

## FCC 47 CFR PART 15 SUBPART B ICES-003 ISSUE 5

**TEST REPORT** 

FOR

## GLASS

## **MODEL NUMBER: AVT-4**

FCC ID: A4R-X1

## **REPORT NUMBER: 13U14955-4, REVISION A**

ISSUE DATE: APRIL 12, 2013

Prepared for GOOGLE INC. 1600 AMPHITHEATRE PARKWAY MOUNTAIN VIEW CA, 94043, U.S.A

Prepared by UL CCS 47173 BENICIA STREET FREMONT, CA 94538, U.S.A. TEL: (510) 771-1000 FAX: (510) 661-0888

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NVLAP LAB CODE 200065-0

### **Revision History**

Rev.	lssue Date	Revisions	Revised By
	4/11/13	Initial Issue	F. de Anda
А	04/12/13	Correction to model on cover page	G. Persons

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# **1. ATTESTATION OF TEST RESULTS**

EUT DESCRIPTION: GLASS   MODEL: EVT-4   SERIAL NUMBER: ECABB131105243   DATE TESTED: MARCH 30 – APRIL 5, 2014   APPLICABLE STANDARDS   TEST RESULTS   FCC PART 15 SUBPART B Pass	COMPANY NAME:	GOOGLE INC. 1600 AMPHITHEATRE PARKW/ MOUNTAIN VIEW, CA, 94043, L	AY J.S.A	
MODEL: EVT-4 SERIAL NUMBER: ECABB131105243 DATE TESTED: MARCH 30 – APRIL 5, 2014 APPLICABLE STANDARDS STANDARD TEST RESULTS FCC PART 15 SUBPART B Pass	EUT DESCRIPTION: GLASS			
SERIAL NUMBER: ECABB131105243 DATE TESTED: MARCH 30 – APRIL 5, 2014           APPLICABLE STANDARDS           STANDARD         TEST RESULTS           FCC PART 15 SUBPART B         Pass	MODEL: EVT-4			
DATE TESTED: MARCH 30 – APRIL 5, 2014           APPLICABLE STANDARDS           TEST RESULTS           FCC PART 15 SUBPART B         Pass	SERIAL NUMBER: ECABB131105243			
APPLICABLE STANDARDS STANDARD TEST RESULTS FCC PART 15 SUBPART B Pass	DATE TESTED:	MARCH 30 – APRIL 5, 2014		
STANDARDTEST RESULTSFCC PART 15 SUBPART BPass		APPLICABLE STANDARDS		
FCC PART 15 SUBPART B Pass	STANDARD		TEST RESULTS	
	FCC PART 15 SUBPART B		Pass	

UL CCS tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL CCS By:

Tested By:

no de Anola

FRANCISCO DE ANDA EMC SUPERVISOR UL CCS

MONA HUA EMC ENGINEER UL CCS

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# 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2009 and CAN/CSA-CEI/IEC CISPR 22:02 as referenced by ICES-003 Issue 5.

# 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <u>http://www.ccsemc.com</u>.

# 4. CALIBRATION AND UNCERTAINTY

# 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

# 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB) 36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

# 4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

# 5. EQUIPMENT UNDER TEST

# 5.1. DESCRIPTION OF EUT

The EUT is a mobile computing device featuring a heads-up video display. The device incorporates an 802.11 b/g 2.4 GHz WLAN and BT, BT-LE radio with an integral antenna. An integral vibrating element provides audio to the user via contact with the user's head. The EUT is provided with an AC charger and a USB cable. When connected to a PC, the USB cable provides a path for charging and for software updates, and is not intended for any other data transfer functions.

## **GENERAL INFORMATION**

Power Requirements	Charger input: 100-240 VAC / 50-60 Hz, 0.25 A	
	Charger output: 5 VDC, 1 A	
Frequencies generated or used by the EUT	32.768KHz, 16.369MHz, 38.4MHz, 37.4MHz and 1.0 GHz	

### **SUBASSEMBLIES**

The EUT was constructed using the following subassemblies:

Subassembly Description	Manufacturer	Part Number	
Glass	Google	EVT1	
Charger	Google	10AG212020	
USB cable	N/A	N/A	

# 5.1. PRELIMINARY TEST CONFIGURATIONS

The following configurations were investigated during preliminary testing:

EUT Configuration	Description
1	Standalone, battery operated.
2	Operating while charging with supplied charger.
3	Connected to laptop with minimum configuration.

The worst-case configurations were determined to be with AC charger and connected to the laptop PC. Exploratory testing was also performed to determine worst-case orientation. Right-side up (normal wearing position) was determined to be worst case.

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# 5.2. MODE(S) OF OPERATION

Mode	Description		
Normal	Displaying a continuous video clip on the heads-up display with audio		

## 5.3. SOFTWARE AND FIRMWARE

The EUT driver software installed during testing was 201303251100.

# 5.4. MODIFICATIONS

No modifications were made during testing.

# 5.5. WORST-CASE CONFIGURATION AND MODE

The EUT was investigated as X, Y, and Z position, the Z -Orientation is the worst case orientation, so all emission tests were put in the Z-Orientation.

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# 5.1. DETAILS OF TESTED SYSTEM

### SUPPORT EQUIPMENT & PERIPHERALS

SUPPORT EQUIPMENT LIST						
Description	Manufacturer	Model	S/N	FCC ID		
Laptop PC	Dell	PP18L	20071776413	DoC		
AC Adapter	Dell	PA-12	M1108056-006	N/A		
AC Charger	Google	10AG212020	N/A	DoC		
Telephone Simulator	Teltone	TLs3	993	N/A		
Mouse	Dell	M-UK DEL3	OYH958	DoC		

### I/O CABLES

	I/O CABLE LIST						
Cable No.	Port	No. of identical ports	Connector Type	Cable Type	Cable Length	Remarks	
1	AC	2	115VAC	Unshielded	1.2m	NA	
2	DC	1	DC	Unshielded	1m	NA	
3	USB	1	EUT	Unshielded	0.8m	NA	
4	USB	1	MOUSE	Unshielded	1m	NA	
5	RJ11	1	Telephone Simulator	Unshielded	1.2m	NA	

#### TEST SETUP

The EUT was set up as shown in the following diagrams. A video stored within the EUT was played on the heads-up display with audio running to the vibrating element.

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## **SETUP DIAGRAMS, CONFIGURATION 1**



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## **CONFIGURATION 2**



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## **CONFIGURATION 3**



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# 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List						
Description	Manufacturer	Model	Asset	Cal Due		
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C00986	08/22/13		
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	C01011	04/23/13		
Preamplifier, 1-26.5GHz	Agilent / HP	8449B	C01063	10/22/13		
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	11/11/13		
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/08/13		
LISN, 30 MHz	FCC	50/250-25-2	C00626	01/14/14		

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# 7. APPLICABLE LIMITS AND TEST RESULTS

# 7.1. RADIATED EMISSIONS

## TEST PROCEDURE

### ANSI C63.4

The frequency range was investigated from 30 MHz to 2000 MHz.

### <u>LIMIT</u>

§15.109 (a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Limits for radiated disturbance of Class B ITE at measuring distance of 3 m			
Frequency range	Limits		
(MHz)	(dBµV/m)		
30 to 88 40 (QP)			
88 to 216	43.5 (QP)		
216 to 960 46 (QP)			
Above 960 MHz 54 (AV), 74 (PK)			
Note: The lower limit shall apply at the transition frequency.			

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#### **RESULTS**

#### RADIATED EMISSIONS 30 TO 1000 MHz (STAND ALONE)

#### **CONFIGURATION 1**



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### WORST EMISSIONS

Project :1	3U14955									
Company	Name:Google	è								
Model / C	onfig:Stand A	lone								
Mode:No	rmal									
Fest By:M	ona Hua									
Horizonta	I 30 - 1000MH:	Z								
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Preamp/ Cable loss [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - QPk	Margin (dB)	Height [cm]	Polarity
1	55.6857	36.28	РК	6.9	-28.8	14.38	40	-25.62	200	Horz
2	69.9825	36.54	РК	7.9	-28.7	15.74	40	-24.26	100	Horz
3	132.5006	31.22	РК	13.6	-28	16.82	43.52	-26.7	400	Horz
4	646.9423	29.57	РК	19.8	-25.8	23.57	46.02	-22.45	300	Horz
Vertical 3	0 - 1000MHz									
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Preamp/ Cable loss [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - OPk	Margin (dB)	Height [cm]	Polarity
5	70.2248	34.26	РК	7.9	-28.7	13.46	40	-26.54	200	Vert
6	198.8958	35.5	РК	12.3	-27.3	20.5	43.52	-23.02	200	Vert
7	800.0874	38.92	РК	21.2	-24.8	35.32	46.02	-10.7	200	Vert

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### RADIATED EMISSIONS 1 TO 2 GHz

Н	igh Frequen	y Measurem	ient											
ompliance	Certification	Services, Fr	emont :	im Cha	amber-l	В								
ompany:		Google												
'roject #: )ate:		13U14955 4/4/2013												
est Engine	er:	Mona Hua												
Configuratio	n:	EUT Only												
ioue:		Normai												
est Equipn	ient:													
Horn 1-18GHz Pre-amplifer 1-26GH			Hz	Pre-am	plifer	26-40GH	z	Но	Horn > 18GHz Limit					
T59; S/N: 3	3245 @3m	▼ T145 #	Agilent 3	008800	)56 🗸				•				-	FCC 15.109
Hi Frequency	Cables												_	
3' cable 22807700 12' cable 22807			28076	00	20' cal	ole 22	807500		HPF R			Reject Filter RBW=VBW=1MF		
3' cable	22807700	• 12' ca	able 228	07600	•	20' cab	le 2280	)7500 💂			•		• <u>Avera</u> RBW=	<b>ge Measurements</b> 1MHz ; VBW=10Hz
f Di	st Read Pl	Read Avg.	AF	CL	Amp	D Corr	Fltr	Peak	Avg	Pk Lim	Avg Lim	Pk Mar	Avg Mar	Notes
GHz (n	1) dBuV	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dBuV/m	dBuV/m	dB	dB	(V/H)
.196 3.	0 43.9	39.4	24.7	3.4	-35.9	0.0	0.0	36.1	31.6	74	54 54	-37.9	-22.4	V
.668 3.	0 43.8 0 43.3	37.8	25.4 26.4	3.9	-35.7	0.0	0.0	38.1	32.6	74	54 54	-30.9	-22.9 -21.4	V
.093 3.	0 43.9	39.4	24.3	3.3	-35.9	0.0	0.0	35.6	31.0	74	54	-38.4	-23.0	H
.299 3.	0 44.4 0 42.9	37.7	25.1	3.5	-35.8	0.0	0.0	37.1	30.5	74	54 54	-36.9 -35.4	-23.5	н
f Measurement Frequency Amp Dist Distance to Antenna D Cor Read Analyzer Reading Avg					Amp D Corr Avg	Preamp Gain Distance Correct to 3 meters Average Field Strength @ 3 m					Avg Lim Average Field Strength Limit Pk Lim Peak Field Strength Limit Avg Mar Margin vs. Average Limit			
. –	Antenna	actor			Peak HPF	Calculate High Pas	d Peak s Filter	c Field Stre	ngth		Pk Mar	Margin vs.	Peak Limit	

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### WORST EMISSIONS

### **CONFIGURATION 2**

roject :1	3U14955									
Company	Name:Googl	e								
Model / C	onfig:Glass 1	- EVT4								
Mode:CH	ARGING MOD	θE								
est By:M	ona Hua									
lorizonta	I 30 - 1000MH	łz								
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Preamp/ Cable loss [dB]	dB(uVolts/ meter)	E-Fields [dBuV/m] - QPk	Margin (dB)	Height [cm]	Polarity
1	83.31	37.08	PK	7.2	-28.6	15.68	40	-24.32	400	Horz
2	172.7255	42.05	PK	11.3	-27.5	25.85	43.52	-17.67	100	Horz
3	259.7177	41.04	PK	12.1	-26.6	26.54	46.02	-19.48	100	Horz
4	387.6618	39.76	PK	15.1	-26.4	28.46	46.02	-17.56	100	Horz
5	800.0874	43.44	PK	21.2	-24.8	39.84	46.02	-6.18	100	Horz
/ertical 3	0 - 1000MHz									
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Preamp/ Cable Joss [dB]	dB(uVolts/	E-Fields [dBuV/m] - OPk	Margin (dB)	Height [cm]	Polarity
6	69.0132	40.5	PK	7.8	-28.7	19.6	40	-20.4	200	Vert
7	198.8958	35.32	PK	12.3	-27.3	20.32	43.52	-23.2	200	Vert
8	800.0874	32.49	РК	21.2	-24.8	28.89	46.02	-17.13	300	Vert

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#### WORST EMISSIONS

Project :1	3U14955									
Company	Name:Goog	gle								
Model / C	Config:Glass	1 - EVT4								
Mode:Tx										
Test By:N	lona Hua									
Horizonta	al 30 - 1000M	H7								
	Test	Meter		Antenna	Preamp/		E-Fields			
Marker No.	Frequency (MHz)	Reading (dBuV)	Detector	Factor dB/m	Cable loss [dB]	dB(uVolts/ meter)	[dBuV/m]	Margin (dB)	Height [cm]	Polarity
1	63.1976	37.7	PK	7.4	-28.8	16.3	40	-23.7	100	Horz
2	211.0117	48.92	PK	10.3	-27.1	32.12	43.52	-11.4	100	Horz
3	282.7379	51.39	PK	13.4	-26.6	38.19	46.02	-7.83	100	Horz
4	481.1966	40.85	РК	17.7	-26.5	32.05	46.02	-13.97	100	Horz
Vertical 3	0 - 1000MHz									
	Test	Meter		Antenna	Preamp/		E-Fields			
Marker	Frequency	Reading		Factor	Cable	dB(uVolts/	[dBuV/m]	Margin	Height	
No.	(MHz)	(dBuV)	Detector	dB/m	loss [dB]	meter)	- QPk	(dB)	[cm]	Polarity
5	41.6313	40.62	PK	12.3	-29	23.92	40	-16.08	200	Vert
6	129.1082	35.5	PK	13.9	-28	21.4	43.52	-22.12	200	Vert
7	172.4831	37.61	PK	11.4	-27.5	21.51	43.52	-22.01	200	Vert
8	327.0822	36.72	PK	13.9	-26.3	24.32	46.02	-21.7	200	Vert
9	800.0874	33.26	PK	21.2	-24.8	29.66	46.02	-16.36	200	Vert

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#### **RADIATED EMISSIONS 1 TO 2 GHz**

iompany: roject #: tate: est Engineer: ionfiguration: Iode: iest Equipment: Horn 1- T59; S/N: 3245 if cable 2 3' cable 2 3' cable 228 if Dist GHz (m) 340 3.0	18GHz @3m 2807700 307700	Google 13U14955 4/4/2013 Mona Hua EUT with AC 2 Normal Pre-a T145 J 12' cc	Adapter Aglient 3	1-26G	iHz )56 -	Pre-am	plifer								
ompany:           roject #:           ate:           est Engineer:           onfiguration:           Iode:             est Equipment:           Horn 1-'           T59; S/N: 3245           3' cable 2           3' cable 2           3' cable 2           GHz (m)           ¥0           3.0	E 18GHz @3m 2807700 307700 V Read Pk	Google 13U14955 4/4/2013 Mona Hua EUT with AC . Normal Pre-a T145 / 12' ca	Adapter mplifer Aglient 3	1-26G	i <b>Hz</b> )56 <b>-</b>	Pre-am	plifer								
ate:         ast Engineer:           onfiguration:         code:           sst Equipment:         Horn 1-'           T59; S/N: 3245           H           H Frequency Cable         3' cable 2           3' cable 228         f           GHz         (m)           40         3.0	2807700 307700	4/4/2013 Mona Hua EUT with AC / Normal Pre-a T145 / 12' ca	Adapter mplifer Aglient 3	1-26G	i <b>Hz</b> )56 -	Pre-am	plifer								
est Engineer: onfiguration: ode: est Equipment: Horn 1-' T59; S/N: 3245   H Frequency Cable 3' cable 228 f Dist GHz (m) 140 3.0	18GHz @3m 2807700 307700	Mona Hua EUT with AC. Normal Pre-a T145 / 12' cc	Adapter mplifer Aglient 3	<b>1-26G</b>	Hz	Pre-am	plifer								
Imagen actor.           ode:           est Equipment:           Horn 1-'           T59; S/N: 3245           H Frequency Cable           3' cable 2           3' cable 228           f         Dist           GHz         (m)           40         3.0	2807700 307700	Pre-a - T145 / 12' ci	mplifer Aglient 3	<b>1-26G</b> 008A00	Hz )56 ↓	Pre-am	plifer								
est Equipment:           Horn 1-           T59; S/N: 3245           Hi Frequency Cable           3' cable 2           3' cable 228           f           Dist           GHz         (m)           140         3.0	E 18GHz @3m 2807700 307700 Read Pk	Pre-a T145,	Aglient 3	<b>1-26</b> G	Hz )56 –	Pre-am	plifer		_						
Horn         1-           T59;         S/N:         3245           H Frequency Cable         3' cable 2         3' cable 228           3' cable         23' cable 228         10' cm           f         Dist         GHz         (m)           140         3.0         145         3.0	- 18GHz @3m 2807700 307700	Pre-a T145	Aglient 3	<b>1-26G</b> 3008A 00	Hz )56 -	Pre-am	plifer		_						
Horn 1- T59; S/N: 3245 H Frequency Cable 3' cable 2 3' cable 228 f Dist GHz (m) 40 3.0	-18GHz @3m 2807700 307700	• T145	Aglient 3	1-26C 3008A 0(	3Hz 056 🗸	Pre-am	pliter	20 10017						Limit	
T59;         S/N: 3245           Hi Frequency Cable         3' cable 2           3' cable 228         3' cable 228           f         Dist           GHz         (m)           140         3.0	@3m es 2807700 307700	• T145 12' c	Aglient:	3008A 0	056 🖵		1z Pre-amplifer 26-40GHz Horn > 18GHz								
Hi Frequency Cable 3' cable 2 3' cable 228 f Dist GHz (m) 40 3.0 45 3.0	es 2807700 807700 V	<b>12' (</b>	able 2						-				•	FCC 15.109	
3' cable 2           3' cable 228           f         Dist           GHz         (m)           140         3.0           145         3.0	2807700 807700	12' ( 12' ca	able 2						<u> </u>				_		
3' cable 228           f         Dist           GHz         (m)           140         3.0           145         3.0	807700	12' Ci	3' cable 22807700 12' cable 228076				00 20' cable 22807500 HPF						Reject Filter Rewey BW=1MHz		
f         Dist           GHz         (m)           140         3.0           145         3.0	Read Pk		able 228	07600	_	20' cab	le 228	07500 🖕					Avera	ige Measurements	
f         Dist           GHz         (m)           340         3.0           145         3.0	Read Pk												RBW=	1MHz ; VBW=10Hz	
GHz (m) 340 3.0 345 3.0	1	Read Avg.	AF	CL	Amp	D Corr	Fltr	Peak	Avg	Pk Lim	Avg Lim	Pk Mar	Avg Mar	Notes	
40 3.0 45 3.0	dBuV	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dBuV/m	dBuV/m	dB	dB	(V/H)	
	52.7 53.4	39.4 41.6	25.2 27.1	3.5 4.0	-35.8	0.0	0.0	45.7 49.1	32.4 37.3	74 74	54 54	-28.3 -24.9	-21.6 -16.7	H V	
35 3.0	50.7	37.7	27.4	4.1	-35.4	0.0	0.0	46.9	33.9	74	54	-27.1	-20.1	H	
40 3.0	52.8	39.4	24.5	3.3	-35.9	0.0	0.0	44.7	31.3	74	54	-29.3	-22.7	V	
60 3.0 215 3.0	54.6 51.0	40.3	24.9	3.4	-35.8	0.0	0.0	47.1	32.9	74	54 54	-26.9	-21.1	H	
10 0.0			27.00				0.0			.4					
rv. 01.30.13 f Dist Read AF	Measuremer Distance to . Analyzer Re Antenna Fa	nt Frequency Antenna eading actor	7		Amp D Corr Avg Peak	Preamp ( Distance Average Calculate	Gain Corre Field S ed Pea	ct to 3 mete Strength @ k Field Stre	rs 3 m ength		Avg Lim Pk Lim Avg Mar Pk Mar	Average F Peak Field Margin vs Margin vs	Field Strengt d Strength L 3. Average L 5. Peak Limi	h Limit imit imit t	
CL	Cable Loss				HPF	High Pas	s Filter	t	-			_			

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# 7.1. AC MAINS LINE CONDUCTED EMISSIONS

### TEST PROCEDURE

### ANSI C63.4

### <u>LIMIT</u>

§15.107 (a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

Frequency range	Limi	ts (dBμV)								
(MHz)	Quasi-peak	Average								
0.15 to 0.50 66 to 56 56 to 46										
0.50 to 5 56 46										
5 to 30	60	50								
Notes:										
1. The lower limit shall apply at	the transition frequencies									
2. The limit decreases linearly v	vith the logarithm of the frequ	uency in the range 0.15 MHz to								

0.50 MHz.

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### **RESULTS**

### **CONFIGURATION 2**

#### <u>LINE 1</u>



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#### REPORT NO: 13U14955-4A EUT: GLASS

### <u>LINE 2</u>



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#### **6 WORST EMISSIONS**

Project No:13	U14955								
Client Name:	Google								
Model/Devic	e: Glass 1 - R	EVT4, EUT a	nd AC Adapt	er					
Test Volt/Fre	q:115 VAC/	50Hz							
Test By:Mona	Hua								
Line-L1 .15 - 3	80MHz								
Test	Meter					CISPR 11/22		CISPR 11/22	
Frequency	Reading		T24 IL	LC Cables		Class B		Class B	
(MHz)	(dBuV)	Detector	L1.TXT (dB)	1&3 (dB)	dB(uVolts)	Quasi-peak	Margin	Average	Margin
0.6225	52.3	PK	0.1	0	52.4	56	-3.6	-	-
0.6225	39.74	Av	0.1	0	39.84	-	-	46	-6.16
1.266	44.1	PK	0.1	0.1	44.3	56	-11.7	-	-
1.266	30.14	Av	0.1	0.1	30.34	-	-	46	-15.66
3.4035	48.53	PK	0.1	0.1	48.73	56	-7.27	-	-
3.4035	32.56	Av	0.1	0.1	32.76	-	-	46	-13.24
14.703	43.84	PK	0.2	0.2	44.24	60	-15.76	-	-
14.703	27.97	Av	0.2	0.2	28.37	-	-	50	-21.63
Line-L2 .15 - 3	OMHZ								
Test	Meter		724.0	LC Cables		CISPR 11/22		CISPR 11/22	
(MU <sub>2</sub> )	(dpu)/)	Detector	124 IL	18.2 (dp)	dP(u)(alts)	Class B Quasi poak	Margin		Margin
0.6045	(ubuv) /12.19	DELECTO	0.1	1003 (UB)	/12 29	Guasi-peak	-12 71	Average	wargin
0.6045	18.81	Δν	0.1	0	18.91		- 12.71	46	-27.09
1 23	34.47	DK	0.1	01	34.67	56	-21 33		
1.23	10.67	Δν	0.1	0.1	10.87	-	-	46	-35 13
7.0665	39.7	PK	0.1	0.1	39.9	60	-20.1	-	-
7.0665	23.96	Av	0.1	0.1	24.16	-	-	50	-25.84
14,1225	42.01	PK	0.2	0.2	42.41	60	-17.59	-	-
14 1225	25.02	Δν	0.2	0.2	25.42	-	-	50	-24 58

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### **CONFIGURATION 3**

#### LINE 1 RESULTS



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#### LINE 2 RESULTS



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#### **6 WORST EMISSIONS**

SUMMAR	Y DATA	– EUT w	ith Lapi	top					
Project No:13	U14955								
Client Name:	Google								
Model/Device	e:Device w	ith Laptop							
Test Volt/Fre	q:115VAC/	60 Hz							
Test By:Mona	Hua								
Line-L1 .15 - 3	OMHz								
Test	Meter		T24 IL	LC Cables		CISPR 11/22		<b>CISPR 11/22</b>	
Frequency	Reading		L1.TXT	1&3.TXT		Class B Quasi-		Class B	
(MHz)	(dBuV)	Detector	(dB)	(dB)	dB(uVolts)	peak	Margin	Average	Margin
0.1905	56.2	PK	0.1	0	56.3	64	-7.7	-	-
0.1905	30.2	Av	0.1	0	30.3	-	-	54	-23.7
0.3525	52.18	PK	0.1	0	52.28	58.9	-6.62	-	-
0.3525	23.08	Av	0.1	0	23.18	-	-	48.9	-25.72
0.5505	49.91	PK	0.1	0	50.01	56	-5.99	-	-
0.5505	25.15	Av	0.1	0	25.25	-	-	46	-20.75
1.5855	43.38	PK	0.1	0.1	43.58	56	-12.42	-	-
1.5855	23.34	Av	0.1	0.1	23.54	-	-	46	-22.46
20.589	35.06	PK	0.3	0.2	35.56	60	-24.44	-	-
20.589	27.51	Av	0.3	0.2	28.01	-	-	50	-21.99
Line-L2 .15 - 3	OMHz								
Test	Meter		T24 IL	LC Cables		CISPR 11/22		CISPR 11/22	
Frequency	Reading		L1.TXT	1&3.TXT		Class B Quasi-		Class B	
(MHz)	(dBuV)	Detector	(dB)	(dB)	dB(uVolts)	peak	Margin	Average	Margin
0.1725	55.48	PK	0.1	0	55.58	64.8	-9.22	-	-
0.1725	36.51	Av	0.1	0	36.61	-	-	54.8	-18.19
0.4245	49.73	PK	0.1	0	49.83	57.4	-7.57	-	-
0.4245	26.04	Av	0.1	0	26.14	-	-	47.4	-21.26
1.1355	46.72	PK	0.1	0.1	46.92	56	-9.08	-	-
1.1355	30.79	Av	0.1	0.1	30.99	-	-	46	-15.01
17.007	35.68	PK	0.2	0.2	36.08	60	-23.92	-	-
17.007	28.42	Av	0.2	0.2	28.82	-	-	50	-21.18

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