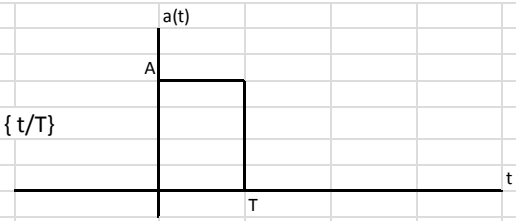
$a(t) = A \,.\mathrm{rect}\{t/T\}$

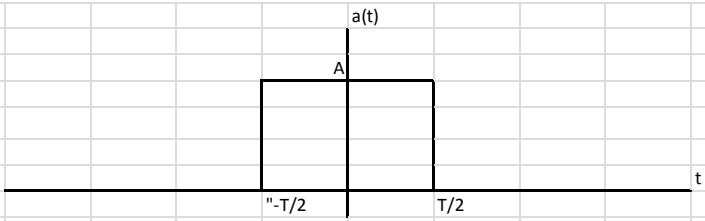


$$A(f) = A \,.\, T \,\mathrm{sinc}\,(\pi f T) \,.\, e^{-j\pi f T}$$

this spectrum is centred about zero.

complex number meaning the sinc function lies at a minus angle to the REAL axis.

The size of the minus angle is dependent on the width of the rectangular pulse.



$$A(f) = A \,.\, T \,\mathrm{sinc}\,(\pi f T)$$

this spectrum is centred about zero.

Interesting to note not a complex number and therefore no phase angle.