

The 8974 is a power tetrode designed for very high powered frequency or high frequency broadcast service and very low frequency communication in the megawatt power range. The 8974 has a two section thoriated tungsten filament mounted on water-cooled supports. The two sections may be fed in quadrature to reduce hum contributed by an arc ac power source. The maximum anode dissipation rating is 1500 kW steady state. Large diameter coaxial terminals are used for the control grid and the RF filament terminals. Filament power and filament support cooling water connections are made through three special couplings with threaded clamping rings.



## CHARACTERISTICS

Plate Dissipation (Max.)	1,500 Kilowatts
Screen Dissipation (Max.)	15.0 Kilowatts
Grid Dissipation (Max.)	4.0 Kilowatts
Frequency for Max. rating (CW)	30 MHz
Amplification Factor	4.5
Filament/Cathode	Thoriated Tungsten
Voltage	16.3 Volts
Current	600 Amps
Capacitance	Grounded Cathode
Input	1600 pf
Output	250 pf
Feedthrough	6.0 pf
Capacitance	Grounded Grid
Input	675 pf
Output	260 pf
Feedthrough	1.0 pf
Cooling	Water and Forced Air
Base	Special Coaxial
Air Socket	N/A
Air Chimney	N/A
Boiler	N/A
Length	23.75 in; 60.30 cm
Diameter	17.03 in; 43.30 cm
Weight	175.0 lb; 80.0 kg

Class of Operation	Type of Service	MAXIMUM RATINGS		TYPICAL OPERATION				
		Plate Voltage (Volts)	Plate Current (Amps)	Plate Voltage (Volts)	Screen Voltage (Volts)	Plate Current (Amps)	Drive Power (Watts)	Output Power (kiloWatts)
C	RF Amplifier	22,500	125	21,500	1,000	125	7,000	2,158.0
C	RF Amplifier Plate Modulated	17,500	100	17,500	1,000	95.0	6,465	1,384.0
AB1	RF Linear Amplifier	22,500	125	20,000	1,500	86.5	---	1,225.0
AB1	AF Amplifier or Modulator	22,500	125	17,500	1,500	146	---	2,015.0

The values listed above represent specified limits for the product and are subject to change. The data should be used for basic information only. Formal, controlled specifications may be obtained from CPI for use in equipment design.



**For information** on this and other CPI MPP products, visit our website at: [www.cpii.com](http://www.cpii.com), or contact: CPI Microwave Products Division, Eimac Operation, 607 Hansen Way, Palo Alto, CA 94303  
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