



6960 A

Water-cooled triode for Industrial RF Heating



- Output power: 9.5 kW (CW mode)
- Anode voltage: 7.2 kV
- Anode dissipation: 6 kW
- Frequency up to 55 MHz

9.5 kW triode for RF induction 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 6960A triode, intended for induction heating applications, delivers continuous RF power of 9.5 kW. It is especially well suited to industrial applications such as heat treatment.

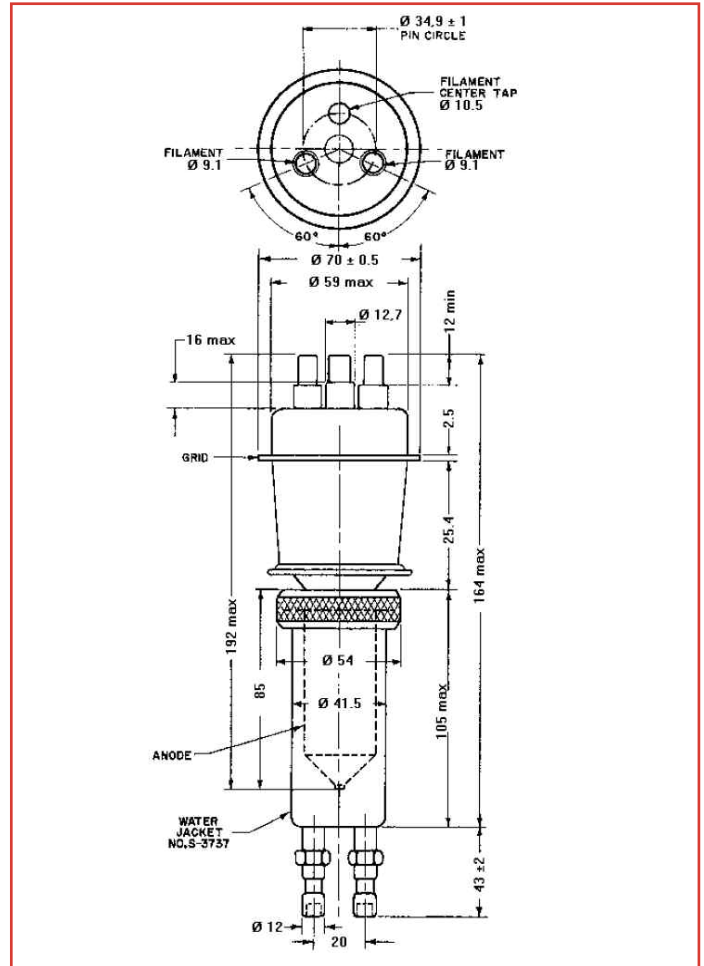
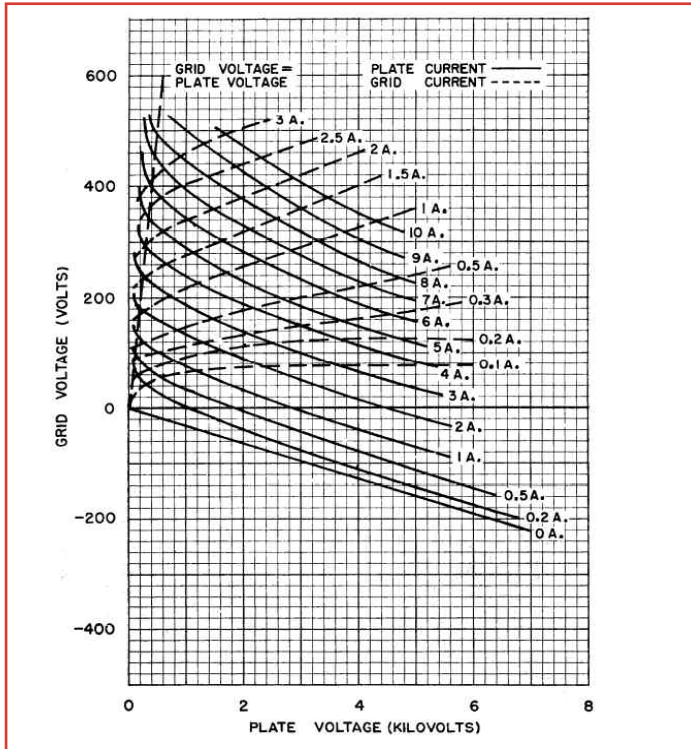
This water-cooled triode uses a coaxial design and metal-ceramic technology. It may be operated in CW or pulse modes. For operation in pulse mode, the parameters depend on each equipment characteristics. Contact us for specific information.

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.

6960 A

Industrial RF Heating

Constant current characteristics



Technical specifications			
Cathode	thoriated tungsten		
Filament voltage	12.6	V	
Filament current	33	A	
Max. heater surge current	125	A	
Amplification factor	32		
Capacitance			
• grid-anode	11	pF	
• grid-cathode	16	pF	
• cathode-anode	0.3	pF	
Mechanical characteristics			
Operating position	vertical down or up		
Weight	0.5	kg	
Dimensions	70 x 192	mm	
Cooling characteristics			
Max. water outlet temperature	60	°C	
Max water pressure at the tube inlet	3	bar	
Min. air flow on filament connections	0.5	m ³ /min	
Max. T° at any point on the tube envelop	250	°C	

Maximum ratings			
Frequency		55	MHz
Anode DC voltage		7.2	kV
Anode DC current		2.2	A
Grid voltage		-1250	V
Grid DC current, at full load		600	mA
Grid DC current, off load		700	mA
Anode dissipation		6	kW
Grid dissipation		290	W
Grid resistance		20	kΩ
Class C, RF oscillator for industrial applications			
Frequency	30	30	30
Anode DC voltage	6.5	6.0	5.0
Grid DC voltage	-450	-400	-300
Anode DC current	2.0	2.0	2.0
Grid current, on load	0.5	0.5	0.5
Anode input power	13	12	10
Anode output power	9.5	8.5	7.1
Anode dissipation	3.5	3.5	2.9
Grid dissipation	190	185	180
Grid resistance	900	800	600
Feedback ratio	15.7	16.1	17.1
Oscillator efficiency	73	71	71

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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