PCTEST

DUT: A3LSMF916U; Type: Portable Handset; Serial: 0876M

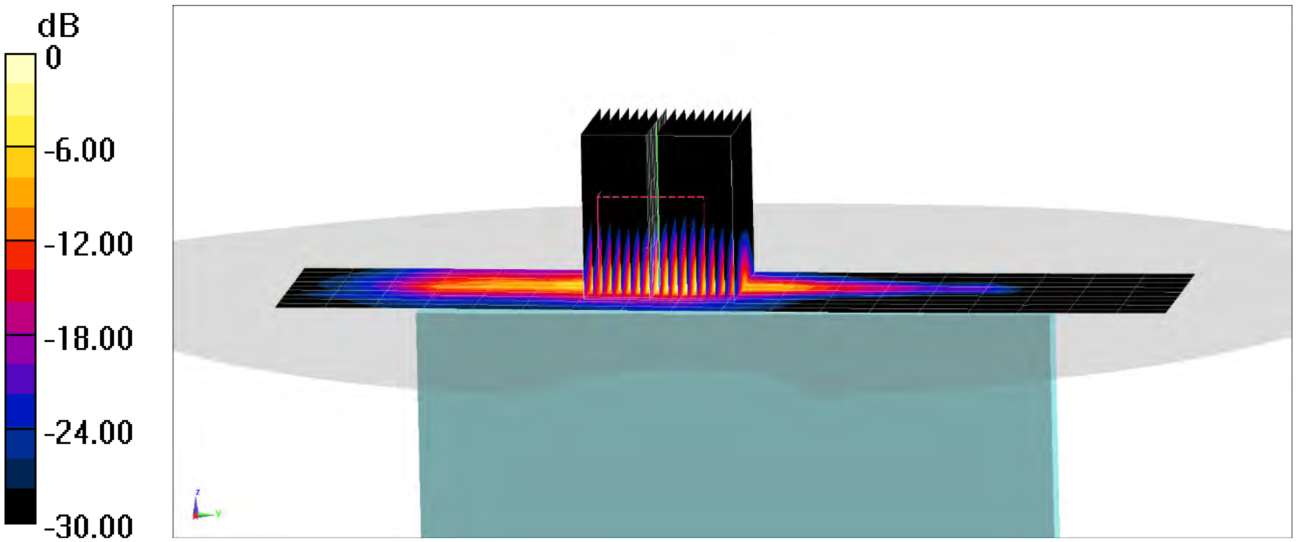
Communication System: UID 0, IEEE 802.11n; Frequency: 5785 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5785 MHz; σ = 6.187 S/m; ε_r = 46.154; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/19/2020; Ambient Temp: 21.1°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5785 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11n, MIMO, U-NII-3, 20 MHz Bandwidth, UMPC Extremity SAR, Ch 157, 13 Mbps, Top Edge

Area Scan (10x19x1): Measurement grid: dx=5mm, dy=10mm
Zoom Scan (17x17x8)/Cube 0: Measurement grid: dx=1.9mm, dy=1.9mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 40.68 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 77.2 W/kg
SAR(10 g) = 1.94 W/kg
Smallest distance from peaks to all points 3 dB below = 3.4 mm
Ratio of SAR at M2 to SAR at M1 = 52.7%



0 dB = 30.9 W/kg = 14.90 dBW/kg

PCTEST

DUT: A3LSMF916U; Type: Portable Handset; Serial: 1356M

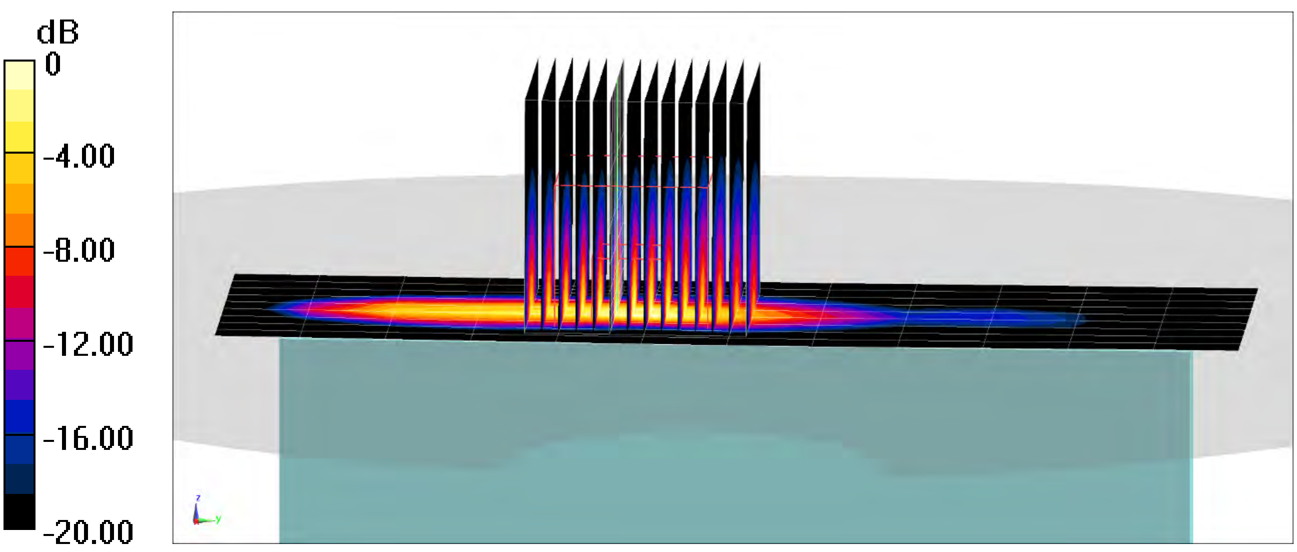
Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.284
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2441 MHz; σ = 2.035 S/m; ε_r = 51.318; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/27/2020; Ambient Temp: 22.4°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7409; ConvF(7.24, 7.24, 7.24) @ 2441 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: Bluetooth, Antenna 1, UMPC Extremity SAR, Ch 39, 1 Mbps, Top Edge

Area Scan (10x13x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (14x14x8)/Cube 0: Measurement grid: dx=2.4mm, dy=2.4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 35.90 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 10.9 W/kg
SAR(10 g) = 0.619 W/kg
Smallest distance from peaks to all points 3 dB below = 3.4 mm
Ratio of SAR at M2 to SAR at M1 = 66.2%



0 dB = 5.37 W/kg = 7.30 dBW/kg

APPENDIX B: SYSTEM VERIFICATION

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1003

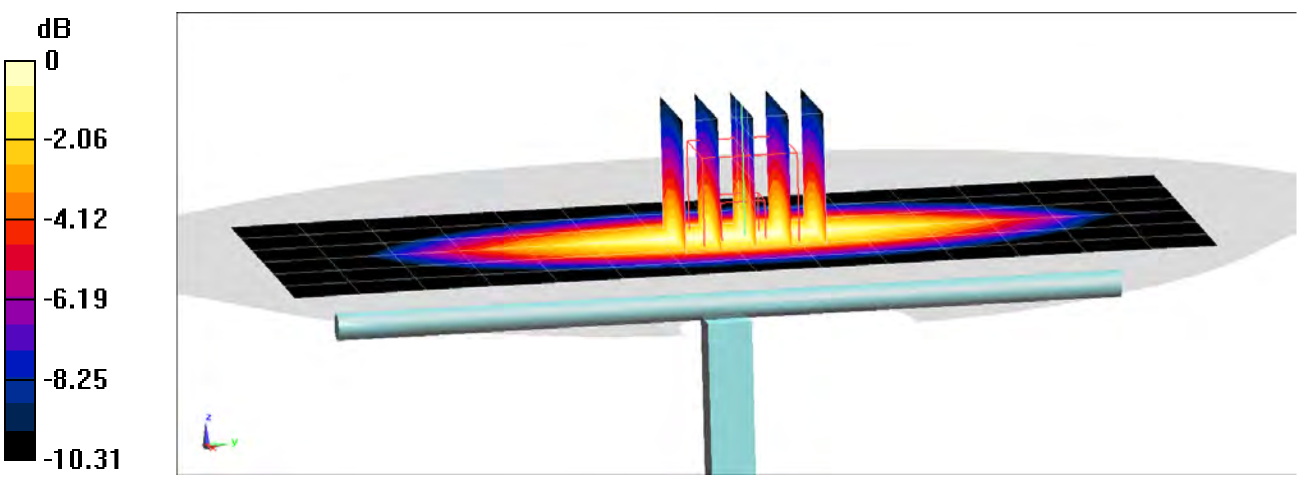
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used:
f = 750 MHz; σ = 0.883 S/m; ε_r = 43.064; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/05/2020; Ambient Temp: 20.3°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN3589; ConvF(8.7, 8.7, 8.7) @ 750 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.54 W/kg
SAR(1 g) = 1.67 W/kg
Deviation(1 g) = -4.90%



0 dB = 2.23 W/kg = 3.48 dBW/kg

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1003

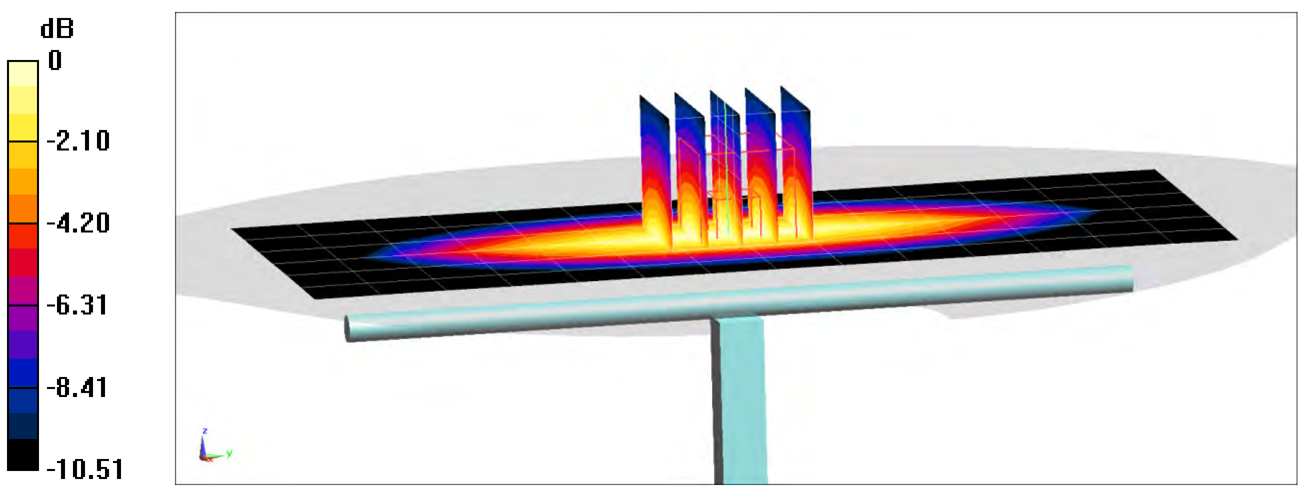
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used:
f = 750 MHz; σ = 0.873 S/m; ε_r = 43.074; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/23/2020; Ambient Temp: 22.9°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN3589; ConvF(8.7, 8.7, 8.7) @ 750 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.53 W/kg
SAR(1 g) = 1.63 W/kg
Deviation(1 g) = -7.18%



0 dB = 2.19 W/kg = 3.40 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

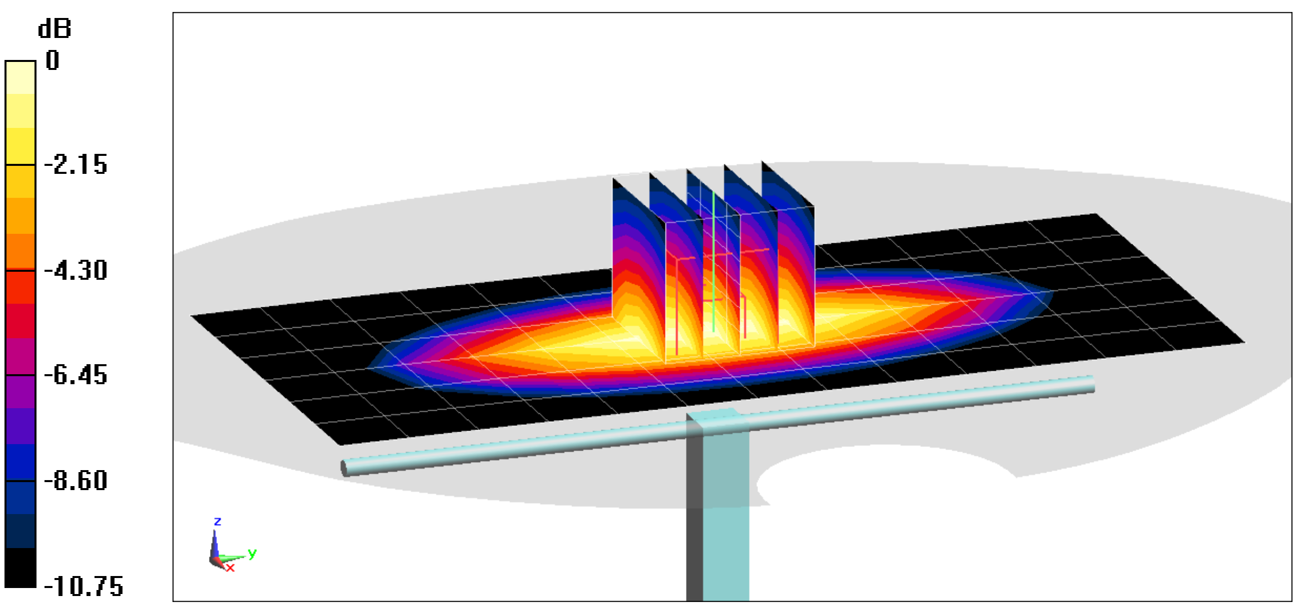
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used:
f = 835 MHz; σ = 0.906 S/m; ε_r = 41.748; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/29/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7410; ConvF(9.88, 9.88, 9.88) @ 835 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.87 W/kg
SAR(1 g) = 1.92 W/kg
Deviation(1 g) = -0.52%



0 dB = 2.56 W/kg = 4.08 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

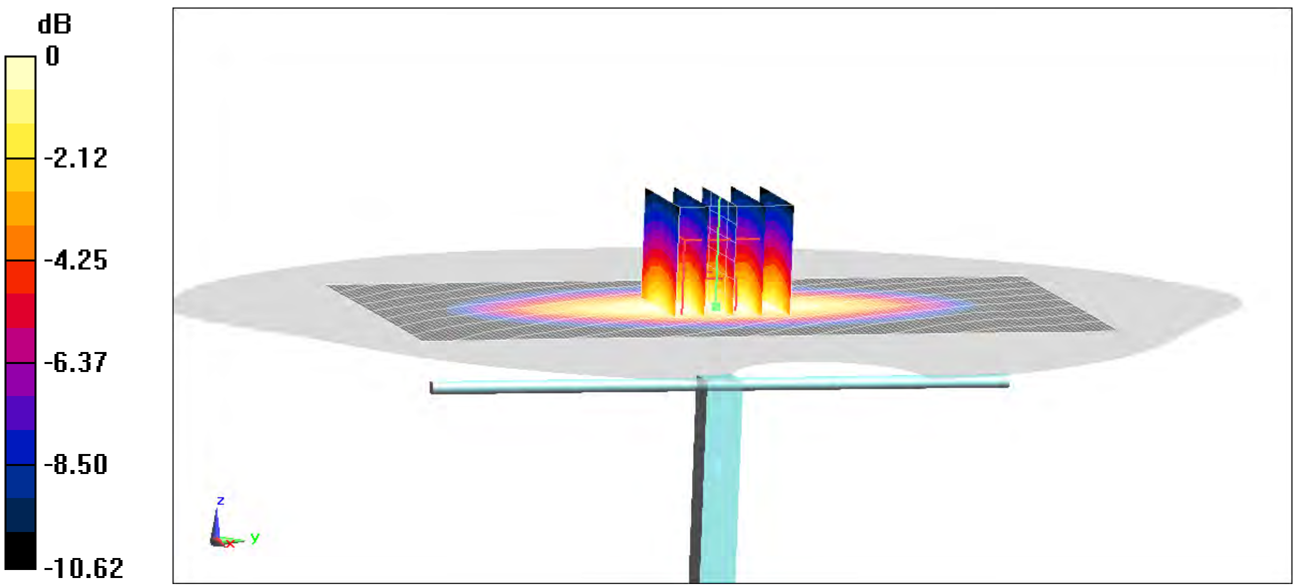
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used:
f = 835 MHz; σ = 0.903 S/m; ε_r = 42.758; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/06/2020; Ambient Temp: 24.9°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7406; ConvF(9.61, 9.61, 9.61) @ 835 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1583; Calibrated: 5/14/2020
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.91 W/kg
SAR(1 g) = 1.93 W/kg
Deviation(1 g) = 0.00%



0 dB = 2.59 W/kg = 4.13 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1150

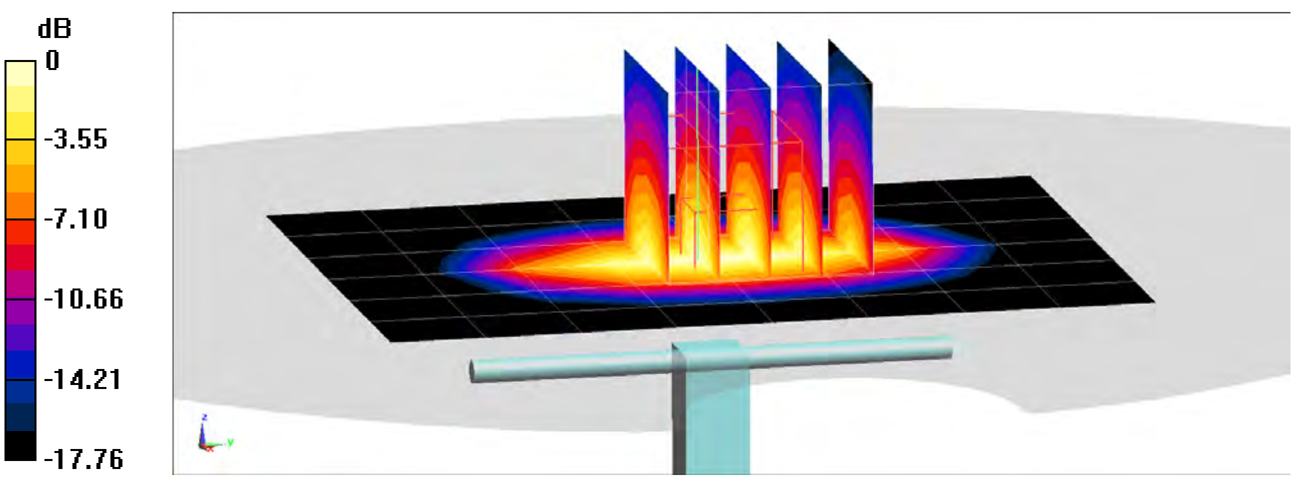
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used:
f = 1750 MHz; $\sigma = 1.314$ S/m; $\varepsilon_r = 40.794$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/02/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN3589; ConvF(7.55, 7.55, 7.55) @ 1750 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 6.05 W/kg
SAR(1 g) = 3.39 W/kg
Deviation(1 g) = -7.12%



0 dB = 5.09 W/kg = 7.07 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1150

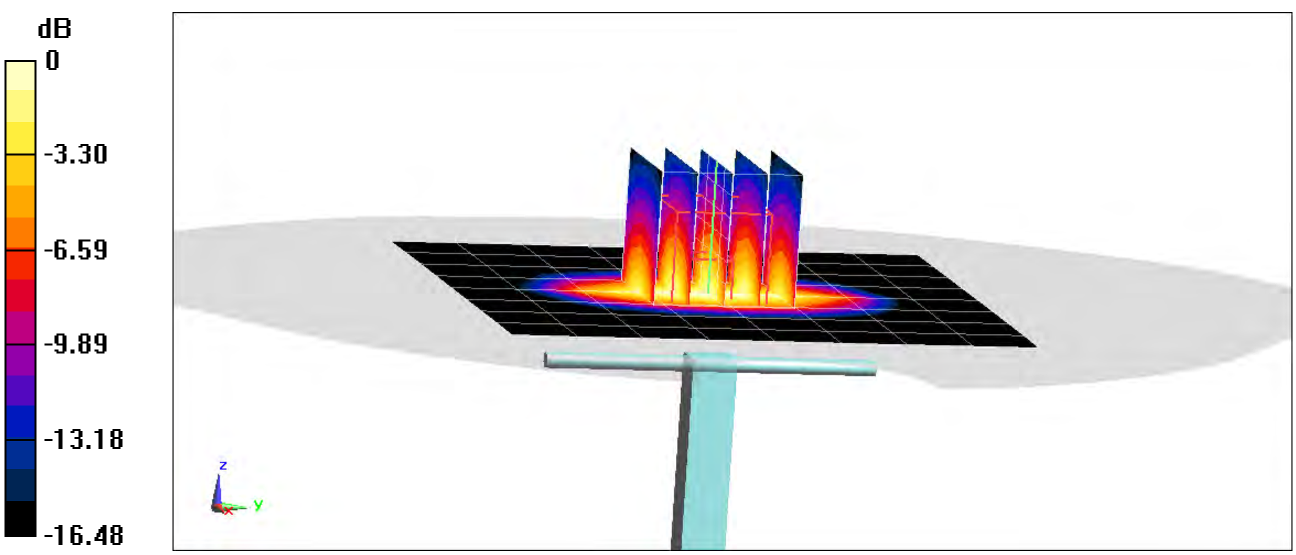
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used:
f = 1750 MHz; σ = 1.321 S/m; ε_r = 41.025; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/11/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7406; ConvF(8.32, 8.32, 8.32) @ 1750 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1583; Calibrated: 5/14/2020
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966
Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (9x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 6.84 W/kg
SAR(1 g) = 3.76 W/kg
Deviation(1 g) = 3.01%



0 dB = 5.76 W/kg = 7.60 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d148

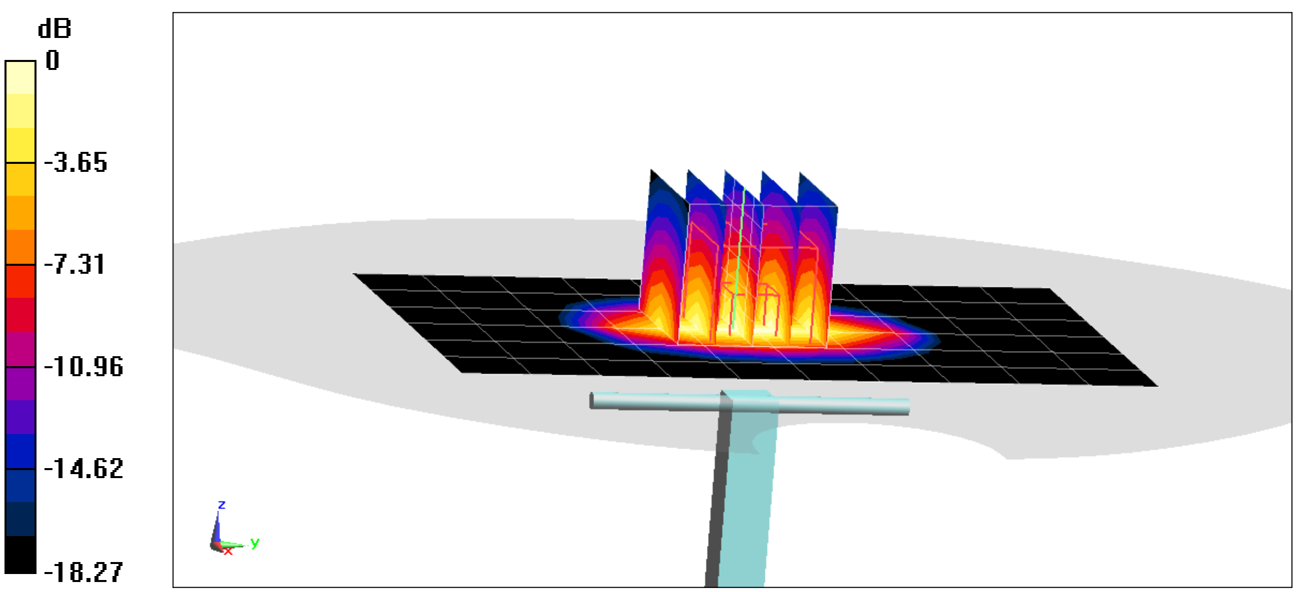
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1900 MHz; σ = 1.371 S/m; ε_r = 40.081; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/03/2020; Ambient Temp: 23.4°C; Tissue Temp: 21.3°C

Probe: EX3DV4 - SN7410; ConvF(8.11, 8.11, 8.11) @ 1900 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966
Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.59 W/kg
SAR(1 g) = 4.17 W/kg
Deviation(1 g) = 6.65%



0 dB = 6.35 W/kg = 8.03 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d148

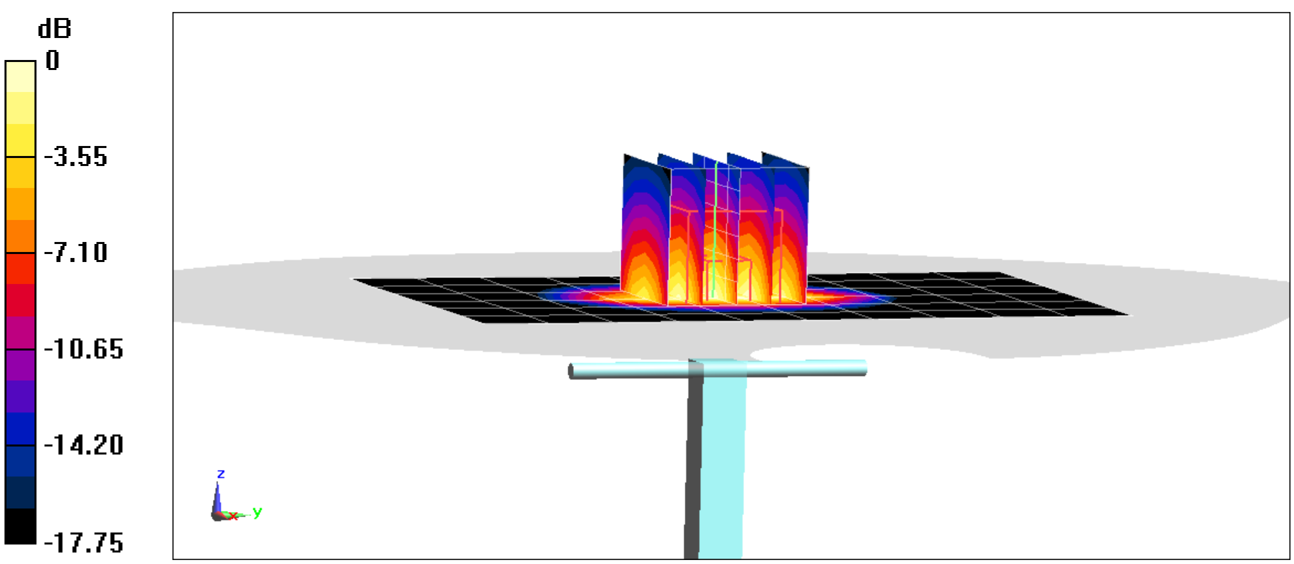
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1900 MHz; σ = 1.373 S/m; ε_r = 41.464; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/05/2020; Ambient Temp: 24.6°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7406; ConvF(7.96, 7.96, 7.96) @ 1900 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1583; Calibrated: 5/14/2020
Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.72 W/kg
SAR(1 g) = 4.23 W/kg
Deviation(1 g) = 8.18%



0 dB = 6.54 W/kg = 8.16 dBW/kg

PCTEST

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: 1073

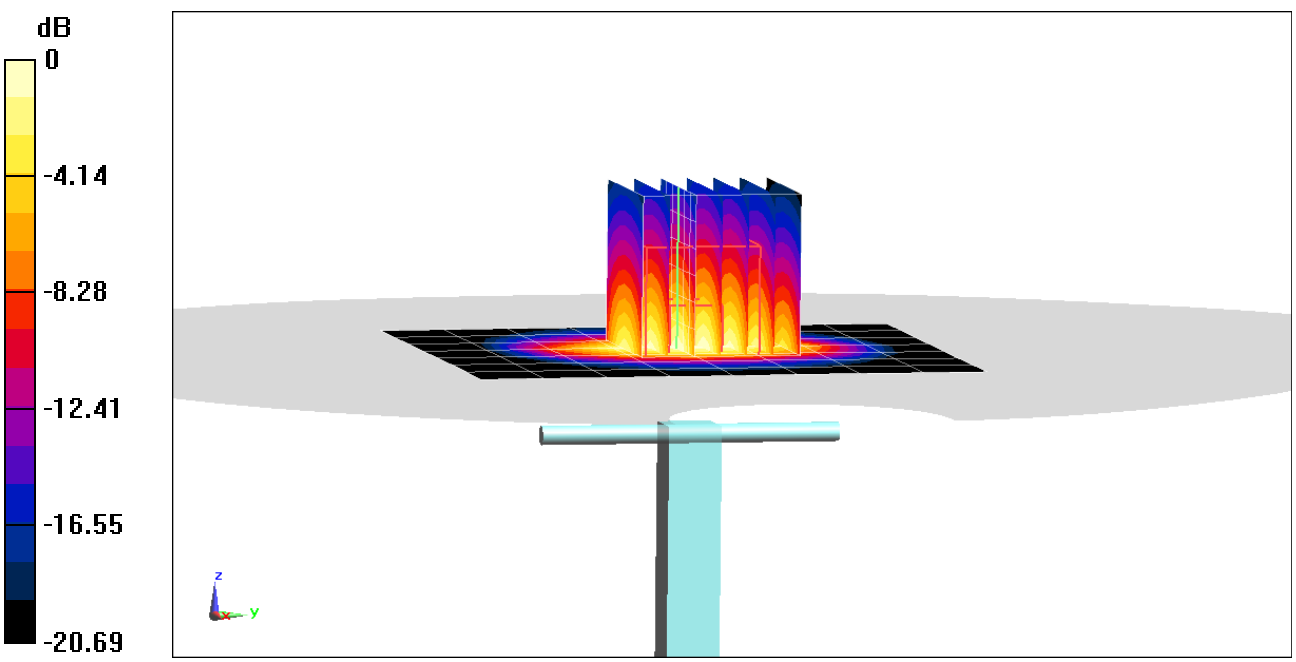
Communication System: UID 0, CW; Frequency: 2300 MHz; Duty Cycle: 1:1
Medium: 2300 Head; Medium parameters used:
f = 2300 MHz; σ = 1.636 S/m; ε_r = 40.799; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/17/2020; Ambient Temp: 22.7°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7551; ConvF(7.74, 7.74, 7.74) @ 2300 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2300 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 9.41 W/kg
SAR(1 g) = 4.69 W/kg
Deviation(1 g) = -4.67%



0 dB = 7.59 W/kg = 8.80 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 719

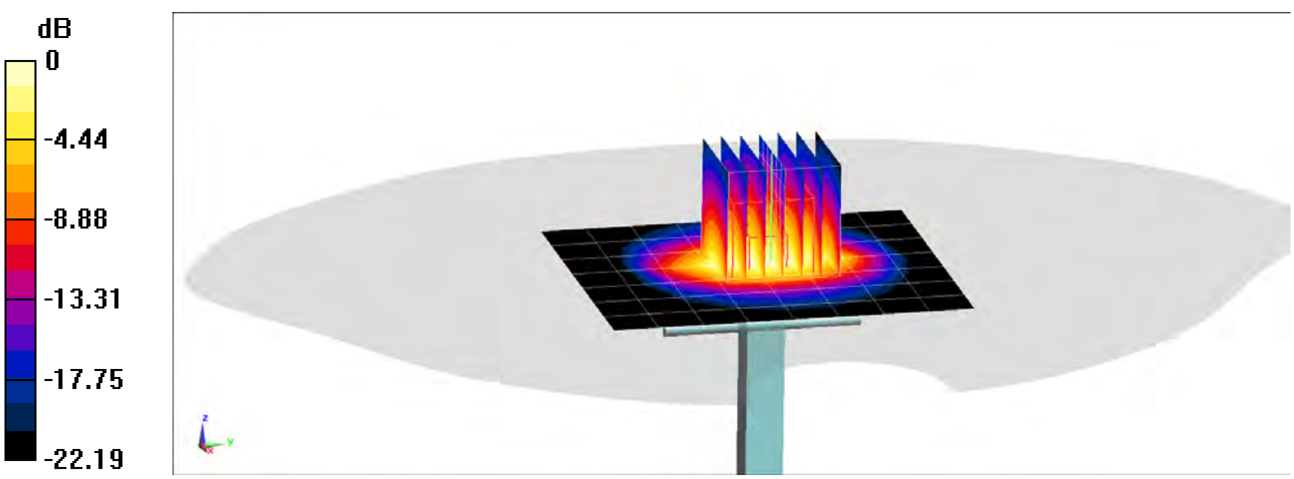
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2450 MHz; σ = 1.821 S/m; ε_r = 41.109; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/28/2020; Ambient Temp: 22.9°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2450 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.1 W/kg
SAR(1 g) = 5.34 W/kg
Deviation(1 g) = 0.56%



0 dB = 8.95 W/kg = 9.52 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 797

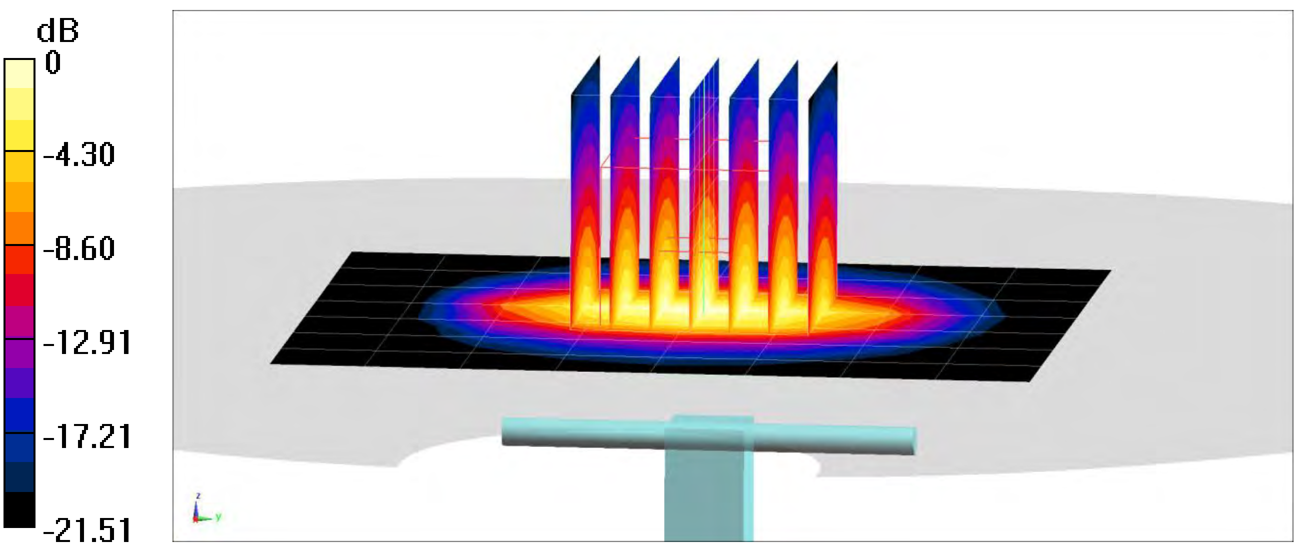
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2450 MHz; σ = 1.788 S/m; ε_r = 40.696; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/20/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2450 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.8 W/kg
SAR(1 g) = 5.11 W/kg
Deviation(1 g) = -3.04%



0 dB = 8.64 W/kg = 9.37 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 719

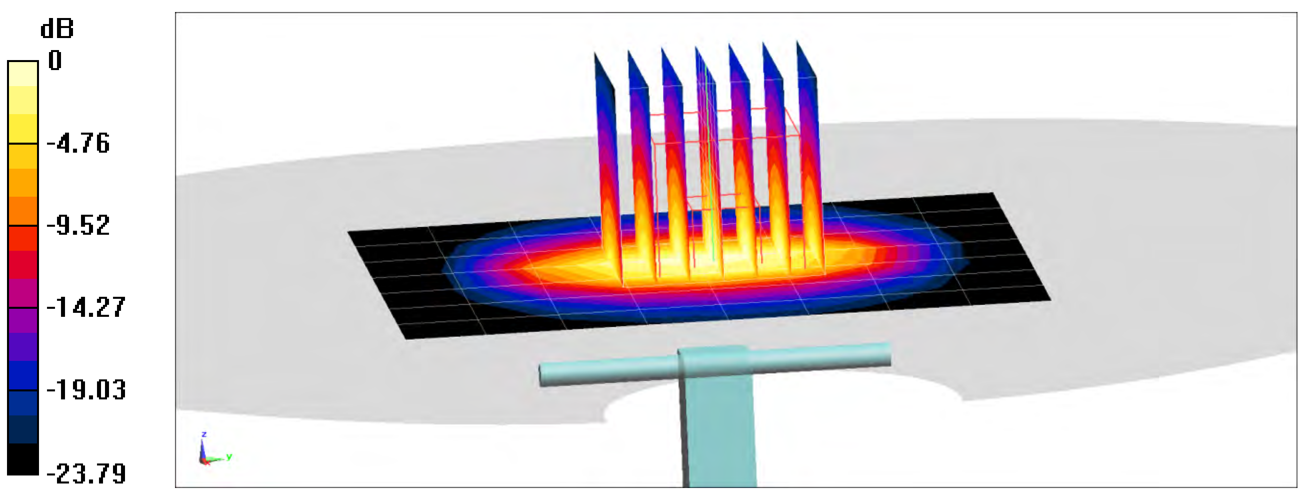
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2450 MHz; σ = 1.867 S/m; ε_r = 38.764; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/04/2020; Ambient Temp: 22.8°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2450 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.7 W/kg
SAR(1 g) = 5.28 W/kg
Deviation(1 g) = -0.56%



0 dB = 8.98 W/kg = 9.53 dBW/kg

PCTEST

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1064

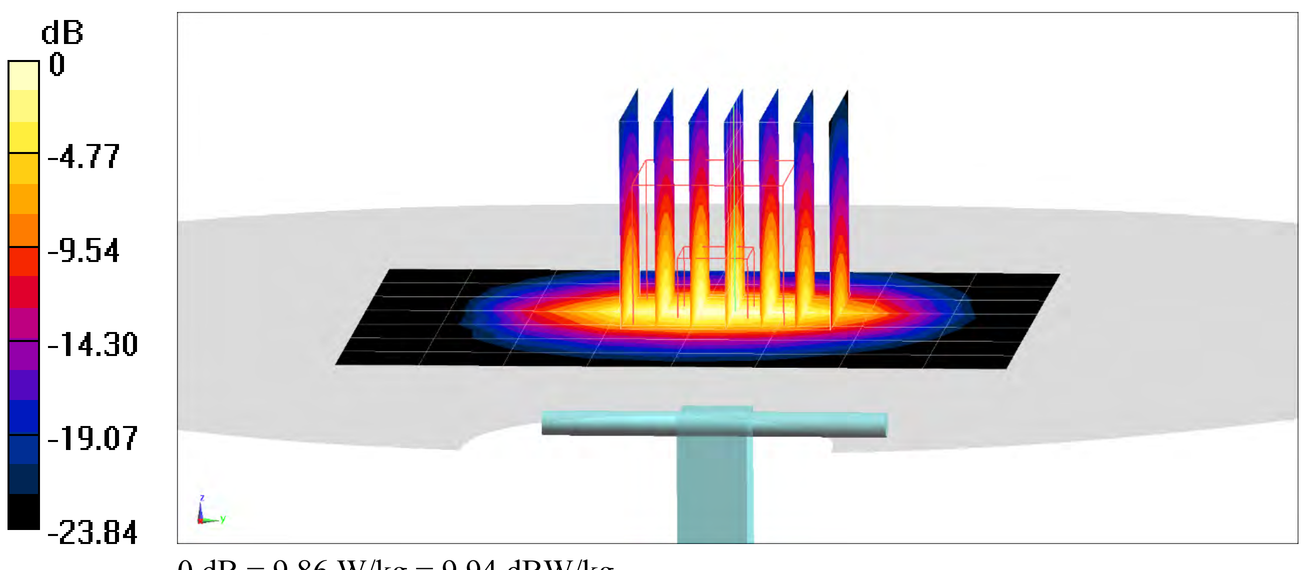
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2600 Head Medium parameters used:
f = 2600 MHz; σ = 1.941 S/m; ε_r = 40.903; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/28/2020; Ambient Temp: 22.9°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN3589; ConvF(6.6, 6.6, 6.6) @ 2600 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 12.6 W/kg
SAR(1 g) = 5.8 W/kg
Deviation(1 g) = -0.17%



0 dB = 9.86 W/kg = 9.94 dBW/kg

PCTEST

DUT: Dipole 3500 MHz; Type: D3500V2; Serial: 1059

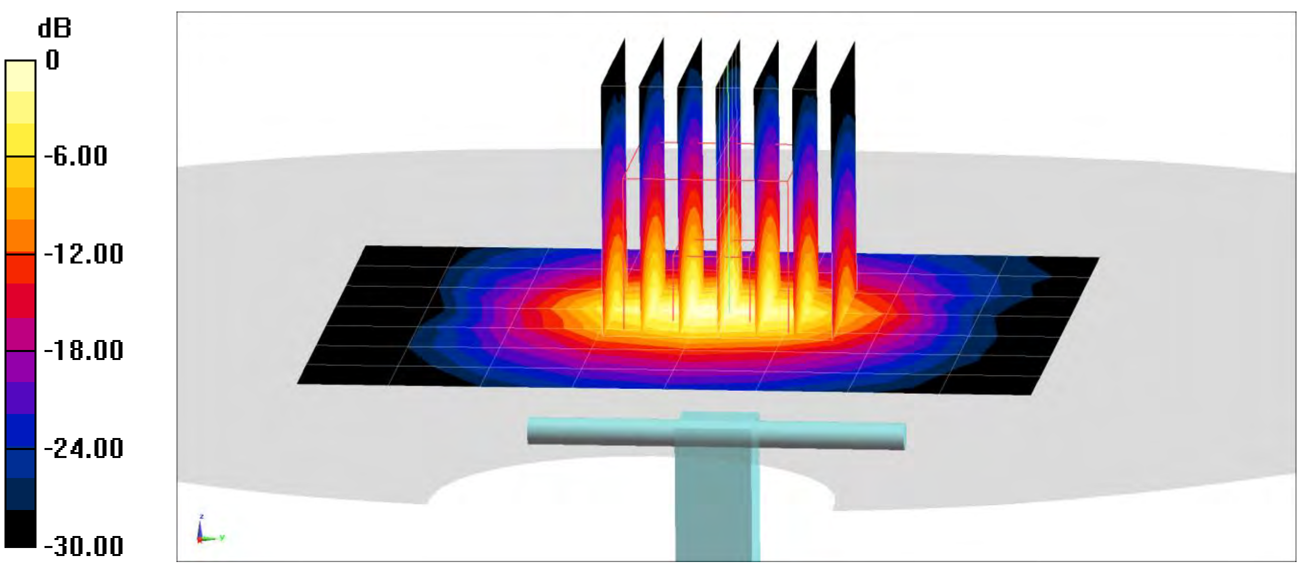
Communication System: UID 0, CW; Frequency: 3500 MHz; Duty Cycle: 1:1
Medium: 3600 Head Medium parameters used:
f = 3500 MHz; σ = 2.872 S/m; ε_r = 39.373; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/24/2020; Ambient Temp: 22.8°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7488; ConvF(7.3, 7.3, 7.3) @ 3500 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V4.0 left 20; Type: QD 000 P40 CC; Serial: 1687
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

3500 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 16.9 W/kg
SAR(1 g) = 6.18 W/kg
Deviation(1 g) = -4.33%



0 dB = 12.0 W/kg = 10.79 dBW/kg

PCTEST

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: 1018

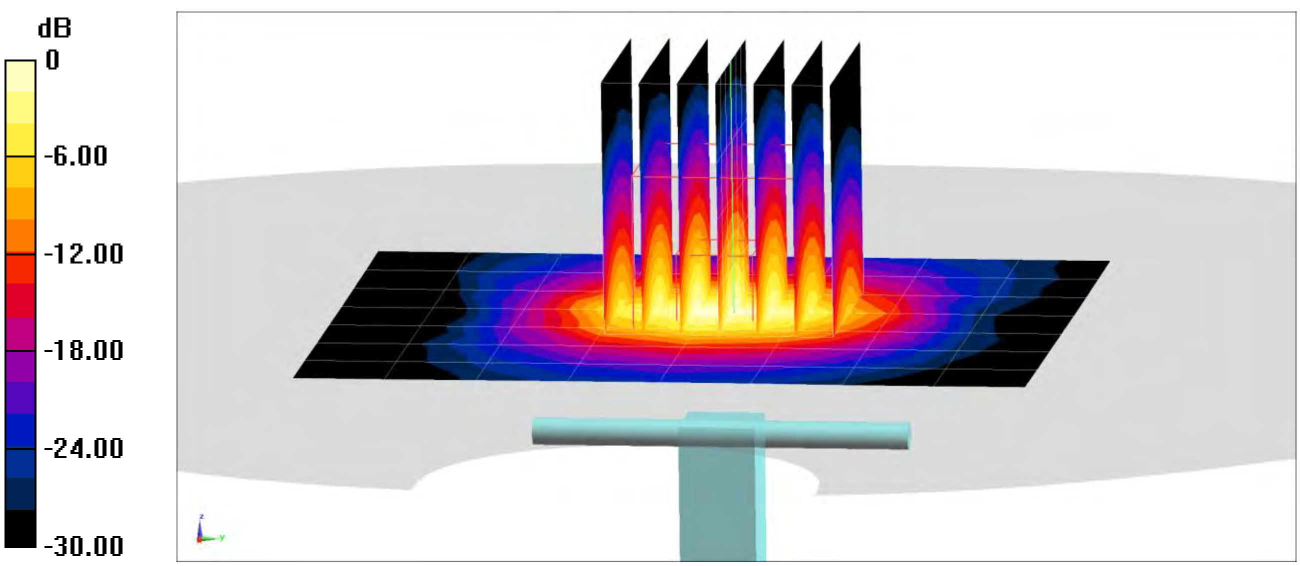
Communication System: UID 0, CW; Frequency: 3700 MHz; Duty Cycle: 1:1
Medium: 3600 Head Medium parameters used:
f = 3700 MHz; σ = 3.037 S/m; ε_r = 39.104; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/24/2020; Ambient Temp: 22.8°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7488; ConvF(7.2, 7.2, 7.2) @ 3700 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V4.0 left 20; Type: QD 000 P40 CC; Serial: 1687
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

3700 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.1 W/kg
SAR(1 g) = 6.34 W/kg
Deviation(1 g) = -3.65%



0 dB = 12.8 W/kg = 11.07 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

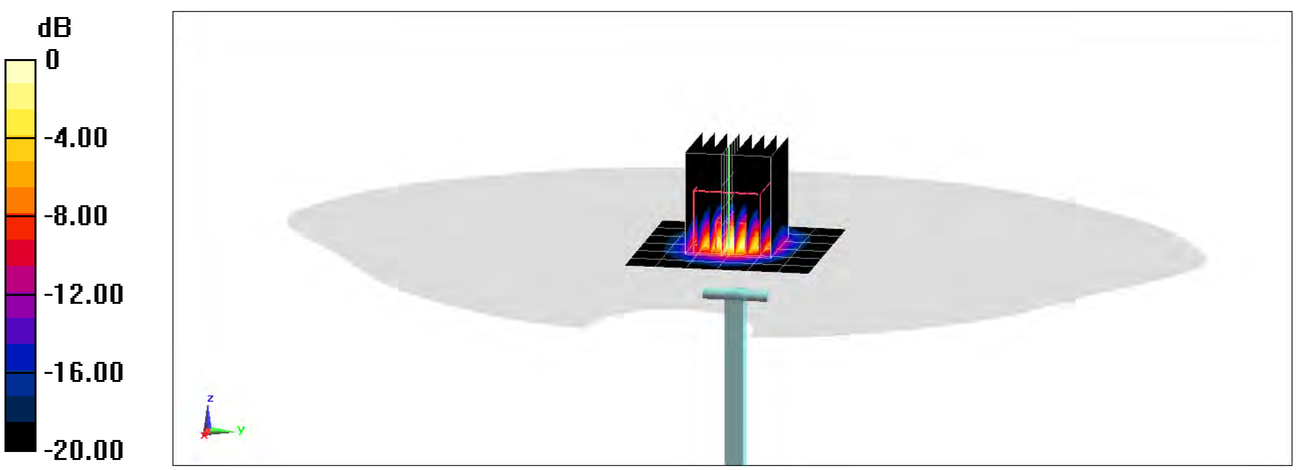
Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Head Medium parameters used:
f = 5250 MHz; $\sigma = 4.583$ S/m; $\varepsilon_r = 36.641$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/13/2020; Ambient Temp: 21.7°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(5.5, 5.5, 5.5) @ 5250 MHz; Calibrated: 4/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/15/2020
Phantom: Twin-SAM V5.0 Left 20; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5250 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 15.6 W/kg
SAR(1 g) = 3.82 W/kg
Deviation(1 g) = -3.54%



0 dB = 9.27 W/kg = 9.67 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

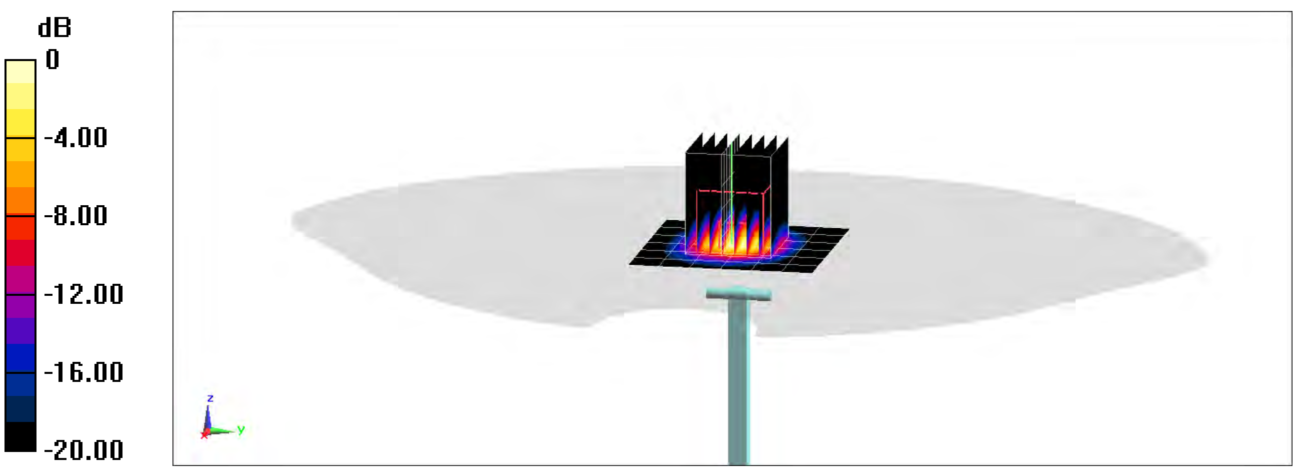
Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Head Medium parameters used:
f = 5600 MHz; σ = 4.938 S/m; ε_r = 35.953; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/13/2020; Ambient Temp: 21.7°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(4.93, 4.93, 4.93) @ 5600 MHz; Calibrated: 4/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/15/2020
Phantom: Twin-SAM V5.0 Left 20; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5600 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 17.0 W/kg
SAR(1 g) = 3.87 W/kg
Deviation(1 g) = -7.97%



0 dB = 9.47 W/kg = 9.76 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

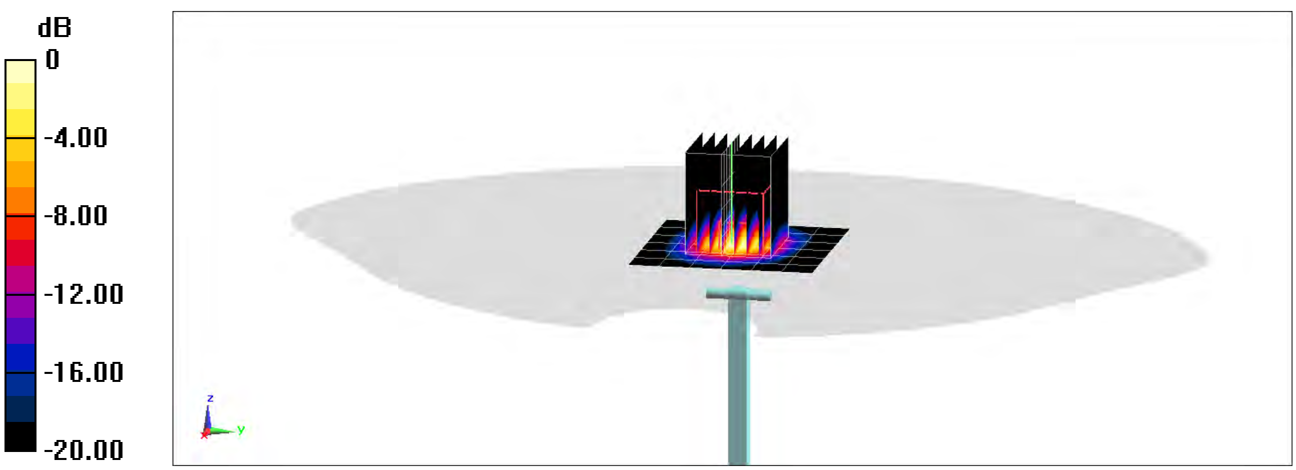
Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Head Medium parameters used:
f = 5750 MHz; σ = 5.092 S/m; ε_r = 35.667; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/13/2020; Ambient Temp: 21.7°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(5.05, 5.05, 5.05) @ 5750 MHz; Calibrated: 4/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/15/2020
Phantom: Twin-SAM V5.0 Left 20; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5750 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 17.7 W/kg
SAR(1 g) = 3.89 W/kg
Deviation(1 g) = -3.35%



0 dB = 9.65 W/kg = 9.85 dBW/kg

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1054

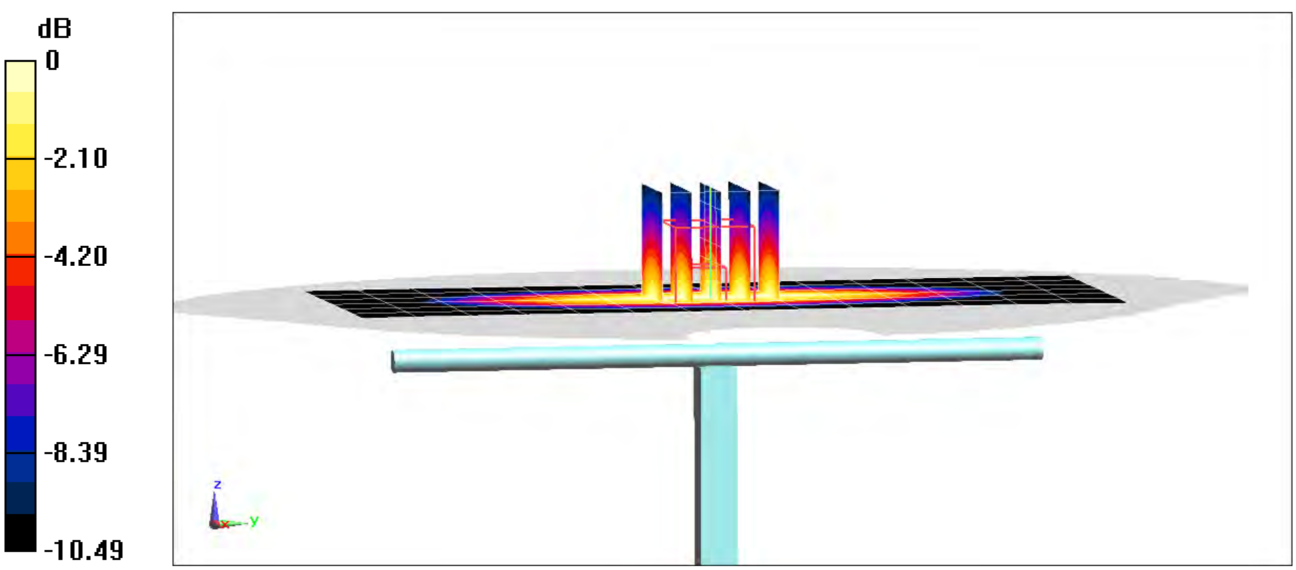
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used:
f = 750 MHz; σ = 0.955 S/m; ε_r = 53.959; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/01/2020; Ambient Temp: 23.7°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 750 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.74 W/kg
SAR(1 g) = 1.8 W/kg; SAR(10 g) = 1.19 W/kg
Deviation(1 g) = 5.51%; Deviation(10 g) = 5.68%



0 dB = 2.42 W/kg = 3.84 dBW/kg

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1054

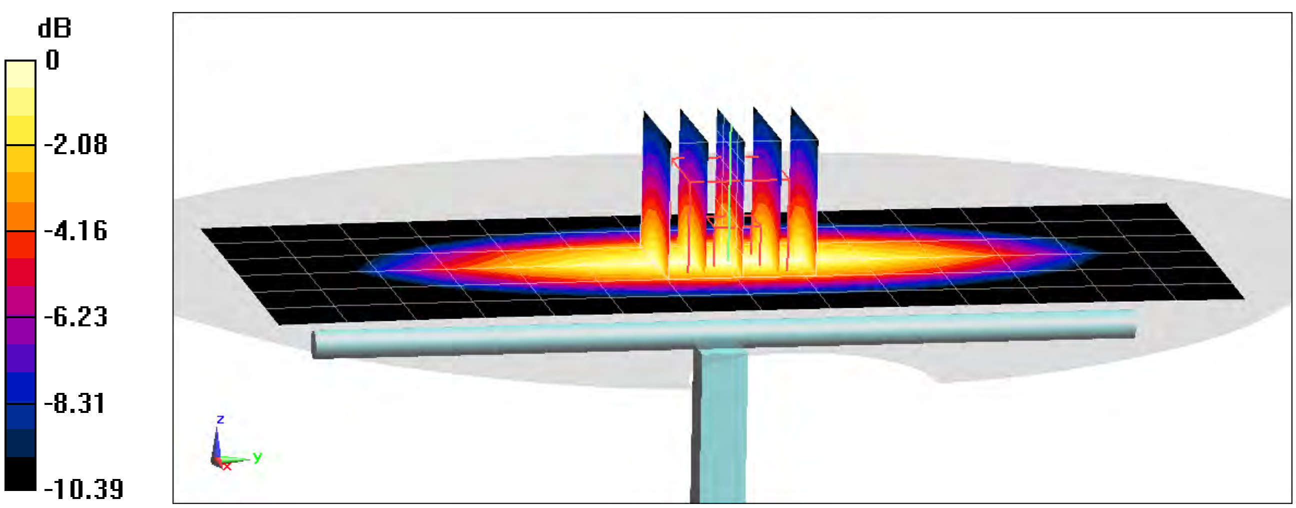
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used:
f = 750 MHz; σ = 0.951 S/m; ε_r = 54.099; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/21/2020; Ambient Temp: 23.9°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7551; ConvF(10.09, 10.09, 10.09) @ 750 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.62 W/kg
SAR(1 g) = 1.71 W/kg
Deviation(1 g) = 0.23%



0 dB = 2.30 W/kg = 3.62 dBW/kg

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1054

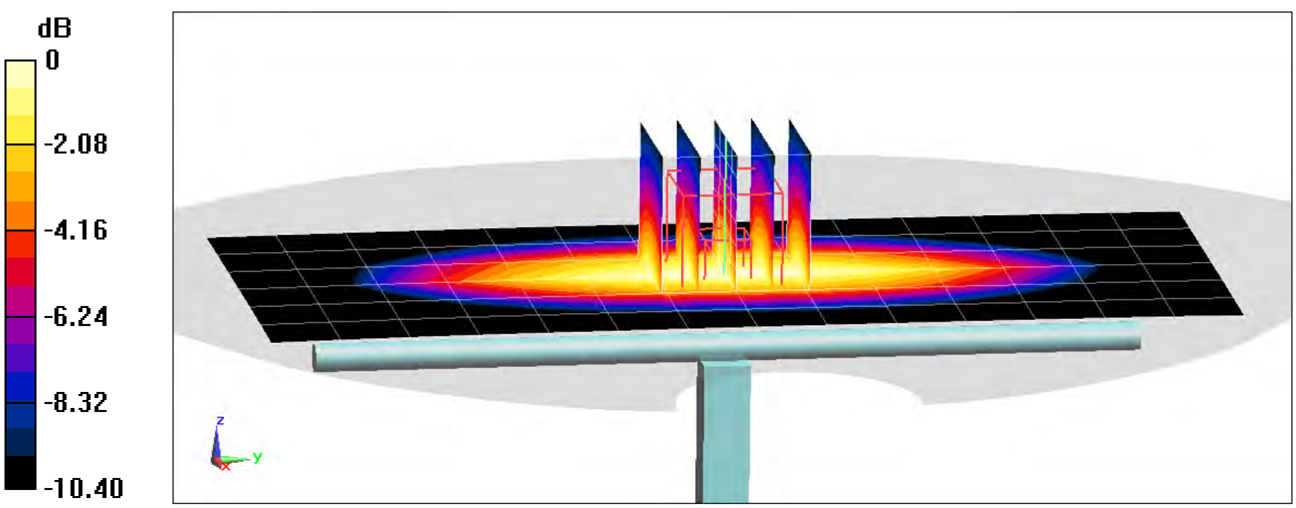
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used:
f = 750 MHz; σ = 0.967 S/m; ε_r = 53.555; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/26/2020; Ambient Temp: 21.7°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN7551; ConvF(10.09, 10.09, 10.09) @ 750 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.68 W/kg
SAR(1 g) = 1.76 W/kg
Deviation(1 g) = 3.17%



0 dB = 2.36 W/kg = 3.73 dBW/kg

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1054

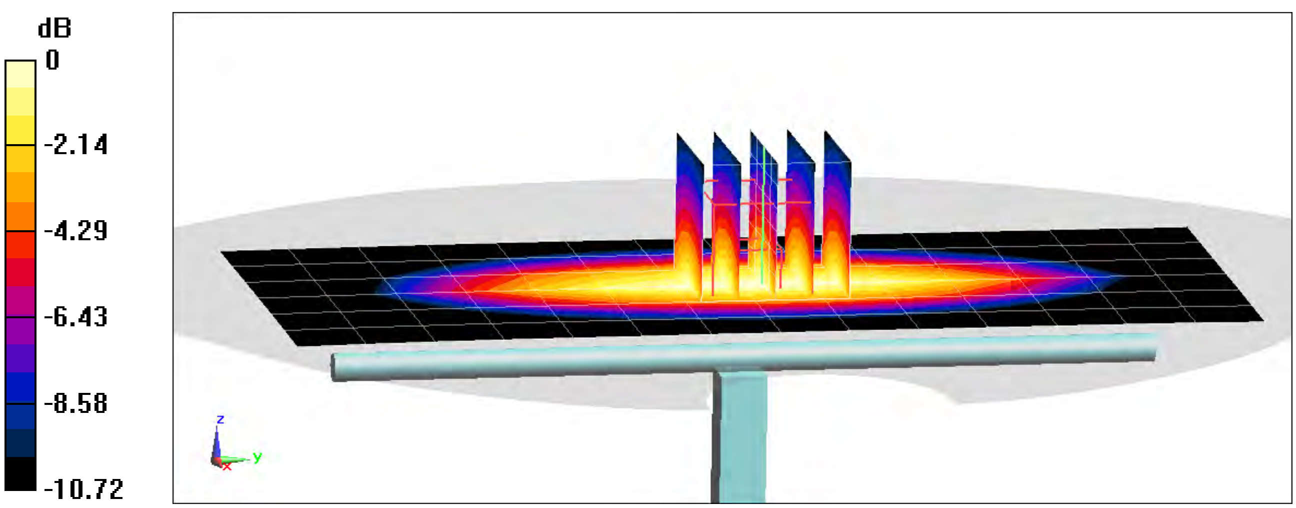
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used:
f = 750 MHz; σ = 0.969 S/m; ε_r = 53.19; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/28/2020; Ambient Temp: 21.5°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7551; ConvF(10.09, 10.09, 10.09) @ 750 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.77 W/kg
SAR(1 g) = 1.76 W/kg
Deviation(1 g) = 3.17%



0 dB = 2.40 W/kg = 3.80 dBW/kg

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1054

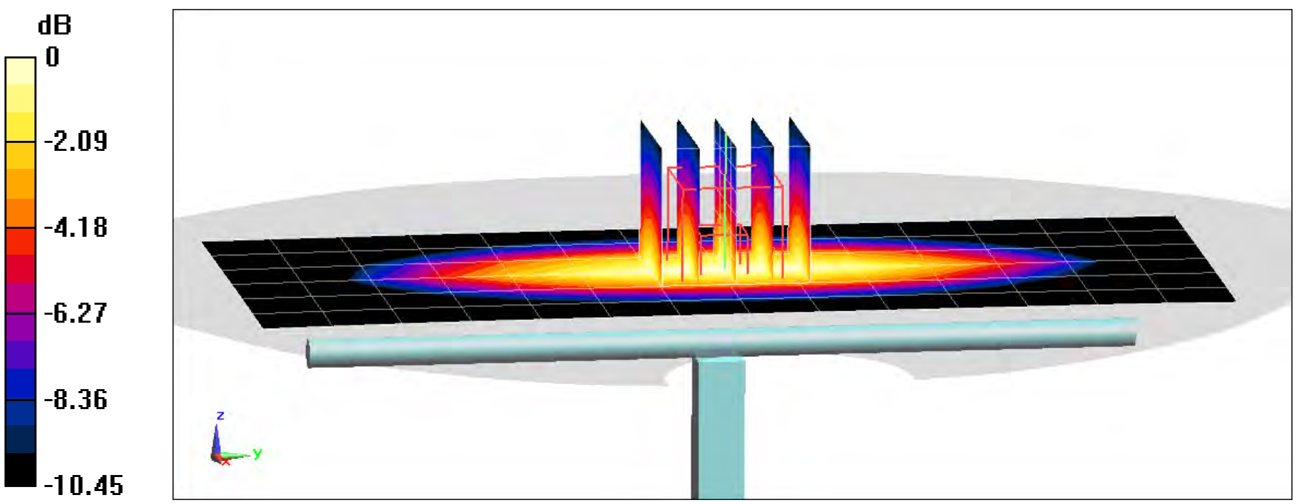
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used:
f = 750 MHz; σ = 0.964 S/m; ε_r = 53.772; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/30/2020; Ambient Temp: 23.5°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7551; ConvF(10.09, 10.09, 10.09) @ 750 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.65 W/kg
SAR(1 g) = 1.71 W/kg; SAR(10 g) = 1.13 W/kg
Deviation(1 g) = 0.23%; Deviation(10 g) = 0.36%



0 dB = 2.31 W/kg = 3.64 dBW/kg

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1054

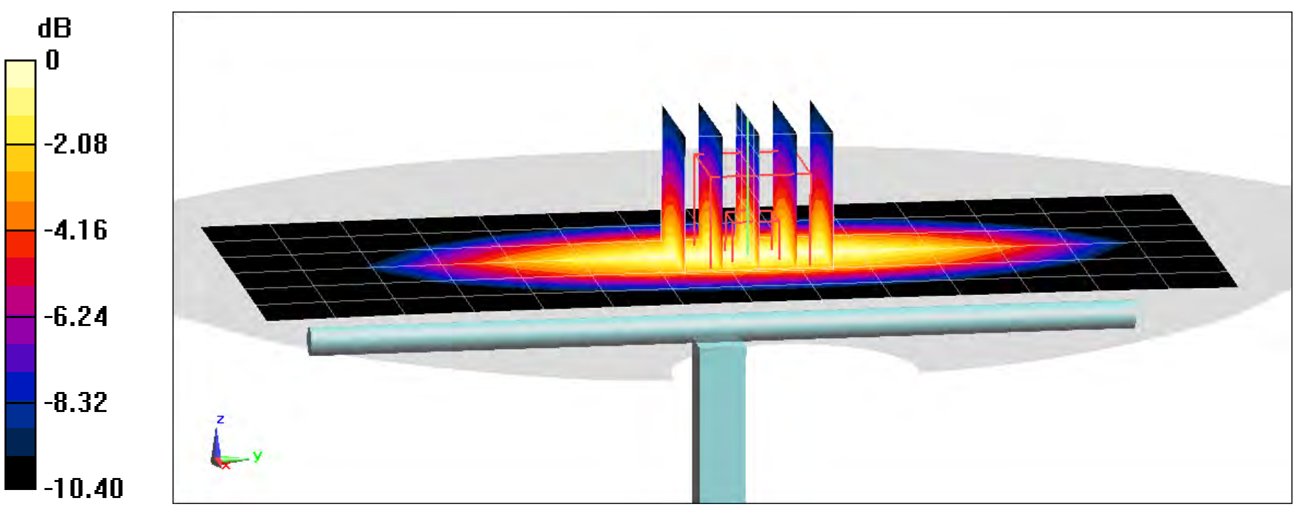
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used:
f = 750 MHz; σ = 0.973 S/m; ε_r = 53.556; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 08/03/2020; Ambient Temp: 23.9°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7551; ConvF(10.09, 10.09, 10.09) @ 750 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.74 W/kg
SAR(1 g) = 1.78 W/kg; SAR(10 g) = 1.17 W/kg
Deviation(1 g) = 4.34%; Deviation(10 g) = 3.91%



0 dB = 2.40 W/kg = 3.80 dBW/kg

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1161

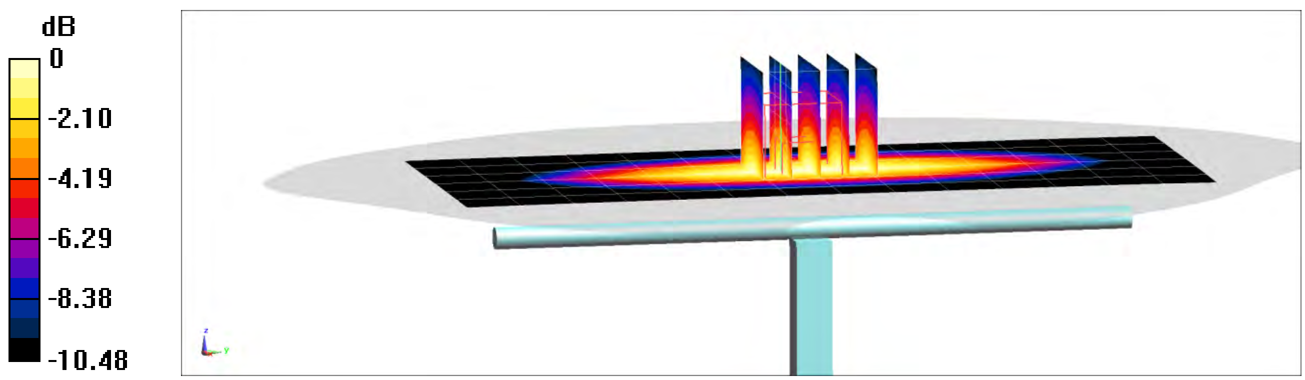
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used:
f = 750 MHz; $\sigma = 0.947$ S/m; $\varepsilon_r = 53.467$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 08/24/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN3589; ConvF(8.49, 8.49, 8.49) @ 750 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1558; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.77 W/kg
SAR(10 g) = 1.18 W/kg
Deviation(10 g) = 6.31%



0 dB = 2.42 W/kg = 3.84 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d047

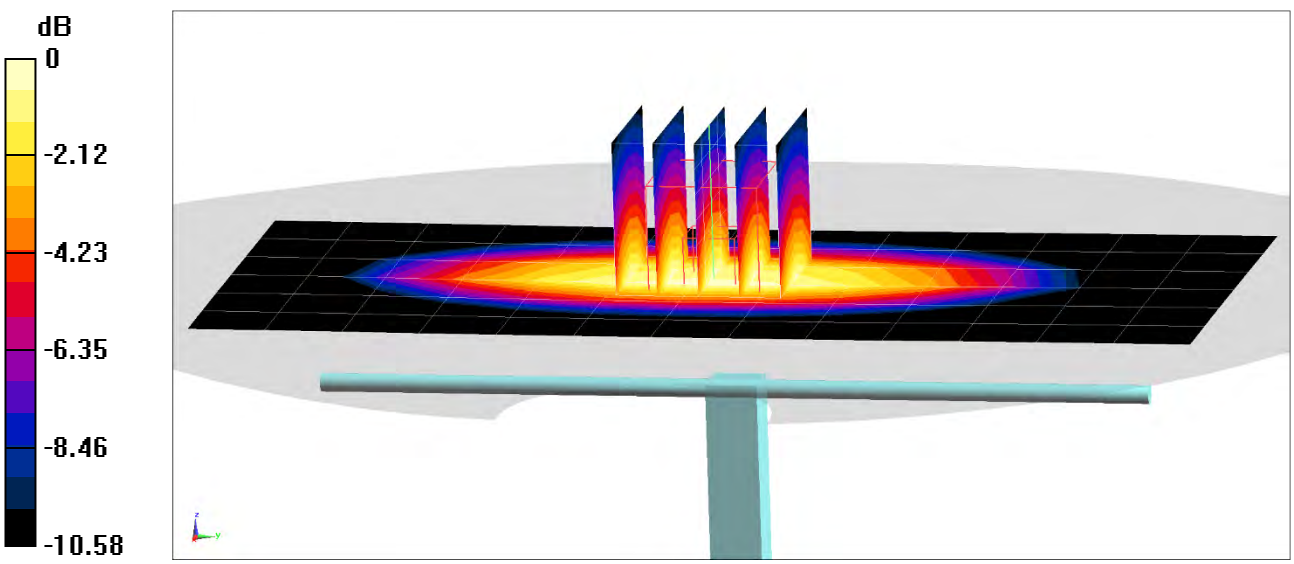
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 0.96 S/m; ε_r = 54.305; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/19/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 835 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.80 W/kg
SAR(1 g) = 1.82 W/kg
Deviation(1 g) = -3.91%



0 dB = 2.45 W/kg = 3.89 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d047

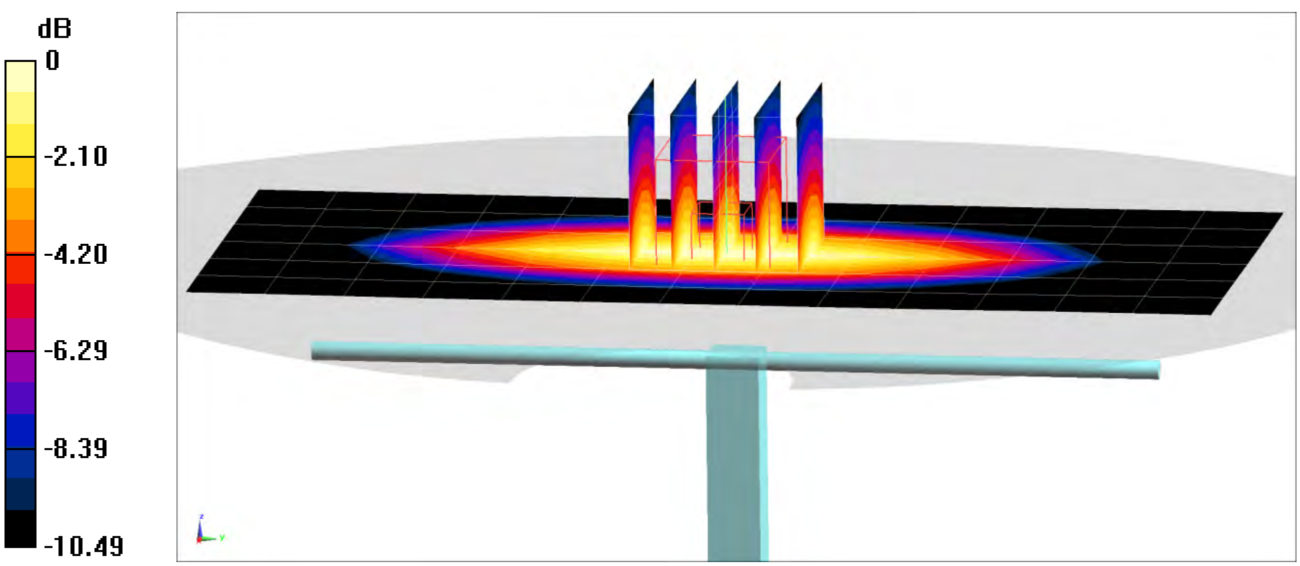
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 0.955 S/m; ε_r = 53.949; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/30/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 835 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.88 W/kg
SAR(1 g) = 1.9 W/kg
Deviation(1 g) = 0.32%



0 dB = 2.54 W/kg = 4.05 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

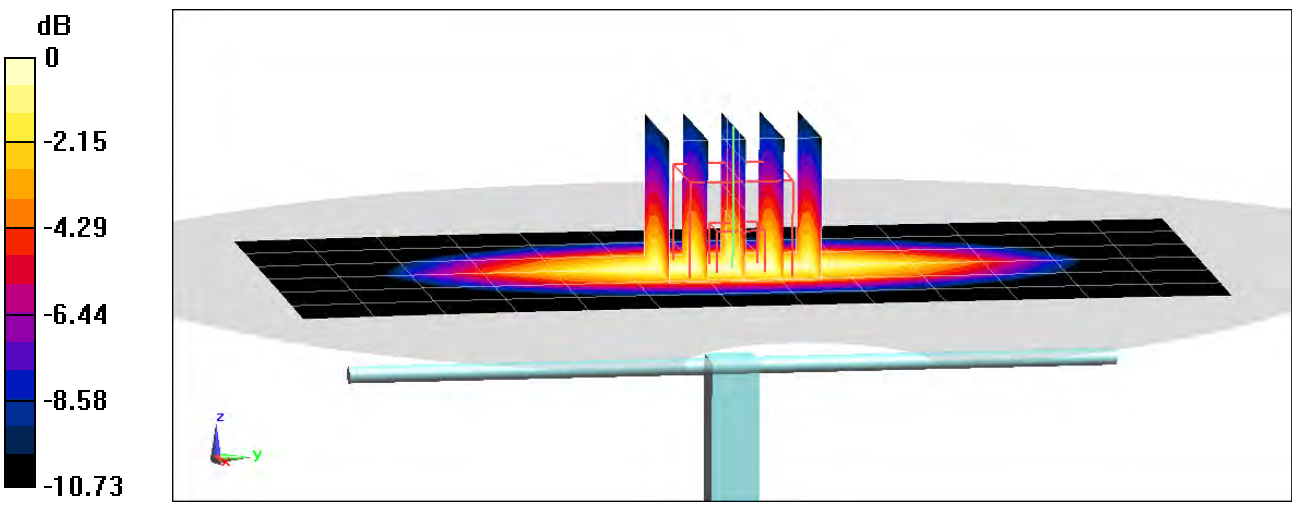
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used:
f = 835 MHz; σ = 0.997 S/m; ε_r = 53.562; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/30/2020; Ambient Temp: 23.5°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7551; ConvF(9.92, 9.92, 9.92) @ 835 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 3.30 W/kg
SAR(10 g) = 1.4 W/kg
Deviation(10 g) = 5.42%



0 dB = 2.88 W/kg = 4.59 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d047

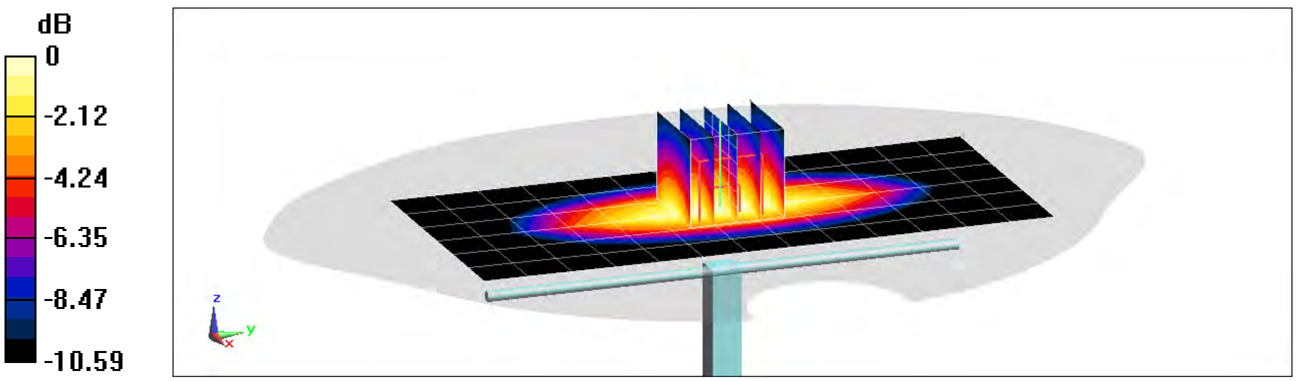
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 0.967 S/m; ε_r = 53.62; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 08/02/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 835 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 3.03 W/kg
SAR(1 g) = 1.98 W/kg
Deviation(1 g) = 4.54%



0 dB = 2.67 W/kg = 4.27 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

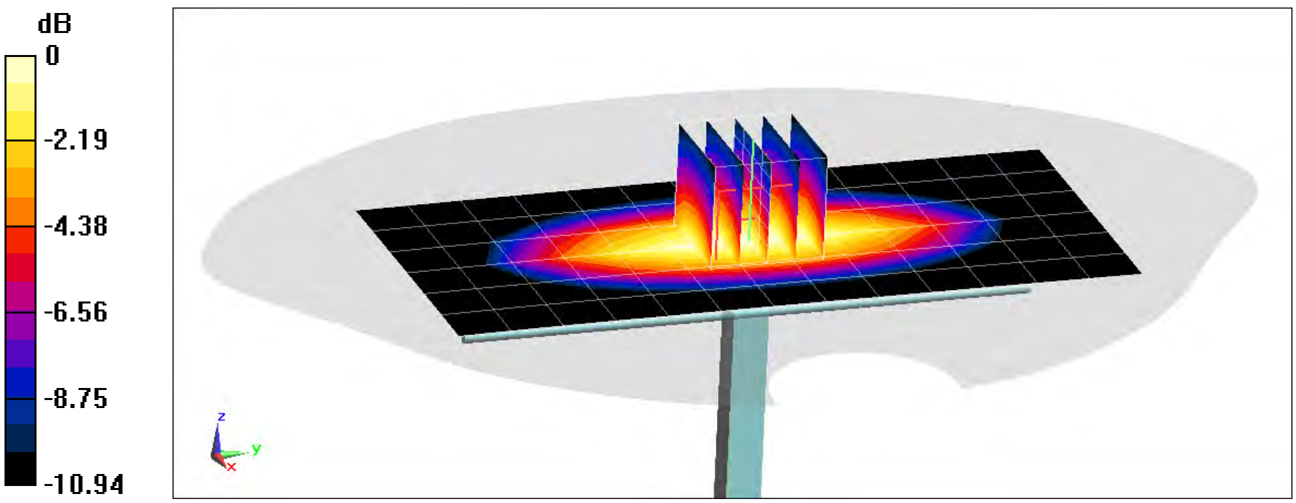
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used:
f = 835 MHz; σ = 1.002 S/m; ε_r = 52.962; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 08/04/2020; Ambient Temp: 22.0°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7551; ConvF(9.92, 9.92, 9.92) @ 835 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 3.11 W/kg
SAR(1 g) = 1.99 W/kg; SAR(10 g) = 1.29 W/kg
Deviation(1 g) = -0.10%; Deviation(10 g) = -2.86%



0 dB = 2.71 W/kg = 4.33 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

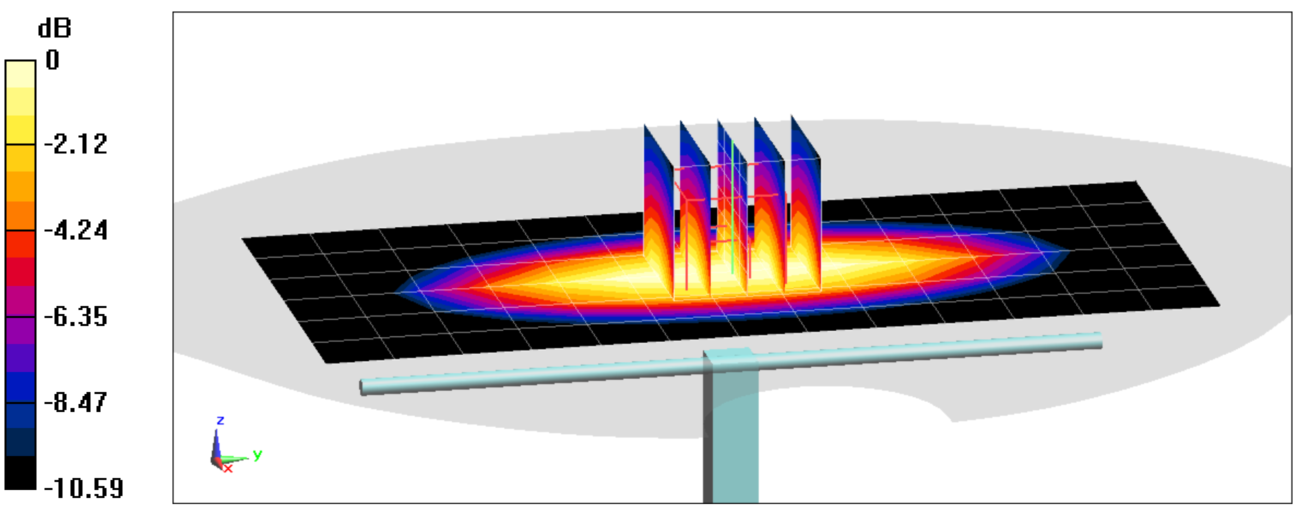
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used:
f = 835 MHz; σ = 0.952 S/m; ε_r = 54.633; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 08/07/2020; Ambient Temp: 23.7°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7551; ConvF(9.92, 9.92, 9.92) @ 835 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 3.06 W/kg
SAR(1 g) = 2 W/kg; SAR(10 g) = 1.32 W/kg
Deviation(1 g) = 0.40%; Deviation(10 g) = -0.60%



0 dB = 2.64 W/kg = 4.22 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d133

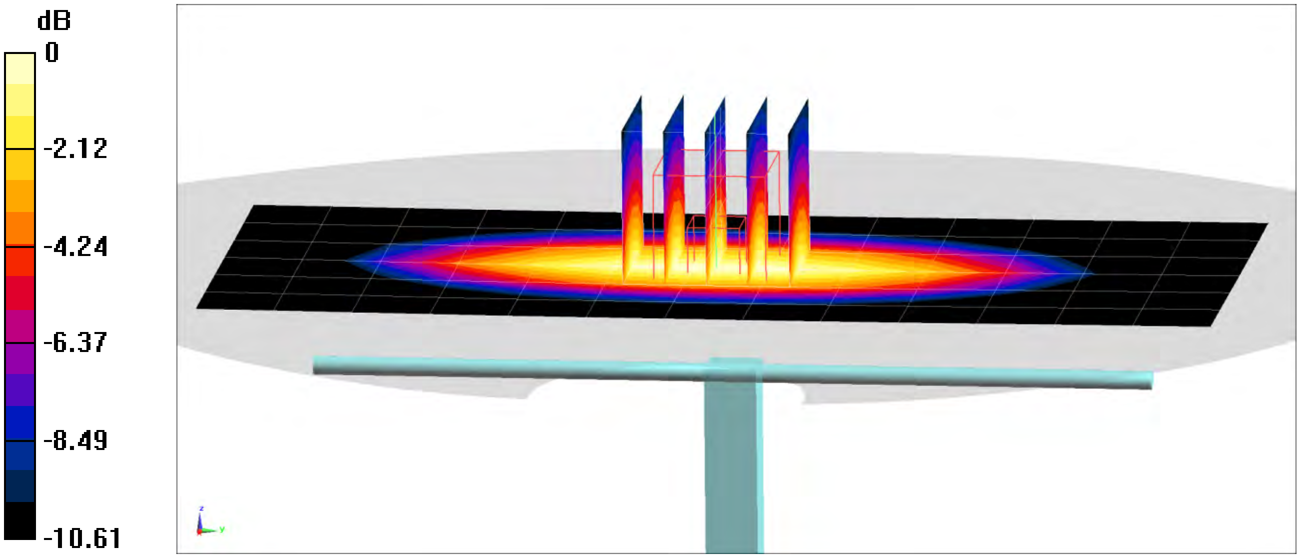
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 0.956 S/m; ε_r = 53.169; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 08/10/2020; Ambient Temp: 24.1°C; Tissue Temp: 23.3°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 835 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.90 W/kg
SAR(1 g) = 1.91 W/kg; SAR(10 g) = 1.25 W/kg
Deviation(1 g) = -2.05%; Deviation(10 g) = -2.34%



0 dB = 2.56 W/kg = 4.08 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

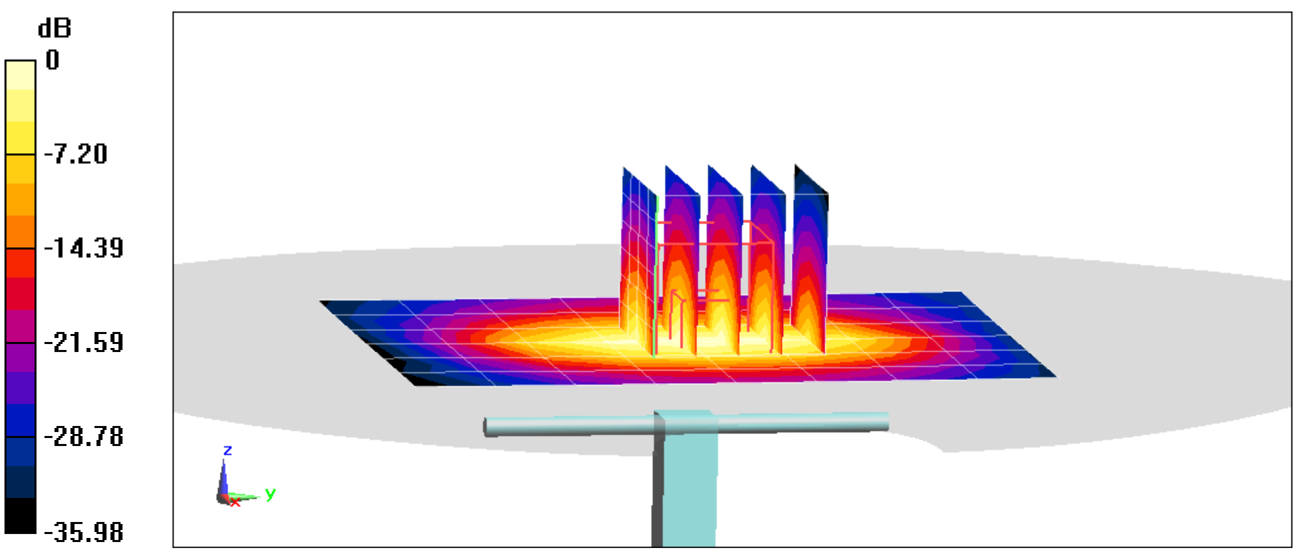
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.507 S/m; ε_r = 51.327; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/01/2020; Ambient Temp: 20.7°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1750 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 6.29 W/kg
SAR(1 g) = 3.47 W/kg; SAR(10 g) = 1.85 W/kg
Deviation(1 g) = -7.22%; Deviation(10 g) = -7.04%



0 dB = 5.26 W/kg = 7.21 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

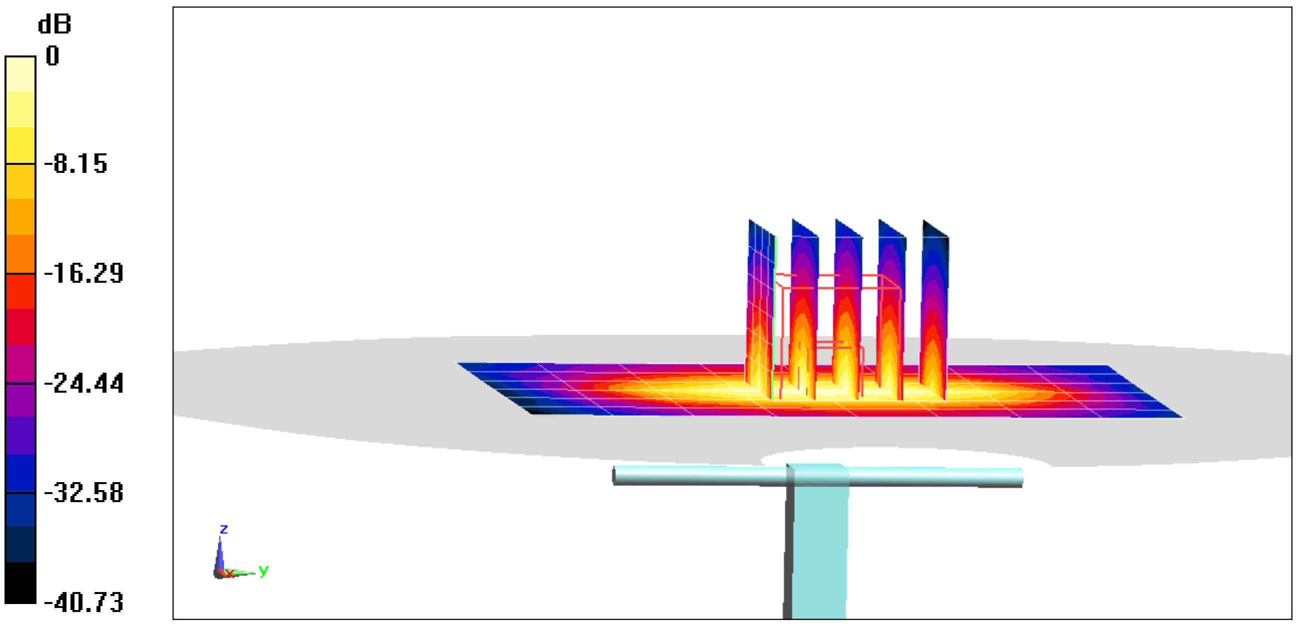
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.515 S/m; ε_r = 50.982; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/16/2020; Ambient Temp: 21.9°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1750 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.17 W/kg
SAR(1 g) = 3.94 W/kg
Deviation(1 g) = 5.35%



0 dB = 6.01 W/kg = 7.79 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

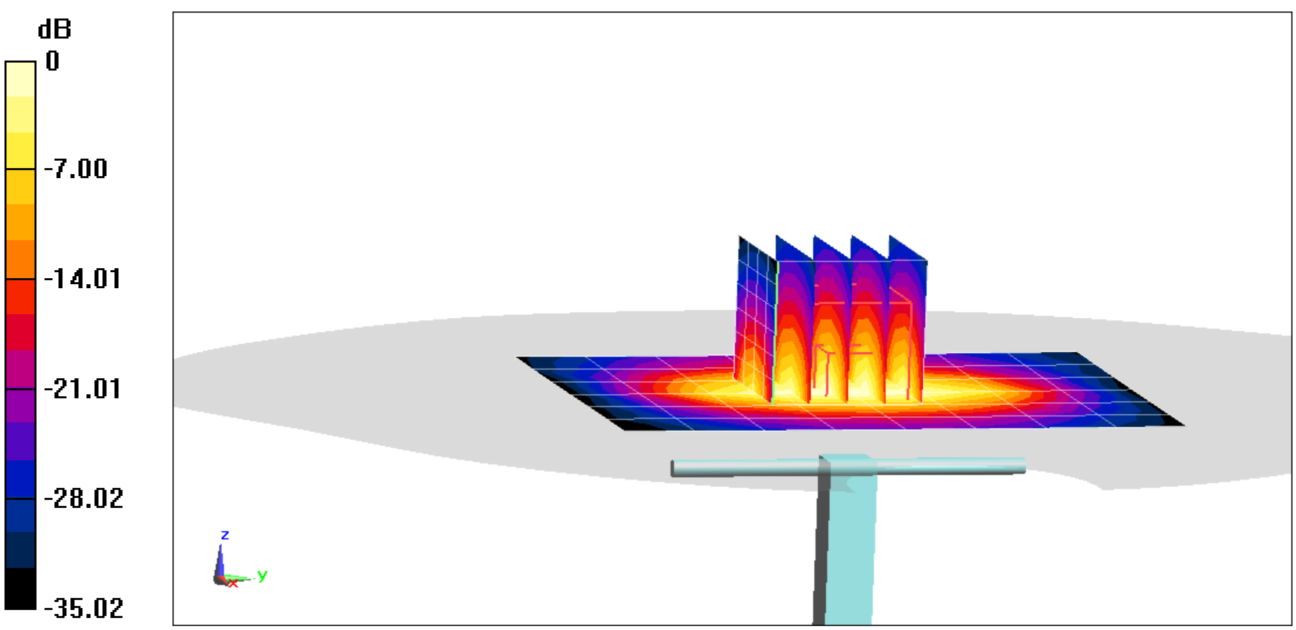
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.532 S/m; ε_r = 51.829; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/20/2020; Ambient Temp: 20.9°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1750 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.23 W/kg
SAR(10 g) = 2.05 W/kg
Deviation(10 g) = 3.02%



0 dB = 5.89 W/kg = 7.70 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

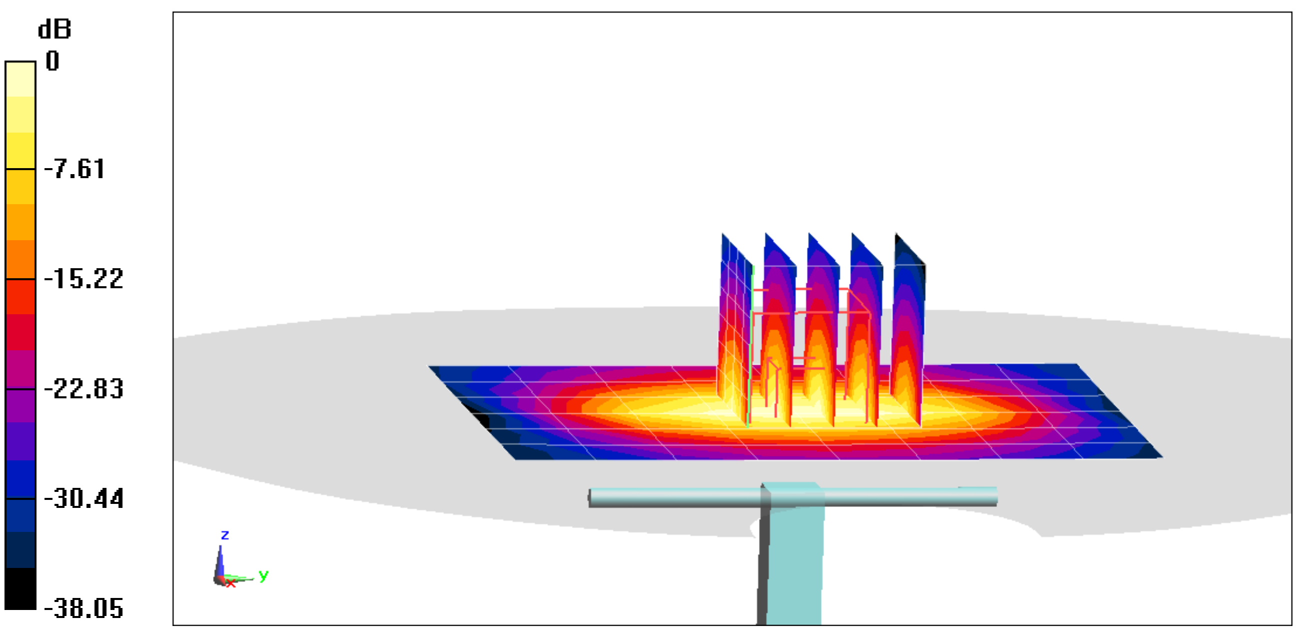
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.526 S/m; ε_r = 51.434; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/22/2020; Ambient Temp: 21.2°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1750 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.39 W/kg
SAR(1 g) = 3.98 W/kg; SAR(10 g) = 2.08 W/kg
Deviation(1 g) = 6.42%; Deviation(10 g) = 4.52%



0 dB = 6.00 W/kg = 7.78 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1150

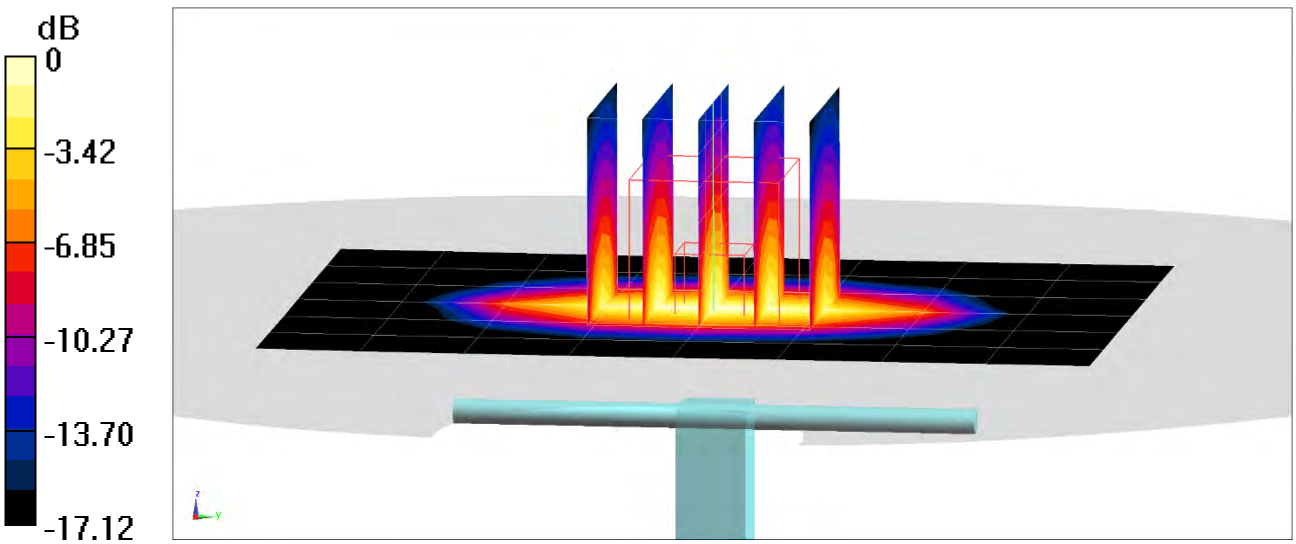
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used:
f = 1750 MHz; σ = 1.522 S/m; ε_r = 51.137; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/23/2020; Ambient Temp: 23.7°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7406; ConvF(7.96, 7.96, 7.96) @ 1750 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1583; Calibrated: 5/14/2020
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.09 W/kg
SAR(1 g) = 3.87 W/kg; SAR(10 g) = 2.04 W/kg
Deviation(1 g) = 5.74%; Deviation(10 g) = 5.15%



0 dB = 5.99 W/kg = 7.77 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1148

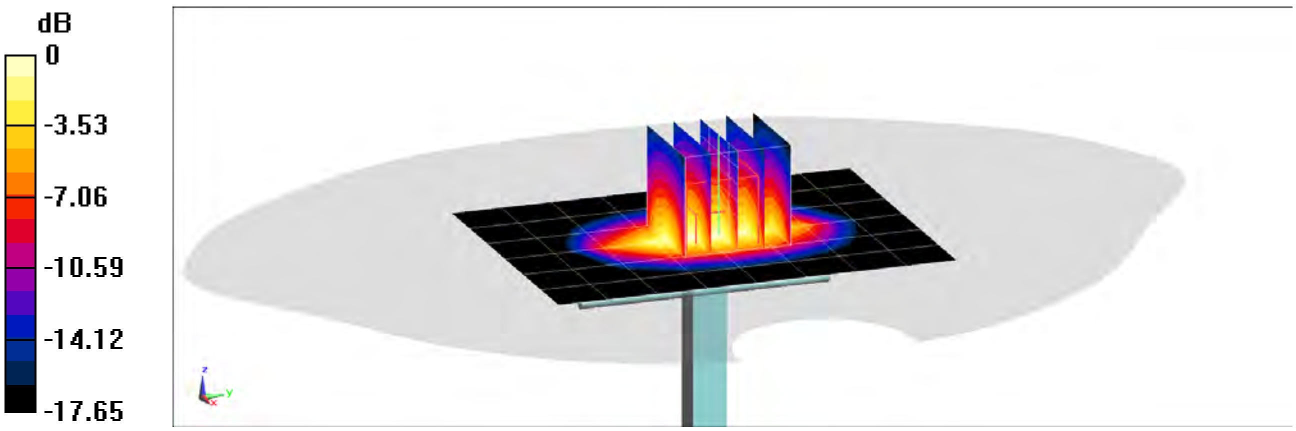
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.514 S/m; ε_r = 51.115; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/26/2020; Ambient Temp: 22.5°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7406; ConvF(7.96, 7.96, 7.96) @ 1750 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1583; Calibrated: 5/14/2020
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.15 W/kg
SAR(1 g) = 3.89 W/kg
Deviation(1 g) = 7.16%



0 dB = 5.93 W/kg = 7.73 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1148

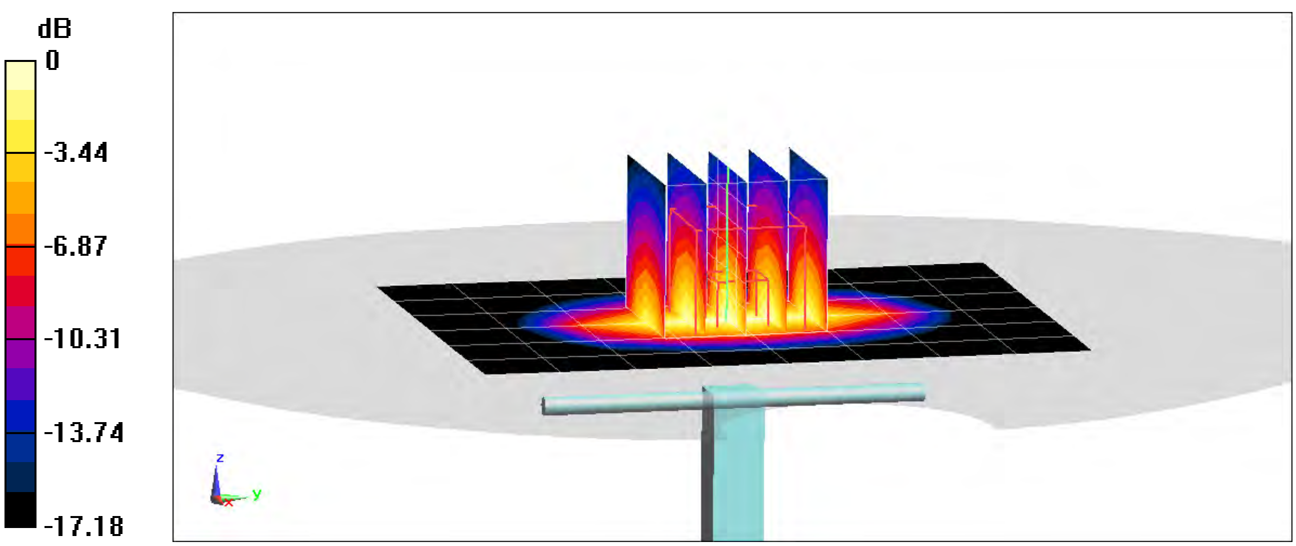
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.493 S/m; ε_r = 51.117; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/29/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7406; ConvF(7.96, 7.96, 7.96) @ 1750 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1583; Calibrated: 5/14/2020
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 6.39 W/kg
SAR(10 g) = 1.93 W/kg
Deviation(10 g) = 0.00%



0 dB = 5.34 W/kg = 7.28 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

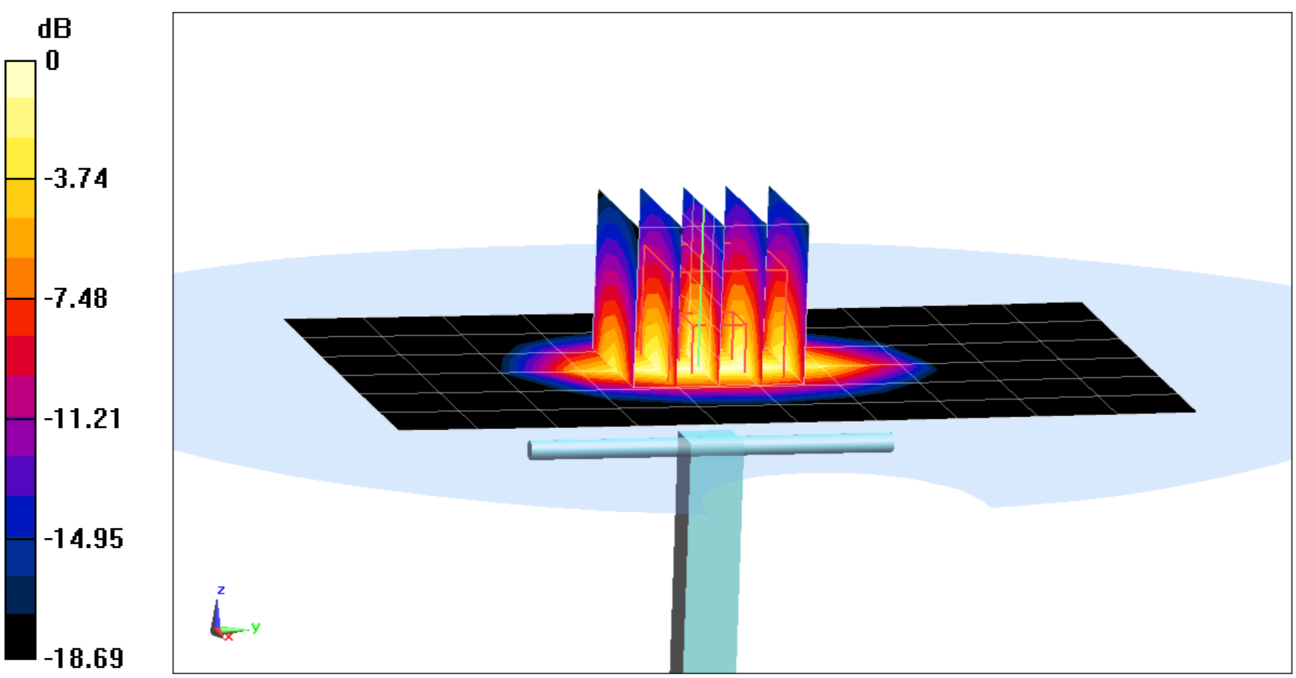
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.583 S/m; ε_r = 51.289; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/29/2020; Ambient Temp: 22.5°C; Tissue Temp: 23.8°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.91 W/kg
SAR(1 g) = 4.28 W/kg
Deviation(1 g) = 8.63%



0 dB = 6.61 W/kg = 8.20 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

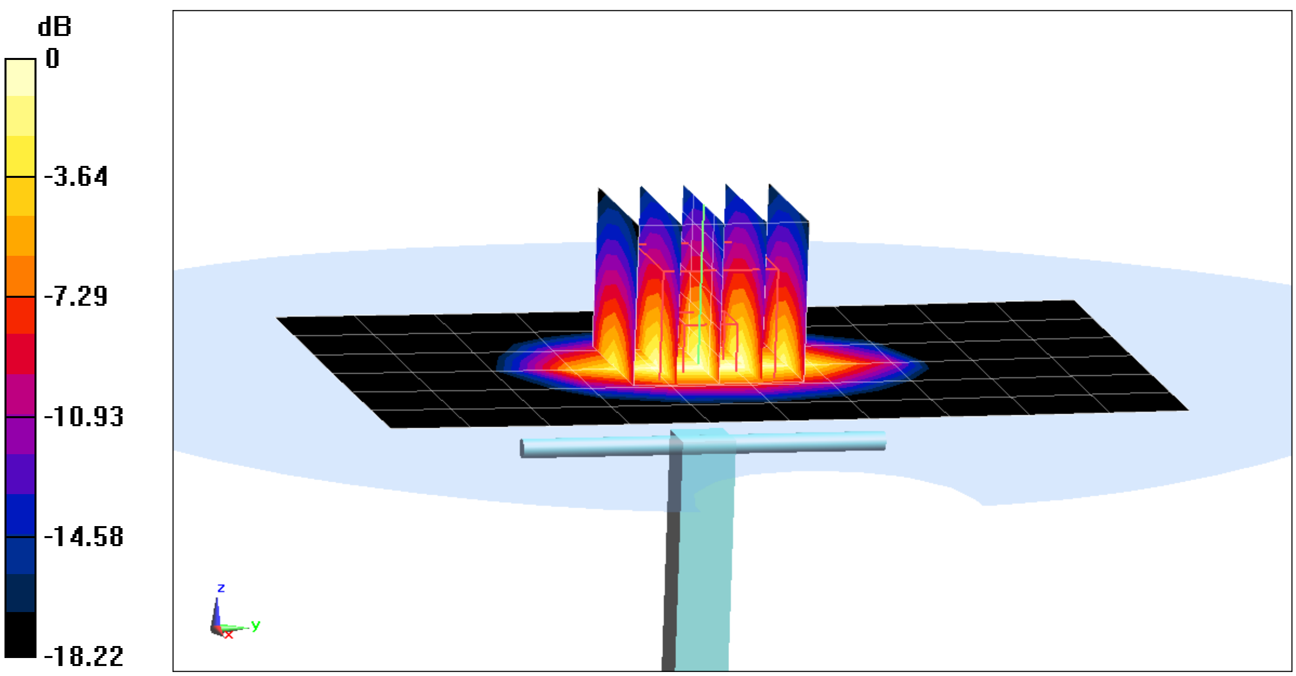
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.584 S/m; ε_r = 52.325; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/01/2020; Ambient Temp: 23.0°C; Tissue Temp: 23.0°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.89 W/kg
SAR(1 g) = 4.2 W/kg; SAR(10 g) = 2.16 W/kg
Deviation(1 g) = 6.60%; Deviation(10 g) = 4.35%



0 dB = 6.58 W/kg = 8.18 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

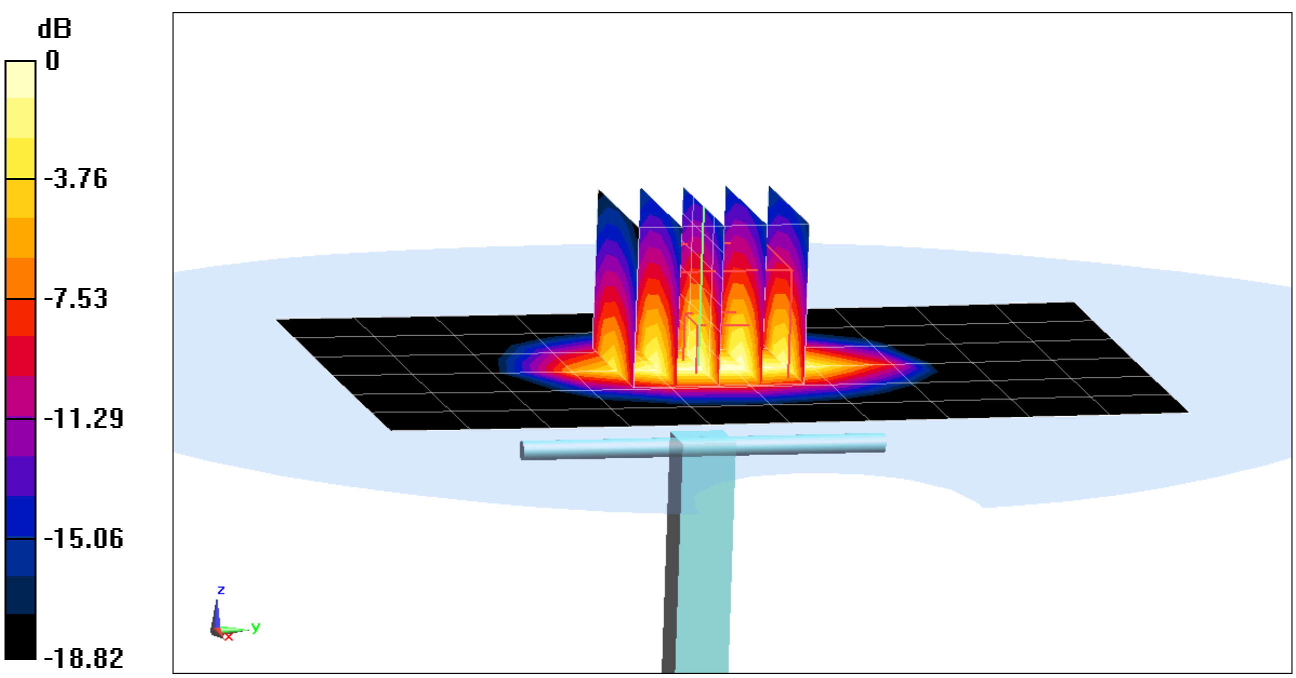
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.575 S/m; ε_r = 51.624; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/06/2020; Ambient Temp: 22.5°C; Tissue Temp: 23.0°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.87 W/kg
SAR(1 g) = 4.26 W/kg; SAR(10 g) = 2.19 W/kg
Deviation(1 g) = 8.67%; Deviation(10 g) = 6.31%



0 dB = 6.54 W/kg = 8.16 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

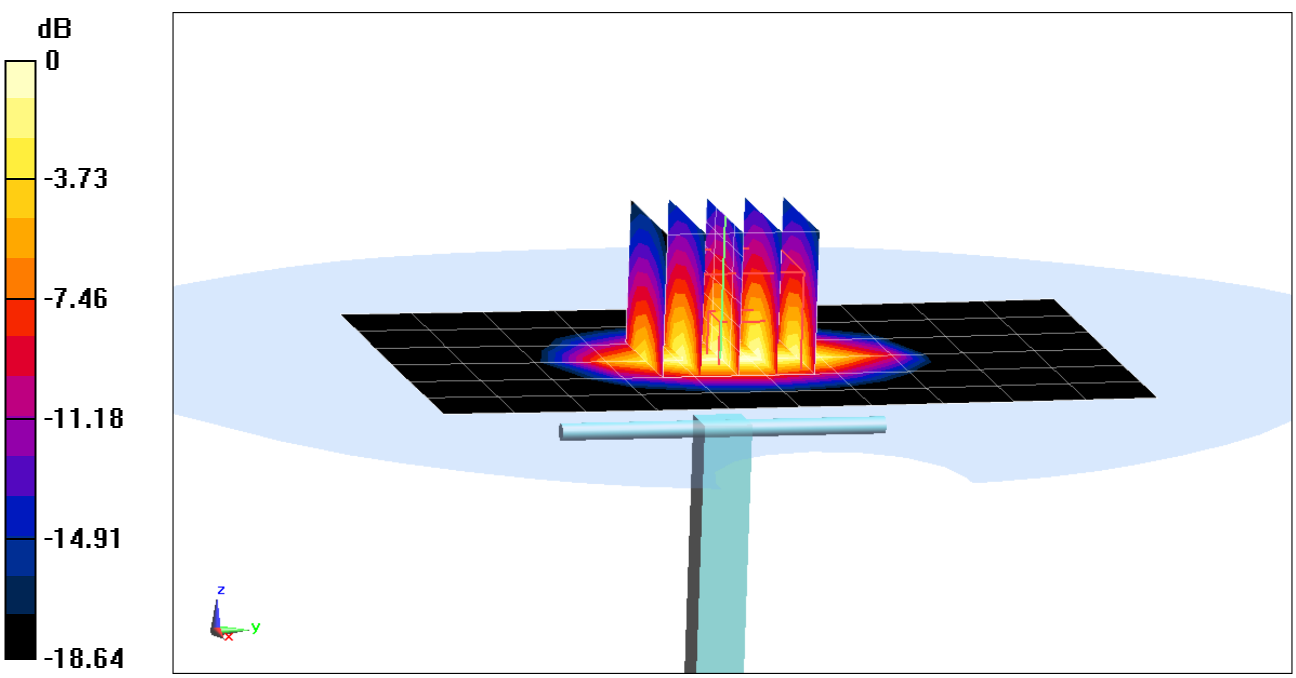
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.562 S/m; ε_r = 52.779; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/11/2020; Ambient Temp: 23.4°C; Tissue Temp: 23.6°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.90 W/kg
SAR(1 g) = 4.23 W/kg; SAR(10 g) = 2.18 W/kg
Deviation(1 g) = 7.91%; Deviation(10 g) = 5.83%



0 dB = 6.47 W/kg = 8.11 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

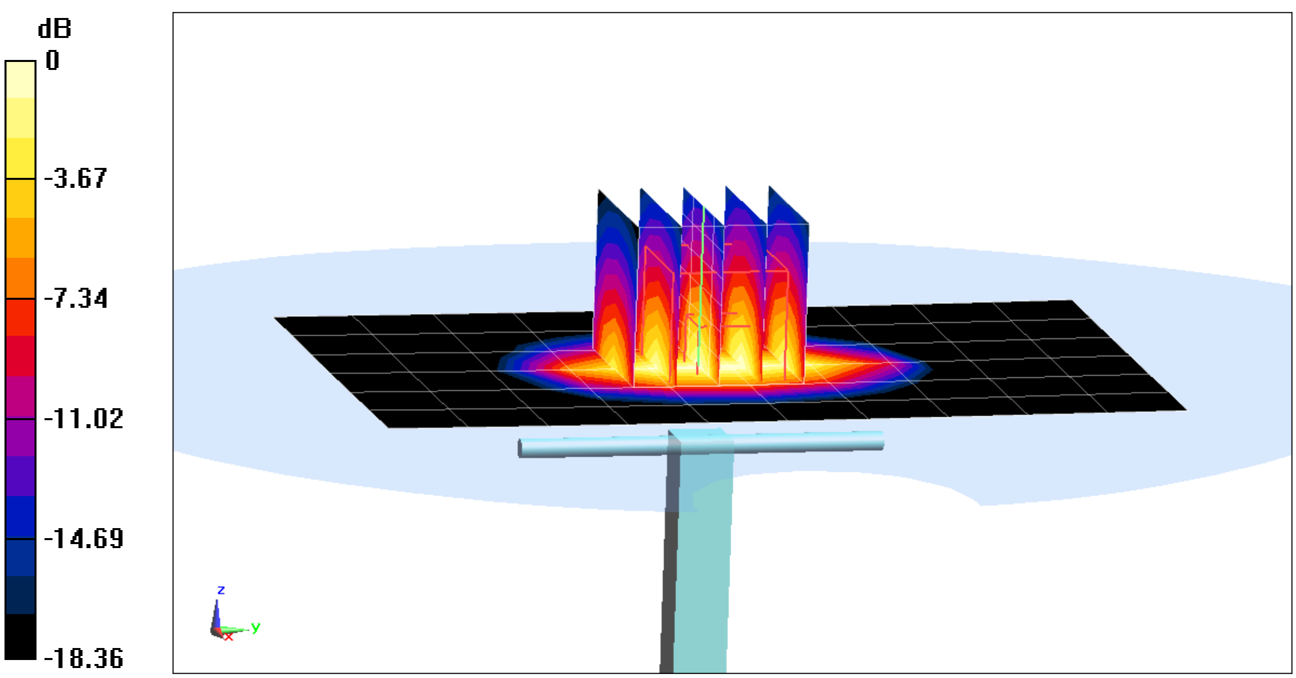
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.556 S/m; ε_r = 52.729; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/14/2020; Ambient Temp: 24.0°C; Tissue Temp: 23.1°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.81 W/kg
SAR(1 g) = 4.16 W/kg; SAR(10 g) = 2.14 W/kg
Deviation(1 g) = 6.12%; Deviation(10 g) = 3.88%



0 dB = 6.39 W/kg = 8.06 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

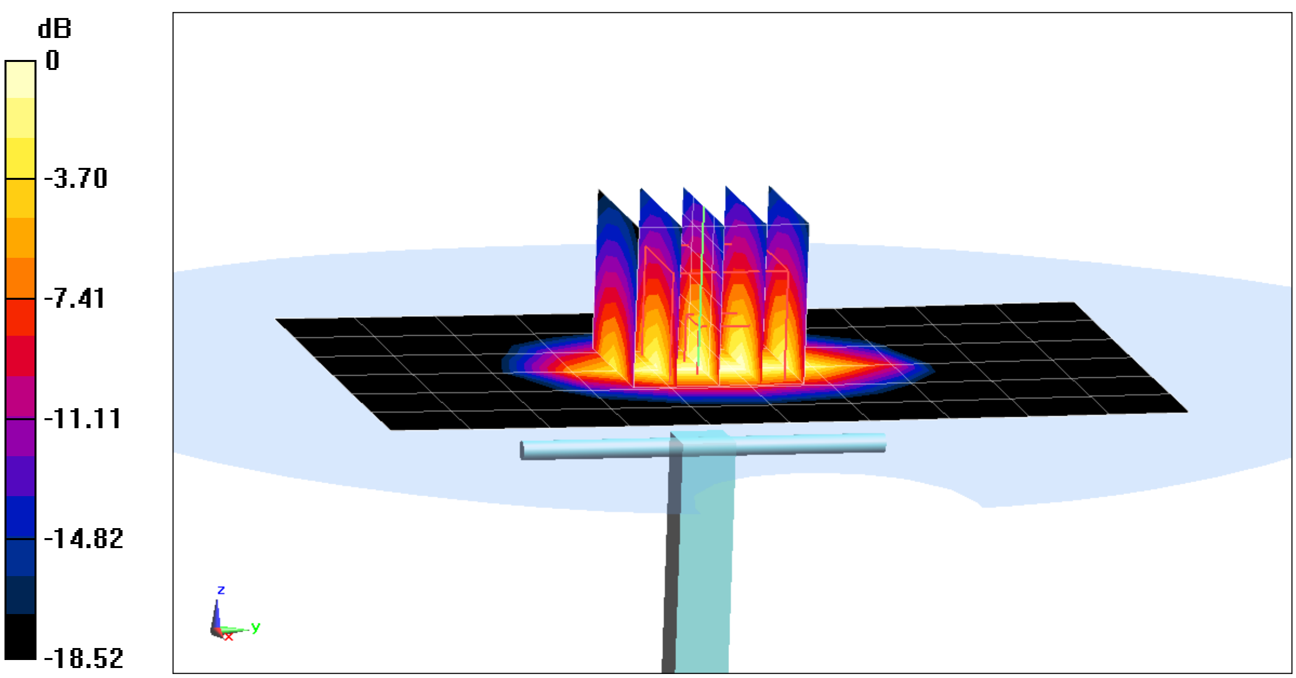
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.555 S/m; ε_r = 53.847; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/17/2020; Ambient Temp: 23.1°C; Tissue Temp: 23.6°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.93 W/kg
SAR(1 g) = 4.23 W/kg; SAR(10 g) = 2.18 W/kg
Deviation(1 g) = 7.91%; Deviation(10 g) = 5.83%



0 dB = 6.49 W/kg = 8.12 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

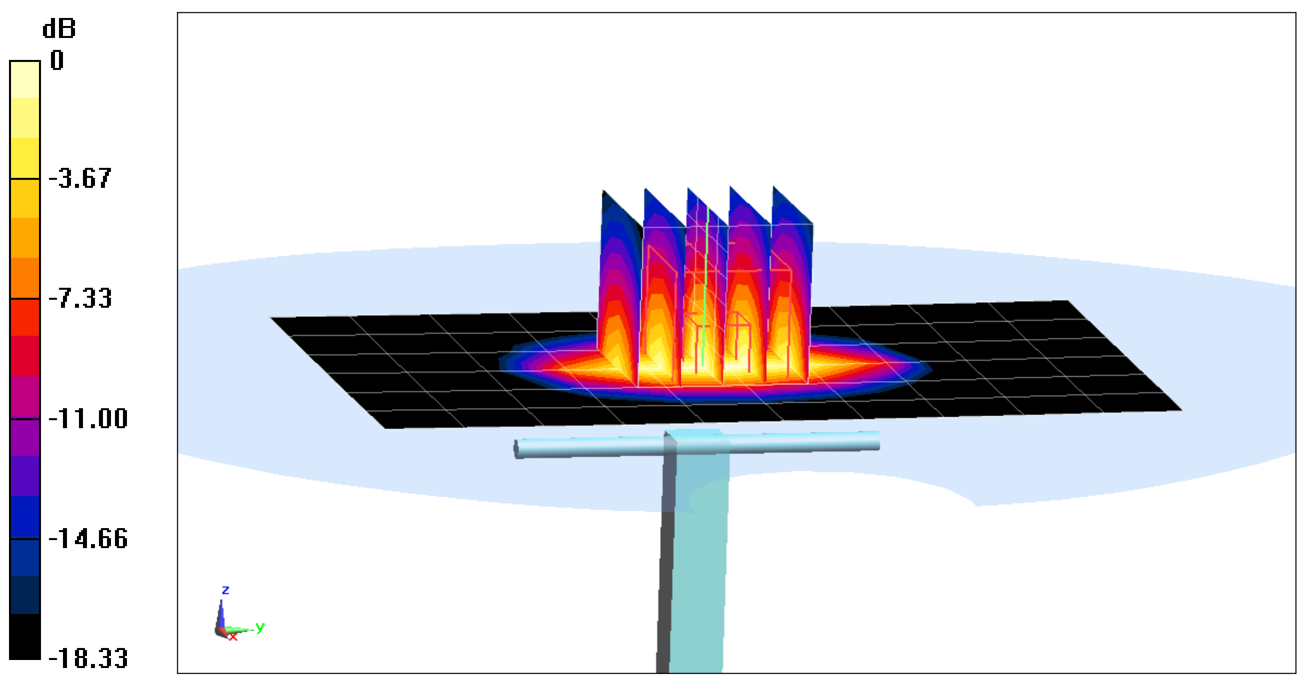
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.554 S/m; ε_r = 54.033; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/20/2020; Ambient Temp: 22.5°C; Tissue Temp: 23.7°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.71 W/kg
SAR(10 g) = 2.14 W/kg
Deviation(10 g) = 3.88%



0 dB = 6.35 W/kg = 8.03 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

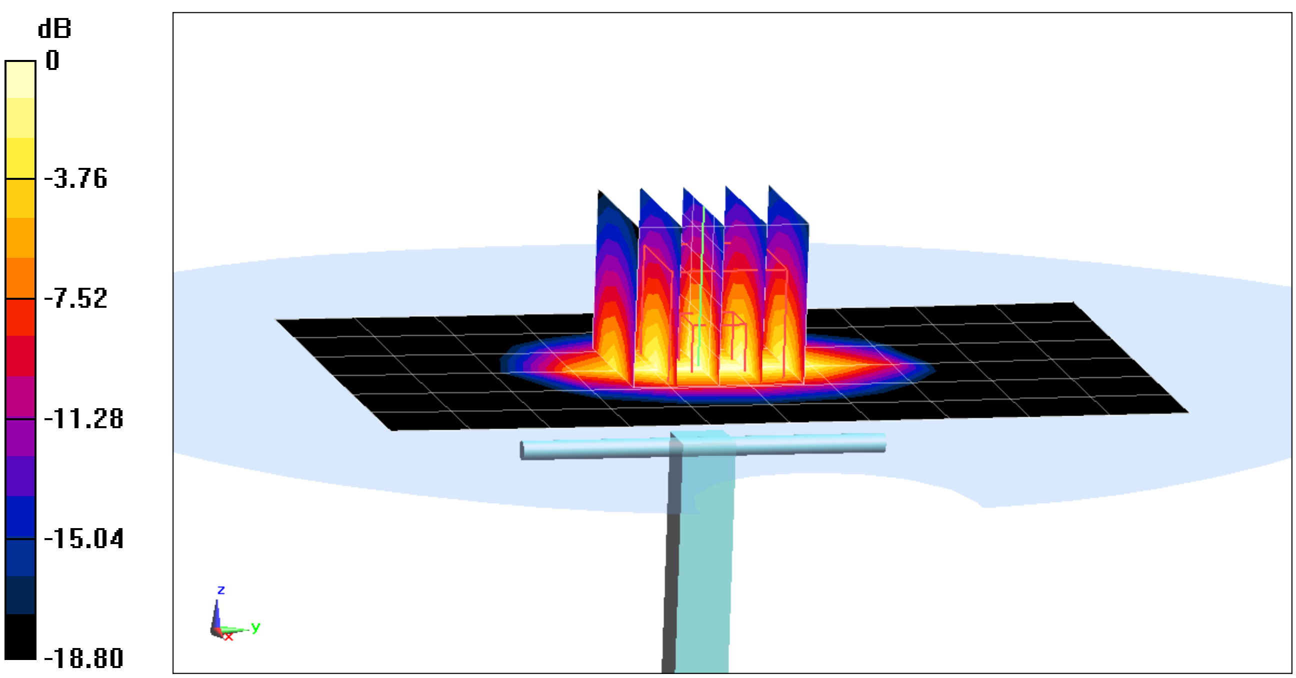
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; $\sigma = 1.521$ S/m; $\varepsilon_r = 52.81$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/27/2020; Ambient Temp: 22.7°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.71 W/kg
SAR(10 g) = 2.15 W/kg
Deviation(10 g) = 4.37%



0 dB = 6.43 W/kg = 8.08 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

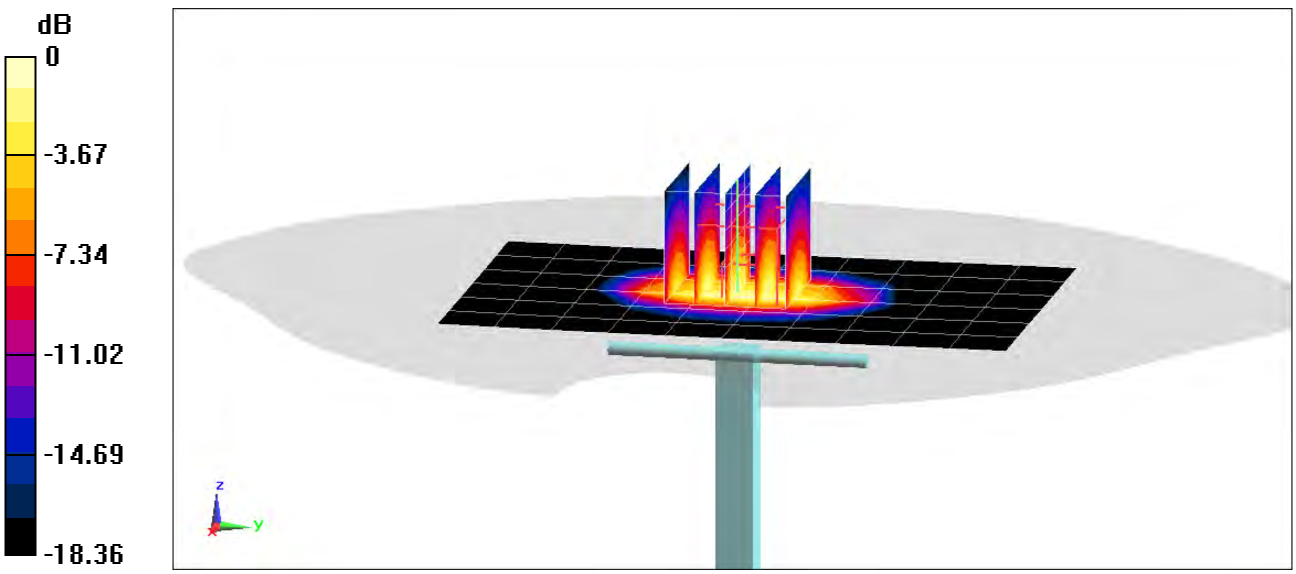
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.55 S/m; ε_r = 51.06; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/30/2020; Ambient Temp: 24.0°C; Tissue Temp: 23.3°C

Probe: EX3DV4 - SN7357; ConvF(7.8, 7.8, 7.8) @ 1900 MHz; Calibrated: 4/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/15/2020
Phantom: Twin-SAM V5.0 Right 30; Type: QD 000 P40 CD; Serial: 1759
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.79 W/kg
SAR(10 g) = 2.17 W/kg
Deviation(10 g) = 4.83%



0 dB = 6.53 W/kg = 8.15 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

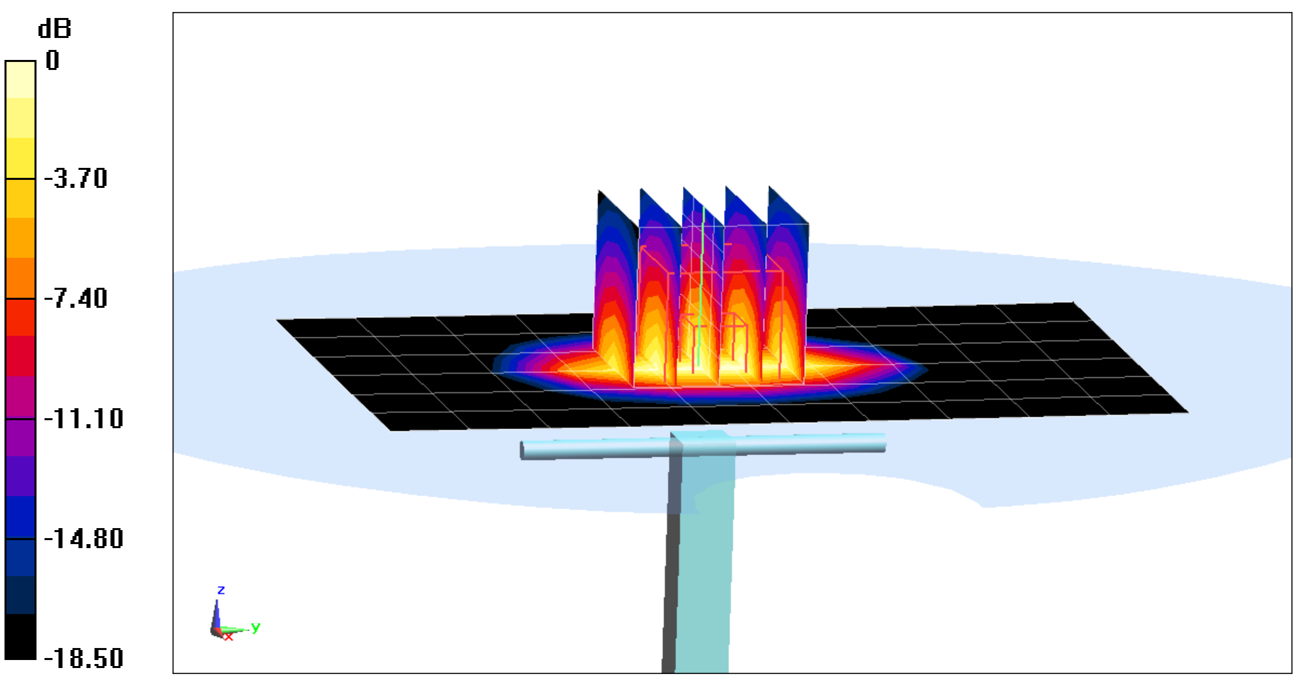
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.562 S/m; ε_r = 51.999; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/30/2020; Ambient Temp: 21.7°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.46 W/kg
SAR(10 g) = 2.06 W/kg
Deviation(10 g) = 0.00%



0 dB = 6.25 W/kg = 7.96 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

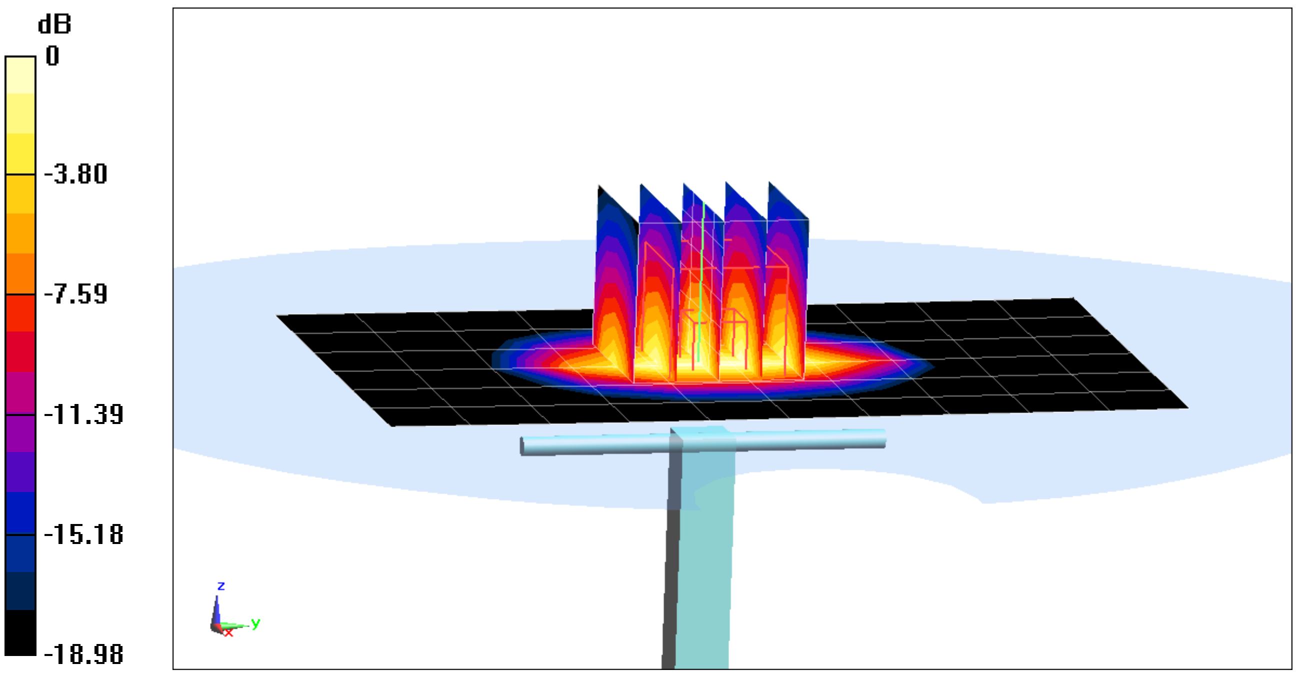
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.539 S/m; ε_r = 51.711; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/03/2020; Ambient Temp: 21.1°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.88 W/kg
SAR(10 g) = 2.08 W/kg
Deviation(10 g) = 0.97%



0 dB = 6.46 W/kg = 8.10 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

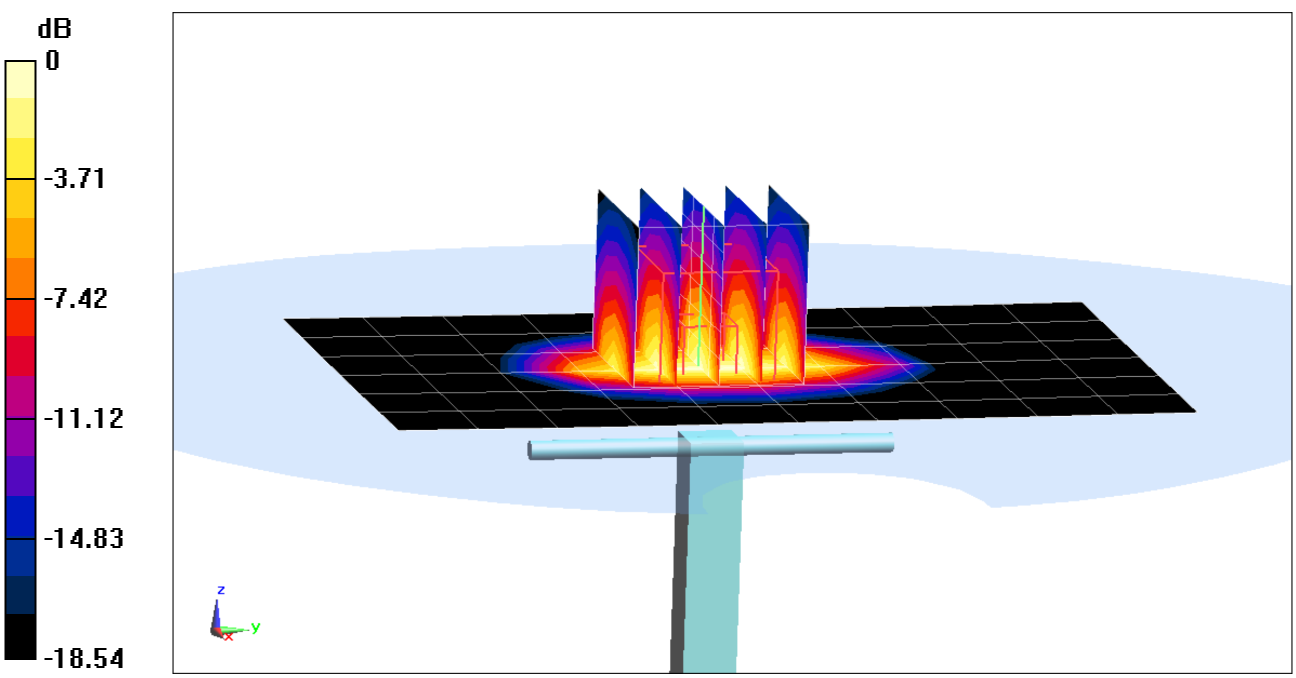
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.541 S/m; ε_r = 52.348; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0

Test Date: 08/06/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.87 W/kg
SAR(1 g) = 4.23 W/kg
Deviation(1 g) = 7.36%



0 dB = 6.62 W/kg = 8.21 dBW/kg

PCTEST

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: 1073

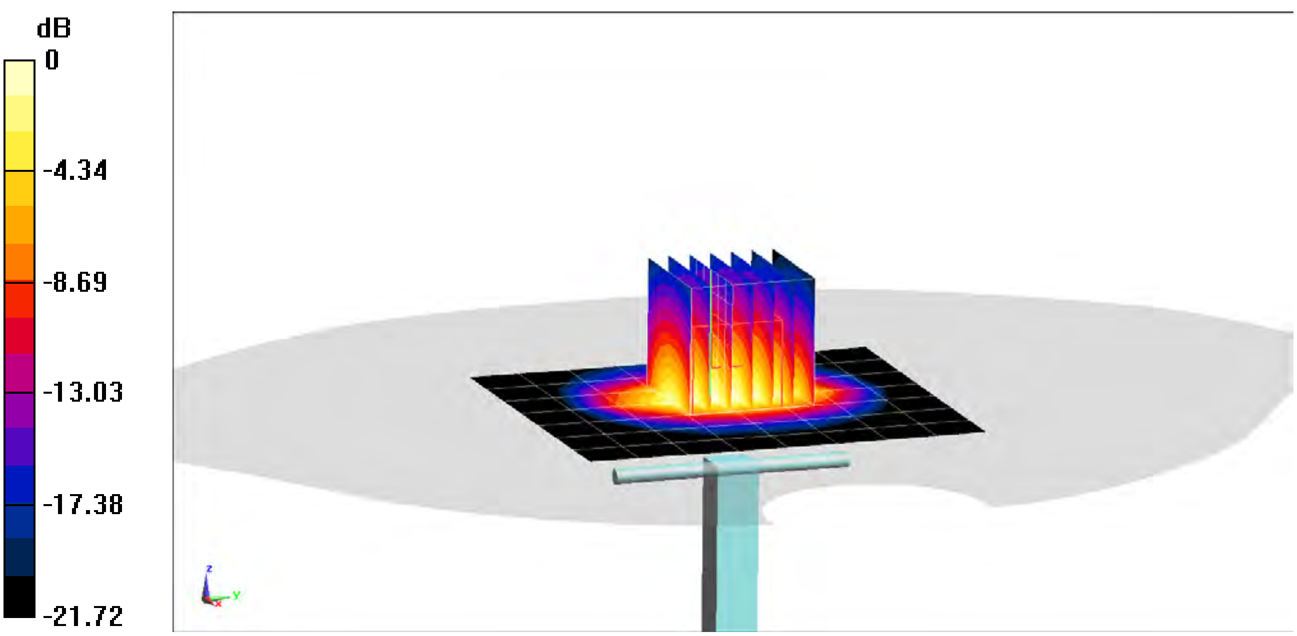
Communication System: UID 0, CW; Frequency: 2300 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2300 MHz; σ = 1.824 S/m; ε_r = 51.87; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/11/2020; Ambient Temp: 23.5°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7409; ConvF(7.5, 7.5, 7.5) @ 2300 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2300 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.3 W/kg
SAR(1 g) = 5.07 W/kg; SAR(10 g) = 2.39 W/kg
Deviation(1 g) = 6.29%; Deviation(10 g) = 3.02%



0 dB = 8.08 W/kg = 9.07 dBW/kg

PCTEST

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: 1073

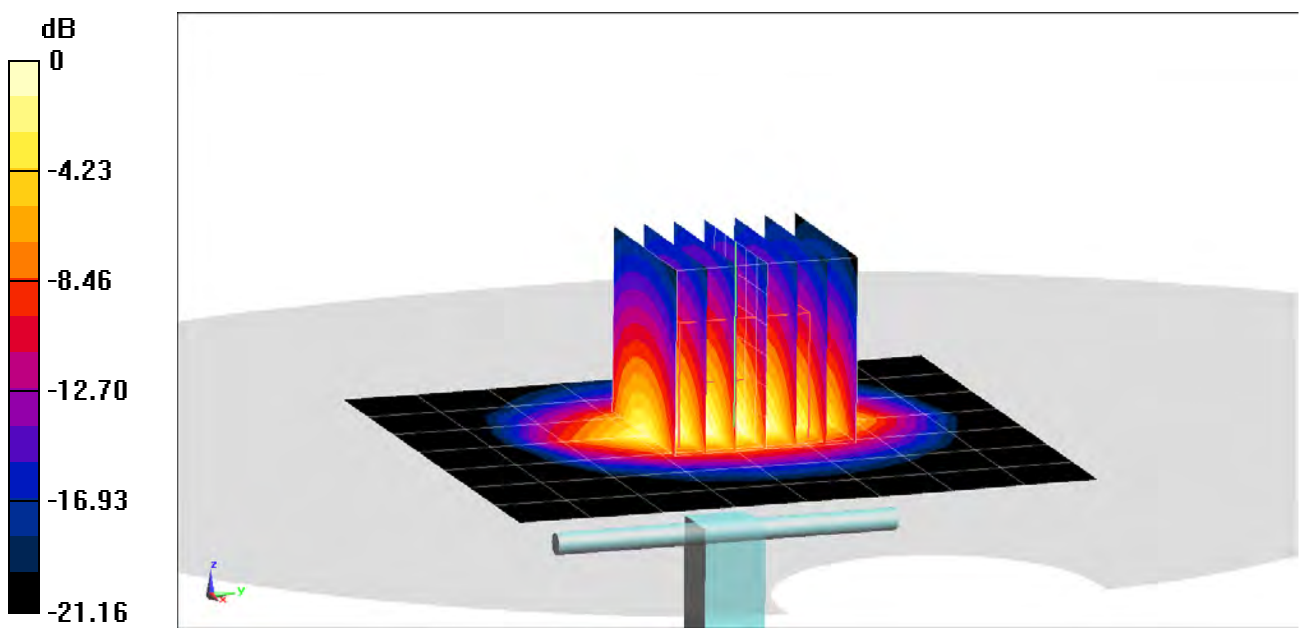
Communication System: UID 0, CW; Frequency: 2300 MHz; Duty Cycle: 1:1
Medium: 2300 Body Medium parameters used:
f = 2300 MHz; σ = 1.87 S/m; ε_r = 51.376; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/14/2020; Ambient Temp: 23.0°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN7409; ConvF(7.5, 7.5, 7.5) @ 2300 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2300 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.1 W/kg
SAR(1 g) = 5.02 W/kg; SAR(10 g) = 2.38 W/kg
Deviation(1 g) = 5.24%; Deviation(10 g) = 2.59%



0 dB = 8.17 W/kg = 9.12 dBW/kg

PCTEST

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: 1073

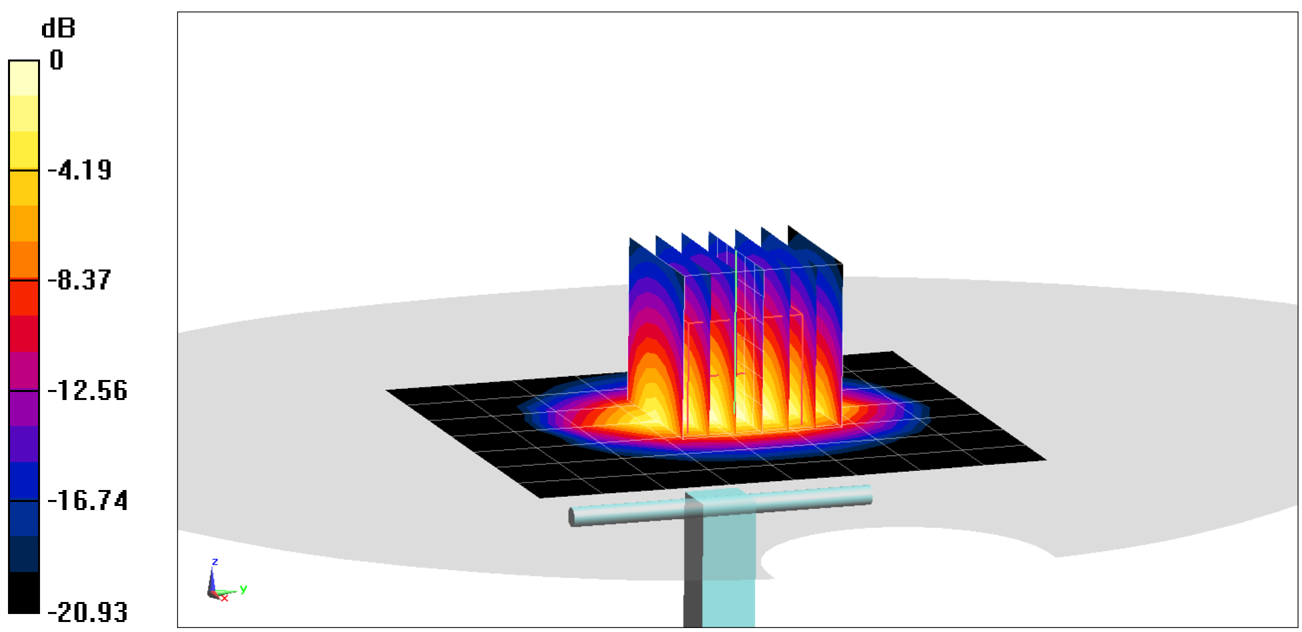
Communication System: UID 0, CW; Frequency: 2300 MHz; Duty Cycle: 1:1
Medium: 2300 Body Medium parameters used:
$f = 2300$ MHz; $\sigma = 1.875$ S/m; $\varepsilon_r = 53.389$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/17/2020; Ambient Temp: 22.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7409; ConvF(7.5, 7.5, 7.5) @ 2300 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2300 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.3 W/kg
SAR(1 g) = 5.12 W/kg; SAR(10 g) = 2.43 W/kg
Deviation(1 g) = 7.34%; Deviation(10 g) = 4.74%



0 dB = 8.32 W/kg = 9.20 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 981

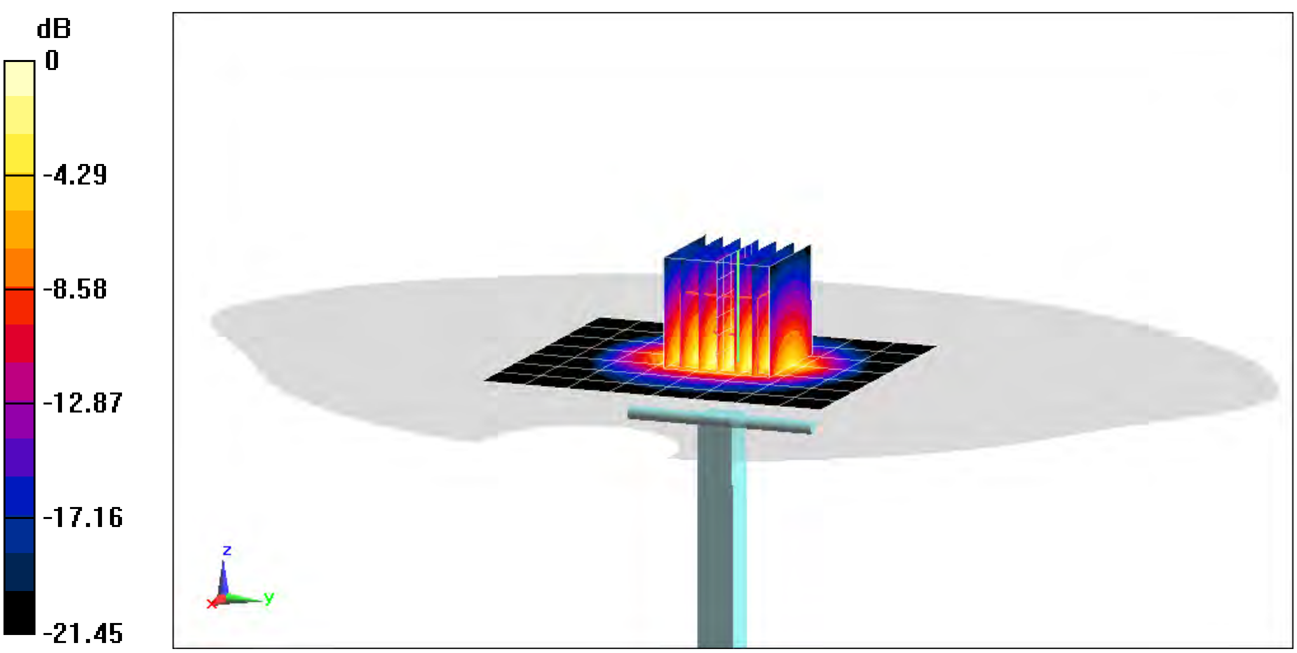
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 1.99 S/m; ε_r = 51.778; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/12/2020; Ambient Temp: 22.5°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2450 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.4 W/kg
SAR(1 g) = 5.11 W/kg
Deviation(1 g) = 0.39%



0 dB = 8.47 W/kg = 9.28 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 719

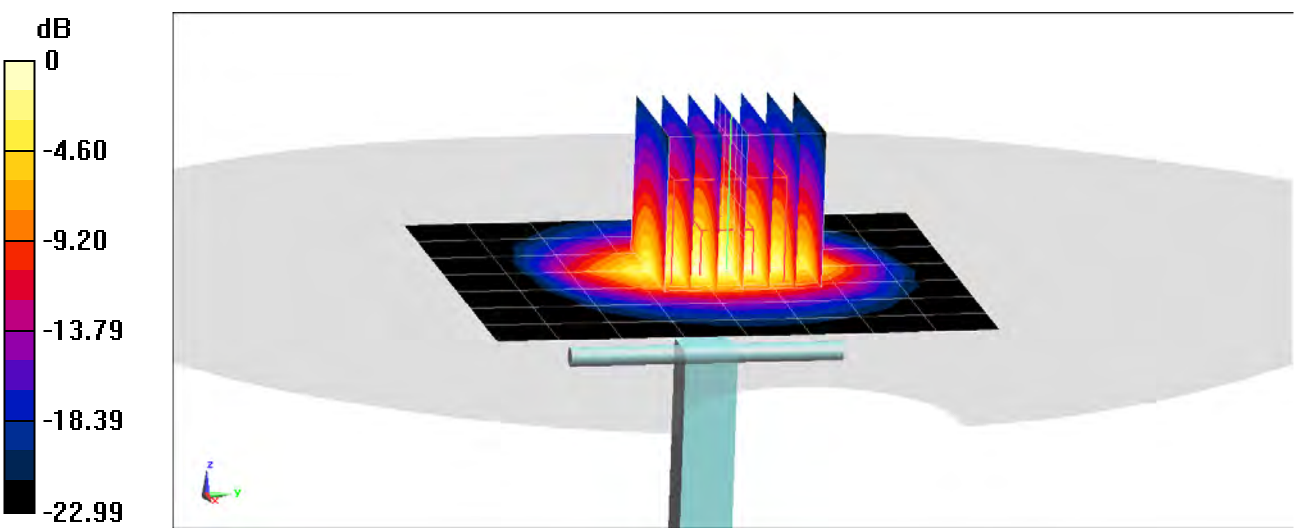
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.034 S/m; ε_r = 51.503; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/20/2020; Ambient Temp: 23.6°C; Tissue Temp: 23.6°C

Probe: EX3DV4 - SN7409; ConvF(7.24, 7.24, 7.24) @ 2450 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.3 W/kg
SAR(1 g) = 5.29 W/kg
Deviation(1 g) = 4.13%



0 dB = 8.98 W/kg = 9.53 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 719

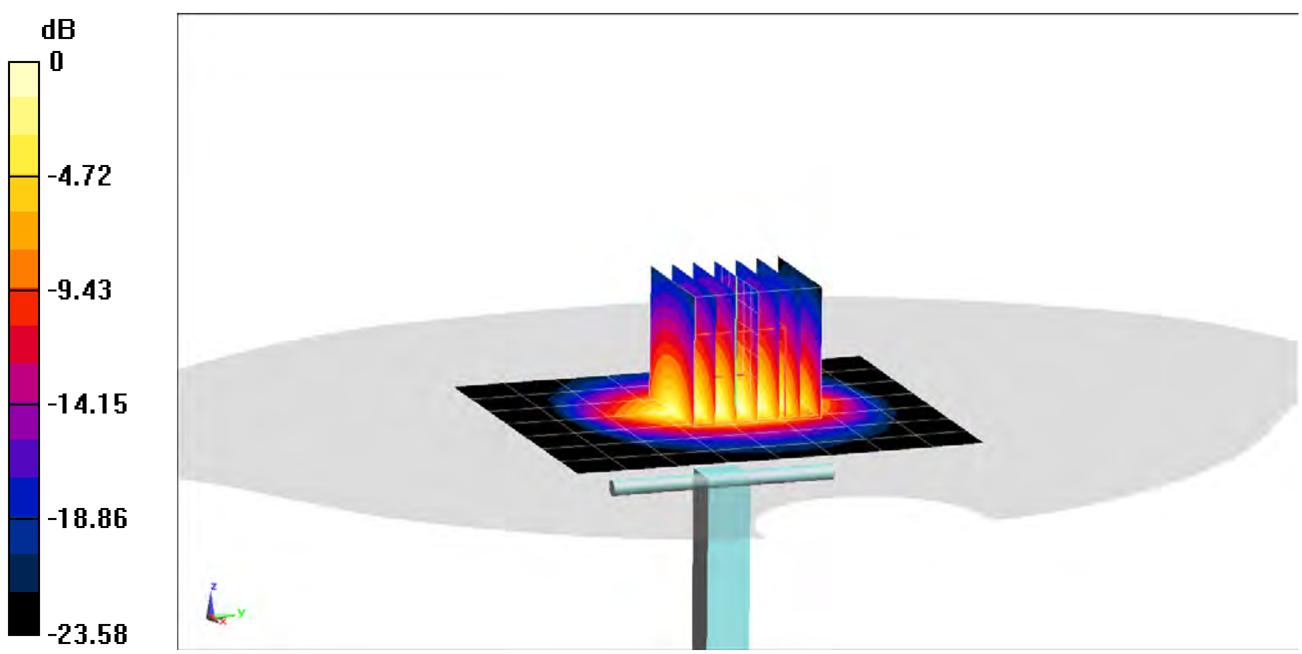
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.027 S/m; ε_r = 50.733; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/23/2020; Ambient Temp: 22.4°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7409; ConvF(7.24, 7.24, 7.24) @ 2450 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.4 W/kg
SAR(1 g) = 5.37 W/kg; SAR(10 g) = 2.45 W/kg
Deviation(1 g) = 5.71%; Deviation(10 g) = 2.08%



0 dB = 9.08 W/kg = 9.58 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 719

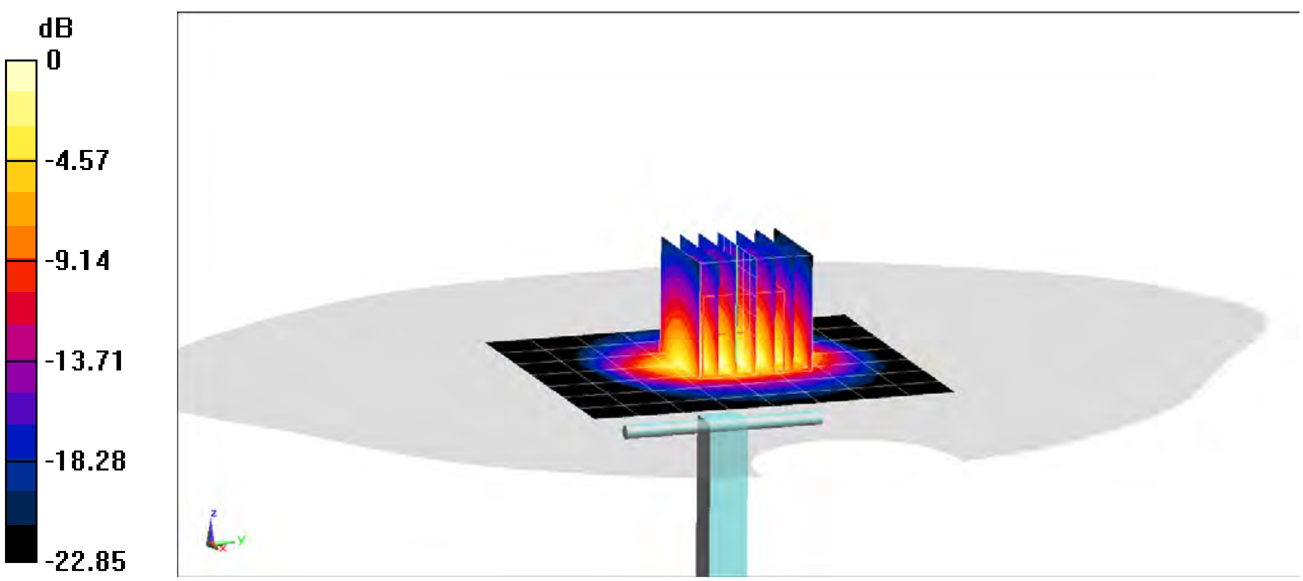
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.046 S/m; ε_r = 51.291; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/27/2020; Ambient Temp: 22.4°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7409; ConvF(7.24, 7.24, 7.24) @ 2450 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.4 W/kg
SAR(10 g) = 2.47 W/kg
Deviation(10 g) = 2.92%



0 dB = 9.04 W/kg = 9.56 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 981

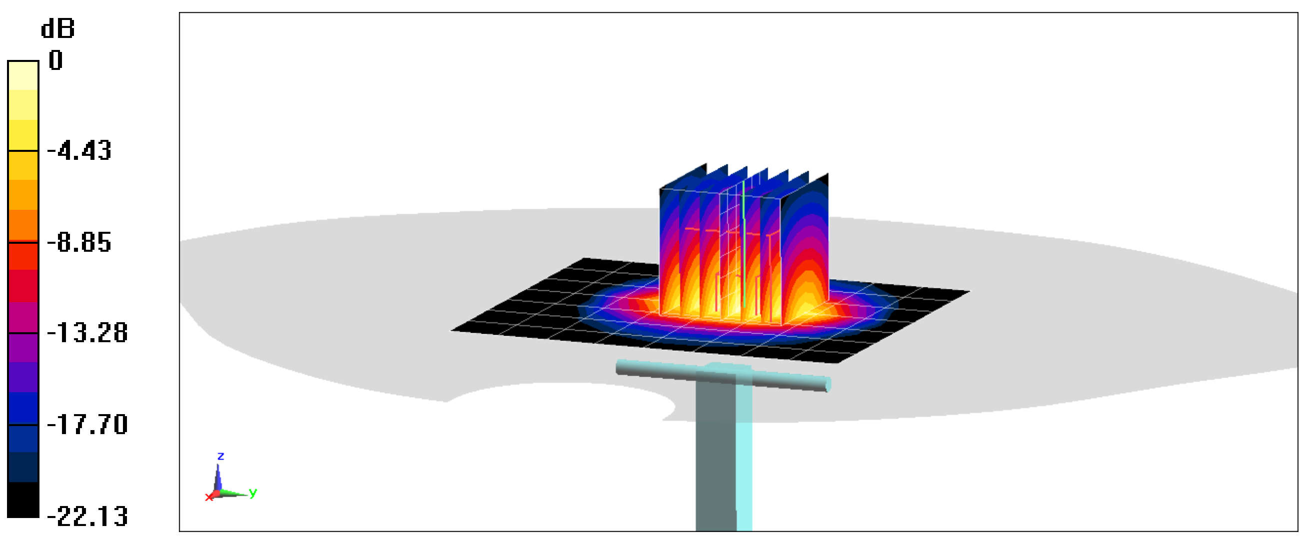
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 1.99 S/m; ε_r = 51.723; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/27/2020; Ambient Temp: 24.5°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2450 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.8 W/kg
SAR(1 g) = 5.17 W/kg
Deviation(1 g) = 1.57%



0 dB = 8.72 W/kg = 9.41 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 981

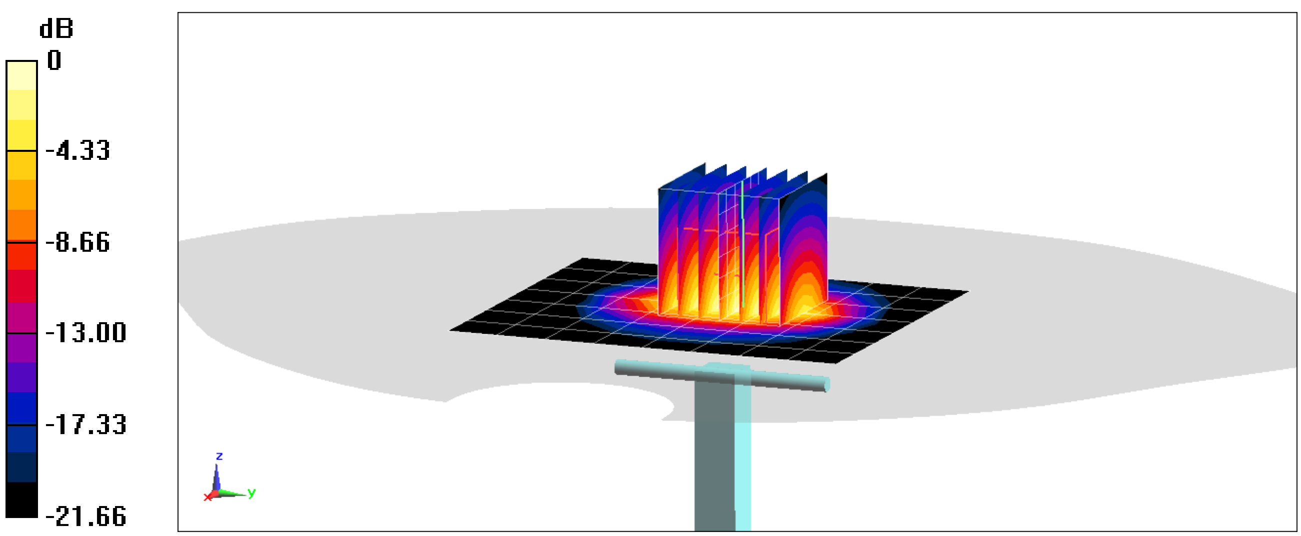
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 1.992 S/m; ε_r = 50.79; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/30/2020; Ambient Temp: 24.5°C; Tissue Temp: 23.4°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2450 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.5 W/kg
SAR(1 g) = 5.12 W/kg
Deviation(1 g) = 0.59%



0 dB = 8.54 W/kg = 9.31 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 719

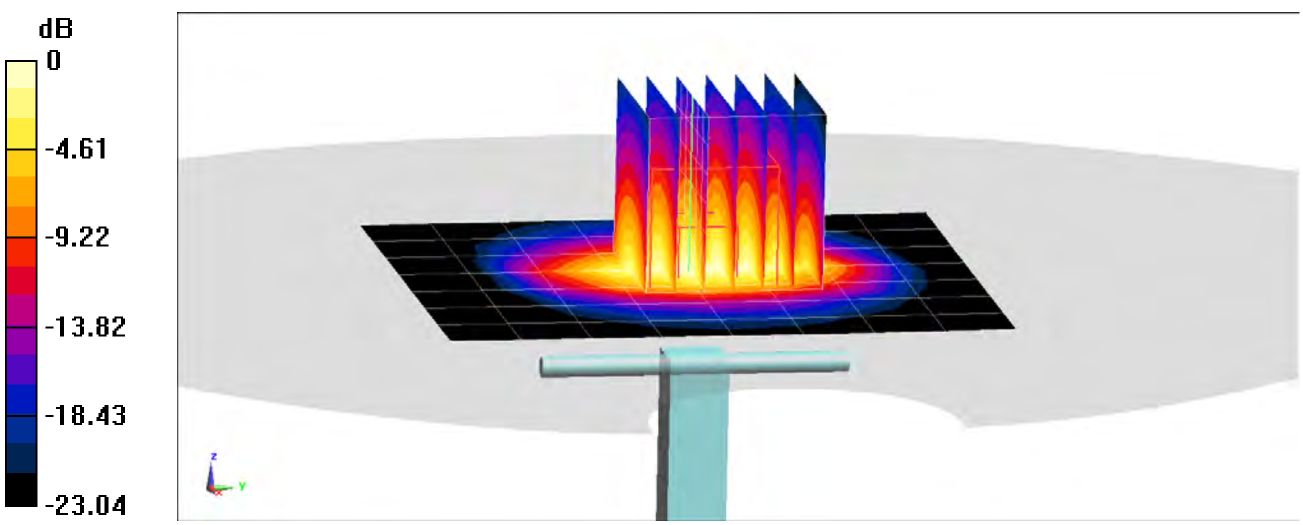
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.045 S/m; ε_r = 51.557; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/31/2020; Ambient Temp: 23.1°C; Tissue Temp: 24.0°C

Probe: EX3DV4 - SN7409; ConvF(7.24, 7.24, 7.24) @ 2450 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.3 W/kg
SAR(1 g) = 5.37 W/kg
Deviation(1 g) = 5.71%



0 dB = 8.96 W/kg = 9.52 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 719

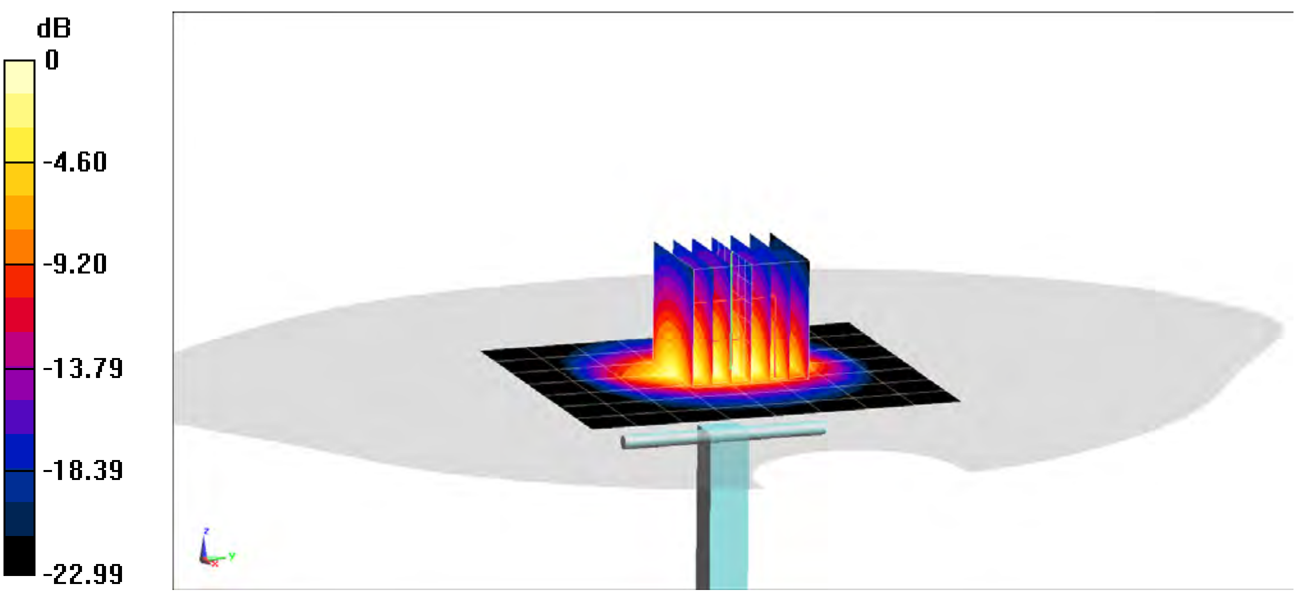
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.029 S/m; ε_r = 52.269; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/03/2020; Ambient Temp: 22.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7409; ConvF(7.24, 7.24, 7.24) @ 2450 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.1 W/kg
SAR(1 g) = 5.3 W/kg; SAR(10 g) = 2.43 W/kg
Deviation(1 g) = 4.33%; Deviation(10 g) = 1.25%



0 dB = 8.85 W/kg = 9.47 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 981

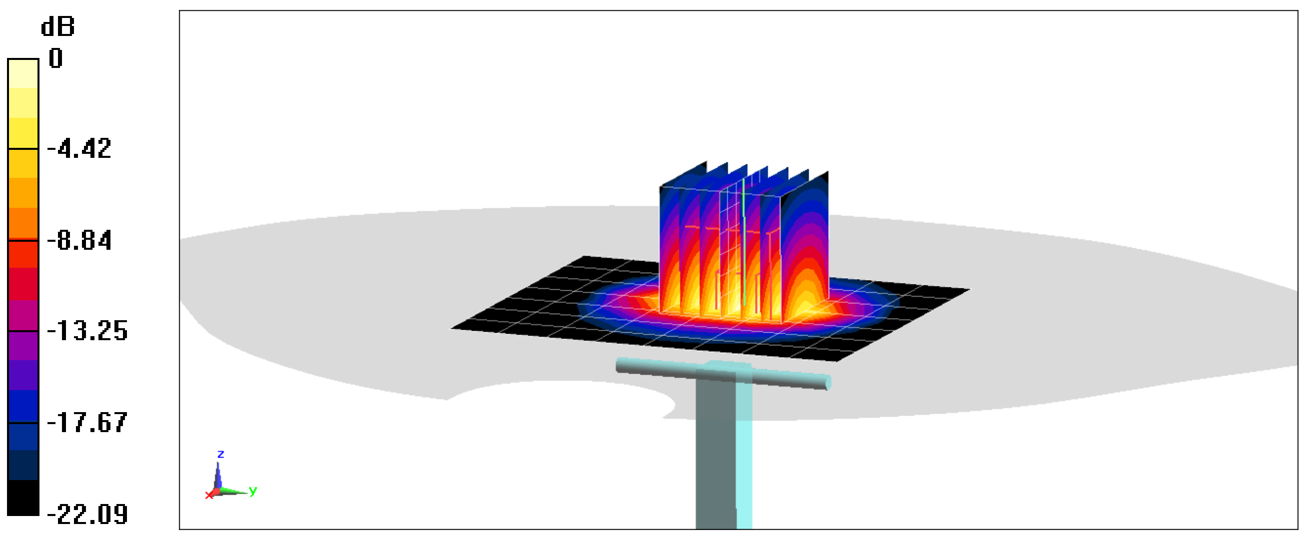
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.026 S/m; ε_r = 51.539; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/03/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2450 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.3 W/kg
SAR(1 g) = 4.93 W/kg; SAR(10 g) = 2.26 W/kg
Deviation(1 g) = -3.14%; Deviation(10 g) = -6.61%



0 dB = 8.29 W/kg = 9.19 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 797

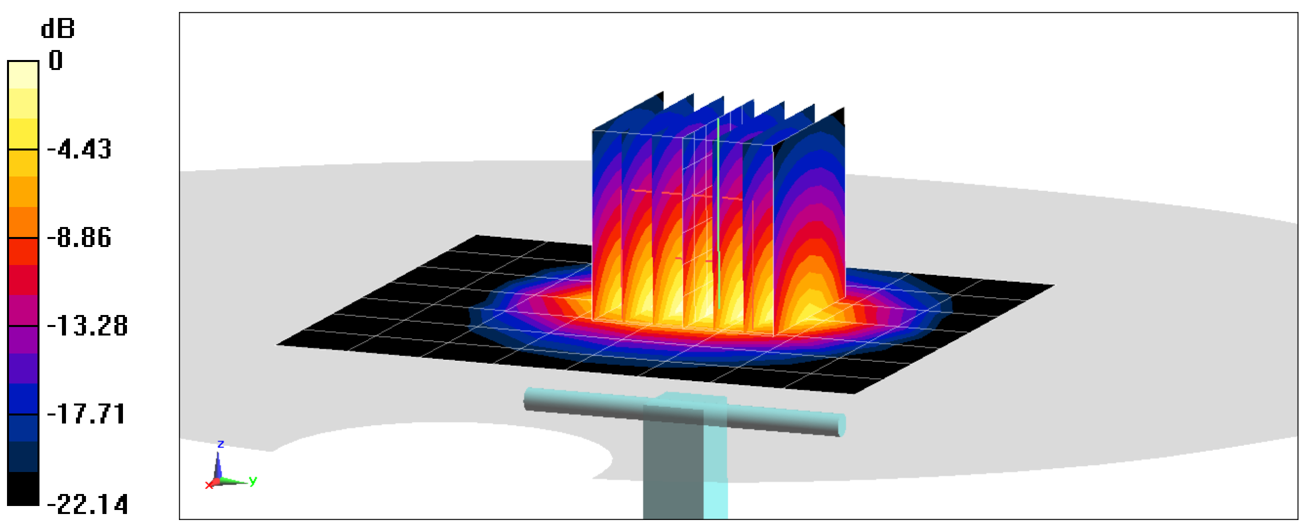
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.044 S/m; ε_r = 51.681; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/10/2020; Ambient Temp: 23.0°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2450 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.1 W/kg
SAR(1 g) = 4.88 W/kg; SAR(10 g) = 2.25 W/kg
Deviation(1 g) = -4.50%; Deviation(10 g) = -7.02%



0 dB = 8.19 W/kg = 9.13 dBW/kg

PCTEST

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1064

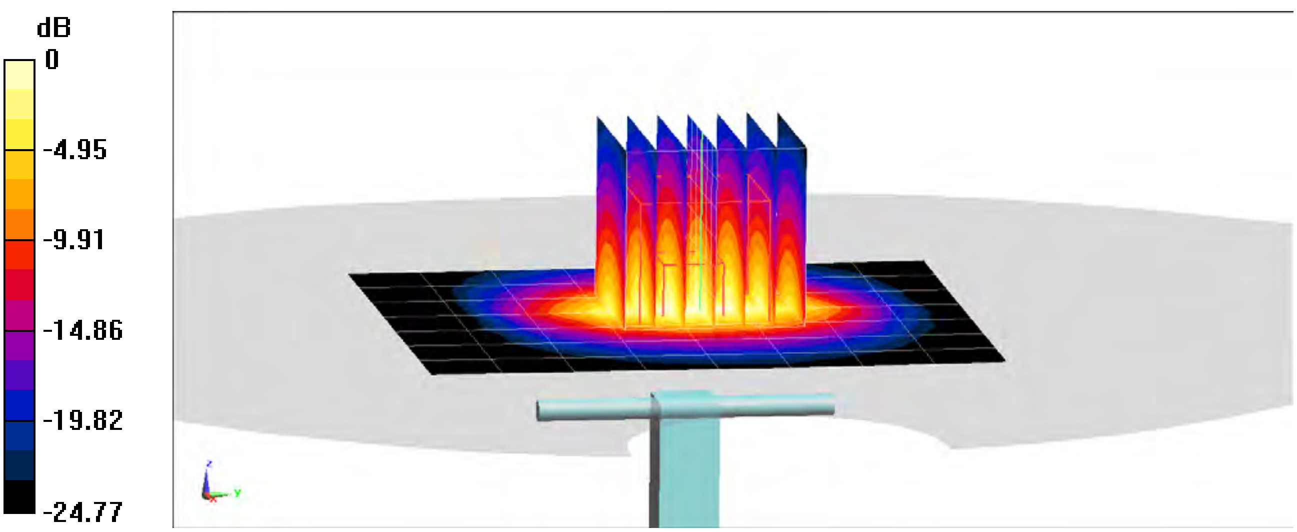
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2600 Body Medium parameters used:
f = 2600 MHz; σ = 2.216 S/m; ε_r = 51.051; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/20/2020; Ambient Temp: 23.6°C; Tissue Temp: 23.6°C

Probe: EX3DV4 - SN7409; ConvF(7.12, 7.12, 7.12) @ 2600 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 12.7 W/kg
SAR(1 g) = 5.63 W/kg
Deviation(1 g) = 1.26%



0 dB = 9.86 W/kg = 9.94 dBW/kg

PCTEST

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1064

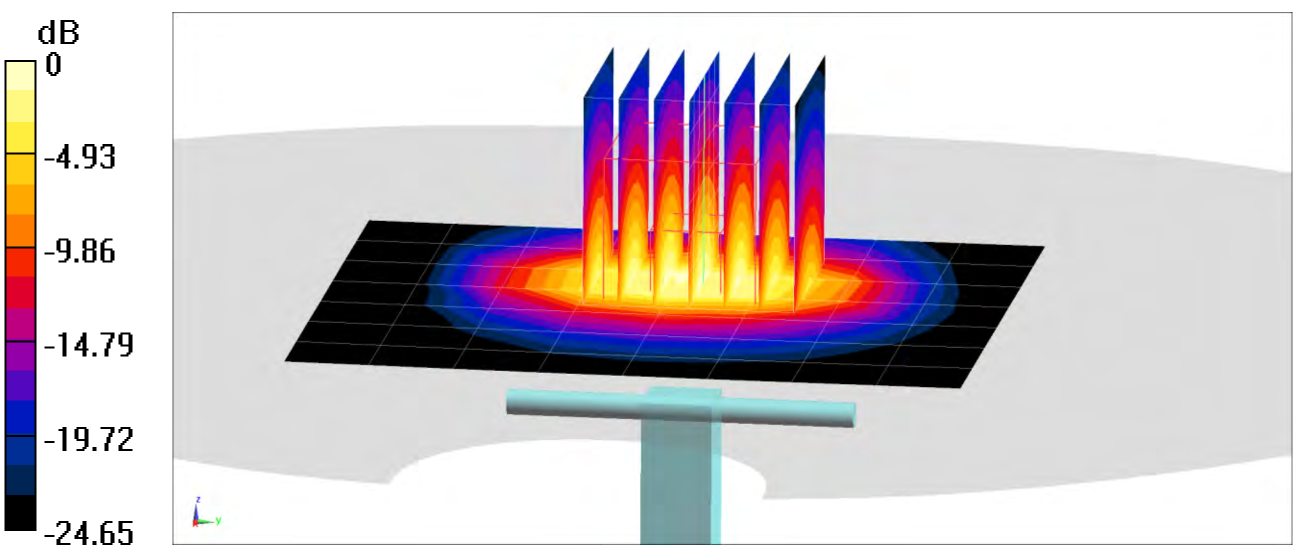
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2600 Body; Medium parameters used:
f = 2600 MHz; σ = 2.201 S/m; ε_r = 50.296; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/23/2020; Ambient Temp: 22.4°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7409; ConvF(7.12, 7.12, 7.12) @ 2600 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 12.5 W/kg
SAR(10 g) = 2.42 W/kg
Deviation(1 g) = -3.20%



0 dB = 9.60 W/kg = 9.82 dBW/kg

PCTEST

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1004

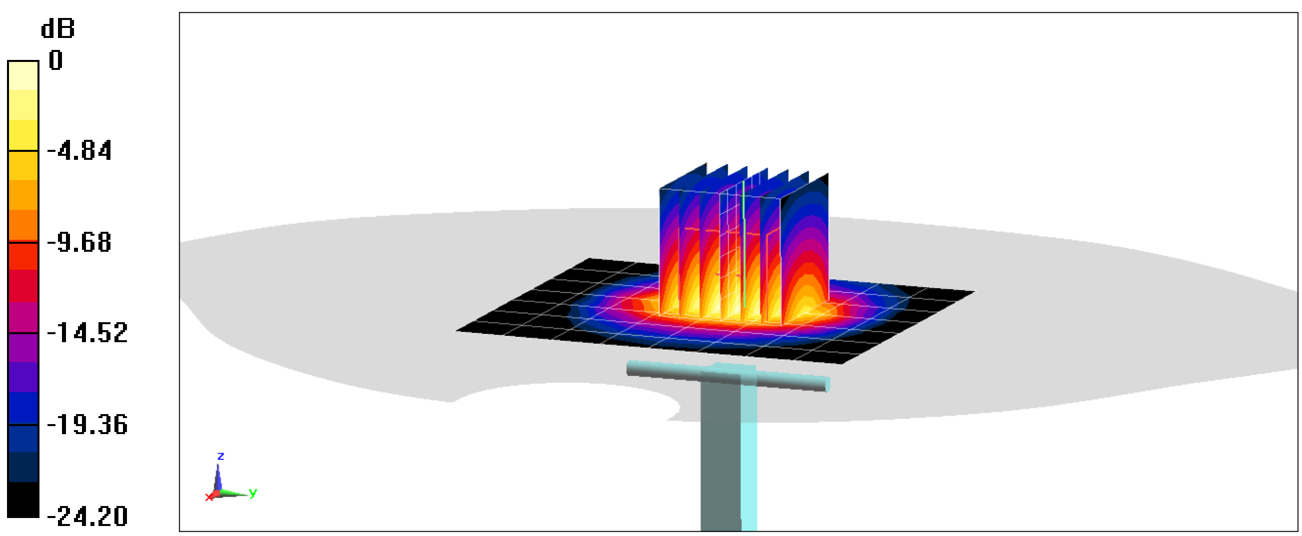
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2600 Body Medium parameters used:
f = 2600 MHz; σ = 2.189 S/m; ε_r = 51.129; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/27/2020; Ambient Temp: 24.5°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7552; ConvF(7.19, 7.19, 7.19) @ 2600 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 12.8 W/kg
SAR(1 g) = 5.77 W/kg
Deviation(1 g) = 5.29%



0 dB = 10.0 W/kg = 10.00 dBW/kg

PCTEST

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1004

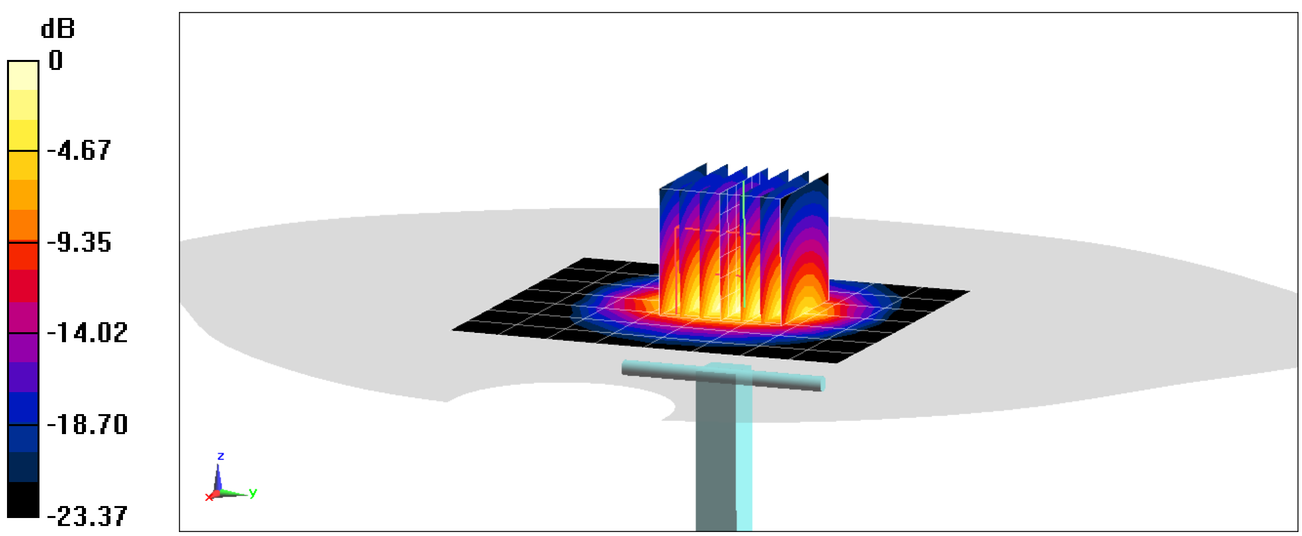
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2600 Body Medium parameters used:
f = 2600 MHz; σ = 2.202 S/m; ε_r = 50.211; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/30/2020; Ambient Temp: 24.5°C; Tissue Temp: 23.4°C

Probe: EX3DV4 - SN7552; ConvF(7.19, 7.19, 7.19) @ 2600 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.7 W/kg
SAR(1 g) = 5.42 W/kg; SAR(10 g) = 2.44 W/kg
Deviation(1 g) = -1.09%; Deviation(10 g) = -1.21%



0 dB = 9.16 W/kg = 9.62 dBW/kg

PCTEST

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1064

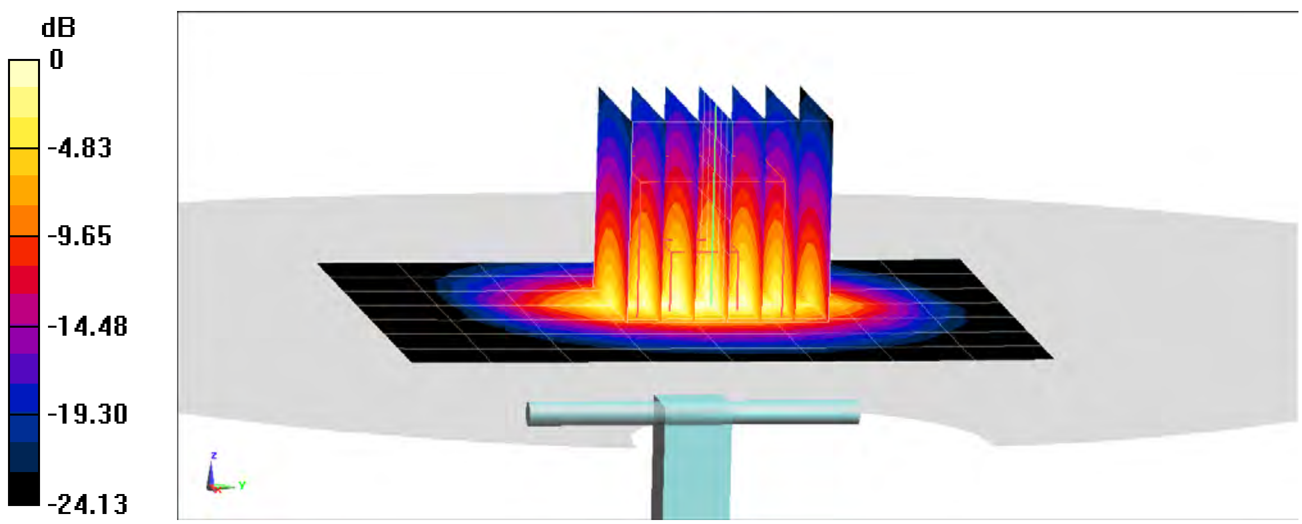
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2600 Body Medium parameters used:
f = 2600 MHz; $\sigma = 2.214$ S/m; $\varepsilon_r = 51.127$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/31/2020; Ambient Temp: 23.1°C; Tissue Temp: 24.0°C

Probe: EX3DV4 - SN7409; ConvF(7.12, 7.12, 7.12) @ 2600 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 12.7 W/kg
SAR(1 g) = 5.61 W/kg
Deviation(1 g) = 0.90%



0 dB = 9.82 W/kg = 9.92 dBW/kg

PCTEST

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1064

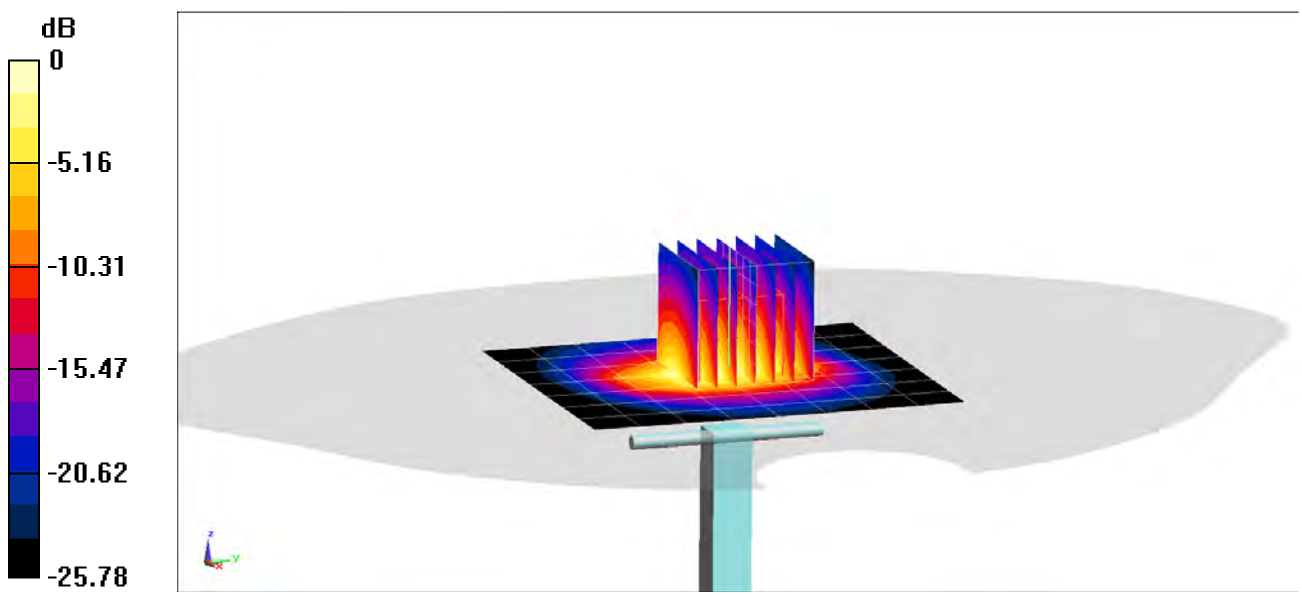
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2600 MHz; σ = 2.21 S/m; ε_r = 51.841; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/03/2020; Ambient Temp: 22.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7409; ConvF(7.12, 7.12, 7.12) @ 2600 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 12.2 W/kg
SAR(1 g) = 5.47 W/kg; SAR(10 g) = 2.4 W/kg
Deviation(1 g) = -1.62%; Deviation(10 g) = -4.00%



0 dB = 9.40 W/kg = 9.73 dBW/kg

PCTEST

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1004

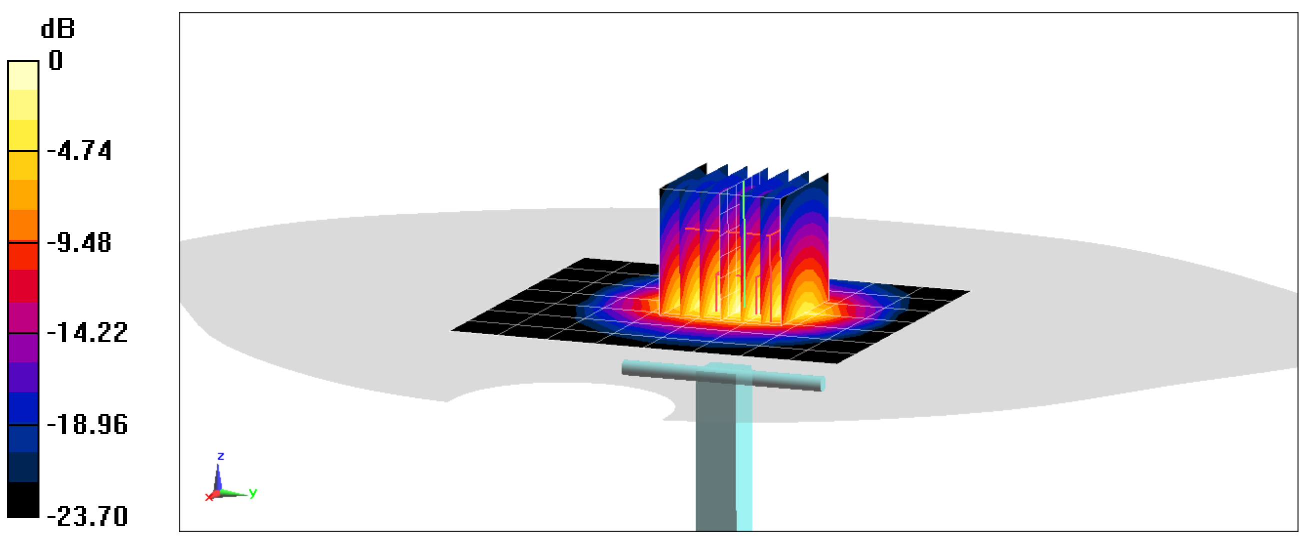
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2600 Body Medium parameters used:
f = 2600 MHz; σ = 2.233 S/m; ε_r = 50.936; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/03/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7552; ConvF(7.19, 7.19, 7.19) @ 2600 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.5 W/kg
SAR(10 g) = 2.34 W/kg
Deviation(10 g) = -5.26%



0 dB = 9.13 W/kg = 9.60 dBW/kg

PCTEST

DUT: Dipole 3500 MHz; Type: D3500V2; Serial: 1059

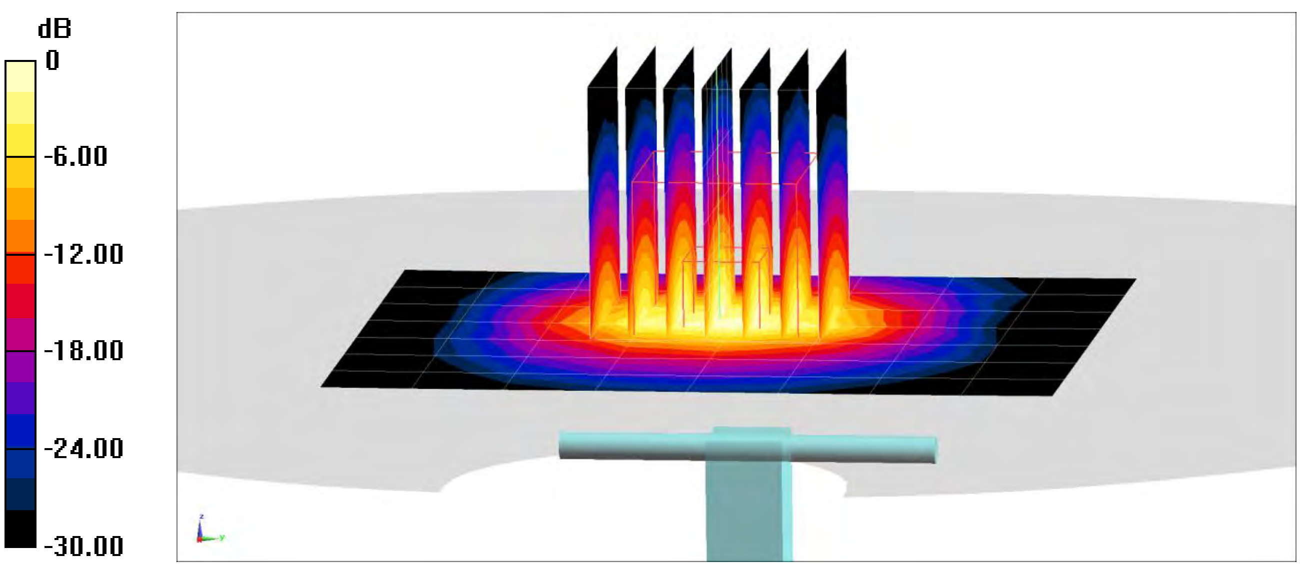
Communication System: UID 0, CW; Frequency: 3500 MHz; Duty Cycle: 1:1
Medium: 3600 Body Medium parameters used:
f = 3500 MHz; σ = 3.392 S/m; ε_r = 49.974; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/27/2020; Ambient Temp: 22.4°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN7488; ConvF(7, 7, 7) @ 3500 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

3500 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 17.1 W/kg
SAR(1 g) = 6.53 W/kg
Deviation(1 g) = 0.31%



0 dB = 12.7 W/kg = 11.04 dBW/kg

PCTEST

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: 1018

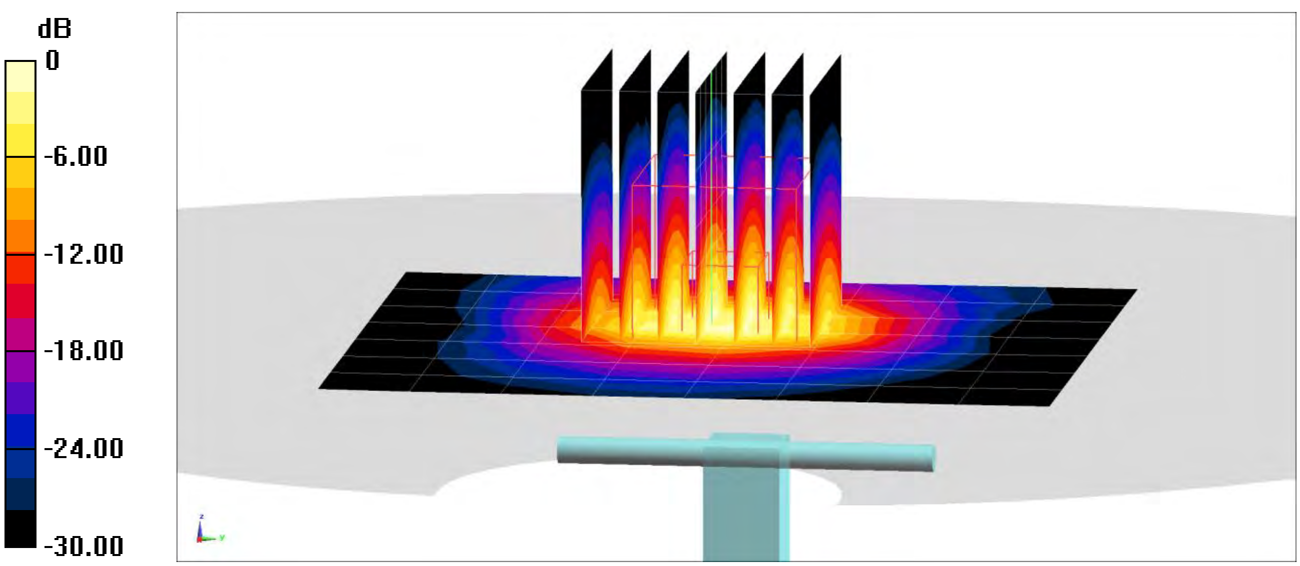
Communication System: UID 0, CW; Frequency: 3700 MHz; Duty Cycle: 1:1
Medium: 3600 Body Medium parameters used:
f = 3700 MHz; σ = 3.604 S/m; ε_r = 49.678; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/27/2020; Ambient Temp: 22.4°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN7488; ConvF(6.85, 6.85, 6.85) @ 3700 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

3700 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.1 W/kg
SAR(1 g) = 6.61 W/kg
Deviation(1 g) = 2.80%



0 dB = 13.1 W/kg = 11.17 dBW/kg

PCTEST

DUT: Dipole 3500 MHz; Type: D3500V2; Serial: 1059

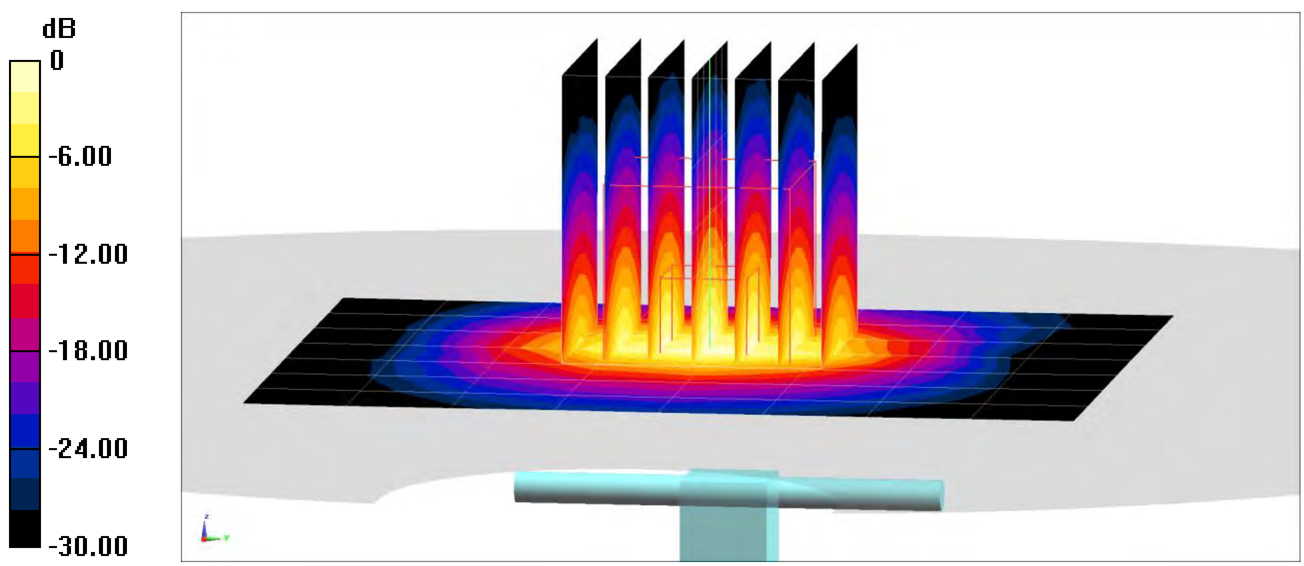
Communication System: UID 0, CW; Frequency: 3500 MHz; Duty Cycle: 1:1
Medium: 3600 Body Medium parameters used:
f = 3500 MHz; σ = 3.373 S/m; ε_r = 49.517; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/04/2020; Ambient Temp: 23.7°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7488; ConvF(7, 7, 7) @ 3500 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

3500 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 16.7 W/kg
SAR(1 g) = 6.42 W/kg; SAR(10 g) = 2.4 W/kg
Deviation(1 g) = -1.38%; Deviation(10 g) = -0.83%



0 dB = 12.6 W/kg = 11.00 dBW/kg

PCTEST

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: 1018

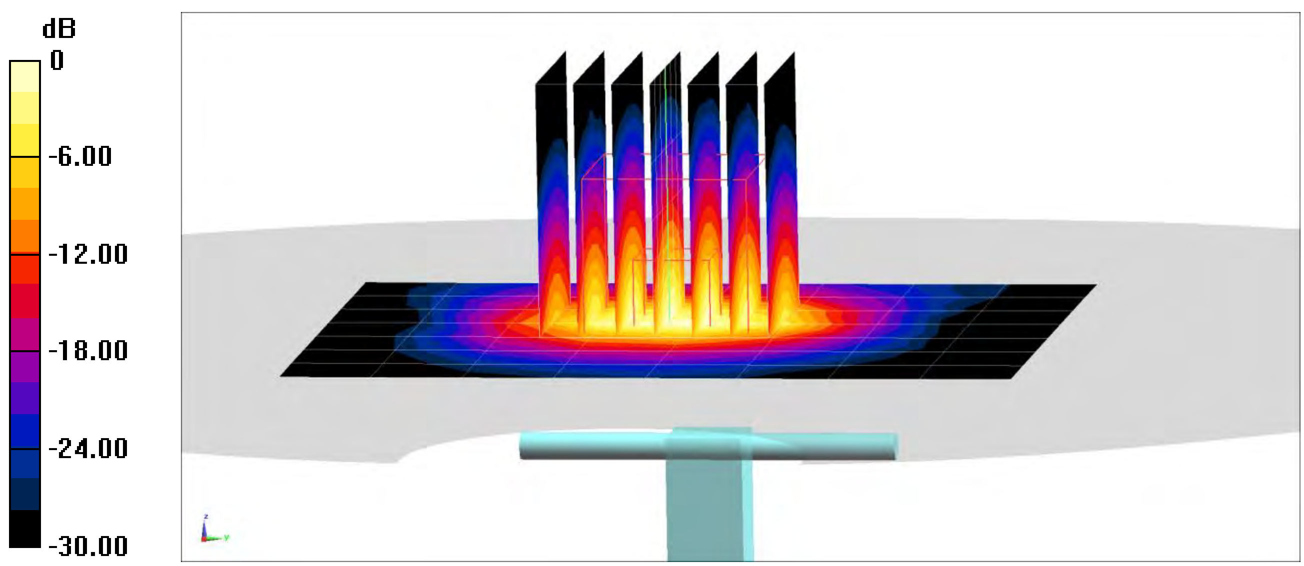
Communication System: UID 0, CW; Frequency: 3700 MHz; Duty Cycle: 1:1
Medium: 3600 Body Medium parameters used:
f = 3700 MHz; σ = 3.58 S/m; ε_r = 49.214; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/04/2020; Ambient Temp: 23.7°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7488; ConvF(6.85, 6.85, 6.85) @ 3700 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

3700 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.5 W/kg
SAR(1 g) = 6.76 W/kg; SAR(10 g) = 2.44 W/kg
Deviation(1 g) = 5.13%; Deviation(10 g) = 5.63%



0 dB = 13.5 W/kg = 11.30 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

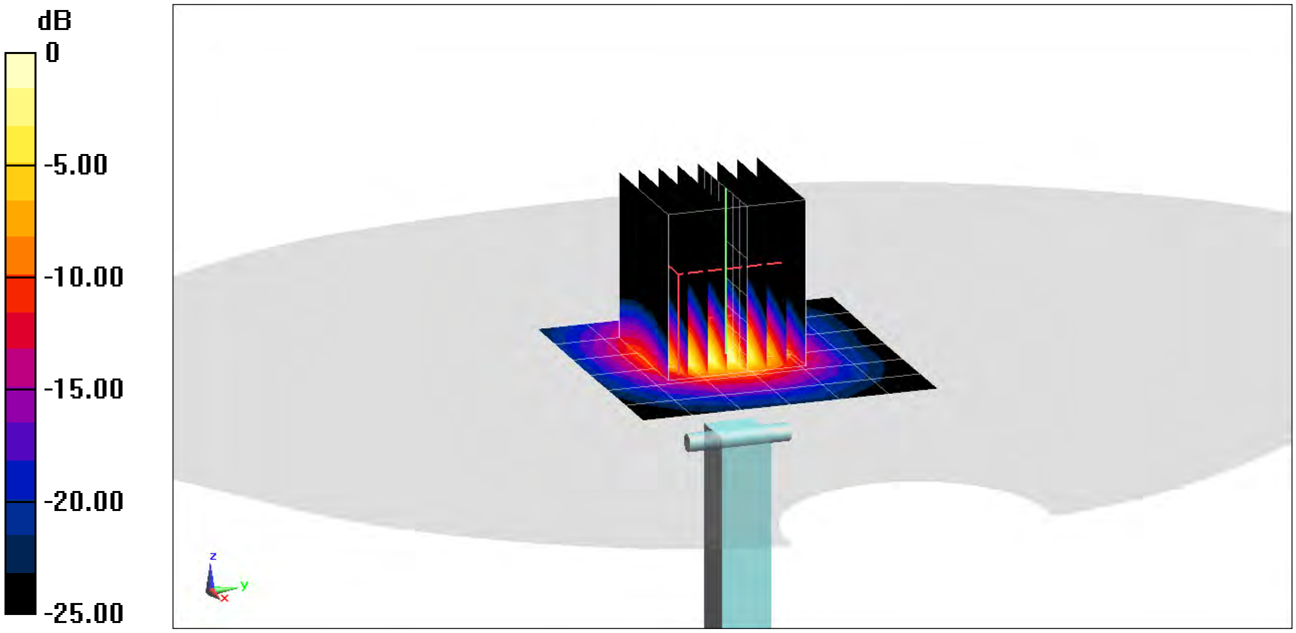
Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5250 MHz; σ = 5.434 S/m; ε_r = 46.826; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/05/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7538; ConvF(4.6, 4.6, 4.6) @ 5250 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5250 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 15.4 W/kg
SAR(1 g) = 3.81 W/kg
Deviation(1 g) = 0.79%



0 dB = 8.88 W/kg = 9.48 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

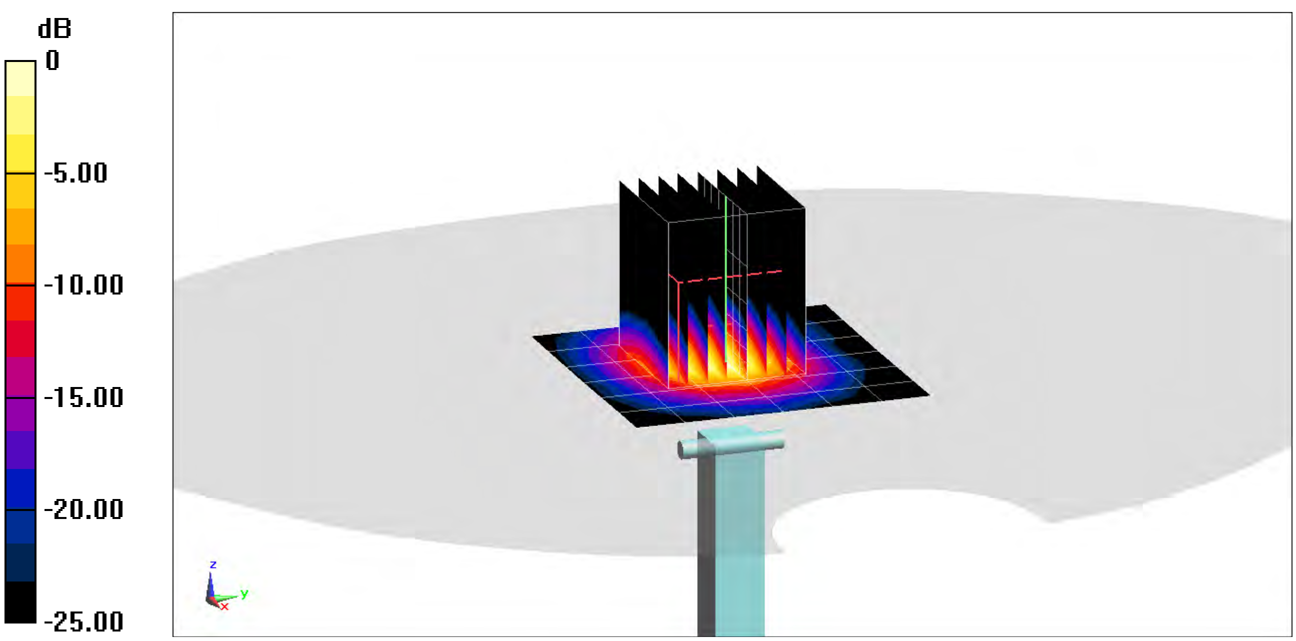
Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5600 MHz; σ = 5.891 S/m; ε_r = 46.256; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/05/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7538; ConvF(4.09, 4.09, 4.09) @ 5600 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5600 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.2 W/kg
SAR(1 g) = 3.99 W/kg
Deviation(1 g) = 1.66%



0 dB = 9.80 W/kg = 9.91 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

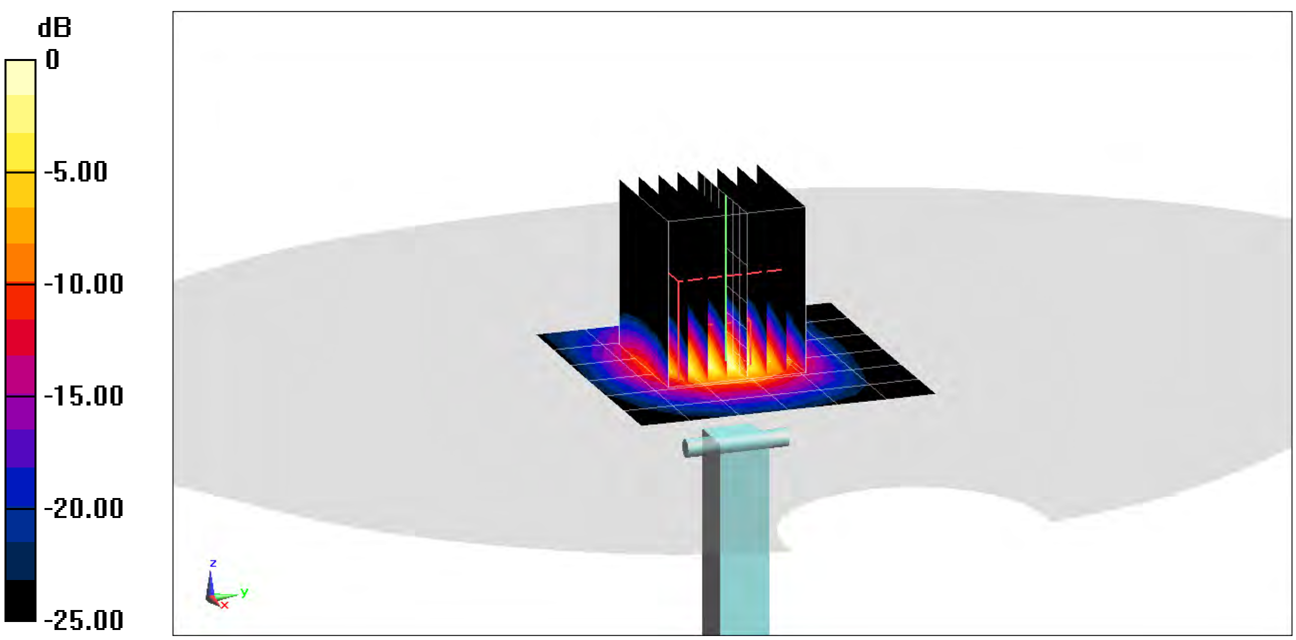
Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5750 MHz; σ = 6.096 S/m; ε_r = 46.02; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/05/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5750 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5750 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 17.3 W/kg
SAR(1 g) = 3.66 W/kg
Deviation(1 g) = -3.56%



0 dB = 9.17 W/kg = 9.62 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

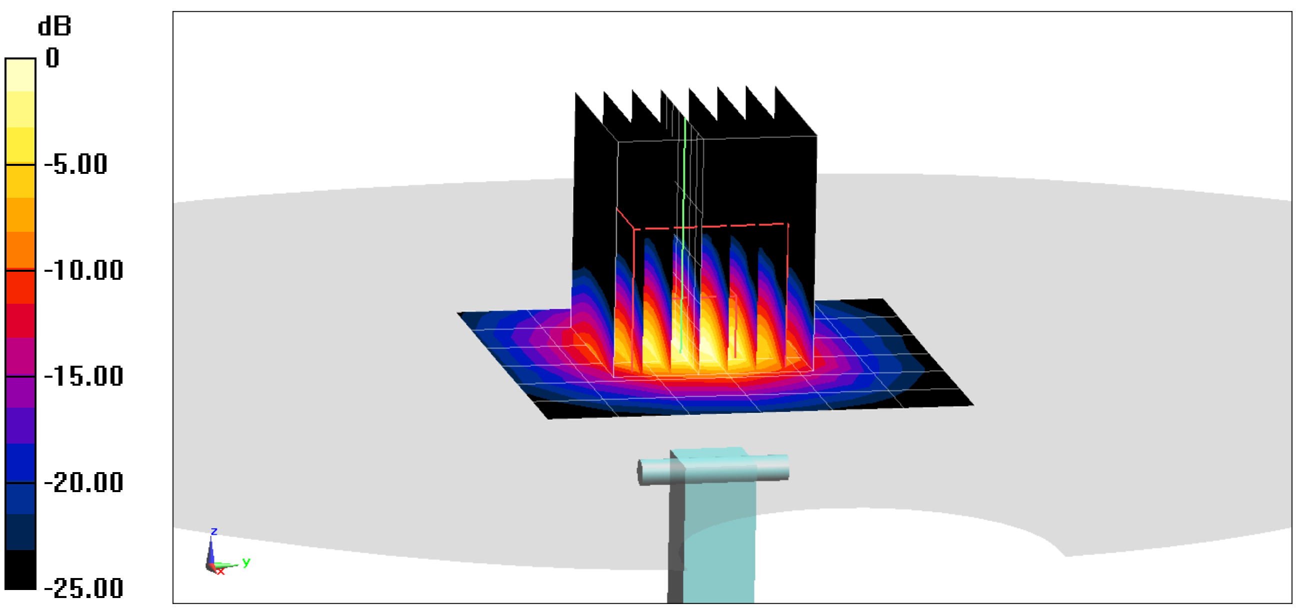
Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5250 MHz; σ = 5.46 S/m; ε_r = 46.788; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/13/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7538; ConvF(4.6, 4.6, 4.6) @ 5250 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5250 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 14.7 W/kg
SAR(1 g) = 3.66 W/kg
Deviation(1 g) = -3.17%



0 dB = 8.42 W/kg = 9.25 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

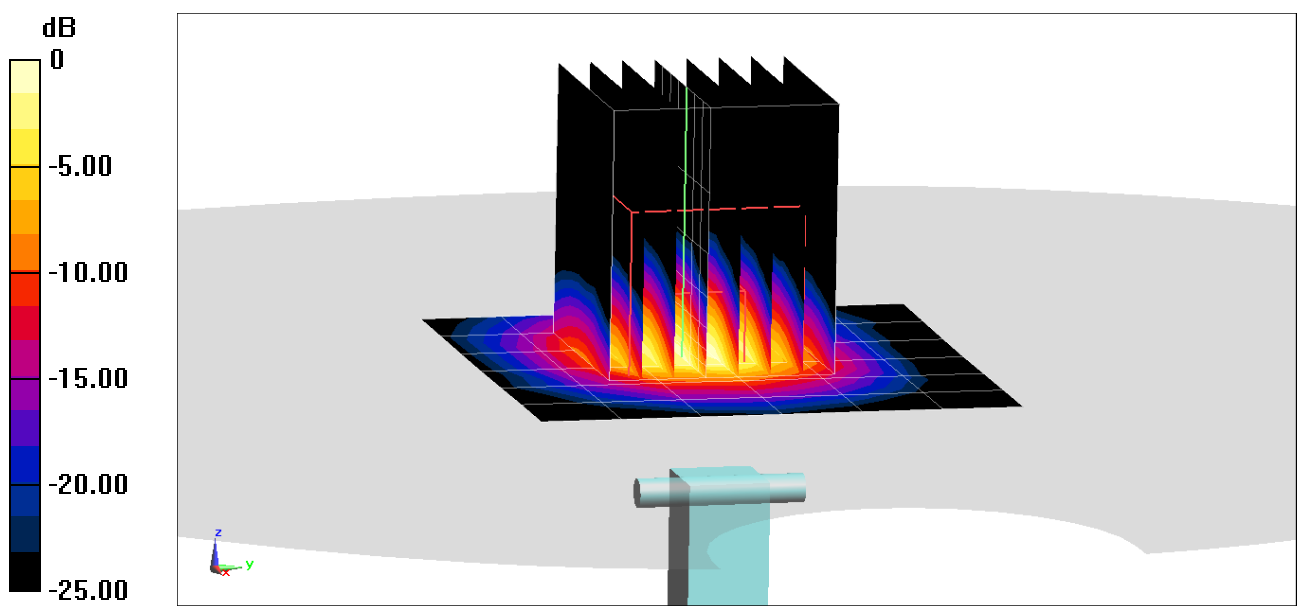
Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5600 MHz; σ = 5.929 S/m; ε_r = 46.207; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/13/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7538; ConvF(4.09, 4.09, 4.09) @ 5600 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5600 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 16.6 W/kg
SAR(1 g) = 3.79 W/kg
Deviation(1 g) = -3.44%



0 dB = 9.10 W/kg = 9.59 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

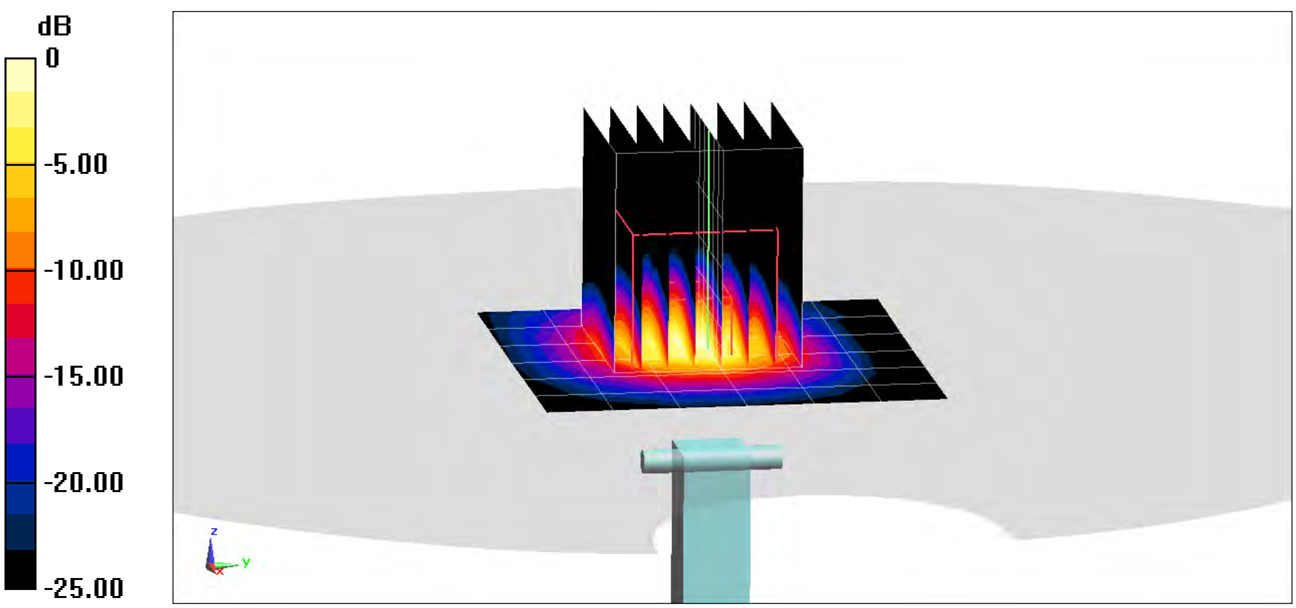
Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5750 MHz; σ = 6.107 S/m; ε_r = 45.951; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/13/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5750 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5750 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 16.8 W/kg
SAR(1 g) = 3.66 W/kg
Deviation(1 g) = -3.56%



0 dB = 8.94 W/kg = 9.51 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

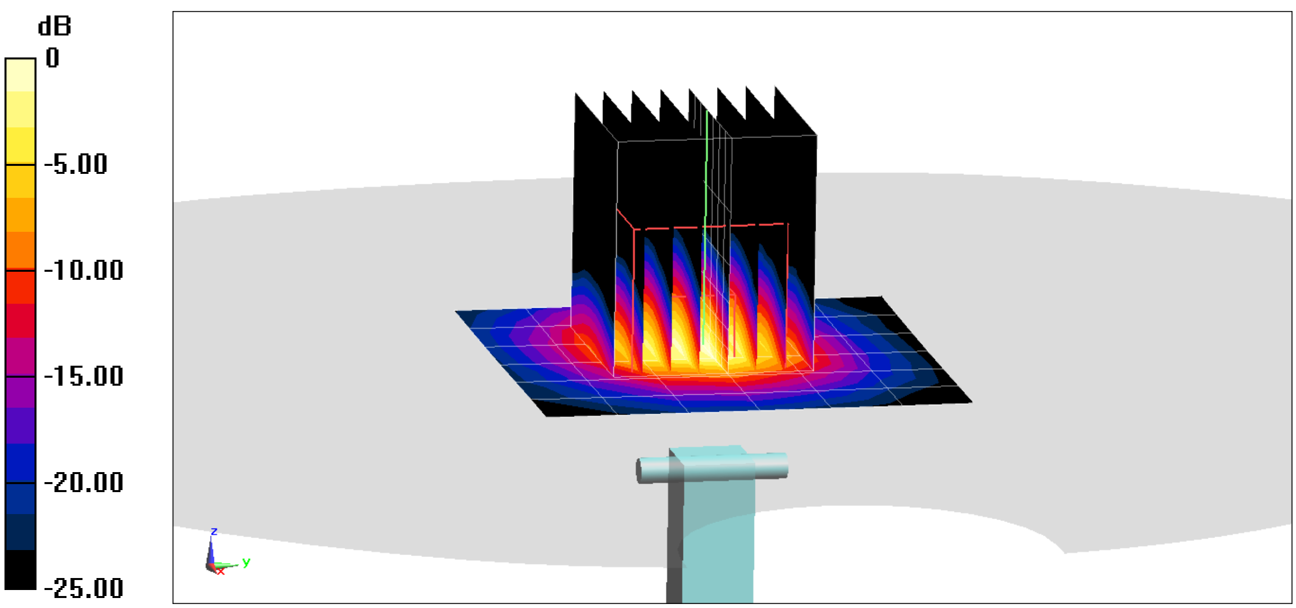
Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5250 MHz; σ = 5.469 S/m; ε_r = 47.002; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/19/2020; Ambient Temp: 21.1°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7538; ConvF(4.6, 4.6, 4.6) @ 5250 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5250 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 15.1 W/kg
SAR(10 g) = 1.03 W/kg
Deviation(10 g) = -2.83%



0 dB = 8.67 W/kg = 9.38 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

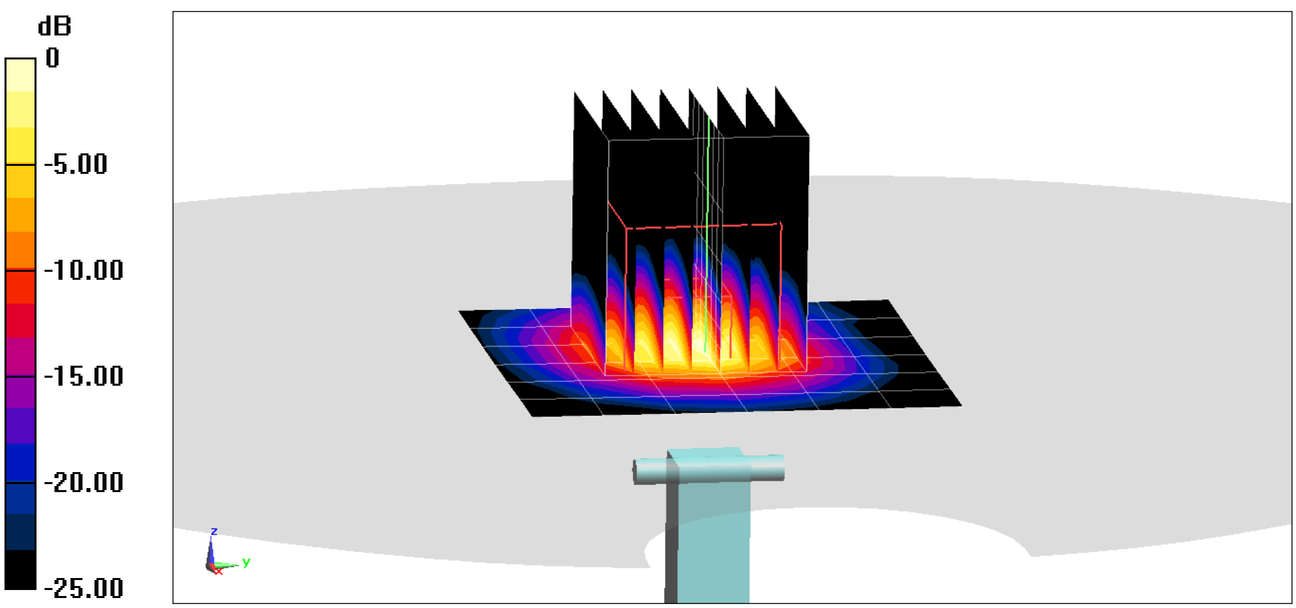
Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5600 MHz; σ = 5.937 S/m; ε_r = 46.434; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/19/2020; Ambient Temp: 21.1°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7538; ConvF(4.09, 4.09, 4.09) @ 5600 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5600 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 17.8 W/kg
SAR(10 g) = 1.1 W/kg
Deviation(10 g) = 0.00%



0 dB = 9.52 W/kg = 9.79 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

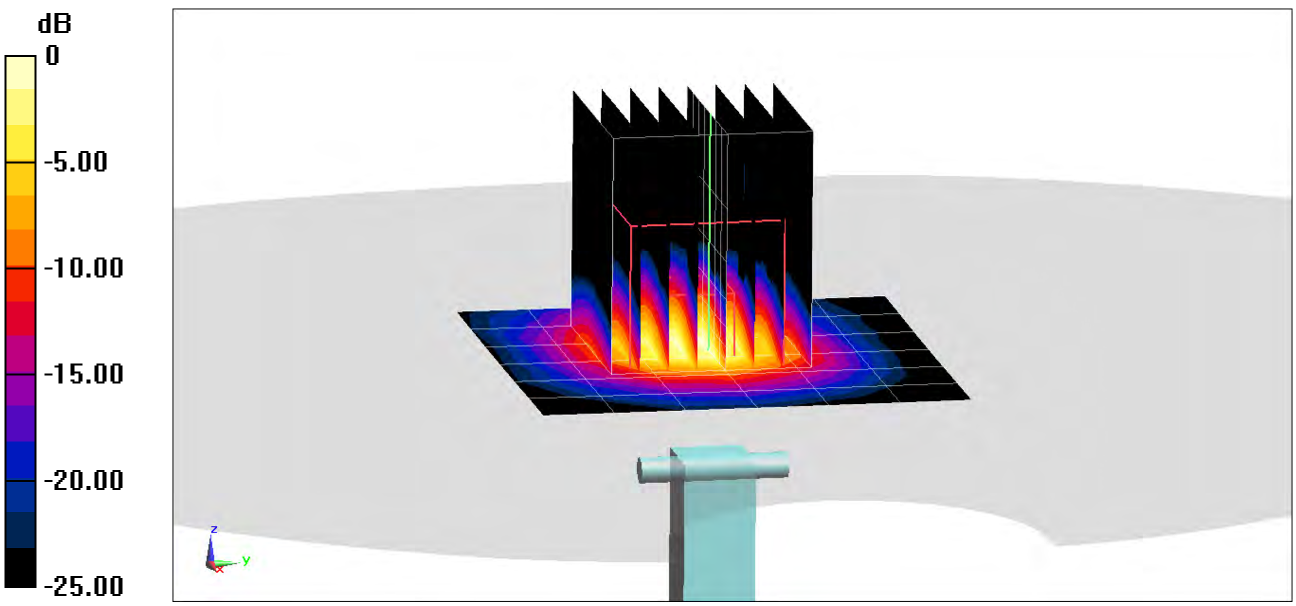
Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5750 MHz; σ = 6.143 S/m; ε_r = 46.198; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/19/2020; Ambient Temp: 21.1°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5750 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5750 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 17.3 W/kg
SAR(10 g) = 1.01 W/kg
Deviation(10 g) = -4.72%



0 dB = 8.97 W/kg = 9.53 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

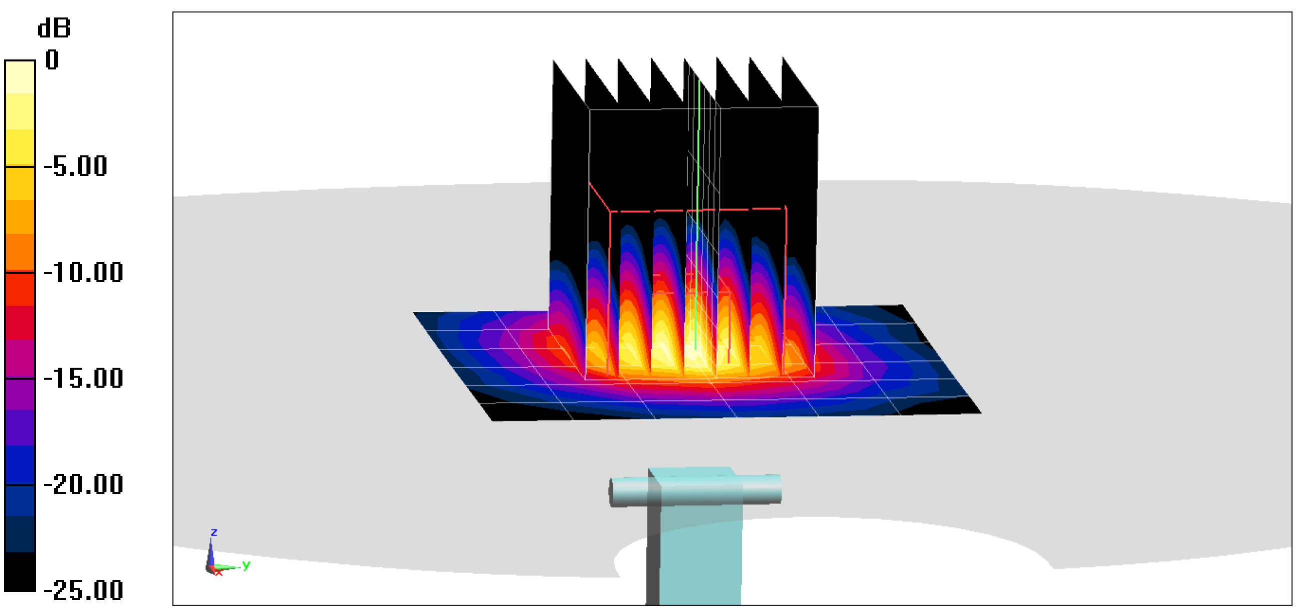
Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5250 MHz; σ = 5.467 S/m; ε_r = 46.929; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/27/2020; Ambient Temp: 21.9°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7538; ConvF(4.6, 4.6, 4.6) @ 5250 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5250 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 15.2 W/kg
SAR(10 g) = 1.03 W/kg
Deviation(10 g) = -2.83%



0 dB = 8.70 W/kg = 9.40 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

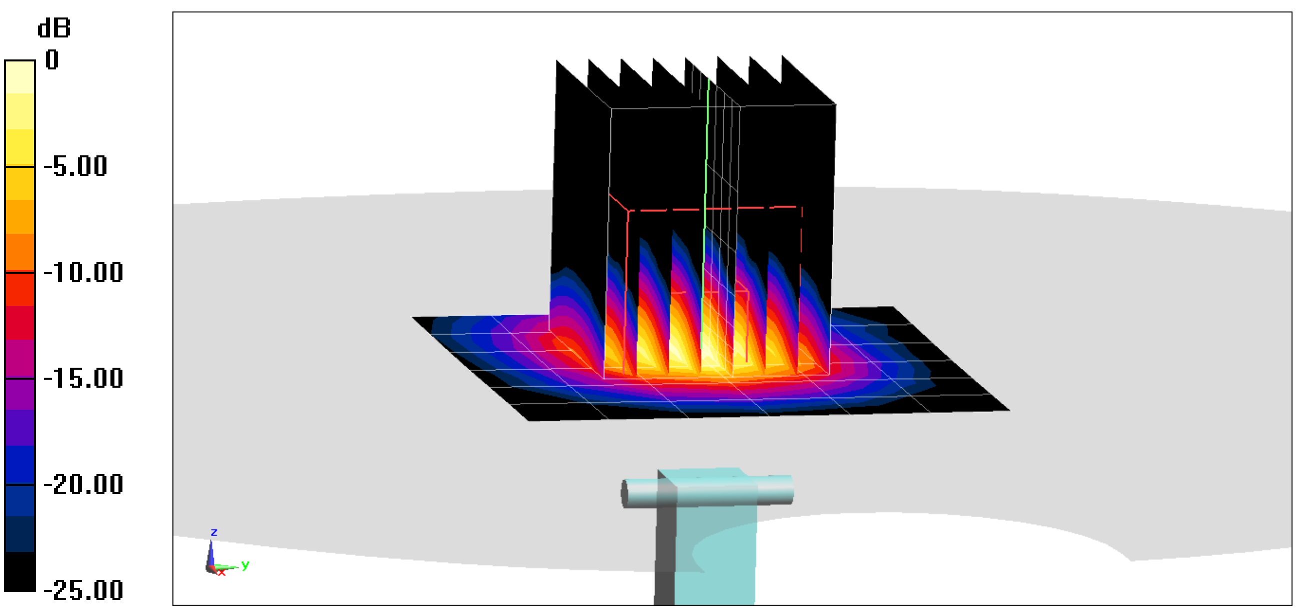
Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5600 MHz; $\sigma = 5.931$ S/m; $\varepsilon_r = 46.352$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/27/2020; Ambient Temp: 21.9°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7538; ConvF(4.09, 4.09, 4.09) @ 5600 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5600 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.0 W/kg
SAR(10 g) = 1.11 W/kg
Deviation(10 g) = 0.91%



0 dB = 9.74 W/kg = 9.89 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

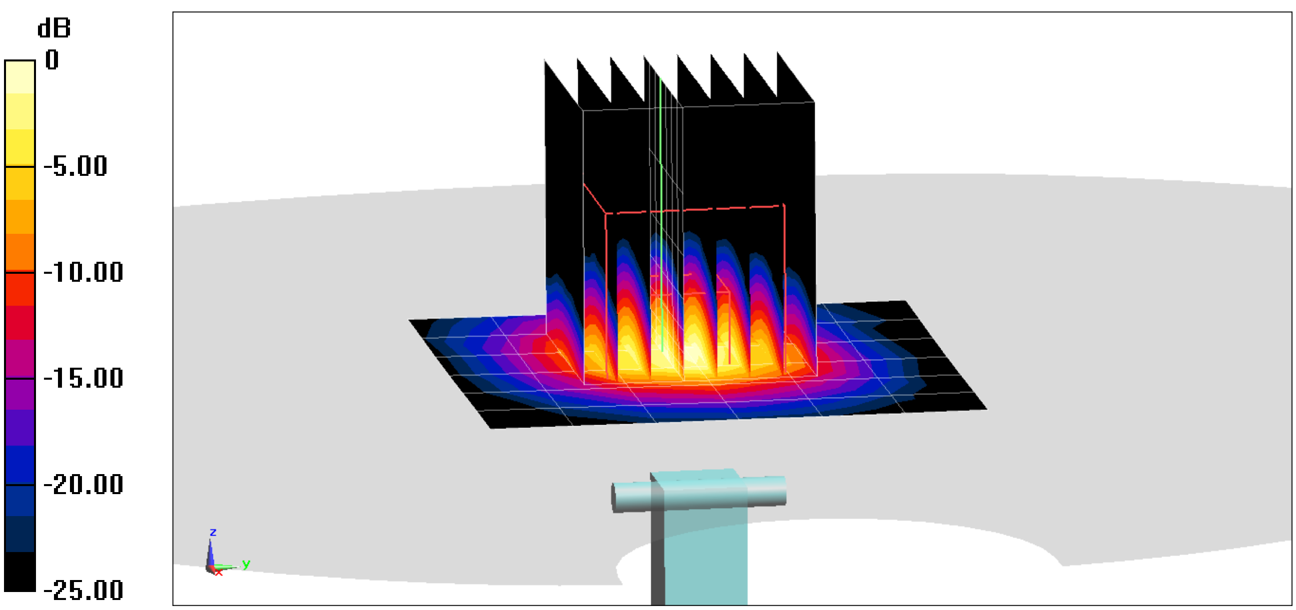
Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5750 MHz; σ = 6.139 S/m; ε_r = 46.119; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/27/2020; Ambient Temp: 21.9°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5750 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5750 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.1 W/kg
SAR(10 g) = 1.05 W/kg
Deviation(10 g) = -0.94%



0 dB = 9.40 W/kg = 9.73 dBW/kg

APPENDIX C: SAR TISSUE SPECIFICATIONS

Measurement Procedure for Tissue verification:

1) The network analyzer and probe system was configured and calibrated.
2) The probe was immersed in the tissue. The tissue was placed in a nonmetallic container. Trapped air bubbles beneath the flange were minimized by placing the probe at a slight angle.
3) The complex admittance with respect to the probe aperture was measured
4) The complex relative permittivity ε' can be calculated from the below equation (Pournaropoulos and Misra):

$$Y = \frac{j2\omega\varepsilon_r\varepsilon_0}{[\ln(b/a)]^2}\int_a^b\int_a^b\int_0^\pi \cos\phi' \frac{\exp\left[-j\omega r(\mu_0\varepsilon_r'\varepsilon_0)^{1/2}\right]}{r} d\phi' d\rho' d\rho$$

where *Y* is the admittance of the probe in contact with the sample, the primed and unprimed coordinates refer to source and observation points, respectively, $r^2 = \rho^2 + \rho'^2 - 2\rho\rho'\cos\phi'$, ω is the angular frequency, and $j = \sqrt{-1}$.

3 Composition / Information on ingredients

3.2 Mixtures
Description: Aqueous solution with surfactants and inhibitors
Declarable, or hazardous components:

CAS: 107-21-1 EINECS: 203-473-3 Reg.nr.: 01-2119456816-28-0000	**Ethanediol** STOT RE 2, H373; Acute Tox. 4, H302	>1.0-4.9%
CAS: 68608-26-4 EINECS: 271-781-5 Reg.nr.: 01-2119527859-22-0000	**Sodium petroleum sulfonate** Eye Irrit. 2, H319	< 2.9%
CAS: 107-41-5 EINECS: 203-489-0 Reg.nr.: 01-2119539582-35-0000	**Hexylene Glycol / 2-Methyl-pentane-2,4-diol** Skin Irrit. 2, H315; Eye Irrit. 2, H319	< 2.9%
CAS: 68920-66-1 NLP: 500-236-9 Reg.nr.: 01-2119489407-26-0000	**Alkoxylated alcohol, > C_{16}** Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319	< 2.0%

Additional information:
For the wording of the listed risk phrases refer to section 16.
Not mentioned CAS-, EINECS- or registration numbers are to be regarded as Proprietary/Confidential.
The specific chemical identity and/or exact percentage concentration of proprietary components is withheld as a trade secret.

Figure C-1

Note: Liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

Schmid & Partner Engineering AG **s p e a g**

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Phone +41 44 245 9700, Fax +41 44 245 9779
info@speag.com, http://www.speag.com

Measurement Certificate / Material Test

Item Name	**Body Tissue Simulating Liquid (MBBL600-6000V6)**
Product No.	SL AAM U16 BC (Batch: 181029-1)
Manufacturer	SPEAG

Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

Target Parameters

Target parameters as defined in the KDB 865664 compliance standard.

Test Condition

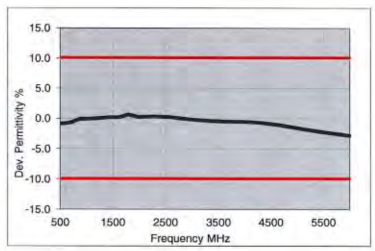
Ambient Condition	22°C ; 30% humidity
TSL Temperature	22°C
Test Date	30-Oct-18
Operator	CL

Additional Information

TSL Density
TSL Heat-capacity

Results

	Measured			Target		Diff.to Target [%]	
f [MHz]	e'	e''	sigma	eps	sigma	Δ-eps	Δ-sigma
800	55.1	21.3	0.95	55.3	0.97	-0.4	-2.1
825	55.1	20.8	0.96	55.2	0.98	-0.3	-2.0
835	55.1	20.6	0.96	55.1	0.99	0.0	-2.5
850	55.1	20.4	0.96	55.2	0.99	-0.1	-3.0
900	55.0	19.7	0.98	55.0	1.05	0.0	-6.7
1400	54.2	15.6	1.22	54.1	1.28	0.2	-4.7
1450	54.1	15.4	1.24	54.0	1.30	0.2	-4.6
1500	54.1	15.3	1.27	53.9	1.33	0.3	-4.5
1550	54.0	15.1	1.30	53.9	1.36	0.2	-4.4
1600	53.9	15.0	1.33	53.8	1.39	0.2	-4.3
1625	53.9	14.9	1.35	53.8	1.41	0.3	-4.3
1640	53.9	14.9	1.36	53.7	1.42	0.3	-4.2
1650	53.8	14.9	1.36	53.7	1.43	0.2	-4.9
1700	53.8	14.8	1.40	53.6	1.46	0.4	-4.1
1750	53.7	14.7	1.43	53.4	1.49	0.5	-4.0
1800	53.7	14.6	1.46	53.3	1.52	0.8	-3.9
1810	53.7	14.6	1.47	53.3	1.52	0.8	-3.3
1825	53.7	14.6	1.48	53.3	1.52	0.8	-2.6
1850	53.6	14.5	1.50	53.3	1.52	0.6	-1.3
1900	53.5	14.5	1.53	53.3	1.52	0.4	0.7
1950	53.5	14.5	1.57	53.3	1.52	0.4	3.3
2000	53.4	14.4	1.60	53.3	1.52	0.2	5.3
2050	53.4	14.4	1.64	53.2	1.57	0.3	4.5
2100	53.3	14.4	1.68	53.2	1.62	0.2	3.7
2150	53.3	14.4	1.72	53.1	1.66	0.4	3.6
2200	53.2	14.4	1.76	53.0	1.71	0.3	2.9
2250	53.1	14.4	1.81	53.0	1.76	0.2	2.8
2300	53.1	14.4	1.85	52.9	1.81	0.4	2.2
2350	53.0	14.5	1.89	52.8	1.85	0.3	2.2
2400	52.9	14.5	1.94	52.8	1.90	0.2	2.1
2450	52.9	14.5	1.98	52.7	1.95	0.4	1.5
2500	52.8	14.6	2.03	52.6	2.02	0.3	0.5
2550	52.7	14.6	2.07	52.6	2.09	0.2	-1.0
2600	52.6	14.7	2.12	52.5	2.16	0.2	-1.9
3500	51.1	15.5	3.02	51.3	3.31	-0.4	-8.8
3700	50.8	15.7	3.24	51.1	3.55	-0.5	-8.8
5200	48.1	18.2	5.27	49.0	5.30	-1.8	-0.6
5250	48.0	18.3	5.34	49.0	5.36	-1.9	-0.4
5300	47.9	18.4	5.41	48.9	5.42	-2.0	-0.2
5500	47.5	18.6	5.70	48.6	5.65	-2.2	0.8
5600	47.3	18.8	5.84	48.5	5.77	-2.3	1.3
5700	47.1	18.9	5.99	48.3	5.88	-2.5	1.8
5800	47.0	19.0	6.14	48.2	6.00	-2.6	2.3



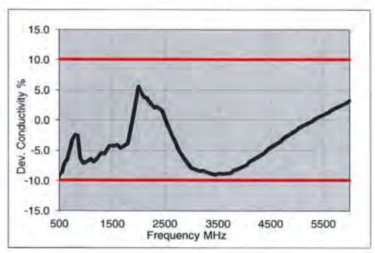


Figure C-2
600 – 5800 MHz Body Tissue Equivalent Matter

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s p e a g

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Measurement Certificate / Material Test

Item Name	**Head Tissue Simulating Liquid (HBBL600-10000V6)**
Product No.	SL AAH U16 BC (Batch: 181031-2)
Manufacturer	SPEAG

Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

Target Parameters

Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards.

Test Condition

Ambient Condition	22°C ; 30% humidity
TSL Temperature	22°C
Test Date	31-Oct-18
Operator	CL

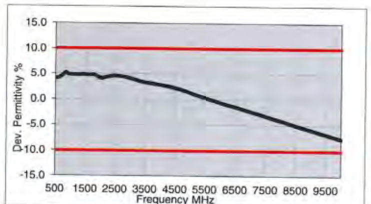
Additional Information

TSL Density

TSL Heat-capacity

Results

	Measured			Target		Diff.to Target [%]	
f [MHz]	e'	e''	sigma	eps	sigma	Δ-eps	Δ-sigma
800	43.8	20.5	0.91	41.7	0.90	5.1	1.4
825	43.8	20.1	0.92	41.6	0.91	5.3	1.5
835	43.8	19.9	0.93	41.5	0.91	5.4	2.0
850	43.7	19.7	0.93	41.5	0.92	5.3	1.5
900	43.5	18.9	0.95	41.5	0.97	4.8	-2.1
1400	42.5	15.0	1.17	40.6	1.18	4.7	-0.8
1450	42.5	14.8	1.19	40.5	1.20	4.9	-0.8
1600	42.2	14.3	1.27	40.3	1.28	4.7	-1.1
1625	42.2	14.2	1.29	40.3	1.30	4.8	-0.7
1640	42.2	14.2	1.30	40.3	1.31	4.8	-0.5
1650	42.1	14.2	1.30	40.2	1.31	4.6	-1.0
1700	42.1	14.0	1.33	40.2	1.34	4.8	-0.9
1750	42.0	13.9	1.36	40.1	1.37	4.8	-0.8
1800	41.9	13.9	1.39	40.0	1.40	4.7	-0.7
1810	41.9	13.8	1.40	40.0	1.40	4.7	0.0
1825	41.9	13.8	1.41	40.0	1.40	4.7	0.7
1850	41.8	13.8	1.42	40.0	1.40	4.5	1.4
1900	41.8	13.7	1.45	40.0	1.40	4.5	3.6
1950	41.7	13.7	1.48	40.0	1.40	4.3	5.7
2000	41.6	13.6	1.51	40.0	1.40	4.0	7.9
2050	41.6	13.6	1.55	39.9	1.44	4.2	7.3
2100	41.5	13.5	1.58	39.8	1.49	4.2	6.1
2150	41.4	13.5	1.62	39.7	1.53	4.2	5.7
2200	41.4	13.5	1.65	39.6	1.58	4.4	4.6
2250	41.3	13.5	1.69	39.6	1.62	4.4	4.2
2300	41.2	13.5	1.72	39.5	1.67	4.4	3.2
2350	41.1	13.5	1.76	39.4	1.71	4.4	2.9
2400	41.1	13.5	1.80	39.3	1.76	4.6	2.5
2450	41.0	13.5	1.84	39.2	1.80	4.6	2.2
2500	40.9	13.5	1.88	39.1	1.85	4.5	1.4
2550	40.8	13.5	1.92	39.1	1.91	4.4	0.6
2600	40.8	13.6	1.96	39.0	1.96	4.6	-0.2
3500	39.2	14.1	2.74	37.9	2.91	3.3	-5.8
3700	38.9	14.2	2.93	37.7	3.12	3.1	-6.1
5200	36.3	15.8	4.57	36.0	4.66	0.9	-1.7
5250	36.2	15.9	4.63	35.9	4.71	0.8	-1.6
5300	36.1	15.9	4.69	35.9	4.76	0.7	-1.4
5500	35.8	16.1	4.92	35.6	4.96	0.3	-0.9
5600	35.6	16.2	5.04	35.5	5.07	0.1	-0.6
5700	35.4	16.2	5.15	35.4	5.17	0.0	-0.3
5800	35.2	16.3	5.27	35.3	5.27	-0.2	0.0
6000	34.9	16.5	5.50	35.1	5.48	-0.6	0.5
6500	34.0	16.9	6.12	34.5	6.07	-1.4	0.9
7000	33.1	17.3	6.74	33.9	6.65	-2.3	1.3
7500	32.2	17.6	7.36	33.3	7.24	-3.2	1.6
8000	31.4	17.9	7.97	32.7	7.84	-4.1	1.7
8500	30.5	18.2	8.59	32.1	8.45	-5.0	1.6
9000	29.7	18.4	9.20	31.5	9.08	-5.9	1.3
9500	28.9	18.5	9.80	31.0	9.71	-6.8	0.9
10000	28.1	18.7	10.40	30.4	10.36	-7.6	0.4



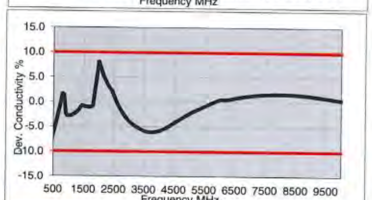


Figure C-3
600 – 5800 MHz Head Tissue Equivalent Matter

APPENDIX D: SAR SYSTEM VALIDATION

Per FCC KDB Publication 865664 D02v01r02, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

Table D-1
SAR System Validation Summary – 1g

SAR SYSTEM #	FREQ. [MHz]	DATE	PROBE SN	PROBE CAL. POINT		COND.	PERM.	CW VALIDATION			MOD. VALIDATION		
						(σ)	(εr)	SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
E	750	2/20/2020	3589	750	Head	0.889	43.647	PASS	PASS	PASS	N/A	N/A	N/A
L	835	9/24/2019	7410	835	Head	0.911	42.199	PASS	PASS	PASS	GMSK	PASS	N/A
L	835	7/6/2020	7406	835	Head	0.903	42.76	PASS	PASS	PASS	GMSK	PASS	N/A
E	1750	2/20/2020	3589	1750	Head	1.390	41.519	PASS	PASS	PASS	N/A	N/A	N/A
L	1750	7/11/2020	7406	1750	Head	1.321	41.025	PASS	PASS	PASS	N/A	N/A	N/A
L	1900	9/24/2019	7410	1900	Head	1.442	39.947	PASS	PASS	PASS	GMSK	PASS	N/A
L	1900	7/7/2020	7406	1900	Head	1.403	40.885	PASS	PASS	PASS	GMSK	PASS	N/A
P	2300	10/8/2019	7551	2300	Head	1.742	39.398	PASS	PASS	PASS	N/A	N/A	N/A
E	2450	2/5/2020	3589	2450	Head	1.823	38.835	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
E	2600	2/5/2020	3589	2600	Head	1.933	38.635	PASS	PASS	PASS	TDD	PASS	N/A
D	3500	2/4/2020	7488	3500	Head	2.882	36.886	PASS	PASS	PASS	TDD	PASS	N/A
D	3700	2/4/2020	7488	3700	Head	3.037	36.597	PASS	PASS	PASS	TDD	PASS	N/A
H	5250	5/7/2020	7357	5250	Head	4.644	35.12	PASS	PASS	PASS	OFDM	N/A	PASS
H	5600	5/7/2020	7357	5600	Head	5.03	34.51	PASS	PASS	PASS	OFDM	N/A	PASS
H	5750	5/7/2020	7357	5750	Head	5.207	34.26	PASS	PASS	PASS	OFDM	N/A	PASS
L	750	8/20/2019	7410	750	Body	0.941	54.921	PASS	PASS	PASS	N/A	N/A	N/A
P	750	9/26/2019	7551	750	Body	0.959	54.287	PASS	PASS	PASS	N/A	N/A	N/A
D	835	2/20/2020	7488	835	Body	1.001	53.45	PASS	PASS	PASS	GMSK	PASS	N/A
P	835	9/26/2019	7551	835	Body	0.991	54.104	PASS	PASS	PASS	GMSK	PASS	N/A
I	1750	6/17/2020	7570	1750	Body	1.518	52.03	PASS	PASS	PASS	N/A	N/A	N/A
L	1750	7/20/2020	7406	1750	Body	1.507	51.756	PASS	PASS	PASS	N/A	N/A	N/A
J	1900	1/1/2020	7571	1900	Body	1.579	51.919	PASS	PASS	PASS	GMSK	PASS	N/A
K	2300	7/7/2020	7409	2300	Body	1.85	51.59	PASS	PASS	PASS	N/A	N/A	N/A
O	2450	5/27/2020	7552	2450	Body	2.038	55.028	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2450	7/7/2020	7409	2450	Body	2.018	51.18	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2600	7/8/2020	7409	2600	Body	2.194	50.73	PASS	PASS	PASS	TDD	PASS	N/A
O	2600	5/27/2020	7552	2600	Body	2.183	54.825	PASS	PASS	PASS	TDD	PASS	N/A
D	3500	2/12/2020	7488	3500	Body	3.373	50.003	PASS	PASS	PASS	TDD	PASS	N/A
D	3700	2/12/2020	7488	3700	Body	3.585	49.719	PASS	PASS	PASS	TDD	PASS	N/A
G	5250	6/8/2020	7538	5250	Body	5.400	47.530	PASS	PASS	PASS	OFDM	N/A	PASS
G	5600	6/8/2020	7538	5600	Body	5.857	46.970	PASS	PASS	PASS	OFDM	N/A	PASS
G	5750	6/8/2020	7538	5750	Body	6.061	46.723	PASS	PASS	PASS	OFDM	N/A	PASS

Table D-2
SAR System Validation Summary – 10g

SAR SYSTEM #	FREQ. [MHz]	DATE	PROBE SN	PROBE CAL. POINT		COND. (σ)	PERM. (εr)	CW VALIDATION			MOD. VALIDATION		
								SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
L	750	8/20/2019	7410	750	Body	0.941	54.921	PASS	PASS	PASS	N/A	N/A	N/A
P	750	9/26/2019	7551	750	Body	0.959	54.287	PASS	PASS	PASS	N/A	N/A	N/A
E	750	2/21/2020	3589	750	Body	0.965	53.65	PASS	PASS	PASS	N/A	N/A	N/A
P	835	9/26/2019	7551	835	Body	0.991	54.104	PASS	PASS	PASS	GMSK	PASS	N/A
D	835	2/20/2020	7488	835	Body	1.001	53.45	PASS	PASS	PASS	GMSK	PASS	N/A
I	1750	6/17/2020	7570	1750	Body	1.518	52.03	PASS	PASS	PASS	N/A	N/A	N/A
L	1750	7/20/2020	7406	1750	Body	1.507	51.756	PASS	PASS	PASS	N/A	N/A	N/A
J	1900	1/1/2020	7571	1900	Body	1.579	51.919	PASS	PASS	PASS	GMSK	PASS	N/A
H	1900	6/1/2020	7357	1900	Body	1.555	51.21	PASS	PASS	PASS	GMSK	PASS	N/A
K	2300	7/7/2020	7409	2300	Body	1.85	51.59	PASS	PASS	PASS	N/A	N/A	N/A
K	2450	7/7/2020	7409	2450	Body	2.018	51.18	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
O	2450	5/27/2020	7552	2450	Body	2.038	55.028	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2600	7/8/2020	7409	2600	Body	2.194	50.73	PASS	PASS	PASS	TDD	PASS	N/A
O	2600	5/27/2020	7552	2600	Body	2.183	54.825	PASS	PASS	PASS	TDD	PASS	N/A
D	3500	2/12/2020	7488	3500	Body	3.373	50.003	PASS	PASS	PASS	TDD	PASS	N/A
D	3700	2/12/2020	7488	3700	Body	3.585	49.719	PASS	PASS	PASS	TDD	PASS	N/A
G	5250	6/8/2020	7538	5250	Body	5.400	47.530	PASS	PASS	PASS	OFDM	N/A	PASS
G	5600	6/8/2020	7538	5600	Body	5.857	46.970	PASS	PASS	PASS	OFDM	N/A	PASS
G	5750	6/8/2020	7538	5750	Body	6.061	46.723	PASS	PASS	PASS	OFDM	N/A	PASS

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to FCC KDB Publication 865664 D01v01r04.

APPENDIX F: DOWNLINK LTE CA RF CONDUCTED POWERS

1.1 LTE Downlink Only Carrier Aggregation Test Reduction Methodology

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number of component carriers (CCs) supported by the product implementation. Per April 2018 TCBC Workshop Notes, the following test reduction methodology was applied to determine the combinations required for conducted power measurements.

LTE DLCA Test Reduction Methodology:

- The supported combinations were arranged by the number of component carriers in columns.
- Any limitations on the PCC or SCC for each combination were identified alongside the combination (e.g. CA_2A-2A-4A-12A, but B12 can only be configured as a SCC).
- Power measurements were performed for "supersets" (LTE CA combinations with multiple components carriers) and any "subsets" (LTE CA combinations with fewer component carriers) that were not completely covered by the supersets.
- Only subsets that have the exact same components as a superset were excluded for measurement.
- When there were certain restrictions on component carriers that existed in the superset that were not applied for the subset, the subset configuration was additionally evaluated.
- Both inter-band and intra-band downlink carrier aggregation scenarios were considered.
- Downlink CA combinations for SISO and 4x4 Downlink MIMO operations were measured independently, per May 2017 TCBC Workshop notes.

Table 1 – Example of Exclusion Table for SISO Configurations

Index	2CC	Supported Channel Bandwidth [MHz] CC1	CC2	Restriction	Completely Covered by Measurement Superset
2CC #1	CA_2C	5, 10, 15, 20	5, 10, 15, 20		3CC #4
2CC #2	CA_2A-5A	5, 10, 15, 20	5, 10		4CC #1
2CC #3	CA_2A-12A	5, 10, 15, 20	5, 10		3CC #3
2CC #4	CA_2A-13A	5, 10, 15, 20	10		3CC #9
2CC #5	CA_2A-17A	5, 10	5, 10		No
2CC #6	CA_2A-30A	5, 10, 15, 20	5, 10		3CC #14
2CC #8	CA_2A-66A (2)	5, 10, 15, 20	5, 10, 15, 20		5CC #1
2CC #9	CA_2A-71A	5, 10, 15, 20	5, 10, 15, 20		3CC #10
2CC #10	CA_4A-4A	5, 10, 15, 20	5, 10, 15, 20		3CC #6
2CC #11	CA_4A-5A (1)	5, 10, 15, 20	5, 10		4CC #1
2CC #12	CA_4A-12A (4)	5, 10, 15, 20	5, 10		3CC #8
2CC #13	CA_4A-13A	5, 10, 15, 20	10		3CC #9
2CC #14	CA_4A-17A	5, 10	5, 10	B17 SCC Only	No
2CC #15	CA_5B	5, 10	5, 10		5CC #1
2CC #16	CA_5A-25A	5, 10	5, 10, 15, 20		No
2CC #17	CA_7C	15, 20	15, 20		No
2CC #18	CA_7A-7A (1)	5, 10, 15, 20	5, 10, 15, 20		No
2CC #19	CA_7A-12A	5, 10, 15, 20	5, 10		3CC #12
2CC #20	CA_12B	5	5, 10		3CC #13
2CC #21	CA_12A-25A	5, 10	5, 10, 15, 20		No
2CC #22	CA_12A-30A	5, 10	5, 10		3CC #14
2CC #23	CA_41A-41A (1)	5, 10, 15, 20	5, 10, 15, 20		No

Index	3CC	Supported Channel Bandwidth [MHz] CC1	CC2	CC3	Restriction	Completely Covered by Measurement Superset
3CC #1	CA_2A-2A-4A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		4CC #1
3CC #2	CA_2A-2A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10		4CC #1
3CC #3	CA_2A-2A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #4	CA_2C-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #5	CA_2A-2A-71A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #6	CA_2A-4A-4A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #7	CA_2A-4A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10		4CC #1
3CC #8	CA_2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #9	CA_2A-4A-13A	5, 10, 15, 20	5, 10, 15, 20	10		No
3CC #10	CA_2A-4A-71A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #11	CA_2A-5B	5, 10, 15, 20	5, 10	5, 10		4CC #5
3CC #12	CA_2A-7A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #13	CA_2A-12B	5, 10, 15, 20	5	5, 10		No
3CC #14	CA_2A-12A-30A	5, 10, 15, 20	5, 10	5, 10		No
3CC #15	CA_4A-4A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #16	CA_5B-30A	5, 10	5, 10	5, 10		5CC #1
3CC #17	CA_5B-66A	5, 10	5, 10	5, 10, 15, 20		5CC #1
3CC #18	CA_5A-30A-66A	5, 10	5, 10	5, 10, 15, 20		4CC #9
3CC #19	CA_12A-66C	5, 10	5, 10, 15, 20	5, 10, 15, 20		No
3CC #20	CA_30A-66A-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20		4CC #9
3CC #21	CA_41D	10, 15, 20	10, 15, 20	10, 15, 20		No
3CC #22	CA_41A-41C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #23	CA_66D	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #24	CA_66A-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No

Index	4CC	Supported Channel Bandwidth [MHz] CC1	CC2	CC3	CC4	Restriction	Completely Covered by Measurement Superset
4CC #1	CA_2A-2A-4A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
4CC #2	CA_2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10	B12 SCC Only	No
4CC #3	CA_2A-2A-5A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10		No
4CC #4	CA_2A-2A-5A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
4CC #5	CA_2A-5B-30A	5, 10, 15, 20	5, 10	5, 10	5, 10		5CC #1
4CC #6	CA_2A-5B-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20		5CC #1
4CC #7	CA_5B-30A-66A	5, 10	5, 10	5, 10	5, 10		5CC #1
4CC #8	CA_5B-66A-66A	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20		5CC #2
4CC #9	CA_5A-30A-66A-66A	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20		No
4CC #10	CA_41E	15, 20	15, 20	15, 20	20		No

Index	5CC	Supported Channel Bandwidth [MHz] CC1	CC2	CC3	CC4	CC5	Restriction	Completely Covered by Measurement Superset
5CC #1	CA_2A-5B-30A-66A	5, 10, 15, 20	5, 10	5, 10	5, 10	5, 10, 15, 20		No
5CC #2	CA_2A-5B-66A-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20		No

Table 2 – Example of Exclusion Table for 4x4 Downlink MIMO Configurations

Index	2CC	Supported Channel Bandwidth [MHz] CC1	CC2	Restriction	Completely Covered by Measurement Superset
2CC #M1	CA_[2C]	5, 10, 15, 20	5, 10, 15, 20		3CC #M6
2CC #M2	CA_[2A]-2A	5, 10, 15, 20	5, 10, 15, 20		3CC #M1
2CC #M3	CA_[2A]-[2A]	5, 10, 15, 20	5, 10, 15, 20		No
2CC #M4	CA_[2A]-4A (2)	5, 10, 15, 20	5, 10, 15, 20		3CC #M1
2CC #M5	CA_[2A]-[4A] (2)	5, 10, 15, 20	5, 10, 15, 20		No
2CC #M6	CA_[2A]-5A	5, 10, 15, 20	5, 10		4CC #M3
2CC #M7	CA_[2A]-12A (1)	5, 10, 15, 20	3, 5, 10		No
2CC #M8	CA_[2A]-13A	5, 10, 15, 20	10		3CC #M4
2CC #M9	CA_[2A]-17A	5, 10	5, 10		No
2CC #M10	CA_[2A]-29A (2)	5, 10, 15, 20	5, 10	B29 SCC Only	3CC #M12
2CC #M11	CA_[2A]-30A	5, 10, 15, 20	5, 10		3CC #M5
2CC #M12	CA_[2A]-66A (2)	5, 10, 15, 20	5, 10, 15, 20		4CC #M1
2CC #M13	CA_2A-[66A] (2)	5, 10, 15, 20	5, 10, 15, 20		4CC #M2
2CC #M14	CA_[2A]-[66A] (2)	5, 10, 15, 20	5, 10, 15, 20		No
2CC #M15	CA_[2A]-71A	5, 10, 15, 20	5, 10, 15, 20		3CC #M11
2CC #M16	CA_5A-[66A]	5, 10	5, 10, 15, 20		3CC #M16
2CC #M17	CA_12A-[66A] (4)	5, 10	5, 10, 15, 20		3CC #M17
2CC #M18	CA_13A-[66A]	5, 10	5, 10, 15, 20		3CC #M19
2CC #M19	CA_30A-[66A]	5, 10	5, 10, 15, 20		3CC #M20
2CC #M20	CA_[66B]	5, 10, 15	5, 10, 15		4CC #M4
2CC #M21	CA_[66C]	5, 10, 15, 20	5, 10, 15, 20		4CC #M6
2CC #M22	CA_[66A]-66A	5, 10, 15, 20	5, 10, 15, 20		3CC #M28
2CC #M23	CA_[66A]-[66A]	5, 10, 15, 20	5, 10, 15, 20		No

Index	3CC	Supported Channel Bandwidth [MHz] CC1	CC2	CC3	Restriction	Completely Covered by Measurement Superset
3CC #M1	CA_[2A]-2A-4A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M2	CA_[2A]-2A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #M3	CA_[2A]-2A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #M4	CA_[2A]-2A-13A	5, 10, 15, 20	5, 10, 15, 20	10		No
3CC #M5	CA_[2A]-2A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #M6	CA_[2C]-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M7	CA_2C-[66A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M8	CA_[2C]-[66A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M9	CA_[2A]-2A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M10	CA_[2A]-2A-[66A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M11	CA_[2A]-2A-71A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M12	CA_[2A]-4A-29A	5, 10, 15, 20	5, 10, 15, 20	5, 10	B29 SCC Only	No
3CC #M13	CA_[2A]-4A-71A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M14	CA_[2A]-5B	5, 10, 15, 20	5, 10	5, 10		4CC #M1
3CC #M15	CA_[2A]-5A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
3CC #M16	CA_2A-5A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
3CC #M17	CA_2A-12A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
3CC #M18	CA_[2A]-13A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
3CC #M19	CA_2A-13A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
3CC #M20	CA_2A-30A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
3CC #M21	CA_[2A]-66B	5, 10, 15, 20	5, 10, 15	5, 10, 15		4CC #M3
3CC #M22	CA_2A-[66B]	5, 10, 15, 20	5, 10, 15	5, 10, 15		4CC #M4
3CC #M23	CA_[2A]-[66B]	5, 10, 15, 20	5, 10, 15	5, 10, 15		No
3CC #M24	CA_[2A]-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		4CC #M5
3CC #M25	CA_2A-[66C]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		4CC #M6
3CC #M26	CA_[2A]-[66C]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M27	CA_[2A]-66A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M28	CA_2A-[66A]-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M29	CA_[2A]-66A-71A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No

Index	4CC	Supported Channel Bandwidth [MHz] CC1	CC2	CC3	CC4	Restriction	Completely Covered by Measurement Superset
4CC #M1	CA_[2A]-5B-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20		No
4CC #M2	CA_2A-5B-[66A]	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20		No
4CC #M3	CA_[2A]-5A-66B	5, 10, 15, 20	5, 10	5, 10, 15	5, 10, 15		No
4CC #M4	CA_[2A]-5A-[66B]	5, 10, 15, 20	5, 10	5, 10, 15	5, 10, 15		No
4CC #M5	CA_[2A]-5A-66C	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20		No
4CC #M6	CA_[2A]-5A-[66C]	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20		No

Note: [CC] indicates component carrier with 4x4 DL MIMO antenna configuration

1.2 LTE Downlink Only Carrier Aggregation Test Selection and Setup

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number component carriers (CCs) supported by the product implementation. For those configurations required by April 2018 TCBC Workshop Notes, conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. Additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

This device supports LAA with downlink carrier aggregation only. It uses carrier aggregation in the downlink to combine LTE in the unlicensed spectrum (i.e. LTE Band 46) with LTE in the licensed band (served as PCC). All uplink communications and acknowledgements on the PCC remain identical to specifications when downlink carrier aggregation is inactive.

Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the maximum average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive. All bands required for SAR testing per FCC KDB procedures were considered. Based on the measured maximum powers below, no additional SAR tests were required for DLCA SAR configurations.

General PCC and SCC configuration selection procedure

- PCC uplink channel, channel bandwidth, modulation and RB configurations were selected based on section C)3)b)ii) of KDB 941225 D05 V01r02. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation.
- To maximize aggregated bandwidth, highest channel bandwidth available for that CA combination was selected for SCC. For inter-band CA, the SCC downlink channels were selected near the middle of their transmission bands. For contiguous intra-band CA, the downlink channel spacing between the component carriers was set to multiple of 300 kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521. For non-contiguous intra-band CA, the downlink channel spacing between the component carriers was set to be larger than the nominal channel spacing and provided maximum separation between the component carriers.
- All selected PCC and SCC(s) remained fully within the uplink/downlink transmission band of the respective component carrier.

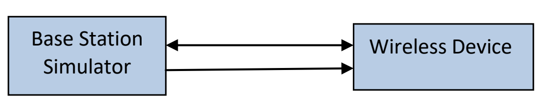


Figure 1
DL CA Power Measurement Setup

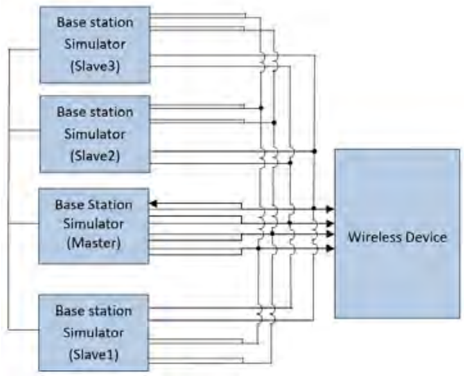


Figure 2
DL CA with DL 4x4 MIMO Power Measurement Setup

1.3 Downlink Carrier Aggregation RF Conducted Powers

1.3.1 LTE Band 71 as PCC

Table 1
Maximum Output Powers

	PCC									SCC 1				SCC 2				SCC 3				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_4A-4A-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-	-	-	-	24.70	24.67
CA_48A-48A-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	LTE B48	20	55990	3625	LTE B48	20	56640	3690	-	-	-	-	24.62	24.67
CA_48C-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	-	-	-	-	24.58	24.67
CA_2A-2A-4A-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B4	20	2175	2132.5	24.68	24.67
CA_2A-2A-66A-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	24.70	24.67
CA_2A-66A-66A-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	67236	2190	24.70	24.67
CA_2A-66C-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	24.71	24.67

1.3.2 LTE Band 12 as PCC

Table 2
Maximum Output Powers

	PCC									SCC 1				SCC 2				SCC 3				SCC 4				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_2A-12A (1)	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B2	20	900	1960	-	-	-	-	-	-	-	-	-	-	-	-	25.01	25.10
CA_4A-12A (1)	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	-	-	-	-	25.13	25.10
CA_4A-12A (2)	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	-	-	-	-	25.13	25.10
CA_12A-25A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B25	20	8365	1962.5	-	-	-	-	-	-	-	-	-	-	-	-	25.06	25.10
CA_12A-46A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	25.06	25.10
CA_12A-66A (1)	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	-	-	-	-	25.08	25.10
CA_12A-66A (2)	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	-	-	-	-	25.08	25.10
CA_4A-4A-12A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-	-	-	-	-	-	-	-	25.15	25.10
CA_12A-46C	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	25.09	25.10
CA_2A-2A-4A-12A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B4	20	2175	2132.5	-	-	-	-	25.20	25.10
CA_2A-2A-12B	LTE B12	5	23095	707.5	QPSK	1	24	5095	737.5	LTE B12	5	5047	732.7	LTE B2	20	900	1960	LTE B2	20	700	1940	-	-	-	-	24.83	24.85
CA_2A-12A-66C	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	-	-	-	-	25.13	25.10
CA_12A-46D	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	-	-	-	-	25.20	25.10
CA_2A-2A-12A-30A-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B30	10	9820	2355	LTE B66	20	66786	2145	25.17	25.10
CA_2A-2A-12A-66A-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	LTE B66	20	67236	2190	25.20	25.10
CA_2A-12A-30A-66A-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	LTE B2	20	900	1960	LTE B30	10	9820	2355	LTE B66	20	66786	2145	LTE B66	20	67236	2190	25.15	25.10

1.3.3 LTE Band 13 as PCC

Table 3
Maximum Output Powers

	PCC									SCC 1				SCC 2				SCC 3				SCC 4				SCC 5				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_2A-4A-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	-	-	-	-	24.32	24.15
CA_2A-13A-46A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	24.33	24.15
CA_4A-4A-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-	-	-	-	-	-	-	-	-	-	-	-	24.34	24.15
CA_13A-46A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B46	20	50665	5537.5	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	-	-	-	-	24.38	24.15
CA_2A-13A-46C	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	24.36	24.15
CA_2A-13A-66C	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	-	-	-	-	-	-	-	-	24.37	24.15
CA_13A-46C-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	24.24	24.15
CA_13A-48A-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B48	20	55990	3625	LTE B66	15	66786	2145	LTE B66	5	66879	2154.3	-	-	-	-	-	-	-	-	24.33	24.15
CA_13A-48A-66C	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B48	20	55990	3625	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	-	-	-	-	-	-	-	-	24.35	24.15
CA_2A-2A-13A-66A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	LTE B66	20	67236	2190	-	-	-	-	24.34	24.15
CA_2A-2A-13A-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	15	66786	2145	LTE B66	5	66879	2154.3	-	-	-	-	24.34	24.15
CA_2A-13A-48A-48A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B48	20	55990	3625	LTE B48	20	56640	3690	LTE B66	20	66786	2145	-	-	-	-	24.37	24.15
CA_2A-13A-48A-48C	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B48	20	55990	3625	LTE B48	20	56640	3690	LTE B48	20	56442	3670.2	-	-	-	-	24.35	24.15
CA_2A-13A-48C-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B66	20	66786	2145	-	-	-	-	24.33	24.15
CA_2A-13A-48D	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	-	-	-	-	24.35	24.15
CA_2A-13A-66A-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	5	67168	2183.2	LTE B66	15	67261	2192.5	-	-	-	-	24.34	24.15
CA_13A-48A-48C-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B48	20	55990	3625	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	LTE B66	20	66786	2145	-	-	-	-	24.33	24.15
CA_13A-48A-48D	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B48	20	55990	3625	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	LTE B48	20	55736	3599.6	-	-	-	-	24.36	24.15
CA_13A-48C-48C	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	-	-	-	-	24.39	24.15
CA_13A-48D-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	LTE B66	20	66786	2145	-	-	-	-	24.36	24.15
CA_13A-48C-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B66	15	66786	2145	LTE B66	5	66879	2154.3	-	-	-	-	24.31	24.15
CA_13A-48C-66C	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	-	-	-	-	24.33	24.15
CA_13A-48E	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	LTE B48	20	56584	3684.4	-	-	-	-	24.34	24.15
CA_2A-13A-46D-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B66	20	66786	2145	24.12	24.15
CA_2A-13A-46E	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B46	20	51061	5577.1	24.09	24.15
CA_13A-46D-66A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B66	20	66786	2145	LTE B66	20	67236	2190	24.08	24.15
CA_13A-46E-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B46	20	51061	5577.1	LTE B66	20	66786	2145	24.10	24.15

1.3.4 LTE Band 14 as PCC

Table 4
Maximum Output Powers

	PCC									SCC 1				SCC 2				SCC 3				SCC 4				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_2A-2A-14A-30A-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B30	10	9820	2355	LTE B66	20	66786	2145	24.08	24.15
CA_2A-2A-14A-66A-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	LTE B66	20	67236	2190	24.13	24.15
CA_2A-14A-30A-66A-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	LTE B2	20	900	1960	LTE B30	10	9820	2355	LTE B66	20	66786	2145	LTE B66	20	67236	2190	24.15	24.15

1.3.5 LTE Band 26 as PCC

Table 5
Maximum Output Powers

	PCC									SCC 1				SCC 2				SCC 3				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_25A-25A-26A	LTE B26	3	26865	831.5	QPSK	1	14	8865	876.5	LTE B25	20	8365	1962.5	LTE B25	20	8590	1985	-	-	-	-	24.44	24.61
CA_25A-26A-41A	LTE B26	15	26865	831.5	QPSK	1	36	8865	876.5	LTE B25	20	8365	1962.5	LTE B41	20	40620	2593	-	-	-	-	24.87	24.74
CA_26A-41C	LTE B26	15	26865	831.5	QPSK	1	36	8865	876.5	LTE B41	20	40620	2593	LTE B41	20	40422	2573.2	-	-	-	-	24.64	24.74
CA_25A-26A-41C	LTE B26	15	26865	831.5	QPSK	1	36	8865	876.5	LTE B25	20	8140	1940	LTE B41	20	40620	2593	LTE B41	20	40422	2573.2	24.84	24.74

1.3.6 LTE Band 5 as PCC

Table 6
Maximum Output Powers

	PCC									SCC 1				SCC 2				SCC 3				SCC 4				SCC 5				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_5A-5A (1)	LTE B5	3	20415	825.5	QPSK	1	7	2415	870.5	LTE B5	5	2625	891.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.86	24.77
CA_5A-25A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B25	20	8365	1962.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.80	24.85
CA_5A-46A (1)	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.77	24.85
CA_5B (1)	LTE B5	5	20425	826.5	QPSK	1	12	2425	871.5	LTE B5	3	2464	875.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.87	24.80
CA_2A-5A-46A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	24.80	24.85
CA_5A-46A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B46	20	50665	5537.5	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	-	-	-	-	24.77	24.85
CA_5B-46A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B5	5	2453	874.3	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	24.83	24.85
CA_5A-46C (1)	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	-	-	-	-	24.83	24.85
CA_2A-2A-4A-5A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	24.77	24.85
CA_2A-4A-4A-5A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-	-	-	-	-	-	-	-	24.71	24.85
CA_2A-4A-5B	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B5	5	2453	874.3	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	24.84	24.85
CA_2A-5A-46C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	24.78	24.85
CA_4A-4A-5B	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B5	5	2453	874.3	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-	-	-	-	-	-	-	-	24.81	24.85
CA_5A-5A-66A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B5	5	2425	871.5	LTE B66	20	66786	2145	LTE B66	20	67236	2190	-	-	-	-	-	-	-	-	24.84	24.85
CA_5A-5A-66B	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B5	5	2425	871.5	LTE B66	15	66786	2145	LTE B66	5	66879	2154.3	-	-	-	-	-	-	-	-	24.83	24.85
CA_5A-5A-66C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B5	5	2425	871.5	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	-	-	-	-	-	-	-	-	24.78	24.85
CA_5A-46C-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	24.80	24.85
CA_5A-46D (1)	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	-	-	-	-	-	-	-	-	24.84	24.85
CA_5B-46C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B5	5	2453	874.3	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	24.82	24.85
CA_2A-2A-5A-30A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B30	10	9820	2355	LTE B66	20	66786	2145	-	-	-	-	24.77	24.85
CA_2A-2A-5A-66A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	LTE B66	20	67236	2190	-	-	-	-	24.75	24.85
CA_2A-2A-5A-66B	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	15	66786	2145	LTE B66	5	66879	2154.3	-	-	-	-	24.81	24.85
CA_2A-2A-5A-66C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	-	-	-	-	24.77	24.85
CA_2A-5A-30A-66A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B30	10	9820	2355	LTE B66	20	66786	2145	LTE B66	20	67236	2190	-	-	-	-	24.77	24.85
CA_2A-5B-30A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B5	5	2453	874.3	LTE B2	20	900	1960	LTE B30	10	9820	2355	LTE B66	20	66786	2145	-	-	-	-	24.68	24.85
CA_2A-5A-48A-48A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B48	20	55990	3625	LTE B48	20	55340	3560	LTE B66	20	66786	2145	-	-	-	-	24.78	24.85
CA_2A-5A-48A-48C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B48	20	55990	3625	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	-	-	-	-	24.79	24.85
CA_2A-5A-48C-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B66	20	66786	2145	-	-	-	-	24.80	24.85
CA_2A-5A-48D	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	-	-	-	-	24.78	24.85
CA_2A-5B-66A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B5	5	2453	874.3	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	67236	2190	-	-	-	-	24.79	24.85
CA_2A-5B-66B	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B5	5	2453	874.3	LTE B2	20	900	1960	LTE B66	15	66786	2145	LTE B66	5	66879	2154.3	-	-	-	-	24.76	24.85
CA_2A-5B-66C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B5	5	2453	874.3	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	-	-	-	-	24.81	24.85
CA_5B-30A-66A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B5	5	2453	874.3	LTE B30	10	9820	2355	LTE B66	20	66786	2145	LTE B66	20	67236	2190	-	-	-	-	24.77	24.85
CA_5A-46E (1)	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B46	20	51061	5577.1	-	-	-	-	24.82	24.85
CA_5B-46D	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B5	5	2453	874.3	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	-	-	-	-	24.83	24.85
CA_5A-48A-48C-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B48	20	55990	3625	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	LTE B66	20	66786	2145	-	-	-	-	24.81	24.85
CA_5A-48A-48D	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B48	20	55990	3625	LTE B48	20	56640	3690	LTE B48	20	56442	3670.2	LTE B48	20	56244	3650.4	-	-	-	-	24.78	24.85
CA_5A-48C-48C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	-	-	-	-	24.77	24.85
CA_5A-48D-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	LTE B66	20	66786	2145	-	-	-	-	24.88	24.85
CA_5A-48E	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	LTE B48	20	56584	3684.4	-	-	-	-	24.79	24.85
CA_2A-5A-46D-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B66	20	66786	2145	24.88	24.85
CA_2A-5A-46E	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B46	20	50269	5497.9	24.84	24.85
CA_5A-46D-66A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B66	20	66786	2145	LTE B66	20	67236	2190	24.86	24.85
CA_5A-46E-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B46	20	50269	5497.9	LTE B66	20	66786	2145	24.87	24.85

1.3.7 LTE Band 66 as PCC

Table 7
Maximum Output Powers

Combination	PCC									SCC 1				SCC 2				SCC 3				SCC 4				SCC 5				SCC 6				Power	
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_2A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.36	24.30
CA_12A-66A (1)	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B12	10	5095	737.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.37	24.30
CA_12A-66A (2)	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B12	10	5095	737.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.37	24.30
CA_5A-46A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B5	10	2525	881.5	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.31	24.30
CA_13A-46A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B13	10	5230	751	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.35	24.30
CA_46A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.33	24.30
CA_66A-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66734	2139.8	LTE B66	20	66536	2120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.23	24.30
CA_66C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66838	2150.2	LTE B66	20	66536	2120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.16	24.30
CA_2A-2A-66A-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B71	20	68761	634.5	-	-	-	-	-	-	-	-	-	-	-	-	24.46	24.30
CA_2A-12A-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66838	2150.2	LTE B2	20	900	1960	LTE B12	10	5095	737.5	-	-	-	-	-	-	-	-	-	-	-	-	24.48	24.30
CA_2A-13A-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66838	2150.2	LTE B2	20	900	1960	LTE B13	10	5230	751	-	-	-	-	-	-	-	-	-	-	-	-	24.50	24.30
CA_2A-29A-30A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B29	10	9715	722.5	LTE B30	10	9820	2355	-	-	-	-	-	-	-	-	-	-	-	-	24.45	24.30
CA_2A-46A-46A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	47090	5180	-	-	-	-	-	-	-	-	-	-	-	-	24.50	24.30
CA_2A-46A-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B48	20	55990	3625	-	-	-	-	-	-	-	-	-	-	-	-	24.52	24.30
CA_2A-66A-66A-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B71	20	68761	634.5	-	-	-	-	-	-	-	-	-	-	-	-	24.26	24.30
CA_2C-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B2	20	702	1940.2	-	-	-	-	-	-	-	-	-	-	-	-	24.50	24.30
CA_2A-66C-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66838	2150.2	LTE B2	20	900	1960	LTE B71	20	68761	634.5	-	-	-	-	-	-	-	-	-	-	-	-	24.52	24.30
CA_5A-5A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B5	10	2525	881.5	LTE B5	5	2425	871.5	-	-	-	-	-	-	-	-	-	-	-	-	24.49	24.30
CA_5A-5A-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	LTE B66	10	66987	2165.1	LTE B5	10	2525	881.5	LTE B5	5	2425	871.5	-	-	-	-	-	-	-	-	-	-	-	-	24.12	24.00
CA_5A-5A-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66838	2150.2	LTE B5	10	2525	881.5	LTE B5	5	2425	871.5	-	-	-	-	-	-	-	-	-	-	-	-	24.53	24.30
CA_5A-46C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B5	10	2525	881.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	-	-	-	-	24.51	24.30
CA_13A-46C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B13	10	5230	751	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	-	-	-	-	24.50	24.30
CA_13A-48A-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	LTE B66	10	66987	2165.1	LTE B13	10	5230	751	LTE B48	20	55990	3625	-	-	-	-	-	-	-	-	-	-	-	-	24.10	24.00
CA_13A-48A-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66838	2150.2	LTE B13	10	5230	751	LTE B48	20	55990	3625	-	-	-	-	-	-	-	-	-	-	-	-	24.39	24.30
CA_29A-30A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B29	10	9715	722.5	LTE B30	10	9820	2355	-	-	-	-	-	-	-	-	-	-	-	-	24.32	24.30
CA_46C-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	-	-	-	-	24.50	24.30
CA_48A-48A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B48	20	55990	3625	LTE B48	20	55340	3560	-	-	-	-	-	-	-	-	-	-	-	-	24.41	24.30
CA_48A-48A-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	LTE B66	10	66987	2165.1	LTE B48	20	55990	3625	LTE B48	20	55340	3560	-	-	-	-	-	-	-	-	-	-	-	-	24.12	24.00
CA_48A-48A-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66838	2150.2	LTE B48	20	55990	3625	LTE B48	20	55340	3560	-	-	-	-	-	-	-	-	-	-	-	-	24.50	24.30
CA_48C-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	-	-	-	-	-	-	-	-	-	-	-	-	24.47	24.30
CA_2A-2A-5A-30A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5	10	2525	881.5	LTE B30	10	9820	2355	-	-	-	-	-	-	-	-	24.20	24.30
CA_2A-2A-5A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5	10	2525	881.5	-	-	-	-	-	-	-	-	24.37	24.30
CA_2A-2A-5A-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	LTE B66	10	66987	2165.1	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5	10	2525	881.5	-	-	-	-	-	-	-	-	24.14	24.00
CA_2A-2A-5A-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66838	2150.2	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5	10	2525	881.5	-	-	-	-	-	-	-	-	24.35	24.30
CA_2A-2A-12A-30A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B12	10	5095	737.5	LTE B30	10	9820	2355	-	-	-	-	-	-	-	-	24.53	24.30
CA_2A-2A-12A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B12	10	5095	737.5	-	-	-	-	-	-	-	-	24.49	24.30
CA_2A-2A-12B-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B12	5	5095	737.5	LTE B12	5	5047	732.7	-	-	-	-	-	-	-	-	24.54	24.30
CA_2A-2A-13A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B13	10	5230	751	-	-	-	-	-	-	-	-	24.45	24.30
CA_2A-2A-13A-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	LTE B66	10	66987	2165.1	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B13	10	5230	751	-	-	-	-	-	-	-	-	24.12	24.00
CA_2A-2A-14A-30A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B14	10	5330	763	LTE B30	10	9820	2355	-	-	-	-	-	-	-	-	24.44	24.30
CA_2A-2A-14A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B14	10	5330	763	-	-	-	-	-	-	-	-	24.48	24.30
CA_2A-5A-30A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B30	10	9820	2355	-	-	-	-	-	-	-	-	24.54	24.30
CA_2A-5B-30A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B5	5	2453	874.3	LTE B30	10	9820	2355	-	-	-	-	-	-	-	-	24.44	24.30
CA_2A-5A-48A-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B48	20	55990	3625	LTE B48	20	55340	3560	-	-	-	-	-	-	-	-	24.37	24.30
CA_2A-5A-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	-	-	-	-	-	-	-	-	24.30	24.30
CA_2A-5B-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B5	5	2453	874.3	-	-	-	-	-	-	-	-	24.42	24.30
CA_2A-5B-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	LTE B66	10	66987	2165.1	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B5	5	2453	874.3	-	-	-	-	-	-	-	-	24.06	24.00
CA_2A-5B-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66838	2150.2	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B5	5	2453	874.3	-	-	-	-	-	-	-	-	24.49	24.30
CA_2A-12A-30A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B12	10	5095	737.5	LTE B30	10	9820	2355	-	-	-	-	-	-	-	-	24.32	24.30
CA_2A-12B-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B12	5	5095	737.5	LTE B12	5	5047	732.7	-	-	-	-	-	-	-	-	24.48	24.30
CA_2A-13A-48A-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B13	10	5230	751	LTE B48	20	55990	3625	LTE B48	20	55340	3560	-	-	-	-	-	-	-	-	24.38	24.30
CA_2A-13A-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B13	10	5230	751	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	-	-	-	-	-	-	-	-	24.29	24.30
CA_2A-13A-66A-66B	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	5	66604	2126.8	LTE B66	15	66511	2117.5	LTE B2	20	900	1960	LTE B13	10	5230	751	-	-	-	-	-	-	-	-	24.43	24.30
CA_2A-13A-66B-66A	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	LTE B66	10	66987	2165.1	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B13	10	5230	751	-	-	-	-	-	-	-	-	24.11	24.00
CA_2A-14A-30A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B14	10	5330	763	LTE B30	10	9820	2355	-	-	-	-	-	-	-	-	24.34	24.30
CA_2A-46A-46C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	53540	5825	-	-	-	-	-	-	-	-	24.49	24.30
CA_2A-46A-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	-	-	-	-	-	-	-	-	24.52	24.30
CA_2A-46C-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B48	20	55990	3625	-	-	-	-	-	-	-	-	24.55	24.30
CA_2A-48A-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B48	20	55990	3625	LTE B48	20	56640	3690	LTE B48	20	56442	3670.2	-	-	-	-	-	-	-	-	24.55	24.30
CA_5B-30A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B5	10	2525	881.5	LTE B5	5	2453	874.3	LTE B30	10	9820	2355	-	-	-	-	-	-	-	-	24.43	24.30
CA_5A-48A-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B5	10	2525	881.5	LTE B48	20	55990	3625	LTE B48	20	56640	3690	LTE B48	20	56442	3670.2	-	-	-	-	-	-	-	-	24.45	24.30
CA_5A-48D-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B5	10	2525	881.5	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	-	-	-	-	-	-	-	-	24.30	24.30
CA_13A-48A-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B13	10	5230	751	LTE B48	20	55990	3625	LTE B48	20	56640	3690	LTE B48	20	56442	3670.2	-	-	-	-	-	-	-	-	24.39	24.30
CA_13A-48D-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B13	10	5230	751	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	-	-	-	-	-	-	-	-	24.46	24.30
CA_13A-48C-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	LTE B66	10	66987	2165.1	LTE B13	10	5230	751	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	-	-	-	-	-	-	-	-	24.14	24.00
CA_13A-48C-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66838	2150.2	LTE B13	10	5230	751	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	-	-	-	-	-	-	-	-	24.36	24.30
CA_46A-46D-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B46	20	50665	5537.5	LTE B46	20	53540	5825	LTE B46	20	53342	5805.2	LTE B46	20	53144	5785.4	-	-	-	-	-	-	-	-	24.52	24.30
CA_48A-48C-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	LTE B66	10	66987	2165.1	LTE B48	20	55990	3625	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	-	-	-	-	-	-	-	-	24.11	24.00
CA_48A-48C-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66838	2150.2	LTE B48	20	55990	3625	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	-	-	-	-	-	-	-	-	24.48	24.30
CA_48A-48D-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B48	20	55990	3625	LTE B48	20	56640	3690	LTE B48	20	56442	3670.2	LTE B48	20	56244	3650.4	-	-	-	-	-	-	-	-	24.49	24.30
CA_48C-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	-	-	-	-	-	-	-	-	24.52	24.30
CA_2A-5A-46D-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	-	-	-	-	24.32	24.30
CA_2A-13A-46D-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B13	10	5230	751	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	-	-	-	-	24.35	24.30
CA_2A-46A-48D-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	-	-	-	-	24.32	24.30
CA_2A-46C-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	-	-	-	-	24.36	24.30
CA_2A-46D-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B48	20	55990	3625	-	-	-	-	24.37	24.30
CA_2A-46D-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	-	-	-	-	24.39	24.30
CA_2A-48E-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	LTE B48	20	55792	3605.2	-	-	-	-	24.36	24.30
CA_5A-46D-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B5	10	2525	881.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	-	-	-	-	24.34	24.30
CA_5A-46E-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B5	10	2525	881.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B46	20	50269	5497.9	-	-	-	-	24.26	24.30
CA_13A-46D-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B13	10	5230	751	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	-	-	-	-	24.39	24.30
CA_13A-46E-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B13	10	5230	751	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B46	20	50269	5497.9	-	-	-	-	24.33	24.30
CA_46A-48E-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B46	20	50665	5537.5	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	LTE B48	20	55792	3605.2	-	-	-	-	24.36	24.30
CA_2A-46C-48D-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	24.37	24.30
CA_2A-46D-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50269	5497.9	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	24.29	24.30
CA_2A-46E-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B48	20	51061	5577.1	LTE B48	20	55990	3625	24.36	24.30
CA_2A-46E-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B66	20	66536	2120	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B46	20	51061	5577.1	24.34	24.30
CA_46C-48E-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	LTE B48	20	56386	3664.6	LTE B48	20	55792	3605.2	24.39	24.30
CA_46E-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B46	20	50269	5497.9	LTE B48	20	55990	3625	LTE B48	20	56188	3644.8	24.36	24.30

1.3.8 LTE Band 25 as PCC

Table 8
Maximum Output Powers

Combination	PCC									SCC 1				SCC 2				SCC 3				SCC 4				Power	
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_5A-25A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	LTE B5	10	2525	881.5	-	-	-	-	-	-	-	-	-	-	-	-	24.60	24.58
CA_12A-25A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	LTE B12	10	5095	737.5	-	-	-	-	-	-	-	-	-	-	-	-	24.54	24.58
CA_25A-46A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	24.49	24.58
CA_25A-25A-26A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	LTE B25	20	8590	1985	LTE B26	5	8865	876.5	-	-	-	-	-	-	-	-	24.72	24.58
CA_25A-25A-41A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	LTE B25	20	8590	1985	LTE B41	20	40620	2593	-	-	-	-	-	-	-	-	24.60	24.58
CA_25A-26A-41A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	LTE B26	15	8865	876.5	LTE B41	20	40620	2593	-	-	-	-	-	-	-	-	24.62	24.58
CA_25A-41C	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	LTE B41	20	40620	2593	LTE B41	20	40422	2573.2	-	-	-	-	-	-	-	-	24.54	24.58
CA_25A-46C	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	24.58	24.58
CA_25A-25A-41C	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	LTE B25	20	8590	1985	LTE B41	20	40620	2593	LTE B41	20	40422	2573.2	-	-	-	-	24.57	24.58
CA_25A-26A-41C	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	LTE B26	15	8865	876.5	LTE B41	20	40620	2593	LTE B41	20	40422	2573.2	-	-	-	-	24.49	24.58
CA_25A-46D	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	-	-	-	-	24.58	24.58
CA_25A-25A-41D	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	LTE B25	20	8590	1985	LTE B41	20	40422	2573.2	LTE B41	20	40620	2593	LTE B41	20	40818	2612.8	24.55	24.58

1.3.9 LTE Band 30 as PCC

Table 9
Maximum Output Powers

Combination	PCC									SCC 1				SCC 2				SCC 3				SCC 4				Power	
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_2A-2A-29A-30A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B29	10	9715	722.5	-	-	-	-	23.79	23.94
CA_2A-29A-30A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	LTE B2	20	900	1960	LTE B29	10	9715	722.5	LTE B66	20	66786	2145	-	-	-	-	23.83	23.94
CA_29A-30A-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	LTE B29	10	9715	722.5	LTE B66	20	66786	2145	LTE B66	20	67236	2190	-	-	-	-	23.86	23.94
CA_2A-2A-5A-30A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5	10	2525	881.5	LTE B66	20	66786	2145	23.61	23.94
CA_2A-2A-12A-30A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B12	10	5095	737.5	LTE B66	20	66786	2145	23.64	23.94
CA_2A-2A-14A-30A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B14	10	5330	763	LTE B66	20	66786	2145	23.85	23.94
CA_2A-5A-30A-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B66	20	66786	2145	LTE B66	20	67236	2190	23.84	23.94
CA_2A-5B-30A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B5	5	2453	874.3	LTE B66	20	66786	2145	23.77	23.94
CA_2A-12A-30A-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	LTE B2	20	900	1960	LTE B12	10	5095	737.5	LTE B66	20	66786	2145	LTE B66	20	67236	2190	23.90	23.94
CA_2A-14A-30A-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	LTE B2	20	900	1960	LTE B14	10	5330	763	LTE B66	20	66786	2145	LTE B66	20	67236	2190	23.84	23.94
CA_5B-30A-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	LTE B5	10	2525	881.5	LTE B5	5	2453	874.3	LTE B66	20	66786	2145	LTE B66	20	67236	2190	23.81	23.94

1.3.10 LTE Band 41 as PCC

Table 10
Maximum Output Powers

	PCC									SCC 1				SCC 2				SCC 3				SCC 4				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41A-41A (1)	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	LTE B41	20	39750	2506	-	-	-	-	-	-	-	-	-	-	-	-	24.39	24.43
CA_41A-41C	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	-	-	-	-	-	-	-	-	24.41	24.43
CA_41C-41A	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	LTE B41	20	41292	2660.2	LTE B41	20	39750	2506	-	-	-	-	-	-	-	-	24.40	24.43
CA_41A-41D	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	LTE B41	20	40146	2545.6	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	-	-	-	-	24.62	24.43
CA_41D-41A	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	LTE B41	20	41292	2660.2	LTE B41	20	41094	2640.4	LTE B41	20	39750	2506	-	-	-	-	24.62	24.43
CA_41C-41C	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	LTE B41	20	41292	2660.2	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	-	-	-	-	24.58	24.43
CA_41E	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	LTE B41	20	41292	2660.2	LTE B41	20	41094	2640.4	LTE B41	20	40896	2620.6	-	-	-	-	24.63	24.43
CA_41C-41D	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	LTE B41	20	41292	2660.2	LTE B41	20	40146	2545.6	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	24.63	24.43
CA_41D-41C	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	LTE B41	20	41292	2660.2	LTE B41	20	41094	2640.4	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	24.62	24.43

1.3.11 LTE Band 48 as PCC

Table 11
Maximum Output Powers

	PCC									SCC 1				SCC 2				SCC 3				SCC 4				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48A-48A	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	LTE B48	20	55340	3560	-	-	-	-	-	-	-	-	-	-	-	-	24.60	24.40
CA_48A-48C	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	-	-	-	-	-	-	-	-	24.44	24.40
CA_48C-48A	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	LTE B48	20	56598	3685.8	LTE B48	20	55340	3560	-	-	-	-	-	-	-	-	24.56	24.40
CA_48A-48D	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	LTE B48	20	55736	3599.6	-	-	-	-	24.34	24.40
CA_48D-48A	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	LTE B48	20	56598	3685.8	LTE B48	20	56400	3666	LTE B48	20	55340	3560	-	-	-	-	24.53	24.40
CA_48C-48C	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	LTE B48	20	56598	3685.8	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	-	-	-	-	24.49	24.40
CA_48E	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	LTE B48	20	56598	3685.8	LTE B48	20	56400	3666	LTE B48	20	56202	3646.2	-	-	-	-	24.55	24.40
CA_48C-48D	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	LTE B48	20	56598	3685.8	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	LTE B48	20	55736	3599.6	24.37	24.40
CA_48D-48C	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	LTE B48	20	56598	3685.8	LTE B48	20	56400	3666	LTE B48	20	55340	3560	LTE B48	20	55538	3579.8	24.40	24.40
CA_48F	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	LTE B48	20	56598	3685.8	LTE B48	20	56400	3666	LTE B48	20	56202	3646.2	LTE B48	20	56004	3626.4	24.45	24.40

1.4 DL CA with DL 4x4 MIMO RF Conduction Powers

This device supports downlink 4x4 MIMO operations for some LTE bands. Uplink transmission is limited to a single output stream. When carrier aggregation was applicable, the general test selection and setup procedures described in Section 1.2 were applied.

Per May 2017 TCB Workshop Notes, SAR for 4x4 DL MIMO was not needed since the maximum average output power in 4x4 DL MIMO mode was not more than 0.25 dB higher than the maximum output power with 4x4 DL MIMO inactive. Additionally, SAR for 4x4 MIMO Downlink Carrier Aggregation was not needed since the maximum average output power in 4x4 MIMO Downlink Carrier Aggregation mode was not more than 0.25 dB higher than the maximum output power with 4x4 MIMO Downlink and downlink carrier aggregation inactive.

1.4.1 LTE 4x4 MIMO DL Standalone Powers

Table 12
Maximum Output Powers

LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	Modulation	RB Size	RB Offset	4x4 DL MIMO Tx. Power [dBm]	Single Antenna Tx. Power [dBm]	Target Power [dBm]
66	20	132572	1770	QPSK	1	99	24.26	24.30	24.0
25	15	26115	1857.5	QPSK	1	36	24.75	24.58	24.5
30	5	27710	2310	QPSK	1	12	23.90	23.94	24.0
41	20	41490	2680	QPSK	1	50	24.47	24.43	24.0
48	5	56715	3697.5	QPSK	1	24	24.32	24.40	24.0

1.4.2 LTE Band 71 as PCC

Table 13
Maximum Output Powers

	PCC										SCC 1					SCC 2					SCC 3					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_[4A]-4A-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	2x2	-	-	-	-	-	24.46	24.67
CA_[4A]-[4A]-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	4x4	-	-	-	-	-	24.44	24.67
CA_[2A]-2A-4A-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	2x2	24.61	24.67
CA_2A-2A-[4A]-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	4x4	24.33	24.67
CA_[2A]-[2A]-4A-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B4	20	2175	2132.5	2x2	24.63	24.67
CA_[2A]-2A-[4A]-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	4x4	24.64	24.67
CA_[2A]-[2A]-[4A]-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B4	20	2175	2132.5	4x4	24.59	24.67
CA_[2A]-2A-66A-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	2x2	24.37	24.67
CA_2A-2A-[66A]-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	24.42	24.67
CA_[2A]-[2A]-66A-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	2x2	24.43	24.67
CA_[2A]-2A-[66A]-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	24.41	24.67
CA_[2A]-[2A]-[66A]-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	24.66	24.67
CA_[2A]-66A-66A-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	24.64	24.67
CA_2A-[66A]-66A-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.68	24.67
CA_[2A]-[66A]-66A-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.71	24.67
CA_2A-[66A]-[66A]-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.59	24.67
CA_[2A]-[66A]-[66A]-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.75	24.67
CA_[2A]-66C-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	66984	2164.8	2x2	24.43	24.67
CA_2A-[66C]-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	24.53	24.67
CA_[2A]-[66C]-71A	LTE B71	20	133297	680.5	QPSK	1	0	68761	634.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	24.67	24.67

1.4.3 LTE Band 12 as PCC

Table 14
Maximum Output Powers

	PCC										SCC 1					SCC 2					SCC 3					SCC 4					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_[2A]-12A (1)	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.07	25.10
CA_[4A]-12A (1)	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.11	25.10
CA_[4A]-12A (2)	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.11	25.10
CA_12A-[66A] (1)	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.06	25.10
CA_12A-[66A] (2)	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.06	25.10
CA_[4A]-4A-12A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	2x2	-	-	-	-	-	-	-	-	-	-	24.99	25.10
CA_[4A]-[4A]-12A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	4x4	-	-	-	-	-	-	-	-	-	-	25.01	25.10
CA_[2A]-2A-4A-12A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	2x2	-	-	-	-	-	25.02	25.10
CA_2A-2A-[4A]-12A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	25.01	25.10
CA_[2A]-[2A]-4A-12A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B4	20	2175	2132.5	2x2	-	-	-	-	-	25.06	25.10
CA_[2A]-2A-[4A]-12A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	25.08	25.10
CA_[2A]-[2A]-[4A]-12A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	25.09	25.10
CA_[2A]-2A-12B	LTE B12	5	23095	707.5	QPSK	1	24	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	-	-	-	-	-	24.94	24.85
CA_[2A]-[2A]-12B	LTE B12	5	23095	707.5	QPSK	1	24	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	-	-	-	-	-	24.67	24.85
CA_[2A]-12A-66C	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	66984	2164.8	2x2	-	-	-	-	-	25.16	25.10
CA_2A-12A-[66C]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	25.14	25.10
CA_[2A]-12A-[66C]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	25.09	25.10
CA_[2A]-2A-12A-30A-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	2x2	25.25	25.10
CA_2A-2A-12A-[30A]-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	25.24	25.10
CA_2A-2A-12A-30A-[66A]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	25.28	25.10
CA_[2A]-[2A]-12A-30A-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	2x2	25.22	25.10
CA_[2A]-2A-12A-[30A]-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	25.27	25.10
CA_[2A]-2A-12A-30A-[66A]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	25.23	25.10
CA_2A-2A-12A-[30A]-[66A]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	25.28	25.10
CA_[2A]-[2A]-12A-[30A]-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	25.21	25.10
CA_[2A]-[2A]-12A-30A-[66A]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	25.26	25.10
CA_[2A]-2A-12A-[30A]-[66A]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	25.25	25.10
CA_[2A]-[2A]-12A-[30A]-[66A]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	25.16	25.10
CA_[2A]-2A-12A-66A-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	25.06	25.10
CA_2A-2A-12A-[66A]-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	25.02	25.10
CA_[2A]-[2A]-12A-66A-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	25.04	25.10
CA_[2A]-2A-12A-[66A]-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	25.05	25.10
CA_2A-2A-12A-[66A]-[66A]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	25.04	25.10
CA_[2A]-[2A]-12A-[66A]-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	25.05	25.10
CA_[2A]-2A-12A-[66A]-[66A]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	25.08	25.10
CA_[2A]-[2A]-12A-[66A]-[66A]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	25.06	25.10
CA_[2A]-12A-30A-66A-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	25.27	25.10
CA_2A-12A-[30A]-66A-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	25.23	25.10
CA_2A-12A-30A-[66A]-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	25.25	25.10
CA_[2A]-12A-[30A]-66A-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	25.24	25.10
CA_[2A]-12A-30A-[66A]-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	25.22	25.10
CA_2A-12A-[30A]-[66A]-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	25.23	25.10
CA_2A-12A-30A-[66A]-[66A]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	25.25	25.10
CA_[2A]-12A-[30A]-[66A]-66A	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	25.22	25.10
CA_2A-12A-[30A]-[66A]-[66A]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	25.24	25.10
CA_[2A]-12A-[30A]-[66A]-[66A]	LTE B12	10	23095	707.5	QPSK	1	49	5095	737.5	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	25.21	25.10

1.4.4 LTE Band 13 as PCC

Table 15
Maximum Output Powers

	PCC										SCC 1					SCC 2					SCC 3					SCC 4					SCC 5					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_[2A]-4A-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.32	24.15
CA_2A-[4A]-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.22	24.15
CA_[2A]-[4A]-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.24	24.15
CA_[2A]-13A-46A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.23	24.15
CA_[4A]-4A-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.28	24.15
CA_[4A]-[4A]-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.28	24.15
CA_13A-46A-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.26	24.15
CA_[2A]-13A-46C	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	-	-	-	-	-	-	-	-	-	-	24.29	24.15
CA_[2A]-13A-66C	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	66984	2164.8	2x2	-	-	-	-	-	-	-	-	-	-	24.32	24.15
CA_2A-13A-[66C]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	-	-	-	-	-	24.25	24.15
CA_[2A]-13A-[66C]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	-	-	-	-	-	24.22	24.15
CA_13A-46C-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	24.32	24.15
CA_13A-[48A]-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B66	15	66786	2145	2x2	LTE B66	5	66879	2154.3	2x2	-	-	-	-	-	-	-	-	-	-	24.22	24.15
CA_13A-48A-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	-	-	-	-	-	24.23	24.15
CA_13A-[48A]-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	-	-	-	-	-	24.23	24.15
CA_13A-[48A]-66C	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	66984	2164.8	2x2	-	-	-	-	-	-	-	-	-	-	24.24	24.15
CA_13A-48A-[66C]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	-	-	-	-	-	24.21	24.15
CA_13A-[48A]-[66C]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	-	-	-	-	-	24.26	24.15
CA_[2A]-2A-13A-66A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.29	24.15
CA_2A-2A-13A-[66A]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.20	24.15
CA_[2A]-[2A]-13A-66A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.31	24.15
CA_[2A]-2A-13A-[66A]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.30	24.15
CA_2A-2A-13A-[66A]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	24.31	24.15
CA_[2A]-[2A]-13A-[66A]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.29	24.15
CA_[2A]-2A-13A-[66A]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	24.24	24.15
CA_[2A]-[2A]-13A-[66A]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	24.31	24.15
CA_[2A]-2A-13A-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	15	66786	2145	2x2	LTE B66	5	66879	2154.3	2x2	-	-	-	-	-	24.26	24.15
CA_2A-2A-13A-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	24.28	24.15
CA_[2A]-[2A]-13A-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	15	66786	2145	2x2	LTE B66	5	66879	2154.3	2x2	-	-	-	-	-	24.30	24.15
CA_[2A]-2A-13A-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	24.26	24.15
CA_[2A]-[2A]-13A-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	24.24	24.15
CA_[2A]-13A-48A-48A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.27	24.15
CA_2A-13A-[48A]-48A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.28	24.15
CA_2A-13A-48A-48A-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.30	24.15
CA_[2A]-13A-[48A]-48A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.31	24.15
CA_[2A]-13A-48A-48A-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.29	24.15
CA_2A-13A-[48A]-[48A]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.28	24.15
CA_2A-13A-[48A]-48A-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.23	24.15
CA_[2A]-13A-[48A]-[48A]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.27	24.15
CA_[2A]-13A-[48A]-48A-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.24	24.15
CA_2A-13A-[48A]-[48A]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.27	24.15
CA_[2A]-13A-[48A]-[48A]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.27	24.15
CA_[2A]-13A-48A-48C	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	-	-	-	-	-	24.27	24.15
CA_2A-13A-[48A]-48C	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	-	-	-	-	-	24.24	24.15
CA_2A-13A-48A-[48C]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	-	-	-	-	-	24.28	24.15
CA_[2A]-13A-[48A]-48C	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	-	-	-	-	-	24.27	24.15
CA_[2A]-13A-48A-[48C]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	-	-	-	-	-	24.26	24.15
CA_2A-13A-[48A]-[48C]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	-	-	-	-	-	24.24	24.15
CA_[2A]-13A-[48A]-[48C]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	-	-	-	-	-	24.25	24.15
CA_[2A]-13A-48C-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.35	24.15
CA_2A-13A-[48C]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.29	24.15
CA_2A-13A-48C-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.39	24.15
CA_[2A]-13A-[48C]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.29	24.15
CA_[2A]-13A-48C-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.29	24.15
CA_2A-13A-[48C]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.27	24.15
CA_[2A]-13A-[48C]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.27	24.15
CA_[2A]-13A-48D	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	-	-	-	-	-	24.21	24.15
CA_2A-13A-[48D]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	-	-	-	-	-	24.25	24.15
CA_[2A]-13A-[48D]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	-	-	-	-	-	24.30	24.15
CA_[2A]-13A-66A-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	5	67168	2183.2	2x2	LTE B66	15	67261	2192.5	2x2	-	-	-	-	-	24.27	24.15
CA_2A-13A-[66A]-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	5	67168	2183.2	2x2	LTE B66	15	67261	2192.5	2x2	-	-	-	-	-	24.28	24.15
CA_2A-13A-66A-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	2x2	LTE B66	5	67168	2183.2	4x4	LTE B66	15	67261	2192.5	4x4	-	-	-	-	-	24.26	24.15
CA_[2A]-13A-[66A]-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	5	67168	2183.2	2x2	LTE B66	15	67261	2192.5	2x2	-	-	-	-	-	24.29	24.15
CA_[2A]-13A-66A-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	5	67168	2183.2	4x4	LTE B66	15	67261	2192.5	4x4	-	-	-	-	-	24.27	24.15
CA_2A-13A-[66A]-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	5	67168	2183.2	4x4	LTE B66	15	67261	2192.5	4x4	-	-	-	-	-	24.23	24.15
CA_[2A]-13A-[66A]-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	5	67168	2183.2	4x4	LTE B66	15	67261	2192.5	4x4	-	-	-	-	-	24.29	24.15
CA_13A-[48A]-48C-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.27	24.15
CA_13A-48A-[48C]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.32	24.15
CA_13A-48A-48C-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.29	24.15
CA_13A-[48A]-[48C]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.25	24.15
CA_13A-[48A]-48C-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.26	24.15
CA_13A-48A-[48C]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.28	24.15
CA_13A-[48A]-[48C]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.27	24.15
CA_13A-[48A]-48D	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	LTE B48	20	55736	3599.6	2x2	-	-	-	-	-	24.15	24.15
CA_13A-48A-[48D]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	LTE B48	20	55736	3599.6	4x4	-	-	-	-	-	24.20	24.15
CA_13A-[48A]-[48D]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	LTE B48	20	55736	3599.6	4x4	-	-	-	-	-	24.14	24.15
CA_13A-[48C]-48C	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	-	-	-	-	-	24.19	24.15
CA_13A-[48C]-[48C]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	-	-	-	-	-	24.21	24.15
CA_13A-[48D]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.28	24.15
CA_13A-48D-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.26	24.15
CA_13A-[48D]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.30	24.15
CA_13A-[48C]-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B66	15	66786	2145	2x2	LTE B66	5	66879	2154.3	2x2	-	-	-	-	-	24.27	24.15
CA_13A-48C-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	24.26	24.15
CA_13A-[48C]-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	24.23	24.15
CA_13A-[48C]-66C	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	66984	2164.8	2x2	-	-	-	-	-	24.24	24.15
CA_13A-48C-[66C]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	24.25	24.15
CA_13A-[48C]-[66C]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	24.26	24.15
CA_13A-[48E]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	LTE B48	20	56584	3684.4	4x4	-	-	-	-	-	24.17	24.15
CA_[2A]-13A-46D-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	2x2	24.27	24.15
CA_2A-13A-46D-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	4x4	24.36	24.15
CA_[2A]-13A-46D-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	4x4	24.26	24.15
CA_[2A]-13A-46E	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	24.26	24.15
CA_13A-46D-[66A]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.23	24.15
CA_13A-46D-[66A]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.31	24.15
CA_13A-46E-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	LTE B66	20	66786	2145	4x4	24.32	24.15

1.4.5 LTE Band 14 as PCC

Table 16
Maximum Output Powers

	PCC										SCC 1					SCC 2					SCC 3					SCC 4					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_[2A]-2A-14A-30A-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	2x2	24.12	24.15
CA_2A-2A-14A-[30A]-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	24.10	24.15
CA_2A-2A-14A-30A-[66A]	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	24.08	24.15
CA_[2A]-[2A]-14A-30A-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	2x2	24.12	24.15
CA_[2A]-2A-14A-[30A]-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	24.09	24.15
CA_[2A]-2A-14A-30A-[66A]	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	24.10	24.15
CA_2A-2A-14A-[30A]-[66A]	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	24.09	24.15
CA_[2A]-[2A]-14A-[30A]-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	24.08	24.15
CA_[2A]-[2A]-14A-30A-[66A]	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	24.07	24.15
CA_[2A]-2A-14A-[30A]-[66A]	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	24.05	24.15
CA_[2A]-[2A]-14A-[30A]-[66A]	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	24.11	24.15
CA_[2A]-2A-14A-66A-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	24.29	24.15
CA_2A-2A-14A-[66A]-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.35	24.15
CA_[2A]-[2A]-14A-66A-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	24.38	24.15
CA_[2A]-2A-14A-[66A]-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.36	24.15
CA_2A-2A-14A-[66A]-[66A]	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.34	24.15
CA_[2A]-[2A]-14A-[66A]-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.36	24.15
CA_[2A]-2A-14A-[66A]-[66A]	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.34	24.15
CA_[2A]-[2A]-14A-[66A]-[66A]	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.37	24.15
CA_[2A]-14A-30A-66A-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	24.10	24.15
CA_2A-14A-[30A]-66A-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	24.10	24.15
CA_2A-14A-30A-[66A]-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.10	24.15
CA_[2A]-14A-[30A]-66A-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	24.10	24.15
CA_[2A]-14A-30A-[66A]-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.08	24.15
CA_2A-14A-[30A]-[66A]-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.08	24.15
CA_2A-14A-30A-[66A]-[66A]	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.05	24.15
CA_[2A]-14A-[30A]-[66A]-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.09	24.15
CA_2A-14A-[30A]-[66A]-[66A]	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.10	24.15
CA_[2A]-14A-[30A]-[66A]-[66A]	LTE B14	5	23330	793	QPSK	1	12	5330	763	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.08	24.15

1.4.6 LTE Band 5 as PCC

Table 17
Maximum Output Powers

Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC 1 SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC 2 SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC 3 SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC 4 SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC 5 SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	Power LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_5A-[25A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B25	20	8365	1962.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.91	24.85
CA_2A-5A-46A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.65	24.85
CA_5A-46A-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.66	24.85
CA_[2A]-2A-4A-5A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	2x2	-	-	-	-	-	-	-	-	-	-	24.74	24.85
CA_2A-2A-[4A]-5A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	24.72	24.85
CA_[2A]-[2A]-4A-5A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B4	20	2175	2132.5	2x2	-	-	-	-	-	-	-	-	-	-	24.71	24.85
CA_[2A]-2A-[4A]-5A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	24.72	24.85
CA_[2A]-[2A]-[4A]-5A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	24.71	24.85
CA_[2A]-4A-4A-5A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	2x2	LTE B4	10	2350	2150	2x2	-	-	-	-	-	-	-	-	-	-	24.74	24.85
CA_2A-[4A]-4A-5A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	2x2	-	-	-	-	-	-	-	-	-	-	24.71	24.85
CA_2A-4A-[4A]-5A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B4	20	2175	2132.5	2x2	LTE B4	10	2350	2150	4x4	-	-	-	-	-	-	-	-	-	-	24.69	24.85
CA_[2A]-[4A]-4A-5A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	2x2	-	-	-	-	-	-	-	-	-	-	24.70	24.85
CA_2A-[4A]-[4A]-5A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	4x4	-	-	-	-	-	-	-	-	-	-	24.73	24.85
CA_[2A]-[4A]-[4A]-5A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	4x4	-	-	-	-	-	-	-	-	-	-	24.69	24.85
CA_[2A]-4A-5B	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	2x2	-	-	-	-	-	-	-	-	-	-	24.71	24.85
CA_2A-[4A]-5B	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	24.69	24.85
CA_[2A]-[4A]-5B	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	24.65	24.85
CA_[2A]-5A-46C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	-	-	-	-	-	-	-	-	-	-	24.65	24.85
CA_[4A]-4A-5B	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	2x2	-	-	-	-	-	-	-	-	-	-	24.65	24.85
CA_[4A]-[4A]-5B	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	4x4	-	-	-	-	-	-	-	-	-	-	24.70	24.85
CA_5A-5A-[66A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2425	871.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	-	-	-	-	-	24.74	24.85
CA_5A-5A-[66A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2425	871.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	-	-	-	-	-	24.66	24.85
CA_5A-5A-[66B]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2425	871.5	2x2	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	-	-	-	-	-	24.66	24.85
CA_5A-5A-[66C]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2425	871.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	-	-	-	-	-	24.64	24.85
CA_5A-46C-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	24.68	24.85
CA_[2A]-2A-5A-30A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.98	24.85
CA_2A-2A-5A-[30A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.96	24.85
CA_2A-2A-5A-30A-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.97	24.85
CA_[2A]-[2A]-5A-30A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.95	24.85
CA_[2A]-2A-5A-[30A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.98	24.85
CA_[2A]-2A-5A-30A-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.98	24.85
CA_2A-2A-5A-[30A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.97	24.85
CA_[2A]-[2A]-5A-[30A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.96	24.85
CA_[2A]-[2A]-5A-30A-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.99	24.85
CA_[2A]-2A-5A-[30A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.97	24.85
CA_[2A]-[2A]-5A-[30A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.98	24.85
CA_[2A]-2A-5A-66A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.67	24.85
CA_2A-2A-5A-[66A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.65	24.85
CA_[2A]-[2A]-5A-66A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.66	24.85
CA_[2A]-2A-5A-[66A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.70	24.85
CA_2A-2A-5A-[66A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	24.69	24.85
CA_[2A]-[2A]-5A-[66A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.69	24.85
CA_[2A]-2A-5A-[66A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	24.69	24.85
CA_[2A]-[2A]-5A-[66A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	24.66	24.85
CA_[2A]-2A-5A-66B	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	15	66786	2145	2x2	LTE B66	5	66879	2154.3	2x2	-	-	-	-	-	24.69	24.85
CA_2A-2A-5A-[66B]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	24.67	24.85
CA_[2A]-[2A]-5A-66B	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	15	66786	2145	2x2	LTE B66	5	66879	2154.3	2x2	-	-	-	-	-	24.77	24.85
CA_[2A]-2A-5A-[66B]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	24.67	24.85
CA_[2A]-[2A]-5A-[66B]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	24.71	24.85
CA_[2A]-2A-5A-66C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	66984	2164.8	2x2	-	-	-	-	-	24.73	24.85
CA_2A-2A-5A-[66C]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	24.73	24.85
CA_[2A]-[2A]-5A-66C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	66984	2164.8	2x2	-	-	-	-	-	24.68	24.85
CA_[2A]-2A-5A-[66C]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	24.67	24.85
CA_[2A]-[2A]-5A-[66C]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	24.71	24.85
CA_[2A]-5A-30A-66A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.96	24.85
CA_2A-5A-[30A]-66A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.99	24.85
CA_2A-5A-30A-[66A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.98	24.85
CA_[2A]-5A-[30A]-66A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.97	24.85
CA_[2A]-5A-30A-[66A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.99	24.85
CA_2A-5A-[30A]-[66A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.98	24.85
CA_2A-5A-30A-[66A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	24.96	24.85
CA_[2A]-5A-[30A]-[66A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.97	24.85
CA_2A-5A-[30A]-[66A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	24.98	24.85
CA_[2A]-5A-[30A]-[66A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	24.97	24.85
CA_[2A]-5B-30A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.99	24.85
CA_2A-5B-[30A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.98	24.85
CA_2A-5B-30A-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.98	24.85
CA_[2A]-5B-[30A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.99	24.85
CA_[2A]-5B-30A-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.97	24.85
CA_2A-5B-[30A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.99	24.85
CA_[2A]-5B-[30A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.97	24.85
CA_[2A]-5A-48A-48A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.75	24.85
CA_2A-5A-[48A]-48A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.70	24.85
CA_2A-5A-48A-48A-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.71	24.85
CA_[2A]-5A-[48A]-48A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.75	24.85
CA_[2A]-5A-48A-48A-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.75	24.85
CA_2A-5A-[48A]-[48A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.71	24.85
CA_2A-5A-[48A]-48A-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.74	24.85
CA_[2A]-5A-[48A]-[48A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.74	24.85
CA_[2A]-5A-[48A]-48A-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.74	24.85
CA_2A-5A-[48A]-[48A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.74	24.85
CA_[2A]-5A-[48A]-[48A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.73	24.85
CA_[2A]-5A-48A-48C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	-	-	-	-	-	24.76	24.85
CA_2A-5A-[48A]-48C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	-	-	-	-	-	24.66	24.85
CA_2A-5A-48A-[48C]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	-	-	-	-	-	24.73	24.85
CA_[2A]-5A-[48A]-48C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	-	-	-	-	-	24.67	24.85
CA_[2A]-5A-48A-[48C]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	-	-	-	-	-	24.77	24.85
CA_2A-5A-[48A]-[48C]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	-	-	-	-	-	24.75	24.85
CA_[2A]-5A-[48A]-[48C]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	-	-	-	-	-	24.76	24.85
CA_[2A]-5A-48C-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.70	24.85
CA_2A-5A-[48C]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.82	24.85
CA_2A-5A-48C-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.79	24.85
CA_[2A]-5A-[48C]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.71	24.85
CA_[2A]-5A-48C-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.73	24.85
CA_2A-5A-[48C]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.74	24.85
CA_[2A]-5A-[48C]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.65	24.85
CA_[2A]-5A-48D	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	-	-	-	-	-	24.75	24.85
CA_2A-5A-[48D]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	-	-	-	-	-	24.78	24.85
CA_[2A]-5A-[48D]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	-	-	-	-	-	24.67	24.85
CA_[2A]-5B-66A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.78	24.85
CA_2A-5B-[66A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.67	24.85
CA_[2A]-5B-[66A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.70	24.85
CA_2A-5B-[66A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	24.71	24.85
CA_[2A]-5B-[66A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	24.78	24.85
CA_[2A]-5B-66B	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	4x4	LTE B66	15	66786	2145	2x2	LTE B66	5	66879	2154.3	2x2	-	-	-	-	-	24.68	24.85
CA_2A-5B-[66B]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	2x2	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	24.76	24.85
CA_[2A]-5B-[66B]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	4x4	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	24.64	24.85
CA_[2A]-5B-66C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	66984	2164.8	2x2	-	-	-	-	-	24.71	24.85
CA_2A-5B-[66C]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	24.44	24.85
CA_[2A]-5B-[66C]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	24.65	24.85
CA_5B-[30A]-66A-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.99	24.85
CA_5B-30A-[66A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.98	24.85
CA_5B-[30A]-[66A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	24.99	24.85
CA_5B-30A-[66A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B30	10	9820	2355	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	24.96	24.85
CA_5B-[30A]-[66A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B30	10	9820	2355	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	24.98	24.85
CA_5A-[48A]-48C-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.74	24.85
CA_5A-48A-[48C]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.73	24.85
CA_5A-48A-48C-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.72	24.85
CA_5A-[48A]-[48C]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.67	24.85
CA_5A-[48A]-48C-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.71	24.85
CA_5A-48A-[48C]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.70	24.85
CA_5A-[48A]-[48C]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.66	24.85
CA_5A-[48A]-48D	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	LTE B48	20	56244	3650.4	2x2	-	-	-	-	-	24.98	24.85
CA_5A-48A-[48D]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	LTE B48	20	56244	3650.4	4x4	-	-	-	-	-	24.99	24.85
CA_5A-[48A]-[48D]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	LTE B48	20	56244	3650.4	4x4	-	-	-	-	-	24.98	24.85
CA_5A-[48C]-48C	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	-	-	-	-	-	24.97	24.85
CA_5A-[48C]-[48C]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	-	-	-	-	-	24.98	24.85
CA_5A-[48D]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	LTE B66	20	66786	2145	2x2	-	-	-	-	-	24.75	24.85
CA_5A-48D-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.73	24.85
CA_5A-[48D]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	LTE B66	20	66786	2145	4x4	-	-	-	-	-	24.74	24.85
CA_5A-[48E]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	LTE B48	20	56584	3684.4	4x4	-	-	-	-	-	24.98	24.85
CA_[2A]-5A-46D-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	2x2	24.73	24.85
CA_2A-5A-46D-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	4x4	24.74	24.85
CA_[2A]-5A-46D-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	4x4	24.67	24.85
CA_[2A]-5A-46E	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	50269	5497.9	2x2	24.69	24.85
CA_5A-46D-[66A]-66A	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.69	24.85
CA_5A-46D-[66A]-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.67	24.85
CA_5A-46E-[66A]	LTE B5	10	20525	836.5	QPSK	1	0	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	50269	5497.9	2x2	LTE B66	20	66786	2145	4x4	24.68	24.85

1.4.7 LTE Band 26 as PCC

Table 18
Maximum Output Powers

Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC 1 SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC 2 SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC 3 SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	Power LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_[25A]-25A-26A	LTE B26	3	26865	831.5	QPSK	1	14	8865	876.5	2x2	LTE B25	20	8365	1962.5	4x4	LTE B25	20	8590	1985	2x2	-	-	-	-	-	24.57	24.61
CA_[25A]-[25A]-26A	LTE B26	3	26865	831.5	QPSK	1	14	8865	876.5	2x2	LTE B25	20	8365	1962.5	4x4	LTE B25	20	8590	1985	4x4	-	-	-	-	-	24.60	24.61
CA_[25A]-26A-41A	LTE B26	15	26865	831.5	QPSK	1	36	8865	876.5	2x2	LTE B25	20	8365	1962.5	4x4	LTE B41	20	40620	2593	2x2	-	-	-	-	-	24.90	24.74
CA_25A-26A-[41A]	LTE B26	15	26865	831.5	QPSK	1	36	8865	876.5	2x2	LTE B25	20	8365	1962.5	2x2	LTE B41	20	40620	2593	4x4	-	-	-	-	-	24.89	24.74
CA_[25A]-26A-[41A]	LTE B26	15	26865	831.5	QPSK	1	36	8865	876.5	2x2	LTE B25	20	8365	1962.5	4x4	LTE B41	20	40620	2593	4x4	-	-	-	-	-	24.79	24.74
CA_26A-[41C]	LTE B26	15	26865	831.5	QPSK	1	36	8865	876.5	2x2	LTE B41	20	40620	2593	4x4	LTE B41	20	40422	2573.2	4x4	-	-	-	-	-	24.85	24.74
CA_[25A]-26A-41C	LTE B26	15	26865	831.5	QPSK	1	36	8865	876.5	2x2	LTE B25	20	8140	1940	4x4	LTE B41	20	40620	2593	2x2	LTE B41	20	40422	2573.2	2x2	24.70	24.74
CA_25A-26A-[41C]	LTE B26	15	26865	831.5	QPSK	1	36	8865	876.5	2x2	LTE B25	20	8140	1940	2x2	LTE B41	20	40620	2593	4x4	LTE B41	20	40422	2573.2	4x4	24.69	24.74
CA_[25A]-26A-[41C]	LTE B26	15	26865	831.5	QPSK	1	36	8865	876.5	2x2	LTE B25	20	8140	1940	4x4	LTE B41	20	40620	2593	4x4	LTE B41	20	40422	2573.2	4x4	24.67	24.74

1.4.8 LTE Band 66 as PCC

Table 19
Maximum Output Powers

	PCC										SCC 1					SCC 2					SCC 3					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_[2A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	-	-	-	-	-	-	-	-	-	-	24.12	24.30
CA_2A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	-	-	-	-	-	-	-	-	-	-	24.43	24.30
CA_[2A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	-	-	-	-	-	-	-	-	-	-	24.47	24.30
CA_12A-[66A] (1)	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B12	10	5095	737.5	2x2	-	-	-	-	-	-	-	-	-	-	24.37	24.30
CA_12A-[66A] (2)	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B12	10	5095	737.5	2x2	-	-	-	-	-	-	-	-	-	-	24.37	24.30
CA_5A-46A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B5	10	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	-	-	-	-	-	24.33	24.30
CA_13A-46A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B13	10	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	-	-	-	-	-	24.48	24.30
CA_46A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B46	20	50665	5537.5	2x2	-	-	-	-	-	24.35	24.30
CA_46A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B46	20	50665	5537.5	2x2	-	-	-	-	-	24.24	24.30
CA_46A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B46	20	50665	5537.5	2x2	-	-	-	-	-	24.45	24.30
CA_[66A]-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66734	2139.8	2x2	LTE B66	20	66536	2120	2x2	-	-	-	-	-	24.37	24.30
CA_66C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66838	2150.2	2x2	LTE B66	20	66536	2120	4x4	-	-	-	-	-	24.22	24.30
CA_66A-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66734	2139.8	4x4	LTE B66	20	66536	2120	4x4	-	-	-	-	-	24.26	24.30
CA_[66C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B66	20	66536	2120	2x2	-	-	-	-	-	24.42	24.30
CA_[66A]-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66734	2139.8	4x4	LTE B66	20	66536	2120	4x4	-	-	-	-	-	24.43	24.30
CA_[66C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B66	20	66536	2120	4x4	-	-	-	-	-	24.41	24.30
CA_[2A]-2A-66A-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B71	20	68761	634.5	2x2	24.46	24.30
CA_2A-2A-[66A]-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B71	20	68761	634.5	2x2	24.25	24.30
CA_[2A]-[2A]-66A-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B71	20	68761	634.5	2x2	24.45	24.30
CA_[2A]-2A-[66A]-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B71	20	68761	634.5	2x2	24.17	24.30
CA_[2A]-[2A]-[66A]-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B71	20	68761	634.5	2x2	24.26	24.30
CA_[2A]-12A-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66838	2150.2	2x2	LTE B2	20	900	1960	4x4	LTE B12	10	5095	737.5	2x2	24.42	24.30
CA_2A-12A-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B2	20	900	1960	2x2	LTE B12	10	5095	737.5	2x2	24.14	24.30
CA_[2A]-12A-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B2	20	900	1960	4x4	LTE B12	10	5095	737.5	2x2	24.06	24.30
CA_[2A]-13A-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66838	2150.2	2x2	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	24.51	24.30
CA_2A-13A-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	24.13	24.30
CA_[2A]-13A-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	24.14	24.30
CA_[2A]-29A-30A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	2x2	24.38	24.30
CA_2A-29A-[30A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	4x4	24.42	24.30
CA_2A-29A-30A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	2x2	24.05	24.30
CA_[2A]-29A-[30A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	4x4	24.46	24.30
CA_[2A]-29A-30A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	2x2	24.14	24.30
CA_2A-29A-[30A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	4x4	24.10	24.30
CA_[2A]-29A-[30A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	4x4	24.08	24.30
CA_[2A]-30A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B30	10	9820	2355	4x4	24.10	24.30
CA_[2A]-46A-46A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	47090	5180	2x2	24.41	24.30
CA_2A-46A-46A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	47090	5180	2x2	24.11	24.30
CA_[2A]-46A-46A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	47090	5180	2x2	24.13	24.30
CA_[2A]-46A-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	2x2	24.38	24.30
CA_2A-46A-[48A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	4x4	24.41	24.30
CA_2A-46A-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	2x2	24.15	24.30
CA_[2A]-46A-[48A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	4x4	24.28	24.30
CA_[2A]-46A-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	2x2	24.18	24.30
CA_2A-46A-[48A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	4x4	24.15	24.30
CA_[2A]-46A-[48A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	4x4	24.12	24.30
CA_[2A]-66A-66A-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B71	20	68761	634.5	2x2	24.33	24.30
CA_2A-66A-[66A]-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B71	20	68761	634.5	2x2	24.48	24.30
CA_2A-[66A]-66A-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B71	20	68761	634.5	2x2	24.11	24.30
CA_[2A]-66A-[66A]-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B71	20	68761	634.5	2x2	24.44	24.30
CA_[2A]-[66A]-66A-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B71	20	68761	634.5	2x2	24.10	24.30
CA_2A-[66A]-[66A]-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B71	20	68761	634.5	2x2	24.19	24.30
CA_[2A]-[66A]-[66A]-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B71	20	68761	634.5	2x2	24.13	24.30
CA_[2C]-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	24.50	24.30
CA_2C-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	702	1940.2	2x2	24.46	24.30
CA_2C-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	702	1940.2	2x2	24.17	24.30
CA_[2C]-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	24.46	24.30
CA_[2C]-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	24.24	24.30
CA_2C-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	702	1940.2	2x2	24.24	24.30
CA_[2C]-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	702	1940.2	4x4	24.19	24.30
CA_[2A]-66C-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66838	2150.2	2x2	LTE B2	20	900	1960	4x4	LTE B71	20	68761	634.5	2x2	24.46	24.30
CA_2A-[66C]-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B2	20	900	1960	2x2	LTE B71	20	68761	634.5	2x2	24.24	24.30
CA_[2A]-[66C]-71A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B2	20	900	1960	4x4	LTE B71	20	68761	634.5	2x2	24.17	24.30
CA_5A-5A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B5	10	2525	881.5	2x2	LTE B5	5	2425	871.5	2x2	24.25	24.30
CA_5A-5A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2425	871.5	2x2	24.45	24.30
CA_5A-5A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2425	871.5	2x2	24.26	24.30
CA_5A-5A-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2425	871.5	2x2	24.07	24.00
CA_5A-5A-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2425	871.5	2x2	24.23	24.30
CA_5A-46C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B5	10	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	24.25	24.30
CA_13A-46C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B13	10	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	24.35	24.30
CA_13A-[48A]-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	24.19	24.00
CA_13A-48A-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	24.06	24.00
CA_13A-[48A]-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	24.05	24.00
CA_13A-[48A]-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66838	2150.2	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	24.48	24.30
CA_13A-48A-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	24.28	24.30
CA_13A-[48A]-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	24.04	24.30
CA_29A-[30A]-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	4x4	24.26	24.30
CA_29A-30A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	2x2	24.10	24.30
CA_29A-30A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	2x2	24.28	24.30
CA_29A-[30A]-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	4x4	24.23	24.30
CA_29A-[30A]-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	4x4	24.23	24.30
CA_29A-30A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	2x2	24.20	24.30
CA_29A-[30A]-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B29	10	9715	722.5	2x2	LTE B30	10	9820	2355	4x4	24.07	24.30
CA_46C-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	24.47	24.30
CA_46C-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	24.25	24.30
CA_46C-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	24.24	24.30
CA_[48A]-48A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	24.30	24.30
CA_48A-48A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	24.37	24.30
CA_48A-48A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	24.18	24.30
CA_[48A]-[48A]-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	24.40	24.30
CA_[48A]-48A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	24.32	24.30
CA_[48A]-48A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	24.24	24.30
CA_48A-48A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	24.33	24.30
CA_[48A]-[48A]-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	24.31	24.30
CA_[48A]-[48A]-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	24.35	24.30
CA_[48A]-48A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	24.32	24.30
CA_[48A]-[48A]-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	24.26	24.30
CA_[48A]-48A-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	24.06	24.00
CA_48A-48A-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	24.08	24.00
CA_[48A]-[48A]-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	24.14	24.00
CA_[48A]-48A-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	24.06	24.00
CA_[48A]-[48A]-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	24.09	24.00
CA_[48A]-48A-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66838	2150.2	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	24.35	24.30
CA_48A-48A-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	24.28	24.30
CA_[48A]-[48A]-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66838	2150.2	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	24.33	24.30
CA_[48A]-48A-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	24.24	24.30
CA_[48A]-[48A]-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	24.40	24.30
CA_[48C]-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.34	24.30
CA_48C-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.36	24.30
CA_48C-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.42	24.30
CA_[48C]-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.33	24.30
CA_[48C]-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.36	24.30
CA_48C-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.29	24.30
CA_[48C]-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.29	24.30

Table 20
Maximum Output Powers

	PCC										SCC 1					SCC 2					SCC 3					SCC 4					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_[2A]-2A-5A-30A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	2x2	24.25	24.30
CA_2A-2A-5A-[30A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	4x4	24.11	24.30
CA_2A-2A-5A-30A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	2x2	24.10	24.30
CA_[2A]-[2A]-5A-30A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	2x2	24.21	24.30
CA_[2A]-2A-5A-[30A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	4x4	24.31	24.30
CA_[2A]-2A-5A-30A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	2x2	24.07	24.30
CA_2A-2A-5A-[30A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	4x4	24.06	24.30
CA_[2A]-[2A]-5A-[30A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	4x4	24.26	24.30
CA_[2A]-[2A]-5A-30A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	2x2	24.20	24.30
CA_[2A]-2A-5A-[30A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	4x4	24.08	24.30
CA_[2A]-[2A]-5A-[30A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	4x4	24.09	24.30
CA_[2A]-2A-5A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	24.43	24.30
CA_2A-2A-5A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	24.37	24.30
CA_2A-2A-5A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	24.27	24.30
CA_[2A]-[2A]-5A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	24.34	24.30
CA_[2A]-2A-5A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	24.32	24.30
CA_[2A]-2A-5A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	24.29	24.30
CA_2A-2A-5A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	24.10	24.30
CA_[2A]-[2A]-5A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	24.16	24.30
CA_[2A]-[2A]-5A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	24.33	24.30
CA_[2A]-2A-5A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	24.10	24.30
CA_[2A]-[2A]-5A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	24.09	24.30
CA_[2A]-2A-5A-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	24.07	24.00
CA_2A-2A-5A-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	24.08	24.00
CA_[2A]-[2A]-5A-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	24.06	24.00
CA_[2A]-2A-5A-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	24.05	24.00
CA_[2A]-[2A]-5A-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	24.04	24.00
CA_[2A]-2A-5A-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66838	2150.2	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	24.40	24.30
CA_2A-2A-5A-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	24.21	24.30
CA_[2A]-[2A]-5A-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66838	2150.2	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	24.37	24.30
CA_[2A]-2A-5A-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	24.16	24.30
CA_[2A]-[2A]-5A-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	24.05	24.30
CA_[2A]-2A-12A-30A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	2x2	24.30	24.30
CA_2A-2A-12A-[30A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	4x4	24.29	24.30
CA_2A-2A-12A-30A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	2x2	24.06	24.30
CA_[2A]-[2A]-12A-30A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	2x2	24.19	24.30
CA_[2A]-2A-12A-[30A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	4x4	24.36	24.30
CA_[2A]-2A-12A-30A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	2x2	24.09	24.30
CA_2A-2A-12A-[30A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	4x4	24.10	24.30
CA_[2A]-[2A]-12A-[30A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	4x4	24.21	24.30
CA_[2A]-[2A]-12A-30A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	2x2	24.08	24.30
CA_[2A]-2A-12A-[30A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	4x4	24.07	24.30
CA_[2A]-[2A]-12A-[30A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	4x4	24.11	24.30
CA_[2A]-2A-12A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	24.40	24.30
CA_2A-2A-12A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	24.39	24.30
CA_2A-2A-12A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	24.15	24.30
CA_[2A]-[2A]-12A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	10	5095	737.5	2x2	24.35	24.30
CA_[2A]-2A-12A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	24.28	24.30
CA_[2A]-2A-12A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	24.25	24.30
CA_2A-2A-12A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	24.13	24.30
CA_[2A]-[2A]-12A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	10	5095	737.5	2x2	24.08	24.30
CA_[2A]-[2A]-12A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	10	5095	737.5	2x2	24.32	24.30
CA_[2A]-2A-12A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	24.05	24.30
CA_[2A]-[2A]-12A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	10	5095	737.5	2x2	24.09	24.30
CA_[2A]-2A-12B-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	5	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	24.39	24.30
CA_2A-2A-12B-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B12	5	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	24.17	24.30
CA_[2A]-[2A]-12B-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	5	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	24.37	24.30
CA_[2A]-2A-12B-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	5	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	24.07	24.30
CA_[2A]-[2A]-12B-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	5	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	24.09	24.30
CA_[2A]-2A-13A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B13	10	5230	751	2x2	24.50	24.30
CA_2A-2A-13A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B13	10	5230	751	2x2	24.43	24.30
CA_2A-2A-13A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B13	10	5230	751	2x2	24.13	24.30
CA_[2A]-[2A]-13A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B13	10	5230	751	2x2	24.33	24.30
CA_[2A]-2A-13A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B13	10	5230	751	2x2	24.36	24.30
CA_[2A]-2A-13A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B13	10	5230	751	2x2	24.18	24.30
CA_2A-2A-13A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B13	10	5230	751	2x2	24.06	24.30
CA_[2A]-[2A]-13A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B13	10	5230	751	2x2	24.16	24.30
CA_[2A]-[2A]-13A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B13	10	5230	751	2x2	24.42	24.30
CA_[2A]-2A-13A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B13	10	5230	751	2x2	24.15	24.30
CA_[2A]-[2A]-13A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B13	10	5230	751	2x2	24.17	24.30
CA_[2A]-2A-13A-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B13	10	5230	751	2x2	24.04	24.00
CA_2A-2A-13A-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B13	10	5230	751	2x2	24.06	24.00
CA_[2A]-[2A]-13A-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B13	10	5230	751	2x2	24.03	24.00
CA_[2A]-2A-13A-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B13	10	5230	751	2x2	24.04	24.00
CA_[2A]-[2A]-13A-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B13	10	5230	751	2x2	24.05	24.00
CA_[2A]-2A-14A-30A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	2x2	24.35	24.30
CA_2A-2A-14A-[30A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.11	24.30
CA_2A-2A-14A-30A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	2x2	24.15	24.30
CA_[2A]-[2A]-14A-30A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	2x2	24.12	24.30
CA_[2A]-2A-14A-[30A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.11	24.30
CA_[2A]-2A-14A-30A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	2x2	24.08	24.30
CA_2A-2A-14A-[30A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.11	24.30
CA_[2A]-[2A]-14A-[30A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.36	24.30
CA_[2A]-[2A]-14A-30A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	2x2	24.10	24.30
CA_[2A]-2A-14A-[30A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.16	24.30
CA_[2A]-[2A]-14A-[30A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.12	24.30
CA_[2A]-2A-14A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	24.40	24.30
CA_2A-2A-14A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	24.28	24.30
CA_2A-2A-14A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	24.13	24.30
CA_[2A]-[2A]-14A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B14	10	5330	763	2x2	24.18	24.30
CA_[2A]-2A-14A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	24.30	24.30
CA_[2A]-2A-14A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	24.07	24.30
CA_2A-2A-14A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	24.15	24.30
CA_[2A]-[2A]-14A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B14	10	5330	763	2x2	24.12	24.30
CA_[2A]-[2A]-14A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B14	10	5330	763	2x2	24.27	24.30
CA_[2A]-2A-14A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	24.21	24.30
CA_[2A]-[2A]-14A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B14	10	5330	763	2x2	24.10	24.30
CA_[2A]-5A-30A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	2x2	24.19	24.30
CA_2A-5A-[30A]-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	4x4	24.14	24.30
CA_2A-5A-30A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	2x2	24.20	24.30
CA_2A-5A-30A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	2x2	24.05	24.30
CA_[2A]-5A-[30A]-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	4x4	24.20	24.30
CA_[2A]-5A-30A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	2x2	24.18	24.30
CA_[2A]-5A-30A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	2x2	24.07	24.30
CA_2A-5A-[30A]-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	4x4	24.28	24.30
CA_2A-5A-[30A]-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	4x4	24.08	24.30
CA_2A-5A-30A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	2x2	24.10	24.30
CA_[2A]-5A-[30A]-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B30	10	9820	2355	4x4	24.06	24.30
CA_[2A]-5A-[30A]-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B30	10	9820	2355	[illegible]	24.12	24.30
CA_[2A]-5A-30A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B30	10	9820	2355	[illegible]	[illegible]	24.30
CA_2A-5A-[30A]-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B30	10	9820	2355	[illegible]	[illegible]	24.30
CA_[2A]-5A-[30A]-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B30	10	9820	2355	[illegible]	24.09	24.30
CA_[2A]-5B-30A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	LTE B30	10	9820	2355	[illegible]	24.30	24.30
CA_2A-5B-[30A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	LTE B30	10	9820	2355	[illegible]	24.22	24.30
CA_2A-5B-30A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	LTE B30	10	9820	2355	[illegible]	24.11	24.30
CA_[2A]-5B-[30A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	LTE B30	10	9820	2355	[illegible]	24.16	24.30
CA_[2A]-5B-30A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	LTE B30	10	9820	2355	[illegible]	24.09	24.30
CA_2A-5B-[30A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	LTE B30	10	9820	2355	[illegible]	24.10	24.30
CA_[2A]-5B-[30A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	LTE B30	10	9820	2355	[illegible]	24.12	24.30
CA_[2A]-5A-48A-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	55340	3560	[illegible]	24.38	24.30
CA_2A-5A-[48A]-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	55340	3560	[illegible]	24.36	24.30
CA_2A-5A-48A-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	55340	3560	[illegible]	24.15	24.30
CA_[2A]-5A-[48A]-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	55340	3560	[illegible]	24.27	24.30
CA_[2A]-5A-48A-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	55340	3560	[illegible]	24.06	24.30
CA_2A-5A-[48A]-[48A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	55340	3560	[illegible]	24.24	24.30
CA_2A-5A-[48A]-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	55340	3560	[illegible]	24.14	24.30
CA_[2A]-5A-[48A]-[48A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	55340	3560	[illegible]	24.16	24.30
CA_[2A]-5A-[48A]-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	55340	3560	[illegible]	24.06	24.30
CA_2A-5A-[48A]-[48A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	55340	3560	[illegible]	24.05	24.30
CA_[2A]-5A-[48A]-[48A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	55340	3560	[illegible]	24.09	24.30
CA_[2A]-5A-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	56188	3644.8	[illegible]	24.31	24.30
CA_2A-5A-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	56188	3644.8	[illegible]	24.32	24.30
CA_2A-5A-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	56188	3644.8	[illegible]	24.18	24.30
CA_[2A]-5A-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	56188	3644.8	[illegible]	24.34	24.30
CA_[2A]-5A-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	56188	3644.8	[illegible]	24.22	24.30
CA_2A-5A-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	56188	3644.8	[illegible]	24.08	24.30
CA_[2A]-5A-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B48	20	55990	3625	[illegible]	LTE B48	20	56188	3644.8	[illegible]	24.16	24.30
CA_[2A]-5B-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	24.33	24.30
CA_2A-5B-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	24.35	24.30
CA_2A-5B-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	24.08	24.30
CA_[2A]-5B-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	24.26	24.30
CA_[2A]-5B-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	24.11	24.30
CA_2A-5B-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	24.16	24.30
CA_[2A]-5B-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	24.10	24.30
CA_[2A]-5B-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	[illegible]	LTE B66	10	66987	2165.1	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	[illegible]	24.00
CA_2A-5B-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	[illegible]	LTE B66	10	66987	2165.1	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	23.73	24.00
CA_[2A]-5B-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	[illegible]	LTE B66	10	66987	2165.1	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	23.72	24.00
CA_[2A]-5B-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66838	2150.2	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	24.34	24.30
CA_2A-5B-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66838	2150.2	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	24.12	24.30
CA_[2A]-5B-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66838	2150.2	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B5	10	2525	881.5	[illegible]	LTE B5	5	2453	874.3	[illegible]	24.08	24.30
CA_[2A]-12A-30A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B12	10	5095	737.5	[illegible]	LTE B30	10	9820	2355	[illegible]	24.12	24.30
CA_2A-12A-[30A]-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B12	10	5095	737.5	[illegible]	LTE B30	10	9820	2355	[illegible]	[illegible]	24.30
CA_2A-12A-30A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B12	10	5095	737.5	[illegible]	LTE B30	10	9820	2355	[illegible]	[illegible]	24.30
CA_2A-12A-30A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B12	10	5095	737.5	[illegible]	LTE B30	10	9820	2355	[illegible]	24.27	24.30
CA_[2A]-12A-[30A]-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B12	10	5095	737.5	[illegible]	LTE B30	10	9820	2355	[illegible]	24.07	24.30
CA_[2A]-12A-30A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B12	10	5095	737.5	[illegible]	LTE B30	10	9820	2355	[illegible]	24.19	24.30
CA_[2A]-12A-30A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B12	10	5095	737.5	[illegible]	LTE B30	10	9820	2355	[illegible]	24.36	24.30
CA_2A-12A-[30A]-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B12	10	5095	737.5	[illegible]	LTE B30	10	9820	2355	[illegible]	24.08	24.30
CA_2A-12A-[30A]-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B12	10	5095	737.5	[illegible]	LTE B30	10	9820	2355	[illegible]	24.31	24.30
CA_2A-12A-30A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B12	10	5095	737.5	[illegible]	LTE B30	10	9820	2355	[illegible]	24.14	24.30
CA_[2A]-12A-[30A]-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	[illegible]	LTE B66	20	66536	2120	[illegible]	LTE B2	20	900	1960	[illegible]	LTE B12	10	5095	737.5	[illegible]	LTE B30	10	9820	2355	[illegible]	24.08	24.30

Table 21
Maximum Output Powers

	PCC										SCC 1					SCC 2					SCC 3					SCC 4					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_[2A]-12A-[30A]-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	4x4	24.36	24.30
CA_2A-12A-[30A]-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	4x4	24.11	24.30
CA_[2A]-12A-[30A]-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B12	10	5095	737.5	2x2	LTE B30	10	9820	2355	4x4	24.15	24.30
CA_[2A]-12B-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B12	5	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	24.36	24.30
CA_2A-12B-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B12	5	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	24.15	24.30
CA_2A-12B-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B12	5	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	24.32	24.30
CA_[2A]-12B-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B12	5	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	24.14	24.30
CA_[2A]-12B-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B12	5	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	24.31	24.30
CA_2A-12B-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B12	5	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	24.18	24.30
CA_[2A]-12B-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B12	5	5095	737.5	2x2	LTE B12	5	5047	732.7	2x2	24.15	24.30
CA_[2A]-13A-48A-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	24.38	24.30
CA_2A-13A-[48A]-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	24.39	24.30
CA_2A-13A-48A-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	24.15	24.30
CA_[2A]-13A-[48A]-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	24.36	24.30
CA_[2A]-13A-48A-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	24.25	24.30
CA_2A-13A-[48A]-[48A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	24.31	24.30
CA_2A-13A-[48A]-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	24.25	24.30
CA_[2A]-13A-[48A]-[48A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	24.38	24.30
CA_[2A]-13A-[48A]-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	24.17	24.30
CA_2A-13A-[48A]-[48A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	24.09	24.30
CA_[2A]-13A-[48A]-[48A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	24.08	24.30
CA_[2A]-13A-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.40	24.30
CA_2A-13A-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.38	24.30
CA_2A-13A-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.22	24.30
CA_[2A]-13A-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.37	24.30
CA_[2A]-13A-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.17	24.30
CA_2A-13A-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.25	24.30
CA_[2A]-13A-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.26	24.30
CA_[2A]-13A-66A-66B	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	5	66604	2126.8	2x2	LTE B66	15	66511	2117.5	2x2	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	24.38	24.30
CA_[2A]-13A-66B-66A	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	24.11	24.00
CA_2A-13A-[66A]-66B	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	5	66604	2126.8	2x2	LTE B66	15	66511	2117.5	2x2	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	24.20	24.30
CA_2A-13A-66B-[66A]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	24.07	24.00
CA_2A-13A-66A-[66B]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	5	66604	2126.8	4x4	LTE B66	15	66511	2117.5	4x4	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	24.38	24.30
CA_2A-13A-[66B]-66A	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	24.06	24.00
CA_[2A]-13A-[66A]-66B	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	5	66604	2126.8	2x2	LTE B66	15	66511	2117.5	2x2	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	24.24	24.30
CA_[2A]-13A-66B-[66A]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	24.05	24.00
CA_[2A]-13A-66A-[66B]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	5	66604	2126.8	4x4	LTE B66	15	66511	2117.5	4x4	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	24.36	24.30
CA_[2A]-13A-[66B]-66A	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	24.11	24.00
CA_2A-13A-[66A]-[66B]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	5	66604	2126.8	4x4	LTE B66	15	66511	2117.5	4x4	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	24.35	24.30
CA_2A-13A-[66B]-[66A]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	24.07	24.00
CA_[2A]-13A-[66A]-[66B]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	5	66604	2126.8	4x4	LTE B66	15	66511	2117.5	4x4	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	24.22	24.30
CA_[2A]-13A-[66B]-[66A]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	24.07	24.00
CA_[2A]-14A-30A-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	2x2	24.39	24.30
CA_2A-14A-[30A]-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.40	24.30
CA_2A-14A-30A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	2x2	24.36	24.30
CA_2A-14A-30A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	2x2	24.06	24.30
CA_[2A]-14A-[30A]-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.40	24.30
CA_[2A]-14A-30A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	2x2	24.39	24.30
CA_[2A]-14A-30A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	2x2	24.07	24.30
CA_2A-14A-[30A]-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.36	24.30
CA_2A-14A-[30A]-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.18	24.30
CA_2A-14A-30A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	2x2	24.16	24.30
CA_[2A]-14A-[30A]-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.19	24.30
CA_[2A]-14A-[30A]-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.18	24.30
CA_2A-14A-[30A]-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.10	24.30
CA_[2A]-14A-[30A]-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B14	10	5330	763	2x2	LTE B30	10	9820	2355	4x4	24.09	24.30
CA_[2A]-46A-46C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	53540	5825	2x2	24.38	24.30
CA_2A-46A-46C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	53540	5825	2x2	24.20	24.30
CA_[2A]-46A-46C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	53540	5825	2x2	24.17	24.30
CA_[2A]-46A-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.39	24.30
CA_2A-46A-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.41	24.30
CA_2A-46A-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.23	24.30
CA_[2A]-46A-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.36	24.30
CA_[2A]-46A-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.14	24.30
CA_2A-46A-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.13	24.30
CA_[2A]-46A-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.19	24.30
CA_[2A]-46C-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	2x2	24.41	24.30
CA_2A-46C-[48A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	4x4	24.28	24.30
CA_2A-46C-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	2x2	24.13	24.30
CA_[2A]-46C-[48A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	4x4	24.32	24.30
CA_[2A]-46C-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	2x2	24.20	24.30
CA_2A-46C-[48A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	4x4	24.17	24.30
CA_[2A]-46C-[48A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	4x4	24.23	24.30
CA_[2A]-48A-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	24.34	24.30
CA_2A-[48A]-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	24.34	24.30
CA_2A-48A-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.36	24.30
CA_2A-48A-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	24.19	24.30
CA_[2A]-[48A]-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	24.34	24.30
CA_[2A]-48A-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.36	24.30
CA_[2A]-48A-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	24.21	24.30
CA_2A-[48A]-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.33	24.30
CA_2A-[48A]-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	24.15	24.30
CA_2A-48A-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.16	24.30
CA_[2A]-[48A]-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.27	24.30
CA_[2A]-[48A]-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	24.16	24.30
CA_[2A]-48A-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.05	24.30
CA_2A-[48A]-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.12	24.30
CA_[2A]-[48A]-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.17	24.30
CA_[2A]-[48D]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	24.07	24.30
CA_5B-[30A]-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B30	10	9820	2355	4x4	24.31	24.30
CA_5B-30A-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B30	10	9820	2355	2x2	24.34	24.30
CA_5B-30A-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B30	10	9820	2355	2x2	24.05	24.30
CA_5B-[30A]-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B30	10	9820	2355	4x4	24.30	24.30
CA_5B-[30A]-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B30	10	9820	2355	4x4	24.06	24.30
CA_5B-30A-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B30	10	9820	2355	2x2	24.07	24.30
CA_5B-[30A]-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B30	10	9820	2355	4x4	24.09	24.30
CA_5A-[48A]-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B5	10	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	24.35	24.30
CA_5A-48A-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B5	10	2525	881.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.30	24.30
CA_5A-48A-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B5	10	2525	881.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	24.19	24.30
CA_5A-[48A]-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B5	10	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.30	24.30
CA_5A-[48A]-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B5	10	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	24.24	24.30
CA_5A-48A-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B5	10	2525	881.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.13	24.30
CA_5A-[48A]-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B5	10	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.24	24.30
CA_5A-[48D]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B5	10	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	24.32	24.30
CA_5A-48D-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B5	10	2525	881.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	24.22	24.30
CA_5A-[48D]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B5	10	2525	881.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	24.20	24.30
CA_13A-[48A]-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	24.37	24.30
CA_13A-48A-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.37	24.30
CA_13A-48A-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	24.19	24.30
CA_13A-[48A]-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.40	24.30
CA_13A-[48A]-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	24.25	24.30
CA_13A-48A-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.28	24.30
CA_13A-[48A]-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	24.25	24.30
CA_13A-[48D]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	24.35	24.30
CA_13A-48D-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	24.23	24.30
CA_13A-[48D]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	24.12	24.30
CA_13A-[48C]-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.13	24.00
CA_13A-48C-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.07	24.00
CA_13A-[48C]-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.12	24.00
CA_13A-[48C]-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66838	2150.2	2x2	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.41	24.30
CA_13A-48C-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.21	24.30
CA_13A-[48C]-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B13	10	5230	751	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.16	24.30
CA_46A-46D-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	53540	5825	2x2	LTE B46	20	53342	5805.2	2x2	LTE B46	20	53144	5785.4	2x2	24.16	24.30
CA_[48A]-48C-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	24.06	24.00
CA_48A-[48C]-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	24.07	24.00
CA_48A-48C-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	24.06	24.00
CA_[48A]-[48C]-66B	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	2x2	LTE B66	10	66987	2165.1	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	24.05	24.00
CA_[48A]-48C-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	24.10	24.00
CA_48A-[48C]-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	24.08	24.00
CA_[48A]-[48C]-[66B]	LTE B66	10	132622	1775	QPSK	1	25	67086	2175	4x4	LTE B66	10	66987	2165.1	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	24.07	24.00
CA_[48A]-48C-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66838	2150.2	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	24.37	24.30
CA_48A-[48C]-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66838	2150.2	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	24.38	24.30
CA_48A-48C-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	24.18	24.30
CA_[48A]-[48C]-66C	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66838	2150.2	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	24.36	24.30
CA_[48A]-48C-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	24.16	24.30
CA_48A-[48C]-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	24.17	24.30
CA_[48A]-[48C]-[66C]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66838	2150.2	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	24.20	24.30
CA_[48A]-48D-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	LTE B48	20	56244	3650.4	2x2	24.27	24.30
CA_48A-[48D]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	LTE B48	20	56244	3650.4	4x4	24.34	24.30
CA_48A-48D-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	LTE B48	20	56244	3650.4	2x2	24.16	24.30
CA_[48A]-[48D]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	LTE B48	20	56244	3650.4	4x4	24.34	24.30
CA_[48A]-48D-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	2x2	LTE B48	20	56442	3670.2	2x2	LTE B48	20	56244	3650.4	2x2	24.15	24.30
CA_48A-[48D]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	LTE B48	20	56244	3650.4	4x4	24.14	24.30
CA_[48A]-[48D]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56640	3690	4x4	LTE B48	20	56442	3670.2	4x4	LTE B48	20	56244	3650.4	4x4	24.15	24.30
CA_[48C]-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	24.35	24.30
CA_48C-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	24.22	24.30
CA_[48C]-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	24.34	24.30
CA_[48C]-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	24.23	24.30
CA_[48C]-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	24.26	24.30
CA_[48E]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	LTE B48	20	56584	3684.4	4x4	24.18	24.30

Table 22
Maximum Output Powers

	PCC										SCC 1					SCC 2					SCC 3					SCC 4					SCC 5					SCC 6					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_[2A]-5A-46D-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.16	24.30
CA_2A-5A-46D-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.17	24.30
CA_[2A]-5A-46D-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.11	24.30
CA_[2A]-13A-46D-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.20	24.30
CA_2A-13A-46D-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B13	10	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.13	24.30
CA_[2A]-13A-46D-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B13	10	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.27	24.30
CA_[2A]-46A-48D-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	-	-	-	-	-	24.33	24.30
CA_2A-46A-[48D]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	-	-	-	-	-	24.36	24.30
CA_2A-46A-48D-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	-	-	-	-	-	24.26	24.30
CA_[2A]-46A-[48D]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	-	-	-	-	-	24.38	24.30
CA_[2A]-46A-48D-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	-	-	-	-	-	24.15	24.30
CA_2A-46A-[48D]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	-	-	-	-	-	24.13	24.30
CA_[2A]-46C-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	-	-	-	-	-	24.33	24.30
CA_2A-46C-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	-	-	-	-	-	24.34	24.30
CA_2A-46C-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	-	-	-	-	-	24.29	24.30
CA_[2A]-46C-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	-	-	-	-	-	24.24	24.30
CA_[2A]-46C-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	-	-	-	-	-	24.16	24.30
CA_2A-46C-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	-	-	-	-	-	24.13	24.30
CA_[2A]-46C-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	-	-	-	-	-	24.22	24.30
CA_[2A]-46D-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B48	20	55990	3625	2x2	-	-	-	-	-	24.36	24.30
CA_2A-46D-[48A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B48	20	55990	3625	4x4	-	-	-	-	-	24.37	24.30
CA_2A-46D-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B48	20	55990	3625	2x2	-	-	-	-	-	24.31	24.30
CA_[2A]-46D-[48A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B48	20	55990	3625	4x4	-	-	-	-	-	24.35	24.30
CA_[2A]-46D-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B48	20	55990	3625	2x2	-	-	-	-	-	24.27	24.30
CA_2A-46D-[48A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B48	20	55990	3625	4x4	-	-	-	-	-	24.18	24.30
CA_[2A]-46D-[48A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B48	20	55990	3625	4x4	-	-	-	-	-	24.12	24.30
CA_[2A]-46D-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.36	24.30
CA_2A-46D-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.28	24.30
CA_2A-46D-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.38	24.30
CA_[2A]-46D-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.30	24.30
CA_[2A]-46D-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.40	24.30
CA_[2A]-46D-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.10	24.30
CA_[2A]-48E-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	LTE B48	20	55792	3605.2	2x2	-	-	-	-	-	24.41	24.30
CA_2A-[48E]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	LTE B48	20	55792	3605.2	4x4	-	-	-	-	-	24.41	24.30
CA_2A-48E-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	LTE B48	20	55792	3605.2	2x2	-	-	-	-	-	24.29	24.30
CA_[2A]-48E-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	LTE B48	20	55792	3605.2	2x2	-	-	-	-	-	24.30	24.30
CA_5A-46D-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B5	10	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.31	24.30
CA_5A-46D-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B5	10	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.31	24.30
CA_5A-46D-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B5	10	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.24	24.30
CA_5A-46E-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B5	10	2525	881.5	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	50269	5497.9	2x2	-	-	-	-	-	24.19	24.30
CA_13A-46D-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B13	10	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.18	24.30
CA_13A-46D-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B13	10	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.32	24.30
CA_13A-46D-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B13	10	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.32	24.30
CA_13A-46E-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B13	10	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	50269	5497.9	2x2	-	-	-	-	-	24.34	24.30
CA_46A-[48E]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	LTE B48	20	55792	3605.2	4x4	-	-	-	-	-	24.38	24.30
CA_46A-48E-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B46	20	50665	5537.5	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	LTE B48	20	55792	3605.2	2x2	-	-	-	-	-	24.33	24.30
CA_[2A]-46C-48D-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	24.19	24.30
CA_2A-46C-[48D]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	LTE B48	20	56386	3664.6	4x4	24.22	24.30
CA_2A-46C-48D-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	24.10	24.30
CA_[2A]-46C-48D-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	24.11	24.30
CA_[2A]-46D-48C-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50269	5497.9	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.29	24.30
CA_2A-46D-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50269	5497.9	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.30	24.30
CA_2A-46D-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50269	5497.9	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.08	24.30
CA_[2A]-46D-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50269	5497.9	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.27	24.30
CA_[2A]-46D-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50269	5497.9	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.13	24.30
CA_2A-46D-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50269	5497.9	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.05	24.30
CA_[2A]-46E-48A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	LTE B48	20	55990	3625	2x2	24.33	24.30
CA_2A-46E-[48A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	LTE B48	20	55990	3625	4x4	24.32	24.30
CA_2A-46E-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	LTE B48	20	55990	3625	2x2	24.15	24.30
CA_[2A]-46E-[48A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	LTE B48	20	55990	3625	4x4	24.14	24.30
CA_[2A]-46E-48A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	LTE B48	20	55990	3625	2x2	24.12	24.30
CA_2A-46E-[48A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	LTE B48	20	55990	3625	4x4	24.24	24.30
CA_[2A]-46E-[48A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	LTE B48	20	55990	3625	4x4	24.24	24.30
CA_[2A]-46E-66A-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	24.21	24.30
CA_2A-46E-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	24.19	24.30
CA_2A-46E-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	24.27	24.30
CA_[2A]-46E-[66A]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	24.13	24.30
CA_[2A]-46E-66A-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	24.32	24.30
CA_2A-46E-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	24.21	24.30
CA_[2A]-46E-[66A]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B66	20	66536	2120	4x4	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	24.25	24.30
CA_46C-48E-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	LTE B48	20	56386	3664.6	2x2	LTE B48	20	55792	3605.2	2x2	24.31	24.30
CA_46E-[48C]-66A	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	50269	5497.9	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.25	24.30
CA_46E-48C-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	50269	5497.9	2x2	LTE B48	20	55990	3625	2x2	LTE B48	20	56188	3644.8	2x2	24.24	24.30
CA_46E-[48C]-[66A]	LTE B66	20	132572	1770	QPSK	1	99	67036	2170	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	50269	5497.9	2x2	LTE B48	20	55990	3625	4x4	LTE B48	20	56188	3644.8	4x4	24.15	24.30

1.4.9 LTE Band 25 as PCC

Table 23
Maximum Output Powers

	PCC										SCC 1					SCC 2					SCC 3					SCC 4					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_5A-[25A]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B5	10	2525	881.5	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.61	24.58
CA_[25A]-46A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B46	20	50665	5537.5	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.61	24.58
CA_[25A]-25A-26A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	2x2	LTE B26	5	8865	876.5	2x2	-	-	-	-	-	-	-	-	-	-	24.40	24.58
CA_25A-[25A]-26A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	2x2	LTE B25	20	8590	1985	4x4	LTE B26	5	8865	876.5	2x2	-	-	-	-	-	-	-	-	-	-	24.46	24.58
CA_[25A]-[25A]-26A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	4x4	LTE B26	5	8865	876.5	2x2	-	-	-	-	-	-	-	-	-	-	24.49	24.58
CA_[25A]-25A-41A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	2x2	LTE B41	20	40620	2593	2x2	-	-	-	-	-	-	-	-	-	-	24.56	24.58
CA_25A-[25A]-41A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	2x2	LTE B25	20	8590	1985	4x4	LTE B41	20	40620	2593	2x2	-	-	-	-	-	-	-	-	-	-	24.60	24.58
CA_25A-25A-[41A]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	2x2	LTE B25	20	8590	1985	2x2	LTE B41	20	40620	2593	4x4	-	-	-	-	-	-	-	-	-	-	24.54	24.58
CA_[25A]-25A-[41A]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	2x2	LTE B41	20	40620	2593	4x4	-	-	-	-	-	-	-	-	-	-	24.38	24.58
CA_25A-[25A]-[41A]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	2x2	LTE B25	20	8590	1985	4x4	LTE B41	20	40620	2593	4x4	-	-	-	-	-	-	-	-	-	-	24.52	24.58
CA_[25A]-[25A]-41A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	4x4	LTE B41	20	40620	2593	2x2	-	-	-	-	-	-	-	-	-	-	24.56	24.58
CA_[25A]-[25A]-[41A]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	4x4	LTE B41	20	40620	2593	4x4	-	-	-	-	-	-	-	-	-	-	24.55	24.58
CA_[25A]-26A-41A	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B26	15	8865	876.5	2x2	LTE B41	20	40620	2593	2x2	-	-	-	-	-	-	-	-	-	-	24.53	24.58
CA_25A-26A-[41A]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	2x2	LTE B26	15	8865	876.5	2x2	LTE B41	20	40620	2593	4x4	-	-	-	-	-	-	-	-	-	-	24.60	24.58
CA_[25A]-26A-[41A]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B26	15	8865	876.5	2x2	LTE B41	20	40620	2593	4x4	-	-	-	-	-	-	-	-	-	-	24.46	24.58
CA_[25A]-41C	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B41	20	40620	2593	2x2	LTE B41	20	40422	2573.2	2x2	-	-	-	-	-	-	-	-	-	-	24.60	24.58
CA_25A-[41C]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	2x2	LTE B41	20	40620	2593	4x4	LTE B41	20	40422	2573.2	4x4	-	-	-	-	-	-	-	-	-	-	24.64	24.58
CA_[25A]-[41C]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B41	20	40620	2593	4x4	LTE B41	20	40422	2573.2	4x4	-	-	-	-	-	-	-	-	-	-	24.56	24.58
CA_[25A]-46C	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	-	-	-	-	-	-	-	-	-	-	24.44	24.58
CA_[25A]-25A-41C	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	2x2	LTE B41	20	40620	2593	2x2	LTE B41	20	40422	2573.2	2x2	-	-	-	-	-	24.82	24.58
CA_25A-[25A]-41C	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	2x2	LTE B25	20	8590	1985	4x4	LTE B41	20	40620	2593	2x2	LTE B41	20	40422	2573.2	2x2	-	-	-	-	-	24.62	24.58
CA_25A-25A-[41C]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	2x2	LTE B25	20	8590	1985	2x2	LTE B41	20	40620	2593	4x4	LTE B41	20	40422	2573.2	4x4	-	-	-	-	-	24.68	24.58
CA_[25A]-25A-[41C]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	2x2	LTE B41	20	40620	2593	4x4	LTE B41	20	40422	2573.2	4x4	-	-	-	-	-	24.61	24.58
CA_25A-[25A]-[41C]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	2x2	LTE B25	20	8590	1985	4x4	LTE B41	20	40620	2593	4x4	LTE B41	20	40422	2573.2	4x4	-	-	-	-	-	24.73	24.58
CA_[25A]-[25A]-41C	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	4x4	LTE B41	20	40620	2593	2x2	LTE B41	20	40422	2573.2	2x2	-	-	-	-	-	24.63	24.58
CA_[25A]-[25A]-[41C]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	4x4	LTE B41	20	40620	2593	4x4	LTE B41	20	40422	2573.2	4x4	-	-	-	-	-	24.67	24.58
CA_[25A]-26A-41C	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B26	15	8865	876.5	2x2	LTE B41	20	40620	2593	2x2	LTE B41	20	40422	2573.2	2x2	-	-	-	-	-	24.81	24.58
CA_25A-26A-[41C]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	2x2	LTE B26	15	8865	876.5	2x2	LTE B41	20	40620	2593	4x4	LTE B41	20	40422	2573.2	4x4	-	-	-	-	-	24.63	24.58
CA_[25A]-26A-[41C]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B26	15	8865	876.5	2x2	LTE B41	20	40620	2593	4x4	LTE B41	20	40422	2573.2	4x4	-	-	-	-	-	24.83	24.58
CA_[25A]-46D	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	-	-	-	-	-	24.82	24.58
CA_[25A]-25A-41D	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	2x2	LTE B41	20	40422	2573.2	2x2	LTE B41	20	40620	2593	2x2	LTE B41	20	40818	2612.8	2x2	24.68	24.58
CA_25A-[25A]-41D	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	2x2	LTE B25	20	8590	1985	4x4	LTE B41	20	40422	2573.2	2x2	LTE B41	20	40620	2593	2x2	LTE B41	20	40818	2612.8	2x2	24.61	24.58
CA_25A-25A-[41D]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	2x2	LTE B25	20	8590	1985	2x2	LTE B41	20	40422	2573.2	4x4	LTE B41	20	40620	2593	4x4	LTE B41	20	40818	2612.8	4x4	24.62	24.58
CA_[25A]-25A-[41D]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	2x2	LTE B41	20	40422	2573.2	4x4	LTE B41	20	40620	2593	4x4	LTE B41	20	40818	2612.8	4x4	24.64	24.58
CA_25A-[25A]-[41D]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	2x2	LTE B25	20	8590	1985	4x4	LTE B41	20	40422	2573.2	4x4	LTE B41	20	40620	2593	4x4	LTE B41	20	40818	2612.8	4x4	24.68	24.58
CA_[25A]-[25A]-41D	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	4x4	LTE B41	20	40422	2573.2	2x2	LTE B41	20	40620	2593	2x2	LTE B41	20	40818	2612.8	2x2	24.63	24.58
CA_[25A]-[25A]-[41D]	LTE B25	15	26115	1857.5	QPSK	1	36	8115	1937.5	4x4	LTE B25	20	8590	1985	4x4	LTE B41	20	40422	2573.2	4x4	LTE B41	20	40620	2593	4x4	LTE B41	20	40818	2612.8	4x4	24.71	24.58

1.4.10 LTE Band 30 as PCC

Table 24
Maximum Output Powers

	PCC										SCC 1					SCC 2					SCC 3					SCC 4					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_[2A]-2A-29A-30A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B29	10	9715	722.5	2x2	-	-	-	-	-	23.89	23.94
CA_2A-2A-29A-[30A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B29	10	9715	722.5	2x2	-	-	-	-	-	23.73	23.94
CA_[2A]-[2A]-29A-30A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B29	10	9715	722.5	2x2	-	-	-	-	-	23.75	23.94
CA_[2A]-2A-29A-[30A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B29	10	9715	722.5	2x2	-	-	-	-	-	23.70	23.94
CA_[2A]-[2A]-29A-[30A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B29	10	9715	722.5	2x2	-	-	-	-	-	23.91	23.94
CA_[2A]-29A-30A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B29	10	9715	722.5	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	23.79	23.94
CA_2A-29A-[30A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B29	10	9715	722.5	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	23.75	23.94
CA_2A-29A-30A-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	2x2	LTE B29	10	9715	722.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	23.79	23.94
CA_[2A]-29A-[30A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B29	10	9715	722.5	2x2	LTE B66	20	66786	2145	2x2	-	-	-	-	-	23.80	23.94
CA_[2A]-29A-30A-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B29	10	9715	722.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	23.81	23.94
CA_2A-29A-[30A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B29	10	9715	722.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	23.80	23.94
CA_[2A]-29A-[30A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B29	10	9715	722.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	23.75	23.94
CA_[2A]-30A-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	23.79	23.94
CA_29A-[30A]-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B29	10	9715	722.5	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	-	-	-	-	-	23.77	23.94
CA_29A-30A-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B29	10	9715	722.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	23.79	23.94
CA_29A-[30A]-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B29	10	9715	722.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	23.76	23.94
CA_29A-30A-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B29	10	9715	722.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	23.77	23.94
CA_29A-[30A]-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B29	10	9715	722.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	23.78	23.94
CA_[2A]-2A-5A-30A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	2x2	23.80	23.94
CA_2A-2A-5A-[30A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	2x2	23.85	23.94
CA_2A-2A-5A-30A-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	4x4	23.83	23.94
CA_[2A]-[2A]-5A-30A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	2x2	23.90	23.94
CA_[2A]-2A-5A-[30A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	2x2	23.83	23.94
CA_[2A]-2A-5A-30A-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	4x4	23.91	23.94
CA_2A-2A-5A-[30A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	4x4	23.86	23.94
CA_[2A]-[2A]-5A-[30A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	2x2	23.79	23.94
CA_[2A]-[2A]-5A-30A-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	4x4	24.05	23.94
CA_[2A]-2A-5A-[30A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	4x4	23.80	23.94
CA_[2A]-[2A]-5A-[30A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	4x4	23.83	23.94
CA_[2A]-2A-12A-30A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	2x2	24.02	23.94
CA_2A-2A-12A-[30A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	2x2	23.85	23.94
CA_2A-2A-12A-30A-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	23.91	23.94
CA_[2A]-[2A]-12A-30A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	2x2	24.11	23.94
CA_[2A]-2A-12A-[30A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	2x2	23.79	23.94
CA_[2A]-2A-12A-30A-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	24.04	23.94
CA_2A-2A-12A-[30A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	23.75	23.94
CA_[2A]-[2A]-12A-[30A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	2x2	23.85	23.94
CA_[2A]-[2A]-12A-30A-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	24.05	23.94
CA_[2A]-2A-12A-[30A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	23.77	23.94
CA_[2A]-[2A]-12A-[30A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	23.71	23.94
CA_[2A]-2A-14A-30A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	2x2	23.99	23.94
CA_2A-2A-14A-[30A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	2x2	23.77	23.94
CA_2A-2A-14A-30A-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	4x4	24.00	23.94
CA_[2A]-[2A]-14A-30A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	2x2	24.01	23.94
CA_[2A]-2A-14A-[30A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	2x2	23.78	23.94
CA_[2A]-2A-14A-30A-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	4x4	24.02	23.94
CA_2A-2A-14A-[30A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	4x4	23.74	23.94
CA_[2A]-[2A]-14A-[30A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	2x2	23.80	23.94
CA_[2A]-[2A]-14A-30A-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	4x4	23.99	23.94
CA_[2A]-2A-14A-[30A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	4x4	23.79	23.94
CA_[2A]-[2A]-14A-[30A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	4x4	23.59	23.94
CA_[2A]-5A-30A-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	23.96	23.94
CA_2A-5A-[30A]-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	23.60	23.94
CA_2A-5A-30A-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.95	23.94
CA_[2A]-5A-[30A]-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	23.68	23.94
CA_[2A]-5A-30A-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.99	23.94
CA_2A-5A-[30A]-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.66	23.94
CA_2A-5A-30A-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.02	23.94
CA_[2A]-5A-[30A]-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.70	23.94
CA_2A-5A-[30A]-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	23.71	23.94
CA_[2A]-5A-[30A]-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	23.69	23.94
CA_[2A]-5B-30A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B66	20	66786	2145	2x2	24.07	23.94
CA_2A-5B-[30A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B66	20	66786	2145	2x2	23.70	23.94
CA_2A-5B-30A-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B66	20	66786	2145	4x4	24.05	23.94
CA_[2A]-5B-[30A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B66	20	66786	2145	2x2	23.66	23.94
CA_[2A]-5B-30A-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B66	20	66786	2145	4x4	24.08	23.94
CA_2A-5B-[30A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B66	20	66786	2145	4x4	23.65	23.94
CA_[2A]-5B-[30A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B66	20	66786	2145	4x4	23.68	23.94
CA_[2A]-12A-30A-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	24.09	23.94
CA_2A-12A-[30A]-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	23.69	23.94
CA_2A-12A-30A-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	2x2	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.02	23.94
CA_[2A]-12A-[30A]-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	23.70	23.94
CA_[2A]-12A-30A-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.90	23.94
CA_2A-12A-[30A]-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.67	23.94
CA_2A-12A-30A-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	2x2	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	23.69	23.94
CA_[2A]-12A-[30A]-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.69	23.94
CA_2A-12A-[30A]-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	23.72	23.94
CA_[2A]-12A-[30A]-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B12	10	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	23.65	23.94
CA_[2A]-14A-30A-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	23.83	23.94
CA_2A-14A-[30A]-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	23.66	23.94
CA_2A-14A-30A-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	2x2	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.76	23.94
CA_[2A]-14A-[30A]-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	23.69	23.94
CA_[2A]-14A-30A-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	4x4	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.89	23.94
CA_2A-14A-[30A]-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.68	23.94
CA_2A-14A-30A-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B2	20	900	1960	2x2	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	23.86	23.94
CA_[2A]-14A-[30A]-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.72	23.94
CA_2A-14A-[30A]-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	2x2	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	23.70	23.94
CA_[2A]-14A-[30A]-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B2	20	900	1960	4x4	LTE B14	10	5330	763	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	23.61	23.94
CA_5B-[30A]-66A-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	23.69	23.94
CA_5B-30A-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.90	23.94
CA_5B-[30A]-[66A]-66A	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.67	23.94
CA_5B-30A-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	2x2	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	23.91	23.94
CA_5B-[30A]-[66A]-[66A]	LTE B30	5	27710	2310	QPSK	1	12	9820	2355	4x4	LTE B5	10	2525	881.5	2x2	LTE B5	5	2453	874.3	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	23.68	23.94

1.4.11 LTE Band 41 as PCC

Table 25
Maximum Output Powers

	PCC										SCC 1					SCC 2					SCC 3					SCC 4					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_[41A]-41A (1)	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	39750	2506	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.39	24.43
CA_41A-[41A] (1)	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	2x2	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.45	24.43
CA_[41A]-[41A] (1)	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.42	24.43
CA_[41A]-41C	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	39948	2525.8	2x2	LTE B41	20	39750	2506	2x2	-	-	-	-	-	-	-	-	-	-	24.45	24.43
CA_41C-[41A]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	2x2	LTE B41	20	41292	2660.2	2x2	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	-	-	24.43	24.43
CA_41A-[41C]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	2x2	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	2x2	-	-	-	-	-	-	-	-	-	-	24.43	24.43
CA_[41C]-41A	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	41292	2660.2	4x4	LTE B41	20	39750	2506	2x2	-	-	-	-	-	-	-	-	-	-	24.45	24.43
CA_[41A]-[41C]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	-	-	24.44	24.43
CA_[41C]-[41A]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	41292	2660.2	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	-	-	24.46	24.43
CA_[41A]-41D	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	40146	2545.6	2x2	LTE B41	20	39948	2525.8	2x2	LTE B41	20	39750	2506	2x2	-	-	-	-	-	24.27	24.43
CA_41D-[41A]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	2x2	LTE B41	20	41292	2660.2	2x2	LTE B41	20	41094	2640.4	2x2	LTE B41	20	39750	2506	4x4	-	-	-	-	-	24.57	24.43
CA_41A-[41D]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	2x2	LTE B41	20	40146	2545.6	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	24.55	24.43
CA_[41D]-41A	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	41292	2660.2	4x4	LTE B41	20	41094	2640.4	4x4	LTE B41	20	39750	2506	2x2	-	-	-	-	-	24.43	24.43
CA_[41A]-[41D]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	40146	2545.6	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	24.61	24.43
CA_[41D]-[41A]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	41292	2660.2	4x4	LTE B41	20	41094	2640.4	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	24.63	24.43
CA_[41C]-41C	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	41292	2660.2	4x4	LTE B41	20	39948	2525.8	2x2	LTE B41	20	39750	2506	2x2	-	-	-	-	-	24.68	24.43
CA_41C-[41C]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	2x2	LTE B41	20	41292	2660.2	2x2	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	24.47	24.43
CA_[41C]-[41C]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	41292	2660.2	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	24.59	24.43
CA_[41E]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	41292	2660.2	4x4	LTE B41	20	41094	2640.4	4x4	LTE B41	20	40896	2620.6	4x4	-	-	-	-	-	24.48	24.43
CA_[41C]-41D	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	41292	2660.2	4x4	LTE B41	20	40146	2545.6	2x2	LTE B41	20	39948	2525.8	2x2	LTE B41	20	39750	2506	2x2	24.46	24.43
CA_41D-[41C]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	2x2	LTE B41	20	41292	2660.2	2x2	LTE B41	20	41094	2640.4	2x2	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	24.30	24.43
CA_41C-[41D]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	2x2	LTE B41	20	41292	2660.2	2x2	LTE B41	20	40146	2545.6	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	24.21	24.43
CA_[41D]-41C	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	41292	2660.2	4x4	LTE B41	20	41094	2640.4	4x4	LTE B41	20	39948	2525.8	2x2	LTE B41	20	39750	2506	2x2	24.50	24.43
CA_[41C]-[41D]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	41292	2660.2	4x4	LTE B41	20	40146	2545.6	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	24.48	24.43
CA_[41D]-[41C]	LTE B41	20	41490	2680	QPSK	1	50	41490	2680	4x4	LTE B41	20	41292	2660.2	4x4	LTE B41	20	41094	2640.4	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	24.51	24.43

1.4.12 LTE Band 48 as PCC

Table 26
Maximum Output Powers

	PCC										SCC 1					SCC 2					SCC 3					SCC 4					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48A-[48A]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	2x2	LTE B48	20	55340	3560	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.26	24.40
CA_[48A]-48A	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	55340	3560	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.37	24.40
CA_[48A]-[48A]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	55340	3560	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.38	24.40
CA_[48A]-48C	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	-	-	-	-	-	-	-	-	-	-	24.31	24.40
CA_48C-[48A]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	2x2	LTE B48	20	56598	3685.8	2x2	LTE B48	20	55340	3560	4x4	-	-	-	-	-	-	-	-	-	-	24.32	24.40
CA_48A-[48C]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	-	-	-	-	-	-	-	-	-	-	24.27	24.40
CA_[48C]-48A	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	56598	3685.8	4x4	LTE B48	20	55340	3560	2x2	-	-	-	-	-	-	-	-	-	-	24.30	24.40
CA_[48A]-[48C]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	-	-	-	-	-	-	-	-	-	-	24.28	24.40
CA_[48C]-[48A]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	56598	3685.8	4x4	LTE B48	20	55340	3560	4x4	-	-	-	-	-	-	-	-	-	-	24.32	24.40
CA_[48A]-48D	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	LTE B48	20	55736	3599.6	2x2	-	-	-	-	-	24.31	24.40
CA_48D-[48A]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	2x2	LTE B48	20	56598	3685.8	2x2	LTE B48	20	56400	3666	2x2	LTE B48	20	55340	3560	4x4	-	-	-	-	-	24.30	24.40
CA_48A-[48D]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	LTE B48	20	55736	3599.6	4x4	-	-	-	-	-	24.29	24.40
CA_[48D]-48A	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	56598	3685.8	4x4	LTE B48	20	56400	3666	4x4	LTE B48	20	55340	3560	2x2	-	-	-	-	-	24.29	24.40
CA_[48A]-[48D]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	LTE B48	20	55736	3599.6	4x4	-	-	-	-	-	24.31	24.40
CA_[48D]-[48A]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	56598	3685.8	4x4	LTE B48	20	56400	3666	4x4	LTE B48	20	55340	3560	4x4	-	-	-	-	-	24.27	24.40
CA_48C-[48C]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	2x2	LTE B48	20	56598	3685.8	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	-	-	-	-	-	24.27	24.40
CA_[48C]-48C	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	56598	3685.8	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	-	-	-	-	-	24.30	24.40
CA_[48C]-[48C]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	56598	3685.8	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	-	-	-	-	-	24.29	24.40
CA_[48E]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	56598	3685.8	4x4	LTE B48	20	56400	3666	4x4	LTE B48	20	56202	3646.2	4x4	-	-	-	-	-	24.28	24.40
CA_[48C]-48D	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	56598	3685.8	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	LTE B48	20	55736	3599.6	2x2	24.41	24.40
CA_48D-[48C]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	2x2	LTE B48	20	56598	3685.8	2x2	LTE B48	20	56400	3666	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	24.39	24.40
CA_48C-[48D]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	2x2	LTE B48	20	56598	3685.8	2x2	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	LTE B48	20	55736	3599.6	4x4	24.33	24.40
CA_[48D]-48C	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	56598	3685.8	4x4	LTE B48	20	56400	3666	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55538	3579.8	2x2	24.36	24.40
CA_[48C]-[48D]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	56598	3685.8	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	LTE B48	20	55736	3599.6	4x4	24.31	24.40
CA_[48D]-[48C]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	56598	3685.8	4x4	LTE B48	20	56400	3666	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55538	3579.8	4x4	24.32	24.40
CA_[48F]	LTE B48	5	56715	3697.5	QPSK	1	24	56715	3697.5	4x4	LTE B48	20	56598	3685.8	4x4	LTE B48	20	56400	3666	4x4	LTE B48	20	56202	3646.2	4x4	LTE B48	20	56004	3626.4	4x4	24.33	24.40

1.5 Downlink Carrier Aggregation with Uplink Carrier Aggregation enabled

This device supports uplink carrier aggregation (ULCA) with additional Carrier Aggregation configurations active in the downlink. Power measurements were performed with ULCA active and additional CA configurations active in the downlink for the configuration per Fall 2017 TCB Workshop Notes.

Per FCC Guidance, additional SAR measurements for these configurations were not required since their maximum output power was not more than 0.25 dB higher than the maximum output power for with only ULCA active.

1.5.1 DL Carrier Aggregation RF Conducted Powers

Table 27
Maximum Output Powers

	PCC									SCC 1									SCC 2				SCC 3				SCC 4				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (UL) Ch.	SCC (UL) Freq. [MHz]	Mod.	SCC UL# RB	SCC UL RB Offset	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	ULCA Tx.Power with add'l CA config. active (dBm)	ULCA Tx Power (dBm)
CA_41C-41A	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	LTE B41	20	39750	2506	-	-	-	-	-	-	-	-	24.07	24.16
CA_41D	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	LTE B41	20	41094	2640.4	-	-	-	-	-	-	-	-	24.05	24.16
CA_41D-41A	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	LTE B41	20	41094	2640.4	LTE B41	20	39750	2506	-	-	-	-	24.17	24.16
CA_41C-41C	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	-	-	-	-	24.19	24.16
CA_41E	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	LTE B41	20	41094	2640.4	LTE B41	20	40896	2620.6	-	-	-	-	24.06	24.16
CA_41C-41D	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	LTE B41	20	40146	2545.6	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	24.10	24.16
CA_41D-41C	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	LTE B41	20	41094	2640.4	LTE B41	20	39948	2525.8	LTE B41	20	39750	2506	24.08	24.16

1.5.2 DL Carrier Aggregation with DL 4x4 MIMO RF Conducted Powers

Note: 4x4 DL MIMO is only operating in the downlink. Uplink transmission is limited to a single output stream for each component carrier of ULCA.

Table 28
Maximum Output Powers

	PCC										SCC 1										Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Frequency [MHz]	DL Ant. Config.	SCC Band	SCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC (DL) Channel	SCC (DL) Frequency [MHz]	DL Ant. Config.	ULCA Tx.Power with add'l CA config. active on DL (dBm)	LTE Single Carrier Tx Power (dBm)
CA_[66B]	LTE B66	10	132622	1775	QPSK	1	0	67086	2175	4x4	LTE B66	10	132523	1765.1	QPSK	1	49	66987	2165.1	4x4	24.00	24.00
CA_[66C]	LTE B66	20	132572	1770	QPSK	1	0	67036	2170	4x4	LTE B66	20	132374	1750.2	QPSK	1	99	66838	2150.2	4x4	23.85	23.85

	PCC										SCC 1										SCC 2					SCC 3					SCC 4					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (UL) Ch.	SCC (UL) Freq. [MHz]	Mod.	SCC UL# RB	SCC UL RB Offset	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	ULCA Tx.Power with add'l CA config. active	ULCA Tx Power (dBm)
CA_[41C]	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	4x4	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.16	24.16
CA_41C-[41A]	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	2x2	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	2x2	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	-	-	24.23	24.16
CA_[41C]-41A	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	4x4	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	4x4	LTE B41	20	39750	2506	2x2	-	-	-	-	-	-	-	-	-	-	24.16	24.16
CA_[41C]-[41A]	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	4x4	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	-	-	-	-	-	24.15	24.16
CA_[41D]	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	4x4	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	4x4	LTE B41	20	41094	2640.4	4x4	-	-	-	-	-	-	-	-	-	-	24.19	24.16
CA_41D-[41A]	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	2x2	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	2x2	LTE B41	20	41094	2640.4	2x2	LTE B41	20	39750	2506	4x4	-	-	-	-	-	24.13	24.16
CA_[41D]-41A	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	4x4	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	4x4	LTE B41	20	41094	2640.4	4x4	LTE B41	20	39750	2506	2x2	-	-	-	-	-	24.17	24.16
CA_[41D]-[41A]	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	4x4	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	4x4	LTE B41	20	41094	2640.4	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	24.20	24.16
CA_[41C]-41C	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	4x4	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	4x4	LTE B41	20	39948	2525.8	2x2	LTE B41	20	39750	2506	2x2	-	-	-	-	-	24.16	24.16
CA_41C-[41C]	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	2x2	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	2x2	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	24.05	24.16
CA_[41C]-[41C]	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	4x4	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	-	-	-	-	-	24.18	24.16
CA_[41E]	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	4x4	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	4x4	LTE B41	20	41094	2640.4	4x4	LTE B41	20	40896	2620.6	4x4	-	-	-	-	-	24.15	24.16
CA_[41C]-41D	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	4x4	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	4x4	LTE B41	20	40146	2545.6	2x2	LTE B41	20	39948	2525.8	2x2	LTE B41	20	39750	2506	2x2	24.22	24.16
CA_41D-[41C]	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	2x2	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	2x2	LTE B41	20	41094	2640.4	2x2	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	24.27	24.16
CA_41C-[41D]	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	2x2	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	2x2	LTE B41	20	40146	2545.6	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	24.21	24.16
CA_[41D]-41C	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	4x4	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	4x4	LTE B41	20	41094	2640.4	4x4	LTE B41	20	39948	2525.8	2x2	LTE B41	20	39750	2506	2x2	24.21	24.16
CA_[41C]-[41D]	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	4x4	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	4x4	LTE B41	20	40146	2545.6	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	24.22	24.16
CA_[41D]-[41C]	LTE B41	20	41490	2680	QPSK	1	0	41490	2680	4x4	LTE B41	20	41292	2660.2	QPSK	1	99	41292	2660.2	4x4	LTE B41	20	41094	2640.4	4x4	LTE B41	20	39948	2525.8	4x4	LTE B41	20	39750	2506	4x4	24.22	24.16

	PCC										SCC 1										Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (UL) Ch.	SCC (UL) Freq. [MHz]	Mod.	SCC UL# RB	SCC UL RB Offset	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	ULCA Tx.Power with add'l CA config. active	ULCA Tx Power (dBm)
CA_[48C]	LTE B48	20	56640	3690	QPSK	1	0	56640	3690	4x4	LTE B48	20	56442	3670.2	QPSK	1	99	56442	3670.2	4x4	20.45	20.45

APPENDIX G POWER REDUCTION VERIFICATION

Per the May 2017 TCBC Workshop Notes, demonstration of proper functioning of the power reduction mechanisms is required to support the corresponding SAR configurations. The verification process was divided into two parts: (1) evaluation of output power levels for individual or multiple triggering mechanisms and (2) evaluation of the triggering distances for proximity-based sensors.

G.1 Power Verification Procedure

The power verification was performed according to the following procedure:

1. A base station simulator was used to establish a conducted RF connection and the output power was monitored. The power measurements were confirmed to be within expected tolerances for all states before and after a power reduction mechanism was triggered. For licensed modes, the device state index as displayed on the device UI was recorded before and after the mechanism was triggered.

2. Step 1 was repeated for all relevant modes and frequency bands for the mechanism being investigated.

3. Steps 1 and 2 were repeated for all individual power reduction mechanisms and combinations thereof. For the combination cases, one mechanism was switched to a 'triggered' state at a time; powers were confirmed to be within tolerances after each additional mechanism was activated.

G.2 Distance Verification Procedure

The distance verification procedure was performed according to the following procedure:

1. A base station simulator was used to establish an RF connection and to monitor the power levels. The device being tested was placed below the relevant section of the phantom with the relevant side or edge of the device facing toward the phantom. For licensed modes, the device state index on the device UI was monitored to determine the triggering state.

2. The device was moved toward and away from the phantom to determine the distance at which the mechanism triggers and the output power is reduced, per KDB Publication 616217 D04v01r02 and FCC Guidance. Each applicable test position was evaluated. The distances were confirmed to be the same or larger (more conservative) than the minimum distances provided by the manufacturer.

3. Steps 1 and 2 were repeated for low, mid, and high bands, as appropriate (see note below Table G-3 and G-4 for more details).

4. Steps 1 through 3 were repeated for all distance-based power reduction mechanisms.

G.3 Main Antenna Verification Summary

Table G-1
Power Measurement Verification for Main Antenna Folder Closed

Mechanism(s)		Mode/Band	Device State Index		
1st	2nd		Un-triggered (Max)	Mechanism #1 (Reduced)	Mechanism #2 (Reduced)
Hotspot On		PCS CDMA	0	6	
Grip		PCS CDMA	0	2	
Hotspot On	Grip	PCS CDMA	0	6	2
Grip	Hotspot On	PCS CDMA	0	2	2
Hotspot On		GPRS 1900	0	6	
Grip		GPRS 1900	0	2	
Hotspot On	Grip	GPRS 1900	0	6	2
Grip	Hotspot On	GPRS 1900	0	2	2
Hotspot On		UMTS 1750	0	6	
Grip		UMTS 1750	0	2	
Hotspot On	Grip	UMTS 1750	0	6	2
Grip	Hotspot On	UMTS 1750	0	2	2
Hotspot On		UMTS 1900	0	6	
Grip		UMTS 1900	0	2	
Hotspot On	Grip	UMTS 1900	0	6	2
Grip	Hotspot On	UMTS 1900	0	2	2
Hotspot On		LTE FDD Band 66	0	6	
Grip		LTE FDD Band 66	0	2	
Hotspot On	Grip	LTE FDD Band 66	0	6	2
Grip	Hotspot On	LTE FDD Band 66	0	2	2
Hotspot On		LTE FDD Band 4	0	6	
Grip		LTE FDD Band 4	0	2	
Hotspot On	Grip	LTE FDD Band 4	0	6	2
Grip	Hotspot On	LTE FDD Band 4	0	2	2
Hotspot On		LTE FDD Band 25	0	6	
Grip		LTE FDD Band 25	0	2	
Hotspot On	Grip	LTE FDD Band 25	0	6	2
Grip	Hotspot On	LTE FDD Band 25	0	2	2
Hotspot On		LTE FDD Band 2	0	6	
Grip		LTE FDD Band 2	0	2	
Hotspot On	Grip	LTE FDD Band 2	0	6	2
Grip	Hotspot On	LTE FDD Band 2	0	2	2
Hotspot On		LTE FDD Band 30	0	6	
Grip		LTE FDD Band 30	0	2	
Hotspot On	Grip	LTE FDD Band 30	0	6	2
Grip	Hotspot On	LTE FDD Band 30	0	2	2
Hotspot On		LTE FDD Band 7	0	6	
Grip		LTE FDD Band 7	0	2	
Hotspot On	Grip	LTE FDD Band 7	0	6	2
Grip	Hotspot On	LTE FDD Band 7	0	2	2
Hotspot On		LTE TDD Band 41 (PC3)	0	6	
Grip		LTE TDD Band 41 (PC3)	0	2	
Hotspot On	Grip	LTE TDD Band 41 (PC3)	0	6	2
Grip	Hotspot On	LTE TDD Band 41 (PC3)	0	2	2
Hotspot On		LTE TDD Band 41 (PC2)	0	6	
Grip		LTE TDD Band 41 (PC2)	0	2	
Hotspot On	Grip	LTE TDD Band 41 (PC2)	0	6	2
Grip	Hotspot On	LTE TDD Band 41 (PC2)	0	2	2
Hotspot On		LTE TDD Band 38	0	6	
Grip		LTE TDD Band 38	0	2	
Hotspot On	Grip	LTE TDD Band 38	0	6	2
Grip	Hotspot On	LTE TDD Band 38	0	2	2
Hotspot On		NR FDD Band n66	0	6	
Grip		NR FDD Band n66	0	2	
Hotspot On	Grip	NR FDD Band n66	0	6	2
Grip	Hotspot On	NR FDD Band n66	0	2	2
Hotspot On		NR FDD Band n25	0	6	
Grip		NR FDD Band n25	0	2	
Hotspot On	Grip	NR FDD Band n25	0	6	2
Grip	Hotspot On	NR FDD Band n25	0	2	2
Hotspot On		NR FDD Band n2	0	6	
Grip		NR FDD Band n2	0	2	
Hotspot On	Grip	NR FDD Band n2	0	6	2
Grip	Hotspot On	NR FDD Band n2	0	2	2
Held-to-Ear		LTE TDD Band 48	0	4	

*Note: This device uses different Device State Indices (DSI) to configure different time averaged power levels based on certain exposure scenarios. For this device in the closed configuration, DSI = 2 represents the case when the grip sensor is active, DSI = 4 represents the case where the device is held to ear, and DSI = 6 represents the case when hotspot mode is active. DSI = 0 is configured when the device cannot detect the use condition.

Table G-2
Power Measurement Verification for Main Antenna Folder Open

Mechanism(s)		Mode/Band	Device State Index		
1st	2nd		Un-triggered (Max)	Mechanism #1 (Reduced)	Mechanism #2 (Reduced)
Hotspot On		PCS CDMA	0	5	
Grip		PCS CDMA	0	1	
Hotspot On	Grip	PCS CDMA	0	5	1
Grip	Hotspot On	PCS CDMA	0	1	1
Hotspot On		GPRS 1900	0	5	
Grip		GPRS 1900	0	1	
Hotspot On	Grip	GPRS 1900	0	5	1
Grip	Hotspot On	GPRS 1900	0	1	1
Hotspot On		UMTS 1750	0	5	
Grip		UMTS 1750	0	1	
Hotspot On	Grip	UMTS 1750	0	5	1
Grip	Hotspot On	UMTS 1750	0	1	1
Hotspot On		UMTS 1900	0	5	
Grip		UMTS 1900	0	1	
Hotspot On	Grip	UMTS 1900	0	5	1
Grip	Hotspot On	UMTS 1900	0	1	1
Hotspot On		LTE FDD Band 66	0	5	
Grip		LTE FDD Band 66	0	1	
Hotspot On	Grip	LTE FDD Band 66	0	5	1
Grip	Hotspot On	LTE FDD Band 66	0	1	1
Hotspot On		LTE FDD Band 4	0	5	
Grip		LTE FDD Band 4	0	1	
Hotspot On	Grip	LTE FDD Band 4	0	5	1
Grip	Hotspot On	LTE FDD Band 4	0	1	1
Hotspot On		LTE FDD Band 25	0	5	
Grip		LTE FDD Band 25	0	1	
Hotspot On	Grip	LTE FDD Band 25	0	5	1
Grip	Hotspot On	LTE FDD Band 25	0	1	1
Hotspot On		LTE FDD Band 2	0	5	
Grip		LTE FDD Band 2	0	1	
Hotspot On	Grip	LTE FDD Band 2	0	5	1
Grip	Hotspot On	LTE FDD Band 2	0	1	1
Hotspot On		LTE FDD Band 30	0	5	
Grip		LTE FDD Band 30	0	1	
Hotspot On	Grip	LTE FDD Band 30	0	5	1
Grip	Hotspot On	LTE FDD Band 30	0	1	1
Hotspot On		LTE FDD Band 7	0	5	
Grip		LTE FDD Band 7	0	1	
Hotspot On	Grip	LTE FDD Band 7	0	5	1
Grip	Hotspot On	LTE FDD Band 7	0	1	1
Hotspot On		LTE TDD Band 41 (PC3)	0	5	
Grip		LTE TDD Band 41 (PC3)	0	1	
Hotspot On	Grip	LTE TDD Band 41 (PC3)	0	5	1
Grip	Hotspot On	LTE TDD Band 41 (PC3)	0	1	1
Hotspot On		LTE TDD Band 41 (PC2)	0	5	
Grip		LTE TDD Band 41 (PC2)	0	1	
Hotspot On	Grip	LTE TDD Band 41 (PC2)	0	5	1
Grip	Hotspot On	LTE TDD Band 41 (PC2)	0	1	1
Hotspot On		LTE TDD Band 38	0	5	
Grip		LTE TDD Band 38	0	1	
Hotspot On	Grip	LTE TDD Band 38	0	5	1
Grip	Hotspot On	LTE TDD Band 38	0	1	1
Hotspot On		NR FDD Band n66	0	5	
Grip		NR FDD Band n66	0	1	
Hotspot On	Grip	NR FDD Band n66	0	5	1
Grip	Hotspot On	NR FDD Band n66	0	1	1
Hotspot On		NR FDD Band n25	0	5	
Grip		NR FDD Band n25	0	1	
Hotspot On	Grip	NR FDD Band n25	0	5	1
Grip	Hotspot On	NR FDD Band n25	0	1	1
Hotspot On		NR FDD Band n2	0	5	
Grip		NR FDD Band n2	0	1	
Hotspot On	Grip	NR FDD Band n2	0	5	1
Grip	Hotspot On	NR FDD Band n2	0	1	1
Held-to-Ear		LTE TDD Band 48	0	3	

*Note: This device uses different Device State Indices (DSI) to configure different time averaged power levels based on certain exposure scenarios. For this device in the open configuration, DSI = 1 represents the case when the grip sensor is active, DSI = 3 represents the case where the device is held to ear, and DSI = 5 represents the case when hotspot mode is active. DSI = 0 is configured when the device cannot detect the use condition.

Table G-3
Distance Measurement Verification for Main Antenna Folder Closed

Mechanism(s)	Test Condition	Band	Distance Measurements (mm)		Minimum Distance per Manufacturer (mm)
			Moving Toward	Moving Away	
Grip - Closed	Phablet - Back Side	Mid	14	20	11
Grip - Closed	Phablet - Back Side	High	14	20	11
Grip - Closed	Phablet - Bottom Edge	Mid	14	20	13
Grip - Closed	Phablet - Bottom Edge	High	14	20	13

*Note: Mid band refers to: CDMA BC1, GSM1900, UMTS B2/4, LTE B2/4/25/66, NR Band n66/2/25; High band refers to: LTE B7/30/38/41

Table G-4
Distance Measurement Verification for Main Antenna Folder Open

Mechanism(s)	Test Condition	Band	Distance Measurements (mm)		Minimum Distance per Manufacturer (mm)
			Moving Toward	Moving Away	
Grip - Open	UMPC - Back Side	Mid	16	21	13
Grip - Open	UMPC - Back Side	High	16	21	13
Grip - Open	UMPC - Front Side	Mid	12	17	10
Grip - Open	UMPC - Front Side	High	12	17	10
Grip - Open	UMPC - Bottom Edge	Mid	17	24	17
Grip - Open	UMPC - Bottom Edge	High	17	24	17

*Note: Mid band refers to: CDMA BC1, GSM1900, UMTS B2/4, LTE B2/4/25/66, NR Band n66/2/25; High band refers to: LTE B7/30/38/41

G.4 WIFI Verification Summary

Table G-5
Power Measurement Verification WIFI Antenna 1 Held to Ear

Mechanism(s)	Mode/Band	Conducted Power (dBm)	
1st		Un-triggered (Max)	Mechanism #1 (Reduced)
Held-to-Ear	802.11b	18.23	12.15
Held-to-Ear	802.11g	17.38	12.06
Held-to-Ear	802.11n (2.4GHz)	17.45	12.16
Held-to-Ear	802.11a	16.45	9.07
Held-to-Ear	802.11n (5GHz, 20MHz BW)	16.25	9.12
Held-to-Ear	802.11ac (20MHz BW)	16.05	9.06
Held-to-Ear	802.11n (5GHz, 40MHz BW)	16.88	9.26
Held-to-Ear	802.11ac (40MHz BW)	16.33	10.36
Held-to-Ear	802.11ac (80MHz BW)	15.05	11.00

*Note: IEEE801.11ax and MIMO WIFI modes were not evaluated due to equipment limitations.

Table G-6
Power Measurement Verification WIFI Antenna 2 Held to Ear

Mechanism(s)	Mode/Band	Conducted Power (dBm)	
1st		Un-triggered (Max)	Mechanism #1 (Reduced)
Held-to-Ear	802.11b	17.88	12.11
Held-to-Ear	802.11g	17.30	11.84
Held-to-Ear	802.11n (2.4GHz)	17.20	11.93
Held-to-Ear	802.11a	17.16	9.86
Held-to-Ear	802.11n (5GHz, 20MHz BW)	16.85	9.66
Held-to-Ear	802.11ac (20MHz BW)	16.26	9.14
Held-to-Ear	802.11n (5GHz, 40MHz BW)	16.29	10.93
Held-to-Ear	802.11ac (40MHz BW)	15.60	11.00
Held-to-Ear	802.11ac (80MHz BW)	14.54	10.95

*Note: IEEE801.11ax and MIMO WIFI modes were not evaluated due to equipment limitations.

Table G-7
Power Measurement Verification WIFI Antenna 1 with NR Active

Mode/Band	Conducted Power (dBm)		
	Un-triggered (Max)	Mechanism #1 NR Active (Reduced)	Mechanism #2 RCV and NR Active (Reduced)
802.11b	17.85	11.95	11.74
802.11g	16.91	11.79	11.82
802.11n (2.4GHz)	16.79	12.13	11.78
802.11a	17.13	9.78	9.87
802.11n (5GHz, 20MHz BW)	17.14	9.69	9.92
802.11ac (20MHz BW)	17.11	9.70	9.79
802.11n (5GHz, 40MHz BW)	16.02	9.73	9.82
802.11ac (40MHz BW)	15.98	9.82	9.90
802.11ac (80MHz BW)	14.91	9.85	9.78

*Note: IEEE801.11ax and MIMO WIFI modes were not evaluated due to equipment limitations.

Table G-8
Power Measurement Verification WIFI Antenna 2 with NR Active

Mode/Band	Conducted Power (dBm)		
	Un-triggered (Max)	Mechanism #1 NR Active (Reduced)	Mechanism #2 RCV and NR Active (Reduced)
802.11b	18.15	11.89	12.03
802.11g	17.21	12.17	11.99
802.11n (2.4GHz)	17.14	11.95	12.12
802.11a	16.82	9.54	9.79
802.11n (5GHz, 20MHz BW)	16.90	9.79	9.67
802.11ac (20MHz BW)	16.84	9.86	9.77
802.11n (5GHz, 40MHz BW)	15.93	9.92	9.62
802.11ac (40MHz BW)	15.87	9.72	9.71
802.11ac (80MHz BW)	14.65	9.76	9.83

*Note: IEEE801.11ax and MIMO WIFI modes were not evaluated due to equipment limitations.

Table G-9
Power Measurement Verification WIFI Antenna 1 with Bluetooth

Mode/Band	Conducted Power (dBm)	
	Un-triggered (Max)	Mechanism #1 Bluetooth Active (Reduced)
802.11a	17.13	13.13
802.11n (5GHz, 20MHz BW)	17.14	13.27
802.11ac (20MHz BW)	17.11	13.31
802.11n (5GHz, 40MHz BW)	16.02	12.99
802.11ac (40MHz BW)	15.98	13.12
802.11ac (80MHz BW)	14.91	13.08

*Note: IEEE801.11ax and MIMO WIFI modes were not evaluated due to equipment limitations.

Table G-10
Power Measurement Verification WIFI Antenna 2 with Bluetooth

Mode/Band	Conducted Power (dBm)	
	Un-triggered (Max)	Mechanism #1 Bluetooth Active (Reduced)
802.11a	16.82	12.84
802.11n (5GHz, 20MHz BW)	16.90	12.77
802.11ac (20MHz BW)	16.84	12.82
802.11n (5GHz, 40MHz BW)	15.93	12.74
802.11ac (40MHz BW)	15.87	12.85
802.11ac (80MHz BW)	14.65	12.91

*Note: IEEE801.11ax and MIMO WIFI modes were not evaluated due to equipment limitations.

G.5 Bluetooth Verification Summary

Table G-11
Power Measurement Verification Bluetooth Antenna 1 Held to Ear

Mechanism(s)	Mode/Band	Conducted Power (dBm)	
1st		Un-triggered (Max)	Mechanism #1 (Reduced)
Held-to-Ear	Bluetooth	18.52	13.60

Table G-12
Power Measurement Verification Bluetooth Antenna 2 Held to Ear

Mechanism(s)	Mode/Band	Conducted Power (dBm)	
1st		Un-triggered (Max)	Mechanism #1 (Reduced)
Held-to-Ear	Bluetooth	18.17	13.55

APPENDIX H: IEEE 802.11AX RU SAR EXCLUSION

1.1 IEEE 802.11ax RU SAR Exclusion

To make the most efficient use of the additional available subcarriers (data tones), IEEE 802.11ax can utilize Orthogonal Frequency-Division Multiple Access (OFDMA) which divides the existing 802.11 channels into smaller subchannels called Resource Units (RUs). Possible RU sizes are: 26T, 52T, 106T, 242T, 484T and 996T.

Per April 2019 TCB workshop notes, 802.11ax was considered a higher order 802.11 mode when compared to a/b/g/n/ac to apply KDB Publication 248227 D01v02r02 for OFDM mode selection. Therefore, SAR tests were not required for 802.11ax based on the maximum allowed output powers of OFDM modes and the reported SAR values. Per FCC Guidance, maximum conducted powers were performed for each RU size to demonstrate that the output powers would not be higher than the other OFDM 802.11 modes.

1.2 IEEE 802.11ax RU Target Powers

1.2.1 Maximum 802.11ax RU WLAN Output Power

IEEE 802.11ax RU (in dBm)																
	SISO Antenna 1 & Antenna 2								MIMO							
	2.4G		5G 20MHz		5G 40MHz		5G 80MHz		2.4G		5G 20MHz		5G 40MHz		5G 80MHz	
	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
26T	14.0	15.0	8.0	9.0	8.0	9.0	8.0	9.0	17.0	18.0	11.0	12.0	11.0	12.0	11.0	12.0
52T	15.0	16.0	10.0	11.0	9.0	10.0	9.0	10.0	18.0	19.0	13.0	14.0	12.0	13.0	12.0	13.0
106T	15.5	16.5	12.0	13.0	11.0	12.0	10.0	11.0	18.5	19.5	15.0	16.0	14.0	15.0	13.0	14.0
242T	16.0	17.0	13.0	14.0	13.0	14.0	11.0	12.0	19.0	20.0	16.0	17.0	16.0	17.0	14.0	15.0
484T					13.0	14.0	13.0	14.0					16.0	17.0	16.0	17.0
996T							13.0	14.0							16.0	17.0

1.2.2 Reduced 802.11ax RU WLAN Output Power

The below table is applicable in the following conditions:

- RCV active
- RCV active during simultaneous conditions with 2.4 GHz WLAN and 5 GHz WLAN
- RCV active during simultaneous conditions with 5G NR mmWave
- RCV active during simultaneous conditions with 5G NR mmWave and 2.4 GHz WLAN and/or 5 GHz WLAN
- Simultaneous conditions with 5G NR mmWave

IEEE 802.11ax RU (in dBm)																
	SISO Antenna 1 & Antenna 2								MIMO							
	2.4G		5G 20MHz		5G 40MHz		5G 80MHz		2.4G		5G 20MHz		5G 40MHz		5G 80MHz	
	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
26T	12.0	13.0	8.0	9.0	8.0	9.0	8.0	9.0	15.0	16.0	11.0	12.0	11.0	12.0	11.0	12.0
52T	12.0	13.0	10.0	11.0	9.0	10.0	9.0	10.0	15.0	16.0	13.0	14.0	12.0	13.0	12.0	13.0
106T	12.0	13.0	10.0	11.0	10.0	11.0	10.0	11.0	15.0	16.0	13.0	14.0	13.0	14.0	13.0	14.0
242T	12.0	13.0	10.0	11.0	10.0	11.0	10.0	11.0	15.0	16.0	13.0	14.0	13.0	14.0	13.0	14.0
484T					10.0	11.0	10.0	11.0					13.0	14.0	13.0	14.0
996T							10.0	11.0							13.0	14.0

1.3 IEEE 802.11ax Measured Powers

Table 1
Maximum 2.4 GHz 802.11ax RU Output Power – Ant 1

Freq [MHz]	Channel	Tones	RU Index	Avg Conducted Powers (dBm)
2412	1	26T	0	14.99
			4	14.88
			8	14.42
2437	6	26T	0	14.66
			4	14.99
			8	14.93
2462	11	26T	0	14.54
			4	14.82
			8	14.75

Freq [MHz]	Channel	Tones	RU Index	Avg Conducted Powers (dBm)
2412	1	52T	37	15.51
			38	15.77
			40	15.57
2437	6	52T	37	15.89
			38	15.65
			40	15.87
2462	11	52T	37	15.78
			38	15.74
			40	15.73

Freq [MHz]	Channel	Tones	RU Index	Avg Conducted Powers (dBm)
2412	1	106T	53	16.26
			54	16.37
2437	6	106T	53	16.22
			54	16.01
2462	11	106T	53	16.30
			54	16.02

Freq [MHz]	Channel	Tones	RU Index	Avg Conducted Powers (dBm)
2412	1	242T	61	16.99
2437	6	242T	61	16.78
2462	11	242T	61	16.97

Table 2
Maximum 2.4 GHz 802.11ax RU Output Power – Ant 2

Freq [MHz]	Channel	Tones	RU Index	Avg Conducted Powers (dBm)
2412	1	26T	0	14.78
			4	14.91
			8	14.68
2437	6	26T	0	14.51
			4	14.73
			8	14.72
2462	11	26T	0	14.93
			4	14.84
			8	14.79

Freq [MHz]	Channel	Tones	RU Index	Avg Conducted Powers (dBm)
2412	1	52T	37	15.59
			38	15.85
			40	15.99
2437	6	52T	37	15.85
			38	15.87
			40	15.95
2462	11	52T	37	15.87
			38	15.97
			40	15.61

Freq [MHz]	Channel	Tones	RU Index	Avg Conducted Powers (dBm)
2412	1	106T	53	16.07
			54	16.35
2437	6	106T	53	16.23
			54	16.47
2462	11	106T	53	16.27
			54	16.32

Freq [MHz]	Channel	Tones	RU Index	Avg Conducted Powers (dBm)
2412	1	242T	61	16.91
2437	6	242T	61	16.71
2462	11	242T	61	16.94

Table 3
Maximum 5 GHz 802.11ax RU Output Power – Ant 1

20MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm) RU Index 37	39	40
1	5180	36	52T	10.53	10.60	10.54
	5200	40	52T	10.57	10.65	10.58
	5240	48	52T	10.42	10.49	10.44
2A	5260	52	52T	10.61	10.73	10.70
	5280	56	52T	10.48	10.55	10.49
	5320	64	52T	10.75	10.83	10.77
2C	5500	100	52T	10.98	10.99	10.99
	5600	120	52T	10.78	10.86	10.81
	5720	144	52T	10.99	10.99	10.99
3	5745	149	52T	10.78	10.95	10.83
	5785	157	52T	10.43	10.59	10.50
	5825	165	52T	10.61	10.29	10.27

20MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm) RU Index 0	4	8
1	5180	36	26T	8.97	8.74	8.99
	5200	40	26T	8.91	8.67	8.96
	5240	48	26T	8.92	8.47	8.34
2A	5260	52	26T	8.48	8.66	8.59
	5280	56	26T	8.79	8.88	8.78
	5320	64	26T	8.70	8.91	8.75
2C	5500	100	26T	8.99	8.68	8.97
	5600	120	26T	8.70	8.29	8.72
	5720	144	26T	8.99	8.76	8.74
3	5745	149	26T	8.74	8.96	8.89
	5785	157	26T	8.99	8.74	8.99
	5825	165	26T	8.69	8.88	8.75

20MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm) RU Index 53	54	N/A
1	5180	36	106T	12.67	12.66	
	5200	40	106T	12.52	12.51	
	5240	48	106T	12.88	12.85	
2A	5260	52	106T	12.58	12.51	
	5280	56	106T	12.49	12.61	
	5320	64	106T	12.61	12.62	
2C	5500	100	106T	12.78	12.70	
	5600	120	106T	12.67	12.65	
	5720	144	106T	12.85	12.76	
3	5745	149	106T	12.90	12.91	
	5785	157	106T	12.61	12.67	
	5825	165	106T	12.44	12.43	

20MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm) RU Index 61	N/A	N/A
1	5180	36	242T	13.90		
	5200	40	242T	13.86		
	5240	48	242T	13.87		
2A	5260	52	242T	13.92		
	5280	56	242T	13.97		
	5320	64	242T	13.79		
2C	5500	100	242T	13.73		
	5600	120	242T	13.65		
	5720	144	242T	13.78		
3	5745	149	242T	13.71		
	5785	157	242T	13.69		
	5825	165	242T	13.66		

40MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm) RU Index 0	8	17
1	5190	38	26T	8.71	8.86	8.58
	5230	46	26T	8.68	8.71	8.24
2A	5270	54	26T	8.99	8.99	8.63
	5310	62	26T	8.47	8.47	8.55
2C	5510	102	26T	8.53	8.60	8.74
	5590	118	26T	8.42	8.25	8.46
	5710	142	26T	8.92	8.96	8.99
3	5755	151	26T	8.77	8.79	8.40
	5795	159	26T	8.58	8.33	8.40

40MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm) RU Index 37	40	44
1	5190	38	52T	9.85	9.75	9.86
	5230	46	52T	9.79	9.62	9.75
2A	5270	54	52T	9.71	9.54	9.77
	5310	62	52T	9.76	9.82	9.86
2C	5510	102	52T	9.98	9.89	9.87
	5590	118	52T	9.78	9.66	9.81
	5710	142	52T	9.56	9.95	9.56
3	5755	151	52T	9.62	9.56	9.72
	5795	159	52T	9.87	9.81	9.94

40MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm) RU Index 53	54	56
1	5190	38	106T	11.85	11.70	11.94
	5230	46	106T	11.61	11.96	11.63
2A	5270	54	106T	11.85	11.70	11.90
	5310	62	106T	11.97	11.80	11.94
2C	5510	102	106T	11.76	11.40	11.62
	5590	118	106T	11.84	11.63	11.78
	5710	142	106T	11.71	11.89	11.99
3	5755	151	106T	11.74	11.59	11.90
	5795	159	106T	11.65	11.93	11.74

40MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm) RU Index 61	62	N/A
1	5190	38	242T	13.56	13.54	
	5230	46	242T	13.79	13.73	
2A	5270	54	242T	13.55	13.56	
	5310	62	242T	13.99	13.99	
2C	5510	102	242T	13.69	13.63	
	5590	118	242T	13.58	13.48	
	5710	142	242T	13.74	13.81	
3	5755	151	242T	13.97	13.98	
	5795	159	242T	13.53	13.59	

40MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm) RU Index 65	N/A	N/A
1	5190	38	484T	13.92		
	5230	46	484T	13.95		
2A	5270	54	484T	13.99		
	5310	62	484T	13.87		
2C	5510	102	484T	13.68		
	5590	118	484T	13.70		
	5710	142	484T	13.83		
3	5755	151	484T	13.64		
	5795	159	484T	13.69		

	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index		
					0	18	36
80MHz BW	1	5210	42	26T	8.99	8.96	8.81
	2A	5290	58	26T	8.86	8.65	8.83
	2C	5530	106	26T	8.93	8.78	8.84
		5610	122	26T	8.70	8.46	8.61
		5690	138	26T	8.80	8.60	8.87
	3	5775	155	26T	8.92	8.90	8.99

	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index		
					37	44	52
80MHz BW	1	5210	42	52T	9.99	9.91	9.97
	2A	5290	58	52T	9.84	9.61	9.84
	2C	5530	106	52T	9.61	9.34	9.49
		5610	122	52T	9.76	9.46	9.69
		5690	138	52T	9.68	9.56	9.23
	3	5775	155	52T	9.48	9.30	9.61

	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index		
					53	56	60
80MHz BW	1	5210	42	106T	10.69	10.44	10.66
	2A	5290	58	106T	10.54	10.27	10.45
	2C	5530	106	106T	10.56	10.29	10.41
		5610	122	106T	10.73	10.92	10.91
		5690	138	106T	10.67	10.45	10.61
	3	5775	155	106T	10.53	10.80	10.63

	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index		
					61	62	64
80MHz BW	1	5210	42	242T	11.90	11.69	11.87
	2A	5290	58	242T	11.83	11.61	11.57
	2C	5530	106	242T	11.77	11.94	11.62
		5610	122	242T	11.78	11.82	11.63
		5690	138	242T	11.82	11.37	11.82
	3	5775	155	242T	11.68	11.89	11.82

	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index		
					65	66	N/A
80MHz BW	1	5210	42	484T	13.56	13.38	
	2A	5290	58	484T	13.52	13.72	
	2C	5530	106	484T	13.72	13.56	
		5610	122	484T	13.80	13.76	
		5690	138	484T	13.69	13.65	
	3	5775	155	484T	13.71	13.76	

	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index		
					67	N/A	N/A
80MHz BW	1	5210	42	996T	13.94		
	2A	5290	58	996T	13.84		
	2C	5530	106	996T	13.97		
		5610	122	996T	13.92		
		5690	138	996T	13.89		
	3	5775	155	996T	13.81		

Table 4
Maximum 5 GHz 802.11ax RU Output Power – Ant 2

	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index		
					0	4	8
20MHz BW	1	5180	36	26T	8.66	8.81	8.68
		5200	40	26T	8.95	8.62	8.54
		5240	48	26T	8.83	8.53	8.95
	2A	5260	52	26T	8.88	8.99	8.86
		5280	56	26T	8.62	8.79	8.65
		5320	64	26T	8.68	8.71	8.63
	2C	5500	100	26T	8.55	8.70	8.64
		5600	120	26T	8.97	8.69	8.58
		5720	144	26T	8.51	8.75	8.66
	3	5745	149	26T	8.97	8.71	8.68
		5785	157	26T	8.75	8.94	8.93
		5825	165	26T	8.93	8.99	8.95

	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index		
					37	39	40
20MHz BW	1	5180	36	52T	10.58	10.70	10.64
		5200	40	52T	10.55	10.71	10.67
		5240	48	52T	10.90	10.98	10.92
	2A	5260	52	52T	10.90	10.92	10.90
		5280	56	52T	10.73	10.77	10.71
		5320	64	52T	10.85	10.97	10.87
	2C	5500	100	52T	10.64	10.79	10.67
		5600	120	52T	10.99	10.68	10.61
		5720	144	52T	10.56	10.69	10.65
	3	5745	149	52T	10.84	10.98	10.95
		5785	157	52T	10.83	10.99	10.99
		5825	165	52T	10.99	10.70	10.61

	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index		
					53	54	N/A
20MHz BW	1	5180	36	106T	12.90	12.89	
		5200	40	106T	12.85	12.93	
		5240	48	106T	12.60	12.57	
	2A	5260	52	106T	12.58	12.99	
		5280	56	106T	12.92	12.81	
		5320	64	106T	12.99	12.94	
	2C	5500	100	106T	12.86	12.85	
		5600	120	106T	12.71	12.67	
		5720	144	106T	12.75	12.68	
	3	5745	149	106T	12.95	12.95	
		5785	157	106T	12.62	12.65	
		5825	165	106T	12.73	12.80	

	Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
					RU Index		
					61	N/A	N/A
20MHz BW	1	5180	36	242T	13.71		
		5200	40	242T	13.63		
		5240	48	242T	13.99		
	2A	5260	52	242T	13.99		
		5280	56	242T	13.94		
		5320	64	242T	13.84		
	2C	5500	100	242T	13.77		
		5600	120	242T	13.64		
		5720	144	242T	13.87		
	3	5745	149	242T	13.67		
		5785	157	242T	13.64		
		5825	165	242T	13.61		

40MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
				RU Index		
				0	8	17
1	5190	38	26T	8.88	8.99	8.99
	5230	46	26T	8.54	8.57	8.70
2A	5270	54	26T	8.57	8.88	8.72
	5310	62	26T	8.84	8.94	8.90
2C	5510	102	26T	8.70	8.82	8.85
	5590	118	26T	8.82	8.73	8.88
	5710	142	26T	8.68	8.81	8.89
3	5755	151	26T	8.64	8.61	8.85
	5795	159	26T	8.64	8.67	8.78

40MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
				RU Index		
				37	40	44
1	5190	38	52T	9.76	9.56	9.79
	5230	46	52T	9.81	9.72	9.78
2A	5270	54	52T	9.75	9.58	9.60
	5310	62	52T	9.67	9.48	9.78
2C	5510	102	52T	9.58	9.94	9.77
	5590	118	52T	9.70	9.71	9.85
	5710	142	52T	9.90	9.88	9.57
3	5755	151	52T	9.68	9.73	9.82
	5795	159	52T	9.89	9.84	9.99

40MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
				RU Index		
				53	54	56
1	5190	38	106T	11.64	11.86	11.68
	5230	46	106T	11.95	11.75	11.86
2A	5270	54	106T	11.80	11.60	11.78
	5310	62	106T	11.93	11.70	11.96
2C	5510	102	106T	11.63	11.96	11.73
	5590	118	106T	11.57	11.77	11.57
	5710	142	106T	11.56	11.90	11.70
3	5755	151	106T	11.80	11.99	11.89
	5795	159	106T	11.55	11.89	11.67

40MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
				RU Index		
				61	62	N/A
1	5190	38	242T	13.92	13.96	
	5230	46	242T	13.99	13.99	
2A	5270	54	242T	13.86	13.72	
	5310	62	242T	13.91	13.88	
2C	5510	102	242T	13.82	13.85	
	5590	118	242T	13.73	13.65	
	5710	142	242T	13.88	13.97	
3	5755	151	242T	13.87	13.62	
	5795	159	242T	13.85	13.93	

40MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
				RU Index		
				65	N/A	N/A
1	5190	38	484T	13.70		
	5230	46	484T	13.99		
2A	5270	54	484T	13.96		
	5310	62	484T	13.82		
2C	5510	102	484T	13.67		
	5590	118	484T	13.65		
	5710	142	484T	13.99		
3	5755	151	484T	13.67		
	5795	159	484T	13.64		

80MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
				RU Index		
				0	18	36
1	5210	42	26T	8.43	8.74	8.46
2A	5290	58	26T	8.99	8.98	8.77
2C	5530	106	26T	8.96	8.94	8.72
	5610	122	26T	8.95	8.86	8.62
	5690	138	26T	8.54	8.75	8.99
3	5775	155	26T	8.93	8.95	8.73

80MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
				RU Index		
				37	44	52
1	5210	42	52T	9.54	9.95	9.88
2A	5290	58	52T	9.68	9.81	9.66
2C	5530	106	52T	9.67	9.71	9.95
	5610	122	52T	9.59	9.89	9.62
	5690	138	52T	9.65	9.59	9.99
3	5775	155	52T	9.45	9.94	9.81

80MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
				RU Index		
				53	56	60
1	5210	42	106T	10.99	10.85	10.65
2A	5290	58	106T	10.90	10.76	10.99
2C	5530	106	106T	10.99	10.92	10.74
	5610	122	106T	10.55	10.79	10.57
	5690	138	106T	10.73	10.59	10.98
3	5775	155	106T	10.99	10.94	10.85

80MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
				RU Index		
				61	62	64
1	5210	42	242T	11.72	11.87	11.80
2A	5290	58	242T	11.57	11.78	11.72
2C	5530	106	242T	11.66	11.81	11.85
	5610	122	242T	11.61	11.73	11.59
	5690	138	242T	11.90	11.54	11.55
3	5775	155	242T	11.68	11.91	11.88

80MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
				RU Index		
				65	66	N/A
1	5210	42	484T	13.80	13.77	
2A	5290	58	484T	13.77	13.75	
2C	5530	106	484T	13.84	13.83	
	5610	122	484T	13.57	13.55	
	5690	138	484T	13.78	13.94	
3	5775	155	484T	13.99	13.54	

80MHz BW

Band	Freq [MHz]	Channel	Tones	Avg Conducted Power (dBm)		
				RU Index		
				67	N/A	N/A
1	5210	42	996T	13.96		
2A	5290	58	996T	13.98		
2C	5530	106	996T	13.98		
	5610	122	996T	13.99		
	5690	138	996T	13.99		
3	5775	155	996T	13.65		

APPENDIX I: PROBE AND DIPOLE CALIBRATION CERTIFICATES

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
Servizio svizzero di taratura
S Swiss Calibration Service

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

Client PC Test

Certificate No: D750V3-1003_Mar20

CALIBRATION CERTIFICATE

Object: D750V3 - SN:1003

Calibration procedure(s): QA CAL-05.v11
Calibration Procedure for SAR Validation Sources between 0.7-3 GHz

Calibration date: March 16, 2020

BN ✓ 04/30/2020

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	03-Apr-19 (No. 217-02892/02893)	Apr-20
Power sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Apr-20
Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-19 (No. 217-02894)	Apr-20
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-19 (No. 217-02895)	Apr-20
Reference Probe EX3DV4	SN: 7349	31-Dec-19 (No. EX3-7349_Dec19)	Dec-20
DAE4	SN: 601	27-Dec-19 (No. DAE4-601_Dec19)	Dec-20

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Feb-19)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-19)	In house check: Oct-20

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: March 16, 2020

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

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%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	42.5 ± 6 %	0.88 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.17 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**8.78 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.43 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**5.77 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.7 ± 6 %	0.96 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.16 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**8.61 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.42 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**5.67 W/kg ± 16.5 % (k=2)**

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	54.9 Ω - 0.1 jΩ
Return Loss	- 26.7 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	51.8 Ω - 2.4 jΩ
Return Loss	- 30.6 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.043 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

DASY5 Validation Report for Head TSL

Date: 16.03.2020

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1003

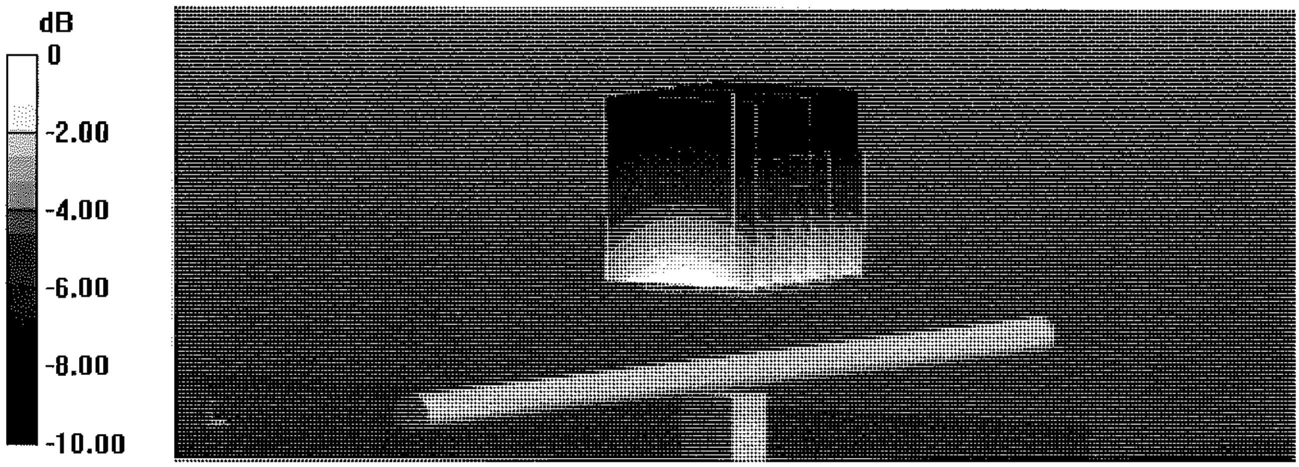
Communication System: UID 0 - CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; $\sigma = 0.88$ S/m; $\varepsilon_r = 42.5$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.07, 10.07, 10.07) @ 750 MHz; Calibrated: 31.12.2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.12.2019
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

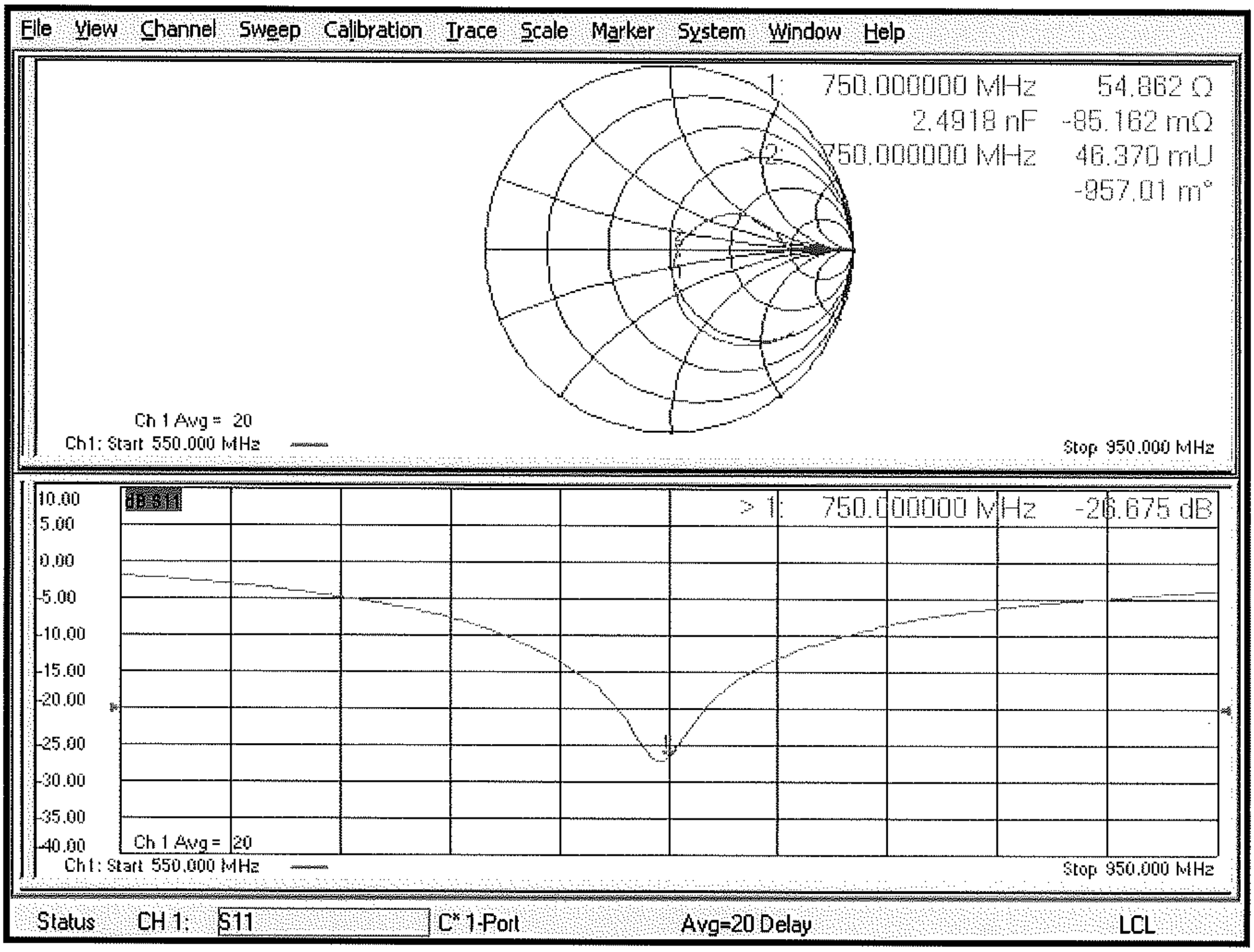
Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 60.72 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 3.27 W/kg
SAR(1 g) = 2.17 W/kg; SAR(10 g) = 1.43 W/kg
Smallest distance from peaks to all points 3 dB below = 16.5 mm
Ratio of SAR at M2 to SAR at M1 = 66.2%
Maximum value of SAR (measured) = 2.90 W/kg



0 dB = 2.90 W/kg = 4.62 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 16.03.2020

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1003

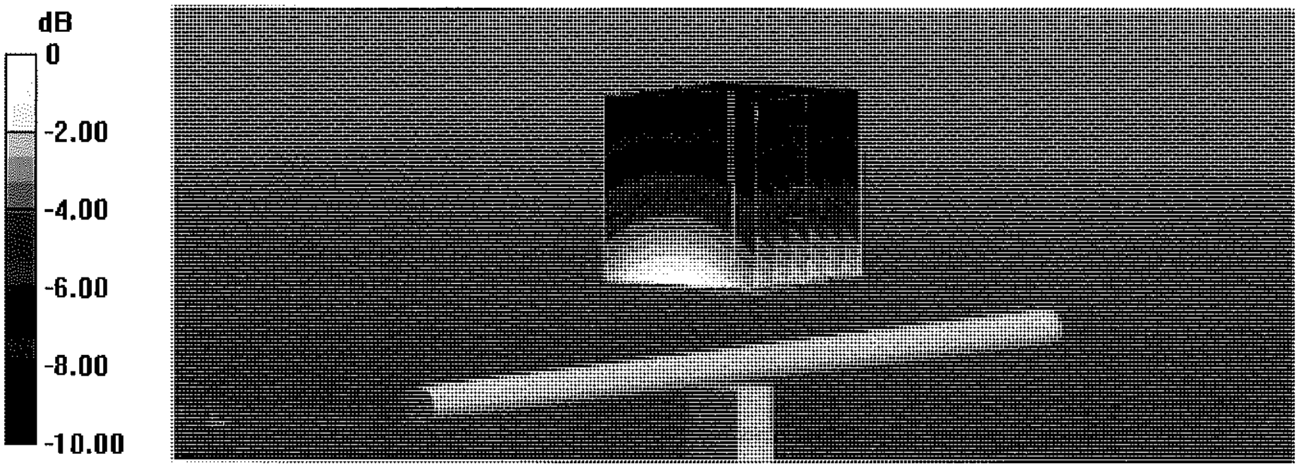
Communication System: UID 0 - CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; σ = 0.96 S/m; ε_r = 54.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.61, 10.61, 10.61) @ 750 MHz; Calibrated: 31.12.2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.12.2019
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

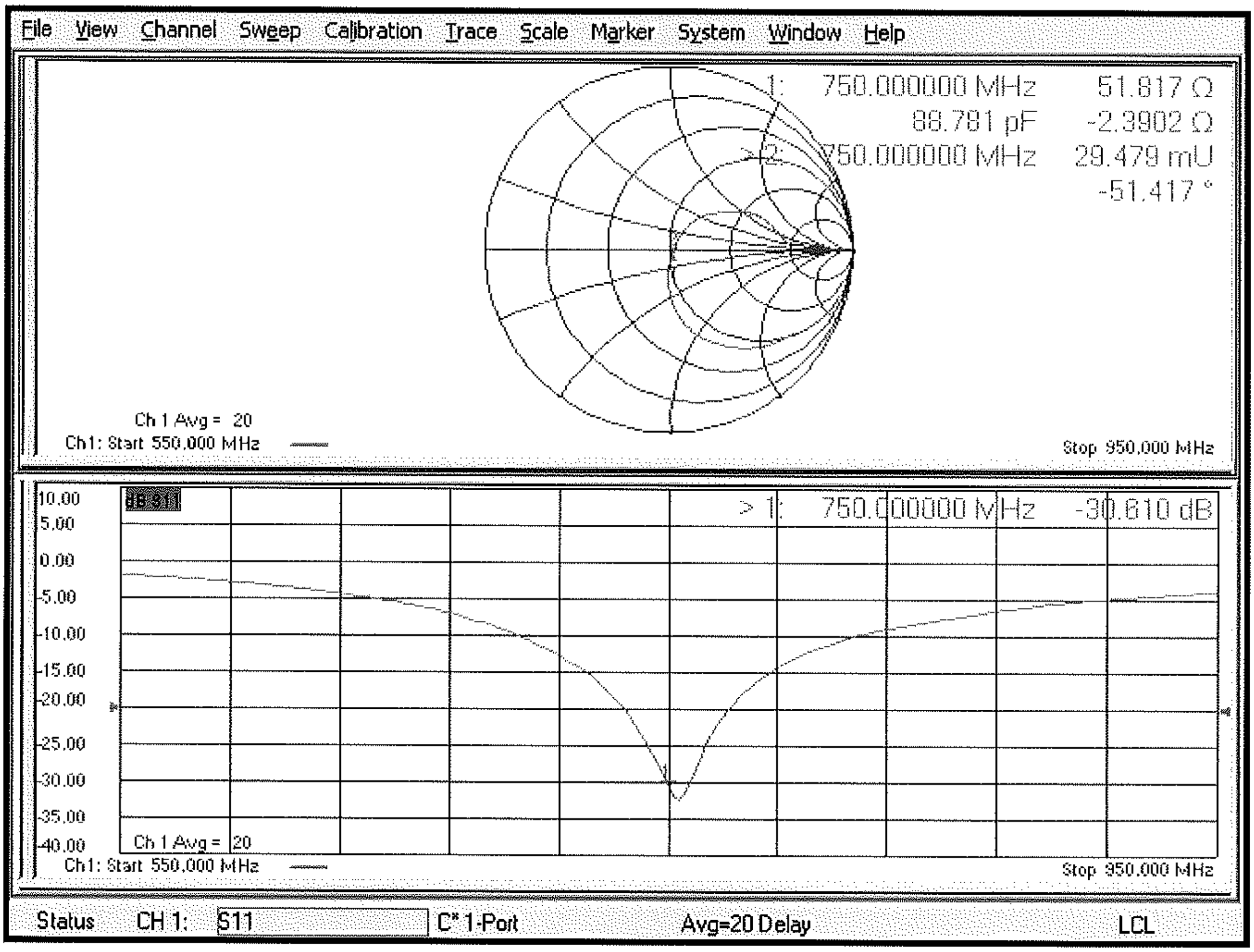
Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.60 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 3.23 W/kg
SAR(1 g) = 2.16 W/kg; SAR(10 g) = 1.42 W/kg
Smallest distance from peaks to all points 3 dB below = 21.2 mm
Ratio of SAR at M2 to SAR at M1 = 66.6%
Maximum value of SAR (measured) = 2.87 W/kg



0 dB = 2.87 W/kg = 4.58 dBW/kg

Impedance Measurement Plot for Body TSL



Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S **Schweizerischer Kalibrierdienst**
C **Service suisse d'étalonnage**
S **Servizio svizzero di taratura**
Swiss Calibration Service

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

Client **PC Test**

Certificate No: D750V3-1054_Mar20

CALIBRATION CERTIFICATE

Object	D750V3 - SN:1054
Calibration procedure(s)	QA CAL-05.v11 Calibration Procedure for SAR Validation Sources between 0.7-3 GHz
Calibration date:	March 11, 2020

BNV 04-30-2020

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	03-Apr-19 (No. 217-02892/02893)	Apr-20
Power sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Apr-20
Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-19 (No. 217-02894)	Apr-20
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-19 (No. 217-02895)	Apr-20
Reference Probe EX3DV4	SN: 7349	31-Dec-19 (No. EX3-7349_Dec19)	Dec-20
DAE4	SN: 601	27-Dec-19 (No. DAE4-601_Dec19)	Dec-20

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Feb-19)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-19)	In house check: Oct-20

	Name	Function	Signature
Calibrated by:	Claudio Leubler	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: March 19, 2020

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

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%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	42.5 ± 6 %	0.88 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.13 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**8.63 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.41 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**5.69 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.7 ± 6 %	0.96 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.14 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**8.53 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.41 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**5.63 W/kg ± 16.5 % (k=2)**

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	53.6 Ω - 1.9 jΩ
Return Loss	- 28.2 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	49.8 Ω - 4.7 jΩ
Return Loss	- 26.6 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.035 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

DASY5 Validation Report for Head TSL

Date: 11.03.2020

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1054

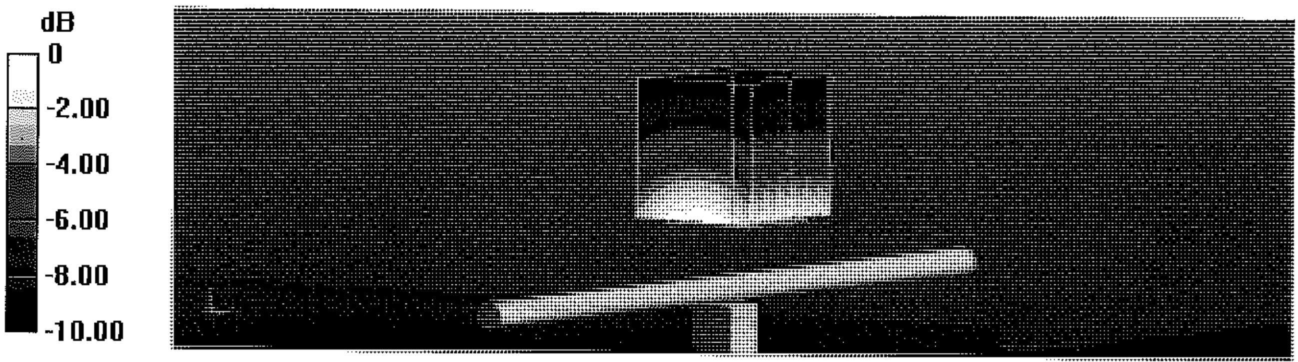
Communication System: UID 0 - CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; $\sigma = 0.88$ S/m; $\varepsilon_r = 42.5$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.07, 10.07, 10.07) @ 750 MHz; Calibrated: 31.12.2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.12.2019
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

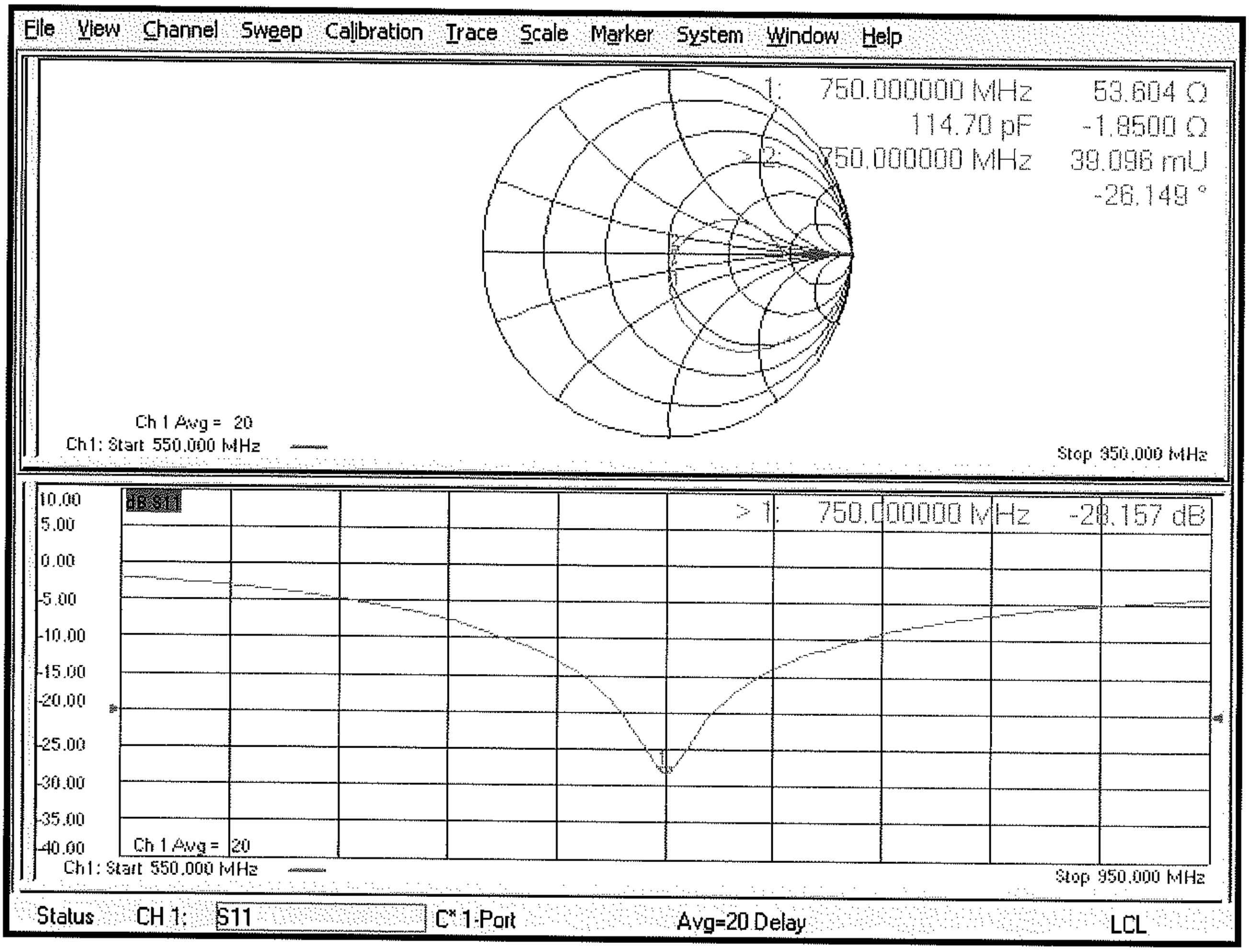
Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 59.98 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 3.19 W/kg
SAR(1 g) = 2.13 W/kg; SAR(10 g) = 1.41 W/kg
Smallest distance from peaks to all points 3 dB below = 17.1 mm
Ratio of SAR at M2 to SAR at M1 = 66.8%
Maximum value of SAR (measured) = 2.82 W/kg



0 dB = 2.82 W/kg = 4.50 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 11.03.2020

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1054

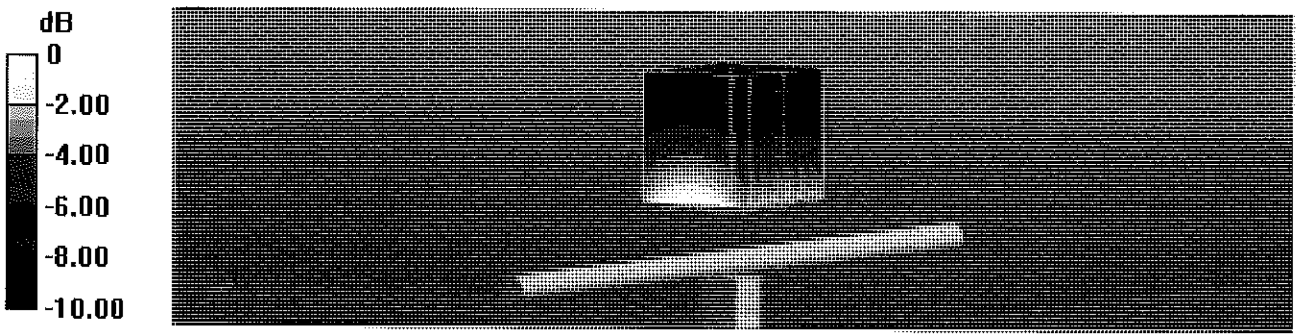
Communication System: UID 0 - CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; $\sigma = 0.96$ S/m; $\varepsilon_r = 54.7$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.61, 10.61, 10.61) @ 750 MHz; Calibrated: 31.12.2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.12.2019
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

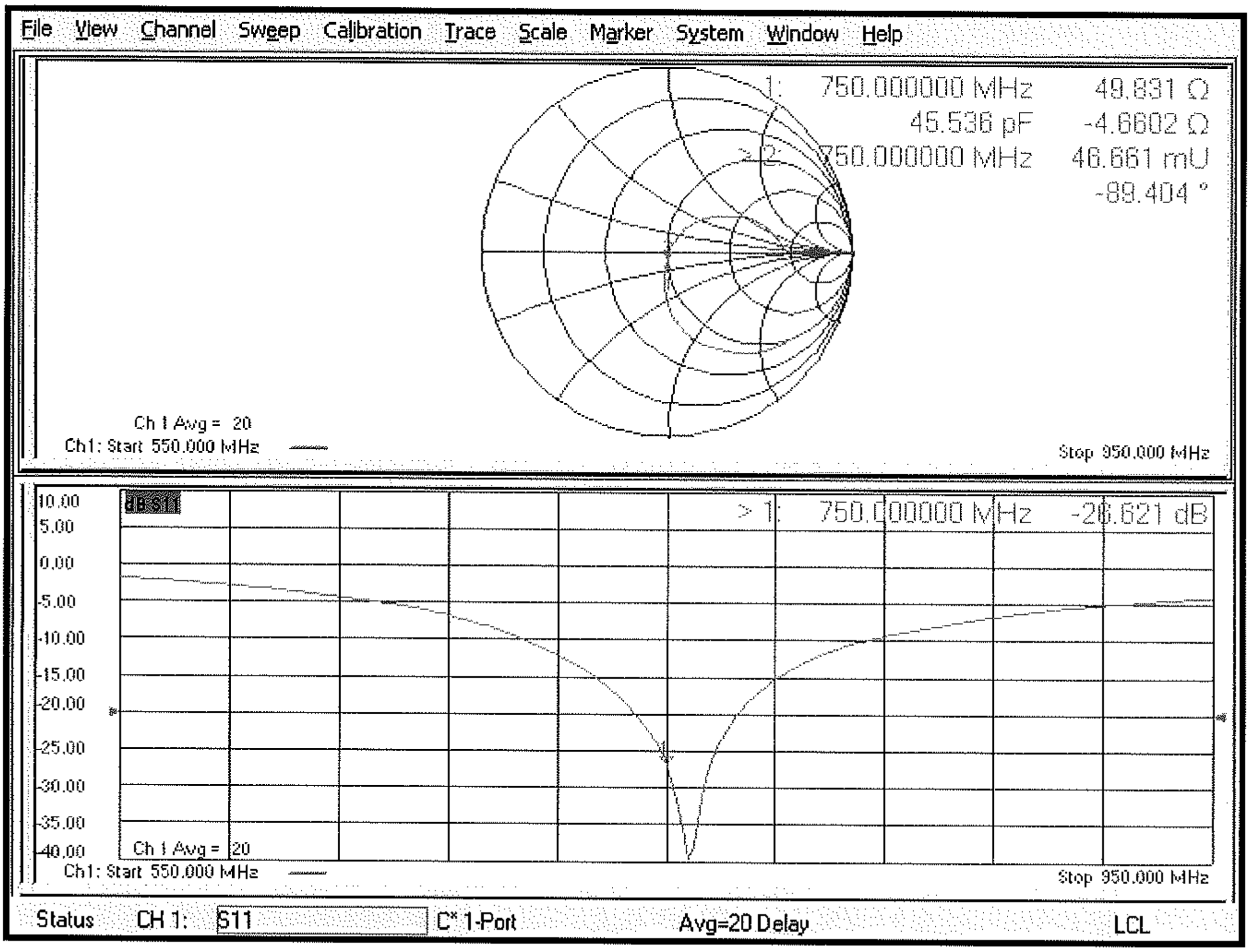
Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.15 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 3.22 W/kg
SAR(1 g) = 2.14 W/kg; SAR(10 g) = 1.41 W/kg
Smallest distance from peaks to all points 3 dB below = 16.1 mm
Ratio of SAR at M2 to SAR at M1 = 66.7%
Maximum value of SAR (measured) = 2.85 W/kg



0 dB = 2.85 W/kg = 4.55 dBW/kg

Impedance Measurement Plot for Body TSL



Appendix: Transfer Calibration at Four Validation Locations on SAM Head[1]

Evaluation Condition

Phantom	SAM Head Phantom	For usage with cSAR3D**V2**-R/L

SAR result with SAM Head (Top ≅ C0)

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR for nominal Head TSL parameters	normalized to 1W	**7.66 W/kg ± 17.5 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR for nominal Head TSL parameters	normalized to 1W	**5.14 W/kg ± 16.9 % (k=2)**

SAR result with SAM Head (Mouth ≅ F90)

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR for nominal Head TSL parameters	normalized to 1W	**8.42 W/kg ± 17.5 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR for nominal Head TSL parameters	normalized to 1W	**5.69 W/kg ± 16.9 % (k=2)**

SAR result with SAM Head (Neck ≅ H0)

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR for nominal Head TSL parameters	normalized to 1W	**7.89 W/kg ± 17.5 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR for nominal Head TSL parameters	normalized to 1W	**5.40 W/kg ± 16.9 % (k=2)**

SAR result with SAM Head (Ear ≅ D90)

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR for nominal Head TSL parameters	normalized to 1W	**6.82 W/kg ± 17.5 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR for nominal Head TSL parameters	normalized to 1W	**4.63 W/kg ± 16.9 % (k=2)**

[1] Additional assessments outside the current scope of SCS 0108

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
Servizio svizzero di taratura
S Swiss Calibration Service

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**

Client PC Test

Certificate No: D750V3-1161_Oct18

CALIBRATION CERTIFICATE

Object: D750V3 - SN:1161

Calibration procedure(s): QA CAL-05.v10
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: October 19, 2018

BN ✓ 10-30-2018

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

BN ✓ 10-20-2019

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-19
Reference Probe EX3DV4	SN: 7349	30-Dec-17 (No. EX3-7349_Dec17)	Dec-18
DAE4	SN: 601	04-Oct-18 (No. DAE4-601_Oct18)	Oct-19

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

	Name	Function	Signature
Calibrated by:	Manu Seitz	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: October 22, 2018

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

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%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.8 ± 6 %	0.89 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.02 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**8.03 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.32 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**5.26 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.1 ± 6 %	0.96 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.11 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**8.43 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.39 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**5.55 W/kg ± 16.5 % (k=2)**

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	55.6 Ω - 1.9 jΩ
Return Loss	- 25.0 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	50.6 Ω - 4.2 jΩ
Return Loss	- 27.6 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.032 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	November 19, 2015

DASY5 Validation Report for Head TSL

Date: 19.10.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1161

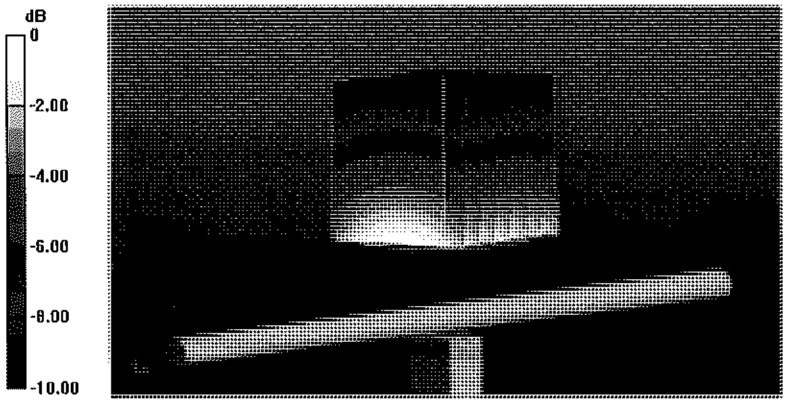
Communication System: UID 0 - CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; σ = 0.89 S/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.22, 10.22, 10.22) @ 750 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

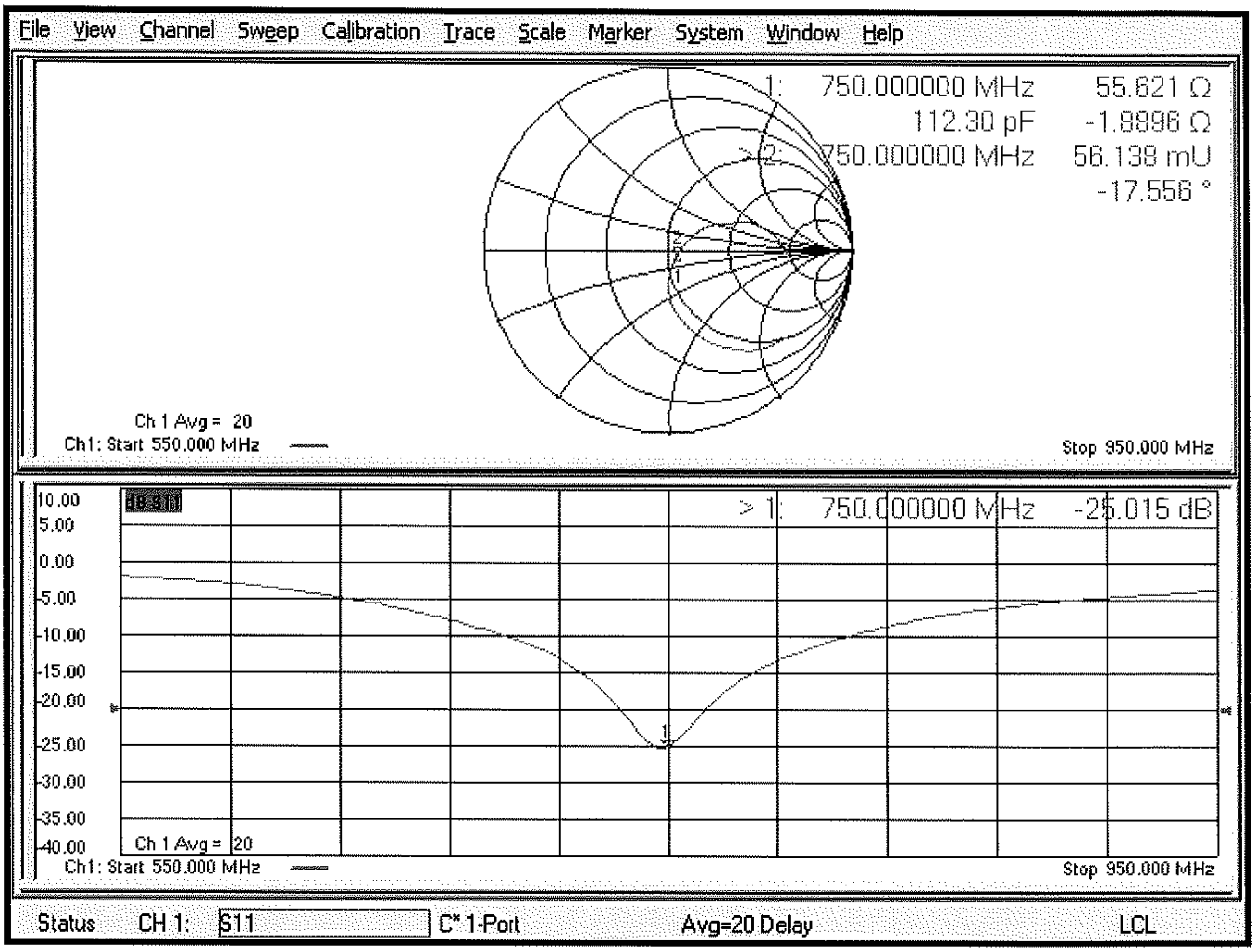
Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 58.51 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 3.04 W/kg
SAR(1 g) = 2.02 W/kg; SAR(10 g) = 1.32 W/kg
Maximum value of SAR (measured) = 2.70 W/kg



0 dB = 2.70 W/kg = 4.31 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 19.10.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1161

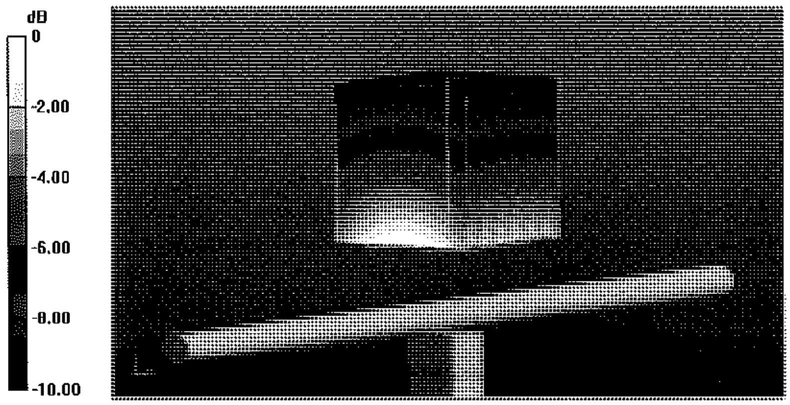
Communication System: UID 0 - CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; σ = 0.96 S/m; ε_r = 55.1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.19, 10.19, 10.19) @ 750 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

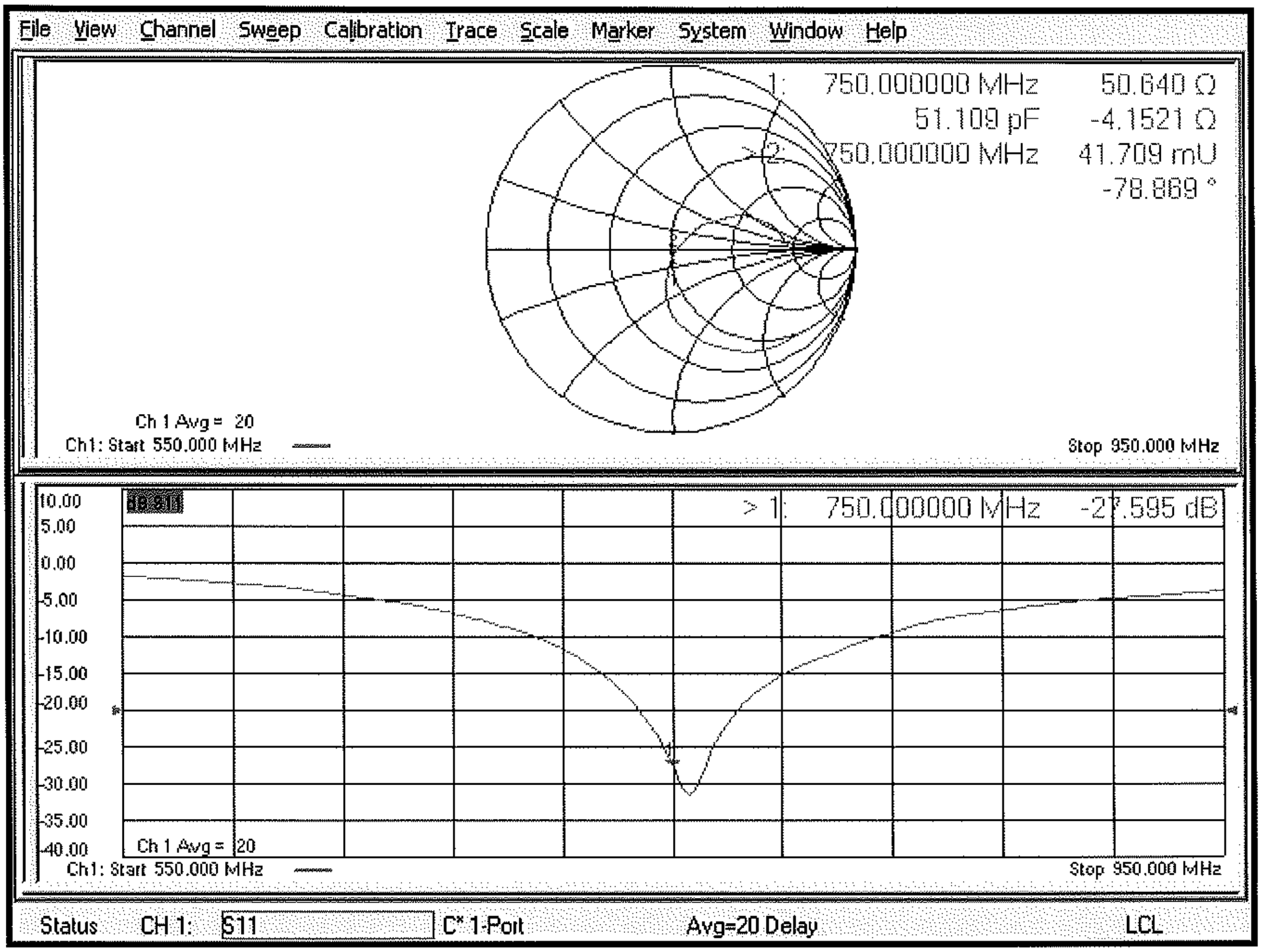
Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.57 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 3.18 W/kg
SAR(1 g) = 2.11 W/kg; SAR(10 g) = 1.39 W/kg
Maximum value of SAR (measured) = 2.83 W/kg



0 dB = 2.83 W/kg = 4.52 dBW/kg

Impedance Measurement Plot for Body TSL



Certification of Calibration

Object	D750V3 – SN:1161
Calibration procedure(s)	Procedure for Calibration Extension for SAR Dipoles.
Extended Calibration date:	October 18, 2019
Description:	SAR Validation Dipole at 750 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Control Company	4040	Therm./Clock/Humidity Monitor	6/29/2019	Biennial	6/29/2021	192291470
Control Company	4352	Ultra Long Stem Thermometer	8/2/2018	Biennial	8/2/2020	181334684
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433971
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	7/2/2019	Annual	7/2/2020	MY53401181
Rohde & Schwarz	ZNLE6	Vector Network Analyzer	10/11/2019	Annual	10/11/2020	101307
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
SPEAG	DAKS-3.5	Portable Dielectric Assessment Kit	8/13/2019	Annual	8/13/2020	1041
Anritsu	MA2411B	Pulse Power Sensor	8/14/2019	Annual	8/14/2020	1315051
Anritsu	MA2411B	Pulse Power Sensor	8/8/2019	Annual	8/8/2020	1339008
Anritsu	ML2495A	Power Meter	11/20/2018	Annual	11/20/2019	1039008
Agilent	N5182A	MXG Vector Signal Generator	8/19/2019	Annual	8/19/2020	MY47420837
Seekonk	NC-100	Torque Wrench	5/9/2018	Biennial	5/9/2020	22217
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
MiniCircuits	ZHDC-16-63-S+	Bidirectional Coupler	CBT	N/A	CBT	N/A
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
SPEAG	EX3DV4	SAR Probe	4/24/2019	Annual	4/24/2020	7357
SPEAG	EX3DV4	SAR Probe	7/16/2019	Annual	7/16/2020	7410
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2019	Annual	7/11/2020	1322
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/18/2019	Annual	4/18/2020	1407

Note: CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator) to determine the losses of the measurement path.

Measurement Uncertainty = ±23% (k=2)

	Name	Function	Signature
Calibrated By:	Brodie Halbfoster	Team Lead Engineer	BRODIE HALBFOSTER
Approved By:	Kaitlin O’Keefe	Senior Technical Manager	KOK

DIPOLE CALIBRATION EXTENSION

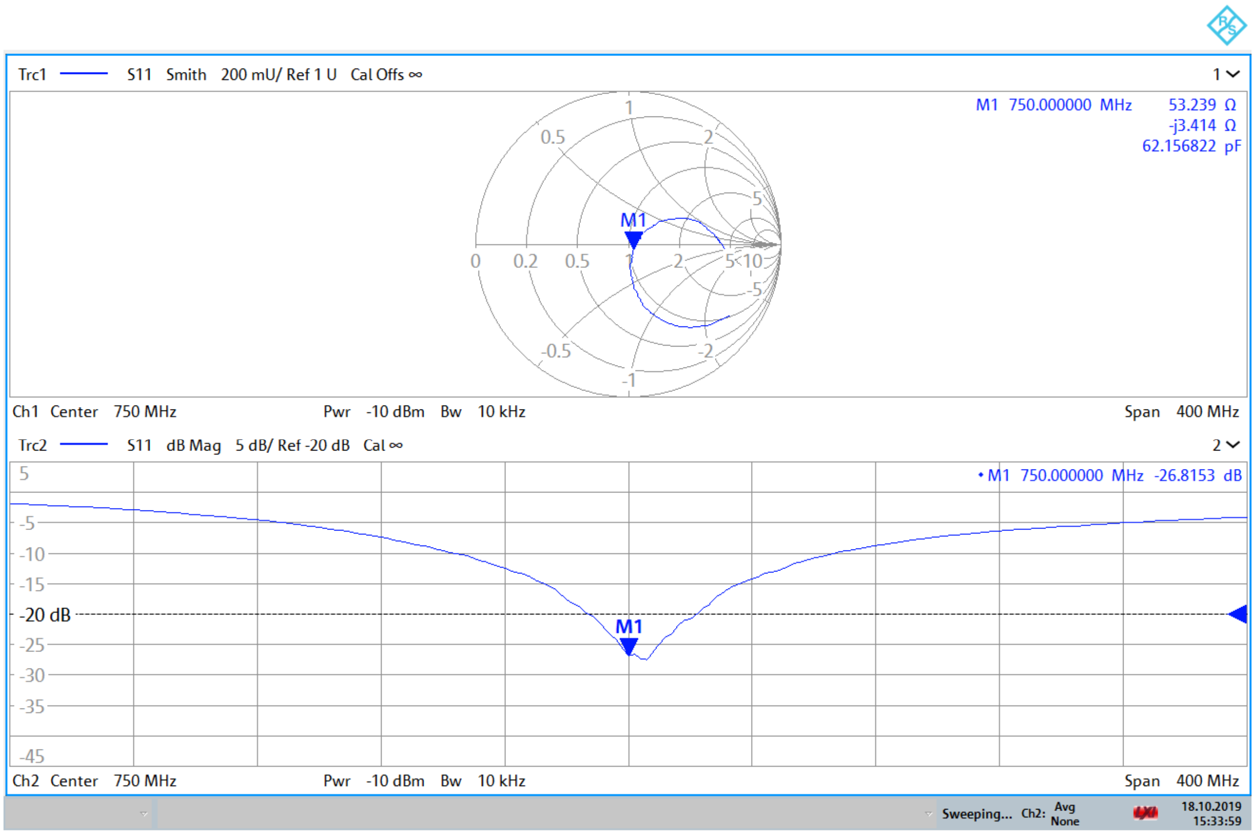
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 23.0 dBm	Measured Head SAR (1g) W/kg @ 23.0 dBm	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 23.0 dBm	Measured Head SAR (10g) W/kg @ 23.0 dBm	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary	Measured Impedance Head (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
10/19/2018	10/18/2019	1.032	1.61	1.64	2.12%	1.05	1.08	2.66%	55.6	53.2	2.4	-1.9	-3.4	1.5	-25	-26.8	-7.30%	PASS
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Body (1g) W/kg @ 23.0 dBm	Measured Body SAR (1g) W/kg @ 23.0 dBm	Deviation 1g (%)	Certificate SAR Target Body (10g) W/kg @ 23.0 dBm	Measured Body SAR (10g) W/kg @ 23.0 dBm	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary	Measured Impedance Body (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
10/19/2018	10/18/2019	1.032	1.69	1.76	4.39%	1.11	1.17	5.41%	50.6	50	0.6	-4.2	-4	0.2	-27.6	-28.1	-1.60%	PASS

Impedance & Return-Loss Measurement Plot for Head TSL



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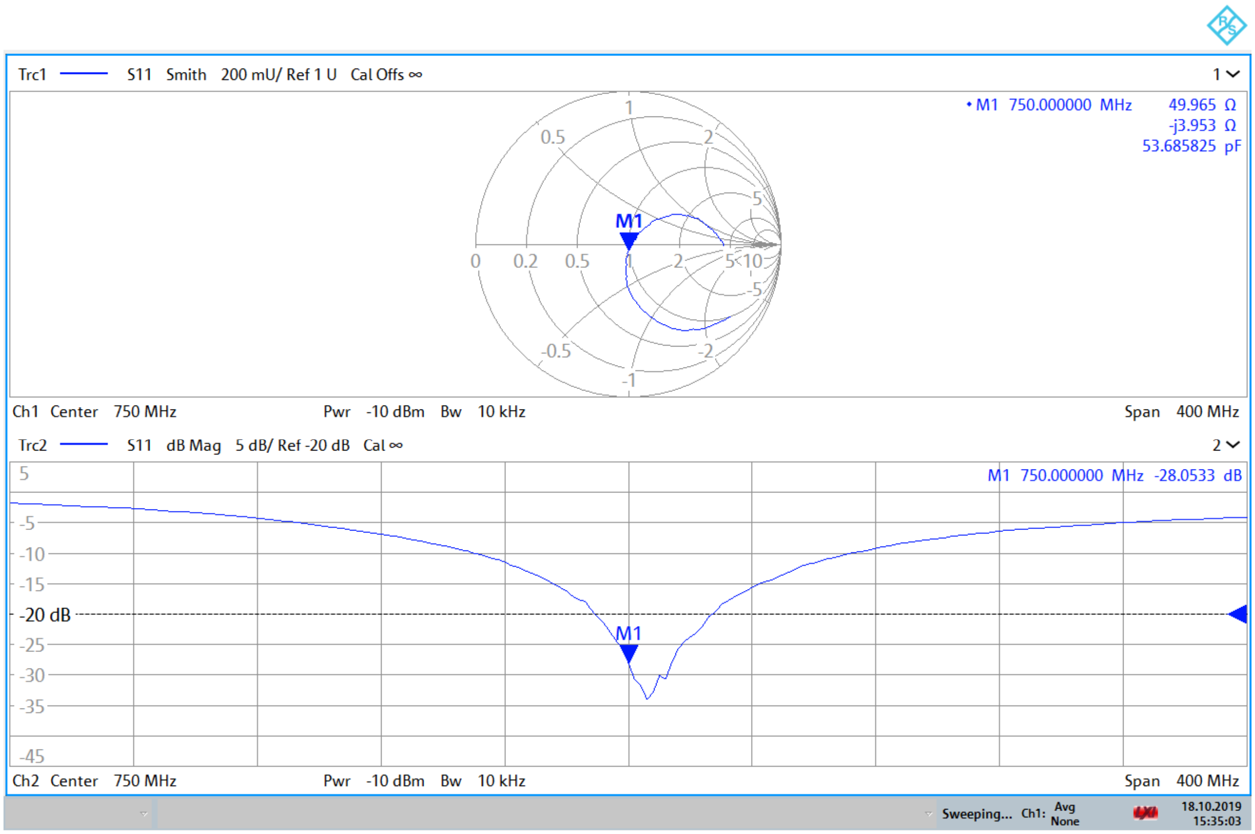
Impedance & Return-Loss Measurement Plot for Body TSL



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Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
Servizio svizzero di taratura
S Swiss Calibration Service

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

Client PC Test

Certificate No: D835V2-4d047_Mar19

CALIBRATION CERTIFICATE

Object	D835V2 - SN:4d047
Calibration procedure(s)	QA CAL-05.v11 Calibration Procedure for SAR Validation Sources between 0.7-3 GHz
Calibration date:	March 13, 2019

BN✓ 04-12-2019
BN✓ Extended 04-30-2020

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-19
Reference Probe EX3DV4	SN: 7349	31-Dec-18 (No. EX3-7349_Dec18)	Dec-19
DAE4	SN: 601	04-Oct-18 (No. DAE4-601_Oct18)	Oct-19

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	07-Oct-15 (in house check Feb-19)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

	Name	Function	Signature
Calibrated by:	Manu Seitz	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: March 13, 2019

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

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%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	41.9 ± 6 %	0.91 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.37 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**9.42 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.54 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**6.13 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.3 ± 6 %	1.01 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.45 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**9.47 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.61 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**6.27 W/kg ± 16.5 % (k=2)**

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	51.4 Ω - 2.6 jΩ
Return Loss	- 30.7 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.8 Ω - 6.1 jΩ
Return Loss	- 22.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.387 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

DASY5 Validation Report for Head TSL

Date: 13.03.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d047

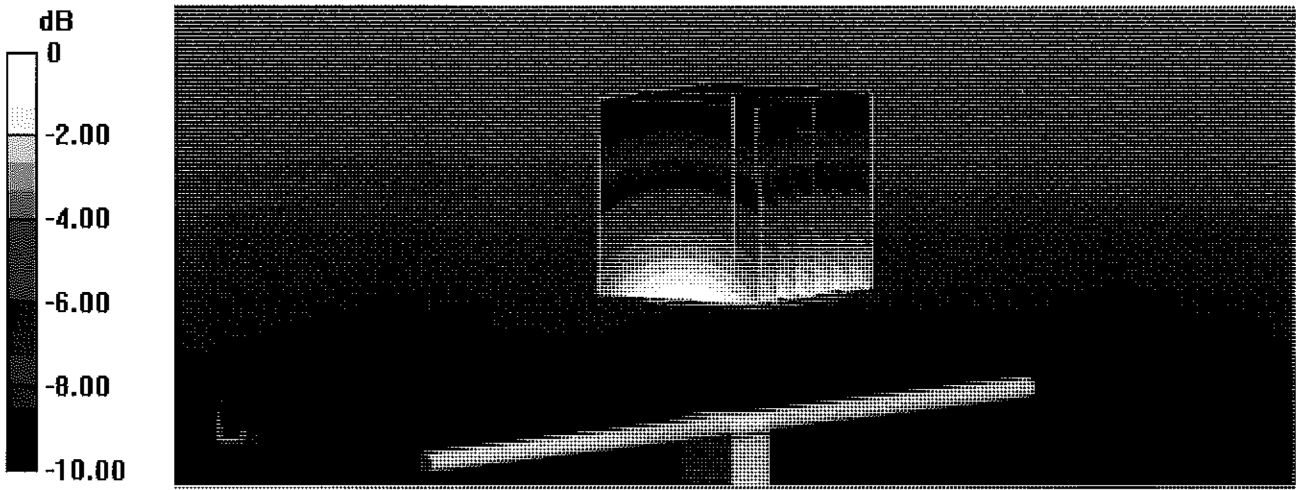
Communication System: UID 0 - CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; σ = 0.91 S/m; ε_r = 41.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10, 10, 10) @ 835 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

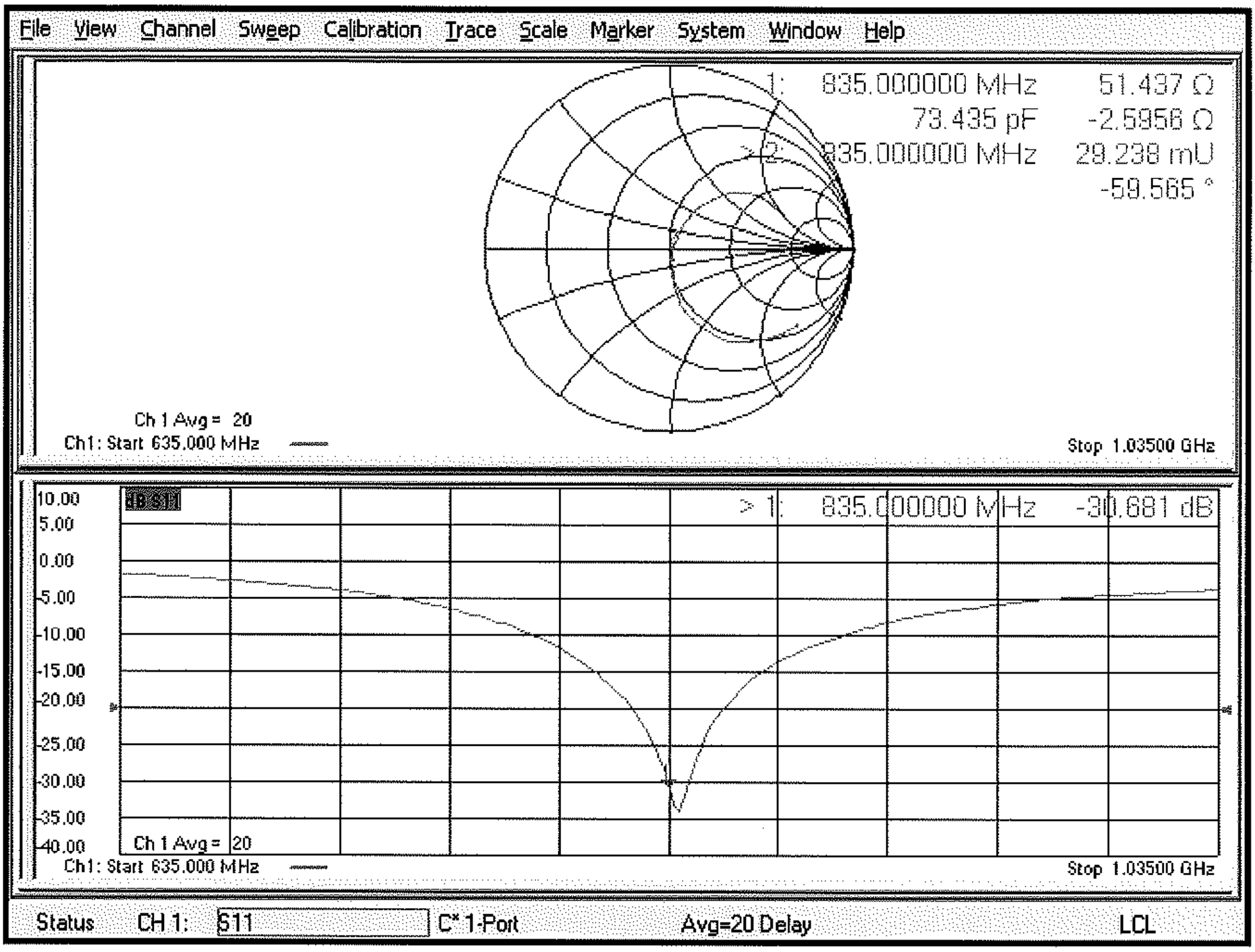
Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 62.48 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 3.60 W/kg
SAR(1 g) = 2.37 W/kg; SAR(10 g) = 1.54 W/kg
Maximum value of SAR (measured) = 3.18 W/kg



0 dB = 3.18 W/kg = 5.02 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 13.03.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d047

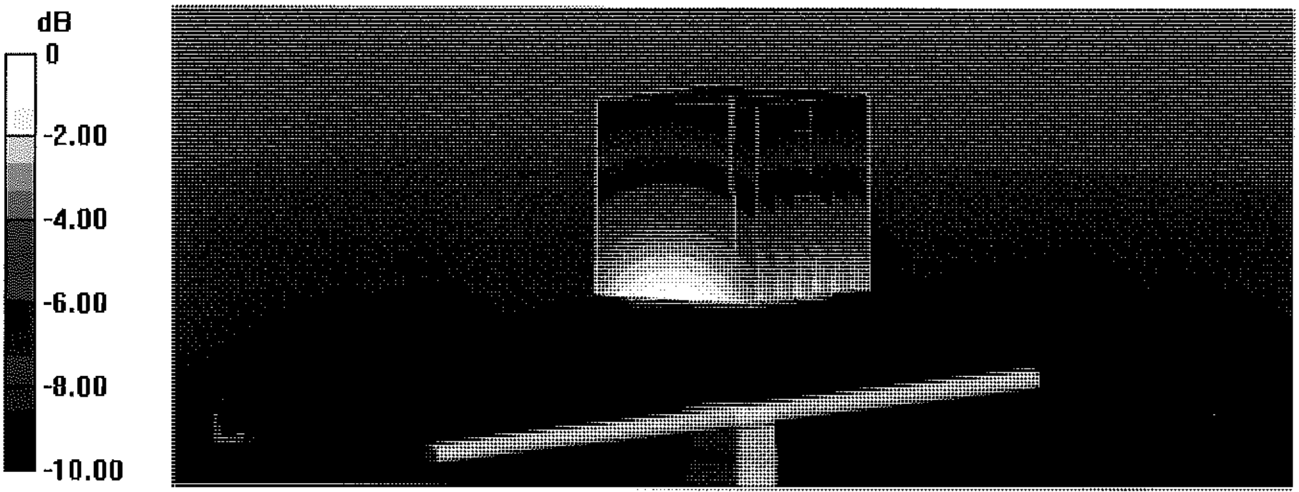
Communication System: UID 0 - CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; σ = 1.01 S/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.15, 10.15, 10.15) @ 835 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

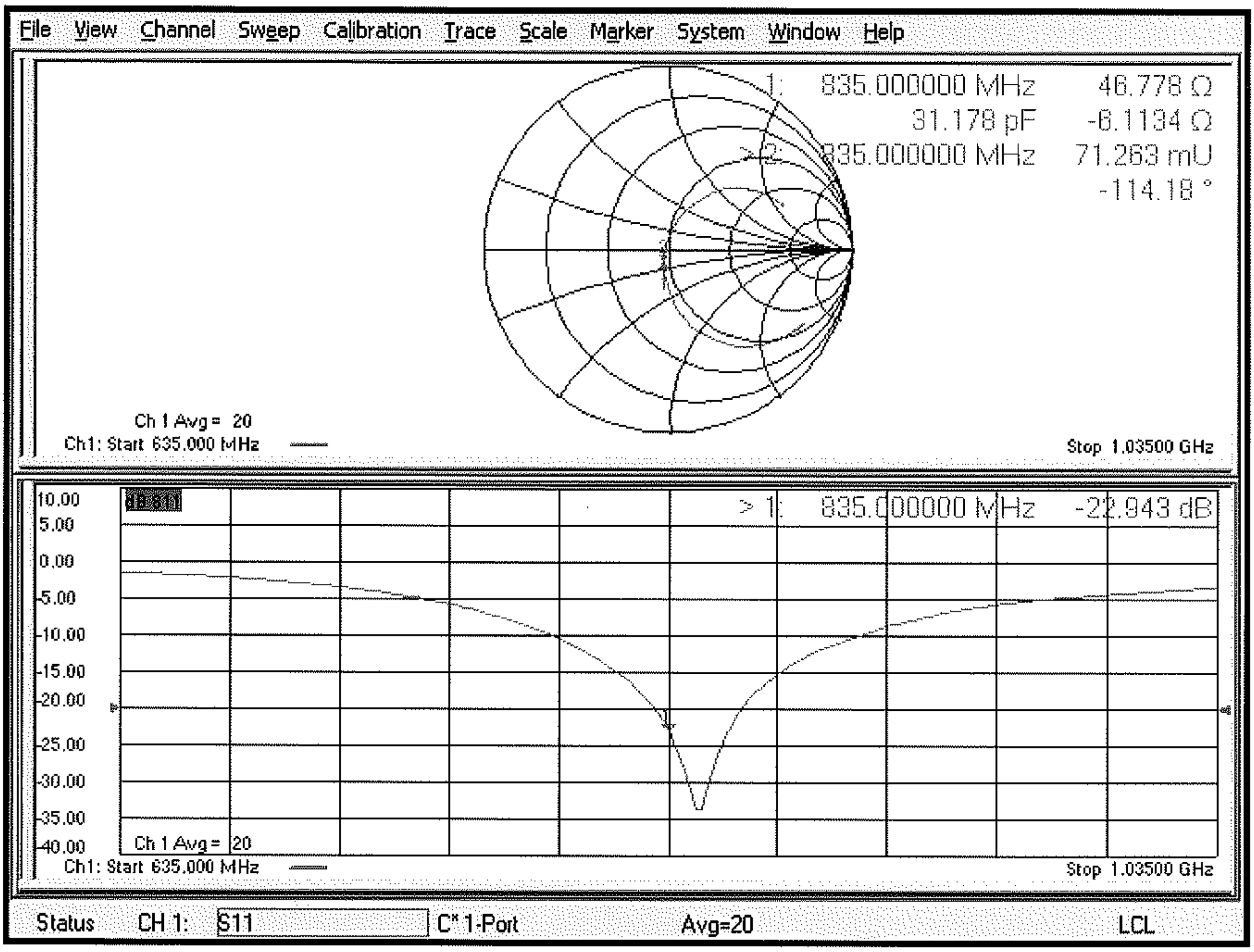
Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 60.49 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 3.58 W/kg
SAR(1 g) = 2.45 W/kg; SAR(10 g) = 1.61 W/kg
Maximum value of SAR (measured) = 3.23 W/kg



0 dB = 3.23 W/kg = 5.09 dBW/kg

Impedance Measurement Plot for Body TSL



PCTEST
7185 Oakland Mills Road, Columbia, MD 21046 USA
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http://www.pctest.com

Certification of Calibration

Object	D835V2 – SN: 4d047
Calibration procedure(s)	Procedure for Calibration Extension for SAR Dipoles.
Extension Calibration date:	3/13/2020
Description:	SAR Validation Dipole at 835 MHz

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Control Company	4040	Therm./Clock/Humidity Monitor	6/29/2019	Biennial	6/29/2021	192291470
Control Company	4352	Ultra Long Stem Thermometer	8/2/2018	Biennial	8/2/2020	181334684
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433971
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	7/2/2019	Annual	7/2/2020	MY53401181
Rohde & Schwarz	ZNLE6	Vector Network Analyzer	10/11/2019	Annual	10/11/2020	101307
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
SPEAG	DAKS-3.5	Portable DAK	9/10/2019	Annual	9/10/2020	1045
Anritsu	MA2411B	Pulse Power Sensor	8/14/2019	Annual	8/14/2020	1315051
Anritsu	MA2411B	Pulse Power Sensor	8/8/2019	Annual	8/8/2020	1339008
Anritsu	ML2495A	Power Meter	12/17/2019	Annual	12/17/2020	941001
Agilent	N5182A	MXG Vector Signal Generator	8/19/2019	Annual	8/19/2020	MY47420837
Seekonk	NC-100	Torque Wrench	5/9/2018	Biennial	5/9/2020	22217
MiniCircuits	ZHDC-16-63-S+	Bidirectional Coupler	CBT	N/A	CBT	N/A
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
SPEAG	EX3DV4	SAR Probe	9/19/2019	Annual	9/19/2020	7551
SPEAG	EX3DV4	SAR Probe	1/21/2020	Annual	1/21/2021	7488
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/17/2019	Annual	9/17/2020	1333
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2020	Annual	1/13/2021	1530

Measurement Uncertainty = ±23% (k=2)

	Name	Function	Signature
Calibrated By:	Brodie Halbfoster	Test Engineer	BRODIE HALBFOSTER
Approved By:	Kaitlin O'Keefe	Senior Technical Manager	KOK

DIPOLE CALIBRATION EXTENSION

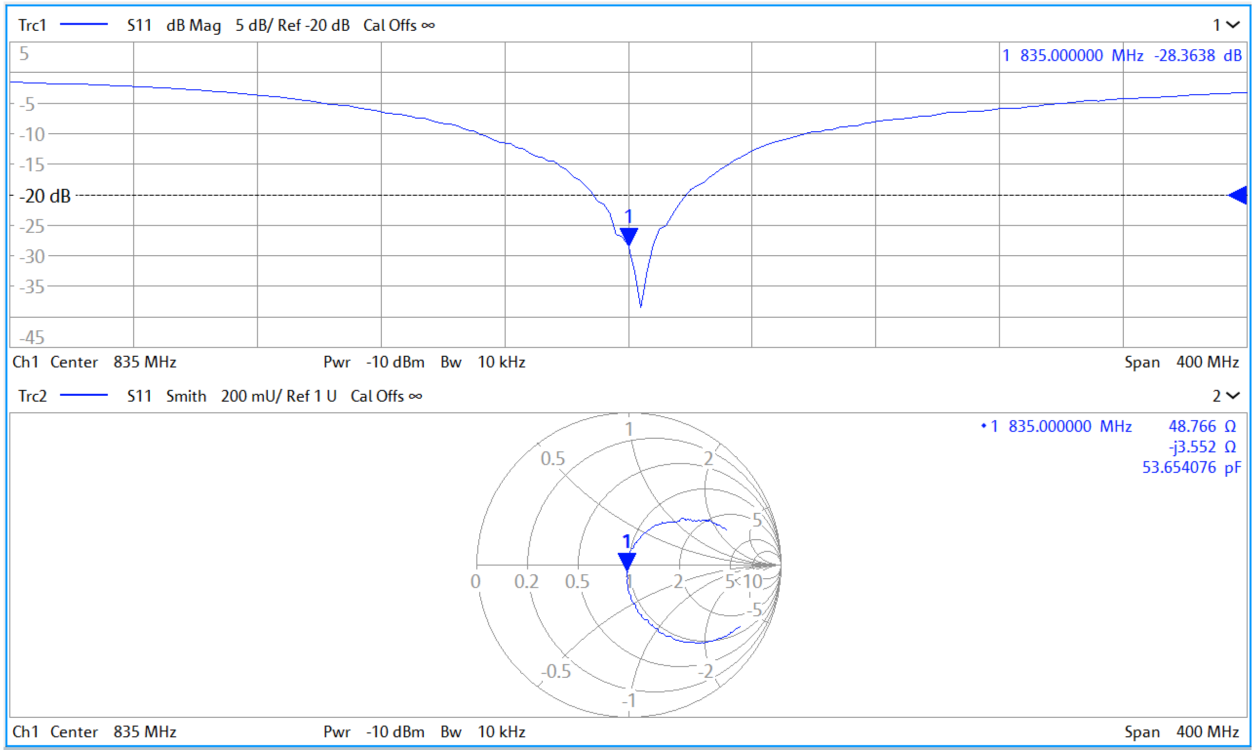
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

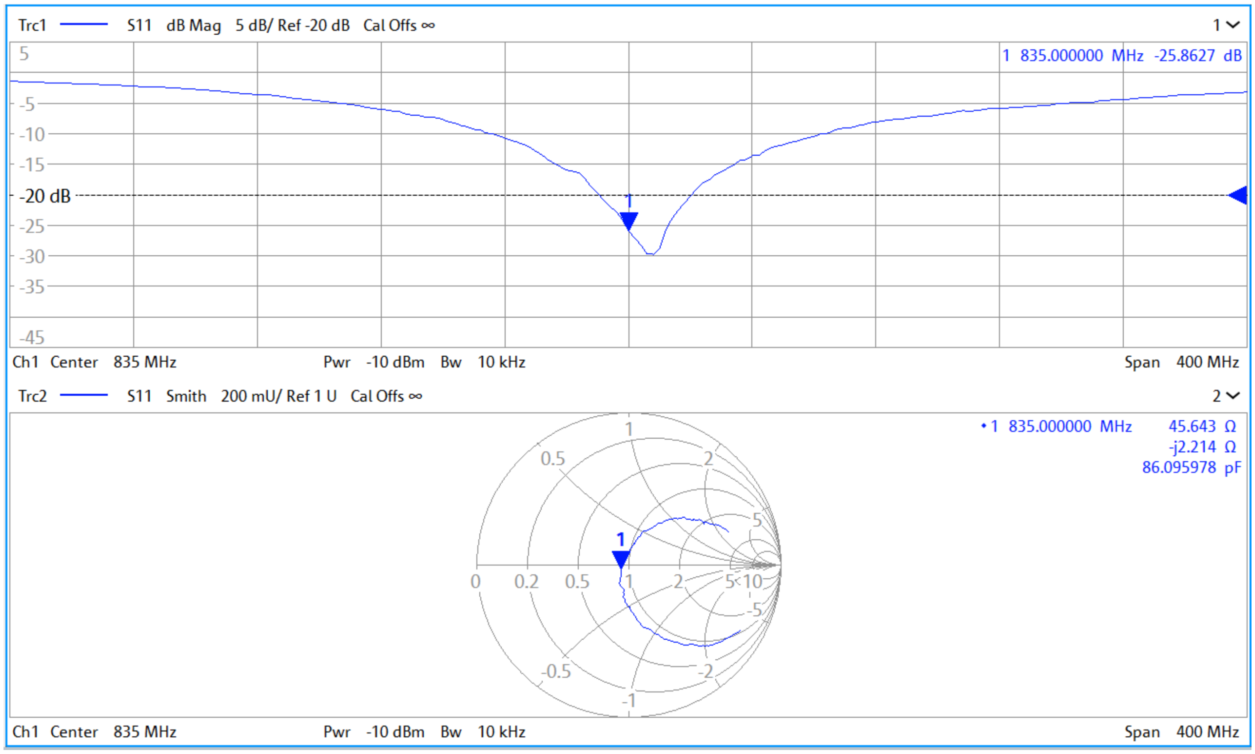
The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 20.0 dBm	Measured Head SAR (1g) W/kg @ 20.0 dBm	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 20.0 dBm	Measured Head SAR (10g) W/kg @ 20.0 dBm	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary	Measured Impedance Head (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
3/13/2019	3/13/2020	1.387	1.884	1.87	-0.74%	1.226	1.22	-0.49%	51.4	48.8	2.6	-2.6	-3.6	1.0	-30.7	-28.4	7.60%	PASS
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Body (1g) W/kg @ 20.0 dBm	Measured Body SAR (1g) W/kg @ 20.0 dBm	Deviation 1g (%)	Certificate SAR Target Body (10g) W/kg @ 20.0 dBm	Measured Body SAR (10g) W/kg @ 20.0 dBm	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary	Measured Impedance Body (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
3/13/2019	3/13/2020	1.387	1.894	1.91	0.84%	1.254	1.26	0.48%	46.8	45.6	1.2	-6.1	-2.2	3.9	-22.9	-25.9	-12.90%	PASS

Impedance & Return-Loss Measurement Plot for Head TSL



Impedance & Return-Loss Measurement Plot for Body TSL



Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S **Schweizerischer Kalibrierdienst**
C **Service suisse d'étalonnage**
S **Servizio svizzero di taratura**
Swiss Calibration Service

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

Client **PC Test**

Certificate No: D835V2-4d132_Jan19

CALIBRATION CERTIFICATE

Object	D835V2 - SN:4d132
Calibration procedure(s)	QA CAL-05.v11 Calibration Procedure for SAR Validation Sources between 0.7-3 GHz
Calibration date:	January 22, 2019

BN ✓ 02/06/2019

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-19
Reference Probe EX3DV4	SN: 7349	31-Dec-18 (No. EX3-7349_Dec18)	Dec-19
DAE4	SN: 601	04-Oct-18 (No. DAE4-601_Oct18)	Oct-19

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: January 22, 2019

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

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%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5.0 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	41.3 ± 6 %	0.92 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.44 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**9.59 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.58 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**6.23 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.6 ± 6 %	0.99 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.46 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**9.67 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.61 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**6.35 W/kg ± 16.5 % (k=2)**

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	49.6 Ω - 3.6 jΩ
Return Loss	- 28.7 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.4 Ω - 6.2 jΩ
Return Loss	- 23.2 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.387 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

Appendix (Additional assessments outside the scope of SCS 0108)

Measurement Conditions

DASY system configuration, as far as not given on page 1 and 3.

Phantom	SAM Head Phantom	For usage with cSAR3DV2-R/L

SAR result with SAM Head (Top)

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.35 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**9.38 W/kg ± 17.5 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.57 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**6.26 W/kg ± 16.9 % (k=2)**

SAR result with SAM Head (Mouth)

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.47 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**9.86 W/kg ± 17.5 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.65 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**6.58 W/kg ± 16.9 % (k=2)**

SAR result with SAM Head (Neck)

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.36 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**9.42 W/kg ± 17.5 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.60 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**6.38 W/kg ± 16.9 % (k=2)**

SAR result with SAM Head (Ear)

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.02 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**8.06 W/kg ± 17.5 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.36 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**5.42 W/kg ± 16.9 % (k=2)**

DASY5 Validation Report for Head TSL

Date: 17.01.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d132

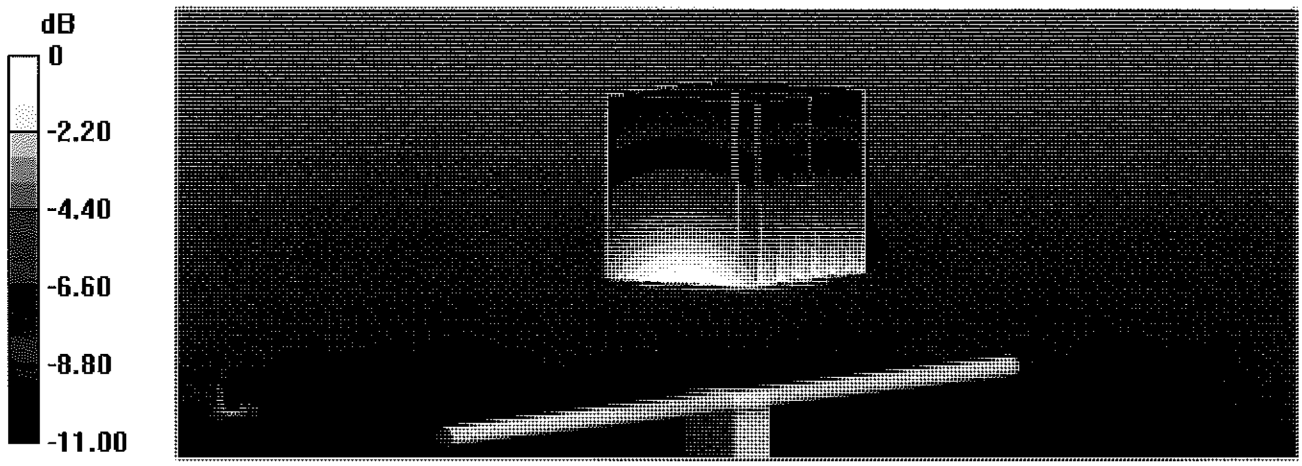
Communication System: UID 0 - CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; σ = 0.92 S/m; ε_r = 41.3; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10, 10, 10) @ 835 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

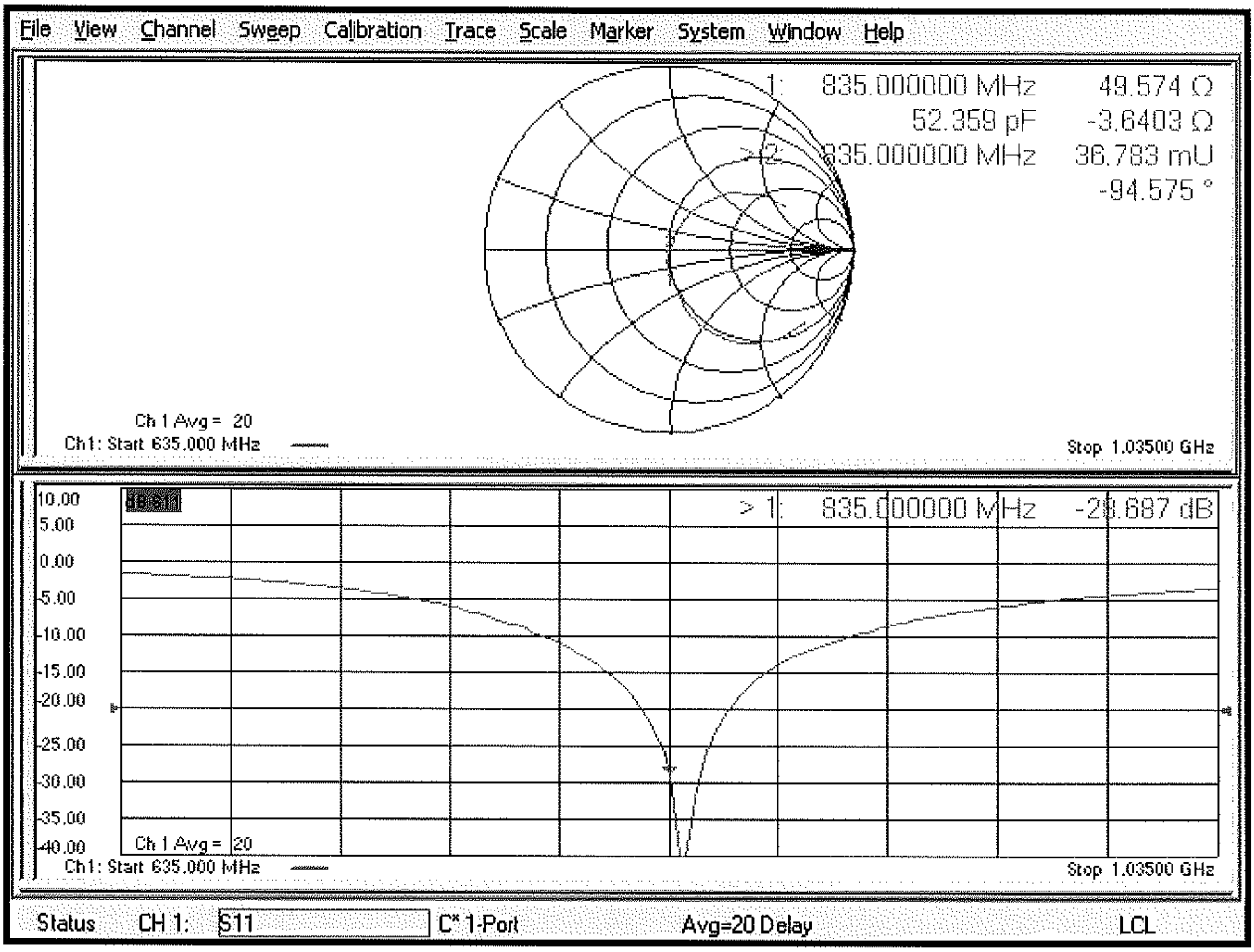
Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.24 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 3.73 W/kg
SAR(1 g) = 2.44 W/kg; SAR(10 g) = 1.58 W/kg
Maximum value of SAR (measured) = 3.28 W/kg



0 dB = 3.28 W/kg = 5.16 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 17.01.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d132

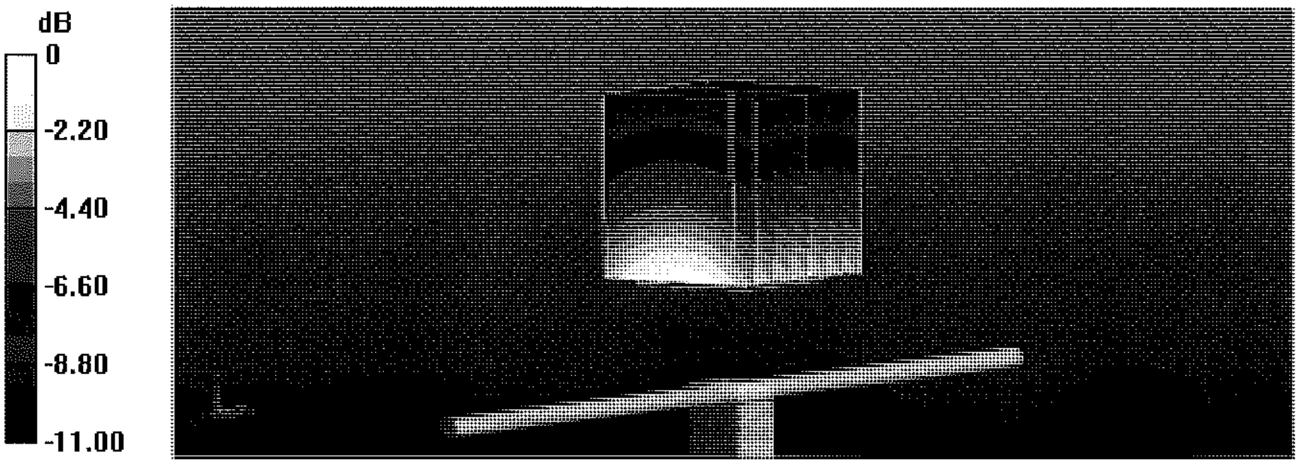
Communication System: UID 0 - CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; σ = 0.99 S/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.15, 10.15, 10.15) @ 835 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

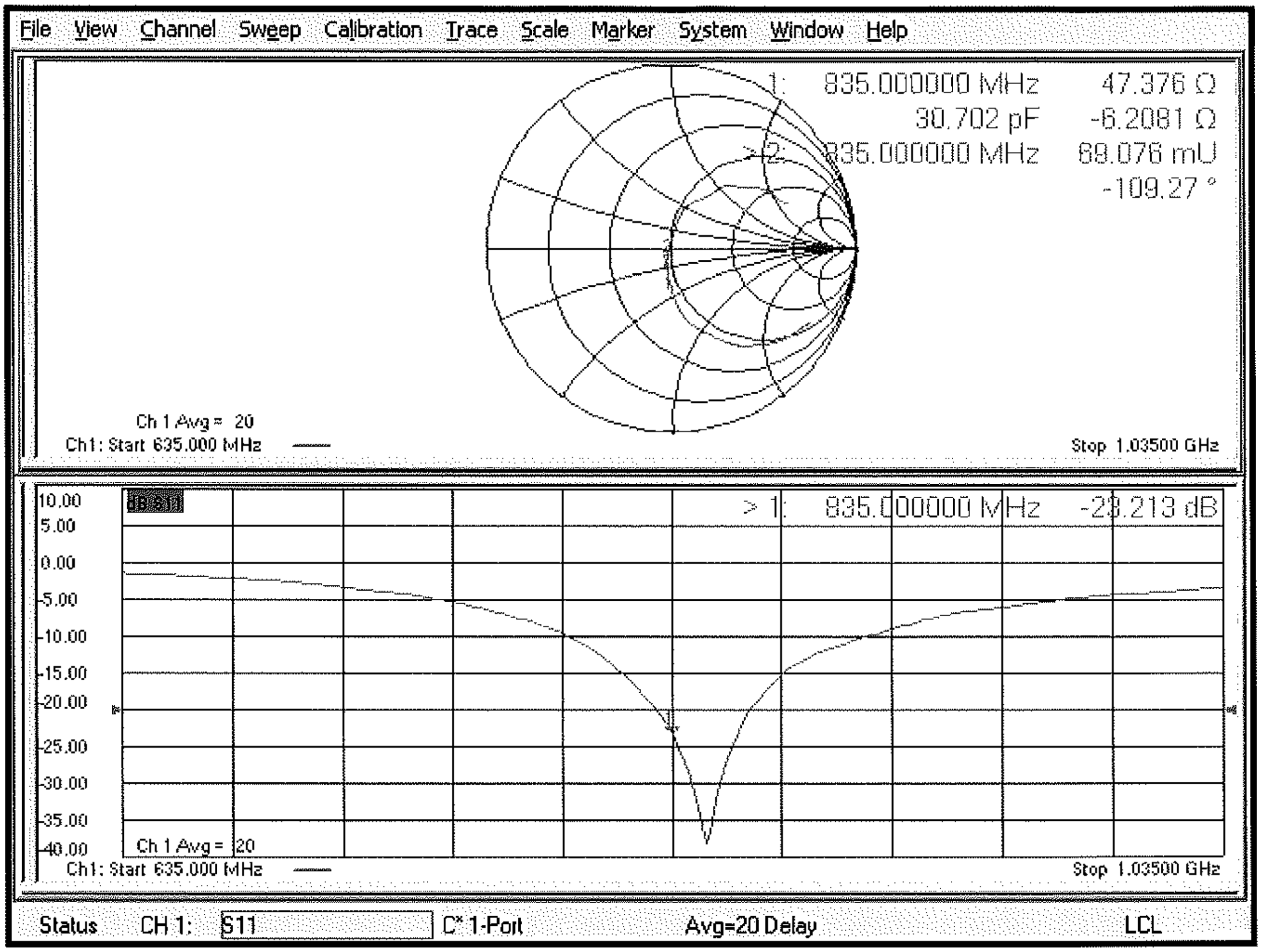
Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 63.32 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 3.64 W/kg
SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.61 W/kg
Maximum value of SAR (measured) = 3.26 W/kg



0 dB = 3.26 W/kg = 5.13 dBW/kg

Impedance Measurement Plot for Body TSL



DASY5 Validation Report for SAM Head

Date: 22.01.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d132

Communication System: UID 0 - CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; $\sigma = 0.92$ S/m; $\varepsilon_r = 44.4$; $\rho = 1000$ kg/m^3
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

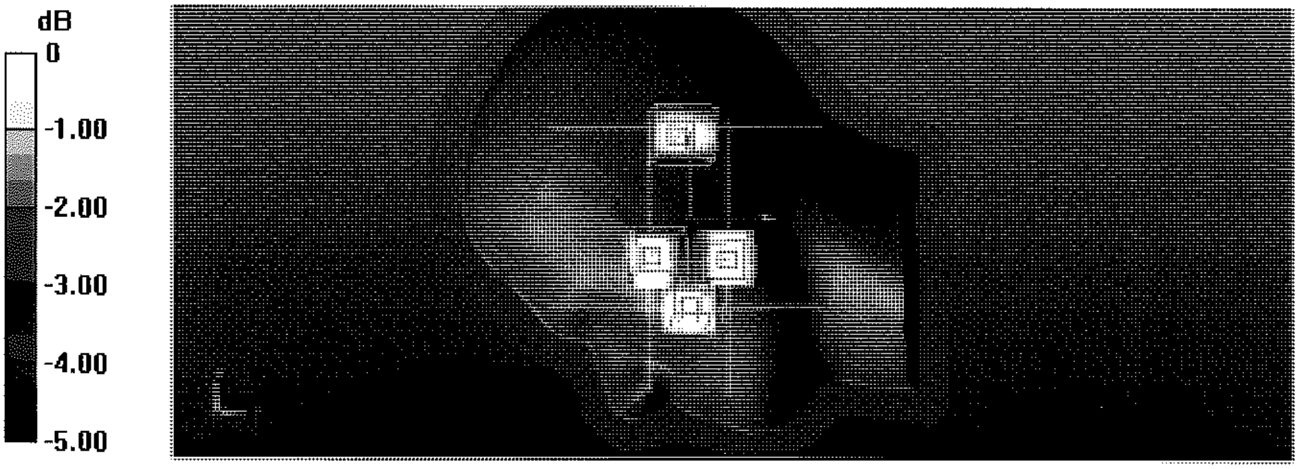
- Probe: EX3DV4 - SN7349; ConvF(10, 10, 10) @ 835 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: SAM Head
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

SAM/Head/Top/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 61.32 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 3.51 W/kg
SAR(1 g) = 2.35 W/kg; SAR(10 g) = 1.57 W/kg
Maximum value of SAR (measured) = 3.12 W/kg

SAM/Head/Mouth/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 62.25 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.67 W/kg
SAR(1 g) = 2.47 W/kg; SAR(10 g) = 1.65 W/kg
Maximum value of SAR (measured) = 3.24 W/kg

SAM/Head/Neck/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 60.69 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 3.43 W/kg
SAR(1 g) = 2.36 W/kg; SAR(10 g) = 1.6 W/kg
Maximum value of SAR (measured) = 3.08 W/kg

SAM/Head/Ear/Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.79 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 2.94 W/kg
SAR(1 g) = 2.02 W/kg; SAR(10 g) = 1.36 W/kg
Maximum value of SAR (measured) = 2.62 W/kg



0 dB = 2.62 W/kg = 4.18 dBW/kg

Calibration Laboratory of
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Accreditation No.: SCS 0108

Client **PC Test**

Certificate No: **D835V2-4d133_Oct18**

CALIBRATION CERTIFICATE

Object: D835V2 - SN:4d133

Calibration procedure(s): QA CAL-05.v10
Calibration procedure for dipole validation kits above 700 MHz

BN ✓
10/30/2018

Calibration date: October 19, 2018

BN ✓
10-20-2019

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-19
Reference Probe EX3DV4	SN: 7349	30-Dec-17 (No. EX3-7349_Dec17)	Dec-18
DAE4	SN: 601	04-Oct-18 (No. DAE4-601_Oct18)	Oct-19

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

	Name	Function	Signature
Calibrated by:	Manu Seitz	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: October 22, 2018

Calibration Laboratory of
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Accreditation No.: SCS 0108

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

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%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.6 ± 6 %	0.91 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.39 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**9.43 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.54 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**6.10 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.9 ± 6 %	0.98 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.46 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**9.75 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.61 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**6.40 W/kg ± 16.5 % (k=2)**