The Fourier coefficients of this input are:

$$a_k = \begin{cases} 2AT_1/T & \text{if } k = 0 \\ A\frac{\sin(k\frac{2\pi}{T}T_1)}{k\pi} & \text{otherwise} \end{cases} \tag{18}$$

By evaluating the sum numerically, we obtain the force as a function of the duty cycle $(2T_1/T)$ in Fig. 6 for $\Delta = 0$ (other detunings only decreased the force). We observe that the forcing term that does work is not drastically increased with pulsed (short duty cycle) pumping.

Note that this is assuming that only the zeroth order correction for $J_n(\beta)$ is necessary. It is possible that higher order corrections, like that used in the derivation from [3], may be needed. We observe that the maximum average force resulting from a square wave input is lower compared with the sinusoidal input of the same average power, which is expected as the power of the square input is spread into more Fourier components.

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