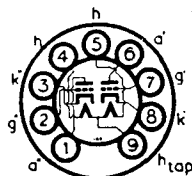


TYPE 5965

MINIATURE

DOUBLE TRIODE



The BRIMAR 5965 is a Trustworthy miniature double triode designed for use in high-speed digital computers. Each triode section features a high zero-bias anode current, a sharp cut-off characteristic, and a separate cathode connection. In addition, the balance of the cut-off characteristic between the two sections is controlled. The heater-cathode construction is designed for dependable service under conditions of intermittent operation. When used in "on-off" control applications, the 5965 will maintain its emission capabilities after long periods of operation under cut-off conditions.

RATINGS

Heater Voltage (A.C. or D.C.)	...	...	...	6.3	} or {	12.6 volts 0.225 amp.
Heater Current	...	...	...	0.45		
Anode Voltage	...	...	...	...		300 volts max.
Positive D.C. Grid Voltage	...	...	...	...		0 volts max.
Anode Dissipation	...	...	...	...		2.2 watts max.
Cathode Current	...	...	...	...		15 mA max.
Heater Cathode Voltage	...	...	...	...		90 volts max.
Grid Circuit Resistance—With Fixed Bias	...	...	...	...		0.1 megohm max.
With Cathode Bias	...	...	...	...		0.5 megohm max.

OPERATING CHARACTERISTICS (Each Section)

Anode Voltage	...	...	...	...	150 volts
Cathode Bias Resistor	...	...	...	...	220 ohms
Amplification Factor	...	...	...	...	47
Anode Resistance, approximate	...	...	...	...	7,250 ohms
Mutual Conductance	...	...	...	...	6.5 mA/V
Anode Current	...	...	...	...	8.2 mA

TYPICAL OPERATION (Computer Service, Each Section)

	On Condition	Off Condition
Anode Supply Voltage	150	150 volts
Anode Load Resistor	7,200	7,200 ohms
Grid Voltage	0†	— volts
Anode Current, approximate	10.5	— mA
Grid Voltage for $I_a = 150\mu A$ approx.‡	—	—5.5 volts

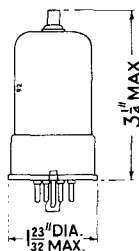
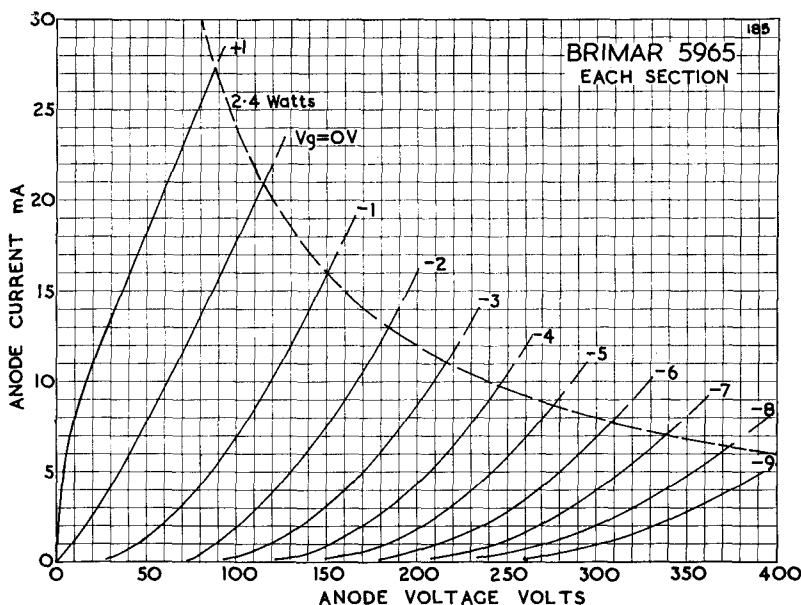
DIRECT INTER-ELECTRODE CAPACITANCES*

Grid to Anode (Each Section)	...	...	...	...	3.0 pF
Input (Each Section)	...	...	...	...	3.8 pF
Output (Section 1)	...	...	...	...	0.5 pF
Output (Section 2)	...	...	...	...	0.38 pF
Anode to Anode	...	...	...	...	0.5 pF

* Without external shield.

† Approximate value of grid voltage with grid current adjusted for approximately $140\mu A$.

‡ The grid voltage required to produce $150\mu A$ in one section normally will not differ by more than 1.5 volts from the grid voltage required to produce $150\mu A$ in the other section with an anode supply voltage of 150 volts and an anode load resistor of 7,200 ohms.

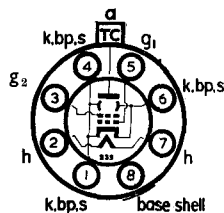


Industrial Type

TYPE 6146

R.F.

POWER AMPLIFIER



The BRIMAR 6146 is an octal based beam tetrode for use as an R.F. power amplifier up to 175 Mc/s or as an A.F. power amplifier or modulator.

RATINGS (Absolute Maximum)

Heater Voltage	...	...	...	...	6.3 volts
Heater Current	...	...	...	...	1.25 amps.
Anode Voltage	...	...	...	...	600 volts max.
Anode Dissipation	...	...	...	...	20 watts max.
Screen Voltage	...	...	...	...	250 volts max.
Screen Dissipation	...	...	...	...	3 watts max.
Control Grid Voltage	...	...	...	...	-150 volts max.
Control Grid Current	...	...	...	...	3.5 mA max.
Control Grid Circuit Resistance	...	...	...	...	100 kilohms
	Fixed Bias	...	...	...	500 kilohms
	Cathode Bias	...	...	...	
	R.F. Amplifier or	...	...	...	
	Oscillator	...	...	...	30 kilohms
Peak Heater to Cathode Voltage	...	...	...	...	135 volts max.
Bulb Temperature	...	...	...	...	220° C. max.

OPERATING CHARACTERISTICS

Anode Voltage	...	...	...	...	...	200 volts
Screen Voltage	...	...	...	...	...	200 volts
Anode Current	...	...	...	...	...	100 mA
Control Grid Voltage for $I_a = 100\text{mA}$	...	...	...	...	...	-29.5 volts approx.
Mutual Conductance	...	...	...	...	...	7 mA/V
Inner Amplification Factor (μ_{g1-g2})	...	...	...	...	...	4.5

OPERATION AS A POWER AMPLIFIER (CLASS C TELEGRAPHY)

Operating Frequency	...	...	...	...	60	175	Mc/s
Anode Voltage	...	...	...	...	600	320	volts
Screen Voltage	...	...	...	...	150 *	180 †	volts
Control Grid Voltage	...	...	...	...	-58 ‡	-51 §	volts
Peak R.F. Drive Voltage	...	...	...	...	73	64	volts
Anode Current	...	...	...	...	112	140	mA
Screen Current	...	...	...	...	9	10	mA
Control Grid Current	...	...	...	...	2.8	2.0	mA
Drive Power	...	...	...	...	0.2	3	watts
Power Output	...	...	...	...	52	25	watts

* Grid No. 2 voltage must not exceed 400 volts under key up conditions.

† Derived from the 320 volt supply through a series resistor of 15.5 kilohms.

‡ Derived from a grid resistor of 20 kilohms or a cathode resistor of 470 ohms.

§ Derived from a grid resistor of 27 kilohms or a cathode resistor of 330 ohms.

INTER-ELECTRODE CAPACITANCES

Input	...	...	...	...	...	13.5 pF
Output	...	...	...	...	...	9 pF
Control Grid to Anode	...	...	...	...	...	0.22 pF max.

