



Date: October 02, 2000

Mr. Steve Dayhoff
Authorization & Evaluation Division
Federal Communications Commission Laboratory
7435 Oakland Mills Road
Columbia, MD 21046

Re: Correspondence Number 16144 regarding 731 Confirmation Number EA98633

Dear Mr. Dayhoff;

This correspondence is provided in response to the request for information dated September 18, 2000 concerning transmitter with FCC ID: AZ489FT5801.

Q1. Device has an integral antenna which requires peak ERP measurement data. Technical info in the filing describes device can have 720 mW conducted output and 630 mW ERP, operating with -0.6 dBd maximum antenna gain but SAR report indicates maximum antenna gain as 1.53 dBi for iDEN mode and 0.14 dBi for GSM mode. Please clarify discrepancies and provide the applicable peak ERP measurement data.

A1. The antenna gain stated in the SAR report is in decibels relative to an isotropic antenna (i.e. – dBi). A dipole antenna has a gain of 2.14 dBi. Subtracting 2.14 dB from the gain stated in the SAR report yields the gain relative to an ideal dipole of -0.61 dBd. This value of -0.6 stated in Exhibit 12.1.1 is a rounded value that was used to convert the output power stated in Exhibit 12.1.1 to the ERP value stated in Exhibit 12.1.3.

Q2. Please verify the total ear spacing from device to tissue liquid. SAR report indicates shell thickness and ear spacer thickness. Is the total thickness the sum of the two?

A2. Yes, the total thickness is the sum of the shell thickness and the ear spacer thickness. The total ear spacing from device to tissue liquid is 0.65 cm.

Q3. The SAR table in Section 7.1 of the SAR report indicates some SAR values have not been included or indicated because they represent lower SAR values. If these configurations have been tested, the SAR numbers should be included as supporting info; otherwise, such configurations would not be considered as tested. Please submit revised table with missing numbers.

A3. The SAR report has been revised and re-issued as Rev B in order to improve the clarity with the following changes:

1-Data not relevant to the FCC has been excluded, specifically data results at GSM mode.

2-SAR tables 7.1 and 7.3 in the previous report have been consolidated into one table, 7.1 in the Rev B SAR report. Now one table reflects both the measured and maximum calculated SAR levels eliminating the need to cross-reference.

3-Table 7.1 of the Rev B SAR report now includes highest SAR levels for each body position at each of three frequencies across the band and for each of two antenna positions.

Q4. First row of Table in Section 7.3 indicates a body-worn test configuration (at 813 MHz) with 0.16 mW/g SAR, which cannot be identified among the SAR values reported in Section 7.1; please clarify.

A4. As described above Table 7.1 of the Rev B SAR report now reflects both the measured and maximum calculated SAR levels in one table. The 0.16 mW/g figure is now appropriately included.

Q5. According to the SAR plots, the SAR value reported on the 4th row of Table 7.3 should be 0.32 mW/g. This will result in a different highest SAR value, please clarify and revise SAR numbers in the manual info.

A5. The referenced SAR plot indicates measured SAR results are 0.30 \pm 0.03dB.

Per formula to calculate dB = $10 \cdot \log(P1/P2)$ \square $P1 = P2 * 10^{(dB / 10)}$

Thus, $P1 = 0.30 * 10^{(0.03 / 10)} = 0.302$ mW/g which has been rounded off to 0.30 mW/g which figure is then found in Table 7.1 of the Rev B SAR report for 806 MHz, Antenna extended, left ear. This result then provides the highest maximum calculated SAR of 0.81 mW/g.

Q6. Section 6.1 of Exhibit 6 describes output power settings but data in the tables on that page are indicating inputs, please clarify.

A6. An amended version of Exhibit 6.1 is attached. The title has been changed to more accurately describe the contents.

Q7. Please submit a clear photo of the leather case/belt-clip tested with the device for this filing.

A7. Picture of the leather case/belt-clip tested with the device.



Q8. Device has two battery options, a slim and a high capacity battery. Please confirm which battery was used during the SAR tests and if battery thickness has been considered for testing the highest body-worn SAR compliance.

A8. Both of the batteries were tested at both sides of the head and in the body-worn configuration. At the face, SAR tests were completed with the battery type that provided the highest SAR results in the body-worn configuration. Table 7.1 presents the highest measured SAR results for each body configuration.

Contact me at (954) 723-5793 if you require any additional information.

Regards,

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