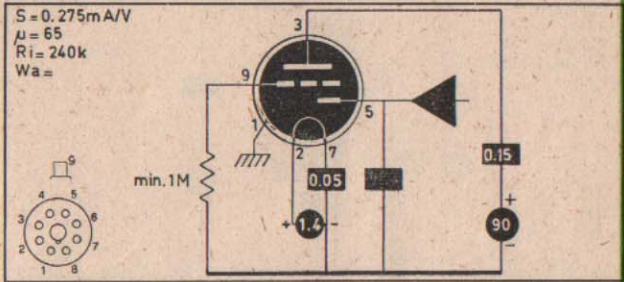
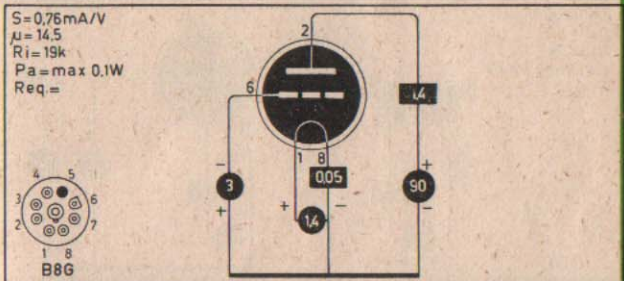


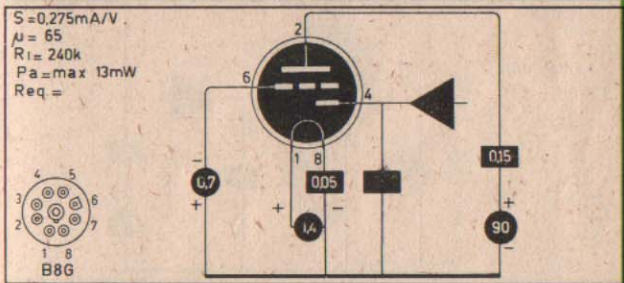
1G4



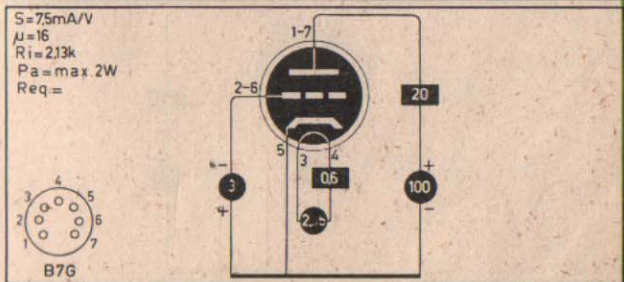
1H5



1LE3



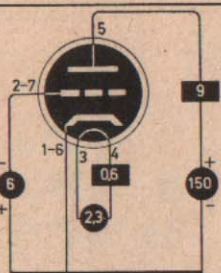
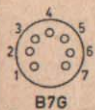
1LH4



2AF4

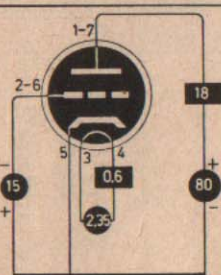
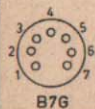
2BN4

S = 6,8mA/V
 $\mu = 43$
Ri = 6,3k
Pa = max. 2W
Req =



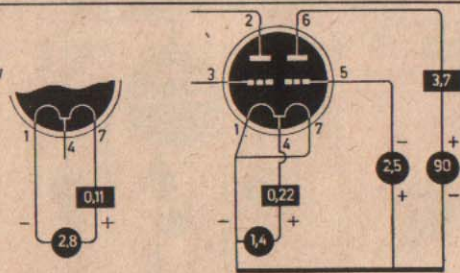
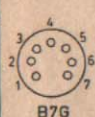
2T4

S = 7mA/V
 $\mu = 13$
Ri = 1,85k
Pa = max 3,5W
Req =



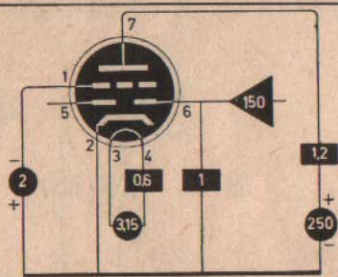
3A5

S = 1,8mA/V
 $\mu = 15$
Ri = 8,3k
Pa = max 2x0,5W
Req =



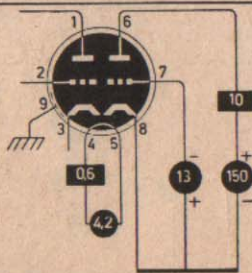
3AV6

S = 1,6mA/V
 $\mu = 100$
Ri = 62,5k
Pa = max 0,5W
Req =



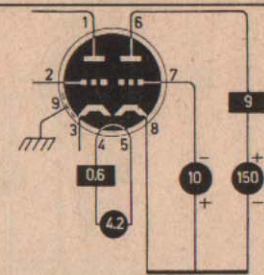
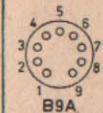
4BC8

S = 6,2mA/V
 $\mu = 35$
Ri = 5,8k
Pa = max. 2x2W
Req =



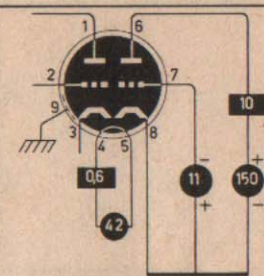
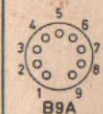
4BQ7A

S = 6,4mA/V
 $\mu = 39$
Ri = 6,1k
Pa = max 2x2W
Req =



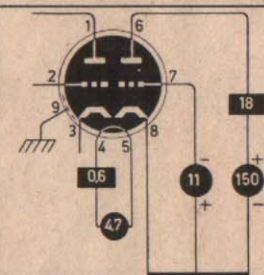
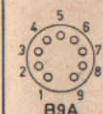
4BZ7

S = 6,8mA/V
 $\mu = 38$
Ri = 5,6k
Pa = max 2x2W
Req =



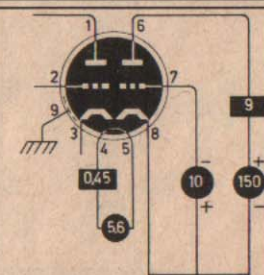
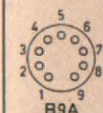
5BK7A

S = 9,3mA/V
 $\mu = 43$
Ri = 4,6k
Pa = max 2x2,7W
Req =



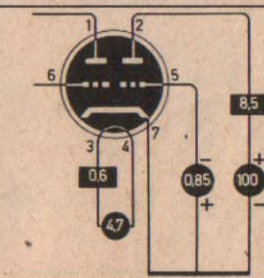
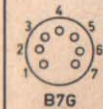
5BQ7A

S = 6,4mA/V
 $\mu = 39$
Ri = 6,1k
Pa = max. 2x2W
Req =



5J6

S = 5,3mA/V
 $\mu = 38$
Ri = 7,1k
Pa = max 2x1,5W
Req =

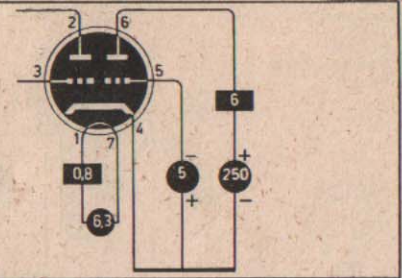


6A6

S=31mA/V
 $\mu=35$
Ri=11,3k
Pa=max 1W
Req =



UX7

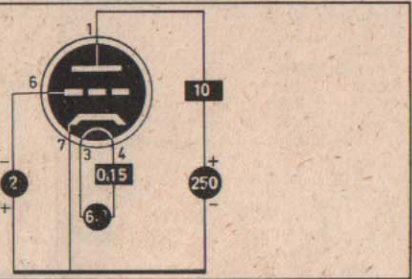


6AB4

S=5,5mA/V
 $\mu=60$
Ri=10,9k
Wa=max 2.5W



B7G

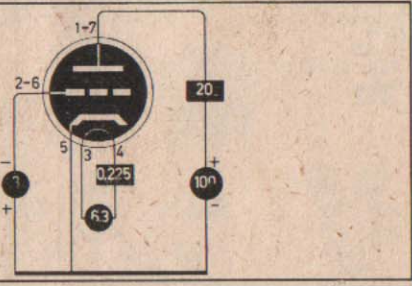


6AF4

S=7,5mA/V
 $\mu=16$
Ri=2,13k
Pa=max 2W
Req =

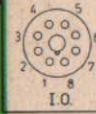


B7G

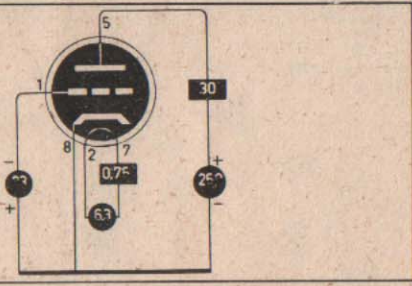


6AH4

S=4,5mA/V
 $\mu=8$
Ri=178k
Pa=max 75W
Req =



I.O.

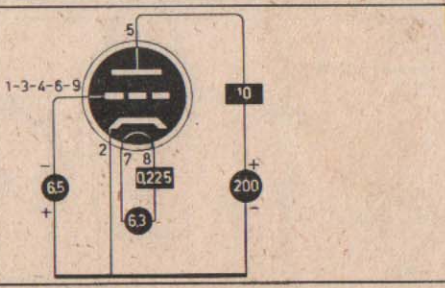


6AM4

S=9,8mA/V
 $\mu=85$
Ri=8,7k
Pa=max 2W
Req =

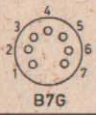


B9A

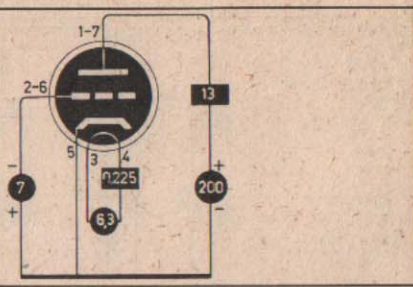


6AN4

S=10mA/V
 $\mu=70$
Ri=7k
Pa=max .4W
Req =

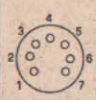


B7G

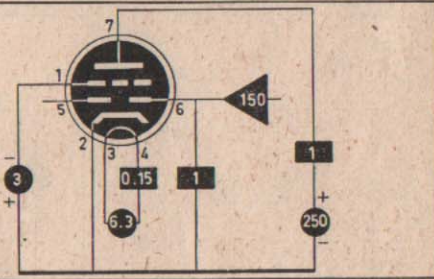


6AQ6

S=1.2 mA/V
 $\mu=70$
Ri=58k
Wa=max .0.5W



B7G

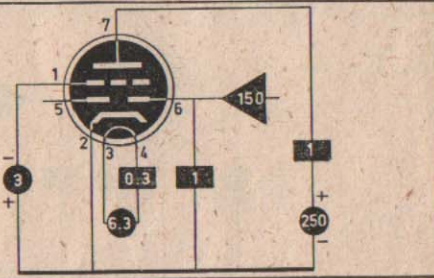


6AT6

S=1.2 mA/V
 $\mu=70$
Ri=58k
Wa=max .0.5W

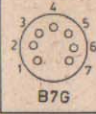


B7G

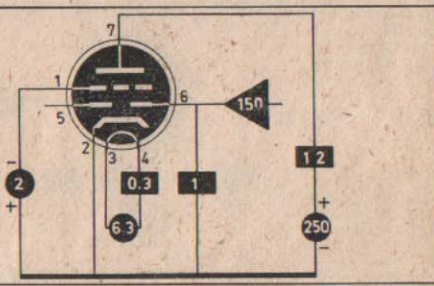


6AV6

S=1.6 mA/V
 $\mu=100$
Ri=62.5k
Wa=max .1W



B7G

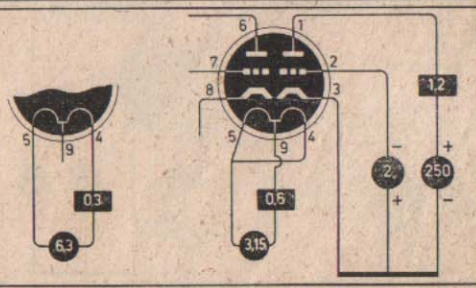


6AX7

S=1,6mA/V
 $\mu=100$
Ri=62,5k
Pa=max 2x1W
Req =

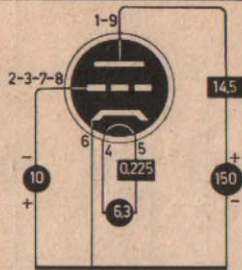


B9A



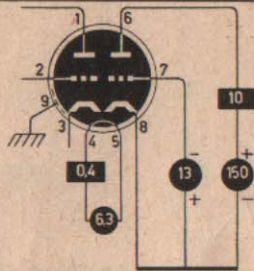
6BC4

S=10mA/V
 $\mu=48$
Ri=4.8k
Pa=max. 2.5W
Req.=



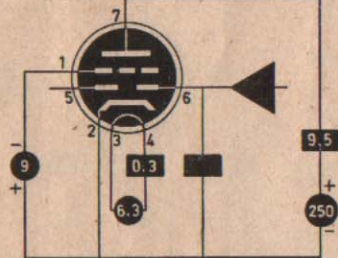
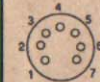
6BC8

S=6.2mA/V
 $\mu=35$
Ri=5.8k
Pa=max. 2W
Req.=



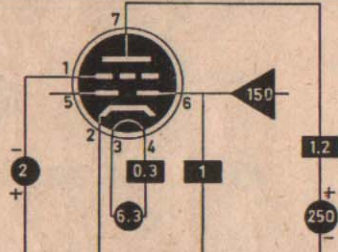
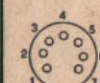
6BF6

S=1.9 mA/V
 $\mu=16$
Ri=8.5k
Wa=max. 2.5W



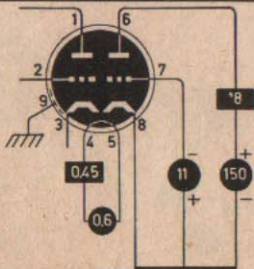
6BK6

S=1.6 mA/V
 $\mu=100$
Ri=62.5k
Wa=max. 1W



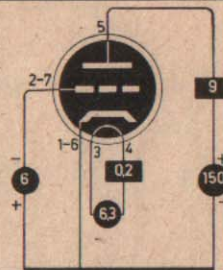
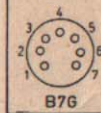
6BK7A

S=9.3mA/V
 $\mu=43$
Ri=4.6k
Pa=max. 2.7W
Req.=



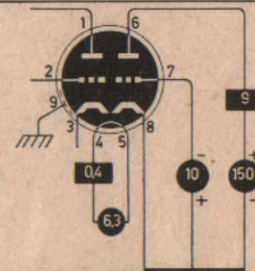
6BN4

S=6.8mA/V
 $\mu=43$
Ri=6.3k
Pa=max. 1.5W
Req.=



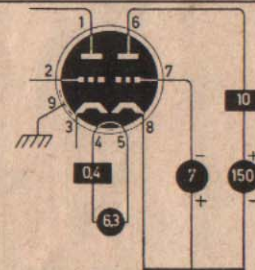
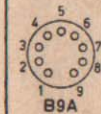
6BQ7A

S=6.4mA/V
 $\mu=39$
Ri=6.1k
Pa=max. 2x2W
Req.=



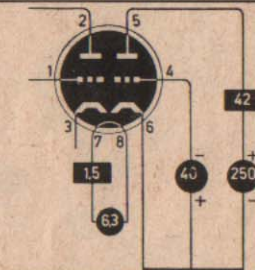
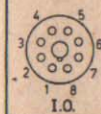
6BS8

S=7.2mA/V
 $\mu=36$
Ri=5k
Pa=max. 2x2W
Req.=



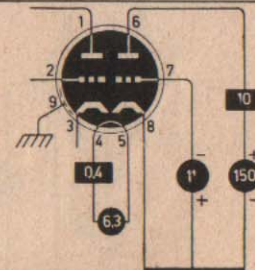
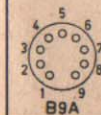
6BX7

S=7.6mA/V
 $\mu=10$
Ri=1.3k
Pa=max. 2x10W
Req.=



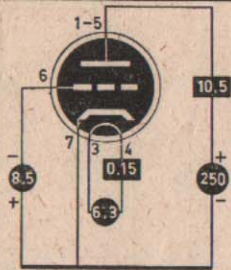
6BZ7

S=6.8mA/V
 $\mu=38$
Ri=5.6k
Pa=max. 2x2W
Req.=



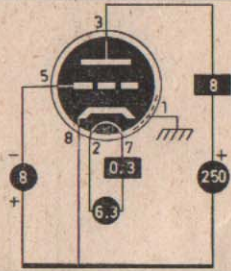
6C4

S=2.2mA/V
 $\mu=17$
Ri=7.7k
Wa=max.3.5W



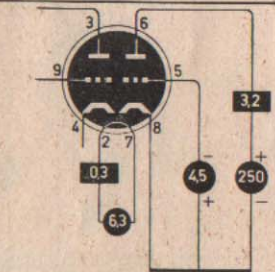
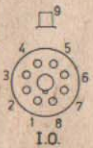
6C5

S=2mA/V
 $\mu=20$
Ri=10k
Wa=max.2.5W



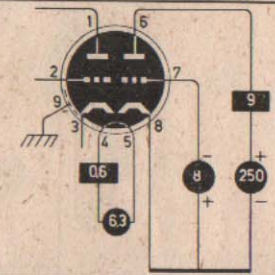
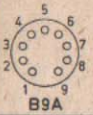
6C8

S=16mA/V
 $\mu=36$
Ri=22.5k
Pa=max.2x1W
Req=



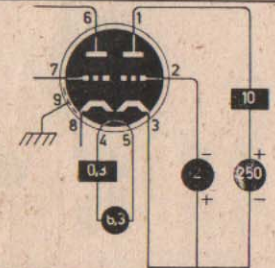
6CG7

S=26mA/V
 $\mu=20$
Ri=7.7k
Pa=max.2x3.5W
Req=



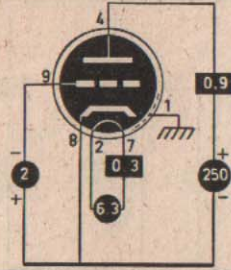
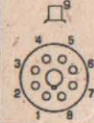
6DT8

S=5.5mA/V
 $\mu=80$
Ri=10.9k
Pa=max.2x2.5W
Req=



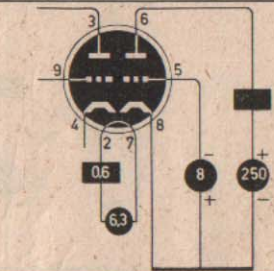
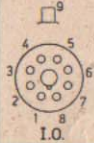
6F5

S=1.5mA/V
 $\mu=100$
Ri=66k
Wa=



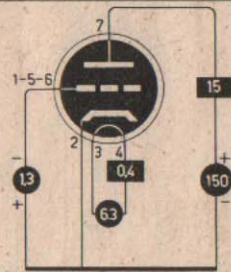
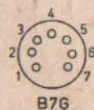
6F8

S=26mA/V
 $\mu=20$
Ri=7.7k
Pa=max.2x2.5W
Req=



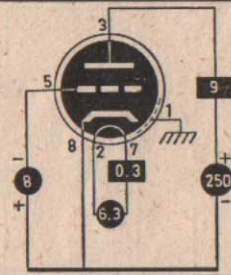
6J4

S=12.2mA/V
 $\mu=55$
Ri=4.5k
Pa=max.2.25W
Req=



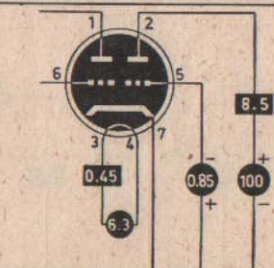
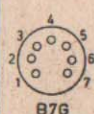
6J5

S=2.6mA/V
 $\mu=20$
Ri=7.7k
Wa=max.2.5W



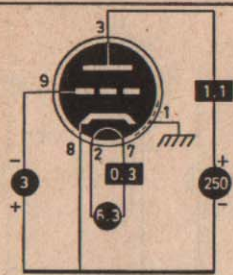
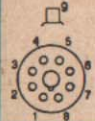
6J6

S=5.3mA/V
 $\mu=38$
Ri=7.1k
Wa=max.1.5W



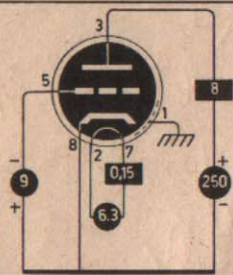
6K5

S=1.4 mA/V
 $\mu=70$
Ri=50k
Wa=



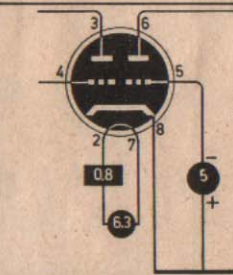
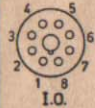
6L5

S=1.9mA/V
 $\mu=17$
Ri=9k
Pa=max.2W
Req=



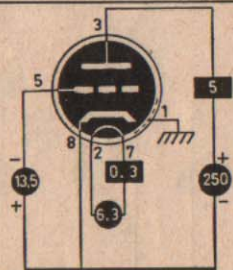
6N7

S=31mA/V
 $\mu=35$
Ri=11.3k
Pa=max.1W
Req=



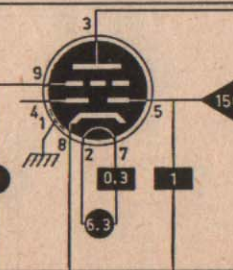
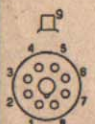
6P5

S=1.4 mA/V
 $\mu=13.8$
Ri=9.5k
Wa=



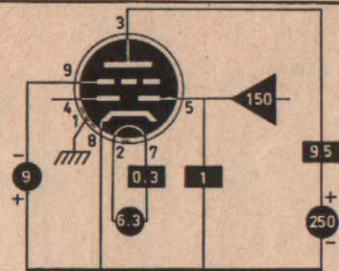
6Q7

S=1.2mA/V
 $\mu=70$
Ri=58k
Wa=max.1W



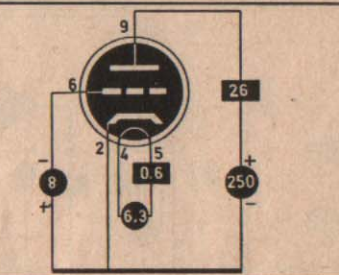
6R7

S=1.9 mA/V
 $\mu=16$
Ri=8.5k
Wa=



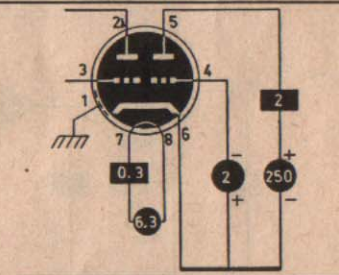
6S4

S=4.5mA/V
 $\mu=16$
Ri=3.6k
Wa=max.7.5W



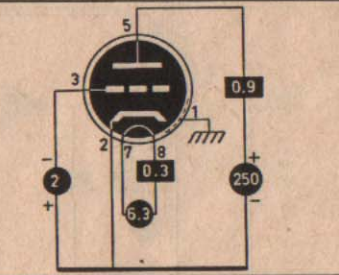
6SC7

S=1.325 mA/V
 $\mu=70$
Ri=53k
Wa=



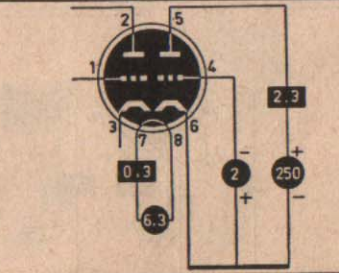
6SF5

S=1.5 mA/V
 $\mu=100$
Ri=66k
Wa=



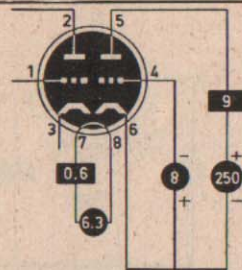
6SL7

S=1.6 mA/V
 $\mu=70$
Ri=44k
Wa=max.2x1W

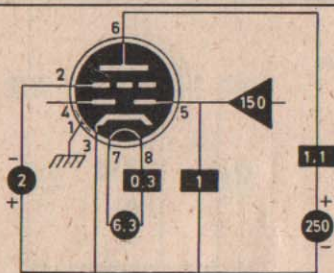


6SN7

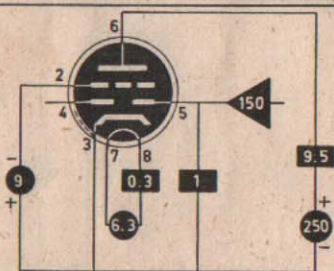
$S=2.6 \text{ mA/V}$
 $\mu=20$
 $R_i=7.7 \text{ k}$
 $W_a=\text{max. } 2 \times 2.5 \text{ W}$

**6SQ7**

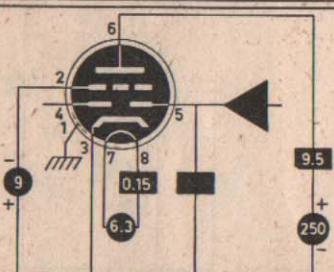
$S=1.18 \text{ mA/V}$
 $\mu=100$
 $R_i=85 \text{ k}$
 $W_a=\text{max. } 0.1 \text{ W}$

**6SR7**

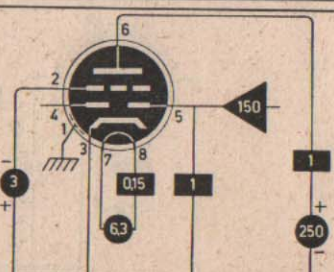
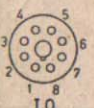
$S=1.9 \text{ mA/V}$
 $\mu=16$
 $R_i=8.5 \text{ k}$
 $W_a=\text{max. } 2.5 \text{ W}$

**6ST7**

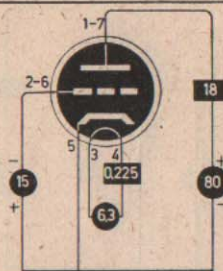
$S=1.88 \text{ mA/V}$
 $\mu=16$
 $R_i=8.5 \text{ k}$
 $W_a=\text{max. } 2.5 \text{ W}$

**6SZ7**

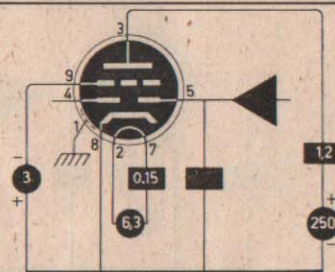
$S=1.2 \text{ mA/V}$
 $\mu=70$
 $R_i=58.7 \text{ k}$
 $P_a=\text{max. } 2.5 \text{ W}$
 $R_{eq} =$

**6T4**

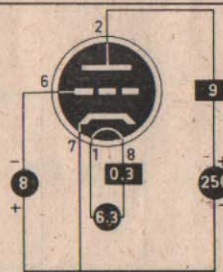
$S=7 \text{ mA/V}$
 $\mu=13$
 $R_i=185 \text{ k}$
 $P_a=\text{max. } 3.5 \text{ W}$
 $R_{eq} =$

**6T7**

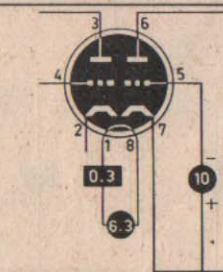
$S=1.05 \text{ mA/V}$
 $\mu=65$
 $R_i=62 \text{ k}$
 $P_a=\text{max. } 0.5 \text{ W}$
 $R_{eq} =$

**7A4**

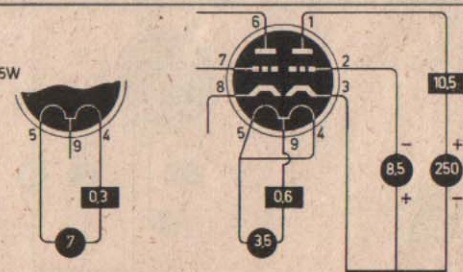
$S=2.6 \text{ mA/V}$
 $\mu=20$
 $R_i=7.7 \text{ k}$
 $W_a=\text{max. } 2.5 \text{ W}$

**7AF7**

$S=2.1 \text{ mA/V}$
 $\mu=16$
 $R_i=7.6 \text{ k}$
 $W_a=\text{max. } 2 \times 1.5 \text{ W}$

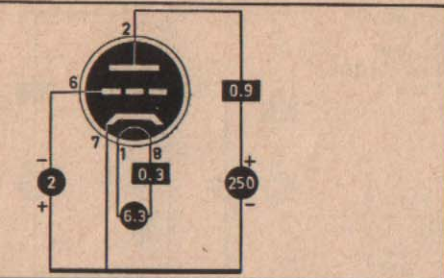
**7AU7**

$S=2.2 \text{ mA/V}$
 $\mu=17$
 $R_i=7.7 \text{ k}$
 $P_a=\text{max. } 2 \times 2.75 \text{ W}$
 $R_{eq} =$



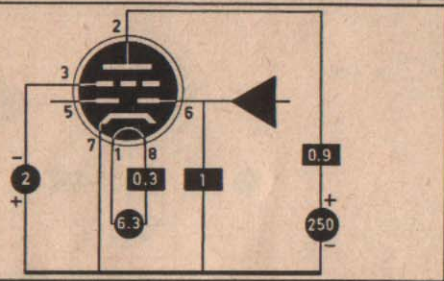
7B4

S=1.5 mA/V
 $\mu=100$
Ri=66k
Wa=



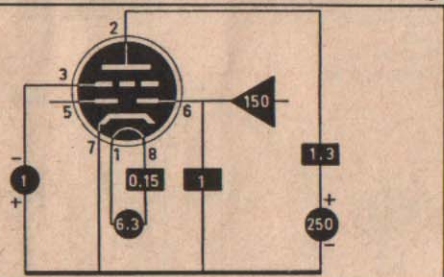
7B6

S=1.1 mA/V
 $\mu=100$
Ri=91k
Wa=



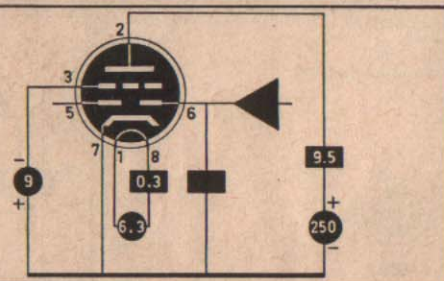
7C6

S=1 mA/V
 $\mu=100$
Ri=100k
Wa=



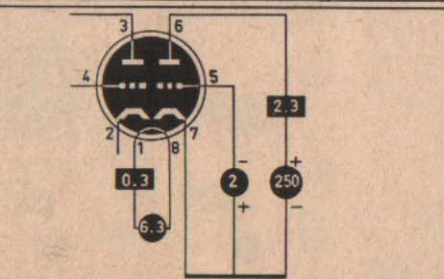
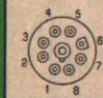
7E6

S=1.88 mA/V
 $\mu=16$
Ri=8.5k
Wa=max. 2.5W



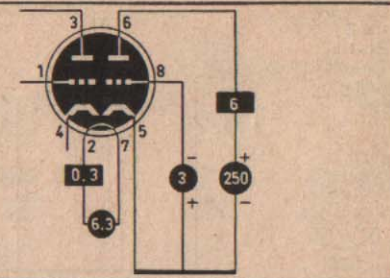
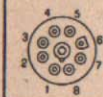
7F7

S=1.6 mA/V
 $\mu=70$
Ri=44k
Wa=max. 2x 1W



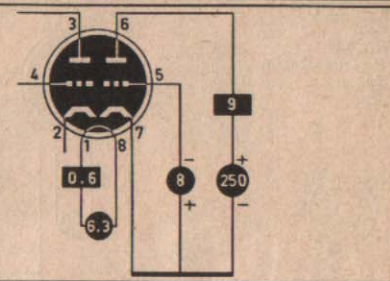
7F8

S=3.3 mA/V
 $\mu=48$
Ri=14.5k
Wa=max. 3.5W



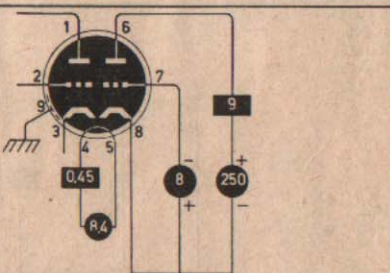
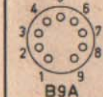
7N7

S=2.6 mA/V
 $\mu=20$
Ri=7.7k
Wa=max. 2x 2.5W



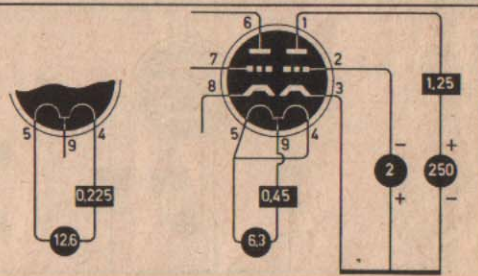
8CG7

S=2.6 mA/V
 $\mu=20$
Ri=7.7k
Pa=max 2x3.5W
Req=



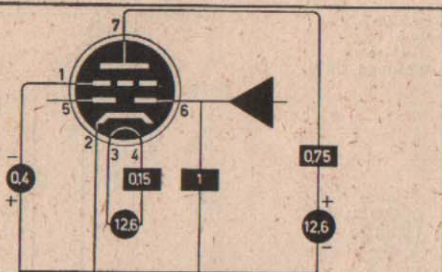
12AD7

S=1.6 mA/V
 $\mu=100$
Ri=62.5k
Pa=max 2x1W
Req=



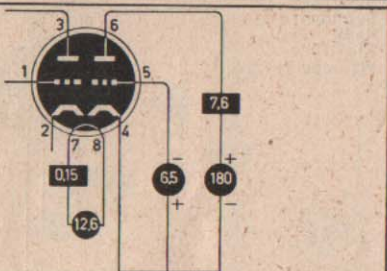
12AE6

S=1mA/V
 $\mu=15$
Ri=15k
Pa=max. 90mW
Req.=



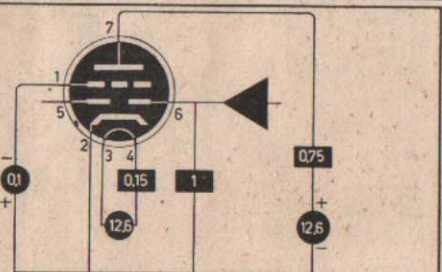
12AH7

S=1.9mA/V
 $\mu=16$
Ri=8.4k
Pa=max. 2x1.5W
Req.=



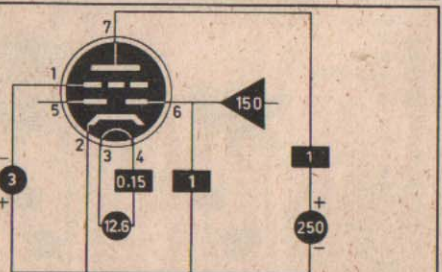
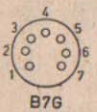
12AJ6

S=12mA/V
 $\mu=55$
Ri=45k
Pa=max. 90mW
Req.=



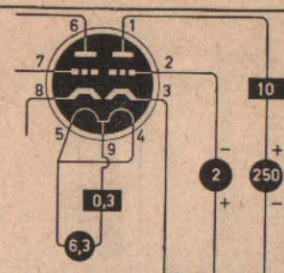
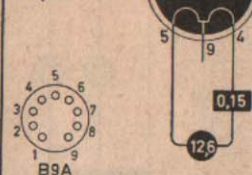
12AT6

S=1.2mA/V
 $\mu=70$
Ri=58k
Wa=max. 0.5W



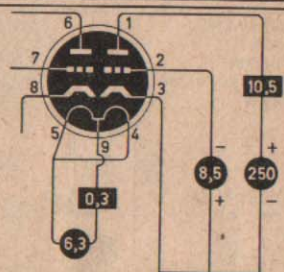
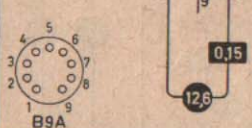
12AT7

S=5.5mA/V
 $\mu=60$
Ri=11k
Pa=max. 2x2.5W
Req.=



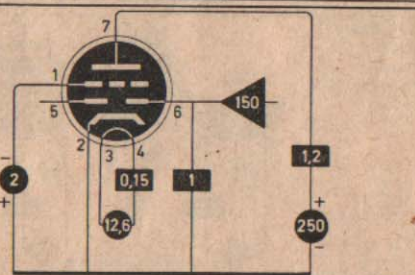
12AU7

S=2.2mA/V
 $\mu=17$
Ri=7.7k
Pa=max. 2x2.75W
Req.=



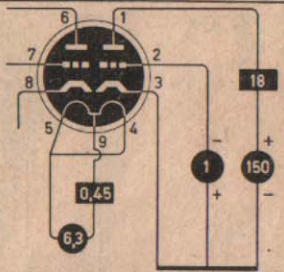
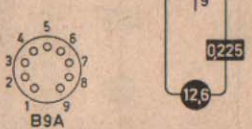
12AV6

S=1.6mA/V
 $\mu=100$
Ri=62.5k
Pa=max. 1W
Req.=



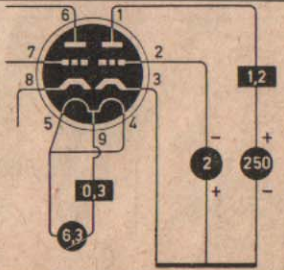
12AV7

S=8.5mA/V
 $\mu=41$
Ri=4.8k
Pa=max. 2x2.7W
Req.=

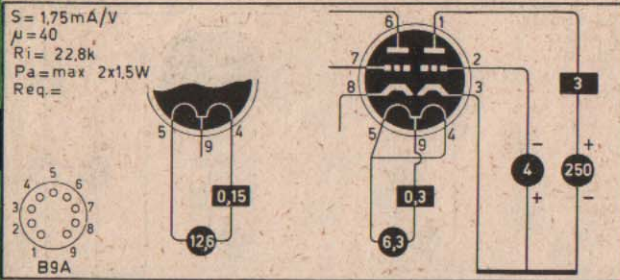


12AX7

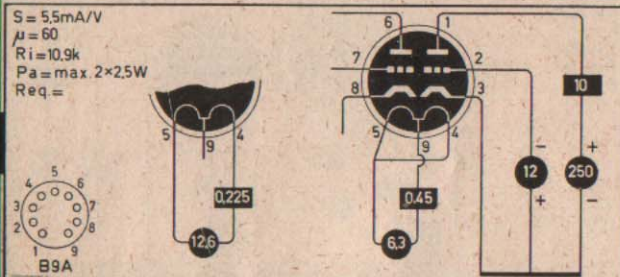
S=1.6mA/V
 $\mu=100$
Ri=62.5k
Pa=max. 2x1W
Req.=



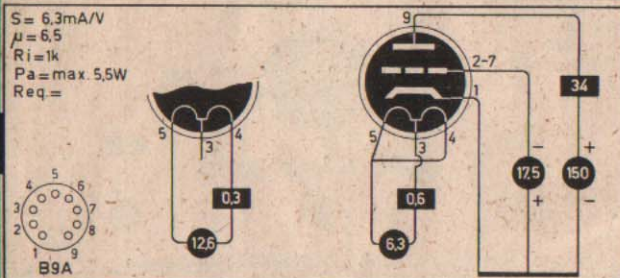
12AY7



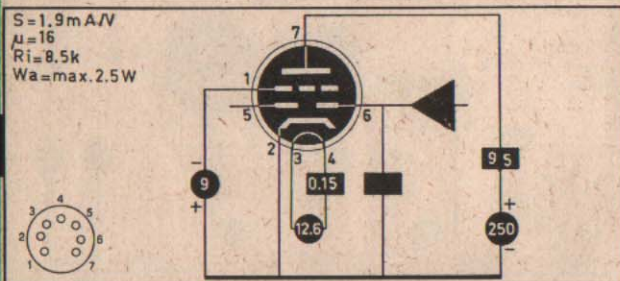
12AZ7



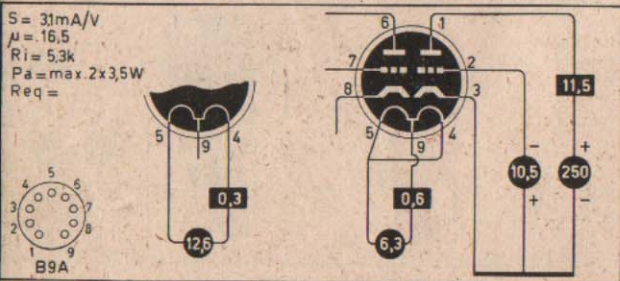
12B4A



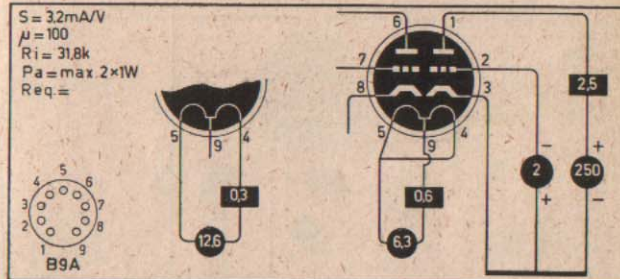
12BF6



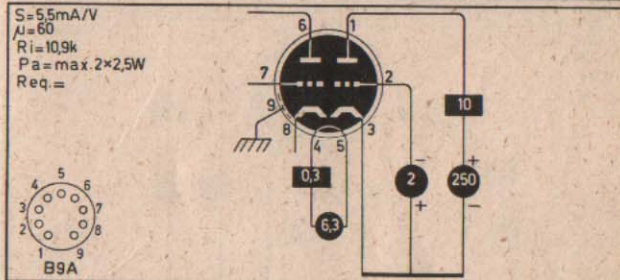
12BH7



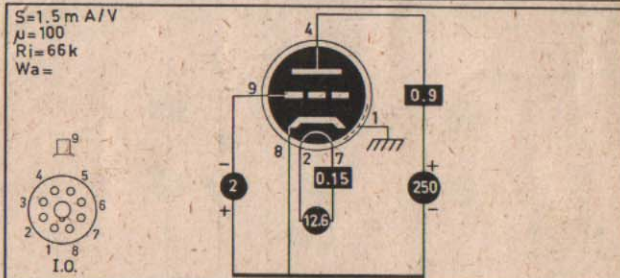
12B7Z



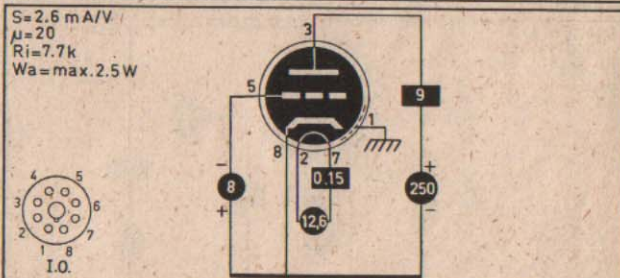
12DT8



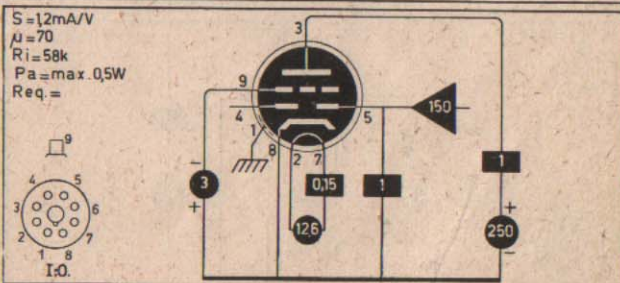
12F5



12J5

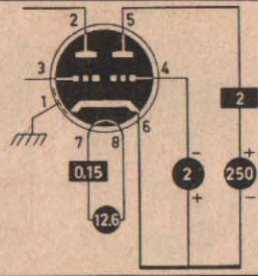


12Q7



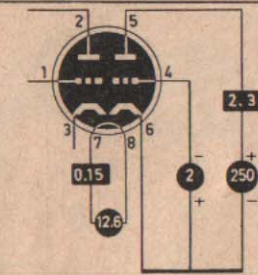
12SC7

S=1.325mA/V
 $\mu=70$
Ri=53k
Wa=



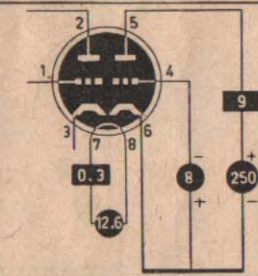
12SL7

S=1.6mA/V
 $\mu=70$
Ri=44k
Wa=



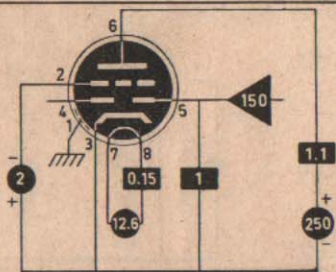
12SN7

S=2.6mA/V
 $\mu=20$
Ri=7.7k
Wa=max. 2x2.5W



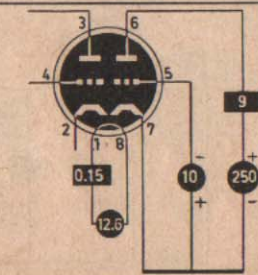
12SQ7

S=1.18mA/V
 $\mu=100$
Ri=85k
Wa=



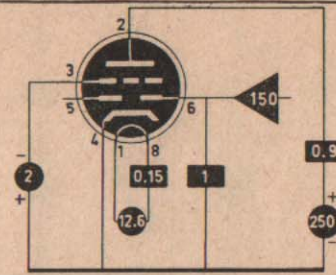
14AF7

S=2.1mA/V
 $\mu=16$
Ri=7.6k
Wa=max. 2x2.5W



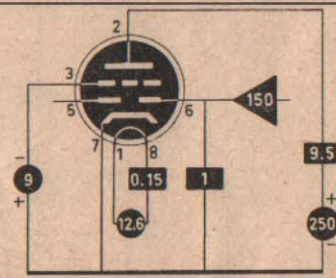
14B6

S=1.1mA/V
 $\mu=100$
Ri=91k
Wa=max. 0.5W



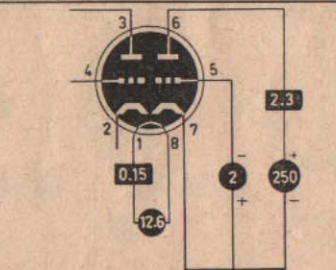
14E6

S=1.9mA/V
 $\mu=16$
Ri=8.5k
Wa=max. 2.5W



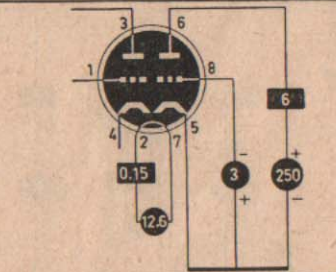
14F7

S=1.6mA/V
 $\mu=70$
Ri=44k
Wa=max. 2x1W



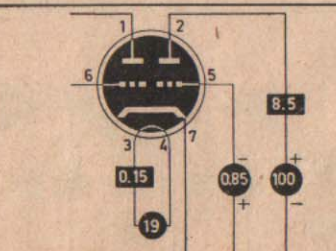
14F8

S=3.3mA/V
 $\mu=48$
Ri=14.5k
Wa=max. 3.5W



19J6

S=5.3mA/V
 $\mu=38$
Ri=7.1k
Wa=max. 2x1.5W

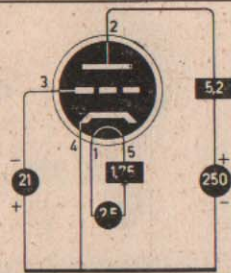


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$S=0,975\text{mA/V}$
 $\mu=9$
 $R_i=9,25\text{k}$
 $P_a=\text{max. } 1,3\text{W}$
 $R_{eq}=\text{=}$



UX5

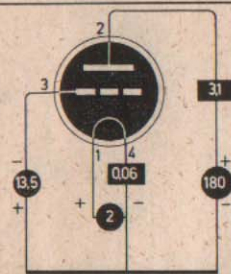


30

$S=0,9\text{mA/V}$
 $\mu=9,3$
 $R_i=10,3\text{k}$
 $P_a=\text{max. } 0,5\text{W}$
 $R_{eq}=\text{=}$



UX4

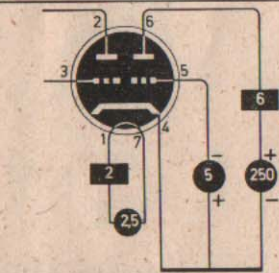


53

$S=3,1\text{mA/V}$
 $\mu=35$
 $R_i=11,3\text{k}$
 $P_a=\text{max. } 1\text{W}$
 $R_{eq}=\text{=}$



UX7

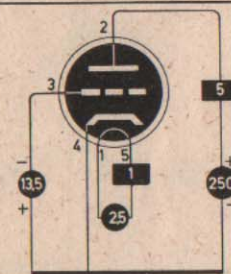


56

$S=1,5\text{mA/V}$
 $\mu=13,8$
 $R_i=9,5\text{k}$
 $P_a=\text{max. } 1,25\text{W}$
 $R_{eq}=\text{=}$



UX5

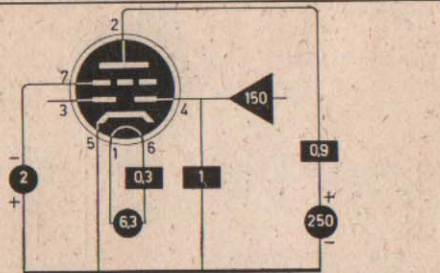


75

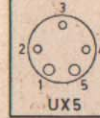
$S=1,1\text{mA/V}$
 $\mu=100$
 $R_i=9\text{k}$
 $P_a=\text{max. } 0,2\text{W}$
 $R_{eq}=\text{=}$



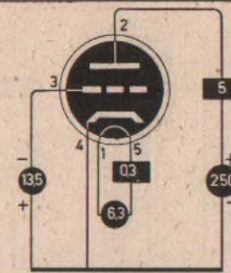
UX6



$S=1,45\text{mA/V}$
 $\mu=13,8$
 $R_i=9,5\text{k}$
 $P_a=\text{max. } 1,5\text{W}$
 $R_{eq}=\text{=}$



UX5

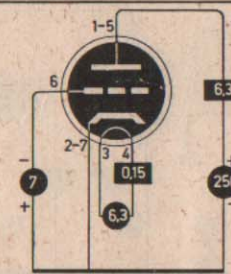


76

$S=2,2\text{mA/V}$
 $\mu=25$
 $R_i=11,4\text{k}$
 $P_a=\text{max. } 1,6\text{W}$
 $R_{eq}=\text{=}$



B7G

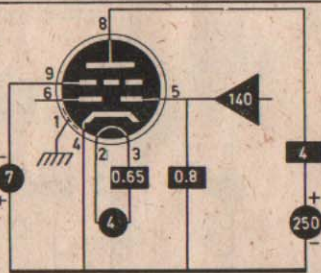


9002

$S=2\text{mA/V}$
 $\mu=27$
 $R_i=13,5\text{k}$
 $W_a=\text{max. } 1,5\text{W}$



ABC1

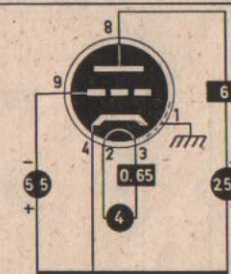


ABC1

$S=2,5\text{mA/V}$
 $\mu=30$
 $R_i=12\text{k}$
 $W_a=\text{max. } 2\text{W}$



AC2

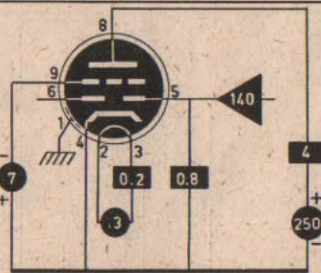


AC2

$S=2\text{mA/V}$
 $\mu=27$
 $R_i=13,5\text{k}$
 $W_a=\text{max. } 1,5\text{W}$

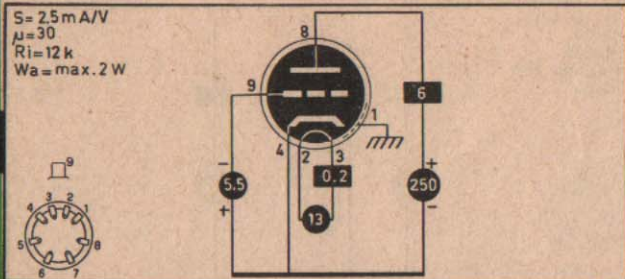


CBC1

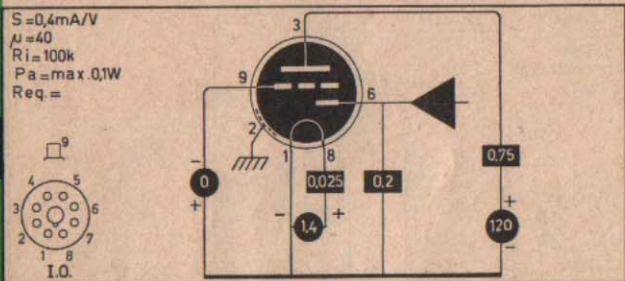


CBC1

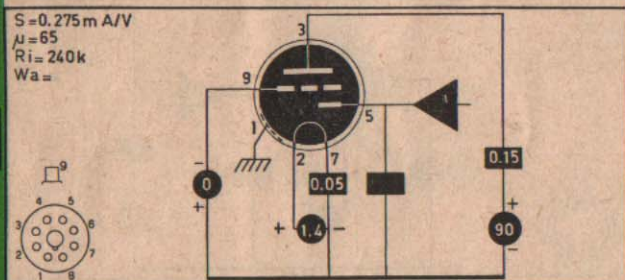
CC2



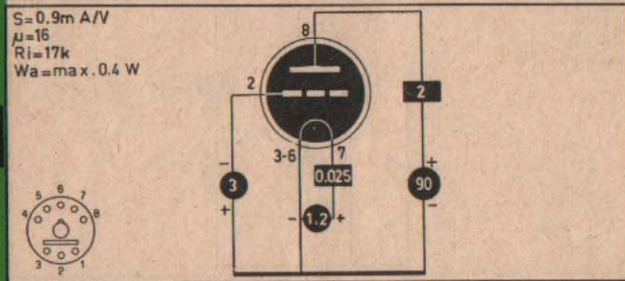
DAC21



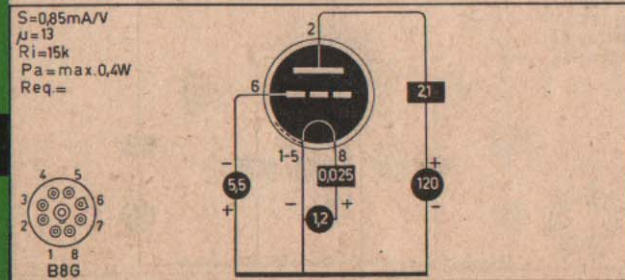
DAC32



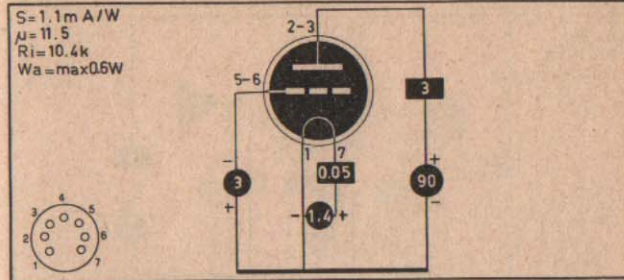
DC11



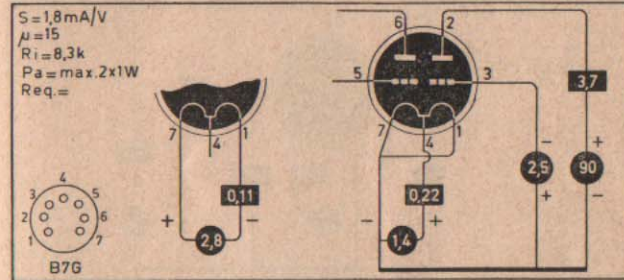
DC25



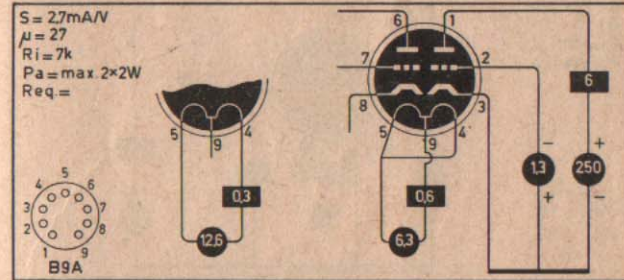
DC90



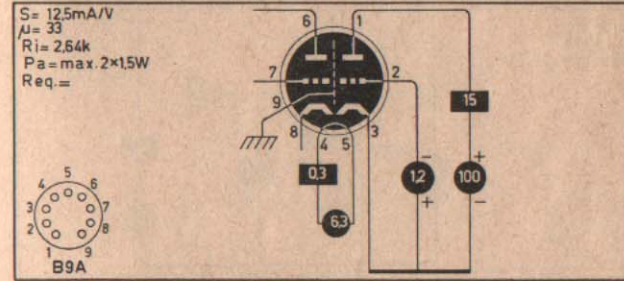
DCC90



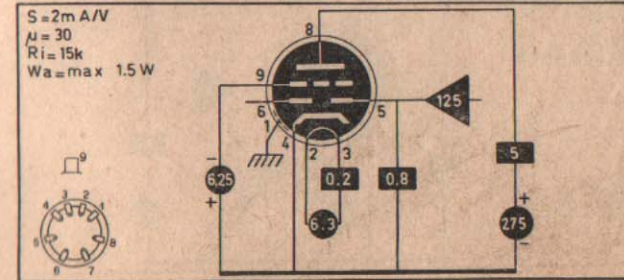
E80CC



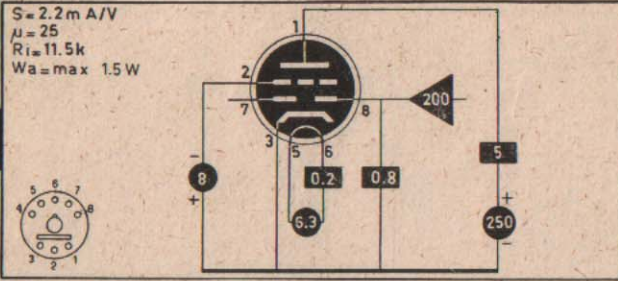
E88CC



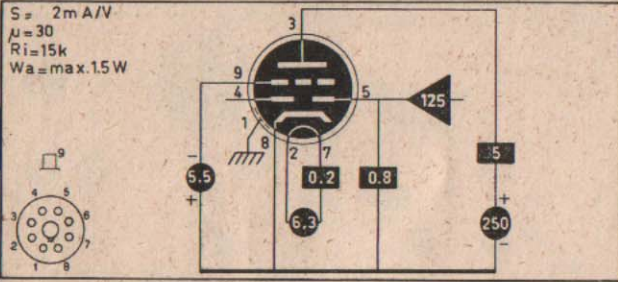
EBC3



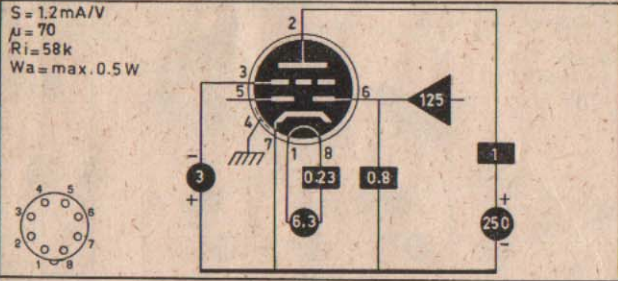
EBC11



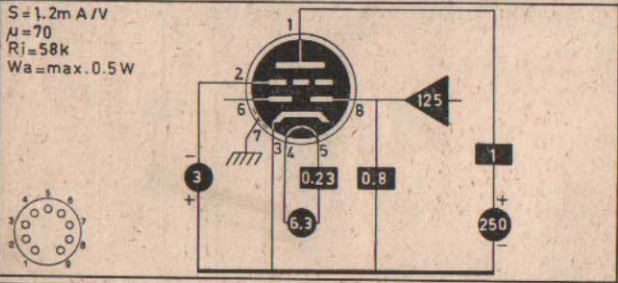
EBC33



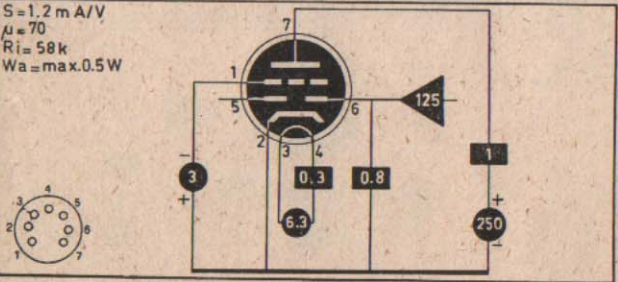
EBC41



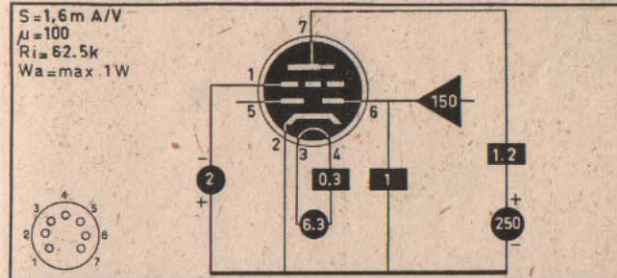
EBC81



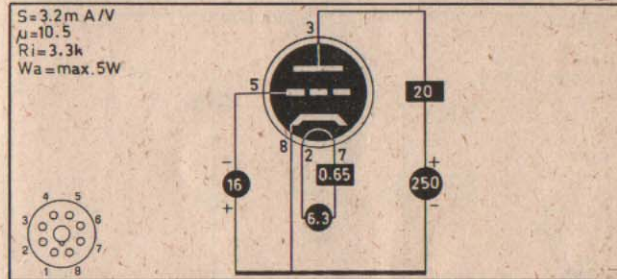
EBC90



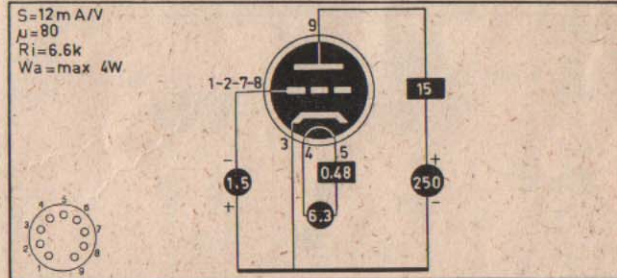
EC91



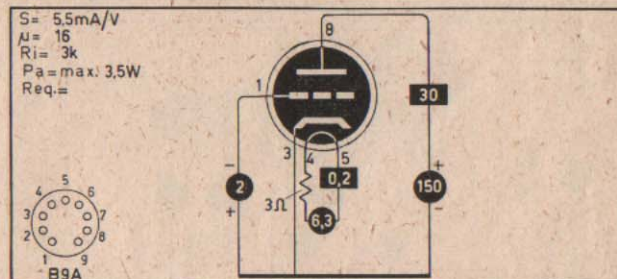
EC31



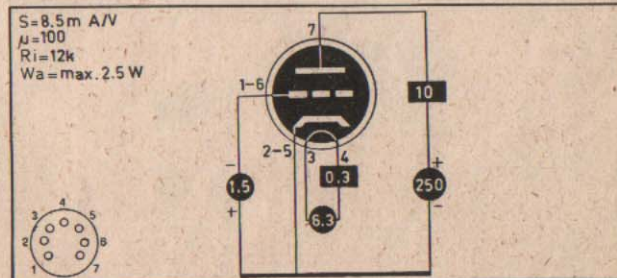
EC80



EC81

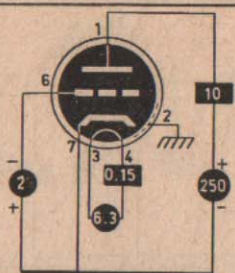


EC91



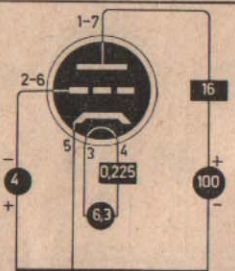
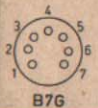
EC92

S=5mA/V
 $\mu=60$
Ri=12k
Wa=max. 2.5W



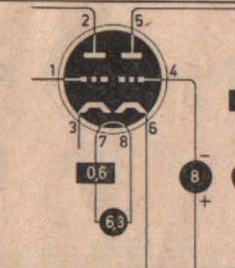
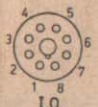
EC93

S=8mA/V
 $\mu=15$
Ri=1,9k
Pa=max. 2,25W
Req=



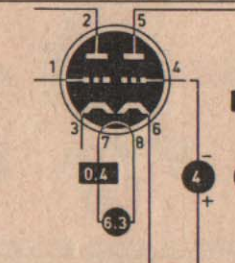
ECC32

S=2,6mA/V
 $\mu=20$
Ri=7,7k
Pa=max. 2x2,5W
Req=



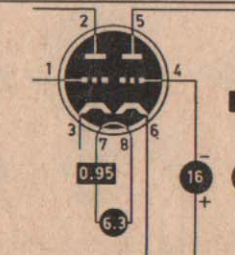
ECC33

S=3,6 mA/V
 $\mu=35$
Ri=9,7k
Wa=



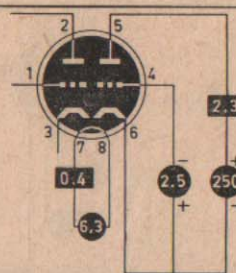
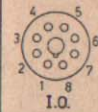
ECC34

S=2,2 mA/V
 $\mu=11,5$
Ri=5,2k
Wa=



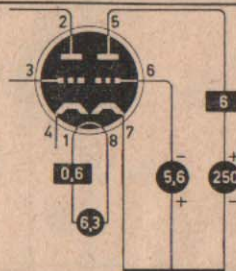
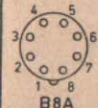
ECC35

S=2mA/V
 $\mu=68$
Ri=34k
Wa=



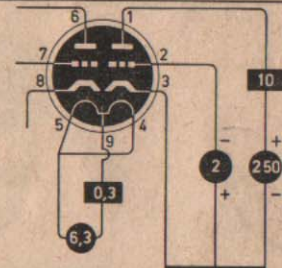
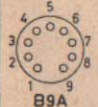
ECC40

S=2,9mA/V
 $\mu=32$
Ri=11k
Pa=max. 2x1,5W
Req=



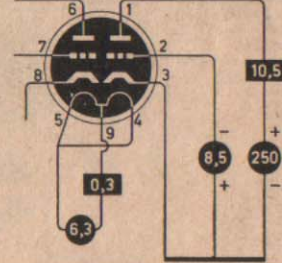
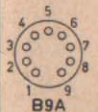
ECC81

S=5,5mA/V
 $\mu=60$
Ri=11k
Pa=max. 2x2,5W
Req=



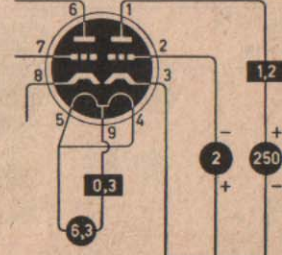
ECC82

S=2,2mA/V
 $\mu=17$
Ri=7,7k
Pa=max. 2x2,75W
Req=



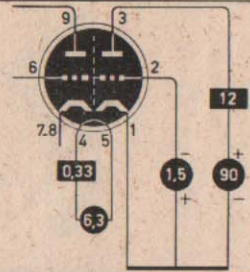
ECC83

S=1,6mA/V
 $\mu=100$
Ri=62,5k
Pa=max. 2x1W
Req=



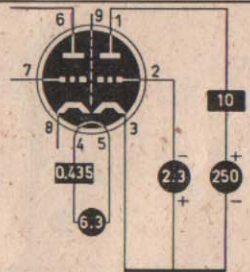
ECC84

S = 6mA/V
 $\mu = 24$
 $R_i = 4k$
 $P_a = \max 2 \times 2W$
 $R_{eq} =$



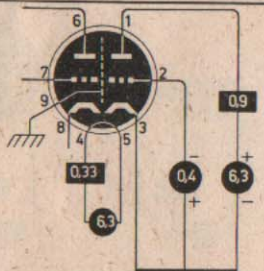
ECC85

S = 5.9mA/V
 $\mu = 57$
 $R_i = 9.7k$
 $W_a = \max. 2 \times 2.5W$



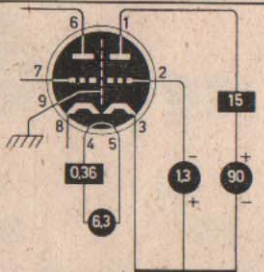
ECC86

S = 26mA/V
 $\mu = 14$
 $R_i = 5k$
 $P_a = \max$
 $R_{eq} =$



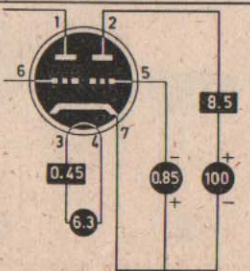
ECC88

S = 12.5mA/V
 $\mu = 33$
 $R_i = 2.64k$
 $P_a = \max 2 \times 1.8W$
 $R_{eq} = 300\Omega$



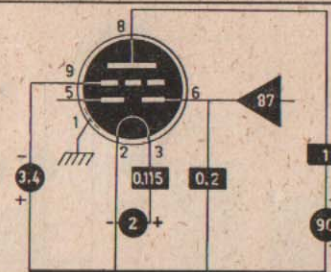
ECC91

S = 5.3mA/V
 $\mu = 38$
 $R_i = 7.1k$
 $W_a = \max. 2 \times 1.5W$



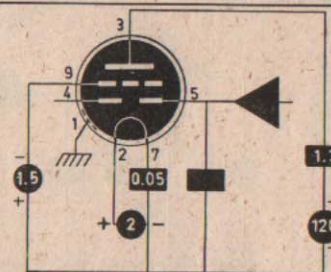
KBC1

S = 0.7mA/V
 $\mu = 16$
 $R_i = 23k$
 $W_a = \max. 0.6W$



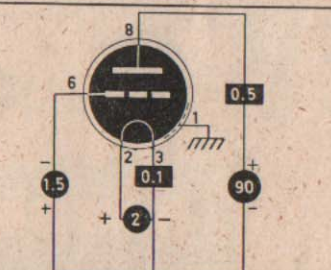
KBC32

S = 1.2mA/V
 $\mu = 25$
 $R_i = 21k$
 $W_a = \max. 0.6W$



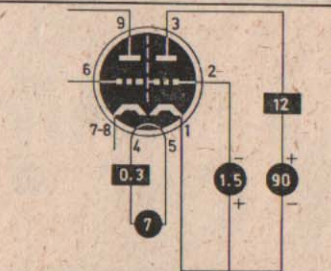
KC4

S = 0.8mA/V
 $\mu = 30$
 $R_i = 37.5k$
 $W_a = \max. 0.5W$



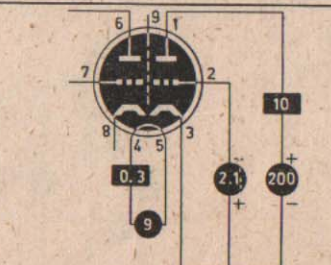
PCC84

S = 6mA/V
 $\mu = 24$
 $R_i = 4k$
 $W_a = \max 2 \times 2W$



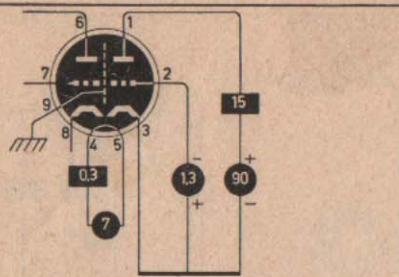
PCC85

S = 5.8mA/V
 $\mu = 48$
 $R_i = 8.3k$
 $W_a = \max. 2 \times 2.5W$



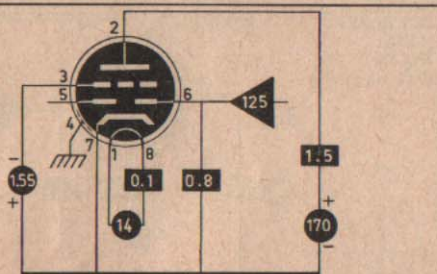
PCC88

S=12,5mA/V
 $\mu=33$
Ri=2,64k
Pa=max. 2x1,8W
Req=300 Ω



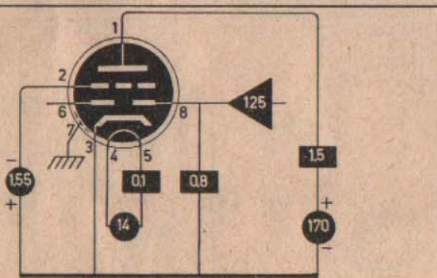
UBC41

S=1,65mA/V
 $\mu=70$
Ri=42k
Wa=max. 0.5W



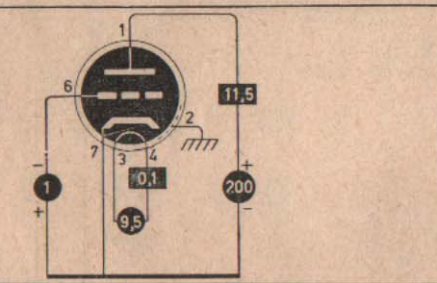
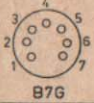
UBC81

S=1,65mA/V
 $\mu=70$
Ri=42k
Pa=max. 0.5W
Req=



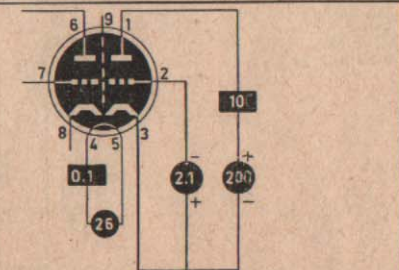
UC92

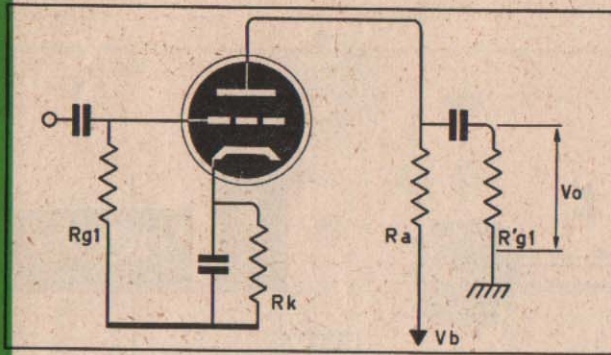
S=6,7mA/V
 $\mu=70$
Ri=10,5k
Pa=max. 2,5W
Req=



UCC85

S=5,8mA/V
 $\mu=48$
Ri=8,3k
Wa=max. 2x2,5W





		Vb: 90V					
Ra	k	470			1000		
R'g1	M	1	4,7	10	2,2	4,7	10
Rk	k	-	-	-	-	-	-
la	mA	0,05	0,05	0,05	0,03	0,03	0,03
Vo max	Veff	4,89	6,2	6,65	5,66	6,8	7,45
A	-	28,7	32,6	33,2	35,4	37,8	39,2
d	%	4,5	4,5	4,7	4,5	4,65	4,7
Rg1: 270k							

		Vb: 100V					
Ra	k	100		270		470	
R'g1	k	270	470	270	470	470	1000
Rk	k	4,7	5,6	8,2	10	12	15
la	mA	0,23	0,21	0,13	0,12	0,09	0,08
Vo max	Veff	5	5,2	4,6	6	6,1	8,5
A	-	35,7	37,2	41,8	42,9	46,9	50
d	%	5	5,1	4,1	4,9	4,4	5

		Vb: 250V					
Ra	k	100		270		470	
R'g1	k	270	470	270	470	470	1000
Rk	k	1,8	1,8	3,3	3,3	4,7	5,6
la	mA	0,84	0,84	0,45	0,45	0,3	0,28
Vo max	Veff	26,5	28,5	24,5	29	25	33,5
A	-	53	52	59,8	64,4	65,8	69,8
d	%	5	4,4	4,95	4,4	4,1	4,2
Rg1: 270k							

		Vb: 100V					
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	1,8	2,2	2,7	3,9	6,8	8,2
la	mA	1,07	1	0,62	0,56	0,26	0,24
Vo max	Veff	10,6	13,2	9,5	14,2	11	12,8
A	-	10,4	10,6	10,9	11,5	11,3	11,6
d	%	4,5	4,9	4,7	4,8	4,9	4,3
Rg1: 270k							
		Vb: 250V					
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	1,5	1,8	2,2	3,3	5,6	8,2
la	mA	2,85	2,69	1,63	1,46	0,66	0,6
Vo max	Veff	31,2	38	26	40,4	28,5	40,6
A	-	11,1	11,7	11,7	12,3	12,1	12,2
d	%	4,5	4,6	4,4	4,5	4,5	4,9

		Vb: 100V					
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	1,2	1,2	2,2	2,7	6,8	8,2
la	mA	1,22	1,22	0,66	0,63	0,26	0,25
Vo max	Veff	8,1	8,6	7,2	10,4	8,9	12,4
A	-	12,5	13,2	12,6	13,5	12,5	12,6
d	%	4,8	4,4	4,8	4,6	4,6	5
Rg1: 270k							
		Vb: 250V					
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	1	1	1,5	1,8	4,7	6,8
la	mA	3,2	3,2	1,78	1,72	0,68	0,63
Vo max	Veff	23	24	18,5	24,5	24,1	33,1
A	-	13,5	14,1	13,8	14,3	13,4	13,1
d	%	4,9	4,6	5	5	4,9	5

		Vb: 100V		Vb: 200V		Vb: 250V	
Ra	k	47	180	47	180	47	180
R'g1	k	680	680	680	680	680	680
Rk	k	5,6	12	5,6	12	1,8	3,9
la	mA	0,4	0,2	0,8	0,35	1,8	0,75
Vo max	Veff	10	10	10	10	10	10
A	-	17	19	19	22	22	26
d	%	7	4,6	3,2	1,8	1	1

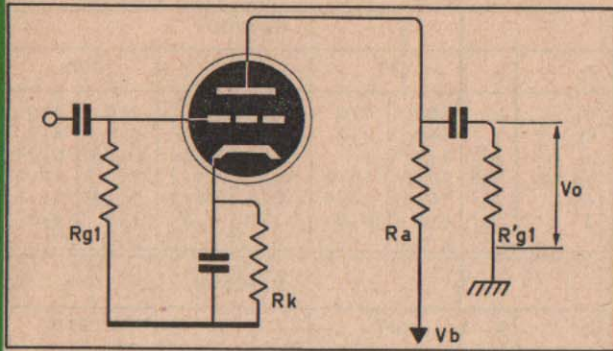
6BF6
6BU6
6R7
6SR7
6ST7
7E6
12BF6
12SR7
14E6

7AU7
6C4
12AU7

EBC3

1H5

6AX7
6BK6
12AX7



Vb: 100V							
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	1,8	2,2	2,7	3,9	6,8	8,2
la	mA	0,98	0,9	0,58	0,51	0,24	0,23
Vo max	Veff	10,5	13,2	9,8	14,6	11,1	13,3
A	—	11,5	12	12,3	13,3	12,9	13,3
d	%	4	4	4,1	4,1	4,5	4,1

Vb: 250V							
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	1,8	1,8	2,7	3,9	6,8	8,2
la	mA	2,5	2,5	1,45	1,28	0,6	0,57
Vo max	Veff	38,4	41,2	32,6	46,8	35	42
A	—	12,5	13,4	13,1	14,2	13,6	14
d	%	5	4	5	4,8	5	5

Rg1: 270k

Vb: 250V							
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	1,8	2,2	2,7	4,7	8,2	10
la	mA	2,7	2,49	1,54	1,27	0,6	0,56
Vo max	Veff	39,2	46,5	33,4	53,5	41,6	48,5
A	—	12,3	12,8	12,8	13,4	13,4	13,9
d	%	4,5	4,5	4,4	5	5,1	4,6

Rg1: 270k

Vb: 100V							
Ra	k	100		270		470	
R'g1	k	270	470	270	470	470	1000
Rk	k	3,3	3,3	5,6	5,6	8,2	10
la	mA	0,29	0,29	0,16	0,16	0,11	0,1
Vo max	Veff	8	8,9	7,75	8,93	8,7	12,2
A	—	34,8	37,1	40,8	44,6	45,8	48,8
d	%	3,6	3,4	3,95	3,4	3,9	4,6

Vb: 250V							
Ra	k	100		270		470	
R'g1	k	270	470	270	470	470	1000
Rk	k	1,8	2,2	3,3	3,9	5,6	6,8
la	mA	0,95	0,88	0,48	0,46	0,31	0,29
Vo max	Veff	33,3	38,5	30,8	39,6	37,5	48,6
A	—	42,2	43,3	48,9	51,4	52,8	56,6
d	%	3,67	4,28	3,4	4,3	4,8	4,95

Rg1: 270k

Vb: 100V							
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	1,8	2,2	3,3	4,7	8,2	10
la	mA	1,05	0,97	0,57	0,5	0,24	0,22
Vo max	Veff	12,5	15,5	12,9	19,2	13,7	17,7
A	—	13,1	13,9	13,6	14,7	14,4	14,7
d	%	3,9	4,2	4,9	4,7	4,4	4,5

Vb: 250V							
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	1,5	2,2	2,7	3,9	6,8	8,2
la	mA	2,79	2,4	1,49	1,31	0,61	0,58
Vo max	Veff	39,9	52,5	38,4	53	42	49,4
A	—	14,7	15	15	16,1	15,9	16,2
d	%	4,1	4,9	4,9	4,6	4,7	4,5

Rg1: 270k

Vb: 100V							
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	2,2	2,7	3,3	5,6	10	12
la	mA	1	0,92	0,59	0,48	0,23	0,21
Vo max	Veff	13,7	17	12	19,5	13,7	19,1
A	—	11,4	12,2	12	12,6	12,5	13,2
d	%	4,6	5	4,5	5,1	5	4,9

Rg1: 270k

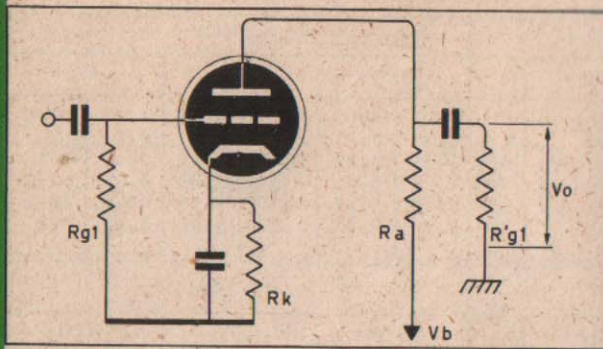
6AQ6
6AT6
6K5
6Q7
6SZ7
12AT6
12Q7

6F8
6J5
6SN7
7A4
7N7
12J5
12SN7
13D1
14A4
14N7

6L5

6C5

6L5



3AV6
6AV6
6B6
6F5
6SF5
6SQ7
7B4
7B6
12AV6
12F5
12SF5
12SQ7
14B6
75

		Vb: 100V					
Ra	k	100		270		470	
R'g1	k	270	470	270	470	470	1000
Rk	k	3,9	3,9	5,6	5,6	8,2	10
la	mA	0,22	0,22	0,14	0,14	0,1	0,09
Vo max	Veff	5,1	5,15	4,8	5,35	5,4	9
A	—	42,5	43	48	53,5	54	60
d	%	5,1	5	4,3	3,7	4,1	5

		Vb: 250V					
Ra	k	100		270		470	
R'g1	k	270	470	270	470	470	1000
Rk	k	1,5	1,8	2,7	2,7	3,9	4,7
la	mA	0,84	0,76	0,44	0,44	0,3	0,27
Vo max	Veff	26,5	30,5	24,5	27,5	23,5	34
A	—	56,4	56,5	63	70,5	71,3	75,5
d	%	4,5	5,3	5,1	4,2	5,2	5,3

		Vb: 250V					
Ra	k	100		270		470	
R'g1	k	270	470	270	470	470	1000
Rk	k	1,8	1,8	2,7	3,3	3,9	4,7
la	mA	0,6	0,6	0,38	0,34	0,26	0,24
Vo max	Veff	19,8	22	19,4	28	22,8	32,3
A	—	36	40	47,5	52,9	57	64,6
d	%	5	4,5	3,7	4,8	3,6	3,6

7C6

		Vb: 100V					
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	1	1,2	1,8	2,2	4,7	4,7
la	mA	1,06	1	0,59	0,56	0,25	0,25
Vo max	Veff	6,25	8,65	4,25	9,3	8,55	8,95
A	—	21,5	22,2	21,2	23,2	21,9	23
d	%	4,3	4,9	3	4,4	4,8	4

		Vb: 250V					
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	0,56	0,68	0,82	1,2	2,7	2,7
la	mA	3,05	2,95	1,74	1,6	0,67	0,67
Vo max	Veff	21	25,5	16,6	25,8	19,3	20,2
A	—	25,6	25,5	26	26,9	24,8	25,9
d	%	5	5	4,7	4,9	5	4,8

7E5

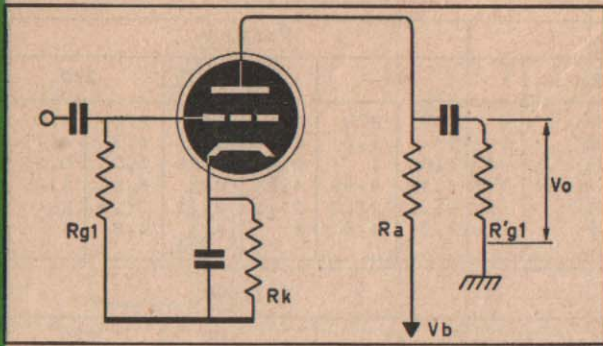
		Vb: 100V					
Ra	k	100		270		470	
R'g1	k	270	470	270	470	470	1000
Rk	k	3,3	3,3	5,6	5,6	6,8	8,2
la	mA	0,3	0,3	0,17	0,17	0,12	0,11
Vo max	Veff	10,3	10,4	7,7	8,6	8,5	13,5
A	—	31,2	31,5	36,6	41	42,5	45
d	%	4,9	4,8	4	3,1	3,4	4,4

		Vb: 250V					
Ra	k	100		270		470	
R'g1	k	270	470	270	470	470	1000
Rk	k	1,8	2,2	3,3	3,9	4,7	5,6
la	mA	0,92	0,83	0,48	0,44	0,31	0,29
Vo max	Veff	33,6	41,5	36,3	46,6	38,8	48,5
A	—	38,6	40,2	43,7	48	50,4	54
d	%	4	4,8	4,5	4,8	3,9	3,7

6SC7
6SL7
7F7
12SC7
12SL7
14F7

		Vb: 100V					
Ra	k	100		270		470	
R'g1	k	270	470	270	470	470	1000
Rk	k	4,7	4,7	6,8	6,8	10	10
la	mA	0,16	0,16	0,1	0,1	0,07	0,07
Vo max	Veff	3,95	4,3	4,16	4,9	6	7,15
A	—	26,4	28,6	34,7	40,7	43	51
d	%	5	4,7	4,3	3,7	5	4

7C6



Vb: 100V							
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	1	1,2	1,8	2,2	4,7	4,7
la	mA	0,9	0,84	0,51	0,48	0,22	0,22
Vo max	Veff	4,74	6,8	4,45	8,8	6,7	7,1
A	—	26,3	26,2	26,2	29,4	28	29,6
d	%	3,7	4,8	3,6	4,7	4,3	3,7

Vb: 250V							
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	0,39	0,47	0,82	1	2,2	2,2
la	mA	3	2,86	1,58	1,5	0,66	0,66
Vo max	Veff	13,5	21	17,8	25,5	20,4	21,6
A	—	33,8	38,2	35,6	36,4	34	36
d	%	4	4,6	4,6	4,9	4,5	4,2

Rg1: 270 k

Vb: 250V					
Ra	k	100	220	100	220
R'g1	k	330	680	330	680
Rk	k	1,2	1,8	—	—
la	mA	1,15	0,7	1,4	0,76
Vo	Veff	10	10	10	10
A	—	43	51	44	52
d	%	1,1	0,9	0,9	0,8

Rg1: 1M Rg1: 10M

		Vb: 200V			Vb: 250V		
Ra	k	47	100	220	47	100	220
R'g1	k	150	330	680	150	330	680
Rk	k	1,2	2,2	3,9	1,2	2,2	3,9
la	mA	2	1,1	0,58	2,6	1,4	0,72
Vo max	Veff	30	33	32	40	44	44
A	—	20	24	24	20	24	25
d	%	3,4	3,6	3,5	3,8	3,7	3,6

		Vb: 300V			Vb: 350V		
Ra	k	47	100	220	47	100	220
R'g1	k	150	330	680	150	330	680
Rk	k	1,2	2,2	3,9	1,2	2,2	3,9
la	mA	3,1	1,6	0,87	3,6	1,9	1
Vo max	Veff	50	54	53	60	65	63
A	—	20	24	25	20	24	25
d	%	4	3,8	3,7	4,1	3,9	3,7

Rg1: 1M

		Vb: 100V			Vb: 200V		
Ra	k	47	100	220	47	100	220
R'g1	k	150	330	680	150	330	680
Rk	k	1,2	2,2	3,9	1,2	2,2	3,9
la	mA	1,2	0,66	0,33	2,41	1,3	0,66
Vo max	Veff	11	10	8	26	25	22
A	—	13,5	14	14,5	13,5	14	14,5
d	%	5,6	4,8	4	6,3	5,8	4,7

		Vb: 250V			Vb: 300V		
Ra	k	47	100	220	47	100	220
R'g1	k	150	330	680	150	330	680
Rk	k	1,2	2,2	3,9	1,2	2,2	3,9
la	mA	3,02	1,63	0,82	3,65	1,97	0,98
Vo max	Veff	34	32	28	43	41	36
A	—	13,5	14	14,5	13,5	14	14,5
d	%	6,4	5,9	4,8	6,5	6	4,9

		Vb: 350V			Vb: 400V		
Ra	k	47	100	220	47	100	220
R'g1	k	150	330	680	150	330	680
Rk	k	1,2	2,2	3,9	1,2	2,2	3,9
la	mA	4,3	2,3	1,16	5	2,62	1,31
Vo max	Veff	51	49	43	59	57	50
A	—	13,5	14	14,5	13,	14	14,5
d	%	6,6	6,1	5	6,7	6,2	5,1

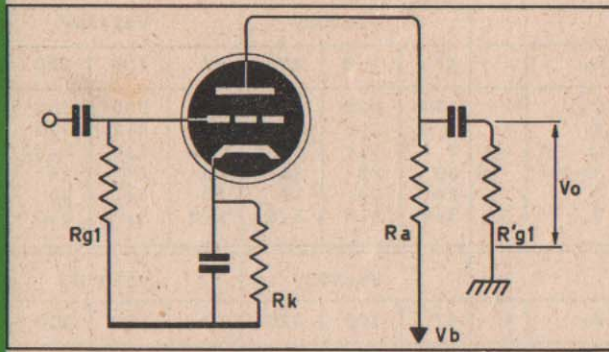
Rg1: 1M

7F8
14F8

EBC41
EBC81

ECC40

ECC82



		Vb: 200V			Vb: 250V		
Ra	k	47	100	220	47	100	220
R'g1	k	150	330	680	150	330	680
Rk	k	1,5	1,8	3,3	1,2	1,5	2,7
la	mA	0,86	0,65	0,36	1,18	0,86	0,48
Vo max	Veff	18	20	24	23	26	28
A	—	34	50	56	37,5	54,5	66,5
d	%	8,5	4,8	4,6	7	3,9	3,4

ECC83

		Vb: 300V			Vb: 400V		
Ra	k	47	100	220	47	100	220
R'g1	k	150	330	680	150	330	680
Rk	k	1	1,2	2,2	0,68	0,82	1,2
la	mA	1,55	1,11	0,63	2,45	1,72	1,02
Vo max	Veff	26	30	36	37	38	38
A	—	40	57	72	44	63	76,5
d	%	5	2,7	2,6	3,6	1,7	1,1

Rg1: 1M

		Vb: 100V			Vb: 170V		
Ra	k	100	220	220	100	220	220
R'g1	k	330	680	680	330	680	680
Rk	k	3,9	5,6	—	3,9	5,6	—
la	mA	0,28	0,18	0,21	0,45	0,28	0,46
Vo max	Veff	5	5	5	5	5	5
A	—	34	41	41	37	44	48
d	%	3,5	1,9	2	1,7	1,3	1,1

Rg1: 1M

10M

Rg1: 1M

10M

UBC41
UBC81

		Vb = 100V					
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	1,8	1,8	2,7	3,3	6,8	6,8
la	mA	0,81	0,81	0,51	0,47	0,23	0,23
Vo max	Veff	6,8	7,6	5,7	10,9	9,3	10
A	—	17,1	19,1	19,2	21,8	22	23,8
d	%	4,7	3,7	3,7	4,8	5	4,2

		Vb = 250V					
Ra	k	47		100		270	
R'g1	k	100	270	100	470	270	470
Rk	k	1	1,2	1,5	1,8	3,3	3,9
la	mA	2,36	2,21	1,45	1,36	0,64	0,61
Vo max	Veff	23,8	30,4	21,8	30,5	23	28,8
A	—	19,8	21,7	21,8	25	25,6	26,2
d	%	4,5	4,9	4,8	4,7	4,7	5

Rg1 = 270k

		Vb = 250V			Vb = 300V		
Ra	k	47	100	220	47	100	220
R'g1	k	150	330	680	150	330	680
Rk	k	1,2	2,2	3,9	1,2	2,2	3,9
la	mA	2,45	1,3	0,67	3,15	1,65	0,83
Vo max	Veff	30	32	29	40	42	38
A	—	18,5	20	21	18,5	20	21
d	%	3,8	3,4	2,6	4	3,5	3

		Vb = 350V			Vb = 400V		
Ra	k	47	100	220	47	100	220
R'g1	k	150	330	680	150	330	680
Rk	k	1,2	2,2	3,9	1,2	2,2	3,9
la	mA	3,8	1,95	0,99	4,4	2,3	1,15
Vo max	Veff	50	52	47	60	63	58
A	—	18,5	20	21	18,5	20	21
d	%	4,1	3,6	3,1	4,2	3,7	3,2

Rg1 = 1M

6AG
6N7
53

E80CC

1G4	-	CV1817	-	-
1H5G	-	CV1818	-	-
1H5GT	-	CV1820	-	-
1LH4	-	CV780	-	-
2AF4	-	-	6AF4	-
2BN4	-	-	6BN4	-
2T4	-	-	6T4	-
3A5	DCC90	CV808	-	-
3AV6	-	-	6AV6	-
			6BK6	-
			12AV6	-
			EBC91	-
4BC8	-	-	6BC8	-
4BQ7A	-	-	6BQ7A	-
4BZ7	-	-	6BZ7	-
5BK7A	-	-	6BK7A	-
5BQ7A	-	-	6BQ7A	-
5J6	-	-	6J6	-
			19J6	-
			ECC91	-
6A6	-	CV1867	53	6N7
6AB4	EC92	-	-	-
6AF4	-	-	2AF4	-
-6AQ4-	EC91	-	-	-
6AQ6	-	-	6AT6	-
			12AT6	-
			EBC90	-
-6AQ8-	ECC85	-	-	-
6AT6	EBC90	CV452	6AQ6	-
			12AT6	-
			EBC90	-
6AV6	EBC91	CV2525	3AV6	-
		CV2526	6BK6	-
			12AV6	-
6AX7	-	-	12AX7	-
			ECC83	-
6B6	-	ARP29	-	7B6
6B6G	-	CV1887	-	-
6BC8	-	-	4BC8	-
-6BD7A-	EBC81	-	-	-
6BF6	-	-	12BF6	7E6
6BK6	-	-	3AV6	-
			6AV6	-
			12AV6	-
			EBC91	-
6BK7A	-	-	5BK7A	-
6BN4	-	-	2BN4	-
6BQ7A	-	-	5BQ7A	-
-6BS4-	EC93	-	-	-
6BU6	6BF6	-	-	-
6BZ7	-	-	4BZ7	-
6C4	-	CV133	-	-
		CV852	-	-
6C5	-	CV582	-	-
		CV583	-	-
6C5G	-	CV581	-	-
		VT65A x/	-	-
-6CW7-	ECC84	-	-	-
6F5	-	CV1908	-	6SF5
		CV1909	-	-
		CV1910	-	-

x) American VT

6F8	-	CV1917	-	6SN7
		CV1918	-	-
6J4	-	CV1763	-	-
6J5	-	CV1067	12J5	7A4
		CV1933	-	-
		VT94 x/	-	-
6J5G	-	CV1932	-	-
		NR78A	-	-
		VR67	-	-
		VT94A x/	-	-
6J5GT	-	CV1934	-	-
		VT94D x/	-	-
6J6	ECC91	CV858	5J6	-
		CV2010	19J6	-
		CV2843	-	-
6J6WA	-	CV4031	-	-
6K5	-	CV861	-	-
6K5G	-	CV860	-	-
6L5	-	CV862	-	-
6N7	-	CV1957	6A7	53
6N7G	-	CV1285	-	-
		CV1956	-	-
6NFGT	-	CV1958	-	-
6P5	-	CV1819	-	-
-6Q4-	EC80	-	-	-
6Q7	-	CV588	12Q7	-
		VT92 x/	-	-
6Q7G	-	CV587	-	-
		AR18	-	-
		NR68	-	-
		VT92A x/	-	-
6Q7GT	-	CV589	-	-
-6R4-	EC81	-	-	-
6R7	-	CV1963	-	6SR7
		CV1964	-	-
		VT88 x/	-	-
6R7G	-	CV1962	-	-
		VT88A x/	-	-
6R7GT	-	VT88B /	-	-
6SC7	-	CV1969	12SC7	-
		CV2716	-	-
		VT105 x/	-	-
6SC7GT	-	CV1970	-	-
6SF5	-	CV1972	12SF5	6F5
		CV1973	-	7B4
6SL7	-	CV1984	12SL7	-
6SL7GT	-	CV1985	-	-
		VT229 x/	-	-
6SN7	-	-	12SN7	7N7
6SN7G	-	CV1986	-	-
6SN7GT	-	CV1988	-	-
		CV3627	-	-
		VT231 x/	-	-
6SQ7	-	CV1990	12SQ7	-
		CV1991	-	-
		VT103 x/	-	-
6SR7	-	CV867	12SR7	-
		VT233 x/	-	-
6ST7	-	CV1995	7E6	7E6
		CV1996	-	-
		VT205 x/	-	-

x) American VT

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6T4	-	-	2T4	-
6T7G	-	CV500	-	-
7A4	-	CV1770 VT192 x/	14A4	6J5
7AF7	-	-	14AF7	-
-7AN7-	PCC84	-	-	-
7AU7	-	-	12AU7 ECC82	-
7B4	-	CV879	-	6SF5
7B6	-	CV882	14B6	6B6
7C6	-	CV887	-	-
7E5	-	CV890 CV2704	-	-
7E6	-	CV891 VT188 x/	14E6	6BF6
7F7	-	CV893 VT189 x/	14F7	6SL7
7F8	-	-	14F8	-
7N7	-	CV898	14N7	6SN7
-9AQ8-	PCC85	-	-	-
12AH7G	-	VT207 x/	-	-
12AH7GT	-	CV529	-	-
12AT6	-	-	6AQ6 6AT6 EBC90	-
12AT7	ECC81	CV455	-	-
12AU7	ECC82	CV491 CV2007 CV2011	7AU7	-
12AV6	-	-	3AV6 6AV6 6BK6 EBC91	-
12AX7	ECC83	CV492	6AX7	-
12AY7	-	CV3650	-	-
12BF6	-	-	6BF6	-
12F5	-	-	6F5	-
12J5	-	CV534 VT135A x/	6J5	-
12J5GT	-	CV535 VT135 x/	-	-
12Q7	-	-	6Q7	-
12SC7	-	CV540 VT268 x/	6SC7	-
12SF5	-	CV919 CV920	6SF5	12F5
12SL7	-	VT289 x/	6SL7	-
12SL7GT	-	CV924	-	-
12SN7	-	-	6SN7	14N7
12SN7GT	-	CV925	-	-
12SQ7	-	CV546 CV547 VT104 x/	6SQ7	-
12SR7	-	CV700	6SR7	-
13D1	-	CV423	6SN7	-
13D3	-	CV2212	-	-
14A4	-	-	7A4	12J5
14AF7	-	-	7AF7	-
14B6	-	-	7B6	6B6
14E6	-	-	6BF6 7E6	6BF6

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14F7	-	CV930	7F7	12SL7
14F8	-	-	7F8	-
-14L7-	UBC41	-	-	-
14N7	-	-	7N7	12SN7
19J6	-	-	5J6 6J6 ECC91	-
30	-	CV604	-	-
53	-	CV2535	6A6	6N7
56	-	CV611	-	-
75	-	CV614	-	-
76	-	CV615	-	-
9002	-	CV664	-	-
ABC1	-	-	CBC1	-
AC2	-	-	CC2	-
CBC1	-	-	ABC1	-
CC2	-	-	AC2	-
DAC21	-	CV2887	-	-
DCC90	3A5	-	-	-
EBC3	-	CV1428 CV1715	-	EBC33
EBC33	-	CV352 CV1055 VR55	-	EBC3
EBC41	-	CV3882	EBC90 6AQ6 6AT6 12AT6	EBC81 EBC90
EBC81	-6BD7A-	-	EBC90 6AQ6 6AT6 12AT6	EBC41 EBC90
EBC90	6AT6	-	12AT6	EBC41 EBC81
EBC91	6AV6	-	12AV6	-
EC31	-	CV1433	-	-
EC80	-6Q4-	-	-	-
EC81	-6R4-	-	-	-
EC91	-6AQ4-	CV139 CV417 CV419	-	-
EC92	6AB4	-	-	-
EC93	-6BS4-	-	-	-
ECC32	6SN7	CV181	12SN7	-
ECC33	-	CV2821	-	-
ECC35	-	CV569	-	-
ECC40	-	CV3884	-	-
ECC81	12AT7	-	-	-
ECC82	12AU7	-	7AU7	-
ECC83	12AX7	-	6AX7	-
ECC84	-6CW7-	-	PCC84	-
ECC85	-6AQ8-	-	-	-
ECC88	-	-	PCC88	-
ECC91	6J6	-	5J6 19J6	-
PCC84	-7AN7-	-	ECC84	-
PCC85	-9AQ8-	-	UCC85	-
PCC88	-	-	ECC88	-
UBC41	-14L7-	-	-	UBC81
UBC81	-	-	-	UBC41
UCC85	-	-	PCC85	-