



TECHNICAL DATA

304TL
LOW-MU TRIODE
•
MODULATOR
OSCILLATOR
AMPLIFIER

The EIMAC 304TL is a low-mu, power triode having a maximum plate dissipation rating of 300 watts, and is intended for use as an amplifier, oscillator or modulator, where maximum performance can be obtained at low plate voltage. It can be used at its maximum ratings at frequencies as high as 40 MHz.

Cooling of the 304TL is accomplished by radiation from the plate, which operates at a visible red color at maximum dissipation, and by means of air convection around the envelope.

GENERAL CHARACTERISTICS

ELECTRICAL

Filament: Thoriated tungsten

Voltage	- - - - -	5.0 or 10.0	volts
Current	- - - - -	25.0 or 12.5	amps

Amplification Factor (Average) - - - - - 12

Direct Interelectrode Capacitances (Average)

Grid-Plate	- - - - -	8.6	pF
Grid-Filament	- - - - -	12.1	pF
Plate-Filament	- - - - -	.8	pF

Transconductance ($I_b = 1.0$ amp, $E_b = 3000$ V, $e_c = -175$ V) 16,700 μ mhos

Frequency for Maximum Ratings - - - - - 40 MHz

MECHANICAL

Base	- - - - -	Special 4 pin, No. 5000B
Socket	- - - - -	Johnson No. 124-213 or Equivalent
Mounting	- - - - -	Vertical, base down or up
Cooling	- - - - -	Convection and Radiation

Recommended Heat Dissipating Connectors:

Plate	- - - - -	HR-7
Grid	- - - - -	HR-6

Maximum Overall Dimensions:

Length	- - - - -	7.625 inches
Diameter	- - - - -	3.563 inches

Net Weight - - - - - 9 ounces

Shipping Weight (Average) - - - - - 2 pounds

RADIO FREQUENCY POWER AMPLIFIER AND OSCILLATOR

Class-C Telephony or FM Telephony
(Key-down conditions, per tube)

MAXIMUM RATINGS

DC PLATE VOLTAGE	- - -	3000 VOLTS
DC PLATE CURRENT	- - -	900 MA
PLATE DISSIPATION	- - -	300 WATTS
GRID DISSIPATION	- - -	50 WATTS

TYPICAL OPERATION*

DC Plate Voltage	- - -	1500	2000	3000 Volts
DC Grid Voltage	- - -	-250	-300	-400 Volts
DC Plate Current	- - -	665	600	500 mA
DC Grid Current	- - -	90	85	80 mA
Peak RF Grid Input Voltage	- - -	430	480	575 Volts
Driving Power (approx.)	- - -	33	36	40 Watts
Grid Dissipation	- - -	11	11	8 Watts
Plate Power Input	- - -	1000	1200	1500 Watts
Plate Dissipation	- - -	300	300	300 Watts
Plate Power Output	- - -	700	900	1200 Watts

*The figures show actual measured tube performance, and do not allow for circuit losses.

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