MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Miniature Button 9-Pin
Outline	6-3
Basing	9LK
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	7551	7558	
Heater Voltage	12 to 15	6.3 ± 5 %	Volts
Heater Current	—	800	Ma
Heater Current at 13.5 Volts	360	—	Ma
Peak Heater-Cathode Voltage			
Heater Negative with Respect to Cathode		100	Volts
Heater Positive with Respect to Cathode		100	Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Grid No. 1 to Plate	0.15	pf Max.
Input: g1 to (k+g3+g2+h)	10	pf
Output: p to (k+g3+g2+h)	5.5	pf

MAXIMUM RATINGS (Absolute Maximum Values)

RF Power Amplifier Service—Class "C"

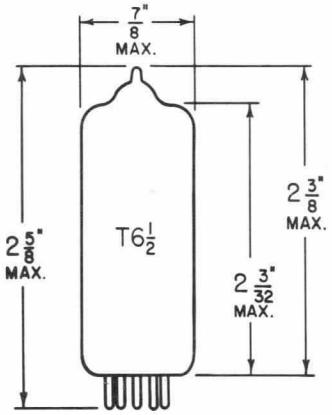
	Telephony[1] CCS	Telephony[1] ICAS	Telegraphy F.M. Telephony CCS	Telegraphy F.M. Telephony ICAS	
Plate Voltage	250	250	300	300	Volts
Grid No. 3 Voltage	0	0	Tied to Cathode		
Grid No. 2 Voltage	250	250	250	250	Volts
Grid No. 1 Voltage	−125	−125	−125	−125	Volts
Plate Current	60	70	70	80	Ma
Grid No. 2 Current	10	10	15	15	Ma
Grid No. 1 Current	5	5	5	5	Ma
Plate Input	15	17.5	21	24	Watts
Plate Dissipation	7	8	10	12	Watts
Grid No. 2 Input	1.4	1.4	2	2	Watts
Grid No. 1 Circuit Resistance	0.1	0.1	0.1	0.1	Megohm
Bulb Temperature (at Hottest Point)	225	225	225	225	Cent.

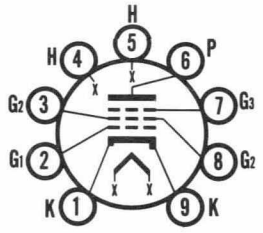
RF FREQUENCY MULTIPLIER AND AF AB1 AMPLIFIER SERVICE

	Class AB1 AF Amplifier CCS	Class "C" Freq. Multiplier CCS	Class "C" Freq. Multiplier ICAS	
Plate Voltage	300	300	300	Volts
Grid No. 3 Voltage	0	0	0	Volts
Grid No. 2 Voltage	250	250	250	Volts
Grid No. 1 Voltage	—	−125	−125	Volts
Plate Current	70	50	60	Ma
Grid No. 2 Current	—	15	15	Ma
Grid No. 1 Current	—	5	5	Ma
Plate Input	21	13	15	Watts
Plate Dissipation	10	10	12	Watts
Grid No. 2 Input	2	2	2	Watts
Grid No. 1 Circuit Resistance	0.1	0.1	0.1	Megohm
Bulb Temperature (at Hottest Point)	225	225	225	° Cent.

QUICK REFERENCE DATA

The Sylvania Types 7551 and 7558 are T-6½ beam pentodes designed for use as a Class "C" RF amplifier, oscillator, or frequency multiplier up to 175 Mc. They can also be used as a modulator or AF amplifier.
Type 7551 is designed for mobile equipment and Type 7558 is designed for fixed station equipment.





9LK

SYLVANIA
ELECTRONIC TUBES
A Division of
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File Under
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CHARACTERISTICS

Plate Voltage	250 Volts
Grid No. 3	Tied to Cathode
Grid No. 2 Voltage	250 Volts
Grid No. 1 Voltage	−18 Volts
Plate Current	40 Ma
Grid No. 2 Current	3 Ma
Transconductance	5300 μmhos
Amplification Factor (G2 to G1)	8.7

TYPICAL OPERATION (Class "C")

RF Power Amplifier—Up to 175 Mc.

	Telephony[1]		Telegraphy or F.M. Telephony		
	CCS	ICAS	CCS	CCS	ICAS
Plate Voltage	250	250	250	300	300 Volts
Grid No. 3 Voltage	Tied to Cathode				
Grid No. 2 Voltage	250[2]	250[2]	200	200	250 Volts
For Grid No. 1 Voltage[3]	−70	−75	−40	−42	−55 Volts
Use Grid No. 1 Resistor[3]	33K	33K	—	—	— Ohms
Peak RF Grid No. 1 Voltage	75	80	47	52	62 Volts
Grid No. 1 Current (Approx.)	2.1	2.3	1.5	2.1	1.6 Ma
Plate Current	60	70	60	70	80 Ma
Grid No. 2 Current	2.5	3.0	3.7	3.7	5.1 Ma
Driving Power (Approx.)	1.0	1.0	1.0	1.0	1.5 Watt
Power Output (Approx.)[4]	6.5	7.5	6.5	8.5	10 Watts

RF Frequency Multiplier—Up to 175 Mc.

	Doubler to 175 Mc		Tripler to 175 Mc	
Plate Voltage	250	300	200	250 Volts
Grid No. 3 Voltage	Tied to Cathode			
Grid No. 2 Voltage	200	250	200	250 Volts
For Grid No. 1 Voltage	−53	−66	−90	−120 Volts
Use Grid No. 1 Resistor[3]	53K	44K	50K	70K Ohms
Peak RF Grid No. 1 Voltage	60	74	105	130 Volts
Grid No. 1 Current (Approx.)	1.0	1.5	1.85	1.7 Ma
Plate Current	50	60	50	60 Ma
Grid No. 2 Current	2.6	3.5	3.0	3.9 Ma
Driving Power (Approx.)	0.4	0.6	0.4	0.6 Watts
Power Output (Approx.)[4]	3.0	4.5	1.4	2.3 Watts

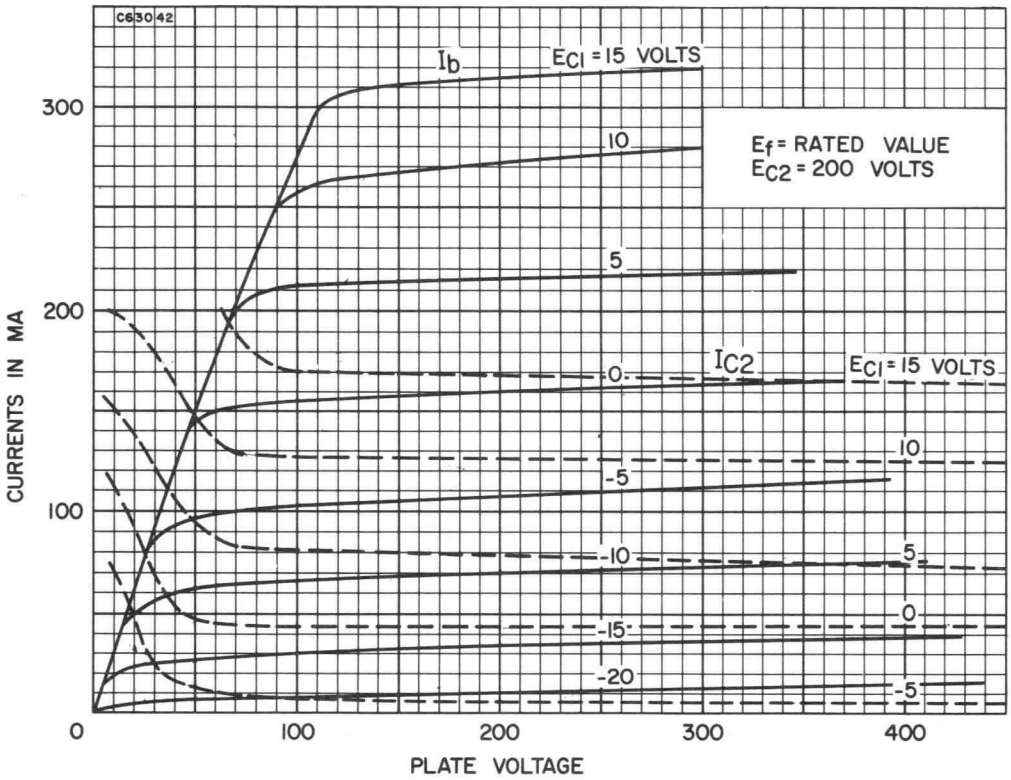
AF POWER AMPLIFIER (Class "AB1"—Push Pull)

Plate Voltage	300 Volts
Grid No. 3	Tied to Cathode
Grid No. 2 Voltage[5]	250 Volts
Grid No. 1 Voltage[5]	−21 Volts
Peak AF Grid No. 1 Voltage	20 Volts
Zero Signal Plate Current	40 Ma
Maximum Signal Plate Current	125 Ma
Zero Signal Grid No. 2 Current	2 Ma
Maximum Signal Grid No. 2 Current	14 Ma
Plate to Plate Load Resistance	5000 Ohms
Power Output (Approx.)	20.5 Watts
Total Harmonic Distortion	5 Percent

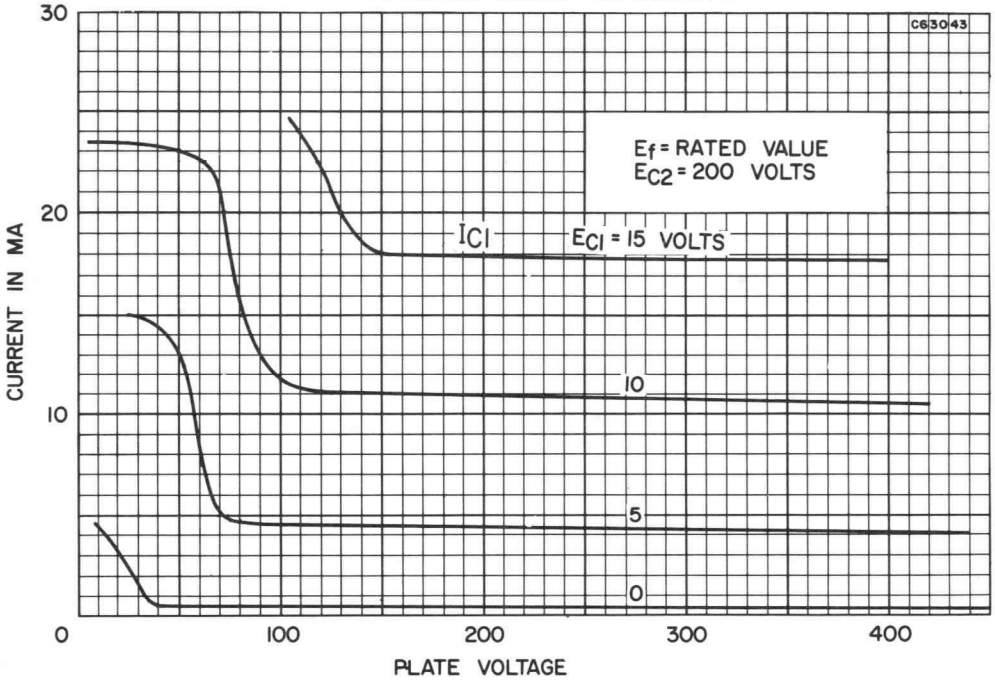
NOTES:

1. *Carrier conditions for use with a maximum modulation factor of 1.0.*
2. *Obtained preferably from a separate source-modulated with the plate supply or from the modulated plate supply through a series resistance.*
3. *Value of grid resistor needed to develop the recommended grid bias voltage. Grid No. 1 bias voltage can also be obtained from a combination of Grid No. 1 resistor with either fixed supply or cathode resistor.*
4. *This value of useful power is measured at load of output circuit.*
5. *Obtained preferably from a separate source.*

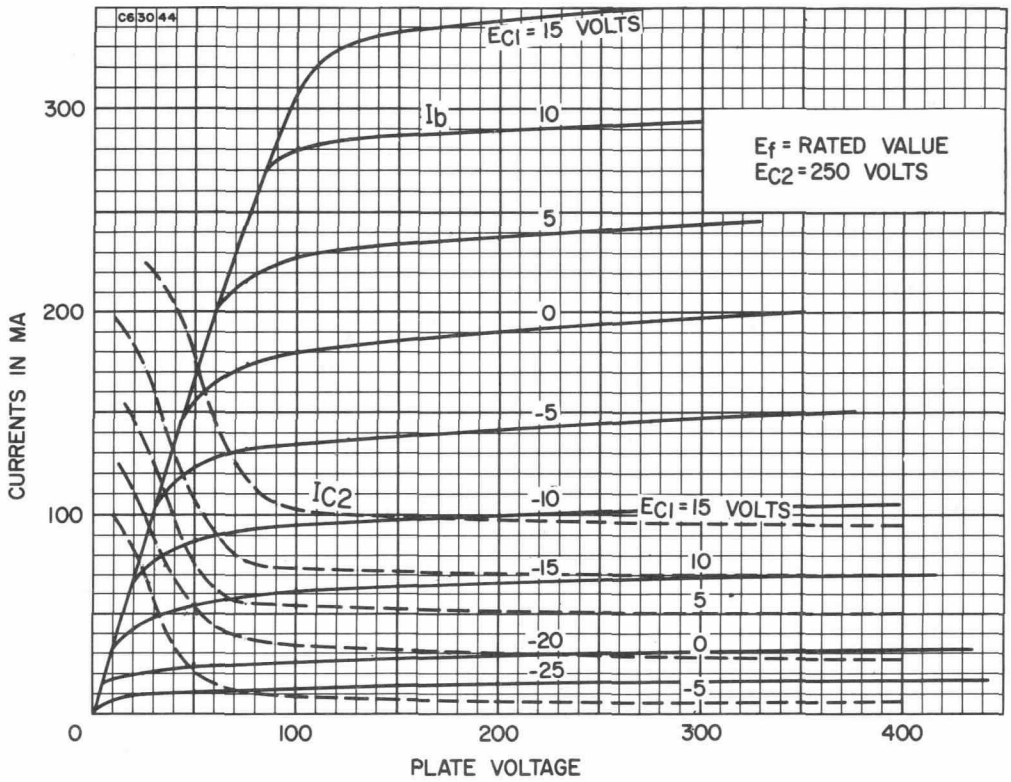
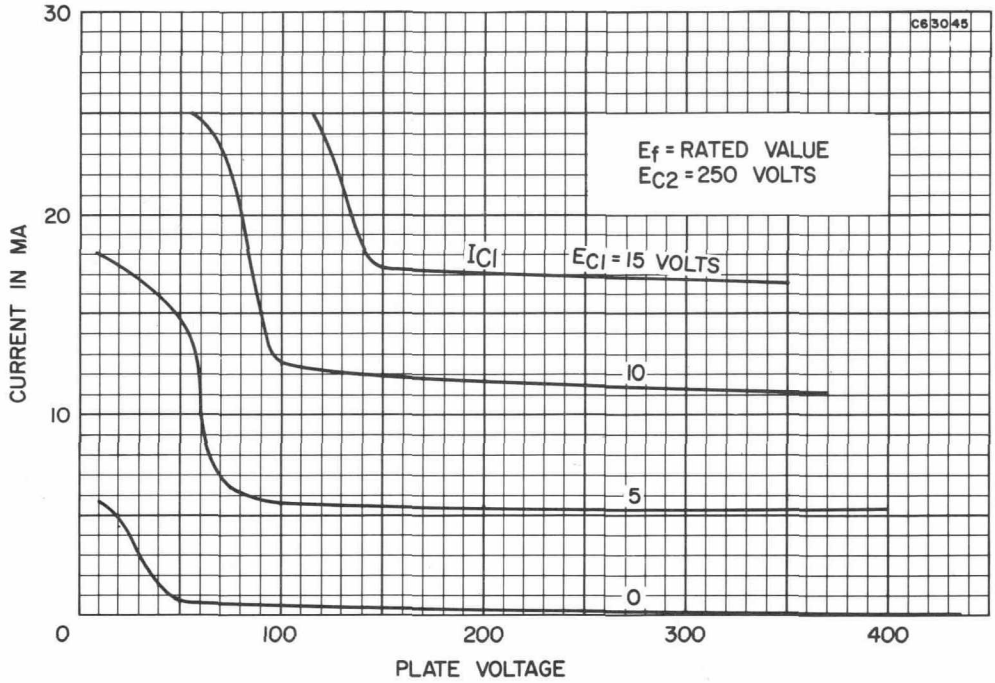
AVERAGE PLATE CHARACTERISTICS



AVERAGE GRID CURRENT



AVERAGE PLATE CHARACTERISTICS



AVERAGE GRID CURRENT