

RADIO FREQUENCY EXPOSURE

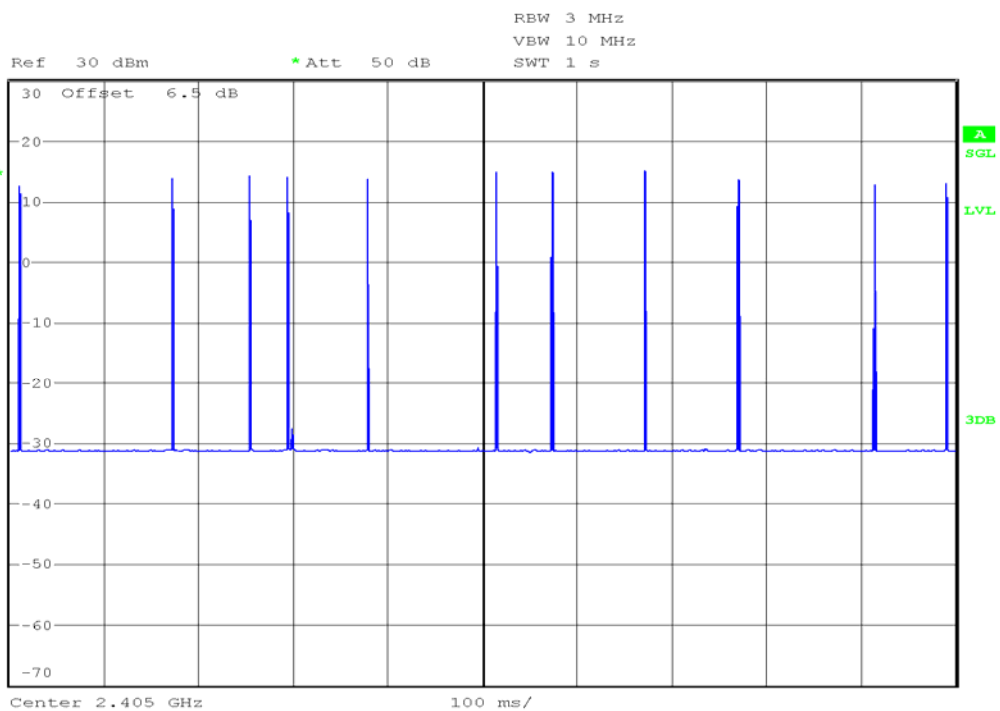
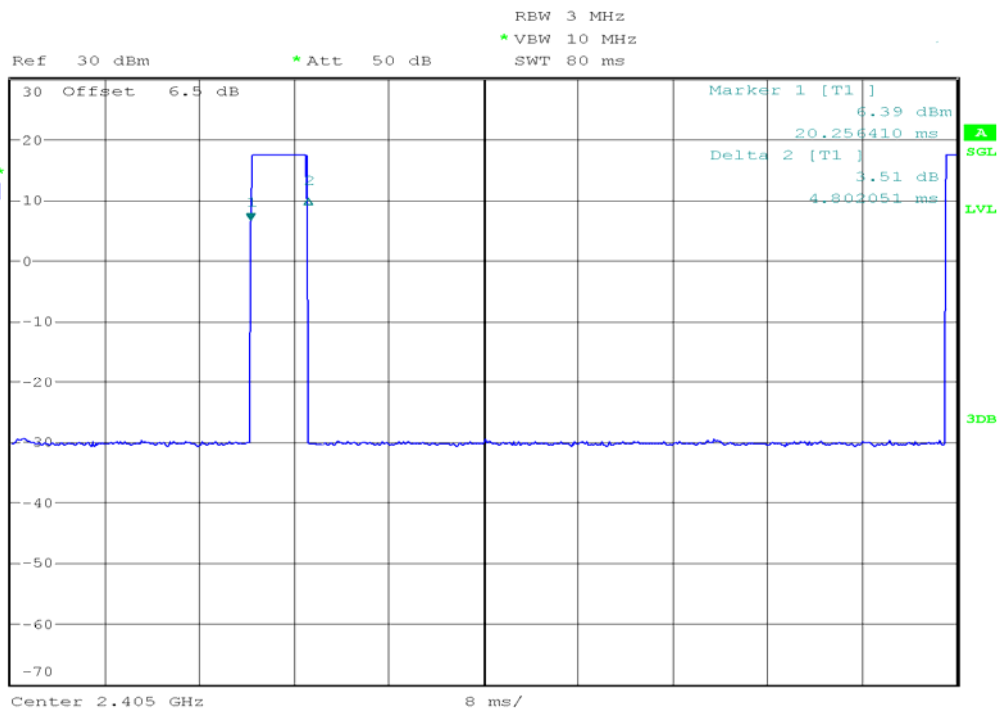
LIMIT

According to §15.247(i) and §15.407(f), 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 § 1.1307(b) of this chapter.

EUT Specification

EUT	ST10***** (The “*” can be 0 to 9, a to z, A to Z, blank or any symbol, for marketing purpose.)
Frequency band (Operating)	☐ WLAN: 2.412GHz ~ 2.462GHz ☐ WLAN: 5.15GHz ~ 5.25GHz ☐ WLAN: 5.25GHz ~ 5.35GHz ☐ WLAN: 5.47GHz ~ 5.725GHz ☒ WLAN: 5.725GHz ~ 5.85GHz ☒ Zigbee:2.405GHz ~ 2.48GHz ☐ Others
Device category	☒ Portable (<20cm separation) ☐ Mobile (>20cm separation) ☐ Others
Antenna diversity	☐ Single antenna ☒ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☐ Tx/Rx diversity
Max. AVG output power	Worst case: 2.4GHz 16.03dBm 5.745GHz 18.65dBm
Antenna gain (Max)	Dipole antennas for 2.4GHz Gain 0 dBi Dipole antennas for 5GHz Gain 5.0 dBi
Evaluation applied	☐ MPE Evaluation* ☒ SAR Evaluation ☐ N/A

DUTY CYCLE TEST RESULTS



Duty Cycle = $11 \times 4.80 \text{ ms} / 1 \text{ s} \times 100\% = 5.28\%$

Standard 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.

- 1) 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,¹⁶ where

- $f_{\text{(GHz)}}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- The result is rounded to one decimal place for comparison

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 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. According to KDB 447498, no stand-alone required for DTS antenna, and no simultaneous SAR measurement is required .

Frequency (MHz)	Distance (mm)	Conducted Average Power (dBm)	Conducted Average Power (mw)	Duty cycle	Time source average power (mw)	Calculation results	Limit
2405	5	15.94	39.26	5.28%	2.07	0.642	3
2440	5	16.03	40.09	5.28%	2.12	0.662	3
2480	5	15.86	38.55	5.28%	2.04	0.643	3
5745	5	15.56	35.97	5.28%	1.90	0.911	3
5785	5	18.65	73.28	5.28%	3.87	1.862	3
5825	5	18.57	71.94	5.28%	3.80	0.834	3

Note1: Time source average power=Conducted Average Power* Duty cycle

Note2: Calculation results=Time source average power/Distance* $\sqrt{\text{Frequency}}$

Test Result: Pass