

### BEAM POWER AMPLIFIER TYPES 12L6-GT, 25L6-GT AND 50L6-GT

The 12L6-GT, 25L6-GT and 50L6-GT are beam pentode types used in the output stage of ac-dc receivers. These types feature high power sensitivity and plate efficiency at low plate and screen voltages.

The 12L6-GT has been designed for use in receivers which employ series-connected heaters, especially in television receivers where the picture-tube heater is in series with other heaters. When it is employed in this type of circuit with other tubes having a heater current rating of 600 ma., heater voltage surges across individual tubes are minimized inasmuch as the heater warm-up characteristic is controlled.

#### ELECTRICAL:

|                                     |                     |         |             |
|-------------------------------------|---------------------|---------|-------------|
| Cathode: . . . . .                  | Coated Unipotential |         |             |
| Heater: . . . . .                   | 12L6-GT             | 25L6-GT | 50L6-GT     |
| Voltage (ac or dc) . . . .          | 12.6                | 25.0    | 50.0 Volts  |
| Current . . . . .                   | 0.6                 | 0.30    | 0.15 Ampere |
| Warm-up Time, approx. ▲             | 11                  | --      | -- Seconds  |
| Direct Interelectrode Capacitances: |                     |         |             |
| Grid to Plate. . . . .              | 0.8                 |         | uuf         |
| Input. . . . .                      | 15                  |         | uuf         |
| Output. . . . .                     | 9.0                 |         | uuf         |

#### MECHANICAL:

|                             |                                             |
|-----------------------------|---------------------------------------------|
| Bulb . . . . .              | T-9                                         |
| Base . . . . .              | Intermediate Shell Octal 7-Pin (JETEC B7-7) |
| Basing . . . . .            | 7AC                                         |
| Mounting Position . . . . . | Any                                         |

#### MAXIMUM RATINGS:

##### Design Center Values

|                              |           |       |
|------------------------------|-----------|-------|
| Plate Voltage . . . . .      | 200 max.  | Volts |
| Plate Dissipation . . . . .  | 10 max.   | Watts |
| Screen Voltage . . . . .     | 125 max.  | Volts |
| Screen Dissipation . . . . . | 1.25 max. | Watts |

##### Heater-Cathode Voltage:

##### Heater Negative with Respect

##### to Cathode: 12L6GT-25L6GT-50L6GT

|                          |     |     |         |       |
|--------------------------|-----|-----|---------|-------|
| Total DC + Peak. . . . . | 300 | 200 | 90 max. | Volts |
|--------------------------|-----|-----|---------|-------|

##### Heater Positive with Respect

##### to Cathode:

|                        |     |     |         |       |
|------------------------|-----|-----|---------|-------|
| DC Component . . . . . | 100 | 100 | -- max. | Volts |
|------------------------|-----|-----|---------|-------|

|                           |     |     |         |       |
|---------------------------|-----|-----|---------|-------|
| Total DC + Peak . . . . . | 200 | 200 | 90 max. | Volts |
|---------------------------|-----|-----|---------|-------|

##### Grid Circuit Resistance:

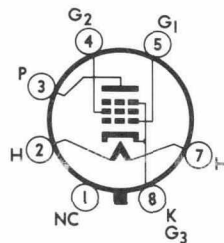
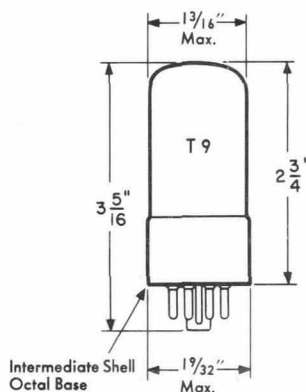
|                        |          |        |
|------------------------|----------|--------|
| Cathode Bias . . . . . | 0.5 max. | Megohm |
| Fixed Bias . . . . .   | 0.1 max. | Megohm |

#### CHARACTERISTICS AND TYPICAL OPERATION:

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

|                                         |       |       |         |
|-----------------------------------------|-------|-------|---------|
| Plate Voltage . . . . .                 | 110   | 200   | Volts   |
| Screen Voltage . . . . .                | 110   | 110   | Volts   |
| Control Grid Voltage . . . . .          | -7.5  | -8    | Volts   |
| Peak A-F Control Grid Voltage . . . . . | 7.5   | 8     | Volts   |
| Zero Signal Plate Current . . . . .     | 49    | 50    | Ma.     |
| Zero Signal Screen Current . . . . .    | 4     | 2     | Ma.     |
| Max. Signal Plate Current . . . . .     | 50    | 55    | Ma.     |
| Max. Signal Screen Current . . . . .    | 11    | 7     | Ma.     |
| Transconductance . . . . .              | 9000  | 9500  | umhos   |
| Plate Resistance, approx. . . . .       | 13000 | 30000 | Ohms    |
| Load Resistance . . . . .               | 2000  | 3000  | Ohms    |
| Power Output . . . . .                  | 2.1   | 4.3   | Watts   |
| Total Harmonic Distortion . . . . .     | 10    | 10    | Percent |

▲ Heater Warm-up Time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times rated heater voltage divided by rated heater current.



Supersedes 12L6-GT Sheet Dated October 15, 1954

Supersedes 25L6-GT Sheet Dated January 28, 1955

Supersedes 50L6-GT Sheet Dated January 28, 1955

Receiving Tube Section

