

Traveling Wave Tube LO – 700W

Features

Frequency range	9.2 to 9.6 GHz
RF peak output power	8 kW
RF average output power	320 W
Gain	33 dB
Duty cycle	4.0 %

Description

The LO-700W is a coupled cavity, grid-pulsed, conduction cooled traveling wave tube for use as a driver or output tube in advanced radar system and test equipment. Each tube delivers at least 8 kW of RF peak power and minimum 320 W of average output power in X band. The tube has a metal-ceramic vacuum envelope, two-stage depressed collector and periodic permanent magnet focusing structure.

RF Performance Requirements

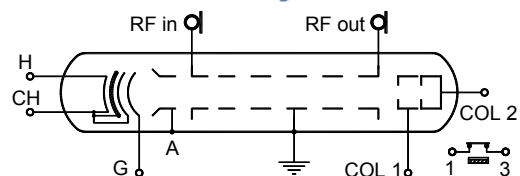
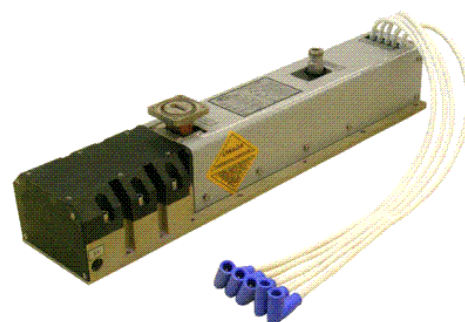
TECHNICAL DATA	MIN	MAX	UNITS
Frequency range	9.2	9.6	GHz
RF peak output power	8	-	kW
RF average output power	320	-	W
Gain	33	-	dB
RF drive power	-	4	
Load VSWR	max 2:1		

Electrical Requirements

TECHNICAL DATA	MIN	MAX	UNITS
Cathode voltage	-17	-19	kV
Collector #1 voltage	83 % cathode voltage		
Collector #2 voltage	50 % cathode voltage		
Grid-bias voltage	-500	-300	V
Grid pulse voltage	+300	+450	V
Cathode pulse current	-	3,2	A
Body current	-	0,7	A
Duty cycle	-	4,0	%
Pulse width	-	100	μs
Heater voltage	12,0	13,0	V
Heater current	1,3	2,0	A
Heater warm-up time	3	-	min

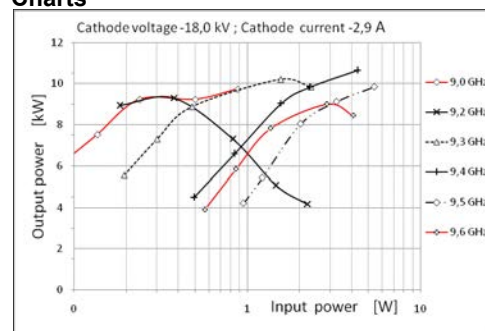
Notes

- The cathode voltage is measured with respect to the ground.
- The heater, grid and collectors voltages are measured with respect to the cathode.

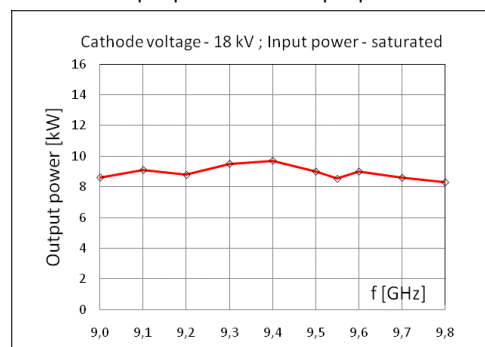


H – heater; CH – cathode-heater;
G – grid; Col1/2 – collectors

Charts



Output power versus input power



Peak output saturation power versus frequency

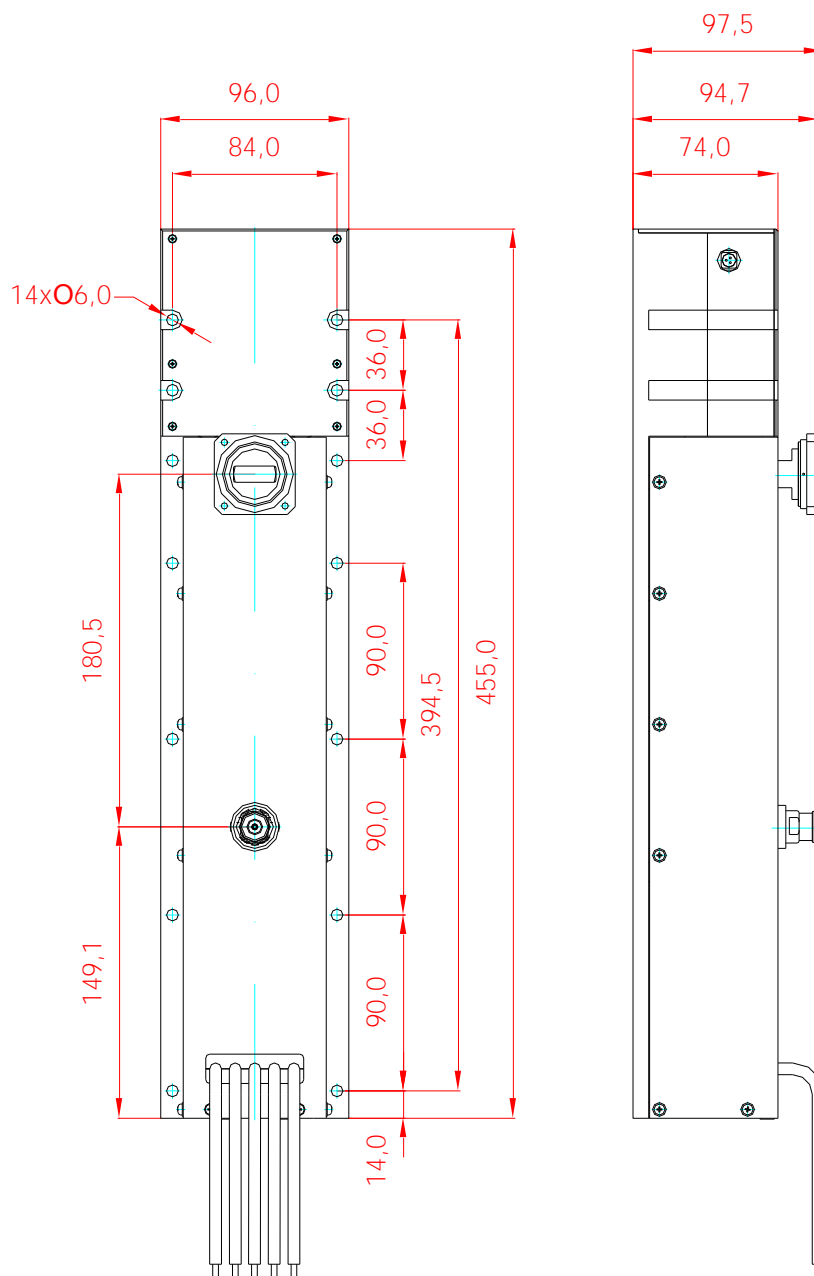
Technical Description

Dimensions	See Outline Drawing
Weight	5,5 kg
Mounting Position	Any
RF input connector	N 50
RF output connector	WR 90

PIT - RADWAR S.A.
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The mechanical dimensions can be modified. Current detailed outline drawing are available on request.
All mechanical dimensions are in [mm].

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