AMPEREX TUBE TYPE ECC2000

TENTATIVE DATA

The Ampex ECC2000 is a premium quality, long-life, shock and vibration resistant dual triode for use as a VHF amplifier for frequencies up to 300 Mc in cascode circuits without external neutralization. It is also intended for use as a frequency multiplier.

The tube is provided with a neutralization screen and with gold-plated pins. The tube is interface free and has a low microphonic sensibility.

PIN CONNECTIONS

1 - SCREEN NO.2
2 - CATHODE NO.2
3 - GRID NO.2
4 - CATHODE NO.1
5 - HEATER, SCREEN NO.1
6 - HEATER
7 - PLATE NO.1
8 - GRID NO.1
9 - CATHODE NO.1
10 - PLATE NO.2

GENERAL CHARACTERISTICS

MECHANICAL

Base
Bulb
Dimensions

miniature 10-pin; gold plated pins
T 6-1/2
see outline drawing

ELECTRICAL

Heating
Heater Voltage
Heater Current
Inter electrode Capacitances
(without shield)

indirect, AC or DC, parallel supply
6.3 volts
325 ma

Section 1

Grid to Cathode Heater and Neutralization Screen 5.5 pf
Grid to Neutralization Screen 1.5 pf
Plate to Cathode, Heater and Neutralization Screen 5.0 pf
Plate to Grid 0.45 pf
Plate to Neutralization Screen 3.3 pf
ECC2000

ELECTRICAL (Cont.)

Inter electrode Capacitances (without shield) (Cont.)

Section 2
- Cathode to Grid and Filament: 7.0 pf
- Plate to Grid and Filament: 3.3 pf
- Plate to Cathode: 0.2 pf
- Plate to Grid: 1.5 pf

Between Sections
- Plate to Plate (max.): 0.045 pf

ABSOLUTE MAXIMUM RATINGS (Both Sections)

- Plate Voltage (Zero Current): 450 volts
- Plate Voltage: 250 volts
- Plate Dissipation: 2.7 watts
- Negative Grid Voltage: 50 volts
- Peak Negative Grid Voltage: 150 volts
- Grid Circuit Resistance (automatic bias): 1 megohm
- Cathode to Heater Voltage: 150 volts
  - Cathode Positive: 50 volts
  - Cathode Negative: 40 ma
- Cathode Current: 400 ma
- Peak Cathode Current: 225°C

TYPICAL CHARACTERISTICS

Triode Section 1 (Input System)

- Plate Voltage: 90
- Neutralization Screen Voltage: 0
- Negative Grid Voltage: 2.1
- Plate Current: 15 ma
- Transconductance: 13,000
- Amplification Factor: 27
- Equivalent Noise Resistance: 250

Triode Section 2 (Output System)

- Plate Voltage: 90
- Negative Grid Voltage: 2.0
- Plate Current: 15 ma
- Transconductance: 17,000
- Amplification Factor: 28
- Equivalent Noise Resistance: 200

Duty factor maximum 1%, pulse duration maximum 10 μsec.
Duty factor maximum 10%, pulse duration maximum 200 μsec.
RECOMMENDED OPERATING CONDITIONS AND CORRESPONDING CHARACTERISTICS AS CASCODE AMPLIFIER AT 200 Mc

Supply Voltage | 200 | 200 volts
Cathode Resistor | 1200 | 680 ohms
Plate Current | 15.5 | 26.5 ma
Input Resistance | 910 | 670 ohms
Input Capacitance | 11 | 12 pf
Noise Factor | 4 | 4 dB

3 Source impedance adapted to minimum noise.