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AERMEC**Aermec S.p.A.**

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• DC SWEEP → OPTIMUM GAIN finding

V_{in-p} : sweep 0 to 5 V

V_{in-m} : 4 nA

step size 20 μ

V_{out} e [300 mV ; 5 V]

Zone lineare [300 mV ; 3 V]

Centro 1.05 V → + 300 mV

Centro 1.35 V

|estremo sup - centro| = 1.05 V

V_{en} optimal : 3.975086 V

↳ bias su 1.3511 V

A_{cm} = ac analysis

(2)

49.22 dB @ 1.81 mHz (DC)

CMRR = 54.61 dB

CMR⁺ & CMR⁻ → common mode range

Amplifier

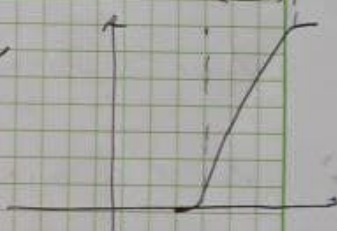
VOLTAGE FOLLOWER

INPUT
CMR

DC SWEEP

0 to 5V
1 mV

+ CMR = [475 mV ; 4.73 V]



PSRR

Antincendio

COSMA SILOS - Via Verona, 11 - 36020 POVE del GRAPPA - VI
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$$V_{DD} = 1.5 \text{ V}$$

$$V_{OUT} = 0.75 \text{ V}$$

→ uscita saturata al massimo!

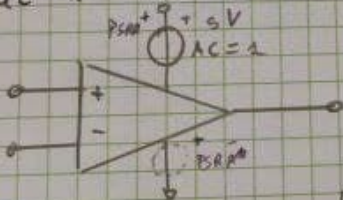
~~Non~~

$$V_{DD} = 3.3 \text{ V}$$

utilizzabile ma non è buono!

PSRR

GENERATORE AC = 1 sull'alimentazione



$$PSRR = A_{OL} |_{dB} - A_{VOL} |_{dB}$$

$$\begin{cases} 1 \text{ Hz} \div 1.5 \text{ V} \\ 20 \text{ point per dec} \end{cases}$$

$$49.66 \text{ dB}$$

$$103.79 \text{ dB} - 49.66 \text{ dB} = 54.13 \text{ dB} \quad (PSRR^+)$$

$$PSRR^- = 103.79 - 62.52 \text{ dB} = 41.27 \text{ dB}$$

Settling Time

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V_{pulse}:

666,67 mV

2,33 V

20 μ s delay

300 ms rise

1,5 μ m Width

3 μ m period

settling time

$\pm 0,323$
 $\pm 0,323$ V

$\phi = 663,3$ mV

$\left\{ \begin{array}{l} Se^+ = 626 \\ 684 \end{array} \right.$ ms

$\left\{ \begin{array}{l} Se^- = 604 \end{array} \right.$ ms

$\rightarrow 672$ mV

~~666 mV + 230 mV~~