SYLVANIA

engineering data service

6762

ADVANCE DATA

GENERAL DATA

Focusing Method	Magnetic	
Deflection Method	Magnetic	
Deflection Angle (approx.)	53	Degrees
Phosphor	P7	
Fluorescence	Blue-white	
Phosphorescence	Yellow	
Persistence of Phosphorescence	Long	

MECHANICAL DATA

Dimensions	Per Outline	
Envelope	Glass	
Base (Small Shell Duodecal 12 pin)	B12-43	
Basing	Per Outline	
Bulb Contact (Recessed Small Cavity Cap)	J1-22	
Cathode	Unipotential Oxide	
Mounting Position	Any	
Connectors	UG 88/U with 52 ohm RG 58/U Cable	
Minimum Useful Screen Diameter	4 1/4	Inches

ELECTRICAL DATA

DIRECT INTERELECTRODE CAPACITANCES (Approx.)

Focus Electrode to All Other Electrodes	7.5	μμf
Gate Electrode to All Other Electrodes	6.0	μμf
Cathode to All Other Electrodes	7.5	μμf

RATINGS (Absolute Values) [1]

Anode Voltage	25000	Volts dc Max.
Focus Electrode Voltage	+20	Volts dc Max.
Gun Anode Voltage	150	Volts dc Max.
Accelerator Voltage	2,000	Volts dc Max.
Gate Electrode Voltage	1,000	Volts dc Max.
Heater Voltage	6.3 ± 10%	Volts
Heater Cathode Voltage	±125	Volts Max.

QUICK REFERENCE DATA

The Sylvania Type 6762 Wamoscope is a new cathode ray device which incorporates most of the essential features of a microwave receiver in a single envelope. It is intended for use as a display tube in S-Band microwave receivers.

SYLVANIA ELECTRIC PRODUCTS INC.

ELECTRONICS DIVISION
WOBURN, MASS.

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TYPICAL OPERATING CONDITIONS [1] & [2]

Heater Voltage	6.3	Volts	
Heater Current	900	Ma	
Anode Voltage	15K	Volts	dc
Gun Anode Voltage	70	Volts	dc
Accelerator Voltage	650	Volts	dc
Gate Electrode Voltage	-3 to +10	Volts	dc
Helix Voltage	670	Volts	dc
Deflection Plates Voltage for centering	540 to 740	Volts	dc
Helix Focusing Solenoid Field Strength	110	Gauss	
Screen Focusing Magnet Field Strength	250	Gauss	
Cathode Current	0.5	Ma	
Center Frequency	3000	Mc	
Bandwidth [3]	300	Mc	
Sensitivity [4]	-40	dbm	
Maximum Gain [5]	10	db	

SOLENOID DATA [6]

Maximum Length	12 1/8	Inches	
Outside Diameter	3 1/2	Inches	
Inside Diameter	2 1/16	Inches	
Weight	9 1/8	lbs.	
Gauss per milliampere	0.85		
Maximum Voltage	250	Volts	dc

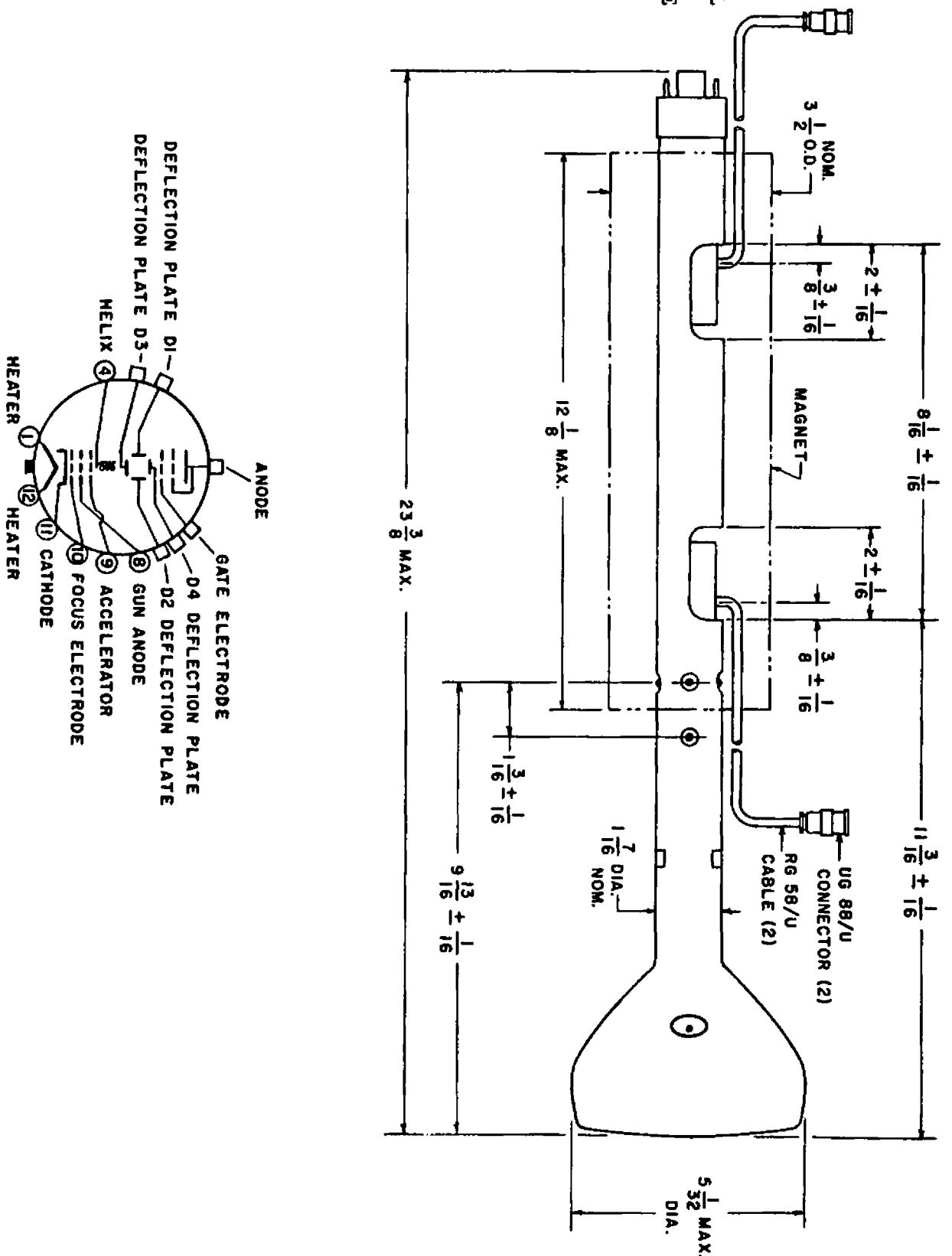
NOTES:

1. Voltage given with respect to cathode.
2. Focus electrode tied to cathode.
3. Using couplers supplied.
4. Minimum detectable signal, visual.
5. Gain of amplifier section at 3000 mc, using couplers supplied.
6. Solenoid #H4-SK860A supplied with tube. Focusing coil and deflection yoke are not furnished since they are dependent upon the specific applications.

APPLICATION

The 6762 Wamoscope consists of a traveling wave tube and a cathode ray tube separated by a gate region. The traveling wave tube section contains the gun and the helical slow-waveguiding structure; the gate region includes an apertured disc; and the cathode ray tube section provides the fluorescent screen for the display.

The operation of the Wamoscope is based upon velocity-sorting the electrons which emerge from the end of the helix of the traveling wave tube section. A dc beam of voltage is passed down the helix. With an rf input, the beam interacts with the rf fields on the helix so that the beam is velocity and current modulated in accordance with the amplitude of the rf signals. The velocity modulated beam enters the region where the aperture (gate electrode) is located. By applying a suitable bias voltage to this electrode, the electrons are decelerated to approximately cathode potential and those electrons whose velocity is greater than the dc velocity pass through the aperture and impinge upon the screen of the cathode ray tube, while the slower electrons are reflected.



OUTLINE & BASING OF THE 6762 WAVOSCOPE