Chris Harvey

From: Kyung-Taek LEE [leekt@digitalemc.com]
Sent: Thursday, July 29, 2004 10:03 PM
To: Chris Harvey
Cc: 'Marianne Bosley'
Subject: RE: Additional Information needed MT#15838 VK Corp. FCC ID: SBWVK530US

Hello,

Thanks for your reply.

For SAR measurement, OK. In the future, I will measure the conducted RF Power before and after each SAR measurement.
For Emission Designator, I am sorry for my mistake. I added the Emission Designator in RF Test Report(page 62).

Best regards,
K.T. LEE

> -----Original Message-----
> **From:** Chris Harvey [mailto:Chrisharveyemc@comcast.net]
> **Sent:** Thursday, July 29, 2004 10:30 PM
> **To:** 'Kyung-Taek LEE'
> **Cc:** 'Marianne Bosley'
> **Subject:** RE: Additional Information needed MT#15838 VK Corp. FCC ID: SBWVK530US
>
> KT, I have reviewed the additional documents and have the following comments:
>
> In the future, please record the conducted RF Power before and after each SAR measurement for comparison to the RF power (Conducted) in the RF test report to be sure that the EUT is transmitting in the maximum power and that there is no significant power drift. I can accept the power drift measurements as shown in this report.
>
> I still can not find the emission designator. You state that it is in the RF test report, but I have looked through all 62 pages once again and can not find this information. I am sorry to ask again but can you please tell me where in the file you have this information?
>
> Best regards,
>
> Chris Harvey
>
> > -----Original Message-----
> > **From:** Kyung-Taek LEE [mailto:leekt@digitalemc.com]
> > **Sent:** Monday, July 19, 2004 7:35 AM
> > **To:** Chris Harvey
> > **Cc:** 'Marianne Bosley'
> > **Subject:** RE: Additional Information needed MT#15838 VK Corp. FCC ID: SBWVK530US
> >
> > Hello again,
> >
> > 1. Attached the added photograph.
> > 2. I requested the antenna specification. I will send it as soon as possible.
> > 3. Attached the corrected schematics.
> > 4. I requested the Op Description. I will send it as soon as possible.
> > 5. I will perform using the EIA/TIA 603 Substitution method for ERP and EIRP.

6. I descried emission designator for GSM and PCS mode to RF test report. please let me know what's the problem.
7. After the ERP measurement, I will send the revised RF test report.
8. After the ERP measurement, I will send the revised RF test report.
9. After the SAR measurement, I will send the revised SAR test report. Refer to the SAR test report and test plots. (Added the SAR Test data)
10. After the ERP measurement, I will send the revised test report. please refer to the RF and SAR test report
11. This phone is not capable of transmitting with the flip cover in the closed position.
12. After the SAR measurement, I will send the revised SAR test report.
13. I will send the revised SAR test report. (added expression: The SAR data is measured multiple hot spot. It is re-measured each hot spot by 1st and 2nd.)
14. I don't understand. please detail explain.
15. The different is location of phone(Left and Right head).

Best Regards,
K.T. LEE

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Manager **Kyung-Taek LEE** [019-557-3554]

-----Original Message-----
From: Chris Harvey [mailto:Chrisharveyemc@comcast.net]
Sent: Friday, July 16, 2004 8:36 PM
To: 'Kyung-Taek LEE'
Cc: 'Marianne Bosley'
Subject: Additional Information needed MT#15838 VK Corp. FCC ID: SBWVK530US

KT, I have performed the review for the above referenced application and find that the folloing items need to be addressed:

1) Photo (View 3) shows RF shield(s). Please provide another photograph with the shield(s) removed to show the components under the shield.

2) There was no photograph showing the antenna (except the external phone photo) nor was there an antenna description submitted. Please provide an antenna specification sheet (should have drawing). The Operations Description document states fixed type antenna and has a drawing.

3) Schematic shows PCS1800, which is typically called PCS1900. I want to be sure that this is not DCS1800 mode. Also model number on the schematics is VG430_US, and the application is for a phone called the VK530US. Is this the correct schematic for this application?

4) The Operational Description (Service Manual) describes how to assemble and disassemble the phone and has some basic specifications, but does not meet the requirements of FCC 2.1033, which requires Range of Operating RF Power values, DC Voltages and Currents at final amplification stage, Tune-up Procedure (requested separately by Marianne), and a description of the Digital Modulation.

5) It appears as though the RF Power measurements are RF conducted power. Per FCC policy, for integral antenna mobile devices in Pt. 22 and 24, ERP and EIRP measurements of the fundamental transmission are required to be performed using the EIA/TIA 603 Substitution method. Please provide ERP and EIRP measurements.

6) Please provide an emission designator for each band of operation.

7) Page 43 of 61 of the RF Test Report seems to show non-compliance. If this is a typographical error (possibly '-' sign missing) please correct the report.

8) FCC ID on last page of RF Report has typographical error. Please correct this error.

9) The SAR report indicates that this phone has GPRS capability. Please confirm the Class of GPRS which determines the GPRS Multi-slot modes.
Please also indicate which modes were tested. If the phone is capable of multi-slot modes that were not tested, then either scaling of the SAR values (this would probably show non-compliance) or re-testing of SAR in the worst case transmit slots will be necessary.

10) The requirements for SAR testing is that the RF power is measured before and after the testing to ensure that the device is transmitting at highest power and that there is no power drift. It is not appropriate to just record the rated power, but you must record the measured data. Please provide this power measurement data. The measured RF Conducted Power between the RF Report and SAR report should be substantially equivalent to each other. Here is the requirement from OET 65 Supplement C:2001 Page 49:

> OUTPUT POWER
> In order to determine if device output has been stable during a SAR measurement, conducted power should be measured before and after each SAR test to verify if the output changes are within the tolerance specified for the device. Conducted output power can be measured at a service output port available on most handsets or with an antenna adapter. It is also recommended that the SAR should be checked at a reference location, such as above the ear reference point of the head phantom, immediately before and after each SAR measurement to verify device output and SAR drifts.

11) Please indicate whether this phone is capable of transmitting with the flip cover in the closed position.

12) All of the data tables for pages 18-27 in the SAR report have the same title. Each table should probably have a different table number (not all table 14.2) and the title indicates CDMA operation (this device is a GSM phone) and some testing was head (all tables indicate body). Please correct the errors.

13) Please explain the table on page 27 of the SAR report. The note column implies that there are multiple hot spot measurements but this is not stated on that page. Please clarify the report.

14) Please provide justification from OET 65 supplement C for the reduced testing (or just reduced reporting) of SAR using the 'slim' battery.

15) Please explain the differences between the data on pages 18 & 20, pages 19 & 21, pages 23 & 25, and pages 24 & 26 of the SAR test report. I do not see any difference in the parameters, yet the data is different.

Please provide the responses to the above items, along with updated exhibits directly to charvey@metlabs.com, copying mbosley@metlabs.com and notifying charvey@ieee.org (no attachments). Please contact me if you have any questions.

Best regards,

Chris Harvey