

FCC MPE REPORT

Certification

Applicant Name:

Safetrust Inc

Date of Issue:

July 12, 2019

Address:

8116 Mill Creek Rd.
Fremont, CA 94539, U.S.A.

Test Site/Location:

EMCE Engineering
1726 Ringwood Avenue San Jose, California USA

Report No.: EMCE-R-1907-F005

FCC ID:	2ANI5SA200
IC:	23133-SA200
APPLICANT:	Safetrust Inc

Model: SA200

Additional Model: N/A

EUT Type: SABRE Module

The measurements shown in this report were made in accordance with the procedures specified in §2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

EMCE Engineering, Inc. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998, 21 U.S. C.853(a)



Steve In
Test Engineer
Certification Division

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Billy Kim
Technical Manager
Certification Division

Version

TEST REPORT NO.	DATE	DESCRIPTION
EMCE-R-1907-F005	July 12, 2019	- First Approval Report

RF Exposure Statement

1. LIMITS

According to §1.1310 and §2.1091 RF exposure is calculated.

(B) Limits for General Population/Uncontrolled Exposures

Frequency range (MHz)	Electric field Strength (V/m)	Magnetic field Strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
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 - 1500.....	f/1500	30
1500 - 100.000.....	1.0	30

F = frequency in MHz

* = Plane-wave equivalent power density

2. MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

$$S = PG/4\pi R^2$$

S = Power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

3. RESULTS

3-1. Bluetooth

Average output Power at antenna input terminal	1.74	dBm
Average output Power at antenna input terminal	1.49	mW
Prediction distance	20.000	cm
Prediction frequency	2402 ~ 2480	MHz
Antenna Gain(typical)	2.0	dBi
Antenna Gain(numeric)	1.59	-
Power density at prediction frequency(S)	0.000471	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²

3-2. DTS

Average output Power at antenna input terminal	18.75	dBm
Average output Power at antenna input terminal	74.99	mW
Prediction distance	20.000	cm
Prediction frequency	2 412 ~ 2 462	MHz
Antenna Gain(typical)	2	dBi
Antenna Gain(numeric)	1.59	-
Power density at prediction frequency(S)	0.023645	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²

-> Worst Case: Simultaneous MPE 20cm is

Simultaneous MPE 20cm is WLAN(2.4 GHz) (0.023645/1.0) + Bluetooth (0.000471/1.0) = 0.024116 < 1