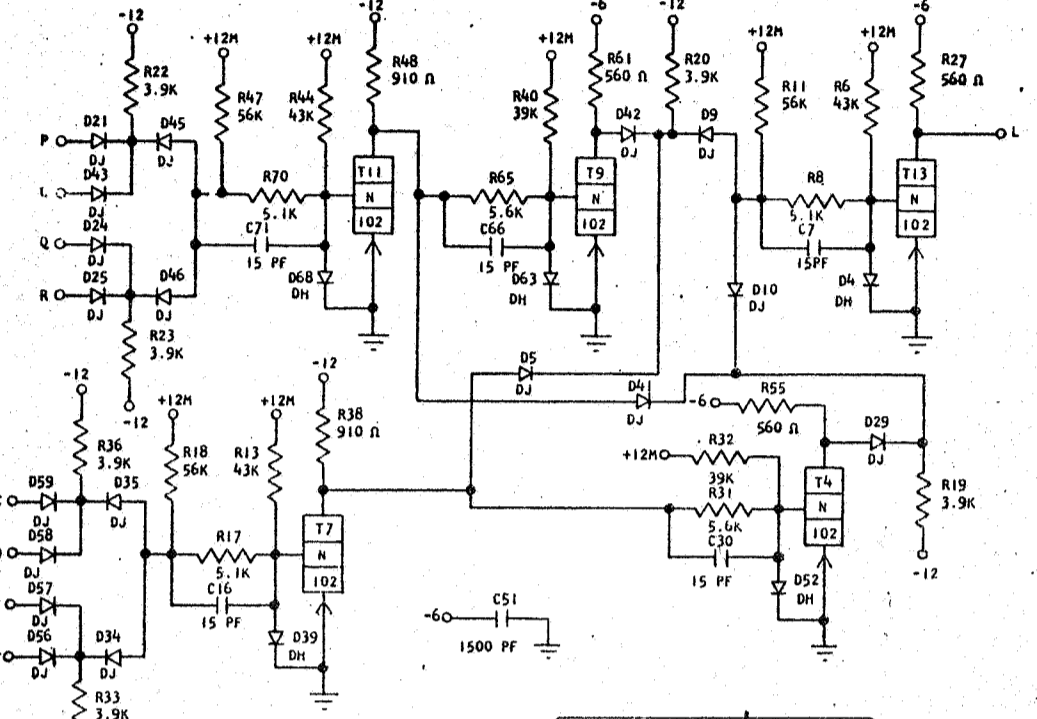
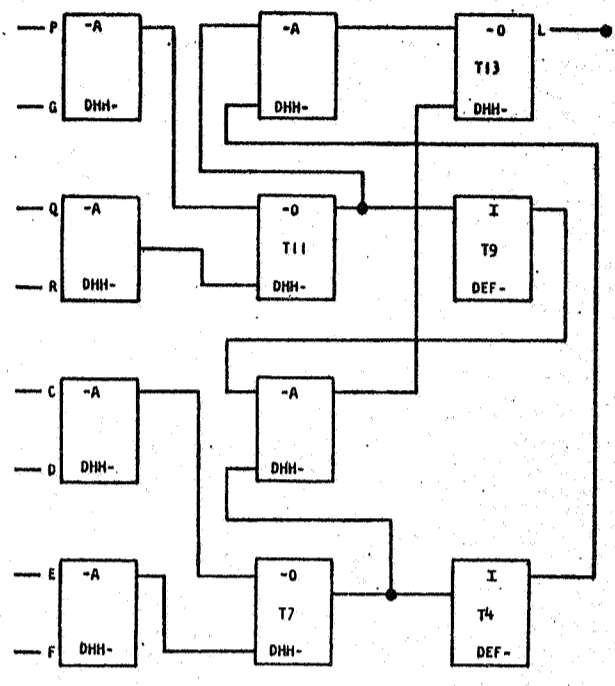


STANDARDS CODE
729928

CARD CODE
729928
D H J -

REFERENCE DRAWING
SEE PRODUCTION DRAWING 370352

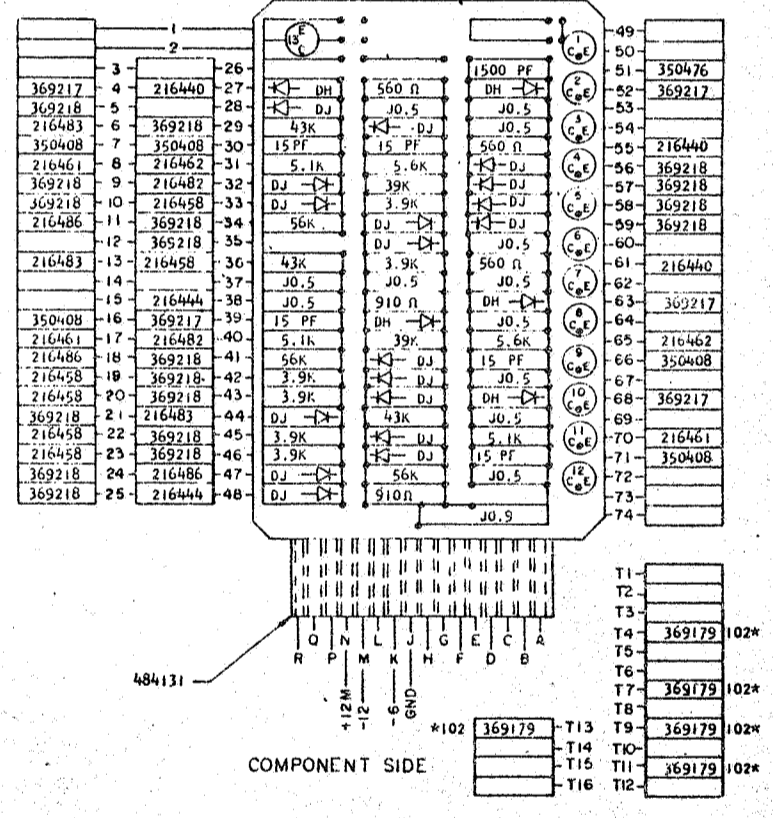
SOTDL MUP NUMBER 4



SEQUENCE OF OPERATION

1. THE FIRST LEVEL OF DIODES OF BOTH T11 AND T7 PERFORM A NEGATIVE AND AND THE SECOND LEVEL OF DIODES A NEGATIVE OR FUNCTION. T9 AND T4 ARE HIGH SPEED INVERTERS THAT ACCEPT NEGATIVE INPUTS TO PERFORM A NEGATIVE AND INVERT FUNCTION. THESE TRANSISTORS ARE DRIVEN BY T11 AND T7 RESPECTIVELY. THE OUTPUTS OF T11, T7, T9 AND T4 ARE FED INTO T13 WHOSE FIRST LEVEL OF DIODES PERFORM A NEGATIVE AND AND WHOSE SECOND LEVEL PERFORM A NEGATIVE OR FUNCTION. THIS CIRCUIT IS USED TO CHECK FOR ODD PARITY OF A TAPE CHARACTER. T11 AND T7 ARE EXCLUSIVE OR'S THAT EACH DETERMINE IF TWO BITS ARE ODD OR EVEN PARITY AND THEN T13, ANOTHER EXCLUSIVE OR COMPARES THE OUTPUTS OF T11 AND T7 TO DETERMINE IF ALL FOUR BITS ARE ODD OR EVEN PARITY.
2. THE CARD CODES SHOWN IN THE BLOCKS REFER TO INDIVIDUAL CARDS SIMILAR TO THAT PORTION OF CIRCUITRY.
3. DELAY - NSEC
 INPUTS TO OUTPUT: MIN. MAX.
 TURN ON 32 263
 TURN OFF 27 213

PINS	SIGNAL NAME	WAVE SHAPE	LEVELS	
			MIN	MAX
P, R, C, F	INPUT	[Square Wave]	UP	-0.65 - -1
Q, E, D, E	INPUT	[Square Wave]	DOWN	-5.81 - -8.8
L	OUTPUT	[Square Wave]	UP	-0.65 - -1
			DOWN	-5.81 - -8.8



CIRCUIT AND PACKAGING STANDARD	
APPROVAL	DATE
ABC	4-2-62

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM TSTR - SOTDL			4-62	115599					729928
MUP NUMBER	4									
DESIGN	RQ	3-1-62	MODEL	SMS						
DETAIL	WH	3-1-62	SCALE	NONE						
CHECK	WH	3-1-62	DRAW	LIG	3-17-62					
APPRO			CHECK							

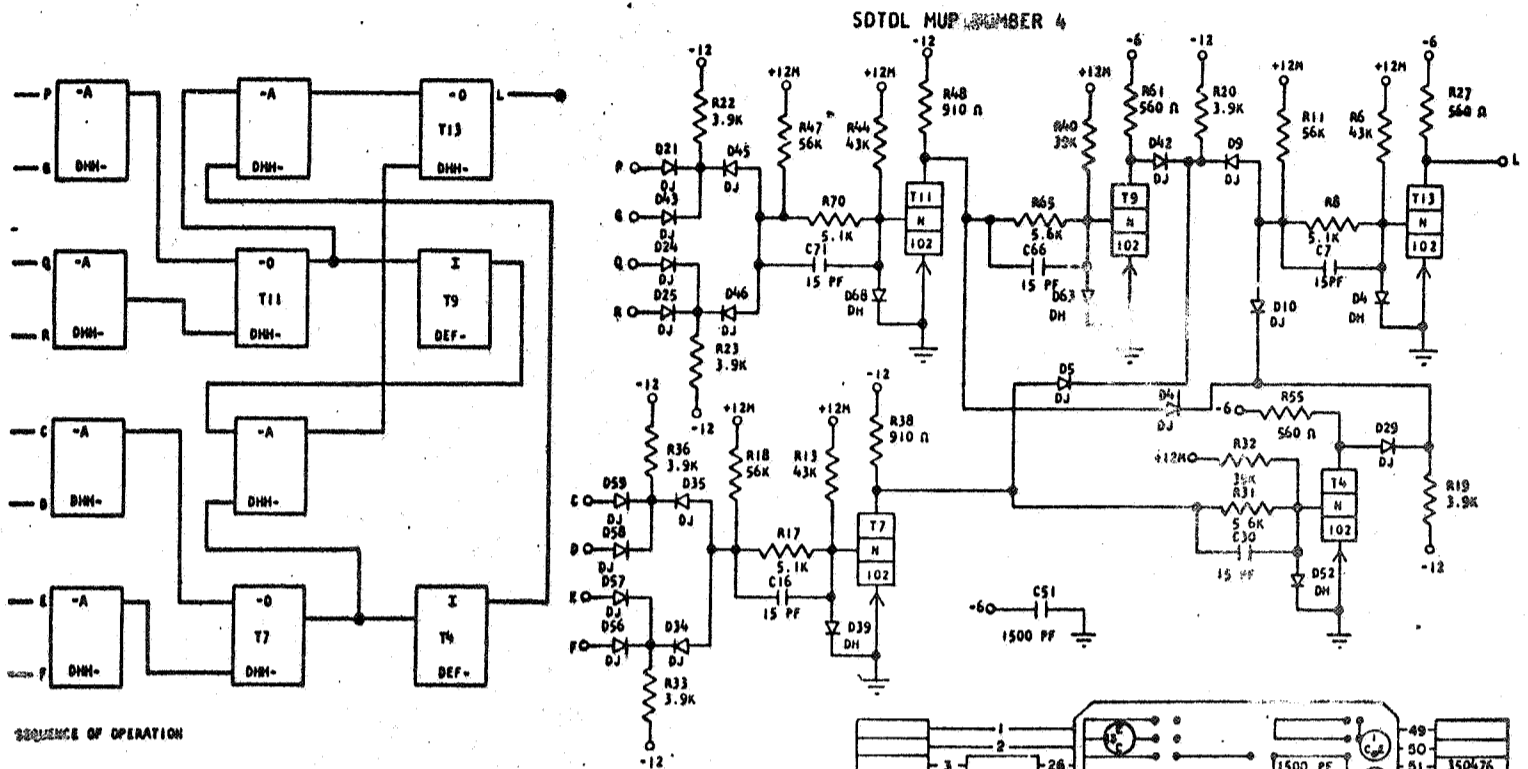
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STANDARD CODE

CARD CODE 729928
D H J -

REFERENCE DRAWING

SEE PRODUCTION DRAWING 370352

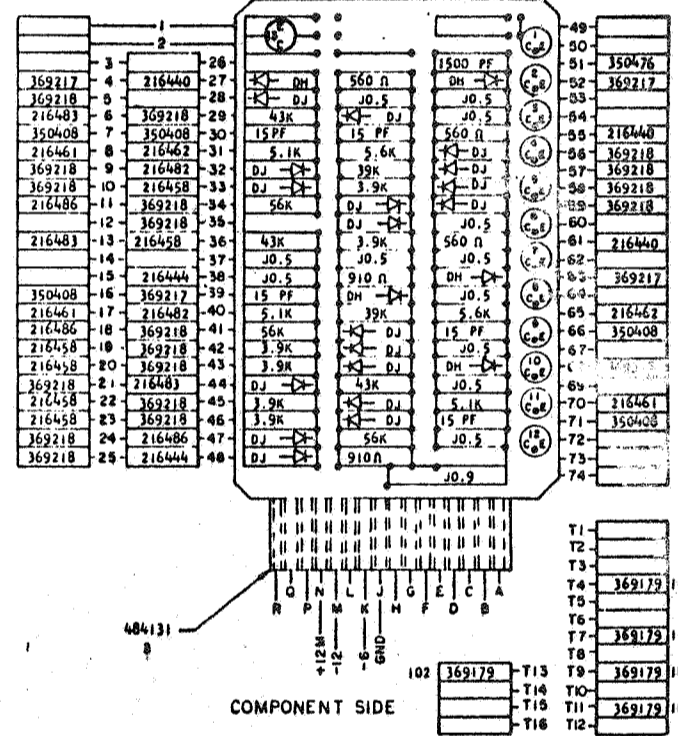


SEQUENCE OF OPERATION

- THE FIRST LEVEL OF DIODES OF BOTH T11 AND T7 PERFORM A NEGATIVE AND AND THE SECOND LEVEL OF DIODES A NEGATIVE OR FUNCTION. T9 AND T4 ARE HIGH SPEED INVERTERS THAT ACCEPT NEGATIVE INPUTS TO PERFORM A NEGATIVE AND INVERT FUNCTION. THESE TRANSISTORS ARE DRIVEN BY T11 AND T7 RESPECTIVELY. THE OUTPUTS OF T11, T7, T9 AND T4 ARE FED INTO T13 WHOSE FIRST LEVEL OF DIODES PERFORM A NEGATIVE AND AND WHOSE SECOND LEVEL PERFORM A NEGATIVE OR FUNCTION. THIS CIRCUIT IS USED TO CHECK FOR ODD PARITY OF A TAPE CHARACTER. T11 AND T7 ARE EXCLUSIVE OR'S THAT EACH DETERMINE IF TWO BITS ARE ODD OR EVEN PARITY AND THEN T13, ANOTHER EXCLUSIVE OR, COMPARES THE OUTPUTS OF T11 AND T7 TO DETERMINE IF ALL FOUR BITS ARE ODD OR EVEN PARITY.
- THE CARD CODES SHOWN IN THE BLOCKS REFER TO INDIVIDUAL CARDS SIMILAR TO THAT PORTION OF CIRCUITRY.
- DELAY - NSEC

INPUTS TO OUTPUT:	MIN.	MAX.
TURN ON	32	263
TURN OFF	27	213

PINS	SIGNAL NAME	WAVE SHAPE	LEVELS	
			MIN	MAX
P, R, C, F	Y INPUT	[Waveform]	UP	-0.65
S, Q, D, E	Y INPUT	[Waveform]	DOWN	-5.81
			UP	-0.65
			DOWN	-5.81



COMPONENT SIDE

CIRCUIT AND PACKAGING STANDARD	
APPROVAL	DATE
ABC	4-2-62

INTERNATIONAL BUSINESS MACHINES CORP				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME	CARD ASM ESTR - SDTOL			12-18-62	115599					
DESIGN	RQ	3-1-62	SLATT							
DETAIL	WH	3-1-62	LIJ	3-7-62						
EMER										
APPROV										

729928

729622

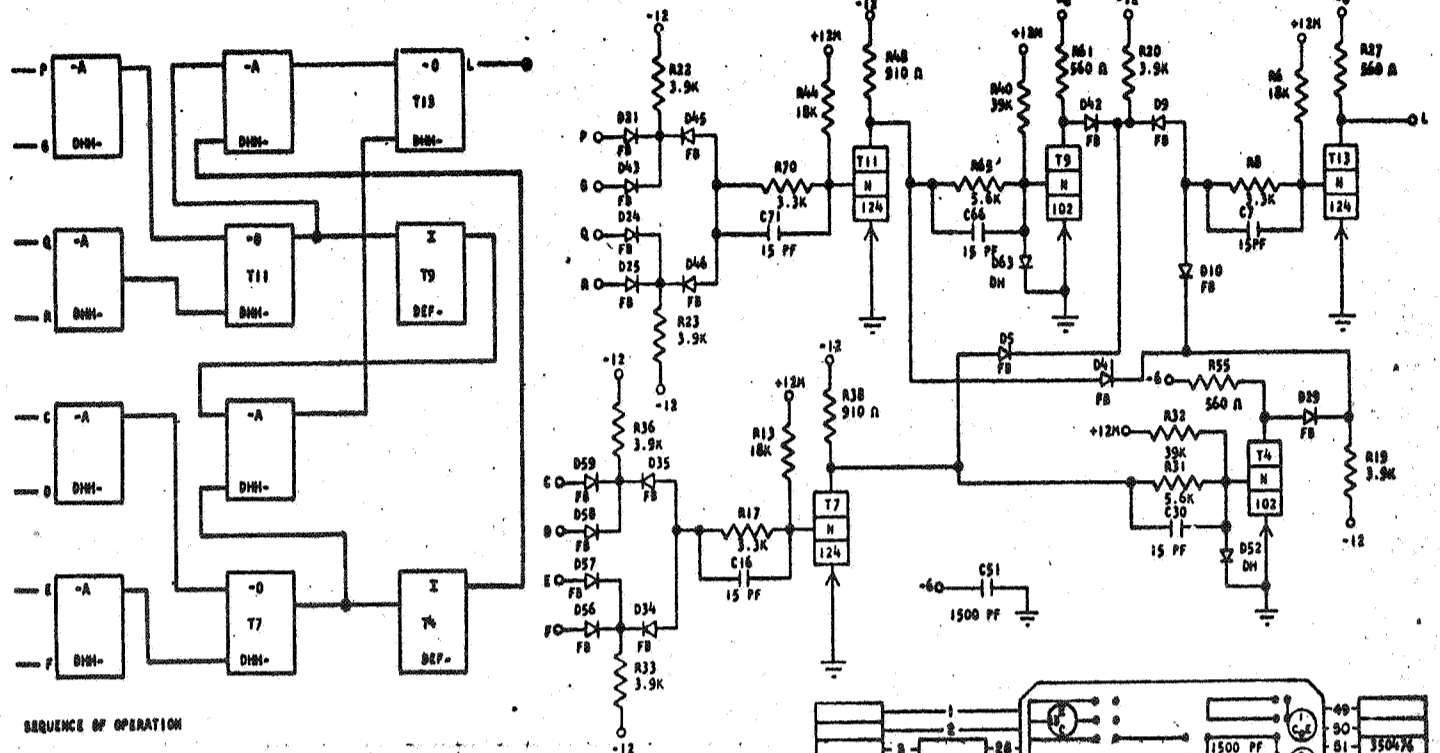
STANDARDS CODE

CARD CODE 729928
D H J -

REFERENCE DRAWING

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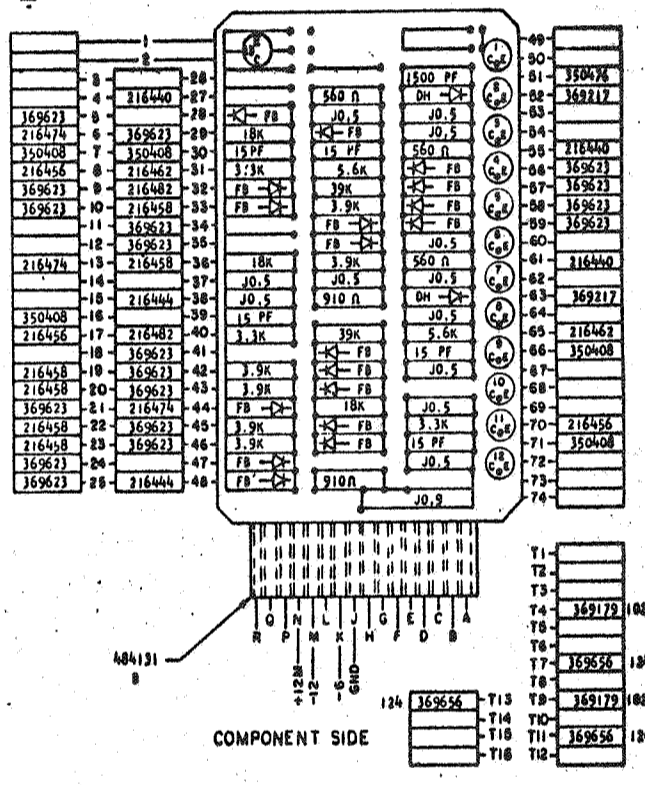
SDTDL MUP NUMBER 4



SEQUENCE OF OPERATION

- THE FIRST LEVEL OF DIODES OF BOTH T11 AND T7 PERFORM A NEGATIVE AND AND THE SECOND LEVEL OF DIODES A NEGATIVE OR FUNCTION. T9 AND T4 ARE HIGH SPEED INVERTERS THAT ACCEPT NEGATIVE INPUTS TO PERFORM A NEGATIVE AND INVERT FUNCTION. THESE TRANSISTORS ARE DRIVEN BY T11 AND T7 RESPECTIVELY. THE OUTPUTS OF T11, T7, T9 AND T4 ARE FED INTO T13 WHOSE FIRST LEVEL OF DIODES PERFORM A NEGATIVE AND AND WHOSE SECOND LEVEL PERFORM A NEGATIVE OR FUNCTION. THIS CIRCUIT IS USED TO CHECK FOR ODD PARITY OF A TAPE CHARACTER. T11 AND T7 ARE EXCLUSIVE OR'S THAT EACH DETERMINE IF TWO BITS ARE ODD OR EVEN PARITY AND THEN T13, ANOTHER EXCLUSIVE OR COMPARES THE OUTPUTS OF T11 AND T7 TO DETERMINE IF ALL FOUR BITS ARE ODD OR EVEN PARITY.
- THE CARD CODES SHOWN IN THE BLOCKS REFER TO INDIVIDUAL CARDS SIMILAR TO THAT PORTION OF CIRCUITRY.
- DELAY - NSEC
 INPUTS TO OUTPUT: MIN. MAX.
 TURN ON 32 263
 TURN OFF 27 213

PINS	SIGNAL NAME	WAVE SHAPE	LEVELS	
			MIN	MAX
P, A, C, F	Y INPUT	[Waveform]	UP	-0.65 -0.1
Q, R, D, E	Y INPUT	[Waveform]	UP	-0.65 -0.1
L	Y OUTPUT	[Waveform]	UP	-0.65 -0.1
			DOWN	-5.81 -8.8



CIRCUIT AND PACKAGING STANDARD	
APPROVAL	DATE
ABC	4-2-62

INTERNATIONAL BUSINESS MACHINES CORP.				DATE	CHANGE NO.	APPROVAL	DATE	CHANGE NO.	APPROVAL	DEVELOPMENT NO.
NAME CARD ASH TSTR - SDTDL				2-29-62	116599					729928
MUP NUMBER 4				12-18-62	116655					
DESIGN	RQ	3-1-62	SCALE	NONE						
CHECK	WH	3-1-62	DRAW	LIG	3-7-62					

C