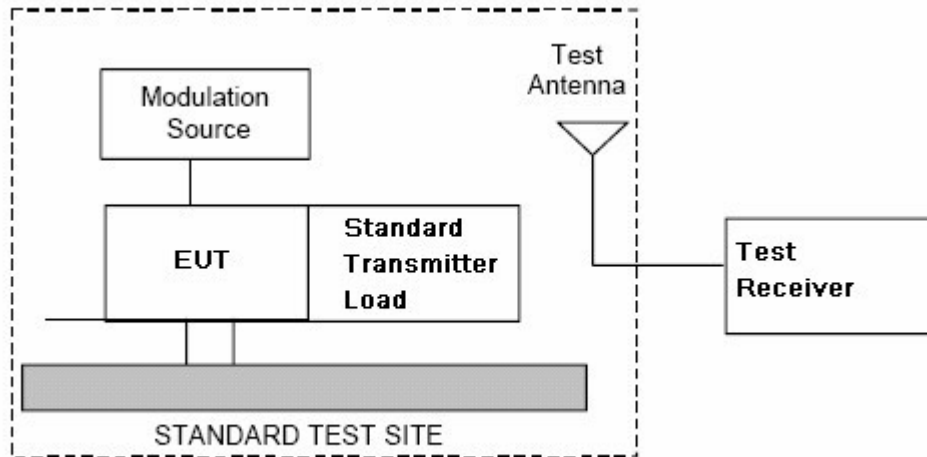
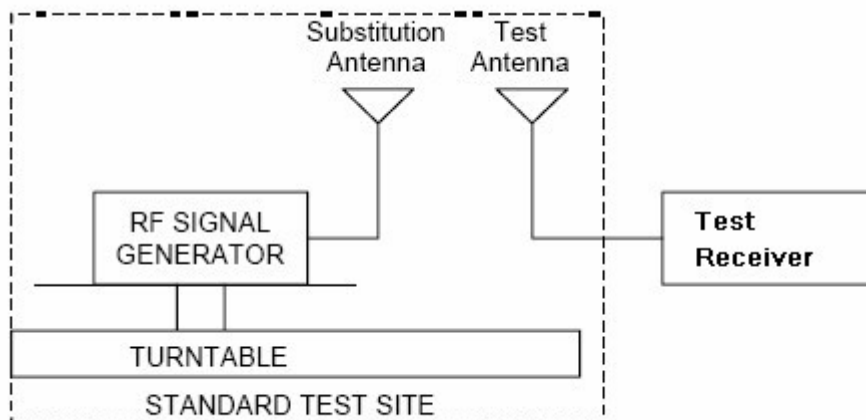


Test Procedure:

1. Test the background noise level with all the facilities.
2. Keep one transmitting path, all other connectors shall be connected by normal power or RF leads.
3. Select the suitable RF notch filter to avoid the test receiver or spectrum analyzer produce unwanted spurious emissions.
4. Keep the EUT continuously transmitting in max power.
5. Read the radiated emissions of the EUT enclosure.

Radiated Emission Test Procedure:

- a) Connect the equipment as illustrated
- b) Adjust the spectrum analyzer for the following setting;
 - 1) RBW=100KHZ for spurious emission below 1GHZ ,and 1MHz for spurious emission above 1GHZ
 - 2) VBW=300KHZ for spurious emission below 1GHZ ,and 3MHz for spurious emission above 1GHZ
 - 3) Sweep speed slow enough to maintain measurement calibration
 - 4) Detector Mode=Positive Peak
- c) Place the transmitter to be tested on the turntable in the standard test site, The transmitter is transmitting into a nonradiating load that is placed on the turntable ,the RF cable to this load should be of minimum length.
- d) Measurements shall be made from 30MHz to 10 times of fundamental carrier, except for the region close to the carrier equal to \pm the carrier bandwidth.
- e) Key the transmitter without modulation or normal modulation base the standard.
- f) For each spurious frequency, raise and lower the test antenna from 1 m to 4 m to obtain a maximum reading on the spectrum analyzer with the test antenna at horizontal polarity. Then the turntable should be rotated 360° to determine the maximum reading. Repeat this procedure to obtain the highest possible reading. Record this maximum reading.
- g) Repeat step f) for each spurious frequency with the test antenna polarized vertically.



- a) Reconnect the equipment as illustrated.
- b) Keep the spectrum analyzer adjusted as in step b)
- c) Remove the transmitter and replace it with a substitution antenna (the antenna should be half wavelength for each frequency involved). The center of the substitution antenna should be approximately at the same location as the center of the transmitter. At the lower frequencies, where the substitution antenna is very long, this will be impossible to achieve when the antenna is polarized vertically. In such case the lower end of the antenna should be 0.3m above the ground.
- d) Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a nonradiating cable. With the antennas at both ends horizontally polarized, and with the signal generator tuned to a particular spurious frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading or this set of conditions is obtained, This should be done carefully repeating the adjustment of the test antenna and generator output.
- e) Repeat step k) with both antennas vertically polarized for each spurious frequency.
- f) Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in step k) and i) by the power loss in the cable between the generator and the antenna, and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna by the following formula:

$$P_d(\text{dBm}) = P_g(\text{dBm}) - \text{cable loss (dB)} + \text{antenna gain (dB)}$$

where:

P_d is the dipole equivalent power and

P_g is the generator output power into the substitution antenna.

NOTE: It is permissible to use other antennas provided they can be referenced to a dipole.

NOTE: Effective radiated power (e.r.p) refers to the radiation of a half wave tuned dipole instead of an isotropic antenna. There is a constant difference of 2.15 dB between e.i.r.p. and e.r.p.e.r.p (dBm)-2.15

4.2.4.1 MEASUREMENT RECORD

Test Frequency (MHz)	Measuring level(dBm)		Limits (dBm)	Margin(dB)	
	Vertical	Horizontal		Vertical	Horizontal
30	N/A	N/A	-13	N/A	N/A
500	N/A	N/A	-13	N/A	N/A
1000	N/A	N/A	-13	N/A	N/A
2000	N/A	N/A	-13	N/A	N/A
5000	N/A	N/A	-13	N/A	N/A
10000	N/A	N/A	-13	N/A	N/A
15000	N/A	N/A	-13	N/A	N/A
20000	N/A	N/A	-13	N/A	N/A

Remark:

N/A,not applicable or the level i too weak to bo etected.

Swcap all the moulation tyoes emissions in Cellular band and PCS band,find the worse case to report it.

4.2.5 OCCUPIED BANDWIDTH

Test Date: 05 May, 2012

Test Method: FCC part 2.1049&2-11-04/EAB/RF

Test Requirement: 2-11-04/EAB/RF

Status: The output power of EUT be set to maximum value,the gain of EUT be set to maximum value by software through the manufacture

Conditions: Normal

Application: 850MHz DL and UL ports, 1900MHz DL and UL ports

Remark: Test configuration

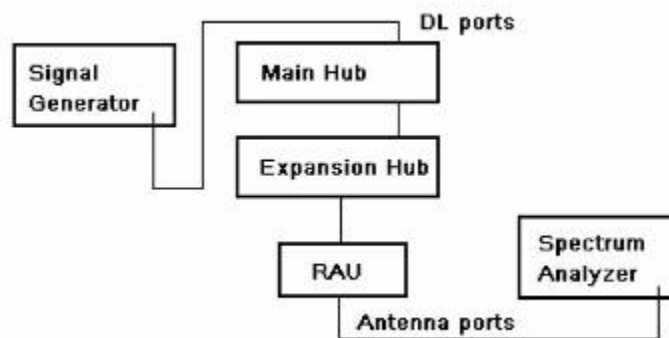


Fig.1 Down Link Configuration

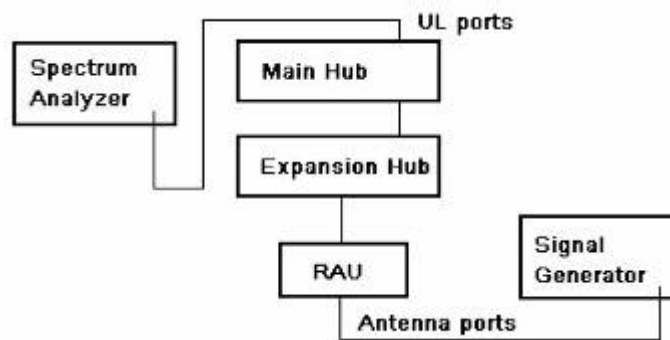


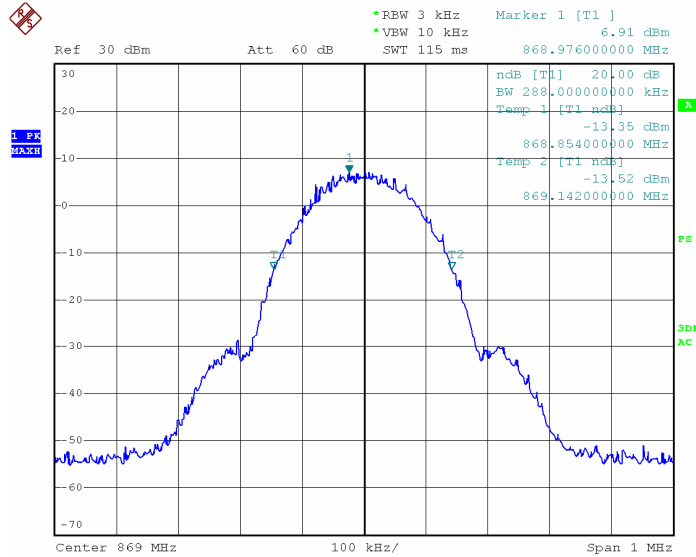
Fig.2 Up Link Configuration

- Test Procedure:
- Set the spectrum analyzer RBW 300Hz >1% bandwidth of carrier.
 - Capture the trace of input signal
 - Connect the equipment as illustrated
 - Capture the trace of output signal

4.2.5.1 MEASUREMENT RECORD

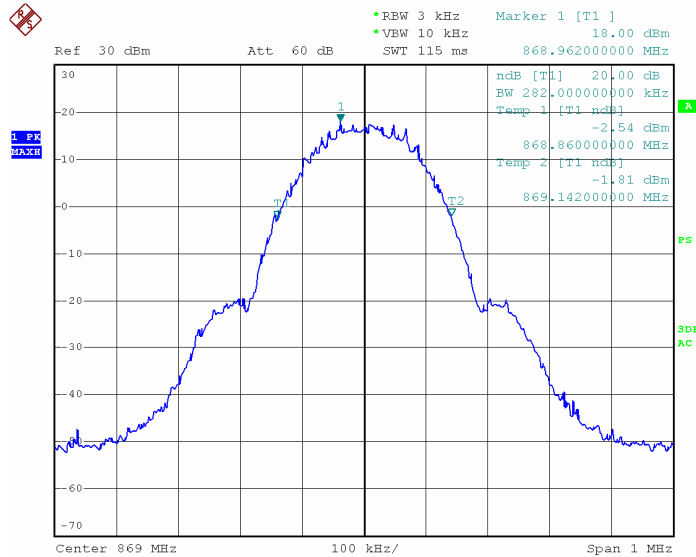
850MHz

850MHz-GSM downlink (lowest frequency)-Input



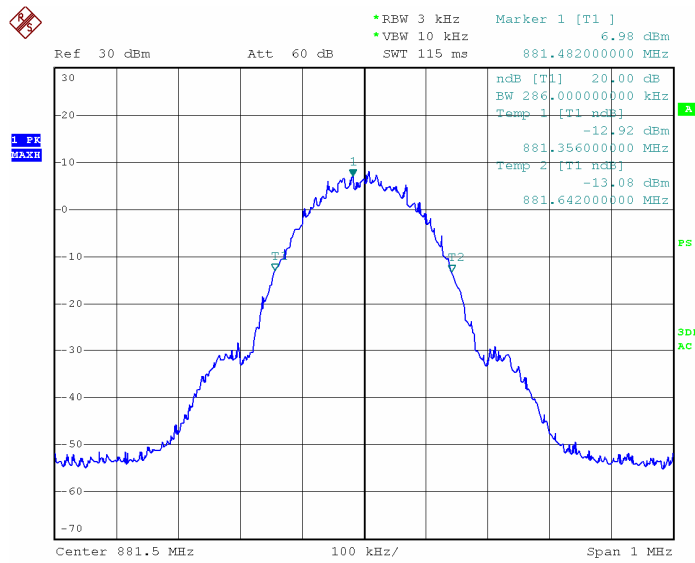
Date: 9.MAY.2012 15:25:25

850MHz-GSM downlink (lowest frequency)-Output



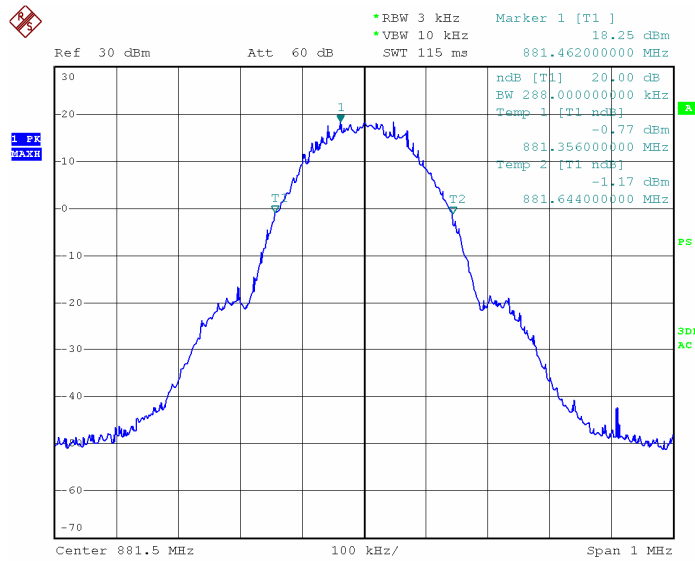
Date: 8.MAY.2012 21:21:44

850MHz-GSM downlink (middle frequency)-Input



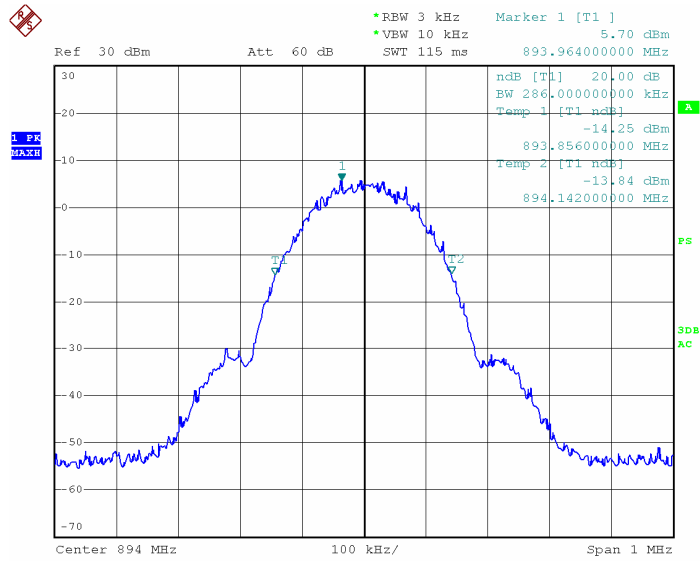
Date: 9.MAY.2012 15:24:42

850MHz-GSM downlink (middle frequency)- Output



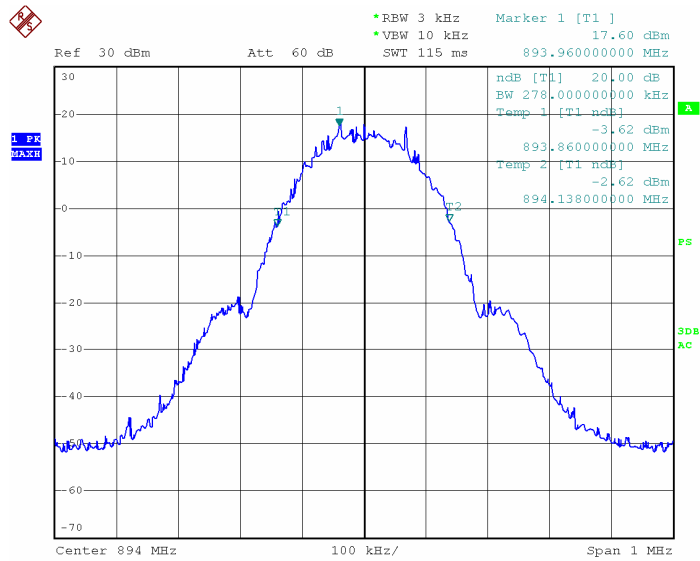
Date: 8.MAY.2012 21:22:33

850MHz-GSM downlink (highest frequency)-Input



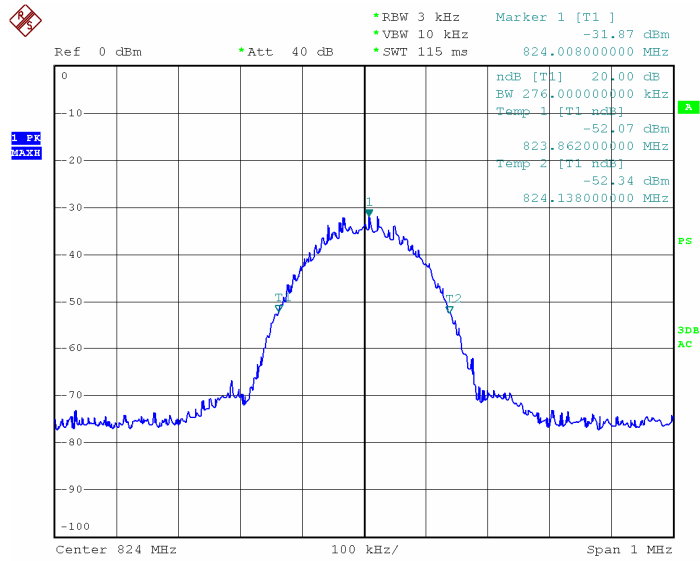
Date: 9.MAY.2012 15:27:37

850MHz-GSM downlink (highest frequency)- Output



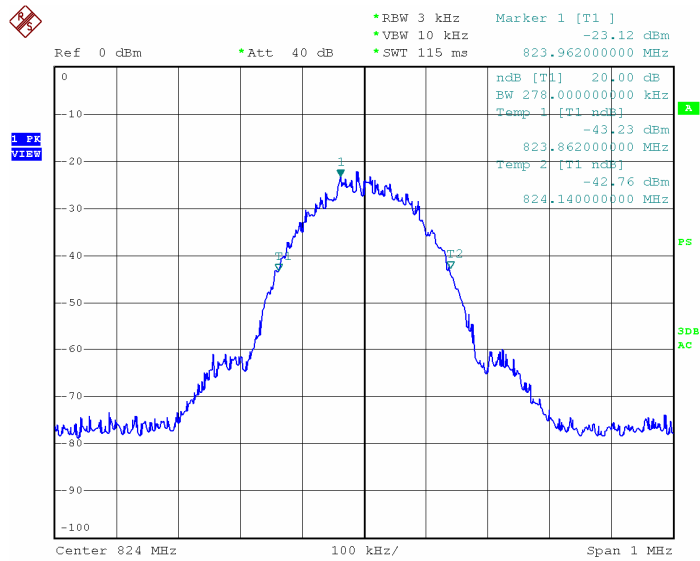
Date: 8.MAY.2012 21:23:08

850MHz-GSM uplink (lowest frequency)-Input



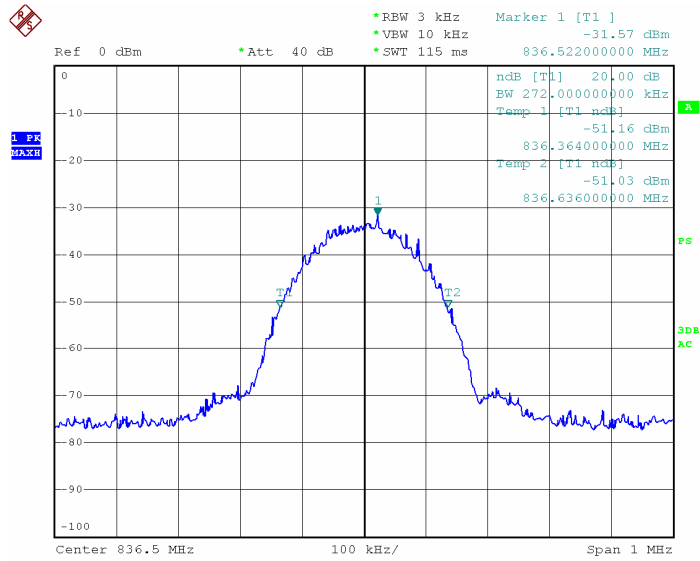
Date: 9.MAY.2012 17:18:48

850MHz-GSM uplink (lowest frequency)- Output



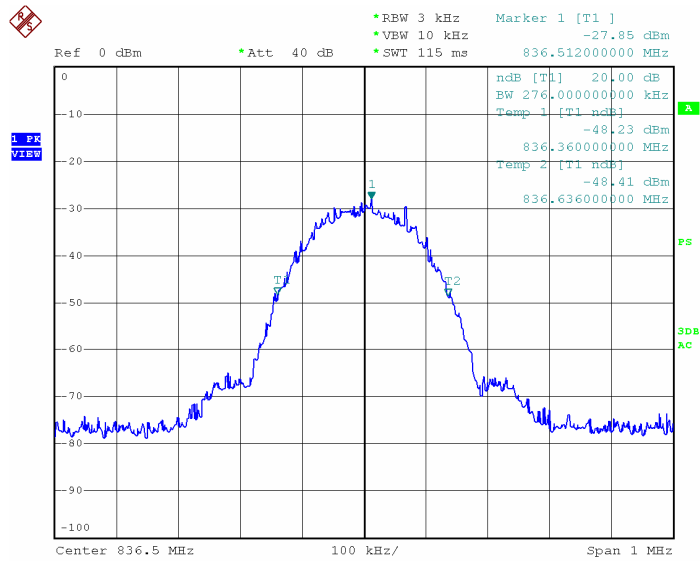
Date: 9.MAY.2012 17:02:49

850MHz-GSM uplink (middle frequency)-Input



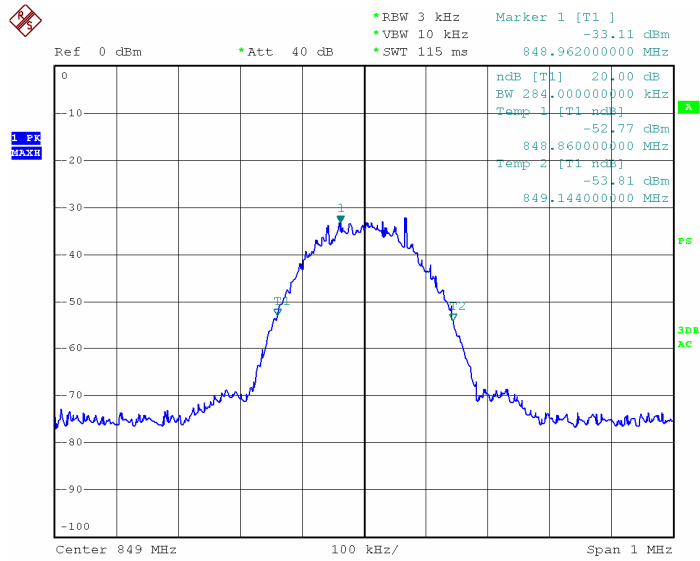
Date: 9.MAY.2012 17:18:21

850MHz-GSM uplink (middle frequency)-Output



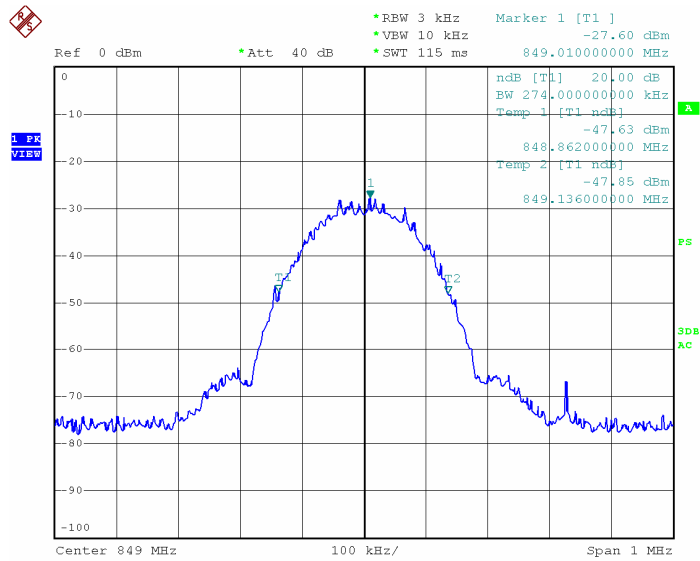
Date: 9.MAY.2012 17:04:04

850MHz-GSM uplink (highest frequency)-Input



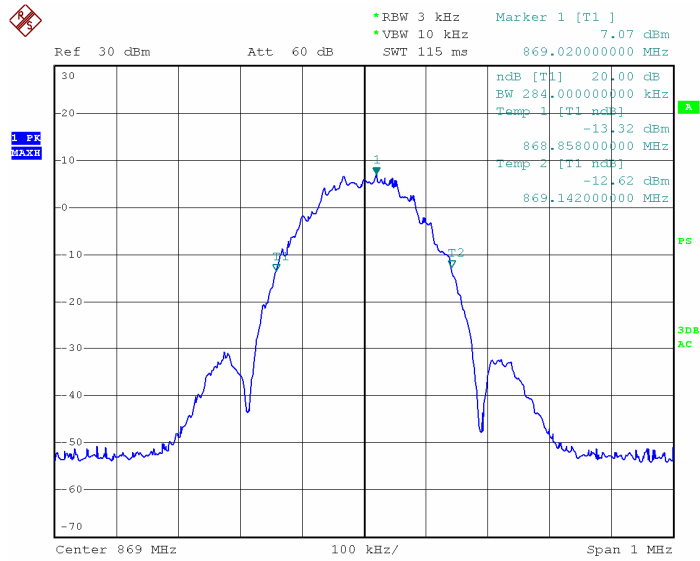
Date: 9.MAY.2012 17:17:48

850MHz-GSM uplink (highest frequency)- Output



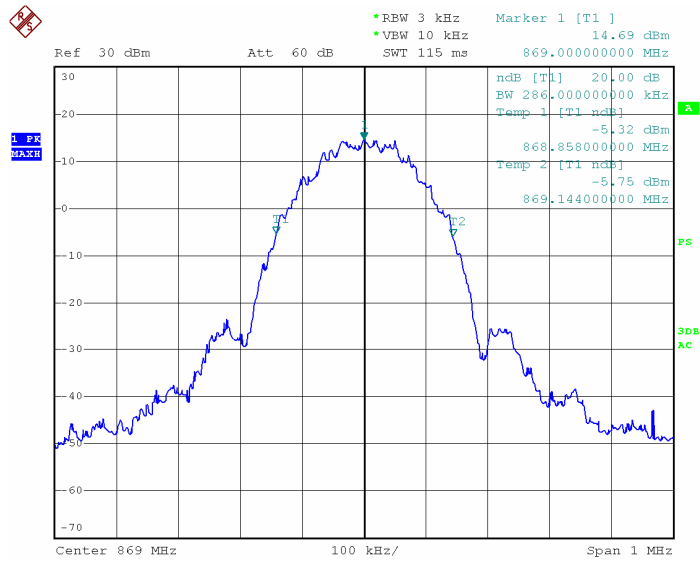
Date: 9.MAY.2012 17:04:57

850MHz-EDGE downlink (lowest frequency)-Input



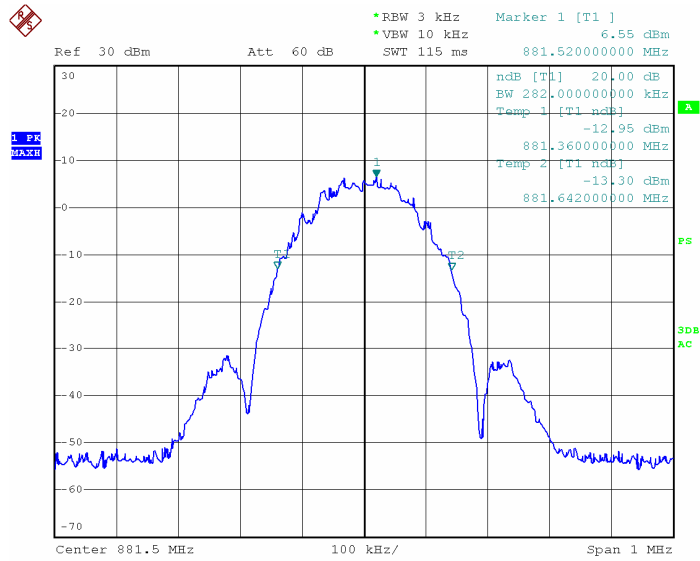
Date: 9.MAY.2012 15:21:50

850MHz-EDGE downlink (lowest frequency)-Output



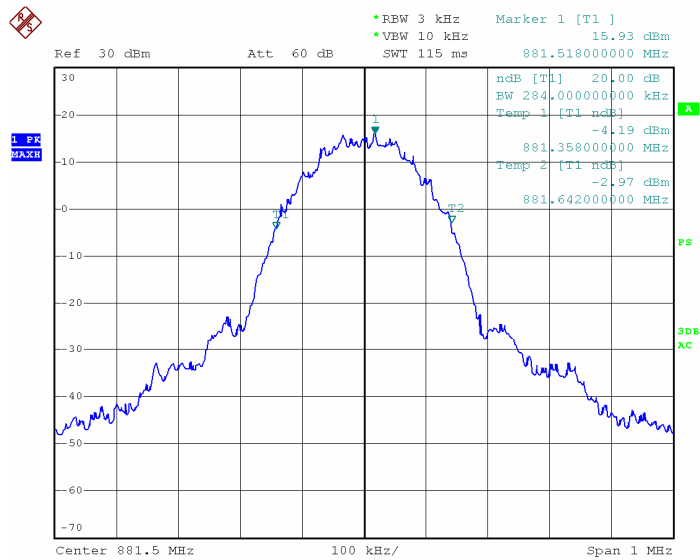
Date: 8.MAY.2012 21:26:40

850MHz-EDGE downlink (middle frequency)-Input



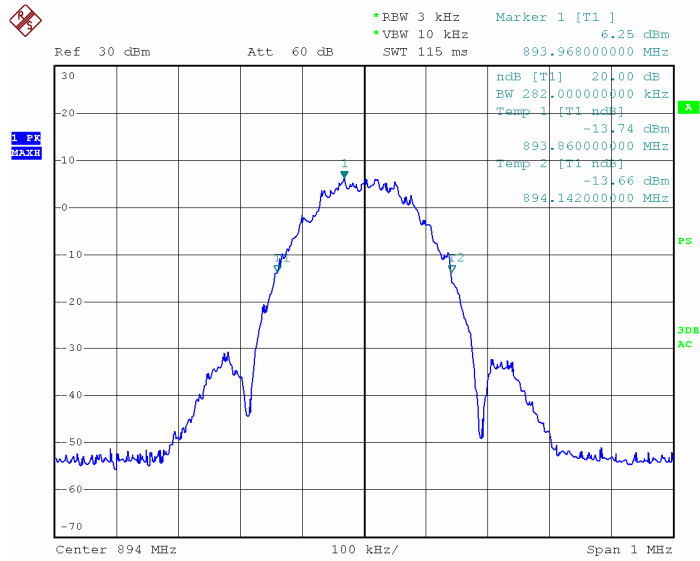
Date: 9.MAY.2012 15:23:32

850MHz-EDGE downlink (middle frequency)- Output



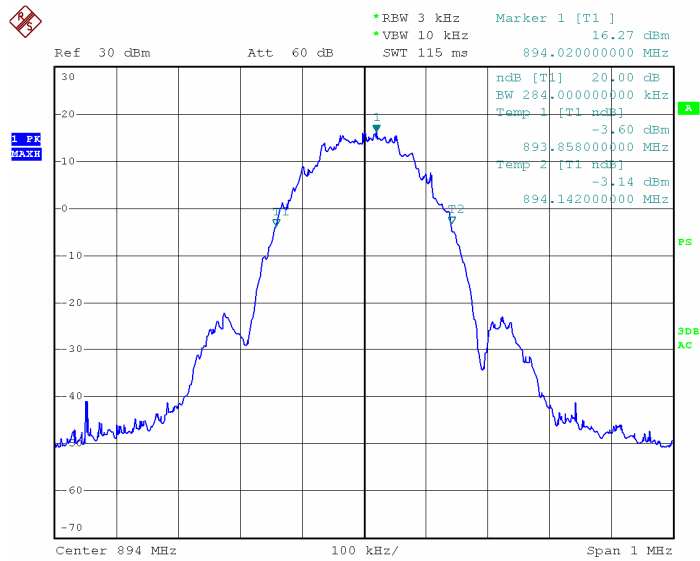
Date: 8.MAY.2012 21:25:48

850MHz-EDGE downlink (highest frequency)-Input



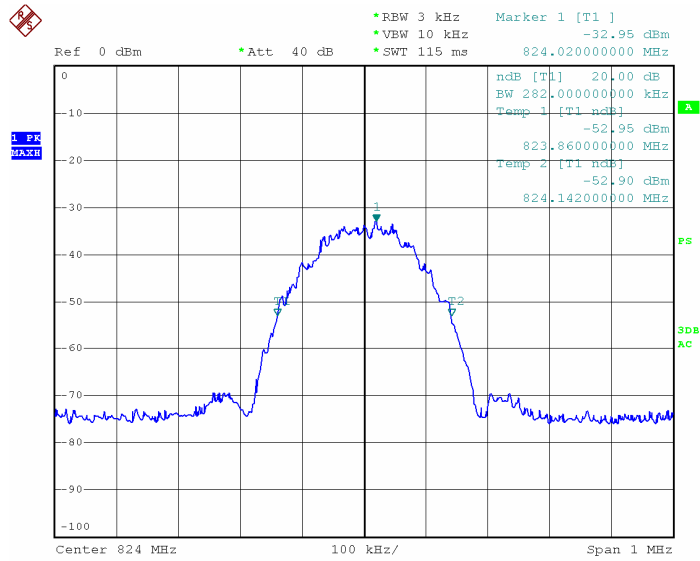
Date: 9.MAY.2012 15:23:03

850MHz-EDGE downlink (highest frequency)- Output



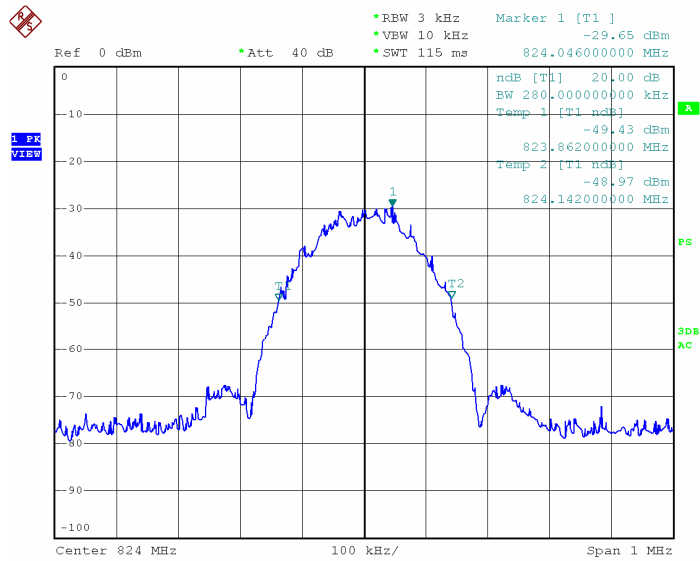
Date: 8.MAY.2012 21:24:41

850MHz-EDGE uplink (lowest frequency)-Input



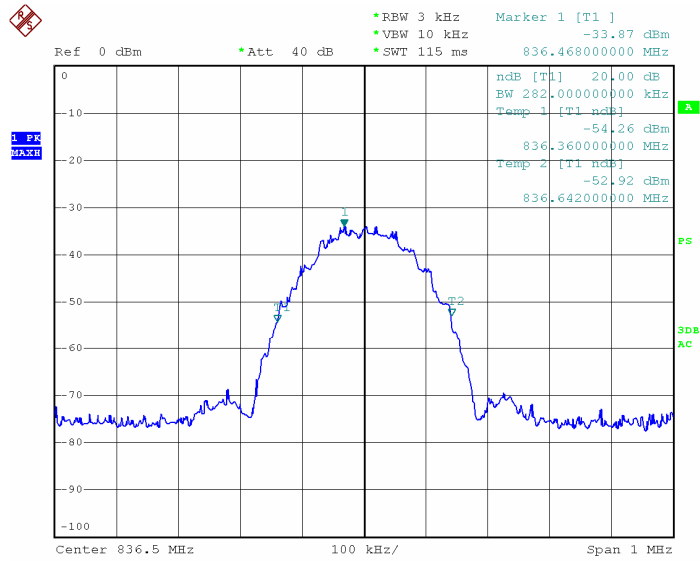
Date: 9.MAY.2012 17:15:57

850MHz-EDGE uplink (lowest frequency)- Output



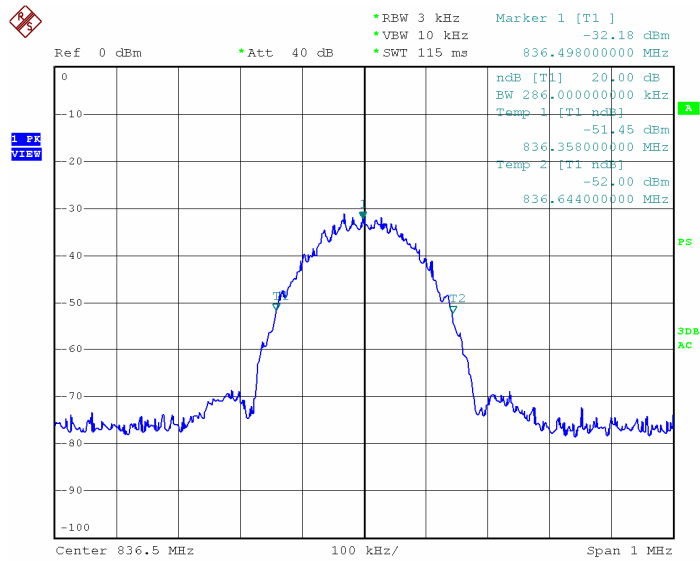
Date: 9.MAY.2012 17:06:41

850MHz-EDGE uplink (middle frequency)-Input



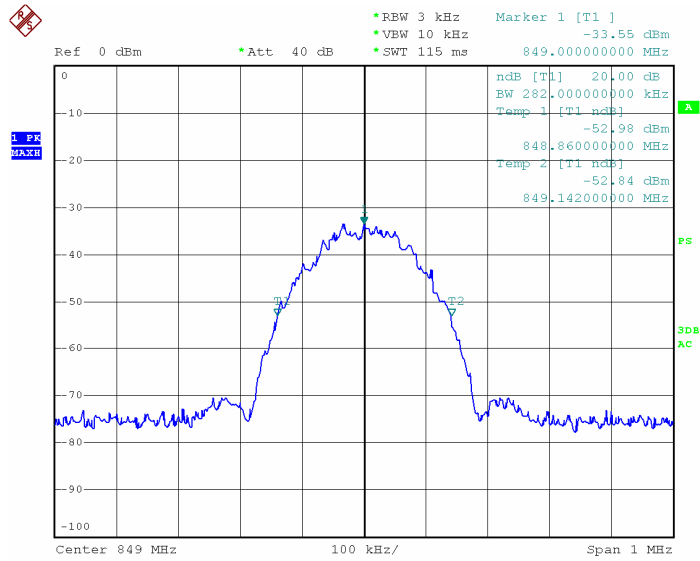
Date: 9.MAY.2012 17:16:37

850MHz-EDGE uplink (middle frequency)-Output



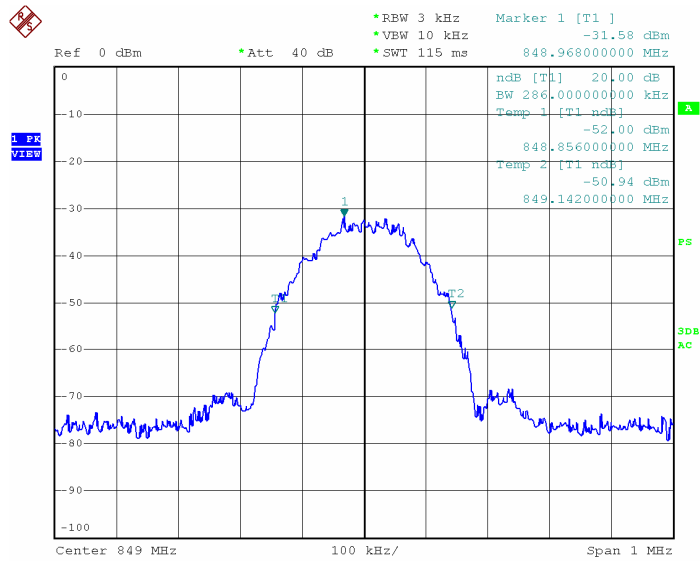
Date: 9.MAY.2012 17:06:13

850MHz-EDGE uplink (highest frequency)-Input



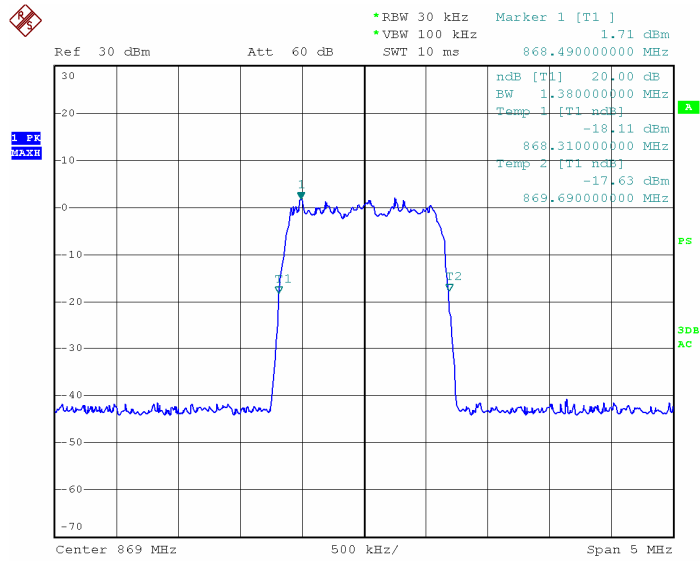
Date: 9.MAY.2012 17:17:06

850MHz-EDGE uplink (highest frequency)- Output



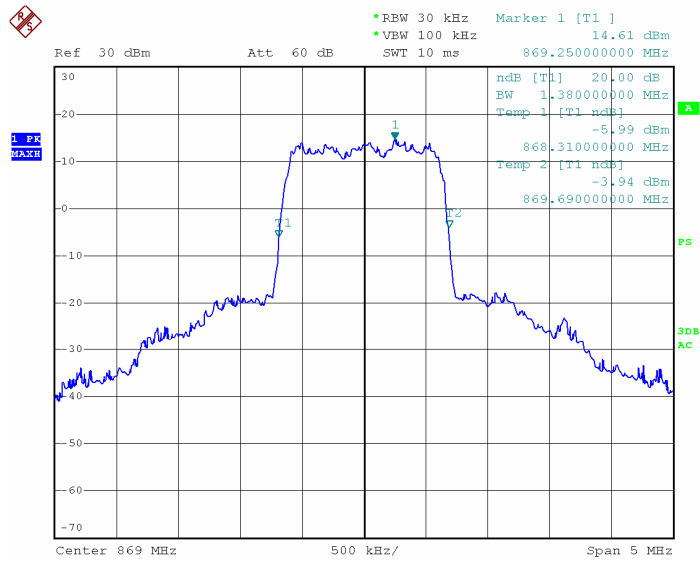
Date: 9.MAY.2012 17:05:41

850MHz-CDMA2000 downlink (lowest frequency)-Input



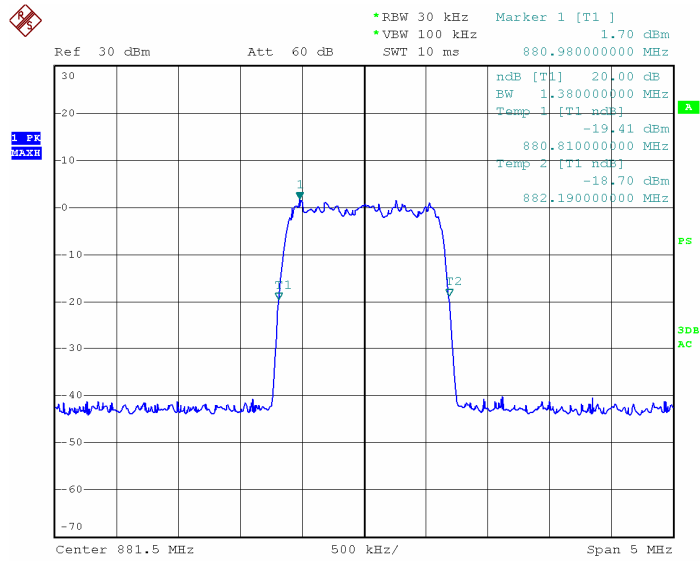
Date: 9.MAY.2012 15:31:20

850MHz-CDMA2000 downlink (lowest frequency)-Output



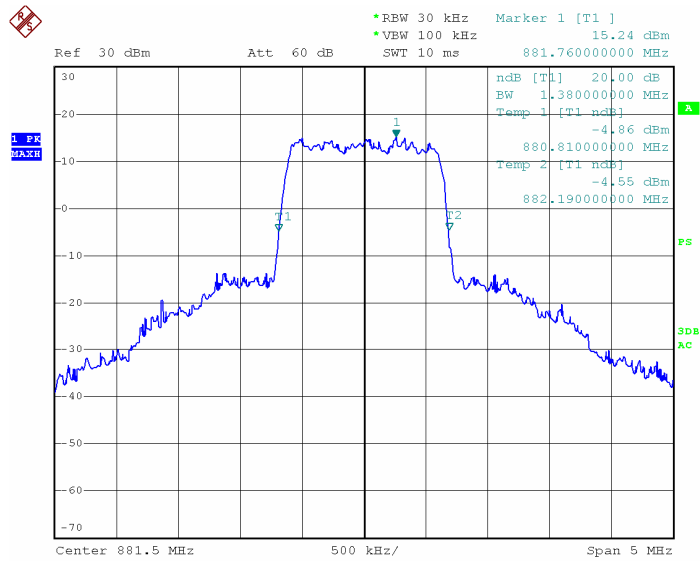
Date: 8.MAY.2012 21:29:39

850MHz-CDMA2000 downlink (middle frequency)-Input



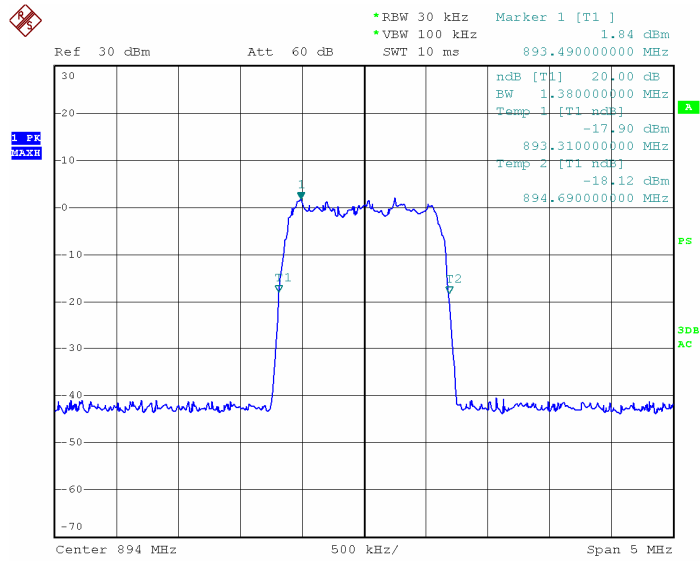
Date: 9.MAY.2012 15:30:42

850MHz-CDMA2000 downlink (middle frequency)- Output



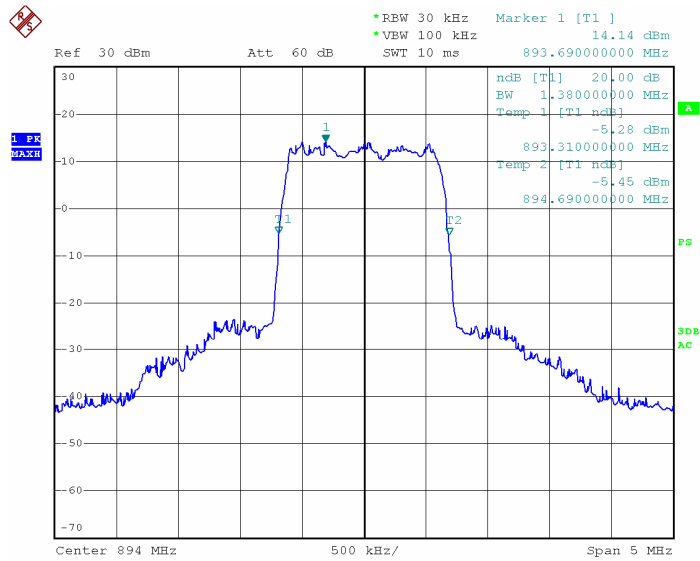
Date: 8.MAY.2012 21:30:40

850MHz-CDMA2000 downlink (highest frequency)-Input



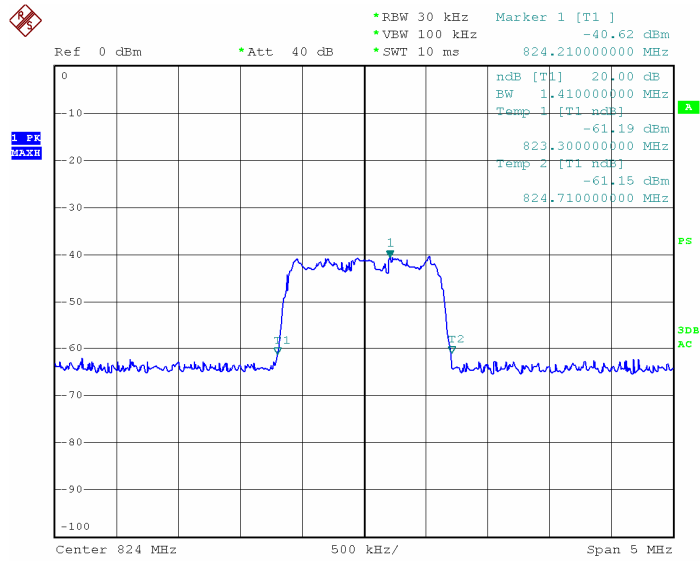
Date: 9.MAY.2012 15:30:01

850MHz-CDMA2000 downlink (highest frequency)- Output



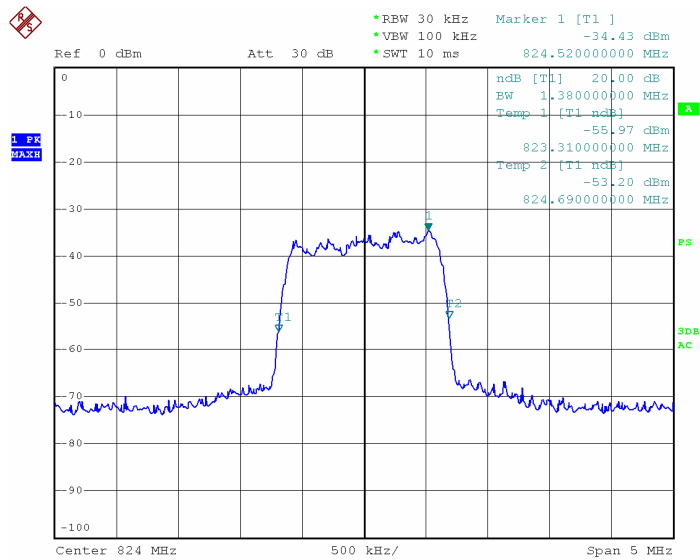
Date: 8.MAY.2012 21:32:27

850MHz-CDMA2000 uplink (lowest frequency)-Input



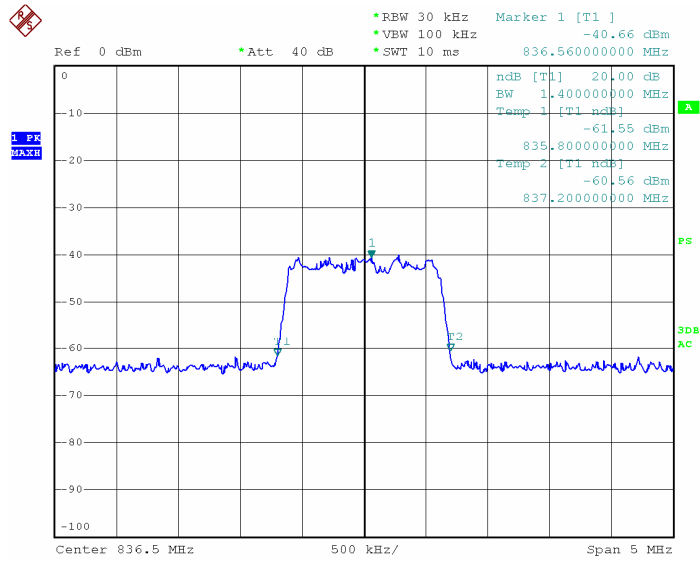
Date: 9.MAY.2012 17:25:02

850MHz-CDMA2000 uplink (lowest frequency)- Output



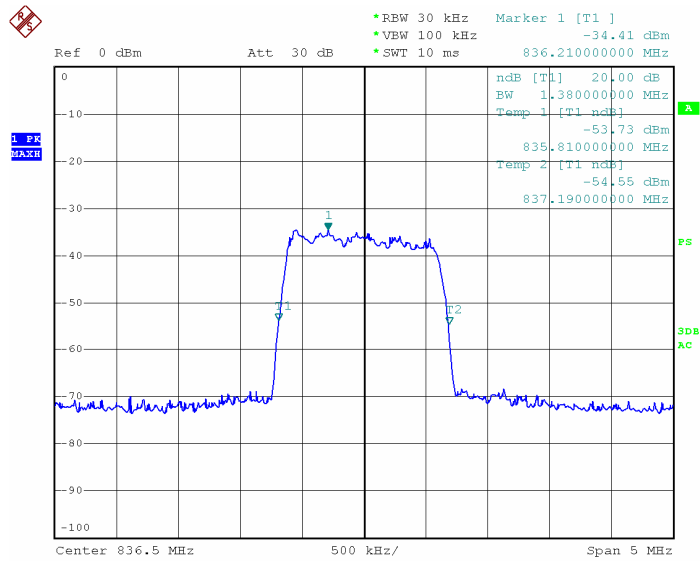
Date: 9.MAY.2012 16:56:45

850MHz-CDMA2000 uplink (middle frequency)-Input



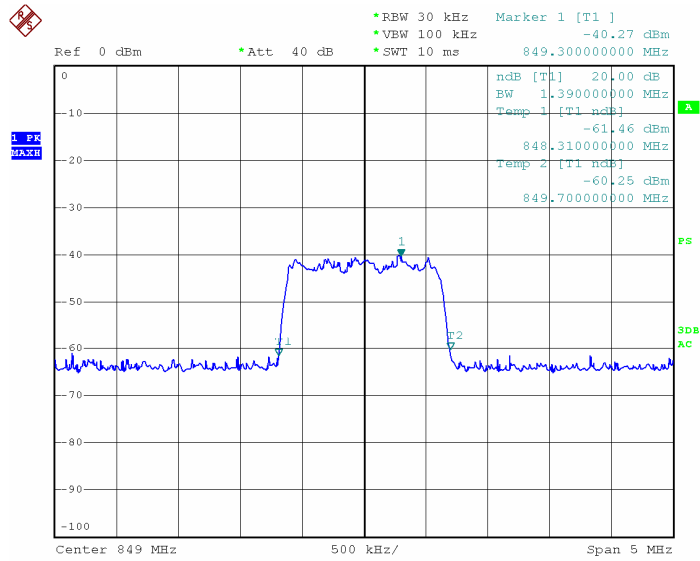
Date: 9.MAY.2012 17:24:34

850MHz-CDMA2000 uplink (middle frequency)-Output



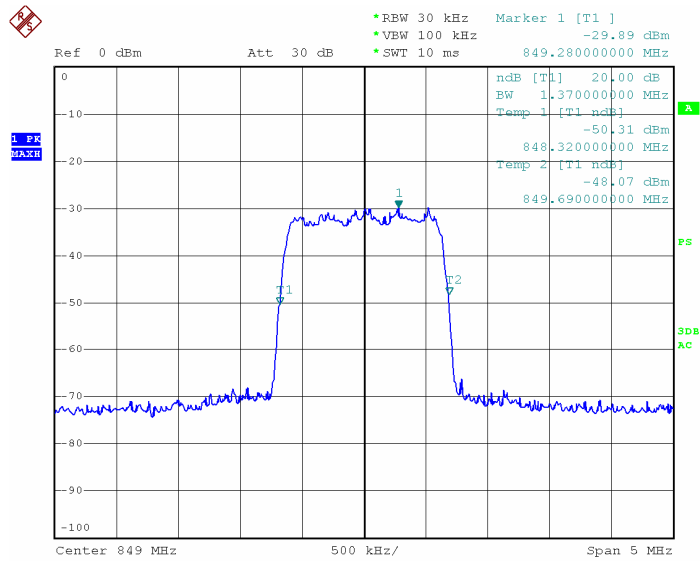
Date: 9.MAY.2012 16:55:26

850MHz-CDMA2000 uplink (highest frequency)-Input



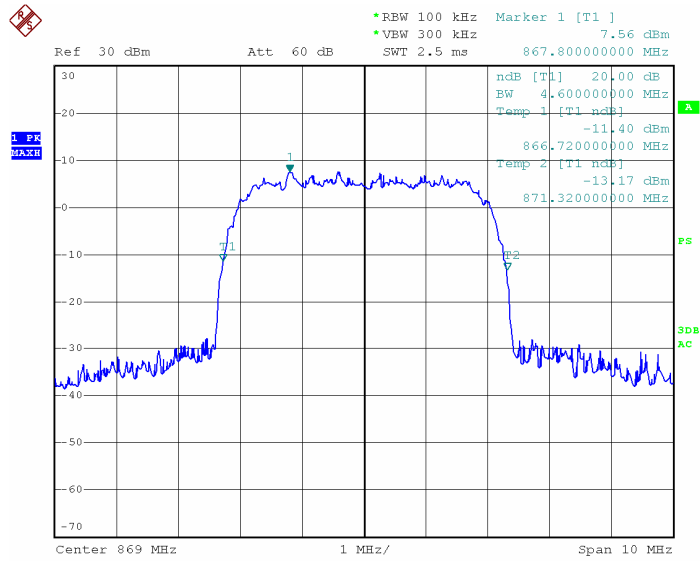
Date: 9.MAY.2012 17:24:03

850MHz-CDMA2000 uplink (highest frequency)- Output



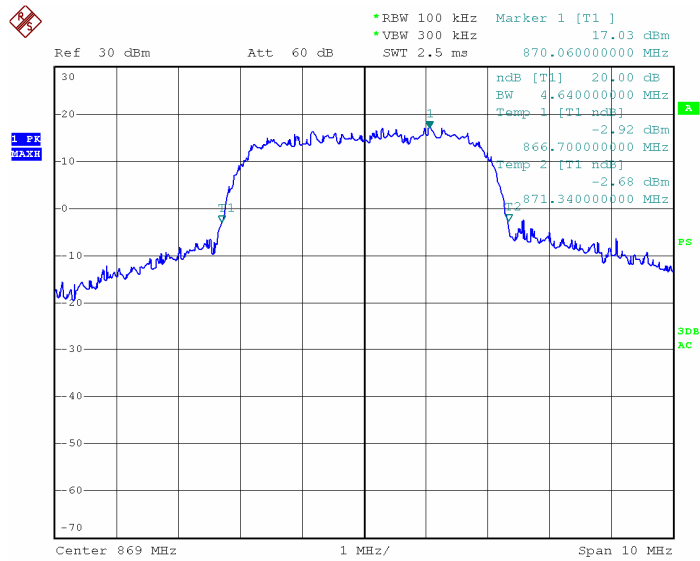
Date: 9.MAY.2012 16:54:52

850MHz-WCDMA downlink (lowest frequency)-Input



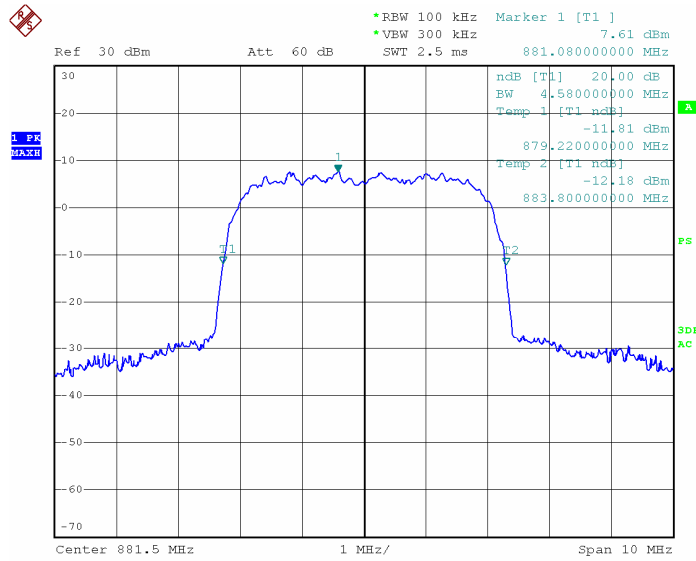
Date: 9.MAY.2012 15:33:41

850MHz-WCDMA downlink (lowest frequency)-Output

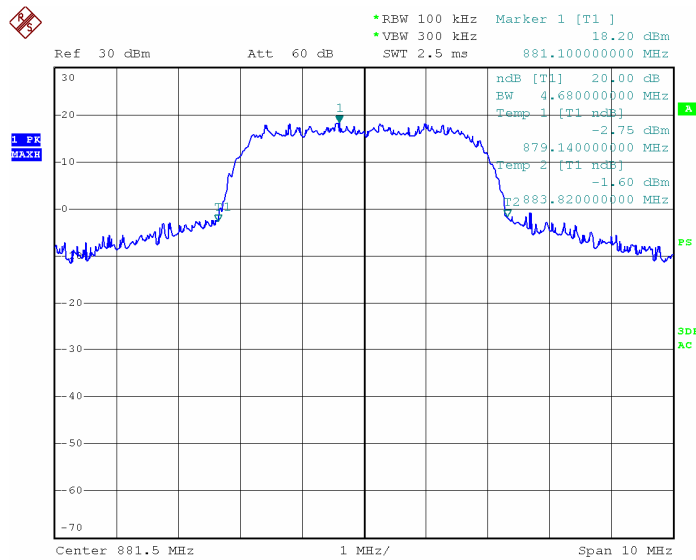


Date: 8.MAY.2012 21:36:17

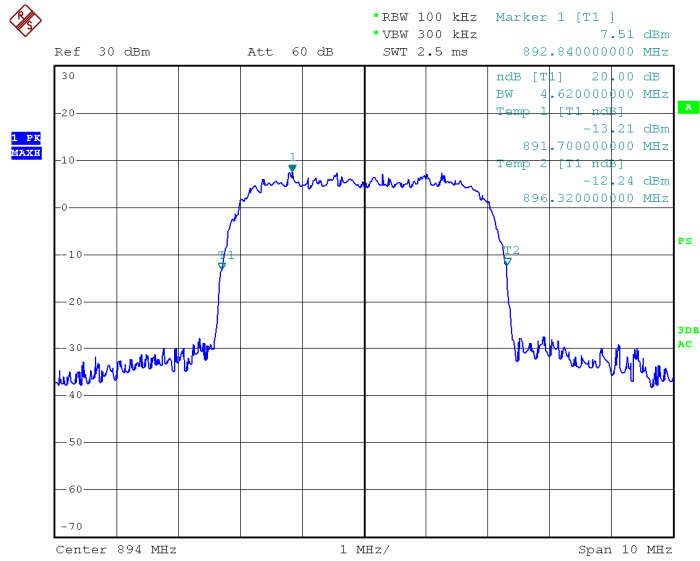
850MHz-WCDMA downlink (middle frequency)-Input



850MHz-WCDMA downlink (middle frequency)- Output

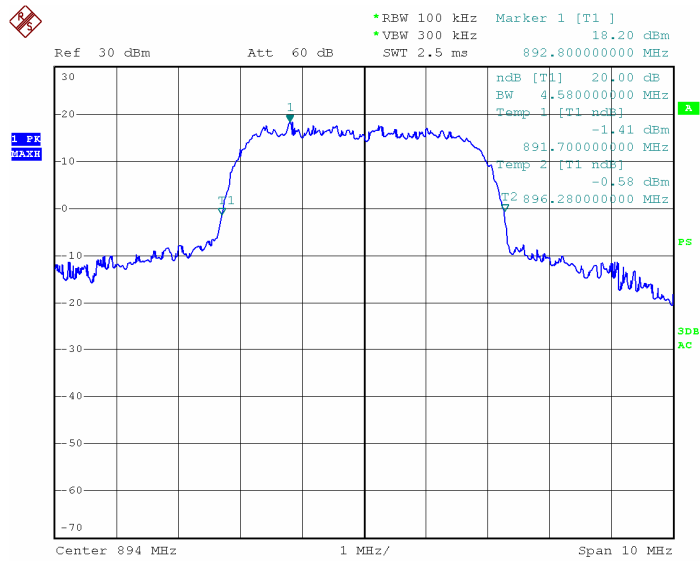


850MHz-WCDMA downlink (highest frequency)-Input



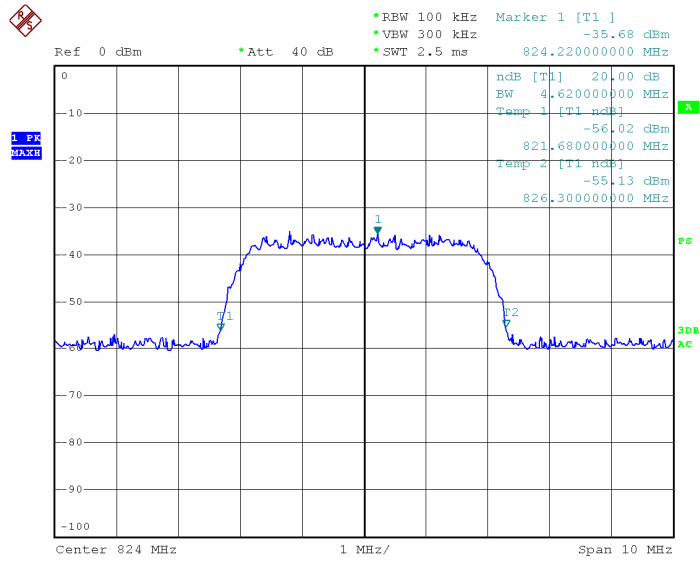
Date: 9.MAY.2012 15:36:37

850MHz-WCDMA downlink (highest frequency)- Output



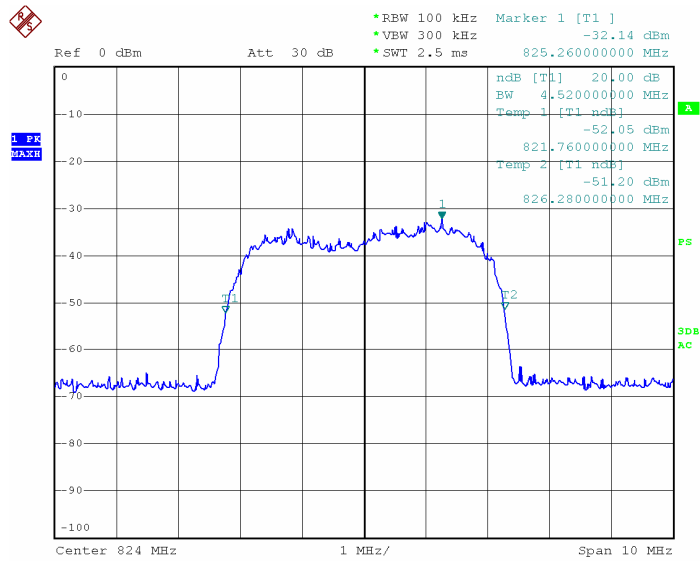
Date: 8.MAY.2012 21:34:50

850MHz-WCDMA uplink (lowest frequency)-Input



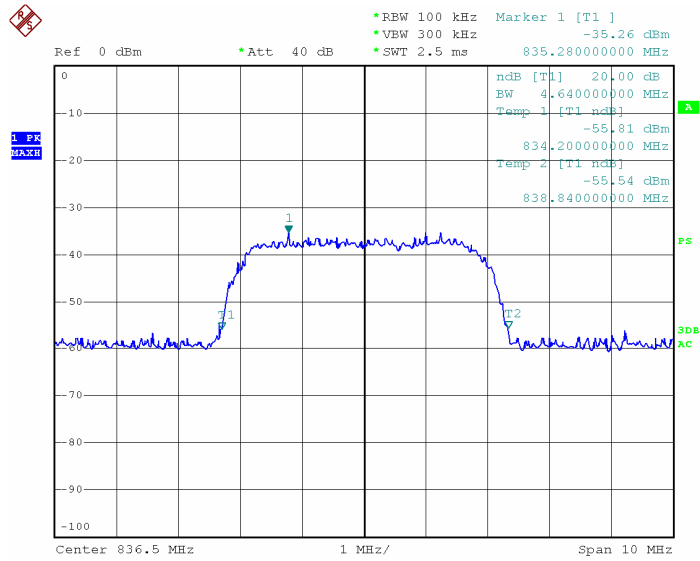
Date: 9.MAY.2012 17:27:09

850MHz-WCDMA uplink (lowest frequency)- Output



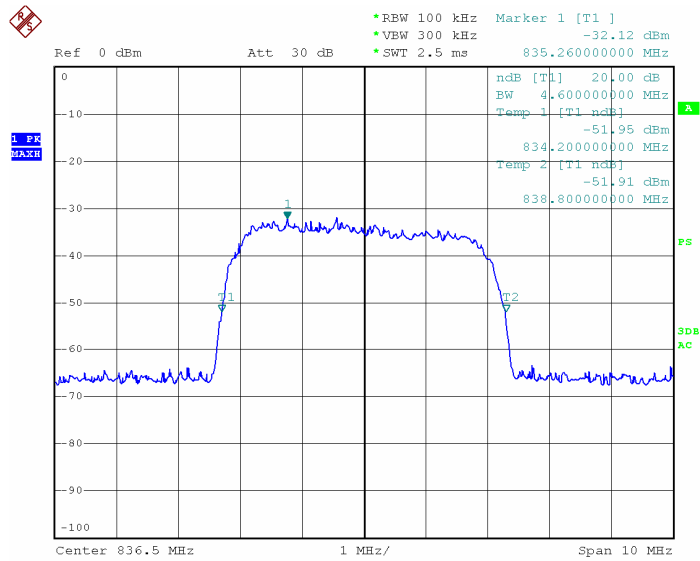
Date: 9.MAY.2012 16:52:24

850MHz-WCDMA uplink (middle frequency)-Input



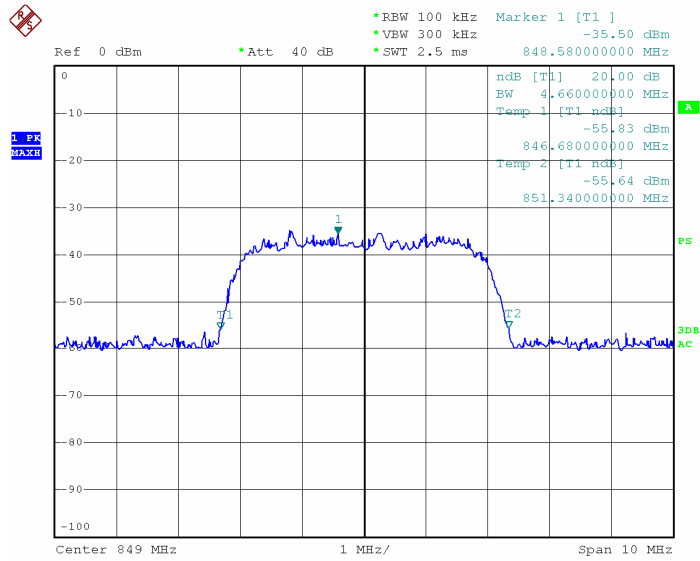
Date: 9.MAY.2012 17:27:36

850MHz-WCDMA uplink (middle frequency)-Ouput



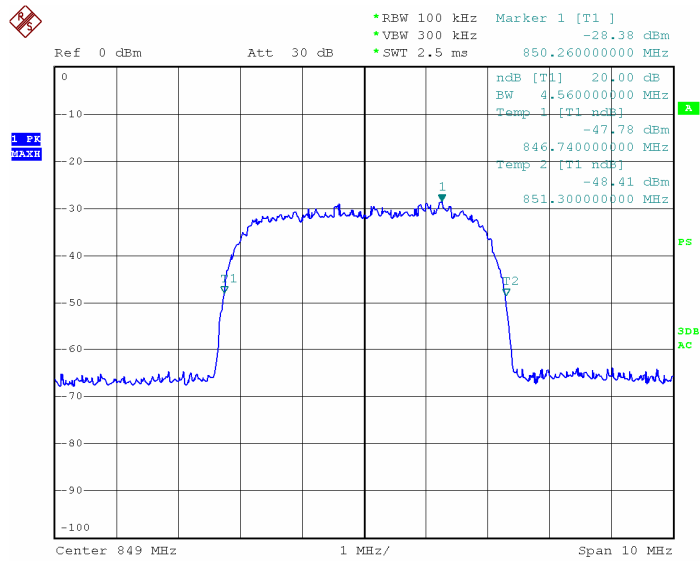
Date: 9.MAY.2012 16:53:16

850MHz-WCDMA uplink (highest frequency)-Input



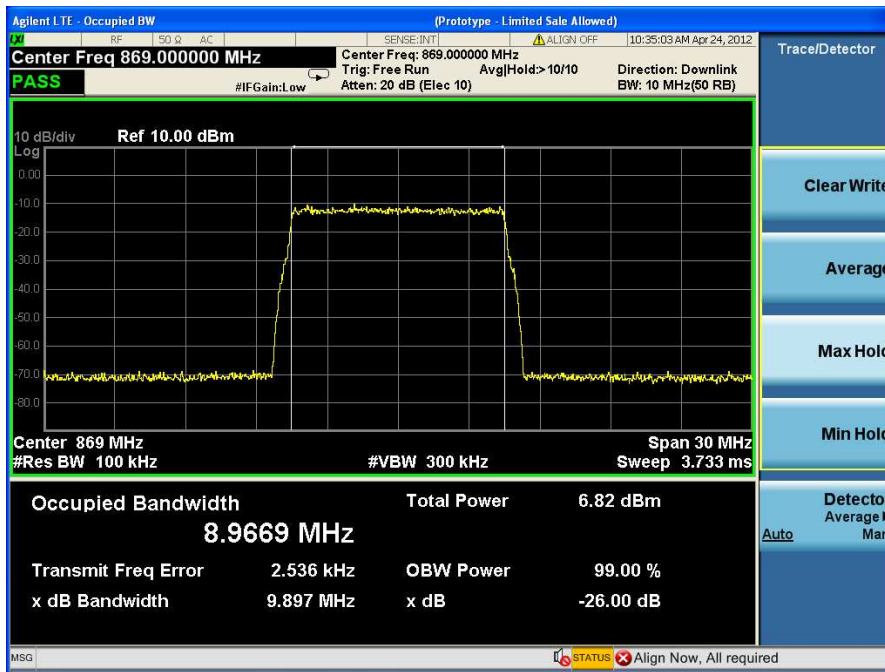
Date: 9.MAY.2012 17:28:00

850MHz-WCDMA uplink (highest frequency)- Output

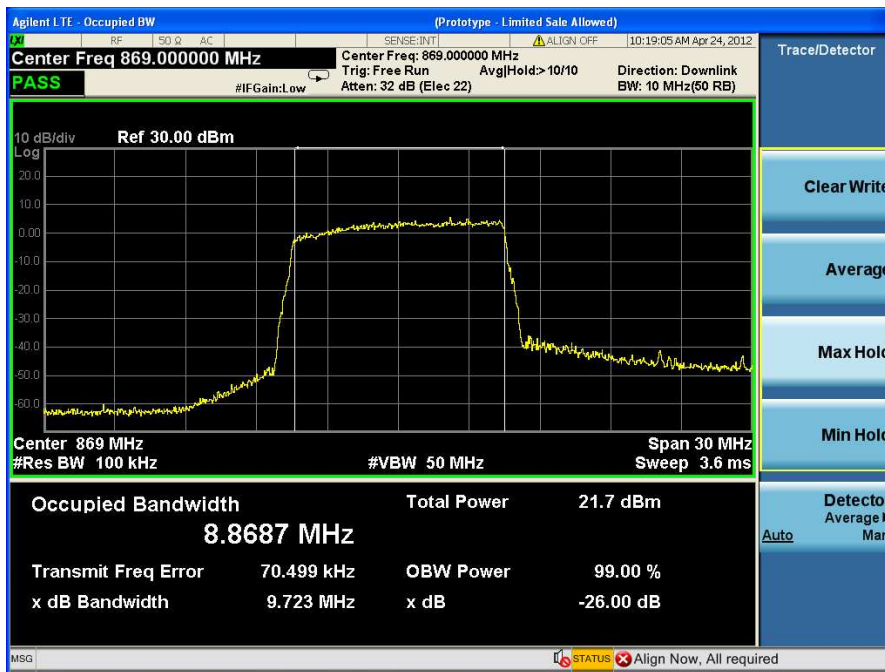


Date: 9.MAY.2012 16:53:44

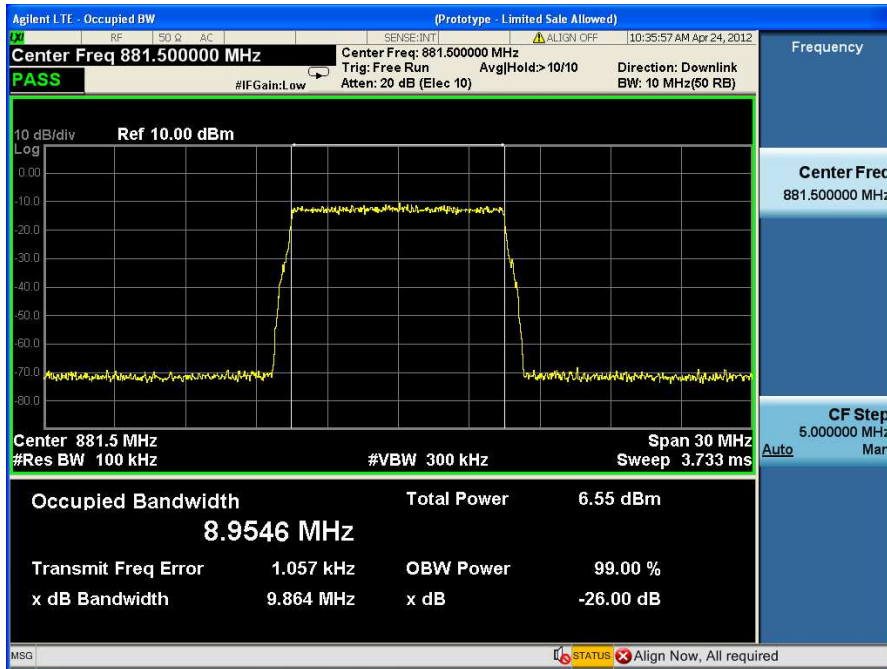
850MHz-LTE –QPSK downlink (lowest frequency)-Input



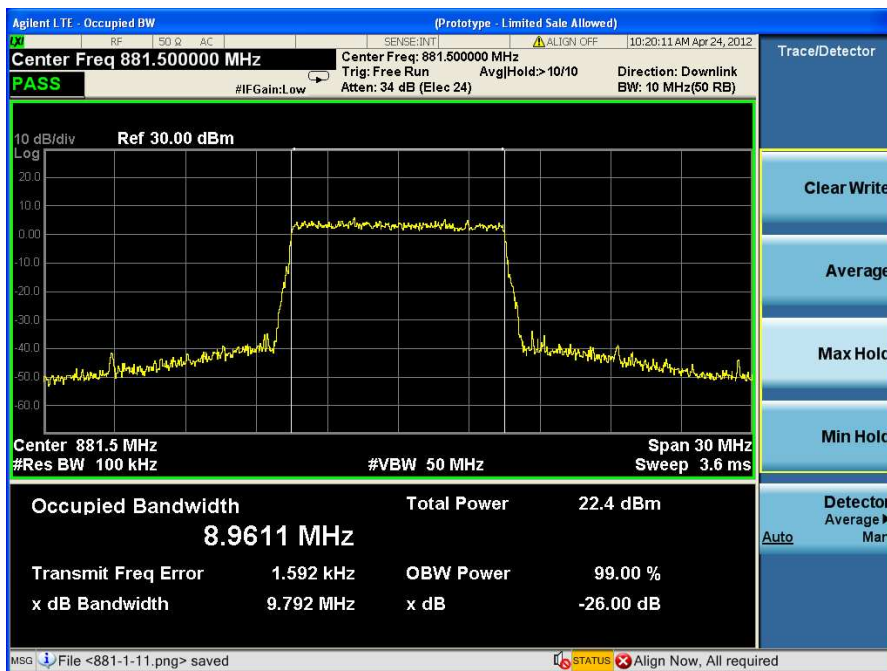
850MHz-LTE –QPSK downlink (lowest frequency)-Output



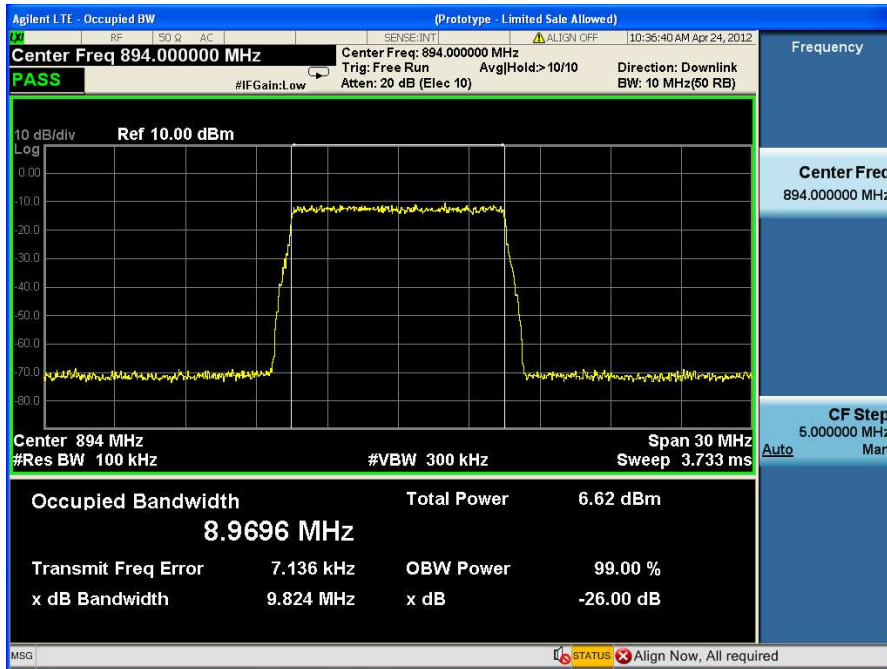
850MHz-LTE –QPSK downlink (middle frequency)-Input



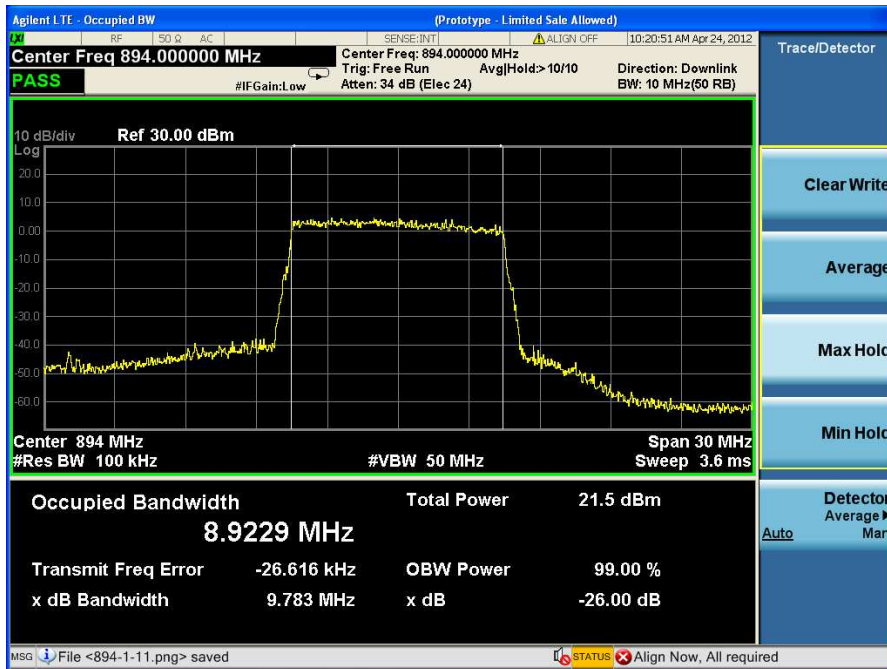
850MHz-LTE –QPSK downlink (middle frequency)- Output



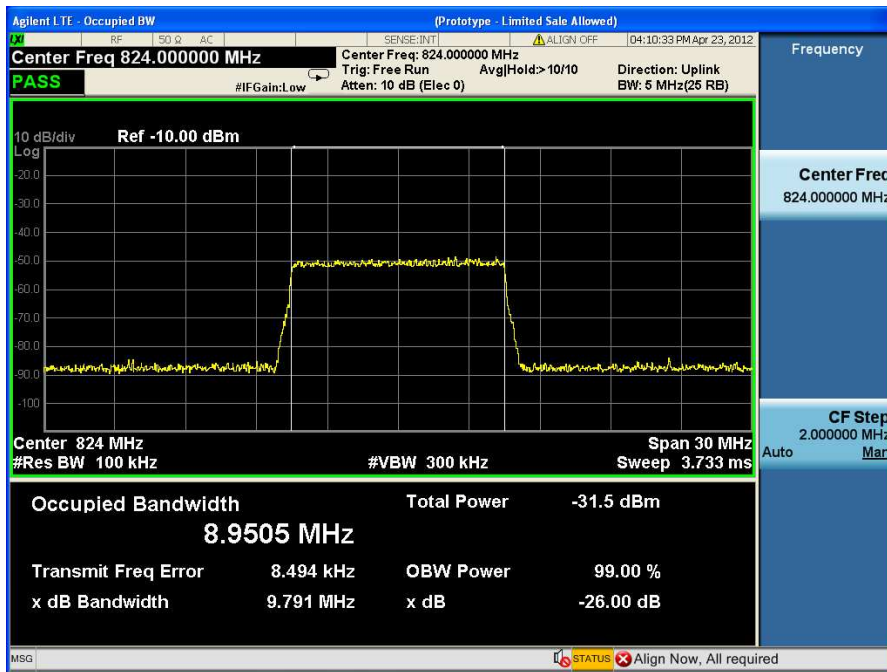
850MHz-LTE –QPSK downlink (highest frequency)-Input



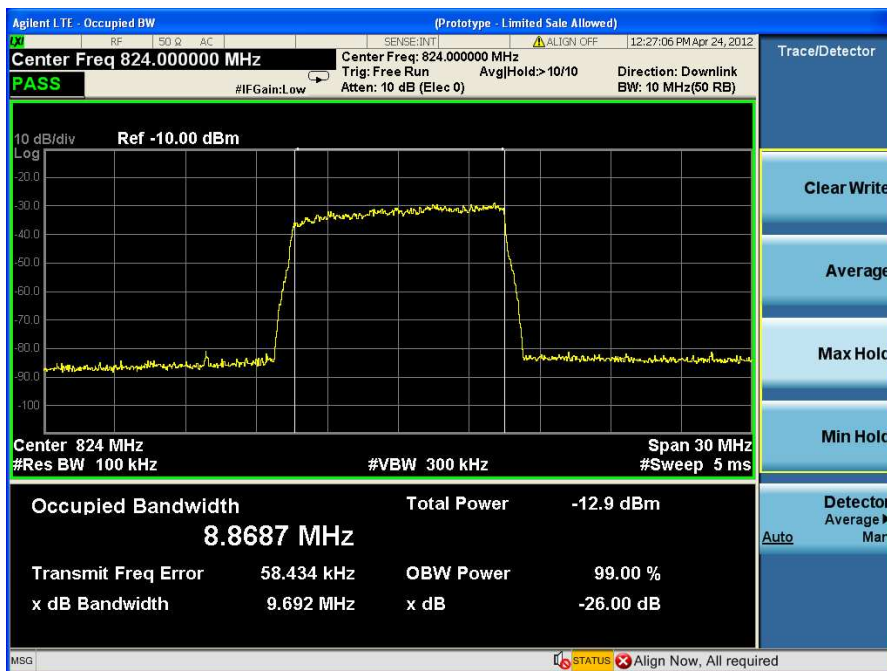
850MHz-LTE –QPSK downlink (highest frequency)- Output



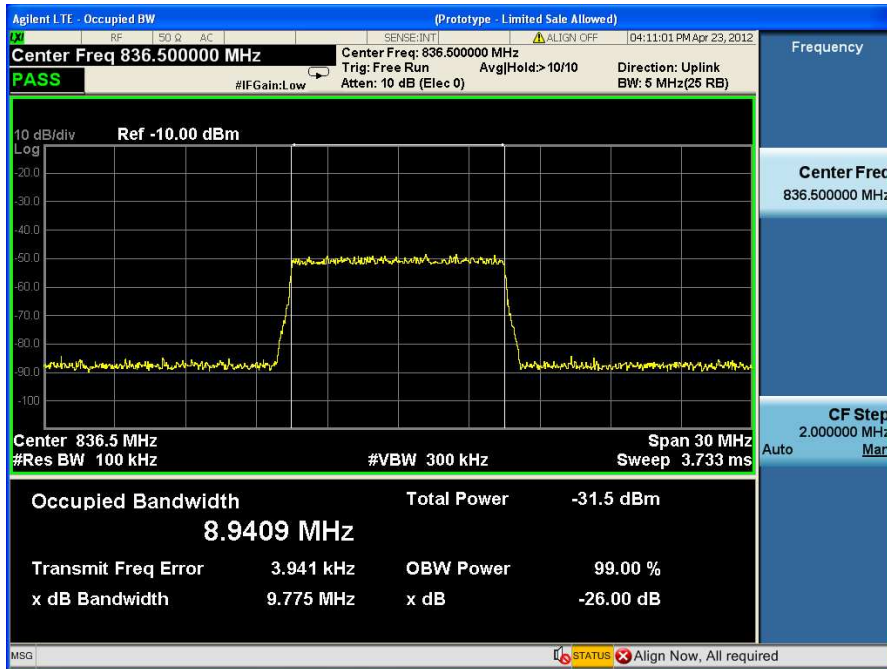
850MHz-LTE –QPSK uplink (lowest frequency)-Input



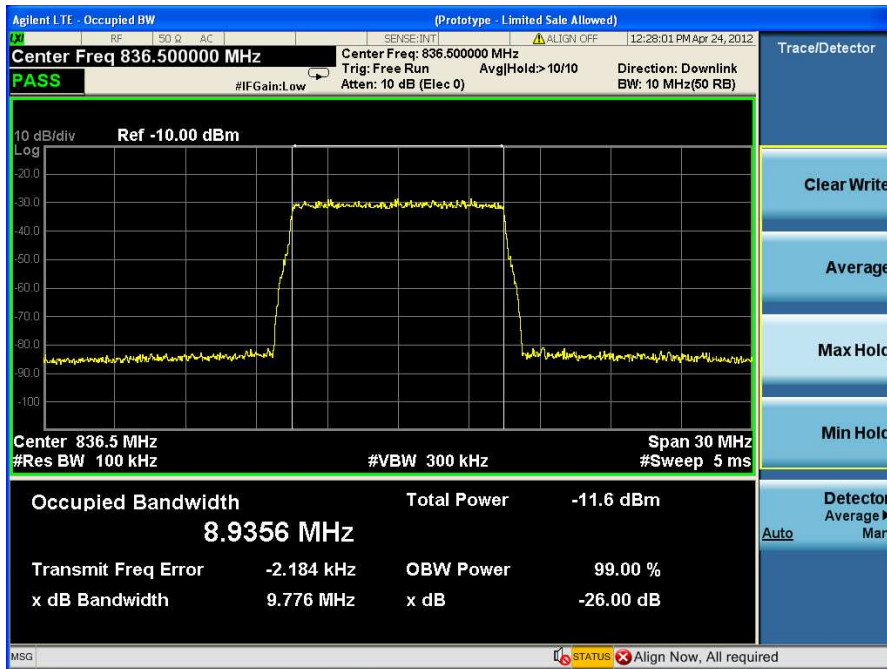
850MHz-LTE –QPSK uplink (lowest frequency)- Output



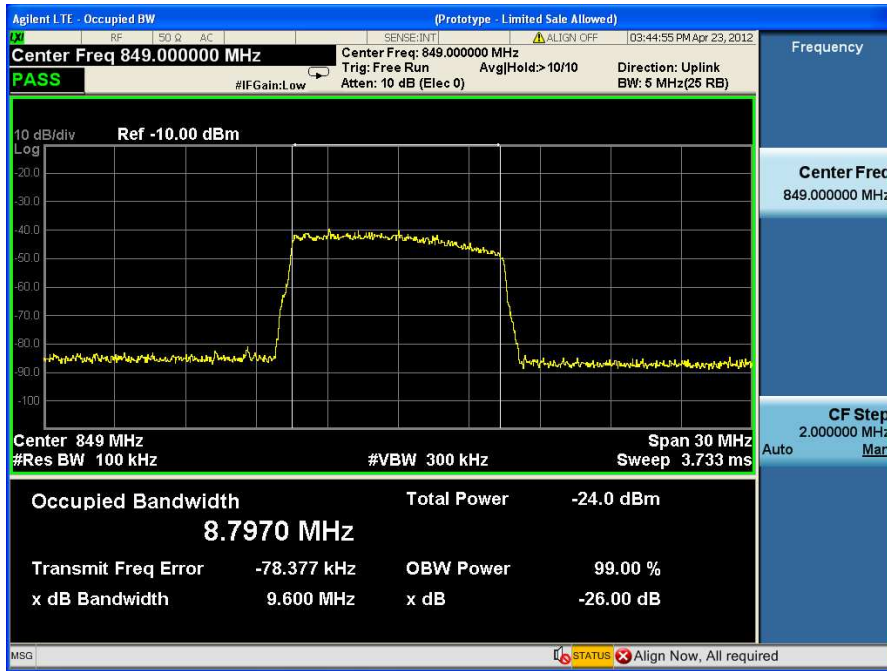
850MHz-LTE –QPSK uplink (middle frequency)-Input



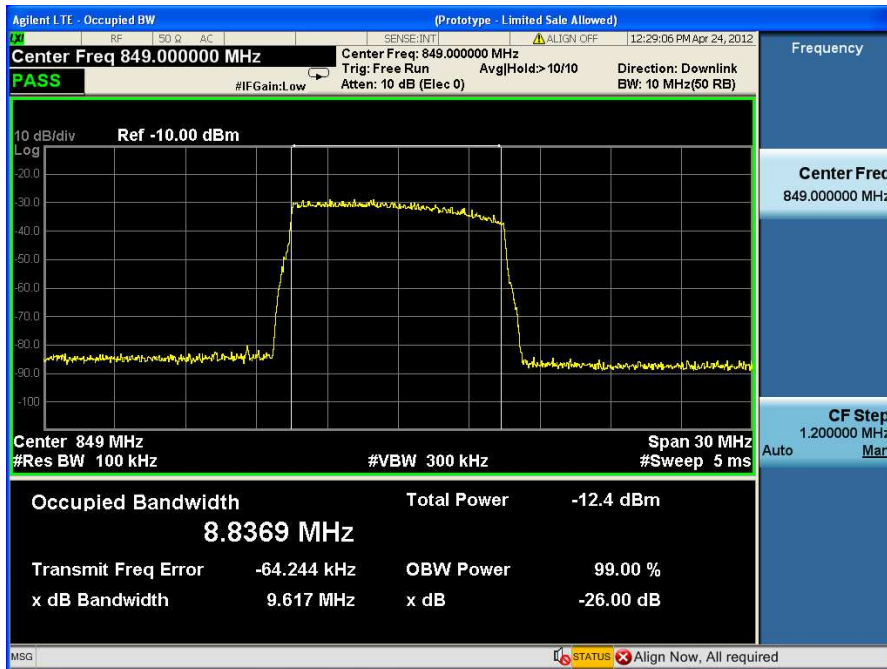
850MHz-LTE –QPSK uplink (middle frequency)-Output



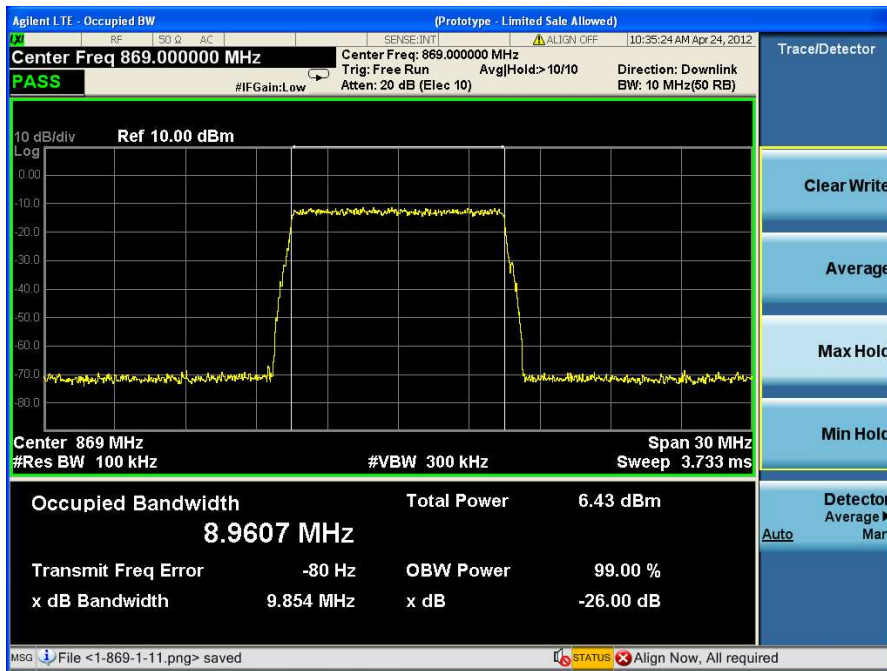
850MHz-LTE –QPSK uplink (highest frequency)-Input



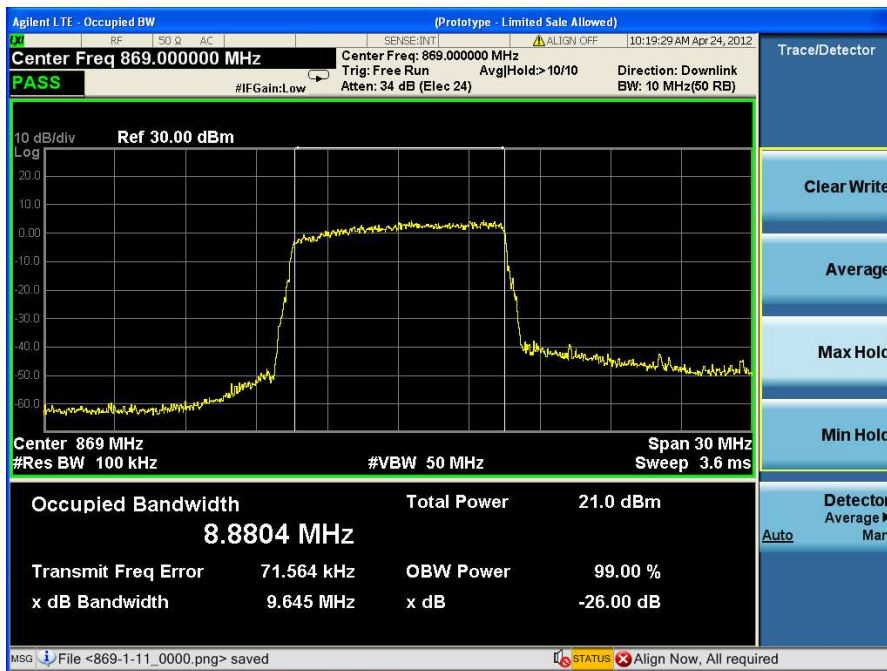
850MHz-LTE –QPSK uplink (highest frequency)- Output



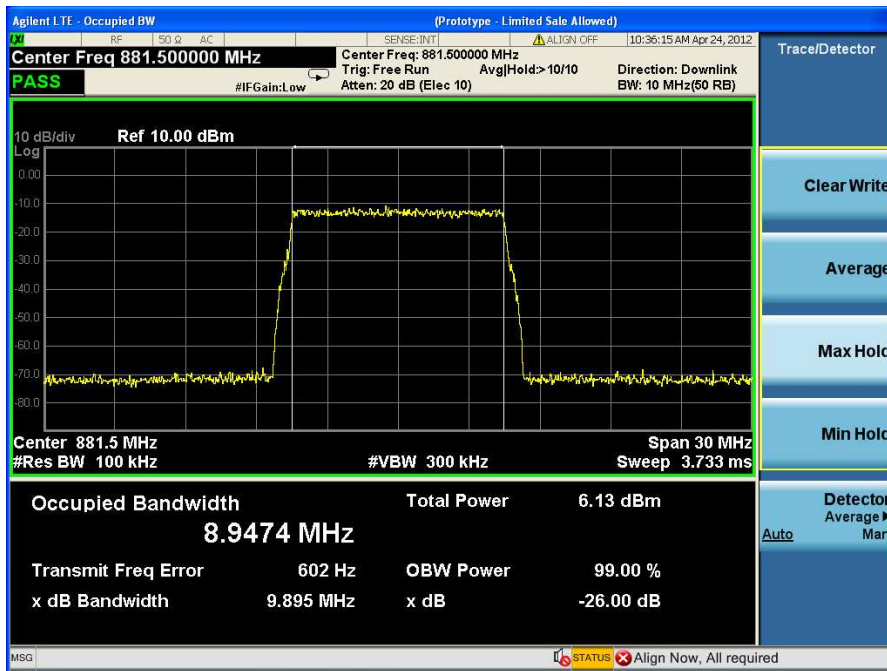
850MHz-LTE-16QAM downlink (lowest frequency)-Input



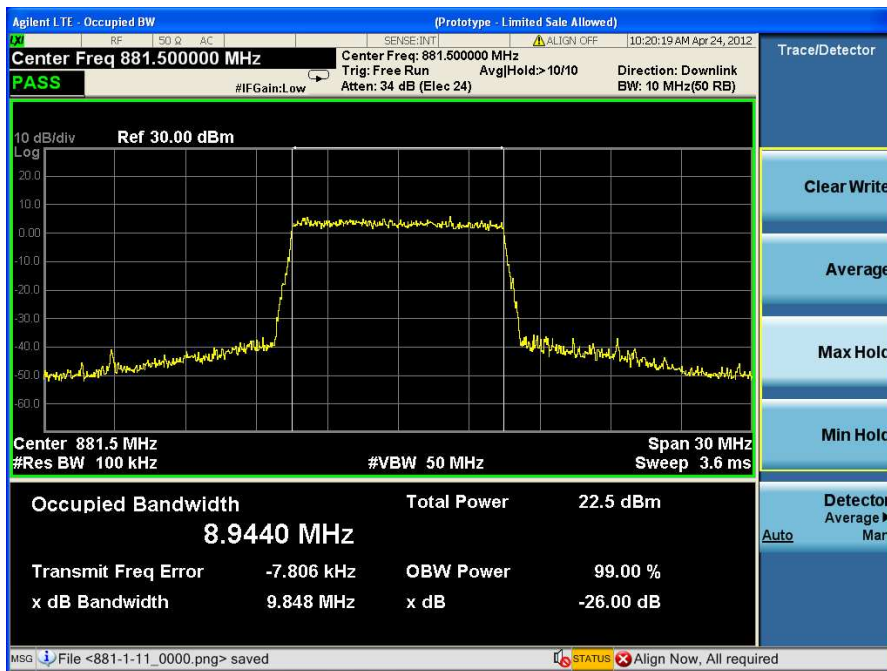
850MHz-LTE-16QAM downlink (lowest frequency)-Output



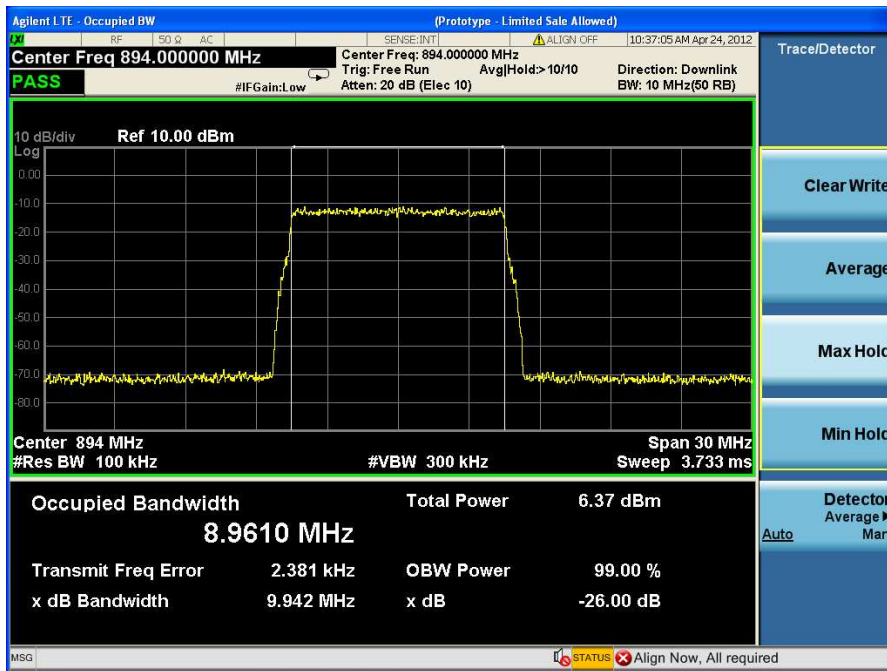
850MHz-LTE-16QAM downlink (middle frequency)-Input



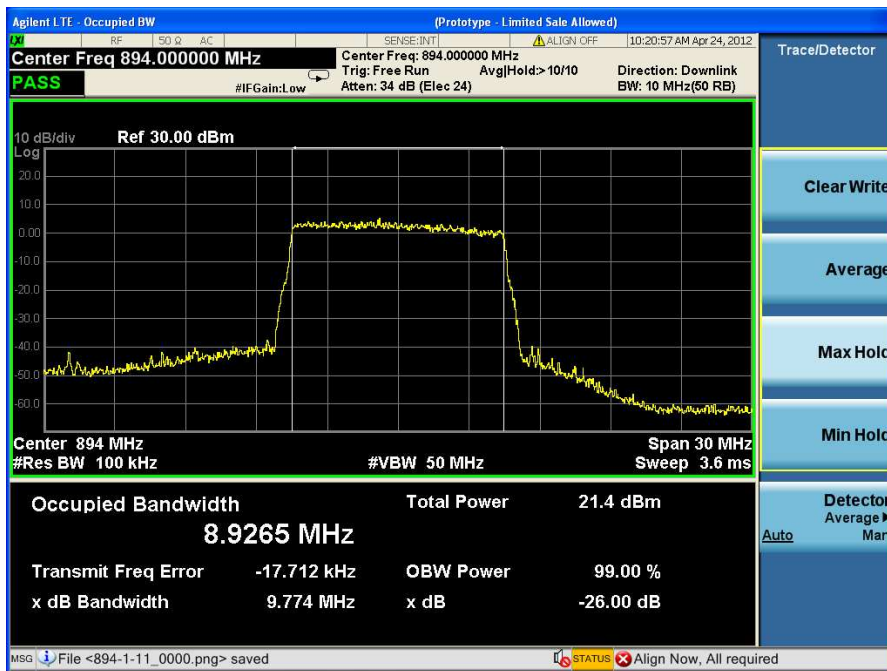
850MHz-LTE -16QAM downlink (middle frequency)- Output



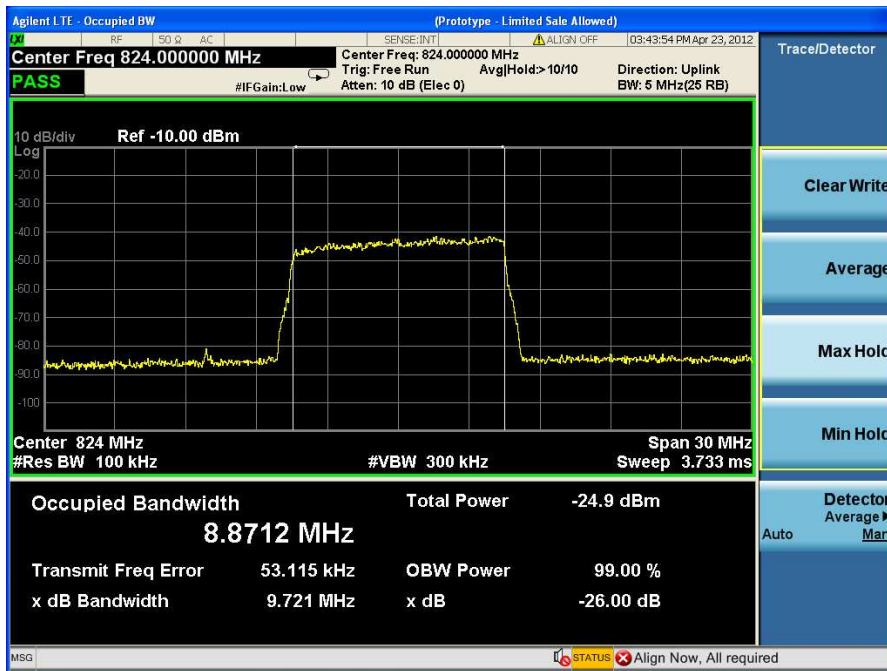
850MHz-LTE -16QAM downlink (highest frequency)-Input



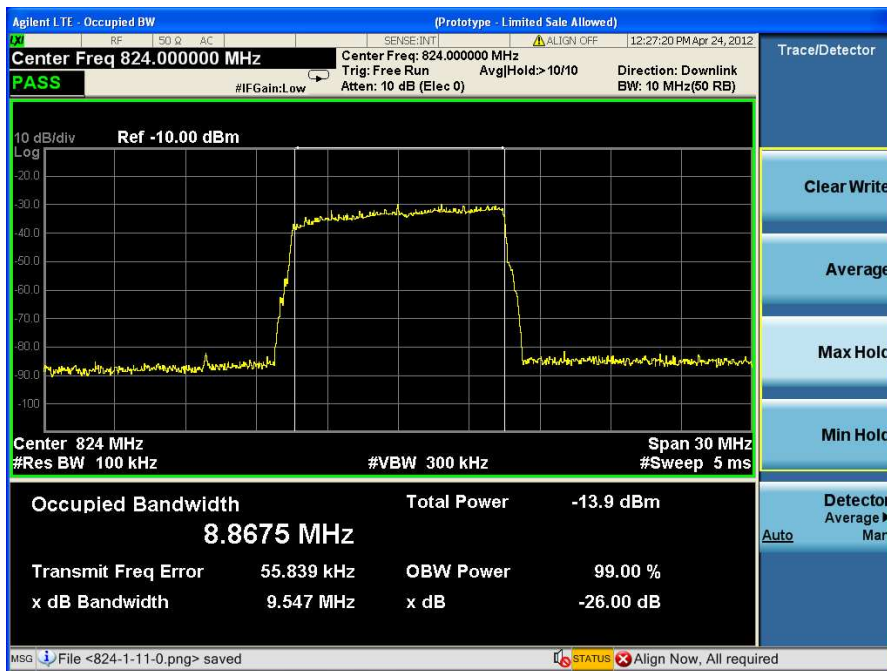
850MHz-LTE-16QAM downlink (highest frequency)- Output



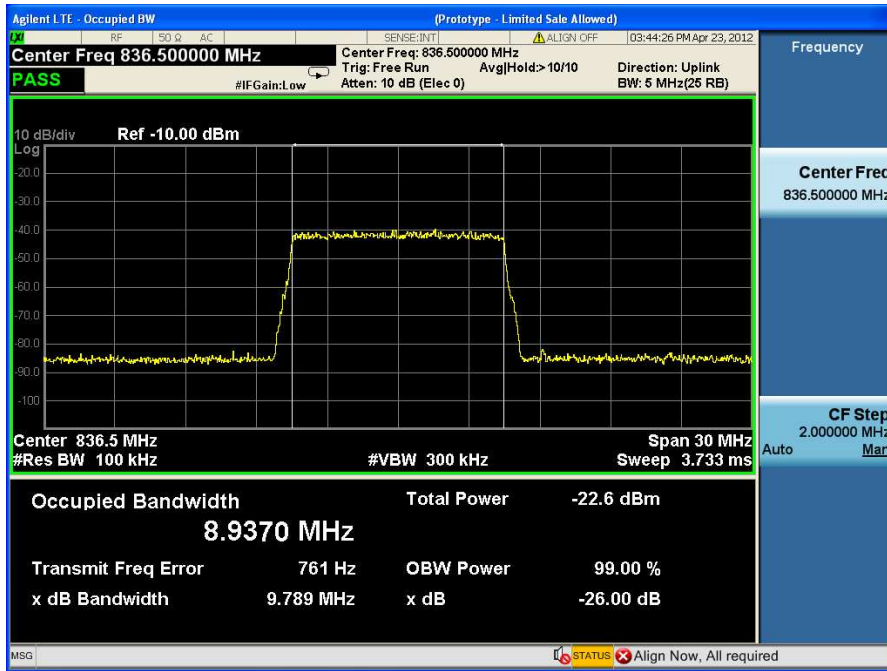
850MHz-LTE -16QAM uplink (lowest frequency)-Input



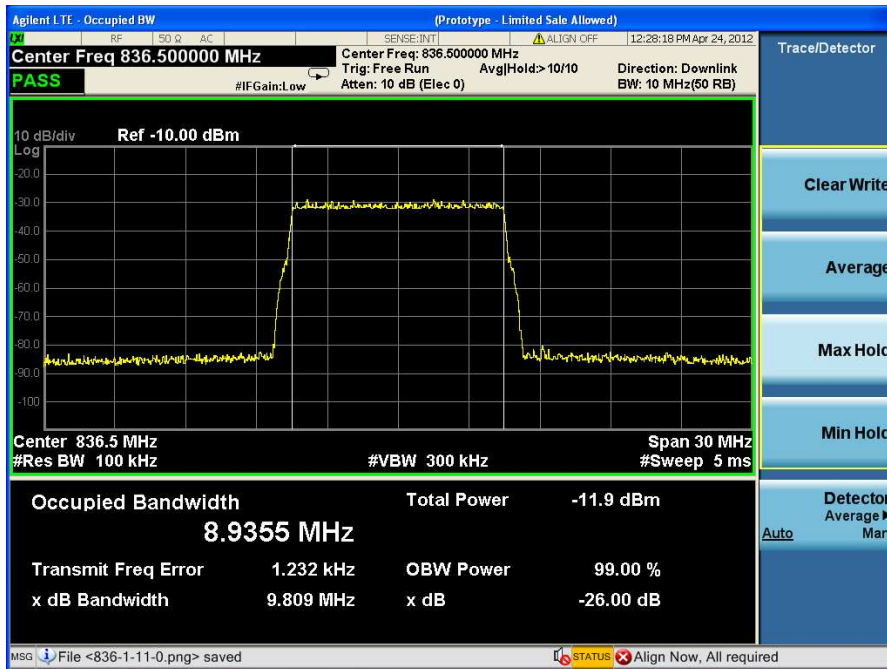
850MHz-LTE-16QAM uplink (lowest frequency)- Output



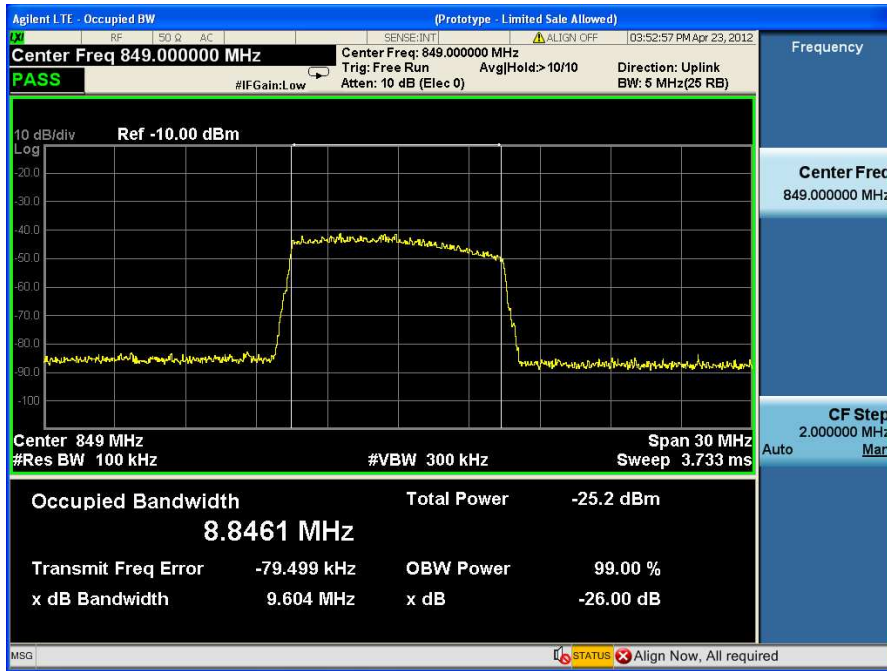
850MHz-LTE -16QAM uplink (middle frequency)-Input



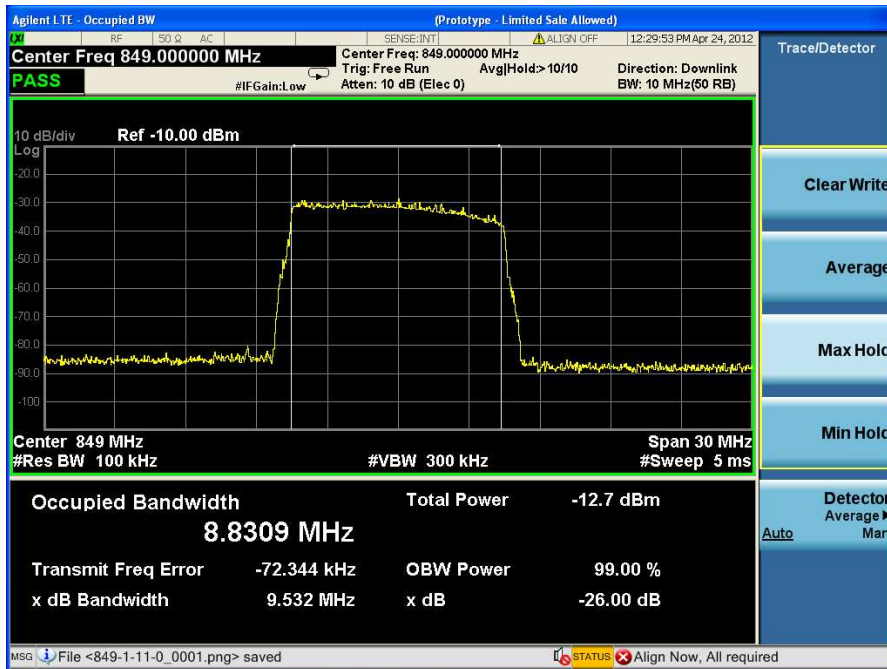
850MHz-LTE -16QAM uplink (middle frequency)-Output



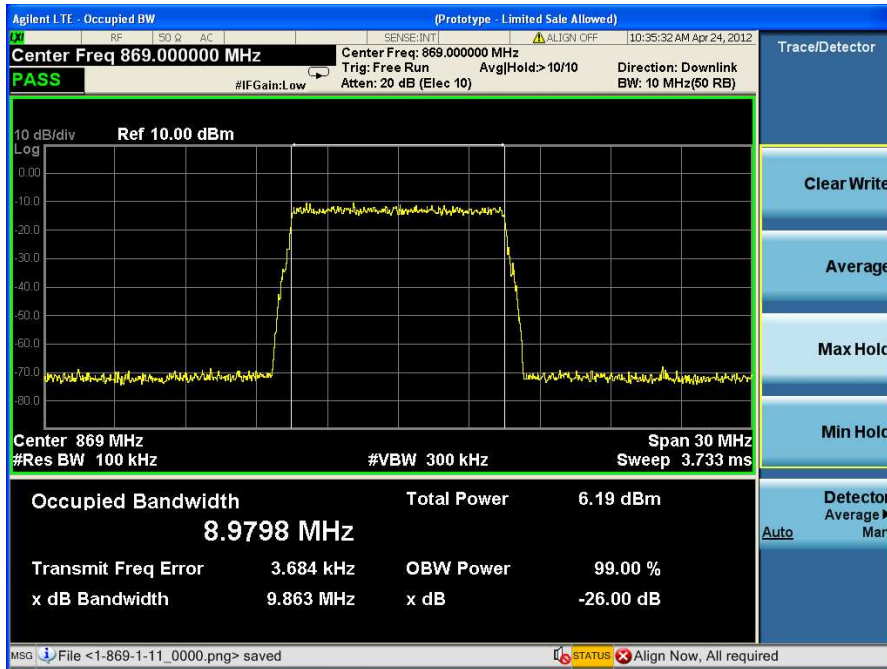
850MHz-LTE-16QAM uplink (highest frequency)-Input



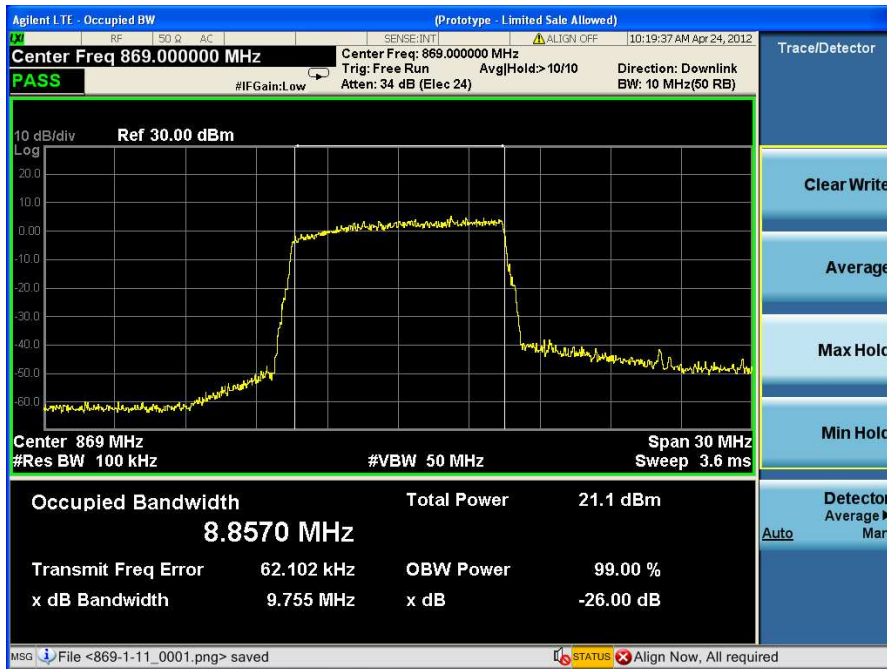
850MHz-LTE -16QAM uplink (highest frequency)- Output



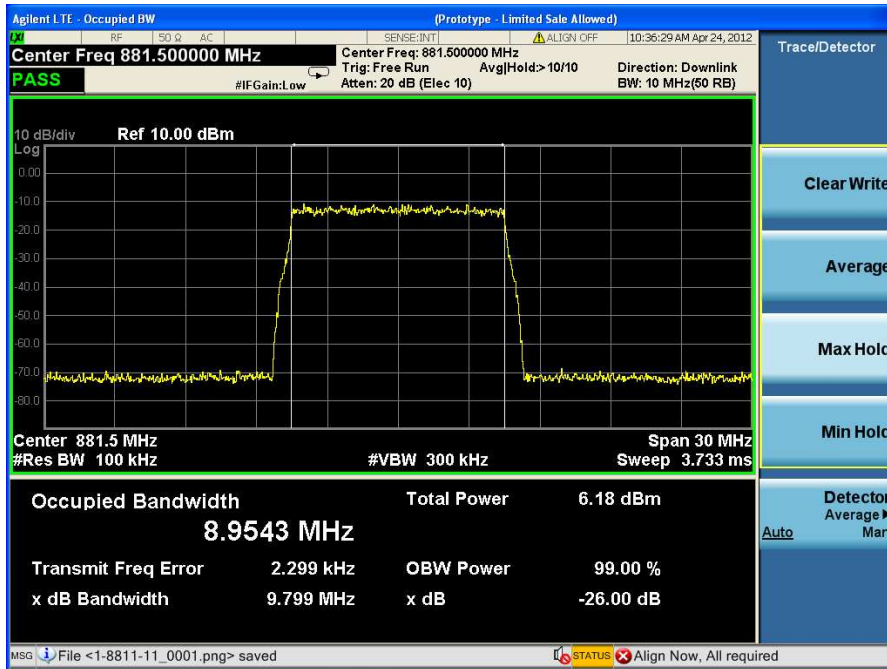
850MHz-LTE -64QAM downlink (lowest frequency)-Input



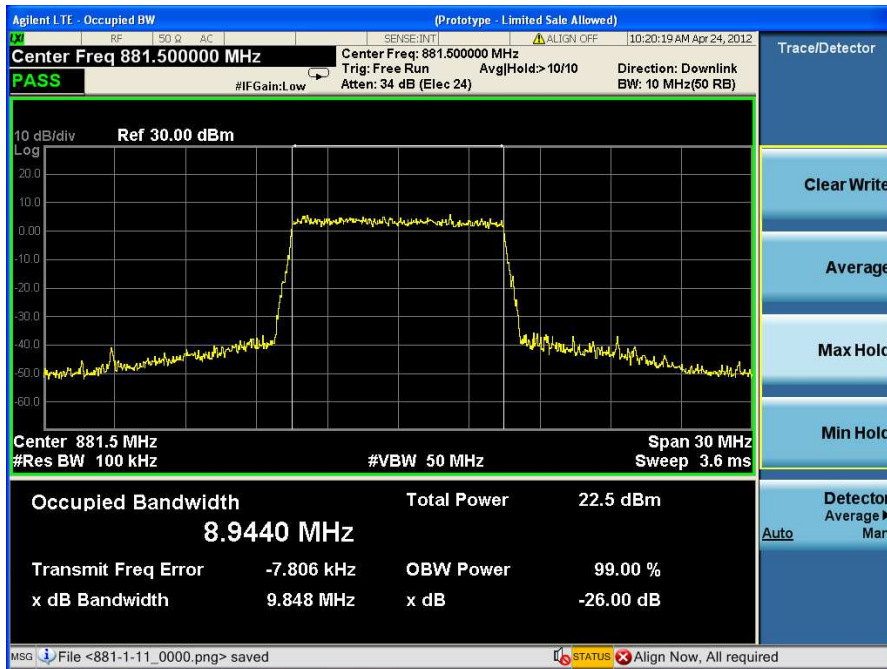
850MHz-LTE -64QAM downlink (lowest frequency)-Output



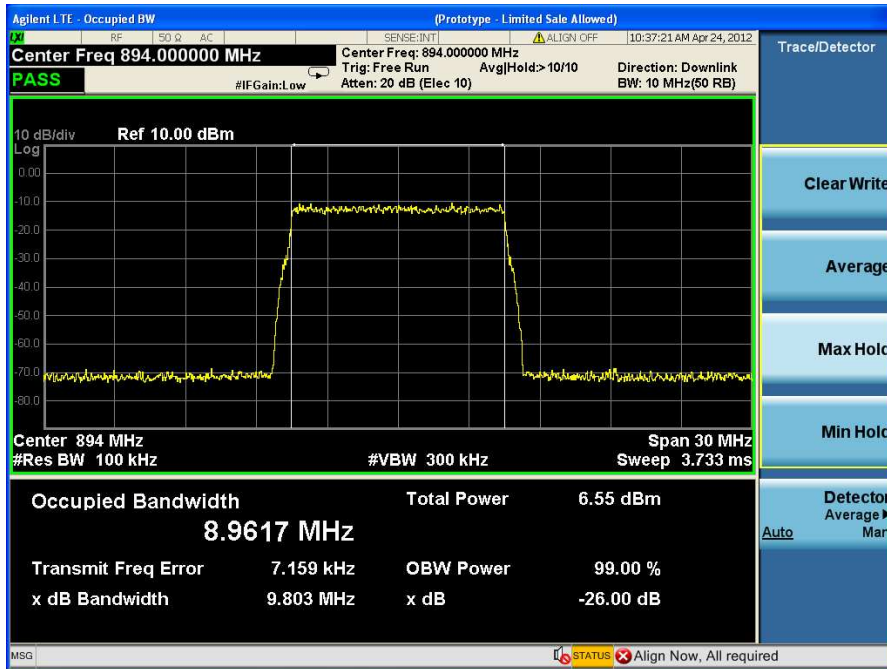
850MHz-LTE -64QAM downlink (middle frequency)-Input



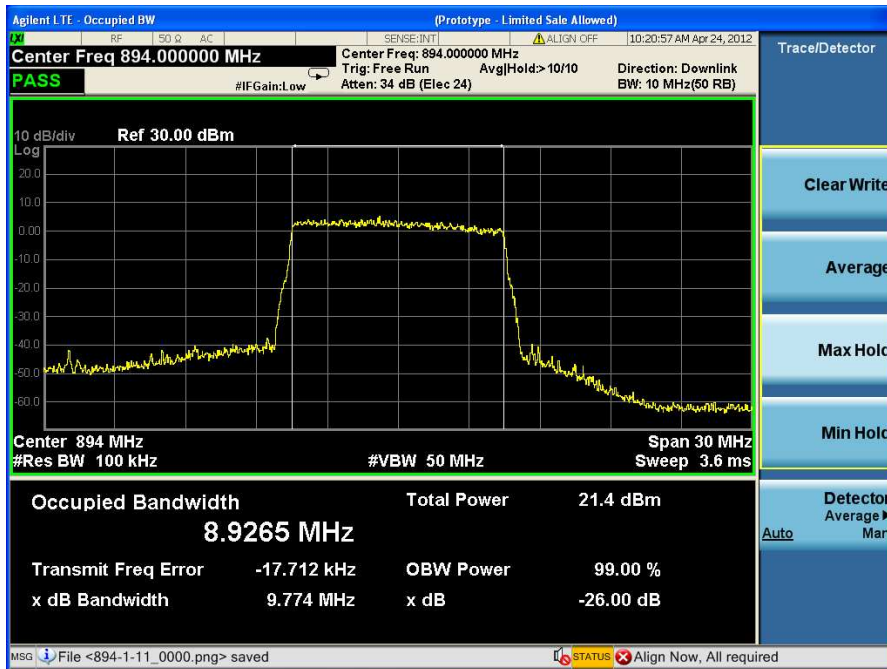
850MHz-LTE -64QAM downlink (middle frequency)- Output



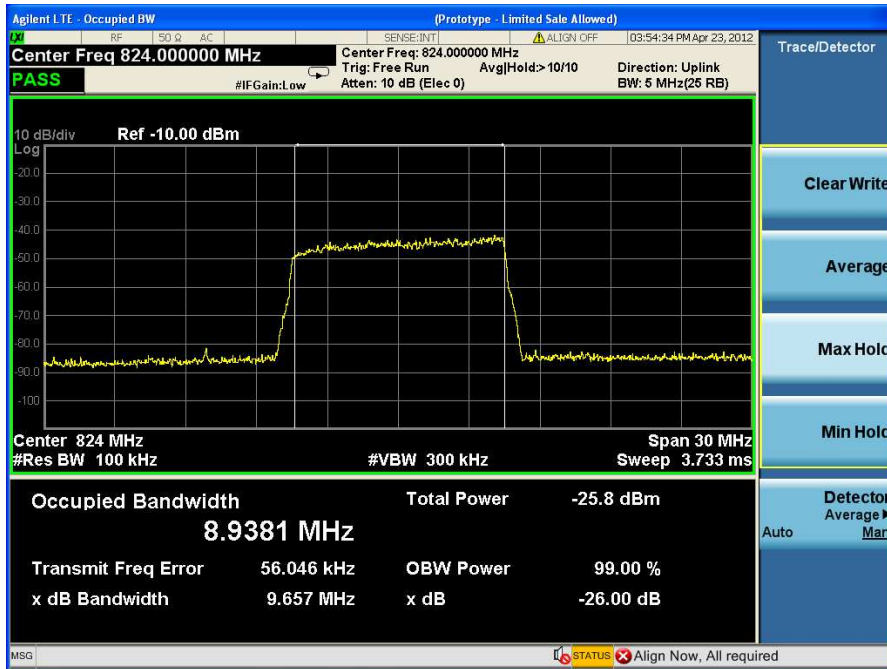
850MHz-LTE -64QAM downlink (highest frequency)-Input



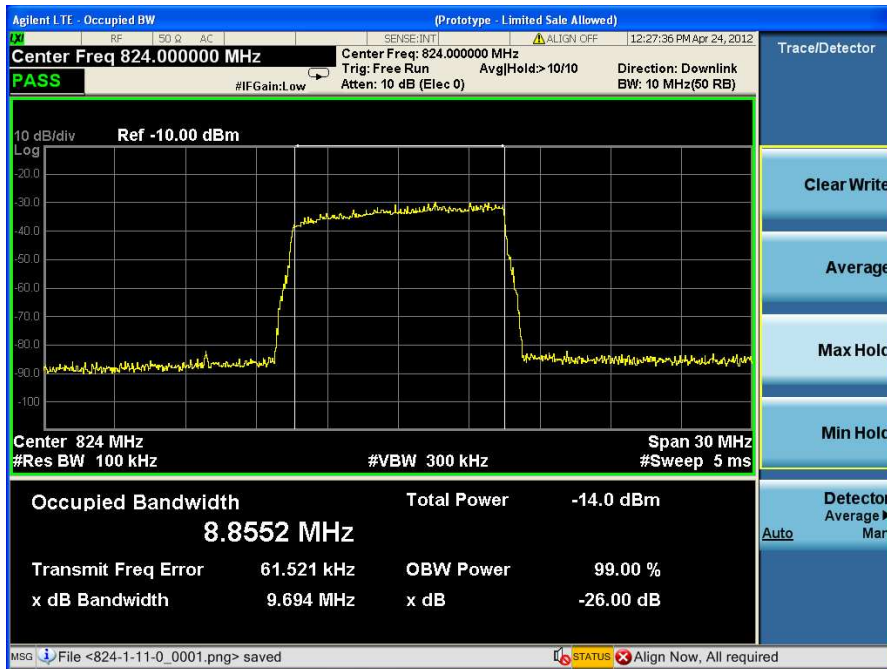
850MHz-LTE -64QAM downlink (highest frequency)- Output



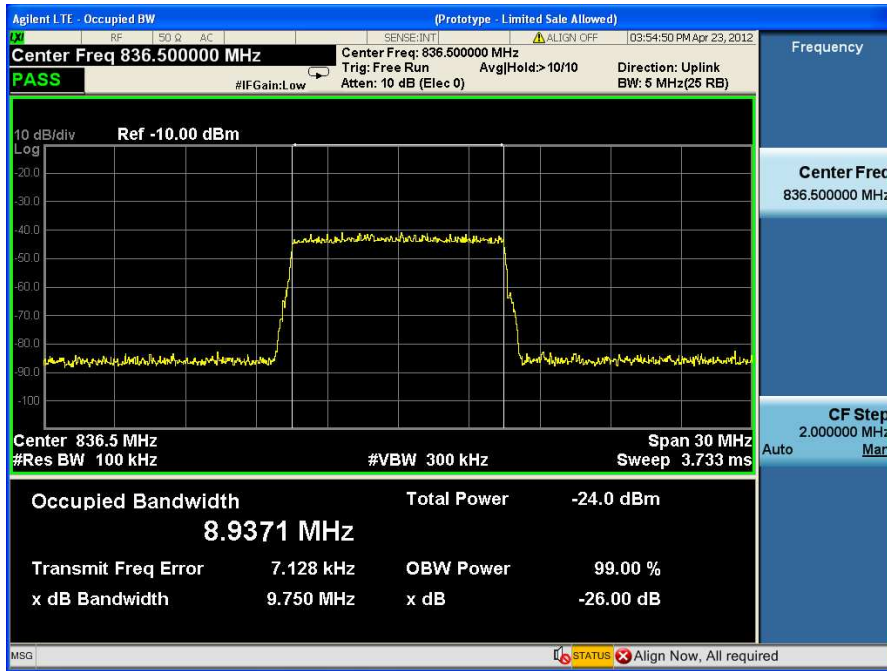
850MHz-LTE -64QAM uplink (lowest frequency)-Input



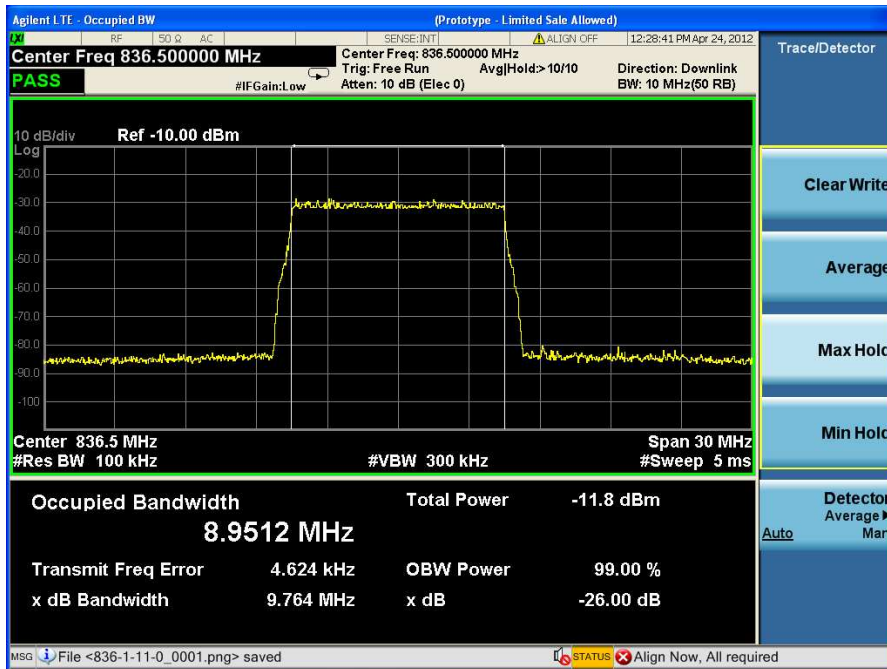
850MHz-LTE -64QAM uplink (lowest frequency)- Output



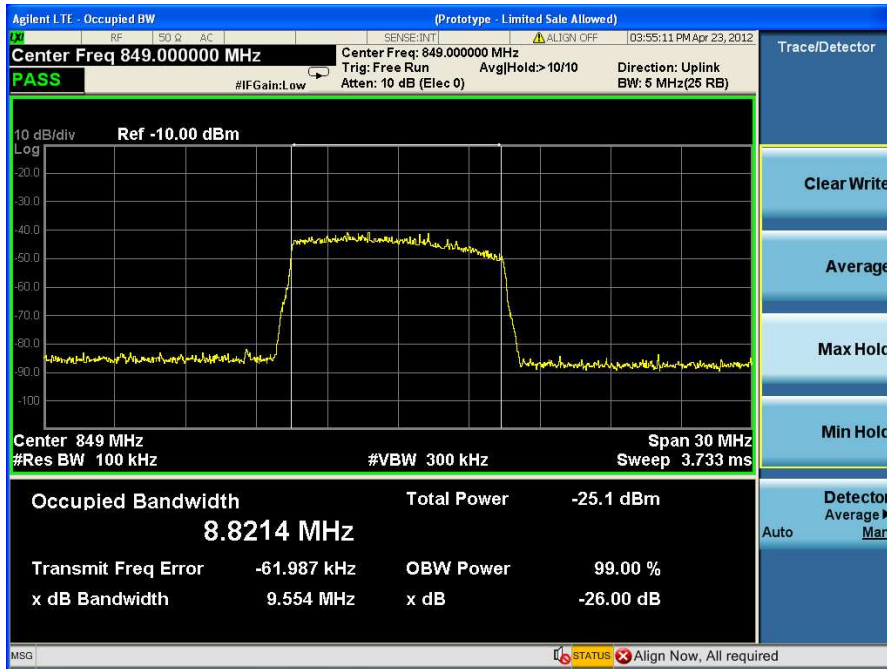
850MHz-LTE -64QAM uplink (middle frequency)-Input



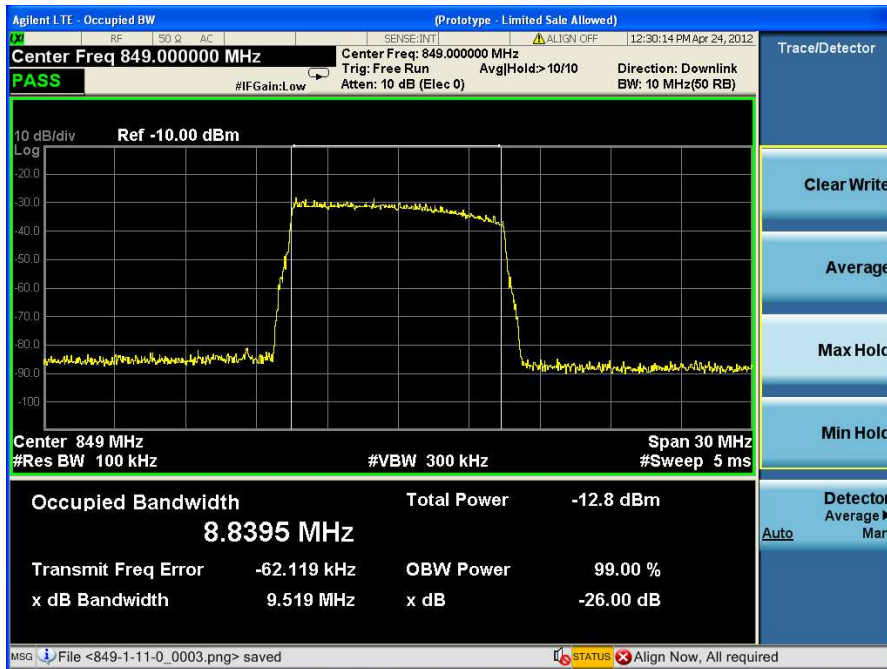
850MHz-LTE -64QAM uplink (middle frequency)-Output



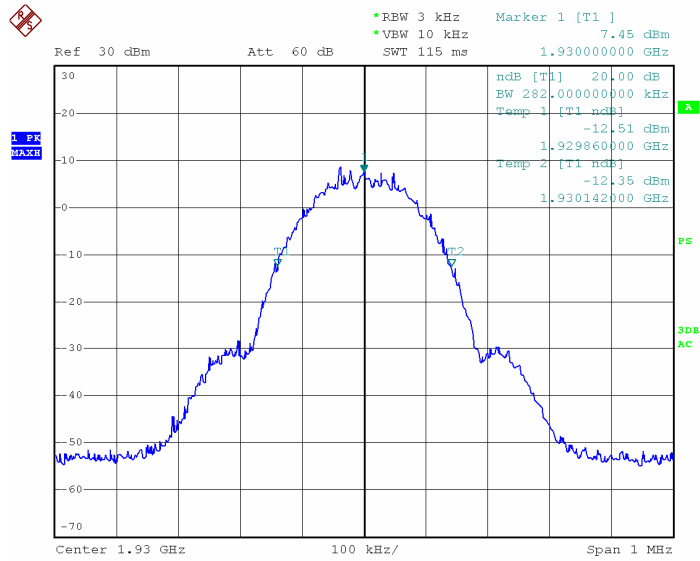
850MHz-LTE -64QAM uplink (highest frequency)-Input



850MHz-LTE -64QAM uplink (highest frequency)- Output

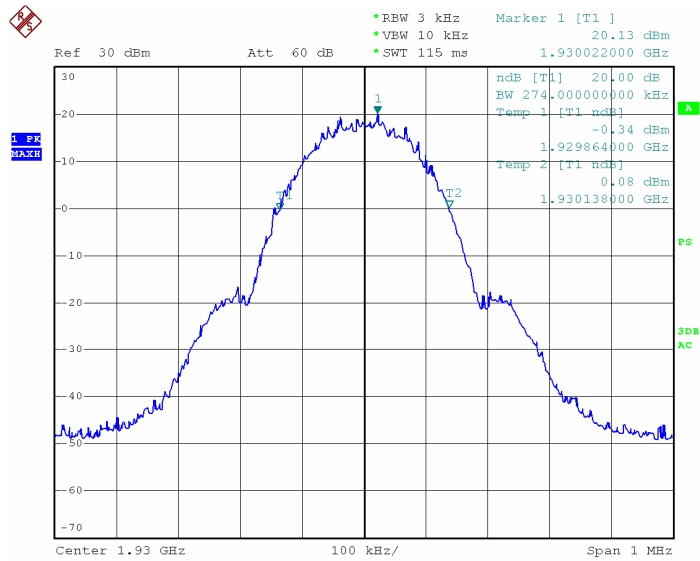


1900MHz-GSM downlink (lowest frequency)-Input



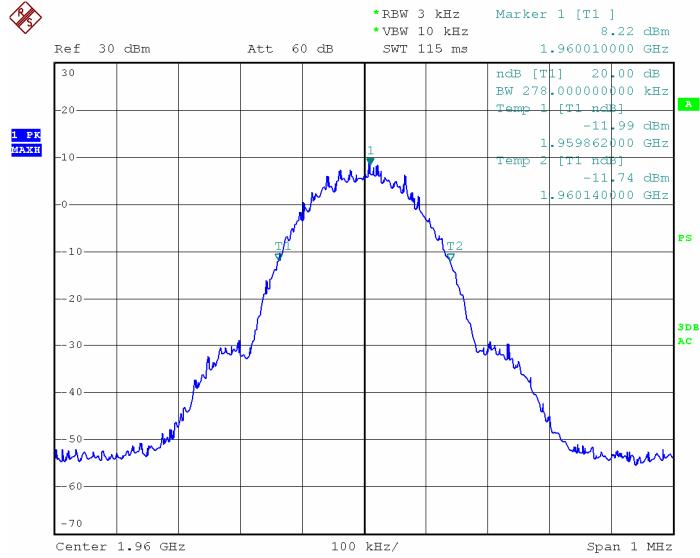
Date: 9.MAY.2012 15:43:23

1900MHz-GSM downlink (lowest frequency)-Output



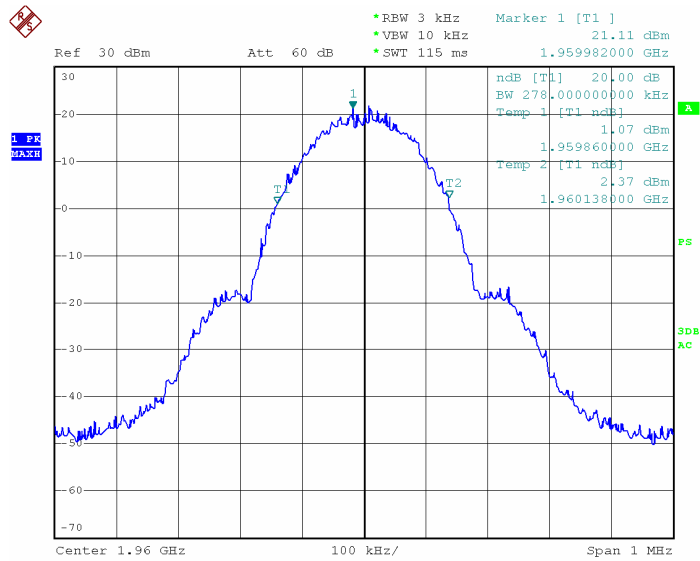
Date: 8.MAY.2012 21:46:21

1900MHz-GSM downlink (middle frequency)-Input



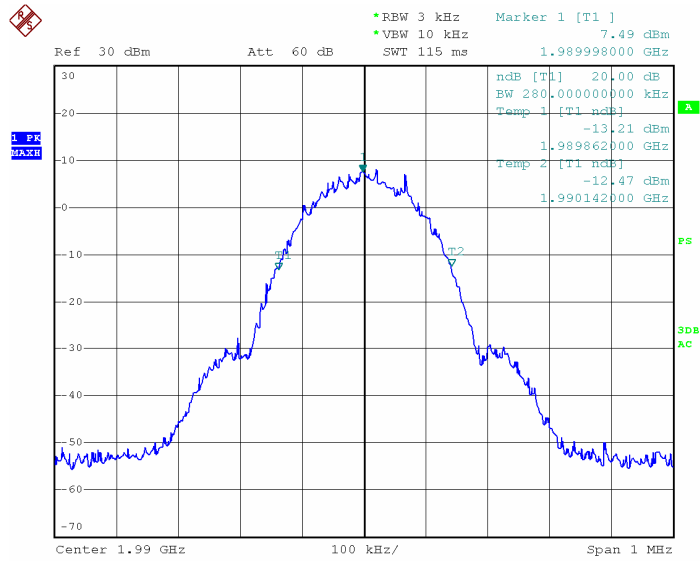
Date: 9.MAY.2012 15:43:50

1900MHz-GSM downlink (middle frequency)- Output



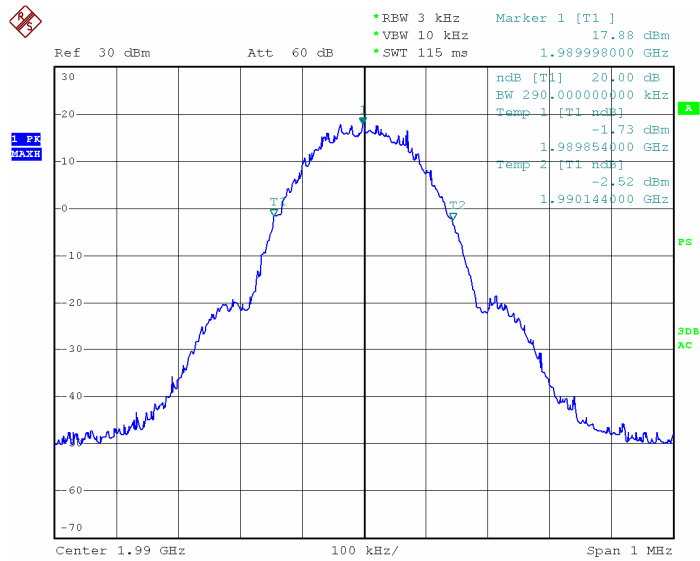
Date: 8.MAY.2012 21:47:01

1900MHz-GSM downlink (highest frequency)-Input



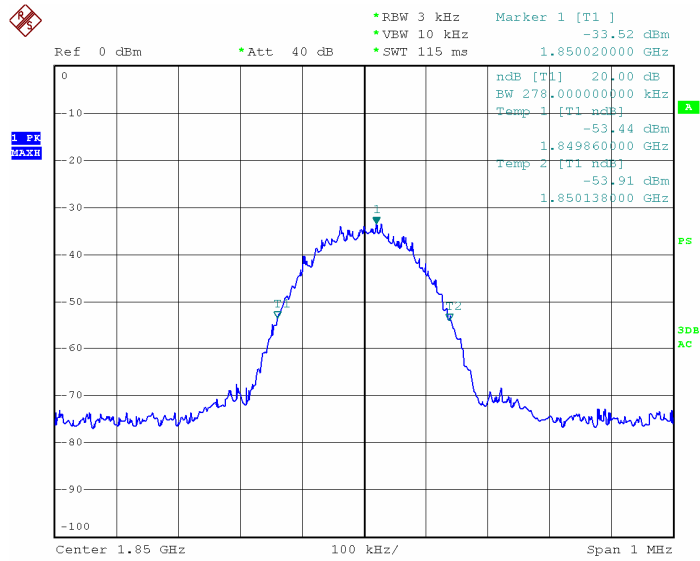
Date: 9.MAY.2012 15:44:57

1900MHz-GSM downlink (highest frequency)- Output



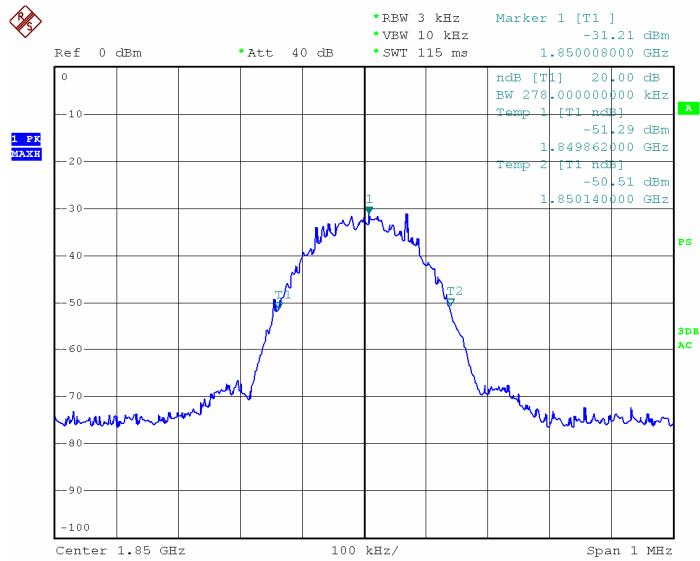
Date: 8.MAY.2012 21:47:31

1900MHz-GSM uplink (lowest frequency)-Input



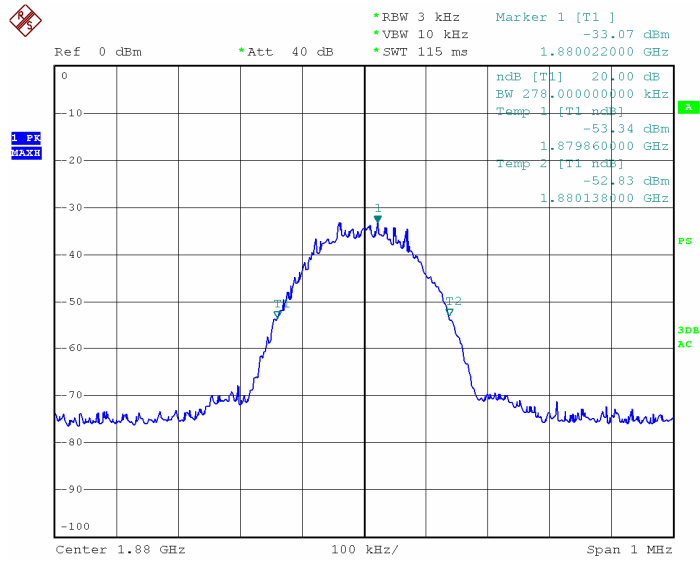
Date: 9.MAY.2012 18:30:02

1900MHz-GSM uplink (lowest frequency)- Output



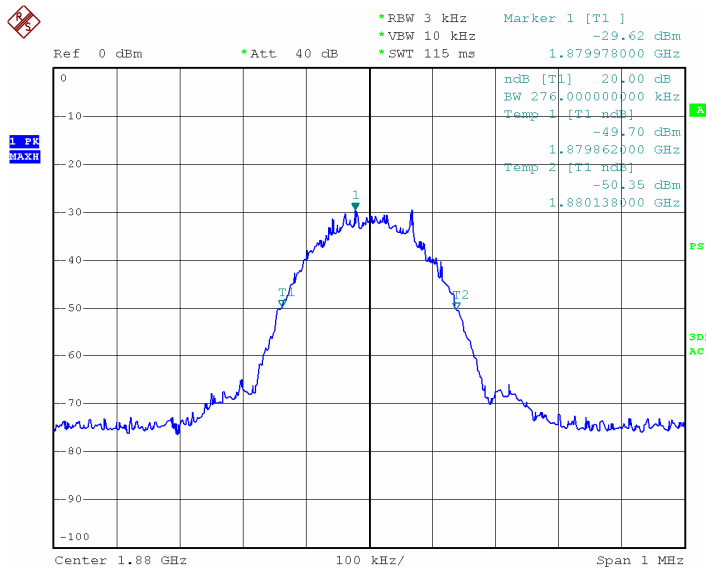
Date: 9.MAY.2012 16:44:33

1900MHz-GSM uplink (middle frequency)-Input



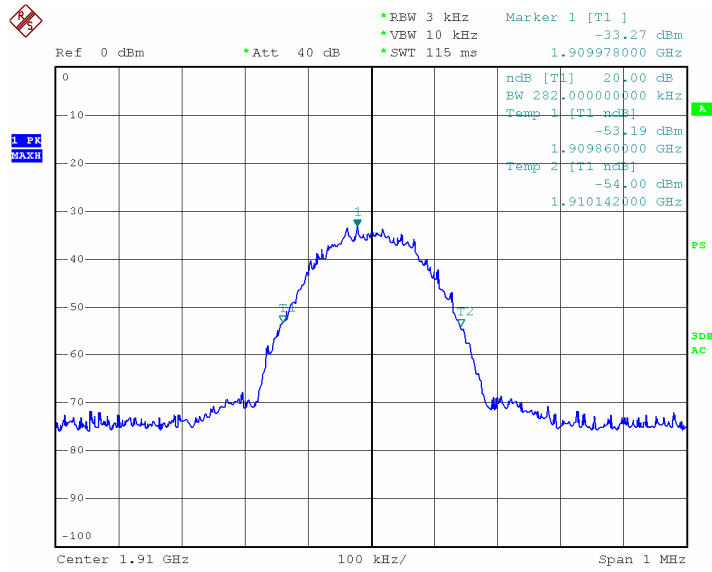
Date: 9.MAY.2012 18:29:34

1900MHz-GSM uplink (middle frequency)-Output



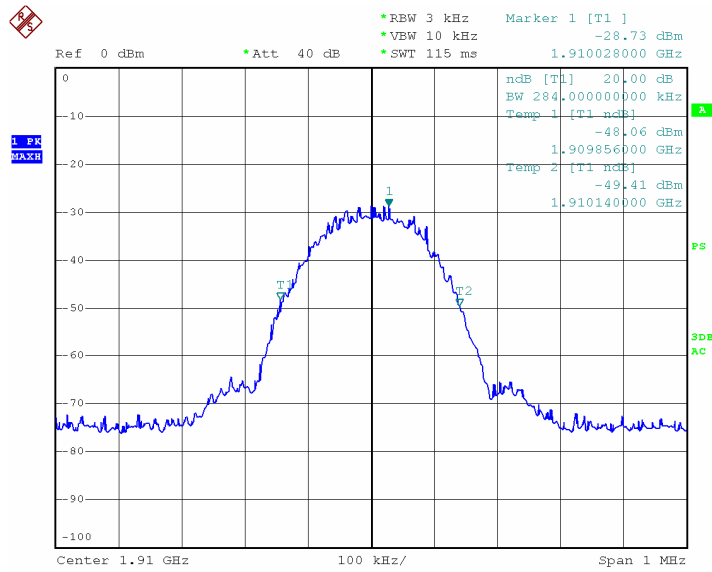
Date: 9.MAY.2012 16:43:44

1900MHz-GSM uplink (highest frequency)-Input



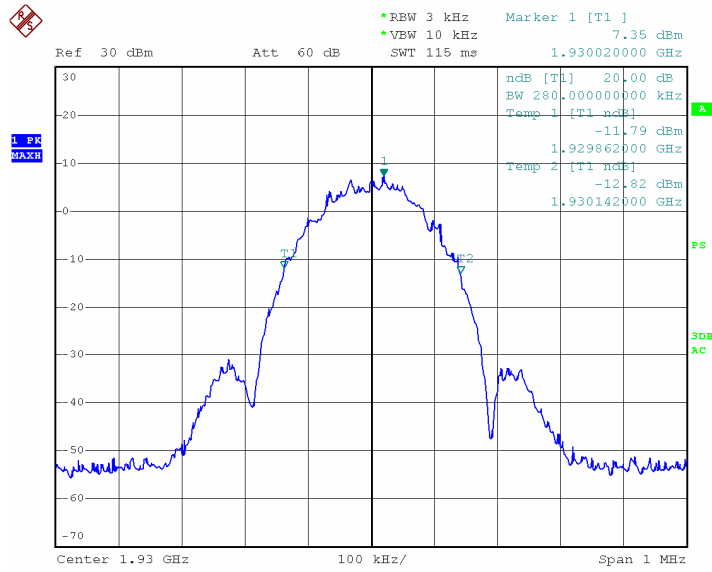
Date: 9.MAY.2012 18:28:52

1900MHz-GSM uplink (highest frequency)- Output



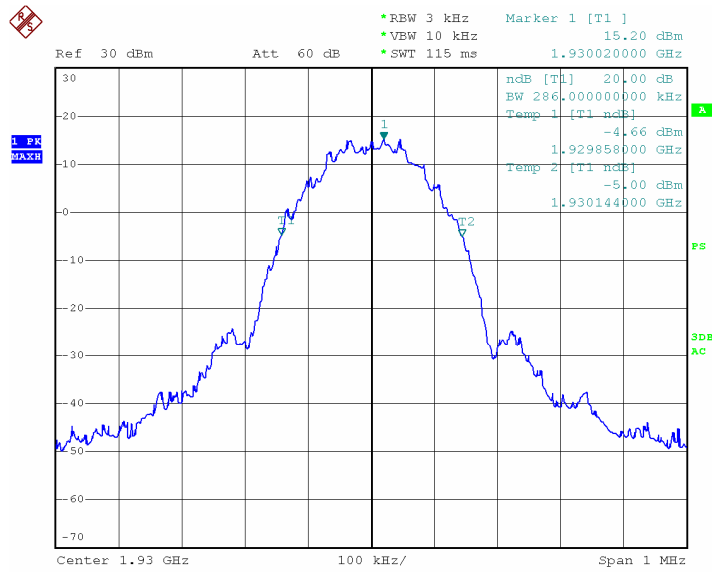
Date: 9.MAY.2012 16:43:11

1900MHz-EDGE downlink (lowest frequency)-Input



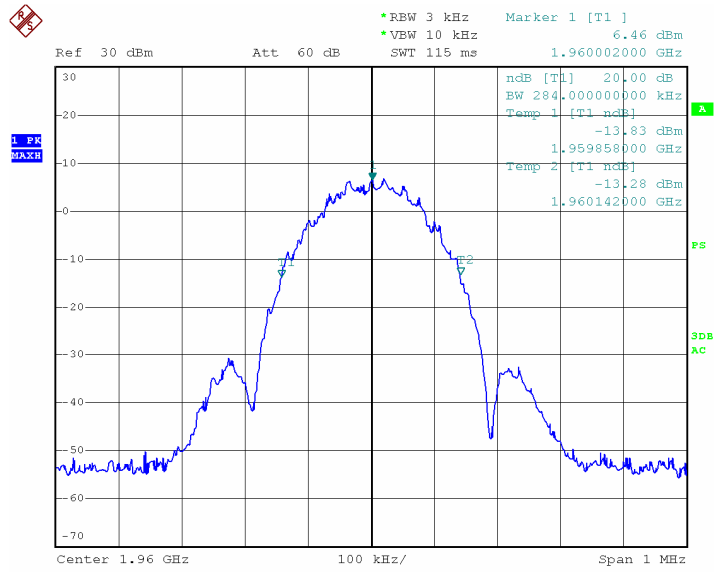
Date: 9.MAY.2012 15:46:23

1900MHz-EDGE downlink (lowest frequency)-Output



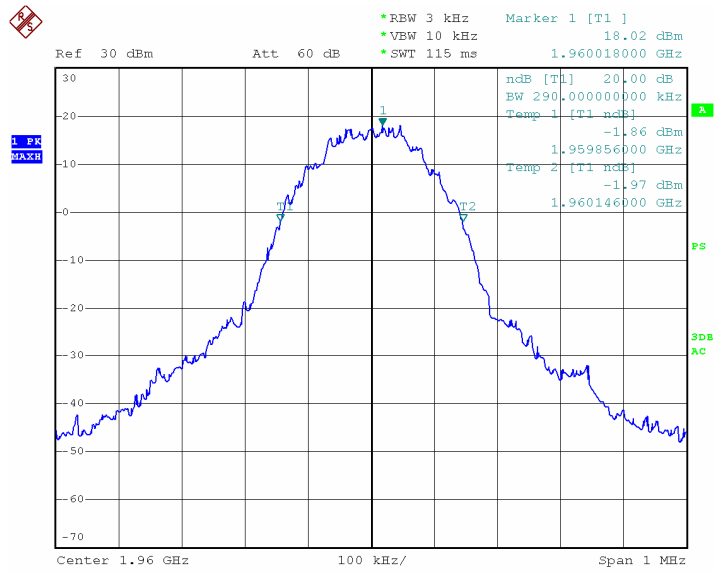
Date: 8.MAY.2012 21:50:30

1900MHz-EDGE downlink (middle frequency)-Input



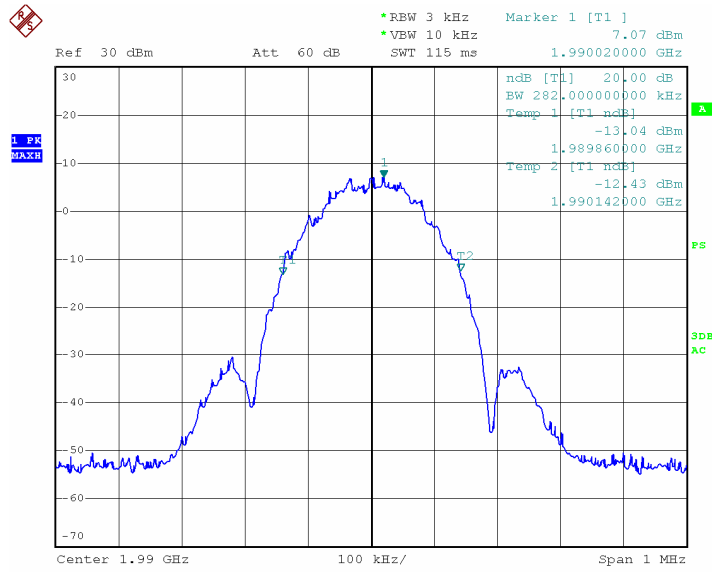
Date: 9.MAY.2012 15:45:56

1900MHz-EDGE downlink (middle frequency)- Output



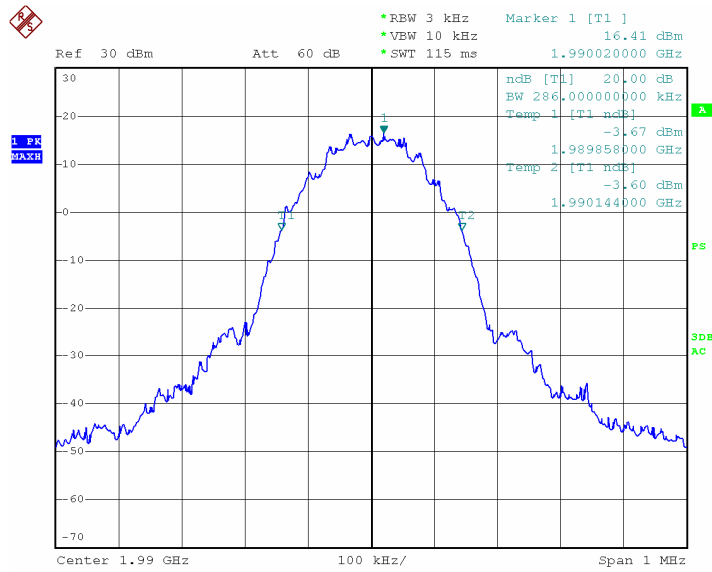
Date: 8.MAY.2012 21:49:51

1900MHz-EDGE downlink (highest frequency)-Input



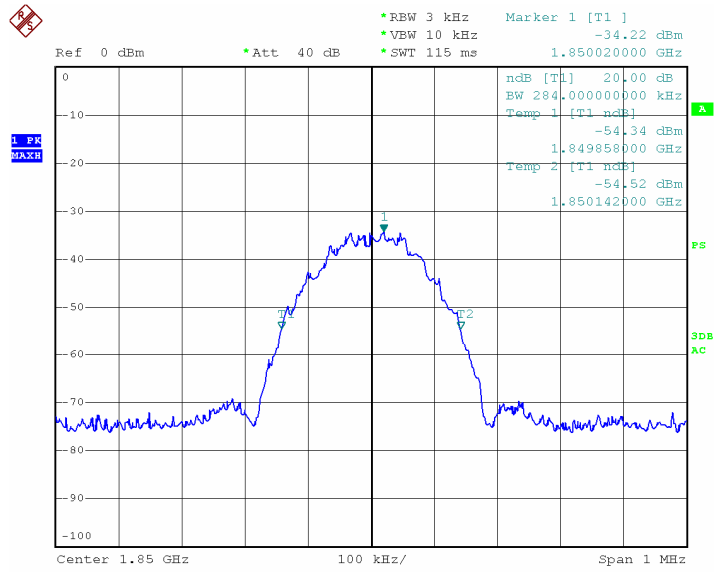
Date: 9.MAY.2012 15:45:31

1900MHz-EDGE downlink (highest frequency)- Output



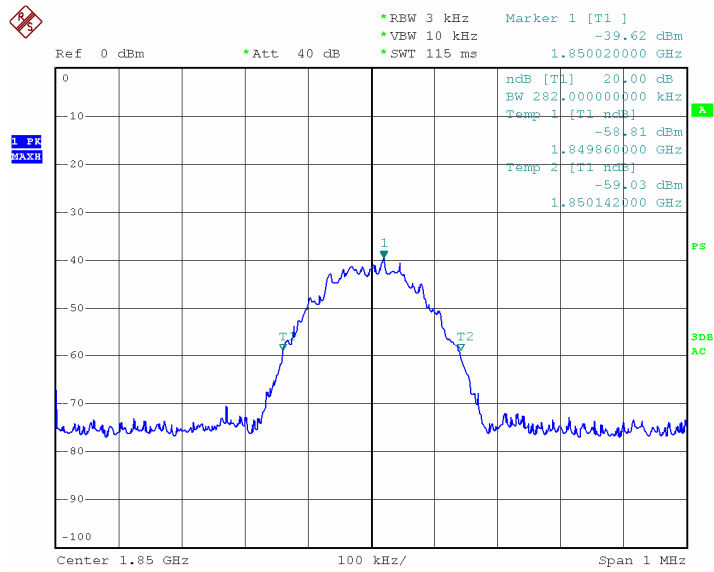
Date: 8.MAY.2012 21:48:59

1900MHz-EDGE uplink (lowest frequency)-Input



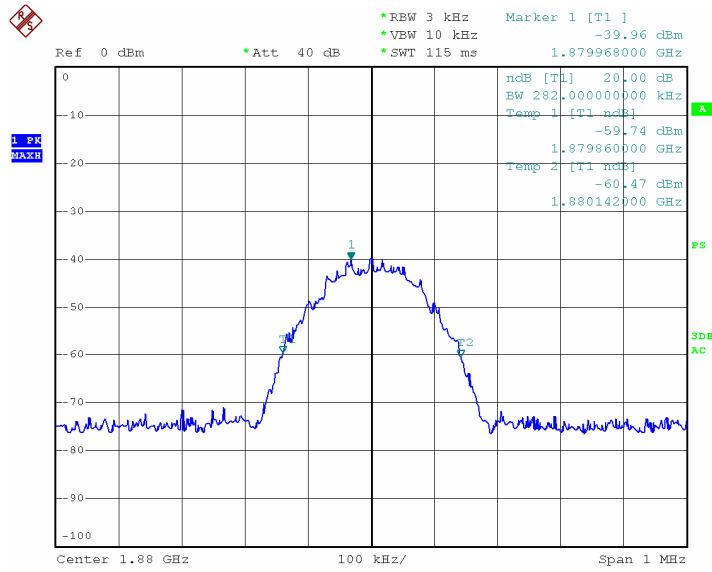
Date: 9.MAY.2012 18:30:42

1900MHz-EDGE uplink (lowest frequency)- Output



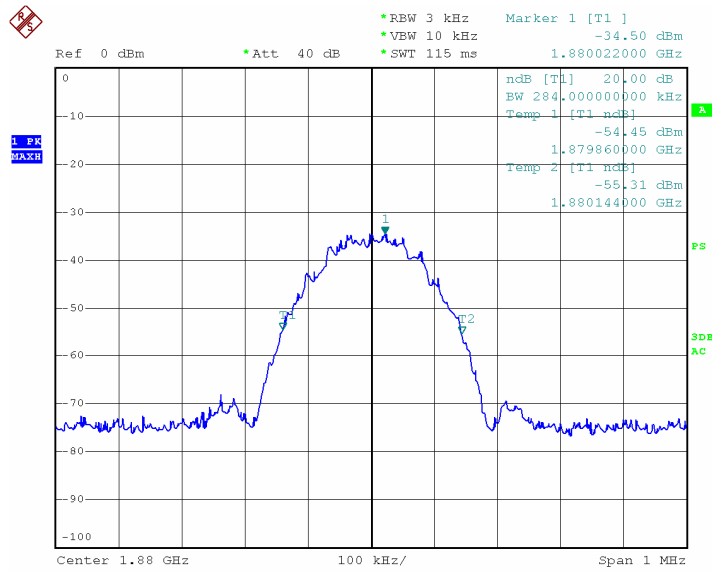
Date: 9.MAY.2012 16:41:05

1900MHz-EDGE uplink (middle frequency)-Input



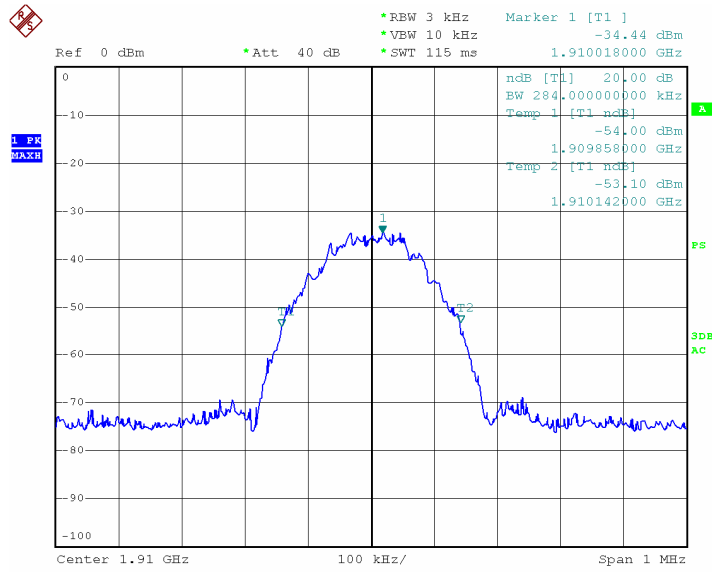
Date: 9.MAY.2012 16:41:39

1900MHz-EDGE uplink (middle frequency)-Output



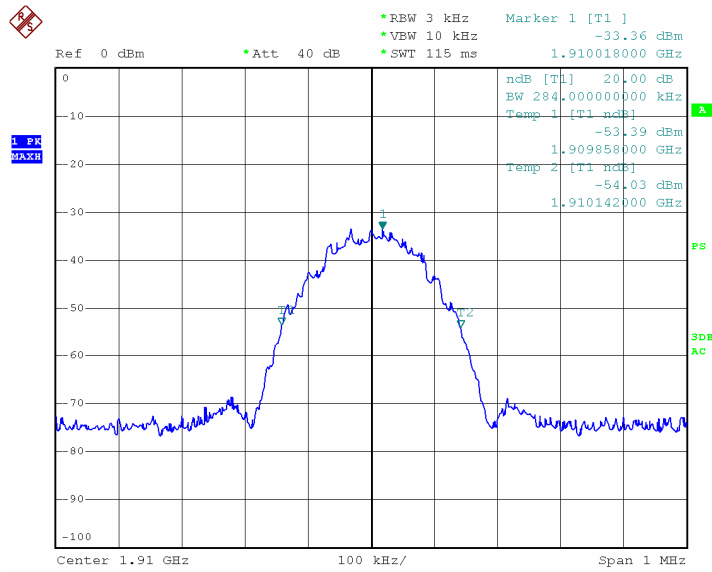
Date: 9.MAY.2012 18:31:11

1900MHz-EDGE uplink (highest frequency)-Input



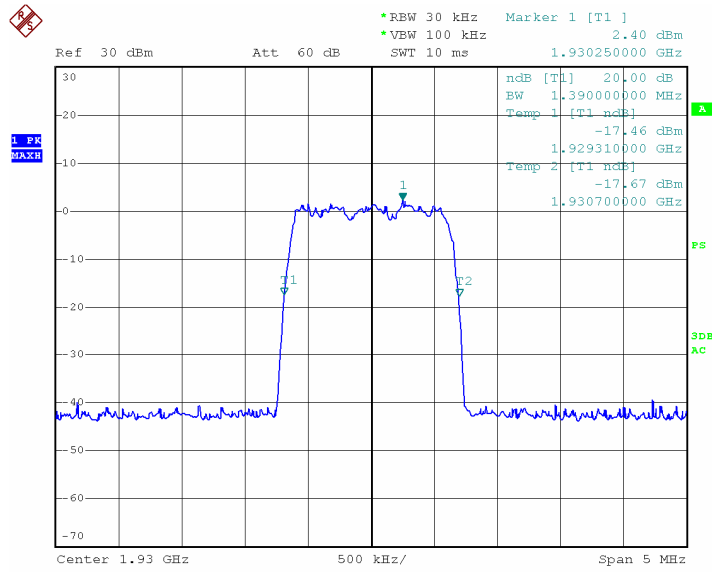
Date: 9.MAY.2012 18:31:45

1900MHz-EDGE uplink (highest frequency)- Output



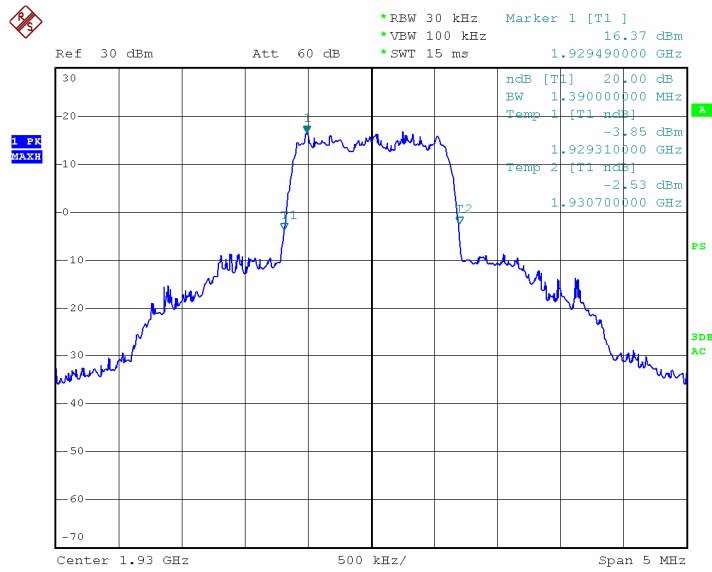
Date: 9.MAY.2012 16:42:10

1900MHz-CDMA2000 downlink (lowest frequency)-Input



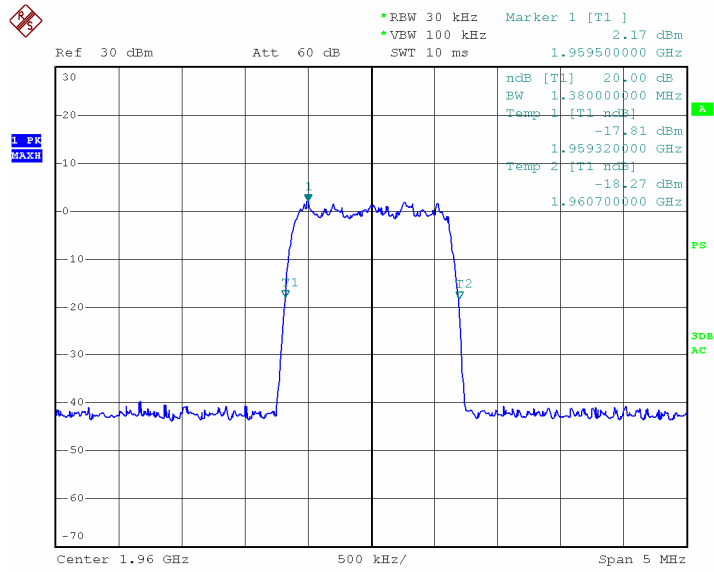
Date: 9.MAY.2012 15:42:10

1900MHz-CDMA2000 downlink (lowest frequency)-Output



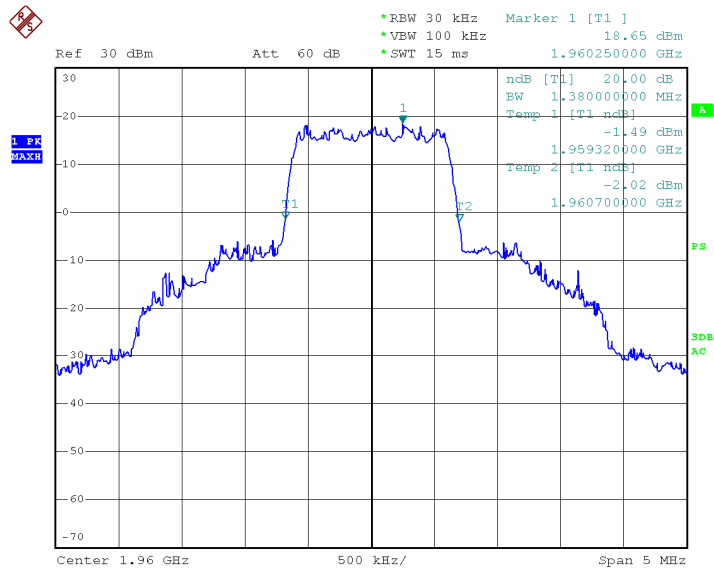
Date: 8.MAY.2012 21:44:10

1900MHz-CDMA2000 downlink (middle frequency)-Input



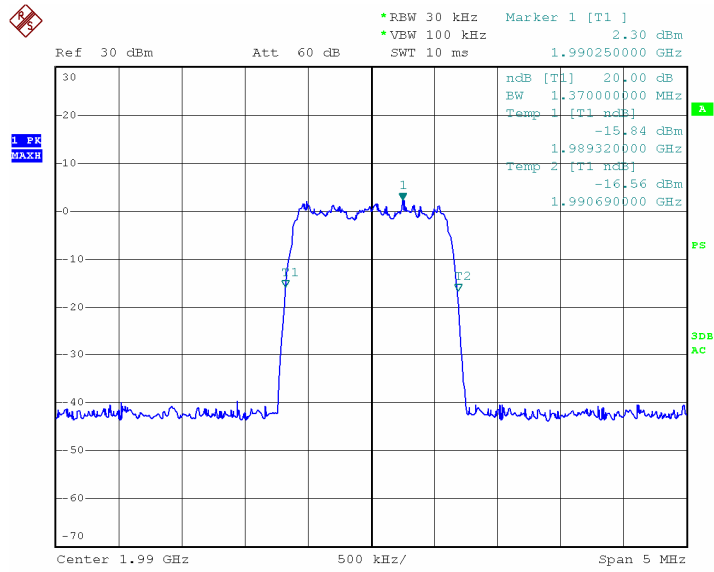
Date: 9.MAY.2012 15:41:38

1900MHz-CDMA2000 downlink (middle frequency)- Output



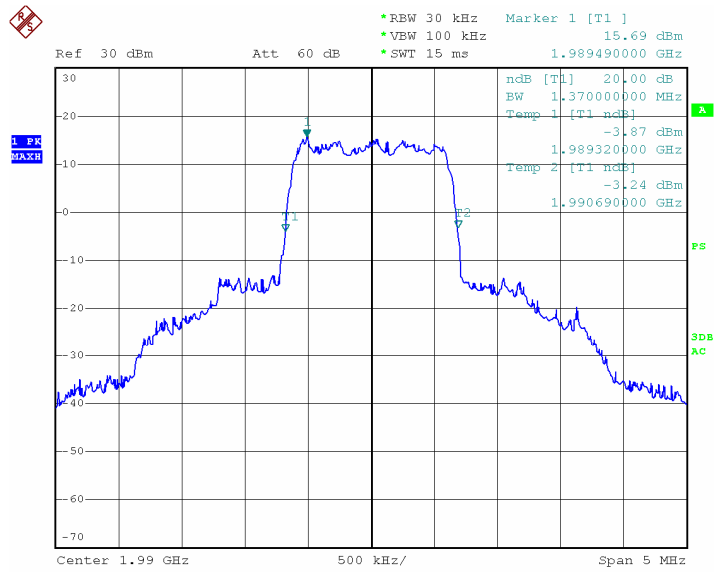
Date: 8.MAY.2012 21:43:35

1900MHz-CDMA2000 downlink (highest frequency)-Input



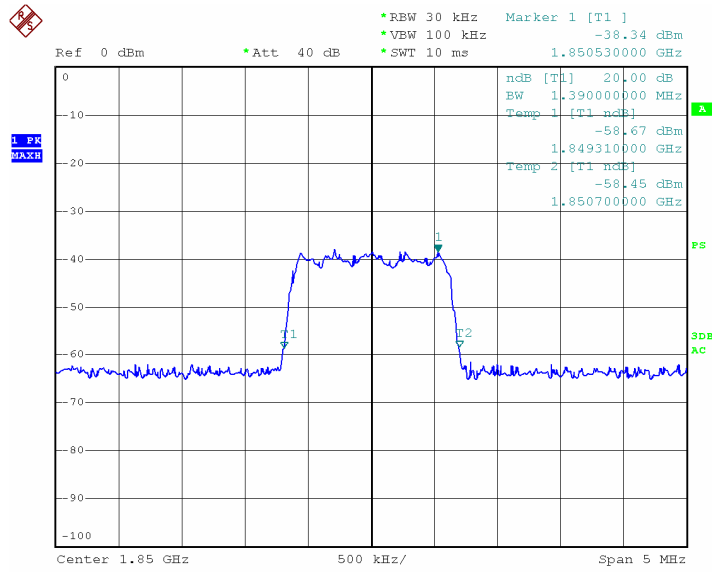
Date: 9.MAY.2012 15:41:10

1900MHz-CDMA2000 downlink (highest frequency)- Output



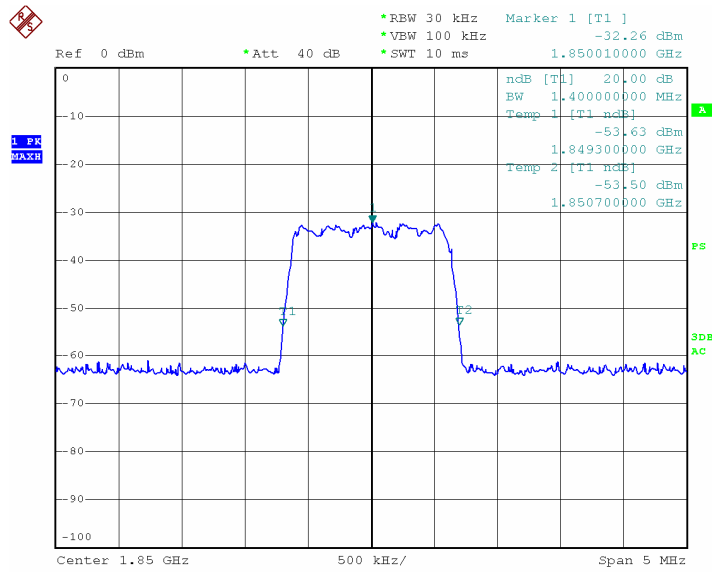
Date: 8.MAY.2012 21:42:13

1900MHz-CDMA2000 uplink (lowest frequency)-Input



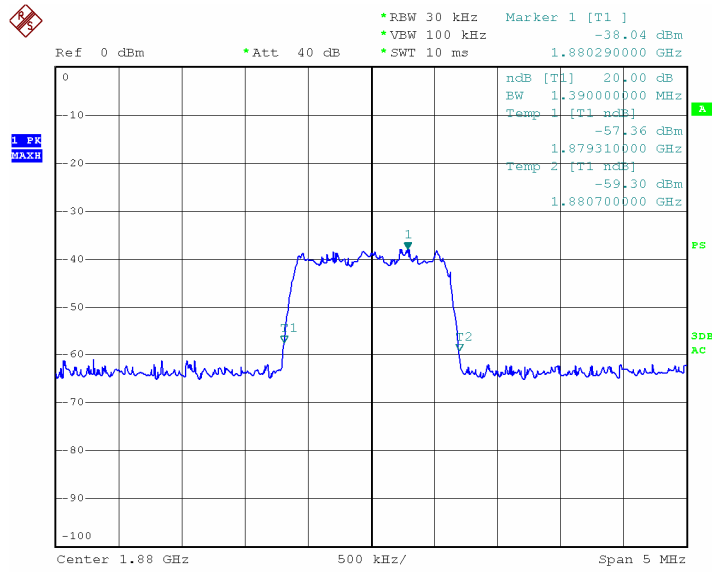
Date: 9.MAY.2012 18:27:21

1900MHz-CDMA2000 uplink (lowest frequency)- Output



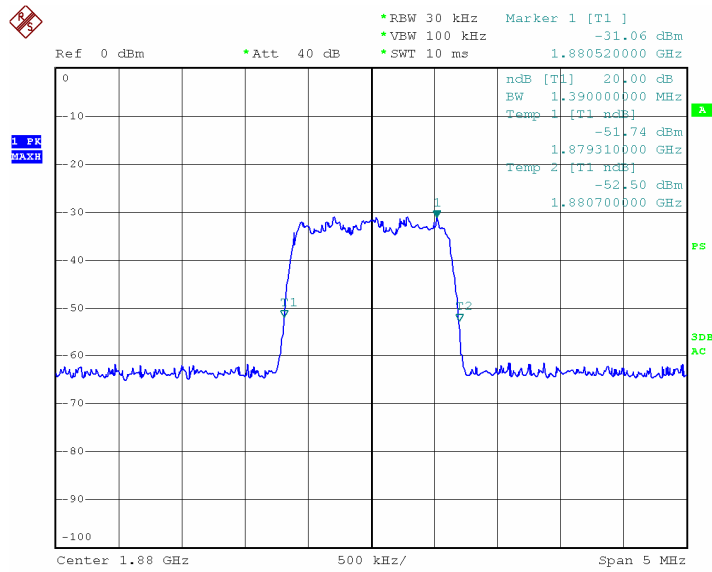
Date: 9.MAY.2012 16:46:07

1900MHz-CDMA2000 uplink (middle frequency)-Input



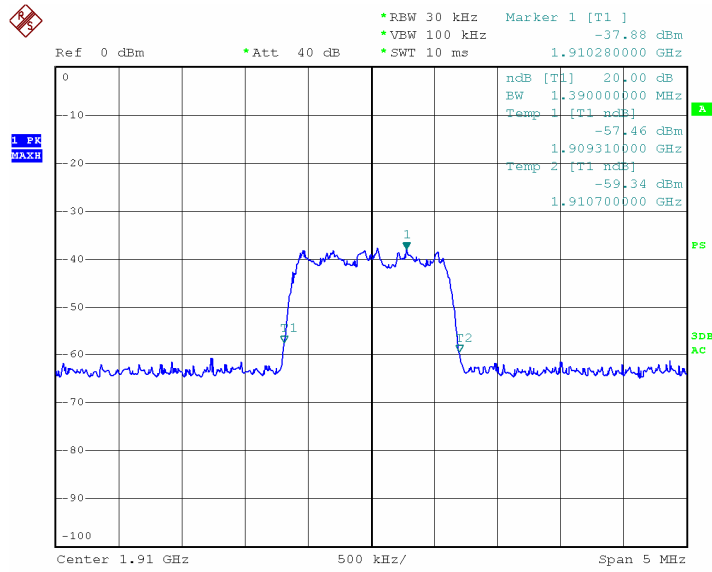
Date: 9.MAY.2012 18:26:53

1900MHz-CDMA2000 uplink (middle frequency)-Ouput



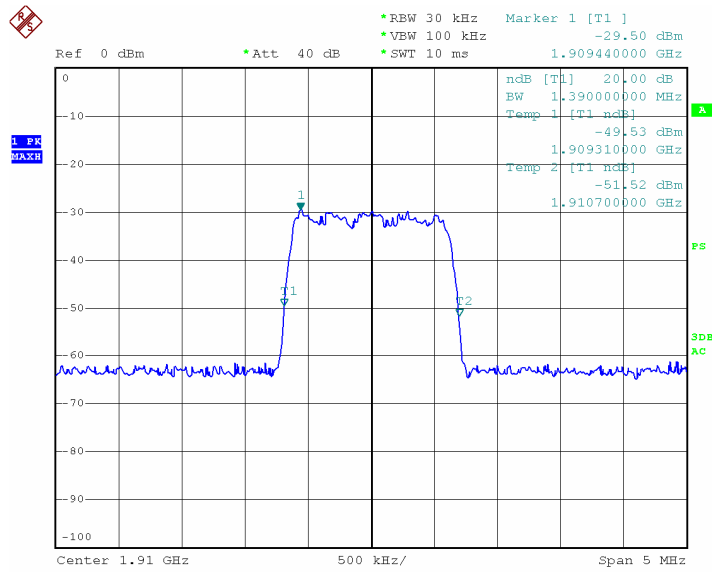
Date: 9.MAY.2012 16:46:35

1900MHz-CDMA2000 uplink (highest frequency)-Input



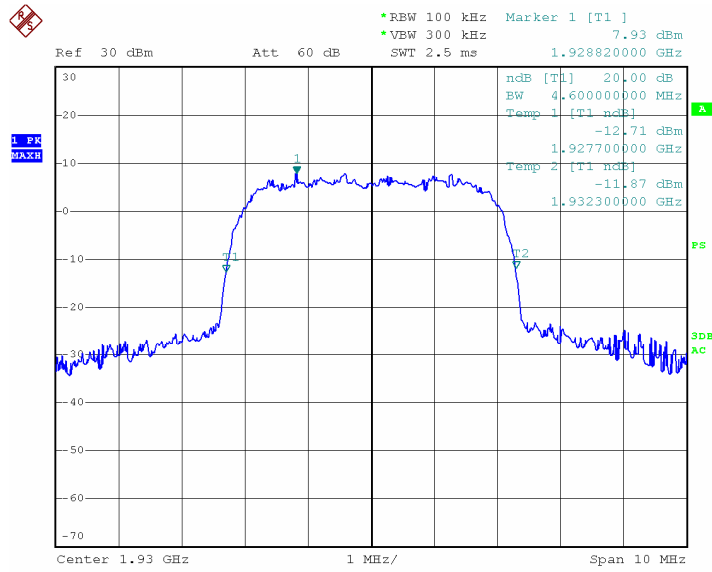
Date: 9.MAY.2012 18:27:47

1900MHz-CDMA2000 uplink (highest frequency)- Output



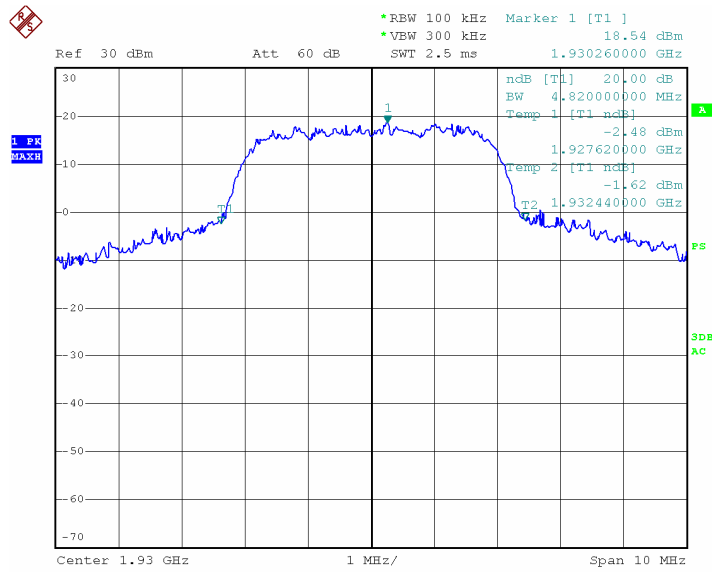
Date: 9.MAY.2012 16:47:04

1900MHz-WCDMA downlink (lowest frequency)-Input



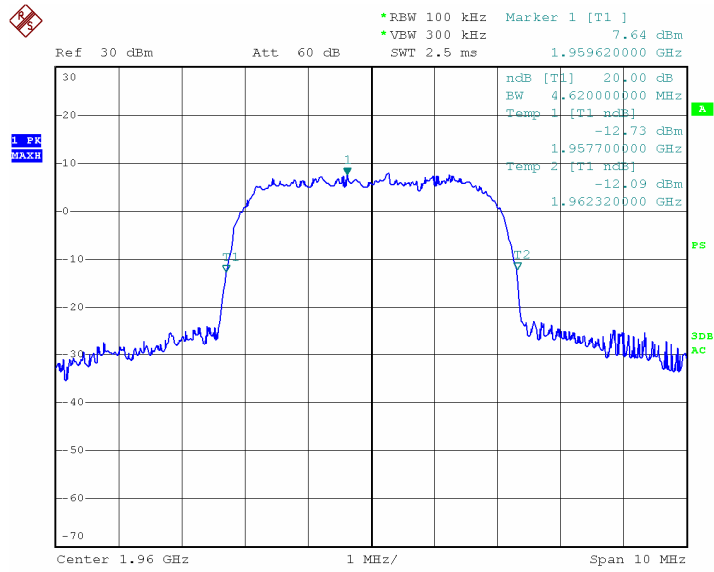
Date: 9.MAY.2012 15:39:08

1900MHz-WCDMA downlink (lowest frequency)-Output



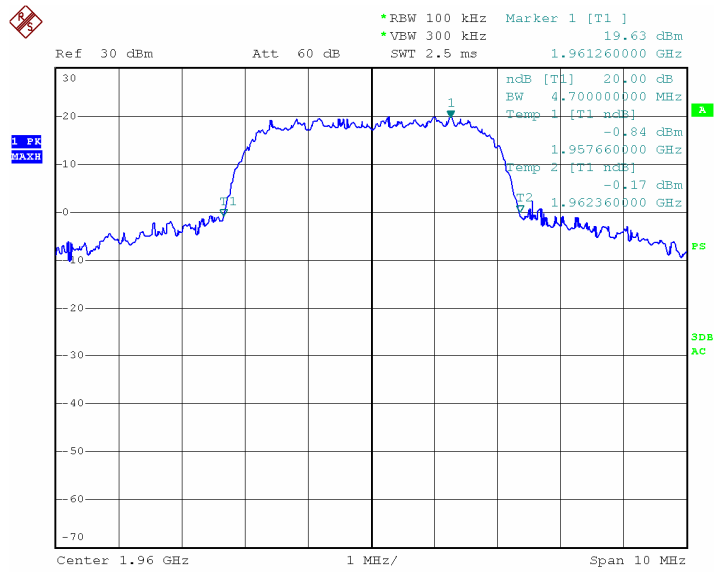
Date: 8.MAY.2012 21:39:22

1900MHz-WCDMA downlink (middle frequency)-Input



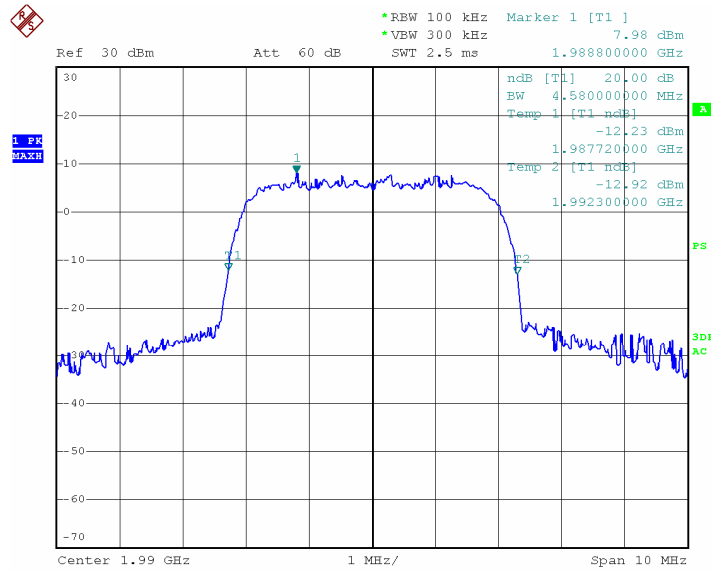
Date: 9.MAY.2012 15:39:44

1900MHz-WCDMA downlink (middle frequency)- Output



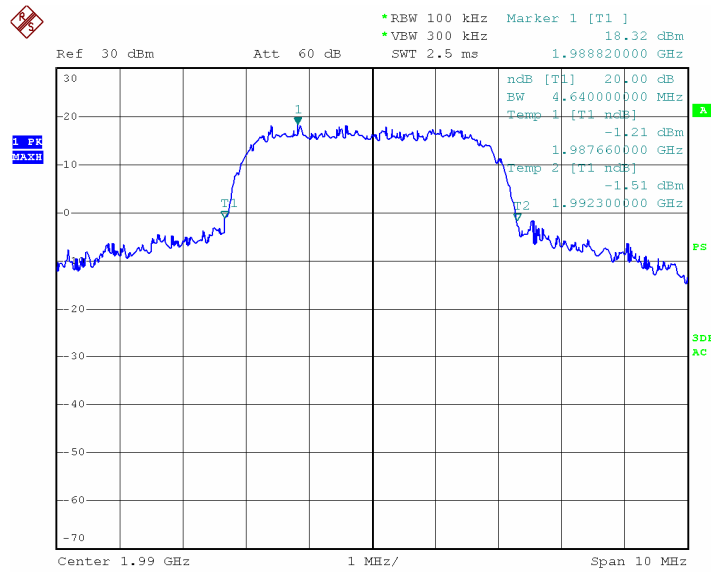
Date: 8.MAY.2012 21:40:07

1900MHz-WCDMA downlink (highest frequency)-Input



Date: 9.MAY.2012 15:40:17

1900MHz-WCDMA downlink (highest frequency)- Output



Date: 8.MAY.2012 21:40:40