

**ADVANCE DATA**

**MECHANICAL DATA**

Bulb	T-6½
Base	E9-1, Miniature Button 9-Pin
Outline	6-2
Basing	9AJ
Cathode	Coated Unipotential
Mounting Position	Any

**ELECTRICAL DATA**

**HEATER CHARACTERISTICS AND RATINGS**

**Average Characteristics**

	<b>Parallel Operation</b>
Heater Voltage <sup>1</sup>	12.6 Volts
Heater Current	180 Ma

**Ratings (Design Maximum Values)**

	<b>Min.-Max.</b>
Heater Voltage <sup>2</sup>	11.4-13.8 Volts
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
Total DC and Peak	200 Volts
Heater Positive with Respect to Cathode	
DC	100 Volts
Total DC and Peak	200 Volts

**DIRECT INTERELECTRODE CAPACITANCES (Each Section)**

	<b>Shielded</b>	<b>Unshielded</b>	
Grid to Plate	1.4	1.4	pf
Input: g to (h+k)	3.3	3.3	pf
Output: p to (h+k)	2.5	1.8	pf
Grid to Grid (Max.)	.005	.005	pf
Plate to Plate (Max.)	.015	.045	pf

**RATINGS (Design Maximum Values)**

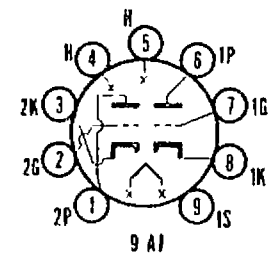
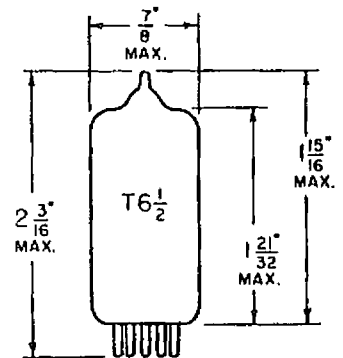
Continuous Class C Service at 175 Mc<sup>4</sup>

Plate Voltage	200 Volts	Max.
Plate Dissipation (Each Plate)	3.5 Watts	Max.
Plate Dissipation (Both Plates)	7.0 Watts	Max.
Plate Input (Each Plate)	5.5 Watts	Max.
Cathode Current (Each Cathode)	30 mA <sub>dc</sub>	Max.
Grid Current (Each Grid)	2.5 mA <sub>dc</sub>	Max.
Negative Grid Voltage	75 Volts	Max.
Grid Circuit Resistance		
Fixed Bias	0.1 Megohm	Max.
Cathode Bias	0.5 Megohm	Max.

**QUICK REFERENCE DATA**

The Sylvania Type 8431 is a T-6½ medium mu double triode designed for Continuous Class C Amplifier Service in the 200 megacycle range.

The rating values apply specifically to Sonobuoy and other battery applications where considerations of power output are paramount, and considerations of long life are of lesser importance.



**SYLVANIA**  
**ELECTRONIC TUBES**  
 A Division of  
 Sylvania Electric Products Inc.  
**RECEIVING TUBE**  
**OPERATIONS**  
**EMPORIUM, PA.**  
 Prepared and Released By The  
 TECHNICAL PUBLICATIONS SECTION  
 EMPORIUM, PENNSYLVANIA

February 7, 1963  
 Page 1 of 7

CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier

Plate Voltage	90	Volts
Grid Voltage	-1.3	Volts
Plate Current	15	Ma
Transconductance	12,500	μmhos
Amplification Factor	33	

Class C RF Frequency Multiplier

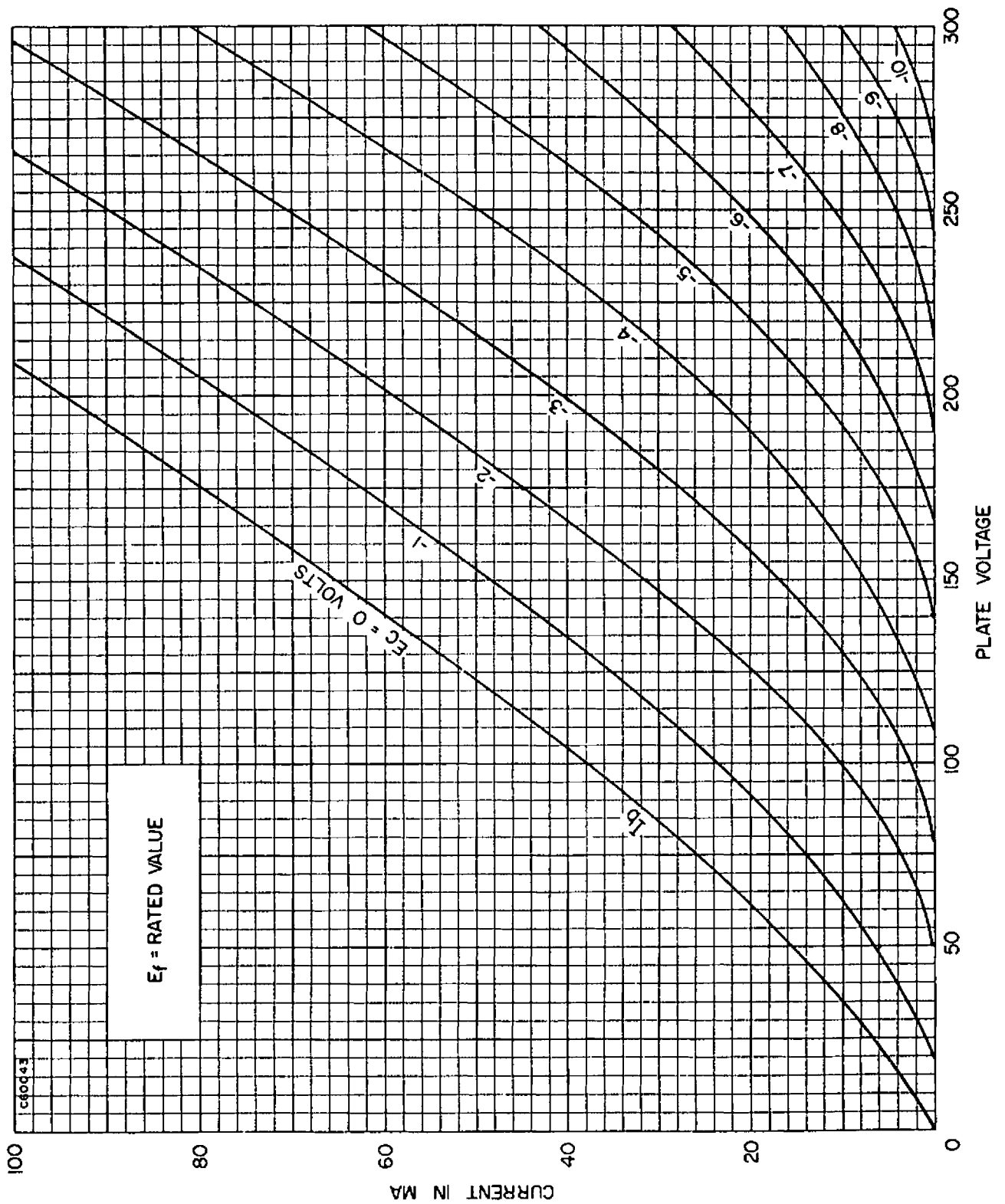
Doubler to 175 Mc

Plate Voltage	160	Volts
For Grid Voltage	-70	Volts
Use Grid Resistor	33,000	Ohms
Peak RF Grid Voltage	77	Volts
Grid Current	2.5	Ma
Plate Current	26	Ma
Power Output <sup>5</sup> (Approx.)	1.0	Watt

NOTES:

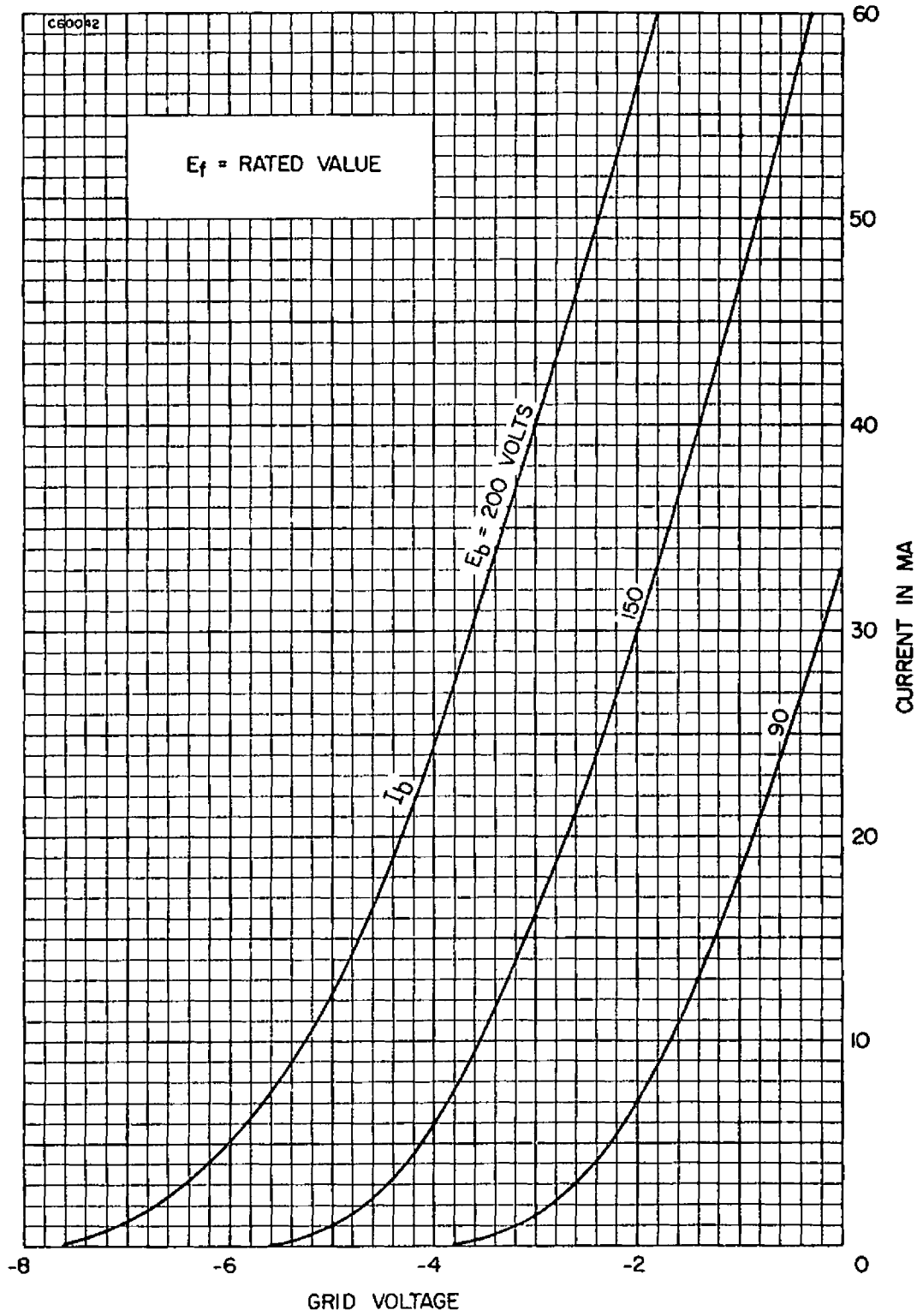
1. For parallel operation of heaters, equipment should be designed that at normal supply voltage bogey tubes will operate at this value of heater voltage.
2. Heater voltage supply variations shall be restricted to maintain heater voltage within the specified values.
3. Shield No. 315.
4. The rating values apply specifically to Sonobuoy and other battery applications where considerations of power output are paramount, and considerations of long life are of lesser importance.
5. These values are for useful power and are as measured at the load of the output circuit.
6. To insure satisfactory operation in Sonobuoy applications Type 8431 is subjected to and must successfully pass an impact acceleration test at an acceleration level of 500 G.

### AVERAGE PLATE CHARACTERISTICS

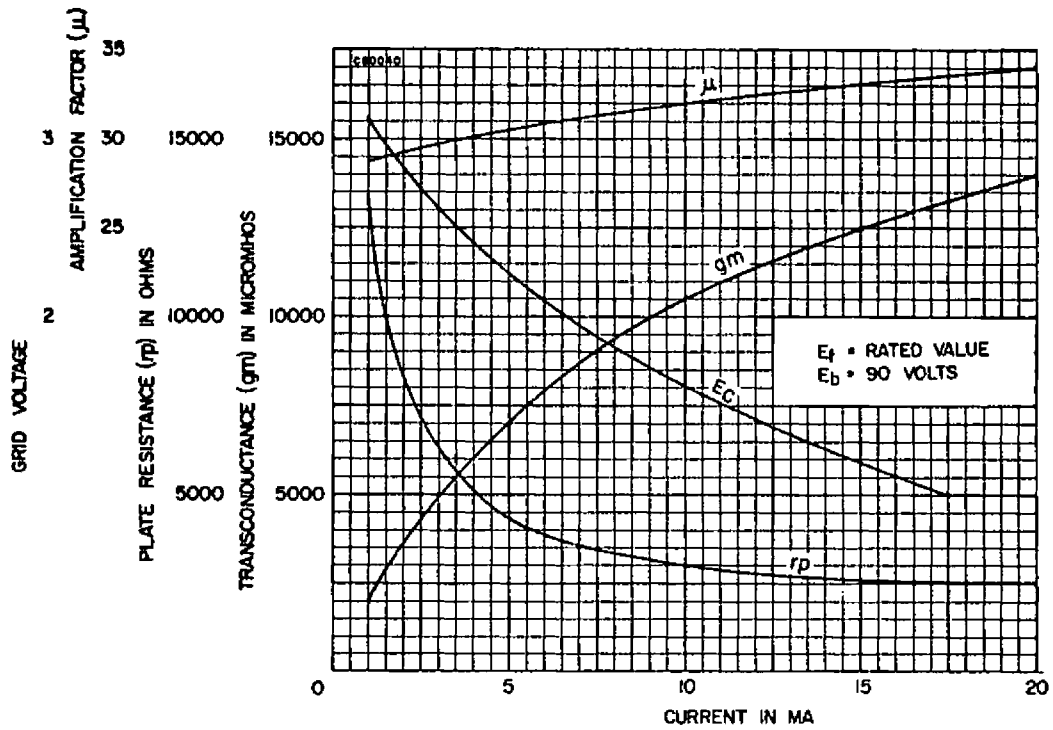




### AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS

