

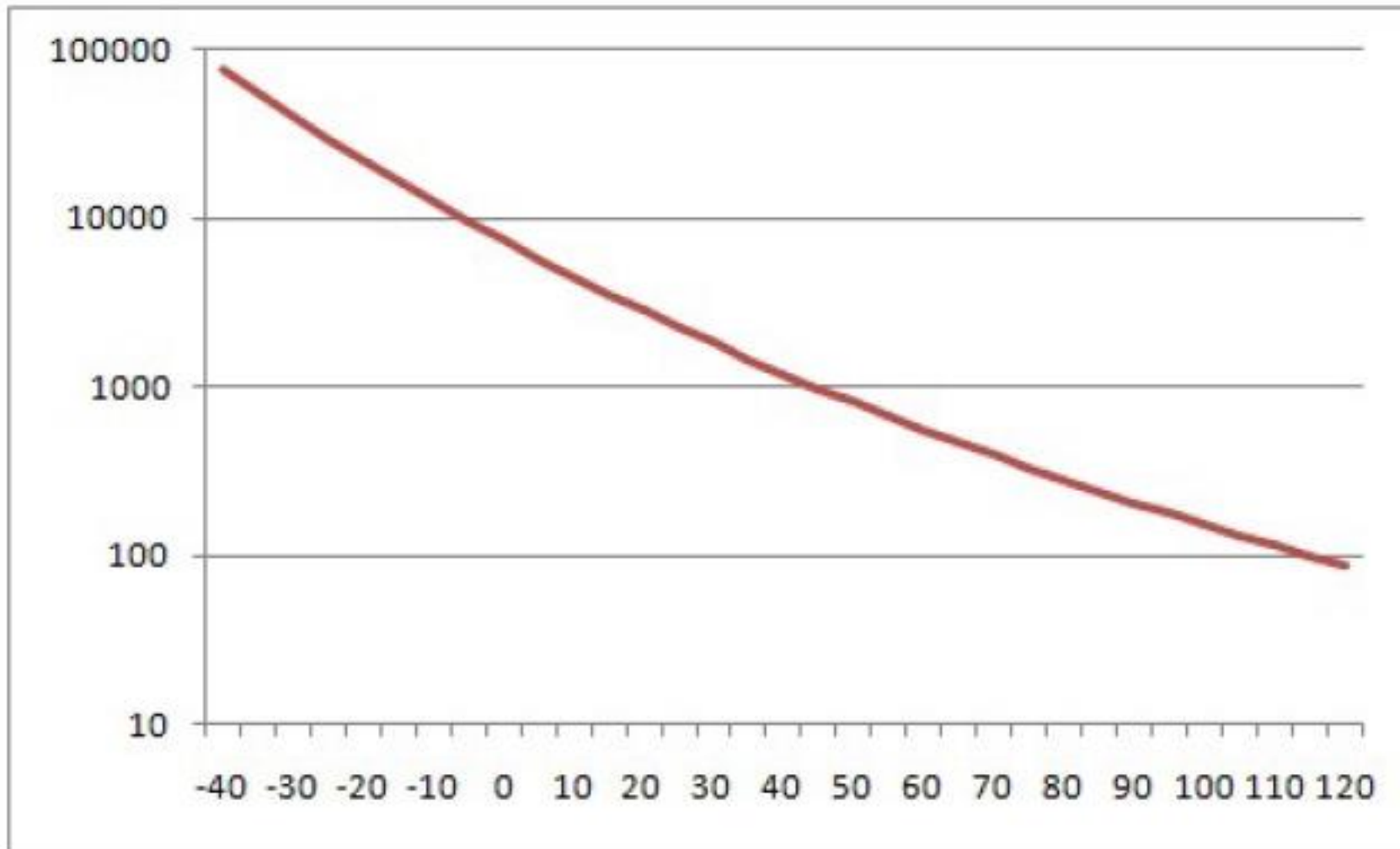
Sensores de Temperatura

Armando Antônio Maria Lagana

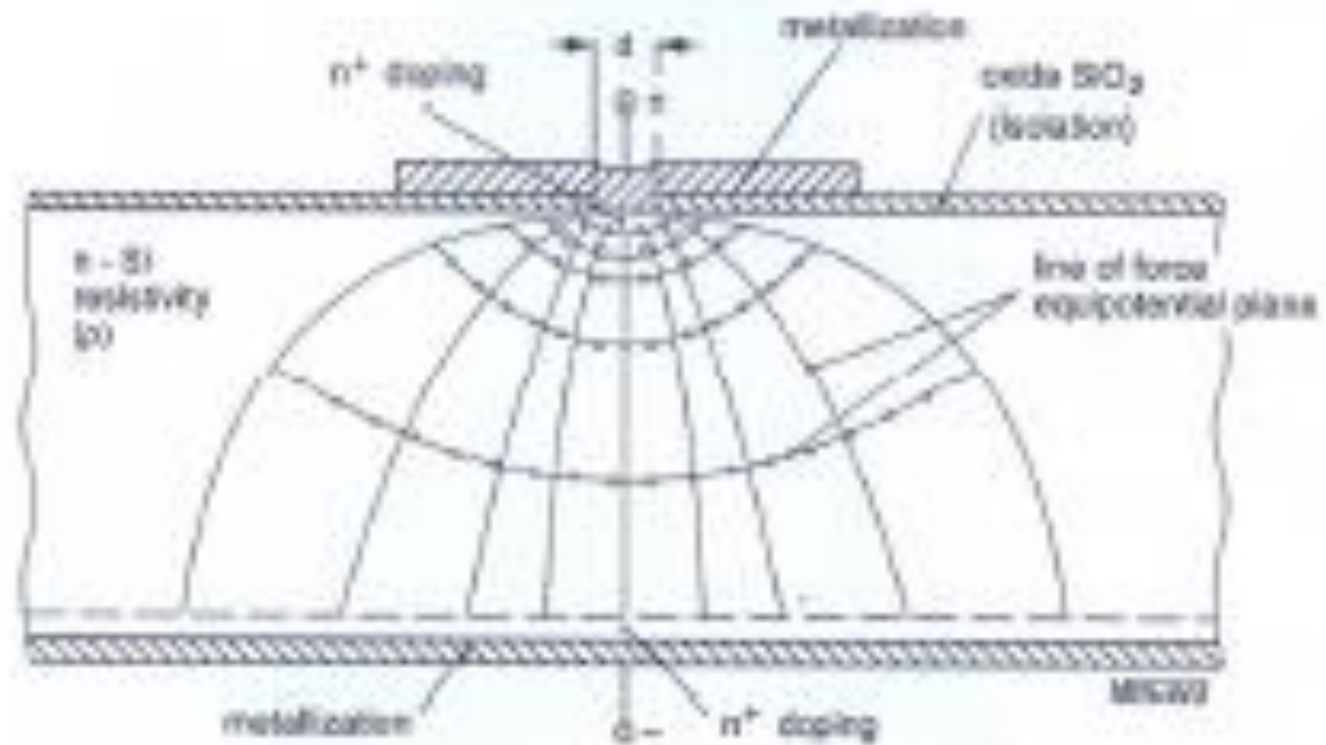
Sensor NCT



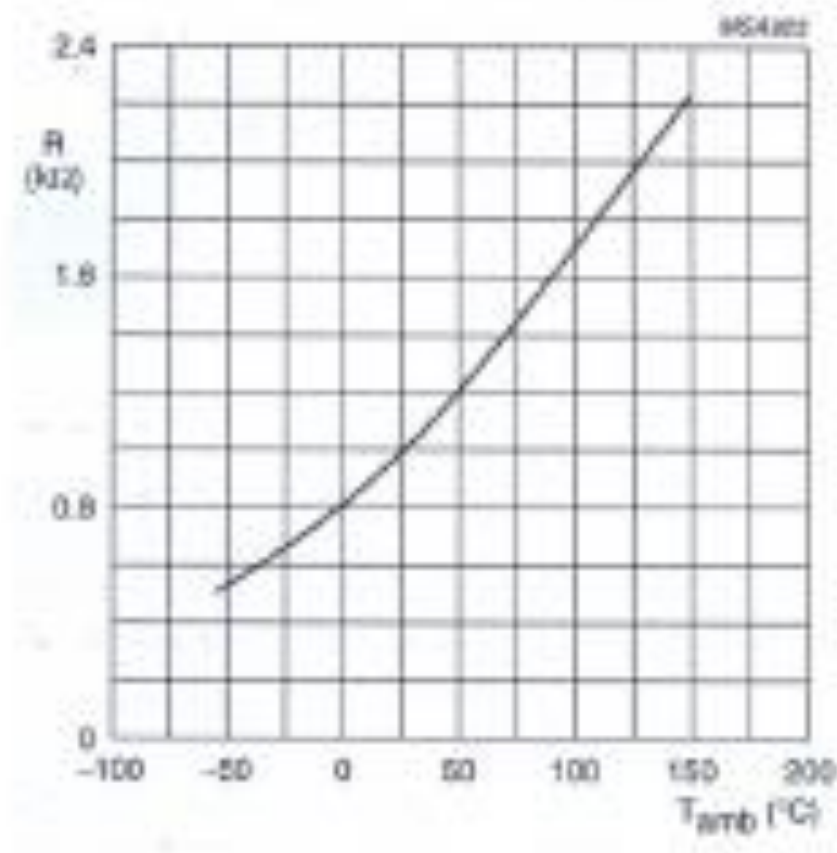
Curva de resposta sensor NCT



Construção



Resistencia em função da temperatura



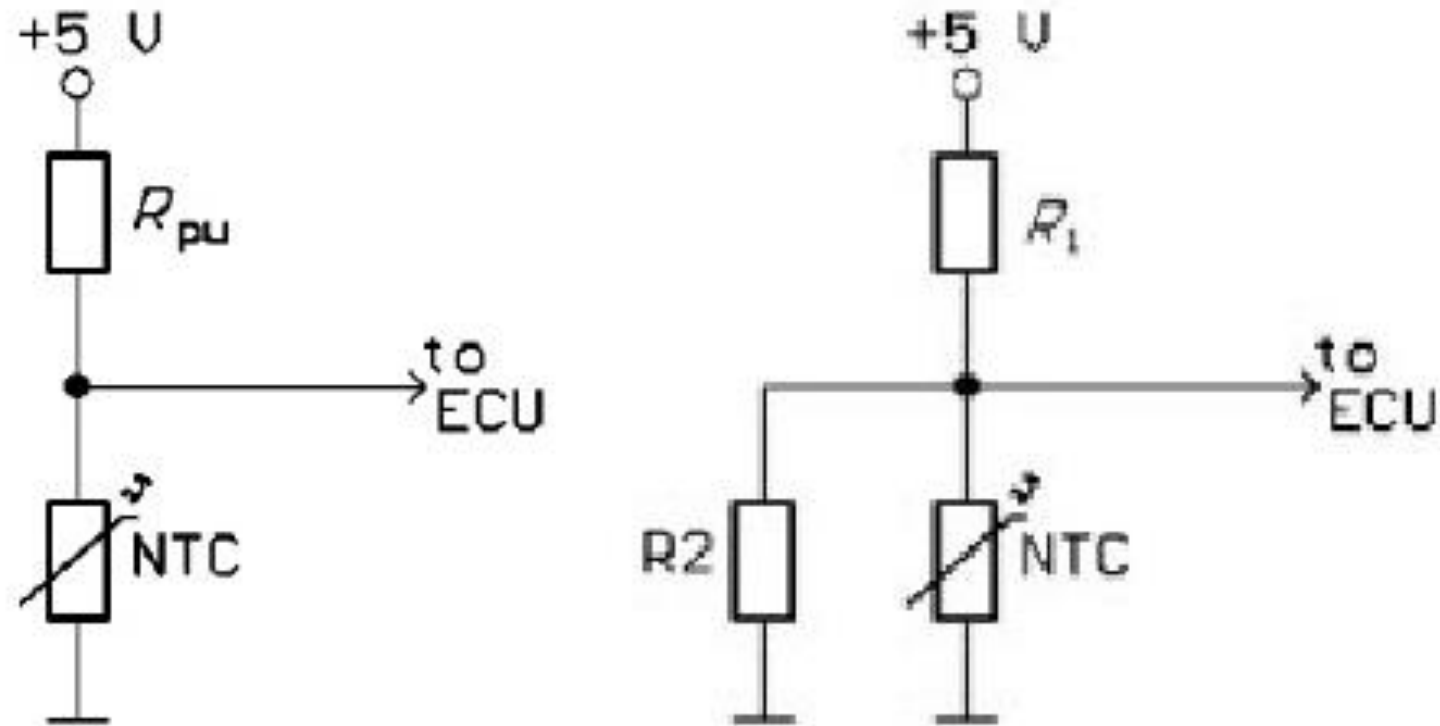
Família	R_{25} (Ω)	Tolerância (ΔR)	Range de Temperatura ($^{\circ}C$)	Encapsulamento
KTY81-1	1000	$\pm 1\%$ até $\pm 5\%$	-55 até 150	SOD70
KTY81-2	2000	$\pm 1\%$ até $\pm 5\%$	-55 até 150	SOD70
KTY82-1	1000	$\pm 1\%$ até $\pm 5\%$	-55 até 150	SOT23
KTY82-2	2000	$\pm 1\%$ até $\pm 5\%$	-55 até 150	SOT23
KTY83-1	1000	$\pm 1\%$ até $\pm 5\%$	-55 até 175	SOD68 (DO - 34)
KTY84-1	1000 R_{100}	$\pm 3\%$ até $\pm 5\%$	-40 até 300	SOD68 (DO - 34)
KTY85-1	1000	$\pm 1\%$ até $\pm 5\%$	-40 até 125	SOD80

Tabela 2.3: Valor da resistência a $25^{\circ}C$

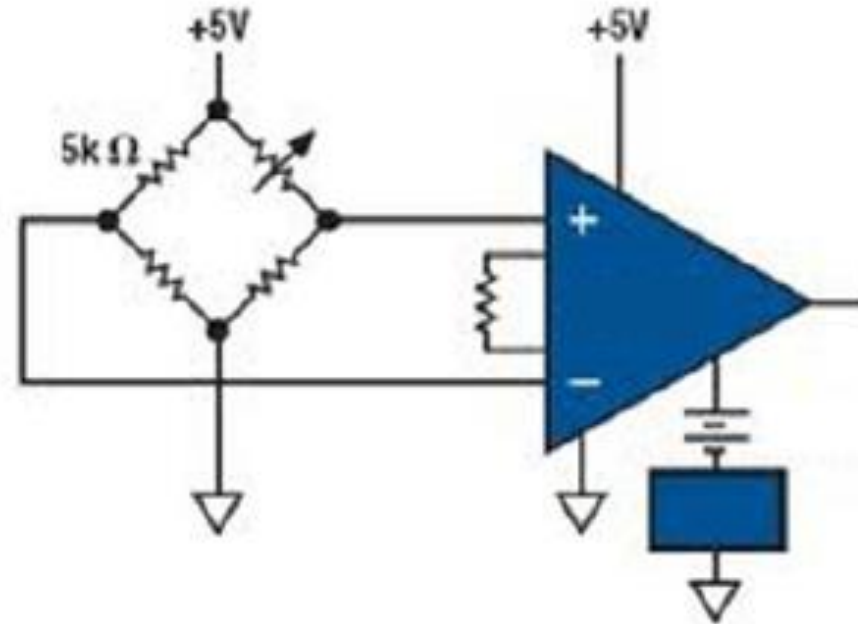
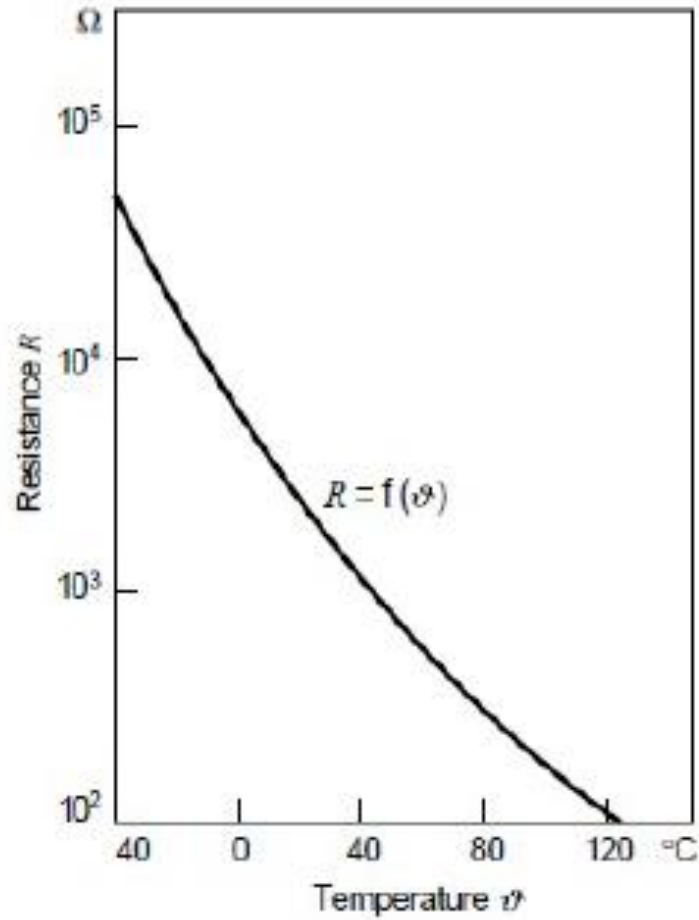
Sensor type	$A(K^{-1})$	$B(K^{-2})$	$C^{(1)}(K^{-D})$	D	$T_I(^{\circ}C)$
KTY81 - 1	7.874×10^{-3}	1.874×10^{-5}	3.42×10^{-8}	3.7	100
KTY81 - 2	7.874×10^{-3}	1.874×10^{-5}	1.096×10^{-6}	3.0	100
KTY82 - 1	7.874×10^{-3}	1.874×10^{-5}	3.42×10^{-8}	3.7	100
KTY82 - 2	7.874×10^{-3}	1.874×10^{-5}	1.096×10^{-6}	3.0	100
KTY83	7.635×10^{-3}	1.731×10^{-5}	-	-	-
KTY84	6.12×10^{-3}	1.1×10^{-5}	3.14×10^{-8}	3.6	250
KTY85	7.635×10^{-3}	1.731×10^{-5}	-	-	-

Tabela 2.4: Parâmetros da equação polimomial

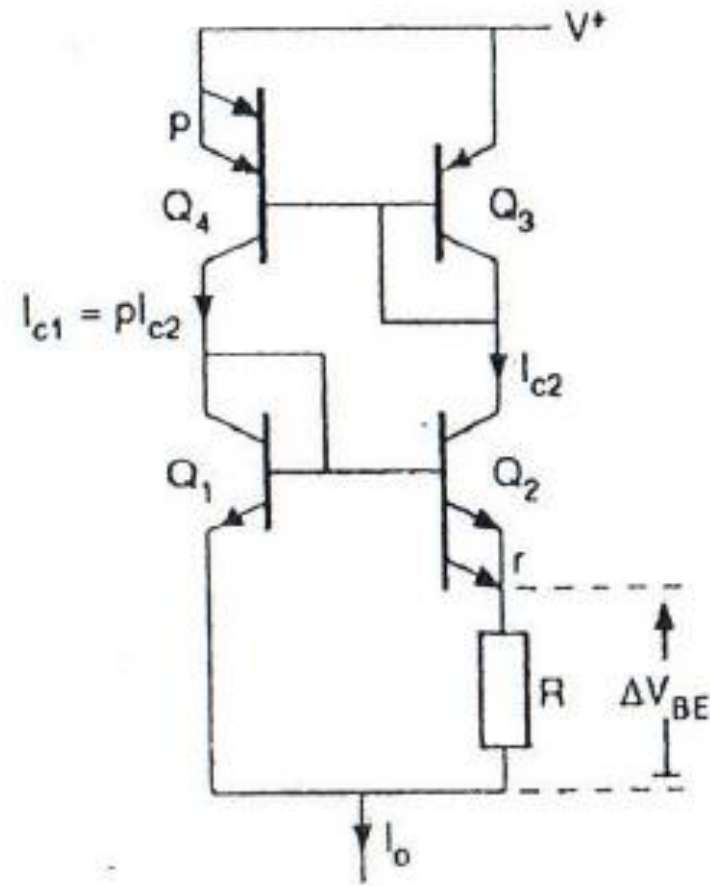
Circuito Polarizador



Circuito Polarizador

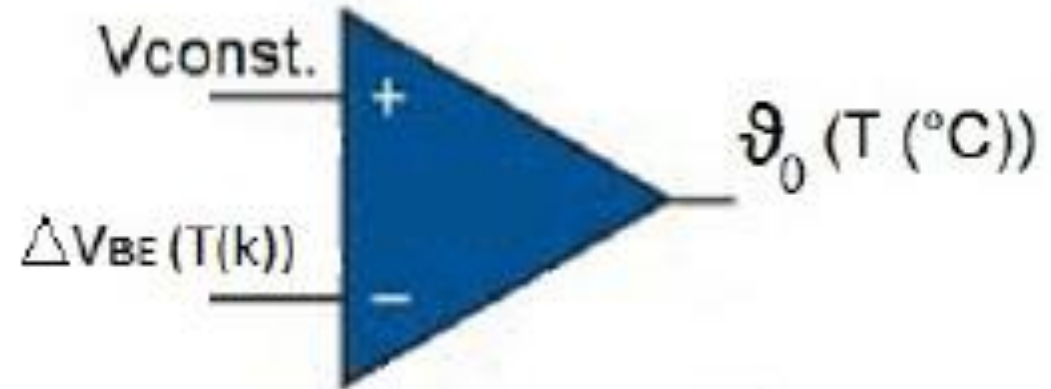


Sensor de temperatura - Semicondutor

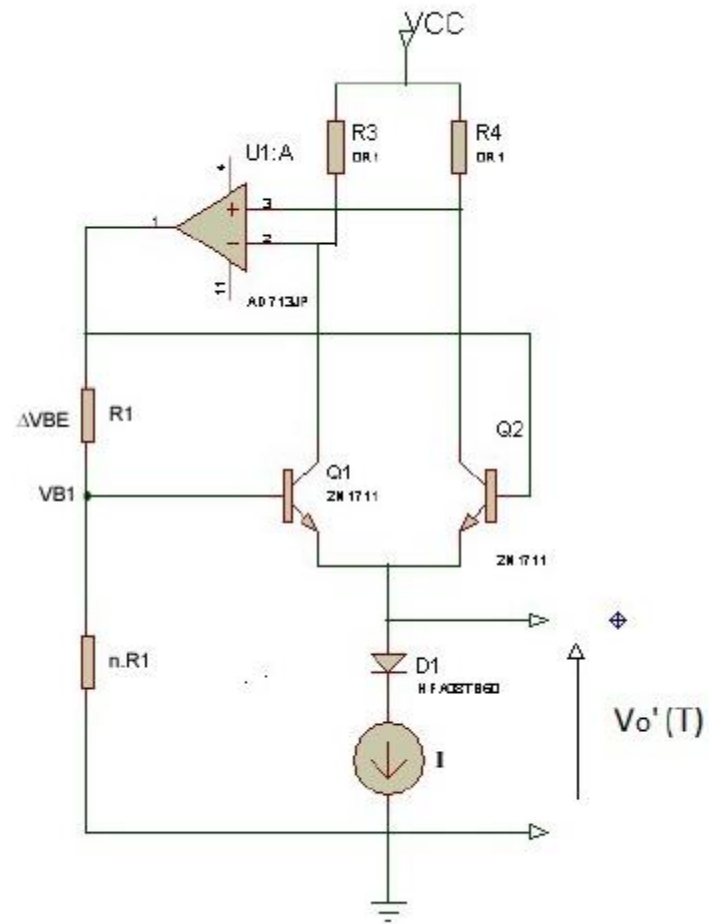


Circuito Polarizador

- $V_{cons} = \frac{k}{q} [\ln(pr)] 273$



Análise



Análise

