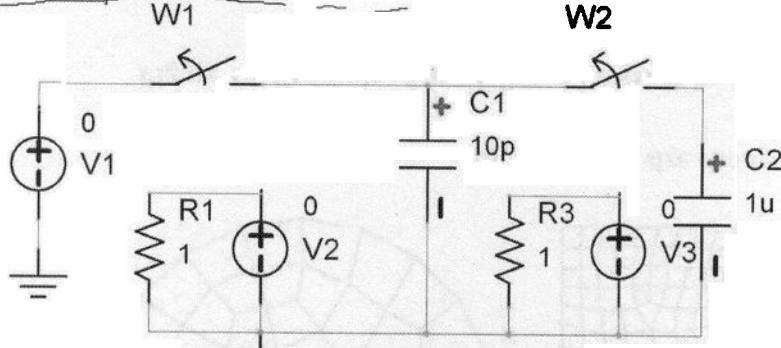


## Lect#9, Filter Course

March-10-09  
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### Usage of Current Controlled Switch in B2 Spice for Switched Cap. Filter

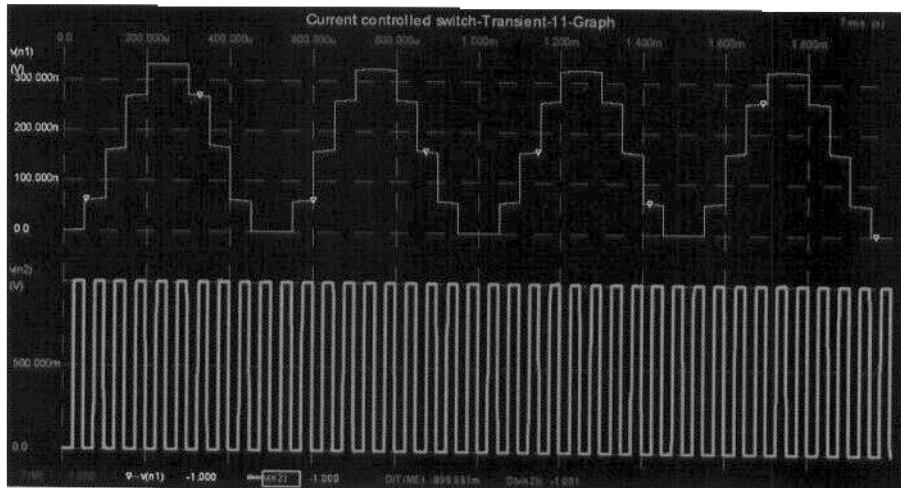
Demo. of a S/H circuit



$V_1 \rightarrow$  Signal source, sine wave  $f = 2\text{kHz}$ ,  $V_A = 20\text{mV}$  (say)

$W_1 \rightarrow$  Current controlled switch, controlled by  $V_2$

$W_2 \rightarrow$  Same but controlled by  $V_3$



$R_{ON} = 100\Omega$ ,  $R_{OFF} = 100\text{M}\Omega$  for both  $W_1, W_2$

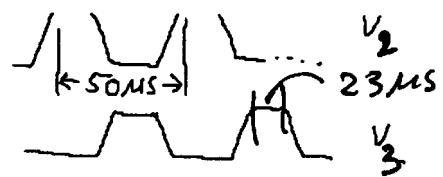
$V_2, V_3$  non overlapping clock signals

	$V_2(\text{low}=0\text{V})$	$V_3(\text{low}=0\text{V})$
$V_a$	1V	
$T_d$	0	
$t_i, t_f$	1μs	25μs ← high voltage 1μs ← initial delay

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$T_w$	23μs ← width
$T_p$	50μs ← period

$23\mu\text{s}$  



The graphs show the sample-and-held waveform across 1 uF capacitor, and one of the clock pulse waveforms