

- 1) The Bluetooth portion of the device appears to be on a separate daughter board. The top and bottom of each board, especially the TX board should be provided. Please provide photograph of the bottom of this board for the Bluetooth portion of this application.

Answer: New document in Exhibit 9 was uploaded. Additional detail photos from Bluetooth daughter board have been added. The document 'Exhibit 9 - N-Gage QD\_Internal\_Photos rev01.pdf' shall replace the document 'Exhibit 9 - N-Gage QD Internal Photos.pdf'.

- 2) Please provide information regarding the DC voltages/currents applied into the several elements of the final radio frequency amplifying device for normal operation over the power range.

Answer: The power amplifier DC voltage/current information:

GSM850 4.2V/1.3A, GSM1900 4.2V/1.2A

- 3) Some pages of the schematics are not clear enough to read. Please provide higher resolution schematics.

Answer: New document in Exhibit 5 was uploaded. The document 'Exhibit 5 - N-Gage QD Schematics rev01.pdf' shall replace the document 'Exhibit 5 - N-Gage QD Schematics.pdf'.

- 4) Because of the difficulty in reading the schematics, it is uncertain if the schematics also include the Bluetooth RF portion. Please explain. Typically the FCC requires the RF schematic for each approval, or alternatively if this component is an OEM product from another manufacturer, you may alternatively provide a parts list that shows this fact.

Answer: New document in Exhibit 5 was uploaded, which shows the schematics of the Bluetooth component. The document 'Exhibit 5 - N-Gage QD Schematics rev01.pdf' shall replace the document 'Exhibit 5 - N-Gage QD Schematics.pdf'.

- 5) Please provide a separate exhibit that shows the test configuration photographs only. We are required to upload this to the FCC as a separate exhibit.

Answer: New documents in Exhibit 7 were uploaded. These documents show the test setups of the separate reports.

- 6) The occupied bandwidth plots for Part 22/24 do not appear to show the measured bandwidth. Please provide/explain.

Answer: Information about measured bandwidth:

FCC 24 GSM1900, Emission bandwidth (26 dB BW)

Occupied bandwidth (99 % BW)

| Operating Mode | Diagram No. | Result  | Comment            |
|----------------|-------------|---------|--------------------|
| TX on ch. 512  | 1           | 310 kHz | Emission bandwidth |
| TX on ch. 661  | 2           | 308 kHz | Emission bandwidth |
| TX on ch. 810  | 3           | 308 kHz | Emission bandwidth |
| TX on ch. 512  | 4           | 246 kHz | Occupied bandwidth |
| TX on ch. 661  | 5           | 246 kHz | Occupied bandwidth |
| TX on ch. 810  | 6           | 246 kHz | Occupied bandwidth |

Diagram 1:

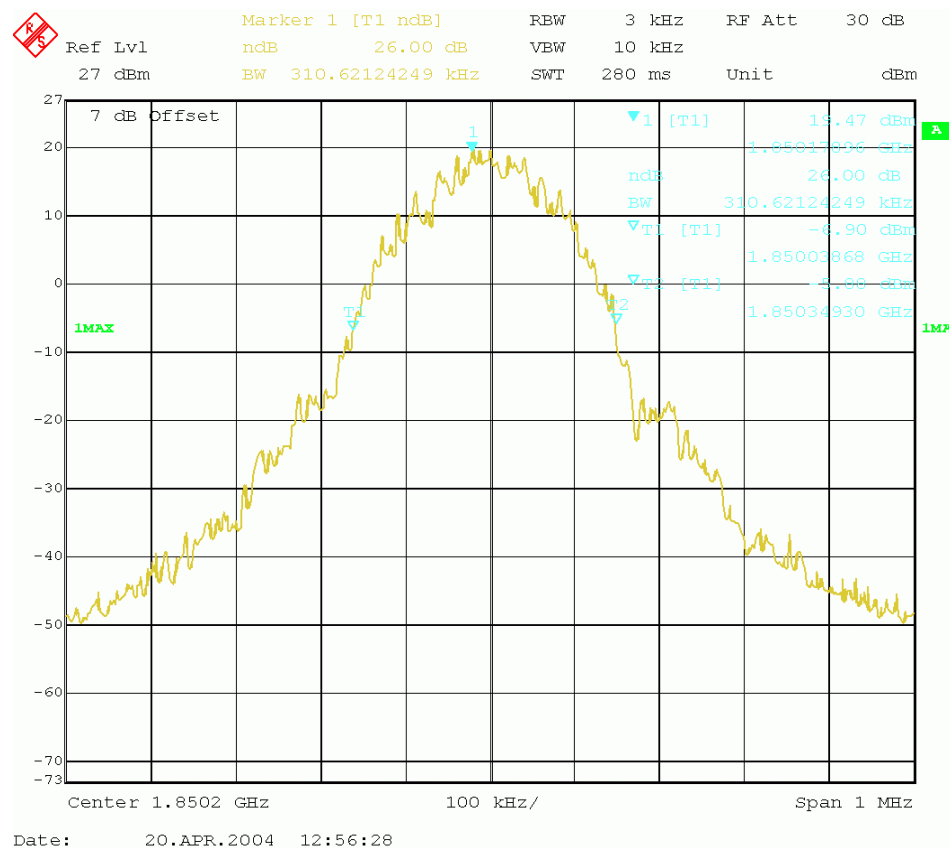


Diagram 2:

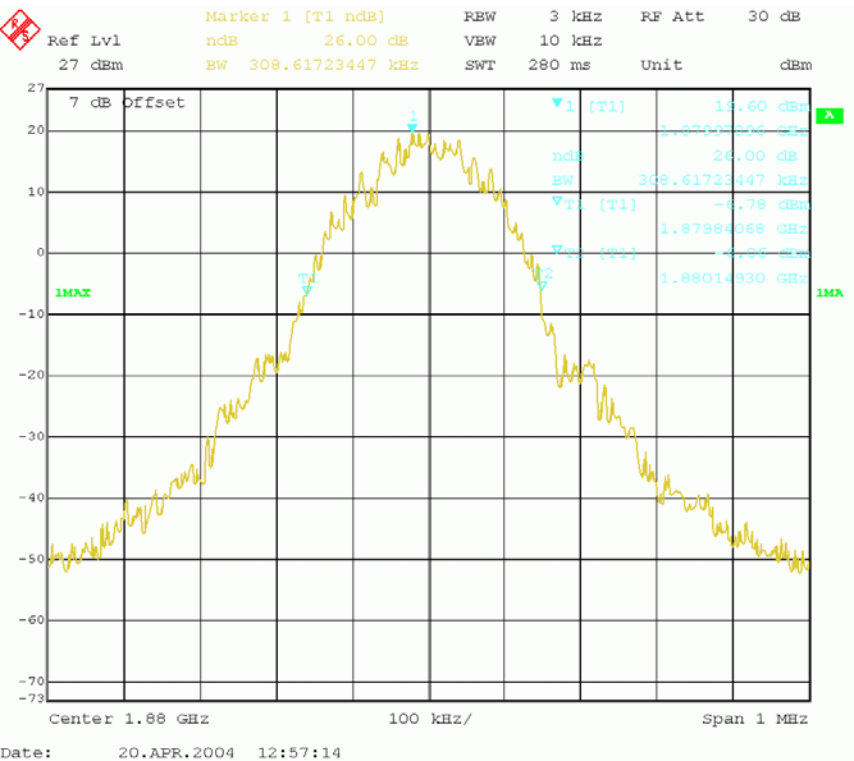


Diagram 3:

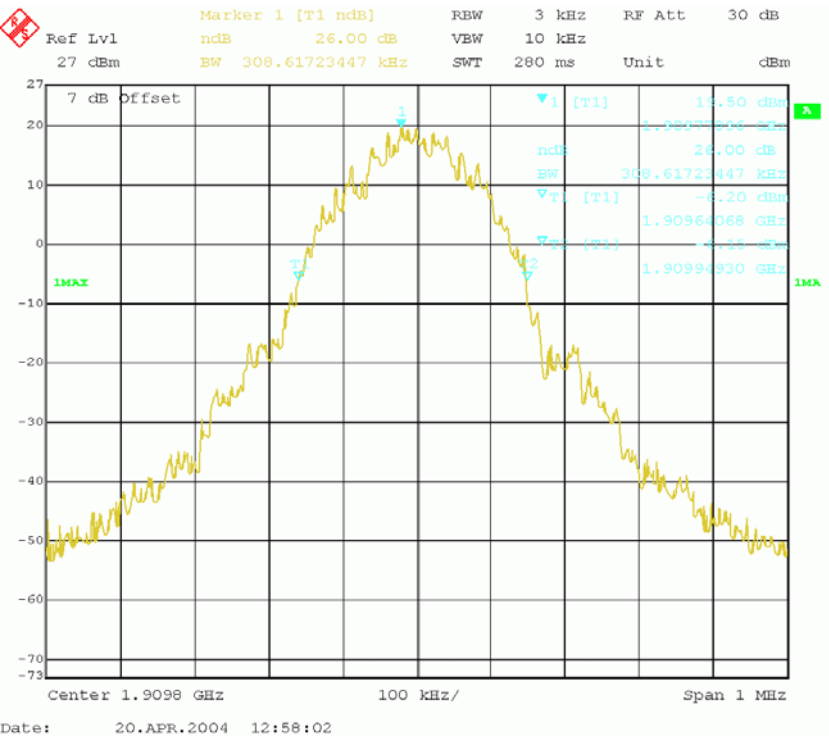


Diagram 4:

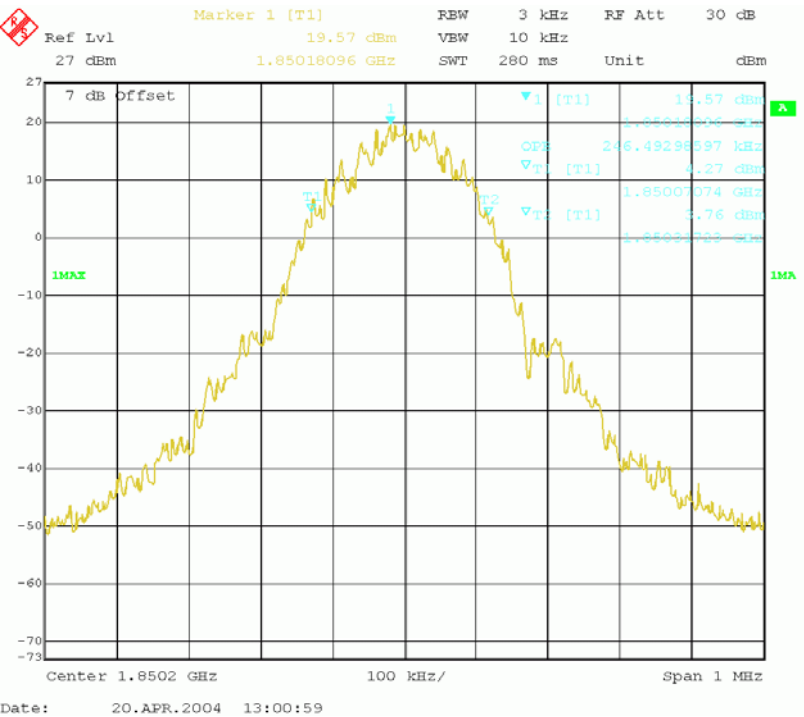


Diagram 5:

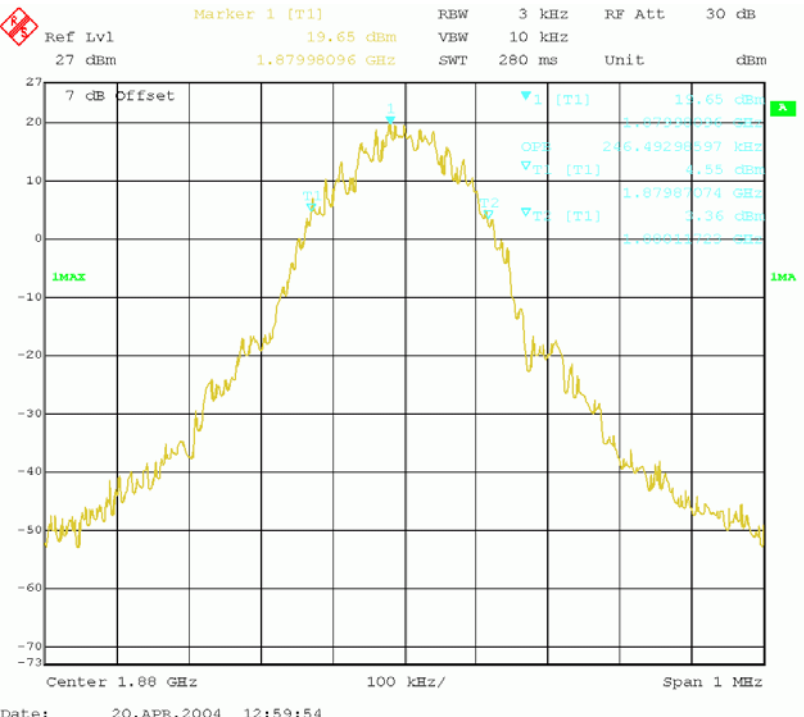
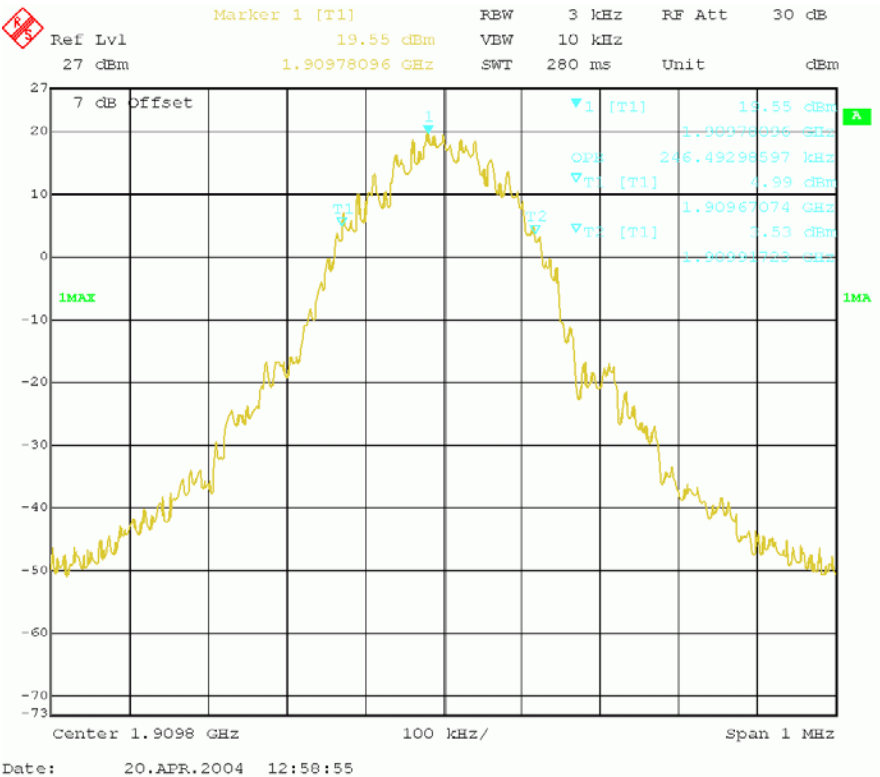


Diagram 6:



FCC 22 GSM850,      Emission bandwidth (26 dB BW)  
Occupied bandwidth (99 % BW)

| Operating Mode | Diagram No. | Result  | Comment            |
|----------------|-------------|---------|--------------------|
| TX on ch. 128  | 1           | 296 kHz | Emission bandwidth |
| TX on ch. 190  | 2           | 292 kHz | Emission bandwidth |
| TX on ch. 251  | 3           | 292 kHz | Emission bandwidth |
| TX on ch. 128  | 4           | 238 kHz | Occupied bandwidth |
| TX on ch. 190  | 5           | 238 kHz | Occupied bandwidth |
| TX on ch. 251  | 6           | 238 kHz | Occupied bandwidth |

Diagram 1:

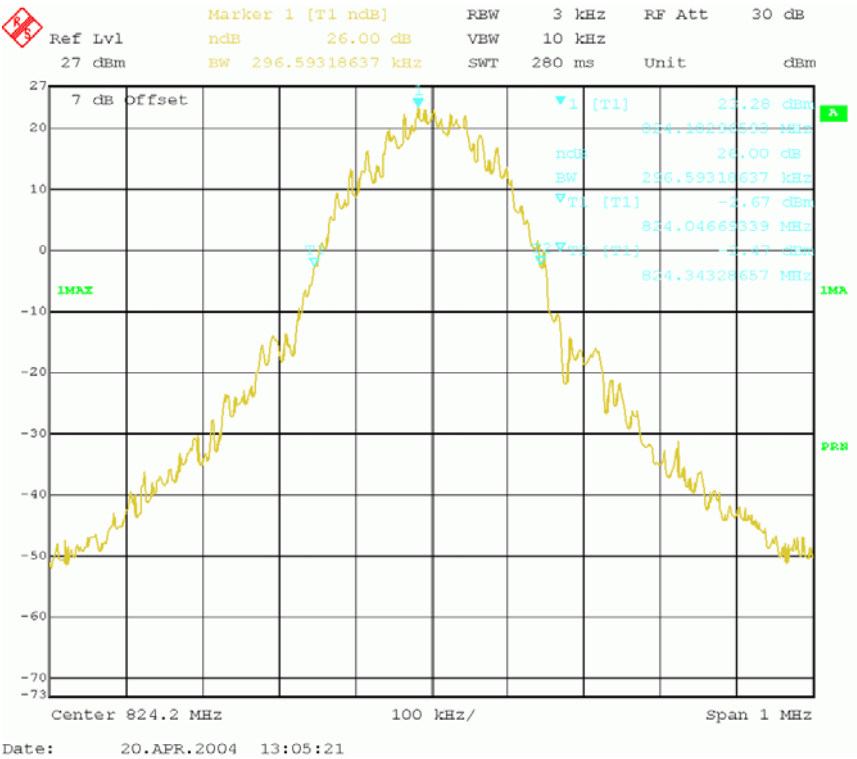


Diagram 2:

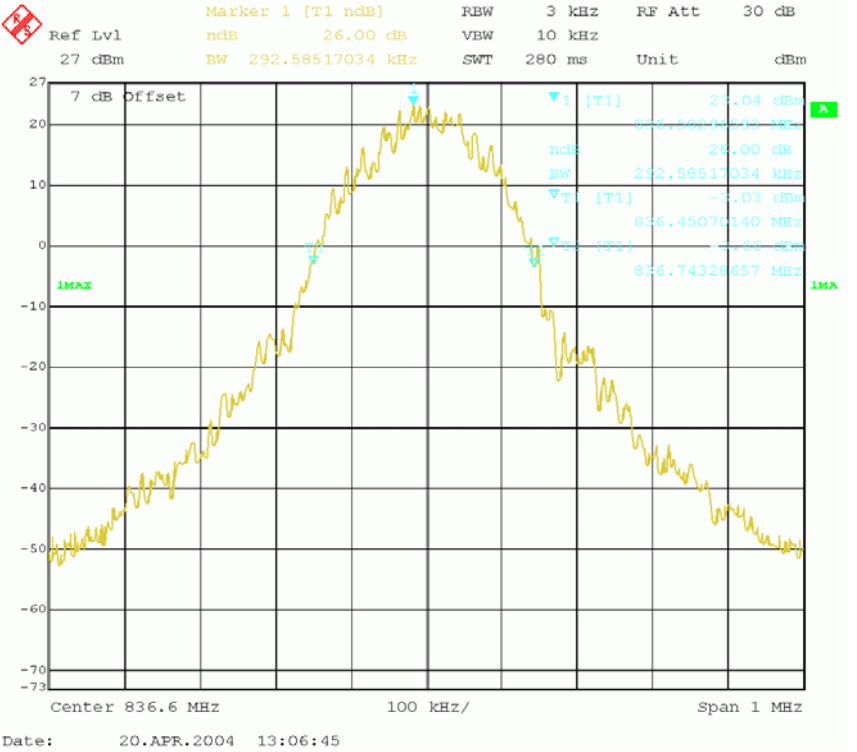


Diagram 3:

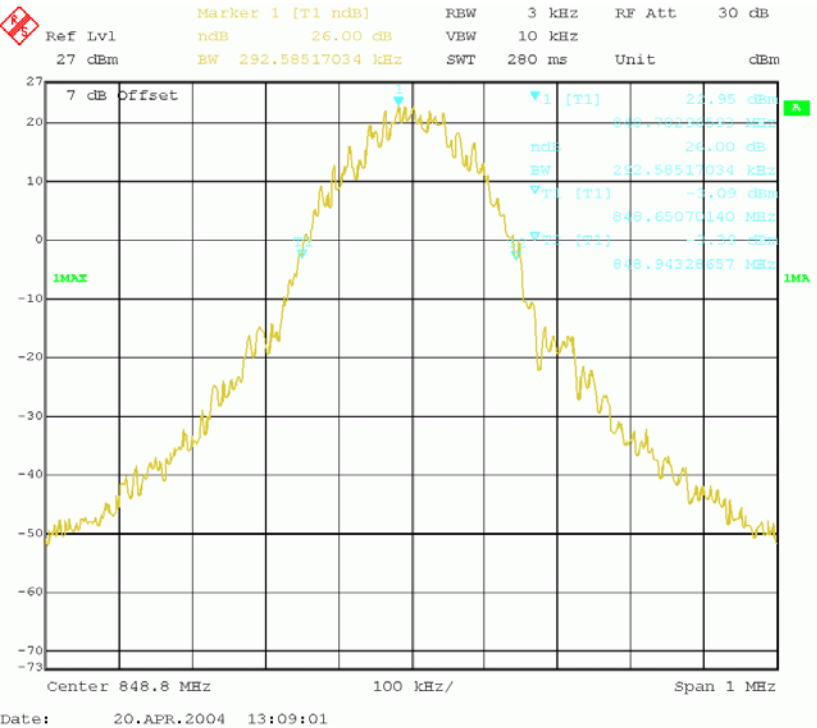


Diagram 4:

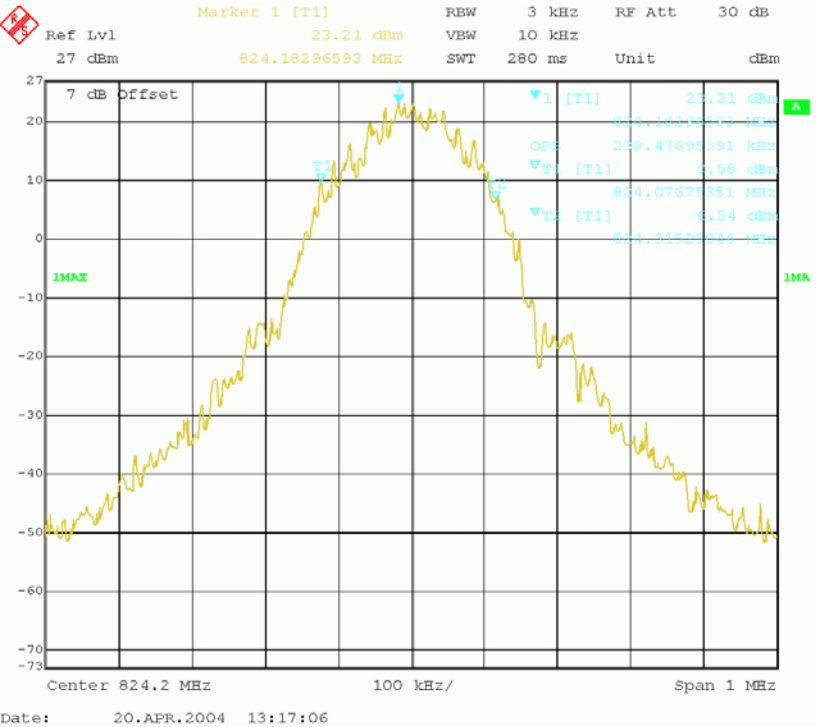


Diagram 5:

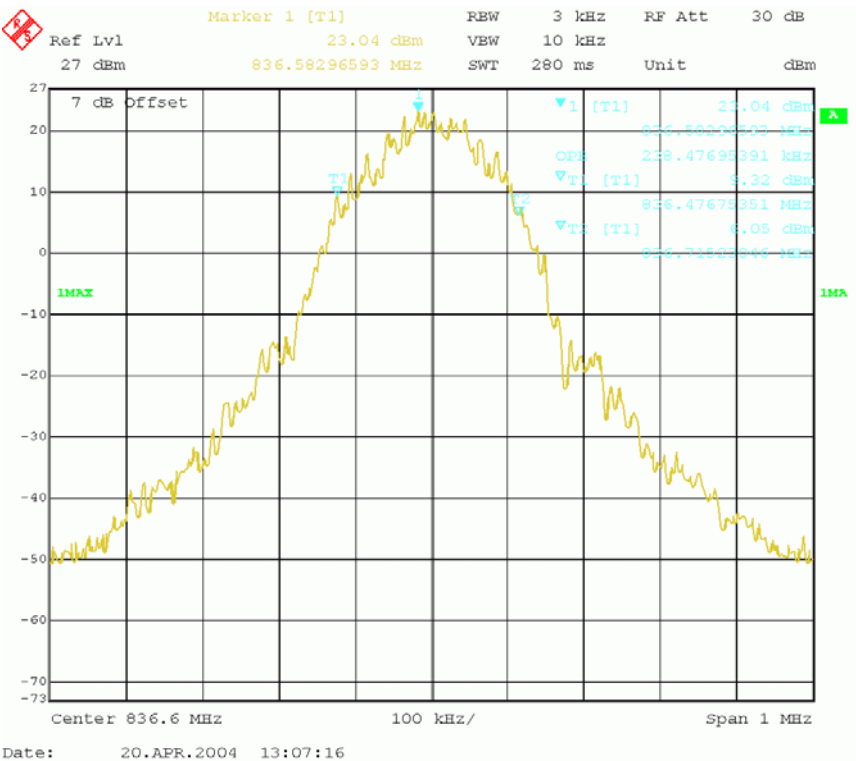
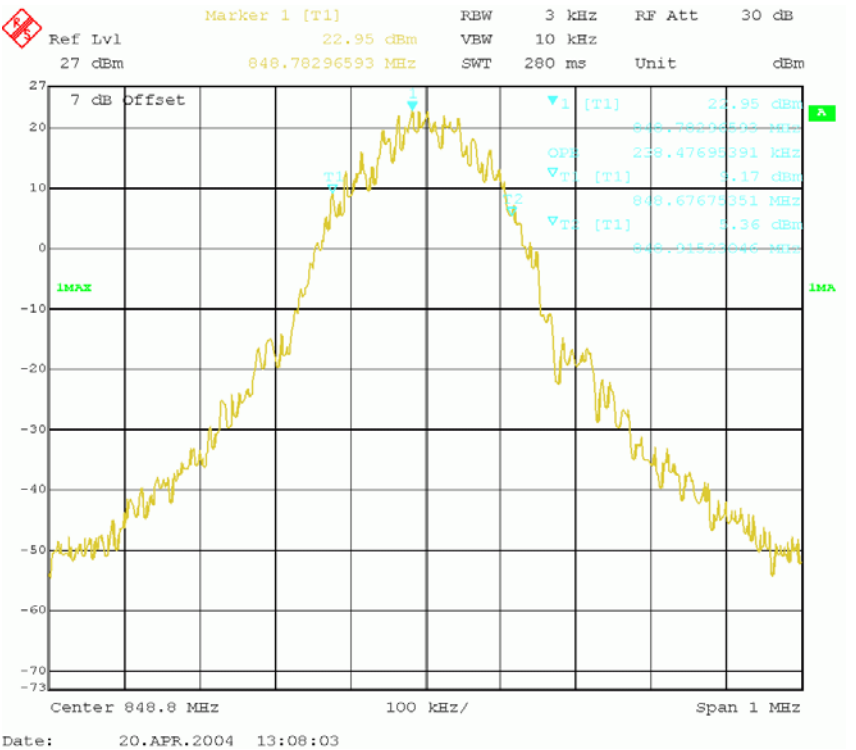


Diagram 6:



- 7) Please explain the RBW/VBW setting used during the test for restricted bands for the Bluetooth device.

Answer: For the FCC tests the RBW/WBW used is 120kHz/300kHz for the 30-1000 MHz range and 1MHz/3MHz for the range above 1GHz. Further more a MaxPeak detector in the low range and an Avg detector for the range above 1GHz was used.  
The drop in noise level at 3GHz is due to the fact, that we switch antenna/amplifier at this particular frequency.

- 8) Please explain the results for bandedge compliance given in the Bluetooth amendment report (Part 3) provided. Are these radiated or conducted results? If radiated, what was the test distance?

Answer: Results of Bluetooth report 3 are radiated. The measurement distance was 3 m.

- 9) Please explain the test distance used for the results of the bandedge compliance given in the Bluetooth amendment report (Part 2) provided.

Answer: Results of Bluetooth report 2 and 3 are radiated. The measurement distance was 3 m. The results of the bandedge compliance in the Bluetooth report 1 are conducted.

- 10) The power values given in the application are as follows:

|          | Target Power | Power Tested in SAR1 | Power Tested in SAR2 |
|----------|--------------|----------------------|----------------------|
| 850 GSM  | 32.5 dBm     | 31.0                 | 30.2                 |
| 1900 GSM | 29.5 dBm     | 29.3                 | 29.8                 |

The 850 GSM appears to have been tested at a much lower than expected level.  
As the FCC expects worse case results to be reported, please explain how the tests provided are considered worse case or alternatively provide new data as necessary.

Answer: The SAR reports state radiated powers (EDRP / EIRP). Target powers are typically conducted.

- 11) Two sets of SAR report were provided with almost 5 months between testing. Please explain the purpose of providing 2 SAR reports.

Answer: The older report has more thorough testing i.e. more test cases. The latter testing was carried out for checking that the minor changes made to the design did not affect SAR performance. We want to file the both reports i.e. SAR values:  
Cell band, head : 0.60 W/kg  
Cell band, body : 1.03 W/kg  
PCS band, head : 0.45 W/kg  
PCS band, body : 0.78 W/kg