

Ediswan Mazda Applications Department

Siemens Edison Swan Limited, Cosmos Works, Brimsdown, Enfield, Middlesex.

SUBJECT

CHIEF ENGINEER'S OFFICE

DATE: 13th January, 1959.
T.D.S. No. 2-V863B-0-1A

TENTATIVE

(APPLICATIONS)

DEVELOPMENTAL				VALVE TYPE 30PL13			
DIMENSIONS		m.m.	TYPE		Triode Output Beam Tetrode		
OVERALL LENGTH MAX.		78.5	CATHODE		Indirectly Heated		
DIAMETER MAX.		22.2	USE		AC/DC Mains Television Receivers		
SEATED HEIGHT MAX.		71.5			Frame Time Base		
RATING							
			Tetrode	Note	Triode	NOTE	
Heater Current (Amps)			0.3				
Heater Volts			16				
Maximum Anode Dissipation (Watts)			7.0		1.0		
Maximum Screen Dissipation (Watts)			2.4				
Maximum Anode Volts			250	A	250		
Maximum Screen Volts			250				
Maximum Heater to Cathode Volts (rms)			150	B	150	B	
Mutual Conductance					3.4	C	
Amplification Factor					18	C	
Maximum Mean Cathode Current (ma)			75				
Maximum Resistance Grid 1 to Cathode (Self Bias) ($M\Omega$)			2	D			
CAPACITANCES pF			BASE B9A (NOVAL)		CAP		
ELECTRODES			PIN.	ELECTRODE	The diagram shows a cross-section of the valve base with pins labeled 1 through 9. Internal electrodes are labeled: at (anode), g_t (top grid), kq, bp, s (control grid/cathode assembly), h (heater), g₁ (first grid), g₂ (second grid), kt (kicker terminal), and h (heater). The base is identified as Baskg9JE.		
TO			1	gt			
TO			2	kq, bp, s			
TO			3	g ₁			
TO			4	h			
TO			5	h			
TO			6	aq			
TO			7	g ₂			
TO			8	kt			
TO			9	at			
The symbol 'E' denotes the electrodes of any second valve section and the remaining earthy potential electrodes of the section under measurement. h & H joined to cathode unless otherwise stated. Measurement with valve cold.			The top view shows a circular base with nine pins numbered 1 through 9 arranged around the perimeter.				
MOUNTING POSITION:			Unrestricted				
			American Base E9-1. Bulb T6½				
TYPICAL OPERATION.							
Frame Time Base							
The output stage should be designed to allow for valve spread and deterioration during life in addition to component variation. Values of total peak anode current available for a new average valve and at assumed end of life point for any valve are as follows:-							
	V _a	V _{g2}	V _{g1}	I _a (mA)			
Average New Valve.	 55	170	-1	175			
Assumed End of Life Condition.	 50	170	-1	110			
Notes							
The V863B and 6/30L2 triode characteristics are identical.							
A. Maximum Peak Anode Voltage(Pulse Positive, 2.0kV. Maximum Peak Anode Voltage(Pulse Negative) 500V. Maximum pulse duration 4% of one cycle with a maximum of 800 μ secs.							
B. Measured with respect to the higher potential heater pin.							
C. V _a = 200V. I _a = 10mA.							
D. Maximum Tetrode Resistance Grid 1 to Cathode (Fixed Bias) 1 megohm.							

— INDICATES A CHANGE SINCE PREVIOUS ISSUE.

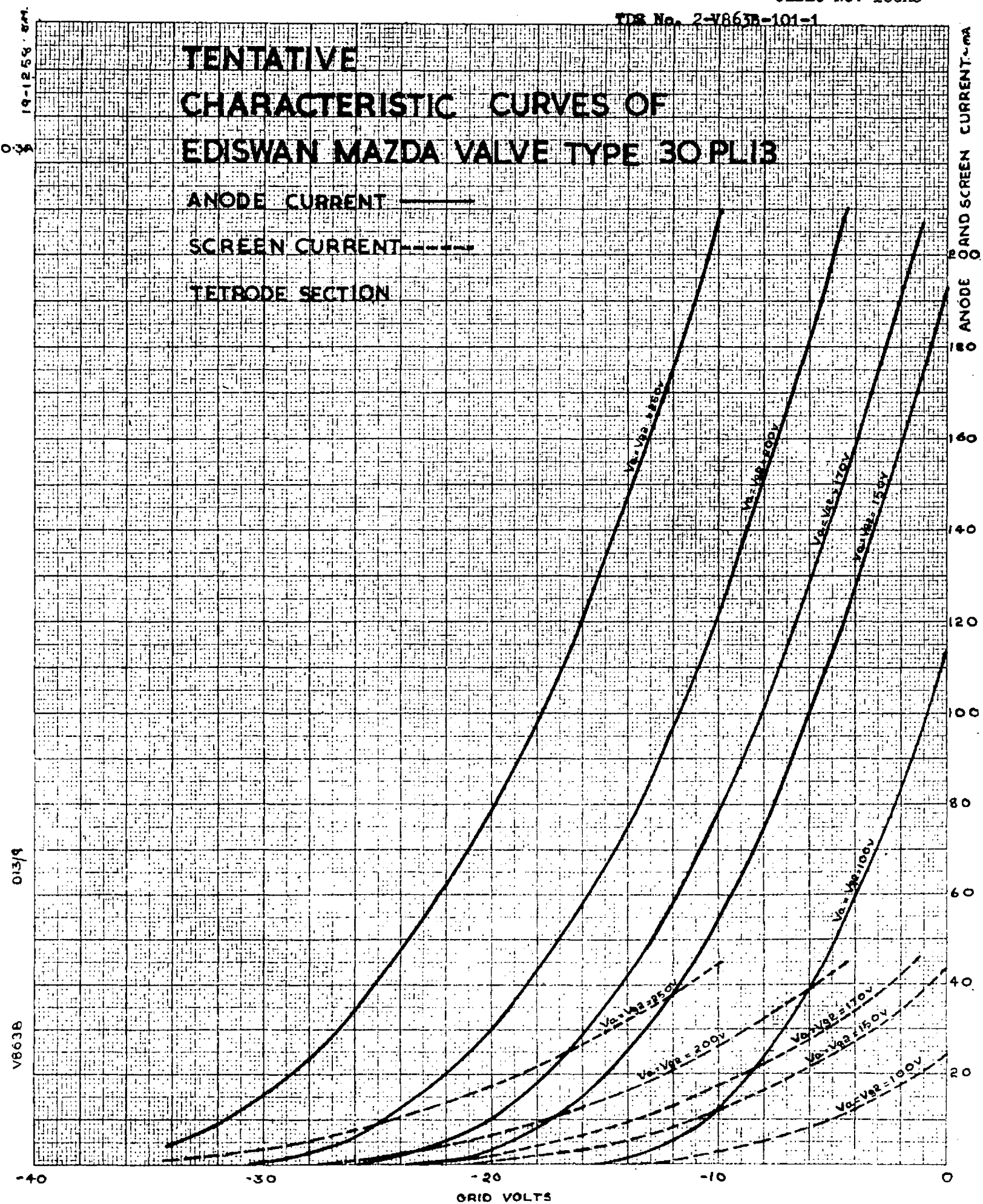
• 9863B •

TENTATIVE CHARACTERISTIC CURVES OF EDISWAN MAZDA VALVE TYPE 30 PL13

ANODE CURRENT ———

SCREEN CURRENT - - - - -

TETRODE SECTION



**TENTATIVE CHARACTERISTIC CURVES OF
EDISWAN MAZDA VALVE TYPE 30PL13.**

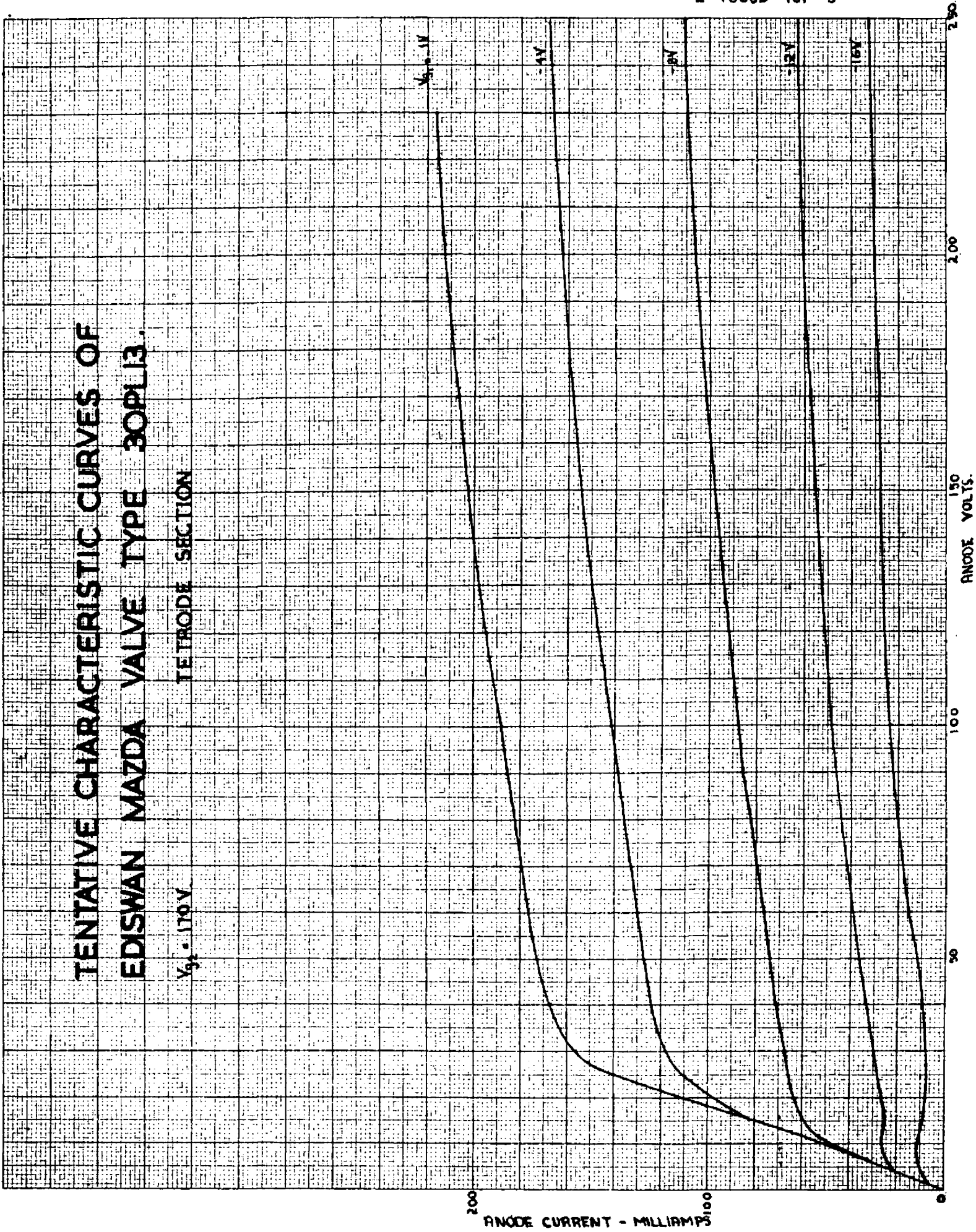
$V_{g1} = 170 \text{ V}$

TETRODE SECTION

D13A

0 19.12.58 H.L.

V863B



PRELIMINARY
CHARACTERISTIC CURVES OF
MAZDA VALVE TYPE 30PL13.

HEATER CURRENT = 0.3 AMPS

TRIODE SECTION

28.965.

V. 712.

-20

-18

-16

-14

-12

-10

-8

-6

-4

-2

0

GRID VOLTS.

$V_{g2} = 230V$

$V_{g2} = 200V$

$V_{g2} = 150V$

$V_{g2} = 100V$

$V_{g2} = 50V$

ANODE CURRENT - MILLIAMPS

20

18

16

14

12

10

8

6

4

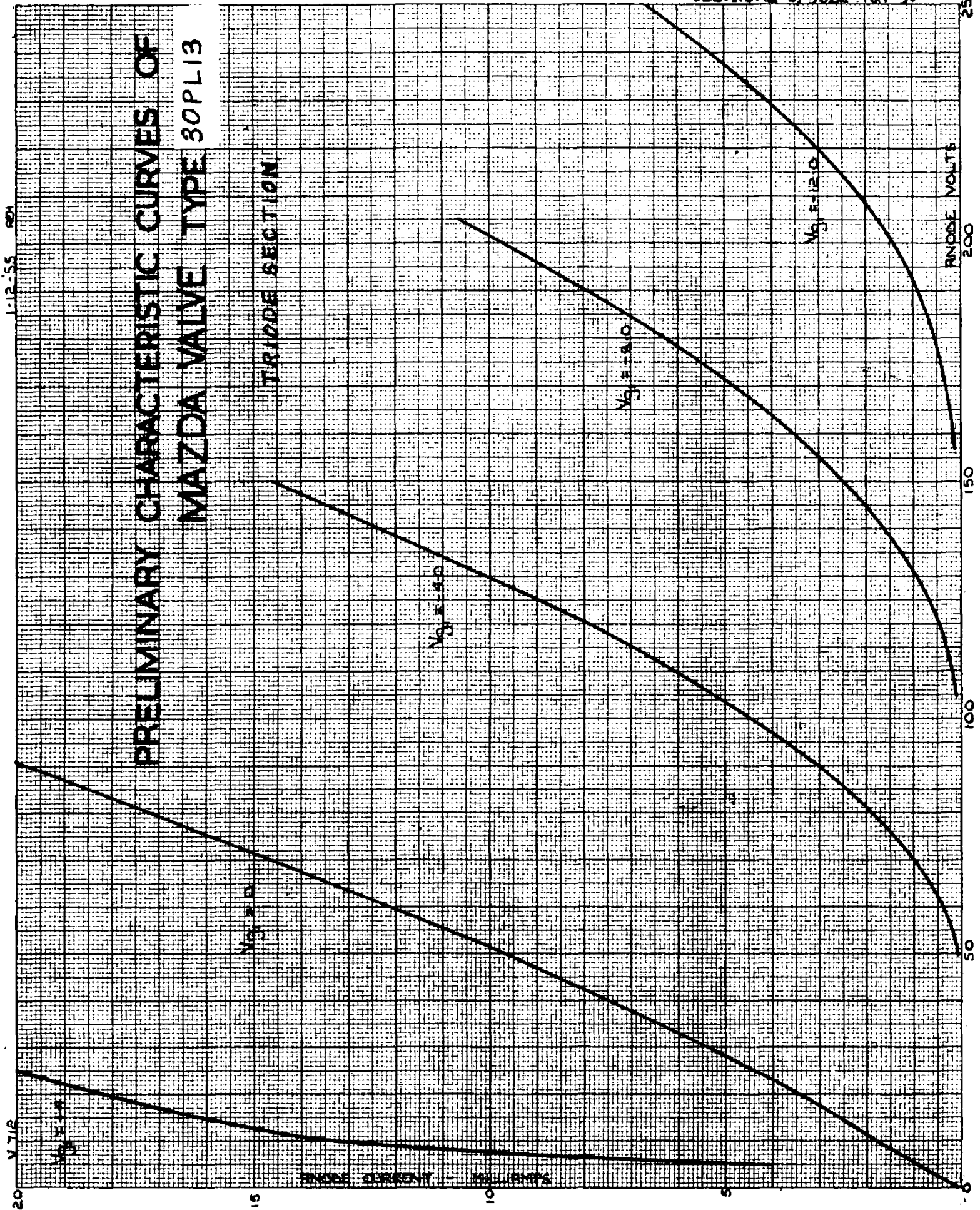
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TDS. No. 2-6/30L2-101-3.

PRELIMINARY CHARACTERISTIC CURVES OF
MAZDA VALVE TYPE 30PL13

TRIODE SECTION

1-2-55



TDS. No. 2-6/3012-103-1.

PRELIMINARY
CHARACTERISTIC CURVES OF
MAZDA VALVE TYPE 30PL13

HEATER CURRENT - 0.3 AMPERE

TRIODE SECTION

MUTUAL CONDUCTANCE (mA/V)

2

3

5

GRID VOLTS.

-15

-10

-5

0

V712

-20

20 9 55.

