

WESTERN ELECTRIC 6140\* ELECTRON TUBE

TYPE DESIGNATION REGISTRATION

DESCRIPTION

The 6140\* is a two-electrode inert-gas-filled cold cathode tube designed for use as a voltage reference tube.

RATINGS, Absolute Values

Cathode Current

Maximum Forward - - - - - 8 milliamperes  
Minimum Forward - - - - - 4 milliamperes  
Maximum Inverse Anode Current - - - - - 0.0 milliampere  
Ambient Temperature Limits - - - - - -55 to +60 centigrade

ELECTRICAL DATA

	<u>Min.</u>	<u>Bogey</u>	<u>Max.</u>	
Anode Breakdown Voltage	--	---	160	volts
Anode Voltage Drop at 6 Milliamperes (D-C) <sup>1</sup>	99	100	103	volts
Regulation (4 to 6 Milliamperes D-C)	--	---	0.75	volt
Temperature Sensitivity, Anode Voltage Drop.				
at Anode Current of 4 Milliamperes (D-C)	--	-0.01	---	volt/c
at Anode Current of 8 Milliamperes (D-C)	--	-0.02	---	volt/c
Fluctuation <sup>2</sup>	--	---	0.1	volt
Stability <sup>3</sup>	--	0.05	0.3	volt

MECHANICAL DATA

Mounting Position - - - - - Any  
Net Weight, Approximate - - - - - 0.3 ounce  
Outline - - - - - 6-1  
Bulb - - - - - T6-1/2  
Base - - - - - E9-1 Small Button 9-Pin  
Maximum Bulb Diameter - - - - - 7/8 inch  
Maximum Overall Length - - - - - 1-3/4 inch  
Maximum Seated Height - - - - - 1-7/32 inch  
Pin Connections<sup>4</sup> - - - - -  
    Pin #1 Internal Connection                      Pins #7 and #8 Anode  
    Pins #2 and #3 Cathode                         Pin #9 Internal Connection  
    Pins #4, #5 and #6 Internal Connection

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- Note 1 These values are for new tubes. The stability characteristic should be considered during tube life. Anode voltage drop will stabilize within 5 minutes after starting.
- Note 2 The anode voltage drop variation during a short period of time (one to ten minutes), with the tube operating at one value of current and temperature within its ratings, will not exceed the above stated maximum value.
- Note 3 The drift of anode voltage drop over a period of 1000 hours, with the tube operating at one value of current and temperature within its ratings, will not exceed the above stated maximum value.
- Note 4 Pins marked "Internal Connection" should not be connected to any portion of an external circuit. Failure to observe this precaution may result in improper operation of the tube.

\*6140/423A

September 14, 1951