RE: FCC ID: BAB271000-231
Attention: Dennis Ward

The following is in response to questions posed with regard to the above application.

1. Please note that internal photos are generally not capable of being held confidential. The only exception is in cases where the internal boards are 'potted' and the case is not capable of being opened without destroying the contents. Please revise the request for confidentiality to remove the internal photos as confidential. Alternately, please explain how the device is 'potted' or how the internal boards are made inaccessible to the user.

We have requested of the manufacturer that the internal photos not be held confidential. As soon as we have permission, we will notify you.

2. FYI – no action needed. The conducted emissions section 4.2 is incorrect. As of Dec 2002 the conducted emissions for Part 15 conducted emissions is QP and average from 150kHz to 30MHz.

Thank you. We will incorporate this in our future reports.

3. Please note that the equipment specification provided with the MPE calculation sheet states that the maximum EIRP of the system is 40dBm. This means the maximum ERP is approximately 37.85dBm. This would mean the ERP of the device, as listed in the specification, could be greater than 3w ERP (it could be up to 6w ERP). Please note that 2.1091 specifically states that any mm wave device under 15.253 capable of operating with an ERP of 3 watts or more requires exposure evaluation (SAR testing) even for mobile devices. Please also note that the MPE calculations provided state that the device antenna gain is 31.5dBi (29.35dBd) and 5dBm power. The measured power used in the MPE calculation and the power capable as stated in the technical documentation do not match. Please revise your technical documentation to clearly indicate that under no circumstance is the ERP of this device as required by 2.1091 and the FCC mm wave accepted test procedure to be greater than 3 watts. Please provide evidence of how this restriction is to be met. Alternately, this device must be submitted to the FCC along with SAR testing at the rated technical specification EIRP of 40dBm (37.85 ERP).

After speaking with the manufacturer, it appears that the equipment specification for transmitter power does not account for loss in the system. Thus, we have uploaded a new RF Exposure exhibit that computes the DUT EIRP from the measured power density at 3 m. This updated exhibit demonstrates that the DUT ERP is less than 3W.

4. Please note that the accepted FCC test procedure for calculating the power or power density for mm wave devices requires a correction factor to be used when the resolution bandwidth of the analyzer is less than the emission bandwidth of the device. The emission bandwidth appears greater than 1MHz (see technical specification). Your report does not appear to include this bandwidth correction factor. Please recalculate your ERP/EIRP data providing the EBW/RBW correction factor as required by the accepted FCC mm wave test procedure. Alternately please show a plot of the 26dB bandwidth as being less than 1MHz.

Per the FCC mm-wave test procedure, the DUT has been tested with the carrier unmodulated. (See test report Figure 5.4.) Recall, the DUT is CW FM, modulated at a rate of 375 Hz. The FCC mm-wave test procedure correction factor does not address this type of signal; it assumes noise like spread spectrum emission. In slow modulated FM CW case, the fixed frequency CW peak emission is the same as the slow modulated FM CW peak emission. (See test report Figs. 5.2 and 5.4.)

5. Please note that your report states "Digital Radiate Emissions" as class A and then states "Not applicable". Please note that all intentional radiators are subject to 15.209 which is equivalent to

the class B limits. Also please note that while no emissions may have been found, the limits are still applicable. Please verify that no emissions were found and that the table designation of ‘not applicable’ is to indicate this condition and not that the limits themselves are not applicable.

The DUT in question is manufactured for use in a motor vehicle. In accordance with Section 15.103(a), digital devices utilized exclusively in any transportation vehicle including motor vehicles and aircraft are exempt. Thus, the section of the report addressing “Digital Radiated Emissions” states that the limits as a “digital device” are not applicable. Note that all emissions from the device that deal with the intentional radiator have been reported in the section titled “Microwave Radiated Emissions”.