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[FCC](#) > [FCC E-filing](#) > [Inquiry System Home Page](#) > Reply to OET Response

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Currently Display Inquiry Tracking Number: **925077**

[Basic KDB Search](#)

[Advanced KDB Search](#)

[Submit an Inquiry](#)

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[Category List](#)

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[Major Guidance Publications](#)

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#### Contact Information:

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City: **N/A**  
State:  
Zip Code:  
Country: **Taiwan**

#### Inquiry Details:

First Inquiry Category: **Radio Frequency Exposure - MPE; SAR**  
Second Inquiry Category: **Specific Absorption Rate**  
Third Inquiry Category: **Non-handset SAR**

Dears,

There is a WLAN USB Dongle and it has two dipole antennas(Antenna A and Antenna B) please refer to attach pdf file.

Thank you very much.

---Reply from Customer on 10/03/2011---

Is other test requirement for test configurations for sar test?  
---Reply from Customer on 10/03/2011---

Is other test requirement for test configurations during sar test?  
---Reply from Customer on 10/20/2011---

Thank you very much for your guidance.

about "enhanced energy coupling test " is:

- 1) using same position as maximum SAR value position(may be Horizontal Down or Up / Vertical Front or Back), if maximum SAR value is "M", and the distance between phantom and EUT is 5mm
- 2) Than add the distance between phantom and EUT to 10mm and get SAR value ("X"), if X is less 50% than M, the procedure is "enhanced energy coupling test ".

#### Response(s):

--OET response sent on Sep 29 2011 8:19AM--

Please be more specific what this inquiry is about.

--OET response sent on Oct 6 2011 3:19PM--

If the dongle's radio energy is entirely radiated from the two dipole antennas and not from the dongle's main body, we do not expect much difference in SAR measurements between horizontal up and horizontal down positions. Therefore there is no need to test both up and down positions; similarly with vertical front and vertical back positions, only one position is sufficient. In addition, for typical usage, the two antennas should be at 90 degree angle (see figure labeled Antenna B Up 90 degree on Page 4). SAR should be measured with (1) phantom 5 mm from the bottom of the dongle body (not the notebook) and (2) phantom 10 mm from the end of the two antennas.

The above test reduction is conditioned on the dongle body being non-radiating. Please present in SAR report, with both antennas transmitting on the same channel, the SAR measurement of antennas at 180 degree (parallel to the dongle body) so that we can clearly see the hot spots of radio energy.

A few side notes:

1. Unless Antenna A and Antenna B can transmit on different channels, both antennas should be transmitting simultaneously when doing SAR measurement for this 2T2R WLAN dongle with and without MIMO beamforming (if available);;
2. If Antenna A and Antenna B can transmit on separate channels, their SAR need to be measured separately and apply the grid-sum procedures described in KDB 248227.
3. What is "enhanced energy coupling test mode"?

--OET response sent on Oct 20 2011 8:44AM--

Noted, thank you for the reply.

[Enter any additional comments below.](#)

**Attachment List:**

[PBA 2 ant](#)

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Thank you very much.

">

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">

*Last Reviewed/Updated on 06/19/2009*

Please send any comments or suggestions for this site to [OET Systems Support](#)

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