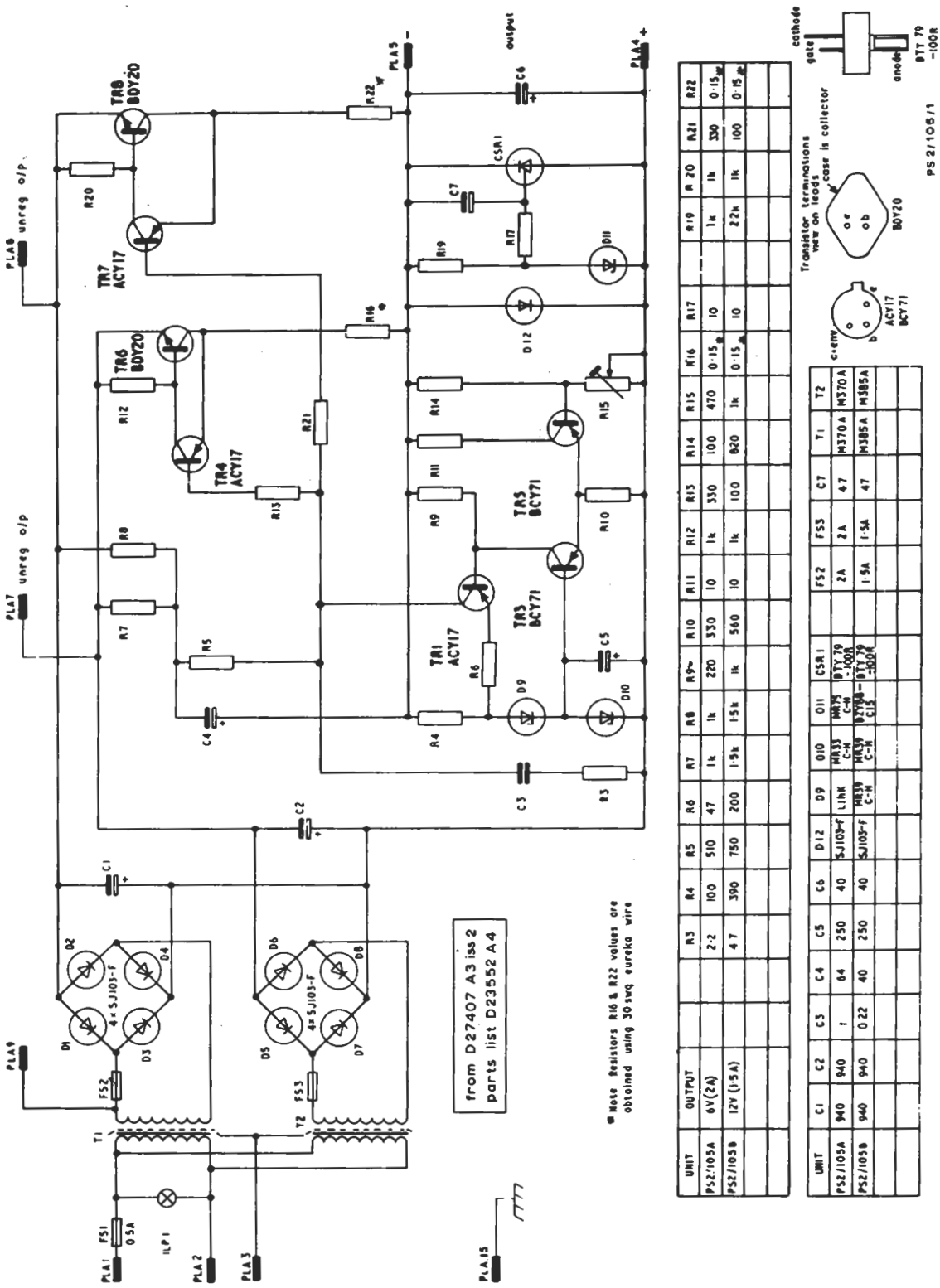
POWER SUPPLIER PS2/105A AND PS2/105B



UNIT	OUTPUT		R3	R4	R5	R6	R7	R8	R9~	R10	R11	R12	R13	R14	R15	R16	R17		R19	R 20	R21	R22
PS2/105A	6V(2A)		2·2	100	510	47	1k	1k	220	330	10	1k	330	100	470	0·15 *	10		1k	1k	330	0·15 *
PS2/105B	12V (1·5A)		4·7	390	750	200	1·5k	1·5k	1k	560	10	1k	100	820	1k	0·15 *	10		22k	1k	100	0·15 *

UNIT	C1	C2	C3	C4	C5	C6	D12	D9	D10	D11	CSR1	FS2	FS3	C7	T1	T2
PS2/105A	940	940	1	64	250	40	SJ103-F	LINK	MR35 C-H	MR35 C-H	BTY 79 -100R	2A	2A	47	M370A	M370A
PS2/105B	940	940	0·22	40	250	40	SJ103-F	MR35 C-H	MR35 C-H	MR35 C-H	BTY79-100R BTY79 -300R	1·5A	1·5A	47	M385A	M385A

Fig. 1. Circuit of the PS2/105A and PS2/105B

Introduction

The PS2/105 power supplier is a modified version of the PS2/82. The unit is mains operated and produces the following outputs:

PS2/105A	6 volts at 2 amperes
PS2/105B	12 volts at 1·5 amperes

Both models have built-in over-voltage protection circuits which operate at about 125 per cent of the nominal output voltage.

Each supplier is built on a printed wiring board which is mounted on a CH1/26A chassis. The index peg positions are:

PS2/105A	60 and 61
PS2/105B	60 and 63

General Specification

	PS2/105A	*PS2/105B*
Output Voltage	6 volts	12 volts
Maximum Load Current	2 amperes	1·5 amperes
Output Impedance at Zero Frequency	<0·2 ohms	<0·3 ohms
Output Impedance at 100 kHz	<0·6 ohms	<1·0 ohms
Output Voltage Drop at Maximum Load	<400 mV	<450 mV
Output Voltage Ripple	<12mV p-p	<9 mV p-p
Power Requirements at 50 Hz	240 volts ±10 per cent	
Operating Temperature Range	−15 to +45 degrees C	

Circuit Description (Fig. 1)

Fig. 1 is a diagram of the PS2/105A and B power suppliers. The operation of the PS2/105 is the same as the PS2/82 except that the over-current protection circuit used in the PS2/82 has been omitted from the PS2/105.

Maintenance

Output Voltage Adjustment

The output voltage is adjusted by resistor R15.

Over-voltage Protection

If the over-voltage protection circuit operates, fuses FS2 and FS3 rupture. To check the operation of the circuit, the fuses must be replaced by resistors of at least nine-watt rating. The PS2/105A requires a 56-ohm resistor and the PS2/105B requires an 82-ohm resistor.

When the resistors have been substituted for the fuses, momentarily connect pin PLA5 to the negative terminal of capacitor C1. The output voltage should fall to 1·5 ±0·5 volts. The circuit is reset by switching off the mains input for a few seconds.

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