

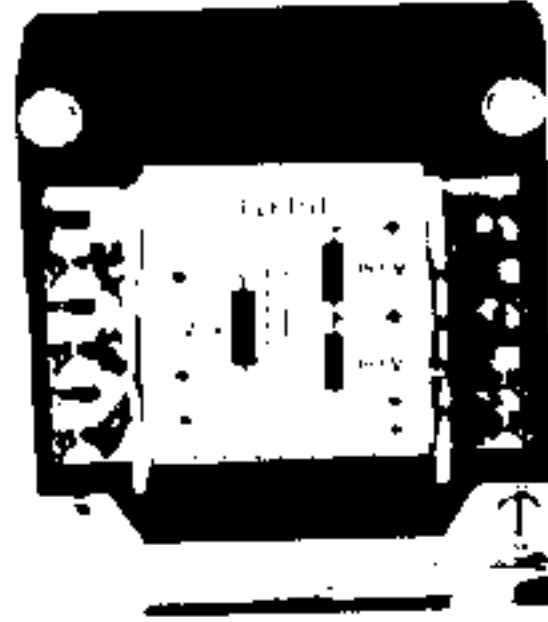
Met dank aan A.R.A. van Rossum

DELTA ELEKTRONIKA BV

Ver. v. Historie v/d Radio



P.O. BOX 27
ZIERIKZEE
NETHERLANDS
TEL (01110) 3656 TLX 55349



EUROPA CARD POWER SUPPLIES

Card	DC output
C 5-5	5 V 5 A
C 24-1.5	24 V 1.5 A
CD 15-1	± 12 V 0.8 A to ± 15 V 1 A
CV 15-2	5-15 V 2 A
CV 30-1	15-30 V 1 A
CV 60-0.6	30-60 V 0.6 A

Transformer	Transformer AC output
T 55	8.5-0-8.5 V
T 2415	0-30 V
TD 151	18.5-0-18.5 V
TV 152	0-13-16-19 V
TV 301	0-24-29-34 V
TV 6006	0-45-54-64 V

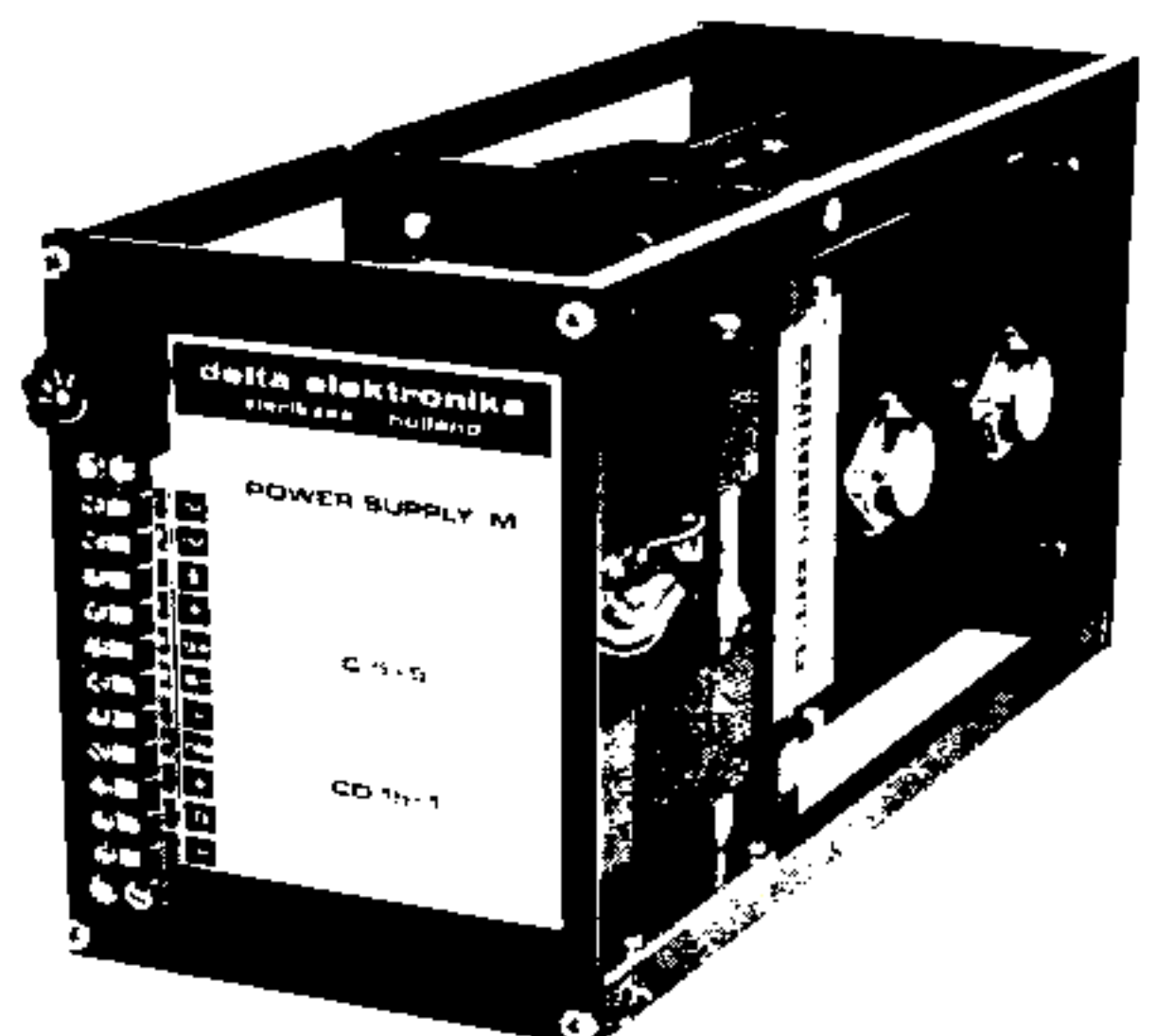
- Standardized Europa card size 100 x 160 mm
- All cards are delivered including matching connector
- Fold back current limit, except C 5-5, which has constant current limit with thermal shut down
- Double screens in all transformers

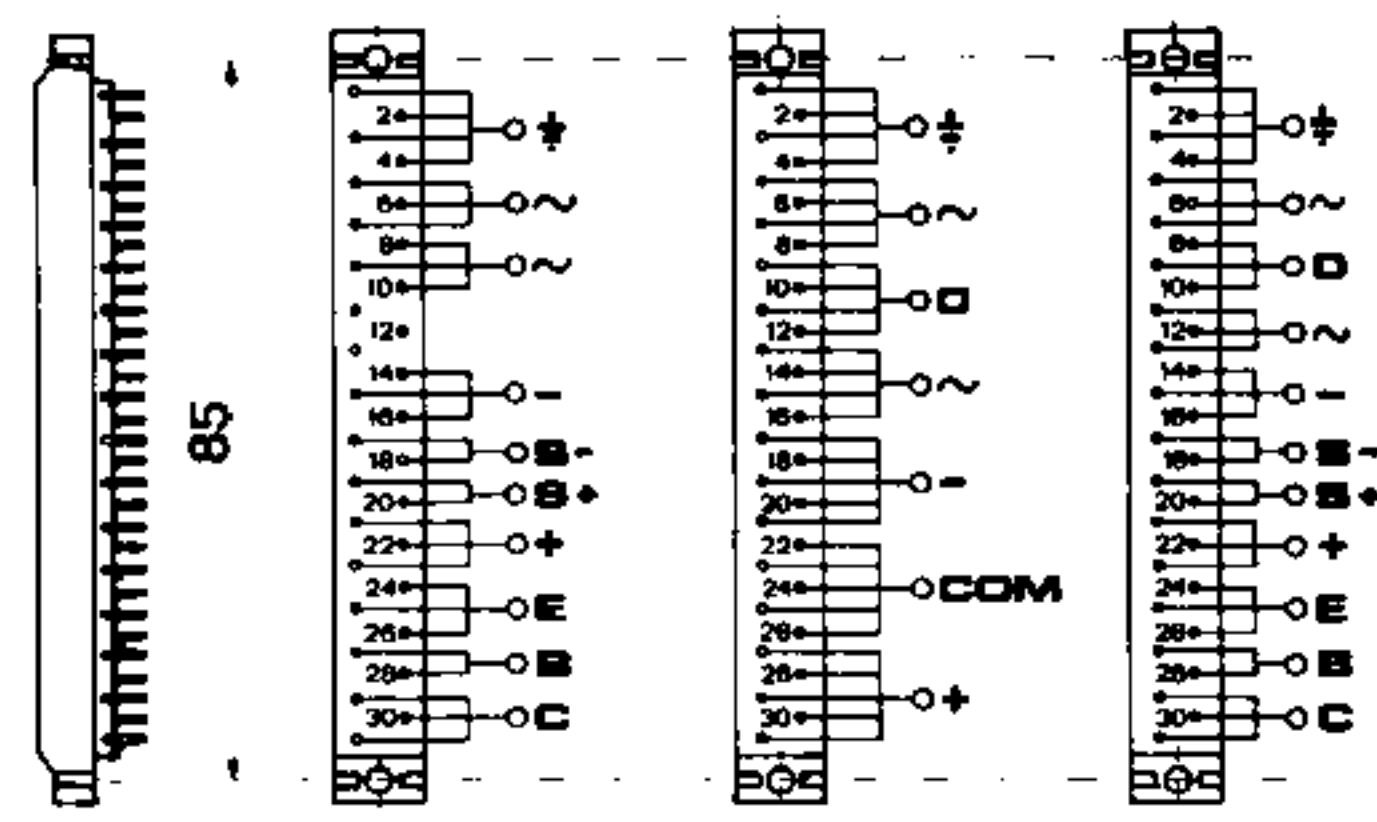
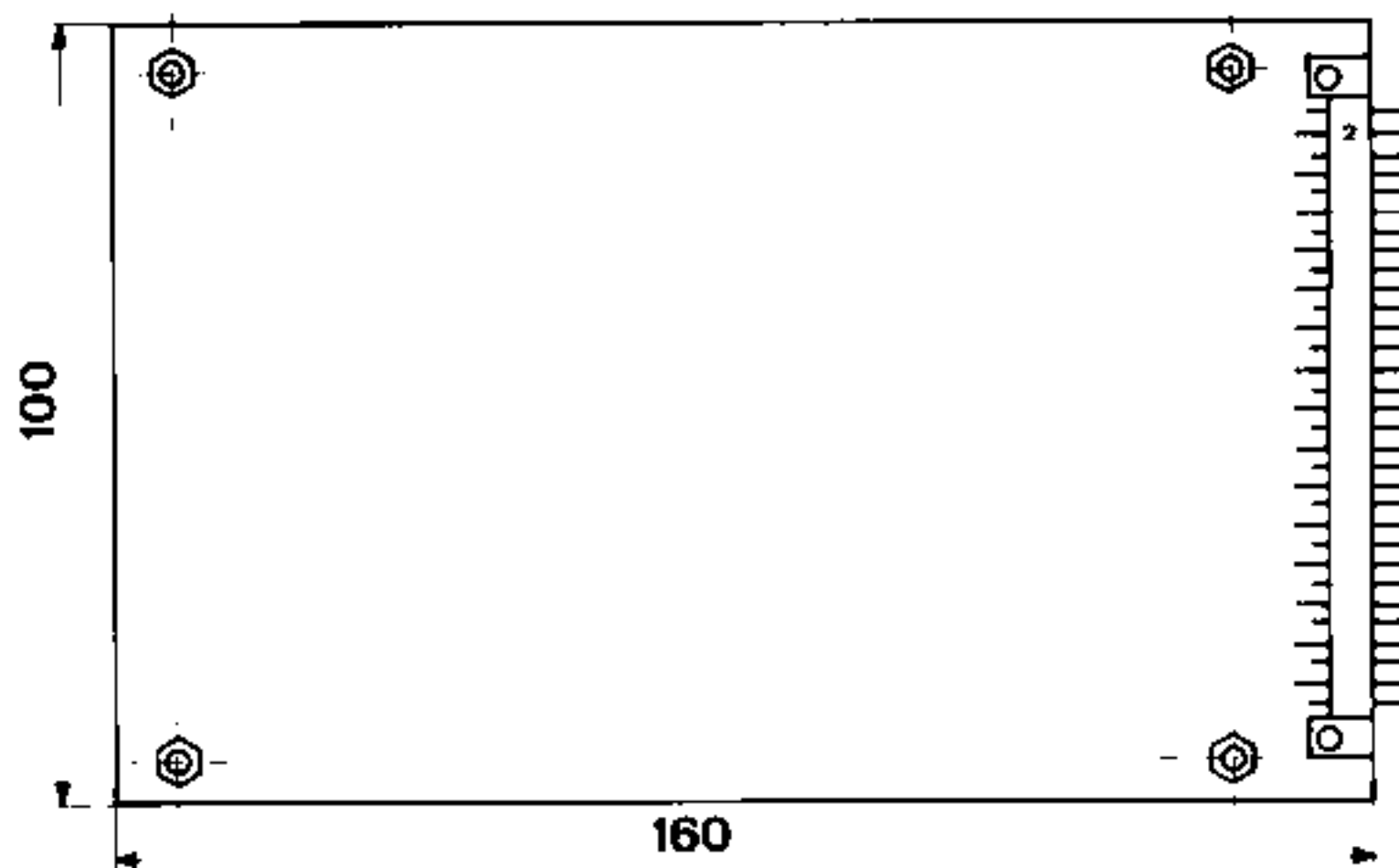
Line regulation ± 10 %	5 mV
Load regulation 0-100 %	10 mV. Exceptions: C 5-5 5 mV, C 60-0.6 20 mV
Temp. coeff. per °C	0.01 %
Stability	0.1 % per 1000 hours under constant conditions after 20 min. warm up
Ripple	0.5 mV r.m.s., 1.5 mV p-p
Recovery time	10 μ S for recovery to within 30 mV of steady state voltage after a step load from 10 % to 100 %
Output impedance	Maximum 0.1 Ohm at 100 kHz
Ambient temp.	0-50 °C at full load and nominal input voltage

CARDS IN 1/4 19" UNITS

Rack units 103 x 132.5 x 260 mm can be ordered with one or two cards plus transformers built-in. All combinations are possible, except two cards C 5-5. These units can be combined with M 5-10, M 24-10 etc. to be used in a 19 inch rack system.

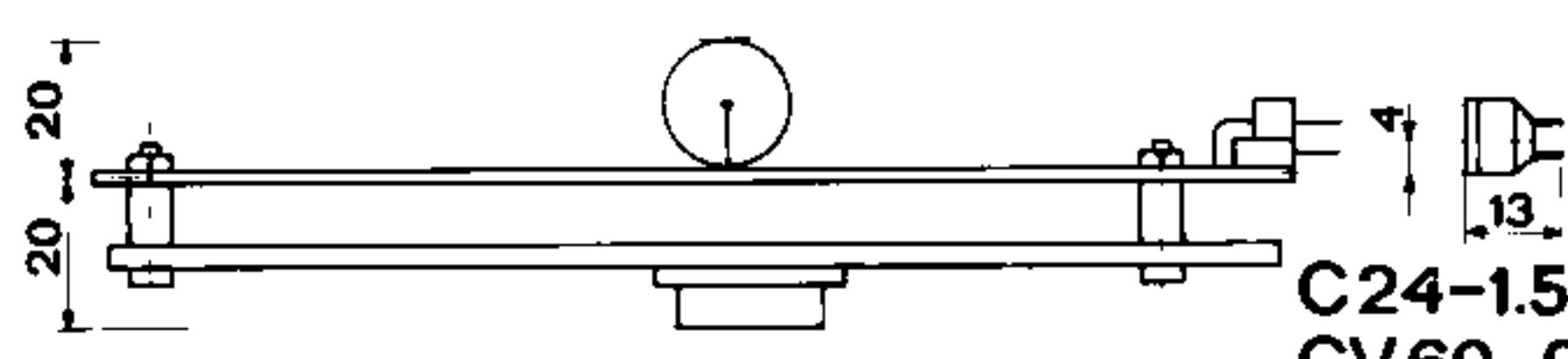
Ordering code: Add prefix M to card type no, for example MC 5-5 (unit with one card), MC 5-5/CD 15-1 (unit with two cards).



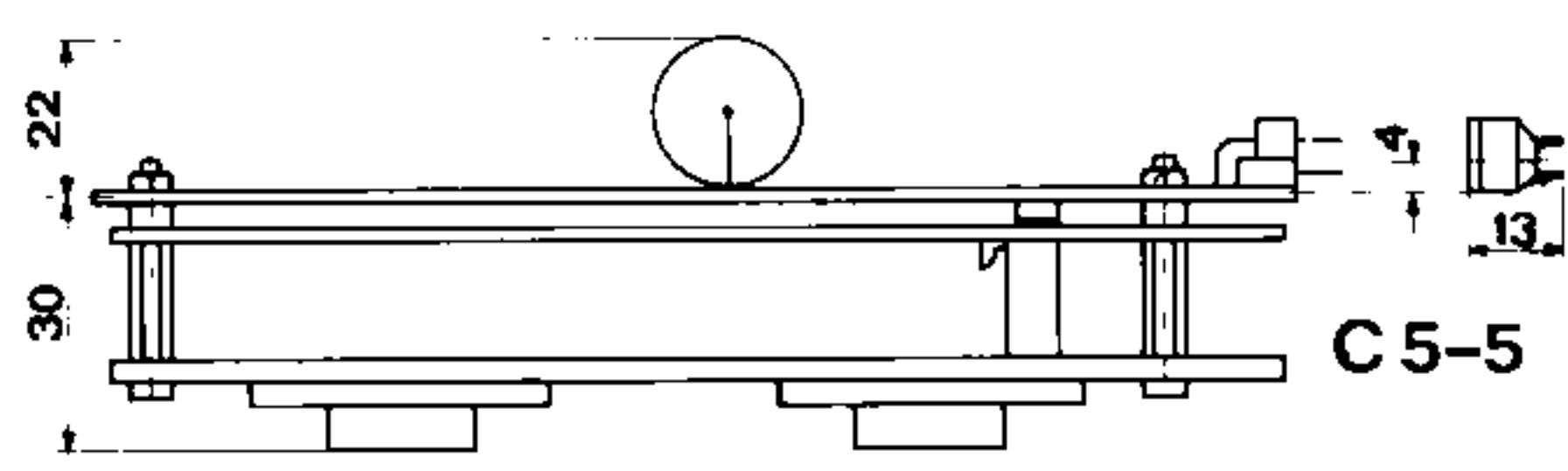


C24-1.5 **CD 15-1** **C5-5**
CV 15-2
CV 30-1
CV 60-0.6

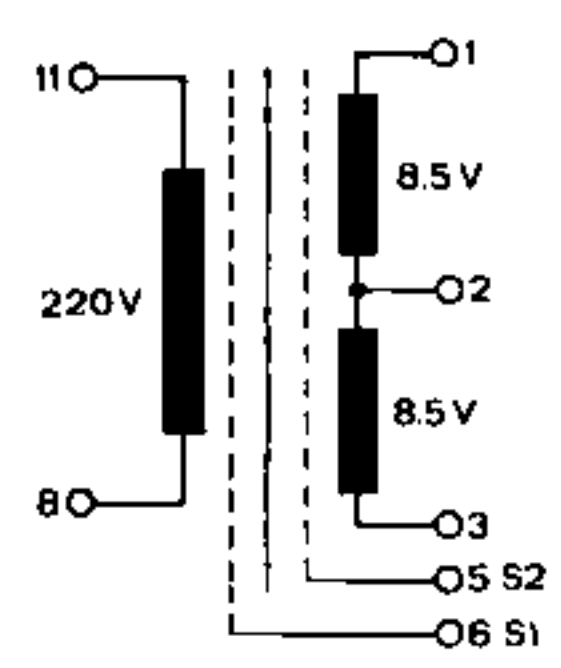
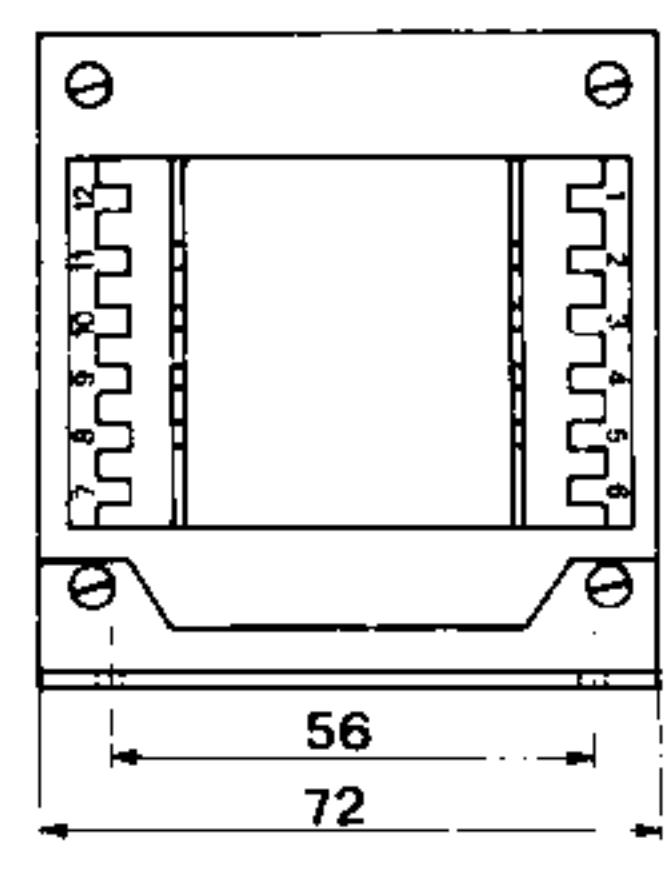
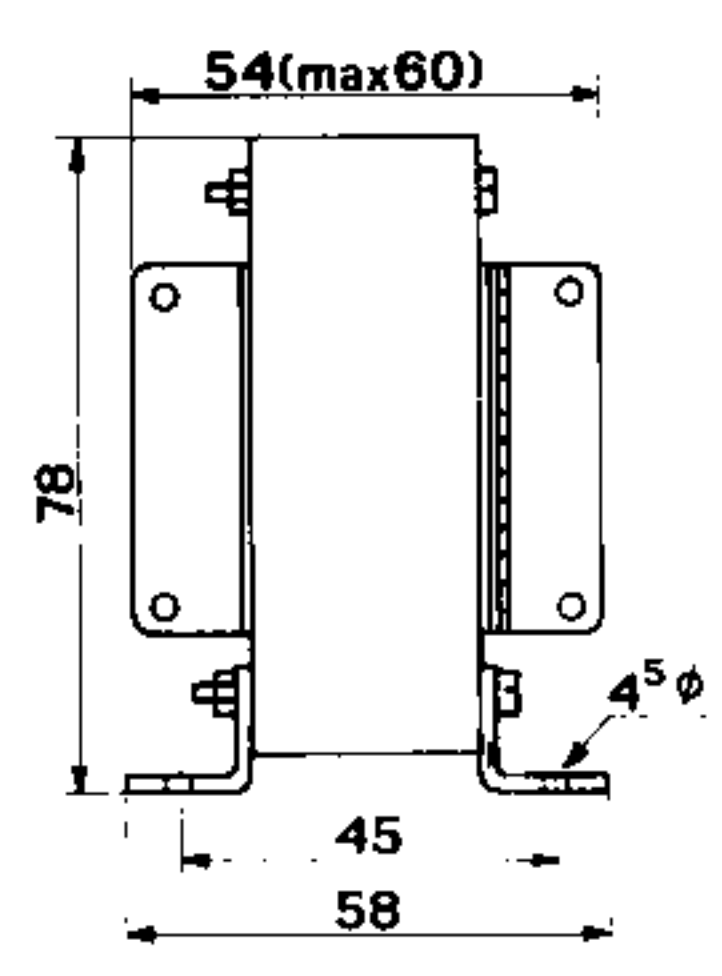
E B C only for test
 Do not connect



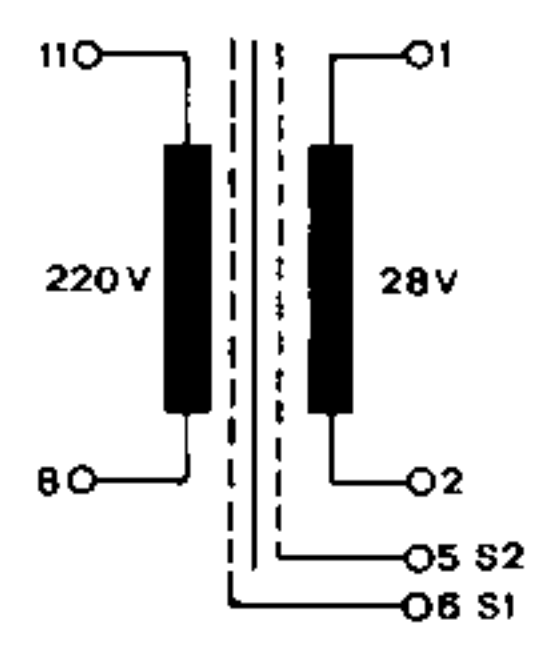
C24-1.5 **CV15-2** **CV30-1**
CV60-0.6 **CD15-1**



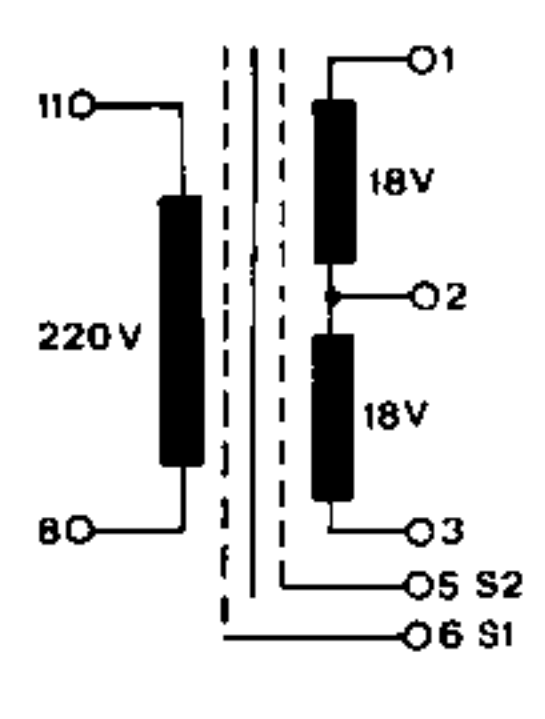
C5-5



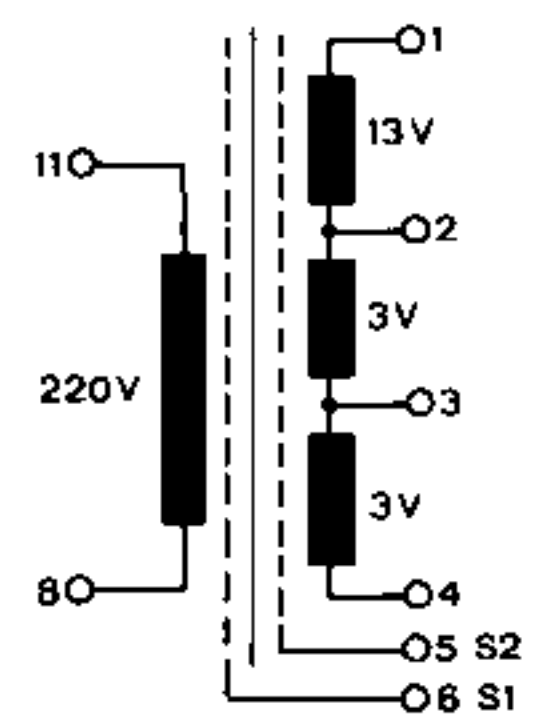
T55



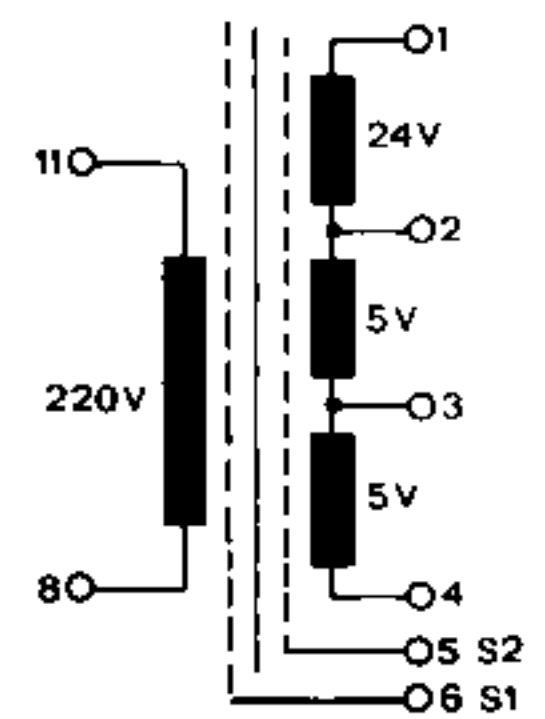
T2415



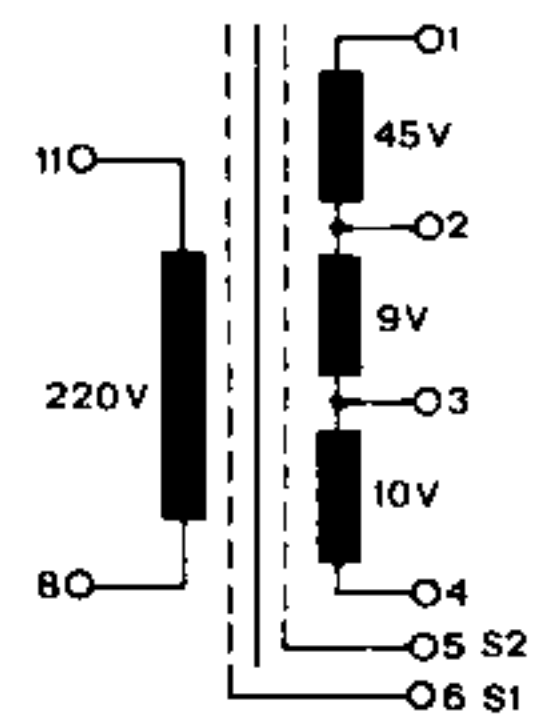
TD151



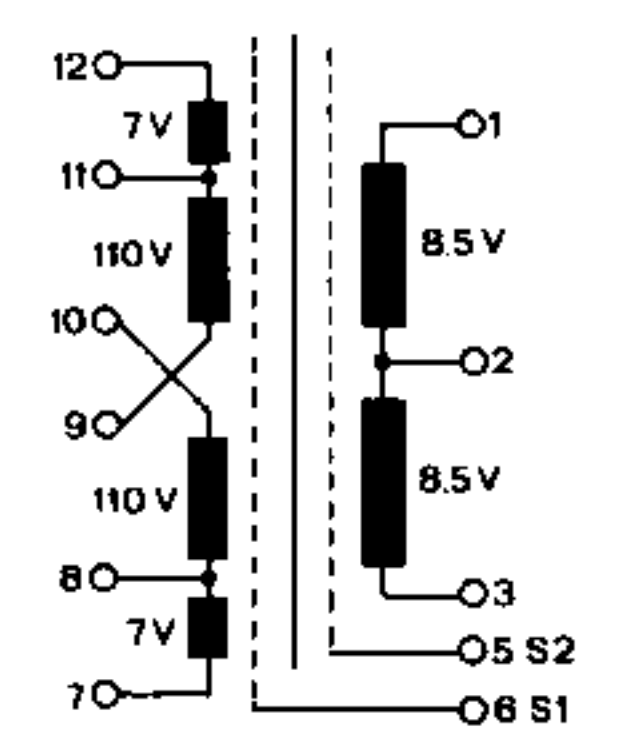
TV152



TV301



TV6006



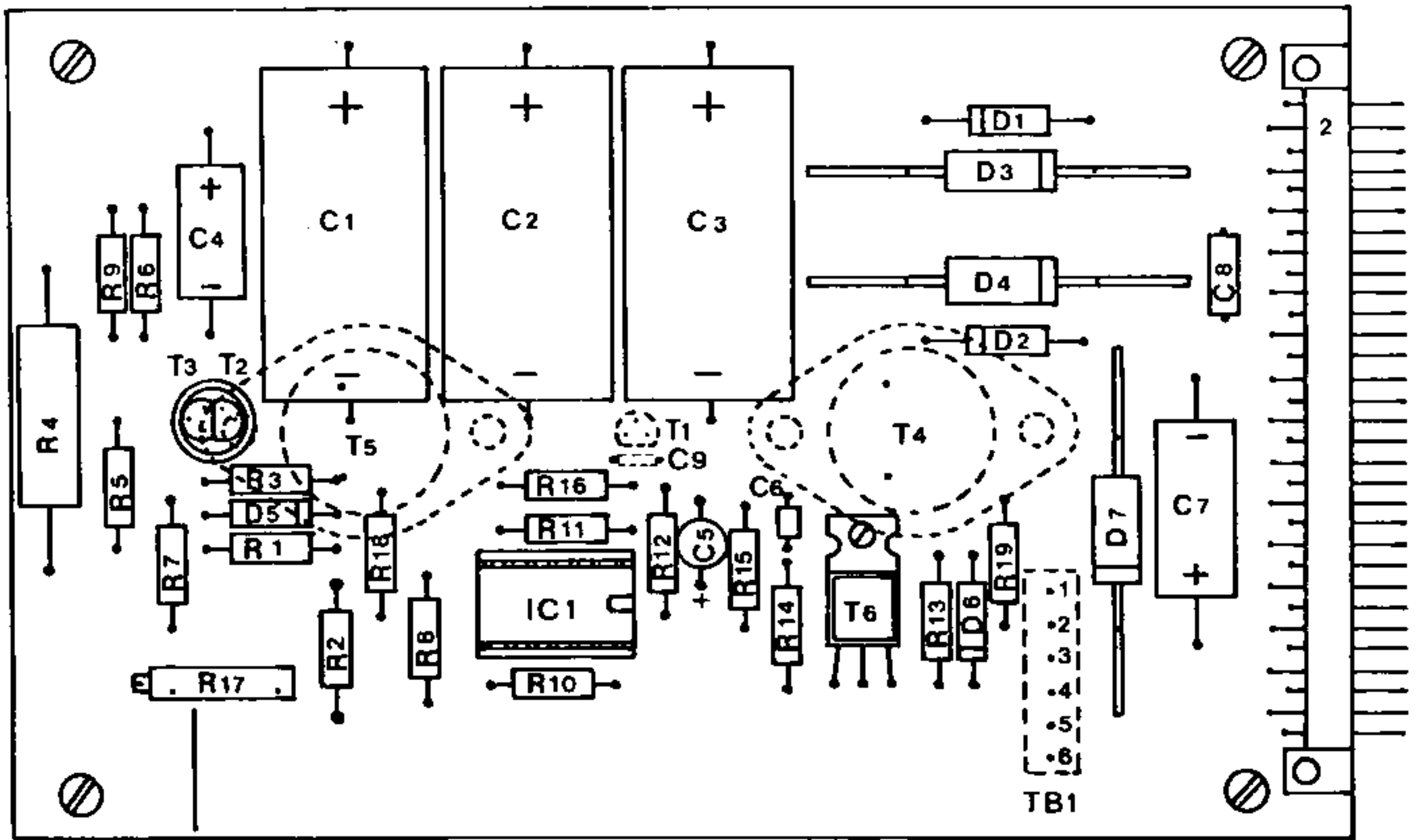
MULTI PRIMARY TRANSFORMERS
T55A etc

Standard transformers have only 220 V 50-400 Hz input.

Multi-primary transformers (add A to type no) can be connected for 110-117-220-234 V 50-400 Hz.

Dimensions and weight: C 5-5	100 x 160 x 52 mm	0.4 kg
All other models	100 x 160 x 40 mm	0.32 kg
Transformers	72 x 78 x 60 mm	1.1 kg

Cards CD 15-1, CV 15-2, CV 30-1 replace previous types C 15-1 D, C 12-2, C 30-1.



voltage adj.

R (Ohm)

1	=	470
2	=	150
3	=	2,2 k
4	=	0,18 WW 10 W
5	=	220
6	=	10 k
7	=	1 k
8	=	680
9	=	180
10	=	10 k
11	=	2,7 k
12	=	2,2 k
13	=	10
14	=	1 k
15	=	470
16	=	470
17	=	1 k tr. potm-
18	=	1,5 k
19	=	470

T

1	=	BC 212	TI
2	=	BC 212	TI
3	=	BC 212	TI
4	=	2N3055	RCA
5	=	2N3055	RCA
6	=	BD 239 A	RCA

C (microfarad)

1	=	4700	16 V
2	=	4700	16 V
3	=	4700	16 V
4	=	100	35 V
5	=	2,2	35 V tt
6	=	0,022	250 V
7	=	220	16 V
8	=	0,22	63 V
9	=	0,01	63 V

D

1	=	1N4003	ITT
2	=	1N4003	ITT
3	=	21PT05	IR
4	=	21PT05	IR
5	=	1N4003	ITT
6	=	1N4003	ITT
7	=	21PT05	IR

IC

1	=	SN72723	TI
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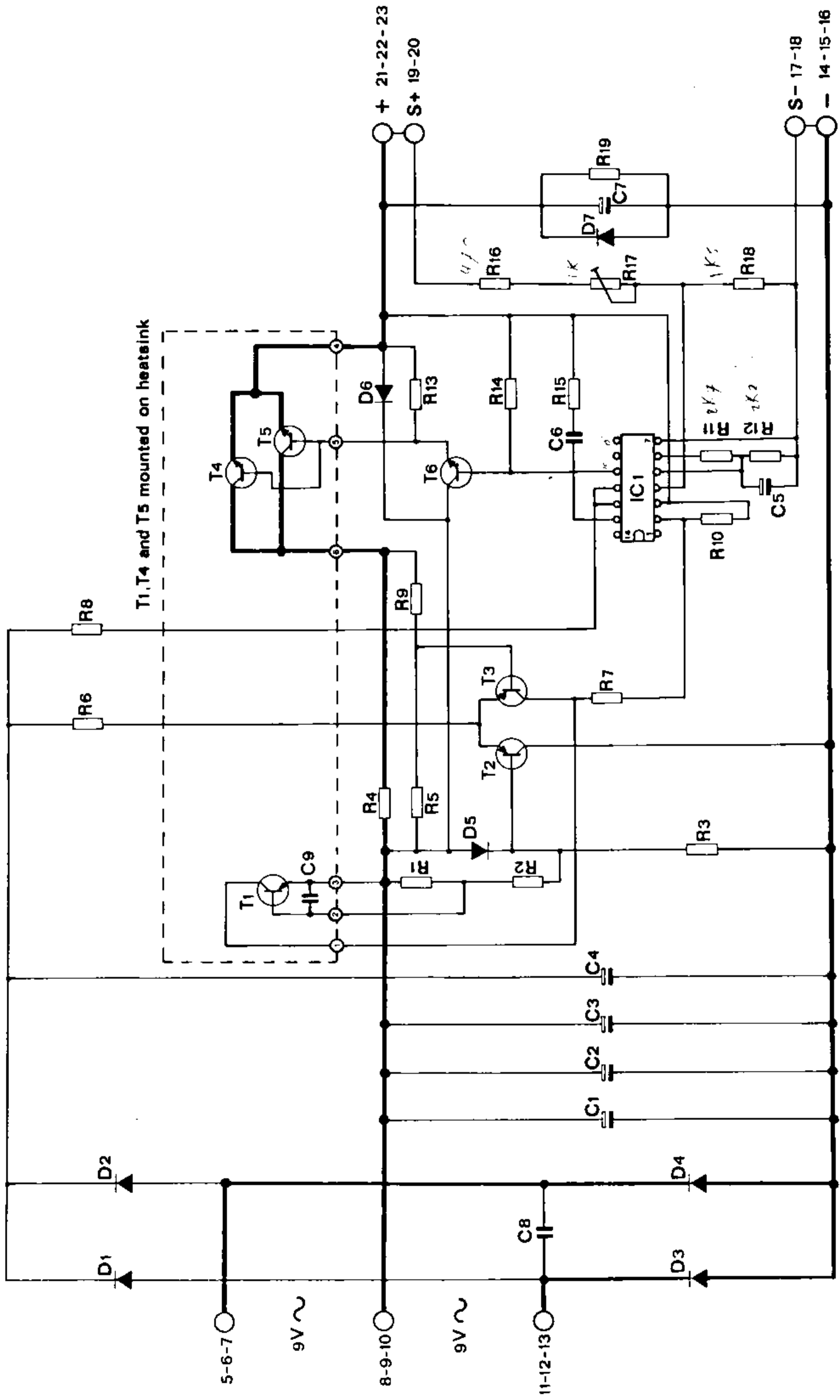
WW = wire wound

tt = tantalum

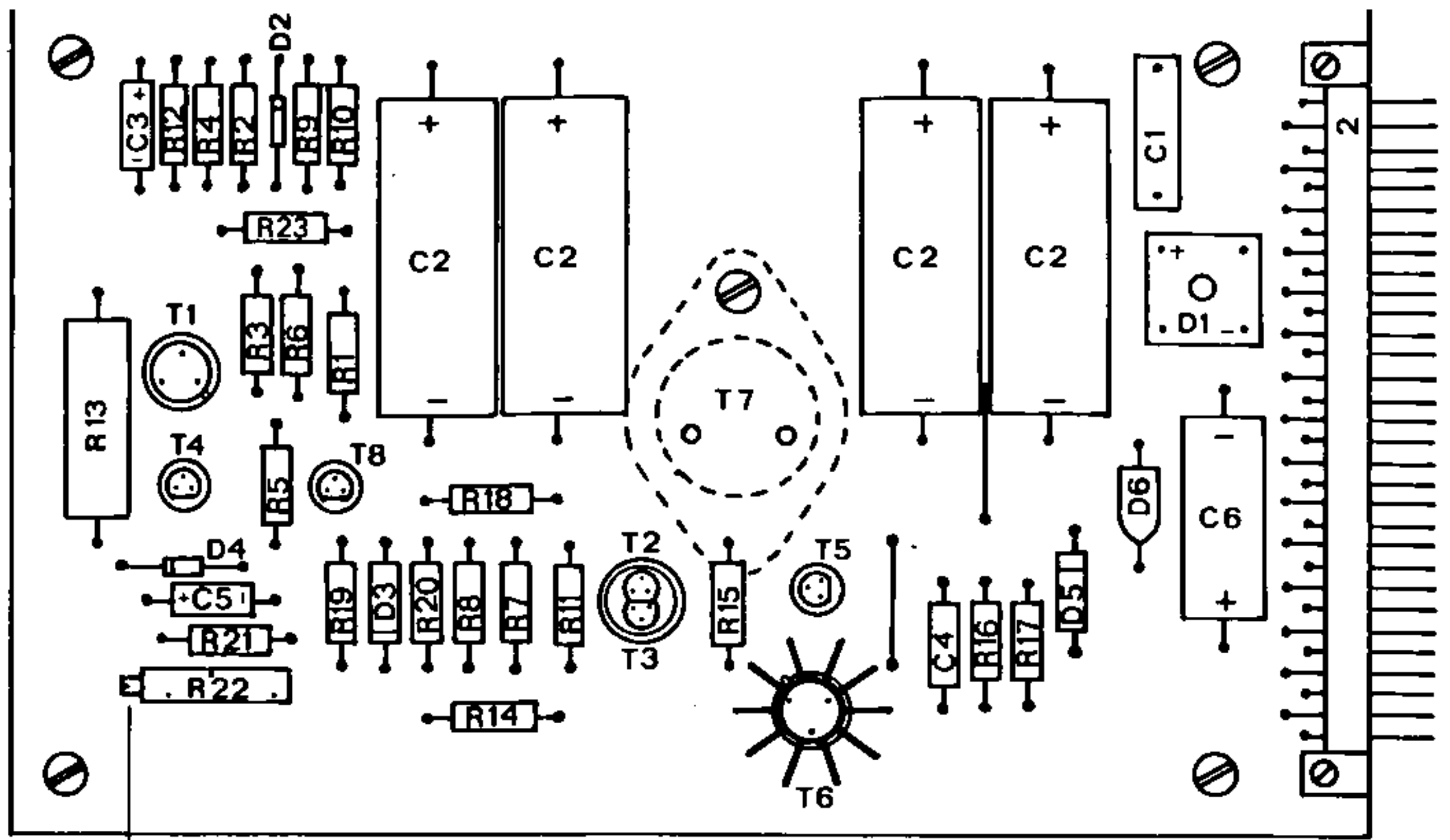
All resistors 0,4 W 2% metal film.

			Title: C5 - 5
			Date: Nov '77
Modifications	Date	App.	delta elektronika bv





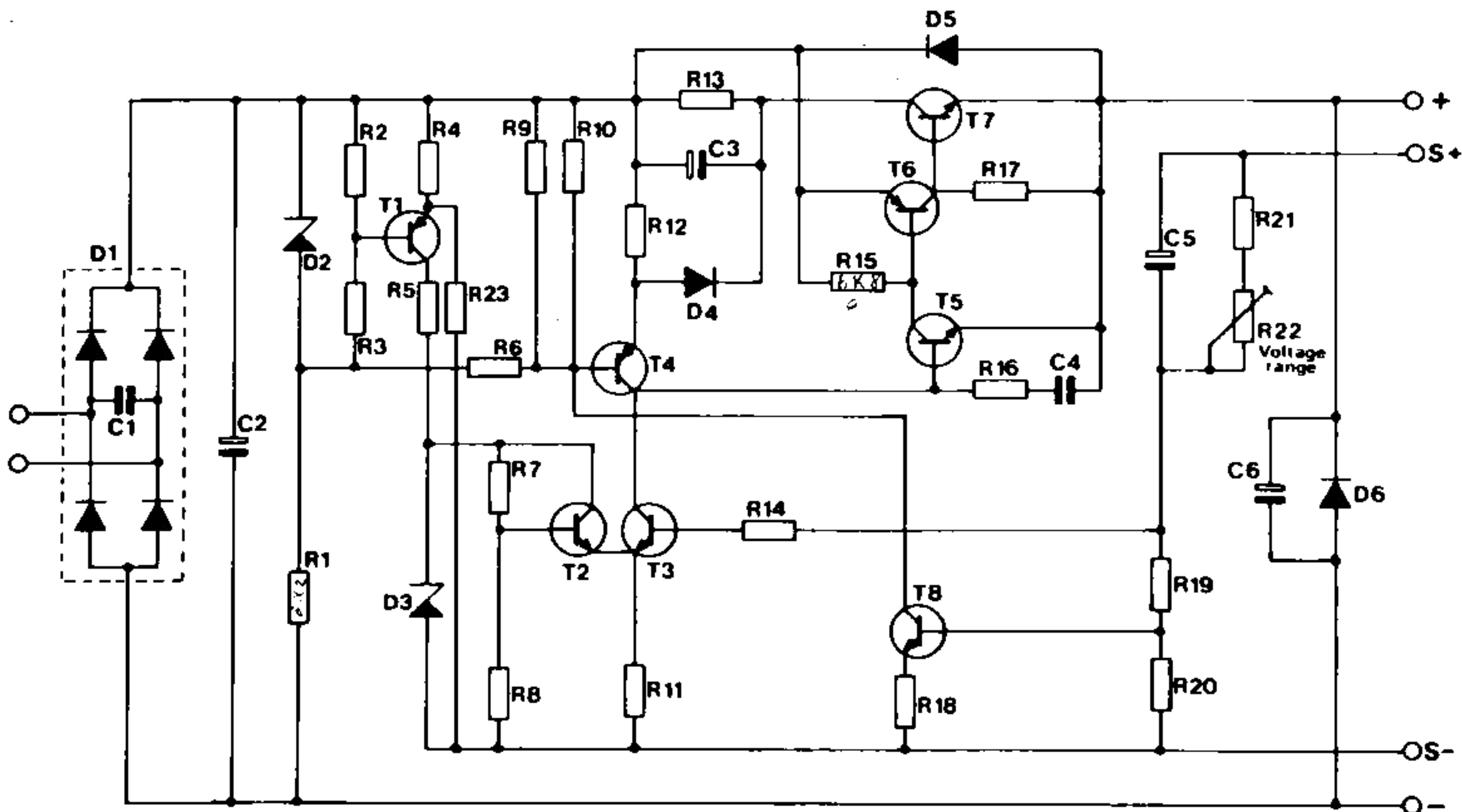
Title: C 5 - 5	Date	App
Circuit diagram	Date: Okt '73	
Modifications	Date	App



voltage range

P 150

	Output VDC	Input VAC	Terminals
CV 15-2	5-9	13	1-2
	9-12	16	1-3 TV 152
	12-15	19	1-4
CV 30-1	15-20	24	1-2
	20-25	29	1-3 TV 301
	25-30	34	1-4
CV 60-0,6	30-40	45	1-2
	40-50	54	1-3 TV 6006
	50-60	64	1-4



Circuit diagram C 24-1.5, CV 15-2, CV 30-1, CV 60-0,6

R (Ohm)	C 24-1.5	CV 15-2	CV 30-1	CV 60-0.6
1	8,2 k	2,7 k	8,2 k	22 k
2	-	2,7 k	---	---
3	-	5,6 k	---	---
4	820	220	820	820
5	-	-	---	2,7 k
6	47 k	47 k	47 k	56 k
7	-	6,8 k	8,2 k	8,2 k
8	-	18 k	33 k	33 k
9	5,6 k	8,2 k	5,6 k	8,2 k
10	CR	CR	CR	CR
11	22 k	22 k	22 k	2,2 k
12	27 k	27 k	27 k	2,7 k
13	1 7 W	1 7 W	1,8 7 W	3,3 7 W
14	470	470	470	470
15	6,8 k	6,8 k	6,8 k	6,8 k
16	100	100	100	100
17	68	68	68	68
18	8,2 k	6,8 k	6,8 k	6,8 k
19	680	180	680	680
20	470	180	560	560
21	2,7 k	-	2,2 k	5,6 k
22	1 k 20 t var	1 k 20 t var	5 k 20 t var	10 k 20 t var
23	100 k	-	---	270 k

C (microfarad)

1	0,1/250 V	0,1/250 V	0,1/250 V	0,1/250 V
2	4x470/ 63 V	4x1000/35 V	3x470/ 63 V	4x100/100 V
3	22 / 16 V	22 / 16 V	22 / 16 V	---
4	0,022 /250 V	0,022 /250 V	0,022 /250 V	0,022 /250 V
5	2,2/100 V	22 / 25 V	2,2/100 V	2,2/100 V
6	220 / 35 V	220 / 35 V	100 / 63 V	47 /100 V

D

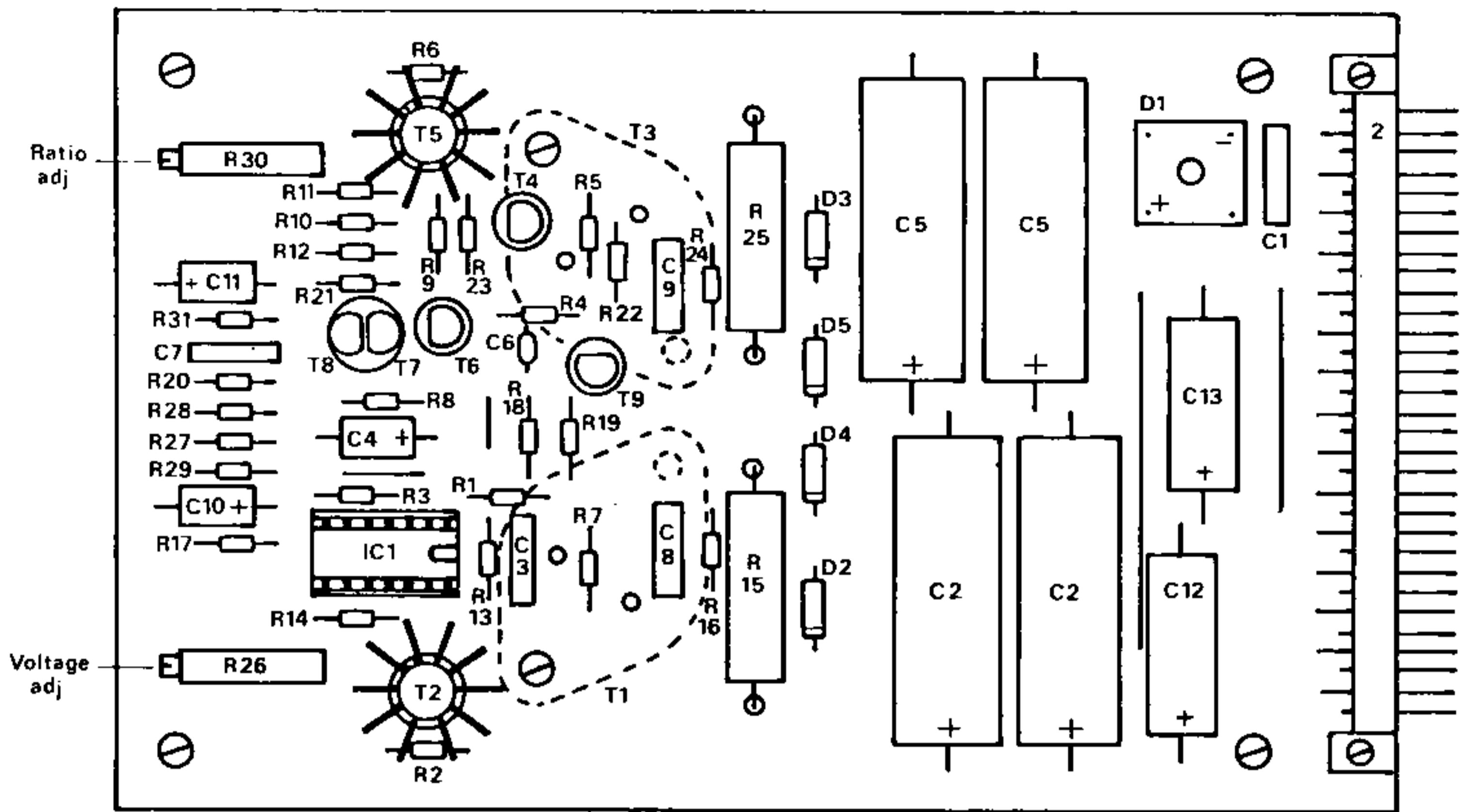
1	VH 148	VH 148	VH 148	W 04	VARO/GIE
2	ZPD 6, 8	ZPD 6, 8	ZPD 6, 8	ZPD 6, 8	ITT
3	1N 825	1N 825	1N 825	1N 825	Micro SemC
4	1N 4148	1N 4148	1N 4148	1N 4148	ITT
5	1N 4002	1N 4002	1N 4002	1N 4002	GI
6	1N 5402	1N 5402	1N 5402	1N 4002	GI

T

1	2N 4037	2N 4037	2N 4037	2N 5415	RCA
2	BC 182	BC 182	BC 182	BC 182	TI
3	BC 182	BC 182	BC 182	BF 297	TI
4	BC 212	BC 212	BC 212	BF 398	TI
5	BC 182	BC 182	BC 182	BF 297	TI
6	2N 4037	2N 4037	2N 4037	2N 5415	RCA
7	2N 3055	2N 3055	2N 3055	2N 3442	RCA
8	BC 182	BC 182	BC 182	BF 297	TI

All other resistors metalfilm $\frac{1}{2}$ W 2%.

CR = calibration resistor.



- R = Ohm
- 1 = 33
 - 2 = 1 k
 - 3 = 3,9 k
 - 4 = 1 k
 - 5 = 100
 - 6 = 1 k
 - 7 = 100
 - 8 = 1 k
 - 9 = 3,9 k
 - 10 = 47 k
 - 11 = 47 k
 - 12 = 68 k
 - 13 = 1 k
 - 14 = 1,2 M
 - 15 = 1,8 7W 5%
 - 16 = 10
 - 17 = 3,9 k
 - 18 = 22 k
 - 19 = CR
 - 20 = 1 k
 - 21 = 220
 - 22 = 2,2 k
 - 23 = 1 k
 - 24 = 10
 - 25 = 1,8 7W 5%
 - 26 = 1 k var.
 - 27 = 820
 - 28 = 1,5 k
 - 29 = 1 k
 - 30 = 1 k var.
 - 31 = 270

- C = microfarad
- 1 = 0,047 250 V Siemens
 - 2 = 2x1000 40 V ROE
 - 3 = 0,00022 63 V Siemens
 - 4 = 2,2 35 V ROE
 - 5 = 2x1000 40 V ROE
 - 6 = 0,0001 250 V CGS
 - 7 = 0,01 250 V Siemens
 - 8 = 0,47 100 V Siemens
 - 9 = 0,47 100 V Siemens
 - 10 = 10 35 V ROE
 - 11 = 10 35 V ROE
 - 12 = 220 35 V ROE
 - 13 = 220 35 V ROE

- T
- 1 = 2N3055 RCA
 - 2 = 2N4037 RCA
 - 3 = 2N3055 RCA
 - 4 = BC 182 A TI
 - 5 = 2N3053 RCA
 - 6 = BC 212 A TI
 - 7 = BC 212 A TI
 - 8 = BC 182 A TI
 - 9 = BC 212 A TI

- IC
- 1 = 2N72723 TI

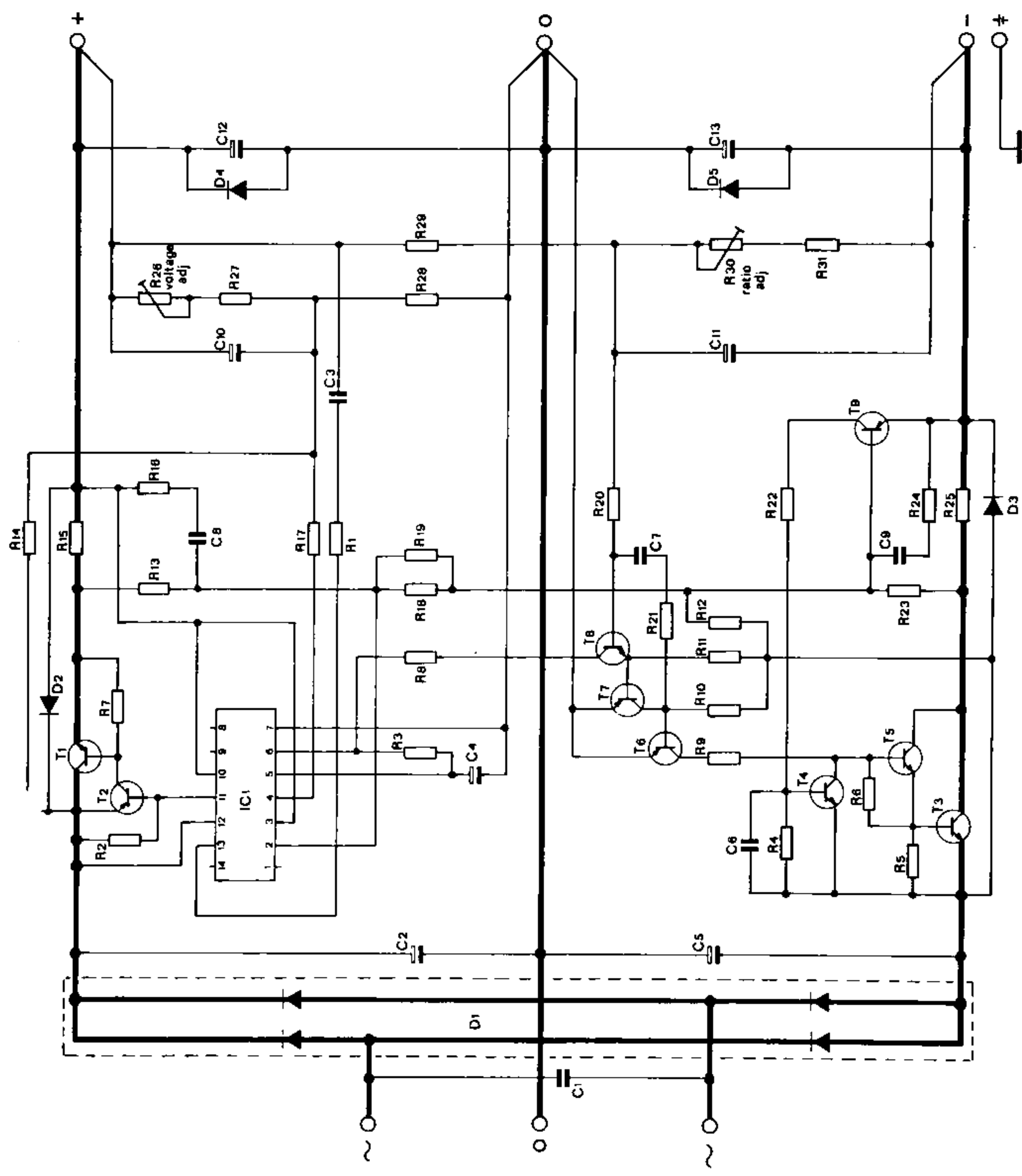
All other resistors metalfilm 0,4 W 2%.

CR = Calibration resistor.

- D
- 1 = VH 148 TI
 - 2 = 1N4003 TI
 - 3 = 1N4003 TI
 - 4 = 1N4003 TI
 - 5 = 1N4003 TI

			Title: CD 15-1A
			Date: Apr '78
Modifications	Date	App.	delta elektronika bv





Title: Circuit diagram CD 15 - 1A	
Date: Apr '78	
Modifications	Date App
delta elektronika bv	

