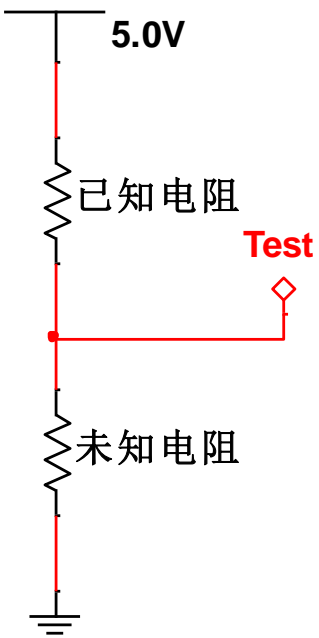
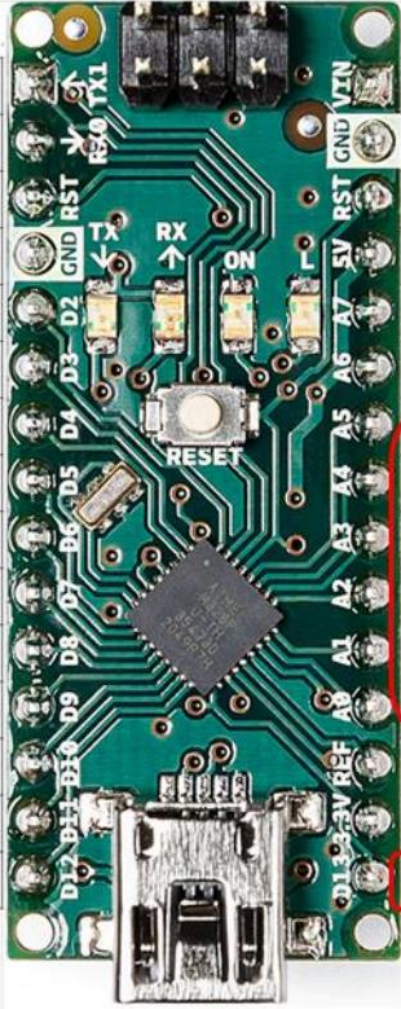


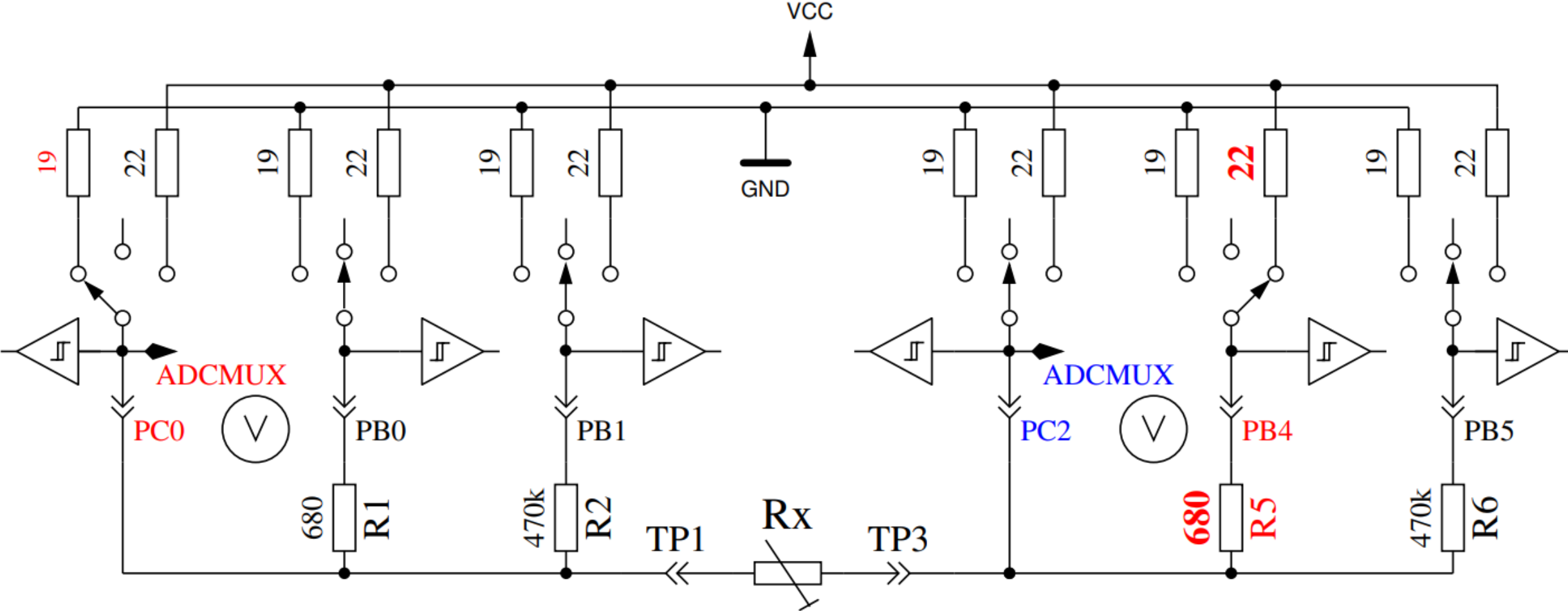
测电阻



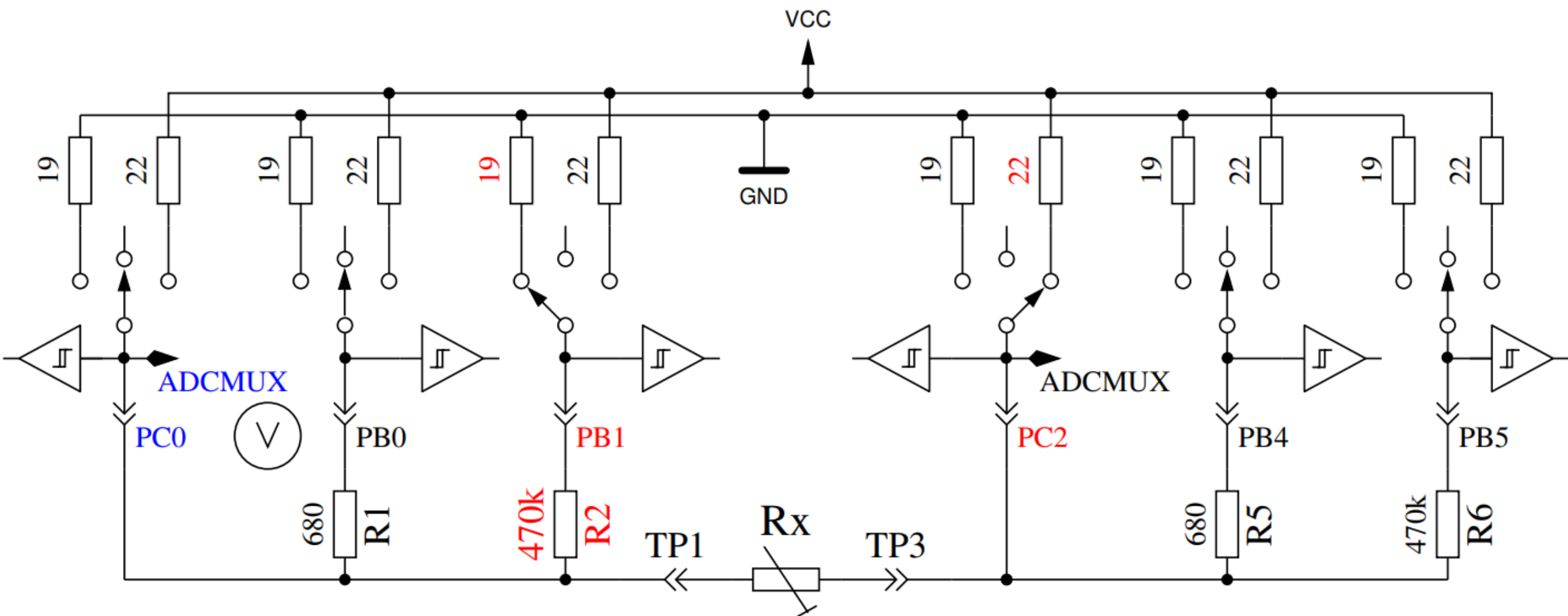
数字IO	单片机本	单片机本身	ADC	数字IO
D0	PD0		VIN	
D1	PD1	GND	GND	
Reset	PC6	PC6	Reset	
GND	GND		+5V	
D2	PD2	ADC7	A7	
~D3	PD3	ADC6	A6	
D4	PD4	PC0(ADC5)	A5	D19
~D5	PD5	PC4(ADC4)	A4	D18
~D6	PD6	PC3(ADC3)	A3	D17
D7	PD7	PC2(ADC2)	A2	D16
D8	PB0	PC1(ADC1)	A1	D15
~D9	PB1	PC0(ADC0)	A0	D14
~D10	PB2	AREF	AREF	
~D11	PB3		+3V3	
D12	PB4	PB5	D13	



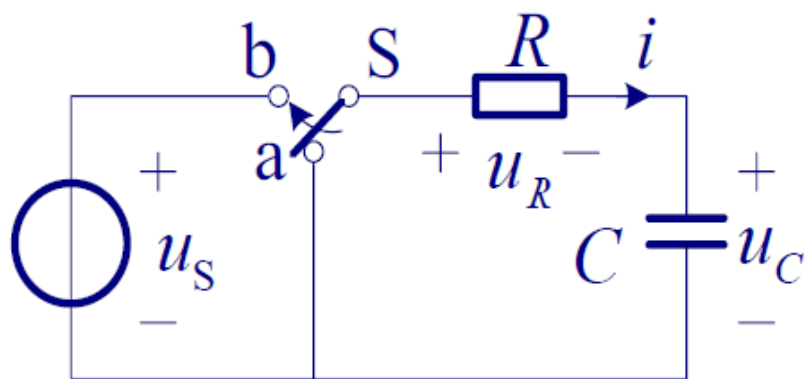
测电阻



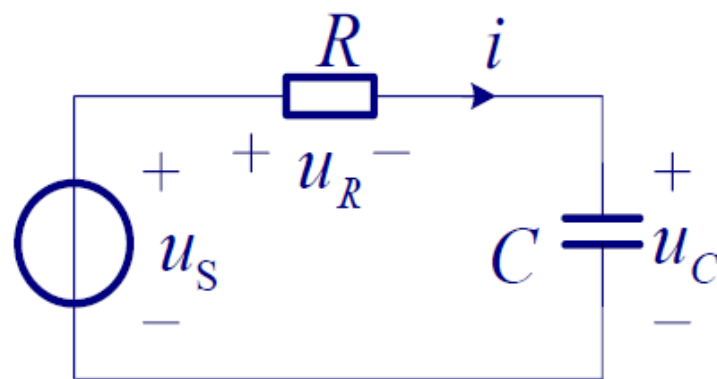
测电阻



测电容



(a) $t \leq 0$ 时



(b) $t \geq 0_+$ 时

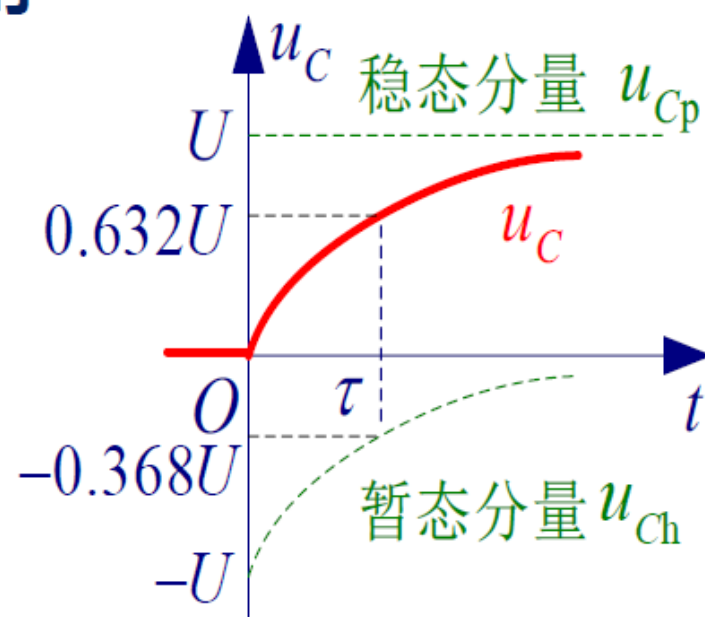
电路方程

$$\begin{cases} RC \frac{du_C}{dt} + u_C = u_s \\ u_C(0) = 0 \end{cases}$$

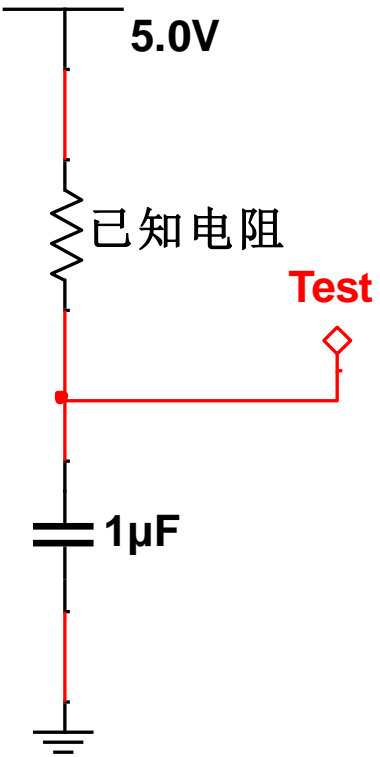
$$u_C = u_{Ch} + u_{Cp} = U(1 - e^{-\frac{t}{RC}}) \quad t \geq 0$$

时间常数

$$\tau = RC$$

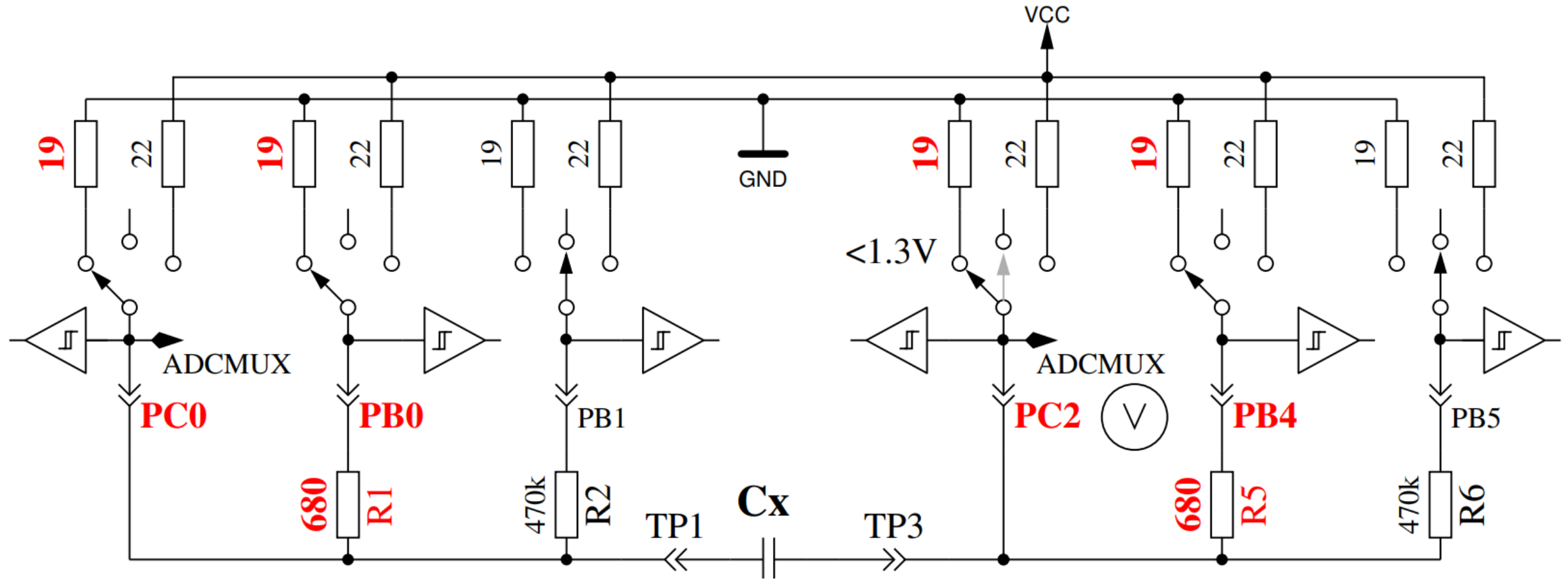


测电容

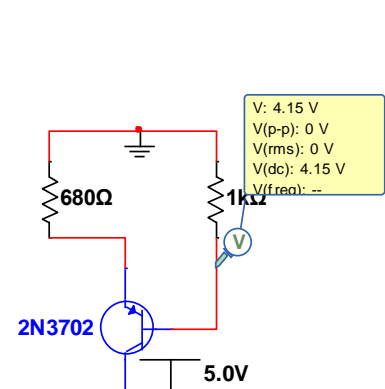
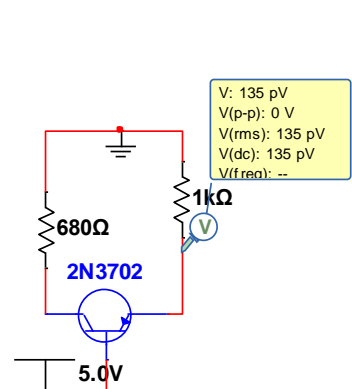
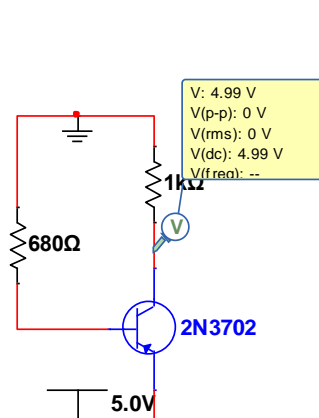
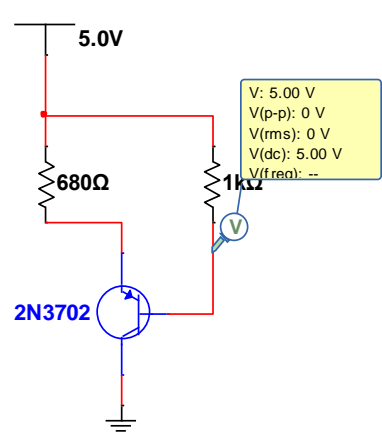
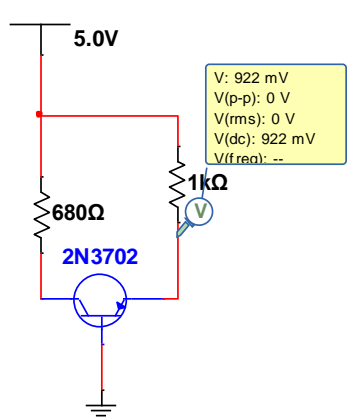
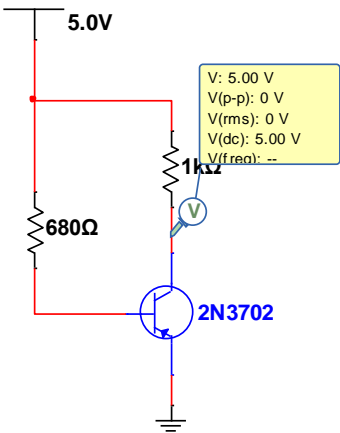
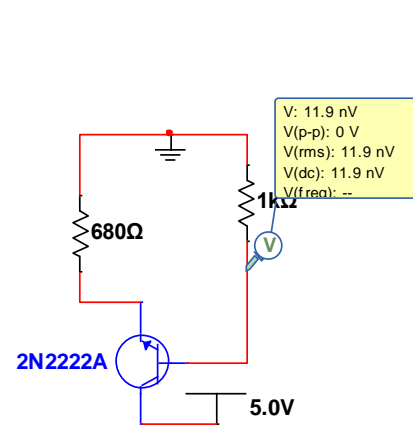
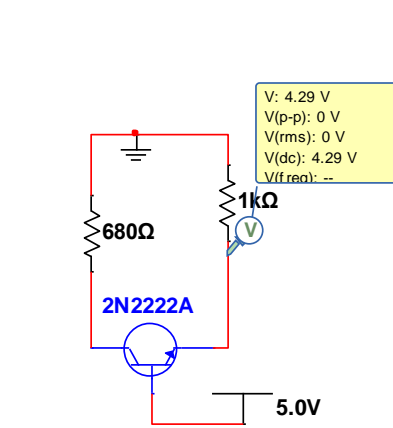
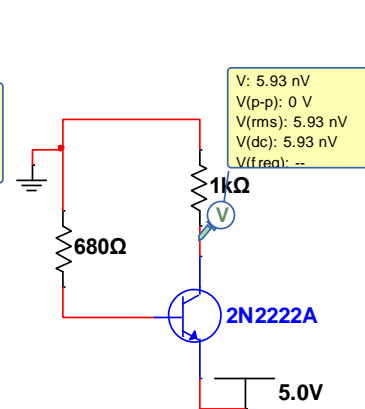
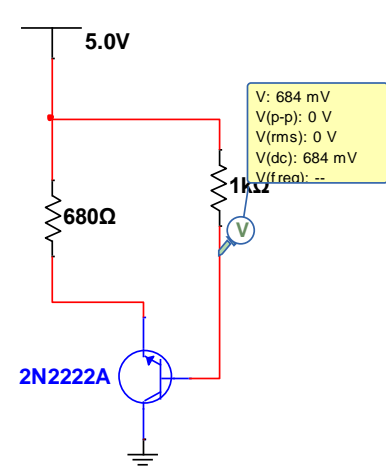
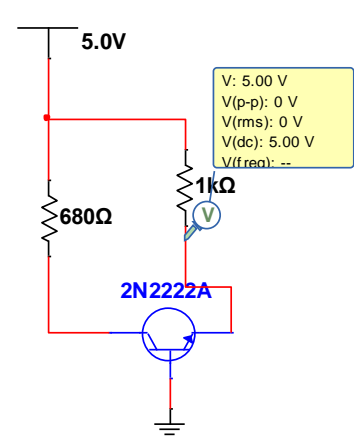
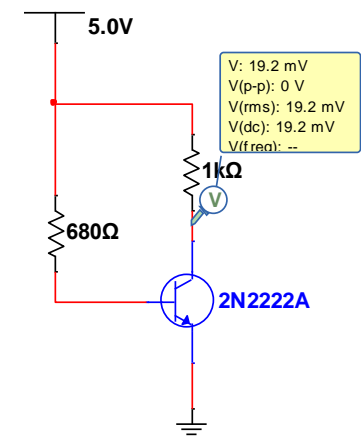


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~D9	PB1	PC0(ADC0)	A0	D14
~D10	PB2	AREF	AREF	
~D11	PB3		+3V3	
D12	PB4	PB5	D13	

测电容-放电



测三极管



测三极管

