



YD 1187

Water-cooled triode for industrial RF heating



- Output power: 50 kW (CW mode)
- Anode voltage: 14.4 kV
- Anode dissipation: 20 kW
- Frequency up to 100 MHz

50 kW triode for RF dielectric heating

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 YD 1187 triode is intended for low power dielectric heating applications and delivers continuous RF power of 50 kW. It is especially well suited to industrial applications, such as plastic welding.

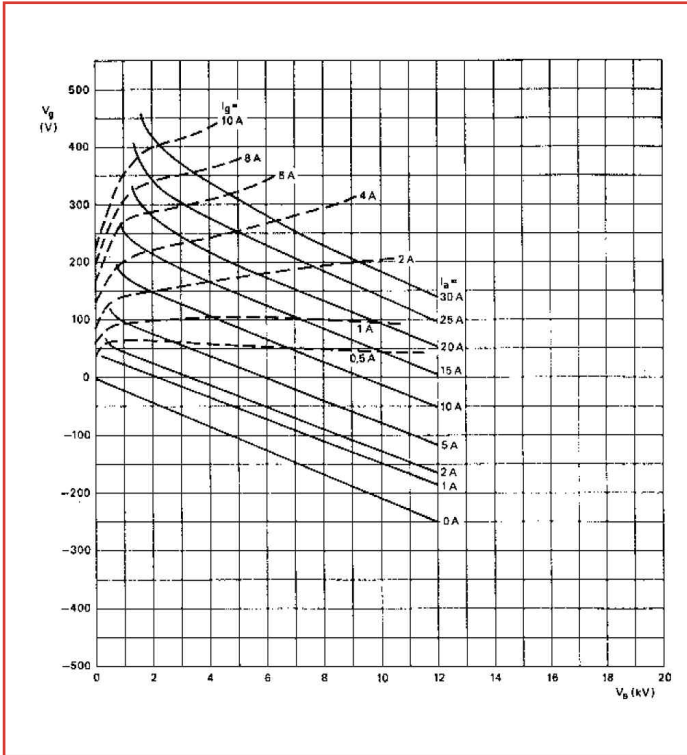
This water-cooled triode uses a coaxial design and metal-ceramic technology. It may be operated in CW or pulse modes. For operation in pulse mode, the parameters depend on each equipment characteristics. Contact us for specific information.

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.

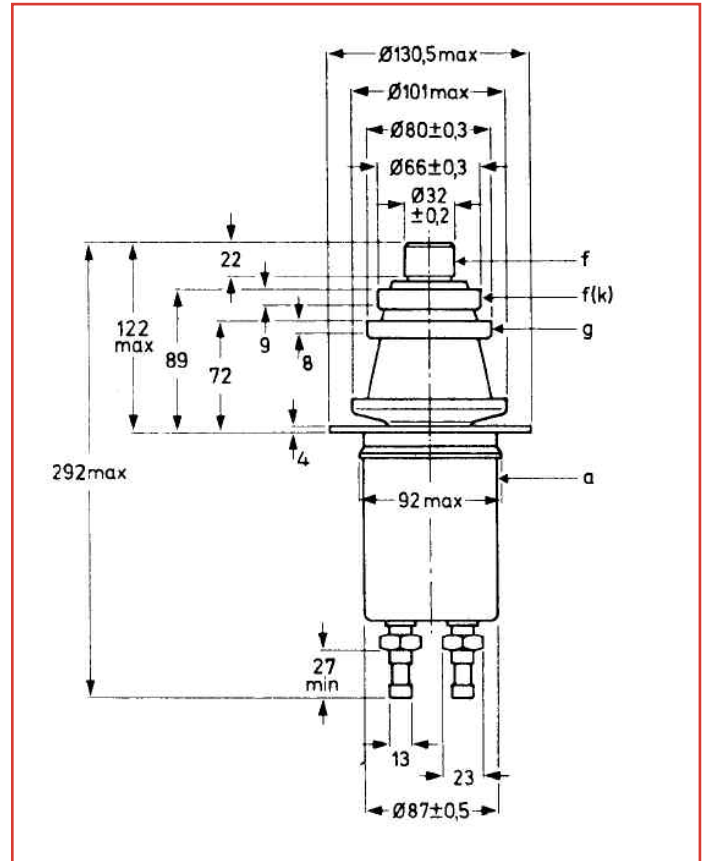
YD 1187

Industrial RF Heating triode

Constant current characteristics



Outline drawing (in mm)



Technical specifications

Cathode	thoriated tungsten
Filament voltage	7.0 V
Filament current	175 A
Max. heater surge current	1000 A
Amplification factor	50
Capacitance	
• grid-anode	22 pF
• grid-cathode	66 pF
• cathode-anode	0.8 pF

Mechanical characteristics

Operating position	vertical
Weight	3.4 kg
Dimensions	292 x 130.5 mm

Cooling – Industrial water

Max. water temperature at tube outlet	50 °C
Max. water pressure at tube inlet	6 bar
Max. T° at any point on the tube envelop	240 °C
Min. air flow on filament connections	0.5 m ³ /min

Maximum ratings

Frequency	100	MHz
Anode DC voltage	14.4	kV
Grid DC voltage	-1500	V
Anode DC current	6.0	A
Grid DC current at full load	1.6	A
Grid DC current, at no load	2.4	A
Peak cathode current	40	A
Anode dissipation	20	kW
Grid dissipation	500	W
Grid resistance (tube non conducting)	10	kΩ

Class C, RF oscillator for industrial applications

Frequency	90	90	90	MHz
Anode DC voltage	8.5	10	12	kV
Grid DC voltage	-495	580	600	V
Anode DC current	5.4	5.33	5.33	A
Grid DC current, on load	1.50	1.45	1.4	A
Anode input power	45.9	53.3	64	kW
Anode output power	34.5	41.2	51.2	kW
Anode dissipation	11.4	12.1	12.8	kW
Grid dissipation	400	380	360	W
Grid resistance	330	400	430	Ω
Feedback ratio	11	10.2	9	%
Oscillator efficiency	72.7	75.0	78.1	%

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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