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COMMERCIAL-IN-CONFIDENCE

SAR EXCLUSION DOCUMENT

Document 75947270-07 Issue 01

Sepura Limited
SC20 hand-portable terminal, SC2028

Bluetooth 2.4 GHz transmitter (other transmitters excluded from this assessment)

FCC Standalone SAR Test Exclusion Considerations (KDB 447498 D01) Section 4.3.1 a)

100 MHz – 6 GHz – Separation Distance ≤ 50 mm

The 1g SAR Test exclusion thresholds for 100 MHz to 6 GHz test separation distances ≤ 50 mm are determined by:

$$\left[\frac{\text{(max power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \right] \sqrt{f \text{ (GHz)}} \leq 3.0 \text{ for 1g SAR and } \leq 7.5 \text{ for 10g extremity SAR.}$$

- f (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
- When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied.

SAR Exclusion Result:

Frequency (GHz)	Power Output (mW)	Duty Cycle %	Maximum Power (Tune up Value) * (mW)	Test Separation Distance (mm)	SAR Test Exclusion Threshold	Limit**	SAR Test Exclusion (Yes/No)
2.402	5	77.54	4	5	1.2	3.0	Yes
2.480	5	77.54	4	5	1.2	3.0	Yes

* Maximum power including tolerance of the time averaged declared conducted output power of the device.

** Select ≤ 3.0 for 1g SAR and ≤ 7.5 for 10g extremity SAR.

The SAR exclusion threshold has been evaluated using the formula described above from information supplied by the manufacturer below. Based on the calculation above, the EUT is categorically excluded from SAR testing.

Approved by

Jon Kenny
Authorised Signatory

Date 06 January 2020



Manufacturer's Declaration of Product Information (extract):

Technical Description: <i>(Please provide a brief description of the intended use of the equipment)</i>	The SC20 hand-portable terminal is a TETRA enabled radio with Bluetooth and Wi-Fi capability
Manufacturer:	Sepura Limited
Model:	SC2028
Part Number:	N/A

Frequency Band 3: Bluetooth.

Antenna Model:	Integral on board	
Antenna length:	~4	cm
Bottom frequency:	2402	MHz
Middle frequency:	2441	MHz
Top frequency:	2480	MHz

Maximum power (input to the antenna including a tolerance):	5m	W
Antenna gain (or maximum gain allowed):	2.5	dBi

Separation distance from antenna to the user/bystander	0.45	cm
Transmitter Duty Cycle:	77.54	%