Report No.:DDT-R21110417-2E02

Issued Date: Apr. 18, 2022

FCC CERTIFICATION TEST REPORT

FOR

Applicant	:	American Future Technology Corporation
Address	:	529 N Baldwin Park Blvd, City of Industry, California 91746, United States
Equipment under Test	:	Transceiver
Model No.	:	HYTE eclipse HG10
Trade Mark	:	HYTE
FCC ID	:	2A6BRHG10TX
Manufacturer	:	Wanstonic Electronics (DongGuan) CO., LTD
Address	:	Tung Fu Rd. West, Shi Jie Town, Dongguan City, Guangdong, China 523290

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808

Tel.: +86-0769-38826678, **E-mail:** ddt@dgddt.com, http://www.dgddt.com

REPORT

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Test Report Declare

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Trade Mark	:	HYTE
Manufacturer	:	Wanstonic Electronics (DongGuan) CO., LTD
Address	:	Tung Fu Rd. West, Shi Jie Town, Dongguan City, Guangdong, China 523290

Test Standard Used:

FCC Rules and Regulations Part 15 Subpart C

Test Procedure Used:

ANSI C63.10:2013

We Declare:

The equipment described above is tested by Dongguan Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Dongguan Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC standards.

Report No.:	DDT-R21110417-2E02		
Date of Receipt:	Jan. 11, 2022	**Date of Test:**	Jan. 11, 2022 ~ Apr. 18, 2022

Prepared By: ***Approved By:***

Ella Gong

Ella Gong/Engineer ***Damon Hu/EMC Manager***

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Apr. 18, 2022	

1. Summary of Test Results

The EUT have been tested according to the applicable standards as referenced below.		
Description of Test Item	**Standard**	**Verdict**
6 dB Bandwidth	FCC Part 15: 15.247 ANSI C63.10:2013	Pass
Peak Output Power	FCC Part 15: 15.247 ANSI C63.10:2013	Pass
Power Spectral Density	FCC Part 15:15.247 ANSI C63.10:2013	Pass
Band Edge Compliance (conducted method)	FCC Part 15: 15.209 FCC Part 15: 15.247 ANSI C63.10: 2013	Pass
Radiation Emission	FCC Part 15: 15.247 ANSI C63.10:2013	Pass
RF Conducted Spurious Emissions	FCC Part 15: 15.209 FCC Part 15: 15.247 ANSI C63.10: 2013	Pass
Emission in Restricted Frequency Bands	FCC Part 15: 15.209 FCC Part 15: 15.247 ANSI C63.10: 2013	Pass
Power Line Conducted Emission	FCC Part 15: 15.207 ANSI C63.10: 2013	Pass
Antenna Requirement	FCC Part 15: 15.203	Pass

2. General Test Information

2.1. Description of EUT

EUT* Name	:	Transceiver
Model Number	:	HYTE eclipse HG10
EUT Function Description	:	Please reference user manual of this device
Power Supply	:	DC 5V from PC
Radio Specification	:	2.4GHz SRD
Operation Frequency	:	2403 MHz - 2477 MHz
Modulation	:	FSK
Data Rate	:	2 Mbps
Antenna Gain	:	Integral PCB Antenna: Maximum PK gain: 2.4 dBi
Sample Type	:	Series production
Series Number	:	S21111719-02 for conductive S21111719-04 for radiation

Note: EUT is the ab. of equipment under test.

Channel information					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2403	25	2428	50	2453
1	2404	26	2429	51	2454
2	2405	27	2430	52	2455
3	2406	28	2431	53	2456
4	2407	29	2432	54	2457
5	2408	30	2433	55	2458
6	2409	31	2434	56	2459
7	2410	32	2435	57	2460
8	2411	33	2436	58	2461
9	2412	34	2437	59	2462
10	2413	35	2438	60	2463
11	2414	36	2439	61	2464
12	2415	37	2440	62	2465
13	2416	38	2441	63	2466
14	2417	39	2442	64	2467
15	2418	40	2443	65	2468
16	2419	41	2444	66	2469
17	2420	42	2445	67	2470
18	2421	43	2446	68	2471
19	2422	44	2447	69	2472
20	2423	45	2448	70	2473
21	2424	46	2449	71	2474
22	2425	47	2450	72	2475
23	2426	48	2451	73	2476
24	2427	49	2452	74	2477

2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Description	Other
MIC	Wanstonic Electronics (DongGuan) CO., LTD	N/A	N/A	N/A
Gaming Headset	Wanstonic Electronics (DongGuan) CO., LTD	N/A	N/A	N/A

2.3. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	EMC Compliance	SN
N/A	N/A	N/A	N/A	N/A

2.4. Block diagram of EUT configuration for test

EUT

Test software: RF_TEST_V33.exe
The test software was used to control EUT work in Continuous Tx mode, and select test channel, wireless mode as below table:

Tested mode, channel, information			
Mode	Setting Tx Power	Channel	Frequency (MHz)
2.4GHz SRD	0	CH0	2403
	0	CH41	2444
	0	CH74	2477

2.5. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25 ℃
Humidity range:	40-75%
Pressure range:	86-106 kPa

2.6. Deviations of test standard

No deviation.

2.7. Test laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808.

Tel.: +86-0769-38826678, http://www.dgddt.com, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, G-20118

2.8. Measurement uncertainty

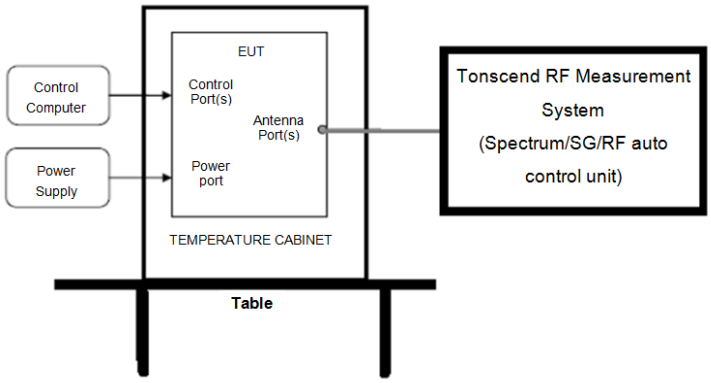
Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Frequencies Stability	6.7 x 10^{-8} (Antenna couple method)
	5.5 x 10^{-8} (Conducted method)
Conducted spurious emissions	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.40 dB (3.6 GHz ≤ f < 8 GHz)
	1.66 dB (8 GHz ≤ f < 22 GHz)
Uncertainty for radio frequency (RBW < 20 kHz)	3×10^{-8}
Temperature	0.4 ℃
Humidity	2 %
Uncertainty for Radiation Emission test (30 MHz - 1 GHz)	4.70 dB (Antenna Polarize: V)
	4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1 GHz - 40 GHz)	4.10 dB (1 - 6 GHz)
	4.40 dB (6 GHz - 18 GHz)
	3.54 dB (18 GHz - 26 GHz)
	4.30 dB (26 GHz - 40 GHz)
Uncertainty for Power line conduction emission test	3.32 dB (150 kHz - 30 MHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

3. Equipment Used During Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒RF Connected Test (Tonscend RF Measurement System 3#)					
Signal analyzer	R&S	FSQ26	101272	Jun. 01, 2021	1 Year
Wideband Radio Communication tester	R&S	CMW500	117491	Jun. 01, 2021	1 Year
Vector Signal Generator	Agilent	N5182A	MY19060405	Jun. 01, 2021	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180912	Jun. 01, 2021	1 Year
RF Control Unit	Tonsend	JS0806-2	DDT-ZC01449	Jun. 01, 2021	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-150L	ZX170110-A	Jun. 01, 2021	1 Year
Test Software	JS Tonscend	JS1120-3	Ver.2.6.77.0518	N/A	N/A
☒Radiation 3#chamber					
EMI Test Receiver	R&S	ESU	100472	Jun. 01, 2021	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	Jun. 01, 2021	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Sep. 19, 2021	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	01429	Aug. 07, 2021	1 Year
Double Ridged Horn Antenna	Schwarzbeck	BBHA9120	02108	Jul. 17, 2021	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	May 08, 2021	1 Year
Pre-amplifier	COM-POWER	PAM-118A	18040084	Sep. 02, 2021	1 Year
Pre-amplifier	COM-POWER	PAM-840A	461369	Mar. 15, 2022	1 Year
Test software	Audix	E3	V 6.1.1.1	N/A	N/A
☒Power Line Conducted Emissions Test 1#					
Test Receiver	R&S	ESCI	100551	Sep. 02, 2021	1 Year
LISN 1	R&S	ENV216	101109	Sep. 02, 2021	1 Year
LISN 2	R&S	ESH2-Z5	100309	Sep. 02, 2021	1 Year
Pulse Limiter	R&S	ESH3-Z2	101242	Sep. 02, 2021	1 Year
CE Cable 1	HUBSER	N/A	W10.01	Sep. 02, 2021	1 Year
LISN 3	SCHWARZBECK	NSLK 8163	00017	Sep. 02, 2021	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A

4. 6 dB Bandwidth

4.1. Block diagram of test setup



4.2. Limits

For direct sequence systems, the minimum 6 dB bandwidth shall be at least 500 kHz

4.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) 6 dB Bandwidth set the spectrum analyzer as follows:

RBW:	100 kHz
VBW:	300 kHz
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

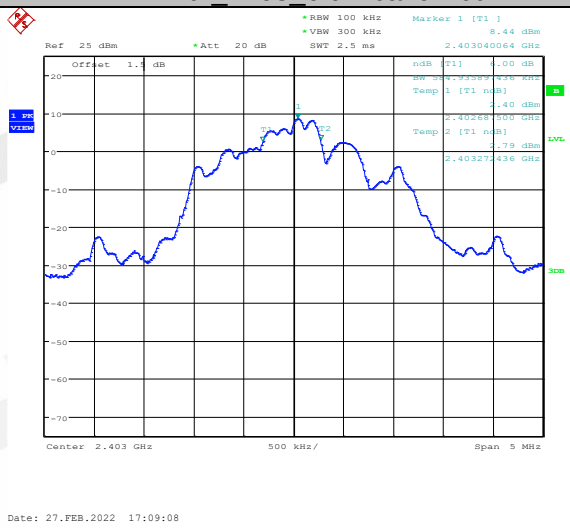
(3) Allow the trace to stabilize, measure the 6 dB bandwidth of signal.

4.4. Test result

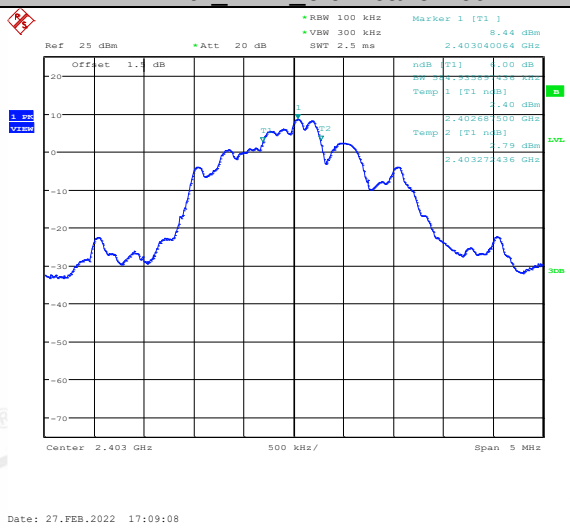
Mode	Channel	6 dB bandwidth Result (MHz)	6 dB width Limit (MHz)	Verdict
2.4GHz SRD	2403	0.585	>0.5	Pass
	2444	0.585	>0.5	Pass
	2477	0.617	>0.5	Pass

4.5. Original test data

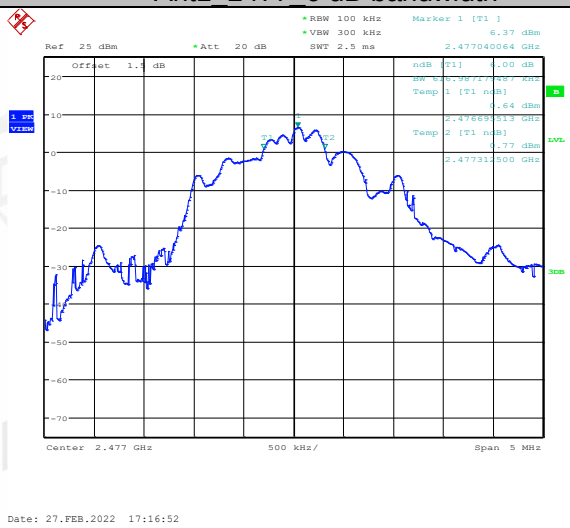
Ant1_2403_6 dB bandwidth



Ant1_2444_6 dB bandwidth



Ant1_2477_6 dB bandwidth



5. Maximum Peak Output Power

5.1. Block diagram of test setup

Same with 4.1

5.2. Limits

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. If transmitting antennas of directional gain greater than 6dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi, the e.i.r.p shall not exceed 4W.

5.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Set the spectrum analyzer as follows:

RBW:	≥DTS bandwidth
VBW:	≥3 x RBW
Span	≥3 x RBW
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges measure out the conducted output power.

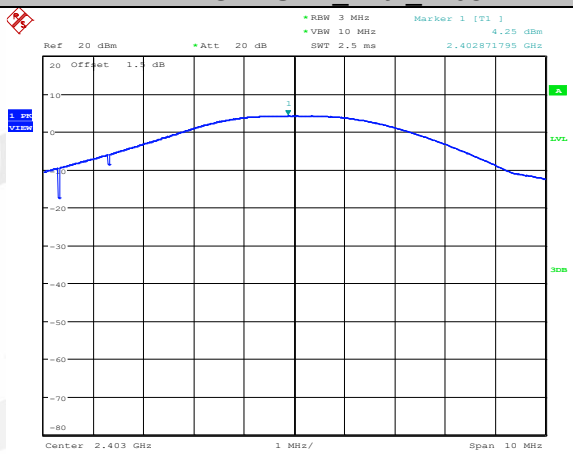
5.3.1. Test result

Mode	Freq. (MHz)	Conducted Output Power (dBm)	Limit (dBm)	Verdict
2.4GHz SRD	2403	4.25	30	Pass
	2444	5.14	30	Pass
	2477	3.63	30	Pass

Mode	Freq. (MHz)	EIRP (dBm)	Limit (dBm)	Verdict
2.4GHz SRD	2403	6.65	36	Pass
	2444	7.54	36	Pass
	2477	6.03	36	Pass
Note: EIRP (dBm)=Conducted Output Power (dBm)+ Antenna Gain (dBi)				

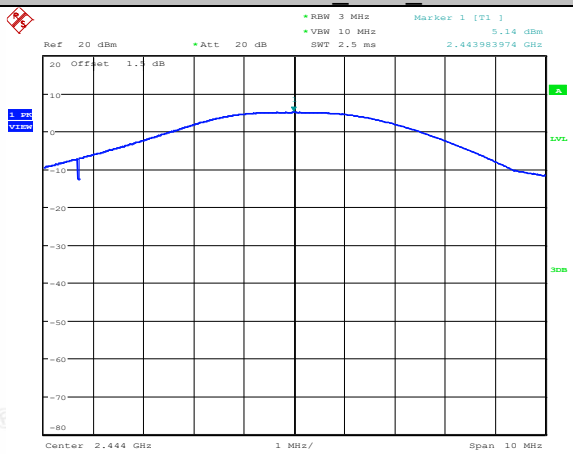
5.4. Original test data

2.4GHz SRD_Ant1_2403



Date: 6.APR.2022 14:53:13

2.4GHz SRD_Ant1_2444



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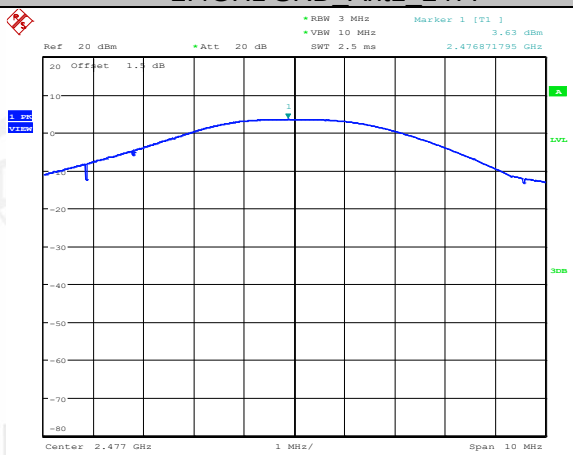
2.4GHz SRD_Ant1_2477



Date: 6.APR.2022 14:58:04

6. Power Spectral Density

6.1. Block diagram of test setup

Same with 4.1

6.2. Limits

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

6.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Set the spectrum analyzer as follows:

Center frequency	DTS Channel center frequency
RBW:	3 kHz ≤ RBW ≤ 100 kHz
VBW:	≥ 3RBW
Span	1.5 times the DTS bandwidth
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.

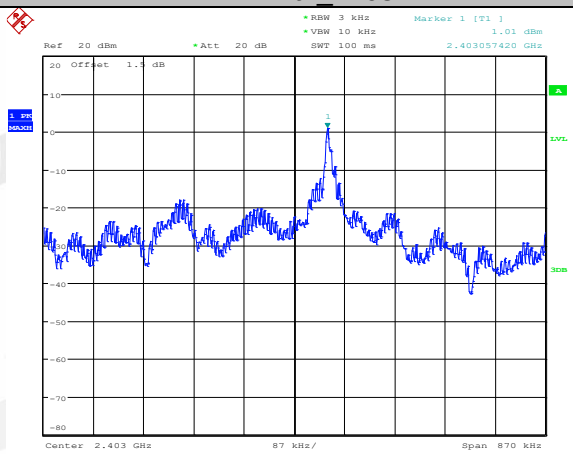
(4) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

6.4. Test result

EUT Set Mode	Antenna	Channel	Result (dBm/3 kHz)
2.4GHz SRD	ANT1	2403	1.01
	ANT1	2444	1.97
	ANT1	2477	0.28
Limit: <8 dBm/3 kHz			Verdict: Pass

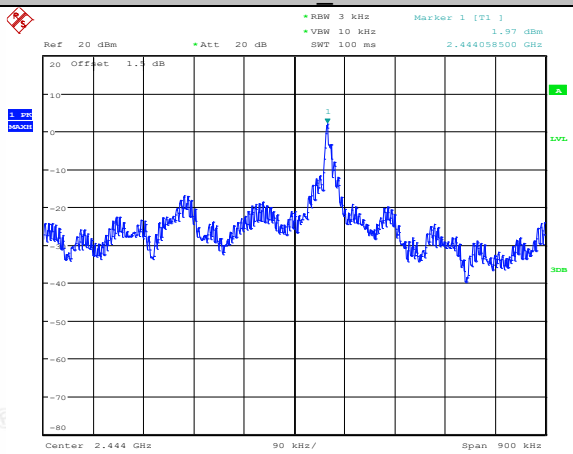
6.5. Original test data

Ant1_2403



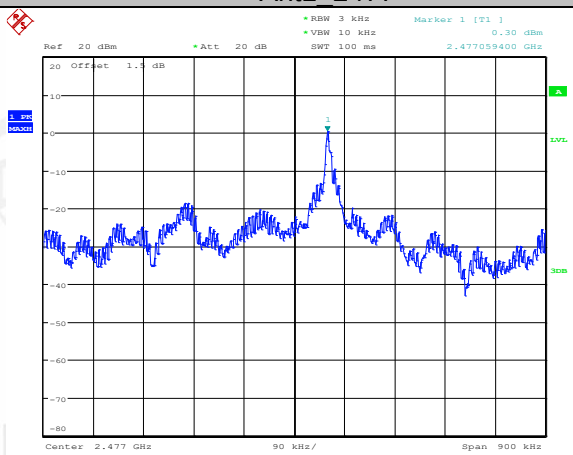
Date: 6.APR.2022 15:08:47

Ant1_2444



Date: 6.APR.2022 15:09:26

Ant1_2477



Date: 6.APR.2022 15:10:16

7. Band Edge Compliance (Conducted Method)

7.1. Block diagram of test setup

Same with 4.1

7.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

7.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

Center frequency	DTS Channel center frequency
RBW:	100 kHz
VBW:	300 kHz
Span	1.5 times the DTS bandwidth
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

(4) Set the spectrum analyzer as follows:

RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Number of measurement points	≥ span/RBW
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

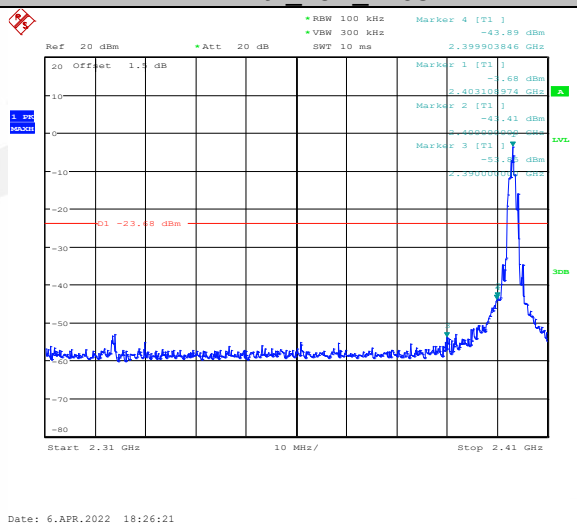
(5) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

7.4. Test result

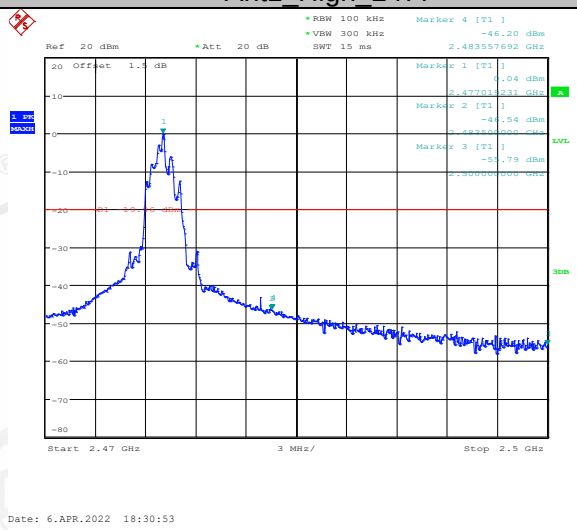
EUT Set Mode	CH or Frequency	Measured Range	Verdict
2.4GHz SRD	CH0	2.310 GHz - 2.410 GHz	Pass
	CH74	2.470 GHz - 2.570 GHz	Pass

7.5. Original test data

Ant1_Low_2403



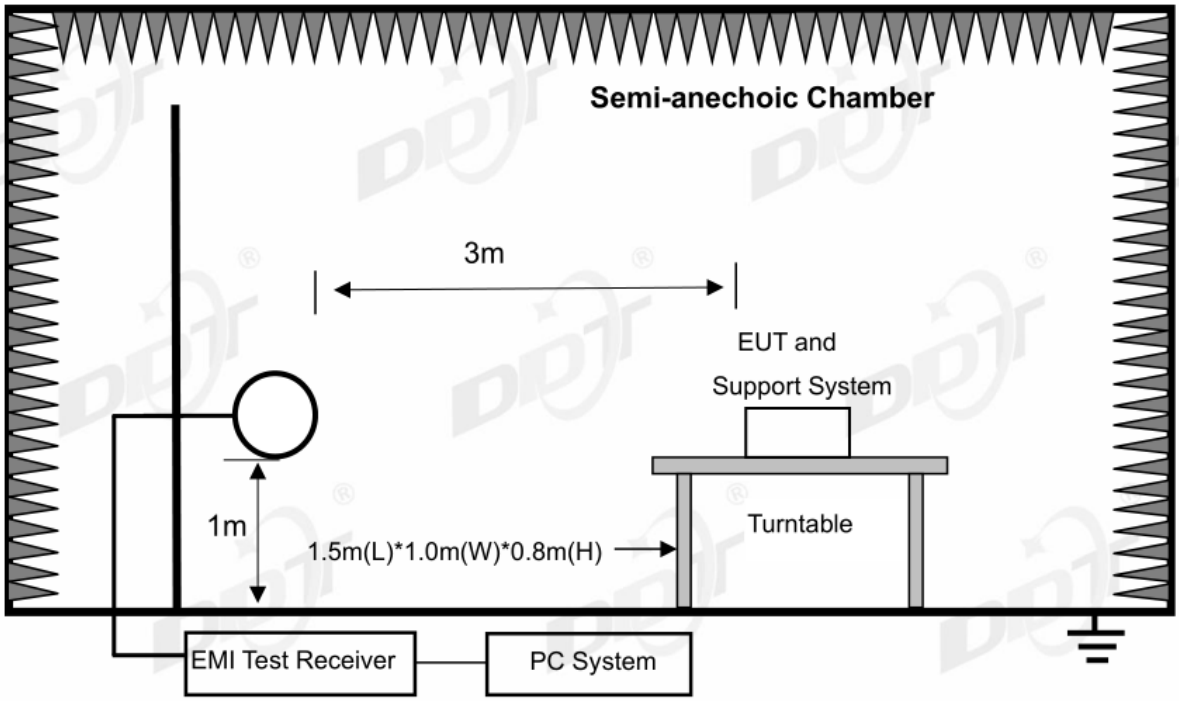
Ant1_High_2477



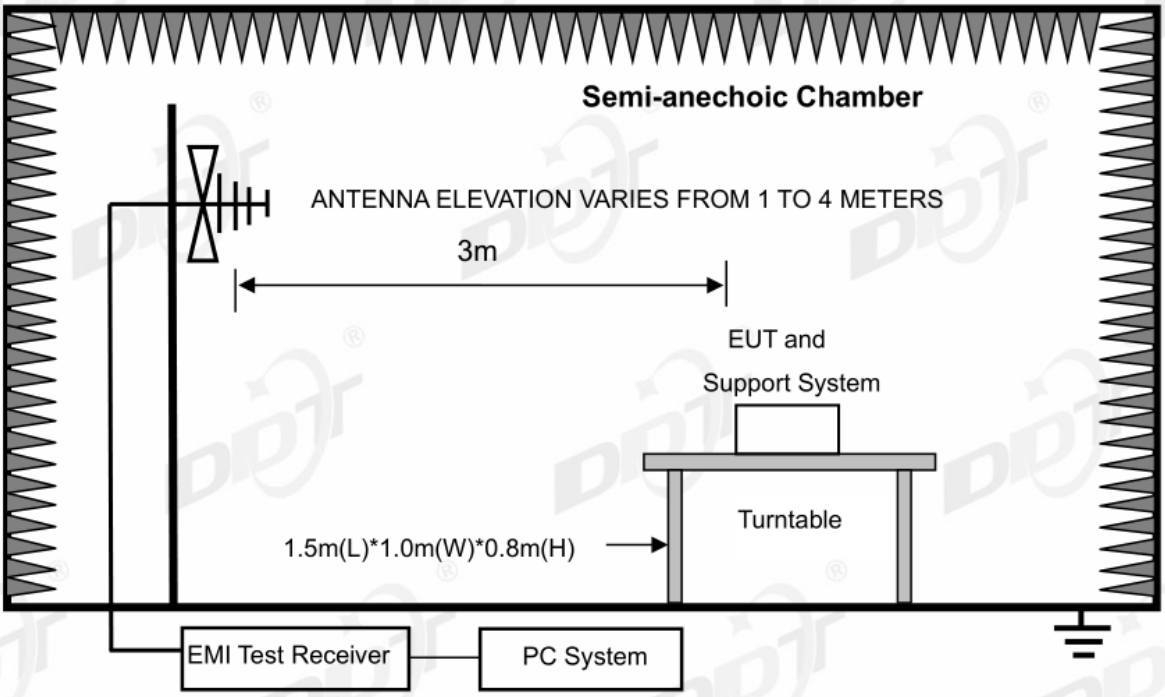
8. Radiated Emission

8.1. Block diagram of test setup

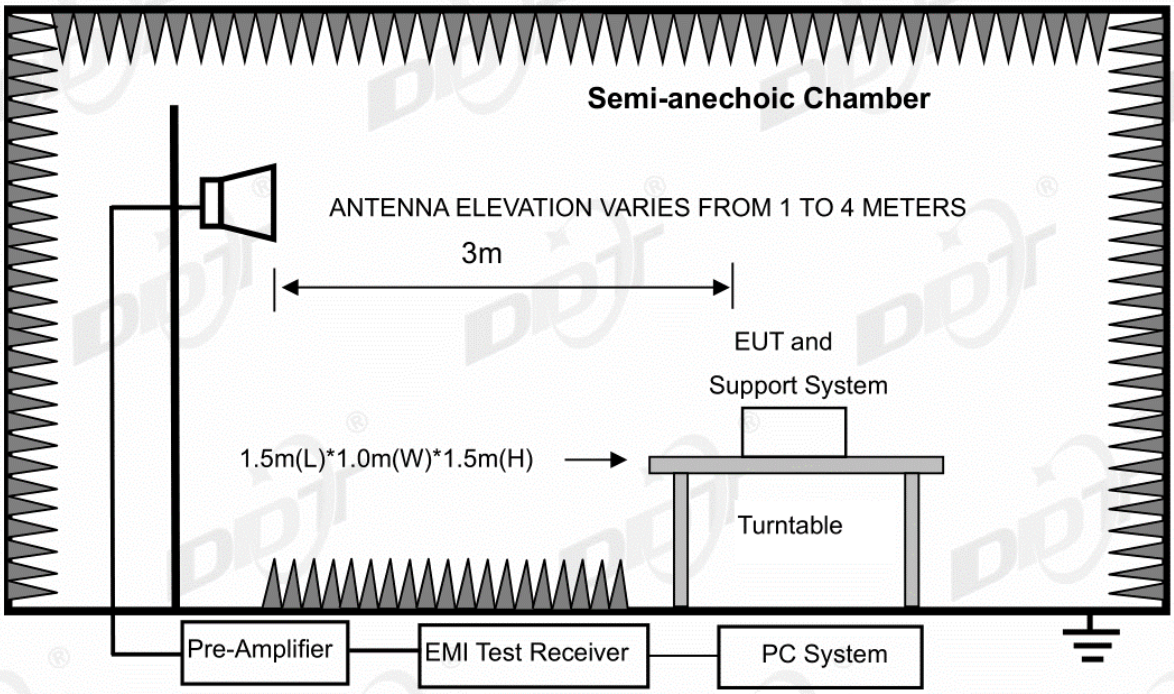
In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



In 3 m Anechoic Chamber, test setup diagram for 30 MHz - 1 GHz:



In 3 m Anechoic Chamber, test setup diagram for frequency above 1 GHz:



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

8.2. Limit

(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2]Above 38.6

(2) FCC 15.209 Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Note: (1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30 MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$Limit_{3m}(dBuV/m) = Limit_{30m}(dBuV/m) + 40Log(30m/3m)$$

(3) Limit for this EUT

The emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20 dB below the fundamental emissions or comply with 15.209 limits.

8.3. Test Procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber for below 1 G and 150 cm above the ground plane inside a semi-anechoic chamber for above 1 G.

(2) Test antenna was located 3 m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test antenna distance
9 kHz - 30 MHz	Active Loop antenna	3 m
30 MHz - 1 GHz	Trilog Broadband Antenna	3 m
1 GHz - 18 GHz	Double Ridged Horn Antenna (1 GHz - 18 GHz)	3 m
18 GHz - 40 GHz	Horn Antenna (18 GHz - 40 GHz)	1 m

According ANSI C63.10:2013 clause 6.4.4.2 and 6,5.3, for measurements below 30 MHz, the loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also

is positioned with its plane horizontal at the specified distance from the EUT. The center of the loop is 1 m above the ground. For measurement above 30 MHz, the Trilog Broadband Antenna or Horn Antenna was located 3 m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 25 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1 m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 25 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 9 kHz to 30 MHz and 18 GHz to 25 GHz, so below final test was performed with frequency range from 30 MHz to 18 GHz.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10:2013 on Radiated Emission test.

(5) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz, for emissions from 9 kHz - 90 kHz, 110 kHz - 490 kHz and above 1 GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW

Frequency band	RBW
9 kHz - 150 kHz	200 Hz
150 kHz - 30 MHz	9 kHz
30 MHz - 1 GHz	120 kHz

(7) For emissions above 1 GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz, VBW is set at 3 MHz for Peak measure; According ANSI C63.10:2013 clause 4.1.4.2.2 procedure for average measure.

(8) X axis, Y axis, Z axis are tested, and worse setup X axis is reported.

8.4. Test result

Pass. (See below detailed test result)

All the emissions except fundamental emission from 9 kHz to 25 GHz were comply with 15.209 limits.

Note1: According exploratory test, the emission levels are 20 dB below the limit detected from 9 kHz to 30 MHz and 18 GHz to 25 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

Note2: For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in FSK, Tx 2444 MHz mode.

Note3: For emissions above 1 GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit.

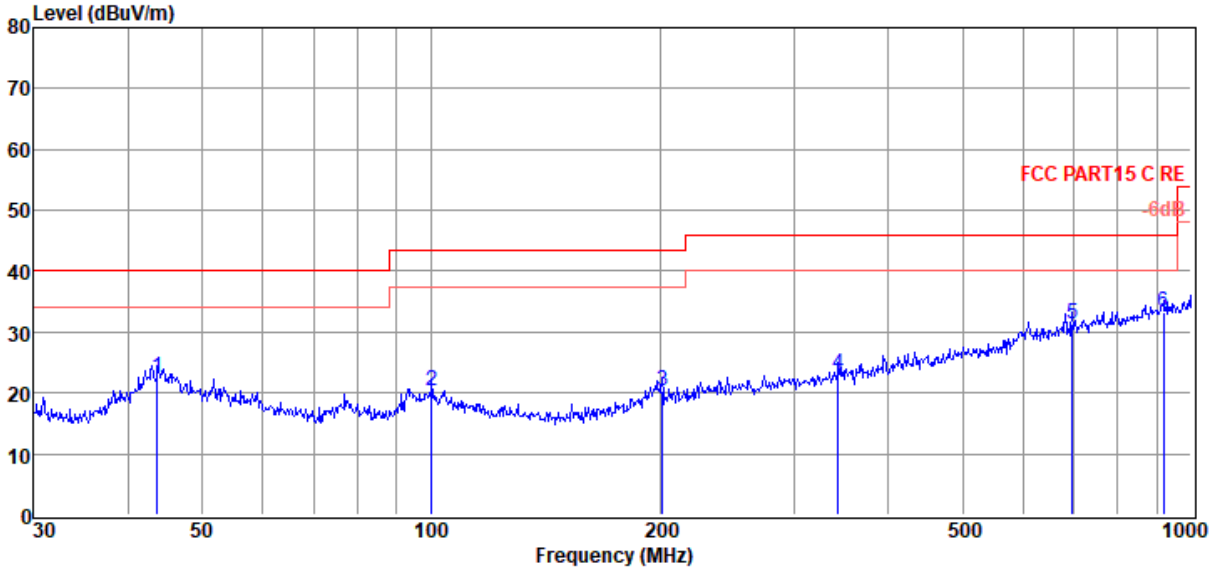
Radiated Emission test (below 1 GHz)

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC BELOW 1G DONGLE.EM6	
Test Date	: 2022-02-22	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 VLUB 9163 3#/3m/HORIZONTAL
Memo	:		

Data:

1



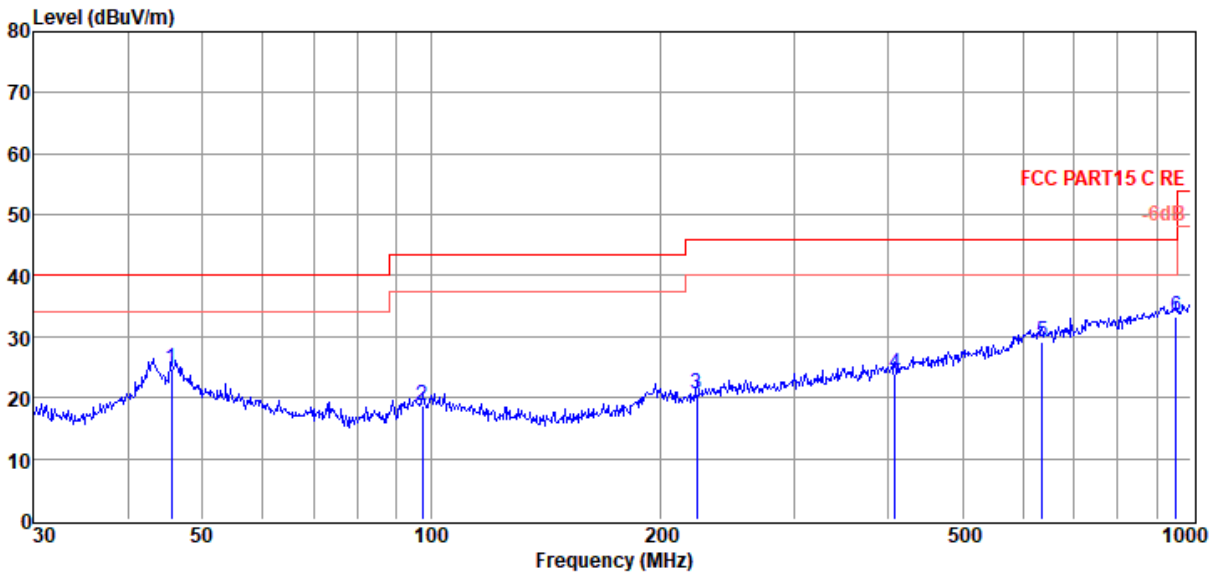
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	43.66	4.04	14.80	3.64	22.48	40.00	-17.52	QP	HORIZONTAL
2	100.23	4.78	11.52	3.98	20.28	43.50	-23.22	QP	HORIZONTAL
3	201.39	4.32	11.59	4.46	20.37	43.50	-23.13	QP	HORIZONTAL
4	343.18	3.42	14.63	4.97	23.02	46.00	-22.98	QP	HORIZONTAL
5	696.86	5.79	19.44	5.98	31.21	46.00	-14.79	QP	HORIZONTAL
6	919.29	4.24	22.40	6.52	33.16	46.00	-12.84	QP	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC BELOW 1G DONGLE.EM6	
Test Date	: 2022-02-22	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 VLUB 9163 3#/3m/VERTICAL
Memo	:		

Data:
2



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	45.54	6.13	14.83	3.65	24.61	40.00	-15.39	QP	VERTICAL
2	97.46	3.41	11.45	3.97	18.83	43.50	-24.67	QP	VERTICAL
3	223.73	4.44	11.70	4.55	20.69	46.00	-25.31	QP	VERTICAL
4	407.51	3.00	15.70	5.18	23.88	46.00	-22.12	QP	VERTICAL
5	636.13	4.47	18.92	5.83	29.22	46.00	-16.78	QP	VERTICAL
6	955.44	4.59	22.19	6.60	33.38	46.00	-12.62	QP	VERTICAL

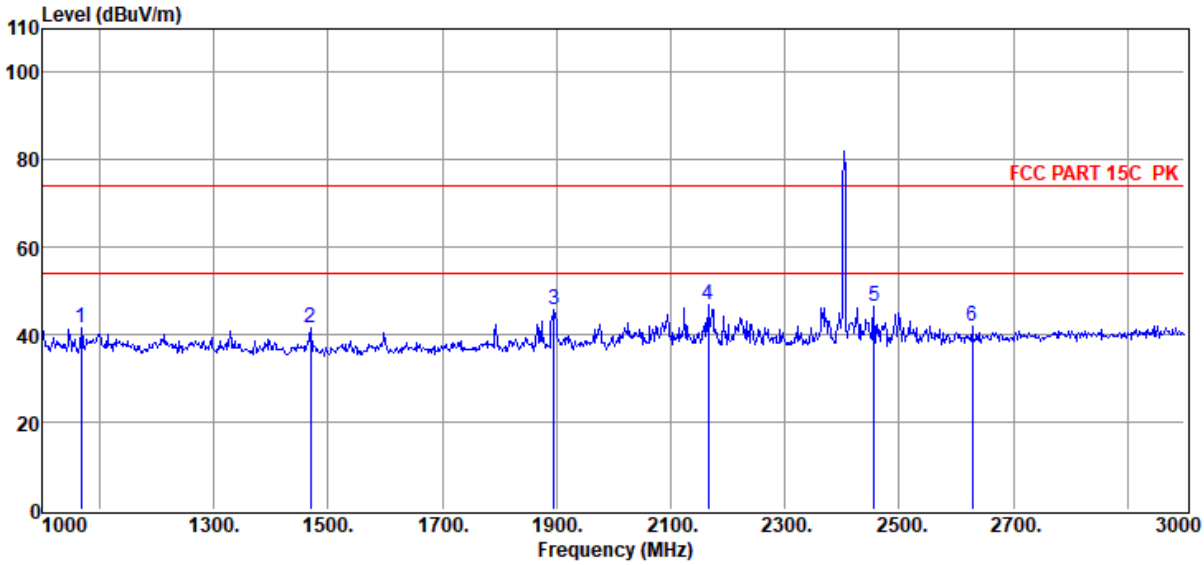
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Radiated Emission test (above 1 GHz)

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6	
Test Date	: 2022-03-28	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	: SRD 2403 power 0		

Data: 7



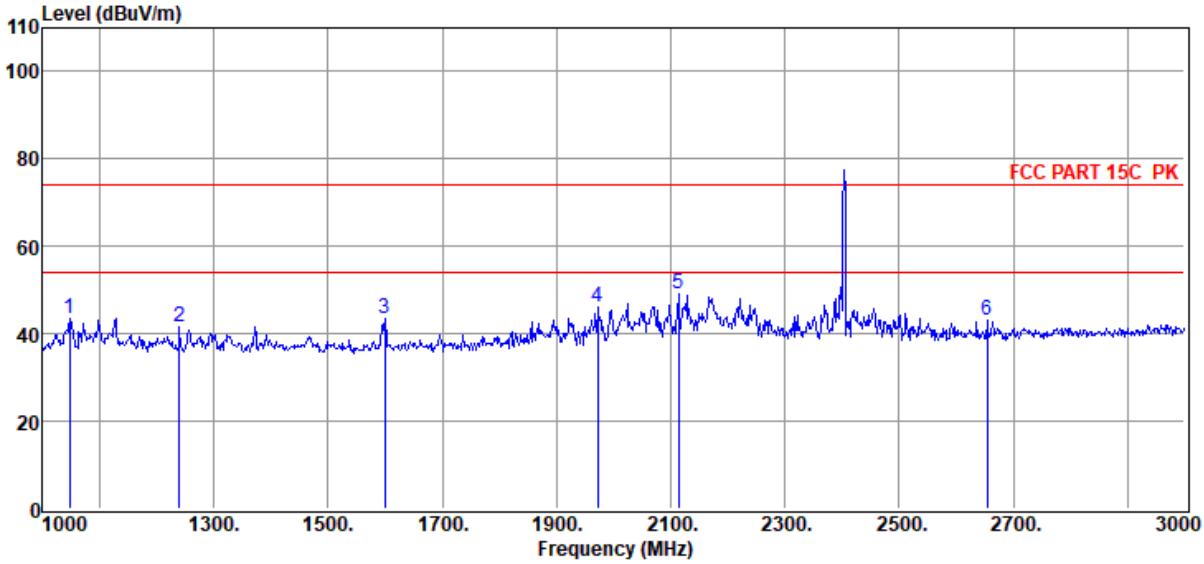
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1068.00	52.63	25.49	38.00	1.14	0.51	41.77	74.00	-32.23	Peak	HORIZONTAL
2	1470.00	52.96	25.41	38.61	1.36	0.58	41.70	74.00	-32.30	Peak	HORIZONTAL
3	1896.00	56.15	26.43	39.24	1.55	0.66	45.55	74.00	-28.45	Peak	HORIZONTAL
4	2166.00	56.97	27.00	39.48	1.65	0.70	46.84	74.00	-27.16	Peak	HORIZONTAL
5	2456.00	56.14	27.52	39.63	1.73	0.73	46.49	74.00	-27.51	Peak	HORIZONTAL
6	2628.00	50.99	28.09	39.71	1.77	0.75	41.89	74.00	-32.11	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6	
Test Date	: 2022-03-28	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/VERTICAL
Memo	: SRD 2403 power 0		

Data: 8



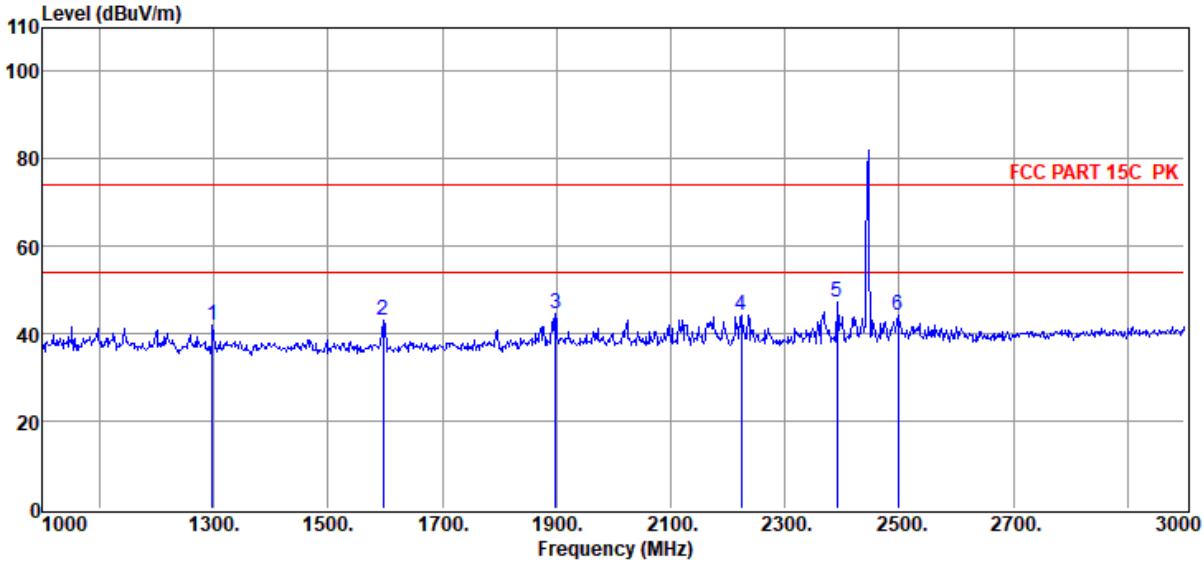
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1048.00	54.19	25.49	37.97	1.13	0.51	43.35	74.00	-30.65	Peak	VERTICAL
2	1240.00	52.81	25.45	38.26	1.23	0.54	41.77	74.00	-32.23	Peak	VERTICAL
3	1600.00	54.61	25.66	38.80	1.42	0.61	43.50	74.00	-30.50	Peak	VERTICAL
4	1972.00	56.59	26.63	39.36	1.59	0.67	46.12	74.00	-27.88	Peak	VERTICAL
5	2114.00	59.34	26.91	39.46	1.63	0.69	49.11	74.00	-24.89	Peak	VERTICAL
6	2654.00	51.92	28.19	39.73	1.78	0.75	42.91	74.00	-31.09	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6	
Test Date	: 2022-03-28	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	: SRD 2444 power 0		

Data: 9



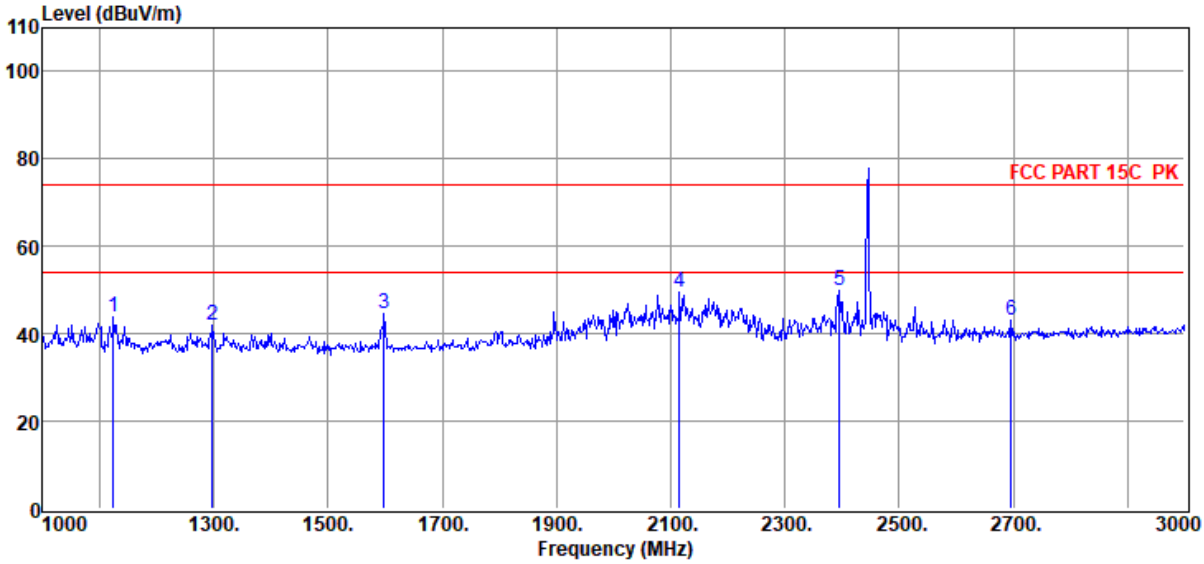
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1298.00	53.19	25.44	38.35	1.27	0.55	42.10	74.00	-31.90	Peak	HORIZONTAL
2	1596.00	54.10	25.65	38.79	1.42	0.61	42.99	74.00	-31.01	Peak	HORIZONTAL
3	1898.00	55.07	26.43	39.25	1.56	0.66	44.47	74.00	-29.53	Peak	HORIZONTAL
4	2224.00	54.36	27.10	39.51	1.66	0.70	44.31	74.00	-29.69	Peak	HORIZONTAL
5	2392.00	56.93	27.41	39.60	1.71	0.72	47.17	74.00	-26.83	Peak	HORIZONTAL
6	2498.00	53.62	27.60	39.65	1.74	0.73	44.04	74.00	-29.96	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#		D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6
Test Date	: 2022-03-28	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/VERTICAL
Memo	: SRD 2444 power 0		

Data: 10



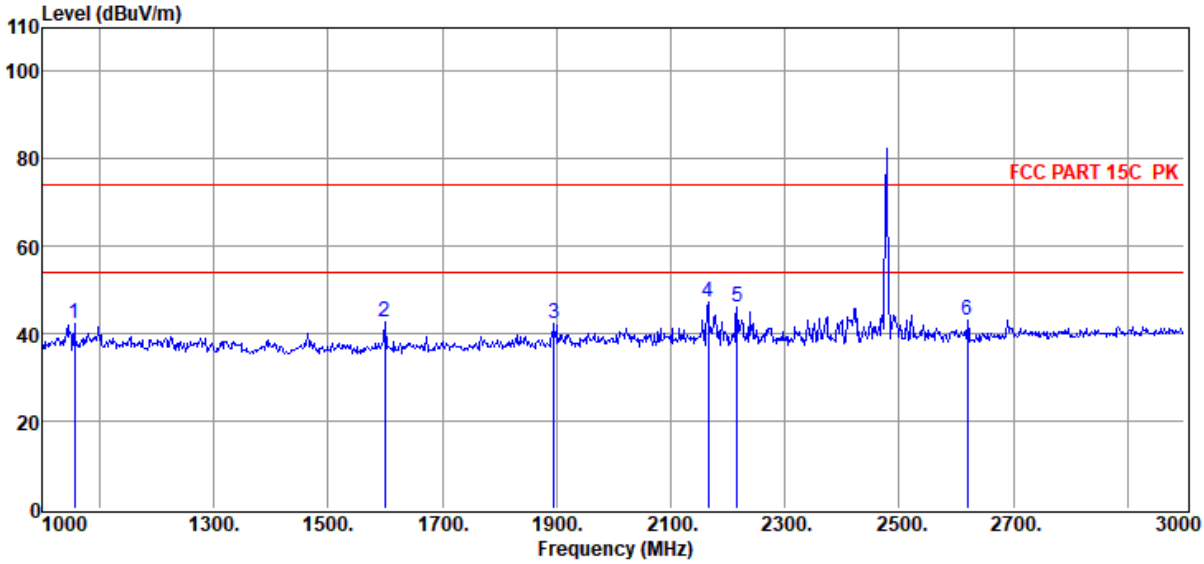
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1124.00	54.73	25.48	38.09	1.17	0.52	43.81	74.00	-30.19	Peak	VERTICAL
2	1298.00	53.12	25.44	38.35	1.27	0.55	42.03	74.00	-31.97	Peak	VERTICAL
3	1598.00	55.84	25.65	38.80	1.42	0.61	44.72	74.00	-29.28	Peak	VERTICAL
4	2116.00	59.79	26.91	39.46	1.63	0.69	49.56	74.00	-24.44	Peak	VERTICAL
5	2396.00	59.71	27.41	39.60	1.71	0.72	49.95	74.00	-24.05	Peak	VERTICAL
6	2696.00	52.01	28.34	39.75	1.79	0.76	43.15	74.00	-30.85	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6	
Test Date	: 2022-03-28	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	: SRD 2477 power 0		

Data: 11



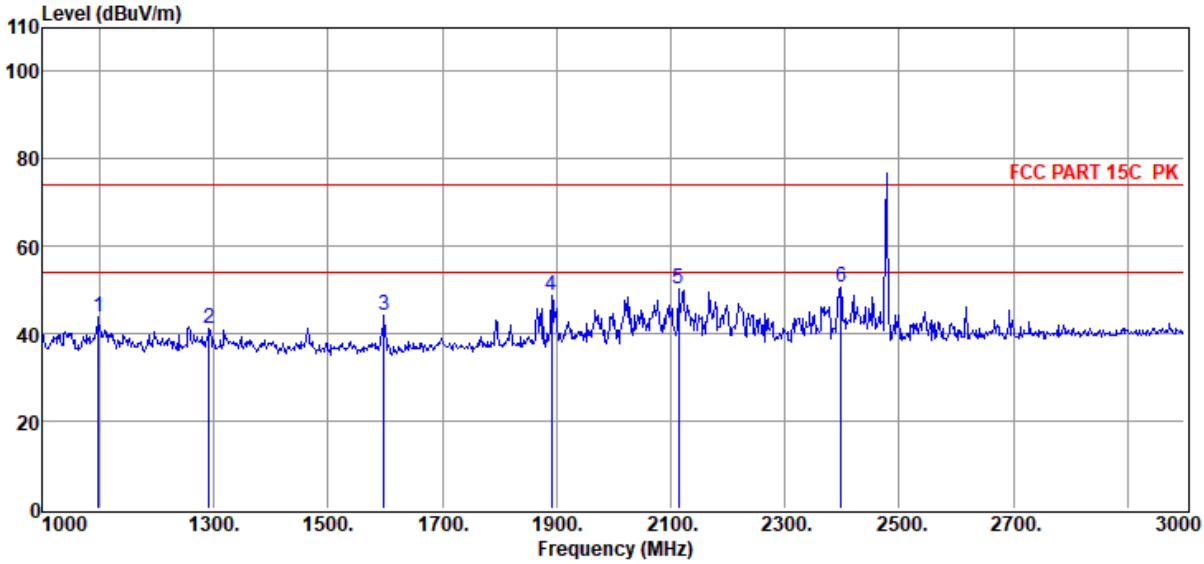
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1056.00	53.21	25.49	37.98	1.13	0.51	42.36	74.00	-31.64	Peak	HORIZONTAL
2	1600.00	53.93	25.66	38.80	1.42	0.61	42.82	74.00	-31.18	Peak	HORIZONTAL
3	1896.00	52.80	26.43	39.24	1.55	0.66	42.20	74.00	-31.80	Peak	HORIZONTAL
4	2166.00	57.50	27.00	39.48	1.65	0.70	47.37	74.00	-26.63	Peak	HORIZONTAL
5	2216.00	56.16	27.09	39.51	1.66	0.70	46.10	74.00	-27.90	Peak	HORIZONTAL
6	2620.00	52.39	28.06	39.71	1.77	0.75	43.26	74.00	-30.74	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6	
Test Date	: 2022-03-28	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/VERTICAL
Memo	: SRD 2477 power 0		

Data: 12



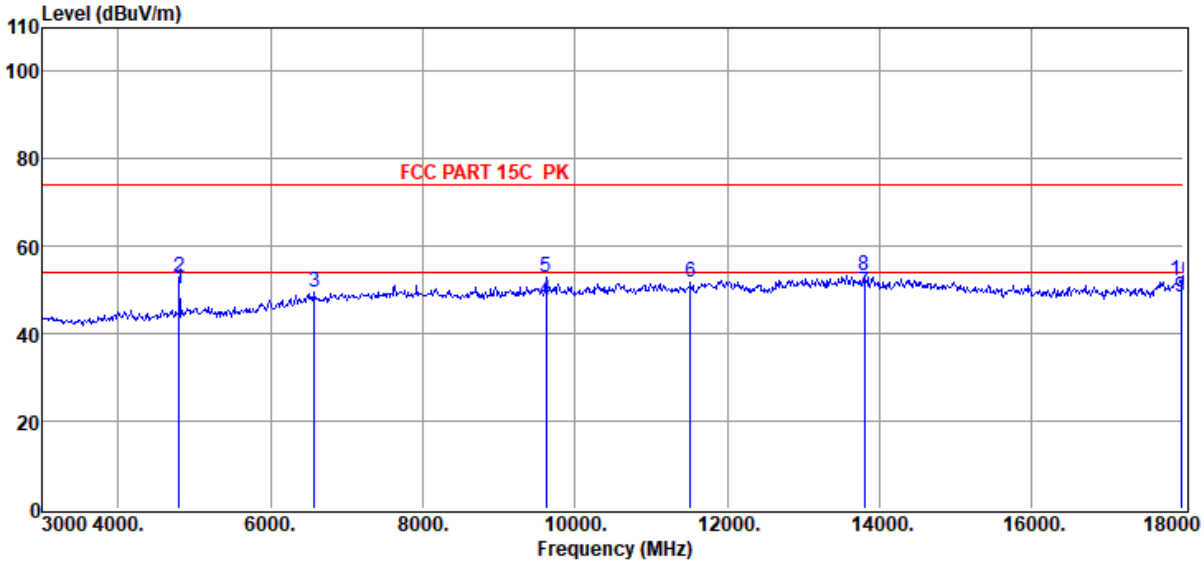
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1098.00	54.66	25.48	38.05	1.15	0.52	43.76	74.00	-30.24	Peak	VERTICAL
2	1292.00	52.24	25.44	38.34	1.26	0.55	41.15	74.00	-32.85	Peak	VERTICAL
3	1598.00	55.25	25.65	38.80	1.42	0.61	44.13	74.00	-29.87	Peak	VERTICAL
4	1892.00	59.20	26.42	39.24	1.55	0.66	48.59	74.00	-25.41	Peak	VERTICAL
5	2114.00	60.36	26.91	39.46	1.63	0.69	50.13	74.00	-23.87	Peak	VERTICAL
6	2398.00	60.48	27.42	39.60	1.71	0.72	50.73	74.00	-23.27	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6	
Test Date	: 2022-05-17	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	: SRD 2403 power 0		

Data: 1



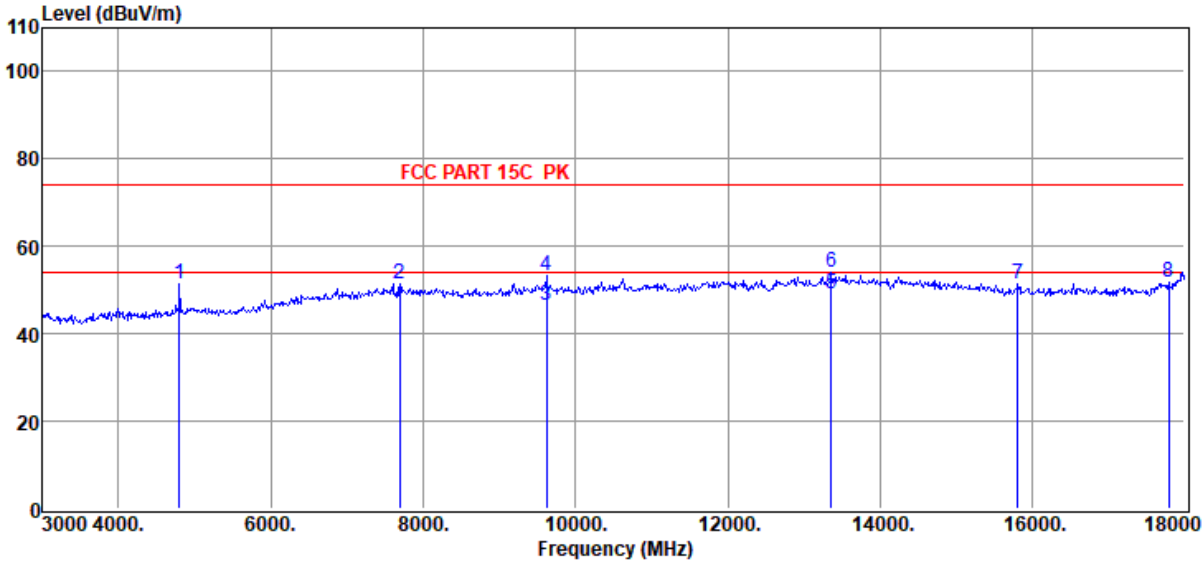
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	4800.00	53.54	32.46	40.36	2.47	2.16	50.27	54.00	-3.73	Average	HORIZONTAL
2	4800.00	56.07	32.46	40.36	2.47	2.16	52.80	74.00	-21.20	Peak	HORIZONTAL
3	6570.00	48.51	35.31	40.04	3.23	2.49	49.50	74.00	-24.50	Peak	HORIZONTAL
4	9615.00	43.29	38.63	40.33	3.63	2.36	47.58	54.00	-6.42	Average	HORIZONTAL
5	9615.00	48.67	38.63	40.33	3.63	2.36	52.96	74.00	-21.04	Peak	HORIZONTAL
6	11520.00	46.44	39.01	40.15	3.97	2.39	51.66	74.00	-22.34	Peak	HORIZONTAL
7	13800.00	42.20	39.94	39.84	4.31	2.91	49.52	54.00	-4.48	Average	HORIZONTAL
8	13800.00	45.86	39.94	39.84	4.31	2.91	53.18	74.00	-20.82	Peak	HORIZONTAL
9	17970.00	38.17	42.31	40.68	4.95	3.78	48.53	54.00	-5.47	Average	HORIZONTAL
10	17970.00	41.81	42.31	40.68	4.95	3.78	52.17	74.00	-21.83	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6	
Test Date	: 2022-05-17	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/VERTICAL
Memo	: SRD 2403 power 0		

Data: 2



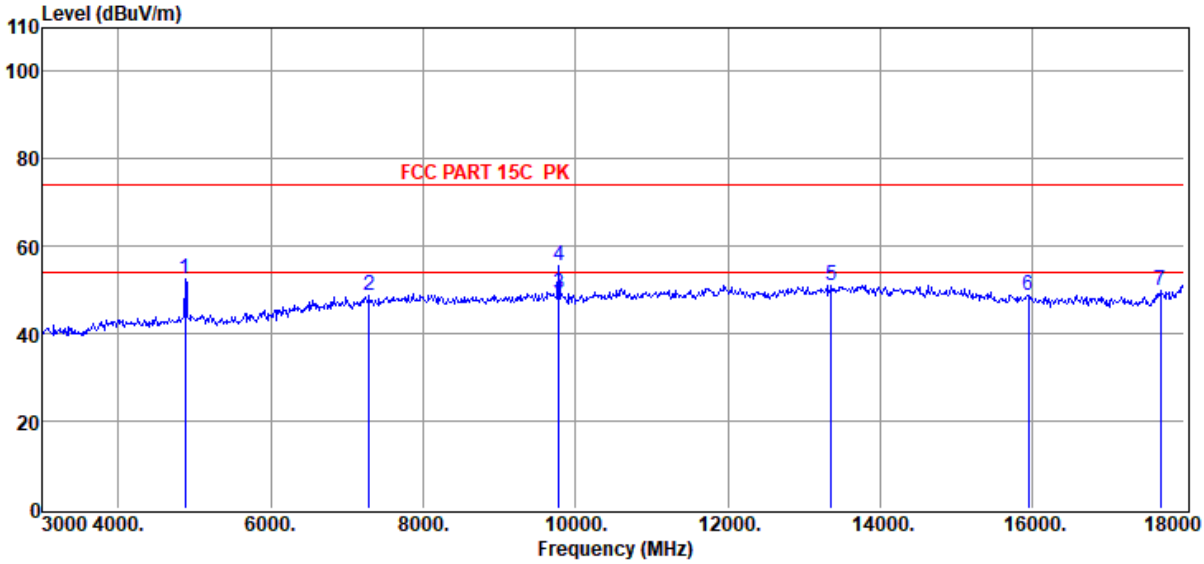
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	4800.00	54.68	32.46	40.36	2.47	2.16	51.41	74.00	-22.59	Peak	VERTICAL
2	7695.00	49.08	36.63	39.77	3.16	2.27	51.37	74.00	-22.63	Peak	VERTICAL
3	9615.00	42.19	38.63	40.33	3.63	2.36	46.48	54.00	-7.52	Average	VERTICAL
4	9615.00	48.92	38.63	40.33	3.63	2.36	53.21	74.00	-20.79	Peak	VERTICAL
5	13365.00	42.51	39.89	40.14	4.10	2.94	49.30	54.00	-4.70	Average	VERTICAL
6	13365.00	47.19	39.89	40.14	4.10	2.94	53.98	74.00	-20.02	Peak	VERTICAL
7	15810.00	45.41	38.24	39.84	4.58	3.02	51.41	74.00	-22.59	Peak	VERTICAL
8	17790.00	42.63	41.20	40.57	4.90	3.73	51.89	74.00	-22.11	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6	
Test Date	: 2022-03-04	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	: SRD 2444 power 0		

Data: 3



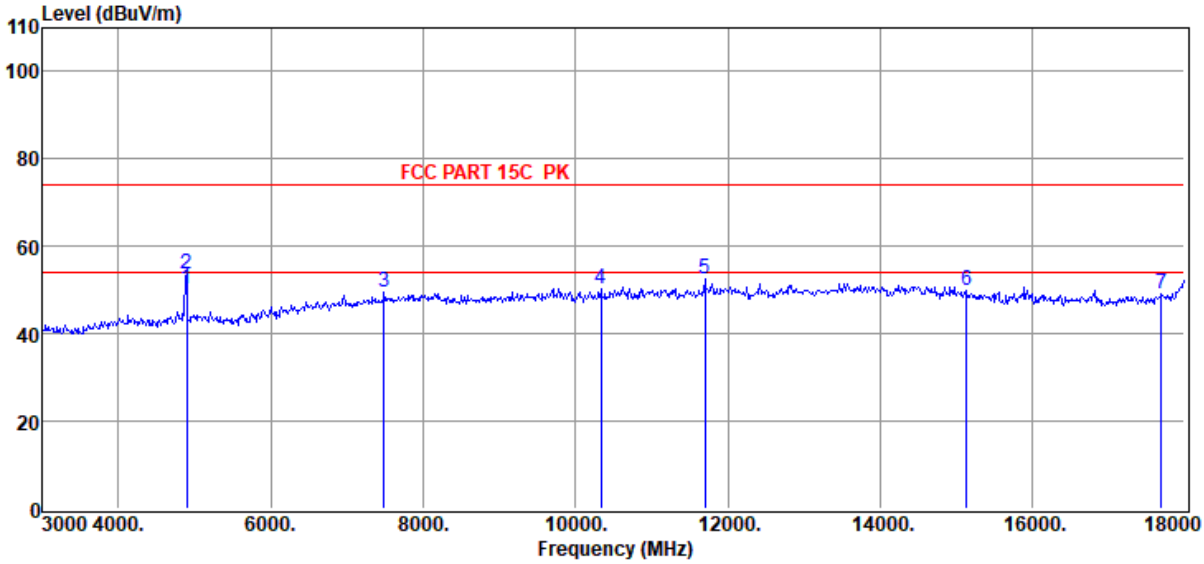
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	4875.00	55.56	32.70	40.38	2.49	2.17	52.54	74.00	-21.46	Peak	HORIZONTAL
2	7290.00	46.91	36.23	39.73	3.09	2.27	48.77	74.00	-25.23	Peak	HORIZONTAL
3	9780.00	45.11	38.53	40.45	3.65	2.41	49.25	54.00	-4.75	Average	HORIZONTAL
4	9780.00	51.30	38.53	40.45	3.65	2.41	55.44	74.00	-18.56	Peak	HORIZONTAL
5	13365.00	44.26	39.89	40.14	4.10	2.94	51.05	74.00	-22.95	Peak	HORIZONTAL
6	15945.00	43.07	38.00	39.88	4.60	3.09	48.88	74.00	-25.12	Peak	HORIZONTAL
7	17685.00	41.22	40.55	40.51	4.87	3.70	49.83	74.00	-24.17	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6	
Test Date	: 2022-03-29	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/VERTICAL
Memo	: SRD 2444 power 0		

Data: 4



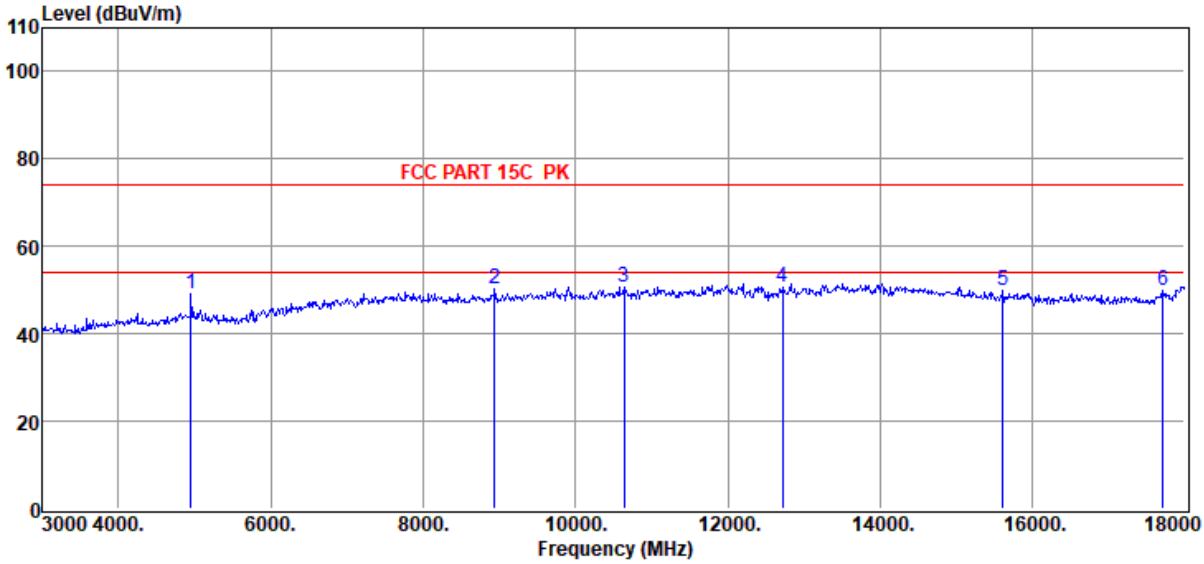
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	4890.00	53.34	32.75	40.38	2.50	2.17	50.38	54.00	-3.62	Average	VERTICAL
2	4890.00	56.52	32.75	40.38	2.50	2.17	53.56	74.00	-20.44	Peak	VERTICAL
3	7485.00	47.62	36.39	39.75	3.14	2.27	49.67	74.00	-24.33	Peak	VERTICAL
4	10335.00	45.75	38.80	40.47	3.67	2.45	50.20	74.00	-23.80	Peak	VERTICAL
5	11700.00	47.23	39.08	40.13	4.00	2.39	52.57	74.00	-21.43	Peak	VERTICAL
6	15135.00	43.01	39.31	39.64	4.49	2.69	49.86	74.00	-24.14	Peak	VERTICAL
7	17700.00	40.54	40.64	40.52	4.88	3.71	49.25	74.00	-24.75	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6	
Test Date	: 2022-03-04	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	: SRD 2477 power 0		

Data: 5



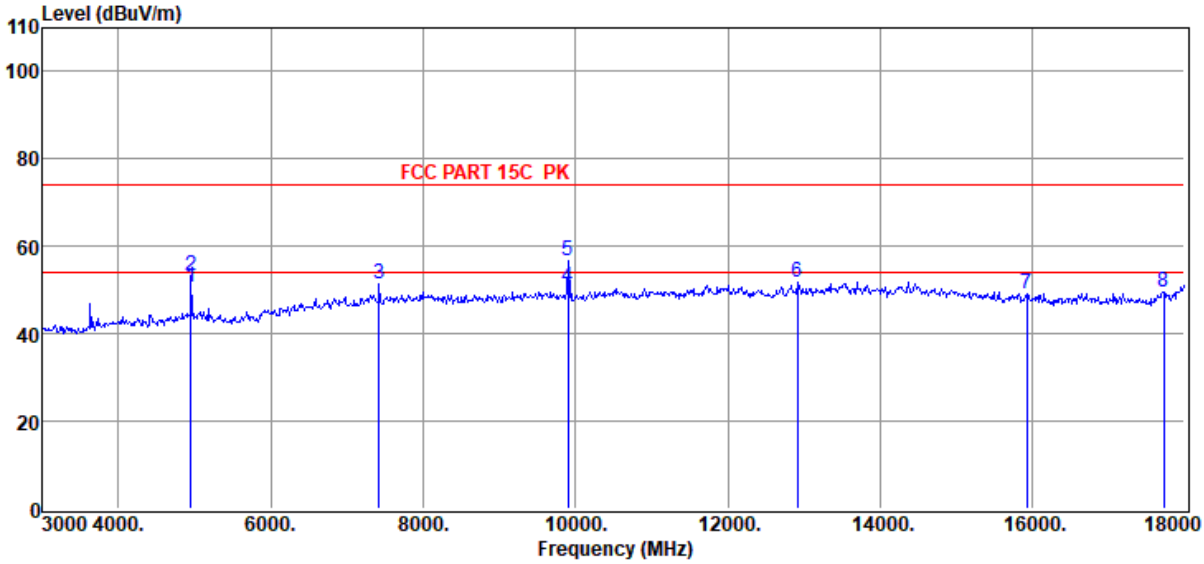
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	4950.00	51.77	32.94	40.39	2.52	2.18	49.02	74.00	-24.98	Peak	HORIZONTAL
2	8940.00	46.38	38.24	39.89	3.32	2.19	50.24	74.00	-23.76	Peak	HORIZONTAL
3	10635.00	45.95	39.08	40.35	3.71	2.42	50.81	74.00	-23.19	Peak	HORIZONTAL
4	12720.00	44.85	39.26	40.32	4.01	2.80	50.60	74.00	-23.40	Peak	HORIZONTAL
5	15615.00	43.56	38.59	39.78	4.57	2.93	49.87	74.00	-24.13	Peak	HORIZONTAL
6	17715.00	41.19	40.73	40.53	4.88	3.71	49.98	74.00	-24.02	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6	
Test Date	: 2022-03-29	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/VERTICAL
Memo	: SRD 2477 power 0		

Data: 6



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	4950.00	53.28	32.94	40.39	2.52	2.18	50.53	54.00	-3.47	Average	VERTICAL
2	4950.00	56.02	32.94	40.39	2.52	2.18	53.27	74.00	-20.73	Peak	VERTICAL
3	7425.00	49.46	36.34	39.74	3.12	2.27	51.45	74.00	-22.55	Peak	VERTICAL
4	9900.00	46.49	38.46	40.53	3.66	2.45	50.53	54.00	-3.47	Average	VERTICAL
5	9900.00	52.71	38.46	40.53	3.66	2.45	56.75	74.00	-17.25	Peak	VERTICAL
6	12915.00	45.31	39.50	40.37	4.28	2.91	51.63	74.00	-22.37	Peak	VERTICAL
7	15930.00	43.51	38.03	39.88	4.59	3.08	49.33	74.00	-24.67	Peak	VERTICAL
8	17730.00	40.74	40.83	40.54	4.88	3.71	49.62	74.00	-24.38	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

9. RF Conducted Spurious Emissions

9.1. Block diagram of test setup

Same as section 4.1

9.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

9.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

Center frequency	Test frequency
RBW:	100 kHz
VBW:	300 kHz
Span	Wide enough to capture the peak level of the in-band emission
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

(4) Set the spectrum analyzer as follows:

RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Number of measurement points	≥span/RBW
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

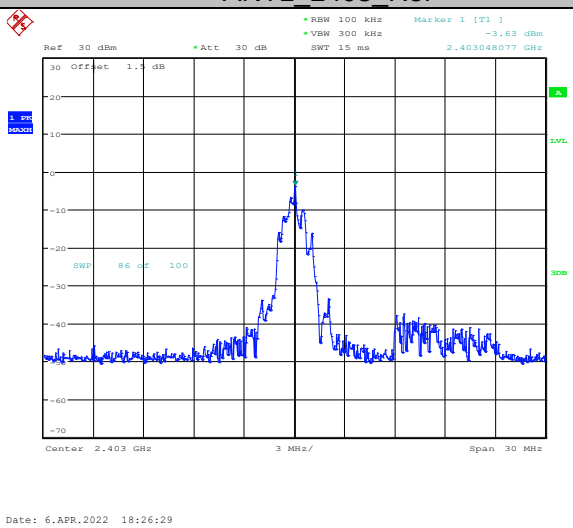
(5) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

9.4. Test result

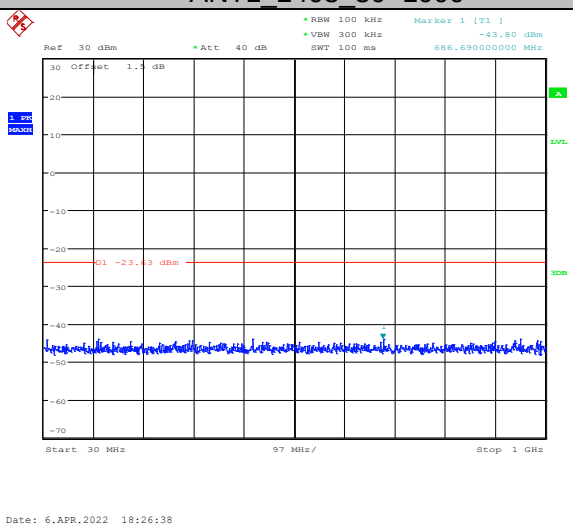
Mode	Freq. (MHz)	Verdict
2.4GHz SRD	2403	Pass
	2444	Pass
	2477	Pass

9.5. Original test data

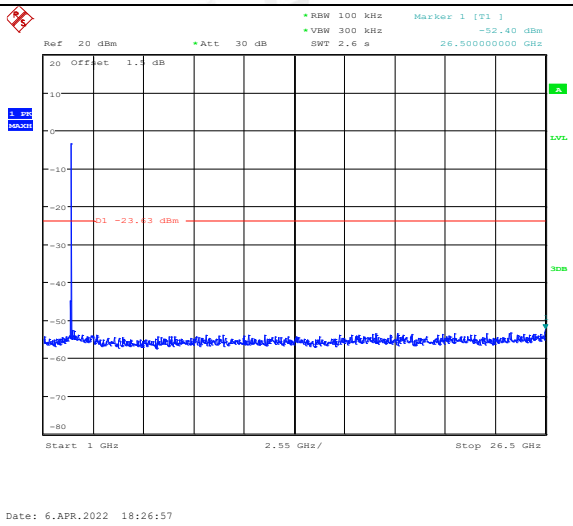
ANT1_2403_Ref



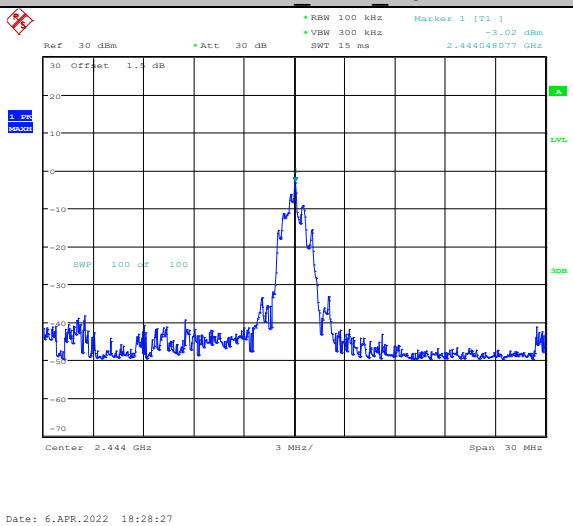
ANT1_2403_30~1000



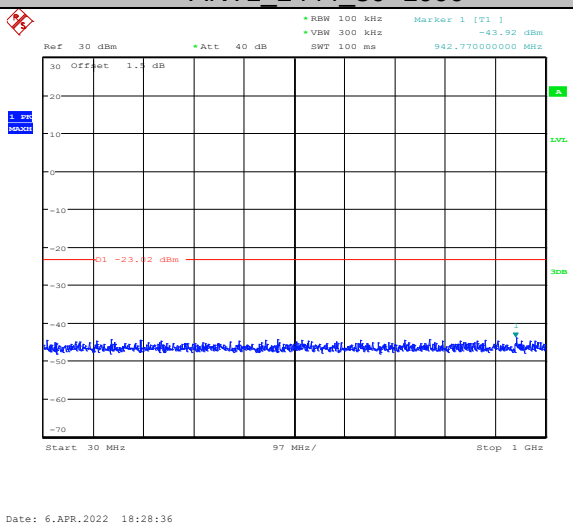
ANT1_2403_1000~26500



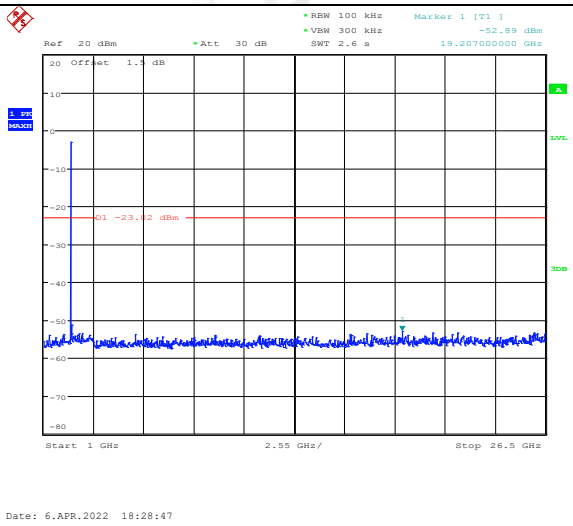
ANT1_2444_Ref



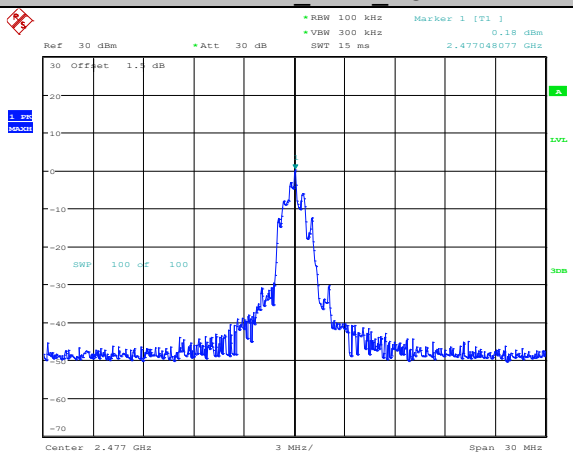
ANT1_2444_30~1000



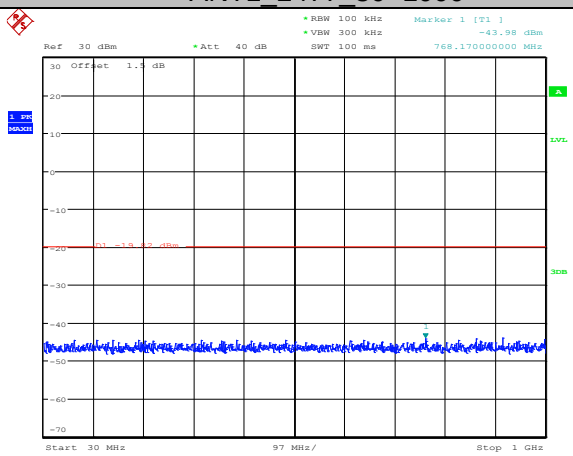
ANT1_2444_1000~26500



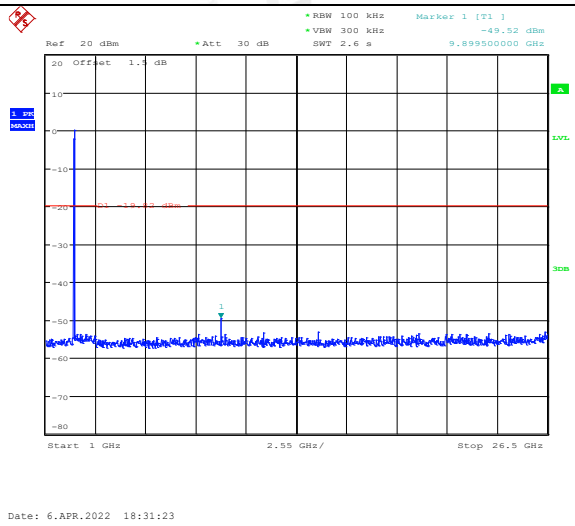
ANT1_2477_Ref



ANT1_2477_30~1000

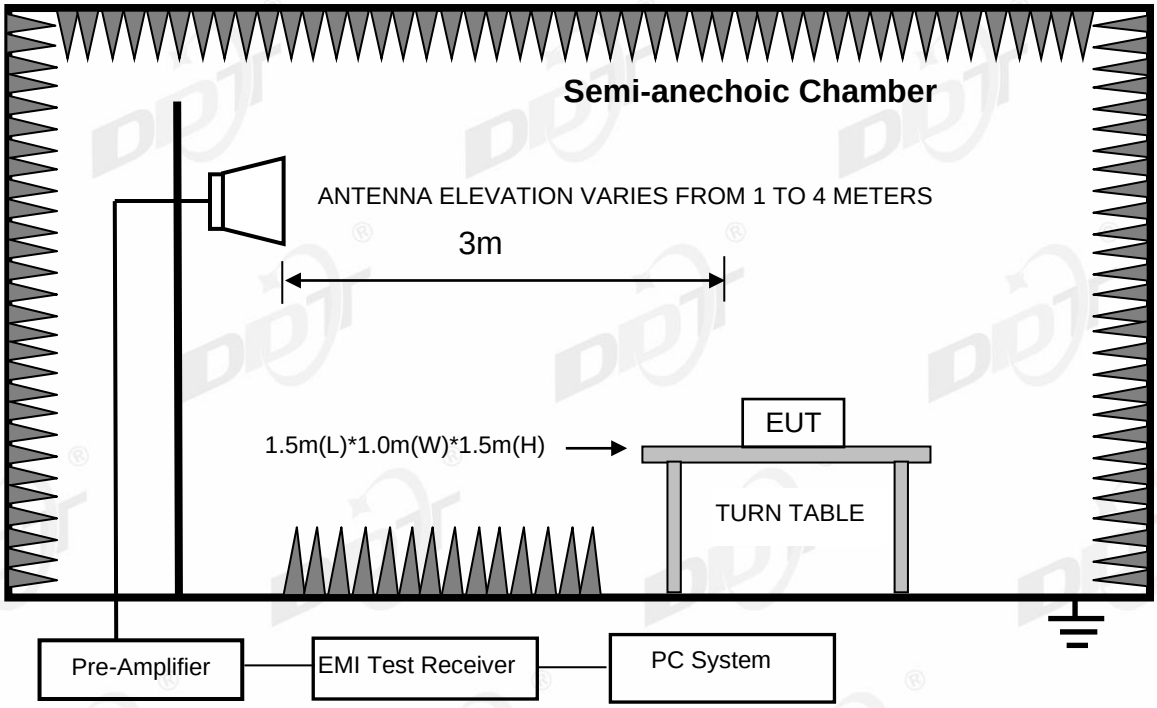


ANT1_2477_1000~26500


RBW 100 kHz
VBW 300 kHz
SWT 2.6 s
Marker 1 [T1]
-49.52 dBm
9.899500000 GHz
Ref 20 dBm
Att 30 dB
Offset 1.5 dB
1 PK
MAXH
A
LVL
3DB
Start 1 GHz
2.55 GHz/
Stop 26.5 GHz
Date: 6.APR.2022 18:31:23

10. Emissions in Restricted Frequency Bands

10.1. Block diagram of test setup



10.2. Limit

All restriction band should comply with 15.209, other emission should be at least 20 dB below the fundamental.

10.3. Test procedure

Same with clause 8.3 except change investigated frequency range from 2310 MHz to 2410 MHz and 2470 MHz to 2500 MHz.

Remark: All restriction band have been tested, and only the worst case is shown in report.

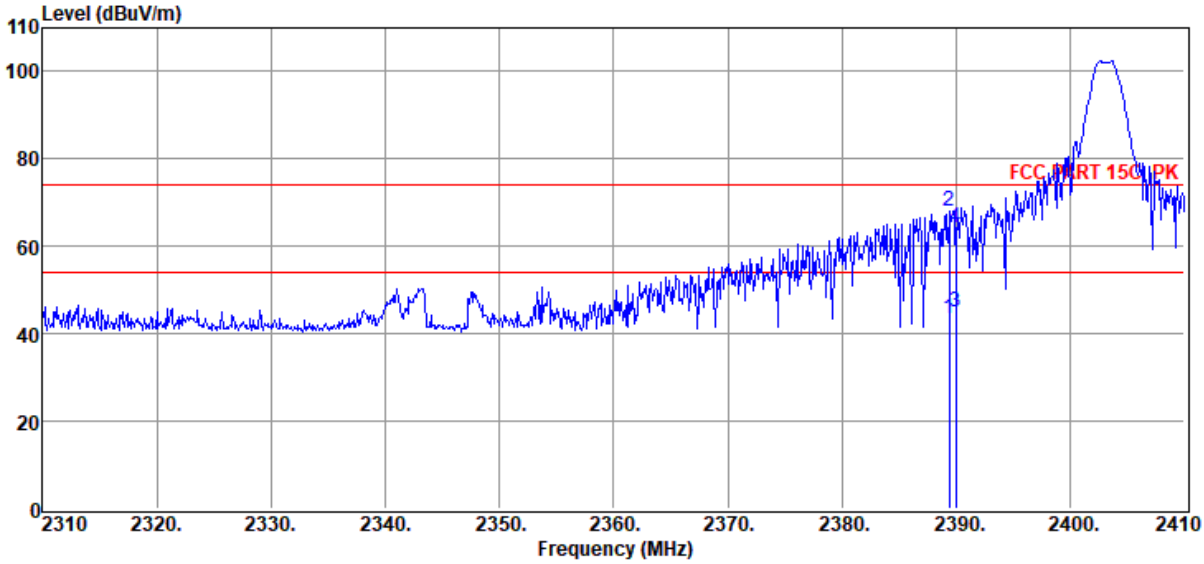
10.4. Test result

Pass. (See below detailed test result)

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#		D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6
Test Date	: 2022-03-04	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	: SRD 2403 power 0		

Data: 13



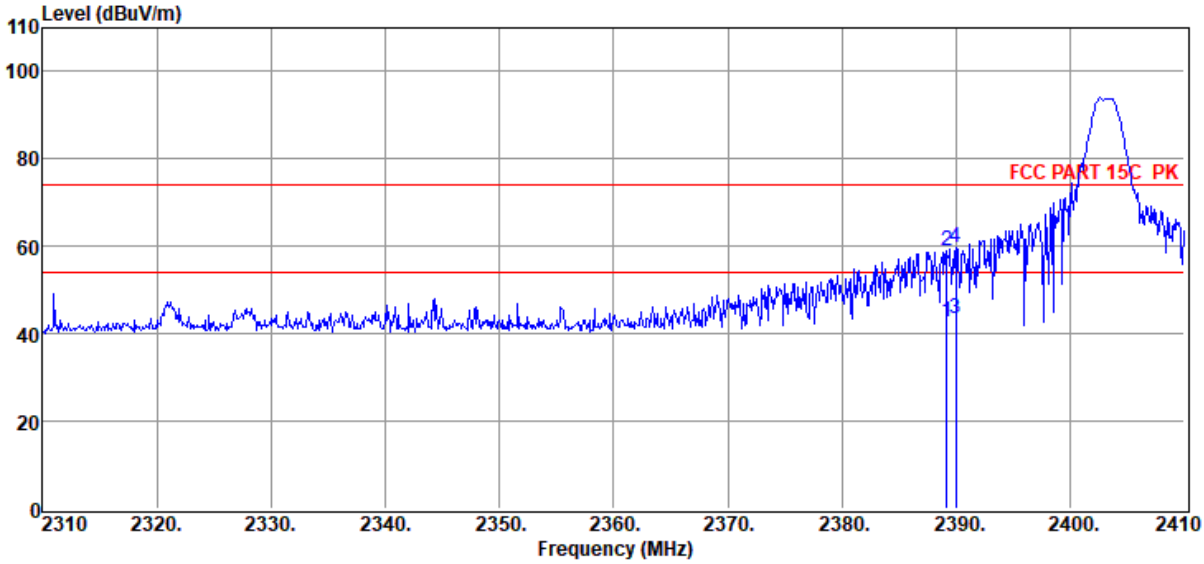
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2389.40	53.26	27.40	39.59	1.71	0.72	43.50	54.00	-10.50	Average	HORIZONTAL
2	2389.40	77.76	27.40	39.59	1.71	0.72	68.00	74.00	-6.00	Peak	HORIZONTAL
3	2390.00	54.62	27.40	39.60	1.71	0.72	44.85	54.00	-9.15	Average	HORIZONTAL
4	2390.00	74.12	27.40	39.60	1.71	0.72	64.35	74.00	-9.65	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6	
Test Date	: 2022-03-04	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/VERTICAL
Memo	: SRD 2403 power 0		

Data: 14



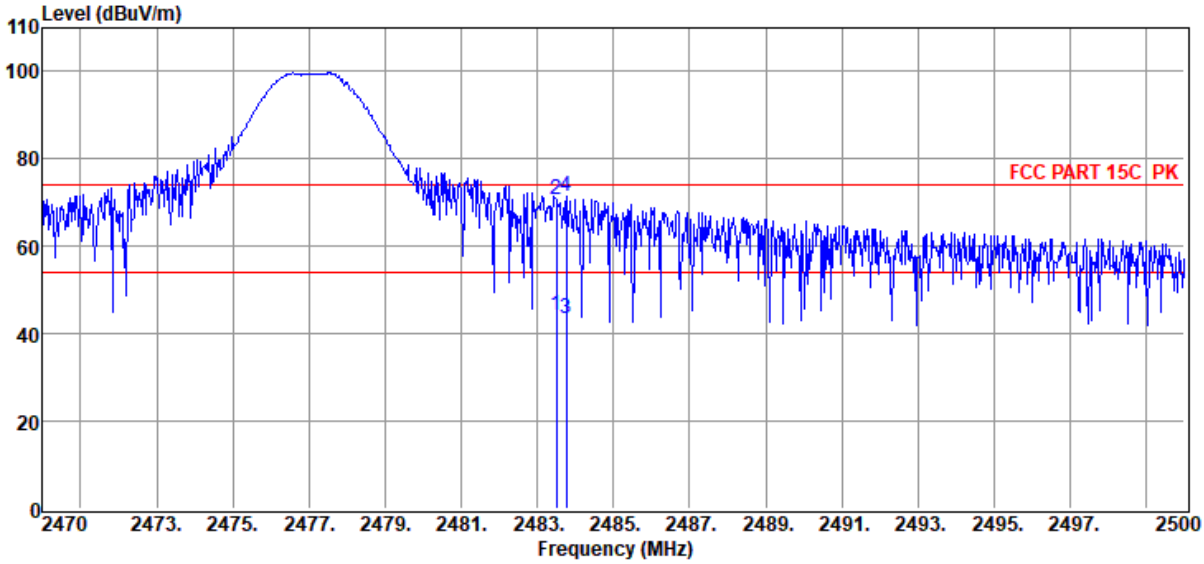
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2389.20	52.55	27.40	39.59	1.71	0.72	42.79	54.00	-11.21	Average	VERTICAL
2	2389.20	68.90	27.40	39.59	1.71	0.72	59.14	74.00	-14.86	Peak	VERTICAL
3	2390.00	53.21	27.40	39.60	1.71	0.72	43.44	54.00	-10.56	Average	VERTICAL
4	2390.00	69.57	27.40	39.60	1.71	0.72	59.80	74.00	-14.20	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#		D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6
Test Date	: 2022-03-04	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/HORIZONTAL
Memo	: SRD 2477 power 0		

Data: 15



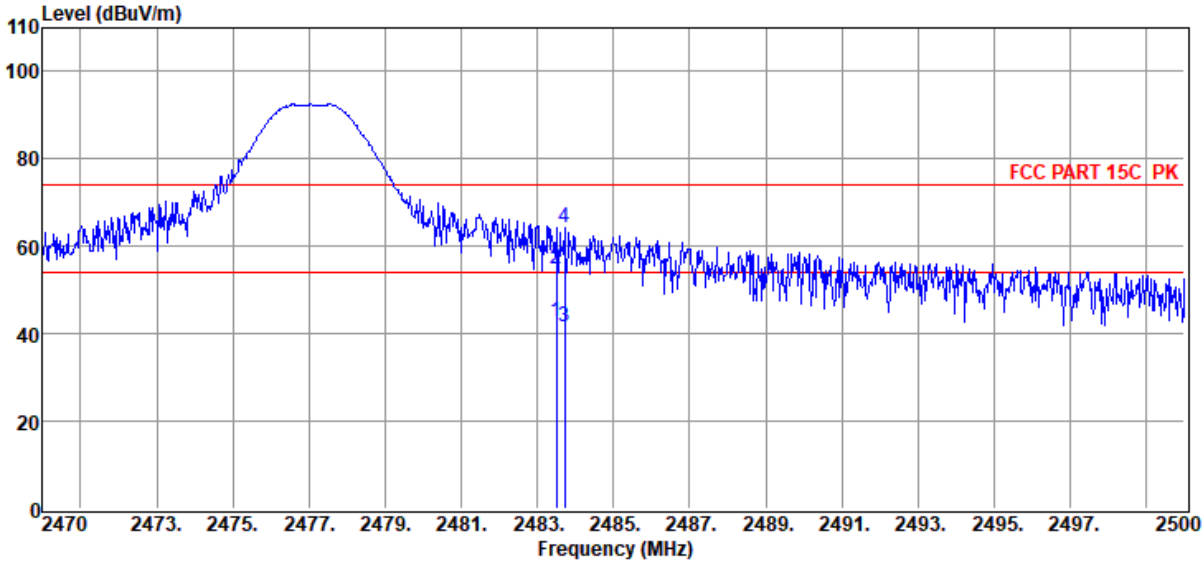
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	53.65	27.57	39.64	1.74	0.73	44.05	54.00	-9.95	Average	HORIZONTAL
2	2483.50	80.14	27.57	39.64	1.74	0.73	70.54	74.00	-3.46	Peak	HORIZONTAL
3	2483.77	53.18	27.57	39.64	1.74	0.73	43.58	54.00	-10.42	Average	HORIZONTAL
4	2483.77	81.09	27.57	39.64	1.74	0.73	71.49	74.00	-2.51	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 3#	D:\E3 6.111\2022 Report Data\Q21110417-2E HS-HYTE-001\FCC ABOVE 1G DONGLE.EM6	
Test Date	: 2022-03-04	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: DC 5V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2021 BBHA 9120D 3#/3m/VERTICAL
Memo	: SRD 2477 power 0		

Data: 16

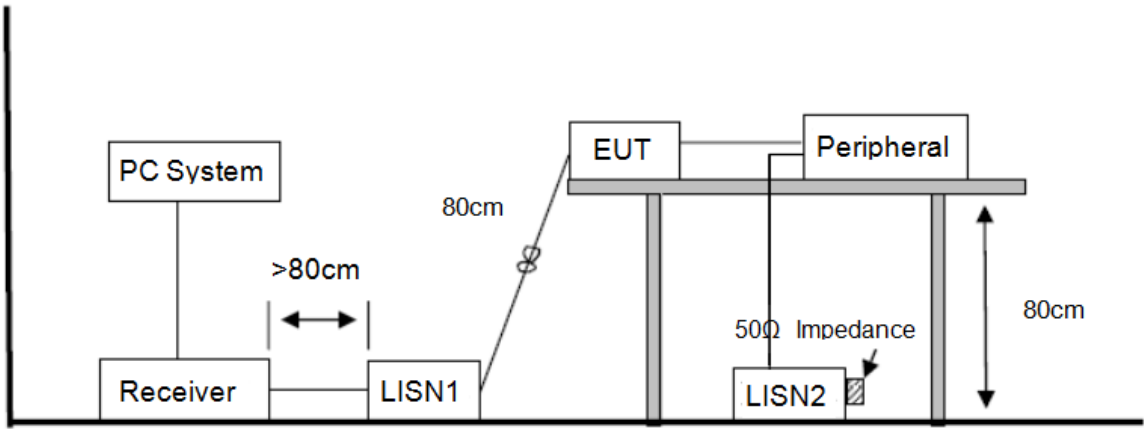


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	52.28	27.57	39.64	1.74	0.73	42.68	54.00	-11.32	Average	VERTICAL
2	2483.50	64.39	27.57	39.64	1.74	0.73	54.79	74.00	-19.21	Peak	VERTICAL
3	2483.71	51.28	27.57	39.64	1.74	0.73	41.68	54.00	-12.32	Average	VERTICAL
4	2483.71	73.74	27.57	39.64	1.74	0.73	64.14	74.00	-9.86	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

11. Power Line Conducted Emission

11.1. Block diagram of test setup



11.2. Power line conducted emission limits

Frequency	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150 kHz ~ 500 kHz	66 ~ 56*	56 ~ 46*
500 kHz ~ 5 MHz	56	46
5 MHz ~ 30 MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

11.3. Test procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80 cm above the ground plane.

Configuration EUT to simulate typical usage as described in clause 2.4 and test equipment as described in clause 10.2 of this report.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

11.4. Test result

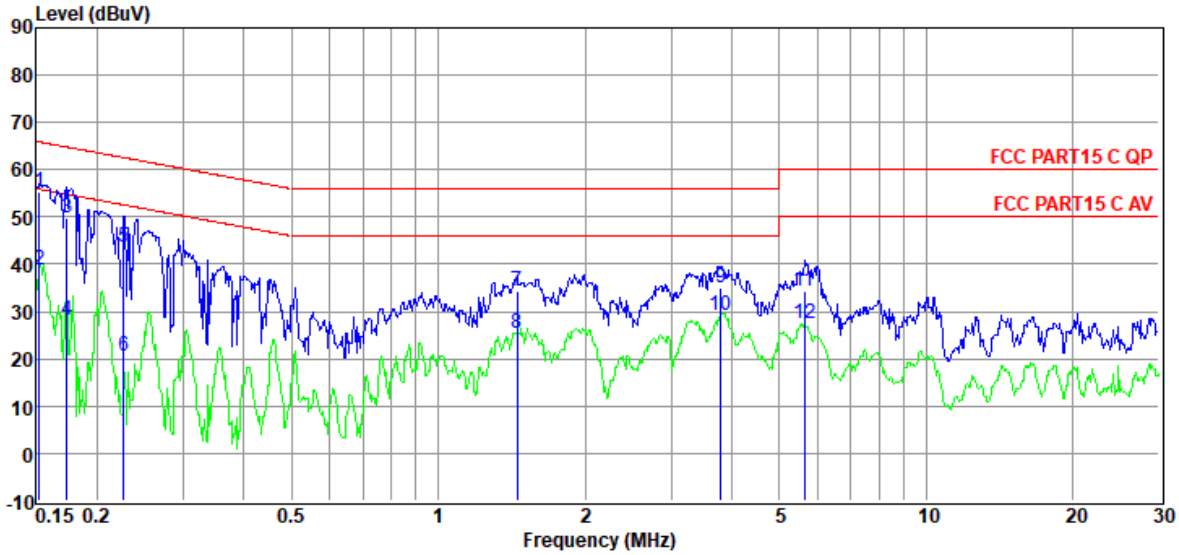
Pass. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.
Note2: "-----" means Peak detection; "-----" means Average detection.
Note3: Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/50Hz, recorded worse case.

TR-4-E-010 Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	D:\2022 CE report date\Q21111719-2E\FCC.EM6	
Test Date	: 2022-03-31	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: AC 120V/60Hz	**Test Mode**	: Tx mode
Condition	: TEMP:24.3°C, RH:53.0%, BP:101.0kPa	**LISN**	: 2021 1# ENV216/NEUTRAL
Memo	:		

Data: 6



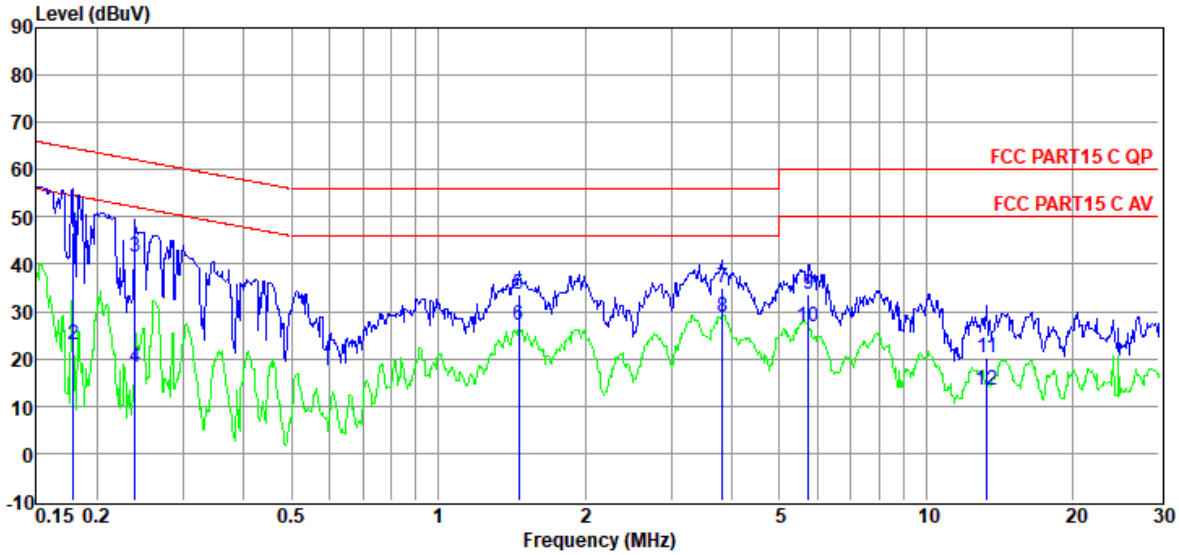
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.15	35.62	9.80	0.01	9.92	55.35	65.87	-10.52	QP	NEUTRAL
2	0.15	19.05	9.80	0.01	9.92	38.78	55.87	-17.09	Average	NEUTRAL
3	0.17	29.92	9.80	0.01	9.92	49.65	64.81	-15.16	QP	NEUTRAL
4	0.17	8.26	9.80	0.01	9.92	27.99	54.81	-26.82	Average	NEUTRAL
5	0.23	23.87	9.76	0.02	9.92	43.57	62.57	-19.00	QP	NEUTRAL
6	0.23	0.72	9.76	0.02	9.92	20.42	52.57	-32.15	Average	NEUTRAL
7	1.45	14.61	9.65	0.04	9.89	34.19	56.00	-21.81	QP	NEUTRAL
8	1.45	5.83	9.65	0.04	9.89	25.41	46.00	-20.59	Average	NEUTRAL
9	3.80	15.30	9.79	0.05	9.92	35.06	56.00	-20.94	QP	NEUTRAL
10	3.80	9.30	9.79	0.05	9.92	29.06	46.00	-16.94	Average	NEUTRAL
11	5.62	14.71	9.68	0.07	9.93	34.39	60.00	-25.61	QP	NEUTRAL
12	5.62	7.62	9.68	0.07	9.93	27.30	50.00	-22.70	Average	NEUTRAL

Note:
1. Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site	: DDT 1# Shield Room	D:\2022 CE report date\Q21111719-2E\FCC.EM6	
Test Date	: 2022-03-31	**Tested By**	: Kennys Zhang
EUT	: Transceiver	**Model Number**	: HYTE eclipse HG10
Power Supply	: AC 120V/60Hz	**Test Mode**	: Tx mode
Condition	: TEMP:24.3°C, RH:53.0%, BP:101.0kPa	**LISN**	: 2021 1# ENV216/LINE
Memo	:		

Data: 8



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Detector	Phase
1	0.18	27.07	9.72	0.01	9.92	46.72	64.55	-17.83	QP	LINE
2	0.18	3.20	9.72	0.01	9.92	22.85	54.55	-31.70	Average	LINE
3	0.24	21.80	9.76	0.02	9.92	41.50	62.13	-20.63	QP	LINE
4	0.24	-1.57	9.76	0.02	9.92	18.13	52.13	-34.00	Average	LINE
5	1.46	14.29	9.55	0.04	9.89	33.77	56.00	-22.23	QP	LINE
6	1.46	7.48	9.55	0.04	9.89	26.96	46.00	-19.04	Average	LINE
7	3.82	15.42	9.59	0.05	9.92	34.98	56.00	-21.02	QP	LINE
8	3.82	9.27	9.59	0.05	9.92	28.83	46.00	-17.17	Average	LINE
9	5.74	13.97	9.54	0.07	9.93	33.51	60.00	-26.49	QP	LINE
10	5.74	7.37	9.54	0.07	9.93	26.91	50.00	-23.09	Average	LINE
11	13.34	0.46	9.71	0.14	9.93	20.24	60.00	-39.76	QP	LINE
12	13.34	-6.25	9.71	0.14	9.93	13.53	50.00	-36.47	Average	LINE

Note:
1. Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

12. Antenna Requirements

12.1. Limit

For intentional device, according to FCC 47 CFR Section 15.203, 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

12.2. Result

The product is that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain is 2.4 dBi.

END OF REPORT