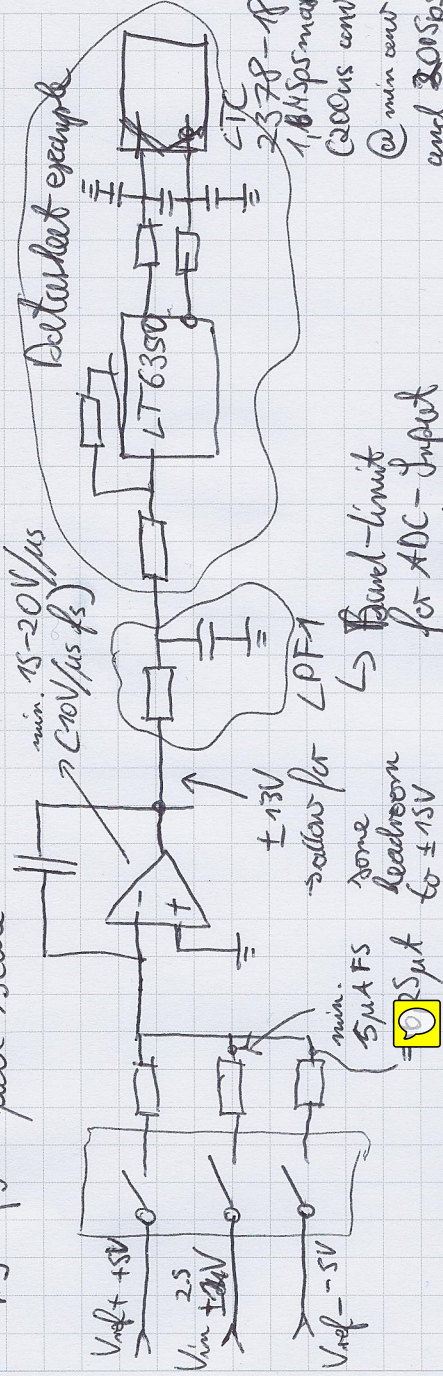


$F_S = F_S = \text{full-scale}$



### 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:  $1kV - FS \Rightarrow 10V/\mu s \Rightarrow 100\mu s$

Theoretical Speed  $\Rightarrow 4kSps$  (estimate)

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