RF EXPOSURE EVALUATION
FCC ID: 2AVBO-HTA9

Product Name	:	Thermal imaging camera
Model Name	:	HT-A9
Serial model	:	HT-A8,HT-H8
Equipment Type	:	DTS
Specification	:	802.11b/g/n (HT20)/n (HT40)
Operation Frequency	:	2.4G Wi-Fi: 2412-2462MHz for 802.11b/g/n (HT20) 2422-2452MHz for 802.11n (HT40)
Number of Channel	:	802.11b/g/n(HT20): 11 Channels 802.11n(HT40): 7 Channels
Type of Modulation	:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n;
Antenna installation	:	PCB Antenna
Antenna Gain	:	3 dBi
Power supply	:	Battery 4.2V 5000mA
Hardware Version	:	HT-A8-MB-V1.3
Software Version	:	V2.1.1

Standard Requirement

Portable device

According to § 15.247(i) and § 1.1307b(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 levels in excess of the Commission's guidelines. See KDB 447498 D01 General RF Exposure Guidance v05, section 4. 3. 1.

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

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]*[√f(GHz)] ≤3.0 for 1-g SAR and ≤7.5 for 10-g SAR extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison.

The test exclusions are applicable only when the minimum test separation distance is ≤ 50mm and for transmission frequencies between 100MHz and 6GHz. When the minimum test separation distance is <5mm, a distance of 5mm 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 quality for TCB approval.

One antenna is available for the EUT (WIFI product). The minimum separation distance is 5mm.

Max output power is Low Channel with 802.11b mode

Modulation	Maximum Peak Output Power (dBm)			Limit
	Low Channel	Middle Channel	High Channel	
802.11b	12.49	12.18	12.51	1W(30dBm)
802.11g	10.99	10.86	10.84	1W(30dBm)
802.11n-HT20	9.81	9.76	9.78	1W(30dBm)
802.11n-HT40	8.36	8.54	8.35	1W(30dBm)

SAR evaluation

Antenna Type :FPCB Antenna Antenna Gain: 3 dBi

Modulation	Channel Freq. (GHz)	Conducted power (dBm)	Conducted power (mW)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Distance (mm)	Result calculation	10g SAR Exclusion threshold	SAR test exclusion
802.11b	2.412	12.49	17.742	12±1	13.00	19.953	<5	6.19753	7.50	YES
	2.437	12.18	16.520	12±1	13.00	19.953	<5	6.22957	7.50	YES
	2.462	12.51	17.824	12±1	13.00	19.953	<5	6.26144	7.50	YES
802.11g	2.412	10.99	12.560	10±1	11.00	12.589	<5	3.91038	7.50	YES
	2.437	10.86	12.190	10±1	11.00	12.589	<5	3.93059	7.50	YES
	2.462	10.84	12.134	10±1	11.00	12.589	<5	3.95070	7.50	YES
802.11n-HT20	2.412	9.81	9.572	9±1	10.00	10.000	<5	3.10612	7.50	YES
	2.437	9.76	9.462	9±1	10.00	10.000	<5	3.12218	7.50	YES
	2.462	9.78	9.506	9±1	10.00	10.000	<5	3.13815	7.50	YES
802.11n-HT40	2.422	8.36	6.85	8±1	9.00	7.94	<5	2.47239	7.50	YES
	2.437	8.54	7.14	8±1	9.00	7.94	<5	2.48003	7.50	YES
	2.452	8.35	6.84	8±1	9.00	7.94	<5	2.48766	7.50	YES

Conclusion:

For the max result : 6.26144≤ 7.5 for 10-g SAR, No SAR is required.

Signature

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EMC Manager

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