826

TRANSMITTING TRIODE

For operation at maximum ratings up to 250 Mc

Filament †	Thoriated Tungsten	
Voltage	7.5	a-c or d-c volts
Current	4	amp.
Amplification Factor	31	
Direct Interelectrode Capacitances:		
Grid to Plate	2.9	μμf
Grid to Filament	3.7	μμf
Plate to Filament	1.4	μμf
Maximum Overall Length		3-11/16"
Maximum Diameter		2-3/8"
Bulb		T-16
RCA Socket		Type UT-10€
Cooling		Forced Air

MAXIMUM CCS RATINGS with TYPICAL OPERATING CONDITIONS

CCS = Continuous Commercial Service

R-F POWER AMPLIFIER - Class B Telephony

Carrier conditions per tube for use with a max. modulation factor of 1.0

	CCS	
D-C Plate Voltage	1000 max.	volts
D-C Plate Current	65 max.	ma.
Plate Input	65 max.	watts
Plate Dissipation	60 max.	watts
Typical Operation:		
D-C Plate Voltage	1000	volts
D-C Grid Voltage #	-50	volts
Peak R-F Grid Voltage	87	volts
D-C Plate Current	65	ma.
D-C Grid Current **	8.5 approx.	ma.
Driving Power ** o	3.7 approx.	watts
Power Output	22 approx.	watts

o At crest of audio-frequency cycle with modulation factor of 1.0.

GRID-MODULATED R-F POWER AMPLIFIER - Class C Telegraphy

Carrier conditions per tube for use with a max. modulation factor of 1.0

	CCS	
D-C Plate Voltage	1000 max.	volts
D-C Grid Voltage	-500 max.	volts
D-C Plate Current	65 max.	ma.
Plate Input	65 max.	watts
Plate Dissipation	60 max.	watts
Typical Operation:		
D-C Plate Voltage	1000	volts
D-C Grid Voltage □	-125	volts
Peak R-F Grid Voltage	165	volts
Peak A-F Grid Voltage	95	volts
D-C Plate Current	65	ma.
D-C Grid Current **	9.5 approx.	ma.
Driving Power ** o	8.2 approx.	watts
Power Output	25 approx.	watts

□ Obtained preferably from fixed supply.
o At crest of audio-frequency cycle with modulation factor of 1.0.
#, **, †: See end of tabulation.

826

TRANSMITTING TRIODE

(continued from preceding page)

PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony

Carrier conditions per tube for use with a max. modulation factor of 1.0

	CCS		
D-C Plate Voltage	800	max.	volts
D-C Grid Voltage	-500	max.	volts
D-C Plate Current	95	max.	ma.
D-C Grid Current	40	max.	ma.
Plate Input	75	max.	watts
Plate Dissipation	40	max.	watts
Typical Operation:			
D-C Plate Voltage	800		volts
D-C Grid Voltage #▲	-98		volts
	2800		ohms
Peak R-F Grid Voltage	198		volts
D-C Plate Current	94		ma.
D-C Grid Current **	35	approx.	ma.
Driving Power **	6.2	approx.	watts
Power Output	53	approx.	watts

▲ Obtained preferably from grid resistor of value shown or combination of grid resistor with either fixed supply or by-passed cathode resistor.

R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

Key-down conditions per tube without modulation##

	CCS		
D-C Plate Voltage	1000	max.	volts
D-C Grid Voltage	-500	max.	volts
D-C Plate Current	125	max.	ma.
D-C Grid Current	35	max.	ma.
Plate Input	125	max.	watts
Plate Dissipation	60	max.	watts
Typical Operation:			
D-C Plate Voltage	1000		volts
D-C Grid Voltage ◊	-70		volts
	2000		ohms
	440		ohms
Peak R-F Grid Voltage	183		volts
D-C Plate Current	125		ma.
D-C Grid Current**	35	approx.	ma.
Driving Power **	5.8	approx.	watts
Power Output	86	approx.	watts

Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

◊ Obtained from fixed supply (-70), grid resistor (2000), or cathode resistor (440). When the 826 is used in the final amplifier or a preceding stage of a transmitter designed for break-in operation and oscillator keying, a small amount of fixed bias must be used to maintain the plate current at a safe value. With plate voltage of 1000 volts, a fixed bias of at least -7.5 volts should be used.

** Subject to wide variations as explained on sheet TRANS. TUBE RATINGS.

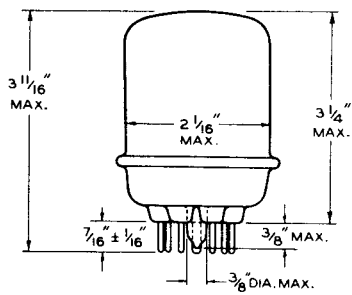
† The filament is center-tapped and the center lead is brought out of the tube. With this design, it is possible to minimize the effect of filament-lead inductance by connecting all three filament leads in parallel through r-f by-pass condensers. The center lead of this parallel connection should not be returned directly to the center-tap of the filament-transformer winding or to ground, although it may be by-passed to either of these points if desired. R-f by-passing of the grid- and plate-return circuits should be made to the center lead of the filament.

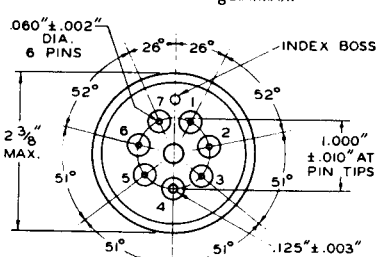
826

TRANSMITTING TRIODE

(continued from preceding page)

Data on operating frequencies for the 826 are given on the sheet TRANS. TUBE RATINGS vs FREQUENCY. Adequate shielding must be provided at the higher frequencies and forced-air cooling is necessary. At the ultra-high frequencies, push-pull operation is recommended and it is desirable to connect the two grid terminals and the two plate terminals together in order to reduce the respective lead inductances.

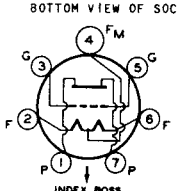




BOTTOM VIEW

92C-6131

BOTTOM VIEW OF SOCKET CONNECTIONS



Pin 1 – Plate
Pin 2 – Filament
Pin 3 – Grid
Pin 4 – Filament Mid-Tap
Pin 5 – Grid
Pin 6 – Filament
Pin 7 – Plate

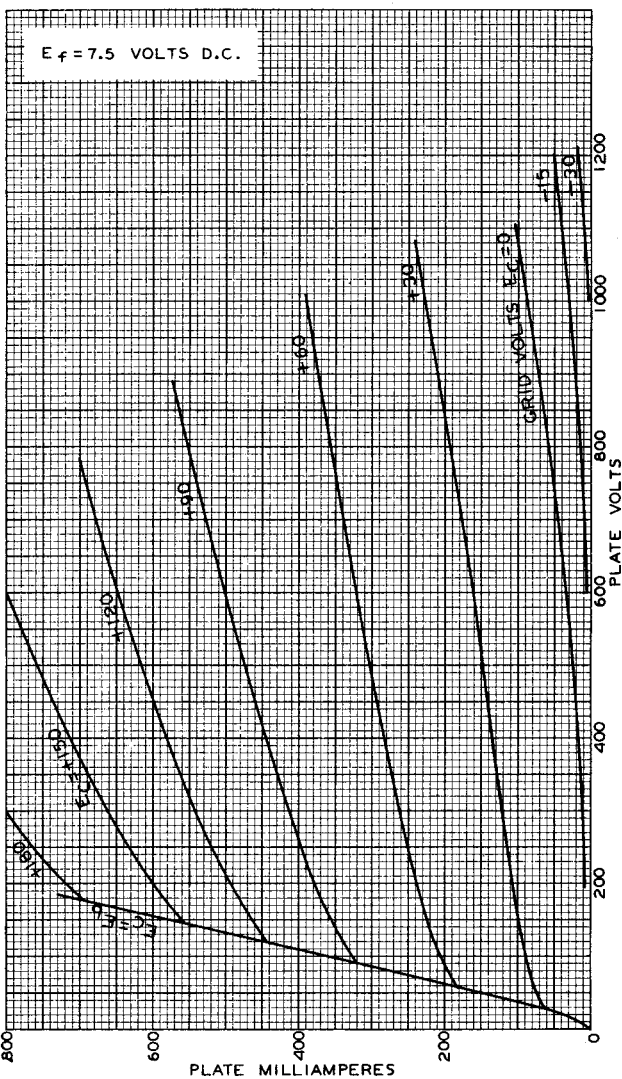
TUBE MOUNTING POSITION

VERTICAL: Terminals up or down.
HORIZONTAL: No.

826

826

AVERAGE PLATE CHARACTERISTICS



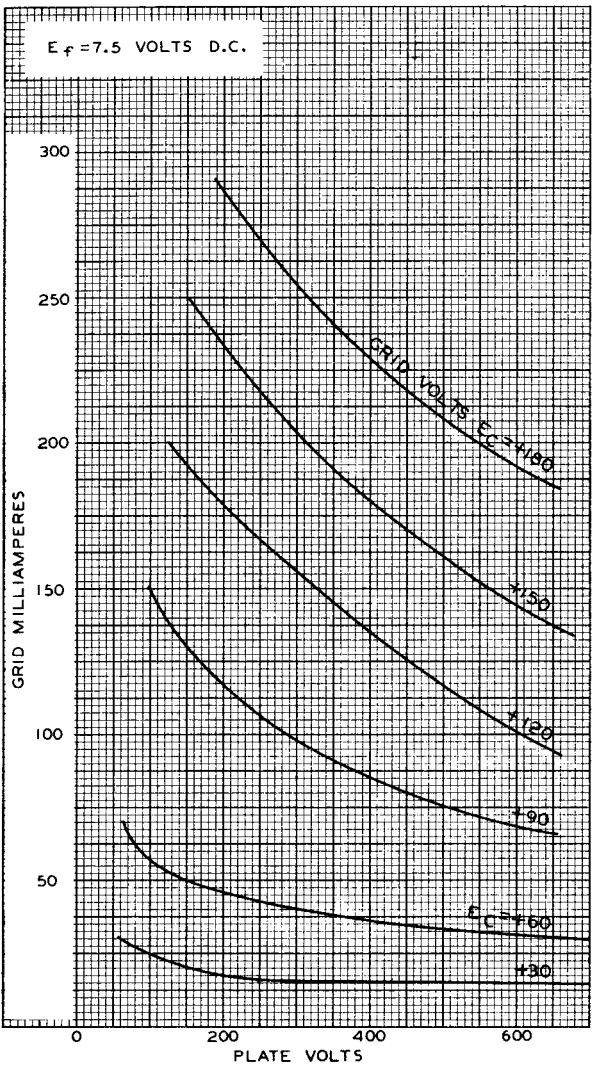
SEPT. 9, 1940

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

92C-6210

826

TYPICAL CHARACTERISTICS



RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.