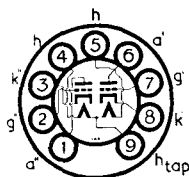


Current Equipment Type
TYPE 12AT7
MINIATURE
HIGH SLOPE
DOUBLE TRIODE



B9A (Noval) Base

The separate cathode connections and tapped heater features enable the 12AT7 to be used in a variety of applications. As a frequency changer it will operate at frequencies up to 500 Mc/s.

RATINGS

Heater Voltage	...	...	...	...	6.3	} or {	12.6 volts
Heater Current	...	...	...	...	0.3		0.15 amp.
Anode Voltage	...	...	...	...	...		300 volts max.
Anode Dissipation (each section)	...	...	...	...	...		2.5 watts max.
D.C. Cathode Current (each section)	...	...	...	...	...		20 mA. max.
Anode Voltage (zero Anode Current)	...	...	...	...	...		550 volts max.

OPERATING CHARACTERISTICS

						(Each Section, Class A)	
Anode Voltage	...	...	...	...	...	100 180 250	volts
Anode Current	...	...	...	...	...	3.7 11.0 10.0	mA
Grid Voltage	...	...	...	...	...	-1 -1 -2	volts
Anode Impedance	...	...	...	...	...	13,500 9,400 10,000	ohms
Mutual Conductance	...	...	...	...	...	4.0 6.6 5.5	mA/V
Amplification Factor	...	...	...	...	...	54 62 55	
Grid Voltage	...	...	...	...	...	-6 -8 -12	volts
(for Anode Current cut-off)							

OPERATION AS FREQUENCY CHANGER

OSCILLATOR SECTION

Anode Supply Voltage	...	...	...	...	...	250 volts
Anode Decoupling Resistor	...	...	...	...	...	1,000 ohms
Grid Resistor	...	...	...	...	...	10,000 ohms

MIXER SECTION

Anode Supply Voltage	...	...	...	...	...	250 volts
Anode Decoupling Resistor	...	...	...	...	...	1,000 ohms
Cathode Bias Resistor	...	...	...	...	...	680 ohms
* Conversion Conductance	...	...	...	...	...	2.5 mA/V
† Heterodyne Voltage	...	...	...	...	...	(See note)

* Exact value depends on circuit constants and input impedance considerations.

† Heterodyne voltage should be just less than that required to cause grid current in the mixer section.

INTER-ELECTRODE CAPACITANCES *

Grid to Grid	...	...	...	...	...	0.005 pF max.
Anode to Anode	...	...	...	...	...	0.4 pF max.

EACH SECTION

Input	...	...	...	...	...	2.5 pF
Output	...	...	...	...	...	0.4 pF
Grid to Anode	...	...	...	...	...	1.5 pF
Cathode to Heater	...	...	...	...	...	2.5 pF

* Measured with no external shield.

Type 12AT7 is a commercial equivalent of the CV455.

