



Travelling Wave Tube

Type LY71



Description

The LY71 is rated at 10kW minimum peak power output, 45dB gain, 4% duty ratio at pulse lengths up to 60µs, and is characterised by a flat gain response across the operating bandwidth. The compact, rugged tube is of a metal ceramic construction and weighs 8.5kg (approx.). The LY71 TWTs are also designed to run in parallel operation and have been in service for a number of years.

Features

The LY71 is a medium power E-F Band TWT intended for radar applications. The tube incorporates:

- Low Voltage Beam Switching Grid
- Ring Bar Circuits
- PPM Focusing
- Depressed Collector Operation
- Liquid Cooling.

Specification

Frequency Range	2.7-3.2GHz
Output Power	10kW Peak (min)
Duty Ratio	4%
Gain	45dB
Load VSWR	1.5:1
Source VSWR	1.5:1
Gain Flatness Over the Frequency Range	1dB
Harmonic output	2nd: -30dBc 3rd & 4th: -40dBc
Noise Figure	35dB
Heater Voltage	6.3V
Heater Power	35W

Phase Sensitivity

Cathode	0.5°/V
Grid	5°/V
AM/PM	8°/dB

Electrode Voltages WRT Cathode (Typical)

Grid Bias	-400V
Grid Pulse	350V
Slow Wave Structure	16kV
Collector	12kV

Electrode Pulse Currents (Typical)

Grid	40mA
Slow Wave Structure	0.9A
Cathode	3.2A

Physical

Temperature Range (Operating)	-10°C to +70°C
Coolant	Water or Water/Glycol
Flow	3.5 Litres/Minute (min)
Pressure Drop	0.45b
Input Connector	SMA
Output Connector	7/8" EIA
Overall Dimensions (approx)	630mm x 105mm x 135mm
Weight (approx)	8.5kg

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