



ITL 25-3

Air-cooled triode for industrial RF heating



84 kW triode for RF dielectric heating machines

Based on more than 60 years of experience in the design and manufacture of electron tubes, Thales is a long-standing partner to most producers of industrial heating machines. And we are the benchmark supplier of grid tubes.

The ITL 25-3 triode is intended for low power dielectric heating applications and delivers continuous RF power of 84 kW. It is especially well suited to industrial applications, such as wood gluing and plastic welding.

This air-cooled triode uses a coaxial design and metal-ceramic technology. It may be operated in CW or pulsemodes. For operation in pulse mode, the parameters depend on each equipment characteristics. Contact us for specific information.

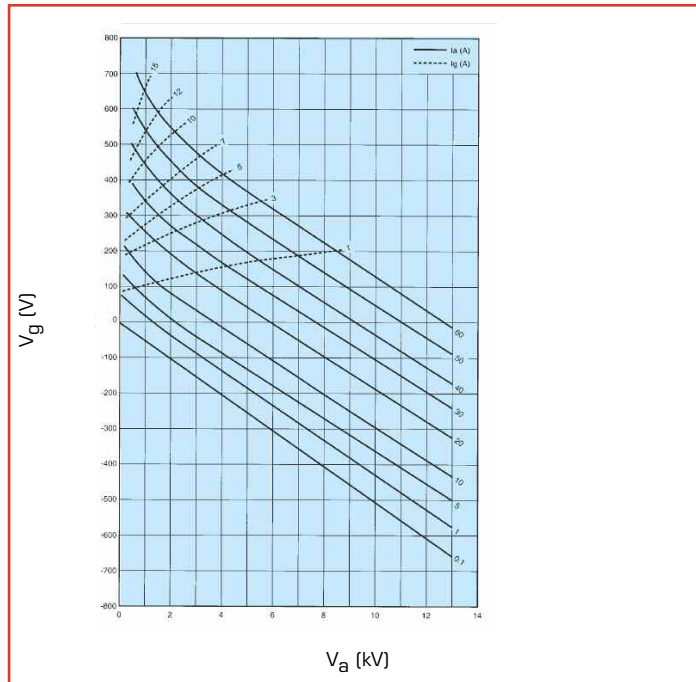
Thales is fully committed to the long-term viability of tube technology, and to delivering high-tech products based on our proven expertise in complex processes. We offer the widest range on the market, whether for dielectric or induction and laser applications, backed by all the customer support and technical assistance services you need.

- Output power: 84 kW (CW mode)
- Anode voltage: 14 kV
- Anode dissipation: 30 kW
- Frequency up to 100 MHz

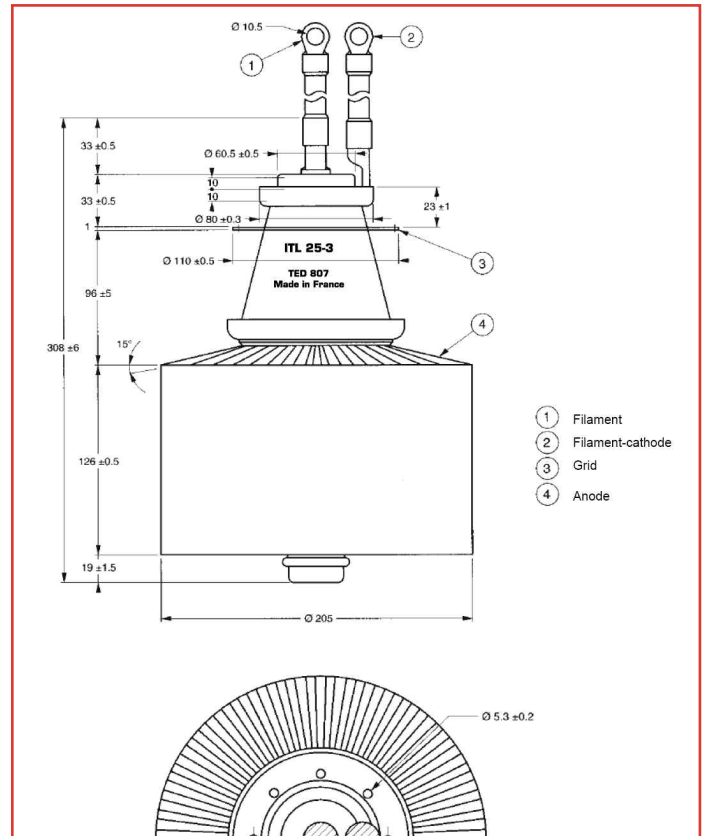
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Industrial RF Heating triode

Constant current characteristics



Outline drawing (in mm)



Technical specifications

Cathode	thoriated tungsten
Filament voltage	9 V
Filament current	180 A
Max. heater surge current	720 A
Amplification factor	22
Capacitance	
• grid-anode	30 pF
• grid-cathode	80 pF
• cathode-anode	2.0 pF

Mechanical characteristics

Operating position	vertical
Weight	14 kg
Dimensions	205 x 308 mm

Cooling air curves

Typ. air temperature at tube inlet	25 °C
Min. air flow cooling (for Pa=25 kW)	29 m ³ /min
Corresponding air pressure drop	16 mbar
Max. T° at any point on the tube envelop	220 °C

Maximum ratings

Frequency *	30	MHz
Anode voltage up to 30 MHz	14	kV
Anode voltage from 30 to 50 MHz	12	kV
Anode voltage from 50 to 80 MHz	10	kV
Anode voltage from 80 to 100 MHz	8	kV
Grid voltage	-1500	V
Anode current, CW	12	A
Grid current, at full load, CW	2.2	A
Grid current, at no load, CW	4	A
Peak cathode current CW	55	A
Anode dissipation (Tin= 25°C)	30	kW
Anode dissipation (Tin = 45°C)	25	kW
Grid dissipation up to 50 MHz	1200	W
Grid dissipation from 50 to 80 MHz	1000	W
Grid dissipation from 80 to 100 MHz	700	W
Grid resistance (tube non conducting)	10	kΩ

Class C, RF oscillator for industrial applications

Frequency	30	30	MHz
Anode voltage	12	10	kV
Anode current	9.7	9.9	A
Grid current, on load	1.3	1.4	A
Anode input power	116	99	kW
Anode output power	88	71	kW
Anode dissipation	27	26	kW
Grid dissipation	480	535	W
Grid resistance	650	540	Ω
Feedback ratio	11.6	13.3	%
Oscillator efficiency	76	74	%

* above 30 MHz, please contact Thales.

Operations at higher frequencies available on request.

For more technical information regarding this tube, feel free to ask our distributor Richardson Electronics - www.rell.com

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