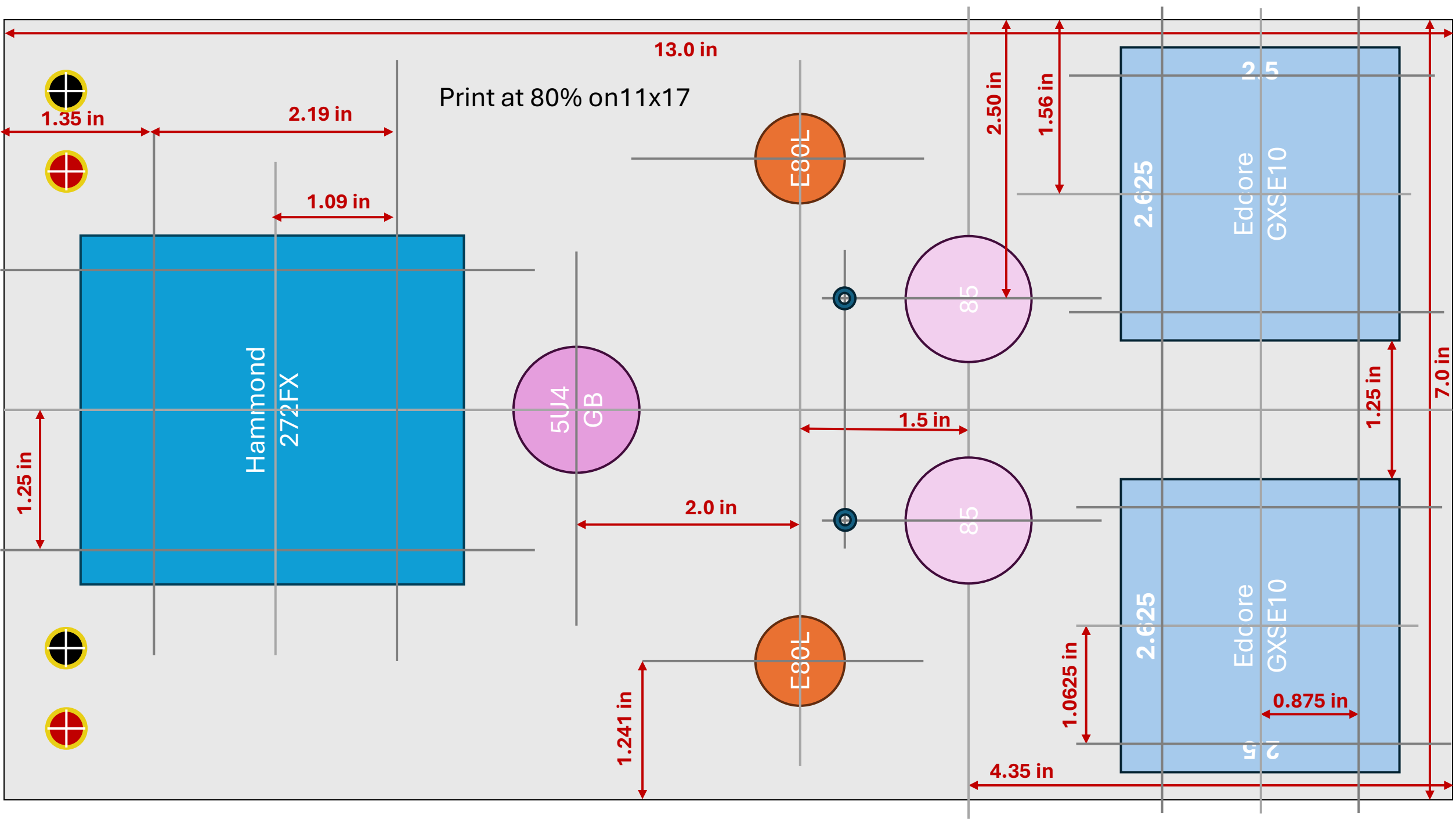


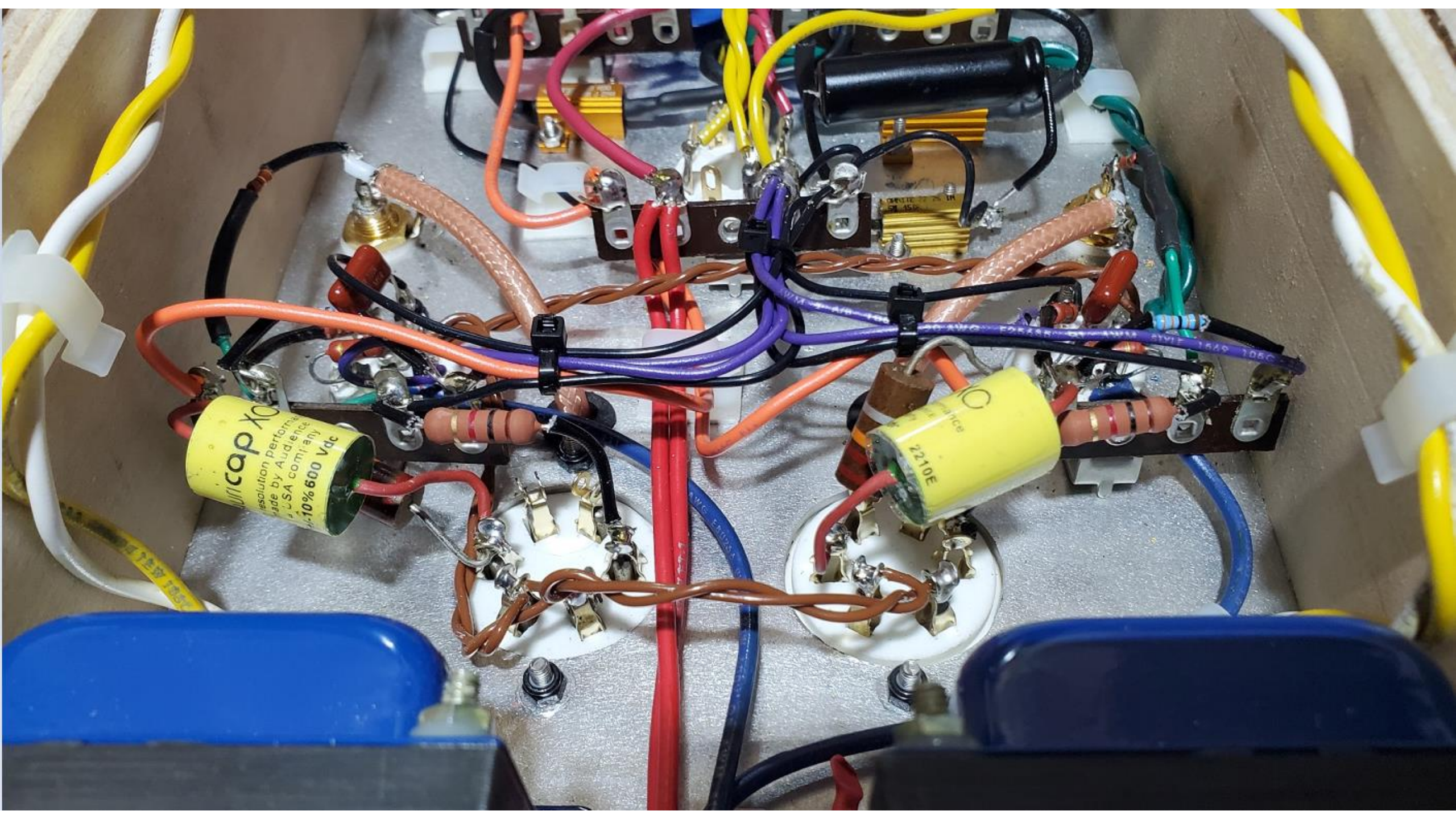
Zen 8580 Triode Amp

04-24-25

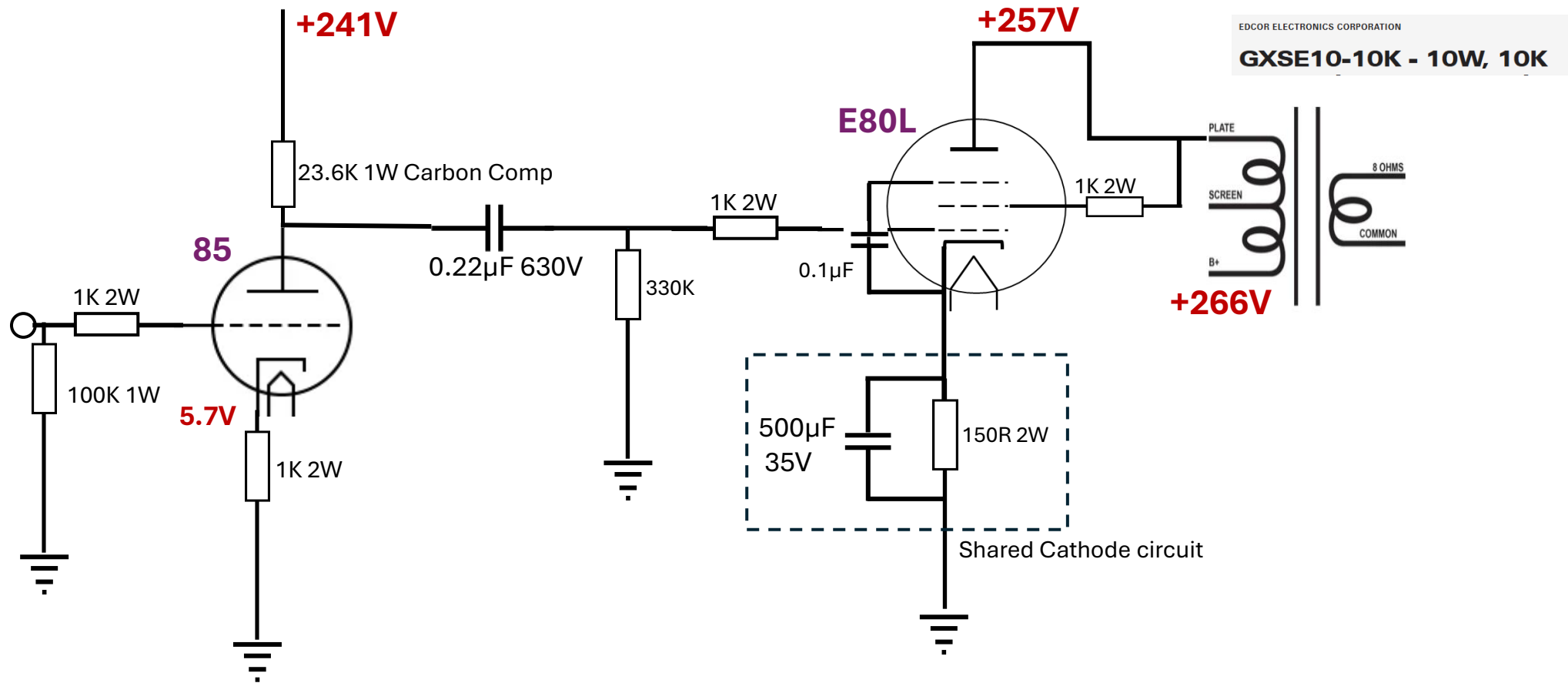




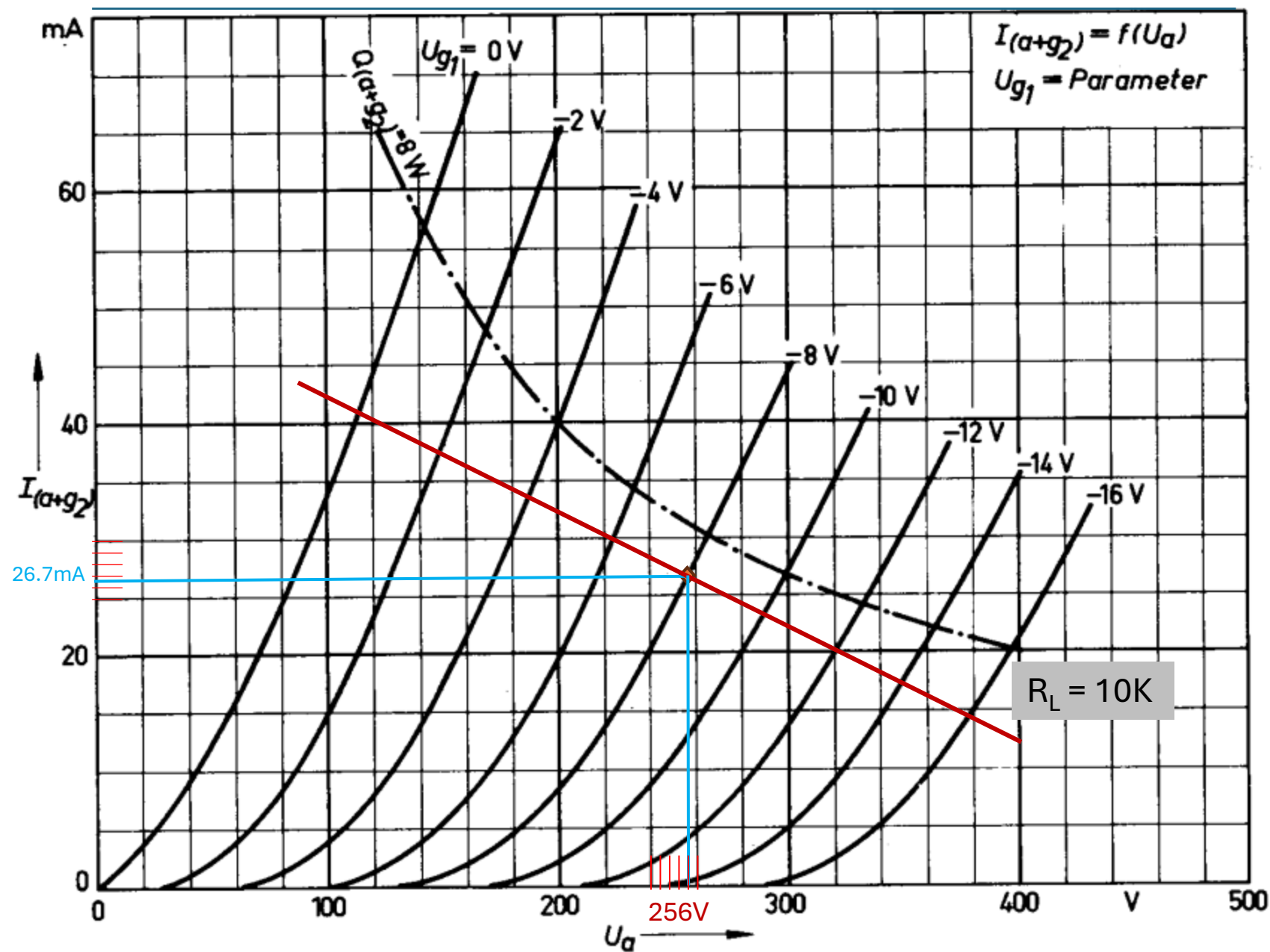








E80L



Triodenschaltung

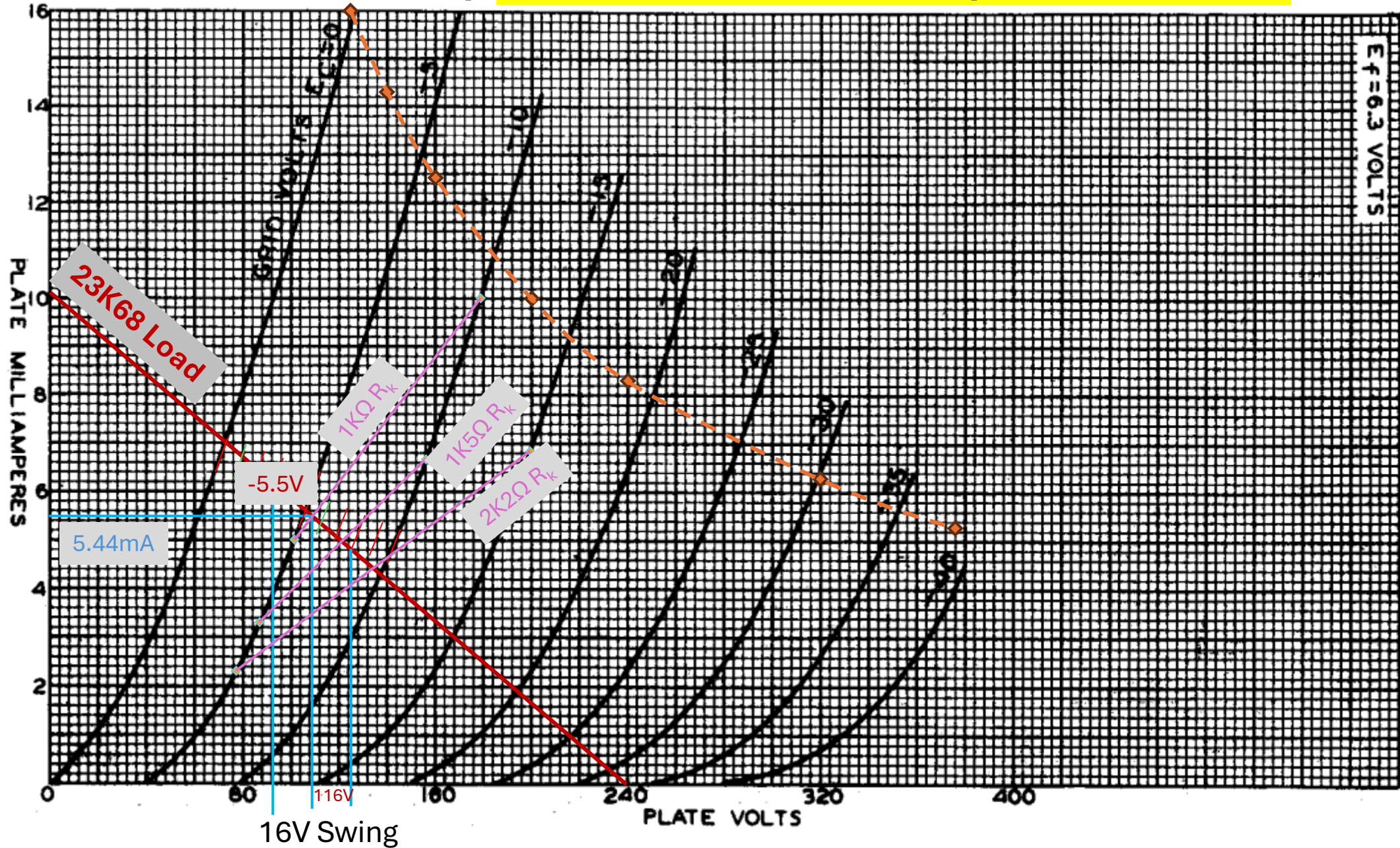
KENNLINIENFELD

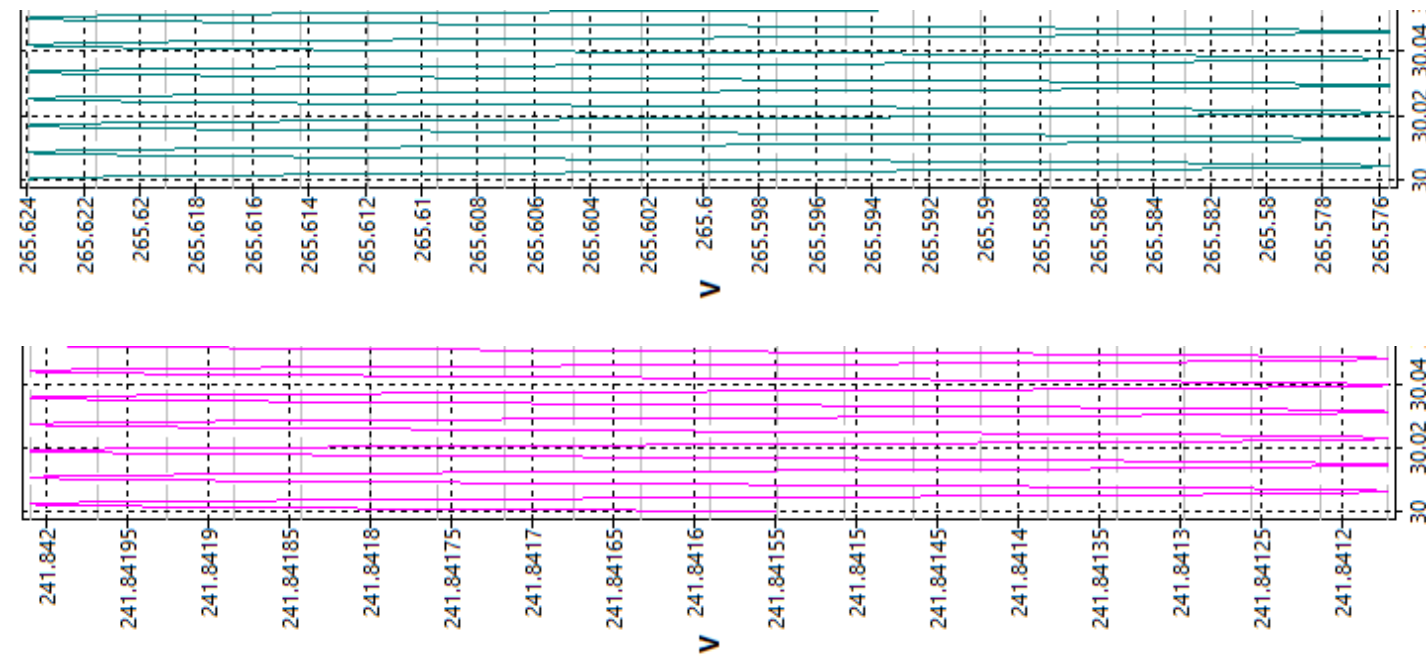
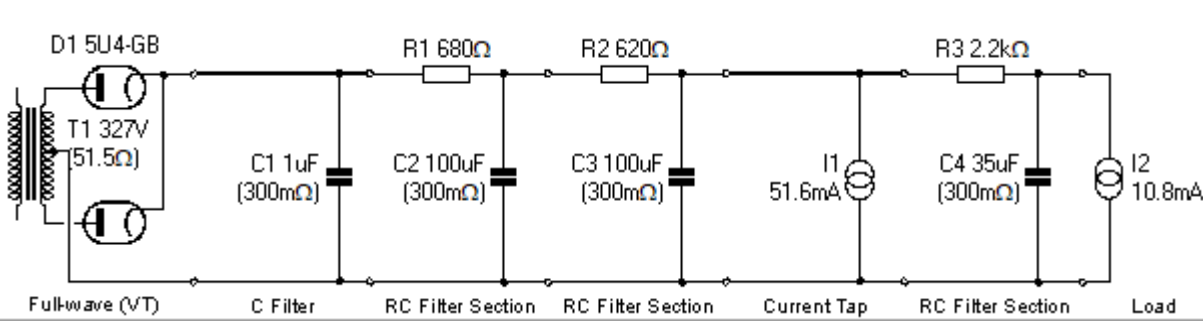
$$I_{(a+g_2)} = f(U_a)$$

511
RD

85 Tube Preamp with 23.68K Carbon Comp Plate Resistors

85 AVERAGE PLATE CHARACTERISTICS TRIODE UNIT





ELECTRICAL DATA:		
TESTS	CONDITIONS	ACCEPTANCE CRITERIA
I _{ex}	@ 125V, 60Hz, WHT - BLK	239mA Max.
Sec. N.L.V	@ 125V, 60Hz, WHT - BLK	
	RED - RED =	654.3V ±2%
	RED - RED/YEL = RED/YEL - RED =	327.1V ±2%
	YEL - YEL =	5.510V ±2%
	YEL - YEL/BLK = YEL/BLK - YEL =	2.755V ±2%
	GRN - GRN =	6.887V ±2%
	GRN - GRN/YEL = GRN/YEL - GRN =	3.444V ±2%
DCR	@ 20°C, WHT - BLK =	2.619 Ω ±20%
	@ 20°C, RED - RED =	102.9 Ω ±20%
	@ 20°C, YEL - YEL =	0.063 Ω ±20%
	@ 20°C, GRN - GRN =	0.042 Ω ±20%
HIPOT	PRIMARY - SECONDARY	2000V, 60Hz, 1 SEC

Output Transformer

The DCR on the primary should be around 315.133 Ohms. The secondary should be about 0.656 Ohms.
1:12 PM

$$0.0267 \times 315 =$$

8.4105

$$265.6 - 8.4 =$$

257.2

Close Enough

SPECIAL QUALITY, LONG LIFE, SHOCK AND VIBRATION RESISTANT
OUTPUT PENTODE

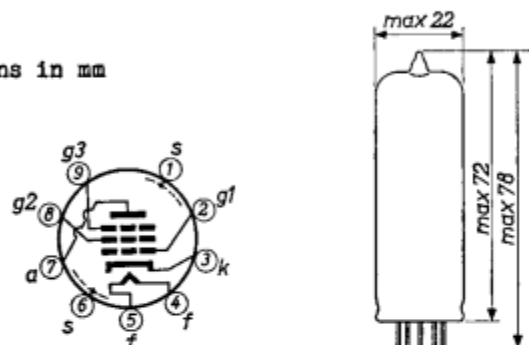
HEATING

Indirect by A.C. or D.C.; series or parallel supply

Heater voltage $V_f = 6.3$ V

Heater current $I_f = 0.7$ A

Dimensions in mm



Base: NOVAL with gold plated pins

CHARACTERISTICS

Column I: Setting of the tube and typical (average) measuring results of new tubes

II: Characteristics range values for equipment design

III: Data indicating the end point of life

Capacitances

	I	II
Grid No.1 to all other elements except anode	$C_{g1} = 10.0$	9.2-10.8 pF
Anode to all other elements except grid No.1	$C_a = 6.8$	6.3- 7.3 pF
Anode to grid No.1	$C_{ag1} =$	< 0.15 pF
Grid No.1 to heater	$C_{g1f} =$	< 0.25 pF
Cathode to heater	$C_{kf} = 7.0$	pF

Heater current

	I	II	III
Heater voltage	$V_f = 6.3$		V
Heater current	$I_f = 0.7$	0.665-0.735	0.665-0.735 A

LIMITING VALUES (Absolute max. rating system)

Anode voltage	V_{a0}	max.	600 V
	V_a	max.	300 V
Anode dissipation	W_a	max.	8 W
Negative grid No.3 voltage	$-V_{g3}$	max.	100 V
Grid No.2 voltage	V_{g20}	max.	600 V
	V_{g2}	max.	300 V
Grid No.2 dissipation	W_{g2}	max.	2.6 W
Grid No.1 voltage	$-V_{g1}$	max.	100 V
Cathode current	I_k	max.	50 mA
Voltage between cathode and heater	V_{kf}	max.	120 V
Bulb temperature	t_{bulb}	max.	225 °C
Grid No.1 resistor (automatic bias)	R_{g1}	max.	1 MΩ

Heater voltage: The average heater voltage should be 6.3 V.

Variations of the heater voltage exceeding the range of 6.0 V to 6.6 V will shorten the tube life.

The tolerance of heater current (column II) should be taken into account.

CHARACTERISTICS (continued)

Hum voltage		I	II	III
Anode voltage	V_a	= 200		V
Grid No.3 voltage	V_{g3}	= 0		V
Grid No.2 voltage	V_{g2}	= 200		V
Cathode resistor	R_k	= 130		Ω
Anode resistor	R_a	= 1		kΩ
Hum voltage	V_{g1hum}	=	< 0.25	mV ¹⁾

Insulation between heater and cathode

	I	II	III
Voltage between heater and cathode (cathode positive)	$V_{kf}(k \text{ pos.}) = 120$		V
Series resistor	R	= 1	MΩ
Current from cathode to heater	I_{kf}	=	< 15 20 μA

Insulation between the electrodes

	I	II	III
Voltage between two arbitrary electrodes	V	= 300	V ²⁾
Insulation resistance	R_{isol}	=	> 50 10 MΩ

LIFE EXPECTANCY: 10 000 hours under the following life-test conditions:

Heater voltage	V_f	= 6.3 V
Anode voltage	V_a	= 200 V
Grid No.3 voltage	V_{g3}	= 0 V
Grid No.2 voltage	V_{g2}	= 200 V
Cathode resistor	R_k	= 130 Ω

Voltage between cathode and heater (cathode positive) $V_{kf}(k \text{ pos.}) = 120$ V

The data indicating the end point of life are given in column III under the heading "Characteristics".

¹⁾ Hum voltage referred to grid No.1, measured with straight response filter. Frequency of heater supply voltage 50 c/s. Centre tap of heater transformer grounded.

²⁾ When measured between the cathode and another electrode, the cathode should be positive



85

85

TWIN DIODE—MEDIUM-MU TRIODE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage. 6.3 ac or dc volts

Current. 0.3 amp

Direct Interelectrode Capacitances - Triode Unit:*

Grid to Plate. 1.5 $\mu\mu\text{f}$ Grid to Cathode. 1.5 $\mu\mu\text{f}$ Plate to Cathode. 4.3 $\mu\mu\text{f}$

* With no external shield.

Mechanical:

Mounting Position. Any

Maximum Overall Length 4-17/32"

Seated Length. 3-25/32" \pm 1/8"

Maximum Diameter 1-9/16"

Bulb ST-12

Cap. Small

Base Small-Shell Small 6-Pin

Basing Designation for BOTTOM VIEW 6G

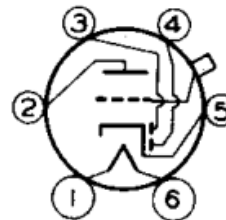
Pin 1- Heater

Pin 2- Triode

Plate

Pin 3- Diode No.2

Plate



Pin 4- Diode No.1

Plate

Pin 5- Cathode

Pin 6- Heater

Cap - Triode Grid

TRIODE UNIT
AMPLIFIER - Class A₁

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE. 250 max. volts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. . . 90 max. volts

Heater positive with respect to cathode. . . 90 max. volts

Typical Operation and Characteristics:

Plate Voltage. 135 180 250 . . volts

Grid Voltage -10.5 -13.5 -20 . . volts

Amplification Factor . . . 8.3 8.3 8.3

Plate Resistance 11000 8500 7500 . . ohms

Transconductance 750 975 1100 . . μmhos

Plate Current. 3.7 6.0 8.0 . . ma

Load Resistance. 25000 20000 20000 . . ohms

Power Output 75 160 350 . . mw



6V7G



55, 85

BOTTOM VIEWS

THE 6V7G, 55 AND 85 ARE HEATER CATHODE TYPE TUBES CONSISTING OF TWO DIODES AND A TRIODE IN A SINGLE BULB. THEY ARE DESIGNED FOR USE AS COMBINED DETECTORS, AMPLIFIERS AND AUTOMATIC VOLUME CONTROL TUBES.

RATINGS

INTERPRETED ACCORDING TO RCA STANDARD WG-210

MAXIMUM PLATE VOLTAGE 250
MAXIMUM PLATE DISSIPATION 2.0VOLTS
WATTS