

7911

Planar Triode

**FOR PLATE-PULSED OSCILLATOR
OR AMPLIFIER APPLICATIONS**

The 7911 is a high- μ triode of ceramic and metal planar construction intended for use as a plate-pulsed oscillator or amplifier at frequencies up to 6000 megahertz.

GENERAL

ELECTRICAL

Cathode - Coated Unipotential	
Heater Characteristics and Ratings	
Heater Voltage, AC or DC*	6.3 \pm 0.3 Volts
Heater Current*	0.55 Amperes
Direct Interelectrode Capacitances♦	
Grid to Plate: (g to p)	1.4 pf
Input: g to (h + k)	5.0 pf
Output: p to (h + k)	0.05 pf

MECHANICAL

Operating Position - Any

See Outline Drawing on page 3 for dimensions and electrical connections

MAXIMUM RATINGS

PLATE-PULSED OSCILLATOR OR AMPLIFIER SERVICE—ABSOLUTE-MAXIMUM VALUES

Cathode Heating Time, minimum	.60	Seconds
Peak Positive-Pulse Plate Supply Voltage	3000	Volts
Duty Factor of Plate Pulse▲	0.001	
Pulse Duration	2.0	Microseconds
Plate Current		
Average▲	2.5	Milliamperes
Average During Plate Pulse□	2.5	Amperes
Negative Grid Voltage		
Average During Plate Pulse	100	Volts
Grid Current		
Average▲	1.0	Milliamperes
Average During Plate Pulse	1.0	Amperes
Cathode Current		
Average▲	3.0	Milliamperes
Average During Plate Pulse□	3.0	Amperes
Plate Dissipation▲	6.5	Watts
Peak Heater-Cathode Voltage		
Heater Positive with respect to Cathode	50	Volts
Heater Negative with respect to Cathode	50	Volts
Envelope Temperature at Hottest Point	250	C

Absolute-Maximum ratings are limiting values of operating and environmental conditions applicable to any electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making no allowance for equipment variations, environmental variations, and the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration and of

all other electron devices in the equipment.

The equipment manufacturer should design so that initially and throughout life no absolute-maximum value for the intended service is exceeded with any tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of the tube under consideration and of all other electron devices in the equipment.

CHARACTERISTICS AND TYPICAL OPERATION**AVERAGE CHARACTERISTICS**

Plate Voltage	200	Volts
Cathode-Bias Resistor	100	Ohms
Amplification Factor	58	
Plate Resistance, approximate	2300	Ohms
Transconductance	25000	Micromhos
Plate Current	23	Milliamperes
Grid Voltage, approximate		
I _b = 100 Microamperes	-5	Volts

PLATE-PULSED OSCILLATOR SERVICE

Frequency	4100	MHz
Heater Voltage	6.3	Volts
Duty Factor	0.001	
Pulse Duration	1.0	Microseconds
Pulse Repetition Rate	1000	Pulses per Second
Peak Positive-Pulse Supply Voltage	3000	Volts
Plate Current		
Average	2.5	Milliamperes
Average During Plate Pulse	2.5	Amperes
Grid Current		
Average	0.3	Milliamperes
Average During Plate Pulse	0.3	Amperes
Useful Power Output		
Average	2.2	Watts
Average During Plate Pulse	2.2	Kilowatts

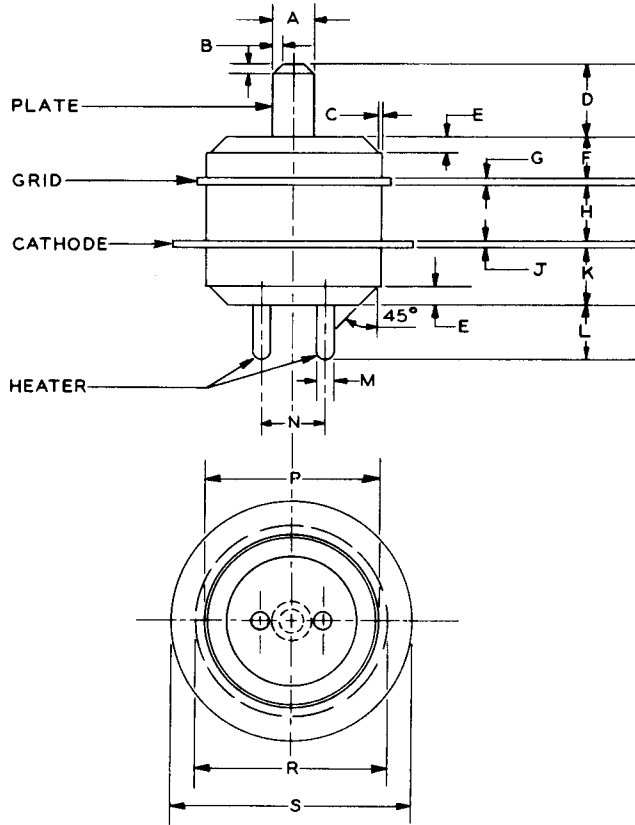
NOTES

- ★ The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.
- Heater current of a bogey tube at E_f = 6.3 volts.
- ◆ Measured using a grounded adapter that provides shielding between external terminals of the tube.
- Applications with a duty factor greater than 0.001 should be referred to your General Electric tube sales representative for recommendation.
- ▲ In any 5000 microsecond interval.
- The regulation and/or series plate-supply impedance must be such as to limit the peak current, with the tube considered a short circuit, to a maximum of 25 amperes.

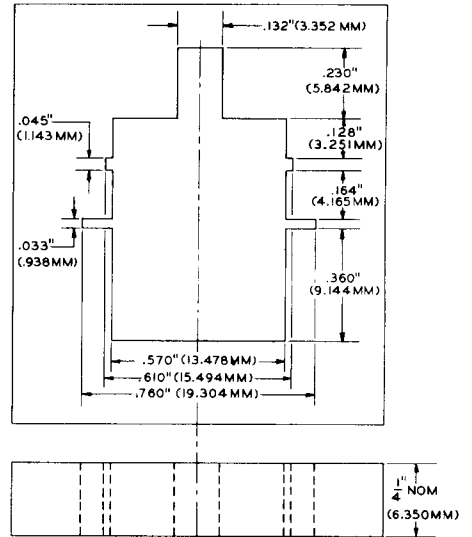
The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or elements. In the absence of an

express written agreement to the contrary, General Electric Company assumes no liability for patent infringement arising out of any use of the tubes with other devices or elements by any purchaser of tubes or others.

PHYSICAL DIMENSIONS



ALIGNMENT GAUGE

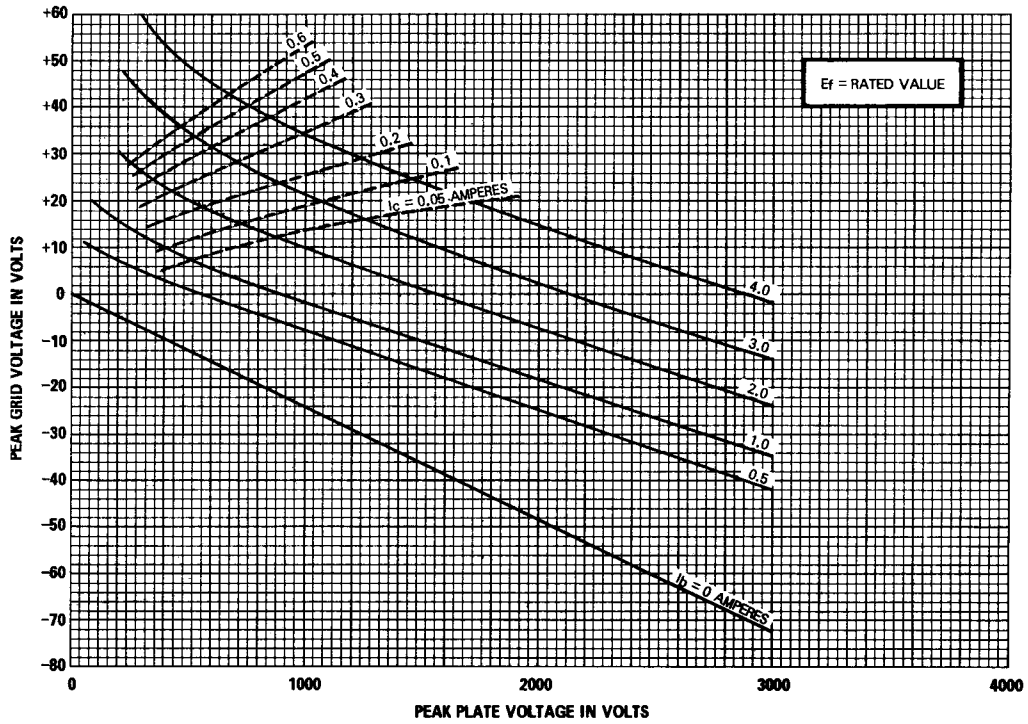


Note: Gauge tolerances are ± 0.001 inches or ± 0.025 millimeters, unless otherwise indicated.

Ref.	INCHES			MILLIMETERS		
	Minimum	Nominal	Maximum	Minimum	Nominal	Maximum
A	0.122		0.128	3.099		3.251
B		0.030			0.76	
C		0.005			0.13	
D	0.220		0.230	5.59		5.84
E	0.040		0.060	1.02		1.52
F	0.120		0.130	3.05		3.30
G	0.025		0.031	0.635		0.787
H	0.167		0.177	4.24		4.50
J	0.025		0.031	0.635		0.787
K	0.170		0.180	4.32		4.57
L	0.170		0.180	4.32		4.57
M	0.047		0.053	1.194		1.346
N	0.185		0.215	4.70		5.46
P	0.535		0.565	13.59		14.35
R	0.598		0.608	15.19		15.44
S	0.748		0.758	19.00		19.25

Note: The millimeter dimensions are derived from the original inch dimensions.

AVERAGE CONSTANT-CURRENT CHARACTERISTICS



TUBE DEPARTMENT



Owensboro, Kentucky 42301