

Appendix 5

RF Exposure Information

According to KDB 447498 D01 section 4.3.1, 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$$

≤ 3.0 for 1-g SAR, and
 ≤ 7.5 for 10-g extremity SAR, where

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Maximum power of quadcopter:

Frequency (GHz)	Maximum peak output power (dBuV/m)	Output power (mW)
2.448	74.93	0.0093
2.456	74.58	0.0086
2.472	75.65	0.0110

Result:

$$(0.0093/5) \cdot \sqrt{2.448} = 0.0029 < 3.0$$

$$(0.0086/5) \cdot \sqrt{2.456} = 0.0027 < 3.0$$

$$(0.0110/5) \cdot \sqrt{2.472} = 0.0035 < 3.0$$

Maximum power of camera:

Frequency (GHz)	Maximum peak output power (dBuV/m)	Output power (mW)
2.421	81.91	0.0466
2.424	81.85	0.0459
2.446	82.73	0.0562

Result:

$$(0.0529/5) \cdot \sqrt{2.421} = 0.0164 < 3.0$$

$$(0.0542/5) \cdot \sqrt{2.424} = 0.0169 < 3.0$$

$$(0.0556/5) \cdot \sqrt{2.446} = 0.0174 < 3.0$$

Conclusion:

According to KDB 447498 D01 section 4.3.2, the sum of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration. Hence, no SAR is required.