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СОДЕРЖАНИЕ

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Введение

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Цель лабораторно-практических занятий

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Структура лабораторно-практического занятия

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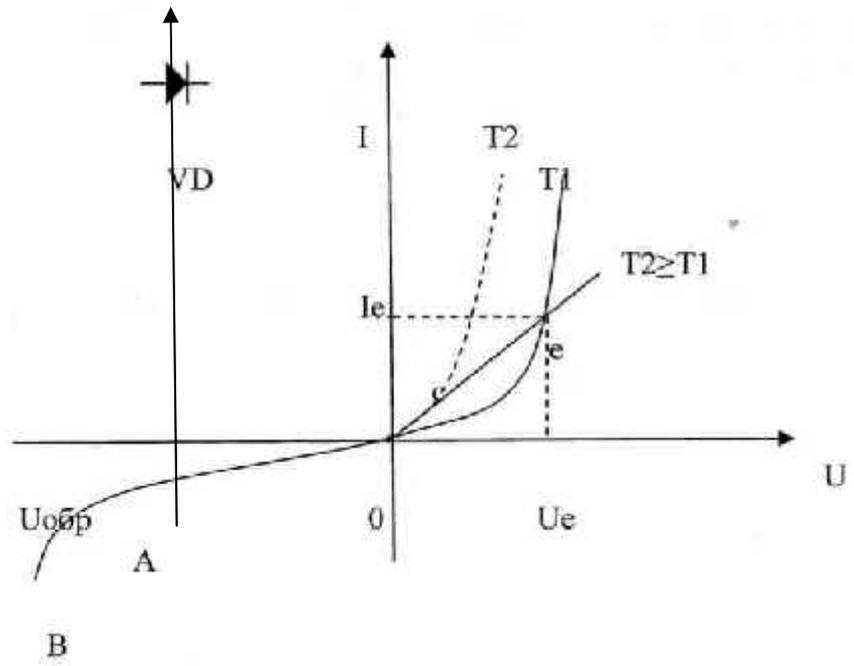
:

$$I = I_0 (e^{U / \xi_T} - 1)$$

U -
;

p-n-

; $\xi_T = |T/q|$ -



.7 -

U
I , (p-n-
() . (,
I
p-n- I .
U
p-n- .

1. 13 IV).

2. 13.1,

3. $I = f(U)$ S4 U 0

«+»,

$I = 10$ $0,05 \pm 0,1$.

13.1.

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7. . . . : -
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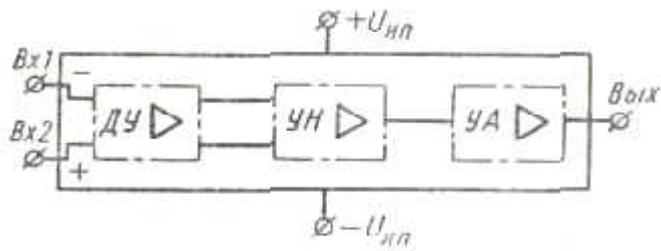
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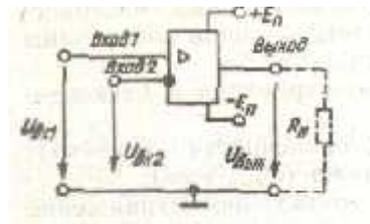
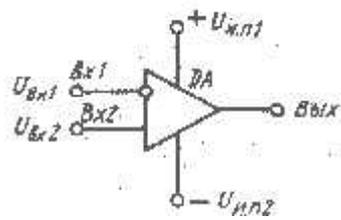
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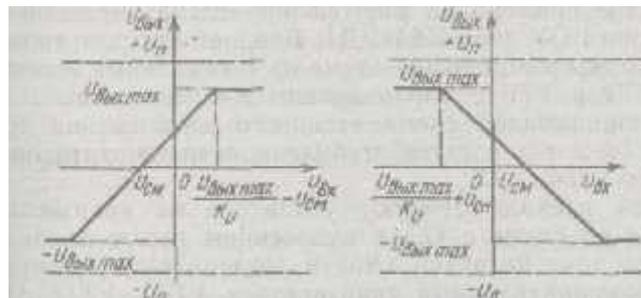
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u -

$$U = u(U_1 - U_2),$$

.3

(U_m)



.3

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, K_U , R

.4.

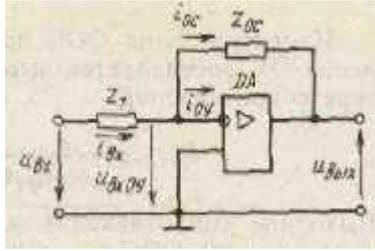
Z,

u ,

:

$$u = -Z / Z_1.$$

180°.



.4

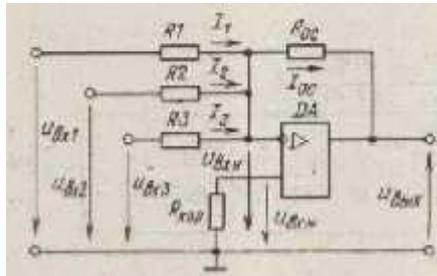
R₁,

$$U(t) = -(R / R_1) U(t).$$

$$\frac{R}{R} = R_1 = R$$

$$U(t) = -U(t).$$

.5



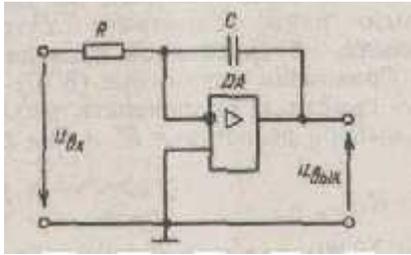
.5

$$U = -(U_1 R / R_1 + U_2 R / R_2 + U_3 R / R_3).$$

$$R_1 = R_2 = R_3 = R$$

$$U = -(U_1 + U_2 + U_3).$$

.6.

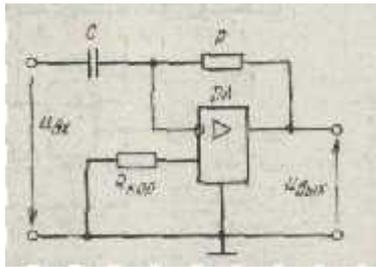


.6

$$U_{\text{вых}}(t) = -1/RC \int_0^t U_{\text{вх}}(t) dt.$$

() .

.7.



.7

$$U_{\text{вых}}(t) = -RC dU_{\text{вх}}(t)/dt.$$

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+6 -6 .

1

1.1

1 2 -

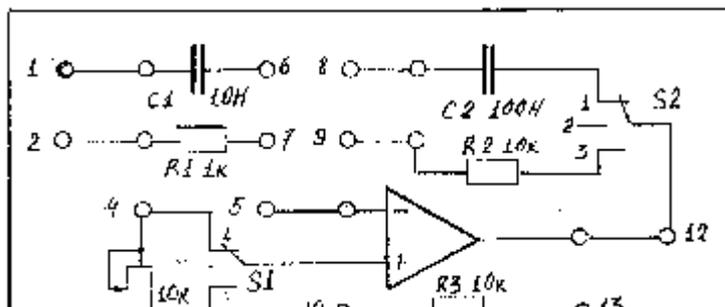
1.2.

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(.8):



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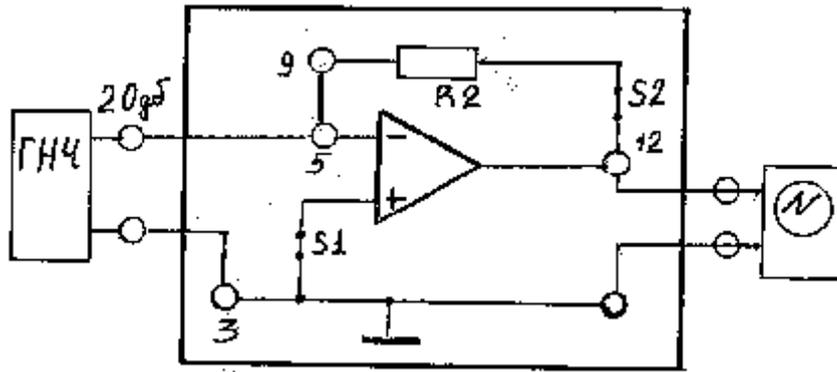
- 3.1
- 3.2

$U_m = 5$

$f = 10$

3.3

(.9):



.9

3.4

u.

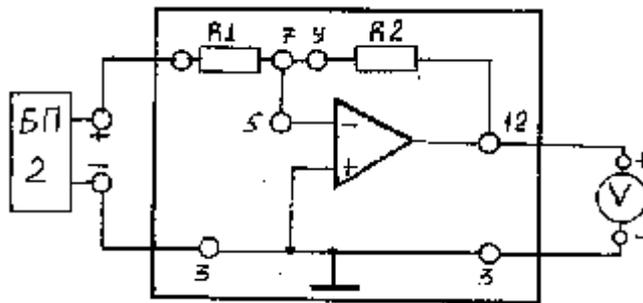
4

- 4.1
- 4.2

2

$U = +0,1$

(.10):



.10

4.3

U

$$= U / U$$

$$= R2 / R1.$$

4.4 R1 R3 = 10

5

5.1

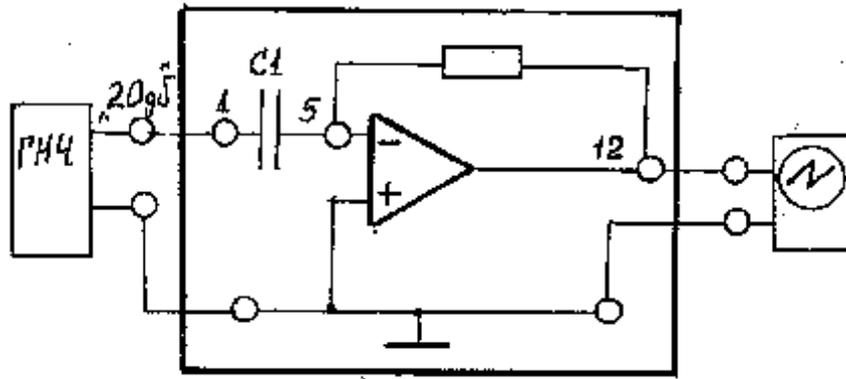
f = 1

U

= 0,5

5.2

(.11):



.11

5.3

6

6.1

1 - R1,

R2 - 2.

6.2

f = 100

U = 0,5

(.1).

6.3

6.4

7

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1. . . . ,
2. . . . « », 2018.
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3. « »; - , 2016 / , ,
.- « », 2018.

