



engineering data service

ADVANCE DATA

MECHANICAL DATA

Dimensions	Per Outline
Envelope	Metal Capsule
Base	Octal Plug
Basing	Per Outline
Cathode	Philips Impregnated
Focusing Field	Electromagnet
Magnetic Field Strength	1000 Gauss
Length of Magnetic Field	7 inches
Mounting Position	Any
Connector	UG-595/U
Weight (1)	1 lb. approx.
Cooling	Forced Air

ELECTRICAL DATA

MAXIMUM RATINGS (Absolute Values) (2)

Heater Voltage	12.0 $\pm 5\%$	volts
Maximum Heater Cathode Voltage	0	volts
Maximum Accelerator Voltage	2000	volts
Maximum Accelerator Current	5	milliamperes
Maximum Helix Voltage	2000	volts
Maximum Helix Current	2	milliamperes
Maximum Collector Voltage	2100	volts
Maximum Collector Dissipation	25	watts
Maximum Focusing		
Electrode Voltage	± 50	volts
Maximum Helix Voltage to Ground	2000	volts

TYPICAL OPERATING CONDITIONS (3)

Heater Voltage	12.0	volts
Heater Current	1.2	amperes
Focus Electrode Voltage	0	volts d.c.
Gun Anode Voltage	500	volts d.c.
Accelerator Voltage	500-2000	volts d.c.
Helix Voltage	500-2000	volts d.c.
Collector Voltage (4)	590-2090	volts d.c.
Cathode Current	12	milliamperes
Helix Current	0.5	milliamperes
Collector Current	10	milliamperes
Maximum Power Output	100	milliwatts
Minimum Power Output	10	milliwatts
Tuning Sensitivity		
Center Frequency	6.4	Mc/volt
Maximum	11.2	Mc/volt

QUICK REFERENCE DATA

The Sylvania type 6902 is a Backward Wave Oscillator designed for voltage tunable service over the frequency range 17500-27000 megacycles with a power output of 10-100 mW.

SYLVANIA ELECTRIC
PRODUCTS INC.

SPECIAL TUBE OPERATIONS
WOBURN, MASS.

Prepared and Released by The

PRODUCT DEVELOPMENT
LABORATORY
KEW GARDENS, N.Y.
4 FEBRUARY 1957

SYLVANIA

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NOTES:

1. Magnet not included, information on request.
2. Voltages given with respect to the cathode.
3. Voltages given with respect to the cathode. The tube operated with the helix connected to the accelerator. One side of the heater should be tied to the cathode. Either accelerator or cathode may be grounded.
4. Collector is 90 volts positive with respect to the accelerator.

TUBE TYPE 6902
OUTLINE AND BASING DIAGRAM
17.5-27 K.M.C. - B.W.O.

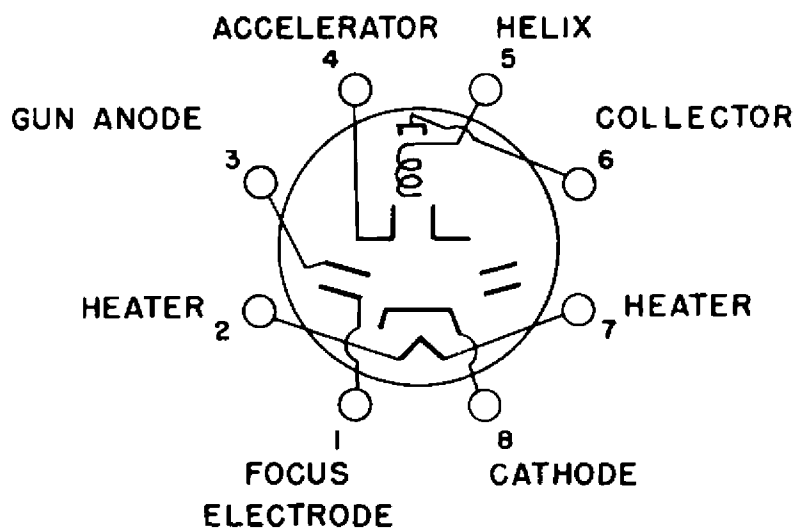
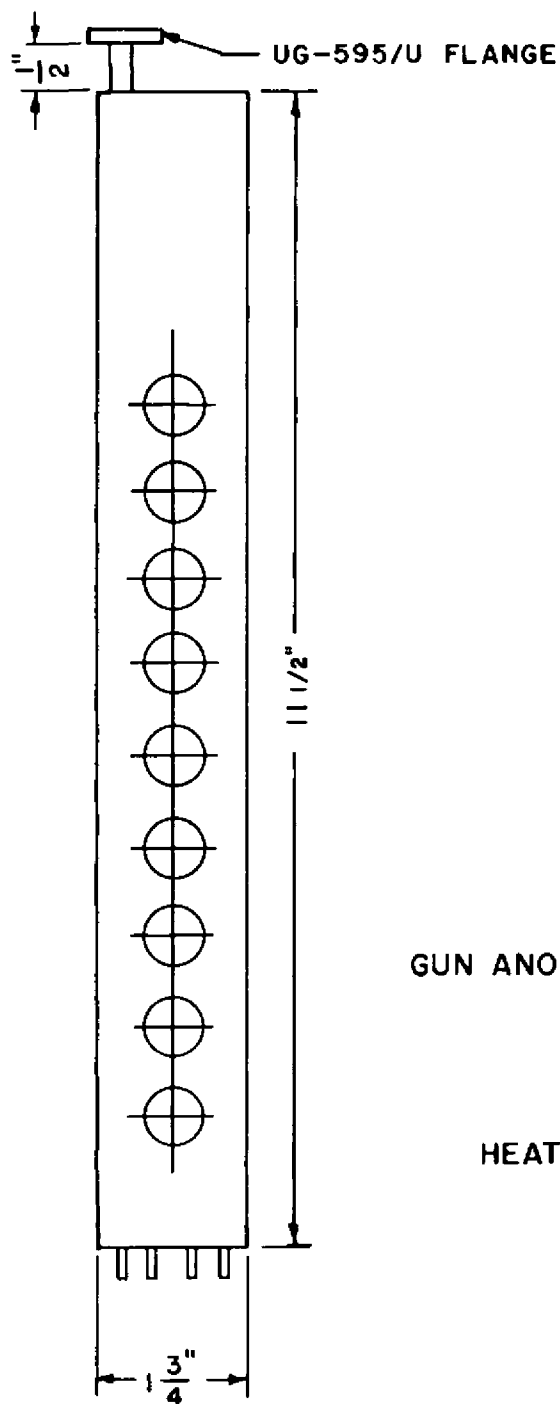


FIG. 1

SYLVANIA 6902

POWER OUTPUT AND HELIX VOLTAGE VS. FREQUENCY

