RF EXPOSURE TEST

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.

| 3 (77 | | | | | | |
|--|--|--|--|--|---|-----------------------|
| MHz | 5 | 10 | 15 | 20 | 25 | mm |
| 150 | 39 | 77 | 116 | 155 | 194 | |
| 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 | SAR Test Exclusion |
| 1900 | 11 | 22 | 33 | 44 | 54 | Threshold (mW) |
| 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 | |
| 150 300 | 232 164 | 271 192 | 310 219 | | | |
| | | | | 349 | 387 | |
| 300 | 164 | 192 | 219 | 349 246 | 387 274 | - |
| 300 450 | 164 134 | 192 157 | 219 179 | 349 246 201 | 387 274 224 | |
| 300 450 835 | 164 134 98 | 192 157 115 | 219 179 131 | 349 246 201 148 | 387 274 224 164 | SAR Test |
| 300 450 835 900 | 164 134 98 95 | 192 157 115 111 | 219 179 131 126 | 349 246 201 148 142 | 387 274 224 164 158 | SAR Test Exclusion |
| 300 450 835 900 1500 | 164 134 98 95 73 | 192 157 115 111 86 | 219 179 131 126 98 | 349 246 201 148 142 110 | 387 274 224 164 158 122 | SAR Test |
| 300 450 835 900 1500 1900 | 164 134 98 95 73 65 | 192 157 115 111 86 76 | 219 179 131 126 98 87 | 349 246 201 148 142 110 98 | 387 274 224 164 158 122 109 | SAR Test Exclusion |
| 300 450 835 900 1500 1900 2450 | 164 134 98 95 73 65 57 | 192 157 115 111 86 76 67 55 46 | 219 179 131 126 98 87 77 63 53 | 349 246 201 148 142 110 98 86 71 59 | 387 274 224 164 158 122 109 96 79 66 | SAR Test Exclusion |
| 300 450 835 900 1500 1900 2450 3600 | 164 134 98 95 73 65 57 47 | 192 157 115 111 86 76 67 55 | 219 179 131 126 98 87 77 63 | 349 246 201 148 142 110 98 86 71 | 387 274 224 164 158 122 109 96 79 | SAR Test Exclusion |

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* \leq 50 mm are determined by:

| ≤ 50 mm are determined by: |
|--|
| [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] • |
| $[\sqrt{f_{\text{(GHz)}}}] \le 3.0 \text{ for } 1\text{-g SAR and} \le 7.5 \text{ for } 10\text{-g extremity SAR,}_{16} \text{ where}$ |
| \square f _(GHz) is the RF channel transmit frequency in GHz |
| ☐ Power and distance are rounded to the nearest mW and mm before calculation 17 |
| ☐ The result is rounded to one decimal place for comparison |
| The test exclusions are applicable only when the minimum <i>test separation distance</i> is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum <i>test separation</i> |

distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Maximum measured transmitter power.

| frequency range | Maximum Peak Conducted Output Power (dBm) | Maximum Conducted Output Power (mW) |
|--------------------|---|-------------------------------------|
| 2402 | 1.697 | 1.48 |
| 2441 | 2.302 | 1.70 |
| 2480 | 2.576 | 1.81 |

The max.output power E.I.R.P is 2.576dBm=1.81mW, Frequency is 2.48GHz So $(1.81/5)^*$ $\sqrt{2.48}=0.56834 \le 3.0$

Note: $\sqrt{2.48} = 1.57$

Conclusion: No SAR is required.