

# TIMCO ENGINEERING INC.

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## TCB & FCB

*FCC Approvals*

*Industry Canada Approvals*

*Notified Body for Europe*

3/21/2008

MR. RUDOLPH PILLMEIER

ALCATEL-LUCENT (WHIPPANY)

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SUBJECT: ALCATEL-LUCENT, INC. - FCC ID: AS5ONEBTS-18

REFERENCE: JOB 545UC8

Dear MR. PILLMEIER:

**This application is on hold until these questions are resolved.** Please answer all question(s) together and only respond to [tei@timcoengr.com](mailto:tei@timcoengr.com). Any other method will cause **unnecessary delay**.

**DO NOT HIT REPLY!** Your response should be sent ONLY to [tei@timcoengr.com](mailto:tei@timcoengr.com). Any additional exhibits that are sent should be UPLOADED at our web site – please do not attach files to your email. Responses should also contain the job number, applicant name and FCC ID of the device. If an acceptable response is not received within 2 weeks the job will be closed & there will be additional charges to reopen.

**ANSWER ALL QUESTIONS.** Be sure to number or identify your answer with the corresponding question. If you are referring to another document, be sure to give the page number and paragraph reference where your response can be found.

Thank you for your reply. However, based upon our review of your reply we have the following additional questions:

1. Item 2. of previous correspondence:

Please revise your reply based on the following FCC KDB publication number: 890810  
<http://fjallfoss.fcc.gov/oetcf/kdb/forms/FTSSearchResultPage.cfm?id=20531&switch=P>

### Publication

Number: 890810

Rule Parts: 24E Publication Date: 03/26/2007

Keyword: Testing Emission Limitations for Part 24 Broadband section 24.200, bandwidth measurement, Personal Communications Service devices

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**First Category:** Radio Service Rules

**Second Category:** Part 24 Personal Communications Service

**Third Category:**

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**Question:** If the emission bandwidth is 4.1 MHz wide, 1% of this is 41 kHz; can a 30 kHz Resolution and Video BW to test the band edge be used?

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**Answer:** Measurements using narrower resolution bandwidths are acceptable and must sum the power from all contiguous reduced resolution bandwidths within the 1% or 1 MHz resolution specified (see below). An alternative is to add an additional correction factor of  $10 \log(RBW1/RBW2)$  to the  $43 + 10 \log(P)$  limit. RBW1 is the narrower measurement resolution bandwidth and RBW2 is either the 1% emissions bandwidth or 1 MHz. The out of band emission limits Section 24.238 outside of the operating frequency band available for PCS service section 24.229 for Broadband Personal Communication Services Section 24.200 has a power spectrum density limit of  $43 + 10 \log(P)$  below the transmitter power (P).

In the adjacent 1 MHz bands above and below the operating frequency, the power spectrum density limit is based on a resolution bandwidth of 1% of the emission bandwidth. The emission bandwidth is measured between two frequencies points above and below the carrier center frequency of the unit-under-test's emissions where all emission outside of these points is 26 dB below the total transmit power. An accepted practice for measuring the 26 dB points is to use a resolution bandwidth of 1% of the emission bandwidth.

In all other bands outside of the operating frequency ranges, the power spectrum density limit is based on a frequency resolution of 1 MHz.

~~~~Previous correspondence 03/0/08~~~~`

1. The following required exhibits were not received- Parts List, Tune Up Information, and Internal Photos. Please submit. Alternatively, please provide justification letter for each of these exhibits. The FCC EAS system forces us to upload a document (cover letter is Ok) for each of these types of exhibit.
2. Part 24.238(b) - Band-edges compliance: It appears that the plots in the test report were generated with resolution bandwidth of 30kHz, which is less than the allowed resolution bandwidth specified in this section:  $RBW \geq 1\%$  of the emission bandwidth (i.e. measured 26dB below the transmitter power). Please provide evidence of compliance with 24.238(b).

Sincerely,

Bruno Clavier  
Timco Engineering, Inc.