

TUNG-SOL

PRODUCT BULLETIN

INDUSTRIAL ELECTRON TUBE TYPE 5847/404A

FEBRUARY 1963

MINIATURE BROADBAND PENTODE

DESCRIPTION — The 5847/404A is a high gain, broadband, nine-pin, miniature pentode. Its low noise and low grid current requirements admirably suit it for use as a broadband amplifier in I-F amplifier and carrier systems as well as in cathode-ray oscilloscope amplifiers. The frame grid construction employed results in a high figure of merit, reduces noise levels, and provides a long and reliable service life.

ELECTRICAL DATA

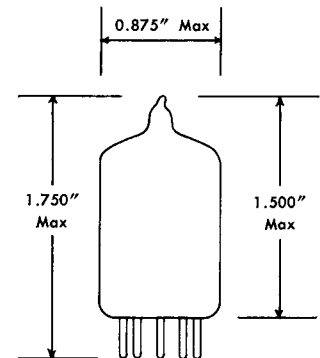
Heater Voltage	6.3 ± 10%	Volts
Heater Current — $E_f = 6.3$ Volts	300	Milliamperes
Interelectrode Capacitance — maximum values, with shield		
Grid to Plate	0.04	Micromicrofarads
Input	7.8	Micromicrofarads
Output	3.4	Micromicrofarads

MECHANICAL DATA

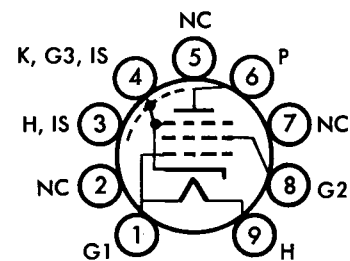
Mounting Position	Any
Bulb	T6½
Base	Small Button Miniature 9-pin, JEDEC No. E9-1
Dimensions	See Outline Drawing
Maximum Net Weight	0.5 Ounce

RATINGS, ABSOLUTE VALUES

	Minimum	Maximum	
Heater Voltage	5.7	6.9	Volts
Plate Voltage	—	200	Volts dc
Plate Dissipation	—	3.3	Watts
Grid No. 2 Voltage	—	165	Volts dc
Grid No. 2 Dissipation	—	0.85	Watt
Cathode Current	—	40	Milliamperes
Heater — Cathode Voltage	—	55	Volts
Envelope Temperature	—	150	Degrees Centigrade
Altitude for Full Ratings	—	10,000	Feet



OUTLINE DRAWING



LOWER INTERNAL SHIELD — PIN 3
UPPER INTERNAL SHIELD — PIN 4

BASING DIAGRAM
BOTTOM VIEW

TYPE 5847/404A

TYPICAL OPERATING CONDITIONS

Heater Voltage	6.3	Volts
Heater Current	0.3	Amperes
Plate Voltage	150	Volts dc
Grid No. 2 Voltage	150	Volts dc
Cathode Bias Resistance	110	Ohms
Control Grid Voltage	0	Volts
Plate Current	13	Milliamperes dc
Screen Current	4.5	Milliamperes dc
Transconductance	12,500	Micromhos

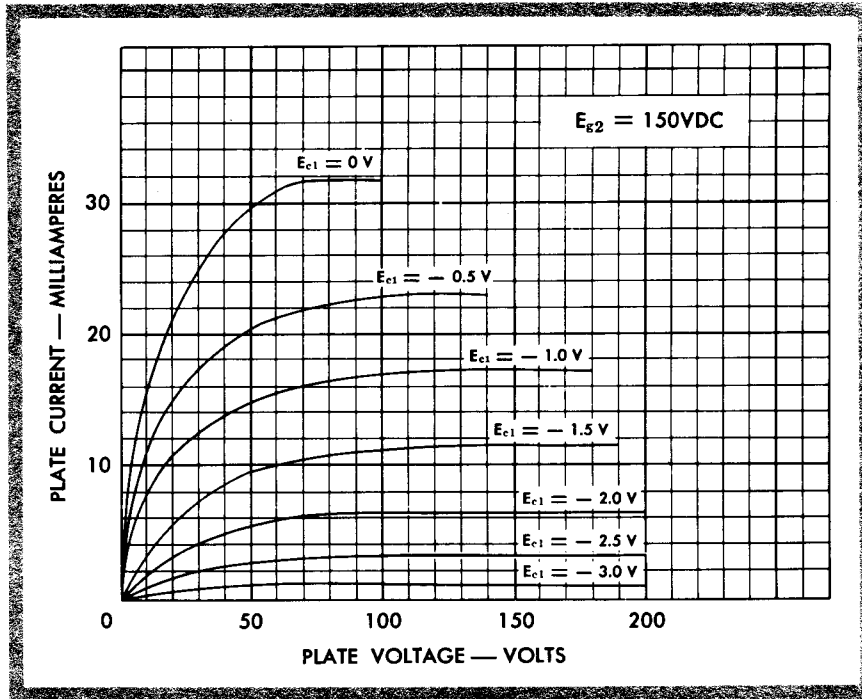
APPLICATION NOTES

The high figure of merit, the good transfer characteristic and the low noise figure of the 5847/404A highly recommend it to the equipment designer who requires a broadband carrier, I-F, or video amplifier tube.

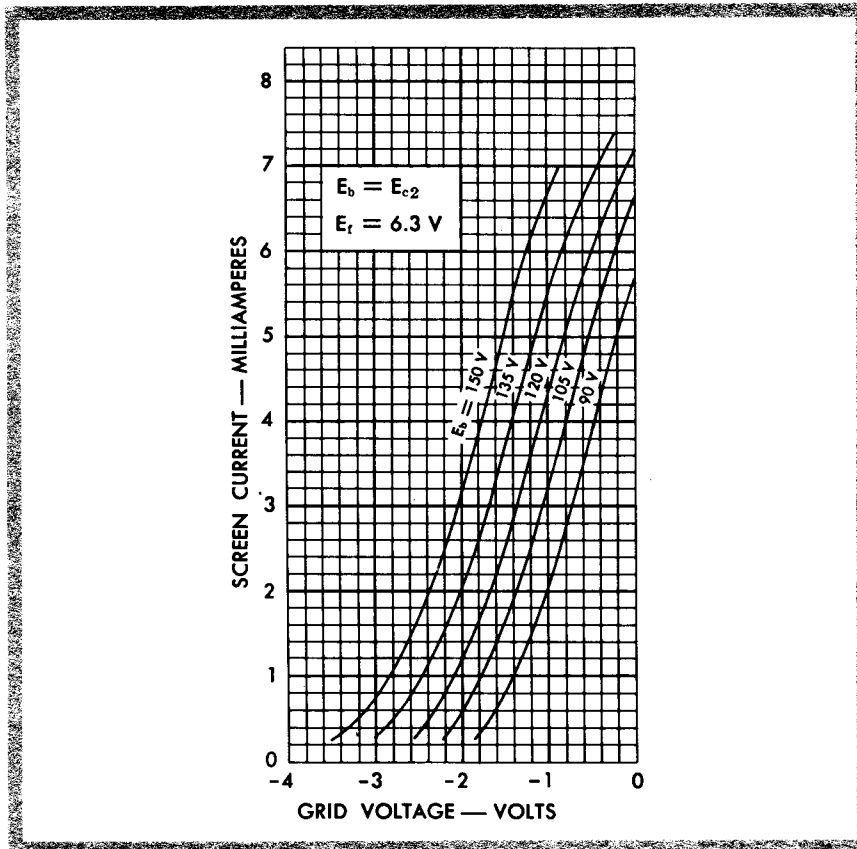
The first two of these characteristics result from the frame-grid type of construction used in this tube. When using this type of construction, the grid wire is tension wound and gold brazed to a rigid, self-supporting frame which is held to close dimension tolerances. The resulting product is a uniform, rugged and electrically constant control grid.

The 5847/404A has low input and output capacitances and has high transconductance. This permits the tube to pass a wideband signal without sacrificing gain. With unity gain at either end, it will pass a band 120 megacycles wide.

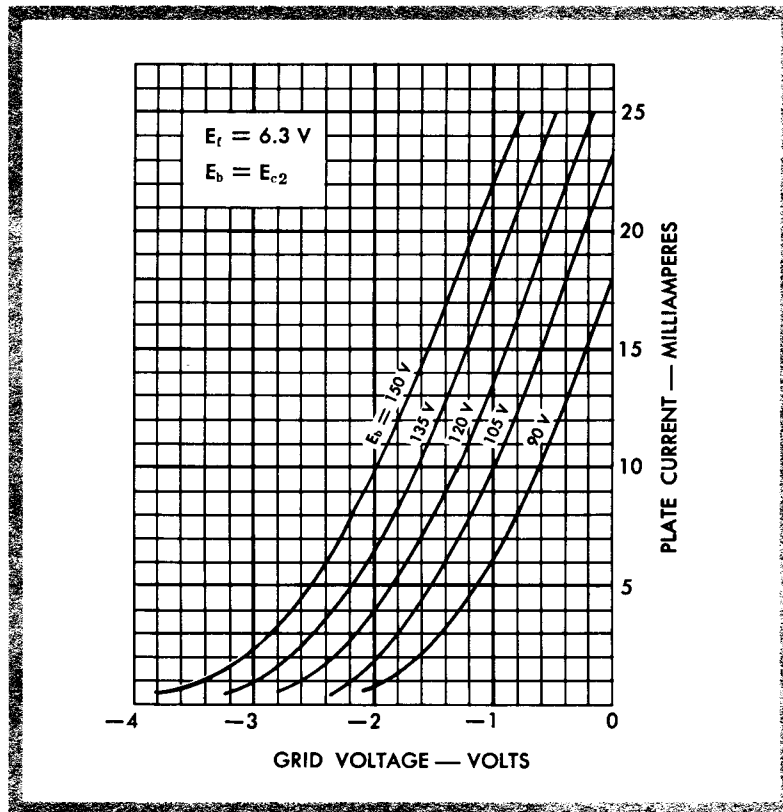
PLATE CHARACTERISTIC CURVES



SCREEN CHARACTERISTIC CURVES



TRANSFER CHARACTERISTIC CURVES



TRANSCONDUCTANCE CURVES

