Westinghouse Electric Corporation

X-Ray Tube Data Sheet

Electron Tube Type 5602

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: Oil
- Maximum oil temperature: 200 °F
- Focal Spot Sizes (Superimposed):
  - Projected length: 2.1 and 4.2 mm
  - Width: 2.1 and 4.2 mm
- Outline drawing number: 5602
- Mounting position: Any

MAXIMUM RATINGS

Heat capacity: 150,000 *Heat units
Continuous rating: 25,000 Heat units/minute
Maximum fluoroscopic rating at a loading of 425 (kv x ma):
- Continuous: Minutes

<table>
<thead>
<tr>
<th>Full Wave</th>
<th>Half Wave</th>
<th>Self-rectified</th>
<th>Inverse Useful</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak plate voltage: 125</td>
<td>100</td>
<td>100</td>
<td>90</td>
<td>Kilovolts</td>
</tr>
</tbody>
</table>

Value of dc average current at maximum voltage rating for 1/20 second for 2.1 mm spot:
- 39 | 44 | - | 34 | Milliamperes |

Value of dc average current at maximum voltage rating for 1/20 second for 4.2 mm spot:
- 125 | 139 | - | 103 | Milliamperes |

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

<table>
<thead>
<tr>
<th>2.1 mm spot size</th>
<th>125 KVP</th>
<th>100 KVP</th>
<th>90 KVP Useful</th>
<th>125 KVP</th>
<th>100 KVP</th>
<th>90 KVP Useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>Full Wave</td>
<td>Half Wave</td>
<td>Self-rectified</td>
<td>Full Wave</td>
<td>Half Wave</td>
<td>Self-rectified</td>
</tr>
<tr>
<td>0.1 Sec.</td>
<td>4580</td>
<td>4170</td>
<td>2940</td>
<td>13700</td>
<td>13000</td>
<td>8740</td>
</tr>
<tr>
<td>1 Sec.</td>
<td>3620</td>
<td>3410</td>
<td>2570</td>
<td>8900</td>
<td>9650</td>
<td>6870</td>
</tr>
<tr>
<td>5 Sec.</td>
<td>2950</td>
<td>2875</td>
<td>2310</td>
<td>6090</td>
<td>7300</td>
<td>5560</td>
</tr>
<tr>
<td>30 Sec.</td>
<td>2140</td>
<td>2200</td>
<td>1925</td>
<td>2550</td>
<td>3400</td>
<td>3400</td>
</tr>
</tbody>
</table>

*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.