

QUICK REFERENCE DATA

Forced-air cooled triode intended for use as Class 'C' industrial oscillator.

f	30	Mc/s
P _{out}	7.6	kW
f max.	150	Mc/s
V _a max.	6.0	kV
p _a max.	3.0	kW

To be read in conjunction with

GENERAL OPERATIONAL RECOMMENDATIONS - TRANSMITTING VALVES

INDUSTRIAL OSCILLATOR, CLASS 'C'

OPERATING CONDITIONS

f	30	30	Mc/s
P _{out}	5.8	7.6	kW
P _{load}	5.0	6.7	kW
Duty factor	1.0	1.0	
η_a	77	78	%
V _a	5.0	6.0	kV
I _a	1.5	1.63	A
-V _g	300	350	V
I _g	300	310	mA
R _{g-f}	1.0	1.13	k Ω
Feedback ratio $\frac{v_{in(pk)}}{v_a(pk)}$	0.125	0.12	
P _{drive}	157	180	W
p _a	1.7	2.2	kW
p _g	76	84	W

RATINGS (ABSOLUTE MAXIMUM SYSTEM)

$f_{\text{max.}}$	150	Mc/s
$V_a \text{ max.}$	7.0	kV
$-V_g \text{ max.}$	1.0	kV
$I_g \text{ max.}$	350	mA
$I_k \text{ max.}$	2.5	A
$i_{k(pk)} \text{ max.}$	15	A
$p_a \text{ max.}$	3.0	kW
$p_g \text{ max.}$	110	W
$R_{g-f} \text{ max.}$	10	k Ω

CATHODE

Directly heated, thoriated tungsten

V_f	12.6	V
I_f	33	A

CAPACITANCES

c_{a-g}	24	pF
c_{out}	0.5	pF
c_{in}	21	pF

CHARACTERISTICS (measured at $V_a = 2.5\text{kV}$, $I_a = 0.9\text{A}$)

g_m	22	mA/V
μ	26	

MOUNTING POSITION

Vertical, with base up or down

COOLING

Forced-air cooled (see curves on pages C4 and C5)

Maximum temperatures

Anode and grid seals	180	°C
Filament seals	210	°C

The amount of forced-air cooling required for the anode of this valve depends upon the anode dissipation and temperature and pressure of inlet air.

PHYSICAL DATA

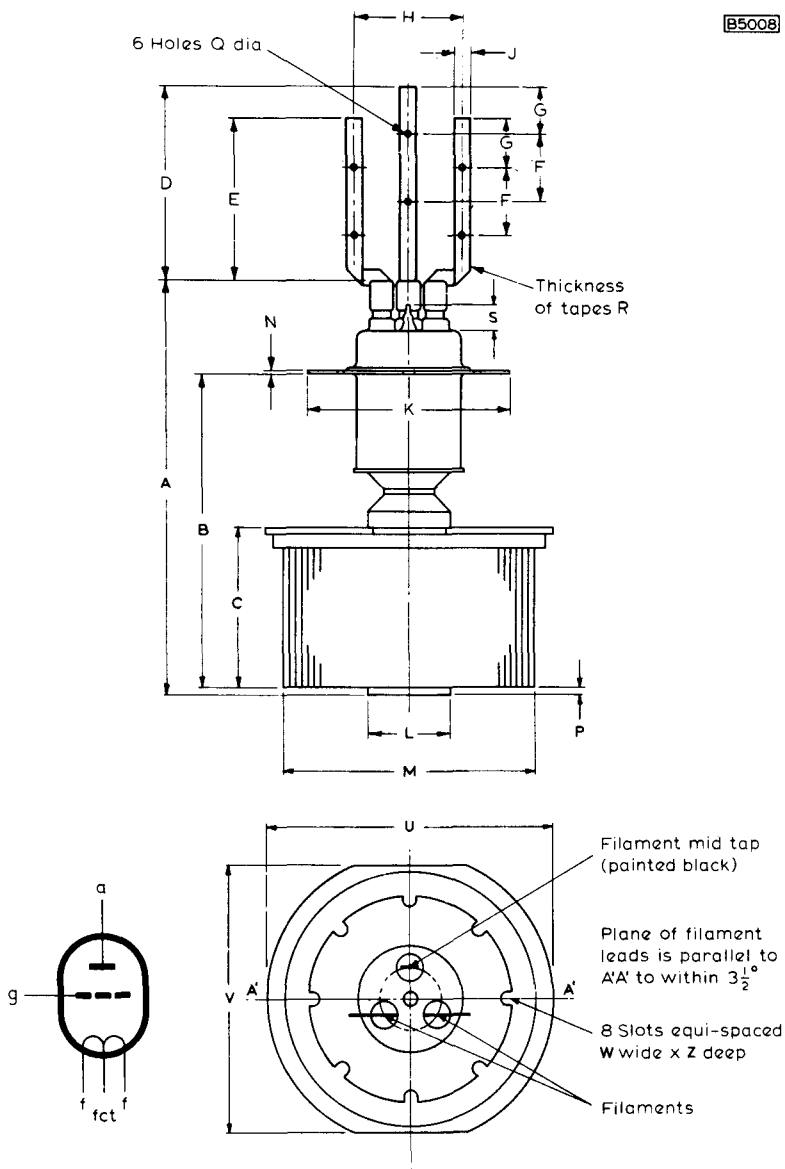
	lb	kg
Weight of valve	8.4	3.8

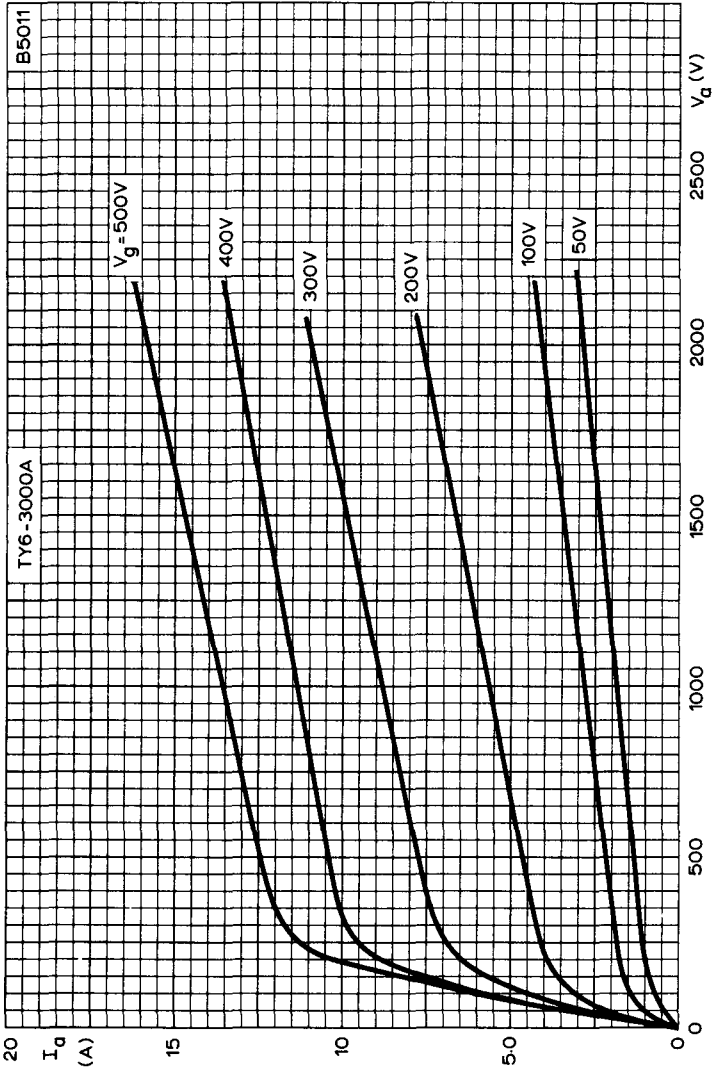
DIMENSIONS

	Inches	Millimetres	
A	8.46	215	max.
B	6.075 ± 0.059	154.3 ± 1.5	
C	3.406 ± 0.039	86.5 ± 1.0	
D	4.252 ± 0.078	108 ± 2.0	
E	3.425 ± 0.039	88 ± 1.0	
F	1.378 ± 0.039	35 ± 1.0	
G	0.866 ± 0.078	20 ± 2.0	
H	2.500	63.5	max.
J	0.315 ± 0.019	8.0 ± 0.5	
K	4.567 ± 0.019	116 ± 0.5	dia.
L	1.969 ± 0.008	50 ± 0.2	dia.
M	5.929 ± 0.039	150.6 ± 1.0	dia.
N	0.063 ± 0.007	1.6 ± 0.2	
P	0.178 ± 0.008	4.5 ± 0.2	
Q	0.145 ± 0.002	3.70 ± 0.05	
R	4×0.010	4×0.25	
S	0.78	20	max.
U	6.512 ± 0.019	165.4 ± 0.5	
V	6.256 ± 0.019	158.9 ± 0.5	
W	0.182 ± 0.004	4.62 ± 0.1	
Z	0.205 ± 0.008	5.20 ± 0.20	

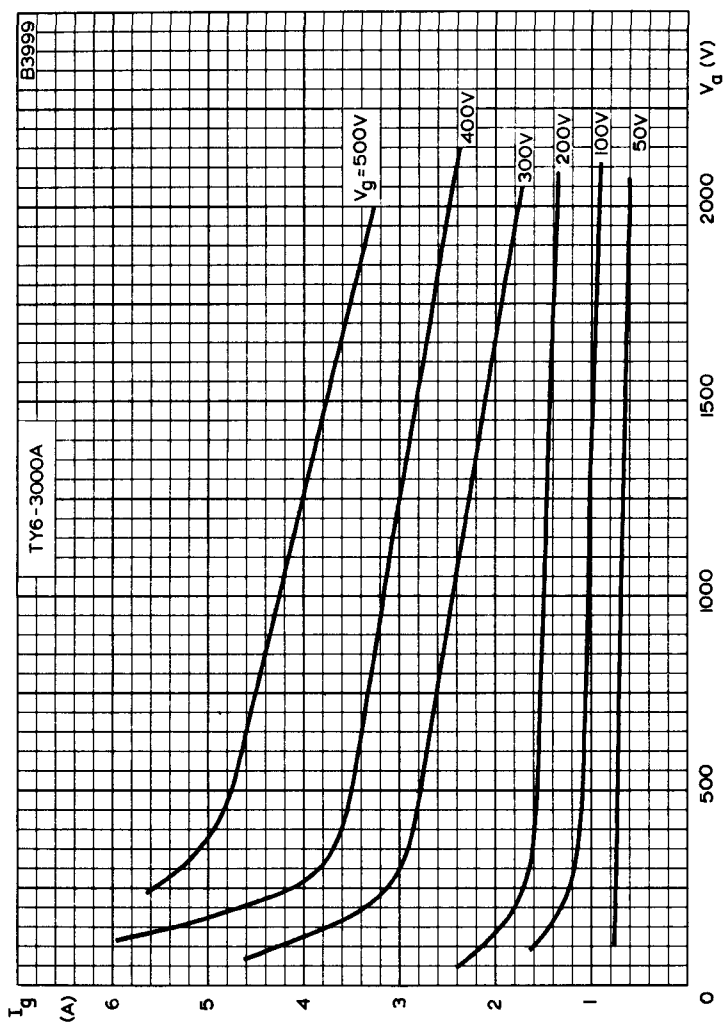
Inch dimensions derived from original millimetre dimensions

B5008

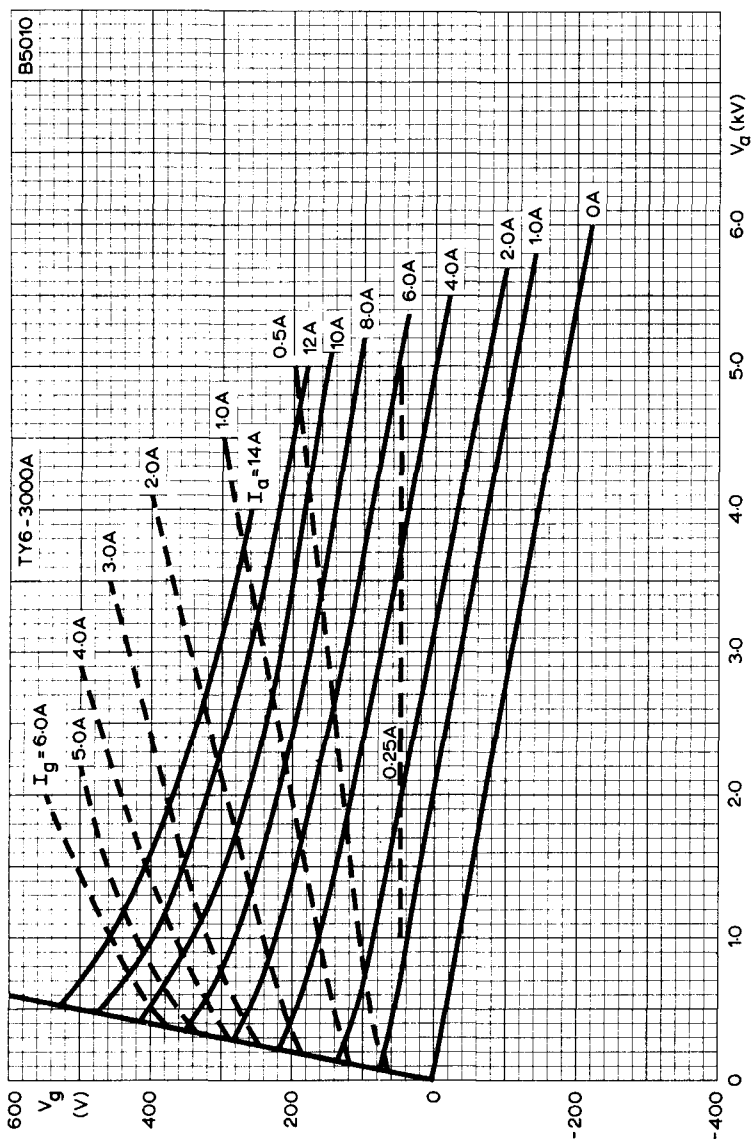




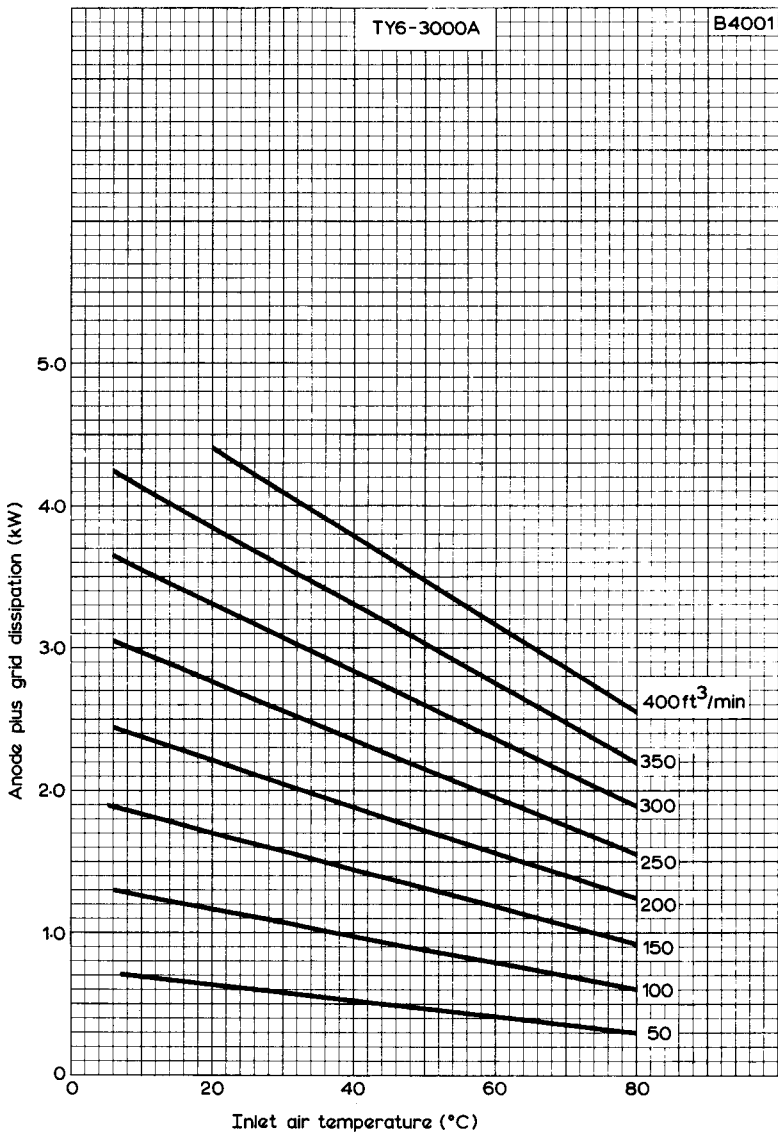
ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH
GRID VOLTAGE AS PARAMETER



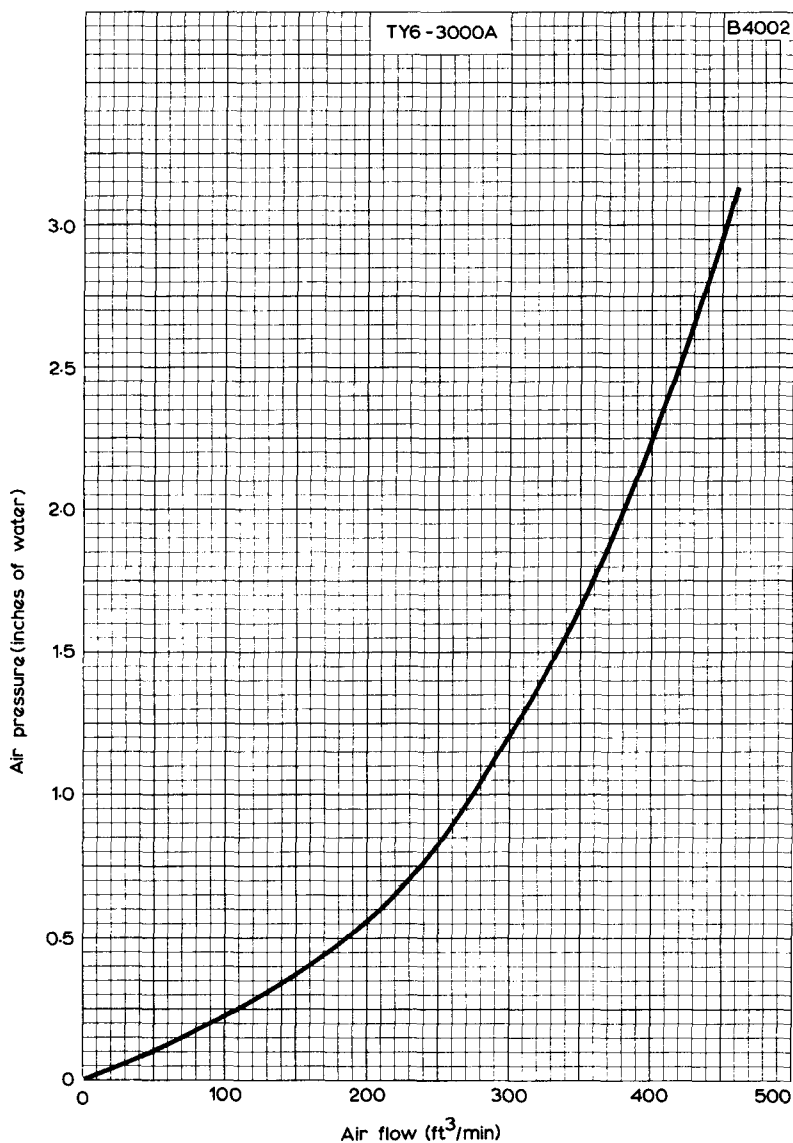
GRID CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH
GRID VOLTAGE AS PARAMETER



CONSTANT CURRENT CHARACTERISTICS



AIR COOLING CHARACTERISTICS



AIR FLOW CHARACTERISTICS