



TÜVRheinland®



LAB N° 1356

Report No. 28113121-007

| 11.8 TEST: RF Exposure Requirements | | PASS |
|--|-------------------------------------|-------------------|
| Parameters required prior to the test | Laboratory Ambient Temperature (°C) | 15 to 35 °C |
| | Relative Humidity (%) | 30 to 60 % |
| Parameters recorded during the test | Laboratory Ambient Temperature (°C) | --- |
| | Relative Humidity (%) | --- |
| | Air pressure (hPa) | 1020 |
| — | Power Supply / Frequency | Application Point |
| Fully configured sample tested at the power line frequency | 5V dc | --- |
| Equipment mode: | Operation mode | #1 |
| FCC Standard | 47 CFR 2.1093 | |
| Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines 47 CFR 2.1093 - Radiofrequency radiation exposure evaluation: portable devices | | |
| EUT classification (fixed, mobile or portable devices) | Fixed equipment | |
| Limits Freq. Range 2405÷2480MHz | See next table | |

**Appendix A*****SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm***

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table. The equation and threshold in 4.3.1 must be applied to determine SAR test exclusion.

| MHz | 5 | 10 | 15 | 20 | 25 | mm |
|------|-----|-----|-----|-----|-----|--|
| 150 | 39 | 77 | 116 | 155 | 194 | <i>SAR Test Exclusion Threshold (mW)</i> |
| 300 | 27 | 55 | 82 | 110 | 137 | |
| 450 | 22 | 45 | 67 | 89 | 112 | |
| 835 | 16 | 33 | 49 | 66 | 82 | |
| 900 | 16 | 32 | 47 | 63 | 79 | |
| 1500 | 12 | 24 | 37 | 49 | 61 | |
| 1900 | 11 | 22 | 33 | 44 | 54 | |
| 2450 | 10 | 19 | 29 | 38 | 48 | |
| 3600 | 8 | 16 | 24 | 32 | 40 | |
| 5200 | 7 | 13 | 20 | 26 | 33 | |
| 5400 | 6 | 13 | 19 | 26 | 32 | |
| 5800 | 6 | 12 | 19 | 25 | 31 | |
| MHz | 30 | 35 | 40 | 45 | 50 | mm |
| 150 | 232 | 271 | 310 | 349 | 387 | <i>SAR Test Exclusion Threshold (mW)</i> |
| 300 | 164 | 192 | 219 | 246 | 274 | |
| 450 | 134 | 157 | 179 | 201 | 224 | |
| 835 | 98 | 115 | 131 | 148 | 164 | |
| 900 | 95 | 111 | 126 | 142 | 158 | |
| 1500 | 73 | 86 | 98 | 110 | 122 | |
| 1900 | 65 | 76 | 87 | 98 | 109 | |
| 2450 | 57 | 67 | 77 | 86 | 96 | |
| 3600 | 47 | 55 | 63 | 71 | 79 | |
| 5200 | 39 | 46 | 53 | 59 | 66 | |
| 5400 | 39 | 45 | 52 | 58 | 65 | |
| 5800 | 37 | 44 | 50 | 56 | 62 | |

Note: 10-g Extremity SAR Test Exclusion Power Thresholds are 2.5 times higher than the 1-g *SAR Test Exclusion Thresholds* indicated above. These thresholds do not apply, by extrapolation or other means, to occupational exposure limits.



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| Operating Condition #1 | | | | | | |
|---|--------------------------------|------|--------------------------|-------------------------------|---------------------|---|
| Frequency | Max Conducted Output Power (P) | | Numeric Antenna Gain (G) | Max Radiated Output Power (P) | Separation distance | Exemption Limit (obtained by linear interpolation) (mW) |
| (MHz) | (dBm) | (mW) | / | (mW) | (mm) | |
| 2405 | -1.45 | 0.72 | 1,99 | 1.43 | <5 | 10.10 |
| 2445 | -1.01 | 0.79 | 1,99 | 1.57 | <5 | 10.03 |
| 2480 | -0.52 | 0.89 | 1,99 | 1.77 | <5 | 9.97 |
| VERDICT | | | | | | |
| SAR evaluation is not required because the output power value is less than exemption limit (separation distance <5mm) | | | | | | |

Note:

$G = \text{Numeric Gain } (10^{(\text{dBi}/10)}) / (10^{(2.98/10)}) = 1.99$