## FCC PART 15C TEST REPORT FOR CERTIFICATION On Behalf of

## HUIZHOU FORYOU GENERAL ELECTRONICS CO.,LTD.

Car Multimedia Player

Model Number: VX7024

FCC ID: 2AEIN-VX7024

Prepared for:	HUIZHOU FORYOU GENERAL ELECTRONICS CO.,LTD.			
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	Huizhou, China			
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	Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China			
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Report Number:	ESTE-R1702007		
Date of Test:	November 26 ~ November 27, 2017		
Date of Report:	November 28, 2017		

Report No. ESTE-R1702007



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HUIZHOU FORYOU GENERAL ELECTRONICS CO.,LTD. **Applicant:** North Shangxia Road, Dongjiang Hi tech Industry Park, Address: Huizhou, China Huizhou Foryou General Electronics Co., Ltd Manufacturer: North Shangxia Road, Dongjiang Hi-tech Industry Park, Huizhou, Guangdong Address: Province, 516005, PR China Car Multimedia Player E.U.T: VX7024 **Model Number: Power Supply: DC 12V DC 12V Test Voltage: JENSEN** Serial No.: **Trade Name:** November 26 ~ November 27, **Date of Receipt:** January 04,2017 Date of Test: FCC Rules and Regulations Part 15 Subpart C:2016 **Test Specification:** ANSI C63.10:2013 The device described above is tested by EST Technology Co., Ltd. The **Test Result:** measurement results were contained in this test report and EST Technology Co., Ltd. was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the FCC Rules and Regulations Part 15 Subpart C requirements. This report applies to above tested sample only and shall not be reproduced in part without written approval of EST Technology Co., Ltd. Date: November 28, 2017

Prepared by:

Reviewed by:

Approved by

Amy / Assistant

Tony / Engineer

Iceman Hu / Manage

Other Aspects:

None.

Abbreviations: OK/P=passed

fail/F=failed

n.a/N=not applicable

E.U.T=equipment under tested

This test report is based on a single evaluation of one sample of above mentioned products, It is not permitted to be duplicated in extracts without written approval of EST Technology Co., Ltd.

## 1. GENERAL INFORMATION

# 1.1. Description of Device (EUT)

Product Name	:	Car Multimedia Player
FCC ID		2AEIN-VX7024
		ZIZII VII VOZI
Model Number	:	VX7024
Operation frequency	:	2402MHz~2480MHz
Number of channel	:	79
Antenna	:	Internal antenna, 0 dBi gain
Modulation	:	BT BDR: GFSK BT EDR: π/4-DQPSK BT EDR: 8-DPSK
Sample Type	:	Prototype production



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## 2. SUMMARY OF TEST

## 2.1. Summary of test result

Description of Test Item	Standard	Results
Maximum Peak Output Power	FCC Part 15: 15.247(b)(1) DA 00-705	PASS
20dB Bandwidth	FCC Part 15: 15.247a1 DA 00-705	PASS
Carrier Frequency Separation	FCC Part 15: 15.247(a)(1) DA 00-705	PASS
Number Of Hopping Channel	FCC Part 15: 15.247(a)(1)(iii) DA 00-705	PASS
Dwell Time	FCC Part 15: 15.247(a)(1)(iii) DA 00-705	PASS
Radiated Emissions	FCC Part 15: 15.209 FCC Part 15: 15.247(d) ANSI C63.10:2013 DA 00-705	PASS
Band Edge Compliance	FCC Part 15: 15.247(d) DA 00-705	PASS
Power Line Conducted Emissions	FCC Part 15: 15.207 ANSI C63.10:201 DA 00-705	NA
Antenna requirement	FCC Part 15: 15.203	PASS

Note: 15.207 only signals conducted onto the AC power lines are required to be measured. The equipment is only DC power supply, so "Power Line Conducted Emissions" is not required.



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## 2.2. Test Facilities

EMC Lab	:	Certificated by CNAS, CHINA Registration No.: L5288 Date of registration: November 13, 2017 Certificated by A2LA, USA				
		Registration No.: 4366.01 Date of registration: November 07, 2017				
		Certificated by FCC, USA Designation Number: CN1215 Registration No.: 722932 Date of registration: November 21, 2017				
		Certificated by Industry Canada Registration No.: 9405A Date of registration: December 03, 2015				
		Certificated by VCCI, Japan Registration No.: R-13663; C-14103 Date of registration: July 25, 2017 This Certificate is valid until: July 24, 2020				
		Certificated by TUV Rheinland, Germany Registration No.: UA 50195514 0001 Date of registration: February 07, 2015				
		Certificated by TUV/PS, Shenzhen Registration No.: SCN1017 Date of registration: January 27, 2011				
		Certificated by Intertek ETL SEMKO Registration No.: 2011-RTL-L2-64 Date of registration: April 28, 2011				
		Certificated by Nemko, Hong Kong Registration No.: 175193 Date of registration: May 4, 2011				
Name of Firm	:	EST Technology Co., Ltd.				
Site Location	:	Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China				



## 2.3. Measurement uncertainty

Test Item	Uncertainty
Uncertainty for Conduction emission test	±3.48dB
Uncertainty for spurious emissions test	±4.60 dB(Polarize: H)
(30MHz-1GHz)	±4.68 dB(Polarize: V)
Uncertainty for spurious emissions test (1GHz to 18GHz)	±4.96dB
Uncertainty for radio frequency	7×10 <sup>-8</sup>
Uncertainty for conducted RF Power	0.20dB
Uncertainty for Power density test	0.26dB

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

## 2.4. Assistant equipment used for test

### 2.4.1. N/A

## 2.5. Block Diagram

For radiated emissions test: EUT was placed on a turn table, which is 0.8 (or 1.5) meter high above ground. EUT was beset into Bluetooth test mode by software before test.



(EUT: Car Multimedia Player)



## 2.6. Test mode

The test software was used to control EUT work in Continuous TX mode, and select test channel, wireless mode

Mode	Channel	Frequency
	Low	2402MHz
GFSK	Middle	2441MHz
	High	2480MHz
	Low	2402MHz
8-DPSK	Middle	2441MHz
	High	2480MHz

## 2.7. Channel List

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
No.	(MHz)	No.	(MHz)	No.	(MHz)	No.	(MHz)
1	2402	2	2403	3	2404	4	2405
5	2406	6	2407	7	2408	8	2409
9	2410	10	2411	11	2412	12	2413
13	2414	14	2415	15	2416	16	2417
17	2418	18	2419	19	2420	20	2421
21	2422	22	2423	23	2424	24	2425
25	2426	26	2427	27	2428	28	2429
29	2430	30	2431	31	2432	32	2433
33	2434	34	2435	35	2436	36	2437
37	2438	38	2439	39	2440	40	2441
41	2442	42	2443	43	2444	44	2445
45	2446	46	2447	47	2448	48	2449
49	2450	50	2451	51	2452	52	2453
53	2454	54	2455	55	2456	56	2457
57	2458	58	2459	59	2460	60	2461
61	2462	62	2463	63	2464	64	2465
65	2466	66	2467	67	2468	68	2469
69	2470	70	2471	71	2472	72	2473
73	2474	74	2475	75	2476	76	2477
77	2478	78	2479	79	2480	-	-

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## 2.8. Test Equipment

## 2.8.1. For conducted emission test

Equipment	Manufacturer	Model No.	Serial No.	Calibration	Last Cal.	Next Cal.
				Body		
EMI Test Receiver	Rohde	ESHS30	832354	CEPREI	June 17,17	1 Year
	& Schwarz					
Artificial Mains Network	Rohde	ENV216	101260	CEPREI	June 17,17	1 Year
	& Schwarz					
Pulse Limiter	Rohde	ESH3-Z2	101100	CEPREI	June 17,17	1 Year
	& Schwarz					
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A

## 2.8.2. For radiated emission test(9 kHz-30MHz)

Equipment	Manufacturer	Model No.	Serial No.	Calibration	Last Cal.	Next Cal.
				Body		
EMI Test	Rohde	ESR7	101780	CEPREI	June 17,17	1 Year
Receiver	& Schwarz					
Active Loop Antenna	SCHWARZB	FMZB1519	1519-038	CEPREI	October	1 Year
	ECK				08,17	
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A

## 2.8.3. For radiated emissions test (30-1000MHz)

Equipment	Manufacturer	Model No.	Serial No.	Calibration	Last Cal.	Next Cal.
				Body		
EMI Test	Rohde	ESR7	101780	CEPREI	June 17,17	1 Year
Receiver	& Schwarz					
Bilog Antenna	Teseq	CBL 6111D	27090	CEPREI	June 08,17	1 Year
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A

## 2.8.4. For radiated emission test(above 1GHz)

Equipment	Manufacturer	Model No.	Serial No.	Calibration	Last Cal.	Next Cal.
				Body		
Horn Antenna	SCHWARZB	BBHA 9120 D	BBHA912	CEPREI	June 08,17	1 Year
	ECK		0D1002			
Horn Antenna	SCHWARZB	BBHA9170	BBHA917	CEPREI	June 08,17	1Year
	ECK		0242			
Signal Amplifier	SCHWARZB	BBV9718	9718-212	CEPREI	March	1 Year
	ECK				12,17	
Signal Amplifier	Rohde	SCU40	100437	LISAI	November	1 Year
	&Schwarz				04,16	
Spectrum Analyzer	Rohde	FSV	103173	CEPREI	June 17,17	1 Year
	&Schwarz					
PSA Series Spertrum	Agilent	E4447A	MY50180	CEPREI	June 16,17	1Year
Analyzer			031			
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A

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## 2.8.5. For connect EUT antenna terminal test

Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
Snectrum Analyzer	Rohde &Schwarz	FSV	103173	CEPREI	June 17,17	1 Year
Spectrum Analyzer	Agilent	E4408B	MY44211 139	CEPREI	June 17,17	1 Year



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## 3. MAXIMUM PEAK OUTPUT POWER

### 3.1. Limit

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts, the e.i.r.p shall not exceed 4W

### 3.2. Test Procedure

The transmitter output (antenna port) was connected to the spectrum analyzer. Connect EUT antenna terminal to the spectrum analyzer with a low loss SMA cable.

## 3.3. Test Result

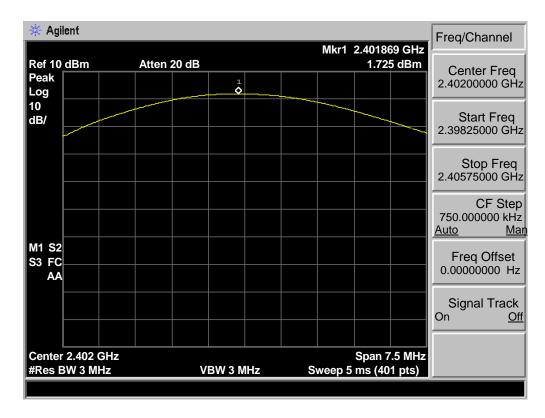
EUT: Car Multimedia Player								
M/N: VX7024								
Test date: 2017-11-27 Test site: RF site Tested by: Seven								
Mada Freq		Result	L	Limit				
Mode	(MHz)	(dBm)	dBm	W	Conclusion			
GFSK	2402	1.725	30.00	1	Pass			
	2441	2.395	30.00	1	Pass			
	2480	2.600	30.00	1	Pass			
	2402	1.595	21.00	0.125	Pass			
8-DPSK	2441	1.883	21.00	0.125	Pass			
	2480	2.021	21.00	0.125	Pass			



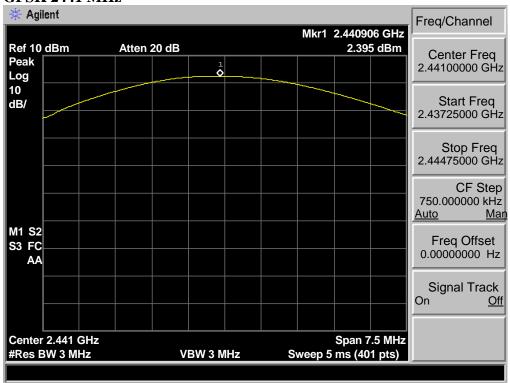
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### 3.4. Test Data

#### GFSK 2402 MHz



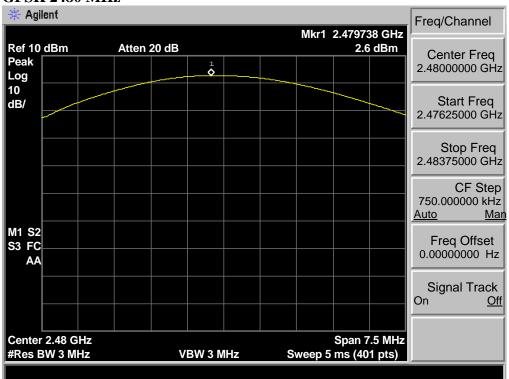
### GFSK 2441 MHz





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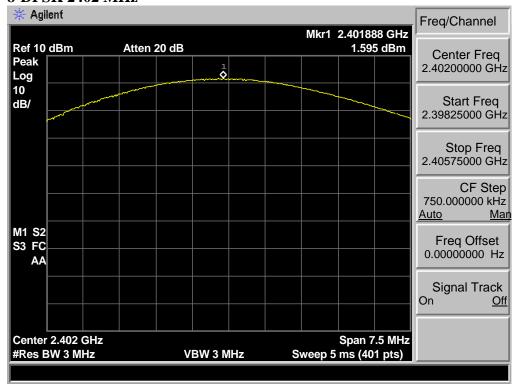
### GFSK 2480 MHz



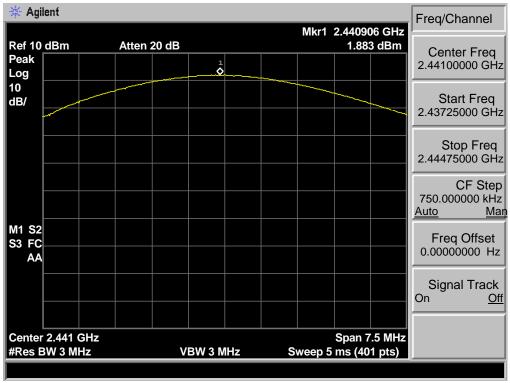


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#### 8-DPSK 2402 MHz



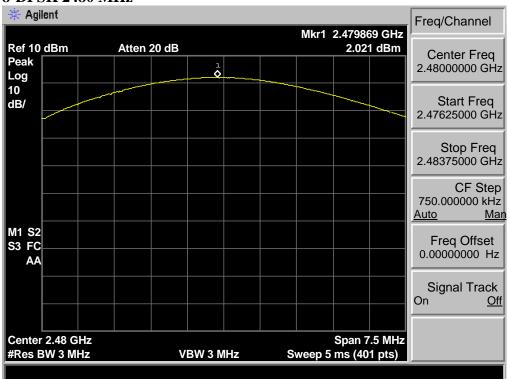
### 8-DPSK 2441 MHz





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## 8-DPSK 2480 MHz





## 4. 20 DB BANDWIDTH

### 4.1. Limit

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.

### 4.2. Test Procedure

The transmitter output (antenna port) was connected to the spectrum analyzer. Connect EUT antenna terminal to the spectrum analyzer with a low loss SMA cable. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

### 4.3. Test Result

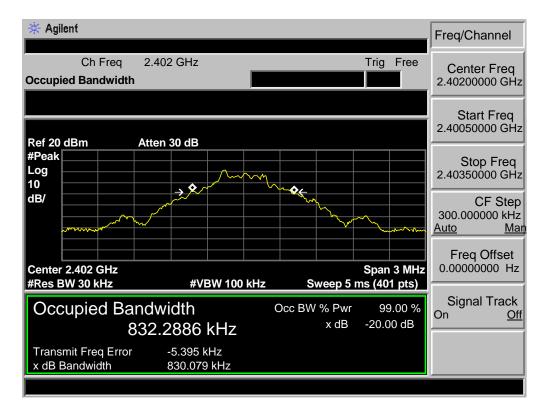
EUT: Car Multimedia Player							
M/N: VX7024							
Test date: 2017-11-27 Test site: RF site Tested by: Seven							
Mode	Freq (MHz)	20dB Bandwidth (MHz)	Limit (kHz)   Con				
	2402	0.830	/	PASS			
GFSK	2441	0.828	/	PASS			
	2480	0.824	/	PASS			
	2402	1.167	/	PASS			
8-DPSK	2441	1.166	/	PASS			
	2480	1.171	/	PASS			



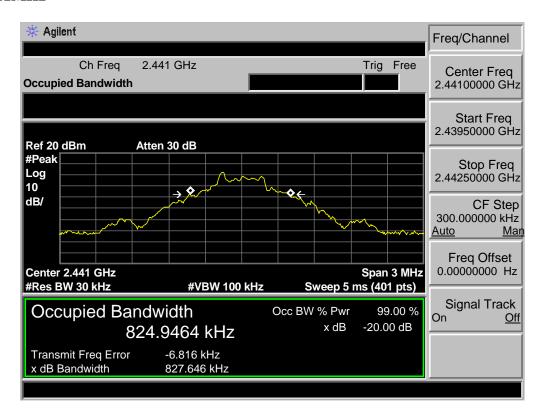
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## 4.4. Test Data

### GFSK 2402MHz



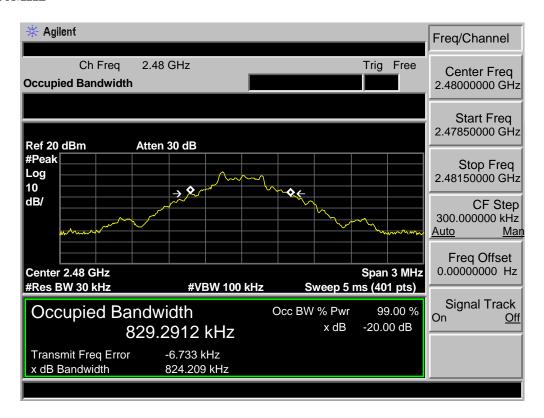
#### GFSK 2441MHz





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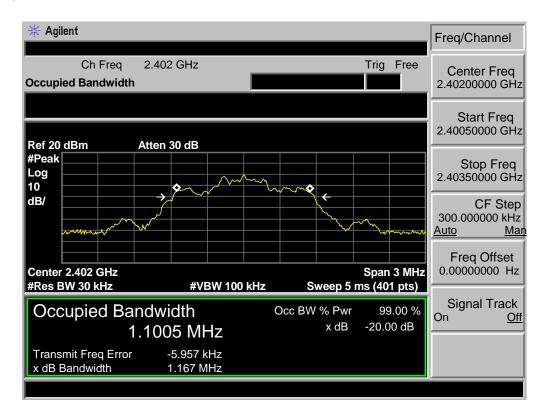
### GFSK 2480MHz



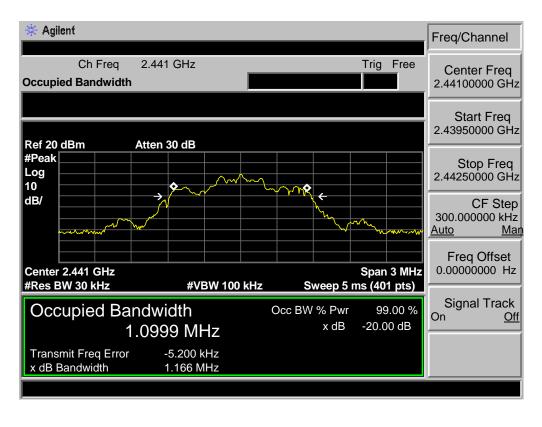


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#### 8-DPSK 2402MHz



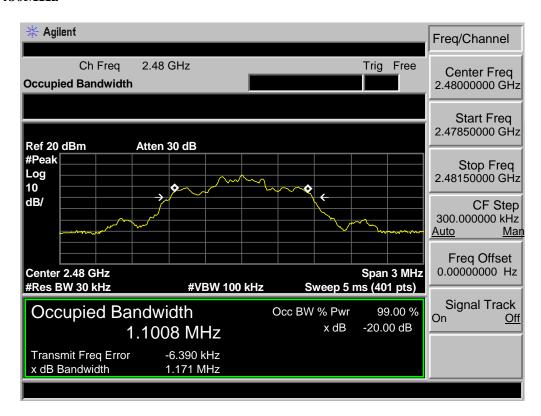
### 8-DPSK 2441MHz





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### 8-DPSK 2480MHz





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## 5. CARRIER FREQUENCY SEPARATION

### 5.1. Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

### 5.2. Test Procedure

The transmitter output (antenna port) was connected to the spectrum analyzer. Connect EUT antenna terminal to the spectrum analyzer with a low loss SMA cable. The carrier frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW.

### 5.3. Test Result

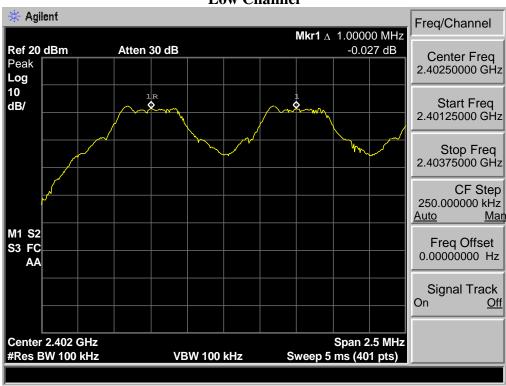
EUT: Car M	Iultimedia Pl	ayer			
M/N: VX70	)24				
Test date: 2017-11-26			Test site: RF site Tested by: Seven		
Mode	Channel	Channel			
		separation	Limit	Conclusion	
		(MHz)			
	Low CH	1.000	0.830MHz	PASS	
GFSK	Mid CH	1.000	0.828MHz	PASS	
	High CH	1.000	0.824MHz	PASS	
	Low CH	1.000	2/2 of the 20dD Dondryidth on	PASS	
8-DPSK	Mid CH	1.000	> 2/3 of the 20dB Bandwidth or	PASS	
High CH		1.000	25[kHz]( whichever is greater)	PASS	



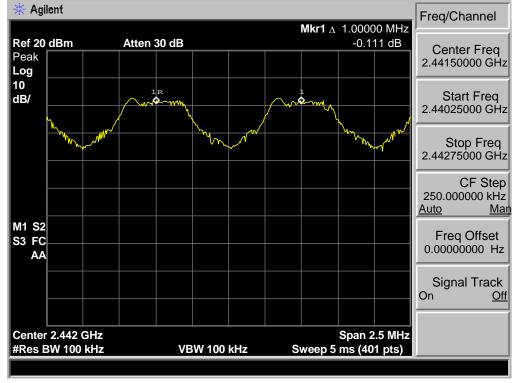
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### 5.4. Test Data

GFSK Low Channel

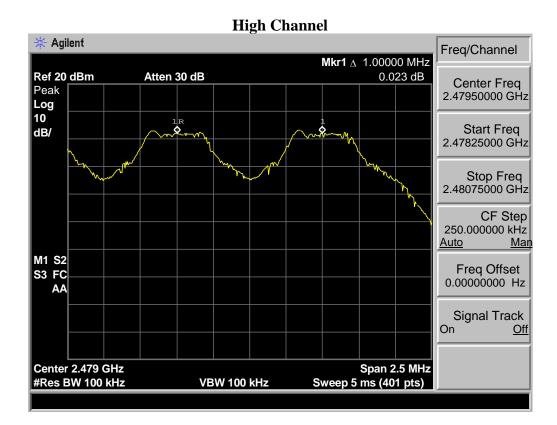


## **Mid Channel**



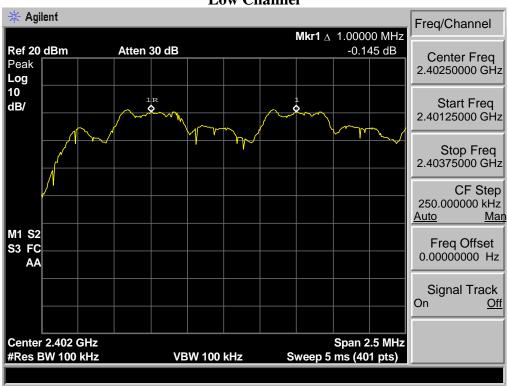


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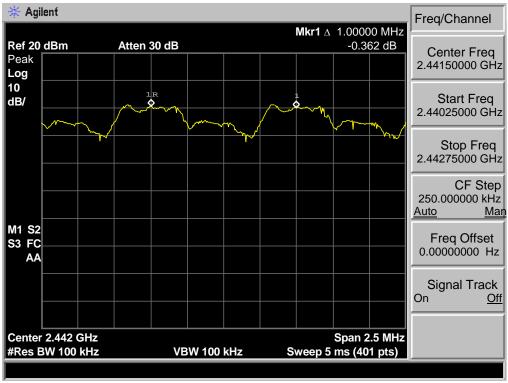




8-DPSK Low Channel

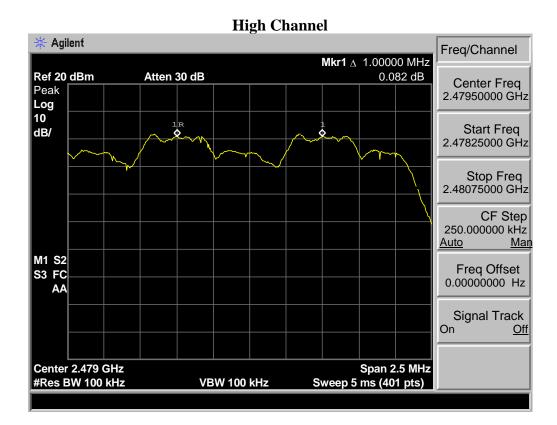


### **Mid Channel**





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## 6. NUMBER OF HOPPING CHANNEL

### 6.1. Limit

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels

### 6.2. Test Procedure

The transmitter output (antenna port) was connected to the spectrum analyzer. Connect EUT antenna terminal to the spectrum analyzer with a low loss SMA cable. The number of hopping channel was measured by spectrum analyzer with 300kHz RBW and 300kHz VBW.

## 6.3. Test Result

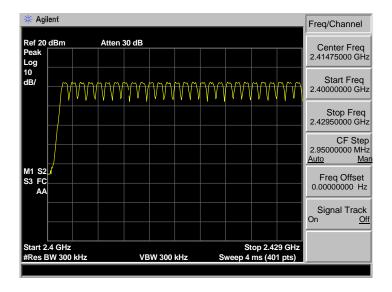
EUT: Car Multimedia Player							
M/N: VX7024							
Test date: 2017-11-26 Test site: RF site Tested by: Seven							
Mode	Number of hopping channel		Limit	Conclusion			
GFSK	79		>15	PASS			
8-DPSK	79		>15	PASS			

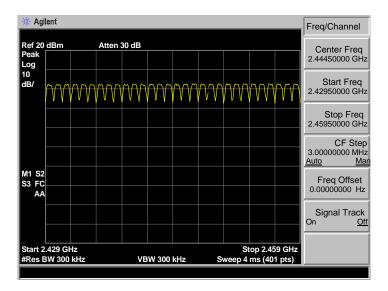


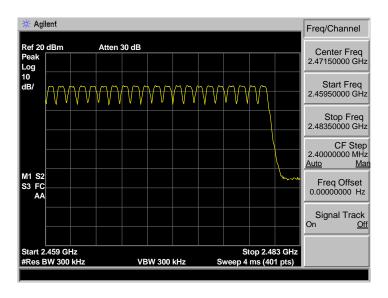
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## 6.4. Test Data

### **GFSK**



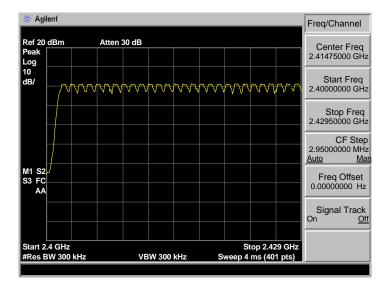


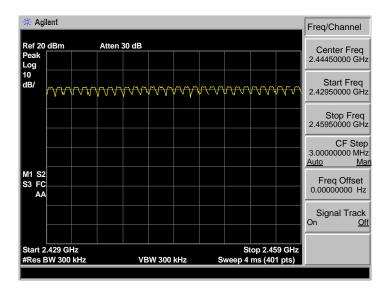


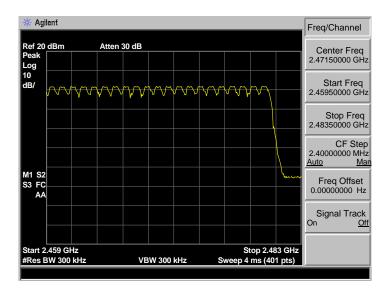


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### 8-DPSK









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## 7. DWELL TIME

### 7.1. Limit

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

### 7.2. Test Procedure

- 1. The transmitter output (antenna port) was connected to the spectrum analyzer. Connect EUT antenna terminal to the spectrum analyzer with a low loss SMA cable.
- 2. Set the EUT to proper test mode with relative test software and hardware.
- 3. Spectrum analyzer setting: Centered Frequency = measured channel, RBW = 1MHz, VBW = 1MHz, Frequency Span = 0 Hz.
- 4. Set sweep time properly to capture the entire dwell time per hopping channel.
- 5. Set detector type to Peak and trace mode to Max Hold and make the measurement.
- 6. Repeat step 3-5 until all channels measured were complete.

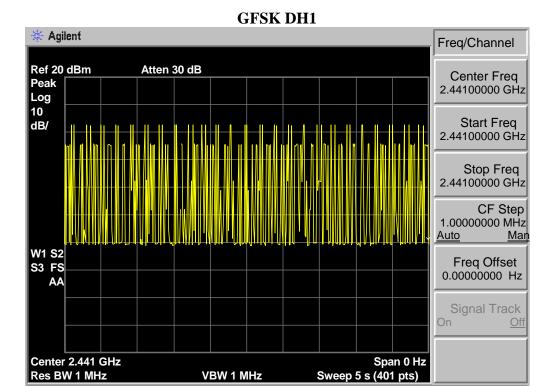
### 7.3. Test Result

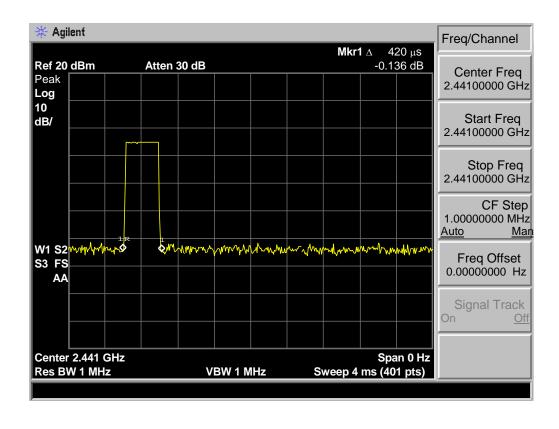
EUT: Car Multimedia Player							
M/N: VX7024							
Test date: 2017-11	Test date: 2017-11-26 Test site: RF site Tested by: Seven						
Mode	Hopping number	Measure time (s)	Burst on time (ms)	Dwell time (ms)	Limit	Conclusion	
GFSK DH1	46	5	0.42	122.1	<400ms	PASS	
GFSK DH3	23	5	1.68	244.2	<400ms	PASS	
GFSK DH5	19	5	2.92	350.6	<400ms	PASS	
8-DPSK 3DH1	44	5	0.43	119.5	<400ms	PASS	
8-DPSK 3DH3	24	5	1.69	256.3	<400ms	PASS	
8-DPSK 3DH5	18	5	2.92	332.1	<400ms	PASS	
Dwell time = Hopping number/measure time *0.4*79*burst on time.							



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### 7.4. Test Data

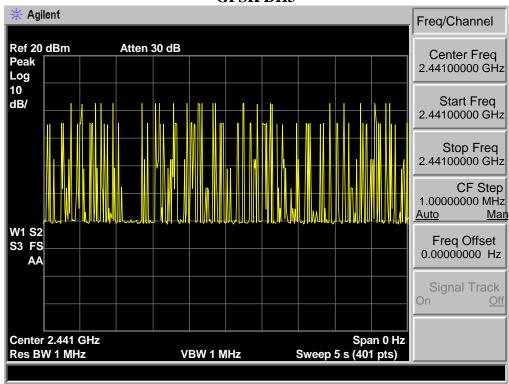


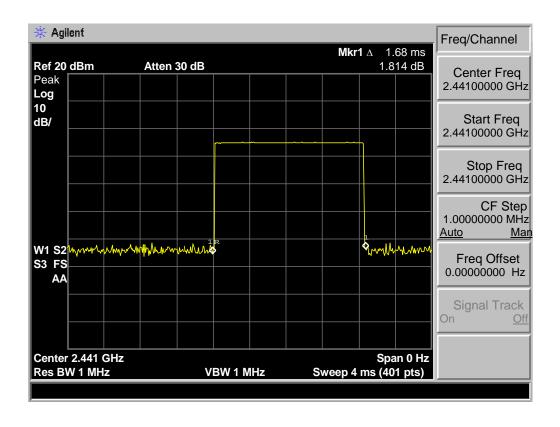




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#### **GFSK DH3**

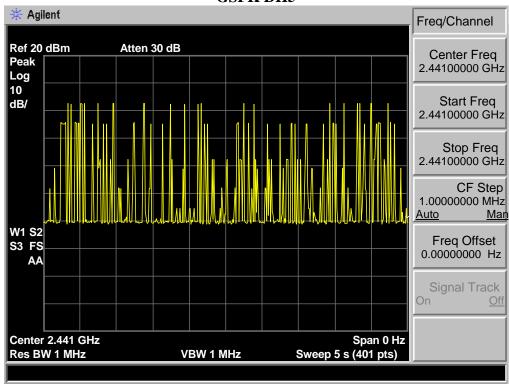


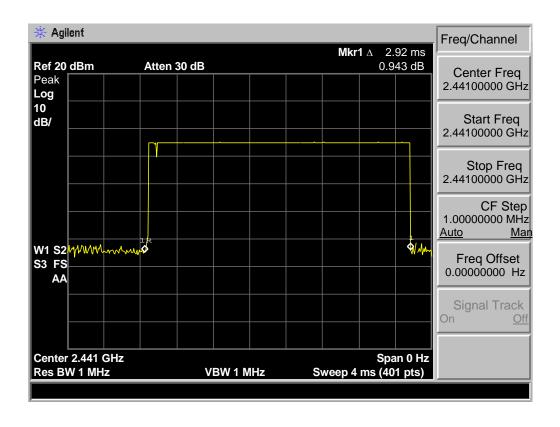




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### **GSFK DH5**



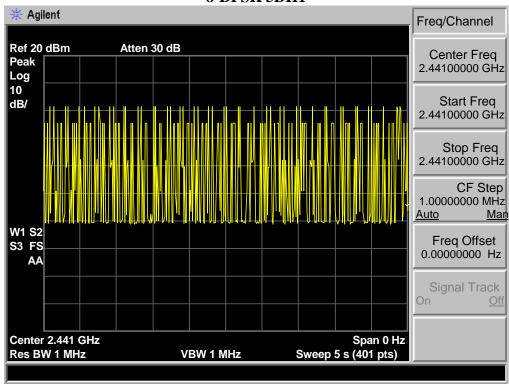


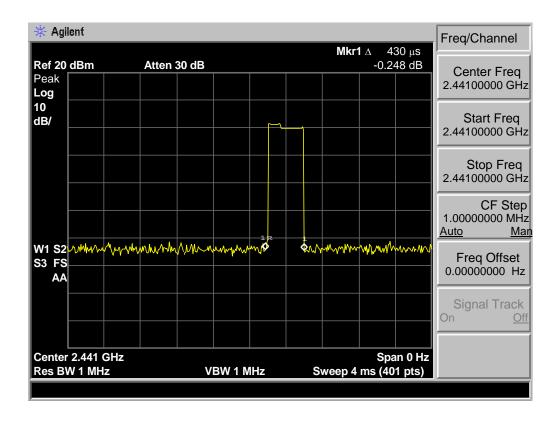
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#### **8-DPSK 3DH1**



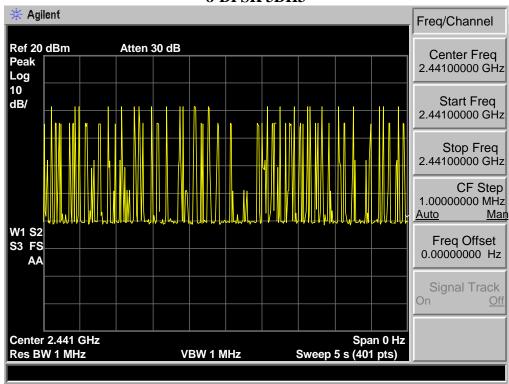


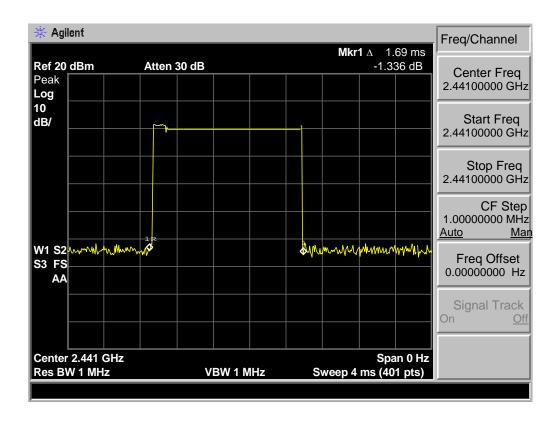


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#### **8-DPSK 3DH3**

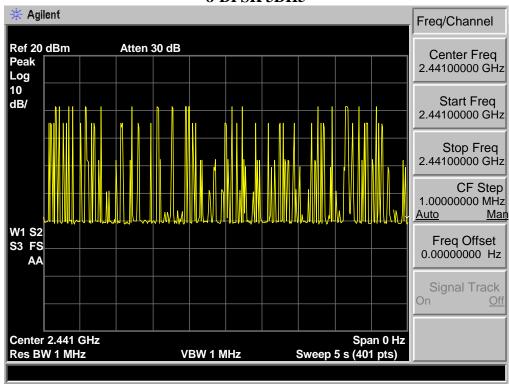


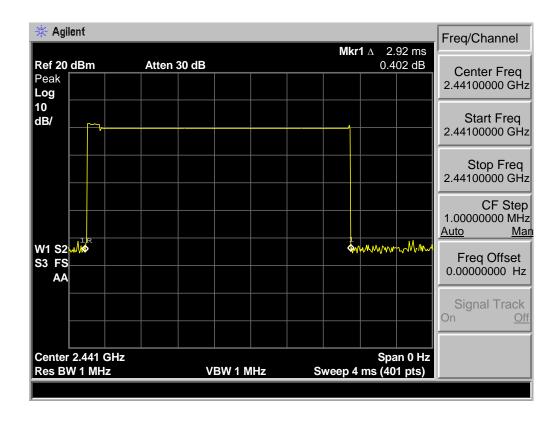




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#### **8-DPSK 3DH5**







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#### 8. RADIATED EMISSIONS

#### 8.1. Limit

All 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 20dB below the fundamental emissions, or comply with 15.209 limits.

15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 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
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 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)

15.209 Limit

13.207 Lillit		
Frequency (MHz)	Field Strength(µV/m)	Distance(m)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark : (1) Emission level  $dB\mu V = 20 \log$  Emission level  $\mu V/m$ 

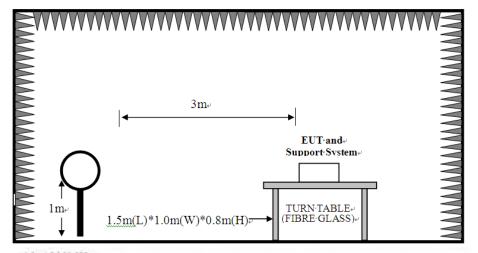
- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.



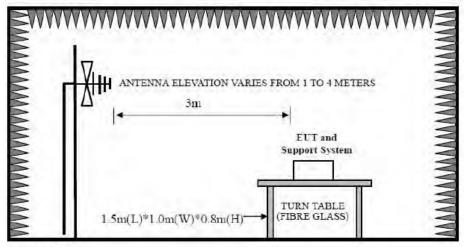
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### 8.2. Block Diagram of Test setup

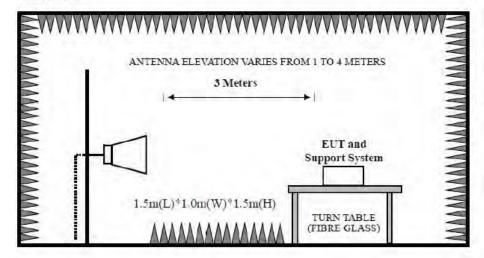
9kHz~30MHz



30~1000MHz



Above 1GHz



EST

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#### 8.3. Test Procedure

EUT was placed on a turn table, which is 0.8 meter high above ground for 9kHz~1000MHz test, and which is 1.5 meter high above ground for above 1GHz test. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test.

The test frequency analyzer system was set to Peak Detect (300Hz RBW in 9kHz to 150kHz and 10kHz RBW in 150kHz to 30MHz) Function and Specified Bandwidth with Maximum Hold Mode.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 1MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

PEAK detector, 1MHz/1MHz for PAEK measurement,

PEAK detector, 1MHz/10Hz for Average measurement

The frequency range from 30MHz to 10th harmonic (25GHz) are checked.

#### 8.4. Test Result

Pass

Note: 1. For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.

2. The frequency 2402MHz \ 2441MHz and 2480MHz is fundamental frequency which no limit, the limit on plots is automatically generated by the software, it's not fundamental limit, we can't remove it.



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### 8.5. Test Data

9 kHz – 30 MHz

Pass

Note: The amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

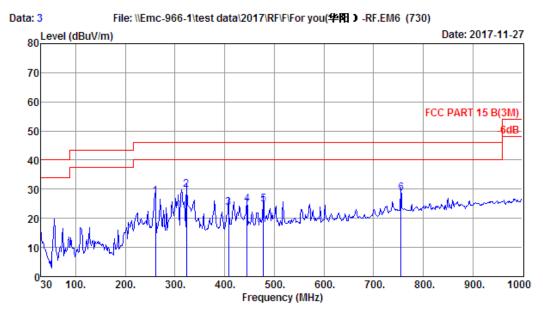


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#### 30 MHz - 1000 MHz

# EST Technology

Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China Tel:+86-769-83081888 Fax:+86-769-83081878



Site no : 966 Chamber Data no. : 3

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa LINE Phase : HORIZONTAL

Limit : FCC PART 15 B(3M)

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024 Test Mode : TX Mode

	Freq.	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	260.860	12.96	2.22	12.16	27.34	46.00	18.66	QP
2	322.940	13.65	2.43	13.68	29.76	46.00	16.24	QP
3	408.300	16.25	2.68	4.79	23.72	46.00	22.28	QP
4	445.160	16.36	2.92	5.56	24.84	46.00	21.16	QP
5	478.140	17.40	3.07	4.40	24.87	46.00	21.13	QP
6	755.560	22.10	3.87	2.61	28.58	46.00	17.42	QP

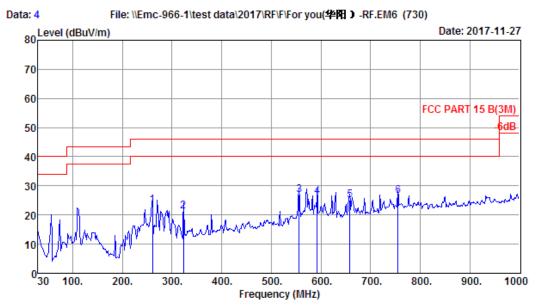
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

- 2. Margin= Limit Emission Level.
- 3. The emission levels that are 20dB below the official limit are not reported.

Report No. ESTE-R1702007



Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China Tel:+86-769-83081888 Fax:+86-769-83081878



Site no : 966 Chamber Data no. : 4
Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa LINE Phase : VERTICAL

Limit : FCC PART 15 B(3M)

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024 Test Mode : TX Mode

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	260.860	12.96	2.22	8.22	23.40	46.00	22.60	QP
2	322.940	13.65	2.43	5.08	21.16	46.00	24.84	QP
3	555.740	19.61	3.25	4.10	26.96	46.00	19.04	QP
4	592.600	19.48	3.36	3.35	26.19	46.00	19.81	QP
5	658.560	20.06	3.61	1.48	25.15	46.00	20.85	QP
6	755.560	22.10	3.87	0.68	26.65	46.00	19.35	QP

- 2. Margin= Limit Emission Level.
- 3. The emission levels that are 20dB below the official limit are not reported.

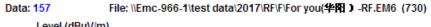


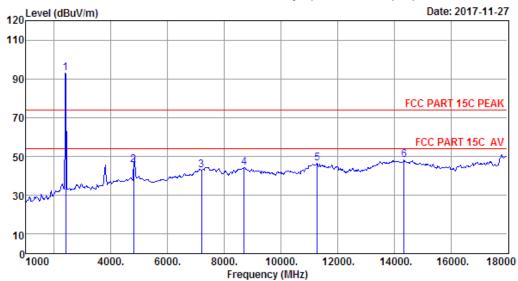
#### 1000-18000MHz

# EST Technology

Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China Tel:+86-769-83081888

Fax:+86-769-83081878





Site no. : 966 Chamber

Data no. : 157 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m ANT 1-18G

: FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

: Car multimedia player EUT

Power : DC 12V : VX7024 M/N

: GFSK TX 2402MHz Test Mode

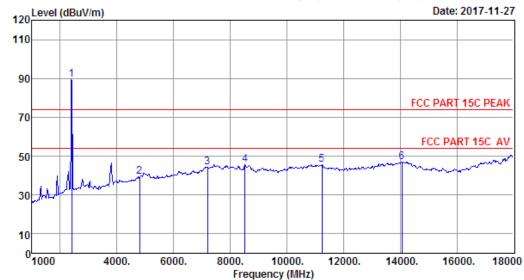
		Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	L	2402.00	27.61	6.62	34.64	93.41	93.00	74.00	-19.00	Peak
2	2	4804.00	31.25	11.77	35.64	38.12	45.50	74.00	28.50	Peak
3	3	7206.00	36.52	11.54	33.95	28.75	42.86	74.00	31.14	Peak
4	1	8701.00	37.35	11.45	33.65	29.05	44.20	74.00	29.80	Peak
5	5	11285.00	39.33	11.08	33.32	29.21	46.30	74.00	27.70	Peak
6	5	14345.00	41.76	10.92	33.39	28.85	48.14	74.00	25.86	Peak

- 2. Margin= Limit Emission Level.
- 3. The emission levels that are 20dB below the official limit are not reported.



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Data: 158 File: \\Emc-966-1\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 158
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : GFSK TX 2402MHz

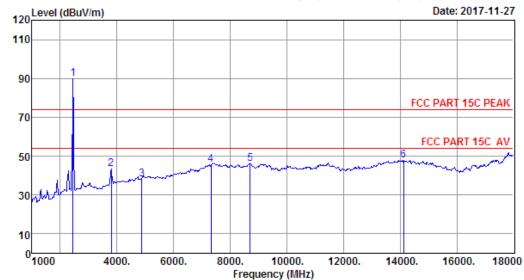
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2402.00	27.61	6.62	34.64	89.74	89.33	74.00	-15.33	Peak
2	4804.00	31.25	11.77	35.64	32.08	39.46	74.00	34.54	Peak
3	7206.00	36.52	11.54	33.95	30.31	44.42	74.00	29.58	Peak
4	8514.00	36.96	11.45	34.07	31.13	45.47	74.00	28.53	Peak
5	11234.00	39.37	11.12	33.25	28.27	45.51	74.00	28.49	Peak
6	14056.00	41.51	10.90	33.06	27.62	46.97	74.00	27.03	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 159 File: \\Emc-966-1\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 159
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : GFSK TX 2441MHz

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2441.00	27.60	6.67	34.85	90.56	89.98	74.00	-15.98	Peak
2	3805.00	29.11	10.06	36.36	40.76	43.57	74.00	30.43	Peak
3	4882.00	31.37	12.07	35.76	30.58	38.26	74.00	35.74	Peak
4	7323.00	36.55	11.57	34.14	31.55	45.53	74.00	28.47	Peak
5	8701.00	37.35	11.45	33.65	30.94	46.09	74.00	27.91	Peak
6	14124.00	41.57	10.91	33.22	28.63	47.89	74.00	26.11	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

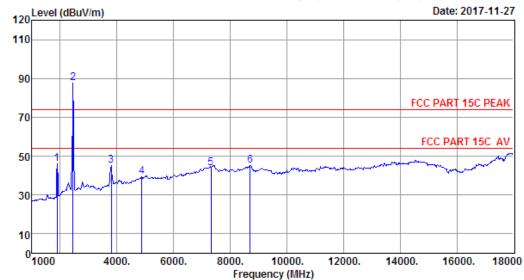
- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Site no. : 966 Chamber Data no. : 160
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : GFSK TX 2441MHz

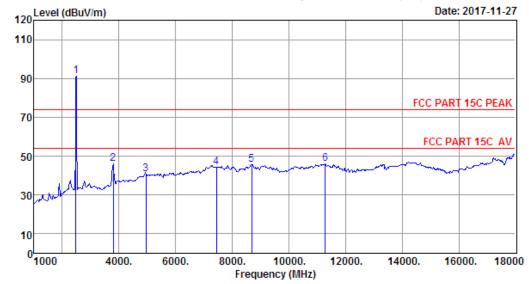
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1884.00	25.28	5.75	35.23	50.39	46.19	74.00	27.81	Peak
2	2441.00	27.60	6.67	34.85	88.32	87.74	74.00	-13.74	Peak
3	3805.00	29.11	10.06	36.36	42.57	45.38	74.00	28.62	Peak
4	4882.00	31.37	12.07	35.76	31.62	39.30	74.00	34.70	Peak
5	7323.00	36.55	11.57	34.14	30.02	44.00	74.00	30.00	Peak
6	8701.00	37.35	11.45	33.65	29.92	45.07	74.00	28.93	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 161 File: \\Emc-966-1\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 161
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : GFSK TX 2480MHz

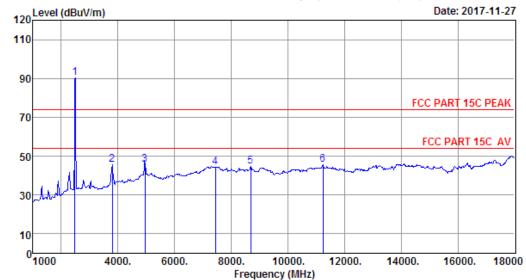
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.00	27.58	6.71	35.11	91.96	91.14	74.00	-17.14	Peak
2	3805.00	29.11	10.06	36.36	43.32	46.13	74.00	27.87	Peak
3	4960.00	31.49	12.44	36.01	33.03	40.95	74.00	33.05	Peak
4	7440.00	36.54	11.61	34.22	30.53	44.46	74.00	29.54	Peak
5	8684.00	37.32	11.45	33.66	30.44	45.55	74.00	28.45	Peak
6	11285.00	39.33	11.08	33.32	28.93	46.02	74.00	27.98	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 162 File: \\Emc-966-1\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 162
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : GFSK TX 2480MHz

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.00	27.58	6.71	35.11	91.18	90.36	74.00	-16.36	Peak
2	3805.00	29.11	10.06	36.36	42.59	45.40	74.00	28.60	Peak
3	4960.00	31.49	12.44	36.01	37.48	45.40	74.00	28.60	Peak
4	7440.00	36.54	11.61	34.22	30.27	44.20	74.00	29.80	Peak
5	8684.00	37.32	11.45	33.66	29.72	44.83	74.00	29.17	Peak
6	11234.00	39.37	11.12	33.25	28.16	45.40	74.00	28.60	Peak

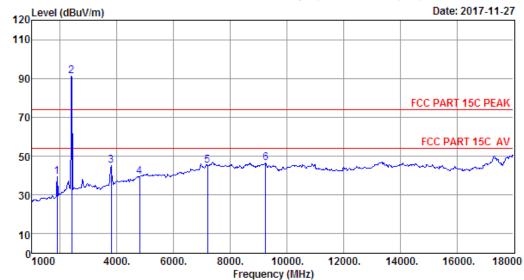
Report No. ESTE-R1702007

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 163 File: \\Emc-966-1\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 163
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

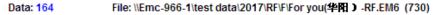
Test Mode : 8-DPSK TX 2402MHz

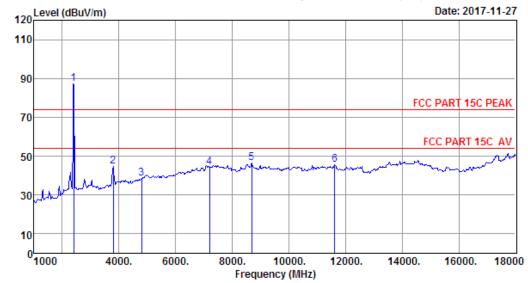
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1884.00	25.28	5.75	35.23	43.72	39.52	74.00	34.48	Peak
2	2402.00	27.61	6.62	34.64	91.77	91.36	74.00	-17.36	Peak
3	3805.00	29.11	10.06	36.36	42.20	45.01	74.00	28.99	Peak
4	4804.00	31.25	11.77	35.64	32.21	39.59	74.00	34.41	Peak
5	7206.00	36.52	11.54	33.95	31.09	45.20	74.00	28.80	Peak
6	9245.00	37.83	11.58	34.37	31.65	46.69	74.00	27.31	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Site no. : 966 Chamber Data no. : 164
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : 8-DPSK TX 2402MHz

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2402.00	27.61	6.62	34.64	87.50	87.09	74.00	-13.09	Peak
2	3805.00	29.11	10.06	36.36	42.10	44.91	74.00	29.09	Peak
3	4804.00	31.25	11.77	35.64	31.06	38.44	74.00	35.56	Peak
4	7206.00	36.52	11.54	33.95	30.16	44.27	74.00	29.73	Peak
5	8684.00	37.32	11.45	33.66	31.17	46.28	74.00	27.72	Peak
6	11625.00	39.06	11.04	33.19	28.64	45.55	74.00	28.45	Peak

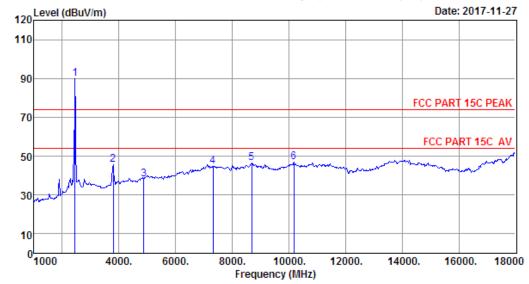
Report No. ESTE-R1702007

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 165 File: \\Emc-966-1\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 165
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : 8-DPSK TX 2441MHz

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2441.00	27.60	6.67	34.85	90.53	89.95	74.00	-15.95	Peak
2	3805.00	29.11	10.06	36.36	42.74	45.55	74.00	28.45	Peak
3	4882.00	31.37	12.07	35.76	30.58	38.26	74.00	35.74	Peak
4	7323.00	36.55	11.57	34.14	30.55	44.53	74.00	29.47	Peak
5	8684.00	37.32	11.45	33.66	31.34	46.45	74.00	27.55	Peak
6	10180.00	38.42	11.49	34.53	31.40	46.78	74.00	27.22	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

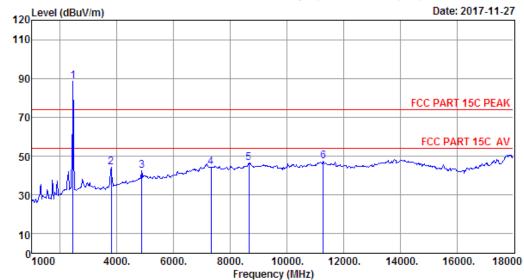
- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Site no. : 966 Chamber Data no. : 166
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : 8-DPSK TX 2441MHz

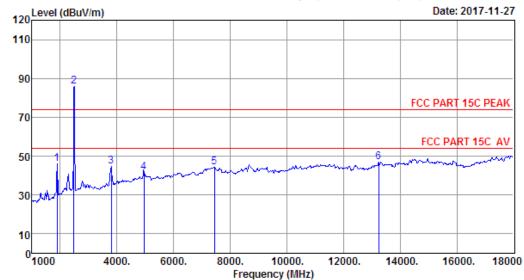
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2441.00	27.60	6.67	34.85	88.93	88.35	74.00	-14.35	Peak
2	3805.00	29.11	10.06	36.36	41.53	44.34	74.00	29.66	Peak
3	4882.00	31.37	12.07	35.76	34.74	42.42	74.00	31.58	Peak
4	7323.00	36.55	11.57	34.14	30.45	44.43	74.00	29.57	Peak
5	8650.00	37.27	11.45	33.68	31.52	46.56	74.00	27.44	Peak
6	11285.00	39.33	11.08	33.32	30.33	47.42	74.00	26.58	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Site no. : 966 Chamber Data no. : 167
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : 8-DPSK TX 2480MHz

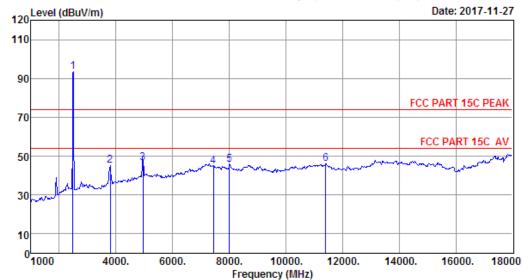
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1884.00	25.28	5.75	35.23	50.09	45.89	74.00	28.11	Peak
2	2480.00	27.58	6.71	35.11	86.74	85.92	74.00	-11.92	Peak
3	3805.00	29.11	10.06	36.36	42.05	44.86	74.00	29.14	Peak
4	4960.00	31.49	12.44	36.01	33.87	41.79	74.00	32.21	Peak
5	7440.00	36.54	11.61	34.22	30.19	44.12	74.00	29.88	Peak
6	13240.00	39.46	11.46	32.88	29.07	47.11	74.00	26.89	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 168 File: \\Emc-966-1\test data\\2017\\RF\\F\\For you(华阳 ) -RF.EM6 (730)



Site no. : 966 Chamber Data no. : 168
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : 8-DPSK TX 2480MHz

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.00	27.58	6.71	35.11	94.07	93.25	74.00	-19.25	Peak
2	3805.00	29.11	10.06	36.36	42.42	45.23	74.00	28.77	Peak
3	4960.00	31.49	12.44	36.01	38.60	46.52	74.00	27.48	Peak
4	7440.00	36.54	11.61	34.22	30.92	44.85	74.00	29.15	Peak
5	8004.00	37.01	11.40	34.96	32.33	45.78	74.00	28.22	Peak
6	11404.00	39.25	10.99	33.57	29.46	46.13	74.00	27.87	Peak

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- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



### 18000MHz-25000MHz

Pass

Note: The amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.



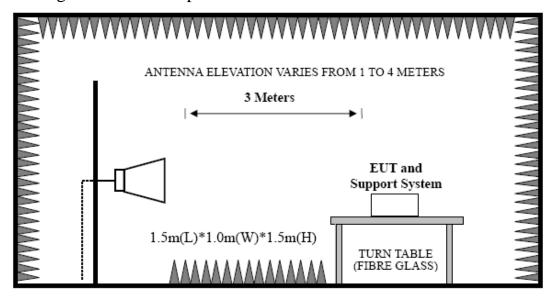
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#### 9. BAND EDGE COMPLIANCE

#### 9.1. Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

#### 9.2. Block Diagram of Test setup



#### 9.3. Test Procedure

EUT was placed on a turn table, which is 1.5 m high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test.

Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of emissions

Peak: RBW = 1MHz, VBW = 1MHz, Detector = PEAK detector, Sweep time = auto.

AV: RBW = 1MHz, VBW = 10Hz, Detector=PEAK detector, Sweep time = auto.

#### 9.4. Test Result

Pass (The testing data was attached in the next pages.)

Note: 1. For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.

2. The frequency 2402MHz and 2480MHz is fundamental frequency which no limit, the limit on plots is automatically generated by the software, it's not fundamental limit, we can't remove it.



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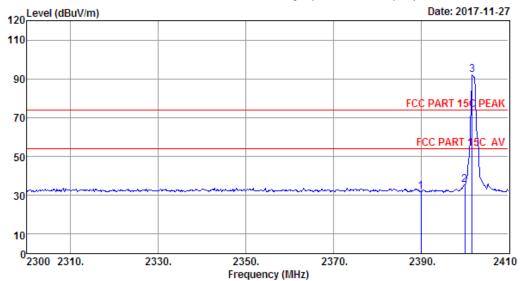
#### Test Data

### EST Technology

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Data: 137 File: \\Emc-966-1\\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 137
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : GFSK TX 2402MHz (No Hopping)

	Freq.		-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00				31.72	74.00	42.28	Peak
2 3	2400.00 2401.75			35.77 92.62	35.36 92.21	74.00 74.00	38.64 -18.21	Peak Peak

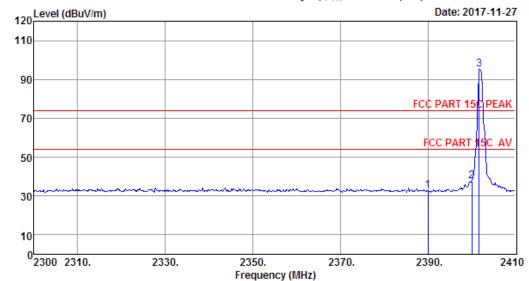
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- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 138 File: \\Emc-966-1\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 138
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : GFSK TX 2402MHz (No Hopping)

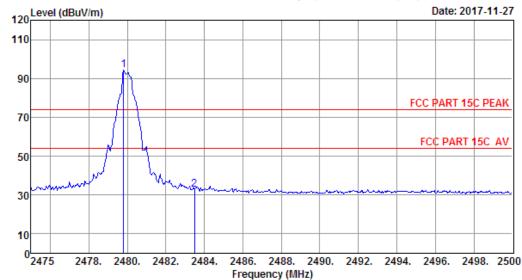
		Freq. (MHz)			-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
_	1	2390.00					32.63	74.00	41.37	Peak
	2	2400.00 2401.75				38.00 95.76	37.59 95.35	74.00 74.00	36.41 -21.35	Peak Peak
	•	2401.70	27.01	0.02	04.04	30.70	30.00	/4.00	21.00	LCGA

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 139 File: \\Emc-966-1\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 139
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : GFSK TX 2480MHz (No Hopping)

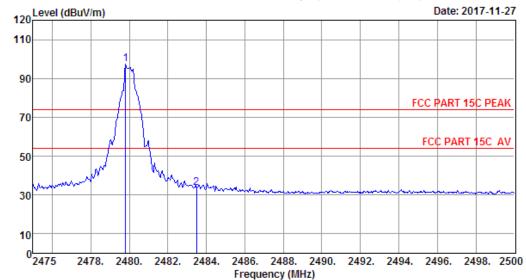
	Freq.			Factor	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2479.80	27.58	6.71	35.11	95.27	94.45	74.00	-20.45	Peak
2	2483.50	27.58	6.71	35.11	33.44	32.62	74.00	41.38	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Site no. : 966 Chamber Data no. : 140
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : GFSK TX 2480MHz (No Hopping)

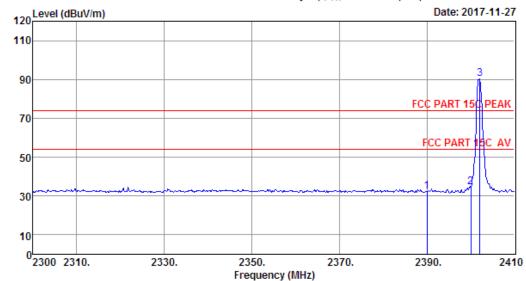
	Freq.			Factor	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2479.80	27.58	6.71	35.11	98.35	97.53	74.00	-23.53	Peak
2	2483.50	27.58	6.71	35.11	34.61	33.79	74.00	40.21	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 141 File: \\Emc-966-1\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 141
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : 8-DPSK TX 2402MHz (No Hopping)

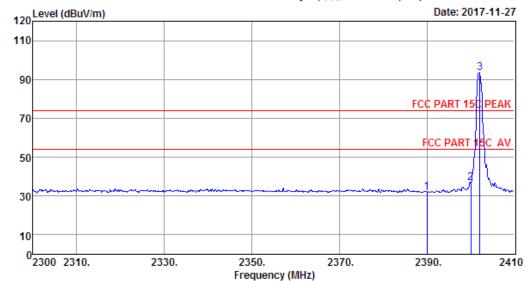
		Freq.			-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
_	1	2390.00	27.64	6.62	34.62	32.63	32.27	74.00	41.73	Peak
	2	2400.00	27.61	6.62	34.64	35.03	34.62	74.00	39.38	Peak
	3	2402.08	27.61	6.62	34.64	90.59	90.18	74.00	-16.18	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 142 File: \\Emc-966-1\\test data\\2017\\RF\\F\\For you(华阳 ) -RF.EM6 (730)



Site no. : 966 Chamber Data no. : 142
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : 8-DPSK TX 2402MHz (No Hopping)

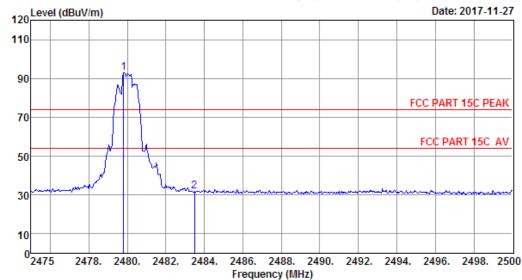
	_		Cable	-		Emission		Vanaia	
	Freq. (MHz)	Factor (dB/m)		Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.64	6.62	34.62	32.42	32.06	74.00	41.94	Peak
2	2400.00	27.61	6.62	34.64	37.28	36.87	74.00	37.13	Peak
3	2402.08	27.61	6.62	34.64	94.06	93.65	74.00	-19.65	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 143 File: \\Emc-966-1\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 143
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

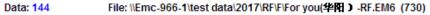
Test Mode : 8-DPSK TX 2480MHz (No Hopping)

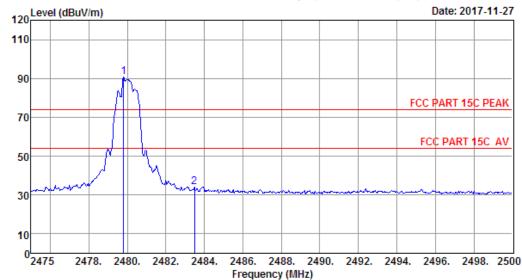
	Freq.			Factor	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2479.80	27.58	6.71	35.11	94.01	93.19	74.00	-19.19	Peak
2	2483.50	27.58	6.71	35.11	32.57	31.75	74.00	42.25	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Site no. : 966 Chamber Data no. : 144
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : 8-DPSK TX 2480MHz (No Hopping)

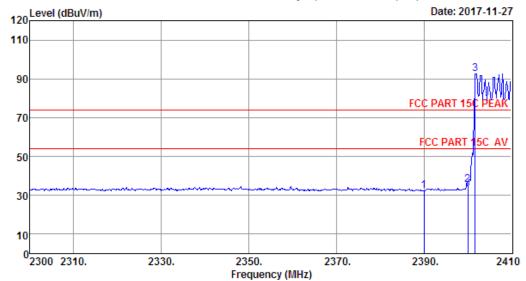
		eq. Fa	int. C nctor L iB/m) (	oss I	actor R		Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	247	9.80 27	.58 6	.71 3	35.11	91.78	90.96	74.00	-16.96	Peak
2	248	3.50 27	.58 6	.71 3	35.11	34.75	33.93	74.00	40.07	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Site no. : 966 Chamber Data no. : 169
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

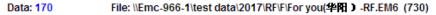
Test Mode : GFSK TX 2402MHz (Hopping On)

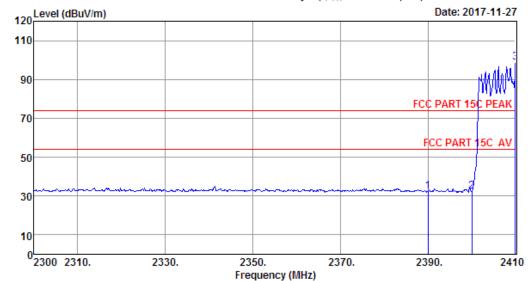
	Freq.			-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.64	6.62	34.62	32.72	32.36	74.00	41.64	Peak
2	2400.00	27.61	6.62	34.64	36.01	35.60	74.00	38.40	Peak
3	2401.75	27.61	6.62	34.64	93.13	92.72	74.00	-18.72	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Site no. : 966 Chamber Data no. : 170
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : GFSK TX 2402MHz (Hopping On)

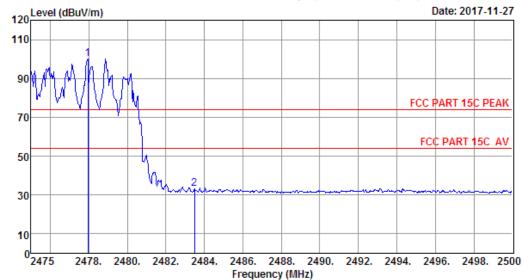
		Freq.			-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
_	1	2390.00	27.64	6.62	34.62	32.70	32.34	74.00	41.66	Peak
	2	2400.00	27.61	6.62	34.64	32.75	32.34	74.00	41.66	Peak
	3	2410.00	27.60	6.64	34.64	99.14	98.74	74.00	-24.74	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 171 File: \\Emc-966-1\\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 171
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : GFSK TX 2480MHz (Hopping On)

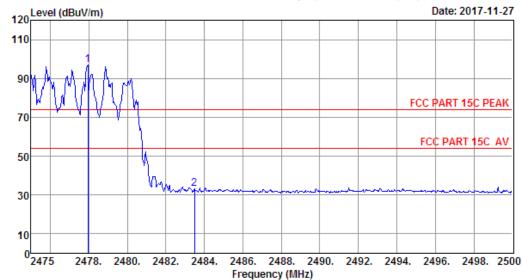
	Freq.			Factor	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2477.95	27.58	6.71	35.11	100.75	99.93	74.00	-25.93	Peak
2	2483.50	27.58	6.71	35.11	33.85	33.03	74.00	40.97	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 172 File: \\Emc-966-1\\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 172
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : GFSK TX 2480MHz (Hopping On)

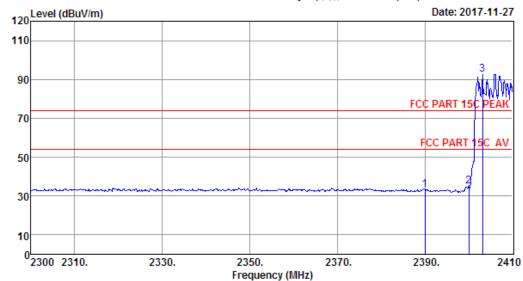
	Freq.			Factor	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2477.95	27.58	6.71	35.11	97.75	96.93	74.00	-22.93	Peak
2	2483.50	27.58	6.71	35.11	33.85	33.03	74.00	40.97	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 173 File: \\Emc-966-1\test data\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



: 966 Chamber Data no. : 173 Site no. : 3m ANT 1-18G Dis. / Ant. Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

: DC 12V Power M/N : VX7024

Test Mode : 8-DPSK TX 2402MHz (Hopping On)

		Freq.			-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
_	1	2390.00	27.64	6.62	34.62	33.73	33.37	74.00	40.63	Peak
	2	2400.00	27.61	6.62	34.64	35.32	34.91	74.00	39.09	Peak
	3	2403.18	27.61	6.64	34.64	92.97	92.58	74.00	-18.58	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

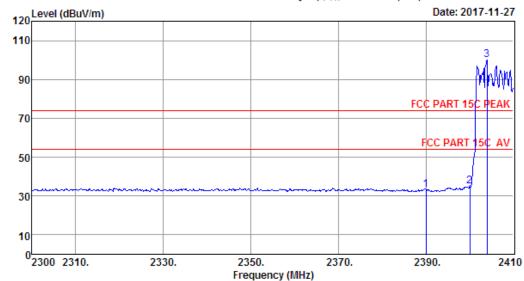
- 2. Margin= Limit Emission Level.
- 3. The emission levels that are 20dB below the official limit are not reported.



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Data: 174 File: \\Emc-966-1\test data\\2017\\RF\\F\\For you(华阳 ) -\RF.EM6 (730)



Site no. : 966 Chamber Data no. : 174
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : 8-DPSK TX 2402MHz (Hopping On)

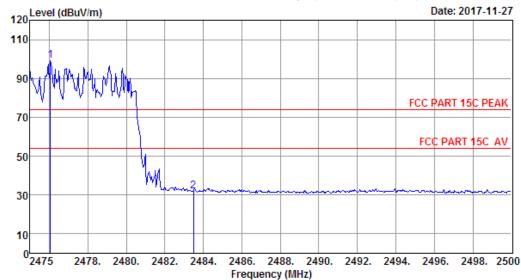
		Freq.			-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
_	1	2390.00	27.64	6.62	34.62	33.73	33.37	74.00	40.63	Peak
	2	2400.00	27.61	6.62	34.64	35.32	34.91	74.00	39.09	Peak
	3	2403.95	27.61	6.64	34.64	100.36	99.97	74.00	-25.97	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Site no. : 966 Chamber Data no. : 175
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : 8-DPSK TX 2480MHz (Hopping On)

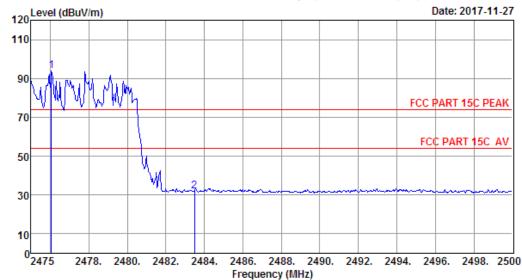
	Factor	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
 6.05 27.58 3.50 27.58		99.84 32.56	99.02 31.74	74.00 74.00	-25.02 42.26	Peak Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Site no. : 966 Chamber Data no. : 176
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Car multimedia player

Power : DC 12V M/N : VX7024

Test Mode : 8-DPSK TX 2480MHz (Hopping On)

	Freq.	Loss	Reading	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
_	2476.05 2483.50	 	 	94.02 31.74	74.00 74.00	-20.02 42.26	Peak Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



## 10. POWER LINE CONDUCTED EMISSIONS

### 10.1.Limit

	Maximum RF Line Voltage	
Frequency	Quasi-Peak Level	Average Level
	$dB(\mu V)$	dB(µV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. \* Decreasing linearly with logarithm of frequency.

### 10.2.Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT was charged form PC's USB port which connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#).. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10:2013 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESHS30) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked.

## 10.3.Test Result

NA



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<sup>2.</sup> The lower limit shall apply at the transition frequencies.

## 11. ANTENNA REQUIREMENTS

#### 11.1.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 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 11.2.Result

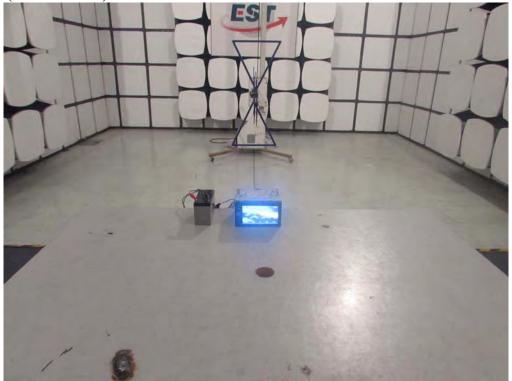
The antennas used for this product are Internal antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 0 dBi.



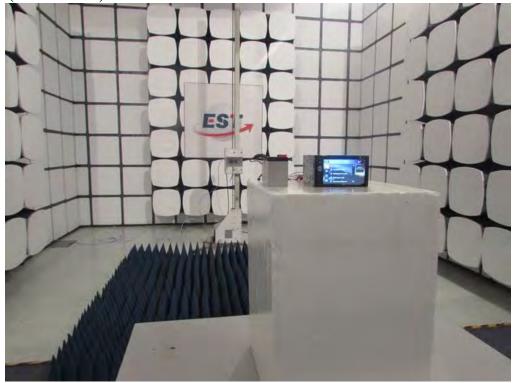
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# 12. TEST SETUP PHOTO

Radiated Test (30-1000 MHz)



Radiated Test (Above 1GHz)





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# **13.PHOTO EUT**

**External Photos** 







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External Photos M/N: VX7024

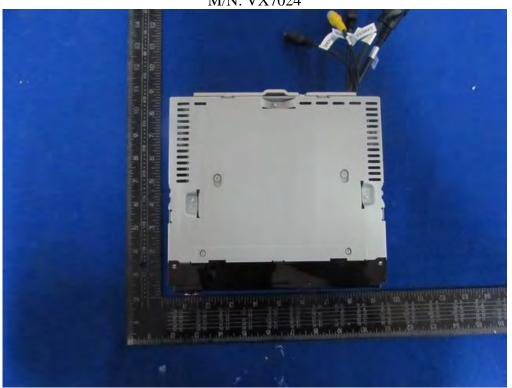


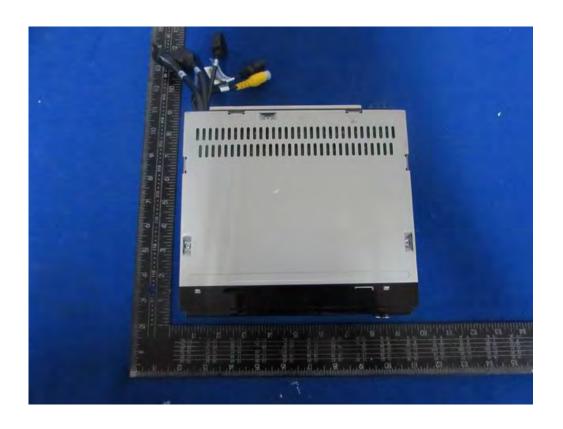




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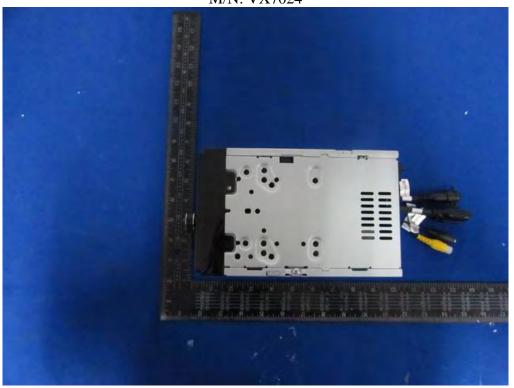
**External Photos** M/N: VX7024

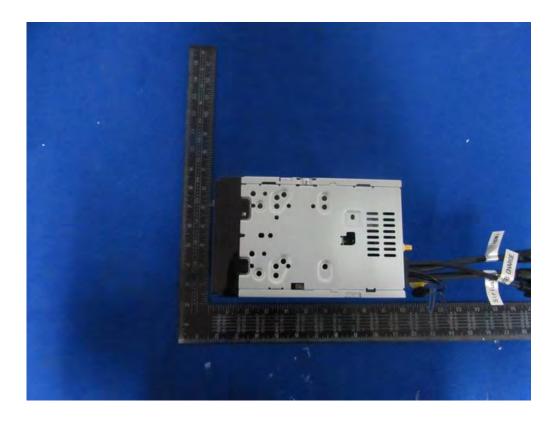






External Photos M/N: VX7024











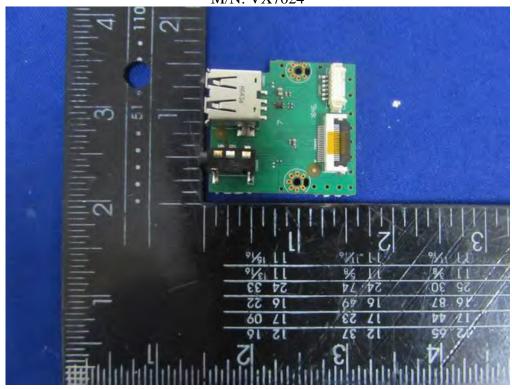


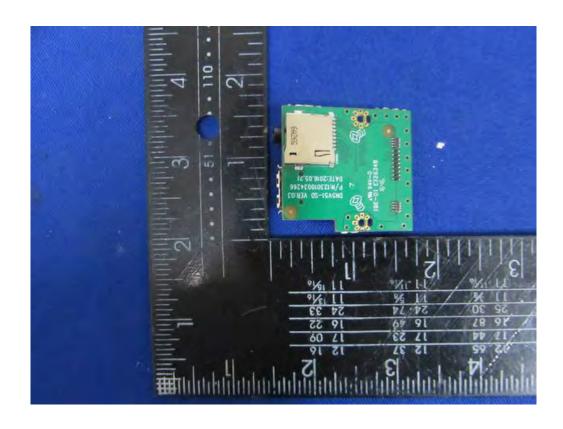






M/N: VX7024

























Bluetooth Antenna



M/N: VX7024

