THALES

YD 1174 FL

Air-cooled triode for industrial RF heating

- Output power: 31 kW (CW mode)
- Anode voltage: 12 kV
- Anode dissipation: 10 kW
- Frequency up to 120 MHz

31 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 1174 FL triode is intended for low power dielectric heating applications and delivers continuous RF power of 31 kW. It is especially well suited to industrial applications, such as plastic or agrifood dielectric heating.

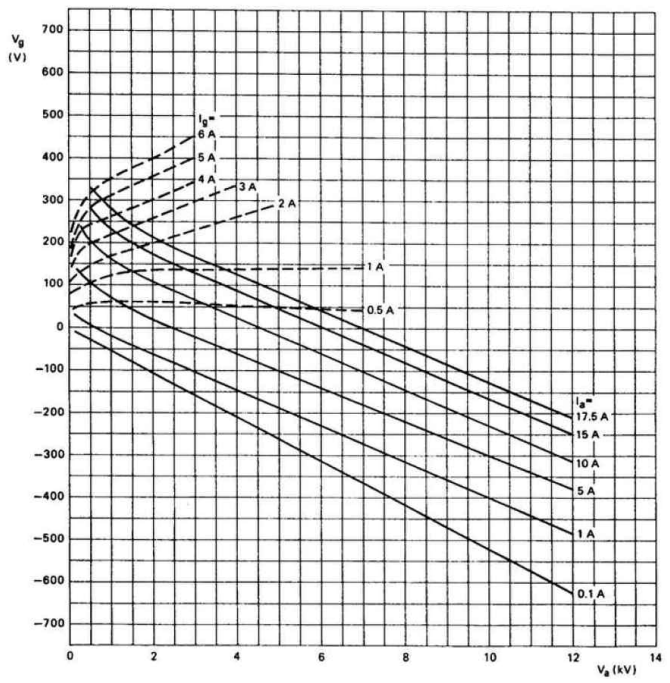
This air-cooled triode uses a coaxial design and metal-ceramic technology. It may be operated in CW or pulse modes. For operation in pulse mode, the parameters depend on each equipment characteristics. Contact us for specific information.

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.

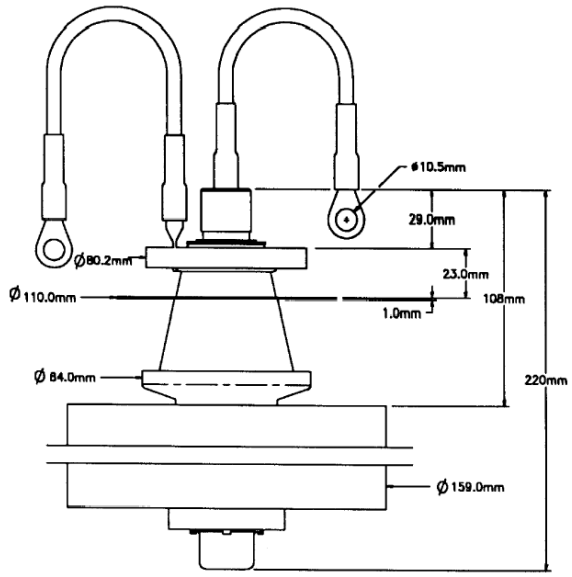
YD 1174 FL

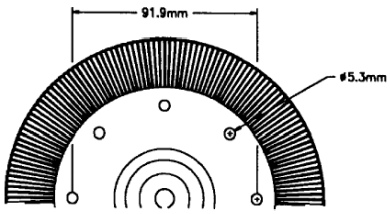
Industrial RF Heating triode

Constant current characteristics



Outline drawing (in mm)





Technical specifications

Cathode	thoriated tungsten	
Filament voltage	5.8	V
Filament current	130	A
Max. heater surge current	800	A
Amplification factor	24	
Capacitance		
• grid-anode	25	pF
• grid-cathode	47	pF
• cathode-anode	1	pF

Mechanical characteristics

Operating position	vertical	
Weight	7.3	kg
Dimensions	159 x 220	mm

Cooling characteristics (air-cooling)

Max. air temperature at tube inlet	45	°C
Min. air flow cooling (for P_a + P_g = 10 kW)	9.5	m^3/min
Min. air pressure cooling corresponding	0.55	mbar
Max. T° at any point on the tube envelop	240	°C

Maximum ratings

Frequency	120	MHz
Anode DC voltage	12	kV
Grid DC voltage	-1800	V
Anode DC current	5	A
Grid DC current, at full load	1.0	A
Grid DC current, at no load	1.5	A
Peak cathode current	25	A
Anode dissipation	10	kW
Grid dissipation	300	W
Grid resistance (tube non conducting)	10	kΩ

Class C, RF oscillator for industrial applications

Frequency	30	30	MHz
Anode DC voltage	10	10	kV
Grid DC voltage	-864	-621	V
Anode current	3.4	4.0	A
Grid current, on load	0.60	0.69	A
Anode input power	34	40	kW
Anode output power	25.7	30.3	kW
Anode dissipation	7.6	9.2	kW
Grid dissipation	150	180	W
Grid resistance	1440	900	Ω
Feedback ratio	12.0	10.0	%
Oscillator efficiency	75.6	75.8	%

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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