

## Chris Harvey

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**From:** LXu@metlabs.com  
**Sent:** Tuesday, March 16, 2004 4:52 PM  
**To:** MBosley@metlabs.com  
**Cc:** charvey@ieee.org  
**Subject:** RE: Request for Information MT#15024 Inside Technologies



FCC 225

report.PDF (455 KB)



EMC15024-FCC\_15

2.pdf (340 KB)



EUT back.jpg (204

KB)



EUT front.jpg (207

KB)



EUT open.jpg (203

KB)



PCB back.jpg (133

KB)



PCB front.jpg (152

KB)

All

answers were inserted in each questions

Please find the updated 15.225 report and FCC 15B report

<<FCC 225 report.PDF>> <<EMC15024-FCC\_152.pdf>>

> -----Original Message-----

> From: Chris Harvey [SMTP:Chrisharveyemc@comcast.net]

> Sent: Tuesday, March 16, 2004 12:07 PM

> To: Liming Xu

> Cc: 'Marianne Bosley'

> Subject: Request for Information MT#15024 Inside Technologies

>  
> The following issues have arisen upon initial review of the above  
> referenced application:

> Technical issues (Liming):

> 1. The test report has No AC Conducted Emissions performed, and it is  
> required by 15.207 c

> A: The AC Conducted Emissions was performed and reported in Pt.15B  
> report. I can add in to the 15.225 report if you want.

> 15.207(c) Measurements to demonstrate compliance with the  
> conducted limits are not required for devices which only employ  
> battery power for operation and which do not operate from the AC power  
> lines or contain provisions for operation while connected to the AC  
> power lines. Devices that include, or make provision for, the use of  
> battery chargers which permit operating while charging, AC adaptors or  
> battery eliminators or that connect to the AC power lines indirectly,  
> obtaining their power through another device which is connected to the  
> AC power lines, shall be tested to demonstrate compliance with the  
> conducted limits.

> 2. The Executive Summary states that the testing was performed from 30  
> MHz and up, but does not mention the fundamental at 13.56 MHz and 2nd  
> harmonic which are below 30MHz. Also the loop antenna is not listed in  
> this section of the report.

> A: Corrected

>

>

> 3. The report indicates loop antenna was oriented around vertical, but

> not around the horizontal axis. Was this antenna orientation

> performed per FCC requirements?

> A: the EUT was scanned with loop antenna in Vertical and horizontal

> orientations. the statement was added in report

>

> 4. The distance correction factor for frequencies below 30MHz is

> 40dB/decade. You can take a greater distance correction factor, since

> it appears that 20dB/decade was used.

> A:  $20 \log( d1/ d2 )$  or 20dB/decade for frequency between 4.642MHz

> and 30MHz.

>  $40 \log( d1/ d2 )$  or 40dB/decade for frequency between 1.0 MHz

> and 4.642MHz .

>  $60 \log( d1/ d2 )$  or 60dB/decade for frequency between 0.009MHz

> and 1.0MHz. this is from ETSI 300 330 - Annex J

> I can not find any FCC publication for this.

> If you want me use 40dB/decade for all frequency between 0.009MHz and

> 30MHz.

> I will correct the report.

>

> 5. On Pg 16 of 17, the EMI receiver appears out of calibration. A.

> corrected.

>

>

> 6. Bandwidth and band edge plot per 15.215c is not included in the

> report:

> A: Added into report

>

> 15.215(c) Intentional radiators operating under the alternative

> provisions to the general emission limits, as contained in Sections

> 15.217 through 15.255 and in Subpart E of this part, must be designed

> to ensure that the 20 dB bandwidth of the emission is contained within

> the frequency band designated in the rule section under which the

> equipment is operated. The requirement to contain the 20 dB bandwidth

> of the emission within the specified frequency band includes the

> effects from frequency sweeping, frequency hopping and other

> modulation techniques that may be employed as well as the frequency

> stability of the transmitter over expected variations in temperature

> and supply voltage.

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> 7. There is no mention of the detector used for making these

> measurements (QP is required) or the bandwidths used for measurements

> below 30MHz. Please amend the report.

> A: Added into report

>

>

> 8. Please provide External and Internal Photographs of the EUT.

> A: see the attachements ( External: EUT back, front and open.

> Internal: PCB back and front )

>

> <<EUT back.jpg>> <<EUT front.jpg>> <<EUT open.jpg>> <<PCB

> back.jpg>>

> <<PCB front.jpg>>

>

>  
> 9. Please note that 15.225 has changed significantly, including a  
> raising of the limits in the 13.553-13.567 band and limit in the  
> 13.110-14.010 MHz bands.  
>  
> Ok  
>  
> Administrative issues (Marianne):  
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> 10. There is not confidentiality Letter in the exhibits and it appears  
> as though this was desired by the applicant. Please confirm from  
> applicant.  
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>  
> 11. The Applicant name on the FCC Web Site is Inside Technologies,  
> however the name used throughout the application is Inside  
> Contactless. Please correct the discrepancy.  
>  
>  
>  
> 12. Please provide a specific exhibit for label location.  
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>  
> Please respond to all the issues together in one response, but please  
> feel free to contact me with individual questions if you have them.  
>  
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>  
> Best regards,  
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>  
> Chris Harvey  
>  
> charvey@ieee.org <mailto:charvey@ieee.org>  
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> 443-622-3300  
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