6677/6CL6
POWER PENTODE
9-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..... 0.65 .... amp
Direct Interelectode Capacitances:
Grid No.1 to plate.......... 0.12 max. μf
Grid No.1 to cathode, grid No.3 & internal
shield, grid No.2, and heater.......... 11 μf
Plate to cathode, grid No.3 & internal
shield, grid No.2, and heater.......... 5.5 μf

Mechanical:
Operating Position................ Any
Maximum Overall Length........... 2-5/8"
Maximum Seated Length............. 2-3/8"
Length, Base Seat to Bulb Top (Excluding tip)..... 2" ± 3/32"
Diameter.......................... 0.750" to 0.875"
Dimensional Outline.............. See General Section
Bulb .................................. T6-1/2
Base .. Small-Button Naval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW ..... 9BV

Pin 1 - Cathode
Pin 2 - Grid No.1
Pin 3 - Grid No.2
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Plate
Pin 7 - Grid No.3, Internal
Pin 8 - Grid No.2
Pin 9 - Grid No.1

AMPLIFIER — Class A

Maximum Ratings, Design-Maximum Values:
PLATE VOLTAGE..................... 330 max. volts
GRID-No.3 (SUPPRESSOR-GRID) VOLTAGE........ 0 max. volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE...... 330 max. volts
GRID-No.2 VOLTAGE.............. See Grid-No.2 Input Rating Chart
GRID-No.1 (CONTROL-GRID) VOLTAGE:
Negative-bias value.............. 50 max. volts
Positive-bias value............. 0 max. volts
GRID-No.2 INPUT:
For grid-No.2 voltages up to 165 volts... 2 max. watts
For grid-No.2 voltages between 165 and
330 volts............. See Grid-No.2 Input Rating Chart

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RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
PLATE DISSIPATION .......................... 8.5 max. watts
PEAK HEATER-CATHODE VOLTAGE:
   Heater negative with respect to cathode . 100 max. volts
   Heater positive with respect to cathode . 100 max. volts
BULB TEMPERATURE (At hottest point on bulb surface) .............. 210 max. °C

Typical Operation and Characteristics:
Heater Voltage .................................. 6.3 volts
Plate Voltage .................................... 250 volts
Grid No.3 ........................................... Connected to cathode at socket
Grid-No.2 Voltage ............................... 150 volts
Grid-No.1 Voltage ................................ -3 volts
Peak AF Grid-No.1 Voltage ....................... 3 volts
Zero-Signal Plate Current ....................... 30 ma
Max.-Signal Plate Current ...................... 31 ma
Zero-Signal Grid-No.2 Current ................. 7 ma
Max.-Signal Grid-No.2 Current .................. 7.2 ma
Plate Resistance (Approx.) ..................... 0.15 megohm
Transconductance .............................. 11000 µmhos
Load Resistance .................................. 7500 ohms
Total Harmonic Distortion ..................... 8 %
Max.-Signal Power Output ..................... 2.8 watts

Maximum Circuit Values:
Grid-No.1-Circuit Resistance:
   For fixed-bias operation ..................... 0.1 max. megohm
   For cathode-bias operation ................... 0.5 max. megohm

* when the heater is operated from storage-battery-with-charger supply or similar supplies, the normal battery-voltage fluctuation may be as much as 5% per cent or more. Although such variation in heater voltage is permissible for short periods, reliability can be increased with improved supply-voltage regulation.

O Without external shield.

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 circuits.

Transconductance at Reduced Heater Voltage:
Average Value .................................. 8800 µmhos
With heater volts = 5, plate volts = 250, grid No.3 connected to cathode at socket, grid-No.2 volts = 150, and grid-No. 1 volts = -3.