

World's Most Stable and Highest-Power Continuous Wave Klystron

Registration No.	Number 00143		
Registration Date	September 2, 2014	Registration Category	Category 1
Name (Model, etc.)	508.6 MHz, 1.2 MW CW KLYSTRON (E3732, T62)		
Location	Tsukuba-shi, Ibaraki		
	KEK, HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION		
Owner (Custodian)	KEK, HIGH ENERGY ACCELERATOR RESEARCH ORGANIZATION		
Manufacturer (Company)	KEK, Toshiba electron tubes & Electron Tubes & Devices Co., Ltd. (now Canon Electron Tubes & Devices Co., Ltd.) (Joint Development)		
Year Manufactured	2002		
Year first appeared	1982		
Reason For Selection	The world's largest UHF CW klystron, jointly developed by KEK and Toshiba, to accelerate electrons and positrons for accelerators of TRISTAN and KEKB. It achieved the world's first continuous stable output of 1.35MW. Compared to the prototype, drastic improvements have been made to treatment technologies in manufacturing process, and to electron guns, output couplers, vapor cooled collectors, etc. These technologies have been used to develop various types of high-power klystrons. To increase the dielectric breakdown voltage between the body and the anode, the anode copper is coated with chromium oxide and the shape of the ceramic insulator in between is devised. There are many original achievements, such as using a low-temperature M-type cathode to prevent excessive evaporation of barium and coating a ceramic window with titanium nitride to prevent breakage caused by multipactoring. Methods of titanium nitride and RF coupler are used as global standards today.		
Registration Standard	1 - A (Show an important aspect or stage of the development of science and technology.)		
Open/Closed to Public	Closed to Public		
Photo			
			
	The device installed The same type of device		
Other useful information			