

DC - 2 GHz

Features Include:

1000 V/m capability
Ultra-broadband
Compact
Portable
Cost effective
Test samples up to 26x26x13 inches
Traceable accuracy
Virtually eliminates resonance
Low VSWR
Efficient field generation

SERIES

Applications Include:

Susceptibility testing Emissions testing Test portable communication products Meter/sensor calibration Product calibration High Power leveling Medical and Biological When it comes to testing electronic products or components to EMC susceptibility standards, you don't have to have a full scale test chamber at your disposal. The IFI CC Series of TEM Cells can offer the necessary environment for performing precompliance and compliance testing in a package that is convenient, cost-effective and (in certain respects) technically superior to the larger anechoic chamber.

Originally conceived by Mike Crawford at the National Bureau of Standards and further developed by IFI, the CC TEM Cells consist of a rectangular transmission line operating in the transverse electromagnetic mode (TEM). The cell is tapered at each end to a trasition section that includes type N coaxial jacks for signal connection.

Size and precision design of the CC series allow for accurate maintenance and measurement of E-Field levels (within \pm 1.0 dB on most models) without antennas. The geometry of the cell combined with it's well maintained impedance minimizes undesirable resonance effects. In addition, the typical VSWR is less than 1.25 to 1. To summarize, the ability to produce, maintain and measure E-fields is considerably easier within a CC Series TEM cell than within the larger anechoic chambers.

The compact size of the CC Series allow them to be easily moved around, essentially acting as a "benchtop shielded room". And with IFI's line of amplifiers and accesory products, your whole test area can take up a fraction of the space of a standard EMC test facility.

With the average CC TEM cell costing two to four percent of an average anechoic chamber, manufacturers could afford a complete test setup, and test labs can afford multiple test setups. And with thirty-five models ranging in size and frequency, the CC series offers you a choice to fit your specific application needs.

INSTRUMENTS FOR INDUSTRY INC.

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TEM Cells DC - 2 GHz

Model	DC to Maximum	Maximum Test			Outside			Septum	
Number	Frequency	Object Size (Inches)			Dimension (Inches)			Height	
	MHz	Length	Depth	Height	Length	Depth	Height	Inches	Meters
CC-100S	91	26.2	26.2	13.1	162	80	83	39.4	1.00
CC-101	100	22.6	22.6	7.6	140	72	51	26.6	0.68
CC-101S	100	22.6	22.6	11.3	140	72	72	34	0.86
CC-101.5	150	15.7	15.7	5.2	104	50	34	15.7	0.40
CC101.5S	150	15.7	15.7	7.8	104	50	50	23.6	0.60
CC-102 CC-102EX CC-102S CC-102SEX	200 375 200 325	11.8 11.8 11.8 11.8	11.8 11.8 11.8 11.8	3.9 3.9 5.9 5.9	77 77 77 77 77	38 38 38 38	26 26 38 38	11.8 11.8 17.7 17.7	0.30 0.30 0.45 0.45
CC-103	300	7.9	7.9	2.6	54	26	18	7.9	0.20
CC-103EX	500	7.9	7.9	2.6	54	26	18	7.9	0.20
CC-103S	300	7.9	7.9	4.0	54	26	26	11.8	0.30
CC-103SEX	500	7.9	7.9	4.0	54	26	26	11.8	0.30
CC-104	400	5.9	5.9	1.9	42	20	14	5.9	0.15
CC-104EX	750	5.9	5.9	1.9	42	20	14	5.9	0.15
CC-104EXX	1000	5.9	5.9	1.9	42	20	14	5.9	0.15
CC-104S	400	5.9	5.9	2.9	42	20	20	8.9	0.23
CC-104SEX	750	5.9	5.9	2.9	42	20	20	8.9	0.23
CC-104SEXX	1000	5.9	5.9	2.9	42	20	20	8.9	0.23
CC-105	500	4.7	4.7	1.5	34.3	16	11	4.7	0.12
CC-105EX	750	4.7	4.7	1.5	34.3	16	11	4.7	0.12
CC-105EXX	1000	4.7	4.7	1.5	34.3	16	11	4.7	0.12
CC-105S	500	4.7	4.7	2.3	34.3	16	16	7.1	0.18
CC-105SEX	750	4.7	4.7	2.3	34.3	16	16	7.1	0.18
CC-105SEXX	1000	4.7	4.7	2.3	34.3	16	16	7.1	0.18
CC-108	800	2.9	2.9	0.9	24	11	8	3.0	0.08
CC-108EX	1200	2.9	2.9	0.9	24	11	8	3.0	0.08
CC-108EXX	1600	2.9	2.9	0.9	24	11	8	3.0	0.08
CC-110	1000	2.3	2.3	0.7	18.8	9	6	2.4	0.06
CC-110EX	1500	2.3	2.3	0.7	18.8	9	6	2.4	0.06
CC-110EXX	2000	2.3	2.3	0.7	18.8	9	6	2.4	0.06
CC-110S	1000	2.3	2.3	1.1	18.8	9	9	3.6	0.09
CC-110SEX	1400	2.3	2.3	1.1	18.8	9	9	3.6	0.09
CC-110SEXX	1800	2.3	2.3	1.1	18.8	9	9	3.6	0.09
BC-110 [†]	1000	1.6	1.6	0.5	4	5	10	1.6	0.04

Field level calculation

• The Field generated inside the chamber may be calculated from the expression E=V/D, where V is the input voltage to the cell and D is the septum to top plate seperation ("septum height" in above chart).

• To ensure that the test object "sees" a uniform field, its dimensions should not exceed one third of the volume between the septum and the walls of the TEM cell (i.e., the "maximum test object size" in the above chart).

+Designed for medical and biological applications. © 1997 Instruments For Industry, Inc. Specifications may change without notice.



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