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December 1, 2000

American TCB, Inc.
6731 Whittier Avenue
Suite C110
McLean, VA 22101

Re: AB6NTHV5XG

Dear Sir or Madam:

This document describes the method used for determining the minimum separation distance between the iBWA System 3200 and the general public in order to prevent RF exposure as per paragraph 1.1310.

The minimum separation distance was determined with calculations. They were done using FCC OST/OET Bulletin 65 ("Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Radiation''). The aperture antenna equations for predicting RF fields from that document were used. The iBWA System 3200 will be deployed using antennas of 3 different dimension: 30 cm, 60 cm, and 120 cm. The aperture antenna equations were used to evaluate the power density levels of all 3 antennas. The worst case results are recorded below.

The power density of the 23 GHz iBWA System 3200:
- at the surface of the 30 cm antenna is 0.57 mW/cm^2 (OST/OET Bulletin 65 equation 11)
- in the near field (R < 1.7 m from the 30 cm antenna) is less than 0.41 mW/cm^2 (equation 12, 13, 14)
- in the transition region (1.7 m < R < 4.0m from the 30 cm antenna) is less than 0.41 mW/cm^2 (equation 16, 17)
- in the far field (R > 4.0 m from the 30 cm antenna) is less than 0.18 mW/cm^2 (equation 18)

Power = 20.0 dBm
Antenna diameter = 30 cm, 60 cm, or 120 cm
Frequency = 22400 MHz
Antenna gain = 35.5 dBi (30 cm), 40.7 (60 cm), and 46.6 dBi (120 cm)

The FCC General Population limit is 1 mW/cm^2, hence the 23 GHz iBWA System 3200 meets the requirement at any distance.

Regards,

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Product Integrity
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C-MAC Engineering