



50B5

Description and Rating

**BEAM POWER AMPLIFIER**

**GENERAL DESCRIPTION**

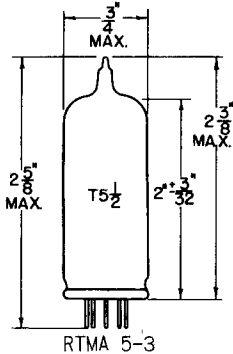
Principal Application: The 50B5 is a miniature beam-power amplifier designed primarily for use in the output stage of compact a-c/d-c receivers. The 50B5 features high power sensitivity and is capable of

providing a relatively high power output at the plate and screen voltages normally available in this application.

Cathode: . . . . . Coated Unipotential  
 Heater Voltage (A-C or D-C) . . . . . 50.0 Volts  
 Heater Current . . . . . 0.15 Ampere  
 Envelope: . . . . . T-5½, Glass  
 Base: . . . . . E7-1, Miniature Button 7-Pin

Mounting Position: . . . . . Any  
 Direct Interelectrode Capacitances: #  
 Grid 1 to Plate . . . . . 0.5 μμf  
 Input . . . . . 13 μμf  
 Output . . . . . 6.5 μμf  
 # Without external shield

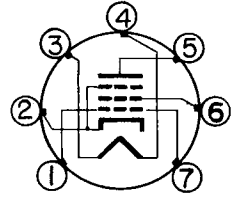
**PHYSICAL DIMENSIONS**



**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**



RTMA 7BZ  
BOTTOM VIEW

**DESIGN CENTER VALUES:**

Plate Voltage . . . . .	135	Volts
Screen Voltage . . . . .	117	Volts
Plate Dissipation . . . . .	5.5	Watts
Screen Dissipation . . . . .	1.25	Watts
Heater-Cathode Voltage . . . . .	180	Volts
Bulb Temperature at Any Point . . . . .	250	Centigrade
Grid Number 1 Circuit Resistance		
With Fixed Bias . . . . .	0.1	Megohm
With Cathode Bias . . . . .	0.5	Megohm

**MAXIMUM RATINGS**

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

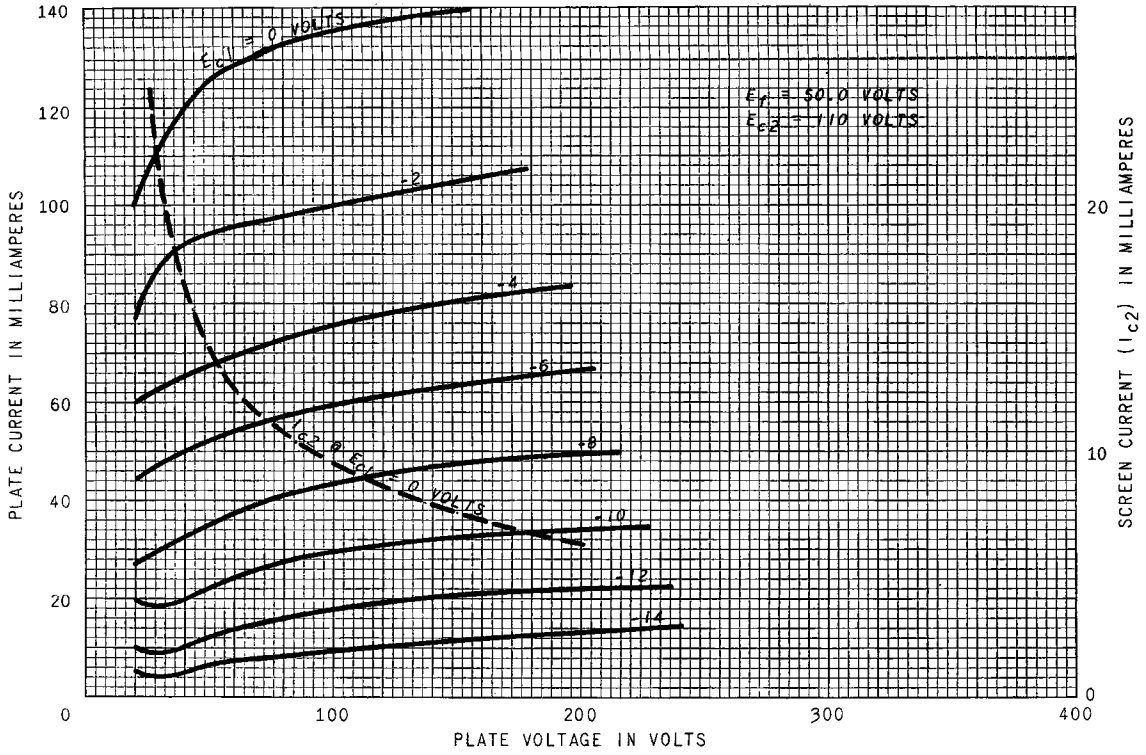
**CHARACTERISTICS AND TYPICAL OPERATION**

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 . . . . .	4.0	Milliamperes
Maximum-Signal Screen Current . . . . .	8.5	Milliamperes
Load Resistance . . . . .	2500	Ohms
Total Harmonic Distortion (Approx) . . . . .	9	Per Cent
Maximum-Signal Power Output . . . . .	1.9	Watts

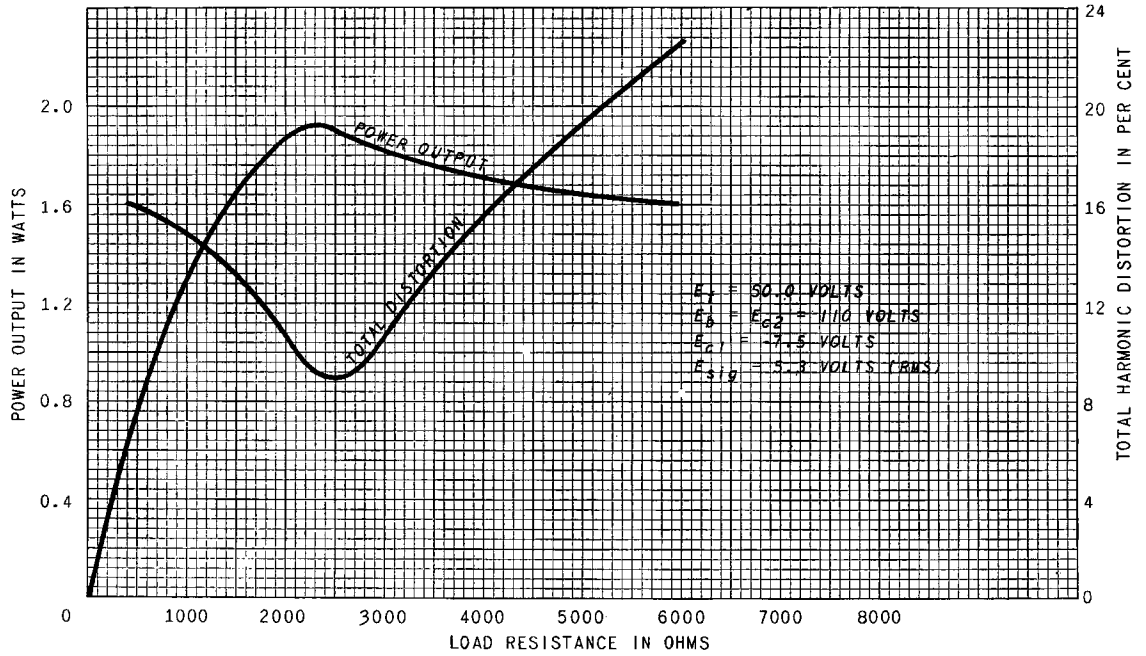


Supersedes ET-T412A dated 6-46

AVERAGE PLATE CHARACTERISTICS



OPERATION CHARACTERISTICS



Tube Divisions, Electronics Department



Schenectady, N. Y.