





Report No.: WSCT-ANAB-R&E241200078A-BT

Mahalalak W5 CI **Test Graphs** Dwell 1-DH1 2402MHz One Burst Spectrum Analyzer 1 Swept SA SCPI + Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) #Atten: 30 dB Preamp: Off Avg Type: Log-Power Trig: Video Trig Delay: -500.0 μs PNO: Fast Gate: Off KEYSIGHT Input: RF 1 2 3 4 5 6 w ₩ ₩ ₩ ₩ Align: Auto IF Gain: Low PNNNN ΔMkr1 382.0 μs Ref LvI Offset 4.26 dB -2.63 dB Scale/Div 10 dB Ref Level 20.00 dBm والمراوات والمدوال والرواد والمراوية والموافقة والمراوية والمواولة والمراوية Center 2.402000000 GHz Res BW 1.0 MHz Span 0 Hz Sweep 10.0 ms (10001 pts) #Video BW 3.0 MHz 15 C 5 Marker Table Function Value Mode Function Function Width -2.63 dB 382.0 μs (Δ) 497.0 µs 2.11 dBm Dec 30, 2024 8:14:54 AM Dwell 1-DH1 2402MHz Accumulated 15 C SCPI Spectrum Analyzer 1 + . wept SA Input Z: 50 Ω KEYSIGHT Input: RF #Atten: 30 dB PNO: Fast Avg Type: Log-Power Trig: Free Run Corr CCorr Freq Ref: Int (S) Gate: Off IF Gain: Low Sig Track: Off Preamp: Off ₩₩₩₩₩ Align: Auto PNNNN Ref LvI Offset 4.26 dB Scale/Div 10 dB Ref Level 20.00 dBm

Center 2.402000000 GHz Span 0 Hz Sweep 31.6 s (10001 pts) #Video BW 3.0 MHz Res BW 1.0 MHz Dec 30, 2024 8:15:27 AM **F** F

MON # 深圳世标检测认证股份有限公司

ADD: Building A-B, Baoli'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China. TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605





CCREDITED

Report No.: WSCT-ANAB-R&E241200078A-BT





ADD: Building A-B, Baoli'an Industrial Park, No. 58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China. TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605

MON # 深圳世标检测认证股份有限公司

15 C

Page 42 of 75

ation& Testi







Report No.: WSCT-ANAB-R&E241200078A-BT

WSET



ADD: Building A-B, Baoil'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China.

TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 E-mail: fengbing.wang@wsct-cert.com Http: www.wsct-cert.com

深圳世标检测认证股份有限公司 World Standard Zation Certification& Testing Group(Shenzhen) Co.,Lt

VSCT WSC

Page 43 of 75

SET WSET







Report No.: WSCT-ANAB-R&E241200078A-BT

"Infalalalate W5 CI



ADD: Building A-B, Baoli'an Industrial Park, No. 58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guang TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605

MON # 深圳世标检测认证股份有限公司

Page 44 of 75

15 C



1*W5 [T* 1





Report No.: WSCT-ANAB-R&E241200078A-BT

WSLT



ADD: Building A-B, Baoli'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China.
TEL: 0086-755-26996192 26998053 26998144 FAX: 0086-755-86376605 E-mail: fengbing.wang@wsct-cert.com Http://www.wsct-cert.com

深圳世标检测认证股份有限公司 World Standard zation Certification& Testing Group(Shenzhen) Co.,Ltd

Member of the WSCT Group (WSCT SA)

Page 45 of 75

W5CT°

SET WSCI



1*W5 [T* 1





Report No.: WSCT-ANAB-R&E241200078A-BT

WSLT



ADD: Building A-B,Baoli'an Industrial Park,No.58 and 60,Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China. TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 E-mail: fengbing.wang@wsct-cert.com Http://www.wsct-cert.com

深圳世标检测认证股份有限公司
World Standard Zation Certification & Testing Group (Shenzhen) Co., Ltd.

VECT WE

Page 46 of 75

WSCT

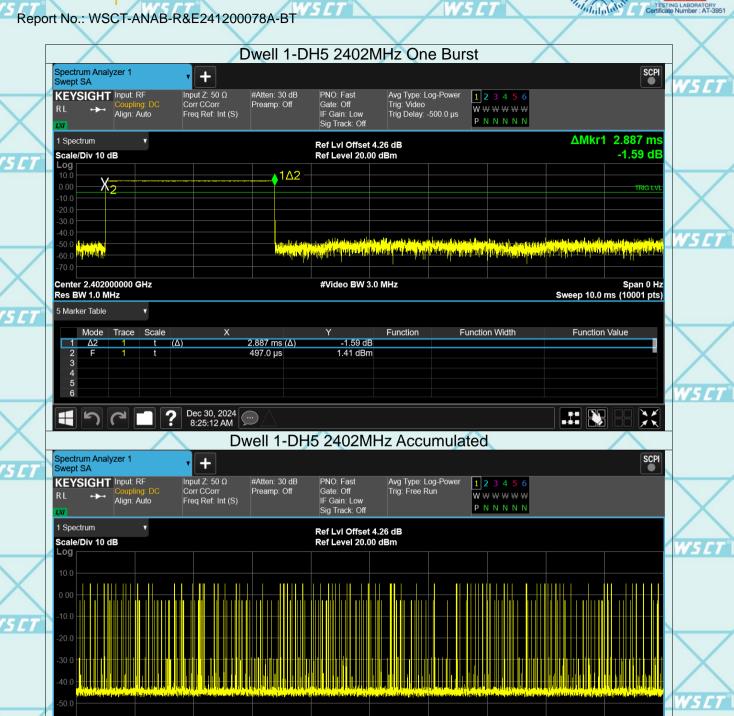
WSCT







Report No.: WSCT-ANAB-R&E241200078A-BT



Dec 30, 2024 8:25:46 AM

Center 2.402000000 GHz

Res BW 1.0 MHz

ation& Testi 10M #

ADD: Building A-B, Baoli'an Industrial Park, No. 58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guang TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605

深圳世标检测认证股份有限公司

Span 0 Hz Sweep 31.6 s (10001 pts)

Į.

#Video BW 3.0 MHz



1*W5 [T* 1





Report No.: WSCT-ANAB-R&E241200078A-BT

W5 CI



ADD: Building A-B, Baoli'an Industrial Park, No. 58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guang TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605

10M # 深圳世标检测认证股份有限公司

ation& Test







Report No.: WSCT-ANAB-R&E241200078A-BT

W5 CT



ADD: Building A-B,Baoli'an Industrial Park,No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China.
TEL: 0086-755-26996192 26998053 26996144 FAX: 0086-755-86376605 E-mail: fengbing.wang@wsct-cert.com Http://www.wsct-cert.com

深圳世标检测认证股份有限公司
World Standard Zation Certification& Testing Group(Shenzhen) Co.,Lt

VSCT* WSC

Page 49 of 75

WSET







Report No.: WSCT-ANAB-R&E241200078A-BT

6.8. **Pseudorandom Frequency Hopping Sequence**

FCC Part15 C Section 15.247 (a)(1) requirement: Test Requirement:

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. The system shall hop to channel frequencies that are selected at the system hopping rate from a Pseudorandom ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

EUT Pseudorandom Frequency Hopping Sequence

The pseudorandom sequence may be generated in a nine-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. And the result is fed back to the input of the first stage. The sequence begins with the first one of 9 consecutive ones; i.e. the shift register is initialized with nine ones.

- Number of shift register stages: 9
- Length of pseudo-random sequence: 29-1 = 511 bits
- Longest sequence of zeros: 8 (non-inverted signal)

W51

Linear Feedback Shift Register for Generation of the PRBS sequence

An example of Pseudorandom Frequency Hopping Sequence as follow:

2 62 64 78 73 75 77

Each frequency used equally on the average by each transmitter. The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in

synchronization with the transmitted signals.

Page 50 of 75







Report No.: WSCT-ANAB-R&E241200078A-BT

6.9. Conducted Band Edge Measurement

6.9.1. Te	st Specifica	tion
/		

WSET

W5 CT

W5ET

W5 CT

X	Test Requirement:	FCC Part15 C Section 15.247 (d)	
W5CT°	Test Method:	ANSI C63.10:2014 W5 [T] W5 [T]	
$\overline{}$	Limit:	In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.	W5ET
WSET	Test Setup:	Spectrum Analyzer EUT	
WSCT*	Test Mode:	Transmitting mode with modulation	\triangle
WS ET	Test Procedure:	 The testing follows the guidelines in Band-edge Compliance of RF Conducted Emissions of ANSI C63.10:2014 Measurement Guidelines. Set to the maximum power setting and enable the EUT transmit continuously. Set RBW = 100 kHz (≥1% span=10MHz), VBW = 300 kHz (≥RBW). Band edge emissions must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100kHz RBW. The attenuation shall be 30 dB instead of 20 dB when RMS conducted output power procedure is used. Enable hopping function of the EUT and then repeat step 2 and 3. Measure and record the results in the test report. 	WS ET
	Test Result:	PASS	Witten
	11919		W-S-L-T

WELS.

WSET

W5 C7

awset

WSCT

W5CT

WSET

W5 CT

W5 CT

WSET

W5ET°

WSCT

WELT

AWS CT

DD: Building A-B,Baoli'an Industrial Park,No.58 and 60,Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City Guangdong Province, Chi EL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 E-mail: fengbing.wang@wsct-cert.com Http::www.wsct-cert.com 深圳世标检测认证股份有限公司

Member of the WSCT Group (WSCT SA)

Page 51 of 75

W5CT W









TEL: 0086-755-26996192 26996053 26996144

FAX: 0086-755-86376605

深圳世标检测认证股份有限公司







Report No.: WSCT-ANAB-R&E241200078A-BT



ADD: Building A-B, Baoil'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China. TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605

深圳世标检测认证股份有限公司

Page 53 of 75



WS ET

NS E T

World Standardization Certification & Testing Group (Shenzhen) Co., ltd.



W5 CT



Report No.: WSCT-ANAB-R&E241200078A-BT

Conducted Spurious Emission Measurement 6.10.

	6.10.1.7 Test Specificatio	n WSET WSET	W5 L				
	Test Requirement:	FCC Part15 C Section 15.247 (d)					
	Test Method:	ANSI C63.10:2014					
_	Limit:	FCC Part15 C Section 15.247 (d) ANSI C63.10:2014 In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits. Transmitting mode with modulation 1. The testing follows the guidelines in Spurious RF Conducted Emissions of ANSI C63.10:2014 Measurement Guidelines 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. 3. Set to the maximum power setting and enable the EUT transmit continuously.					
	Test Setup:	In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits. Transmitting mode with modulation 1. The testing follows the guidelines in Spurious RF Conducted Emissions of ANSI C63.10:2014 Measurement Guidelines 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Set RBW = 100 kHz, VBW = 300kHz, scan up through 10th harmonic. All harmonics / spurs must be					
	Test Mode:	Transmitting mode with modulation	\searrow				
		Conducted Emissions of ANSI C63.10:2014 Measurement Guidelines 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each	W5 L				
_	Test Procedure:	 Set to the maximum power setting and enable the EUT transmit continuously. Set RBW = 100 kHz, VBW = 300kHz, scan up 	WSI				

Test Result:

WS CT

within the authorized band as measured with a 100

5. Measure and record the results in the test report. 6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

kHz RBW.

W5 CT WS ET WS CT W5 C1

PASS

ADD: Building A-B, Baoli'an Industrial Park, No. 58 and 60, Tangtou Avenue,









Report No.: WSCT-ANAB-R&E241200078A-BT



Gate: Off IF Gain: Low Sig Track: Off Corr CCorr Freq Ref: Int (S) $M \Leftrightarrow W \Leftrightarrow W \Leftrightarrow W$ Align: Auto PNNNNN Mkr1 2.401 844 0 GHz 1 Spectrum Ref LvI Offset 4.26 dB 4.35 dBm Scale/Div 10 dB Ref Level 14.26 dBm

Center 2.4020000 GHz #Video BW 300 kHz Span 1.500 MHz #Res BW 100 kHz Sweep 1.00 ms (1001 pts) Dec 30, 2024 9:06:59 AM

Tx. Spurious 1-DH5 2402MHz Emission Spectrum Analyzer 1 Swept SA + Input Z: 50 Ω Avg Type: Log-Power Avg|Hold: 10/10 Trig: Free Run KEYSIGHT Input: RF #Atten: 20 dB 1 2 3 4 5 6 Corr CCorr Freq Ref: Int (S) Gate: Off IF Gain: Low Align: Auto PNNNNN Sig Track: Off 1 Spectrum Mkr1 2.402 6 GHz Ref LvI Offset 4.26 dB Ref Level 14.26 dBm 4.26 dBm Scale/Div 10 dB DL1 -15.65 dBr ۸4 Stop 26.50 GHz Sweep ~2.53 s (30001 pts) Start 30 MHz #Res BW 100 kHz #Video BW 300 kHz 5 Marker Table Function Width Function Value Mode Scale Function 2.402 6 GHz 4.26 dBm 4.804 3 GHz 4.804 3 GHz -41.26 dBm -41.26 dBm N

2 3 4 5 6 7.206 0 GHz 9.607 7 GHz -46.88 dBm -47.09 dBm N Dec 30, 2024 **

ADD: Building A-B, Baoli'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China.

FAX: 0086-755-86376605

World 深圳世标检测认证股份有限公司

TEL: 0086-755-26996192 26996053 26996144

Page 55 of 75





CCREDITED

Report No.: WSCT-ANAB-R&E241200078A-BT

The Made and the W5 CI



ADD: Building A-B, Baoil'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China. TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605

MON # 深圳世标检测认证股份有限公司

15 C

Page 56 of 75



Scale/Div 10 dB

4 33

World Standardization Certification & Testing Group (Shenzhen) Co., ltd.



CCREDITED

Report No.: WSCT-ANAB-R&E241200078A-BT

The Made and the W5 CI Tx. Spurious 1-DH5 2480MHz Ref SCPI Spectrum Analyzer 1 + Input Z: 50 Ω #Atten: 20 dB Preamp: Off PNO: Best Wide Gate: Off Avg Type: Log-Power Avg|Hold: 100/100 KEYSIGHT Input: RF 1 2 3 4 5 6 Corr CCorr M W W W W IF Gain: Low Sig Track: Off Align: Auto Freq Ref: Int (S) Trig: Free Run 1 Spectrum Mkr1 2.479 856 0 GHz Ref LvI Offset 4.33 dB Ref Level 14.33 dBm

Center 2.4800000 GHz #Res BW 100 kHz

Dec 30, 2024 9:15:23 AM

+

#Video BW 300 kHz

Span 1.500 MHz Sweep 1.00 ms (1001 pts) 噩

2.61 dBm

Tx. Spurious 1-DH5 2480MHz Emission

SCPI

Stop 26.50 GHz

Sweep ~2.53 s (30001 pts)

Function Value

Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF Align: Auto 1 Spectrum

Input Z: 50 Ω #Atten: 20 dB Corr CCorr Freq Ref: Int (S) Preamp: Off

PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Avg Type: Log-Power Avg|Hold: 10/10 Trig: Free Run

1 2 3 4 5 6 $M \otimes W \otimes W \otimes W$ PNNNNN

Function Width

Mkr1 2.480 2 GHz 2.34 dBm

Scale/Div 10 dB Ref Level 14.33 dBm DL1 -17.39 dB

#Video BW 300 kHz

Function

Ref LvI Offset 4.33 dB

#Res BW 100 kHz 5 Marker Table Mode Trace Scale

Start 30 MHz

2.480 2 GHz 2.287 9 GHz 4.960 5 GHz 2.34 dBm -42.69 dBm N -43.68 dBm -49.95 dBm N 7.439 8 GHz 9.920 1 GHz -47.48 dBm

Dec 30, 2024 9:15:54 AM

ation& Testi

ADD: Building A-B, Baoil'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China. TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605

MON # 深圳世标检测认证股份有限公司

Page 57 of 75

15 C







W5 CI Report No.: WSCT-ANAB-R&E241200078A-BT



ADD: Building A-B, Baoil'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China. TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605

MON # 深圳世标检测认证股份有限公司

15 C

Page 58 of 75





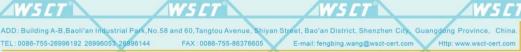


W5 CI



Report No.: WSCT-ANAB-R&E241200078A-BT





深圳世标检测认证股份有限公司
World Standard zation Certification& Testing Group(Shenzhen) Co.,Ltd

15 C







W5CT°



ADD: Building A-B, Baoll'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China. TEL: 0086-755-26996192 26996053, 26996144 FAX: 0086-755-86376605 E-mail: fengbing.wang@wsct-cert.com

深圳世标检测认证股份有限公司
World Standard zation Certification& Testing Group(Shenzhen) Co.,Ltd.

15 C I

Page 60 of 75

SCT WS L

WSET





W5 CI

ANSI National Accreditation Board
A C C R E D I T E D

SOILE TROS

TESTING LABORATORY

Report No.: WSCT-ANAB-R&E241200078A-BT





深圳世标检测**认证股份有限公司**World Standard Eatin Certification & Testing Group (Shenzhen) Co.,Ltd

15 C

ation& Testi





ANSI National Accreditation Board
A C C R E D I T E D

SOME FROST
TESTING LABORATORY

Report No.: WSCT-ANAB-R&E241200078A-BT

Tx. Spurious 3-DH5 2441MHz Ref



WSCT WSCT WSCT WSCT WSCT WSCT

ADD: Building A-B, Baoil'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China. TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 E-mail: fengbing.wang@wsct-cert.com Http: www.wsct-cert.com

深圳世标检测认证股份有限公司
World Standard Zation Certification & Testing Group (Shenzhen) Co.,Ltd

Page 62 of 75

WSET







W5 CI



Report No.: WSCT-ANAB-R&E241200078A-BT



ADD: Building A-B, Baoil'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China. TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605

MON # 深圳世标检测认证股份有限公司

15 C

Page 63 of 75



W5 C

V5 C

World Standardization Certification & Testing Group (Shenzhen) Co., ltd.



Peak Value

Average Value



Report No.: WSCT-ANAB-R&E241200078A-BT

W5CT"

6.11. Radiated Spurious Emission Measurement

6.11.1. Test Specification

IWS ET"

Peak

Peak

W5CT

W5CI

/	on in the rest openingation									
	Test Requirement:	FCC Part15	FCC Part15 C Section 15.209							
	Test Method:	ANSI C63.10:2014								
	Frequency Range:	9 kHz to 25 GHz 3 m								
	Measurement Distance:									
	Antenna Polarization: W5 [Horizontal &	Vertical		W5					
		Frequency	Detector	RBW	VBW	Remark				
	X	9kHz- 150kHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value				
/		150kHz-	Quasi-peak	9kHz	30kHz	Quasi-peak Value				
7	Receiver Setup:	30MHz		WSCT		WSIT				
		30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value				

WS CT WS

14	

Above 1GHz

Field Strength Measurement Frequency (microvolts/meter) Distance (meters) 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 88-216 150 200 216-960 3 Above 960 500

1MHz

1MHz

3MHz

10Hz

Limit:

77			
7.7	AL T	V. 80	ġŢ.
	/ I	/ 5	Ш

		MACE CT	
Frequency	Field Strength (microvolts/meter)	Measurement Distance (meters)	Detector
Above 4CHz	500	3	Average
Above 1GHz	5000/5/7	3	Peak

For radiated emissions below 30MHz

WS CT WS CT

Test setup:

N5CT°

Distance = 3m

Computer

Pre -Amplifier

Receiver

Ground Plane

30MHz to 1GHz

Testin

W5CT

VSCT WSC

AWS CT

awsct

wsct-cert.com World Star

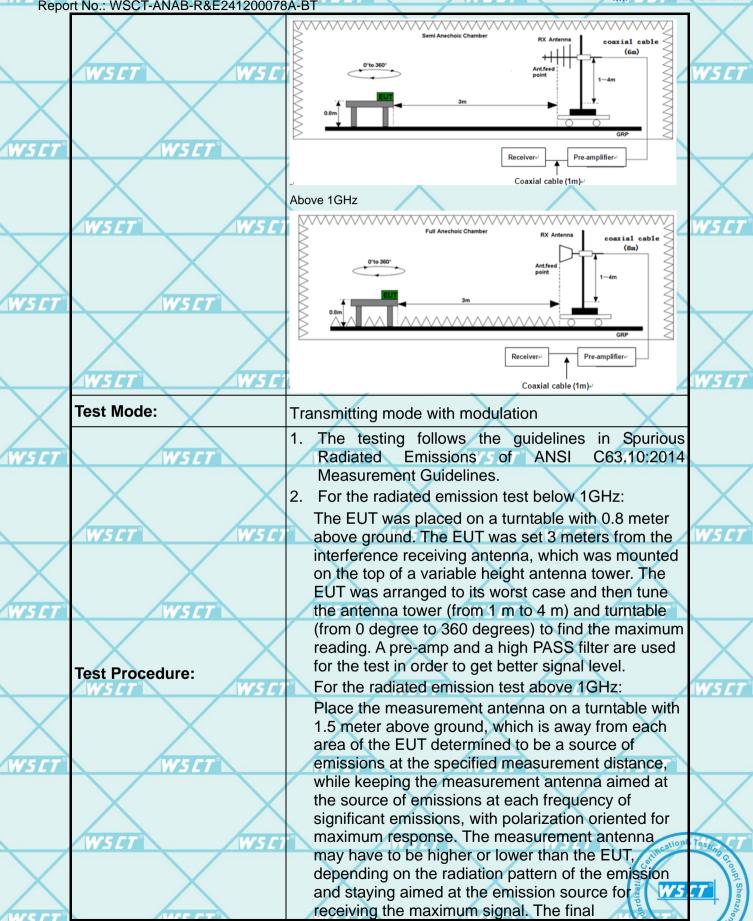
W5 C1

深圳世标检测认证股份有限公司
World Standard zation Certification& Testing Group(Shenzhen) Co.,Li





Report No.: WSCT-ANAB-R&E241200078A-BT



WSI





Report No.: WSCT-ANAB-R&E241200078A-BT

measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m

Set to the maximum power setting and enable the EUT transmit continuously.

4. Use the following spectrum analyzer settings:

above the ground or reference ground plane.

(1) Span shall wide enough to fully capture the emission being measured;

(2) Set RBW=100 kHz for f < 1 GHz, RBW=1MHz for f>1GHz; VBW≥RBW;
Sweep = auto; Detector function = peak; Trace = max hold for peak

(3) For average measurement: use duty cycle correction factor method per 15.35(c). Duty cycle = On time/100 milliseconds On time =N1*L1+N2*L2+...+Nn-1*LNn-1+Nn*Ln Where N1 is number of type 1 pulses, L1 is length of type 1 pulses, etc.

Average Emission Level = Peak Emission

Corrected Reading: Antenna Factor + Cable
Loss + Read Level - Preamp Factor = Level

Level + 20*log(Duty cycle)

Test results: PASS

WSCI

WSIGN WSIGN WSIGN

WSCT WSCT WSCT WSCT WSCT

WSCT WSCT WSCT WSCT WSCT

WSCT WSCT WSCT WSCT WSCT

WSCT WSCT WSCT

DD: Building A-B,Baoli'an Industrial Park,No.58 and 60,Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China.

DD: Building A-B,Baoil'an Industrial Park,No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, Chir EL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 E-mail: fengbing.wang@wsct-cert.com Http://www.wsct-cert.com

a. 深圳世标检测认证股份有限公司
World Standard Zation Certification& Testing Group(Shenzhen) Co.,Lt

VSCT WSCT

Page 66 of 75

SCT WSCT







Report No.: WSCT-ANAB-R&E241200078A-BT

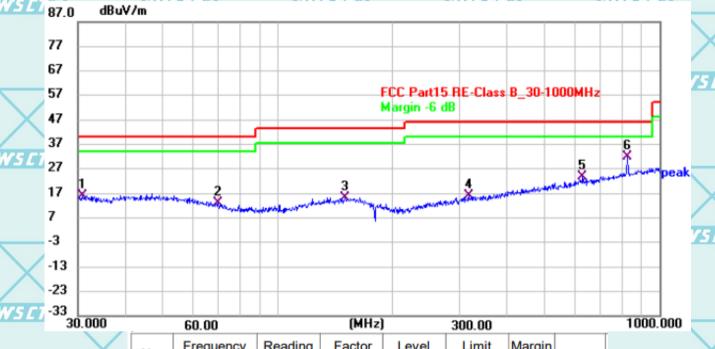
6.11.2. **Test Data** Please refer to following diagram for individual

Below 1GHz

The worst mode is GFSK

Horizontal:

W5 CI



	No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	
3	1	30.9619	35.66	-19.38	16.28	40.00	-23.72	QP	
1	2	69.9675	35.30	-22.34	12.96	40.00	-27.04	QP	7
	3	150.1424	34.79	-19.52	15.27	43.50	-28.23	QP	
	4	316.7278	35.61	-19.69	15.92	46.00	-30.08	QP	1
	5	631.4116	36.76	-13.07	23.69	46.00	-22.31	QP	A
1	6 *	827.4934	42.75	-10.61	32.14	46.00	-13.86	QP	

W5 CI NSCI WS CI W5 C

ADD: Building A-B, Baoli'an Industrial Park, No. 58 and 60, Tangtou Avenue,

FAX: 0086-755-86376605

Page 67 of 75

W5C1







Report No.: WSCT-ANAB-R&E241200078A-BT

W5CT"



W5CT

WSET

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	
1	40.6125	35.61	-18.96	16.65	40.00	-23.35	QP	
2	63.8427	35.20	-21.07	14.13	40.00	-25.87	QP	A
3	145.5418	35.21	-19.75	15.46	43.50	-28.04	QP	
4	291.6744	35.19	-20.54	14.65	46.00	-31.35	QP	
5	531.0316	35.82	-14.93	20.89	46.00	-25.11	QP	
6 *	831.1284	49.23	-10.55	38.68	46.00	-7.32	QP	1

W5CT

Note1:

Freq. = Emission frequency in MHz

Reading level (dBµV) = Receiver reading

Corr. Factor (dB) = Antenna factor + Cable loss - Amplifier factor.

Measurement $(dB\mu V)$ = Reading level $(dB\mu V)$ + Corr. Factor (dB)

Limit (dBµV) = Limit stated in standard

Margin (dB) = Measurement (dB μ V) – Limits (dB μ V)

15 C I

WSCT

WSET WSET WSET WSET

W5CT"

WELT

WSET

WELT

W5C

Continue Testing Group She

WSCT

4WSCT

WELT

aws ct

ADD: Building A-B, Baoli'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, Chin TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 E-mail: fengbing.wang@wsct-cert.com Http://www.wsct-cert.com

lember of the WSCT Group (WSCT SA)

Page 68 of 75

WSCT WSC







Report No.: WSCT-ANAB-R&E241200078A-BT

Above 1GHz

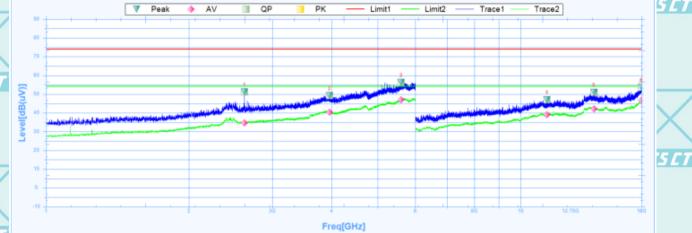
Note 1: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental signal.

Note 2: The spurious above 18G is noise only, do not show on the report.

The worst mode is GFSK

Low channel: 2402MHz

Horizontal:



Susputed Data List Reading **Factor** Limit Margin Deg Freq. Level NO. **Polarity Trace** Verdict [dB(uV)] [MHz] [dB] [dB(uV)] [dB] [dB] [°] PK 2618.1250 51.29 27.74 23.55 74 -22.71 21.3 Pass Horizontal 2618.1250 34.63 27.74 6.89 -19.37 21.3 ΑV Horizontal Pass 49.28 74 PK 3958.7500 29.6 19.68 -24.72 317.7 Horizontal Pass 3958.7500 40.3 29.6 10.7 54 -13.7317.7 Horizontal ΑV Pass 5600.0000 56.24 32.16 24.08 74 -17.76 358.5 PK Horizontal Pass 3 46.93 32.16 14.77 54 -7.07 358.5 ΑV 5600.0000 Horizontal Pass 11374.5000 47.11 15.78 31.33 74 -26.89 261.2 Horizontal PK Pass 54 -14.95 11374.5000 39.05 15.78 23.27 261.2 Horizontal ΑV Pass 14274.0000 51 18.84 32.16 74 -23 202.6 PK Pass Horizontal 14274.0000 42.09 18.84 23.25 -11.91 202.6 Horizontal Pass 53.65 74 -20.35 PΚ 6 17977.5000 23.77 29.88 360.1 Horizontal Pass 17977.5000 46.87 23.77 23.1 -7.13 360.1 Horizontal ΑV Pass

ADD: Building A-B, Baoli'an Industrial Park, No. 58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China. FAX: 0086-755-86376605

Page 69 of 75



W5ET

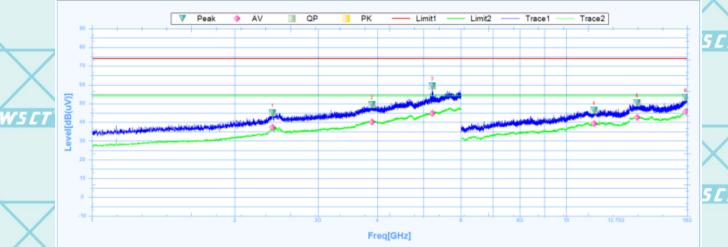




Report No.: WSCT-ANAB-R&E241200078A-BT

W5 CT

Vertical:



W5CT°

W5 C

W5E

	Suspu	ited Data Lis	st								
7	NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
	1	2401.2500	45.09	27.26	17.83	74	-28.91	202.9	Vertical	PK	Pass
	1	2401.2500	37.25	27.26	9.99	54	-16.75	202.9	Vertical	AV	Pass
	2	3894.3750	49.38	29.45	19.93	74	-24.62	358.7	Vertical	PK	Pass
/	2	3894.3750	40.25	29.45	10.8	54	-13.75	358.7	Vertical	AV	Pass
	3	5223.1250	59.46	31.78	27.68	74	-14.54	188.6	Vertical	PK	Pass
/	3	5223.1250	44.82	31.78	13.04	54	-9.18	188.6	Vertical	AV	Pass
7	4	11446.5000	46.31	15.98	30.33	74	-27.69	7.5	Vertical	PK	Pass
	4	11446.5000	39.24	15.98	23.26	54	-14.76	7.5	Vertical	AV	Pass
	5	14113.5000	50.27	19.01	31.26	74	-23.73	317.1	Vertical	PK	Pass
	5	14113.5000	42.69	19.01	23.68	54	-11.31	317.1	Vertical	AV	Pass
	6	17871.0000	53.21	23.08	30.13	74	-20.79	354.3	Vertical	PK	Pass
	6	17871.0000	45.73	23.08	22.65	54	-8.27	354.3	Vertical	AV	Pass

W5 CI W5 E7 W5 C W5 C1 W5 CT

> W5C1 WS ET WS CT W5 E1

ADD: Building A-B, Baoli'an Industrial Park, No. 58 and 60, Tangtou Avenue

W5CT

深圳世标检测认证股份有限公司

W5C1

W5CT



W5 E

World Standardization Certification & Testing Group (Shenzhen) Co.,ltd.

W5ET



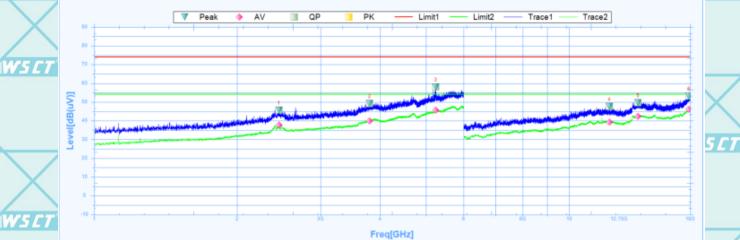


Report No.: WSCT-ANAB-R&E241200078A-BT

Middle channel: 2440MHz

Horizontal: T W5 CT W5 CT W5 CT W5 CT

W5CT



	Suspu	ited Data Lis	it									
	NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	Z
/	1	2448.1250	45.67	27.42	18.25	74	-28.33	157.4	Horizontal	PK	Pass	
	1	2448.1250	37.66	27.42	10.24	54	-16.34	157.4	Horizontal	AV	Pass	
/	2	3803.7500	49.29	29.23	20.06	74	-24.71	179	Horizontal	PK	Pass	
7	2	3803.7500	39.94	29.23	10.71	54	-14.06	179	Horizontal	AV	Pass	
_	3	5241.2500	57.97	31.79	26.18	74	-16.03	359.5	Horizontal	PK	Pass	
	3	5241.2500	45.62	31.79	13.83	54	-8.38	359.5	Horizontal	AV	Pass	
	4	12165.0000	47.76	16.59	31.17	74	-26.24	213.3	Horizontal	PK	Pass	1
	4	12165.0000	39.27	16.59	22.68	54	-14.73	213.3	Horizontal	AV	Pass	
	5	13984.5000	49.73	19.08	30.65	74	-24.27	114.1	Horizontal	PK	Pass	Z
/	5	13984.5000	42.31	19.08	23.23	54	-11.69	114.1	Horizontal	AV	Pass	
	6	17895.0000	53.21	23.23	29.98	74	-20.79	245.6	Horizontal	PK	Pass	
/	6	17895.0000	46.1	23.23	22.87	54	-7.9	245.6	Horizontal	AV	Pass	

WSCT WSCT WSCT WSCT WSCT

WSCT WSCT WSCT WSCT

WSCT WSCT WSCT WSCT WSCT

WS CT WS CT WS CT WS CT

ADD: Building A-B, Baoli'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China.

ADD: Building A-B, Baoli'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China FEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 E-mail: fengbing.wang@wsct-cert.com Http: www.wsct-cert.com

深圳世标检测认证股份有限公司
World Standard Pation Certification& Testing Group(Shenzhen) Co.,Ltd

WSCT WSC

Page 71 of 75

WSCT WSCT

W5C1



W5ET





Report No.: WSCT-ANAB-R&E241200078A-BT

W5 CT

Vertical:



W5CT

W5 C

W5E

-	Suspu	ited Data Lis	t										
<i>,</i>	NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict		
	1	2486.2500	45.63	27.55	18.08	74	-28.37	333.2	Vertical	PK	Pass		
	1	2486.2500	36.58	27.55	9.03	54	-17.42	333.2	Vertical	AV	Pass		
/	2	3756.8750	47.8	29.12	18.68	74	-26.2	116.8	Vertical	PK	Pass		
	2	3756.8750	39.93	29.12	10.81	54	-14.07	116.8	Vertical	AV	Pass		
	3	5172.5000	60.04	31.74	28.3	74	-13.96	357.7	Vertical	PK	Pass		
	3	5172.5000	44.7	31.74	12.96	54	-9.3	357.7	Vertical	AV	Pass		
7	4	11133.0000	47.43	15.83	31.6	74	-26.57	78	Vertical	PK	Pass		
	4	11133.0000	39.19	15.83	23.36	54	-14.81	78	Vertical	AV	Pass		
	5	13606.5000	51.29	17.99	33.3	74	-22.71	261	Vertical	PK	Pass		
	5	13606.5000	42.33	17.99	24.34	54	-11.67	261	Vertical	AV	Pass		
	6	17979.0000	54.49	23.78	30.71	74	-19.51	229.8	Vertical	PK	Pass		
	6	17979.0000	47.15	23.78	23.37	54	-6.85	229.8	Vertical	AV	Pass		

W5 C1 W5 E7 W5 C W5 C1 W5 C7

> W5C1 WS ET WS CT W5 E1

ADD: Building A-B, Baoli'an Industrial Park, No. 58 and 60, Tangtou Avenue

W5CT

深圳世标检测认证股份有限公司

FAX: 0086-755-86376605

Page 72 of 75

W5CT

W5C1



W5ET



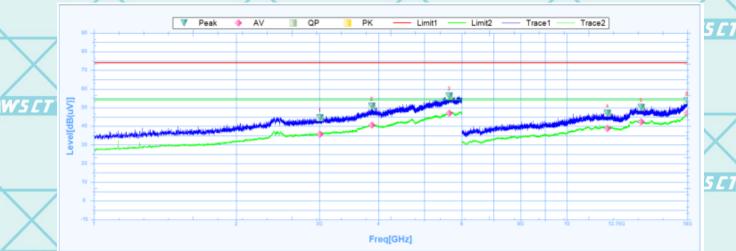


Report No.: WSCT-ANAB-R&E241200078A-BT

High channel: 2480MHz

Horizontal:

W5CT°



W5 CT

W5 C

	Susputed Data List											
	NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	/
	1	3003.7500	44.6	28.2	16.4	74	-29.4	307	Horizontal	PK	Pass	
	1	3003.7500	35.71	28.2	7.51	54	-18.29	307	Horizontal	AV	Pass	K
/	2	3867.5000	50.78	29.38	21.4	74	-23.22	0	Horizontal	PK	Pass	
	2	3867.5000	40.6	29.38	11.22	54	-13.4	0	Horizontal	AV	Pass	
	3	5641.2500	56.3	32.23	24.07	74	-17.7	0	Horizontal	PK	Pass	
7	3	5641.2500	46.99	32.23	14.76	54	-7.01	0	Horizontal	AV	Pass	
4	4	12196.5000	47.07	16.54	30.53	74	-26.93	137.9	Horizontal	PK	Pass	
	4	12196.5000	38.8	16.54	22.26	54	-15.2	137.9	Horizontal	AV	Pass	
	5	14364.0000	50.07	18.76	31.31	74	-23.93	137.9	Horizontal	PK	Pass	
	5	14364.0000	42.38	18.76	23.62	54	-11.62	137.9	Horizontal	AV	Pass	
	6	17976.0000	53.53	23.76	29.77	74	-20.47	360	Horizontal	PK	Pass	Z
/	6	17976.0000	47.05	23.76	23.29	54	-6.95	360	Horizontal	AV	Pass	

WSET WSET WSET WSET WSET WSET WSET

WSCT WSCT WSCT WSCT WSCT

ADD: Building A-B, Baoli'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China. TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 E-mail: fengbing.wang@wsct-cert.com Http: www.wsct-cert.com

深圳世标检测认证股份有限公司
World Standard Zation Certification& Testing Group(Shenzhen) Co.,Ltd

Title Wood Gloup (Wood DA)

CT

Page 73 of 75

WSET WSET

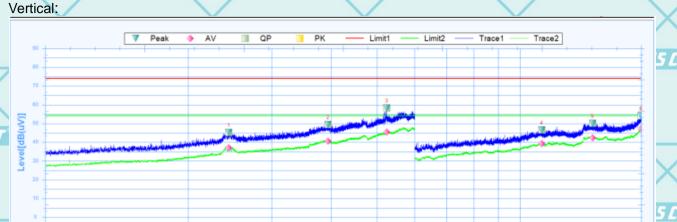






Report No.: WSCT-ANAB-R&E241200078A-BT

W5 CT



Freq[GHz]

7	(17 m	ir mi

NSC

	Suspu	ited Data Lis	st									
	NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	
	1	2436.8750	45.31	27.39	17.92	74	-28.69	0	Vertical	PK	Pass	
	1	2436.8750	37.07	27.39	9.68	54	-16.93	0	Vertical	AV	Pass	,
-	2	3942.5000	49.5	29.56	19.94	74	-24.5	319	Vertical	PK	Pass	2
	2	3942.5000	40.68	29.56	11.12	54	-13.32	319	Vertical	AV	Pass	
	3	5243.1250	58.27	31.79	26.48	74	-15.73	146.8	Vertical	PK	Pass	
/	3	5243.1250	45.36	31.79	13.57	54	-8.64	146.8	Vertical	AV	Pass	
7	4	11115.0000	46.64	15.86	30.78	74	-27.36	360.1	Vertical	PK	Pass	
	4	11115.0000	39.34	15.86	23.48	54	-14.66	360.1	Vertical	AV	Pass	
	5	14215.5000	50.05	18.91	31.14	74	-23.95	95	Vertical	PK	Pass	
	5	14215.5000	42.32	18.91	23.41	54	-11.68	95	Vertical	AV	Pass	
	6	17991.0000	54.04	23.87	30.17	74	-19.96	294.6	Vertical	PK	Pass	,
	6	17991.0000	47.18	23.87	23.31	54	-6.82	294.6	Vertical	AV	Pass	2

Note:

- The emission levels of other frequencies are very lower than the limit and not show in test report.
- Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency.
- Data of measurement shown "---"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.
 - Measurements were conducted in all three modulation (GFSK, Pi/4 DQPSK, 8DPSK), and the worst case Mode (GFSK) was submitted only.

	W5CT"		W5 ET		WSET		WSCT		N5 ET
W5CT"		W5CT		W5 CT		W5CT		W5CT	

深圳世标检测认证股份有限公司

ADD: Building A-B, Baoil an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guanggong Province, China. FAX: 0086-755-86376605 TEL: 0086-755-26996192 26996053 26996144

WS CT

Malalalala

ac-MRA

World Standardization Certification & Testing Group (Shenzhen) Co., ltd.

Report No.: WSCT-ANAB-R&E241200078A-BT

6.11.3. **Restricted Bands Requirements**

Bluetooth (GFSK, Pi/4-DQPSK, 8DPSK)mode have been tested, and the worst result GFSK model was report

	as below								
7	Frequency	Reading	Correct Factor	Emission Level	Limit	Margin	Polar	Detector	/
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V		
ý		W5 CT		Low Cha	nnel	W5C		W5	C
	2387	62.18	-8.76	53.42	74	-20.58	Ŧ	PK PK	
	2387	53.20	-8.76	44.44	54	-9.56	нХ	AV	
	2387	59.58	-8.73	50.85	74	-23.15	V	PK	
	2387	55.74	-8.73	47.01	54	-6.99	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	AV	
/	2390	64.95	-8.76	56.19	74	-17.81	Н	PK	(
	2390	56.49	-8.76	47.73	54	-6.27	Т	AV	
Ź	2390	62.37	-8.73	53.64	74	-20.36	V	PK	Ľ
	2390	57.38	-8.73	48.65	54	-5.35	V	AV	
				High Cha	nnel				
	2483.5	64.38	-8.76	55.62	74-77	-18.38	HV5	PK	
	2483.5	55.36	-8.76	46.60	54	-7.40	Н	AV	
	2483.5	60.32	-8.73	51.59	74	-22.41	V	PK	
	2483.5	56.96	-8.73	48.23	54	-5.77	V	AV	
	Motor From Fr	minaian fragues	ov in MILI-		100				

Note: Freq. = Emission frequency in MHz

Reading level $(dB\mu V)$ = Receiver reading

Corr. Factor (dB) = Attenuation factor + Cable loss Level $(dB\mu V)$ = Reading level $(dB\mu V)$ + Corr. Factor (dB)

Limit (dBµV) = Limit stated in standard

Margin (dB) = Level (dB μ V) - Limits (dB μ V)

****END OF REPORT****

W5 ET

W5CI NS CI WS CI

ADD: Building A-B, Baoli'an Industrial Park, No.58 and 60, Tangtou Avenue

FAX: 0086-755-86376605

深圳世标检测认证股份有限公司

Page 75 of 75

W5 C1