

Dear Joe:

In your e-mail dated Jan. 08, 2001, you asked :

1) Provide any correspondence between the TCB and the test lab to verify that the TCB reviewed the application and made any corrections.

CCS:

1) Application was submitted on 11/29/2000.

2) Administrative and Technical review were made on 11/30/2000.

3) TCB requested for additional information on Nov. 30

**From: certadm [certadm@ccsemc.com]**

**To: jack@trclab.com.tw**

**Cc: mkuo@ccsemc.com**

**Subject: Sony Corporation, FCC ID:AK8SPPA2470,AN00T1138**

**Notice content**

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**Question #1: Please provide operational description as required per section 2.1 031(b)(4) of FCC rules.**

**Question #2: As required under 15.247(b)(4) of FCC rules, please provide information to comply the requirements in section 1.1307(b)(1) of FCC rules.**

4) On December 08, 2000, received answer to Nov. 30 questions. Operational description does not contain information to justify that device meet spread spectrum definitions and RF exposure information can not be justified as well.



Acrobat Document

5) TCB request for additional information on Dec. 14, 2000. In this e-mail, asked for more technical information to support that the device complied with Spread spectrum definition. Disclose TCB limitation in certifying device operates 15.247 2.4 GHz band for portable device, ask for EIRP value in relation to duty cycle etc.

**From: Mike Kuo**

Sent: Thursday, December 14, 2000 12:10 AM  
To: 'jack'  
Cc: Mike Kuo  
Subject: RE: AK8SPPA2470, AN00T1138

Dear Jack:

Based upon the information provided, some of questions are still not address :

Question #1: From the theory of operation provided, there is no technical information to determine that this device meet the definition of a direct sequence spread system. Please provide technical information to show that the device comply with definition of DSSS.

Question #2: RF exposure information : as you indicated in the e-mail, the ERP of device is 57.16mW with 50% duty cycle. What is the value of EIRP ?

Question #3: On Nov. 15,2000, FCC published TCB limitation and review procedures to all TCBs for evaluating RF exposures compliance. Cordless telephone is considered as Portable device under FCC definitions. TCB can only certify 15.247 portable device under the following conditions 1) the device and its antenna operate at more than 2.5 cm from a person's body with the peak conducted and peak radiated (EIRP) output power not exceeding 50mW for the 2.4GHz band; 2) the device and its antenna operate at less than 2.5 cm from a person's body and the peak conducted with peak radiated (EIRP) output power not exceeding 15mW for the 2.4GHz band.

Cordless telephone normally is operated under no. 2 condition. I will make the final determination once I received your reply to this e-mail. If your device can not comply with condition no.2 requirement, this application has to submit to FCC for approval.

Best Regards

Mike Kuo / Compliance Certification Services

6)On Dec. 18, 2000, received answers to Dec. 14 questions. Two files were received. Operational Description and re-confirmed EIRP for base station is 57mW and handset is 0.399mW.

From: jack [jack@trclab.com.tw]  
Sent: Tuesday, December 18, 2000 6:29 AM  
To: mkuo@ccsemc.com  
Subject: AK8SPPA2470, AN00T1138

Dear mike

The attachment AK8SPPA2470-Q1 is for your required. (DSSS question)

A attachment AK8SPPA2470-Q2 describe EIRP and ERP. yur can refer to our report on page 24/72. (G=1.6 for ERP, G=1 for EIRP)

According to page 24/72 of our report, the EIRP is 57.16mW for the base unit and 0.399 mW for Handset. The output power of handset is less than 15mW for no 2.

Regarding question 1, the FCC have never require this message until today.

Today, I check "generic search of FCC OET" that all TCB LAB have never grant 2.4GHz DSS cordless phone including your company. So, I think this case which is first of you company.

Anyway, this case is in need of grent.

THANKS!

Jack Tsai

7)On Dec. 18,2000, TCB explain the TCB limitation once again.

From: Mike Kuo  
Sent: Monday, December 18, 2000 6:15 PM  
To: 'jack'  
Subject: RE: Grant of FCC

Dear Jack :

The Grant condition of K7GG2488 states " Output is EIRP. Maximum output for the handset is 87 mW peak EIRP, operating with a 50% duty factor (TDM) for ensuring SAR compliance. "

But I December 14 question to you are :

Question #2: RF exposure information : as you indicated in the e-mail, the ERP of device is 57.16mW with 50% duty cycle. What is the value of EIRP ?

Question #3: On Nov. 15,2000, FCC published TCB limitation and review procedures to all TCBs for evaluating RF exposures compliance. Cordless telephone is considered as Portable device under FCC definitions. TCB can only certify 15.247 portable device under the following conditions 1) the device and its antenna operate at more than 2.5 cm from a person's body with the peak conducted and peak radiated (EIRP) output power not exceeding 50mW for the 2.4GHz band; 2) the device and its antenna operate at less than 2.5 cm from a person's body and the peak conducted with peak radiated (EIRP) output power not exceeding 15mW for the 2.4GHz band.

Question #2: You need to provide the value of EIRP by considering 50% duty cycle to me. If the answer from Question #2 is less 15mW, I ( as TCB ) can certify the device without SAR evaluation. There is nothing wrong with my question and I did not say I can not certify this device. In order to make the decision to certify it or not, you have to answer all three questions.

Best Regards

Mike Kuo

P.S. For your information, I had conference calls with all TCBs and FCC this morning. FCC once again mentioned the Spread Spectrum device requirements. If the test result complied with 15.247 technical requirements, but it does not mean that device is complied with the definition of Direct Sequence Spread Spectrum device. In general, all system must utilize a minimum 11:1 spreading rate to data rate ratio. The definition of Direct Sequence Systems can be found in Page 362 of FCC CFR 47 Part 2.1 and Spread Spectrum definition can be found in Page 369 of FCC CFR 47 Part 2.1.

8) On Dec. 18, 2000, second TCB questions issued for RF exposure language in the user manual. ( Dec. 18 TCB question #2.txt)

From: Mike Kuo

Sent: Wednesday, December 18, 2000 1:22 AM

To: 'jack'

Subject: RE: AK8SPPA2470, AN00T1138

Dear Jack:

In regards to SAR requirement, FCC wants to see some kind of language in the user manual for RF exposure information to user. The suggest wordings from FCC is :

An "IMPORTANT NOTE" should be included at a conspicuous location in the manual(s) to alert all responsible parties about the specific requirements; example template -  
"IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements, the following antenna installation and device operating configurations must be satisfied  
....."

Best Regards

Mike Kuo / Compliance Certification Services

9)On Dec. 19, received RF exposure language wording :

From: jack [jack@trclab.com.tw]  
Sent: Thursday, December 19, 2000 5:56 PM  
To: Mike Kuo  
Subject: AK8SPPA2470, AN00T1138

Dear Mike,

For your required, he Sony correct IMPORTANT NOTE.

IMPORTANT NOTE:

In order to comply with FCC RF exposure compliance requirements,  
please observe the following guidelines to operate this device to protect body  
from exposing to RF electromagnetic energy.  
..Avoid direct body contact with transmitting antenna during telephone conversation.  
..Do not replace or modify the transmitting antenna under any situation.

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Sony Industries Taiwan Co.,Ltd.  
Quality Assurance Dept.  
Tsao Hui-Ling

**Tel: +886-7-841-1501 ext:5616**

**Fax: +886-7-831-7460**

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10) On Dec. 19. upload to FCC and the Grant issued.

Best Regards

Mike Kuo / Compliance Certification Services