DOUBLE-DIODE TRIODE

MINIATURE TYPE

UNIPOTENTIAL CATHODE

HEATER
12.6 VOLTS 150 MA.
AC OR DC
ANY MOUNTING POSITION

THE 12BT6 IS A COMBINED HIGH-MU TRIODE VOLTAGE AMPLIFIER AND DOUBLE DIODE DETECTOR USING THE 7 PIN MINIATURE CONSTRUCTION. IT IS INTENDED TO PROVIDE ADEQUATE OUTPUT VOLTAGE TO DRIVE MOST BEAM POWER TUBES TO FULL POWER OUTPUT. THE HIGH PERVEANCE DIODES GIVE GOOD RECTIFICATION EFFICIENCY AT LOW SIGNAL LEVELS AND THE LOW DIODE TO TRIODE GRID CAPACITANCE REDUCES TROUBLE FROM AUDIO COUPLING BETWEEN THE TWO SECTIONS.

DIRECT INTERELECTRODE CAPACITANCES

<table>
<thead>
<tr>
<th>DIODE</th>
<th>WITH SHIELD</th>
<th>WITHOUT SHIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 TO CATHODE: (1P TO K)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>#2 TO CATHODE: (2P TO K)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>#1 TO GRID: (1P TO G)</td>
<td>0.01</td>
<td>0.013</td>
</tr>
</tbody>
</table>

WITH RMA SHIELD #326 CONNECTED TO CATHODE

RATINGS
INTERPRETED ACCORDING TO RMA STANDARD MB-210

HEATER VOLTAGE 12.6 VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE 90 VOLTS
MAXIMUM PLATE VOLTAGE 300 VOLTS
MAXIMUM POSITIVE DC GRID VOLTAGE 0 VOLTS
AVERAGE DIODE CURRENT EACH PLATE WITH 10 VOLTS DC APPLIED 4 MA.
MAXIMUM DIODE CURRENT EACH PLATE FOR CONTINUOUS OPERATION 1 MA.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

<table>
<thead>
<tr>
<th>HEATER VOLTAGE</th>
<th>HEATER CURRENT</th>
<th>PLATE VOLTAGE</th>
<th>GRID VOLTAGE</th>
<th>PLATE CURRENT</th>
<th>PLATE RESISTANCE</th>
<th>TRANSCONDUCTANCE</th>
<th>AMPLIFICATION FACTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.6 VOLTS</td>
<td>150 MA.</td>
<td>100 VOLTS</td>
<td>-1 VOLTS</td>
<td>0.8 MA.</td>
<td>54 000 OHMS</td>
<td>1 300 μMhos</td>
<td>70</td>
</tr>
<tr>
<td>12.6 VOLTS</td>
<td>150 MA.</td>
<td>250 VOLTS</td>
<td>-3 VOLTS</td>
<td>1 MA.</td>
<td>58 000 OHMS</td>
<td>1 200 μMhos</td>
<td></td>
</tr>
</tbody>
</table>

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12BT6 (6BT6)

12BT6 TRIODE UNIT
$E_f = 12.6$ Volts

PLATE MILLIAMPERES

0 1 2 3

PLATE VOLTS

0 100 200 300 400 500

12BT6 EACH DIODE UNIT
$E_f = 12.6$ Volts

DC VOLTS DEVELOPED BY DIODE

RMS Signal Input = 30 Volts

LOAD RESISTANCE

1 Meg.

0.5 Meg.

0.25 Meg.

0.1 Meg.

RECTIFIED MICROAMPERES

0 25 50 75 100 125 150

-2 -5 -10 -15 -20 -30 -40