

APPENDIX A: VERIFICATION PLOTS

PCTEST

Date: 08/27/2021

750MHz Body Verification

Medium

Frequency [MHz]	TSL	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [C]	Tissue Temperature [C]
750.0	750 Body	0.990	53.4	21.7	20.5

Exposure Conditions

Phantom Section	Test Distance [mm]	Power [dBm]	Communication System, UID
Flat	15	23.0	CW, 0

Hardware Setup

Phantom	Dipole	Probe, Calibration Date	Conversion Factor	DAE, Calibration Date
Twin-SAM V8.0 Right - 1981	D750V3 - SN1054	EX3DV4 - SN7570, 2020-12-15	10.24	DAE4 Sn859, 2020-12-07

Software Setup

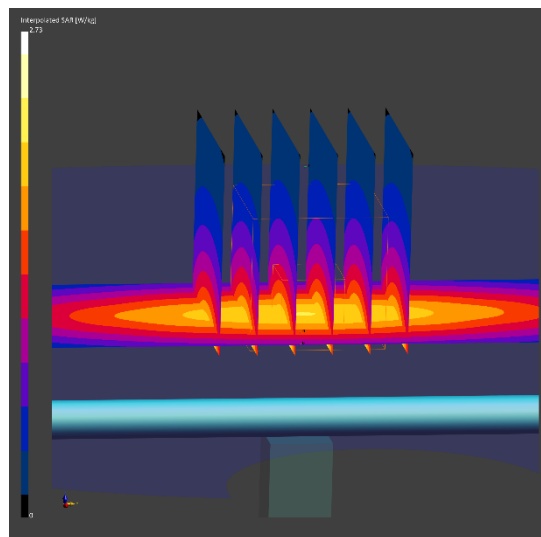
Software	Software Version
cDASY6 Module SAR	16.0.0.116

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5

Measurement Results

	Zoom Scan
psSAR1g [W/Kg]	1.77
psSAR10g [W/Kg]	1.16
Dev. 1g [%]	0.34



PCTEST

Date: 08/09/2021

835MHz Body Verification

Medium

Frequency [MHz]	TSL	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [C]	Tissue Temperature [C]
835.0	835 Body	1.01	53.8	21.7	21.2

Exposure Conditions

Phantom Section	Test Distance [mm]	Power [dBm]	Communication System, UID
Flat	15	23.0	CW, 0

Hardware Setup

Phantom	Dipole	Probe, Calibration Date	Conversion Factor	DAE, Calibration Date
Twin-SAM V8.0 - 1978	D835V2 - SN4d047	EX3DV4 - SN7417, 2021-02-16	10.17	DAE4 Sn665, 2021-02-12

Software Setup

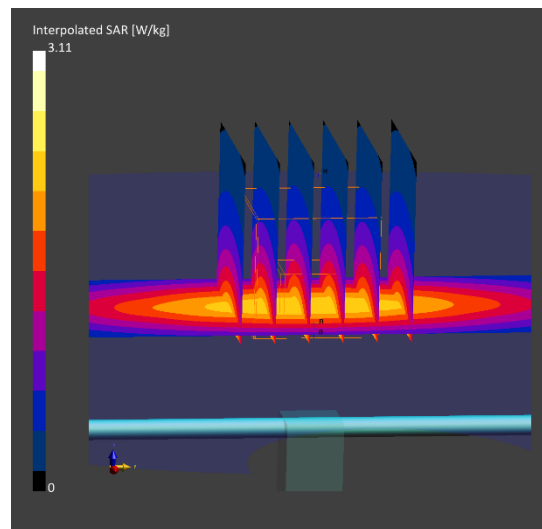
Software	Software Version
cDASY6 Module SAR	16.0.0.116

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5

Measurement Results

	Zoom Scan
psSAR1g [W/Kg]	2.01
psSAR10g [W/Kg]	1.31
Dev. 1g [%]	6.12



PCTEST

Date: 08/20/2021

835MHz Body Verification

Medium

Frequency [MHz]	TSL	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [C]	Tissue Temperature [C]
835.0	835 Body	1.00	53.5	21.7	20.9

Exposure Conditions

Phantom Section	Test Distance [mm]	Power [dBm]	Communication System, UID
Flat	15	23.0	CW, 0

Hardware Setup

Phantom	Dipole	Probe, Calibration Date	Conversion Factor	DAE, Calibration Date
Twin-SAM V8.0 Right - 1981	D835V2 - SN4d047	EX3DV4 - SN7570, 2020-12-15	9.9	DAE4 Sn859, 2020-12-07

Software Setup

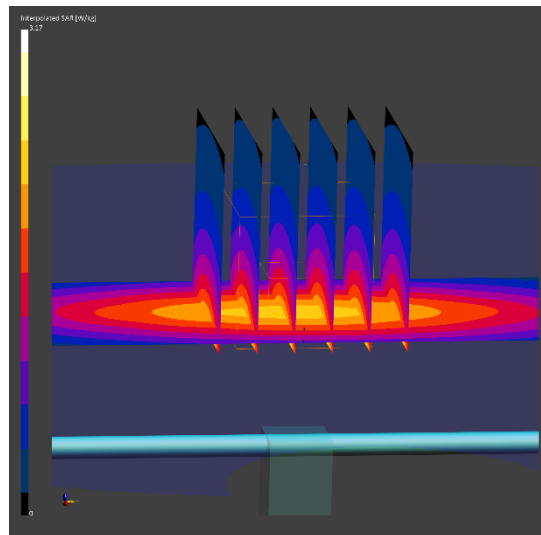
Software	Software Version
cDASY6 Module SAR	16.0.0.116

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5

Measurement Results

	Zoom Scan
psSAR1g [W/Kg]	1.96
psSAR10g [W/Kg]	1.28
Dev. 1g [%]	3.48



PCTEST

Date: 08/23/2021

835MHz Body Verification

Medium

Frequency [MHz]	TSL	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [C]	Tissue Temperature [C]
835.0	835 Body	1.01	53.3	21.1	20.4

Exposure Conditions

Phantom Section	Test Distance [mm]	Power [dBm]	Communication System, UID
Flat	15	23.0	CW, 0

Hardware Setup

Phantom	Dipole	Probe, Calibration Date	Conversion Factor	DAE, Calibration Date
Twin-SAM V8.0 - 1978	D835V2 - SN4d047	EX3DV4 - SN7417, 2021-02-16	10.17	DAE4 Sn665, 2021-02-12

Software Setup

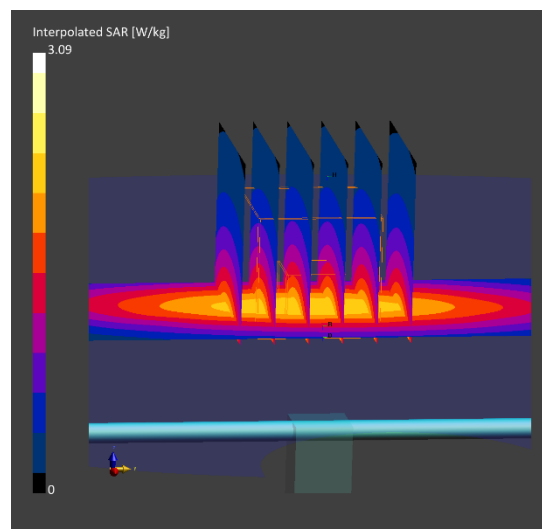
Software	Software Version
cDASY6 Module SAR	16.0.0.116

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5

Measurement Results

	Zoom Scan
psSAR1g [W/Kg]	1.99
psSAR10g [W/Kg]	1.29
Dev. 1g [%]	5.07



PCTEST

Date: 08/09/2021

1750MHz Body Verification

Medium

Frequency [MHz]	TSL	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [C]	Tissue Temperature [C]
1750.0	1750 Body	1.52	52.0	21.0	21.2

Exposure Conditions

Phantom Section	Test Distance [mm]	Power [dBm]	Communication System, UID
Flat	10	20.0	CW, 0

Hardware Setup

Phantom	Dipole	Probe, Calibration Date	Conversion Factor	DAE, Calibration Date
Twin-SAM V8.0 - 1978	D1750V2 - SN1148	EX3DV4 - SN7417, 2021-02-16	8.43	DAE4 Sn665, 2021-02-12

Software Setup

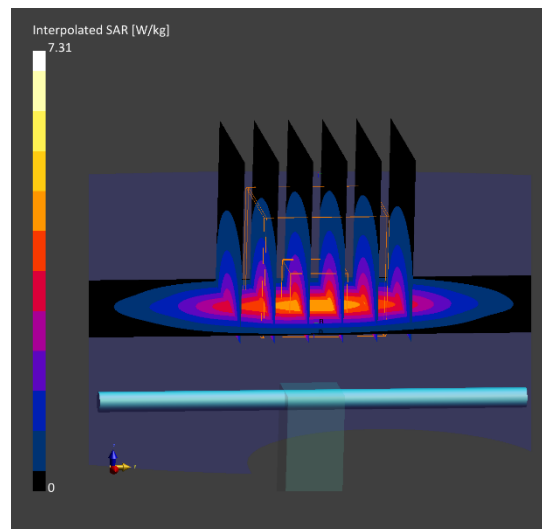
Software	Software Version
cDASY6 Module SAR	16.0.0.116

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5

Measurement Results

	Zoom Scan
psSAR1g [W/Kg]	3.88
psSAR10g [W/Kg]	2.05
Dev. 1g [%]	6.89



PCTEST

Date: 08/07/2021

1900MHz Body Verification

Medium

Frequency [MHz]	TSL	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [C]	Tissue Temperature [C]
1900.0	1900 Body	1.57	54.8	21.3	21.1

Exposure Conditions

Phantom Section	Test Distance [mm]	Power [dBm]	Communication System, UID
Flat	10	20.0	CW, 0

Hardware Setup

Phantom	Dipole	Probe, Calibration Date	Conversion Factor	DAE, Calibration Date
Twin-SAM V8.0 Right - 1981	D1900V2 - SN5d148	EX3DV4 - SN7570, 2020-12-15	8.12	DAE4 Sn859, 2020-12-07

Software Setup

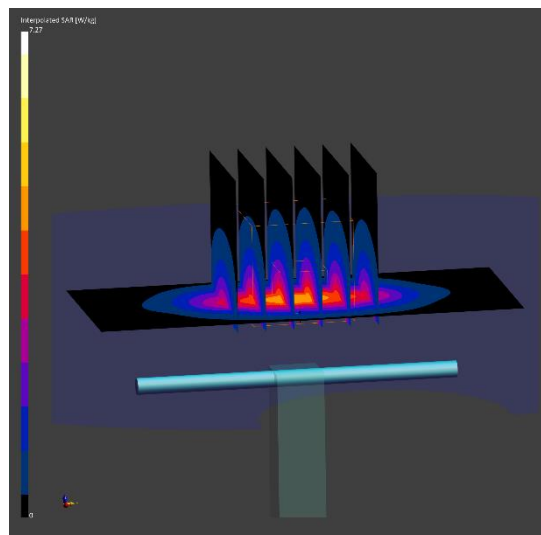
Software	Software Version
cDASY6 Module SAR	16.0.0.116

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5

Measurement Results

	Zoom Scan
psSAR1g [W/Kg]	3.80
psSAR10g [W/Kg]	1.95
Dev. 1g [%]	-2.81



PCTEST

Date: 08/19/2021

2600MHz Body Verification

Medium

Frequency [MHz]	TSL	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [C]	Tissue Temperature [C]
2600.0	2450 Body	2.22	50.8	21.7	21.2

Exposure Conditions

Phantom Section	Test Distance [mm]	Power [dBm]	Communication System, UID
Flat	10	20.0	CW, 0

Hardware Setup

Phantom	Dipole	Probe, Calibration Date	Conversion Factor	DAE, Calibration Date
Twin-SAM V8.0 Right - 1981	D2600V2 - SN1004	EX3DV4 - SN7570, 2020-12-15	7.36	DAE4 Sn859, 2020-12-07

Software Setup

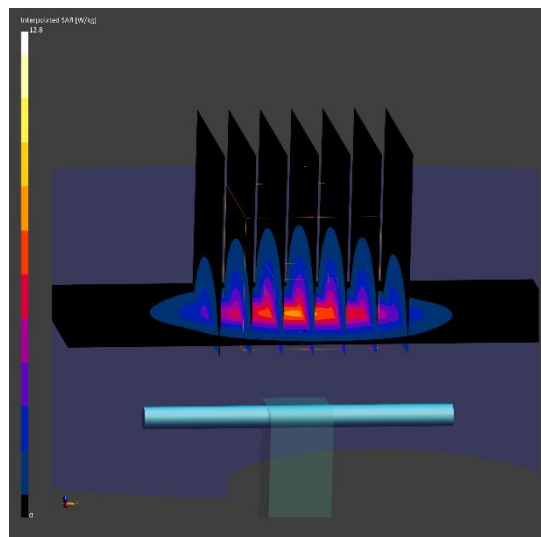
Software	Software Version
cDASY6 Module SAR	16.0.0.116

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5

Measurement Results

	Zoom Scan
psSAR1g [W/Kg]	5.80
psSAR10g [W/Kg]	2.57
Dev. 1g [%]	4.69



PCTEST

Date: 08/19/2021

30 GHz System Verification

Device Under Test Properties

DUT	Serial Number
30 GHz Verification Source	1045

Exposure Conditions

Phantom Section	Position	Test Distance [mm]	Band	Frequency [MHz]
5G	FRONT	5.55	Validation band	30000.0

Hardware Setup

Probe, Calibration Date	DAE, Calibration Date
EUmmWV4 - SN9541, 05/20/2021	DAE4 SN665, 02/12/2021

Software Setup

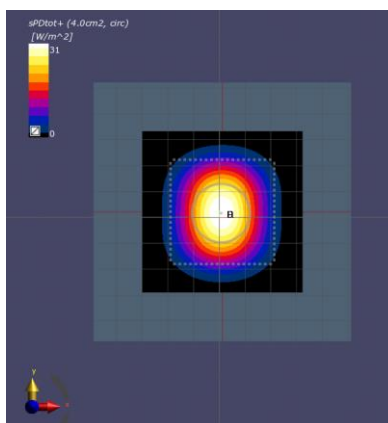
Software	Software Version
cDASY6 Module mmWave	2.4.2.62

Scans Setup

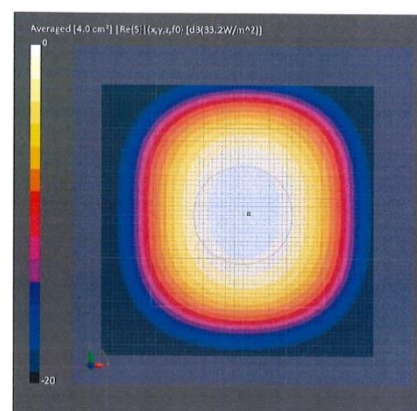
Scan Type	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	5.55

Measurement Results

Scan Type	5G Scan
Avg. Area [cm ²]	4.00
pS _{tot} avg [W/m ²]	31.0
pS _n avg [W/m ²]	30.6
E _{peak} [V/m]	126
Deviation (dB)	-0.30



30GHz System Verification



Calibration Certificate

PCTEST

Date: 08/28/2021

30 GHz System Verification

Device Under Test Properties

DUT	Serial Number
30 GHz Verification Source	1045

Exposure Conditions

Phantom Section	Position	Test Distance [mm]	Band	Frequency [MHz]
5G	FRONT	5.55	Validation band	30000.0

Hardware Setup

Probe, Calibration Date	DAE, Calibration Date
EUmmWV4 - SN9541, 05/20/2021	DAE4 SN665, 02/12/2021

Software Setup

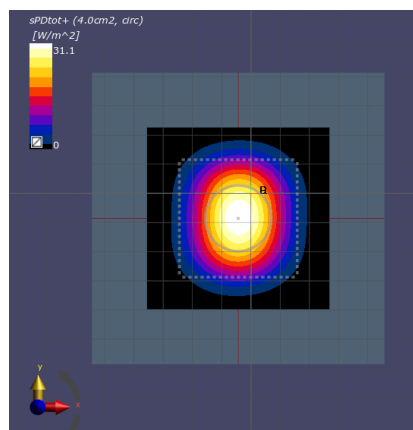
Software	Software Version
cDASY6 Module mmWave	2.4.2.62

Scans Setup

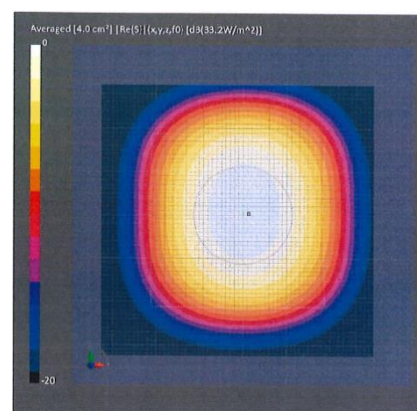
Scan Type	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	5.55

Measurement Results

Scan Type	5G Scan
Avg. Area [cm ²]	4.00
pS _{tot} avg [W/m ²]	31.1
pS _n avg [W/m ²]	30.7
E _{peak} [V/m]	127
Deviation (dB)	-0.28



30GHz System Verification



Calibration Certificate

PCTEST

Date: 08/30/2021

30 GHz System Verification

Device Under Test Properties

DUT	Serial Number
30 GHz Verification Source	1045

Exposure Conditions

Phantom Section	Position	Test Distance [mm]	Band	Frequency [MHz]
5G	FRONT	5.55	Validation band	30000.0

Hardware Setup

Probe, Calibration Date	DAE, Calibration Date
EUmmWV4 - SN9541, 05/20/2021	DAE4 SN665, 02/12/2021

Software Setup

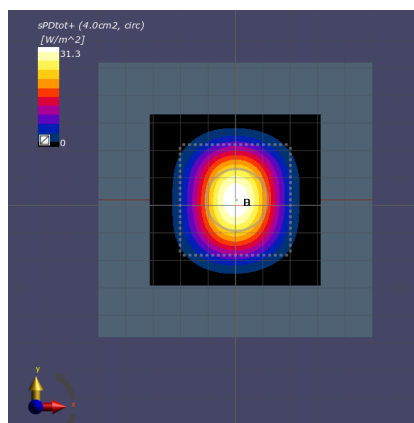
Software	Software Version
cDASY6 Module mmWave	2.4.2.62

Scans Setup

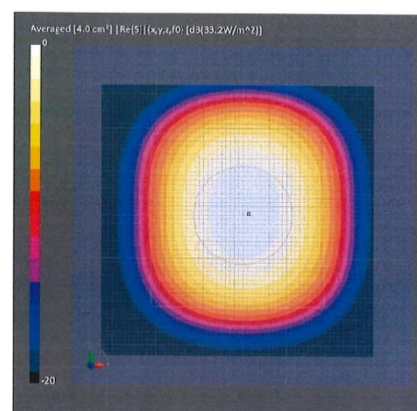
Scan Type	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	5.55

Measurement Results

Scan Type	5G Scan
Avg. Area [cm²]	4.00
pS _{tot} avg [W/m²]	31.3
pS _n avg [W/m²]	30.9
E _{peak} [V/m]	126
Deviation (dB)	-0.26



30GHz System Verification



Calibration Certificate

PCTEST

Date: 08/30/2021

30 GHz System Verification

Device Under Test Properties

DUT	Serial Number
30 GHz Verification Source	1045

Exposure Conditions

Phantom Section	Position	Test Distance [mm]	Band	Frequency [MHz]
5G	FRONT	5.55	Validation band	30000.0

Hardware Setup

Probe, Calibration Date	DAE, Calibration Date
EUmmWV4 - SN9523, 01/11/2021	DAE4ip SN1639, 11/17/2020

Software Setup

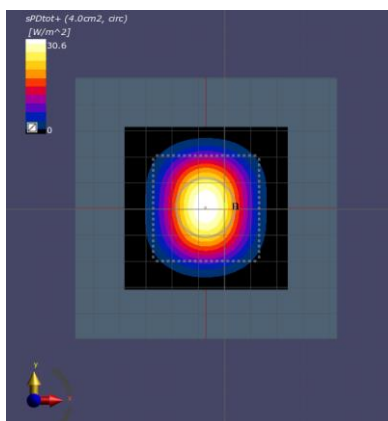
Software	Software Version
cDASY6 Module mmWave	2.4.2.62

Scans Setup

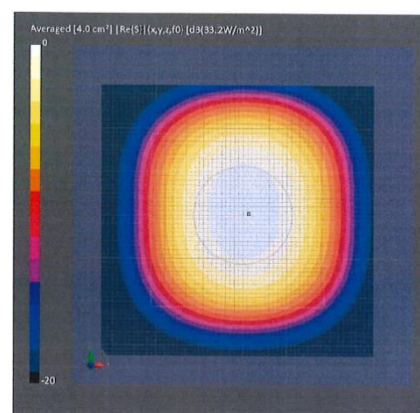
Scan Type	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	5.55

Measurement Results

Scan Type	5G Scan
Avg. Area [cm ²]	4.00
pS _{tot} avg [W/m ²]	30.6
pS _n avg [W/m ²]	30.2
E _{peak} [V/m]	126
Deviation (dB)	-0.35



30GHz System Verification



Calibration Certificate

PCTEST

Date: 09/01/2021

30 GHz System Verification

Device Under Test Properties

DUT	Serial Number
30 GHz Verification Source	1045

Exposure Conditions

Phantom Section	Position	Test Distance [mm]	Band	Frequency [MHz]
5G	FRONT	5.55	Validation band	30000.0

Hardware Setup

Probe, Calibration Date	DAE, Calibration Date
EUmmWV4 - SN9541, 05/20/2021	DAE4 SN665, 02/12/2021

Software Setup

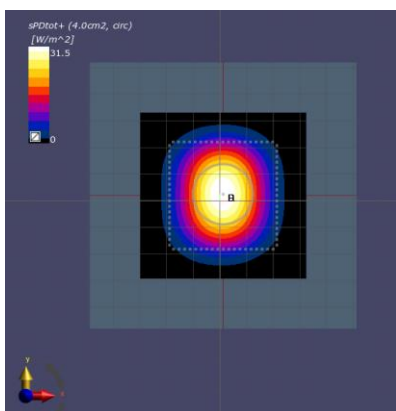
Software	Software Version
cDASY6 Module mmWave	2.4.2.62

Scans Setup

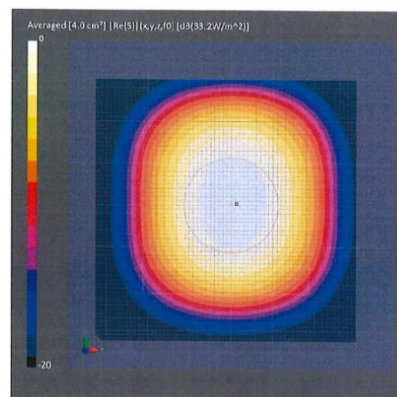
Scan Type	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	5.55

Measurement Results

Scan Type	5G Scan
Avg. Area [cm²]	4.00
pS _{tot} avg [W/m²]	31.5
pS _n avg [W/m²]	31.0
E _{peak} [V/m]	127
Deviation (dB)	-0.23



30GHz System Verification



Calibration Certificate