rf/microwave instrumentation

Model ATC25M1G, M1 through M3 Cavitenna™ 3500 Watts 25MHz–1000MHz

The Model ATC25M1G Cavitenna™ was developed specifically for use in a shielded room of the type commonly used for RF susceptibility testing. The Cavitenna is a small, broadband radiator designed to couple energy into the shielded room as though it were a resonant cavity. Because a shielded room is a space bounded by electrically conducting surfaces, it has all the properties of a resonant cavity. The Cavitenna achieves its unusually small size by using the wall of the shielded room as its grounded plane. This design frees the Cavitenna from size constraints inherent in antennas designed for free space application.

When excited as a cavity, a shielded room has many resonant modes determined by its geometry. Field polarization and phase performance cannot be controlled when an RF radiator is placed within a shielded room. AR RF/Microwave Instrumentation has designed the Cavitenna so that it can easily be moved from wall-to-wall to obtain different phase and polarization. For highly automated systems, three Cavitennas are recommended for mounting on the walls of the shielded room. This arrangement used with automatic switching, enables successive testing with different phase and polarization conditions generated by each antenna.

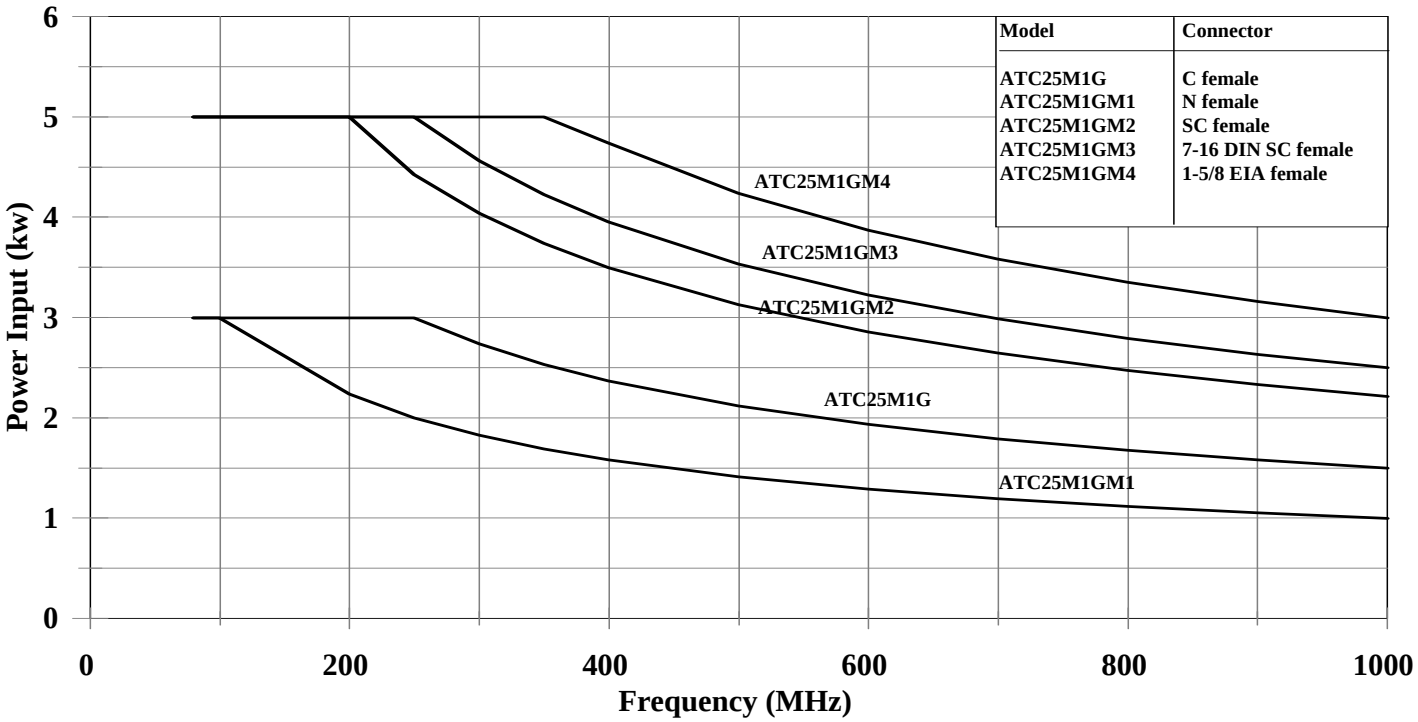
The Cavitenna's unique combination of small size, extremely broad frequency range, and tolerance for high RF voltages, when used with the resonant cavity characteristics of a shielded room, significantly reduces the RF power and time required for RF susceptibility testing.

SPECIFICATIONS

FREQUENCY RANGE	25–1000 MHz
INPUT POWER, CW MAXIMUM	See Graph
IMPEDANCE	50 ohms nominal
CONNECTOR TYPE	See Model Configurations on graph
ELECTRIC FIELD INTENSITY	See curves calculated using AR amplifier performance data. (Similar performance should not be expected using other amplifiers)
SIZE	117 x 61 x 51 cm (46 x 24 x 20 in)
WEIGHT (maximum)	14 kg (30 lbs)
MOUNTING SYSTEM	Magnetic clamps included

CAUTION: *High voltages and high electric fields are generated by this unit. Human damage will result due to proximity or contact. This field generator should be used only in an adequately shielded room. Personnel must not occupy room when in use.*

Model Configurations and Power Rating



Model	Connector
ATC25M1G	C female
ATC25M1GM1	N female
ATC25M1GM2	SC female
ATC25M1GM3	7-16 DIN SC female
ATC25M1GM4	1-5/8 EIA female