



# Triode Type BW 165

HF AMPLIFIER AND OSCILLATOR

**General.** The BW-165 is a water-cooled transmitting triode fitted with a thoriated tungsten filament.

**Cooling.** The anode forms part of the valve envelope and is designed for cooling by water circulated in direct contact with the valve envelope. The rated flow of cooling water is approximately 8 gallons per minute. The temperature of the cooling water at the outlet must not exceed 65°C and the temperature rise across the jacket must not exceed 15°C.

The external grid and filament seals require air cooling, the volume of air necessary being 20 cu. ft. per minute, and should be directed vertically downwards on to the valve from a 1 in. nozzle. The temperature of the grid and filament seals must not exceed 140°C.

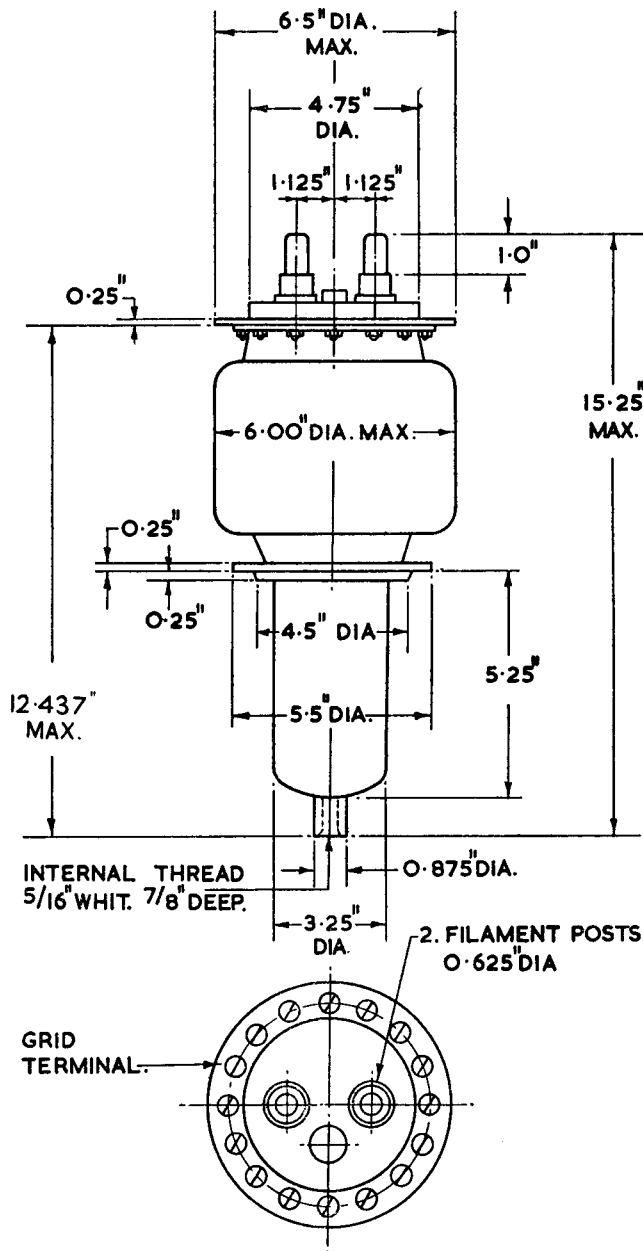
All cooling supplies must be started before the application of any supply voltage and must be continued for at least one minute after the removal of all supply voltages.

**Filament Starting.** The cold filament resistance is approximately 0.0045 Ω. The filament current must not exceed 450 A, even momentarily, at any time.

### APPROXIMATE DATA

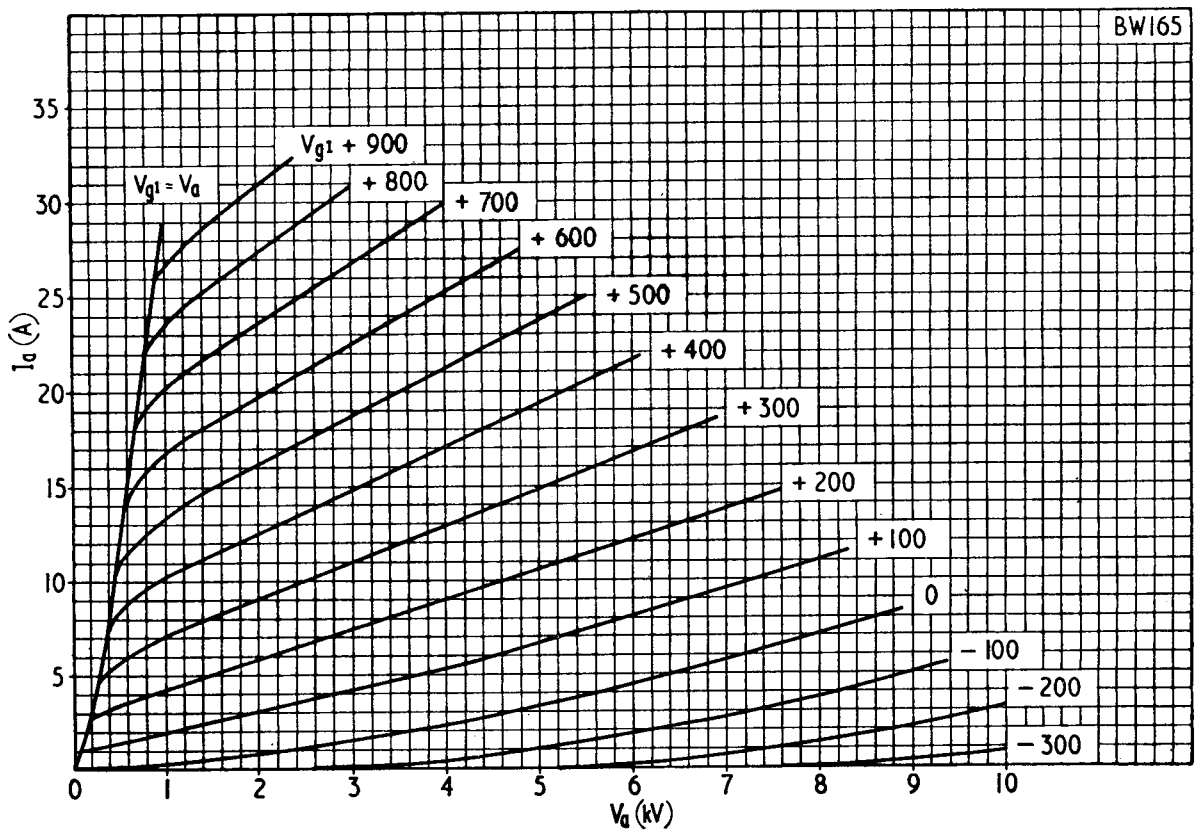
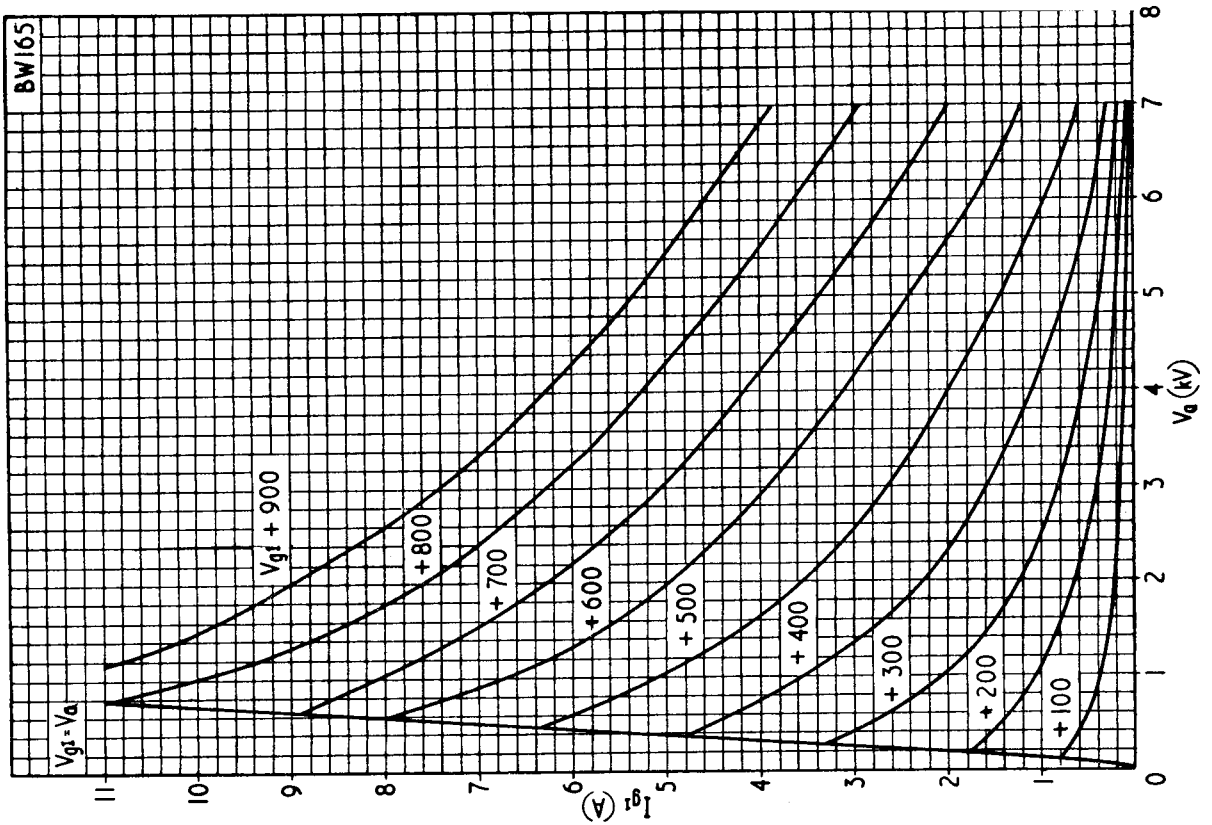
$V_f$	7.2	V*
$I_f$	170	A
$V_a$ (max)	12	kV
$P_a$ (max)	24	kW
$P_{g1}$ (max)	1	kW
$\mu$ (taken at $V_a$ 9 kV, $I_a$ 2 A)	26	
$g_m$ (taken at $V_a$ 10 kV, $I_a$ 1.5 A)	19	mA/V
$I_k$ (pk)	35	A
$f$ (max) (at full ratings)	50	Mc/s
$C_{a-g1}$	30	pF
$C_{a-k}$	1.5	pF
$C_{g1-k}$	46.5	pF

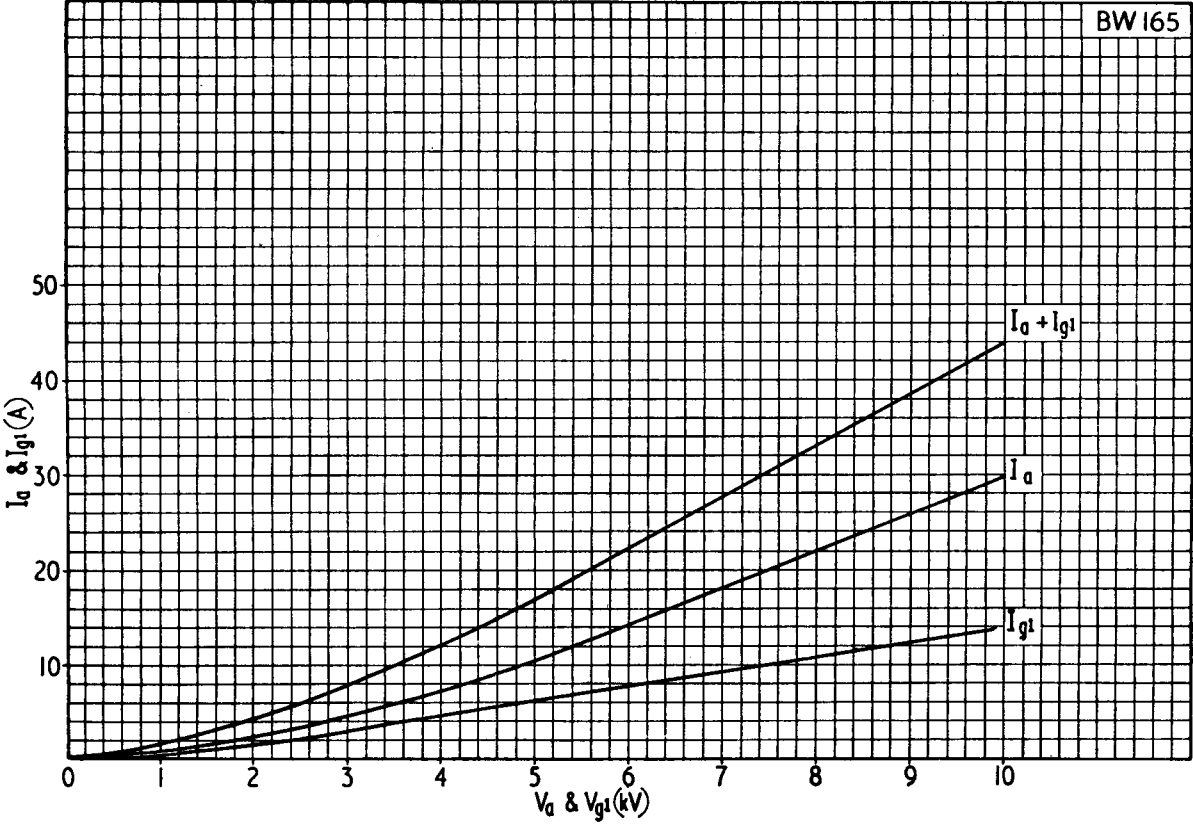
\* The valve must be operated at the marked filament voltage.



MARCONI'S WIRELESS TELEGRAPH COMPANY LIMITED

Head Office: Marconi House, Chelmsford, England. Telephone: Chelmsford 3221. Telegraphic Address: Expanse, Chelmsford







PRINTED IN ENGLAND