



FCC REPORT

Applicant: AST Technology (shenzhen) Co. Ltd

Address of Applicant: Room 1304, West Building Of NanShan Software Park,
NanShan District, ShenZhen City

Equipment Under Test (EUT)

Product Name: Wireless camera

Model No.: WLC-102

Trade Mark: AST

FCC ID: 2ACY4WLC-102

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.249:2013

Date of sample receipt: July 25, 2014

Date of Test: July 25-August 05, 2014

Date of report issued: August 13, 2014

Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Lo
Laboratory Manager

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2 Version

Version No.	Date	Description
00	August 13, 2014	Original

Prepared By:

Edward Pan

Date:

August 13, 2014

Project Engineer

Check By:

Hank Yan

Date:

August 13, 2014

Reviewer

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4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
AC Power Line Conducted Emission	15.207	Pass
Field strength of the fundamental signal	15.249 (a)	Pass
Spurious emissions	15.249 (a) (d)/15.209	Pass
Band edge	15.249 (d)/15.205	Pass
20dB Occupied Bandwidth	15.215 (c)	Pass

Pass: The EUT complies with the essential requirements in the standard.

5 General Information

5.1 Client Information

Applicant:	AST Technology (shenzhen) Co. Ltd
Address of Applicant:	Room 1304, West Building Of NanShan Software Park, NanShan District, ShenZhen City
Manufacturer/Factory:	AST Technology (shenzhen) Co. Ltd
Address of Manufacturer/Factory:	Room 1304, West Building Of NanShan Software Park, NanShan District, ShenZhen City

5.2 General Description of EUT

Product Name:	Wireless camera
Model No.:	WLC-102
Operation Frequency:	905MHz& 924MHz
Channel numbers:	2
Channel separation:	19MHz
Modulation type:	FM
Antenna Type:	Dedicated Antenna(RP-SMA connector)
Antenna gain:	1.5dBi
Power supply:	Model No.:HNA120050U Input: 100-240V~50-60Hz 0.15A MAX Output: 12V-0.5A

Operation Frequency each of channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	905	2	924	N/A	N/A	N/A	N/A

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	905MHz
The Highest channel	924MHz

5.3 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode with FM modulation.
<i>Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.</i>	

Per-test mode.

We have verified the construction and function in typical operation, The EUT was placed on three different polar directions; i.e. X axis, Y axis, Z axis. which was shown in this test report and defined as follows:

Axis	X	Y	Z
Field Strength(dBuV/m)	69.16	70.88	70.18

Final Test Mode:

The EUT was tested in FM modulation, and found the Y axis is the worst case.

According to ANSI C63.4 standards, the test results are both the "worst case" and "worst setup":

Y axis (see the test setup photo)

5.4 Description of Support Units

N/A

5.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS —Registration No.: CNAS L5775**

CNAS has accredited Global United Technology Services Co., Ltd. To ISO/IEC 17025 General Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **FCC —Registration No.: 600491**

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 600491, June 28, 2013.

- **Industry Canada (IC) —Registration No.: 9079A-2**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-2, June 26, 2013.

5.6 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China

Tel: 0755-27798480

Fax: 0755-27798960

5.7 Other Information Requested by the Customer

None.

6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	Mar. 28 2014	Mar. 27 2015
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Jul. 01 2014	Jun. 30, 2015
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Feb. 23 2014	Feb. 22 2015
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	June 27 2014	June 26 2015
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	Mar. 28 2014	Mar. 27 2015
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	Mar. 29 2014	Mar. 28 2015
9	Coaxial Cable	GTS	N/A	GTS211	Mar. 29 2014	Mar. 28 2015
10	Coaxial cable	GTS	N/A	GTS210	Mar. 29 2014	Mar. 28 2015
11	Coaxial Cable	GTS	N/A	GTS212	Mar. 29 2014	Mar. 28 2015
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Jul. 01 2014	Jun. 30, 2015
13	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	Jul. 01 2014	Jun. 30, 2015
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June 27 2014	June 26 2015
15	Band filter	Amindeon	82346	GTS219	Mar. 29 2014	Mar. 28 2015
16	Constant temperature and humidity box	Oregon Scientific	BA-888	GTS248	May 10 2013	May 09 2015
17	D.C. Power Supply	Instek	PS-3030	GTS232	May 10 2013	May 09 2015
18	Universal radio communication tester	Rohde & Schwarz	CMU200	GTS235	May 10 2013	May 09 2015
19	Splitter	Agilent	11636B	GTS237	May 10 2013	May 09 2015

Conducted Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.0(L)x3.0(W)x3.0(H)	GTS264	Sep. 07 2013	Sep. 06 2015
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	July 01 2014	June 30 2015
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS224	July 01 2014	June 30 2015
4	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	July 01 2014	June 30 2015
5	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS226	July 01 2014	June 30 2015
6	Coaxial Cable	GTS	N/A	GTS227	July 01 2014	June 30 2015
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A

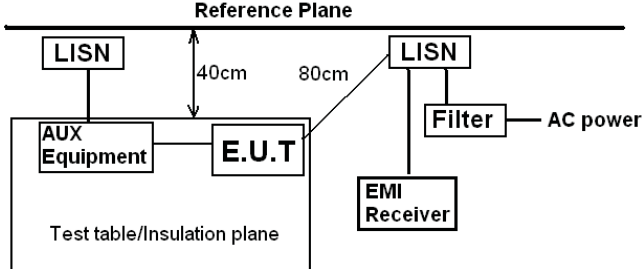
General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Barometer	ChangChun	DYM3	GTS257	July 08 2014	July 07 2015

7 Test results and Measurement Data

7.1 Antenna requirement:

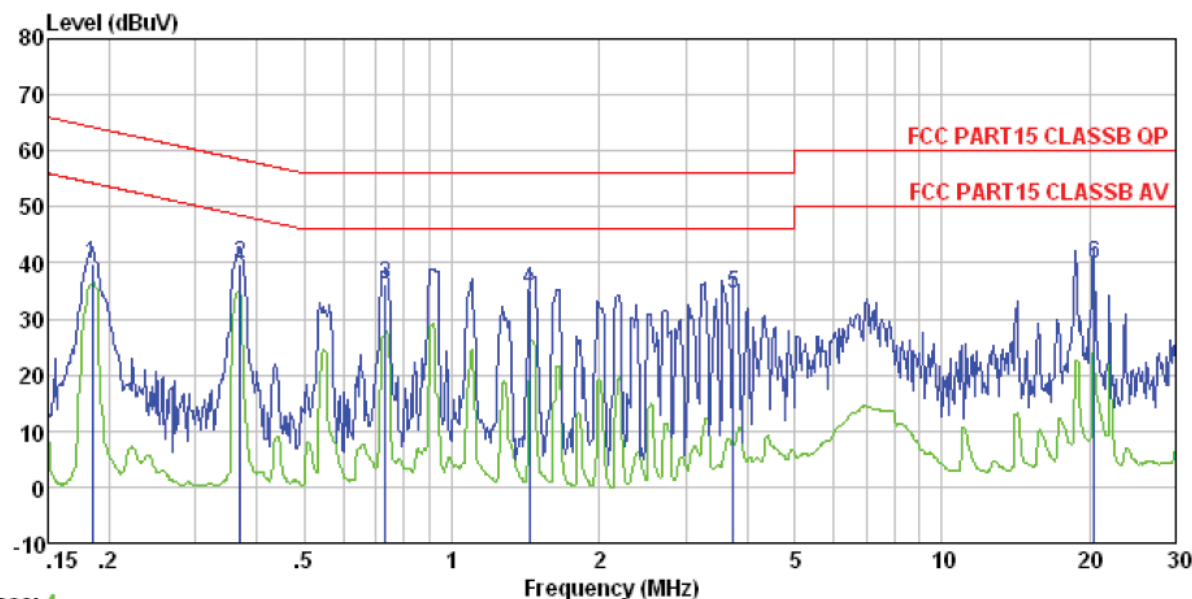
Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
E.U.T Antenna: <i>The antenna is dedicated Antenna(RP-SMA connector), the best case gain of the antenna is 1.5dBi</i>	
	

7.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207		
Test Method:	ANSI C63.4:2003		
Test Frequency Range:	150KHz to 30MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto		
Limit:	Frequency range (MHz)	Limit (dBuV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
* Decreases with the logarithm of the frequency.			
Test setup:	 Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m		
Test procedure:	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.		
Test Instruments:	Refer to section 6.0 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Pass		

Measurement data:

Line:



Trace: 4

Condition : FCC PART15 CLASSB QP LISN-2013 LINE

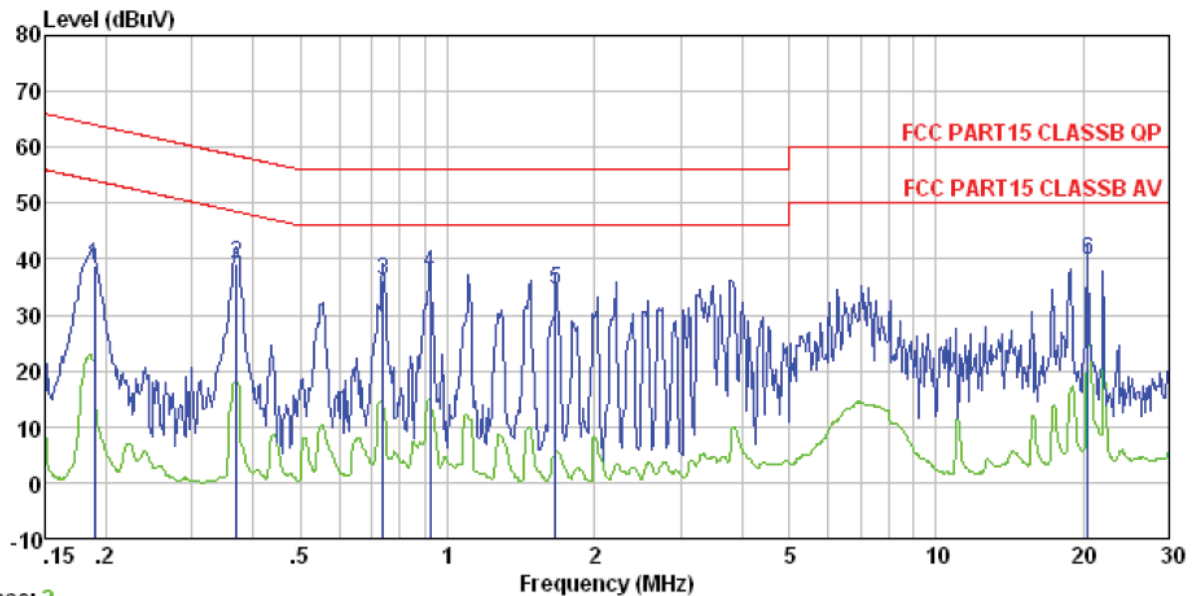
Job No. : 1288RF

Test mode : Transmitting mode

Test Engineer: Mike

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.184	39.40	0.14	0.13	39.67	64.28	-24.61	QP
2	0.369	39.64	0.11	0.10	39.85	58.52	-18.67	QP
3	0.731	35.84	0.14	0.13	36.11	56.00	-19.89	QP
4	1.441	35.01	0.12	0.13	35.26	56.00	-20.74	QP
5	3.759	34.15	0.19	0.15	34.49	56.00	-21.51	QP
6	20.486	39.09	0.64	0.22	39.95	60.00	-20.05	QP

Neutral:



Trace: 2

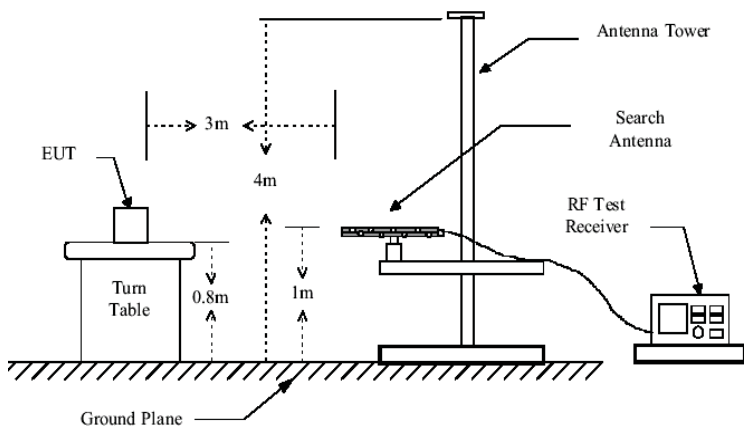
Condition : FCC PART15 CLASSB QP LISN-2013 NEUTRAL
 Job No. : 1288RF
 Test mode : Transmitting mode
 Test Engineer: Mike

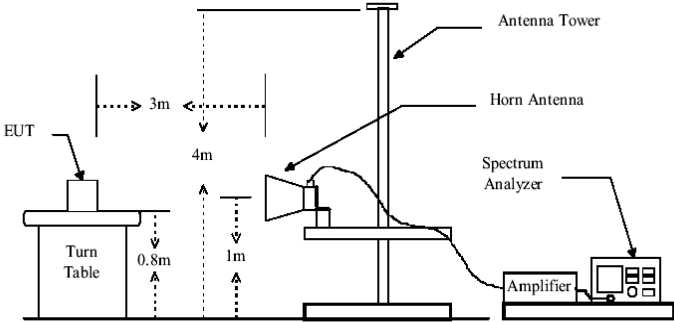
	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.189	38.70	0.07	0.13	38.90	64.06	-25.16	QP
2	0.369	38.99	0.06	0.10	39.15	58.52	-19.37	QP
3	0.739	36.08	0.07	0.13	36.28	56.00	-19.72	QP
4	0.923	37.35	0.07	0.13	37.55	56.00	-18.45	QP
5	1.662	34.40	0.09	0.14	34.63	56.00	-21.37	QP
6	20.486	38.87	0.57	0.22	39.66	60.00	-20.34	QP

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss
4. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.

7.3 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.4:2003				
Test Frequency Range:	30MHz to 10GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		Peak	1MHz	10Hz	Average Value
	Remark: For the field strength test, the RBW and VBW were set to 6MHz and 10MHz. Peak detector for Peak value				
Limit: (Field strength of the fundamental signal)	Frequency		Limit (dBuV/m @3m)		Remark
	902MHz-928MHz		94.00		Average Value
			114.00		Peak Value
Limit: (Spurious Emissions)	Frequency		Limit (dBuV/m @3m)		Remark
	30MHz-88MHz		40.00		Quasi-peak Value
	88MHz-216MHz		43.50		Quasi-peak Value
	216MHz-960MHz		46.00		Quasi-peak Value
	960MHz-1GHz		54.00		Quasi-peak Value
	Above 1GHz		54.00		Average Value
			74.00		Peak Value
Limit: (band edge)	Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.				
Test setup:	Below 1GHz				
					
Test setup:	Above 1GHz				

	 The diagram illustrates the test setup. An EUT (Equipment Under Test) is placed on a Turn Table at a height of 0.8m. The Turn Table is 3m away from the Antenna Tower. The Antenna Tower has a Horn Antenna at a height of 4m. A Spectrum Analyzer is connected to the Antenna Tower via an Amplifier. The Spectrum Analyzer is also connected to the Antenna Tower. The Antenna Tower is 1m high.
Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement data:

7.3.1 Field Strength of The Fundamental Signal

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
905.00	74.07	23.12	4.87	31.18	70.88	94.00	-43.12	Vertical
905.00	73.30	23.12	4.87	31.18	70.11	94.00	-43.89	Horizontal
924.00	72.43	23.24	4.95	31.20	69.42	94.00	-44.58	Vertical
924.00	65.80	23.24	4.95	31.20	62.79	94.00	-51.21	Horizontal

7.3.2 Spurious emissions

■ Below 1GHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
30.75	51.12	14.32	0.56	32.06	33.94	40.00	-6.06	Vertical
32.18	51.66	14.32	0.58	32.06	34.50	40.00	-5.50	Vertical
33.56	51.04	14.31	0.59	32.06	33.88	40.00	-6.12	Vertical
35.01	49.82	14.30	0.61	32.06	32.67	40.00	-7.33	Vertical
36.38	47.69	14.68	0.62	32.06	30.93	40.00	-9.07	Vertical
49.01	42.46	15.31	0.76	31.97	26.56	40.00	-13.44	Vertical
30.85	40.19	14.32	0.56	32.06	23.01	40.00	-16.99	Horizontal
54.07	38.20	15.06	0.81	31.95	22.12	40.00	-17.88	Horizontal
101.64	37.48	15.02	1.21	31.77	21.94	43.50	-21.56	Horizontal
196.51	44.08	12.57	1.82	32.13	26.34	43.50	-17.16	Horizontal
343.18	43.71	16.17	2.59	32.04	30.43	46.00	-15.57	Horizontal
631.69	37.84	20.57	3.84	31.09	31.16	46.00	-14.84	Horizontal

■ Above 1GHz

Test channel:	Lowest channel
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Peak value:

Frequency (MHz)	Read Level (dBUV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBUV/m)	Limit Line (dBUV/m)	Over Limit (dB)	polarization
1810.00	57.21	25.31	4.86	34.14	53.24	74.00	-20.76	Vertical
2715.00	57.49	28.18	5.69	33.64	57.72	74.00	-16.28	Vertical
3620.00	39.05	29.15	7.19	32.62	42.77	74.00	-31.23	Vertical
4525.00	39.49	31.37	8.36	31.95	47.27	74.00	-26.73	Vertical
5430.00	35.18	31.86	9.40	32.40	44.04	74.00	-29.96	Vertical
6335.00	37.69	33.36	10.68	32.07	49.66	74.00	-24.34	Vertical
7240.00	31.08	36.19	11.68	31.97	46.98	74.00	-27.02	Vertical
8145.00	29.48	37.06	12.36	31.53	47.37	74.00	-26.63	Vertical
9050.00	27.51	37.20	13.69	32.25	46.15	74.00	-27.85	Vertical
1810.00	62.22	25.31	4.86	34.14	58.25	74.00	-15.75	Horizontal
2715.00	55.21	28.18	5.69	33.64	55.44	74.00	-18.56	Horizontal
3620.00	39.89	29.15	7.19	32.62	43.61	74.00	-30.39	Horizontal
4525.00	42.16	31.37	8.36	31.95	49.94	74.00	-24.06	Horizontal
5430.00	34.33	31.86	9.40	32.40	43.19	74.00	-30.81	Horizontal
6335.00	34.93	33.36	10.68	32.07	46.90	74.00	-27.10	Horizontal
7240.00	31.61	36.19	11.68	31.97	47.51	74.00	-26.49	Horizontal
8145.00	29.15	37.06	12.36	31.53	47.04	74.00	-26.96	Horizontal
9050.00	29.53	37.20	13.69	32.25	48.17	74.00	-25.83	Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
1810.00	47.22	25.31	4.86	34.14	43.25	54.00	-10.75	Vertical
2715.00	47.11	28.18	5.69	33.64	47.34	54.00	-6.66	Vertical
3620.00	29.47	29.15	7.19	32.62	33.19	54.00	-20.81	Vertical
4525.00	29.81	31.37	8.36	31.95	37.59	54.00	-16.41	Vertical
5430.00	25.66	31.86	9.40	32.40	34.52	54.00	-19.48	Vertical
6335.00	27.88	33.36	10.68	32.07	39.85	54.00	-14.15	Vertical
7240.00	21.71	36.19	11.68	31.97	37.61	54.00	-16.39	Vertical
8145.00	19.69	37.06	12.36	31.53	37.58	54.00	-16.42	Vertical
9050.00	17.64	37.20	13.69	32.25	36.28	54.00	-17.72	Vertical
1810.00	52.99	25.31	4.86	34.14	49.02	54.00	-4.98	Horizontal
2715.00	45.64	28.18	5.69	33.64	45.87	54.00	-8.13	Horizontal
3620.00	29.92	29.15	7.19	32.62	33.64	54.00	-20.36	Horizontal
4525.00	32.99	31.37	8.36	31.95	40.77	54.00	-13.23	Horizontal
5430.00	24.55	31.86	9.40	32.40	33.41	54.00	-20.59	Horizontal
6335.00	24.84	33.36	10.68	32.07	36.81	54.00	-17.19	Horizontal
7240.00	21.84	36.19	11.68	31.97	37.74	54.00	-16.26	Horizontal
8145.00	19.65	37.06	12.36	31.53	37.54	54.00	-16.46	Horizontal
9050.00	19.68	37.20	13.69	32.25	38.32	54.00	-15.68	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*
3. *“**”, means this data is the too weak instrument of signal is unable to test.*

Test channel:	Highest channel
---------------	-----------------

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
1848.00	55.88	25.50	4.88	34.20	52.06	74.00	-21.94	Vertical
2772.00	51.85	28.31	5.73	33.59	52.30	74.00	-21.70	Vertical
3696.00	43.44	29.24	7.32	32.52	47.48	74.00	-26.52	Vertical
4620.00	33.78	31.55	8.44	32.00	41.77	74.00	-32.23	Vertical
5544.00	36.68	32.09	9.58	32.41	45.94	74.00	-28.06	Vertical
6468.00	35.38	33.60	10.85	32.14	47.69	74.00	-26.31	Vertical
7392.00	30.15	36.52	11.76	31.83	46.60	74.00	-27.40	Vertical
8316.00	30.08	36.56	12.62	31.87	47.39	74.00	-26.61	Vertical
9240.00	28.66	37.41	13.84	32.03	47.88	74.00	-26.12	Vertical
1848.00	56.86	25.50	4.88	34.20	53.04	74.00	-20.96	Horizontal
2772.00	48.67	28.31	5.73	33.59	49.12	74.00	-24.88	Horizontal
3696.00	44.33	29.24	7.32	32.52	48.37	74.00	-25.63	Horizontal
4620.00	36.70	31.55	8.44	32.00	44.69	74.00	-29.31	Horizontal
5544.00	34.11	32.09	9.58	32.41	43.37	74.00	-30.63	Horizontal
6468.00	34.85	33.60	10.85	32.14	47.16	74.00	-26.84	Horizontal
7392.00	29.85	36.52	11.76	31.83	46.30	74.00	-27.70	Horizontal
8316.00	28.91	36.56	12.62	31.87	46.22	74.00	-27.78	Horizontal
9240.00	27.85	37.41	13.84	32.03	47.07	74.00	-26.93	Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
1848.00	45.94	25.50	4.88	34.20	42.12	54.00	-11.88	Vertical
2772.00	41.86	28.31	5.73	33.59	42.31	54.00	-11.69	Vertical
3696.00	33.56	29.24	7.32	32.52	37.60	54.00	-16.40	Vertical
4620.00	23.54	31.55	8.44	32.00	31.53	54.00	-22.47	Vertical
5544.00	26.49	32.09	9.58	32.41	35.75	54.00	-18.25	Vertical
6468.00	25.49	33.60	10.85	32.14	37.80	54.00	-16.20	Vertical
7392.00	20.85	36.52	11.76	31.83	37.30	54.00	-16.70	Vertical
8316.00	20.65	36.56	12.62	31.87	37.96	54.00	-16.04	Vertical
9240.00	18.65	37.41	13.84	32.03	37.87	54.00	-16.13	Vertical
1848.00	46.82	25.50	4.88	34.20	43.00	54.00	-11.00	Horizontal
2772.00	38.62	28.31	5.73	33.59	39.07	54.00	-14.93	Horizontal
3696.00	34.65	29.24	7.32	32.52	38.69	54.00	-15.31	Horizontal
4620.00	26.65	31.55	8.44	32.00	34.64	54.00	-19.36	Horizontal
5544.00	24.74	32.09	9.58	32.41	34.00	54.00	-20.00	Horizontal
6468.00	24.66	33.60	10.85	32.14	36.97	54.00	-17.03	Horizontal
7392.00	19.85	36.52	11.76	31.83	36.30	54.00	-17.70	Horizontal
8316.00	18.49	36.56	12.62	31.87	35.80	54.00	-18.20	Horizontal
9240.00	17.95	37.41	13.84	32.03	37.17	54.00	-16.83	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*
3. *“*” , means this data is the too weak instrument of signal is unable to test.*

7.3.3 Bandedge emissions

All of the restriction bands were tested, and only the data of worst case was exhibited.

Test channel:	Lowest channel
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
902.00	45.59	23.12	4.87	31.18	42.40	46.00	-3.60	Vertical
902.00	44.25	23.12	4.87	31.18	41.06	46.00	-4.94	Horizontal

Test channel:	Highest channel
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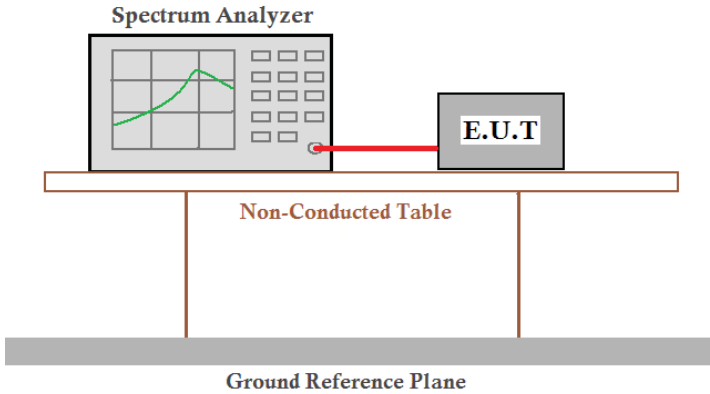
Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
928.00	41.07	23.28	4.96	31.20	38.11	46.00	-7.89	Vertical
960.00	37.75	23.49	5.08	31.22	35.10	46.00	-10.90	Vertical
928.00	38.03	23.28	4.96	31.20	35.07	46.00	-10.93	Horizontal
960.00	36.40	23.49	5.08	31.22	33.75	46.00	-12.25	Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor

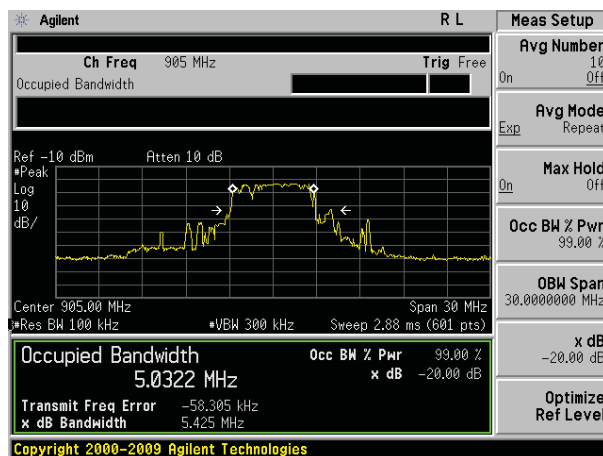
7.4 20dB Occupy Bandwidth

Test Requirement:	FCC Part15 C Section 15.249/15.215
Test Method:	ANSI C63.4:2003
Limit:	Operation Frequency range 902MHz~928MHz
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

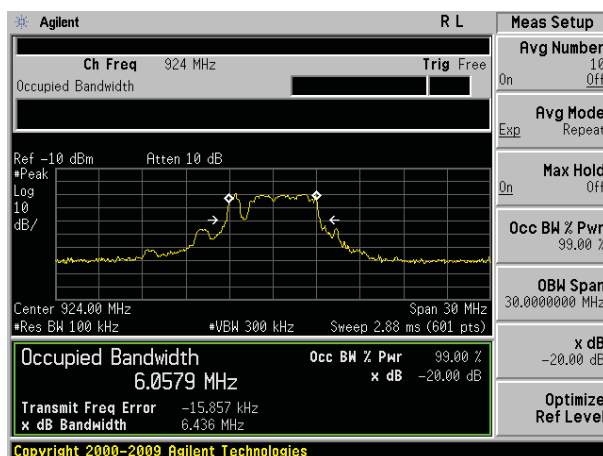
Measurement Data

Test channel	20dB bandwidth(MHz)	Result
Lowest	5.425	Pass
Highest	6.436	Pass

Test plot as follows:



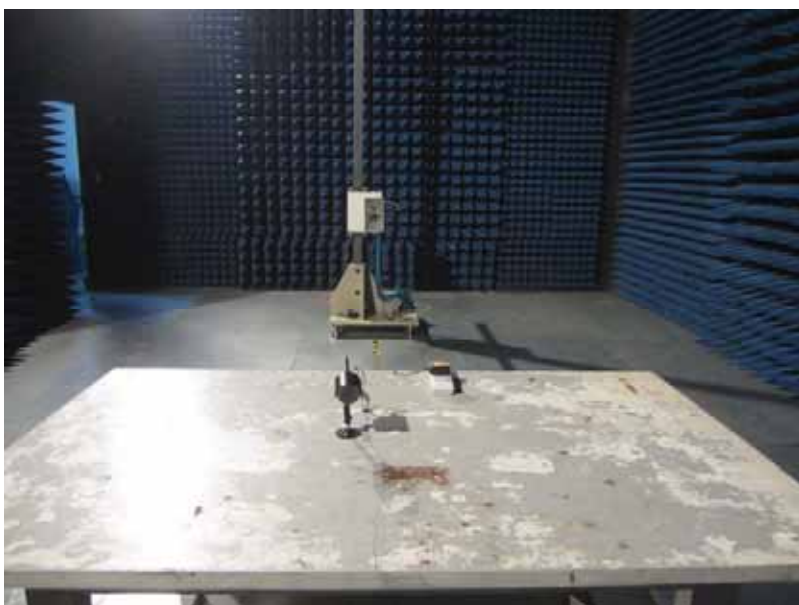
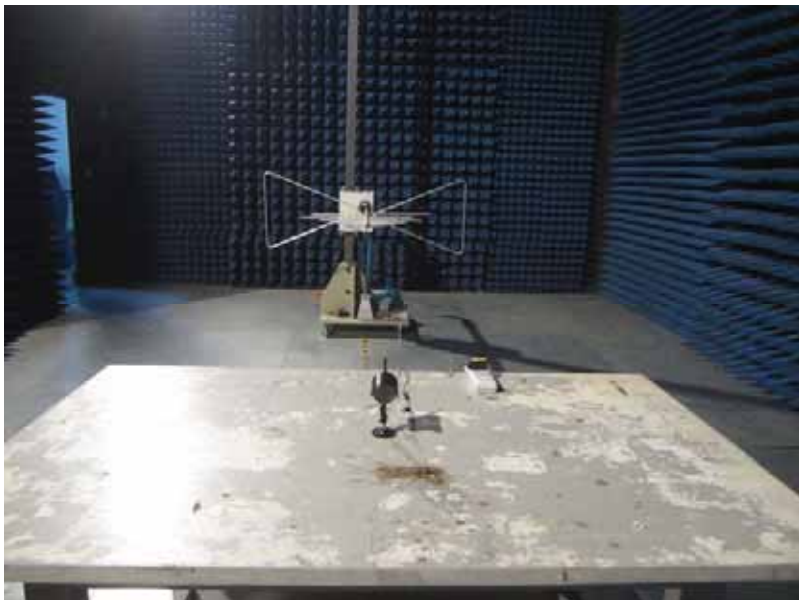
Lowest channel



Highest channel

8 Test Setup Photo

Radiated Emission



Conducted Emission



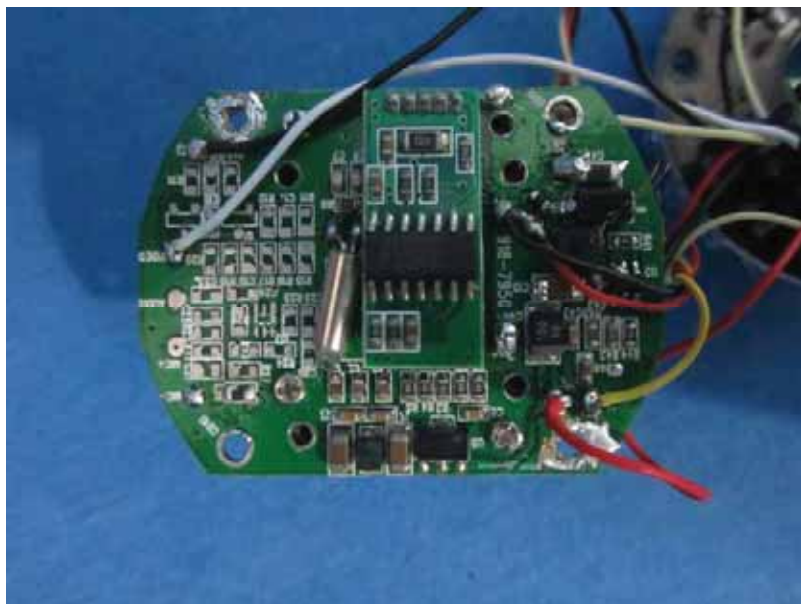
9 EUT Constructional Details

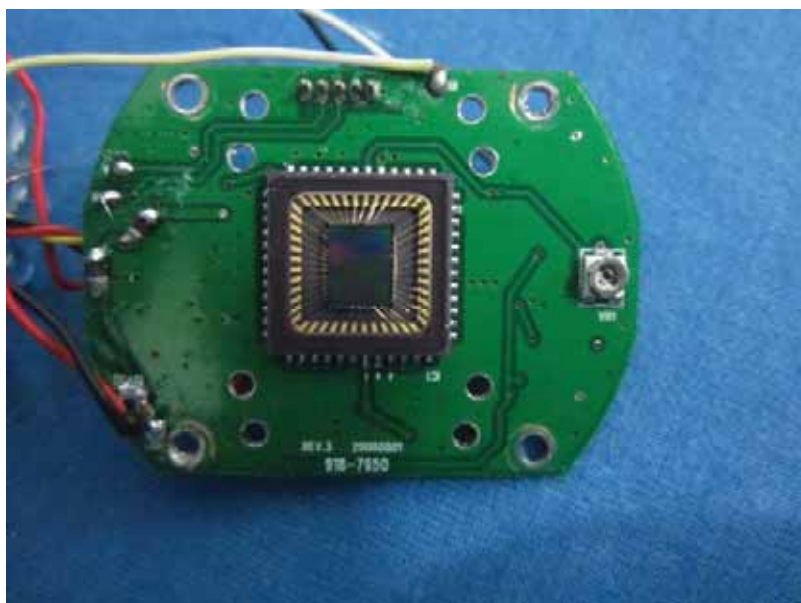
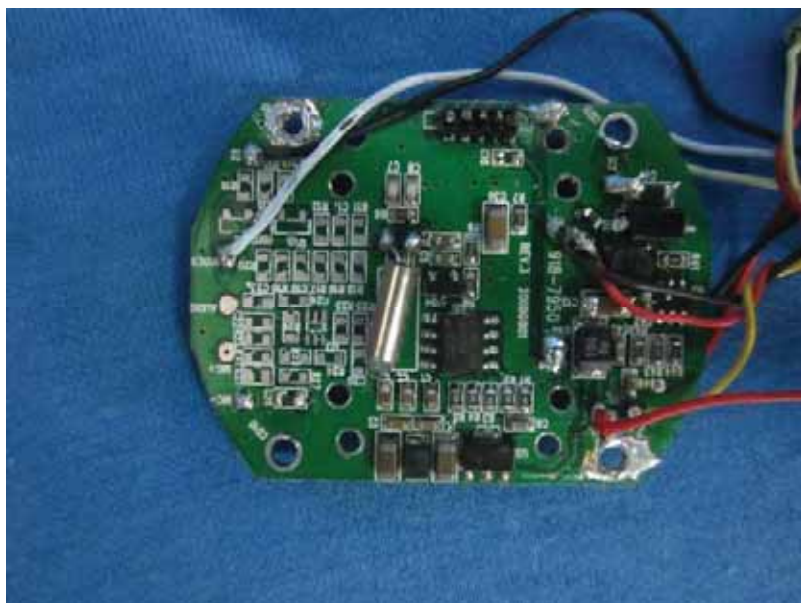


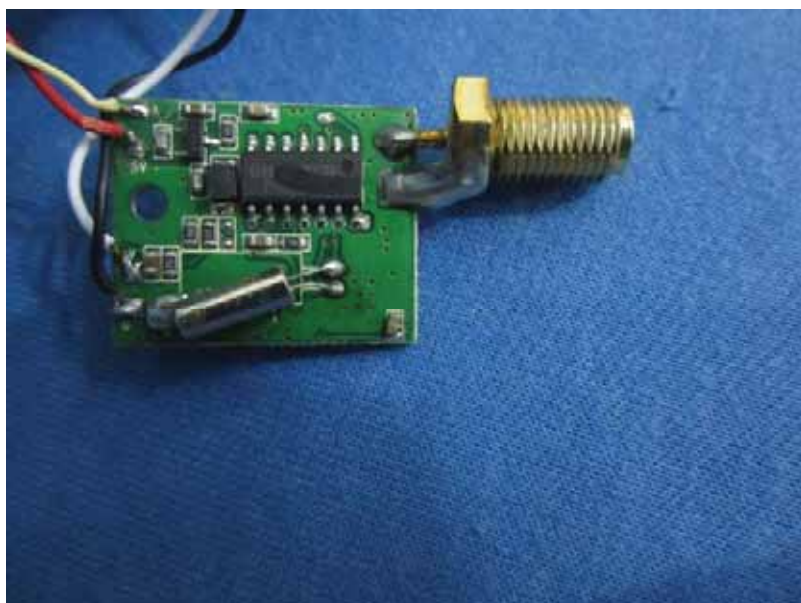
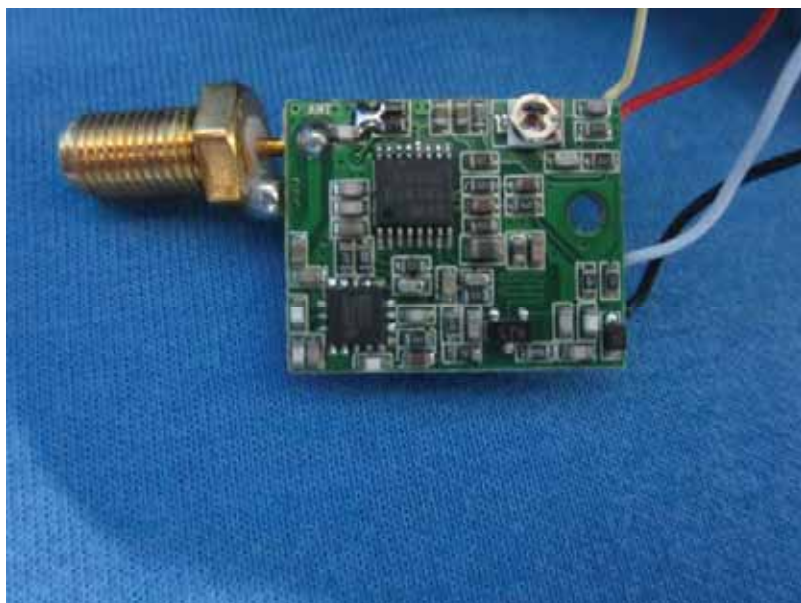


















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