

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	30	MHz
P_{out} (less P_{drive})	60	kW
f max.	30	MHz
V_a max.	9.6	kV
p_a max.	40	kW

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

OPERATING CONDITIONS

f	30	MHz
P_{out}	62.3	kW
P_{out} (less P_{drive})	60	kW
P_{load}	55	kW
Duty factor	1.0	
η_a	78	%
V_a	8.0	kV
I_a	10	A
$-V_g$	675	V
$I_{g \text{ on load}}$	2.25	A
off load	3.3	A
R_{g-f}	300	Ω
Feedback ratio $v_{in(pk)}/v_{a(pk)}$	0.14	
P_{drive}	2.3	kW
p_a	17.7	kW

RATINGS (ABSOLUTE MAXIMUM SYSTEM)

f max.	30	MHz
V_a max.	9.6	kV
P_{in} max.	96	kW
$-V_g$ max.	1.5	kV
I_g max. on load	2.5	A
off load	3.5	A
I_k max.	14.5	A
$i_{k(pk)}$ max.	68	A
p_a max.	40	kW
R_{g-f} max.	10	k Ω

CATHODE

Directly heated, thoriated tungsten

$*V_f$	8.4	V
I_f	235	A
$i_{f(pk)}$ max. (starting)	1.0	kA
r_f (cold)	0.0039	Ω

*The filament has been designed to accept temporary variations in supply voltage of +5% and -10%.

CAPACITANCES

c_{a-g}	45	pF
c_{a-f}	1.7	pF
c_{g-f}	100	pF

CHARACTERISTICS (measured at $V_a = 8.0$ kV, $I_a = 6.0$ A)

g_m	110	mA/V
μ	31	

MOUNTING POSITION

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

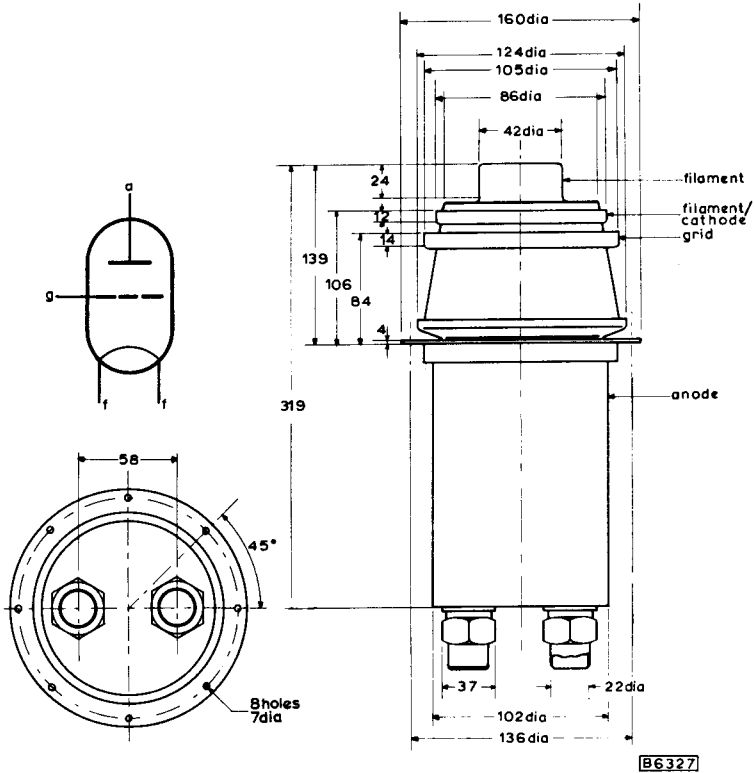
WATER COOLING CHARACTERISTICS

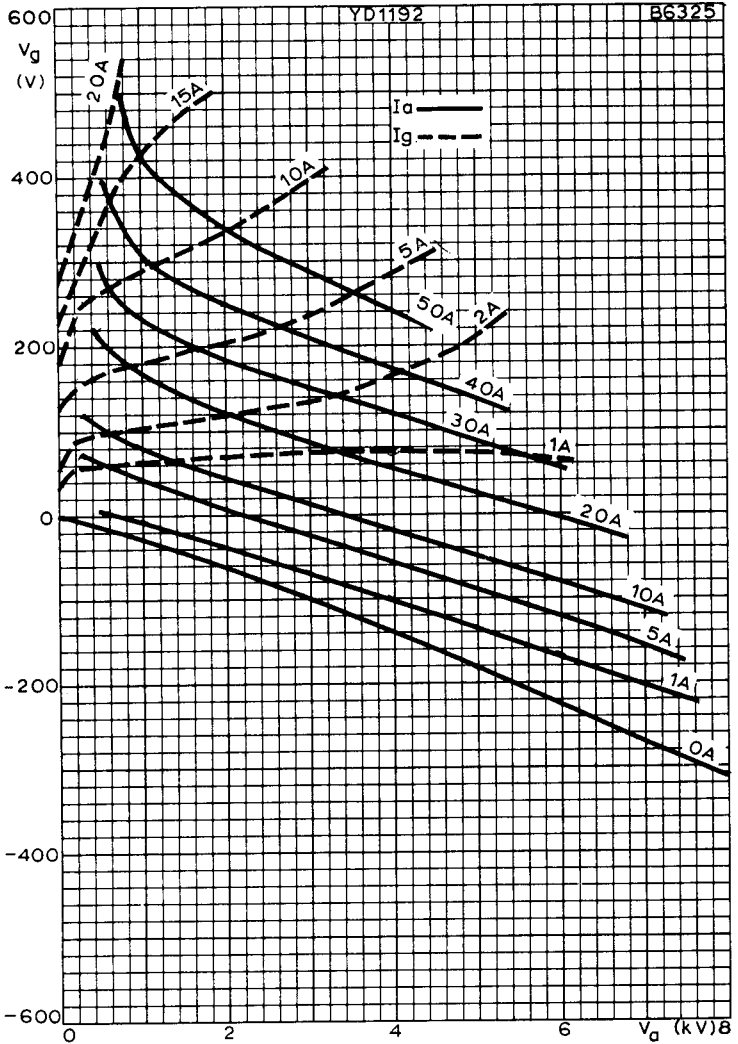
Anode Dissipation (kW)	Inlet Temperature (°C)	Rate of flow (l/min)	Inlet Pressure (Atm)	Outlet Temperature (°C)
40	20	30	0.7	40

ACCESSORIES

Grid connector ($f \leq 4.0\text{MHz}$)	40707
Filament connectors (both types required)	40705
	and 40706
Filament cables	40718
	and 40719

OUTLINE DRAWING OF YD1192





CONSTANT CURRENT CHARACTERISTICS