

RF POWER TRIODE

- Water cooled

QUICK REFERENCE DATA

Industrial RF oscillator, class-C

freq. MHz	V_a kV	W_o kW
30	12	39
	10	31,3
	8	23,2

HEATING: direct; thoriated tungsten filament

Filament voltage	V_f	=	8 V
Filament current	I_f	=	130 A
Cold filament resistance	R_{fo}	=	0,006 Ω

The filament is designed to accept temporary fluctuations of +5% and -10%.

The filament current must never exceed a peak value of 280 A at any time during the initial energizing schedule.

CAPACITANCES

Anode to all other elements except grid	C_a	=	0,9 pF
Grid to all other elements except anode	C_g	=	45 pF
Anode to grid	C_{ag}	=	23,5 pF

TYPICAL CHARACTERISTICS

Anode voltage	V_a	=	12 kV
Anode current	I_a	=	2 A
Mutual conductance	S	=	22 mA/V
Amplification factor	μ	=	21

TEMPERATURE LIMITS (Absolute limits)

Temperature of all seals	max.	220 $^{\circ}\text{C}$
Water inlet temperature	max.	50 $^{\circ}\text{C}$

COOLING Generally a low velocity air flow to the seals is required.

Table 1 Cooling characteristics

anode dissipation W_a kW	inlet temperature T_i °C	rate of flow q_{min} l/min	pressure drop ΔP kPa*	max. outlet temperature T_o (°C)
20	20	22	50	35
	50	49	230	56
15	20	16	25	35
	50	37	130	56
10	20	11	10	35
	50	25	70	56
5	20	6	2	35
	50	15	22	56

ACCESSORIES

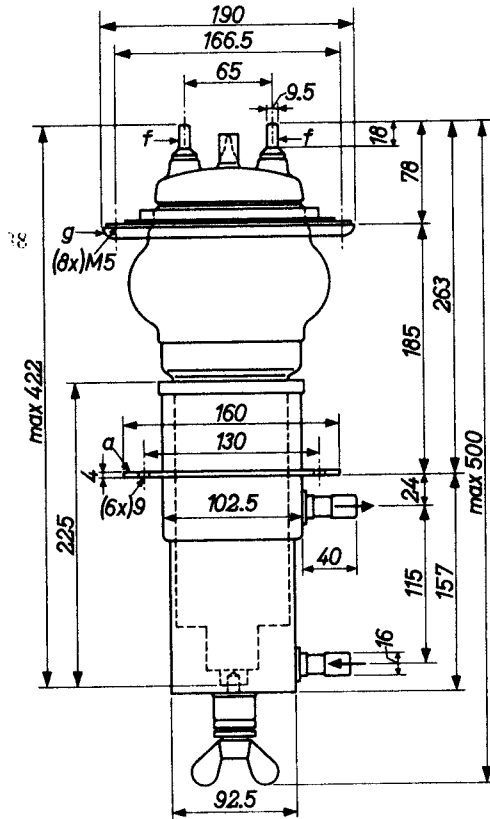
Filament connectors
Grid connector
Water jacket
O-ring, large
small

40662
40663
K722
2622 080 30895
2622 080 30736

* 100 kPa \approx 1 at

MECHANICAL DATA

Dimensions in mm



- Mounting position : vertical with anode down.
- Net mass of tube : 3,0 kg
- Net mass of water jacket : 2,7 kg

For further data and curves (except cooling curves)
please refer to type TBL12/38

Fig. 1 Mechanical outline.

PHILIPS

Data handbook



Electronic
components
and materials

TBW12/38

page	sheet	date
1	171	1988.02
2	172	1988.02
3	173	1988.02
4	FP	2000.09.22