



PUBLIC NOTICE

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**OFFICE OF ENGINEERING AND TECHNOLOGY SEEKS COMMENT ON
INFINEON TECHNOLOGIES AMERICAS CORP. REQUEST FOR WAIVER OF SECTION
15.255(c)(3) OF THE COMMISSION'S RULES FOR SHORT-RANGE INTERACTIVE MOTION
SENSORS FOR IN-VEHICLE RADAR OPERATION IN THE 57-64 GHz BAND**

ET Docket No. 20-263

Comment Date: September 21, 2020
Reply Comment Date: October 19, 2020

On July 23, 2020, Infineon Technologies Americas Corp. (Infineon) filed a request for waiver of section 15.255(c)(3) of the Commission's rules¹ to allow Infineon to market its BGT60 family of radar modules. These modules would operate as unlicensed devices in the 57-64 GHz band at a higher power than specified in the rule, limited to operation within automotive vehicle passenger cabins.²

Infineon indicates that its devices would be used for in-vehicle child safety systems and other in-cabin safety-related monitoring, such as seatbelt reminder, airbag optimization, and driver's health and attention.³ In particular, Infineon describes the risks of inadvertently leaving children in hot vehicles, and an automobile industry commitment to providing a widely deployed rear seat reminder no later than the 2025 model year.⁴

Section 15.255(c)(3) requires devices used for short-range interactive motion sensing to comply with a peak transmitter conducted output power limit of -10 dBm and a peak equivalent isotropically radiated power (EIRP) limit of +10 dBm. Infineon requests to operate its devices under the same technical parameters as those we granted to Google in 2018.⁵ Under that waiver, we permitted Google to deploy its Soli sensor technology to enable touchless control of device functions or features (such as its Pixel phone) at +10 dBm peak transmitter conducted output power, +13 dBm peak EIRP level, and +13 dBm/MHz peak power spectral density, with a 10 percent duty cycle in any 33 milliseconds (ms) interval.⁶

¹ 47 CFR § 15.255(c)(3).

² Infineon Technologies Americas Corp. Request for Waiver (*Request*), filed July 23, 2020.

³ *Id.* at 5.

⁴ *Id.* at 6.

⁵ *Id.* at 3-4. We note that Infineon only seeks a waiver of 15.255(c)(3). Google also received a waiver of 15.255(b)(2), which restricts airborne operation; Infineon's proposed applications are limited to in-cabin automotive passenger vehicles. *Id.* at 5.

⁶ *Google LLC Request for Waiver of Section 15.255(c)(3) of the Commission's Rules Applicable to Radars used for Short Range Interactive Motion Sensing in the 57 64 GHz Frequency Band*, Order, 33 FCC Rcd 12542 (OET 2018). Google developed the Soli sensor to capture motion in a three-dimensional space using a radar beam, which enables persons to use gestures and motions to control a smartphone's functions or features. See www.google.com/soli.

Infineon also claims that its modules will operate as short range interactive motion sensing devices and should be treated the same as the Google Soli device; however, should the Commission decide otherwise, it also requests a waiver of section 15.255(a)(2) of the rules to allow its modules to operate as a field disturbance sensor (FDS) while being inside a vehicle in motion.⁷ Section 15.255(a)(2) prohibits operation of FDS within the 57-64 GHz band unless those sensors are employed for fixed operation or in short range interactive motion sensing applications.⁸

Infineon asserts that the life-saving technology associated with Infineon's BGT60 family of radars justifies granting its request in near term rather than waiting for the completion of a lengthy rulemaking process to modify our rules, as has been suggested by commenters in similar waiver requests that are pending before the Commission.⁹ Infineon further requests that the waiver, if granted, clearly apply to BGT60 radars that will be certified under the Rules as modular transmitters, or that are otherwise incorporated, without change, as components by Infineon or Infineon's customers into other vehicular in-cabin devices or systems.¹⁰

The Office of Engineering and Technology (OET) seeks comment on Infineon's waiver request.

To develop a complete record on the issues presented by this request, the proceeding will be treated, for *ex parte* purposes, as a "permit-but-disclose" proceeding in accordance with Section 1.1200(a) of the Commission's rules, subject to the requirements under Section 1.1206(b). We have opened a new docket, ET Docket 20-263 to facilitate consideration of this request and have moved Infineon's submission into this docket.¹¹ Parties should file all comments and reply comments in ET Docket 20-263.

Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://apps.fcc.gov/ecfs/>.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

⁷ Request at 2.

⁸ 47 CFR § 15.255(a)(2).

⁹ Request at 15-16. See e.g., *Vayyar Imaging Ltd. Request for Waiver of Section 15.255(c)(3) of the Commission's Rules for In-Vehicle Radar Operation in the 57-64 GHz Band*, Public Notice, DA 20-68, 35 FCC Rcd 500 (2020); *Valeo North America Inc. Request for Waiver of Section 15.255(c)(3) of the Commission's Rules for In-Vehicle Radar Operation in the 57-64 GHz Band*, Public Notice, DA 20-486, 35 FCC Rcd 4582 (2020).

¹⁰ Request at 6, fn.19.

¹¹ Infineon filed its waiver request electronically as a non-docketed proceeding in the Commission's Electronic Comment Filing System at https://www.fcc.gov/ecfs/search/filings?proceedings_name=INBOX-PART15&sort=date_disseminated,DESC.

- Effective March 19, 2020, and until further notice, the Commission no longer accepts any hand or messenger delivered filings. This is a temporary measure taken to help protect the health and safety of individuals, and to mitigate the transmission of COVID-19.¹²
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Parties should also send a copy of their filings to Anh T. Wride, Office of Engineering and Technology, Federal Communications Commission, Room 7-A363, 445 12th Street, S.W., Washington, D.C. 20554, or by e-mail to anh.wride@fcc.gov.

By the Acting Chief, Office of Engineering and Technology

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¹² See *FCC Announces Closure of FCC Headquarters Open Window and Change in Hand-Delivery Policy*, Public Notice, DA 20-304 (March 19, 2020), <https://www.fcc.gov/document/fcc-closes-headquarters-open-window-and-changes-hand-delivery-policy>.