DESCRIPTION AND RATING

PLIOTRON GL-5797

The GL-5797 is a subminiature semi-remote-cutoff pentode suitable for use as a radio-frequency amplifier at frequencies up to approximately 400 megacycles. The tube is designed to give reliable service and dependable life under conditions of shock, vibration, and high ambient temperature as encountered in aircraft service. The heater-cathode construction is designed to withstand many-thousand cycles of intermittent operation. The GL-5797 is especially suited for applications where the supply voltage for the heater, plate, and screen is approximately 26.5 volts.

TECHNICAL INFORMATION

GENERAL

Electrical Data

Cathode - Coated Unipotential

Heater Voltage

26.5 Volts

Heater Current

0.045 Ampere

Direct Interelectrode Capacitances*

Grid-No. 1 to Plate

0.028 Max uuf

Input

4.0 uuf

Output

4.2 uuf

Mechanical Data

Mounting Position - Any

Envelope - T-3 Glass

Base - Subminiature Button 8-Lead, KS-1**

MAXIMUM RATINGS

Electrical - Design Center Values

Plate Voltage

50 Volts

Screen Voltage

50 Volts

Plate Dissipation

0.8 Watt

Screen Dissipation

0.25 Watt

Cathode Current

9.0 Milliamperes

Heater-Cathode Voltage

90 Volts

Mechanical

Peak Impact Acceleration in Any Direction

300 G

Vibrational Acceleration in Any Direction /

2.5 G

Ambient Temperature

+175 C

CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier

Plate Voltage

26.5 Volts

Suppressor Voltage #

0 Volt

Screen Voltage

26.5 Volts

Grid-No. 1 Voltage

0 Volt

Plate Resistance, approximate

0.07 Megohm

Transconductance

3450 Micromhos

Plate Current

2.75 Milliamperes

Screen Current

0.9 Milliamperes

Grid-No. 1 Voltage, approximate for Gm = 10 Micromhos

-3.5 Volts

from RTMA release #1020,
Sept. 17, 1951, & release
#1020A, Dec. 12, 1952

GENERAL ELECTRIC
* With minimum lead length of 1.500 inches as specified.
** With external shield of 0.0405 inch diameter connected to cathode.
# For a period of at least 96 hours at 25 cycles per second.
# Lead 3 externally connected to lead 2.

BasiNG DIAGRAM

LEAD 1: GRID NUMBER 1
LEAD 2: CATHODE
LEAD 3: INTERNAL SHIELD AND GRID NUMBER 3 (SUPPRESSOR)
LEAD 4: HEATER
LEAD 5: HEATER
LEAD 6: GRID NUMBER 2 (SCREEN)
LEAD 7: PLATE
LEAD 8: NO CONNECTION

K-69087-72A476 July 23, 1951
OUTLINE
GL-5797
Ef = 26.5 Volts  Eb = 26.5 Volts

K-69087-72A467    July 23, 1951
GL-5797
AVERAGE CHARACTERISTICS

Ef = 26.5 Volts  Ec3 = 0 Volts
Ec2 = 26.5 Volts

K-69087-72A469    July 19, 1951
GL-5797
AVERAGE PLATE CHARACTERISTICS
Correction Notice for 5797 and 5798 Data Sheets

Direct Interelectrode Capacitances should be referenced with a double asterisk instead of a single one.

Base-Subminiature Button 8-Lead, K8-l should be referenced with a single asterisk instead of a double one.

The Basing Diagram should show an eighty-degree spacing between leads one and eight and a forty-degree spacing between all other leads. The proper delineation of this diagram appears below.
To Tube Engineers:

On September 17, 1951, in Release No. 1020, the RTMA Engineering Office announced registration of the tube type designations 5797, 5798 under sponsorship of General Electric Company, Schenectady 5, New York.

Sponsor now proposes the following modifications in designation 5797:

<table>
<thead>
<tr>
<th>Item</th>
<th>As Registered</th>
<th>As Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Interelectrode Capacitances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grid No.1 to Plate, maximum,</td>
<td>0.028</td>
<td>0.024 uuf</td>
</tr>
<tr>
<td>Input</td>
<td>4.0</td>
<td>4.2 uuf</td>
</tr>
<tr>
<td>Output</td>
<td>4.2</td>
<td>3.2 uuf</td>
</tr>
<tr>
<td>Heater Voltage</td>
<td>26.5</td>
<td>26.5±5% Volts</td>
</tr>
<tr>
<td>Base - Subminiature Button 8-Lead</td>
<td>1.8-1</td>
<td>EC-10</td>
</tr>
<tr>
<td><strong>MAXIMUM RATINGS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak Impact Acceleration</td>
<td>300</td>
<td>450 G</td>
</tr>
<tr>
<td>Ambient Temperature</td>
<td>°175</td>
<td>°225 Centigrade</td>
</tr>
<tr>
<td>Bulb Temperature at Hottest Point</td>
<td>not given</td>
<td>°225 Centigrade</td>
</tr>
<tr>
<td><strong>CHARACTERISTICS AND TYPICAL OPERATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plate Current</td>
<td>2.75</td>
<td>2.8 Milliamperes</td>
</tr>
</tbody>
</table>

And the following modifications to designation 5798:

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<thead>
<tr>
<th>Item</th>
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<tbody>
<tr>
<td>Heater Voltage</td>
<td>26.5</td>
<td>26.5±5% Volts</td>
</tr>
<tr>
<td>Base-Subminiature Button 8-Lead</td>
<td>K3-1</td>
<td>EC-10</td>
</tr>
<tr>
<td><strong>MAXIMUM RATINGS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plate Dissipation (Each Section)</td>
<td>0.4</td>
<td>0.2 Watt</td>
</tr>
<tr>
<td>Mechanical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak Impact Acceleration</td>
<td>300</td>
<td>450 G</td>
</tr>
<tr>
<td>Ambient Temperature</td>
<td>°175</td>
<td>°225 Centigrade</td>
</tr>
<tr>
<td>Bulb Temperature at Hottest Point</td>
<td>not given</td>
<td>°225 Centigrade</td>
</tr>
<tr>
<td><strong>CHARACTERISTICS AND TYPICAL OPERATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amplification Factor</td>
<td>21</td>
<td>24</td>
</tr>
<tr>
<td>Plate Resistance, approximate</td>
<td>6700</td>
<td>7100 Ohms</td>
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<tr>
<td>Transconductance</td>
<td>3150</td>
<td>3400 Micromhos</td>
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<tr>
<td>Plate Current</td>
<td>2.3</td>
<td>2.0 Milliamperes</td>
</tr>
</tbody>
</table>

Unless valid objection to these reregistrations are lodged with the Engineering Office prior to January 12, 1953, these registrations will be made and this material will be reissued marked "Final".

Very truly yours,

[Signature]

Chief Engineer
Radio-Television Manufacturers Association

RRBa tober:mg