

Client: Google, Inc.	Job Number: JD101521 and
Model: GFHD254	T-Log Number: T101543
Contact: Weifeng Pan	Project Manager: Deepa Shetty
Standard: FCC 15.247 and 15.407	Project Coordinator: -
	Class: N/A

Maximum Permissible Exposure / SAR Exclusion

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 12/19/2016

Test Engineer: Mark Hill

General Test Configuration

Calculation uses the free space transmission formula:

$$S = (PG)/(4 \pi d^2)$$

Where: S is power density (W/m^2), P is output power (W), G is antenna gain relative to isotropic, d is separation distance from the transmitting antenna (m).

Summary of Results

Device complies with Power Density requirements at 20cm separation:	Yes
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Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

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FCC MPE Calculation

Use: General
 Antenna: -4.0dBi for Bluetooth
 9.48dBi for UNII1 (Directional TxBF gain)
 10.6dBi for UNII3 (Directional TxBF gain)
 Worse case mode: BLE for 2.4GHz Bluetooth Operation
 n40, TxBF for UNII1
 n40, TxBF for UNII3

Assessment of individual radio operation

Freq. MHz	EUT Power dBm	EUT Power mW*	Cable Loss Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm^2	MPE Limit at 20 cm mW/cm^2
BT Radio Operation (worse case - BLE)								
2440	6.0	4.0	0	-4	6.0	1.58	0.0003	1.000
5GHz radio operation								
5200	20.3	107.2	0	9.48	20.3	950.60	0.189	1.000
5795	24.5	281.8	0	10.6	24.5	3235.94	0.644	1.000

Simultaneous transmission calculation using worse case (as a % of MPE limit @ 20cm) of 2.4GHz and 5GHz operation

Freq. MHz	% of limit
2440	0.00
5200	64.4
Total:	64.4