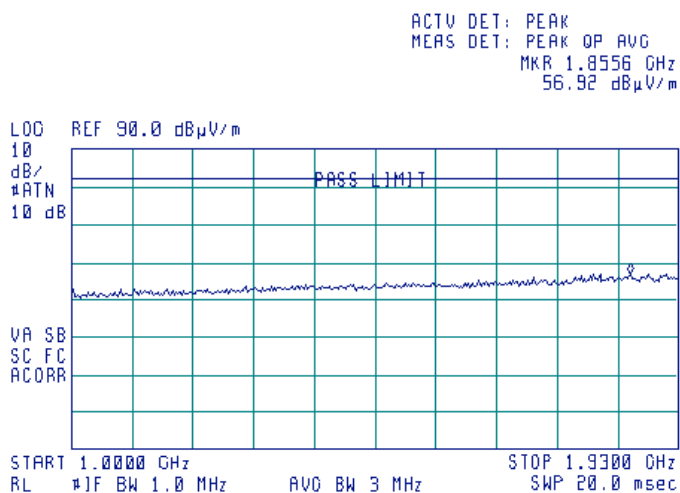
11:14:23 MAY 18, 2004

ACTV DET: PEAK
MEAS DET: PEAK OP AVG
MKR 80.9 MHz
56.27 dB μ V/m



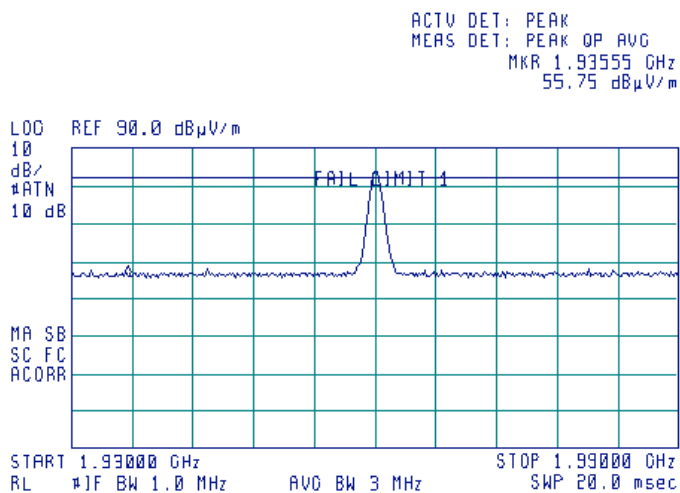
CW transmit mode 1000 – 1930 MHz.

14:07:16 MAY 18, 2004



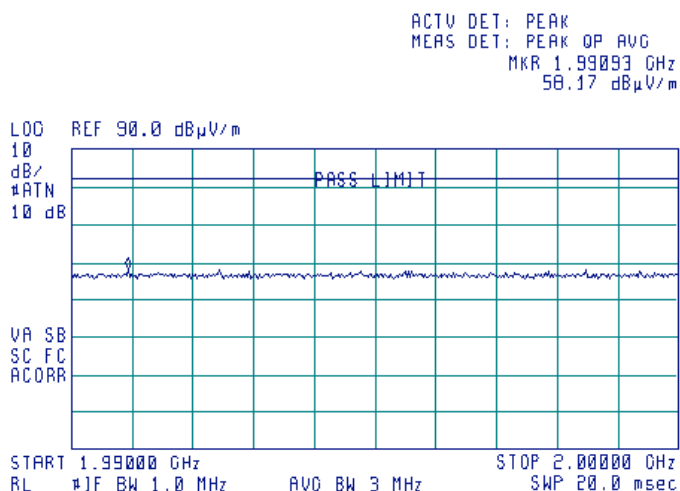
CW transmit mode 1930 – 1990 MHz.

14:14:24 MAY 18, 2004



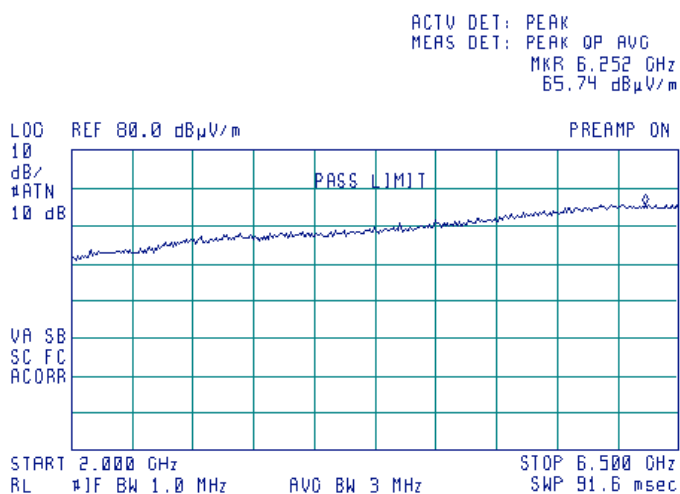
CW transmit mode 1990 – 2000 MHz.

14:10:31 MAY 10, 2004

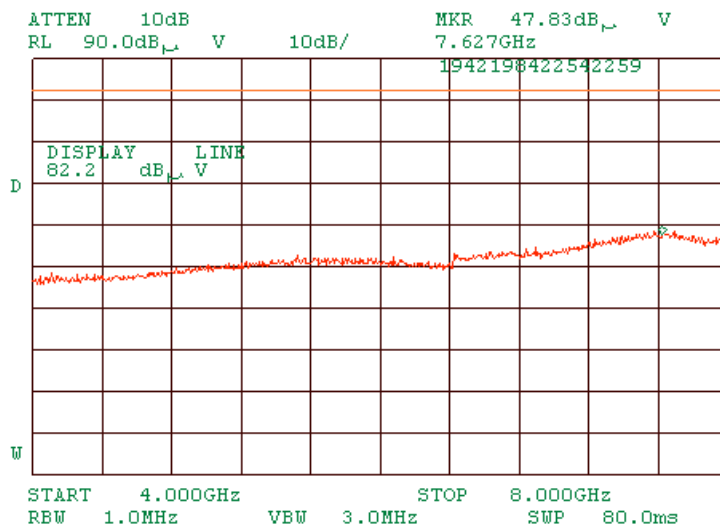


CW transmit mode 2000 – 6500 MHz.

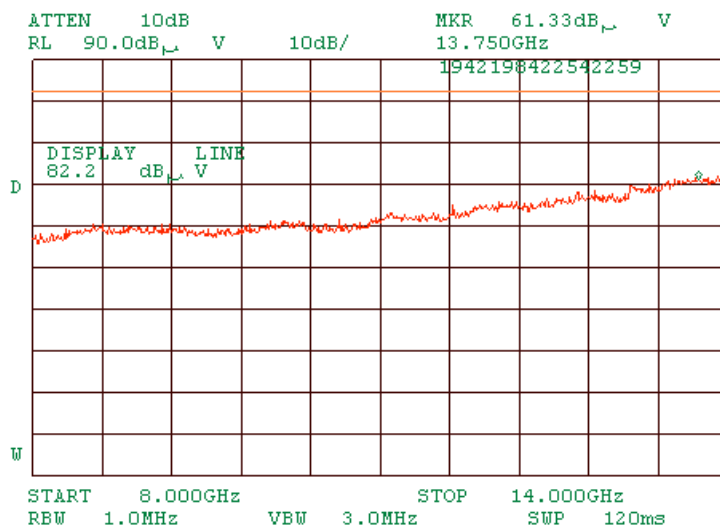
16:17:57 MAY 10, 2004



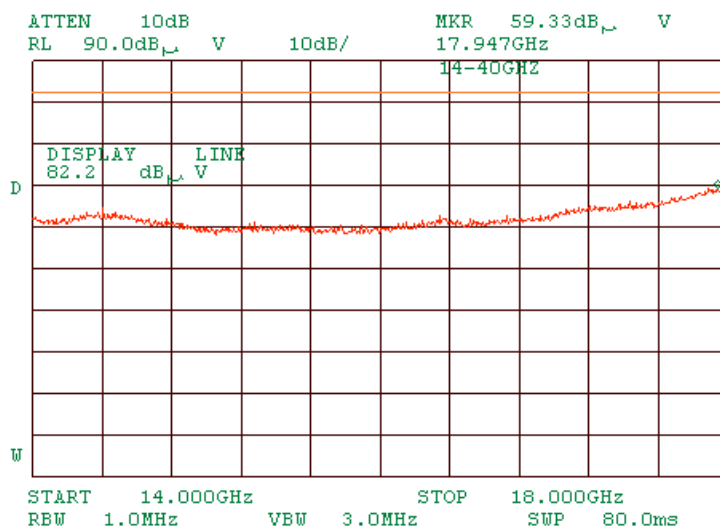
CW transmit mode 4000 – 8000 MHz.



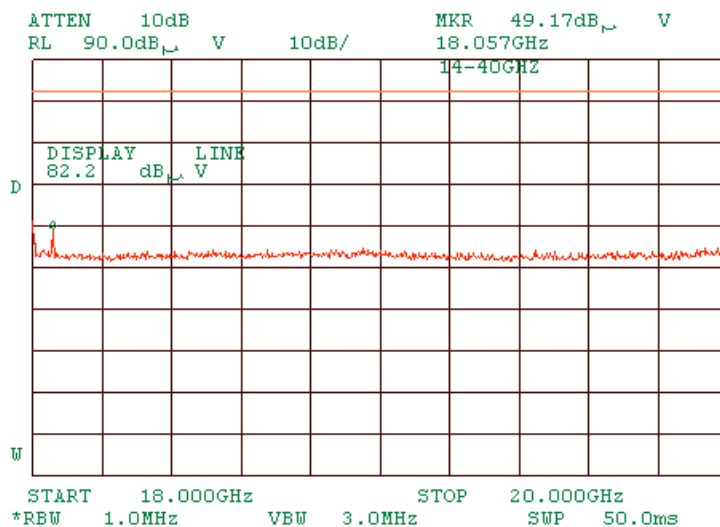
CW transmit mode 8000 – 14000 MHz.



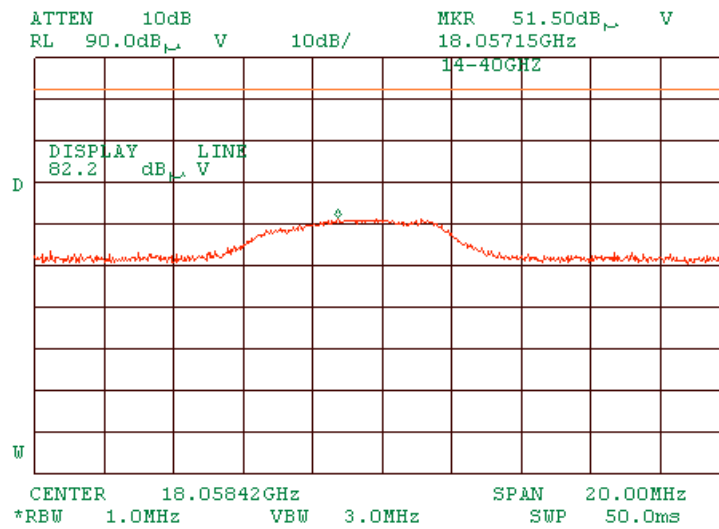
CW transmit mode 14000 – 18000 MHz.



CW transmit mode 18000 – 20000 MHz.



CW transmit mode Spurious

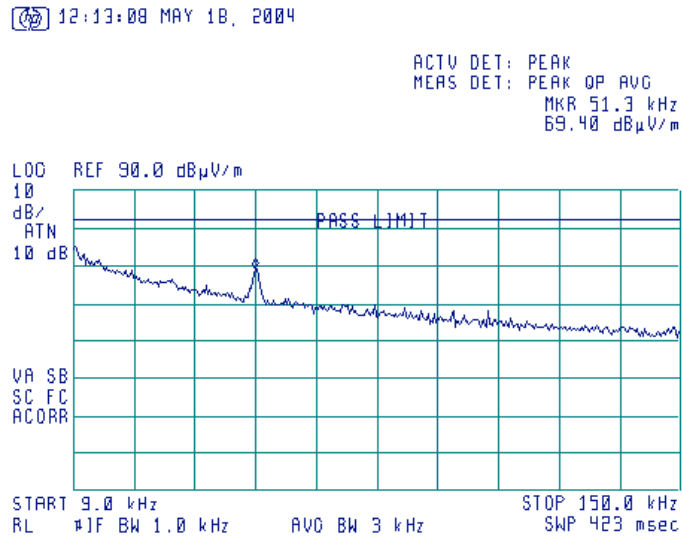


Signal	Freq (GHz)	Peak Amp (dBuV/m)	Peak - Lim1 (dB)	LimitLine1 (dBuV/m)	Corrections (dB)	Pol.	Height (m)	Az. (deg)
1	18.05715	51.5	-30.73	82.23	13.80	H	1	230

Substitution method:

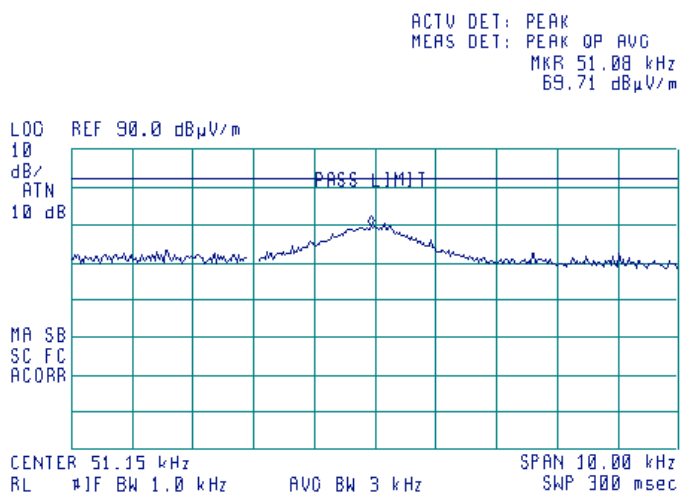
Signal	Freq (MHz)	Peak Amp (dBuV/m)	Gen out (dBm)	Again (dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)
1	18.0579	51.5	-63.3	21.15	2.61	-13	-31.41

IP = 10 dBm
CW transmit mode 9 – 150 kHz.

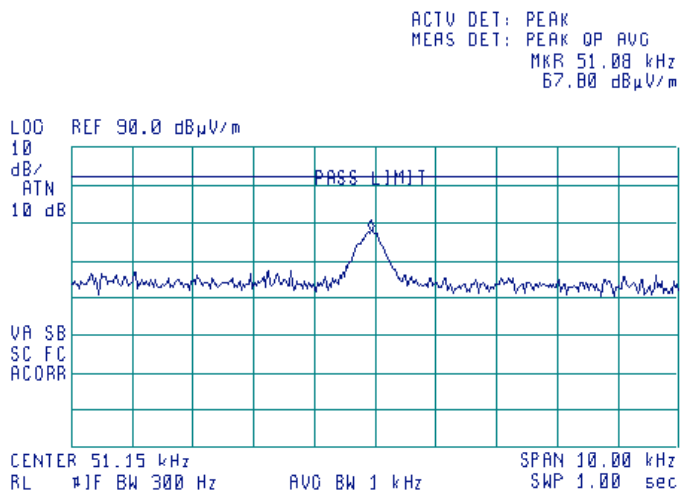


CW transmit mode Spurious.

11:56:42 MAY 18, 2004

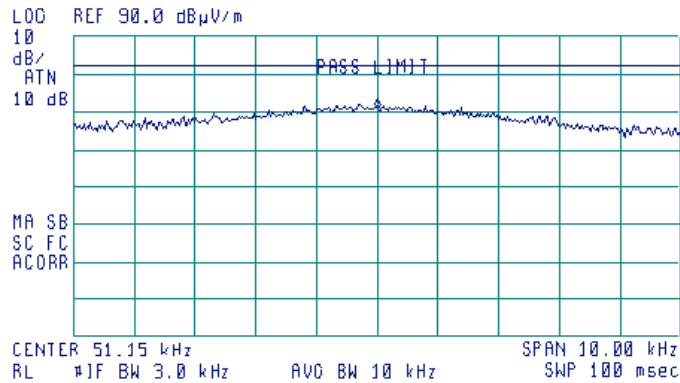


11:58:13 MAY 18, 2004



11:59:07 MAY 18, 2004

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 51.15 kHz
70.64 dBμV/m

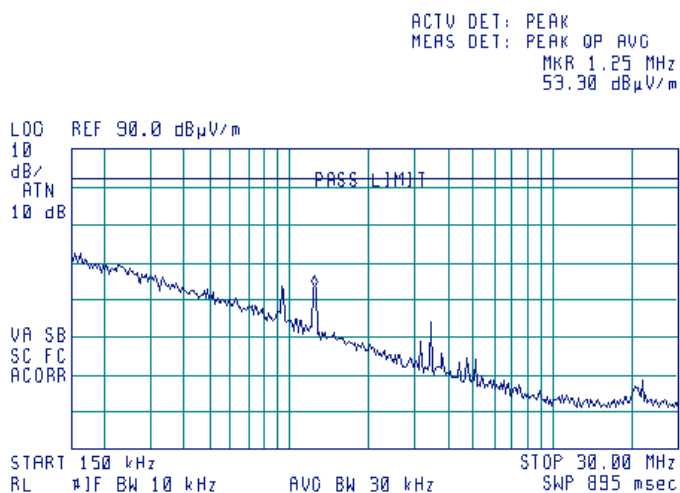


The signal is a narrow band signal. No need to apply the factor.
The source for the spurious is a power supply.

Signal	Freq (MHz)	Peak Amp (dBuV/m)	Peak - Lim1 (dB)	QP Amp (dBuV/m)	QP - Lim1 (dB)	LimitLine1 (dBuV/m)	Corrections (dB)	Pol.	Height (m)	Az. (deg)
2	0.051468	71.44	-10.79	67.03	-15.20	82.23	13.80	V	1.1	224

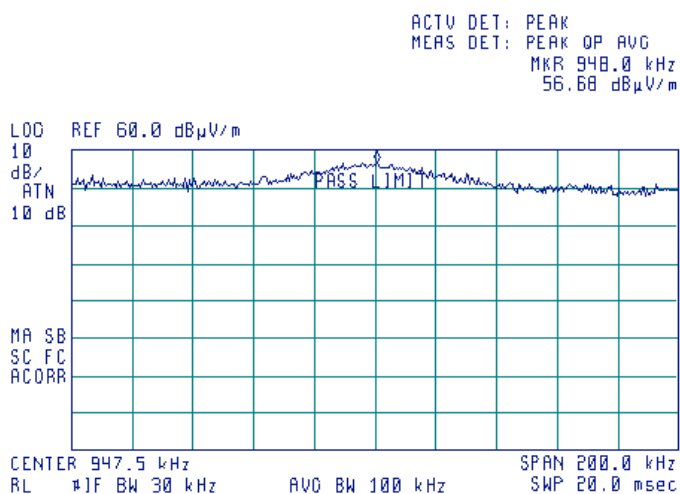
CW transmit mode 0.150 – 30 MHz.

13:23:04 MAY 10, 2004



CW transmit mode spurious.

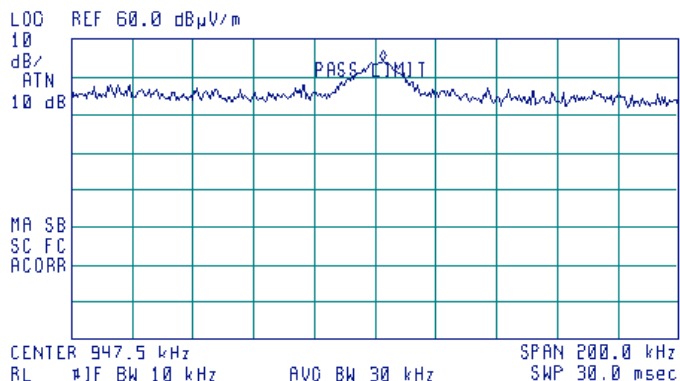
13:20:46 MAY 10, 2004



CW transmit mode spurious.

13:21:53 MAY 18, 2004

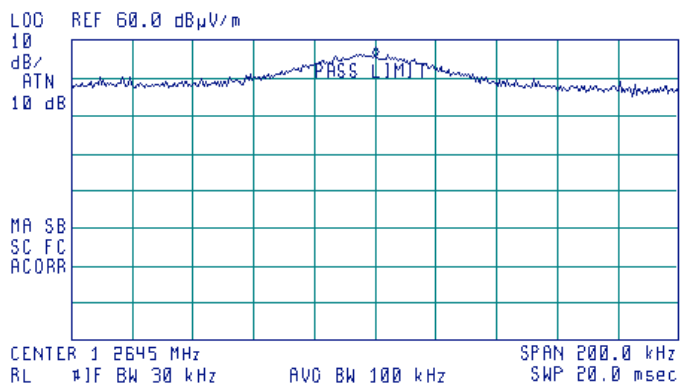
ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 950.0 kHz
54.24 dB μ V/m



CW transmit mode spurious.

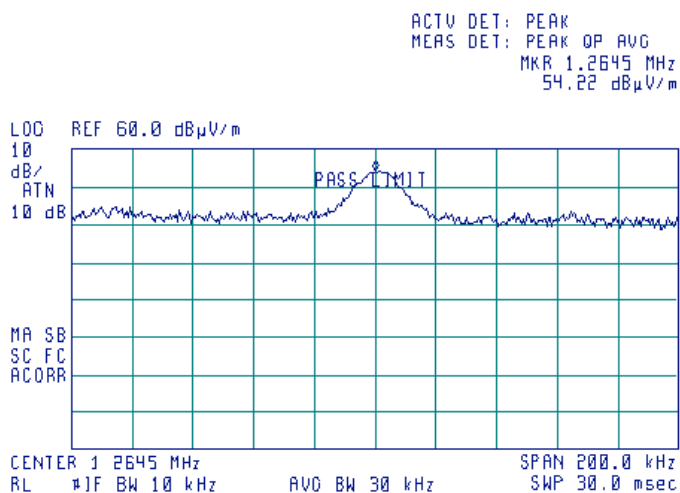
13:17:34 MAY 18, 2004

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 1.2645 MHz
55.50 dB μ V/m



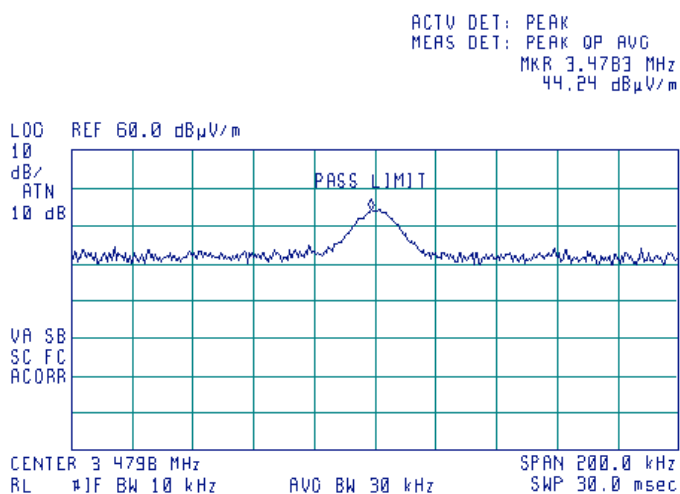
CW transmit mode spurious.

13:16:26 MAY 18, 2004

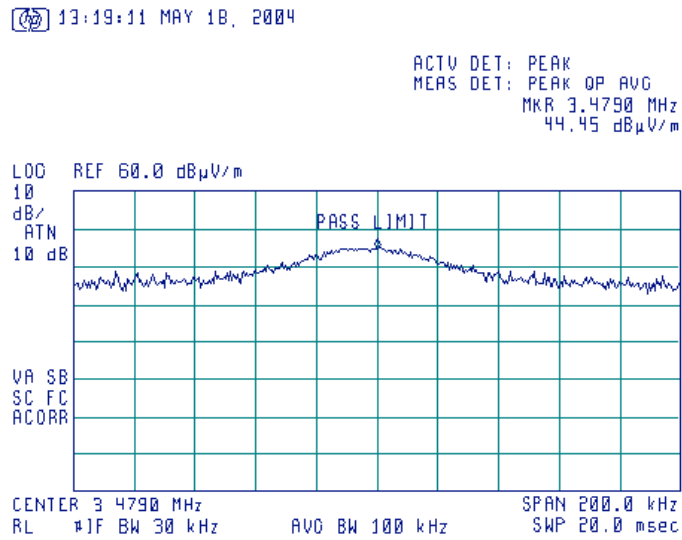


CW transmit mode spurious.

13:15:33 MAY 18, 2004



CW transmit mode spurious.



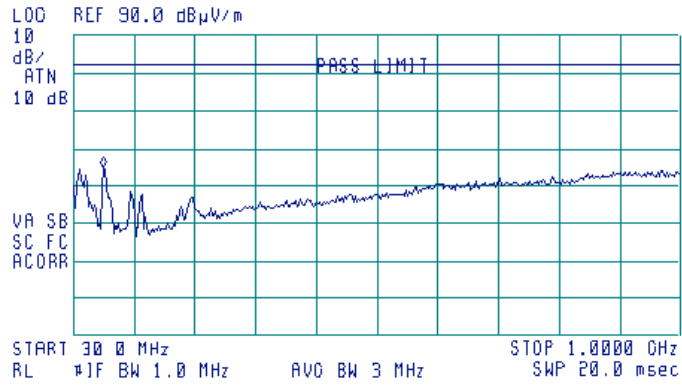
Narrow band signals, no need to add 20 dB integration factor.
Signal from power supply

Signal	Freq (MHz)	Peak Amp (dBuV/m)	Peak - Lim1 (dB)	QP Amp (dBuV/m)	QP - Lim1 (dB)	LimitLine1 (dBuV/m)	Pol	Height (m)	Az (deg)
1	0.939700	57.08	-25.15	54.49	-27.74	82.23	V	1.1	216
2	1.266000	55.10	-27.13	53.35	-28.88	82.23	V	1.1	220
3	3.479750	45.08	-37.15	43.32	-38.91	82.23	V	1.1	210

CW transmit mode 30 – 1000 MHz.

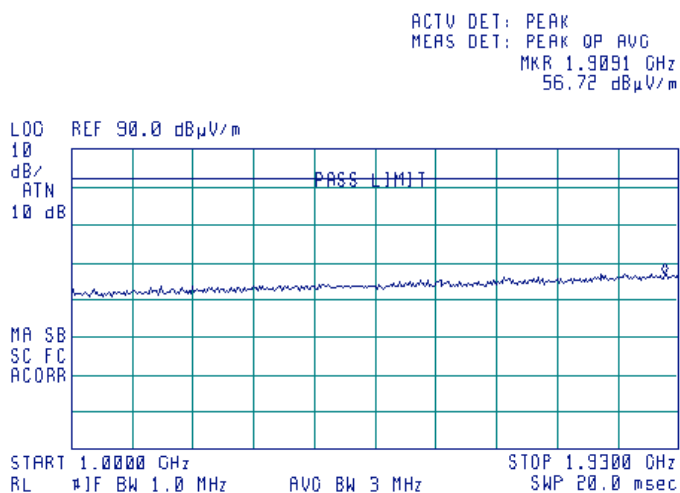
11:16:38 MAY 18, 2004

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 78.5 MHz
54.76 dB μ V/m



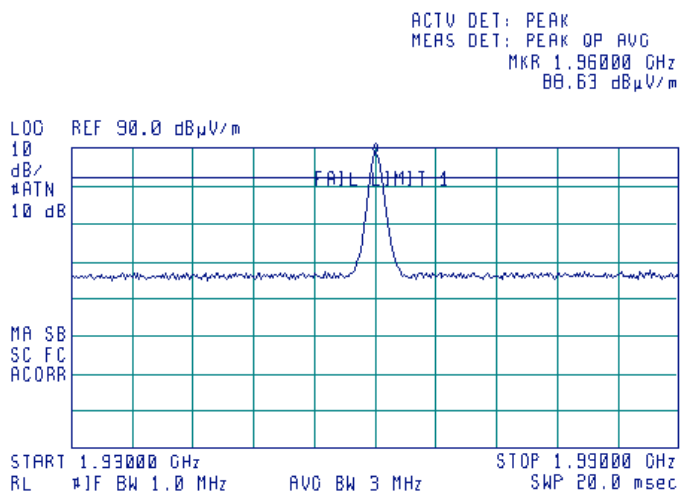
CW transmit mode 1000 – 1930 MHz.

13:57:55 MAY 18, 2004



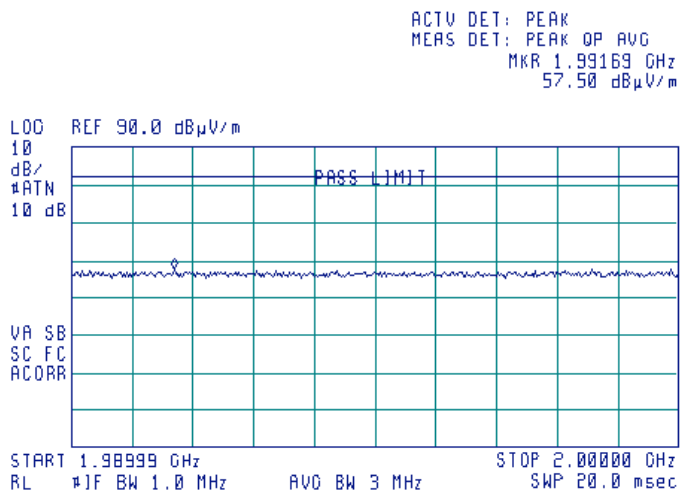
CW transmit mode 1930 – 1990 MHz.

14:01:01 MAY 18, 2004



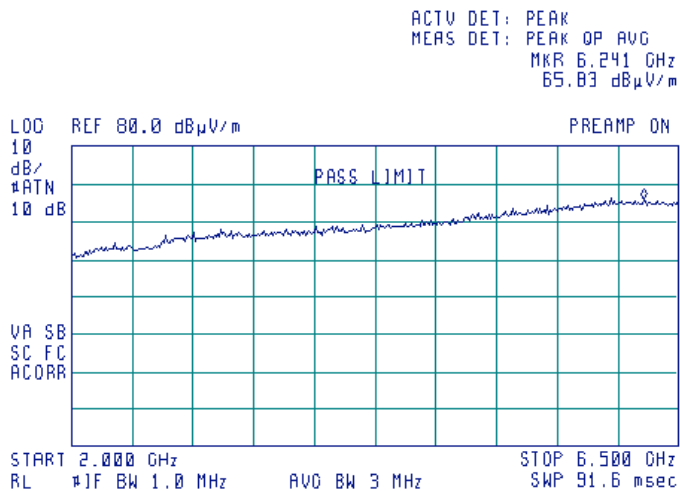
CW transmit mode 1990 – 2000 MHz.

14:03:03 MAY 10, 2004

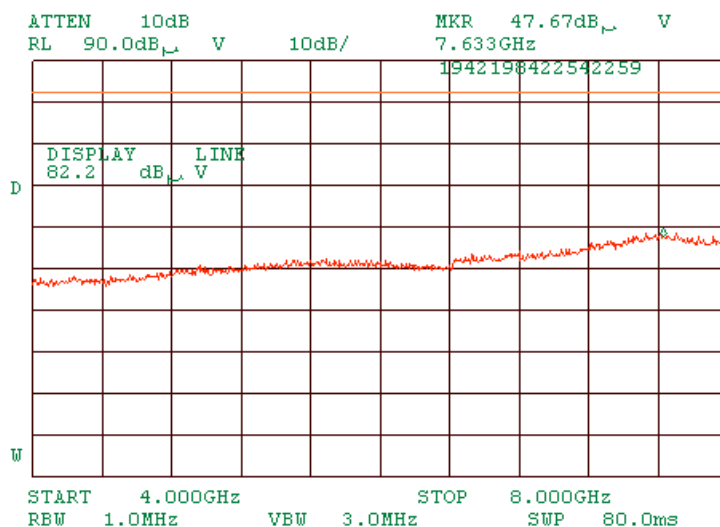


CW transmit mode 2000 – 6500 MHz.

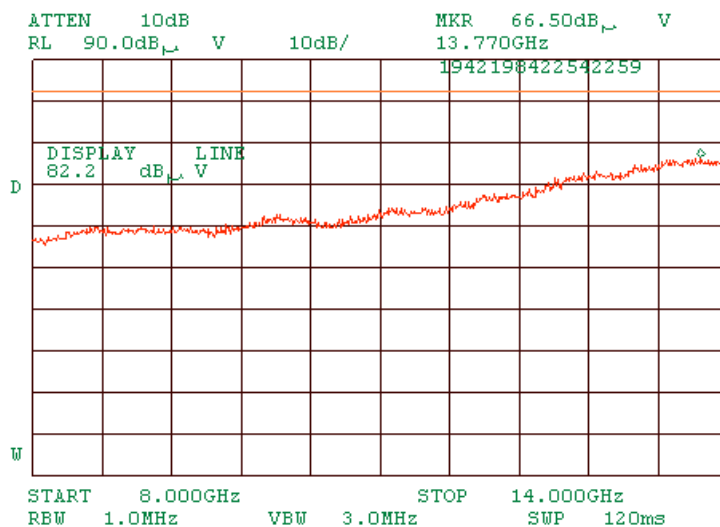
16:14:01 MAY 10, 2004



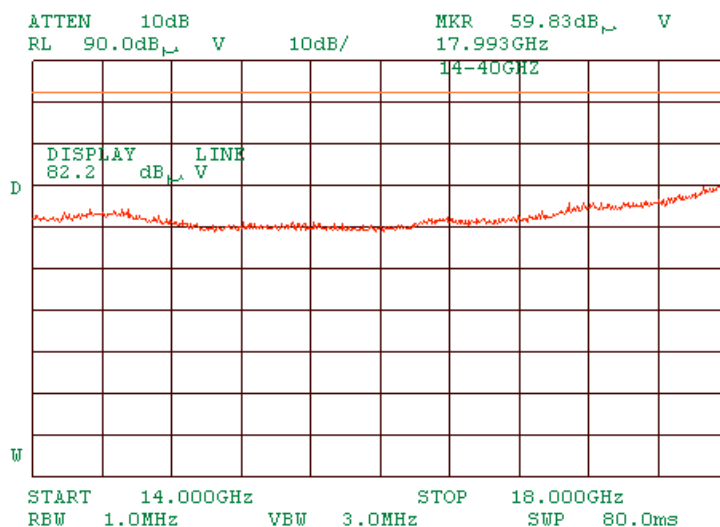
CW transmit mode 4000 – 8000 MHz.



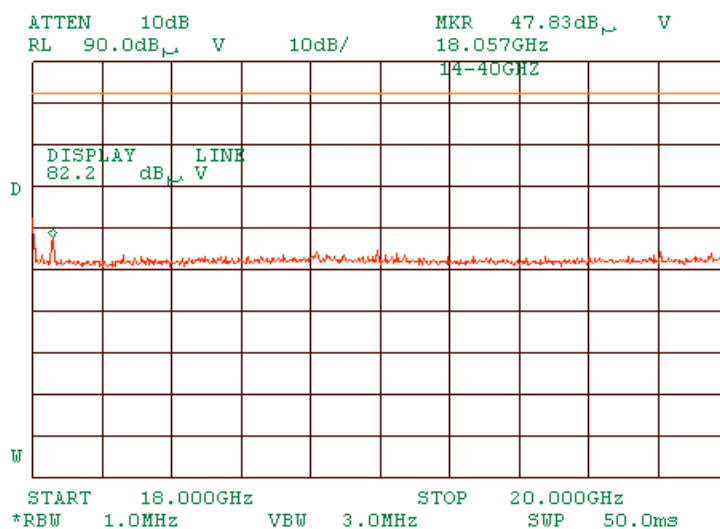
CW transmit mode 8000 – 14000 MHz.



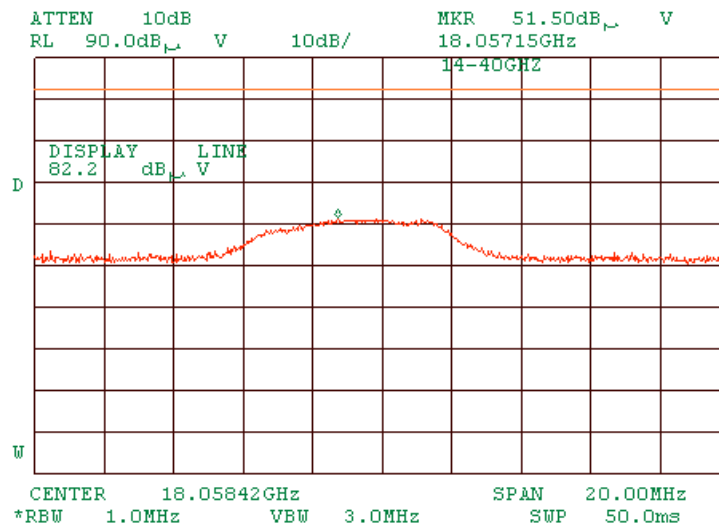
CW transmit mode 14000 – 18000 MHz.



CW transmit mode 18000 – 20000 MHz.



CW transmit mode Spurious



Signal	Freq (GHz)	Peak Amp (dBuV/m)	Peak - Lim1 (dB)	LimitLine1 (dBuV/m)	Corrections (dB)	Pol.	Height (m)	Az. (deg)
2	18.05715	51.5	-30.73	82.23	13.80	H	1	230

Substitution method:

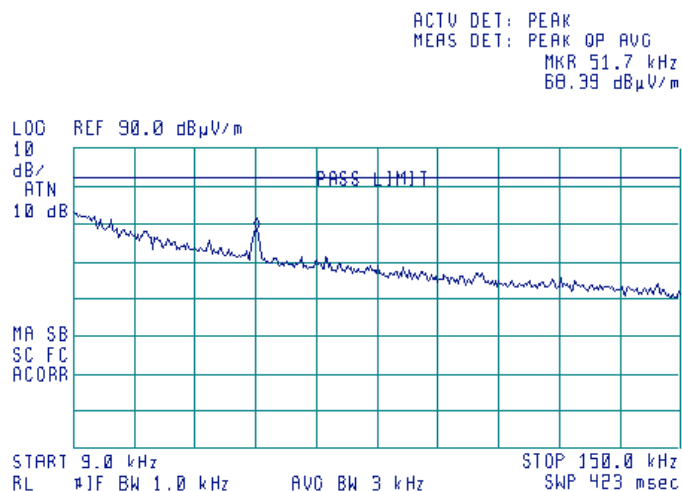
Signal	Freq (MHz)	Peak Amp (dBuV/m)	Gen out (dBm)	Again (dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)
1	18.0579	51.5	-63.3	21.15	2.61	-13	-31.41

Date 18 May 2004
 Test Radiated spurious emissions
 Project 15867, Mobile Access 1200 Add-on (optical module)
 Humidity 46%
 Temperature 24 C
 Air pressure 1014hPa
 Test equipment 521, 1947, 121, 589, 603
 Assigned band Downlink: 1930 – 1990MHz Uplink: 1850 – 1910MHz
 IP = input power
 Op = output power
 G = gain
 Mod = input modulation

Radiated spurious emissions DOWNLINK

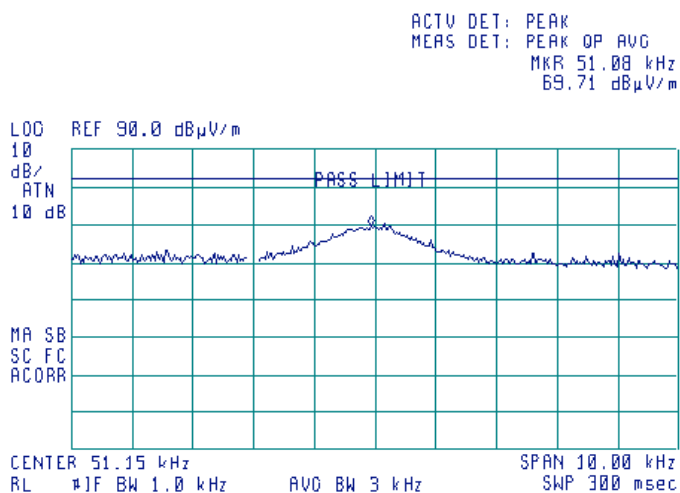
IP = 36 dBm
 CW transmit mode 9 – 150 kHz.

12:20:25 MAY 18, 2004

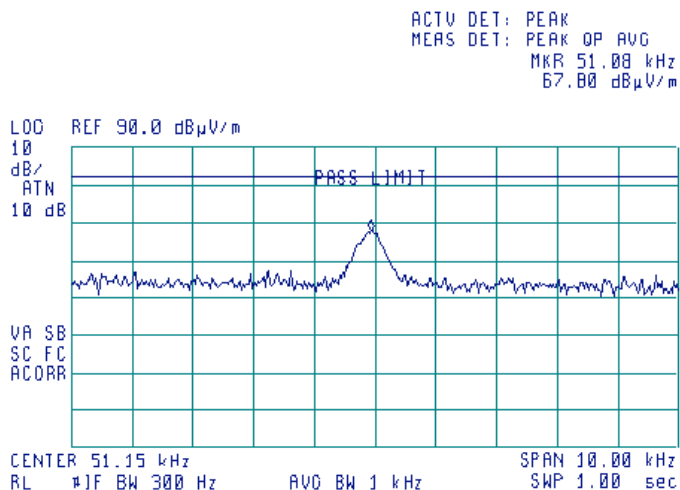


CW transmit mode Spurious.

11:56:42 MAY 18, 2004

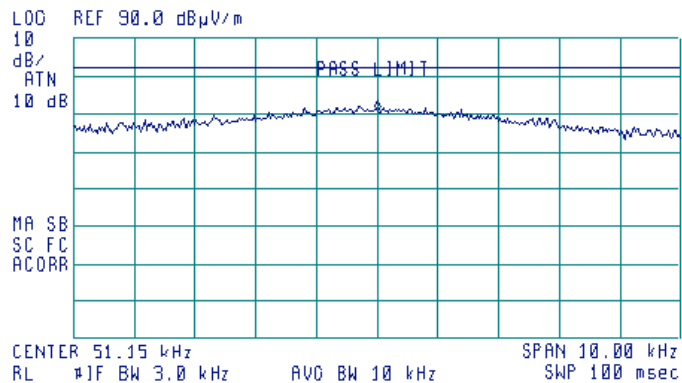


11:58:13 MAY 18, 2004



11:59:07 MAY 18, 2004

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 51.15 kHz
70.64 dBμV/m

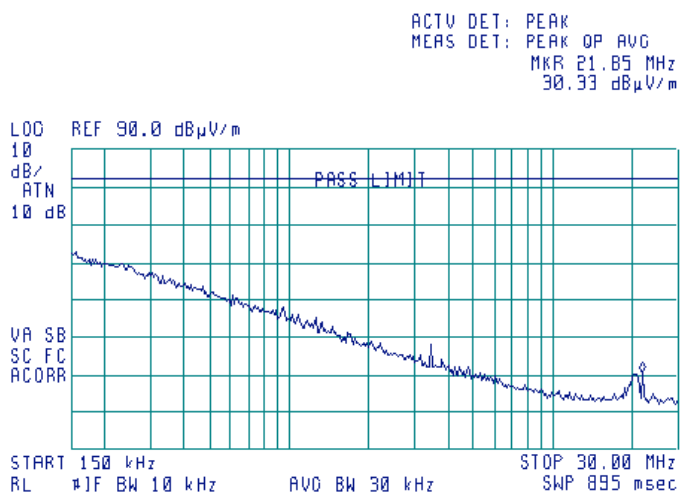


The signal is a narrow band signal. No need to apply the factor.
The source for the spurious is a power supply.

Signal	Freq (MHz)	Peak Amp (dBuV/m)	Peak - Lim1 (dB)	QP Amp (dBuV/m)	QP - Lim1 (dB)	LimitLine1 (dBuV/m)	Corrections (dB)	Pol.	Height (m)	Az. (deg)
2	0.051468	71.44	-10.79	67.03	-15.20	82.23	13.80	V	1.1	224

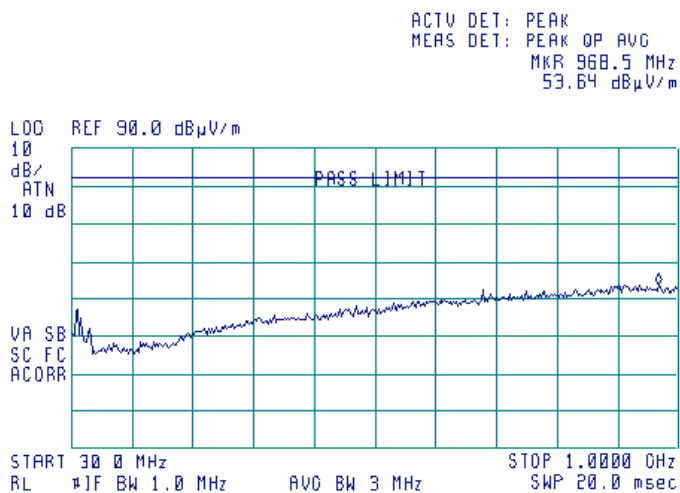
CW transmit mode 0.150 – 30 MHz.

12:26:36 MAY 18, 2004



CW transmit mode 30 – 1000 MHz.

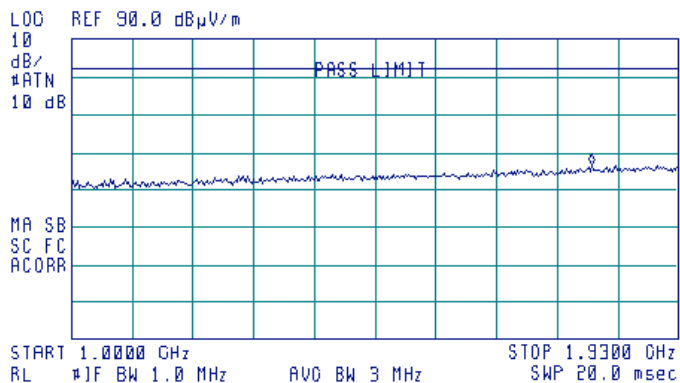
11:06:42 MAY 18, 2004



CW transmit mode 1000 – 1930 MHz.

14:31:09 MAY 18, 2004

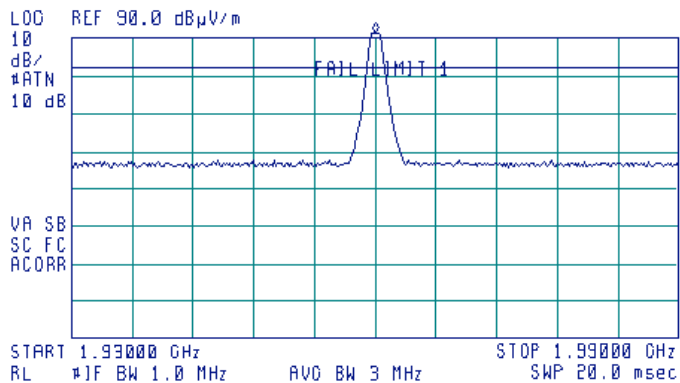
ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 1.7975 GHz
56.68 dBμV/m



CW transmit mode 1930 – 1990 MHz.

14:34:37 MAY 18, 2004

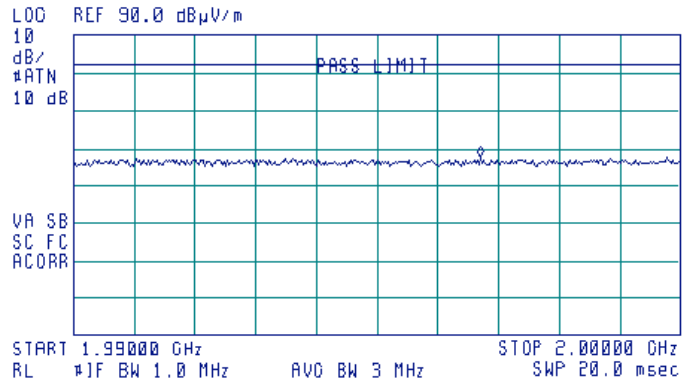
ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 1.96000 GHz
95.10 dBμV/m



CW transmit mode 1990 – 2000 MHz.

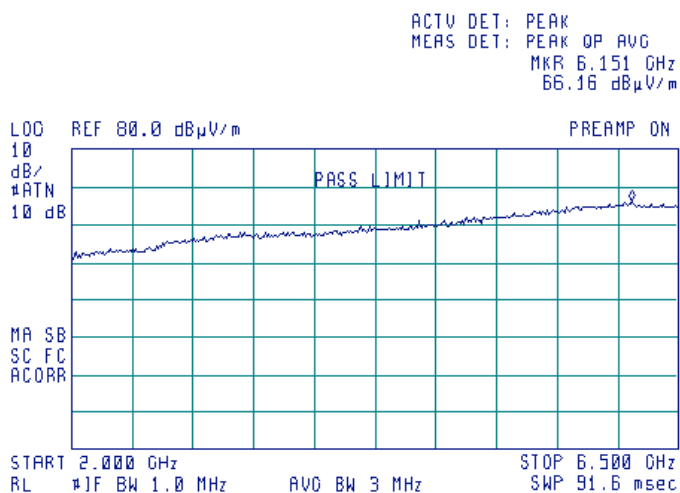
14:36:32 MAY 18, 2004

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 1.99670 GHz
57.65 dB μ V/m

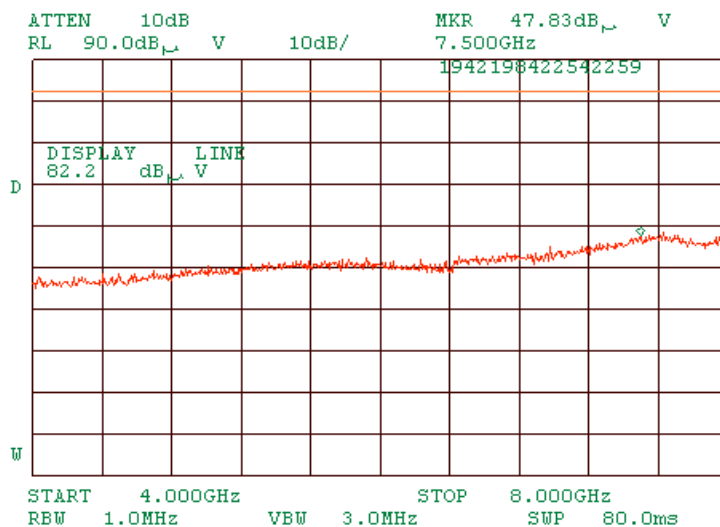


CW transmit mode 2000 – 6500 MHz.

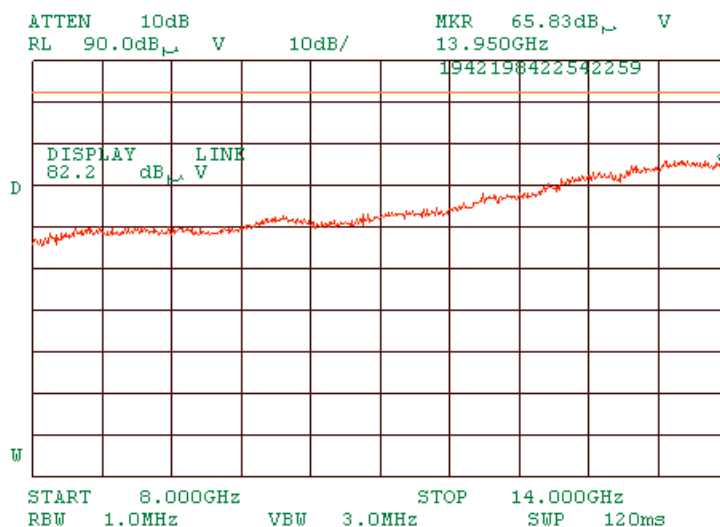
16:22:30 MAY 18, 2004



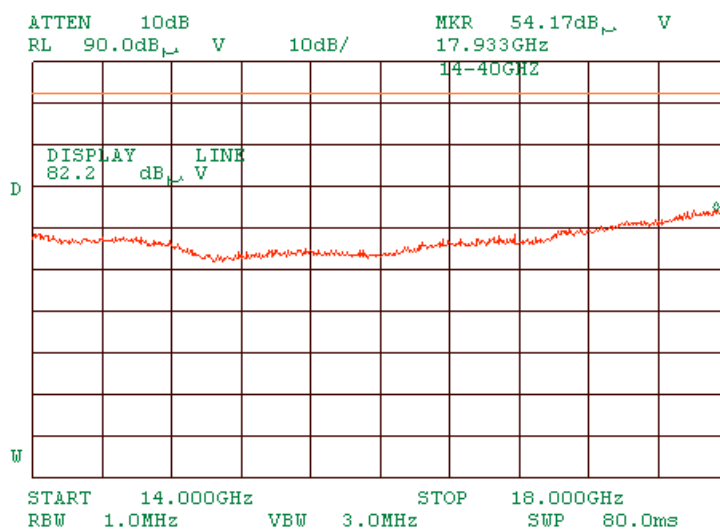
CW transmit mode 4000 – 8000 MHz.



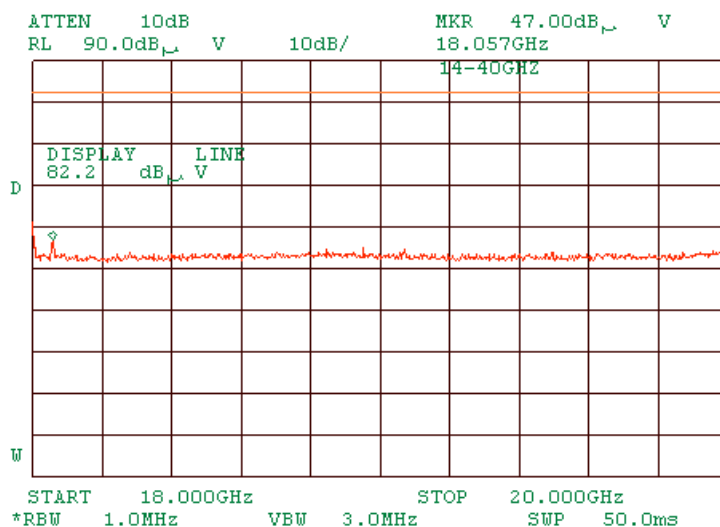
CW transmit mode 8000 – 14000 MHz.



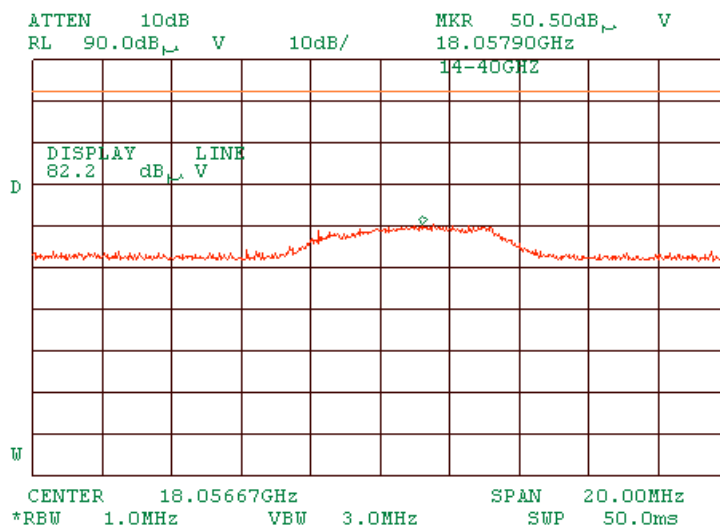
CW transmit mode 14000 – 18000 MHz.



CW transmit mode 18000 – 20000 MHz.



CW transmit mode spurious



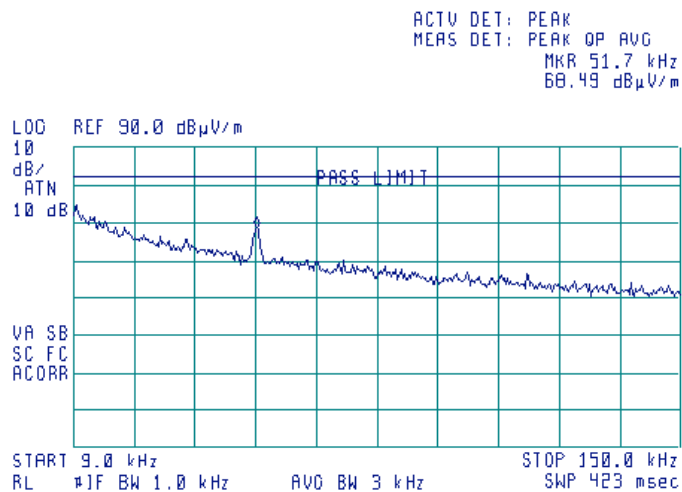
Signal	Freq (MHz)	Peak Amp (dBuV/m)	Peak Lim1 (dB)	LimitLine1 (dBuV/m)	Corrections (dB)	Pol.	Height (m)	Az. (deg)
2	0.051468	50.5	-31.8	82.23	13.80	H	1	246

Substitution method:

Signal	Freq (MHz)	Peak Amp (dBuV/m)	Gen out (dBm)	Again (dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)
1	18.0579	50.5	-64.3	21.15	2.61	-13	-32.76

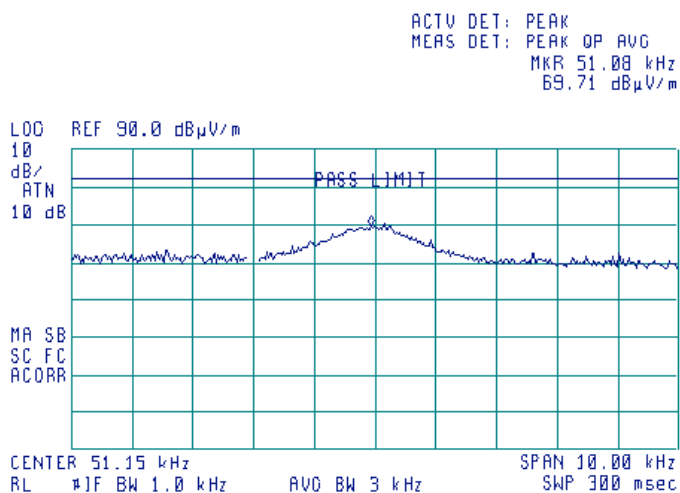
IP = 10 dBm
CW transmit mode 9 – 150 kHz.

12:16:51 MAY 18, 2004

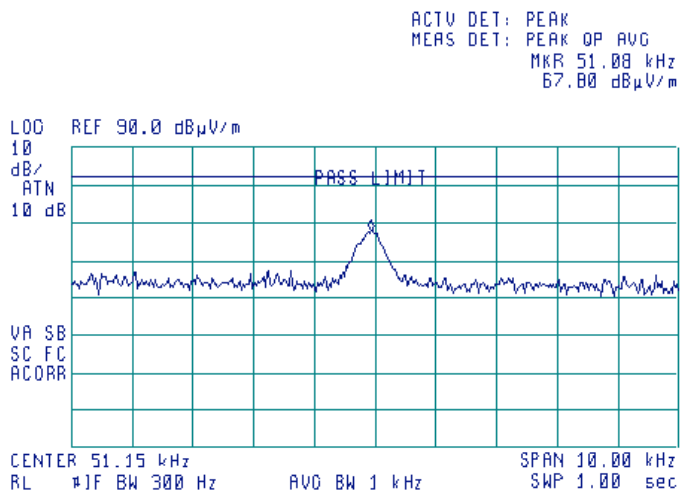


CW transmit mode Spurious.

11:56:42 MAY 18, 2004

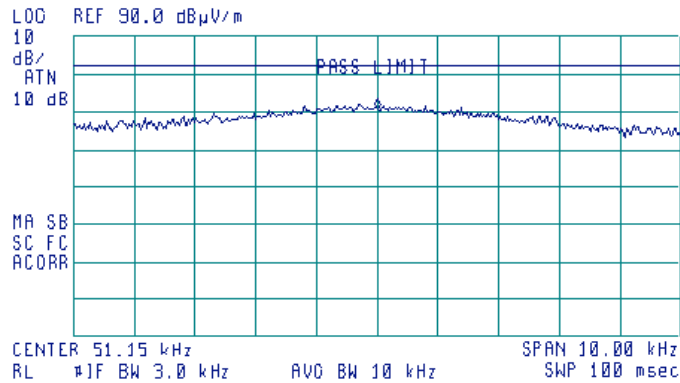


11:58:13 MAY 18, 2004



11:59:07 MAY 18, 2004

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 51.15 kHz
70.64 dBμV/m

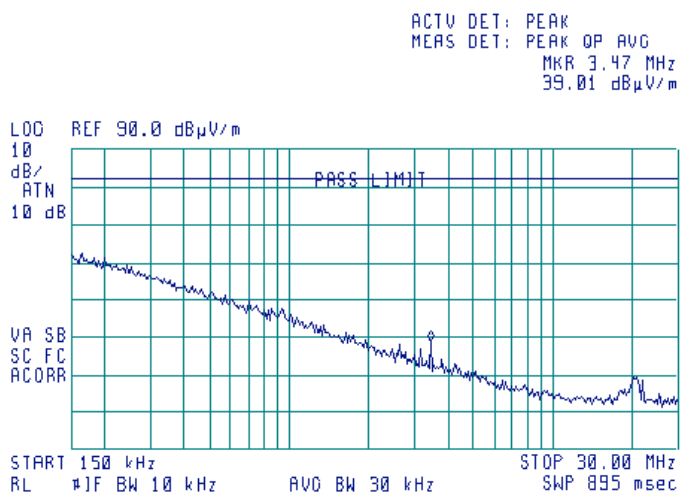


The signal is a narrow band signal. No need to apply the factor.
The source for the spurious is a power supply.

Signal	Freq (MHz)	Peak Amp (dBuV/m)	Peak - Lim1 (dB)	QP Amp (dBuV/m)	QP - Lim1 (dB)	LimitLine1 (dBuV/m)	Corrections (dB)	Pol.	Height (m)	Az. (deg)
2	0.051468	71.44	-10.79	67.03	-15.20	82.23	13.80	V	1.1	224

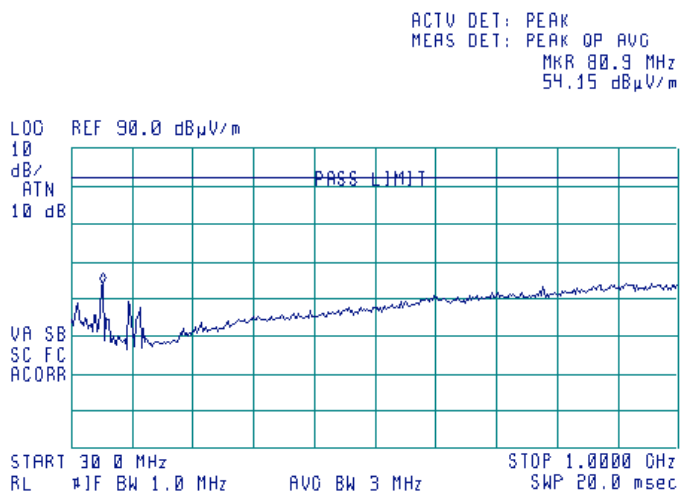
CW transmit mode 0.150 – 30 MHz.

12:28:44 MAY 18, 2004



CW transmit mode 30 – 1000 MHz.

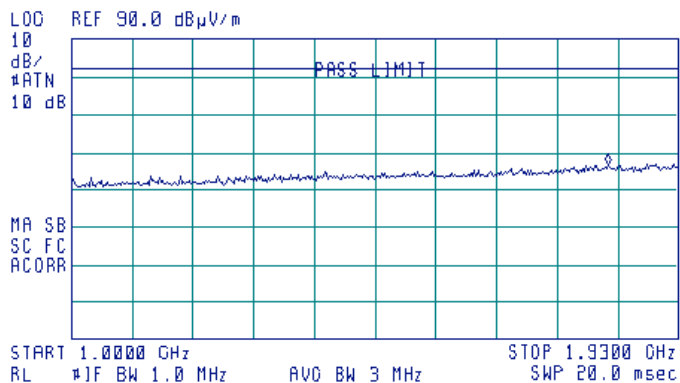
10:51:16 MAY 18, 2004



CW transmit mode 1000 – 1930 MHz.

14:21:55 MAY 18, 2004

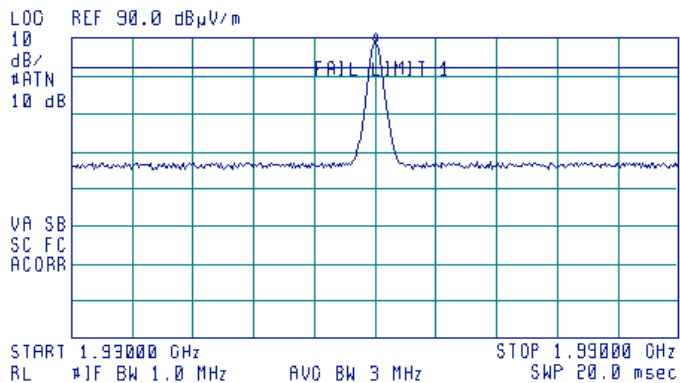
ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 1.8207 GHz
56.65 dBμV/m



CW transmit mode 1930 – 1990 MHz.

14:18:07 MAY 18, 2004

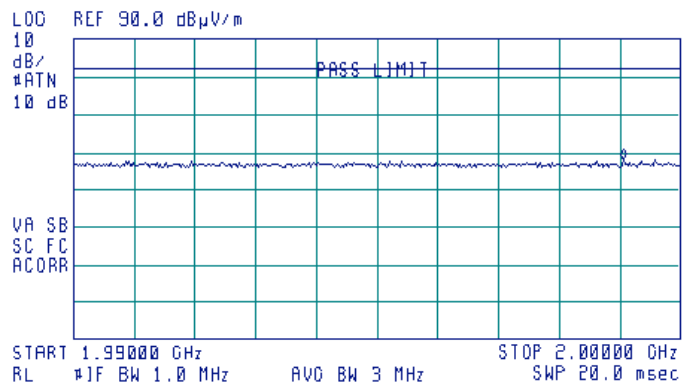
ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 1.96000 GHz
88.79 dBμV/m



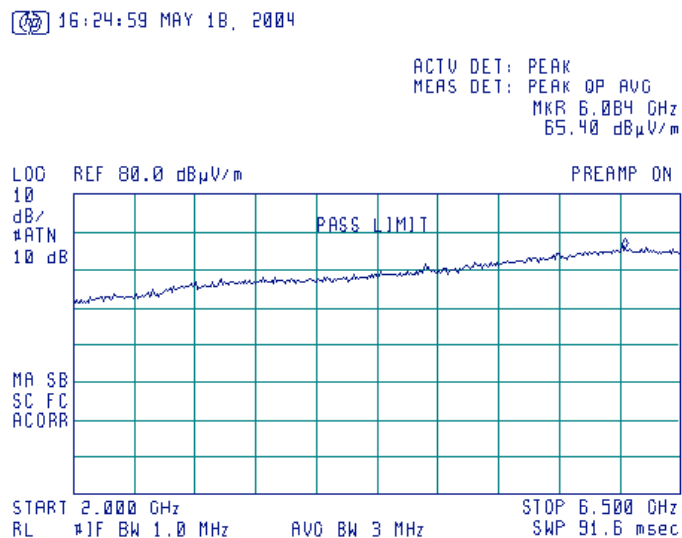
CW transmit mode 1990 – 2000 MHz.

14:27:54 MAY 18, 2004

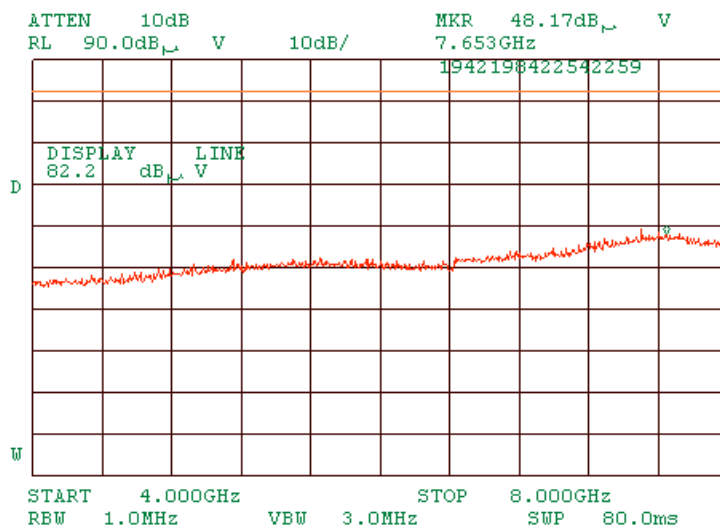
ACTV DET: PEAK
MEAS DET: PEAK OP AVG
MKR 1.99905 GHz
57.91 dB μ V/m



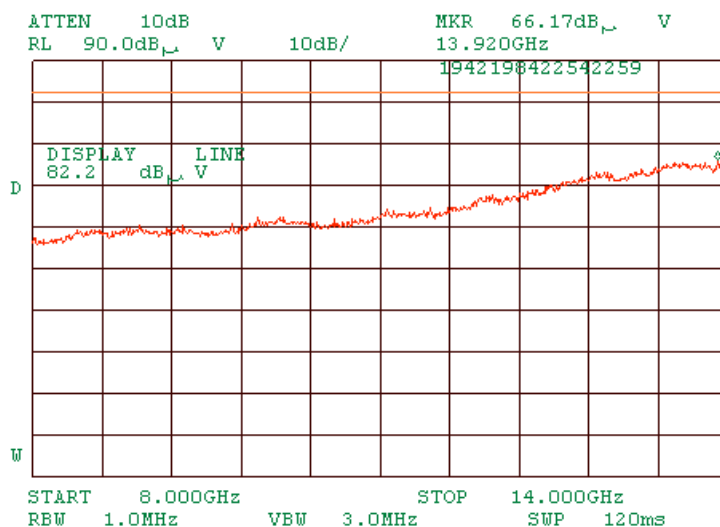
CW transmit mode 2000 – 6500 MHz.



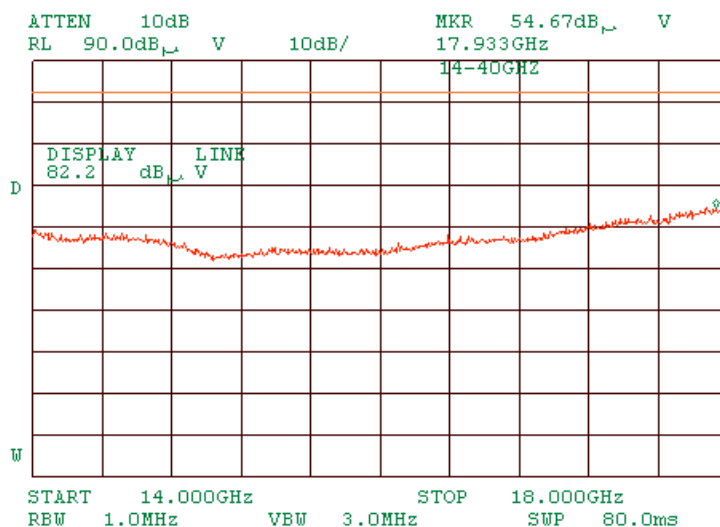
CW transmit mode 4000 – 8000 MHz.



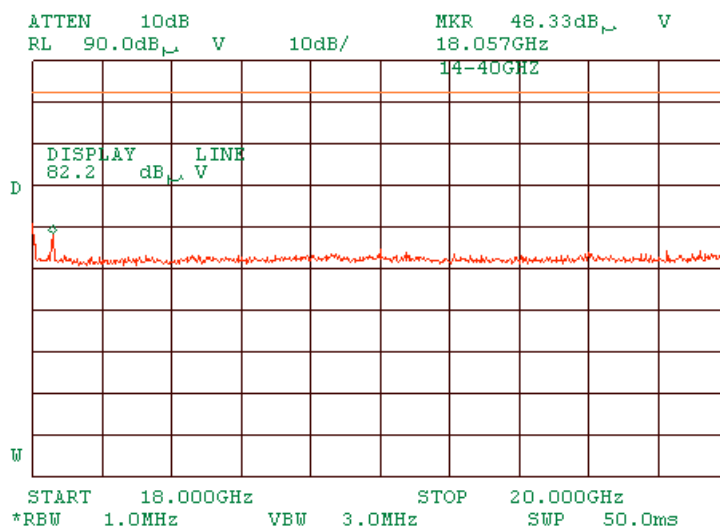
CW transmit mode 8000 – 14000 MHz.



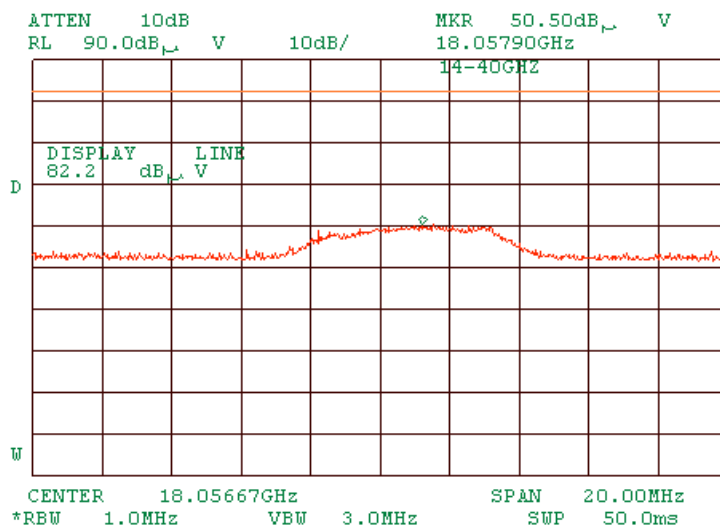
CW transmit mode 14000 – 18000 MHz.



CW transmit mode 18000 – 20000 MHz.



CW transmit mode spurious



Signal	Freq (MHz)	Peak Amp (dBuV/m)	Peak Lim1 (dB)	LimitLine1 (dBuV/m)	Corrections (dB)	Pol.	Height (m)	Az. (deg)
1	18.0579	50.5	-31.8	82.23	13.80	H	1	246

Substitution method:

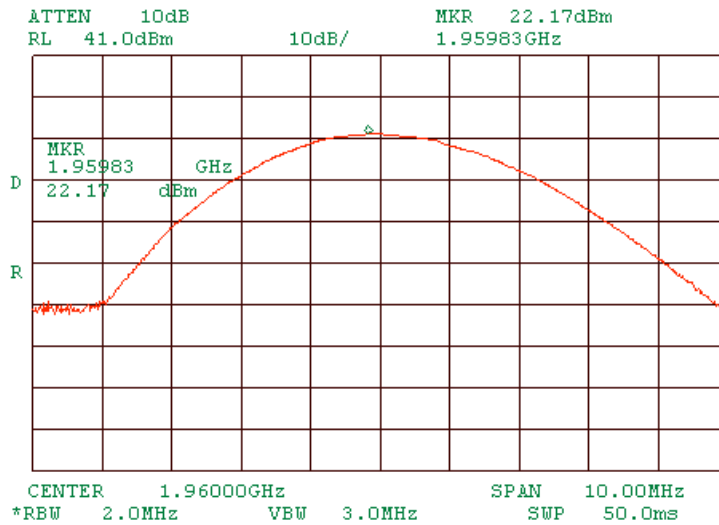
Signal	Freq (MHz)	Peak Amp (dBuV/m)	Gen out (dBm)	Again (dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)
1	18.0579	50.5	-64.3	21.15	2.61	-13	-32.76

Date 18 May 2004
 Test **Output power**
 Project 15867, Mobile Access 1200 and 1000
 Humidity 46%
 Temperature 24 C
 Air pressure 1014hPa
 Test equipment 521, 1947, 121, 589, 603
 Assigned band Downlink: 1930 – 1990MHz Uplink: 1850 – 1910MHz
 IP = input power
 Op = output power
 G = gain
 Mod = input modulation

Output power DOWNLINK

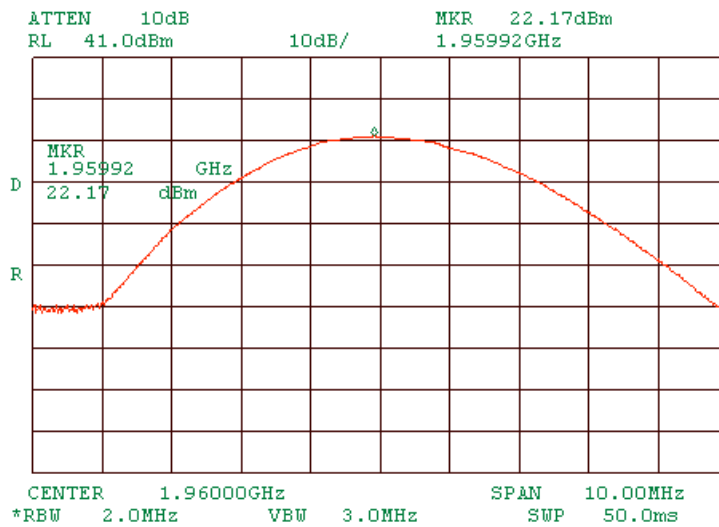
MOD = CW

Port 1 MID channel

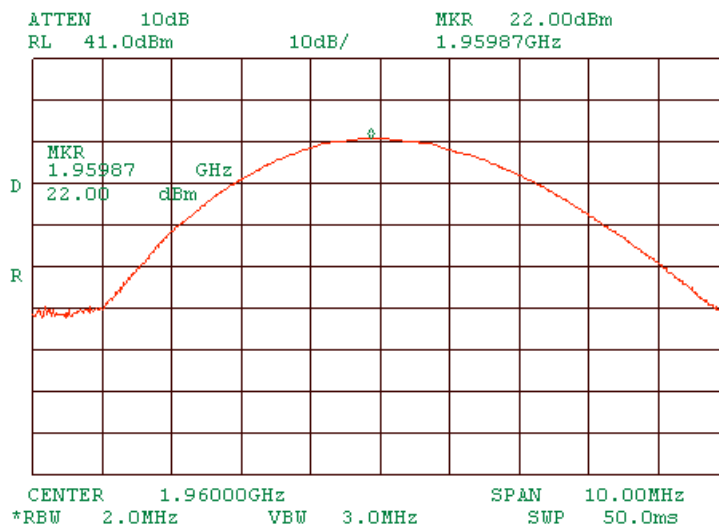


$P_{OUT} = 22.17 \text{ dBm}$

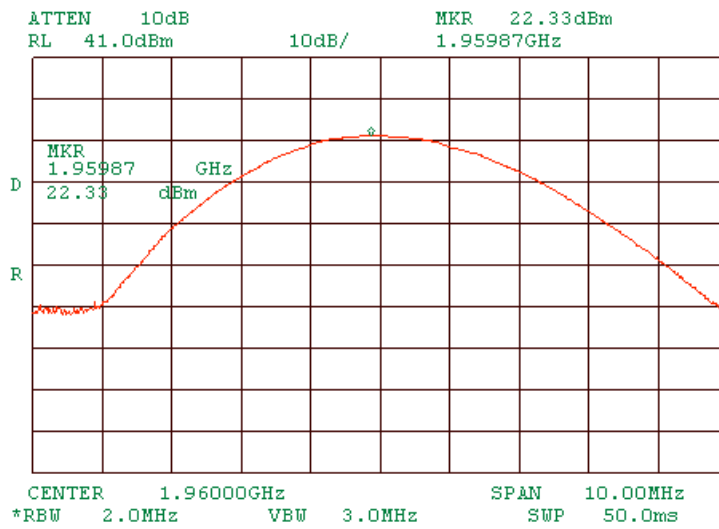
Port 2 MID channel


 $P_{OUT} = 22.17 \text{ dBm}$

Port 3 MID channel


 $P_{OUT} = 22.00 \text{ dBm}$

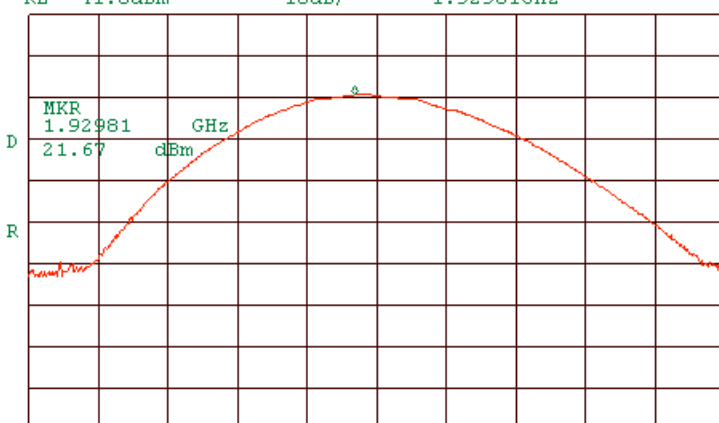
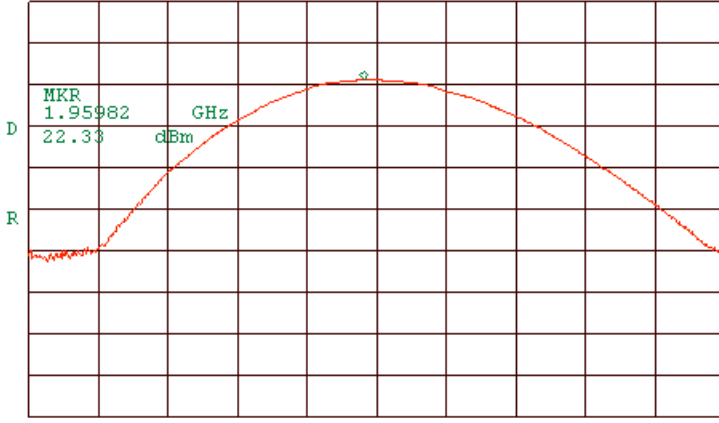
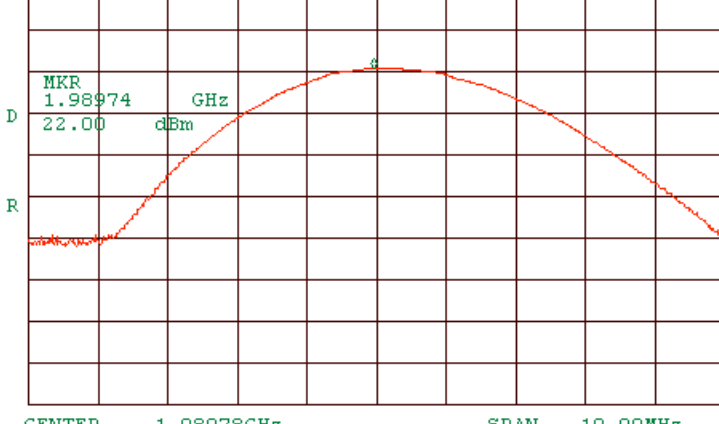
Port 4 MID channel

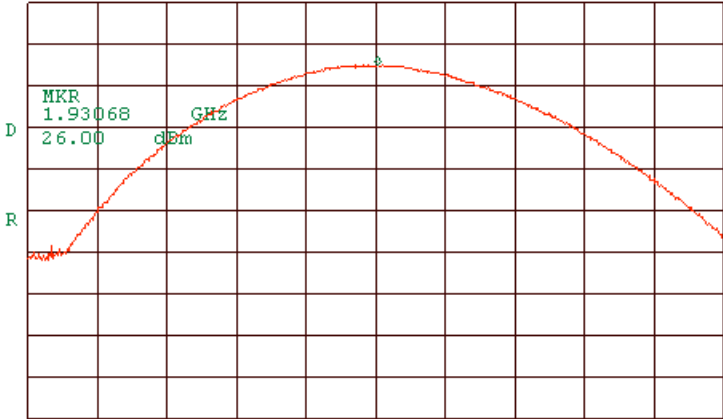
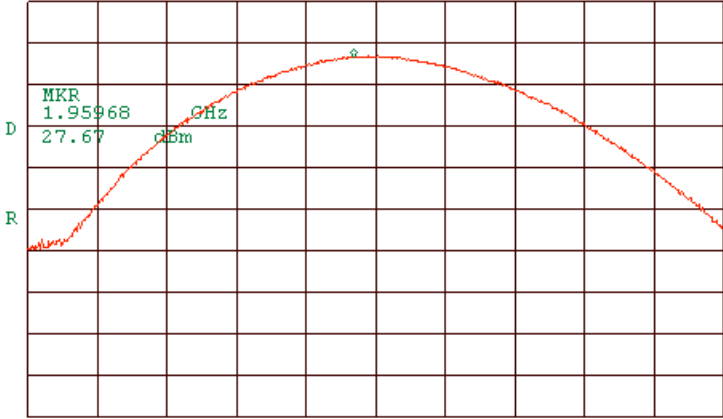
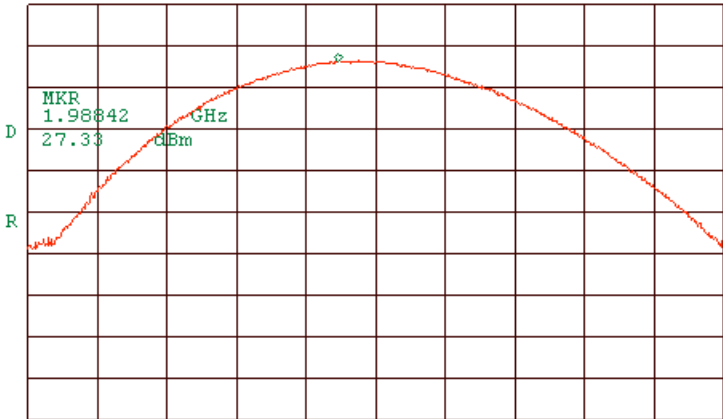


$P_{OUT} = 22.33 \text{ dBm}$

Max output power on Port 4. The further measurements will be made on port 1.

IP = 36dBm

Port 1 LOW channel	ATTEN 10dB RL 41.0dBm 10dB/ MKR 21.67dBm 1.92981GHz  CENTER 1.93013GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
P _{OUT} = 21.67 dBm F = 1930.0125 MHz IP = 36dBm Standard = CW	
Port 1 MID channel	ATTEN 10dB RL 41.0dBm 10dB/ MKR 22.33dBm 1.95982GHz  CENTER 1.96000GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
P _{OUT} = 22.33 dBm F = 1960 MHz	
Port 1 HIGH channel	ATTEN 10dB RL 41.0dBm 10dB/ MKR 22.00dBm 1.98974GHz  CENTER 1.98978GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
P _{OUT} = 22.00 dBm F = 1989.9875 MHz	

Port 1 LOW channel P_{OUT}= 26.00 dBm F = 1930.625 MHz IP = 36dBm Standard = CDMA Mod = QPSK Bit rate = 1.2288 Mbps	ATTEN 10dB RL 41.0dBm 10dB/ MKR 26.00dBm 1.93068GHz  CENTER 1.93065GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
Port 1 MID channel P_{OUT}= 27.67 dBm F = 1960 MHz	ATTEN 10dB RL 41.0dBm 10dB/ MKR 27.67dBm 1.95968GHz  CENTER 1.96000GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
Port 1 HIGH channel P_{OUT}= 27.33 dBm F = 1988.75 MHz	ATTEN 10dB RL 41.0dBm 10dB/ MKR 27.33dBm 1.98842GHz  CENTER 1.98895GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel

 $P_{OUT} = 25.50 \text{ dBm}$

F = 1930.625 MHz

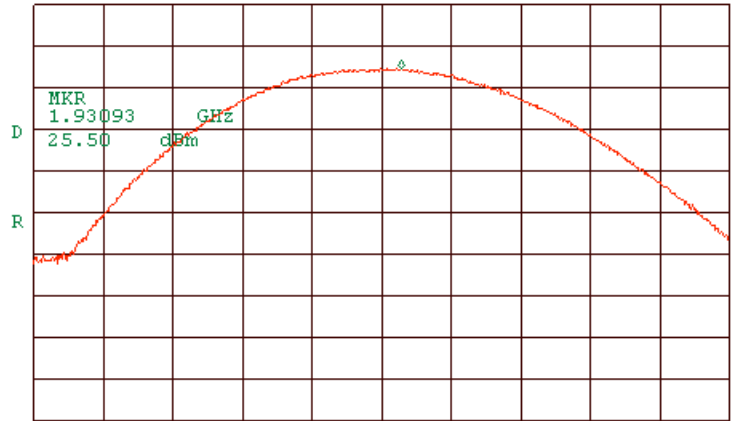
IP = 36 dBm

Standard = CDMA

Mod = OQPSK

Bit rate = 1.2288 Mbps

ATTEN 10dB MKR 25.50dBm
RL 41.0dBm 10dB/ 1.93093GHz



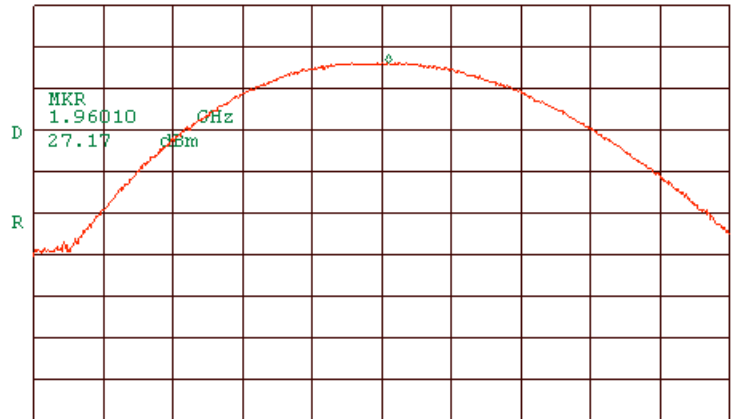
CENTER 1.93065GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 MID channel

 $P_{OUT} = 27.17 \text{ dBm}$

F = 1960 MHz

ATTEN 10dB MKR 27.17dBm
RL 41.0dBm 10dB/ 1.96010GHz



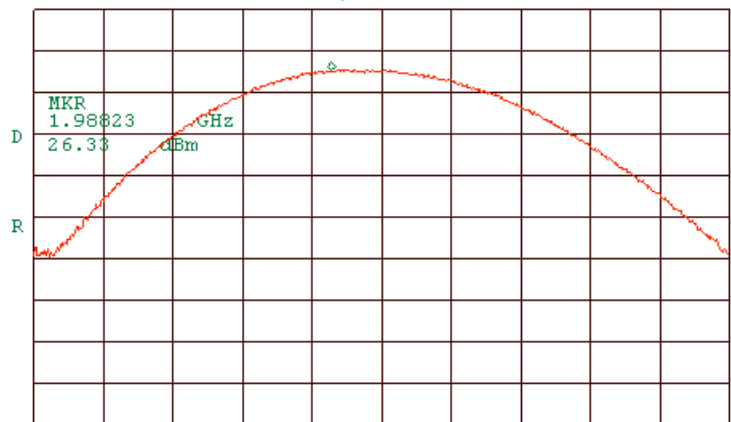
CENTER 1.96000GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 HIGH channel

 $P_{OUT} = 26.33 \text{ dBm}$

F = 1988.75 MHz

ATTEN 10dB MKR 26.33dBm
RL 41.0dBm 10dB/ 1.98823GHz



CENTER 1.98895GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel

 $P_{OUT} = 20.17 \text{ dBm}$

F = 1930.0125 MHz

IP = 36 dBm

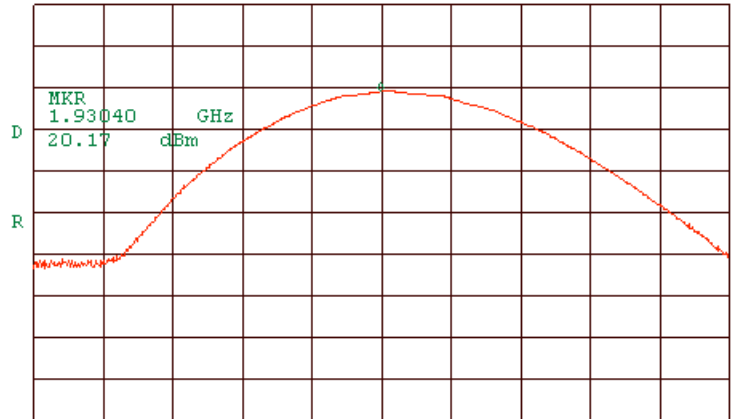
Standard = FM

Mod = FM

Deviation = 2.5 kHz

Rate = 2500 Hz

ATTEN 10dB MKR 20.17dBm
RL 41.0dBm 10dB/ 1.93040GHz



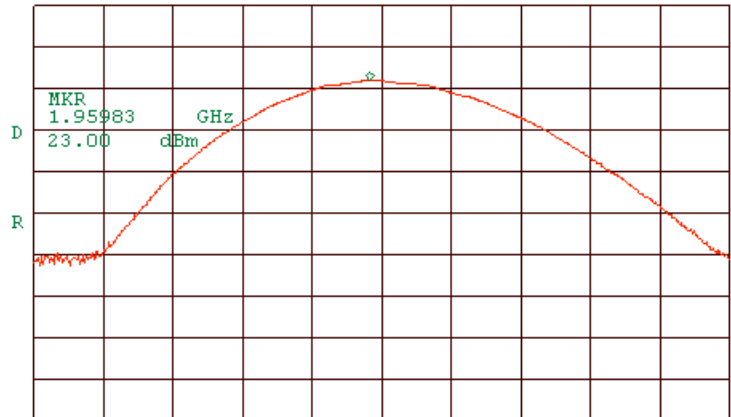
CENTER 1.93042GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 MID channel

 $P_{OUT} = 23.00 \text{ dBm}$

F = 1960 MHz

ATTEN 10dB MKR 23.00dBm
RL 41.0dBm 10dB/ 1.95983GHz



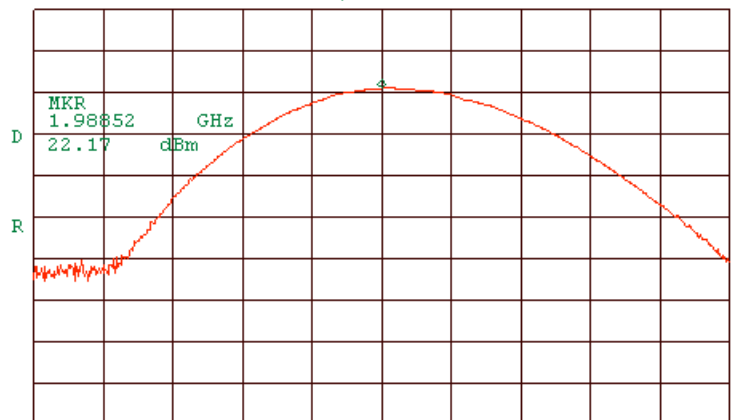
CENTER 1.96000GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 HIGH channel

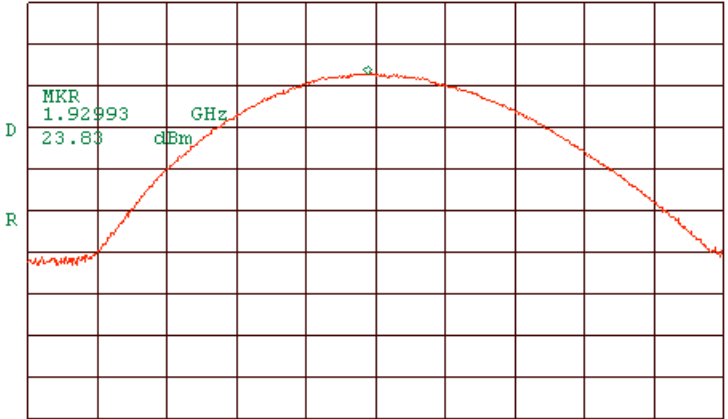
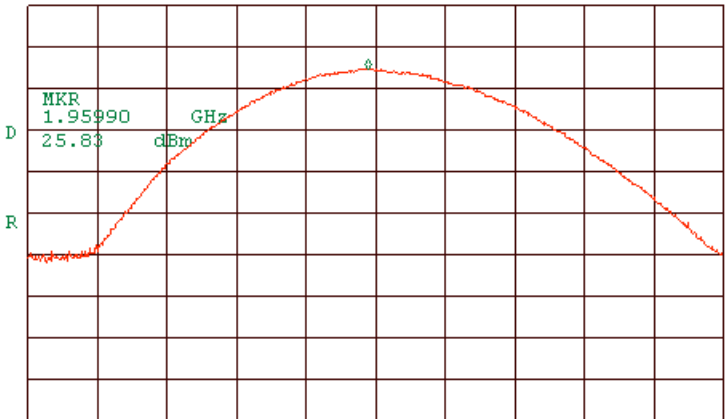
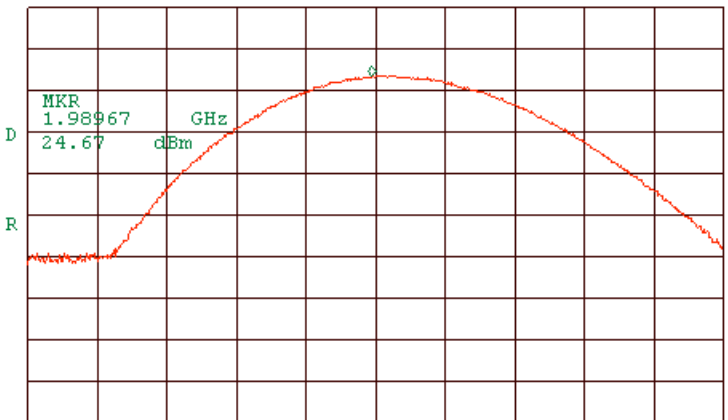
 $P_{OUT} = 22.17 \text{ dBm}$

F = 1989.9875 MHz

ATTEN 10dB MKR 22.17dBm
RL 41.0dBm 10dB/ 1.98852GHz



CENTER 1.98852GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel P_{OUT}= 23.83 dBm F = 1930.05 MHz IP = 36dBm Standard = TDMA Mod = PI/4 DQPSK Bit Rate = 48.6 kbps	ATTEN 10dB RL 41.0dBm 10dB/ MKR 23.83dBm 1.92993GHz  CENTER 1.93005GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms
Port 1 MID channel P_{OUT}= 25.83 dBm F = 1960 MHz	ATTEN 10dB RL 41.0dBm 10dB/ MKR 25.83dBm 1.95990GHz  CENTER 1.96000GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms
Port 1 HIGH channel P_{OUT}= 24.67 dBm F = 1989.99 MHz	ATTEN 10dB RL 41.0dBm 10dB/ MKR 24.67dBm 1.98967GHz  CENTER 1.98972GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms

Port 1 LOW channel

 $P_{OUT} = 21.33 \text{ dBm}$

F = 1930.2 MHz

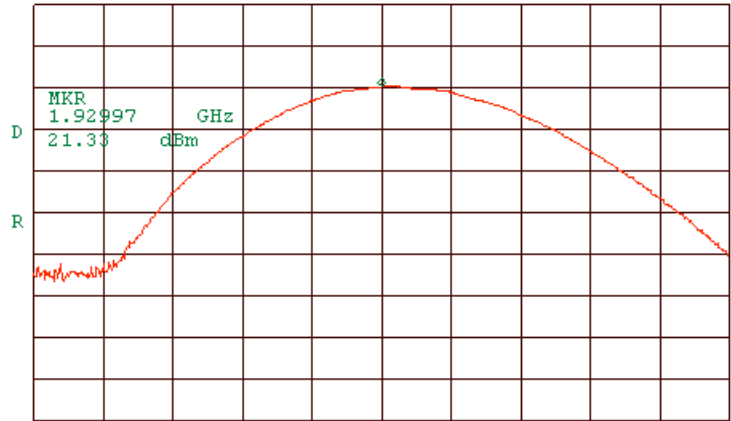
IP = 36 dBm

Standard = GSM

Mod = GMSK

Bit Rate = 270.833 kbps

ATTEN 10dB MKR 21.33dBm
RL 41.0dBm 10dB/ 1.92997GHz



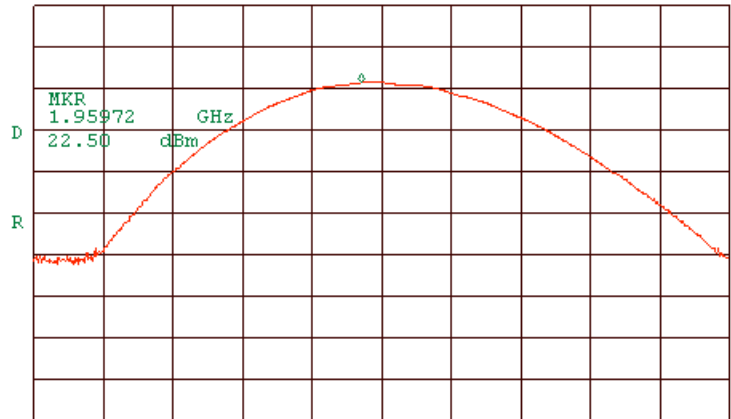
CENTER 1.92997GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 MID channel

 $P_{OUT} = 22.50 \text{ dBm}$

F = 1960 MHz

ATTEN 10dB MKR 22.50dBm
RL 41.0dBm 10dB/ 1.95972GHz



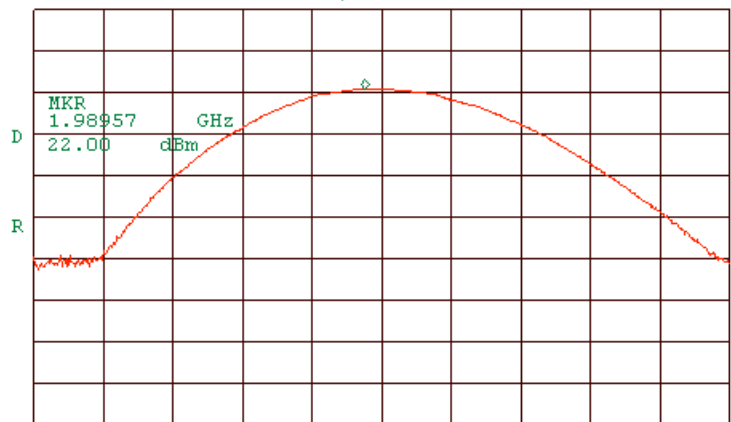
CENTER 1.96000GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 HIGH channel

 $P_{OUT} = 22.00 \text{ dBm}$

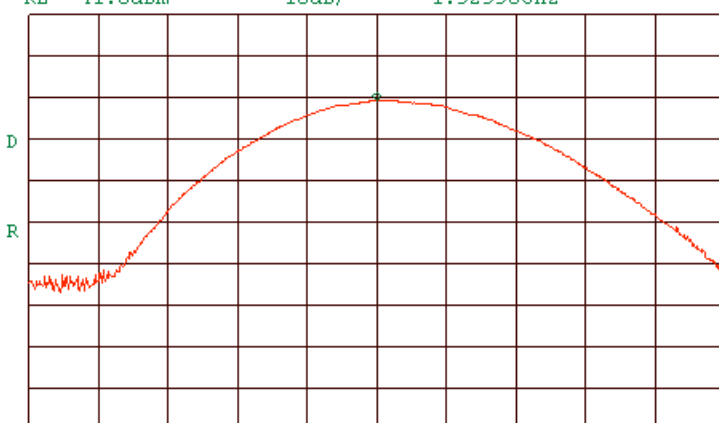
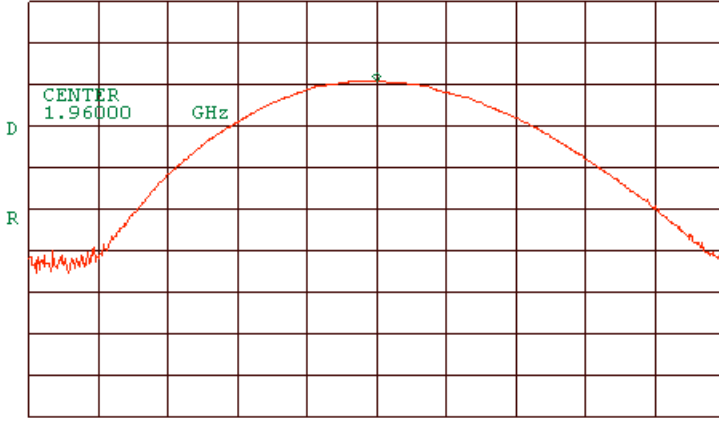
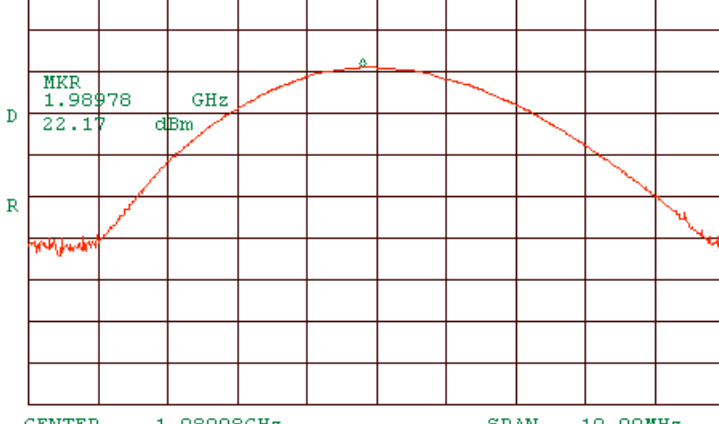
F = 1989.8 MHz

ATTEN 10dB MKR 22.00dBm
RL 41.0dBm 10dB/ 1.98957GHz



CENTER 1.98980GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

IP = 10dBm

Port 1 LOW channel	ATTEN 10dB MKR 20.33dBm RL 41.0dBm 10dB/ 1.92990GHz  CENTER 1.92990GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
Port 1 MID channel	ATTEN 10dB MKR 21.83dBm RL 41.0dBm 10dB/ 1.96000GHz  CENTER 1.96000GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
Port 1 HIGH channel	ATTEN 10dB MKR 22.17dBm RL 41.0dBm 10dB/ 1.98978GHz  CENTER 1.98998GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel

 $P_{OUT} = 26.17 \text{ dBm}$

F = 1930.625 MHz

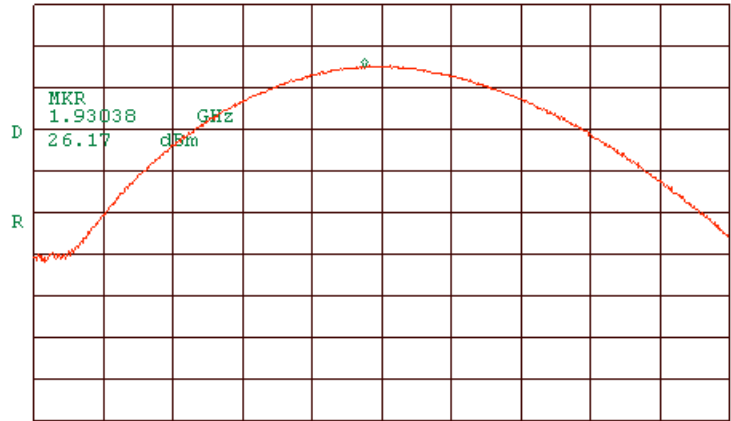
IP = 10dBm

Standard = CDMA

Mod = QPSK

Bit rate = 1.2288 Mbps

ATTEN 10dB MKR 26.17dBm
RL 41.0dBm 10dB/ 1.93038GHz



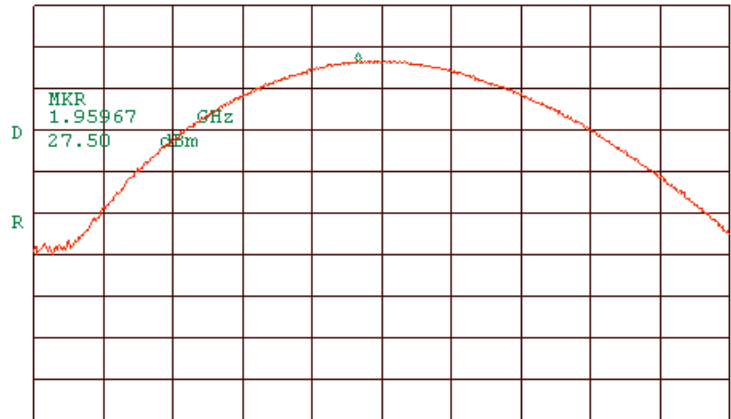
CENTER 1.93063GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 MID channel

 $P_{OUT} = 27.50 \text{ dBm}$

F = 1960 MHz

ATTEN 10dB MKR 27.50dBm
RL 41.0dBm 10dB/ 1.95967GHz



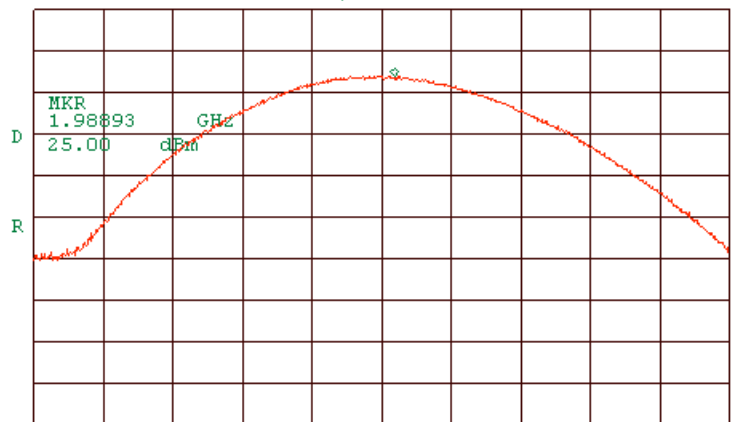
CENTER 1.96000GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 HIGH channel

 $P_{OUT} = 25.00 \text{ dBm}$

F = 1988.75 MHz

ATTEN 10dB MKR 25.00dBm
RL 41.0dBm 10dB/ 1.98893GHz



CENTER 1.98875GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel

 $P_{OUT} = 25.67 \text{ dBm}$

F = 1930.625 MHz

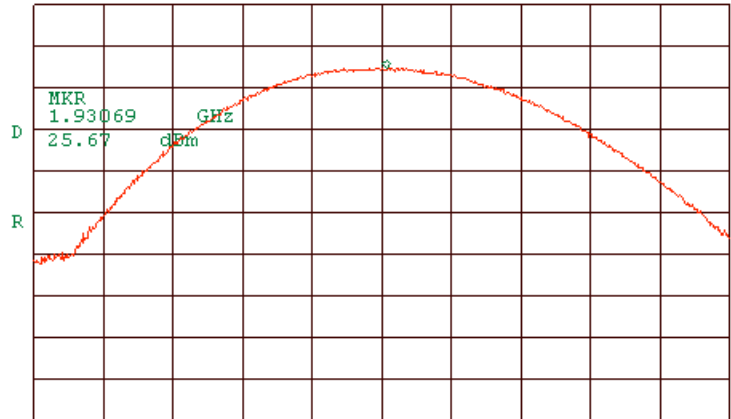
IP = 10dBm

Standard = CDMA

Mod = OQPSK

Bit rate = 1.2288 Mbps

ATTEN 10dB MKR 25.67dBm
RL 41.0dBm 10dB/ 1.93069GHz



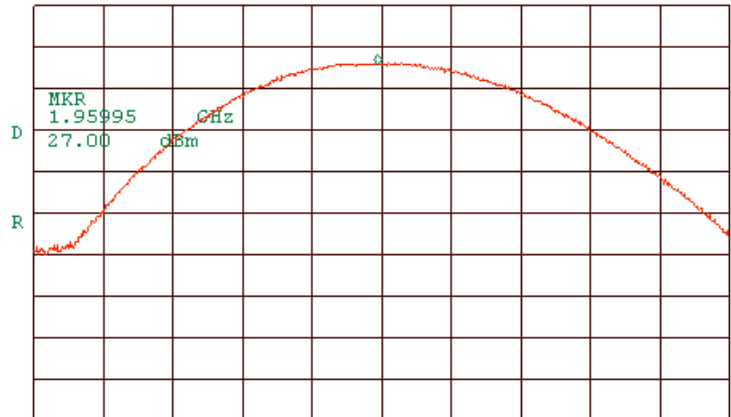
CENTER 1.93063GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 MID channel

 $P_{OUT} = 27.00 \text{ dBm}$

F = 1960 MHz

ATTEN 10dB MKR 27.00dBm
RL 41.0dBm 10dB/ 1.95995GHz



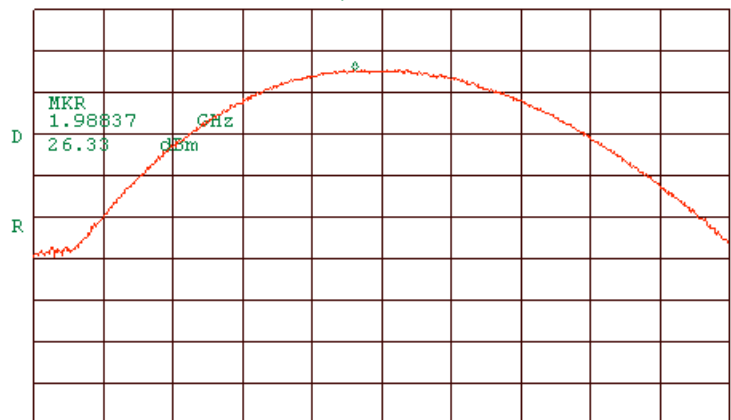
CENTER 1.96000GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 HIGH channel

 $P_{OUT} = 26.33 \text{ dBm}$

F = 1988.75 MHz

ATTEN 10dB MKR 26.33dBm
RL 41.0dBm 10dB/ 1.98837GHz



CENTER 1.98875GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel

 $P_{OUT} = 21.17 \text{ dBm}$

F = 1930.0125 MHz

IP = 10 dBm

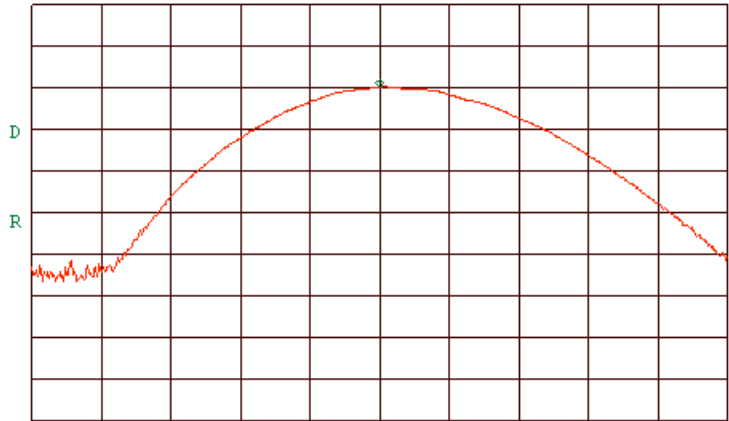
Standard = FM

Mod = FM

Deviation = 2.5 kHz

Rate = 2500 Hz

ATTEN 10dB MKR 21.17dBm
RL 41.0dBm 10dB/ 1.92980GHz



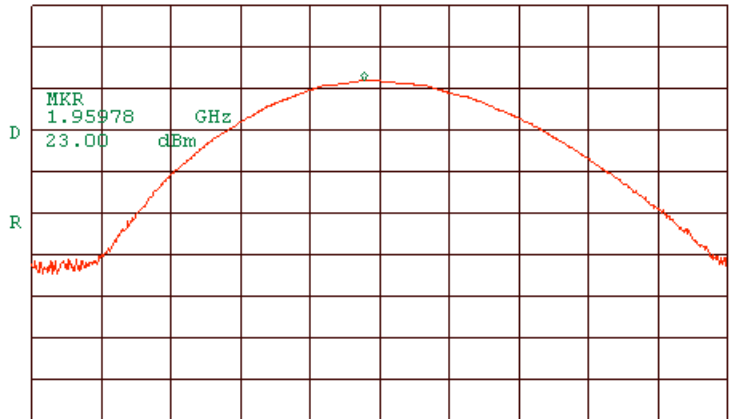
CENTER 1.92980GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 MID channel

 $P_{OUT} = 23.00 \text{ dBm}$

F = 1960 MHz

ATTEN 10dB MKR 23.00dBm
RL 41.0dBm 10dB/ 1.95978GHz



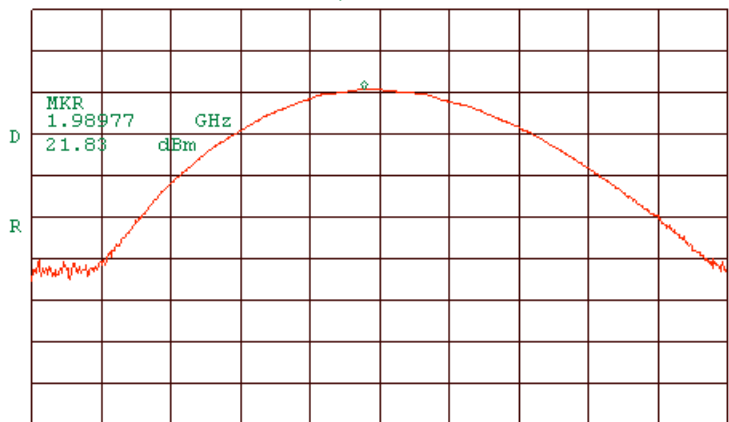
CENTER 1.96000GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 HIGH channel

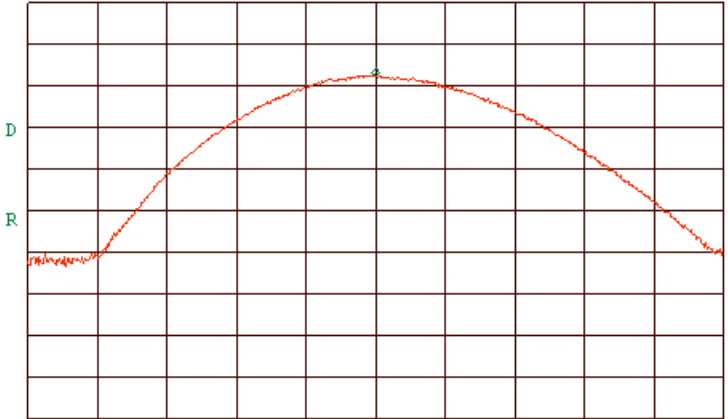
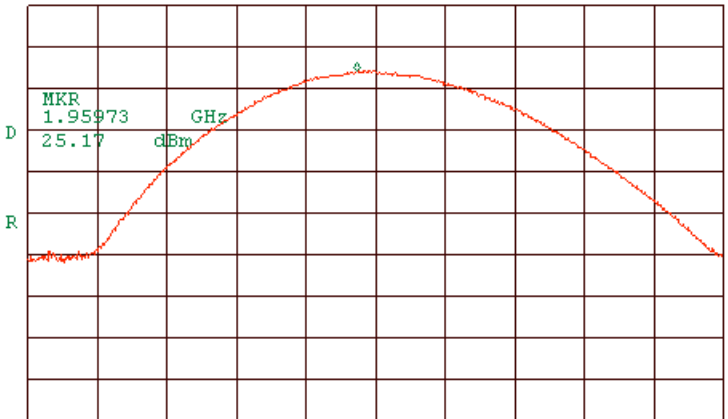
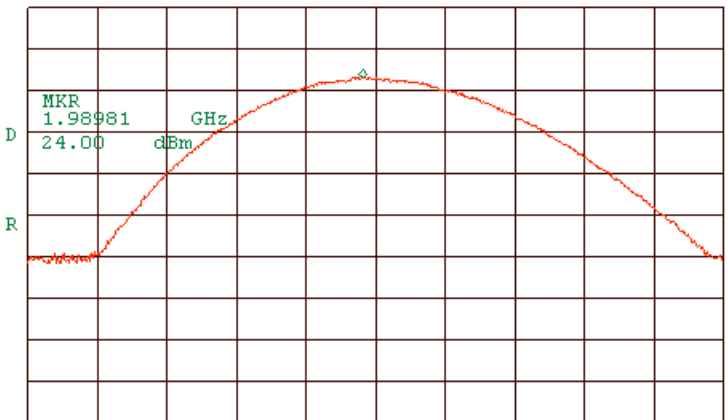
 $P_{OUT} = 21.83 \text{ dBm}$

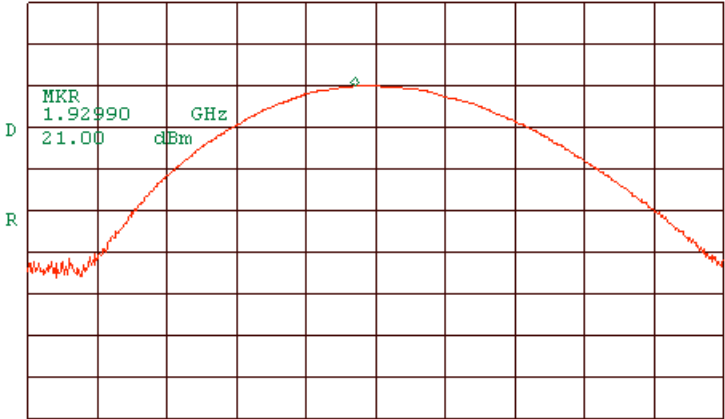
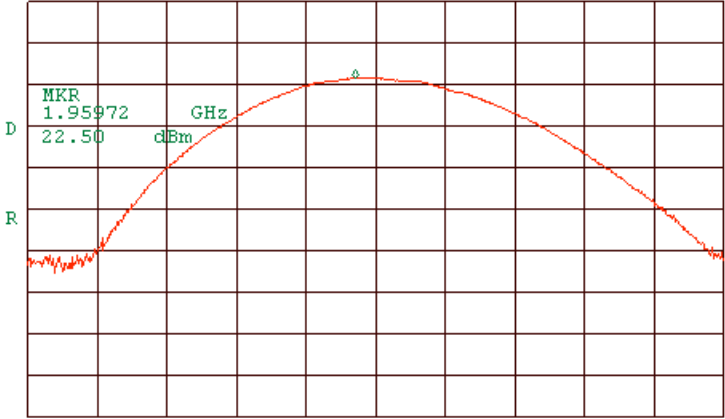
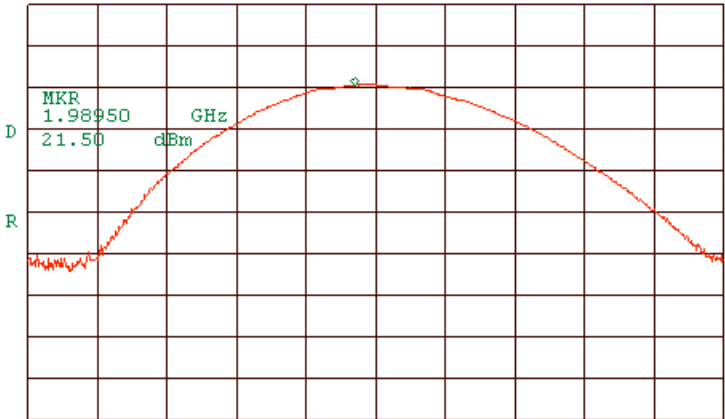
F = 1989.9875 MHz

ATTEN 10dB MKR 21.83dBm
RL 41.0dBm 10dB/ 1.98977GHz



CENTER 1.98999GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

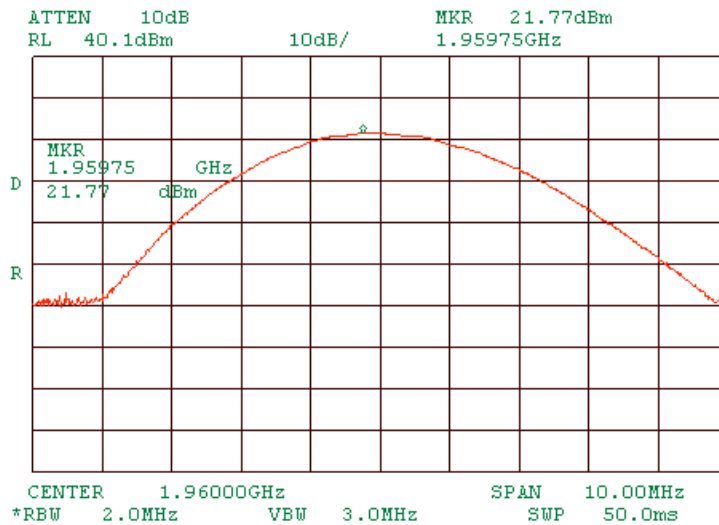
Port 1 LOW channel P_{OUT}=23.33dBm F = 1930.05 MHz IP = 10dBm Standard = TDMA Mod = PI/4 DQPSK Bit Rate = 48.6 kbps	ATTEN 10dB RL 41.0dBm 10dB/ MKR 23.33dBm 1.93000GHz  CENTER 1.93000GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
Port 1 MID channel P_{OUT}=25.17 dBm F = 1960 MHz	ATTEN 10dB RL 41.0dBm 10dB/ MKR 25.17dBm 1.95973GHz  CENTER 1.96000GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
Port 1 HIGH channel P_{OUT}=24.00 dBm F = 1989.99 MHz	ATTEN 10dB RL 41.0dBm 10dB/ MKR 24.00dBm 1.98981GHz  CENTER 1.98999GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel P_{OUT}= 21.00 dBm F = 1930.2 MHz IP = 10dBm Standard = GSM Mod = GMSK Bit Rate = 270.833 kbps	ATTEN 10dB RL 41.0dBm 10dB/ MKR 21.00dBm 1.92990GHz  CENTER 1.93020GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms
Port 1 MID channel P_{OUT}= 22.50 dBm F = 1960 MHz	ATTEN 10dB RL 41.0dBm 10dB/ MKR 22.50dBm 1.95972GHz  CENTER 1.96000GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms
Port 1 HIGH channel P_{OUT}= 21.50 dBm F = 1989.8 MHz	ATTEN 10dB RL 41.0dBm 10dB/ MKR 21.50dBm 1.98950GHz  CENTER 1.98980GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms

Date 18 May 2004
 Test Output power
 Project 15867, Mobile Access 1200 Add-on (optical module)
 Humidity 46%
 Temperature 24 C
 Air pressure 1014hPa
 Test equipment 521, 1947, 121, 589, 603
 Assigned band Downlink: 1930 – 1990MHz Uplink: 1850 – 1910MHz
 IP = input power
 Op = output power
 G = gain
 Mod = input modulation

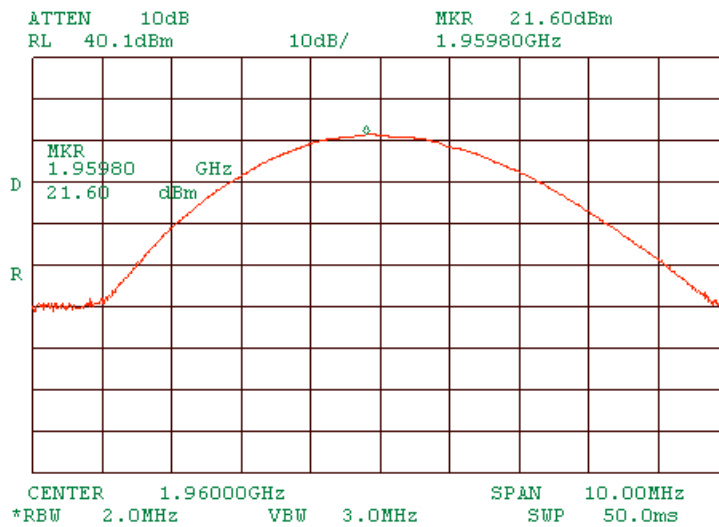
Output power DOWNLINK

Mod = CW
 $F_{\text{LOW}} = 1930.0125 \text{ MHz}$
 $F_{\text{MID}} = 1960 \text{ MHz}$
 $F_{\text{HIGH}} = 1989.9875 \text{ MHz}$
 Port 1 MID channel



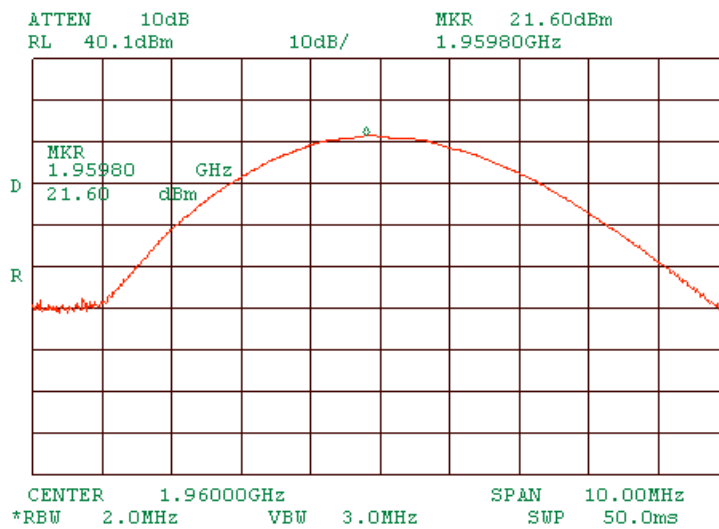
$P_{\text{OUT}} = 21.77 \text{ dBm}$

Port 2 MID channel



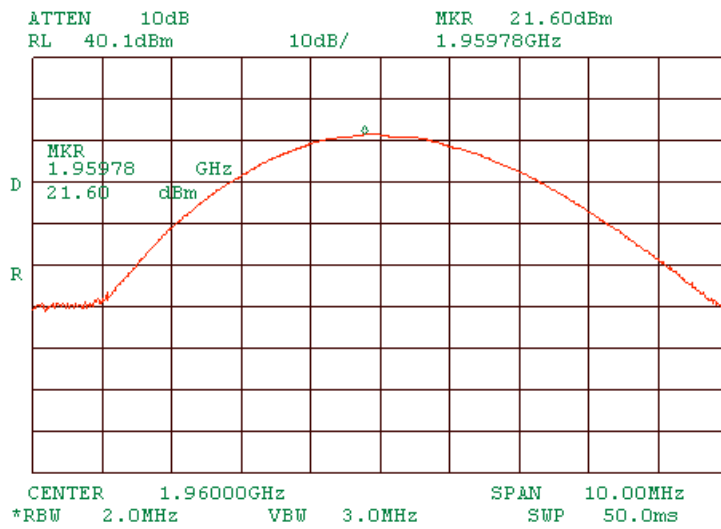
$P_{OUT} = 21.60 \text{ dBm}$

Port 3 MID channel



$P_{OUT} = 21.60 \text{ dBm}$

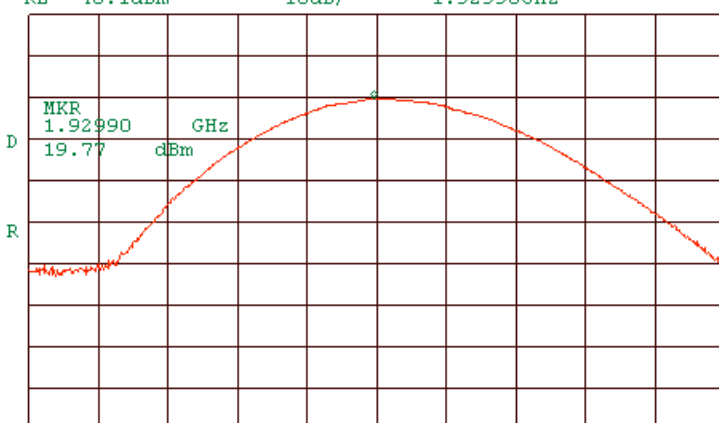
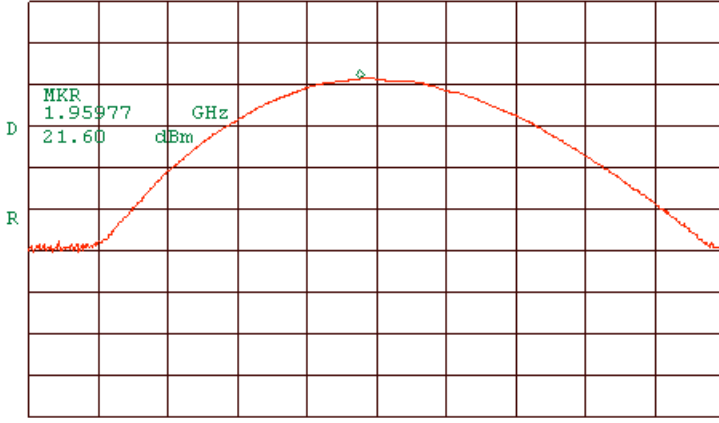
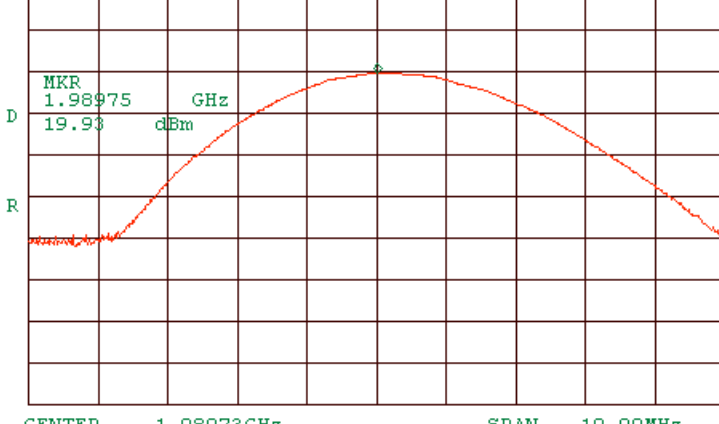
Port 4 MID channel

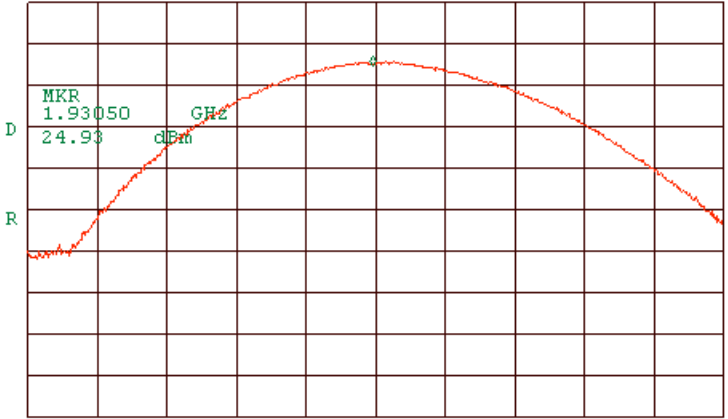
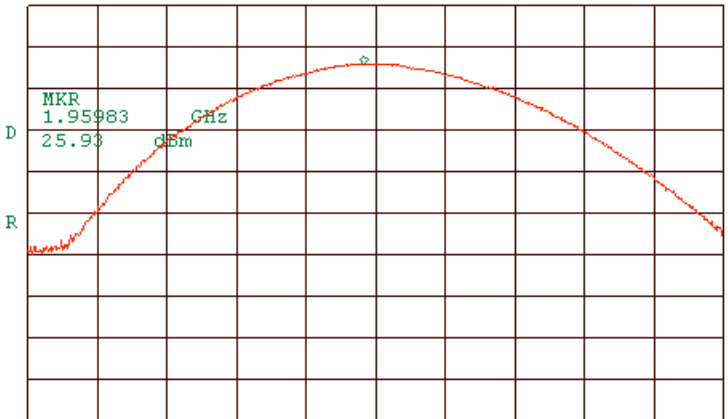
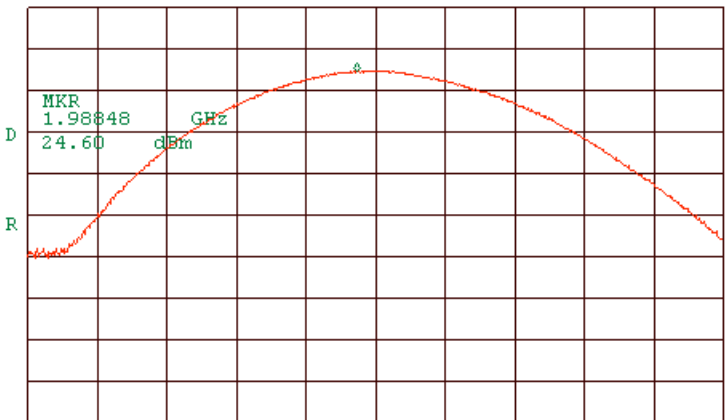


$P_{OUT} = 21.60 \text{ dBm}$

Max output power on Port 1. The further measurements will be made on port 1.

IP = 10dBm

Port 1 LOW channel	ATTEN 10dB RL 40.1dBm 10dB/ MKR 19.77dBm 1.92990GHz  CENTER 1.92993GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
Port 1 MID channel	ATTEN 10dB RL 40.1dBm 10dB/ MKR 21.60dBm 1.95977GHz  CENTER 1.96000GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
Port 1 HIGH channel	ATTEN 10dB RL 40.1dBm 10dB/ MKR 19.93dBm 1.98975GHz  CENTER 1.98973GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel P_{OUT}=24.93dBm F = 1930.625 MHz IP = 10dBm Standard = CDMA Mod = QPSK Bit rate = 1.2288 Mbps	ATTEN 10dB RL 40.1dBm 10dB/ MKR 24.93dBm 1.93050GHz  CENTER 1.93053GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms
Port 1 MID channel P_{OUT}=25.93 dBm F = 1960 MHz	ATTEN 10dB RL 40.1dBm 10dB/ MKR 25.93dBm 1.95983GHz  CENTER 1.96000GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms
Port 1 HIGH channel P_{OUT}=24.60 dBm F = 1988.75 MHz	ATTEN 10dB RL 40.1dBm 10dB/ MKR 24.60dBm 1.98848GHz  CENTER 1.98875GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms

Port 1 LOW channel

 $P_{OUT} = 24.60\text{dBm}$

F = 1930.625 MHz

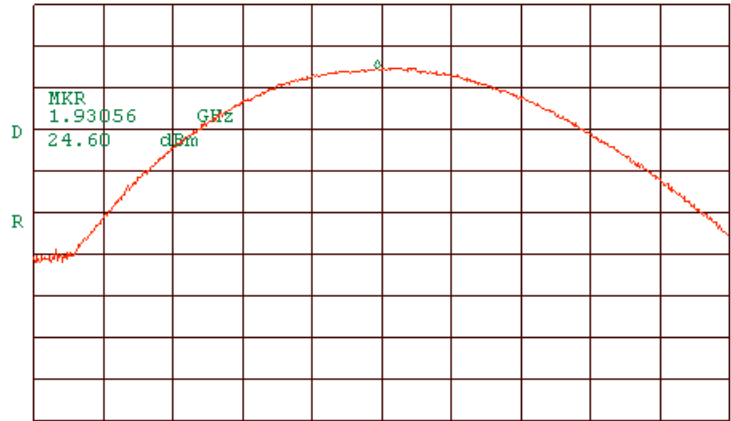
IP = 10dBm

Standard = CDMA

Mod = OQPSK

Bit rate = 1.2288 Mbps

ATTEN 10dB MKR 24.60dBm
RL 40.1dBm 10dB/ 1.93056GHz



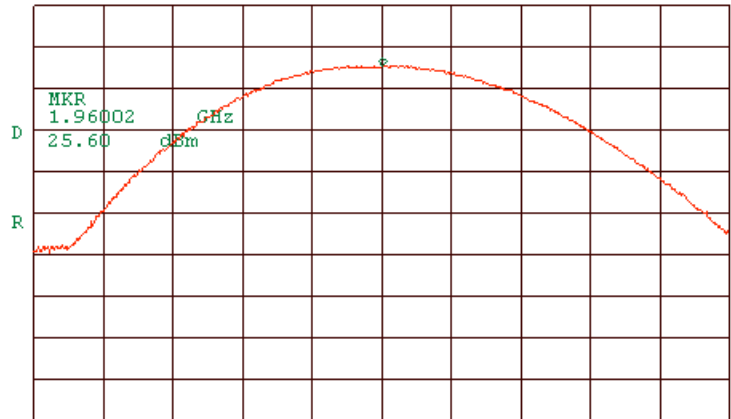
CENTER 1.93063GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 MID channel

 $P_{OUT} = 25.60\text{ dBm}$

F = 1960 MHz

ATTEN 10dB MKR 25.60dBm
RL 40.1dBm 10dB/ 1.96002GHz



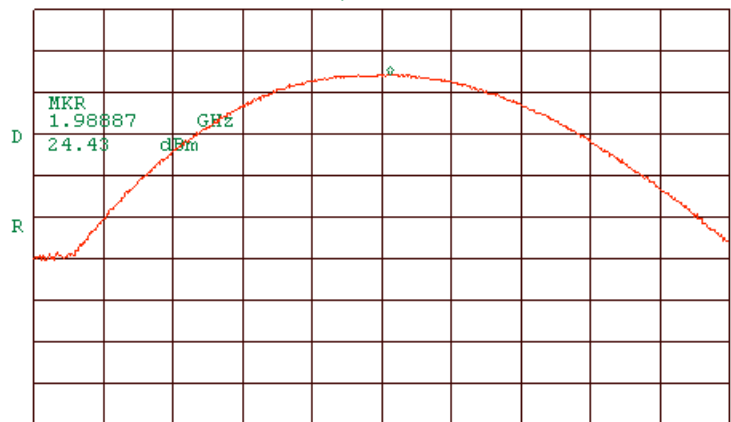
CENTER 1.96000GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 HIGH channel

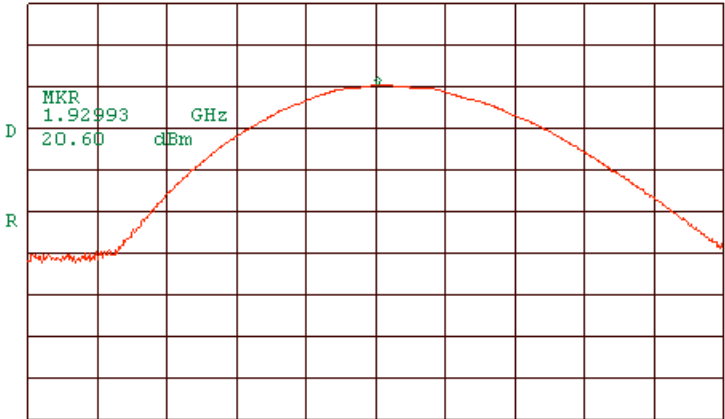
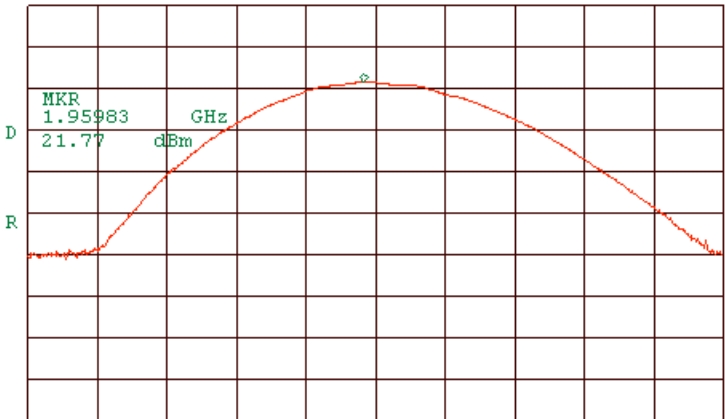
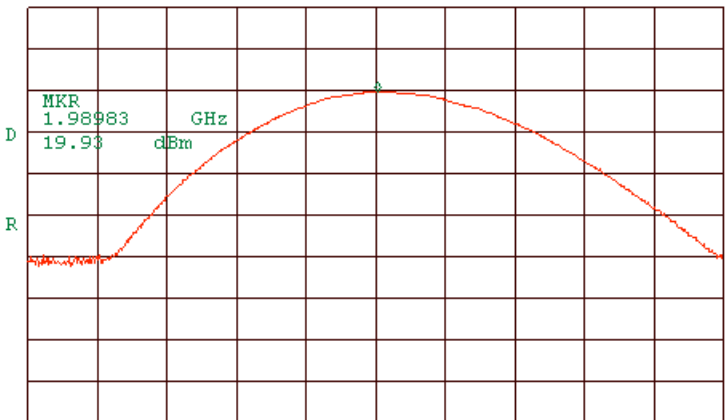
 $P_{OUT} = 24.43\text{ dBm}$

F = 1988.75 MHz

ATTEN 10dB MKR 24.43dBm
RL 40.1dBm 10dB/ 1.98887GHz



CENTER 1.98875GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel P_{OUT}= 20.60dBm F = 1930.0125 MHz IP = 10dBm Standard = FM Mod = FM Deviation = 2.5 kHz Rate = 2500 Hz	ATTEN 10dB RL 40.1dBm 10dB/ MKR 20.60dBm 1.92993GHz  CENTER 1.92989GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms
Port 1 MID channel P_{OUT}= 21.77 dBm F = 1960 MHz	ATTEN 10dB RL 40.1dBm 10dB/ MKR 21.77dBm 1.95983GHz  CENTER 1.96000GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms
Port 1 HIGH channel P_{OUT}= 19.93 dBm F = 1989.9875 MHz	ATTEN 10dB RL 40.1dBm 10dB/ MKR 19.93dBm 1.98983GHz  CENTER 1.98980GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms

Port 1 LOW channel

 $P_{OUT} = 23.43 \text{ dBm}$

F = 1930.05 MHz

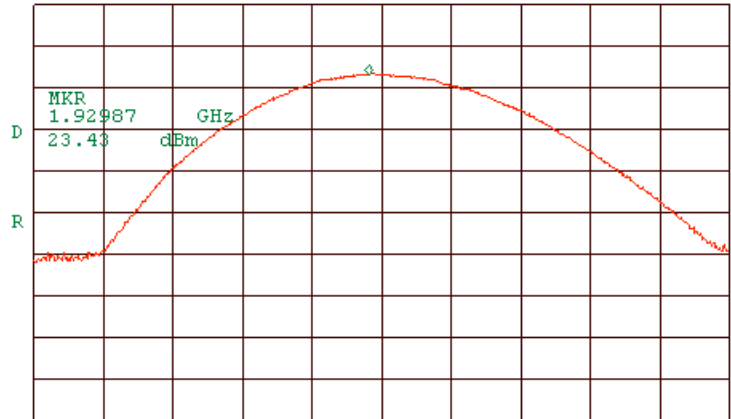
IP = 10dBm

Standard = TDMA

Mod = PI/4 DQPSK

Bit Rate = 48.6 kbps

ATTEN 10dB MKR 23.43dBm
RL 40.1dBm 10dB/ 1.92987GHz



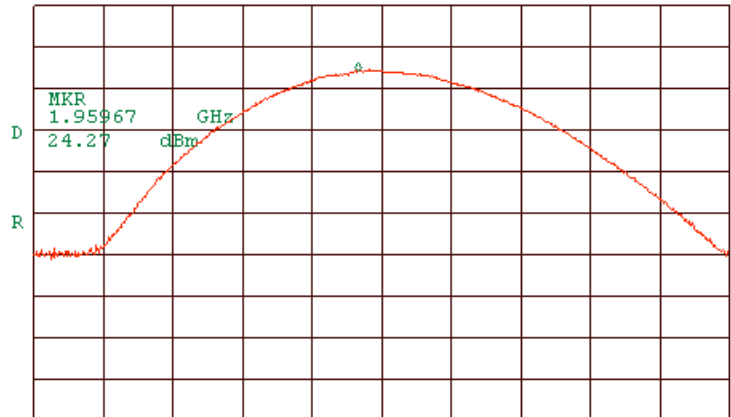
CENTER 1.93005GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 MID channel

 $P_{OUT} = 24.27 \text{ dBm}$

F = 1960 MHz

ATTEN 10dB MKR 24.27dBm
RL 40.1dBm 10dB/ 1.95967GHz



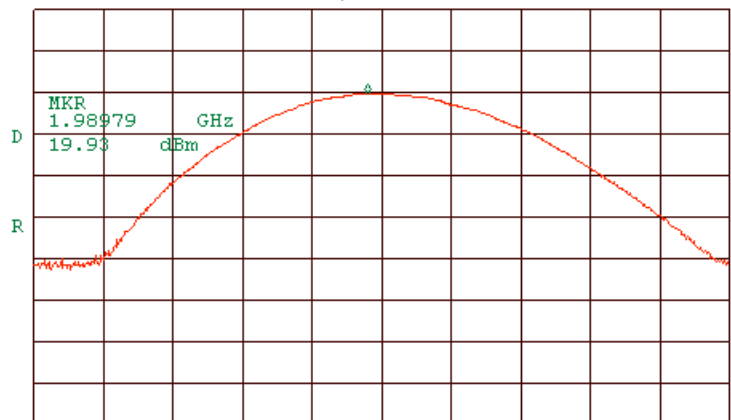
CENTER 1.96000GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 HIGH channel

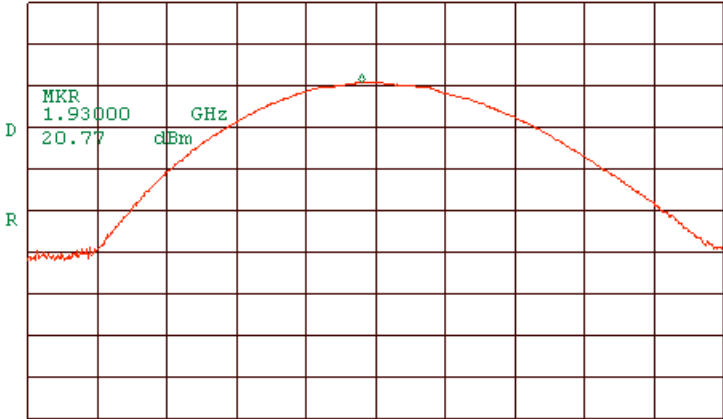
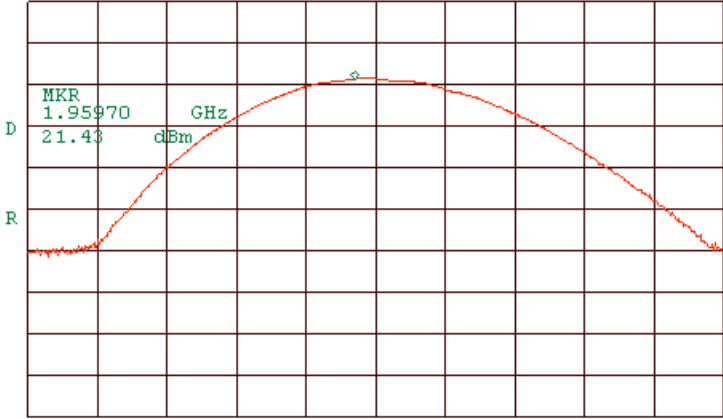
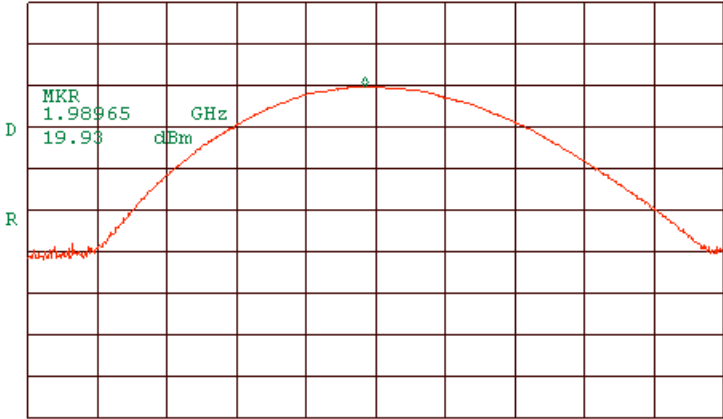
 $P_{OUT} = 19.93 \text{ dBm}$

F = 1989.99 MHz

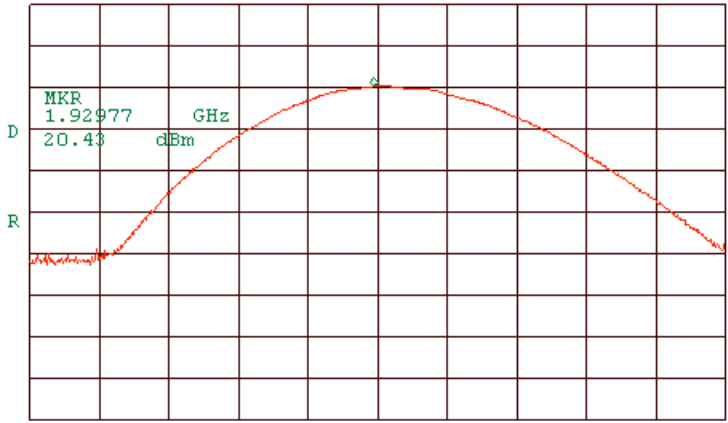
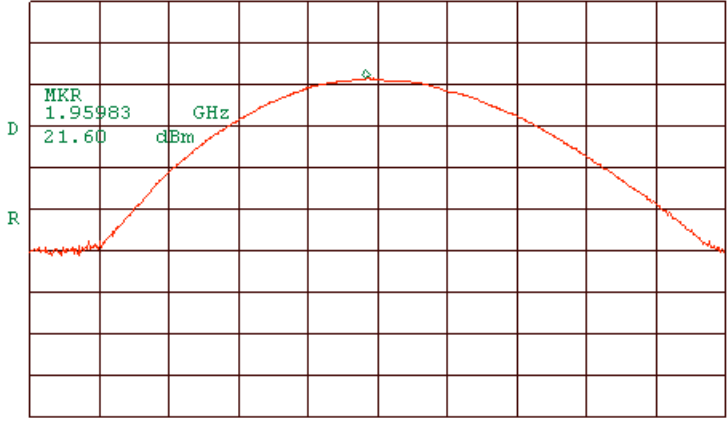
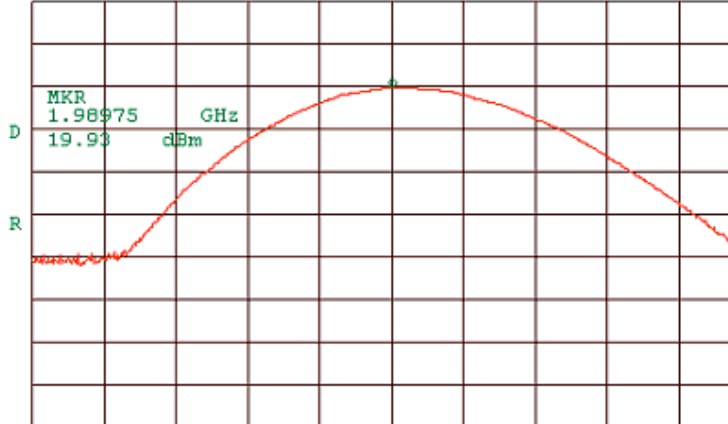
ATTEN 10dB MKR 19.93dBm
RL 40.1dBm 10dB/ 1.98979GHz



CENTER 1.98999GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel P_{OUT}=20.77dBm F = 1930.2 MHz IP = 10dBm Standard = GSM Mod = GMSK Bit Rate = 270.833 kbps	ATTEN 10dB RL 40.1dBm 10dB/ MKR 20.77dBm 1.93000GHz  CENTER 1.93020GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
Port 1 MID channel P_{OUT}=21.43 dBm F = 1960 MHz	ATTEN 10dB RL 40.1dBm 10dB/ MKR 21.43dBm 1.95970GHz  CENTER 1.96000GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
Port 1 HIGH channel P_{OUT}=19.93 dBm F = 1989.8 MHz	ATTEN 10dB RL 40.1dBm 10dB/ MKR 19.93dBm 1.98965GHz  CENTER 1.98980GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

IP = 36dBm

Port 1 LOW channel	ATTEN 10dB RL 40.1dBm 10dB/ MKR 20.43dBm 1.92977GHz  CENTER 1.92982GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
Port 1 MID channel	ATTEN 10dB RL 40.1dBm 10dB/ MKR 21.60dBm 1.95983GHz  CENTER 1.96000GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms
Port 1 HIGH channel	ATTEN 10dB RL 40.1dBm 10dB/ MKR 19.93dBm 1.98975GHz  CENTER 1.98975GHz SPAN 10.00MHz *RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel

 $P_{OUT} = 25.43 \text{ dBm}$

F = 1930.625 MHz

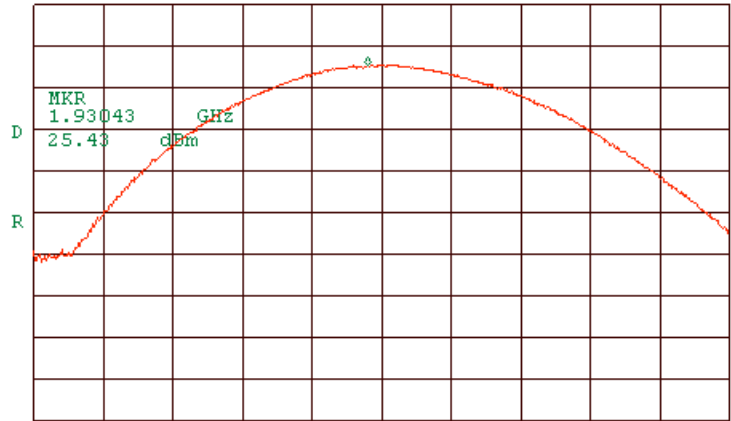
IP = 36 dBm

Standard = CDMA

Mod = QPSK

Bit rate = 1.2288 Mbps

ATTEN 10dB MKR 25.43dBm
RL 40.1dBm 10dB/ 1.93043GHz



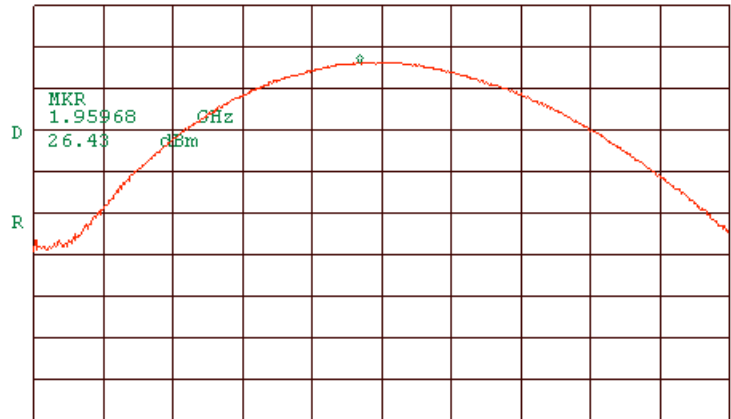
CENTER 1.93063GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 MID channel

 $P_{OUT} = 26.43 \text{ dBm}$

F = 1960 MHz

ATTEN 10dB MKR 26.43dBm
RL 40.1dBm 10dB/ 1.95968GHz



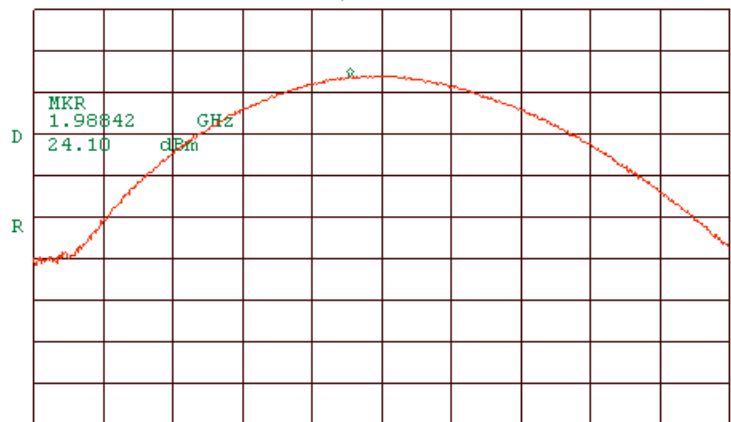
CENTER 1.96000GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 HIGH channel

 $P_{OUT} = 24.10 \text{ dBm}$

F = 1988.75 MHz

ATTEN 10dB MKR 24.10dBm
RL 40.1dBm 10dB/ 1.98842GHz



CENTER 1.98887GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel

 $P_{OUT} = 21.83 \text{ dBm}$

F = 1930.625 MHz

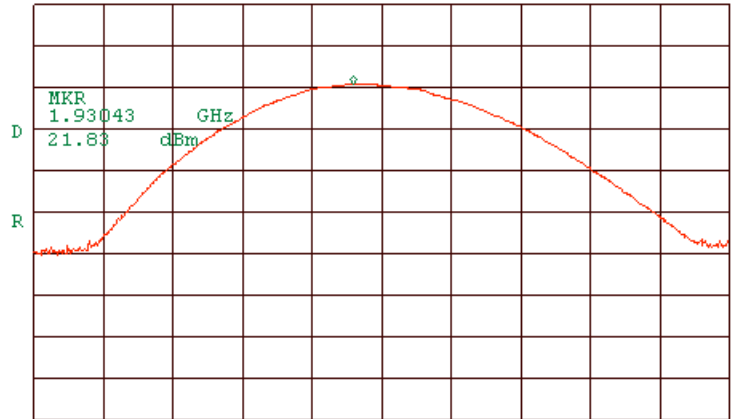
IP = 36 dBm

Standard = CDMA

Mod = OQPSK

Bit rate = 1.2288 Mbps

ATTEN 10dB MKR 21.83dBm
RL 41.0dBm 10dB/ 1.93043GHz



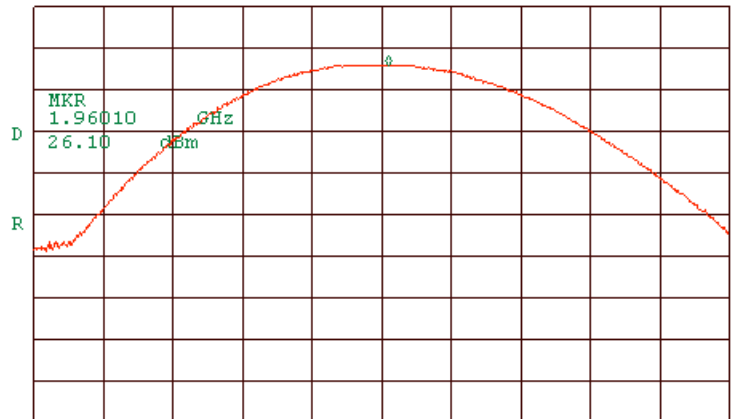
CENTER 1.93083GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 MID channel

 $P_{OUT} = 26.10 \text{ dBm}$

F = 1960 MHz

ATTEN 10dB MKR 26.10dBm
RL 40.1dBm 10dB/ 1.96010GHz



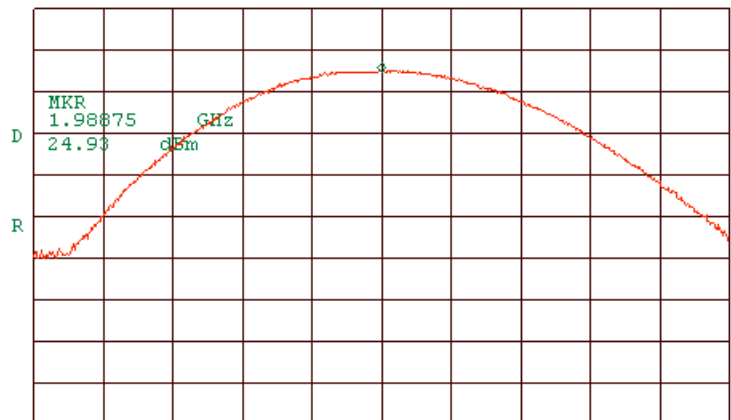
CENTER 1.96000GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 HIGH channel

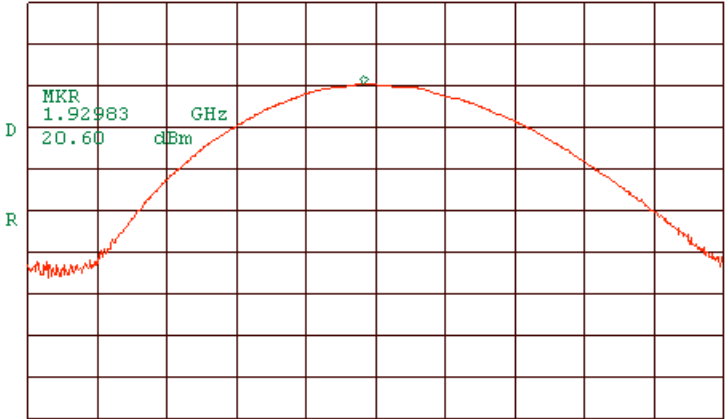
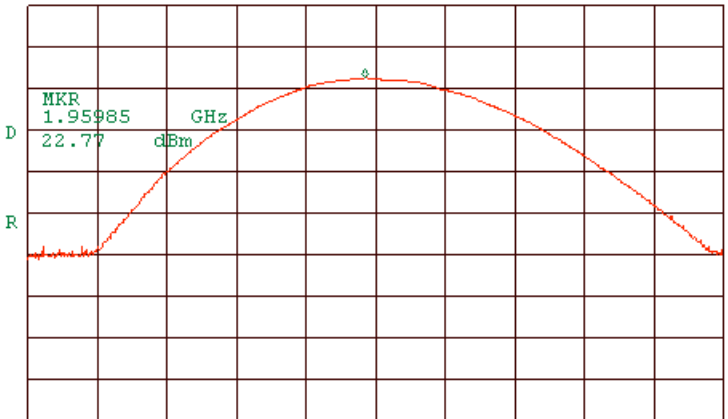
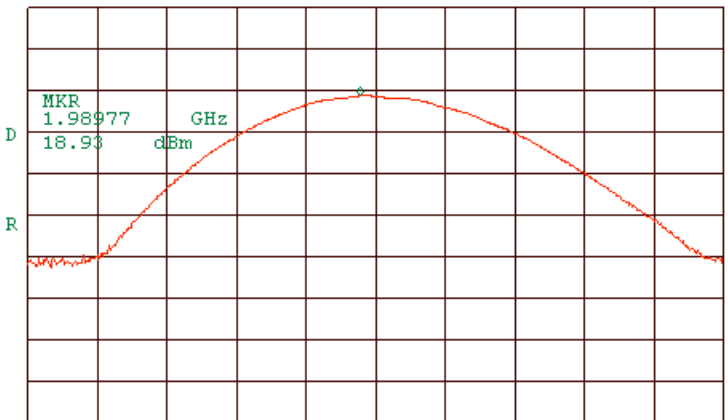
 $P_{OUT} = 24.93 \text{ dBm}$

F = 1988.75 MHz

ATTEN 10dB MKR 24.93dBm
RL 40.1dBm 10dB/ 1.98875GHz



CENTER 1.98875GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel P_{OUT}=20.60dBm F = 1930.0125 MHz IP = 36dBm Standard = FM Mod = FM Deviation = 2.5 kHz Rate = 2500 Hz	ATTEN 10dB RL 40.1dBm 10dB/ MKR 20.60dBm 1.92983GHz  CENTER 1.93000GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms
Port 1 MID channel P_{OUT}=22.77 dBm F = 1960 MHz	ATTEN 10dB RL 40.1dBm 10dB/ MKR 22.77dBm 1.95985GHz  CENTER 1.96000GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms
Port 1 HIGH channel P_{OUT}=18.93 dBm F = 1989.9875 MHz	ATTEN 10dB RL 40.1dBm 10dB/ MKR 18.93dBm 1.98977GHz  CENTER 1.98999GHz *RBW 2.0MHz VBW 3.0MHz SPAN 10.00MHz SWP 50.0ms

Port 1 LOW channel

 $P_{OUT} = 23.10\text{dBm}$

F = 1930.05 MHz

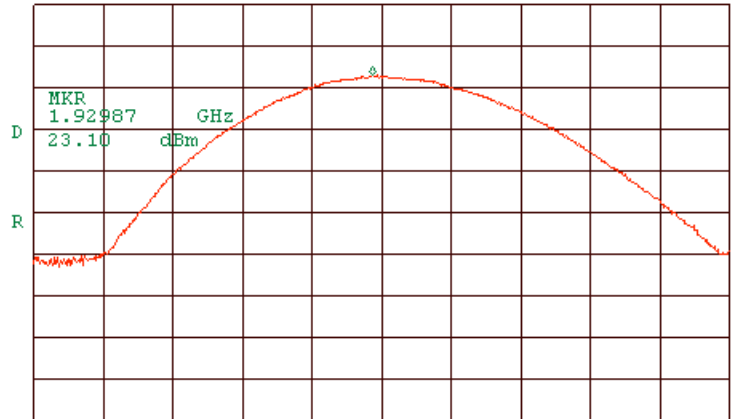
IP = 36dBm

Standard = TDMA

Mod = PI/4 DQPSK

Bit Rate = 48.6 kbps

ATTEN 10dB MKR 23.10dBm
RL 40.1dBm 10dB/ 1.92987GHz



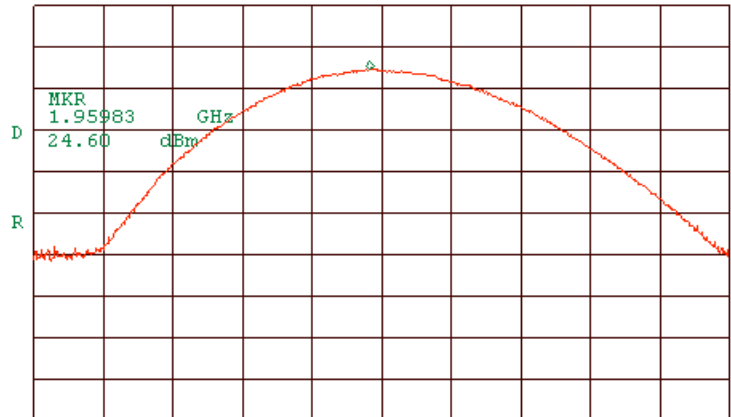
CENTER 1.93000GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 MID channel

 $P_{OUT} = 24.60\text{ dBm}$

F = 1960 MHz

ATTEN 10dB MKR 24.60dBm
RL 40.1dBm 10dB/ 1.95983GHz



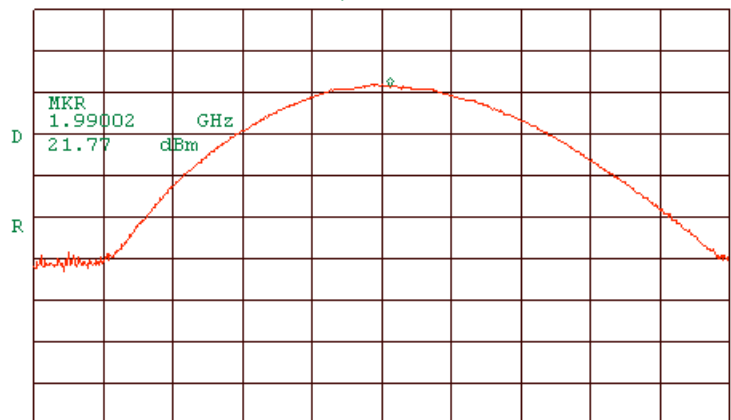
CENTER 1.96000GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 HIGH channel

 $P_{OUT} = 21.77\text{ dBm}$

F = 1989.99 MHz

ATTEN 10dB MKR 21.77dBm
RL 40.1dBm 10dB/ 1.99002GHz



CENTER 1.98990GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 LOW channel

 $P_{OUT} = 20.27 \text{ dBm}$

F = 1930.2 MHz

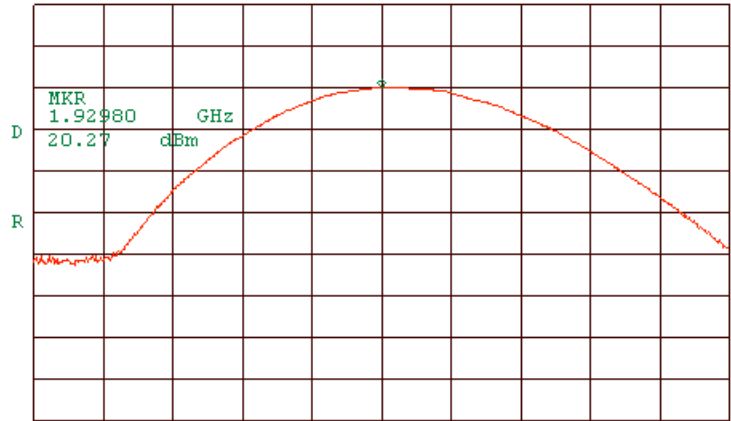
IP = 36 dBm

Standard = GSM

Mod = GMSK

Bit Rate = 270.833 kbps

ATTEN 10dB MKR 20.27dBm
RL 40.1dBm 10dB/ 1.92980GHz



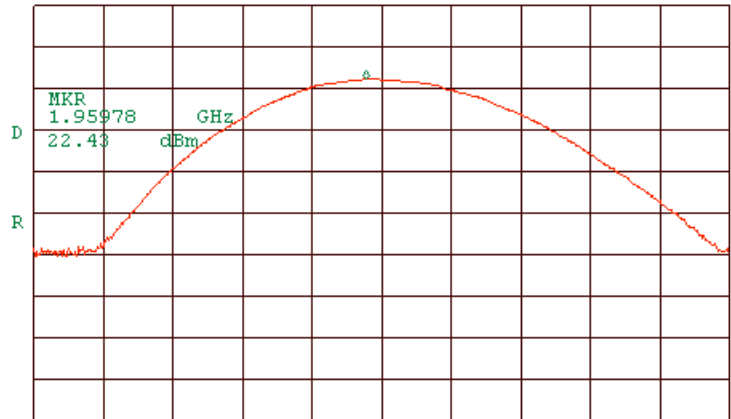
CENTER 1.92980GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 MID channel

 $P_{OUT} = 22.43 \text{ dBm}$

F = 1960 MHz

ATTEN 10dB MKR 22.43dBm
RL 40.1dBm 10dB/ 1.95978GHz



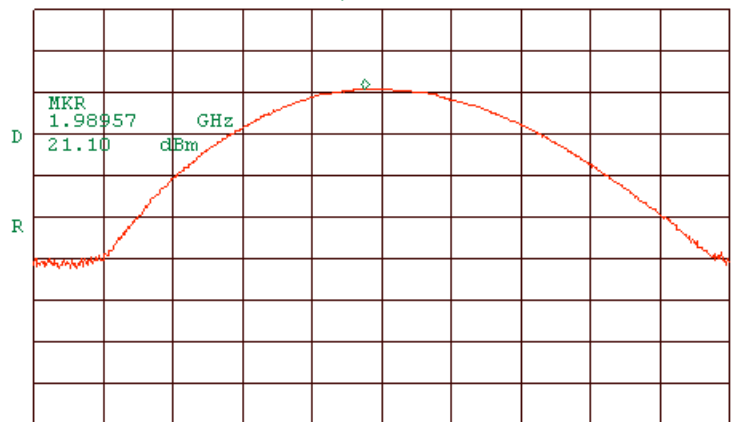
CENTER 1.96000GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Port 1 HIGH channel

 $P_{OUT} = 19.93 \text{ dBm}$

F = 1989.8 MHz

ATTEN 10dB MKR 21.10dBm
RL 40.1dBm 10dB/ 1.98957GHz



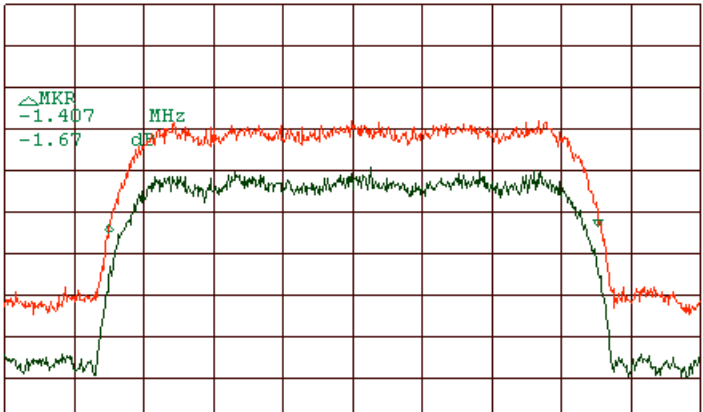
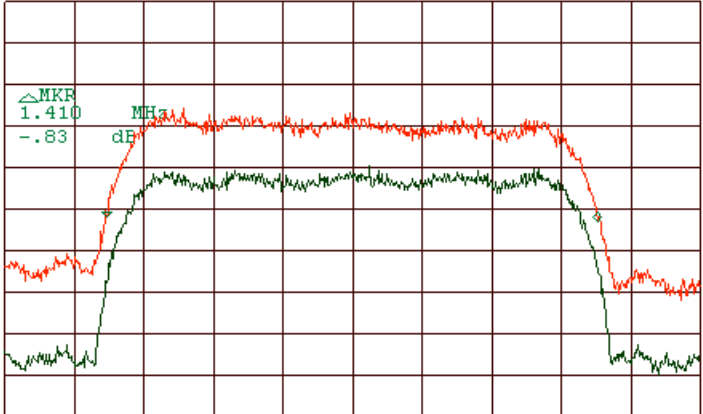
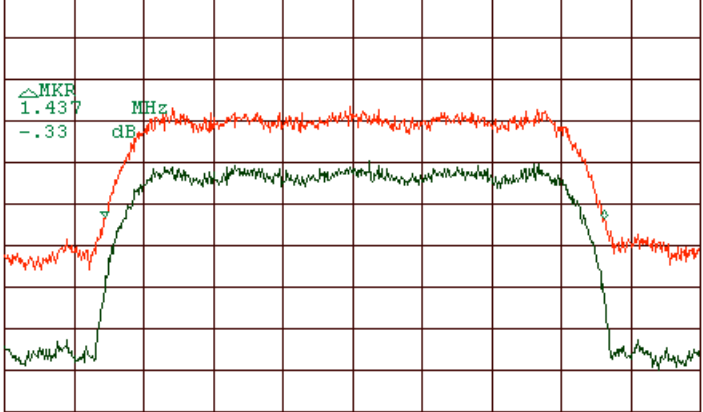
CENTER 1.98980GHz SPAN 10.00MHz
*RBW 2.0MHz VBW 3.0MHz SWP 50.0ms

Date 18 May 2004
Test Occupied bandwidth
Project 15867, Mobile Access 1200 and 1000
Humidity 46%
Temperature 24 C
Air pressure 1014hPa
Test equipment 521, 1947, 121, 589, 603
Assigned band Downlink: 1930 – 1990MHz Uplink: 1850 – 1910MHz
IP = input power
Op = output power
G = gain
Mod = input modulation

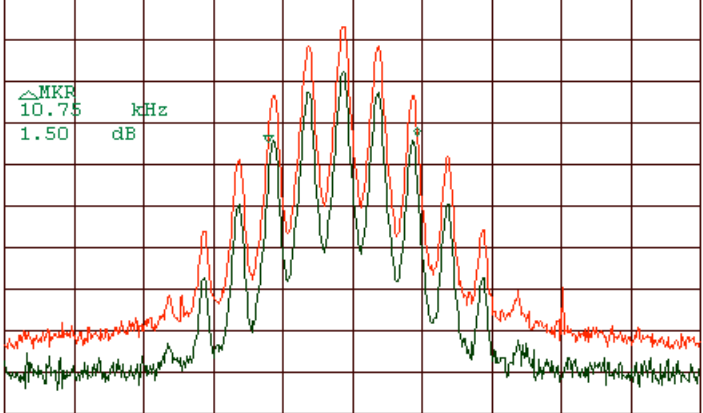
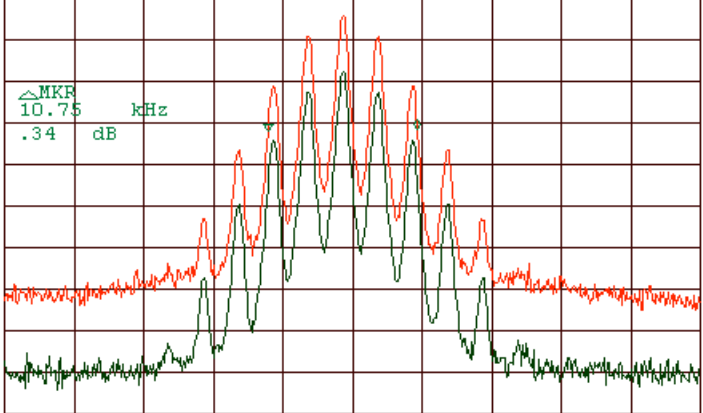
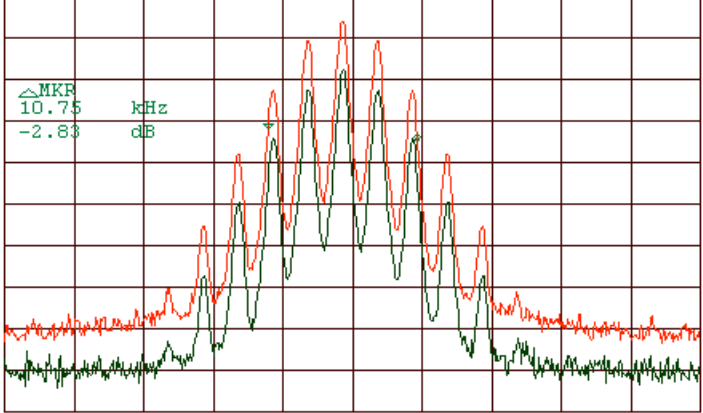
Occupied bandwidth DOWNLINK

$F_{\text{LOW}} = 1930.0125 \text{ MHz}$
 $F_{\text{MID}} = 1960 \text{ MHz}$
 $F_{\text{HIGH}} = 1989.9875 \text{ MHz}$

IP = 10dBm

Port 1 LOW channel	ATTEN 10dB RL 25.0dBm 10dB/ ΔMKR -1.67dB -1.407MHz  CENTER 1.930622GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
OBW = 1.407 MHz	
F = 1930.625 MHz IP = 10dBm Standard = CDMA Mod = QPSK Bit rate = 1.2288 Mbps Upper signal = Output power Lower signal = Incident power	
Port 1 MID channel	ATTEN 10dB RL 25.0dBm 10dB/ ΔMKR -.83dB 1.410MHz  CENTER 1.960000GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
OBW = 1.41 MHz	
F = 1960 MHz	
OBW = 1.437 MHz	ATTEN 10dB RL 25.0dBm 10dB/ ΔMKR -.33dB 1.437MHz  CENTER 1.988750GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
P _{OUT} = 24.60 dBm	
F = 1988.75 MHz	

Port 1 LOW channel	
OBW = 1.413 MHz	
F = 1930.625 MHz	
IP = 10dBm	
Standard = CDMA	
Mod = OQPSK	
Bit rate = 1.2288 Mbps	
Upper signal = Output power	
Lower signal = Incident power	
	ATTN 10dB RL 25.0dBm 10dB/ ΔMKR - .50dB 1.413MHz CENTER 1.930625GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
Port 1 MID channel	
OBW = 1.417 MHz	
F = 1960 MHz	
	ATTN 10dB RL 25.0dBm 10dB/ ΔMKR - .34dB -1.417MHz CENTER 1.960000GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
Port 1 MID channel	
OBW = 1.417 MHz	
F = 1988.75 MHz	
	ATTN 10dB RL 25.0dBm 10dB/ ΔMKR .33dB 1.417MHz CENTER 1.988750GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec

Port 1 LOW channel OBW = 10.75 kHz F = 1930.0125 MHz IP = 10dBm Standard = FM Mod = FM Deviation = 2.5 kHz Rate = 2500 Hz Upper signal = Output power Lower signal = Incident power	ATTEN 10dB RL 25.0dBm 10dB/ △MKR 1.50dB 10.75kHz  CENTER 1.93001250GHz SPAN 50.00kHz *RBW 300Hz VBW 1.0kHz SWP 1.40sec
Port 1 MID channel OBW = 10.75 kHz F = 1960 MHz	ATTEN 10dB RL 25.0dBm 10dB/ △MKR .34dB 10.75kHz  CENTER 1.960000000GHz SPAN 50.00kHz *RBW 300Hz VBW 1.0kHz SWP 1.40sec
Port 1 MID channel OBW = 10.75 kHz F = 1989.9875 MHz	ATTEN 10dB RL 25.0dBm 10dB/ △MKR -2.83dB 10.75kHz  CENTER 1.98998750GHz SPAN 50.00kHz *RBW 300Hz VBW 1.0kHz SWP 1.40sec

Port 1 LOW channel

OBW = 32.17 kHz

F = 1930.05 MHz

IP = 10dBm

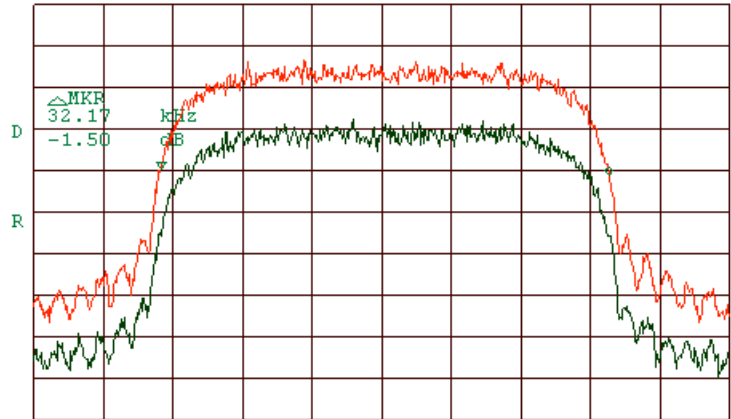
Standard = TDMA

Mod = PI/4 DQPSK

Bit Rate = 48.6 kbps

Upper signal = Output power

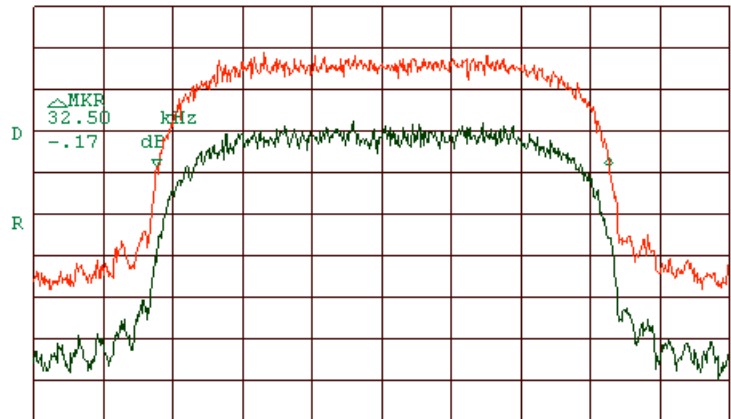
Lower signal = Incident power

 ATTN 10dB
 RL 25.0dBm 10dB/ Δ MKR -1.50dB
 32.17kHz

 CENTER 1.93005000GHz SPAN 50.00kHz
 *RBW 300Hz VBW 1.0kHz SWP 1.40sec

Port 1 MID channel

OBW = 32.50 kHz

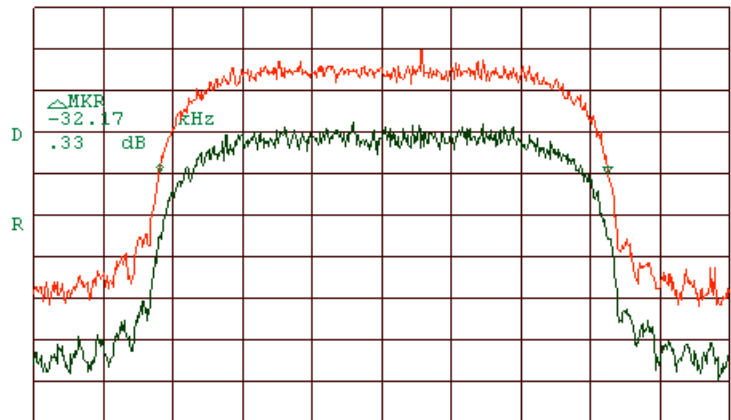
F = 1960 MHz

 ATTN 10dB
 RL 25.0dBm 10dB/ Δ MKR -.17dB
 32.50kHz

 CENTER 1.96000000GHz SPAN 50.00kHz
 *RBW 300Hz VBW 1.0kHz SWP 1.40sec

Port 1 MID channel

OBW = 32.17 kHz

F = 1989.99 MHz

 ATTN 10dB
 RL 25.0dBm 10dB/ Δ MKR .33dB
 -32.17kHz

 CENTER 1.98999000GHz SPAN 50.00kHz
 *RBW 300Hz VBW 1.0kHz SWP 1.40sec

Port 1 LOW channel

OBW = 306.7 kHz

F = 1930.2 MHz

IP = 10dBm

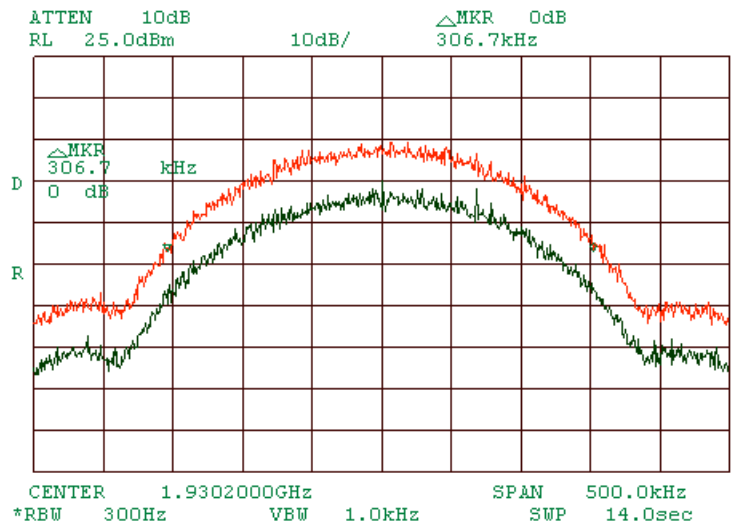
Standard = GSM

Mod = GMSK

Bit Rate = 270.833 kbps

Upper signal = Output power

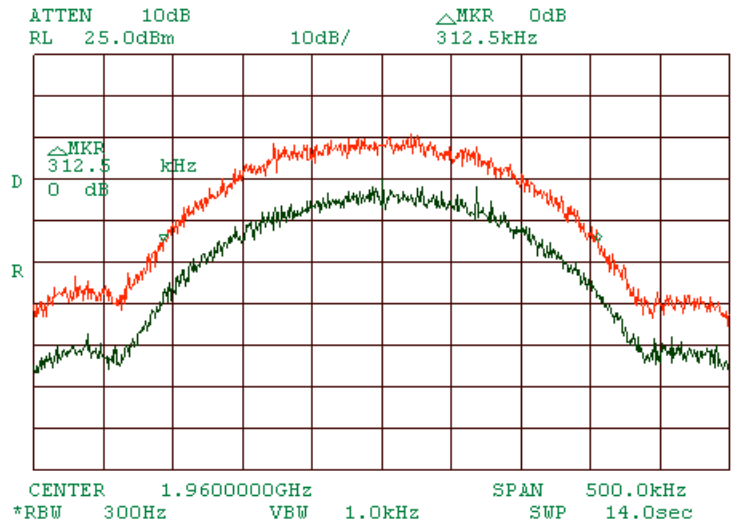
Lower signal = Incident power



Port 1 MID channel

OBW = 312.5 kHz

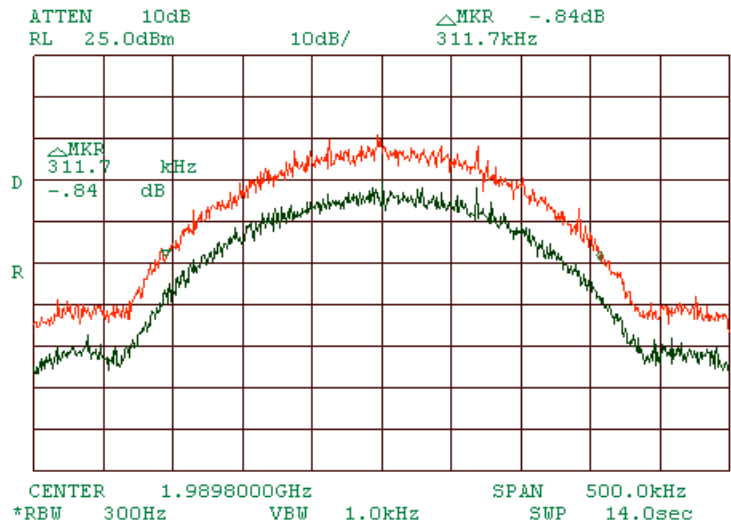
F = 1960 MHz



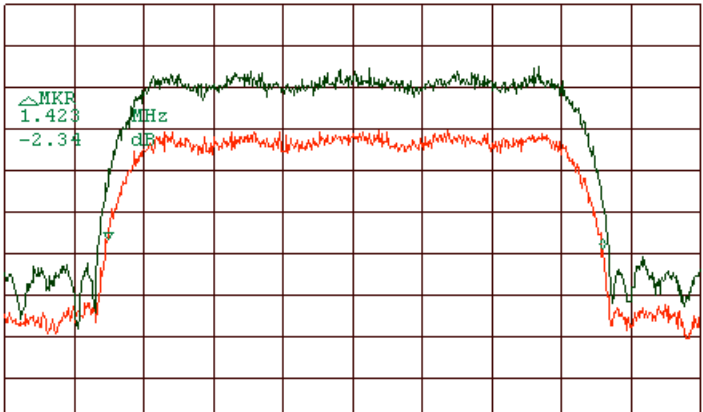
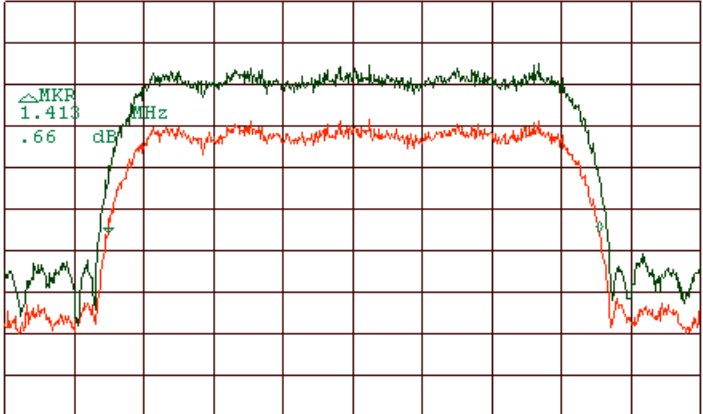
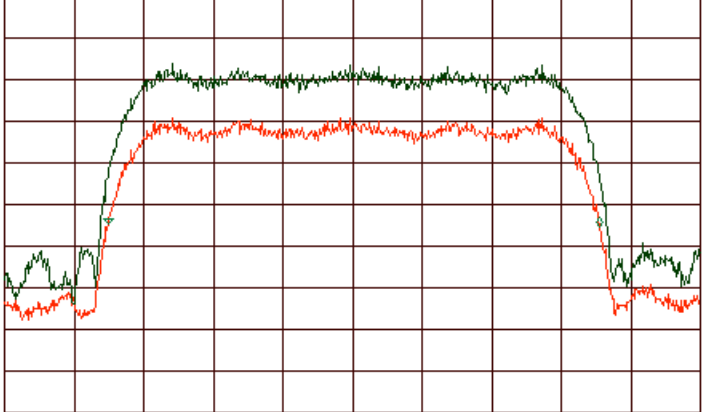
Port 1 MID channel

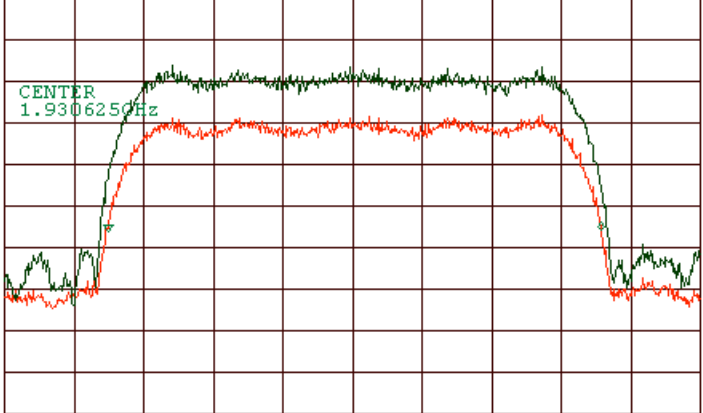
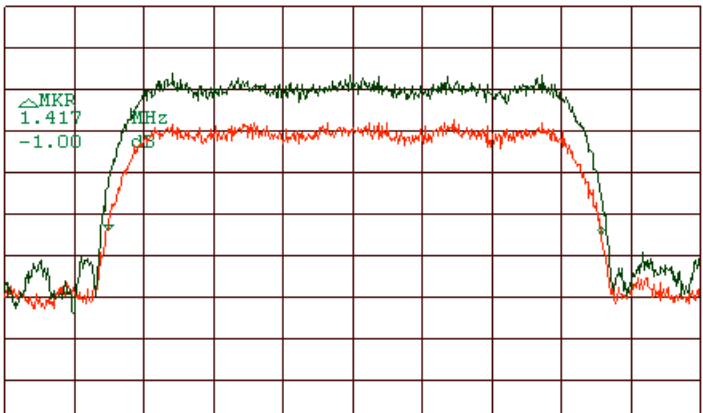
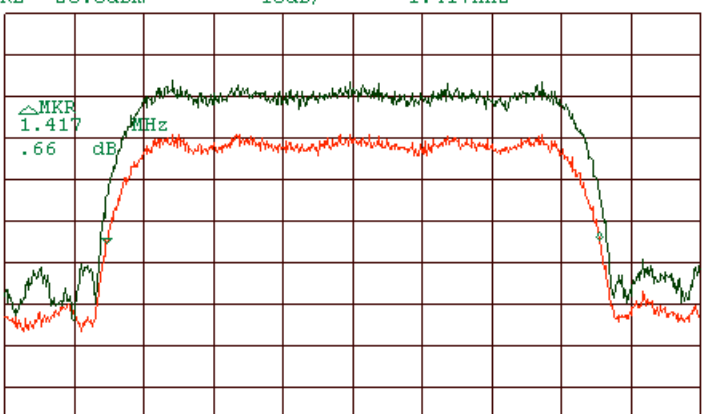
OBW = 311.7 kHz

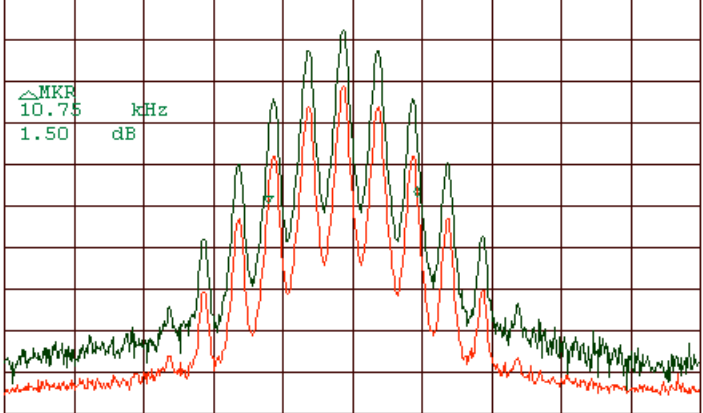
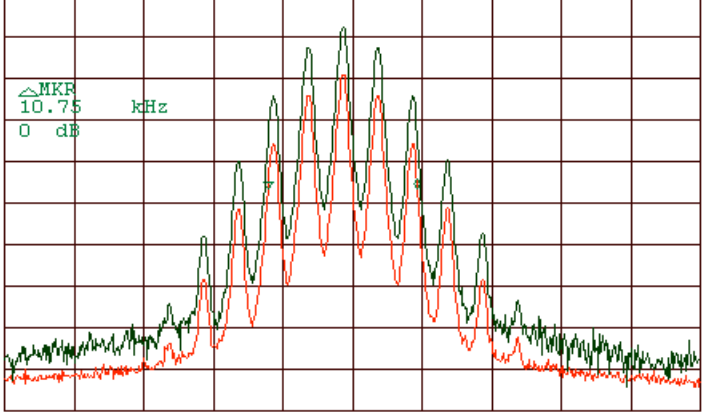
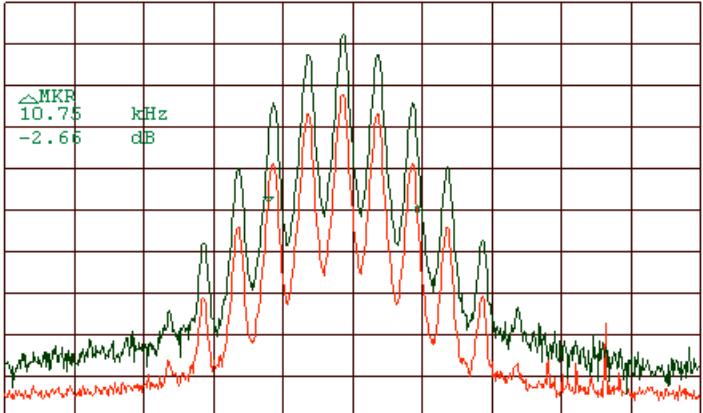
F = 1989.8 MHz



IP = 36dBm

Port 1 LOW channel	ATTEN 10dB RL 25.0dBm 10dB/ ΔMKR -2.34dB 1.423MHz  CENTER 1.930625GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
OBW = 1.423 MHz	
F = 1930.625 MHz IP = 10dBm Standard = CDMA Mod = QPSK Bit rate = 1.2288 Mbps Upper signal = Incident power Lower signal = Output power	
Port 1 MID channel	ATTEN 10dB RL 25.0dBm 10dB/ ΔMKR .66dB 1.413MHz  CENTER 1.960000GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
OBW = 1.413 MHz	
F = 1960 MHz	
Port 1 MID channel	ATTEN 10dB RL 25.0dBm 10dB/ ΔMKR -.50dB 1.413MHz  CENTER 1.988750GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
OBW = 1.413 MHz	
F = 1988.75 MHz	

Port 1 LOW channel OBW = 1.417 kHz F = 1930.625 MHz IP = 10dBm Standard = CDMA Mod = OQPSK Bit rate = 1.2288 Mbps Upper signal = Incident power Lower signal = Output power	ATTEN 10dB RL 25.0dBm 10dB/ △MKR .17dB 1.417MHz  CENTER 1.930625GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
Port 1 MID channel OBW = 1.417 kHz F = 1960 MHz	ATTEN 10dB RL 25.0dBm 10dB/ △MKR -1.00dB 1.417MHz  CENTER 1.960000GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
Port 1 MID channel OBW = 1.417 kHz F = 1988.75 MHz	ATTEN 10dB RL 25.0dBm 10dB/ △MKR .66dB 1.417MHz  CENTER 1.988750GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec

Port 1 LOW channel OBW = 10.75 kHz F = 1930.0125 MHz IP = 10dBm Standard = FM Mod = FM Deviation = 2.5 kHz Rate = 2500 Hz Upper signal = Incident power Lower signal = Output power	ATTEN 10dB RL 40.0dBm 10dB/ △MKR 1.50dB 10.75kHz  CENTER 1.93001250GHz SPAN 50.00kHz *RBW 300Hz VBW 1.0kHz SWP 1.40sec
Port 1 MID channel OBW = 10.75 kHz F = 1960 MHz	ATTEN 10dB RL 40.0dBm 10dB/ △MKR 0dB 10.75kHz  CENTER 1.96000000GHz SPAN 50.00kHz *RBW 300Hz VBW 1.0kHz SWP 1.40sec
Port 1 MID channel OBW = 10.75 kHz F = 1989.9875 MHz	ATTEN 10dB RL 40.0dBm 10dB/ △MKR -2.66dB 10.75kHz  CENTER 1.98998750GHz SPAN 50.00kHz *RBW 300Hz VBW 1.0kHz SWP 1.40sec

Port 1 LOW channel

OBW = 32.67 kHz

F = 1930.05 MHz

IP = 10dBm

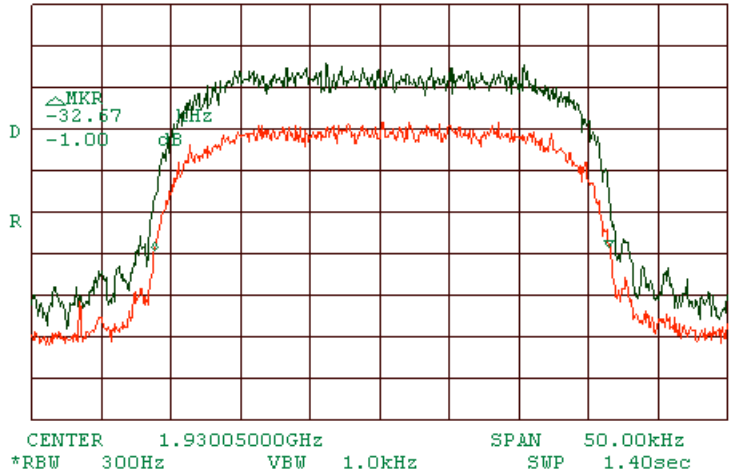
Standard = TDMA

Mod = PI/4 DQPSK

Bit Rate = 48.6 kbps

Upper signal = Incident power

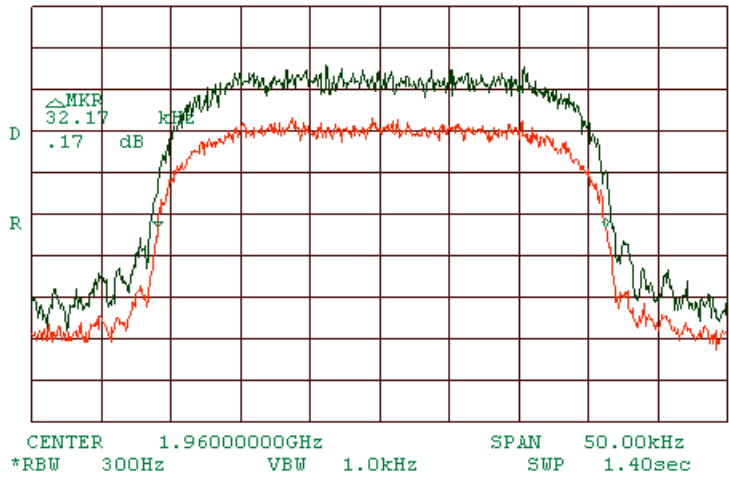
Lower signal = Output power

 ATTN 10dB
 RL 40.0dBm 10dB/ Δ MKR -1.00dB
 -32.67kHz


Port 1 MID channel

OBW = 32.17 kHz

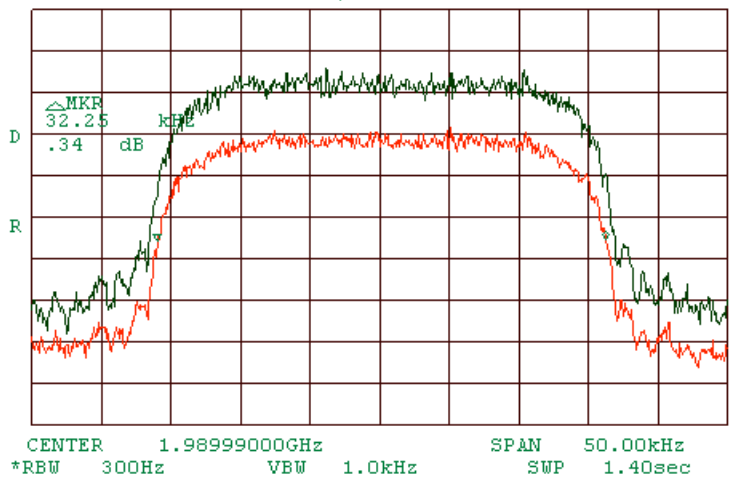
F = 1960 MHz

 ATTN 10dB
 RL 40.0dBm 10dB/ Δ MKR .17dB
 32.17kHz


Port 1 MID channel

OBW = 32.25 kHz

F = 1989.99 MHz

 ATTN 10dB
 RL 40.0dBm 10dB/ Δ MKR .34dB
 32.25kHz


Port 1 LOW channel

OBW = 305.0 kHz

F = 1930.2 MHz

IP = 10dBm

Standard = GSM

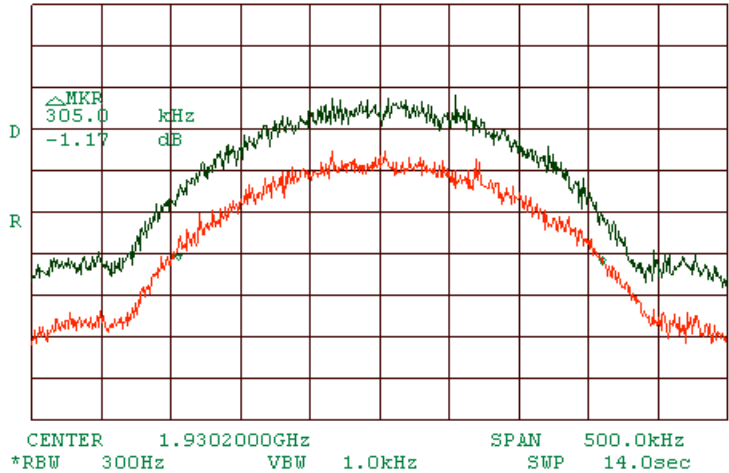
Mod = GMSK

Bit Rate = 270.833 kbps

Upper signal = Incident power

Lower signal = Output power

ATTEN 10dB
RL 40.0dBm 10dB/ Δ MKR -1.17dB
305.0kHz

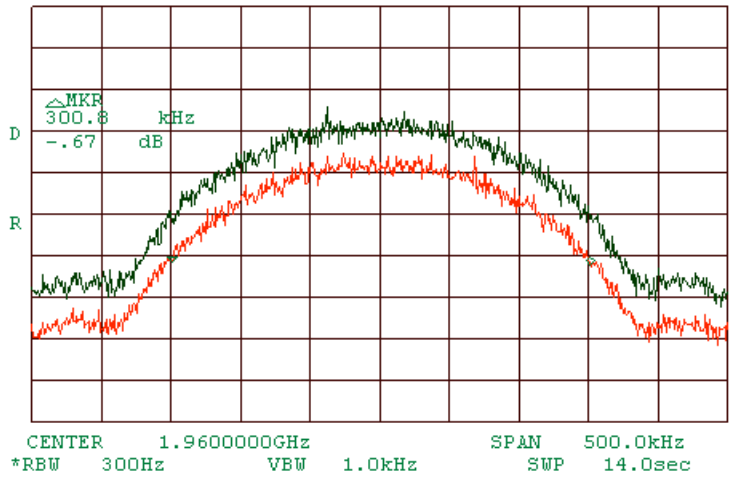


Port 1 MID channel

OBW = 300.8 kHz

F = 1960 MHz

ATTEN 10dB
RL 40.0dBm 10dB/ Δ MKR -.67dB
300.8kHz

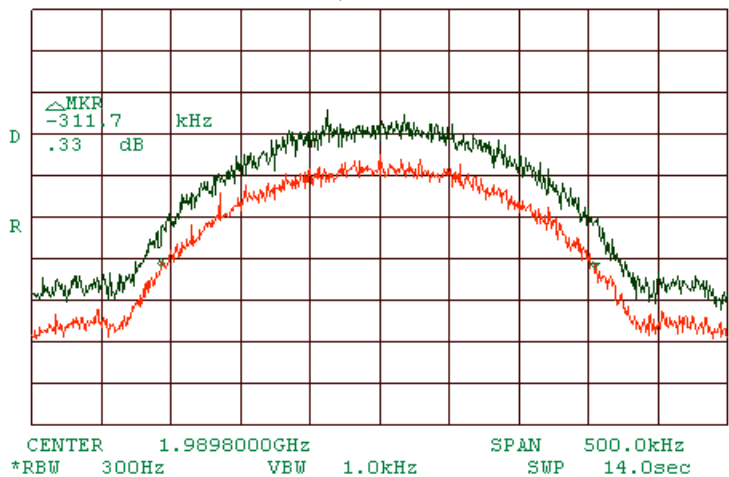


Port 1 MID channel

OBW = 311.7 kHz

F = 1989.8 MHz

ATTEN 10dB
RL 40.0dBm 10dB/ Δ MKR .33dB
-311.7kHz

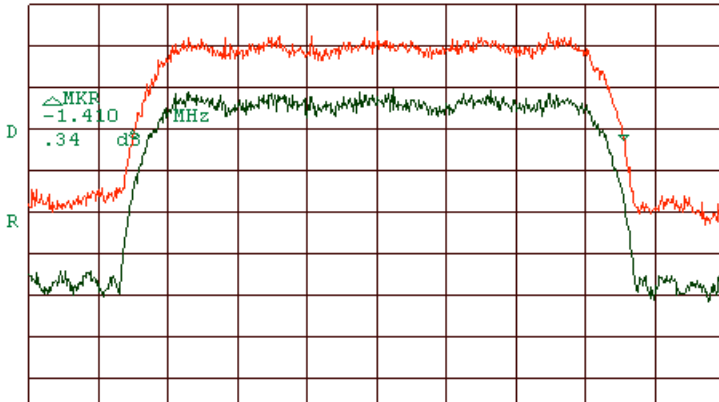
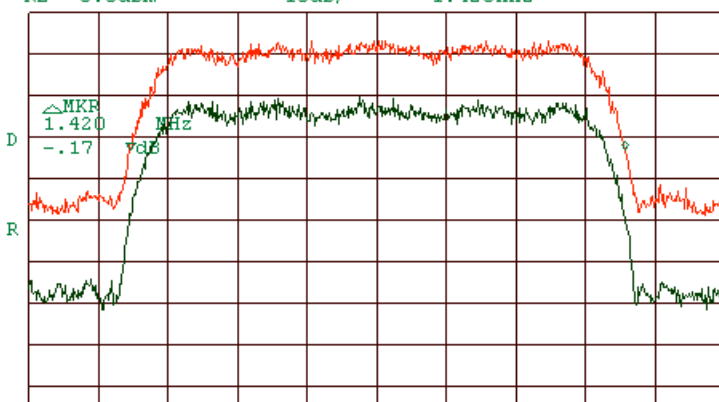
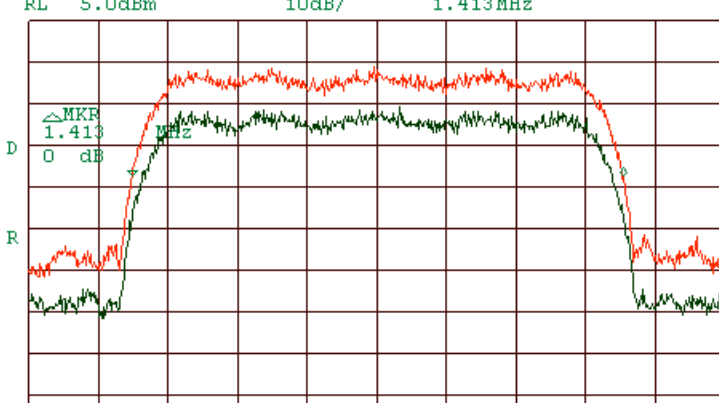


Date 18 May 2004
Test Occupied bandwidth
Project 15867, Mobile Access 1200 Add-on (optical module)
Humidity 46%
Temperature 24 C
Air pressure 1014hPa
Test equipment 521, 1947, 121, 589, 603
Assigned band Downlink: 1930 – 1990MHz Uplink: 1850 – 1910MHz
IP = input power
Op = output power
G = gain
Mod = input modulation

Occupied bandwidth DOWNLINK

$F_{\text{LOW}} = 1930.0125 \text{ MHz}$
 $F_{\text{MID}} = 1960 \text{ MHz}$
 $F_{\text{HIGH}} = 1989.9875 \text{ MHz}$

IP = 10dBm

Port 1 LOW channel	ATTEN 10dB RL 5.0dBm 10dB/ ΔMKR .34dB -1.410MHz  CENTER 1.930624GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
OBW = 1.41 MHz	
F = 1930.625 MHz IP = 10dBm Standard = CDMA Mod = QPSK Bit rate = 1.2288 Mbps Upper signal = Output power Lower signal = Incident power	
Port 1 MID channel	ATTEN 10dB RL 5.0dBm 10dB/ ΔMKR -.17dB 1.420MHz  CENTER 1.960000GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
OBW = 1.42 MHz	
F = 1960 MHz	
Port 1 HIGH channel	ATTEN 10dB RL 5.0dBm 10dB/ ΔMKR 0dB 1.413MHz  CENTER 1.988750GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
OBW = 1.413 MHz	
F = 1988.75 MHz	

Port 1 LOW channel

OBW = 1.403 MHz

F = 1930.625 MHz

IP = 10dBm

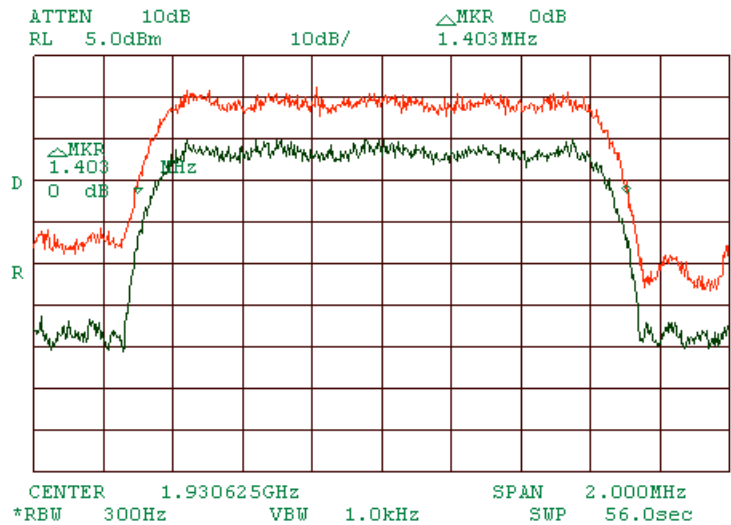
Standard = CDMA

Mod = OQPSK

Bit rate = 1.2288 Mbps

Upper signal = Output power

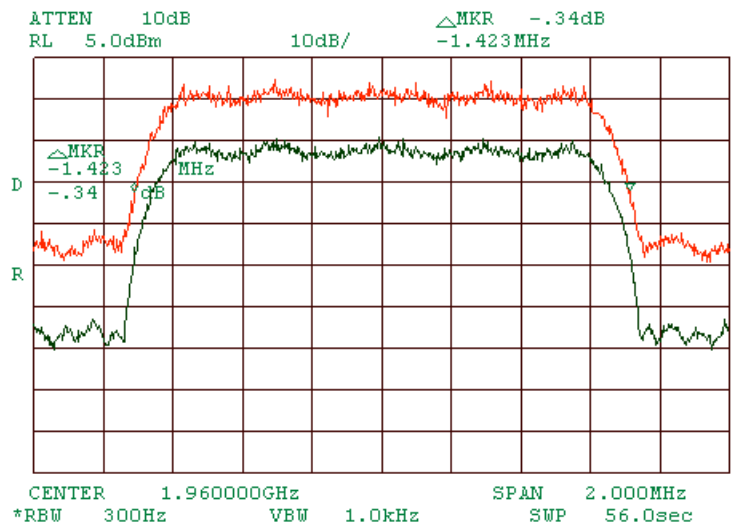
Lower signal = Incident power



Port 1 MID channel

OBW = 1.423 MHz

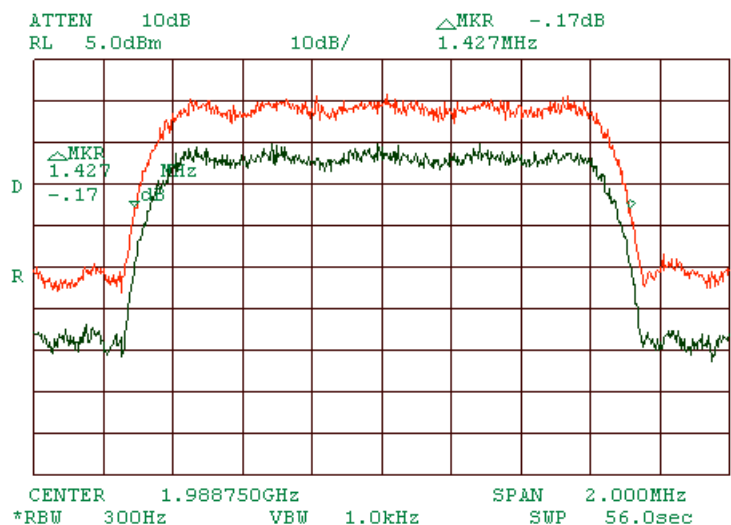
F = 1960 MHz



Port 1 HIGH channel

OBW = 1.427 MHz

F = 1988.75 MHz



Port 1 LOW channel

OBW = 10.83 kHz

F = 1930.0125 MHz

IP = 10dBm

Standard = FM

Mod = FM

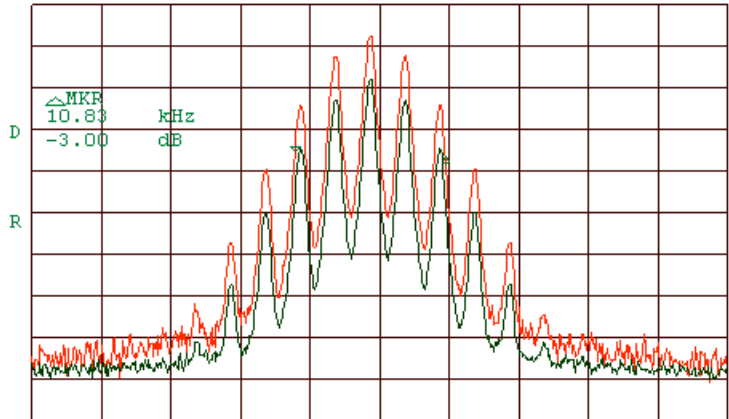
Deviation = 2.5 kHz

Rate = 2500 Hz

Upper signal = Output power

Lower signal = Incident power

ATTEN 10dB
RL 25.0dBm 10dB/ Δ MKR -3.00dB
10.83kHz



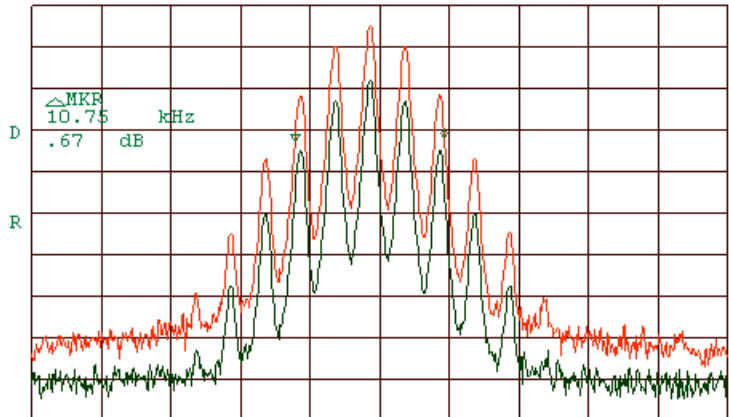
CENTER 1.93001250GHz SPAN 50.00kHz
*RBW 300Hz VBW 1.0kHz SWP 1.40sec

Port 1 MID channel

OBW = 10.75 kHz

F = 1960 MHz

ATTEN 10dB
RL 25.0dBm 10dB/ Δ MKR .67dB
10.75kHz



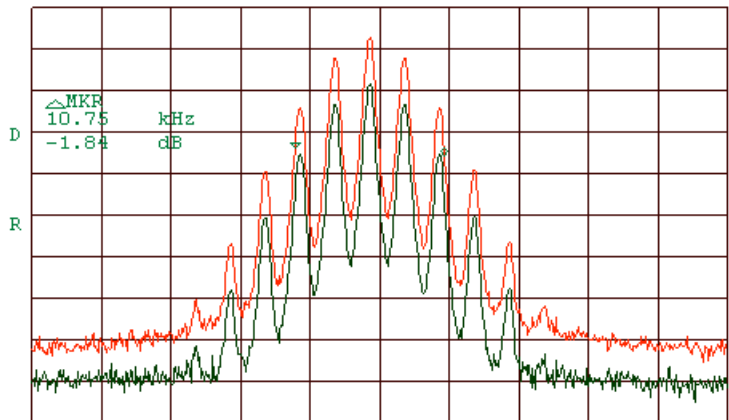
CENTER 1.960000000GHz SPAN 50.00kHz
*RBW 300Hz VBW 1.0kHz SWP 1.40sec

Port 1 HIGH channel

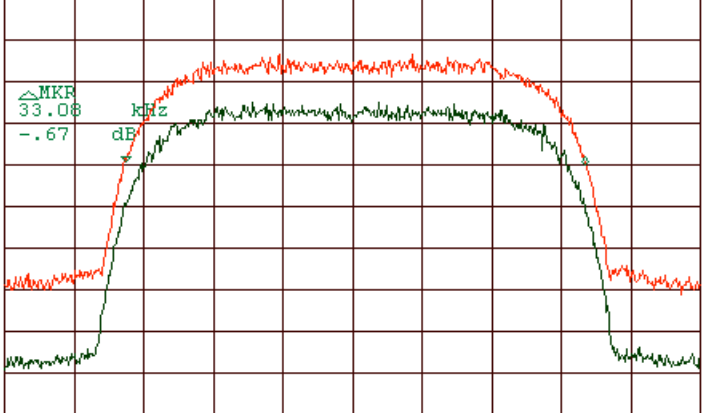
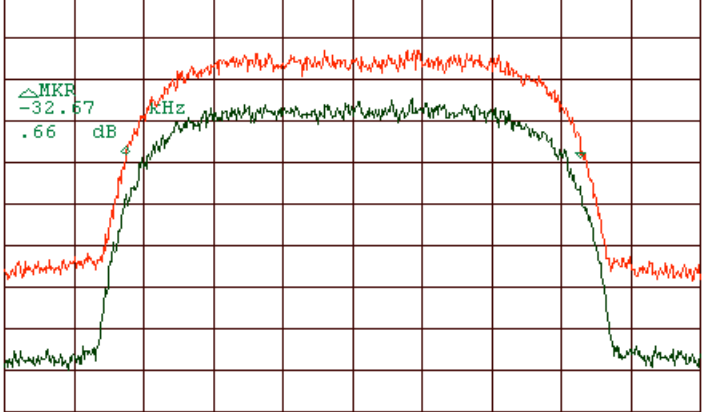
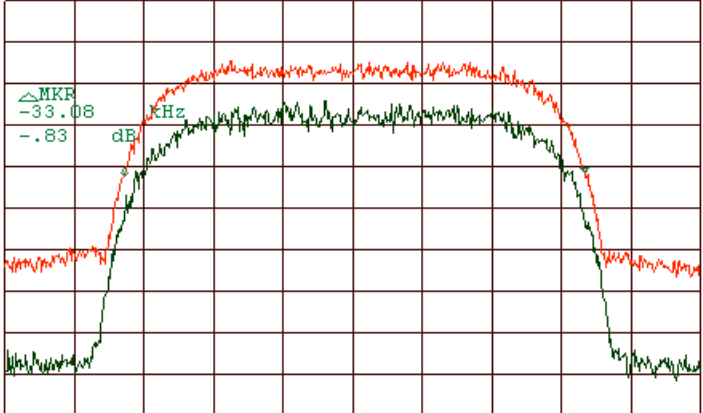
OBW = 10.75 kHz

F = 1989.9875 MHz

ATTEN 10dB
RL 25.0dBm 10dB/ Δ MKR -1.84dB
10.75kHz



CENTER 1.98998750GHz SPAN 50.00kHz
*RBW 300Hz VBW 1.0kHz SWP 1.40sec

Port 1 LOW channel OBW = 33.08 kHz F = 1930.05 MHz IP = 10dBm Standard = TDMA Mod = PI/4 DQPSK Bit Rate = 48.6 kbps Upper signal = Output power Lower signal = Incident power	ATTEN 10dB RL 25.0dBm 10dB/ △MKR -.67dB 33.08kHz  CENTER 1.93005000GHz SPAN 50.00kHz *RBW 300Hz VBW 1.0kHz SWP 1.40sec
Port 1 MID channel OBW = 32.67 kHz F = 1960 MHz	ATTEN 10dB RL 25.0dBm 10dB/ △MKR .66dB -32.67kHz  CENTER 1.96000000GHz SPAN 50.00kHz *RBW 300Hz VBW 1.0kHz SWP 1.40sec
Port 1 HIGH channel OBW = 33.08 kHz F = 1989.99 MHz	ATTEN 10dB RL 25.0dBm 10dB/ △MKR -.83dB -33.08kHz  CENTER 1.98999000GHz SPAN 50.00kHz *RBW 300Hz VBW 1.0kHz SWP 1.40sec

Port 1 LOW channel

OBW = 303.3 kHz

F = 1930.2 MHz

IP = 10dBm

Standard = GSM

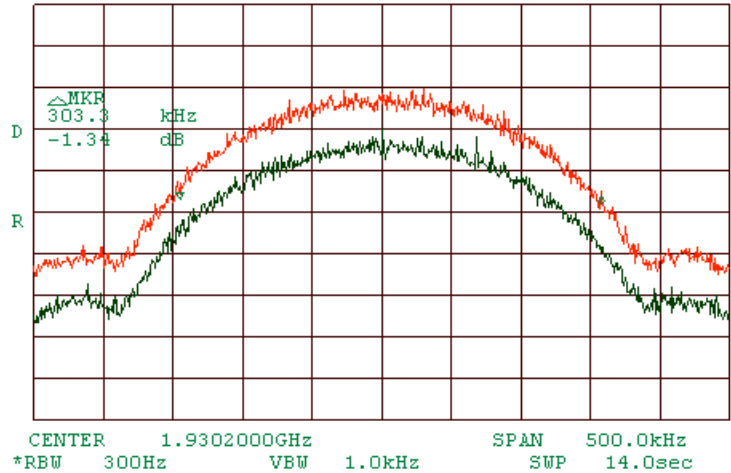
Mod = GMSK

Bit Rate = 270.833 kbps

Upper signal = Output power

Lower signal = Incident power

ATTEN 10dB
RL 25.0dBm 10dB/ Δ MKR -1.34dB
303.3kHz

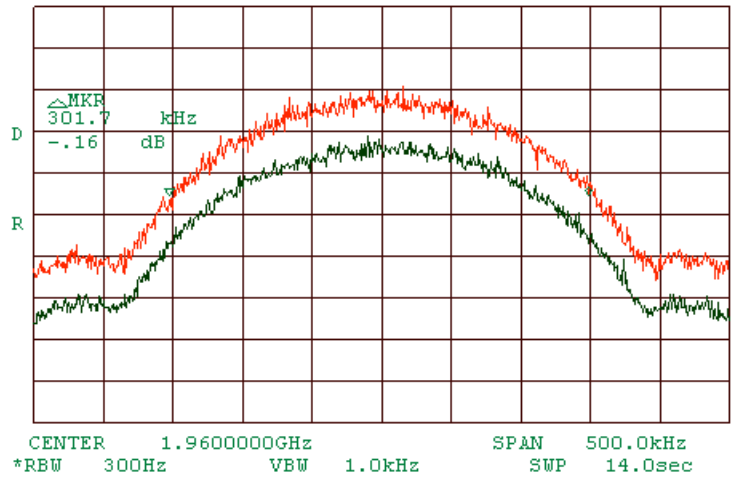


Port 1 MID channel

OBW = 301.7 kHz

F = 1960 MHz

ATTEN 10dB
RL 25.0dBm 10dB/ Δ MKR -.16dB
301.7kHz

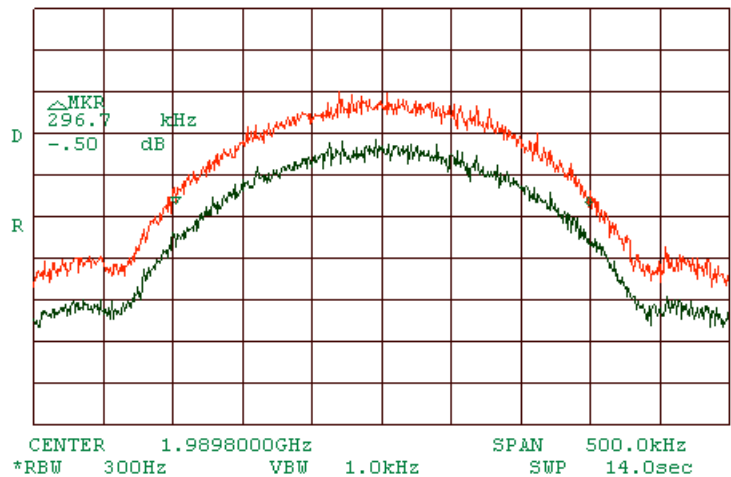


Port 1 HIGH channel

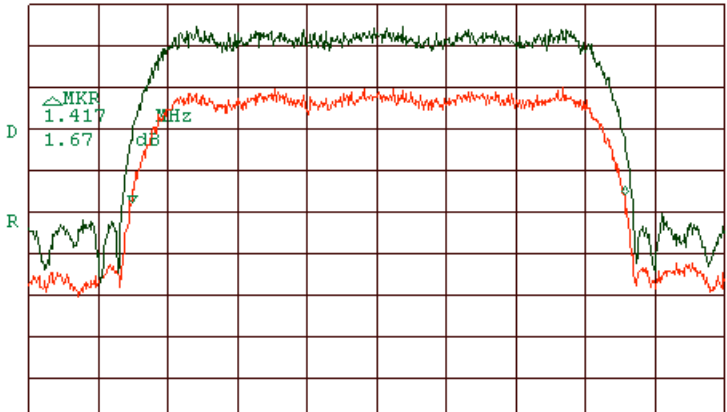
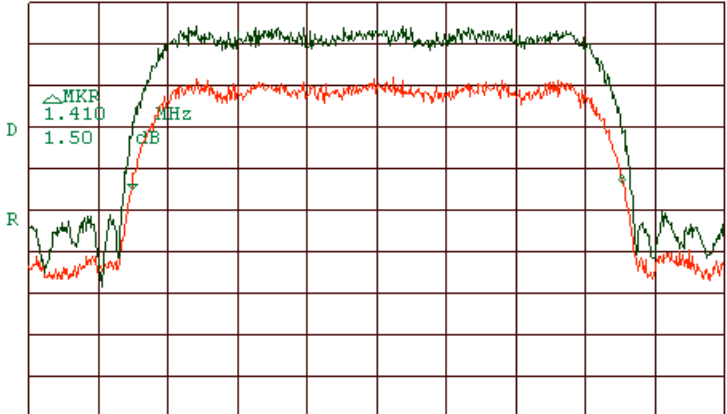
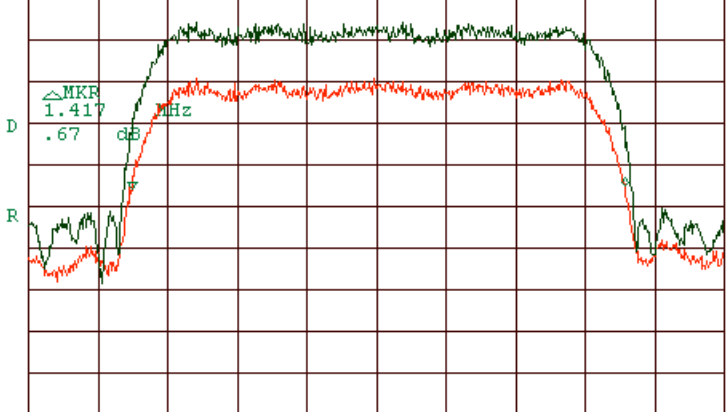
OBW = 33.08 kHz

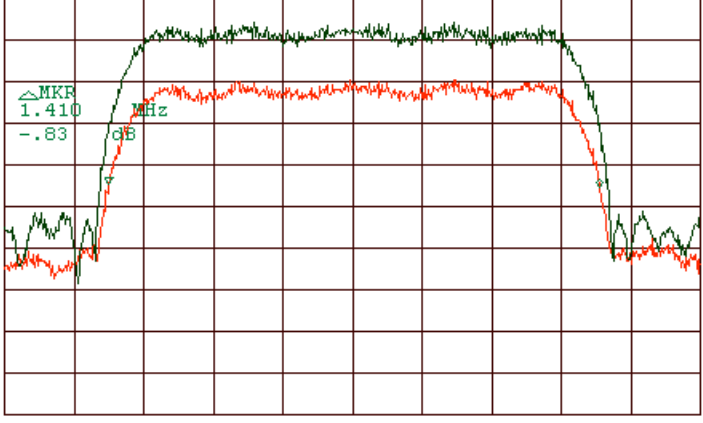
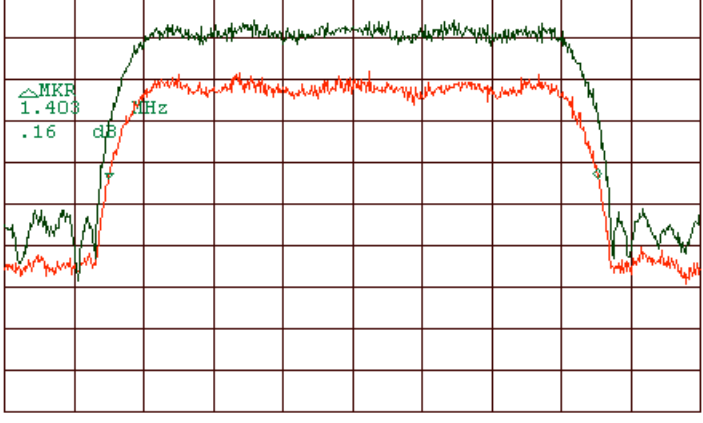
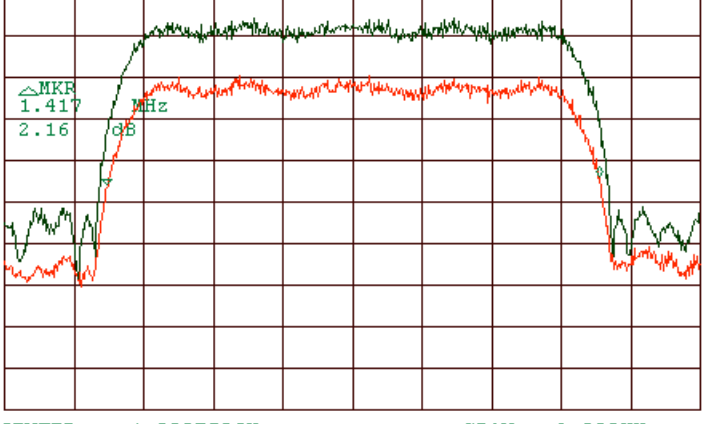
F = 1989.8 MHz

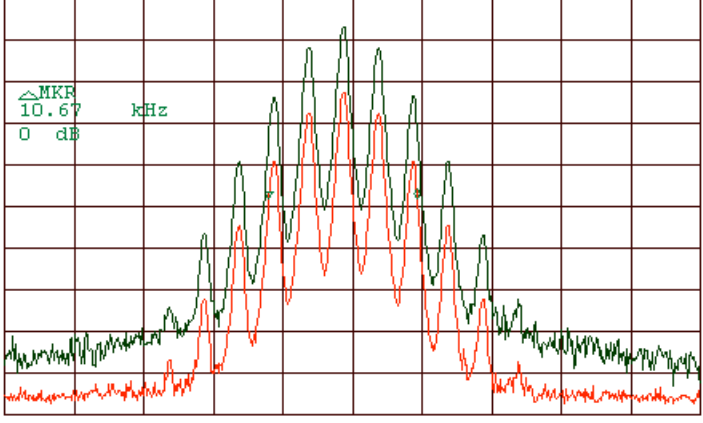
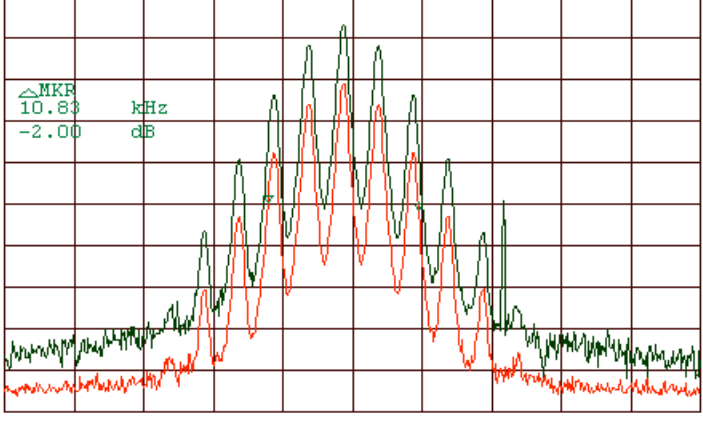
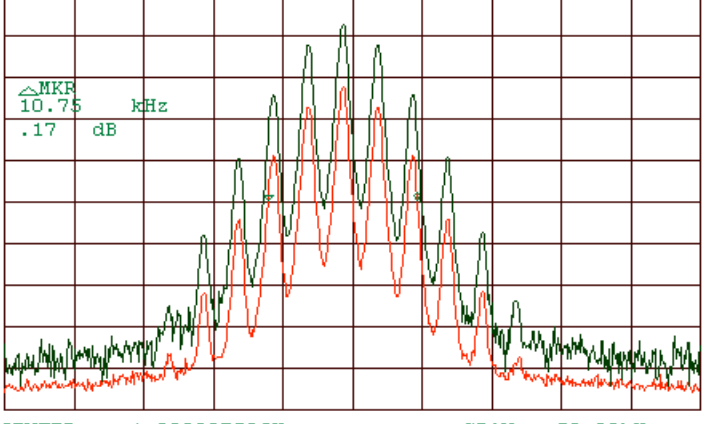
ATTEN 10dB
RL 25.0dBm 10dB/ Δ MKR -.50dB
296.7kHz



IP = 36dBm

Port 1 LOW channel	ATTEN 10dB RL 15.0dBm 10dB/ ΔMKR 1.67dB 1.417MHz  CENTER 1.930625GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
OBW = 1.417 MHz	
F = 1930.625 MHz IP = 36dBm Standard = CDMA Mod = QPSK Bit rate = 1.2288 Mbps Upper signal = Incident power Lower signal = Output power	
Port 1 MID channel	ATTEN 10dB RL 15.0dBm 10dB/ ΔMKR 1.50dB 1.410MHz  CENTER 1.960000GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
OBW = 1.410 MHz	
F = 1960 MHz	
Port 1 HIGH channel	ATTEN 10dB RL 15.0dBm 10dB/ ΔMKR .67dB 1.417MHz  CENTER 1.988750GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
OBW = 1.417 MHz	
F = 1988.75 MHz	

Port 1 LOW channel OBW = 1.410 kHz F = 1930.625 MHz IP = 36dBm Standard = CDMA Mod = OQPSK Bit rate = 1.2288 Mbps Upper signal = Incident power Lower signal = Output power	ATTEN 10dB RL 15.0dBm 10dB/ △MKR -.83dB 1.410MHz  CENTER 1.930625GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
Port 1 MID channel OBW = 1.403 kHz F = 1960 MHz	ATTEN 10dB RL 15.0dBm 10dB/ △MKR .16dB 1.403MHz  CENTER 1.960000GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec
Port 1 HIGH channel OBW = 1.417 kHz F = 1988.75 MHz	ATTEN 10dB RL 15.0dBm 10dB/ △MKR 2.16dB 1.417MHz  CENTER 1.988750GHz SPAN 2.000MHz *RBW 300Hz VBW 1.0kHz SWP 56.0sec

Port 1 LOW channel OBW = 10.67 kHz F = 1930.0125 MHz IP = 36dBm Standard = FM Mod = FM Deviation = 2.5 kHz Rate = 2500 Hz Upper signal = Incident power Lower signal = Output power	ATTEN 10dB RL 40.0dBm 10dB/ △MKR 0dB 10.67kHz  CENTER 1.93001250GHz SPAN 50.00kHz *RBW 300Hz VBW 1.0kHz SWP 1.40sec
Port 1 MID channel OBW = 10.83 kHz F = 1960 MHz	ATTEN 10dB RL 40.0dBm 10dB/ △MKR -2.00dB 10.83kHz  CENTER 1.96000000GHz SPAN 50.00kHz *RBW 300Hz VBW 1.0kHz SWP 1.40sec
Port 1 HIGH channel OBW = 10.75 kHz F = 1989.9875 MHz	ATTEN 10dB RL 40.0dBm 10dB/ △MKR .17dB 10.75kHz  CENTER 1.98898750GHz SPAN 50.00kHz *RBW 300Hz VBW 1.0kHz SWP 1.40sec

Port 1 LOW channel

OBW = 33.17 kHz

F = 1930.05 MHz

IP = 36dBm

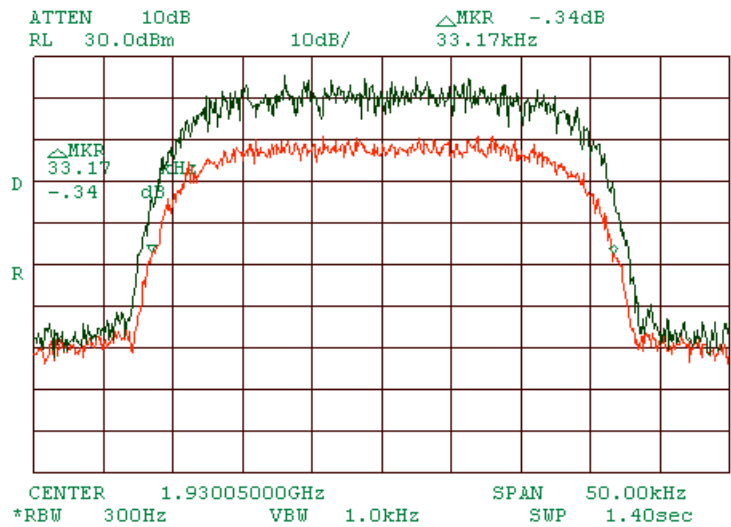
Standard = TDMA

Mod = PI/4 DQPSK

Bit Rate = 48.6 kbps

Upper signal = Incident power

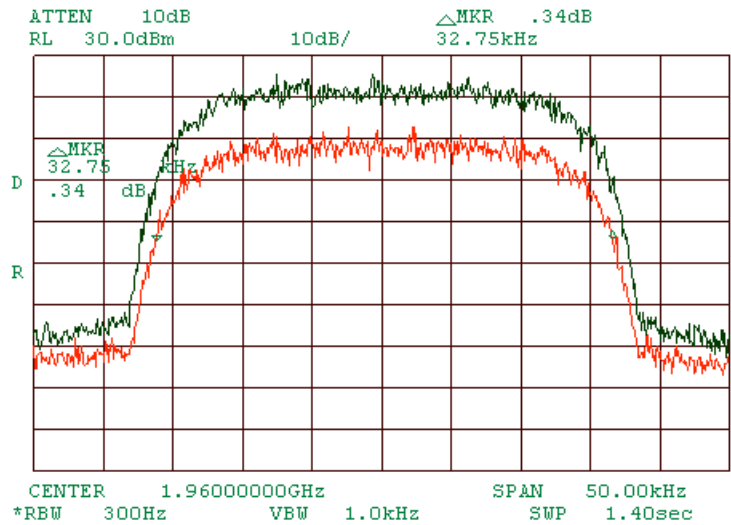
Lower signal = Output power



Port 1 MID channel

OBW = 32.75 kHz

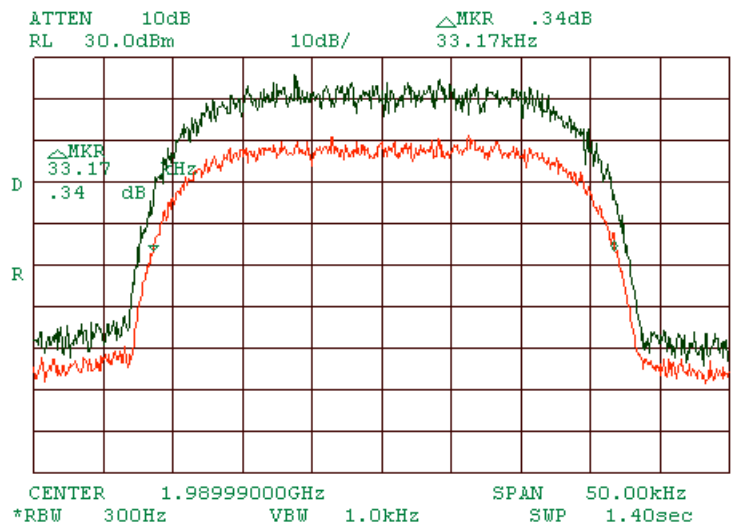
F = 1960 MHz



Port 1 HIGH channel

OBW = 33.17 kHz

F = 1989.99 MHz



Port 1 LOW channel

OBW = 319.2 kHz

F = 1930.2 MHz

IP = 36dBm

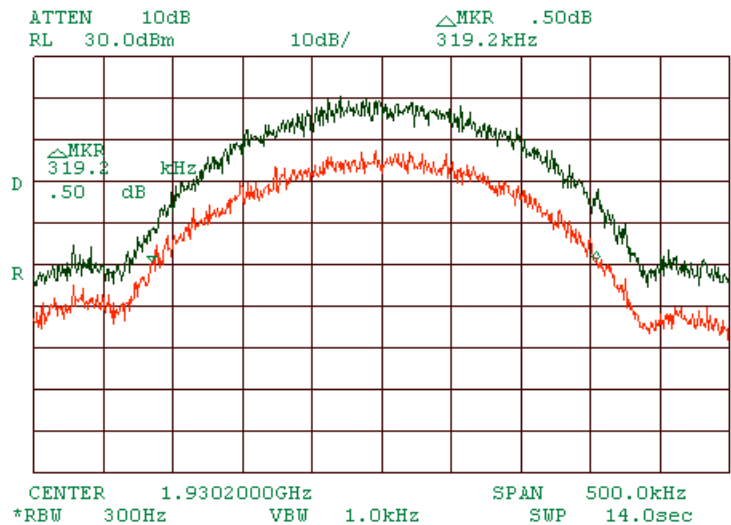
Standard = GSM

Mod = GMSK

Bit Rate = 270.833 kbps

Upper signal = Incident power

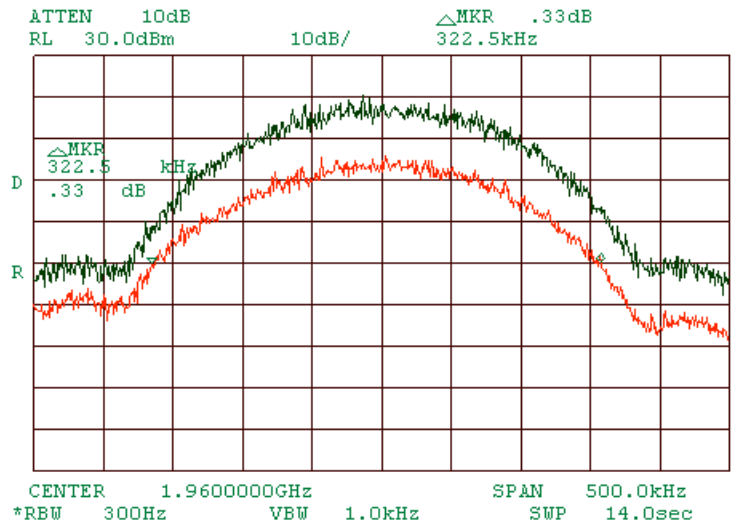
Lower signal = Output power



Port 1 MID channel

OBW = 322.5 kHz

F = 1960 MHz



Port 1 HIGH channel

OBW = 312.5 kHz

F = 1989.8 MHz

