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AMPEREX TUBE TYPE 6508

The 6508 is a two electrode mercury-vapor rectifier tube and is designed for rectifier application of relatively high voltage and current. The cathode is directly heated, oxide coated. The physical design of this tube is similar to the popular AMPEREX types 5869 and 5870 thyratrons. The top bakelite cup is intended to prevent mercury condensation on the anode and thus eliminates arc-back.

Maximum Ratings, Absolute Values

Peak Inverse Voltage (max.)	21,000	15,000	10,000 volts
Condensed Mercury Temperature Limits	+25 to +45	+25 to +50	+25 to +60 °C
Maximum plate current			
Peak		10 amps	
Average (Averaging time max. 30 sec)		2.5 amps	
Surge, for design only (Maximum duration 0.1 second)		100 amps	
Frequency Range		25 - 150 cps	

Electrical Data

	Min.	Bogey	Max.	
Filament Voltage	4.75	5.0	5.25	volts
Filament Current at 5.0 volts	—	12.5	13.7	amps
Filament Heating Time (Note 3) (before applying plate voltage)	90	—	—	seconds
Tube Voltage Drop (Output current = 2.5 amps)	—	12	—	volts

Operating conditions for 21 KV, Peak Inverse Voltage

Circuit	Input Voltage rms value kv	DC Output voltage to filter kv	DC Output current amp
Single-phase full-wave 2 tubes	7.4	6.7	5
Three-phase half-wave 3 tubes	8.6	10	7.5
Three-phase, double Y 6 tubes parallel	8.6	10	15
Four-phase half-wave 4 tubes	7.4	9.5	10
Single-phase full-wave 4 tubes	14.8	13.4	5
Three-phase full-wave 6 tubes	14.8	20	7.5
Four-phase full-wave 8 tubes	14.8	19	10

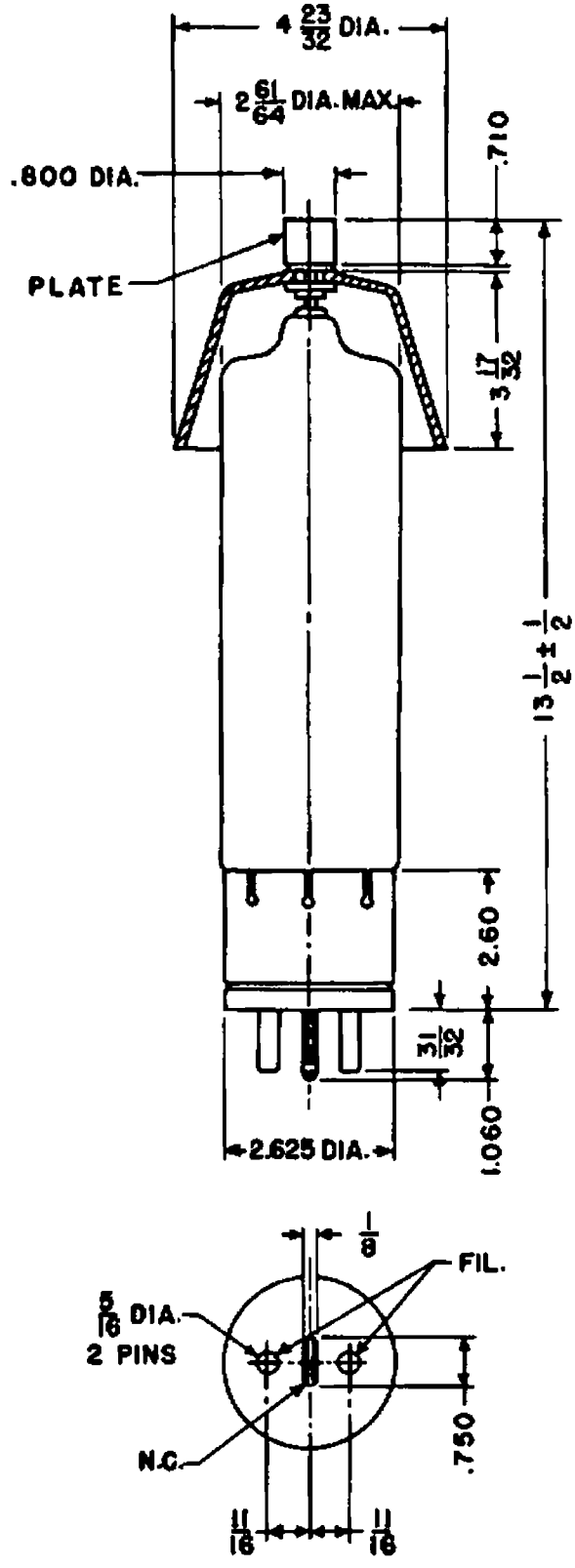
Mechanical Data

Type of cooling	Convection
Equilibrium Condensed-Mercury Temperature Rise	
At Full Load, approximate	+15 °C
At No Load, approximate	+13 °C
Mounting position	Vertical with base down
Net weight (approximate)	25 ounces

NOTES:

1. In order to obtain maximum life it is recommended that a filament voltage phase shift of 90° ± 30° with respect to plate voltage be applied.
2. The tube should always be used with the bakelite cap attached.
3. The minimum heating time refers only to the filament. Sufficient additional time must be allowed to permit the condensed mercury temperature to rise to the minimum condensed mercury temperature limit and to permit all the mercury to condense on the lower part of the bulb.
4. The metallic shell of the base should not be allowed to reach a potential different from the cathode potential.

6508


4 23/32 DIA.
2 61/64 DIA. MAX.
.800 DIA.
.710
PLATE
3 17/32
13 1/2 ± 1/2
2.60
31/32
1.060
2.625 DIA.

1/8
FIL.
5/16 DIA.
2 PINS
N.C.
.750
11/16
11/16