

# MPE Calculation

## KDB 447498 - 4.3.1 b)

b) For 100 MHz to 6 GHz and test separation distances > 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following (also illustrated in Appendix B):

- 1) {[Power allowed at numeric threshold for 50 mm in step a)] + [(test separation distance – 50 mm)·(f(MHz)/150)]} mW,  
for 100 MHz to 1500 MHz
- 2) {[Power allowed at numeric threshold for 50 mm in step a)] + [(test separation distance – 50 mm)·10]} mW,  
for > 1500 MHz and ≤ 6 GHz

## KDB 447498 - Appendix B

| Frequency<br>(MHz) | Distance (mm) |
|--------------------|---------------|
|                    | 60            |
| 1900               | 209           |
| 2450               | 196           |
| 3600               | 179           |

Model Name : **SP96-A**

FCC ID : **S7A-SP96**

Separation distance : **60.0 mm**

| Modulation | Frequency<br>(MHz) | Min. Test<br>separation<br>distance | Measured<br>Maximum<br>Average<br>power | Tune-up<br>tolerance | Max. Power with tune-up<br>tolerance |       | SAR Test exclusion<br>thresholds for 100MHz to<br>6GHz at test separation<br>distance ≥ 50 mm | Limit  | Result |
|------------|--------------------|-------------------------------------|-----------------------------------------|----------------------|--------------------------------------|-------|-----------------------------------------------------------------------------------------------|--------|--------|
|            |                    | (mm)                                | (dBm)                                   | (dB)                 | (dBm)                                | (mW)  |                                                                                               |        |        |
| GFSK       | 2402               | 60.00                               | 15.29                                   | ± 1.00               | 16.29                                | 42.56 | 101.0993                                                                                      | 197.13 | PASS   |
|            | 2442               |                                     | 15.17                                   |                      | 16.17                                | 41.40 | 101.0783                                                                                      | 196.19 | PASS   |
|            | 2480               |                                     | 14.36                                   |                      | 15.36                                | 34.36 | 100.9017                                                                                      | 195.56 | PASS   |
| π/4DQPSK   | 2402               | 60.00                               | 6.87                                    | ± 1.00               | 7.87                                 | 6.12  | 100.1582                                                                                      | 197.13 | PASS   |
|            | 2442               |                                     | 7.39                                    |                      | 8.39                                 | 6.90  | 100.1798                                                                                      | 196.19 | PASS   |
|            | 2480               |                                     | 6.63                                    |                      | 7.63                                 | 5.79  | 100.1521                                                                                      | 195.56 | PASS   |
| 8DPSK      | 2402               | 60.00                               | 7.83                                    | ± 1.00               | 8.83                                 | 7.64  | 100.1973                                                                                      | 197.13 | PASS   |
|            | 2442               |                                     | 7.33                                    |                      | 8.33                                 | 6.81  | 100.1773                                                                                      | 196.19 | PASS   |
|            | 2480               |                                     | 6.77                                    |                      | 7.77                                 | 5.98  | 100.1571                                                                                      | 195.56 | PASS   |
| BT LE      | 2402               | 60.00                               | 5.29                                    | ± 1.00               | 6.29                                 | 4.26  | 100.1099                                                                                      | 197.13 | PASS   |
|            | 2442               |                                     | 4.70                                    |                      | 5.70                                 | 3.72  | 100.0968                                                                                      | 196.19 | PASS   |
|            | 2480               |                                     | 3.54                                    |                      | 4.54                                 | 2.84  | 100.0747                                                                                      | 195.56 | PASS   |