INDUSTRIAL
RF HEATING

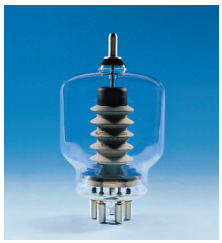
# T 500-2

## Radiation cooled triode

## 1.6 kW

- Output power:
  1.6 kW in CW mode
- Anode voltage: 4 kV
- Anode dissipation:
  450 W max.
- Frequency up to 120 MHz

THALES



*T 500-2*

The T 500-2 is a RF power triode of glass construction with a ruggedly constructed graphite anode.
It is used as class C RF oscillator for industrial applications.

For operation in pulse mode, the parameters depends on each equipment characteristics. Contact us for specific information.
This product is designed, developed and manufactured at an ISO 9001: V2000 registered production site.

## Electrical characteristics

| | | | |
|---|---|---|---|
| Cathode | thoriated tungsten | | |
| Heating | direct | | |
| Filament voltage (+ 5%, - 10%) | 10 | V | |
| Filament current | 10 | A | |
| Interelectrode capacitances: | | | |
| • grid-anode | 7 | pF | |
| • grid-cathode | 8 | pF | |
| • cathode-anode | 0.17 | pF | |
| Amplification factor | 28 | | |
| Transconductance (Va: 3.5 kV, Ia: 125 mA) | 4.5 | mA/V | |

## Mechanical characteristics

| | | | |
|---|---|---|---|
| Operating position | vertical | | |
| Weight | 440 | g | approx. |
| Dimensions | see outline drawing | | |

## Maximum ratings

| | | | |
|---|---|---|---|
| Frequency | 120 | MHz | |
| Anode voltage | 4 | kV | |
| Peak cathode current | 5 | A | |
| Anode dissipation | 450 | W | |
| Grid dissipation | 50 | W | |
| Grid voltage | - 500 | V | |

## Cooling

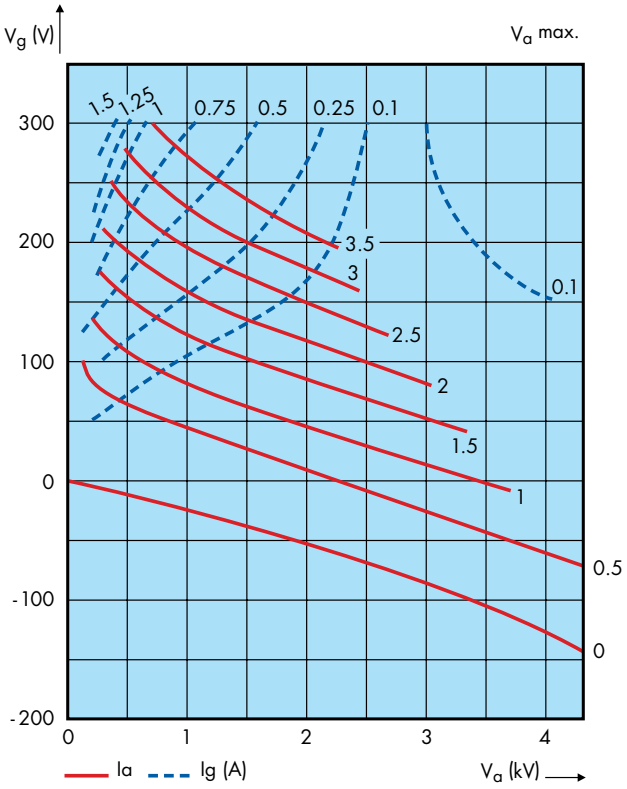
| | | | |
|---|---|---|---|
| Cooling method | radiation / low velocity air flow | | |
| Temperature of the bulb | 250 | °C | max. |
| Temperature of the glass-metal seals | 160 | °C | max. |

## Typical operation

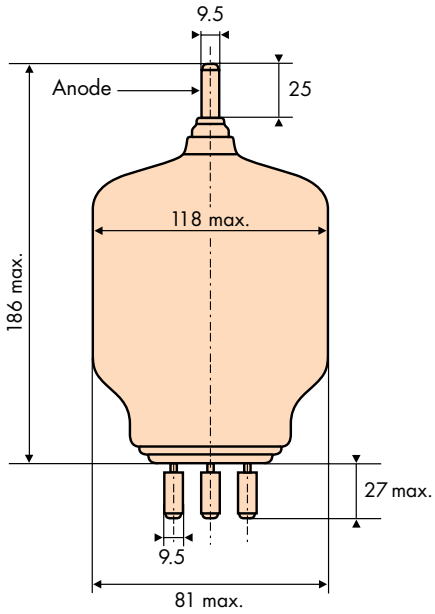
| | RF oscillator Class C, up to 50 MHz | | | | |
|---|---|---|---|---|---|
| **Examples** | **1** | **2** | **3** | **4** | |
| Anode voltage | 4 | 3.5 | 3 | 2.5 | kV |
| Anode current | 535 | 535 | 535 | 535 | mA |
| Anode input power | 2.14 | 1.88 | 1.6 | 1.34 | kW |
| Anode output power (1) | 1.63 | 1.37 | 1.12 | 0.91 | kW |
| Anode dissipation | 450 | 450 | 425 | 390 | W |
| Grid current | 115 | 115 | 115 | 115 | mA |
| Grid dissipation | 25 | 25 | 25 | 25 | W |
| Grid resistance | 3 | 2.6 | 2.2 | 1.8 | kΩ |
| Efficiency | 76.5 | 73 | 70.5 | 67.5 | % |

(1) Circuit losses not included.

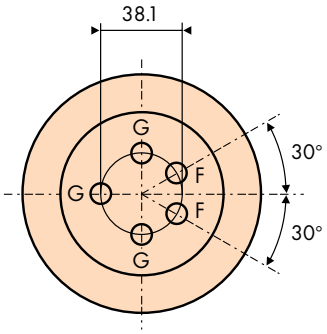
**Constant current characteristics**

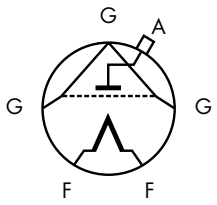



**Outline drawing** (dimensions in mm)




**Bottom view** (dimensions in mm)




**Accesories**
Anode connector 9 mm 066P1
Socket Super Giant P5 857P1




*For further information, please contact:*

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