

RF EXPOSURE EVALUATION

EUT Specification

EUT	Facial Aesthetics Intelligent Trading Hub (FAITH)
Model Number	DF1596-1-M
FCC ID	2BF7M-DF1596
Antenna gain (Max)	2.4G WIFI 2.2536 dBi for antenna 1 2.2536 dBi for antenna 2 5G WIFI U-NII-1 3.7145 dBi for antenna 1 3.7145 dBi for antenna 2 U-NII-3 5.0078 dBi for antenna 1 5.0078 dBi for antenna 2
Operation Frequency	2.4G WIFI 2412-2462MHz 5G WIFI 5180-5240MHz 5745-5825MHz
Power Supply	AC 120V/60Hz
Classification Per Stipulated Test Standard	§15.247(i), §2.1093
Modulation	2.4G WIFI IEEE 802.11b: DSSS(CCK, DQPSK, DBPSK) IEEE 802.11g/n: OFDM(64-QAM, 16-QAM, QPSK, BPSK) 5G WIFI IEEE 802.11a: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac: OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK)
Max. output power	2.4G WIFI IEEE 802.11b: 8.84 dBm IEEE 802.11g: 8.49 dBm IEEE 802.11n HT20: 8.56 dBm IEEE 802.11n HT40: 6.77 dBm 5G WIFI U-NII-1

	IEEE 802.11a: 6.34 dBm IEEE 802.11n HT20: 5.77 dBm IEEE 802.11n HT40: 4.15 dBm IEEE 802.11ac VHT20: 4.35 dBm IEEE 802.11ac VHT40: 4.42 dBm IEEE 802.11ac VHT80: 2.83 dBm U-NII-3 IEEE 802.11a: 6.22 dBm IEEE 802.11n HT20: 5.05 dBm IEEE 802.11n HT40: 4.53 dBm IEEE 802.11ac VHT20: 4.99 dBm IEEE 802.11ac VHT40: 4.51 dBm IEEE 802.11ac VHT80: 3.46 dBm
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Test Requirement:

According to §15.247(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{(GHz)}}}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,²⁴ where

- $f_{\text{(GHz)}}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation²⁵
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by §2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

The minimum separation distance is 5mm.

2.4G WIFI

Transmit Frequency (MHz)	Mode	Measured Power (dBm)	Tune up Power (dBm)	Max tune up power(dBm)	Calculation Result	1-g SAR
2462	802.11b	8.84	8±1	9	2.49	3
2412	802.11g HT20	8.49	8±1	9	2.47	3
2462	802.11n HT20	8.56	8±1	9	2.49	3
2437	802.11n HT40	6.77	6±1	7	1.56	3

5G WIFI U-NII-1

Transmit Frequency (MHz)	Mode	Measured Power (dBm)	Tune up Power (dBm)	Max tune up power(dBm)	Calculation Result	1-g SAR
5180	802.11a	6.34	6±1	7	2.28	3
5200	802.11n HT20	5.77	5±1	6	1.82	3
5190	802.11n HT40	4.15	4±1	5	1.44	3
5180	802.11ac VHT20	4.35	4±1	5	1.44	3
5190	802.11ac VHT20	4.42	4±1	5	1.44	3
5210	802.11ac VHT20	2.83	2±1	3	0.91	3

U-NII-3

Transmit Frequency (MHz)	Mode	Measured Power (dBm)	Tune up Power (dBm)	Max tune up power(dBm)	Calculation Result	1-g SAR
5825	802.11a	6.22	6±1	7	2.42	3
5745	802.11n HT20	5.05	5±1	6	1.91	3
5795	802.11n HT40	4.53	4±1	5	1.52	3
5745	802.11ac VHT20	4.99	4±1	5	1.52	3
5795	802.11ac VHT20	4.51	4±1	5	1.52	3
5775	802.11ac VHT20	3.46	3±1	4	1.21	3

According to KDB 447498, WLAN 2.4G & WLAN 5G can't transmit simultaneously, and no simultaneous SAR measurement is required.

Signature:



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