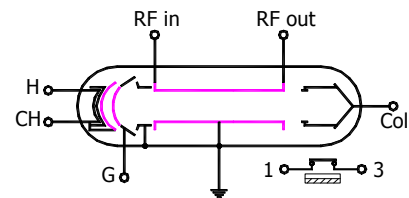


## Features

Frequency range	1.0 to 1.5 GHz
RF peak output power	10 kW
RF average output power	min. 200 W
Gain	min. 27 dB
Duty cycle	2 %

## Description

The L-113A is a ring and loop, grid-pulsed and air cooled traveling wave tube for use as a driver or output tube in advanced radar system and test equipment. Each tube delivers at least 10 kW of RF peak power and minimum 200 W of average output power in L band without adjustment. The tube has a metal-ceramic vacuum envelope, periodic permanent magnet focusing structure, and single-stage depressed collector with normal closed (NC) thermostat.



H – heater, CH – cathode-heater,  
G – grid, Col – collector.

## RF Performance Requirements

TECHNICAL DATA	MIN	MAX	UNITS
Frequency range	1.0	1.5	GHz
RF peak output power	10	-	kW
RF average output power	200	-	W
Gain	27	-	dB
RF drive power	-	20	W
Load VSWR	max 2:1		

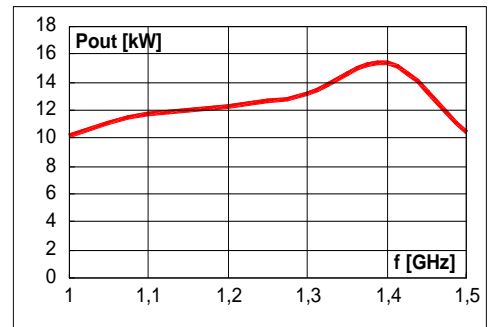
## Electrical Requirements

TECHNICAL DATA	MIN	MAX	UNITS
Cathode voltage	-12.0	-14.5	kV
Collector voltage	80 ± 5 % cathode voltage		
Grid bias voltage	-250	-350	V
Grid pulse voltage	+350	+650	V
Cathode pulse current	-	4.5	A
SWS pulse current	-	2.2	A
Duty cycle	-	2.0	%
Pulse width	-	80	μs
Heater voltage	8.0	10.5	V
Heater current	4.0	4.8	A
Heater warm-up time	3	-	min

## Notes

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

## Chart



Output power versus frequency.

## Mechanical Description

Dimensions	- see Outline Drawing
Weight	- 8.0 kg (max. 8.4 kg)
Cooling	- fan min. 160 m <sup>3</sup> /h
Mounting Position	- any
RF input connector	- type N
RF output connector	- type SC
Thermal switch connector	- type Binder 719 (pin 1&3)

