



ELECTRON TUBE DEPARTMENT ■ COMPONENTS DIVISION
INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION, CLIFTON, NEW JERSEY

*
F-8104
AND F-8104-J
POWER TRIODES

DESCRIPTION:

THE F-8104 AND F-8104-J ARE TRIODES DESIGNED FOR USE AS R-F AMPLIFIERS AND OSCILLATORS. THE ANODE IS WATER COOLED AND 8 KILOWATTS OF POWER MAY BE DISSIPATED DURING CONTINUOUS COMMERCIAL SERVICE. THE F-8104-J IS PROVIDED WITH AN INTEGRAL WATER JACKET ATTACHED TO THE TUBE.

ELECTRICAL:

FILAMENT VOLTAGE	15	VOLTS
FILAMENT CURRENT	36	AMPERES
AMPLIFICATION FACTOR	25	
DIRECT INTER-ELECTRODE CAPACITANCE		
GRID-PLATE	14.2	UUF
GRID-FILAMENT	16.3	UUF
PLATE-FILAMENT	1.9	UUF

MECHANICAL:

MOUNTING POSITION	VERTICAL, ANODE UP OR DOWN
TYPE OF COOLING	CIRCULATING WATER
ANODE WATER FLOW REQUIRED	3.5 GPM
WATER PRESSURE, MAXIMUM	80 PSI
OUTLET WATER TEMPERATURE, MAXIMUM	70 °C
MAXIMUM GLASS TEMPERATURE	180 °C
NET WEIGHT, APPROXIMATE	1-1/4 LBS.

* FORMERLY D-1040 AND D-1040-J

MAXIMUM RATING AND TYPICAL OPERATING CONDITIONS:

R-F POWER AMPLIFIER AND OSCILLATOR - CLASS C
(KEY DOWN CONDITIONS PER TUBE WITHOUT AMPLITUDE MODULATION)

MAXIMUM RATINGS, ABSOLUTE VALUES:

	<u>2 MC TO 30 MC</u>	<u>BELOW 2 MC</u>	
D-C PLATE VOLTAGE *	6.0	8.0	MAX. KV
D-C GRID VOLTAGE	-1500	-1500	MAX. KV
D-C PLATE CURRENT	2.2	2.5	MAX. AMPERES
D-C GRID CURRENT	.300	.300	MAX. AMPERES
PLATE INPUT	12	18	MAX. KW
PLATE DISSIPATION	8	8	MAX. KW

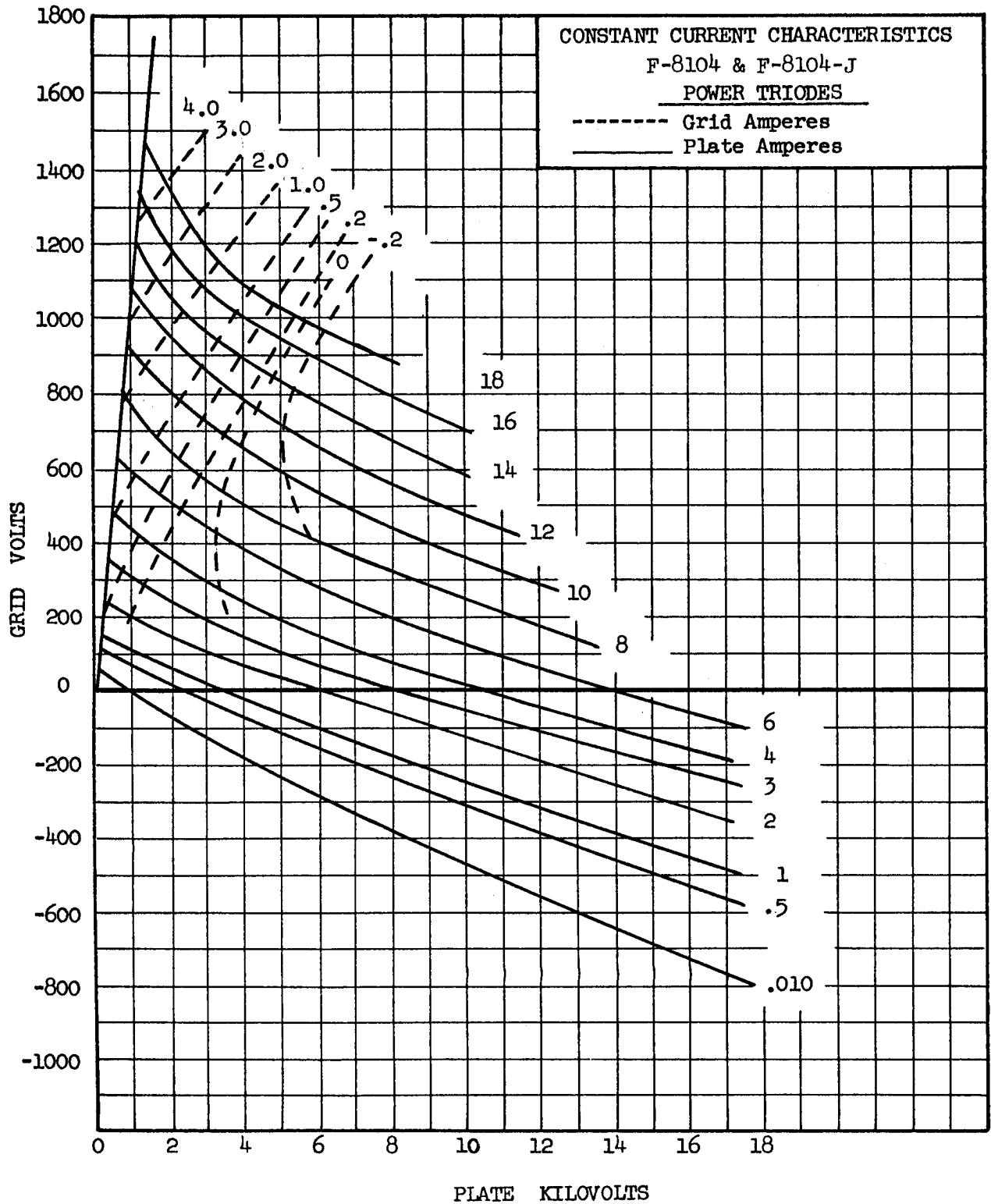
TYPICAL OPERATION:

D-C PLATE VOLTAGE	5.5	7.5	KV
D-C GRID VOLTAGE	-600	-800	VOLTS
PEAK R-F GRID VOLTAGE	1300	1600	VOLTS
D-C PLATE CURRENT	2.0	2.4	VOLTS
D-C GRID CURRENT, APPROXIMATE	.17	.15	AMPERES
DRIVING POWER, APPROXIMATE	220	240	WATTS
POWER OUTPUT, APPROXIMATE	6.8	11.5	KW
R-F LOAD RESISTANCE	1175	1300	OHMS

* RECTIFIED, UNFILTERED, THREE-PHASE, HALF-WAVE
PLATE SUPPLY IS ACCEPTABLE.

ADDITIONAL INFORMATION FOR SPECIFIC APPLICATIONS CAN BE OBTAINED FROM THE:

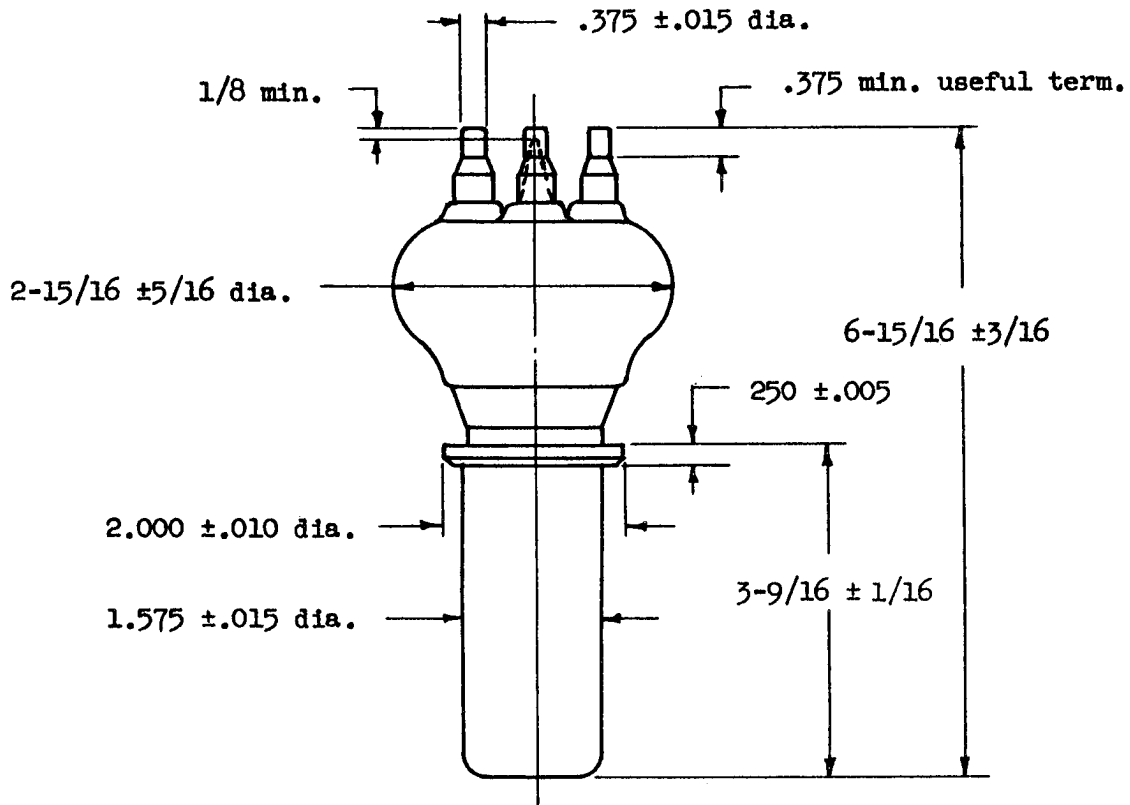
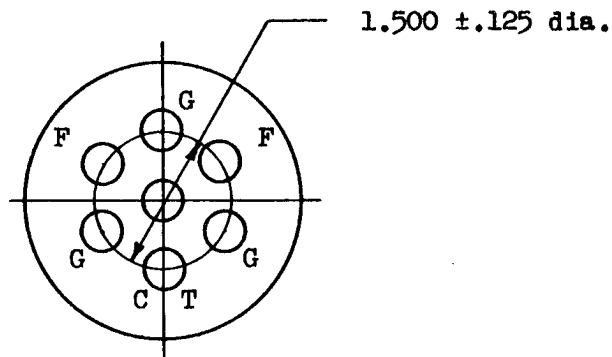
ELECTRON TUBE APPLICATIONS SECTION
ITT COMPONENTS DIVISION
Post Office Box 412
CLIFTON, NEW JERSEY



Fil. Terminal - Yellow
 Fil. Center Terminal - Red
 Grid Terminal - Black

ACCESSORIES

Water Jacket
 RT-53933-12 (Ordering #)
 RT-54530-1 (Outline Dwg)
 O-Ring
 RT-53836-1 - Type "AA"



NOTE:

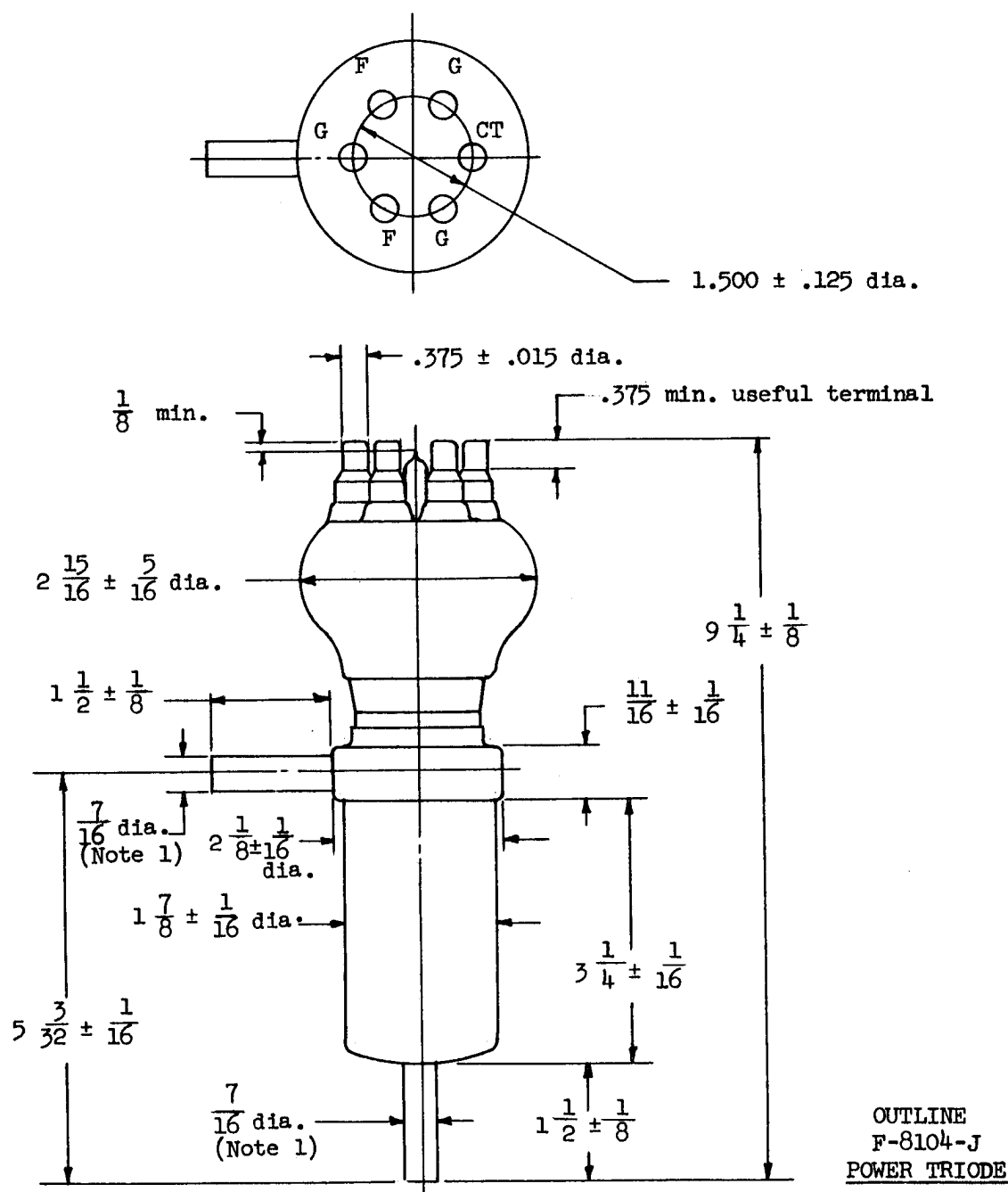
1/2" flexible copper lead,
 6" long, available on each
 terminal upon request.

OUTLINE

F-8104 POWER TRIODE

Fil. Terminal - Yellow
 Fil. Center Term. - Red
 Grid Terminal - Black

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Note 1: Brass compression
 fittings are useful in
 making water connections.

Note 2: 1/2" flexible copper
 lead, 6" long, avail-
 able on each terminal
 upon request.



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