



ZSJZ
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DOLAM

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TRAVELING WAVE TUBE: LO-301E, LO-301F, LO-301S

High Power Pulse TWT (with Ring and Loop Slow Wave Circuit)

The pulsed traveling wave tubes are used as drivers or as output tubes in test equipment

I. RF Performance Requirements

Type of tube LO-301...	F	E	S	F	E	S	F	E	S	
Technical data	min.			typical			max.			Units
Frequency range	3,0	3,2	3,0				3,2	3,4	3,4	GHz
RF Peak output power	10,0			12,0						[kW]
Gain	27			30						[dB]
Duty							1,0	1,4		[%]
Load VSWR							2			-

II. RF Other Parameters

Technical data	min.	typical	max.	Units
Noise		42	50	[dB]
RF input connector	N 50			
RF output connector	N 50			

III. Electrical Requirements

Technical data	min.	typical	max.	Units
Cathode voltage - pulse	15,0		17,0	[kV]

Cathode pulse current - pulse			5,5	[A]
Pulse width	10			[μ s]
Number stage depresset collector	0			-
Heater voltage	8,0		11,0	[V]
Heater current	4,5		5,5	[A]
Preheating time			3	minutes

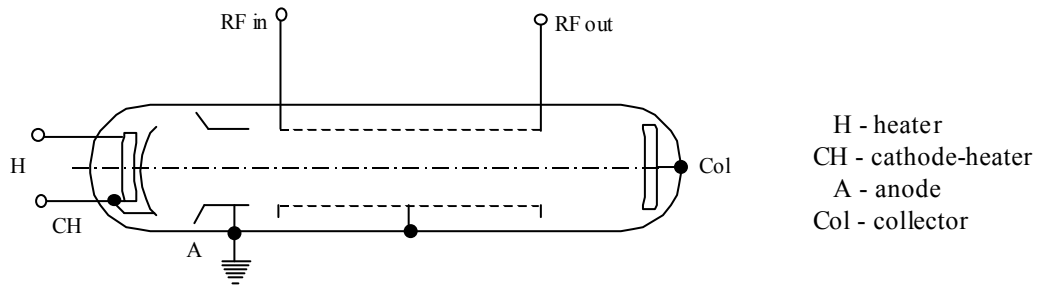


Fig. 1. Scheme connections of electrodes tube LO-301

IV. Mechanical Description

- | | |
|----------------------------|------------------------------|
| 1. Dimensions | See Outline Drawing, Fig. 2. |
| 2. System cooling | Liquid - 2 l/minutes |
| 3. Max coolant inlet temp. | 60°C |
| 4. Mounting Position | Any |
| 5. Weight | 10 kg (22,2 lbs) |

V. Notes

1. The cathode voltage is measured with respect to the ground.
2. The heater voltage is measured with respect to the cathode.
3. Focusing - Periodic Permanent Magnet.
4. Each tube delivers a peak output power in the given frequency range without tuning adjustment.
5. Optimum peak output power and gain may occur after fine tuning of beam voltage and RF input power.
6. Helix over current protection should be provided in the power supply.
7. Environment temperature from 233 K to 343 K.
8. A ceramic-metal construction provides exceptional mechanical strength.

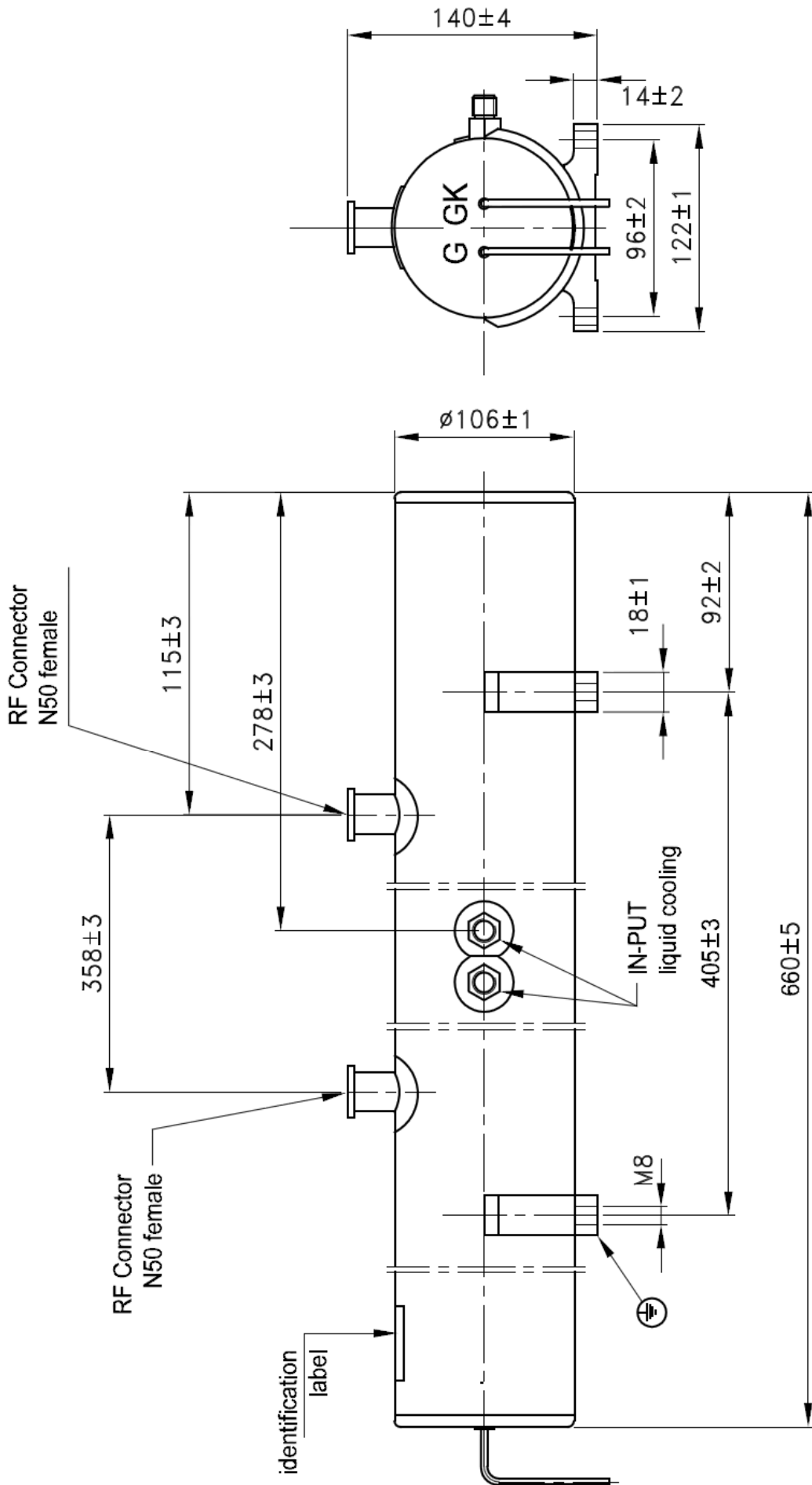


Fig. 2. Dimensions of tube LO-301