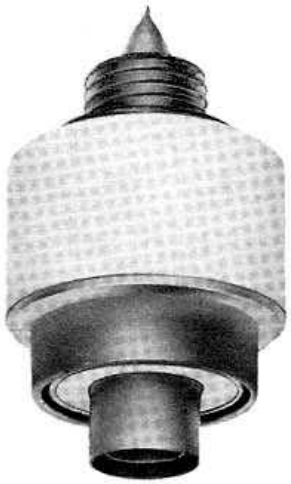
EIMAC
Division of Varian
SAN CARLOS
CALIFORNIA

8755

UHF TRIODE



The EIMAC 8755 is a miniature, frequency-stable, planar triode for advanced airborne and space applications up to 3000 MHz at full ratings. The rugged ceramic/metal pulse tube is designed for high-voltage, high-pulse current operation, and features large contact areas for improved electrical paths. The tube may be used as an amplifier or an oscillator, and employs an arc-resistant cathode.

GENERAL CHARACTERISTICS

ELECTRICAL

		Min.	*Nom.*	*Max.*	
Cathode:	Arc Resistant Oxide				
	Heating Time	60			seconds
Heater:	Voltage		6.3		volts
	Current at 6.3 V	1.2	1.3	1.4	amps
Amplification Factor			125		
Transconductance Ib 105 mA			40,000		umhos
Direct Interelectrode Capacitances:					
	Grid-Cathode		9.3		pF
	Plate-Cathode		.06		pF
	Grid Plate		1.25		pF
Frequency for Maximum Ratings			3000		MHz

MECHANICAL

Base	Graduated Cylindrical Surface
Operating Position	Any
Maximum Operating Temperatures:	
Ceramic-to-Metal Seals	250°C
Anode Core	250°C
Cooling	Conduction or forced air*
Maximum Over-All Dimensions:	
Height	1.47 inches
Diameter	0.83 inches
Net Weight	.67 ounce
Shipping Weight (approx.)	5.5 ounces

*With suitable cooler attached

Printed in U.S.A.

GRID PULSED OSCILLATOR OR AMPLIFIER

MAXIMUM RATINGS

DC PLATE VOLTAGE	8000	VOLTS
DC GRID VOLTAGE	−150	VOLTS
PULSE PLATE CURRENT	5	AMPS
PLATE DISSIPATION*	150	WATTS**
GRID DISSIPATION*	1.5	WATTS
PULSE DURATION	6	uSEC****
DUTY	.0033	****

TYPICAL OPERATION

Frequency	1600	3000	3400	MHz
DC Plate Voltage	4000	4000	5000	Volts
DC Grid Voltage	−53	−75	−100	Volts
Pulse Plate Current	2.0	5	5	Amp
Pulse Power Output***	3.4	6	7	kW
Driving Power***	220	1350	1850	Watts
Pulse Duration	200	2	2	usec
Duty	.01	.001	.001	

PLATE PULSED OSCILLATOR OR AMPLIFIER

MAXIMUM RATINGS

PEAK PULSE PLATE VOLTAGE	10,000	VOLTS
DC OR PULSE GRID VOLTAGE	−150	VOLTS
PULSE PLATE CURRENT	5	AMPS
PLATE DISSIPATION (AVG.)	150	WATTS**
GRID DISSIPATION (AVG.)	1.5	WATTS
PULSE DURATION	6	uSEC****
DUTY FACTOR	.0033	****

PULSE MODULATOR OR PULSE AMPLIFIER (REGULATOR)

MAXIMUM RATINGS

DC PLATE VOLTAGE	8,000	VOLTS
PEAK PLATE VOLTAGE	10,000	VOLTS
DC OR PULSE GRID VOLTAGE	−150	VOLTS
PULSE PLATE CURRENT	5	AMPS
PLATE DISSIPATION (AVG.)	150	WATTS**
GRID DISSIPATION (AVG.)	1.5	WATTS
PULSE DURATION	6	uSEC ****
DUTY FACTOR	.0033	****

*Average
**With suitable cooler attached
***Measured
****For above plate current

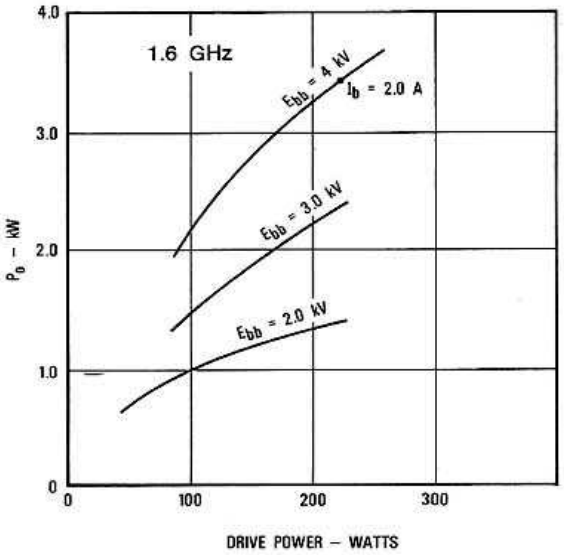
APPLICATION

Cooling — The 8755 may be cooled by conduction or forced air.

Where forced air cooling is required, Anode Cooler, PN-014653 can be supplied. This cooler will be satisfactory for anode dissipation up to 150 watts with the proper air stream.

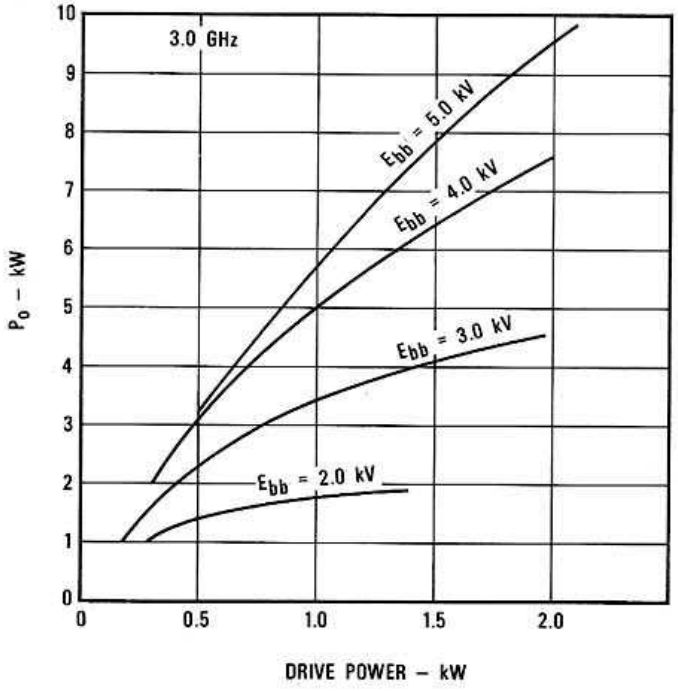
Special Applications — For further information, check with the nearest Varian Electron Tube and Device Field Office, or the Product Manager, Power Grid Division, EIMAC Division of Varian, 301 Industrial Way, San Carlos, California.

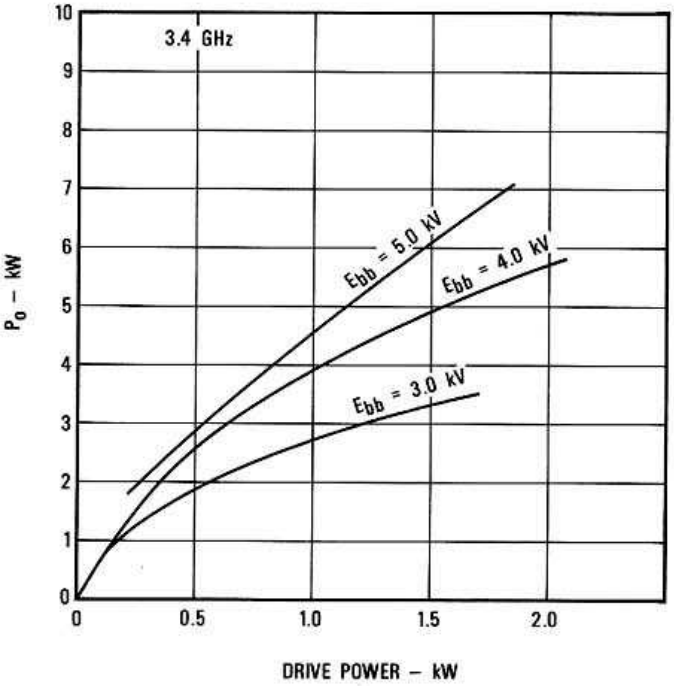
TYPICAL PERFORMANCE
8755 GRID PULSED AMPLIFIER
(PULSE DURATION 200 MICROSECONDS – DUTY .01)

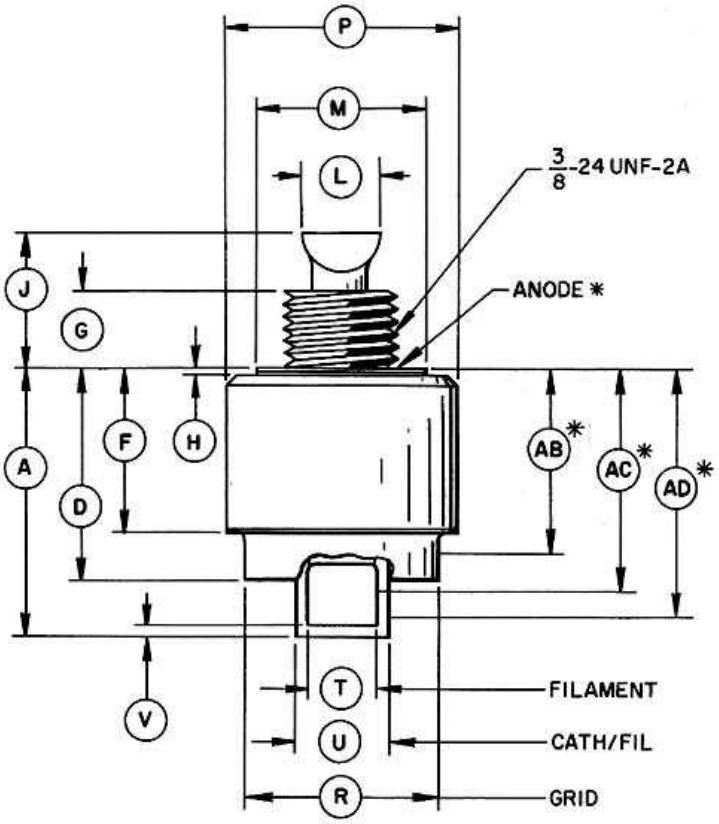


TYPICAL PERFORMANCE
8755 GRID PULSED AMPLIFIER

(PULSE DURATION 2 MICROSEC – DUTY .001)





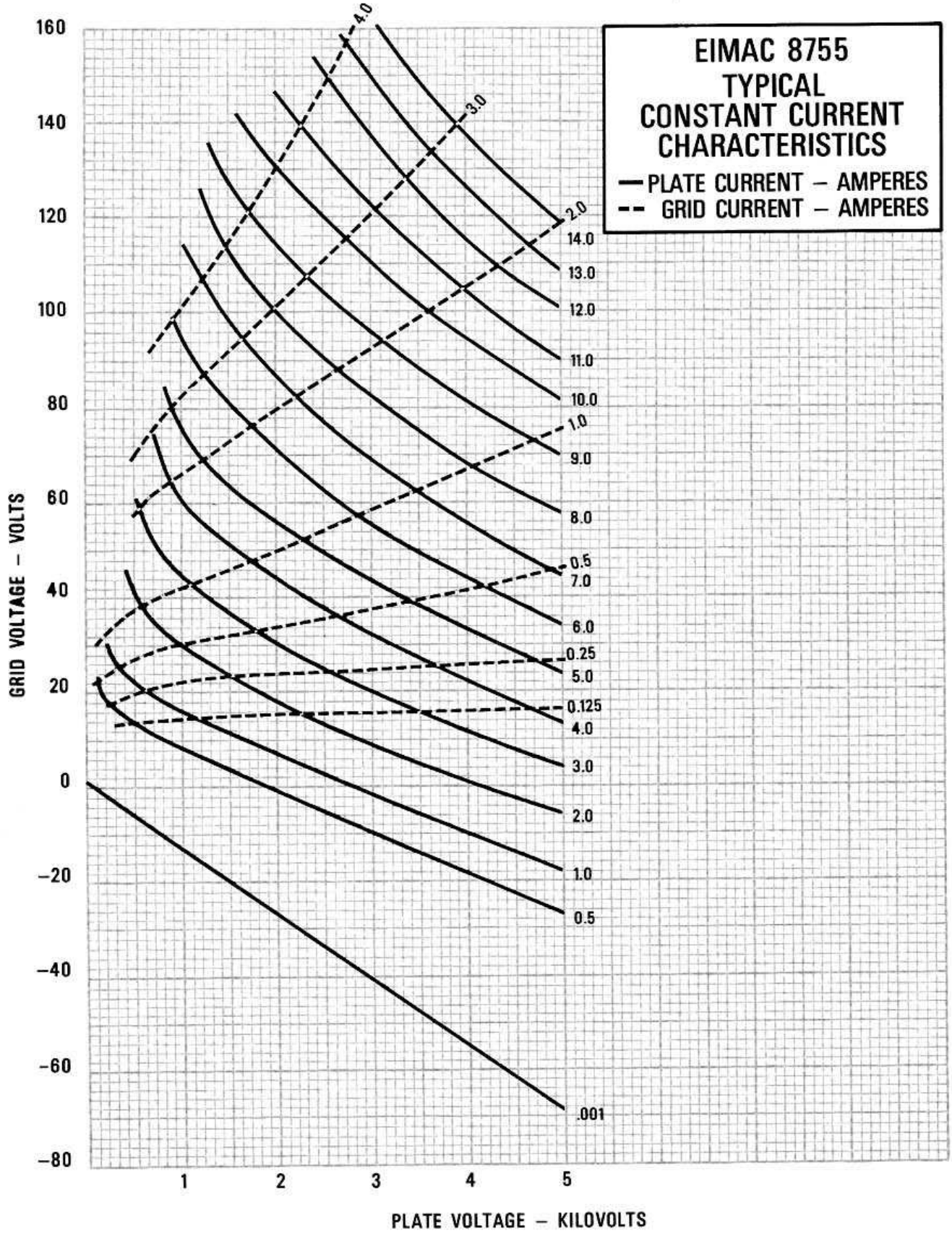


DIMENSIONS IN INCHES

DIMENSIONAL DATA			
DIM.	MIN.	MAX.	REF.
A		1.020	
D	.760	.800	
F		.570	
G	.250	.270	
H		.040	
J		.450	
L		.260	
M	.550	.575	
P	.770	.830	
R	.650	.670	
T	.210	.225	
U	.310	.330	
V		.040	
AB	.590	.740	
AC	.760	.885	
AD	.800	.975	

NOTES

1. REF. DIMS. ARE FOR INFO. ONLY AND ARE NOT REQ'D. FOR INSPECTION PURPOSES.
2. (*) CONTACT SURFACE.
3. ANODE FLANGE IS ELECTRICAL CONTACT. STUD IS FOR HEAT TRANSFER.


EIMAC 8755
TYPICAL
CONSTANT CURRENT
CHARACTERISTICS
— PLATE CURRENT – AMPERES
-- GRID CURRENT – AMPERES
GRID VOLTAGE – VOLTS
160
140
120
100
80
60
40
20
0
–20
–40
–60
–80
1
2
3
4
5
PLATE VOLTAGE – KILOVOLTS
4.0
3.0
2.0
1.0
0.5
0.25
0.125
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.5
.001