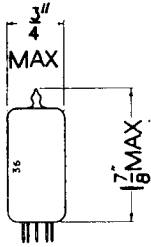
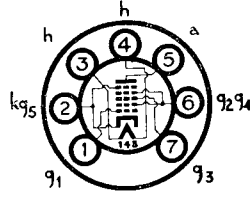


Current Equipment Type



TYPE 12AD6  
MINIATURE  
HEPTODE  
FREQUENCY  
CHANGER



The BRIMAR 12AD6 is a miniature frequency changer for use in car radio receivers to operate directly from the 12-volt battery without the use of a vibrator H.T. system. It is designed to operate over the range of voltage variations normally encountered with car batteries.

RATINGS

Heater Voltage	...	...	...	...	...	...	...	...	12.6 volts
Heater Current	...	...	...	...	...	...	...	...	0.15 amp.
Anode Voltage	...	...	...	...	...	...	...	...	30 volts max.
Screen Grid ( $g_2, g_1$ ) Voltage	...	...	...	...	...	...	...	...	30 volts max.
Screen Grid Supply Voltage	...	...	...	...	...	...	...	...	30 volts max.
Negative Control Grid ( $g_3$ ) Voltage	...	...	...	...	...	...	...	...	-30 volts max.
Positive Control Grid Voltage	...	...	...	...	...	...	...	...	0 volts max.
Control Grid Circuit Resistance	...	...	...	...	...	...	...	...	10 megohms max.
Cathode Current	...	...	...	...	...	...	...	...	20 mA max.
Heater-Cathode Voltage	...	...	...	...	...	...	...	...	$\pm$ 30 volts max.

STATIC CHARACTERISTICS—OSCILLATOR SECTION

Measured with grids 2 and 4 connected to anode

Anode, $g_2$ and $g_4$ Voltage	...	...	...	...	...	...	...	...	12.6 volts
Control Grid ( $g_3$ ) Voltage	...	...	...	...	...	...	...	...	0 volts
Oscillator Grid ( $g_1$ ) Voltage	...	...	...	...	...	...	...	...	0 volts
Mutual Conductance ( $g_1$ to $g_2 + g_4 + a$ )	...	...	...	...	...	...	...	...	3.8 mA/V
Amplification Factor ( $g_1$ to $g_2 + g_4 + a$ )	...	...	...	...	...	...	...	...	9
Cathode Current	...	...	...	...	...	...	...	...	5 mA
Control Grid Voltage for $I_k = 10 \mu A$	...	...	...	...	...	...	...	...	-4 volts

OPERATING CHARACTERISTICS AS A SELF EXCITED MIXER

Anode Voltage	...	...	...	...	...	...	...	...	12.6 volts
Screen Grid ( $g_2, g_1$ ) Voltage	...	...	...	...	...	...	...	...	12.6 volts
Control Grid ( $g_3$ ) Voltage	...	...	...	...	...	...	...	...	0 volts
Control Grid Resistance	...	...	...	...	...	...	...	...	2.2 megohms
Oscillator Grid ( $g_1$ ) Resistance	...	...	...	...	...	...	...	...	33 kilohms
Oscillatory Voltage on Oscillator Grid	...	...	...	...	...	...	...	...	1.6 volts r.m.s.
Oscillator Grid Current	...	...	...	...	...	...	...	...	50 $\mu A$
Anode Current	...	...	...	...	...	...	...	...	450 $\mu A$
Screen Grid Current	...	...	...	...	...	...	...	...	1.5 mA
Cathode Current	...	...	...	...	...	...	...	...	2 mA
Conversion Conductance	...	...	...	...	...	...	...	...	260 $\mu A/V$
Control Grid Voltage for $g_c = 5 \mu A/V$	...	...	...	...	...	...	...	...	-2.2 volts approx.
Control Grid Voltage for $g_c = 20 \mu A/V$	...	...	...	...	...	...	...	...	-1.8 volts approx.

INTER-ELECTRODE CAPACITANCES

	With external screen	Without external screen
Control Grid to Anode ( $g_2$ to a)	0.25	0.30 pF max.
Control Grid to Oscillator Grid ( $g_3$ to $g_1$ )	0.15	0.15 pF max.
R.F. Input ( $g_3$ to all)	8.0	8.0 pF
Oscillator Input ( $g_1$ to all)	5.5	5.5 pF
Mixer Output (a to all)	13.0	8.0 pF
Oscillator Grid to Cathode ( $g_1$ to k + $g_3$ )	3.0	3.0 pF
Oscillator Output (k to all except $g_1$ )	20.0	15.0 pF
Oscillator Grid to Anode ( $g_1$ to a)	0.05	0.1 pF