

L4555 000

COAXIAL PULSE MAGNETRON

L-4555

60 Kilowatts Minimum Peak Power
Tunable Frequency 32,100 to 33,100 MHz

The L-4555 is a rugged, compact, light-weight, tunable, Ka-band coaxial magnetron capable of delivering 60 KW peak output power across the frequency range of 32.1 to 33.1 GHz. Tuning is achieved with a low backlash, low torque, tuning mechanism designed for manual locking at any frequency within the tuning band. The tube is designed for long life, and high reliability is ensured through simplified design and construction.

OPERATING CONDITIONS

Heater Voltage (Standby)	6.3 V
Heater Current (Standby)	3.5 A
Preheat Time	Min. 120 sec.
Pulse Voltage	15 to 17 kv
Pulse Current	16.2 A
Rate of Rise of Voltage	Max. 150 kv/usec.

ABSOLUTE MAXIMUM RATINGS

Heater Voltage	6.9 V
Heater Surge Current	10.0 A
Pulse Length	1.0 us
Pulse Voltage	18 kv
Pulse Current	20 A
Average Input Power	215 W
Duty Cycle	0.001
Anode Temperature	135°C
VSWR	1.5:1 Ratio

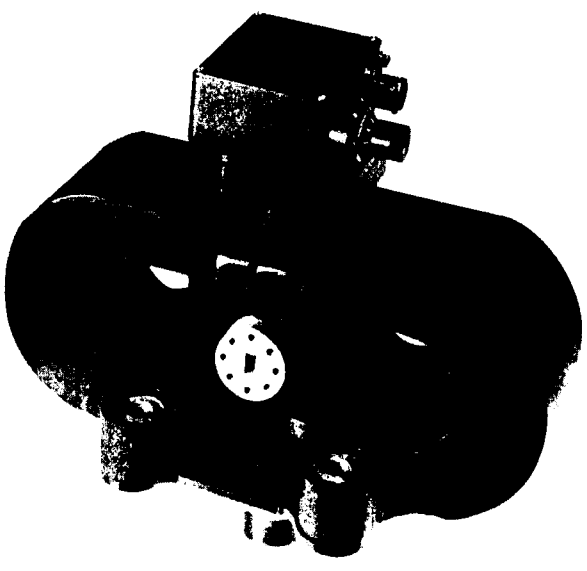
PERFORMANCE CHARACTERISTICS

Peak Power	Typical 75.0 KW
Frequency*	32,100 to 33,100 MHz
Pulling Factor (1.5:1 VSWR)	Max. 15 MHz
Pushing Figure	Max. 1.0 MHz/amp
Missing Pulses	Max. 0.25 Percent
Side Lobes	Min. 8.0 db
Anode Temperature Coefficient	Max. 1000 kc/°C
Shock (11 ms)	15 G
Vibration (54-200 cps)	10 G
Rated Cycle Life	500 Hrs

MECHANICAL RATINGS

Mounting Position	Any
Weight	Approx. 10 lbs.
Mating Mounting Flange	UG-600/U (mod.)
Anode Cooling	Forced Air
Input/Output Pressurization	Max. 60 psia

*Also available in Tuning Ranges of up to 3,000 MHz, from 31.0 to 36.0 GHz.

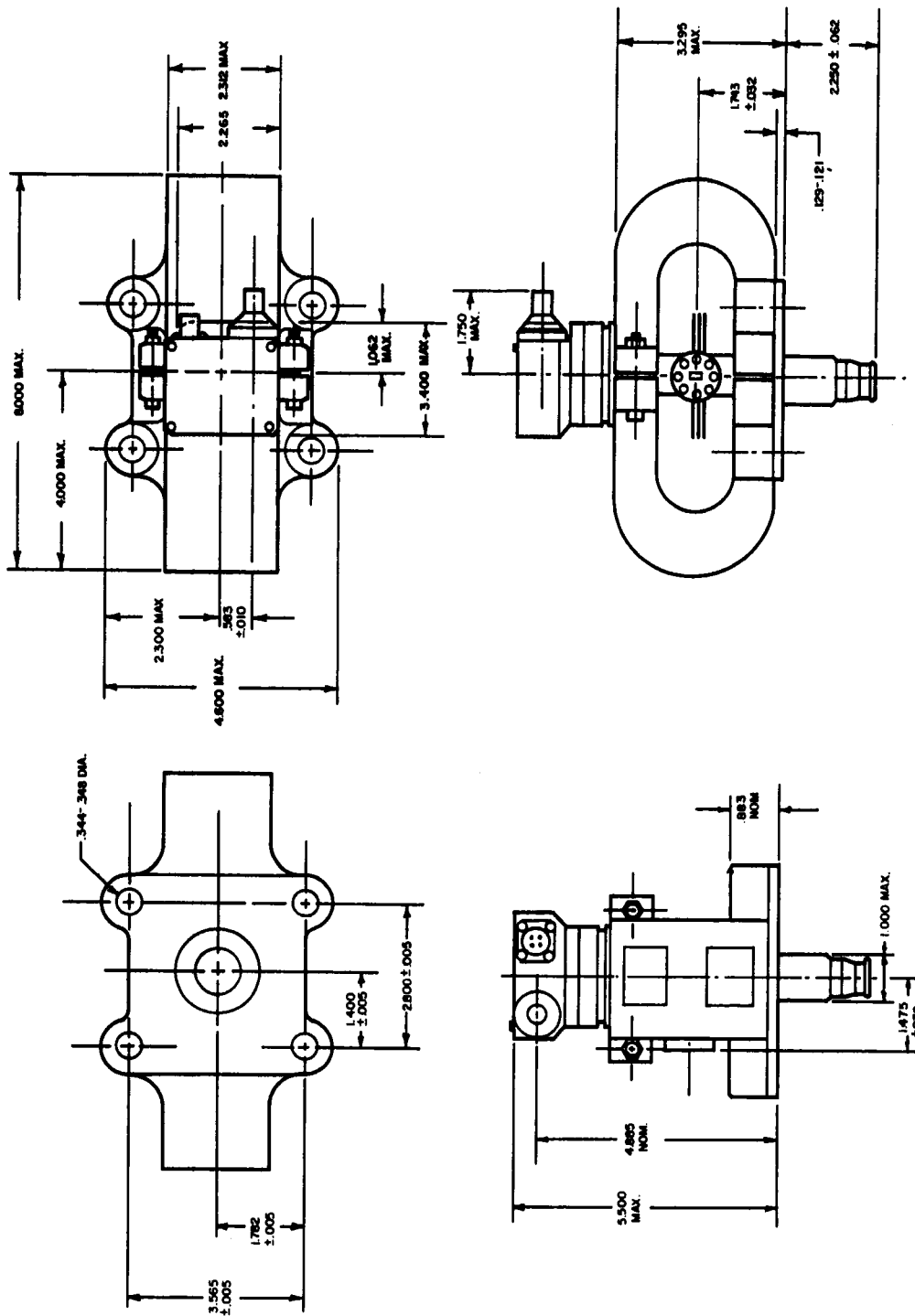


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Personnel should not be exposed to the microwave energy which may radiate from this device if improperly used or connected. All input and output rf connections, waveguide flanges, and gaskets must be rf leak proof and properly engaged. Never operate this device without a microwave energy absorbing load attached. Never look into an open waveguide or antenna while the device is energized.

This device may produce X-radiation when energized. Operating personnel must be protected by appropriate shielding. X-ray caution signs or labels should be permanently attached to equipment directing operating personnel never to operate this device without X-ray shielding in place.



L-4419

65 Kilowatts Minimum Peak Power
 Fixed Frequency 16,500 ± 25 Mc

This coaxial Ku-band magnetron weighs only 5 lbs. — an extremely good power-to-weight ratio. The special cathode design provides exceptional life and reliability for airborne systems.

OPERATING CONDITIONS

Heater Voltage (Standby)	12.6 V
Heater Current (Standby)	2.6 A
Preheat Time	Min. 180 sec.
Pulse Voltage	14 to 16 kv
Pulse Current	16 a
Rate of Rise of Voltage	Max. 160 kV/us

ABSOLUTE MAXIMUM RATINGS

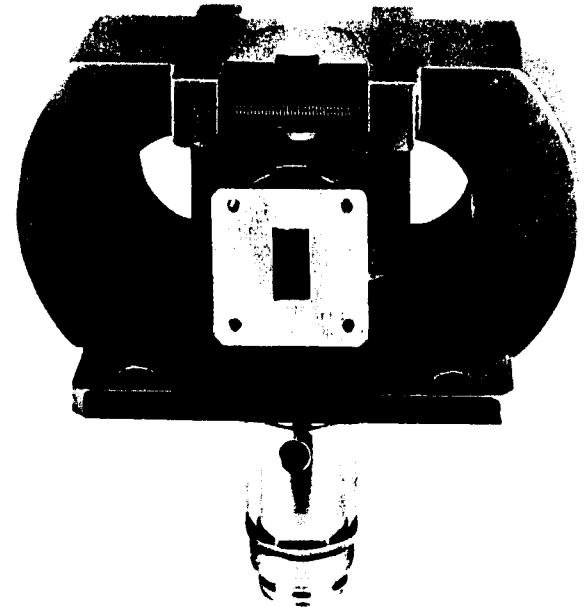
Heater Voltage	14.0 V
Heater Surge Current	10.0 A
Pulse Length	3.0 us
Pulse Voltage	18.0 kv
Pulse Current	18.0 a
Average Input Power	272 W
Duty Cycle	0.001
Anode Temperature	150° C
VSWR	1.5:1 Ratio

PERFORMANCE CHARACTERISTICS

Peak Power	Min. 65 kw
Fixed Frequency	16,500 ± 25 Mc
Pulling Factor (1.5:1 VSWR)	Max. 12 Mc
Pushing Figure	Max. 0.2 Mc/amp
Missing Pulses	Max. 0.5 Percent
Side Lobes	Min. 9.0 db
Anode Temperature Coefficient	Max. 500 kc/° C
Shock (11 ms)	15 G
Vibration (20-500 cps)	5.0 G
Rated Cycle Life	400 Hrs.

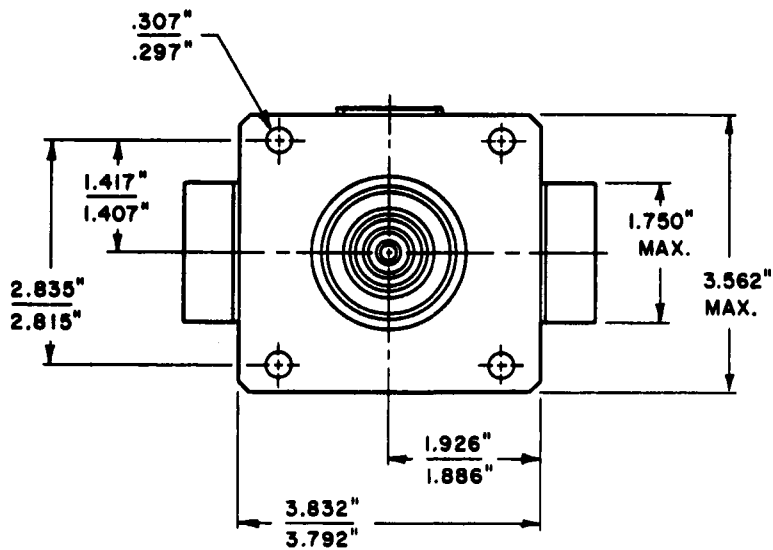
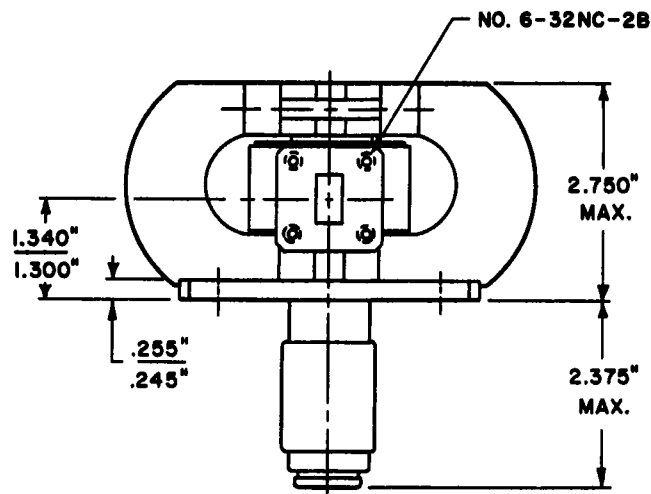
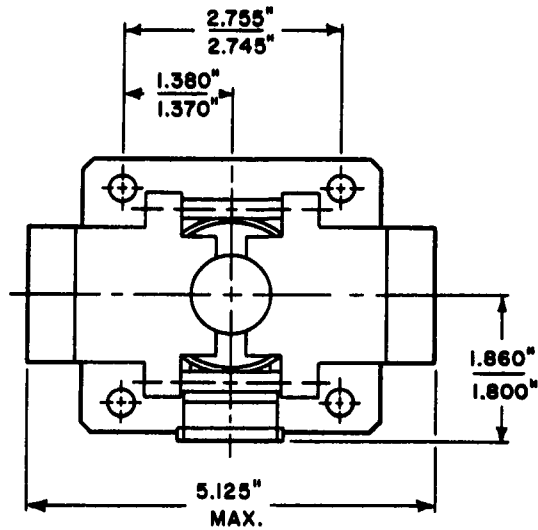
MECHANICAL RATINGS

Mounting Position	Any
Weight	Max. 5.0 lbs.
Mating Mounting Flange	UG-541/U (mod.)
Anode Cooling	Forced Air
Input/Output Pressurization	Max. 60 psia



PULSE MAGNETRON

L-4419



L-4451

35 Kilowatts Minimum Peak Power
Tunable Frequency 16,600 to 17,100 Mc

This lightweight, coaxial cavity Ku-band magnetron is "screwdriver tunable," permitting presetting of frequency for airborne systems. Other frequency coverage within the range of 15.5 to 17.5 Gc is available on special order.

OPERATING CONDITIONS

Heater Voltage (Standby)	12.6 V
Heater Current (Standby)	1.7 A
Preheat Time	Min. 120 sec.
Pulse Voltage	11 to 13 kVdc
Pulse Current	9.5 A
Rate of Rise of Voltage	Max. 90 kV/us

ABSOLUTE MAXIMUM RATINGS

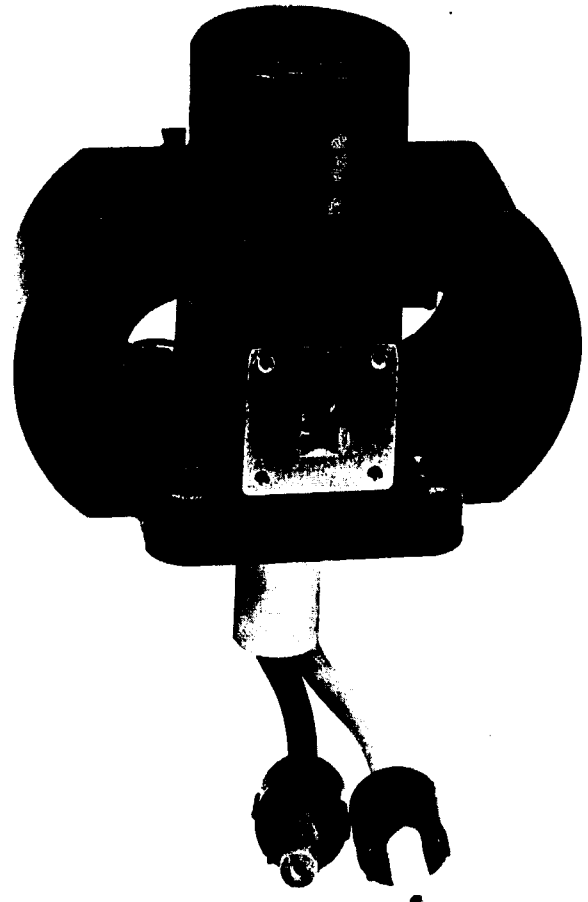
Heater Voltage	14.0 V
Heater Surge Current	8.0 a
Pulse Length	3.0 us
Pulse Voltage	14.0 kv
Pulse Current	13.0 a
Average Input Power	135 W
Duty Cycle	0.001
Anode Temperature	150° C
VSWR	1.5:1 Ratio

PERFORMANCE CHARACTERISTICS

Peak Power	Min. 35 kW
Tunable Frequency	16,600 to 17,100 Mc
Pulling Factor (1.5:1 VSWR)	Max. 9.0 Mc
Pushing Figure	Max. 0.2 Mc/amp
Missing Pulses	Max. 0.25 Percent
Side Lobes	Min. 9.0 db
Anode Temperature Coefficient	Max. 500 kc/°C
Shock (11 ms)	30 G
Vibration (22-500 cps)	10 G
Rated Cycle Life	500 Hrs.
Backlash	Max. 5.0 Mc

MECHANICAL RATINGS

Mounting Position	Any
Weight	Max. 5.0 lbs.
Mating Mounting Flange	UG-541/U (mod.)
Anode Cooling	Forced Air
Input/Output Pressurization	Max. 60 psia



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