from JEDEC release
#2397, March 2, 1959

TYPE 12FB5

GENERAL

The 30P12 has been designed for use in the output stage of Audio Amplifiers or Frame Time Bases, and is suitable for AC or AC/DC operation.

RATING

Heater Current (amps)	I_h	0·3
Heater Voltage (volts)	V_h	12·6
Maximum Anode Voltage (volts)	$V_{a(max)}$	250
Maximum Screen Voltage (volts)	$V_{g2(max)}$	250
Maximum Anode Dissipation (watts)	$P_{a\ (max)}$	6·0
Maximum Screen Dissipation (continuous) (watts)	$P_{g2(max)}$	1·8
Maximum Screen Dissipation (Speech and Music) (watts)	$P_{g2(max)}$	2·7
Maximum Cathode Current (mA)	$I_{k(max)}$	50
Maximum Heater to Cathode Voltage (volts) (r.m.s.)	$V_{h-k\ (max)}$	150*
Mutual Conductance (mA/V)	g_m	8.3†

† Measured with respect to the higher potential heater pin.
* Taken at V_a = 170v ; V_{g_2} = 180 ; V_{g_1} = —9·4v; I_a = 35mA

DIMENSIONS

Maximum Overall Length (mm)	78·5
Maximum Diameter (mm)	22·2
Maximum Seated Height (mm)	71·5
Approximate Nett Weight (ozs)	½
Approximate Packed Weight (ozs)	1¼

MOUNTING POSITION—Unrestricted

TYPICAL OPERATION—Class A Audio Output

Anode Supply Voltage (volts)	$V_{a(b)}$	170
Screen Supply Voltage (volts)	$V_{g2(b)}$	180
Grid Bias Voltage (volts)	V_{g_1}	—10.3
Anode Current (quiescent) (mA)	$I_{a(o)}$	31
Screen Current (quiescent) (mA)	$I_{g2(o)}$	7·3
Anode Load (ohms)	R_a	5,000‡
Power Output (watts)	P_{out}	2·25‡
Input Swing (volts) (r.m.s.)	$V_{in(r.m.s.)}$	3·9‡

The above operating conditions were taken with fixed DC potentials.

The grid to cathode circuit resistance must not exceed 0·5 megohms with cathode self-bias.

‡ For 5% Third Harmonic and Second Harmonic not exceeding 5%.

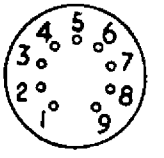
TYPICAL OPERATION—Frame Time-Base

The frame output stage should be designed to allow for valve spread and deterioration during life in addition to component variation. Values of total tetrode peak-anode current available for a new average valve and at the assumed end of life point on any valve are as follows :

	V_a	V_{g2}	V_{g1}	I_a(mA)
Average New Valve	50	180	-1	110
Assumed End of Life Condition	50	180	-1	72

BULB—Clear T6 ½

BASE—Noval (B9A) E9-1



Viewed from Free End of Pins

CONNECTIONS 9CV

Pin 1	Internal connection†	IC
Pin 2	Control Grid	g_1
Pin 3	Cathode	k
Pin 4	Heater	h
Pin 5	Heater	h
Pin 6	Internal Connection†	IC
Pin 7	Anode	a
Pin 8	Internal Connection†	IC
Pin 9	Screen Grid	g2

† "Internal connection" indicates that the pin is connected internally to an electrode for the purpose of improving mechanical rigidity of the valve. The connection may not always be made to the same electrode on a given valve type and it is essential that the corresponding valve holder socket be left unconnected.

SIEMENS EDISON SWAN LIMITED

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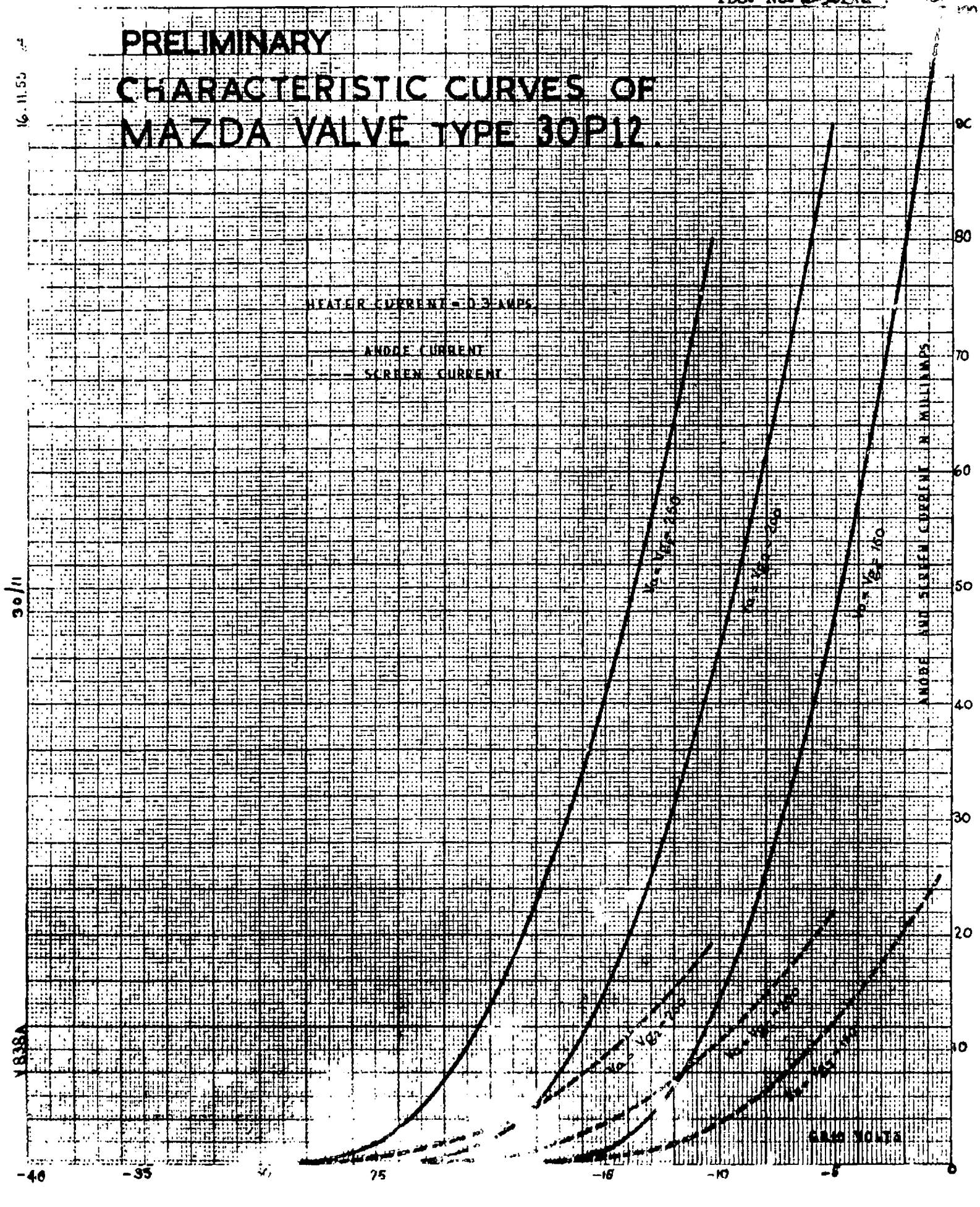
TDS. No. 2-30P12-1

PRELIMINARY CHARACTERISTIC CURVES OF MAZDA VALVE TYPE 30P12.