

SAR vs duty cycle

f (MHz)	Ch. No.	Modulation	Data Rate (Mbps)	Duty Cycle (%)	Output Power (dBm)	SW Power Setting	Measured 1-g SAR (W/kg)	100% 1-g SAR (W/kg)
2412	1	BPSK	6	64.4	15.45	21	0.548	0.549
2412	1	QPSK	12	68.75	15.45	21	0.548	0.549
2412	1	16-QAM	24	35.81	15.40	43	0.523	0.527
2412	1	64-QAM	48	21.67	15.90	65	0.488	0.496
2412	1	64-QAM	54	18.75	15.30	65	0.428	0.435

Test Laboratory: Compliance Certification Services

Host # 1 IBM Laptop

DUT: Buffalo; Type: WLI-CB-G54HP; Serial: N/A

Communication System: 802.11bg; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24 deg. C; Liquid Temperature: 23 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3552 ; ConvF(6.94, 6.94, 6.94); Calibrated: 3/19/2005
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 2/7/2005
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

G mode, Data Rate: 6 Mbps/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.665 mW/g

G mode, Data Rate: 6 Mbps/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

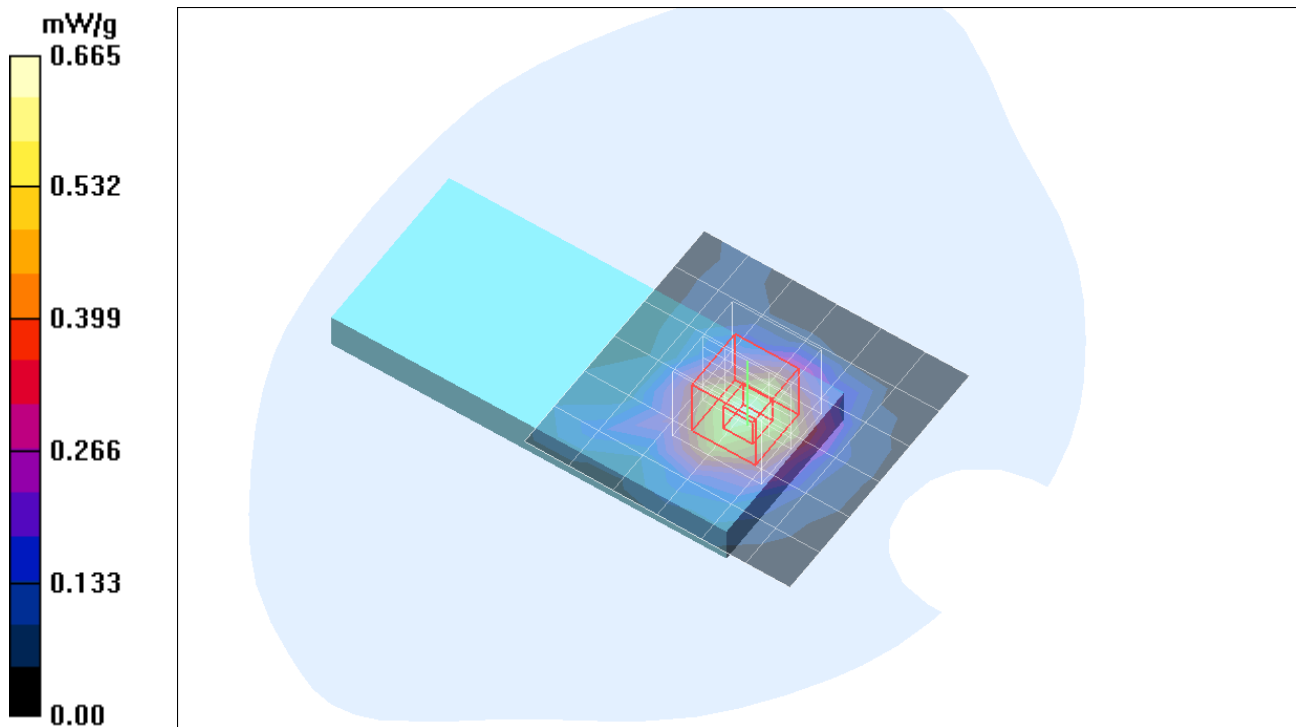
Reference Value = 10.1 V/m; Power Drift = -0.188 dB

Peak SAR (extrapolated) = 0.910 W/kg

SAR(1 g) = 0.548 mW/g; SAR(10 g) = 0.310 mW/g

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.700 mW/g



Test Laboratory: Compliance Certification Services

Host # 1 IBM Laptop

DUT: Buffalo; Type: WLI-CB-G54HP; Serial: N/A

Communication System: 802.11bg; Frequency: 2412 MHz; Duty Cycle: 1:1.55

Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24 deg. C; Liquid Temperature: 23 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3552 ; ConvF(6.94, 6.94, 6.94); Calibrated: 3/19/2005
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 2/7/2005
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

G mode, Data Rate: 6 Mbps/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.667 mW/g

G mode, Data Rate: 6 Mbps/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

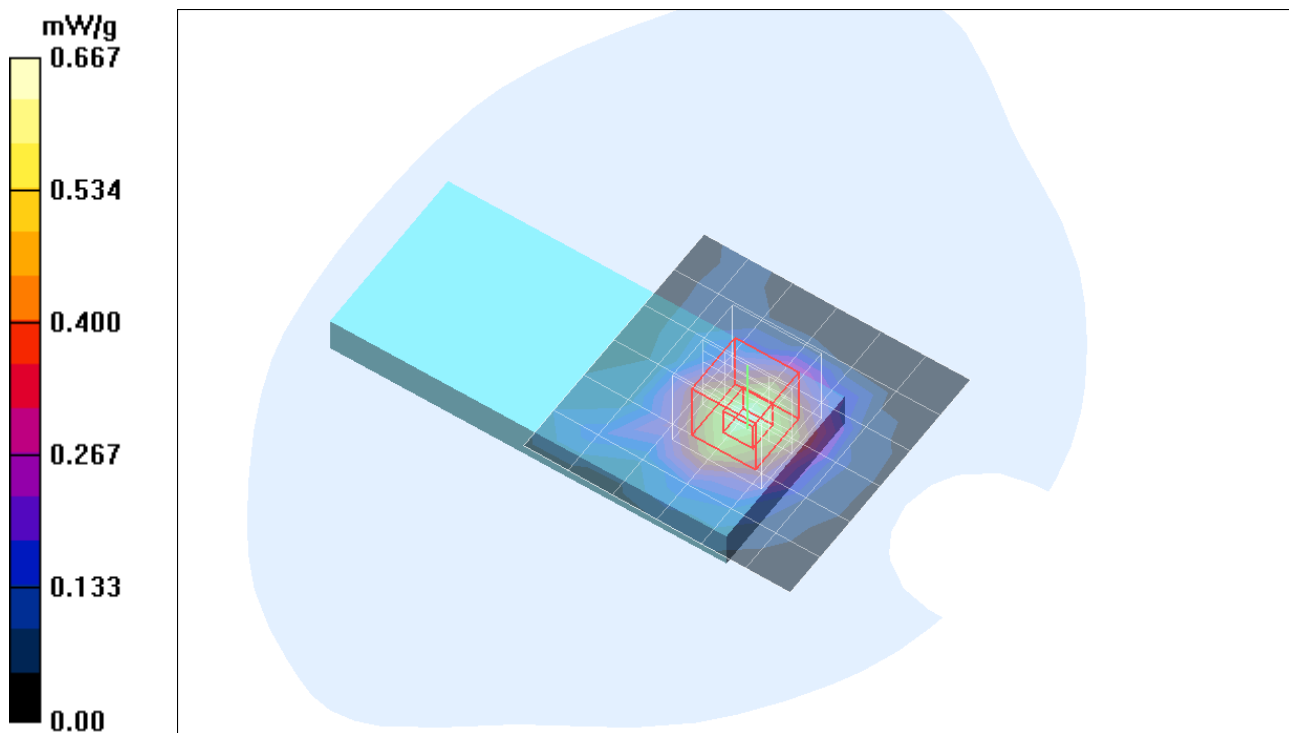
Reference Value = 10.1 V/m; Power Drift = -0.189 dB

Peak SAR (extrapolated) = 0.913 W/kg

SAR(1 g) = 0.549 mW/g; SAR(10 g) = 0.310 mW/g

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.702 mW/g



Test Laboratory: Compliance Certification Services

Host # 1 IBM Laptop

DUT: Buffalo; Type: WLI-CB-G54HP; Serial: N/A

Communication System: 802.11bg; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24 deg. C; Liquid Temperature: 23 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3552 ; ConvF(6.94, 6.94, 6.94); Calibrated: 3/19/2005
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 2/7/2005
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

G mode, Data Rate: 12 Mbps/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.600 mW/g

G mode, Data Rate: 12 Mbps/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

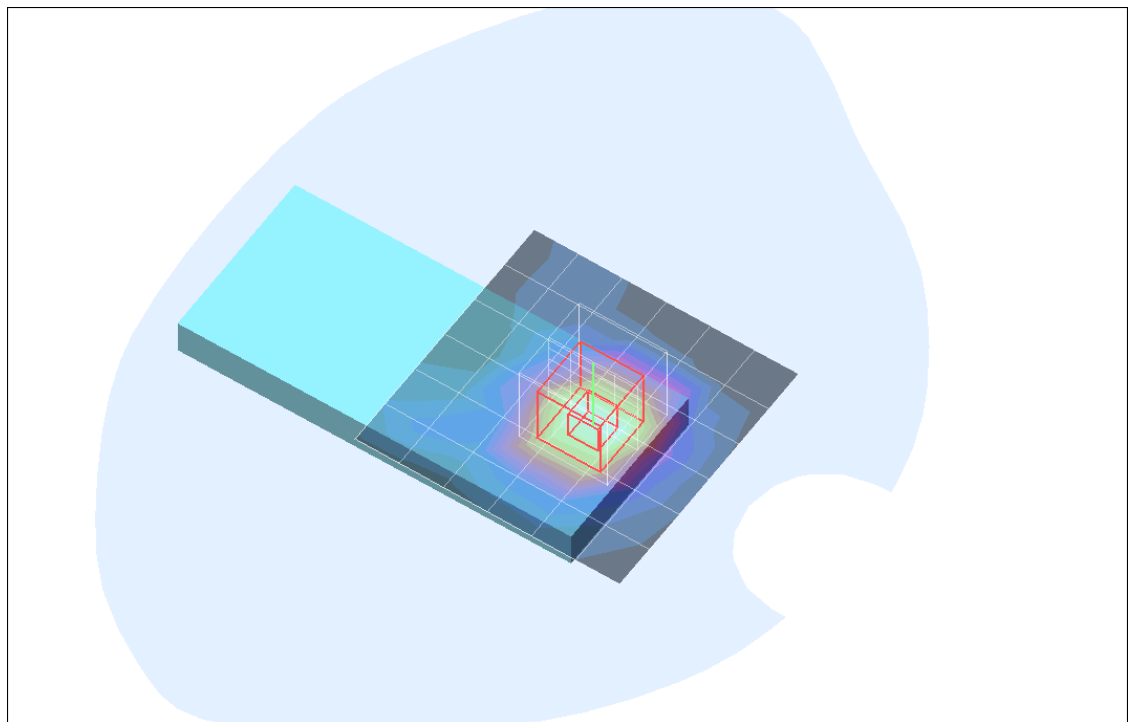
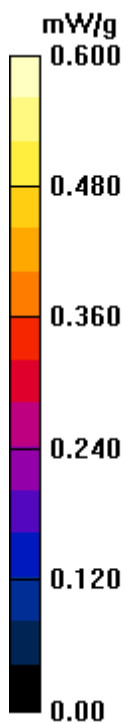
Reference Value = 9.94 V/m; Power Drift = -0.142 dB

Peak SAR (extrapolated) = 0.908 W/kg

SAR(1 g) = 0.548 mW/g; SAR(10 g) = 0.310 mW/g

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.705 mW/g



Test Laboratory: Compliance Certification Services

Host # 1 IBM Laptop

DUT: Buffalo; Type: WLI-CB-G54HP; Serial: N/A

Communication System: 802.11bg; Frequency: 2412 MHz; Duty Cycle: 1:1.46

Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24 deg. C; Liquid Temperature: 23 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3552 ; ConvF(6.94, 6.94, 6.94); Calibrated: 3/19/2005
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 2/7/2005
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

G mode, Data Rate: 12 Mbps/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.601 mW/g

G mode, Data Rate: 12 Mbps/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

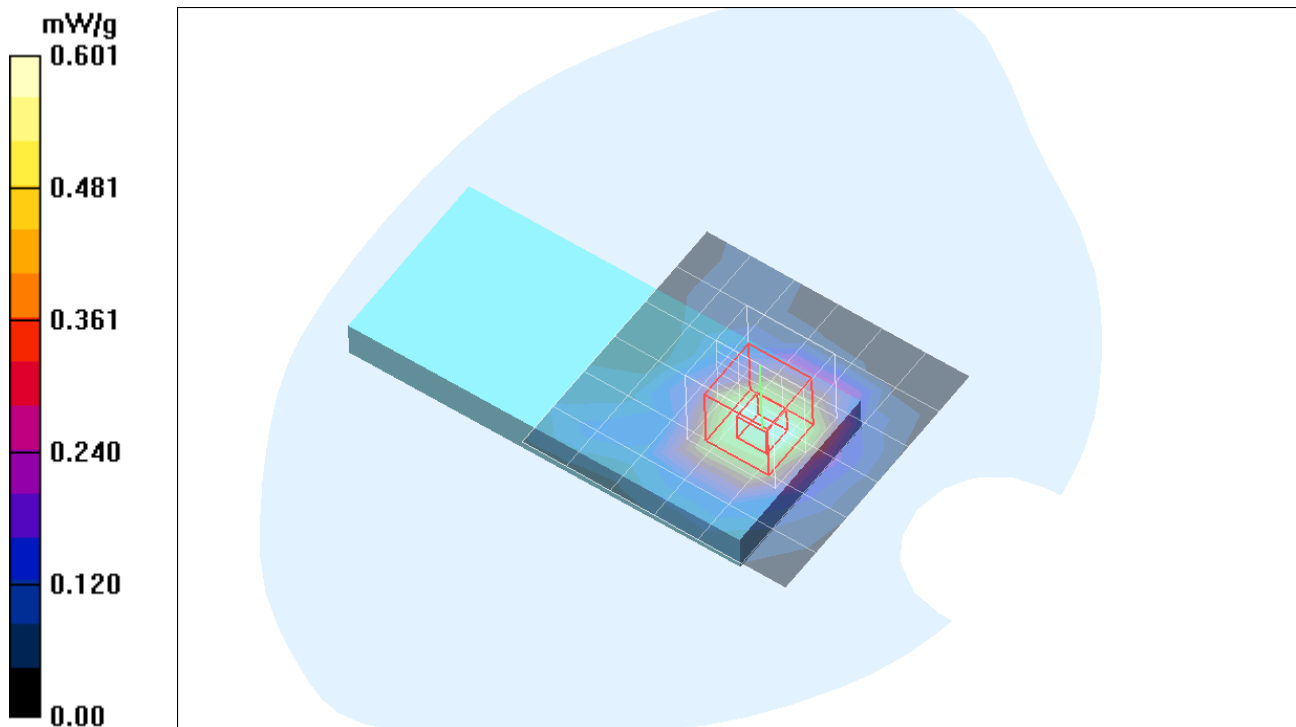
Reference Value = 9.95 V/m; Power Drift = -0.142 dB

Peak SAR (extrapolated) = 0.911 W/kg

SAR(1 g) = 0.549 mW/g; SAR(10 g) = 0.311 mW/g

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.707 mW/g



Test Laboratory: Compliance Certification Services

Host # 1 IBM Laptop

DUT: Buffalo; Type: WLI-CB-G54HP; Serial: N/A

Communication System: 802.11bg; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24 deg. C; Liquid Temperature: 23 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3552 ; ConvF(6.94, 6.94, 6.94); Calibrated: 3/19/2005
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 2/7/2005
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

G mode, Data Rate: 24 Mbps/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.589 mW/g

G mode, Data Rate: 24 Mbps/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

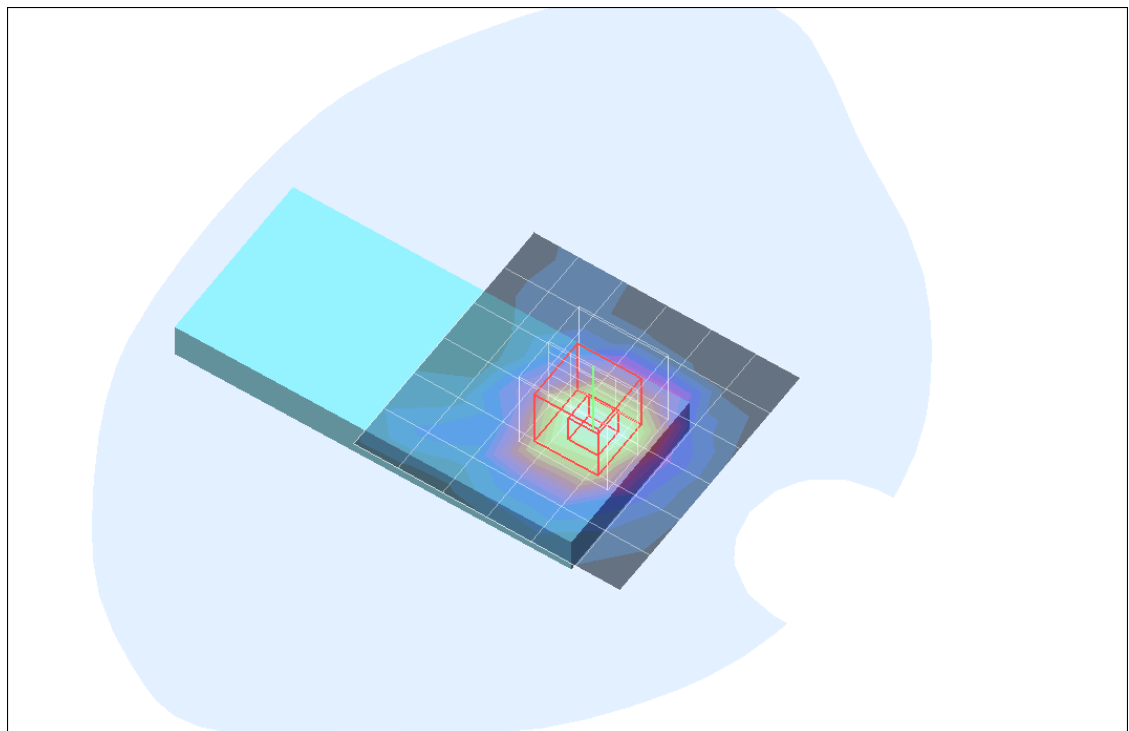
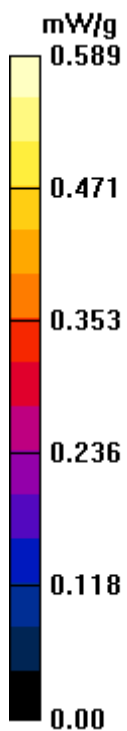
Reference Value = 9.94 V/m; Power Drift = -0.105 dB

Peak SAR (extrapolated) = 0.872 W/kg

SAR(1 g) = 0.523 mW/g; SAR(10 g) = 0.298 mW/g

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.668 mW/g



Test Laboratory: Compliance Certification Services

Host # 1 IBM Laptop

DUT: Buffalo; Type: WLI-CB-G54HP; Serial: N/A

Communication System: 802.11bg; Frequency: 2412 MHz; Duty Cycle: 1:2.79

Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24 deg. C; Liquid Temperature: 23 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3552 ; ConvF(6.94, 6.94, 6.94); Calibrated: 3/19/2005
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 2/7/2005
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

G mode, Data Rate: 24 Mbps/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.594 mW/g

G mode, Data Rate: 24 Mbps/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

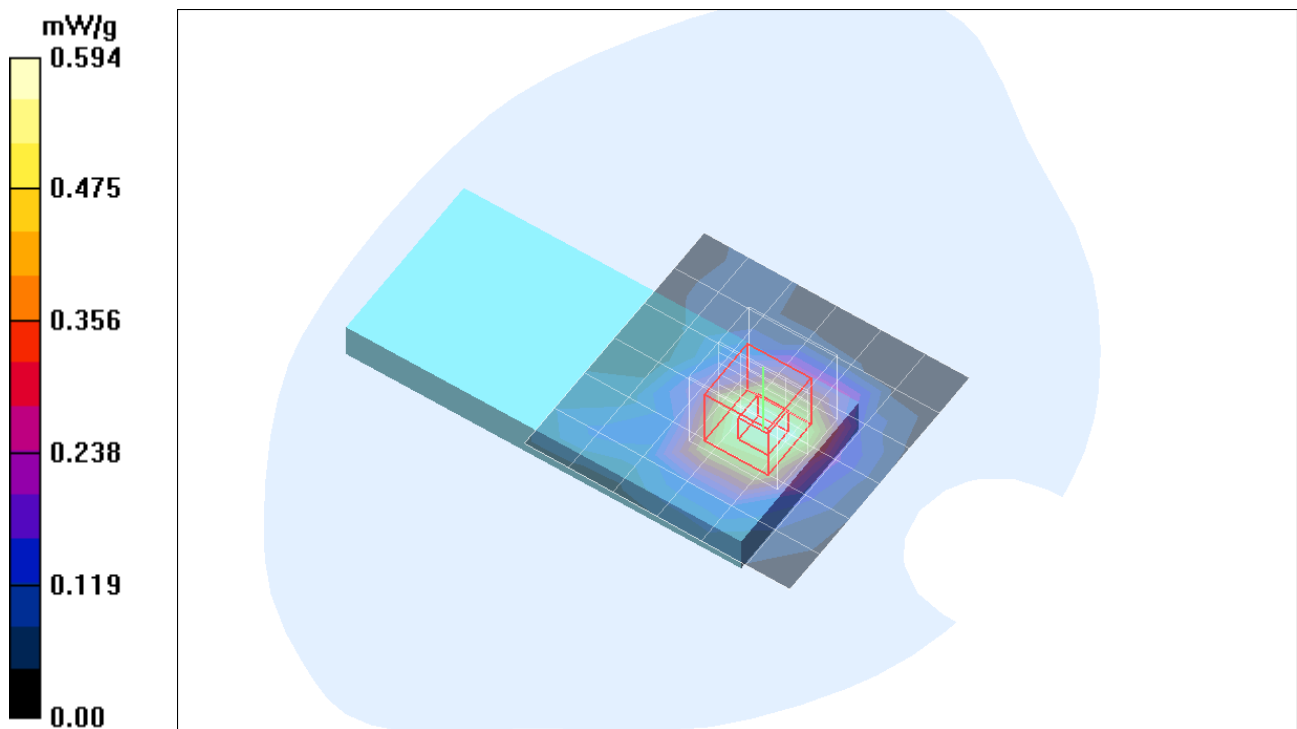
Reference Value = 9.95 V/m; Power Drift = -0.106 dB

Peak SAR (extrapolated) = 0.883 W/kg

SAR(1 g) = 0.527 mW/g; SAR(10 g) = 0.300 mW/g

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.674 mW/g



Test Laboratory: Compliance Certification Services

Host # 1 IBM Laptop

DUT: Buffalo; Type: WLI-CB-G54HP; Serial: N/A

Communication System: 802.11bg; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24 deg. C; Liquid Temperature: 23 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3552 ; ConvF(6.94, 6.94, 6.94); Calibrated: 3/19/2005
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 2/7/2005
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

G mode, Data Rate: 48 Mbps/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.540 mW/g

G mode, Data Rate: 48 Mbps/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

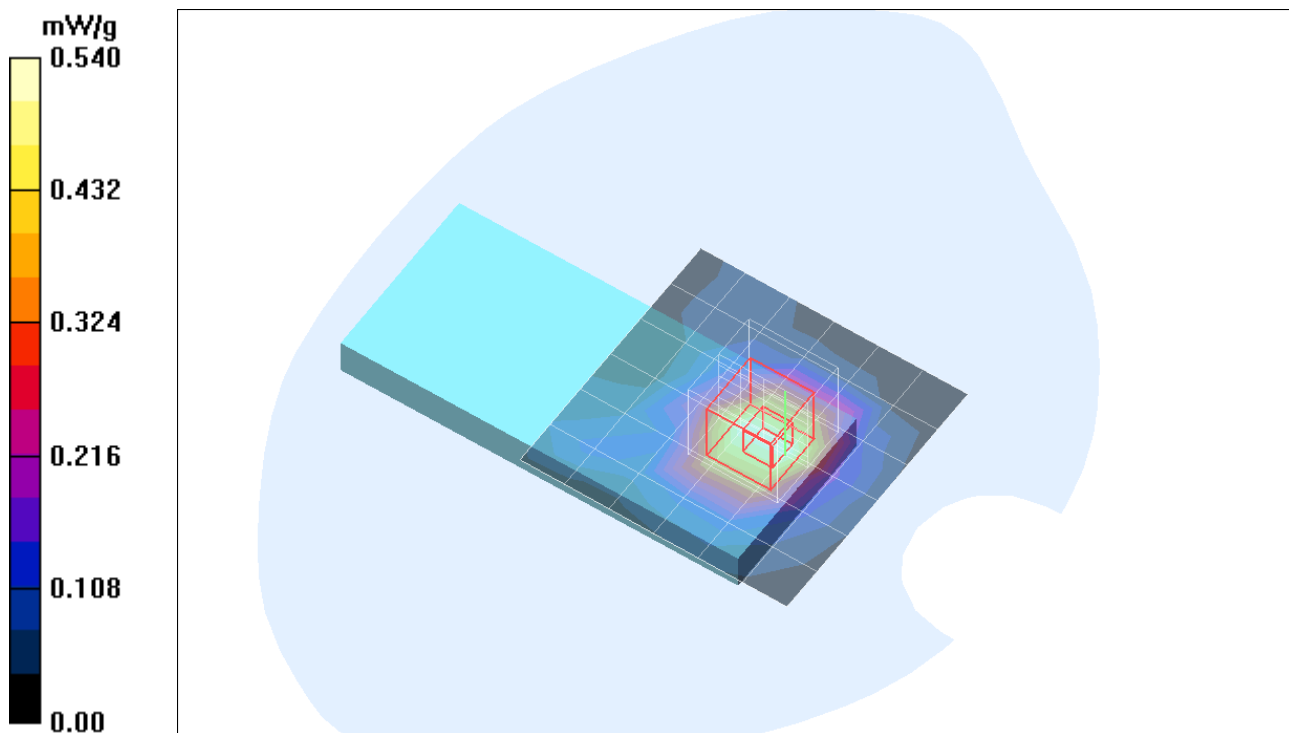
Reference Value = 9.61 V/m; Power Drift = -0.157 dB

Peak SAR (extrapolated) = 0.866 W/kg

SAR(1 g) = 0.488 mW/g; SAR(10 g) = 0.277 mW/g

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.619 mW/g



Test Laboratory: Compliance Certification Services

Host # 1 IBM Laptop

DUT: Buffalo; Type: WLI-CB-G54HP; Serial: N/A

Communication System: 802.11bg; Frequency: 2412 MHz; Duty Cycle: 1:4.62

Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24 deg. C; Liquid Temperature: 23 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3552 ; ConvF(6.94, 6.94, 6.94); Calibrated: 3/19/2005
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 2/7/2005
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

G mode, Data Rate: 48 Mbps/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.549 mW/g

G mode, Data Rate: 48 Mbps/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

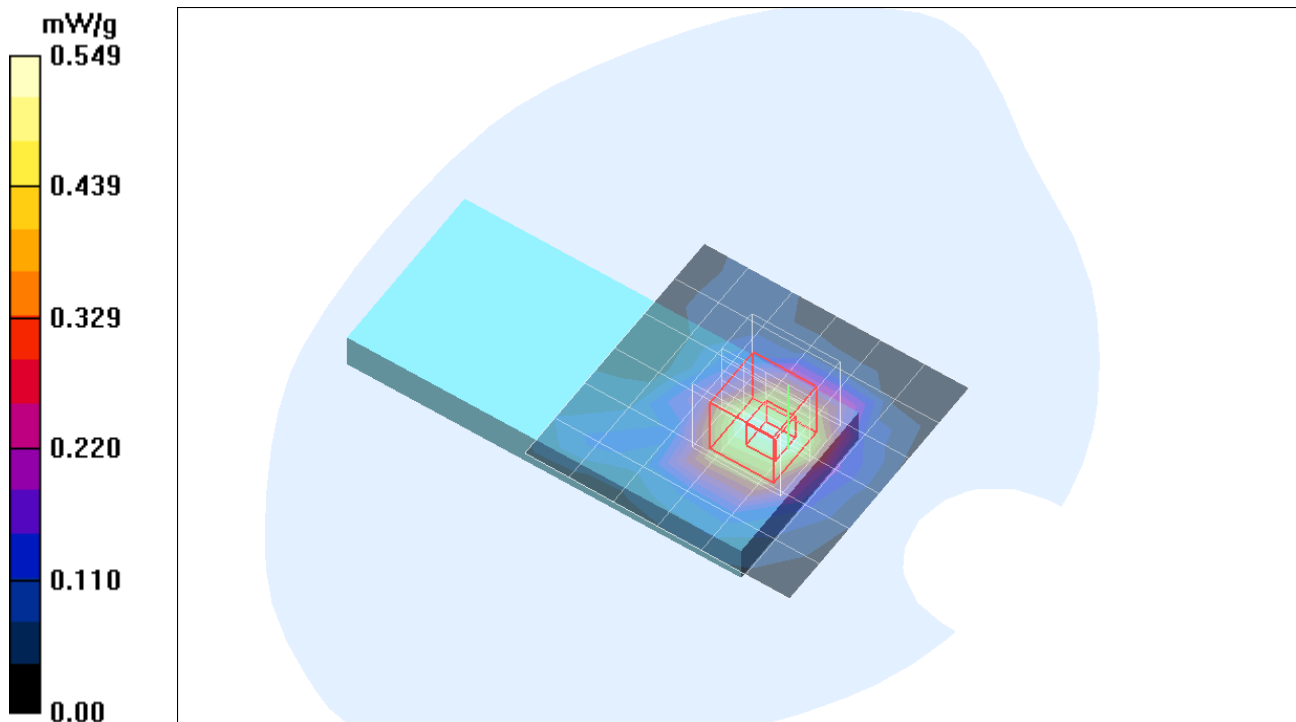
Reference Value = 9.63 V/m; Power Drift = -0.159 dB

Peak SAR (extrapolated) = 0.887 W/kg

SAR(1 g) = 0.496 mW/g; SAR(10 g) = 0.280 mW/g

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.630 mW/g



Test Laboratory: Compliance Certification Services

Host # 1 IBM Laptop

DUT: Buffalo; Type: WLI-CB-G54HP; Serial: N/A

Communication System: 802.11bg; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24 deg. C; Liquid Temperature: 23 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3552 ; ConvF(6.94, 6.94, 6.94); Calibrated: 3/19/2005
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 2/7/2005
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

G mode, Data Rate: 54 Mbps/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.524 mW/g

G mode, Data Rate: 54 Mbps/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

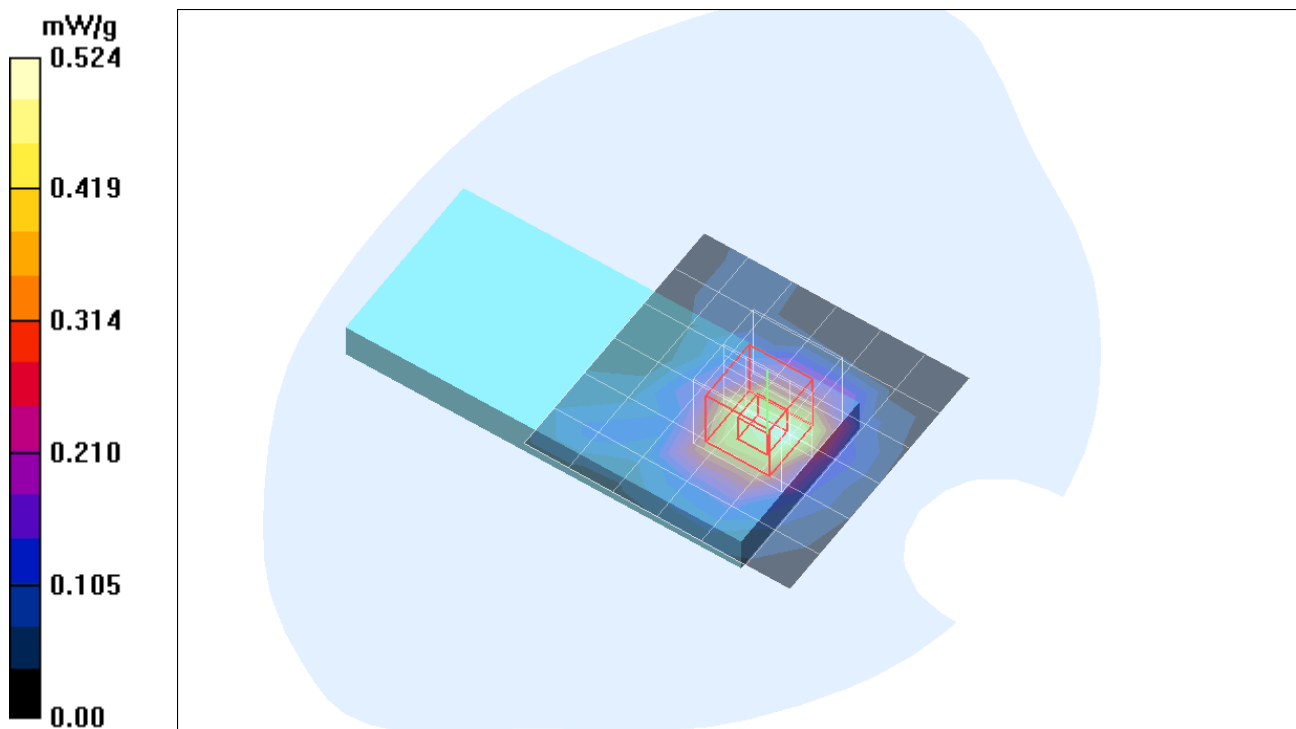
Reference Value = 8.78 V/m; Power Drift = -0.141 dB

Peak SAR (extrapolated) = 0.686 W/kg

SAR(1 g) = 0.428 mW/g; SAR(10 g) = 0.245 mW/g

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.541 mW/g



Test Laboratory: Compliance Certification Services

Host # 1 IBM Laptop

DUT: Buffalo; Type: WLI-CB-G54HP; Serial: N/A

Communication System: 802.11bg; Frequency: 2412 MHz; Duty Cycle: 1:5.33

Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24 deg. C; Liquid Temperature: 23 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3552 ; ConvF(6.94, 6.94, 6.94); Calibrated: 3/19/2005
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 2/7/2005
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

G mode, Data Rate: 54 Mbps/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.533 mW/g

G mode, Data Rate: 54 Mbps/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

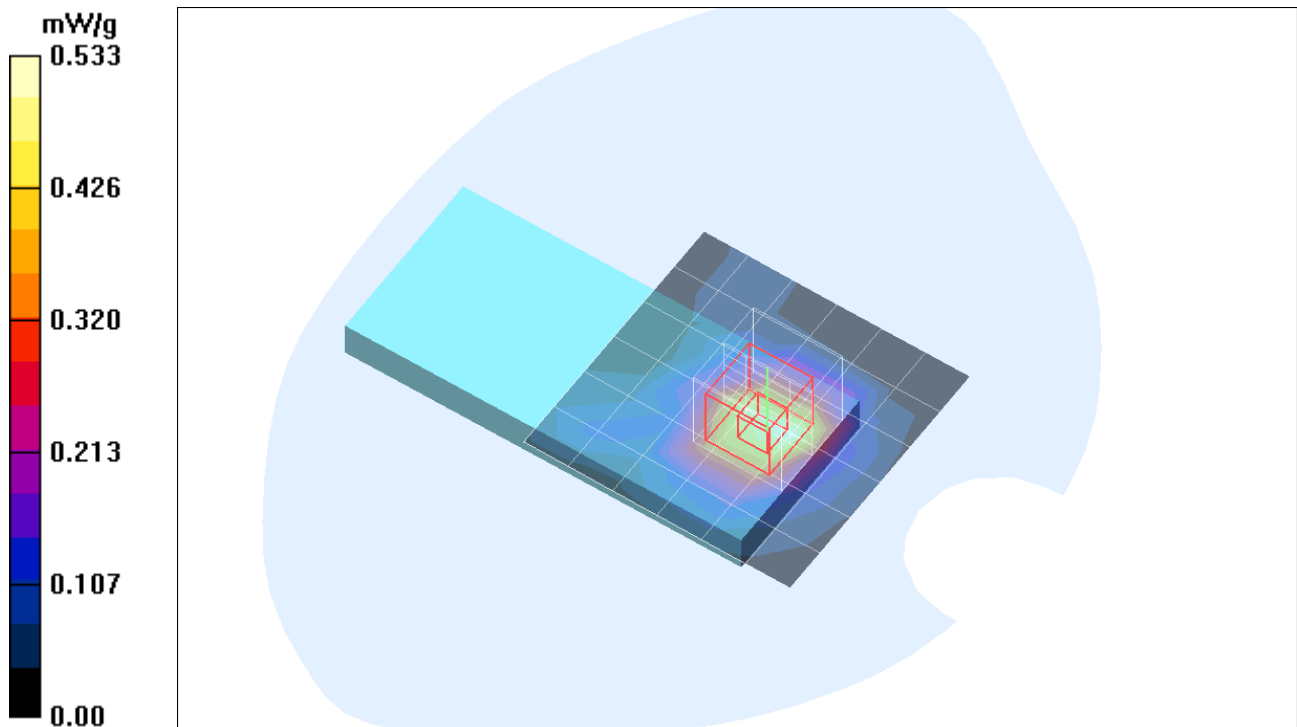
Reference Value = 8.80 V/m; Power Drift = -0.143 dB

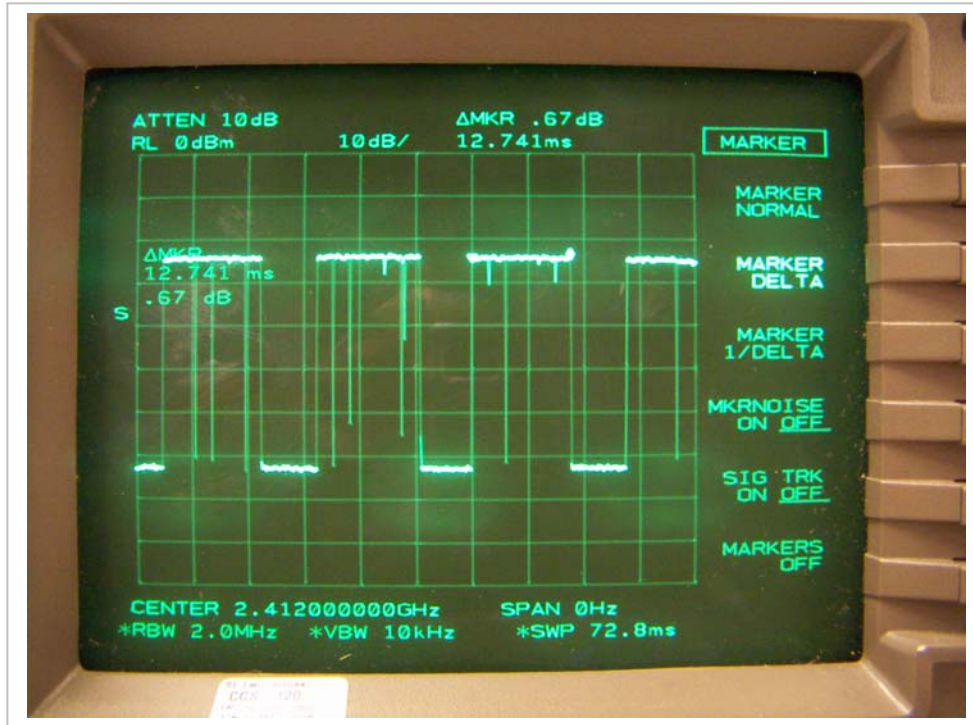
Peak SAR (extrapolated) = 0.703 W/kg

SAR(1 g) = 0.435 mW/g; SAR(10 g) = 0.248 mW/g

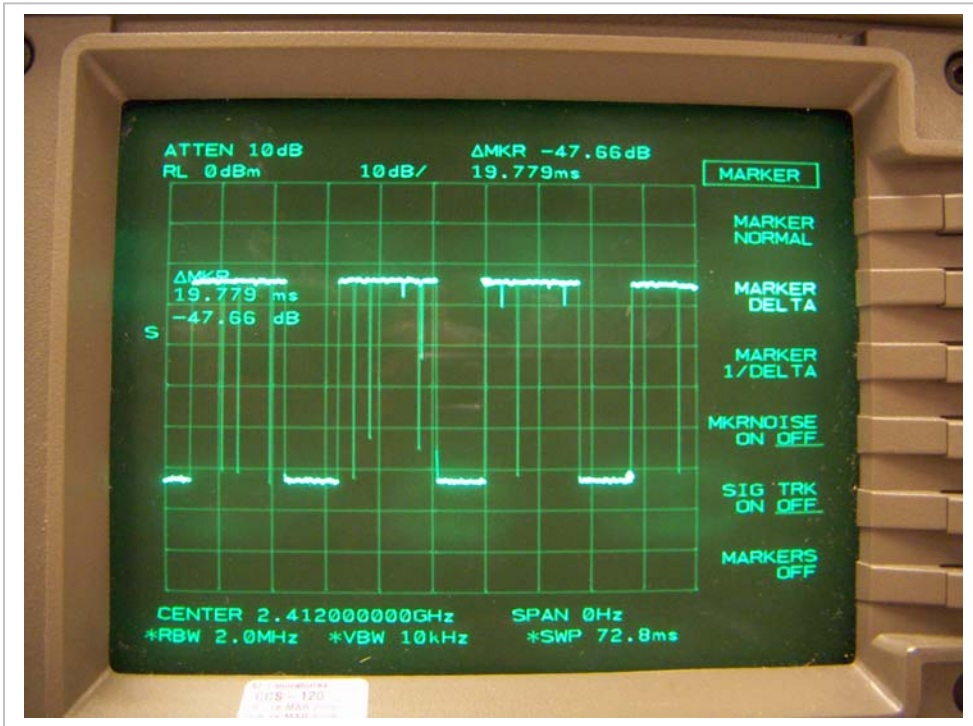
[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.551 mW/g

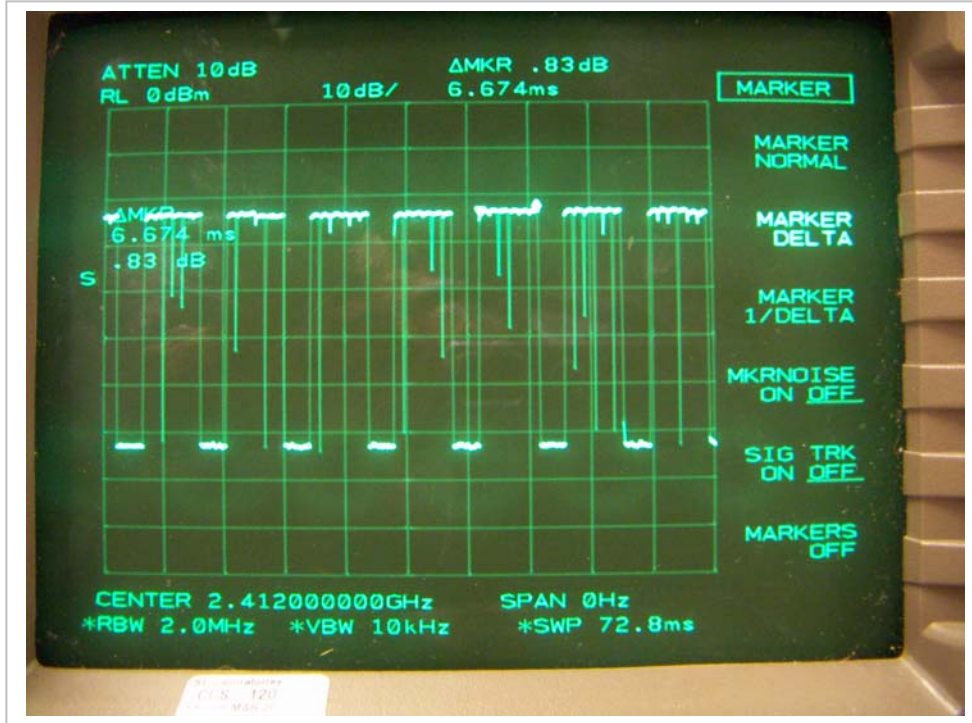




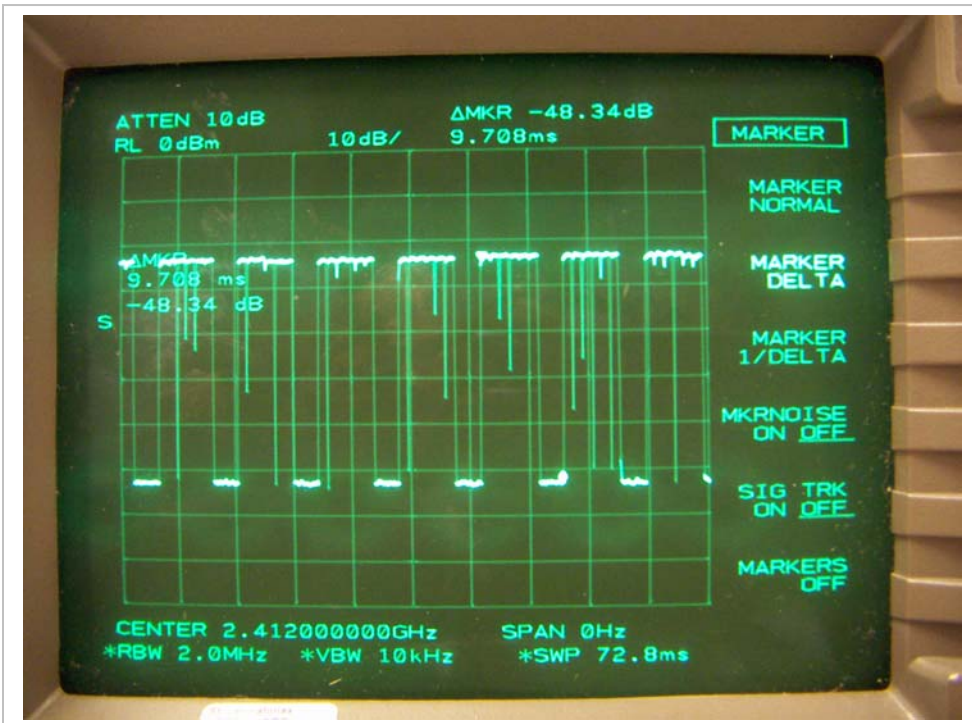
Ch 2412 Data Rate 6M bps ON Time 12.74 ms



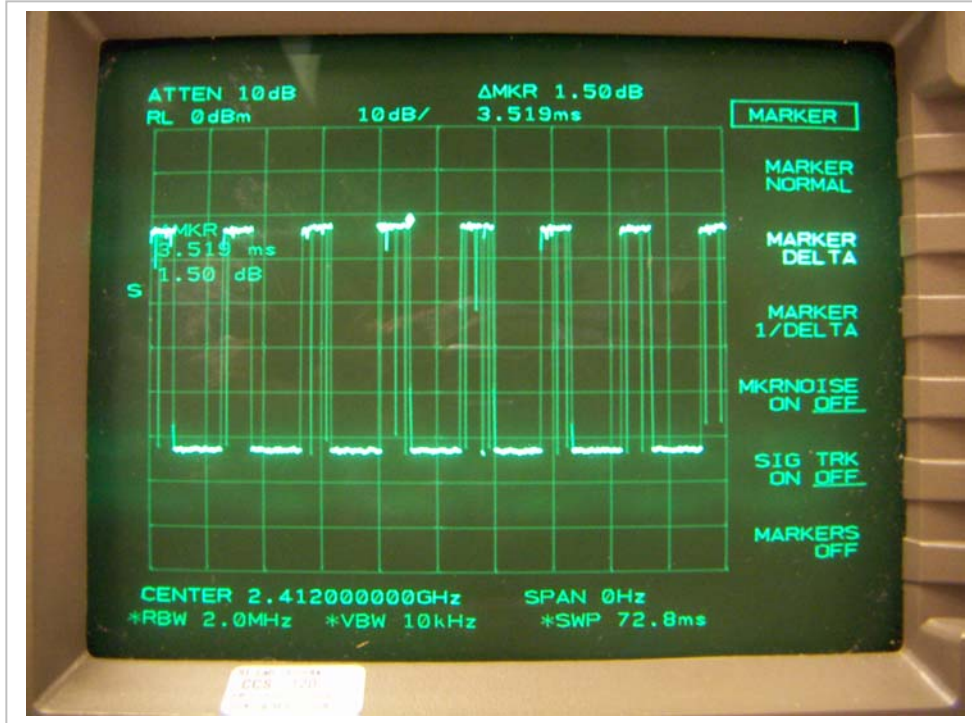
Ch 2412 Data Rate 6M bps Total Time 19.779 ms
Duty Cycle 64.4% Crest Factor 1.55



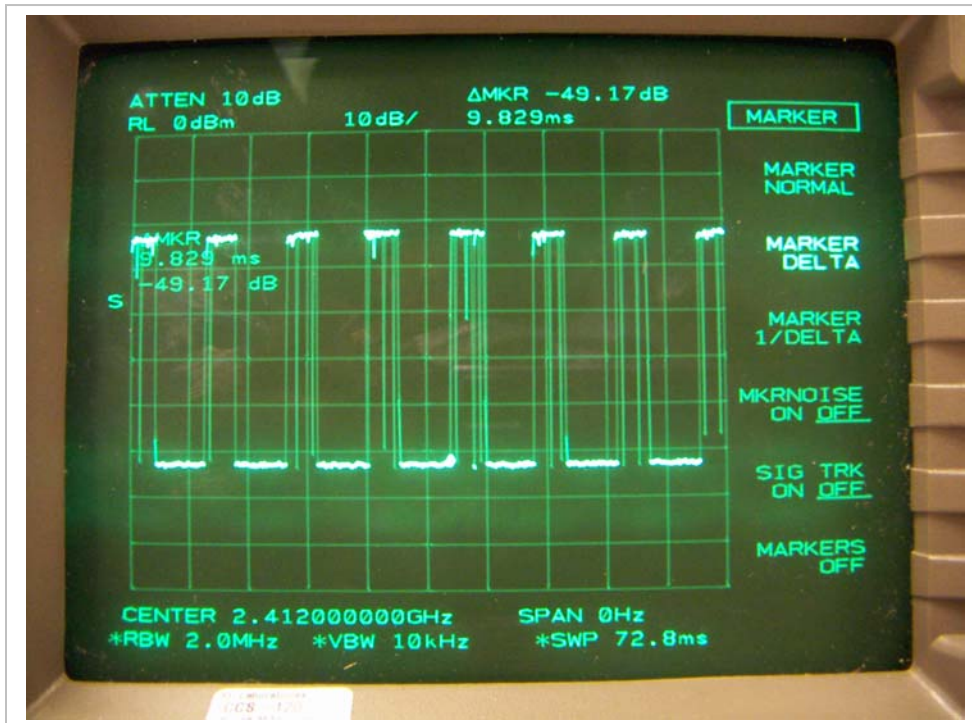
Ch 2412 Data Rate 12M bps ON Time 6.674 ms



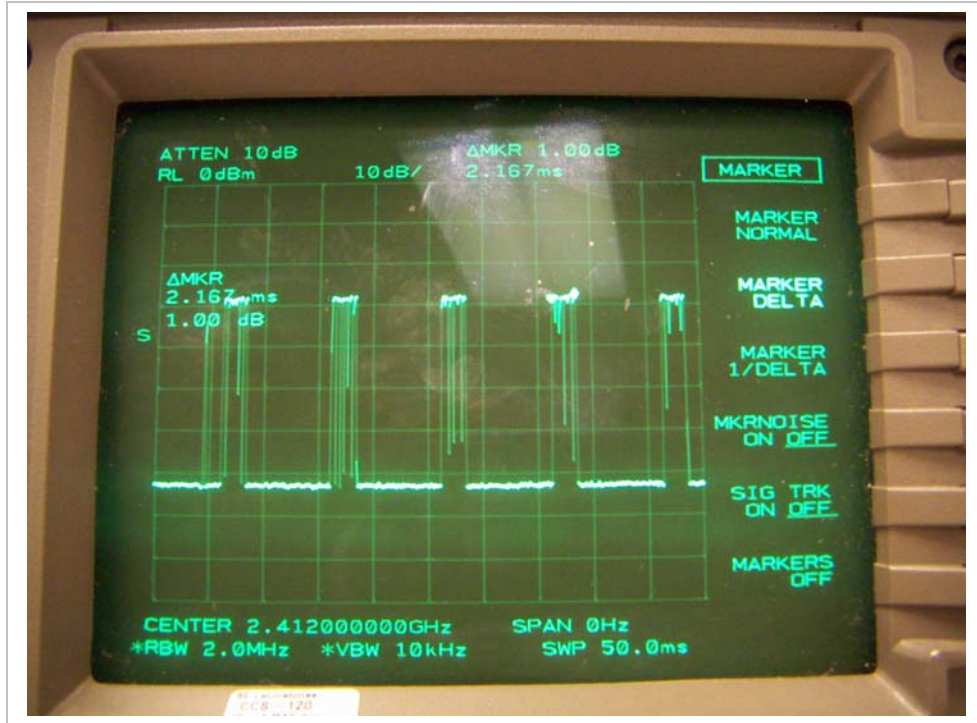
Ch 2412 Data Rate 12M bps Total Time 9.708 ms
 Duty Cycle 68.75% Crest Factor 1.46



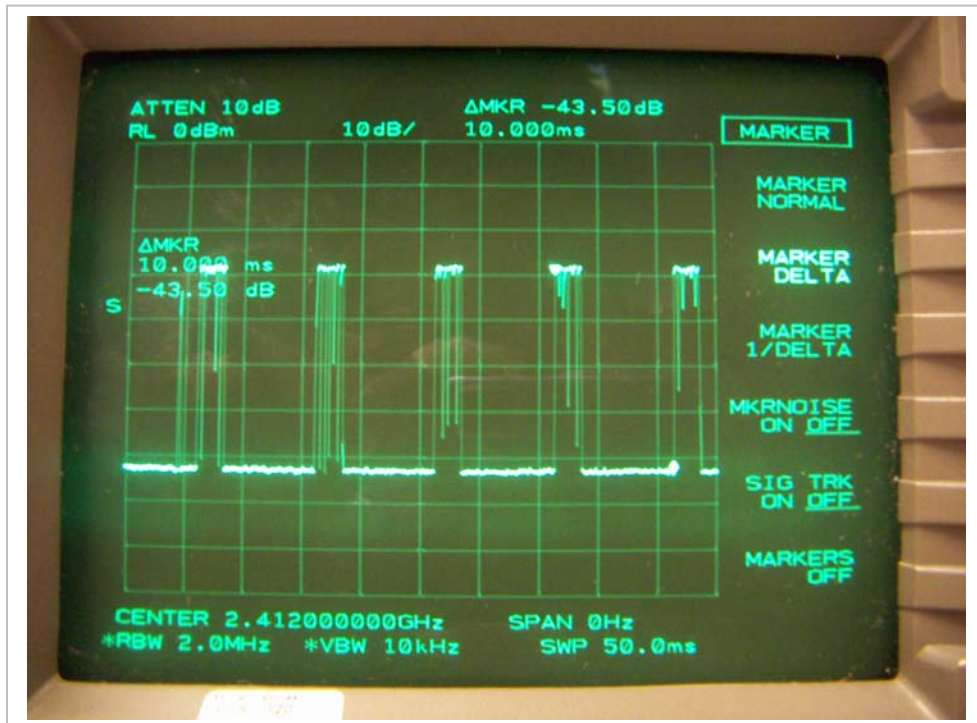
Ch 2412 Data Rate 24M bps ON Time 3.519 ms



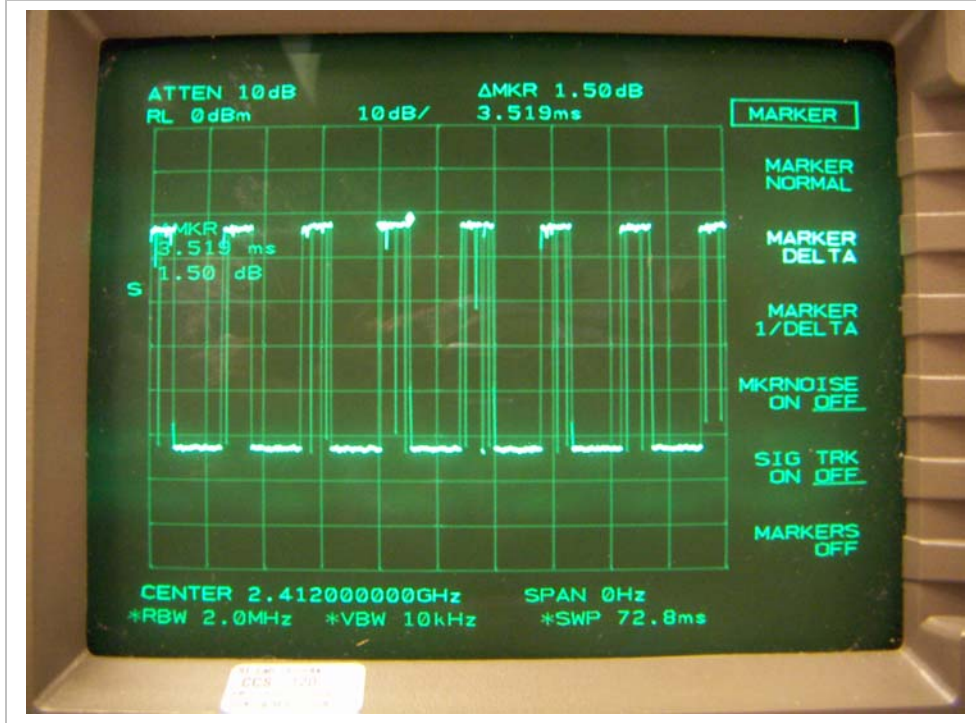
Ch 2412 Data Rate 24M bps Total Time 9.829 ms
 Duty Cycle 35.81% Crest Factor 2.79



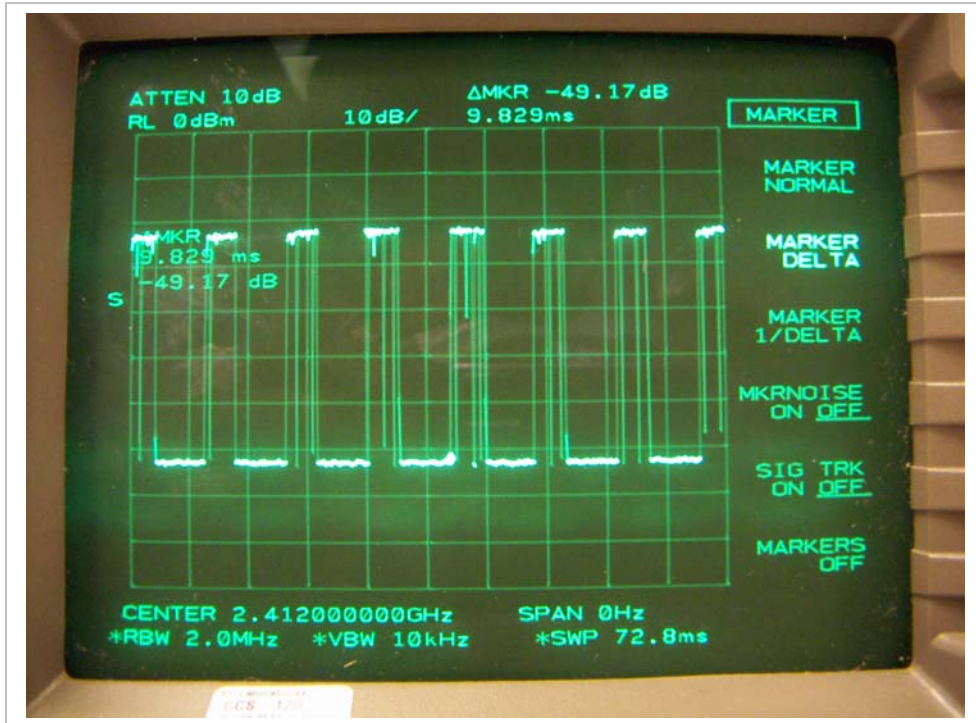
Ch 2412 Data Rate 48M bps ON Time 2.167 ms



Ch 2412 Data Rate 48M bps Total Time 10 ms
Duty Cycle 21.67% Crest Factor 4.62



Ch 2412 Data Rate 54M bps ON Time 1.820 ms



Ch 2412 Data Rate 54M bps Total Time 9.708 ms
 Duty Cycle 18.75% Crest Factor 5.33