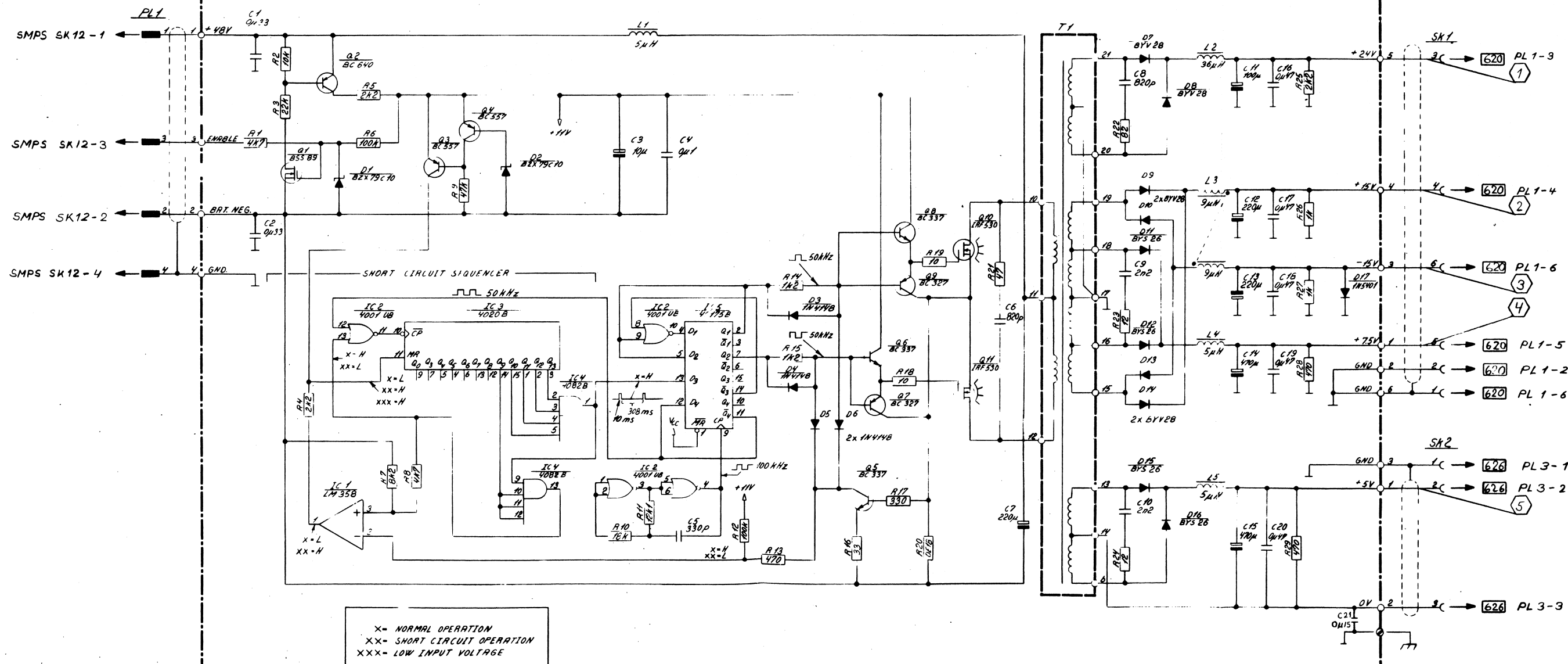


TECHNICAL DESCRIPTION

PCB 621 VOLTAGE CONVERTER BOARD

The voltage converter is a push-pull converter with isolation. There is no stabilisation, it only converts the stabilized 40 V voltage from the Switched Mode Power Supply. The converter frequency is controlled by IC2 and IC5. The converter starts when the enable input is high. The output is protected by a Short Circuit Sequencer. During a shortcircuit the gate voltage of Q10 and Q11 is controlled by Q5 so that the current through Q10 and Q11 is limited to approx. 3 A and sensed by R20. A sequence network, consisting of IC1, IC2, IC3 and IC4 is sensing the gate voltage of Q10 and Q11. If the voltage is low, the converter is shut-off for 300 msec. and then restarted as the shortcircuit sequencer is disabled for 10 msec. by IC4, thus allowing the converter to work for 10 msec. charging the output capacitors. In case of no shortcircuit the gate voltage of Q10 and Q11 will be high and the converter will continue to work. In case of a shortcircuit the gate voltage of Q10 and Q11 will remain low and the sequence network shut off the converter for 300 msec. etc. This means that the loss in Q10 and Q11 will be reduced by a duty factor 1:30. At the same time the current in the output circuit will be reduced and the wiring thereby protected.



PCB 621 VOLTAGE CONVERTER
VERSION 2A MAIN DIAGRAM

PARTS LIST FOR VOLTAGE CONVERTER BOARD 621 VERSION 2A

PARTS LIST FOR VOLTAGE CONVERTER BOARD 621 VERSION 2A

Printed Circuit Board Complete 621									
IC1	LM358								
IC2	4001UB								
IC3	4020B								
IC4	4082B								
IC5	40175								
Q1	BSS89								
Q2	BC640								
Q3,4	BC557								
Q5,6,8	BC337								
Q7,9	BC327								
Q10,11	IRF530								
D1,2	BZX79C10								
D3-6	1N4148								
D7-10,13,14	BYV28								
D11,12,15,16	BYS26								
D17	1N5401								
R1,8	4.7 kohm	5%							
R2	10 kohm	5%							
R3	22 kohm	5%							
R4	2.2 kohm	5%							
R5	2.2 kohm	5%							
R6,12	100 kohm	5%							
R7	8.2 kohm	5%							
R9	47 kohm	5%							
R10	18 kohm	5%							
R11	12.1kohm	1%							
R13	470 ohm	5%							
R14,15	1.2 kohm	5%							
R16	33 ohm	5%							
R17	330 ohm	5%							
R18,19	10 ohm	5%							
R20	0.18 ohm	2%							
R21	47 ohm	5%							
R22	82 ohm	5%							
R23,24	12 ohm	5%							
R25	2.2 kohm	5%							
R26,27	1 kohm	5%							
R28,29	470 ohm	5%							
C1,2	0.33 uF	10%							
C3	10 uF	20%							
C4	0.1 uF	10%							
C5	330 pF	1%							
C6,8	820 pF	10%							
C7,12,13	220 uF -10+50%	10%							

C9,10	107 562 11								
C11	850 035 80								
C14,15	850 400 11								
C16-20	850 402 00								
C21	850 408 20								
	854 017 50								
L1,4,5	843 008 90								
L2	840 064 00								
L3	840 055 70								
T1	840 033 70								
PL1	840 032 70								
SK1	843 053 00								
SK2	832 791 00								
	830 414 80								
	831 002 80								
	831 002 60								
	831 540 10								
	501 347 00								
	501 410 00								
	501 422 00								
	501 322 00								
	544 322 00								
	501 510 00								
	501 382 00								
	501 447 00								
	501 418 00								
	511 412 10								
	501 247 00								
	501 312 00								
	501 133 00								
	501 233 00								
	501 110 00								
	526 001 80								
	501 147 00								
	501 182 00								
	501 112 00								
	512 322 00								
	512 310 00								
	512 247 00								
	624 533 00								
	651 710 01								
	622 510 00								
	615 233 00								
	602 282 00								
	652 822 02								

63V Cer.	602 322 00
40V W.alum.	652 810 01
40V W.alum.	652 847 01
63V Polyes.	622 547 01
	623 515 01