

Twin triode with separate cathodes suitable for use in amplifier, mixer, oscillator and multivibrator circuits. Useful frequency range extends from low frequencies to about 800 Mc.

COLD CAPACITANCES (without external shield)

Input, Each Section*	2.2	$\mu\mu\text{F}$
Output, Section 1*	1.0	$\mu\mu\text{F}$
Output, Section 2*	1.0	$\mu\mu\text{F}$
Plate to Grid, Each Section*	1.3	$\mu\mu\text{F}$
Plate to Plate, nominal	.05	$\mu\mu\text{F}$
Plate to Plate, maximum	.1	$\mu\mu\text{F}$

ABSOLUTE MAXIMUM RATINGS (each section)

Plate Voltage	330	volts
Grid Voltage, positive value	+ 5	volts
Grid Voltage, negative value	- 50	volts
Cathode Current	20	ma
Plate Dissipation	1.6	watts
Heater — Cathode Voltage	130	volts
Bulb Temperature, at hottest point	160	°C
Grid Circuit Resistance		
with fixed bias	1	Mohm
with cathode bias	2	Mohms

* Measured with internal shield and heater connected to cathode of section. Elements of other section grounded.

MECHANICAL DATA

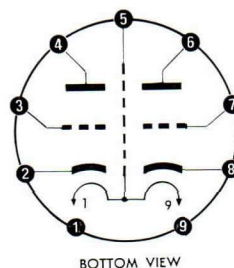
Base: Small Button Noval 9-pin,
RETMA E9-1

Bulb: EIA T 6½

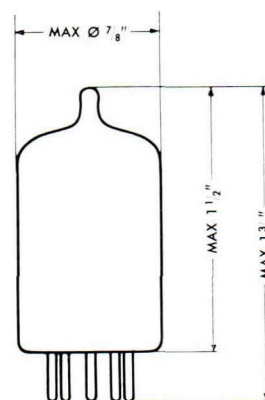
Mounting Position: Any

PIN NO CONNECTED TO

1. Heater
2. Cathode of Section 1
3. Grid of Section 1
4. Plate of Section 1
5. Shield and Heater Tap
6. Plate of Section 2
7. Grid of Section 2
8. Cathode of Section 2
9. Heater



BOTTOM VIEW



407A TWIN TRIODE



TYPICAL OPERATION. CLASS A₁. (each section)

Heater Voltage (Pins 1 & 9 to Pin 5)	20.0	20.0	volts
Heater Current	.1	.1	amp
Heater Voltage (Pin 1 to Pin 9)	40.0	40.0	volts
Heater Current	.05	.05	amp
Plate Supply Voltage	130	150	volts
Cathode Bias Resistor	200	240	ohms
Plate Current	7.6	8.2	ma
Transconductance	5400	5500	μ mhos
Amplification Factor	35	35	
Plate Resistance	6500	6400	ohms
Grid Voltage for Plate Current = 10 μ a	— 6	— 7	volts
Equivalent Noise Resistance	500	500	ohms
Input Conductance at 100 Mc	130	130	μ mhos

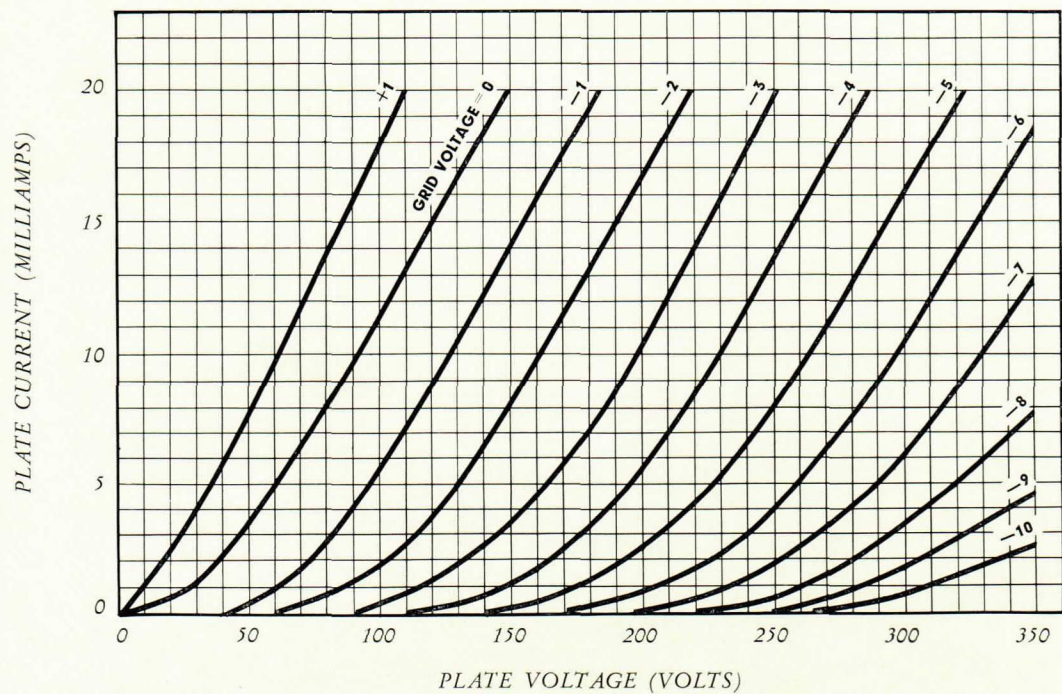
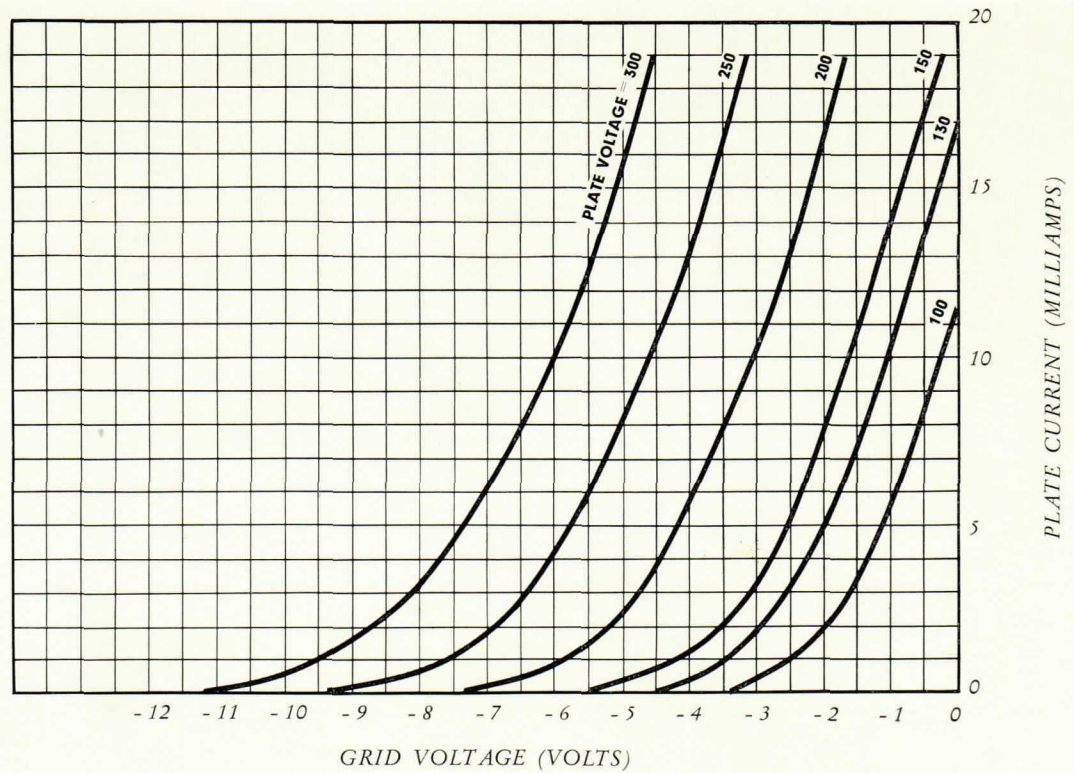
TYPICAL OPERATION. CLASS AB₁

Plate Supply Voltage	300	volts
Cathode Bias Resistor	800	ohms
RMS AF Grid to Grid Voltage	14	volts
Zero Signal Plate Current, Each Section	4.9	ma
Max. Signal Plate Current, Each Section	6.3	ma
Load Impedance, Plate to Plate	40,000	ohms
Total Harmonic Distortion	10	%
Max. Signal Power Output	1.0	watt

OPERATION RANGE VALUES (each section)

Heater Voltage	20.0			volts
Plate Supply Voltage	150			volts
Cathode Bias Resistor	240			ohms
	MIN	AVE	MAX	
Heater Current	90	100	110	ma
Plate Current	5.9	8.2	10.0	ma
Transconductance	4500	5500	6500	μ mhos
Transconductance, End of Life Point	3700			μ mhos
I_{hk} at $E_{hk} = \pm 100$ volts			20	μ a
Grid Current			— .05	μ a
Cutoff Plate Current at $E_{c1} = -10$ volts			75	μ a
Vibration Output		5		mv
Measured at 2.5 g and 25 cps with both sections in parallel. $E_f = 40.0$ v, $E_b = 150$ v, $E_{c1} = -3$ v, $r_p = 2000$ ohms.				

AVERAGE CHARACTERISTICS



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