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

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Report No.: WSCT-ANAB-R&E241000052A-BT

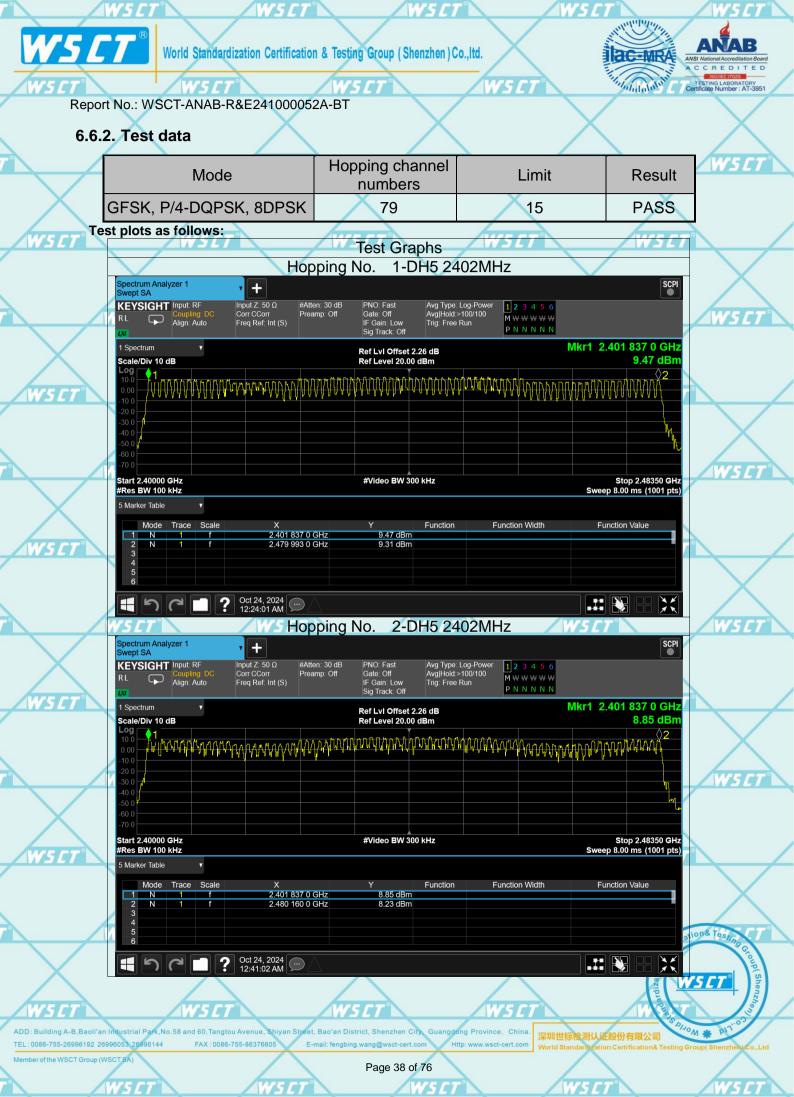
# 6.6.75 Hopping Channel Number

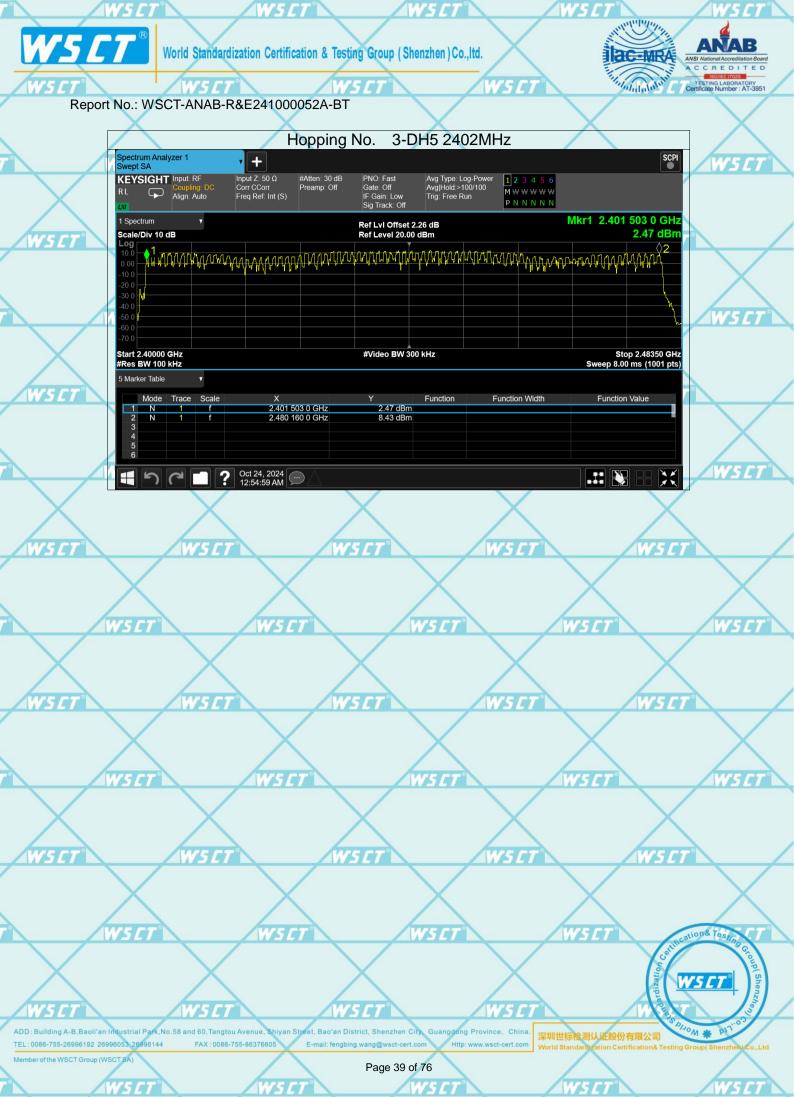
#### 6.6.1. Test Specification

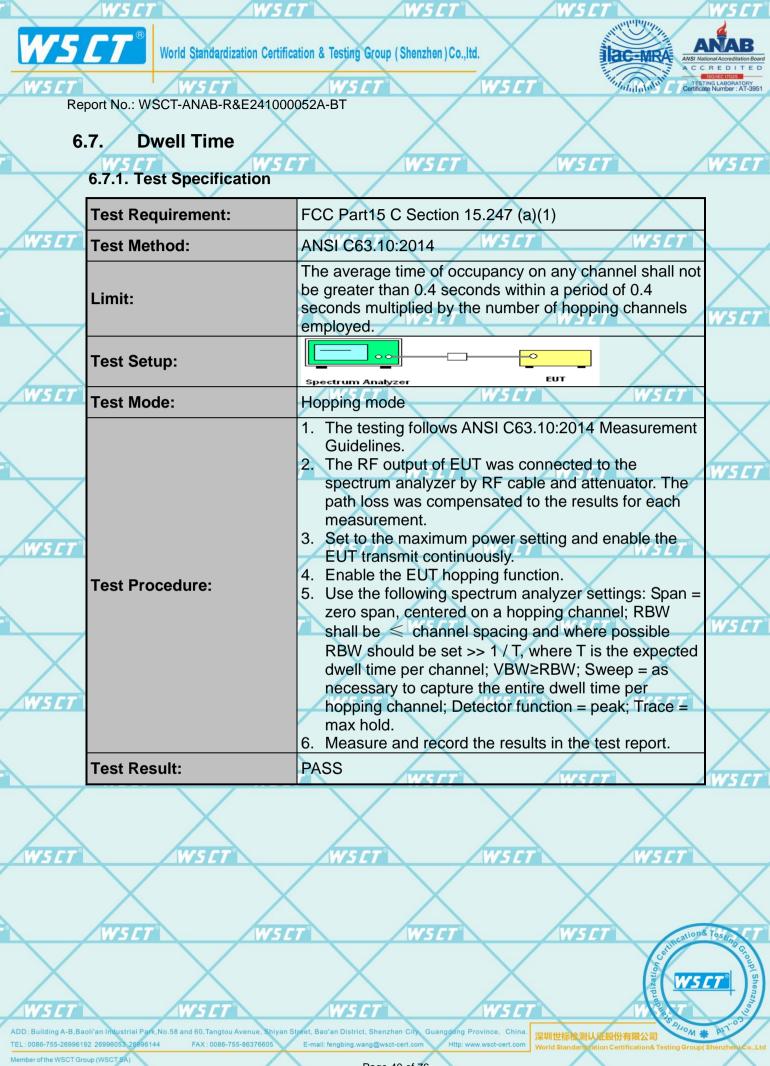
/			
<b>5 C T</b>	Test Requirement:	FCC Part15 C Section 15.247 (a)(1)	/
	Test Method:	ANSI C63.10:2014	$\overline{}$
	Limit:	Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.	SFT
	Test Setup:	Spectrum Analyzer	
	Test Mode:	Hopping mode	$\checkmark$
ISCT	Test Procedure:	<ol> <li>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.</li> <li>Set to the maximum power setting and enable the EUT transmit continuously.</li> <li>Enable the EUT hopping function.</li> <li>Use the following spectrum analyzer settings: Span =</li> </ol>	5.57
	Test Result:	PASS	EFT
ISET	WSET	WSET WSET	$\overline{\langle}$
	WSET WSE	T WSET WSET reations test	T
SET	WSET	T WSET WSET WSET WSET	Group(Shenzhen
uilding A-B,Bac		treet, Bao'an District, Shenzhen City, Guangdong Province, China. 深圳世标检测认证股份有限公司	
of the WSCT Gro	<u> </u>	Page 37 of 76 World Standardization Certification& Testing Group( Shenz	

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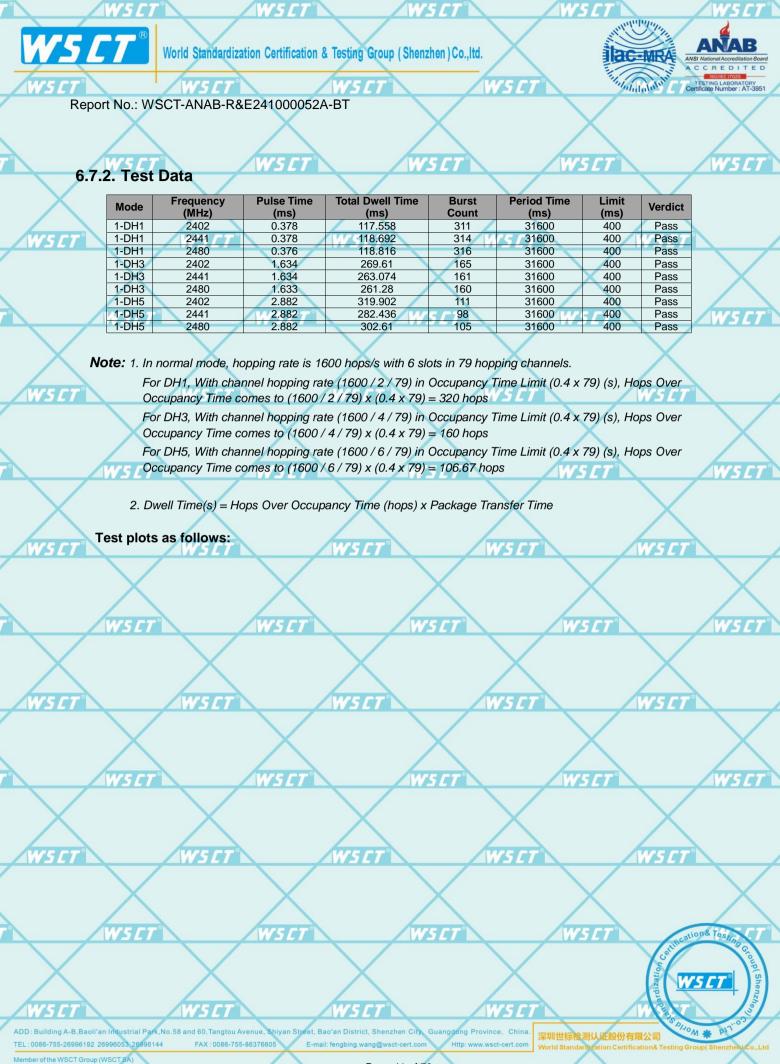
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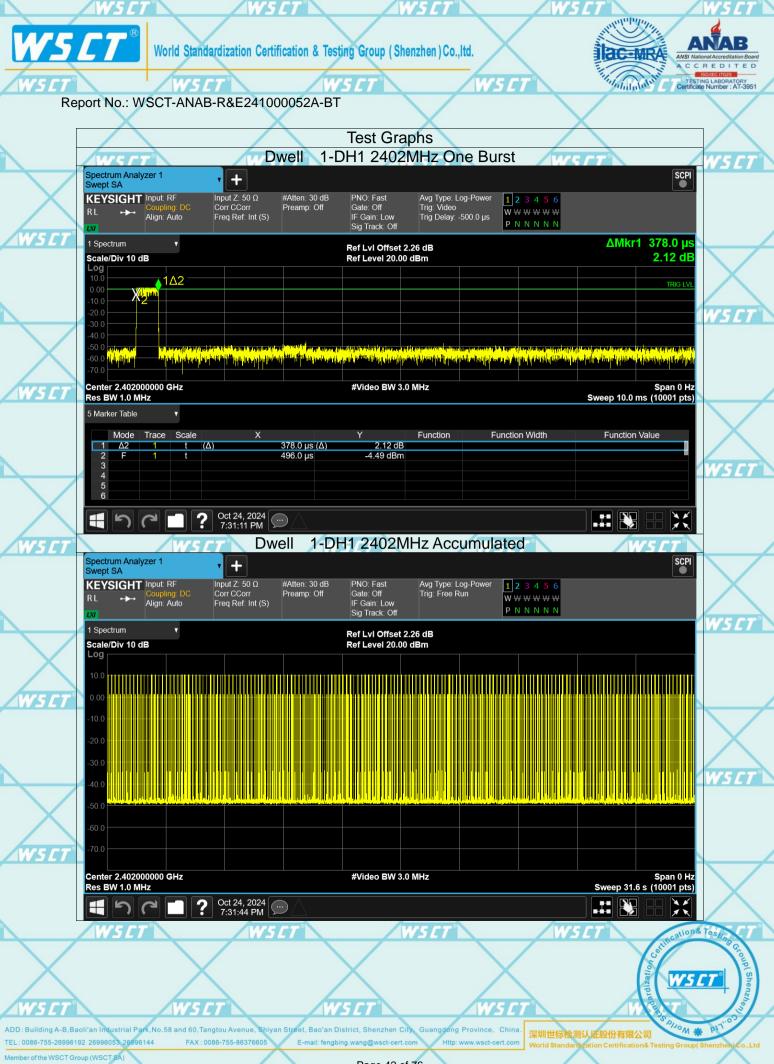




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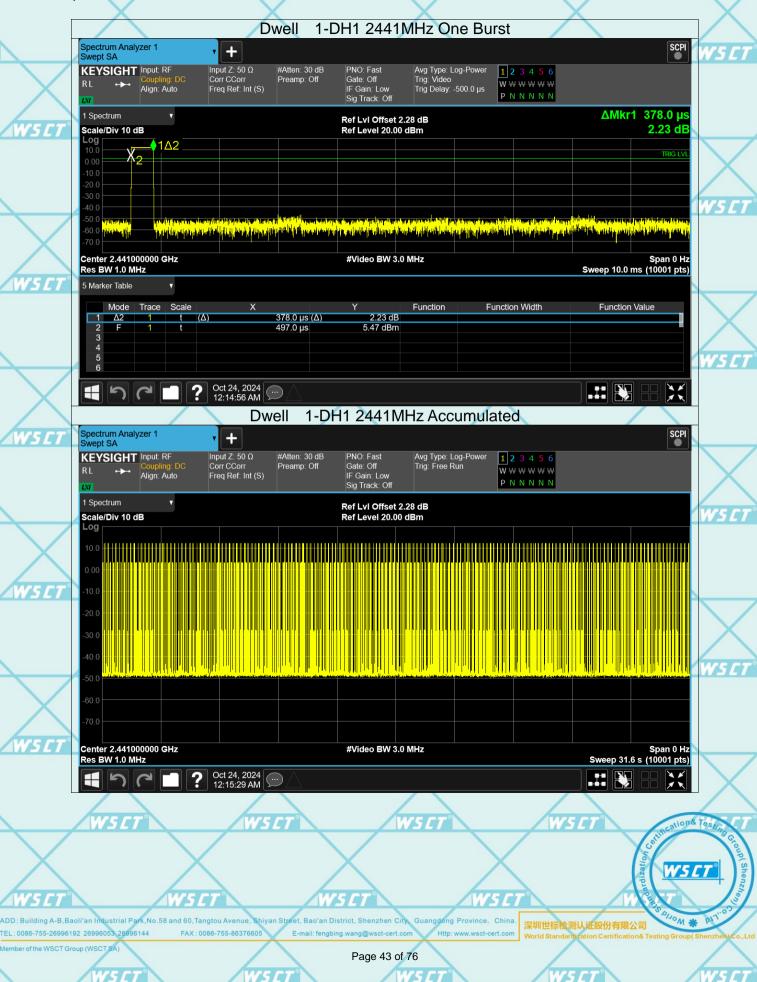


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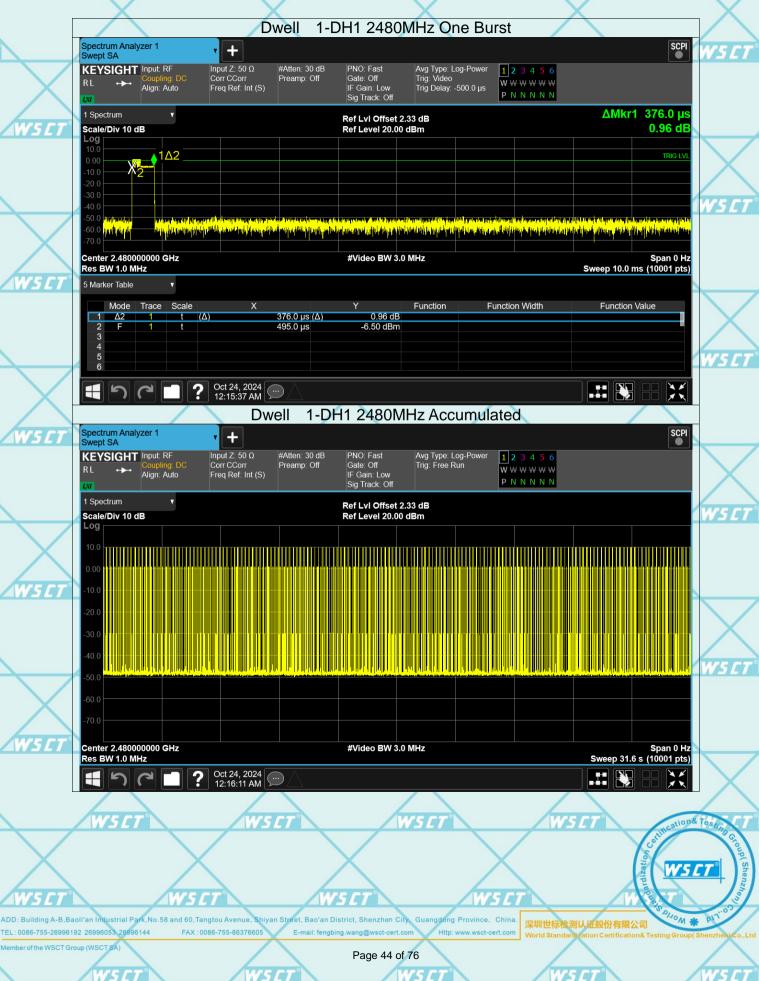


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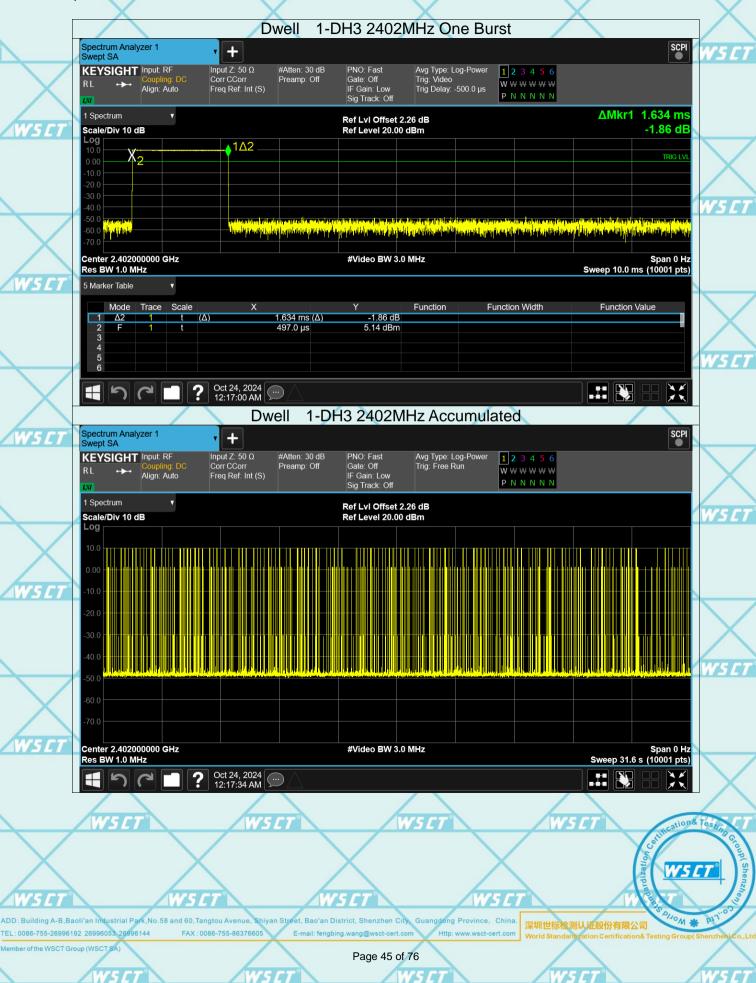


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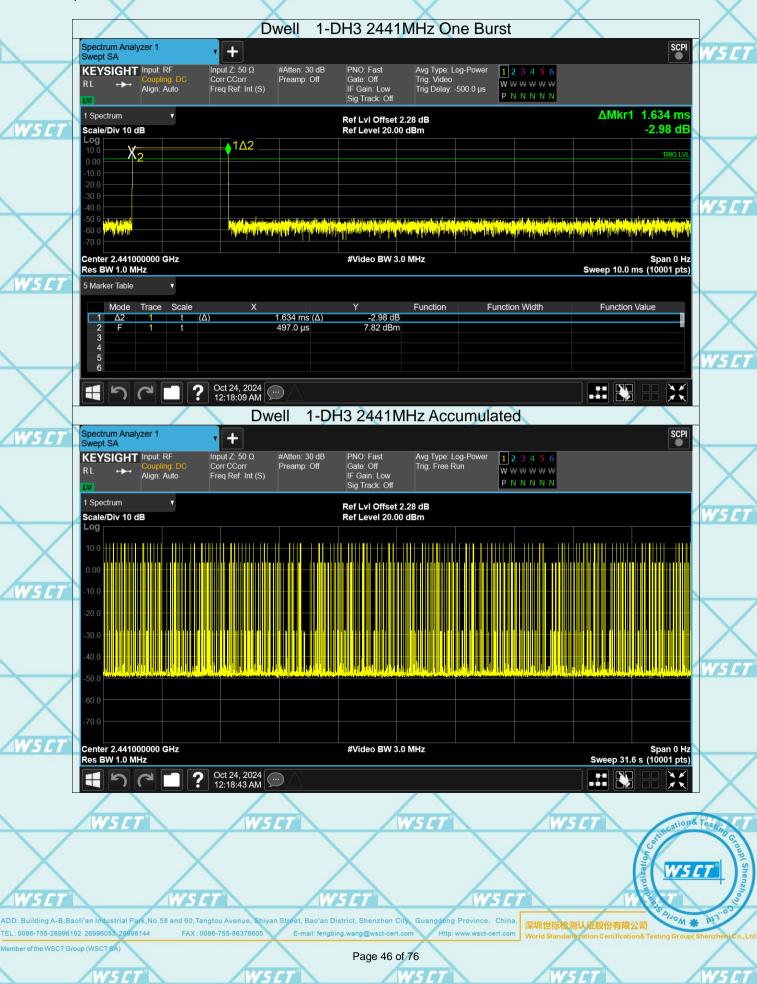


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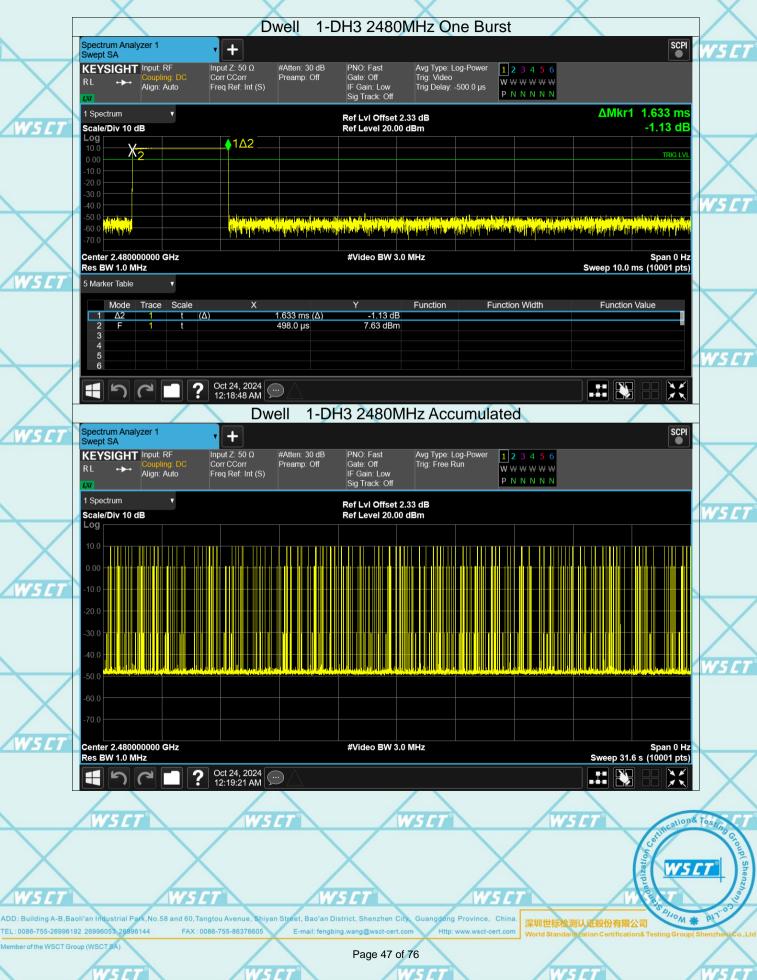


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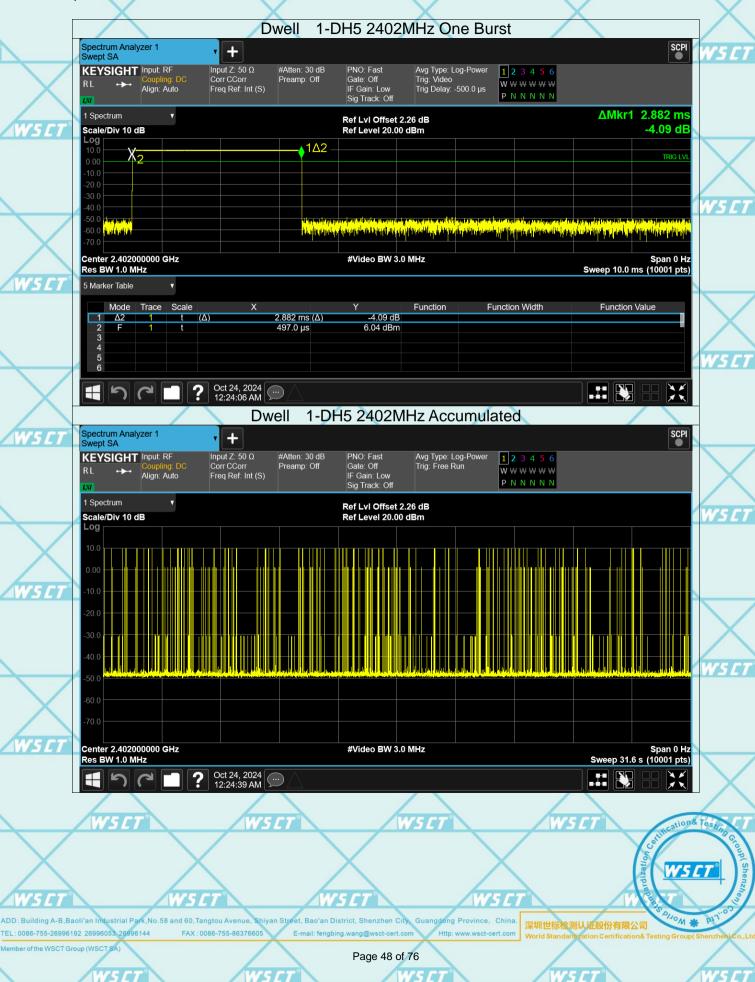


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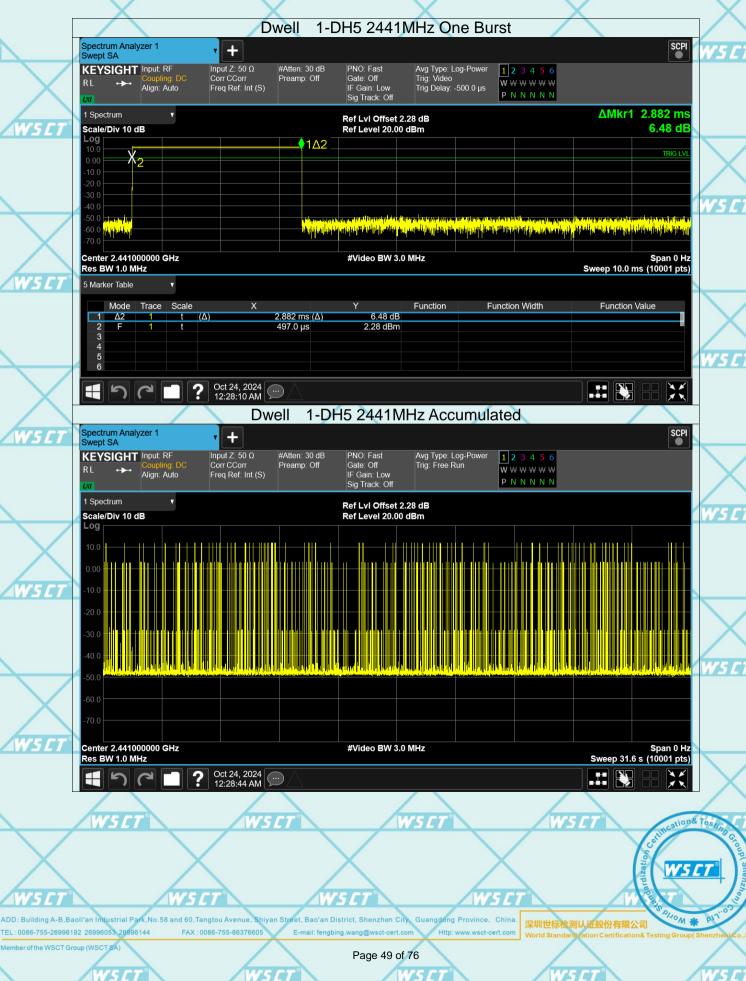


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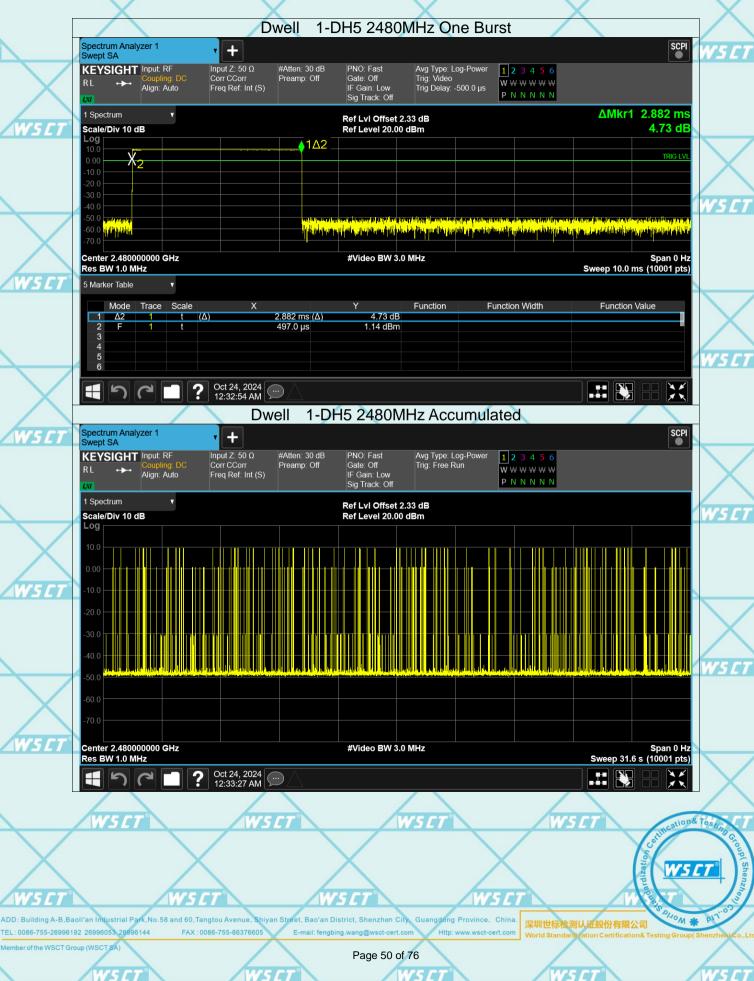


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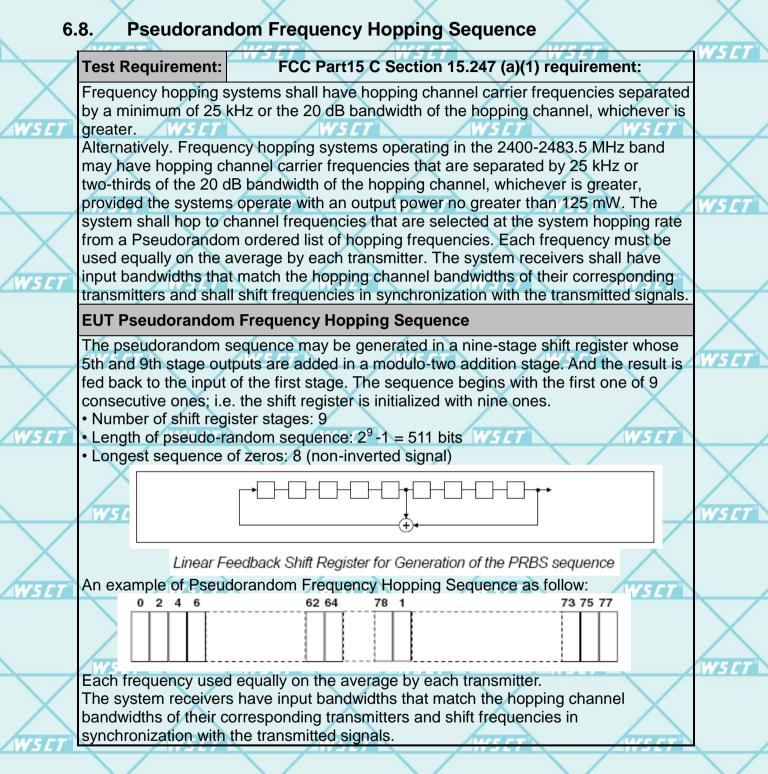
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# 6.9. Conducted Band Edge Measurement

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6.9.1. Test Specification

					_
$\wedge$	Test Requirement:	FCC Part15 C See	ction 15.247 (d)		
WSCT <sup>®</sup>	Test Method:	ANSI C63.10:2014	4 WSET	WSCT <sup>®</sup>	
	Limit:	radiation frequences shall be at least 20 radiated power. In	ndwidth outside the i by band, the radio free 0 dB below the highe addition, radiated en ands must also comp limits.	quency power st level of the nissions which fall	WSET
WSET	Test Setup:	Spectrum Analyzer		wscr°	$\checkmark$
	Test Mode:	Transmitting mode	e with modulation	5/7	WSET
W5ET W5ET	Test Procedure:	Compliance of C63.10:2014 M 2. Set to the max EUT transmit of 3. Set RBW = 100 kHz (≥RBW). E 20 dB down fro the authorized RBW. The atte dB when RMS used. 4. Enable hoppin step 2 and 3.	ows the guidelines in RF Conducted Emis Aeasurement Guidelin imum power setting a continuously. 0 kHz (≥1% span=10 Band edge emissions band as measured w nuation shall be 30 d conducted output po g function of the EUT ecord the results in th	sions of ANSI nes. and enable the MHz), VBW = 300 must be at least ion level within <i>v</i> ith a 100kHz B instead of 20 wer procedure is	
	Test Result:	PASS		SCT°	WSET
WSET	WSET	WSET	WSET	WSCT	
	WSET WSE		SET W	SCT scations	Testing
WSET	WSET	WSET	WSET	and at log at lo	Tosting Group (Shenzhou)
	oli'an Industrial Park,No.58 and 60,Tangtou Avenue, Shiyan S	reet, Bao'an District, Shenzhen City, C E-mail: fengbing.wang@wsct-cert.com	Suangdong Province, China. 深圳世标机	W认证股份有限公司 arctivation Certification& Testing Group(	PIT
Member of the WSCT Gro	pup (WSCT SA)	Page 52 of 76			$\square$







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Report No.: WSCT-ANAB-R&E241000052A-BT

#### 6.10. Conducted Spurious Emission Measurement

6.10.1. Test Specification

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Х	Test Requirement:	FCC Part15 C Section 15.247 (d)	
NS ET	Test Method:	ANSI C63.10:2014 WSET WSET	
$\overline{}$	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.	wsc
VSET	Test Setup:	Spectrum Analyzer EUT	
	Test Mode:	Transmitting mode with modulation	$\times$
WSET WSET	Test Procedure:	<ol> <li>The testing follows the guidelines in Spurious RF Conducted Emissions of ANSI C63.10:2014 Measurement Guidelines</li> <li>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.</li> <li>Set to the maximum power setting and enable the EUT transmit continuously.</li> <li>Set RBW = 100 kHz, VBW = 300kHz, scan up through 10th harmonic. All harmonics / spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.</li> <li>Measure and record the results in the test report.</li> <li>The RF fundamental frequency should be excluded against the limit line in the operating frequency band.</li> </ol>	WIST C
	Test Result:	PASS	$\wedge$
			AVER

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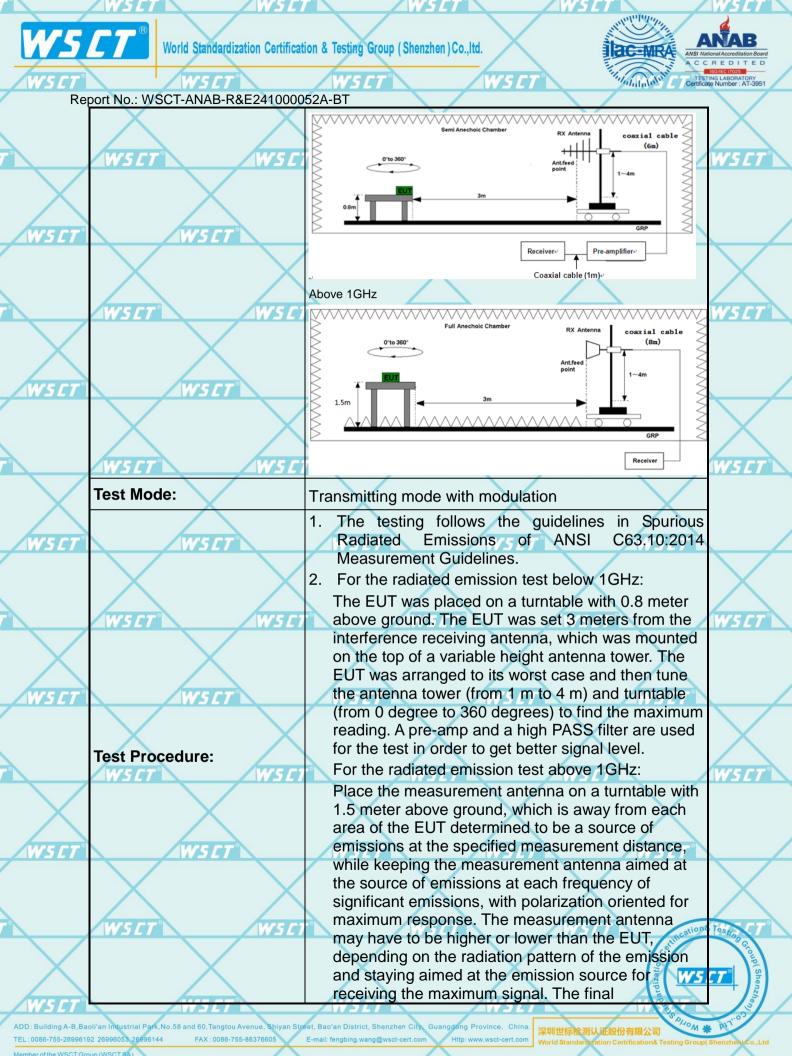
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Report No.: WSCT-ANAB-R&E241000052A-BT

# 6.11. Radiated Spurious Emission Measurement

6.11.1. Test Specification

	6.11.1. Test Specification			$\sim$				
	Test Requirement:	FCC Part15 C Section 15.209						
WSET	Test Method: 5 [7	ANSI C63.10	):2014	WS CT		WSCT		
	Frequency Range:	9 kHz to 25 0		$\sim$				
	Measurement Distance:	3 m					$\land$	
	Antenna Polarization:	Horizontal &	Vertical		W5		WSCT	
	X	Frequency	Detector	RBW	VBW	Remark		
		9kHz- 150kHz 150kHz-	Quasi-peak	200Hz	1kHz 30kHz	Quasi-peak Value Quasi-peak Value		
WSET	Receiver Setup: 7	30MHz	Quasi-peak	9kHz	JUKHZ	Quasi-peak value		
		30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value	$\sim$	
		Above 1GHz	Peak Peak	1MHz 1MHz	3MHz 10Hz	Peak Value Average Value		
	WSET WSE		WSLT	Field Stre		Measurement	WS CT	
		Frequen	су	(microvolts		Distance (meters)		
	X	0.009-0.4		2400/F(H		300		
		0.490-1.705		24000/F(KHz)		30 30		
WSET	WSLT	30-88		30 100		30 5 7 1		
		88-216		150		3	$\sim$	
	Limit:	216-960		200		3	$\land$	
	WSET WSET	Above 960 50		500	WS	3	W5CT	
WSET	WSET	Frequency Above 1GHz	(microv	Strength volts/meter) 500	Measure Distan (meter 3	ce Detector		
	For radiated emissions below 30MHz						$\mathbf{\nabla}$	
	WSET WSET	Di	stance = 3m			Computer	WSET	
		•						
	Test setup:	Pre -Amplifier				Amplifier		
WSCT	WSCT	EUT Turn table				<b>7°</b>		
						leceiver	$\bigvee$	
			Ground	Plane			$\wedge$	
	WSET WSET	30MHz to 1GHz			/w5	c7°	Tesus CT	
X		X		X		ardizetion c.	Houp	
WSET	WSET	WSET				The second	100 m	
	oli'an Industrial Park,No.58 and 60,Tangtou Avenue, Shiyan Str           92 26996053 26996144         FAX : 0086-755-86376605	et, Bao'an District, Shenzh E-mail: fengbing.wang@wsct-		Province, China. www.wsct-cert.com		A 近股份有限公司 ation Certification& Testing Group		
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						nissions. The			$ \land $
	<b>W5</b>	<u>7°\W</u>	/SCTÌ			n for maximur			<b>W5CT</b> °)
						nge of heights			
			2		•	d or reference	•	nd enable the	
			3			ntinuously.	etting a		
<b>WSET</b> °		W5CT	4.			g spectrum ar	nalvzer s	ettings:	
						vide enough to		-	$\sim$
			$\sim$	· · ·		ing measured			$\land$
	WSE		75 CT			00  kHz for f <		RBW-1MHz	WSFT
			2.61			VBW≥RBW;			
X		X					function	= peak; Trace	
					max hold				
WSET		WSET				e measureme	nt: use c	luty cycle	
						actor method			
	- X		X	15.	35(c). Dut	ty cycle = On	time/10	0 milliseconds	X
				On	time =N1	*L1+N2*L2+.	+Nn-1*	LNn-1+Nn*Ln	
	<b>W5</b>		/ <i>5 [[</i> 1°]	W W	here N1 i	s number of t	vpe 1 pu	llses, L1 is	WSCT
						pe 1 pulses, e	••••••		
				A	/erage En	nission Level	= Peak	Emission	
WSET		WSET		Le	evel + 20*	log(Duty cycle	e)	WEET	
				Со	rrected Re	eading: Anten	na Facto	or + Cable	
			$\mathbf{\mathbf{\nabla}}$			Level - Prea			
	Test re	sults:	P	ASS					$\land$
	WSE		SCA		WSCI		WSL		WSLT <sup>°</sup>
		The symbol of "" in the							
		For the test data above							-
WSET		and peak (or quasi-peal	k) detecto	r functions, if	the peak (or	r quasi-peak) mea	sured value	e complies with the	
	a a a a a a a a a a a a a a a a a a a	average limit, it is unneo	cessary to	perform an a	average mea	surement.	$\sim$		$\sim$
No	ote 3: 1	The low frequency, whic	h started	from 9 kHz to	o 30 MHz, wa	as pre-scanned ar	nd the resu	It which was 20 dB	$\wedge$
	WSD	ower than the limit line	per 15.31	(o) was not re	eported.5 C1		WSC		W5LT
No		The EUT is working in th					een tested	and normal link mo	
X		s worst.			0112				
	I:								
WSET®		WSET		<b>W5</b> [T		WSET		WSET	
	$\sim$		$\checkmark$		$\sim$		$\searrow$		$\sim$
			$\wedge$						$\wedge$
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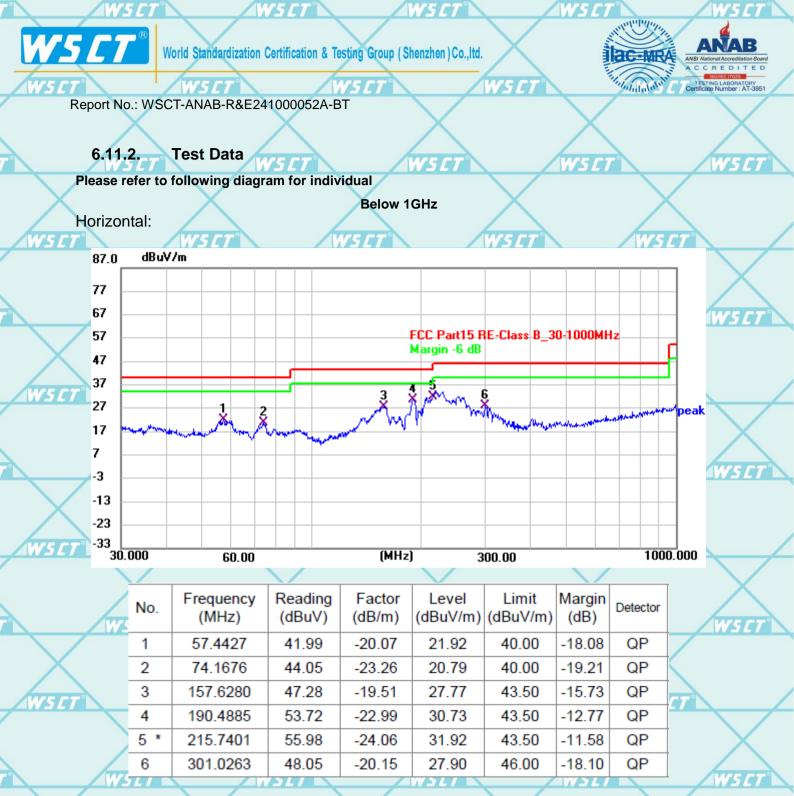
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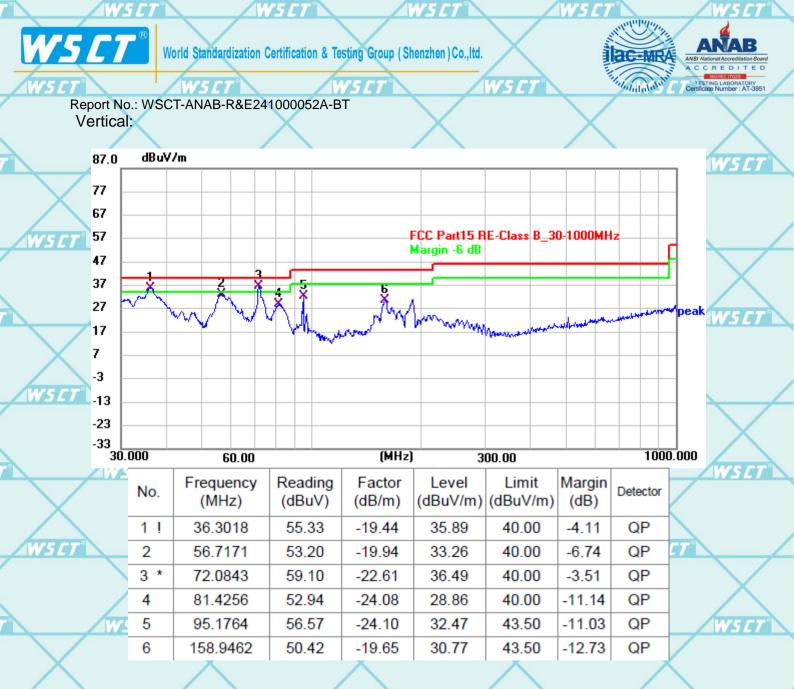
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#### Note1:

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Freq. = Emission frequency in MHz Reading level  $(dB\mu V)$  = Receiver reading Corr. Factor (dB) = Antenna factor + Cable loss - Amplifier factor. Measurement  $(dB\mu V)$  = Reading level  $(dB\mu V)$  + Corr. Factor (dB)Limit  $(dB\mu V)$  = Limit stated in standard Margin (dB) = Measurement  $(dB\mu V)$  – Limits  $(dB\mu V)$ 

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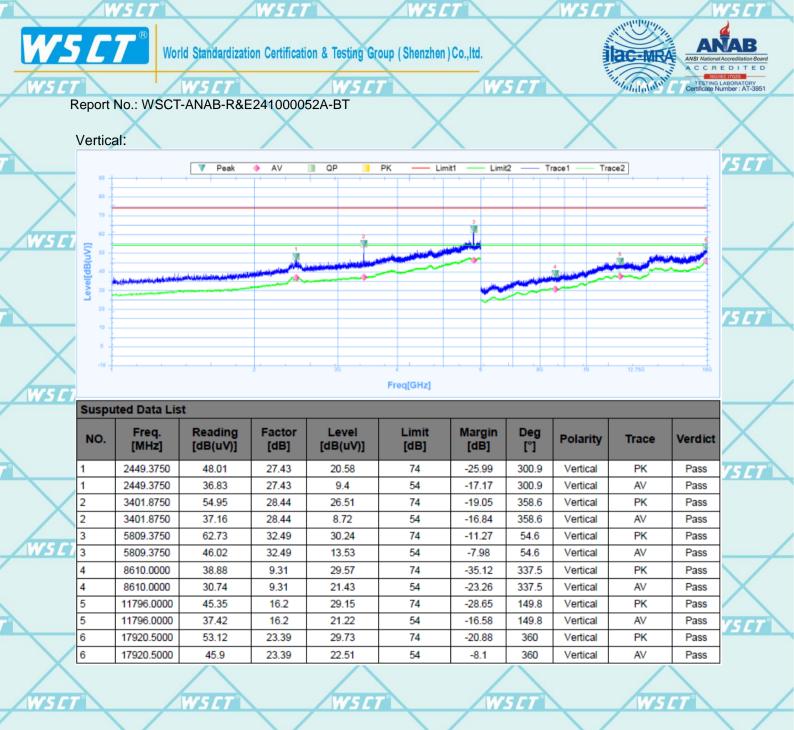
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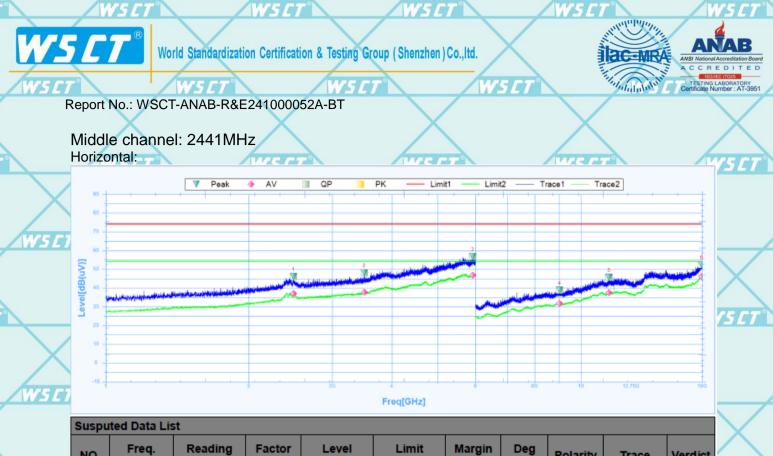


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	NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	/7
	1	2482.5000	46.02	27.54	18.48	74	-27.98	237.2	Horizontal	PK	Pass	
$\sim$	1	2482.5000	37.1	27.54	9.56	54	-16.9	237.2	Horizontal	AV	Pass	
$\wedge$	2	3498.7500	48.15	28.5	19.65	74	-25.85	152.2	Horizontal	PK	Pass	
	2	3498.7500	37.77	28.5	9.27	54	-16.23	152.2	Horizontal	AV	Pass	
/S []	3	5923.1250	56.76	32.68	24.08	74	-17.24	3.8	Horizontal	PK	Pass	
	3	5923.1250	46.88	32.68	14.2	54	-7.12	3.8	Horizontal	AV	Pass	
	4	9028.5000	38.75	9.86	28.89	74	-35.25	24.3	Horizontal	PK	Pass	
	4	9028.5000	31.69	9.86	21.83	54	-22.31	24.3	Horizontal	AV	Pass	/
	5	11466.0000	45.57	16.03	29.54	74	-28.43	147.4	Horizontal	PK	Pass	7
	5	11466.0000	37.43	16.03	21.4	54	-16.57	147.4	Horizontal	AV	Pass	
$\bigvee$	6	17968.5000	52.53	23.71	28.82	74	-21.47	185.7	Horizontal	PK	Pass	
$\wedge$	6	17968.5000	46.06	23.71	22.35	54	-7.94	185.7	Horizontal	AV	Pass	

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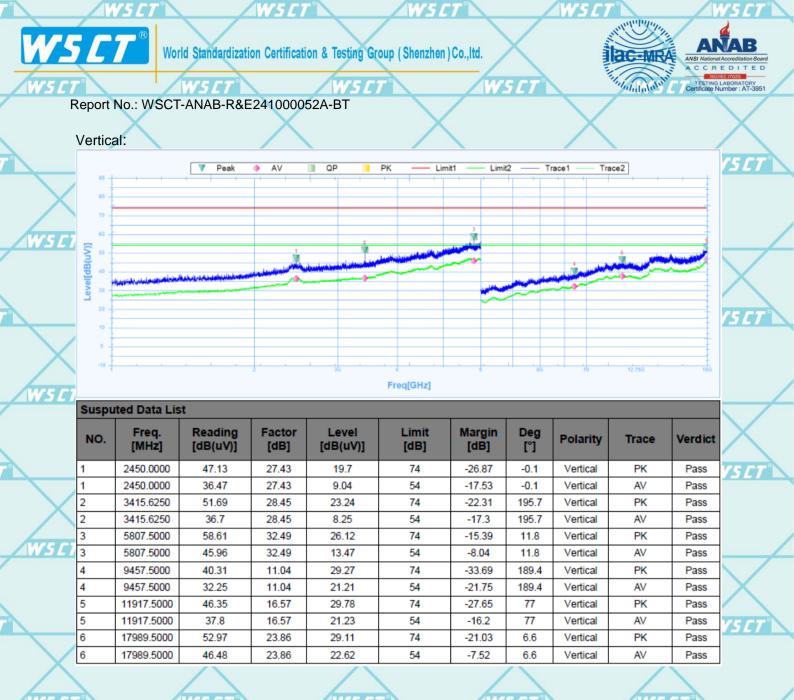
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an District, Shenzhen City, Guangdong Province, China \* Mor ADD: Building A-B, Baoli'an Industrial Park, No.58 ar eet, Ba d 60. Tangtou Ave nivan St 深圳世标检测认证股份有限公司 TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 E-mail: fengbing Http://www.wsct-cert.co Member of the WSCT Group (WSCT SA)

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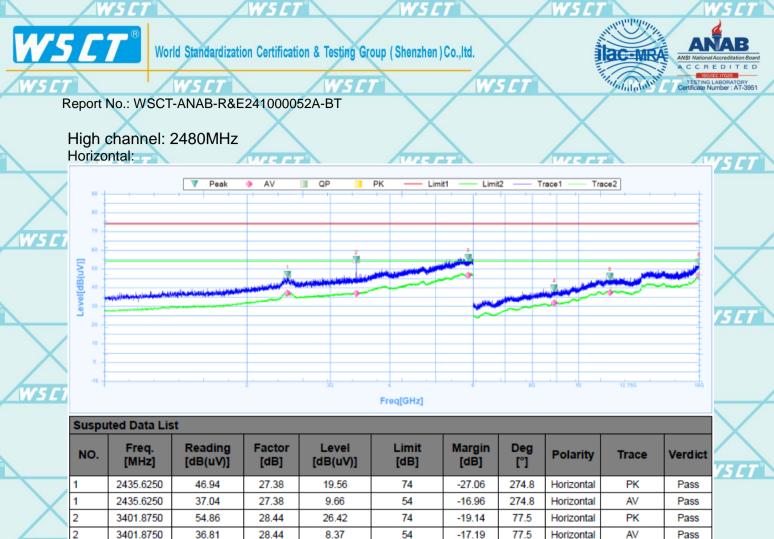
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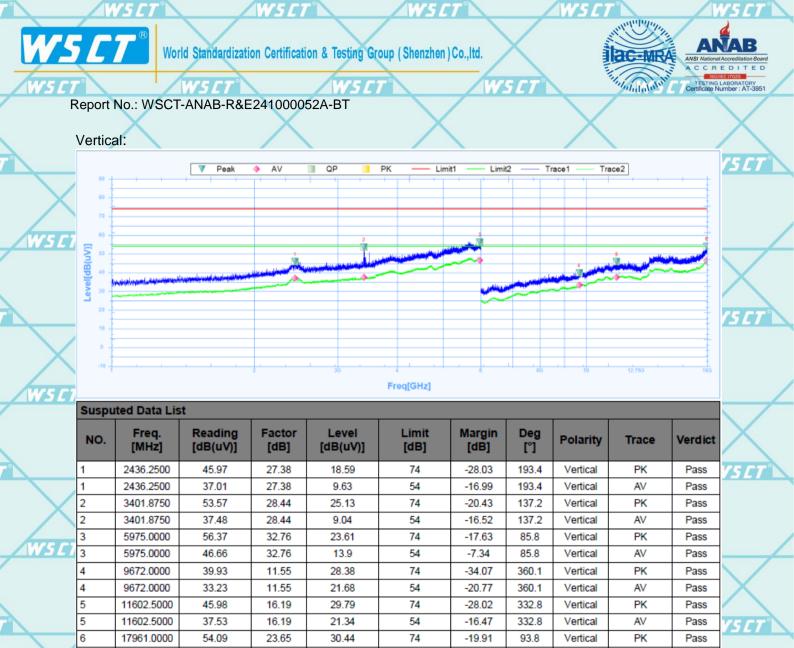
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#### Note:

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1. The emission levels of other frequencies are very lower than the limit and not show in test report.

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2. Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency.

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 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.

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- Measurements were conducted in all three modulation (GFSK, Pi/4 DQPSK, 8DPSK), and the worst case Mode (GFSK) was submitted only.
- 5. EUT has been tested in unfolded states, and the report only reflects data in the unfolded state (worst-case scenario)

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