

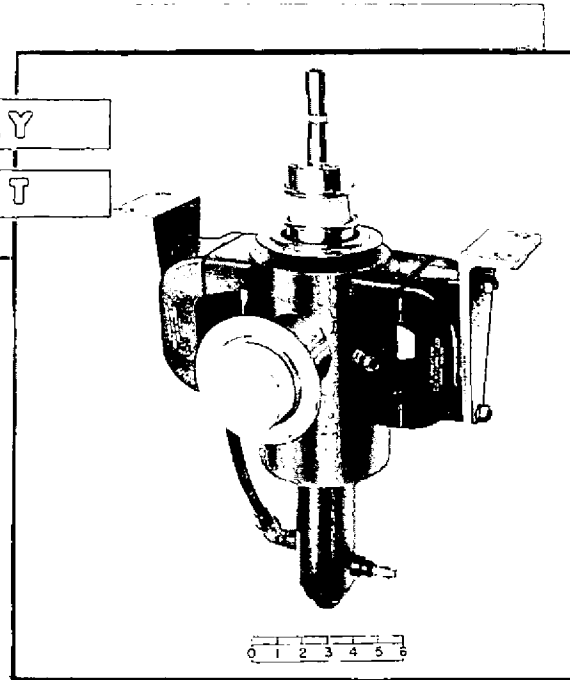
**RK 7528**

**PRELIMINARY**

**DATA SHEET**



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**RK 7528**

**GENERAL DESCRIPTION**

The RK7528/QK264 magnetron is a tuneable, high power, pulsed oscillator which is capable of delivering a minimum of 2.0 megawatts peak power and 2400 watts average power. The RK7528/QK264 is tuneable within the frequency region of 1250-1350 megacycles. The tube requires liquid cooling, is of the integral magnet type and the r. f. output is designed to couple directly to standard 3" x 6" waveguide.

The RK7528/QK264 magnetron may be used in MTI radar systems which require the generation of r. f. pulse energy that is relatively free from time, frequency, and amplitude jitter.

The generated power of this magnetron may be increased by 10-15% and satisfactory life still maintained by operating the tube into a 1.5 VSWR with the phase adjusted to the "in sink" position.

Mechanical Data

Mounting Position .....	Cathode Vertical
Net Weight .....	70 Pounds
Cooling .....	Liquid
Input Bushing .....	Oil Immersed
Output Pressurization .....	25 p. s. i. a. Min.

Typical Electrical Data

Heater Current - Preheat .....	90 Amperes
Heater Voltage @ 90 A - 600 Sec. ....	3.7 Volts
Current Pulse Width (tpc) .....	4.3 usec
Duty Cycle .....	.0012
Peak Anode Voltage .....	60 Kilovolts
Voltage Rise Time .....	0.55-0.65 usec
Peak Anode Current .....	90 Amperes
Maximum VSWR .....	1.5
Average Power Output .....	2650 Watts
R. F. Bandwidth .....	2.1/tpc Max.
Life - 1.5 VSWR, Off-On Cycled .....	250 Hrs., 500 Hrs. Objective

Reliable operation and optimum 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 only to acquaint the reader with the basic characteristics of the magnetrons and should not be used as an absolute guide. Detailed test specifications are available upon request, and specific problems pertaining to applications should be directed to the Applications Engineering Department of the Raytheon Company, Microwave and Power Tube Division, Waltham, Massachusetts.

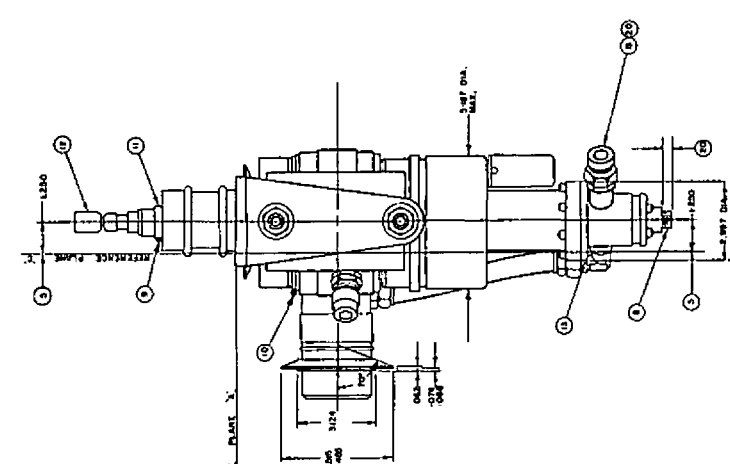
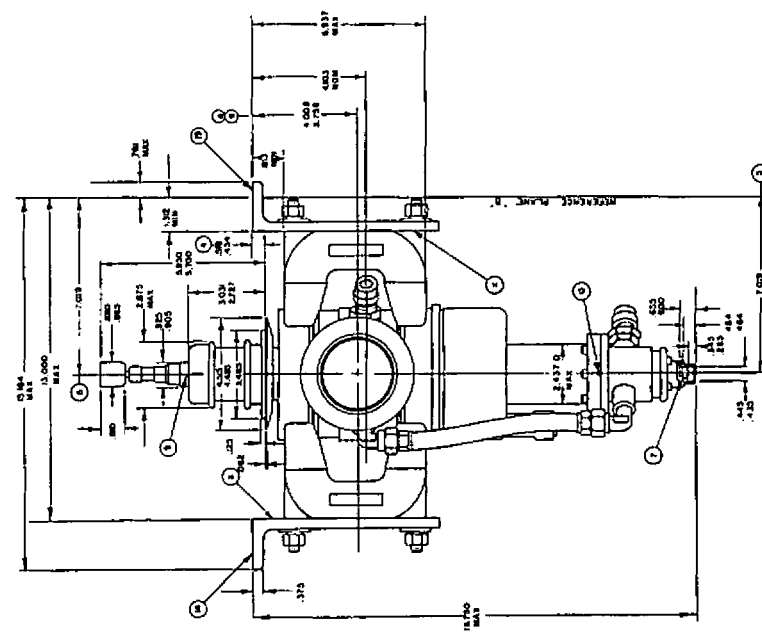
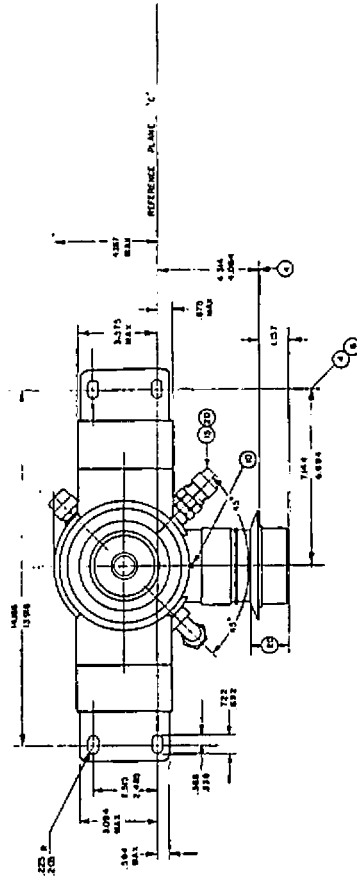


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**preliminary  
data  
sheet**

**NOTES**

1. REFERENCE PLANE "A" LIES ON TOP SURFACE OF MOUNTED BRACKET.
2. REFERENCE PLANE "B" IS PERPENDICULAR TO PLANE "A" PASSING THROUGH THE CENTER OF HOLES IN BRACKET AS SHOWN.
3. REFERENCE PLANE "C" IS PERPENDICULAR TO PLANE "A" AND IS LOCATED AT THE CENTER OF THE BRACKET AS SHOWN.
4. DIMENSIONS ARE GIVEN AS MAXIMUM UNLESS OTHERWISE SPECIFIED.
5. PAGES OF THIS CENTER LINE MAY VARY FROM THE LOCATION BY ±1.0 IN THE DIRECTION OF OUTPUT AS DETERMINED BY THE CENTER OF THE FLANGE.
6. SPARE SPECIFICATIONS:
  - (A) REFERENCE ANGLE
  - (B) PITCH DIAMETER
  - (C) PITCH DIAMETER
7. 1/4-10007-1 THREAD
8. BURNING TEMPERATURE
9. ANODE TEMPERATURE
10. GRID TEMPERATURE
11. GRID CURRENT
12. GRID CONNECTION
13. PLATE CONNECTION
14. FLUX TEMPERATURE
15. THESE SURFACES TO BE PARALLEL TO REFERENCE PLANE "A" WITHIN .001 INCHES.
16. THESE SURFACES TO BE PARALLEL TO REFERENCE PLANE "B" WITHIN .001 INCHES.
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