



EN 62311: 2008

AS REFERENCED BY TEST PLAN 12511671-TP1V2

RF EXPOSURE ANALYSIS REPORT

FOR

MILLIMETER WAVE RADAR SENSOR DEVELOPMENT BOARD

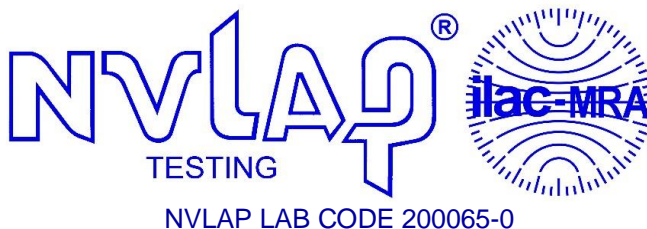
MODELS: IWR6843ISK, MMWAVEICBOOST

REPORT NUMBER: 12511671-E2V5

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Prepared for
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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	5/30/2019	Initial Issue	M. Heckrotte
V2	7/15/2019	Included MMWAVEICBOOST as the EUT	C. Cheung
V3	8/25/2020	Revised Test Plan reference to 12511671-TP1V2, Revised RF report reference to 12511671-E1V3	M.Heckrotte
V4	11/09/2020	Revised RF report reference to 12511671-E1V4	M.Heckrotte
V5	11/12/2020	Revised RF report reference to 12511671-E1V6 Added reference to RF report 13016837-E2V3 Revised descriptions of EUT and antennas Revised separation distance to 7.5 cm	M.Heckrotte

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: TEXAS INSTRUMENTS
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EUT DESCRIPTION: MILLIMETER WAVE RADAR SENSOR DEVELOPMENT BOARD

MODELS: IWR6843ISK, MMWAVEICBOOST

SERIAL NUMBERS: 5498300073 (IWR6843)
5498100089 (MMWAVEICBOOST)

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
EN 62311: 2008 as referenced by Test Plan 12511671-TP1V2	Complies

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the Federal Government.

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STEVE AGUILAR
TEST ENGINEER
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2. METHODOLOGY

All calculations were made in accordance with EN 62311: 2008 as referenced by Test Plan 12511671-TP1V2.

3. REFERENCES

EIRP measurements are documented in test report UL test reports 12511671-E1V6 and 13016837-E2V3.

4. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.

5. EUT DESCRIPTION

5.1. DESCRIPTION OF EUT

See Test Plan 12511671-TP1V2.

The IWR6843ISK is a 60 to 64 GHz mmWave radar sensor development board with integral high-gain (~7 dBi) antennas on the printed circuit board.

The MMWAVEICBOOST is an interface board.

6. EN 62311 REQUIREMENTS - LIMITATION OF EXPOSURE

6.1. LIMITS

The following Reference levels for electric, magnetic, and /or electromagnetic fields as applicable, are excerpted from Table 2 as given in Council Recommendation 1999/519/EC:

Frequency Range	Equivalent plane wave power density (W/m ²)
2 – 300 GHz	10

6.2. OPERATING MODES

The RF Exposure calculations in this report are based on a single band operating configuration where the 60 GHz radio is not transmitting simultaneously with any other co-located radio.

6.3. RESULTS

The far-field boundary distance of the EUT antenna array is 7.21 cm. A far-field RF Exposure analysis is performed for a separation distance of 7.5 cm.

Mode	Center Freq. (GHz)	Mean Power over TX Period (dBm EIRP)	Mean Power over TX Period (W EIRP)	Separation Distance (m)	Power Density (W/m ²)	Power Density Limit (W/m ²)
300 MHz	60.41	7.65	0.0058	0.075	0.08	10
300 MHz	61.26	13.74	0.0237	0.075	0.33	10
1300 MHz	60.92	11.44	0.0139	0.075	0.20	10
4000 MHz	62.15	10.59	0.0115	0.075	0.16	10

7. CONCLUSIONS

The EUT complies with the RF Exposure Limits given in Council Recommendation 1999/519/EC for any separation distance greater than or equal to 7.5 cm under all modes of operation.

END OF REPORT