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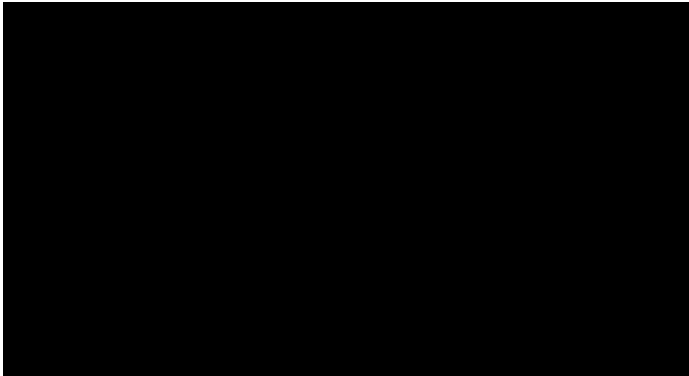
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5/4"

$X_{Gl}X$	$X_{Dl}X$	$X_{El}X$	T_{Dlm}	T_{Glm}	$X_{DGl}X$	$X_{EGl}X$	$k_{Gl}oC$	$k_{Dl}oC$
6.67°	7.32°	11.995	333.81	1.9798	0.650	5.825	3.369	0.01400

$$\frac{11.995 - 7.320}{333.81}$$

5/5"

	$W_{kl}X$	$W_{ul}X$	$W_{ql}X \quad ?3m$	C_w	C_{wu}
C	1.711	2.022	1.673	0.978	0.827
D	1.687	/	1.653	0.980	/

5/6"

$W_{kl}X$	0.990	1.091	1.189	1.289	1.388	1.487	1.587	1.686
$W_{Nl}X$	0.978	1.077	1.174	1.271	1.368	1.464	1.560	1.651

5/7

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	$W_{ul}oX$	$W_{kl}oX$	T_{klm}	
	991	912	230.89	196.61
?3m	990	843	114.69	109.00

	W_{N1X}	W_{q1X}	T_{q1m}	
C	0.839	0.911	0.0858	0.087
D	1.001	1.011	0.010	0.0831

		h_N			h_2			h_J	?
h	32 J	72 J	322 J	3m J	32m J	322m J	30 J	40 J	50 J
W_{k1X}	0.697	0.694	0.697	0.699	0.702	0.700	0.703	0.719	0.701
W_{q1X}	0.390	0.643	0.664	0.684	0.689	0.687	0.691	0.703	0.746
$C_w ? "W_{q1} " W_k$	0.560	0.914	0.953	0.978	0.981	0.981	0.983	0.978	✓

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5MHz 10MHz

0.750 0.737

0.655 0.466

0.873 0.632

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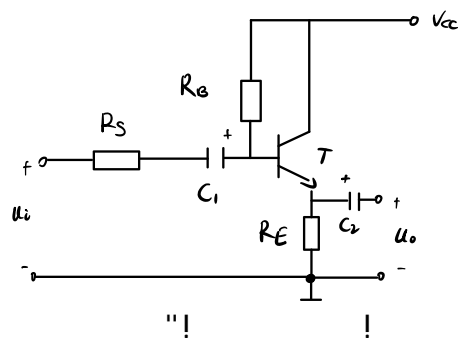
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1. 直流稳压电源一台, 型号 DP832A
2. 手持万用表1台, 型号 Fluke F227C
3. 信号发生器, 1台, 型号 Tek AFG1062或DG4062
4. 电阻若干, 阻值分别为 $20k\Omega \times 1$, $1k\Omega \times 1$, $100k\Omega \times 1$, $2k\Omega \times 1$
5. 电位器, 最大阻值为 $100k\Omega$
6. 三极管1只, 型号为 9013.
7. 电容2只, 容量均为 $10\mu F$.
8. 示波器1台, 型号为 Tek MSO2012B.
9. 短接桥和连接导线若干, 型号分别为 P8-1 和 50148
10. 实验用九孔方板1块, 大小为 $300mm \times 298mm$.

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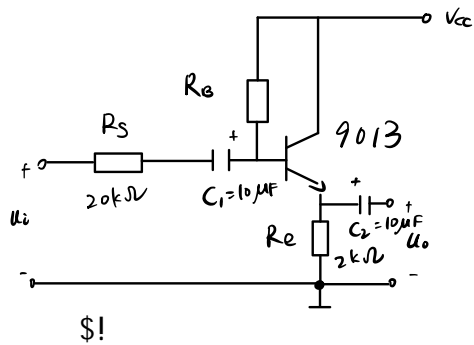
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$$U_{BE} \mid V_B \quad 4V_E \quad I_C - I_E \mid (12 \eta) I_B \quad I_B \mid \frac{V_{CC} - 4V_B}{R_B} \quad I_B \mid \frac{I_C}{\eta} \quad U_{CE} \mid V_{CC} - 4V_E$$



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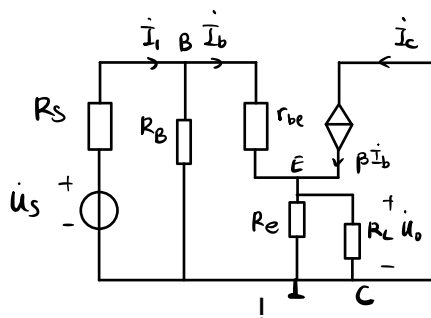
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1)

R_i



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$$R_L \qquad R_i \quad R_B//[r_{be} \quad (1 \quad +T_E)] \qquad R_L$$

$$i \quad B//[\quad _{be} \quad (1 \quad +^* \quad _E// \quad _L)]$$

$$R_i \qquad R_i \quad R_i \quad B// \quad _{be})$$

$$_{be} \quad 2k$$

$$2 \qquad A$$

$$B \qquad R_i \qquad i \quad \frac{U_i}{I_i} \mid \frac{U_i}{U_s \, 4 \, U_i} R_s$$

$$2) \qquad R_o$$

$$R_o \quad _o \quad \frac{r_{be}}{12 \, \eta} // \quad _E \acute{e}$$

$$\frac{r_{be}}{12 \, \eta} \qquad R_o \quad _o \quad \frac{R_B//R_S+r_{be}}{12 \, \eta}$$

$$// \quad _E \acute{e} \quad \frac{R_B//R_S+r_{be}}{12 \, \eta} \qquad R_o$$

$$R_o \quad _o \acute{e} \quad _c$$

$$R_o \qquad U_o \qquad R_L$$

$$U_L \qquad U_L \quad \frac{R_L}{R_L \, 2 \, R_o} U_o \qquad R_o \qquad _o$$

$$(\frac{U_o}{U_L} \, 41) R_L$$

$$3) \qquad A_u$$

$$A_u$$

$$_u \quad \frac{(12 \, \eta)(R_E//R_L)}{(12 \, \eta)(R_E//R_L)+r_{be}} \, \Omega 1$$

$$A_u \qquad 1 \qquad 1$$

$$(1 \quad _)$$

$$A_u \quad A_{us} \qquad U_s \quad U_i \quad U_o$$

$$! \qquad !$$

1 - *

1.

2 +12V B
1kHz u_i 1V u_i
3-2 R_B

2.

L 1k B 1kHz u_i
 u_o U_i U_o
3-3
A 1kHz u_s U_s U_o 3-3
 u_o

3.

L 1k B 1kHz u_i
 u_o
 U_L 3-4 U_i

4.

R_i A 1kHz u_s 1V A B
 U_s U_i 3-5 L 1k

5.

R_o L 1k A 1kHz u_s 1V
 u_s u_o
 U_o U_L 3-6 B 1kHz

6.

A B
L 1k u_i 0.7V $f=10\text{kHz}$
 U_i
 U_o 3-7 $A_u=F(f)$

1.



3-2

3-2

2.



3-4

3-5

3-4

3-5

R_o

R_i

3-2

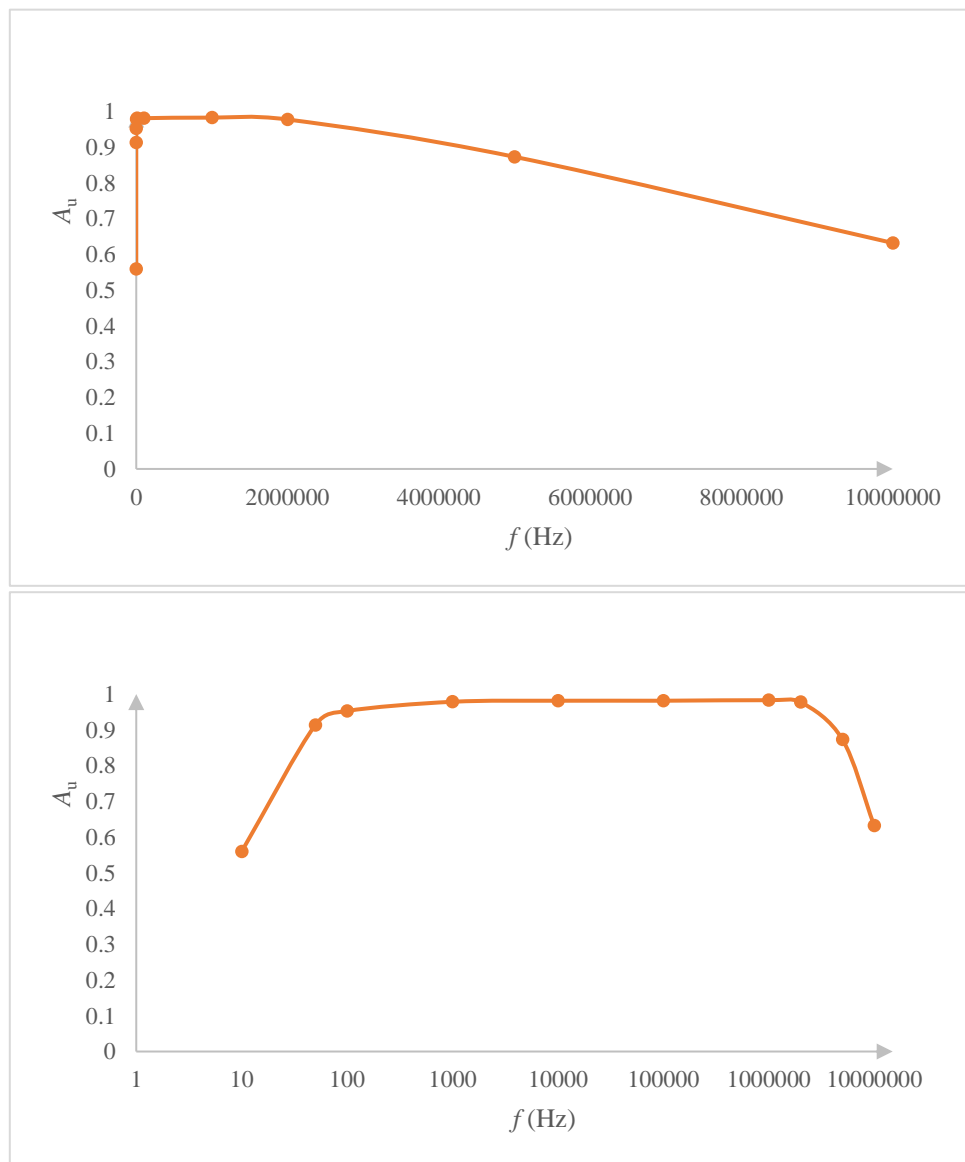
3.

3-7

$$A_u = F(f)$$

Excel

10



1. $U_{CE} < 0.5V$

U_{CE} U_{CC}
 $U_{CE} < 0.5V$

U_{CE} U_{CC}

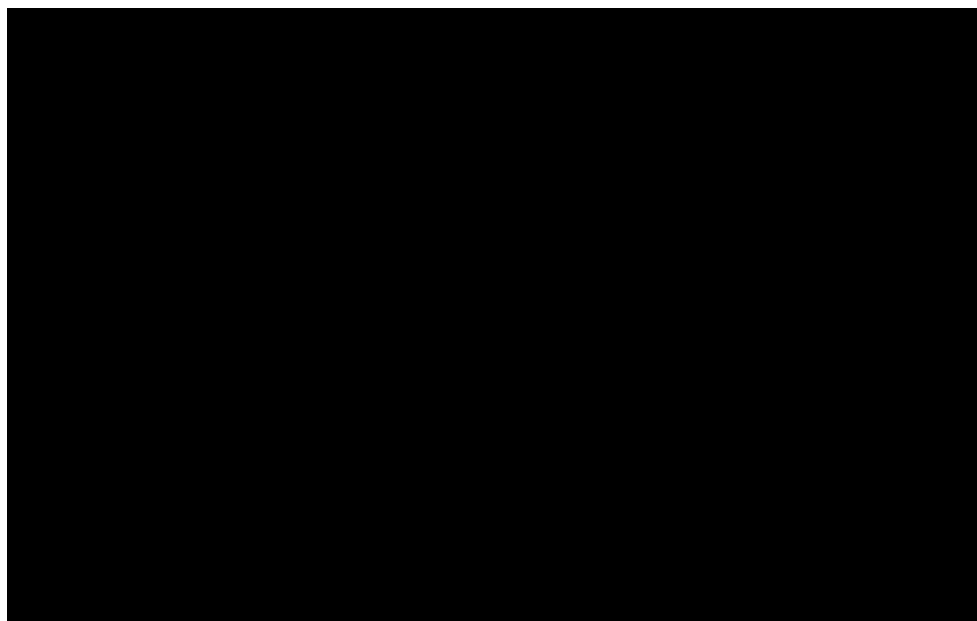
2. 3-2

R_B

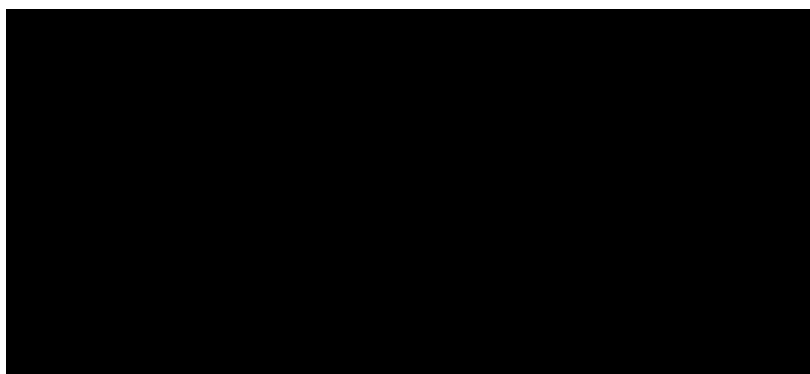
U_{BEQ} I_{BQ}

3. 3-7 100kHz F287C

F287C
287C 65-100kHz 6% 20Hz 100kHz



Tektronix MSO2012B 100MHz



1.

2.

1.

Excel

MATLAB

Excel

1.

3-7

3MHz

3MHz

210320621

2023-05-08

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CE#

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Variable	Operating point value
V(1)	6.38127
V(4)	7.03417
V(5)	12

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