



**ELECTRONIC
INNOVATIONS**
IN ACTION

MICROWAVE DEVICES

— PRODUCT INFORMATION —

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GE16841

Planar Triode

The GE16841 is a metal-ceramic planar triode intended for use as a CW oscillator or amplifier. This tube is rated for long life primarily as a local oscillator up to about 6000 megahertz.

CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS

	Minimum	Bogey	Maximum	Units	Test Conditions				
					Ef V	Eb V	Ib Ma	Eg V	Rk Ohms
Heater Voltage, AC or DC *	5.4	5.7	6.0	Volts					
Heater Current	250	270	290	Milliamperes	5.7	---	---	---	---
Plate Current	9	14	19	Milliamperes	5.7	150	---	---	82
Amplification Factor	55	78	100		5.7	150	---	---	82
Transconductance	12000	17000	---	Micromhos	5.7	100	---	0	---
Grid Voltage, Cutoff	---	---	-5.5	Volts	5.7	150	0.1	---	---
Direct Interelectrode Capacitances •									
Grid to Plate: (g to p)	0.85	1.05	1.25	pf					
Input: g to (h+k)	1.5	2.1	2.7	pf					
Output: p to (h+k)	---	0.018	0.026	pf					
Cathode Heating Time	60	---	---	Seconds					

CW OSCILLATOR SERVICE

Frequency	4300	Megahertz
DC Plate Voltage	100	Volts
Grid Resistor	Adjusted	
Plate Current	15	Milliamperes
Grid Current	3	Milliamperes
Power Output	25	Milliwatts

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

GENERAL  ELECTRIC

ABSOLUTE-MAXIMUM RATINGS

Plate Voltage	250	Volts
Positive DC Grid Voltage	0	Volts
Negative DC Grid Voltage	50	Volts
Plate Dissipation	1.5	Watts
DC Grid Current	5	Milliamperes
DC Cathode Current	20	Milliamperes
Peak Cathode Current	80	Milliamperes
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode	50	Volts
Heater Negative with Respect to Cathode	50	Volts
Grid Circuit Resistance	10000	Ohms
Envelope Temperature at Hottest Point ♦	250	°C
Temperature Differential Between Two Adjacent Electrodes ▲	75	°C
Mechanical Vibration (20-2000 Hz Sinusoidal)	10	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

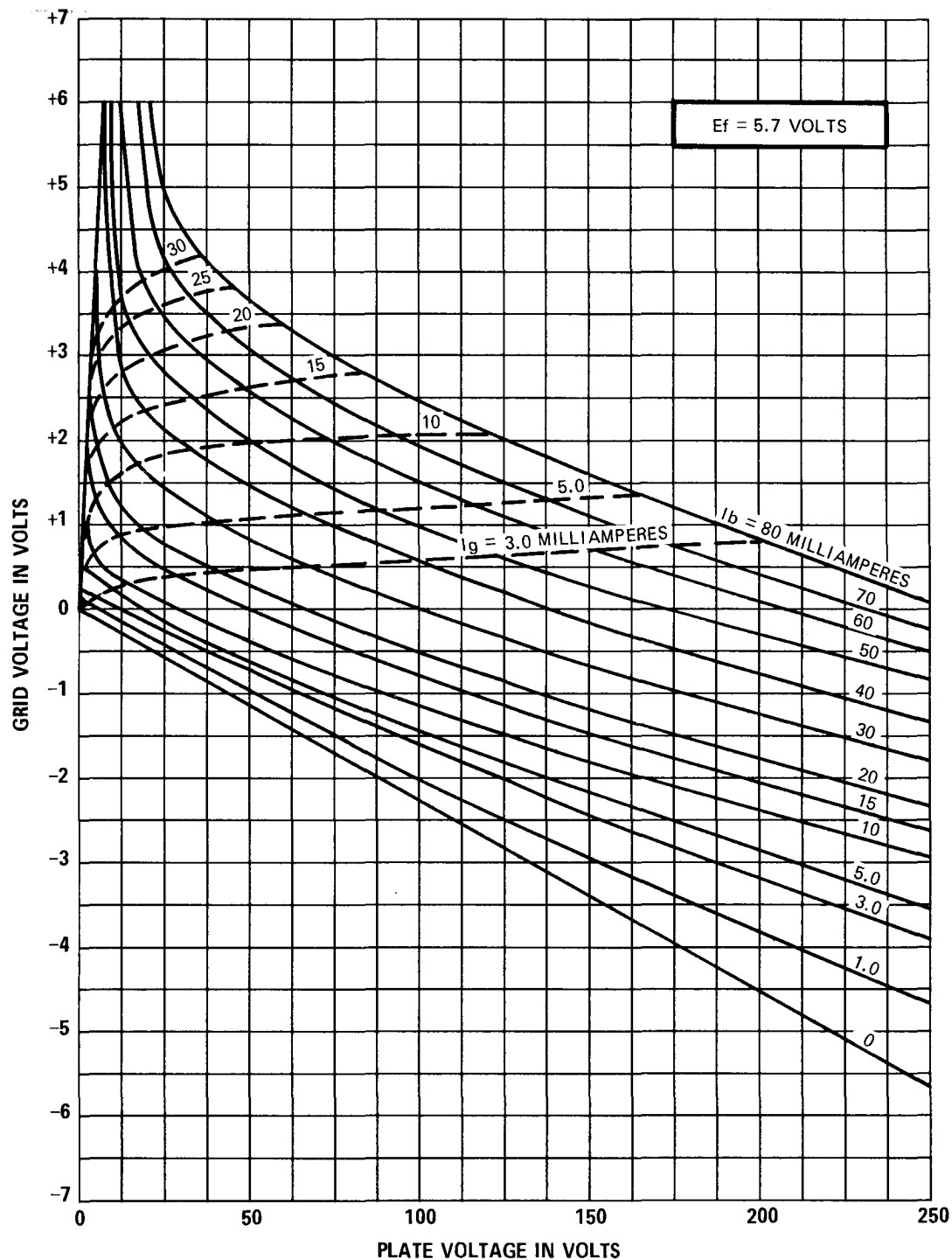
♦ For specific recommendations concerning higher temperature operation, contact your General Electric sales representative.

▲ This assumes no thermal heat sinking to any insulator.

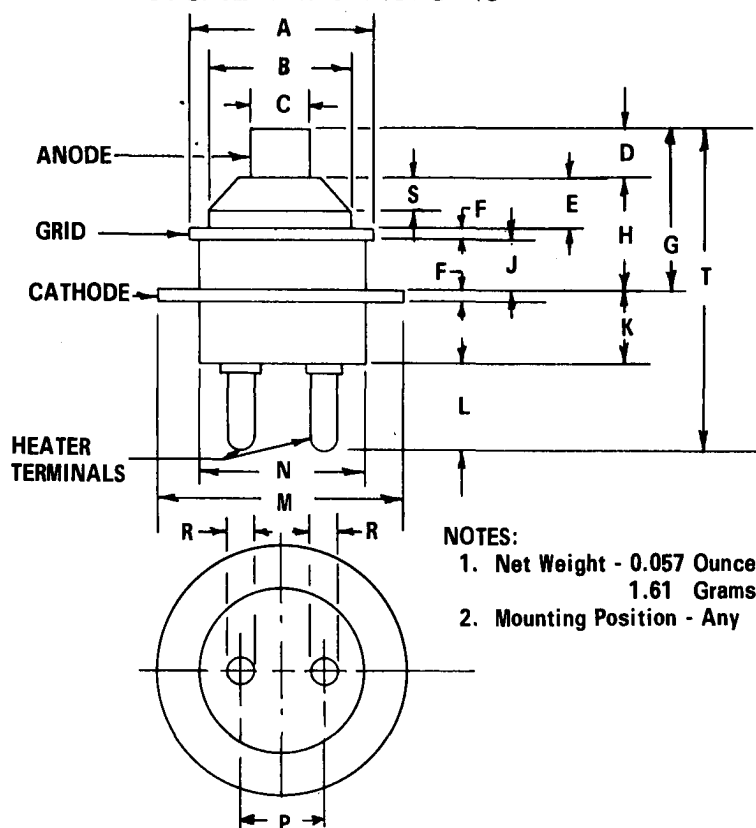
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AVERAGE CONSTANT-CURRENT CHARACTERISTICS



PHYSICAL DIMENSIONS



Ref.	INCHES			MILLIMETERS		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.357	0.360	0.363	9.068	9.144	9.220
B	---	---	0.285	---	---	7.239
C	0.108	0.110	0.112	2.743	2.794	2.845
D	0.095	0.100	0.105	2.413	2.540	2.667
E	0.095	0.100	0.105	2.413	2.540	2.667
F	0.025	0.028	0.031	0.635	0.711	0.787
G	0.315	0.325	0.335	8.001	8.225	8.509
H	0.216	0.224	0.232	5.486	5.690	5.893
J	0.094	0.098	0.102	2.388	2.489	2.591
K	0.143	0.150	0.157	3.632	3.810	3.988
L	0.165	0.175	0.185	4.191	4.445	4.699
M	0.476	0.480	0.484	12.09	12.19	12.29
N	---	---	0.330	---	---	8.458
P	0.130	0.136	0.142	3.302	3.454	3.607
R	0.048	0.051	0.054	1.219	1.295	1.372
S	---	0.060	---	---	1.524	---
T	0.623	0.650	0.677	15.82	16.51	17.20

TUBE PRODUCTS DEPARTMENT

GENERAL  ELECTRIC

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