

# AMPEREX TUBE TYPE 8415

## TENTATIVE DATA

The Amperex 8415 is an external anode industrial triode designed for use as an RF oscillator. The anode is capable of dissipating 300 watts. Maximum ratings apply up to 300 megacycles.

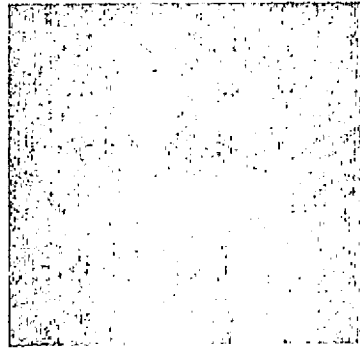
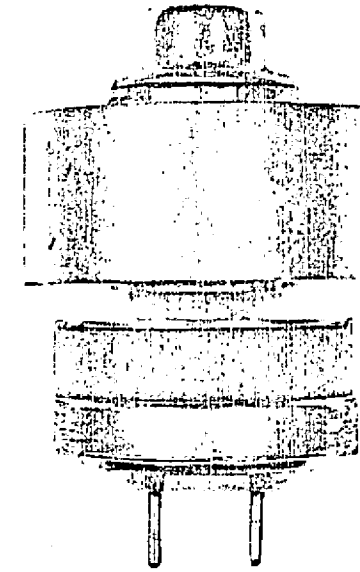
### GENERAL CHARACTERISTICS

#### MECHANICAL

Mounting Position	Vertical, Anode Up or Down
Dimensions	See Outline Drawing
Maximum Operating Temperatures	
Glass to Metal Seal	175°C
Ceramic to Metal Seal	200°C
Anode Core	200°C
Net Weight (approx.)	5 ounces
Required Air Flow at 300 watts Plate Dissipation <sup>1</sup>	10 cfm

#### ELECTRICAL

Filament	Thoriated Tungsten
Filament Voltage <sup>2</sup>	5 volts
Filament Current	11.5 amps
Amplification Factor	
$\mu_p = 150$ ma, $E_p = 2000$ volts	28
Peak Cathode Current <sup>3</sup>	1800 ma
Direct Interelectrode Capacitances	
Grid to Plate	5.40 pf
Grid to Filament	5.20 pf
Plate to Filament	0.87 pf



**Amperex**

1. Inlet air temperature 25°C maximum.
2. When operating at 300 Mc, the filament voltage should be reduced to 4.8 volts.
3. This figure is the maximum usable cathode current (plate current plus grid current) for any condition of operation.

INDUSTRIAL OSCILLATOR - CLASS C  
GROUNDED GRID OPERATION

MAXIMUM RATINGS

Frequency	300 Mc
DC Plate Voltage	2500 volts
DC Grid Voltage	-250 volts
DC Plate Current	300 ma
DC Grid Current	125 ma
Plate Power Input	750 watts
Plate Dissipation	300 watts
Grid Dissipation	20 watts

TYPICAL OPERATION

Frequency	290	290 Mc
DC Plate Voltage	2000	2250 volts
DC Grid Voltage	-114	-114 volts
Peak RF Grid Voltage	286	285 volts
DC Plate Current (full load)	300	300 ma
DC Plate Current (no load)	174	177 ma
DC Grid Current (full load)	95	95 ma
DC Grid Current (no load)	124	122 ma
Grid Resistor	1200	1200 ohms
Driving Power (approx.)	27	27 watts
Plate Power Input	600	675 watts
Plate Dissipation	250	285 watts
Plate Power Output	350	390 watts
Load Power Output <sup>4</sup>	285	325 watts
Tube Efficiency	58	58 %
Plate Load Impedance	3400	4000 ohms
Feedback Ratio	6	7

4. Tank circuit efficiency - cavity operation 90%

