

Chris Harvey

From: Petruska, Steve [spetrusk@sharpsec.com]
Sent: Monday, April 13, 2009 10:18 AM
To: charvey@ieee.org; charvey-tcb@ccsemc.com
Cc: chris.harvey@ccsemc.com; claire.hoque@ccsemc.com; mike.kuo@ccsemc.com
Subject: RE: Sharp Corporation , FCC ID: APYHRO00096, Assessment NO.: AN09T8997, Notice#1

Attachments: JQA SAR LTR.pdf



JQA SAR LTR.pdf
(164 KB)

Hi Chris,

Please refer to the attached additional SAR probe calibration information that was prepared by JQA.

Please let me know if this will be sufficient to satisfy the requirements of KDB 450824 and allow for completion of the subject application.

Thanks,
Steve

-----Original Message-----

From: Chris Harvey [mailto:charveyemc@gmail.com] On Behalf Of Chris Harvey
Sent: Tuesday, April 07, 2009 11:47 AM
To: Petruska, Steve
Subject: Re: Sharp Corporation , FCC ID: APYHRO00096, Assessment NO.: AN09T8997, Notice#1

Steve I am sorry for the confusion on this issue. The fcc allows the probe to be used up to 100 MHz from the calibration frequency but requires additional steps in accordance with the KDB when the probe is used at more than 50 MHz from the cal frequency.

Does that help?

Sent via BlackBerry from T-Mobile

-----Original Message-----

From: "Petruska, Steve" <spetrusk@sharpsec.com>
Date: Tue, 7 Apr 2009 11:38:45
To: <charvey@ieee.org>; <charvey-tcb@ccsemc.com>
Cc: <chris.harvey@ccsemc.com>; Claire Hoque<claire.hoque@ccsemc.com>; <mike.kuo@ccsemc.com>
Subject: RE: Sharp Corporation , FCC ID: APYHRO00096, Assessment NO.: AN09T8997, Notice#1

Chris,

The probe calibration data we submitted indicates that using the DASYS version 4.4 and higher allows extending the validity from +/- 50 MHz to +/- 100 MHz. (See attached.) Is this not acceptable in accordance with the requirements of KDB 450824? Please advise.

Regards,
Steve

-----Original Message-----

From: Chris Harvey [mailto:charveyemc@gmail.com] On Behalf Of Chris Harvey
Sent: Monday, April 06, 2009 12:14 PM
To: Petruska, Steve; charvey-tcb@ccsemc.com
Cc: chris.harvey@ccsemc.com; Claire Hoque; mike.kuo@ccsemc.com
Subject: Re: Sharp Corporation , FCC ID: APYHRO00096, Assessment NO.: AN09T8997, Notice#1

Steve, JQA must address the issues of KDB 450824 in this application.

BR
Chris
Sent via BlackBerry from T-Mobile

-----Original Message-----

From: "Petruska, Steve" <spetrusk@sharpsec.com>

Date: Mon, 6 Apr 2009 11:33:46
To: <charvey-tcb@ccsemc.com>
Cc: <chris.harvey@ccsemc.com>; <claire.hoque@ccsemc.com>; <mike.kuo@ccsemc.com>
Subject: RE: Sharp Corporation , FCC ID: APYHRO00096, Assessment NO.: AN09T8997, Notice#1

Dear Chris,

Thank you for your review of the subject TCB application.
We would like to respond to the comments as indicated below.

- 1) SAR Probe Calibration
JQA advised us that they understand the requirements of KDB Publication 450824, and calibration of their measurement equipment is scheduled to be carried out in November of this year.
- 2) FeliCa Operation in the U.S.
We confirmed that FeliCa operation for model CDMA SHY01 can only be activated when the phone is connected to the KDDI (Japan) communication network. Therefore we indicate that "FeliCa does not operate in USA" in the Model Description document.
It is the same case for the recently submitted application for model SH002 (APYHRO00097).

Best regards,

Steve Petruska
Sharp Electronics Corp.
201-529-9689

-----Original Message-----

From: charvey-tcb@ccsemc.com [mailto:charvey-tcb@ccsemc.com]
Sent: Thursday, April 02, 2009 1:36 PM
To: Petruska, Steve
Cc: chris.harvey@ccsemc.com; claire.hoque@ccsemc.com; mike.kuo@ccsemc.com
Subject: Sharp Corporation , FCC ID: APYHRO00096, Assessment NO.: AN09T8997, Notice#1

Dear Steve Petruska,

You are listed as the Technical Contact for the above referenced TCB application. The following item(s) need(s) to be resolved before the review can be continued:

FCC has a KDB entry (#450824) regarding SAR PROBE CALIBRATION

b) At 300 MHz to 3 GHz, DUT measurements should be within +/- 100 MHz of the probe calibration frequency. (however)

c) Measurements exceeding 50 % of these intervals, I.E.,
+/- 25 MHz, DUT f less than 300 MHz, OR
+/- 50 MHz, DUT f greater than or equal to 300 MHz,
SHALL APPLY THE FOLLOWING additional steps:

1) When the actual tissue dielectric parameters used for probe calibration are available (careful about some probe manuf. list only nominal or range on calib. cert.), the differences for relative permittivity and conductivity between probe calibration and routine measurements should each be less than or equal to 5 % while also satisfying the required +/- 5 % tolerances in target dielectric parameters.

2) When nominal tissue dielectric parameters are PROVIDED in the probe calibration data, the tissue dielectric parameters measured for routine measurements should be less than the target relative permittivity and higher than the target conductivity values, to minimize SAR underestimations. Otherwise, a thorough analysis of the effective frequency interval supported by the probe calibration and dielectric medium should be included in the SAR report to substantiate the test results - SEE ITEM d). Alternatively, the measured 1-g SAR may be compensated with respect to +5 % tolerances in relative permittivity and -5 % tolerances in conductivity, computed according to valid SAR sensitivity data, to reduce SAR underestimation and maintain conservativeness.

d) When thorough analysis is required for the additional steps, the following SHALL ALSO BE ADDRESSED BY THE DUT TEST LAB.

These other items can contribute to additional SAR differences, especially when the probe calibration, tissue dielectric parameters and device test frequencies are misaligned.

1) The probe conversion factor and its frequency response, with respect to the tissue dielectric media used during probe calibration and routine measurements, should be examined to determine if the effective frequency interval is adequate for the intended measurements to satisfy protocol requirements.

2) Measurements within the required frequency interval should satisfy an expanded probe calibration uncertainty (k=2) less than or equal to 15 % for all measurement conditions.

3) When SAR is reported within 10 % of the SAR limit, differences in field conditions and effects of output power levels on signal modulation between probe calibration and routine measurements should be examined to determine probe calibration validity.

4) Probe isotropy should also be assessed by rotating the probe in 15 degree increments at the peak SAR location of the zoom scan and accounted for in the measurement uncertainty.

Because the JQA probe calibration is performed at 900MHz and the measurements are performed at 824.7MHz, the additional steps described above are required for FCC compliance.

Please explain how the 13.56 transmitter does not operate in the USA (per the Model Description exhibit).

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of the original e-mail date may result in application dismissal and forfeiture of the filing fee. Also, please note that partial responses increase processing time and should not be submitted. Any questions about the content of this correspondence should be directed to the e-mail address listed below the name of the sender.

Best regards,

Chris Harvey
Charvey-tcb@ccsemc.com