Dt&C

FCC ID: VA5REB500-2WLR

ıdalone SAR test exclusion considerations: Tranceiver 1

Date: June 26, 2018

RF feauture	Mode	Transmitting Frequency(MHz)	Test separation distance (mm)	ANT Gain (dBi)	Max. Burst power with tune-up tolerance (dBm)Note1	Duty Cycle Correction(dB)Note2	Calculated. Frame average power (dBm)Note3	Power thresholds	SAR test exclusion thresholds
LoRa	CSS	919.00	5.0	-8.60	20.50	-8.88	11.62	2.78	7.50

Please refer to the Operational description for Duty cycle and Max. tune-up power.

Note1. Max. tune up power (Burst average)

Note2. After transmission, the device always operate RX during 1500 ms. (Refer to the Operational description)

Duty is calculated as 12.9%. (On Time : 223 ms, On+Off Time : 1723 ms), Duty Correction Factor is -8.88 dB.

Note3. Calculated. Frame average power = Max. Burst power with tune-up tolerance + Duty Cycle Correction

KDB 447498 D01 clasue 4.3.1 Step 1) SAR test exclusion thresholds for 100MHz to 6GHz at test separationn distances ≤ 50 mm

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

Sample Calculation

= [(11.62mW / 5mm)] X [√0.919GHz] = 2.78

Note. The calculation result was rounded to two decimal place for comparison.

Conclusion : SAR evaluation for general population exposure conditions by measurement or numerical simulation is not required