

-	<u>21</u>	<u>6</u>	<u>210320621</u>	
	<u>2023</u>	<u>6</u>	<u>1</u>	

1

$R_f=10k\gg$

$R_f=100k\gg$

$u_o$

$T_1=\underline{2.19ms}$

$T_2=\underline{21.9ms}$

$u_c$

$u_o$

$R_f=10k\gg$

$R_f=100k\gg$

$u_o$

$R_f=10k\gg$

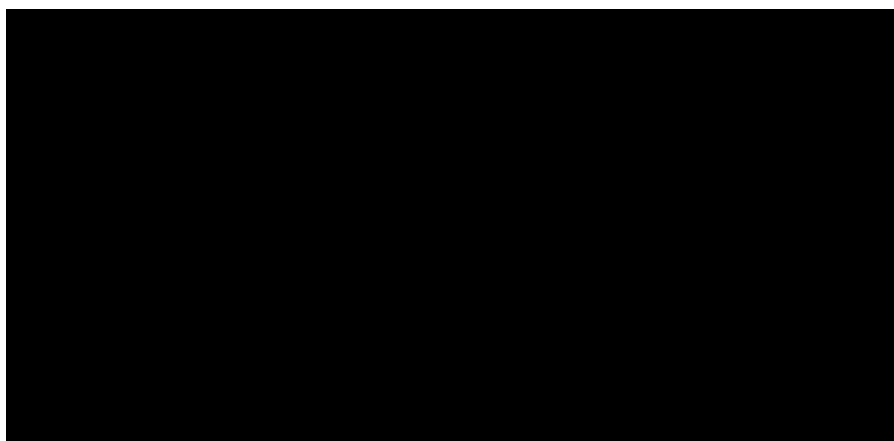
$R_f=10k\gg$

405.8Hz

2.464ms

48.64%

w 5.7V



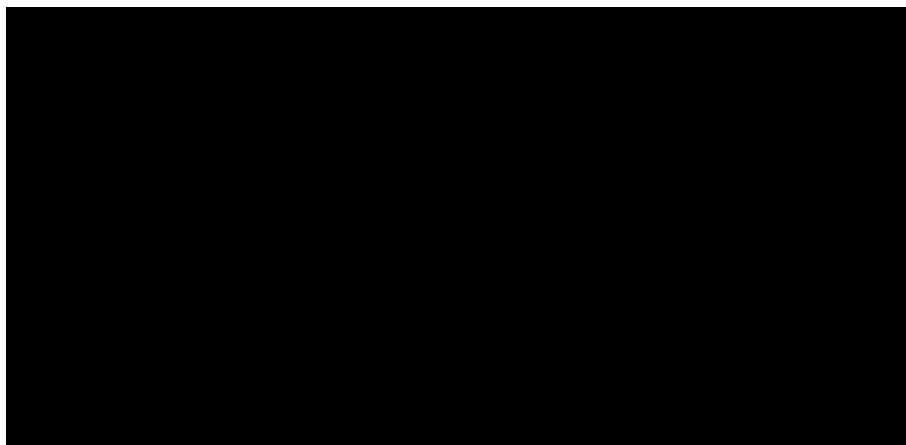
$R_f=100k\gg$

42.10Hz

23.75ms

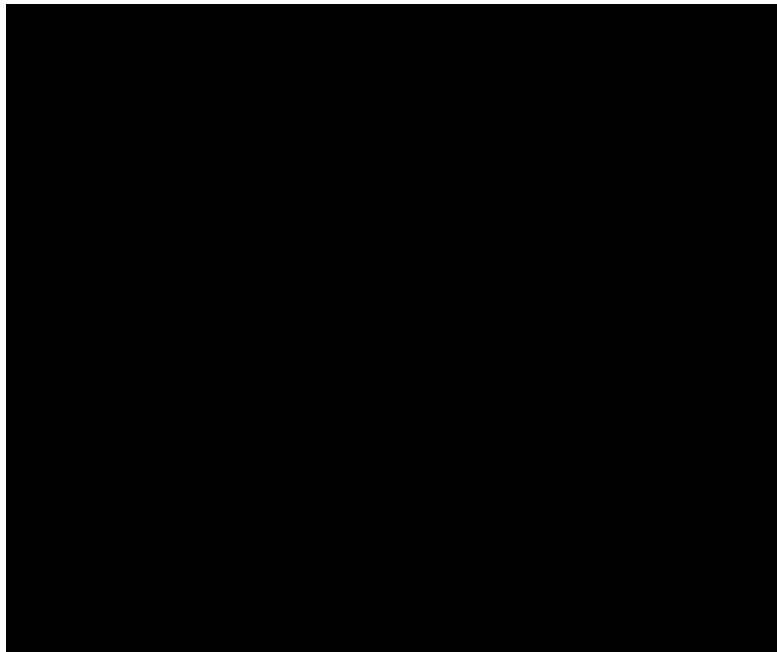
48.56%

w 5.6V



2

$R_w$       b      a      0



ho

) †

†

) V

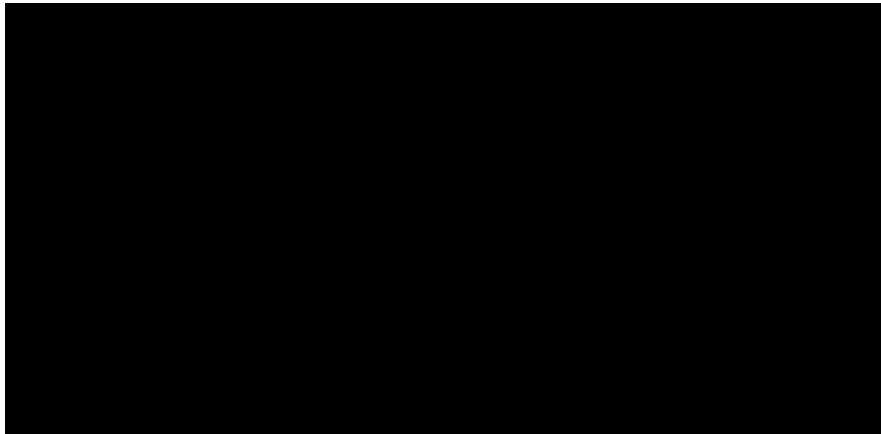
†

76.61Hz

13.05ms

2.361%

w 5.9V



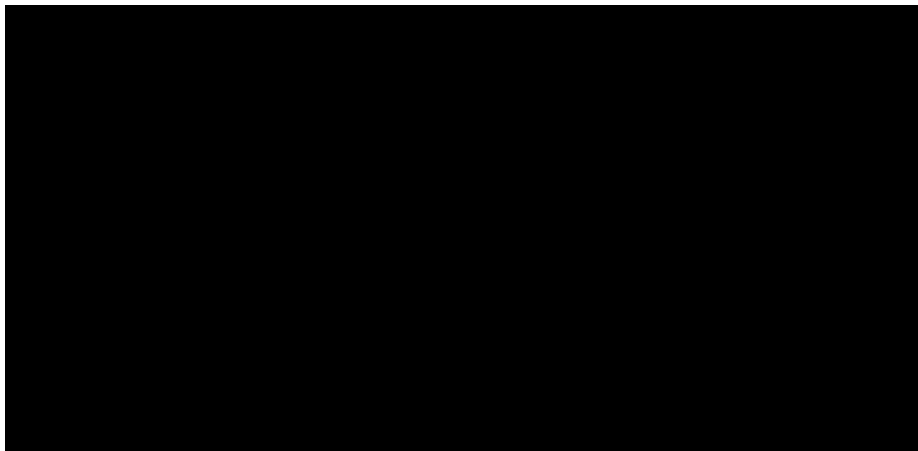
$R_w$     b    c    0

82.13Hz

12.18ms

97.37%

w 5.9V

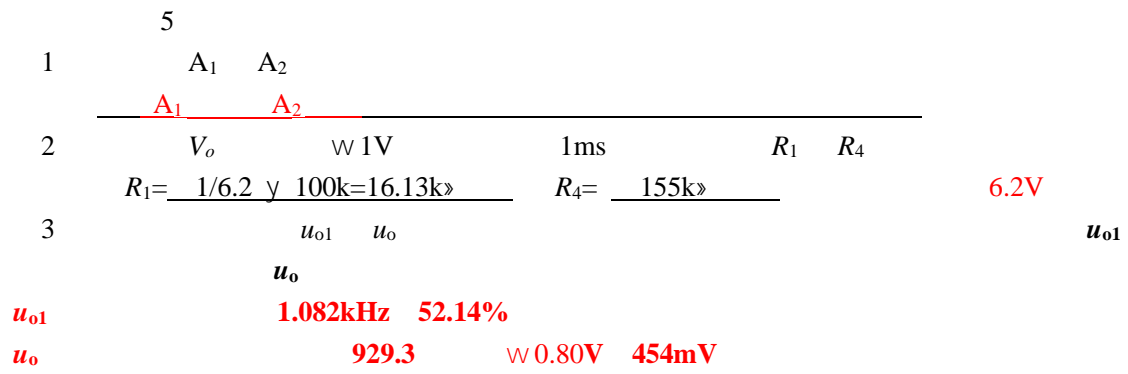


w 5.7V~w 5.9V

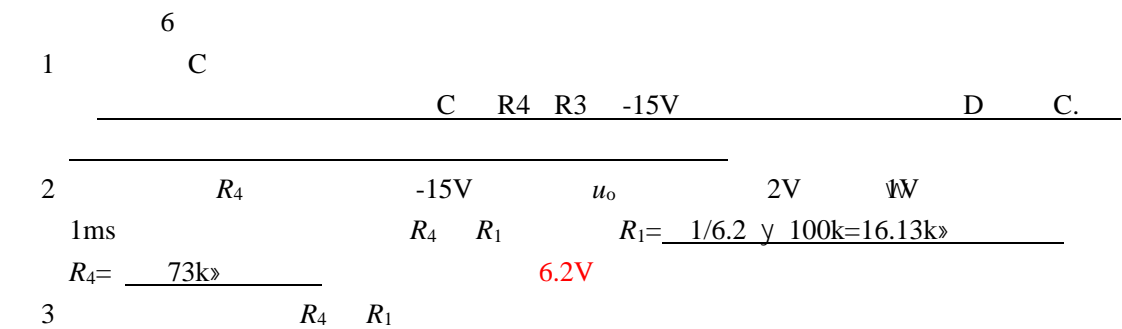
12ms-13ms

2.37%-97.37%

3



4



$k$   $k$

$k$

$\dagger$

$k$

$k$

$\dagger$

$k$

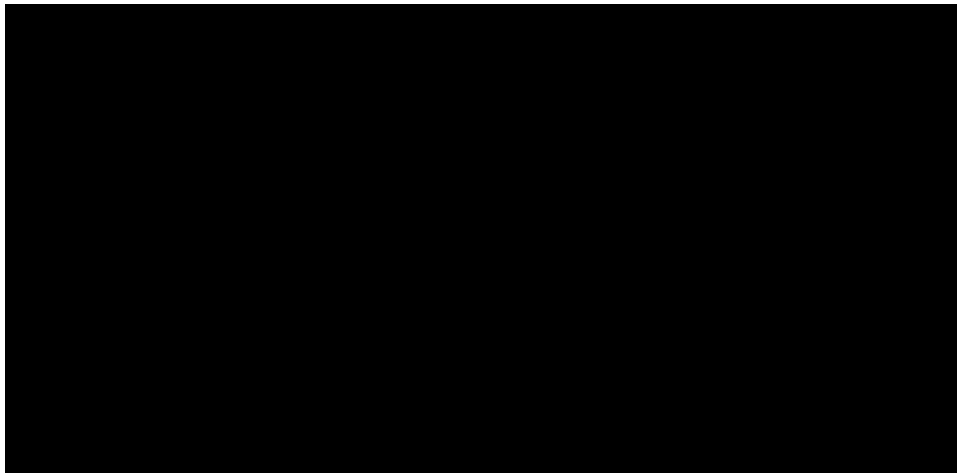
$k$

$u_{o1}$

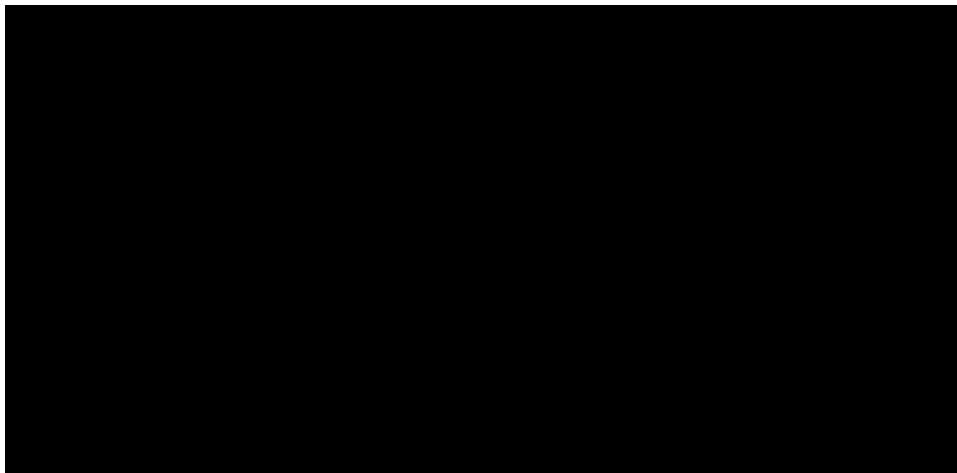
858.5Hz 6.653%

$u_o$

1.162ms W 1.10V 596mV

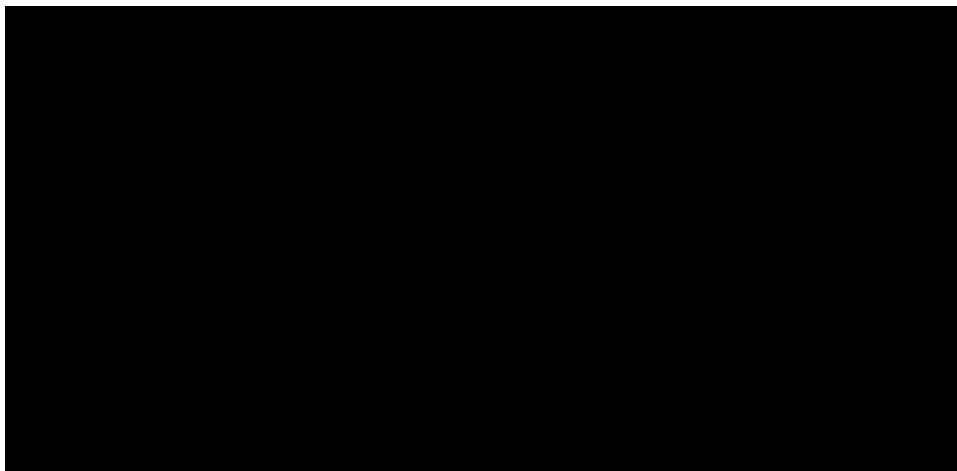


$u_{o1}$  846.7Hz 93.25%  
 $u_o$  1.181ms w 1.07V 586mV



5 RC

$u_o$   $u_f$   
 $R_1=R_2=R=10k\Omega$   
151.9Hz 150.9Hz  $u_f$  7.80V  $u_o$  23.4V



$R_1=R_2=R=20k\Omega$

76.18Hz     $U_f$                       8.20V     $U_0$                       24.2V



76.175Hz



- 1.
- 2.

1		1	DP832A
2		1	Fluke 287C
3		1	Tek MSO2012B
4		1	Tek AFG1062    DG4062
5		2	1N4007y 2
6			14m    4"609m    4"322m    4



7			2023 H 1 203 H 1
8		2	C961 LM741
9		1	2DW231 6.2V×1
10		6	32m 4"322m 4"442m 4
11			P8-1 50148
12	9	1	300mm×298mm

1-1

1.

+15V

-15V

FZ1%\$ \_»

u0

7-3

DZ

FZ1%\$ \$ \_»

u0

uc

2DW231

u0

FZ1%\$ \_»

7-3

T1

FZ1%\$ \_»

LM741

7-2

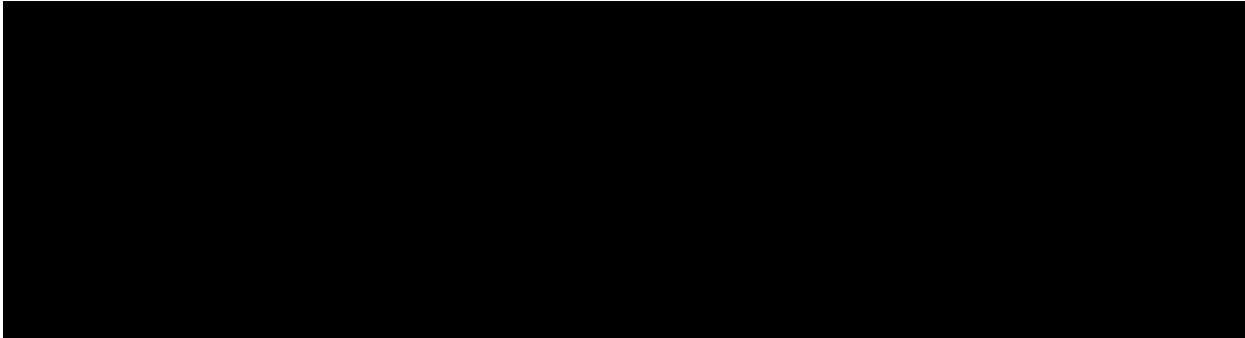
FZ1%\$ \$ \_»

u0

Ç 5+(%

7-2

FZ1%\$ \$ \_»



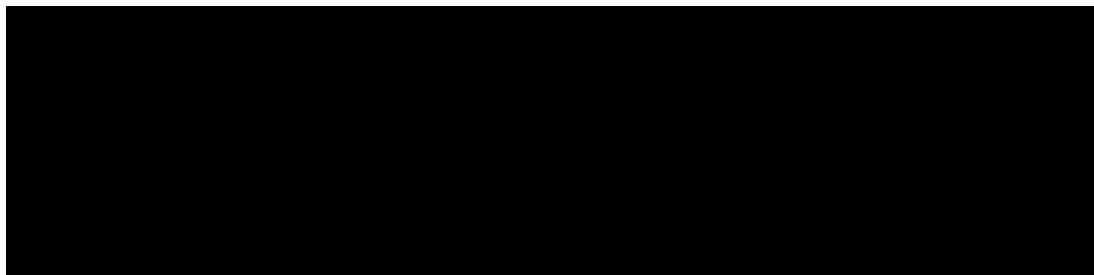
2.

7-4  
LM741  
Ç 5+(%  
D1 +15V  
D2 -15V  
1N4007  
Rw  
DZ  
2DW231  
Rw b a 0 uo  
uo (d)  
Rw b c 0 uo uc  
uo (d)



3.

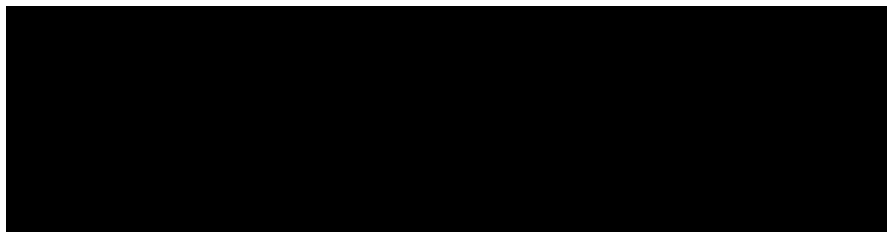
7-5  
R1  
R4  
A1 A2 LM741  
Ç 5+(%  
+15V -15V



R1 R4 uo1  
uo uo1 uo

4.

7-6  
R1 R4  
D 1N4007 A1 A2 LM741  
Ç 5+(%  
+15V -15V



R4 R1  
uo 2V w %l 1ms uo  
uo1 uo uo1 uo  
R4 +15V D  
uo1 uo uo1  
uo

5. RC  
7-7 F%1F&1F1%\$ \_» C1=7&171\$ " %Ç :



+15V -15V A1  
uo uo

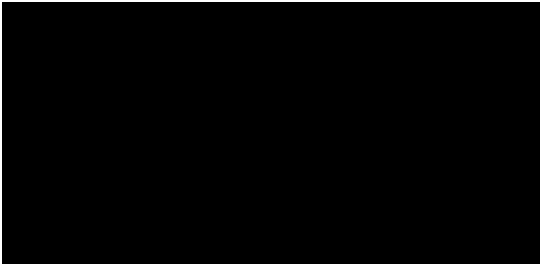
Rf  
Rf  
6.

Ç 5+(%  
1 w \*" &J 50% 700Hz~1kHz  
2 w &J`

1

		(Hz)	(ms)	(V)	(%)	$R_f=10k\Omega$
$R_f=10k\Omega$	2.19	405.8	2.464	w 5.7	48.64%	
$R_f=100k\Omega$	21.9	42.10	23.75	w 5.6	48.56%	

2 (  $u_o$  )  
 $R_{ab}=0$   $R_{bc}=0$   $u_o$



$R_{ab}=0$   
76.61Hz 13.05ms 2.361% w 5.9V  
82.13Hz 12.18ms 97.37% w 5.9V


$R_{bc}=0$

7-3

$U_{om}/V$	$T$	$R_w$	$u_o$ 0
$d$			
W 5.7V~W 5.9V	12ms-13ms		2.37%-97.37%

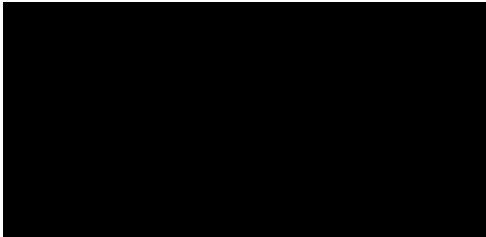
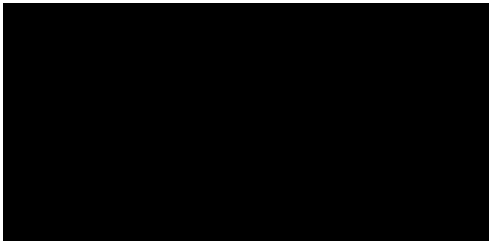
3

7-4

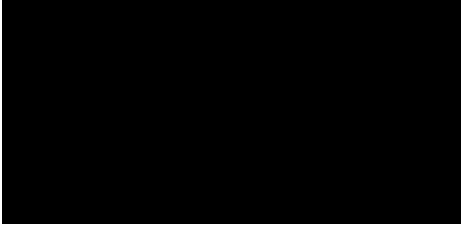
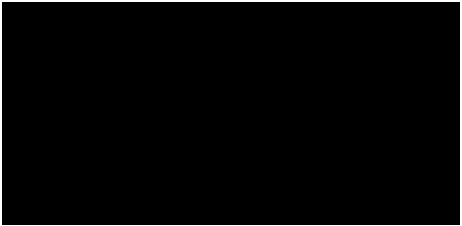
	$A_1$ $A_2$	$A_1$ $A_2$
	$R_1 = \underline{1/6.2 \text{ y } 100k=16.13k} \gg \underline{6.2V}$ $R_4 = \underline{155k} \gg$	
	$u_{o1}$ $u_o$ 	$u_{o1}$ $= \underline{1.082kHz}$ $= \underline{52.14\%}$ $u_o$ $= \underline{929.3 \text{ u}}$ $= \underline{454mV}$

4

7-5

	6-6 C	$C$ $R_4$ $R_3$ -15V $D$ C.
	$R_1 = \underline{1/6.2 \text{ y } 100k=16.13k} \gg \underline{73k} \gg \underline{6.2V}$ $R_4 =$	
	$u_{o1}$ $u_o$ 	$u_{o1}$ $u_{o1}$ <b>858.5Hz 6.653%</b> $u_o$ $u_o$ <b>1.162ms 596mV</b>
	$R_4$ +15V D $u_{o1}$ $u_o$ 	$u_{o1}$ $u_{o1}$ <b>846.7Hz 93.25%</b> $u_o$ $u_o$ <b>1.181ms 586mV</b>

5 RC

	$U_{opp}$	$U_{fpp}$	$ F $	$f_o$	$u_o$ $u_f$
$R=10k\gg$	23.4V	7.80V	0.333	150.9Hz	<div><div><math>u_{o1}</math> <math>u_f</math></div></div>
$R=20k\gg$	24.4V	8.20V	0.336	76.10Hz	<div><div><math>u_{o1}</math> <math>u_o</math></div></div>

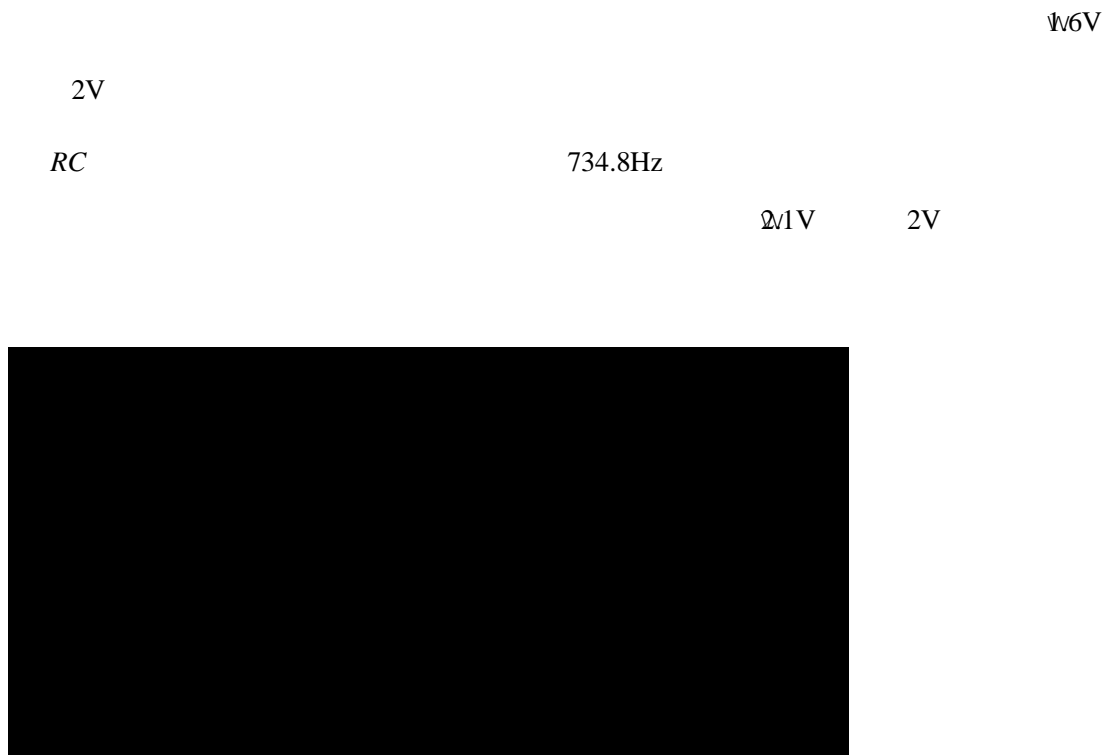
RC

$f_o$

$f_c=$  \_\_\_\_\_

6

C741  
1 \_\_\_\_\_ w 6.2V 50% 700Hz~1kHz  
2 2V w



1.  $d$   $f$   $C$   $f$   $d$   $R_2$   $f$   
 $50\%$   $R_2$   $f$   $R_2$
- 2.
3.  $3.3V$   
 $3.3V$   $3.3V$

