September 13, 2000

Federal Communications Commission
Equipment Approval Services
7435 Oakland Mills Road
Columbia, MD 21046

SUBJECT: ITRONIX CORPORATION
FCC ID: KBCXC6250RIM801D
731 Confirmation No.: EA98559

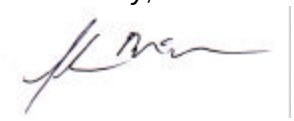
To Whom It May Concern:

On behalf of Itronix Corporation we hereby submit the following amendment to the subject application:

1. We have retested the Conducted Spurious emissions with the high-pass filter removed. Please find attached the new test plots and test description.
2. We are resubmitting the Radiated Spurious test data, which correlates with the previously submitted Radiated Spurious test plots.

If you have any questions or comments concerning the above, please contact the undersigned.

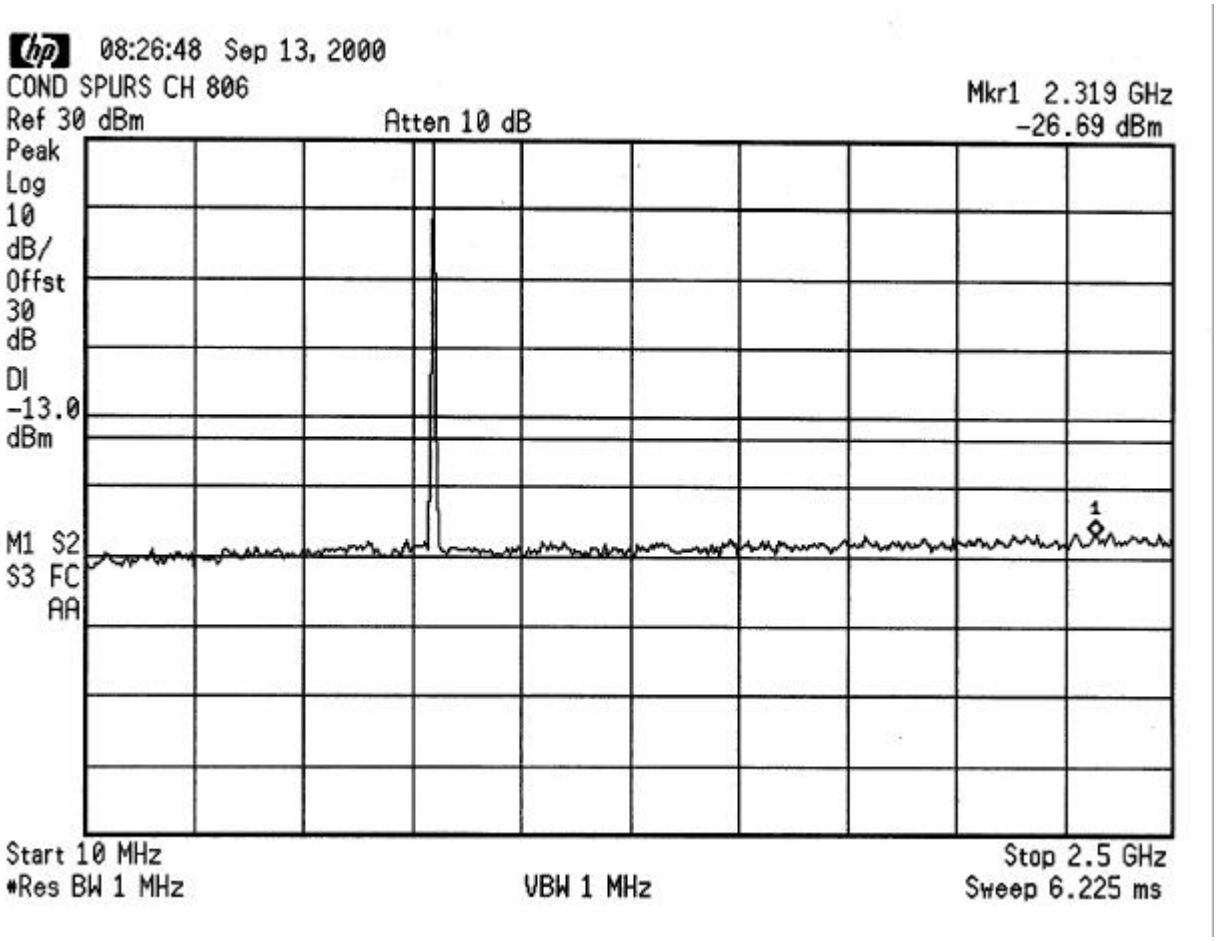
Sincerely,



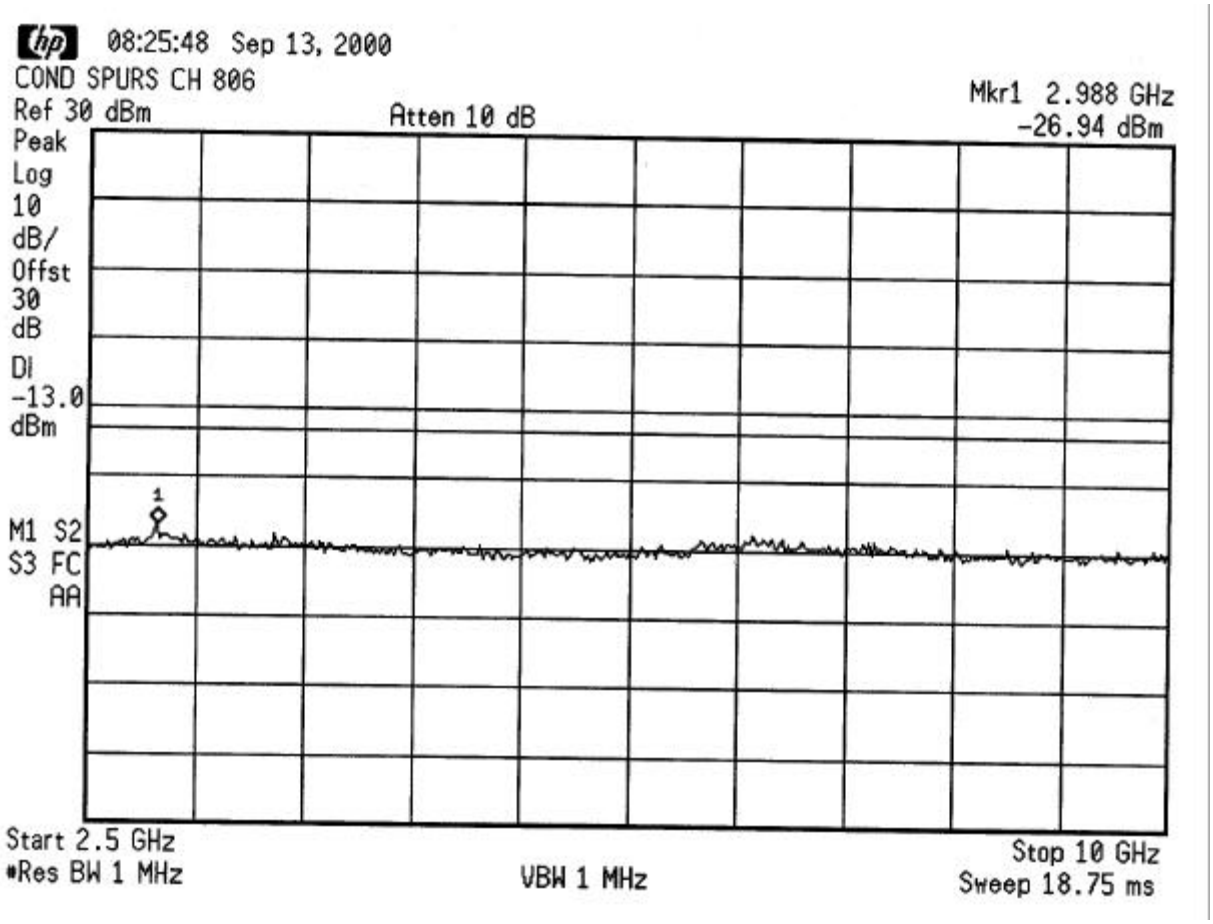
Shawn McMillen
General Manager
Celltech Research Inc.
Testing & Engineering Lab

cc: Itronix Corporation

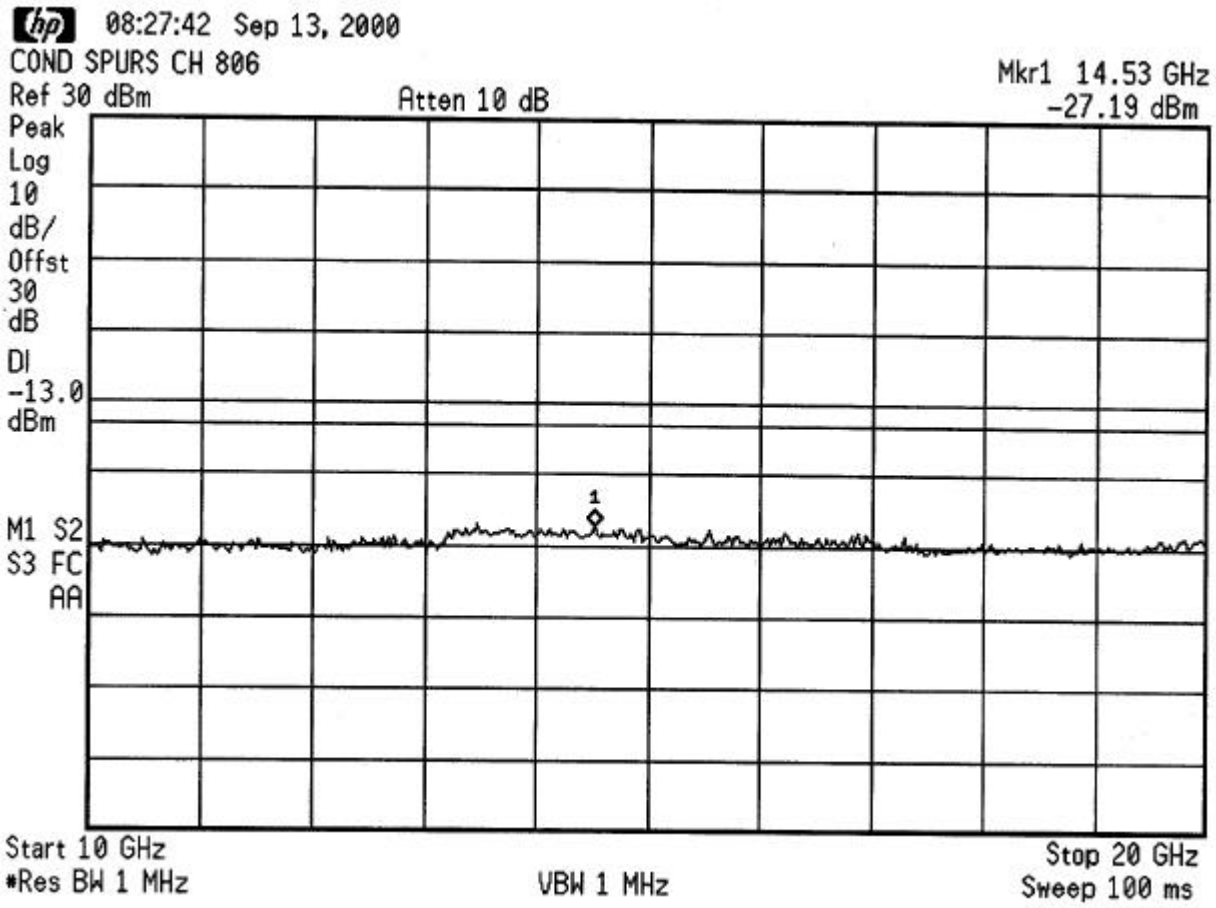
CONDUCTED SPURIOUS – Channel 806



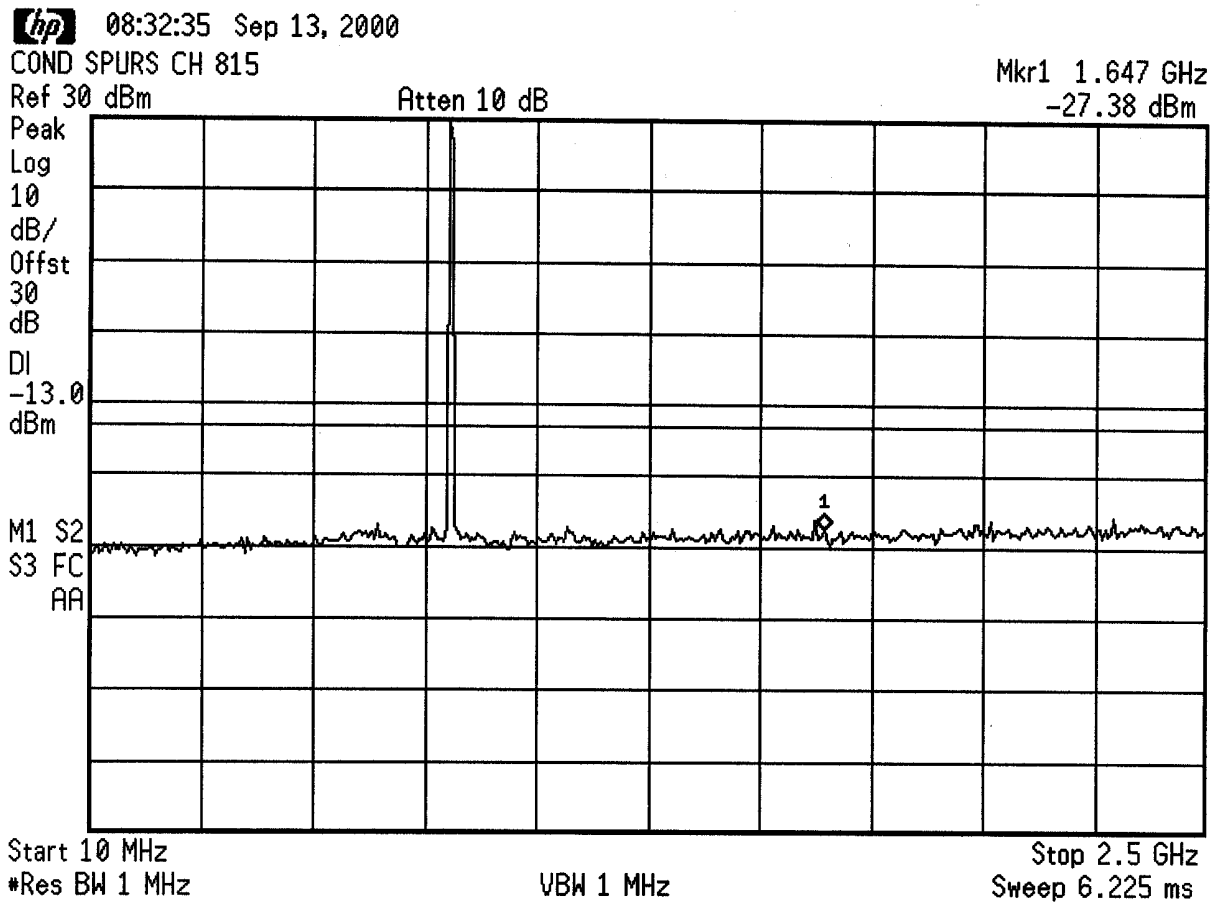
CONDUCTED SPURIOUS – Channel 806



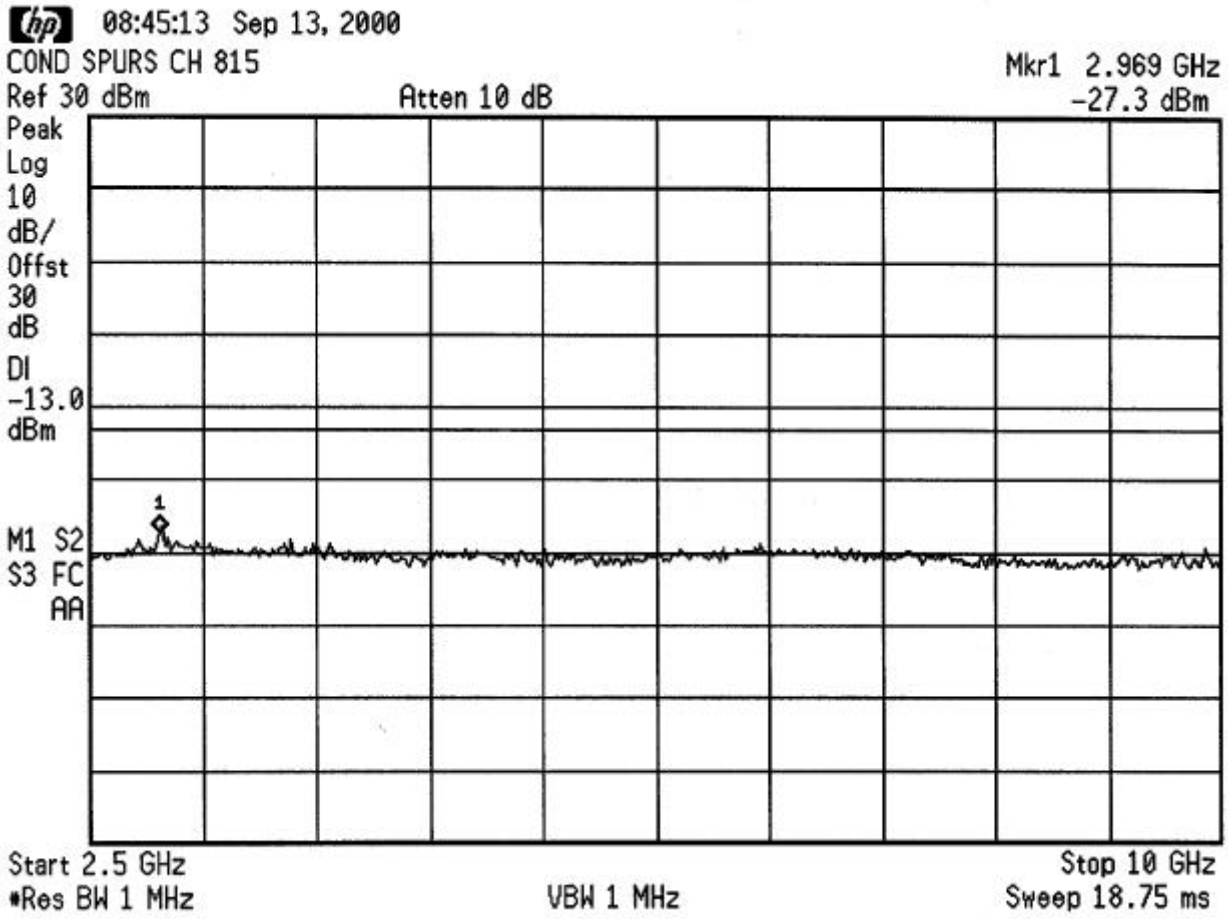
CONDUCTED SPURIOUS – Channel 806



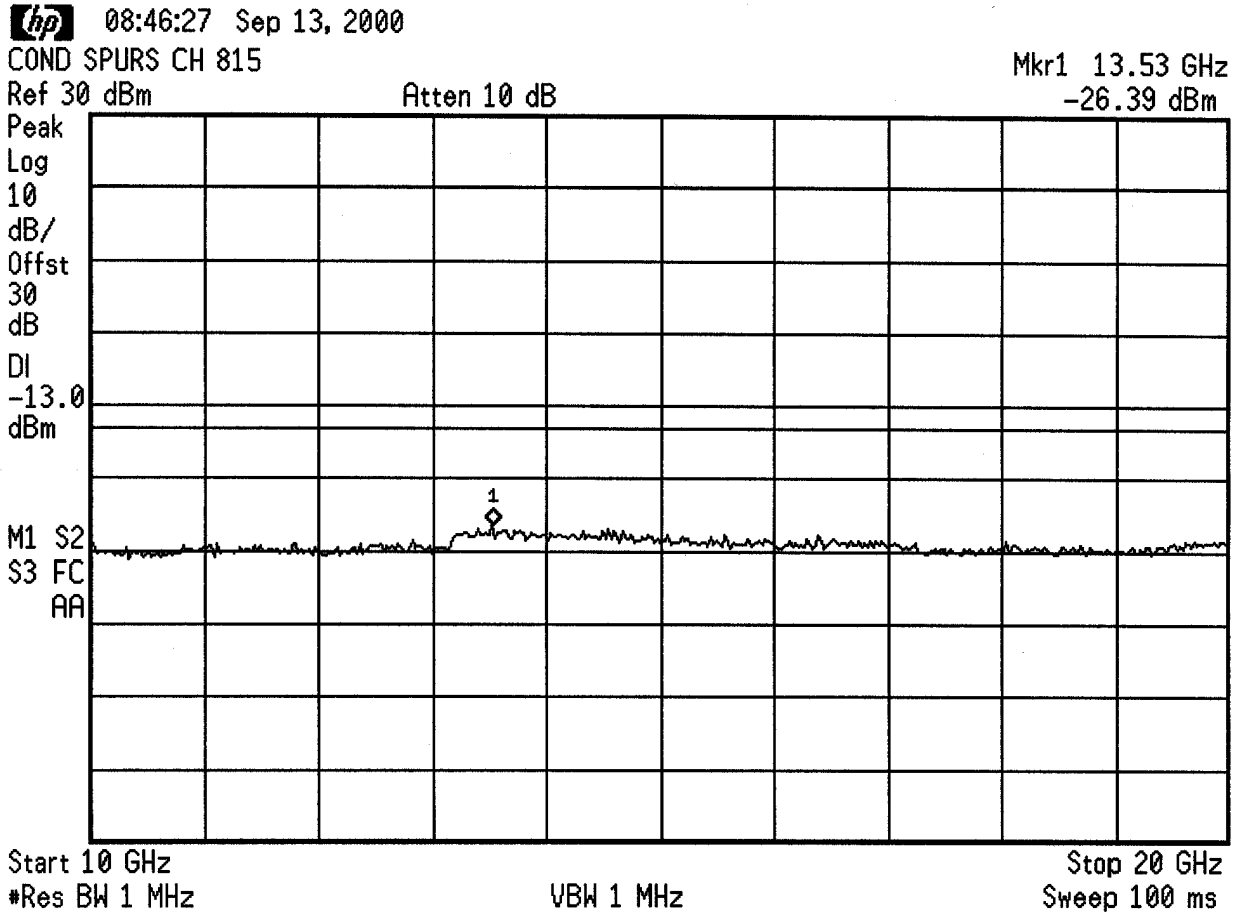
CONDUCTED SPURIOUS – Channel 815



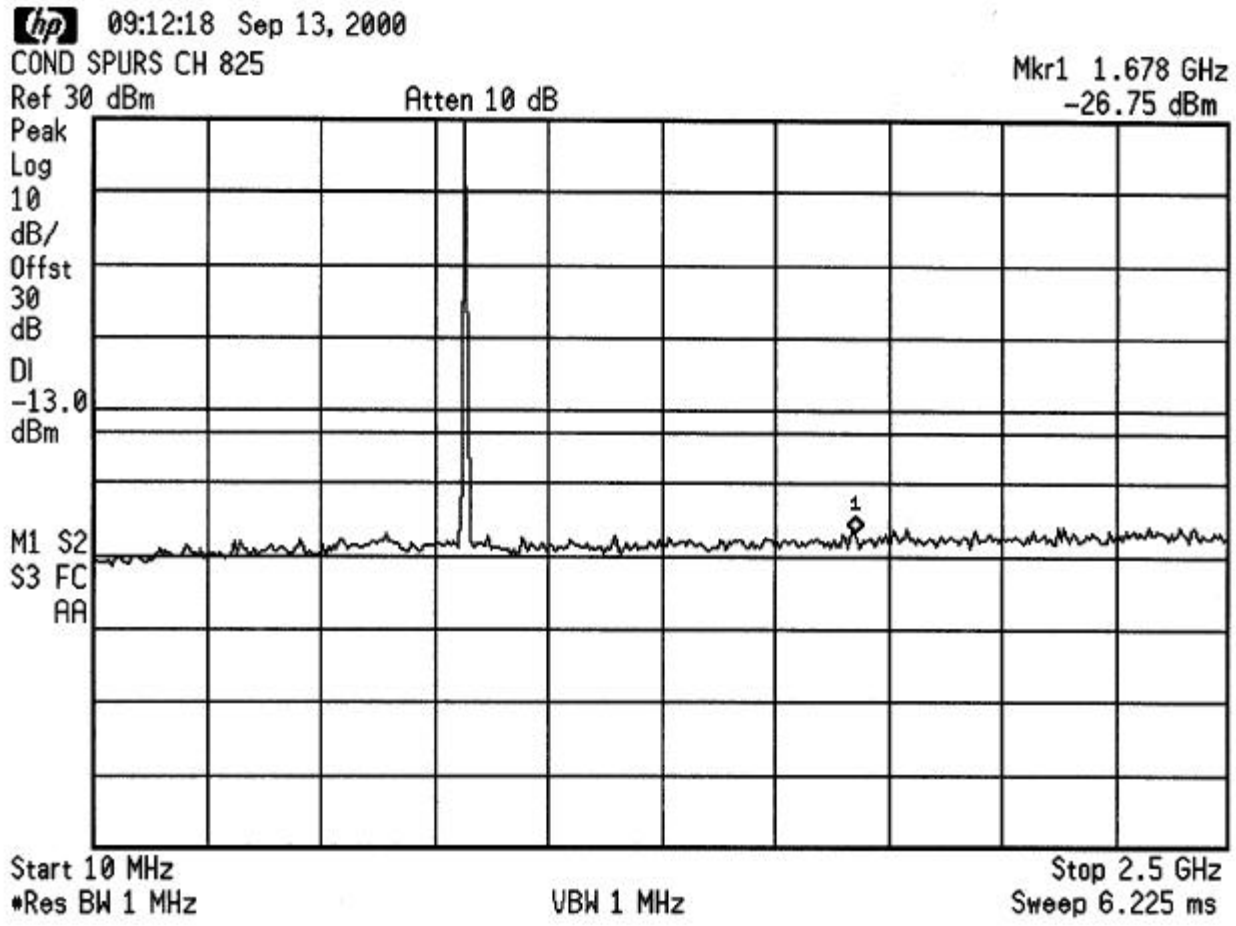
CONDUCTED SPURIOUS – Channel 815



CONDUCTED SPURIOUS – Channel 815



CONDUCTED SPURIOUS – Channel 825



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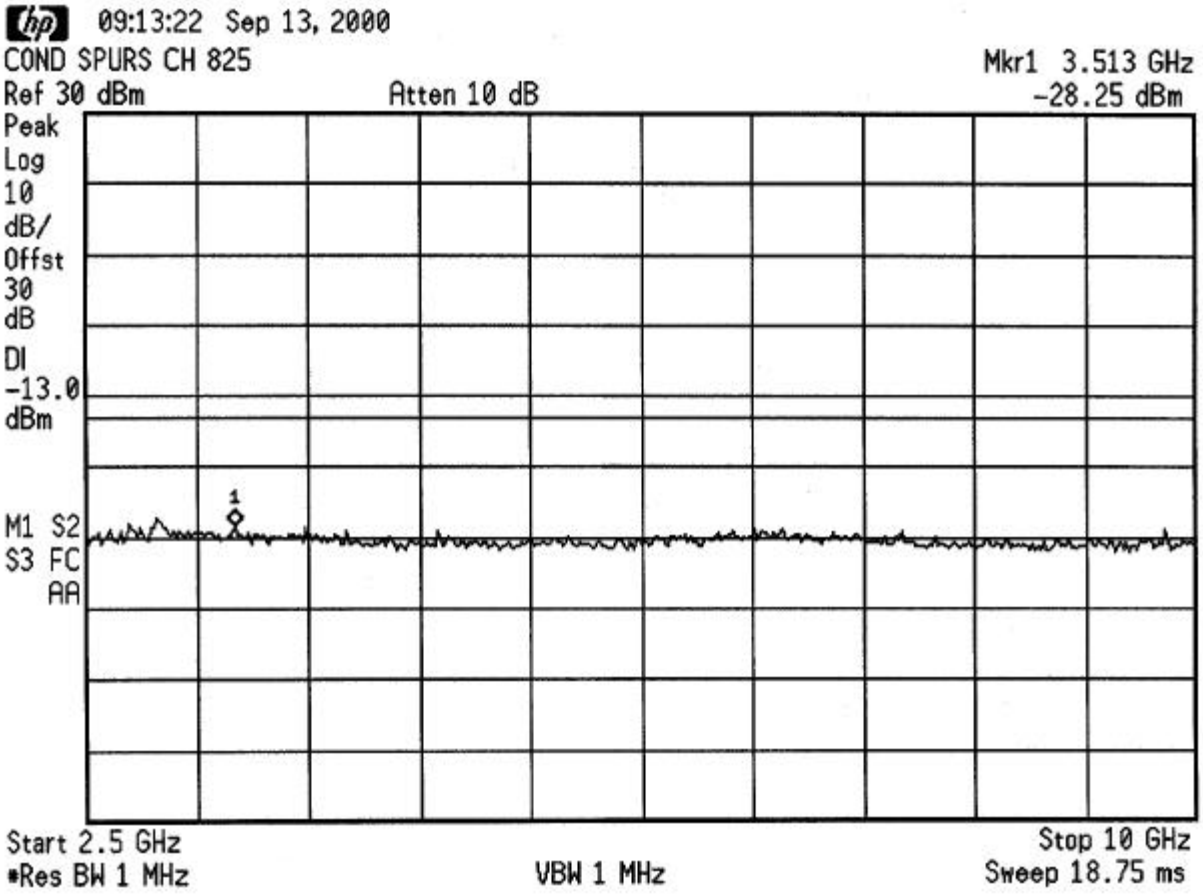
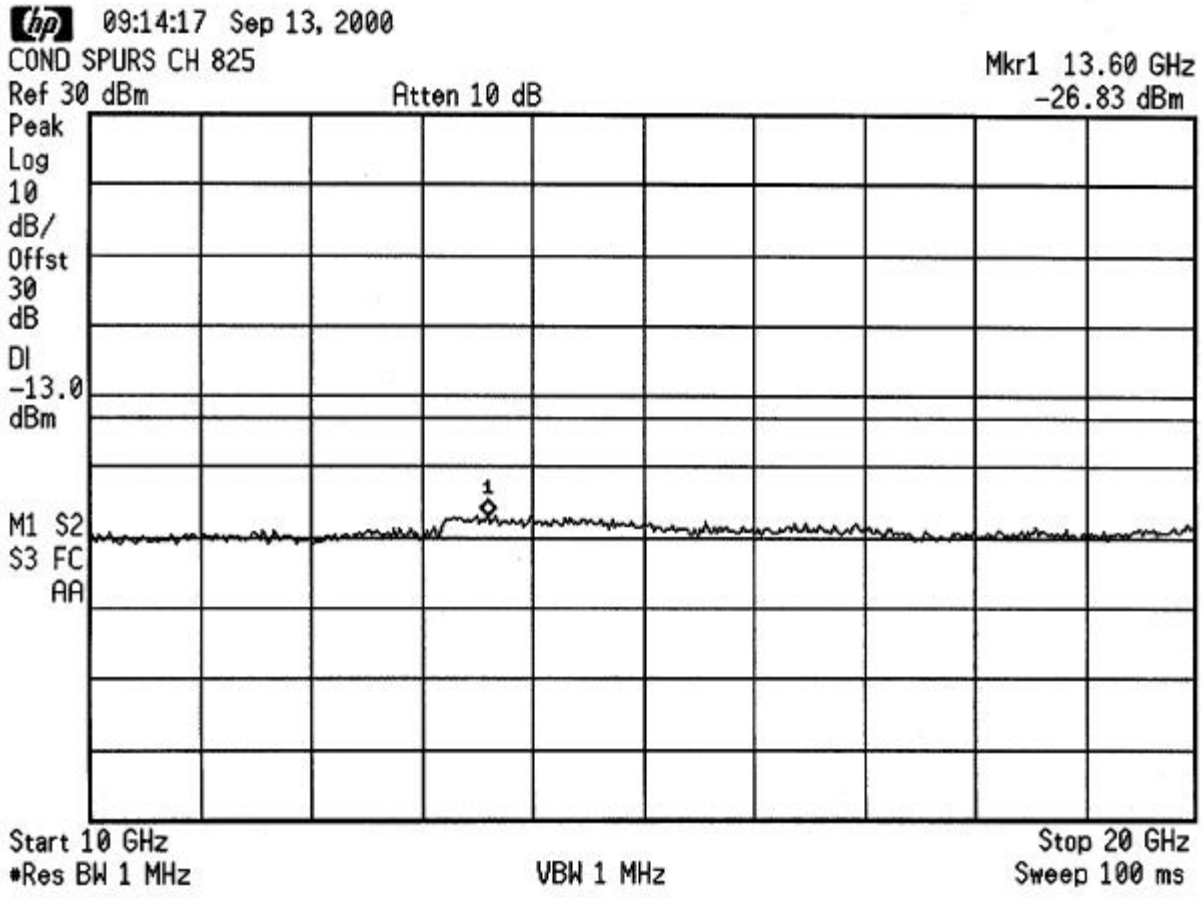


CONDUCTED SPURIOUS – Channel 825



2.3 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL - §2.1051

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from 10MHz to 20GHz. The transmitter is modulated with a 2500Hz tone at a level of 16dB greater than that required to provided 50% modulation. The antenna output terminal of the EUT was connected to the input of a 50Ω spectrum analyzer through a matched 30dB attenuator and coaxial cable. The transmitter was operating at maximum power with and without internal data modulation.

2.4 RADIATED SPURIOUS AND HARMONIC EMISSIONS - §2.1053

Radiated and harmonic emissions above 1 GHz were measured at our 3-meter outdoor site. The EUT is placed on the turntable connected to a dummy load in normal operation using the intended power source. A receiving antenna located 3 meters from the turntable receives any signal radiated from the transmitter and its operating accessories. The receiving antenna is varied from 1 to 4 meters and the polarization is varied (horizontal and vertical) to determine the worst-case emission level. A high pass filter (Microwave Circuits Inc. P/N: H1G04G01) was used in series with the antenna, followed by a 25dB amplifier (HP 83017A).

2.5 FREQUENCY STABILITY/TEMPERATURE VARIATION - §2.1055

The frequency stability of the transmitter is measured by:
a) Temperature: The temperature is varied from -30°C to +60°C using an environmental chamber.
b) Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the voltage normally at the input to the device or at the power supply terminals if cables are not normally supplied. The EUT is tested down to the battery endpoint.

Specification – The minimum frequency stability shall be +/- 0.00025% at any time during normal operation.

Time Period and Procedure:

1. The carrier frequency of the transmitter and the individual oscillators is measured at room temperature (25°C to 27°C to provide a reference).
2. The equipment is subjected to an overnight “soak” at -30°C without any power applied.
3. After the overnight “soak” at 30°C (usually 14-16 hours), the equipment is turned on in a “standby” condition for one minute before applying power to the transmitter. Measurement of the carrier frequency of the transmitter and the individual oscillators is made within a three-minute interval after applying power to the transmitter.
4. Frequency measurements were made at 10°C intervals up to room temperature. A minimum period of one and one half-hour is provided to allow stabilization of the equipment at each temperature level.

3.3 FIELD STRENGTH OF SPURIOUS RADIATION – §2.1053

Operating Frequency:	806 MHz
Channel:	Low
Measured Conducted Power:	30.00dBm
Modulation:	unmodulated carrier
Distance:	3 meters
Limit:	$43 + 10 \log_{10} (W) = 39.47$ dBc

Frequency (MHz)	**Level** (dBm)	**AFCL** (dB)	**POL** (H/V)	**ERP** (dBm)	(dBc)
1612	$\leq$ - 56.47	28.96	H	- 15.39	45.39
2418	$\leq$ - 56.47	28.96	H	- 15.39	45.39
3224	$\leq$ - 57.24	28.55	H	- 16.57	46.57
4030	$\leq$ - 57.24	28.55	H	- 16.57	46.57
4836	$\leq$ - 57.24	28.55	H	- 16.57	46.57
5642	< -100				

Notes:

1. The bandwidth is set per §90.210 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 10 MHz up to 20GHz.
3. < -100dBm is below the floor of the spectrum analyzer.
4. The EUT is manipulated through 3 orthogonal axis and the worst-case emission are reported.
5. The EUT is placed 3.0 meters away from the receiving antenna and the ERP is calculated using the formula.
   ERP (dBm) $= 10 \text{ Log}_{10} (((r(mV/m)/1 \times 10^{6})^2 / 49.2/1 \times 10^{-3})$
   ERP (dBm) $= 10 \text{ Log}_{10} [(3 \times FS/1 \times 10^{6})^2 / (49.2) \times 1000]$
   ERP (Watts) $= \{(3 \times FS)/1 \times 10^{6}\}^2 / 49.2$
   Note: The antenna factor and cable loss were determined prior to the test.

Operating Frequency:	815 MHz
Channel:	Mid
Measured Conducted Power:	30.00dBm
Modulation:	unmodulated carrier
Distance:	3 meters
Limit:	43 + 10 $\log_{10}$ (W) = 39.47 dBc

Frequency (MHz)	**Level** (dBm)	**AFCL** (dB)	**POL** (H/V)	**ERP** (dBm)	(dBc)
1630	$\leq$ - 57.48	28.96	H	- 16.40	46.40
2445	$\leq$ - 57.48	28.96	H	- 16.40	46.40
3260	$\leq$ - 57.06	28.55	H	- 16.39	46.39
4075	$\leq$ - 57.06	28.55	H	- 16.39	46.39
4890	$\leq$ - 57.06	28.55	H	- 16.39	46.39
5705	< -100				

Notes:

1. The bandwidth is set per §90.210 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 10 MHz up to 20GHz.
3. < -100dBm is below the floor of the spectrum analyzer.
4. The EUT is manipulated through 3 orthogonal axis and the worst-case emission are reported.
5. The EUT is placed 3.0 meters away from the receiving antenna and the ERP is calculated using the formula:
   ERP (dBm) = 10 Log_{10} (((r(mV/m)/1 x 10^6)^2 / 49.2/1 x 10^{-3})
   ERP (dBm) = 10 Log_{10} [(3 x FS/1 x 10^6)^2 / (49.2) x 1000]
   ERP (Watts) = {(3 x FS)/1 x 10^6}^{2} / 49.2
   Note: The antenna factor and cable loss were determined prior to the test.

Operating Frequency:	825 MHz
Channel:	High
Measured Conducted Power:	30.00dBm
Modulation:	unmodulated carrier
Distance:	3 meters
Limit:	43 + 10 $\log_{10}$ (W) = 39.47 dBc

Frequency (MHz)	**Level** (dBm)	**AFCL** (dB)	**POL** (H/V)	**ERP** (dBm)	(dBc)
1650	$\leq$ -55.55	28.96	H	- 14.47	44.47
2475	$\leq$ -55.55	28.96	H	- 14.47	44.47
3300	$\leq$ - 57.16	28.55	H	- 16.49	46.49
4125	$\leq$ - 57.16	28.55	H	- 16.49	46.49
4950	$\leq$ - 57.16	28.55	H	- 16.49	46.49
5775	< -100				

Notes:

1. The bandwidth is set per §90.210 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 10 MHz up to 20GHz.
3. < -100dBm is below the floor of the spectrum analyzer.
4. The EUT is manipulated through 3 orthogonal axis and the worst-case emission are reported.
5. The EUT is placed 3.0 meters away from the receiving antenna and the ERP is calculated using the formula:
   ERP (dBm) = 10 Log_{10} (((r(mV/m)/1 x 10^6)^2 / 49.2/1 x 10^{-3})
   ERP (dBm) = 10 Log_{10} [(3 x FS/1 x 10^6)^2 / (49.2) x 1000]
   ERP (Watts) = {(3 x FS)/1 x 10^6}^{2} / 49.2
   Note: The antenna factor and cable loss were determined prior to the test.