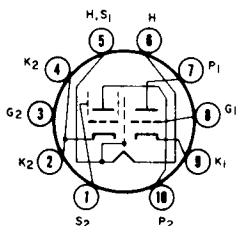


# AMPEREX TUBE TYPE ECC2000

## TENTATIVE DATA

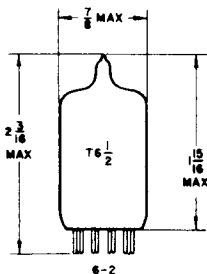
The Amperex ECC2000 is a premium quality, long-life, shock and vibration resistant dual triode for use as a VHF amplifier for frequencies up to 300 Mc in cascode circuits without external neutralization. It is also intended for use as a frequency multiplier.

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

### ELECTRICAL

Heating	indirect, AC or DC, parallel supply
Heater Voltage	6.3 volts
Heater Current	325 ma

### Interelectrode Capacitances (without shield)

#### 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.)

### Interelectrode 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
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### 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 <sup>1</sup>	150 volts
Grid Circuit Resistance (automatic bias)	1 megohm
Cathode to Heater Voltage	
Cathode Positive	150 volts
Cathode Negative	50 volts
Cathode Current	40 ma
Peak Cathode Current <sup>2</sup>	400 ma
Bulb Temperature	225°C

### TYPICAL CHARACTERISTICS

#### Triode Section 1 (Input System)

Plate Voltage	90	90 volts
Neutralization Screen Voltage	0	0 volt
Negative Grid Voltage	2.1	1.4 volts
Plate Current	15	27 ma
Transconductance	13,000	17,500 $\mu$ mhos
Amplification Factor	27	27
Equivalent Noise Resistance	250	200 ohms

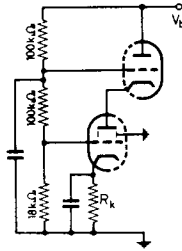
#### Triode Section 2 (Output System)

Plate Voltage	90	90 volts
Negative Grid Voltage	2.0	1.4 volts
Plate Current	15	27 ma
Transconductance	17,000	22,000 $\mu$ mhos
Amplification Factor	28	28
Equivalent Noise Resistance	200	150 ohms

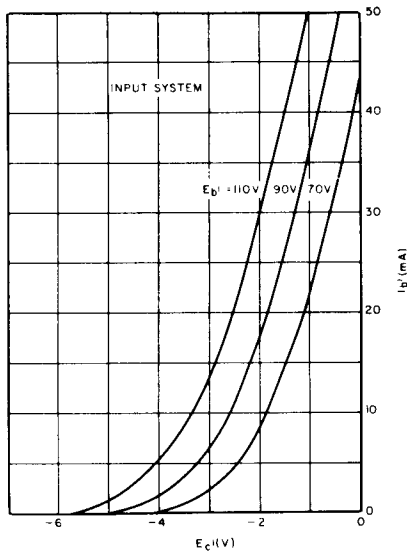
<sup>1</sup> Duty factor maximum 1%, pulse duration maximum 10  $\mu$ sec.

<sup>2</sup> Duty factor maximum 10%, pulse duration maximum 200  $\mu$ sec.

## 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 <sup>3</sup>



<sup>3</sup> Source impedance adapted to minimum noise.

# ECC2000

