

WS CI

Test Procedure:

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- The testing follows the guidelines in Spurious of ANSI Radiated **Emissions** C63.10:2014 Measurement Guidelines.
- For the radiated emission test below 1GHz: The EUT was placed on a turntable with 0.8 meter above ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high PASS filter are used for the test in order to get better signal level.

For the radiated emission test above 1GHz:

Place the measurement antenna on a turntable with 1.5 meter above ground, which is away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which



Report No.: WSCT-ANAB-R&E250100003A-BT 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 WSE VS CT W5 CT above the ground or reference ground plane. Set to the maximum power setting and enable the EUT transmit continuously. 4. Use the following spectrum analyzer settings: NS CT (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; WS CT W5C 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. / 5 Average Emission Level = Peak Emission Level + 20*log(Duty cycle) Corrected Reading: Antenna Factor + Cable NS C W5C7 Loss + Read Level - Preamp Factor = Level Test results: **PASS**

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a. 深圳世标检测认证股份有限公司
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6.11.2. Test Data

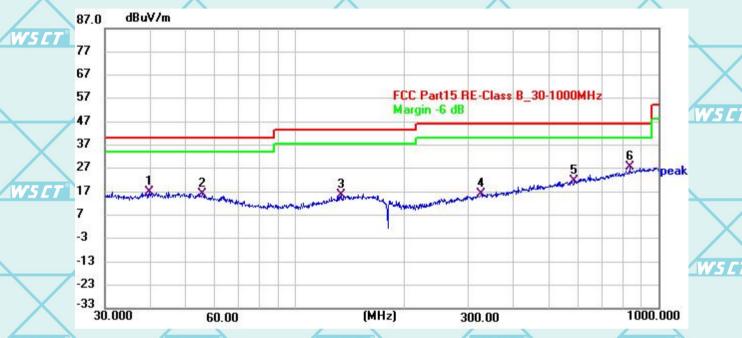
Please refer to following diagram for individual

W5 CT Below 1GHz CT

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Horizontal:



WS CT

	No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	X
	1	39.9067	35.95	-19.08	16.87	40.00	-23.13	QP	V5 C
	2	55.7558	35.86	-19.79	16.07	40.00	-23.93	QP	
	3	133.9706	35.77	-20.23	15.54	43.50	-27.96	QP	-
Ľ1	4	326.4532	35.45	-19.39	16.06	46.00	-29.94	QP	
	5	587.3584	35.50	-14.07	21.43	46.00	-24.57	QP	X
	6 *	833.6825	38.30	-10.55	27.75	46.00	-18.25	QP	

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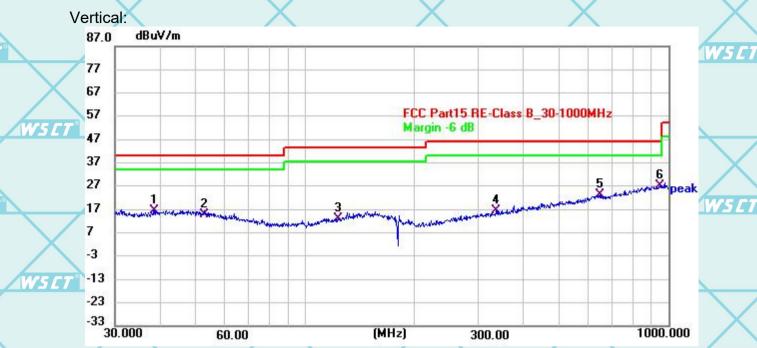
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W5CT° WS CT W5CT° W5CT° W5C Frequency Margin Reading Factor Level Limit No. Detector (MHz) (dBuV) (dB/m) (dBuV/m) (dBuV/m) (dB) WS C1 1 38.5992 35.69 -19.2116.48 -23.52QP 40.00 2 52.7831 33.86 -18.9414.92 40.00 -25.08QP 3 123.8612 QP 34.37 -21.11 13.26 43.50 -30.24-19.1216.35 -29.65 QP 4 336.6248 35.47 46.00 46.00 5 650,2294 36.20 -12.8223.38 -22.62QP QP 6 947.0990 36.71 -9.3827.33 46.00 -18.67

Note1:

Freq. = Emission frequency in MHz

Reading level (dBµV) = Receiver reading

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

Measurement (dBµV) = Reading level (dBµV) + Corr. Factor (dB)

Limit (dBµV) = Limit stated in standard

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

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Above 1GHz

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

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

Low channel: 2402MHz

Horizontal:



Freq[GHz]

Suspu	ıted Data Lis	t								
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2448.1250	46.49	27.42	19.07	74	-27.51	228.9	Horizontal	PK	Pass
1	2448.1250	37.28	27.42	9.86	54	-16.72	228.9	Horizontal	AV	Pass
2	3924.3750	49.69	29.52	20.17	74	-24.31	1.4	Horizontal	PK	Pass
2	3924.3750	40.39	29.52	10.87	54	-13.61	1.4	Horizontal	AV	Pass
3	5186.2500	60.22	31.75	28.47	74	-13.78	360.1	Horizontal	PK	Pass
3	5186.2500	44.64	31.75	12.89	54	-9.36	360.1	Horizontal	AV	Pass
4	11016.0000	48.19	15.67	32.52	74	-25.81	-0.1	Horizontal	PK	Pass
4	11016.0000	39.38	15.67	23.71	54	-14.62	-0.1	Horizontal	AV	Pass
5	14017.5000	50.04	19.11	30.93	74	-23.96	274.6	Horizontal	PK	Pass
5	14017.5000	42.97	19.11	23.86	54	-11.03	274.6	Horizontal	AV	Pass
6	17971.5000	53.88	23.73	30.15	74	-20.12	159.8	Horizontal	PK	Pass
6	17971.5000	46.82	23.73	23.09	54	-7.18	159.8	Horizontal	AV	Pass

WS C1 W5C1 W5 CI W5 C1

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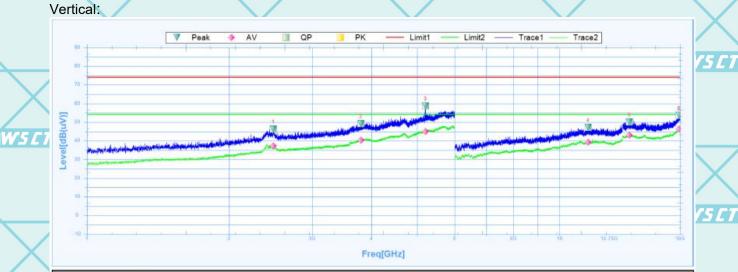
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	Suspu	ited Data Lis	t								
	NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
	1	2478.1250	46.33	7.84	38.49	74	-27.67	21	Vertical	PK	Pass
	1	2478.1250	37.26	7.84	29.42	54	-16.74	21	Vertical	AV	Pass
	2	3800.6250	49.28	11	38.28	74	-24.72	269.4	Vertical	PK	Pass
	2	3800.6250	40.46	11	29.46	54	-13.54	269.4	Vertical	AV	Pass
	3	5207.5000	58.78	18.36	40.42	74	-15.22	337.4	Vertical	PK	Pass
	3	5207.5000	45.04	18.36	26.68	54	-8.96	337.4	Vertical	AV	Pass
7	4	11499.0000	47.19	39.05	8.14	74	-26.81	134.7	Vertical	PK	Pass
	4	11499.0000	39.32	39.05	0.27	54	-14.68	134.7	Vertical	AV	Pass
	5	14065.5000	50.07	41.41	8.66	74	-23.93	16.5	Vertical	PK	Pass
	5	14065.5000	42.93	41.41	1.52	54	-11.07	16.5	Vertical	AV	Pass
	6	17920.5000	53.65	45.97	7.68	74	-20.35	95.4	Vertical	PK	Pass
	6	17920.5000	46.33	45.97	0.36	54	-7.67	95.4	Vertical	AV	Pass

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WS CT W5 C1 W5C7 W5 C1 tion& Testi

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W5ET[®]





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Middle channel: 2441MHz Horizontal:



Suspi	uted Data Lis	t								
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2439.3750	46.52	27.39	19.13	74	-27.48	269.3	Horizontal	PK	Pass
1	2439.3750	37.29	27.39	9.9	54	-16.71	269.3	Horizontal	AV	Pass
2	3885.0000	49.68	29.42	20.26	74	-24.32	81.6	Horizontal	PK	Pass
2	3885.0000	41.06	29.42	11.64	54	-12.94	81.6	Horizontal	AV	Pass
3	5791.2500	60.46	32.47	27.99	74	-13.54	6.5	Horizontal	PK	Pass
3	5791.2500	46.38	32.47	13.91	54	-7.62	6.5	Horizontal	AV	Pass
4	11499.0000	47.24	16.12	31.12	74	-26.76	195.8	Horizontal	PK	Pass
4	11499.0000	39.68	16.12	23.56	54	-14.32	195.8	Horizontal	AV	Pass
5	14005.5000	49.91	19.11	30.8	74	-24.09	359.5	Horizontal	PK	Pass
5	14005.5000	42.53	19.11	23.42	54	-11.47	359.5	Horizontal	AV	Pass
6	17958.0000	54.58	23.63	30.95	74	-19.42	236.5	Horizontal	PK	Pass
6	17958.0000	46.76	23.63	23.13	54	-7.24	236.5	Horizontal	AV	Pass

	14000.0000	72.00	10.11	20.72		11.71	000.0	1 TOTIZOTICAL	, 14	1 655	
6	17958.0000	54.58	23.63	30.95	74	-19.42	236.5	Horizontal	PK	Pass	
6	17958.0000	46.76	23.63	23.13	54	-7.24	236.5	Horizontal	AV	Pass	
W5ET*		W5 CT		W5 Ci		W	S C T °		W5	CT°	
	X		X		\rightarrow			X			X
	W5CT°		W5CT		W5 E	7		W5 C1			NS CT
WS ET		W5 CT		WSC		W	SET [®]		WS	CT"	
	WS CT		WSET		WSE	7		WSEI		acation& To	Stin TT
WS ET®		W5 CT		WSC		W	S C T		N magardization Co.	W5C1	Group (Shenzheir)
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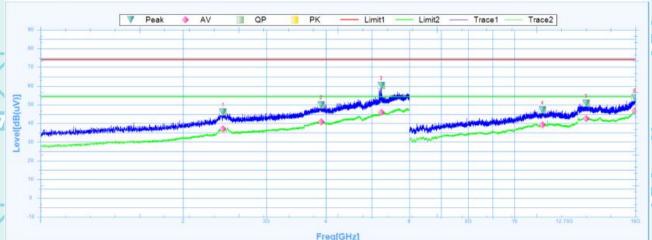
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	sputed Data Lis	t								
N	D. Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdic
1	2427.5000	46.15	27.35	18.8	74	-27.85	360.1	Vertical	PK	Pass
1	2427.5000	37	27.35	9.65	54	-17	360.1	Vertical	AV	Pass
2	3909.3750	49.79	29.48	20.31	74	-24.21	293.4	Vertical	PK	Pass
2	3909.3750	40.74	29.48	11.26	54	-13.26	293.4	Vertical	AV	Pass
3	5236.2500	60.34	31.79	28.55	74	-13.66	249.2	Vertical	PK	Pass
3	5236.2500	45.82	31.79	14.03	54	-8.18	249.2	Vertical	AV	Pass
4	11452.5000	47.25	15.99	31.26	74	-26.75	223.3	Vertical	PK	Pass
4	11452.5000	39.36	15.99	23.37	54	-14.64	223.3	Vertical	AV	Pass
5	14181.0000	50.7	18.94	31.76	74	-23.3	83.4	Vertical	PK	Pass
5	14181.0000	42.55	18.94	23.61	54	-11.45	83.4	Vertical	AV	Pass
6	17938.5000	53.67	23.51	30.16	74	-20.33	292.6	Vertical	PK	Pass
6	17938.5000	46.81	23.51	23.3	54	-7.19	292.6	Vertical	AV	Pass

WSCT®	W5 ET	WSET	W5 ET	WSET	
WS	$\langle \hspace{0.1cm} \rangle$				W5 CT°
WSCT	WS ET	WSET	WSET	WSET	
7 W5				\times	Testo.
X	X	X		5CT° Codification &	3 Group (Shenzh

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W5 CT





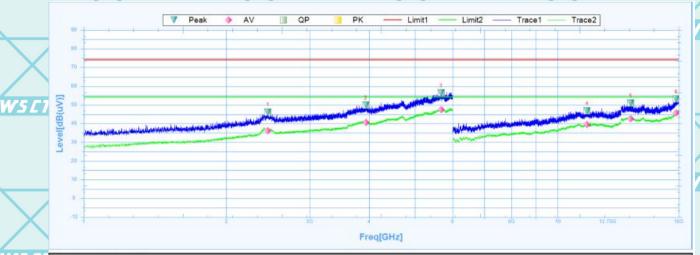


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High channel: 2480MHz

Horizontal:

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W5 C1	Suspu	ited Data Lis	t								50
	NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
	1	2445.0000	46.22	7.72	38.5	74	-27.78	87.8	Horizontal	PK	Pass
	1	2445.0000	36.28	7.72	28.56	54	-17.72	87.8	Horizontal	AV	Pass
	2	3937.5000	49.79	11.92	37.87	74	-24.21	296.9	Horizontal	PK	Pass
X	2	3937.5000	40.66	11.92	28.74	54	-13.34	296.9	Horizontal	AV	Pass
/ \	3	5674.3750	56.52	21.16	35.36	74	-17.48	339.9	Horizontal	PK	Pass
ee e 1	3	5674.3750	47.35	21.16	26.19	54	-6.65	339.9	Horizontal	AV	Pass
75 C 1	4	11535.0000	46.89	39.02	7.87	74	-27.11	20	Horizontal	PK	Pass
	4	11535.0000	39.55	39.02	0.53	54	-14.45	20	Horizontal	AV	Pass
	5	14256.0000	50.96	41.17	9.79	74	-23.04	358	Horizontal	PK	Pass
	5	14256.0000	42.66	41.17	1.49	54	-11.34	358	Horizontal	AV	Pass
	6	17784.0000	53.11	45.05	8.06	74	-20.89	-0.1	Horizontal	PK	Pass
	6	17784.0000	45.79	45.05	0.74	54	-8.21	-0.1	Horizontal	AV	Pass

6	17784.0000	45.79	45.05	0.74	54	-8.21	-0.1	Horizontal	AV	Pass		
WSCT		W5 ET		W5 C	7°	W	S C T		W5	CT°		
	W5CT°		W5 CT		WSE			WSCT			WS CT	
WSCT		W5 CT		WSE			SET"		WS			
	WSET	,	WSET		WSE			WSET				
WSCT		WSIT		WSE			5/7		ndardization Ce.	W5C	Soung Group (Snenzhon	

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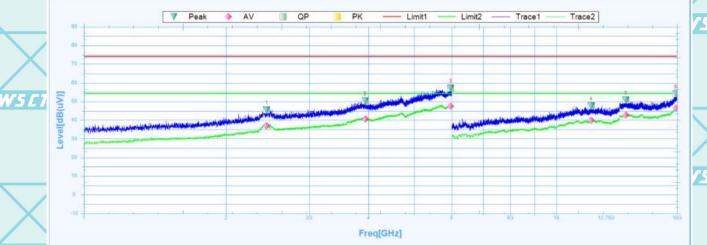






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Vertical:



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Suspi	uted Data Lis	t								
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2436.8750	45.44	7.7	37.74	74	-28.56	11.3	Vertical	PK	Pass
1	2436.8750	37.09	7.7	29.39	54	-16.91	11.3	Vertical	AV	Pass
2	3939.3750	50.34	11.91	38.43	74	-23.66	80.6	Vertical	PK	Pass
2	3939.3750	40.65	11.91	28.74	54	-13.35	80.6	Vertical	AV	Pass
3	5971.2500	57.06	21.81	35.25	74	-16.94	19	Vertical	PK	Pass
3	5971.2500	47.34	21.81	25.53	54	-6.66	19	Vertical	AV	Pass
4	11842.5000	47.75	38.74	9.01	74	-26.25	139.5	Vertical	PK	Pass
4	11842.5000	39.9	38.74	1.16	54	-14.1	139.5	Vertical	AV	Pass
5	14038.5000	50.71	41.45	9.26	74	-23.29	324.8	Vertical	PK	Pass
5	14038.5000	42.77	41.45	1.32	54	-11.23	324.8	Vertical	AV	Pass
6	17904.0000	53.97	45.86	8.11	74	-20.03	218.4	Vertical	PK	Pass
6	17904.0000	46.48	45.86	0.62	54	-7.52	218.4	Vertical	AV	Pass

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.
- 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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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

etector
PK
AV
PK
AV
PK _W 5
AV

Note: Freq. = Emission frequency in MHz

Reading level (dBµV) = Receiver reading

Corr. Factor (dB) = Attenuation factor + Cable loss Level (dB μ V) = Reading level (dB μ V) + Corr. Factor (dB) Limit (dB μ V) = Limit stated in standard

Margin (dB) = Level (dBμV) – Limits (dBμV)

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W5 C7

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