4D32

R.F. POWER TETRODE

Service Type CV3543

The data should be read in conjunction with the Power Tetrode Preamble.

ABRIDGED DATA

Beam power transmitting tetrode

Anode dissipation	50	W max
Anode voltage	750	V max
Frequency for full ratings	60	MHz max
Output power (class C unmodulated)	140	W

GENERAL

Electrical

Cathode	indirectly heated, oxide coated	
Heater voltage	6.3	V
Heater current	3.75	A
Peak usable cathode current	2	A
Grid-screen amplification factor	10	
Inter-electrode capacitances:		
input	26	pF
output	13	pF
grid to anode	0.4	pF max

Mechanical

Overall length	5.750 inches (146mm) max
Overall diameter	2.312 inches (58.7mm) max
Net weight	6 ounces (170g) approx
Mounting position	any
Base	B.S.448-B7A
Cooling	natural

ANODE AND SCREEN MODULATED R.F. POWER AMPLIFIER

(Class C telephony, carrier conditions per valve for use with a maximum modulation factor of 1.0)

MAXIMUM RATINGS (Absolute values)

Anode voltage	600	V max
Screen voltage	350	V max
Grid voltage	−200	V max
Anode current	300	mA max
Grid current	15	mA max
Anode dissipation	50	W max
Screen dissipation	10	W max
Grid dissipation	0.75	W max
Frequency (for full ratings)	60	MHz max

TYPICAL OPERATING CONDITIONS

Anode voltage	600	V
Screen series resistor	10 000	Ω
Grid voltage	−100	V
Anode current	220	mA
Screen current (approx)	28	mA
Grid current (approx)	10	mA
Driving power (approx)	1.25	W
Output power (approx)	100	W

R.F. POWER AMPLIFIER AND OSCILLATOR

(Class C telegraphy, key-down conditions, one valve)

MAXIMUM RATINGS (Absolute values)

Anode voltage	750	V max
Screen voltage	350	V max
Grid voltage	−200	V max
Anode current	300	mA max
Grid current	15	mA max
Anode dissipation	50	W max
Screen dissipation	14	W max
Grid dissipation	0.75	W max
Frequency (for full ratings)	60	MHz max

TYPICAL OPERATING CONDITIONS

Anode voltage	750	V
Screen voltage	300	V
Grid voltage	−100	V
Anode current	250	mA
Screen current (approx)	34	mA
Grid current (approx)	12	mA
Anode dissipation	47	W
Screen dissipation	10	W
Peak r.f. voltage	119	V
Driving power (approx)	1.5	W
Output power	140	W
Efficiency	75	%

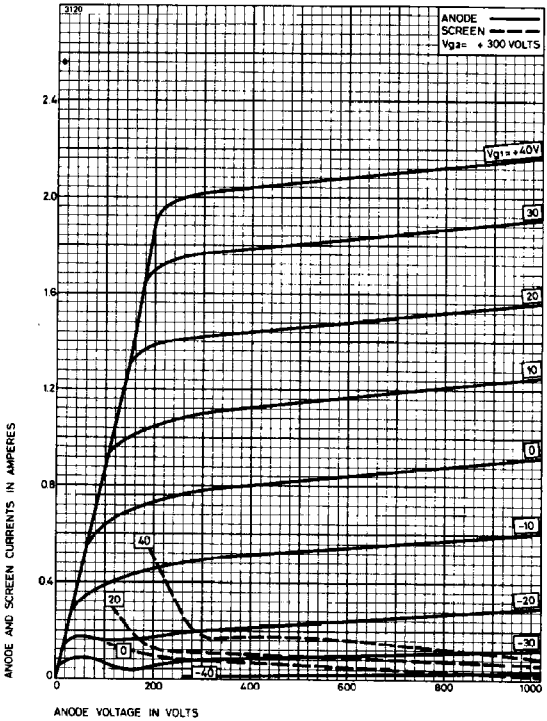
AUDIO FREQUENCY POWER AMPLIFIER (Class AB_1 and AB_2)

TYPICAL OPERATING CONDITIONS

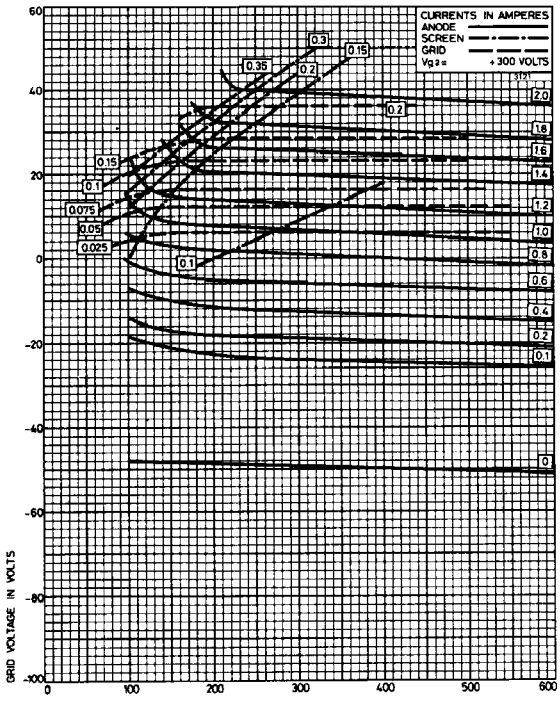
(Values are for 2 valves in push-pull unless otherwise stated)

Anode voltage	600	600	V
Grid voltage	−37.5	−25	V
Screen voltage	350	250	V
Peak a.f. input voltage (grid to grid)	74	70	V
Maximum-signal anode current	350	365	mA
Zero-signal anode current	100	100	mA
Maximum-signal screen current	46	26	mA
Effective load (anode to anode)	3000	3000	Ω
Driving power (maximum-signal, approx)	0	0.45	W
Output power (maximum-signal, approx)	112	125	W
Anode dissipation (per valve, approx)	49	47	W
Screen dissipation (per valve, approx)	8	3	W

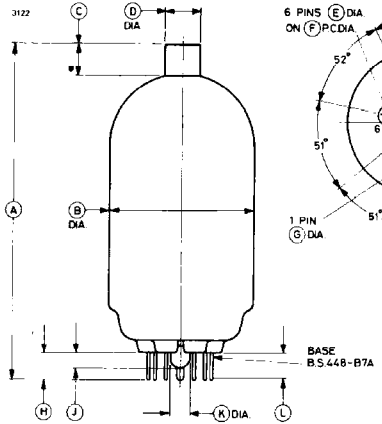
TYPICAL ANODE AND SCREEN CHARACTERISTICS



TYPICAL CONSTANT CURRENT CHARACTERISTICS



OUTLINE (All dimensions without limits are nominal)



Ref	Inches	Millimètres
A	5.250 ± 0.500	133.4 ± 12.7
B	2.312 max	58.72 max
C	0.500	12.70
D	0.566	14.38
E	$0.058^{+0.002}_{-0.006}$	$1.473^{+0.051}_{-0.152}$
F	1.000	25.40
G	0.125 ± 0.003	3.175 ± 0.076
H	0.438 ± 0.062	11.13 ± 1.57
J	0.375 max	9.53 max
K	0.375 max	9.53 max
L	0.312 min	7.92 min

Millimètre dimensions have been derived from inches.

Pin	Element
1	Heater
2	Screen
3	No connection
4	Cathode and beam plates
5	Cathode and beam plates
6	Grid
7	Heater
Cap	Anode