Triode *Type BR 155*

VHF AMPLIFIER AND OSCILLATOR

General. The BR 155 is a forced-air-cooled transmitting triode fitted with a tungsten filament.

Filament Starting. The cold filament resistance is approximately 0·01 Ω. The filament current must not exceed 195 A at any time during the switching-on period.

Cooling. The anode requires forced air cooling. The air cooling and air flow characteristics given show air inlet temperature °C/anode + grid loss; and air flow/air pressure.

The external grid and filament seals also require air cooling. The volume of air necessary will be approximately 10 cu. ft. per minute and should be directed vertically downwards on to the seals through a 1-in. nozzle.

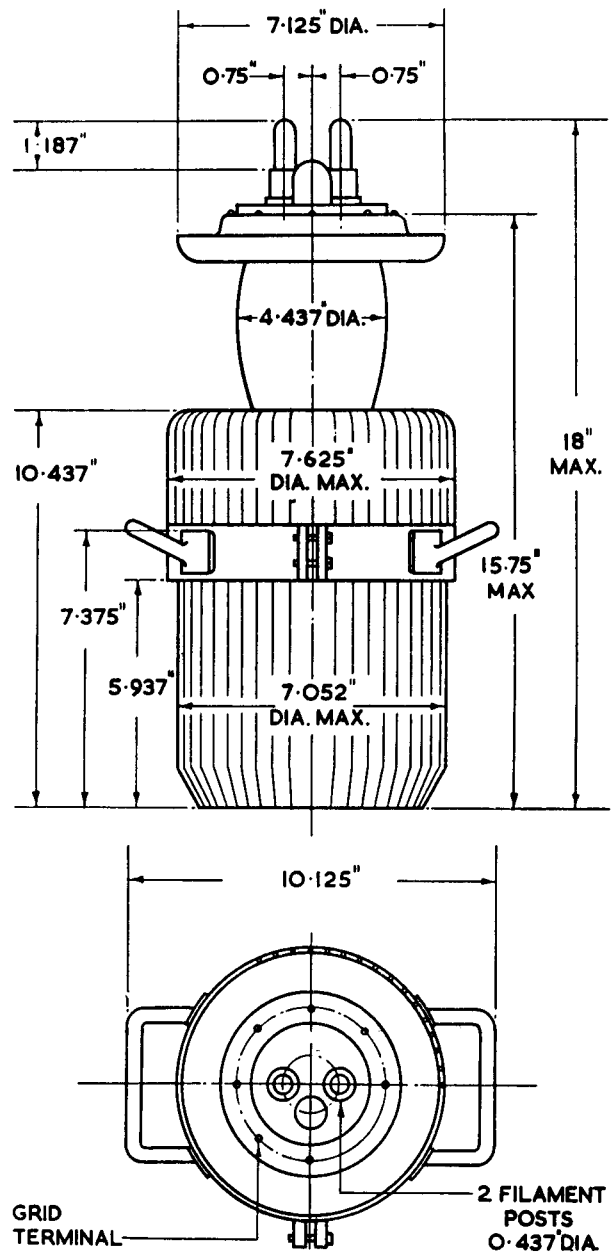
The temperature of the anode and that of the grid and filament seals must not exceed 180°C.

The air flow must be started before the application of any supply voltage and should be continued for at least one minute after the removal of all supply voltages.

APPROXIMATE DATA

V_f		17	V
I_f		130	A
$V_{a\ (max)}$	1. Class C RF Amplifier	10	kV
	2. Class C RF Amplifier Anode modulated	8	kV
$p_{a\ (max)}$		7·5	kW
$p_{gl\ (max)}$		0·35	kW
μ	taken at V_a 5 kV, I_a 1·5 A	50	
g_m	taken at V_a 5 kV, I_a 1·5 A	18	mA/V
$f_{(max)}$	(at full ratings)	100	Mc/s
$c_{a\text{-}gl}$		31	pF
$c_{a\text{-}k}$		3	pF
$c_{gl\text{-}k}$		44·5	pF

Marked Voltage. Each valve is marked with the filament voltage required to give 14 A peak emission at 90% saturation.



WEIGHT 28 lb. (12·7 kg.)

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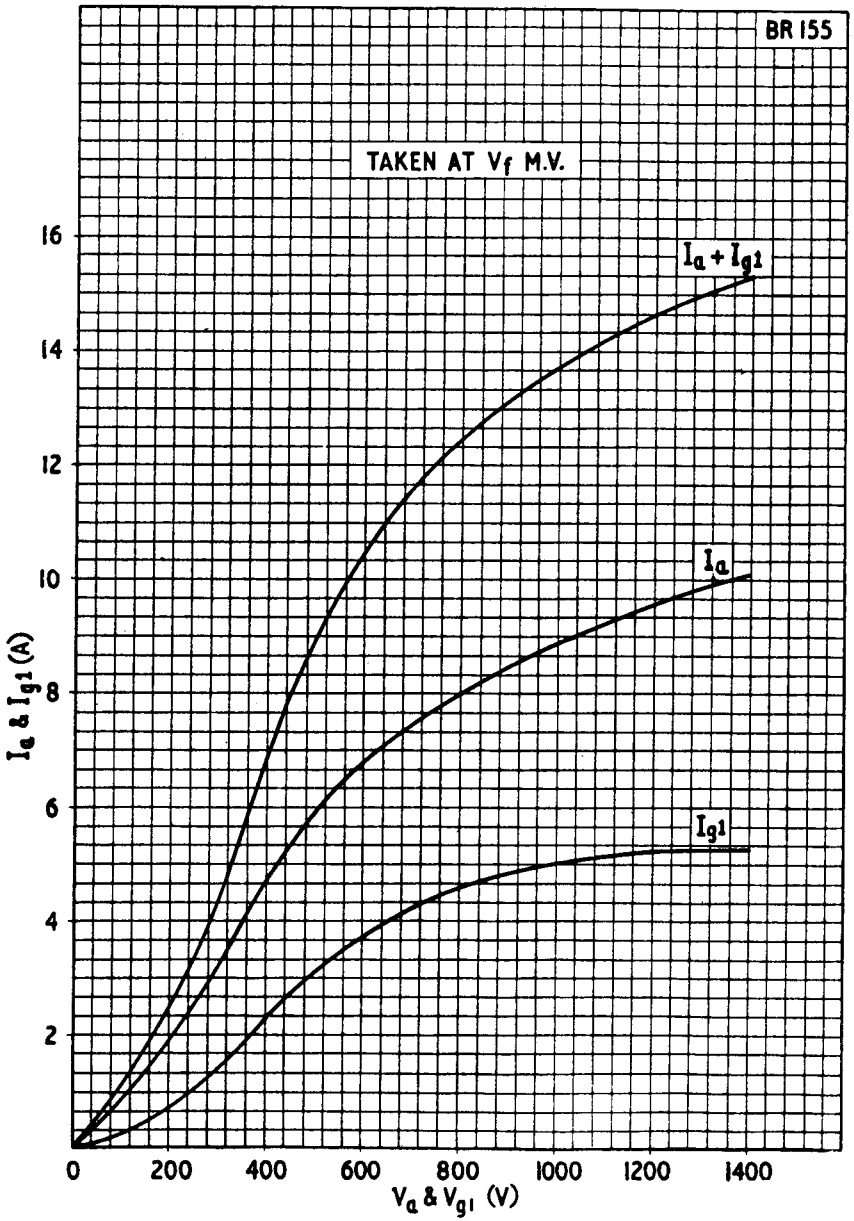
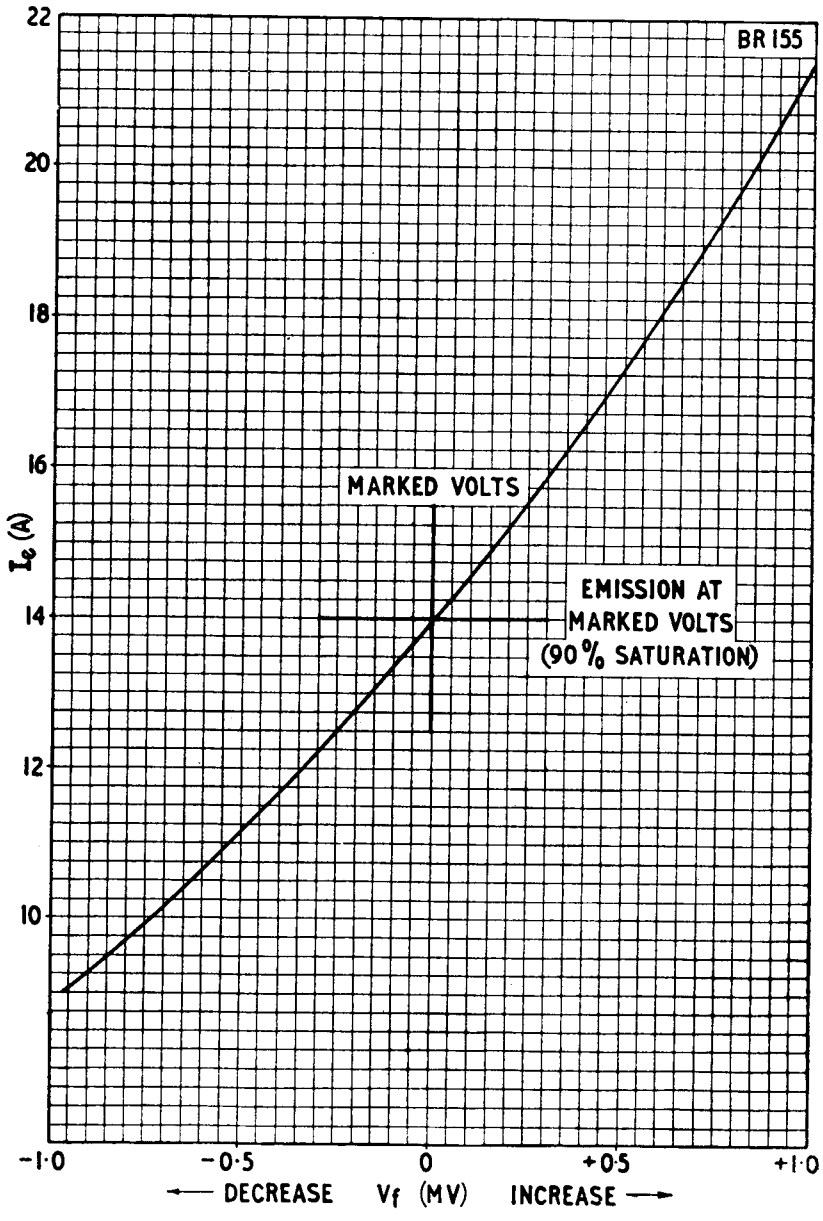
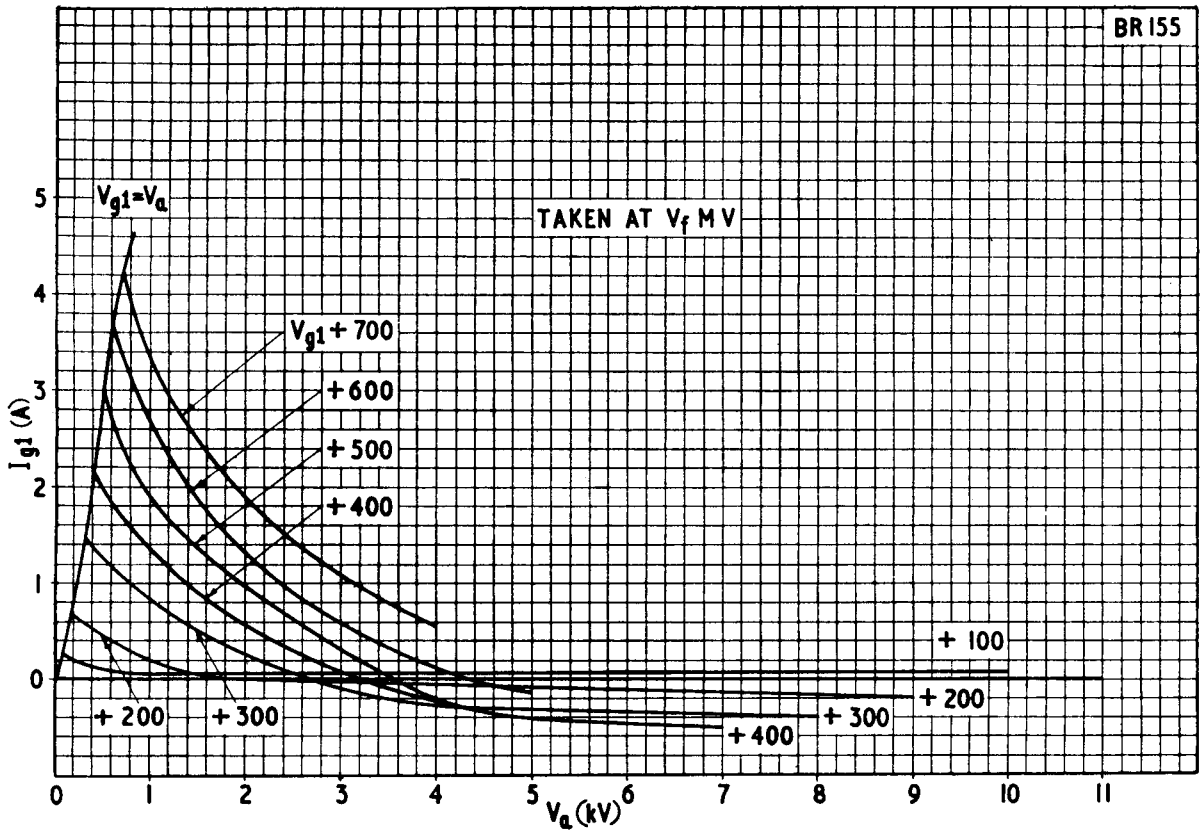
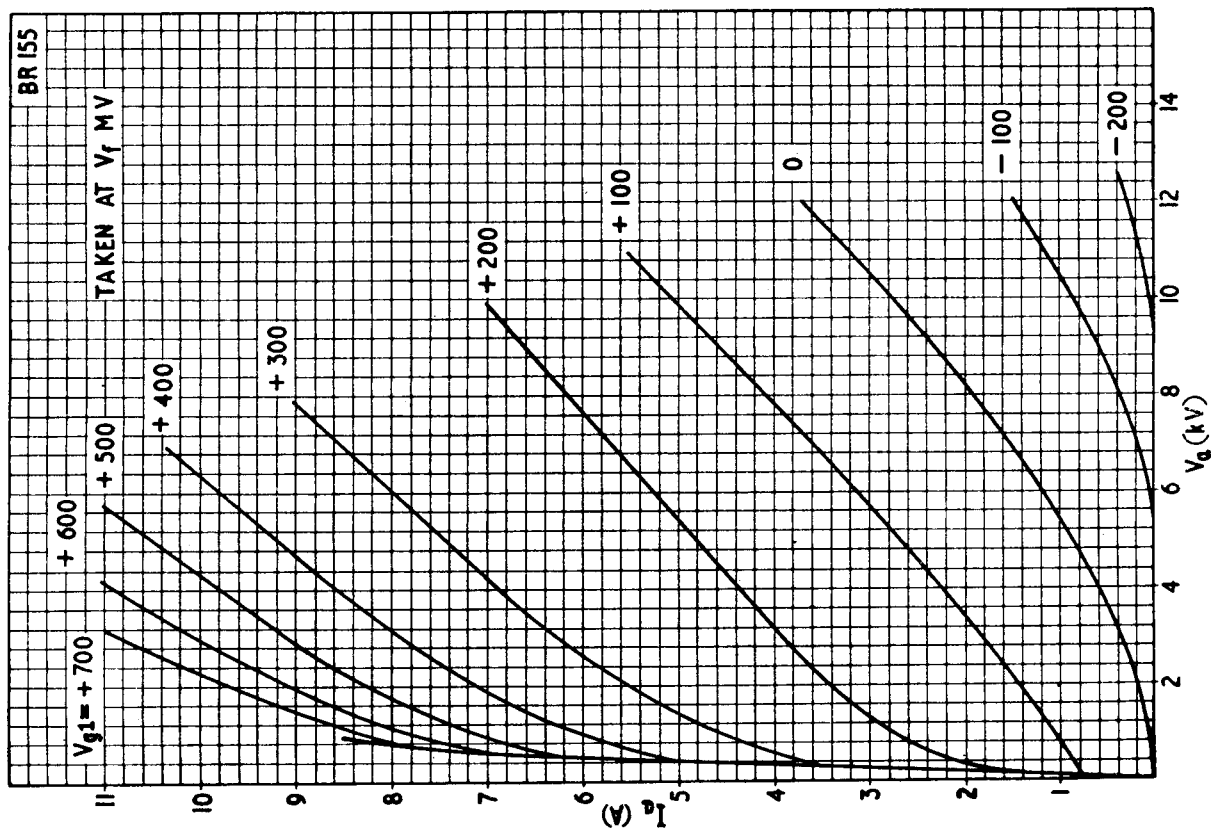
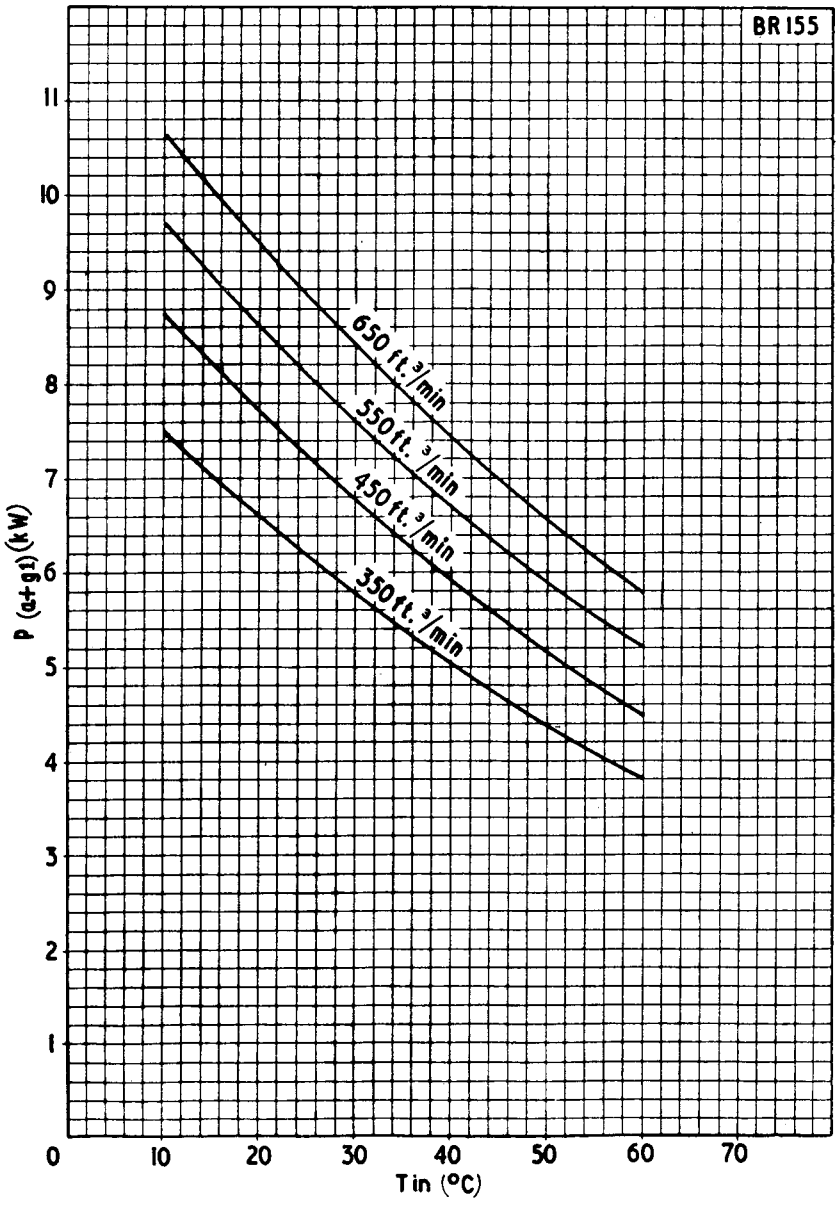
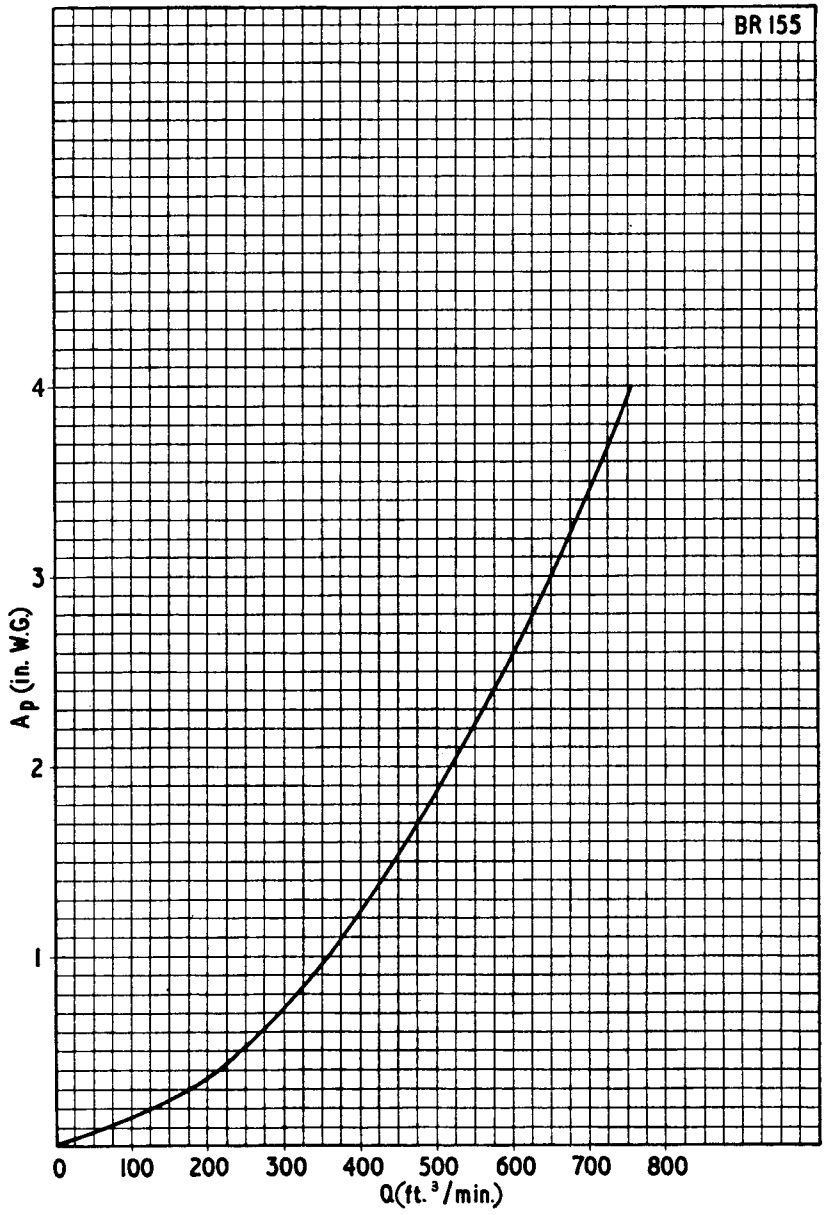

BR 155
TAKEN AT V_f M.V.
$I_a + I_{g1}$
I_a
I_{g1}
I_a & I_{g1} (A)
16
14
12
10
8
6
4
2
0
200
400
600
800
1000
1200
1400
V_a & V_{g1} (V)


BR 155
MARKED VOLTS
EMISSION AT MARKED VOLTS (90% SATURATION)
I_e (A)
22
20
18
16
14
12
10
-1·0
-0·5
0
+0·5
+1·0
← DECREASE V_f (MV) INCREASE →


BR 155
TAKEN AT V_f M V
$V_{g1}=V_a$
V_{g1} + 700
+ 600
+ 500
+ 400
+ 300
+ 200
+ 100
+ 200
+ 300
+ 400
I_{g1} (A)
V_a (kV)


BR 155
TAKEN AT V_f M V
V_{g1} = + 700
+ 600
+ 500
+ 400
+ 300
+ 200
+ 100
0
− 100
− 200
I_a (A)
V_a (kV)





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