

# AMPEREX MERCURY VAPOR RECTIFIER 866-A

## FILAMENT

A.C. Voltage . . . . .	2.5
Current (amperes) . . . . .	5.0
Preheating Period (Seconds)* . . . . .	30

\*Before plate voltage is applied.

## MAXIMUM RATINGS

	For Operation At Supply Frequency Up to 150 Cycles With Condensed Mercury Temperature Range	For Operation At Supply Frequency Up to 1000 Cycles With Condensed Mercury Temperature Range
	25°C. to 60°C.	25°C. to 70°C.
Peak Inverse Voltage . . . . .	10000	2000
Peak Plate Current (ampere) . . . . .	1.0	2
Average Plate Current (ampere)* . . . . .	.25	.5
Approx. Tube Voltage Drop . . . . .	10	10

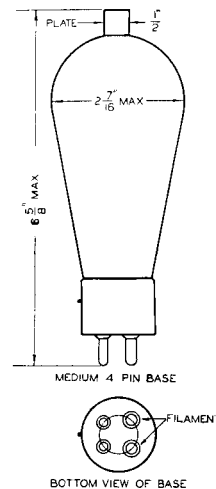
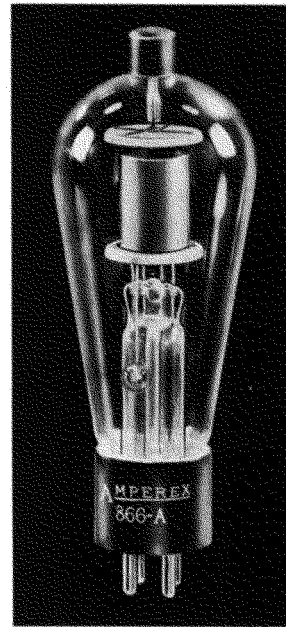
\*Averaged over period of 10 seconds.

## MAXIMUM OUTPUTS IN TYPICAL CIRCUITS

	A.C. Input Volts R.M.S.	D.C. Output Volts to Filter	Max. D.C. Load Current Amperes
Single-Phase Full Wave (2 Tubes) . . . . .	3535*	3180	.5
Single-Phase Full Wave Bridge (4 Tubes) . . . . .	7070†	6360	.5
Three-Phase Half Wave (3 Tubes) . . . . .	4080‡	4780	.75
Three-Phase Double Y-Parallel (6 Tubes) . . . . .	4080‡	4780	1.5
Three-Phase Full Wave (6 Tubes) . . . . .	4080‡	9570	.75

\*Per Tube. †Total. ‡Per Leg.

NOTE: For Out-Of-Phase Filament Excitation information see "Maximum Peak Plate Current" and "Maximum Average Plate Current", pp. 3 and 4, "General Information and Application Notes" section, "Mercury Vapor High Voltage RECTIFIER TUBES".



**AMPEREX**

**866-A**

# 866-A — AMPEREX MERCURY VAPOR RECTIFIER

RECTIFIER CIRCUIT		SINGLE PHASE FULL-WAVE 2 TUBES		SINGLE PHASE FULL-WAVE 4 TUBES		THREE PHASE HALF-WAVE		THREE PHASE DOUBLE-Y		THREE PHASE FULL-WAVE	
Conditions assumed for following relations		FIG. 1		FIG. 2		FIG. 3		FIG. 4		FIG. 5	
1. Sine-Wave Supply 2. Balanced Phase Voltages 3. Zero Tube Drop 4. Pure Resistance Load 5. No Filter Used											
NOTE: All rectifier fila- ments supplied by single phase transformers, with secondaries insu- lated for voltages great- er than the Maximum Peak Inverse Voltage.											
$E$ Average	.450 $E_{rms}$ .318 $E_{max}$			.900 $E_{rms}$ .636 $E_{max}$		1.170 $E_{rms}$ .827 $E_{max}$		1.170 $E_{rms}$ .827 $E_{max}$		2.34 $E_{rms}$ 1.65 $E_{max}$	
$E$ Inverse	3.14 $E_{avg}$			1.57 $E_{avg}$		2.09 $E_{avg}$		2.09 $E_{avg}$		1.045 $E_{avg}$	
$I$ Average	.636 $I_{max}$			.636 $I_{max}$		.827 $I_{max}$		1.91 $I_{max}$		.955 $I_{max}$	
Ripple Frequency	2 X Supply Freq.			2 X Supply Freq.		3 X Supply Freq.		6 X Supply Freq.		6 X Supply Freq.	
Ripple Voltage (Rms)	48.3%			48.3%		18.3%		4.2%		4.2%	
<sup>†</sup> Ratio Secondary $K_{va}$ D.C. Output- $K_w$	1.57			1.11		1.48		1.48		1.05	
<sup>†</sup> Ratio Primary $K_{va}$ D.C. Output- $K_w$	1.11			1.11		1.21		1.05		1.05	

<sup>†</sup> These ratios assume that a choke input filter is used to maintain the output current substantially constant.