

# Global United Technology Service Co., Ltd.

Report No: GTSE10110031201

# **FCC REPORT**

Applicant: Kyosho Corporation

Address of Applicant: 153 FUNAKO ATSUGI, KANAGAWA 243-0034, JAPAN

**Equipment Under Test (EUT)** 

Product Name: 2.4G transmitter

Model No.: KT-201

FCC ID: Y6A-KT-201

Standards: FCC CFR Title 47 Part 15 Subpart C Section 15.249:2009

Date of Receipt: 13 Nov., 2010

**Date of Test:** 16-26 Nov., 2010

Date of Issue: 26 Nov., 2010

Test Result: PASS \*

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Lo Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the GTS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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# 3 Test Summary

Test Item	Section in CFR 47	Result		
Antenna requirement	15.203	PASS		
Field strength of the fundamental signal	15.249 (a)	PASS		
Spurious emissions	15.249 (a) (d)/15.209	PASS		
Band edge (Radiated Emission)	15.249 (d)/15.205	PASS		
20dB Occupied Bandwidth	15.215 (c)	PASS		

#### Remark:

- Passed: The EUT complies with the essential requirements in the standard.
- Failed: The EUT does not comply with the essential requirements in the standard.
- Tx: In this whole report Tx (or tx) means Transmitter.
- Rx: In this whole report Rx (or rx) means Receiver.

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# 4 General Information

# 4.1 Client Information

Applicant:	Kyosho Corporation
Address of Applicant:	153 FUNAKO ATSUGI,KANAGAWA 243-0034,JAPAN
Manufacturer/ Factory:	Kyosho Corporation
Address of Manufacturer/ Factory:	153 FUNAKO ATSUGI,KANAGAWA 243-0034,JAPAN

# 4.2 General Description of E.U.T.

Product Name:	2.4G transmitter
Model No.:	KT-201
Operation Frequency:	2410MHz to 2474.86MHz
Channel numbers:	81
Channel separation:	0.81075MHz
Modulation type:	GFSK
Antenna Type:	Integral
Antenna gain:	2dBi
Power supply:	4*1.5V("AA" size)=6.0V

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Operation Frequency each of channel								
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	
1	2410.00000	22	2427.02575	43	2444.05150	64	2461.07725	
2	2410.81075	23	2427.83650	44	2444.86225	65	2461.88800	
3	2411.62150	24	2428.64725	45	2445.67300	66	2462.69875	
4	2412.43225	25	2429.45800	46	2446.48375	67	2463.50950	
5	2413.24300	26	2430.26875	47	2447.29450	68	2464.32025	
6	2414.05375	27	2431.07950	48	2448.10525	69	2465.13100	
7	2414.86450	28	2431.89025	49	2448.91600	70	2465.94175	
8	2415.67525	29	2432.70100	50	2449.72675	71	2466.75250	
9	2416.48600	30	2433.51175	51	2450.53750	72	2467.56325	
10	2417.29675	31	2434.32250	52	2451.34825	73	2468.37400	
11	2418.10750	32	2435.13325	53	2452.15900	74	2469.18475	
12	2418.91825	33	2435.94400	54	2452.96975	75	2469.99550	
13	2419.72900	34	2436.75475	55	2453.78050	76	2470.80625	
14	2420.53975	35	2437.56550	56	2454.59125	77	2471.61700	
15	2421.35050	36	2438.37625	57	2455.40200	78	2472.42775	
16	2422.16125	37	2439.18700	58	2456.21275	79	2473.23850	
17	2422.97200	38	2439.99775	59	2457.02350	80	2474.04925	
18	2423.78275	39	2440.80850	60	2457.83425	81	2474.86000	
19	2424.59350	40	2441.61925	61	2458.64500			
20	2425.40425	41	2442.43000	62	2459.45575			
21	2426.21500	42	2443.24075	63	2460.26650			

#### Note

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency		
The lowest channel	2410.00MHz		
The middle channel	2442.43MHz		
The Highest channel	2474.86MHz		

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#### 4.3 Test environment and mode

Operating Environment:					
Temperature:	25.0 °C				
Humidity:	53 % RH				
Atmospheric Pressure:	1010 mbar				
Test mode:					
Transmitting mode:	Keep the EUT in transmitting mode with modulation.				

GTS has verified the construction and function in typical operation, The EUT was placed on three different polar directions; i.e. X axis, Y axis, Z axis. which was shown in this test report and defined as follows:

**Operating Environment:** 

**Pre-Test Mode:** (lowest channel=2410MHz)

Axis	X	Υ	Z
Field Strength(dBuV/m)	102.16	109.51	103.64

Final Test Mode:

According to ANSI C63.4 standards, the test results are both the "worst case" and "worst setup"

Y axis (see the test setup photo)

### 4.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

### ● FCC —Registration No.: 600491

Global United Technology Service Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 600491, July 20, 2010.

#### Industry Canada (IC)

The 3m Semi-anechoic chamber of Global United Technology Service Co., Ltd. Has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-1.

#### 4.5 Test Location

All tests were performed at:

Global United Technology Service Co., Ltd.

Address: 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen,

China

Tel: 0755-27798480 Fax: 0755-27798960

Global United Technology Service Co., Ltd. 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China 518102

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# 4.6 Other Information Requested by the Customer

None.

### 4.7 Test Instruments list:

Radia	Radiated Emission:									
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)				
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS201	Mar. 30 2010	Mar. 30 2011				
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS202	N/A	N/A				
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Sep. 10 2010	Sep. 10 2011				
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS204	Sep. 10 2010	Sep. 10 2011				
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS205	June 30 2010	June 30 2011				
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A				
7	Coaxial Cable	GTS	N/A	GTS400	Apr. 01 2010	Apr. 01 2011				
8	Coaxial Cable	GTS	N/A	GTS401	Apr. 01 2010	Apr. 01 2011				
9	Coaxial cable	GTS	N/A	GTS402	Apr. 01 2010	Apr. 01 2011				
10	Coaxial Cable	GTS	N/A	GTS407	Apr. 01 2010	Apr. 01 2011				
11	Coaxial Cable	GTS	N/A	GTS408	Apr. 01 2010	Apr. 01 2011				
12	Amplifier(10KHz- 5GHz)	Sonnoma Instrument	305-1052	GTS210	Aug. 03 2010	Aug. 03 2011				
13	Amplifier(2GHz- 20GHz)	HP	8349B	GTS231	Aug. 03 2010	Aug. 03 2011				

Cond	Conducted Emission:									
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)				
1	Shielding Room	ZhongYu Electron	7.0(L)x3.0(W)x3.0(H)	GTS206	Apr. 10 2010	Apr. 10 2011				
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS208	Sep. 14 2010	Sep. 14 2011				
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS209	Sep. 14 2010	Sep. 14 2011				
4	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS207	Apr. 14 2010	Apr. 14 2011				
5	Coaxial Cable	GTS	N/A	GTS406	Apr. 01 2010	Apr. 01 2011				
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A				

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# 5 Test results and Measurement Data

### 5.1 Antenna requirement:

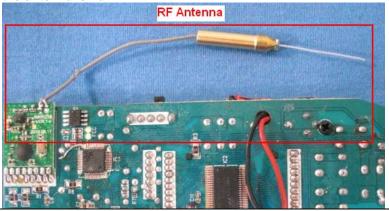
Standard requirement: FCC Part15 C Section 15.203

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, 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.

#### **E.U.T Antenna:**

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 2dBi.



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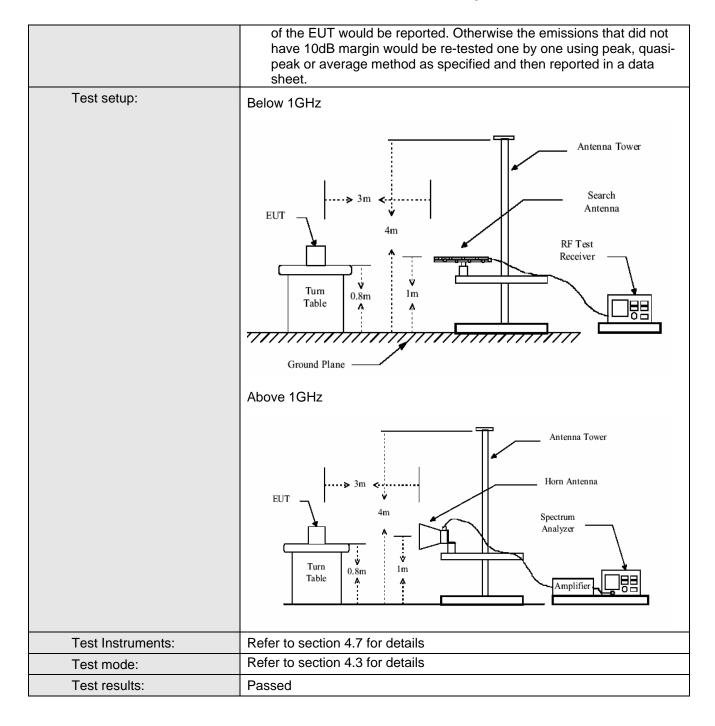
# 5.2 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.249 and 15.209					
Test Method:	ANSI C63.4: 20	03				
Test Frequency Range:	30MHz to 25000	OMHz				
Test site:	Measurement D	istance: 3m (	Semi-Anecho	ic Chambe	r)	
Receiver setup:		·				
•	Frequency	Detector	RBW	VBW	Remark	
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value	
	Above 1GHz	Peak	1MHz	3MHz	Peak Value	
	7.5070 10112	Peak	1MHz	10Hz	Average Value	
Limit:			1: :: (15. ) (	, 60 \		
(Field strength of the	Freque	ency	Limit (dBuV/		Remark	
fundamental signal)	2400MHz-24	183.5MHz	94.( 114.		Average Value Peak Value	
1 toute.			114.	U	Peak value	
Limit:	Freque	nev	Limit (dBuV/	m @3m)	Remark	
(Spurious Emissions)	30MHz-8		40.0		Quasi-peak Value	
	88MHz-21		43.5		Quasi-peak Value	
	216MHz-9		46.0		Quasi-peak Value	
	960MHz-	54.0		Quasi-peak Value		
	Above 1	CU-	54.0		Average Value	
	Above 1	GHZ	74.0		Peak Value	
Limit: (band edge)	harmonics, sha fundamental or	II be attenuat to the genera	ed by at leas al radiated em	t 50 dB be	by bands, except for slow the level of the s in Section 15.209,	
Test Procedure:	<ul> <li>whichever is the lesser attenuation.</li> <li>a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values</li> </ul>					

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#### Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

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#### **Measurement Data**

# 5.2.1 Field Strength Of The Fundamental Signal

#### Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2410.00	108.63	27.57	3.37	30.06	109.51	114.00	-4.49	Horizontal
2410.00	106.58	27.57	3.37	30.06	107.46	114.00	-6.54	Vertical
2442.43	107.14	27.48	3.43	29.99	108.06	114.00	-4.57	Horizontal
2442.43	102.63	27.48	3.43	29.99	103.55	114.00	-8.46	Vertical
2474.86	106.31	27.52	3.49	29.93	107.39	114.00	-6.61	Horizontal
2474.86	102.58	27.52	3.49	29.93	103.66	114.00	-10.34	Vertical

#### Average value:

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Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2410.00	87.63	27.57	3.37	30.06	88.51	94.00	-5.49	Horizontal
2410.00	86.06	27.57	3.37	30.06	86.94	94.00	-7.06	Vertical
2442.43	85.49	27.48	3.43	29.99	86.41	94.00	-6.54	Horizontal
2442.43	81.65	27.48	3.43	29.99	82.57	94.00	-9.79	Vertical
2474.86	85.18	27.52	3.49	29.93	86.26	94.00	-7.74	Horizontal
2474.86	82.09	27.52	3.49	29.93	83.17	94.00	-10.83	Vertical

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# **5.2.2 Spurious Emissions**

30MHz~1GHz		
Test mode:	Transmitting	

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
66.03	38.22	11.78	0.79	25.70	25.09	40.00	-14.91	Vertical
173.81	43.11	10.65	1.65	25.63	29.78	43.50	-13.72	Vertical
216.02	51.42	9.07	1.84	25.61	36.72	46.00	-9.28	Vertical
239.99	45.56	10.42	1.92	25.60	32.30	46.00	-13.70	Vertical
490.75	45.56	17.14	2.39	25.55	39.54	46.00	-6.46	Vertical
38.62	35.39	12.64	0.64	25.74	22.93	40.00	-17.07	Horizontal
167.82	39.67	11.53	1.62	25.63	27.19	43.50	-16.31	Horizontal
216.02	48.64	14.05	1.84	25.61	38.92	46.00	-7.08	Horizontal
225.31	49.17	14.51	1.88	25.61	39.95	46.00	-6.05	Horizontal
478.85	47.02	19.83	2.37	25.55	43.67	46.00	-2.33	Horizontal

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Above 1GHz					
Test mode:	Transmitting	Test channel:	Lowest	Remark:	Peak

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2327.00	6.02	29.76	39.75	46.58	43.56	74.00	-30.44	Vertical
2400.00	6.34	30.03	38.87	50.23	48.78	74.00	-25.22	Vertical
4820.00	9.36	34.25	41.53	55.80	59.03	74.00	-14.97	Vertical
7230.00	13.38	37.23	40.98	48.98	59.86	74.00	-14.14	Vertical
9640.00	13.39	37.99	37.56	40.80	55.97	74.00	-18.03	Vertical
12050.00	16.45	39.10	39.09	39.30	57.21	74.00	-16.79	Vertical
2327.00	6.02	29.76	39.75	49.89	45.92	74.00	-28.08	Horizontal
2400.00	6.34	30.03	38.87	52.21	49.71	74.00	-24.29	Horizontal
4820.00	9.36	34.25	41.53	59.10	61.18	74.00	-12.82	Horizontal
7230.00	13.38	37.23	40.98	49.06	58.69	74.00	-15.31	Horizontal
9640.00	13.39	37.99	37.56	42.34	56.16	74.00	-17.84	Horizontal
12050.00	16.45	39.10	39.09	40.74	57.20	74.00	-16.80	Horizontal

Test mode:	Transmitting	Test channel:	Lowest	Remark:	average
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Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2327.00	6.02	29.76	39.75	38.12	34.72	54.00	-19.28	Vertical
2400.00	6.34	30.03	38.87	40.81	39.02	54.00	-14.98	Vertical
4820.00	9.36	34.25	41.53	46.07	49.00	54.00	-5.00	Vertical
7230.00	13.38	37.23	40.98	33.29	43.91	54.00	-10.09	Vertical
9640.00	13.39	37.99	37.56	29.94	44.89	54.00	-9.11	Vertical
12050.00	16.45	39.10	39.09	27.32	45.05	54.00	-8.95	Vertical
2327.00	6.02	29.76	39.75	39.94	35.97	54.00	-18.03	Horizontal
2400.00	6.34	30.03	38.87	42.98	40.48	54.00	-13.52	Horizontal
4820.00	9.36	34.25	41.53	46.68	48.76	54.00	-5.24	Horizontal
7230.00	13.38	37.23	40.98	34.29	43.92	54.00	-10.08	Horizontal
9640.00	13.39	37.99	37.56	31.48	45.30	54.00	-8.70	Horizontal
12050.00	16.45	39.10	39.09	28.40	44.86	54.00	-9.14	Horizontal

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Test mode:

Transmitting

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Test mode:	Tran	smitting	Test char	nnel:	Middle	Remark:	Pe	Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
1117.00	3.97	25.72	39.31	54.90	45.28	74.00	-28.72	Vertical	
2327.00	6.02	29.76	39.75	45.76	41.79	74.00	-32.21	Vertical	
4884.86	10.57	34.35	40.33	56.27	60.86	74.00	-13.14	Vertical	
7327.29	12.91	37.31	40.40	50.77	60.59	74.00	-13.41	Vertical	
9769.72	13.89	38.03	37.94	41.26	55.24	74.00	-18.76	Vertical	
12212.15	17.95	39.23	39.30	37.13	55.01	74.00	-18.99	Vertical	
1117.00	3.97	25.72	39.31	55.85	46.23	74.00	-27.77	Horizontal	
2327.00	6.02	29.76	39.75	46.88	42.91	74.00	-31.09	Horizontal	
4884.86	10.57	34.35	40.33	57.56	62.15	74.00	-11.85	Horizontal	
7327.29	12.91	37.31	40.40	52.23	62.05	74.00	-11.95	Horizontal	
9769.72	13.89	38.03	37.94	42.89	56.87	74.00	-17.13	Horizontal	
12212.15	17.95	39.23	39.30	38.93	56.81	74.00	-17.19	Horizontal	

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1117.00	3.97	25.72	39.31	42.50	32.88	54.00	-21.12	Vertical
2327.00	6.02	29.76	39.75	38.94	34.97	54.00	-19.03	Vertical
4884.86	10.57	34.35	40.33	40.95	45.54	54.00	-8.46	Vertical
7327.29	12.91	37.31	40.40	35.56	45.38	54.00	-8.62	Vertical
9769.72	13.89	38.03	37.94	29.90	43.88	54.00	-10.12	Vertical
12212.15	17.95	39.23	39.30	26.50	44.38	54.00	-9.62	Vertical
1117.00	3.97	25.72	39.31	43.07	33.45	54.00	-20.55	Horizontal
2327.00	6.02	29.76	39.75	39.67	35.70	54.00	-18.30	Horizontal
4884.86	10.57	34.35	40.33	41.84	46.43	54.00	-7.57	Horizontal
7327.29	12.91	37.31	40.40	36.61	46.43	54.00	-7.57	Horizontal
9769.72	13.89	38.03	37.94	31.11	45.09	54.00	-8.91	Horizontal
12212.15	17.95	39.23	39.30	27.87	45.75	54.00	-8.25	Horizontal

Middle

Remark:

average

Test channel:

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Test mode:

Transmitting

# Report No: GTSE10110031201

average

Remark:

Test mode:	Tran	smitting	Test char	nnel:	Hiç	ghest	Remark:		Pea	ak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV		Level (dBuV/m)	Limit Line (dBuV/m)	Ov Lim (dE	nit	Polarization
2483.50	5.76	30.32	39.53	59.56	;	56.11	74.00	-17.	89	Vertical
2500.00	6.22	30.37	39.15	51.28	3	48.72	74.00	-25.	28	Vertical
4949.72	10.43	34.45	41.03	57.83	3	61.68	74.00	-12.	32	Vertical
7424.58	12.72	37.37	40.01	50.55	;	60.63	74.00	-13.	37	Vertical
9899.44	14.24	38.08	37.78	44.12	2	58.66	74.00	-15.	34	Vertical
12374.30	17.55	39.34	39.48	38.41		55.82	74.00	-18.	18	Vertical
2483.50	5.76	30.32	39.53	61.64		58.19	74.00	-15.	81	Horizontal
2500.00	6.22	30.37	39.15	53.64		51.08	74.00	-22.	92	Horizontal
4949.72	10.43	34.45	41.03	60.47	,	64.32	74.00	-9.6	68	Horizontal
7424.58	12.72	37.37	40.01	53.47	,	63.55	74.00	-10.	45	Horizontal
9899.44	14.24	38.08	37.78	47.32	-	61.86	74.00	-12.	14	Horizontal
12374.30	17.55	39.34	39.48	41.89	)	59.30	74.00	-14.	70	Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	5.76	30.32	39.53	44.65	41.20	54.00	-12.80	Vertical
2500.00	6.22	30.37	39.15	41.42	38.86	54.00	-15.14	Vertical
4949.72	10.43	34.45	41.03	41.53	45.38	54.00	-8.62	Vertical
7424.58	12.72	37.37	40.01	33.36	43.44	54.00	-10.56	Vertical
9899.44	14.24	38.08	37.78	26.83	41.37	54.00	-12.63	Vertical
12374.30	17.55	39.34	39.48	25.00	42.41	54.00	-11.59	Vertical
2483.50	5.76	30.32	39.53	46.01	42.56	54.00	-11.44	Horizontal
2500.00	6.22	30.37	39.15	43.04	40.48	54.00	-13.52	Horizontal
4949.72	10.43	34.45	41.03	43.41	47.26	54.00	-6.74	Horizontal
7424.58	12.72	37.37	40.01	35.50	45.58	54.00	-8.42	Horizontal
9899.44	14.24	38.08	37.78	29.23	43.77	54.00	-10.23	Horizontal
12374.30	17.55	39.34	39.48	26.33	43.74	54.00	-10.26	Horizontal

Highest

Test channel:

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5.2.3 Band e	5.2.3 Band edge (Radiated Emission)									
Test mode:	Transmitting	Test channel:	Lowest	Remark:	Peak					

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2327.00	6.02	29.76	39.75	49.89	45.92	74.00	-28.08	Horizontal
2400.00	6.34	30.03	38.87	52.21	49.71	74.00	-24.29	Horizontal
2327.00	6.02	29.76	39.75	46.58	43.56	74.00	-30.44	Vertical
2400.00	6.34	30.03	38.87	50.23	48.78	74.00	-25.22	Vertical

Test mode:	Transmitting	Test channel:	Lowest	Remark:	Average
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Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2327.00	6.02	29.76	39.75	39.94	35.97	54.00	-18.03	Horizontal
2400.00	6.34	30.03	38.87	42.98	40.48	54.00	-13.52	Horizontal
2327.00	6.02	29.76	39.75	38.12	34.72	54.00	-19.28	Vertical
2400.00	6.34	30.03	38.87	40.81	39.02	54.00	-14.98	Vertical

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Test mode:	Tra	ansmitting	Test chann	el:	l: Highest		Remark:		Peak	
Frequency (MHz)	Cable Loss (d	I ⊢actor	Preamp Factor (dB)	Le	ead vel suV)	Level (dBuV/m)	Limit Line (dBuV/m)	Ove Lim (dE	nit	Polarization
2483.50	5.76	30.32	39.53	61	.64	58.19	74.00	-15.	81	Horizontal
2500.00	6.22	30.37	39.15	53	.64	51.08	74.00	-22.	92	Horizontal
2483.50	5.76	30.32	39.53	59	.56	56.11	74.00	-17.	89	Vertical
2500.00	6.22	30.37	39.15	51	.28	48.72	74.00	-25.	28	Vertical

Test mode:	Transı	mitting	Test channe	el:	High	est	Remark:		Ave	rage	
Frequency	Cable	Antenna	Preamp	Re	ead	Level	Limit Line	Ove			

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	5.76	30.32	39.53	46.01	42.56	54.00	-11.44	Horizontal
2500.00	6.22	30.37	39.15	43.04	40.48	54.00	-13.52	Horizontal
2483.50	5.76	30.32	39.53	44.65	41.20	54.00	2483.50	Vertical
2500.00	6.22	30.37	39.15	41.42	38.86	54.00	2500.00	Vertical

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# 5.3 20dB Bandwidth

Test Requirement:	FCC Part15 C Section 15.249/15.215					
Test Method:	ANSI C63.4:2003					
Receiver setup:	RBW=10KHz, VBW=30KHz, detector: Peak					
Limit:	Operation Frequency range 2400MHz-2483.5MHz					
Test Procedure:	<ol> <li>According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT.</li> <li>Set the EUT to proper test channel.</li> <li>Max hold the radiated emissions, mark the peak power frequency point and the -20dB upper and lower frequency points.</li> </ol>					
	4. Read 20dB bandwidth.					
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane					
Test Instruments:	Refer to section 4.7 for details					
Test mode:	Refer to section 4.3 for details					
Test results:	Passed					

#### **Measurement Data**

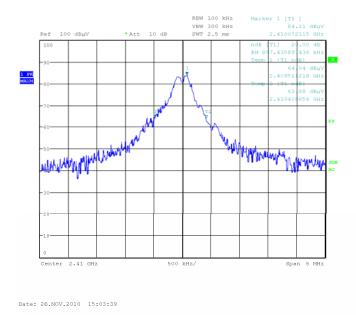
Test channel	20dB bandwidth (MHz)	Results
Lowest	0.8974	Pass
Middle	0.8654	Pass
Highest	0.8894	Pass

#### Test plot as follows:

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Test channel: Middle \_\_\_\_\_\_\_

