

RS 3060 CL

Forced-air cooled triode

120 kW

- Output power:
120 kW in CW mode
- Anode voltage: 14 kV
- Anode dissipation: 35 kW max.
- Frequency up to 100 MHz



THALES



RS 3060 CL

The RS 3060 CL 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 3060 CL is a forced-air 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 %)	10	V	
Filament current	190	A	
Surge current	570	A	max.
Capacitance:			
• grid-anode	46	pF	
• grid-cathode	95	pF	
• cathode-anode (1)	2.6	pF	
Amplification factor	22		approx.
Transconductance (Va: 4 kV, Ia: 3 A)	50	mA/V	approx.

Mechanical characteristics

Operating position	vertical, anode up or down		
Weight	18	kg	approx.
Dimensions	see outline drawing		

Maximum ratings

Frequency (2)	30	MHz	
Anode voltage:			
• up to 15 MHz	14	kV	
• from 15 to 30 MHz	10	kV	
Control-grid voltage	- 1.5	kV	
Control-grid current (F < 15 MHz):			
• at full load, CW	2.2	A	
• at no load, CW	2.8	A	
Peak cathode current, CW	70	A	
Anode dissipation			
• from the anode side	30	kW	
• from the electrode terminal side	35	kW	
Grid dissipation			
• up to 15 MHz	1.2	kW	
• from 15 to 30 MHz	0.9	kW	
Grid resistance (at blocked tube)	8	kΩ	

(1) Measured with a 30 cm diameter shielding plate in the screen-grid terminal plane.
(2) Conditions above 30 MHz, please consult Thales Electron Devices.

Cooling

Anode cooling	forced air		
Cooling water flow and pressure gradient	see cooling curves		
Inlet air temperature	25	°C	typ.
Temperature at any point on tube envelope	220	°C	max.

Typical operation (3)

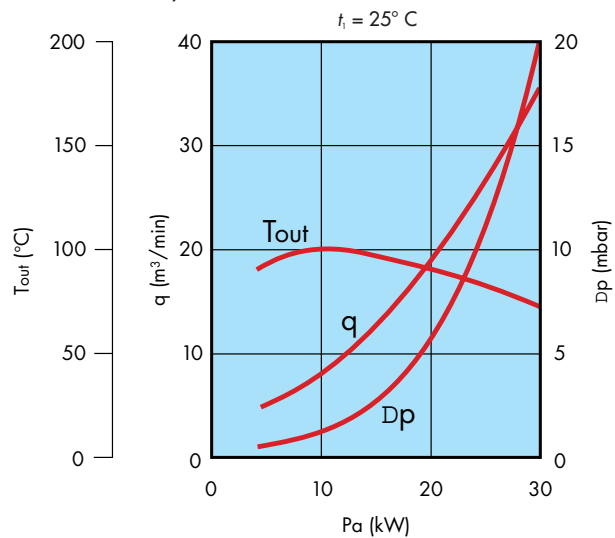
Examples	Class C RF oscillator for industrial applications		
	1	2	
Frequency	< 15	< 15	MHz
Anode voltage	13	12	kV
Control grid bias	- 950	- 950	V
RF Control grid voltage	1 440	1 440	V
Anode current	12.1	10.7	A
Control grid current	1.75	1.75	A
Anode input power	157	128	kW
Anode output power (4)	120	100	kW
Anode dissipation	35	26	kW
Control grid dissipation	750	730	W
Grid resistance	540	540	Ω
Feedback ratio	12.5	13.4	%
Oscillator efficiency	76	78	%

(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.

Cooling air curves (air flow from anode side)

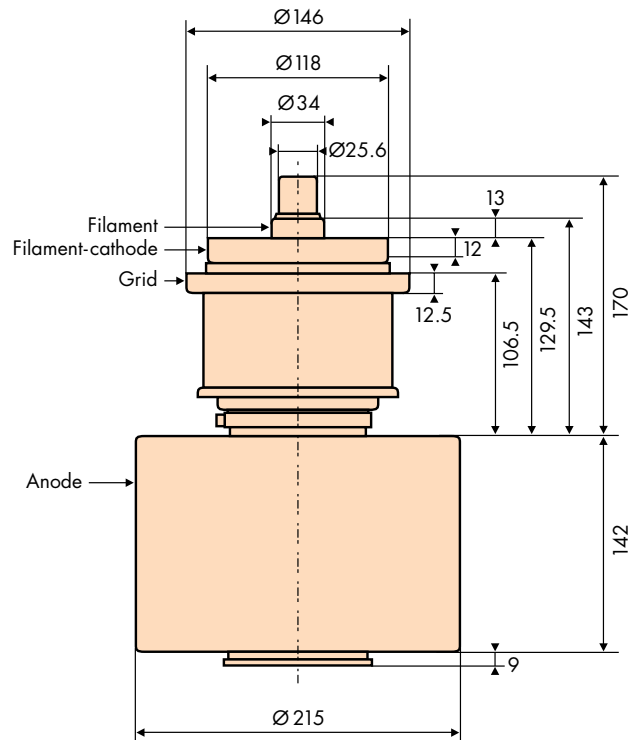
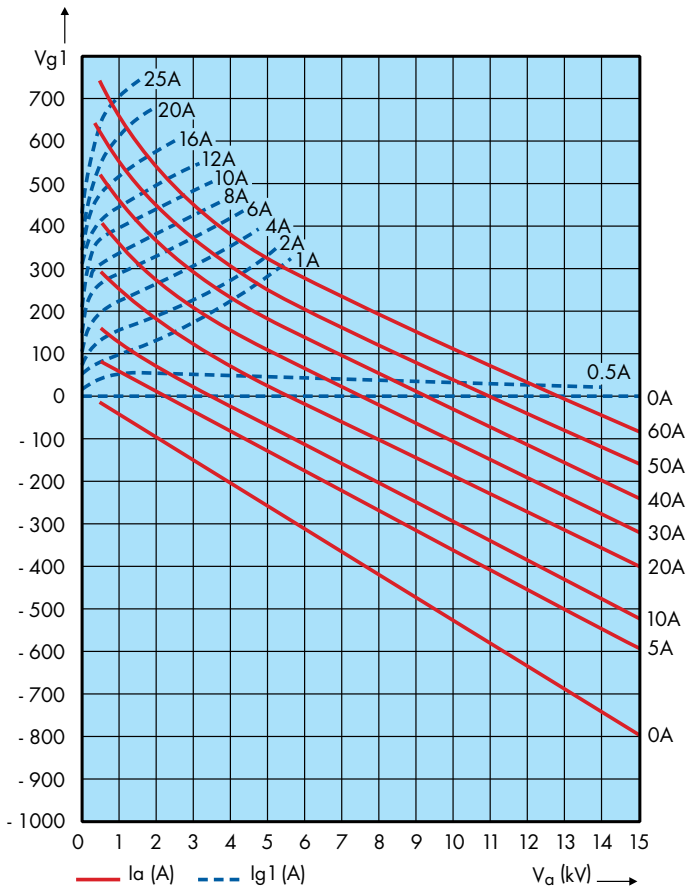
P_a : anode dissipation
 Δp : pressure drop
 q : air flow rate
 T_{out} : air outlet temperature



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Constant current characteristics

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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