RF Exposure Evaluation

Product： Transceiver

Model Number： CARF-LCDLR; SLRF-LCDLR

Applicant： **Nutek Corporation**

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1   RF Exposure Evaluation

Portable Device

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.

According to KDB 447498_D01_V06 4.3.1(a) SAR exclusion thresholds by: [max. power of channel, including tune-up tolerance, mW]/(min, test separation distances, mm)]*[$\sqrt{f(GHz)}$]$\leqq$3.0 for 1-g SAR and $\leqq$7.5 for 10-g extremity SAR.

Maximum measured transmitter power

Frequency Range (MHz)	Continuous transmit power (dBm)	Duty Cycle (dB)	Transmit power (dBm)	Tune-up power tolerance (dB)	Total Maximum power	
					(dBm)	(mW)
909.6	11.71	-7.44	4.27	(±)2	6.27	4.236

(4.236/5)*($\sqrt{0.9096}$)=0.808 $\leqq$ 3.0

Conclusion:

No SAR is required.

SIMULTANEOUS TRANSMISSION EVALUATION

N/A

Duty Cycle Calculation
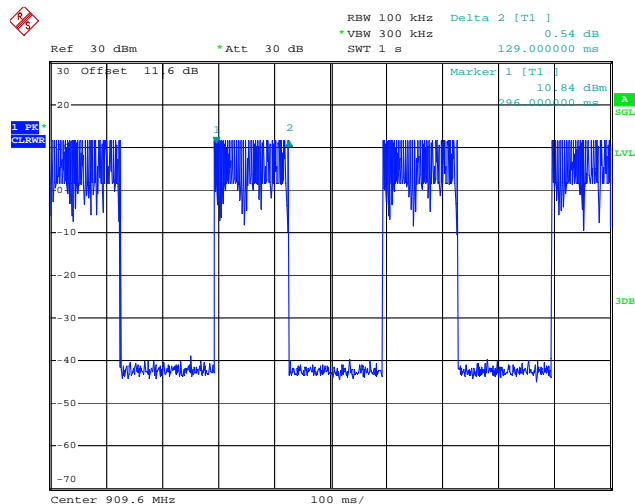
Duty cycle factor in dB = 20 $\log$ (duty cycle) = 20 $\log$ (Ton/Tp)

The duration of one cycle = 129.0ms

The transmission time of one cycle = 301.0ms
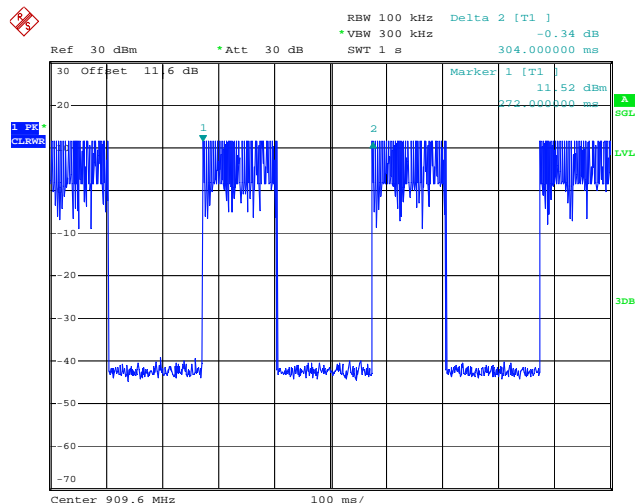
Duty Cycle = 129.0 ms / 304.0ms = 0.42434

Therefore, the duty cycle factor is found by 20 $\log$ 0.442434 = -7.44 dB

Ton:

Date: 25.MAY.2021 18:57:40

Tp:

Date: 25.MAY.2021 18:54:48