RF Solid State Amplifiers: The Most Innovative, Most Reliable, Highest Power RF Solid State Amplifiers Ever Created
All The Power You Need...With Legendary Performance & Reliability

“A” Series: Up to 400 MHz / 25 to 50,000 watts CW depending upon frequency range

“W” Series: Up to 1,000 MHz / 1 to 10,000 watts CW

Our “A” and “W” Series amplifiers have the power to deliver all the field strength you need. With unsurpassed mismatch capabilities and excellent flatness, they provide all the power promised over the entire operating band.

We subject our amplifiers to the harshest conditions just to make sure they give you reliable service and performance over the long haul. We test them under various output VSWR loads to stress them to the limit. The only problem we ran into was that there were no available loads to handle the enormous power, up to 80,000 watts, that our amplifiers deliver. Whereas this would stop most manufacturers, it presented another challenge to our talented designers, and we designed our own as shown in Figures 1 & 2. All our RF solid-state amplifiers have modulation capability that will faithfully reproduce AM, FM or Pulse Modulation appearing on the input signal for use in the most demanding EMC applications.

These technologically advanced amplifiers perform beyond the norm, beyond expectations, and way beyond the abilities of other test amplifiers.

These self-contained, broadband, completely solid-state amplifiers are designed for applications requiring the ultimate in output power over a wide instantaneous bandwidth with high gain. Extensive control and status reporting capabilities are available both locally and remotely. Most models feature air-cooled designs while some higher power units feature liquid cooled designs. The touch-screen panels are intuitive, convenient, and easy to use.

AR RF/Microwave makes the toughest EMC Compliance Class A amplifiers with the highest power densities and widest bandwidths. However, it is reliability that drives this 50-year-old brand; and customer service you can depend on.

Randall Bloom
CEO, W5 Engineering
Portland Oregon
AR's history of providing broadband, high power amplifiers has remained constant through the years. Applying the latest technology has enabled us to break new ground in very high power, solid state amplifier design.

**Facility**

We made an investment in 2016 to create a Large Amplifier Integration and Test Area. Not only did this open up floor space to support the building of multiple systems but it brought added HVAC capabilities for the amplifiers and primary AC power to properly conduct factory testing. Engineers now have the freedom to create designs to accommodate multiple configurations and optimize performance. The area also supports customer factory acceptance testing as required.

**Air vs. Liquid Cooling**

Liquid cooling of the amplifier’s solid-state transistors has a number of advantages. First, it allows for precise temperature control of the devices. The number one factor determining the reliability of solid state devices is temperature. By carefully controlling the temperature, engineers can optimize the performance of the amplifier without sacrificing reliability.

Second, it reduces the size of the amplifier. Air-cooled amplifiers use large metal heat sinks over which air is forced to carry away heat. In a liquid-cooled amplifier, the transistors are mounted on cooling plates through which water flows. The plates are much smaller than heat sinks and because you don’t have to accommodate air flow they can be built closer together.

Third, it reduces the heat load on the amplifier room and its resulting HVAC requirements. Since most of the heat generated is carried away by the cooling liquid, room HVAC requirements are reduced.

Fourth, it allows for fewer fans. This makes the amplifier audibly quieter. By reducing the noise, operators can work in a safer, more pleasant environment without fatigue.

Fifth, it gives customers the option of using existing cooling infrastructure to save costs. Liquid cooling options include an external chiller or the use of chilled water supplied by the customer’s facility. By utilizing existing infrastructure, operating costs can be reduced.


**Informative Touch Panel**

AR’s high power amplifiers incorporate our latest Touch Panel amplifier control system*. This new system makes it easier to monitor and control important amplifier functions. On the right are some example screen shots unique to one of AR’s newest ultra high power amplifiers. See page 45 for more details on AR’s intuitive touch panel capabilities.
* Touch Panel amplifier control system
“A” and “W” Series Amplifiers Provide A Wide Range Of Features & Benefits

• Highest Output Power In Its Class - Enough Margin To Obtain The Necessary Field Strength You Require
• Unsurpassed Service, Support & Warranty - Reduce Downtime To Save Money And Provide Your Customers With Testing Continuity
• Durability & Longevity - Provides Lower Life Cycle Costs
• Best Efficiency In Its Class - Reduces Operating Costs and Helps The Environment
• Great Mismatch Capability - Gives You The Power You Need For Driving Poor Loads, Allowing You To Select Lower Power Amplifiers And Saving You Money
• Multiple Control Interfaces That Some Of Our Competitors Lack – More Value For Your Money
• Unsurpassed Harmonic Rejection - Provides More Accurate Measurements
• Lower Acoustical Noise - Enhances The Work Environment
• Compact, Lightweight, Modular Designs - Ability To Fit In Small Areas/Chambers And Easily Transportable
• Intuitive Operation - Saves You Time And Money

10000W1000A
10000 Watts CW, 80 MHz - 1000 MHz
Liquid Cooling For Large High-Power RF Amplifiers

Temperature is a major factor in determining the reliability of solid state devices used in high-power RF amplifiers. Reducing the temperature that the semiconductor devices see can greatly improve both reliability and performance.

Liquid cooling not only allows for lower overall temperatures, but also offers a number of other important advantages:

- **Liquid cooling reduces the size of the amplifier**
  Air-cooled amplifiers use large metal heat sinks over which air is forced to carry away heat. In a liquid-cooled amplifier, the transistors are mounted on cooling plates through which water flows. The plates are much smaller than heat sinks and because you don’t have to accommodate airflow, they can be built closer together.

- **Liquid Cooling Reduces The Heat Load On The Amplifier Room**
  Since most of the heat generated is carried away by the cooling liquid, HVAC requirements are reduced, which results in more comfortable surroundings and reduced utility bills.

- **Liquid Cooling Allows For Fewer Fans**
  This makes the amplifier significantly quieter. By reducing the noise, operators can work in a safer, more pleasant environment without fatigue.

- **Liquid Cooling Provides The Option Of Using Your Existing Cooling Infrastructure**
  Liquid cooling options include an external chiller or the use of chilled water supplied by the customer’s facility. By utilizing one’s existing infrastructure, operating costs can be greatly reduced.

Like everything we do at AR, liquid cooling has been carefully considered, tested and researched before being chosen as the preferred method for controlling temperatures in large high-power amplifiers. We utilize proprietary techniques to implement the most reliable and robust mechanical designs possible.

CoolAR Chillers

AR, the world leader in supplying high power, broadband amplifiers, can now supply chillers for any of its standard liquid-to-liquid cooled amplifiers such as the models 12500A225A-L and 20000A225A-L. This capability ensures amplifier performance in any operating condition, reduces the risk of inappropriately sized equipment, and eases the procurement process by working with only one vendor. Each chiller is sized for the amplifier model, taking into consideration the user’s operating requirements and environment. We can also supply chillers for custom amplifiers designed to user specifications and provide a true turnkey solution.

The chillers are provisioned to handle the unique requirements of test amplifiers and to interface with the amplifier controller for monitoring of faults. Consultation for proper sizing and installation and training are included. Service is provided through a well-established, worldwide network of support distributors with over 40 years of experience.
**350 AH1A**

**Operation**
- Class AB Linear

**Power Output (1.79 Ohm load)**
- CW, min.: 350 watts, 10 Hz - 300 kHz
- Voltage Output, min.: 25 Vrms, 10 Hz - 300 kHz
- Current Output, min.: 14 Arms, 10 Hz - 1 MHz
- Flatness: ±1.0 dB, 10 Hz - 1 MHz
- Frequency Response: 10 Hz - 1 MHz instantaneously
- Input Signal: 0 - 2 Vrms
- Gain (Power): 47 dB min., 10 Hz - 300 kHz
- Power Gain Control Range: 48 dB min.
- Mismatch Tolerance: 100% of rated power without fail
- Modulation Capability: Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal

**Cooling**
- Forced air (self contained fans)

**Size (WxHxD)**
- Without cabinet: 48.3 x 13.2 x 55.1 cm / 19.8 x 5.2 x 21.7 in
- With cabinet: 50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in

**Export classification**
- EAR99

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**100 A400 AM20**

**Rated Output Power Into 50Ω:**
- 4 kHz: 100 kHz - 100 kHz: 10 watts min. rising to 100 watts min. at 100 kHz
- 100 kHz - 400 MHz: 125 watts typ.; 100 watts min.

**Input For Rated Output:**
- 1.0 milwatt max.

**Power Output @ 3 dB Compression Into 50Ω:**
- 4 kHz: 100 kHz - 100 kHz: 10 watts min. rising to 100 watts min. at 100 kHz
- 100 kHz - 400 MHz: 85 watts typ.; 75 watts min.

**Flatness:**
- ±1.0 dB typ., ±1.5 dB max, 10 kHz - 400 MHz
- ±0.5 dB typ., ±1.0 dB max, 100 kHz - 400 MHz

**Harmonic Distortion**
- Minus 30 dBc typical at 50 watts (0.01 - 400 MHz)

**Power Output @ 1 dB Compression Into 50Ω:**
- 4 kHz - 400 MHz: 10 watts min. rising to 75 watts min. at 100 kHz
- 100 kHz - 400 MHz: 85 watts typ.; 75 watts min.

**Noise Figure**
- 4 kHz - 400 MHz: 55 dBm typ.

**Third Order Intercept Point**
- Minus 8 dB typ.

**Spurious**
- Minus 73 dBc typ.

**Remote Control**
- RF Input: Type N female on front panel
- RF Output: Type N female on front panel

**Remote Interfaces**
- IEEE-488: 24 pin female
- RS-232: 9 pin Subminiature D female
- USB: Type B female

**Cooling**
- Forced air (self contained fans) and load impedance.

**Size (WxHxD)**
- Without cabinet: 50.3 x 34 x 55.1 cm / 19.8 x 13.4 x 21.7 in
- With cabinet: 50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in

**Export classification**
- EAR99

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**800 A3B**

**Rated Output Power**
- 800 watts

**Input For Rated Output**
- 1.0 milwatt max.

**Power Output @ 3 dB compression**
- Nominal 800 watts

**Power Output @ 1 dB compression**
- Nominal 500 watts

**Flatness**
- ± 1.0 dB max.

**Frequency Response**
- 10 kHz - 3 MHz instantaneously

**Gain (at max. setting)**
- 60 dB min.

**Gain Adjustment (continuous range)**
- 23 dB min.

**Input Impedance**
- 50 ohms, nominal

**Output Impedance**
- 50 ohms, nominal

**Power Output Into 50Ω**
- Nominal 800 watts Min. 800 watts, 10 kHz - 2 MHz

**Nominal 800 watts, 10 kHz - 3 MHz**

**Power Output Into 25Ω**
- Min. 700 watts, 2 - 3 MHz

**Remote Control**
- IEEE-488/RS-232, USB ability to remote control and power an external impedance transformer.

**RF Power Display**
- 0 - 1000 watts full scale. Directional power monitor allows separate display of forward and reflected power.

**Cooling**
- Forced air (self contained fans)

**Primary Power**
- 190 - 240 VAC

**Weight (max.)**
- 36.4 kg (80 lb)

**Size (WxHxD)**
- 50.3 x 34 x 55.1 cm / 19.8 x 13.4 x 21.7 in

**For external impedance transformer options, see specification sheet for IT2002 Series impedance transformers.**
**10 kHz to 100 MHz**

### 150A100D

- **Rated Output Power**: 1,200 Watts, min. 1,100 Watts, 0.01 - 100MHz
- **Input For Rated Output**: 1.0 milliwatt max.
- **Power Output @ 3dB compression**: Typ.: 1,300 watts, min. 1,200 watts, 0.01 - 100MHz
- **Power Output @ 1dB compression**: Typ.: 1,200 watts, min. 1,100 watts, 10 - 225MHz
- **Inputs**: 15-pin subminiature D, Ethernet RJ-45, USB 2.0 Type B, Fiber optic ST Conn Tx and Rx RS-232
- **RF Output**: 7/16 DIN female
- **RF Input**: N female
- **Connectors**: RF Input: Type N female, RF Output: Type N female
- **Remote Control**: IEEE-488, RS-232 9-pin subminiature D (female), Fiber optic ST Conn Tx and Rx RS-232, USB 2.0 Type B, Ethernet RJ-45, Safety Interlock 15-pin subminiature D
- **Cooling**: Forced air (self contained fans)
- **Weight**: 18.5 kg (41 lb)
- **Size (WxHxD)**: 50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in

### 1200A225

- **Rated Output Power**: Typ.: 2,500 watts, min. 2,400 watts, 0.01 - 100MHz
- **Input For Rated Output**: 1.0 milliwatt max.
- **Power Output @ 3dB compression**: Typ.: 2,800 watts, min. 2,400 watts, 0.01 - 100MHz
- **Power Output @ 1dB compression**: Typ.: 2,300 watts, min. 2,100 watts, 10 - 225MHz
- **Inputs**: 15-pin subminiature D, Ethernet RJ-45, USB 2.0 Type B, Fiber optic ST Conn Tx and Rx RS-232
- **RF Output**: 7/16 DIN female
- **RF Input**: N female
- **Connectors**: RF Input: Type N female, RF Output: Type N female
- **Remote Control**: IEEE-488, RS-232 9-pin subminiature D (female), Fiber optic ST Conn Tx and Rx RS-232, USB 2.0 Type B, Ethernet RJ-45, Safety Interlock 15-pin subminiature D
- **Cooling**: Forced air (self contained fans)
- **Weight**: 139 kg (305 lb)
- **Size (WxHxD)**: 56.1 x 115 x 88.9 cm / 22.1 x 45.25 x 35 in

### 2500A225A

- **Rated Output Power**: 2,500 watts CW, 10 kHz - 225 MHz
- **Input For Rated Output**: 1.0 milliwatt max.
- **Power Output @ 3dB compression**: Typ.: 2,800 watts, min. 2,400 watts, 0.01 - 100MHz
- **Power Output @ 1dB compression**: Typ.: 2,300 watts, min. 2,100 watts, 10 - 225MHz
- **Inputs**: 15-pin subminiature D, Ethernet RJ-45, USB 2.0 Type B, Fiber optic ST Conn Tx and Rx RS-232
- **RF Output**: 7/16 DIN female
- **RF Input**: N female
- **Connectors**: RF Input: Type N female, RF Output: Type N female
- **Remote Control**: IEEE-488, RS-232 9-pin subminiature D (female), Fiber optic ST Conn Tx and Rx RS-232, USB 2.0 Type B, Ethernet RJ-45, Safety Interlock 15-pin subminiature D
- **Cooling**: Forced air (self contained fans)
- **Weight**: 159 kg (350 lb)
- **Size (WxHxD)**: 56.1 x 115 x 88.9 cm / 22.1 x 45.25 x 35 in
### RF Solid State Amplifiers

**10 kHz to 225 MHz**

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<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Power Output (CW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5000A225A</td>
<td>5,000 watts, 10 kHz - 225 MHz</td>
<td></td>
</tr>
<tr>
<td>10000A225A-A</td>
<td>10,000 watts, 10 kHz - 225 MHz</td>
<td></td>
</tr>
<tr>
<td>12500A225A-L</td>
<td>12,500 watts, 10 kHz - 225 MHz</td>
<td></td>
</tr>
</tbody>
</table>

#### Rated Output Power
- **Typical (Typ.):**
  - 5000 watts, 0.1 - 100 MHz
  - 1500 watts, 0.1 - 100 MHz
  - 2000 watts, 0.1 - 100 MHz
- **Minimum (Min.):**
  - 9000 watts, 0.1 - 100 MHz
  - 3000 watts, 0.1 - 100 MHz
  - 1000 watts, 0.1 - 100 MHz

#### Primary Power
- **380 - 480 VAC, Delta (4 wire)**
- **200 - 240 VAC, Delta (3 wire)**
- **190 - 240 VAC, Delta (3 wire) or 3-phase**
- **50/60Hz, 200 - 240 VAC or 380 - 415 VAC 3-phase**

#### Export Classification
- **EAR99**

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*See Application Note #27A at www.arworld.us/appnote27/"
16,000 watts CW, 10 kHz-225 MHz

Rated Output Power
- Nominal: 16,000 watts, 0.1 - 100 MHz
- Minimum: 12,000 watts, 10 - 225 MHz

Input For Rated Output
- Nominal: 14,000 watts, 0.1 - 100 MHz

Power Output for 1dB Compression
- Nominal: 15,000 watts, 0.1 - 100 MHz
- Minimum: 10,000 watts, 0.1 - 100 MHz

Flatness
- ±3.0 dB max.

Frequency Response
- 10 kHz - 225 MHz instantly

Gain Adjustment (continuous range)
- 20 dB min.

Input Impedance
- 50 ohms, VSWR 2.0:1 max.

Output Impedance
- 50 ohms, nominal

Mismatch Tolerance
- 100% rated power without foldback up to 6:1 mismatch above which may limit to 7000 watts reflected power from 10kHz - 100MHz, Limited to 7000 watts reflected power from 100MHz - 225MHz.

Modulation Capability
- Will faithfully reproduce AM, FM or Pulse modulation appearing on the input signal.

Harmonic Distortion
- Minus 20 dBc max. at 100 watts

Third Order Intercept Point
- Minus 20 dBc max. at 12,000 watts

RF Power Display
- 77 dBm typ.

RF Rise/Fall Time
- 150 nanoseconds max.

Primary Power
- (user must specify)
- 190 - 240 VAC, Delta (4 wire)
- 380 - 480 VAC, Delta (4 wire)
- 47 - 63 Hz, 3-phase
- 75,000 watts max. at 95 EF typ.

Connectors
- RF Input: Type N female on rear panel
- RF Output: Type EIA 3-1/8 male on rear panel
- Forward Sample: N female, front (coupling factor 84dB typ.)
- Reverse Sample: N female, front (coupling factor 84dB typ.)
- Pulse Modulation Input: BNC female on rear panel
- Safety Interlock: 15 pin female Type D on rear panel

Cooling
- Forced air (self contained fans with internal liquid cooling)
- Weight: 997 kg (2200 lb)

Export classification
- EAR99

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20,000 watts CW, 10 kHz-225 MHz

Rated Output Power
- Nominal: 20,000 watts, 0.1 - 100 MHz
- Minimum: 13,000 watts, 0.1 - 100 MHz

Input For Rated Output
- Nominal: 16,000 watts, 0.1 - 100 MHz

Power Output for 1dB Compression
- Nominal: 15,000 watts, 0.1 - 100 MHz
- Minimum: 10,000 watts, 0.1 - 100 MHz

Flatness
- ±3.0 dB max.

Frequency Response
- 10 kHz - 225 MHz instantly

Gain Adjustment (continuous range)
- 20 dB min.

Input Impedance
- 50 ohms, VSWR 2.0:1 max.

Output Impedance
- 50 ohms, nominal

Mismatch Tolerance
- 100% rated power without foldback up to 6:1 mismatch above which may limit to 7000 watts reflected power from 10kHz - 100MHz, Limited to 7000 watts reflected power from 100MHz - 225MHz.

Modulation Capability
- Will faithfully reproduce AM, FM or Pulse modulation appearing on the input signal.

Harmonic Distortion
- Minus 20 dBc max. at 20 watts

Third Order Intercept Point
- Minus 35 dBm typ. at 15 watts

Spurious
- Minus 73 dBc typ.

Third Order Intercept Point
- 35 dBm typ.

Noise Figure
- 8 dB typ.

Primary Power
- 100 - 240 VAC
- 50 / 60 Hz, 200 watts

Connectors
- RF Input: Type N female on rear panel
- RF Output: Type EIA 3-1/8 male on rear panel
- Forward Sample: N female, front (coupling factor 84dB typ.)
- Reverse Sample: N female, front (coupling factor 84dB typ.)
- Pulse Modulation Input: BNC female on rear panel
- Safety Interlock: 15 pin female Type D on rear panel

Cooling
- Liquid cooled via external chilled water supply
- Weight: 997 kg (2200 lb)

Export classification
- EAR99
RF Solid State Amplifiers
10 kHz to 250 MHz

50 watts CW, 10 kHz - 250 MHz

<table>
<thead>
<tr>
<th>Specification</th>
<th>50A250</th>
<th>125A250</th>
<th>500A250D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Output Power</td>
<td>70 watts typ., 50 watts min.</td>
<td>150 watts typ., 125 watts min.</td>
<td>600 watts typ., 500 watts min., f1 - 250 MHz</td>
</tr>
<tr>
<td>Input For Rated Output</td>
<td>1.0 milliWatt max.</td>
<td>1.0 milliWatt max.</td>
<td>1.0 milliWatt max.</td>
</tr>
<tr>
<td>Power Output @ 3dB compression</td>
<td>Ttyp. 70 watts</td>
<td>Typical: 145 watts / Min. 125 watts</td>
<td>Typical: 525 watts / Min. 475 watts, 200 MHz - 250 MHz</td>
</tr>
<tr>
<td>Power Output @ 1dB compression</td>
<td>Ttyp. 55 watts</td>
<td>Typical: 110 watts / Min. 90 watts</td>
<td>Typical: 550 watts / Min. 475 watts, 200 MHz - 250 MHz</td>
</tr>
<tr>
<td>Flatness</td>
<td>±1.0 dB typ., ±1.5 dB max.</td>
<td>±1.0 dB typ., ±1.5 dB max.</td>
<td>±1.5 dB typ., ±2.0 dB max.</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>10 kHz - 250 MHz instantaneously</td>
<td>10 kHz - 250 MHz instantaneously</td>
<td>10 kHz - 250 MHz instantaneously</td>
</tr>
<tr>
<td>Gain (at max. setting)</td>
<td>47 dB min.</td>
<td>50 dB min.</td>
<td>57 dB min.</td>
</tr>
<tr>
<td>Input Impedance</td>
<td>50 ohms, VSWR 2.0:1 max.</td>
<td>50 ohms, VSWR 2.0:1 max.</td>
<td>50 ohms nominal.</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>50 ohms, nominal</td>
<td>50 ohms nominal.</td>
<td>50 ohms nominal.</td>
</tr>
<tr>
<td>Mismatch Tolerance*</td>
<td>100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.</td>
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</tr>
<tr>
<td>Harmonic Distortion</td>
<td>Minus 20 dBc max. at 40 watts, Minus 30 dBc typ. at 30 watts</td>
<td>Minus 20 dBc max. at 90 watts, Minus 30 dBc typ. at 70 watts</td>
<td>Minus 20 dBc max. at 90 watts, Minus 30 dBc typ. at 70 watts</td>
</tr>
<tr>
<td>Spurious</td>
<td>Minus 73 dBc typ.</td>
<td>Minus 73 dBc typ.</td>
<td>Minus 73 dBc typ.</td>
</tr>
<tr>
<td>Third Order Intercept Point</td>
<td>55 dBm typ.</td>
<td>55 dBm typ.</td>
<td>55 dBm typ.</td>
</tr>
<tr>
<td>Noise Figure</td>
<td>8 dB typ.</td>
<td>8 dB typ.</td>
<td>7 dB typ.</td>
</tr>
<tr>
<td>Primary Power</td>
<td>100 - 240 VAC, 50/60Hz</td>
<td>500 watts</td>
<td>125 watts CW, 10 kHz - 250 MHz</td>
</tr>
<tr>
<td>Connectors</td>
<td>RF Input Type N female</td>
<td>RF Input Type N female</td>
<td>RF Input Type N female</td>
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<tr>
<td>Connectors</td>
<td>RF Output Type N female</td>
<td>RF Output Type N female</td>
<td>RF Output Type N female</td>
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<tr>
<td>RS-232</td>
<td>24 pin female</td>
<td>9 pin Subminiature D female</td>
<td>9 pin Subminiature D female</td>
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<td>Fiber optic</td>
<td>ST Conn Tx and Rx RS-232</td>
<td>Fiber optic ST Conn Tx and Rx RS-232</td>
<td>Fiber optic ST Conn Tx and Rx RS-232</td>
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<td>USB 2.0</td>
<td>Type B</td>
<td>Type B</td>
<td>Type B</td>
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<td>Ethernet</td>
<td>RJ-45</td>
<td>RJ45</td>
<td>RJ45</td>
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<td>Safety Interlock</td>
<td>15 Pin Subminiature D</td>
<td>15-pin Subminiature D</td>
<td>15-pin Subminiature D</td>
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<tr>
<td>Cooling</td>
<td>Forced air (self contained fans)</td>
<td>Forced air (self contained fans)</td>
<td>Forced air (self contained fans)</td>
</tr>
<tr>
<td>Weight</td>
<td>16.7 kg (37 lb)</td>
<td>18.5 kg (41 lb)</td>
<td>78 kg (171 lb)</td>
</tr>
<tr>
<td>With cabinet</td>
<td>8.6 kg (19 lb)</td>
<td>18.5 kg (41 lb)</td>
<td>58 kg (128 lb)</td>
</tr>
<tr>
<td>Size (WxHxD)</td>
<td>50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in</td>
<td>50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in</td>
<td>50.3 x 38.1 x 75.5 cm (19.8 x 15.0 x 29.7 in)</td>
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<tr>
<td>Export classification</td>
<td>EAR99</td>
<td>EAR99</td>
<td>EAR99</td>
</tr>
</tbody>
</table>

* See Application Note #27A at www.arworld.us/appnote27/
10 kHz to 400 MHz

**100A400A**

- **Rated Output Power**: 100 watts typ., 100 watts min.
- **Input For Rated Output**: 1.0 milliwatt max.
- **Power Output @ 3dB compression**: TYP. 125 watts / MIN. 165 watts
- **Power Output @ 1dB compression**: TYP. 165 watts / MIN. 125 watts
- **Frequency Response**: 10 kHz - 400 MHz instantaneously
- **Gain (at max. setting)**: 50.0 dB min.
- **Gain Adjustment (continuous range)**: 20.0 dB min.
- **Input Impedance**: 50 ohms, VSWR 2.0:1 max.
- **Output Impedance**: 50 ohms, nominal
- **Mismatch Tolerance**:
  - 100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
- **Harmonic Distortion**:
  - Minus 20 dBc typ. at 75 watts
  - Minus 30 dBc typical at 50 watts
- **Spurious**: Minus 73 dBc typ.
- **Third Order Intercept Point**: 8.5 dB typ.
- **Noise Figure**: 15 Pin Subminiature D
- **Cooling**: Forced air (self contained fans)
- **Weight**: 18.5 kg (41 lb) / 12.0 kg (26 lb)
- **Size (WxHxD)**: 50.3 x 20.5 x 74.9 cm / 19.8 x 8.1 x 29.5 in
- **Export Classification**: EAR99

**175A400**

- **Rated Output Power**: 175 watts typ., 175 watts min.
- **Input For Rated Output**: 1.0 milliwatt max.
- **Power Output @ 3dB compression**: TYP. 210 watts / MIN. 165 watts
- **Power Output @ 1dB compression**: TYP. 165 watts / MIN. 125 watts
- **Frequency Response**: 10 kHz - 400 MHz instantaneously
- **Gain (at max. setting)**: 52.5 dB min.
- **Gain Adjustment (continuous range)**: 20.0 dB min.
- **Input Impedance**: 50 ohms, VSWR 2.0:1 max.
- **Output Impedance**: 50 ohms, nominal
- **Mismatch Tolerance**:
  - 100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
- **Harmonic Distortion**:
  - Minus 20 dBc typ. at 150 watts
- **Spurious**: Minus 73 dBc typ.
- **Third Order Intercept Point**: 8.5 dB typ.
- **Noise Figure**: 15 Pin Subminiature D
- **Cooling**: Forced air (self contained fans)
- **Weight**: 33 kg (73 lb) / 22 kg (48 lb)
- **Size (WxHxD)**: 50.3 x 20.5 x 74.9 cm / 19.8 x 8.1 x 29.5 in
- **Export Classification**: EAR99

**250A400**

- **Rated Output Power**: 250 watts typ., 250 watts min.
- **Input For Rated Output**: 1.0 milliwatt max.
- **Power Output @ 3dB compression**: TYP. 325 watts / MIN. 230 watts
- **Power Output @ 1dB compression**: TYP. 230 watts / MIN. 200 watts
- **Frequency Response**: 10 kHz - 400 MHz instantaneously
- **Gain (at max. setting)**: 54.0 dB min.
- **Gain Adjustment (continuous range)**: 20.0 dB min.
- **Input Impedance**: 50 ohms, VSWR 2.0:1 max.
- **Output Impedance**: 50 ohms, nominal
- **Mismatch Tolerance**:
  - 100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
- **Harmonic Distortion**:
  - Minus 20 dBc typ. at 200 watts
- **Spurious**: Minus 73 dBc typ.
- **Third Order Intercept Point**: 8.5 dB typ.
- **Noise Figure**: 15 Pin Subminiature D
- **Cooling**: Forced air (self contained fans)
- **Weight**: 45 kg (98 lb) / 33 kg (73 lb)
- **Size (WxHxD)**: 50.3 x 20.5 x 74.9 cm / 19.8 x 8.1 x 29.5 in
- **Export Classification**: EAR99
RF Solid State Amplifiers

10 kHz to 400 MHz

350A400

- Rated Output Power: 425 watts typ., 350 watts min.
- Input For Rated Output: 1.0 milliwatt max.
- Power Output @ 3dB compression: Typ. 400 watts / Min. 325 watts
- Power Output @ 1dB compression: Typ. 325 watts / Min. 225 watts

- Flatness: ±1.5 dB typ., ±2.0 dB max.
- Frequency Response: 10 kHz - 400 MHz, instantaneously
- Gain (at max. setting): 55.5 dB min.
- Gain Adjustment (continuous range): 20 dB min.
- Input Impedance: 50 ohms, VSQR 2.0:1 max.
- Output Impedance: 50 ohms, nominal
- Mismatch Tolerance*: 100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

- Harmonic Distortion: Minus 20 dBc max. at 300 watts
- Spurious: Minus 73 dBc typ.
- Third Order Intercept Point: 65 dBm typ.
- Noise Figure: 7.5 dB typ.
- Primary Power: 100 - 240 VAC, 50 / 60 Hz, 2950 watts

- Connectors:
  - RF Input: Type N female
  - RF Output: Type N female
- Remote Interfaces:
  - IEEE-488: 24 pin female
  - RS-232: 9 pin Subminiature D female
  - USB 2.0: Type B
  - Ethernet: RJ-45
- Safety Interlock: 15 Pin Subminiature D
- Cooling: Forced air (self contained fans)
- Weight:
  - With cabinet: 48 kg (104 lb)
  - Without cabinet: 35 kg (78 lb)
- Size (WxHxD):
  - With cabinet: 50.3 x 20.5 x 74.9 cm / 19.8 x 8.1 x 29.5 in
  - Without cabinet: 48.3 x 17.7 x 74.9 cm / 19 x 7 x 29.5 in
- Export Classification: EAR99

* See Application Note #27A at www.arworld.us/appnote27/

600A400

- Rated Output Power: 700 watts typ., 600 watts min.; 0.1 - 250MHz: 600 watts typ., 500 watts min., 250MHz - 400MHz: 650 watts typ., 500 watts min., 250MHz - 400MHz
- Power Output @ 3dB compression: Typ. 600 watts / Min. 500 watts
- Power Output @ 1dB compression: Typ. 550 watts / Min. 500 watts

- Flatness: ±1.5 dB typ., ±2.0 dB max.
- Frequency Response: 10 kHz - 400 MHz, instantaneously
- Gain (at max. setting): 75.8 dB min.
- Gain Adjustment (continuous range): 20 dB min.
- Input Impedance: 50 ohms, VSQR 2.0:1 max.
- Output Impedance: 50 ohms, nominal
- Mismatch Tolerance*: 100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

- Harmonic Distortion: Minus 20 dBc max. at 500 watts
- Spurious: Minus 73 dBc typ.
- Third Order Intercept Point: 70 watts typ.
- Noise Figure: 8 dB typ.
- Primary Power: 100 - 240 VAC, 50 / 60 Hz, 250 watts

- Connectors:
  - RF Input: Type N female
  - RF Output: Type 7/16 DIN
- Remote Interfaces:
  - IEEE-488: 24 pin female
  - RS-232: 9 pin Subminiature D female
  - Fiber optic: ST Conn Tx and Rx RS-232
  - USB 2.0: Type B
  - Ethernet: RJ-45
- Safety Interlock: 15 Pin Subminiature D
- Cooling: Forced air (self contained fans)
- Weight:
  - With cabinet: 87 kg (191 lb)
  - Without cabinet: 68 kg (148 lb)
- Size (WxHxD):
  - With cabinet: 50.3 x 38.1 x 75.5 cm / 19.8 x 15.0 x 29.7 in
  - Without cabinet: 48.3 x 35.6 x 75.5 cm / 19 x 14.0 x 29.7 in
- Export Classification: EAR99

50W1000D

- Rated Output Power: 70 watts typ., 50 watts min.
- Input For Rated Output: 1.0 milliwatt max.
- Power Output @ 3dB compression: Typ. 70 watts / Min. 60 watts
- Power Output @ 1dB compression: Typ. 60 watts / Min. 45 watts

- Flatness: ±1.0 dB typ., ±1.5 dB max.
- Frequency Response: 50 MHz - 1000 MHz, instantaneously
- Gain (at max. setting): 48 dB min.
- Gain Adjustment (continuous range): 20 dB min.
- Input Impedance: 50 ohms, VSQR 2.0:1 max.
- Output Impedance: 50 ohms, nominal
- Mismatch Tolerance*: 100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

- Harmonic Distortion: Minus 20 dBc max. at 300 watts
- Spurious: Minus 73 dBc typ.
- Third Order Intercept Point: 55 dBm typ.
- Noise Figure: 8 dB typ.
- Primary Power: 100 - 240 VAC, 50 / 60 Hz, 1800 watts

- Connectors:
  - RF Input: Type N female
  - RF Output: Type N female
- Remote Interfaces:
  - IEEE-488: 24 pin female
  - RS-232: 9 pin Subminiature D female
  - Fiber optic: ST Conn Tx and Rx RS-232
  - USB 2.0: Type B
  - Ethernet: RJ-45
- Safety Interlock: 15 Pin Subminiature D
- Cooling: Forced air (self contained fans)
- Weight:
  - With cabinet: 17.7 kg (39 lb)
  - Without cabinet: 9.5 kg (21 lb)
- Size (WxHxD):
  - With cabinet: 50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in
  - Without cabinet: 48.3 x 13.2 x 55.1 cm / 19.8 x 5.2 x 21.7 in
- Export Classification: EAR99
150W1000B

150 watts CW, 80-1000 MHz

- Rated Output Power: 160 watts typical, 130 watts min.
- Input For Rated Output: 1.0 milliwatt max.
- Power Output @ 3dB compression: Nominal 150 watts / Min. 125 watts
- Weight: 42.6 kg (94 lbs)
- Cooling: Forced air (self contained fans)

250W1000C

250 watts CW, 80-1000 MHz

- Rated Output Power: 250 watts
- Input For Rated Output: 1.0 milliwatt max.
- Power Output @ 3dB compression:
  - Typical: 300 watts, Minimum: 275 watts up to 500 MHz;
  - 250 watts 500-1000MHz
- Weight: 80 to 1000 MHz instantaneously
- Mismatch Tolerance:
  - 100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. See Application Note #27.

500W1000C

500 watts CW, 80-1000 MHz

- Rated Output Power: 600 watts typical, 500 watts Minimum
- Input For Rated Output: 1.0 mW max.
- Power Output @ 3dB compression:
  - Typical: 575 watts, Minimum: 525 watts up to 700 MHz;
  - 475 watts 700-1000MHz
- Weight: 36.7 kg (81 lbs)
- Cooling: Forced air (self contained fans)
**RF Solid State Amplifiers**

### 750W1000B

- **Rated Output Power:** 750 watts CW, 80-1000 MHz
- **Input For Rated Output:** 1.0 milliwatt max.
- **Power Output @ 3dB compression:**
  - Typical: 900 watts; Minimum: 750 watts up to 700 MHz; 930 watts from 700 to 1000 MHz
- **Power Output @ 1dB compression:**
  - Typical: 750 watts; Minimum: 700 watts up to 700 MHz; 650 watts from 700 to 1000 MHz
- **Flatness:** ±1.5 dB max; ±1.0 dB typ.
- **Frequency Response:** 80-1000 MHz; instantaneously
- **Gain (at max. setting):** 6 dB typ.
- **Input Impedance:** 50 ohms, VSWR 1.5:1 max.
- **Output Impedance:** 50 ohms, nominal
- **Gain Adjustment:**
  - Mismatch Tolerance*: 100% of rated power without foldback. Will operate without damage or oscillation with any amplitude and phase of source and load impedance. See Application Note #27.
- **Modulation Capability:**
  - Will faithfully reproduce AM, FM, or Pulse modulation appearing on input signal.
- **Noise Figure:** 8 dB typ.
- **Harmonic Distortion:**
  - Minus 20 dBc at 900 watts, -20 dBc typ. @ 1000 watts
- **Third Order Intercept Point:**
  - 66 dBm typ.
- **Spurious:** Minus 73 dBc typ.
- **Primary Power:** 200-240 VAC
  - 50/60 Hz, 1300 watts
- **Connectors:**
  - RF Input: Type N female on rear panel
  - RF Output: Type 7-16 DIN female on rear panel
- **Remote Interfaces:**
  - IEEE-488: 24 pin female
  - RS-232: 9 pin Subminiature D (female)
  - Fiber Optic: ST Conn Tx and Rx RS-232
  - USB 2.0: Type B
  - Ethernet: RJ-45
- **Safety Interlock:** 15 pin Subminiature D
- **Cooling:** Forced air (self-contained fans)
- **Weight:** 113.4 kg (250 lbs)
- **Size (WxHxD):** 56.1 x 97.8 x 82.5 cm / 22.1 x 38.5 x 32.5 in
- **Export Classification:** EAR99

### 1,000W1000G

- **Rated Output Power:** 1,000 watts CW, 80-1000 MHz
- **Input For Rated Output:** 1.0 milliwatt max.
- **Power Output @ 3dB compression:**
  - Typical: 1200 watts / 1100 watts min. up to 700 MHz; 930 watts from 700 to 1000 MHz
- **Power Output @ 1dB compression:**
  - Typical: 1000 watts / 975 watts min. up to 700 MHz; 900 watts from 700 to 1000 MHz
- **Flatness:** ±1.5 dB max; ±1.0 dB typ.
- **Frequency Response:** 80-1000 MHz; instantaneously
- **Gain (at max. setting):** 60 dB min.
- **Gain Adjustment (continuous range):** 25 dB min.
- **Input Impedance:** 50 ohms, VSWR 1.5:1 max; 1.5:1 typ.
- **Output Impedance:** 50 ohms, nominal
- **Mismatch Tolerance*: 100% of rated power without foldback. Will operate without damage or oscillation with any amplitude and phase of source and load impedance.
- **Harmonic Distortion:**
  - Minus 20 dBc at 1500 watts
  - Minus 73 dBc typ.
- **Third Order Intercept Point:**
  - 66 dBm typ.
- **Spurious:** Minus 73 dBc typ.
- **Primary Power:** 200-240 VAC, 50/60 Hz, 4000 watts
- **Connectors:**
  - RF Input: Type N female on rear panel
  - RF Output: Type 7-16 DIN female on rear panel
  - Remote Interfaces:
    - IEEE-488: 24 pin female
    - RS-232: 9 pin Subminiature D (female)
    - Fiber Optic: ST Conn Tx and Rx RS-232
    - USB 2.0: Type B
    - Ethernet: RJ-45
  - Safety Interlock: 15 pin Subminiature D
  - Cooling: Forced air (self-contained fans)
  - Weight (approximate): 124.8 kg (275 lb)
  - Size (WxHxD): 56.1 x 97.8 x 82.5 cm / 22.1 x 38.5 x 32.5 in
  - Export Classification: EAR99

### 1,500W1000A

- **Rated Output Power:** 1,500 watts CW, 80-1000 MHz
- **Input For Rated Output:** 1.0 milliwatt max.
- **Power Output @ 3dB compression:**
  - Nominal 1600 watts / 1500 watts min. up to 700 MHz; 1420 watts from 700 to 1000 MHz
- **Power Output @ 1dB compression:**
  - Nominal 1450 watts / 1400 watts min. up to 700 MHz; 1250 watts min. from 700 to 1000 MHz
- **Flatness:** ±2.0 dB max; ±1.5 dB typ.
- **Frequency Response:** 80-1000 MHz; instantaneously
- **Gain (at max. setting):** 61.8 dB min.
- **Gain Adjustment (continuous range):** 25 dB min.
- **Input Impedance:** 50 ohms, VSWR 1.5:1 max; 1.5:1 typ.
- **Output Impedance:** 50 ohms, nominal
- **Mismatch Tolerance*: 100% of rated power without foldback. Will operate without damage or oscillation with any amplitude and phase of source and load impedance.
- **Harmonic Distortion:**
  - Minus 20 dBc at 1500 watts
  - Minus 73 dBc typ.
- **Third Order Intercept Point:**
  - 66 dBm typ.
- **Spurious:** Minus 73 dBc typ.
- **Primary Power:** (user must specify)
  - 200-240 VAC
  - 50/60 Hz, 3 phase, 7000 watts
- **Connectors:**
  - RF Input: Type N female on rear panel
  - RF Output: Type 1.5/8 female on rear panel
  - Forward Sample: Type N female, front (-63 dBc)
  - Reverse Sample: Type N female, front (-63 dBc)
  - Remote Interfaces:
    - IEEE-488: 24 pin female
    - RS-232: 9 pin Subminiature D, female
    - Fiber Optic: ST Conn Tx and Rx RS-232
    - USB 2.0: Type B
    - Ethernet: RJ-45
    - Safety Interlock: 15 pin female subminiature D, rear panel
  - Cooling: Forced air (self-contained fans), enters front and bottom
  - Weight (approximate): 182 kg (400 lb)
  - Size (WxHxD): 56.1 x 113.3 x 97.6 cm / 22.1 x 44.8 x 38.4 in

* See Application Note #27A at www.arworld.us/appnote27/
### 2000W1000D

**2,000 watts CW, 80-1000 MHz**

- **Rated Output Power**: 2000 watts min.
- **Input For Rated Output**: 1.0 milliwatt max.
- **Power Output @ 3dB compression**:
  - Nominal 2100 watts / 2000 watts min. up to 500 MHz;
  - 1650 watts from 500 to 1000 MHz.
- **Power Output @ 1dB compression**:
  - Nominal 1850 watts / 1750 watts min. up to 500 MHz;
  - 1420 watts min. from 500 to 1000 MHz.
- **Flatness**: ±2.0 dB max. / ±1.5 dB typ.
- **Frequency Response**: 80 - 1000 MHz; instantaneously.
- **Gain**: (at max. setting) 65 dB min.
- **Gain Adjustment**: (continuous range) 25 dB min.
- **Input Impedance**: 50 ohms, VSWR 1.5:1 max.; 1.3:1 typ.
- **Output Impedance**: 50 ohms, nominal.
- **Mismatch Tolerance*: 100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
- **Harmonic Distortion**: Minus 20 dBc max. at 1620 watts, -20 dBc typ. at 2000 watts.
- **Third Order Intercept Point**: 70 dBm typ.
- **Primary Power** (user must specify):
  - 50 / 60 Hz, 3 phase, 9000 watts.
- **Cooling**: Forced air (self contained fans).
- **Size (WxHxD)** (3 cabinets):
  - 56.1 x 173 x 82.3 cm / 22.1 x 68 x 32.4 in

### 3000W1000B

**3,000 watts CW, 80-1000 MHz**

- **Rated Output Power**: 2800 watts min.
- **Input For Rated Output**: 1.0 milliwatt max.
- **Power Output @ 3dB compression**:
  - Nominal 3000 watts / 2600 watts min. up to 500 MHz;
  - 2400 watts from 500 to 1000 MHz.
- **Power Output @ 1dB compression**:
  - Nominal 2500 watts / 2250 watts min. up to 500 MHz;
  - 1850 watts from 500 to 1000 MHz.
- **Flatness**: ±2.0 dB max. / ±1.5 dB typ.
- **Noise Figure**: 73 dBm typ.
- **Frequency Response**: 80 - 1000 MHz; instantaneously.
- **Gain**: (at max. setting) 64.8 dB min.
- **Gain Adjustment**: (continuous range) 25 dB min.
- **Input Impedance**: 50 ohms, VSWR 1.5:1 max.; 1.3:1 typ.
- **Output Impedance**: 50 ohms, nominal.
- **Mismatch Tolerance*: 100% of rated power without foldback up to 6.0:1 mismatch above, which may limit to 1500 watts reflected power. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
- **Harmonic Distortion**: Minus 20 dBc max. at 2400 watts, -20 dBc typ. at 3000 watts.
- **Third Order Intercept Point**: 72 dBm typ.
- **Primary Power** (user must specify):
  - 50 / 60 Hz, 3 phase, 17.5kVA.
- **Cooling**: Forced air (self contained fans).
- **Size (WxHxD)** (2 joined cabinets):
  - 111.8 x 177.8 x 82.3 cm / 44 x 70 x 32.4 in

### 4000W1000B

**4,000 watts CW, 80-1000 MHz**

- **Rated Output Power**: 3700 watts min.
- **Input For Rated Output**: 1.0 milliwatt max.
- **Power Output @ 3dB compression**:
  - Nominal 4000 watts / 3600 watts min. up to 500 MHz;
  - 3400 watts from 500 to 1000 MHz.
- **Power Output @ 1dB compression**:
  - Nominal 3500 watts / 3200 watts min. up to 500 MHz;
  - 2800 watts from 500 to 1000 MHz.
- **Flatness**: ±2.0 dB max. / ±1.5 dB typ.
- **Noise Figure**: 72 dBm typ.
- **Frequency Response**: 80 - 1000 MHz; instantaneously.
- **Gain**: (at max. setting) 66 dB min.
- **Gain Adjustment**: (continuous range) 25 dB min.
- **Input Impedance**: 50 ohms, VSWR 1.5:1 max.; 1.3:1 typ.
- **Output Impedance**: 50 ohms, nominal.
- **Mismatch Tolerance*: 100% of rated power without foldback up to 6.0:1 mismatch above, which may limit to 2000 watts reflected power. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
- **Harmonic Distortion**: Minus 20 dBc max. at 4000 watts, -20 dBc typ. at 4000 watts.
- **Third Order Intercept Point**: 73 dBm typ.
- **Primary Power** (user must specify):
  - 50 / 60 Hz, 3 phase, 30kVA.
- **Cooling**: Forced air (self contained fans).
- **Size (WxHxD)** (2 joined cabinets):
  - 111.8 x 177.8 x 82.3 cm / 44 x 70 x 32.4 in
RF Solid State Amplifiers
80 to 1000 MHz

6000W1000

6,000 watts CW, 80-1000 MHz

Rated Output Power 6000 watts min.
Input For Rated Output 1.2 milliwatt max.
Power Output @ 3dB compression
Nominal 6000 watts / 5500 watts min. up to 700 MHz;
5120 watts from 700 to 1000 MHz.
Power Output @ 1dB compression
Nominal 5500 watts / 5000 watts min. up to 700 MHz;
4500 watts from 700 to 1000 MHz.

Flatness ±2.0 dB max. / ±1.5 dB typ.
Frequency Response 80 - 1000 MHz: instantaneously
Gain (at max. setting) 67.8 dB min.
Gain Adjustment (continuous range) 25 dB min.
Input Impedance 50 ohms, VSWR 1.5:1 max.; 1.3:1 typ.
Output Impedance 50 ohms, nominal
Mismatch Tolerance* 100% of rated power without foldback up to 6.0:1 mismatch
above, which may limit to 3000 watts reflected power.
Will operate without damage or oscillation with any magnitude
and phase of source and load impedance.

6000W1000A

10,000 watts CW, 80-1000 MHz

Rated Output Power 12500 watts Nominal
Input For Rated Output 10500 watts min. up to 700 MHz;
9500 watts from 700 to 1000 MHz.
Power Output @ 3dB compression
Nominal 12500 watts / 12000 watts min. up to 700 MHz;
10000 watts from 700 to 1000 MHz.
Power Output @ 1dB compression
Nominal 11000 watts / 10500 watts min. up to 700 MHz;
9500 watts from 700 to 1000 MHz.

Flatness ±2.0 dB max. / ±1.5 dB typ.
Frequency Response 80 - 1000 MHz: instantaneously
Gain (at max. setting) 70 dB min.
Gain Adjustment (continuous range) 25 dB min.
Input Impedance 50 ohms, VSWR 1.5:1 max.; 1.3:1 typ.
Output Impedance 50 ohms, nominal
Mismatch Tolerance* 100% of rated power without foldback up to 6.0:1 mismatch
above, which may limit to 6000 watts reflected power.
Will operate without damage or oscillation with any magnitude
and phase of source and load impedance.

Modulation Capability Faithfully reproduces AM, FM, or Pulse modulation appearing
on input signal.
Harmonic Distortion Minus 20 dBc max. at 6000 watts,
-25 dBc typ. at 10000 watts
Third Order Intercept Point 75 dBm typ.
Noise Figure 8 dB max., 6 dB typ.

Primary Power (specify voltage) 200 - 240 VAC Delta connected (4-wire),
360 - 435 VAC Wye connected (5-wire)
50 / 60 Hz, three phase, 48000W
Connectors RF Input Type N female on rear panel
RF Output Type 1 5/8 female on rear panel
Forward Sample Type N female, front (-70 dBc)
Reverse Sample Type N female, front (-70 dBc)
Remote Interfaces:
IEEE-488 24-pin female
RS-232 9-pin Subminiature D, female
Fiber Optic ST Conn Tx and Rx RS-232
USB 2.0 Type B
Ethernet RJ-45
Safety Interlock 15 pin female subminiature D, rear panel
Cooling Forced air (self contained fans), enters front and bottom
Weight (approximate) 703 kg (1550 lb)
Size (WxHxD) (3 joined cabinets) 170 x 183 x 99 cm / 67 x 72 x 39 in
Export classification EAR99

10000W1000A

10,000 watts CW, 80-1000 MHz

Rated Output Power 12500 watts Nominal
Input For Rated Output 10500 watts min. up to 700 MHz;
9500 watts from 700 to 1000 MHz.
Power Output @ 3dB compression
Nominal 12500 watts / 12000 watts min. up to 700 MHz;
10000 watts from 700 to 1000 MHz.
Power Output @ 1dB compression
Nominal 11000 watts / 10500 watts min. up to 700 MHz;
9500 watts from 700 to 1000 MHz.

Flatness ±2.0 dB max. / ±1.5 dB typ.
Frequency Response 80 - 1000 MHz: instantaneously
Gain (at max. setting) 70 dB min.
Gain Adjustment (continuous range) 25 dB min.
Input Impedance 50 ohms, VSWR 1.5:1 max.; 1.3:1 typ.
Output Impedance 50 ohms, nominal
Mismatch Tolerance* 100% of rated power without foldback up to 6.0:1 mismatch
above, which may limit to 6000 watts reflected power.
Will operate without damage or oscillation with any magnitude
and phase of source and load impedance.

Modulation Capability Faithfully reproduces AM, FM, or Pulse modulation appearing
on input signal.
Harmonic Distortion Minus 20 dBc max. at 12500 watts,
-25 dBc typ. at 12500 watts
Third Order Intercept Point 78 dBm typ.
Noise Figure 8 dB max., 6 dB typ.

Primary Power (specify voltage) 200 - 240 VAC Delta connected (4-wire),
360 - 435 VAC Wye connected (5-wire)
50 / 60 Hz, three phase, 48000W
Connectors RF Input Type N female on rear panel
RF Output Type 4-1/16 EIA, rear panel
Forward Sample Type N female, front (-70 dBc)
Reverse Sample Type N female, front (-70 dBc)
Remote Interfaces:
IEEE-488 24-pin female
RS-232 9-pin Subminiature D, female
Fiber Optic ST Conn Tx and Rx RS-232
USB 2.0 Type B
Ethernet RJ-45
Safety Interlock 15 pin female subminiature D, rear panel
Cooling Forced air (self contained fans), enters front and bottom
Weight (approximate) 1407 kg (3100 lbs)
Size (WxHxD) 140 x 183 x 99 cm / 134 x 72 x 39 in
Export classification EAR99

* See Application Note #27A at www.arworld.us/appnote27/