Courtenay Geraghty

From: Stephen Berger [stephen.berger@cox-internet.com]
Sent: Thursday, October 13, 2005 1:56 AM
To: 'Courtenay Geraghty'
Cc: al@pctestlab.com; 'PCTest-Greg '; 'Joanna Kolasinski'
Subject: RE: Questions Regarding FCC ID: L82-S44
Follow Up Flag: Follow up
Flag Status: Red
Attachments: Siemens FCC ID S44 - Attestation - v3.pdf; Siemens FCC ID S44 - Test Report - Mobile - v4.pdf

Dear Greg & Courtenay,

The following is in response to your questions. I will answer the technical questions in this note and have requested that the design team provide the photos your requested.

The responses to your questions are placed in square brackets, under each question below.

Please let me know if there is further discussion required of these items or other items to be addressed.

Best Regards,

Stephen Berger

TEM Consulting, LP

Web Site - ***www.temconsulting.com***
E-MAIL - stephen.berger@ieee.org
Phone - (512) 864-3365
Mobile - (512) 466-0833
FAX - (512) 869-8709

From: Courtenay Geraghty [mailto:courtenay@pctestlab.com]
Sent: Tuesday, October 11, 2005 5:29 PM
To: stephen.berger@cox-internet.com
Cc: al@pctestlab.com; 'PCTest-Greg '; 'Joanna Kolasinski'
Subject: Questions Regarding FCC ID: L82-S44

To: Mr. Steve Berger / TEM Consulting LP
From: Gregory Czumak / PCTEST TCB

Re: FCC ID: L82-S44
Applicant: SIEMENS

Application Received: 08 / 25 / 2005
Correspondence Reference Number: 150825A.L82
Confirmation Number: 1508250417
Date of Original Email: 10 / 11 / 2005

Subject: Request for additional information

In regards to your recent TCB application referenced above, we kindly request that you provide the

following additional information.

1. Please verify that the EUT complies with the requirement that, immediately prior to initiating transmission, it monitors the combined time and spectrum window in which it intends to operate for a period of at least 10 ms (Section 15.323(c)(1)).

   [The EUT does comply with the requirement that it monitors the combined time and spectrum window for 10 ms immediately before it initiates transmission, er 15.323(c)(1).]

2. With respect to this application, as well as the associated Base Station application (see question #1 from the email for that application), Section 15.323(c)(5) requires that the EUT have at least 40 duplex channels in order to use the LIC method when spectrum is otherwise unavailable. Regarding that question, the response stated that "Our statement in the test report Section 5.15.2., that we only use 6x5=30 duplex channels is not completely correct. We offer, according to the DECT standard, 12 duplex slots per system. Each base station may access one of 12 duplex channels, but simultaneously only 6 duplex channels. Therefore we would like to change our statement to 12x5=60 duplex slots." However, Section 5.24.2 of the handset test report (p.54/67) states that only even slots are "active". If this means that the odd numbered slots are not available, then, in effect, the system only uses 30 duplex channels, and the original statement made is still applicable, namely, the EUT may only use the LIC method on available spectrum, as determined by Sections 15.323(c)(1)-(4). If no spectrum is available, as determined by these Sections, the EUT may not access any channel, and the LIC method may not be used. If this is the case, then question #2 from the original email is also still applicable ("Because the EUT does not meet the requirement for using the upper threshold, per Section 15.323(c)(5), Clause 8.1.2(b) of C63.17 requires that the interference level equal the lower threshold plus U_M, or, -81.5 dBm + 6 dBm = -75.5 dBm. However, Section 5.14.3 of the test report indicates that an interferer level of -40 dBm was used in the C63.17 Clause 8.1.2(b) test. Please retest using an interferer level of -75.5 dBm and submit new data.") Please address.

   [This point has received significant discussion on several applications. Note the conclusion of a series of E-Mails on the topic of blind slots from Joe Dichoso:

From: Joe Dichoso [mailto:Joe.Dichoso@fcc.gov]
Sent: Tuesday, September 27, 2005 9:18 AM
To: Dag Åkerberg (new address); Cahill, Steve; stephen.berger@ieee.org; Joe Dichoso
Cc: William Hurst
Subject: RE: blind spot

Thank you all for your insights. This lesson on blind slots will help in future inquiries.
I believe some of the intent of the new rules were meant to accommodate DECT systems.
So when determining the number of defined channels for 15.323(c)5, I just take the number of specific/individual duplex time domain channels and multiply by the number of carriers regardless of whether or not blind slot technology is used.
I hope this is ok with everyone.
Regards,
Joe

   The focus of the regulations is to protect spectrum use. This system can use 60 channels (5 frequencies and 12 duplex slots per frequency). However, due to reaction time it can only use 30 channels at one time. However, if other systems are operating on any of the channels the system can begin operation on any remaining channels. So from the point of other users of the spectrum the system can use any of 60 channels. The limit is internal, in that as soon as it selects one of the channels it can then only simultaneously select one of 29 other channels. However that point is relatively academic in that this device is a phone designed to conduct one call at a time using only one channel at a time.]

3. If the EUT has only 6 available transmit slots (see question #2, above), then the crest factor used to calculate the SAR levels should have been 1:6, and not 1:24, as was used in the SAR report. If, indeed, all 12 transmit slots are available, the 1:12 should have been used (for

example, in GSM applications, the duty factor used is 1:8). Please reevaluate the SAR levels using a duty factor of 1:6 (or 1:12, if appropriate) and submit the new SAR levels. Please note that this does not involve retesting the SAR level, only using the SAR system's pc to reevaluate the SAR value with the new crest factor.
[See answer to question 2. We believe this answer is correct, as stated.]

4. Please provide photos of the pcb's (both handset and base station) with the RF shields removed.
[Photos have been requested from the design group and should be available shortly.]

5. Please correct the following (apparent) typos on the Certificate of Compliance cover sheet: (a) the units for peak transmit power should be dBm, not dBV/m, (b) the maximum measured power is 20.3 dBm, not 20.13 dBm, (c) the occupied bandwidth (emission bandwidth), worst case, is 1.7 MHz, not 1.79 MHz, and (d) the peak transmit power limit is 21.15 dBm, not 21.3 dBm.
[A revised Certificate of Compliance is attached.]

6. FYI: Clause 6.1.5 of C63.17 (psd measurement) calls for VBW equal to or greater than 3 times the RBW, zero span, sample detection averaged for 100 sweeps. These settings were not used in the test report, however, since the settings used are likely to have produced results equal to or greater than those the Standard's setting would have produced, it is acceptable.
[Comment is noted and these setting will be used on the next product submission.]

7. FYI: per IEEE P1528, the target value for 1900 MHz validation is 39.7 W/kg, and not 39.4 W/kg, as is shown in Table 8 of the SAR report (p.20/56).
[Noted and will be corrected on future test reports.]

8. FYI: Please be aware of the following typo on p.20/65 of the test report: the psd limit is found in Section 15.319(d), not (c).
[Typo is corrected in the revised test report, attached.]

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 60 days of the original e-mail date may result in application dismissal and forfeiture of the filing fees.

Sincerely,

Gregory Czumak
Quality Manager
Senior Certification Engineer

If you have any questions or comments, please do not hesitate to contact us. Thank you.

Sincerely,
Courtenay

Courtenay Geraghty
Communication Industry

Administrator

courtenay@pctestlab.com
PCTEST Engineering Lab.
Tel. 1.410.290.6652
Fax. 1.410.290.6654