SHARP-CUTOFF PENTODE
7-PIN MINIATURE TYPE
For use in mobile communications equipment

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
Voltage .......... 6.3 ± 20%* ac or dc volts
Current at 6.3 volts .. 0.15 amp
Direct Interelectrode Capacitances:

<table>
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<tr>
<th>Without</th>
<th>With</th>
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<tr>
<td>Externl Shield</td>
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<tr>
<td>Shield</td>
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<tr>
<td>Grid No.1 to plate . . . 0.0035 max. 0.0035 max. μμf</td>
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<tr>
<td>Grid No.1 to cathode, grid No.3 &amp; internal shield, grid No.2, and heater . . . 5.4 μμf</td>
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<tr>
<td>Plate to cathode, grid No.3 &amp; internal shield, grid No. 2, and heater. . . . 4.4 μμf</td>
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Characteristics, Class A Amplifier:
Heater Voltage ............... 6.3 volts
Plate Supply Voltage ........... 250 volts
Grid No.3 .................. Connected to cathode at socket
Grid-No.2 Supply Voltage .......... 150 volts
Cathode Resistor ............. 100 ohms
Plate Resistance (Approx.) ........ 1.4 megoohms
Transconductance ............. 4600 μmhos
Plate Current .............. 7.4 ma
Grid-No.2 Current .......... 2.6 ma
Grid-No.1 Voltage (Approx.)  for plate μa = 10 ............ -7.7 volts

Mechanical:
Operating Position ........... Any
Maximum Overall Length ........ 2-1/8"
Maximum Seated Length .......... 1-7/8"
Length, Base Seat to Bulb Top (Excluding tip) 1-1/2" ± 3/32"
Diameter ....................... 0.650" to 0.750"
Dimensional Outline ........... See General Section
Bulb. ......................... T5-1/2
Base ......................... Small-Button Miniature 7-Pin (JEDEC No. E7-1)
Basing Designation for BOTTOM VIEW .............. 7CM

Pin 1—Grid No.1
Pin 2—Cathode
Pin 3—Heater
Pin 4—Heater
Pin 5—Plate

Pin 6—Grid No.2
Pin 7—Grid No.3, Internal Shield
AMPLIFIER — Class A

Maximum Ratings, Design—Maximum Values:

PLATE VOLTAGE: ................. 330 max. volts
GRID-No. 2 (SCREEN-GRID) SUPPLY
VOLTAGE: ........................ 330 max. volts
GRID-No. 2 VOLTAGE: .......... See Grid-No. 2 Input Rating Chart
at front of Receiving Tube Section
GRID-No. 1 (CONTROL-GRID)
VOLTAGE:
Negative-bias value. ............... 55 max. volts
Positive-bias value. ............... 0 max. volts
GRID-No. 2 INPUT:
For grid-No. 2 voltages
up to 165 volts ........................ 0.55 max. watt
For grid-No. 2 voltages
between 165 and 330
volts. ............................. See Grid-No. 2 Input Rating Chart
at front of Receiving Tube Section
PLATE DISSIPATION: ............... 3.3 max. watts
PEAK HEATER—CATHODE VOLTAGE:
Heater negative with respect to cathode. . 100 max. volts
Heater positive with respect to cathode. . 100 max. volts

* When the heater is operated from storage—battery—with—charger supply or similar supplies, the normal battery—voltage fluctuation may be as
much as 35 per cent or more. Although such variation in heater voltage is permissible for short periods, reliability can be increased with
improved supply—voltage regulation.

* With external shield JEDEC No. 316 connected to cathode.

SPECIAL RATINGS & PERFORMANCE DATA

Heater—Cycling Life Performance:

This test is performed on a sample lot of tubes from each
production run. A minimum of 2000 cycles of Intermittent
operation is applied under the following conditions: heater
volts = 7.5 cycled one minute on and one minute off, heater
135 volts positive with respect to cathode, and all other
elements connected to ground. At the end of this test,
tubes are checked for heater—cathode shorts and open cir-
cuits.

Transconductance at Reduced Heater Voltage:

Average Value: ................. 3600 μhos
With heater volts = 5, plate supply volts = 250, grid No. 3
connected to cathode at socket, grid—No. 2 supply volts =
150, and cathode resistor (ohms) bypassed = 100.