

RF EXPOSURE EVALUATION

EUT Specification

EUT	10.3-INCH reader
Model Number	SHERD-01-9BA
FCC ID	2A9YMSHERD-01
Antenna gain (Max)	2.14 dBi for WIFI 2.4 Band and BT 2.04 dBi for WIFI 5G Band I 2.04 dBi for WIFI 5G Band III
Operation Frequency	2.4G WIFI: 2412-2462MHz for 802.11b/g; 2412-2462MHz for 802.11n(HT20); 2422-2452MHz for 802.11n(HT40); BT: 2402-2480MHz 5G WIFI: Band I : 5180-5240 MHz Band III : 5745-5825 MHz
Input Rating	DC 5V, 2A
Classification Per Stipulated Test Standard	§ 15.247(i), § 2.1093

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:

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

- $f_{\text{(GHz)}}$ 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.

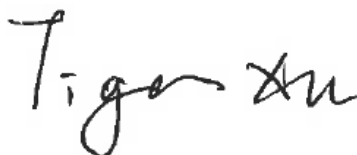
Routine SAR evaluation refers to that specifically required by §2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

One antenna is available for the EUT. The minimum separation distance is 5mm.

Mode	Frequency (MHz)	Max Measured Power (dBm)	Tune up Power (dBm)	Max tune up power(dBm)	Calculation Result	1-g SAR
2.4G WIFI	2412	6.25	6±1	7	1.556789	3
5G WIFI band I	5200	6.23	6±1	7	2.285824	3
5G WIFI band III	5475	5.92	6±1	7	2.402625	3
BT	2441	5.62	6±1	7	1.566120	3

The Product unsupported at the same time to Transmitting. According to KDB 447498, and no simultaneous SAR measurement is required.

Signature:



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