

# PET3080CL

Forced Air Cooled Triode  
For Industrial RF Heating

Drop in equivalent of RS 3080 CL

- Output Power: 120 kW (CW mode)
- Anode voltage: 14 kV
- Anode dissipation: 45 kW
- Frequency up to 100 MHz

Manufactured in India, in a world-class facility equipped with high quality machinery, materials and components sourced from reputed suppliers in America, Europe and Japan.

Fifty-two weeks warranty against manufacturing defects irrespective of the number of hours of operation.



# PET3080CL

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The PET3080CL is a RF power triode designed for industrial heating applications. This tube uses a coaxial design and metal-ceramic technology. This triode is designed to operate in CW modes. For operation in pulse mode, the parameters depend on each equipment characteristics. Contact us for specific information. The PET3080CL is a forced-air cooled triode.

## Electrical characteristics

Cathode Filament	.	.	.	.	.	thoriated tungsten
Filament voltage (+ 5 %, - 10 %).	.	.	.	.	.	11 V
Filament current	.	.	.	.	.	205 A
Surge current (maximum)	.	.	.	.	.	615 A
Capacitances:						
• Grid to Anode	.	.	.	.	.	46 pF
• Grid to Cathode	.	.	.	.	.	106 pF
• Cathode to Anode (see note 2)	.	.	.	.	.	3 pF
Amplification factor	.	.	.	.	.	19
Transconductance (Va: 4 kV, Ia: 3 A)	.	.	.	.	.	60 mA/V approx.

## Mechanical characteristics

Operating position	.	.	.	.	.	vertical anode up or down
Weight	.	.	.	.	.	18.5 kg (41 lbs) approx.
Dimensions	.	.	.	.	.	see ourline drawing

## Maximum ratings

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

## Typical Operation (Class C RF oscillator for industrial applications)

Frequency	.	.	.	.	.	< 30 MHz
Anode voltage	.	.	.	.	.	12 kV
Control grid bias	.	.	.	.	.	- 1055 V
RF Control grid voltage	.	.	.	.	.	1555 V
Anode current	.	.	.	.	.	12.7 A
Control grid current	.	.	.	.	.	2.2 A
Anode input power	.	.	.	.	.	151.9 kW
Anode output power	.	.	.	.	.	106 kW
Anode dissipation	.	.	.	.	.	35 kW
Control grid dissipation	.	.	.	.	.	942 W
Grid resistance	.	.	.	.	.	485 $\Omega$
Feedback ratio	.	.	.	.	.	14.8 %
Oscillator efficiency	.	.	.	.	.	74.9 %

*Operations at higher frequencies available upon request*

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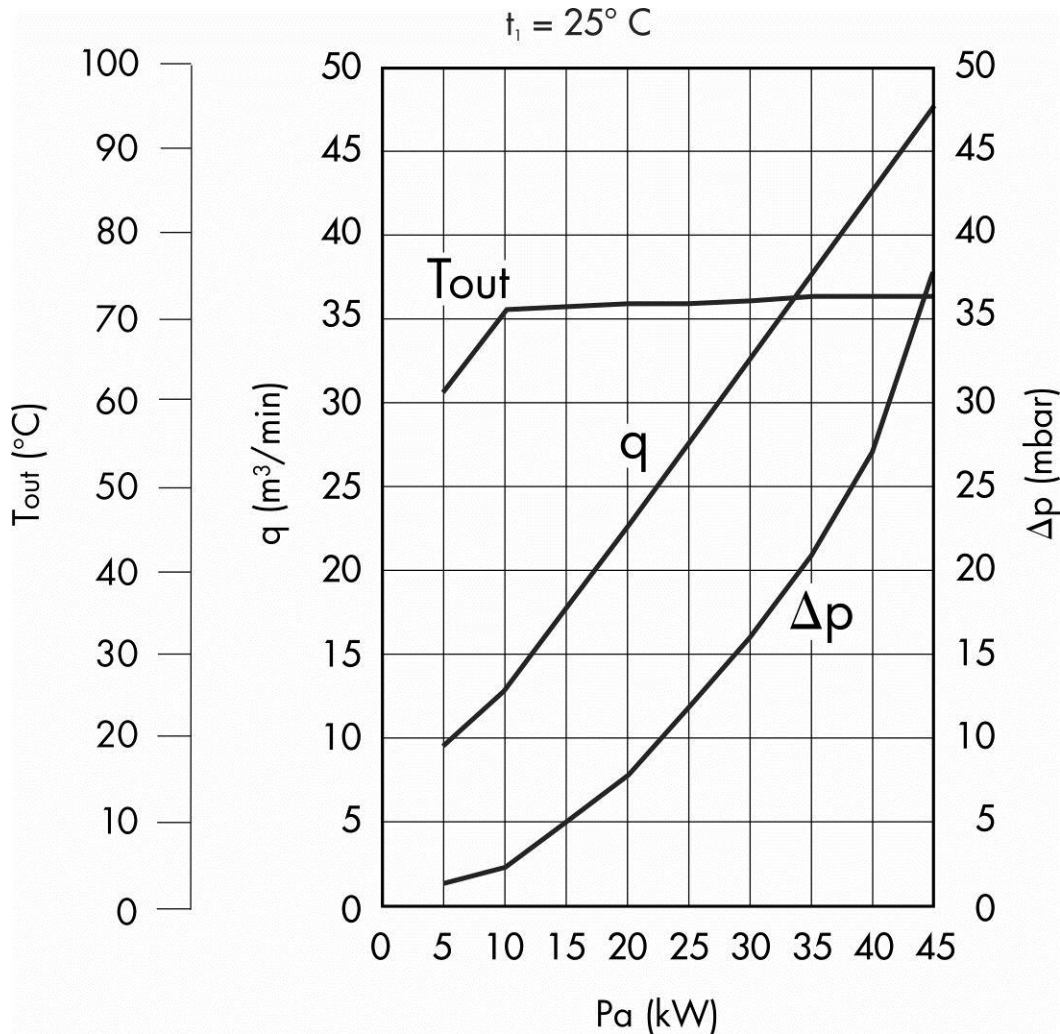
**Cooling**

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

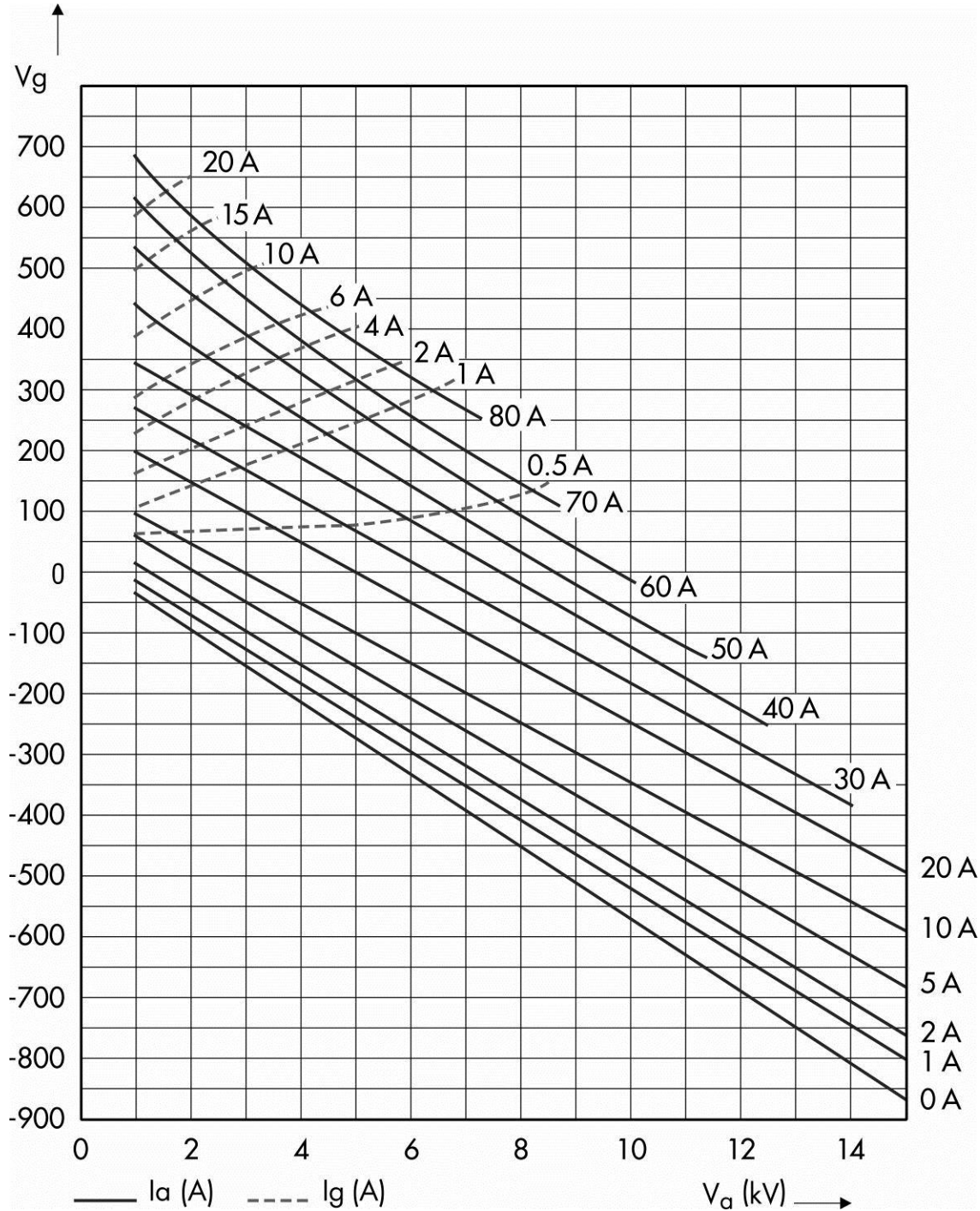
**Cooling Curves**

(For air flow from electrode terminal side)

Pa : anode dissipation     $\Delta p$  : pressure drop  
 q : air flow rate    Tout : air outlet temperature



Constant Current Characteristics



Outline Drawing (in mm)

