35Z5-GT

Description and Rating

HALF-WAVE HIGH-VACUUM RECTIFIER

GENERAL DESCRIPTION
Principal Application: The 35Z5-GT is a half-wave high-vacuum rectifier designed for use in a-c/d-c receivers. The heater is tapped to permit operation of a panel lamp. It is recommended that the plate be connected to the heater tap so that the plate current will pass through the panel lamp and the tapped section of the heater.

Cathode: Coated Unipotential
Heater Voltage (A-C or D-C)*: 35.0 Volts
Heater Tap Voltage*: 7.5 Volts
Heater Current*: 0.15 Ampere

Envelope: T-9 Glass
Base: B6-B, Intermediate Shell Octal 6-Pin
Mounting Position: Any

PHYSICAL DIMENSIONS

TERMINAL CONNECTIONS

<table>
<thead>
<tr>
<th>Pin</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No Connection</td>
</tr>
<tr>
<td>2</td>
<td>Heater</td>
</tr>
<tr>
<td>3</td>
<td>Heater Tap</td>
</tr>
<tr>
<td>5</td>
<td>Plate</td>
</tr>
<tr>
<td>7</td>
<td>Heater</td>
</tr>
<tr>
<td>8</td>
<td>Cathode</td>
</tr>
</tbody>
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MAXIMUM RATINGS

Design Center Values:

- Peak Inverse Plate Voltage: 700 Volts
- A-C Plate Supply Voltage (RMS): 235 Volts
- Steady-State Peak Plate Current: 600 Milliamperes
- Steady-State D-C Output Current:
  - Without Panel Lamp: 100 Milliamperes
  - With Panel Lamp and Shunting Resistor: 90 Milliamperes
  - With Panel Lamp and No Shunting Resistor: 60 Milliamperes
- Panel Lamp Shunting Resistor:
  - For D-C Output Current of 70 Milliamperes: 800 Ohms
  - For D-C Output Current of 80 Milliamperes: 400 Ohms
  - For D-C Output Current of 90 Milliamperes: 250 Ohms
- Heater Tap Voltage (RMS) When Panel Lamp Fails: 15 Volts
- D-C Heater Cathode Voltage: 350 Volts

* Values are for operation without panel lamp. For heater voltage and current ratings with panel lamp, refer to Characteristics and Typical Operation given on page 2. The heater tap voltage is measured between pins 2 and 3 with 0.15 ampere flowing between pins 2 and 7.
CHARACTERISTICS AND TYPICAL OPERATION

HALF-WAVE RECTIFIER - WITH PANEL LAMP NUMBER 40 OR NUMBER 47

Heater Voltage (Pin 2 to Pin 7): .......... 32  32  32  32  32 ........ Volts
Heater Tap Voltage (Pin 2 to Pin 3): .......... 5.5  5.5  5.5  5.5  5.5 ........ Volts
Heater Current (Between Pins 3 and 7): .......... 0.15  0.15  0.15  0.15  0.15 ........ Ampere
A-C Plate Supply Voltage (RMS) .......... 117  117  117  117  235 ........ Volts
Filter Input Capacitor .......... 40  40  40  40  40 ........ Microfarads
Minimum Total Effective Plate Supply Impedance .......... 15  15  15  15  100 ........ Ohms
Panel Lamp Shunting Resistor # .......... --- 300  150  100 --- ........ Ohms
D-C Output Current .......... 60  70  80  90  60 ........ Milliamperes

HALF-WAVE RECTIFIER - WITHOUT PANEL LAMP

Heater Voltage (Pin 2 to Pin 7): .......... 35  35 ........ Volts
Heater Tap Voltage (Pin 2 to Pin 3): .......... 7.5  7.5 ........ Volts
Heater Current (Between Pins 3 and 7): .......... 0.15  0.15 ........ Ampere
A-C Plate Supply Voltage (RMS) .......... 117  235 ........ Volts
Filter Input Capacitor .......... 40  40 ........ Microfarads
Minimum Total Effective Plate Supply Impedance .......... 15  100 ........ Ohms
D-C Output Current .......... 100  100 ........ Milliamperes
D-C Output Voltage at Input to Filter: (Approx)
At 50 Milliamperes Load Current .......... 140  280 ........ Volts
At 100 Milliamperes Load Current .......... 120  235 ........ Volts

Tube Voltage Drop:
Measured with Applied D-C at 200 Milliamperes .......... 18 ........ Volts

# Shunting resistor required if d-c output current is greater than 60 milliamperes.

TYPICAL CIRCUIT FOR OPERATION WITH PANEL LAMP

TYPICAL CIRCUIT FOR OPERATION WITHOUT PANEL LAMP

Rs = Panel-lamp shunting resistor

Drop across R at 0.15 ampere should equal difference between line voltage and total of all rated heater voltages.
AVERAGE PLATE CHARACTERISTICS

E_T = 34 VOLTS

D-C PLATE VOLTAGE IN VOLTS

PLATE CURRENT IN MILLIAMPERES

Tube Divisions, Electronics Department

GENERAL ELECTRIC

Schenectady, N. Y.