

October 28, 1999

Mr. G. Czumak
Engineer
FCC Application Processing Branch
Federal Communications Commission
Equipment Approval Service
P. O. Box 358315
Pittsburgh, PA 15251-5315

RE:: Submitting Additional Information Regarding Cellular Telephone Transceiver
FCC ID: BGBMT254XFOR6A
731 Confirmation No.: EA95160
Correspondence Ref. No.: 10214

Dear Mr. Czumak:

We wish to reply to your e-mail dated October 15, 1999 as follows:

1. **Measurement Data Supporting ERP/EIRP Values** – The EIRP and ERP values have been calculated from measured antenna gain and measured conducted power as follows. The peak antenna gain values from measured data are -1.84dBd in 800MHz and +0.45dB in 1900MHz.
 - 1) So, in the case of 800MHz
"A800" Power = 0.4W = 26.02dBm, so A800 ERP = 24.18dBm, which is 0.26W ERP
"D800" Power = 0.48W = 26.8dBm, so D800 ERP = 24.9dBm, which is 0.31W ERP
 - 2) In the case of 1900MHz, "D1900" Power = 0.38W = 25.8dBm, so D1900 EIRP = 28.24dBm, which is 0.67W EIRP
2. **Correct Emission Designators** – In accordance with 47CFR2.202, the emission designator is not determined by occupied bandwidth test data. It is determined by necessary bandwidth.

We have reviewed FCC filings by several other competitors, and found they also specify emission designators based on necessary bandwidth, not actual measurement data.

Please confirm if this is a new policy by the FCC, and we will revise the emission designator for this application, and all future applications.

3. **Confirmation of PCS and Cellular TDMA Formats** - The phone operates in three modes AMPS, CDPD, and TDMA which have been measured separately, where applicable.
 - 1) AMPS mode
Emissions designator is 40K0F8W and 40K0F1D corresponding to the FM and FSK used in AMPS. This mode only operates in the cellular (800) band. The power rating for this mode is listed in our document as "A800" under section 2.3
 - 2) CDPD mode
Emissions designator is 28K8FXW, corresponding to the GMSK modulation used in standard CDPD. This mode only operates in the cellular (800) band. The power rating for this mode is listed in our document as "A800" under section 2.3. We have taken 28K8FXW to be the accepted emission designator for GMSK used on CDPD, based on previous precedent, notably Mitsubishi BGBMT151XFOR6A, which has the same emission characteristics. However, we will use whatever designator the Commission finds appropriate, of course.

3) TDMA mode

The emissions designator is 40K0GXW, corresponding to the pi/4QPSK used in the TDMA(IS-136) standard. This mode operates in the cellular (800) and PCS (1900) MHz band. The power ratings for this mode are listed in our submission document as "D800" and "D1900", respectively, under section 2.3.

We have taken 40K0GXW to be the accepted emission designator for IS-136 pi/4QPSK based on previous precedent, notably Ericsson AXATR-363-A2, and Mitsubishi BGBMT253XFOR6A. We believe the designator should be the same as these. However, we will use whatever designator the Commission finds appropriate.

4. **Actual Tuning Range of PCS Emissions** – Low Channel 1850.04MHz, and High Channel 1909.92MHz.

5. **Clarification of Device Output Power Measurements in AMPS and TDMA Modes of Operation** - The first set of tolerances, i.e.,

26.0 dBm +3.8/-2.2 dB for the AMPS mode
26.8 dBm +3.0/-3.0 dB for cellular TDMA
25.8 dBm +4.0/-2.0 dB for PCS,

are the tolerances according to the EIA IS-137. We included them basically for reference. In no way do we mean to say that the unit is capable of operating within this range. However, for the purposes of this application please note the following tolerances, based on the specified power adjustment procedures:

- A. Amps Mode – 26.0dBm +/- 0.5dB
- B. Cellular TDMA – 26.8dBm +/- 1dB
- C. PCS – 25.8dBm +/- 1dB

6. **Composition of Tissue Material Ingredients for SAR Measurements**

Measurement Frequency	*Tissue Ingredients
835Mhz	Water (44.3%) Sugar (54.7%) Salt (0.9%) HEC (0.1%)
1900Mhz	Distilled Water (56%) Deethyl Englykol (44%)
**% by weight	

7. **SAR Data Supporting Operation Using Accessories** – Please reference new SAR Data uploaded under Attachment "MT254withaccessory".

8. **Antenna Configurations** – There is only one antenna, a non-retractable type, used for this device.

9. **SAR Data Supporting Battery Options** – Please reference new SAR Data uploaded under Attachment "MT254withaccessory". The SAR limit is not exceeded with any of the battery options.

If you have any questions or require additional information, please contact me.

Sincerely,

R. Gruhlke
Director
Regulatory Liaison Division
RG/sst
Cc: MWCI, Mr. Ted Sims
Mr. S. Jung

