

AVLA 1



Técnicas de Análise de Defeitos

①

Medição
componente
↓
Otimização
diodos

②

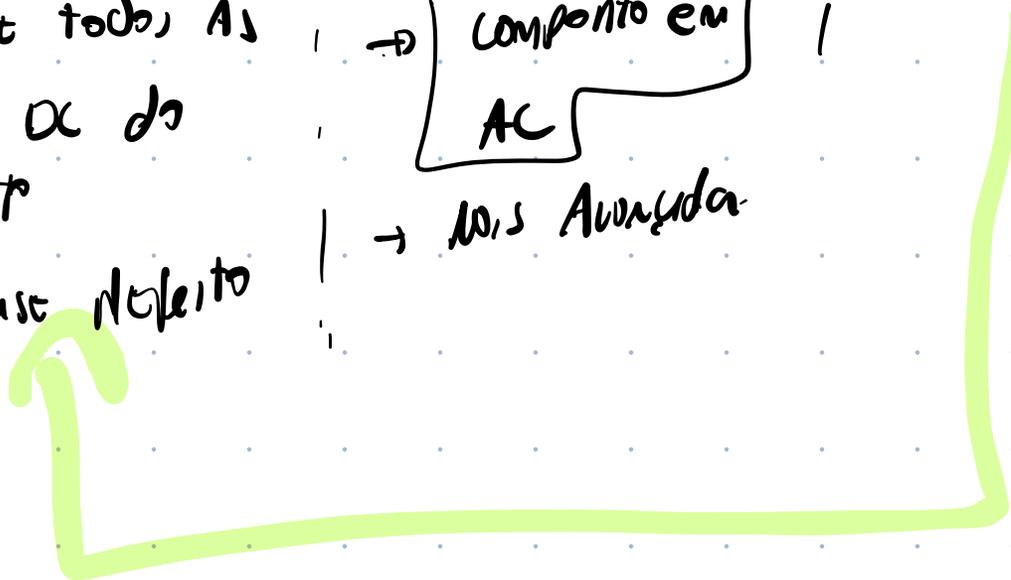
Tec. Análise DC
→ componente
se componente em DC
→ sobe todos os
tempos DC do
circuit
→ Análise Defeito

③

Tec. Análise
Sinos
→ Osciloscópio
→ Componente em
AC
→ mais Avançada

④

TMTD =
→ testes de dispositivos
→ Lives TMTD

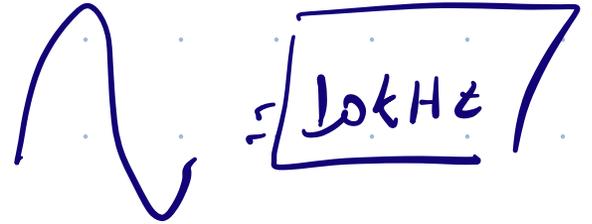
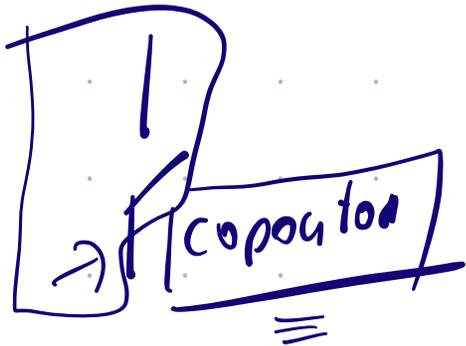


(DC)

DC

depois do cortejado (ms)

Chave Aberta



Avançado (sinus)

0,166ms

AC

- | | | | |
|---|---|----|----------------------|
| 1 | Capacitor μF | 7 | \underline{E} |
| 2 | Resistor $\underline{X_C} = \underline{\Omega}$ | 8 | $\underline{\theta}$ |
| 3 | $\underline{Z_{SR}}$ | 9 | $\underline{R_e}$ |
| 4 | $\underline{D_{CR}}$ | 10 | $\underline{L_S}$ |
| 5 | $\underline{f_d}$ | | |
| 6 | $\underline{f_D}$ | | |

Met ①
Correto

Melhorar passo a
vez o que
tem tempo ①

Introd

Met ②

→ DL ←

Alguns dias
do método 2

Cursos e
furos

Met 3

Ac

Resistor

Umidade
medida

Ohms
 Ω

Volts

Ohmmetro

Ohmmetro

Wohm

Capacitor

Farad. F

Capacitância

Capacitmetro

Ohmmetro

Indutor.

Henry (H)

Indutância

Indutivmetro

Ohmmetro

diodes

Optometro



Música

Transistores

Optometro

Música

etc

Optometro

Música

→ Induktivität
→ Induktions

Kapazität
Kapazitätiv

Ohmivität
Resistivität

L

INDUCTION

C

COOPERATION

R

RESISTANCE

LCR

Equip.

Diodo



Novo CCR

em
multímetro



Teste



Transistores
BJT, MOSFET, IGBT



TENSÃO e corrente

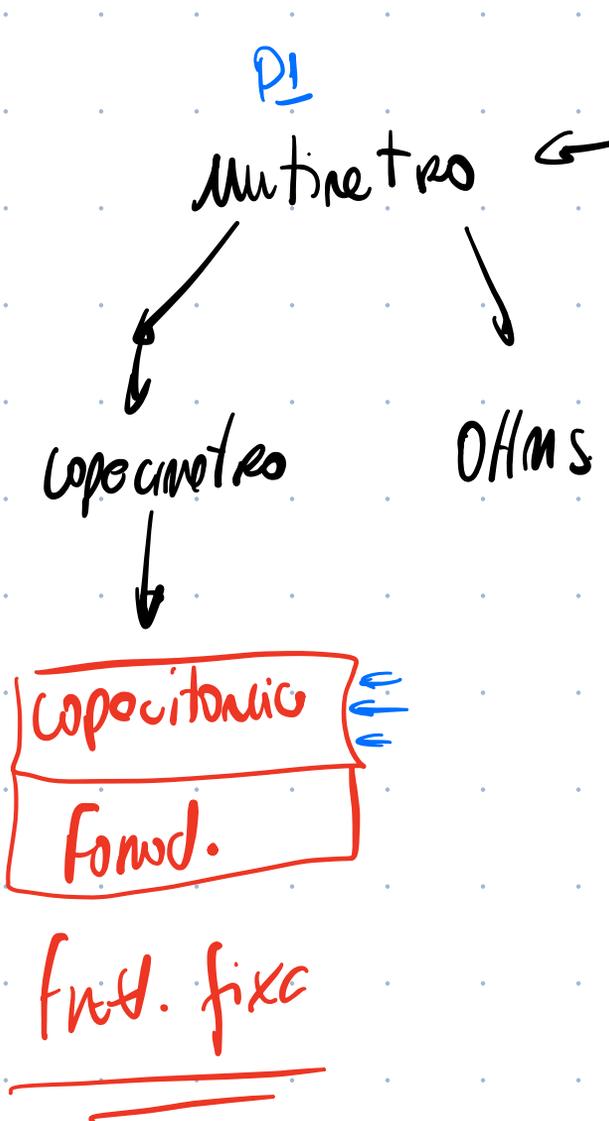
→ DC + TMTU



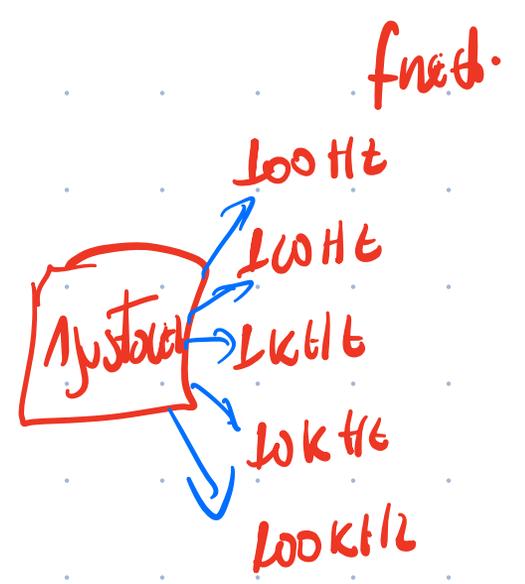
Capacitor foil " "

→ Capacitor LCR

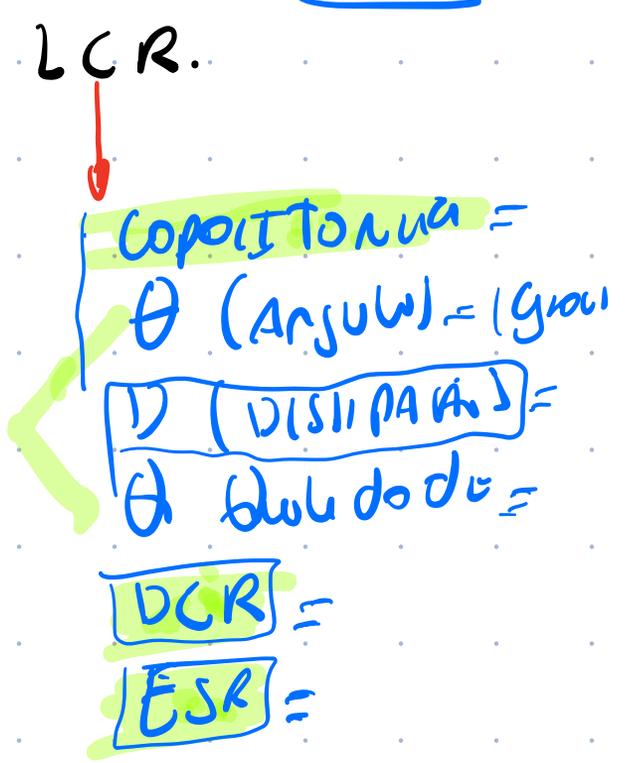
→ Multimeter



Capacitro

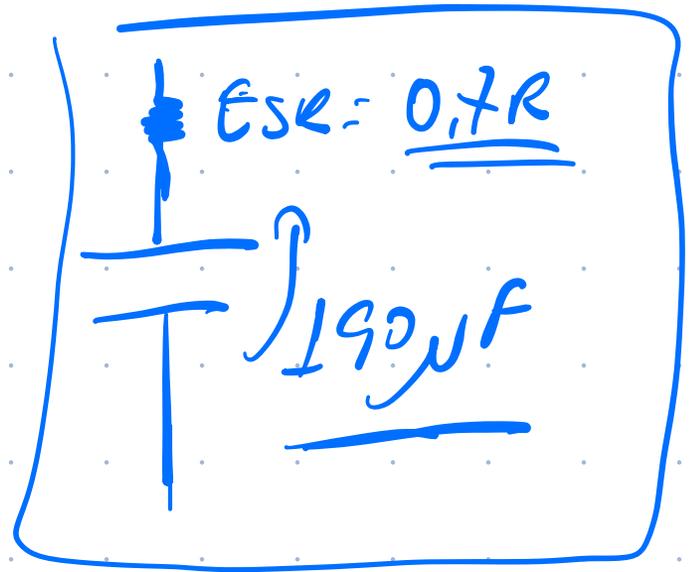


P_{100}



Capacitancia = $190\mu\text{f}$

DCR = Resist. DC do capacitor



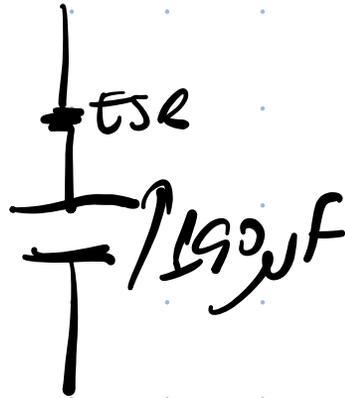
$$190\mu\text{f} / 0,7\text{R} = 120\text{Hz}$$

$$120\text{Hz} \rightarrow 190\mu\text{f} \underline{\underline{\text{ESR } 0,7\text{R}}}$$

220 μ F

190 μ F

0,7 R (ESR)



100 Hz =

$$\frac{1}{2\pi \cdot 100\text{Hz} \cdot 190\mu\text{F}} = \boxed{X_C = 0,31R}$$

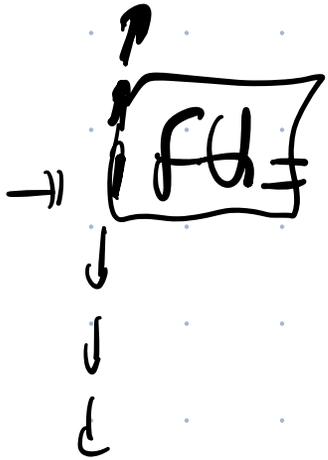
$$f_D = \frac{X_C}{\text{ESR}}$$

$$f_D = \frac{\text{ESR}}{X_C}$$

$$200\mu\text{F} / f = 100\text{Hz}$$

$$\rightarrow \text{Med. de } = \boxed{190\mu\text{F}}$$

$$\rightarrow X_C = \frac{1}{2\pi \cdot f \cdot C} = \frac{1}{2\pi \cdot 100\text{Hz} \times 190\mu\text{F}} = 0,37\text{R}$$



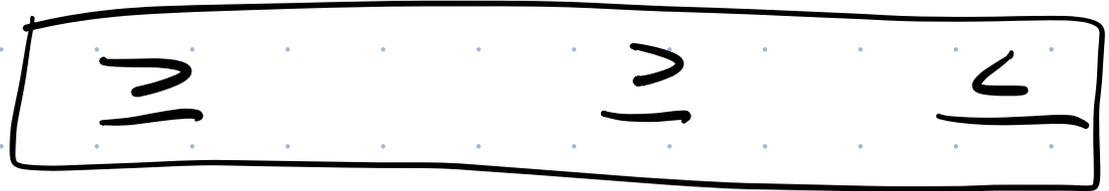
$$\frac{X_C}{FSR} = \frac{0,37}{0,7} = \boxed{12}$$

$$\boxed{0,3\text{R}}$$

$$200\mu\text{F} = 2\text{R}$$

$$\hookrightarrow \underline{\underline{100\text{mN}}}$$

Сопоставь = Сопутание, тема, ЕSR.



$190 \mu\text{F}$, $t_{SR} 0,7$, $x_c = 0,34$, $f_{th} 12$

$$x_c = \frac{1}{2\pi f_c}$$

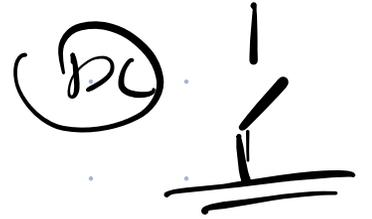
$$f_{th} = \frac{x_c}{t_{SR}}$$

$$f_D = \frac{t_{SR}}{x_c}$$

$f_D = \frac{t_{SR}}{x_c}$

capacitor $220\mu F / 35V$

teste fuso = $30V @ 10mA$
n3o ter fuso



toquei no
Bicho
AMTD

2^o

capacitoria,

ESR

X_C

Q

\downarrow
 $220\mu F$

\downarrow

0.7

11

$139\mu F$

0.7

CA (fuerza)

① técnicas de Análise de fe
① med. dos componentes (feito centr.)

② TA DC

③ TA S.

④ TMTD

+ [DC + TMTD + AC]

DC



TMTD
fonte

AC
JCC, ω , D, Cop. ESR, θ
capacitor

noo pod rca
wrenh