

RF Exposure Evaluation

Product : Transceiver

Model Number : CAIVU-LR; SLIVU-LR

Applicant : **Nutek Corporation**

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Report Issued : 2021/06/11

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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)]* $[\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 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	13.35	-7.10	6.25	(±)2	8.25	6.683

$$(6.683/5)*(\sqrt{0.9096})=1.275 \leq 3.0$$

Conclusion:

No SAR is required.

SIMULTANEOUS TRANSMISSION EVALUATION

N/A

Duty Cycle Calculation

Duty cycle factor in dB = $20 \log (\text{duty cycle}) = 20 \log (\text{Ton}/\text{Tp})$

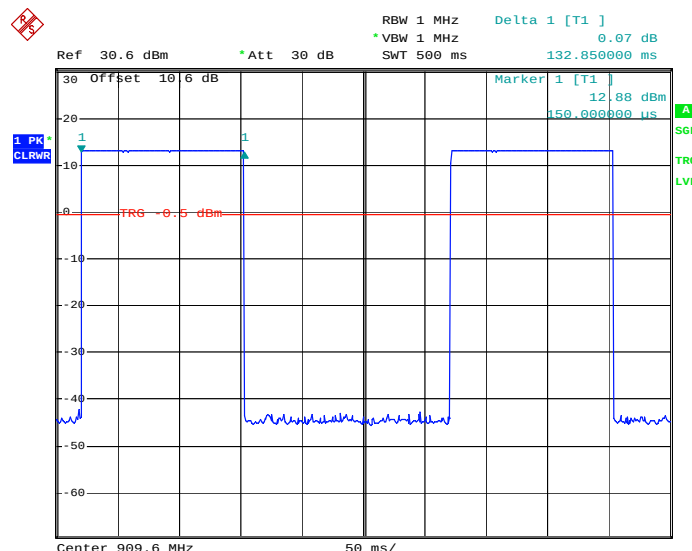
The duration of one cycle = 132.85ms

The transmission time of one cycle = 300.85ms

Duty Cycle = $129.0 \text{ ms} / 304.0\text{ms} = 0.44158$

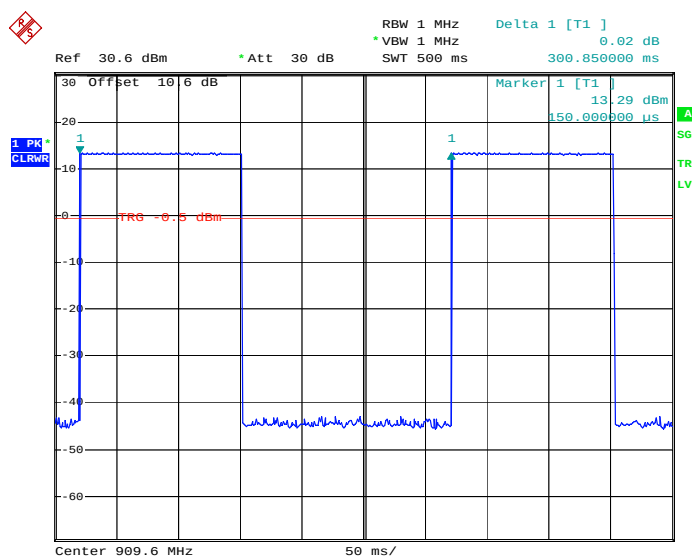
Therefore, the duty cycle factor is found by $20 \log 0.442434 = -7.10 \text{ dB}$

Ton:



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