MOTOROLA

Date: 28th November 2001

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

Re: Form 731 Confirmation Number: EA102585 with FCC ID: AZ489FT5811.

Dear Mr. Lyles;

Motorola Inc., 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322, herein submits its response to the 15th November 2001 request for information in Correspondence Number 21261.

1) We rate this equipment by maximum RF output power rather than ERP which, from the ERP data, clearly is dependent upon the user's choice of computing equipment with which it is used. That is our preference for the Grant as well since we cannot guarantee that 0.546 watts will be the maximum when installed in another PDA, or that 0.433 watts will be the maximum when used with another laptop computer.

2) It is recognized that the 824-825 MHz band is outside the extent of part 90. Further, this equipment is precluded from operation in the USA within that band since no base stations have or can be licensed there under part 90. Nonetheless the Commission has issued many grants to include this range (e.g. – FCC ID: AZ489FT5792, AZ489FT5793, AZ489FT5796, AZ489FT5797, AZ489FT5799, AZ489FT5800).

   The reason is that this product, like the others preceding it, are targeted for sale outside the USA in some countries that permit operation to 825 MHz, and also accept the FCC Grant of Authorization for their transmitter Certification process. For that reason past applications as well as the present application have requested a Grant to 825 MHz. Continuation of the practice to include in the Grant of Authorization operation to 825 MHz will aid that purpose and hence, US trade.

3) The 18K3D7W designator has been previously accepted for numerous predecessor products that employ the same modulation (see examples noted in preceding item 2).

The first four characters used (18K3) describe the necessary bandwidth of 18.3 kHz as determined using the calculation method given in Exhibit 6.2.

The first symbol, D, was the result of a past discussion with Mr. Frank Coperich of the OET due to similarity of iDEN TDMA with TIA standard TDMA cellular radio equipment authorized under part 22 which uses the same symbol.

The second symbol, 7, was chosen because of the multiple digitally modulated subcarriers employed for the emission, as described in Exhibit 4.2.

The third symbol, W, was chosen to describe the fact that the emission was used for transmission of multiple types of information; in particular, telephony, 2-way voice, data, and facsimile.

4) The occupied bandwidth is independent of duty cycle, and of the type of modulation used for data transmission (i.e. – QPSK or QAM). As shown in the calculations in Exhibit 6.2, it is determined solely by the spacing of the subcarriers, and the bandwidth of the digital filter used to filter the noise-like spectrum produced by the digital modulation.

5) Our method of rating power (pulse average) results in a power rating that is independent of duty cycle as it rates the power only during information transmission. This rating is used because it is the most effective means to determine link margins and interference potential in RF system analysis and design.

Truly the mean power (i.e. – long term or steady state average power) is the product of the pulse average power and the duty cycle. For that reason a duty cycle correction factor is used to determine the pulse average power using an RMS responding measuring instrument such as the HP 438A. This correction is clarified in exhibit 7.1.

The mean output power so determined for the 3 duty cycles cited in Exhibit 12.2 of 1:6, 2: 6 and 81:120 is 117 milliwatts, 333 milliwatts and 473 milliwatts respectively.

6) Attached are the dipole test plots requested indicating the actual dates of test.

7) Your input has been noted.

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

Sincerely,
/s/ Mike Ramnath
FCC Liaison
Email: mike.ramnath@motorola.com

Attachments:
Dipole plots (New)