

+

-

+

-

+

-

Vs

Vs

a

b

b

a

b

Ve

Vs

F=50Hz, R=100Ω , C=2200µF

Av

Ve

Vs

RL

Vi=AvVe

Zs= 8K

Ze

Ve

Vs

Vg=10mV

Zg=100 Ω

RL

Générateur

Amplificateur

Charge

Vi = AvVe

Zs

Ze

Ve

Vg

Zg

RL

Générateur

Amplificateur

Charge

Vs

Vcc=12V

Rc=8k

E

B

C

E

B

C

Vs

RB

RL

1K

VS1

RB1

RB2

270k

36k

300k

RE

1k

β =200

β =200

10mV

100Ω

RE

560Ω

0

1

2

4

3

5

6

7

8

9

10

to

τ

2/3ΔV

ΔV

t2

t1

Ve

Vs

0

1

2

4

3

5

6

7

8

9

10

to

τ

⅔ ΔV

ΔV

t2

t1

-5

-4

-2

-3

-1

τ

Continuité mathématique

⅔ ΔV

⅓ΔV

τ

⅓ ΔV

⅔ ΔV

E1

E2

1 ms

0

2

4

6

8

10

-4

-2

-6

-8

-10

-12

-14

τ

1 ms

Ve

Vs

E1

E2

E3

E5

E4

to

t1

t2

0

2

4

6

8

10

to

t1

E

τ=60µs

100 µs

Vs

Veq

0

2

6

12

10

8

14

-2

-4

to

t1

τ=75µs

100 µs

E1

E2

E3

3.75

Ve

Vs

continuité mathématique

+

-

Ve

Vs

R2

R1

i

i

=0

source

Charge

Av2

f02

Av1

f01

+

-

1K

ve

10K

+

-

1K

100K

vs

gain 11 (20.8 dB) f0 = 326KHz

gain 101 (40.1 dB) f0 = 34.1kKHz

gain 1111 (60.9 dB) f0 = 34.1kKHz

+

-

v

s

C

v

e

R

Rf

+

-

v

s

100n

v

e

3k

100k

1 ms

-10

Ve

10

Vs

8

-8

6

4

2

0

-2

-4

-6

+

-

Vs

Ve

100k

100nF

100nF

3k

3k

1 ms

-10

Ve

10

Vs

8

-8

6

4

2

0

-2

-4

-6

R

10k

1mA

Volts

-10.00

R

10k

Volts

10.00

1mA

Vs1

Vs2

Vc1

Vc2

*VOH*

*VTH*

*VTL*

*VOL*

*0*

*V +*

*V -*

*Vs*

*T*

*Tdch*

*Tch*

*fo*

R2

10k

R1

10k

C1

50nF

R

1.59k

C2

50nF

R

1.59k

Ve

Vs

R2

10k

R1

10k

C

50nF

R

1.59k

C

50nF

R

1.59k

Ve

Vs

*R1*

*10k*

*R2*

*10k*

*R*

*1.59k*

*R*

*1.59k*

*C*

*50nF*

*C*

*50nF*

*Ve*

*Vs*

R2

R1

C

R

C

R

Ve

Vs

R2

10k

R1

15k

C

10nF

R

1.59k

C

10nF

R

1.59k

Ve

Vs

-20

-40

-60

-80

10

0

-100

10

100

1k

2k

10k

100k

1M

Gain

10

100

1k

2k

10k

100k

1M

0

-20

-40

-60

-80

-100

-120

-140

-160

-180

-90

10

100

1k

2k

10k

100k

1M

0

-10

-20

-30

-40

-50

-60

-70

-80

-90

-100

-110

-120

-130

-140

-150

-160

-170

-180

Phase

-40

-60

-70

-80

-90

-20

0

10

-30

-50

-10

10

100

1k

2k

10k

100k

1M

10

100

1k

2k

10k

100k

1M

0

-20

-40

-60

-80

-100

-120

-140

-160

-180

-90

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| *Ho* | *1* |  |  |  |  |  |
| *Q* | *0,7* | *0,8* | *1* | *2* | *5* | *10* |
| *H(fo)* | *0,7* | *0,8* | *1* | *2* | *5* | *10* |
| *H(fo)(dB)* | *-3,10* | *-1,94* | *0* | *6,02* | *13,98* | *20* |
| *H(2fo)* | *0,48* | *0,51* | *0,55* | *0,63* | *0,66* | *0,67* |
| *H(2fo)(dB)* | *-6,33* | *-5,81* | *-5,12* | *-3,98* | *-3,60* | *-3,54* |

*fo*

*2fo*

*10fo*

20

10

15

5

0

-5

-10

-15

-20

-25

*10*

*5*

*2*

*1*

*0.7*

*Q*

*-260*

*-240*

*-220*

*-200*

*-180*

*-160*

*-140*

*-120*

*-100*

*-90*

*-270*

*-80*

*-60*

*-40*

*-20*

*0*

*20*

*40*

*60*

*80*

*90*

*-90*

*fo*

*10fo*

*10*

*5*

*2*

*1*

*0.7*

*Q*

*ho>0*

*ho<0*

*fo*

*f2*

*f1*

*H(fo)*

*H(fo)*

√2

*Bande passante*

*H*

*fo*

*f2*

*f1*

*HdB(fo)*

*HdB(fo)-3dB*

*Bande passante*

*HdB=20log(H)*

*fo*

*f2*

*f1*

*H(fo)*

*H(fo)*

√2

*Bande passante*

*H*

R2

8k

R1

10k

C1

50nF

R3

318

C2

50nF

R4

318

Ve

R6

8k

R5

10k

C3

50nF

R7

3.18k

C4

50nF

R8

3.18k

Vs

-20

-30

20

-10

0

100

1k

10k

100k

10