

RS 3700 CJ

Water-cooled triode

1 250 kW

- Output power:
1 250 kW in CW mode
- Anode voltage: 20 kV
- Anode dissipation: 500 kW max.
- Frequency up to 30 MHz



THALES



RS 3700 CJ

The RS 3700 CJ is a RF power triode designed specifically for industrial applications. This tube uses a coaxial design and metal-ceramic technology. This triode is designed to operate in CW mode. For operation in pulse mode, the parameters depend on each

equipment characteristics, contact us for specific information.

The RS 3700 CJ is a water-cooled triode.

This product is designed, developed and manufactured at an ISO 9001 production site registered.

Electrical characteristics

Filament	thoriated tungsten		
Filament voltage (+ 5 %, - 10 %)	13.5	V	
Filament current	1.3	kA	
Surge current	3.9	kA	max.
Capacitance:			
• grid-anode	200	pF	
• grid-cathode	500	pF	
• cathode-anode (1)	10	pF	
Amplification factor	35		approx.
Transconductance (Va: 4 kV, Ia: 20 A)	400	mA/V	approx.

Mechanical Characteristics

Operating position	vertical, anode up or down		
Weight	80	kg	approx.
Dimensions	see outline drawing		

Maximum ratings

Frequency (2)	30	MHz	
Anode voltage:			
• up to 15 MHz	20	kV	
• from 15 to 30 MHz	16	kV	
Control-grid voltage	- 2	kV	
Peak cathode current, CW	650	A	
Anode dissipation	500	kW	
Grid dissipation:	10	kW	
Grid resistance (at blocked tube)	2	kΩ	

(1) Measured with a 50 cm diameter shielding plate in the grid terminal plane.

(2) Limited conditions above 30 MHz. Please consult Thales Electron Devices.

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Cooling

Anode cooling	water		
Cooling water flow and pressure gradient	see cooling curves		
Cooling water inlet pressure	5	bar	max.
Water inlet temperature	35	°C	max.
Temperature at any point on tube envelope	220	°C	max.
Air flow on tube terminal side	8	m ³ /mn	

Typical operation (3)

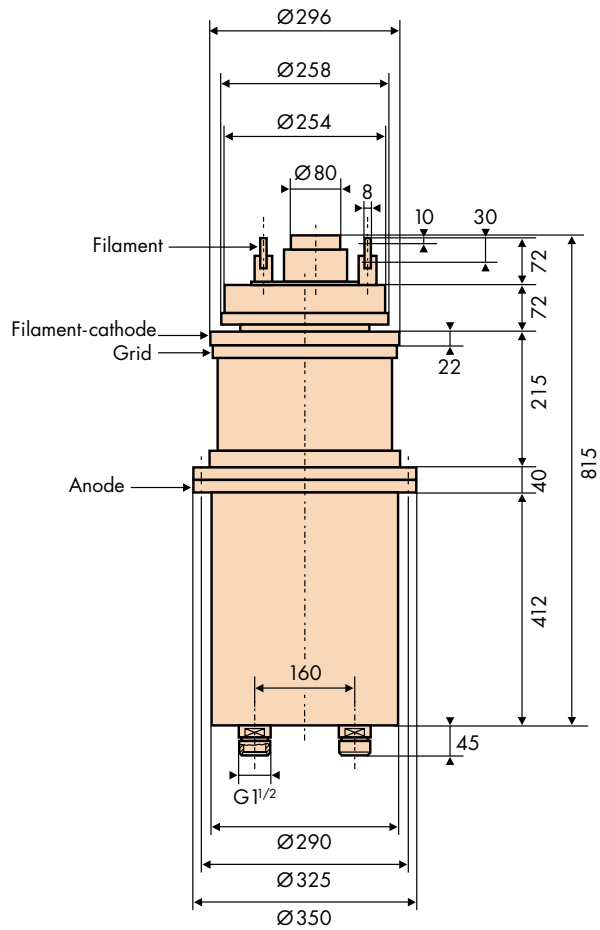
Examples	Class C RF oscillator for industrial applications		
	1	2	
Frequency	< 15	< 30	MHz
Anode voltage	16	14	kV
Control grid bias	- 850	- 800	V
RF control grid voltage	1 450	1 340	V
Anode current	100	86	A
Control grid current	16	14	A
Anode input power	1 600	1 204	kW
Anode output power (4)	1 250	900	kW
Anode dissipation	328	286	kW
Control grid dissipation	8.4	7	kW
Grid resistance	53	57	Ω
Feedback ratio	9.5	10.2	%
Oscillator efficiency	78	75	%

(3) Operation with higher frequencies on request

(4) Without taking circuit losses into account

Nota: Data sheets are for information only. For design purpose, please ask for our latest specification.

Outline drawing (mm)



This document cannot be considered to be a contractual specification. The information given herein may be modified without notice due to product improvement or further development. Consult Thales Electron Devices before making use of this information for equipment design.

For further information, please contact:

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