



RF EXPOSURE Test Report

Report No.: MTi230805003-06E5

Date of issue: 2023-08-22

Applicant: Beijing Cozyla Technology Ltd.

Product: Cozyla Canvas

Model(s): Cozyla CD-3M341F

FCC ID: 2BCES-CD3M341F

Shenzhen Microtest Co., Ltd.
<http://www.mtitest.com>



Instructions

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Test Result Certification	
Applicant:	Beijing Cozyla Technology Ltd.
Address:	Room A419 Building1, No. 12 Shangdi Information Road, Haidian District, Beijing PRC 100080
Manufacturer:	Beijing Cozyla Technology Ltd.
Address:	Room A419 Building1, No. 12 Shangdi Information Road, Haidian District, Beijing PRC 100080
Product description	
Product name:	Cozyla Canvas
Trademark:	Cozyla
Model name:	Cozyla CD-3M341F
Serial Model:	N/A
Standards:	N/A
Test procedure:	KDB 447498 D01 v06
Date of Test	
Date of test:	2023-08-16 2023-08-22
Test result:	Pass

Test Engineer :

Letter Lan.

(Letter Lan)

Reviewed By :

Leon Chen

(Leon Chen)

Approved By :

Tom Xue

(Tom Xue)

RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

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

f = frequency in MHz * = Plane-wave equivalent power density

MPE Calculation Method

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

P_d = Power density in mW/cm²

P_{out} = output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π = 3.1415926

R = distance between observation point and center of the radiator in cm(20cm)

P_d the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Measurement Result

BT/BLE:

Operation Frequency: 2402-2480MHz

ANT Gain: 2.07 dBi

Power density limited: 1mW/ cm²

BR+EDR:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
2402	GFSK	6.2	6±1	7	5.012	2.07	1.61	0.0016	1
2441		6.4	6±1	7	5.012	2.07	1.61	0.0016	1
2480		7.6	7±1	8	6.310	2.07	1.61	0.0020	1
2402	π/4-DQPSK	6.22	6±1	7	5.012	2.07	1.61	0.0016	1
2441		6.41	6±1	7	5.012	2.07	1.61	0.0016	1
2480		7.56	7±1	8	6.310	2.07	1.61	0.0020	1
2402	8DPSK	6.32	6±1	7	5.012	2.07	1.61	0.0016	1
2441		6.56	6±1	7	5.012	2.07	1.61	0.0016	1
2480		7.73	7±1	8	6.310	2.07	1.61	0.0020	1

BLE:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric	(mW/cm2)	(mW/cm2)
2402	GFSK-1M	6.26	6±1	7	5.012	2.07	1.61	0.0016	1
2440		6.89	6±1	7	5.012	2.07	1.61	0.0016	1
2480		7.6	7±1	8	6.310	2.07	1.61	0.0020	1
2402	GFSK-2M	6.3	6±1	7	5.012	2.07	1.61	0.0016	1
2440		6.91	6±1	7	5.012	2.07	1.61	0.0016	1
2480		7.62	7±1	8	6.310	2.07	1.61	0.0020	1

2.4G WIFI:

Operation Frequency: WIFI 802.11b/g/n HT20/ax20: 2412-2462MHz,

802.11n HT40/ax40: 2422-2452MHz,

ANT Gain: 2.07 dBi

 Power density limited: 1mW/ cm²

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna	Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain	Power density(mW/cm ²)	(mW/cm ²)
				(dBm)	(mW)	Numeric		
2412	802.11b	15.54	15±1	16	39.811	1.61	0.01276	1
2437		15.24	15±1	16	39.811	1.61	0.01276	1
2462		15.26	15±1	16	39.811	1.61	0.01276	1
2412	802.11g	13.29	13±1	14	25.119	1.61	0.00805	1
2437		13.27	13±1	14	25.119	1.61	0.00805	1
2462		13.29	13±1	14	25.119	1.61	0.00805	1
2412	802.11n H20	12.29	12±1	13	19.953	1.61	0.00639	1
2437		12.46	12±1	13	19.953	1.61	0.00639	1
2462		12.58	12±1	13	19.953	1.61	0.00639	1
2422	802.11n H40	12.76	12±1	13	19.953	1.61	0.00639	1
2437		12.53	12±1	13	19.953	1.61	0.00639	1
2452		12.21	12±1	13	19.953	1.61	0.00639	1
2412	802.11ax H20	11.19	11±1	12	15.849	1.61	0.00508	1
2437		10.55	10±1	11	12.589	1.61	0.00403	1
2462		10.67	10±1	11	12.589	1.61	0.00403	1
2422	802.11ax H40	10.60	10±1	11	12.589	1.61	0.00403	1
2437		10.63	10±1	11	12.589	1.61	0.00403	1
2452		10.27	10±1	11	12.589	1.61	0.00403	1

5G WiFi: UNII-1:

Operation Frequency: 802.11a/n(HT20)/ac(HT20)/ax(HE20):

U-NII Band 1: 5180MHz to 5240MHz;

U-NII Band 3: 5745MHz to 5825MHz;

802.11n(HT40)/ac(HT40)/ax(HE40):

U-NII Band 1: 5190MHz to 5230MHz;

U-NII Band 3: 5755MHz to 5795MHz;

ANT Gain: 3.02 dBi

Power density limited: 1mW/ cm²

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna	Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain	Power density(mW/cm ²)	(mW/cm ²)
				(dBm)	(mW)	Numeric		
5180	11a	10.69	10±1	11	12.589	2.00	0.00502	1
5200	11a	10.42	10±1	11	12.589	2.00	0.00502	1
5240	11a	10.38	10±1	11	12.589	2.00	0.00502	1
5180	11n (HT20)	10.69	10±1	11	12.589	2.00	0.00502	1
5200	11n (HT20)	10.76	10±1	11	12.589	2.00	0.00502	1
5240	11n (HT20)	10.41	10±1	11	12.589	2.00	0.00502	1
5190	11n (HT40)	10.81	10±1	11	12.589	2.00	0.00502	1
5230	11n (HT40)	10.93	10±1	11	12.589	2.00	0.00502	1
5180	11ac (HT20)	10.44	10±1	11	12.589	2.00	0.00502	1
5200	11ac (HT20)	10.2	10±1	11	12.589	2.00	0.00502	1
5240	11ac (HT20)	10.68	10±1	11	12.589	2.00	0.00502	1
5190	11ac (HT40)	11.03	11±1	12	15.849	2.00	0.00632	1
5230	11ac (HT40)	10.96	10±1	11	12.589	2.00	0.00502	1
5180	11ax (HT20)	9.57	9±1	10	10.000	2.00	0.00399	1
5200	11ax (HT20)	9.55	9±1	10	10.000	2.00	0.00399	1
5240	11ax (HT20)	9.49	9±1	10	10.000	2.00	0.00399	1
5190	11ax (HT40)	10.13	10±1	11	12.589	2.00	0.00502	1
5230	11ax (HT40)	9.99	9±1	10	10.000	2.00	0.00399	1



5G WiFi:UNII-3

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna	Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain	Power density(mW/cm ²)	(mW/cm ²)
				(dBm)	(mW)	Numeric		
5745	11a	7.94	7±1	8	6.310	2.00	0.00252	1
5785	11a	8.12	8±1	9	7.943	2.00	0.00317	1
5825	11a	9.45	9±1	10	10.000	2.00	0.00399	1
5745	11n (HT20)	7.76	7±1	8	6.310	2.00	0.00252	1
5785	11n (HT20)	8.01	8±1	9	7.943	2.00	0.00317	1
5825	11n (HT20)	9.2	9±1	10	10.000	2.00	0.00399	1
5755	11n (HT40)	8.22	8±1	9	7.943	2.00	0.00317	1
5795	11n (HT40)	8.09	8±1	9	7.943	2.00	0.00317	1
5745	11ac (HT20)	7.59	7±1	8	6.310	2.00	0.00252	1
5785	11ac (HT20)	7.53	7±1	8	6.310	2.00	0.00252	1
5825	11ac (HT20)	8.56	8±1	9	7.943	2.00	0.00317	1
5755	11ac (HT40)	7.93	7±1	8	6.310	2.00	0.00252	1
5795	11ac (HT40)	8.45	8±1	9	7.943	2.00	0.00317	1
5745	11ax (HT20)	7.59	7±1	8	6.310	2.00	0.00252	1
5785	11ax (HT20)	7.66	7±1	8	6.310	2.00	0.00252	1
5825	11ax (HT20)	8.74	8±1	9	7.943	2.00	0.00317	1
5755	11ax (HT40)	7.71	7±1	8	6.310	2.00	0.00252	1
5795	11ax (HT40)	8.23	8±1	9	7.943	2.00	0.00317	1



Conclusion:

SIMULTANEOUS TRANSMISSIONS

When a number of sources at different frequencies, and/or broadband sources, contribute to the total exposure, it becomes necessary to weigh each contribution relative to the MPE. To comply with the MPE, the fraction of the MPE in terms of E2, H2 (or power density) incurred within each frequency interval should be determined and the sum of all such fractions should not exceed unity. In order to ensure compliance with the MPE for a controlled environment, the sum of the ratios of the power density to the corresponding MPE should not exceed unity. That is

$$\sum_{i=1}^n \frac{S_i}{MPE_i} \leq 1$$

Simultaneous transmit:

Operating Band	The MPE ratio
BR&EDR	0.0020
BLE	0.0020
2.4G WIFI	0.00805
5G WIFI	0.00632

So the simultaneous transmitting antenna pairs as below:

BR&EDR +BLE+5G WIFI = 0.0020+ 0.0020+0.00632=0.001032

BLE+ BR&EDR +2.4G WIFI = 0.0020+ 0.00805+0.0020=0.01205

For the max result: 0.01205≤ 1.0 SAR, No SAR is required.

----END OF REPORT----