

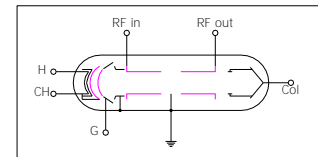
Features

Frequency range	1.42 to 1.58 GHz
RF peak output power	40 kW
RF average output power	800 W
Gain	34 dB
Duty cycle	max 1 %



Description

The L-13M1 is a ring and bar, grid-pulsed and liquid cooled traveling wave tube for use as a driver or output tube in advanced radar system and test equipment. Each tube delivers at least 40 kW of RF peak power and minimum 800 W of average output power in L band without adjustment. The tube has a metal-ceramic vacuum envelope, single-stage depressed collector and periodic permanent magnet focusing structure.



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

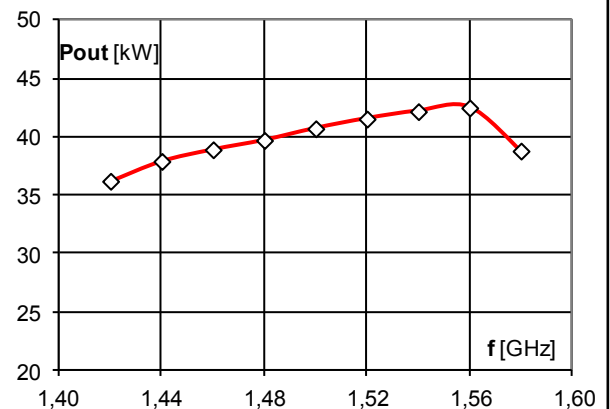
RF Performance Requirements

TECHNICAL DATA	MIN	MAX	UNITS
Frequency range	1.42	1.58	GHz
RF peak output power	40	-	kW
RF average output power	-	800	W
Gain	34	-	dB
RF drive power	-	15	W
Load VSWR	max 2:1		

Electrical Requirements

TECHNICAL DATA	MIN	MAX	UNITS
Cathode voltage	-16.5	-18.5	kV
Collector voltage	83 % cathode voltage		
Grid bias voltage	-500	-700	V
Grid pulse voltage	+400	+700	V
Cathode pulse current	-	8.5	A
SWS pulse current	0.3	3.2	A
Duty cycle	-	2	%
Pulse width	-	60	μs
Ion pump voltage	-	-2.0	kV
Heater voltage	9.5	12.0	V
Heater current	4.4	5.0	A
Heater warm-up time	4		min

Chart



Output power versus frequency.

Notes

- The cathode and ion pump voltages are measured with respect to the ground.
- The heater, grid and collector voltages are measured with respect to the cathode.
- Optimum output power may occur after slight tuning of grid pulse voltage and RF input power at operating frequency.

Mechanical Description

Dimensions	See Outline Drawing
Weight	27.0 kg
Liquid cooling	4 l/min, max. 60°C on inlet
Mounting Position	Any
RF input connector	N50
RF output connector	7/8" EIA

PIT - RADWAR S.A. WROCLAW DIVISION

50-425 Wrocław, ul. Krakowska 64, Poland; tel. (+48) 71-342-65-54; fax (+48) 71-342-58-59; e-mail: sales@dolam.pl
53-439 Wrocław, ul. Grabiszyńska 97 tel. (+48) 71-361-18-19 ; fax. (+48) 71-361-73-19; e-mail: office@pitow.wroc.pl

