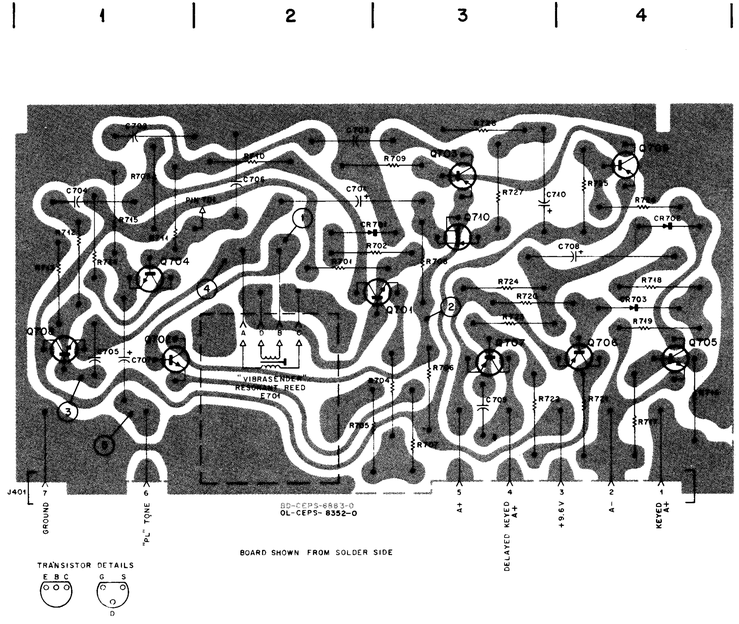
TONE "PRIVATE-LINE" ENCODER

MODEL TLN4293B

FUNCTION–

Generates a low frequency audio tone for continuous modulation of the transmitter rf signal. Provides transmitter turn-off delay of approximately 150 ms after the transmitter is unkeyed.



"PL" ENCODER COMPONENT LOCATIONS

REF. SYM.	LOCATION
C701	A2
C702	B1
C703	A2
C704	A1
C705	A1
C706	A2
C707	B1
C708	B4
C709	C3
C710	A3
CR701	B2
CR702	B4
CR703	B4
Q701	B2
Q702	B1
Q703	A3
Q704	B1
Q705	B4
Q706	B4
Q707	B3
Q708	B1
Q709	A4
Q710	B3
R701	B2

REF. SYM.	LOCATION
R702	B2
R703	A1
R704	C3
R705	C2
R706	C3
R707	C3
R708	B3
R709	A3
R710	A2
R711	B1
R712	B1
R713	B1
R714	B1
R715	A1
R716	C4
R717	C4
R718	B4
R719	B4
R720	B3
R721	C4
R722	C3
R723	B3
R724	B3
R725	A4
R726	A4
R727	A3
R728	A3

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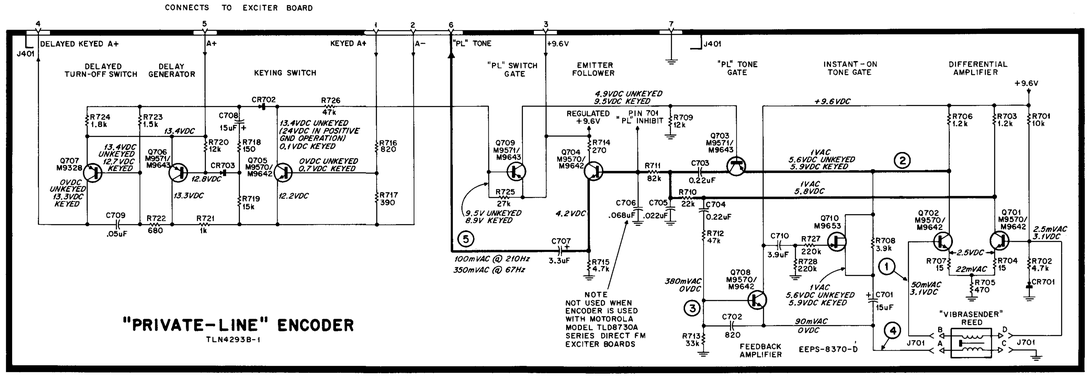
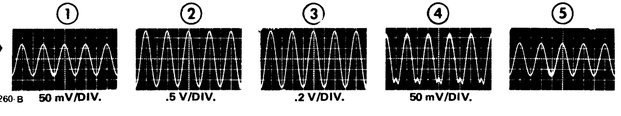


"PL" ENCODER WAVEFORMS

OSCILLOSCOPE WAVEFORMS MEASURED UNDER FOLLOWING CONDITIONS:

1. WAVEFORMS SHOWN USING 100 Hz "VIBRASENDER" RESONANT REED.
2. VERTICAL SENSITIVITY SHOWN UNDER EACH WAVEFORM.
3. HORIZONTAL DEFLECTION = 5 msec/DIV.
4. ALL WAVEFORMS MEASURED IN RESPECT TO CHASSIS GROUND.



"PL" ENCODER

701. ALL AC VOLTAGE MEASUREMENTS ARE RMS VALUES. ALL AC VOLTAGES ARE SINUSOIDAL EXCEPT Q708 EMITTER. METER READING DEPENDENT UPON METER RESPONSE TO NON-SINUSOIDAL WAVE.

702. DC VOLTAGE MEASUREMENTS IN Q705, Q706 AND Q707 STAGES TAKEN WITH RESPECT TO A-. VOLTAGES FOR ALL OTHER STAGES TAKEN WITH RESPECT TO CHASSIS GROUND. ALL DC VOLTAGES MAY BE MEASURED WITH 20,000 OHM-PER-VOLTMETER OR HIGH IMPEDANCE DC VOLTMETER (11 MEGOHM) EXCEPT BASE OF Q704 WHICH CAN ONLY BE MEASURED WITH A HIGH IMPEDANCE METER.

703. UNLESS OTHERWISE STATED: CAPACITOR VALUES ARE IN PICOFARADS. RESISTOR VALUES ARE IN OHMS.

704. PIN 701 IS USED ONLY FOR CERTAIN OPTIONAL EQUIPMENT.

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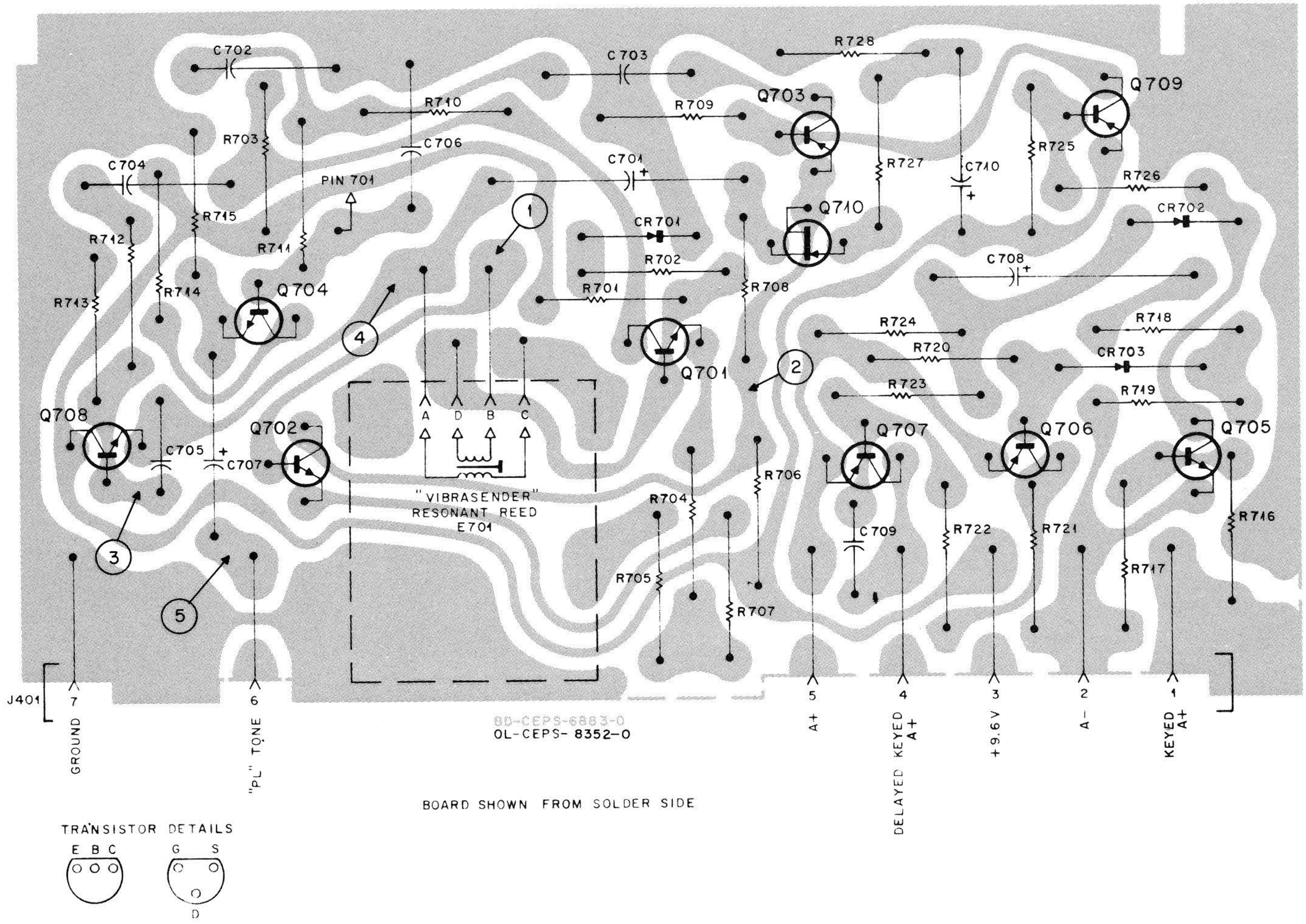
TONE "PRIVATE-LINE" ENCODER

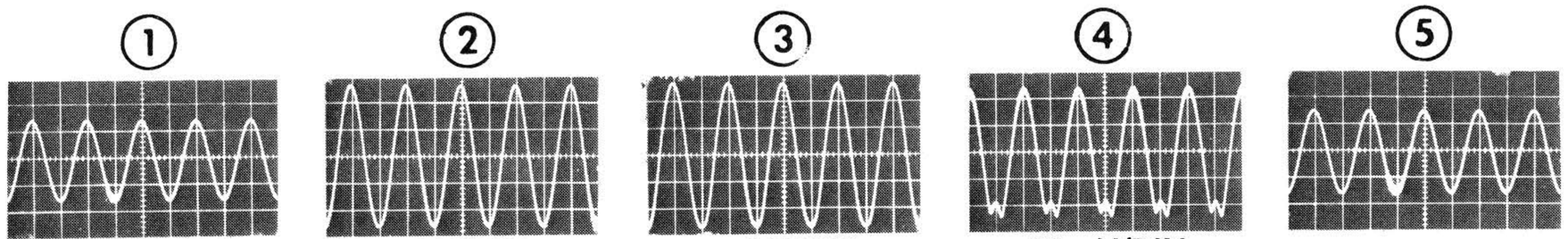
68P81030E24-B
8/6/77-UP



"PL" ENCODER WAVEFORMS

OSCILLOSCOPE WAVEFORMS MEASURED UNDER FOLLOWING CONDITIONS:

1. WAVEFORMS SHOWN USING 100-Hz "VIBRASENDER" RESONANT REED.
2. VERTICAL SENSITIVITY SHOWN UNDER EACH WAVEFORM.
3. HORIZONTAL DEFLECTION = 5 msec/DIV.
4. ALL WAVEFORMS MEASURED IN RESPECT TO CHASSIS GROUND.



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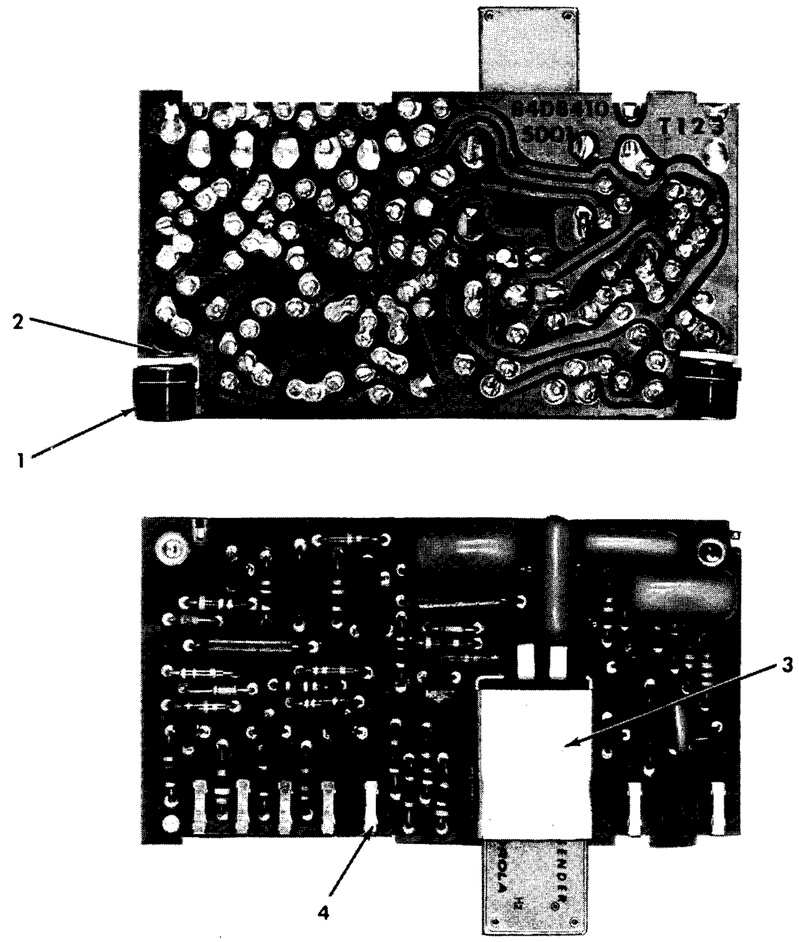


AEPS-6945-O

MECHANICAL PARTS LIST

TLN5731A Tone "Private-Line" Encoder PL-1308-C

CODE	MOTOROLA PART NO.	DESCRIPTION
1	42-84284B01	RETAINER, screw: 2 req'd
2	3-138162	LOCKSCREW, tapping: No 4 x 3/8" Phillips hex head; 2 req'd
3	42-84116B02	SOCKET & BRACKET ASSEMBLY: for "Vibrasender" Resonant Reed
4	9-83011H01	TERMINAL, pin: female 7 req'd

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION

ELECTRICAL PARTS LIST

IMPORTANT

USE ONLY THE FOLLOWING MOTOROLA PART NUMBERS WHEN ORDERING REPLACEMENT PARTS

TLN4293B PL Encoder Board PL-1327-D

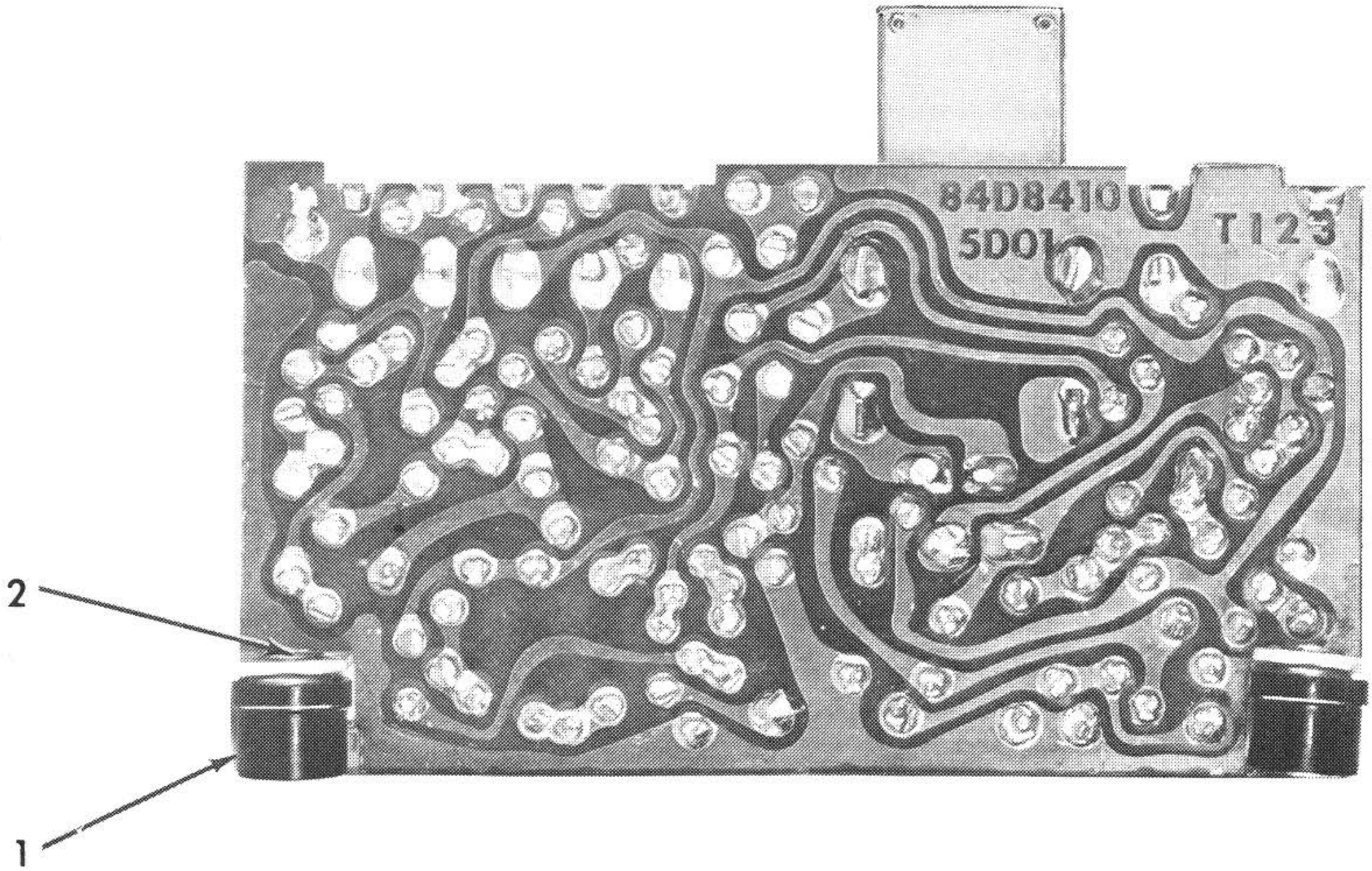
		CAPACITOR, fixed: uF; ±10%; 50 V; unl stated
C701	23D84762H09	15 ±20%; 20 V
C702	21D82187B23	820 pF; 500 V
C703	8D83813H11	0.22
C704	8D83813H11	0.22
C705	8D83813H08	.022
C706	8D83813H05	.068
C707	23D84762H08	3.9 uF ±20%; 15 V
C708	23D83214C26	15; 25 V
C709	21C82372C04	.05; +80-20%; 25 V
C710	23D84762H08	3.9 uF ±20%; 15 V
		SEMICONDUCTOR DEVICE, diode: (SEE NOTE I)
CR701	48C83654H01	silicon
CR702	48C83654H01	silicon
CR703	48C83654H01	silicon
J401		CONNECTOR, receptacle: consists of 7 female contact terminals (Part No. 9B83011H01) mounted on edge of circuit board
		"VIBRASENDER" RESONANT REED: (SEE NOTE II)
E701	TLN6824A	"plug-in" unit
		TRANSISTOR: (SEE NOTE I)
Q701	48R869570	NPN; type M9570
	or 48R869642	NPN; type M9642
Q702	48R869570	NPN; type M9570
	or 48R869642	NPN; type M9642
Q703	48R869571	PNP; type M9571
	or 48R869643	PNP; type M9643
Q704	48R869570	NPN; type M9570
	or 48R869642	NPN; type M9642
Q705	48R869570	NPN; type M9570
	or 48R869642	NPN; type M9642
Q706	48R869571	PNP; type M9571
	or 48R869643	PNP; type M9643
Q707	48R869328	PNP; type M9328
Q708	48R869570	NPN; type M9570
	or 48R869642	NPN; type M9642
Q709	48R869571	PNP; type M9571
	or 48R869643	PNP; type M9643
Q710	48R869653	FET; type M9653
		RESISTOR, fixed: ±5%; 1/4 W; unl stated
R701	6S129668	10k
R702	6S129669	4.7k
R703	6S129708	1.2k
R704	6S124A05	15
R705	6S129709	470
R706	6S129708	1.2k
R707	6S124A05	15
R708	6-10401A63	3.9k
R709	6S129230	12k ±10%
R710	6S129667	22k
R711	6S124A95	82k
R712	6-10401A89	47k
R713	6S129526	33k
R714	6S129752	270 ±10%
R715	6S129669	4.7k
R716	6S129432	820 ±10%

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
R717	6S129863	390 ±10%
R718	6S129862	150 ±10%
R719	6S129236	15k
R720	6S129887	12k
R721	6S129805	1k
R722	6S129984	680
R723	6S129681	1.5k
R724	6S129269	1.8k ±10%
R725	6S127806	27k ±10%
R726	6S128902	47k ±10%
R727	6S129147	220k
R728	6S129147	220k

NOTES:

I. For optimum performance, replacement diodes and transistors must be ordered by Motorola part number.

II. The "Vibrasender" Resonant Reed (Model TLN6824A) is not a part of the encoder board. When ordering a complete board, the reed must be ordered separately.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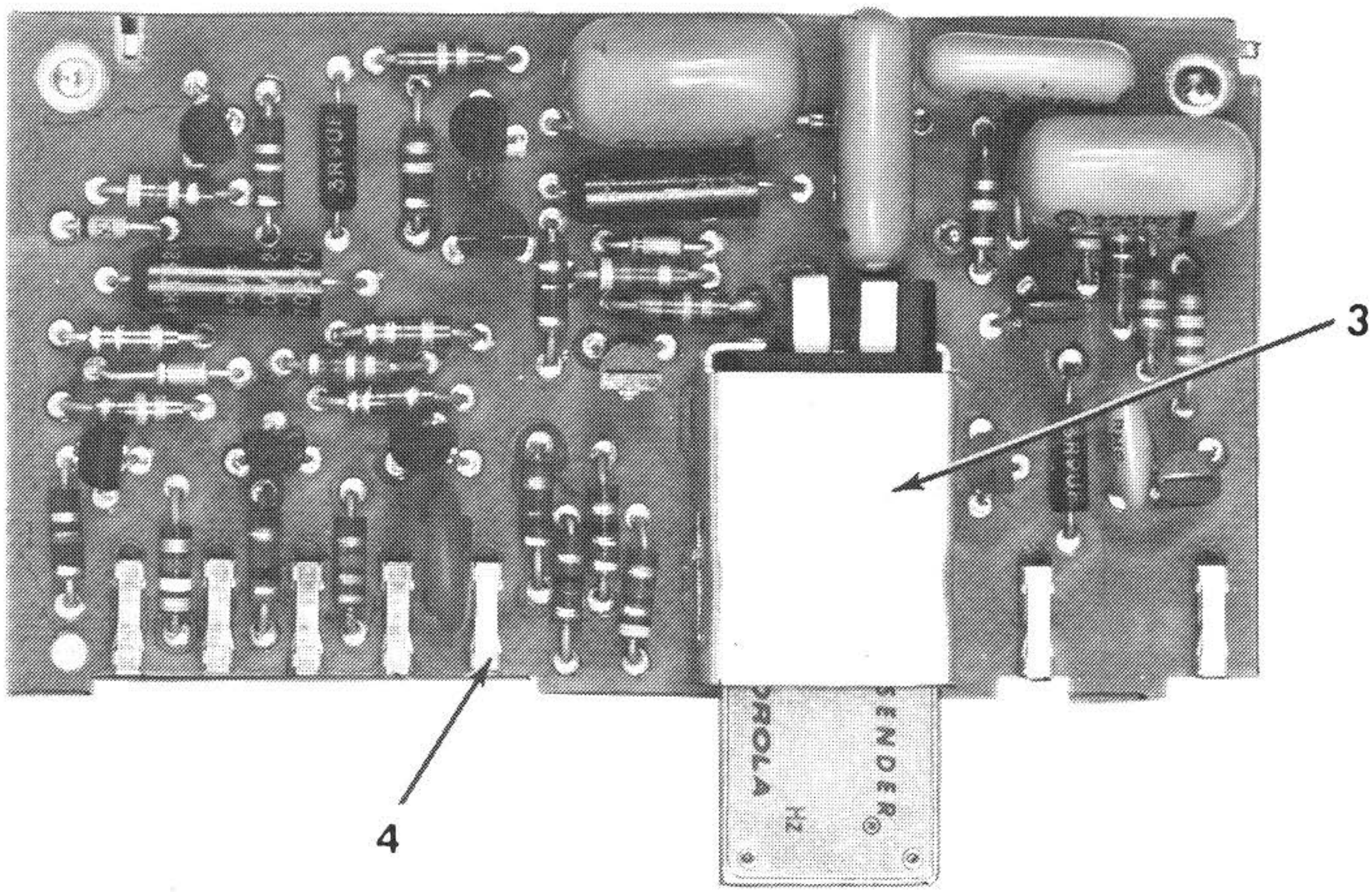
5D01
T123
2
1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