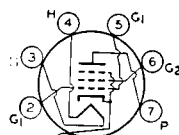


<b>34GD5</b>	Refer to chart at end of section.
<b>34GD5A</b>	Refer to chart at end of section.
<b>34R3</b>	Refer to chart at end of section.
<b>35</b>	Refer to chart at end of section.
<b>35A5</b>	Refer to chart at end of section.
<b>35B5</b>	Refer to chart at end of section.

## 35C5 BEAM POWER TUBE

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.



7Cv

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

### Class A<sub>1</sub> Amplifier

#### 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

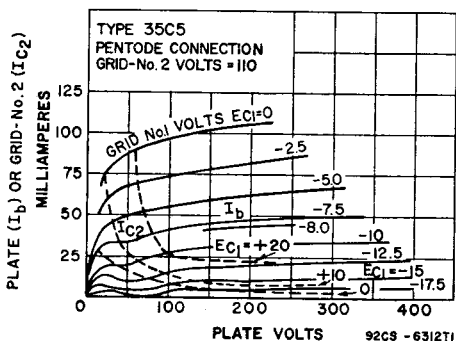
Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.5	megohm

### 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 A<sub>1</sub>), 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**

Refer to chart at end of section.

**35EH5**

Refer to chart at end of section.

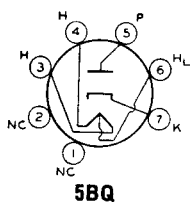
**35GL6**

Refer to chart at end of section.

**35L6GT**

Refer to type 6LR6.

**35LR6**



**5BQ**

**HALF-WAVE  
VACUUM RECTIFIER**

**35W4**

Miniature type used in power supply of ac/dc receivers. Outlines section, 5D; requires miniature 7-contact socket. This type is equivalent in performance to glass-octal type 35Z5GT. The heater is provided with a tap for operation of a panel lamp.

Heater Voltage (ac/dc):	*	**	
Entire Heater (pins 3 and 4)	35	32	volts
Panel Lamp Section (pins 4 and 6)	7.5	5.5	volts
Heater Current:			
Between Pins 3 and 4	0.15	—	ampere
Between Pins 3 and 6	—	0.15	ampere
Peak Heater-Cathode Voltage		±360 max	volts

- \* Without panel lamp.
- \*\* With No.40 or No.47 panel lamp.

**Half-Wave Rectifier**

**MAXIMUM RATINGS (Design-Maximum Values)**

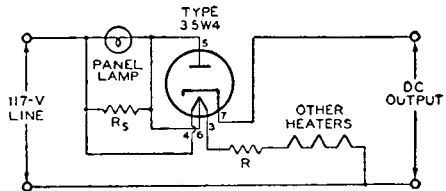
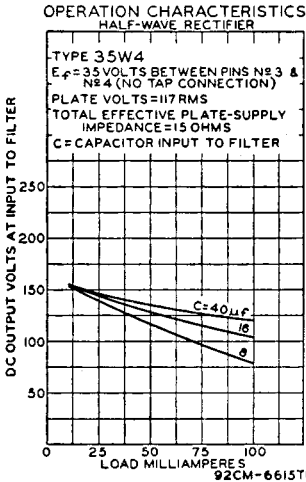
Peak Inverse Plate Voltage		360	volts		
Peak Plate Current		660	mA		
Average Output Current:					
With Panel Lamp and {	No Shunting Resistor	66	mA		
	Shunting Resistor	100	mA		
Without Panel Lamp		110	mA		
Panel-Lamp-Section Voltage:					
When Panel Lamp Fails		17	volts		
AC Plate-Supply Voltage (rms)	117	117	117	117	volts
Filter-Input Capacitor	40	40	40	40	μF
Minimum Total Effective Plate-Supply Impedance	15	15	15	15	ohms
Panel-Lamp Shunting Resistor	—	300	150	100	ohms
Average Output Current	60	70	80	90	mA

† No.40 or No.47 panel lamp used in circuit given below with capacitor-input filter.

**Installation and Application**

For heater considerations, refer to miniature type 35C5.

With the panel lamp connected as shown in the diagram, the drop across R and all heaters (with panel lamp) should equal 117 volts at 0.15 ampere. The shunting resistor R<sub>s</sub> is required when dc output current exceeds 60 milliamperes. Values of R<sub>s</sub> for dc output currents greater than 60 milliamperes are given in tabulated data.



**TYPICAL OPERATION WITHOUT PANEL LAMP**

AC Plate-Supply Voltage (rms)	117	volts
Filter-Input Capacitor	40	μF
Minimum Total Effective Plate-Supply Impedance	15	ohms
Average Output Current	100	mA
DC Output Voltage at Input to Filter (Approx.):		
At half-load current (50 mA)	135	volts
At full-load current (100 mA)	120	volts
Voltage Regulation (Approx.):		
Half-load to full-load current	15	volts

**MAXIMUM CIRCUIT VALUES**

Panel-Lamp Shunting Resistor:*			
For dc output current of	70 mA	800	ohms
	80 mA	400	ohms
	90 mA	250	ohms

\* Required when dc output current is greater than 60 milliamperes.