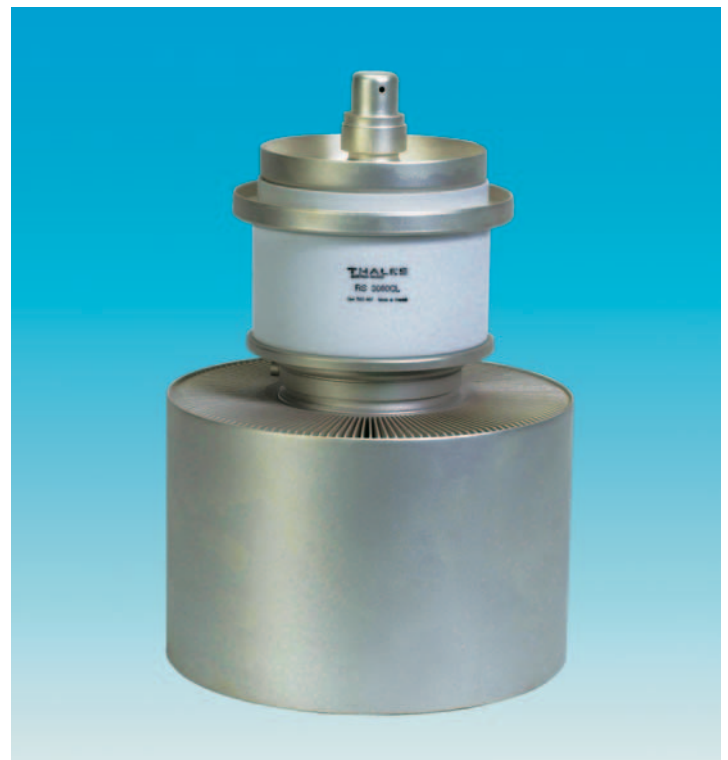


# RS 3080 CL

Forced-air cooled triode

**120 kW**

- Output power:  
120 kW in CW mode
- Anode voltage: 14 kV
- Anode dissipation: 45 kW max.
- Frequency up to 100 MHz



**THALES**



RS 3080 CL

The RS 3080 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 3080 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 %)	11	V	
Filament current	205	A	
Surge current	615	A	max.
Capacitance:			
• grid-anode	46	pF	
• grid-cathode	106	pF	
• cathode-anode (1)	3	pF	
Amplification factor	19		approx.
Transconductance (Va: 4 kV, Ia: 3 A)	60	mA/V	approx.

### Mechanical Characteristics

Operating position	vertical, anode up or down		
Weight	18.5	kg	approx.
Dimensions	see outline drawing		

### Maximum ratings

Frequency (2)	30	MHz
Anode voltage	14	kV
Control-grid voltage	- 1.5	kV
Peak cathode current, CW	85	A
Control grid current:		
• on load, CW	2.3	A
• off load, CW	2.6	A
Anode dissipation	45	kW
Grid dissipation	1.25	kW
Grid resistance (at blocked tube)	8	kΩ

(1) Measured with a 30 cm diameter shielding plate in the grid terminal plane.

(2) Limited 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)

### Class C RF oscillator for industrial applications

Frequency	< 30	MHz
Anode voltage	12	kV
Control grid bias	- 1 055	V
RF control grid voltage	1 555	V
Anode current	12.7	A
Control grid current	2.2	A
Anode input power	1 51.9	kW
Anode output power (4)	106	kW
Anode dissipation	35	kW
Control grid dissipation	942	W
Grid resistance	485	Ω
Feedback ratio	14.8	%
Oscillator efficiency	74.9	%

(3) Operation with higher frequencies on request.

(4) Without taking circuit losses into account.

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

## Cooling air curves (air flow from electrode terminal side)

$P_a$  : anode dissipation  
 $\Delta p$  : pressure drop  
 $q$  : air flow rate  
 $T_{out}$  : air outlet temperature

