

From: Tim Harrington [mailto:THARRING@fcc.gov]

Sent: Thursday, January 23, 2003 2:29 PM

To: jon.hughes@celltechlabs.com

Cc: Martin Perrine; Tim Harrington

Subject: RE: spacing

From these descriptions and ruminations the proposed approach with cover and instructions seems reasonable.

Keep in mind stability consideration below if you have not seen it.

From: Tim Harrington

To: TCB Council

Date: Dec 2002

Subject: Re: Zero Gap SAR measurement for lap held position for GSM-PDA device

Per Rich F. and EAB, response to 12/2/ PDA question is below.

INQUIRY:

"I understand that FCC is requiring zero gap separation on PDA/notebook PC products that have internal radio. The reason behind this requirement is that the users can put the device on his/her laps even though the GSM-PDA may be provided with a belt clip similar to what the cell phone vendors provide. Is FCC imposing this zero gap SAR separation on cell/handset/smart phones vendors as well? For example, will Smart phone manufacturers like Samsung or Nokia or Ericson need to worry about this stuff? If not, then I think that this zero gap requirement will put PDA GSM handheld-platform products in a direct disadvantage relative to the mobile handset counterparts. Reason = their mobile performance and our performance, in term of targeted features, have converged already or will converge very soon. Convergence means that the simple digital assistant, phone, web browsing, SMS functions are all now combined into one device, except theirs is a handset and ours has the PDA form factor. If PDA manufacturer has to meet zero gap and they don't due to the form factor difference, what are the grounds for FCC to ensure competitive fairness even though the device's supported features are virtually identical/converging??"

RESPONSE:

FCC is becoming aware of the potential interactive use of PDAs, smartphones, communicators, palmtops, convergence devices, subnotebooks, PADs, etc. when placed on a user's thigh while seated, in order to free up one hand for other activities or to avoid minor fatigue or discomfort. Belt-clip/holster SAR data may be applicable to a held-on-lap position if such accessories are installed during normal use, and if the device with belt-clip is reasonably stable when placed on

the lap. In both direct- contact and belt-clip-spaced lap cases, it is anticipated that one hand may be used to stabilize the device (not necessarily in-between PDA and lap), while the other hand operates the device, unless the other hand is operating another device or pencil. If certain angles are needed to view the screen, in lap-held use it is anticipated that persons' feet may be propped up to achieve such angles. FCC will generally consider PDAs and smartphones on a case-by-case basis until further notice. The spatial peak SAR limit of 1.6 W/kg in 1-gram is applicable to both head and body positions. FCC welcomes industry comments on whether it is reasonable to expect that this is a normal use position for PDAs. Details of other possible effective schemes that manufacturers may have to comply with FCC RF exposure guidelines throughout device normal use are also welcomed.

---Original Message-----

From: Tim Harrington [mailto:THARRING@fcc.gov]

Sent: Thursday, January 23, 2003 1:43 PM

To: jon.hughes@celltechlabs.com

Subject: RE: spacing

Do you mean without knob? I am unclear on final expected body spacing relative to 8mm "compliance distance" mentioned earlier. Does SAR level or pattern change much with 8mm air vs 8mm leather?

From: Jonathan Hughes

To: Tim Harrington

Date: 1/23/03 4:31PM

Subject: RE: spacing

Tim, the client would ultimately like to go with the cover in the fold-over position requirement if possible.

From: Jonathan Hughes

To: Tim Harrington

Cc: Martin Perrine

Date: 1/23/03 4:19PM

Subject: RE: spacing

Good question, in actual fact on the back of the cover is a swivel stud for the belt-clip to latch on to. This provides a thickness of 10mm. The thickness of the cover with the fold-over is 15mm. Fold-over not necessarily required for compliance based on this. The body-worn manual statements would then make it clear that the leather carry-case is required for lapheld position.

From: Tim Harrington [mailto:THARRING@fcc.gov]

Sent: Thursday, January 23, 2003 10:39 AM

To: jon.hughes@celltechlabs.com

Cc: Martin Perrine; Tim Harrington

Subject: spacing

What is cover only thickness then thickness with fold-over?

From: Jonathan Hughes

To: Tim Harrington

CC: Martin Perrine

Date: 1/23/03 1:28PM

Subject: Phone/PDA Question

Dear Tim,

Our client is producing a handheld/body-worn/lapheld Phone/PDA device with external stubby antenna. The device will be supplied to the user with a belt-clip, headset, and leather carry-case (pouch with fold-over flip-cover type). For lapheld position it was determined that an 8mm spacing would be required from the back side of the unit to ass SAR. It was also determined that if the device is placed inside the leather carry-case with the front flip-cover of the carry-case folded back behind the device, a separation distance greater than 8mm was maintained between the back of the Phone/PDA and the user's lap.

QUESTION:

If the quick start, users manual, and RF exposure statements are explicit in providing the appropriate operating instructions to the user, can this device be certified for body-worn SAR in the lapheld configuration based on the device being placed in the supplied carry-case with the flip-cover open and folded back behind the device?