

WESTERN ELECTRIC 6891 ELECTRON TUBE

TYPE DESIGNATION REGISTRATION

JUL 7 1958

Reservation No.: 6891
Reservation Date: April 12, 1956

Manufacturers Designation: M-1958
Data Bureau Designation: 6891

DESCRIPTION

The 6891 traveling wave tube employs a helix-type wave propagating structure. The tube is used for low-level gain in the 8500 to 9600 megacycles frequency range. The power output is approximately +17 dbm. The input and output circuits employ matching waveguides. A uniform axial magnetic field is provided by a permanent magnet which is an integral part of the tube.

ELECTRICAL RATINGS, ABSOLUTE VALUES

Heater Voltage	5.5	volts
Heater Current	0.53	ampere
Maximum Collector Voltage	1500	volts
Maximum Helix Voltage	1500	volts
Maximum Anode Voltage	1500	volts
Maximum Beam Forming Electrode Voltage:		
Negative Value	100	volts
Positive Value	0	volts
Maximum Collector Current	5	milliamperes
Maximum Helix Current	0.6	milliamperes
Maximum Anode Current	0.1	milliampere
Maximum Beam Forming Current	10	microamperes
Maximum Power Dissipation	7.5	watts

MECHANICAL DATA

Dimensions	See outline drawing
Type of Cathode	Oxide Impregnated Unipotential
Mounting Position	Any
Weight (including magnet)	6-3/4 pounds
Type of Cooling	Convection

Continued on Page 2

WESTERN ELECTRIC 6891 ELECTRON TUBETYPE DESIGNATION REGISTRATIONTYPICAL OPERATION

Frequency Band	8500-9600 megacycles
Collector Voltage	1200 volts
Collector Current	4 milliamperes
Helix Voltage	1180 volts
Helix Current	0.24 milliampere
Anode Voltage	1450 volts
Anode Current	3 microamperes
Power Output	20 dbm
Gain	44 db
Noise Figure	21 db
Magnetic Field	500 gauss

Note: Manufacture of this type has been discontinued by Western Electric Company.
This sheet is for information only and does not imply continuing availability of the device.

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- NOTES:
1. THE MAGNETIC ORIENTATION OF THE NUMBERED TERMINALS AT THE END ONLY MAY VARY UP TO 180° FROM THE POSITION SHOWN.
2. TEXT OF WARNING:
MAGNETIC MINIMUM 2 INCHES BETWEEN THIS MAGNET AND MAGNETIC MATERIALS (MAGNETS, STEEL, TOOLS, PLATES, ETC.)
3. A CYLINDER, 1 1/2 IN. DIAMETER WITH THE AXIS LOCATED AS INDICATED, SHALL PASS OVER EACH END.
4. ALL METAL SURFACES, INCLUDING AREAS 'C', COVERED BY GRAY PAINT EXCEPT THOSE MARKED (X).
5. EACH WAVEGUIDE SURFACE 'B' SHALL BE MAGNETED TO MAGNETIZED SURFACE A WITHIN 0.05 AND SHALL BE FREE OF SCRATCHES AND SURFACE IMPERFECTIONS.
6. THE OPENING OF THE WAVE GUIDE SHALL BE ENCLOSED BY A DUST COVER WHEN TUBE IS NOT IN USE.

