Triode

4212E

CATHODE.

Thoriated tungsten filament		
Voltage	14	V
Nominal current	6.2	A
Peak emission	4.5	A

RATING.

Amplification factor	Measured at V_a 2,000V V_1 −90V	16	
Impedance		1,900	ohms

DIRECT INTER-ELECTRODE CAPACITIES.

Grid to anode	19	pF
Grid to filament	14.8	pF
Anode to filament	8.5	pF

DIMENSIONS.

Overall length	352	mm.
Max. diameter	93	mm.
Base	Giant 4-pin bayonet	
Net weight	750	g.

MAXIMUM RATINGS.

Maximum direct anode voltage	3,000	V
Maximum direct anode current	350	mA
Maximum direct grid current	75	mA
Maximum anode dissipation	275	W
Maximum freq. for above ratings	1.5	Mc/s
Maximum anode voltage for frequency of 4.5 Mc/s	1,000	V

This valve may be supplied in either one of the four impedance groups :

Group 1.	I_a 110–129 mA	Measured at V_a 1,500V V_g −68V
2.	I_a 130–148 mA	
3.	I_a 149–167 mA	
4.	I_a 168–185 mA	

It is recommended that the valve be operated in a vertical position. When operated horizontally the plane of the filament must be vertical. Free circulation of air must be provided to ensure adequate cooling of the glass during operation.

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TYPICAL OPERATING CONDITIONS
AUDIO FREQUENCY

Class A Power Amplifier or Modulator.

Direct anode voltage	1,500	1,250 V
Grid bias	—57	—40 V
Direct anode current	0.170	0.200 A
Load resistance	5,000	3,000 Ω
Undistorted output	50	40 W approx.

Class B Power Amplifier or Modulator.
(For balanced 2-valve operation.)

Direct anode voltage	2,500	1,500 V
Grid bias	—145	—80 V
Direct anode current per valve—zero signal	50	60 mA
Direct anode current per valve max. signal	300	350 mA
Peak A.F. grid to grid drive voltage	420	300 V
*Direct grid current	13.5	38 mA approx.
Load resistance anode to anode	9,100	4,600 Ω
*Grid driving power per valve	3	6 W approx.
Recommended grid driving power	50	50 W
Power output	960	660 W

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RADIO FREQUENCY

Class B Telephony. Modulated carrier applied to grid.
(Carrier conditions per valve for use with 100% modulation.)

Direct anode voltage	2,000	1,500 V
Grid bias	—125	—90 V
Direct anode current	0.200	0.275 A
Peak R.F. grid voltage	110	110 V
*Direct grid current	0	34 mA approx.
Power output	130	130 W

Class C Power Amplifier. Anode subject to modulation.
(Carrier conditions per valve for use with 100% modulation.)

Direct anode voltage	2,000	1,500 V
Grid bias	—240	—215 V
Direct anode current	0.300	0.300 A
Peak R.F. grid voltage	330	315 V
*Direct grid current	15	22 mA approx.
Power output	420	300 W

Class C Power Amplifier or Oscillator, unmodulated.

Direct anode voltage	3,000	2,000 V
Grid bias	—250	—180 V
Direct anode current	0.250	0.300 A
Peak R.F. grid voltage	345	272 V
*Direct grid current	15	22 mA approx.
*Driving power	5	6 W approx.
Power output	550	440 W

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

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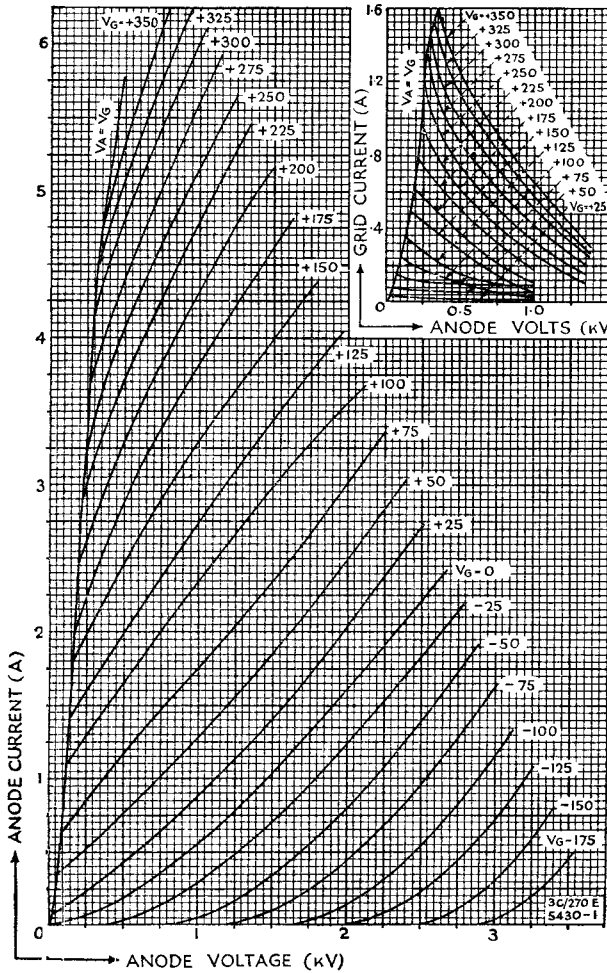

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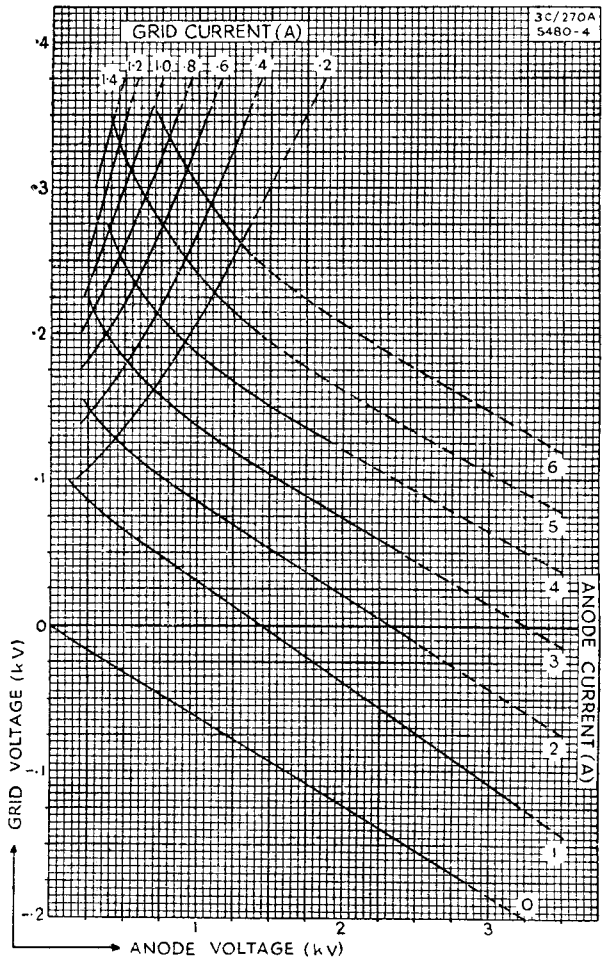

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