



TECHNICAL INFORMATION

Excellence in Electronics

TRIODE TYPE CK5842

The CK5842 (417A) is a heater-cathode type, high transconductance triode of miniature construction. The design features of low noise, low interelectrode capacitances, and very high transconductance make this type suitable for service in wide band amplifier stages, and especially grounded-grid operation. The useful frequency range extends from low to very high frequencies. The heater-cathode construction is designed to withstand many thousands of cycles of intermittent operation.

MECHANICAL DATA

ENVELOPE: T-6½ Glass

BASE: Miniature Button 9-Pin.

TERMINAL CONNECTIONS:

Pin 1 Plate	Pin 6 Cathode
Pin 2 No Connection	Pin 7 Grid
Pin 3 Heater	Pin 8 Grid
Pin 4 Grid	Pin 9 Heater
Pin 5 Grid	

MOUNTING POSITION: Any

ELECTRICAL DATA

DIRECT INTERELECTRODE CAPACITANCES: (μfds)

Plate to Cathode and Heater	0.55 max.
Input (k to g + h)	9.0
Output (p to g + h)	1.8

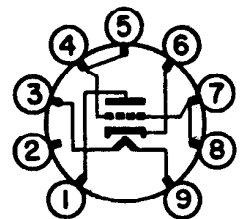
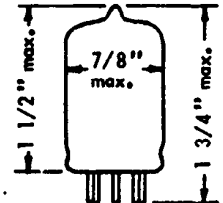
RATINGS—ABSOLUTE MAXIMUM VALUES:

Heater Voltage (ac or dc)	6.3 ± 10% volts
Plate Voltage	200 volts
Plate Dissipation	4.5 watts
Cathode Current	38 ma
Heater-Cathode Voltage	55 volts
Bulb Temperature	160 °C

CHARACTERISTICS AND TYPICAL OPERATION:

Heater Voltage	6.3	6.3 volts
Heater Current	0.3	0.3 ma
Plate Voltage	150	130 volts
Cathode Bias Resistance	60	360 ohms
Grid Voltage	0	+9 volts
Plate Current	25	27 ma
Plate Resistance	1700	1600 ohms
Transconductance	25,000	27000 umhos
Amplification Factor	43	43

Without Shield



BOTTOM VIEW

9V

300 W4

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Tentative Data

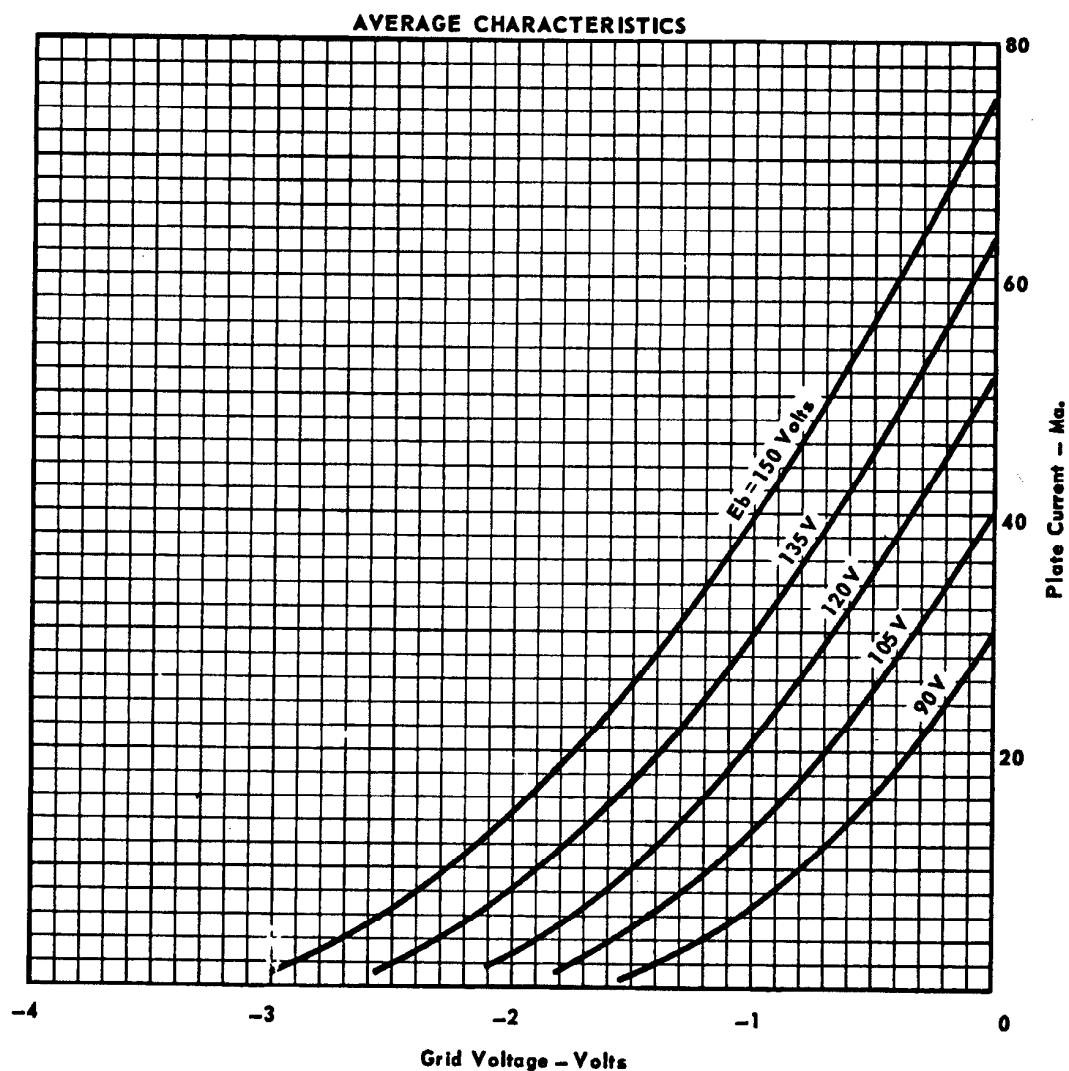
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RECEIVING TUBE AND SEMICONDUCTOR OPERATIONS

NEWTON 58, MASS.



TRIODE

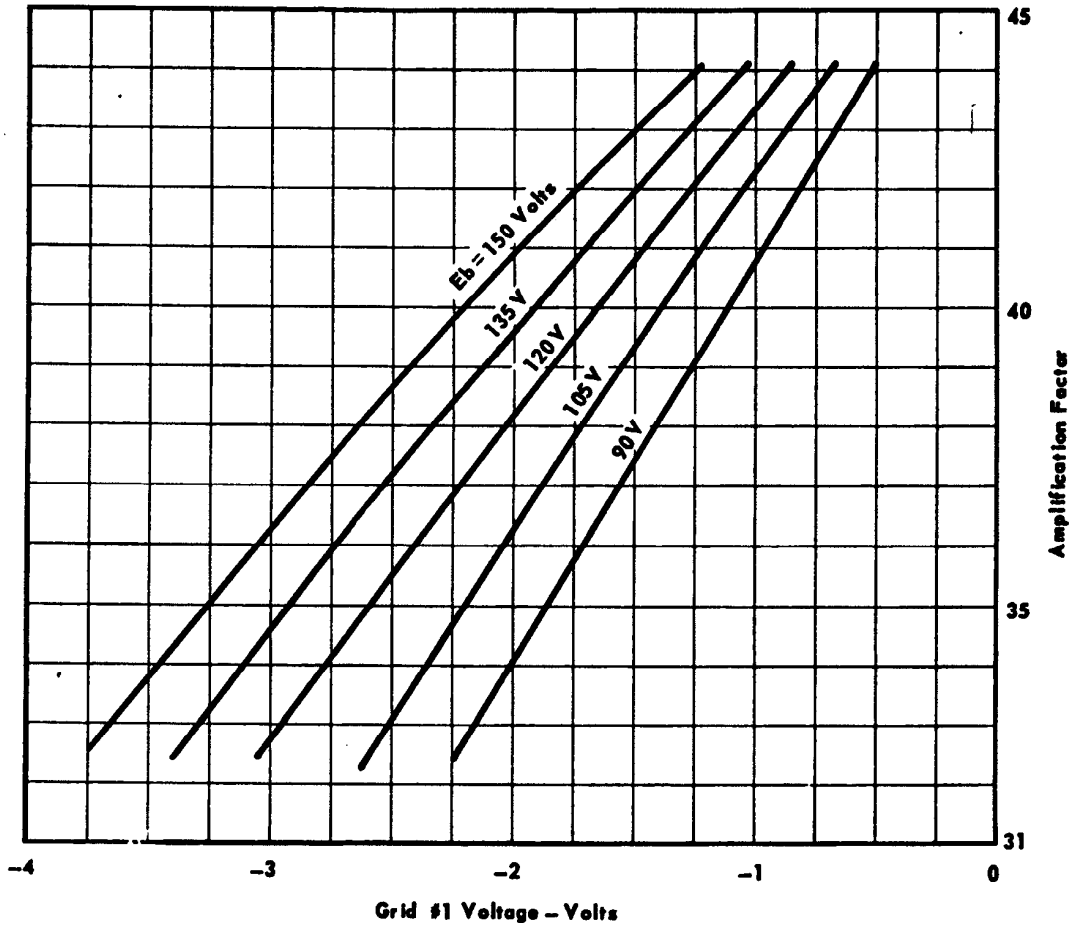


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TRIODE

AVERAGE CHARACTERISTICS



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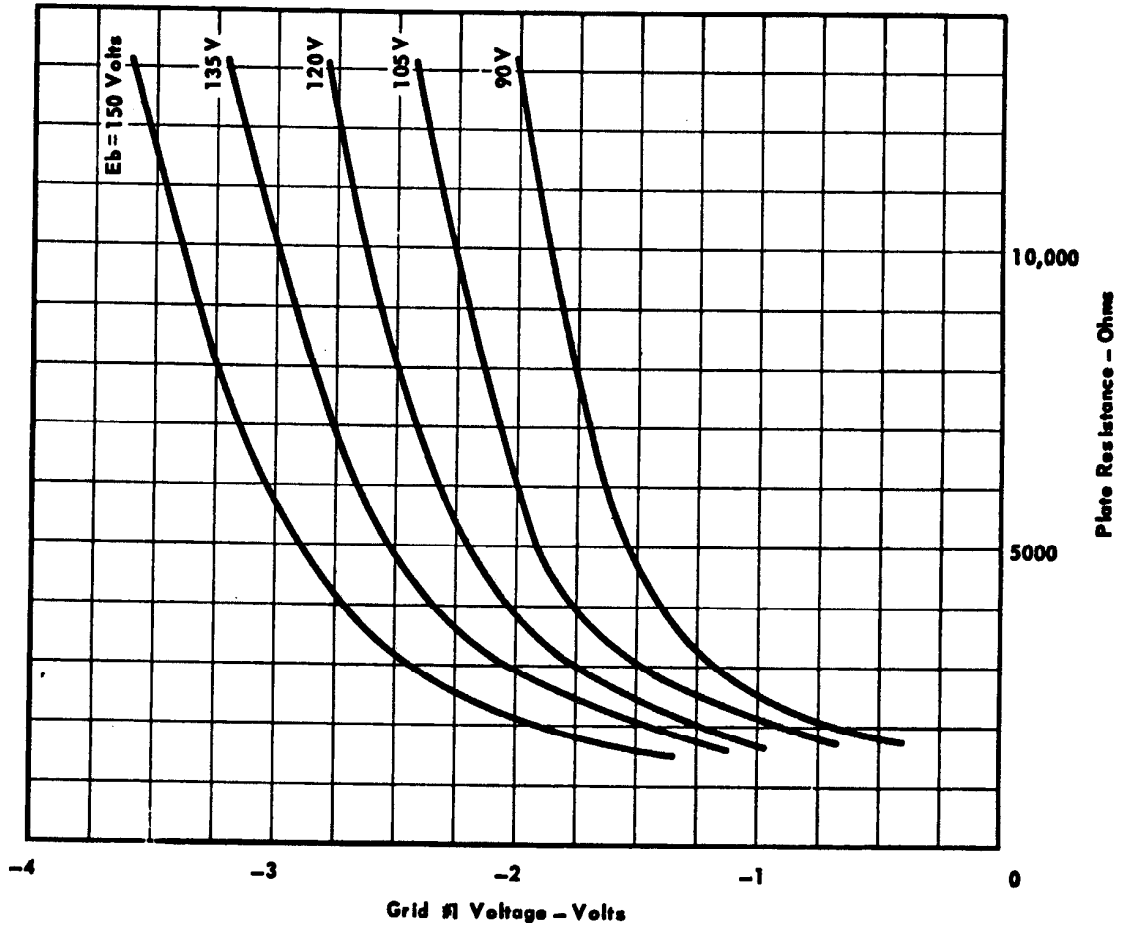
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TRIODE

AVERAGE CHARACTERISTICS



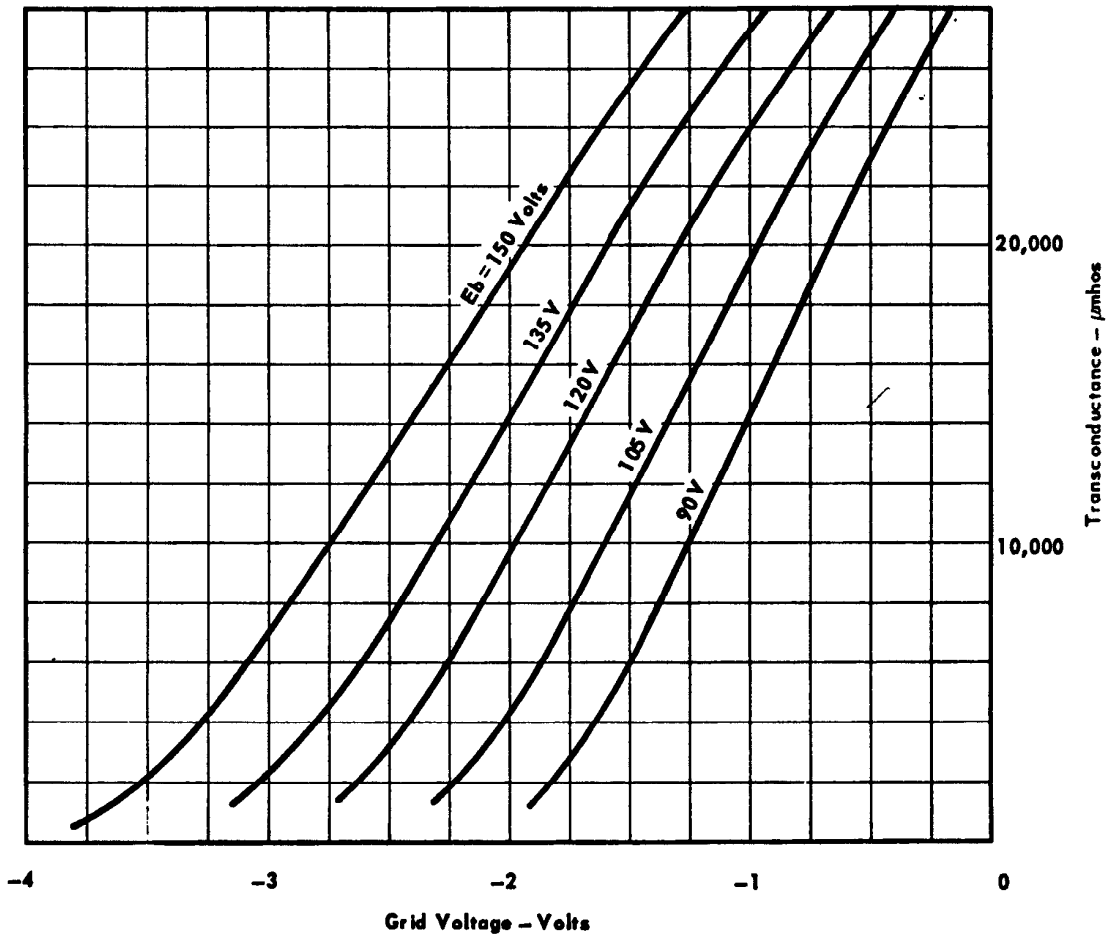
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RECEIVING TUBE AND SEMICONDUCTOR OPERATIONS



TYPE CK5842

TRIODE

AVERAGE CHARACTERISTICS



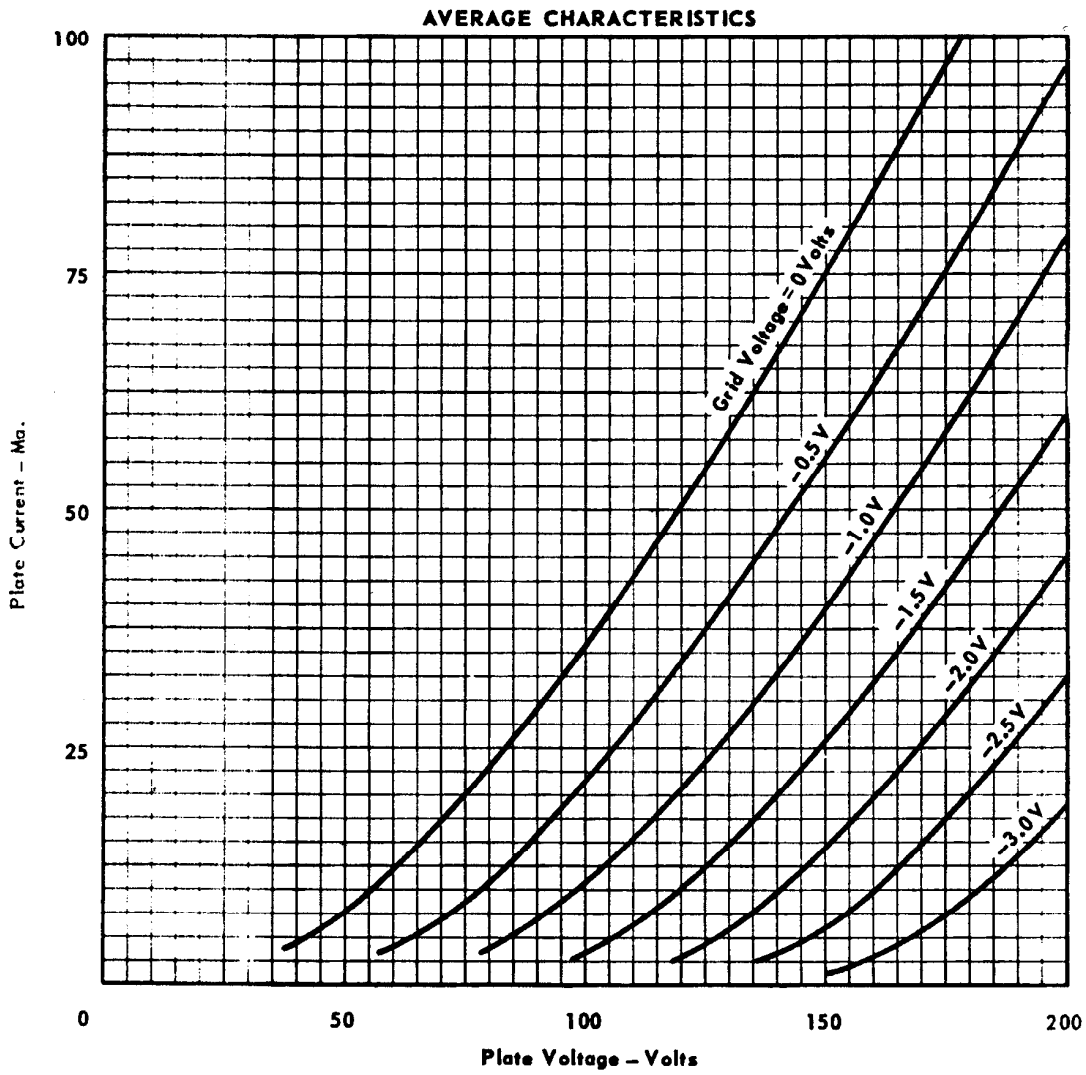
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RAYTHEON MANUFACTURING COMPANY
RECEIVING TUBE AND SEMICONDUCTOR OPERATIONS

NEWTON 68 MASS



TRIODE



RAYTHEON MANUFACTURING COMPANY

VACUUM TUBE AND SEMICONDUCTOR OPERATING DATA

RAYTHEON

TECHNICAL
INFORMATION
SERVICE

Technical Information

RELIABILITY CONTROL SUPPLEMENT

5842

RELIABILITY
CONTROLLED
10,000 HOUR LIFE
TRIODE

RELIABILITY CONTROLLED 10,000 HOUR LIFE

Type 5842 is one of Raytheon's Reliability Controlled tubes and is warranted* for 10,000 hours of useful life when operated under the following approved conditions:

$E_f = 6.3V \pm 5\%$; $E_b = 150 Vdc$; $E_c = 0$; $R_k = 60$ ohms.

To control reliability a randomly selected statistical sample is operated under above conditions plus an E_{hk} of 100 Vdc and an R_g of 0.47 meg. for 10,000 hours. The Reliability Controlled 10,000 Hour Life Test end points are:

Transconductance..... 17,500 umhos, min.
Heater-cathode leakage..... 10 uAdc, max.
Grid current..... -1.0 uAdc, max.

*Long Life Warranty is applied to lots of 100 tubes minimum. Raytheon warrants these tubes to have an average useful life of over 10,000 hours. The end of useful life may be considered to have been reached when transconductance under normal test conditions falls below 17,500 umhos. See "10,000 Hour Reliable Life Certificate for Reliability Controlled Tubes" for warranty details.

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