

From: Roland Gubisch ES-BOX  
Sent: Tuesday, January 02, 2007 9:41 AM  
To: 'Brett Glass'  
Cc: Terre Wolak ES-ATL; David Legge ES-Lhd; Lorna Airlie ES-Lhd; David Feasey ES-Lhd  
Subject: RE: Certification review of Proximity P50 Reader FCC ID: USE353110

Attachments: Modulation and restricted band.pdf; 47cfr15-2005.pdf; FCC DoC Guidance.PDF

Brett,

Thank you for the detailed response.

a) The amended attachments are fine, we will use these.

b) The RFID chip you are using in your circuit has provisions for 4 kB PSK modulation. This modulation would spread the otherwise very narrow spectrum of the 125 kHz emission (see attached diagram). We would like to obtain a spectrum plot similar to the attached diagram, demonstrating that the 20 dB bandwidth of the actual emission remains clear of the 110 kHz restricted band edge. The plot should be obtained with the same antenna as that used for the test report, but, as it is a relative measurement only, it does not have to be done on an open field site.

c) Non-radio products are labeled according to the approval method dictated by product type in the table in Part 15, section 15.101(a). A copy of the current Part 15 rules is attached.

a. If the device is subject to Declaration of Conformity, the label contains the FCC logo and product trade name/model number. The text of 15.19(a)(3) appears in the Declaration of Conformity. Please refer to the DoC guidance document attached.

b. If the device is subject to Verification. The label contains the text in 15.19(a)(3) [but NOT the FCC logo]. If the device is too small for the label to contain all of the text, the statement "Complies with Part 15 of the FCC Rules." should appear on the label and the full text of 15.19(a)(3) provided in the user manual.

Best wishes,

Roland

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From: Brett Glass [mailto:Brett.Glass@paxton-access.co.uk]  
Sent: Friday, December 29, 2006 7:27 AM  
To: Roland Gubisch ES-BOX  
Cc: Terre Wolak ES-ATL; David Legge ES-Lhd; Lorna Airlie ES-Lhd; David Feasey ES-Lhd  
Subject: RE: Certification review of Proximity P50 Reader FCC ID: USE353110  
Importance: High

Roland,

Thank you for this prompt response to my application. Below is the corrective action to address the issues:

#### ADMINISTRATIVE

(1) The following statement applies to the device: b. "The device is permanently sealed or potted, and any attempt to open it would result in destruction of the device."

Please see attached amended copy of the Confidentiality Request letter:

(2) Please see attached new Block Diagram and the Operational Description:

(3) I have noted this information and it has raised some questions on the labelling of our non-radio products (unintentional radiators) which we intend to verify. If the device is sufficiently small in size (like the p50) how should it be labelled?

Do we use the FCC logo as the device will not have an FCC ID?

#### TECHNICAL

(1) The reason there is no evidence of this is because there is no measured band, the transmitter output frequency will always be a solitary value (i.e. 125.01 kHz as taken from the report). This value is dictated by the inductance (L) and the series capacitor / resistors to form the LCR circuit. The antenna inductance will differ from reader to reader to give a frequency within a tolerance of 125kHz plus or minus 5% - as stated in the Operational Description. Any major frequency shift would require the selection of a new crystal.

I will apply the above corrective action to the exhibits for the other two devices due for certification (Proximity KP50 and Vandal Proof Readers). I am still waiting for the test reports for these devices from Intertek UK, once I have these I will be ready to submit the two remaining applications.

Best Regards,

Brett Glass

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From: Roland Gubisch ES-BOX [mailto:roland.gubisch@intertek.com]  
Sent: 28 December 2006 18:37  
To: Brett Glass  
Cc: Terre Wolak ES-ATL; David Legge ES-Lhd  
Subject: Certification review of Proximity P50 Reader FCC ID: USE353110

Dear Brett,

Review of this application for certification is complete, and several issues need to be addressed before certification can be completed.

#### ADMINISTRATIVE

(1) The Confidentiality Request letter lists internal photos. Internal photos are not held confidential without additional justification, such as:

- a. "The device is professionally installed, and only installers employed by/authorized by Paxton Access will have access to the device"; or
- b. "The device is permanently sealed or potted, and any attempt to open it would result in destruction of the device."

If either of these justifications applies to your device, please add it to the existing Confidentiality Request letter, and re-submit the amended copy. Otherwise, you should delete the listing of "internal photos" from the Confidentiality Request letter and re-submit the amended copy.

(2) The exhibit submitted as a Block Diagram correctly shows the crystal frequency, but no other frequencies in the device circuit. It would be better to add several frequencies, including the crystal frequency and the output frequency of 125 kHz, to the block diagram shown in Figure 1 of the Operational Description, and use that diagram as the Block Diagram to be submitted. It could then be deleted from the Operational Description. Both the new Block Diagram and the Operational Description will be held confidential.

(3) For information only: The P50 is marginal to the size normally allowed for the 15.19(a)(3) text ("This device complies with part 15 of the FCC rules...") to be located in the Users Manual, where you have placed it. If future products are larger, the label should be designed to accommodate both the FCC ID and the 15.19(a)(3) text.

TECHNICAL

(1) According to 15.215(a), the 20 dB bandwidth of the fundamental emission must lie wholly within the assigned band. In this case, there is a "restricted band" at and below 110 kHz to be avoided by the fundamental emission at 125 kHz. I suspect that the 125 kHz emission is sufficiently narrow to avoid the restricted band at 110 kHz, but I cannot find any evidence in either the test report or the data sheet of the RFID chip HTRC110 to support that. Is there any additional information to indicate compliance in this regard?

Certification will proceed as soon as these points are addressed.

Thank you,

Roland