The 6S07 is a new metal duplex-diode high-mu triode featuring single-ended construction with interlead shielding between grid and heater within the base. The shielding reduces the hum voltage picked up by the grid lead from the heater leads, and permits operation with a satisfactory hum level. The electrical characteristics of the 6S07 are similar to those of type 75.

From a circuit standpoint, the single-ended construction offers distinct advantages in comparison with corresponding types previously available, as follows: (1) elimination of loose or broken grid leads, (2) wiring can be completed below the set panel, (3) heater appearance of the chassis, (4) lowered cost, and (5) simplification of tube renewal.

**TENTATIVE CHARACTERISTICS and RATINGS**

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEATER VOLTAGE (A.C. or D.C.)</td>
<td>6.3 Volts</td>
</tr>
<tr>
<td>HEATER CURRENT</td>
<td>0.3 Ampere</td>
</tr>
<tr>
<td>DIRECT INTERELECTRODE CAPACITANCES - Triode Unit:</td>
<td></td>
</tr>
<tr>
<td>Grid to Plate</td>
<td>1.8 µF</td>
</tr>
<tr>
<td>Grid to Cathode</td>
<td>4.2 µF</td>
</tr>
<tr>
<td>Plate to Cathode</td>
<td>3.4 µF</td>
</tr>
<tr>
<td>MAXIMUM OVERALL LENGTH</td>
<td>2-5/8&quot;</td>
</tr>
<tr>
<td>MAXIMUM DIAMETER</td>
<td>1-5/16&quot;</td>
</tr>
<tr>
<td>BASE</td>
<td>Small Wafer Octal 8-Pin</td>
</tr>
</tbody>
</table>

* With shell connected to cathode.

**Triode Unit - Class A Amplifier**

<table>
<thead>
<tr>
<th>OPERATING CONDITIONS and CHARACTERISTICS:</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Voltage</td>
<td>6.3 Volts</td>
</tr>
<tr>
<td>Plate Voltage</td>
<td>250 max. Volts</td>
</tr>
<tr>
<td>Grid Voltage</td>
<td>-2 Volts</td>
</tr>
<tr>
<td>Amplification Factor</td>
<td>100</td>
</tr>
<tr>
<td>Plate Resistance</td>
<td>91000 Ohms</td>
</tr>
<tr>
<td>Transconductance</td>
<td>1100 Micromhos</td>
</tr>
<tr>
<td>Plate Current</td>
<td>0.8 Milliamperes</td>
</tr>
</tbody>
</table>

* In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

**Diode Units - Two**

The two diode units are placed around a cathode, the sleeve of which is common to the triode unit. Each diode has its own base pin. Diode biasing of the triode unit is not suitable.

**INSTALLATION and APPLICATION**

The application and operating conditions for the 6S07 are the same as those for the type 75.

**Outline Drawing**

Same as for 6SJ7

**Pin Connections**

Pin 1 - Shell  
Pin 2 - Triode Grid  
Pin 3 - Cathode  
Pin 4 - Diode Plate #2  
Pin 5 - Diode Plate #1  
Pin 6 - Triode Plate  
Pin 7 - Heater  
Pin 8 - Heater

(Pin numbers are according to RMA system)

**Mounting Position**

Vertical or Horizontal - No restrictions

September 19, 1938

from RMA release #144, Oct. 7, 1938
DOUBLE DIODE TRIODE

MECHANICAL DATA

Coated unipotential cathode
Outline drawing: 8-1
Base: B8-21 small wafer octal 8-pin
Maximum diameter: 1-5/16"
Maximum overall length: 2-5/8"
Maximum seated height: 2-1/16"
Pin connections:
- Pin 1 - Shell
- Pin 2 - Triode grid
- Pin 3 - Cathode
- Pin 4 - #2 diode plate
- Pin 5 - #1 diode plate
- Pin 6 - Triode plate
- Pin 7 - Heater
- Pin 8 - Heater
Mounting position: any

ELECTRICAL DATA

Direct Interelectrode Capacitances*

Diode input (each unit): (1P or 2P to H+K) 2.6 μF
Triode grid to #1 diode plate: (G to 1P) max. 0.03 μF

*Pin 1 connected to pin 3

Ratings

Heater voltage (ac or dc) 6.3 volts
Maximum heater-cathode voltage 90 volts
Maximum plate voltage 300 volts
Maximum positive dc grid voltage 0 volts
Maximum plate dissipation 0.5 watt
Maximum diode current each plate for continuous operation 1.0 ma

Typical Operating Conditions and Characteristics, Class A1 Amplifier

Heater voltage 6.3 6.3 volts
Heater current 300 300 ma
Plate voltage 250 volts
Grid voltage -2 volts
Plate resistance (approx.) 85,000 ohms
Transconductance 1.175 μhos
Plate current 1.1 ma
Amplification factor 100 100
Average diode current each plate with 10 volts dc applied 2.0 2.0 ma

Continued on Page 2
Announcement of Electron Device Type Reregistration

Release No. 144C (Tentative)*

May 2, 1960

The Joint Electron Device Engineering Council announced the registration of the following electron device designation 6SQ7

on October 7, 1938, Release No. 1938, under the sponsorship of Radio Corporation of America, Harrison, New Jersey.

The sponsor now proposes reregistration based on the following data:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>AS REGISTERED</th>
<th>AS PROPOSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under ELECTRICAL DATA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct Interelectrode Capacitances**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diode input (each unit): (1P or 2P to H+K)</td>
<td>2.6</td>
<td>3.3 max.</td>
</tr>
<tr>
<td>Triode grid to triode plate</td>
<td>none</td>
<td>1.6</td>
</tr>
<tr>
<td>Triode grid to cathode and heater</td>
<td>none</td>
<td>3.2</td>
</tr>
<tr>
<td>Triode plate to cathode and heater</td>
<td>none</td>
<td>3.0</td>
</tr>
<tr>
<td>Triode grid to #2 diode plate</td>
<td>none</td>
<td>0.04 max.</td>
</tr>
</tbody>
</table>

**Pin 1 connected to pin 3

*Unless valid objection to this reregistration is lodged with the EIA Standards Laboratory prior to June 2, 1960, this reregistration will be made and this information will be considered "FINAL" WITHOUT FURTHER NOTICE!