

Amperex® ELECTRONIC CORPORATION
230 DUFFY AVENUE, NICKSVILLE, L. I., N. Y.

TUBE TYPE
8269

The 8269 is a forced-air cooled power triode intended for use in industrial RF heating generators at frequencies up to 50 mc. Its characteristics permit a substantially constant output to be maintained under varying load conditions. Because of the special grid material used, the grid has a very large safety margin.

GENERAL CHARACTERISTICS

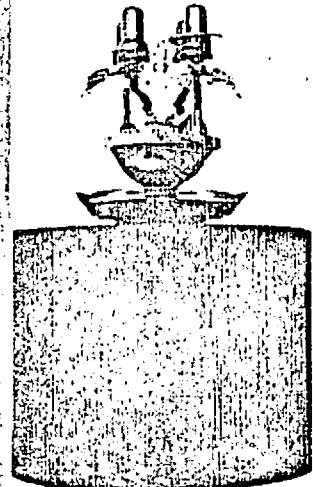
MECHANICAL

Mounting Position	Vertical
Accessories	
Four Grid ¹ and Filament Connectors	S-3707
One Insulating Pedestal	S-3705
Weight	
	8269 S-3705
Net Weight	9 lbs. 11 oz. 4 lbs. 10 oz.
Shipping Weight	22 lbs. 6 lbs. 13 oz.
Temperatures and Cooling	
Max. Temperature of Envelope and Seals	220°C
Air-Cooling Characteristics:	

Anode Dissipation (kw) ²	Altitude (ft)	Max. Air Inlet Temp. (°C)	Min. Air Flow (cu.ft./min.)	Total Pressure (in. water)
2	0	35	170	0.8
	0	45	205	1.0
	5000	35	205	0.9
	10000	25	215	0.9
4	0	35	240	1.5
	0	45	280	1.95
	5000	35	275	1.65
	10000	25	296	1.65
6	0	35	325	2.7
	0	45	378	3.5
	5000	35	395	3.2
	10000	25	412	3.2

ELECTRICAL:

Filament Heating	Thoriated tungsten Direct
Filament Voltage	12.6 +5 -10% volts
Filament Current	33 amps
Direct Interelectrode Capacitances	
Plate to Grid	7.9 pf
Plate to Filament	1 pf
Grid to Filament	14.2 pf
Typical Characteristics at E _b = 6 kv and I _b = 1 amp	
Amplification Factor	24
Transconductance	12,000 μmhos



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1. At frequencies above 4 mc the two grid terminals must be connected in parallel. Care should be taken to distribute the RF current equally between both grid terminals to avoid excessive grid seal temperatures.
2. For continuous service; for intermittent service see curves.

MAXIMUM RATINGS AND OPERATING CONDITIONS

HF Class C oscillator for industrial use with anode voltage supplied by a three-phase full wave rectifier without filter (continuous service).

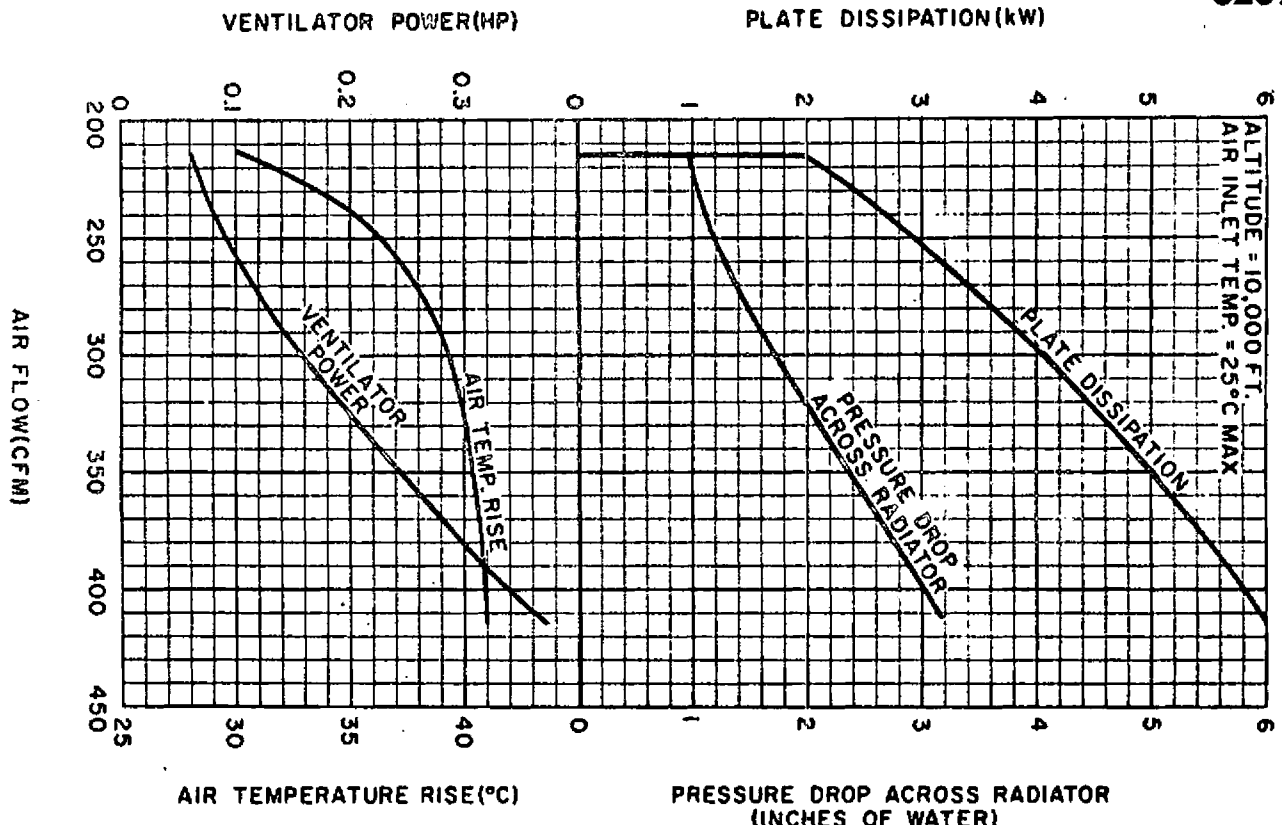
ABSOLUTE MAXIMUM RATINGS

Frequency	50 Mc
DC Plate Voltage	8 kv
DC Plate Current	1.8 amps
DC Plate Input Power	12 kw
DC Plate Dissipation	6 kw
DC Grid Voltage	-1250 volts
Grid Current (Loaded)	0.4 amp
Grid Current (Unloaded)	0.5 amp
Grid Resistor	10 k ohms

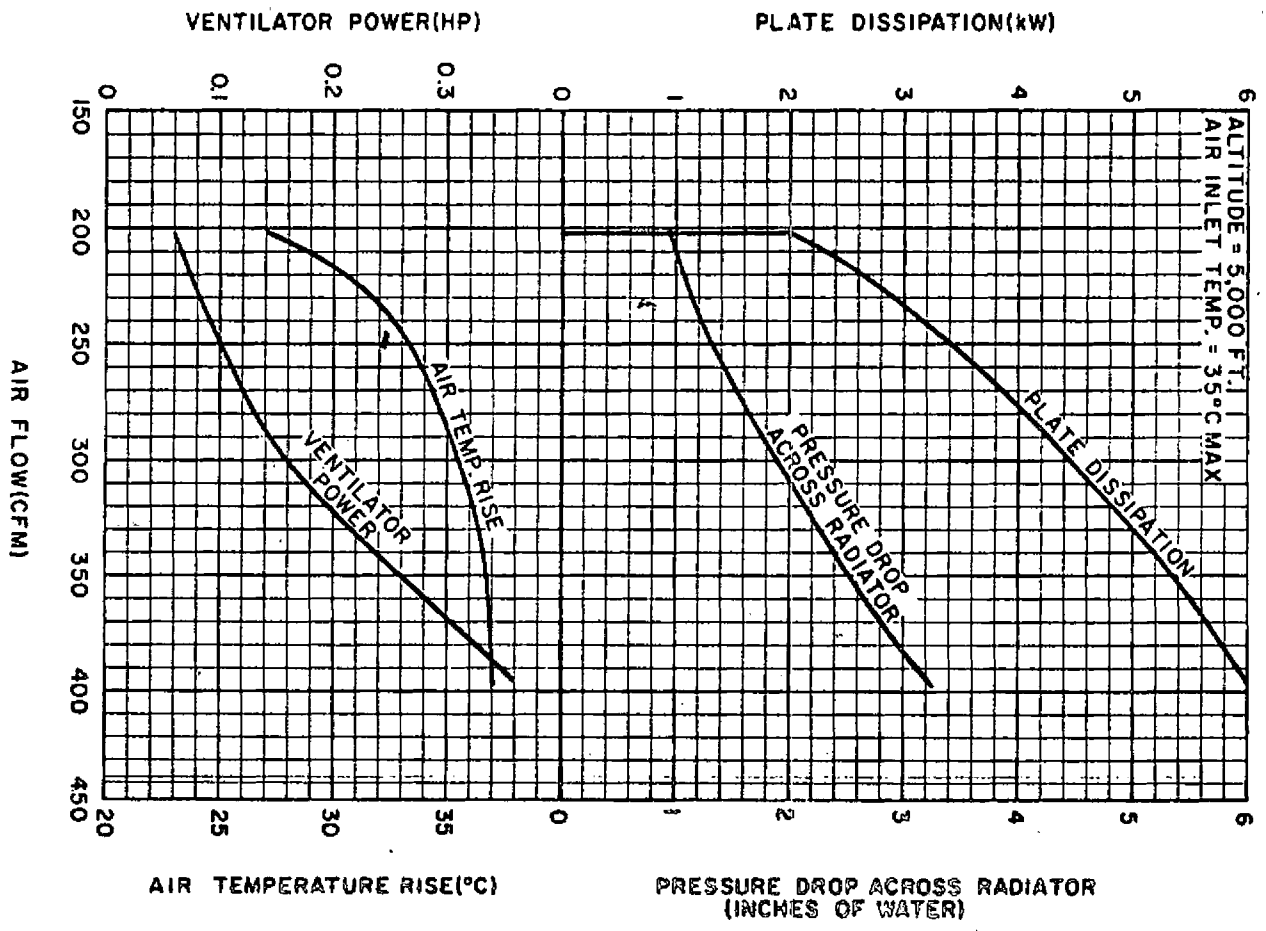
TYPICAL OPERATING CONDITIONS

Frequency	50	50 Mc
DC Plate Supply Voltage	7200	6200 volts
DC Current (Loaded)	1.5	1.4 amp
DC Current (Unloaded)	0.37	0.4 amp
Grid Current (Loaded)	0.36	0.37 amp
Grid Current (Unloaded)	0.47	0.47 amp
Grid Resistor	1850	1500 ohms
DC Plate Input Power	10800	8680 watts
DC Plate Dissipation	3300	2500 watts
DC Plate Output Power	7500	6180 watts
Tube Efficiency	70	71 %
Useful Power in Load (Circuit efficiency approx. 85%)	6100	5000 watts
Feedback Factor	17	17 %
Load Impedance	2300	2100 ohms

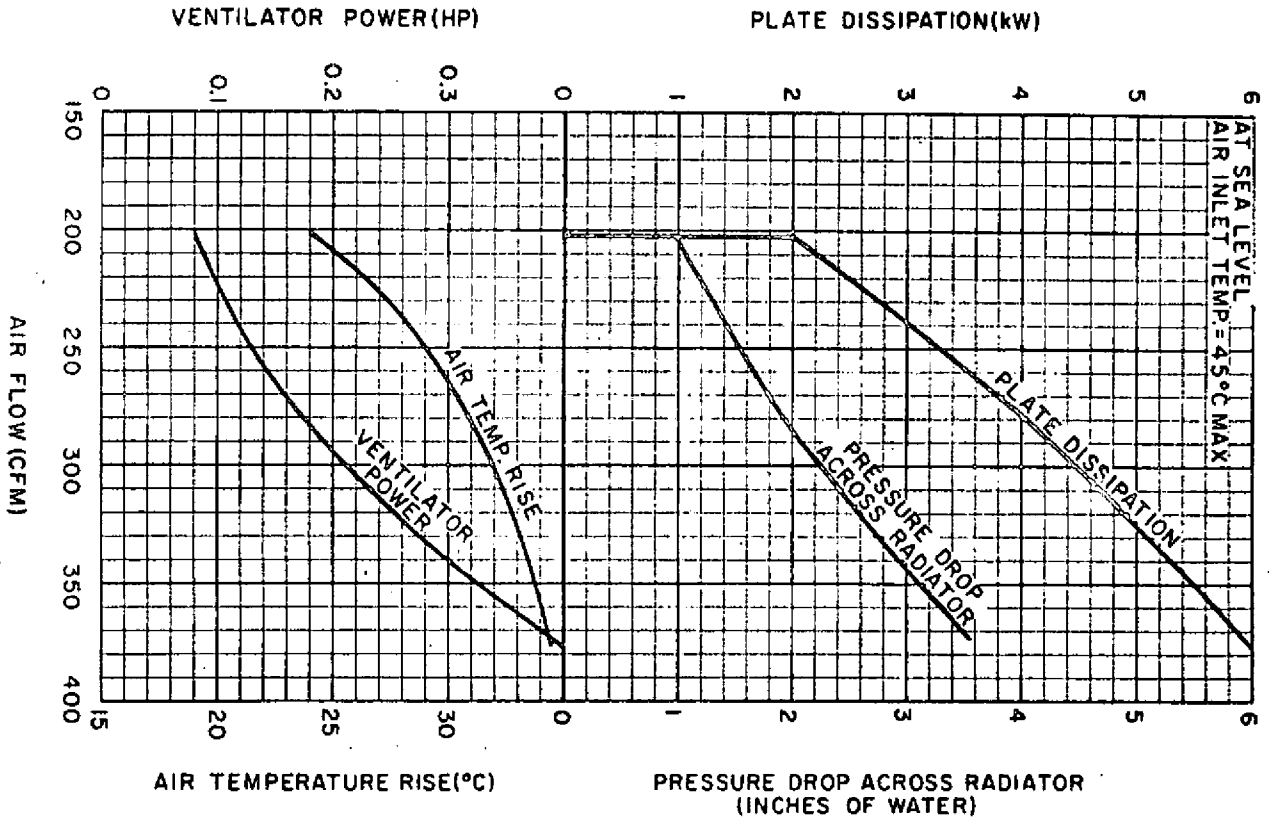
COOLING CHARACTERISTICS



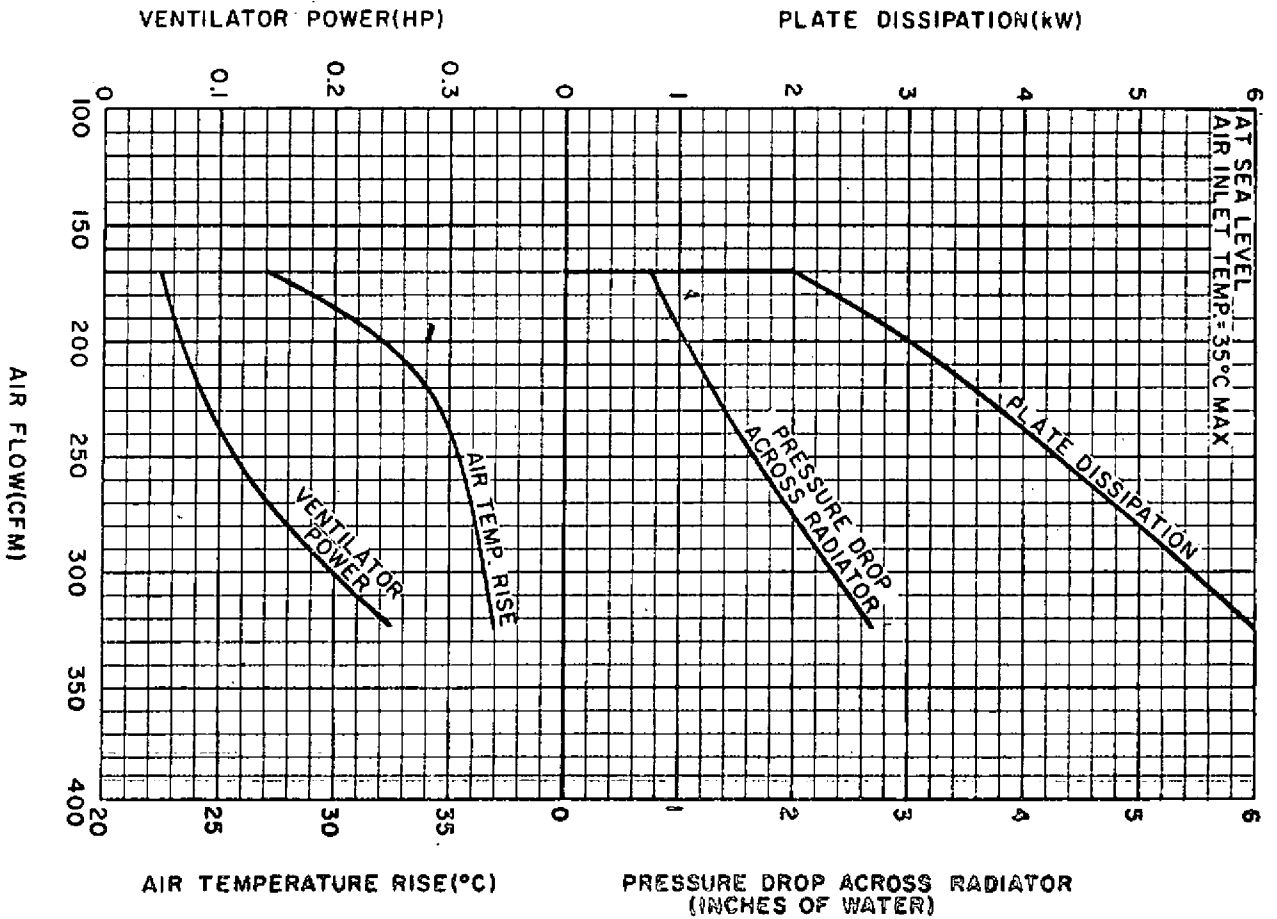
COOLING CHARACTERISTICS

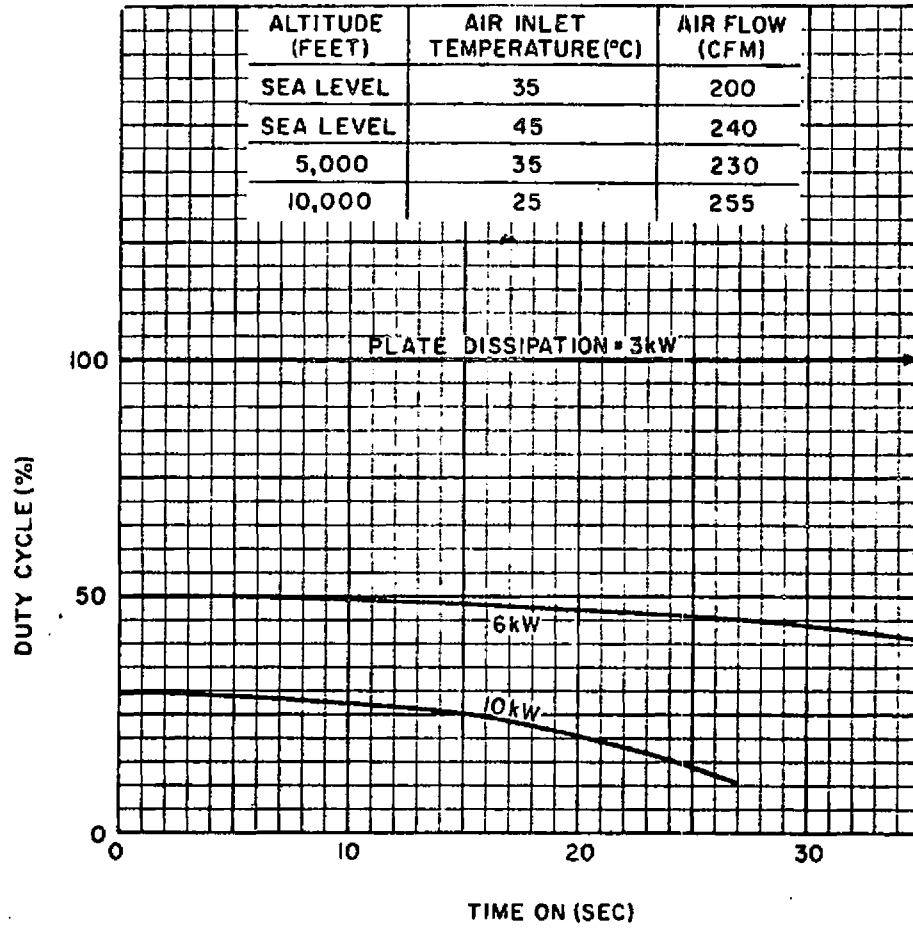


COOLING CHARACTERISTICS

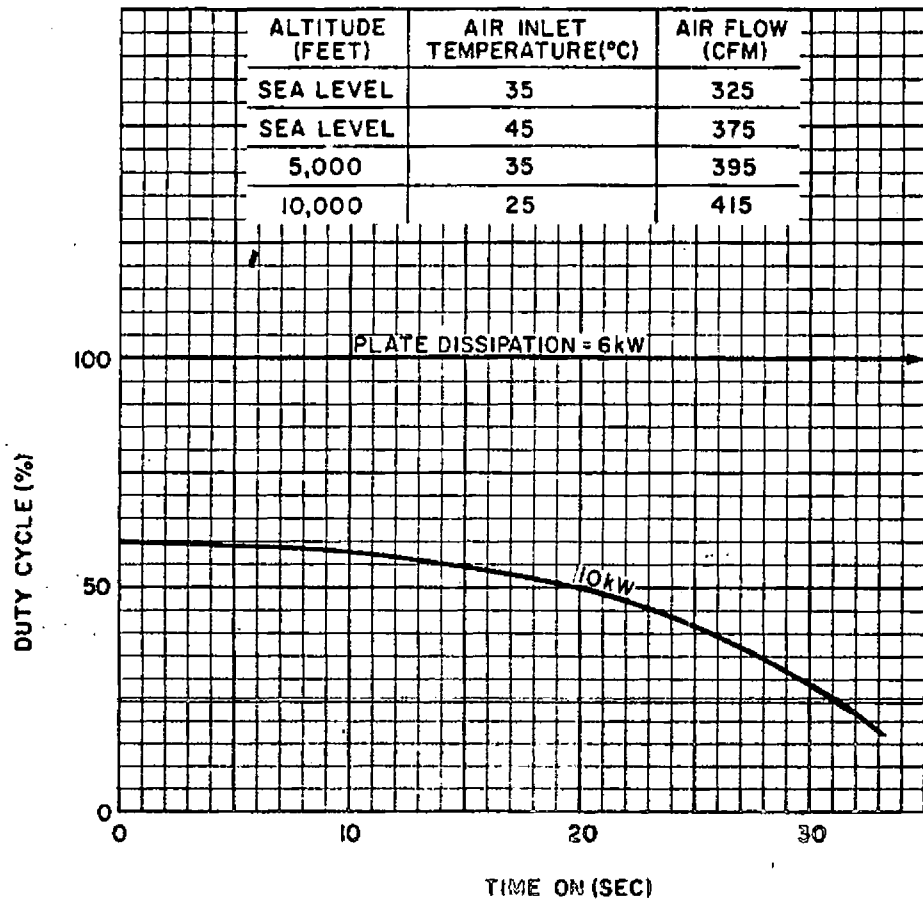


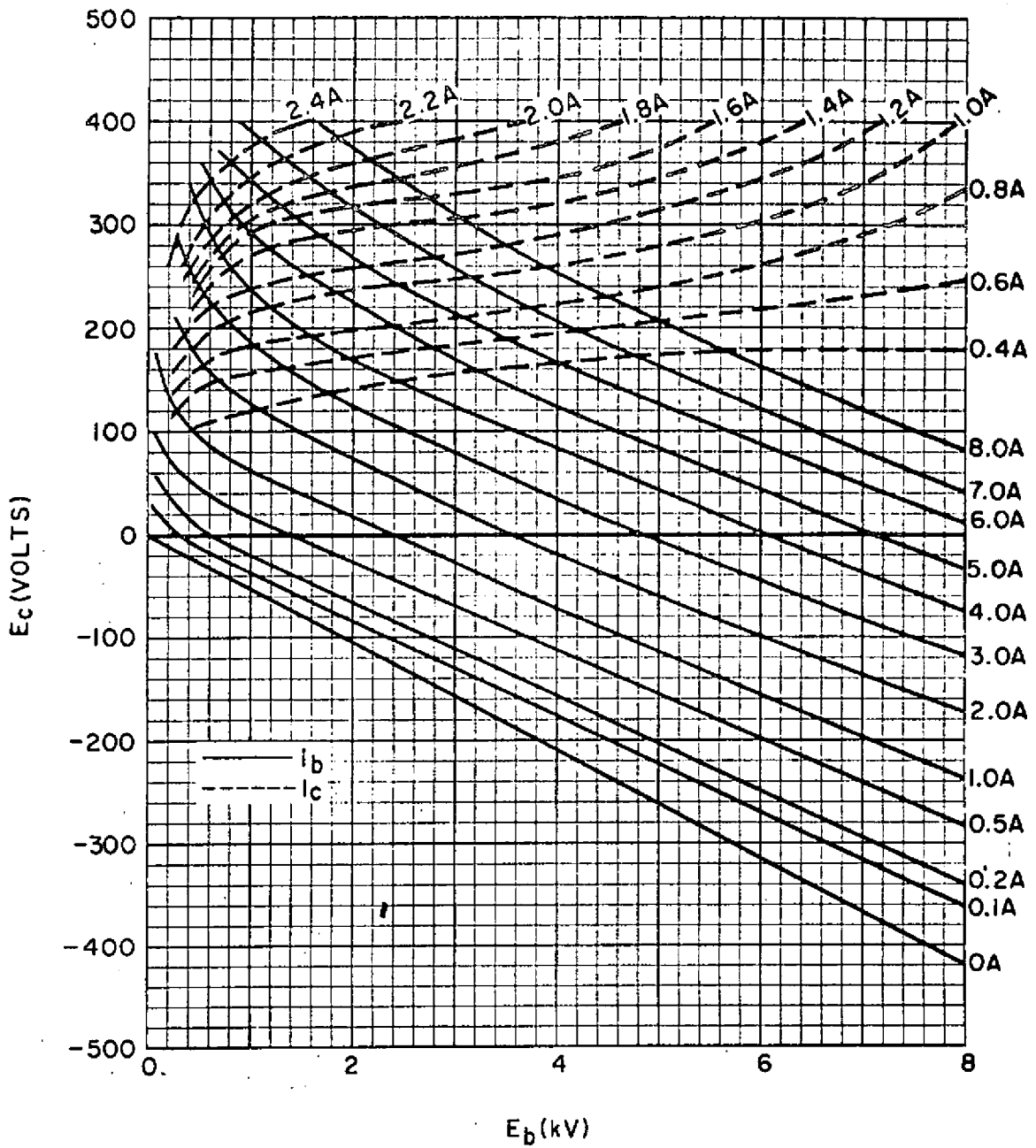
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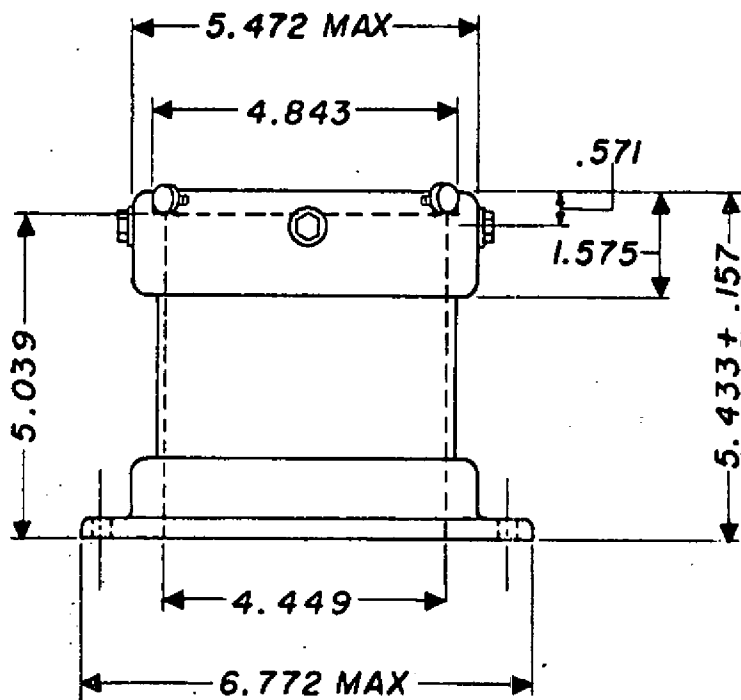
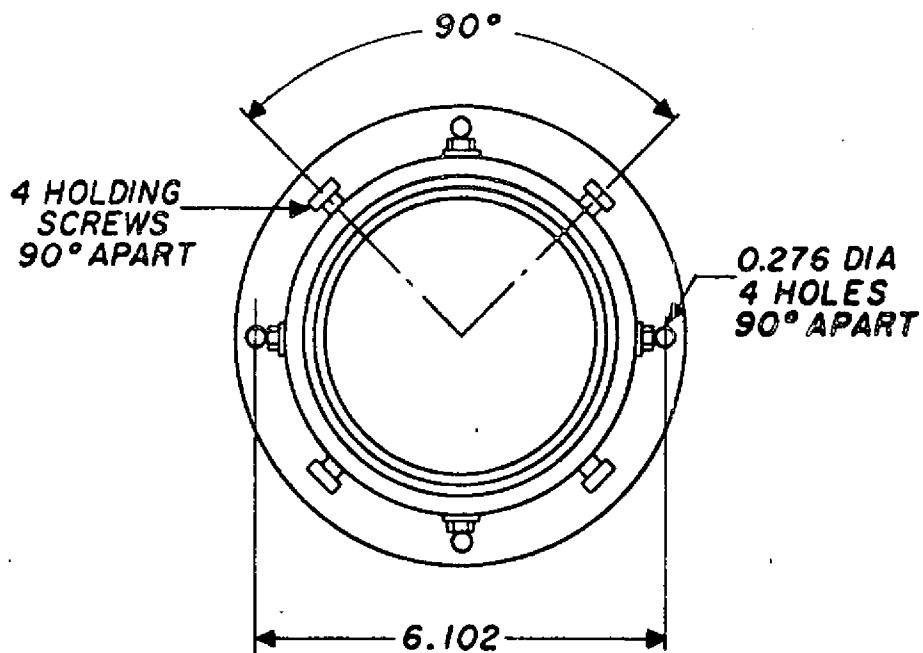


INTERMITTENT SERVICE CHARACTERISTICS





CONSTANT CURRENT CHARACTERISTICS



AIR FLOW CHAMBER
S-3705

