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RF Exposure Evaluation Report

Client: Block, Inc.

Address: 1955 Broadway, Suite 600,
Oakland, CA 94612 United States

Model: Bitkey

Test Report No.: RFE20251010-70-M1 Rev. 0

Approved By:

Fox Lane

Fox Lane,
EMC Test Engineer

Date: March 4, 2026

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Revision Page

Rev. No.	Date	Description
Original	4 March 2026	Issued by FLane Prepared by FLane

1 Regulatory Requirements:

FCC Part 1.1310, 2.1091, 2.1093
KDB 447498 D01
RSS-102, Issue 6

Summary:
The purpose of this report is to evaluate the EUT's transmitter for exemption from routine SAR testing.

EUT:

Model:	**Bitkey**
FCC ID:	**2AF3K-BK003**
IC:	**21827-BK003**
HVIN:	**BK003**

MPE Lab	Nebraska Center for Excellence in Electronics
MPE Labs FCC Cab Designation:	US1060
MPE Labs ISED Cab Designation:	US0177

2 FCC

FCC Limits, Part 1.1310

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f^2	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f^2	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

Occupational/Controlled		(10-g) Extremity SAR Eval	
General Population/uncontrolled	X	(1-g) Body SAR Eval	X

FCC Power Density Calculations

Frequency	EIRP (P)	EIRP +10% for Tolerance (P10)	SAR Exemption Calc (SAC)	Sar Exemption Limit (SAL)	% of limit	Result
GHz	mW	mW	mW/cm^2	Numeric	%	
13.5600	0	0.0	0.0	3.0	0.0	PASS

Distance (d)	5	mm

S = (P10 / d)*sqrt(f) – used to calculate exposure at "d" cm

f = Frequency (GHz)

S = power density (mW/cm^2)

P = transmitter conducted power (in mW)

d = distance to radiation center (mm)

Results:
Complies

Note:
Device power significantly below 1mW (less than -20dBm) and shows exemption from SAR testing
EIRP values in mW were multiplied by 1.1 to account for a 10% tolerance.

3 ISED

RSS 102, Issue 6, Section 6.4 (for distances less than 20cm)

Devices operating at or below the applicable output power levels (adjusted for tune-up tolerance) specified in table 11, based on the separation distance, are exempt from SAR evaluation. The separation distance, defined as the distance between the user and/or bystander and the antenna and/or radiating element of the device or the outer surface of the device, shall be less than or equal to 20 cm for these exemption limits to apply.

Table 11: Power limits for exemption from routine SAR evaluation based on the separation distance

Frequency (MHz)	≤ 5 mm(mW)	10 mm (mW)	15 mm(mW)	20 mm(mW)	25 mm(mW)	30 mm(mW)	35 mm(mW)	40 mm(mW)	45 mm(mW)	> 50 mm(mW)
≤ 300	45	116	139	163	189	216	246	280	319	362
450	32	71	87	104	124	147	175	208	248	296
835	21	32	41	54	72	96	129	172	228	298
1900	6	10	18	33	57	92	138	194	257	323
2450	3	7	16	32	56	89	128	170	209	245
3500	2	6	15	29	50	72	94	114	134	158
5800	1	5	13	23	32	41	54	74	102	128

The exemption limits in table 11 Table 11 are based on measurements and simulations of half-wave dipole antennas at separation distances of 5 mm to 50 mm from a flat phantom, which provides a SAR value of approximately 0.4 W/kg for 1 g of tissue.

For limb-worn devices where the 10 gram of tissue applies, the exemption limits for routine evaluation in table 11 are multiplied by a factor of 2.5.

For controlled-use devices where the 8 W/kg for 1 gram of tissue applies, the exemption limits for routine evaluation in table 11 Table 11 are multiplied by a factor of 5.

When the operating frequency of the device is between two frequencies located in table 11, linear interpolation shall be applied for the applicable separation distance. If the separation distance of the device is between two distances located in table 11, linear interpolation may be applied for the applicable frequency. Alternatively, the limit corresponding to the smaller distance may be employed. For example, in case of a 7 mm separation distance, either use the exception value for a 5 mm separation distance or interpolate between the limits corresponding to 5 mm and 10 mm separation distances.

For implanted medical devices, the exemption limit for routine SAR evaluation is set at an output power of 1 mW, regardless of frequency.

The SAR levels from exempted transmitters shall be included in the compliance assessment and the determination of the TER. Detailed guidance is included in sections 7.1.8 and 8.2.2.1.

RSS 102, Issue 6, Section 6.6 (for distances 20cm or greater)

Field reference level (FRL) exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm (i.e. mobile devices), except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 1 W (adjusted for tune-up tolerance)
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than $4.49/f^{0.5}W$ (adjusted for tune-up tolerance), where ƒ is in MHz
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance)
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834} W$ (adjusted for tune-up tolerance), where ƒ is in MHz
- at or above 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 5 W (adjusted for tune-up tolerance)

In these cases, the information contained in the RF exposure technical brief may be limited to information that demonstrates how the EIRP was derived.

Occupational/Controlled	☐
General Population/uncontrolled	☒

ISED Power Density Calculations								
Frequency	EIRP	Antenna Gain	Peak Power EIRP	Peak Power EIRP +10% for Tolerance	Power Density	Limit at (d)	% of limit	Result
MHz	mW	numerical	mW	mW	mW/cm^2	mW	%	
13.5600	0.001	1.00	0.00	0.00	0.000	1.00	0.000	PASS

Antenna Gain set to 1.00 because power measurements were performed with radiated method

Distance (d)	5	**mm**

S = (P x G)/(4 x π x d^2) – used to calculate exposure at "d" cm

EIRP = P x G, measured as field strength

d = √(S/(P x G) x 4 X π) – used to calculate minimum distance to meet limits

S = power density (mW/cm^2)

P = transmitter conducted power (in mW)

G = antenna numeric gain (Numerical)

d = distance to radiation center (cm)

Note:
Device power significantly below 1mW (less than -20dBm) and shows exemption from SAR testing
EIRP values in mW were multiplied by 1.1 to account for a 10% tolerance.

Result:
The EUT was found to be exempt from routine SAR testing and **COMPLIANT** with FCC and ISED RF exposure requirements.

4 Result

Device complies with all exposure limits listed in this report.

REPORT END