

4B38

AIR COOLED BEAM POWER TUBE

ELECTRICAL DATA;

GENERAL DATA;

Cathode; Indirectly Heated Oxide Coated

Heater Voltage ----- 6.3 Volts

Heater Current ----- 4.8 Amps

Warming up Time ----- 60 Sec

Amplification Factor Grid No.2

to Grid No.1 ----- 6

Direct Interelectrode Capacitances,

Grid No.1 to Plate ----- 1.5 μF

Input ----- 50 μF

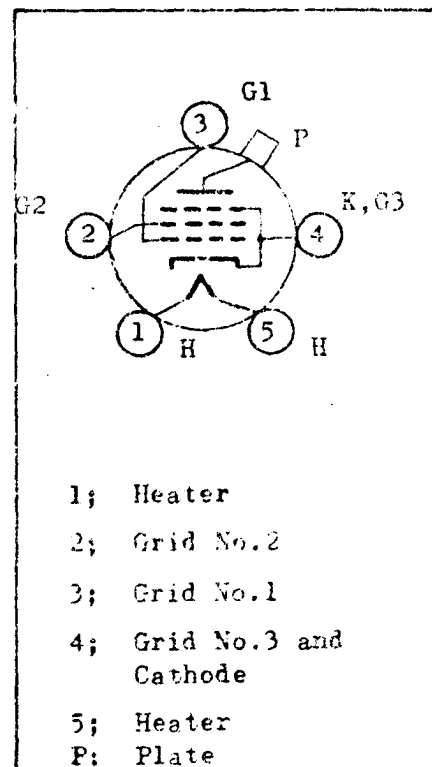
Output ----- 20 μF

Heater to Cathode ----- 25 μF

Transconductance ----- 20 millimhos

(for $I_b=300\text{mA dc}$; $E_b=500\text{V dc}$; $E_{c2}=200\text{V dc}$)

Maximum Frequency for Maximum Ratings - 10MHz/s



- 1; Heater
- 2; Grid No.2
- 3; Grid No.1
- 4; Grid No.3 and Cathode
- 5; Heater
- P; Plate

TERMINAL CONNECTIONS

NEC

Nippon Electric Co., Ltd.

MECHANICAL DATA;

Base;

Upper Part ----- A93

Bottom Part ----- E32S-2

Cooling; Natural Convection and Radiation,

or Forced Air Cooling

Maximum Bulb Temperature ----- 175°C

Mounting Position; Vertical, bottom base down or up

Dimensions;

Overall Length -----	175-6mm
Maximum Diameter -----	93 mm
Net weight -----	370 gr (approx.)

AF POWER AMPLIFIER AND MODULATOR--CLASS AB1

MAXIMUM RATINGS;

DC Plate Voltage -----	1250 Volts
DC Grid No.2 Voltage -----	400 Volts
Max. Signal DC Plate Current* -----	600 mA
Max. Signal Plate Input* -----	450 Watts
Plate Dissipation -----	150 Watts
Peak Heater to Cathode Voltage -----	+500 Volts

Note; When fixed bias is used, grid No.1 circuit resistance should be the value of 50KΩ or less.

TYPICAL OPERATION; (Values are for two tubes)

DC Plate Voltage -----	800	1000 Volts
DC Grid No.2 Voltage -----	300	300 Volts
DC Grid No.1 Voltage -----	-50	-50 Volts
Peak AF Grid No.1 to Grid No.1 Voltage -----	100	100 Volts
Max. Signal DC Plate Current -----	800	720 mA
Zero-Signal DC Plate Current -----	100	80 mA
Max. Signal DC Grid No.2 Current -----	80	70 mA
Effective Load Resistance (Plate to Plate) -----	1900	2800 Ohms
Plate Power Output (approx.) -----	380	450 Watts

CATHODE FOLLOWER AMPLIFIER; (Values are for two tubes)

DC Plate Voltage -----	800	1000 Volts
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DC Grid No.2 Voltage	-----	300	300 Volts
DC Grid No.1 Voltage	-----	-50	-50 Volts
Peak AF Grid No.1 to Grid No.1 Voltage	-----	1200	1600 Volts
Max. Signal DC Plate Current**	-----	800	720 mA
Max. Signal Peak Plate Current	-----	1.3	1.2 Amps
Zero-Signal DC Plate Current	-----	100	80 mA
Max. Signal DC Grid No.2 Current**	-----	80	70 mA
Peak AF Cathode to Cathode Voltage	-----	1200	1600 Volts
Plate Power Output (approx.)	-----	380	450 Watts

Note; Peak Cathode to Grid No.1 Voltage should never exceed +300 Volts.

* Average value over any audio-frequency-cycle of sine wave form.

** Value of pure resistance load.

PLATE CHARACTERISTICS (1)

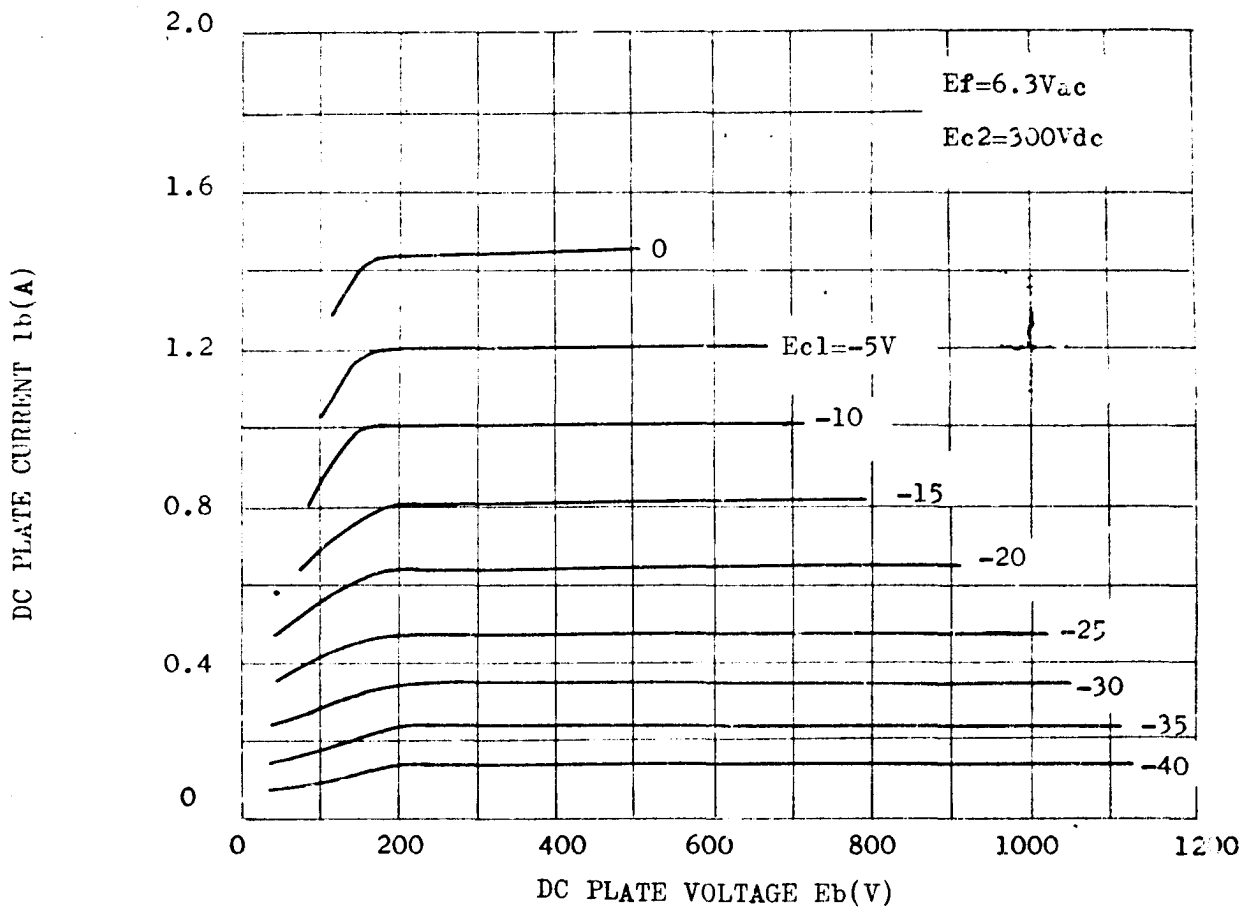
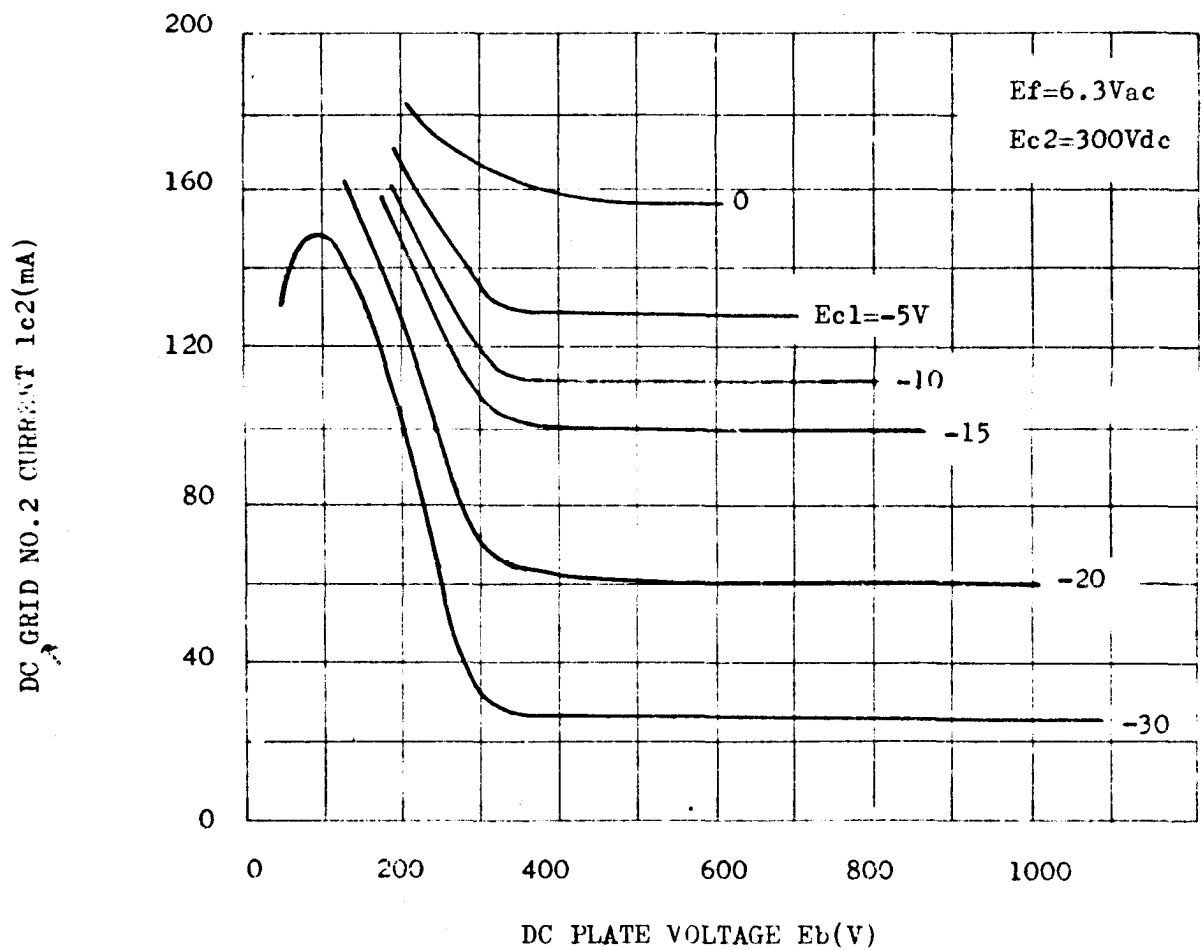
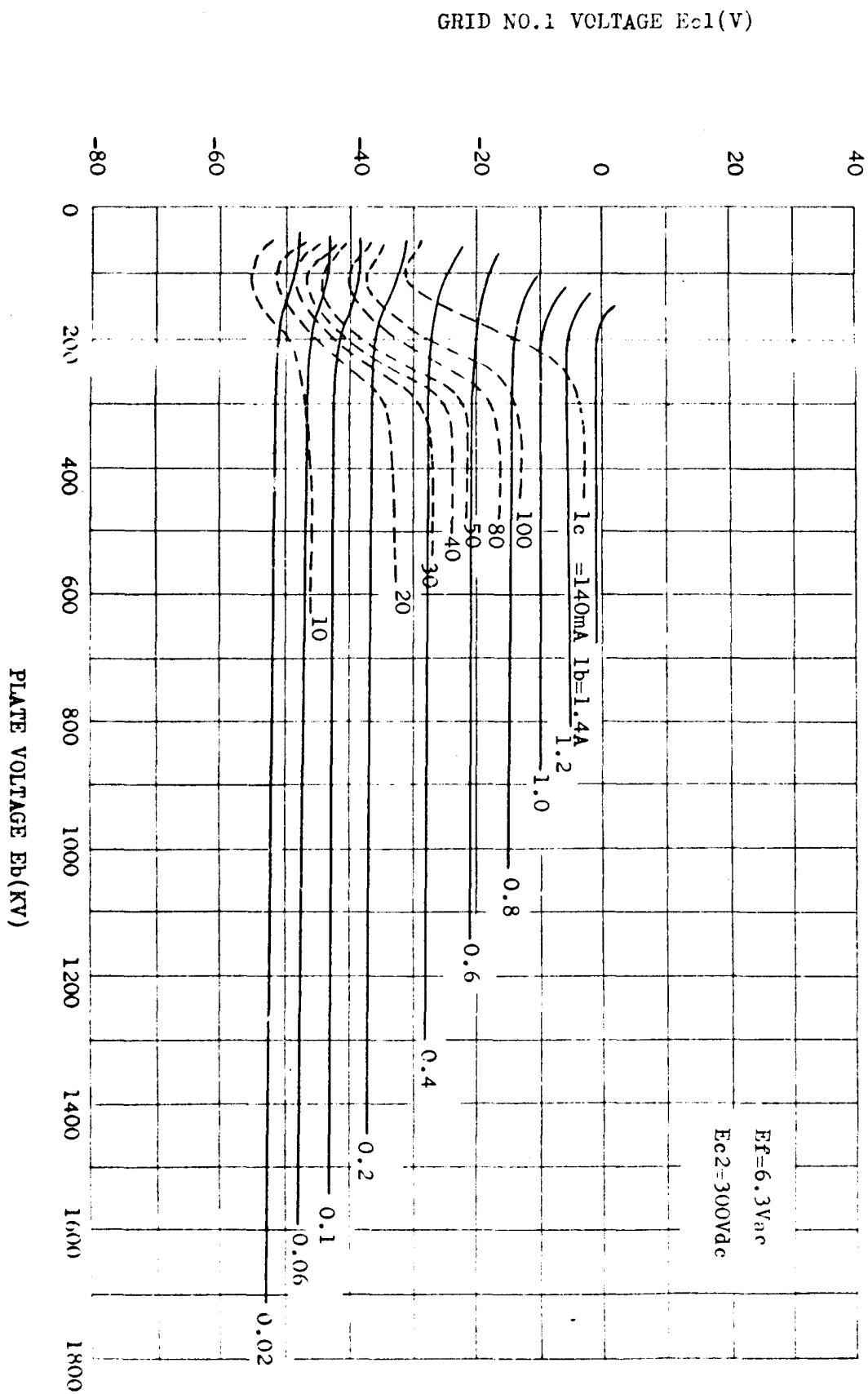


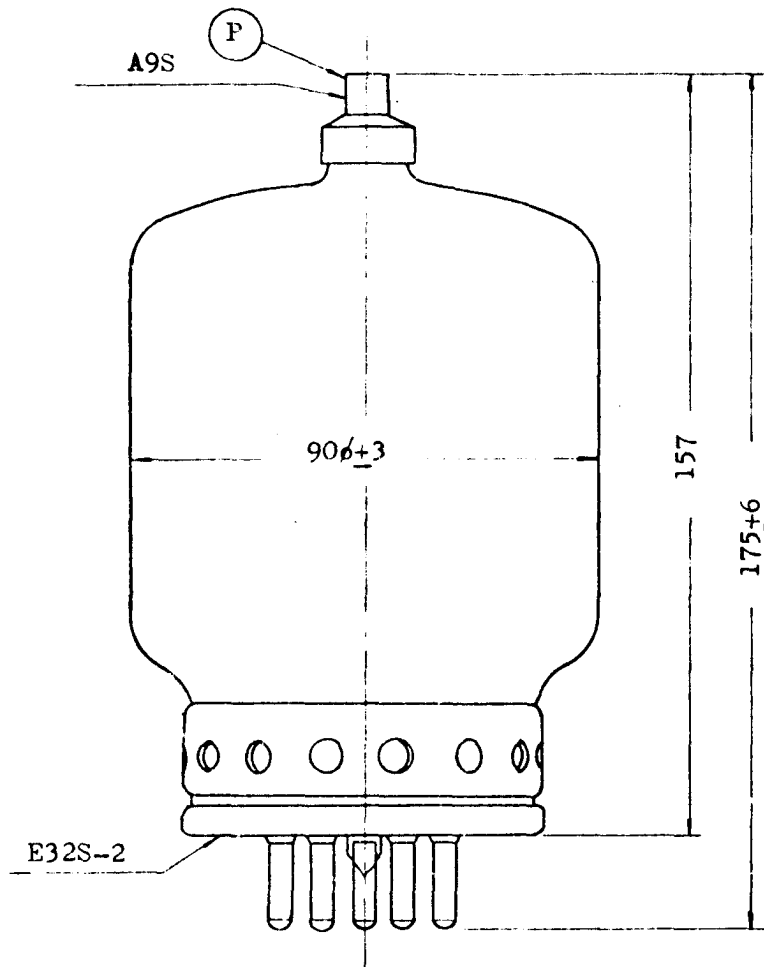
PLATE CHARACTERISTICS (2)



CONSTANT CURRENT CHARACTERISTICS



OUTLINE DRAWING



(Unit: mm)

