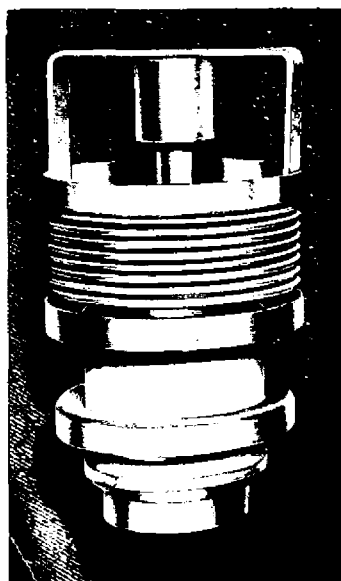


**GL-7399****TETRODE**

**PULSED SERVICE
GROUNDED-GRID OPERATION**

**FORCED-AIR COOLED
METAL AND CERAMIC**

INTEGRAL RADIATOR

The GL-7399 is a small-size, four-electrode transmitting tube especially designed for pulsed-amplifier or -oscillator service at L-band frequencies. This tetrode is particularly well suited for use in airborne or ground-based radar equipment.

The tube is capable of providing useful output at frequencies up to approximately 1500 megacycles.

Features of the GL-7399 include long

life and reliability, long pulse width, high peak power and high gain, broad-banding capability, and resistance to shock and vibration.

These together with such design factors as an oxide-coated cathode, coaxial elements, and metal-ceramic construction make the tube well adapted to application in modern systems where performance and reliability are important.

Electrical

	Mini- mum	Bogey	Maxi- mum	
Heater Voltage.....	6.0	6.3	6.8	Volts
Heater Current.....	5.6			Amperes
Amplification.....				
Factor, G_2 to G_1	10.5			
$E_{c2}=275$ Volts DC, $E_b=1000$ Volts DC,				
$I_b=200$ Milliamperes DC				
Cathode Heating Time.....	1			Minute
Direct Interelectrode Capacitances*				
Cathode to Plate†.....	0.012			μmf
Input.....	21.5			μmf
Output.....	9.3			μmf

Mechanical

Mounting Position—Any			
Net Weight.....	1.0		Pounds

Thermal

Cooling— Forced Air†

Radiator§

Plate Dissipation..... 300 240 180 Watts

Air Flow, 45 C incoming air temperature..... 15 10 5 Min Cubic Feet per Minute

Static Pressure, anode at room temperature¶..... 0.60 0.30 0.10 Inches-Water

Radiator Hub Temperature▲..... 180 Max C

Seals

Screen and Control Grid, approximate..... 1 Cubic Foot per Minute

Heater and Cathode, approximate..... 1 Cubic Foot per Minute

Ceramic Temperature at any Point..... 200 Max C

MAXIMUM RATINGS AT 500 MEGACYCLES**Radio-Frequency Power Amplifier—Plate and Screen Grid Pulsed**

DC Plate Voltage, during pulse.....	10	Kilovolts	DC Grid-No. 1 Voltage, not pulsed....	-175	Volts
DC Plate Current, during pulse.....	10	Amperes	DC Grid-No. 1 Current, during pulse....	2.5	Amperes
DC Screen Voltage, during pulse.....	2000	Volts	Pulse Width♥♦.....	15	Microseconds
DC Screen Input♣.....	15	Watts	Duty Factor♥♠.....	0.0012	
Plate Dissipation♣.....	300	Watts			

TYPICAL OPERATION AT 500 MEGACYCLES**Class B, Grounded-Grid Service**

DC Plate Voltage, during pulse.....	9	Kilovolts	DC Grid-No. 1 Current, during pulse....	1.1	Amperes
DC Grid-No. 2 Voltage, during pulse....	1400	Volts	DC Grid-No. 2 Current, during pulse....	0.47	Amperes
DC Grid-No. 1 Voltage, not pulsed....	-125	Volts	Driving Power at Tube, during pulse....	2.6	Kilowatts
Peak RF Plate Voltage.....	7000	Volts	Power Output, during pulse.....	52	Kilowatts
Peak RF Grid Voltage.....	300	Volts	Pulse Width♦.....	15	Microseconds
DC Plate Current, during pulse.....	9.2	Amperes	Duty Factor♠.....	0.001	

* Control grid connected directly to screen grid.

† Complete external shielding between cathode and plate.

‡ Forced air cooling should be applied during the application of any voltages.

§ Provision must be made for unobstructed passage of cooling air between radiator fins, and the anode terminal and adjacent fins.

¶ With anode temperature at 180 C a 10-percent increase in back pressure occurs for the specified air flow.

▲ Measured at the base of the fin adjacent to the plate terminal. See outline drawing on page 2.

♣ Maximum average value.

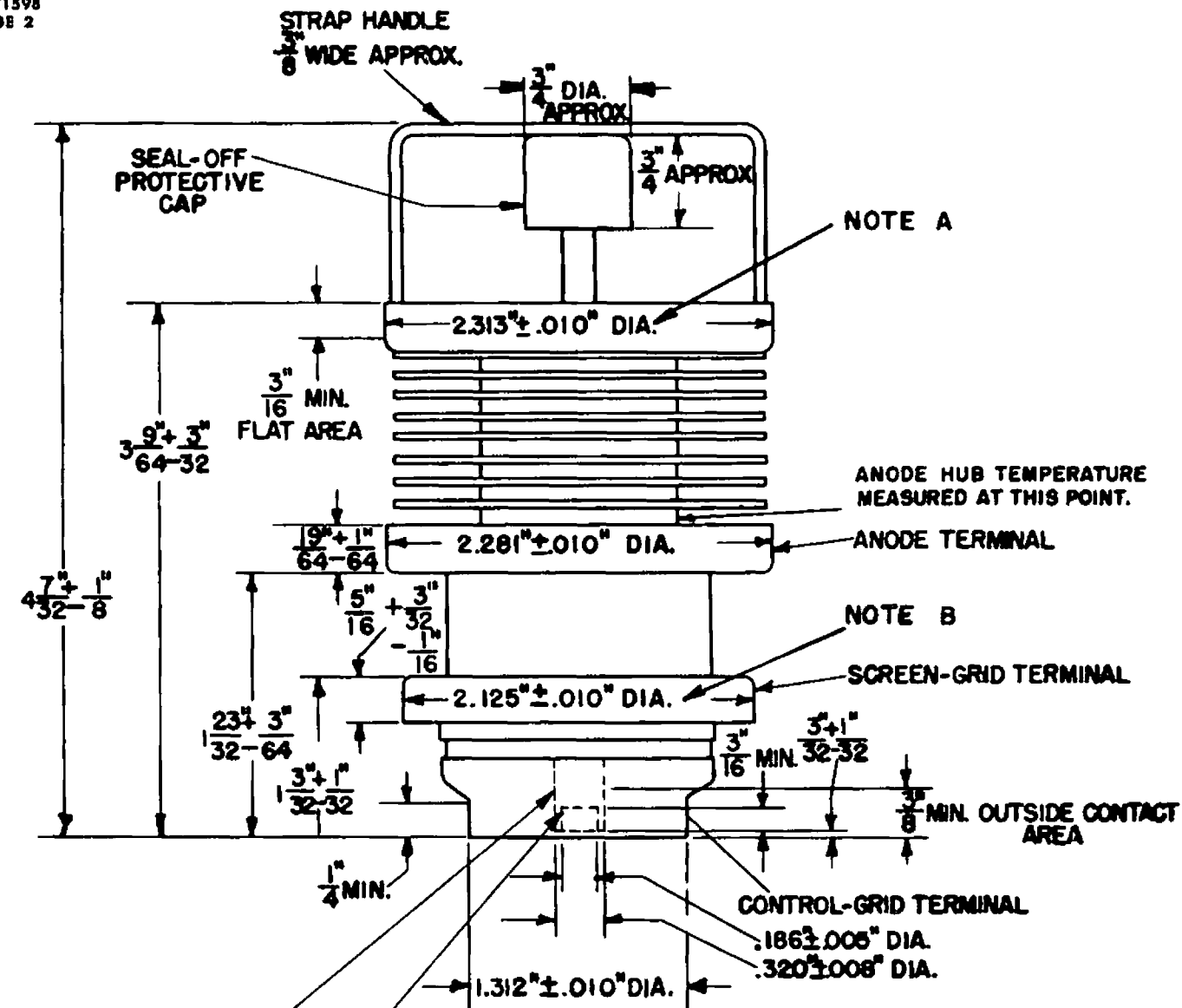
♥ For applications that require longer pulses or higher duty refer to the tube manufacturer for recommendations.

♦ Pulse duration measured between points at 70 percent of peak value. The peak value is defined as the maximum value of a smooth curve through the average of the fluctuations over the top portion of the pulse.

♠ Maximum ratio of on time to elapsed time during any one millisecond period.

GENERAL ELECTRIC

from JEDEC release #2815, May 23, 1960



CATHODE AND
 FILAMENT TERMINAL
 (NOTE C)

FILAMENT CUP TERMINAL
 (NOTES I & D)

NOTES:

1. BOTTOM OF CUP MUST NOT BE USED AS A SOCKET STOP.

(A) MAX. ECCENTRICITY 0.015 INCHES

(B) MAX. ECCENTRICITY 0.008 INCHES

(C) MAX. ECCENTRICITY 0.018 INCHES

(D) MAX. ECCENTRICITY 0.021 INCHES

WITH RESPECT TO CENTERLINE DETERMINED
 BY CENTERS OF ANODE & CONTROL GRID
 TERMINALS.