MECHANICAL DATA

Bulb	T-5½
Base	E7-1, Miniature Button 7-Pin
Outline	5-1
Basing	7DK
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS AND RATINGS

Characteristics		
Heater Voltage[1]	6.3 Volts	
Heater Current[2]	225 Ma	
Ratings (Design Maximum Values)		
Heater Voltage[3]	6.3 ± 0.6 Volts	
Maximum Heater-Cathode Voltage		
Heater Negative with Respect to Cathode		
Total DC and Peak	200 Volts	Max.
Heater Positive with Respect to Cathode		
DC	100 Volts	Max.
Total DC and Peak	200 Volts	Max.

DIRECT INTERELECTRODE CAPACITANCES (Shielded)[4]

Grid to Plate	1.7 μμf	
Input: g to (h+k)	3.0 μμf	
Output: p to (h+k)	1.8 μμf	
Heater to Cathode	3.0 μμf	

RATINGS (Design Maximum Values)
Continuous Class C Service at 175 mc.

Plate Voltage	330 Volts	Max.
Plate Dissipation	5.0 Watts	Max.
Plate Input	7.5 Watts	Max.
Cathode Current[5]	40 mAdc	Max.
Grid Current[5]	10 mAdc	Max.
Negative Grid Voltage	50 Volts	Max.
Grid Circuit Resistance		
Fixed Bias	0.1 Megohm	Max.
Cathode Bias	0.5 Megohm	Max.

CHARACTERISTICS AND TYPICAL OPERATION

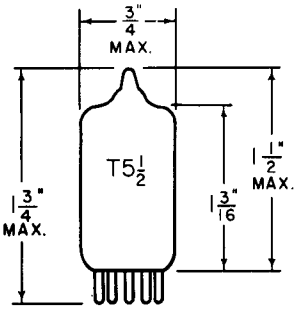
Plate Voltage	200 Volts
Grid Voltage	0 Volts
Cathode Bias Resistor	100 Ohms
Plate Current	12 Ma
Transconductance	9500 μmhos
Amplification Factor	80
Ec for Ib = 20 μAdc (Approx.)	−6.5 Volts

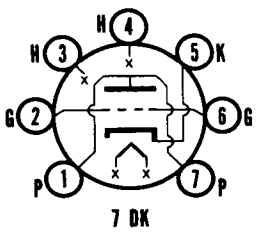
NOTES:

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. *The bogey value of current is obtained when operating the heater at the specified 6.3 volts.*
3. *Heater voltage supply variations shall be restricted to maintain heater voltage within the specified tolerance.*
4. *Shield No. 316.*
5. *In Sonobouy or other battery applications where considerations of long life are secondary to those of power output, the maximum ratings for cathode current and grid current may be taken as 50 mAdc and 15 mAdc respectively.*

QUICK REFERENCE DATA

The Sylvania Type 7738 is a miniature high mu triode designed for Continuous Class C Amplifier Service in the 200 megacycle range.





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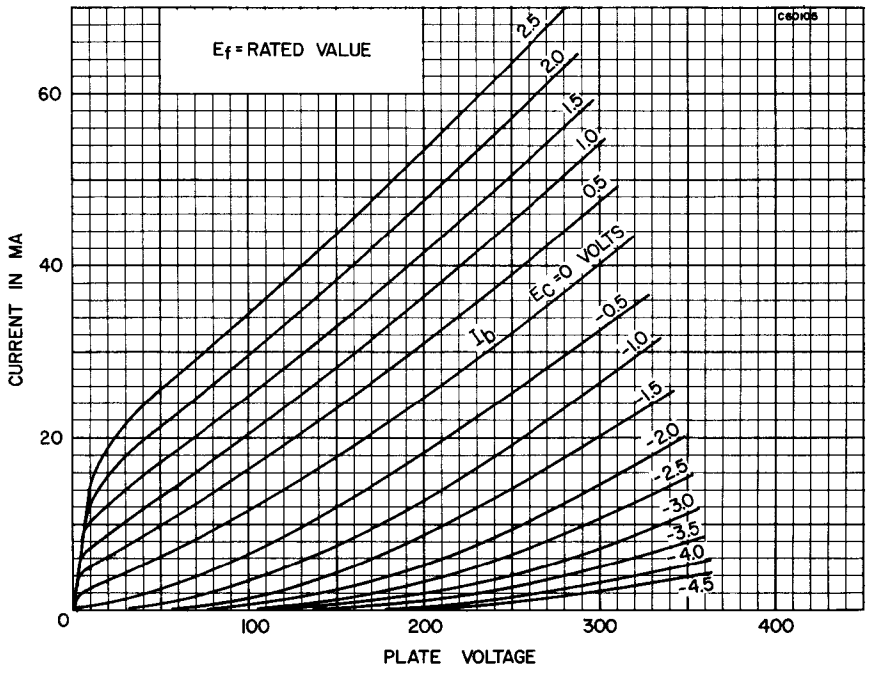
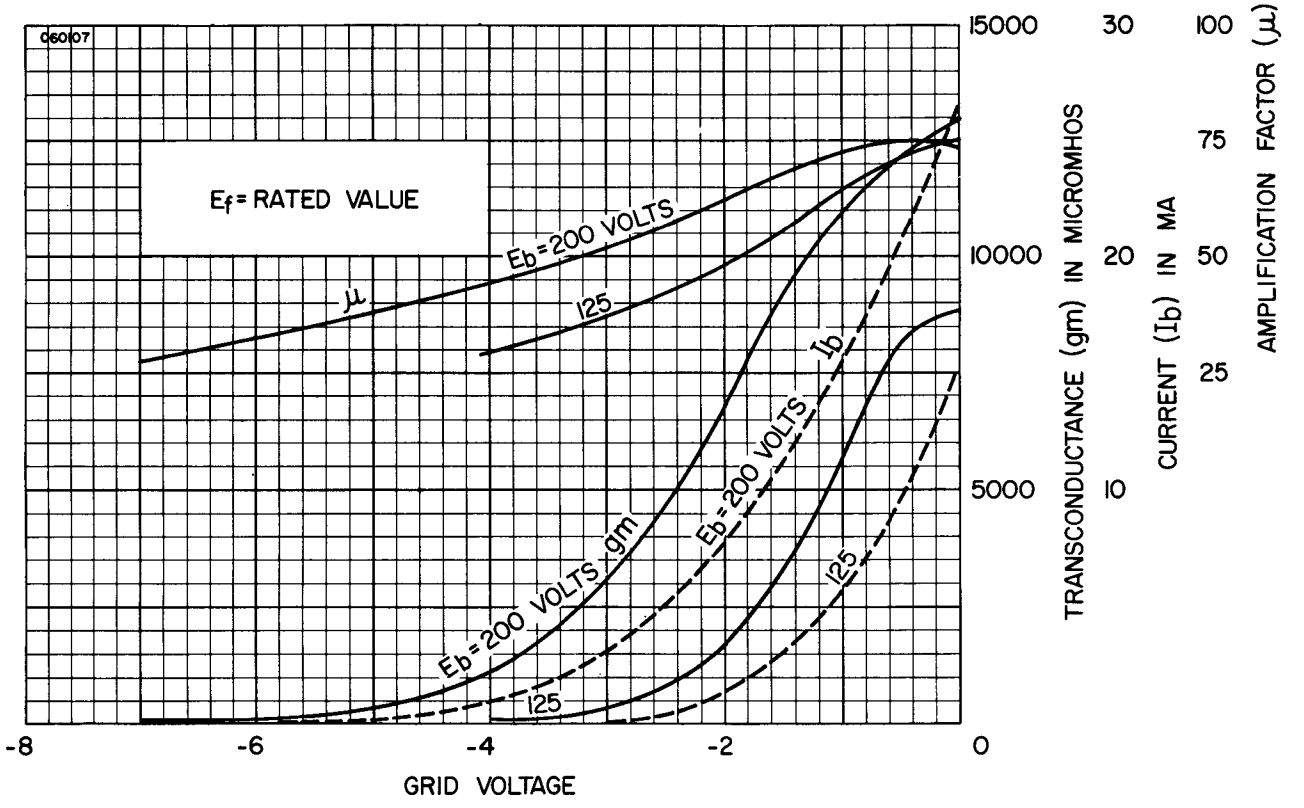
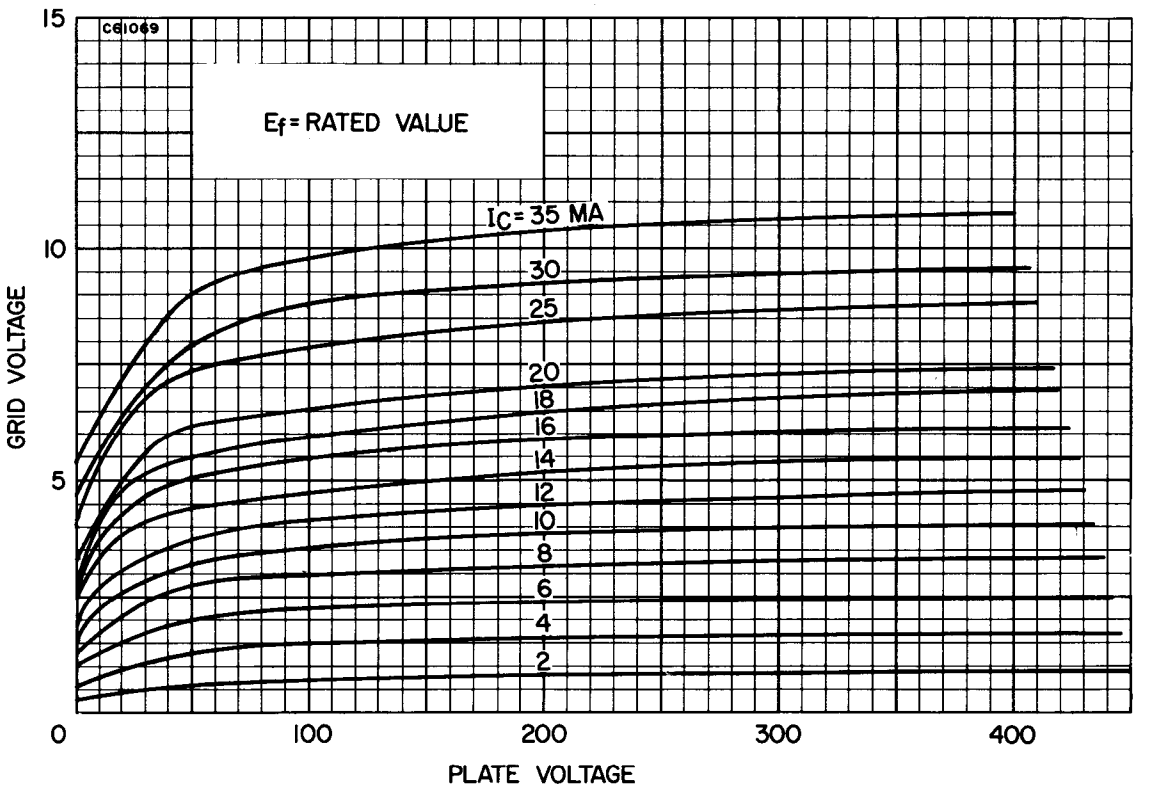
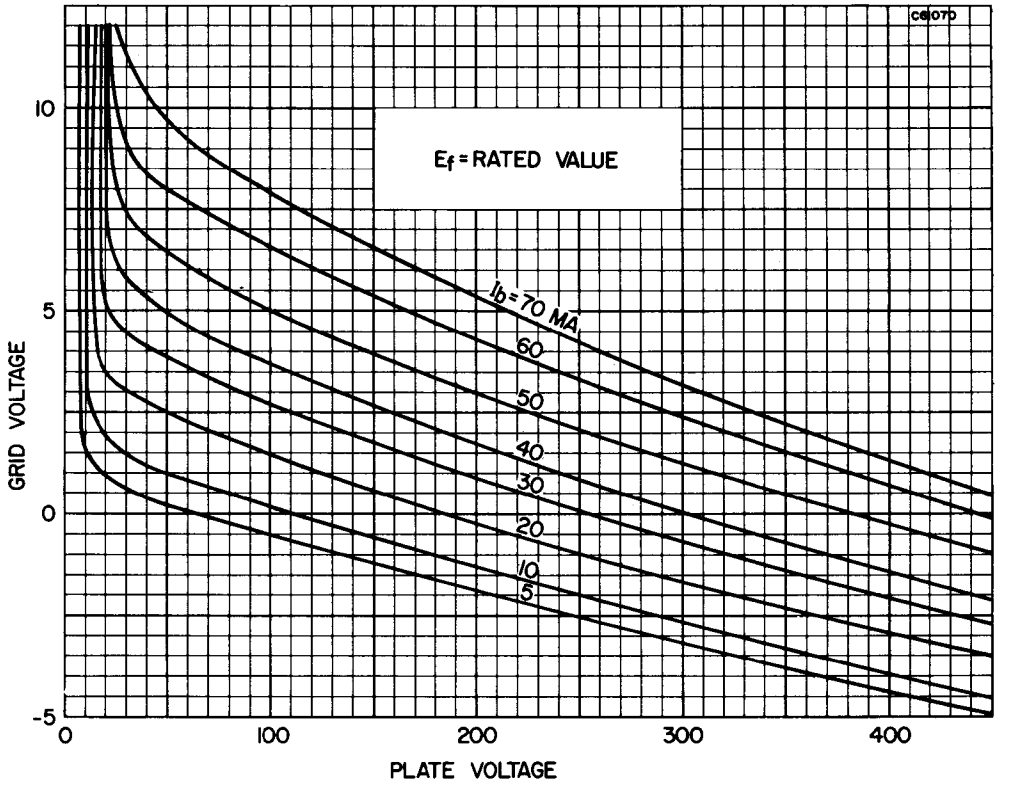
AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE GRID CHARACTERISTICS



CONSTANT CURRENT CHARACTERISTICS