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PLANAR TRIODE

•• Product Information ••

GE17701
GE17701-AL

17701177

The GE17701 is a planar metal-ceramic triode intended for use as a plate-pulsed oscillator or amplifier. This tube was designed primarily for zero-bias, long life, high power, broadbanded amplifiers. The GE17701-AL is a special select "Airline" version. The GE17701 carries a 1 year or 1,000 hour warranty and the GE17701-AL carries a 1 year or 2,000 hour warranty.

CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS

Test Conditions						
Ef	Eb	Ib	RL	Rk	ib	Ec
V	V	mA	kΩ	Ω	A	V

	Minimum	Nominal	Maximum	Units						
Heater Voltage, AC or DC*	6.0	6.3	6.6	Volts						
Heater Current	1.15	1.25	1.35	Amperes	6.3	---	---	---	---	---
Amplification Factor	43	58	73		6.3	200	---	---	68	---
Transconductance	19,000	26,000	33,000	μMhos	6.3	200	---	---	68	---
Grid Voltage, Cutoff	---	---	-85	Volts	6.3	2,000	0.1	100	---	---

Pulse Emission Grid Drive (1μSec pulse - 1 KHz)

GE17701	---	70	90	Volts	6.0	1,000	---	---	---	8.0	-40
GE17701-AL	50	70	90	Volts	6.0	1,000	---	---	---	8.0	-40

Direct Interelectrode Capacitances:

Grid to Plate: {g to p} [Cgp]	1.95	2.15	2.35	pf
Input: {g to (h+k)} [Cin]	7.0	9.0	11.0	pf
Output: {p to (h+k)} [Cout]	---	0.1	0.15	pf
Cathode Heating Time	10	---	---	Seconds

PLATE-PULSED OSCILLATOR SERVICE

Frequency	1,200	Megahertz
Duty Factor	0.004	
Pulse Duration	4	Microseconds
Pulse Repetition Rate	1,000	Pulse Per Second
Peak Positive-Pulse Supply Voltage	2,500	Volts
Plate Current: Average During Pulse	4	Amperes
Grid Current: Average During Pulse	2	Amperes
Power Output: Average During Pulse	3,000	Watts

NOTES

* The equipment designer should design the equipment so that heater voltage is centered at the specified nominal value, with heater supply variations restricted to maintain heater voltage within the specified tolerance. In some applications, longer tube life may be obtained at reduced heater voltage. For specific recommendations, contact MPD directly.

• Measured at 450 KHz using a grounded adapter that provides shielding between external terminals of tube.

GE 17701

Page 2
12-70**ABSOLUTE-MAXIMUM RATINGS****PLATE-PULSED OSCILLATOR SERVICE**

Peak Positive-Pulse Plate Supply Voltage	3500	Volts
1 Microsecond Pulse Duration	2500	Volts
4 Microsecond Pulse Duration	0.004	
Duty Factor of Plate Pulse	5.0	Amperes
Plate Current, Average During Pulse	120	Volts
Negative Grid Voltage, Average During Pulse	2.0	Amperes
Grid Current, Average During Pulse	30	Watts
Plate Dissipation		
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
Temperature Differential Between Two Adjacent Electrodes	100	°C
Mechanical Vibration (20-2000 Hz Sinusoidal)	30	G Peak

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

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

NOTES

§ In any 5 millisecond interval.

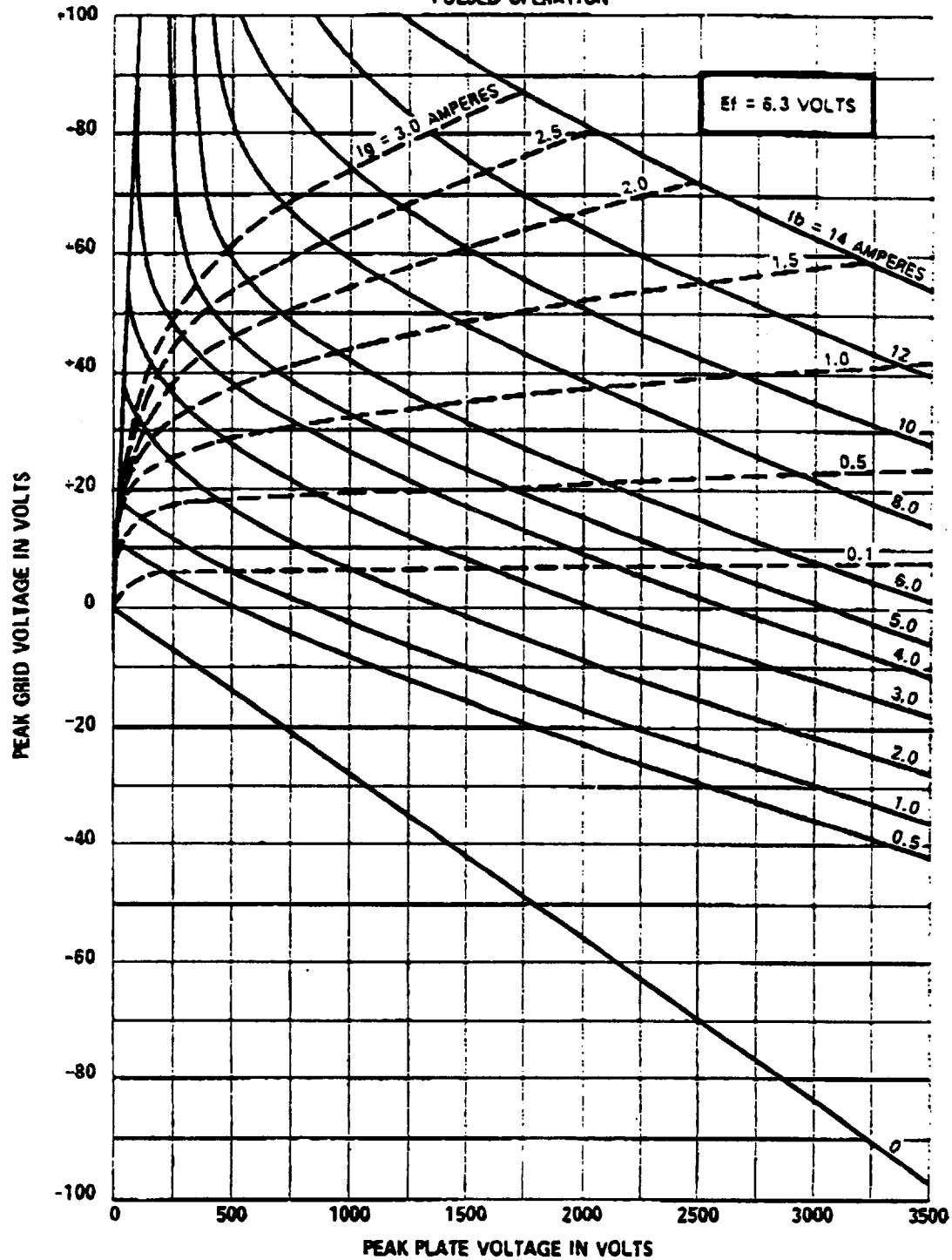
- The regulation and/or series plate supply impedance must be such as to limit the peak current, with the tube considered a short circuit, to a maximum of 10 times the maximum plate current rating.
- ▲ For specific recommendations concerning higher temperature operation, contact your General Electric sales representative.
- ◆ This assumes no thermal heat sinking to any insulator.

The devices 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 devices by General Electric Company conveys any license under patent claims covering combinations of these devices with other devices or elements, to the

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

AVERAGE CONSTANT-CURRENT CHARACTERISTICS

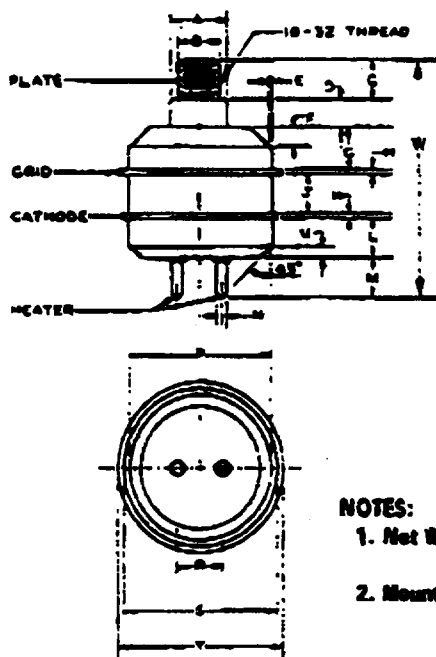
PULSED OPERATION



GE17701

Page 4
12-70

PHYSICAL DIMENSIONS



NOTES:

1. Net Weight - 0.307 Ounces
- 8.7 Grams
2. Mounting Position - Any

Ref.	INCHES			MILLIMETERS		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.247	0.250	0.253	6.274	6.350	6.426
B	---	---	0.180	---	---	4.626
C	0.130	0.150	0.170	3.302	3.810	4.318
D	0.070	0.080	0.090	1.778	2.032	2.286
E	---	0.005	---	---	0.127	---
F	0.075	0.085	0.095	1.905	2.159	2.388
G	0.182	0.187	0.192	4.623	4.750	4.877
H	0.025	0.028	0.031	0.635	0.711	0.787
J	0.170	0.175	0.180	4.318	4.445	4.572
K	0.025	0.028	0.031	0.635	0.711	0.787
L	0.170	0.175	0.180	4.318	4.445	4.572
M	0.170	0.175	0.180	4.318	4.445	4.572
N	0.047	0.050	0.053	1.194	1.270	1.348
P	0.635	0.650	0.665	16.13	16.51	16.89
R	0.186	0.200	0.214	4.724	5.080	5.436
S	0.698	0.703	0.708	17.73	17.86	17.98
T	0.748	0.753	0.758	19.00	19.13	19.26
U	0.040	0.050	0.060	1.016	1.270	1.524
W	0.942	0.938	1.054	23.93	25.35	26.77

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