

















<b>UID</b>	<b>Rev</b>	<b>Communication System Name</b>	<b>Group</b>	<b>PAR (dB)</b>	<b>Unc<sup>E</sup> k = 2</b>
10983	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.31	±9.6
10984	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.42	±9.6
10985	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.54	±9.6
10986	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.50	±9.6
10987	AAA	5G NR DL (CP-OFDM, TM 3.1, 60 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.53	±9.6
10988	AAA	5G NR DL (CP-OFDM, TM 3.1, 70 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.38	±9.6
10989	AAA	5G NR DL (CP-OFDM, TM 3.1, 80 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.33	±9.6
10990	AAA	5G NR DL (CP-OFDM, TM 3.1, 90 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.52	±9.6

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.





Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

## Glossary

CW Continuous wave

## Calibration is Performed According to the Following Standards

- Internal procedure QA CAL-45, Calibration procedure for sources in air above 6 GHz.
- IEC/IEEE 63195-1, "Assessment of power density of human exposure to radio frequency fields from wireless devices in close proximity to the head and body (frequency range of 6 GHz to 300 GHz)", May 2022

## Methods Applied and Interpretation of Parameters

- Coordinate System:* z-axis in the waveguide horn boresight, x-axis is in the direction of the E-field, y-axis normal to the others in the field scanning plane parallel to the horn flare and horn flange.
- Measurement Conditions:* (1) 10 GHz: The radiated power is the forward power to the horn antenna minus ohmic and mismatch loss. During the measurements, the horn is directly connected to the cable and the antenna ohmic and mismatch losses are determined by far-field measurements. (2) 30, 45, 60 and 90 GHz: The verification sources are switched on for at least 30 minutes. Absorbers are used around the probe cub and at the ceiling to minimize reflections.
- Horn Positioning:* The waveguide horn is mounted vertically on the flange of the waveguide source to allow vertical positioning of the EUmmW probe during the scan. The plane is parallel to the phantom surface. Probe distance is verified using mechanical gauges positioned on the flare of the horn.
- E-field distribution:* E field is measured in two x-y-plane (10mm, 10mm +  $\lambda/4$ ) with a vectorial E-field probe. The E-field value stated as calibration value represents the E-field-maxima and the averaged ( $1\text{cm}^2$  and  $4\text{cm}^2$ ) power density values at 10mm in front of the horn.
- Field polarization:* Above the open horn, linear polarization of the field is expected. This is verified graphically in the field representation.

## Calibrated Quantity

- Local peak E-field ( $\text{V/m}$ ) and average of peak spatial components of the poynting vector ( $\text{W/m}^2$ ) averaged over the surface area of  $1\text{cm}^2$  and  $4\text{cm}^2$  at the nominal operational frequency of the verification source. Both square and circular averaging results are listed.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.



# DASY Report

## Measurement Report for 5G Verification Source 30 GHz, UID 0 -, Channel 30000 (30000.0MHz)

### Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 30 GHz	100.0 x 100.0 x 100.0	SN: 1043	-

### Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	5.55 mm	Validation band	CW	30000.0, 30000	1.0

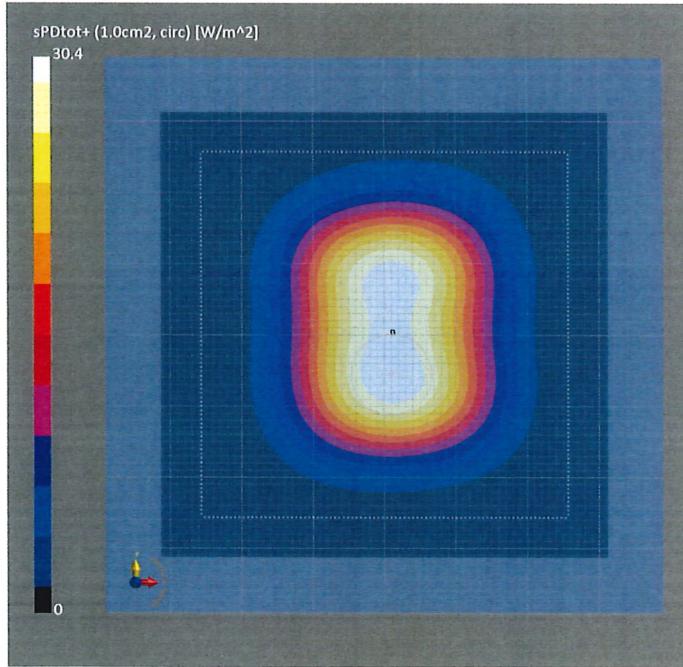
### Hardware Setup

Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV3 - SN9374_F1-55GHz, 2023-05-22	DAE4ip Sn1602, 2022-06-27

### Scan Setup

Sensor Surface [mm]	5G Scan	5G Scan
MAIA	5.55 MAIA not used	Date 2023-06-23, 18:21 Avg. Area [cm <sup>2</sup> ] 1.00 Avg. Type Circular Averaging psPDn+ [W/m <sup>2</sup> ] 29.8 psPDtot+ [W/m <sup>2</sup> ] 30.4 psPDmod+ [W/m <sup>2</sup> ] 30.4 Max(Sn) [W/m <sup>2</sup> ] 33.5 Max(Stot) [W/m <sup>2</sup> ] 33.9 Max( Stot ) [W/m <sup>2</sup> ] 34.0 $E_{\max}$ [V/m] 115 Power Drift [dB] 0.02

### Measurement Results



# DASY Report

## Measurement Report for 5G Verification Source 30 GHz, UID 0 -, Channel 30000 (30000.0MHz)

### Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 30 GHz	100.0 x 100.0 x 100.0	SN: 1043	-

### Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	5.55 mm	Validation band	CW	30000.0, 30000	1.0

### Hardware Setup

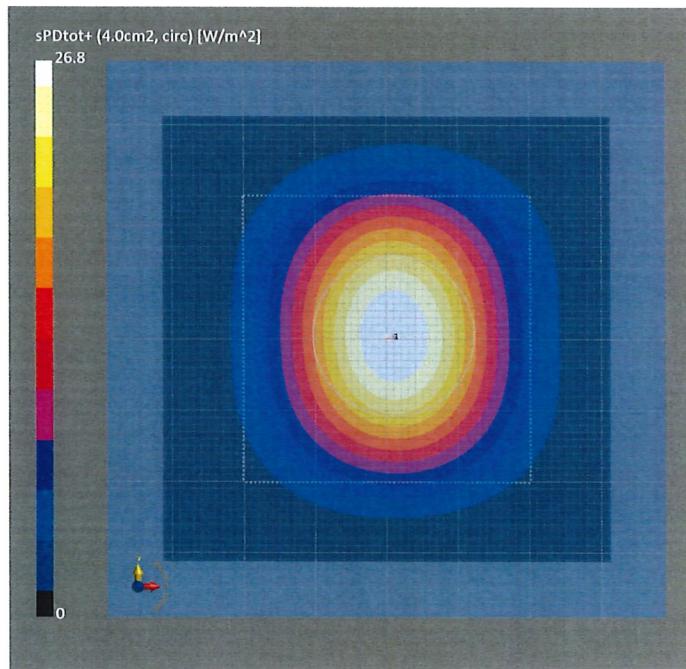
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV3 - SN9374_F1-55GHz, 2023-05-22	DAE4ip Sn1602, 2022-06-27

### Scan Setup

Sensor Surface [mm]	5G Scan	5G Scan
MAIA	5.55	MAIA not used

Date	2023-06-23, 18:21
Avg. Area [cm <sup>2</sup> ]	4.00
Avg. Type	Circular Averaging
psPDn+ [W/m <sup>2</sup> ]	26.3
psPDTot+ [W/m <sup>2</sup> ]	26.8
psPDmod+ [W/m <sup>2</sup> ]	26.9
Max(Sn) [W/m <sup>2</sup> ]	33.5
Max(Stot) [W/m <sup>2</sup> ]	33.9
Max( Stot ) [W/m <sup>2</sup> ]	34.0
E <sub>max</sub> [V/m]	115
Power Drift [dB]	0.02



# DASY Report

## Measurement Report for 5G Verification Source 30 GHz, UID 0 -, Channel 30000 (30000.0MHz)

### Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 30 GHz	100.0 x 100.0 x 100.0	SN: 1043	-

### Exposure Conditions

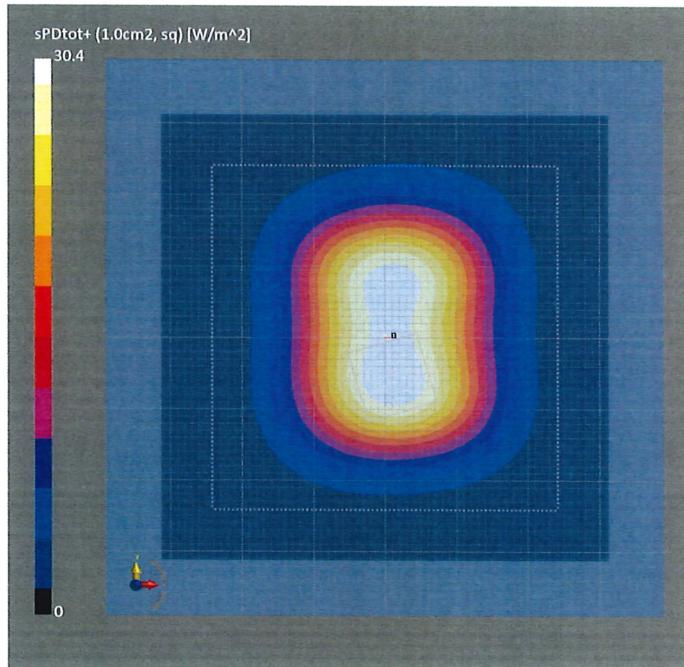
Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	5.55 mm	Validation band	CW	30000.0, 30000	1.0

### Hardware Setup

Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV3 - SN9374_F1-55GHz, 2023-05-22	DAE4ip Sn1602, 2022-06-27

### Scan Setup

Sensor Surface [mm]	5G Scan	5G Scan	
MAIA	5.55 MAIA not used	Date Avg. Area [cm <sup>2</sup> ] Avg. Type psPDn+ [W/m <sup>2</sup> ] psPDTot+ [W/m <sup>2</sup> ] psPDmod+ [W/m <sup>2</sup> ] Max(Sn) [W/m <sup>2</sup> ] Max( Stot ) [W/m <sup>2</sup> ] Max( Stot ) [W/m <sup>2</sup> ] E <sub>max</sub> [V/m] Power Drift [dB]	2023-06-23, 18:21 1.00 Square Averaging 29.8 30.4 30.4 33.5 33.9 34.0 115 0.02



# DASY Report

## Measurement Report for 5G Verification Source 30 GHz, UID 0 -, Channel 30000 (30000.0MHz)

### Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 30 GHz	100.0 x 100.0 x 100.0	SN: 1043	-

### Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	5.55 mm	Validation band	CW	30000.0, 30000	1.0

### Hardware Setup

Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV3 - SN9374_F1-55GHz, 2023-05-22	DAE4ip Sn1602, 2022-06-27

### Scan Setup

Sensor Surface [mm]	5G Scan
MAIA	5.55 MAIA not used

### Measurement Results

5G Scan
Date
Avg. Area [cm <sup>2</sup> ]
Avg. Type
psPDn+ [W/m <sup>2</sup> ]
psPDTot+ [W/m <sup>2</sup> ]
psPDMod+ [W/m <sup>2</sup> ]
Max(Sn) [W/m <sup>2</sup> ]
Max(Stot) [W/m <sup>2</sup> ]
Max( Stot ) [W/m <sup>2</sup> ]
E <sub>max</sub> [V/m]
Power Drift [dB]

