## FCC PART 15 SUBPART C TEST REPORT

for

Wireless Trackball Mouse

Model No.: M-RT1BR

FCC ID: YWO-M-RT1BR

of

Applicant: ELECOM CO., LTD

Address: Fushimimachi 4-1-1, Chuo-ku, Osaka City,
Osaka Japan 541-8765

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: TW1477, TW0020, TW1072

Industry Canada filed test laboratory Reg. No.: 20037

A2LA Accredited No.: 2732.01





Report No.: W6M22001-19617-C-1



Registration number: W6M22001-19617-C-1 FCC ID: YWO-M-RT1BR

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### **1** General Information

### 1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems. The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that is performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.

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### Specific Conditions:

Usage of the hereunder tested device in combination with other integrated or external antennas requires at least additional output power measurements, spurious emission measurements, conducted emission measurements (AC supply lines) and radio frequency exposure evaluations for each individual configuration performed, for certification by FCC.

### **Tester:**

February 20, 2020 Spencer Yang Spencer Yang

Date WTS-Lab. Name Signature

### Technical responsibility for area of testing:

February 20, 2020 Kevin Wang

Date WTS Name Signature

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1.2 Testing laboratory

### 1.2.1 Location

#### **OATS**

No.5-1, Lishui, Shuang Sing Village, Wanli Dist., New Taipei City 207,

Taiwan (R.O.C.)

3 meter semi-anechoic chamber

No.35, Aly. 21, Ln. 228, Ankang Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

TEL:886-2-6613-0228 FAX:886-2-2791-5046

Company

Worldwide Testing Services(Taiwan) Co., Ltd. 6F, NO. 58, LANE 188, RUEY-KUANG RD. NEIHU, TAIPEI 114, TAIWAN R.O.C.

Tel : 886-2-66068877 Fax : 886-2-66068879

#### 1.2.2 Details of accreditation status

Accredited testing laboratory

A2LA accredited number: 2732.01

FCC filed test laboratory Reg. No. TW1477, TW0020, TW1072

Industry Canada filed test laboratory Reg. No. 20037

### Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd.:

Name: /.
Accredited number: /.
Street: /.
Town: /.
Country: /.
Telephone: /.
Fax: /.

### 1.3 Details of approval holder

Name: ELECOM CO., LTD

Street: Fushimimachi 4-1-1, Chuo-ku,

Town: Osaka City, Osaka Country: Japan 541-8765
Telephone: +81-6-6229-1418
Fax: +81-6-6229-8030

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1.4 Application details
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Date of receipt of test item: January 31, 2020

Date of test: From February 03, 2020 to February 19, 2020

1	.5	General	information	of Test	item
		General	IIIIOIIIIauoii	OI LEST	ILEIII

i.5 Gen	erai illiorillation oi	rest item
Type of test	item:	Wireless Trackball Mouse
Model Numl	per:	M-RT1BR
Brand Name	:	ELECOM
Multi-listing	model number:	./.
Photos:		./.

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Frequency band: 2400 MHz – 2483.5 MHz

Frequency ( ch 0 or A): 2402 MHz
Frequency ( ch 19 or B): 2440 MHz
Frequency ( ch 39 or C): 2480 MHz

Number of Channels: 40

Operation modes: Duplex

Modulation Type: GFSK

Fixed point-to-point operation:  $\square$  Yes /  $\boxtimes$  No

Type of Antenna: PCB antenna

Antenna gain: -1.89 dBi

Power supply: Battery: 3Vd.c. (1.5Vd.c.\*2)

Emission designator: 1M04G1D

Host device: none

### Classification:

Fixed Device	
Mobile Device (Human Body distance > 20cm)	
Portable Device (Human Body distance < 20cm)	

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<u>Transmitter</u> <u>Unom</u>

Power ( ch 0 or A): Conducted: -9.64 dBm
Power ( ch 19 or B): Conducted: -9.21 dBm
Power ( ch 39 or C): Conducted: -9.73 dBm

**Manufacturer:** (if applicable)

Name: ./.
Street: ./.
Town: ./.
Country: ./.

Additional information: ./.

#### 1.6 Test standards

Technical standard: FCC RULES SUBPART C § 15.247 (2018-10)

FCC ID: YWO-M-RT1BR **2** Technical test

## 2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course	×
of the tests performed.	

or

The deviations were ascertained in the course of the tests performed.  $\Box$ 

### 2.2 Test environment

Relative humidity content: 20 ... 75 %

Air pressure: 86 ... 103 kPa

Power supply: Battery: 3Vd.c. (1.5Vd.c.\*2)

Extreme conditions parameters: ./.

Test item Name	Uncertainty
Estimation Result of Uncertainty of Conducted Emission	Expanded Uncertainty: AMN: 1.06 dB Voltage probe: 1.12 dB
Estimation Result of Uncertainty of Radiated Emission(3M)	Expanded Uncertainty: 0.009-30 MHz: 1.88 dB 30-1000 MHz: 2.79 dB 1-18 GHz: 2.36 dB 18-40 GHz: 1.55 dB
Estimation Result of Uncertainty of Bandwidth Measurement 20 dB Bandwidth, Occupied bandwidth, Channel bandwidth, Necessary Bandwidth	Expanded Uncertainty: 0.45 kHz
Estimation Result of Uncertainty of Conducted Output Power Measurement Output power	Expanded Uncertainty: 1.14 dB
Estimation Result of Uncertainty of Power Density Measurement Power density	Expanded Uncertainty: 1.45 dB
Estimation Result of Uncertainty of Band Edge Measurement	Expanded Uncertainty: 1.01 dBc

The decision rule is: Measurement uncertainty is not taken into account.



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## 2.3 Test Equipment List

No.	Test equipment	Туре	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2019/6/4	2020/6/3
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function	on Test
ETSTW-CE 004	ZWEILEITER-V- NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2019/11/1	2020/10/31
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2019/9/24	2020/9/23
ETSTW-CE 008	HF-EICHLEITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function	on Test
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2019/7/23	2020/7/22
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2019/10/3	2020/10/2
ETSTW-CE 028	MXE EMI Receiver	N9038A	MY53220110	Agilent	2019/7/18	2020/7/17
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2019/6/4	2020/6/3
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2019/5/29	2020/5/28
ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	Function	on Test
ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0336	397	K&L	Function	on Test
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2019/7/25	2020/7/24
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2019/7/22	2020/7/21
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	ETS-Lindgren	2019/4/2	2020/4/1
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2020/1/23	2021/1/22
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2019/4/23	2020/4/22
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2019/5/13	2020/5/12
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-te	st Use
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2020/2/20	2021/2/19
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2020/2/20	2021/2/19
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2020/2/20	2021/2/19
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2019/3/5	2020/3/4
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2020/2/20	2021/2/19
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2019/5/16	2020/5/15
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function	on Test
ETSTW-RE 069	Double-Ridged Guide Horn Antenna	3117	00069377	ETS-Lindgren	Function	on Test
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2019/9/23	2020/9/22
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2019/9/18	2020/9/17
ETSTW-RE 091	Match Pad	MDCS1500	None	WOKEN	2019/5/9	2020/5/8
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2020/2/20	2021/2/19
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	T-0A023536	T-Power	Functi	on test
ETSTW-RE 115	2.4GHz Notch Filter	N0124411	473874	MICROWAVE CIRCUITS	2020/1/13	2021/1/12



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ETSTW-RE 120   SRP Player	FCC ID: YWO	-MI-KIIBK RF Player	MP9200	MP9210-111022	ADIVIC	Functi	on test
EISTW-RE 125   SGHz Notch filter							
STATE   SOFT Notes ther   S20062213-000   1							
ETSTW-RE-127 RF Switch Box RFS-01 None WTS 20200220 202012/19  ETSTW-RE-128 3.5GHz Notch filter N0153001 SN887233 Microwave Circuits 2019/88 2020087  ETSTW-RE-129 5.5GHz Notch filter N0153001 SN887234 Microwave Circuits 2019/88 2020087  ETSTW-RE-129 5.5GHz Notch filter N0559984 SN887234 Microwave Circuits 2019/88 2020087  ETSTW-RE-120 Handbedt RF Spectrum N9340A CN0147000204 Agilent Pre-table 10 1			5200/E221.3-O/O				
ETSTW-RE 128   5.3GHz Notch filter   NO153001   SN487233   Microwave Circuits   2019x8   2020x87	ETSTW-RE 126	5GHz Notch filter			K&L Microwave	2019/8/8	2020/8/7
ETSTW-RE 129   5.5GHz Notch filter   N0555984   SN487234   Microwave Circuits   2019x8   2020x87	ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2020/2/20	2021/2/19
ETSTW-RE 130	ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circuits	2019/8/8	2020/8/7
ETSTW-RE 142 Amplifier 8447D 2805A03378 Agilent 2019/5/16 2020/5/15  ETSTW-RE 147 Bi-log Hybrid Amenna MCTD 2786B BLB16M4008 ETC 2019/4/2 2020/4/1  ETSTW-RE 147 Bi-log Hybrid Amenna MCTD 2786B BLB16M4008 ETC 2019/5/27 2020/5/26  ETSTW-EMI 011 USB Compact Modulator SFC-U 101689 R&S 2019/5/16 2020/5/15  ETSTW-GSM 002 Universal Radio Communication Analyzer Amenda Radio Communication Tester S22851-40/12/95S 3 WI 2020/1/13 2021/1/12  ETSTW-GSM 002 Band Reject Filter WRCTFR34/849-25SS 1 WI 2020/1/13 2021/1/12  ETSTW-GSM 002 Band Reject Filter WRCTFR34/849-3-25SSS 1 WI 2020/1/13 2021/1/12  ETSTW-GSM 002 Band Reject Filter WRCTFR34/849-3-3-25SSS 1 WI 2020/1/13 2021/1/12  ETSTW-GSM 002 Band Reject Filter WRCTFR34/849-3-3-25SSS 1 WI 2020/1/13 2021/1/12  ETSTW-GSM 002 Band Reject Filter WRCTFR34/849-3-3-25SSS 1 WI 2020/1/13 2021/1/12  ETSTW-GSM 002 Band Reject Filter WRCTFR34/849-3-3-25SSS 1 WI 2020/1/13 2021/1/12  ETSTW-GSM 002 Band Reject Filter WRCTFR34/849-3-3-25SSS 1 WI 2020/1/13 2021/1/12  ETSTW-GSM 002 Band Reject Filter WRCTFR34/849-3-3-25SSS 1 WI 2020/1/13 2021/1/12  ETSTW-GSM 002 Band Reject Filter WRCTFR34/849-3-25SSS 1 WI 2020/1/13 2021/1/12  ETSTW-GSM 002 Band Reject Filter WRCTFR34/849-3-3-25SSS 2020/3/4 WRCTFR34/849-3-25SSS 1 WI 2020/1/13 2021/1/12  ETSTW-GSM 002 Band Reject Filter WRCTFR34/849-3-25SSS 2020/3/4 WRCTFR34/	ETSTW-RE 129		N0555984	SN487234	Microwave Circuits	2019/8/8	2020/8/7
ETSTW-RE 147   Bi-log Hybrid Antenna   MCTD 2786B   BLB16M04005   ETC   2019/4/2   2020/4/1	ETSTW-RE 130		N9340A	CN0147000204	Agilent	Pre-te	st Use
EISTW-RF 002   Electromagnetic field probe   LIF-30   K-0007   STT   2019/5/27   2020/5/26	ETSTW-RE 142	Amplifier	8447D	2805A03378	Agilent	2019/5/16	2020/5/15
ETSTW-EMI 011   USB Compact Modulator   SFC-U   101689   R&S   2019/5/16   2020/5/15	ETSTW-RE 147	Bi-log Hybrid Antenna	MCTD 2786B	BLB16M04005	ETC	2019/4/2	2020/4/1
ETSTW-GSM 002	ETSTW-RF 002	Electromagnetic field probe	LF-30	K-0007	STT	2019/5/27	2020/5/26
ETSTW-GSM 003   Ratio Communication Tester   CMU 200   109439   R&S   2019/3/5   2019/3/25   2020/3/25	ETSTW-EMI 011	USB Compact Modulator	SFC-U	101689	R&S	2019/5/16	2020/5/15
ETSTW-GSM 003         Radio Communication Analyzer         MT8820C         6201342073         Anrisu         2019/3/26         2020/3/25           ETSTW-GSM 004         Wideband Radio Communication Tester         CMW500         128092         R&S         2019/10/25         2020/10/24           ETSTW-GSM 019         Band Reject Filter         SVECTRS/48/49-82/28/51/40/1752-32/58         3         WI         2020/1/13         2021/1/12           ETSTW-GSM 020         Band Reject Filter         WRCD178/71/748-1752-32/58S         1         WI         2020/1/13         2021/1/12           ETSTW-GSM 021         Band Reject Filter         WRCD1879-3/1880.5         3         WI         2020/1/13         2021/1/12           ETSTW-GSM 022         Band Reject Filter         WRCT901-9/9/1880.5         3         WI         2020/1/13         2021/1/12           ETSTW-GSM 023         Power Divider         4901.19.A         None         SUHNER         2019/9/12         2020/9/11           ETSTW-GSM 024         Radio Communication         MT8821C         None         Anritisu         2019/3/5         2020/3/4           ETSTW-GSM 025         Band Reject Filter         BRM19835         001         Micro-Tronics         2019/8/9         2020/8/8           ETSTW-Cable 011         SMA to N type	ETSTW-GSM 002		CMU 200	109439	R&S	2019/3/5	2020/3/4
EISTW-GSM 019 Band Reject Filter   WRCTFS21/R49-   822/R51-40 /12-19SS   3   WI   2020/1/13   2021/1/12   2021/12   2021/1	ETSTW-GSM 003	Radio Communication Analyzer	MT8820C	6201342073	Anritsu	2019/3/26	2020/3/25
EISTW-GSM 020 Band Reject Filter	ETSTW-GSM 004		CMW500	128092	R&S	2019/10/25	2020/10/24
ETSTW-GSM 021 Band Reject Filter   1743/1752-32/5SS   1 WI   2020/1/13   2021/1/12   ETSTW-GSM 022 Band Reject Filter   WRCD1879-5/1880.5   1875-5/1884.5   3 WI   2020/1/13   2021/1/12   ETSTW-GSM 022 Band Reject Filter   WRCT901.9/903.1   904.25-50/8SS   1 WI   2020/1/13   2021/1/12   ETSTW-GSM 023   Power Divider   4901.19.A   None   SUHNER   2019/9/12   2020/9/11   ETSTW-GSM 024   Radio Communication   Analyzer   Analyzer   Analyzer   MT8821C   None   Analisu   2019/3/5   2020/3/4   ETSTW-GSM 025   Band Reject Filter   BRM19835   001   Micro-Tronics   2019/8/9   2020/8/8   ETSTW-Cable 011   SMA to N type Cable   RGU-400   None   THERMAX   Pre-test Use NCR   ETSTW-Cable 016   BNC Cable   Switch Box   B Cable 1   Schwarz beck   2020/2/20   2021/2/19   ETSTW-Cable 017   BNC Cable   X Cable   B Cable 2   Schwarz beck   2020/2/20   2021/2/19   ETSTW-Cable 018   BNC Cable   Y Cable   B Cable 3   Schwarz beck   2020/2/20   2021/2/19   ETSTW-Cable 019   BNC Cable   Z Cable   B Cable 4   Schwarz beck   2020/2/20   2021/2/19   ETSTW-Cable 020   N TYPE Cable   OATS Cable 1   N30N304-335-15M   JYE BAO CO.,LTD.   2019/7/2   2020/7/1   ETSTW-Cable 025   Microwave Cable   SUCOFLEX 104   279075   HUBER+SUHNER   2019/5/14   2020/5/13   ETSTW-Cable 030   Microwave Cable   FA147A0015M2020   30064-2   UTIFLEX   2019/9/18   2020/9/17   ETSTW-Cable 040   Microwave Cable   FA147A0015M2020   30064-3   UTIFLEX   2019/9/18   2020/9/17   ETSTW-Cable 040   Microwave Cable   SUCOFLEX 104   317576   HUBER+SUHNER   2019/5/16   2020/5/15   ETSTW-Cable 058   Microwave Cable   SUCOFLEX 104   MY28891   HUBER+SUHNER   2019/5/16   2020/5/15   ETSTW-Cable 058   Microwave Cable   SUCOFLEX 104   MY28891   HUBER+SUHNER   2019/5/16   2020/5/15	ETSTW-GSM 019	Band Reject Filter		3	WI	2020/1/13	2021/1/12
ETSTW-GSM 021         Band Reject Filter         -1875.5/1884.5-32/5SS         3         WI         2020/1/13         2021/1/12           ETSTW-GSM 022         Band Reject Filter         WRCT901.9/903.1-904.25-50/88SS         1         WI         2020/1/13         2021/1/12           ETSTW-GSM 023         Power Divider         4901.19.A         None         SUHNER         2019/9/12         2020/9/11           ETSTW-GSM 024         Radio Communication Analyzer         MT8821C         None         Anritsu         2019/3/5         2020/3/4           ETSTW-GSM 025         Band Reject Filter         BRM19835         001         Micro-Tronics         2019/8/9         2020/8/8           ETSTW-Cable 011         SMA to N type Cable         RGU-400         None         THERMAX         Pre-test Use NCR           ETSTW-Cable 016         BNC Cable         Switch Box         B Cable 1         Schwarz beck         2020/2/20         2021/2/19           ETSTW-Cable 017         BNC Cable         X Cable         B Cable 2         Schwarz beck         2020/2/20         2021/2/19           ETSTW-Cable 019         BNC Cable         X Cable         B Cable 3         Schwarz beck         2020/2/20         2021/2/19           ETSTW-Cable 029         NTYPE Cable         OATS Cable 1 <td< td=""><td>ETSTW-GSM 020</td><td>Band Reject Filter</td><td></td><td>1</td><td>WI</td><td>2020/1/13</td><td>2021/1/12</td></td<>	ETSTW-GSM 020	Band Reject Filter		1	WI	2020/1/13	2021/1/12
ETSTW-GSM 022 Power Divider 4901.19.A None SUHNER 2019/9/12 2020/9/11 ETSTW-GSM 023 Power Divider 4901.19.A None SUHNER 2019/9/12 2020/9/11 ETSTW-GSM 024 Radio Communication Analyzer Analyzer BRM19835 001 Micro-Tronics 2019/8/9 2020/8/8 ETSTW-GSM 025 Band Reject Filter BRM19835 001 Micro-Tronics 2019/8/9 2020/8/8 ETSTW-Cable 011 SMA to N type Cable RGU-400 None THERMAX Pre-test Use NCR ETSTW-Cable 016 BNC Cable Switch Box B Cable 1 Schwarz beck 2020/2/20 2021/2/19 ETSTW-Cable 017 BNC Cable X Cable B Cable 2 Schwarz beck 2020/2/20 2021/2/19 ETSTW-Cable 018 BNC Cable Y Cable B Cable 3 Schwarz beck 2020/2/20 2021/2/19 ETSTW-Cable 019 BNC Cable Z Cable B Cable 4 Schwarz beck 2020/2/20 2021/2/19 ETSTW-Cable 020 N TYPE Cable OATS Cable 1 N30N30-L335-15M JYE BAO CO.,LTD. 2019/7/2 2020/7/1 ETSTW-Cable 026 Microwave Cable SUCOFLEX 104 279075 HUBER+SUHNER 2019/5/14 2020/5/13 ETSTW-Cable 027 Microwave Cable SUCOFLEX 104 279083 HUBER+SUHNER 2019/5/14 2020/5/13 ETSTW-Cable 028 Microwave Cable FA147A0015M2020 30064-2 UTIFLEX 2019/9/18 2020/9/17 ETSTW-Cable 029 Microwave Cable FA147A0015M2020 30064-3 UTIFLEX 2019/9/18 2020/9/17 ETSTW-Cable 030 Microwave Cable SUCOFLEX 104 (S_Cable 9) 279067 HUBER+SUHNER 2020/2/20 2021/2/19 ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15 ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15 ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-GSM 021	Band Reject Filter	-1875.5/1884.5-	3	WI	2020/1/13	2021/1/12
ETSTW-GSM 024         Radio Communication Analyzer         MT8821C         None         Anritsu         2019/3/5         2020/3/4           ETSTW-GSM 025         Band Reject Filter         BRM19835         001         Micro-Tronics         2019/8/9         2020/8/8           ETSTW-Cable 011         SMA to N type Cable         RGU-400         None         THERMAX         Pre-test Use NCR           ETSTW-Cable 016         BNC Cable         Switch Box         B Cable 1         Schwarz beck         2020/2/20         2021/2/19           ETSTW-Cable 017         BNC Cable         X Cable         B Cable 2         Schwarz beck         2020/2/20         2021/2/19           ETSTW-Cable 018         BNC Cable         Y Cable         B Cable 3         Schwarz beck         2020/2/20         2021/2/19           ETSTW-Cable 019         BNC Cable         Z Cable         B Cable 4         Schwarz beck         2020/2/20         2021/2/19           ETSTW-Cable 020         N TYPE Cable         OATS Cable 1         N30N30-1.335-15M         JYE BAO CO.,LTD.         2019/7/2         2020/7/1           ETSTW-Cable 026         Microwave Cable         SUCOFLEX 104         279075         HUBER+SUHNER         2019/5/14         2020/5/13           ETSTW-Cable 027         Microwave Cable         FA147A00	ETSTW-GSM 022	Band Reject Filter		1	WI	2020/1/13	2021/1/12
ETSTW-GSM 025 Band Reject Filter BRM19835 001 Micro-Tronics 2019/8/9 2020/8/8  ETSTW-GSM 025 Band Reject Filter BRM19835 001 Micro-Tronics 2019/8/9 2020/8/8  ETSTW-Cable 011 SMA to N type Cable RGU-400 None THERMAX Pre-test Use NCR  ETSTW-Cable 016 BNC Cable Switch Box B Cable 1 Schwarz beck 2020/2/20 2021/2/19  ETSTW-Cable 017 BNC Cable X Cable B Cable 2 Schwarz beck 2020/2/20 2021/2/19  ETSTW-Cable 018 BNC Cable Y Cable B Cable 3 Schwarz beck 2020/2/20 2021/2/19  ETSTW-Cable 019 BNC Cable Z Cable B Cable 4 Schwarz beck 2020/2/20 2021/2/19  ETSTW-Cable 020 N TYPE Cable OATS Cable 1 N30N30-L335-15M JYE BAO CO.,LTD. 2019/7/2 2020/7/1  ETSTW-Cable 026 Microwave Cable SUCOFLEX 104 279075 HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 027 Microwave Cable SUCOFLEX 104 279083 HUBER+SUHNER 2019/5/14 2020/5/13  ETSTW-Cable 028 Microwave Cable FA147A0015M2020 30064-2 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 029 Microwave Cable FA147A0015M2020 30064-3 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 030 Microwave Cable SUCOFLEX 104 (S_Cable 9) 279067 HUBER+SUHNER 2019/5/16 2020/5/15  ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15  ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2019/9/12	2020/9/11
ETSTW-Cable 011 SMA to N type Cable RGU-400 None THERMAX Pre-test Use NCR  ETSTW-Cable 016 BNC Cable Switch Box B Cable 1 Schwarz beck 2020/2/20 2021/2/19  ETSTW-Cable 017 BNC Cable X Cable B Cable 2 Schwarz beck 2020/2/20 2021/2/19  ETSTW-Cable 018 BNC Cable Y Cable B Cable 3 Schwarz beck 2020/2/20 2021/2/19  ETSTW-Cable 019 BNC Cable Z Cable B Cable 4 Schwarz beck 2020/2/20 2021/2/19  ETSTW-Cable 020 N TYPE Cable OATS Cable 1 N30N30-L335-15M JYE BAO CO.,LTD. 2019/7/2 2020/7/1  ETSTW-Cable 026 Microwave Cable SUCOFLEX 104 279075 HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 027 Microwave Cable SUCOFLEX 104 279083 HUBER+SUHNER 2019/5/14 2020/5/13  ETSTW-Cable 028 Microwave Cable FA147A0015M2020 30064-2 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 030 Microwave Cable FA147A0015M2020 30064-3 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15  ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 none HUBER+SUHNER 2019/5/16 2020/5/15  ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 none HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-GSM 024		MT8821C	None	Anritsu	2019/3/5	2020/3/4
ETSTW-Cable 016 BNC Cable Switch Box B Cable 1 Schwarz beck 2020/2/20 2021/2/19 ETSTW-Cable 017 BNC Cable X Cable B Cable 2 Schwarz beck 2020/2/20 2021/2/19 ETSTW-Cable 018 BNC Cable Y Cable B Cable 3 Schwarz beck 2020/2/20 2021/2/19 ETSTW-Cable 019 BNC Cable Z Cable B Cable 4 Schwarz beck 2020/2/20 2021/2/19 ETSTW-Cable 020 N TYPE Cable OATS Cable 1 N30N30-L335-15M JYE BAO CO.,LTD. 2019/7/2 2020/7/1 ETSTW-Cable 026 Microwave Cable SUCOFLEX 104 279075 HUBER+SUHNER 2020/2/20 2021/2/19 ETSTW-Cable 027 Microwave Cable SUCOFLEX 104 279083 HUBER+SUHNER 2019/5/14 2020/5/13 ETSTW-Cable 028 Microwave Cable FA147A0015M2020 30064-2 UTIFLEX 2019/9/18 2020/9/17 ETSTW-Cable 029 Microwave Cable FA147A0015M2020 30064-3 UTIFLEX 2019/9/18 2020/9/17 ETSTW-Cable 030 Microwave Cable SUCOFLEX 104 279067 HUBER+SUHNER 2020/2/20 2021/2/19 ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15 ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 None HUBER+SUHNER 2019/6/6 2020/6/5 ETSTW-Cable 064 Microwave Cable SUCOFLEX 104 None HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-GSM 025	Band Reject Filter	BRM19835	001	Micro-Tronics	2019/8/9	2020/8/8
ETSTW-Cable 017 BNC Cable X Cable B Cable 2 Schwarz beck 2020/2/20 2021/2/19 ETSTW-Cable 018 BNC Cable Y Cable B Cable 3 Schwarz beck 2020/2/20 2021/2/19 ETSTW-Cable 019 BNC Cable Z Cable B Cable 4 Schwarz beck 2020/2/20 2021/2/19 ETSTW-Cable 020 N TYPE Cable OATS Cable 1 N30N30-L335-15M JYE BAO CO.,LTD. 2019/7/2 2020/7/1 ETSTW-Cable 026 Microwave Cable SUCOFLEX 104 279075 HUBER+SUHNER 2020/2/20 2021/2/19 ETSTW-Cable 027 Microwave Cable SUCOFLEX 104 279083 HUBER+SUHNER 2019/5/14 2020/5/13 ETSTW-Cable 028 Microwave Cable FA147A0015M2020 30064-2 UTIFLEX 2019/9/18 2020/9/17 ETSTW-Cable 029 Microwave Cable FA147A0015M2020 30064-3 UTIFLEX 2019/9/18 2020/9/17 ETSTW-Cable 030 Microwave Cable SUCOFLEX 104 (S_Cable 9) 279067 HUBER+SUHNER 2020/2/20 2021/2/19 ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15 ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 none HUBER+SUHNER 2019/6/6 2020/6/5 ETSTW-Cable 064 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-Cable 011	SMA to N type Cable	RGU-400	None	THERMAX	Pre-test l	Use NCR
ETSTW-Cable 018 BNC Cable Y Cable B Cable 3 Schwarz beck 2020/2/20 2021/2/19  ETSTW-Cable 019 BNC Cable Z Cable B Cable 4 Schwarz beck 2020/2/20 2021/2/19  ETSTW-Cable 020 N TYPE Cable OATS Cable 1 N30N30-L335-15M JYE BAO CO.,LTD. 2019/7/2 2020/7/1  ETSTW-Cable 026 Microwave Cable SUCOFLEX 104 279075 HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 027 Microwave Cable SUCOFLEX 104 279083 HUBER+SUHNER 2019/5/14 2020/5/13  ETSTW-Cable 028 Microwave Cable FA147A0015M2020 30064-2 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 029 Microwave Cable FA147A0015M2020 30064-3 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 030 Microwave Cable SUCOFLEX 104 279067 HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15  ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 none HUBER+SUHNER 2019/5/16 2020/6/5  ETSTW-Cable 064 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2020/2/20	2021/2/19
ETSTW-Cable 019 BNC Cable Z Cable B Cable 4 Schwarz beck 2020/2/20 2021/2/19  ETSTW-Cable 020 N TYPE Cable OATS Cable 1 N30N30-L335-15M JYE BAO CO.,LTD. 2019/7/2 2020/7/1  ETSTW-Cable 026 Microwave Cable SUCOFLEX 104 279075 HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 027 Microwave Cable SUCOFLEX 104 279083 HUBER+SUHNER 2019/5/14 2020/5/13  ETSTW-Cable 028 Microwave Cable FA147A0015M2020 30064-2 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 029 Microwave Cable FA147A0015M2020 30064-3 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 030 Microwave Cable SUCOFLEX 104 279067 HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15  ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 none HUBER+SUHNER 2019/6/6 2020/6/5  ETSTW-Cable 064 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2020/2/20	2021/2/19
ETSTW-Cable 020 N TYPE Cable OATS Cable 1 N30N30-L335-15M JYE BAO CO.,LTD. 2019/7/2 2020/7/1  ETSTW-Cable 026 Microwave Cable SUCOFLEX 104 279075 HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 027 Microwave Cable SUCOFLEX 104 279083 HUBER+SUHNER 2019/5/14 2020/5/13  ETSTW-Cable 028 Microwave Cable FA147A0015M2020 30064-2 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 029 Microwave Cable FA147A0015M2020 30064-3 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 030 Microwave Cable SUCOFLEX 104 (S_Cable 9) 279067 HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15  ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 none HUBER+SUHNER 2019/6/6 2020/6/5  ETSTW-Cable 064 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2020/2/20	2021/2/19
ETSTW-Cable 026 Microwave Cable SUCOFLEX 104 279075 HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 027 Microwave Cable SUCOFLEX 104 279083 HUBER+SUHNER 2019/5/14 2020/5/13  ETSTW-Cable 028 Microwave Cable FA147A0015M2020 30064-2 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 029 Microwave Cable FA147A0015M2020 30064-3 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 030 Microwave Cable SUCOFLEX 104 (S_Cable 9) 4 279067 HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15  ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 none HUBER+SUHNER 2019/6/6 2020/6/5  ETSTW-Cable 064 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2020/2/20	2021/2/19
ETSTW-Cable 027 Microwave Cable SUCOFLEX 104 279083 HUBER+SUHNER 2019/5/14 2020/5/13  ETSTW-Cable 028 Microwave Cable FA147A0015M2020 30064-2 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 029 Microwave Cable FA147A0015M2020 30064-3 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 030 Microwave Cable SUCOFLEX 104 (S_Cable 9) 279067 HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15  ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 none HUBER+SUHNER 2019/6/6 2020/6/5  ETSTW-Cable 064 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-Cable 020	N TYPE Cable	OATS Cable 1	N30N30-L335-15M	JYE BAO CO.,LTD.	2019/7/2	2020/7/1
ETSTW-Cable 028 Microwave Cable FA147A0015M2020 30064-2 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 029 Microwave Cable FA147A0015M2020 30064-3 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 030 Microwave Cable SUCOFLEX 104 (S_Cable 9) 279067 HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15  ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 none HUBER+SUHNER 2019/6/6 2020/6/5  ETSTW-Cable 064 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2020/2/20	2021/2/19
ETSTW-Cable 029 Microwave Cable FA147A0015M2020 30064-3 UTIFLEX 2019/9/18 2020/9/17  ETSTW-Cable 030 Microwave Cable SUCOFLEX 104 (S_Cable 9) 4279067 HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15  ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 none HUBER+SUHNER 2019/6/6 2020/6/5  ETSTW-Cable 064 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2019/5/14	2020/5/13
ETSTW-Cable 030 Microwave Cable SUCOFLEX 104 (S_Cable 9) 279067 HUBER+SUHNER 2020/2/20 2021/2/19 ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15 ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 none HUBER+SUHNER 2019/6/6 2020/6/5 ETSTW-Cable 064 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2019/9/18	2020/9/17
ETSTW-Cable 030 Microwave Cable (S_Cable 9) 27906/ HUBER+SUHNER 2020/2/20 2021/2/19  ETSTW-Cable 043 Microwave Cable SUCOFLEX 104 317576 HUBER+SUHNER 2019/5/16 2020/5/15  ETSTW-Cable 058 Microwave Cable SUCOFLEX 104 none HUBER+SUHNER 2019/6/6 2020/6/5  ETSTW-Cable 064 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2019/9/18	2020/9/17
ETSTW-Cable 043         Microwave Cable         SUCOFLEX 104         317576         HUBER+SUHNER         2019/5/16         2020/5/15           ETSTW-Cable 058         Microwave Cable         SUCOFLEX 104         none         HUBER+SUHNER         2019/6/6         2020/6/5           ETSTW-Cable 064         Microwave Cable         SUCOFLEX 104         MY28891         HUBER+SUHNER         2019/5/16         2020/5/15	ETSTW-Cable 030	Microwave Cable		279067	HUBER+SUHNER	2020/2/20	2021/2/19
ETSTW-Cable 064 Microwave Cable SUCOFLEX 104 MY28891 HUBER+SUHNER 2019/5/16 2020/5/15	ETSTW-Cable 043	Microwave Cable		317576	HUBER+SUHNER	2019/5/16	2020/5/15
	ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2019/6/6	2020/6/5
ETSTW-Cable 066 SMA type cable 32022 None ASTROLAB 2019/9/24 2020/9/23	ETSTW-Cable 064	Microwave Cable	SUCOFLEX 104	MY28891	HUBER+SUHNER	2019/5/16	2020/5/15
	ETSTW-Cable 066	SMA type cable	32022	None	ASTROLAB	2019/9/24	2020/9/23



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ETSTW-Cable 071	N TYPE CABLE	EMCCFD400-NM- NM-25000	170239	EMCI	2019/6/6	2020/6/5	
ETSTW-Cable 072	SMA type cable (8m)	SUCOFLEX 104	805800/4	HUBER+SUHNER	2019/5/16	2020/5/15	
ETSTW-Cable 074	SMA type cable (2m)	SUCOFLEX 104	802563/4	HUBER+SUHNER	2019/5/16	2020/5/15	
WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMC	None	Farad	Version ETS-03A1		
WTSTW-SW 006	EMI TEST SOFTWARE	e3	None	AUDIX	Version 9.161014  Version 2.0.0.1		
WTSTW-SW 008	Signal studio	Agilent	None	AUDIX			
ETSTW-TH 001	Thermohygrometer	608-H1	45204316	Testo	2019/9/9	2020/9/8	
ETSTW-TH 002	Thermohygrometer	608-H1	45204317	Testo	2019/9/9	2020/9/8	

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#### 2.4 General Test Procedure

**POWER LINE CONDUCTED INTERFERENCE:** The procedure used was ANSI STANDARD C63.10-2013 6.2 using a LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

**RADIATION INTERFERENCE:** The test procedure used was according to ANSI STANDARD C63.10-2013 6.3 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

**FORMULA OF CONVERSION FACTORS:** The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of  $dB\mu V$ ) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

Freq (MHz) METER READING + ACF + CABLE LOSS(to the receiver) = FS

33  $20 dB\mu V + 10.36 dB + 6 dB = 36.36 dB\mu V/m @3m$ 

The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table) and arranged according to ANSI C63.10-2013 6.2.2. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

- (1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
- (2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.
- (3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.
- (4) If the intentional radiator contains a digital device, regardless of whether this digital device controls the functions of the intentional radiator or the digital device is used for additional control or function purposes other than to enable the operation of the intentional radiator, the frequency range shall be investigated up to the range specified in paragraphs (a)(1)-(a)(3) of this section or the range applicable to the digital device, as shown in paragraph (b)(1) of this Section, whichever is the higher frequency range of investigation.

For hand-held devices, a exploratory test was performed with three (3) orthogonal planes to determine the highest emissions.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.



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When the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.

The formula is as follows:

Average = Peak + Duty Factor

Duty Factor = 20 log (dwell time/T)

T = 100ms when the pulse train period is over 100 ms or the period of the pulse train.

Modified Limits for peak according to 15.35 (b) = Max Permitted average Limits + 20dB

ANSI STANDARD C63.10-2013 B.2.7: Any measurements that utilize special test software shall be indicated and referenced in the test report. During testing, test software 'EZ EMC' was used for setting up different operation modes.



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## Test results (enclosure)

TEST CASE	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.247(b)	×	×	
Equivalent isotropically radiated Power	15.247(b)	×	×	
Spurious Emissions radiated – Transmitter operating	15.247(c)	×	×	
Band Edge Measurement	15.247(d)	×	×	
Minimum 6 dB Bandwidth	15.247(a)(2)	×	×	
Peak Power Spectral Density	15.247(e)	×	×	
Radiated Emission from Receiver Part	15.109			
Power Line Conducted Emission	15.207(a)			

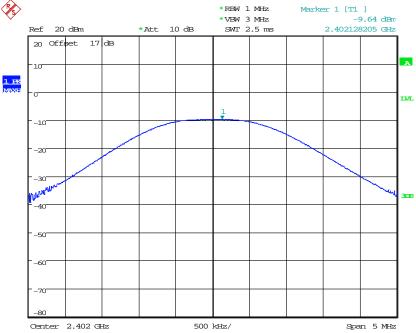
The following is intentionally left blank.

FCC ID: YWO-M-RT1BR

## 3.1 Peak Output Power (transmitter)

FCC Rule: 15.247(b)(3)

This measurement applies to equipment with an integral antenna and to equipment with an antenna connector and equipped with an antenna as declared by the applicant.

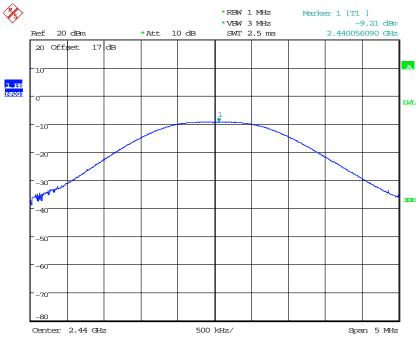


MAX OUTPUT POWER BT4.0 CH00 Date: 5.FEB.2020 08:36:50

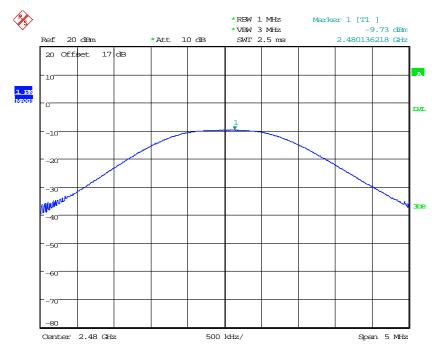


Registration number: W6M22001-19617-C-1

FCC ID: YWO-M-RT1BR



MAX OUTPUT POWER BT4.0 CH19 Date: 5.FEB.2020 08:38:28



MAX OUTPUT POWER BT4.0 CH39 Date: 5.FEB.2020 08:39:02



Registration number: W6M22001-19617-C-1

FCC ID: YWO-M-RT1BR

Limits:

Frequency	Power
MHz	dBm
902 - 928	30
2400 – 2483.5	30
5725 – 5850	30

In case of employing transmitter antennas having antenna gain > 6 dBi and using fixed point-to point operation consider \$15.247 (b)(4)

Test equipment used: ETSTW-RE 055, ETSTW-RE 050, ETSTW-RE 064

FCC ID: YWO-M-RT1BR

## 3.2 Equivalent Isotropic Radiated Power (EIRP)

FCC Rule: 15.247(b)(3)

**BLE** 

EIRP = max. conducted output power + antenna gain

EIRP = -9.21 dBm + (-1.89 dBi [antenna gain claimed by manufacturer] = -11.10 dBm = 0.0776 mW

## 3.3 Exemption Limits for Routine Evaluation according to FCC KDB Publication

**RESULT:** 

Test standard : FCC KDB Publication

447498 D01 General RF Exposure Guidance v06

According to 447498 D01 General RF Exposure Guidance v06:

SAR evaluation, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

### 3.3.1 Exemption Limits for Routine Evaluation – SAR Evaluation

SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table .

Table: SAR evaluation — Exemption limits for routine evaluation based on frequency and separation distance

MHz	5	10	15	20	25	mm
2440	10.02	19.05	29.07	38.11	48.11	SAR Test Exclusion Threshold (mW)

MHz	30	35	40	45	50	mm
2440	57.15	67.16	77.18	86.22	96.24	SAR Test Exclusion Threshold (mW)

Output power level shall be the higher of the maximum conducted or equivalent isotropically radiated power (e.i.r.p.) source-based, time-averaged output power.

Established separation distance is 5 mm.

Operating frequency band: 2402-2480 MHz

Max. output power level at 5 mm separation distance at 2440 MHz

according to table is: 10.02 mW

The product is exempt from SAR Evaluation/Testing because the output power of 0.0776 mW is below the exemption limit of 10.02 mW.

FCC ID: YWO-M-RT1BR

### 3.4 Transmitter Radiated Emissions in Restricted Bands

FCC Rules: 15.247 (c), 15.205, 15.209, 15.35

Radiated emission measurements were performed from 30 MHz to 26500 MHz.

For radiated emission tests, the analyzer setting was as followings:

Frequency  $\leq 1$  GHz, RBW:100 kHz, VBW: 100 kHz (Peak measurements) Frequency > 1 GHz, RBW: 1 MHz, VBW: 1 MHz (Peak measurements) Frequency > 1 GHz, RBW:1 MHz, VBW: 10 Hz (Average measurements)

Limits.

For frequencies below 1GHz:

Frequency of Emission	Field strength	Field Strength
(MHz)	(microvolts/meter)	(dB microvolts/meter)
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above	500	54.0

For frequencies above 1GHz (Average measurements).

Guidance on Measurement of Digit Transmission Systems:

"If the emission is pulsed, modify the unit for continuous operation, use the setting shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation."

The correction factor, based on the total channel dwell time in a 100 ms period, may be mathematically applied to a measurement made with an average detector, to further reduce the value.

Duty cycle correction = 20 log (dwell time/ 100ms)

Note: No duty cycle correction was added to the reading of this EUT.

Explanation: See attached diagrams in Appendix.

FCC ID: YWO-M-RT1BR

### 3.5 Spurious Emissions (tx)

Spurious emission was measured with modulation (declared by manufacturer).

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. 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))

FCC Rule: 15.247(d), 15.35

For out of band emissions that are close to or that exceed the 20 dB attenuation requirement described in the specification, radiated measurements were performed at a 3 m separation distance to determine whether these emissions complied with the general radiated emission requirement.

#### Limits:

For frequencies above 1GHz (Peak measurements).

Modified Limit for peak according to 15.35 (b) = Max Permitted average Limits + 20dB

For frequencies above 1GHz (Average measurements). Max. reading – 20dB

Max. reading – 20 dB

Guidance on Measurement of Digit Transmission Systems:

"If the emission is pulsed, modify the unit for continuous operation, use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation."

The correction factor, based on the total channel dwell time in a 100 ms period, may be mathematically applied to a measurement made with an average detector, to further reduce the value.

Duty Cycle correction = 20 log (dwell time/100ms)

Note: No duty cycle correction was added to the reading of EUT.



FCC ID: YWO-M-RT1BR

SAMPLE CALCULATION OF LIMIT. All results will be updated by an automatic measuring system

in accordance with point 2.3.

#### Calculation of test results:

Such factors like antenna correction, cable loss, external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

The peak and average spurious emission plots was measured with the average limits.

In the Table being listed the critical peak and average value and exhibit the compliance with the above calculated Limits.

If in the column's correction factor states a value then the max. Field strength in the same row is corrected by a value gained from the "Correction Factor".

### Summary table with radiated data of the test plots

Model:	M-RT1	IBR		Date:				
Mode:				Temperature:		$^{\circ}\mathrm{C}$	Engineer:	
Polarization:								
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
					-			

Frequency		iding BuV)	Factor (dB)	Res (dBu			mit V/m)	Margin	Table Degree	Ant. High
(MHz)	Peak	Ave.	Corr.	Peak	Áve.	Peak	Ave.	(dB)	(Deg.)	(m)
						1			1	
						-				

#### Note

- 1. Correction Factor = Antenna factor + Cable loss Preamplifier
- 2. The formula of measured value as: Test Result = Reading + Correction Factor
- 3. Detector function in the form: PK = Peak, QP = Quasi Peak, AV = Average
- 4. All not in the table noted test results are more than 20 dB below the relevant limits.
- 5. After evaluated, the test result in this report adopt the worst case to measure, please see attached diagrams in appendix.

**TEST RESULT** (**Transmitter**): The unit DOES meet the FCC requirements.

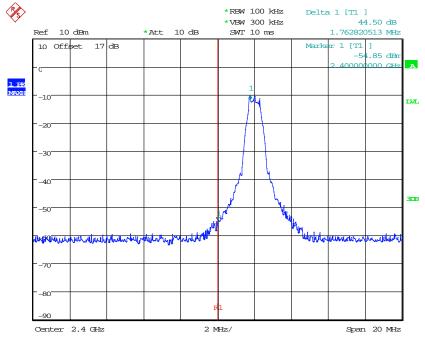
Test equipment used: ETSTW-RE 030, ETSTW-RE 111, ETSTW-RE 088, ETSTW-RE 018, ETSTW-RE 064

FCC ID: YWO-M-RT1BR

### 3.6 Radiated Emission on the band edge

According to FCC rules part 15 subpart C §15.247(d) in any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required.

In addition radiated emission which fall in the restricted bands, as defined in section 15.205(a), must also with the radiated emission limits.

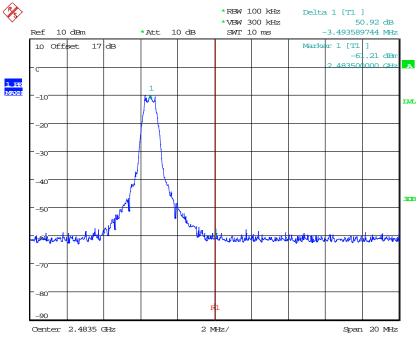


BANDEDGE BT4.0 CH00 Date: 5.FEB.2020 08:37:22



Registration number: W6M22001-19617-C-1

FCC ID: YWO-M-RT1BR



BANDEDGE BT4.0 CH39
Date: 5.FEB.2020 08:39:34

#### Limit:

Frequency Range / MHz	Limit
902 –928	
2400 – 2483.5	- 20 dB
5725 - 5850	

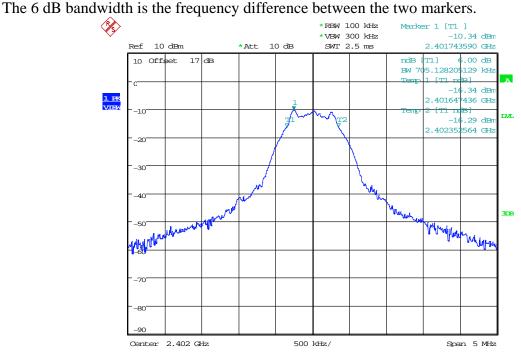
Test equipment used: ETSTW-RE 055, ETSTW-RE 050, ETSTW-RE 064



FCC ID: YWO-M-RT1BR

### 3.7 Minimum 6 dB Bandwidth

The analyzer ResBW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK reading was taken, two markers were set 6 dB below the maximum level on the right and the left side of the emission.

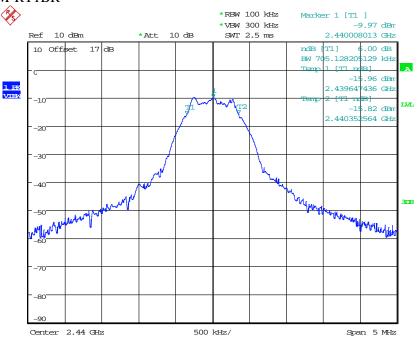


6DB BANDWIDTH BT4.0 CH00 Date: 5.FEB.2020 08:37:02

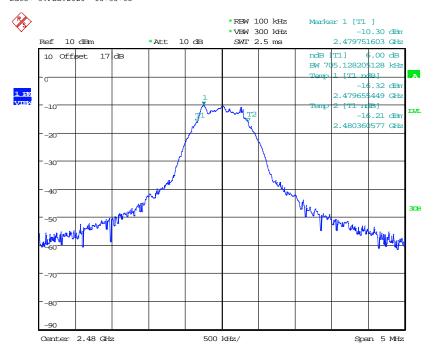


Registration number: W6M22001-19617-C-1

FCC ID: YWO-M-RT1BR



6DB BANDWIDTH BT4.0 CH19
Date: 5.FEB.2020 08:38:38



6DB BANDWIDTH BT4.0 CH39
Date: 5.FEB.2020 08:39:14



Registration number: W6M22001-19617-C-1 FCC ID: YWO-M-RT1BR

**Limits:** 

Frequency Range MHz	Limits
902-928	min 500 kHz
2400-2483.5	min 500 kHz
5725-5850	min 500 kHz

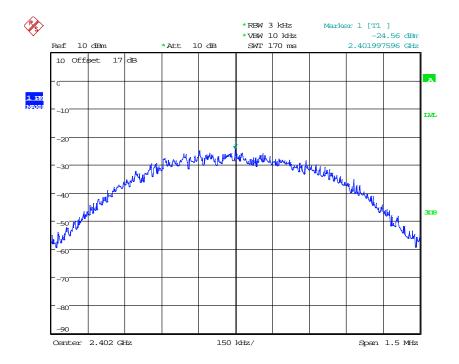
Test equipment used: ETSTW-RE 055, ETSTW-RE 050

FCC ID: YWO-M-RT1BR

## 3.8 Peak Power Spectral Density

Peak Power Spectral density is a measured at low, middle and high channel.

The peak output power is measured with a measurement bandwidth of 10 MHz and displayed on diagram together with Peak Power Spectral Density result which was measured with a bandwidth of 3 kHz, appreciate frequency span and sweep time.

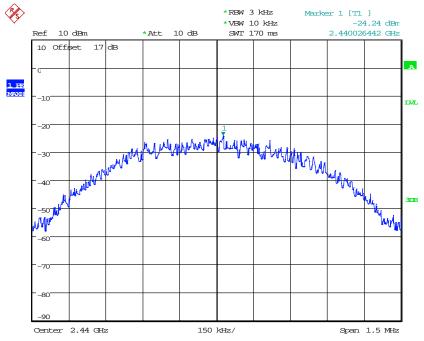


POWER DENSITY BT4.0 CH00
Date: 5.FEB.2020 08:37:14

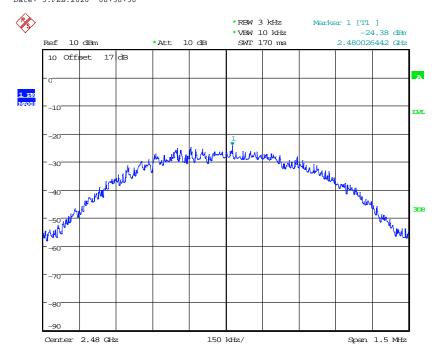


Registration number: W6M22001-19617-C-1

FCC ID: YWO-M-RT1BR



POWER DENSITY BT4.0 CH19
Date: 5.FEB.2020 08:38:50



POWER DENSITY BT4.0 CH39
Date: 5.FEB.2020 08:39:26



Registration number: W6M22001-19617-C-1 FCC ID: YWO-M-RT1BR

**Limits:** 

Frequency Range MHz	dBm
902-928	8
2400-2483.5	8
5725-5850	8

Test equipment used: ETSTW-RE 055, ETSTW-RE 050

FCC ID: YWO-M-RT1BR

### 3.9 Radiated Emission from Receiver Part

FCC Rule: 15.109

## Summary table with radiated data of the test plots

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission	Field Strength	Field Strength
(MHz)	(microvolts/meter)	(dBmicrovolts/meter)
30 - 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

Explanation: Please see report no.: W6M22001-19617-P-15B.



FCC ID: YWO-M-RT1BR

### 3.10 Power Line Conducted Emission

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.

Model:	M-RT1BI	R Date	e:					
Mode:		Tem	perature:		°C	Eng	gineer:	
Polarization:		Hu	ımidity:		%			
Frequency	Rea (dB	ding uV)	Factor (dB)		sult uV)	Liı (dB	nit uV)	Margin
(MHz)	QP	Ave.	Corr.	QP	Ave.	QP	Ave.	(dB)
							-	
							-	

Polarization: --

1 Oldi i Zation.								
Frequency	Reading (dBuV)		Factor (dB)	Result (dBuV)		Limit (dBuV)		Margin
(MHz)	QP	Ave.	Corr.	QP	Ave.	QP	Ave.	(dB)

Note: 1. The formula of measured value as: Test Result = Reading + Correction Factor

- 2. The Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss
- 3. Detector function in the form: PK = Peak, QP = Quasi Peak, AV = Average
- 4. All not in the table noted test results are more than 20 dB below the relevant limits.
- 5. This test is not required because power supply by battery.

#### **Limits:**

Frequency of Emission (MHz)	Conducted Limit (dBuV)				
	Quasi Peak	Average			
0.15-0.5	66 to 56	56 to 46			
0.5-5	56	46			
5-30	60	50			

Test equipment used: ETSTW-CE 001, ETSTW-CE 016, ETSTW-RE 045.

FCC ID: YWO-M-RT1BR

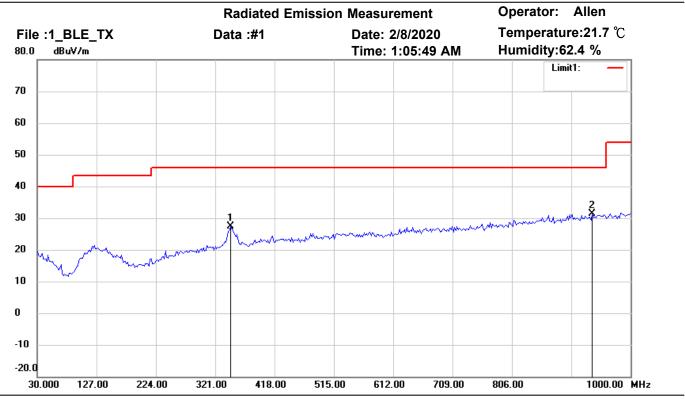
## **Appendix**

## **Measurement diagrams**

Spurious Emissions radiated



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Site: Chamber

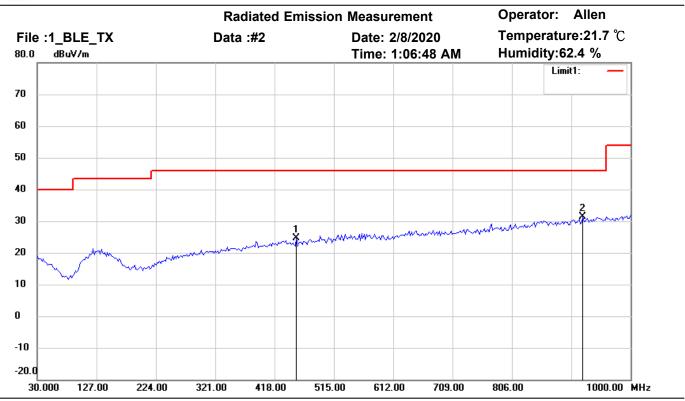
Condition: FCC\_part 15 RE-Class C\_30-1000MHz Polarization: Horizontal

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	346.8536	32.50	peak	-5.18	27.32	46.00	100	170	-18.68	
*	937.7956	27.52	peak	3.97	31.49	46.00	100	265	-14.51	



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Site: Chamber

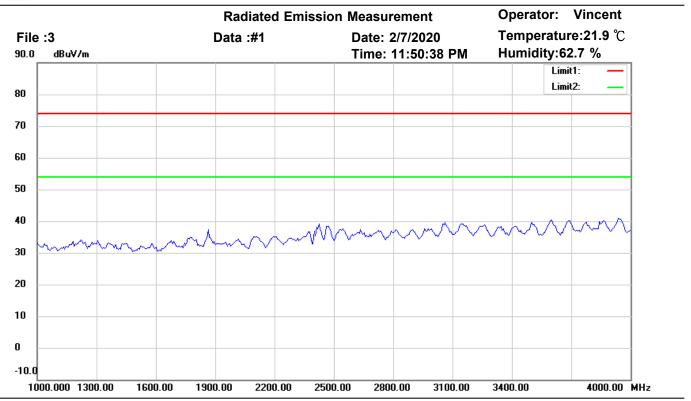
Condition: FCC\_part 15 RE-Class C\_30-1000MHz Polarization: Vertical

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	453.7675	28.05	peak	-3.51	24.54	46.00	100	135	-21.46	
*	922.2445	27.60	peak	3.66	31.26	46.00	100	360	-14.74	



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Site: Chamber

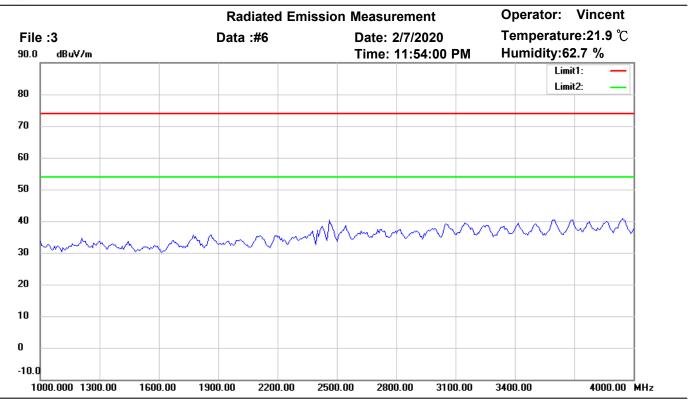
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

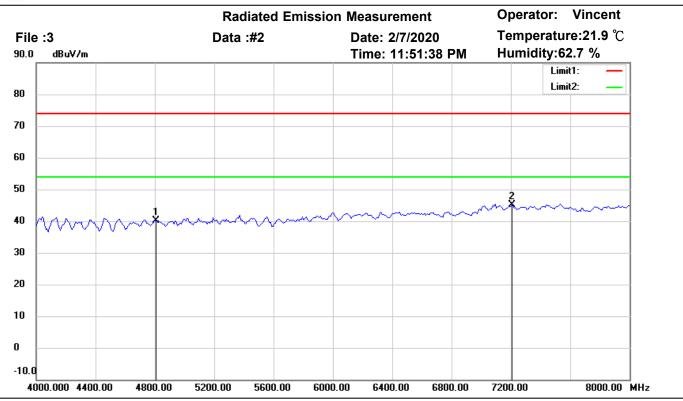
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

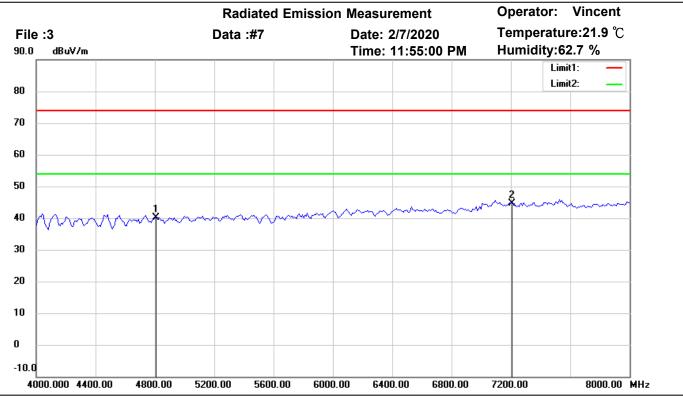
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	4804.000	41.96	peak	-1.95	40.01	74.00	150	90	-33.99	
*	7206.000	41.77	peak	3.24	45.01	74.00	150	150	-28.99	



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Site: Chamber

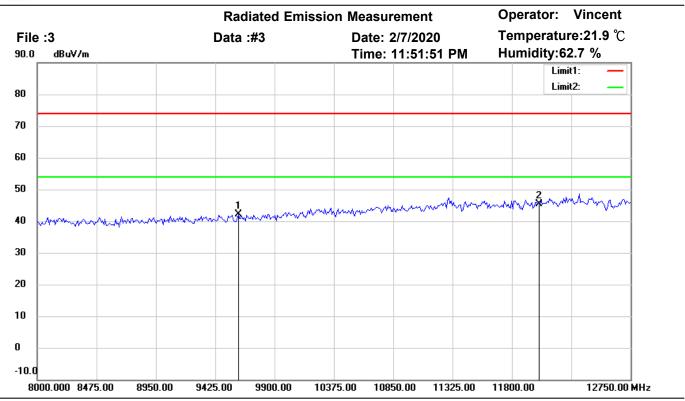
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	4804.000	42.16	peak	-1.95	40.21	74.00	150	40	-33.79	
*	7206.000	41.51	peak	3.24	44.75	74.00	150	215	-29.25	



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Site: Chamber

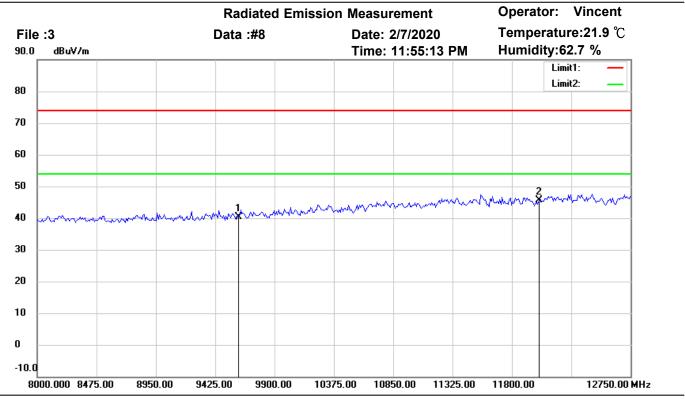
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	9608.000	35.48	peak	6.53	42.01	74.00	150	300	-31.99	
*	12010.000	33.83	peak	11.62	45.45	74.00	150	195	-28.55	



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Site: Chamber

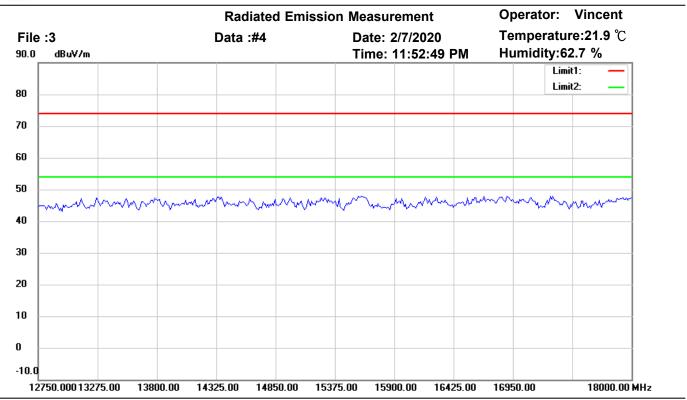
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	9608.000	33.78	peak	6.53	40.31	74.00	150	300	-33.69	
*	12010.000	34.10	peak	11.62	45.72	74.00	150	165	-28.28	



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Site: Chamber

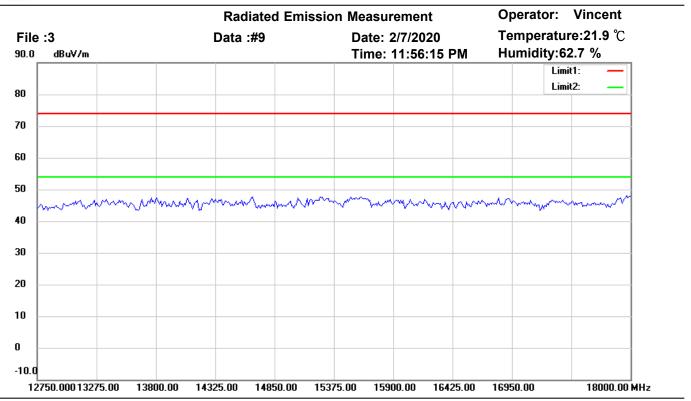
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

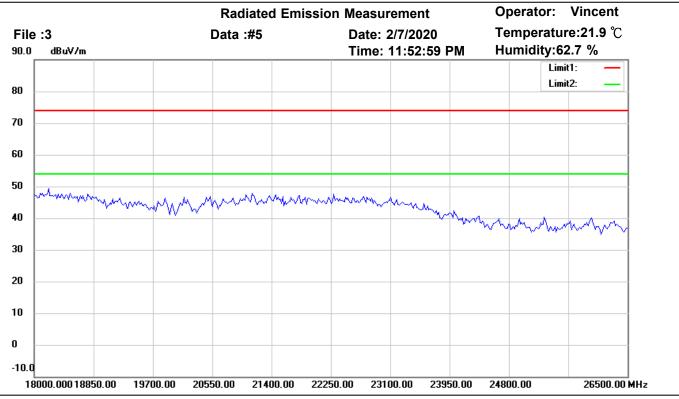
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

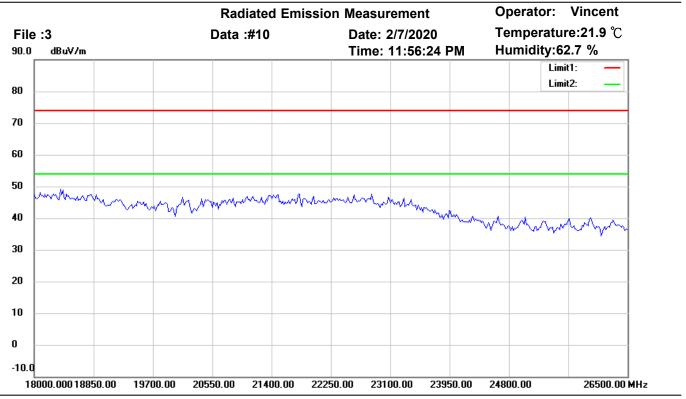
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

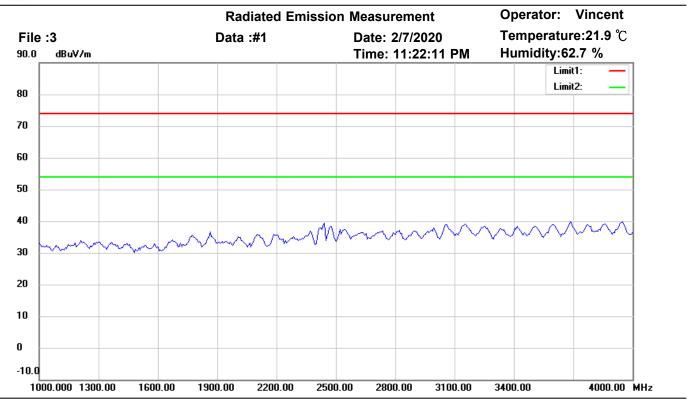
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

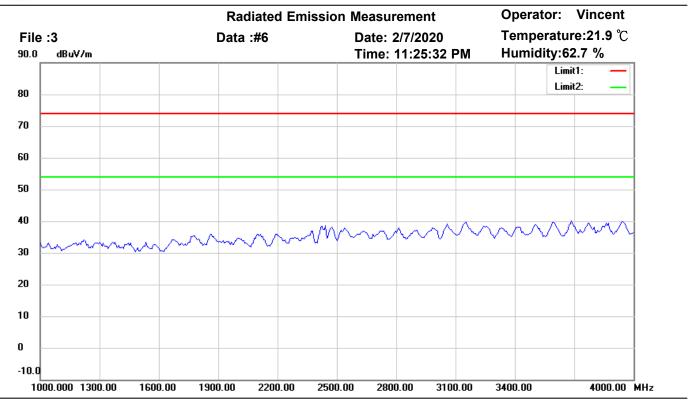
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2440MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

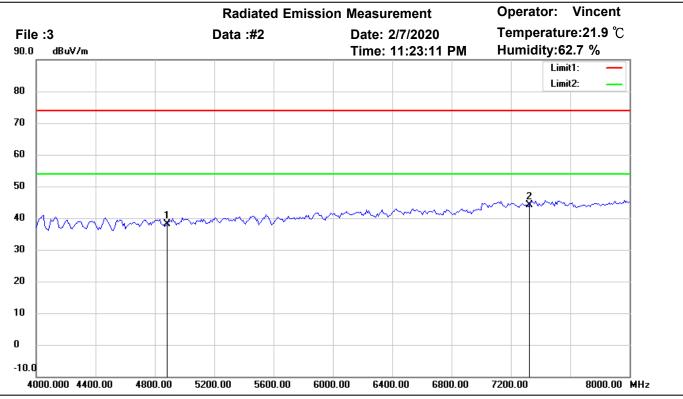
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2440MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

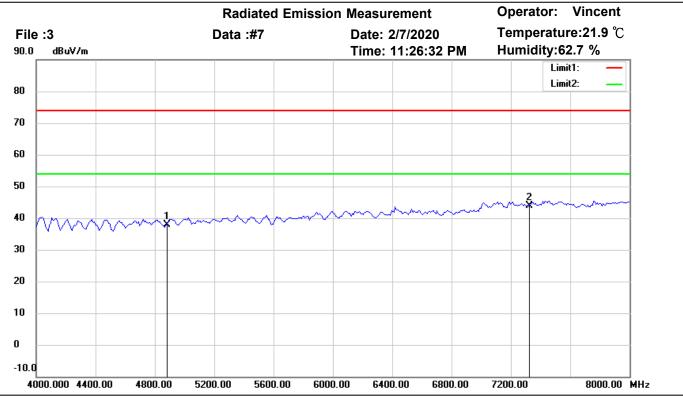
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2440MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	4880.000	39.84	peak	-1.68	38.16	74.00	150	190	-35.84	
*	7320.000	40.74	peak	3.45	44.19	74.00	150	320	-29.81	



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Site: Chamber

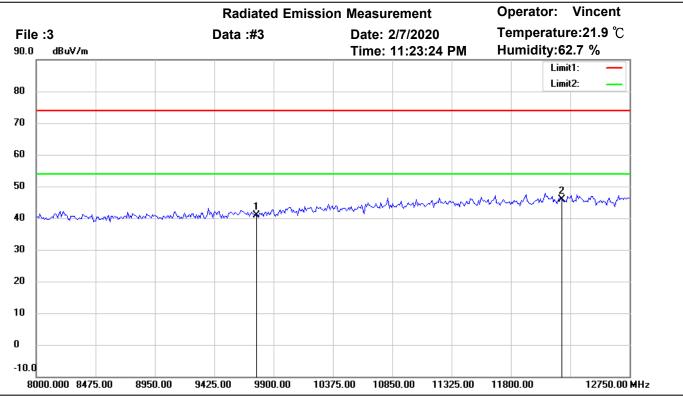
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2440MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	4880.000	39.57	peak	-1.68	37.89	74.00	150	80	-36.11	
*	7320.000	40.54	peak	3.45	43.99	74.00	150	245	-30.01	



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Site: Chamber

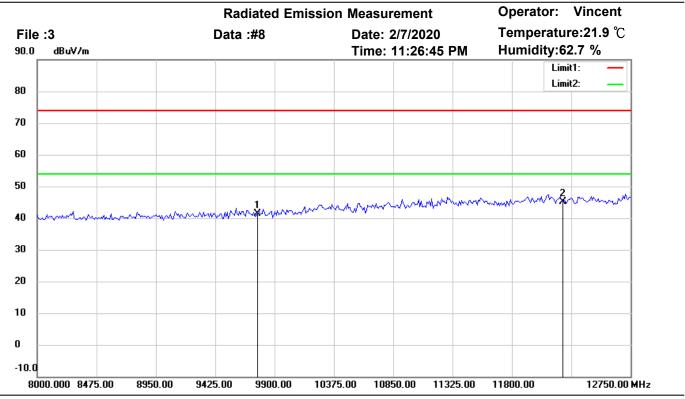
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2440MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	9760.000	34.01	peak	6.76	40.77	74.00	150	215	-33.23	
*	12200.000	33.00	peak	12.85	45.85	74.00	150	240	-28.15	



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Site: Chamber

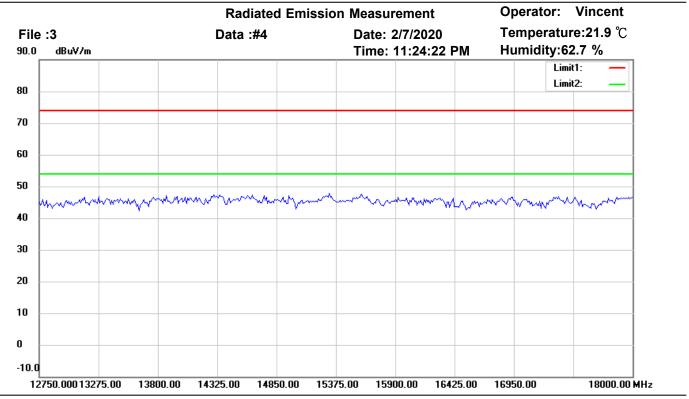
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2440MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	9760.000	34.74	peak	6.76	41.50	74.00	150	60	-32.50	
*	12200.000	32.28	peak	12.85	45.13	74.00	150	230	-28.87	



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Site: Chamber

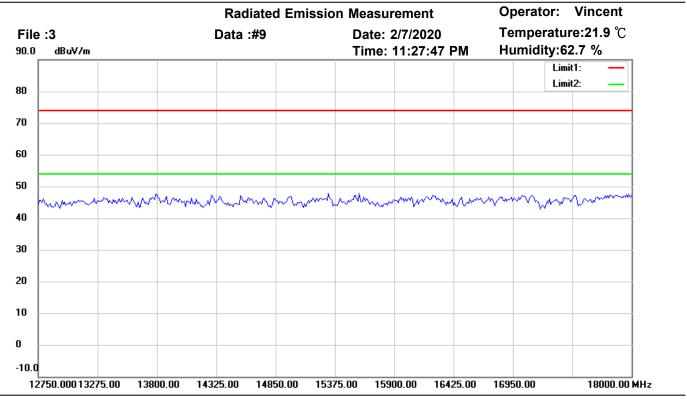
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2440MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

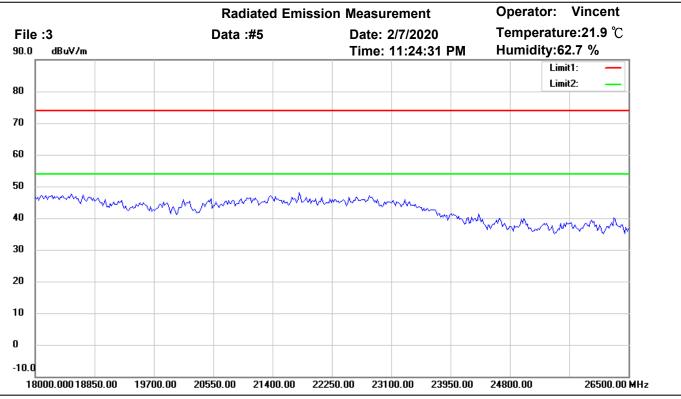
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2440MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

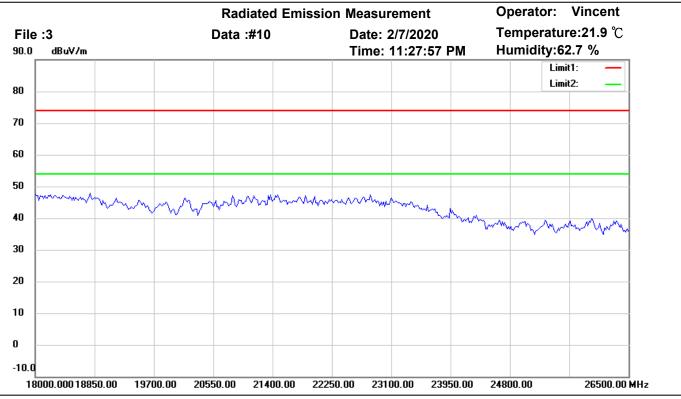
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2440MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

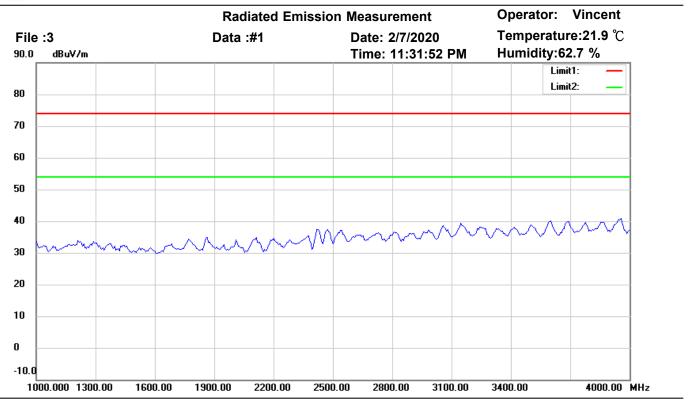
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2440MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

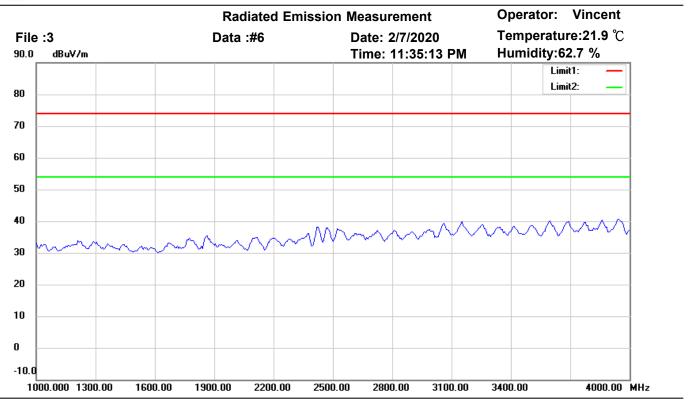
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2480MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

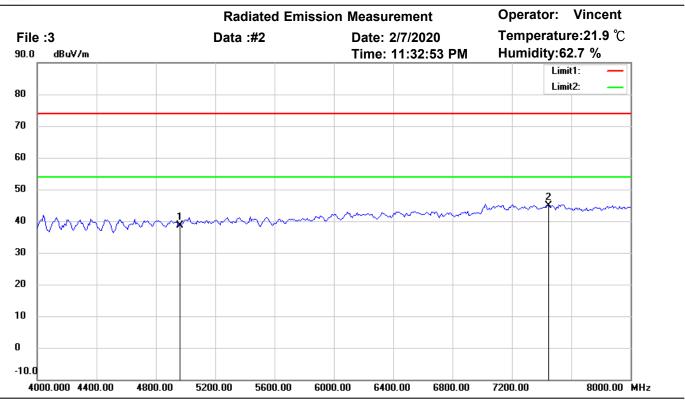
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2480MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

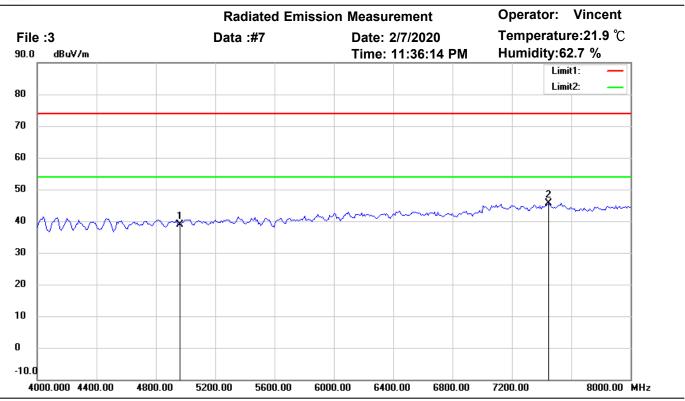
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2480MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	4960.000	40.00	peak	-1.35	38.65	74.00	150	60	-35.35	
*	7440.000	41.13	peak	3.72	44.85	74.00	150	330	-29.15	



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Site: Chamber

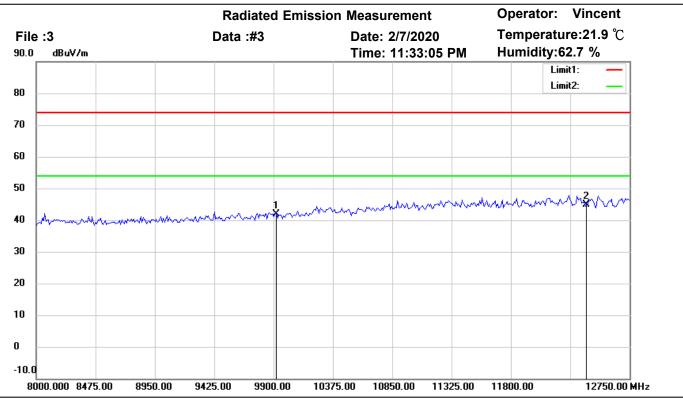
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2480MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	4960.000	40.18	peak	-1.35	38.83	74.00	150	90	-35.17	
*	7440.000	41.79	peak	3.72	45.51	74.00	150	305	-28.49	



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Site: Chamber

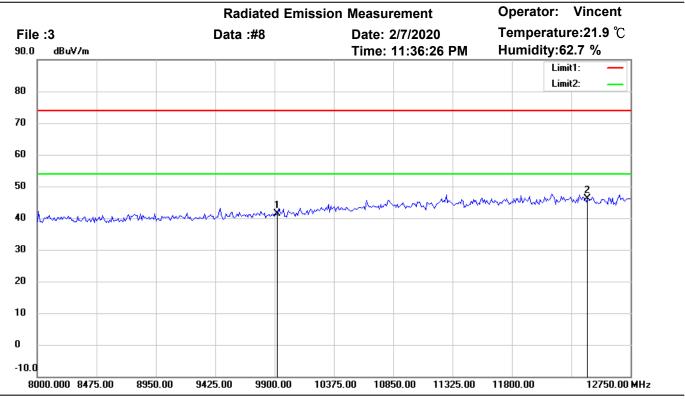
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2480MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	9920.000	34.83	peak	7.16	41.99	74.00	150	80	-32.01	
*	12400.000	32.05	peak	12.75	44.80	74.00	150	220	-29.20	



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Site: Chamber

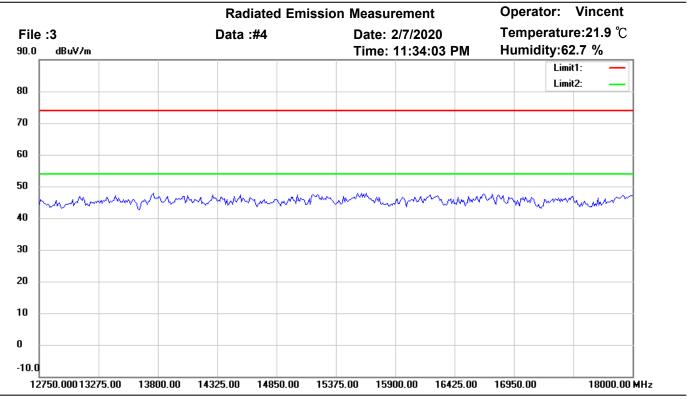
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2480MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	9920.000	34.32	peak	7.16	41.48	74.00	150	230	-32.52	
*	12400.000	33.44	peak	12.75	46.19	74.00	150	155	-27.81	



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Site: Chamber

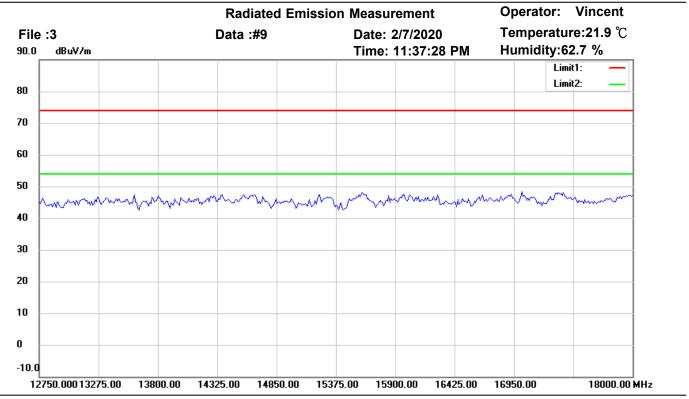
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2480MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

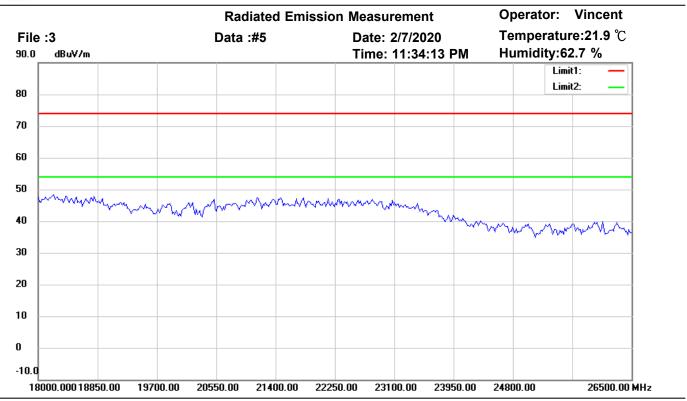
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2480MHz

Mk.	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

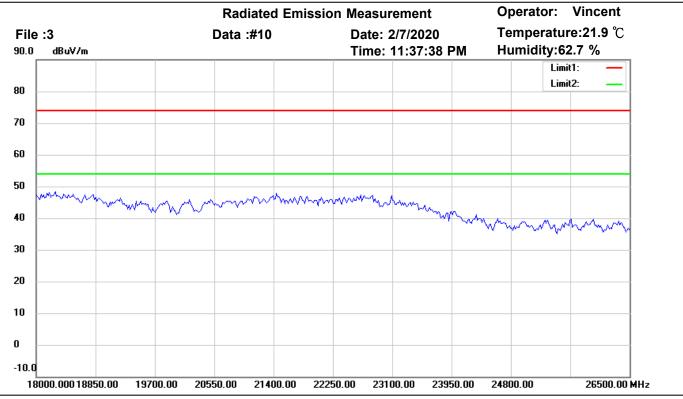
Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Horizontal

Test Mode: TX 2480MHz

Mk.	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



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Site: Chamber

Condition: FCC\_part 15 RE-Class C\_Above 1GHz\_PK Polarization: Vertical

Test Mode: TX 2480MHz

Mk.	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	