



MECHANICAL DATA

Envelope . . . . .	Metal Capsule
Base . . . . .	6 Prong Amp AN Type
Cathode . . . . .	Philips Impregnated
Magnetic Field Strength . . . . .	700 Gauss
Length of Magnetic Field . . . . .	14" Uniform
Mounting Position . . . . .	Any
Weight, approx. <sup>1</sup> . . . . .	1 Lb.
Connectors . . . . .	BNC with 50 Ohm Coax Cable
Focusing Field <sup>1</sup> . . . . .	Electromagnet
Cooling <sup>2</sup> . . . . .	Convection Air
Maximum Collector Temperature . . . . .	200° C

QUICK REFERENCE DATA

The Sylvania Type 6559 is a traveling wave tube designed for cw or pulsed amplifier service over the frequency range 2000-4000 megacycles. Power output is approximately 1 watt.

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage ( $\pm 10\%$ ) . . . . .	8.0 Volts ac
Heater Current . . . . .	0.8 Amperes

RATINGS (Absolute Values)

Heater-Cathode Voltage . . . . .	10 Volts	Max.
1st Anode Voltage . . . . .	800 Volts	Max.
Helix Voltage . . . . .	1000 Volts	Max.
Helix Current . . . . .	10 Ma	Max.
Collector Voltage . . . . .	1000 Volts	Max.
Collector Dissipation . . . . .	40 Watts	Max.
Focusing Electrode Voltage . . . . .	-25 Volts to +25 Volts	Max.
Helix Voltage to Ground . . . . .	1000 Volts	Max.

CHARACTERISTICS

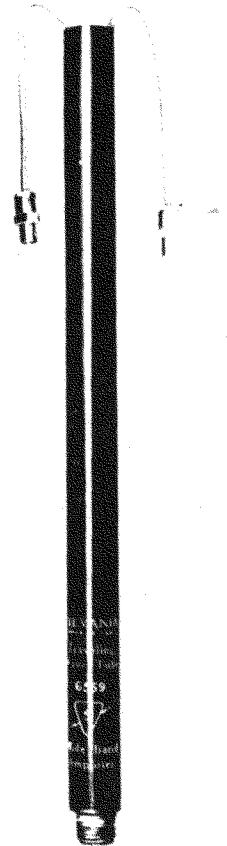
Frequency . . . . .	2.0 Kmc Min. to 4.0 Kmc	Max.
Cold Transmission Loss . . . . .	40 db	Min.

TYPICAL OPERATION<sup>3</sup>

Frequency . . . . .	3000 Mc
1st Anode Voltage . . . . .	510 Volts
1st Anode Current . . . . .	0 Ma
Helix Voltage . . . . .	800 Volts
Helix Current . . . . .	2 Ma
Collector Voltage . . . . .	850 Volts
Collector Current . . . . .	20 Ma
Power Output . . . . .	1 Watt
Operating Band to 3 db Power Points . . . . .	2.1 to 3.9 Kmc
Gain . . . . .	> 25 db
Noise Figure at Operating Band Width . . . . .	< 30 db

NOTES:

1. Magnet not included, information on request.
2. Provided that the solenoid ID permits air circulation and that the temperature inside the solenoid is less than 50° C over the ambient.
3. Voltages given with respect to cathode. Any one element may be operated at capsule potential which should be ground.



SYLVANIA ELECTRIC PRODUCTS INC.

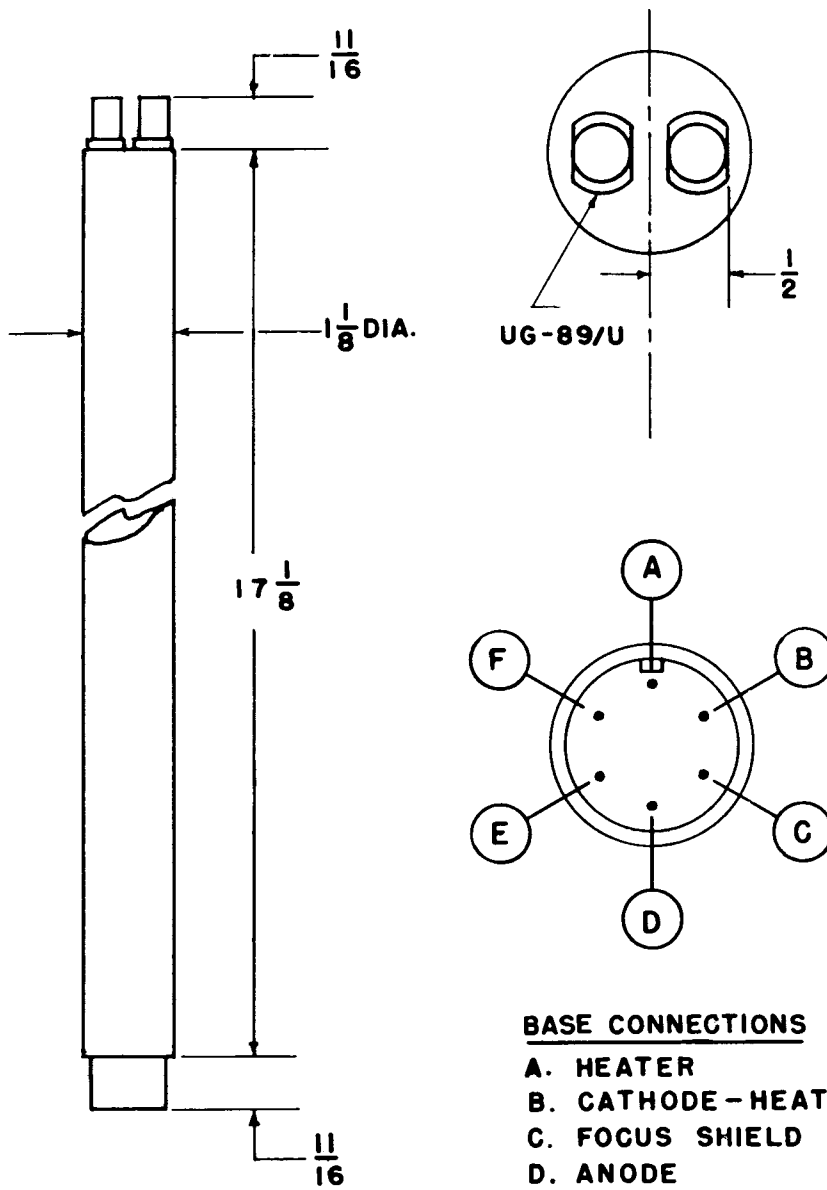
ELECTRONICS DIVISION WOBURN, MASS.

Prepared and Released By The TECHNICAL PUBLICATIONS SECTION EMPORIUM, PENNSYLVANIA

11-54-109-1

PAGE 1 OF 2

OUTLINE DRAWING



BASE CONNECTIONS

- A. HEATER
- B. CATHODE - HEATER
- C. FOCUS SHIELD
- D. ANODE
- E. HELIX
- F. COLLECTOR