

PT6055

Travelling Wave Tube



The PT6055 is an S-band travelling wave tube amplifier having the following features:

- Grid pulsing
- Air cooling
- PPM focusing to achieve low mass.
- Ion pump fitted to the tube to monitor the vacuum, ensuring long life and high reliability.

The Peak Power is nominally 50 kW, the duty cycle 2.4% and the minimum gain 50 dB.

The tube operates over the frequency band 2750-3050 MHz.

The RF input is an N-type coaxial connector and the RF output is in waveguide (CPR 284F).

Specification

ELECTRICAL SPECIFICATIONS (NOMINALS)

Cathode Voltage (with respect to body)
-32 kV
Collector Depression (with respect to body)
-10 kV
Cathode Current
9 A
Interception Current
3 A maximum
Duty Cycle
2.4 % maximum
Heater Voltage
9.3 V D.C.
Heater Current
9.3 A
Cathode warm-up time
10 minutes
Grid Bias
-500 V
Grid Forward Drive
+500 V
Grid Current
10 mA
Grid Capacitance
100 pF
Frequency Band
2750 MHz to 3050 MHz
RF Drive Power
0.5 W maximum
Peak Output Power
50 kW minimum
Ion Pump Voltage
3.5 kV

MECHANICAL SPECIFICATIONS

Dimensions
See drawing attached
Coolant
Forced air
Coolant flow rate
14 lbs per minute
Coolant pressure drop
9 inch WG at 20 deg C
Coolant inlet temperature
-15 to +60 deg C
Gun Cooling
No separate cooling required
Waveguide Pressurisation
Not required
Mass
41 kg
Coolant Connections
See outline drawing
Electrical Connections
Flying leads to connect with amp
type LGH4
RF Waveguide Output
CPR 284F flange
RF Input Connector
Type N - co-axial
Mounting
Any position
Vac Ion Connection
Type to mate with UG931/U(MHV)

OTHER

Life

2000 Hours minimum (end of life defined as when the Peak Output power has fallen to 40 kW peak with the nameplate conditions applied)

X-Radiation

0.7 mR per hour

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