



Mercedes-Benz

Mercedes-Benz USA, LLC  
A Daimler Company

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

In the Matter of	)	
	)	
Amendment of Section 15.253 of the	)	
Commission's Rules regarding operation	)	Docket No. RM-11555
within the band 76.0-77.0 GHz	)	
(vehicle radar systems)	)	
	)	
	)	

TO: The Commission

**SUPPORTING COMMENTS  
BY THE  
MERCEDES-BENZ USA, LLC.**

The MBUSA hereby submits the following supporting comments in the above captioned matter.

**BACKGROUND**

The Mercedes-Benz USA, LLC (hereinafter MBUSA) submits supporting comments on behalf of its parent company, Daimler Aktiengesellschaft (DAG). MBUSA is responsible for the sales, marketing and customer service for all Mercedes-Benz and Maybach products in the United States and offers drivers the most diverse line-up in the luxury segment with 12 model lines ranging from the sporty C-Class to the flagship S-Class sedans and CL-Class coupes.

**Automotive Radar Systems**

We wish to express our support to Toyota Motor Corporation's (TMC) petition that the Federal Communications Commission should amend 47 C.F.R., Part 15, Section 15.253, "Operation with the bands 46.7-46.9 GHz and 76.0-77.00 GHz,"<sup>1</sup> in order to enable the introduction of new vehicular technologies in the United States that can help collision avoidance and safety, and also contribute to driver convenience. In 1995, the FCC adopted the rules and electromagnetic emission limits for vehicular radar systems set forth in Section 15.253 of the Commission's Rules and Regulations.<sup>2</sup> Due to this rule change, in the Fall of 1999, Mercedes-Benz was the world's first vehicle manufacturer to

<sup>1</sup> See 47 C.F.R. Section 15.253

<sup>2</sup> See In the Matter of Amendment of Parts 2, 15, and 97 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications, ET Dkt 94-124, *First Report and Order and*

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introduce Adaptive Cruise Control (ACC) on its flagship 2000MY S-Class sedan in the United States market. Since then, there has been significant growth in the use of automobile radar systems, and it is anticipated that these systems will become relatively commonplace within a few years as a result of consumer demand and the driver's desire to increase vehicular safety and comfort. In fact, beginning with 2010MY models, ACC is available as standard equipment, or as an option, on approximately 50% of Mercedes-Benz vehicle lines.

In 2002, the Commission itself noted its expectation that vehicular radar will soon become "as essential to passenger safety as airbags in motor vehicles."<sup>3</sup> Indeed, this is in fact happening and the Commission can take great pride in knowing that the deployment of these vehicular technologies will result in improved collision mitigation between vehicles by improving overall highway safety as well as contributing in minimizing the amount of collision energy. To increase user demand, new 'advanced' safety-related functions are combined with comfort functions; such as an enhanced ACC system which also enables the use of ACC in dense traffic at low speeds and in "Stop & Go" situations.

However, given the acknowledged important public safety benefits that support the continued development and deployment of vehicle radar systems, TMC's petition respectfully urges that the Part 15 emissions limits governing 76-77 GHz systems be modified. The new regulation should be consistent with the European regulation and not differentiate between a vehicle 'in motion' or 'not in motion.' Instead, it should be based on the potential for harmful electromagnetic interference only.

MBUSA strongly supports TMC's position on this issue. The Commission for years has been pursuing the express goal of "ensur[ing] that vehicle radar systems will have sufficient spectrum and design flexibility to develop their systems successfully."<sup>4</sup> By being proactive, the Commission has taken affirmative measures to ensure that interference and emissions limits do not "increase the cost" of unlicensed vehicular radar devices at 76-77 GHz in a manner that would

result in delay or interruption of the availability of these beneficial devices to the public. Depriving the public or eliminating the availability of these unlicensed devices, which will enhance the safety of travel of the public via motor vehicles would be contrary to the public interest.<sup>5</sup>

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*Second Notice of Proposed Rulemaking*, FCC 95-499, 11 FCC Rcd 4481 (1995) (Millimeter Wave First Report and Order).

<sup>3</sup> See *In the Matter of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems*, Report and Order, 17 FCC Rcd. 7435, 7459 (2002).

<sup>4</sup> See *Millimeter Wave First Report and Order* at 4490.

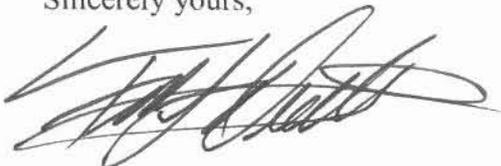
<sup>5</sup> See *In the Matter of Amendment of Parts 2, and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications*, *Third Memorandum Opinion and Order*, 15 FCC Rcd 10515, 10518 (2000).

If the Commission amends Section 15.253 of its Rules and Regulation to adopt reasonable and supportive limits for radiated emissions levels in the 76-77 GHz frequency band, then MBUSA is very confident that these technologies will be able to be further deployed along other vehicle lines by other manufacturers.

MBUSA also strongly endorses all comments filed by the international Strategic Automotive Radar frequency Allocation (SARA) consortium. SARA has been instrumental in promoting the frequency management for automotive radar worldwide. With the Commission amending its rules to eliminate the “not in motion” criteria in Section 15.253 (b)(1), and replacing the existing applicable power density limits specified in Section 15.253 (b)(2) and (b)(3) with a uniform limit for peak power not to exceed 55 dBm EIRP, then the current FCC Rules for 47 C.F.R., Part 15, Section 15.253 rules will be in conformance with existing international standards and recommendations. This will allow SARA members and all automotive manufacturers to incorporate more sophisticated ACC applications, such as ‘Stop and Go.’ Worldwide harmonized regulations will allow standardized technologies resulting in scale effects making these safety technologies more affordable, more quickly for all vehicle models and not just luxury lines thereby further supporting greater overall highway safety.

If you have any inquiries or correspondence concerning this matter, please feel free to contact Dan Selke, of my staff, at 201-573-2616, or [Daniel.Selke@mbusa.com](mailto:Daniel.Selke@mbusa.com) .

Sincerely yours,



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