

Robert Bosch, GmbH
Request for Grant of Special Temporary Authority
File No. 1515- EX-ST-2017

Narrative Exhibit Describing Operation

This application, filed by Robert Bosch, GmbH, an international manufacturer of tools, automotive and industrial equipment and consumer products, requests special temporary authority during a 180-day period beginning November 11, 2017 and ending May 10, 2018 to operate an anti-collision radar system aboard the Green Line trains of the Massachusetts Bay Transportation Authority (MBTA) (known locally as the “T”) in Boston, Massachusetts. The purpose of the tests is to test the use of these devices, certified for automotive anti-collision applications, aboard railway vehicles.

The system is intended to avoid collisions of vehicles by means of early warning. It consists of a multi-purpose camera, a radar sensor and a control unit. It monitors the track ahead and any possible obstacles in front of the vehicle in real time. If it detects a potential collision, it sends a warning to the driver. Should the driver not respond or respond too late, the collision warning system can initiate automatic braking.

The radar sensor is the only RF device in the system. It is certified under Part 15 of the Commission’s rules, under FCC Identifier NF3-MRREVO14F as a Field Disturbance Sensor Motion Detector. It operates pursuant to Section 15.253 of the Commission’s rules. The reason that Special Temporary Authority is required for these tests however is that in the *Report and Order*, FCC 17-94, *Amendment of Parts 1, 2, 15, 90 and 95 of the Commission’s Rules to Permit Radar Services in the 76-81 GHz Band* (Docket 15-26, released July 14, 2017), the Commission decided henceforth to regulate 76-81 GHz vehicular radars under a new Subpart M of Part 95 instead of Part 15. At Paragraph 57 of the Report and Order, the Commission specifically confirmed that “Vehicular radars currently certified under Part 15 to operate in the 76-77 GHz band need not be re-certified under Part 95 to continue to operate in that band.” However, any changes to such previously certified devices will need to comply with the applicable Part 95 rules.

So, it is clear that the certified radar sensor operated as part of this anti-collision system does not require any further grant of equipment authorization in order to be deployed pursuant to Part 95 rules which will become effective on October 20, 2017. However, it is not yet absolutely clear that 76-77 GHz radars can be used on vehicles other than automobiles. Bosch filed a KDB Request for a Major Guidance Document (# 653005) on May 26, 2017. The document requested clarification on the scope of vehicles on which 76-77 GHz vehicular radar sensors which were certified pursuant to Section 15.253(c) of the Commission's Rules could be mounted. On June 1, 2017 the Commission a Draft Laboratory Division Publications Report on this subject, which read in part as follows:

The Part 15 rules do not specifically define vehicles in Section 15.253; however, in Section 15.515 which specifies “Technical requirements for vehicular radar system”, the rule permits use of sensors “mounted in terrestrial transportation vehicles”. Therefore, sensors certified under Section 15.253(c) for use on vehicles can be deployed, without

further certification, on railroad train locomotives; train cars; monorails or trams; construction vehicles; farming vehicles such as tractors and harvesters; motorcycles; scooters and motorbikes; mobile scissor-lifts and mobile work platforms; and boats and ships operated within territorial waters of the United States. The overall installation must comply with all the conditions of grant of certification and the relevant technical standards for such operation.

No comments were filed with respect to it and it is currently listed as one of seven expired draft publications but it has not yet been finalized as a Major Guidance Document. Because the document is not finalized; because it has not yet been determined that the guidance provided therein, if finalized, pertaining to Section 15.253(c) applies equally to Part 95-regulated vehicular radar sensors -- including the range of vehicles on which such radar sensors could operate after the *Report and Order* effective date of October 20, 2017; and given the fact that the *Report and Order* actually eliminated the entirety of Section 15.253 and did not add any definition of "vehicle" in the Part 95 rules (Section 95.3303) to inform manufacturers of radar sensors as to the scope of "vehicles" on which certified Section 15.253(c) radar sensors could operate, Bosch believes that the most prudent course of action is to request the instant STA for testing and feasibility studies of the certified devices on railway trains.

The Stop Buzzer contact in the United States is Mr. Florian Waldenmaier, whose direct phone number is +49 711 811-47863. Mr. Waldenmaier is an employee of Bosch. Undersigned counsel will also serve as a stop buzzer contact, at 301-351-3795.

Should any question arise concerning this application, kindly notify undersigned counsel.

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