VKP-8290A Klystron

Communications & Power Industries

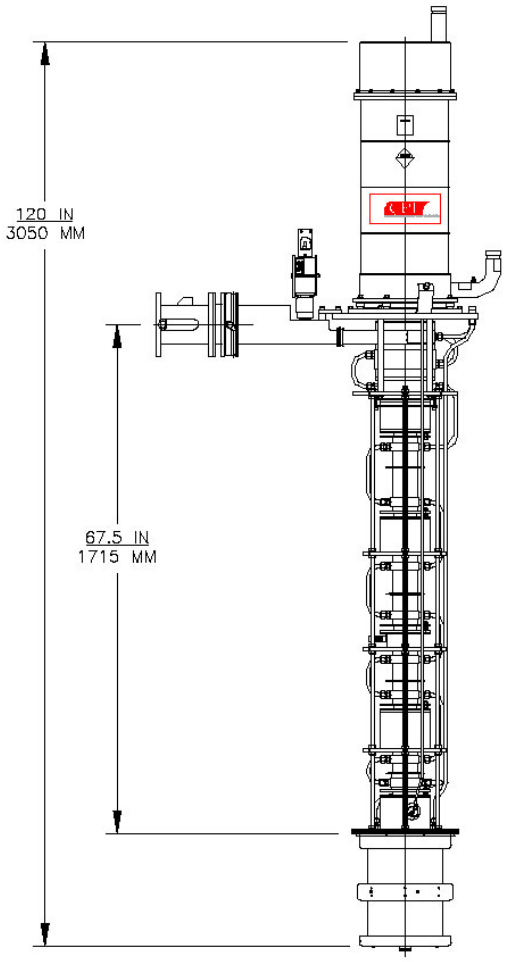
CPI Microwave Power Products (MPP) offers super-power klystrons for particle accelerator applications. The VKP-8290A is a 805 MHz, 2.5 MW peak, 250 kW average long-pulse klystron for the Spallation Neutron Source Project at Los Alamos National Laboratory.

Key Features

- Electron gun with modulating anode for beam control
- 6-cavity rf circuit, including one 2nd harmonic cavity for enhanced efficiency
- Single output window in WR-975 waveguide
- Collector capable of dissipating the entire beam power

Operating Parameters

Peak Power Output	2,500	kWatts (min)
Average Output Power	250	kWatts
Peak Beam Voltage	120	kV (max)
Peak Beam Current	55	A (max)
Peak Mod Anode Voltage	100	kV
Frequency	805	MHz
Duty	10%	- - -
RF Pulse width	1.67	msec
1dB Bandwidth	± 0.7	MHz (min)
Saturated Gain	45	dB (min)
Efficiency	55	% (min)
Collector Coolant Flow	120 / 450	gpm / l/m
Body Coolant Flow	10 / 2.3	gpm / m³/h
O/P Window Cooling (Air)	25 / 50	cfm / m³/h
Electromagnet:		
Gun Coil Current	18	A
Gun Coil Voltage	20	V
Main Coil Current	30	A
Main Coil Voltage	120	V
Size with Accessories:		
Height	120 / 3050	inches / cm
Weight	5,000 / 2,270	Pounds / kg



For information on Super Power Klystrons and other CPI MPP products, visit our website at www.cpii.com/mpp, or contact:
CPI Microwave Power Products Division, 607 Hansen Way, Palo Alto, CA 94303
Telephone: 650-846-3900, Fax: 650-856-0705, Email: marketing@cpii.com

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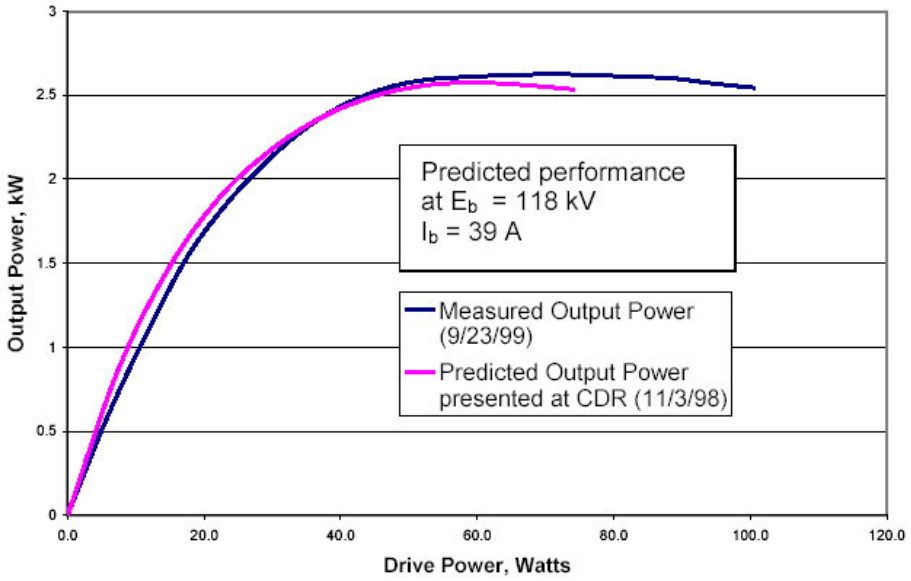
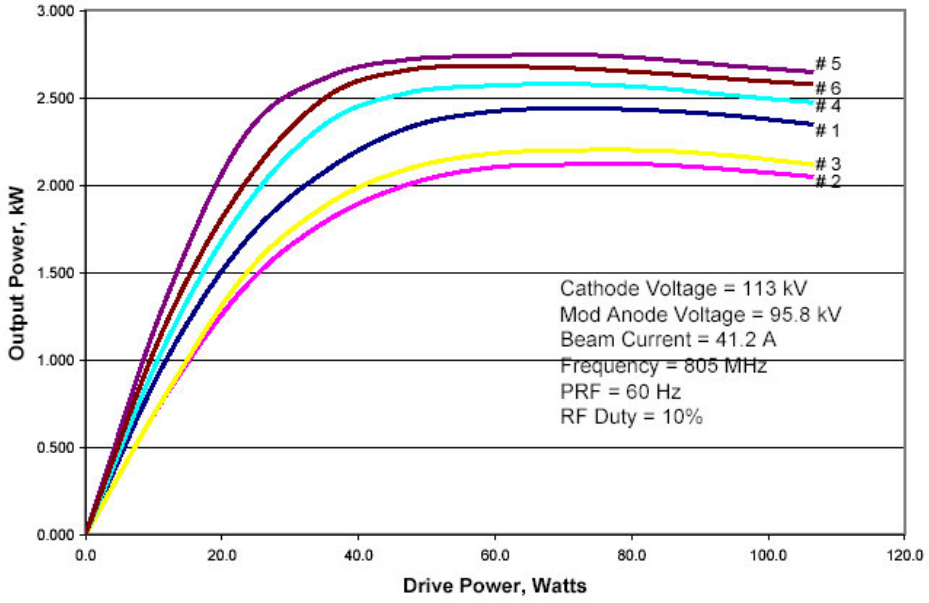
Measured Test Data

Peak Beam Voltage: 113 kV
Peak Beam Current: 41.5 A
Peak Mod Anode Voltage: 96 kV
Frequency: 805 MHz

VKP-8290A - Transfer Curve



VKP-8290A - Transfer Curves with 1.5:1 Mismatch at 6 Equally Spaced Positions



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