



MIMO SAR Test results

| Head SAR Test | | | | | | | | | | | | | | | | | | | |
|--------------------|-----------|-----------|---------------|----------|-----------------|-------------|----------------|-----|-------------|---------------------|---------------------|------------------------|--------------|---------------------------|------------------|------------------------|------------------------|-------------------------|-------------------------|
| System & Position | | | | | DUT & Accessory | | | | Power | | | | | | | SAR | | | |
| Plot No. | Band | Mode | Test Position | Gap (mm) | Antenna | Power State | EUT Flip State | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Duty Cycle % | Duty Cycle Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) | Measured 10g SAR (W/kg) | Reported 10g SAR (W/kg) |
| | Bluetooth | DH5 1Mbps | Right Tilted | 0mm | Ant 7+5(5) | DSI 2 | | 39 | 2441 | 14.30 | 16.00 | 1.479 | 77.07 | 1.298 | -0.05 | 0.170 | 0.326 | | 0.000 |
| | Bluetooth | DH5 1Mbps | Left Cheek | 0mm | Ant 7+5(5) | DSI 2 | | 39 | 2441 | 14.30 | 16.00 | 1.479 | 77.07 | 1.298 | 0.04 | 0.642 | 1.233 | | 0.000 |
| | | | | | | | | | | | | 1.000 | | 1.000 | | | 0.000 | | 0.000 |
| Hotspot SAR Test | | | | | | | | | | | | | | | | | | | |
| System & Position | | | | | DUT & Accessory | | | | Power | | | | | | | SAR | | | |
| Plot No. | Band | Mode | Test Position | Gap (mm) | Antenna | Power State | EUT Flip State | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Duty Cycle % | Duty Cycle Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) | Measured 10g SAR (W/kg) | Reported 10g SAR (W/kg) |
| | Bluetooth | DH5 1Mbps | Right Side | 5mm | Ant 7+5(5) | DSI 7 | Open | 39 | 2441 | 13.80 | 15.50 | 1.479 | 77.07 | 1.298 | 0.02 | 0.662 | 1.271 | | 0.000 |
| | Bluetooth | DH5 1Mbps | Top Side | 5mm | Ant 7+5(5) | DSI 7 | Open | 39 | 2441 | 13.80 | 15.50 | 1.479 | 77.07 | 1.298 | 0.13 | 0.225 | 0.432 | | 0.000 |
| | | | | | | | | | | | | 1.000 | | 1.000 | | 0.000 | | 0.000 | 0.000 |
| | Bluetooth | DH5 1Mbps | Right Side | 5mm | Ant 7+5(5) | DSI 11 | Close | 39 | 2441 | 14.30 | 16.00 | 1.479 | 77.07 | 1.298 | 0.06 | 0.572 | 1.098 | | 0.000 |
| | Bluetooth | DH5 1Mbps | Bottom Side | 5mm | Ant 7+5(5) | DSI 11 | Close | 39 | 2441 | 14.30 | 16.00 | 1.479 | 77.07 | 1.298 | -0.07 | 0.211 | 0.405 | | 0.000 |
| | | | | | | | | | | | | 1.000 | | 1.000 | | 0.000 | | 0.000 | 0.000 |
| | Bluetooth | DH5 1Mbps | Right Side | 0mm | Ant 7+5(5) | DSI 5/6 | Open | 39 | 2441 | 14.30 | 16.00 | 1.479 | 77.07 | 1.298 | -0.12 | 0.000 | 1.040 | 1.997 | |
| | Bluetooth | DH5 1Mbps | Top Side | 0mm | Ant 7+5(5) | DSI 5/6 | Open | 39 | 2441 | 14.30 | 16.00 | 1.479 | 77.07 | 1.298 | 0.08 | 0.000 | 0.284 | 0.545 | |
| | | | | | | | | | | | | 1.000 | | 1.000 | | 0.000 | | 0.000 | 0.000 |
| | Bluetooth | DH5 1Mbps | Right Side | 0mm | Ant 7+5(5) | DSI 10/12 | Close | 39 | 2441 | 14.30 | 16.00 | 1.479 | 77.07 | 1.298 | 0.11 | 0.000 | 0.873 | 1.676 | |
| | Bluetooth | DH5 1Mbps | Bottom Side | 0mm | Ant 7+5(5) | DSI 10/12 | Close | 39 | 2441 | 14.30 | 16.00 | 1.479 | 77.07 | 1.298 | -0.02 | 0.000 | 0.291 | 0.559 | |
| | | | | | | | | | | | | 1.000 | | 1.000 | | 0.000 | | 0.000 | 0.000 |
| Bpdy worn SAR Test | | | | | | | | | | | | | | | | | | | |
| System & Position | | | | | DUT & Accessory | | | | Power | | | | | | | SAR | | | |
| Plot No. | Band | Mode | Test Position | Gap (mm) | Antenna | Power State | EUT Flip State | Ch. | Freq. (MHz) | Average Power (dBm) | Tune-Up Limit (dBm) | Tune-up Scaling Factor | Duty Cycle % | Duty Cycle Scaling Factor | Power Drift (dB) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) | Measured 10g SAR (W/kg) | Reported 10g SAR (W/kg) |
| | Bluetooth | DH5 1Mbps | Front | 5mm | Ant 7+5(5) | DSI 3 | Open | 39 | 2441 | 14.30 | 16.00 | 1.479 | 77.07 | 1.298 | 0.17 | 0.349 | 0.670 | | 0.000 |
| | | | | | | | | | | | | 1.000 | | 1.000 | | 0.000 | | 0.000 | 0.000 |
| | Bluetooth | DH5 1Mbps | Front | 5mm | Ant 7+5(5) | DSI 10 | Close | 39 | 2441 | 14.30 | 16.00 | 1.479 | 77.07 | 1.298 | -0.11 | 0.319 | 0.612 | | 0.000 |



MIMO SAR verification results

| Bluetooth MIMO (Head) | | | |
|------------------------------|-------|---|-------|
| DSI 2 SISO Ant7 Plimit (dBm) | 13.9 | SISO Ant7 Pmax (dBm) | 17.9 |
| DSI 2 SISO Ant5 Plimit (dBm) | 15.9 | SISO Ant5 Pmax (dBm) | 17.9 |
| Duty Cycle % | 77.07 | MIMO Pmax (dBm) | 13.4 |
| Ptest (dBm) | 13.4 | Total uncertainty (dB) | 1.5 |
| SAR design target (W/kg) | 1.03 | Back off | 0 |
| Measured MIMO Ptest (dBm) | 14.30 | Measured MIMO SAR at meas. Ptest (W/kg) | 0.642 |
| Reported SAR _{MIMO} | 1.233 | Calc.SAR | 2.724 |

| Bluetooth MIMO(Open Hotspot) | | | |
|------------------------------|-------|---|-------|
| DSI 7 SISO Ant7 Plimit (dBm) | 12.9 | SISO Ant7 Pmax (dBm) | 17.9 |
| DSI 7 SISO Ant5 Plimit (dBm) | 16.9 | SISO Ant5 Pmax (dBm) | 17.9 |
| Duty Cycle % | 77.07 | MIMO Pmax (dBm) | 13.4 |
| Ptest (dBm) | 12.9 | Total uncertainty (dB) | 1.5 |
| SAR design target (W/kg) | 1.03 | Back off | 0 |
| Measured MIMO Ptest (dBm) | 13.80 | Measured MIMO SAR at meas. Ptest (W/kg) | 0.662 |
| Reported SAR _{MIMO} | 1.271 | Calc.SAR | 2.620 |

| Bluetooth MIMO (Close Hotspot) | | | |
|--------------------------------|-------|---|-------|
| DSI 11 SISO Ant7 Plimit (dBm) | 13.9 | SISO Ant7 Pmax (dBm) | 17.9 |
| DSI 11 SISO Ant5 Plimit (dBm) | 16.9 | SISO Ant5 Pmax (dBm) | 17.9 |
| Duty Cycle % | 77.07 | MIMO Pmax (dBm) | 13.4 |
| Ptest (dBm) | 13.4 | Total uncertainty (dB) | 1.5 |
| SAR design target (W/kg) | 1.03 | Back off | 0 |
| Measured MIMO Ptest (dBm) | 14.30 | Measured MIMO SAR at meas. Ptest (W/kg) | 0.572 |
| Reported SAR _{MIMO} | 1.098 | Calc.SAR | 2.508 |



| Bluetooth MIMO (Open Body worn) | | | |
|---------------------------------|-------|---|-------|
| DSI 3 SISO Ant7 Plimit (dBm) | 16.4 | SISO Ant7 Pmax (dBm) | 17.9 |
| DSI 3 SISO Ant5 Plimit (dBm) | 16.9 | SISO Ant5 Pmax (dBm) | 17.9 |
| Duty Cycle % | 77.07 | MIMO Pmax (dBm) | 13.4 |
| Ptest (dBm) | 13.4 | Total uncertainty (dB) | 1.5 |
| SAR design target (W/kg) | 1.03 | Back off | 0 |
| Measured MIMO Ptest (dBm) | 14.30 | Measured MIMO SAR at meas. Ptest (W/kg) | 0.349 |
| Reported SAR _{MIMO} | 0.670 | Calc. SAR | 1.777 |

| Bluetooth MIMO (Close Body worn) | | | |
|----------------------------------|-------|---|-------|
| DSI 10 SISO Ant7 Plimit (dBm) | 16.4 | SISO Ant7 Pmax (dBm) | 17.9 |
| DSI 10 SISO Ant5 Plimit (dBm) | 17.9 | SISO Ant5 Pmax (dBm) | 17.9 |
| Duty Cycle % | 77.07 | MIMO Pmax (dBm) | 13.4 |
| Ptest (dBm) | 13.4 | Total uncertainty (dB) | 1.5 |
| SAR design target (W/kg) | 1.03 | Back off | 0 |
| Measured MIMO Ptest (dBm) | 14.30 | Measured MIMO SAR at meas. Ptest (W/kg) | 0.319 |
| Reported SAR _{MIMO} | 0.612 | Calc. SAR | 1.604 |

| Bluetooth MIMO (Open Handheld) | | | |
|--------------------------------|-------|---|-------|
| DSI 5/6 SISO Ant7 Plimit (dBm) | 15.9 | SISO Ant7 Pmax (dBm) | 17.9 |
| DSI 5 SISO Ant5 Plimit (dBm) | 17.9 | SISO Ant5 Pmax (dBm) | 17.9 |
| Duty Cycle % | 77.07 | MIMO Pmax (dBm) | 13.4 |
| Ptest (dBm) | 13.4 | Total uncertainty (dB) | 1.5 |
| SAR design target (W/kg) | 2.55 | Back off | 0 |
| Measured MIMO Ptest (dBm) | 14.30 | Measured MIMO SAR at meas. Ptest (W/kg) | 1.040 |
| Reported SAR _{MIMO} | 1.997 | Calc. SAR | 4.256 |

| Bluetooth MIMO (Close Handheld) | | | |
|---------------------------------|-------|---|-------|
| DSI 12 SISO Ant7 Plimit (dBm) | 17.9 | SISO Ant7 Pmax (dBm) | 17.9 |
| DSI 10 SISO Ant5 Plimit (dBm) | 17.9 | SISO Ant5 Pmax (dBm) | 17.9 |
| Duty Cycle % | 77.07 | MIMO Pmax (dBm) | 13.4 |
| Ptest (dBm) | 13.4 | Total uncertainty (dB) | 1.5 |
| SAR design target (W/kg) | 2.55 | Back off | 0 |
| Measured MIMO Ptest (dBm) | 14.30 | Measured MIMO SAR at meas. Ptest (W/kg) | 0.873 |
| Reported SAR _{MIMO} | 1.676 | Calc. SAR | 3.293 |



MIMO SAR conducted power

| Default DSI 2/3/4/5/6/10/11/12 | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---------|-----------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|
| Mode | Channel | Frequency (MHz) | Ant 7+5(7) | | Ant 7+5(5) | | Ant 7+5 | | Ant 7+5(7) | | Ant 7+5(5) | | Ant 7+5 | | Ant 7+5(7) | | Ant 7+5(5) | | Ant 7+5 | |
| | | | Average power (dBm) 1Mbps | Tune-up Limit | Average power (dBm) 1Mbps | Tune-up Limit | Average power (dBm) 1Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit |
| BR / EDR | CH 00 | 2402 | 14.00 | 18.00 | 13.90 | 18.00 | 17.27 | 18.00 | 12.10 | 13.00 | 10.90 | 12.00 | 14.55 | 16.00 | 12.20 | 13.00 | 11.00 | 12.00 | 14.65 | 16.00 |
| | CH 39 | 2441 | 15.10 | 16.00 | 14.30 | 16.00 | 17.73 | 19.00 | 12.50 | 14.00 | 11.40 | 13.00 | 15.00 | 16.50 | 12.60 | 14.00 | 11.50 | 13.00 | 15.10 | 16.50 |
| | CH 78 | 2480 | 13.90 | 15.00 | 13.40 | 15.00 | 16.67 | 18.00 | 11.20 | 13.00 | 10.70 | 12.00 | 13.97 | 15.50 | 11.30 | 13.00 | 10.80 | 12.00 | 14.07 | 15.50 |

| Mode | Channel | Frequency (MHz) | Ant 7+5(7) | | Ant 7+5(5) | | Ant 7+5 | | Ant 7+5(7) | | Ant 7+5(5) | | Ant 7+5 | |
|------|---------|-----------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|
| | | | Average power (dBm) 1Mbps | Tune-up Limit | Average power (dBm) 1Mbps | Tune-up Limit | Average power (dBm) 1Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit |
| LE | CH 00 | 2402 | 12.78 | 14.00 | 11.82 | 13.00 | 15.34 | 16.54 | 8.36 | 10.00 | 7.62 | 9.00 | 11.02 | 12.50 |
| | CH 19 | 2440 | 13.05 | 14.00 | 11.94 | 13.00 | 15.54 | 16.54 | 8.53 | 10.00 | 7.85 | 9.00 | 11.21 | 12.50 |
| | CH 39 | 2480 | 11.74 | 13.00 | 11.36 | 13.00 | 14.56 | 16.00 | 7.54 | 9.00 | 7.22 | 9.00 | 10.39 | 12.00 |

| DSI 7 | | | | | | | | | | | | | | | | | | | | |
|----------|---------|-----------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|
| Mode | Channel | Frequency (MHz) | Ant 7+5(7) | | Ant 7+5(5) | | Ant 7+5 | | Ant 7+5(7) | | Ant 7+5(5) | | Ant 7+5 | | Ant 7+5(7) | | Ant 7+5(5) | | Ant 7+5 | |
| | | | Average power (dBm) 1Mbps | Tune-up Limit | Average power (dBm) 1Mbps | Tune-up Limit | Average power (dBm) 1Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit |
| BR / EDR | CH 00 | 2402 | 14.20 | 15.00 | 13.50 | 15.00 | 16.87 | 18.00 | 12.10 | 13.00 | 10.90 | 12.50 | 14.55 | 16.00 | 12.20 | 13.00 | 11.00 | 12.50 | 14.65 | 16.00 |
| | CH 39 | 2441 | 14.60 | 15.50 | 13.80 | 15.50 | 17.23 | 18.50 | 12.50 | 14.00 | 11.40 | 13.00 | 15.00 | 16.50 | 12.60 | 14.00 | 11.50 | 13.00 | 15.10 | 16.50 |
| | CH 78 | 2480 | 13.90 | 14.80 | 13.00 | 14.80 | 16.27 | 18.00 | 11.20 | 13.00 | 10.70 | 12.00 | 13.97 | 15.50 | 11.30 | 13.00 | 10.80 | 12.00 | 14.07 | 15.50 |

| Mode | Channel | Frequency (MHz) | Ant 7+5(7) | | Ant 7+5(5) | | Ant 7+5 | | Ant 7+5(7) | | Ant 7+5(5) | | Ant 7+5 | |
|------|---------|-----------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|---------------------------|---------------|
| | | | Average power (dBm) 1Mbps | Tune-up Limit | Average power (dBm) 1Mbps | Tune-up Limit | Average power (dBm) 1Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit | Average power (dBm) 2Mbps | Tune-up Limit |
| LE | CH 00 | 2402 | 12.78 | 14.00 | 11.82 | 13.00 | 15.34 | 16.54 | 8.36 | 10.00 | 7.62 | 9.00 | 11.02 | 12.50 |
| | CH 19 | 2440 | 13.05 | 14.00 | 11.94 | 13.00 | 15.54 | 16.54 | 8.53 | 10.00 | 7.85 | 9.00 | 11.21 | 12.50 |
| | CH 39 | 2480 | 11.74 | 13.00 | 11.36 | 13.00 | 14.56 | 16.00 | 7.54 | 9.00 | 7.22 | 9.00 | 10.39 | 12.00 |