



# PUBLIC NOTICE

Federal Communications Commission  
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**OFFICE OF ENGINEERING AND TECHNOLOGY SEEKS COMMENT ON  
IEE SENSING, INC. REQUEST FOR WAIVER OF SECTIONS 15.255(c)(2) and/or 15.255(c)(3)  
OF THE COMMISSION'S RULES FOR IN-VEHICLE RADAR OPERATION IN THE  
60-64 GHZ BAND**

**ET Docket No. 20-435**

**Comment Date: February 1, 2021**  
**Reply Comment Date: February 16, 2021**

On November 16, 2020, IEE Sensing, Inc. (IEE Sensing) filed a request for waiver of sections 15.255(c)(2) and/or 15.255(c)(3) of the Commission's rules<sup>1</sup> to allow IEE Sensing to obtain a grant of equipment authorization for its VitaSense sensor, a radar operating in the 60-64 GHz band, at a higher power than specified in the rule, limited to operation within automotive vehicle cabins.<sup>2</sup>

According to IEE Sensing, the VitaSense is designed to detect the breathing and movements of children inadvertently left in an automobile to alert the vehicle's alarm system. IEE Sensing states that the VitaSense is intended to be integrated into the vehicle by the vehicle manufacturers and not as an after-market product.<sup>3</sup> IEE Sensing indicates that its device would detect unattended children while the vehicle is completely stopped, thus it considers the VitaSense to be a fixed radar under the provisions of section 15.255.<sup>4</sup>

IEE Sensing states that the VitaSense needs a bandwidth of four gigahertz to eliminate errors in detection, thus it requests a waiver of the 500-megahertz bandwidth requirement in section 15.255(c)(2). This rule requires fixed field disturbance sensors/radars to comply with a 500-megahertz bandwidth contained within the 61.0-61.5 GHz band, and limits equivalent isotropically radiated power (EIRP) levels outside of this band (but within the 57-71 GHz band) to +10 dBm average EIRP and +13 dBm peak EIRP. IEE Sensing affirms that the VitaSense complies with the EIRP limits of this rule section across its proposed operating 60-64 GHz frequency band.

In the alternative, if waiver of the above bandwidth is not possible, IEE Sensing requests waiver of section 15.255(c)(3) to allow the VitaSense to operate as a short-range interactive motion sensing

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<sup>1</sup> 47 CFR §§ 15.255(c)(2) & (c)(3).

<sup>2</sup> *Request of IEE Sensing Inc. for Waiver of Part 15 of the Commission's Rules to Permit Certification of the VitaSense Unattended Child Detection Sensor in the 60-64 GHz Band*, Petition for Waiver (filed Nov. 16, 2020) (*Request*). IEE Sensing supplemented its request on December 1, 2020 to provide additional detail. IEE Sensing, Inc., Clarification to the IEE Sensing Petition for Waiver (filed Dec. 1, 2020) (*Supplement*).

<sup>3</sup> *Request* at 2.

<sup>4</sup> *Id.* at 1.

device with the same technical parameters as those we granted to Google in a 2018 waiver order.<sup>5</sup> 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% duty cycle in any 33 milliseconds (ms) interval.<sup>6</sup> Section 15.255(c)(3) requires field disturbance sensors/radars operating across the 57-71 GHz band to comply with a peak transmitter conducted output power limit of -10 dBm and a peak EIRP limit of +10 dBm.<sup>7</sup>

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). IEE Sensing filed its petition and subsequent clarification electronically as a non-docketed proceeding in the Commission’s Electronic Comment Filing System.<sup>8</sup> We have opened a new docket, **ET Docket 20-435** to facilitate consideration of this request and have moved IEE Sensing’s submission into this docket. Parties should file all comments and reply comments in **ET Docket 20-435**.

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.

- 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.<sup>9</sup>

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<sup>5</sup> *Supplement at 2* (citing *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*, ET Docket No. 18-70, Order, 33 FCC Rcd 12542 (OET 2018) (Google Waiver)). 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](http://www.google.com/soli). We note that IEE Sensing only seeks a waiver of section 15.255(c)(3). Google also received a waiver of 15.255(b)(2), which restricts airborne operation. Google Waiver, 33 FCC Rcd at 12542, para. 1. IEE Sensing states that its technology is only intended to detect “in-vehicle heatstroke...in a completely stopped vehicle.” *Supplement at 1*.

<sup>6</sup> Google Waiver, 33 FCC Rcd at 12548-49, para. 14.

<sup>7</sup> 47 CFR § 15.255(c)(3).

<sup>8</sup> IEE Sensing filed in INBOX-PART15 (“Petition for Waiver of Part 15”), which is our preferred intake for waivers of the Part 15 rules.

<sup>9</sup> See *FCC Announces Closure of FCC Headquarters Open Window and Change in Hand-Delivery Policy*, Public Notice, 35 FCC Rcd 2788 (OMD 2020).

- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 45 L Street, NE, Washington DC 20554.

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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, 45 L Street, NE, Washington DC 20554, or by e-mail to [anh.wride@fcc.gov](mailto:anh.wride@fcc.gov).

Documents associated with this docket will be available for public inspection through the Commission's ECFS.

By the Acting Chief, Office of Engineering and Technology

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