Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1

Inbox
X

tim.dwyer@ccsemc.com to chieu show details Jan 20 (1 day ago) Reply

Hello Chieu,

Q1: The FCC "Description of Product to be Marketed" is limited to 50 Characters. The CCS field allows more characters, but the FCC field is limited to 50 characters. Please reply with shortened descriptions for this application and for FCCID: EJE-WB0054.

The description fields currently read:

FCCID: EJE-WB0054 LifeBook P Series with 4965AGN WLAN and EYSMJCS Bluetooth
FCCID: EJE-WB0055 LifeBook P Series with 4965AG and EYTF3CSFT Bluetooth

Q2: Please explain if this configuration is operating in MIMO mode. The grant including C2PC on file at FCC for FCCID: PD94965AG makes no reference to MIMO operation or aggregate power, although information in this filing appears to indicate the possibility for MIMO operation. If operating in MIMO mode, please provide aggregate power values for all bands (DTS & NII) and confirm that all tests including SAR were performed in MIMO mode with maximum aggregate power output.

Q3: Please confirm that the output power shown on SAR test report page 7 of 63 for Channel 11 (2462 MHz) is a typographical error and revise the report or provide the corrected value by email.

Comment: As the above questions apply in general to the composite parts of this application, separate notices will not be sent and your single reply will be attached to each of the composite parts for FCC filing.

Q4: With reference to the NII Application AN08T7492 and the Intel letter of Oct 19, 2006, please confirm that the following are the correct values to be listed on the grant for this configuration, with consideration also to item Q2 above.

5180 - 5240 MHz 0.045 W
5260 - 5320 MHz 0.045 W

Please note that the evaluation reports for FCCID: EJE-WB0044 have been forwarded for Certifier approval. Once certifier approval is received, the grants will be issued - expected in 24-48 hours.

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,

Tim Dwyer
Technical Reviewer

Reply Reply to all Forward

from **CHIEU** <chieu@emctech.com.au> hide details Jan 21 (1 day ago) Reply

reply-to chieu@emctech.com.au,
to tim.dwyer@ccsemc.com,
date Jan 21, 2008 12:29 AM
subject RE: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1

Hello Tim,

Replies to your questions are below.

Regards
Chieu Huynh

-----Original Message-----
From: tim.dwyer@ccsemc.com [mailto:tim.dwyer@ccsemc.com]
Sent: Monday, 21 January 2008 3:49 PM
To: chieu@emctech.com.au
Cc: tim.dwyer@ccsemc.com
Subject: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1

Hello Chieu,

Q1: The FCC "Description of Product to be Marketed" is limited to 50 Characters. The CCS field allows more characters, but the FCC field is limited to 50 characters. Please reply with shortened descriptions for this application and for FCCID: EJE-WB0054.

The description fields currently read:

FCCID: EJE-WB0054 LifeBook P Series with 4965AGN WLAN and EYSMJCS Bluetooth
FCCID: EJE-WB0055 LifeBook P Series with 4965AG and EYTF3CSFT Bluetooth

Answer1: Please update the description to:
FCCID: EJE-WB0054 LifeBook P Series with 4965AGN WLAN + EYSMJCS BT
FCCID: EJE-WB0055 LifeBook P Series with 4965AG WLAN + EYTF3CSFT BT

Q2: Please explain if this configuration is operating in MIMO mode. The grant including C2PC on file at FCC for FCCID: PD94965AG makes no reference to MIMO operation or aggregate power, although information in this filing appears to indicate the possibility for MIMO operation. If operating in MIMO mode, please provide aggregate power values for all bands (DTS & NII) and confirm that all tests including SAR were performed in MIMO mode with maximum aggregate power output.

Answer2: There is no MIMO mode for this application.

Q3: Please confirm that the output power shown on SAR test report page 7 of 63 for Channel 11 (2462 MHz) is a typographical error and revise the report or provide the corrected value by email.

Comment: As the above questions apply in general to the composite parts of this application, separate notices will not be sent and your single reply will be attached to each of the composite parts for FCC filing.

Answer3: Yes, it is a typo. The correct power should read 15.7 dBm.

Q4: With reference to the NII Application AN08T7492 and the Intel letter of

Oct 19, 2006, please confirm that the following are the correct values to be listed on the grant for this configuration, with consideration also to item Q2 above.

5180 - 5240 MHz 0.045 W
5260 - 5320 MHz 0.045 W

Answer4: Powers to be listed for Fujitsu are same as Intel grant (FCC ID: PD94965AG).
5180 - 5240 MHz 0.049 W
5260 - 5320 MHz 0.087 W
- Show quoted text -

Reply Reply to all Forward

from **Tim Dwyer** <Timothy_Dwyer@ieee.org> hide details 1:34 AM (23 hours ago) Reply

to chieu@emctech.com.au,
date Jan 21, 2008 1:34 AM
subject Re: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1
mailed-by gmail.com

Hello Chieu,

Thanks for your quick reply. Answers to Q1-Q3 are ok.

For Q4, some additional explanation is needed since the maximum reported power in the EMC (p 13/16) and SAR (p 7/74)reports at 5260 MHz is 16.6 dBm = 0.046 W. 0.87 W would be 19.8 dBm, or 3.2 dB higher. The values in the Intel letter are consistent with what you measured. The current application supports listing of 0.46 W, but nothing higher unless there is something I am missing.

I looked again at the eariler Intel filings and do not understand how the 0.87 W value got on the grant. The Intel letter stated the module should never have an output higher than 16.5 dBm from 5180-5320 MHz.

The 0.1 dB difference (16.5 vs. 16.6) is not an issue as it is within measurement or reasonable production tolerance, but 3.2 dB is significantly different.

Please let me know how you want to proceed.

Best regards,

Tim Dwyer
- Show quoted text -

Reply Forward

from **CHIEU** <chieu@emctech.com.au> hide details 6:42 PM (6 hours ago) Reply

reply-to chieu@emctech.com.au,
to Tim Dwyer <Timothy_Dwyer@ieee.org>,
date Jan 21, 2008 6:42 PM
subject RE: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1

Hello Tim,

For Q4, some additional explanation is needed since the maximum reported power in the EMC (p 13/16) and SAR (p 7/74)reports at 5260 MHz is 16.6 dBm = 0.046 W. 0.87 W would be 19.8 dBm, or 3.2 dB higher. The values in the Intel letter are consistent with what you measured. The current application supports listing of 0.46 W, but nothing higher unless there is something I am missing.

Answer4: EMCT used integration method as per test method # 3 of DA 02-2138 to measure peak output power. Peak power reported at 5260MHz is 16.6dBm.

Intel used the power meter to measure peak output power. Intel peak power reported at 5260MHz is 19.4dBm (0.087W).

If EMCT was using the peak power meter to measure the power, then the peak power at 5260MHz would also probably be close to 19.4dBm.

I looked again at the eariler Intel filings and do not understand how the 0.87 W value got on the grant. The Intel letter stated the module should never have an output higher than 16.5 dBm from 5180-5320 MHz.

Intel peak power measured at 5260MHz is 19.4dBm (0.087W) and granted. Intel average power spec stated 16.5dBm from 5180 – 5320 MHz.

The 0.1 dB difference (16.5 vs. 16.6) is not an issue as it is within measurement or reasonable production tolerance, but 3.2 dB is significantly different.

Please let me know how you want to proceed.

Fujitsu prefers to list the same power listed in Intel grant as this is the worst case.

Regards

Chieu Huynh

From: rfspectrum@gmail.com [mailto:rfspectrum@gmail.com] **On Behalf Of** Tim Dwyer
Sent: Monday, 21 January 2008 5:34 PM

To: chieu@emctech.com.au
Subject: Re: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1

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Reply Forward

from **CHIEU** <chieu@emctech.com.au> hide details 7:18 PM (5 hours ago) Reply

reply-to chieu@emctech.com.au,
to Tim Dwyer <Timothy_Dwyer@ieee.org>,
date Jan 21, 2008 7:18 PM
subject RE: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1

Hello Tim,

I had replied to below query.

For consistency, can you please list the power on all Fujitsu grants as per Intel grants?

Also, we just upload an IC application (Assessment No: AN08I2296) for FCC ID: EJE-WB0054 (IC ID: 337J-WB0054). Can you please list the power as per the FCC grants?

Other IC applications (FCC ID: EJE-WB0055, EJE-WB0051 and EJE-WB0052) will be uploading soon.

PS: Fujitsu is expecting FCC grant for EJE-WB0055 yesterday 21st Jan.

Regards

Chieu Huynh

From: rfspectrum@gmail.com [mailto:rfspectrum@gmail.com] **On Behalf Of** Tim Dwyer
Sent: Monday, 21 January 2008 5:34 PM

To: chieu@emctech.com.au
Subject: Re: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1

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Reply Forward

from **Tim Dwyer** <Timothy_Dwyer@ieee.org> hide details 7:32 PM (5 hours ago) Reply

to chieu@emctech.com.au,
cc Mike Kuo <mike.kuo@ccsemc.com>,
date Jan 21, 2008 7:32 PM
subject Re: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1
mailed-by gmail.com

Hello Chieu,

I spoke with Mike Kuo about this issue while waiting for your reply.

I was preparing this email at the same time you were sending yours. So I have received your email that I believe answers Item 2 below. I believe the EMCT measurements are equivalent to average measurements like in the Intel letter. But the EMCT report refers to them as Peak measurements which is misleading.

Mike Kuo wants to have replies to the following questions:

1. Attachment 6 DFS Report Cover Letter. Who wrote this letter?

2. In EMCT reports M071119_Cert_4965AG_NII_BT Section 5.0, M071143_CERT_4965AG_SAR_2.4 Section 4.0 and M071143_CERT_4965AG_SAR_5.6 Section 4.0 Peak Power measurements are reported. Are these in fact peak power measurements or are they average measurements? If they are peak power measurements, then testing will need to be performed at the full peak output power 0.087 W. (Please see the beginning of this email and revise the reports to clarify the measurement data)

3. In each SAR report there are about 20 references to 802.11n operating mode. Since this module is only ABG, and not N, then reference to 802.11n needs to be removed from the reports. Also there is mention in Section 4.0 of both SAR reports of two antennas transmitting simultaneously. Since there is no MIMO or 802.11n mode in this configuration, please review to see if these statements are correct and revise as needed.

Best regards,

Tim Dwyer

- Show quoted text -

Reply Reply to all Forward

Tim Dwyer to chieu show details 7:46 PM (5 hours ago) Reply

Hello Chieu,

We will make every effort to get the grants complete quickly, but need you to reply to the email I just sent.

I will change your IC application to show the same power as the FCC application.

Please try to send me a short email when you upload the other applications so I can pick them up.

Best regards,

Tim Dwyer
- Show quoted text -

Reply Forward

from **CHIEU** <chieu@emctech.com.au> hide details 8:56 PM (3 hours ago) Reply

reply-to chieu@emctech.com.au,
to Tim Dwyer <Timothy_Dwyer@ieee.org>,
cc Mike Kuo <mike.kuo@ccsemc.com>, "Rao, Praveen" <Praveen.Rao@au.fujitsu.com>,
date Jan 21, 2008 8:56 PM

subject RE: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1

Hello Tim,

Appreciate for your help.

Please refer to reply below.

The deadline for certification is now due. Can you please issue the grants ASAP?

Regards

Chieu Huynh

From: rfspectrum@gmail.com [mailto:rfspectrum@gmail.com] **On Behalf Of** Tim Dwyer
Sent: Tuesday, 22 January 2008 11:33 AM

To: chieu@emctech.com.au
Cc: Mike Kuo
Subject: Re: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1

Hello Chieu,

I spoke with Mike Kuo about this issue while waiting for your reply.

I was preparing this email at the same time you were sending yours. So I have received your email that I believe answers Item 2 below. I believe the EMCT measurements are equivalent to average measurements like in the Intel letter. But the EMCT report refers to them as Peak measurements which is misleading.

Mike Kuo wants to have replies to the following questions:

1. Attachment 6 DFS Report Cover Letter. Who wrote this letter?

Answer1: Letter is issued by Intel's Test lab (Elliot labs)

2. In EMCT reports M071119_Cert_4965AG_NII_BT Section 5.0, M071143_CERT_4965AG_SAR_2.4 Section 4.0 and M071143_CERT_4965AG_SAR_5.6 Section 4.0 Peak Power measurements are reported. Are these in fact peak power measurements or are they average measurements? If they are peak power measurements, then testing will need to be performed at the full peak output power 0.087 W. (Please see the beginning of this email and revise the reports to clarify the measurement data)

Answer2: Intel power specs are shown in average. Before performing EMC or SAR measurements, EMCT measured the average power using an average power meter to verify that the average power matches Intel's specs. The CRTU (Intel's Utility software to control the freq/power of the Radio) was then set to achieve the expected average power after which EMCT then measured peak power of the Radio using integration method as per test method # 3 of DA 02-2138. In the past we found that by using this integration method the peak power measured is consistently slightly lower than the peak power measured using peak power meter. So, while the average power of the Radio module is same when EMCT measured and matches that of Intel's specs, the peak power readings are slightly different between Intel and EMCT due to the method of measurement used. Since we are referencing Intel's original report and Grants, to be consistent we suggest showing the same power levels for our Grants too.

3. In each SAR report there are about 20 references to 802.11n operating mode. Since this module is only ABG, and not N, then reference to 802.11n needs to be removed from the reports. Also there is mention in Section 4.0 of both SAR reports of two antennas transmitting simultaneously. Since there is no MIMO or 802.11n mode in this configuration, please review to see if these statements are correct and revise as needed.

Answer3: Revised test reports will email shortly.

Best regards,

- Show quoted text -

Reply Reply to all Forward

from **CHIEU** <chieu@emctech.com.au> hide details 10:28 PM (2 hours ago) Reply

reply-to chieu@emctech.com.au,
to Tim Dwyer <Timothy_Dwyer@ieee.org>,
cc Mike Kuo <mike.kuo@ccsemc.com>,
date Jan 21, 2008 10:28 PM
subject RE: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1

Hello Tim,

Please find attached revised 2.4 GHz SAR reports.

5 GHz SAR reports are to follow.

There is no MIMO or 802.11n mode.

Regards

Chieu Huynh

From: rfspectrum@gmail.com [mailto:rfspectrum@gmail.com] **On Behalf Of** Tim Dwyer

Sent: Tuesday, 22 January 2008 11:33 AM
To: chieu@emctech.com.au
Cc: Mike Kuo
Subject: Re: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1

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5 attachments — Download all attachments

M071143_CERT_4965AG_SAR_2.4 (5 of 5).pdf
2561K View as HTML Download

M071143_CERT_4965AG_SAR_2.4 (1 of 5).pdf
354K View as HTML Download

M071143_CERT_4965AG_SAR_2.4 (2 of 5).pdf
651K View as HTML Download

M071143_CERT_4965AG_SAR_2.4 (3 of 5).pdf
1716K View as HTML Download

M071143_CERT_4965AG_SAR_2.4 (4 of 5).pdf
1475K View as HTML Download

Reply Reply to all Forward

from **CHIEU** <chieu@emctech.com.au> hide details 10:44 PM (2 hours ago) Reply

reply-to chieu@emctech.com.au,
to Tim Dwyer <Timothy_Dwyer@ieee.org>,
cc Mike Kuo <mike.kuo@ccsemc.com>,
date Jan 21, 2008 10:44 PM
subject RE: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1

Hello Tim,

5 GHz revised SAR reports.

Regards

Chieu Huynh

From: rfspectrum@gmail.com [mailto:rfspectrum@gmail.com] **On Behalf Of** Tim Dwyer

Sent: Tuesday, 22 January 2008 11:33 AM
To: chieu@emctech.com.au
Cc: Mike Kuo
Subject: Re: Fujitsu Limited, FCC ID: EJE-WB0055, Assessment NO.: AN08T7491, Notice#1

- Show quoted text -

5 attachments — Download all attachments

M071143_CERT_4965AG_SAR_5.6 (5 of 5).pdf
2518K View as HTML Download

M071143_CERT_4965AG_SAR_5.6 (1 of 5).pdf
367K View as HTML Download

M071143_CERT_4965AG_SAR_5.6 (2 of 5).pdf
1293K View as HTML Download

M071143_CERT_4965AG_SAR_5.6 (3 of 5).pdf
2332K View as HTML Download

M071143_CERT_4965AG_SAR_5.6 (4 of 5).pdf
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