

Mary,

The following is our response.

1 The Tx power was selected to be the absolute maximum power in order to evaluate the worse case SAR. All production units are likely to transmit less power than this.

1(a) This is the maximum conducted power of the FAU200SAT measured at the antenna port.

1(b) This was an error on the application form 731 and should read 1.585 W as stated in your 1(a)

1(c) The requirement for the FAU limits output to 37dBm for standards reasons. The average FAU EIRP is ~32.3dBm but depends upon elevation and some extent azimuth.(i.e.. spatial average antenna gain ~1.2dBi)

1(d) The $-15\text{dBW}/4\text{Khz}$ measurements can be expressed as $+15\text{dBm}/4\text{Khz}$ or $+15\text{dBm}/4\text{Khz} + 10\log(1.23\text{Mhz}/4\text{Khz}) = 15.24.787 = 39.79\text{dBm EIRP}$. Since antenna has a gain of 3.5dB maximum the conducted power at the antenna port will be $39.79 - 3.5 = 39.29$ maximum. Please note that there is a higher measurement uncertainty with radiated measurement method than with conducted method. Also note that this measurement was absolute peak power from the device for full rotation measured on the FCC approved open field test site.

1(e) SAR was performed at 32dBm measured with a power meter. Power meter normally have a very wide bandwidth and therefore one may state 32dBm/1.23Mhz.

1(f) The peak antenna gain is 3.5dBi(cp) with the spatial average about 1.2dBi. It looks very much like the attachment, 4 azimuth cuts. Cut L0 is aligned with the long end of the box.

1(g) (a) looks like conducted power
(b) see reply to 1(b)
(c) Is EIRP=Cond power = ant gain, but see reply to 1(c)
(d) Is a power at a distance= EIRP(in direction)+Detect
Ant
gain-Path loss
(e) This is the conducted power as in (a) or Radiated
Power(33.2dBm avg typ)

2. Only one TX antenna. other is receiver. The SAR was measure
with TX
antenna close to the Phantom. Although the FAU 200SAT can be
categorically be excluded from the MPE evaluation but we were
demonstrating by measurements that the product submitted is
absolutely
safe according to present SAR recommended limits. It is even
safe to
touch the TX antenna when the FAU200SAT is transmitting
maximum output
power when considering SAR limits for body tissue. You cannot
have
any worse practical use situation than holding the tX antenna
of the
FAU200SAT considering it is designed to be installed on the
rooftop or
on a high pole for best operation.

Best regards

Allen Ferry

> -----Original Message-----
> From: Mary Washington [SMTP:mwashington@tuvps.com]
> Sent: 04 January 2000 23:41
> To: aferry@babtps.com
> Cc: Judy F. Evans
> Subject: fwd: RF exposure comments are attached.
>
> Received the following request. We have 60 days from today
to
> respond.
>
> Mary
> ----- Original Text -----
>
> From: OET <oetech@fccsun07w.fcc.gov>, on 1/4/00 1:34 PM:
> To: Mary Washington@EMC@PSSDG
>
> To: MARY WASHINGTON, TUV PRODUCT SERVICE

> From: Frank Coperich
> fcoperic@fcc.gov
> FCC Application Processing Branch
>
> Re: FCC ID OHLFAU200SAT
> Applicant: Ericsson Mobile
> Communications (UK) Ltd.
> Correspondence Reference Number: 11308
> 731 Confirmation Number: EA95504
> Date of Original E-Mail: 01/04/2000
>
> 1. I need to know what maximum output is appropriate for
> determine
> RF
> exposure compliance:
>
> (a) SAR was performed at 32 dBm maximum (1.585 W) tested
> with a CW
> signal,
> is this conducted or radiated output?
> (b) The filing is requesting 316 mW EIRP; not sure how to
> relate
> this to.
> (c) Specs indicates 37 dBm EIRP max output (5 W), 2 W
> average (page
> 25 of
> technical specifications)
> (d) 3 m radiated measurement has 31.6 mW/4 kHz maximum EIRP
> (-15
> dBW/4 kHz)
> (e) cannot find other output power measurements that relate
> to the
> 1.23 MHz
> bandwidth used for CDMA
> (f) clarifying the antenna gain may be helpful
> (g) should items (a), (b), (c) & (e) more or less match?
>
> 2. Please clarify if both antennas can transmit
> simultaneously or
> one is for
> transmit and the other is for receive? If transmit
> simultaneously,
> please
> clarify if the SAR tests was performed with both antennas
> transmitting
> simultaneously.
>
> Note: The antenna unit mounts above building roofs. SAR
> data was
> submitted
> instead of MPE. Unit tested for SAR with antennas at 5 cm
> from
> phantom and
> has 0.7 W/kg. If the unit operates with less than 3 W ERP

(4.92 W

> EIRP), it

> could be categorically excluded from routine MPE evaluation.

> Depending on

> the decision on output power, it could be categorically excluded

> from MPE

> evaluation or we can scale the SAR.

>