



Spot Check Evaluation

APPLICANT : Xiaomi Communications Co., Ltd.
EQUIPMENT : Mobile Phone
BRAND NAME : POCO
MODEL NAME : 22041216G
FCC ID : 2AFZZ1216
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L), 27(M), 27(O), 27(Q),
47 CFR Part 15 Subpart C §15.225
47 CFR Part 15 Subpart C §15.247
47 CFR Part 15 Subpart E §15.407

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
231203-02	Rev. 01	Initial issue of report	May 11, 2022



1 General Description

1.1 Applicant

Xiaomi Communications Co., Ltd.

#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.2 Manufacturer

Xiaomi Communications Co., Ltd.

#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	POCO
Model Name	22041216G
FCC ID	2AFZZ1216
HW Version	P2
SW Version	MIUI13
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Modification of EUT

No modifications are made to the EUT during all test items.

1.5 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CO01-KS 03CH04-KS	CN1257	314309



1.6 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24a



2 Re-use of Measured Data

2.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: 22041216G, FCC ID: 2AFZZ1216) is electrically identical to the reference device (Model: 22041216UG, FCC ID: 2AFZZ1216U) for the portions of the circuitry corresponding to the data being re-used. Based on their similarity, the FCC Part 15C (equipment class: DTS, DSS, DXX) and FCC Part 15E (equipment class: NII) and FCC Part 22, 24, 27 (equipment class: PCE) reuse the original model's result and do spot-check, following the FCC KDB 484596 D01 v01.

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID: 2AFZZ1216 .

2.2 Model Difference Information

All the details of similarity and difference between FCC ID: 2AFZZ1216U and FCC ID: 2AFZZ1216 can be found in the confidential documents (22041216G_Operational Description of Product Equality Declaration).



2.3 Reference detail Section:

Rule Part	Equipment Class	Frequency Band (MHz)	Reference FCC ID(Parent)	Type Grant/ Permissive Change	Reference Title	FCC ID Filling (Variant)	Report Title/Section
15C	DSS (BR/EDR)	2400~2483.5	2AFZZ1216U	Original Grant	FR231203A	2AFZZ1216	All sections applicable
	DTS (BLE)	2400~2483.5	2AFZZ1216U	Original Grant	FR231203B	2AFZZ1216	All sections applicable
	DTS (WLAN)	2400~2483.5	2AFZZ1216U	Original Grant	FR231203C	2AFZZ1216	All sections applicable
	DXX (NFC)	13.56	2AFZZ1216U	Original Grant	FR231203D	2AFZZ1216	All sections applicable
15E	U-NII-1	5180~5240	2AFZZ1216U	Original Grant	FR231203E	2AFZZ1216	All sections applicable
	U-NII-2A	5260~5320	2AFZZ1216U	Original Grant	FR231203E	2AFZZ1216	All sections applicable
	U-NII-2C	5500~5700	2AFZZ1216U	Original Grant	FR231203E	2AFZZ1216	All sections applicable
	U-NII-3	5745~5825	2AFZZ1216U	Original Grant	FR231203E	2AFZZ1216	All sections applicable
22, 24, 27	PCE (GSM)	GSM 850/1900	2AFZZ1216U	Original Grant	FG231203A	2AFZZ1216	All sections applicable
	PCE (WCDMA)	Band II, IV, V	2AFZZ1216U	Original Grant	FG231203A	2AFZZ1216	All sections applicable
	PCE (LTE)	B2/4/5/7/38/41/ CA B7C/38C/ 4A-7A	2AFZZ1216U	Original Grant	FG231203B FG231203C	2AFZZ1216	All sections applicable
	PCE (5G NR)	n5/n7/n38/n41/ n77/n78/ CA n7A-n78A	2AFZZ1216U	Original Grant	FG231203E FG231203F FG231203G	2AFZZ1216	All sections applicable



2.4 Spot Check Verification Data Section

Conducted power test and radiated spurious emission test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model

Summary for power and RSE spot check for each rule entry and technology is listed as below:

Test Item	Mode	2AFZZ1216U Parent Worst Result	2AFZZ1216 Variant Check Result	Difference (dB)
Conducted Power (dBm)	BT BR/EDR	16.00	15.80	0.20
	BLE 1Mbps	3.91	2.72	1.19
	BLE 2Mbps	3.98	2.84	1.14
	11b WLAN 2.4GHz	23.36	23.19	0.17
	11g WLAN 2.4GHz	28.30	28.03	0.27
	11n HT20 WLAN 2.4GHz	28.43	28.28	0.15
	11ax HE20 WLAN 2.4GHz	28.44	28.22	0.22
	11a WLAN 5.2/5.3/5.5GHz	18.51	17.88	0.63
	11n HT20 WLAN 5.2/5.3/5.5GHz	18.41	17.74	0.67
	11n HT40 WLAN 5.2/5.3/5.5GHz	18.00	17.39	0.61
	11ac VHT20 WLAN 5.2/5.3/5.5GHz	18.44	16.82	1.62
	11ac VHT40 WLAN 5.2/5.3/5.5GHz	18.00	17.59	0.41
	11ac VHT80 WLAN 5.2/5.3/5.5GHz	17.47	17.17	0.30
	11ax HE20 WLAN 5.2/5.3/5.5GHz	18.68	17.85	0.83
	11ax HE40 WLAN 5.2/5.3/5.5GHz	18.24	17.39	0.85
	11ax HE80 WLAN 5.2/5.3/5.5GHz	17.67	17.49	0.18
	11a WLAN 5.8GHz	17.80	17.69	0.11
	11n HT20 WLAN 5.8GHz	17.34	17.29	0.05
	11n HT40 WLAN 5.8GHz	17.56	17.50	0.06
	11ac VHT20 WLAN 5.8GHz	17.41	17.36	0.05
	11ac VHT40 WLAN 5.8GHz	17.63	17.52	0.11
	11ac VHT80 WLAN 5.8GHz	18.01	17.60	0.41
	11ax HE20 WLAN 5.8GHz	17.77	17.62	0.15
	11ax HE40 WLAN 5.8GHz	17.74	17.70	0.04
	11ax HE80 WLAN 5.8GHz	18.11	17.85	0.26
	GSM850	32.91	32.91	0
	GSM1900	29.92	29.92	0
	WCDMA Band II	24.16	24.16	0
	WCDMA Band IV	23.92	23.92	0
	WCDMA Band V	24.12	24.12	0
	LTE Band 2	24.05	24.05	0
	LTE Band 4	23.76	23.76	0
	LTE Band 5	24.22	24.22	0
	LTE Band 7	22.78	22.78	0
	LTE Band 38	23.57	23.57	0
	LTE Band 41	23.96	23.96	0
	LTE Band 7C	22.77	22.77	0
	LTE Band 38C	23.48	23.48	0
	5G NR n5 SCS 15k	25.08	24.86	0.22
	5G NR n5 SCS 30k	25.02	24.85	0.17
	5G NR n7 SCS 15k	23.78	23.58	0.20
	5G NR n7 SCS 30k	23.75	23.46	0.29
	5G NR n38 SCS 15k	24.28	23.98	0.30
	5G NR n38 SCS 30k	24.25	23.91	0.34
	5G NR n41 SCS 15k	24.41	24.11	0.30
	5G NR n41 SCS 30k	24.35	24.08	0.27
	5G NR n77 SCS 15k Part27O	25.92	25.86	0.06
	5G NR n77 SCS 30k Part27O	25.74	25.66	0.08
	5G NR n78 SCS 15k Part27O	27.31	27.22	0.09
	5G NR n78 SCS 30k Part27O	27.33	27.28	0.05
	5G NR n77 SCS 15k Part27Q	25.15	25.12	0.03
	5G NR n77 SCS 30k Part27Q	25.26	25.24	0.02
	5G NR n78 SCS 15k Part27Q	27.64	27.61	0.03
	5G NR n78 SCS 30k Part27Q	27.62	27.55	0.07



Test Item	Mode	2AFZZ1216U Parent Worst Result	2AFZZ1216 Variant Check Result	Difference (dB)
Radiated Spurious Emission (dBm)	GSM 850	-50.72	-50.99	0.27
	WCDMA Band II	-51.86	-51.95	0.09
	LTE Band 7C	-57.31	-59.72	2.41
	5G NR SA N7	-56.31	-54.21	2.10
Field Strength (dBuV/m) @ 3m	NFC 13.56MHz	59.01	57.72	1.29

Conclusion:

Radiated spurious emission test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.

Based on the spot check test result, the test data from the original model is representative for the variant model. The power level and RSE spot check are shown within expected level compliant to limit line.

We are using power and ERP/EIRP measurements from the original parent model reports to list on the grant.

We confirm that the test data reuse policy of FCC KDB 484596 D01 Referencing Test Data v01 has been followed and the test data as referenced from the parent model report represents compliance with new FCC ID.



3 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 14, 2021	Apr. 17, 2022~ Apr. 25, 2022	Oct. 13, 2022	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	Aug. 26, 2021	Apr. 17, 2022~ Apr. 25, 2022	Aug. 25, 2022	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY551502 44	10Hz-44G,MAX 30dB	Apr. 12, 2022	Apr. 15, 2022	Apr. 11, 2023	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	Apr. 15, 2022	Oct. 29, 2022	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 30, 2021	Apr. 15, 2022	May 29, 2022	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1356	1GHz~18GHz	Apr. 18, 2021	Apr. 15, 2022	Apr. 17, 2022	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2022	Apr. 15, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 05, 2022	Apr. 15, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40GG A	060728	18~40GHz	Jan. 05, 2022	Apr. 15, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	2025788	1Ghz-18Ghz	Jul. 30, 2021	Apr. 15, 2022	Jul. 29, 2022	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY572801 06	500MHz~26.5G Hz	Oct. 13, 2021	Apr. 15, 2022	Oct. 12, 2022	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F1040900 04	N/A	NCR	Apr. 15, 2022	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Apr. 15, 2022	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Apr. 15, 2022	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required.

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