

Notified Body

EU Type Examination Certificate

Manufacturer company name: Xiaomi Communications Co., Ltd.
Manufacturer address: The Rainbow City of China Resources, NO.68, Qinghe Middle Street,
Haidian District, Beijing, China

Description of the radio equipment: Mobile Phone
Trade name/brand name: MI
Model/type indication: MDG2
Software version: QL1515-tissot
Hardware version: P3A
Frequency bands of operation: 832 MHz to 862 MHz, 880 MHz to 915 MHz,
1710 MHz to 1785 MHz, 1920 MHz to 1980 MHz,
2300 MHz to 2400 MHz, 2500 MHz to 2570 MHz,
2570 MHz to 2620 MHz, 2402 MHz to 2480 MHz,
2412 MHz to 2472 MHz, 5150 MHz to 5350 MHz,
5470 MHz to 5725 MHz, 5725 MHz to 5875 MHz

TD reference: MDG2
ACB project number: ATCB021325
Certificate number: ATCB021325, issue 2

ACB, Inc. is designated as a Notified Body under the
U.S.-EU Mutual Recognition Agreement for Radio Equipment Directive 2014/53/EU

ACB, Inc.
Notified Body Number 1588
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In the opinion of ACB, Inc., the examination of the technical documentation as drawn up by the manufacturer demonstrates that the essential requirements of Article 3.1a, Article 3.1b and Article 3.2, of Radio Equipment Directive 2014/53/EU have been met. The conformity assessment on the radio equipment listed above and as described in Annex 1 to this EU-type examination certificate has been carried out in accordance with Annex III, Module B, of Radio Equipment Directive 2014/53/EU. This EU-type examination certificate relates only to the documents as provided to ACB, Inc.

A list of documentation forming the basis for the EU-type examination is provided in
Annex 2 to this EU-type examination certificate.



Notified Body: *Hans Chang*

28 June 2017
Date



Annex 1 to EU-type examination certificate for Radio Equipment Directive 2014/53/EU

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ACB project number/certificate number: ATCB021325, issue 2

The radio equipment as described and documented in the technical documentation as drawn up by the manufacturer is a Mobile Phone

It supports GSM technology with GPRS and EGPRS/EDGE in the E-GSM 900 MHz and GSM 1800 MHz bands.

It supports UMTS technology in the 900 MHz Band VIII and 2100 MHz Band I.

It supports LTE technology in the 800 MHz Band 20, 900 MHz Band 8, 1800 MHz Band 3, 2100 MHz Band 1, 2600 MHz Band 7, 2300 MHz Band 40 and 2600 MHz Band 38.

It supports IEEE 802.11bgn (HT20&HT40) Wireless LAN technology in the 2.4 GHz band.

It supports Bluetooth Wireless PAN technology in the 2.4 GHz band with EDR and BLE.

It supports IEEE 802.11a/n/ac [(V)HT20, (V)HT40 & VHT80] Wireless LAN technology in the 5 GHz bands.

It supports a GPS / Glonass Receiver in the 1.5/1.6 GHz band.

It supports FM Broadcast reception in the 88 MHz to 108 MHz band.

This radio equipment also supports operation in frequency bands which are not available for use in Member States of the European Union and EFTA countries and which have not been included in this conformity assessment. The conformity assessment of this radio equipment is limited to those frequency bands of operation which are available for use in one or more Member States of the European Union and EFTA countries as detailed below.

Details of operation:

Description of service:	E-GSM 900 MHz
Transmit frequency:	880 MHz to 915 MHz
Receive frequency:	925 MHz to 960 MHz
Modulation:	GMSK, 8PSK
Power class:	Class 4 (GMSK), Class E2 (8PSK)
Transmit power:	33.0 dBm, conducted (GSM/GMSK)
Transmit power:	33.0 dBm, conducted (GPRS/GMSK)
Transmit power:	26.5 dBm, conducted (EGPRS/8PSK)

Description of service:	DCS 1800 MHz
Transmit frequency:	1710 MHz to 1785 MHz
Receive frequency:	1805 MHz to 1880 MHz
Modulation:	GMSK, 8PSK
Power class:	Class 1 (GMSK), Class E2 (8PSK)
Transmit power:	29.2 dBm, conducted (GSM/GMSK)
Transmit power:	29.2 dBm, conducted (GPRS/GMSK)
Transmit power:	25.7 dBm, conducted (EGPRS/8PSK)



Annex 1 to EU-type examination certificate for Radio Equipment Directive 2014/53/EU

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ACB project number/certificate number: ATCB021325, issue 2

Description of service: UMTS 2100 MHz Band I
Transmit frequency: 1920 MHz to 1980 MHz
Receive frequency: 2110 MHz to 2170 MHz
Modulation: QPSK, 16QAM (DL),64QAM(DL)
Power class: Class 3
Transmit power: 22.8 dBm, conducted

Description of service: UMTS 900 MHz Band VIII
Transmit frequency: 880 MHz to 915 MHz
Receive frequency: 925 MHz to 960 MHz
Modulation: QPSK, 16QAM (DL) ,64QAM(DL)
Power class: Class 3
Transmit power: 22.8 dBm, conducted

Description of service: E-UTRA LTE Band 1
Transmit frequency: 1920 MHz to 1980 MHz
Receive frequency: 2110 MHz to 2170 MHz
Modulation: QPSK, 16QAM, 64QAM(DL)
Power class: Class 3
Transmit power: 23.1 dBm, conducted

Description of service: E-UTRA LTE Band 3
Transmit frequency: 1710 MHz to 1785 MHz
Receive frequency: 1805 MHz to 1880 MHz
Modulation: QPSK, 16QAM, 64QAM(DL)
Power class: Class 3
Transmit power: 23.0 dBm, conducted

Description of service: E-UTRA LTE Band 7
Transmit frequency: 2500 MHz to 2570 MHz
Receive frequency: 2620 MHz to 2690 MHz
Modulation: QPSK, 16QAM, 64QAM(DL)
Power class: Class 3
Transmit power: 23.2 dBm, conducted

Description of service: E-UTRA LTE Band 8
Transmit frequency: 880 MHz to 915 MHz
Receive frequency: 925 MHz to 960 MHz
Modulation: QPSK, 16QAM, 64QAM(DL)
Power class: Class 3
Transmit power: 23.2 dBm, conducted

Description of service: E-UTRA LTE Band 20
Transmit frequency: 832 MHz to 862 MHz
Receive frequency: 791 MHz to 821 MHz
Modulation: QPSK, 16QAM, 64QAM(DL)
Power class: Class 3
Transmit power: 23.2 dBm, conducted



Annex 1 to EU-type examination certificate for Radio Equipment Directive 2014/53/EU

Date of issue: 28 June 2017

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Description of service: E-UTRA LTE Band 38
Transmit frequency: 2570 MHz to 2620 MHz
Receive frequency: 2570 MHz to 2620 MHz
Modulation: QPSK, 16QAM, 64QAM(DL)
Power class: Class 3
Transmit power: 22.7 dBm, conducted

Description of service: E-UTRA LTE Band 40
Transmit frequency: 2300 MHz to 2400 MHz
Receive frequency: 2300 MHz to 2400 MHz
Modulation: QPSK, 16QAM, 64QAM(DL)
Power class: Class 3
Transmit power: 23.1 dBm, conducted

Description of service: IEEE 802.11bgn WLAN
Transmit frequency: 2412 MHz to 2472 MHz, 2422 MHz to 2462 MHz (HT40)
Receive frequency: 2412 MHz to 2472 MHz, 2422 MHz to 2462 MHz (HT40)
Modulation: DSSS, OFDM
Transmit power: 17.4 dBm, e.i.r.p.

Description of service: IEEE 802.11a/n/ac WLAN
Transmit frequency: 5180 MHz to 5320 MHz[(v)HT20], 5190 MHz to 5310 MHz [(V)HT40]
5210 MHz to 5290 MHz (VHT80)
Receive frequency: 5180 MHz to 5320 MHz[(v)HT20], 5190 MHz to 5310 MHz [(V)HT40]
5210 MHz to 5290 MHz (VHT80)
Modulation: OFDM
Transmit power: 18.7 dBm, e.i.r.p.

Description of service: IEEE 802.11a/n/ac WLAN
Transmit frequency: 5500 MHz to 5700 MHz[(v)HT20], 5510 MHz to 5670 MHz [(V)HT40]
5530 MHz to 5610 MHz (VHT80)
Receive frequency: 5500 MHz to 5700 MHz[(v)HT20], 5510 MHz to 5670 MHz [(V)HT40]
5530 MHz to 5610 MHz (VHT80)
Modulation: OFDM
Transmit power: 18.4 dBm, e.i.r.p.



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ACB project number/certificate number: ATCB021325, issue 2

Description of service: IEEE 802.11 a/n/ac WLAN
Transmit frequency: 5745 MHz to 5825 MHz[(v)HT20], 5755 MHz to 5795 MHz [(V)HT40]
5775 MHz (VHT80)
Receive frequency: 5745 MHz to 5825 MHz[(v)HT20], 5755 MHz to 5795 MHz [(V)HT40]
5775 MHz (VHT80)
Modulation: OFDM
Transmit power: 13.4 dBm, e.i.r.p.

Description of service: Bluetooth Basic Rate + EDR
Transmit frequency: 2402 MHz to 2480 MHz
Receive frequency: 2402 MHz to 2480 MHz
Modulation: GFSK, $\pi/4$ DQPSK, 8DPSK
Transmit power: 8.8 dBm, e.i.r.p.

Description of service: Bluetooth Low Energy (BLE)
Transmit frequency: 2402 MHz to 2480 MHz
Receive frequency: 2402 MHz to 2480 MHz
Modulation: GFSK
Transmit power: 4.3 dBm, e.i.r.p.

Description of service: GPS Receiver
Transmit frequency: None
Receive frequency: 1575.42 MHz

Description of service: Glonass Receiver
Transmit frequency: None
Receive frequency: 1602.00 MHz + (n * 0.5625 MHz), n = -7, -6, -5, ..., 0, ..., 6)

Description of service: FM Broadcast Receiver
Transmit frequency: None
Receive frequency: 88 MHz to 108 MHz



Annex 2 to EU-type examination certificate for Radio Equipment Directive 2014/53/EU

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1	Test report:	Report number:	Dated:
	EMC	170524001EMC-1	28 June 2017
	Radio(GSM)	170524001RFM-1	23 June 2017
	Radio(UMTS)	170524001RFM-2	23 June 2017
	Radio(LTE)	170524001RFM-3	23 June 2017
	Radio(WiFi)	170524001RFC-3	19 June 2017
	Radio(Bluetooth)	170524001RFC-2	19 June 2017
	Radio(BLE)	170524001RFC-1	19 June 2017
	Radio(WiFi)	170524001RFC-4	22 June 2017
	Radio(WiFi)	170524001RFC-5	19 June 2017
	Radio(GPS)	170524001RFC-7	22 June 2017
	Radio(FM)	170524001RFC-6	23 June 2017
	RF safety	SE170601W001	20 June 2017
	Product safety	OFF-4788002972-A-1	20 June 2017
	Acoustic safety	170524006SPL-1	15 June 2017
2	Technical documentation provided:		
	Antenna details	Block diagram	Circuit diagram/schematics
	External photographs	Internal photographs	Label drawing/location
	Operational description	Parts list/bill of materials	PCB layout
	Test reports	Test setup photographs	User manual
	EU declaration of conformity		
3	Standards used to demonstrate conformity with the essential requirements of Radio Equipment Directive 2014/53/EU:		
	Radio Spectrum (Article 3.2):	EN 301 511 V12.1.1	EN 301 908-1 V11.1.1
		EN 301 908-2 V11.1.1	EN 301 908-13 V11.1.1
		EN 300 328 V2.1.1	EN 301 893 V2.1.1
		EN 300 440 V2.1.1	EN 303 413 V1.1.1
		EN 303 345 V1.1.7	
	EMC (Article 3.1b):	EN 301 489-1 V2.2.0	EN 301 489-3 V2.1.1
		EN 301 489-17 V3.2.0	EN 301 489-19 V2.1.0
		EN 301 489-52 V1.1.0	EN 55024:2010
		EN 55032: 2015	
	RF safety (Article 3.1a):	EN 62479: 2010	
		EN 50360: 2001 + A1: 2012	EN 50566: 2013 + AC: 2014
	Product safety (Article 3.1a):	EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013	



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4 Additional information:

This is a Class 2 device.

Radio Equipment Directive 2014/53/EU, Article 10.4: Manufacturers shall keep the technical documentation and the EU declaration of conformity for 10 years after the radio equipment has been placed on the market.

Radio Equipment Directive 2014/53/EU, Article 10.6: Manufacturers shall ensure that radio equipment which they have placed on the market bears a type, batch or serial number or other element allowing its identification, or, where the size or nature of the radio equipment does not allow it, that the required information is provided on the packaging, or in a document accompanying the radio equipment.

Radio Equipment Directive 2014/53/EU, Article 10.7: Manufacturers shall indicate on the radio equipment their name, registered trade name or registered trade mark and the postal address at which they can be contacted or, where the size or nature of radio equipment does not allow it, on its packaging, or in a document accompanying the radio equipment. The address shall indicate a single point at which the manufacturer can be contacted. The contact details shall be in a language easily understood by end-users and market surveillance authorities.

Radio Equipment Directive 2014/53/EU, Article 10.8: Manufacturers shall ensure that the radio equipment is accompanied by instructions and safety information in a language which can be easily understood by consumers and other end-users, as determined by the Member State concerned. Instructions shall include the information required to use radio equipment in accordance with its intended use. Such information shall include, where applicable, a description of accessories and components, including software, which allow the radio equipment to operate as intended. Such instructions and safety information, as well as any labelling, shall be clear, understandable and intelligible.

The following information shall also be included in the case of radio equipment intentionally emitting radio waves:

- (a) frequency band(s) in which the radio equipment operates;
- (b) maximum radio-frequency power transmitted in the frequency band(s) in which the radio equipment operates.

Radio Equipment Directive 2014/53/EU, Article 10.9: Manufacturers shall ensure that each item of radio equipment is accompanied by a copy of the EU declaration of conformity or by a simplified EU declaration of conformity. Where a simplified EU declaration of conformity is provided, it shall contain the exact internet address where the full text of the EU declaration of conformity can be obtained.

Radio Equipment Directive 2014/53/EU, Article 10.10: In cases of restrictions on putting into service or of requirements for authorization of use, information available on the packaging shall allow the identification of the Member States or the geographical area within a Member State where restrictions on putting into service or requirements for authorization of use exist. Such information shall be completed in the instructions accompanying the radio equipment.

Radio Equipment Directive 2014/53/EU, Article 19.2: On account of the nature of radio equipment, the height of the CE marking affixed to radio equipment may be lower than 5 mm, provided that it remains visible and legible.

Radio Equipment Directive 2014/53/EU, Article 20.1: The CE marking shall be affixed visibly, legibly and indelibly to the radio equipment or to its data plate, unless that is not possible or not warranted on account of the nature of radio equipment. The CE marking shall also be affixed visibly and legibly to the packaging.



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Radio Equipment Directive 2014/53/EU, Annex III, Module B.7: The manufacturer shall inform the notified body that holds the technical documentation relating to the EU-type examination certificate of all modifications to the approved type that may affect the conformity of the radio equipment with the essential requirements of this Directive or the conditions for validity of that certificate. Such modifications shall require additional approval in the form of an addition to the original EU-type examination certificate.

This review includes draft standards, deviations from the standards and technical justification for compliance.

In accordance with Notified Body guidance; if there are no changes, a Notified Body EU type examination certificate has a validity of 10 years from the date of issue.

5 Contact information:

For contact with ACB or questions regarding this EU-type examination certificate:

Web: www.acbcert.com

<http://acbcert.com/contact>

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