

TENTATIVE DATA

QUICK REFERENCE DATA

External anode triode of ceramic-metal construction, water cooled by means of an integral water cooler, intended for use as a class 'C' industrial oscillator.

f	≤ 80	MHz
P_{out} (less P_{drive})	30	kW
$f_{max.}$	80	MHz
V_a max.	9.0	kV
p_a max.	20	kW

To be read in conjunction with
GENERAL OPERATIONAL RECOMMENDATIONS - TRANSMITTING VALVES
INDUSTRIAL OSCILLATOR, CLASS 'C'
OPERATING CONDITIONS

f	≤ 80	MHz
P_{out}	32.4	kW
P_{out} (less P_{drive})	30	kW
P_{load}	25.5	kW
Duty factor	1.0	
η_a	80	%
V_a	7.5	kV
I_a	5.4	A
$-V_g$	653	V
I_g	1.45	A
R_{g-f}	450	Ω
Feedback ratio $v_{in(pk)}/v_{a(pk)}$	0.17	
P_{drive}	2.4	kW
p_a	8.1	kW

RATINGS (ABSOLUTE MAXIMUM SYSTEM)

f max.	80	MHz
V_a max.	9.0	kV
$-V_g$ max.	1.5	kV
I_g max. on load	1.6	A
off load	2.4	A
I_k max.	7.5	A
$i_{k(pk)}$ max.	40	A
P_{in} max.	45	kW
p_a max.	20	kW
R_{g-f} max.	10	k Ω

CATHODE

Directly heated, thoriated tungsten

V_f	7.0	V
I_f	175	A
$i_{f(pk)}$ max. (starting)	1.0	kA
r_f (cold)	0.0042	Ω

The filament has been designed to accept temporary fluctuations of supply voltage of +5 to -10%.

CAPACITANCES

c_{a-g}	32	pF
c_{a-f}	1.0	pF
c_{g-f}	61	pF

CHARACTERISTICS (measured at $V_a = 7.0$ kV, $I_a = 3.5$ A)

g_m	60	mA/V
μ	34	

MOUNTING

Vertical, anode up or down

COOLING

Anode - water cooled with integral cooler.

Seals - low velocity air flow at frequencies > 4MHz

Temperatures

Anode seal max.	200	°C
Grid seal max.	200	°C
Filament seals max.	200	°C
Envelope max.	200	°C
Water inlet max.	50	°C

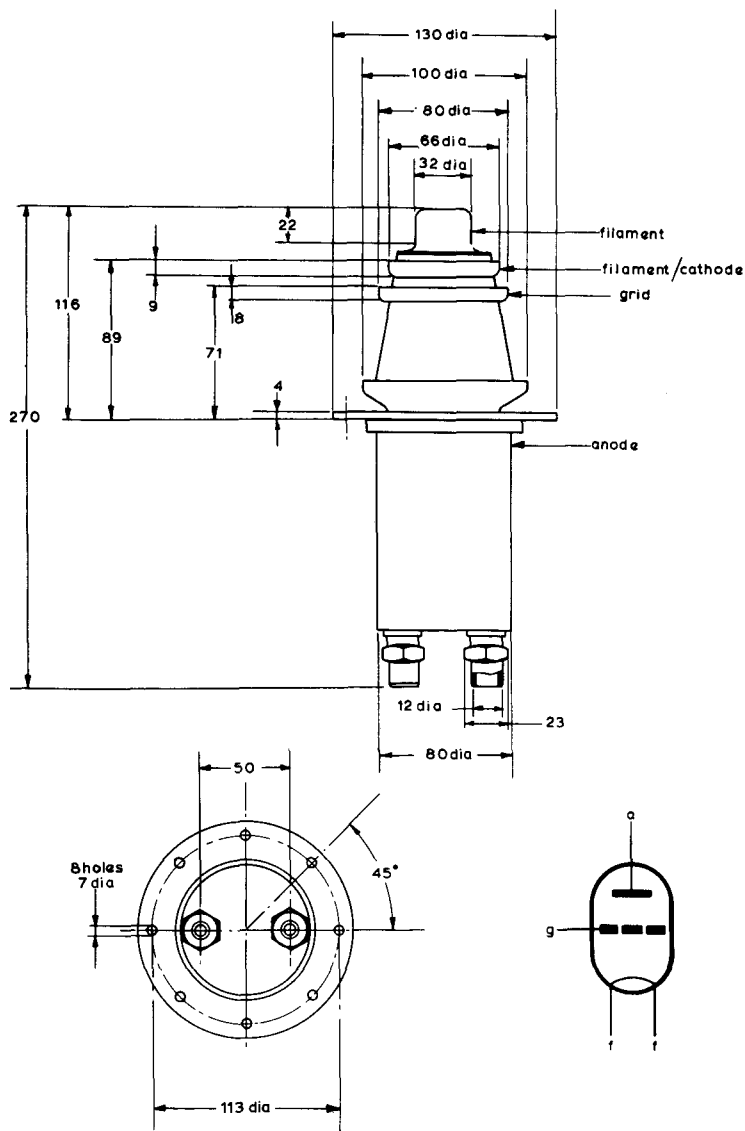
WATER COOLING CHARACTERISTICS

Anode Dissipation (kW)	Inlet Temperature (°C)	Rate of flow (l/min)	Inlet Pressure (Atm)	Outlet Temperature (°C)
20	20	15	0.7	40

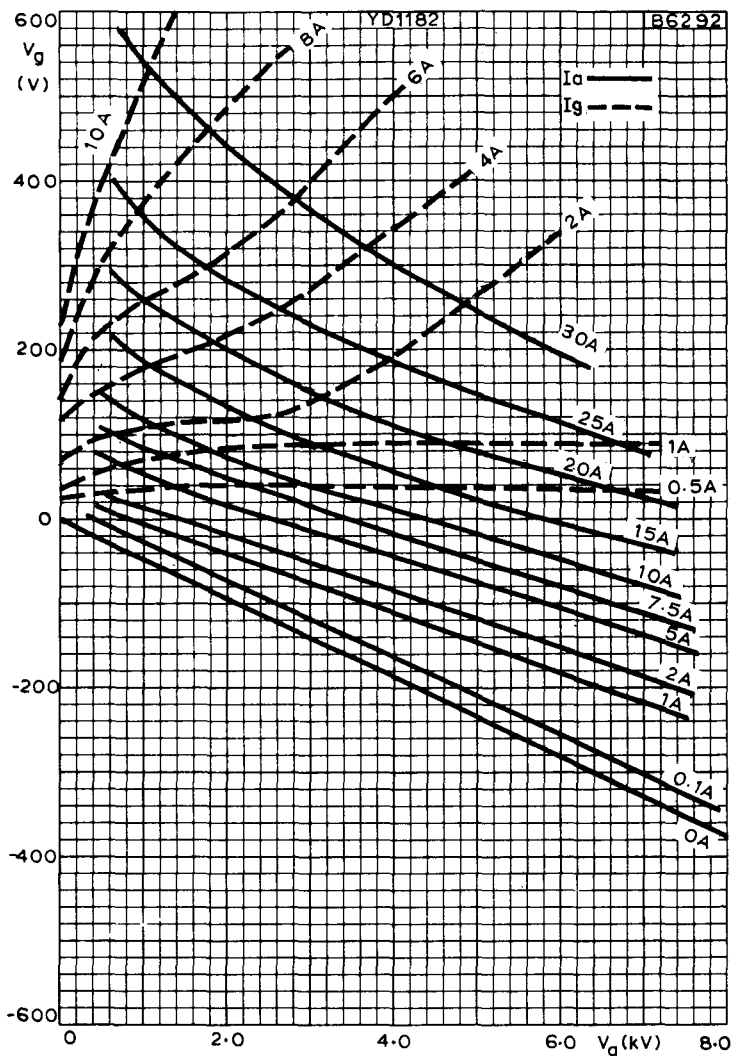
ACCESSORIES

Grid connector $f \leq 4.0\text{MHz}$	40710
$f > 4.0\text{MHz}$	40711
Filament connectors (both types required)	40708
	and 40709
Filament cables (× 2)	40720

OUTLINE DRAWING OF YD1182



All dimensions in mm. **B6295**



CONSTANT CURRENT CHARACTERISTICS