



# 6CY5

## TETRODE

FOR VHF RF AMPLIFIER APPLICATIONS

### DESCRIPTION AND RATING

The 6CY5 is a miniature sharp-cutoff tetrode designed for radio-frequency amplifier use in VHF television tuners. Features of the tube include high transconductance, high input impedance, and low interelectrode capacitances.

#### GENERAL

##### ELECTRICAL

Cathode—Coated Unipotential

Heater Voltage, AC or DC . . . . . 6.3  $\pm$  10% Volts

Heater Current . . . . . 0.2 Amperes

Direct Interelectrode Capacitances\*

Grid-Number 1 to Plate . . . . . 0.03  $\mu$ f

Input . . . . . 4.5  $\mu$ f

Output . . . . . 3.0  $\mu$ f

##### MECHANICAL

Mounting Position—Any

Envelope—T-5½, Glass

Base—E7-1, Miniature Button 7-Pin

#### MAXIMUM RATINGS

##### DESIGN-MAXIMUM VALUES

Plate Voltage . . . . . 180 Volts

Screen-Supply Voltage . . . . . 180 Volts

Screen Voltage—See Screen Rating Chart

Positive DC Grid-Number 1 Voltage . . . . . 0 Volts

Plate Dissipation . . . . . 2.0 Watts

Screen Dissipation . . . . . 0.5 Watts

DC Cathode Current . . . . . 20 Milliamperes

Heater-Cathode Voltage

Heater Positive with Respect to Cathode . . . . . 100 Volts

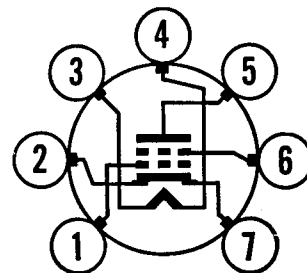
Heater Negative with Respect to Cathode . . . . . 100 Volts

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey tube of a specified type as defined by its published data, and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, taking responsibility for the effects of changes in operating conditions due to variations in tube characteristics.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, and environmental conditions.

#### BASING DIAGRAM

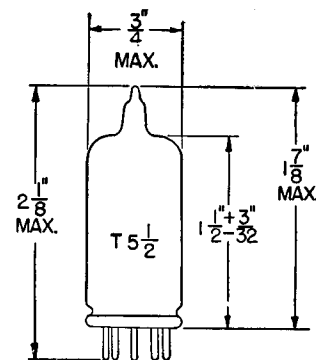


EIA 7E-W

#### TERMINAL CONNECTIONS

- Pin 1—Grid Number 1
- Pin 2—Cathode and Internal Shield
- Pin 3—Heater
- Pin 4—Heater
- Pin 5—Plate
- Pin 6—Grid Number 2 (Screen)
- Pin 7—Cathode and Internal Shield

#### PHYSICAL DIMENSIONS



EIA 5-2

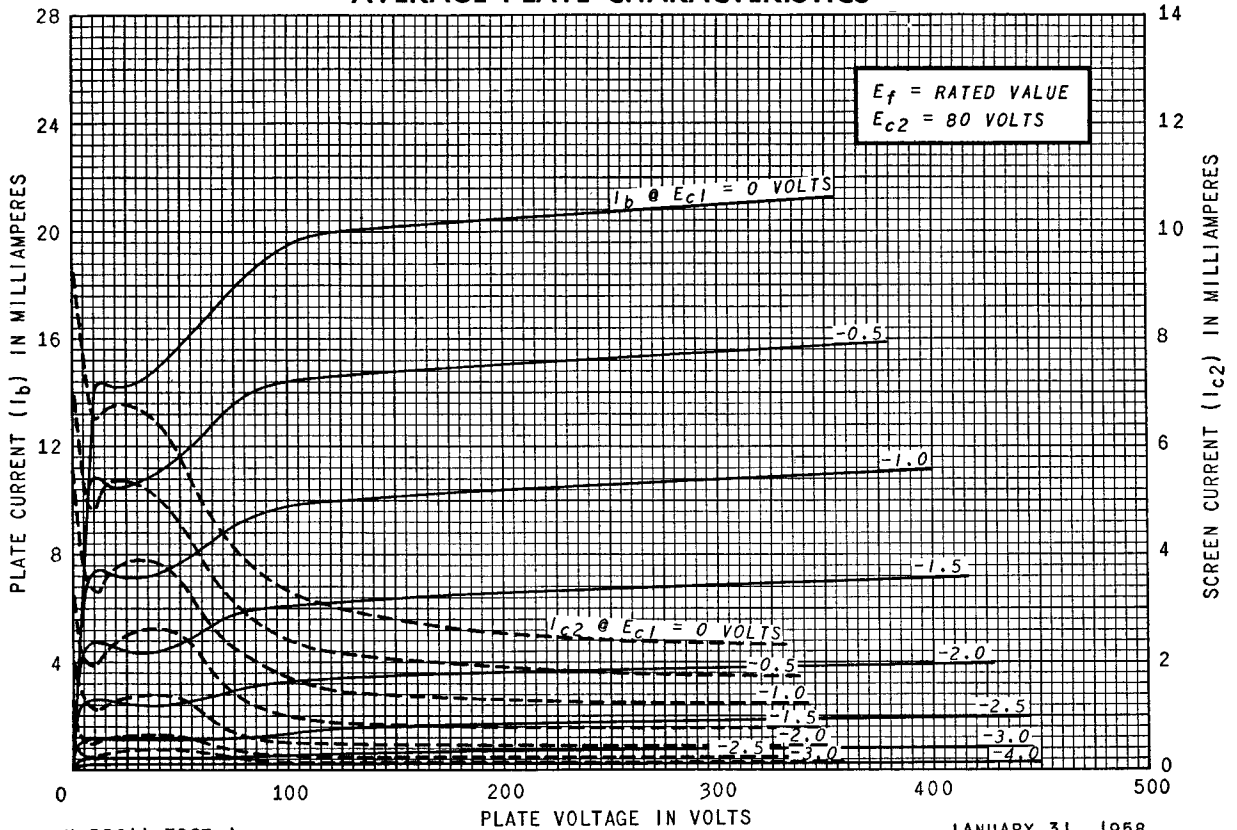
## CHARACTERISTICS AND TYPICAL OPERATION

### AVERAGE CHARACTERISTICS

Plate Voltage .....	125	Volts
Screen Voltage .....	80	Volts
Grid-Number 1 Voltage .....	-1.0	Volts
Plate Resistance, approximate .....	100000	Ohms
Transconductance .....	8000	Micromhos
Plate Current .....	10	Milliamperes
Screen Current .....	1.5	Milliamperes
Grid-Number 1 Voltage, approximate $I_b = 20$ Microamperes .....	-6	Volts

\* With External Shield (EIA 316) connected to Cathode.

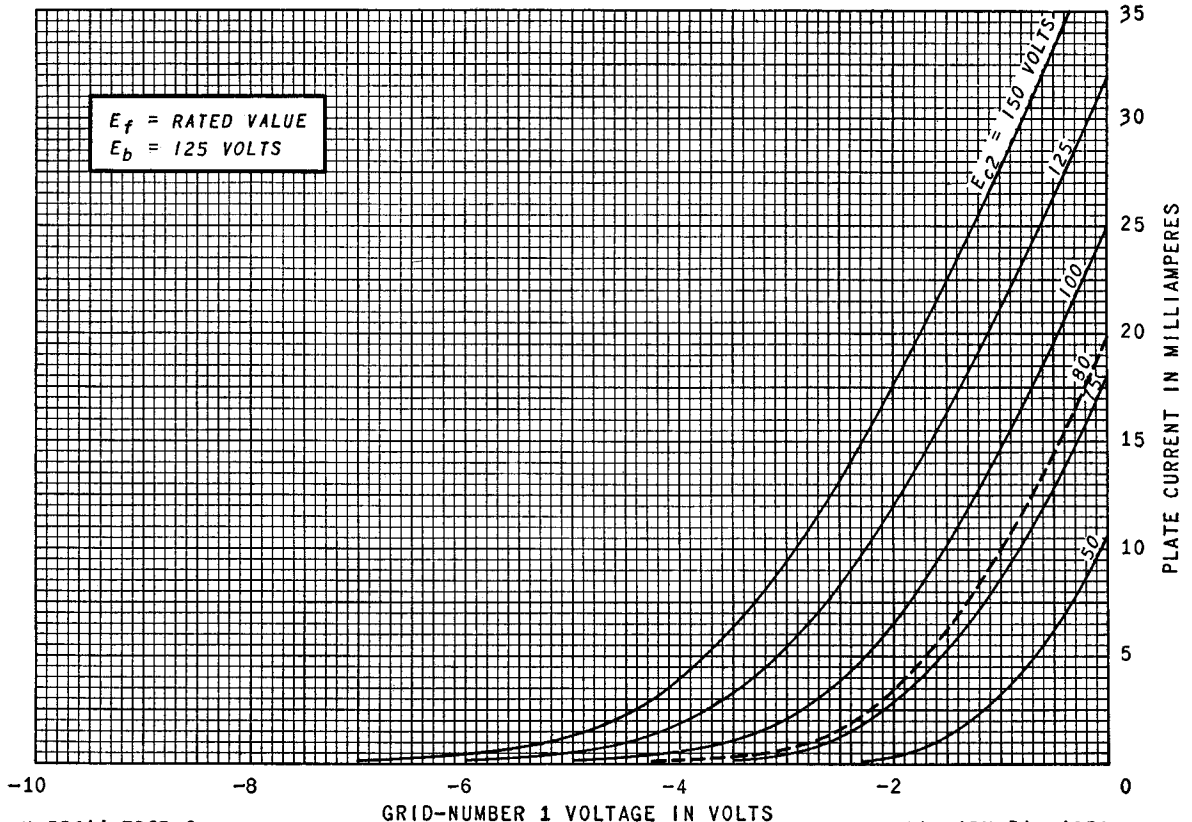
### AVERAGE PLATE CHARACTERISTICS



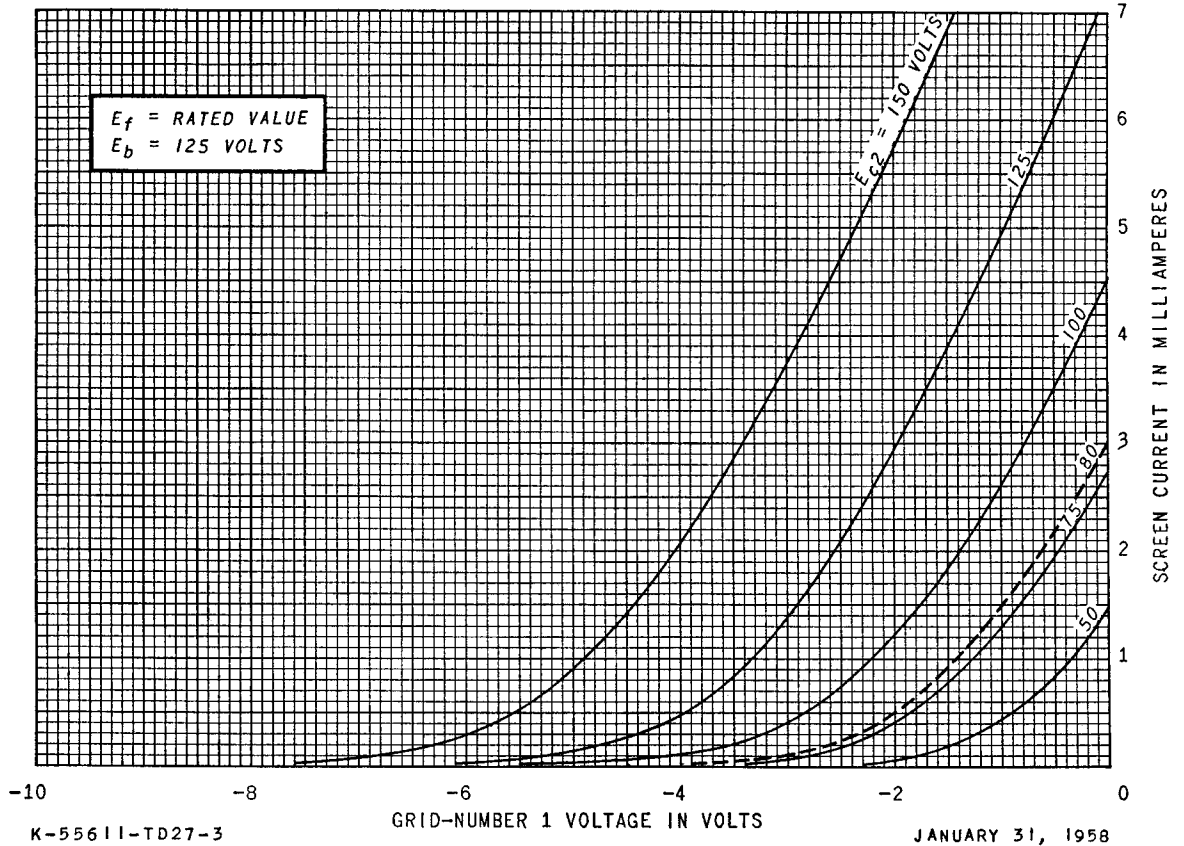
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JANUARY 31, 1958

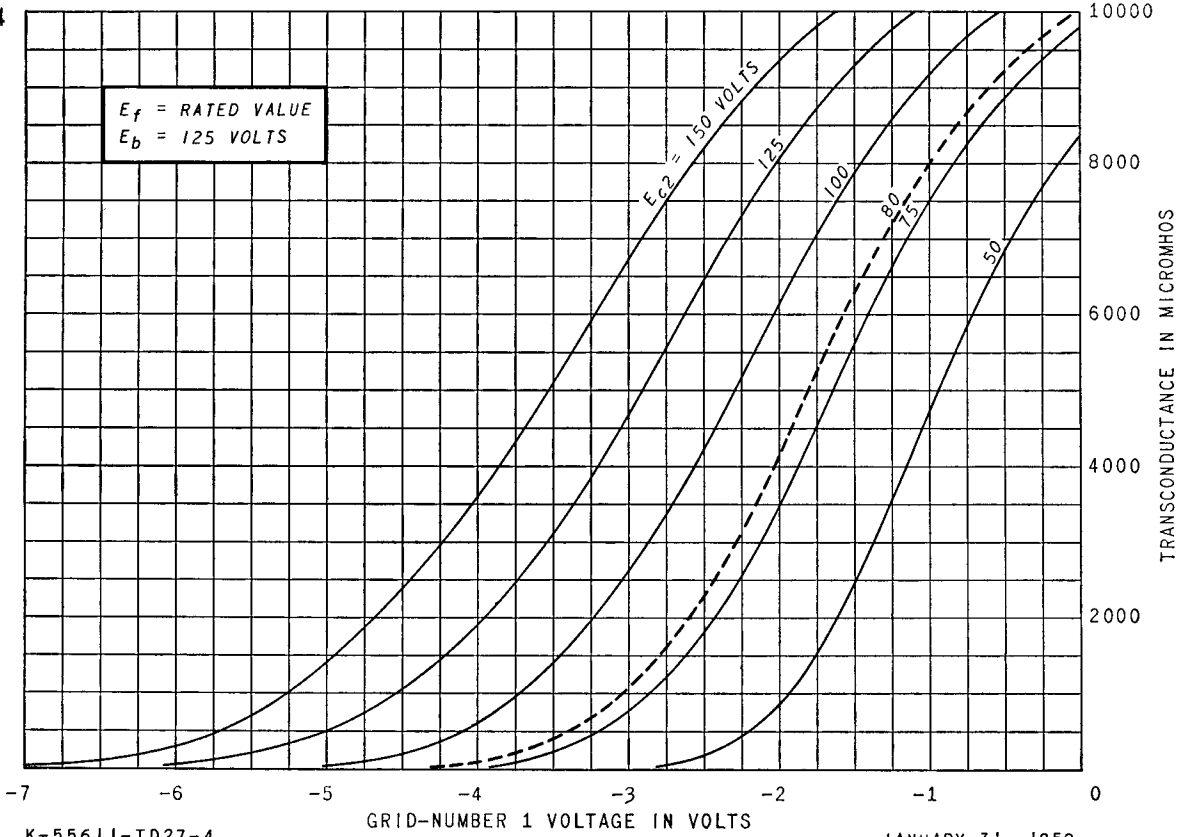
### AVERAGE TRANSFER CHARACTERISTICS



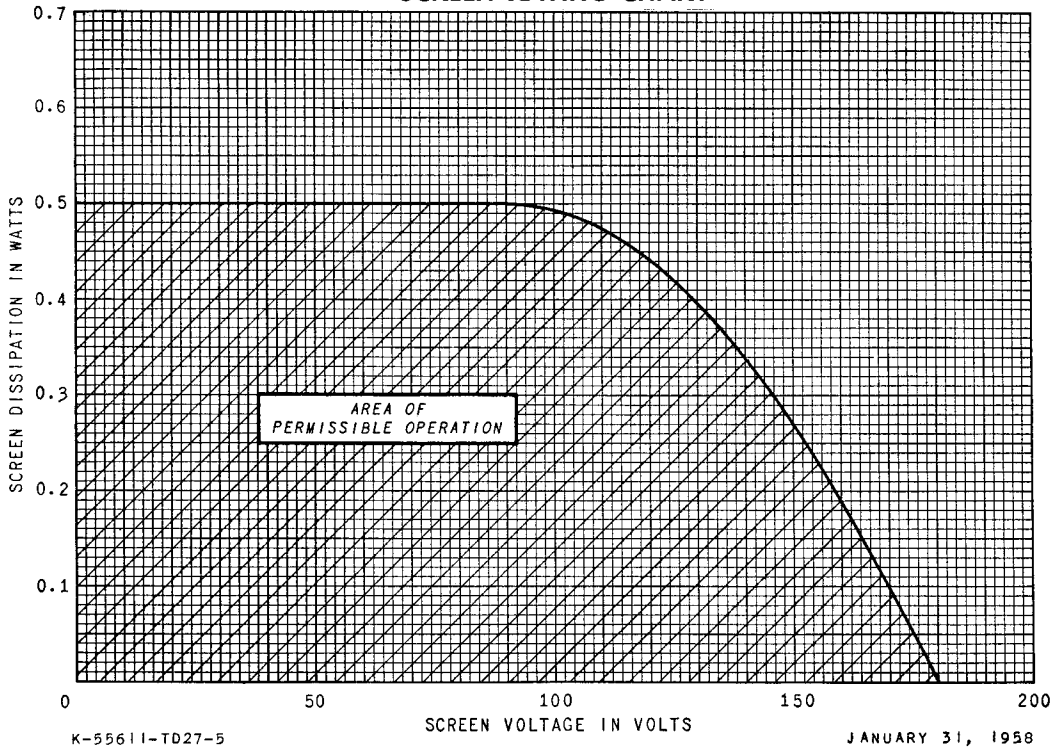
### AVERAGE TRANSFER CHARACTERISTICS



**AVERAGE TRANSFER CHARACTERISTICS**



**SCREEN RATING CHART**



**ELECTRONIC COMPONENTS DIVISION**

