



**HIGH POWER
AMPLIFIERS**
A600 Series
200 - 300 Watts CW
1.0 GHz - 18.0 GHz

DESCRIPTION

The A600 series of high power, linear broadband microwave amplifiers provide the user with proven reliable instrumentation for a wide variety of test and system applications. Each amplifier features regulation of the helix, filament and grid power supplies, thus providing stable operation and long life for the TWTs.

The TWT is fully protected against power supply malfunctions such as helix overcurrent, the power supply is designed to incorporate depressed collector TWTs as manufactured by several suppliers, allowing for wide flexibility in meeting your needs.

Optionally, the TWTAs can be supplied with complete input and output VSWR protection.

FEATURES

- **Monitors**
 - Collector Current Voltage
 - Helix Current Meter
- **Status Indicators**
 - Power On
 - RF Standby/On
 - **Faults:**
 - Helix Overcurrent
 - VSWR Overload
 - Power Supply Thermal Overload
 - TWT Thermal Overload
 - Air Flow
- **Controls**
 - Power On/Off
 - RF Standby/On
 - Fault Reset
 - Local/Remote
- **Ease of Maintenance**
- **Designed to meet the safety requirements of IEC-348 and UL1419**
- **Broadband Frequency**

APPLICATIONS

- **EMC Susceptibility Testing**
- **Communications**

- General Laboratory Instrumentation
- System Amplifiers
- Threat Simulation
- Antenna Patterns Testing
- High Power Component Testing

RF SPECIFICATIONS

| Model | Frequency | Min Pwr | Min Sat | Max NF |
|---------------------|-------------|---------|---------|--------|
| 200 WATTS CW | | | | |
| A600/L | 1.0 - 2.0 | 200 | 30 | 35 |
| A600/S | 2.0 - 4.0 | 200 | 37 | 35 |
| A600/SC | 2.6 - 5.2 | 200 | 35 | 35 |
| A600/EH | 2.0 - 8.0 | 200 | 36 | 35 |
| A600/C | 4.0 - 8.0 | 200 | 40 | 37 |
| A600/X | 8.0 - 12.4 | 200 | 40 | 35 |
| A600/XU | 8.5 - 17.0 | 200 | 37 | 35 |
| A600/J | 12.4 - 18.0 | 200 | 30 | 35 |
| A600/IJ | 8.0 - 18.0 | 200 | 30 | 35 |
| 250 WATTS CW | | | | |
| A610/LS | 1.0 - 2.5 | 250 | 38 | 35 |
| A610/S | 2.0 - 4.0 | 250 | 38 | 35 |
| A610/C | 4.0 - 8.0 | 250 | 40 | 35 |
| A610/X | 8.0 - 12.0 | 250 | 40 | 35 |
| A610/U | 12.0 - 18.0 | 250 | 35 | 35 |
| A610/IJ | 8.0 - 18.0 | 250 | 30 | 35 |
| 300 WATTS CW | | | | |
| A620/IJ | 6.0 - 18.0 | 300 | 34 | 35 |

*Higher output power and gains available

Spurious: -40 dBc (-50 dBc available)

| | | |
|--------------------------|-----------------------------|---------------|
| Spurious: | -40 dBc (-50 dBc available) | |
| In/Out Impedance: | 50 Ohms | |
| In/Out VSWR: | 2.5:1 Maximum | |
| Residual AM/FM: | 1% maximum (-40dBc) | |
| RF Connectors: | | |
| Frequency: | <u>Input</u> | <u>Output</u> |
| 1.0 - 8.0 | Type N | Type N |
| 8.0 - 12.4 | Type N | WR90 |
| 12.4 - 18.0 | Type N | WR62 |
| 8.0 - 18.0 | Type N | WRD750 |
| Location: | Front Panel | Front Panel |

ENVIRONMENTAL

| | |
|------------------------|--------------------------------|
| Operating Temperature: | 0 to 50°C (40°C @ 10,000 feet) |
| Relative Humidity: | 95% (noncondensing) |
| Operating Altitude: | 10,000 feet Maximum |
| NonOperating Temp.: | -20 to 70°C |
| NonOperating Altitude: | 50,000 feet Maximum |

PRIME POWER

208 VAC, ±10%, Three Phase, 50/60 Hz, 2.5 kVA maximum

MECHANICAL

| | |
|--------------------|---|
| Dimensions: | 14" H x 17" W x 25" D (356mm x 432mm x 635mm) Rack Mount |
| Weight: | 175 pounds (79.6 kg) |
| Cooling: | Internal Forced Air Air Intake: Front Panel Air Exhaust: Rear Panel |

REMOTE OPERATION

Standard: Operating mode control and status monitoring via dedicated circuits.

OPTIONS AVAILABLE

| | |
|---------------|--|
| Option 03: | Reflected Power Cutoff VSWR Protection (1) |
| Option 04-XX: | Alternate Prime Power (2) |
| Option 07: | Input Pin diode Pulse Modulator with 40 dB Isolation, 15ns rise/fall times (1) |
| Option 09: | Integral Input Isolator (1) |
| Option 10: | Relay Remote |
| Option 10-1: | IEEE-488 GPIB Remote |
| Option 12: | RF Sample of the output (-50 dBc) (1) |

- Option 12: RF Sample of the output (-50 dBc) (1)
Option 13: Chassis Slides for Standard 19" Rack Mounting
Option 14: Internal Preamplifier for rated power @ less than 0 input.
Option 15: Input Attenuator; 20 dB range (1)
Option 18: RF Input/Output Connectors on the Rear Panel
Other options available (2)

NOTES:

- (1) Option may affect rated output power and gain
(2) Consult factory for features and other functions
(3) Typically -46 dBc AM; -55 dBc FM