Intermec

A UNOVA Company

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June 26, 2000

Federal Communications Commission
Equipment Authorization Division
7435 Oakland Mills Road
Columbia, Maryland 20146

Re: Amtech Systems Division of Intermec Technologies Corp.
Amendment to Application for Equipment Authorization
Proposed FCC I.D. No. FIH-F4-06476-LP
Correspondence Reference Number: 14759
` 731 Confirmation Number: EA97485

To the Commission:

In response to your e-mail transmitted to Amtech on 6/26/00 from Mr. Errol Chang (Ref. No. 14759), concerning the pending grant of certification of the F4 printer (operating as a frequency hopping radio in the 2400-2483.5 MHz band), we are submitting the following amendments and clarifications to our application as described herein:

Public Exposure to Radio Frequency Energy 15.247(b)(4):
The F4 RFID printer is a physically large device, similar to desktop laser jet printers. The communications actually occurs within the overall device such that the radiating antenna would be more than 20 cm away from personnel. It is designed for table top operation and is **not intended for portable operation** (it is powered from an AC power outlet). We have assessed this device as not requiring and environmental assessment per §15.247(b)(4) for the following reasons:

- Part 15 devices are categorically excluded in Table 1 of §1.1307(b)(1). Therefore, the requirements of so Table 1 do not apply.
- The RFID printer is not a mobile or portable device; therefore, the requirements of §1.1307(b)(2) do not apply.
- §1.1310 (as referenced §1.1307(b)(1)) does not apply per the categorical exclusion "…from making such studies or preparing an environmental assessment,…" as specified in that section.
- The RFID printer is not a portable device; therefore, the requirements of 2.1093 do not apply.

For further clarification, a calculation is included below to demonstrate that the RFID printer is in full compliance with the intent of the specific absorption rates as contained in the rules and regulations. These calculations and assumptions are included as follows:

For reference purposes only, the calculated radiation from the RFID printer can be obtained as follows:

Using the well know formula to convert emitted power into power density,

$$P_D = EIRP/(4\pi R^2)$$

Given a physical distance R, of 10" (.254 meter), separation from the transmitting antenna element to the point of nearest approach and a maximum EIRP of 0.5 watts,

The maximum power density (P_D) of .617 W/m^2 is obtained or .06 mW/cm^2. This value is almost two orders of magnitude below the maximum allowed power density (P_D) limit of 5 mW/cm^2.

Therefore, the limits of §1.1310 are met with considerable margin.

Thank you for allowing us to explain your questions in detail. Please contact me if there are any additional questions. I may be reached by email at wmays@asctmd.com or by phone at (505) 856-8054.

Sincerely,

Wes Mays
Manager, Microwave Design