

FCC RF EXPOSURE REPORT

FCC ID: APIHKOMNI20P

Project No. : 1603C095
Equipment : Streaming wireless speaker
Model : HK OMNI 20+
Applicant : Harman International Industries, Incorporated
Address : 8500 Balboa Blvd, Northridge, CA 91329, UNITED STATES
According: : FCC Guidelines for Human Exposure IEEE C95.1

B T L I N C .

No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, China.
TEL: +86-769-8318-3000 FAX: +86-769-8319-6000

MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi r^2} = \frac{EIRP}{4\pi r^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Table for Filed Antenna

2.4G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	harman/Kardon	N/A	Internal	N/A	2.56

5G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	harman/Kardon	N/A	Internal	N/A	3.73

TEST RESULTS

Bluetooth

EUT:	Streaming wireless speaker	Model Name :	HK OMNI 20+
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX Mode _1Mbps		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2.56	1.8030	1.24	1.3305	0.00047747	1	Complies
2.56	1.8030	2.26	1.6827	0.00060388	1	Complies
2.56	1.8030	1.57	1.4355	0.00051517	1	Complies

EUT:	Streaming wireless speaker	Model Name :	HK OMNI 20+
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX Mode _3Mbps		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2.56	1.8030	-0.77	0.8375	0.00030057	1	Complies
2.56	1.8030	-0.11	0.9750	0.00034991	1	Complies
2.56	1.8030	-0.64	0.8630	0.00030971	1	Complies

BLE

EUT:	Streaming wireless speaker	Model Name :	HK OMNI 20+
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage:	AC 120V/60Hz		
Test Mode:	CH00, CH19 , CH39		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2.56	1.8030	0.89	1.2274	0.00044050	1	Complies
2.56	1.8030	1.25	1.3335	0.00047858	1	Complies
2.56	1.8030	1.54	1.4256	0.00051162	1	Complies

2.4G WIFI

EUT:	Streaming wireless speaker	Model Name :	HK OMNI 20+
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX G Mode_CH01/06/11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2.56	1.8030	23.98	250.0345	0.08973262	1	Complies
2.56	1.8030	23.05	201.8366	0.07243532	1	Complies
2.56	1.8030	23.76	237.6840	0.08530026	1	Complies

UNII-1

EUT:	Streaming wireless speaker	Model Name :	HK OMNI 20+
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX A Mode / CH36, CH40, CH48		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3.73	2.3605	14.14	25.9418	0.01218850	1	Complies
3.73	2.3605	15.24	33.4195	0.01570183	1	Complies
3.73	2.3605	14.89	30.8319	0.01448606	1	Complies

UNII-2A

EUT:	Streaming wireless speaker	Model Name :	HK OMNI 20+
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX A Mode / CH52, CH60, CH64		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3.73	2.3605	14.62	28.9734	0.01361289	1	Complies
3.73	2.3605	15.02	31.7687	0.01492624	1	Complies
3.73	2.3605	14.36	27.2898	0.01282184	1	Complies

UNII-2C

EUT:	Streaming wireless speaker	Model Name :	HK OMNI 20+
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX N40 Mode / CH102, CH110, CH134		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3.73	2.3605	11.59	14.4212	0.00677564	1	Complies
3.73	2.3605	14.21	26.3633	0.01238655	1	Complies
3.73	2.3605	15.01	31.6957	0.01489191	1	Complies

UNII-3

EUT:	Streaming wireless speaker	Model Name :	HK OMNI 20+
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX N20 Mode / CH149, CH157, CH165		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3.73	2.3605	13.91	24.6037	0.01155980	1	Complies
3.73	2.3605	15.68	36.9828	0.01737602	1	Complies
3.73	2.3605	15.79	37.9315	0.01782175	1	Complies

Note: the calculated distance is 20 cm.