

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

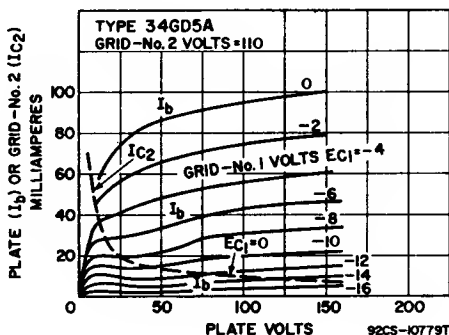
Plate Voltage	150	volts
Grid-No.2 (Screen-Grid) Voltage	130	volts
Grid-No.1 (Control-Grid) Voltage:		
Negative-bias value	50	volts
Positive-bias value	0	volts
Plate Dissipation	5	watts
Grid-No.2 Input	1.1	watts
Bulb Temperature (At hottest point)	250	°C

TYPICAL OPERATION AND CHARACTERISTICS

Plate Voltage	110	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 Voltage	-7.5	volts
Peak AF Grid-No.1 Voltage	7.5	volts
Zero-Signal Plate Current	35	mA
Zero-Signal Grid-No.2 Current	3	mA
Plate Resistance (Approx.)	13000	ohms
Transconductance	5700	μmhos
Load Resistance	2500	ohms
Total Harmonic Distortion	10	per cent
Maximum-Signal Power Output	1.4	watts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.5	megohm



Refer to chart at end of section.

35

Refer to chart at end of section.

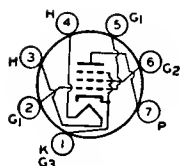
35A5

Refer to chart at end of section.

35B5

BEAM POWER TUBE

35C5



7CV

Miniature type used in output stage of compact, ac/dc radio receivers. Outlines section, 5D; requires miniature 7-contact socket. This tube, like other power-handling tubes, should be adequately ventilated. Except for terminal connections and slightly higher ratings, type 35C5 is equivalent in performance to miniature type 35B5 and, within its maximum ratings, to glass octal type 35L6GT.

Heater Voltage (ac/dc)	35	volts
Heater Current	0.15	ampere
Heater-Cathode Voltage:		
Peak value	±200 max	volts
Average value	100 max	volts

Direct Interelectrode Capacitances (Approx.):

Grid No.1 to Plate	0.6	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3	12	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3	9	pF

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MAXIMUM RATINGS (Design-Maximum Values)

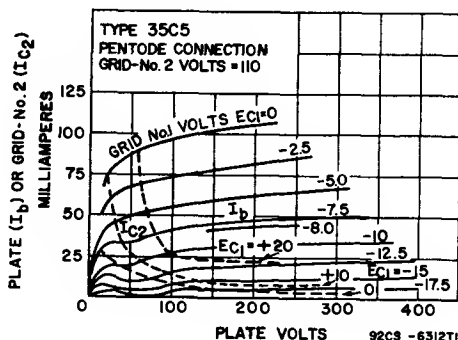
Plate Voltage	150	volts
Grid-No.2 (Screen-Grid) Voltage	130	volts
Plate Dissipation	5.2	watts
Grid-No.2 Input	1.1	watts
Bulb Temperature (At hottest point)	250	°C

TYPICAL OPERATION

Plate Voltage	110	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 (Control-Grid) Voltage	-7.5	volts
Peak AF Grid-No.1 Voltage	7.5	volts
Zero-Signal Plate Current	40	mA
Maximum-Signal Plate Current	41	mA
Zero-Signal Grid-No.2 Current	3	mA
Maximum-Signal Grid-No.2 Current	7	mA
Plate Resistance (Approx.)	13000	ohms
Transconductance	5800	μmhos
Load Resistance	2500	ohms
Total Harmonic Distortion	10	per cent
Maximum-Signal Power Output	1.5	watts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.5	megohm



Installation and Application

The 35-volt heater is designed to operate under the normal conditions of line-voltage variation without materially affecting the performance or serviceability of the 35C5. For operation of the 35C5 in series with other types having 0.15-ampere rating, the current in the heater circuit should be adjusted to 0.15 ampere for the normal supply voltage.

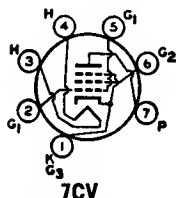
In a series-heater circuit of the "dc-power line" type employing several 0.15-ampere types and one or two 35C5s, the heater(s) of the 35C5(s) should be placed on the positive side of the line. Under these conditions, heater-cathode voltage of the 35C5 must not exceed the value given under maximum ratings. In a series-heater circuit of the "universal" type employing rectifier tube 35W4, one or two 35C5s and several 0.15-ampere types, it is recommended that the heater(s) of the 35C5(s) be placed in the circuit so that the higher values of heater-cathode bias will be impressed on the 35C5(s) rather than on the other 0.15-ampere types. This is accomplished by arranging the 35C5(s) on the side of the supply line which is connected to the cathode of the rectifier, i.e., the positive terminal of the

rectified voltage supply. Between this side of the line and the 35C5(s), any necessary auxiliary resistance and the heater of the 35W4 are connected in series.

As a power amplifier (class A₁), the 35C5 is recommended for use either singly or in push-pull combination in the power-output stage of ac/dc receivers. The operating values shown under typical operation have been determined on the basis that grid-No.1 current does not flow during any part of the input cycle.

Refer to chart at end of section.

35DZ8



7CV

POWER PENTODE

35EH5

Miniature type used in the audio output stage of radio and television receivers and in phonographs. Outlines section, 5D; requires miniature 7-contact socket.

Heater Voltage (ac/dc)	35	volts
Heater Current	0.15	ampere
Heater-Cathode Voltage:		
Peak value	±200 max	volts
Average value	100 max	volts
Direct Interelectrode Capacitances (Approx.):		
Grid No.1 to Plate	0.65	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3	17	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3	9	pF

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage	150	volts
Grid-No.2 (Screen-Grid) Voltage	130	volts
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	volts
Plate Dissipation	5	watts
Grid-No.2 Input	1.75	watts
Bulb Temperature (At hottest point)	225	°C

TYPICAL OPERATION

Plate Supply Voltage	110	volts
Grid-No.2 Supply Voltage	115	volts
Cathode-Bias Resistor	62	ohms
Peak AF Grid-No.1 Voltage	3	volts
Zero-Signal Plate Current	32	mA
Maximum-Signal Plate Current	32	mA
Zero-Signal Grid-No.2 Current	7.2	mA
Maximum-Signal Grid-No.2 Current	12	mA
Plate Resistance (Approx.)	14000	ohms
Transconductance	3000	μmhos
Load Resistance	3000	ohms
Total Harmonic Distortion	8	per cent
Maximum-Signal Power Output	1.2	watts

