

Mestrado em Engenharia Eletrotécnica e de Computadores

Cadeira

Titulo

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1 Template

Table 1:	Comparison	of Key Parar	neters for MCI	P6001, TL084	, and LM324
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Characteristic	MCP6001	TL084	LM324
Max Output (V)	(V+) - 25mV	(V+)	(V+) - 1.5V
Min Output (V)	(V-) + 25mV	(V-) + 1.5V	(V-) + 150mV
Supply Range (V)	1.8V to $6.0V$	4.5V to $40V$	3V to $36V$
Offset (mV)	$\pm 4.5 mV$	1mV	$\pm 3mV$
Max Output (mA)	$\pm 23mA~(5.5V)$	10mA	$\pm 30mA$
Idle Consumption	$100\mu A$	1.4~mA	$240\mu A$

Figure 1: Logo da Nova FCT

 $\begin{cases}
R(283, 15) = 1,998 \cdot 10^4 \ \Omega \\
R(298, 15) = 10^4 \ \Omega \\
R(313, 15) = 0,5282 \cdot 10^4 \ \Omega
\end{cases}
\Leftrightarrow
\begin{cases}
A = 1,3092 \cdot 10^{-3} \\
B = 2,1439 \cdot 10^{-4} \\
C = 9,6600 \cdot 10^{-8}
\end{cases}$ (1)

```
Fdz
printf('Polos: ');
PlFdz
%figure(3);
pzmap(Fdz);
%figure(4);
step(Fdz);
```

Listing 1: Matlab code example

- item 1
 - ...
- item n
- 1. Butterworth
- 2. Chebyshev
- 3. Elliptic

4. Bessel

In the application in study, the group delay is a critical factor because the ECG signal is a time-domain signal, and the phase distortion can lead to a misinterpretation of the signal. So it is safe to say that the Bessel filter is the best choice for this application.

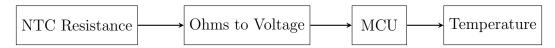


Figure 2: NTC's block diagram

Referece like this ^[1]

References

[1] E. Systems, "Esp32 series datasheet," https://www.espressif.com/sites/default/files/documentation/esp32_datasheet_en.pdf, 2024.