



BUREAU
VERITAS

Test Report No.: FS160712N001

RF EXPOSURE REPORT

Applicant	Harman International Industries, Incorporated
Address	8500 Balboa Blvd, Northridge, CA 91329, UNITED STATES

Manufacturer or Supplier	Harman International Industries, Incorporated
Address	8500 Balboa Blvd, Northridge, CA 91329, UNITED STATES
Product	JBL Google Cast Speaker
Brand Name	JBL
Model	JBL PLAYLIST
Additional Model & Model Difference	N/A
Date of tests	Aug. 01, 2016 ~ Aug. 29, 2016

☒ FCC Part 2 (Section 2.1091)

☒ KDB 447498 D01

☒ IEEE C95.1

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Tested by Breeze Jiang Project Engineer / EMC Department	Approved by Glyn He Supervisor/ EMC Department
	 Date: Sep. 05, 2016

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FS160712N001	Original release	Sep. 05, 2016



Test Report No.: FS160712N001

1. CERTIFICATION

FCC ID:	APIJBLPLAYLIST
PRODUCT:	JBL Google Cast Speaker
BRAND NAME:	JBL
MODEL NO.:	JBL PLAYLIST
ADDITIONAL NO.:	N/A
TEST SAMPLE:	Engineering Sample
APPLICANT:	Harman International Industries, Incorporated
STANDARDS:	FCC Part 2 (Section 2.1091)
	KDB 447498 D01
	IEEE C95.1



2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.



5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit	Peak Gain (dBi)	Antenna Type
Chain 0	2.22 (2.4GHz)	FPCB Antenna
Chain 0	3.22 (5180 ~ 5240MHz)	FPCB Antenna
Chain 0	3.57 (5260 ~ 5320)	FPCB Antenna
Chain 0	3.85 (5500 ~ 5700)	FPCB Antenna
Chain 0	3.32 (5745 ~ 5825)	FPCB Antenna

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412-2472 (WIFI 2.4GHz)	32.810	2.22	20	0.0108825	1.0
2402-2480(BT)	2.328	2.22	20	0.000772	1.0
5180 ~ 5240 (WIFI 5GHz)	76.913	3.22	20	0.032120	1.0
5260 ~ 5320 (WIFI 5GHz)	76.913	3.57	20	0.034810	1.0
5500 ~ 5700 (WIFI 5GHz)	82.035	3.85	20	0.039600	1.0
5745 ~ 5825 (WIFI 5GHz)	78.163	3.32	20	0.033400	1.0

CONCLUSION:

Both of the WLAN 2.4G and 5G can not transmit simultaneously.

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