











TCT通测检测 TCT通测检测 Report No.: TCT210722E018 5.6. Field Strength of Spurious Radiation Measurement 5.6.1. Test Specification **Test Requirement:** FCC part 96.41 **Test Method:** FCC KDB 971168 D01v03r01 **Operation mode:** Refer to item 3.1 Limit: -40dBm For 30MHz~1GHz **RX Antenna** Ant. feed point EUT 1~4 п 80cm Metal Full Soldered Ground Plane E_0 ... Spectrum Analyzer / Receiver System Simulator Test setup: Above 1GHz **RX** Antenn Ant. feed point EUT 150cm Metal Full Soldered Ground Plane m An zer / Receiv System Simulato 1. The testing follows FCC KDB 971168 D01v03r01 Section 6 and ANSI / TIA-603-D-2010 Section 2.2.12. 2. The EUT was placed on a rotatable wooden table 0.8 meters above the ground. 3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower. 4. The table was rotated 360 degrees to determine the **Test Procedure:** position of the highest spurious emission. 5. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations. 6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of

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		max 7. A ho and 8. Tun sam emis 9. Taki 10. Re	timum spurie orn antenna was driven e the output e emission ssion. ssion. ing the reco epeat step 7	bus emission was substitu by a signal g power of si level with El rd of output to step 8 for	n. uted in place generator. gnal genera JT maximur power at an r another po	e of the EUT tor to the n spurious tenna port. larization.	
Test result	ts:	PASS	PASS			he weret	
Remark:		bandw	idth 3MHz s	show in this	d, but only t test item.	ine worst	

5.6.2. Test Instruments

TCT 通测检测 TESTING CENTRE TECHNOLOGY

Radiated Emission Test Site (966)						
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due		
Universal Radio Communication Tester	R&S	CMU200	110188	Jul. 07, 2022		
Spectrum Analyzer	R&S	FSQ40	200061	Jul. 07, 2022		
Signal Generator	HP	83623B	3614A00396	Jul. 07, 2022		
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 04, 2022		
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Sep. 04, 2022		
Broadband Antenna	Schwarzbeck	VULB9163	412	Sep. 04, 2022		
Horn Antenna	Schwarzbeck	BBHA 9120D	1201	Sep. 04, 2022		
Horn Antenna	Schwarzbeck	BBHA 9170	00956	Apr. 10, 2023		
Coaxial cable	SKET	RC_DC18G-N	N/A	Apr. 08, 2022		
Coaxial cable	SKET	RC-DC18G-N	N/A	Apr. 08, 2022		
Coaxial cable	SKET	RC-DC40G-N	N/A	Jul. 07, 2022		
Antenna Mast	Keleto	RE-AM	N/A	N/A		
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A		

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requency (MHz)	Level	@3m (dBµV	//m)	Limit@3m (dBµV/m)
<u>(6)</u>					
e: 1. Emission Level=F 2. The emission leve	Reading+ Cable loss+A els are 20 dB below the	Antenna factor-A e limit value, whi	mp factor ich are not rep	orted. It is deeme	əd to comply wi
requirement					

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	ESTING CENTRE TECHNOLO	ЗY			Report No	.: TCT210722E018
Bandwidth		3MHz		Test c	hannel:	Lowest
Modo		Dese		Tempe	erature :	25°C
Wode.		0333		Relative	Humidity:	56%
Note: Spuriou	us emissions wi	thin 30-10	00MHz were	found more t	han 20dB be	low limit line
		Spurious	Emission			
Frequency			Correction	Spurious	Limit	Result
(MHz)	Polarization	(dBm)	Factor	emissions	(dBm)	result
		(ubiii)	(dB)	(dBm)		
3529.195	Vertical	-50.63	-1.54	-52.17		
3914.500	V	-55.44	0.86	-54.58		
7110.000	V	-64.36	9.20	-55.16	-40.00	PASS
3529.195	Horizontal	-44.94	-1.54	-46.48	-+0.00	1700
3914.500	Н	-49.22	0.86	-48.36		
7110.000	Н	-58.99	9.20	-49.79		
Bandwidth		3MHz		Test c	hannel:	Middle
Modo		0000		Tempe	erature :	25°C
woue.		0333		Relative	Humidity:	56%
Note: Spuriou	us emissions wi	thin 30-10	00MHz were	found more t	han 20dB be	low limit line
		Spurious	Emission			
Frequency			Correction	Spurious	Limit	Pocult
(MHz)	Polarization		Factor	emissions	s (dBm)	Result
		(ubiii)	(dB)	(dBm)		
3449.632	Vertical	-50.36	-1.69	-52.05		
4140.032	V	-55.63	1.86	-53.77		(G)
7250.000	V	-63.53	9.26	-54.27		DACC
3449.632	Horizontal	-45.35	-1.69	-47.04	-40.00	PASS
4140.032	Н	-50.53	1.86	-48.67		
7250.000	H	-57.57	9.26	-48.31		
Bandwidth		3MHz		Test c	hannel:	Highest
Madai		Deee		Tempe	erature :	25°C
Mode:		0333		Relative	Humidity:	56%
Note: Spuriou	us emissions wi	thin 30-10	00MHz were	found more t	han 20dB be	low limit line
		Spurious	Emission			
Frequency			Correction	Spurious	Limit	Pocult
(MHz)	Polarization	(dBm)	Factor	emissions	(dBm)	Result
		(ubiii)	(dB)	(dBm)		
2760.140	Vertical	-58.35	-2.67	-61.02	(.c)	(
4139.010	V	-53.42	1.85	-51.57		
7390.000	V	-62.41	9.26	-53.15	40.00	
2760.140	Horizontal	-53.20	-2.67	-55.87	-40.00	PASS
4139.010	H	-48.86	1.85	-47.01		
7000	11	59.04	0.26	10.65	1	

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Modo	ode: OFDM Temp Relative			Tempe	Temperature :		
WOUC.				Relative	Humidity:	56%	
Note: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.							
	Spurious Emission						
Frequency			Correction	Spurious	Limit	Result	
(MHz)	Polarization	(dBm)	Factor	emissions	(dBm)	Result	
		(ubiii)	(dB)	(dBm)			
3456.340	Vertical	-53.73	-1.66	-55.39			
3527.620	V	-47.67	-1.54	-49.21	-10.00		
7110.000	V	-65.96	9.20	-56.76		PASS	
3456.340	Horizontal	-49.61	-1.66	-51.27	40.00	17,00	
3527.620	Н	-44.36	-1.54	-45.90			
7110.000	H	-60.52	9.20	-51.32			
Bandwidth		3MHz		Test c	hannel:	Middle	
Mode		OFDM		Tempe	erature :	25°C	
Mode.				Relative	Humidity:	56%	
Note: Spuriou	is emissions wi	thin 30-10	00MHz were	found more t	han 20dB be	low limit line.	
		Spurious	Emission	-			
Frequency			Correction	Spurious	Limit	Recult	
(MHz)	Polarization	(dBm)	Factor	emissions	(dBm)	Result	
		(ubiii)	(dB)	(dBm)			
3450.326	Vertical	-49.13	-1.68	-50.81			
4025.360	V	-56.89	1.31	-55.58		(G)	
7250.000	V	-65.38	9.26	-56.12	-40.00	PASS	
3450.326	Horizontal	-44.36	-1.68	-46.04	40.00	17,00	
4025.360	Н	-52.07	1.31	-50.76			
7250.000	H	-58.72	9.26	-49.46		(
Bandwidth		3MHz		Test c	hannel:	Highest	
Mode		OFDM		Tempe	erature :	25°C	
moue.				Relative	Humidity:	56%	
Note: Spuriou	is emissions wi	thin 30-10	00MHz were	found more t	han 20dB be	low limit line.	
		Spurious	Emission	F			
Frequency		Level	Correction	Spurious	Limit	Result	
(MHz)	Polarization	(dBm)	Factor	emissions	(dBm)	rtoourt	
		(abiii)	(dB)	(dBm)			
3721.210	Vertical	-52.35	-0.32	-52.67	(G)	(
4630.340	V	-55.93	3.32	-52.61			
7390.000	V	-65.88	9.26	-56.62	-40 00	PASS	
3721.210	Horizontal	-48.35	-0.32	-48.67	-0.00	17.00	
4630.340	H	-51.36	3.32	-48.04			
7390.000	Н	-60.62	9.26	-51.36			
	A sea a la avita la alta a				D 10 0 . 1.		

3MHz

Bandwidth

Note: All EUT type have been tested, only the data of type CBSD-B with the largest antenna gain which is the worst case reported

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Lowest

Test channel:

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Manufacturer

Programable tempratuce and humidity chamber	JQ	MHU-80L	N/A	Jul. 07, 2022
DC power supply	Kingrang	KR3005K	N/A	Jul. 07, 2022
RF cable (9kHz-40GHz)	тст	RE-04	N/A	Jul. 07, 2022
Antenna Connector	тст	RFC-03	N/A	Jul. 07, 2022

Model

Serial Number

MY49100619

5.7.2. Test Instruments

Equipment

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Calibration Due

Jul. 07, 2022

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5.7.3. Test Data

Temperature	Deviation (ppm)						
(°C)	3555 MHz	3625 MHz	3695 MHz				
50	0.011	0.010	0.010				
40	0.009	0.009	0.008				
30	0.008	0.008	0.007				
20	0.010	0.009	0.009				
10	0.011	0.010	0.009				
0	0.015	0.012	0.011				
-10	0.010	0.009	0.008				
-20	0.012	0.011	0.011				
-30	0.014	0.013	0.012				

Test Result of Voltage Variation

Voltage	Deviation(ppm)						
(Volt)	3555 MHz	3625 MHz	3695 MHz				
42.0	0.015	0.014	0.014				
12.0	0.009	0.009	0.009				
5.5	0.008	0.008	0.007				

Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

