



# Air-Blast-Cooled R.F. Power Amplifier Triode 3J/221S

## CATHODE.

Tungsten filament

Nominal (Actual voltage marked on bulb)	22	V
Nominal current	70	A
Peak emission	12	A

## RATING.

Amplification factor	{ Measured at }	26	
Impedance	{ $V_a$ 12kV, $I_a$ 1.5A }	2,900	$\Omega$

## DIRECT INTER-ELECTRODE CAPACITIES.

Grid to anode	26	pF
Grid to filament	1.3	pF
Anode to filament	20.0	pF

## AIR COOLING.

For dissipation of 10 kW

Volume of air at a pressure of 3in. of water	475	cu. ft./min.
Maximum temperature of core of cooler	150°	C
Maximum ambient temperature	45°	C

## DIMENSIONS.

Maximum overall length	506	mm.
Maximum diameter over cooler	172	mm.

## MAXIMUM RATINGS.

Maximum direct anode voltage	17.5	kV
Maximum direct anode current	2.5	A
Maximum anode dissipation	10	kW
Maximum grid dissipation	1.2	kW
Maximum frequency for above ratings	22	Mc/s

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Power Amplifier  
Triode  
3J/221S**



**TYPICAL OPERATING CONDITIONS**

**RADIO FREQUENCY**

**Class B Telephony Modulated Carrier applied to Grid.**

(Carrier conditions per valve for use with 100% modulation).

Direct anode voltage	15	kV
Grid bias	—600	V approx.
Direct anode current	1	A
Power output	5	kW approx.

**Class C Power Amplifier Anode subject to modulation.**

(Carrier conditions per valve for use with 100% modulation).

Direct anode voltage	12	kV
Grid bias	—2000	V approx.
Direct anode current	1.25	A
Power output	12	kW approx.

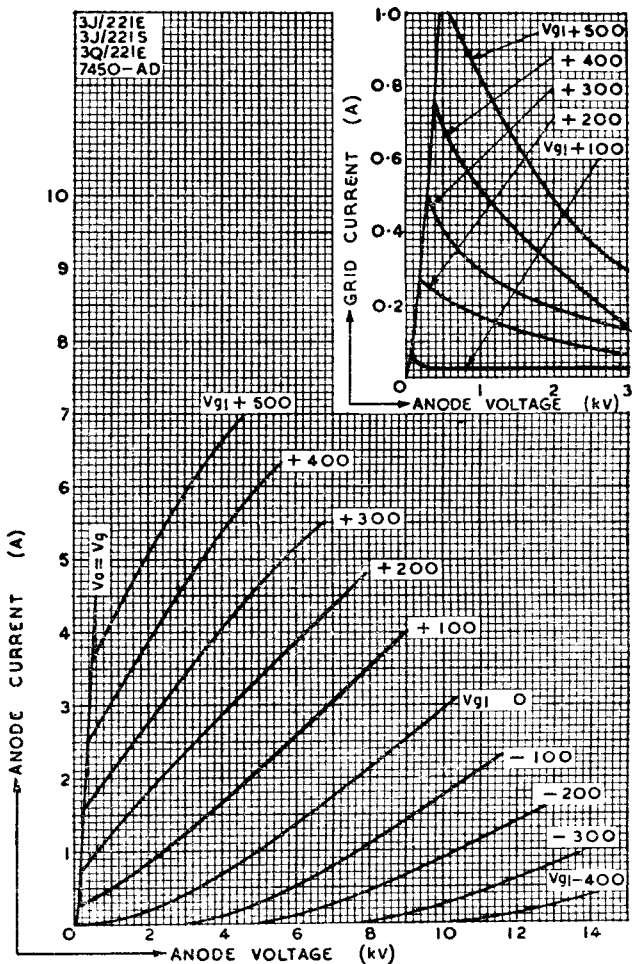
**Class C Power Amplifier or Oscillator, unmodulated.**

Direct anode voltage	17.5	kV
Grid bias	—1,500	V approx.
Direct anode current	2	A
Power output	25	kW approx.



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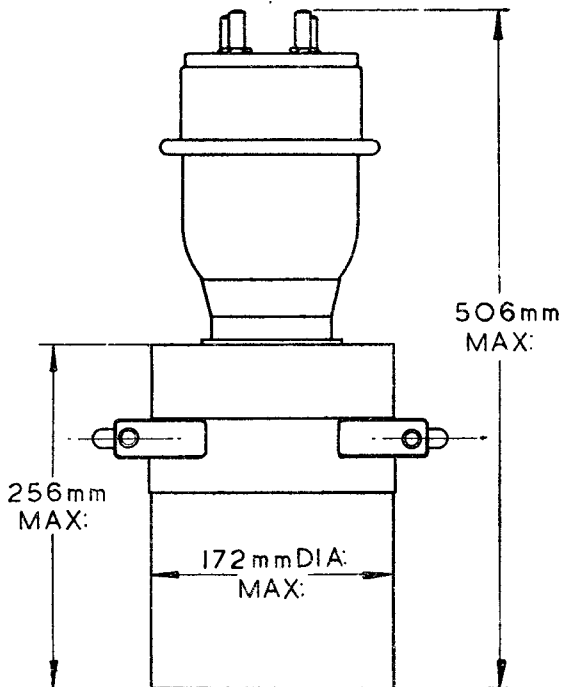
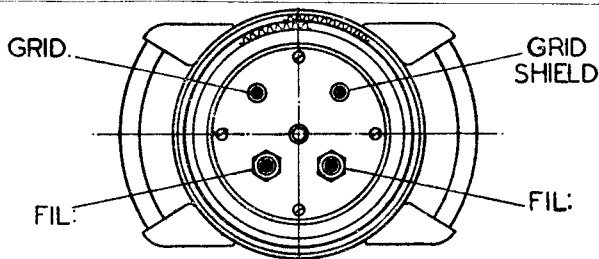
3J/22IS



3J/221S

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3J/221S



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