

## RADIO FREQUENCY EXPOSURE

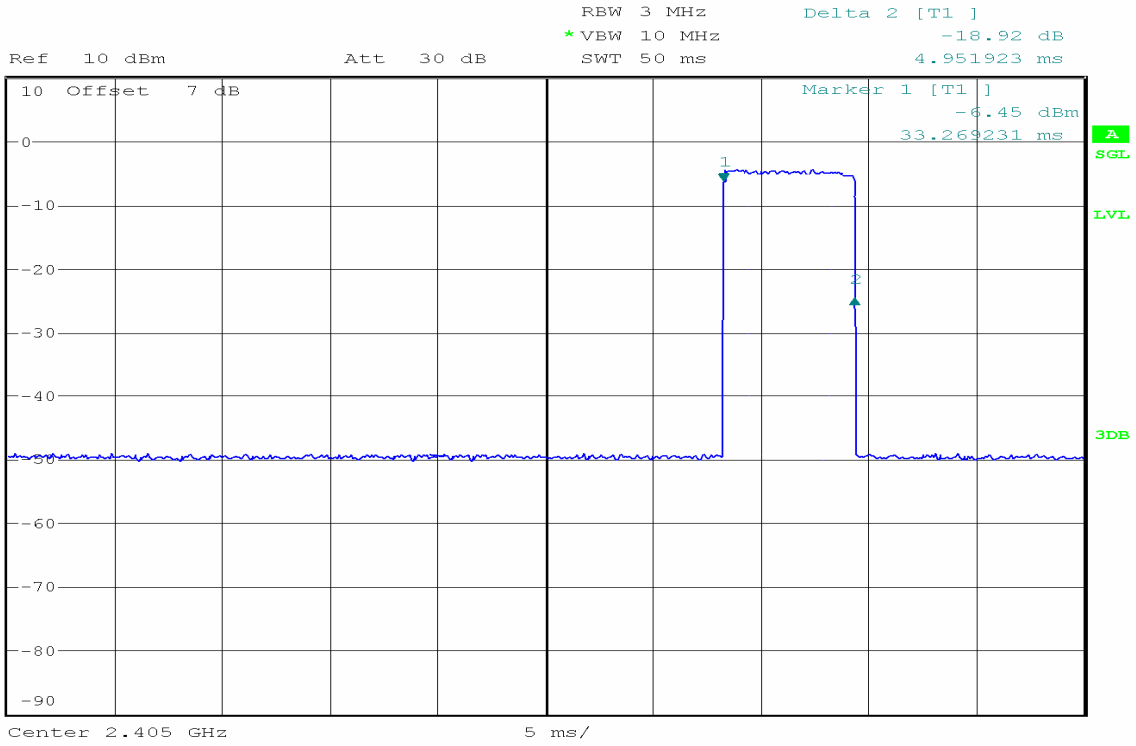
### LIMIT

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.

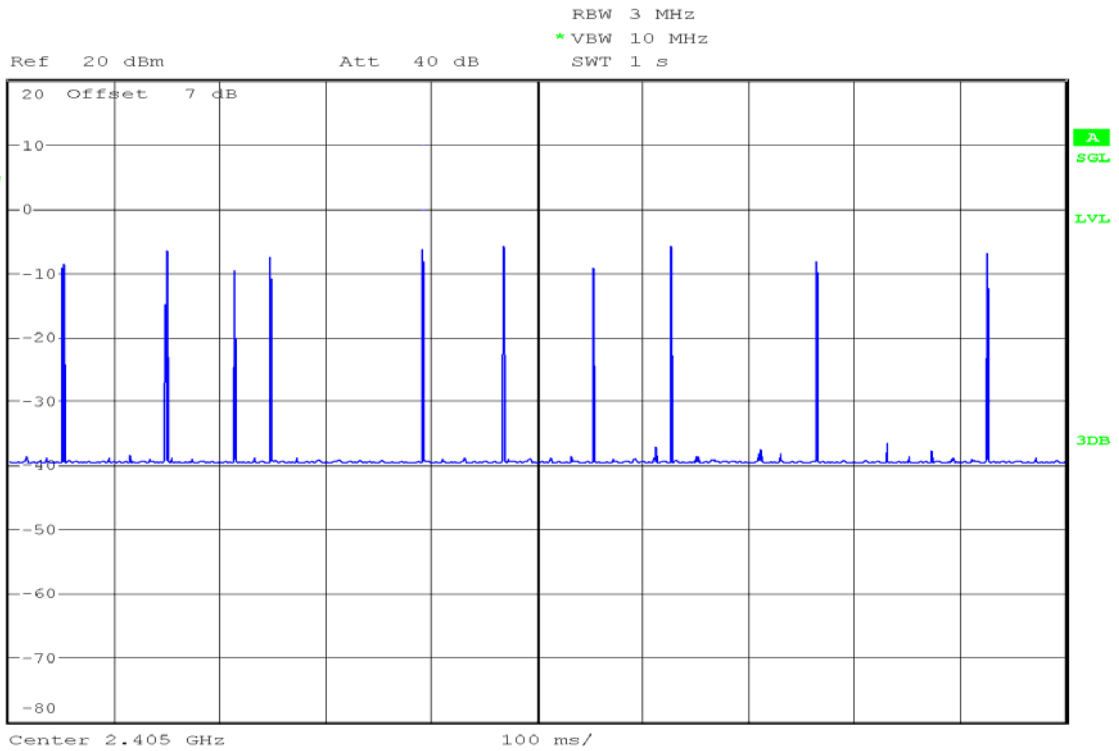
### EUT Specification

<b>EUT</b>	ST24***** (The "*" can be 0 to 9, a to z, A to Z, blank or any symbol, for marketing purpose.)
<b>Frequency band (Operating)</b>	<input type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input type="checkbox"/> WLAN: 5.15GHz ~ 5.25GHz <input type="checkbox"/> WLAN: 5.25GHz ~ 5.35GHz <input type="checkbox"/> WLAN: 5.47GHz ~ 5.725GHz <input checked="" type="checkbox"/> WLAN: 5.725GHz ~ 5.85GHz <input checked="" type="checkbox"/> Zigbee:2.405GHz ~ 2.48GHz <input type="checkbox"/> Others
<b>Device category</b>	<input checked="" type="checkbox"/> Portable (<20cm separation) <input type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others
<b>Antenna diversity</b>	<input type="checkbox"/> Single antenna <input checked="" type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
<b>Max. AVG output power</b>	Worst case: 2.4GHz    16.15dBm 5.745GHz 15.19dBm
<b>Antenna gain (Max)</b>	Dipole antennas for 2.4GHz Gain 0 dBi Dipole antennas for 5GHz Gain 0 dBi
<b>Evaluation applied</b>	<input type="checkbox"/> MPE Evaluation* <input checked="" type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A

## DUTY CYCLE TEST DATA



1



Duty Cycle =  $10 \times 4.95\text{ms} / 1\text{s} \times 100\% = 4.95\%$

**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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{(GHz)}}}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR,}^{16} \text{ where}$$

- $f_{\text{(GHz)}}$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>
- 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	15.82	38.19	4.95%	1.89	0.586	3
2440	5	16.15	41.21	4.95%	2.04	0.637	3
2480	5	15.97	39.54	4.95%	1.96	0.616	3
5745	5	15.56	30.62	4.95%	1.52	0.727	3
5785	5	18.65	30.41	4.95%	1.51	0.724	3
5825	5	18.57	33.04	4.95%	1.64	0.789	3

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

**Note2:** Calculation results=Time source average power/Distance\* √ Frequency

**Test Result: Pass**