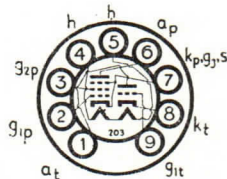


Current Equipment Type

TYPE PCF82
MINIATURE
TRIODE PENTODE
FREQUENCY CHANGER



The BRIMAR PCF82 is a triode-pentode frequency changer featuring a high slope triode and a high input impedance pentode of high slope suitable for use in television receivers for Band III. The high input impedance at 200 Mc/s permits a sensibly constant conversion gain to be obtained over Bands I and III. The low value of C_{ag} for the pentode and C_{ap} , at facilitate the reduction of oscillator radiation. The use of low oscillator grid current to obtain the required heterodyne voltage reduces the frequency drift of the oscillator to a minimum.

Heater Current	0.3 amp.
Heater Voltage	9.5 volts (nom.)

RATINGS

Heater—Cathode Potential (cathode positive)	220 volts max.	
Heater—Cathode Potential (cathode negative)	90 volts max.	
	<i>Triode</i>	<i>Pentode</i>
Anode Voltage ($I_a = 0$)	550	550 volts max.
Anode Voltage	300	300 volts max.
Screen (g_2) Voltage	—	300 volts max.
Anode Dissipation	2.7	2.8 watts max.
Screen Dissipation	—	0.5 watts max.
Positive D.C. Grid No. 1 Voltage	0	0 volts max.
Cathode Current	20	20 mA max.
Grid Resistance	1	1 megohm max.

CHARACTERISTICS

	<i>Triode</i>	<i>Pentode</i>
Anode Voltage	150	250 volts
Screen Voltage	—	110 volts
Cathode Bias Resistor	56	68 ohms
Anode Current	18	10 mA
Screen Current	—	3.5 mA
Mutual Conductance	8.5	5.2 mA/V
Anode Impedance (approx.)	5	400 k ohms
Amplification Factor	40	—
Grid No. 1 Voltage (for $I_a = 10\mu A$)	-12	-10 volts

TYPICAL OPERATION AS MIXER

	<i>Triode</i>	<i>Pentode</i>
Anode Voltage	100	170 volts
Screen Voltage	—	170 volts
Cathode Bias Resistor	0	680 ohms
Grid Leak Resistor	27	100 k ohms
Anode Current	7.0	6.6 mA
Screen Current	—	2.5 mA
Heterodyne Voltage	—	3.0
Conversion Conductance	—	1.6
		5.0 volts peak
		1.65 mA/V

INTER-ELECTRODE CAPACITANCES *

Pentode Grid No. 1 to Pentode Anode	0.006 pF
Pentode Input	5.0 pF
Pentode Output	3.5 pF
Triode Grid to Triode Anode	1.8 pF
Triode Grid to Cathode	2.5 pF
Triode Anode to Cathode	1.0 pF
Cathode to Heater (either section) approx.	3.0 pF

* Measured with external shield.

