

# 7504

*klystron*

The 7504 is a pulsed amplifier klystron capable of producing a peak power output of 2.2 megawatts at a .003 duty cycle. It has three integral cavities which can be mechanically tuned to cover the frequency band from 1240-1360 mcs. The ability to operate at pulse lengths up to 9  $\mu$ s and to provide a gain of 36 db makes it ideally suited for use in ground based radar systems.

The unique high temperature processing used in all Litton Industries' tubes permits the 7504 klystron to provide reliable, long-life operation.

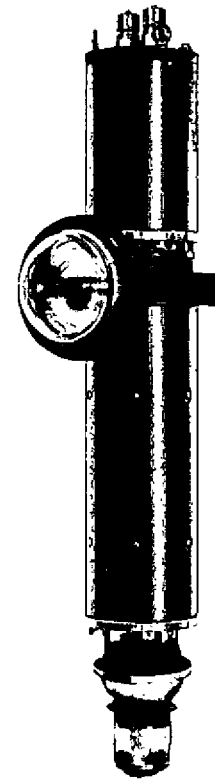
## ELECTRICAL DATA — GENERAL

Heater Voltage (ac)	16 volts
Heater Current at 16 Volts	7.0-9.5 amps
Heater Cold Resistance	0.261 ohms
Input Connector	Type C
Output Connection	Special transition to RG-69/U or RG-103/U Waveguide

## MECHANICAL DATA — GENERAL

Base and Physical Dimensions	See Outline Drawing
Mounting Information	Any Position
Cooling Data, Water	

	COLLECTOR	BODY
Flow	7.5 gpm	1.5 gpm
Pressure drop	50 psi	50 psi
Net Weight	Approx. 110 lbs.	

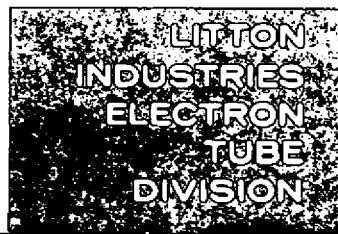


## ABSOLUTE RATINGS

	MIN.	MAX.
Heater Voltage, $E_r$	15	17 Volts ac
Heater Current, $I_r$ (surge)		20 amps
Anode Voltage, $e_{py}$		125 KV
Anode Voltage, $e_{px}$		30 KV
Cathode Current, Peak $I_c$		87 amps
Cathode Current Avg. $I_c$		260 ma
Peak Power Input		9.5 MW
Average Power Input		27.5 KW
Frequency	1240	1360 Mcs
Pulse Length, $t_p$ (epy)		9 $\mu$ s
R-F Input Power, Peak		1 KW
R-F Input Power, avg.		100 W
Load VSWR		1.5:1
Cathode Heating Time	20	minutes
Window Pressure		50 psia
Cathode Seal Temp		175°C
Window Seal Temp		125°C
Hydrostatic Pressure		75 psig
Tuner Torque		500 in/oz.
Fluid Coolant Outlet Temp		70°C

## TYPICAL OPERATION

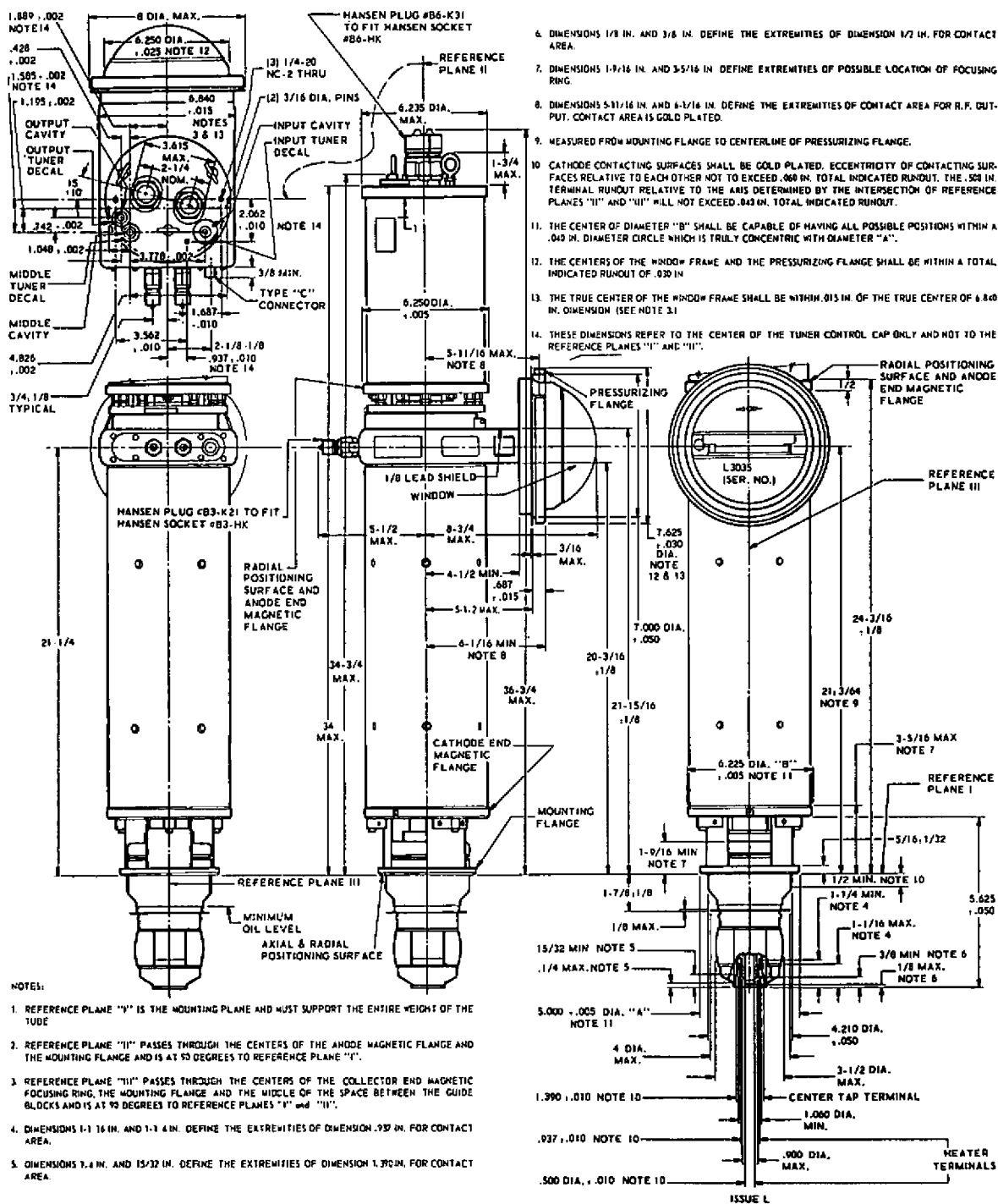
Peak Voltage	115 KV
Peak Current	78 a
Pulse Width	8 $\mu$ s
Duty	0.003
Peak Power Output	2.2 MW
Gain	36 db
Time Jitter, rms	5 m $\mu$ s
Phase Jitter, rms	0.5°



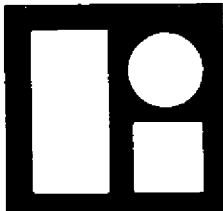
960 INDUSTRIAL ROAD, SAN CARLOS, CALIF.

from JEDEC release #2560, Aug. 17, 1959

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 DIVISION



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