

Progetto di base con MWO di un oscillatore al quarzo

AWR 2N2222quartz.emp - AWR Design Environment - [Schematic 00]

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Project

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 - Schematic 2bis:DCVA_N(*,0,0,1,*)
 - Schematic 3bis
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 - Schematic 0:AngU(Z(1,2))
 - Graph 1
 - Schematic 1:IVCurve()
 - Graph 3
 - Schematic 3:Re(S(2,1))

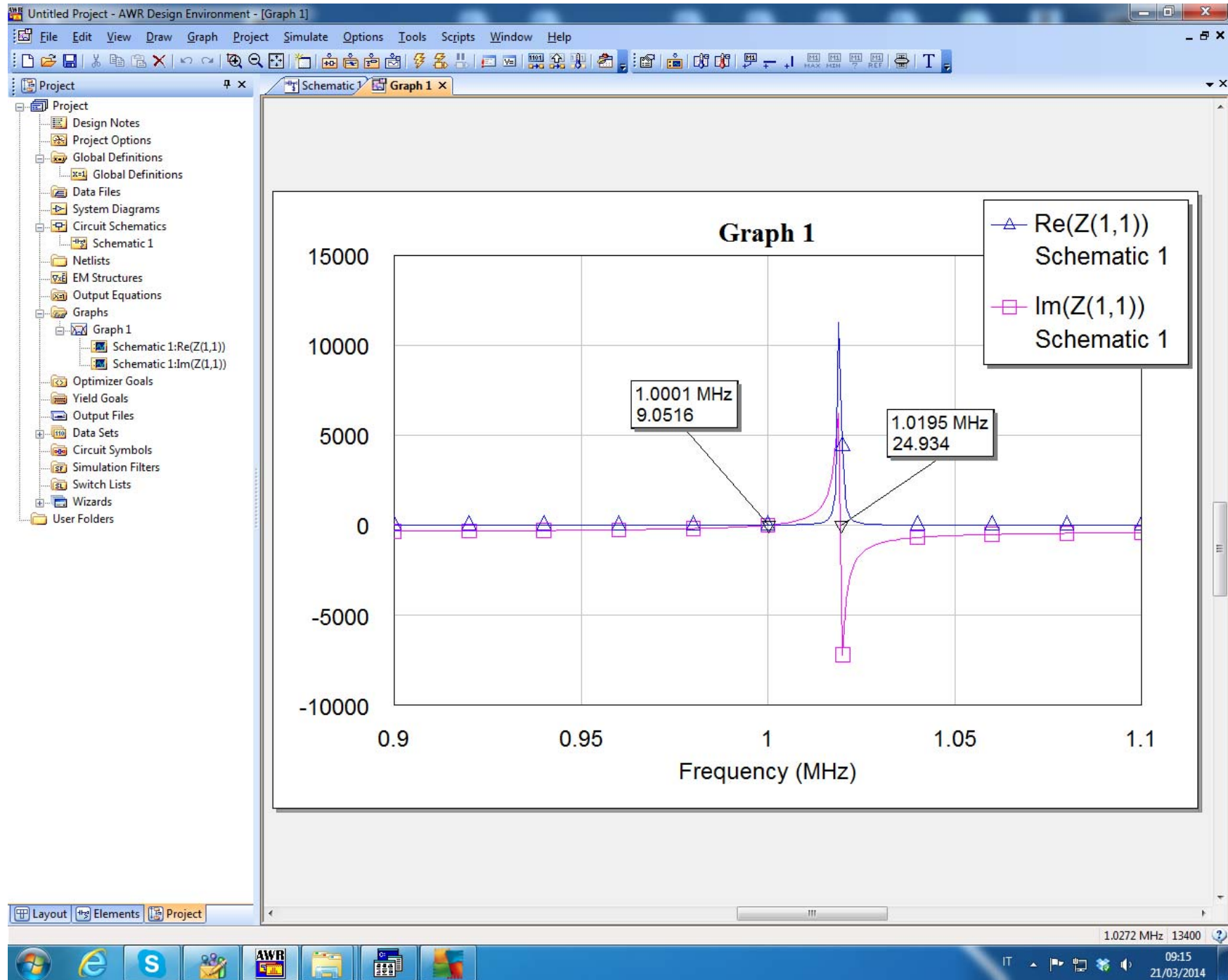
Schematic 00

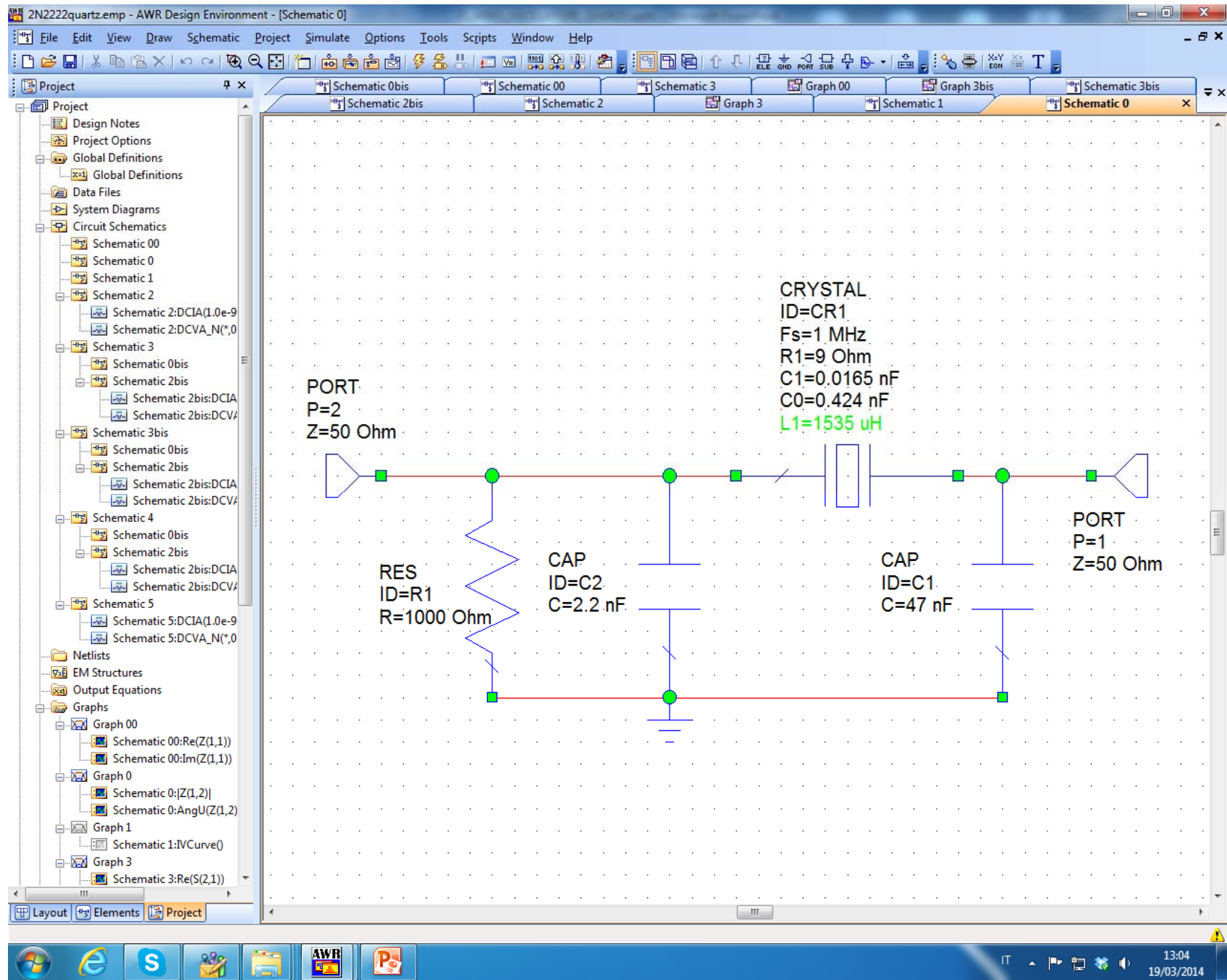
PORT
P=1
Z=50 Ohm

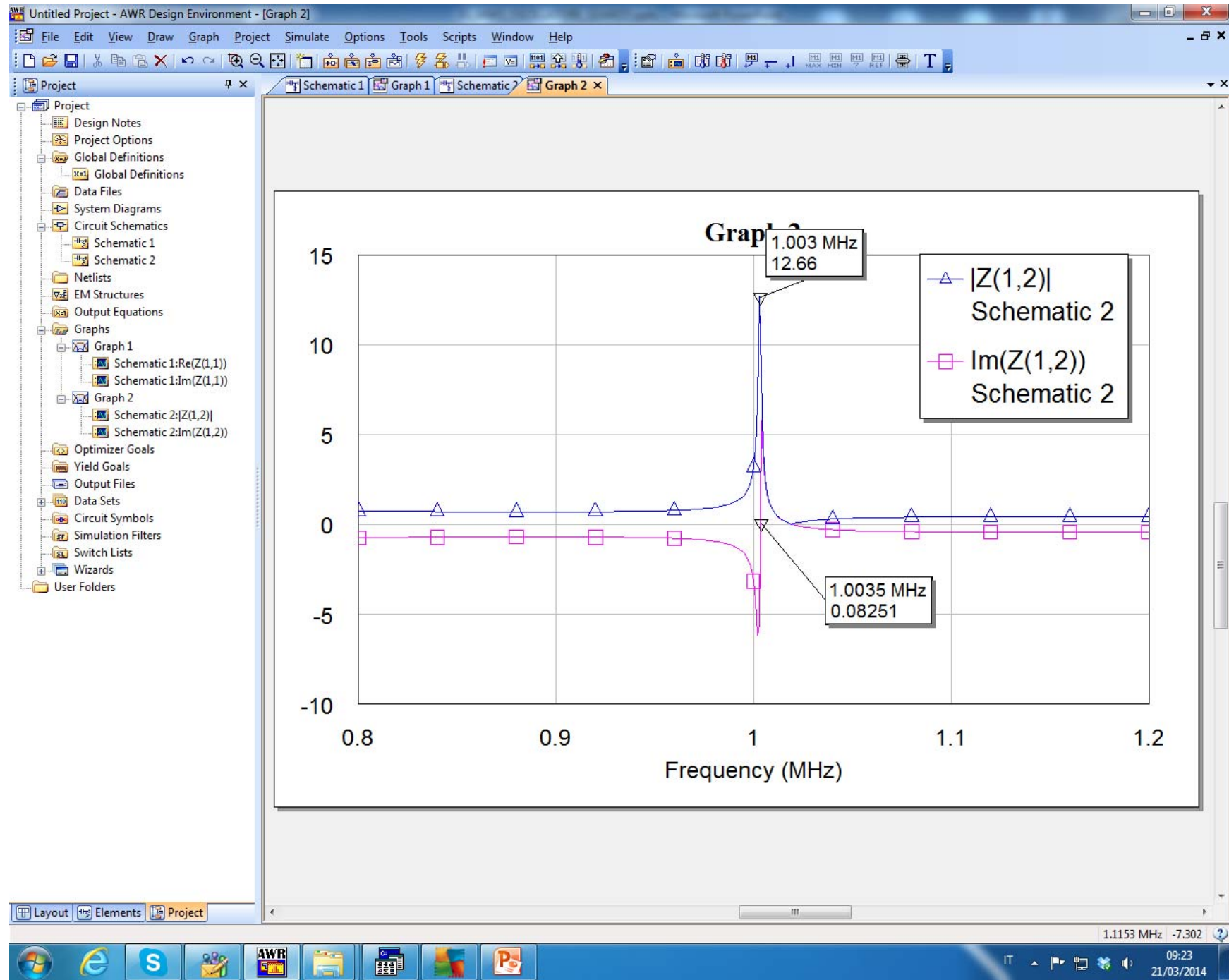
CRYSTAL
ID=CR1
Fs=1 MHz
R1=9 Ohm
C1=0.0165 nF
C0=0.424 nF
L1=1535 uH

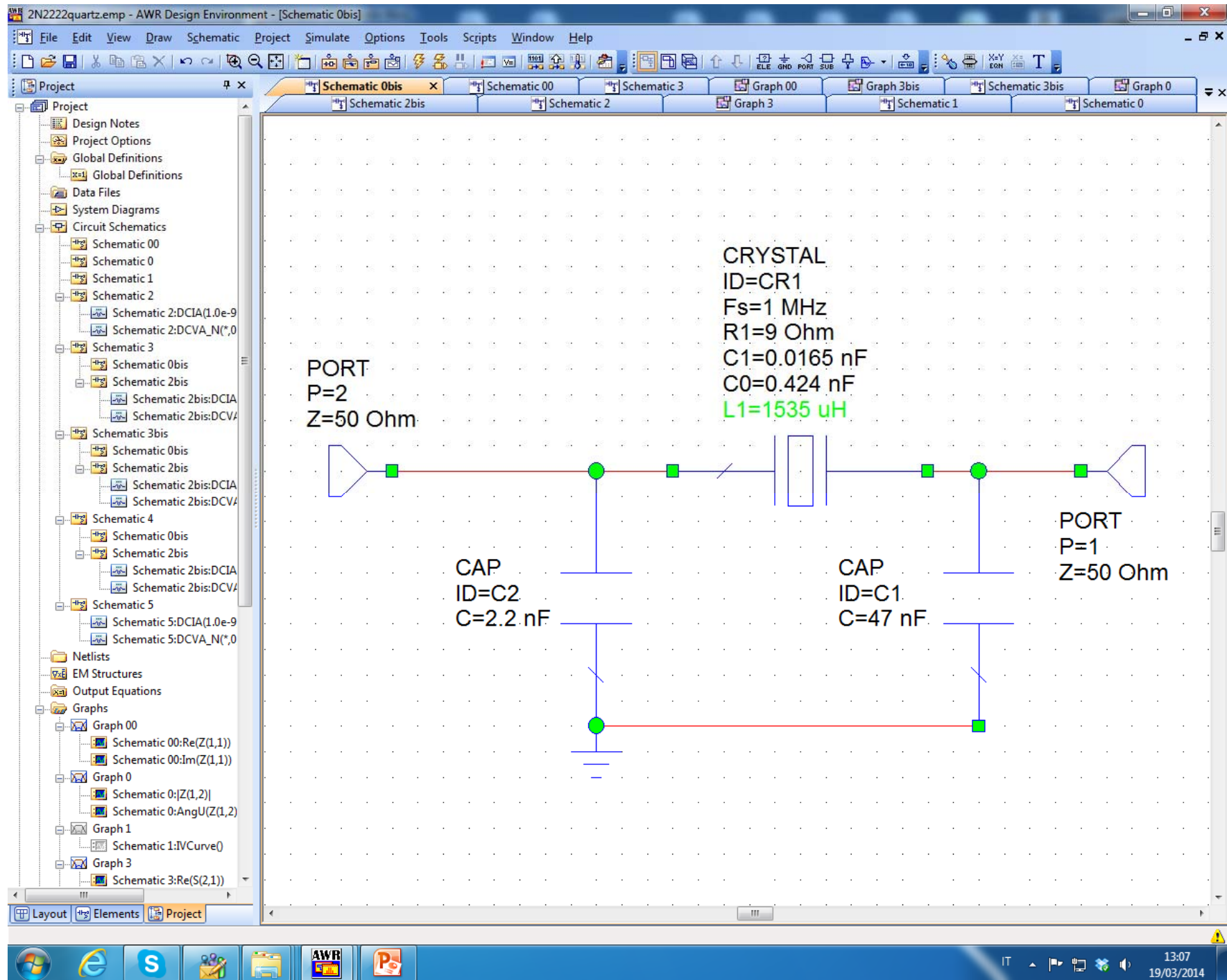
Layout Elements Project

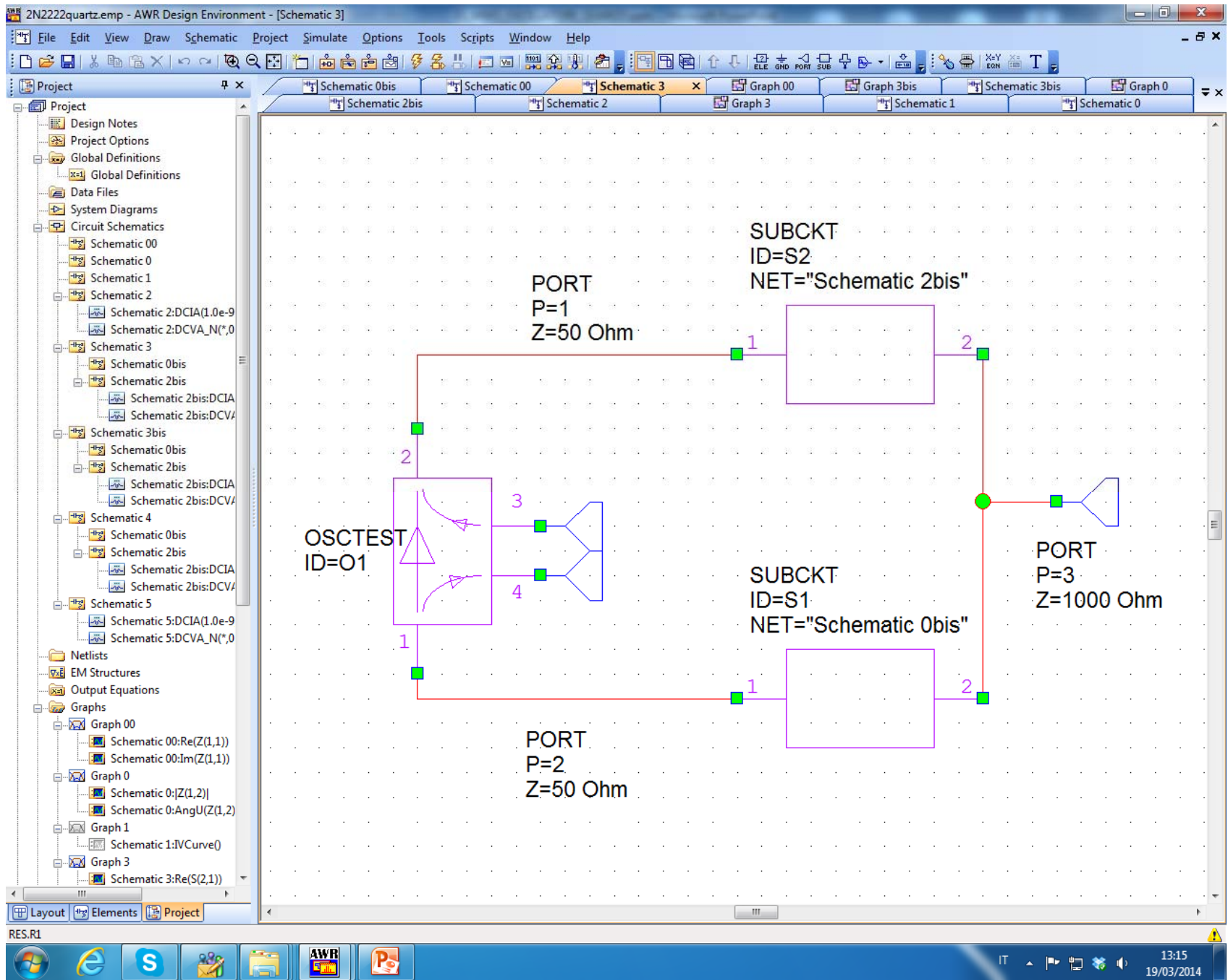
13:02
19/03/2014

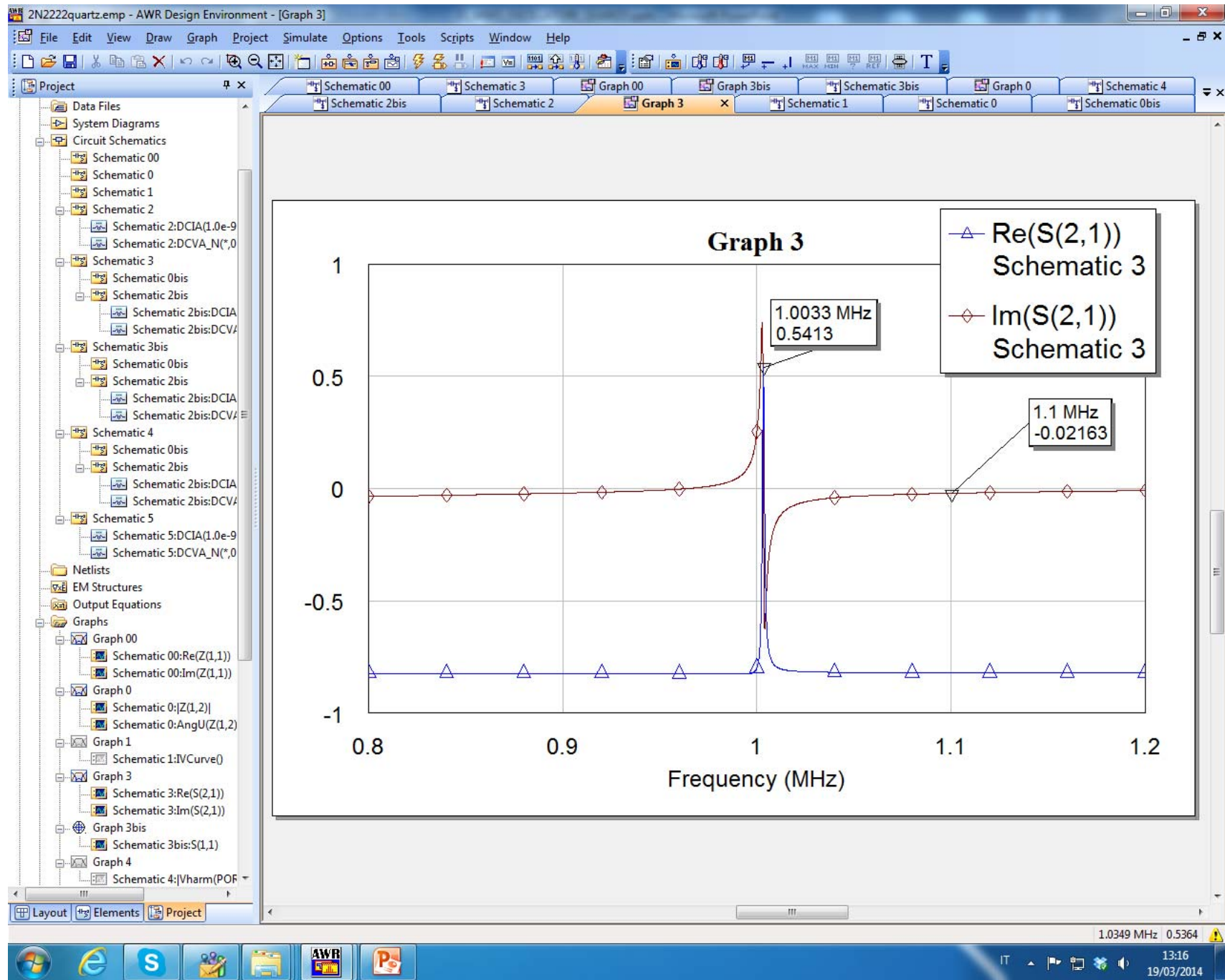




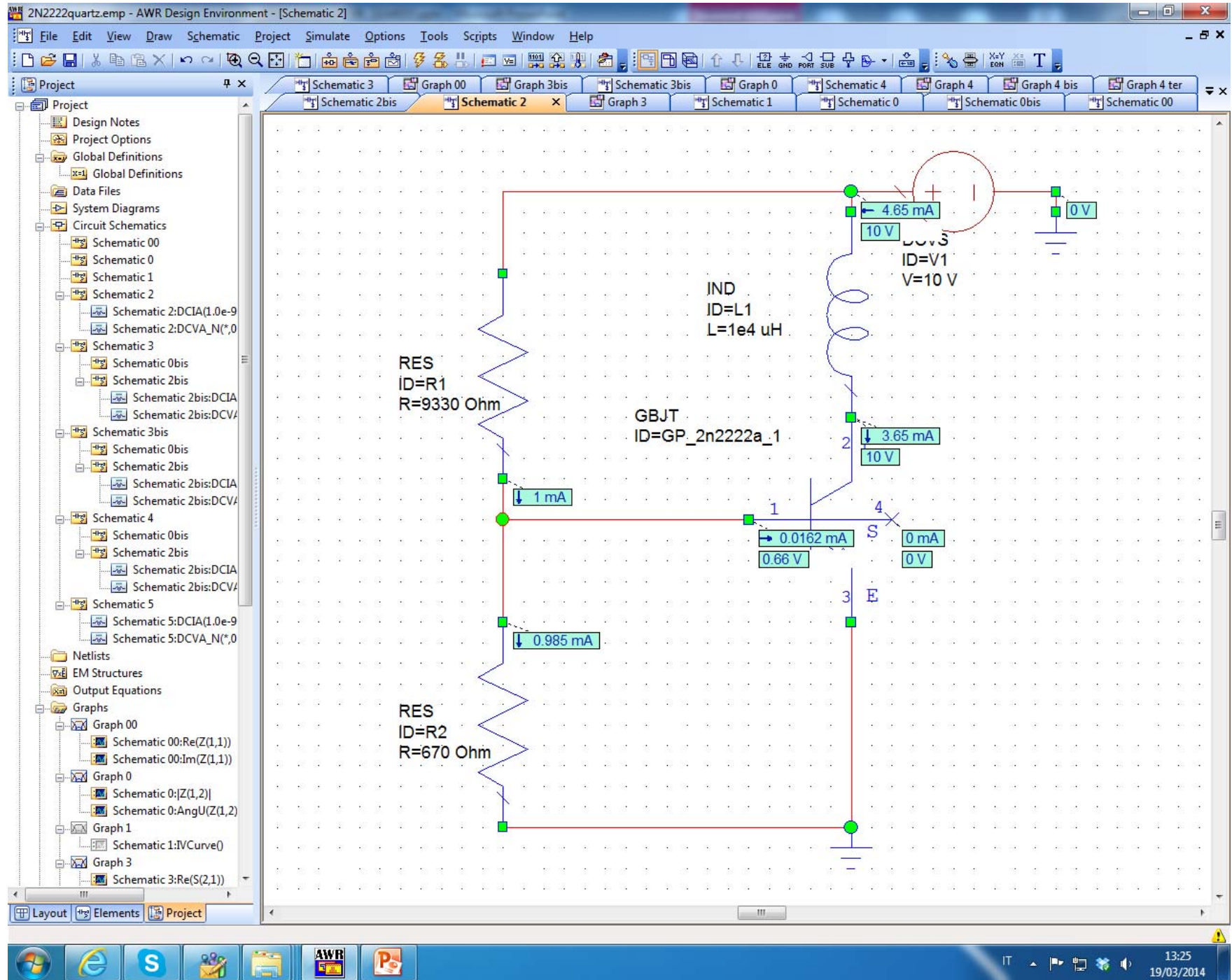


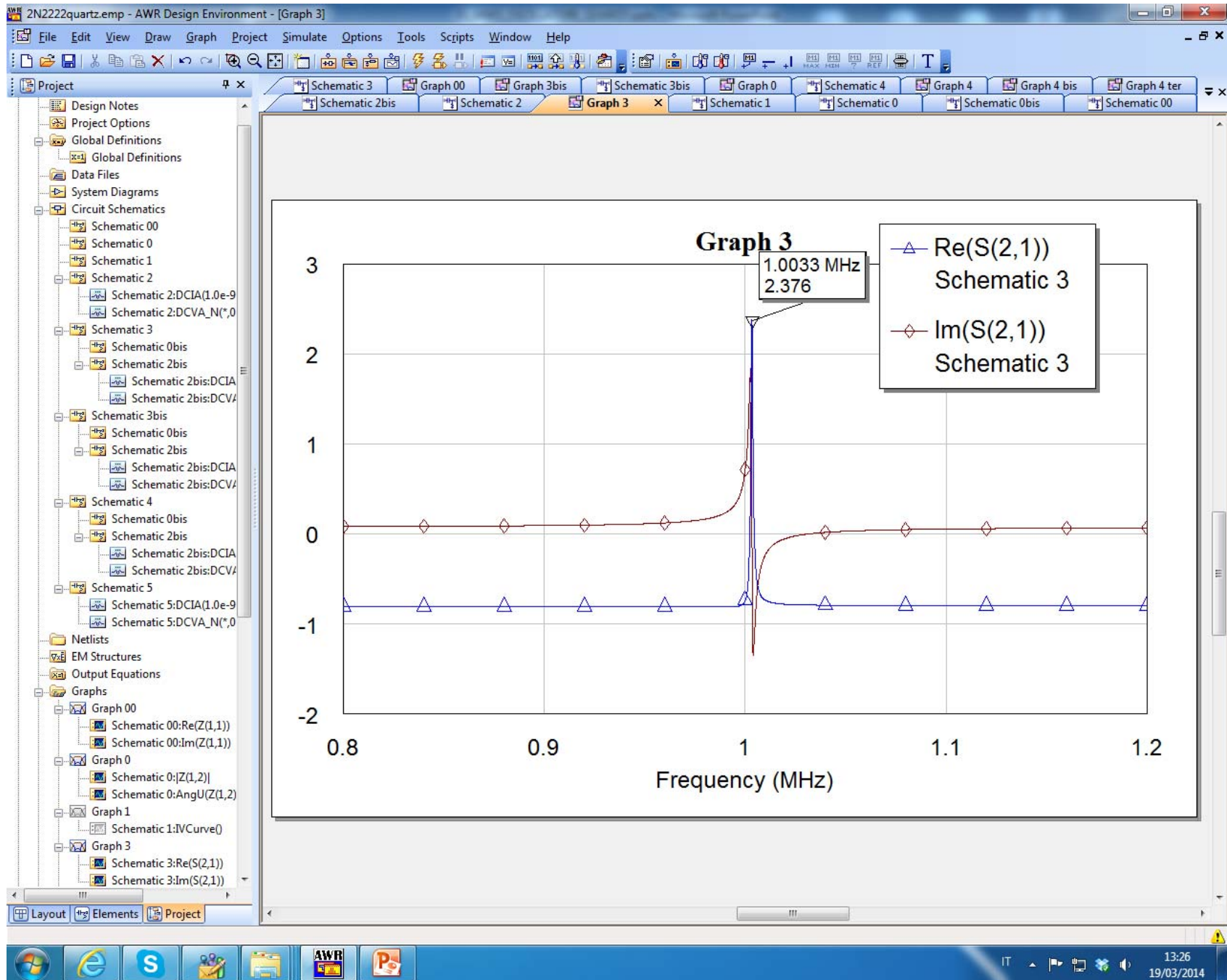






- A causa delle perdite nel quarzo la condizione di Barkhausen non è più soddisfatta.
- Bisogna quindi aumentare gm ovvero Ic





AWR Design Environment - [Schematic 4]

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Schematic 3 Schematic 0 Schematic 0bis Graph 3 Schematic 4 Graph 4 Schematic 1 Graph 1 Schematic 2 Graph 2 Schematic 2bis

OSCAPROBE
ID=X1
Fstart=0.8 MHz
Fend=1.2 MHz
Fsteps=2000
Vsteps=400

SUBCKT
ID=S1
NET="Schematic 0bis"

SUBCKT
ID=S2
NET="Schematic 2bis"

PORT
P=1
Z=1000 Ohm

Layout Elements Project

09:56
21/03/2014

