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RK7547 | PRELIMINARY DATA SHEET

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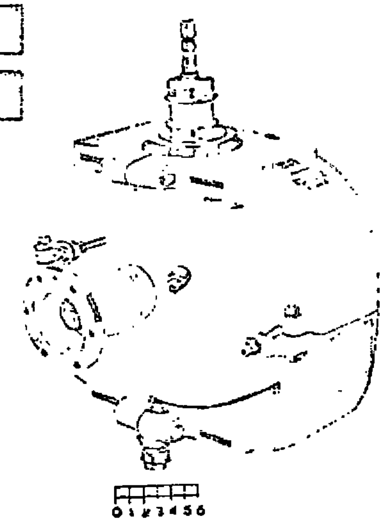


GENERAL DESCRIPTION

The RK7547 magnetron is a mechanically tunable, high power, pulsed-type oscillator which is capable of delivering a minimum of 2.0 megawatts peak power and 3600 watts average power. The RK7547 may be rapid hand or motor tuned to any desired frequency in the 406 to 450 megacycle region. It is an integral magnet, unipotential cathode type tube requiring liquid cooling and having a 3 1/8" coaxial output.

Mechanical Data

Mounting Position	Cathode Vertical
Net Weight	220 Lbs.
Cooling	Forced Liquid
Input Bushing	Oil Immersed
Pressurization (Output)	30 p.s.i.a.

Typical Electrical Data

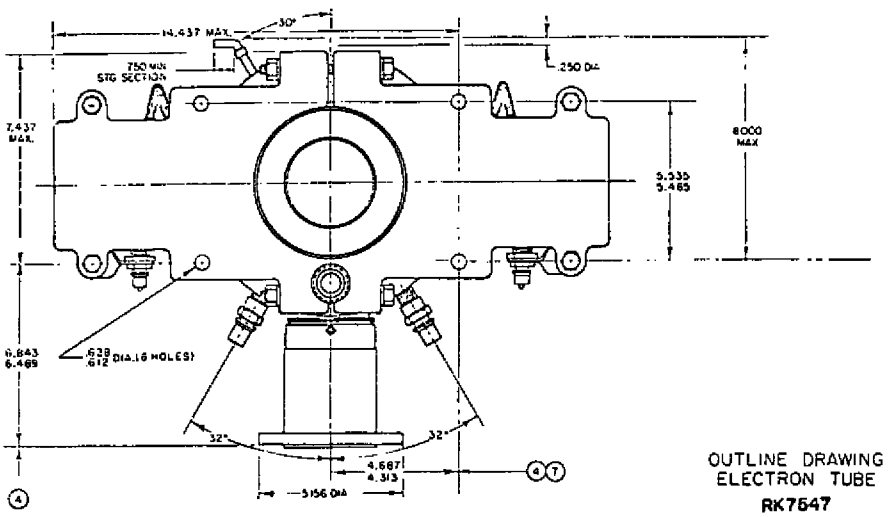
Heater Current (Preheat - 600 sec.)	55 Amperes
Heater Voltage @ 55 A.	6.5 Volts
Pulse Duration (tpc)	6.0 usec.
Peak Anode Voltage	55 Kilovolts
Peak Anode Current	97.2 Amperes
Average Power Output	3950 Watts
Voltage Rise Time	0.95 usec. Min.
Maximum VSWR	1.5
RF Bandwidth (@ 6 db level)	2.0/tpc Max.
Life (1.5 VSWR, Cycled)	1000 Hrs. Min.

Reliable operation and maximum magnetron life can be achieved only if the overall radar transmitter is designed with the magnetron characteristics and peculiarities clearly in mind. This preliminary Data Sheet is intended to serve as an introduction only and should not be used as an absolute guide to users. Detailed tube specifications are available on request, specific problems and applications should be directed to the Applications Engineering Department, Microwave and Power Tube Division, Raytheon Company, Waltham, Massachusetts.

[illegible] tube is being manufactured [illegible] delivery of sample tubes [illegible] of dimensions may be made [illegible] information concerning this tube contact the [illegible] Company

RAYTHEON

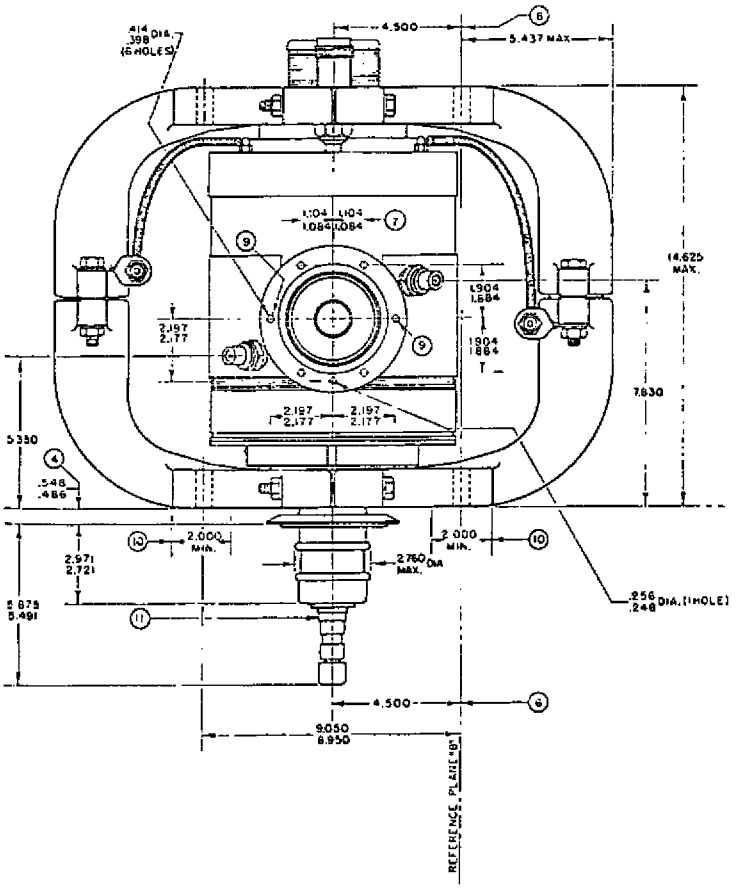
preliminary
data
sheet

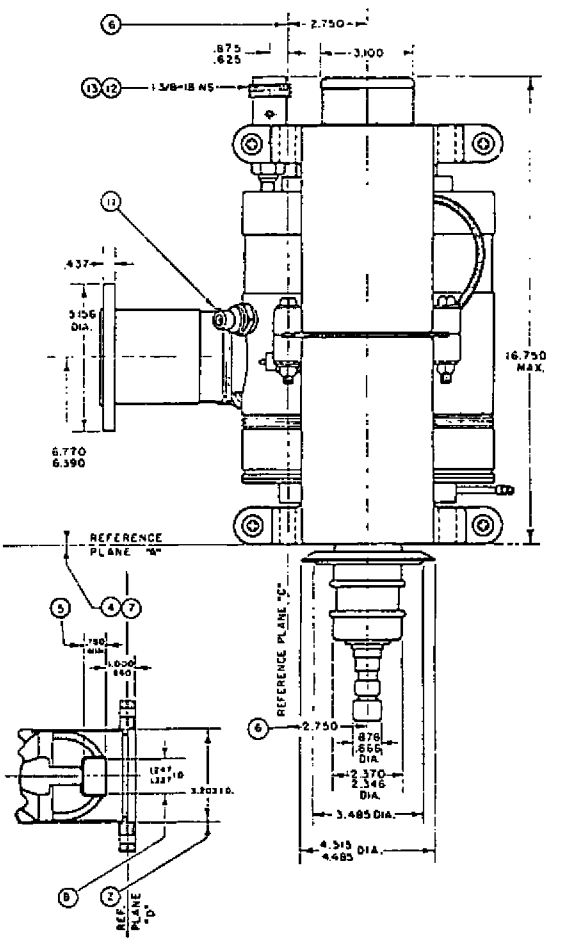


OUTLINE DRAWING
ELECTRON TUBE
RK7547

NOTES

1. REFERENCE PLANE "A" IS DEFINED AS A PLANE PASSING ALONG THE FACE OF THE MOUNTING SURFACE AS SHOWN.
2. REFERENCE PLANE "B" IS DEFINED AS A PLANE PERPENDICULAR TO PLANE "A" AND PASSING THROUGH THE CENTER OF HOLES AT PLANE "A" AS SHOWN.
3. REFERENCE PLANE "C" IS DEFINED AS A PLANE PERPENDICULAR TO PLANES "A" AND "B" PASSING THROUGH THE CENTER OF THE HOLE AT PLANE "A" AS SHOWN.
4. INCLUDES ANGULAR AS WELL AS LATERAL DEVIATION.
5. APPLIES TO STRAIGHT PORTION OF INNER CONDUCTOR WALL.
6. PARTS ON THIS CENTER-LINE MAY VARY FROM TRUE LOCATION BY .125
7. APPLIES TO CENTER OF DIAMETER "Z".
8. CENTER-LINE OF INNER CONDUCTOR SHALL BE CONCENTRIC WITH CENTER-LINE OF OUTER CONDUCTOR WITHIN .545
9. CENTER-LINE PASSING THROUGH THESE HOLES MUST BE PARALLEL TO REFERENCE PLANE "A" WITHIN .010 T.I.R.
10. THESE SURFACES MUST BE COPLANAR WITHIN .015
11. TEMPERATURE MEASURING POINTS.
12. PITCH DIAMETER MUST ACCEPT CLASS 1 "GO" GAGE ONLY.
13. MAJOR DIAMETER MUST NOT BE LESS THAN 1.164
14. REFERENCE PLANE "D" IS DEFINED AS A PLANE ALONG THE SURFACE OF THE OUTPUT FLANGE AS INDICATED.
15. EPOXY BASE PAINT HAVING EQUIVALENT PROPERTIES OF DURACHEM BAKING ENAMEL TO BE USED.





RAYTHEON COMPANY	MICROWAVE AND POWER TUBE DIVISION	WALTHAM 54, MASS.