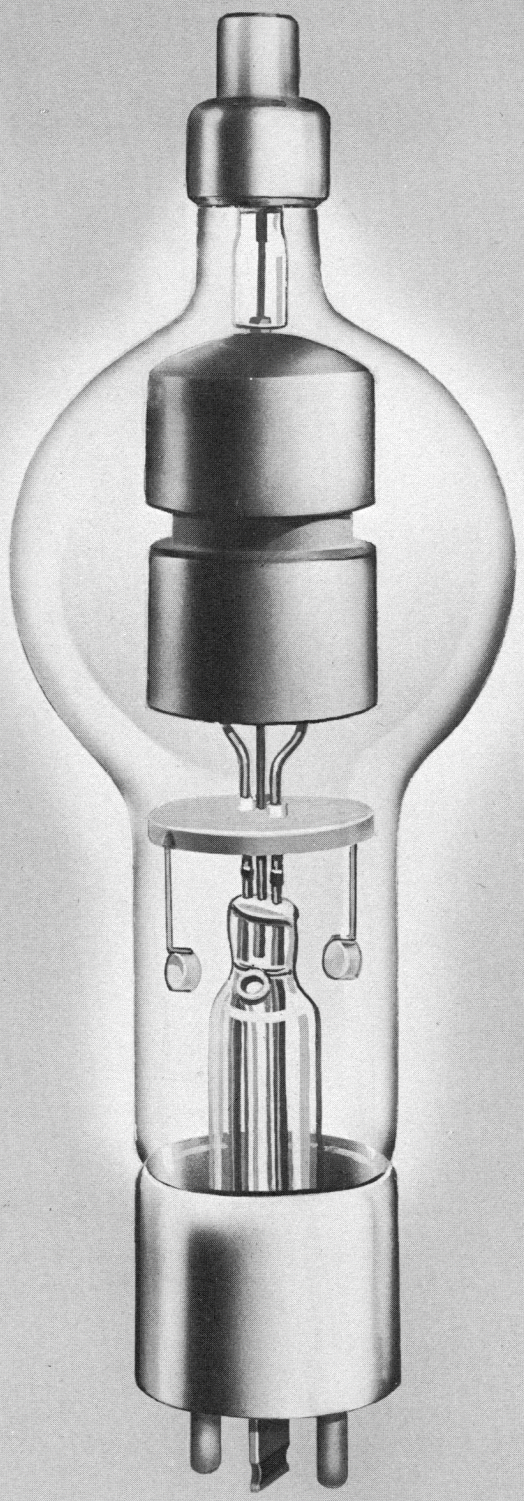
FEDERAL MERCURY VAPOR
Half-Wave Rectifier
Type F-869-B



GENERAL DATA

DESCRIPTION:

Federal's F-869-B is a mercury vapor, half-wave rectifier for use in high-voltage rectifier circuits.

Electrical:

▶ Filament Voltage	5 Volts
▶ Filament Current	20 Amperes
▶ Cathode Heating Time Required	60 Seconds
▶ Anode Voltage Drop	15 Volts
▶ Critical Anode Voltage	100 Volts

Mechanical:

▶ Type of Cooling—Convection or Forced Air	
▶ Equilibrium Condensed Mercury Temperature Rise Over Ambient	
No Load—Approx.	15°Centigrade
Full Load—Approx.	20°Centigrade
▶ Mounting Position—Vertical, Base Down	
▶ Net Weight, Maximum	3.8 Pounds

Maximum Ratings, Absolute Values

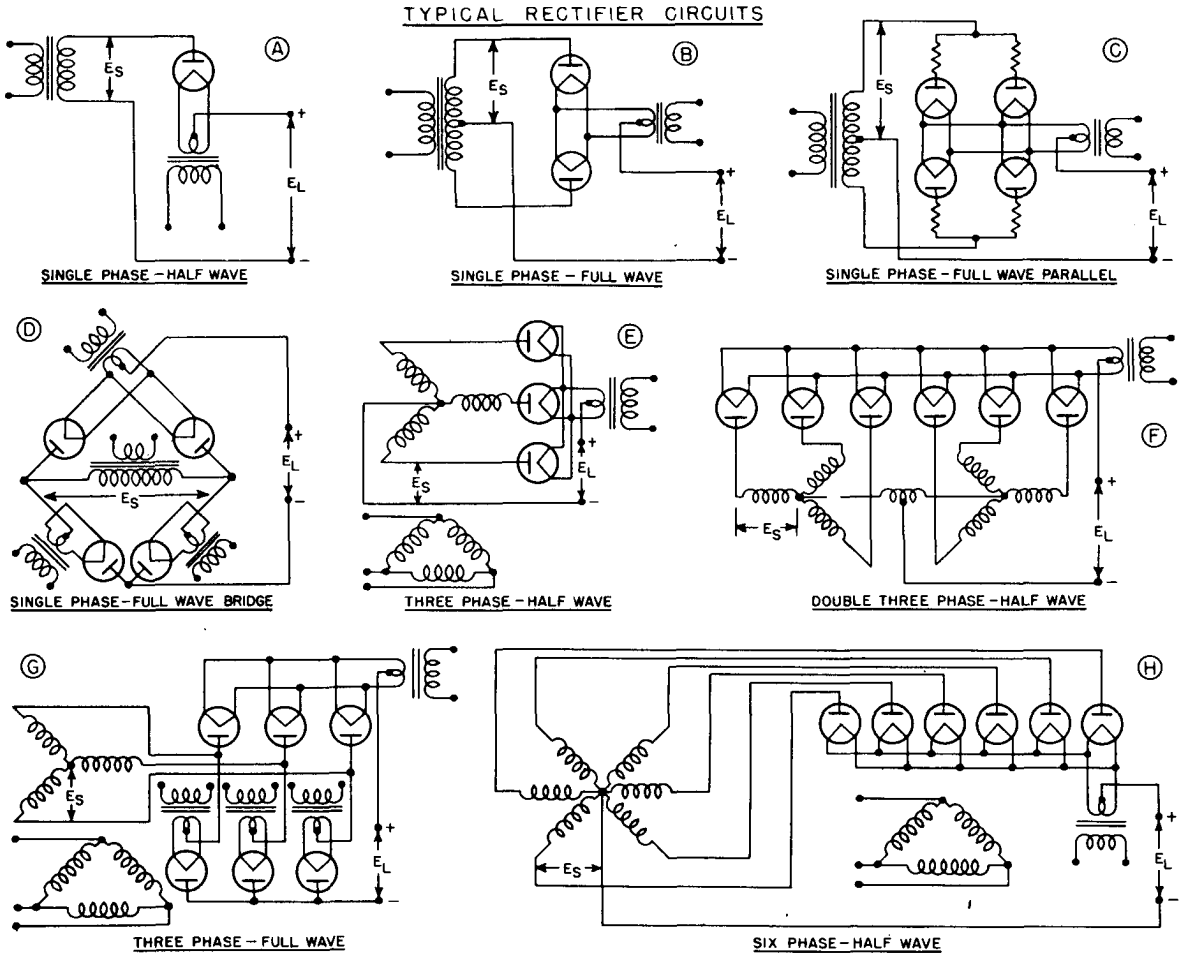
Maximum Peak Inverse Anode Voltage	15,000	20,000 Volts
Condensed Mercury Temperature Limits	30° to 50°	30° to 40° Centigrade
Max. Cathode Current		
Peak	10	10 Amperes
Average	2.5	2.5 Amperes
Surge (maximum duration 0.1 sec.)	100	100 Amperes
Max. Averaging Time	30	30 Seconds
Max. Frequency	150	150 Cycles/sec.

Copyright 1953, Federal Telephone and Radio Company

FEDERAL MERCURY VAPOR
Half-Wave Rectifier
Type F-869-B

Federal produces tubes of only the highest quality, satisfying the most exacting users.

TYPICAL RECTIFIER CIRCUITS



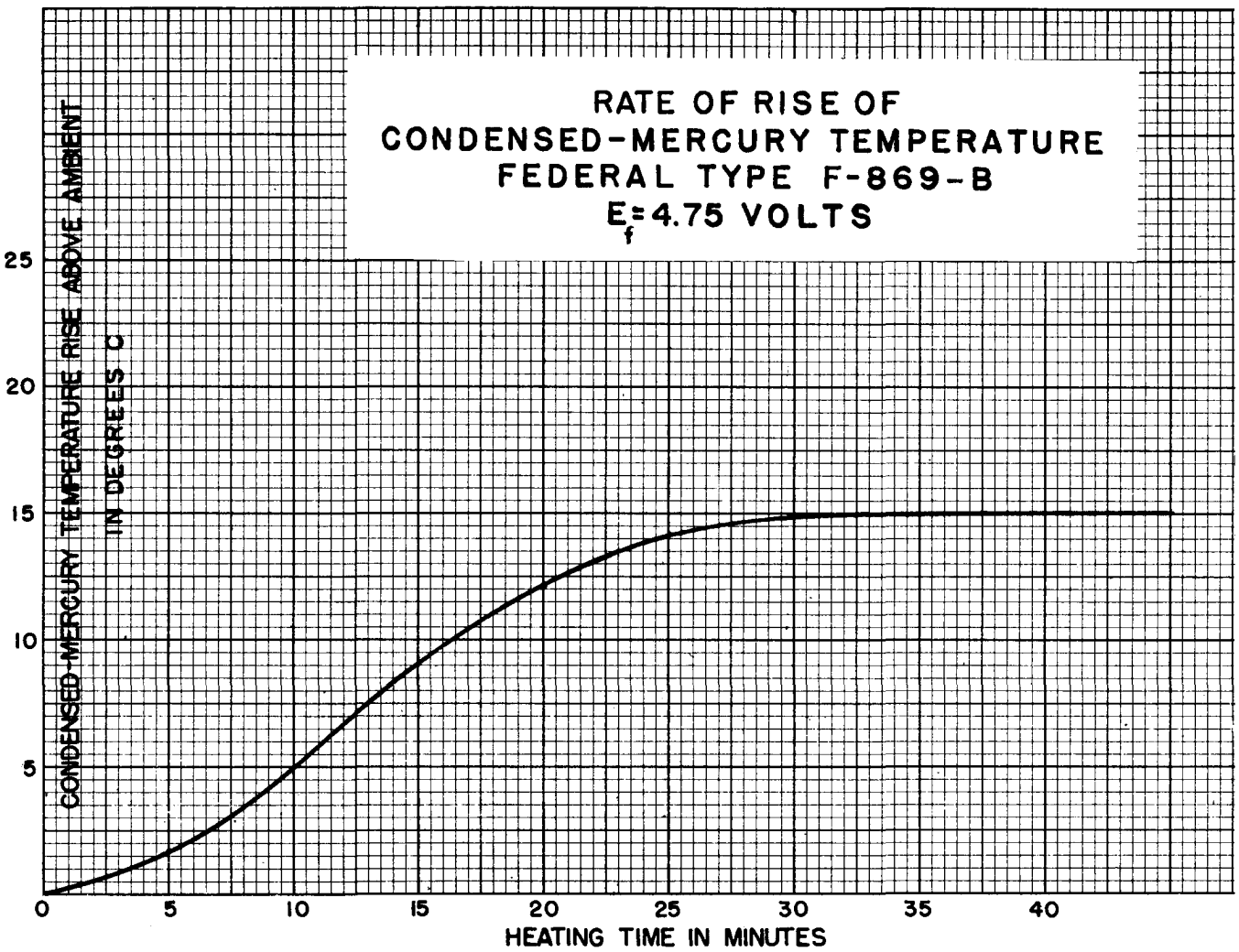
TYPICAL OPERATION FOR MAXIMUM OUTPUT*

Circuit	*R.M.S. Trans. Sec. Volt (E_S)*	*DC Voltage to Filter (E_L)*	*Max. DC Load Current*
A	14,000	6,300	2.5
B	7,000	6,300	5.0
C	7,000	6,300	10.0
D	14,000	12,700	5.0
E	8,100	9,500	7.5
F	8,100	9,500	15
G	8,100	19,000	7.5
H	7,000	9,500	9.5

*For sine wave input and choke input filter to maintain output current substantially constant.

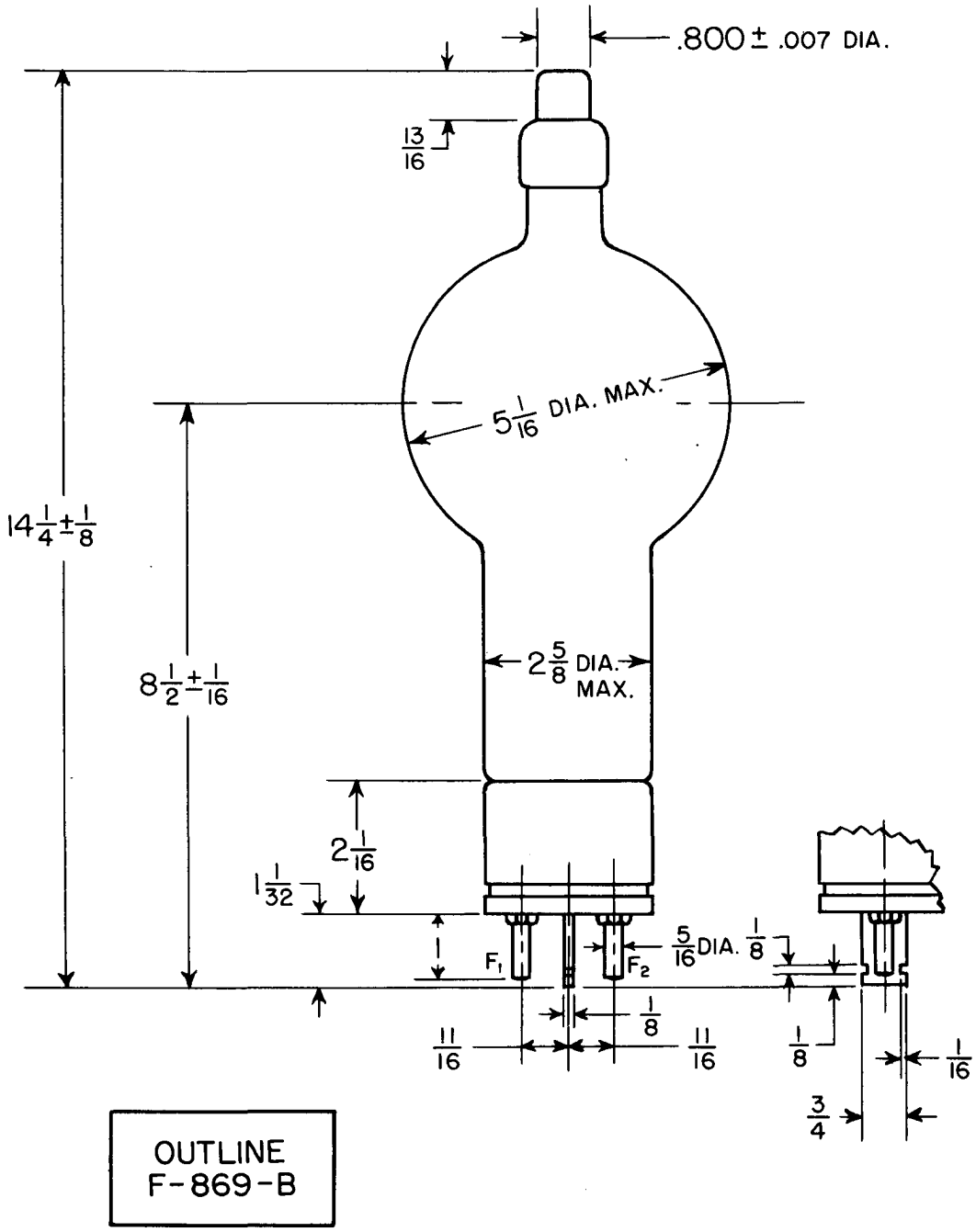
Federal's longer tube life means lower costs. Increase the life of the tubes in your equipment, and unit costs per hour go down.

FEDERAL MERCURY VAPOR
Half-Wave Rectifier
Type F-869-B



FEDERAL MERCURY VAPOR
Half-Wave Rectifier
Type F-869-B

In *satisfying* the customer and winning his confidence, Federal has reduced tube selling to a formula.



OUTLINE
F-869-B

Form F-597 Printed in U. S. A.

DIVISION OF I T & T

Federal Telephone and Radio Company
100 Kingsland Road Clifton, New Jersey