

# **TEST REPORT**

# No.I23N00664-BLE

for

# Guangdong OPPO Mobile Telecommunications Corp., Ltd.

**Mobile Phone** 

# Model Name: CPH2565

with

# Hardware Version: 11

# Software Version: ColorOS 13.1

# FCC ID: R9C-CPH2565

# Issued Date: 2023-05-23

# Designation Number: CN1210

# Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of SAICT.

# **Test Laboratory:**

# SAICT, Shenzhen Academy of Information and Communications Technology

Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China 518000.

Tel:+86(0)755-33322000, Fax:+86(0)755-33322001

Email: yewu@caict.ac.cn. www.saict.ac.cn

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# **REPORT HISTORY**

Report Number	Revision	Description	Issue Date
I23N00664-BLE	Rev.0	1st edition	2023-05-23

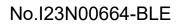
Note: the latest revision of the test report supersedes all previous versions.

# No.I23N00664-BLE



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# 1. Summary of Test Report

### 1.1. Test Items

Description	Mobile Phone
Model Name	CPH2565
Applicant's name	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Manufacturer's Name	Guangdong OPPO Mobile Telecommunications Corp., Ltd.

### 1.2. Test Standards

FCC Part15-2021; ANSI C63.10-2013.

### 1.3. Test Result

### Pass

Please refer to "5.2. Test Results"

### 1.4. Testing Location

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China 518000

#### 1.5. Project data

Testing Start Date:	2023-05-04
Testing End Date:	2023-05-19

# 1.6. Signature

Lin Zechuang (Prepared this test report)

An Ran (Reviewed this test report)

Zhang Bojun (Approved this test report)



# 2. Client Information

# 2.1. Applicant Information

Company Name:	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
A alaha a a i	NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City,
Address:	Guangdong, China
Contact Person	Mei XiLi
E-Mail	meixili@oppo.com
Telephone:	(86)76986076999
Fax:	1

# 2.2. Manufacturer Information

Company Name:	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address:	NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City,
Audress.	Guangdong, China
Contact Person	Mei XiLi
E-Mail	meixili@oppo.com
Telephone:	(86)76986076999
Fax:	/



# 3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

# 3.1.<u>About EUT</u>

Description	Mobile Phone
Model Name	CPH2565
Frequency Range	ISM 2400MHz~2483.5MHz
Equipment type	Bluetooth <sup>®</sup> Low Energy
Type of Modulation	GFSK
PHY	LE 1M
Number of Channels	40
Antenna Type	Integrated antenna
Antenna Gain	0.29dBi
Power Supply	3.87V DC by Battery
FCC ID	R9C-CPH2565
Condition of EUT as received	No abnormality in appearance

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Shenzhen Academy of Information and Communications Technology.

### 3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of Receipt
UT12aa	864951060047999 864951060047981	11	ColorOS 13.1	2023-05-05
UT05aa	864951060048815 864951060048807	11	ColorOS 13.1	2023-04-27

\*EUT ID: is used to identify the test sample in the lab internally.

UT12aa is used for conduction test, UT05aa is used for radiation test and AC Power line Conducted Emission test.

### 3.3. Internal Identification of AE used during the test

AE No.	Description	AE ID*
AE1	Battery	/
AE2	Charger	/
AE3	USB Cable	/

#### AE1

Model	BLPA07
Manufacturer	Dongguan NVT Technology CO., LTD
Capacity	4890mAh
Nominal Voltage	3.87 V
AE2	
Model	VCB7CAUH



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Manufacturer Specification	Dongguan Yohoo Electronic Technology Co., Ltd American Standard Charger
AE3	
Model	DL129
Manufacturer	/

\*AE ID and AE Label: is used to identify the test sample in the lab internally.

# 3.4. General Description

The Equipment under Test (EUT) is a model of Mobile Phone with integrated antenna and battery. It consists of normal options: Lithium Battery, Charger and USB Cable. Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.



# 4. <u>Reference Documents</u>

# 4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

# 4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 15	FCC CFR 47, Part 15, Subpart C:	2021
	15.205 Restricted bands of operation;	
	15.209 Radiated emission limits, general requirements;	
	15.247 Operation within the bands 902–928MHz,	
	2400–2483.5 MHz, and 5725–5850 MHz	
ANSI C63.10	American National Standard of Procedures for Compliance	2013
	Testing of Unlicensed Wireless Devices	



# 5. Test Results

# 5.1. Testing Environment

Normal Temperature:	15~35°C
Relative Humidity:	20~75%

# 5.2. Test Results

No	Test cases	Sub-clause of Part 15C	Verdict
0	Antenna Requirement	15.203	Р
1	Maximum Peak Output Power	15.247 (b)	Р
2	Peak Power Spectral Density	15.247 (e)	Р
3	6dB Bandwidth	15.247 (a)	Р
4	Band Edges Compliance	15.247 (d)	Р
5	Transmitter Spurious Emission - Conducted	15.247 (d)	Р
6	Transmitter Spurious Emission - Radiated	15.247, 15.205, 15.209	Р
7	AC Power line Conducted Emission	15.107, 15.207	Р

See **ANNEX A** for details.

# 5.3. <u>Statements</u>

SAICT has evaluated the test cases requested by the applicant/manufacturer as listed in section 5.2 of this report, for the EUT specified in section 3, according to the standards or reference documents listed in section 4.2.

Disclaimer:

A. After confirmation with the customer, the sample information provided by the customer may affect the validity of the measurement results in this report, and the impact and consequences arising therefrom shall be borne by the customer.

B. The samples in this report are provided by the customer, and the test results are only applicable to the samples received.



# 6. Test Equipments Utilized

# Conducted test system

No.	Equipment	Model	Serial Number	erial Number Manufacturer		Calibration
NO.	Equipment	WOUEI	Senai Number	Manufacturer	Due date	Period
1	Vector Signal	FSV40	100903	Rohde & Schwarz	2023-12-28	1 voor
	Analyzer	F3V40	100903	Ronde & Schwarz	2023-12-20	1 year
2	Power Sensor	U2021XA	MY55430013	Keysight	2023-12-28	1 year
3	Data Acquisition	U2531A	TW55443507	Keysight	/	/
4	RF Control Unit	JS0806-2	21C8060398	Tonscend	2024-05-07	1 year
5	Shielding Room	S81	CT000986-1344	ETS-Lindgren	2026-09-12	5 years

## Radiated test system

No.	Equipment	Model	Serial	Manufacturer	Calibration	Calibration
NO.	Equipment	Widdei	Number	Wanulacturer	Due date	Period
1	Test Receiver	ESR7	101676	Rohde & Schwarz	2023-11-23	1 year
2	BiLog Antenna	3142E	0224831	ETS-Lindgren	2024-05-27	3 years
3	Horn Antenna	3117	00066577	ETS-Lindgren	2025-04-17	3 years
4	Anechoic	FACT3-2.0	1285	ETC Lindaron	2023-05-29	
4	Chamber	FAC13-2.0	1200	ETS-Lindgren	2023-05-29	2 years
5	Spectrum	FSV40	101192	Rohde & Schwarz	2024-01-11	1 voor
5	Analyzer	F3V40	101192	Ronde & Schwarz	2024-01-11	1 year
6	Loop Antenna	HLA6120	35779	TESEQ	2025-05-12	3 years
7	Horn Antenna	QSH-SL-1	17013 Q-par	2026 02 01	2 1/2 2 7 2	
	nom Antenna	8-26-S-20	17013	Q-par	2026-02-01	3 years
8	Test Receiver	ESCI	100702	Rohde & Schwarz	2024-01-11	1 year
9	LISN	ENV216	102067	Rohde & Schwarz	2023-09-06	1 year

# Test software

No.	Equipment	Manufacturer	Version
1	JS1120-3	Tonscend	3.3
2	EMC32	Rohde & Schwarz	10.50.40

EUT is engineering software provided by the customer to control the transmitting signal. The EUT was programmed to be in continuously transmitting mode.



# 7. Laboratory Environment

#### Shielded room

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB
Electrical insulation	> 2MΩ
Ground system resistance	< 4 Ω

### Anechoic chamber

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB
Electrical insulation	> 2MΩ
Ground system resistance	< 4 Ω
Normalised site attenuation (NSA)	<±4 dB, 3 m distance, from 30 to 1000 MHz
Voltage Standing Wave Ratio (VSWR)	≤ 6 dB, from 1 to 18 GHz, 3m distance
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz



# 8. Measurement Uncertainty

Test Name	Uncertain	ity ( <i>k</i> =2)
1. Maximum Peak Output Power	1.32	dB
2. Peak Power Spectral Density	1.32	dB
3. 6dB Bandwidth	4.56	⟨Hz
4. Band Edges Compliance	1.92	dB
	30MHz≤f<1GHz	1.41dB
5 Transmitter Spurious Emission Conducted	1GHz≤f<7GHz	1.92dB
5. Transmitter Spurious Emission - Conducted	7GHz≤f<13GHz	2.31dB
	13GHz≤f≤26GHz	2.61dB
	9kHz≤f<30MHz	1.79dB
C. Transmitter Courieurs Emissien - Dedicted	30MHz≤f<1GHz	4.86dB
6. Transmitter Spurious Emission - Radiated	1GHz≤f<18GHz	4.82dB
	18GHz≤f≤40GHz	2.90dB
7. AC Power line Conducted Emission	150kHz≤f≤30MHz	2.62dB



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# **ANNEX A: Detailed Test Results**

# **Test Configuration**

### The measurement is made according to ANSI C63.10.

#### 1) Conducted Measurements

- 1. Connect the EUT to the test system correctly.
- 2. Set the EUT to the required work mode.
- 3. Set the EUT to the required channel.
- 4. Set the spectrum analyzer to start measurement.
- 5. Record the values.

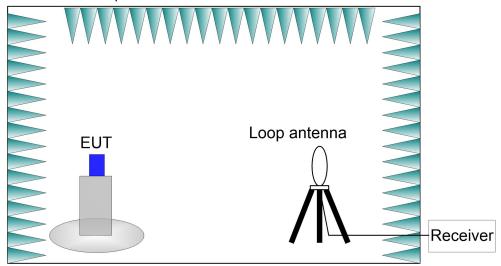


#### 2) Radiated Measurements

#### Test setup:

#### 9kHz-30MHz:

The EUT are measured in a anechoic chamber. The EUT is placed on a non-conductive stand of 80cm high, and at a measurement distance of 3m from the receiving antenna. The center of the receiving loop antenna is 1.0 meter above the ground. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT and adjusting the receiver antenna polarization.

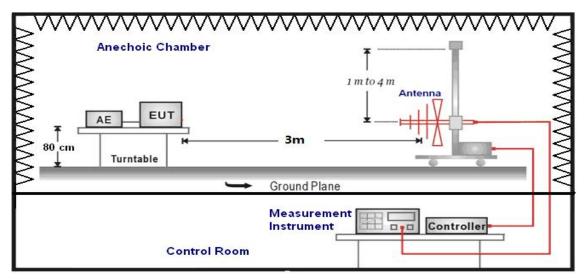




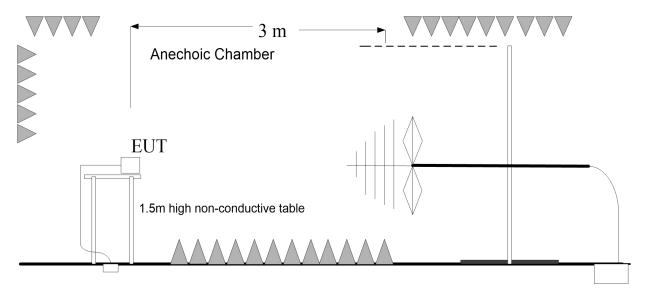
### 30MHz-26.5GHz:

The EUT are measured in a anechoic chamber. The EUT is placed on a non-conductive stand of 80cm high, and at a measurement distance of 3m from the receiving antenna. The center of the receiving antenna is 1.0 meter to 4.0 meter above the ground. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT and adjusting the receiver antenna polarization.

### 30MHz-1GHz:

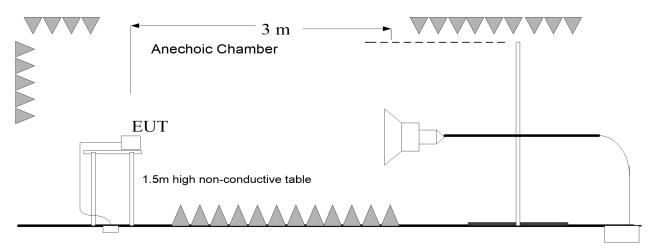


1GHz-3GHz:



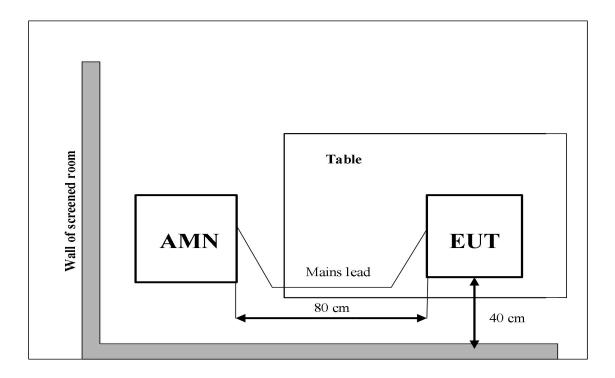


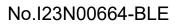
### 3GHz-26.5GHz:



### 3) AC Power line Conducted Emission Measurement

For Bluetooth LE, the EUT is working under test mode. The EUT is commanded to operate at maximum transmitting power.







# A.0 Antenna requirement

#### Measurement Limit:

Standard	Requirement
	An intentional radiator shall be designed to ensure that no antenna other than that
	furnished by the responsible party shall be used with the device. The use of a
	permanently attached antenna or of an antenna that uses a unique coupling to the
	intentional radiator shall be considered sufficient to comply with the provisions of
	this section. The manufacturer may design the unit so that a broken antenna can
	be replaced by the user, but the use of a standard antenna jack or electrical
FCC CRF Part	connector is prohibited. This requirement does not apply to carrier current devices
15.203	or to devices operated under the provisions of §15.211, §15.213, §15.217,
	§15.219, or §15.221. Further, this requirement does not apply to intentional
	radiators that must be professionally installed, such as perimeter protection
	systems and some field disturbance sensors, or to other intentional radiators
	which, in accordance with §15.31(d), must be measured at the installation site.
	However, the installer shall be responsible for ensuring that the proper antenna is
	employed so that the limits in this part are not exceeded.

Conclusion: The Directional gains of antenna used for transmitting is 0.29dBi. The RF transmitter uses an integrate antenna without connector.



# A.1 Maximum Peak Output Power

### Method of Measurement: See ANSI C63.10-clause 11.9.1.3.

The maximum peak conducted output power may be measured using a broadband peak RF power meter.

#### **Measurement Limit:**

Standard	Limit (dBm)
FCC 47 CRF Part 15.247(b)	< 30

#### Measurement Results:

Mode	Frequency (MHz)	RF output power (dBm)	Conclusion
	2402(CH0)	9.16	Р
LE 1M	2440(CH19)	9.58	Р
	2480(CH39)	9.32	Р

### **Conclusion: Pass**



# A.2 Peak Power Spectral Density

# Method of Measurement: See ANSI C63.10-clause 11.10.2.

#### Measurement Limit:

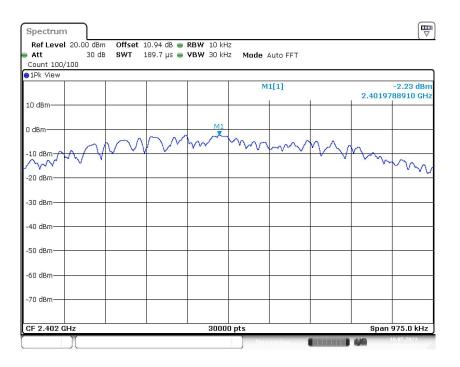
Standard	Limit (dBm/3 kHz)
FCC 47 CRF Part 15.247(e)	< 8

#### Measurement Results:

Mode	Frequency (MHz)	Peak Power Sp (dBm/1	-	Conclusion
	2402(CH0)	Fig.1	-2.23	Р
LE 1M	2440(CH19)	Fig.2	-1.84	Р
	2480(CH39)	Fig.3	-2.08	Р

See below for test graphs. Conclusion: PASS







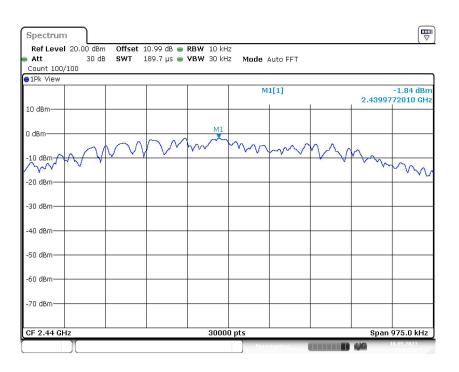


Fig.2 Power Spectral Density (CH19), LE 1M



# No.I23N00664-BLE

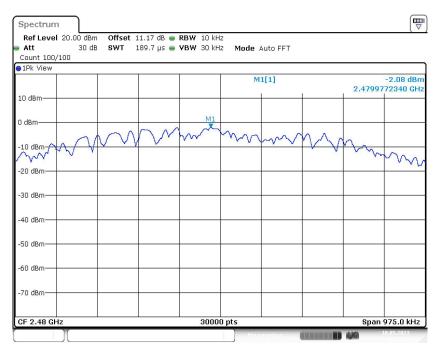


Fig.3 Power Spectral Density (CH39), LE 1M



# A.3 6dB Bandwidth

### Method of Measurement: See ANSI C63.10-clause 11.8.

### Measurement Limit:

Standard	Limit (MHz)
FCC 47 CFR Part 15.247 (a)	≥ 0.5

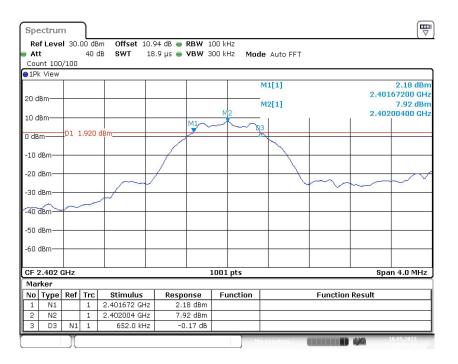
#### Measurement Result:

Mode	Frequency (MHz)	Frequency (MHz) Test Results (MHz)		Conclusion
	2402(CH0)	Fig.4	0.65	Р
LE 1M	2440(CH19)	Fig.5	0.65	Р
	2480(CH39)	Fig.6	0.65	Р

See below for test graphs.

Conclusion: PASS







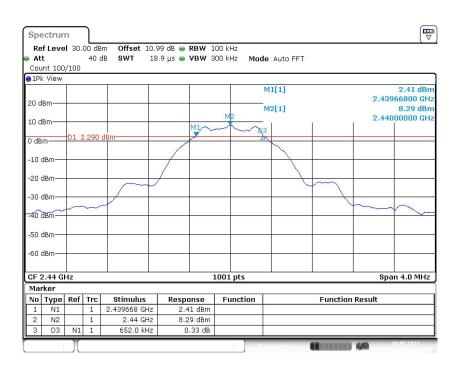
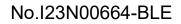


Fig.5 6dB Bandwidth (CH19), LE 1M





20 dBm         2.47966B           10 dBm         M2[1]         8.0           0 dBm         01 2.080 dBm         2.480000	20 dBm
Count 100/100 <ul> <li>Plk View</li> <li>20 dBm</li> <li>M2[1]</li> <li>R.(</li> <li>R.(<td></td></li></ul>	
• 1Pk View               M1[1]             2.3             20.479668             M2[1]             2.479668             8.6             2.480000             0 dBm             0 dBm             0 dBm             -10 dBm             -10 dBm               M1[1]             2.3             2.49068             M2[1]             2.480000             -10 dBm             -10 dBm               M1             -10             -10	
20 dBm         M1[1]         2.3           10 dBm         M2[1]         8.0           0 dBm         01 2.080 dBm         01 2.080 dBm	
20 dBm 21 2.479668 8.0 10 dBm 01 2.080 dBm	
20 dBm M2 M2[1] 8.0 10 dBm D1 2.090 dBm M1 2.480000 -10 dBm10 dBm1	SHE GH
10 dBm 01 2.080 dB	
10 dBm 01 2.080 dB	08 dBm
0 dBm D1 2.080 dBm	UU GHA
-10 dBm	
-20 dBm	
-30 dBm	
740 dBm	
-50 dBm	
-60 dBm	
CF 2.48 GHz 1001 pts Span 4.	0 MHz
Marker	
No Type Ref Trc Stimulus Response Function Function Result	
1 N1 1 2.479668 GHz 2.20 dBm	
2 N2 1 2.48 GHz 8.08 dBm	
3 D3 N1 1 652.0 kHz 0.22 dB	
Measuring 10.05.	

Fig.6 6dB Bandwidth (CH39), LE 1M



# A.4 Band Edges Compliance

### Method of Measurement: See ANSI C63.10-clause 11.13.3.

#### Measurement Limit:

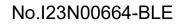
Standard	Limit (dBc)
FCC 47 CFR Part 15.247 (d)	> 20

#### Measurement Result:

Mode	Frequency (MHz)	Test Results (dBc)		Conclusion
LE 1M	2402(CH0)	Fig.7	51.46	Р
	2480(CH39)	Fig.8	53.85	Р

See below for test graphs.

**Conclusion: PASS** 





Spe	ectrun	n	٦							
	f Leve	<b>1</b> 20.			.0.94 dB 🧉					
At		1000	30 0	IB SWT	1.1 ms 🧉	VBW 3	00 kHz Mc	ode Auto Sv	veep	
-	int 300 « View	/300								
<b>0</b> 1PF	( VIEW									7.82 dBm
								M1[1]		2.4020180 GHz
10 d	Bm—							M2[1]		-43.80 dBm
0 dB								mz[1]		2.400000 GHz
U UB									1 1	
-10	dBm—	DI	10.10	0 dBm						
		101 -	-12.10	U UBIII						
-20	dBm—									
-30	de mi									Ů Ĭ.
-30	ubm									
-40	dBm								M3	
ando	aliter	and	Same	4 and any reacherste	remember 1.	Ramo	Marrie asperal	vel mar whe	M3 when the more	adamenter h
-50%	dBm—									
-60	dBm									
00	abin									
-70	dBm—									
Star	t 2.35	GHz		1		1	691 pts			Stop 2.405 GHz
Mai	rker									
No	Туре	Ref	Trc	Stimulus	Res	ponse	Function		Function	Result
1	N1		1	2.402015 GH	lz 7	.82 dBm				
2	N2		1	2.4 GH	lz -43	.86 dBm				
3	N3		1	2.39 GH	lz -48	.06 dBm				
4	N4		1	2.3999783 G	Hz -43	.64 dBm				
_	1							Measuring	(	10.05.2023
										08146117



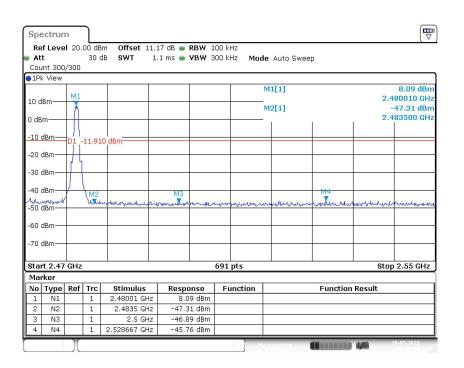


Fig.8 Band Edges (CH39), LE 1M



# A.5 Transmitter Spurious Emission - Conducted

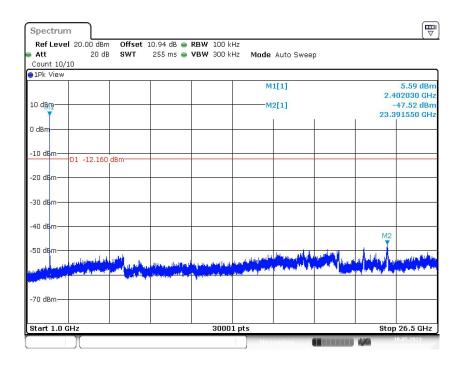
### Method of Measurement: See ANSI C63.10-clause 11.11.

#### **Measurement Limit:**

Standard				Limit (dBm	)
FCC 47 CFR Part 15.247 (d)			20dBm below peak output power in 100 kHz bandwidth		
Measuremen	nt Results:				
Mode	Frequency (MHz)	Frequency Range		Test Results	Conclusion
	2402(CH0)	1GHz-26	.5GHz	Fig.9	Р
LE 1M	2440(CH19)	1GHz-26.5GHz		Fig.10	Р
	2480(CH39)	1GHz-26.5GHz		Fig.11	Р
/	All channels	30MHz -1GHz		Fig.12	Р

#### See below for test graphs.

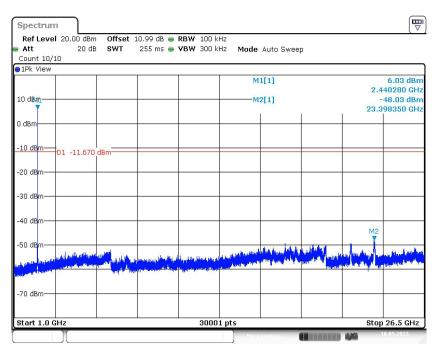
#### **Conclusion: Pass**



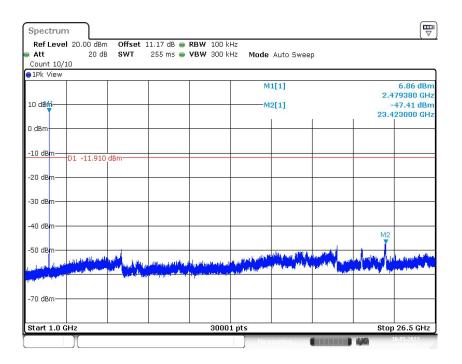
#### Fig.9 Conducted Spurious Emission (CH0, 1GHz-26.5GHz), LE 1M

# No.I23N00664-BLE

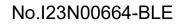








### Fig.11 Conducted Spurious Emission (CH39, 1GHz-26.5GHz), LE 1M





Ref Level 20.00 dB	m Offset 10	).99 dB 🖷 I	<b>RBW</b> 100 k	Ηz				⊲
Att 20 0			<b>VBW</b> 300 k		Auto Sweep	0		
Count 10/10								
1Pk View								
				M	1[1]			58.03 dBm
10 dBm	_						00	
D dBm								
-10 dBm-D1 -11.67	0 dBm							
D1 -11.07	0 ubiii							
-20 dBm								
-30 dBm								
-40 dBm						-		-
-50 dBm								
				M1				7
60.dBm	and the "the splitter of the	dupstandelle	adjana na kada se	rigen fordburg stat	704-http://http://		and the state of the	(Internetions)
() terretaria da anti a constanti a constanti (	in particulation in the	walking and a state of the stat	onderfehigestichen werde	and the second second in	Median Article ( and the	and an an an and the first	and the second rate	Contraction of the second
-70 dBm						1		1
Start 30.0 MHz	1		3000	1 pts		n	Sto	p 1.0 GHz

Fig.12 Conducted Spurious Emission (All Channels, 30MHz -1GHz)



# A.6 Transmitter Spurious Emission - Radiated

#### Method of Measurement: See ANSI C63.10-clause 11.11&11.12.

#### Measurement Limit:

Standard	Limit (dBm)
FCC 47 CFR Part 15.247, 15.205, 15.209	20dBm below peak output power

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

#### Limit in restricted band:

Frequency of emission (MHz)	Field strength(µV/m)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

#### **Test Condition:**

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	120kHz/300kHz	5
1000-4000	1MHz/3MHz	15
4000-18000	1MHz/3MHz	40
18000-26500	1MHz/3MHz	20

**Note:** According to the performance evaluation, the radiated emission margin of EUT is over 20dB in the band from 9kHz to 30MHz. Therefore, the measurement starts from 30MHz to tenth harmonic. The measurement results include the horizontal polarization and vertical polarization measurements. For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.



#### **Measurement Results:**

Mode	Frequency (MHz)	Frequency Range	Test Results	Conclusion
	2402(CH0)	1 GHz ~18 GHz	Fig.13	Р
	2440(CH19)	1 GHz ~18 GHz	Fig.14	Р
LE 1M	2480(CH39)	1 GHz ~18 GHz	Fig.15	Р
	Restricted Band (CH0)	2.38 GHz ~ 2.45 GHz	Fig.16	Р
	Restricted Band (CH39)	2.45 GHz ~ 2.5 GHz	Fig.17	Р
		9 kHz ~30 MHz	Fig.18	Р
/	All channels	30 MHz ~1 GHz	Fig.19	Р
		18 GHz ~ 26.5 GHz	Fig.20	Р

# Worst Case Result:

# For LE 1M:

#### CH19 (1-18GHz)

Frequency	MaxPeak	Limit	Margin	Pol	Corr.
(MHz)	(dBµV/m)	(dBµV/m)	(dB)	FOI	(dB/m)
10470.428572	47.89	74.00	26.11	Н	9.0
11490.857143	47.94	74.00	26.06	V	10.1
12867.428572	48.41	74.00	25.59	Н	11.0
14913.000000	51.10	74.00	22.90	V	13.0
16188.857143	51.31	74.00	22.69	Н	14.7
16963.285714	54.82	74.00	19.18	V	18.3

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	Corr. (dB/m)
10470.428572	34.79	54.00	19.21	Н	9.0
11490.857143	35.32	54.00	18.68	V	10.1
12867.428572	36.16	54.00	17.84	Н	11.0
14913.000000	38.09	54.00	15.91	V	13.0
16188.857143	39.54	54.00	14.46	Н	14.7
16963.285714	41.93	54.00	12.07	V	18.3

#### Note:

A "reference path loss" is established and the  $A_{Rpl}$  is the attenuation of "reference path loss", and Antenna Factor, the gain of the preamplifier, the cable loss.  $P_{Mea}$  is the field strength recorded from the instrument.

The measurement results are obtained as described below:

Result= P<sub>Mea</sub> +Cable Loss +Antenna Factor-Gain of the preamplifier.

#### See below for test graphs.

**Conclusion: Pass** 



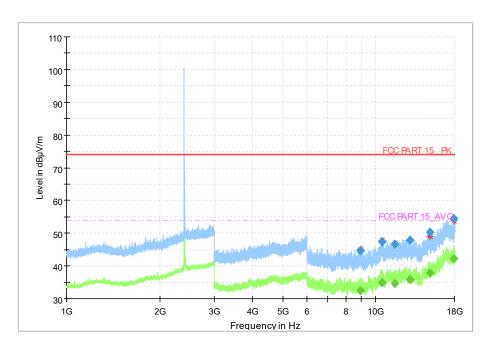


Fig.13 Radiated Spurious Emission (CH0, 1GHz ~18GHz), LE 1M

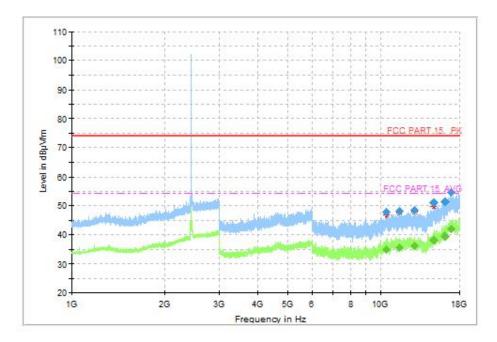


Fig.14 Radiated Spurious Emission (CH19, 1GHz ~18GHz), LE 1M



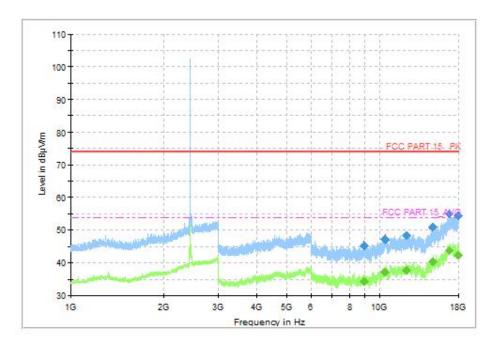


Fig.15 Radiated Spurious Emission (CH39, 1GHz ~18GHz), LE 1M

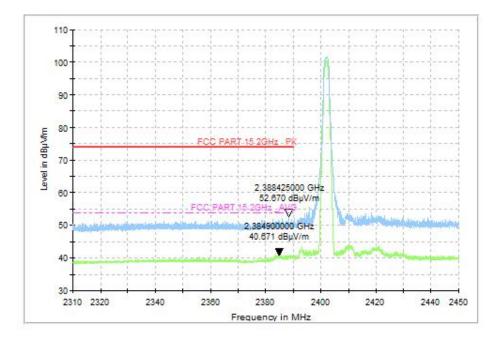


Fig.16 Radiated Band Edges (CH0, 2.38GHz~2.45GHz), LE 1M



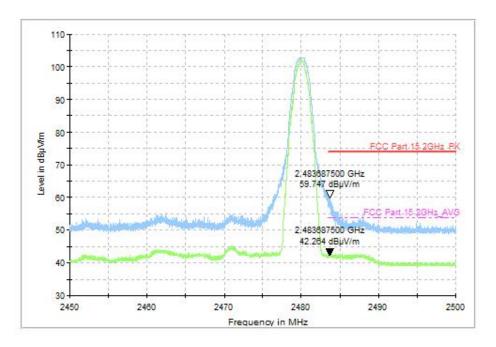


Fig.17 Radiated Band Edges (CH39, 2.45GHz~2.50GHz), LE 1M

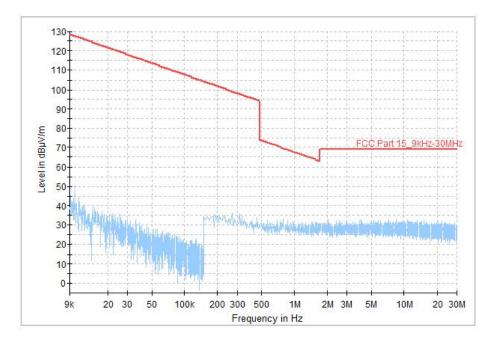


Fig.18 Radiated Spurious Emission (All Channels, 9kHz-30MHz)



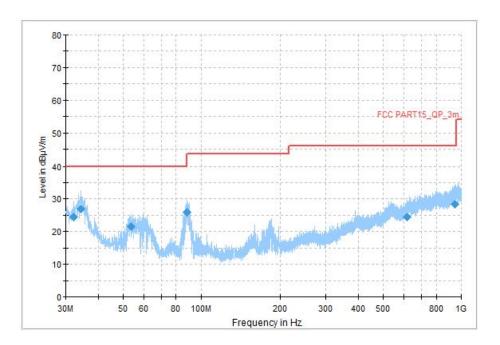


Fig.19 Radiated Spurious Emission (All Channels, 30MHz-1GHz)

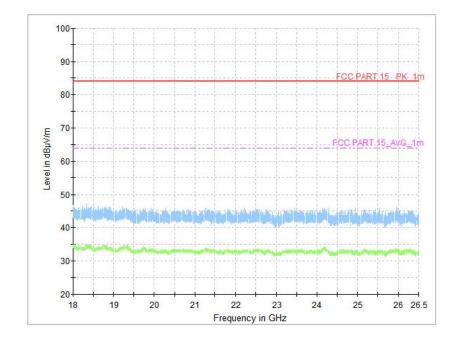


Fig.20 Radiated Spurious Emission (All Channels, 18GHz-26.5 GHz)



# A.7 AC Power line Conducted Emission

#### Method of Measurement: See ANSI C63.10-clause 6.2.

#### **Test Condition:**

Voltage (V)	Frequency (Hz)
120	60

#### **Measurement Result and limit:**

Frequency range	Quasi-peak	Average-peak	Result	(dBµV)	Conclusion				
(MHz)	Limit (dBµV)	Limit (dBµV)	Traffic Idle		Conclusion				
0.15 to 0.5	66 to 56	56 to 46							
0.5 to 5	56	46	Fig.21	Fig.22	Р				
5 to 30	60	50							
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15									
MHz to 0.5 MHz.									

Note: The measurement results include the L1 and N measurements.

See below for test graphs. Conclusion: Pass



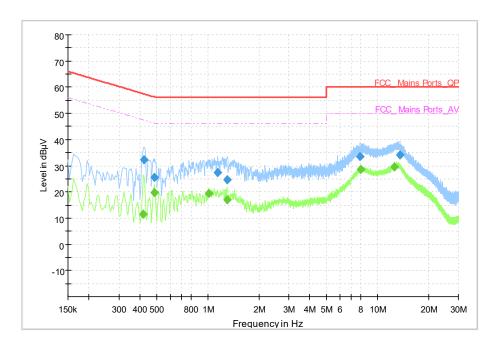


Fig.21 AC Power line Conducted Emission (Traffic)

Frequency	Quasi Peak	Limit	Margin	Line	Filter	Corr.
(MHz)	(dBµV)	(dBµV)	(dB)			(dB)
0.422000	32.21	57.41	25.20	L1	ON	10
0.486000	25.64	56.24	30.60	L1	ON	10
1.146000	27.53	56.00	28.47	N	ON	10
1.306000	24.56	56.00	31.44	N	ON	10
7.890000	33.49	60.00	26.51	L1	ON	10
13.574000	34.26	60.00	25.74	N	ON	10

### Measurement Results: Quasi Peak

### Measurement Results: Average

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.418000	11.65	47.49	35.84	N	ON	10
0.486000	19.90	46.24	26.33	L1	ON	10
1.010000	19.43	46.00	26.57	N	ON	10
1.298000	16.96	46.00	29.04	N	ON	10
7.974000	28.59	50.00	21.41	L1	ON	10
12.638000	29.60	50.00	20.40	L1	ON	10



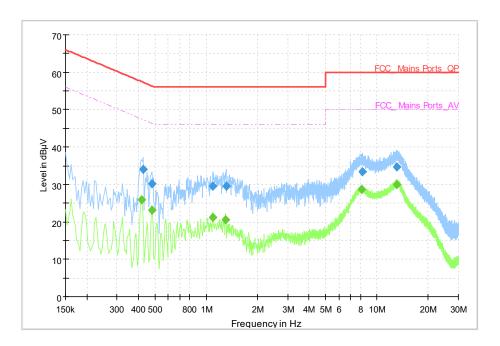


Fig.22 AC Power line Conducted Emission (Idle), LE 1M

Frequency (MHz)	Quasi Peak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.426000	34.10	57.33	23.23	N	ON	10
0.482000	30.26	56.31	26.04	L1	ON	10
1.094000	29.52	56.00	26.48	N	ON	10
1.306000	29.64	56.00	26.36	L1	ON	10
8.210000	33.40	60.00	26.60	N	ON	10
13.002000	34.64	60.00	25.36	L1	ON	10

### Measurement Results: Quasi Peak

### Measurement Results: Average

Frequency	Average	Limit	Margin	Line	ine Filter	Corr.
(MHz)	(dBµV)	(dBµV)	(dB)	LIIIE	Filler	(dB)
0.418000	25.96	47.49	21.53	N	ON	10
0.482000	23.03	46.31	23.28	L1	ON	10
1.094000	21.25	46.00	24.75	N	ON	10
1.298000	20.49	46.00	25.51	N	ON	10
8.114000	28.58	50.00	21.42	L1	ON	10
13.122000	29.87	50.00	20.13	N	ON	10

### \*\*\*END OF REPORT\*\*\*