

Dear Mr. Harington,

Herewith we send you the response of the test laboratory: TNO Electronic Products & Services (EPS) B.V. As TCB we found this explanation reasonable and we hope that you can accept this to. We also have modified the Grant with the Maximum measured SAR value.

Best regards,

Hans Breevoort  
Coordinator Product Certification

-----Original Message-----

**From:** P.A.J.M. Robben [<mailto:robben@eps.tno.nl>]  
**Sent:** dinsdag 9 september 2003 15:19  
**To:** Hans Breevoort  
**Subject:** RE: Vragen FCC  
**Importance:** High

Hans,

Hierbij de response op de opmerkingen van de FCC t.a.v. de Buffalo filing van een tijdje geleden.

Ik hoop dat dit voldoende is.

Groeten,  
Pieter

1.

	EMC (dBm)	SAR (dBm)	Difference SAR/EMC (dBm)
Channel 1	24.00	24.27	+0.27
Channel 6	24.30	25.40	+1.10
Channel 11	23.50	24.01	+0.51

We are aware of the requirement of the FCC concerning the issue that the RF output power in the SAR test report and the EMC test report must be within 5%. However, this requirement totally ignores the fact that there is something called measurement uncertainty. A typical test setup for measuring conducted RF output power has a typical measurement uncertainty, as calculated while using the procedures in ETSI ETR 028, in the range of -1.2 dB/+1.2 dB.

Although the FCC requires a maximum difference of 5%, where the SAR test report must contain the higher value, it is a technical impossibility to achieve such a low measurement uncertainty which then should be in the range of -0.3 dB/+0.5 dB. It is technically not possible to comply with the 5% requirement.

The only situation where this is possible, in case a separate SAR lab and EMC lab is being used, is when both labs make use of the same configuration/sample with fixed power settings. In such a situation there would be no difference.

Since the values in the SAR test report are all higher than in the EMC test report and while the conducted RF power measurement values fall within the measurement uncertainty of the conducted RF power measurement setup, we feel that the SAR values in the SAR test report represent the worst case values which can be obtained.

2.

We think that this filing is not similar to a 2.933 ID change since an antenna connector has been added to the original design. It is more similar to a Class II filing. A decision was made to retest this card due to several peculiar issues we found in the original test report. However, the SAR value on the Grant appears not to be the highest value as reported in the SAR test report. It should indeed be changed to 1.243 W/kg (the value which is on the original Grant).

3.

The additional antenna connector is intended for connecting external antennas and is a non-standard connector. The customer is aware of the FCC regulations in this matter. A FCC Grant was only requested for the configuration as filed in the application.

4.

The addition of the connector should not be a problem regarding the maximum reported SAR values in the SAR test report which was filed at the FCC. The antenna connector is a non-radiating metallic structure. Apart from that, the connector is not in the vicinity of any metallic parts which would cause concern for changed current distribution through such metallic parts. However, we are prepared to retest the device if necessary/required.

-----Original Message-----

**From:** [Hans Breevoort](mailto:hbreevoort@telefication.com) [mailto:[hbreevoort@telefication.com](mailto:hbreevoort@telefication.com)]  
**Sent:** Thursday, August 07, 2003 03:48 PM  
**To:** [robben@eps.tno.nl](mailto:robben@eps.tno.nl)  
**Subject:** FW: Vragen FCC

Beste Pieter,

Hierbij de vragen van de FCC. Vandaag heb ik geen tijd om hierna te kijken maar misschien heb jij wel tijd om hier al wat mee te doen?

Groeten,  
Hans

-----Original Message-----

**From:** [oetech@fccsun34w.fcc.gov](mailto:oetech@fccsun34w.fcc.gov) [mailto:[oetech@fccsun34w.fcc.gov](mailto:oetech@fccsun34w.fcc.gov)]  
**Sent:** woensdag 6 augustus 2003 17:11  
**To:** certification  
**Subject:**  
**To:** Wouter Blom  
**From:** **Tim Harrington**  
[tharring@fcc.gov](mailto:tharring@fcc.gov)  
**Re:** FCC Equipment Authorization Branch  
FCC ID: FDI-09101744-0

Applicant: Melco Inc  
Correspondence Reference Number: 9103  
731 Confirmation Number: TC970429  
Date of Original Email: 08/06/2003

Subject:

- 1) Please explain differences in output power results between SAR and EMC reports, to support applicability of SAR results.

- 2) This is similar to a 2.933 ID change filing - SAR on grant should agree with original.
- 3) What is purpose of added connector? Explain compliance with 15.203. Use with other antennas needs separate approvals.
- 4) Metallic changes typically require SAR test, at least for max. SAR configuration of original filing. Please comment, and/or submit new SAR evaluation.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of the original e-mail date may result in application dismissal pursuant to Section 2.917©. DO NOT Reply to this email by using the Reply button. In order for your response to be processed expeditiously, you must upload your response via the Internet at [www.fcc.gov](http://www.fcc.gov), E-Filing, OET TCB Electronic Filing, TCB Login. If the response is submitted through Add Attachments, a message which informs the processing staff that a new exhibit has been submitted must also be submitted via Submit Correspondence. Also, please note that partial responses increase processing time and should not be submitted. Any questions about the content of this correspondence should be directed to the e-mail address listed below the name of the sender.