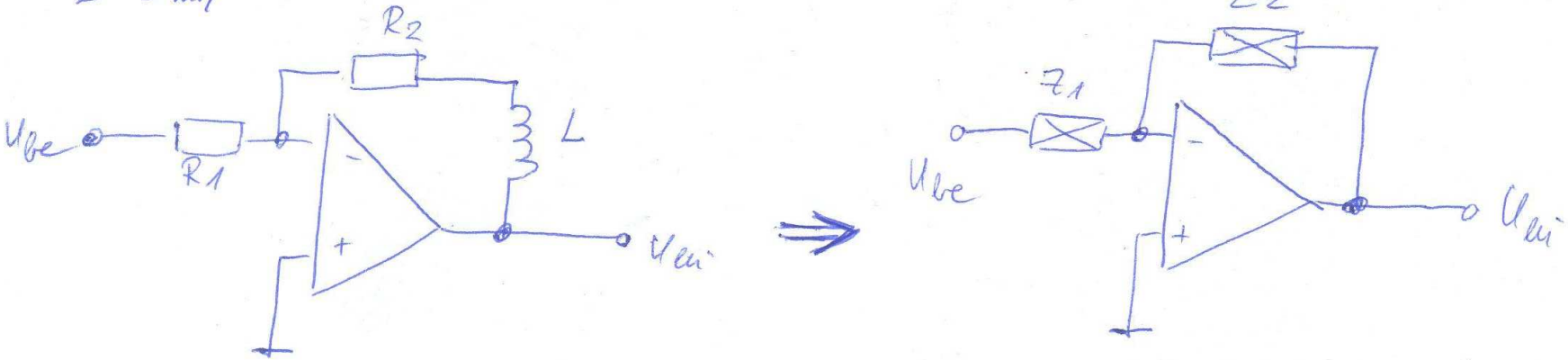
$u_{be} = 2 \cdot \cos(\omega_0 t)$ $\quad \omega_0 = 10^6$ rad/s $\quad u_{be} = 2 \cdot e^{j\omega t}$

$R_1 = 1k$

$R_2 = 1k$

$L = 2$ mH

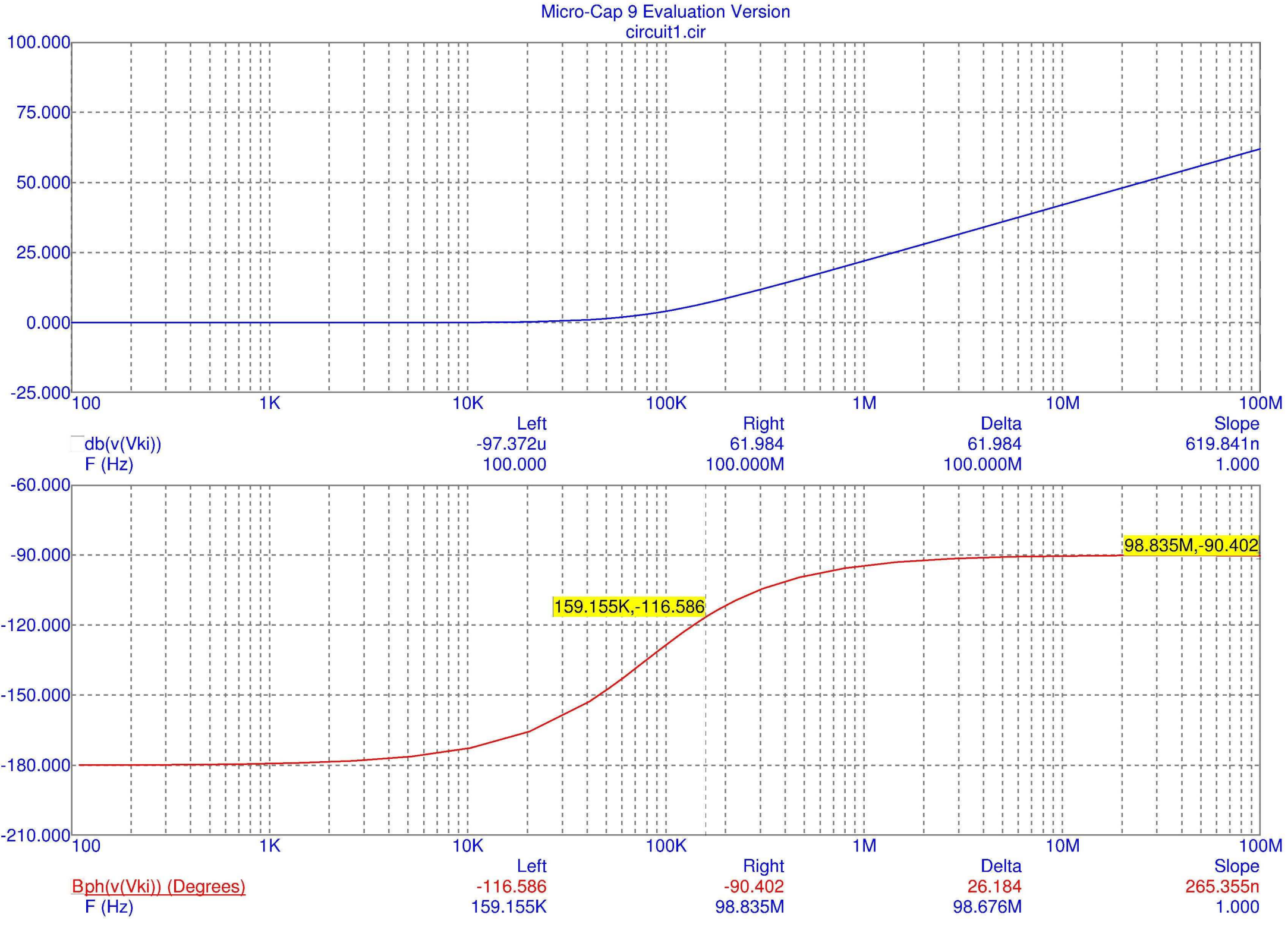


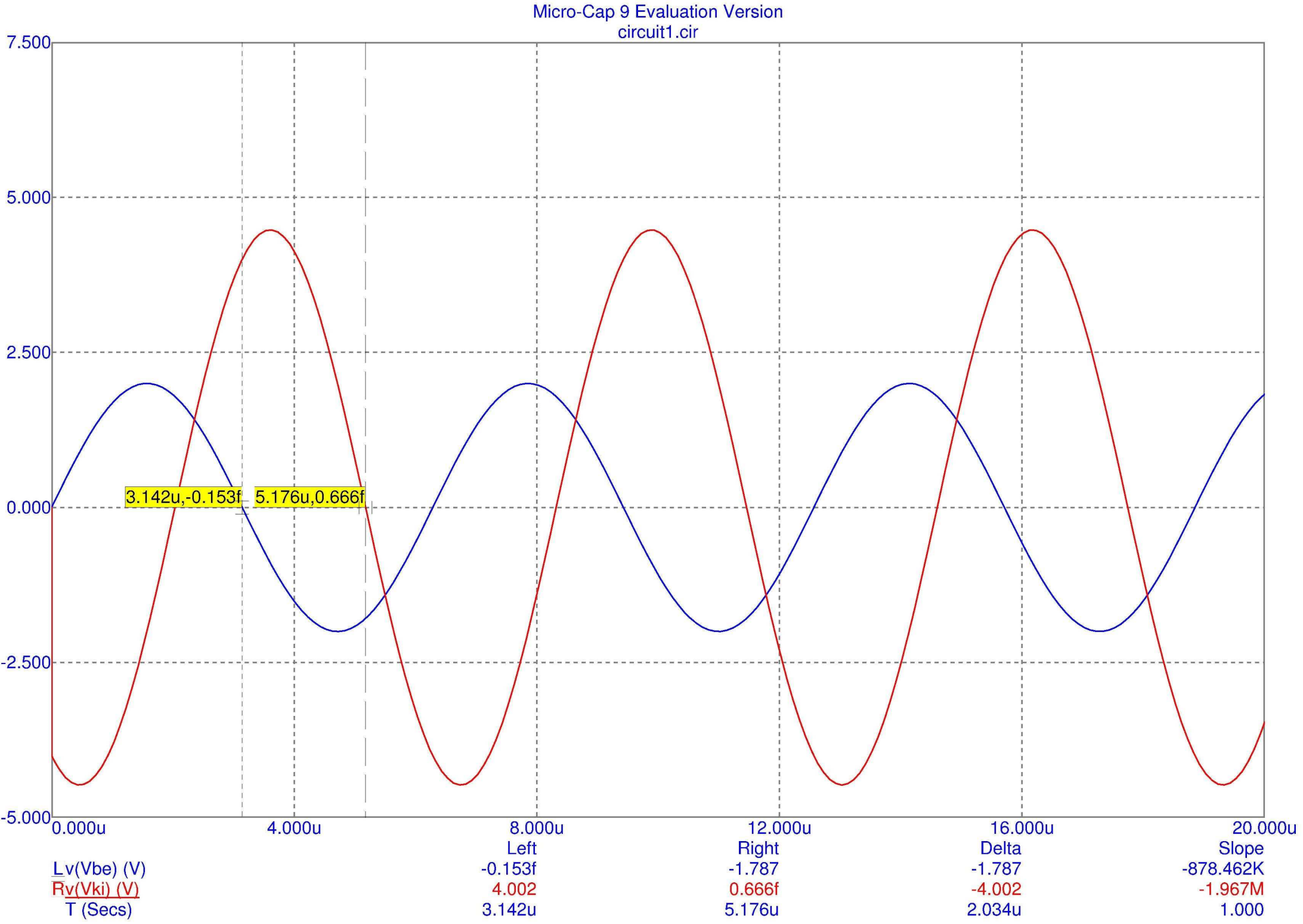
$$\frac{u_{ki}}{u_{be}} = -\frac{Z_2}{Z_1} = -\frac{R_2 + j\omega L}{R_1} = -\frac{R_2}{R_1} - j\frac{\omega L}{R_1} = -1 - j\frac{10^6 \cdot 2 \cdot 10^{-3}}{1000} =$$

$$= -1 - j2 = \sqrt{5} \cdot e^{j243{,}44^\circ} = \sqrt{5} \cdot e^{-j116{,}56^\circ}$$

$$u_{ki} = u_{be} \cdot \sqrt{5} \cdot e^{-j116{,}56^\circ} = 2 \cdot e^{j\omega t} \cdot \sqrt{5} \cdot e^{-j116{,}56^\circ} =$$

$$= 2\sqrt{5} \cdot e^{j(\omega t - 116{,}56^\circ)} \text{ V} = 2\sqrt{5} \cdot \cos(\omega t - 116{,}56^\circ)$$


Micro-Cap 9 Evaluation Version
circuit1.cir
100.000
75.000
50.000
25.000
0.000
-25.000
100
1K
10K
100K
1M
10M
100M
Left
Right
Delta
Slope
db(v(Vki))
-97.372u
61.984
61.984
619.841n
F (Hz)
100.000
100.000M
100.000M
1.000
-60.000
-90.000
-120.000
-150.000
-180.000
-210.000
98.835M,-90.402
159.155K,-116.586
100
1K
10K
100K
1M
10M
100M
Left
Right
Delta
Slope
Bph(v(Vki)) (Degrees)
-116.586
-90.402
26.184
265.355n
F (Hz)
159.155K
98.835M
98.676M
1.000


Micro-Cap 9 Evaluation Version
circuit1.cir
7.500
5.000
2.500
0.000
-2.500
-5.000
3.142u,-0.153f
5.176u,0.666f
0.000u
4.000u
8.000u
12.000u
16.000u
20.000u
Left
Right
Delta
Slope
Lv(Vbe) (V)
-0.153f
-1.787
-1.787
-878.462K
Rv(Vki) (V)
4.002
0.666f
-4.002
-1.967M
T (Secs)
3.142u
5.176u
2.034u
1.000