

RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	Remoto Basic V3 Plus OBDII Dongle
Model Name	RB3P
FCC ID	2APEZ-RB3P

2. EVALUATION METHOD AND LIMIT

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (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

*Note:

1. f= Frequency in MHz * Plane-wave Equivalent Power Density
2. The averaging time for General Population/Uncontrolled exposure to fixed transmitters is not applicable for mobile and portable transmitters. See 47 CFR §§2.1091 and 2.1093 on source-based time-averaging requirement for mobile and portable transmitters.

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

Where:

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

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3. CALCULATION

A minimum test separation distance ≥ 20 cm is required between the antenna and radiating structures of the device and nearby persons to apply mobile device exposure limits. The distance must be at least 20 cm and fully supported by the operating and installation configurations of the transmitter and its antenna(s), according to the source-based time-averaged maximum power requirements of § 2.1091(d)(2). In cases where cable losses or other attenuations are applied to determine compliance, the most conservative operating configurations and exposure conditions must be evaluated.

WCDMA

Test Mode	Frequency (MHz)	Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	Power Density (mW/cm ²)
WCDMA 850 (RMC)	826.6	21.58	143.88	1.80	1.51	0.0433
	836.4	21.36	136.77	1.80	1.51	0.0412
	846.6	21.42	138.68	1.80	1.51	0.0418
WCDMA 850 (AMR)	826.6	21.08	128.23	1.80	1.51	0.0386
	836.4	21.27	133.97	1.80	1.51	0.0404
	846.6	21.05	127.35	1.80	1.51	0.0384
WCDMA 1900 (RMC)	1852.6	21.11	129.12	1.70	1.48	0.0380
	1880	21.26	133.66	1.70	1.48	0.0394
	1907.4	21.66	146.55	1.70	1.48	0.0431
WCDMA 1900 (AMR)	1852.4	21.59	144.21	1.70	1.48	0.0425
	1880	21.44	139.32	1.70	1.48	0.0410
	1907.6	21.35	136.46	1.70	1.48	0.0402

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Test Mode	Frequency (MHz)	Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	Power Density (mW/cm ²)
LTE 1900 (10MHz)	1855.0	22.68	185.35	1.60	1.45	0.0533
	1880.0	22.44	175.39	1.60	1.45	0.0505
	1905.0	22.58	181.13	1.60	1.45	0.0521
LTE 1900 (5MHz)	1852.5	22.11	162.55	1.60	1.45	0.0468
	1880.0	22.33	171.00	1.60	1.45	0.0492
	1907.5	22.74	187.93	1.60	1.45	0.0541
LTE 1900 (3MHz)	1851.5	22.49	177.42	1.60	1.45	0.0510
	1880.0	23.06	202.30	1.60	1.45	0.0582
	1908.5	22.58	181.13	1.60	1.45	0.0521
LTE 1900 (1.4MHz)	1850.7	22.64	183.65	1.60	1.45	0.0528
	1880.0	22.57	180.72	1.60	1.45	0.0520
	1909.3	22.31	170.22	1.60	1.45	0.0490

Note:

- Only the worst case was recorded in the test report.

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