

**Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of

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Unlicensed Use of the 6 GHz Band

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ET Docket No. 18-295

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**COMMENTS OF  
TOYOTA MOTOR CORPORATION**

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Toyota is generally supportive of Commission's efforts to promote new opportunities for unlicensed use in the portions of the 1200 megahertz of spectrum in the 5.925 – 7.125 GHz (6 GHz) band. Toyota recognizes and appreciates the need for additional unlicensed spectrum to support the continued proliferation of wireless devices and promote new technology and services.

As you are aware, the Commission has allocated 75 MHz of spectrum in the 5.9 GHz band for Dedicated Short Range Communications (DSRC).<sup>1</sup> DSRC enables direct vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communications. By helping to identify potential hazards that are beyond the range or capability of sensor technology, V2V and V2I communication can contribute to a safer driving environment and help drivers realize a future with zero fatalities from crashes, better traffic flow, and less congestion.

The Commission must ensure that any unlicensed use of the spectrum adjacent to the 5.9 GHz band protects incumbent, licensed DSRC service from harmful interference. As the Commission is aware, DSRC has already been deployed in the United States using all channels in the band. DSRC-equipped vehicles were first deployed in the United States in 2017, with more expected to follow in both light-duty and heavy-duty vehicles, and there are already thousands of deployed or planned DSRC-enabled roadside units in dozens of states that support a variety of safety critical applications.

While DSRC safety applications are integrated into and spread across the entire 5.9 GHz band, Channel 184 (5915 – 5925 MHz) – the channel immediately adjacent to the 6 GHz band -

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<sup>1</sup> See In the Matter of Amendment of Parts 2 and 90 of the Commission's Rules to Allocate the 5.850-5.925 GHz Band to the Mobile Service for Dedicated Short Range Communications of Intelligent Transportation Services, ET Docket No. 98-95, *Report and Order* (1999)

has been designated by the Commission specifically and exclusively for “public safety applications involving safety of life and property.”<sup>2</sup> Channel 184 allows for critical safety functions that require longer range, such as notification that an emergency responder vehicle is approaching or the ability of first responders to change traffic lights to red to allow for quicker and more efficient travel to the scene of an incident. Harmful interference to this type of communication is likely to have significant safety-related impacts and must therefore be prevented by the Commission.

In the Notice of Proposed Rulemaking, the Commission proposes that the emissions below 5.925 GHz from unlicensed devices operating in the 6 GHz band not exceed an EIRP of -27 dBm/MHz.<sup>3</sup> Toyota is concerned that, even at this proposed level, there is a potential for harmful interference to DSRC reception, particularly if an unlicensed device operating in the 6 GHz band is transmitting from within - or immediately adjacent to - a DSRC-enabled vehicle. This potential harmful interference to DSRC should be fully considered by the Commission. In addition, because of the even greater potential for harmful interference to DSRC, the Commission should reject any proposal to increase the emissions level beyond what is currently contemplated.

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<sup>2</sup> 47 CFR §85.1511

<sup>3</sup> See *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Proposed Rulemaking, ET Docket No. 18-295, ¶ 82 (2018)