Test Report

FCC ID: 2AWAUWT717

Date of issue: June 15, 2020

Report number:	MTi20050813-4E1
Sample description:	Ryan’s Mystery Mission Case - Communicator Watches
Model(s):	717
Applicant:	BONKERS TOYS CO. LLC
Address:	8787 Complex Drive, Suite 206, San Diego, CA 92123
Date of test:	May 22, 2020 to June 15, 2020

Shenzhen Microtest Co., Ltd.
http://www.mtitest.com

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Table of Contents

Test Result Certification

Applicant's name:	BONKERS TOYS CO. LLC
Address:	8787 Complex Drive, Suite 206, San Diego, CA 92123
Manufacture's name:	BONKERS TOYS CO. LLC
Address:	8787 Complex Drive, Suite 206, San Diego, CA 92123
Factory's name:	DONGGUAN SUN KEE INDUSTRIAL CO. LTD.
Address:	No.18 Fengyang road, Beizha, Humen town, Dongguan city, Guangdong Province, China
Product name:	Ryan's Mystery Mission Case - Communicator Watches
Trademark:	N/A
Model name:	717
Standards:	FCC Part 15.249
Test procedure:	ANSI C63.10-2013

This device described above has been tested by Shenzhen Microtest Co., Ltd. and the test results show that the equipment under test (EUT) compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

Tested by: Danny Xu June 15, 2020

Reviewed by: Leo Su June 15, 2020

Approved by: Tom Xue June 15, 2020

1 General description

1.1 Feature of equipment under test (EUT)

Equipment:	Ryan's Mystery Mission Case - Communicator Watches
Trade Name:	N/A
Model Name:	717
Serial Model:	N/A
Model Difference:	N/A
Operation Frequency:	2407 - 2477 MHz
Modulation Type:	GFSK
Antenna Type:	Ceramic antenna
Antenna Gain:	0dBi
Max. Field Strength:	81.05dBuV/m
Power Source:	DC 4.5V from battery
Battery:	DC 1.5V*3 cell "AA" alkaline battery
Hardware version:	A0
Software version:	V01

1.2 Operation channel list

Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
0	2407	1	2443	2	2471
3	2477				

1.3 Test Frequency Channel

Channel	Frequency(MHz)
Low	2407
Middle	2443
High	2477

1.4 EUT operation mode

During testing, RF test program provided by the manufacture to control the Tx operation followed the test requirement.

1.5 Ancillary equipment list

Equipment	Model	S/N	Manufacturer
/	/	/	/

2 Summary of Test Result

Test procedures according to the technical standards:

Item	FCC Part No.	Description of Test	Result
1	FCC Part15.203	Antenna Requirement	Pass
2	FCC Part15.207	AC power line conducted emission	N/A
3	FCC Part15.249(a)	Field strength of fundamental and harmonic emissions	Pass
4	FCC Part 15.215	20dB and 99% Bandwidth	Pass
5	FCC Part15.249(d)	Radiated spurious emission	Pass

3 Test Facilities and Accreditations

3.1 Test laboratory

Test Laboratory	Shenzhen Microtest Co., Ltd
Location	No.102A & 302A, East Block, Hengfang Industrial Park, Xingye Road, Xixiang, Bao'an District, Shenzhen, Guangdong, China
FCC Registration No.	448573

3.2 Environmental conditions

Temperature:	15ºC~35ºC
Humidity	20%~75%
Atmospheric pressure	98kPa~101kPa

3.3 Measurement uncertainty

The reported uncertainty of measurement y ± U，where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2，providing a level of confidence of approximately 95 %

RF frequency	1 x 10-7
RF power, conducted	± 1 dB
Conducted emission(150kHz~30MHz)	± 2.5 dB
Radiated emission(30MHz~1GHz)	± 4.2 dB
Radiated emission (above 1GHz)	± 4.3 dB
Temperature	±1 degree
Humidity	± 5 %

3.4 Test software

Software Name	Manufacturer	Model	Version
Bluetooth and WiFi Test System	Shenzhen JS tonscend co,.ltd	JS1120-3	2.5.77.0418

4 List of test equipment

Equipment No.	Equipment Name	Manufacturer	Model	Serial No.	Calibration date	Due date
MTI-E004	EMI Test Receiver	Rohde&schwarz	ESPI7	100314	2019/10/09	2020/10/08
MTI-E006	TRILOG Broadband Antenna	schwarabeck	VULB 9163	9163-872	2019/10/13	2020/10/12
MTI-E007	Double Ridged Broadband Horn Antenna	schwarabeck	BBHA 9120 D	9120D-1145	2019/10/13	2020/10/12
MTI-E014	amplifier	Hewlett-Packard	8447D	3113A06150	2019/10/09	2020/10/08
MTI-E036	Single path vehicle AMN(LISN)	Schwarzbeck	NNBM 8124	01175	2019/10/09	2020/10/08
MTI-E038	Low noise active vertical monopole antenna	Schwarzbeck	VAMP 9243	#565	2019/10/16	2020/10/15
MTI-E039	Biconical antenna	Schwarzbeck	BBA 9106	#164	2019/10/15	2020/10/14
MTI-E041	MXG Vector Signal Generator	Agilent	N5182A	MY49060455	2020/04/16	2021/04/15
MTI-E042	ESG Series Analog signal generator	Agilent	E4421B	GB40051240	2020/05/21	2021/05/20
MTI-E044	Thermometer clock humidity monitor	-	HTC-1	/	2020/04/17	2021/04/16
MTI-E062	Log Periodic Antenna	Schwarzbeck	VUSLP 9111B	#312	2020/04/11	2022/04/10
MTI-E063	Log Periodic Dipole Array Antenna	ETS-LINDGREN	3148B	00224524	2020/04/11	2022/04/10
MTI-E065	Amplifier	EMtrace	RP06A	00117	2020/04/29	2021/04/28
MTI-E071	PXA Signal Analyzer	Agilent	N9030A	MY51350296	2019/10/25	2020/10/24
MTI-E076	EMI Test Receiver	Rohde&schwarz	ESIB26	100273	2020/04/16	2021/04/15
MTI-E078	Synthesized Sweeper	Agilent	83752A	3610A01957	2020/04/16	2021/04/15
MTI-E079	DC Power Supply	Agilent	E3632A	MY40027695	2020/04/16	2021/04/15
MTI-E093	Artificial mains network	3ctest	LISN J50	ES3911805	2020/04/16	2021/04/15
MTI-E096	Power amplifier	Space-Dtroniccs	EWLNA0118G-P40	1852001	2020/04/29	2021/04/28
MTI-E097	Current Probe	SOLAR ELECTRONICS CO.	9207-1	220095-1	2020/04/17	2021/04/16
MTI-E098	Loop Sensor	SOLAR ELECTRONICS CO.	7334-1	220095-2	2020/04/21	2021/04/20
Note: the calibration interval of the above test instruments is 12 or 24 months and the calibrations are traceable to international system unit (SI).						

5 Test Result

5.1 Antenna requirement

5.1.1 Standard requirement

FCC PART 15.203 and 15.247(b);

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 connector is prohibited.

This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. 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.

5.1.2 EUT Antenna

The antenna is a Ceramic antenna, which was permanently affixed to the device and un-replaced, complies with 15.203. In addition, the maximum antenna gain is 0dBi.

5.2 AC power line conducted emission

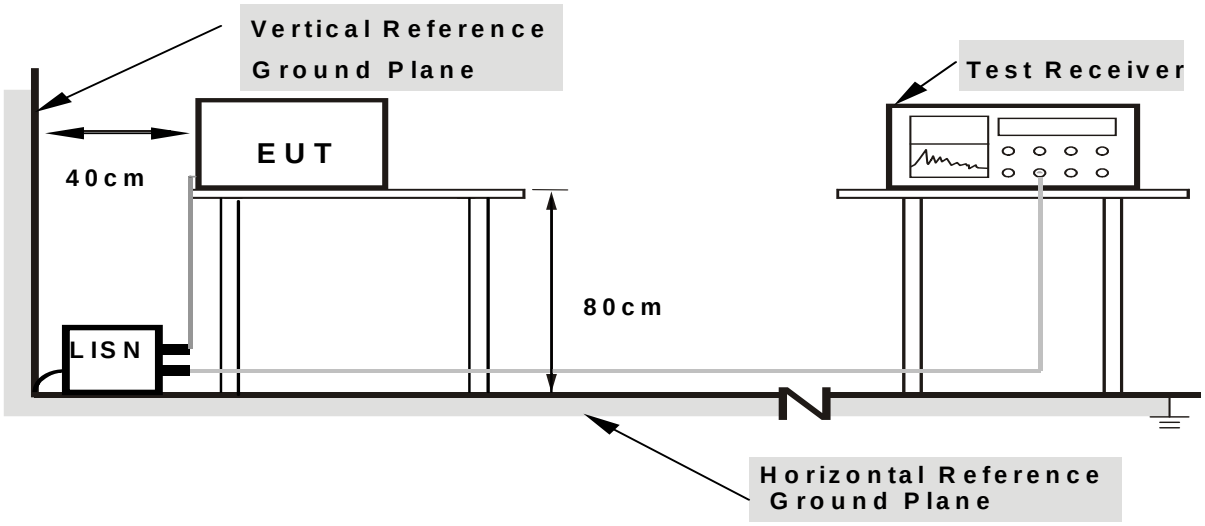
5.2.1 Limits

FCC §15.207;

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

Frequency (MHz)	Quasi-peak	Average
0.15 -0.5	66 - 56 note2	56 - 46 note2
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00
Note1: The tighter limit applies at the band edges. Note2: The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.		

5.2.2 Test setup



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

5.2.3 Test procedure

a. EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

b. The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

c. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment's powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

d. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

e. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

f. LISN at least 80 cm from nearest part of EUT chassis.

For the actual test configuration, please refer to the related Item –EUT Test Photos.

5.2.4 Test results

Note: This device is battery powered and does not apply to conducted emission.

5.3 Field strength of fundamental and harmonic emissions

5.3.1 Limits

FCC §15.249(a);

The field strength of fundamental and harmonic emissions, measured at 3 m, shall not

exceed 50 mV/m and 0.5 mV/m respectively.

The field strength limits shall be measured using an average detector, except for the fundamental emission in the frequency band 902-928 MHz, which is based on measurements using an International Special Committee on Radio Interference (CISPR) quasi-peak detector

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902-928 MHz	50	500
2400-2483.5 MHz	50	500
5725-5875 MHz	50	500
24.0-24.25 GHz	250	2500

Frequency	Field Strength(dBuv/m)	Detector
Fundamental	114	PK
Fundamental	94	AV
Harmonic emissions	74	PK
Harmonic emissions	54	AV

Note: 50mV/m=50000uv/m

20*log(50000uV/m)=94dBuv/m

PK limit reference 15.249(e)

5.3.2 Test Method

1. The EUT is placed on a turntable, which is 0.8m above ground plane for test frequency range below 1GHz, and 1.5m above ground plane for test frequency range above 1GHz.

2. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.

3. Use the following spectrum analyser settings:

Span = wide enough to fully capture the emission being measured, RBW = 1 MHz for f ≥ 1GHz, 100 kHz for f < 1 GHz, VBW ≥ RBW, Sweep = auto, Detector function = peak, Trace = max hold

4. Follow the guidelines in ANSI C63.4-2014 with respect to maximizing the emission by rotating the EUT, adjusting the measurement antenna height and polarization, etc. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, submit this data. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

5. The peak level, once corrected, must comply with the limit specified in Section 15.209. Set the RBW = 1MHz, VBW = 10Hz, Detector = PK for AV value, while maintaining all of the other instrument settings.

5.3.3 Test Result

Transmitter channel: 2407MHz

Frequency	Ant. Polarization	Emission level	Limits	Detector	Result
(MHz)	H / V	dBμV/m	dBμV/m		
2407	V	81.05	114	PK	
2407	H	80.45	114	PK	
2407	V	80.24	94	AV	
2407	H	79.46	94	AV	
4814	V	55.90	74	PK	
4814	H	56.42	74	PK	
4814	V	46.12	54	AV	
4814	H	45.37	54	AV	

Transmitter channel: 2443MHz

Frequency	Ant. Polarization	Emission level	Limits	Detector	Result
(MHz)	H / V	dBμV/m	dBμV/m		
2443	V	80.85	114	PK	
2443	H	80.37	114	PK	
2443	V	80.23	94	AV	
2443	H	79.87	94	AV	
4886	V	55.90	74	PK	
4886	H	56.24	74	PK	
4886	V	47.12	54	AV	
4886	H	46.47	54	AV	

Transmitter channel: 2477MHz

Frequency	Ant. Polarization	Emission level	Limits	Detector	Result
(MHz)	H / V	dBμV/m	dBμV/m		
2477	V	80.90	114	PK	
2477	H	80.35	114	PK	
2477	V	80.27	94	AV	
2477	H	78.79	94	AV	
4954	V	56.52	74	PK	
4954	H	57.50	74	PK	
4954	V	48.41	54	AV	
4954	H	47.98	54	AV	

5.4 20dB and 99% bandwidth

5.4.1 Limits

FCC §15.215(c)

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

5.4.2 Test method

Use the following spectrum analyzer settings:

For 20 dB bandwidth

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel
RBW ≥1% of the 20 dB bandwidth
VBW ≥RBW
Sweep = auto
Detector function = peak
Trace = max hold

The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth and 99% occupied bandwidth of the emission

5.4.3 Test result

Frequency (MHz)	20dB bandwidth (MHz)
2407	1.563
2443	1.576
2477	1.635

Test plots

2405MHz

2440MHz

2470MHz


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.477000000 GHz
Center Freq: 2.477000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
10:34:02 AM Jun 03, 2020
Frequency
10 dB/div
Log
Ref 20.00 dBm
Center Freq
2.477000000 GHz
Center 2.477 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 5 MHz
Sweep 2.533 ms
CF Step
500.000 kHz
Auto
Man
Occupied Bandwidth
1.6329 MHz
Total Power
2.77 dBm
Freq Offset
0 Hz
Transmit Freq Error
501.44 kHz
OBW Power
99.00 %
x dB Bandwidth
1.635 MHz
x dB
-20.00 dB
MSG
STATUS

5.5 Radiated spurious emission

5.5.1 Limit

FCC PART 15.249(a);

Except as provided in paragraph (a) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Frequency (MHz)	Field Strength of Fundamental (mV/m)	Field Strength of Harmonics (μV/m)
902-928	50	500
2400-2483.5	50	500
5725-5875	50	500

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
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

5.5.2 Test method

a) The EUT is placed on a turntable, which is 0.8m above ground plane for test frequency range blew 1GHz, and 1.5m above ground plane for test frequency range above 1GHz.

b) EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.

c) Use the following spectrum analyser settings:

   1) Span = wide enough to fully capture the emission being measured

   2) RBW = 1 MHz for f ≥ 1GHz, 100 kHz for f < 1 GHz

   3) VBW ≥ RBW, Sweep = auto

   4) Detector function = peak

   5) Trace = max hold

d) Follow the guidelines in ANSI C63.4-2014 with respect to maximizing the emission by rotating the EUT, adjusting the measurement antenna height and polarization, etc. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, submit this data. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

e) The peak level, once corrected, must comply with the limit specified in Section 15.209. Set the RBW = 1MHz, VBW = 10Hz, Detector = PK for AV value, while maintaining all of the other instrument settings.

5.5.3 Test Result

Note: If the PK measured values lower than average mode limit, the EUT shall be deemed to meet average limits and then no additional average mode measurement performed.

Below 30MHz

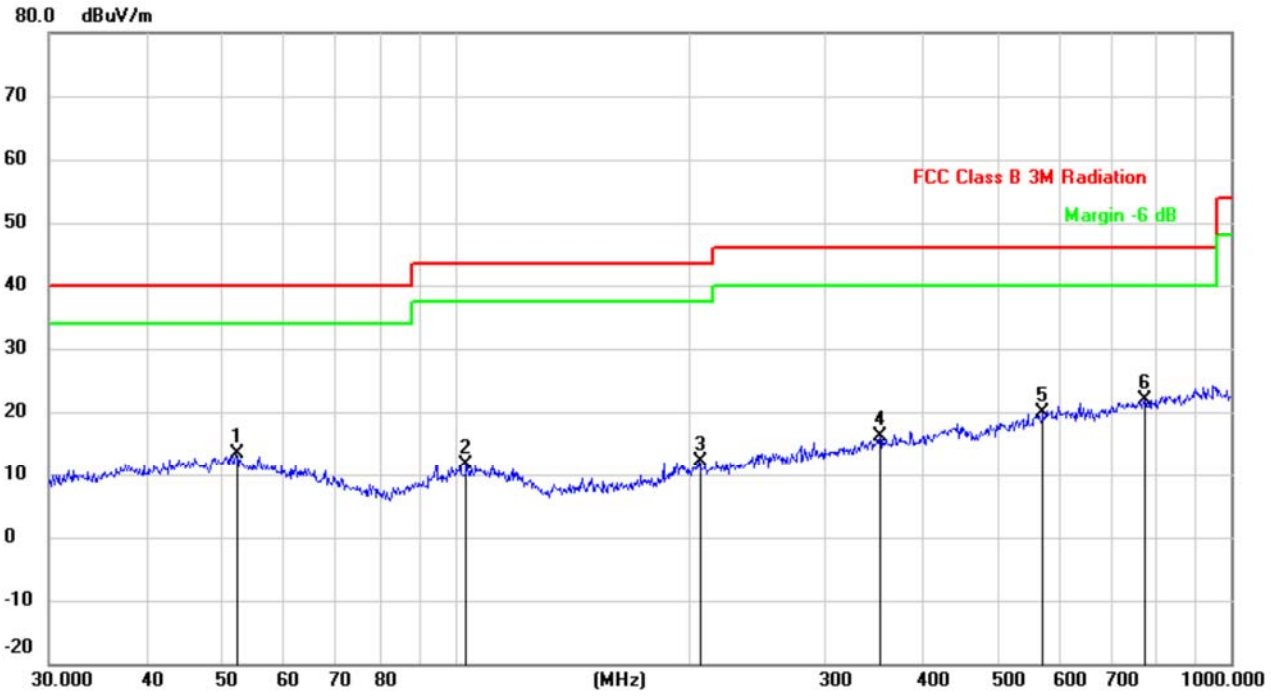
EUT：	Ryan's Mystery Mission Case - Communicator Watches	Model name. ：	717
Pressure：	1010 hPa	Test voltage：	DC 4.5V from battery
Test mode：	TX	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	Pass
--	--	--	--	Pass

Note:
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits (dBuV) + distance extrapolation factor.

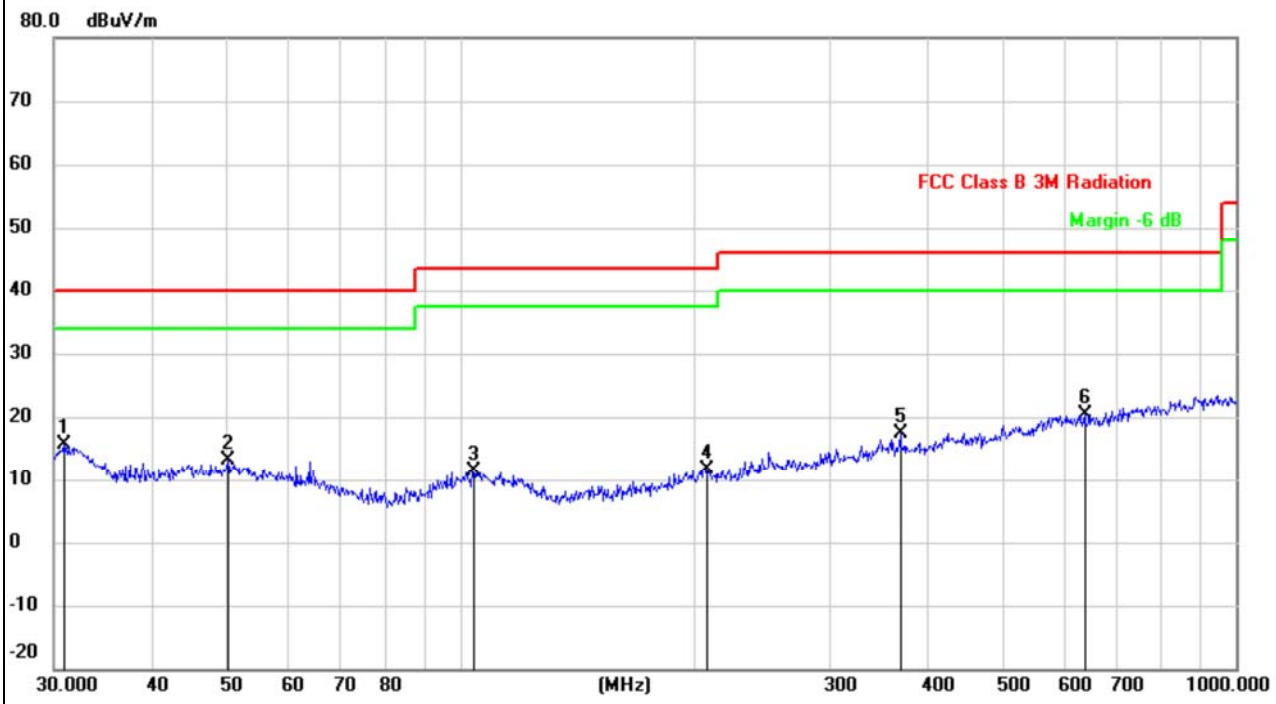
Radiation (30MHz – 1GHz)

EUT:	Ryan's Mystery Mission Case - Communicator Watches	Model name:	717
Pressure:	1010hPa	Polarization:	H
Test voltage:	DC 4.5V from battery	Test mode:	TX



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1		52.2079	25.94	-12.59	13.35	40.00	-26.65	QP
2		103.4421	25.17	-13.63	11.54	43.50	-31.96	QP
3		206.3976	24.76	-12.75	12.01	43.50	-31.49	QP
4		352.9433	25.08	-8.88	16.20	46.00	-29.80	QP
5		572.6144	25.48	-5.54	19.94	46.00	-26.06	QP
6	*	774.1584	25.76	-3.93	21.83	46.00	-24.17	QP

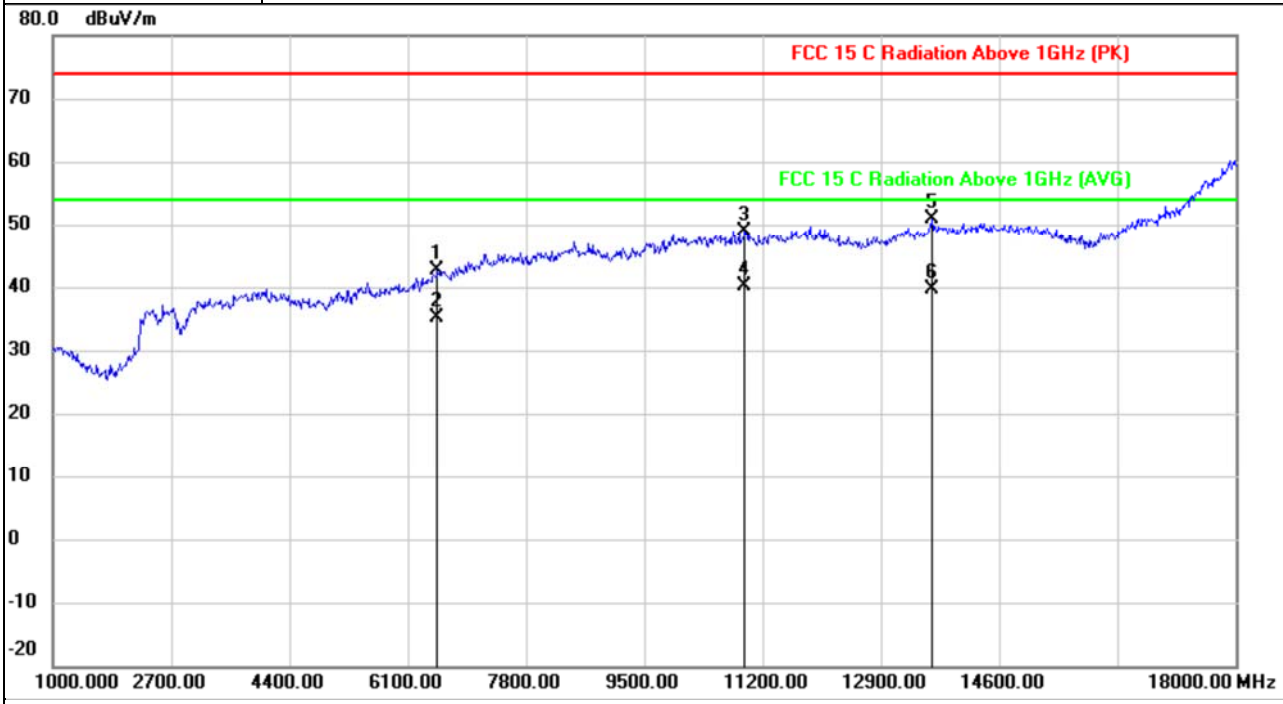
EUT:	Ryan's Mystery Mission Case - Communicator Watches	Model name:	717
Pressure:	1010hPa	Polarization:	V
Test voltage:	DC 4.5V from battery	Test mode:	TX



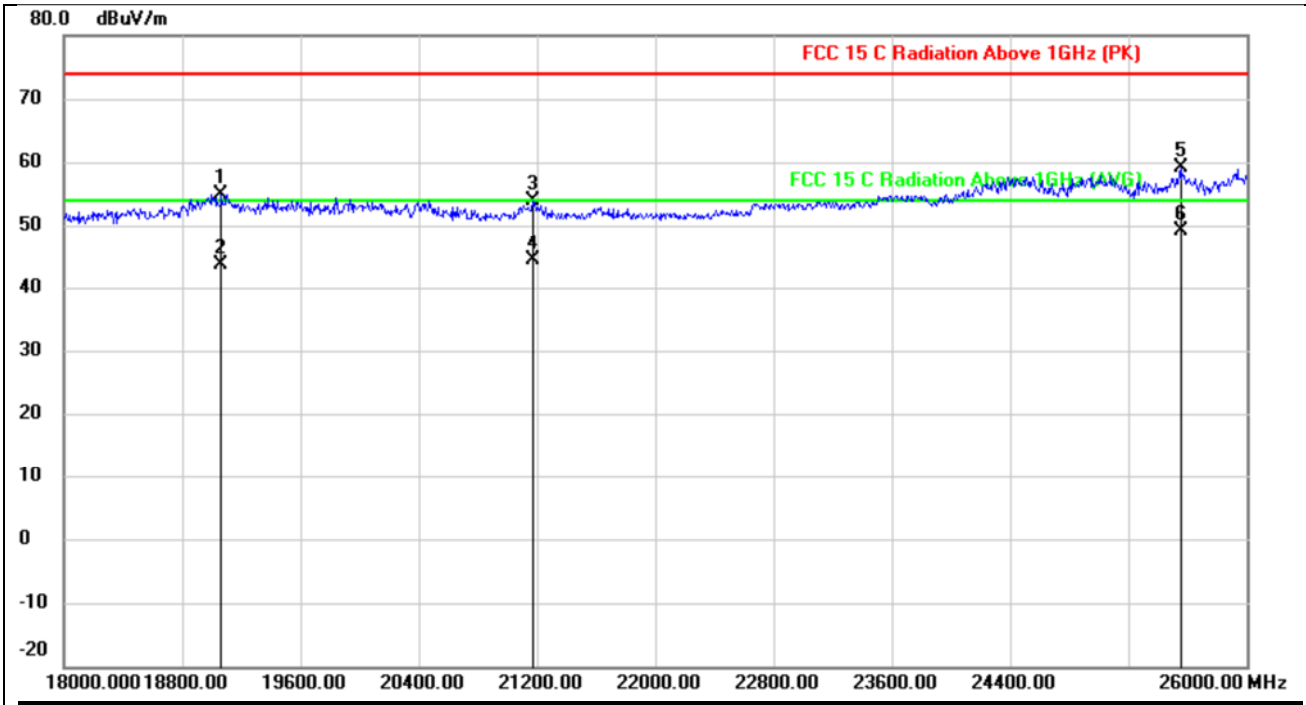
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1	*	30.8535	30.80	-15.08	15.72	40.00	-24.28	QP
2		50.2324	25.36	-12.25	13.11	40.00	-26.89	QP
3		103.8055	24.92	-13.63	11.29	43.50	-32.21	QP
4		207.1226	24.41	-12.75	11.66	43.50	-31.84	QP
5		369.4047	26.40	-8.91	17.49	46.00	-28.51	QP
6		638.3686	25.96	-5.48	20.48	46.00	-25.52	QP

Above 1GHz:

EUT:	Ryan's Mystery Mission Case - Communicator Watches	Model name:	717
Pressure:	1010hPa	Polarization:	H
Test voltage :	DC 4.5V from battery	Test mode:	TX
Test channel:	2407MHz		

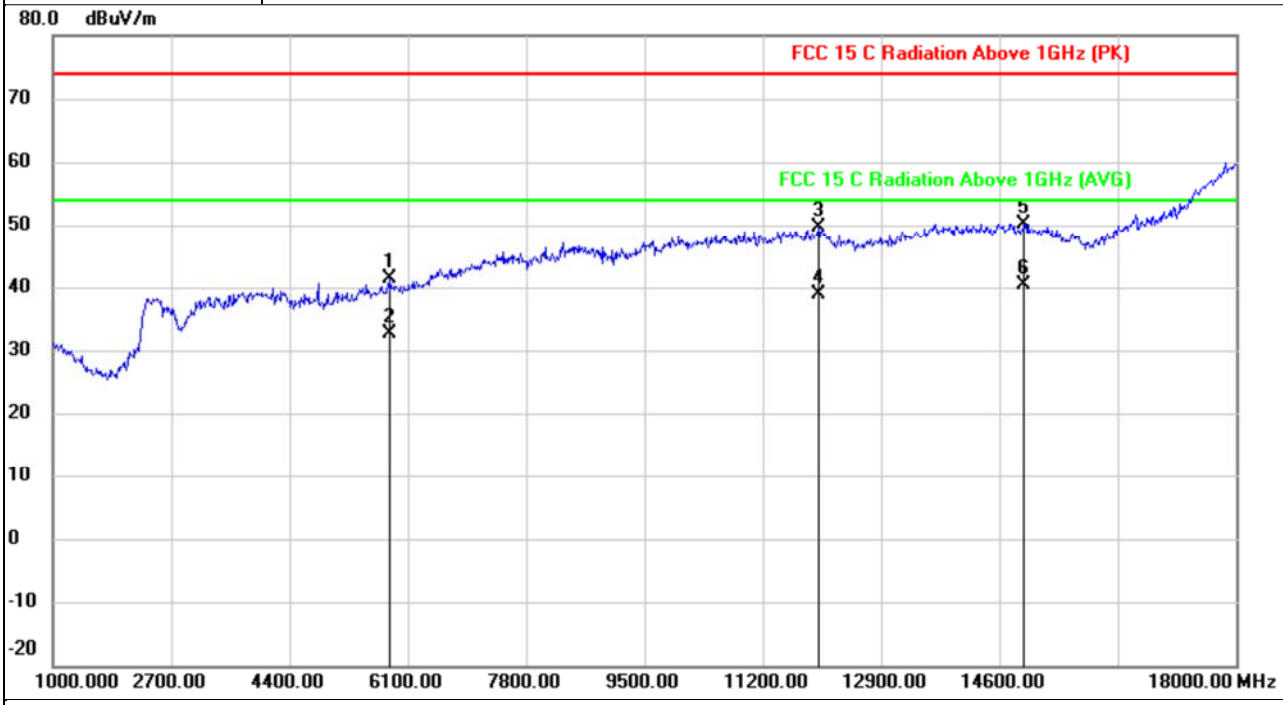


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1		6525.000	45.40	-2.74	42.66	74.00	-31.34	peak
2		6525.000	37.94	-2.74	35.20	54.00	-18.80	AVG
3		10945.000	43.89	4.95	48.84	74.00	-25.16	peak
4	*	10945.000	35.25	4.95	40.20	54.00	-13.80	AVG
5		13631.000	45.46	5.32	50.78	74.00	-23.22	peak
6		13631.000	34.28	5.32	39.60	54.00	-14.40	AVG

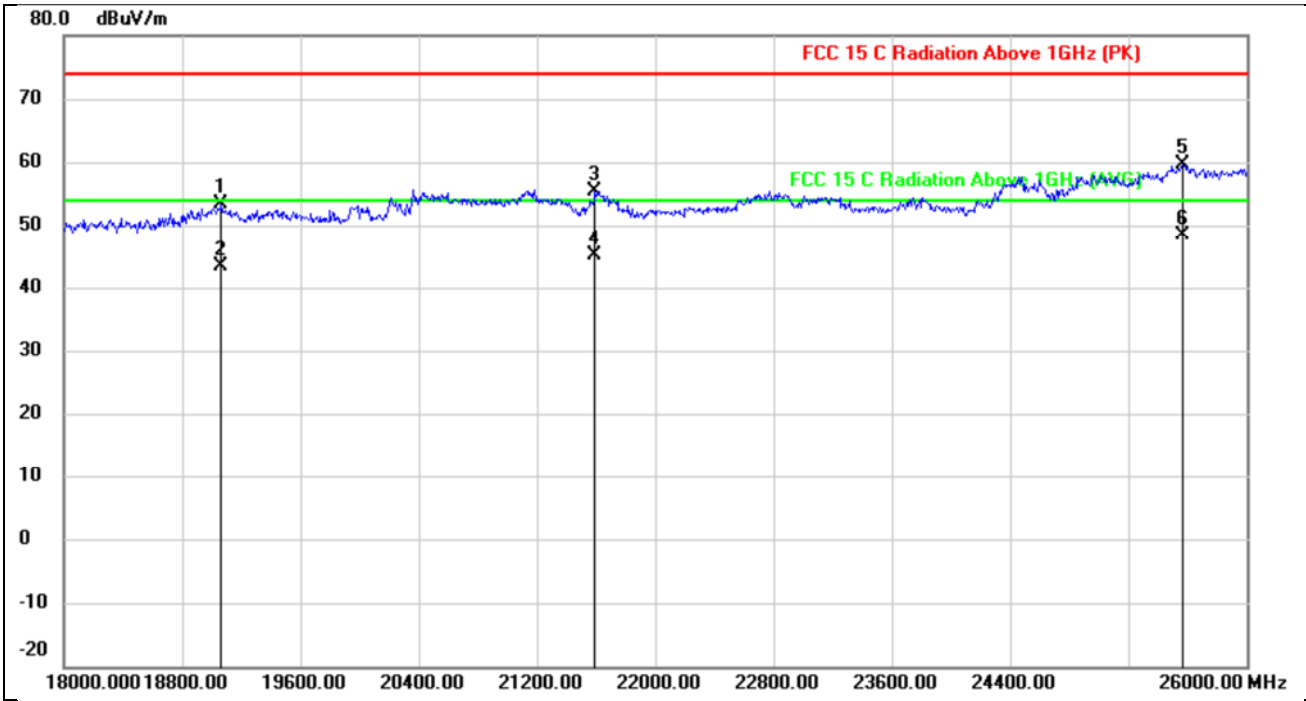


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1		19064.000	35.86	19.12	54.98	74.00	-19.02	peak
2		19064.000	24.48	19.12	43.60	54.00	-10.40	AVG
3		21168.000	34.79	19.05	53.84	74.00	-20.16	peak
4		21168.000	25.45	19.05	44.50	54.00	-9.50	AVG
5		25552.000	39.61	19.47	59.08	74.00	-14.92	peak
6	*	25552.000	29.73	19.47	49.20	54.00	-4.80	AVG

EUT:	Ryan's Mystery Mission Case - Communicator Watches	Model name:	717
Pressure:	1010hPa	Polarization:	V
Test voltage :	DC 4.5V from battery	Test mode:	TX
Test channel:	2407MHz		

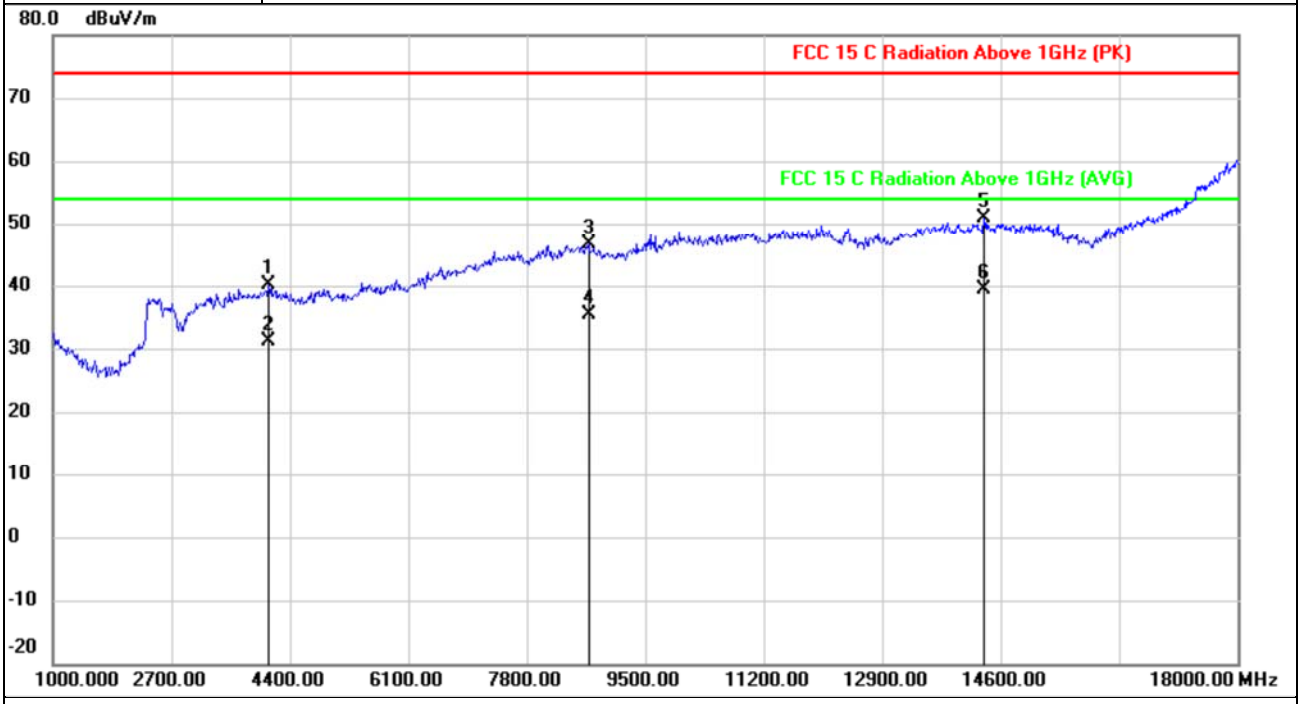


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1		5845.000	46.70	-5.25	41.45	74.00	-32.55	peak
2		5845.000	37.85	-5.25	32.60	54.00	-21.40	AVG
3		11999.000	45.09	4.42	49.51	74.00	-24.49	peak
4		11999.000	34.38	4.42	38.80	54.00	-15.20	AVG
5		14957.000	44.65	5.55	50.20	74.00	-23.80	peak
6	*	14957.000	34.95	5.55	40.50	54.00	-13.50	AVG

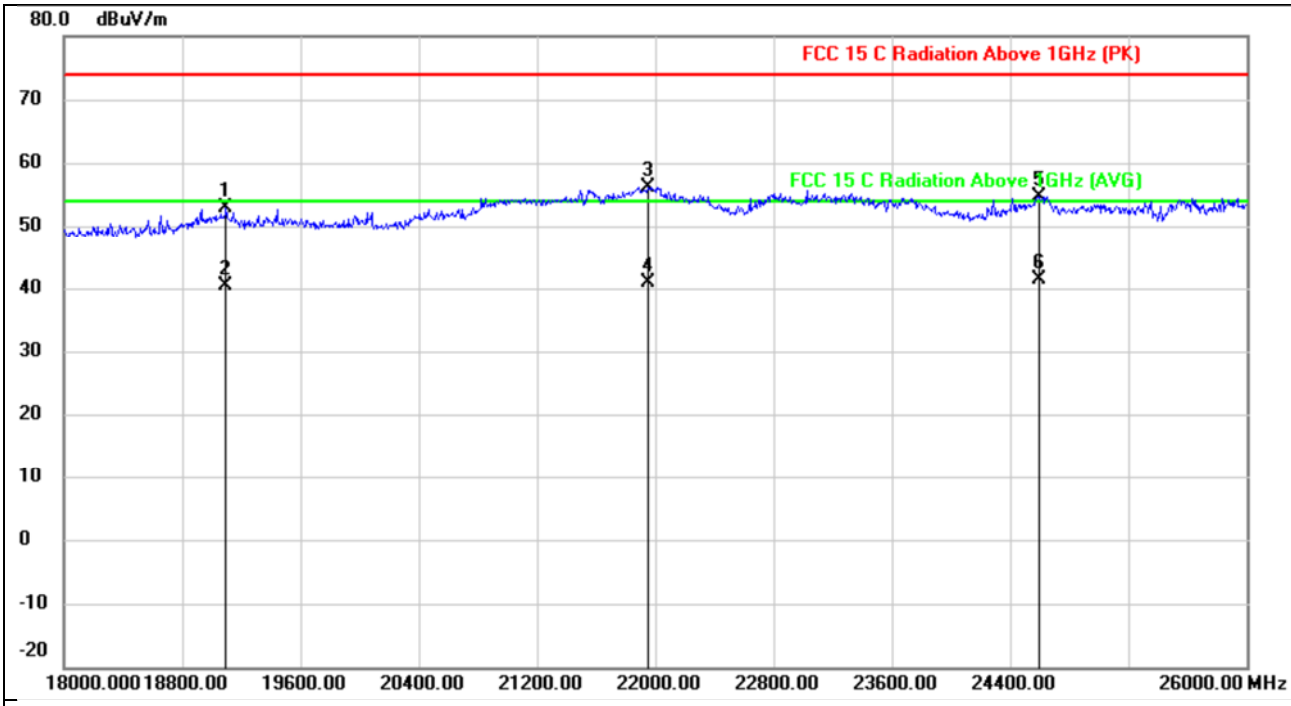


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1		19064.000	34.26	19.12	53.38	74.00	-20.62	peak
2		19064.000	24.38	19.12	43.50	54.00	-10.50	AVG
3		21592.000	36.25	19.14	55.39	74.00	-18.61	peak
4		21592.000	26.06	19.14	45.20	54.00	-8.80	AVG
5		25568.000	40.06	19.46	59.52	74.00	-14.48	peak
6	*	25568.000	28.94	19.46	48.40	54.00	-5.60	AVG

EUT:	Ryan's Mystery Mission Case - Communicator Watches	Model name:	717
Pressure:	1010hPa	Polarization:	H
Test voltage :	DC 4.5V from battery	Test mode:	TX
Test channel:	2443MHz		

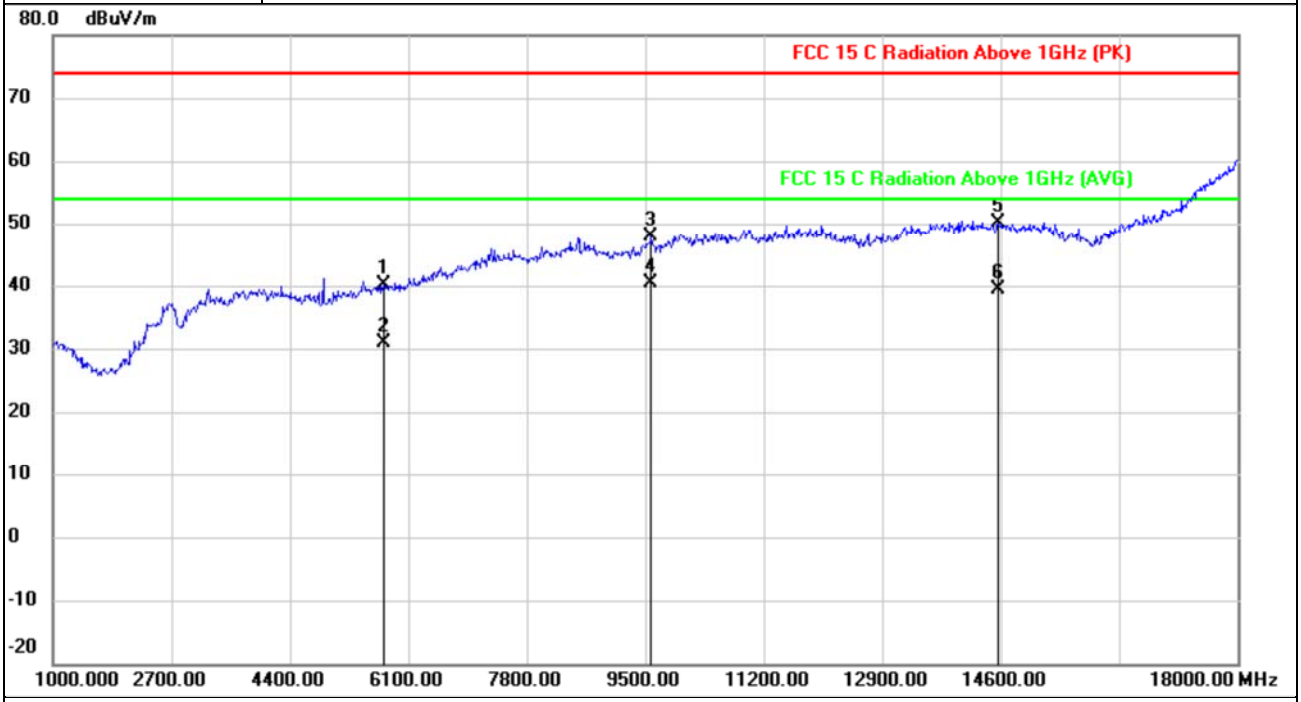


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1		4094.000	50.13	-10.08	40.05	74.00	-33.95	peak
2		4094.000	41.18	-10.08	31.10	54.00	-22.90	AVG
3		8684.000	45.11	1.41	46.52	74.00	-27.48	peak
4		8684.000	33.89	1.41	35.30	54.00	-18.70	AVG
5		14362.000	45.31	5.58	50.89	74.00	-23.11	peak
6	*	14362.000	33.82	5.58	39.40	54.00	-14.60	AVG

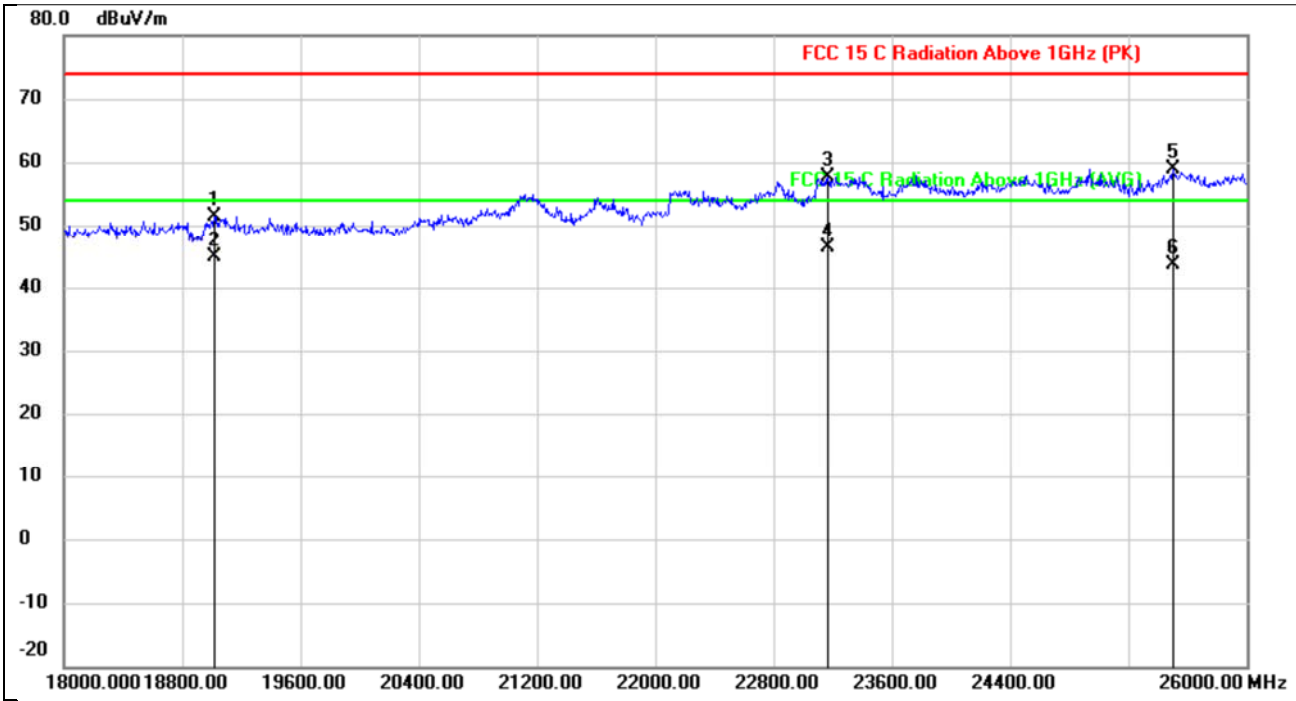


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1		19096.000	33.75	19.11	52.86	74.00	-21.14	peak
2		19096.000	21.29	19.11	40.40	54.00	-13.60	AVG
3		21952.000	37.01	19.21	56.22	74.00	-17.78	peak
4		21952.000	21.59	19.21	40.80	54.00	-13.20	AVG
5		24592.000	34.84	19.76	54.60	74.00	-19.40	peak
6	*	24592.000	21.54	19.76	41.30	54.00	-12.70	AVG

EUT:	Ryan's Mystery Mission Case - Communicator Watches	Model name:	717
Pressure:	1010hPa	Polarization:	V
Test voltage :	DC 4.5V from battery	Test mode:	TX
Test channel:	2443MHz		

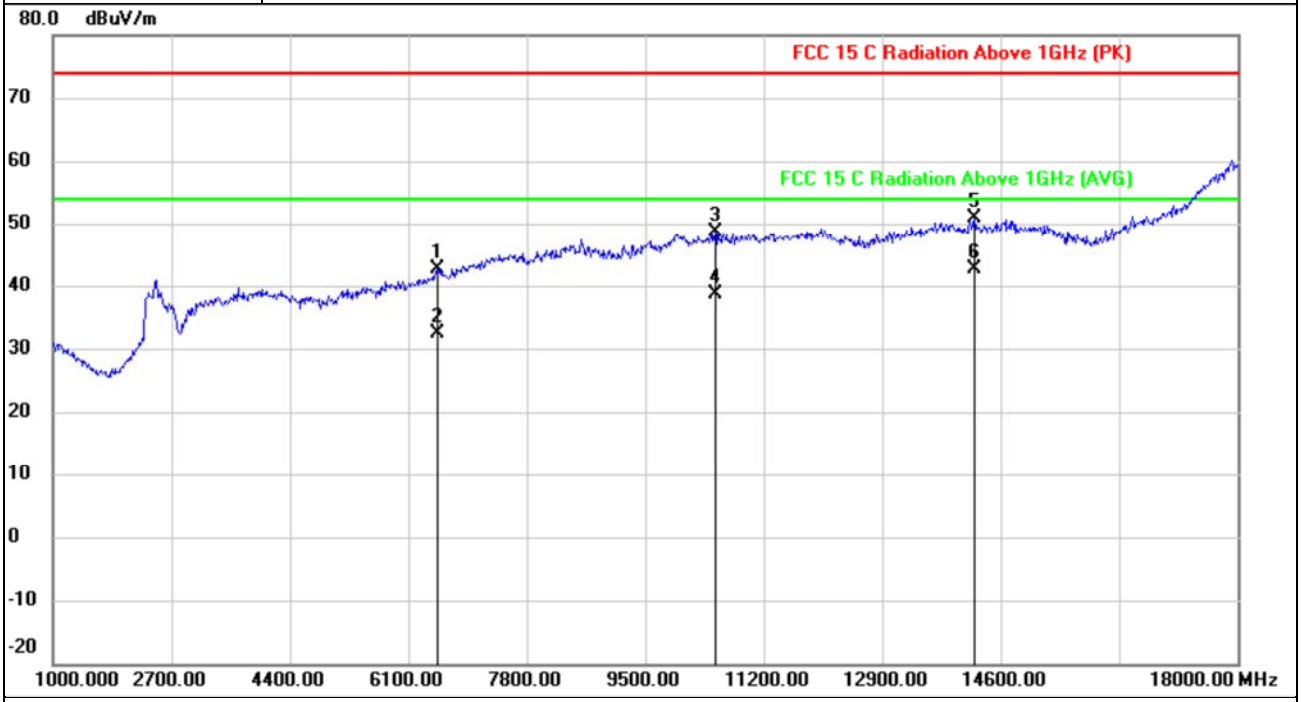


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1		5743.000	45.36	-5.31	40.05	74.00	-33.95	peak
2		5743.000	36.11	-5.31	30.80	54.00	-23.20	AVG
3		9585.000	45.58	2.31	47.89	74.00	-26.11	peak
4	*	9585.000	37.99	2.31	40.30	54.00	-13.70	AVG
5		14566.000	44.63	5.58	50.21	74.00	-23.79	peak
6		14566.000	33.92	5.58	39.50	54.00	-14.50	AVG

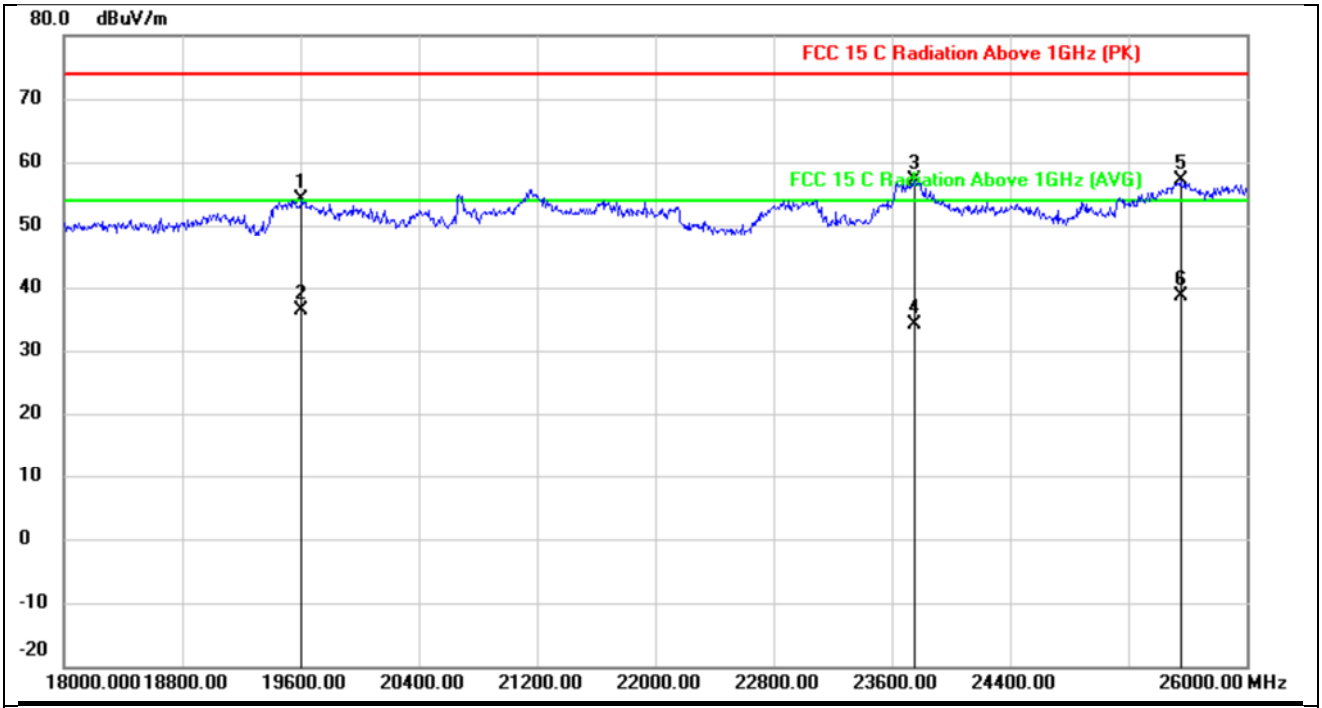


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1		19016.000	32.35	19.13	51.48	74.00	-22.52	peak
2		19016.000	25.77	19.13	44.90	54.00	-9.10	AVG
3		23168.000	38.13	19.46	57.59	74.00	-16.41	peak
4	*	23168.000	27.04	19.46	46.50	54.00	-7.50	AVG
5		25504.000	39.33	19.50	58.83	74.00	-15.17	peak
6		25504.000	24.10	19.50	43.60	54.00	-10.40	AVG

EUT:	Ryan's Mystery Mission Case - Communicator Watches	Model name:	717
Pressure:	1010hPa	Polarization:	H
Test voltage :	DC 4.5V from battery	Test mode:	TX
Test channel:	2477MHz		

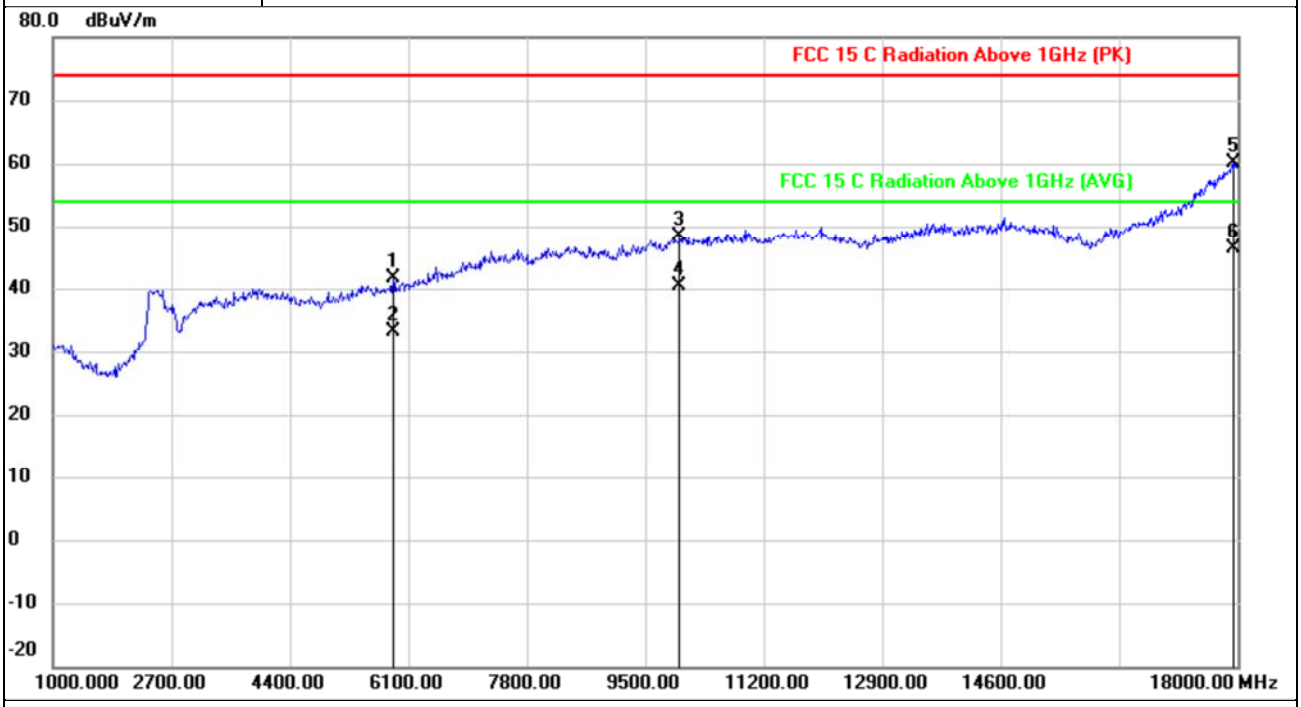


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1		6508.000	45.30	-2.79	42.51	74.00	-31.49	peak
2		6508.000	35.19	-2.79	32.40	54.00	-21.60	AVG
3		10503.000	44.65	3.95	48.60	74.00	-25.40	peak
4		10503.000	34.65	3.95	38.60	54.00	-15.40	AVG
5		14226.000	45.40	5.58	50.98	74.00	-23.02	peak
6	*	14226.000	37.12	5.58	42.70	54.00	-11.30	AVG

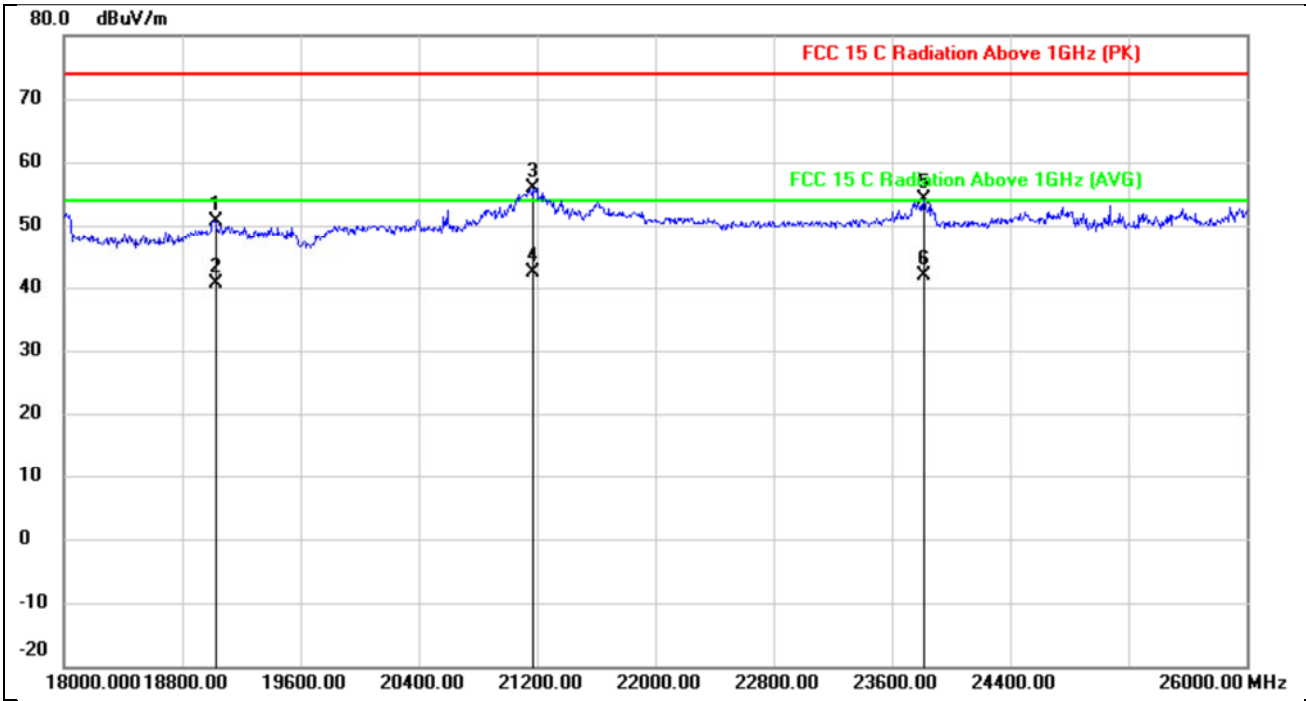


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1		19608.000	35.14	18.94	54.08	74.00	-19.92	peak
2		19608.000	17.46	18.94	36.40	54.00	-17.60	AVG
3		23752.000	37.49	19.58	57.07	74.00	-16.93	peak
4		23752.000	14.62	19.58	34.20	54.00	-19.80	AVG
5		25552.000	37.56	19.47	57.03	74.00	-16.97	peak
6	*	25552.000	19.23	19.47	38.70	54.00	-15.30	AVG

EUT:	Ryan's Mystery Mission Case - Communicator Watches	Model name:	717
Pressure:	1010hPa	Polarization:	V
Test voltage :	DC 4.5V from battery	Test mode:	TX
Test channel:	2477MHz		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1		5879.000	46.85	-5.22	41.63	74.00	-32.37	peak
2		5879.000	38.42	-5.22	33.20	54.00	-20.80	AVG
3		9993.000	45.84	2.53	48.37	74.00	-25.63	peak
4		9993.000	37.77	2.53	40.30	54.00	-13.70	AVG
5		17932.000	46.44	13.61	60.05	74.00	-13.95	peak
6	*	17932.000	32.89	13.61	46.50	54.00	-7.50	AVG



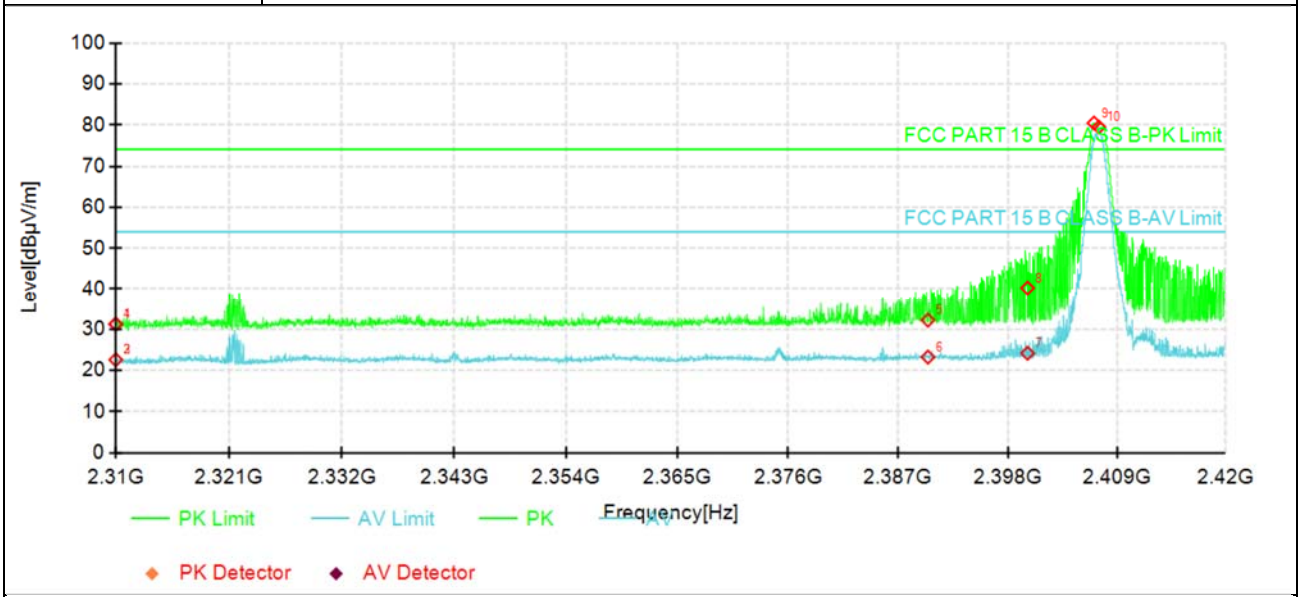
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	Detector
1		19024.000	31.58	19.13	50.71	74.00	-23.29	peak
2		19024.000	21.57	19.13	40.70	54.00	-13.30	AVG
3		21176.000	36.78	19.05	55.83	74.00	-18.17	peak
4	*	21176.000	23.25	19.05	42.30	54.00	-11.70	AVG
5		23816.000	34.41	19.60	54.01	74.00	-19.99	peak
6		23816.000	22.30	19.60	41.90	54.00	-12.10	AVG

5.5.4 Band edge-radiated

Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
(2)Emission Level= Antenna Factor + Cable Loss + Read Level - Preamp Factor
(3) All other emissions more than 20dB below the limit.

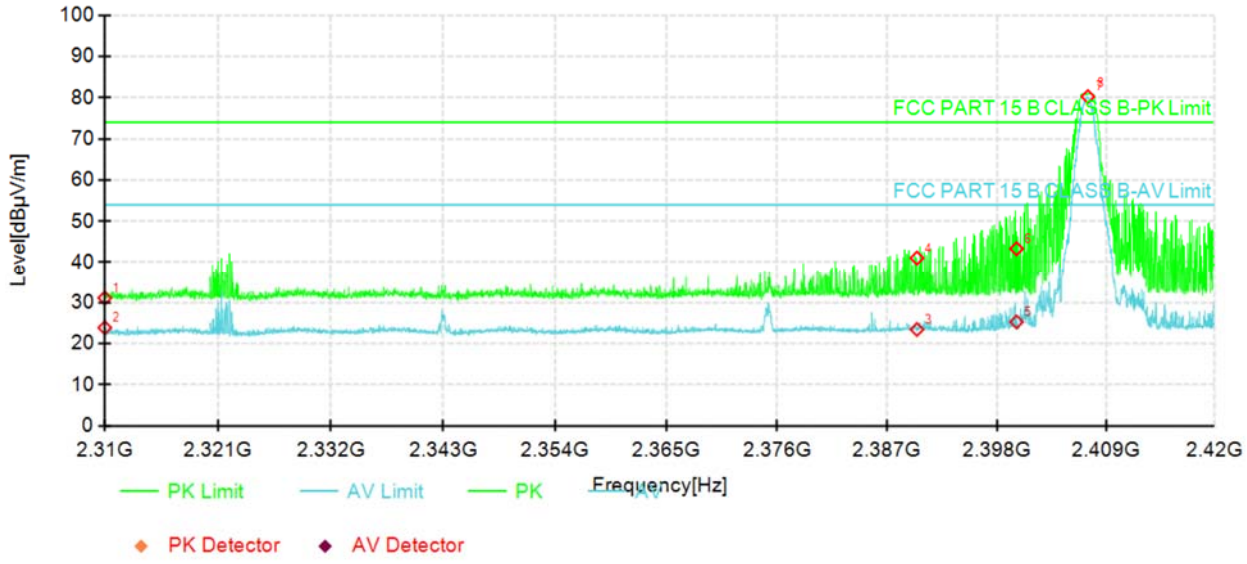
All the modulation modes have been tested, and the worst result was report as below:

EUT:	Ryan's Mystery Mission Case - Communicator Watches	Model name:	717
Pressure:	1010hPa	Polarization:	H
Test voltage :	DC 4.5V from battery	Test mode:	TX
Test channel:	2407MHz		



Suspected Data List

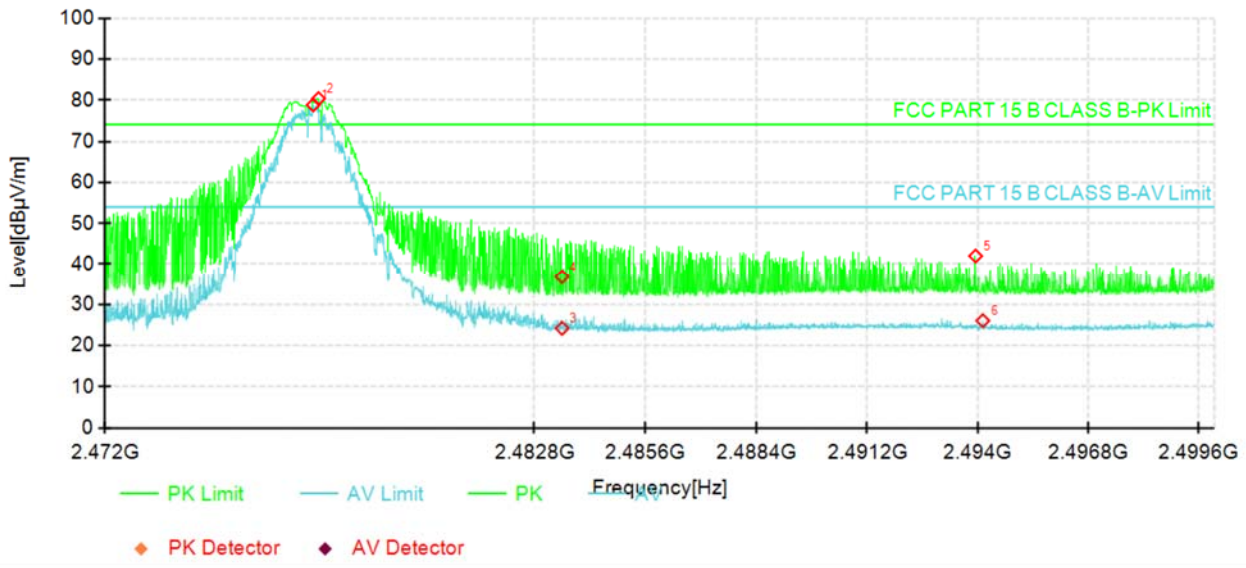
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle [°]	Polarity
1	2310.0000	31.23	-12.03	74.00	42.77	PK	150	74	Horizo
2	2310.0000	22.57	-12.03	54.00	31.43	AV	150	1	Horizo
3	2310.0000	22.57	-12.03	54.00	31.43	AV	150	1	Horizo
4	2310.0000	31.23	-12.03	74.00	42.77	PK	150	74	Horizo
5	2390.0000	32.20	-11.86	74.00	41.80	PK	150	223	Horizo
6	2390.0000	23.23	-11.86	54.00	30.77	AV	150	183	Horizo
7	2400.0000	24.16	-11.84	54.00	29.84	AV	150	143	Horizo
8	2400.0000	40.23	-11.84	74.00	33.77	PK	150	143	Horizo
9	2406.6900	80.45	-11.81	74.00	-6.45	PK	150	23	Horizo
10	2407.1850	79.46	-11.81	54.00	-25.46	AV	150	34	Horizo



Suspected Data List

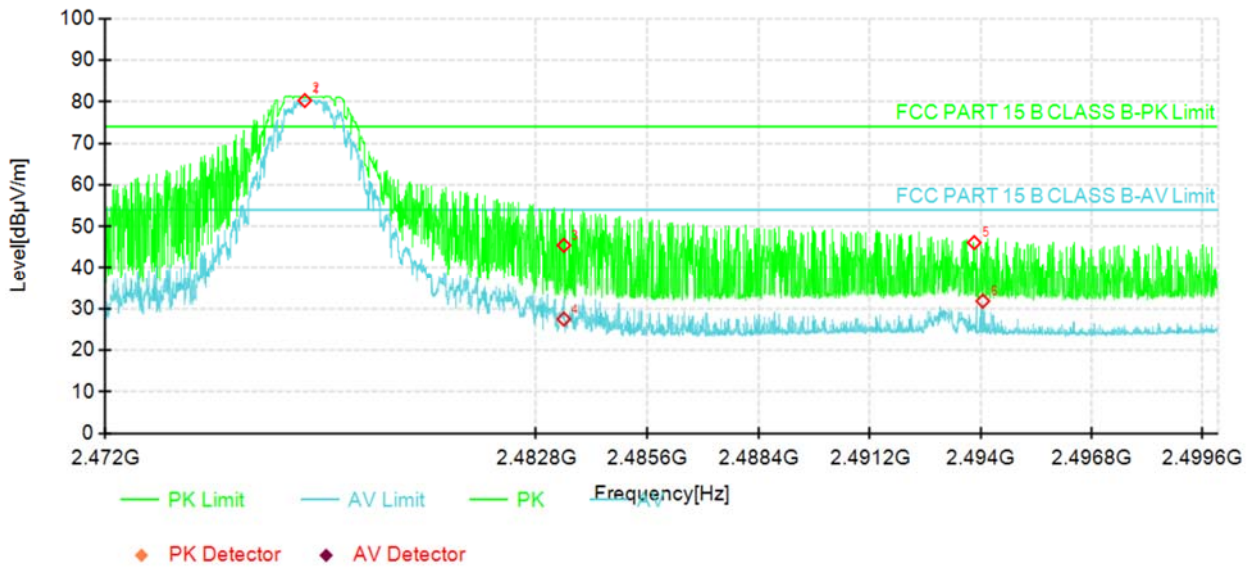
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle [°]	Polarity
1	2310.0000	31.13	-12.03	74.00	42.87	PK	150	247	Vertica
2	2310.0000	23.87	-12.03	54.00	30.13	AV	150	48	Vertica
3	2390.0000	23.45	-11.86	54.00	30.55	AV	150	28	Vertica
4	2390.0000	41.05	-11.86	74.00	32.95	PK	150	316	Vertica
5	2400.0000	25.29	-11.84	54.00	28.71	AV	150	38	Vertica
6	2400.0000	43.32	-11.84	74.00	30.68	PK	150	38	Vertica
7	2407.1850	80.24	-11.81	54.00	-26.24	AV	150	275	Vertica
8	2407.3500	81.05	-11.81	74.00	-7.05	PK	150	275	Vertica

EUT:	Ryan's Mystery Mission Case - Communicator Watches	Model name:	717
Pressure:	1010hPa	Polarization:	V
Test voltage :	DC 4.5V from battery	Test mode:	TX
Test channel:	2477MHz		



Suspected Data List

NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle [°]	Polarity
1	2477.2360	78.79	-11.52	54.00	-24.79	AV	150	90	Horizo
2	2477.3690	80.35	-11.52	74.00	-6.35	PK	150	100	Horizo
3	2483.5000	24.18	-11.49	54.00	29.82	AV	150	38	Horizo
4	2483.5000	36.79	-11.49	74.00	37.21	PK	150	8	Horizo
5	2493.9450	42.01	-11.45	74.00	31.99	PK	150	100	Horizo
6	2494.1270	26.04	-11.44	54.00	27.96	AV	150	79	Horizo

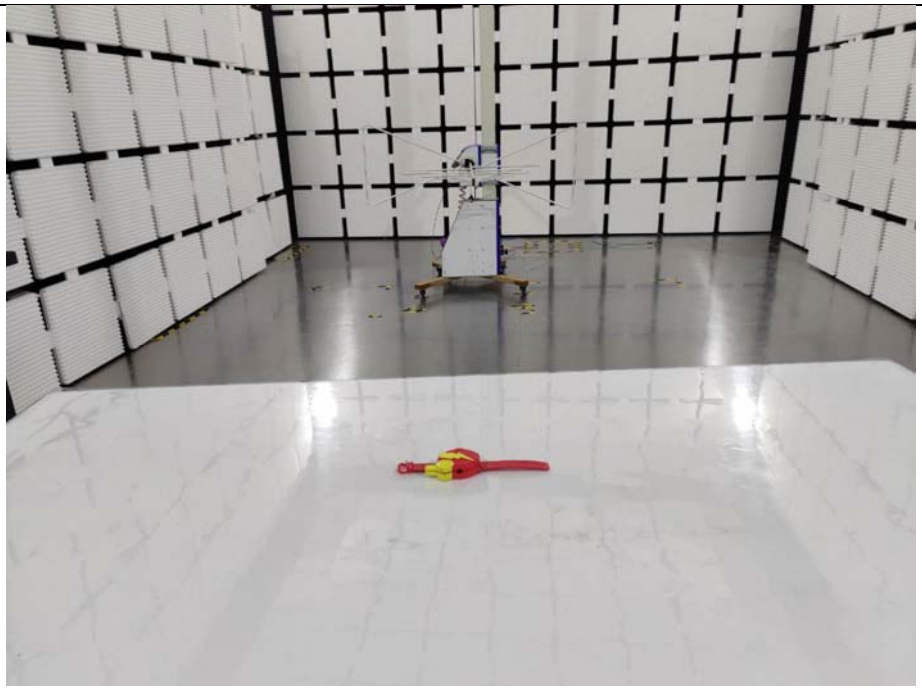


Suspected Data List

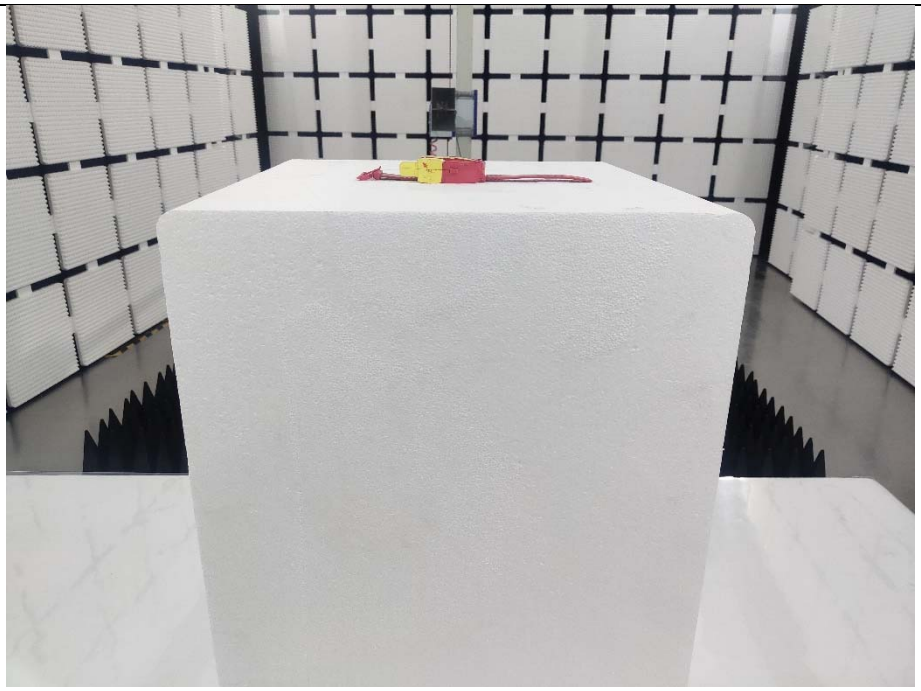
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle [°]	Polarity
1	2477.0000	80.27	-11.52	54.00	-26.27	AV	150	313	Vertica
2	2477.0000	80.90	-11.52	74.00	-6.90	PK	150	313	Vertica
3	2483.5000	45.45	-11.49	74.00	28.55	PK	150	6	Vertica
4	2483.5000	27.48	-11.49	54.00	26.52	AV	150	303	Vertica
5	2493.8330	46.11	-11.45	74.00	27.89	PK	150	283	Vertica
6	2494.0500	31.81	-11.44	54.00	22.19	AV	150	293	Vertica

Photographs of the Test Setup

Radiated emission – below 1GHz



Radiated emission – above 1GHz



Photographs of the EUT

See the APPENDIX 1: EUT PHOTO in the report No.: MTi20050813-4E1-1.

----END OF REPORT----