SAR Evaluation

SAR Test Exclusion Thresholds:
(FCC KDB Publication 447498 D01 v06)

- For 100 MHz ≤ f ≤ 6 GHz and d_{min} ≤ 50 mm:

  $\frac{P_{max}}{d_{min}} \cdot [\sqrt{f_{(GHz)}}]$ ≤ 3.0 for 1-g SAR, and
  ≤ 7.5 for 10-g extremity SAR

  where P_{max} = max. power of channel in mW
  d_{min} = minimum test separation distance in mm
  f = RF channel transmit frequency

  The values 3.0 and 7.5 are referred to as *numeric thresholds*

- For f < 100 MHz and d ≤ 50 mm:

  ½*[1 + log(100/ $f_{(MHz)}$)] *
  {[Power allowed at *numeric threshold* for 50 mm] + [(d_{min} – 50 mm) *($f_{(MHz)}$ /150)]} mW

Evaluation Results: **Complies**

Details:

Frequency MHz	Power (dBm)	Antenna gain (dBi)	Duty Cycle (%)	EIRP (mW)	Test Separation Distance (mm)	SAR Test Exclusion Threshold (mW)
13.56[1)]	-	-	100	0.0001	5	1,199
906[2)]	18.797	3	0.256	0.41	5	16
2480	-14.21	-2.45	100	0.0216	5	10

1) The measured field strength is 55.2 dBuV/m @ 3 meters, which is 0.0000001 W $_{(EIRP)}$
2) Data taken from SAR evaluation report of the certified module, FCC ID: SU3RM900B-M1

Summation ∑ (EIRP) = 0.0001 + 0.41 + 0.0216 = 0.4317 (mW)

Conclusion: The sum of all 3 transmitting antennas is within the SAR Test Exclusion Thresholds at 5 mm test separation distance. SAR test exclusion applies.