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MODEL 700A  
700 WATTS  
10-250 KHz

The Model 700A Ultrasonic Power Amplifier is completely solid state and contains no mechanical circuit breakers or relays. Even its over-temperature sensor is a solidstate device. Designed for severe industrial applications, the Model 700A Amplifier is protected from damage which might be caused by excessive VSWR, high instantaneous line current, excessive output power or over-temperature operation. A built-in time delay and zero-crossing turn-on reduce current inrush to prolong component life. Power Supply voltage regulation is used to remove noise and output fluctuations. A directional wattmeter and front panel selector switch provide convenient measurement of the forward power from the amplifier and reverse power reflected by the load. A non-linear meter scale allows extremely sensitive tuning of the load simply by adjusting for minimum reflected power.

The Model 700A cooling is provided by self-contained fans. Air is drawn in through filtered inlets to protect the circuitry from exposure to excessively dirty environments which may be encountered in industrial applications. All sub-assemblies are plug-in and can be readily removed for maintenance and repair.

The Model 700A may be purchased initially for low power requirements and when additional power is required another Model 700A and a hybrid power combiner may be used to provide performance equivalent to our Model 1400A.

The Model 700A is complete with a built-in 115 VAC power supply, regulators, power meter and protection circuitry. It is normally supplied in a handsome bench top cabinet with rack mounting available as an option.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

REV0385

FORM 211 0783

## SPECIFICATIONS

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| POWER OUTPUT INTO 50 OHMS              |  |
| Maximum.....                           | Up to 700 Watts  |
| Linear.....                            | 250 watts @ less than 1dB gain compression   |
| FREQUENCY.....                         | 10 KHz to 250 KHz useful range<br>from 8 KHz to 450 KHz at reduced gain  |
| GAIN.....                              | 60 dB minimum  |
| GAIN FLATNESS.....                     | $\pm 1.0$ dB typical<br>$\pm 1.5$ dB maximum   |
| INPUT ATTENUATOR.....                  | Continuously adjustable over greater than an 18 dB range   |
| MISMATCH TOLERANCE.....                | The amplifier will operate without shutdown or damage regardless of magnitude and phase of source and load impedance including open or short circuits at up to 200 watts. At higher output levels the amplifier will shutdown when the reflected power exceeds 200 watts |
| INPUT IMPEDANCE.....                   | 50 ohms nominal  |
| OUTPUT IMPEDANCE(Switch Selectable)... | 12.5, 25, 50, 100, 150, 200, 400<br>600, 1000 ohms nominal   |
| PROTECTION.....                        | The amplifier is thoroughly protected against damage from overheating, excessive output power, high VSWR, excessive AC line current and peak AC line voltage   |
| DISTORTION.....                        | Total harmonic distortion is less than 8% at 300 watts output<br>Typically 2% at 100 watt  |
| CONNECTORS.....                        | Type BNC   |
| POWER METER.....                       | Directional power meter and front panel selector switch allows separate measurement of the forward power leaving the amplifier and the power reflected by the load   |
| PRIMARY POWER.....                     | 115 VAC, 50/60 Hz, 15 Amp  |
| COOLING.....                           | Self-contained forced air with filtered inlets   |
| SIZE (W x H x D).....                  | 43.9 x 17.8 x 45.7 cm<br>17.3 x 7.0 x 18.0 in  |
| WEIGHT.....                            | 17 kg. (37 lbs.)   |

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