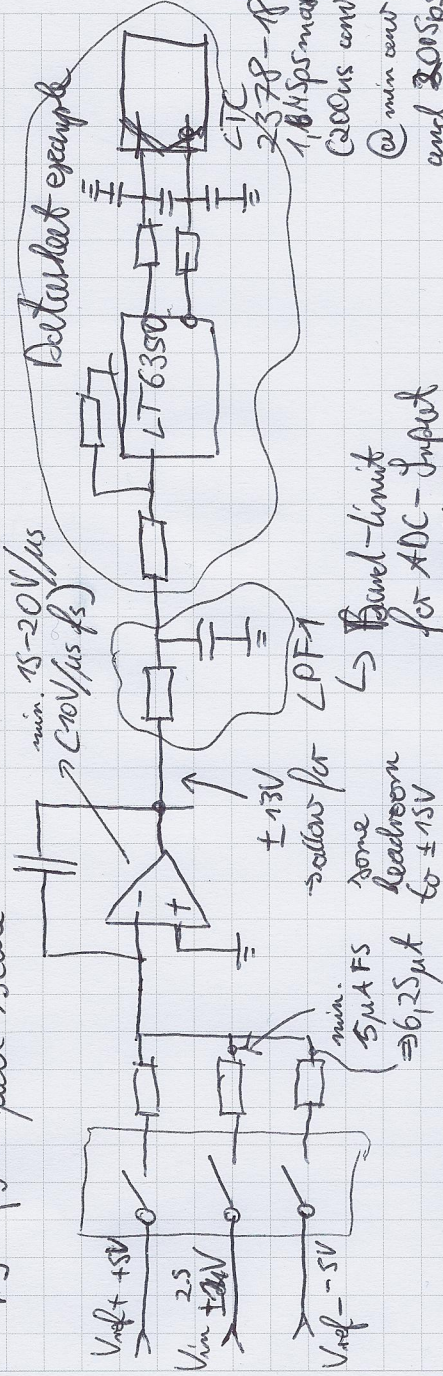


$F_S = F_S = \text{full-scale}$



Operation:

- Use 34584 switching cycles for rampup

- V_{ref} slopes are 25% stronger than $V_{in, max}$

@ Ramp-up to 1kV virtual integration:

$$\rightarrow 1kV / 2500000 = 0.0004V = 0.4mV \text{ required resolution of ADC}$$

Rampup Time: $1kV - F_S \Rightarrow 10V/\mu s \Rightarrow 100\mu s$

Theoretical Speed $\Rightarrow 4kSps$ (estimate)
(with delays and mixing)

$\Rightarrow 32500 \text{ counts of ADC}$
(noise free)
 $\Rightarrow 18 \text{ bit ADC}$

Limit the final speed to 100Sps!