

UHF-TV Transmitter Tube

CEA 4201

The CEA 4201 is the highest efficiency tube operating in the UHF-TV frequency range of 470-810 MHz. By combining a multistage depressed collector with an inductive output amplifier, DC input power is made almost proportional to RF output over a wide power range. The amplifier has been designed for use in digital transmitters.

SPECIFICATIONS



Performance	Min	Max	Units
Heater Voltage	5	7	V
Heater Current, Operating	20	30	A
Heater Current, Surge	–	60	A
Heater Warm-Up Time	300	–	Sec
Beam Voltage	–	38	kV
Quiescent Current	–	0.6	A
Beam Current	–	2.5	A
Solenoid Current	–	25	A
Load VSWR	–	1.5:1	
Bias Voltage (Ref to Cathode)	–	-250	V
Grid Current	–	±150	ma
Ion Pump Current, Beam On	–	20	µA
Ion Pump Voltage (Ref to Cathode)	–	4	kV
Peak/Average Output Power (8VSB)	–	130/30	KW/kw
Peak/Average Input Power (8VSB)	–	1500/250W	

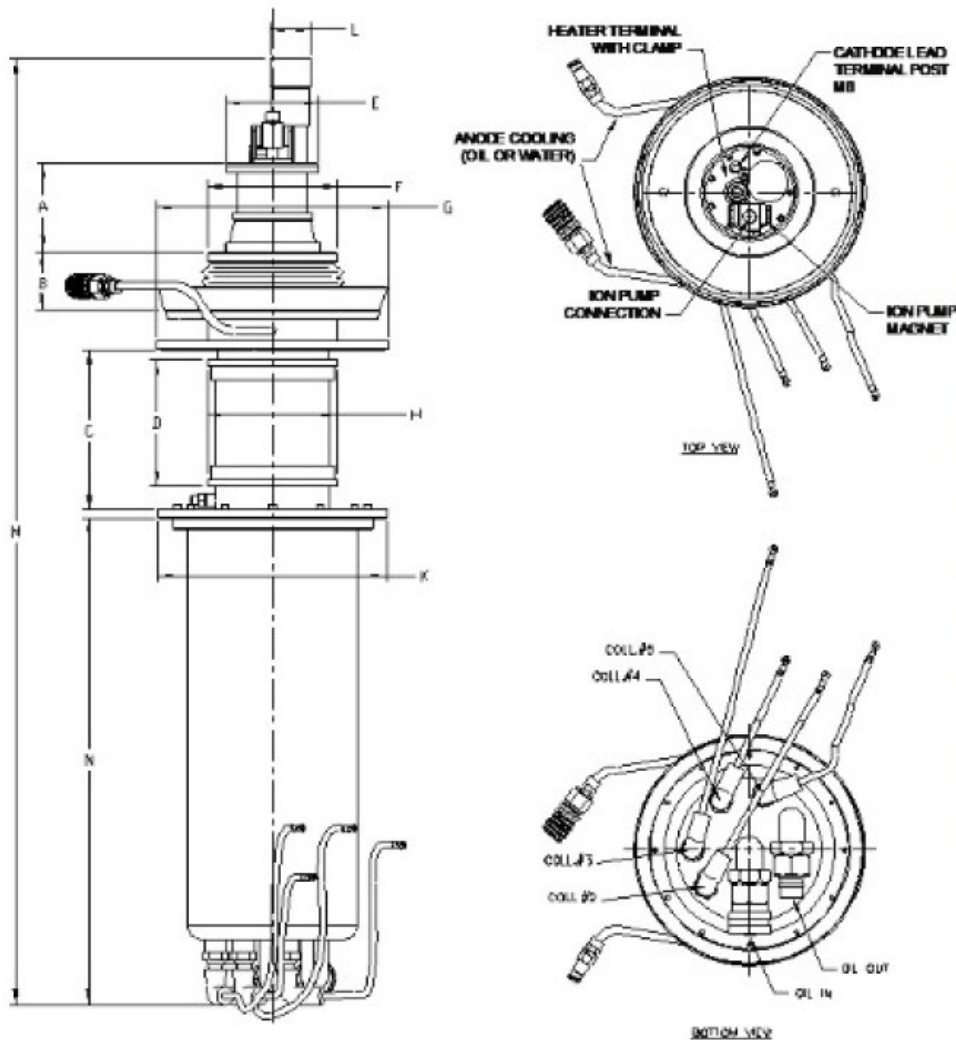
Mechanical	Min	Max	Units
Electromagnetic Voltage	4.5	6.3	V
Electromagnetic Current	20	28	A
RF Input			Type N
RF Output		3 ¹ / ₈ , EIA	50 Ω
Net Weight of Tuning Cavities		110 lb (approx.)	
Net Weight of Magnet Assembly		300 lb (approx.)	
Collector Cooling			
Maximum Inlet Oil Pressure		70 psi	
Maximum Inlet Oil Temperature		65°C	
Maximum Outlet Oil Temperature		75°C	
Minimum Collector Oil Flow (at		15 gpm	

Mechanical (cont.)	
Anode Cooling	
Maximum Inlet Temperature (water or glycol)	65°C
Maximum Anode Flow (water or glycol)	0.9 gpm
Pressure Drop	10 psi
Air Flow to Input and Output Cavities	90 cfm
Minimum Air Pressure at Intake	5 in
Maximum Air Temperature at Intake	60°C

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Outline Drawing (inches)



Dimensions		
Letter	Min	Max
A	3.42	3.47
B	2.30	2.35
C	6.228	6.268
D	4.98	5.02
E	3.64	3.68
F	5.10	5.14
G	9.05	9.09
H	5.11	5.15
K	7.74	7.78
L	1.634	
M	37.17	
N	19.18	

Detailed outline drawings are available on request. Specifications and features are subject to change without notice.

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