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/μsec.

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.
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.
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

LITTON INDUSTRIES • ELECTRON TUBE DIVISION  
SAN CARLOS, CALIF. • WILLIAMSPORT, PA.
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 ................................................ 0.2 Mc/amp
Missing Pulses ................................................ 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