

**6BF5**

**Description and Rating**

**BEAM POWER AMPLIFIER**

**GENERAL DESCRIPTION**

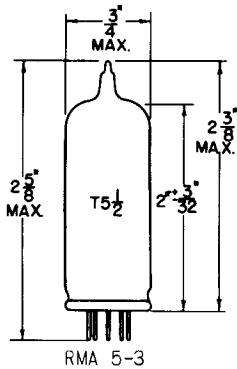
Principal Application: The 6BF5 is a miniature beam-power amplifier designed for use in the audio output stage of television and broadcast receivers. The 6BF5 features high sensitivity and is capable of

Cathode: . . . . . Coated Unipotential  
Heater Voltage (A-C or D-C) . . . . . 6.3 Volts  
Heater Current . . . . . 1.2 Amperes

delivering relatively high power output at low plate and screen voltages. When connected as a triode, the 6BF5 may be used as a vertical-deflection amplifier in television receivers.

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

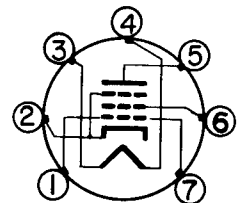
**PHYSICAL DIMENSIONS**



**TERMINAL CONNECTIONS**

- Pin 1 - Grid Number 1
- Pin 2 - Cathode and Beam Plates
- Pin 3 - Heater
- Pin 4 - Heater
- Pin 5 - Plate
- Pin 6 - Grid Number 2 (Screen)
- Pin 7 - Grid Number 1

**BASING DIAGRAM**



RMA 7BZ  
BOTTOM VIEW

**MAXIMUM RATINGS**

Plate Voltage . . . . .	250	Volts
Peak Positive Pulse Plate Voltage * . . . . .	700	Volts
Screen Voltage . . . . .	250	Volts
Plate Dissipation		
For Class A <sub>1</sub> Amplifier Service . . . . .	5.5	Watts
For Vertical-Deflection Amplifier Service . . . . .	5.0	Watts
Screen Dissipation . . . . .	1.25	Watts
Heater-Cathode Voltage . . . . .	100	Volts
Grid Number 1 Circuit Resistance		
With Fixed Bias . . . . .	0.1	Megohm
With Cathode Bias . . . . .	0.5	Megohm
With Cathode Bias Resistor of 820 Ohms Minimum . . . . .	2.2	Megohms

**CLASS A<sub>1</sub> AMPLIFIER**

**CHARACTERISTICS AND TYPICAL OPERATION**

Plate Voltage . . . . .	110	Volts
Screen Voltage . . . . .	110	Volts
Grid Number 1 Voltage . . . . .	-7.5	Volts
Peak A-F Grid Number 1 Voltage . . . . .	7.5	Volts
Plate Resistance (Approx) . . . . .	10000	Ohms
Transconductance . . . . .	7500	Micromhos
Zero-Signal Plate Current . . . . .	49	Milliamperes
Maximum-Signal Plate Current . . . . .	50	Milliamperes
Zero-Signal Screen Current . . . . .	4	Milliamperes
Maximum-Signal Screen Current . . . . .	8.5	Milliamperes
Load Resistance . . . . .	2500	Ohms
Total Harmonic Distortion . . . . .	9	Per Cent
Power Output . . . . .	1.9	Watts

VERTICAL-DEFLECTION AMPLIFIER - TRIODE CONNECTION #

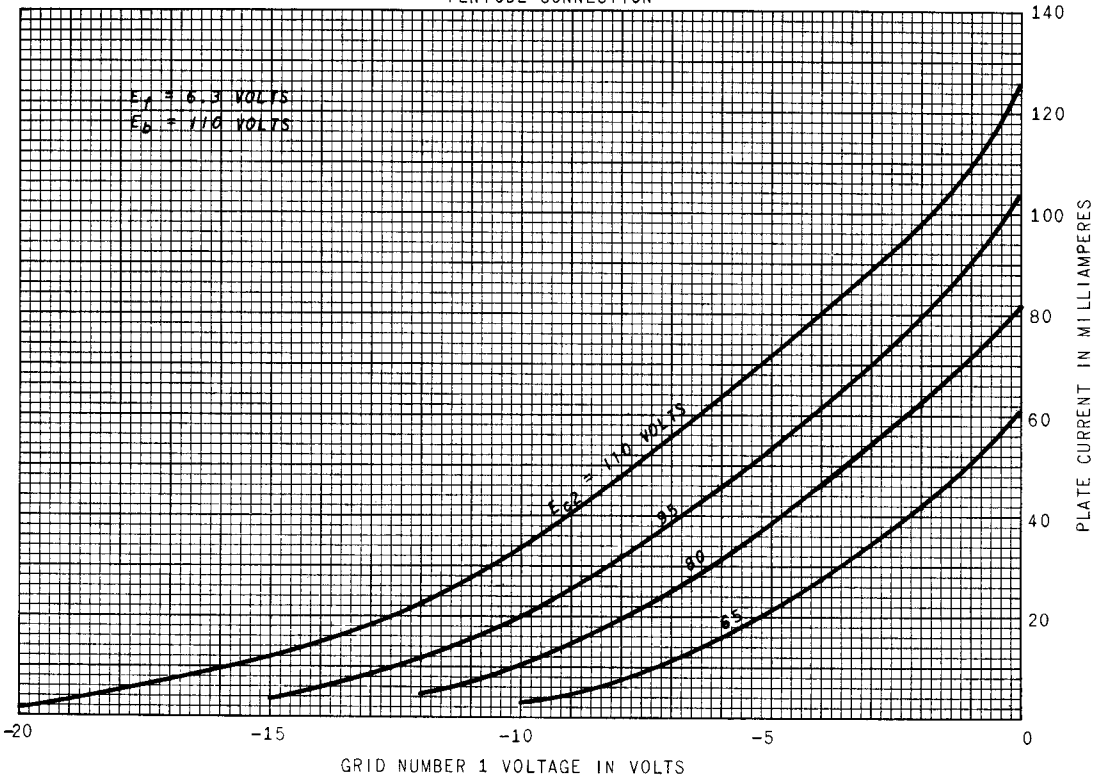
Plate Voltage . . . . .	225	Volts
Cathode Bias Resistor . . . . .	1200	Ohms
Grid Input Voltage	.	
Peak-to-Peak Sawtooth Component (Approx) . . . . .	40	Volts
Negative Peaking Component (Approx). . . . .	56	Volts
Amplification Factor . . . . .	6.7	
Transconductance . . . . .	4200	Micromhos
Plate Current . . . . .	20	Milliamperes
Plate Output Voltage		
Peak Positive Pulse Component (Approx) . . . . .	500	Volts
Peak-to-Peak Sawtooth Component . . . . .	140	Volts
Deflection Angle . . . . .	53	Degrees
Picture Tube Anode Voltage . . . . .	14	Kilovolts
Sweep Height (for 16-inch Picture Tube) . . . . .	11½	Inches

\* The duty cycle of the pulse voltage must not exceed 7% of one scanning cycle and the pulse duration must not exceed 1.2 milliseconds.

# With screen tied to plate

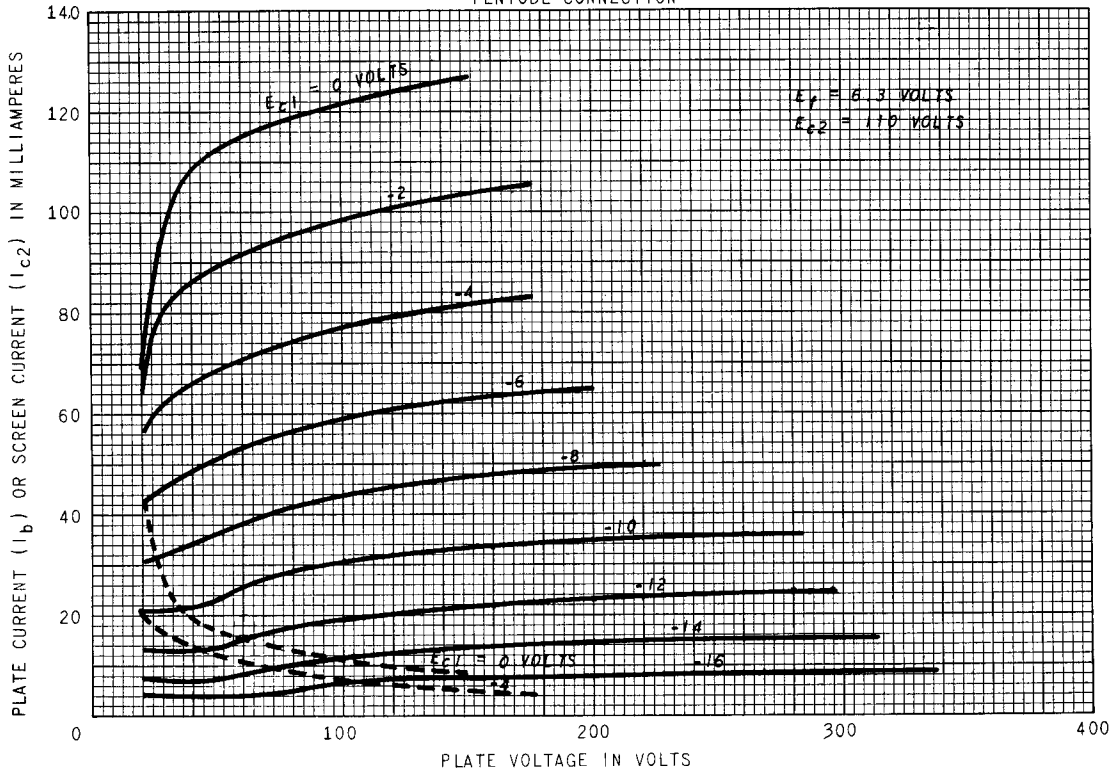
AVERAGE CHARACTERISTICS

PENTODE CONNECTION



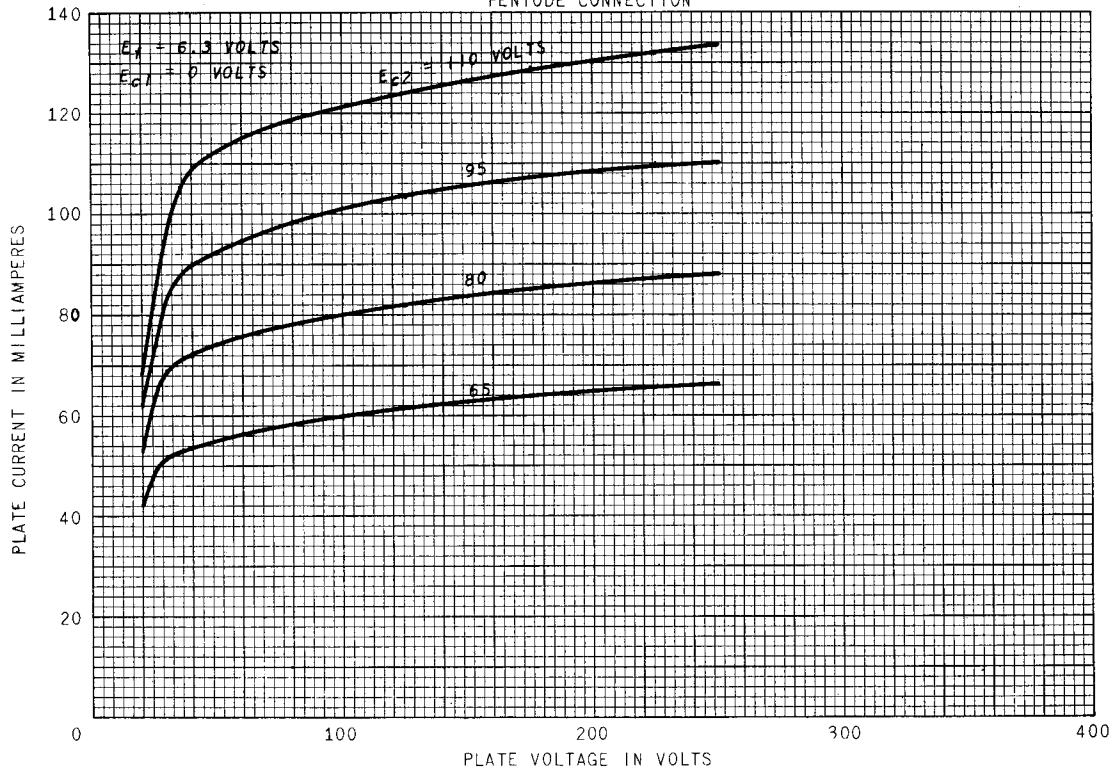
### AVERAGE PLATE CHARACTERISTICS

PENTODE CONNECTION

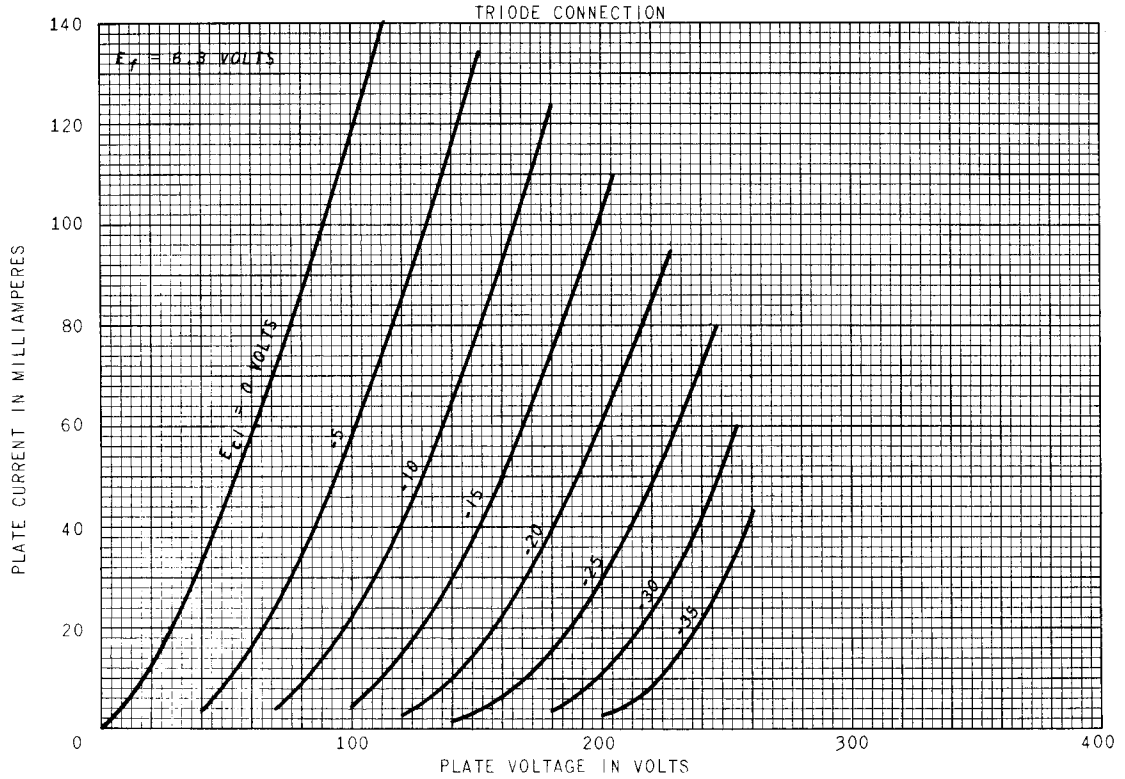


### AVERAGE PLATE CHARACTERISTICS

PENTODE CONNECTION



### AVERAGE PLATE CHARACTERISTICS



Tube Divisions, Electronics Department



Schenectady, N. Y.