



FCC RF Test Report

APPLICANT : HMD Global Oy
EQUIPMENT : Mobile Phone
BRAND NAME : Nokia
MODEL NAME : TA-1221, TA-1231
FCC ID : 2AJOTTA-1221
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

This is a data re-used report which is only valid together with the original test report. We, Sporton International (Kunshan) Inc., 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 (Kunshan) Inc., the test report shall not be reproduced except in full.

Jason Jia

Reviewed by: Jason Jia / Supervisor

James Huang

Approved by: James Huang / Manager



Sporton International (Kunshan) Inc.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG9D3106A	Rev. 01	Initial issue of report	Apr. 14, 2020



1 General Description

1.1 Applicant

HMD Global Oy

Bertel Jungin aukio 9, 02600 Espoo, Finland

1.2 Manufacturer

HMD Global Oy

Bertel Jungin aukio 9, 02600 Espoo, Finland

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	Nokia
Model Name	TA-1221, TA-1231
FCC ID	2AJOTTA-1221
EUT supports Radios application	GSM/WCDMA/LTE WLAN 2.4GHz 802.11b/g/n HT20 Bluetooth BR/EDR/LE FM Receiver, GNSS
IMEI Code	Conducted: N/A Radiation: 355786100000962
HW Version	V1.0
SW Version	00VPO_1_100
EUT Stage	Production Unit

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 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	GSM/GPRS/EDGE: 850: 824.2 MHz ~ 848.8 MHz 1900: 1850.2 MHz ~ 1909.8MHz WCDMA: Band V: 826.4 MHz ~ 846.6 MHz Band II: 1852.4 MHz ~ 1907.6 MHz Band IV: 1712.4 MHz ~ 1752.6 MHz
Rx Frequency	GSM/GPRS/EDGE: 850: 869.2 MHz ~ 893.8 MHz 1900: 1930.2 MHz ~ 1989.8 MHz WCDMA: Band V: 871.4 MHz ~ 891.6 MHz Band II: 1932.4 MHz ~ 1987.6 MHz Band IV: 2112.4 MHz ~ 2152.6 MHz
Antenna Type	LDS Antenna
Antenna Gain	Cellular Band: -0.50 dBi PCS Band: 0.50 dBi AWS Band: 0.50 dBi
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE: GMSK / 8PSK WCDMA : BPSK HSDPA/DC-HSDPA : QPSK HSUPA : QPSK HSPA+ : 16QAM DC-HSDPA : 64QAM

1.5 Modification of EUT

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



1.6 Testing Location

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

Test Firm	Sporton International (Kunshan) Inc.		
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.
	03CH04-KS TH01-KS	CN1257	314309

1.7 Test Software

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

1.8 Re-use of Measured Data

1.6.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: TA-1221, TA-1231, FCC ID: 2AJOTTA-1221) is electrically identical to the reference device (Model: TA-1218, TA-1226, FCC ID: 2AJOTTA-1226) for the portions of the circuitry corresponding to the data being re-used, as treated by KDB Publication 484596 D01.

1.6.2 Difference Section

For details concerning the similarity with respect to component placement, mechanical/electrical design etc., please refer to the Product Equality Declaration.

The re-used RF data includes the following bands provided in Appendix B (Sporton RF Report No. FG9D3105A for the reference device Model: TA-1218, TA-1226, FCC ID: 2AJOTTA-1226).

1.6.3 Reference detail Section:

Equipment Class	Reference FCC ID	Folder Test	Report Title/Section
PCE (2G/3G)	2AJOTTA-1226	Part22H.24E.27L (FG9D3105A)	All sections applicable

1.6.4 Spot Check Verification Data Section

In order to confirm hardware similarity of the subject device with the reference device, spot check measurements were performed on the subject device for the following test items, the test result were consistent with FCC ID: 2AJOTTA-1226.

Assertions concerning the similarity of these devices are based on representations by the applicant. The applicant accepts full responsibility for the validity of the similarity claim, and for the determination that verification test data are sufficient to support it.

Test Item	Mode	2AJOTTA-1226 Worst Result	2AJOTTA-1221 Worst Result	Difference (dB)
Average Conducted Power (dBm)	GSM 850	32.11	31.86	-0.25
	GSM 1900	28.96	28.68	-0.28
	WCDMA Band II	23.03	23.11	0.08
	WCDMA Band IV	22.99	22.97	-0.02
	WCDMA Band V	23.17	23.25	0.08
Radiated Spurious Emission (dBm)	GSM 850	-40.06	-45.86	-5.8
	GSM1900	-48.4	-47.91	0.49
	WCDMA Band IV	-52.31	-52.68	-0.37



2 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	Nov. 02, 2019	Feb. 17, 2020	Nov. 01, 2020	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Nov. 19, 2019	Feb. 17, 2020	Nov. 18, 2020	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESR7	101404	9kHz~7GHz	Apr. 18, 2019	Feb. 21, 2020	Apr. 17, 2020	Radiation (03CH04-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Apr. 18, 2019	Feb. 21, 2020	Apr. 17, 2020	Radiation (03CH04-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	Aug. 27, 2019	Feb. 21, 2020	Aug. 26, 2020	Radiation (03CH04-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1474	1GHz~18GHz	Apr. 01, 2019	Feb. 21, 2020	Mar. 31, 2020	Radiation (03CH04-SZ)
Horn Antenna	SCHWARZBECK	BBHA9170	9170#679	15GHz~40GHz	Apr.19 , 2019	Feb. 21, 2020	Apr. 18, 2020	Radiation (03CH04-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 18, 2019	Feb. 21, 2020	Oct. 17, 2020	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1	1943528	1GHz~18GHz	Oct. 18, 2019	Feb. 21, 2020	Oct. 17, 2020	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 22, 2019	Feb. 21, 2020	Jul. 21, 2020	Radiation (03CH04-SZ)
Amplifier	Agilent Technologies	83017A	MY53270156	500MHz~26.5GHz	Aug. 26, 2019	Feb. 21, 2020	Aug. 25, 2020	Radiation (03CH04-SZ)
AC Power Source	Chroma	61601	N/A	N/A	NCR	Feb. 21, 2020	NCR	Radiation (03CH04-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Feb. 21, 2020	NCR	Radiation (03CH04-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Feb. 21, 2020	NCR	Radiation (03CH04-SZ)

NCR: No Calibration Required.



Appendix A. Reference Report

Please refer to Sporton report number FG9D3105A which is issued separately.