engineering data service

ADVANCE DATA

MECHANICAL DATA

Bulb	T-12
Base	B8-110, Short Medium Shell Octal 8-Pin
Outline	12-14
Basing	8JP
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage (ac or dc)	6.3	Volts
Heater Current	1.2	Ampere
Heater-Cathode Voltage (Design Maximum System)[1]		
Heater Positive with Respect to Cathode		
Total DC and Peak	200	Volts Max.
Heater Negative with Respect to Cathode		
DC	100	Volts Max.
Total DC and Peak	200	Volts Max.

RATINGS (Design Maximum System)[1] - Each Section

Plate Voltage	400	Volts Max.
Grid No. 2 Voltage	300	Volts Max.
Plate Dissipation	15	Watts Max.
Grid No. 2 Dissipation	2.0	Watts Max.
Grid No. 1 Circuit Resistance		
Fixed Bias	0.1	Megohm Max.
Self Bias	0.47	Megohm Max.

AVERAGE CHARACTERISTICS - Each Section

Plate Voltage	250	Volts
Grid No. 2 Voltage	250	Volts
Grid No. 1 Voltage	-12.5	Volts
Plate Current	50	Ma
Grid No. 2 Current	3.0	Ma
Transconductance	6000	µmhos
Plate Resistance (Approx.)	28,000	Ohms

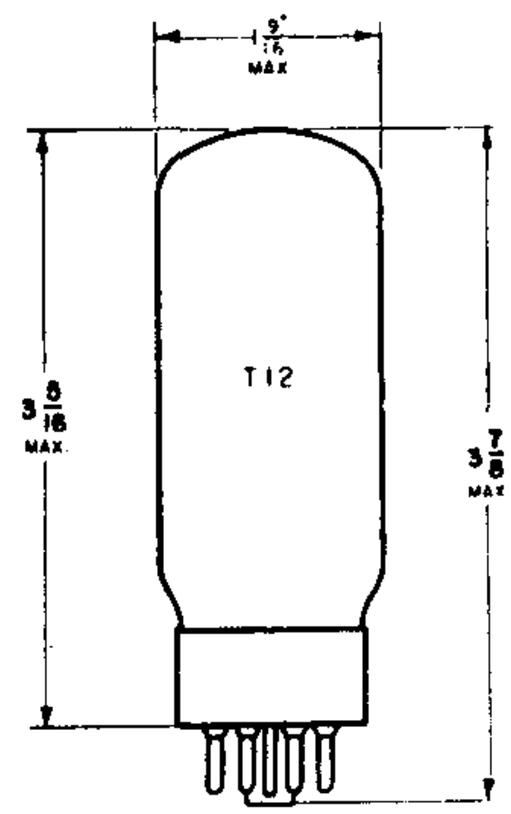
CHARACTERISTICS AND TYPICAL OPERATION

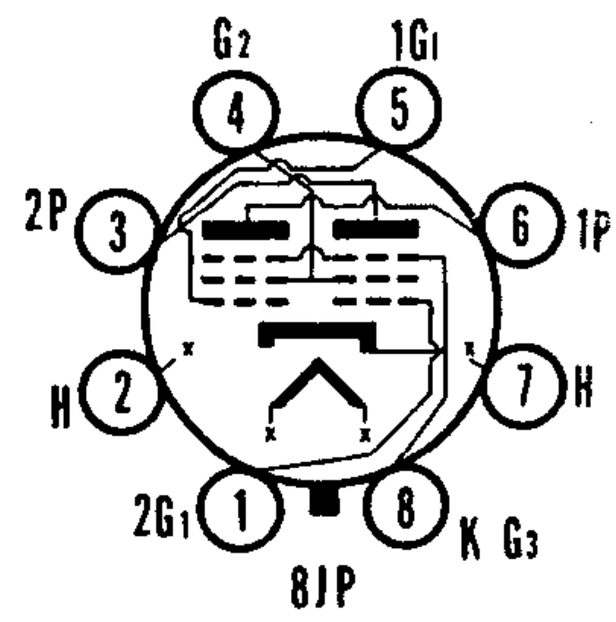
Class AB1 Amplifier (two sections in push-pull)

Plate Voltage	250	400	Volts
Grid No. 2 Voltage	250	250	Volts
Grid No. 1 Voltage	-16	-20	Volts
Peak AF Grid to Grid Voltage	32	40	Volts
Zero Signal Plate Current	77	58	Ma
Maximum Signal Plate Current	74	74	Ma
Zero Signal Grid No. 2 Current	3.5	1.7	Ma

QUICK REFERENCE DATA

The Sylvania Type 6DY7 is a Dual Beam Power Pentode designed for application in stereophonic sound systems, and features Framelok construction.





SYLVANIA ELECTRIC PRODUCTS INC.

RADIO TUBE DIVISION
EMPORIUM, PA.

Prepared and Released By The TECHNICAL PUBLICATIONS SECTION EMPORIUM, PENNSYLVANIA

October 8, 1958

CHARACTERISTICS AND TYPICAL OPERATION (Cont'd)

Maximum Signal Grid No. 2 Current	15.5	14.0	Ma
Load Resistance (Plate to Plate)	9000	14,000	Ohms
Maximum Signal Power Output	11	20	Watts
Total Harmonic Distortion	2.5	2.0	Percent

Class A1 Operating Conditions and Characteristics[2] (Single Section)

Plate Voltage	250	Volts
Grid No. 2 Voltage	250	Volts
Grid No. 1 Voltage	-12.5	Volts
Peak AF Signal Voltage	12.5	Volts
Zero Signal Plate Current	50	Ma
Maximum Signal Plate Current	45	Ma
Zero Signal Grid No. 2 Current	3.0	Ma
Maximum Signal Grid No. 2 Current	9.0	Ma
Load Resistance	5000	Ohms
Maximum Signal Power Output	5.0	Watts
Total Harmonic Distortion	9.0	Percent

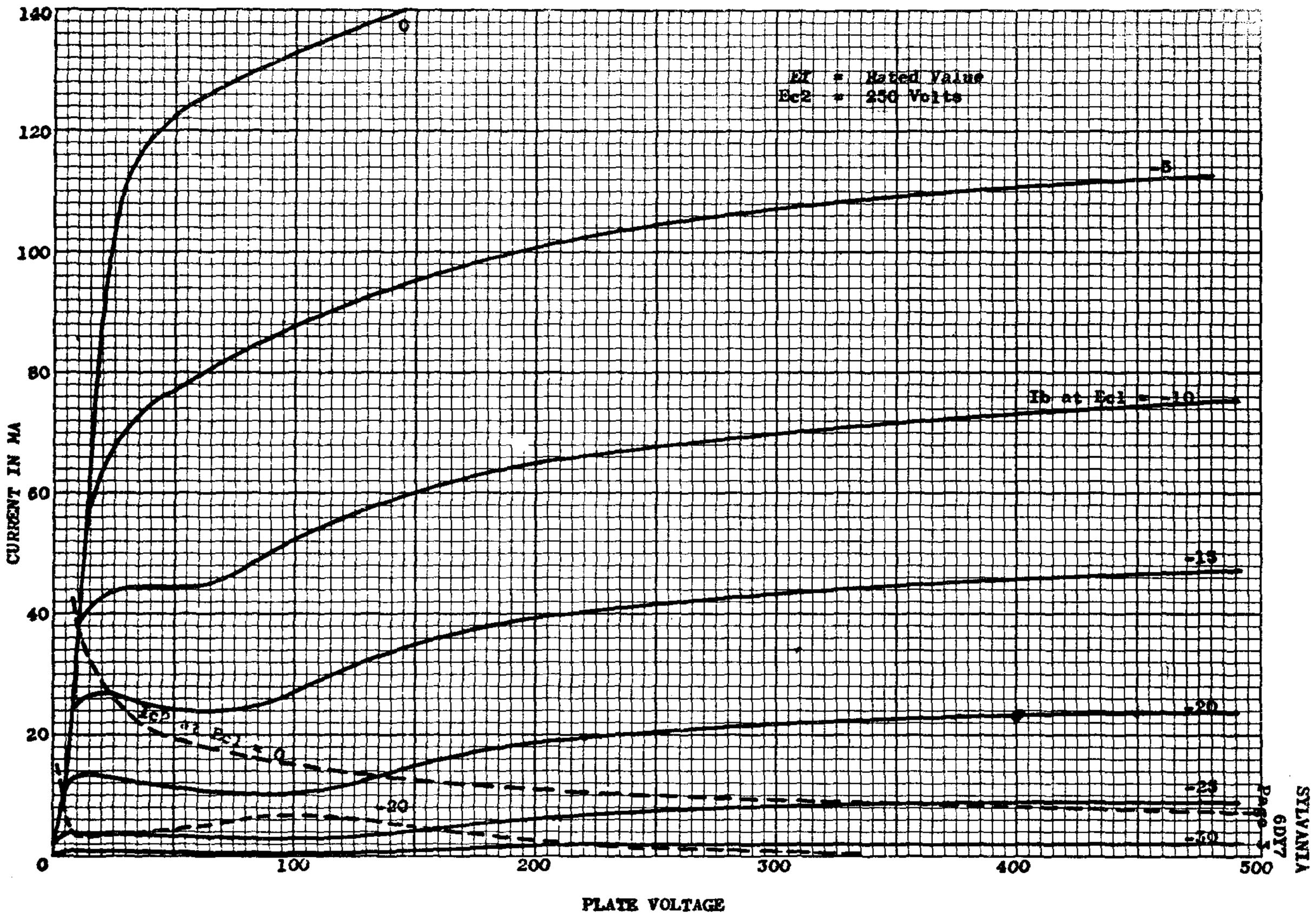
NOTES:

1. Design-Maximum Ratings are limiting values of operating and environmental conditions applicable to a bogey electron device of a specified type as defined by its published data, and should not be exceeded under the worst probable conditions.

   The device manufacturer chooses these values to provide acceptable serviceability of the device taking responsibility for the effects of changes in operating conditions due to variations in device characteristics.

   The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey device under the worst probable operating conditions with respect to supply voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, and environmental conditions.

2. The effects of cross-coupling between sections, with both sections operating simultaneously as single channel Class A1 Amplifiers, is 50 db down.



Ef = Rated Value
Ec2 = 250 Volts
Ib at Ec1 = -10
Ic2 at Ec1 = 0
-5
-15
-20
-25
-30
0
140
120
100
80
60
40
20
0
100
200
300
400
500
CURRENT IN MA
PLATE VOLTAGE