

Modular Approval Request Letter

Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

May 29, 2020

Dear Application Examiner,

TomTom International B.V, **Wireless module**, FCC ID: S4LFF50 would like to have your authorization as a modular approval specific to the mobile RF exposure condition.

The requirements of KDB996369 have been met and shown on the following statements.

1. "The modular transmitter must have its own RF shielding." The radio portion of this module has been shielded, please see exhibition External Photo.
2. "The modular transmitter must have buffered modulation/data inputs." The EUT has buffered data inputs, it is integrated in chip **CYW43455**.
3. "The modular transmitter must have its own power supply regulation." The part number of this regulator is **CYW43455**.

Power supply regulation is the ability of a power supply to maintain an output voltage within a specified tolerance as referenced to changing conditions of input voltage and/or load.

Most electronic equipment is powered from DC voltage derived from the unregulated AC mains voltage. A rectifier circuit converts the AC to DC which is then conditioned to meet the circuit or load requirements.

The rectified voltage follows the AC input and will vary as the mains vary. The variations may affect the circuit performance and is undesirable in sensitive equipment such as computers, sensor and precision circuits. In addition, components and circuits will only operate or perform efficiently when the power supply is within a certain limit. Anything beyond the design limit will either destroy the components and equipment or be insufficient to power the equipment such that it will not turn on or simply malfunction.

The mains supply voltage is usually supposed to remain within certain limits and most equipment are designed o accommodates these. However, these variations, sometimes beyond limits, may cause problems in the sensitive equipment since they will cause variations in the output voltage of the power supply.

Controlling the voltage variations are beyond the control of the equipment manufacturer and the consumer. For this reason, the best the designers can do is to ensure that the power supply output voltage remains fairly constant over a wide range of input voltages.

A power supply with regulation provides an output that remains constant irrespective of variations in the input mains voltage. A typical power supply unit consists of several blocks depending on the design and stability required. A simple linear supply will have a transformer, rectifier, filter and a regulator. A switched mode supply contains the four building blocks and additional blocks such as the inverters and feedback stages.

4. "The modular transmitter must comply with the antenna requirements of section 15.203 and 15.204(C)." The EUT meets the FCC antenna requirements. The spurious emission, unique antenna connector and photo of antennas are shown in the test report.
5. "The modular transmitter must be tested in a stand-alone configuration" The EUT was tested in a stand-alone configuration via a **SDIO extender**. Please see section Photographs of Test Configuration in the test report.
6. "The modular transmitter must be labeled with its own FCC ID number." Please see exhibition Label Sample for the FCC ID of this module. And also in the exhibition Users Manual, there are instructions give to the OEM on how to label the end product.
7. "The modular transmitter must comply with any specific rule or operating requirements applicable to the

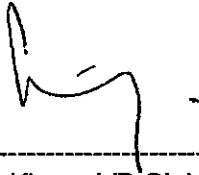
FCC ID: S4LFF50

transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements." The EUT is compliant with all applicable FCC rules. Detail instructions for maintaining compliance are given in the Users Manual.

8. "The modular transmitter must comply with any applicable RF exposure requirements." The EUT is compliant with all applicable RF exposure requirements. RF Exposure is addressed in the RF exposure exhibition.

Please contact me if you have any further questions. Thanks for your attention.

Best Regards,



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