

**APPLICANT: Lucent Technologies****FCC ID: AS5CMP-33****EXHIBIT 17****Section 2.1051 Measurements Required: Spurious Emissions at Antenna Terminal**

Spurious emissions conducted to the transmit antenna terminal were investigated from the lowest RF frequency, 15 MHz, to the 10<sup>th</sup> harmonic of the carrier, 10 GHz, as required by Part 2.1057(a)(1). Part 2.1057(c) specifies that spurious emissions attenuated more than 20 dB below the required limitation do not need to be reported. A single TDMA carrier was modulated by a pseudo-random data bit stream for all 3 time slots, and the Cellular TDMA Dual Radio Module (CDRM) 44WR54, subject of a separate application under AS5CMP-30, in combination with the Cellular TDMA Multi Carrier Linear Amplifier (CMCLA) 44WA29, subject of this application under AS5CMP-31, output power level was set to provide +30.8 dBm (1.2 Watts) at the transmit antenna terminal. Measurements were first made with the Cellular A-Band simplex transmit bandpass filter at 1) the lowest settable channel Ch 991 (869.04 MHz), 2) at mid band Ch 400 (882.00 MHz), and 3) at the highest settable A-Band channel Ch 716 (891.48 MHz). The second set of measurements were made with the Cellular B-Band simplex transmit bandpass filter at 1) the lowest settable B-Band channel Ch 334 (880.02 MHz), 2) at mid band Ch 500 (885.00 MHz), and 3) at the highest settable B-Band channel Ch 799 (893.97 MHz).

In compliance with Part 22.917(h), measurements were made with the instrumentation resolution bandwidth set to 30 kHz. The limitation for the Cellular Frequency Band is specified in Part 22.917(e) as: "The mean power of emissions must be attenuated below the mean power of the unmodulated carrier (P in Watts) ..... by at least  $43 + 10 \log (P)$  dBc." For the CMCLA output power at the antenna terminal set to +30.8 dBm (1.2 Watt), the required emission attenuation below the carrier is then 43.8 dBc. Three plots were made for each channel listed above: 15 MHz – 1 GHz, 1 – 5 GHz, and 5 GHz – 10 GHz. A variable attenuator was used to adjust the carrier peak to the 0 dBm reticle line as a reference line to facilitate reading the *attenuation below the carrier* direct from the vertical display grid. Part 2.1051 also states that: "The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified."

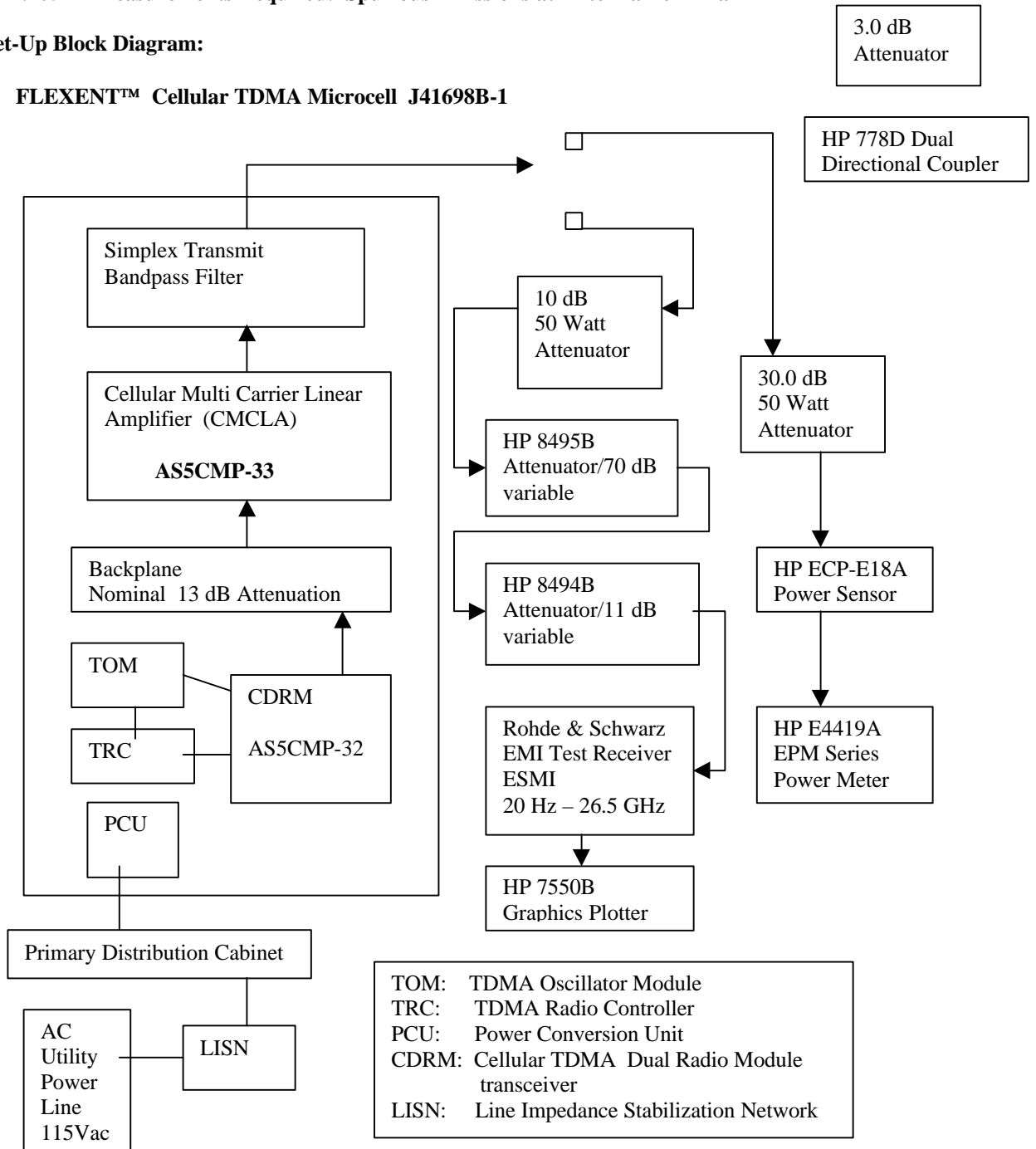
**RESULTS:**

In each of the attached data plots, the instrumentation noise floor exceeded the 43.8 dBc limitation by much greater than 20 dB. The Cellular TDMA Multi Carrier Linear Amplifier (CMCLA) 44WA29, subject of this application and AS5CMP-33, in combination with the Cellular TDMA Dual Radio Module (CDRM) 44WR54, subject of a separate application under AS5CMP-32, demonstrated full compliance with the requirements of Part 2.1051 and Part 22.917. A block diagram of the test set-up and all data plots are attached to this exhibit.

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Test Set-Up Block Diagram:



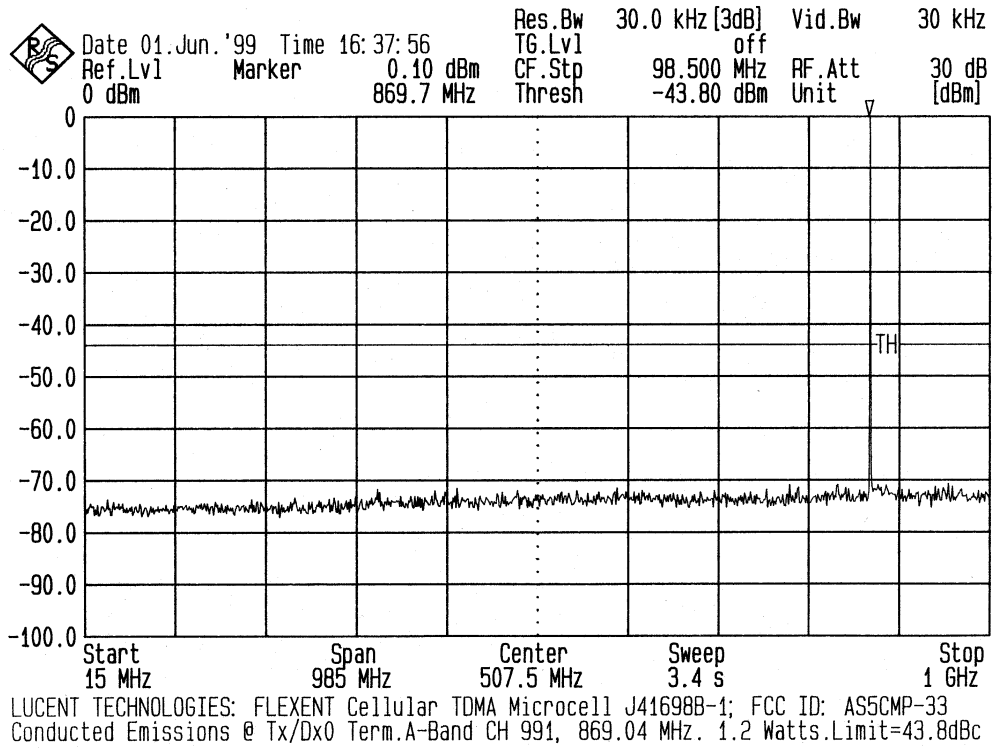
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Data Plots of Conducted Spurious Emissions:



**Cellular A-Band Channel 991 869.04 MHz**  
**Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna termina**  
 Plot 1 of 3

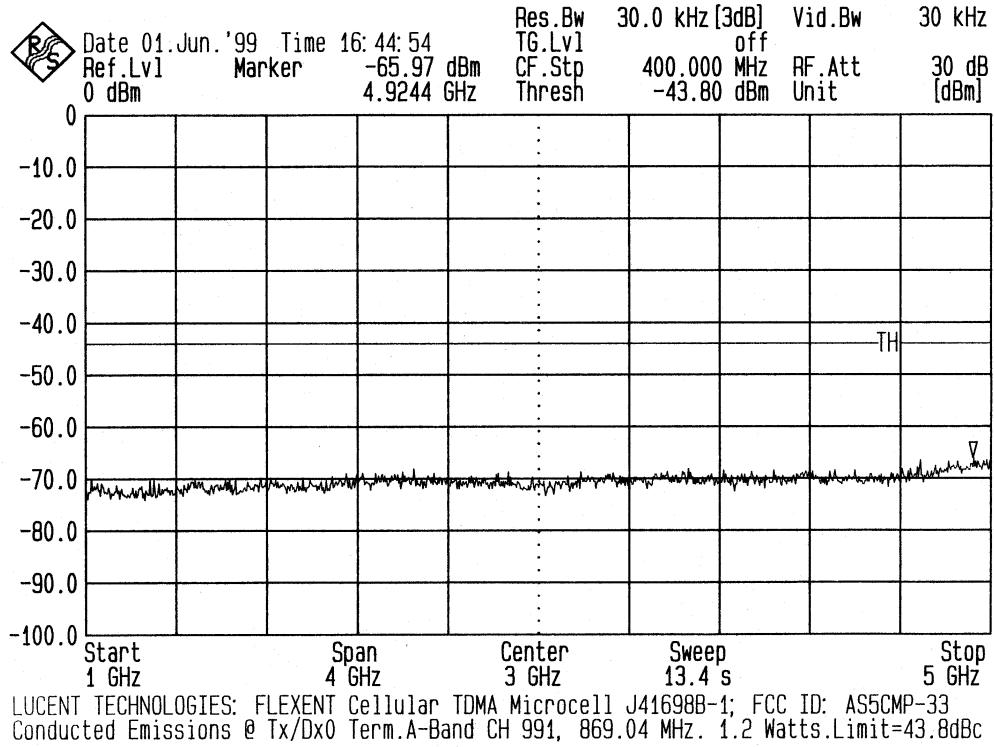
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Data Plots of Conducted Spurious Emissions:



**Cellular A-Band Channel 991 869.04 MHz**  
**Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal**  
 Plot 2 of 3

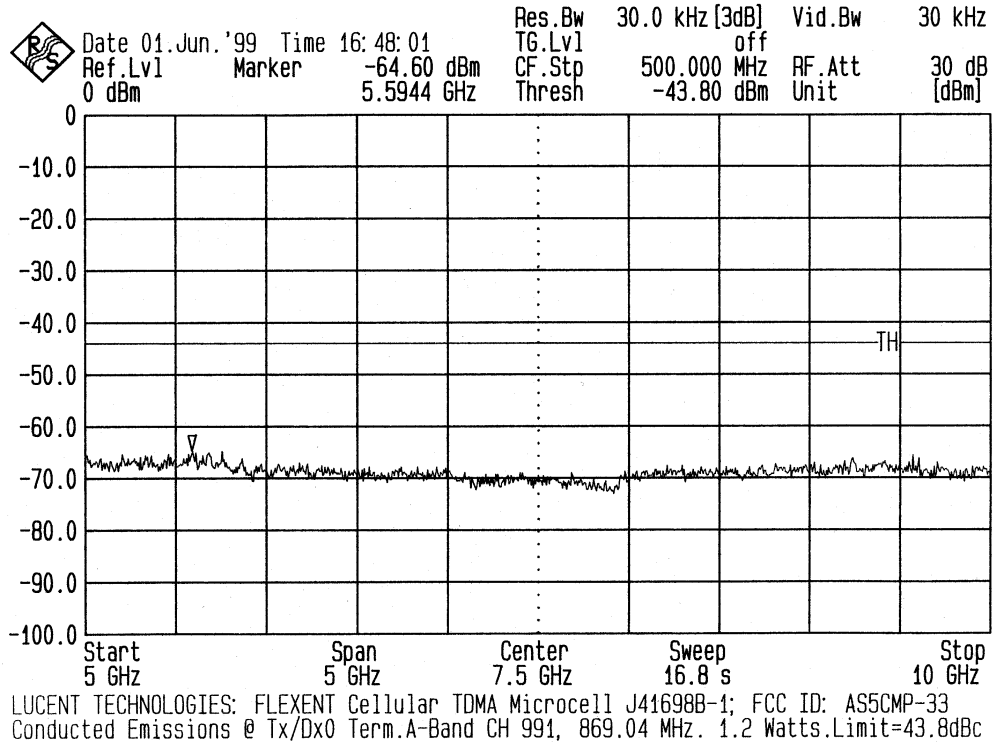
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Data Plots of Conducted Spurious Emissions:



Cellular A-Band Channel 991 869.04 MHz

Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna termina

Plot 3 of 3

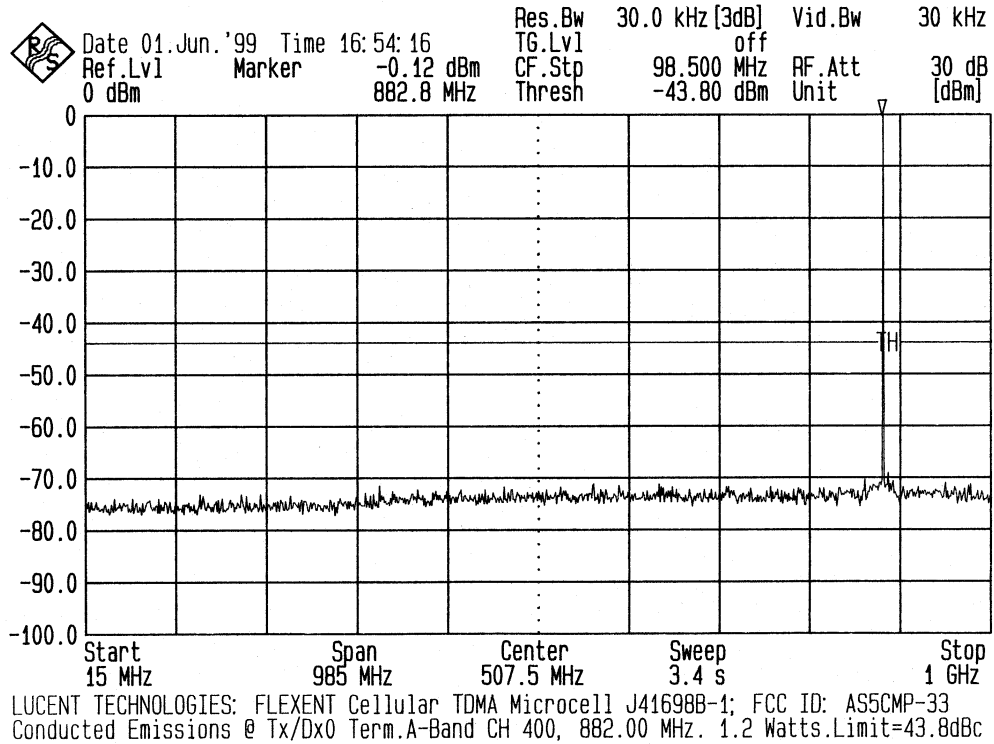
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## Section 2.1051 Measurements Required: Spurious Emissions at Antenna Terminal

## Data Plots of Conducted Spurious Emissions:



Cellular A-Band Channel 400, 882.00 MHz

Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna termin

Plot 1 of 3

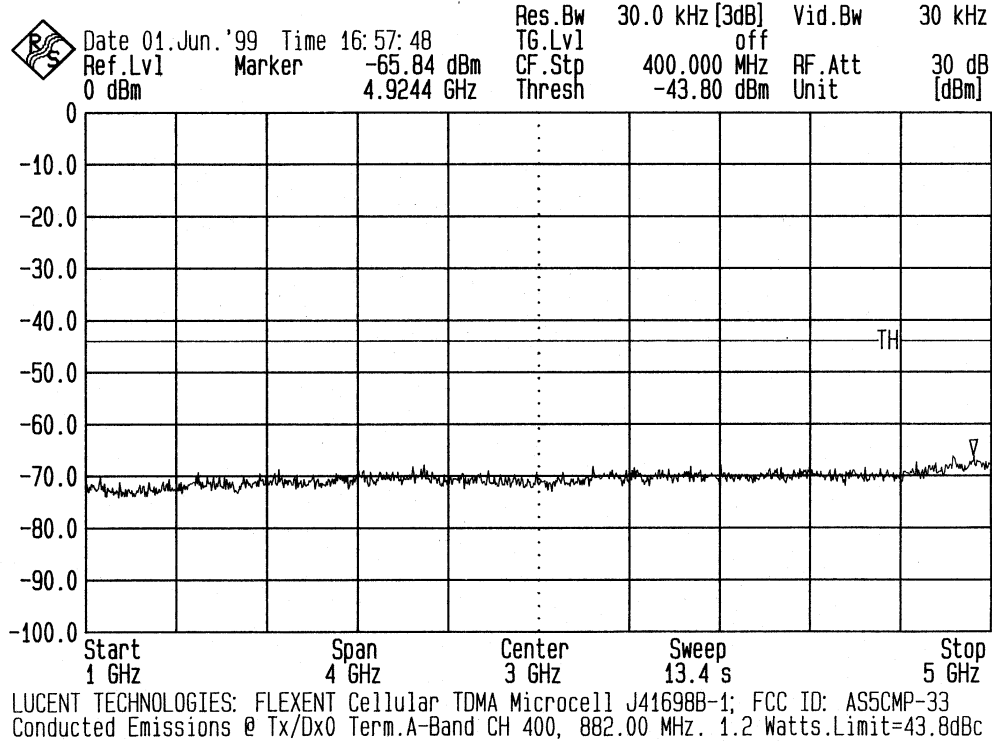
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Data Plots of Conducted Spurious Emissions:



Cellular A-Band Channel 400, 882.00 MHz  
 Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal

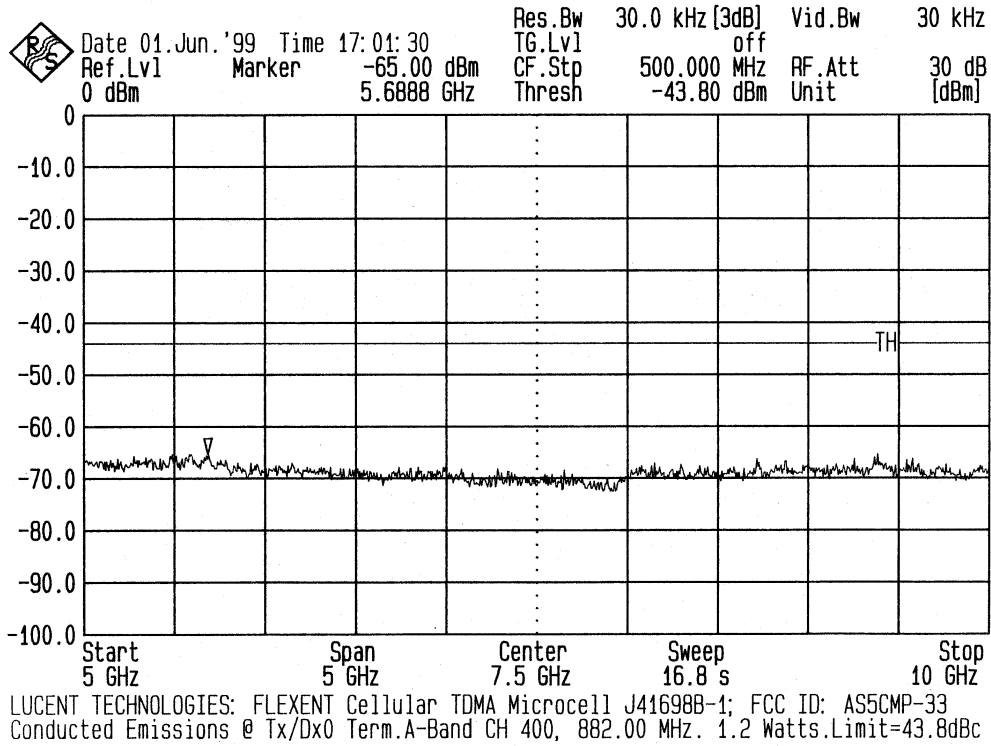
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Data Plots of Conducted Spurious Emissions:



Cellular A-Band Channel 400, 882.00 MHz  
 Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal

Plot 3 of 3



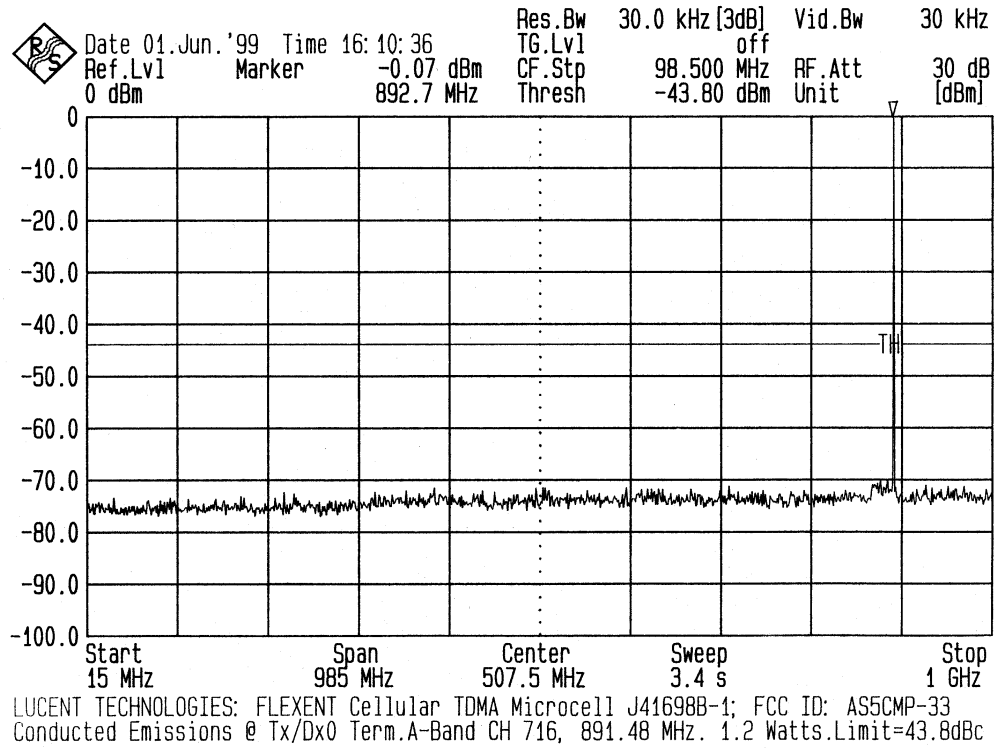
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Data Plots of Conducted Spurious Emissions:



Cellular A-Band Channel 716, 891.48 MHz  
Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal

Plot 1 of 3

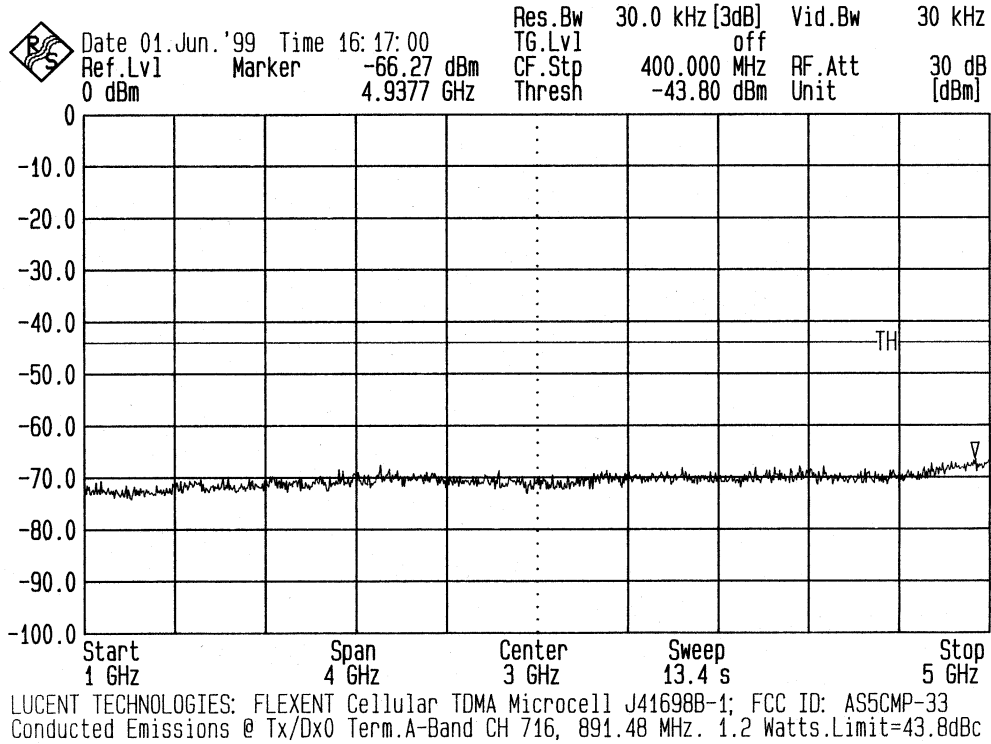
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Data Plots of Conducted Spurious Emissions:



**Cellular A-Band Channel 716, 891.48 MHz**  
**Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal**

Plot 2 of 3

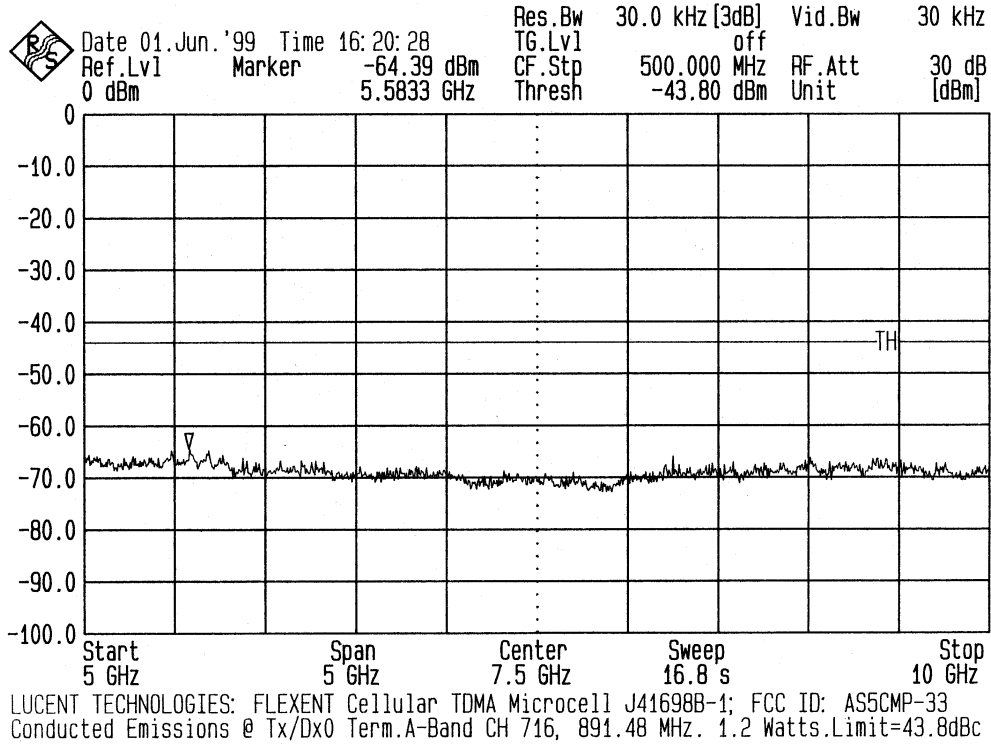
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Data Plots of Conducted Spurious Emissions:



Cellular A-Band Channel 716, 891.48 MHz  
 Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal

Plot 3 of 3

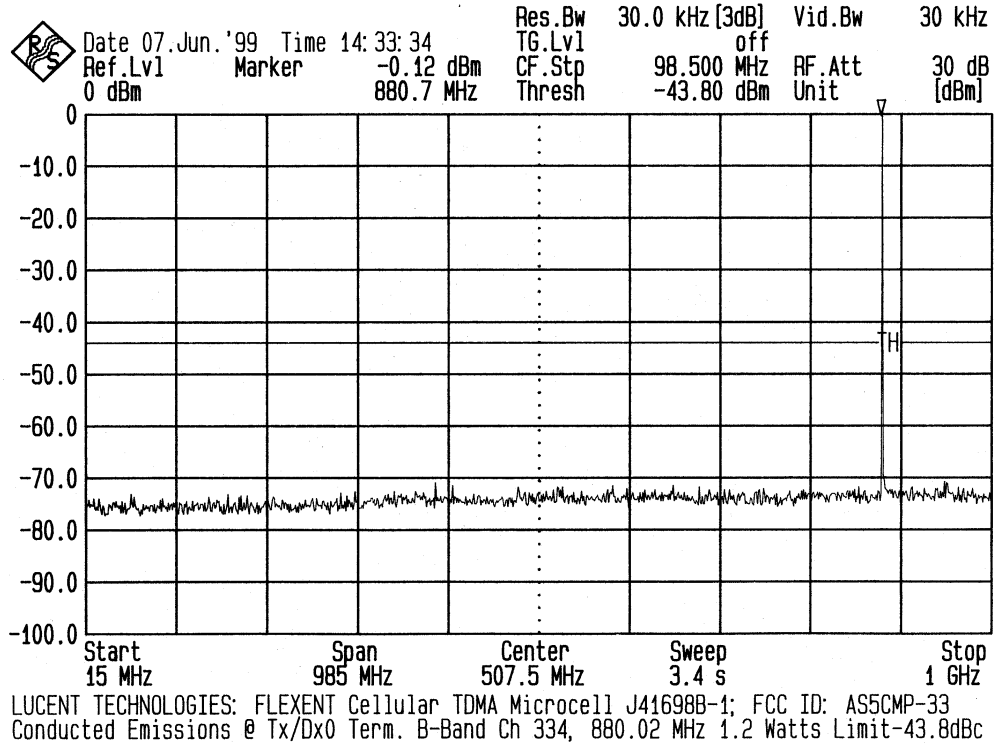
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Data Plots of Conducted Spurious Emissions:



Cellular B-Band Channel 334, 880.02 MHz  
 Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal

Plot 1 of 3

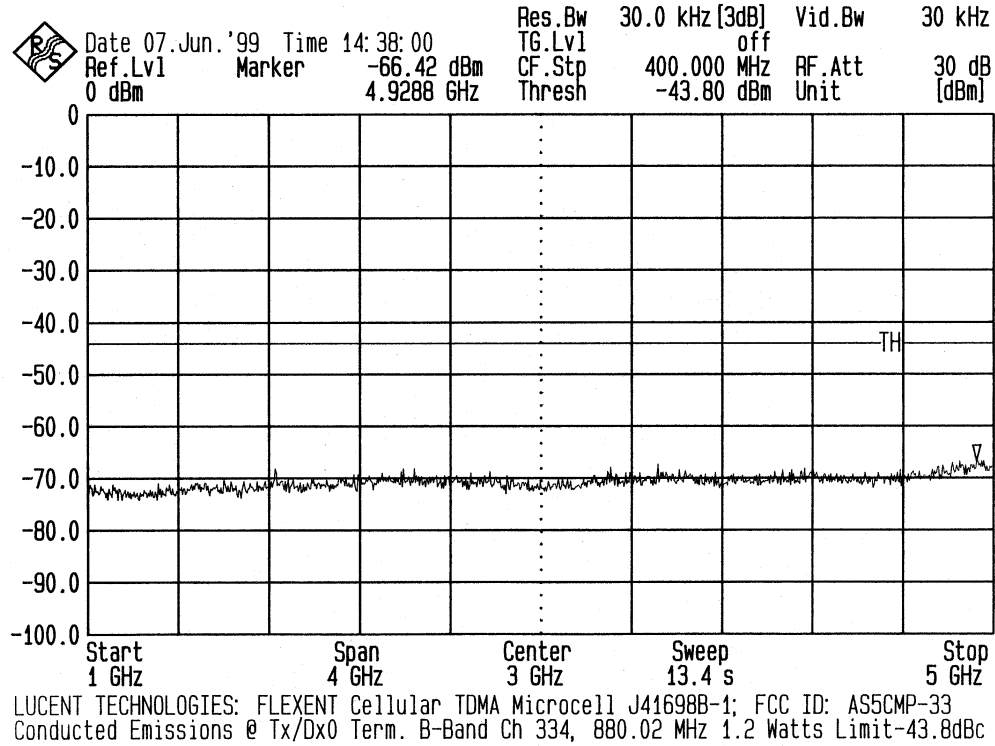
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Data Plots of Conducted Spurious Emissions:



Cellular B-Band Channel 334, 880.02 MHz  
Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal

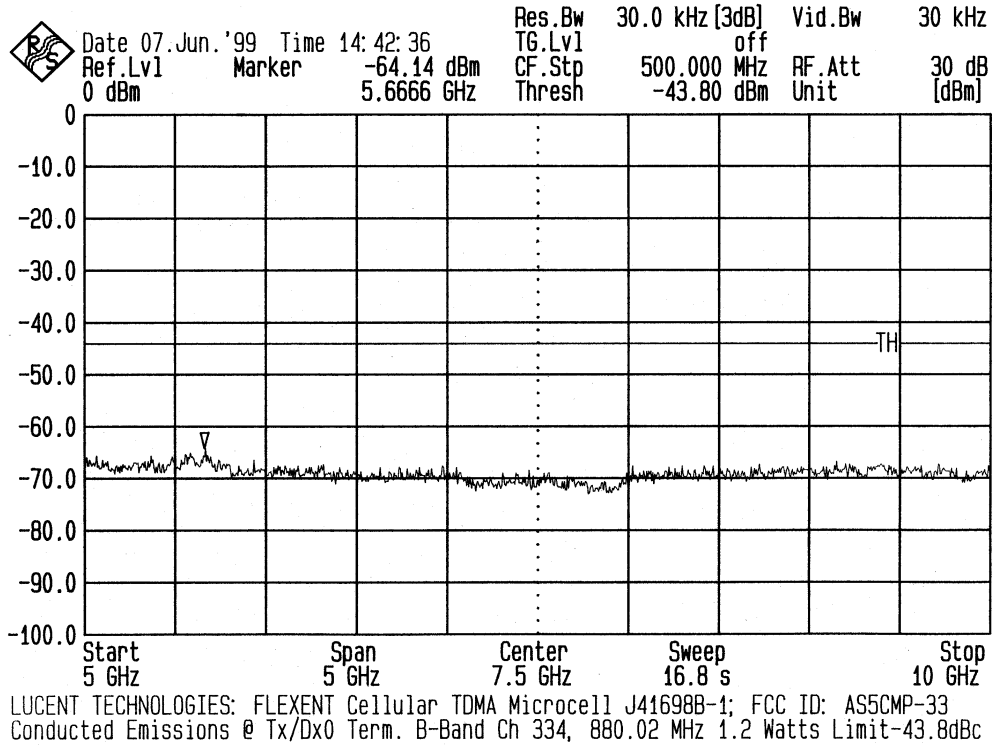
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Data Plots of Conducted Spurious Emissions:



Cellular B-Band Channel 334, 880.02 MHz  
 Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal

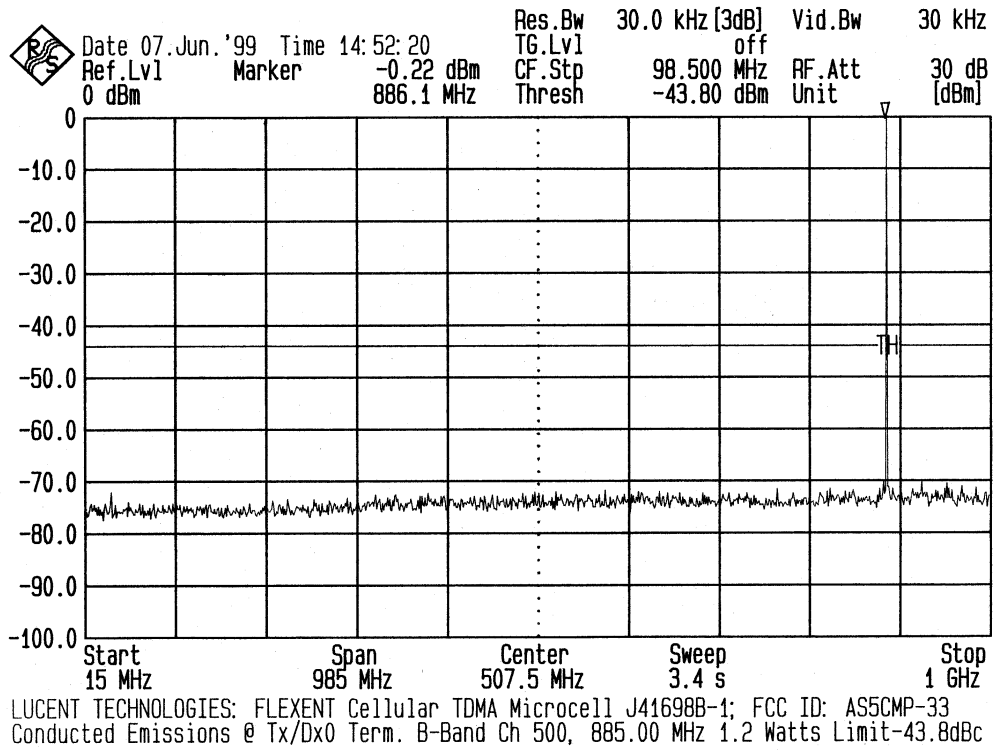
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Section 2.1051 Measurements Required: Spurious Emissions at Antenna Terminal

Data Plots of Conducted Spurious Emissions:



Cellular B-Band Channel 500, 885.00 MHz  
 Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal

Plot 1 of 3

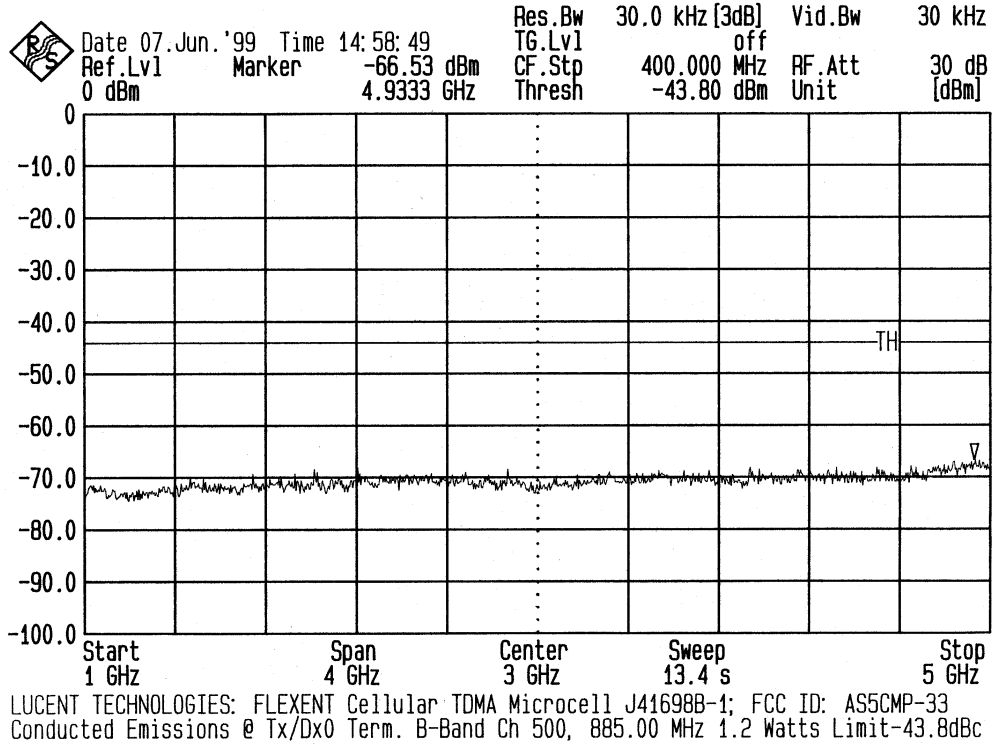
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Section 2.1051 Measurements Required: Spurious Emissions at Antenna Terminal

Data Plots of Conducted Spurious Emissions:



Cellular B-Band Channel 500, 885.00 MHz  
 Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal

Plot 2 of 3



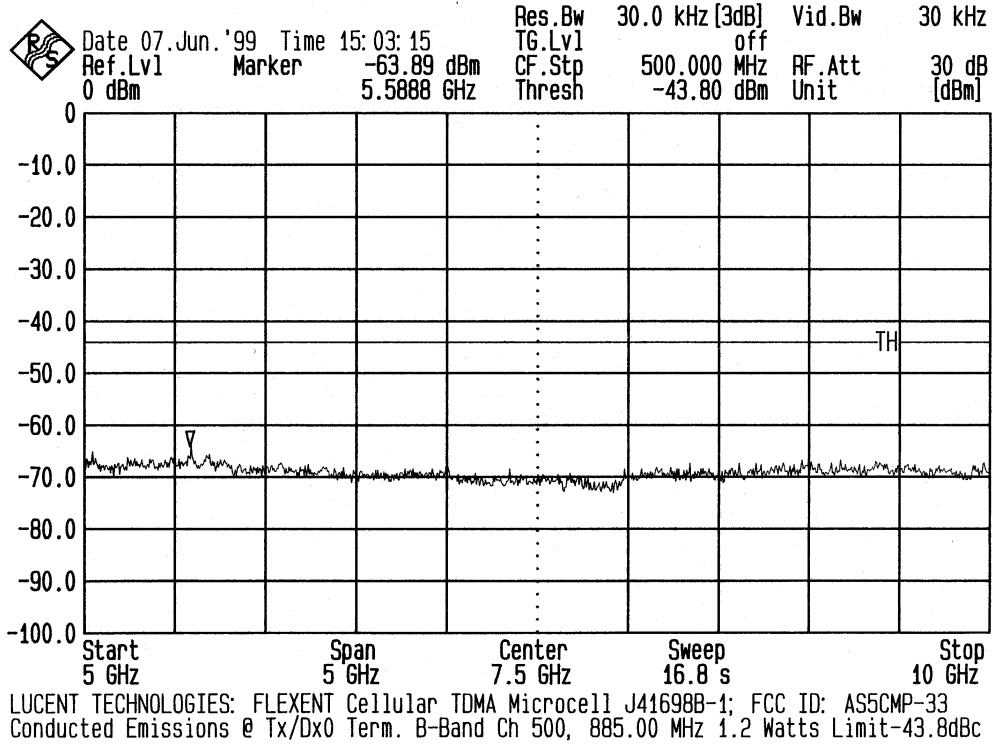
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Section 2.1051 Measurements Required: Spurious Emissions at Antenna Terminal

Data Plots of Conducted Spurious Emissions:



Cellular B-Band Channel 500, 885.00 MHz  
 Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal

Plot 3 of 3

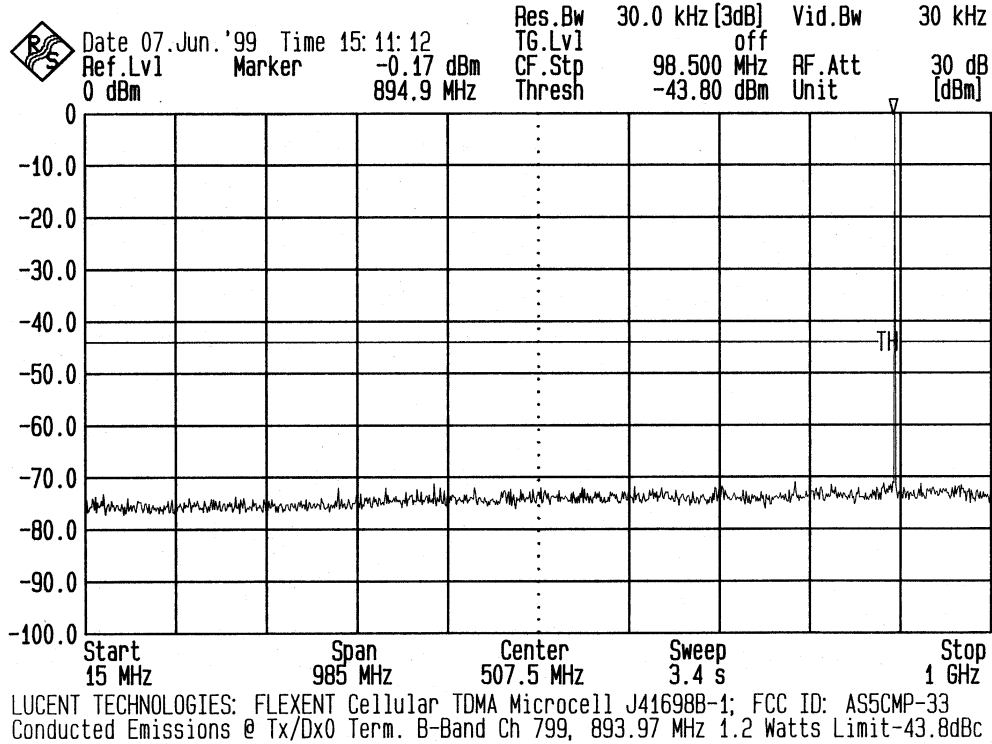
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Data Plots of Conducted Spurious Emissions:



Cellular B-Band Channel 799, 893.97 MHz  
 Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal

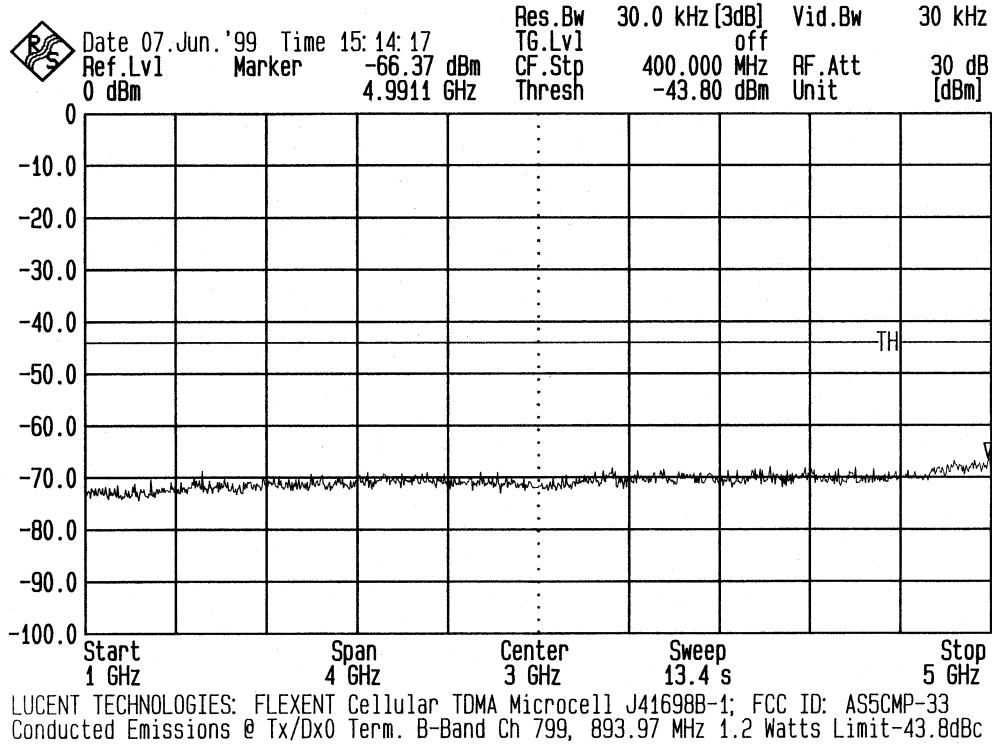
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Section 2.1051 Measurements Required: Spurious Emissions at Antenna Terminal

Data Plots of Conducted Spurious Emissions:



Cellular B-Band Channel 799, 893.97 MHz  
Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal

Plot 2 of 3

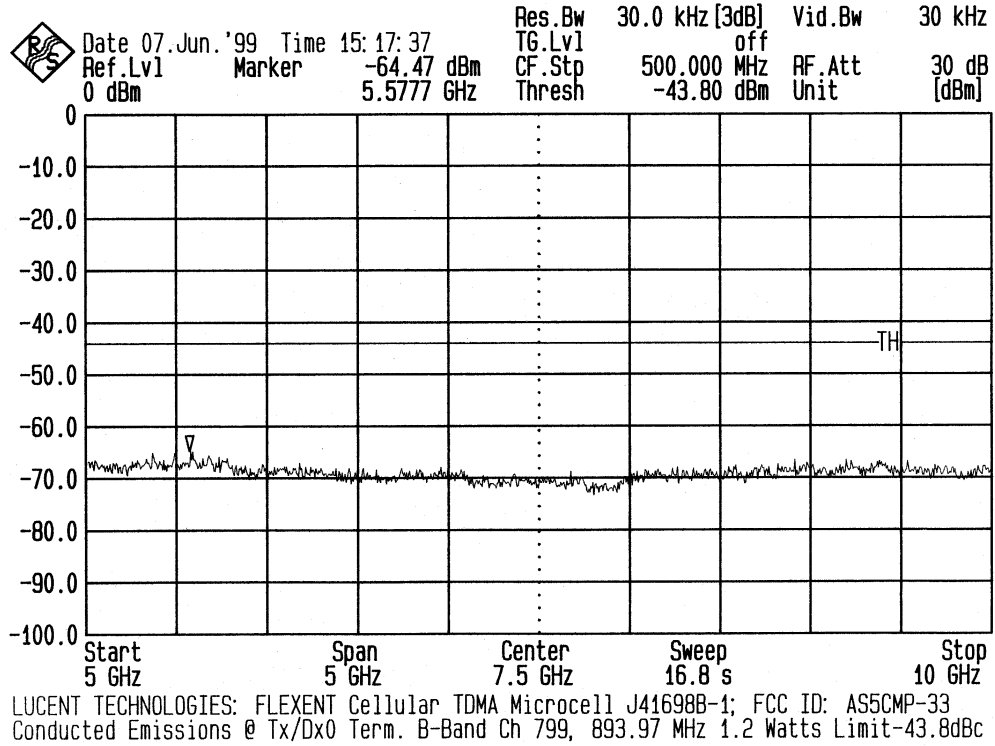
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Section 2.1051 Measurements Required: Spurious Emissions at Antenna Terminal

Data Plots of Conducted Spurious Emissions:



Cellular B-Band Channel 799, 893.97 MHz  
 Cellular TDMA Multi Carrier Linear Amplifier, 44WA29, output at transmit antenna terminal

Plot 3 of 3