

DIODE-PENTODE

DESCRIPTION AND RATING

The 1DN5 is a miniature, filamentary, single-diode, remote-cutoff pentode intended for use as a combined detector, audio-amplifier, and automatic volume-control tube in battery-operated receivers. As a result of its remote-cutoff characteristic, automatic-volume-control voltage may be applied to the pentode section of the 1DN5. By introducing AVC to the audio-amplifier stage, an improved over-all AVC response of the receiver can be achieved.

GENERAL

ELECTRICAL

Cathode—Coated Filament	
Filament Voltage, DC.....	1.4 Volts
Filament Current.....	0.05 Amperes
Direct Interelectrode Capacitances*	
Grid-Number 1 to Diode Plate, maximum.....	0.04 μmf

MECHANICAL

Mounting Position—Any	
Envelope—T-5½, Glass	
Base—E7-1, Miniature Button 7-Pin	

MAXIMUM RATINGS

DESIGN-CENTER VALUES

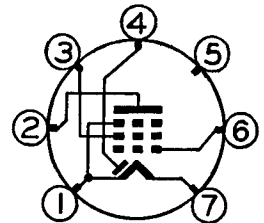
Plate Voltage.....	90 Volts
Screen Voltage.....	90 Volts
Positive DC Grid-Number 1 Voltage.....	0 Volts
Negative DC Grid-Number 1 Voltage.....	50 Volts
DC Cathode Current.....	3.0 Milliamperes
Diode Current for Continuous Operation.....	0.25 Milliamperes

CHARACTERISTICS AND TYPICAL OPERATION

CLASS A₁ AMPLIFIER

Plate Voltage.....	67.5 Volts
Screen Voltage.....	67.5 Volts
Grid-Number 1 Voltage.....	0 Volts
Plate Resistance, approximate.....	0.6 Megohms
Transconductance.....	630 Micromhos
Plate Current.....	2.1 Milliamperes
Screen Current.....	0.55 Milliamperes
Grid-Number 1 Voltage, approximate	
G _m = 10 Micromhos.....	—11.5 Volts
Average Diode Current	
With 10 Volts DC Applied.....	1.0 Milliamperes

BASING DIAGRAM

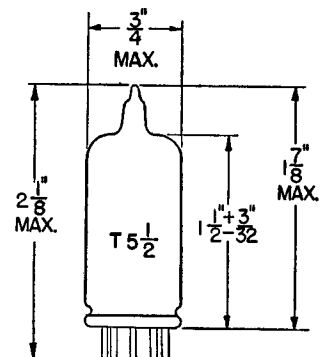


EIA 6BW

TERMINAL CONNECTIONS

- Pin 1—Negative Filament and Grid Number 3 (Suppressor)
- Pin 2—Plate
- Pin 3—Grid Number 2 (Screen)
- Pin 4—Diode Plate†
- Pin 5—No Connection
- Pin 6—Grid Number 1
- Pin 7—Positive Filament

PHYSICAL DIMENSIONS



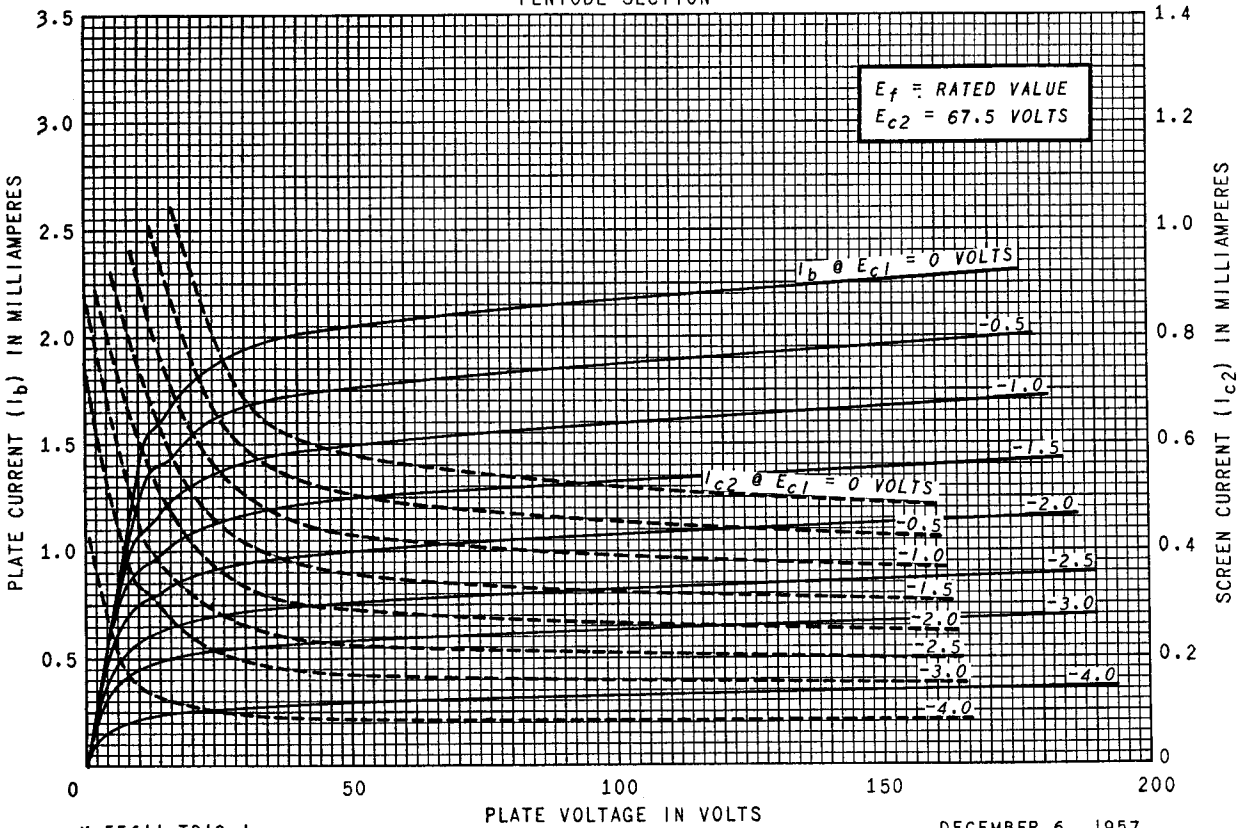
EIA 5-2

* Without external shield.

† The diode is located at the negative end of the filament.

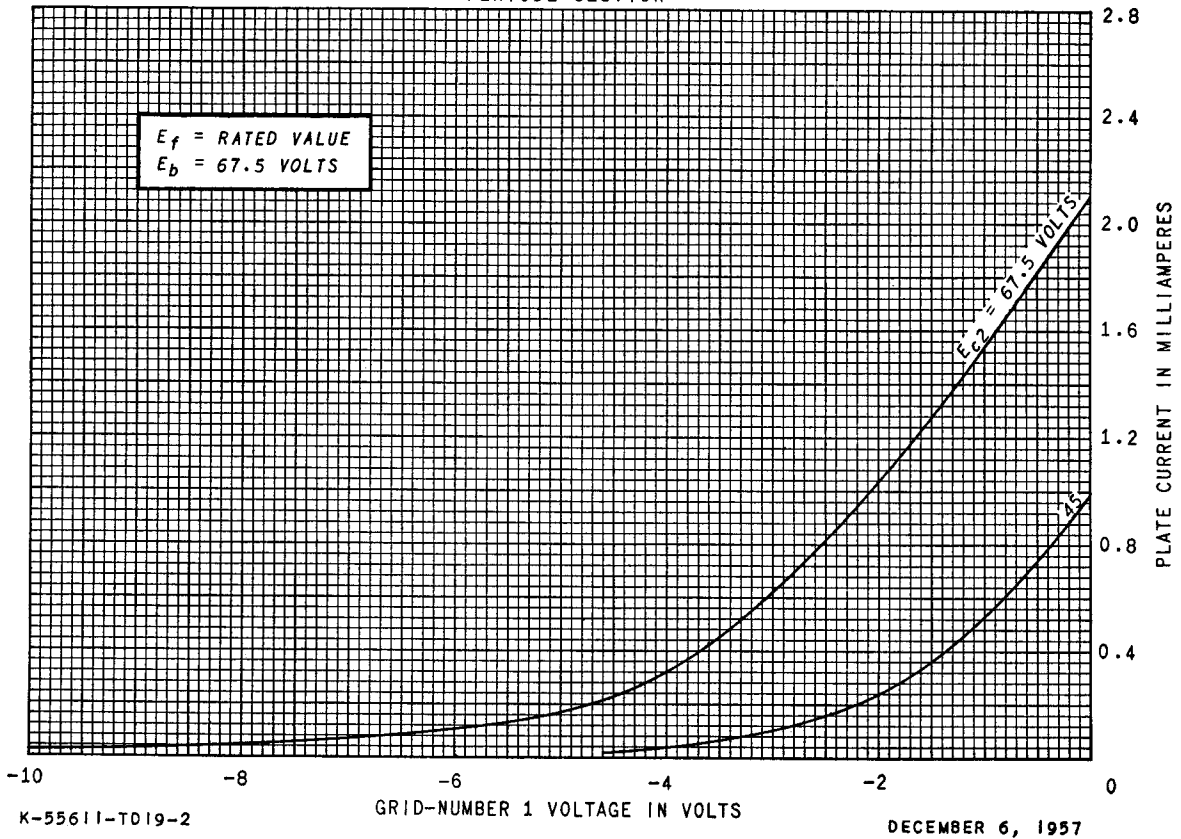
Note: All voltages are referred to the negative terminal of the filament.

AVERAGE PLATE CHARACTERISTICS PENTODE SECTION



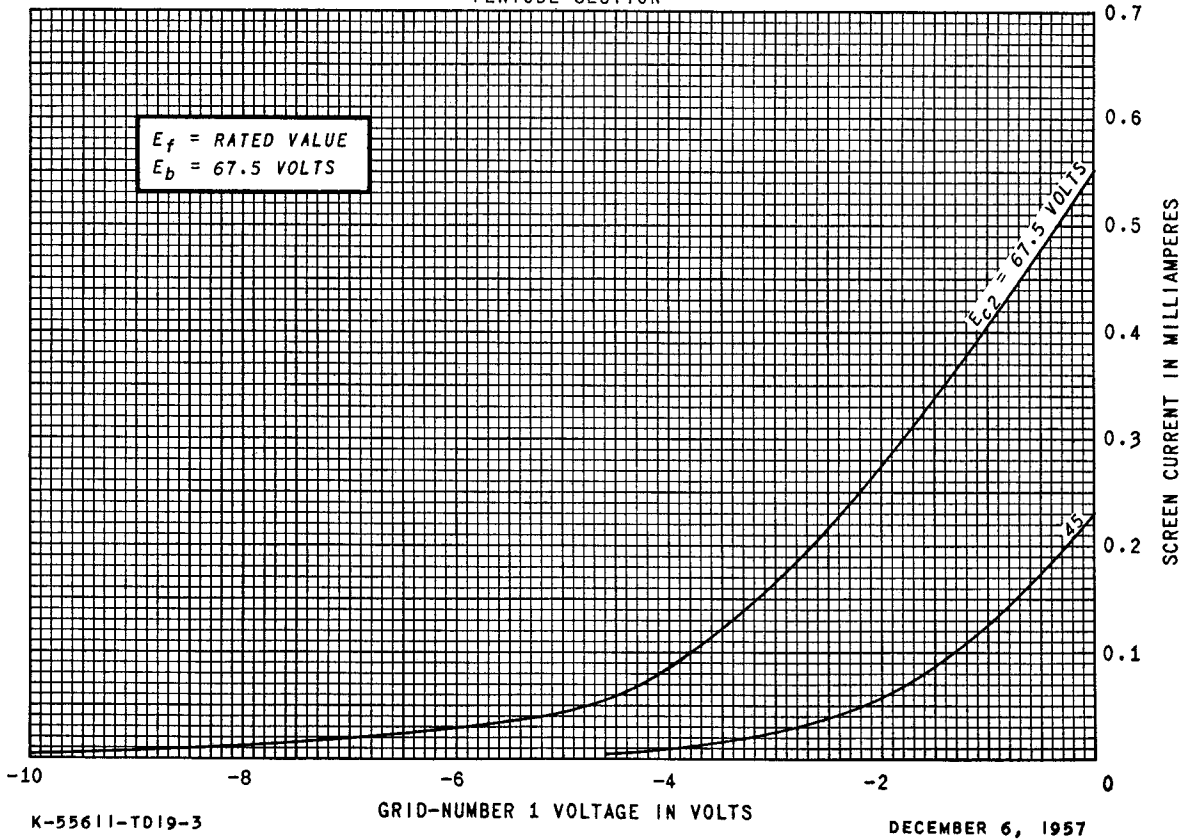
AVERAGE TRANSFER CHARACTERISTICS

PENTODE SECTION

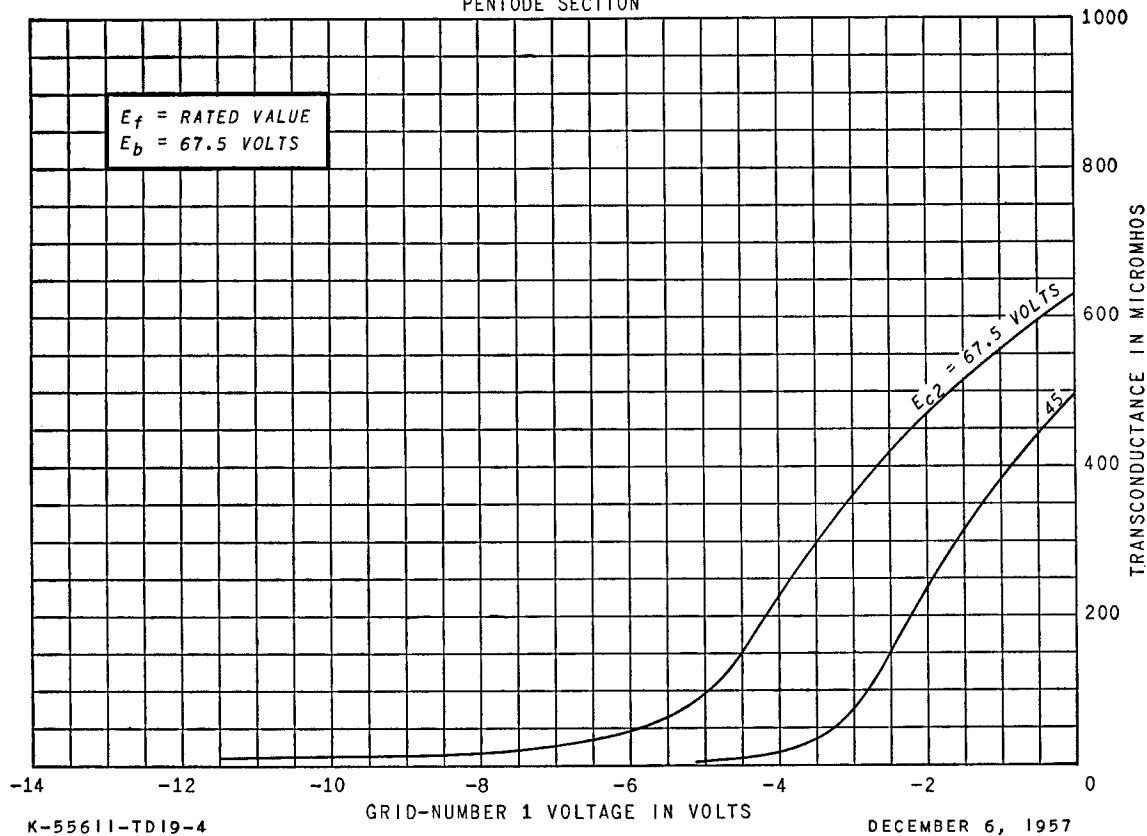


AVERAGE TRANSFER CHARACTERISTICS

PENTODE SECTION



AVERAGE TRANSFER CHARACTERISTICS
PENTODE SECTION



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