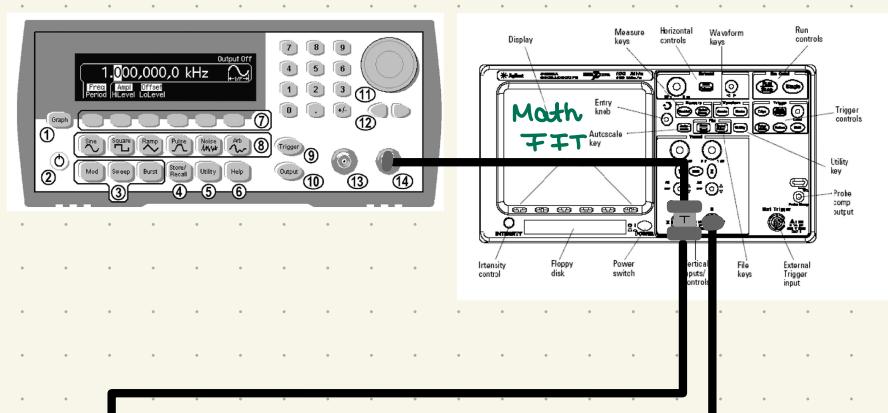


Window: Rectangle

szivárgó spektrum: Hanning

Flat-top: 10,5 periodusnál pontos amplitúdó miatt

Span : ±0 8Hz  
Center : 10 kHz  
Averaging



CH1

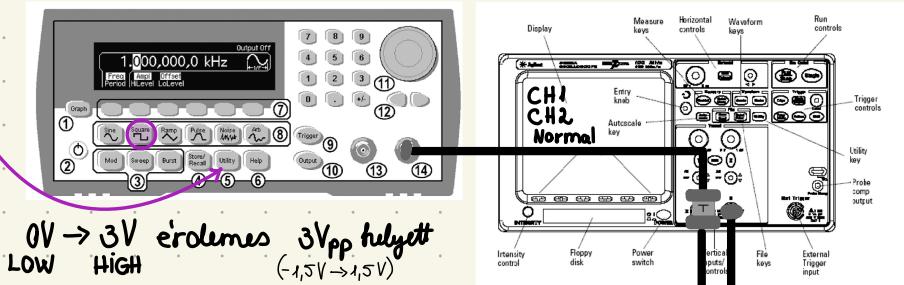
Display: 00 Persist

aztán CH1 off → CH2-t tudjuk hozzá viszonyítani

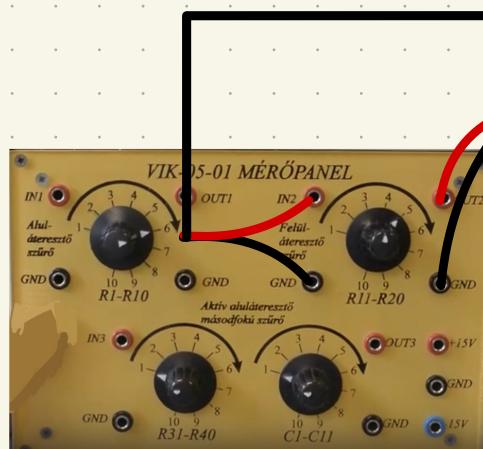
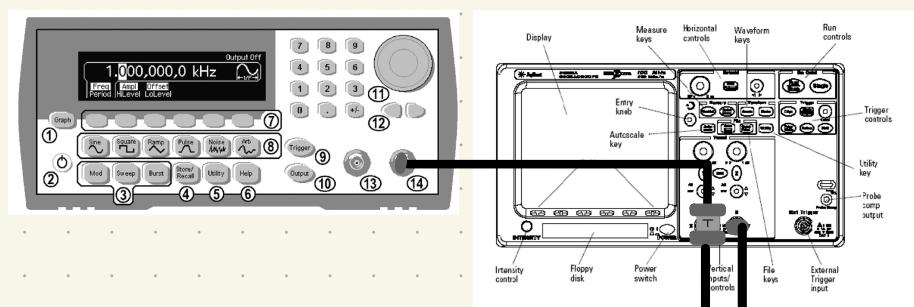
törésponti frekvencia: ±8,937 kHz

5

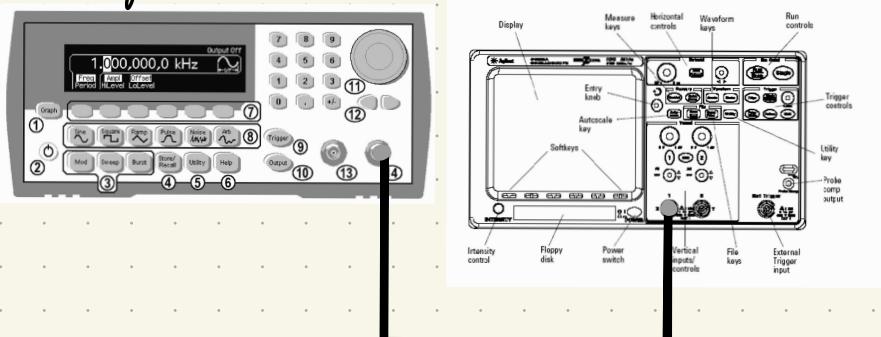
High Z



- Time ref: Left
- Quick measure funkció hasznosat
- Averaging



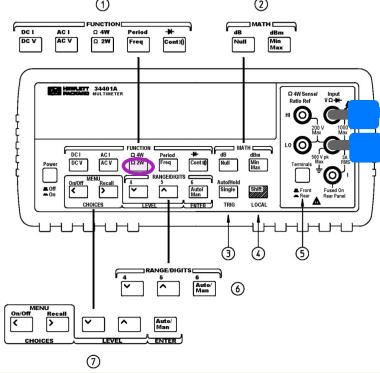
bemenő" jel:



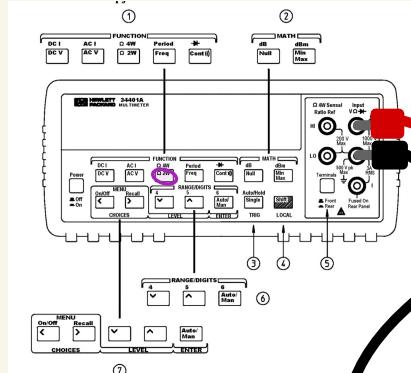
Trigger → mode  
Coupling: AC/DC  
↓  
felülátereszto"

6

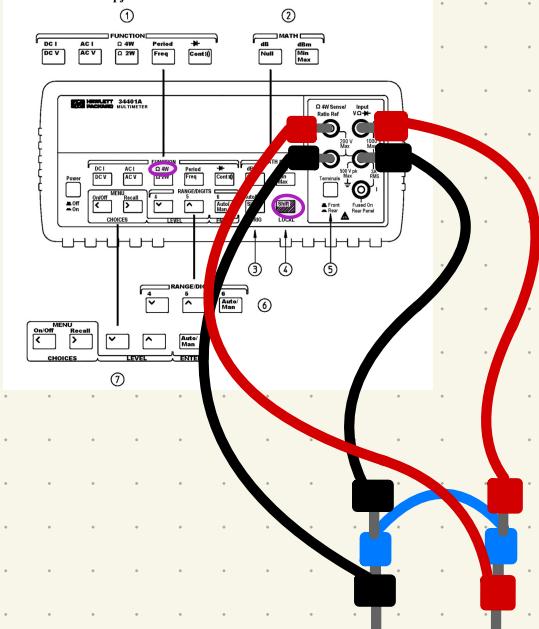
## 0 vezetékes



## 2 vezetékes



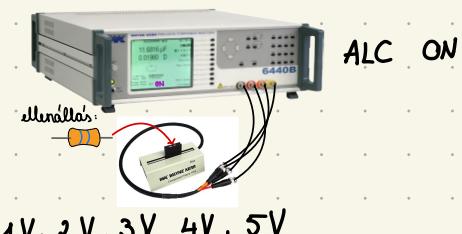
## 4 vezetékes



Graph: Impedance vs Frequency



bifiláris



ALC ON

1V, 2V, 3V, 4V, 5V

csak 4, 82 lesz  
feszösszetszabás miatt

legmagas

varmagas



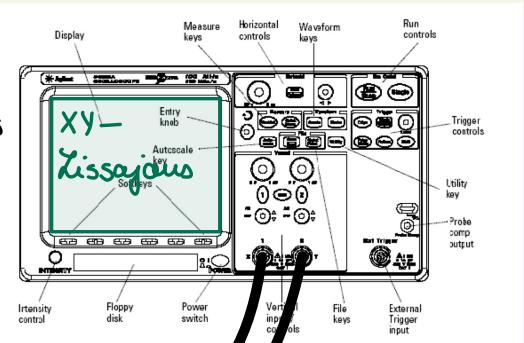
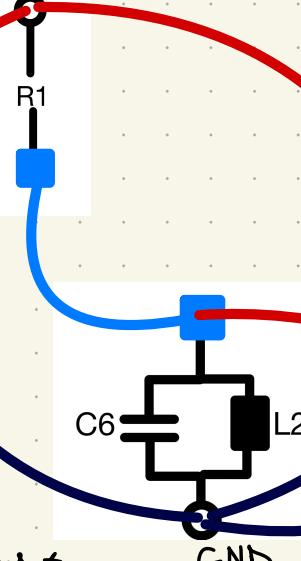
induktivitás mérése  
Impedance vs Frequency  
Phase vs Frequency

## párhuzamos rezgőkör

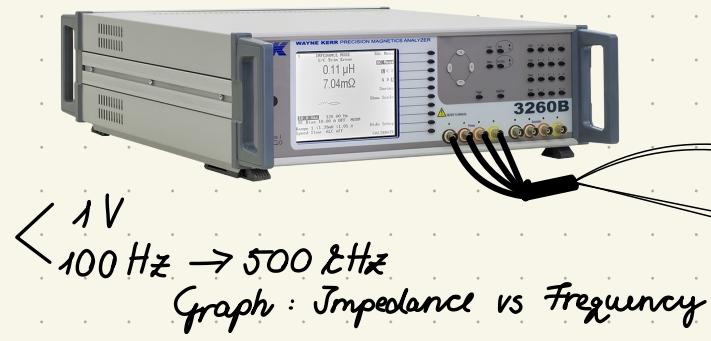
High Z  
Ø fazistala's frekvencia  
41,8...42,8 Hz

beállítás

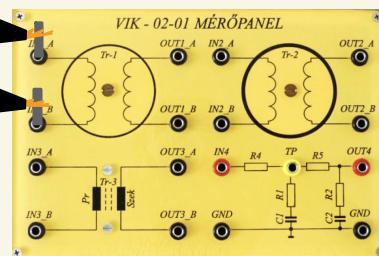
Zissajaus  
aktor nincs fazistala's



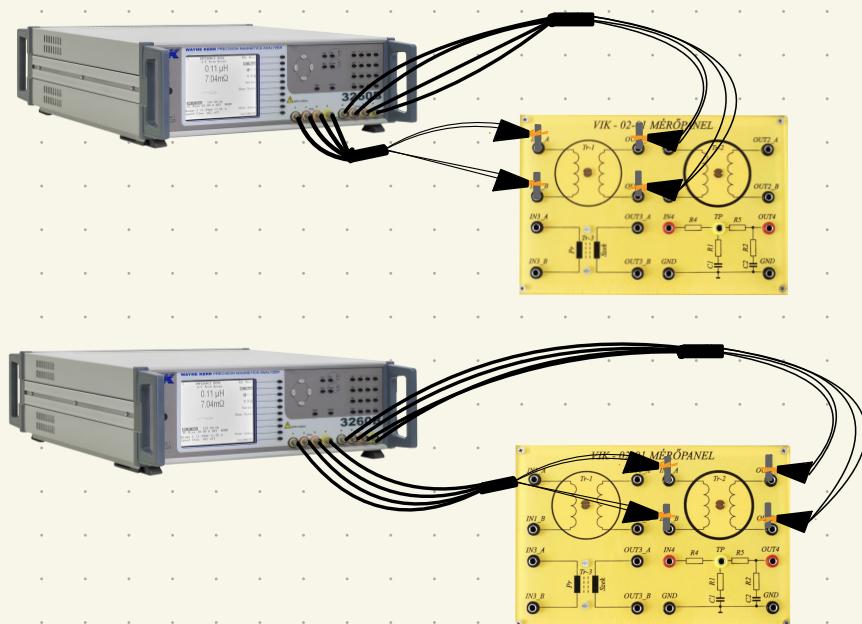
"RESONANCE"  
ezen is megmérhetjük a parametereket



frec: 150Hz (1mV → 10V mérésnél)  
 $50\mu A \rightarrow 200\text{ mA}$  BIAS



RESONANCE:  
< rezonancia frekvencia  
menetkapacitás



RESONANCE  
összehasonlítás

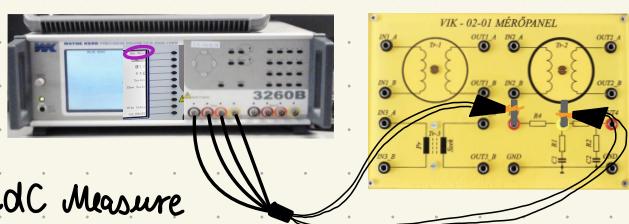
szoros / laza

T2 nagyobb  $C_p$   
↓ kisebb szörts induct.  
szoros

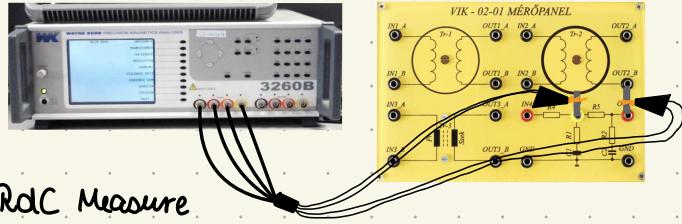
5Veff, 1kHz

Jn-circuit : Menü → impedance →  $U=1V$   $f=1\text{e}Hz$

R4:

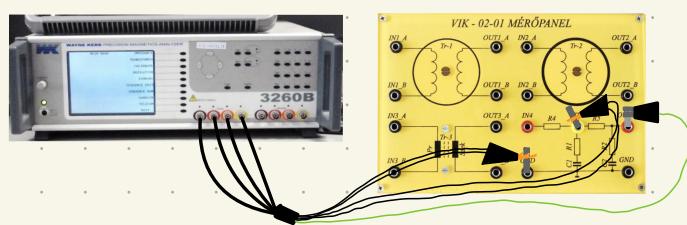


R5:



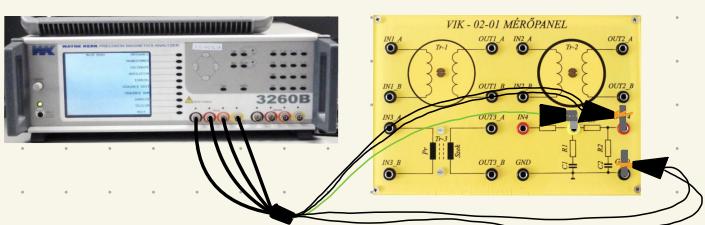
RdC Measure

R1, C1:



Series RC

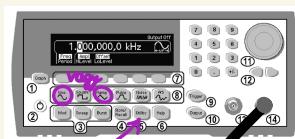
R2, C2:



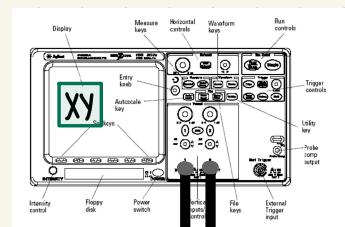
Series RC

8

# DIO'DA staticus karakteristika



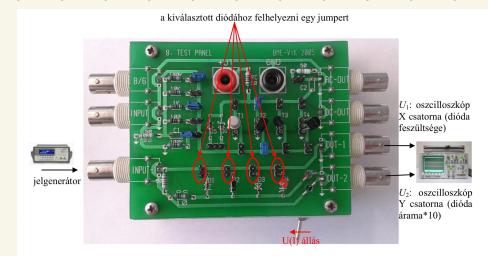
50 Ω



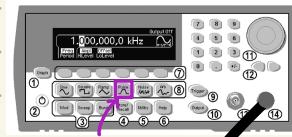
Timeref: Left

CH2: Amper

Osztás: 0,1:1



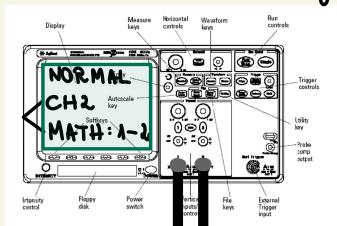
## DIO'DA kapcsolási idő



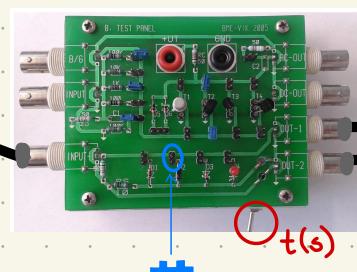
50%

3V High.  
-3V Low  
 $t_c$ : 100 ns  
(edge time)

Osztás 1:1

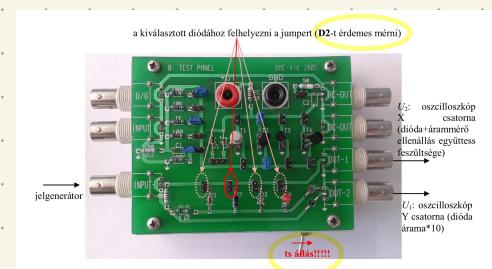


Averaging

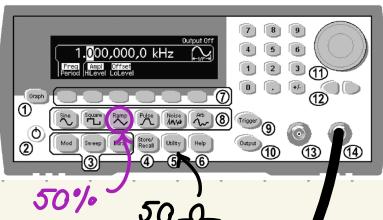


t(s)

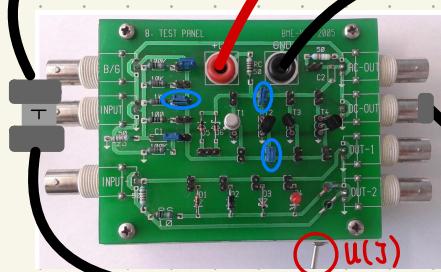
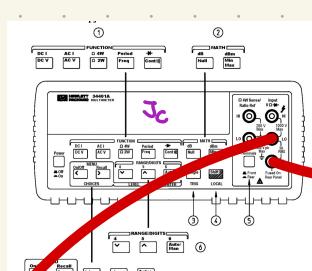
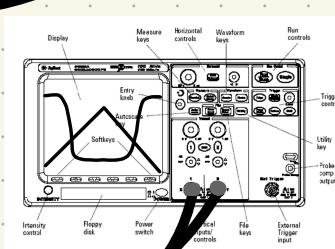
CH2-ről olvassuk  $t_s$ ,  $t_f$  és  $t_{ry} - t$ .  
Osztás 0,1:1



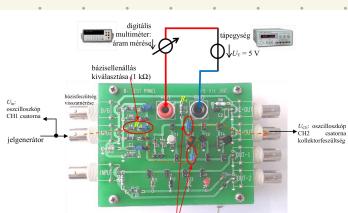
## BTR

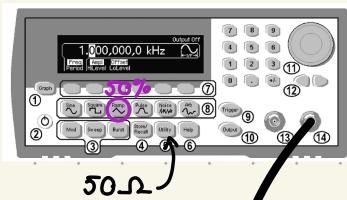


50%

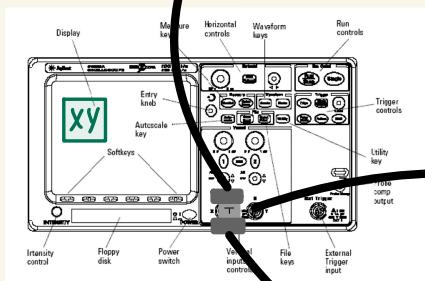
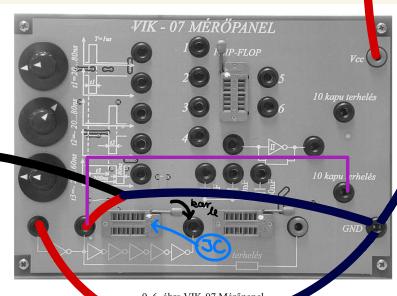
CH1  
CH2

Timeref: Center  
CH2: Volt



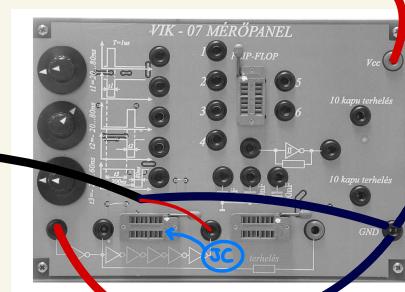
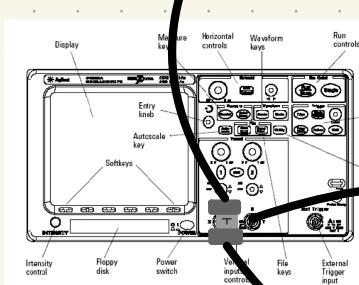
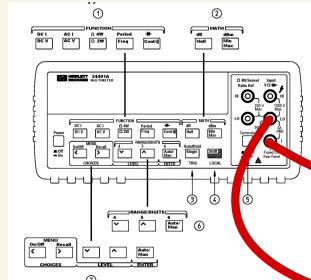
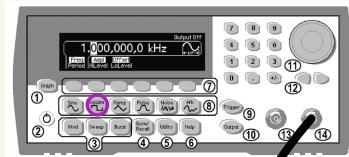


50Ω

10 kapu terheliés:

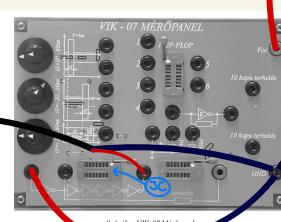
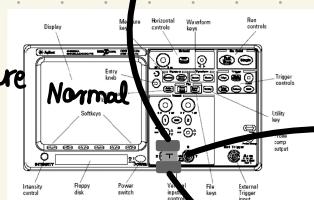
9-6. ábra VIK-07 Mérőpanel

Teljesítményfelvétel: ① panel alapfogyasztás  
 $10\text{Hz} \rightarrow 10\text{MHz}$   
 ② JC - vel együtt : ebből kivonja az alapfogyasztást



\* egymásba kell szorni

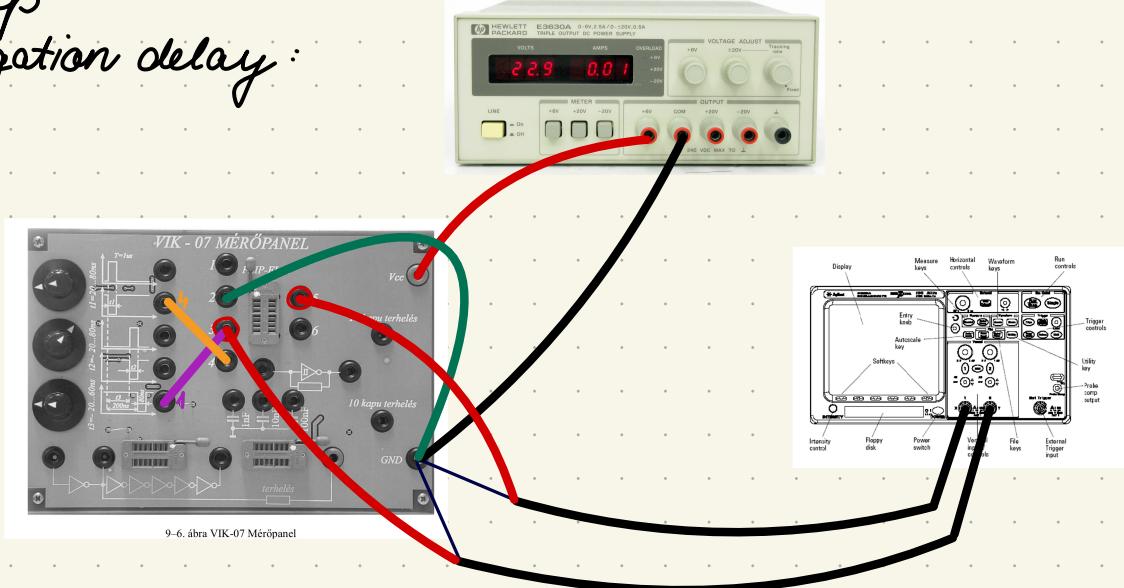
9-6. ábra VIK-07 Mérőpanel

Le - e's felfutási idő:

6. inverter → kiemeléssel:  
"kapott idő" osztva 6-tal!

Quick Measure  
 vagy  
 Cursor  
 nagy  
 zoom - mal

# Flip - Flop propagation delay :



# Flip - Flop jél előállítása :

