

6.25 Emissions inside and outside the subband

6.25.1 Standard Applicable: FCC 15.323(d)

Emissions inside the subband same as RSS-213 6.7.2

$B < f \leq 2B$: less than or equal to 30 dB below the maximum permitted peak power level

$2B < f \leq 3B$: less than or equal to 50 dB below the maximum permitted peak power level

$3B < f \leq$ UPCS Band Edge: less than or equal to 60 dB below the maximum permitted peak power level

Where B is the occupied bandwidth in hertz.

Emissions outside the subband same as RSS-213 6.7.1

$f \leq 1.25\text{MHz}$ outside UPCS band : $\leq -9.5\text{dBm}$

$1.25\text{MHz} \leq f \leq 2.5\text{MHz}$ outside UPCS band : $\leq -29.5\text{ dBm}$

$f \geq 2.5\text{MHz}$ outside UPCS band: $\leq -39.5\text{ dBm}$

6.25.2 Measurement procedure

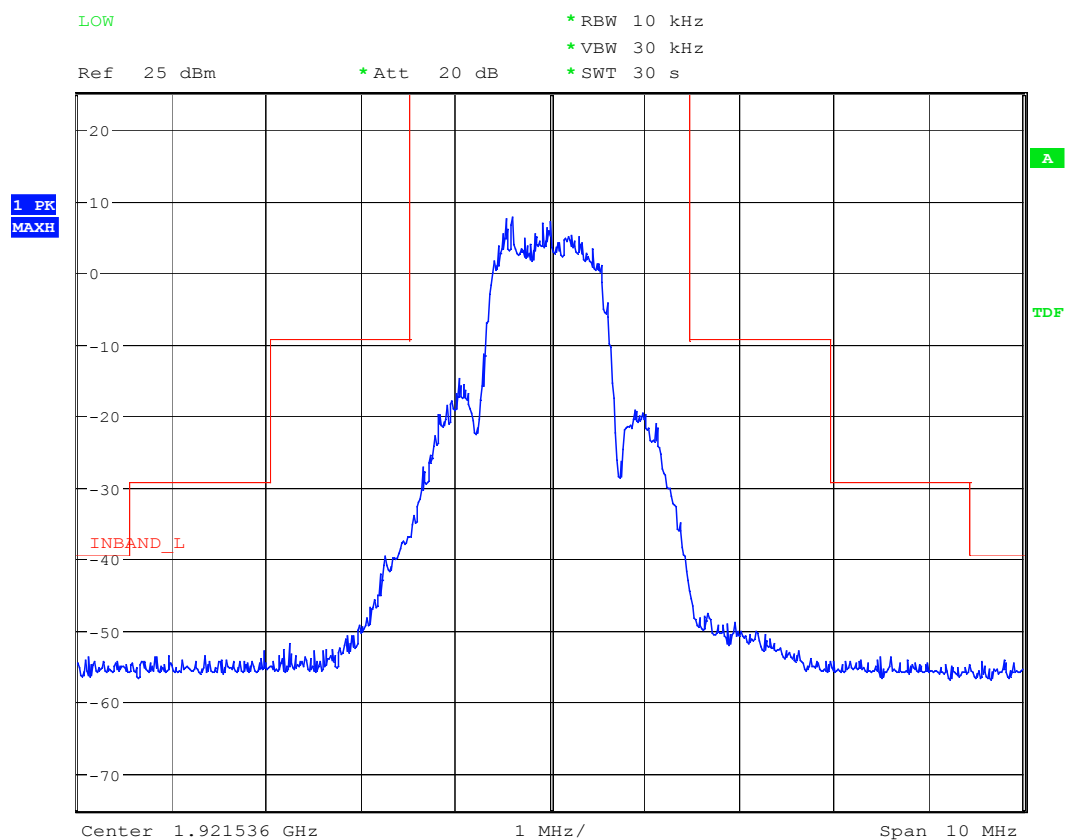
Measurement method according to ANSI C63.17 2006 paragraph 6.1.6

6.25.3 Results: Complies

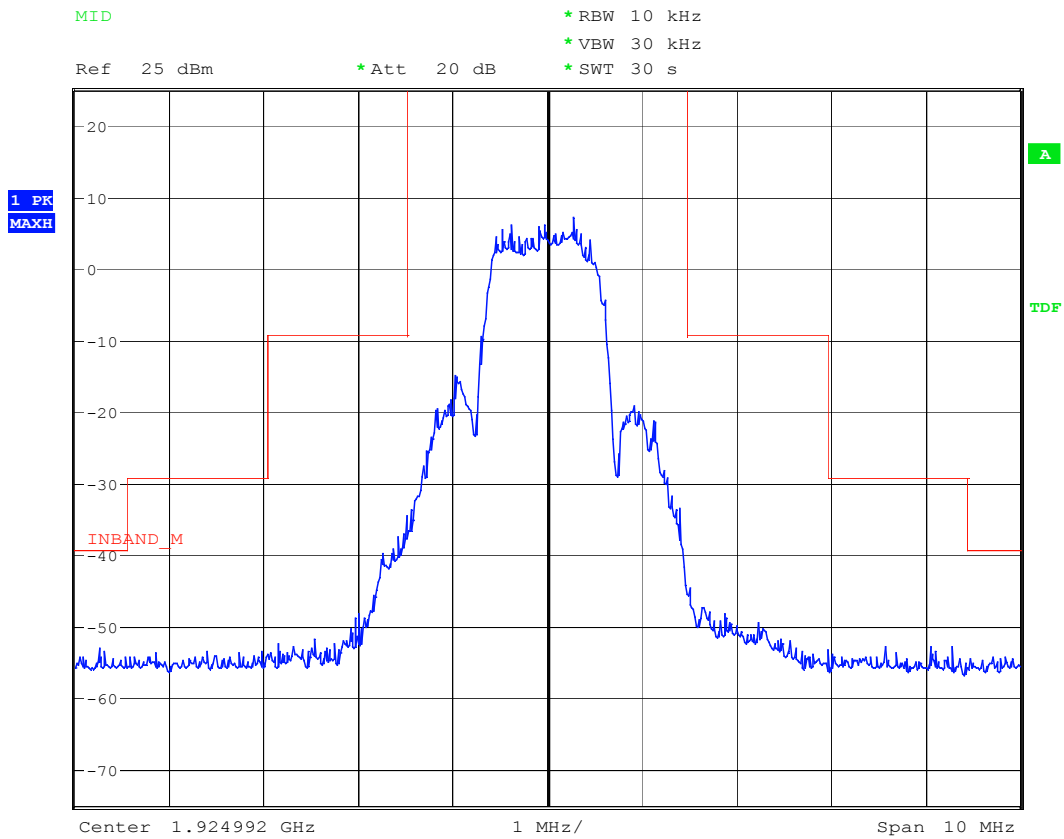
Measurement Data:

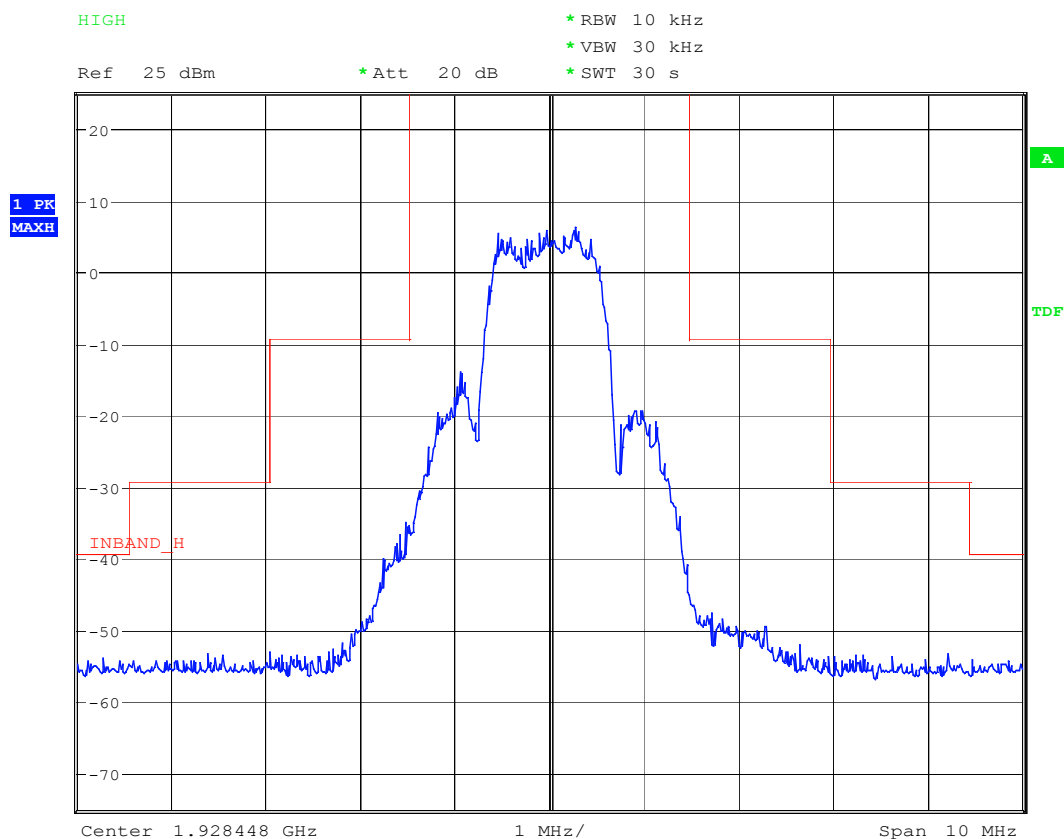
See plots.

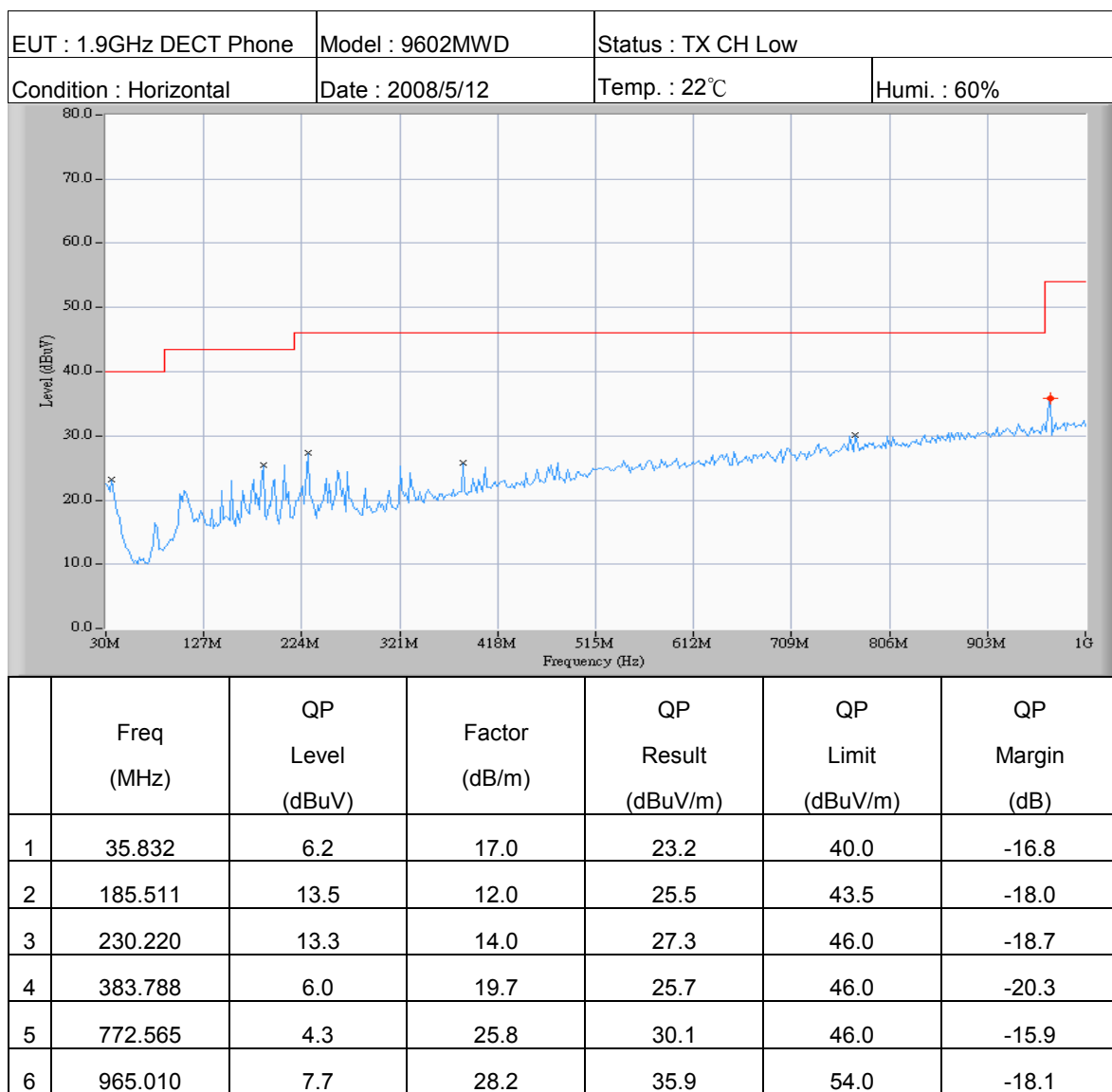
Note: Photos of worst-case display follow:

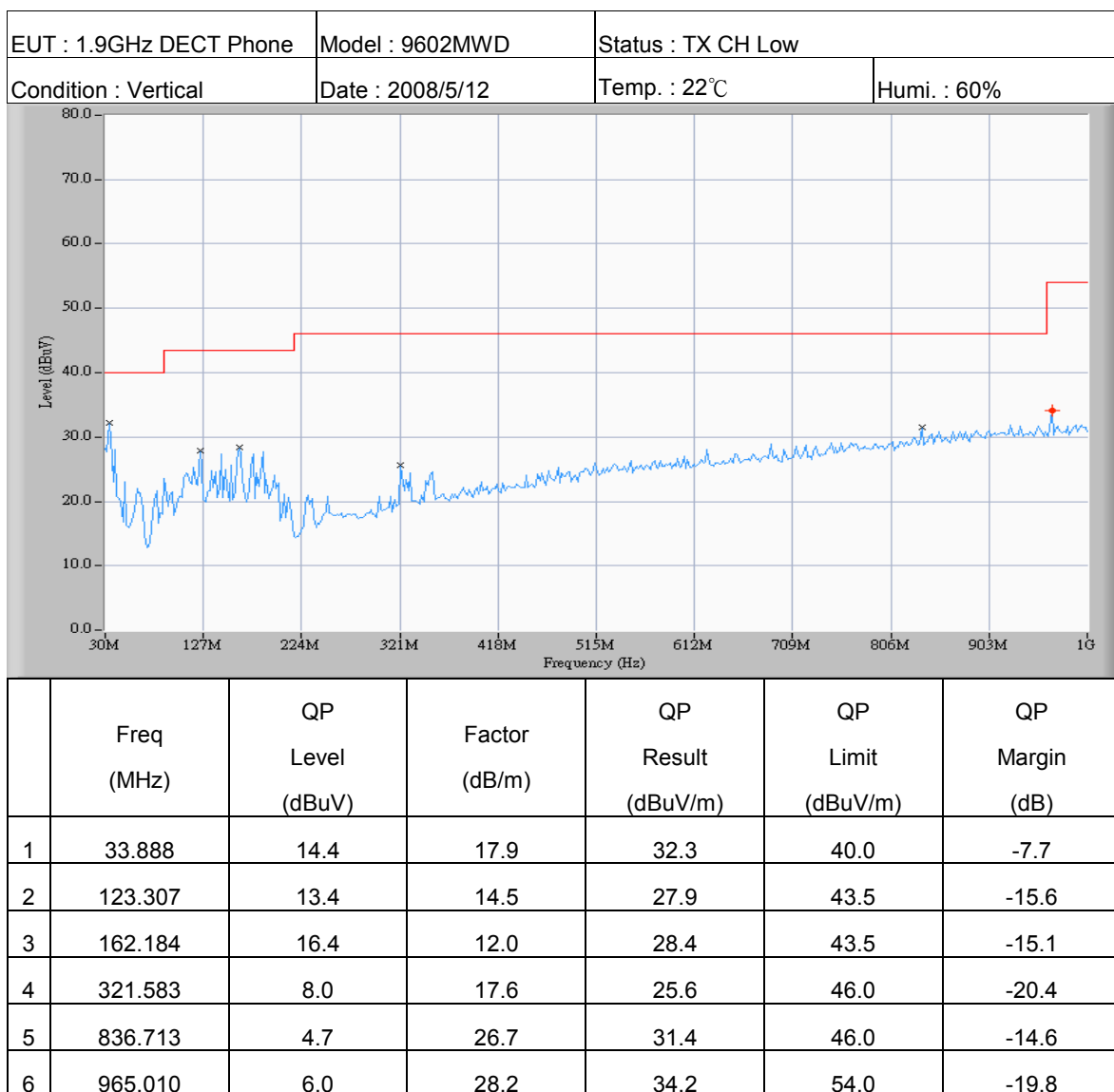
In-band Unwanted Emissions: CH FL

In-band Unwanted Emissions: CH F_M



In-band Unwanted Emissions: CH F_H

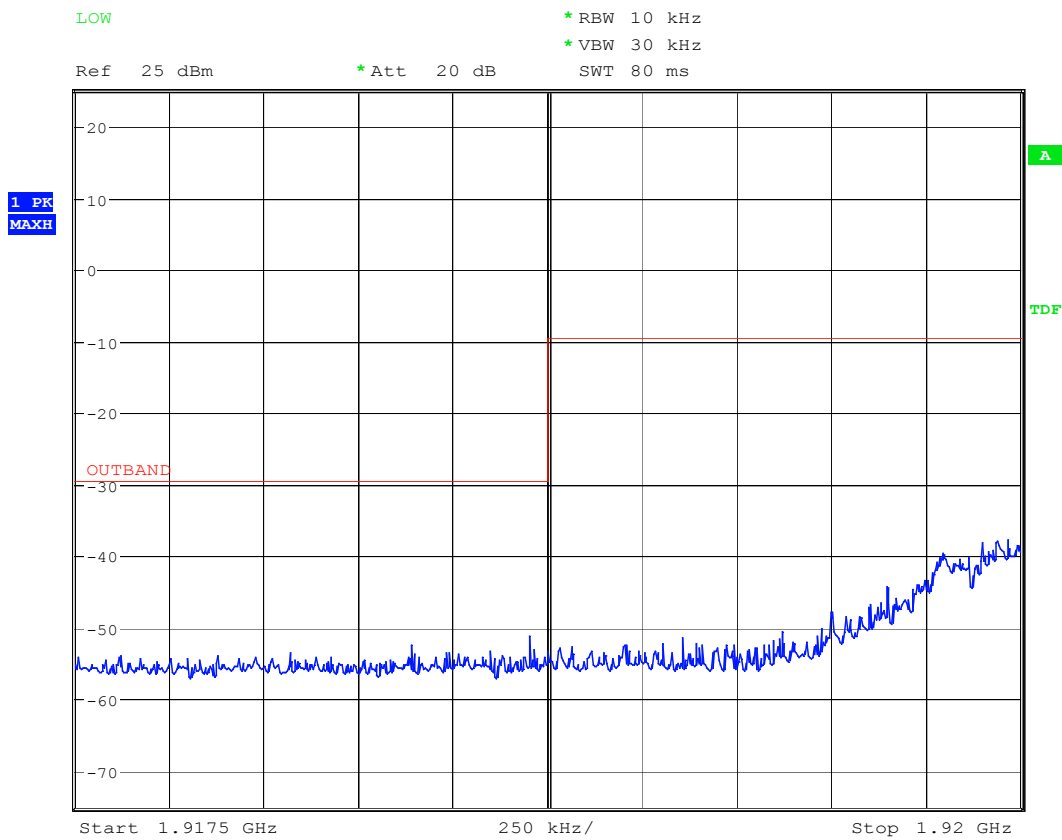
Out-of-band Unwanted Emission:**a) CH FL****Out-of-band Unwanted Emissions (below 1GHz): CH FL**



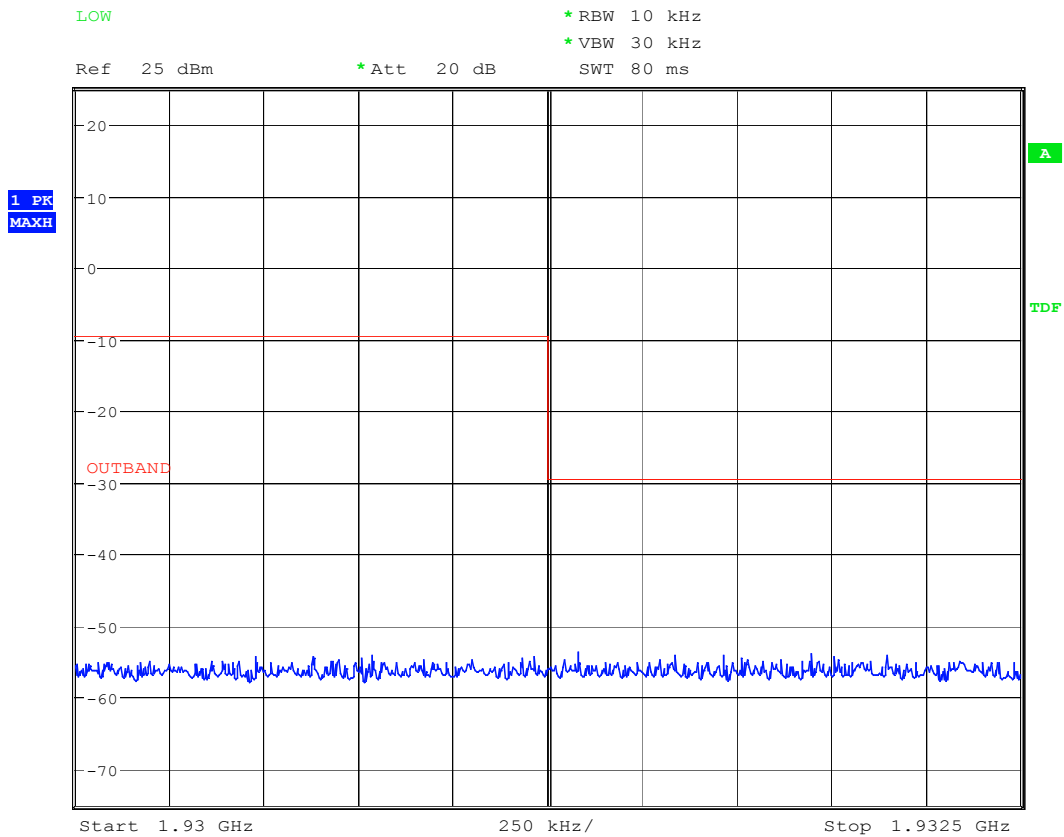
Note:

1. Place of Measurement: Measuring site of the ETC.
2. If the data table appeared symbol of "****" means the value was too low to be measured.
3. The estimated measurement uncertainty of the result measurement is
 $\pm 4.6\text{dB}$ ($30\text{MHz} \leq f < 300\text{MHz}$).
 $\pm 4.4\text{dB}$ ($300\text{MHz} \leq f < 1000\text{MHz}$).

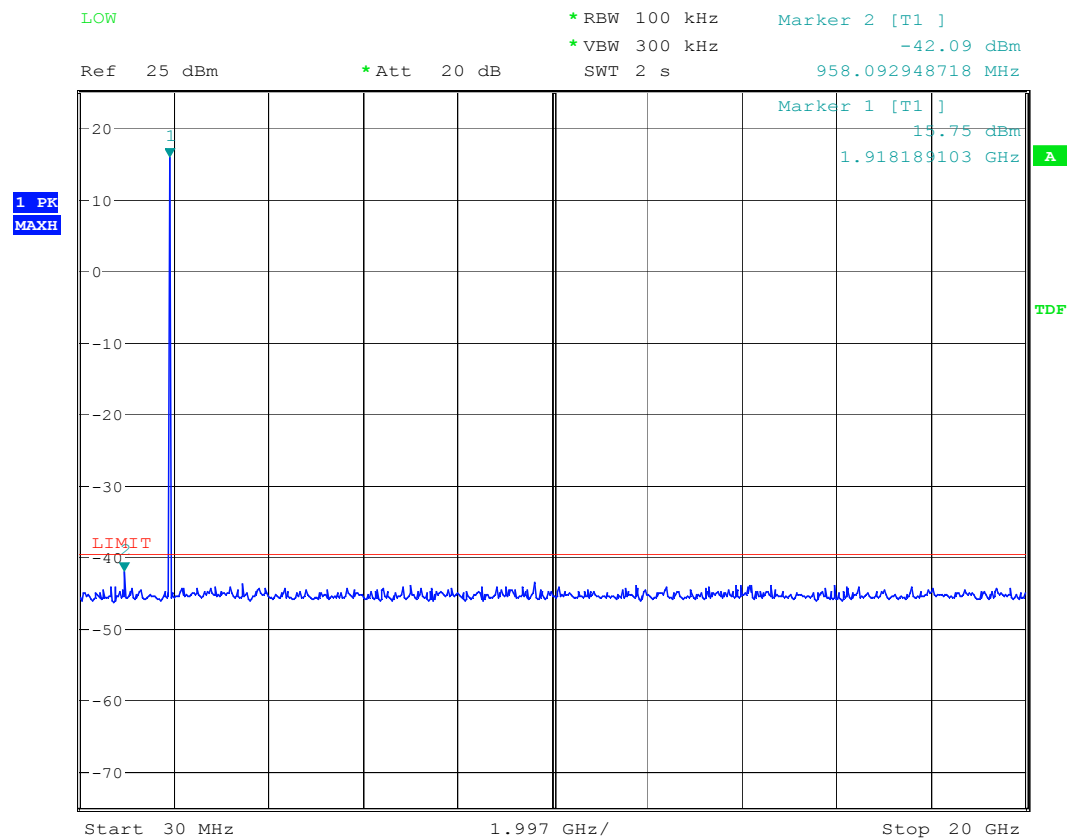
Out-of-band Unwanted Emissions: CH FL

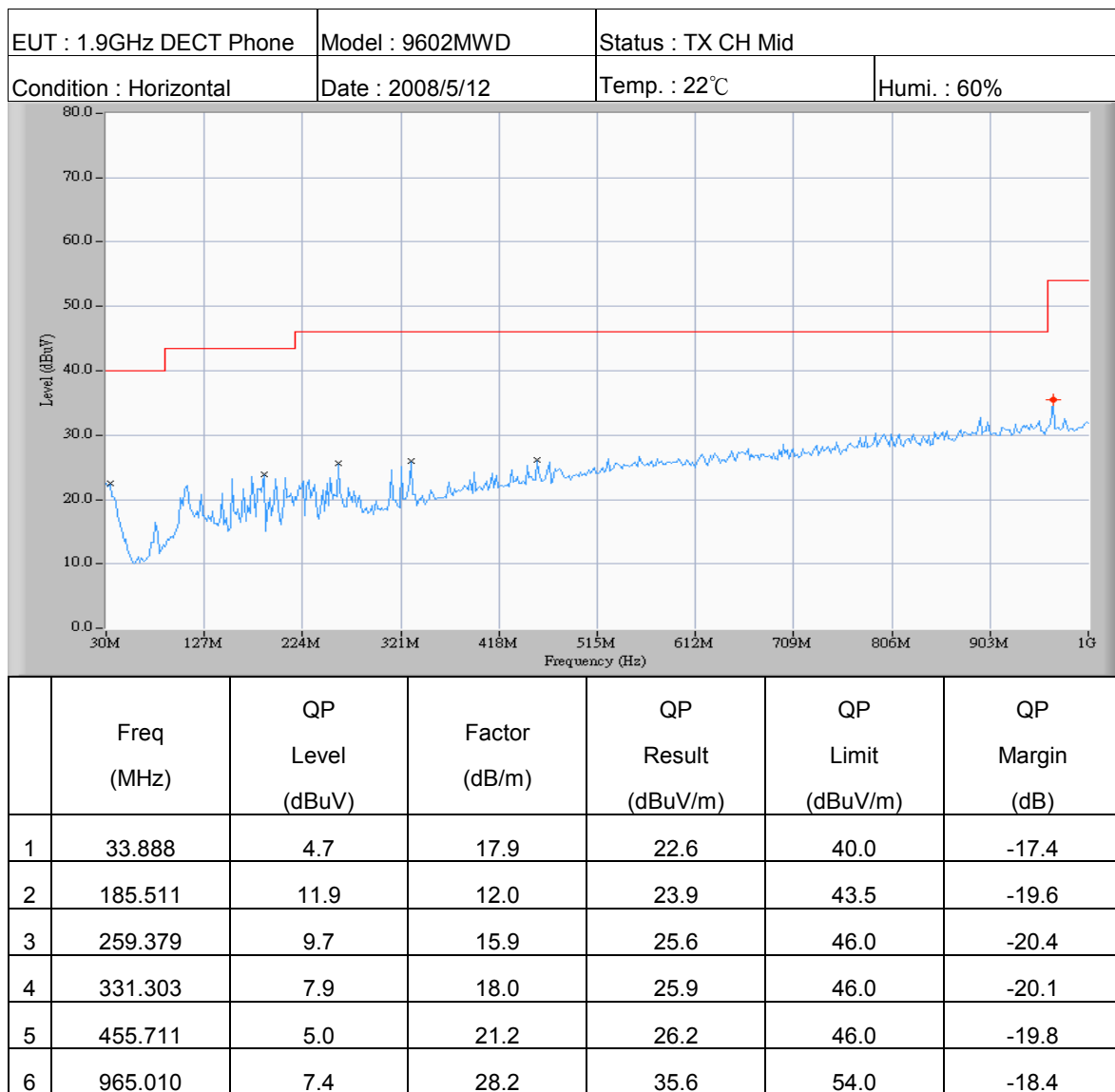


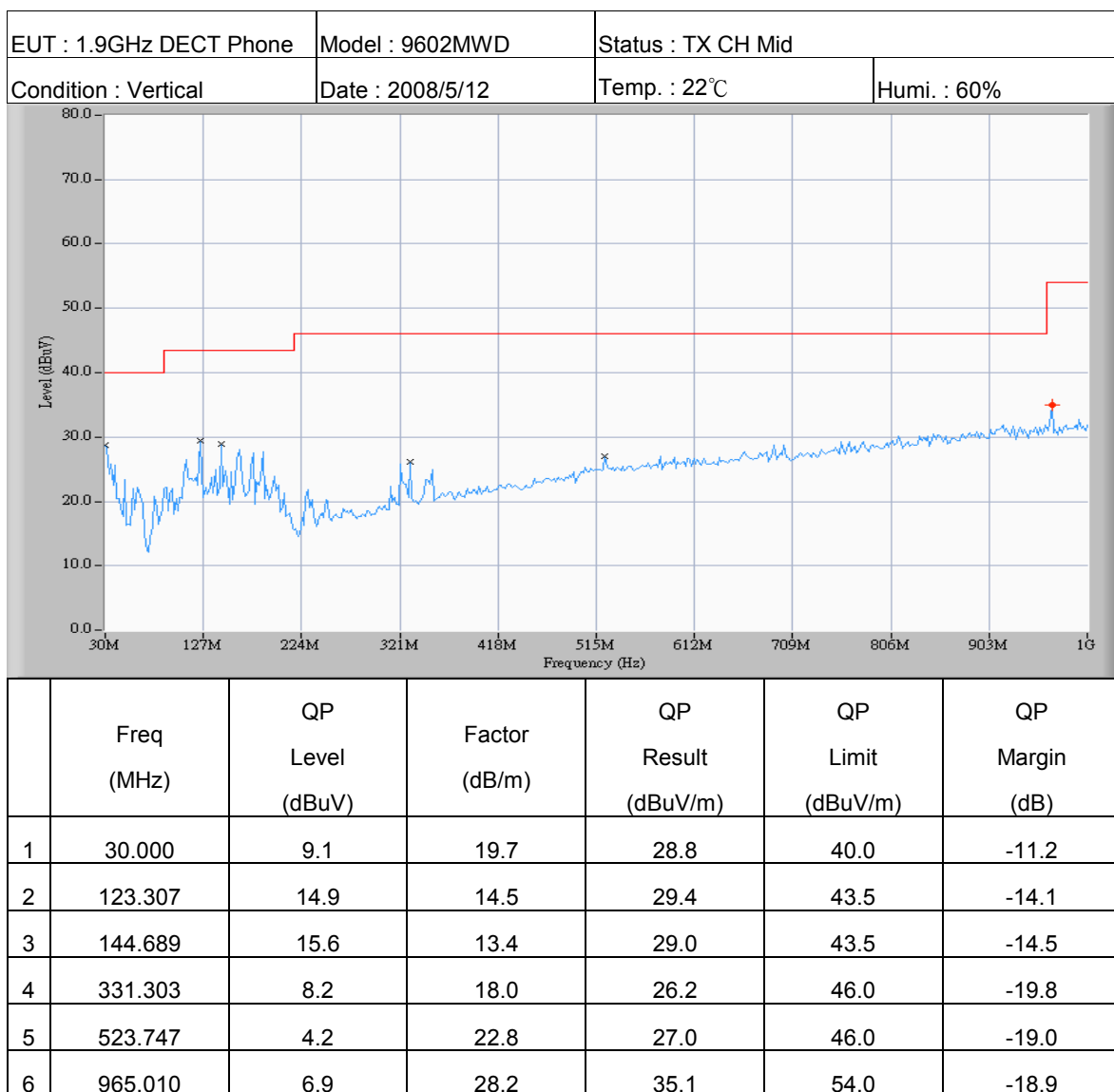
Out-of-band Unwanted Emissions: CH FL



Out-of-band Unwanted Emissions: CH FL



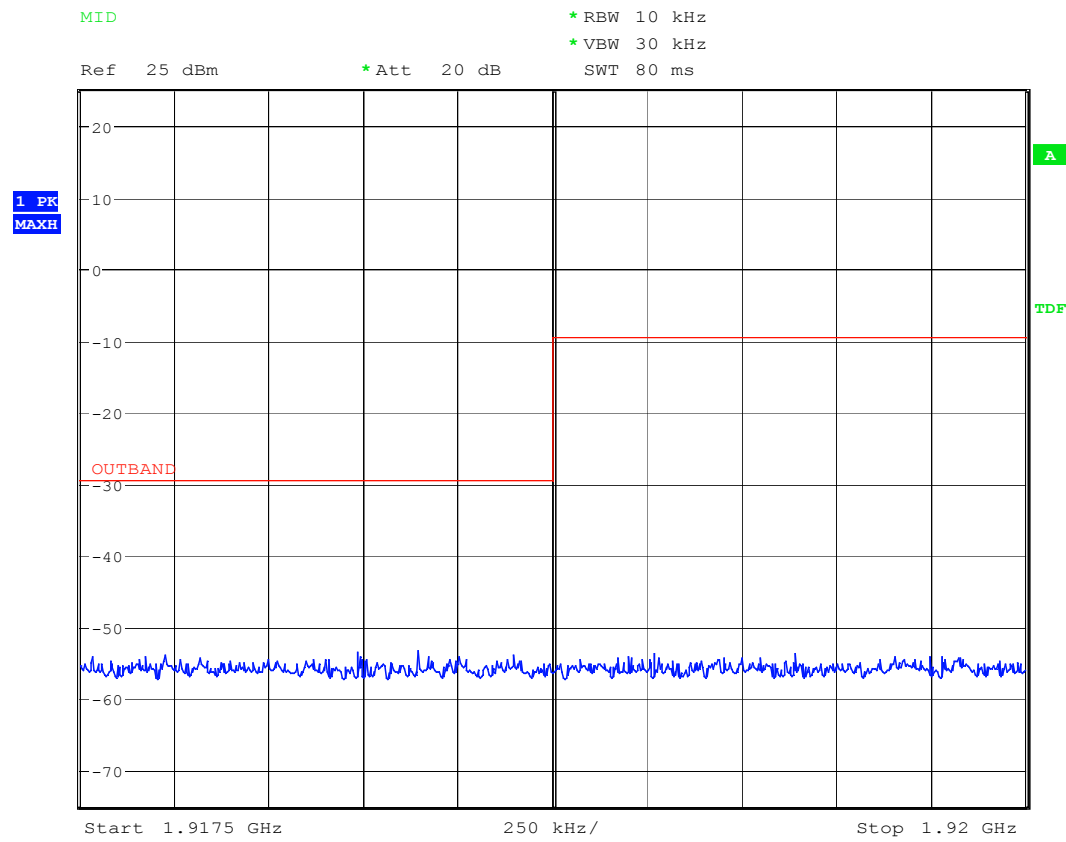
b) CH F_MOut-of-band Unwanted Emissions (below 1GHz): CH F_M



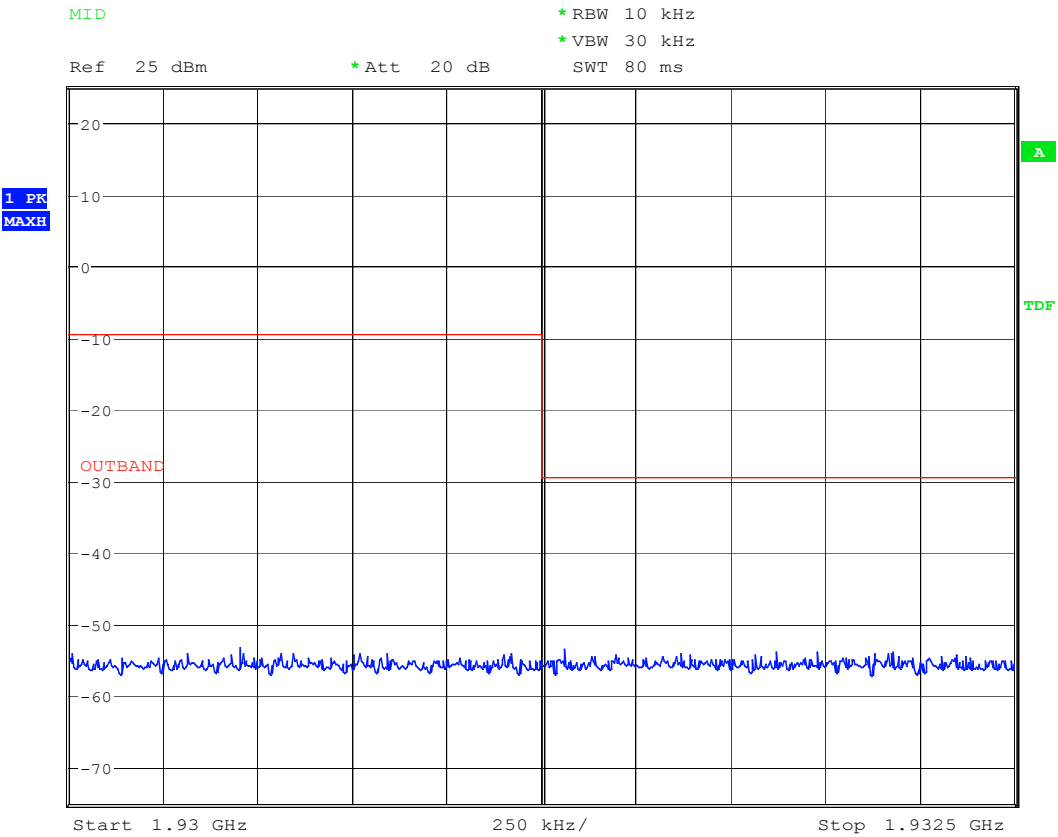
Note:

1. Place of Measurement: Measuring site of the ETC.
2. If the data table appeared symbol of "****" means the value was too low to be measured.
3. The estimated measurement uncertainty of the result measurement is
 $\pm 4.6\text{dB}$ ($30\text{MHz} \leq f < 300\text{MHz}$).
 $\pm 4.4\text{dB}$ ($300\text{MHz} \leq f < 1000\text{MHz}$).

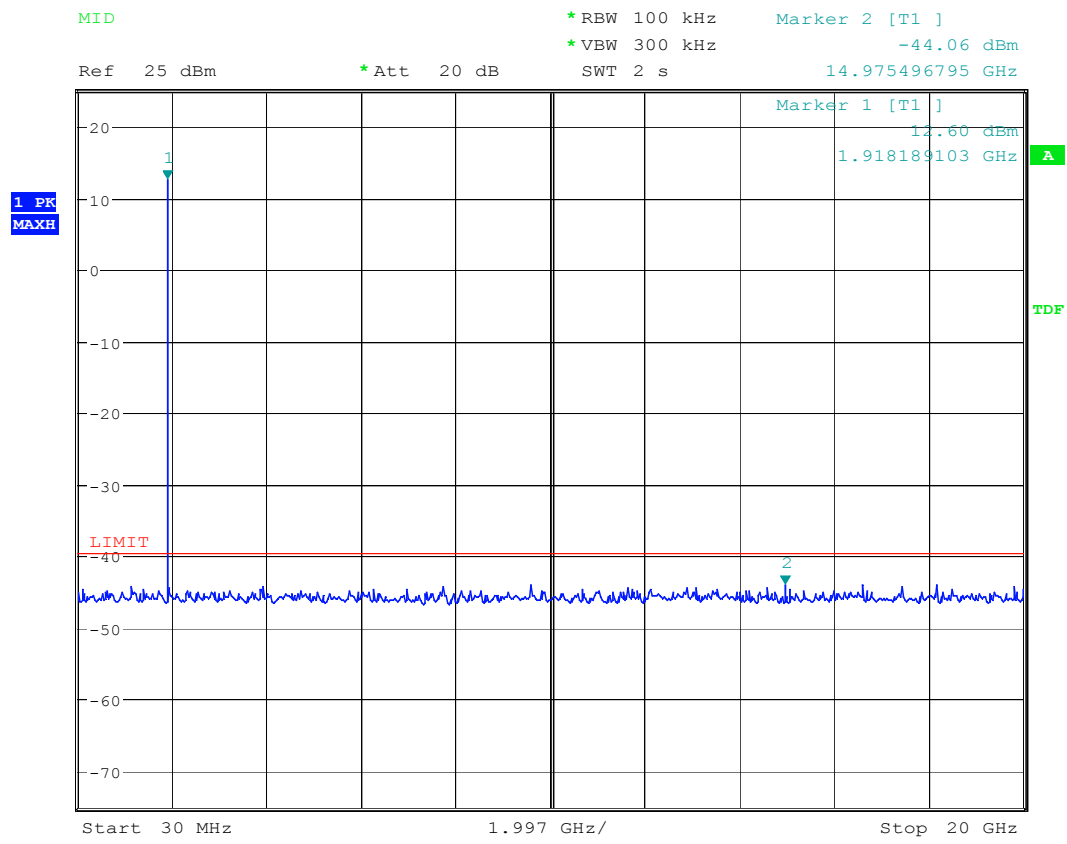
Out-of-band Unwanted Emissions: CH F_M

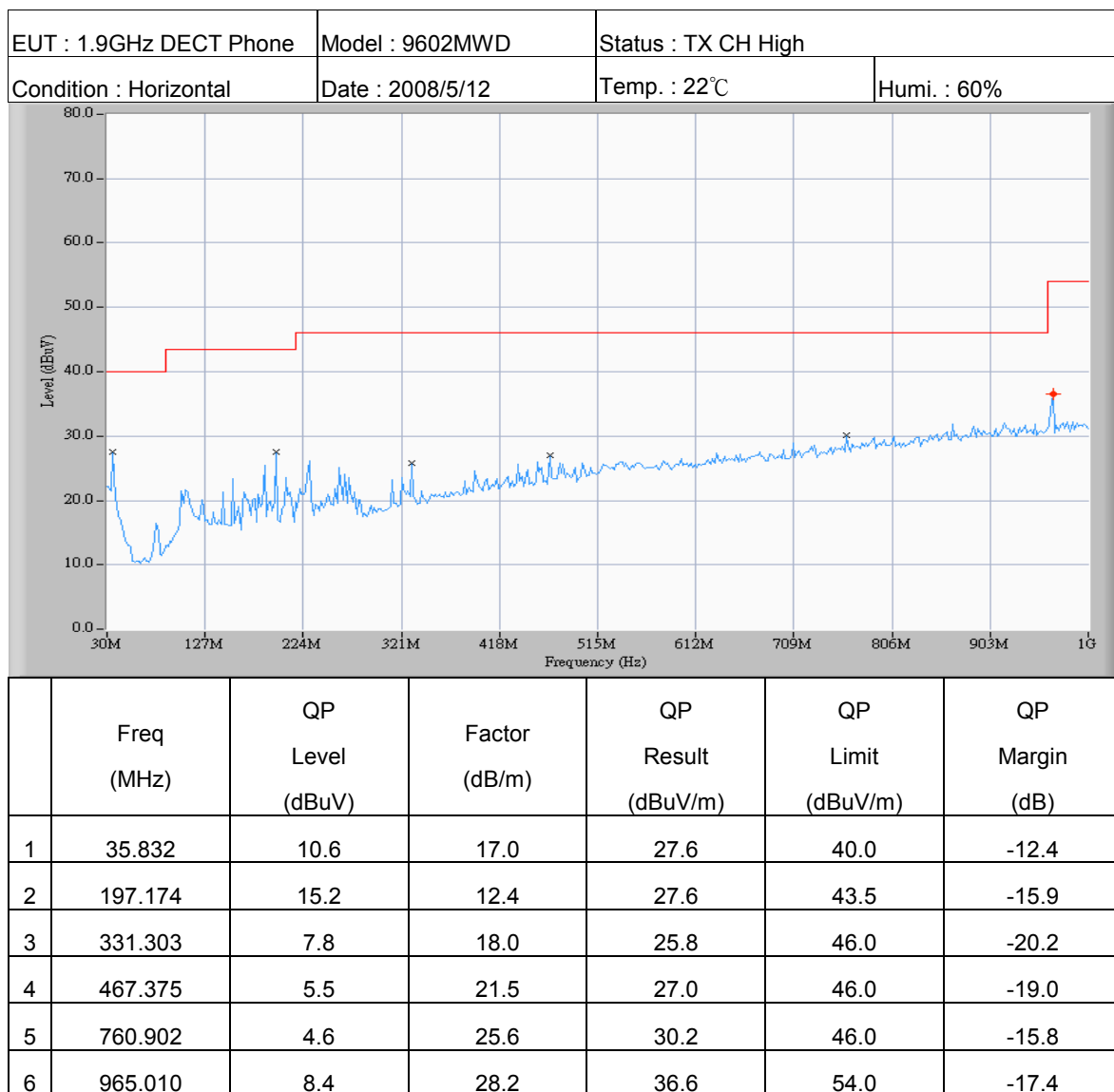


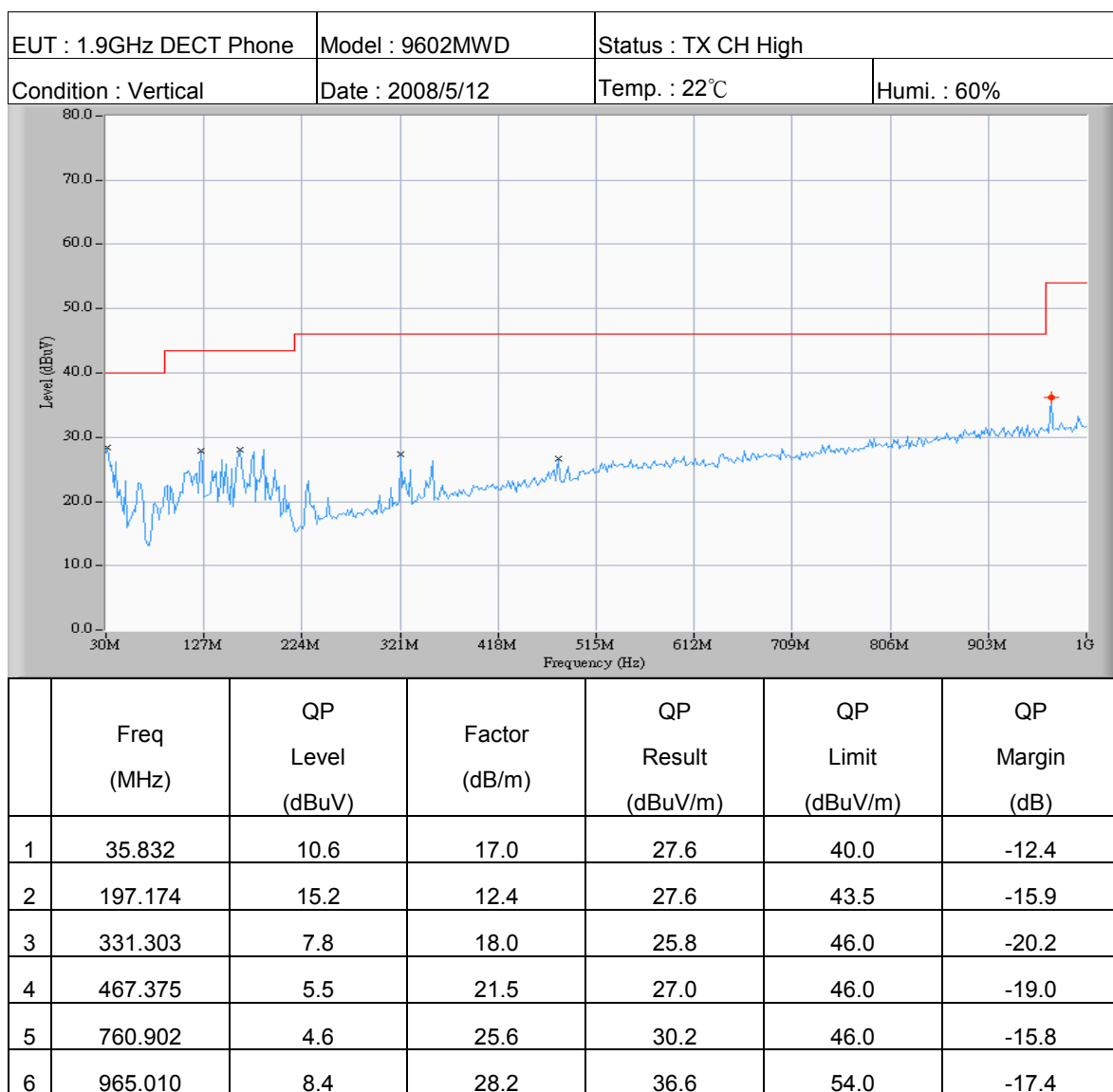
Out-of-band Unwanted Emissions: CH F_M



Out-of-band Unwanted Emissions: CH F_M



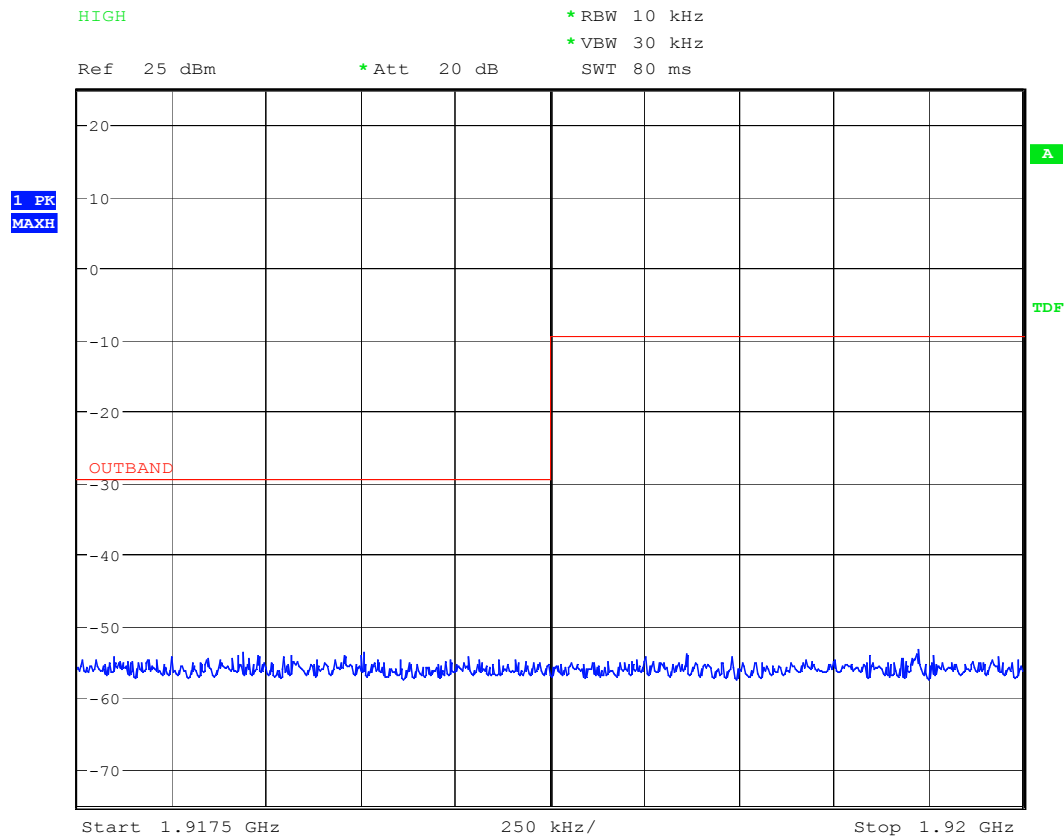
c) CH F_HOut-of-band Unwanted Emissions (below 1GHz): CH F_H



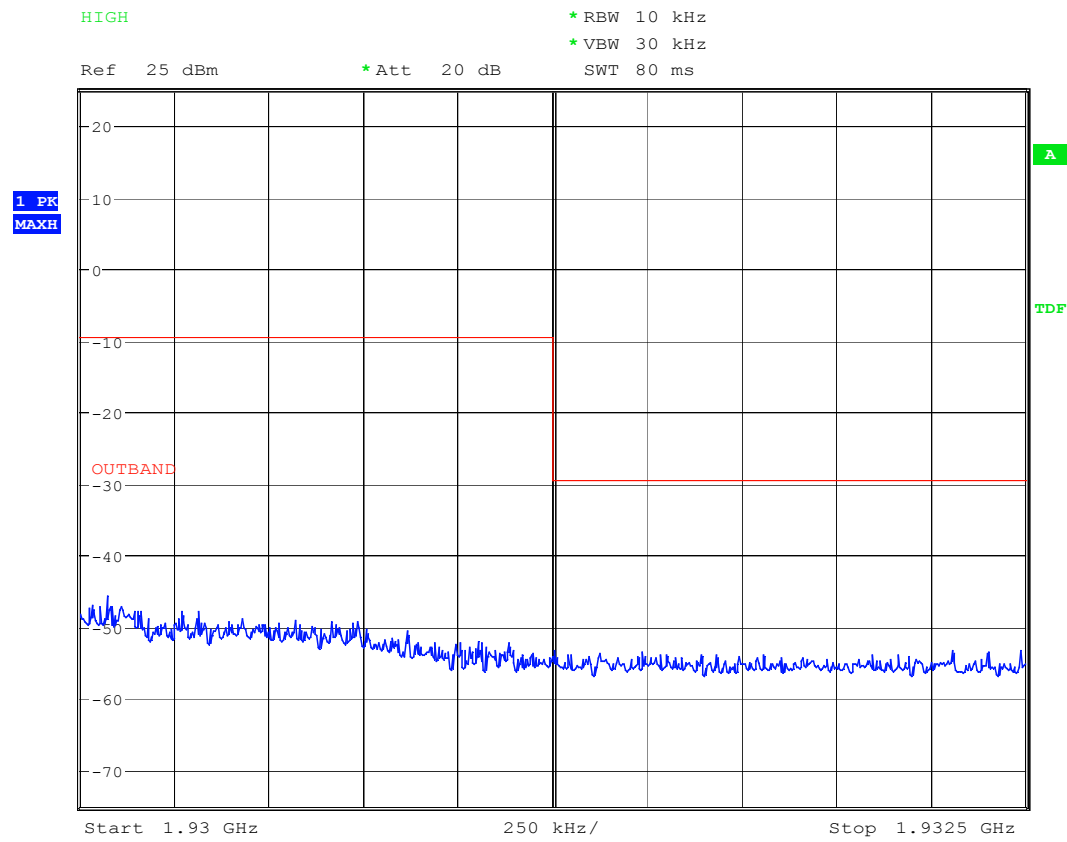
Note:

1. Place of Measurement: Measuring site of the ETC.
2. If the data table appeared symbol of "****" means the value was too low to be measured.
3. The estimated measurement uncertainty of the result measurement is
 $\pm 4.6\text{dB}$ ($30\text{MHz} \leq f < 300\text{MHz}$).
 $\pm 4.4\text{dB}$ ($300\text{MHz} \leq f < 1000\text{MHz}$).

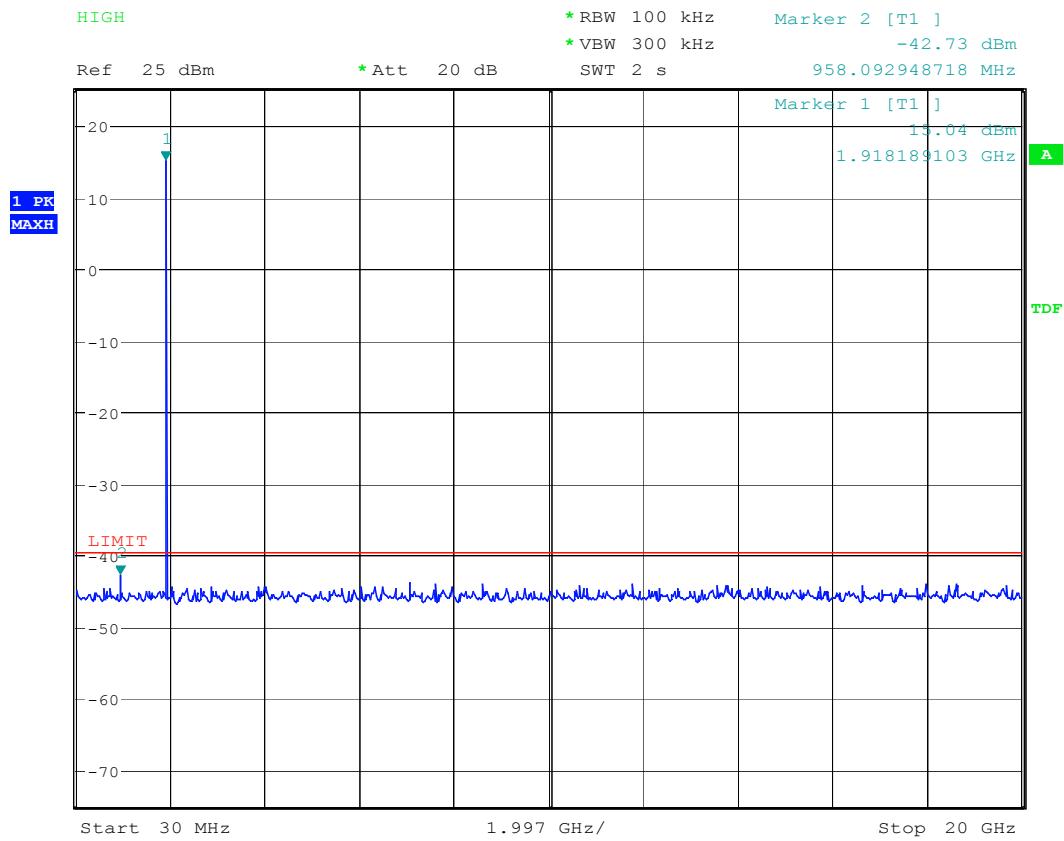
Out-of-band Unwanted Emissions: CH F_H



Out-of-band Unwanted Emissions: CH F_H



Out-of-band Unwanted Emissions: CH F_H



6.26 Frame period and jitter

6.26.1 Standard Applicable: FCC 15.323(e) same as RSS-213 4.3.4 (C)

The frame period (a set of consecutive time slots in which the position of each time slot can be identified by reference to a synchronizing source) of an intentional radiator operating in these subbands shall be 20 milliseconds/X where X is a positive whole number. Each device that implements time division for the purposes of maintaining a duplex connection on a given frequency carrier shall maintain a frame repetition rate with a frequency stability of at least 50 parts per millions (ppm). Each device which further divides access in time in order to support multiple communication links on a given frequency carrier shall maintain a frame repetition rate with a frequency stability of at least 10 ppm. The jitter (time-related, abrupt, spurious variations in the duration of the frame interval) introduced at the two ends of such a communication link shall not exceed 25 microseconds for any two consecutive transmissions. Transmissions shall be continuous in every time and spectrum window during the frame period defined for the device.

6.26.2 Measurement Requirement:

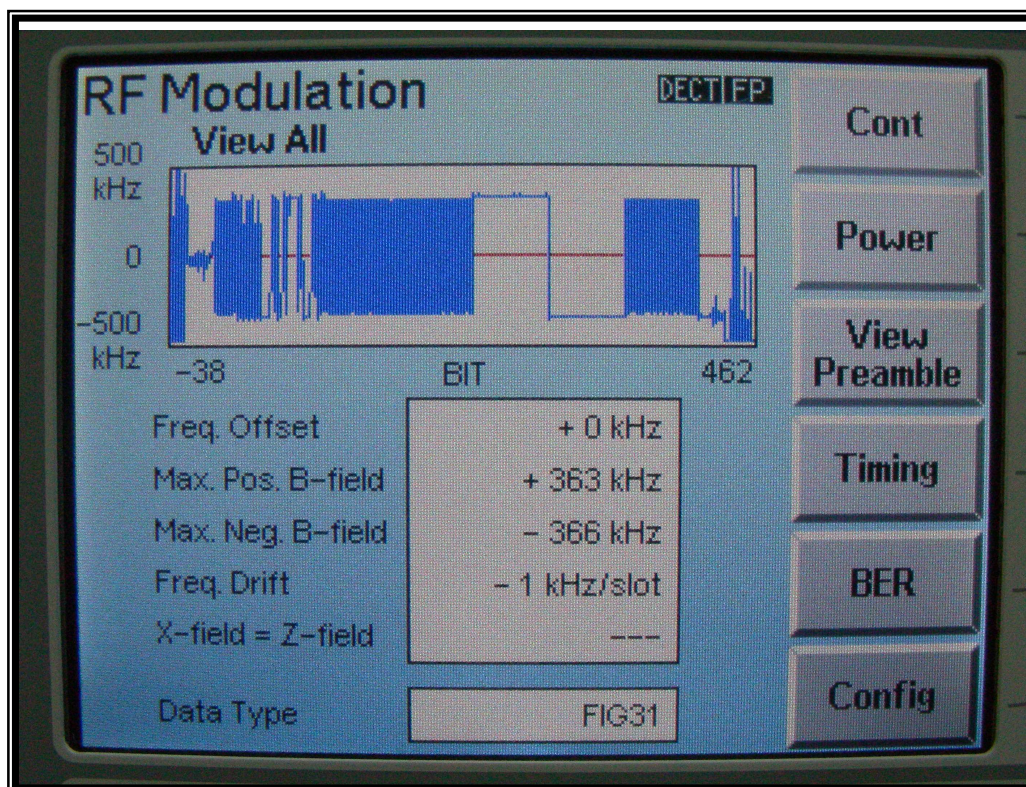
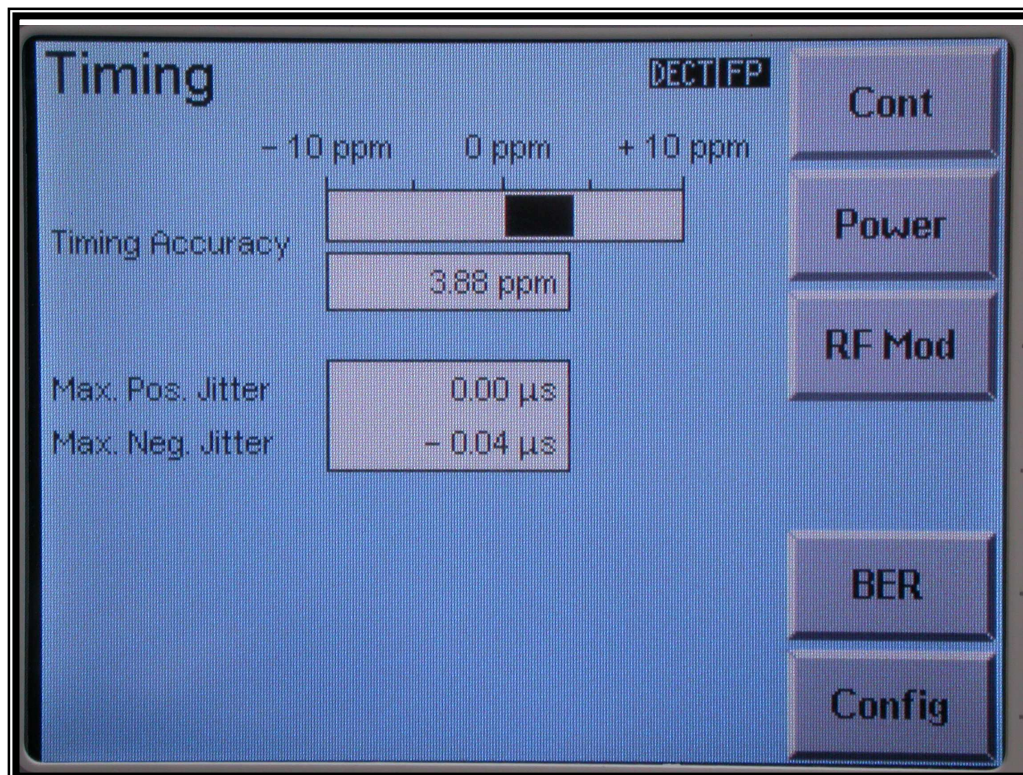
- Frame frequency stability ≤ 50 ppm
- TDMA frame frequency stability ≤ 10 ppm (That translates to frequency drift of 19.2 kHz/slot for 1920 MHz carrier)
- Frame jitter ≤ 25 μ s

6.26.3 Test Results: Complies

Measurement Data:

Channel No.	Frequency (KHz/slot)		Jitter (us)	
	Drift	Limit	Result	Limit
F_L	-1	± 19.2	-0.04	± 25
F_M	-1	± 19.2	-0.04	± 25
F_H	-1	± 19.2	-0.04	± 25

Photos of worst-case display follow:

Frequency Drift**TDMA Frame Jitter**

6.27 Carrier frequency stability

6.27.1 Standard Applicable: FCC 15.323(f)

The frequency stability of the carrier frequency of the intentional radiator shall be maintained within ± 10 ppm over 1 hour or the interval between channel access monitoring, whichever is shorter. The frequency stability shall be maintained over a temperature variation of -20°C to $+50^{\circ}\text{C}$ at normal supply voltage, and over a variation in the primary supply voltage of 85 percent to 115 percent of the rated supply voltage at a temperature of 20°C . For equipment that is capable only of operating from a battery, the frequency stability tests shall be performed using a new battery without any further requirement to vary supply voltage.

RSS-213 6.2 Frequency Stability

The carrier frequency stability shall be maintained within ± 10 ppm ($\pm 0.001\%$).

6.27.2 Measurement Requirement:

- Carrier frequency stability ≤ 10 ppm over 1 hour or interval between channel access monitoring, whichever is shorter (That translates to frequency drift of 19.2 kHz for 1920 MHz carrier)
- Carrier frequency stability over -20°C to $+50^{\circ}\text{C}$ at normal supply voltage, and over 85% to 115% of rated supply voltage (voltage variation not required for battery operated device)

6.27.3 Test Results: Complies

Measurement Data:

a) Carrier Frequency Stability with Supply voltage

Channel No.	Frequency Offset (kHz)			Limit (kHz)
	Voltage x 85%	Normal voltage	Voltage x 115%	
F_L	1	0	0	± 19.2
F_M	0	0	1	± 19.2
F_H	0	0	0	± 19.2

b) Carrier Frequency Stability with Temperature and Time

Channel No.	Frequency Offset (kHz)			Limit (kHz)
	0 °C	20 °C	45 °C	
F_L	1	0	1	±19.2
F_M	1	0	0	±19.2
F_H	2	0	0	±19.2

Test was conducted for duration longer than 1 hour. Photo of worst-case display follows:

