



# Air Blast Cooled Pentode

5J/180E

## CATHODE.

Thoriated tungsten filament

Voltage	10	V
Nominal current	28	A
Peak emission	12	A

## RATING.

Mutual conductance	$\left\{ \begin{array}{l} \text{Measured at} \\ V_a 6kV V_{g_2} 1.5kV \\ I_a 0.5A \end{array} \right\}$	5	mA/V
Screen grid $\mu$	$\left\{ \begin{array}{l} V_a 1.5kV V_{g_2} 1.5kV \\ I_a 0.5A \end{array} \right\}$	6	

## INTER-ELECTRODE CAPACITIES.

Grid to anode	0.6	pF
Input	32	pF
Output	21	pF

## AIR BLAST.

For an anode dissipation of 3.5kW

Volume of air	220	cu. ft./min.
Velocity of air	2,300	ft./min.

at a pressure of 1in. SWG.

## DIMENSIONS.

Maximum overall length	245	mm.
Maximum diameter over cooler	155	mm.
Net weight	6.8	kg.

## MAXIMUM RATINGS.

Maximum direct anode voltage	6	kV
Maximum direct anode current	1.5	A
Maximum anode dissipation	3.5	kW
Maximum direct screen voltage	1.5	kV
Maximum direct screen current	0.25	A
Maximum freq. for above ratings	25	Mc/s

Tentative data.

June 1946

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## TYPICAL OPERATING CONDITIONS. RADIO FREQUENCY.

### Class B Power Amplifier. Modulated carrier applied to grid.

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

Direct anode voltage	6	kV
Grid bias	-250	V
Direct anode current	0.8	A
Direct screen voltage	1,500	V
Peak RF grid voltage	750	V
Peak RF grid current	0.33	A
*Direct grid current	25	mA approx.
Power output	1.4	kW approx.

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

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

Direct anode voltage	5	kV
Grid bias	-1,000	V
Direct anode current	1.2	A
Direct screen voltage	1.5	kV
Peak RF grid voltage	1.5	kV
Peak RF grid current	0.36	A
*Direct grid current	46	mA
Power output	3.8	kW approx.

### Class C Power Amplifier or Oscillator unmodulated. For operation up to 25 Mc/s.

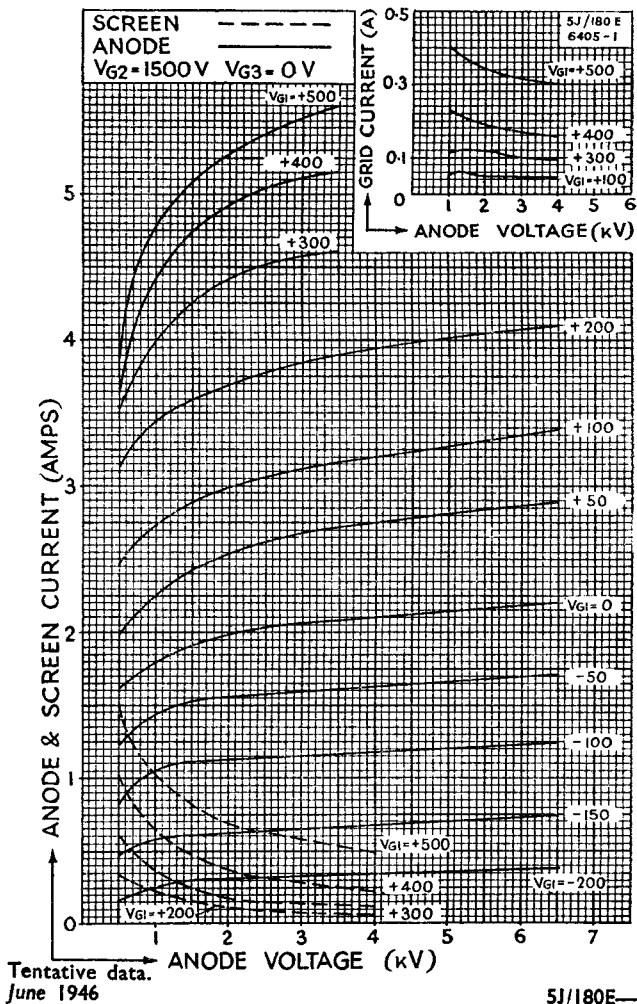
Direct anode voltage	6	kV
Grid bias	-500	V
Direct anode current	1.15	A
Direct screen voltage	1,400	V
Direct screen current	0.2	A
Direct suppressor voltage	200	V
Peak RF grid voltage	1	kV
*Direct grid current	90	mA approx.
Power output	5	kW approx.

\* Subject to wide variation depending upon the impedance of the load circuit.



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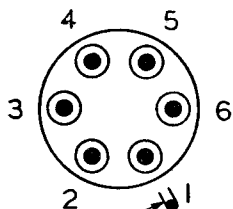


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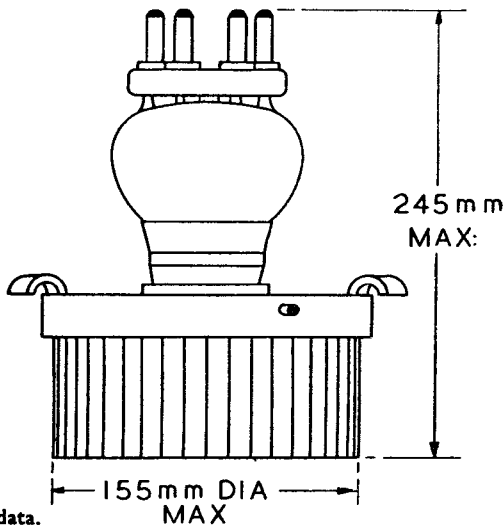
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LOCATING PIN  
ON RADIATOR

## BASING

- 1 GRID 3
- 2 FILAMENT
- 3 GRID 2
- 4 FILAMENT
- 5 GRID 3
- 6 GRID 1



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