



ELECTRONIC TUBE REFERENCE

1626

Power - Triode Single (under 10W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Low-mu triode intended for stable RF oscillator service. Published Class C telegraphy operation at 250 V produces about 4 W output, with full-rating operation specified to approximately 30 MHz.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	8
NOMINAL HEATER	12.6 V / 250 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
AMPLIFICATION FACTOR	5
MAXIMUM PLATE VOLTAGE	500 V
MAXIMUM PLATE DISSIPATION	5 W
<i>Representative electrical section; promoted values mapped from published ratings and characteristics where applicable.</i>	

1626 — Low-Mu Transmitting Triode

An indirectly heated cathode transmitting triode designed for radio-frequency (r-f) oscillator service and Class C power amplification, offering high stability of characteristics.

Overview

The **1626** (also designated as the **GL-1626**) is a low-mu triode designed primarily for r-f oscillator applications where unusual stability of characteristics is required. It features an indirectly heated cathode

with a 12.6-volt heater and is housed in a glass envelope with an eight-pin octal base. The tube is rated for operation at frequencies up to 30 megacycles at maximum ratings, and up to 90 megacycles with reduced operating parameters. The 1626 is also designated for renewal use in certain applications.

Physical and Mechanical Specifications

The 1626 is constructed with a glass bulb and a small-shell octal 8-pin base (basing designation B8-1). It is cooled via natural convection.

Dimensions and Weight

- **Maximum Overall Length:** 4-1/8 inches
- **Maximum Seated Height:** 3-9/16 inches
- **Maximum Bulb Diameter:** 1-9/16 inches
- **Maximum Neck Diameter:** 1-3/16 inches
- **Approximate Net Weight:** 4 ounces
- **Approximate Shipping Weight:** 3 pounds
- **Maximum Ambient Temperature:** 60°C

Pin Connections and Electrode Plane

The bottom view of the octal base reveals the following pinout configuration:

- **Pin 1:** No Connection (NC)
- **Pin 2:** Heater (H)
- **Pin 3:** Plate (P)
- **Pin 4:** No Connection (NC)
- **Pin 5:** Grid (G)
- **Pin 6:** No Connection (NC)
- **Pin 7:** Heater (H)
- **Pin 8:** Cathode (K)

The plane of the electrodes is designated along the AA' axis.

Electrical Characteristics and Ratings

The 1626 operates with a low amplification factor and moderate interelectrode capacitances. Its general electrical characteristics include:

- **Heater Voltage:** 12.6 volts (AC or DC)
- **Heater Current:** 0.25 ampere
- **Amplification Factor:** 5
- **Grid-to-Plate Capacitance:** 4.4 pF (micromicrofarads)
- **Input Capacitance:** 3.2 pF

- **Output Capacitance:** 3.4 pF

Class C RF Power Amplifier and Oscillator Service

The primary application of the 1626 is in Class C radio-frequency power amplifier and oscillator circuits. The typical operating conditions and absolute maximum ratings for key-down conditions without modulation are detailed below:

Parameter	Typical Operation	Maximum Ratings
D-c plate voltage	250 V	250 V
D-c grid voltage	-70 V	-150 V
D-c plate current	25 mA	25 mA
D-c grid current (approximate)	5 mA	8 mA
Plate input	6.25 W	—
Plate dissipation	—	5 W
Peak r-f grid voltage	105 V	—
Driving power (approximate)	0.5 W	—
Power output (approximate)	4 W	—

Grid Bias Methods

For typical operation, the d-c grid voltage of -70 V can be obtained using one of three methods:

- A fixed supply of -70 V
- A grid resistor of 14,000 ohms
- A cathode resistor of 2,300 ohms

Special Operating Conditions

- **Modulation:** Negative modulation may be employed, provided that the positive peak of the audio-frequency envelope does not exceed 115 percent of the carrier conditions.
- **Break-In Operation and Keying:** When the 1626 is used in the final amplifier or a preceding stage of a transmitter designed for break-in operation and oscillator keying, a small amount of fixed bias must be applied to maintain the plate current at a low value during key-up intervals. A fixed bias of at least -35 volts must be used when operating at a plate voltage of 250 volts.

High-Frequency Operation and Derating

While the 1626 can be operated at its maximum ratings up to 30 megacycles, operation at higher frequencies requires a reduction in the maximum allowable plate voltage and plate input power. Other

maximum ratings remain unchanged. The maximum percentages of rated plate voltage and plate input for Class C unmodulated service at elevated frequencies are:

- **At 30 Megacycles:** 100 percent
- **At 60 Megacycles:** 96 percent
- **At 90 Megacycles:** 93 percent

When operating the tube at these higher frequencies, special attention must be given to providing adequate ventilation for the glass bulb.

Characteristic Curves and Interpretation

The operational behavior of the 1626 is illustrated by its characteristic curves:

- **Typical Characteristics (Grid Current vs. Plate Voltage):** For positive grid voltages (such as $E_c = +12, +16, +24, \text{ and } +32$ volts), the grid current is highest at low plate voltages and decreases as plate voltage increases, leveling off as plate voltage exceeds approximately 50 volts.
- **Average Plate Characteristics (Plate Current vs. Plate Voltage):** The plate curves show plate current plotted against plate voltage for grid bias values ranging from positive (+32 V) down to negative (-72 V). The curves demonstrate the low-mu nature of the triode, requiring relatively large negative grid voltage swings to cut off plate current at a plate voltage of 250 volts.

Technical Summary

The **1626** is an octal-based, indirectly heated low-mu transmitting triode designed for stable r-f oscillator and Class C telegraphy service. Operating with a 12.6 V, 0.25 A heater, it provides an amplification factor of 5 and is capable of delivering approximately 4 watts of r-f power output under typical Class C conditions with a plate voltage of 250 V. The tube can be operated up to 90 megacycles when appropriate voltage and input power deratings are applied, making it a reliable choice for stable, low-power high-frequency transmitter stages.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 General Electric Transmitting Types

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1950 GENERAL ELECTRIC TRANSMITTING TYPES

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum operating frequency at full ratings	30 MHz	Published datasheet value
Typical Class C plate voltage	250 V	ClassC Oscillator



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1960 RCA Industrial and Communications Types

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1960 RCA INDUSTRIAL AND COMMUNICATIONS TYPES

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassC;Telegraphy
Grid bias	-70 V	ClassC;Telegraphy
Plate current	25 mA	ClassC;Telegraphy
Driving power	0.5 W	Approximate
Power output	4 W	ClassC;Telegraphy