rf/microwave instrumentation

Model ATP10K100MM4
Field Generator
3000 Watts CW
10kHz–100MHz

The AR RF/Microwave Instrumentation Model ATP10K100MM4 is a broadband, high power RF Field Generator. The unit is capable of generating intense fields in a large volume over a wide frequency range. Twin conductor transmission lines produce both E (electric) and H (magnetic) fields (see Figure 1).

The ATP10K100MM4 is a balanced parallel conductor transmission line that is 2.4 meters long and 1.0 meter wide. It has been designed to match free space impedance of 377 ohms, which results in extremely efficient production of RF fields. Matching transformer and load resistors are built in and provide excellent VSWR characteristics over a frequency range of 10 kHz to 100 MHz. To achieve maximum flexibility in use, the ATP10K100MM4 can be rotated 360 degrees and the field generator can be adjusted to accommodate the unit under test up to a maximum center line height of 68 inches (172.72cm). Items small enough to fit between the elements can be placed on a pedestal or table and the ATP10K100MM4 positioned to surround them. For larger items, the height and angle of the radiating elements must be changed for maximum field strength.

This M4 version of the ATP10K100M comes with a special stand which allows rotation of the field generation in three axes as well as height adjustment. This will allow the generator to be placed vertically and permit testing of upright objects such as equipment racks.

SPECIFICATIONS

POWER INPUT, CW	3000 watts maximum
FREQUENCY RANGE	10 kHz–100 MHz
INPUT IMPEDANCE	50 ohms
VSWR	2.0:1 maximum 10 kHz–100 MHz; 6:1 maximum 10–20 kHz above 1 KW input power
ELECTRIC FIELD INTENSITY	See Graph.
RF INPUT CONNECTOR	Type 7-16 DIN female
COOLING	Natural convection to 40° C ambient temperature
WEIGHT	159 kg (350lb)
SIZE (WxHxD)	261.1 x 215.4 x 141.7 cm (102.8 x 84.8 x 55.8 in)

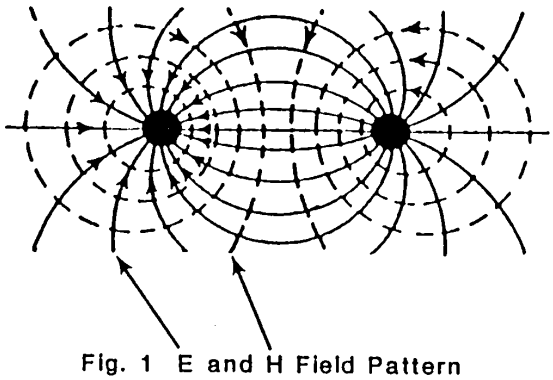
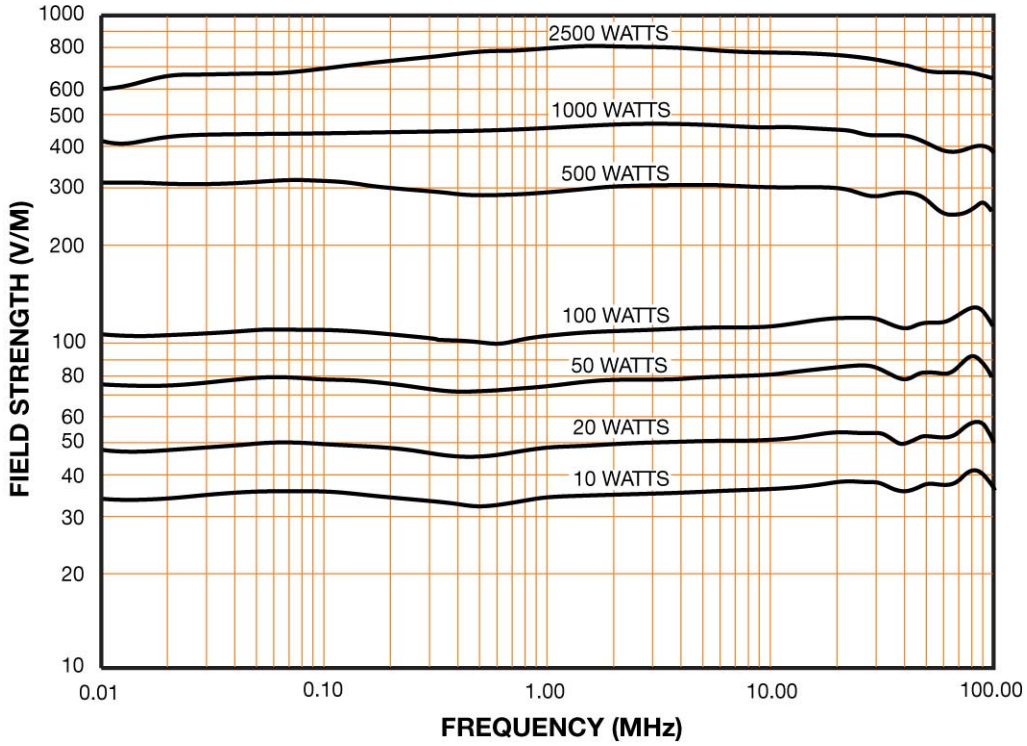


Fig. 1 E and H Field Pattern

FIELD STRENGTH vs. FREQUENCY
MEASURED BETWEEN CONDUCTORS



FIELD STRENGTH vs. FREQUENCY
MEASURED AT 1 METER