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 μF

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
   Gm = 10 Micromhos ........................................... –11.5 Volts
Average Diode Current
   With 10 Volts DC Applied ..................................... 1.0 Milliamperes

BASING DIAGRAM

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

GENERAL ELECTRIC
* 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

$E_t = \text{RATED VALUE}
E_{c2} = 67.5 \text{ VOLTS}

PLATE CURRENT ($I_b$) IN MILLIAMPERES

SCREEN CURRENT ($I_{c2}$) IN MILLIAMPERES

PLATE VOLTAGE IN VOLTS

DECEMBER 6, 1957
AVERAGE TRANSFER CHARACTERISTICS
PENTODE SECTION

$E_f = \text{RATED VALUE}$
$E_b = 67.5 \text{ VOLTS}$

GRID-NUMBER 1 VOLTAGE IN VOLTS

PLATE CURRENT IN MILLIAMPERES

SCREEN CURRENT IN MILLIAMPERES

K-55611-TD19-2

DECEMBER 6, 1957

K-55611-TD19-3

DECEMBER 6, 1957
AVERAGE TRANSFER CHARACTERISTICS
PENTODE SECTION

$E_f = \text{RATED VALUE}$
$E_b = 67.5 \text{ VOLTS}$

TRANSCONDUCTANCE IN MICROMOS

GRID-NUMBER 1 VOLTAGE IN VOLTS

DECEMBER 6, 1957

ELECTRONIC COMPONENTS DIVISION
GENERAL ELECTRIC
Schenectady 5, N. Y.