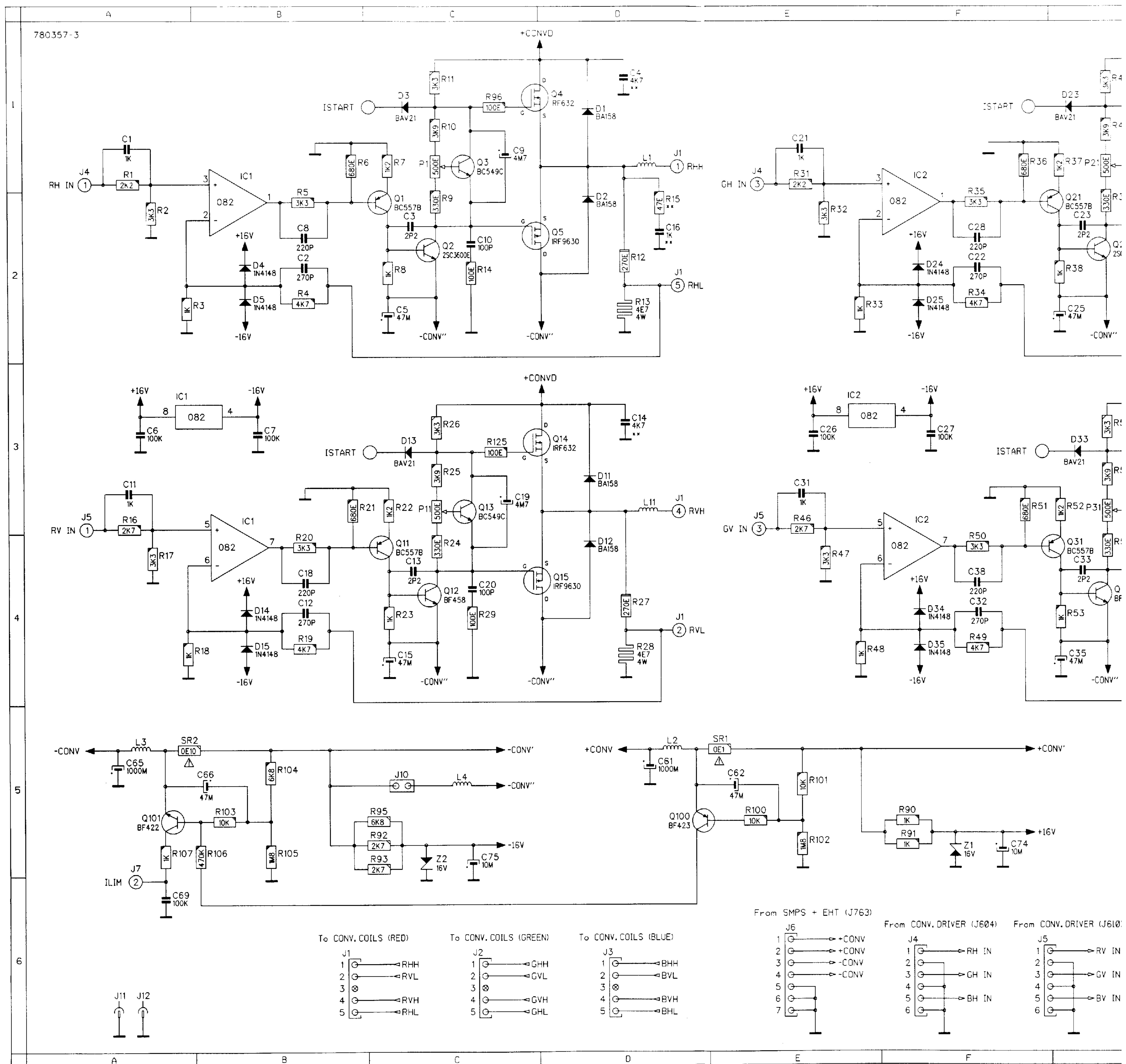
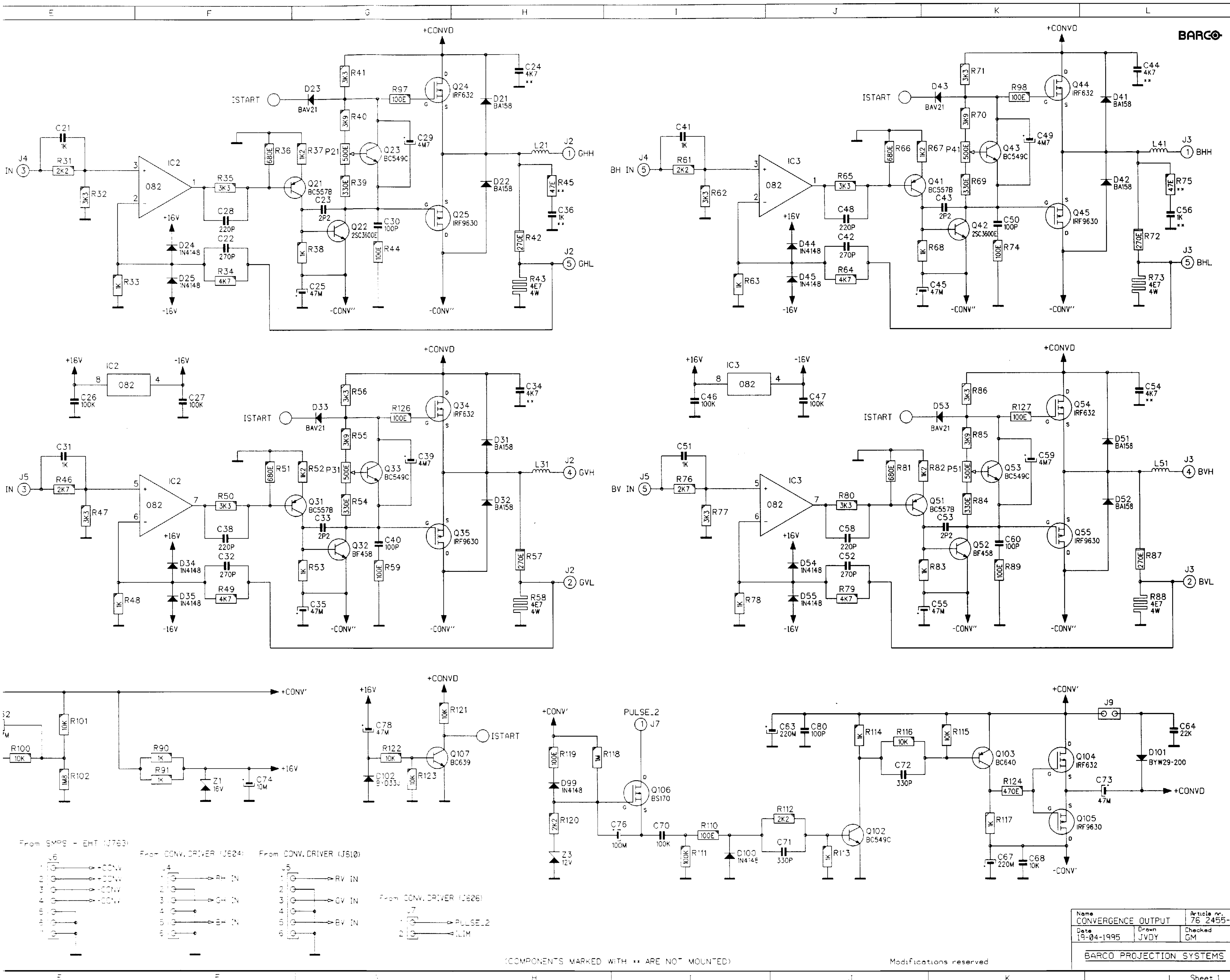


Convergence module (Output) R762455

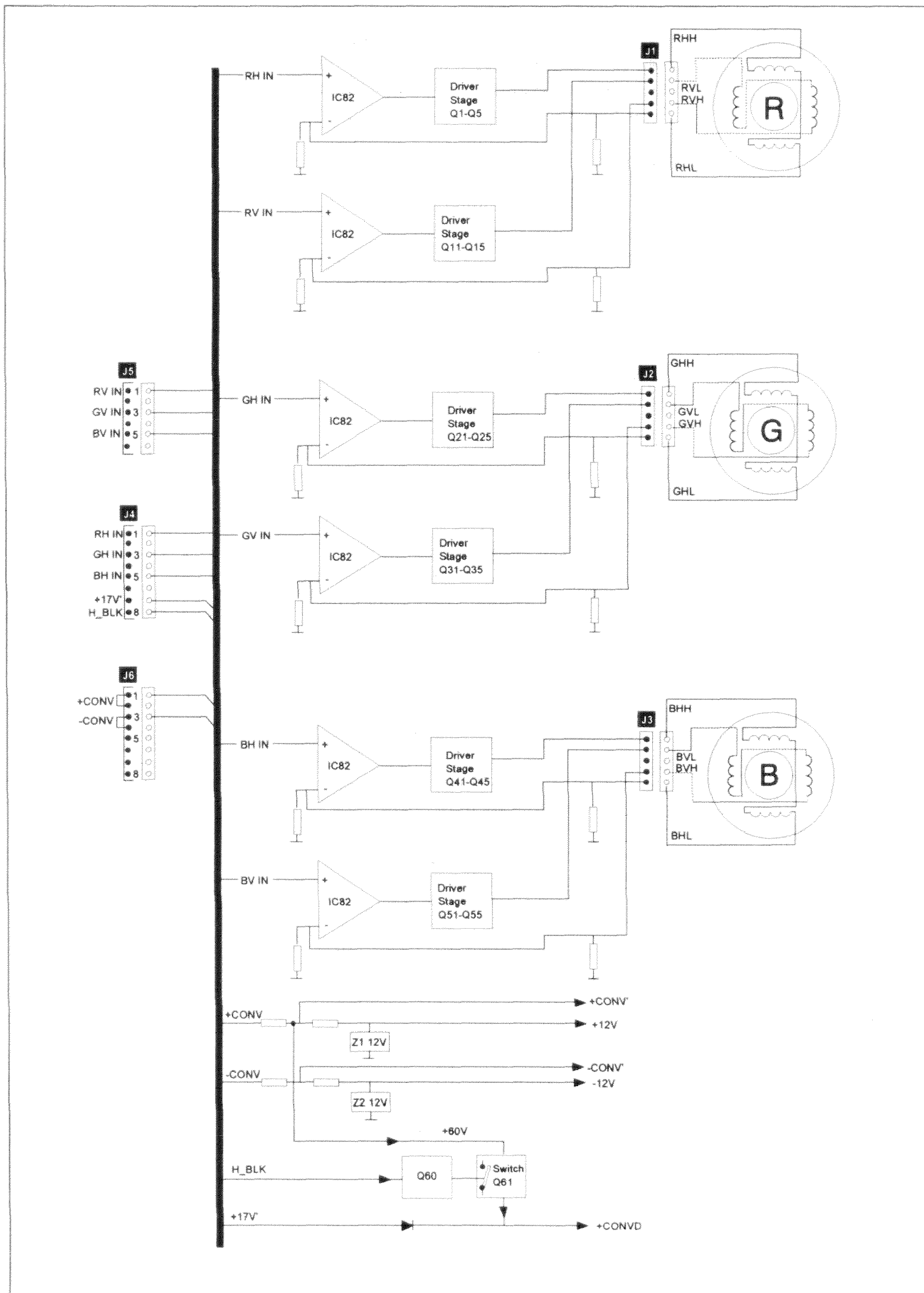
	COMP.	LOC.	COMP.	LOC.	COMP.	LOC.
1	C1	D 2	L31	E 4	R85	F 4
	C2	D 3	L41	D 4	R86	F 4
	C3	C 3	L51	E 4	R87	E 4
	C4	C 3			R88	E 4
	C5	C 2	P1	C 3	R89	F 4
	C6	D 2	P11	F 2	R90	E 4
	C7	D 3	P21	C 3	R91	D 4
	C8	D 3	P31	F 3	R92	F 5
	C9	C 3	P41	C 4	R93	F 5
	C10	C 3	P51	F 4	R95	F 5
	C11	E 2			R100	C 5
	C12	E 3	Q1	D 3	R101	C 5
	C13	F 3	Q2	C 3	R102	C 5
	C14	F 2	Q3	C 3	R103	C 5
	C15	F 3	Q4	C 3	R104	C 5
	C16	D 3	Q5	C 3	R105	C 5
	C18	E 3	Q11	E 2	R106	C 5
	C19	F 3	Q12	F 3	R107	C 5
	C20	F 3	Q13	F 3	R110	D 2
	C21	D 3	Q14	F 2	R111	D 2
2	C22	D 4	Q15	F 3	R112	D 2
	C23	C 3	Q21	D 4	R113	D 2
	C24	C 4	Q22	C 3	R114	D 2
	C25	C 3	Q23	C 3	R115	D 2
	C26	D 3	Q24	C 4	R116	D 2
	C27	D 3	Q25	C 3	R117	D 2
	C28	D 3	Q31	E 3	R118	E 2
	C29	C 3	Q32	F 4	R119	E 2
	C30	C 3	Q33	F 3	R120	E 2
	C31	E 3	Q34	F 3	R121	E 2
	C32	E 3	Q35	F 4	R122	E 2
	C33	F 3	Q41	D 4	R123	E 2
	C34	F 3	Q42	C 4		
	C35	F 4	Q43	C 4	SR1	D 4
	C36	D 4	Q44	C 4	SR2	E 4
	C38	E 3	Q45	C 4		
	C39	F 3	Q51	E 4	Z1	E 4
	C40	F 4	Q52	F 4	Z2	E 4
	C41	D 4	Q53	F 4	Z3	E 2
	C42	D 4	Q54	F 4		
3	C43	C 4	Q55	F 4		
	C44	C 5	Q100	D 5		
	C45	C 4	Q101	D 4		
	C46	E 4	Q102	D 2		
	C47	D 4	Q103	D 2		
	C48	D 4	Q104	C 2		
	C49	C 4	Q105	C 2		
	C50	C 4	Q106	F 2		
	C51	E 4	Q107	E 2		
	C52	E 4				
	C53	F 4	R1	D 2		
	C54	F 4	R2	D 2		
	C55	F 4	R3	D 2		
	C56	D 4	R4	D 3		
	C58	E 4	R5	D 3		
	C59	F 4	R6	D 3		
	C60	F 4	R7	C 3		
	C61	E 4	R8	C 3		
	C62	D 4	R9	C 3		
	C63	C 2	R10	C 3		
4	C64	F 2	R11	C 3		
	C65	D 4	R12	D 2		
	C66	D 4	R13	D 2		
	C67	D 2	R14	C 2		
	C68	C 2	R15	D 3		
	C69	C 5	R16	E 3		
	C70	E 2	R17	E 2		
	C71	D 2	R18	E 2		
	C72	D 2	R19	E 3		
	C73	F 2	R20	F 2		
	C74	E 4	R21	F 3		
	C75	E 4	R22	F 3		
	C76	E 2	R23	F 3		
	C78	E 2	R24	F 3		
			R25	F 3		
	D1	D 3	R26	F 3		
	D2	D 3	R27	E 2		
	D3	C 3	R28	E 2		
	D4	D 3	R29	F 3		
5	D5	D 3	R31	D 3		
	D11	E 3	R32	D 3		
	D12	E 3	R33	D 3		
	D13	F 3	R34	D 4		
	D14	E 3	R35	D 3		
	D15	E 3	R36	C 4		
	D21	D 3	R37	C 4		
	D22	D 3	R38	C 4		
	D23	D 3	R39	C 4		
	D24	D 3	R40	C 4		
	D25	D 3	R41	C 4		
	D31	E 3	R42	D 3		
	D32	E 3	R43	D 3		
	D33	F 4	R44	D 3		
	D34	E 3	R45	D 4		
	D35	E 3	R46	E 3		
	D41	D 4	R47	E 3		
	D42	D 4	R48	E 3		
	D43	D 4	R49	E 4		
	D44	D 4	R50	F 3		
6	D45	D 4	R51	F 3		
	D51	E 4	R52	F 3		
	D52	E 4	R53	F 3		
	D53	E 4	R54	F 3		
	D54	E 4	R55	F 3		
	D55	E 4	R56	F 3		
	D99	E 2	R57	E 3		
	D100	D 2	R58	E 3		
	D101	F 2	R59	F 4		
	D102	E 2	R61	D 4		
			R62	D 4		
	IC1	D 2	R63	D 4		
	IC2	E 3	R64	D 4		
	IC3	D 4	R65	D 4		
			R66	D 4		
	J1	E 3	R67	C 4		
	J2	E 4	R68	C 4		
	J3	E 4	R69	C 4		
	J4	D 2	R70	C 4		
	J5	E 2	R71	C 4		
	J6	D 5	R72	D 4		
	J7	F 2	R73	D 4		
	J9	F 2	R74	C 4		
	J10	C 2	R75	D 4		
	J11	F 2	R76	E 4		
	J12	E 4	R77	E 4		
			R78	E 4		
	L1	D 3	R79	E 4		
	L2	E 5	R80	F 4		
	L3	E 4	R81	F 4		
	L4	D 2	R82	F 4		
	L11	E 3	R83	F 4		
	L21	D 4	R84	F 4		





COMP. LOC.	COMP. LOC.	COMP. LOC.
C1 A 1	IC1 B 3	R38 G 2
C2 B 2	IC2 C 3	R39 G 2
C3 C 3	IC3 D 3	R40 G 2
C4 D 4	IC4 E 3	R41 G 2
C5 E 5	IC5 F 3	R42 H 2
C6 F 6	IC6 G 3	R43 H 2
C7 G 7	IC7 H 3	R44 H 2
C8 H 8	IC8 I 3	R45 H 2
C9 I 9	IC9 J 3	R46 H 2
C10 J 10	IC10 K 3	R47 H 2
C11 K 11	IC11 L 3	R48 H 2
C12 L 12	IC12 M 3	R49 H 2
C13 M 13	IC13 N 3	R50 H 2
C14 N 14	IC14 O 3	R51 H 2
C15 O 15	IC15 P 3	R52 H 2
C16 P 16	IC16 Q 3	R53 H 2
C17 Q 17	IC17 R 3	R54 H 2
C18 R 18	IC18 S 3	R55 H 2
C19 S 19	IC19 T 3	R56 H 2
C20 T 20	IC20 U 3	R57 H 2
C21 U 21	IC21 V 3	R58 H 2
C22 V 22	IC22 W 3	R59 H 2
C23 W 23	IC23 X 3	R60 H 2
C24 X 24	IC24 Y 3	R61 H 2
C25 Y 25	IC25 Z 3	R62 H 2
C26 Z 26	IC26 AA 3	R63 H 2
C27 AA 27	IC27 AB 3	R64 H 2
C28 AB 28	IC28 AC 3	R65 H 2
C29 AC 29	IC29 AD 3	R66 H 2
C30 AD 30	IC30 AE 3	R67 H 2
C31 AE 31	IC31 AF 3	R68 H 2
C32 AF 32	IC32 AG 3	R69 H 2
C33 AG 33	IC33 AH 3	R70 H 2
C34 AH 34	IC34 AI 3	R71 H 2
C35 AI 35	IC35 AJ 3	R72 H 2
C36 AJ 36	IC36 AK 3	R73 H 2
C37 AK 37	IC37 AL 3	R74 H 2
C38 AL 38	IC38 AM 3	R75 H 2
C39 AM 39	IC39 AN 3	R76 H 2
C40 AN 40	IC40 AO 3	R77 H 2
C41 AO 41	IC41 AP 3	R78 H 2
C42 AP 42	IC42 AQ 3	R79 H 2
C43 AQ 43	IC43 AR 3	R80 H 2
C44 AR 44	IC44 AS 3	R81 H 2
C45 AS 45	IC45 AT 3	R82 H 2
C46 AT 46	IC46 AU 3	R83 H 2
C47 AU 47	IC47 AV 3	R84 H 2
C48 AV 48	IC48 AW 3	R85 H 2
C49 AW 49	IC49 AX 3	R86 H 2
C50 AX 50	IC50 AY 3	R87 H 2
C51 AY 51	IC51 AZ 3	R88 H 2
C52 AZ 52	IC52 BA 3	R89 H 2
C53 BA 53	IC53 BB 3	R90 H 2
C54 BB 54	IC54 BC 3	R91 H 2
C55 BC 55	IC55 BD 3	R92 H 2
C56 BD 56	IC56 BE 3	R93 H 2
C57 BE 57	IC57 BF 3	R94 H 2
C58 BF 58	IC58 BG 3	R95 H 2
C59 BG 59	IC59 BH 3	R96 H 2
C60 BH 60	IC60 BI 3	R97 H 2
C61 BI 61	IC61 BJ 3	R98 H 2
C62 BJ 62	IC62 BK 3	R99 H 2
C63 BK 63	IC63 BL 3	R100 H 2
C64 BL 64	IC64 BM 3	R101 H 2
C65 BM 65	IC65 BN 3	R102 H 2
C66 BN 66	IC66 BO 3	R103 H 2
C67 BO 67	IC67 BP 3	R104 H 2
C68 BP 68	IC68 BQ 3	R105 H 2
C69 BQ 69	IC69 BR 3	R106 H 2
C70 BR 70	IC70 BS 3	R107 H 2
C71 BS 71	IC71 BT 3	R108 H 2
C72 BT 72	IC72 BU 3	R109 H 2
C73 BU 73	IC73 BV 3	R110 H 2
C74 BV 74	IC74 BW 3	R111 H 2
C75 BW 75	IC75 BX 3	R112 H 2
C76 BX 76	IC76 BY 3	R113 H 2
C77 BY 77	IC77 BZ 3	R114 H 2
C78 BZ 78	IC78 CA 3	R115 H 2
C79 CA 79	IC79 CB 3	R116 H 2
C80 CB 80	IC80 CC 3	R117 H 2
C81 CC 81	IC81 CD 3	R118 H 2
C82 CD 82	IC82 CE 3	R119 H 2
C83 CE 83	IC83 CF 3	R120 H 2
C84 CF 84	IC84 CG 3	R121 H 2
C85 CG 85	IC85 CH 3	R122 H 2
C86 CH 86	IC86 CI 3	R123 H 2
C87 CI 87	IC87 CJ 3	R124 H 2
C88 CJ 88	IC88 CK 3	R125 H 2
C89 CK 89	IC89 CL 3	R126 H 2
C90 CL 90	IC90 CM 3	R127 H 2
C91 CM 91	IC91 CN 3	R128 H 2
C92 CN 92	IC92 CO 3	R129 H 2
C93 CO 93	IC93 CP 3	R130 H 2
C94 CP 94	IC94 CQ 3	R131 H 2
C95 CQ 95	IC95 CR 3	R132 H 2
C96 CR 96	IC96 CS 3	R133 H 2
C97 CS 97	IC97 CT 3	R134 H 2
C98 CT 98	IC98 CU 3	R135 H 2
C99 CU 99	IC99 CV 3	R136 H 2
C100 CV 100	IC100 CW 3	R137 H 2

Blockdiagram Power output stage convergences



TECHNICAL DESCRIPTION" OUTPUT" (76 2455).

Video Amplifier

The video amplifier is a hybrid amplifier VPH05 which may be supplied with a maximum of 210V and is therefore limited with the zeners Z2-Z6.

As there are always tolerances, the gain is adjustable with P1 and the cutoff (DC level) with P2 in the current source.

A feedback circuit consisting of R5 / R34 provides a stabilisation of the gain and avoids thermal drift away.

Furthermore, the output voltage may not drop below a minimum to avoid oscillations. Following circuit is taken care of above :

The base of Q4 is at approximately 25 volts (12V + 13V on the zener). There is a constant current flow through transistor Q4 / R41 / P2 / R18 / -12V as long the output voltage is beyond the minimum threshold of the emitter of Q4. If the output drops too much, diodes D4 and D14/D15 get forward biased and the above current no more flows through the transistor but directly via the feedback R34 / R5. The bias of the input is adapted to avoid a saturation of the output.

Positive composite blanking pulses arrive at pin 5 of the J1 connector and saturate Q3. The video input pin 4 is pulled at a low level then and the output goes high to drive the crt's black.

IBCL and ABL

Two more signals are taken from the cathode drive :

a) The **IBCL** voltage : Individual Beam Current Limiting voltage, to reduce the contrast voltage as soon the current through that typical tube exceeds a maximum.

The IBCL is smoothened by C12 and leaves at pin 9 of the J1 connector.

b) The **ABL** voltage : The collector-emitter current of Q6 flows through R23 and the corresponding current resistor on the DRIVE board.

We refer to the description of the ABL circuit of the DRIVER module for more information on this subject.

The heater of the picture tube is set at an average of half the supply voltage of 210V with the divider R26 / R27 to prevent a heavy current when there would be a short between heater and cathode.

Spot suppression

The G1 is at approximately zero level (just a diode drop). At switching off it gets heavily negative for the spot suppression.

Convergence module (OUTPUT)

R762455

Parts listing Convergence module (Output) R762455

SIT.	ITEM NO.	DESCRIPTION	QUANTITY	SIT.	ITEM NO.	DESCRIPTION	QUANTITY
100	R133036	SPR L 6 D 6 D 2.4 C	3	C 62	R111500	C EL RA 47M M 10E2 85	
130	R133039	SPR L 8 D 4 D 1.2 C	12	C 63	R111488	C EL RA 220M Z 40E2 85	1
200	R133074	Q ACC ISO SIL600 W 30	0,24	C 64	R1137161	C POMERA 22N K100E2	
				C 65	R1114909	C EL RA1000M M 50E3 SM	1
120	R3133921	J MD JMP P 1 E1SN	2	C 66	R111500	C EL RA 47M M 10E2 85	
	R34698902	SLVU SHR D1,2/0,6 BLK 20	1	C 67	R111488	C EL RA 220M Z 40E2 85	1
	R34840611	CD CT FTMT P 6 65	2	C 68	R1137121	C POMERA 10N K250E2 85	
	R3485022	CD CT FTMT P 2 60	1	C 69	R113724	C POMERA 100N K 63E2	
220	R3631059	SCR D933 M 3 X 8 XIC	15	C 70	R113724	C POMERA 100N K 63E2	
1010	R3631059	SCR D933 M 3 X 8 XIC	4	C 71	R112733	C CE MI 330P K100E2	1
1000	R803711	HTSNK PJ53 CNV	2	C 72	R112368	C N750MI 330P G100E2	
210	R804832	Q ACC SPG 1XM3 LONG	15	C 73	R1113889	C EL RA 47M M100E2 85	1
C 1	R112739	C CE MI 1N K100E2		C 74	R111531	C EL RA 10M M 35E2 85	
C 2	R112367	C N750MI 270P G100E2		C 75	R111531	C EL RA 10M M 35E2 85	
C 3	R112222	C NP0 MI 2P2C100E2	1	C 76	R111477	C EL RA 100M Z 25E2 85	1
C 5	R1113889	C EL RA 47M M100E2 85	1	C 78	R111486	C EL RA 47M M 40E2 85	1
C 6	R1127741	C Z5U MU 100N Z 50E2 85		C 80	R112362	C N750MI 100P G100E2	1
C 7	R1127741	C Z5U MU 100N Z 50E2 85		D 1	R131637	D R BA158 600400 DO7	
C 8	R112366	C N750MI 220P G100E2		D 2	R131637	D R BA158 600400 DO7	
C 9	R1115915	C EL5 RA 4M7M 35E2 85		D 3	R131627	D S BAV21 200250 DO35	
C 10	R112242	C NP0 MI 100P G100E2		D 4	R131621	D S 1N4148 075150 DO35	
C 11	R112739	C CE MI 1N K100E2		D 5	R131621	D S 1N4148 075150 DO35	
C 12	R112367	C N750MI 270P G100E2		D 11	R131637	D R BA158 600400 DO7	
C 13	R112222	C NP0 MI 2P2C100E2	1	D 12	R131637	D R BA158 600400 DO7	
C 15	R1113889	C EL RA 47M M100E2 85	1	D 13	R131627	D S BAV21 200250 DO35	
C 18	R112366	C N750MI 220P G100E2		D 14	R131621	D S 1N4148 075150 DO35	
C 19	R1115915	C EL5 RA 4M7M 35E2 85		D 15	R131621	D S 1N4148 075150 DO35	
C 20	R112242	C NP0 MI 100P G100E2		D 21	R131637	D R BA158 600400 DO7	
C 21	R112739	C CE MI 1N K100E2		D 22	R131637	D R BA158 600400 DO7	
C 22	R112367	C N750MI 270P G100E2		D 23	R131627	D S BAV21 200250 DO35	
C 23	R112222	C NP0 MI 2P2C100E2	1	D 24	R131621	D S 1N4148 075150 DO35	
C 25	R1113889	C EL RA 47M M100E2 85	1	D 25	R131621	D S 1N4148 075150 DO35	
C 26	R1127741	C Z5U MU 100N Z 50E2 85		D 31	R131637	D R BA158 600400 DO7	
C 27	R1127741	C Z5U MU 100N Z 50E2 85		D 32	R131637	D R BA158 600400 DO7	
C 28	R112366	C N750MI 220P G100E2		D 33	R131627	D S BAV21 200250 DO35	
C 29	R1115915	C EL5 RA 4M7M 35E2 85		D 34	R131621	D S 1N4148 075150 DO35	
C 30	R112242	C NP0 MI 100P G100E2		D 35	R131621	D S 1N4148 075150 DO35	
C 31	R112739	C CE MI 1N K100E2		D 41	R131637	D R BA158 600400 DO7	
C 32	R112367	C N750MI 270P G100E2		D 42	R131637	D R BA158 600400 DO7	
C 33	R112222	C NP0 MI 2P2C100E2	1	D 43	R131627	D S BAV21 200250 DO35	
C 35	R1113889	C EL RA 47M M100E2 85	1	D 44	R131621	D S 1N4148 075150 DO35	
C 38	R112366	C N750MI 220P G100E2		D 45	R131621	D S 1N4148 075150 DO35	
C 39	R1115915	C EL5 RA 4M7M 35E2 85		D 51	R131637	D R BA158 600400 DO7	
C 40	R112242	C NP0 MI 100P G100E2		D 52	R131637	D R BA158 600400 DO7	
C 41	R112739	C CE MI 1N K100E2		D 53	R131627	D S BAV21 200250 DO35	
C 42	R112367	C N750MI 270P G100E2		D 54	R131621	D S 1N4148 075150 DO35	
C 43	R112222	C NP0 MI 2P2C100E2	1	D 55	R131621	D S 1N4148 075150 DO35	
C 45	R1113889	C EL RA 47M M100E2 85	1	D 99	R131621	D S 1N4148 075150 DO35	
C 46	R1127741	C Z5U MU 100N Z 50E2 85		D100	R131621	D S 1N4148 075150 DO35	
C 47	R1127741	C Z5U MU 100N Z 50E2 85		D101	R131954	D R BYW29 20008A TO220	1
C 48	R112366	C N750MI 220P G100E2		D102	R1319481	D R BYD33J 6001A3 SOD81	1
C 49	R1115915	C EL5 RA 4M7M 35E2 85		I 1	R134124	U 082 TL DIP8 P	1
C 50	R112242	C NP0 MI 100P G100E2		I 2	R134124	U 082 TL DIP8 P	1
C 51	R112739	C CE MI 1N K100E2		I 3	R134124	U 082 TL DIP8 P	1
C 52	R112367	C N750MI 270P G100E2		J 1	R3137271	J SL FH MBT P 5 M3,96 RP	1
C 53	R112222	C NP0 MI 2P2C100E2	1	J 2	R3137271	J SL FH MBT P 5 M3,96 RP	1
C 55	R1113889	C EL RA 47M M100E2 85	1	J 3	R3137271	J SL FH MBT P 5 M3,96 RP	1
C 58	R112366	C N750MI 220P G100E2		J 6	R313927	J CT H MBT P 7 M2SN	1
C 59	R1115915	C EL5 RA 4M7M 35E2 85		J 9	R3132862	J MD1 MBT P 2 E1SN	1
C 60	R112242	C NP0 MI 100P G100E2		J 10	R3132862	J MD1 MBT P 2 E1SN	1
C 61	R1114909	C EL RA1000M M 50E3 SM	1	J 11	R315302	J PIN PR D1.3L 5.5+3	1
				J 12	R315302	J PIN PR D1.3L 5.5+3	1

Convergence module (OUTPUT)

R762455

L 1	R3061222	CH AX NS 1.5 UH	1	R 11	R1012425	R CF H 3K3 J 0W5	
L 2	R775164	COIL CH HOR DEF	1	R 12	R103229	R MO H270E J 2W	1
L 3	R775164	COIL CH HOR DEF	1	R 13	R103620	R WW H 4E7 K 4W	1
L 4	R774154	CH HOR PJ45 DHR	1	R 14	R101124	R CF H100E J 0W25	
L 11	R3061222	CH AX NS 1.5 UH	1	R 16	R101141	R CF H 2K7 J 0W25	
L 21	R3061222	CH AX NS 1.5 UH	1	R 17	R101142	R MF H 3K32F 0W6 E4	
L 31	R3061222	CH AX NS 1.5 UH	1	R 18	R101136	R CF H 1K J 0W25	
L 41	R3061222	CH AX NS 1.5 UH	1	R 19	R101144	R CF H 4K7 J 0W25	
L 51	R3061222	CH AX NS 1.5 UH	1	R 20	R101142	R MF H 3K32F 0W6 E4	
				R 21	R101134	R CF H680E J 0W25	
P 1	R107005	R TCE H500E K 0W5 S 7TS	1	R 22	R101137	R MF H 1K21F 0W6 E4	
P 11	R107005	R TCE H500E K 0W5 S 7TS	1	R 23	R101136	R CF H 1K J 0W25	
P 21	R107005	R TCE H500E K 0W5 S 7TS	1	R 24	R101530	R MF H330E F 0W4 E3	
P 31	R107005	R TCE H500E K 0W5 S 7TS	1	R 25	R101143	R CF H 3K9 J 0W25	
P 41	R107005	R TCE H500E K 0W5 S 7TS	1	R 26	R1012425	R CF H 3K3 J 0W5	
P 51	R107005	R TCE H500E K 0W5 S 7TS	1	R 27	R103229	R MO H270E J 2W	1
				R 28	R103620	R WW H 4E7 K 4W	1
PC	R780357	PCD PJ53 D700 CNV OUT	1	R 29	R101124	R CF H100E J 0W25	
				R 31	R101140	R MF H 2K21F 0W6 E4	
Q 1	R1314131	Q BC557B P SS TO92		R 32	R101142	R MF H 3K32F 0W6 E4	
Q 2	V132527	Q 2SC3600E N P TO126	1	R 33	R101136	R CF H 1K J 0W25	
Q 3	R131411	Q BC549C N SS TO92		R 34	R101144	R CF H 4K7 J 0W25	
Q 4	R132941	Q IRF632 FN P TO220	1	R 35	R101142	R MF H 3K32F 0W6 E4	
Q 5	R132942	Q IRF9630 FP P TO220	1	R 36	R101134	R CF H680E J 0W25	
Q 11	R1314131	Q BC557B P SS TO92		R 37	R101137	R MF H 1K21F 0W6 E4	
Q 12	R131471	Q BF458 N P TO126	1	R 38	R101136	R CF H 1K J 0W25	
Q 13	R131411	Q BC549C N SS TO92		R 39	R101530	R MF H330E F 0W4 E3	
Q 14	R132941	Q IRF632 FN P TO220	1	R 40	R101143	R CF H 3K9 J 0W25	
Q 15	R132942	Q IRF9630 FP P TO220	1	R 41	R1012425	R CF H 3K3 J 0W5	
Q 21	R1314131	Q BC557B P SS TO92		R 42	R103229	R MO H270E J 2W	1
Q 22	V132527	Q 2SC3600E N P TO126	1	R 43	R103620	R WW H 4E7 K 4W	1
Q 23	R131411	Q BC549C N SS TO92		R 44	R101124	R CF H100E J 0W25	
Q 24	R132941	Q IRF632 FN P TO220	1	R 46	R101141	R CF H 2K7 J 0W25	
Q 25	R132942	Q IRF9630 FP P TO220	1	R 47	R101142	R MF H 3K32F 0W6 E4	
Q 31	R1314131	Q BC557B P SS TO92		R 48	R101136	R CF H 1K J 0W25	
Q 32	R131471	Q BF458 N P TO126	1	R 49	R101144	R CF H 4K7 J 0W25	
Q 33	R131411	Q BC549C N SS TO92		R 50	R101142	R MF H 3K32F 0W6 E4	
Q 34	R132941	Q IRF632 FN P TO220	1	R 51	R101134	R CF H680E J 0W25	
Q 35	R132942	Q IRF9630 FP P TO220	1	R 52	R101137	R MF H 1K21F 0W6 E4	
Q 41	R1314131	Q BC557B P SS TO92		R 53	R101136	R CF H 1K J 0W25	
Q 42	V132527	Q 2SC3600E N P TO126	1	R 54	R101530	R MF H330E F 0W4 E3	
Q 43	R131411	Q BC549C N SS TO92		R 55	R101143	R CF H 3K9 J 0W25	
Q 44	R132941	Q IRF632 FN P TO220	1	R 56	R1012425	R CF H 3K3 J 0W5	
Q 45	R132942	Q IRF9630 FP P TO220	1	R 57	R103229	R MO H270E J 2W	1
Q 51	R1314131	Q BC557B P SS TO92		R 58	R103620	R WW H 4E7 K 4W	1
Q 52	R131471	Q BF458 N P TO126	1	R 59	R101124	R CF H100E J 0W25	
Q 53	R131411	Q BC549C N SS TO92		R 61	R101140	R MF H 2K21F 0W6 E4	
Q 54	R132941	Q IRF632 FN P TO220	1	R 62	R101142	R MF H 3K32F 0W6 E4	
Q 55	R132942	Q IRF9630 FP P TO220	1	R 63	R101136	R CF H 1K J 0W25	
Q100	R132552	Q BF423 P SS TO92		R 64	R101144	R CF H 4K7 J 0W25	
Q101	R132516	Q BF422 N SS TO92		R 65	R101142	R MF H 3K32F 0W6 E4	
Q102	R131411	Q BC549C N SS TO92		R 66	R101134	R CF H680E J 0W25	
Q103	R132968	Q BC640 P SS TO92	1	R 67	R101137	R MF H 1K21F 0W6 E4	
Q104	R132941	Q IRF632 FN P TO220	1	R 68	R101136	R CF H 1K J 0W25	
Q105	R132942	Q IRF9630 FP P TO220	1	R 69	R101530	R MF H330E F 0W4 E3	
Q106	R132910	Q BS170 FN SS TO92	1	R 70	R101143	R CF H 3K9 J 0W25	
Q107	R132922	Q BC639 N SS TO92	1	R 71	R1012425	R CF H 3K3 J 0W5	
				R 72	R103229	R MO H270E J 2W	1
R 1	R101140	R MF H 2K21F 0W6 E4		R 73	R103620	R WW H 4E7 K 4W	1
R 2	R101142	R MF H 3K32F 0W6 E4		R 74	R101124	R CF H100E J 0W25	
R 3	R101136	R CF H 1K J 0W25		R 76	R101141	R CF H 2K7 J 0W25	
R 4	R101144	R CF H 4K7 J 0W25		R 77	R101142	R MF H 3K32F 0W6 E4	
R 5	R101142	R MF H 3K32F 0W6 E4		R 78	R101136	R CF H 1K J 0W25	
R 6	R101134	R CF H680E J 0W25		R 79	R101144	R CF H 4K7 J 0W25	
R 7	R101137	R MF H 1K21F 0W6 E4		R 80	R101142	R MF H 3K32F 0W6 E4	
R 8	R101136	R CF H 1K J 0W25		R 81	R101134	R CF H680E J 0W25	
R 9	R101530	R MF H330E F 0W4 E3		R 82	R101137	R MF H 1K21F 0W6 E4	
R 10	R101143	R CF H 3K9 J 0W25		R 83	R101136	R CF H 1K J 0W25	

R 84	R101530	R MF H330E F 0W4 E3		R117	R101336	R CF H 1K J 1W	1
R 85	R101143	R CF H 3K9 J 0W25		R118	R101172	R CF H 1M J 0W25	
R 86	R1012425	R CF H 3K3 J 0W5		R119	R101124	R CF H100E J 0W25	
R 87	R103229	R MO H270E J 2W	1	R120	R101140	R MF H 2K21F 0W6 E4	
R 88	R103620	R WW H 4E7 K 4W	1	R121	R101148	R CF H 10K J 0W25	
R 89	R101124	R CF H100E J 0W25	1	R122	R101148	R CF H 10K J 0W25	
R 90	R101136	R CF H 1K J 0W25		R123	R101148	R CF H 10K J 0W25	
R 91	R101136	R CF H 1K J 0W25		R124	R101532	R MF H470E F 0W4 E3	1
R 92	R101241	R MF H 2K74F 0W6 E4	1	R125	R101524	R MF H100E F 0W4 E3	1
R 93	R101241	R MF H 2K74F 0W6 E4	1	R126	R101524	R MF H100E F 0W4 E3	1
R 95	R101546	R MF H 6K8 F 0W4 E3		R127	R101524	R MF H100E F 0W4 E3	1
R 96	R101524	R MF H100E F 0W4 E3	1				
R 97	R101524	R MF H100E F 0W4 E3	1	SR 1△	R1013997	R CFFH E1 K 1W	1
R 98	R101524	R MF H100E F 0W4 E3	1	SR 2△	R1012997	R CFFH E1 K 0W7	1
R100	R101148	R CF H 10K J 0W25					
R101	R101148	R CF H 10K J 0W25		Z 1	R131786	D ZEN 16V 0W5 B DO35	1
R102	R101175	R MF H 1M82F 0W6 E4		Z 2	R131786	D ZEN 16V 0W5 B DO35	1
R103	R101148	R CF H 10K J 0W25		Z 3	R131740	D ZEN 12V 0W5 C DO35	
R104	R101146	R MF H 6K81F 0W6 E4					
R105	R101175	R MF H 1M82F 0W6 E4					
R106	R101168	R CF H470K J 0W25					
R107	R101136	R CF H 1K J 0W25					
R110	R101124	R CF H100E J 0W25					
R111	R101160	R CF H100K J 0W25					
R112	R101140	R MF H 2K21F 0W6 E4					
R113	R101136	R CF H 1K J 0W25					
R114	R101136	R CF H 1K J 0W25					
R115	R101148	R CF H 10K J 0W25					
R116	R101148	R CF H 10K J 0W25					

PRODUCT SAFETY NOTICE

Components identified by △ have SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. Before replacing any of these components, read carefully the service safety precautions.

