

# Hojas de datos: Práctica n°2. Parte 3. Filtros Activos

## Filtro Variables de Estado.

$$\frac{1000m \pm 100m}{0,1} \approx 10 \times 10$$

$V_{CC} [V_p]$	$V_{EE} [V_p]$	$V_{in} [V_p]$	$V_{out} [V_p]$	$A [V/V]$	$f_{rec} [kHz]$	$T [s]$
$10 \pm 0.1$	$-10 \pm 0.1$	$1 \pm 0.1$	$1.9 \pm 0.1$	1.9	1 kHz	$40 \mu s$
f.c →	"	"	$1.2 \pm 0.1$	1.2	3.2	$300 \mu s \pm 20 \mu s$
			$1.7 \pm 0.1$	1.7	2	$500 \mu s \pm 20 \mu s$
			$1.8 \pm 0.1$	1.8	1.5	$660 \mu s \pm 20 \mu s$
			$1 \pm 0.1$	1	3.5	$280 \mu s \pm 10 \mu s$
			$0.5 \pm 0.1$	0.5	5.5	$180 \mu s \pm 10 \mu s$

Filtro de salida para bajo.  
Donde esta  $H_0 = 2$

	$V_{CC} [V_p]$	$V_{EE} [V_p]$	$V_{in} [V_p]$	$V_{out} [V_p]$	$A [V/V]$	$f_{rec} [kHz]$	$T [s]$
Tubo	$10 \pm 1$	$-10 \pm 1$	$1 \pm 0.1$	$0.52 \pm 0.04$	0.52 m	3.5 kHz	$300 \mu s \pm 20 \mu s$
fcs	"	"	"	$0.36 \pm 0.02$	0.36	6.2 kHz	$140 \mu s \pm 10 \mu s$
				$0.2 \pm 0.02$	0.2	12.4 kHz	$80 \mu s \pm 4 \mu s$
fci	"	"	"	$0.36 \pm 0.02$	0.36	1.3 kHz	$760 \mu s \pm 40 \mu s$
				$0.2 \pm 0.02$	0.2	700 Hz	$1.4 ms \pm 100 \mu s$

Filtro de salida para banda

	$V_{CC} [V_p]$	$V_{EE} [V_p]$	$V_{in} [V_p]$	$V_{out} [V_p]$	$A [V/V]$	$f_{rec} [kHz]$	$T [s]$
Tubo	$10 \pm 1$	$-10 \pm 1$	$1 \pm 0.1$	$0.4 \pm 0.02$	0.4	5 kHz	$200 \mu s \pm 10 \mu s$
f.i	"	"	"	$0.3 \pm 0.02$	0.3	3 kHz	$320 \mu s \pm 20 \mu s$
				$0.18 \pm 0.01$	0.18	2 kHz	$500 \mu s \pm 20 \mu s$
				$0.44 \pm 0.02$	0.44	10 kHz	$120 \mu s \pm 4 \mu s$

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## Filtro Sallen-Key

	$V_{CC}[V_p]$	$V_{EE}[V_p]$	$V_{in}[V_p]$	$V_{out}[V_p]$	$A[V/V]$	$f_{rec}[kHz]$	$T[s]$
f.c	$10 \pm 1$	$-10 \pm 1$	$1 \pm 0.1$	$2.2 \pm 0.2$	2.2	1kHz	$1ms \pm 40\mu s$
"	"	"	"	$1.5 \pm 0.1$	1.5	5.4kHz	$180\mu s \pm 10\mu s$
"	"	"	"	$1 \pm 0.1$	1	8.1kHz	$120\mu s \pm 10\mu s$
"	"	"	"	$0.43 \pm 40m$	0.43	17kHz	$58\mu s \pm 2\mu s$
"	"	"	"	$2 \pm 0.1$	2	100Hz	$10ms \pm 0.4ms$

Filtro para bajo

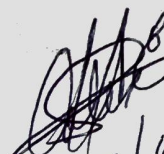
## Filtro retroalimentación múltiples



	$V_{CC}[V_p]$	$V_{EE}[V_p]$	$V_{in}[V_p]$	$V_{out}[V_p]$	$A[V/V]$	$f_{rec}[kHz]$	$T[s]$
f.c	$10 \pm 1$	$-10 \pm 1$	$1 \pm 0.1$	$1.9 \pm 0.1$	1.9	1kHz	$1ms \pm 40\mu s$
"	"	"	"	$1.4 \pm 0.1$	1.4	2.8kHz	$340\mu s \pm 20\mu s$
"	"	"	"	$0.8 \pm 40m$	0.8	4.1kHz	$230\mu s \pm 10\mu s$
"	"	"	"	$0.6 \pm 40m$	0.6	4.9kHz	$200\mu s \pm 10\mu s$
"	"	"	"	$1.9 \pm 0.1$	1.9	100Hz	$10ms \pm 0.4ms$

Filtro para bajo

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