T1368

Mazda Radio Valve Engineering Dept.

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

CHIEF ENGINEER'S OFFICE. DATE 24th November, 1958.

SUBJECT T.D.S. No. 2-V718-O-16

TENTATIVE

VALVE TYPE 30L15

DIMENSIONS		M.M.
OVERALL LENGTH	MAX.	56
DIAMETER	MAX.	22.2
SEATED HEIGHT	MAX.	49

TYPE	Twin Triode.
CATHODE	Indirectly Heated.
USE	Cascode R.F. Amplifier.

RATING

			NOTE
Heater Volts		7.0	
0.3A Heater Current	(amps)	0.3	
Mutual Conductance	(mA/V)	9.0	A
Amplification Factor	(approx.)	26	A
Maximum Anode Volts		250	
Maximum Anode Dissipation	(Watts) (either Sect.)	2.0	
Maximum Cathode Current per Section	(mA)	16	
Maximum Grid to Cathode Resistance	(ohms) Section (1)	500,000	
Maximum Negative Grid Volts		50	
Maximum Effective Grid to Earth Resistance	(ohms) Section (2)	150,000	B
Maximum Grid to Cathode Resistance	(ohms) Section (2)	22,000	C

American Base E9-1 Bulb T6½

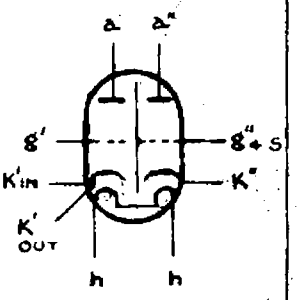
CAPACITANCES

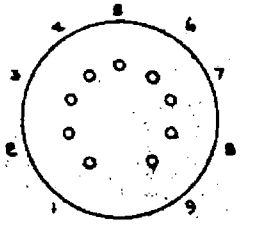
ELECTRODES			* μμF	**
g'	TO	k'hs	3.1	4.1
a"	TO	k'hs	3.6	4.5
a'	TO	k'hs	1.9	2.8
k"	TO	k'hs	5.4	6.3
a'	TO	g'	1.5	1.5
a"	TO	k"	.19	.21
a'	TO	a"	.011	.013
g'	TO	a"	.0058	.0096
	TO			

SYMBOL 'S' INDICATES SHIELDS AND EARTHY PARTS OF THE VALVE HOLDER MEASURED WITH VALVE COLD.

BASING	
PIN	ELECTRODE
1	k"
2	g"s
3	a"
4	h
5	h
6	g'
7	k' in
8	k' out
9	a'

BASE. B.9.A. (NOVAL) CAP.





VIEW OF FREE END

MOUNTING POSITION: Unrestricted. Basing 9DD

TYPICAL CASCODE OPERATION. (See TDS No. 2-V718-O-3.)

Notes.

A. V_a = 90v I_a = 15mA. V_{g_1} = -1.2V.

B. With potentiometer bias from H.T. Line.

C. Grid Current bias.

* Inter-electrode Capacity with holder capacity balanced out but with cylindrical screen can.

** Total capacity including ceramic B9A holder with cylindrical screen. (Plessey holder type CP.18002A/3).

V718

T.D.S. 012.

INDICATES A CHANGE SINCE PREVIOUS ISSUE

T 1685

Ediswan Mazda Applications Department

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

SUBJECT

CHIEF ENGINEER'S OFFICE
(APPLICATIONS)

DATE : 8th December, 1958.
T.D.S. No. 2-V718-0-3

TENTATIVE

TYPICAL CASCODE OPERATION.

0.3A

Input triode connected as a grounded cathode stage and coupled directly to section 2 connected as a grounded grid stage. The valve sections are series fed i.e. anode of section 1 connected directly to cathode of section 2.

		Circuit I.†	Circuit II.††
H.T. Supply Voltage		200	200
Anode decoupling resistor, section 2.	(ohms)	2,200	3,300
Anode current	(mA)	15.3	14.8
Grid bias voltage, section 1. (supplied by cathode resistor)		-1.53	-1.2
Combined mutual conductance ($\Delta ia/\Delta vg1$)	(mA/V)	8.5	8.6
Approx. A.G.C. Volts to give combined mutual conductance of 100 uA/V.		-7	-12
Self bias resistor, section 1.	(ohms)	100	82
Input capacity working*	(pF)	6.0	6.0
Change in input capacity by biassing valve to cut off.	(pF)	1.2	1.2

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Notes.

†. Circuit I. Valve section 2, Potentiometer bias from H.T. line, see TDS. sheet 2-V718-210-1.

††. Circuit II. Valve section 2, Grid current bias, see TDS sheet 2-V718-210-1.

*. Inter-electrode capacity with holder capacity balanced out but with cylindrical screen can.

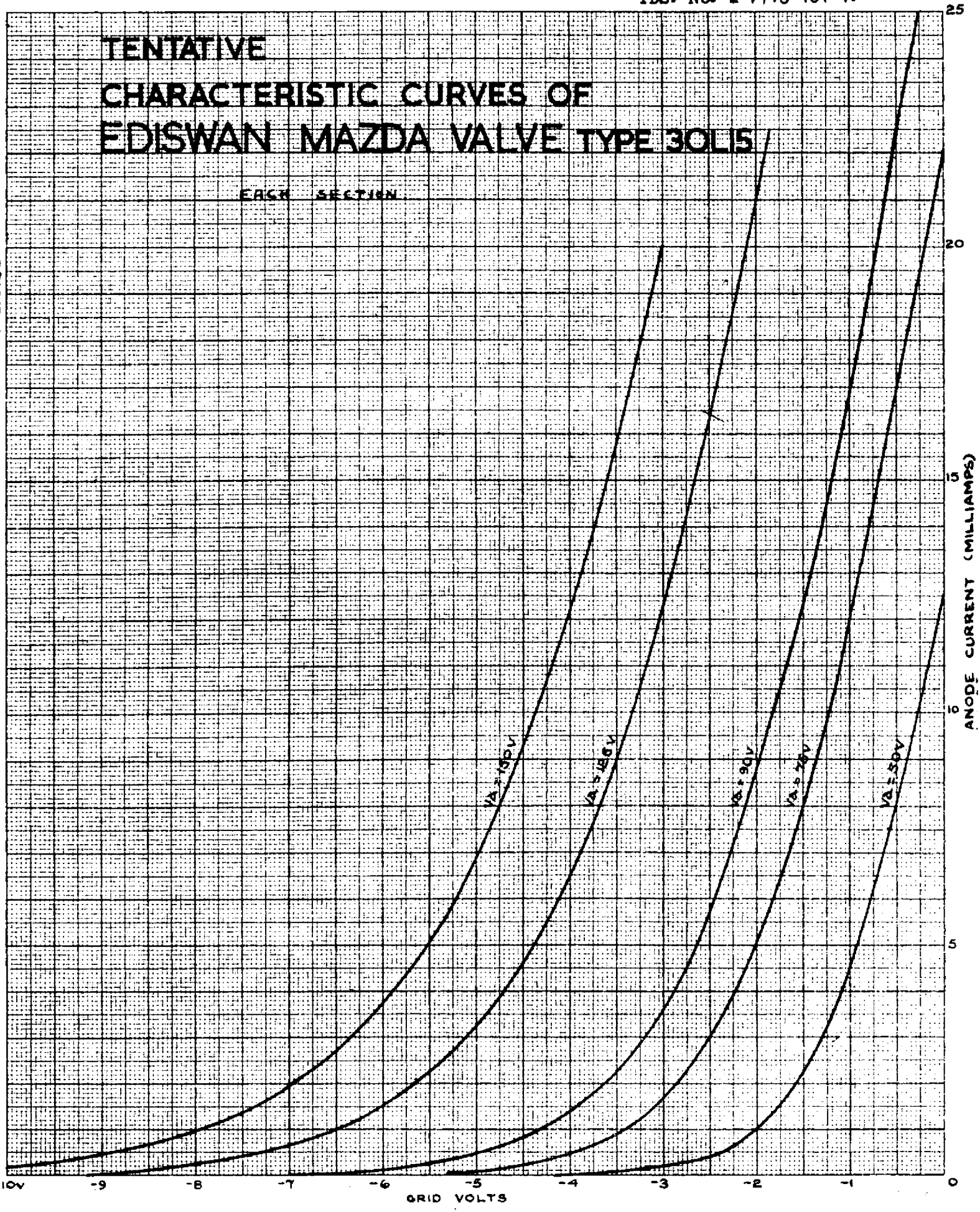
JEDEC No. 7EK7

TDS. No. 2-V718-101-1.

TENTATIVE CHARACTERISTIC CURVES OF EDISWAN MAZDA VALVE TYPE 30L15

EACH SECTION.

G.H. 3.6.58



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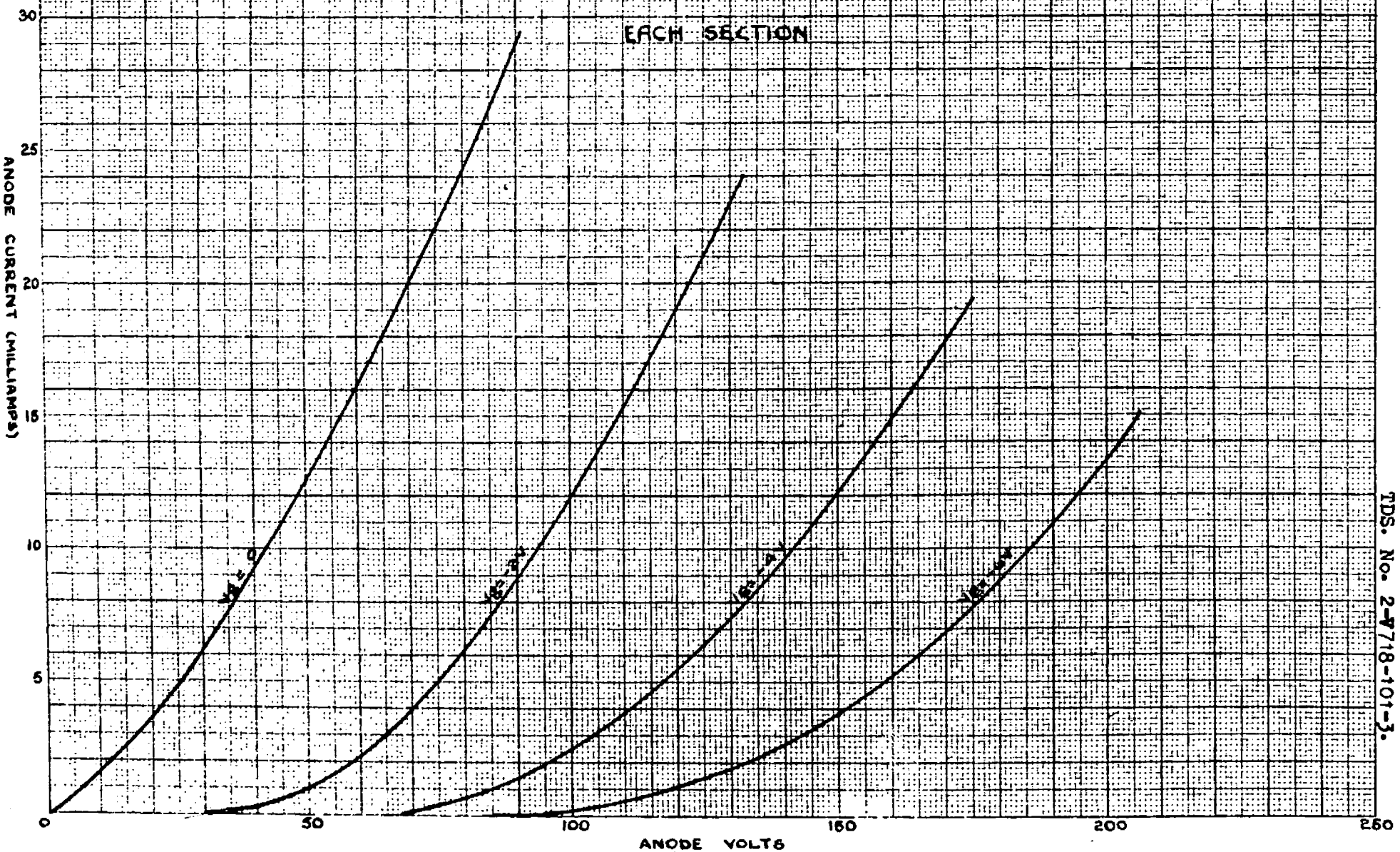
D12/9 (V2)

C.H. 3.6.58.

TENTATIVE CHARACTERISTIC CURVES OF EDISWAN MAZDA VALVE TYPE 30L15

EACH SECTION



TDS. No. 2-V718-101-3.

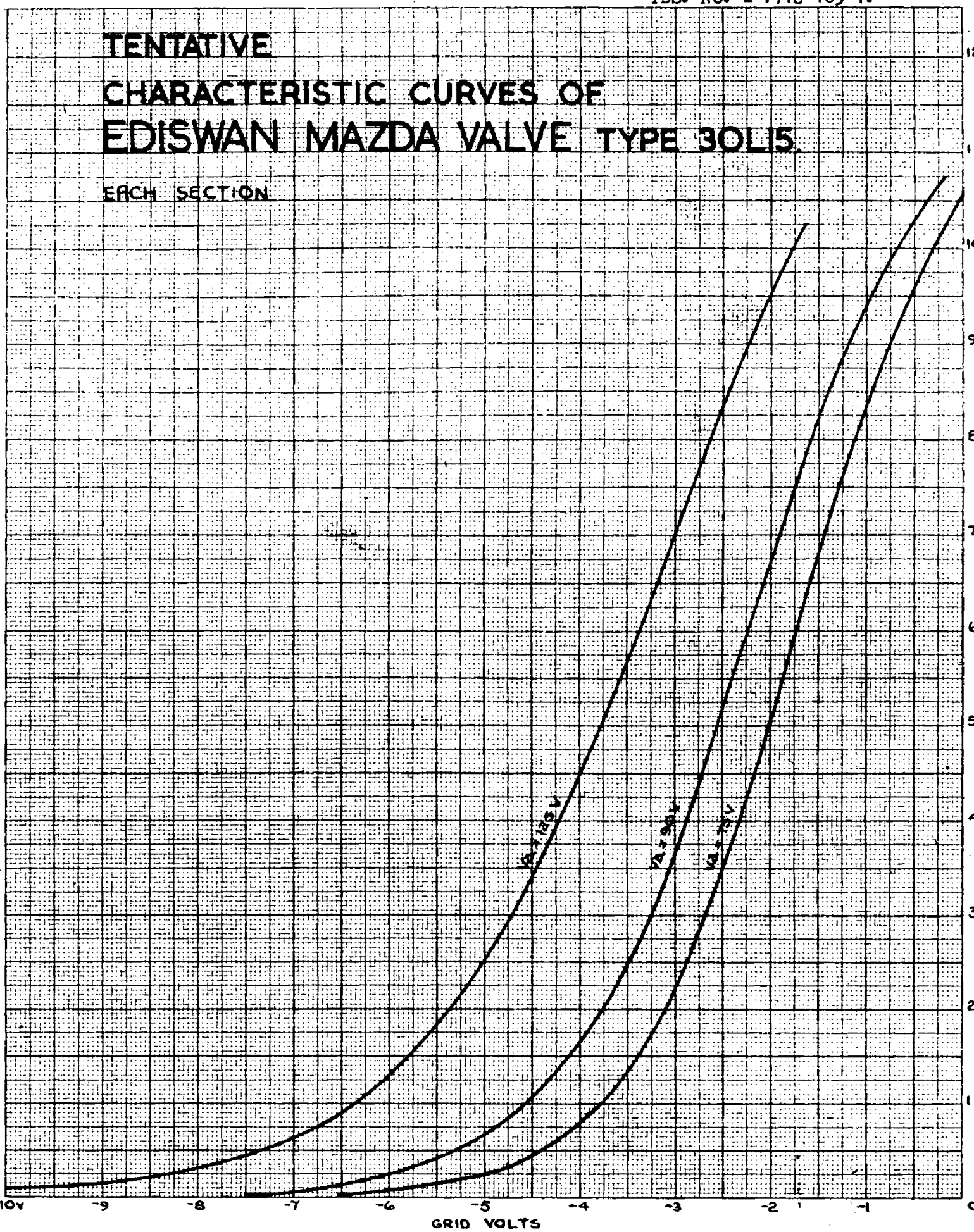
JEDEC No. 7EK7

JEDEC No. 7EK7

TDS. No. 2-V718-103-1.

TENTATIVE CHARACTERISTIC CURVES OF EDISWAN MAZDA VALVE TYPE 30L15.

EACH SECTION



G.H. 3.6.58.

D12/T (V2)

V718

T 1685

Ediswan Mazda Applications Department

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

SUBJECT

CHIEF ENGINEER'S OFFICE
(APPLICATIONS)

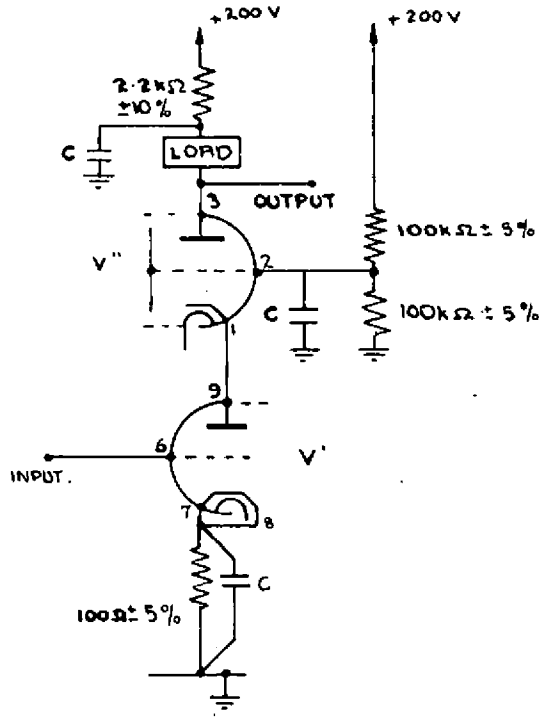
DATE : 11th December, 1958.
T.D.S. No. 2-V718-210-1

TENTATIVE

O·3A

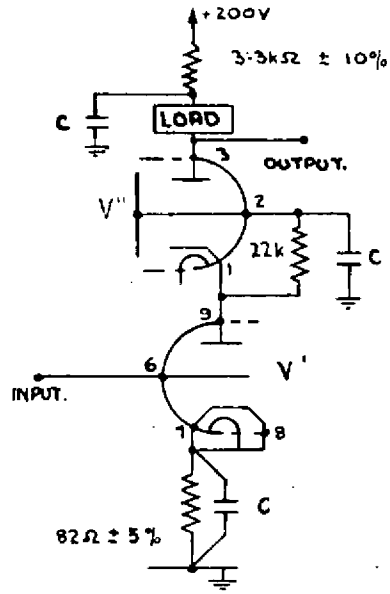
TYPICAL 30L15 CASCODE BIAS CIRCUIT.

CIRCUIT.I.
Valve section 2, Potentiometer Bias Arrangement.



C = DECOUPLING CONDENSERS.

CIRCUIT.II.
Valve section 2, Grid Current Bias Arrangement.



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Note: Application of bias to section 1 in the Potentiometer Bias arrangement effecticely controls both triodes giving this combination a shorter grid base than the Grid Current Bias circuit.