35GL6

Beam Power Tube

7-PIN MINIATURE TYPE

GENERAL DATA

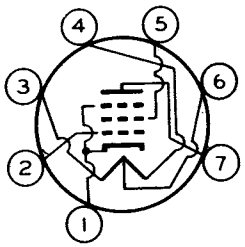
Electrical:

	Without Panel Lamp	*With No.40 or No.47 Panel Lamp*	
Heater, for Unipotential Cathode:			
Voltage (AC or DC):			
Entire heater (Pins 3 and 4)	35	32	volts
Panel-lamp section (Pins 4 and 6)	7	5.5	volts
Current:			
Between pins 3 and 4	0.15 ± 6%	–	amp
Between pins 3 and 6	–	0.15 ± 6%	amp
Direct Interelectrode Capacitances (Approx.):[a]			
Grid No.1 to plate	0.5		μμf
Grid No.1 to cathode & grid No.3, grid No.2, and heater	14		μμf
Plate to cathode & grid No.3, grid No.2, and heater	9.5		μμf

Mechanical:

Operating Position	Any
Maximum Overall Length	2-5/8"
Maximum Seated Length	2-3/8"
Length, Base Seat to Bulb Top (Excluding tip)	2" ± 3/32"
Diameter	0.650" to 0.750"
Dimensional Outline	See *General Section*
Bulb	T5-1/2
Base	Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW	7FZ

Pin 1 – Cathode, Grid No.3
Pin 2 – Grid No.1
Pin 3 – Heater
Pin 4 – Heater
Pin 5 – Grid No.2



Pin 6 – Heater Tap
Pin 7 – Plate
Panel-lamp heater section is between pins 4 and 6.

AMPLIFIER — Class A_1

Maximum Ratings, *Design-Maximum Values:*

RMS HEATER-TAP VOLTAGE when panel lamp fails	14 max.	volts
PLATE VOLTAGE	150 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	130 max.	volts
GRID-No.2 INPUT	1.1 max.	watts
PLATE DISSIPATION	5.5 max.	watts

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PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200 max.	volts
BULB TEMPERATURE (At hottest point on bulb surface)	225 max.	°C

Typical Operation and Characteristics:

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	45	ma
Max.-Signal Plate Current	47	ma
Zero-Signal Grid-No.2 Current	3	ma
Max.-Signal Grid-No.2 Current	9	ma
Plate Resistance (Approx.)	12000	ohms
Transconductance	7500	μmhos
Load Resistance	2500	ohms
Total Harmonic Distortion	8	%
Max.-Signal Power Output	1.8	watts

Maximum Circuit Values:

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

OPERATING CONSIDERATIONS

The 35GL6 has a heater tap which may be used for operating a 6.3-volt/150-milliampere panel lamp in equipment employing semiconductor rectifiers (See accompanying *Typical Circuit*). The table below gives the required values of panel-lamp shunting resistor for various dc output currents with panel lamp No.40 or No.47.

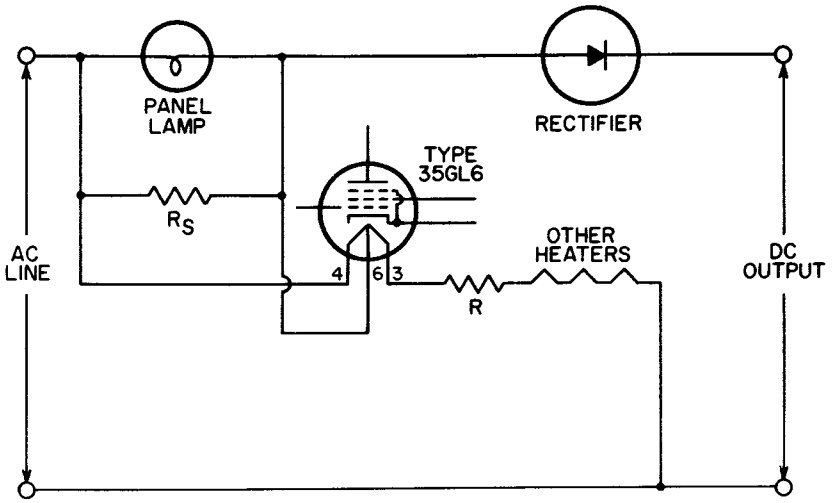
Heater Voltage:								
Entire heater (Pins 3 and 4)	32	32	32	32	32	32	32	volts
Panel-lamp section (Pins 4 and 6)	5	5.4	5.5	5.5	5.5	5.5	5.5	volts
Heater Current:								
Between pins 3 and 6	0.15	0.15	0.15	0.15	0.15	0.15	0.15	amp
Panel-Lamp Shunting Resistor (R_S)	–	–	370	175	120	88	73	ohms
DC Output Current[b]	60	70	80	90	100	110	120	ma

[a] Without external shield.

[b] Higher dc output currents will require smaller values of panel-lamp shunting resistor. For maximum panel-lamp life, the shunting resistor should be selected to allow a panel-lamp voltage of 5.5 volts with full dc output current.

TYPICAL CIRCUIT

With panel lamp No.40 or No.47



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DROP ACROSS R AT 0.15 AMPERE SHOULD EQUAL DIFFERENCE BETWEEN LINE VOLTAGE AND TOTAL OF ALL RATED HEATER VOLTAGES. R_S = PANEL-LAMP SHUNTING RESISTOR REQUIRED WHEN DC OUTPUT CURRENT EXCEEDS 70 MILLIAMPERES.