

# R F Generators

## Versatile and Reliable.... Comdel's CX Series High Frequency RF Generators set a New Standard in RF Power



### Power Amplifiers Built to Last

The cornerstone of the CX series are their dependable power amplifier designs - the same designs that have proven themselves with millions of trouble-free hours in plasma systems all over the world. To further enhance reliability, the components are operated at about half of their rated outputs for long life and no maintenance.

### Versatility in Operation




In addition to offering superior performance in the field, the CX series gives you both, an analog and digital input/output interface. The programmable digital interface is accessible through the front panel or remotely through an RS-232 interface. The CX series power sources operate at any **fixed frequency** from **2 to 30 MHz (most common is 13.56 MHz)**. All performance and interface characteristics remain unchanged.

Ideal for Use in OEM Applications			
Ion Accelerators	Sputtering	High Power RF Drives	
Plasma Etching	Diathermy	Plasma Stripping	Inductive Heating
Plasma Enhanced Chemical Vapor Deposition		Communications	

Key Benefits	
All solid-state for long life and low maintenance	Compact size
Simultaneous display of Forward/Reflected Power	Standard RS-232 interface
Reliable amplifier design with millions of trouble-free hours in plasma systems worldwide	
Digital/Analog operation with added flexibility of local/remote digital operation	
Precise Control circuitry ensures consistency during high VSWR conditions	
Protective circuitry prevents over-voltage and over-current failures	
Over-temperature protection	
Flexibility to operate in Pulse Mode. This mode can be commanded to turn on remotely and programmed locally	

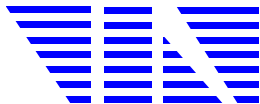
Options	
External Freq. Control (Input/output frequency can be varied $\pm 10\%$ of the center frequency from a TTL clock input)	
Master/Slave operation	DeviceNet
Over-temperature warning output before shutdown	

### List of Models Available

Model	Power Output	Cooling	Control I/O Connector	Size (Weight)	Input Power	Photograph
CX 600	600 W	Forced Air	15 or 25-pin D-type	5.25"H x 19"W x 16"D (35 lbs)	190-225VAC; 1-Ph 50/60Hz / 6A typ	
CX 1250*	1250 W	Water (1gpm)	15-pin D-type	5.25"H x 19"W x 16"D (75 lbs)	190-225VAC; 3-Ph 50/60Hz / 7A typ (440V/3-Ph available)	
CX 1250A	1250 W	Forced Air	25-pin D-type	7"H x 19"W x 19"D (75 lbs)	190-225VAC; 1-Ph 50/60Hz / 15A typ	
CX 2500	2500 W	Water (1.5gpm)	25-pin D-type	7"H x 19"W x 21.5"D (132 lbs)	190-225VAC; 3-Ph 50/60Hz / 15A typ (440V/3-Ph available)	
CX 5000	5000 W	Water (3gpm)	25-pin D-type	5.25"H x 19"W x 24"D (RF) (DC unit separate) (275 lbs) total	185-230VAC; 3-Ph 50/60Hz / 28A typ (440V/3-Ph available)	

\* The water cooled version is necessary when air temperature cannot be guaranteed

GENERAL SPECIFICATIONS	
Frequency	Single frequency between 2 and 30MHz
Frequency Stability	$\pm 0.005\%$
Power control	0-10VDC input for 0 to full rated output
Forward/Reflected Power Monitoring	0-10 VDC for 0 to full rated output
Accuracy/Regulation	$\pm 3\%$ of setpoint, from 10% to 100% max output
Spurious Radiation	Well below FCC part 18 requirements
Harmonic Distortion	$< -30\text{dBc}$
LCD Display	Simultaneous display of Forward and Reflected power
Mode of Operation	Continuous as well as Pulsed
Interface	RS 232
RF Output Connector	N-type female (600-1250W output) HN-type female (2500-5000W output)



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