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Re: FCC ID AK8WLLCA50
Applicant: Sony Corporation
Correspondence Reference Number: 24908
731 Confirmation Number: EA660956

Reply to your comments

1. Demonstration that probe calibration is appropriate for wideband OFDM/QAM modulation tested.

We are understanding that the coded OFDM (Orthogonal Frequency Division Multiplex) may generally generate a high peak power at a instant when each phase of multiple carriers are in phase.

(1) WLL-CA50

The ALC (Automatic Level Control) are employed in the WLL-CA50 RF unit controls the RF output and works to keep it constant by use of the feedback loop.

So instantaneous peak outputs power generated by the coded OFDM of WLL-CA50 are suppressed by 3 times of the average power by the use of ALC.

WLL-CA50.pdf file shows the block diagram.

(2) E-Field Probe (ETV3DV6)

The calibration data of dosimetric E-Field Probe (ET3DV6) has been already submitted at this application. The frequency response and dynamic range of the E-Field probe are shown. They show the flatness of the response from 0.3 to 3.0 GHz and the wide dynamic range to 100 mW/g within linearity ± 0.2 dB.

(3) Evaluation result of SAR

The peak power of OFDM is high value. But actually the average power of WLL-CA50 was around 25mW. And the measured figures of SAR were a normal range which we have experienced with DSSS LAN Card.

We believe that the probe calibration is appropriate for wideband OFDM/QAM modulation tested.

2. SAR values with a small gap between the antenna and phantom such as 1.5 cm. Testing with the worst two configurations is sufficient. A 0 gap measurement may artificially spread out SAR hot spot due to impedance loading through close coupling to the liquid.

Although the spread of SAR hot spot due to close coupling is supposed, our experiment has shown that the 0 gap condition was the highest SAR value from 0 cm gap to 3 cm gap this time. This experiment data is submitted as SAR experiment.pdf files.

Also we can explain the 0 gap condition was the worst SAR value by using the evaluation report of DSS LAN card.

Therefore, our evaluation data shows the most severe SAR condition is the 0 gap in this application.

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