

Lucent Technologies
Bell Labs Innovations



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September 20, 1999

Mr. Frank Coperich
Office of Engineering and Technology
Authorization and Evaluation Division
Equipment Authorization Branch
7435 Oakland Mills Road
Columbia, Maryland 21046

Re: Measurement of ERP for Integrated Patch Antenna
Application for Certification of FCC ID: AS5CMP-33
Confirmation Number: EA94586

Dear Mr. Coperich:

The attached plot and information is submitted in compliance with your request of September 17 for the measurement of the ERP with the optional integrated patch antenna and per our telephone discussion on August 23 concerning the acceptability of the measurement of the antenna gain profile as a basis to calculate the ERP. The attached gain profile measurement was made for the transmit antenna in the azimuth (Az) rotation plane. Peak gain measurements were at 4 frequencies across the cellular base station transmit band: 869, 879, 889 and 894 MHz. The corresponding peak gains were 9.06, 8.98, 8.73 and 8.60 dB, respectively. The power level at the antenna terminal is 1.2 Watts (30.8 dBm) per single carrier and 12 Watts (40.8 dBm) for a maximum of 10 carriers. The corresponding ERP is then 9.66 Watts (39.85 dBm), 9.49 Watts (39.77 dBm), 8.96 Watts (39.52 dBm) and 8.69 Watts (39.39 dBm), respectively, for a single carrier. A total of 10 carriers would then provide a maximum ERP corresponding to 96.6 Watts (49.85 dBm), 94.9 Watts (49.77 dBm), 89.6 Watts (49.52 dBm) and 86.9 Watts (49.39 dBm), respectively. These ERP calculations, from the measured antenna gain, represents the Cellular Dual Radio Module (CDRM) transceiver, Part No. 44WR54, covered under AS5CMP-32, operating in combination with the Cellular TDMA Multi Carrier Linear Amplifier (CMCLA), Part No. 44WA29, covered under AS5CMP-33.

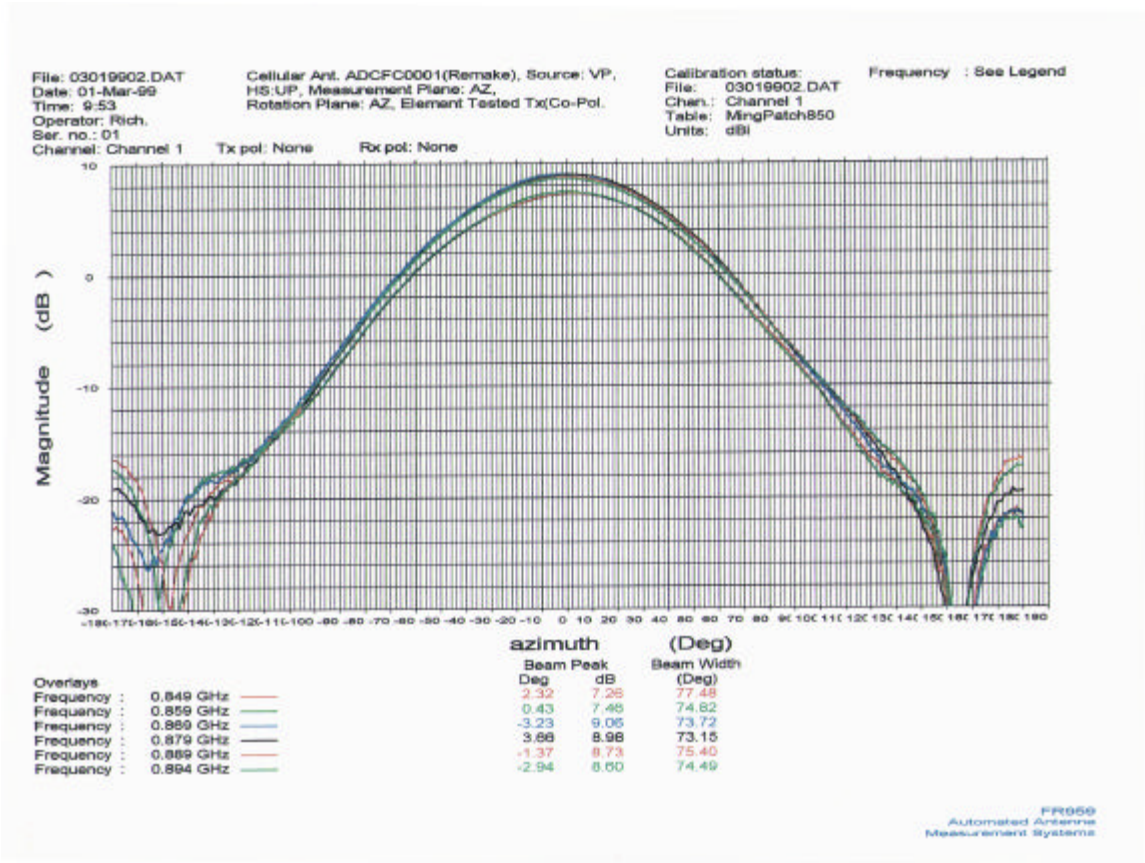
Sincerely,

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Applicant: Lucent Technologies

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Cellular Frequency Integrated Patch Transmit Antenna

Gain profile measured in the azimuth (Az) rotation plane.

The ERP is calculated from the measured power at the antenna terminal + measured antenna gain over the cellular transmit frequency band.

Measurement Frequency Cellular Transmit Band	Peak Gain dB	Antenna Terminal Single Carrier 1.2 Watts	ERP per Single Carrier	Antenna Terminal Maximum 10 Carriers Total Composite 12 Watts	Maximum ERP per 10 Carriers Total Composite
869 MHz	9.06	30.79 dBm	39.85 dBm/9.66 W	40.79 dBm	49.85 dBm/96.6 W
879 MHz	8.98	30.79 dBm	39.77 dBm/9.49 W	40.79 dBm	49.77 dBm/94.9 W
889 MHz	8.73	30.79 dBm	39.52 dBm/8.96 W	40.79 dBm	49.52 dBm/89.6 W
894 MHz	8.60	30.79 dBm	39.39 dBm/8.69 W	40.79 dBm	49.39 dBm/86.9 W
Average	8.84	30.79 dBm	39.63 dBm/9.12 W	40.79 dBm	49.63 dBm/91.9 W