The 12AQ5 is a miniature beam-power pentode intended primarily for use in the audio-frequency output stage of automobile receivers which operate from 12-volt storage batteries. Within the limitations of its maximum ratings, the performance of the 12AQ5 is equivalent to that of the 12V6-GT.

**GENERAL**

Cathode—Coated Unipotential
Heater Voltage, AC or DC ........................................ 12.6 Volts
Heater Current .................................................. 0.225 Amperes
Envelope—T-5½, Glass
Base—E7-1, Miniature Button 7-Pin
Mounting Position—Any

Direct Interelectrode Capacitances, approximate*
   Grid-Number 1 to Plate .................................. 0.4 μμf
   Input ....................................................... 8.0 μμf
   Output ...................................................... 8.5 μμf

**MAXIMUM RATINGS**

**DESIGN-CENTER VALUES**

Plate Voltage .................................................. 250 Volts
Screen Voltage ................................................ 250 Volts
Plate Dissipation .............................................. 12 Watts
Screen Dissipation ............................................ 2.0 Watts
Heater-Cathode Voltage
   Heater Positive with Respect to Cathode ............. 90 Volts
   Heater Negative with Respect to Cathode ............ 90 Volts
Grid-Number 1 Circuit Resistance
   With Fixed Bias .......................................... 0.1 Megohms
   With Cathode Bias ....................................... 0.5 Megohms
Bulb Temperature at Hottest Point ......................... 250 °C

**CHARACTERISTICS AND TYPICAL OPERATION**

**CLASS A1 AMPLIFIER**

Plate Voltage .................................................. 180  250 Volts
Screen Voltage ................................................ 180  250 Volts
Grid-Number 1 Voltage ...................................... -8.5 -12.5 Volts
Peak AF Grid-Number 1 Voltage ............................. 8.5  12.5 Volts
Plate Resistance, approximate ............................ 58000  52000 Ohms
Transconductance ............................................ 3700  4100 Micromhos
Zero-Signal Plate Current .................................. 29  45 Milliamperes
Maximum-Signal Plate Current, approximate .............. 30  47 Milliamperes
Zero-Signal Screen Current .................................. 3.0  4.5 Milliamperes
Maximum-Signal Screen Current, approximate ............. 4.0  7.0 Milliamperes
Load Resistance ............................................... 5500  5000 Ohms
Total Harmonic Distortion, approximate ................... 8  8 Percent
Maximum-Signal Power Output ............................... 2.0  4.5 Watts

* Without external shield.
PUSH-PULL CLASS AB₁ AMPLIFIER, VALUES FOR TWO TUBES

- Plate Voltage: 250 Volts
- Screen Voltage: 250 Volts
- Grid-Number 1 Voltage: -15 Volts
- Peak AF Grid-to-Grid Voltage: 30 Volts
- Zero-Signal Plate Current: 70 Milliamperes
- Maximum-Signal Plate Current, approximate: 79 Milliamperes
- Zero-Signal Screen Current: 5.0 Milliamperes
- Maximum-Signal Screen Current, approximate: 13 Milliamperes
- Effective Load Resistance, Plate-to-Plate: 10000 Ohms
- Total Harmonic Distortion, approximate: 5 Percent
- Maximum-Signal Power Output: 10 Watts