



RF - TEST REPORT

- Human Exposure -

Type / Model Name : BGT60CUTR13AIP

Product Description : 60 GHz short range radar module

HVIN: BGT60CUTR13AIP-SMD

Applicant : Infineon Technologies AG

Address : Am Campeon 1-15

85579 NEUBIBERG, GERMANY

Manufacturer : Infineon Technologies AG

Address : Am Campeon 1-15

85579 NEUBIBERG, GERMANY

Test Result according to the standards
listed in clause 1 test standards:

POSITIVE

Test Report No. : **80260692-01 Rev_0**

14. January 2026

Date of issue



Deutsche
Akkreditierungsstelle
D-PL-12030-01-00

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ATTACHMENT A as separate supplement

1 TEST STANDARDS

The tests were performed according to following standards:

FCC Rules and Regulations:

Part 1, Subpart I, Section 1.1310

Radiofrequency radiation exposure limits

Part 2, Subpart J, Section 2.1091

Radiofrequency radiation exposure evaluation: mobile devices.

KDB 447498 D01 V06

General RF Exposure Guidance

ISED Canada Rules and Regulations:

RSS-102, Issue 6

Radio Frequency (RF) Exposure Compliance of
Radiocommunication Apparatus (All Frequency Bands)

2 EQUIPMENT UNDER TEST

2.1 Information provided by the Client

Please note, we do not take any responsibility for information provided by the client or his representative which may have an influence on the validity of the test results.

2.2 Sampling

The customer is responsible for the choice of sample. Sample configuration, start-up and operation is carried out by the customer or according to his/her instructions.

2.3 Photo documentation of the EUT – see Attachment A

2.4 Equipment type, category

The EUT qualifies under **FCC §15.255(c)(2)(v)** and **RSS-210 J.3.2.a** as a field disturbance sensor, and under **FCC §15.255(c)(2)(ii)** and **RSS-210 J.3.2.b.ii** as a field disturbance sensor.

2.5 Short description of the equipment under test (EUT)

The EUT is a field disturbance sensor. It has two operation modes, working in the frequency band of 61 GHz to 61.5 GHz (Mode 1) and in the frequency band of 57 GHz to 61.56 GHz (Mode 2 - used frequency range only 59.44 GHz to 61.56 GHz) using FMCW.

Number of tested samples: 1
 Serial number: RF sample #3
 Firmware ID: Not applicable, EUT is not equipped with programmable device
 FCC ID: 2AYSQBGT60CUTR13-A
 IC ID: 28678-BGT60CUTR13
 HVIN: BGT60CUTR13AIP-SMD

2.6 Variants of the EUT

There are no variants.

2.7 Operation frequency and channel plan

Operating frequency range 1: 61 GHz to 61.5 GHz
 Operating frequency range 2: 59.44 GHz to 61.56 GHz

2.8 Transmit operating modes

The EUT allows the user to select the following modes:
 - TX modulated

2.9 Antennas

The following integrated antennas are used with the EUT:

Number	Characteristic	Model number	Plug	Frequency range (GHz)	Typ. gain (dBi)
1	linear	On chip patch antenna for TX	-	57 - 64	3
2	linear	On chip patch antenna for RX	-	57 - 64	3
3	linear	On chip patch antenna for RX	-	57 - 64	3
4	linear	On chip patch antenna for RX	-	57 - 64	3

The antennas cannot be unattached by the user.

2.10 Power supply system utilised

Power supply voltage EUT : 2.6 – 4.7 V/DC ($V_{nom} = 3.3$ V/DC)
 Power supply voltage, test jig : 4.5 V/DC (3x AAA battery)

2.11 Peripheral devices and interface cables

The following peripheral devices and interface cables are connected during the measurements:

- Battery pack with USB cable Model : custom-built by customer

2.12 Determination of worst case conditions for final measurement

Exploratory measurements have been made in all three orthogonal axes and the settings of the EUT are changed to locate at which position and at what setting the EUT produces the maximum of the emissions. For the further measurement, the EUT is set in H-position while the receiving antenna is in horizontal polarisation (in co-polarisation with EUT antennas).

As worst case, the following channels and test modes are selected for the final test:

Operation Mode	Operating frequency range (GHz)	Power setting	Modulation	BW (GHz)
1	61.0 – 61.5	P_{def}	FMCW	0.5
2	59.44 – 61.56	P_{def}	FMCW	2.12

Note 1: P_{def} = default power level with maximum power setting. Power level could not be changed with test software.

Note 2: For final testing the normal FMCW modulation was selected. Other test modes were only for pre-scan purposes, e.g. evaluating artefacts from the harmonic mixers.

2.12.1 Test jig

The EUT is mounted on a carrier PCB providing 4.5 V/DC (3x AAA battery) input voltage to the EUT.

2.12.2 Test software

The test software programDevice.bat allows following settings:

Mode 1:

- ISM CW-Mode: TX continuous wave mode, unmodulated, at 61.25 GHz,
- ISM Timing-Mode: TX modulated FMCW at single frequency 61.25 GHz (with chirp bandwidth 0)
- ISM Application-Mode: TX modulated mode FMCW (certification config).

Mode 2:

- Band2GHz CW-Mode: TX continuous wave mode, unmodulated, at 60.5 GHz,
- Band2GHz Timing-Mode: TX modulated FMCW at single frequency 60.5 GHz (with chirp bandwidth 0)
- Band2GHz Application-Mode: TX modulated mode FMCW (certification config).

3 TEST RESULT SUMMARY

Operating in the 61.0 GHz - 61.5 GHz and 57.0 GHz – 61.56 GHz band:

FCC Rule Part	RSS Rule Part	Description	Result
KDB 447498, 7.1	RSS-102, 6.6	MPE	passed
KDB 447498, 4.3.1	RSS-102, 6.3	SAR exclusion consideration	not applicable ¹
KDB 447498, 7.2	RSS-102, 7.1.5	Co-location, Co-transmission	not applicable ²

Note: ¹ Not applicable, distance of user to antenna structures > 20 cm.

² Not applicable, EUT has only one transmitter.

3.1 Revision history of test report

Test report No	Rev.	Issue Date	Changes
80260692-01	0	14 January 2026	Initial test report

The test report with the highest revision number replaces the previous test reports.

3.2 Final assessment

The equipment under test fulfils the requirements cited in clause 1 test standards.

Date of receipt of test sample : acc. to storage records

Testing commenced on : 12 November 2025

Testing concluded on : 12 November 2025

Checked by:

Tested by:

**Thomas
Weise**

Digital signiert von
Thomas Weise
Datum: 2026.01.16
11:19:28 +01'00'

Thomas Weise
Laboratory Manager



Sabine Kugler
2026.01.14
06:35:00 +01'00'

Sabine Kugler
Radio Team

4 TEST ENVIRONMENT

4.1 Address of the test laboratory

**CSA Group Bayern GmbH
Straubinger Strasse 100
94447 PLATTILING
GERMANY**

4.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15 - 35 °C

Humidity: 30 - 60 %

Atmospheric pressure: 86 - 106 kPa

4.3 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. It is noted that the expanded measurement uncertainty corresponds to the measurement results from the standard measurement uncertainty multiplied by the coverage factor $k = 2$. The true value is located in the corresponding interval with a probability of 95 %. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16-4-2: 2011 + A1: 2014 „Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements“ and is documented in the quality system acc. to DIN EN ISO/IEC 17025. For all measurements shown in this report, the measurement uncertainty of the test laboratory, CSA Group Bayern GmbH, is below the measurement uncertainty as defined by CISPR. Therefore, no special measures must be taken into consideration with regard to the limits according to CISPR. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

4.4 Conformity Decision Rule

The applied conformity decision rule is based on ILAC G8:09/2019 clause 4.2.1 Binary Statement for Simple Acceptance Rule ($w = 0$).

Details can be found in the procedure CSA_B_V50_29.

5 HUMAN EXPOSURE

5.1 RF output power

The output power of the device is taken from the power measurement in the test report 80260692-00 issued by CSA Group Bayern GmbH.

Peak EIRP:

Operation mode	Operating frequency range (GHz)	Power setting	Level PK (dBm)
1	61.0 - 61.5	P _{def}	16.1
2	59.44 - 61.56	P _{def}	16.2

Remarks: As worst case the power values are not averaged over time.

5.1 Maximum permissible exposure (MPE) according to FCC

5.1.1 Applicable standard

According to FCC Part 15, Section 15.255(g):

Systems operating under the provisions of this section shall be operated in a manner that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines.

5.1.2 Description of Determination

The maximum rated output power conducted included the tune up tolerance is used to calculate the EIRP. Through the Friis transmission formula, the known maximum gain of the antenna and the maximum power, can be calculated the MPE in a defined distance away from the product.

Friis transmission formula:

$$P_d = \frac{P_{out} * G}{4 * \pi * r^2}$$

Where:

P_d = power density (mW/cm²)

P_{out} = output power to antenna (mW)

G = gain of antenna (linear scale)

r = distance between antenna and observation point (cm)

5.1.3 Determination of MPE

The EUT is not a portable device, it is designed to be used that radiating structures are 20 cm outside of the body of the user. ($r = 20$ cm)

Operating range	EIRP	Tune-Up	max EIRP	r	S	Limit S_{eq}	Margin	Exposure ratio
	(dBm)	(dBi)	(mW)	(cm)	(mW/cm ²)	(mW/cm ²)	(mW/cm ²)	(%)
1	16.1	3.0	81.3	20.0	0.016	1.0	-0.984	1.62
2	16.2	3.0	83.2	20.0	0.017	1.0	-0.983	1.65

Limits for maximum permissible exposure (MPE):

(B) Limits for General Population / Uncontrolled Exposure				
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
0.3 – 1.34	614	1.63	100	30
1.34 – 30	824/ f	2.19/ f	180/ f^2	30
30 - 300	27.5	0.073	0.2	30
300-1500	---	---	$f/1500$	30
1500-100000	---	---	1.0	30

f = Frequency in MHz

The requirements are **FULFILLED**.

Remarks: For determination of EIRP please refer to section 5.1.

5.1 Maximum permissible exposure (MPE) according to ISED

5.1.1 Applicable standard

According to RSS-102, section 6.6:

Field reference level (FRL) exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm (i.e. mobile devices), except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 1 W (adjusted for tune-up tolerance)
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than $4.49/f^{0.5}W$ (adjusted for tune-up tolerance), where f is in MHz
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance)
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834} W$ (adjusted for tune-up tolerance), where f is in MHz
- **at or above 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 5 W (adjusted for tune-up tolerance)**

In these cases, the information contained in the RF exposure technical brief may be limited to information that demonstrates how the EIRP was derived.

5.1.2 Determination of MPE according ISED:

The EUT is not a portable device. The EUT is designed to be used that the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm ($r = 20$ cm).

Operating range	EIRP	Tune-up	max EIRP	Limit S_{eq}	Margin	Exposure ratio
	(dBm)	(dBi)	(mW)	(W)	(W)	(%)
1	16.1	3.0	81.3	5.0	-4.919	1.63
2	16.2	3.0	83.2	5.0	-4.917	1.66

Exemption limits for routine Evaluation – RF exposure evaluation according to RSS-102, section 6.6:

At or above 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

The requirements are **FULFILLED**.

Remarks: For determination of EIRP please refer to section 5.1.

- End of test report -