



2J30-2J34 inclusive

S-BAND
MAGNETRONS

Service Types CV1807, CV1808
CV1809, CV1810

GENERAL DATA

The 2J30-2J34 series comprises five pulse operated, fixed frequency magnetrons. They are maintenance types and therefore only abridged data are given on this sheet. Full information is available on request.

Frequency range:

2J30	2860 to 2900	MHz
2J31 (CV1807)	2820 to 2860	MHz
2J32 (CV1808)	2780 to 2820	MHz
2J33 (CV1809)	2740 to 2780	MHz
2J34 (CV1810)	2700 to 2740	MHz

Typical Operation

Output power (peak)	300	kW
Anode voltage (peak)	20	kV
Anode current (peak)	30	A
Duty cycle	0.001	
Heater voltage	6.3	V
Heater current	1.5	A
Cathode heating time (minimum)	2.0	min
Magnetic field	1900	gauss
Magnet		separate
Output	Coaxial line. Internal diameter of outer conductor 0.812 inch, diameter of inner conductor 0.375 inch	
Cooling		forced-air

OUTLINE DIMENSIONS

Ref	Inches	Millimetres
A	3.250 ± 0.031	82.55 ± 0.79
B	2.875 ± 0.006	73.03 ± 0.15
C	1.687	42.85
D	1.437	36.50
E	1.187	30.15
F	1.875 ± 0.047	47.63 ± 1.19
G	0.193 ± 0.003	4.902 ± 0.076
H	3.000 ± 0.062	76.20 ± 1.57
J	1.687 ± 0.010	42.85 ± 0.25
K	2.984 ± 0.062	75.79 ± 1.57
L	0.125	3.18
M	2.480 max	62.99 max
N	1.490 max	37.85 max
P	0.677 min	17.20 min
Q	2.197 max	55.80 max
R	1.375 ± 0.010	34.93 ± 0.25
S	1.122 ± 0.005	28.50 ± 0.13
T	0.062	1.57
U	0.647 ± 0.022	16.43 ± 0.56
V	2.438 ± 0.062	61.93 ± 1.57
W	1.406 ± 0.031	35.71 ± 0.79
X	0.125 ± 0.010	3.18 ± 0.25
Y	1.000	25.40
Z	$0.365 \begin{matrix} + 0.010 \\ - 0.000 \end{matrix}$	$9.27 \begin{matrix} + 0.25 \\ - 0.00 \end{matrix}$
AA	0.670 max	17.02 max
AB	$0.125 \begin{matrix} + 0.002 \\ - 0.005 \end{matrix}$	$3.175 \begin{matrix} + 0.051 \\ - 0.127 \end{matrix}$
AC	1.457 ± 0.010	37.01 ± 0.25

Millimetre dimensions have been derived from inches.

OUTLINE NOTES

1. The jack holes will be within a radius of 0.023 inch (0.58mm) of the location specified, but will be spaced 0.500 ± 0.010 inch (12.70 ± 0.25 mm) with respect to each other. The centre lines of the holes will be perpendicular to reference plane 'A' within 3° .
2. Any portion of the assembly extending above this surface will be within 1.110 inches (28.19mm) radius of the true centre of the plate.
3. With the flange resting on a plane surface, the flatness of the mounting plate 0.500 inch (12.70mm) from the outer edge will be such that a feeler gauge 0.010 inch (0.25mm) thick and 0.125 inch (3.18mm) wide will not enter for a distance of more than 0.250 inch (6.35mm).
4. Areas between these planes will be painted with a black heat resistant non-corrosive paint.
5. Soldered joints in the mounting flange and coupling adapter will be vacuum tight so that the mounting flange may be used to provide a hermetic seal.
6. U.S.F. 1.500 – 18 thread, class 2 fit.
7. The centre line of the lead measured at this end will be concentric with the centre line of the coupling adapter within 0.020 inch (0.51mm).
8. The centre line of the output cylinder will be concentric with the centre line of the coupling adapter within 0.010 inch (0.25mm).
9. This surface of the coupling adapter will be parallel to Reference Plane 'B' within 1° .
10. The common cathode connection is indicated by letter 'C' on this surface.
11. The output cylinder will be of non-corrosive material or will be painted black; minimum plating $20\text{mg}/\text{in}^2$ silver, or $10\text{mg}/\text{in}^2$ gold.
12. Hexagon head banana pin jacks 0.406 inch (10.31mm) long with holes 0.169 ± 0.005 inch (4.29 ± 0.13 mm) diameter.
13. This dimension applies to the coupling adapter.
14. Polished, or gold plated.