

WESTINGHOUSE ELECTRIC CORPORATION

X-RAY TUBE DATA SHEET

Electron Tube Type 5781

The 5781 tube is a removable insert x-ray tube designed for regular duty service.

GENERAL

Electrical Data

|                        |            |         |
|------------------------|------------|---------|
| Filament current range | 3.5 to 5.5 | Amperes |
| Filament voltage range | 3.5 to 10  | Volts   |

Mechanical Data

|                        |      |    |
|------------------------|------|----|
| Type of cooling        | Air  |    |
| Focal spot size        |      |    |
| Projected length       | 1.5  | mm |
| Width                  | 1.5  | mm |
| Outline drawing number | 5781 |    |
| Mounting position      | Any  |    |

MAXIMUM RATINGS

|                                                                |         |                          |
|----------------------------------------------------------------|---------|--------------------------|
| Heat Capacity                                                  | 150,000 | *Heat units              |
| Continuous rating                                              | 12,000  | Heat units<br>per minute |
| Maximum fluoroscopic rating at a loading<br>of 425 (kv x ma)** | 10      | Minutes                  |

|                                                                                | <u>Full Wave</u> | <u>Half Wave</u> | <u>Self-rectified</u> |               | <u>Units</u> |
|--------------------------------------------------------------------------------|------------------|------------------|-----------------------|---------------|--------------|
|                                                                                |                  |                  | <u>Inverse</u>        | <u>Useful</u> |              |
| Peak plate voltage                                                             | 100              | 100              | 100                   | 90            | Kilovolts    |
| Value of dc average<br>current at maximum<br>voltage rating for<br>1/20 second | 37               | 24.5             | -                     | 19.5          | Milliamps.   |

Table of short-time ratings which are given as the product of peak kv useful times dc average milliamperes.

| <u>Time</u> | <u>Full Wave</u> | <u>Half Wave</u> | <u>Self-rectified</u> |
|-------------|------------------|------------------|-----------------------|
| 0.1 Sec.    | 3480             | 2350             | 1700                  |
| 1 "         | 2770             | 2025             | 1520                  |
| 5 "         | 2270             | 1800             | 1400                  |
| 30 "        | 1690             | 1500             | 1250                  |

\*Heat units are defined as the product of the peak voltage in kilovolts, dc average current in milliamperes, and the exposure time in seconds, and is proportional to energy.

\*\*Kv x ma is defined as the product of peak kv times dc average ma and is proportional to power.

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