

Circuit Setup

Output tube type	211 x 1
Output Transformer	User Defined
Bias method	Cathode
Plate load resistance	9.46 k
Plate idle current	57.6 ma
B+ voltage	1.13 kv
Peak input voltage	50 v
Tran. primary resistance	455 ohm

Tube Data

Amplification Factor (μ)	12.1
Transconductance (gp)	.26 ma/v
Transconductance (gm)	3.14 ma/v
Plate Resistance (rp)	3.86 k
Max Plate Voltage	1.25 kv
Max Plate Current	175 ma
Max Plate Disipation	100. w

Transformer Data

Heat dissipation	1.53 w
Winding Ratio	34.4 : 1
Winding Ratio ²	1181.88
Primary nductance	35 H
Efficiency	88.8%

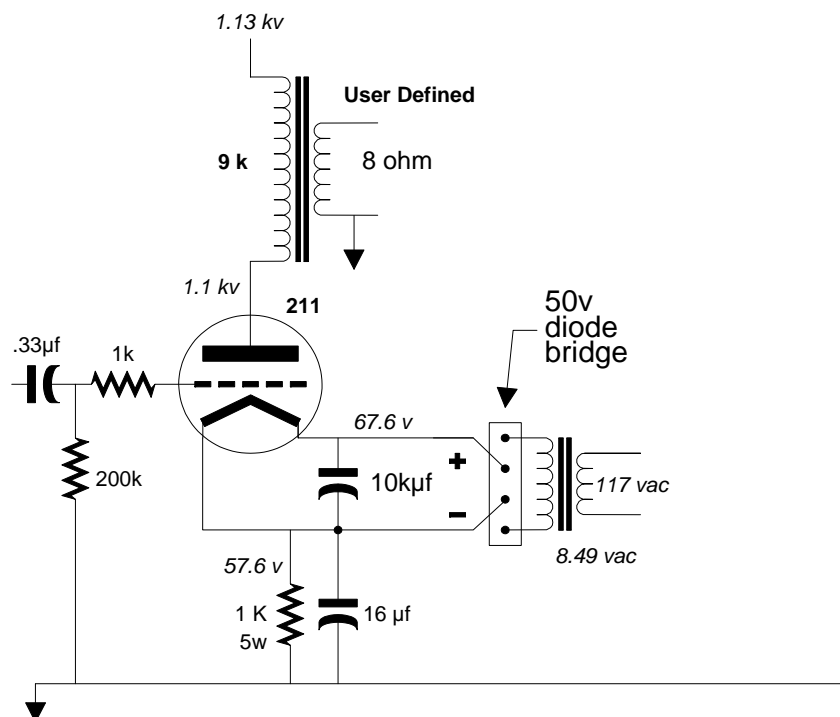
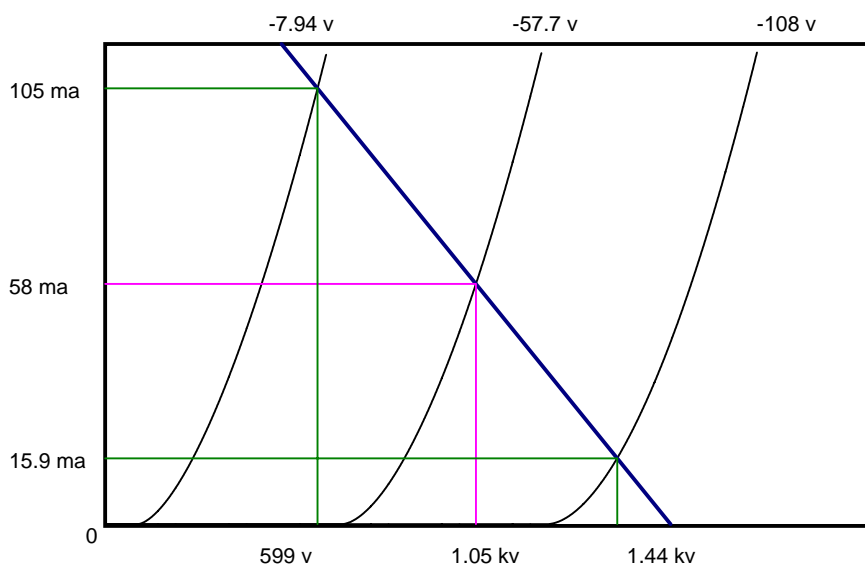
**Output Stage**

Plate dissipation @ Idle	60.7 w
Average plate dissipation	51.6 w
Max plate dissipation ratio	61%
Output impedance	2.74 k
Gain	8.45
PSRR	-3 dB
Rectification	.43 ma
Slew rate of input	6.28 v/μs
Plate efficiency	15%
Stage efficiency	14%

IV Dynamics: Rectification Effect Included

Vp max = 1.44 kv	Vg max = -108 v	Ip min = 15.9 ma
Delta = 398 v	Delta = 50 v	Delta = 42.1 ma
Vp avg = 1.05 kv	Vg avg = -57.9 v	Ip avg = 58 ma
Delta = 447 v	Delta = 50 v	Delta = 47.3 ma
Vp min = 599 v	Vg min = -7.94 v	Ip max = 105 ma

**Cathode resistor**

Resistor value	1 k
Heat dissipation	3.37 w
Bypass capacitor value	16 μf

Output into Load

Power (peak)	18.1 w
Voltage (peak)	12 v
Current (peak)	1.5 A
Output impedance	2.92 ohm
Damping factor	2.74
Distortion 2nd	2.9 %
2nd harmonic in -dB	-30.8 dB
Distortion 3rd	0.5 %
3rd harmonic in -dB	-46.3 dB