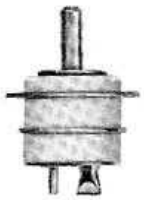
EIMAC
Division of Varian
SAN CARLOS
CALIFORNIA

PRELIMINARY DATA

8892

PLANAR TRIODE

The 8892 is a compact, rugged ceramic/metal planar triode intended for CW use or as a plate- or grid-pulsed oscillator or amplifier. It features high power output, high plate efficiency and excellent frequency stability under severe environmental conditions. The construction of the 8892 readily lends itself to cavity circuit operation resulting in an extremely compact rf source. The 8892 is capable of providing in excess of 1 kW peak power at 6 GHz.



GENERAL CHARACTERISTICS[1]

ELECTRICAL

Cathode: Oxide Coated, Unipotential		
Heater: Voltage	6.3 (±5%)	V
Current, at 6.3 volts	0.65	A
Cathode Heating Time	60	sec.
Transconductance (Average)	30	mmhos
Amplification Factor (Average)	60	
Direct Interelectrode Capacitance, without heater voltage		
Grid-Cathode	5.00	pF
Grid-Plate	1.60	pF
Plate-Cathode (maximum)	0.06	pF
Plate Dissipation (maximum)[2]	50	W
Grid Dissipation (maximum)	1.5	W

1. The data presents the nominal design objectives for this product and the characteristics and specifications of this type are subject to change. The device is now under development and is made available for experimental purposes only. For the most recent information concerning the status of this development, please contact your nearest Varian Electron Tube and Device Field Office or the Product Manager, Eimac Division of Varian, Salt Lake City, Utah.

2. With forced air cooling or appropriate conduction and/or convection cooling.

MECHANICAL

Maximum Overall Dimensions:	
Length	1.059 in; 26.90 mm
Diameter	0.758 in; 19.3 mm
Net Weight	0.25 oz; 7.0 gm
Operating Position	Any
Maximum Operating Temperature:	
Ceramic/Metal Seals	250°C
Cooling	Conduction and Forced Air

  Printed in U.S.A.

RF OSCILLATOR
Class C, Pulsed

ABSOLUTE MAXIMUM RATINGS:

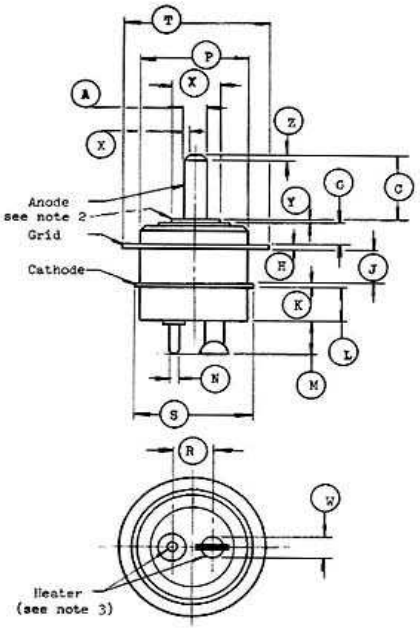
DC PLATE VOLTAGE	2.0	kVdc
PEAK PLATE VOLTAGE	2.5	kv
DC PLATE CURRENT	100	mAdc
DC GRID CURRENT	30	mAdc
PEAK PLATE CURRENT	3.0	a
PEAK GRID CURRENT	1.2	a
DC GRID VOLTAGE	-100	Vdc
PULSE DURATION[1]	3.0	μs
DUTY FACTOR[1]	.0025	
PEAK HEATER-CATHODE VOLTAGE[2]	±50	V
FREQUENCY	6.0	GHz

1. For applications requiring longer pulse duration and/or higher duty factor, please consult the Product Manager, EIMAC-Division of Varian, Salt Lake City, Utah.
2. The heater is electrically isolated from the cathode.

APPLICATION

The cathode and grid flanges should not be altered in any way such as by machining or filing, since final seal could be damaged. Maximum torque applied to flanges during installation should not exceed 15 inch pounds.
For optimum rf performance, the anode line should make good rf contact on the anode area indicated in the outline drawing.

Soldered connections may be made to the anode stud, grid or cathode flanges, and heater contacts where adequate heat sinking and good soldering practices are followed to minimize the heat applied to the tube and the thermal gradient across the metal to ceramic brazed areas.



DIM.	DIMENSIONAL DATA					
	INCHES			MILLIMETERS		
	MIN	MAX	REF	MIN.	MAX.	REF
A	0.122	0.128	--	3.10	3.25	--
C	0.325	0.335	--	8.26	8.51	--
G	0.120	0.130	--	3.05	3.30	--
H	0.025	0.031	--	0.64	0.79	--
J	0.167	0.177		4.24	4.50	
K	0.025	0.031	--	0.64	0.79	--
L	0.170	0.185	--	4.32	4.70	--
M	0.170	0.190	--	4.32	4.83	--
N	0.047	0.053	--	1.19	1.35	--
P	0.535	0.565	--	13.59	14.35	--
R	0.185	0.215	--	4.70	5.46	--
S	0.598	0.608	--	15.19	15.44	--
T	0.748	0.758	--	19.00	19.25	--
W	--	--	0.100	--	--	2.54
X	0.250	0.260	--	6.35	6.60	--
Y	--	0.020	--	--	0.51	--

Note:
1. Ref. Dims. are for info. only & are not req'd. for inspection purposes.
2. For optimum rf performance the Anode line should make rf contact at this point on the Anode Cup.
3. Heater is electrically isolated from cathode.