Catalog

RF POWER AMPLIFIERS

# RF POWER AMPLIFIERS


ACQUITEK

# RF Power Amplifiers Catalog

### Company Overview

Electronics & Innovation, Ltd is a focused and dynamic company fulfilling the market demand for rugged and reliable RF power amplifiers. Founded in 2003, by former ENI engineers and executives, E&I was incorporated on the 16th of March, 2004. We are located in Rochester, NY, where all products are designed, assembled, and tested at our facility. E&I services and supports all major markets; operating globally through distributor outlets worldwide.

E&I is committed to providing RF power amplifier solutions of the highest quality, durability, and ruggedness. Our amplifiers have under gone tests by the military and have proven to be even more reliable than the original ENI amplifiers. In addition unlike the old ENI amplifiers, they are CE marked, RoHS Compliant and meet all relevant emissions and safety standards.

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## TABLE OF CONTENTS

# TABLE OF CONTENTS




## Phased Array Systems



## Switchable Transformers



## Matching Transformers



## Power Indicators



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# 1000S04 Power Amplifier

The 1000S04 Amplifier is a rugged source of RF power for ultrasonic applications. It is a totally solid state solution employing Power MOSFETS in a full bridge PWM power stage. Operating at a significantly higher frequency than the fundamental signal

Flexible Operation:

The 1000S04 produces 1000 Watts of power over a frequency range of 20 to 400 KHz, with a nominal power gain of 60dB (+/-1dB). Operation over the entire frequency range is possible without the need for any switching or tuning.

Sample ports are provided: 50Ω termination

Voltage Sample 1V/50V rms

Current Sample 1V/A rms

Samples are the actual output waveform scaled as shown


**Class of Operation**
Class D/S

**Frequency Range**
20 KHz to 400 KHz

**Rated Power Output**
1,000 Watts

**Power Gain**
60 dB nominal

**Gain Flatness**
+/- 1 dB

**Input Power for Rated Output**
1mW or 0dBm into 50Ω

**Input Impedance**
50 Ω VSWR 1.5:1 Max (optional 10 KΩ)

**Output Impedance**
50 Ω VSWR 1.1:1 Max for rated power

**Ruggedness**
Any load VSWR, any phase from open to Short circuit without damage.

**Drive Source Requirements**
Any signal Generator, function Generator or oscillator capable of up to 0dBm into 50Ω
(1mW / 223 mV / 632mVp-p)

**Protection:**
INPUT: unit will withstand up to +30dBm input without damage.

THERMAL: the unit can operate at 45°C ambient.

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 84–240 VAC 50-60 Hz,
Temperature Range : 0 – 45° C
Cooling : Forced air.
Weight: 14lbs (6.35 KG)
Dimensions
H = 3.5“ (88.9mm)
D = 19“ (482.6mm)
W = 22.5“ (571.5mm)

# 1240L Power Amplifier

The 1240L Amplifier is a rugged source of RF power for ultrasonic, induction heating and laser modulation as well as plasma applications.

It is a totally solid state solution employing RF DMoS FETs in the power amplification stages, offering simultaneous forward and reverse power readouts, and an RS232 port for data collection. The 1240L reflects E&I's commitment to reliable and robust RF power.

Flexible Operation:

The 1240L produces 2000 Watts of quasi linear class AB power over a frequency range of 20 KHz to 1 MHz, with a nominal power gain of 58 dB (+/-2dB). Operation over the entire frequency range is possible without the need for any

switching.

The front panel display provides simultaneous measurements of forward and reflected power as well as the unit's status. The RS232 connector at the rear of the unit can also be used to capture this data and reset the unit should a fault occur.

The E&I 1240L is a 19" rack mount unit 24.5" high. It employs an integral power supply capable of operation from 200-240 VAC 50–60 Hz. The unit weighs approximately 190 lbs or 90 Kg.

**Class of Operation**
Class AB

**Frequency Range**
20 KHz to 1 MHz

**Rated Power Output**
2,000 Watts

**Power Gain**
58 dB nominal

**Gain Flatness**
+/- 2 dB

**Input Power for Rated Output**
3 mW or 5 dBm

**Input Impedance**
50 Ω

**Output Impedance**
50 Ω

**Ruggedness**
Any load VSWR, any phase from open to Short circuit without damage.

**Front Panel Accuracy**
+/- 3% of rated power

**Drive Source Requirements**
Any signal Generator, function Generator or oscillator capable of up to 1.2 Vpp into 50Ω

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

THERMAL: the unit can operate at 45°C ambient. If the internal temperature becomes too high the unit will shut down and an error message will appear on the front panel. The unit may be re-set by cycling the power or from the RS232 input.

MISMATCH: the unit will tolerate any mismatch subject to thermal protection.

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 200–240 VAC 50-60 Hz, Max current 30 Amps
Temperature Range : 0 – 45° C
Cooling : Forced air.
Weight: 190 lbs (90 KG)
Dimensions
H = 24.75" (629mm)
D = 20" (510mm)
W = 16.5" (419mm)

# 1140LA Power Amplifier

The 1140LA Amplifier is a rugged source of RF power for ultrasonic, induction heating and laser modulation as well as plasma applications.

It is a totally solid state solution employing RF DMoS FETs in the power amplification stages, offering simultaneous forward and reverse power readouts, and an RS232 port for data collection. The 1140LA reflects E&I's commitment to reliable and robust RF power.

Flexible Operation:

The 1140LA produces 1000 Watts of quasi linear class AB power over a frequency range of 10 KHz to 2 MHz, with a nominal power gain of 55 dB (+/-1dB). Operation up to 5 MHz is achieved with a lower power gain.

The front panel display provides simultaneous measurements of forward and reflected power as well as the unit's status. The RS232 connector at the rear of the unit can also be used to capture this data and reset the unit should a fault occur.

The E&I 1140LA is a 19" rack mount unit 8U high. It employs an integral power supply capable of operation from 120 - 240 VAC, 50 – 60 Hz. The unit weighs approximately 108 lbs or 48 Kg.


**Class of Operation**
Class AB

**Frequency Range**
10 KHz to 2 MHz

**Rated Power Output**
1,000 Watts

**Power Gain**
55 dB nominal

**Gain Flatness**
+/- 1 dB

**Input Power for Rated Output**
5 mW or 0.7 dBm

**Input Impedance**
50 Ω

**Output Impedance**
50 Ω

**Ruggedness**
Any load VSWR, any phase from open to Short circuit without damage.

**Front Panel Accuracy**
+/- 3% (Up to 2 MHz)

**Drive Source Requirements**
Any signal Generator, function Generator or oscillator capable of up to 1.4Vpp into 50Ω

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

THERMAL: the unit can operate at 45°C ambient. If the internal temperature becomes too high the unit will shut down and an error message will appear on the front panel. The unit may be re-set by cycling the power or from the RS232 input.

MISMATCH: the unit will tolerate any mismatch subject to thermal protection.

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 200–240 VAC 50-60 Hz, Max current 25 Amps
Temperature Range : 0 – 45° C
Cooling : Forced air.
Weight: 108 lbs (49 KG)
Dimensions
H = 13.12" (333.2mm)
D = 20.1" (510.1mm)
W = 16.71" (424.4mm)

# 1040L Power Amplifier

The 1040L Amplifier is a rugged source of RF power for ultrasonic, induction heating and laser modulation as well as plasma applications.

It is a totally solid state solution employing RF DMoS FETs in the power amplification stages, offering simultaneous forward and reverse power readouts, and an RS232 port for data collection. The 1040L reflects E&I's commitment to reliable and robust RF power.

Flexible Operation:

The 1040LA produces 400 Watts of quasi linear class AB power over a frequency range of 10 KHz to 5 MHz, with a nominal power gain of 55 dB (+/-2dB). Operation over the entire frequency range is possible without the need for any switching.

The front panel display provides simultaneous measurements of forward and reflected power as well as the unit's status. The RS232 connector at the rear of the unit can also be used to capture this data and reset the unit should a fault occur.

The E&I 1040L is a 19" rack mount unit 3U high. It employs an integral power supply capable of operation from 115- 220 VAC, 50 – 60 Hz. The unit weighs approximately 54 lbs or 25 Kg.


**Class of Operation**
Class AB

**Frequency Range**
10 KHz to 5 MHz

**Rated Power Output**
400 Watts

**Power Gain**
55 dB nominal

**Gain Flatness**
+/- 1 dB to 1MHz
+/- 2 dB to 5MHz

**Input Power for Rated Output**
1.3 mW or 1.14 dBm

**Input Impedance**
50 Ω / VSWR 1.5:1 Max

**Output Impedance**
50 Ω / VSWR 2:1 Max

**Ruggedness**
Any load VSWR, any phase from open to Short circuit without damage.

**Front Panel Accuracy**
+/- 3% 100KHz—1MHz

**Drive Source Requirements**
Any signal Generator, function Generator or oscillator capable of up to 0.7Vpp into 50Ω

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

THERMAL: the unit can operate at 45°C ambient. If the internal temperature becomes too high the unit will shut down and an error message will appear on the front panel. The unit may be re-set by cycling the power or from the RS232 input. MISMATCH: the unit will tolerate any mismatch subject to thermal protection.

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 104–240 VAC 50-60 Hz, Max current 9 Amps
Temperature Range : 0 – 45° C
Cooling : Forced air.
Weight: 54 lbs (24.4 KG)
Dimensions
H = 5.3" (134.5mm)
D = 20.0" (508mm)
W = 16.5" (420mm)

# 1020L Power Amplifier

The 1020L Amplifier is a rugged source of RF power for ultrasonic, induction heating and laser modulation as well as plasma applications.

It is a totally solid state solution employing RF DMoS FETs in the power amplification stages, offering simultaneous forward and reverse power readouts, and an RS232 port for data collection. The 1020L reflects E&I's commitment to reliable and robust RF power.

Flexible Operation:

The 1020LA produces 200 Watts of quasi linear class AB power over a frequency range of 10 KHz to 5 MHz, with a nominal power gain of 53 dB (+/-1.5dB). Operation over the entire frequency range is possible without the need for any switching.

The front panel display provides simultaneous measurements of forward and reflected power as well as the unit's status. The RS232 connector at the rear of the unit can also be used to capture this data and reset the unit should a fault occur.

The E&I 1020L is a 19" rack mount unit 3U high. It employs an integral power supply capable of operation from 115- 220 VAC, 50 – 60 Hz. The unit weighs approximately 45 lbs or 16 Kg.


**Class of Operation**
Class AB

**Frequency Range**
10 KHz to 5 MHz

**Rated Power Output**
200 Watts

**Power Gain**
53 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
1.0mW or 0 dBm

**Input Impedance**
50 Ω

**Output Impedance**
50 Ω

**Ruggedness**
Any load VSWR, any phase from open to Short circuit without damage.

**Front Panel Accuracy**
+/- 3% accuracy through 2 MHz

**Drive Source Requirements**
Any signal Generator, function Generator or oscillator capable of up to 0.7Vpp into 50Ω

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

THERMAL: the unit can operate at 45°C ambient. If the internal temperature becomes too high the unit will shut down and an error message will appear on the front panel. The unit may be re-set by cycling the power or from the RS232 input. MISMATCH: the unit will tolerate any mismatch subject to thermal protection.

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 104–240 VAC 50-60 Hz, Max current 9 Amps
Temperature Range : 0 – 45° C
Cooling : Forced air.
Weight: 45 lbs (16KG)
Dimensions
H = 5.3" (134.5mm)
D = 18.4" (467mm)
W = 16.5" (420mm)

# 210L Power Amplifier

The 210L Amplifier is a rugged source of RF power, useful for ultrasonics, laser modulation, RFI/EMI, plasma equipment and general laboratory applications. The 210L represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The 210L produces 10 Watts of Class A linear power output over the entire frequency range from 10 KHz to 20 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 40 dB with a typical gain flatness of +/- 1.5 dB

The 210L is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The 210L is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS FETs, de-rated to provide for excellent MTBF figures.


**Class of Operation**
Class A

**Frequency Range**
10 KHz to 20 MHz

**Rated Power Output**
10 Watts

**Saturated Power**
20 Watts

**Power Gain**
40 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
1.0mW or 0 dBm

**Input Impedance**
50 Ω / VSWR 1.5:1 max

**Output Impedance**
50 Ω / VSWR 2:1 max

**Harmonic Level**
< -20dBc

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

**Third Order Intercept Point**
IP3 ~ 56dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 104–240 VAC 50-60 Hz
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 8.5 lbs (3.9KG)
Dimensions
H = 3.25" (82.55mm)
D = 12.0" (304mm)
W = 13.5" (342.9mm)

# 240L Power Amplifier

The 240L Amplifier is a rugged source of RF power, useful for ultrasonics, laser modulation, RFI/EMI, plasma equipment and general laboratory applications. The 240L represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The 240L produces 40 Watts of Class A linear power output over the entire frequency range from 10 KHz to 12 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 50 dB with a typical gain flatness of +/- 1.5 dB

The 240L is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The 240L is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS FETs, de-rated to provide for excellent MTBF figures.


**Class of Operation**
Class A

**Frequency Range**
10KHz to 12 MHz

**Rated Power Output**
40 Watts

**Power Gain**
50 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
0.4mW or –4 dBm

**Input Impedance**
50 Ω / VSWR 1.5:1 max

**Output Impedance**
50 Ω / VSWR 2:1 max

**Harmonic Level**
< -25dBc

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

**Third Order Intercept Point**
IP3 ~ 59dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 104–240 VAC 50-60 Hz, Max current 3 Amps
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 32.5lbs (14.8KG)
Dimensions
H = 5.3" (8134.5mm)
D = 18.4" (467mm)
W = 16.5" (420mm)

# 2100L Power Amplifier

The 2100L Amplifier is a rugged source of RF power, useful for ultrasonics, laser modulation, RFI/EMI, plasma equipment and general laboratory applications. The 2100L represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The 2100L produces 100 Watts of class A linear power output over the entire frequency range from 10 KHz to 12 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 50 dB with a typical gain flatness of +/- 1.5 dB

The 2100L is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The 2100L is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS FETs, de-rated to provide for excellent MTBF figures.


**Class of Operation**
Class A

**Frequency Range**
10KHz to 12 MHz

**Rated Power Output**
100 Watts

**Power Gain**
50 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
1 mW

**Input Impedance**
50 Ω / VSWR 1.5:1 max

**Output Impedance**
50 Ω / VSWR 2:1 max

**Harmonic Level**
< -25dBc

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

Front Panel Meter
Front panel indicates up to 200 Watts into 50Ω

**Third Order Intercept Point**
IP3 ~ 59dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 104–240 VAC 50-60 Hz, Max current 3.9 Amps
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 35lbs (16KG)
Dimensions
H = 5.3" (8134.5mm)
D = 18.4" (467mm)
W = 16.5" (420mm)

# 2200L Power Amplifier

The 2200L Amplifier is a rugged source of RF power, useful for ultrasonics, laser modulation, RFI/EMI, plasma equipment and general laboratory applications. The 2200L represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The 2200L produces 200 Watts of class A linear power output over the entire frequency range from 10 KHz to 12 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 53 dB with a typical gain flatness of +/- 1.5 dB

The 2200L is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The 2200L is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS FETs, de-rated to provide for excellent MTBF figures.


**Class of Operation**
Class A

**Frequency Range**
10KHz to 15 MHz

**Rated Power Output**
200 Watts

**Saturated Power Output**
10KHz to 15MHz > 250 Watts
30KHz to 10MHz > 300 Watts

**Power Gain**
53 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
1 mW

**Input Impedance**
50 Ω / VSWR 1.5:1 max

**Output Impedance**
50 Ω / VSWR 2:1 max

**Harmonic Level**
< -25dBc

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

**Front Panel Meter**
Front panel indicates forward and reflected power

**Third Order Intercept Point**
IP3 ~ 62dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 104–240 VAC 50-60 Hz, Max current 8.4 Amps
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 45lbs (20.5Kg)
Dimensions
H = 5.3" (134.5mm)
D = 18.4" (467mm)
W = 16.5" (420mm)

# 2400L Power Amplifier

The 2400L Amplifier is a rugged source of RF power, useful for ultrasonics, HF transmitters, RFI/EMI, plasma equipment and general laboratory applications. The 2400L represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The 2400L produces 400 Watts of Class A linear power output over the entire frequency range from 10 KHz to 10 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 55 dB with a typical gain flatness of +/- 1.5 dB

The 2400L is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM, FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The 2400L is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS FETs, de-rated to provide for excellent MTBF figures.

**Class of Operation**
Class A

**Frequency Range**
10KHz to 10 MHz

**Rated Power Output**
400 Watts

**Saturated Power Output**
550 Watts Maximum

**Power Gain**
55dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
1 mW

**Input Impedance**
50 Ω / VSWR 1.5:1 max

**Output Impedance**
50 Ω / VSWR 2:1 max

**Harmonic Level**
< -21dBc

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

**Front Panel Meter**
Front panel indicates forward and reflected power

**Third Order Intercept Point**
IP3 ~ 64dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 104–240 VAC 50-60 Hz,
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 95lbs (43Kg)
Dimensions
H = 13" (330.2mm)
D = 18.1" (459.7mm)
W = 16.5" (419mm)

# 2500L Power Amplifier

The 2500L Amplifier is a rugged source of RF power for ultrasonics, induction heating and-laser modulation as well as plasma applications.It is a totally solid state solution employing RF DMoS FETs in the power amplification stages, offering simultaneous forward and reverse power readouts, and an RS232 port for data collection. The 2500L reflects E&I's commitment to reliable and robust RF power.

Flexible Operation:

The 2500L produces 500 Watts of linear class A power over a frequency range of 50 KHz to 12 MHz, with a nominal power gain of 60 dB (+/- 2dB). Operation over the entire frequency range is possible without the need for any switching.

The front panel display provides simultaneous measurements of forward and reflected power as well as the unit's status. The RS232 connector at the rear of the unit can also be used to capture this data and reset the unit should a fault occur.

The E&I 2500L is a 19" rack mount unit 24.5" high. It employs an integral power supply capable of operation from 200-240 VAC 50–60 Hz. The unit weighs approximately 190 lbs or 90 Kg.


**Class of Operation**
Class A

**Frequency Range**
50KHz to 12 MHz

**Rated Power Output**
500 Watts

**Power Gain**
60dB nominal

**Gain Flatness**
+/- 2 dB

**Input Power for Rated Output**
0.5 mW or –3 dBm

**Input Impedance**
50 Ω

**Output Impedance**
50 Ω

**Ruggedness**
Any load VSWR, any phase from open to Short circuit without damage.

**Front Panel Accuracy**
+/- 3% of rated power

**Drive source requirements**
Any signal Generator, function Generator or oscillator capable of up to 1 Vpp into 50 Ω

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

THERMAL: the unit can operate at 45°C ambient. If the internal temperature becomes too high the unit will shut down and an error message will appear on the front panel. The unit may be re-set by cycling the power or from the RS232 input.

MISMATCH: the unit will tolerate any mismatch subject to thermal protection.

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 104–240 VAC 50-60 Hz, max current 20 Amps
Temperature Range : 0 – 45° C
Cooling : Forced air.
Weight: 190lbs (90Kg)
Dimensions
H = 24.75" (629mm)
D = 20" (510mm)
W = 16.5" (419mm)

# A-075 Power Amplifier

The A-075 Amplifier is a rugged source of RF power, useful for ultrasonics, HF transmitters, RFI/EMI, plasma equipment and general laboratory applications. The A-075 represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The A-075 produces 75 Watts of class A linear power output over the entire frequency range from 300 KHz to 35 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 50 dB with a typical gain flatness of +/- 1.5 dB

The A-075 is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The A-075 is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS FETs, de-rated to provide for excellent MTBF.


**Class of Operation**
Class A

**Frequency Range**
300KHz to 35 MHz

**Rated Power Output**
75 Watts

**Saturated Power Output**
100 W Maximum

**Power Gain**
50 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
1 mW Max

**Input Impedance**
50 Ω / VSWR 1.5:1 max

**Output Impedance**
50 Ω / VSWR 1.25:1 max

**Harmonic Level**
< -25dBc

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

**Front Panel Meter**
Front panel indicates forward and reflected power

**Third Order Intercept Point**
IP3 ~ 60dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 104–240 VAC 50-60 Hz, Max current 4.5 Amps
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 35lbs (16Kg)
Dimensions
H = 5.3" (134.5mm)
D = 18.4" (467mm)
W = 16.5" (420mm)

# A-150 Power Amplifier

The A-150 Amplifier is a rugged source of RF power, useful for ultrasonics, HF transmitters, RFI/EMI, plasma equipment and general laboratory applications. The A-150 represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The A-150 produces 150 Watts of class A linear power output over the entire frequency range from 300 KHz to 35 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 55 dB with a typical gain flatness of +/- 1.5 dB

The A-150 is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The A-150 is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS FETs, de-rated to provide for ex-


**Class of Operation**
Class A

**Frequency Range**
300KHz to 35 MHz

**Rated Power Output**
150Watts

**Saturated Power Output**
250 W Maximum

**Power Gain**
55 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
0.5 mW Max

**Input Impedance**
50 Ω / VSWR 1.5:1 max

**Output Impedance**
50 Ω / VSWR 1.25:1 max

**Harmonic Level**
< -25dBc @ 125W

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

**Front Panel Meter**
Front panel indicates forward and reflected power

**Third Order Intercept Point**
IP3 ~ 60dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 104–240 VAC 50-60 Hz, Max current 4.5 Amps
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 48lbs (21.8Kg)
Dimensions
H = 5.3" (134.5mm)
D = 18.4" (467mm)
W = 16.5" (420mm)

# A-300 Power Amplifier

The A-300 Amplifier is a rugged source of RF power, useful for ultrasonics, HF transmitters, RFI/EMI, plasma equipment and general laboratory applications. The A-300 represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The A-300 produces 300 Watts of class A linear power output over the entire frequency range from 300 KHz to 35 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 55 dB with a typical gain flatness of +/- 1.5 dB

The A-300 is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The A-300 is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS FETs, de-rated to provide for excellent MTBF.

**Class of Operation**
Class A

**Frequency Range**
300KHz to 35 MHz

**Rated Power Output**
300Watts

**Saturated Power Output**
>500 W 300KHz—25MHz
>400 W 25MHz—35MHz

**Power Gain**
55 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
1 mW Max

**Input Impedance**
50 Ω / VSWR 1.5:1 max

**Output Impedance**
50 Ω / VSWR 1.25:1 max

**Harmonic Level**
< -24dBc @ 125W

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

**Front Panel Meter**
Front panel indicates forward and reflected power

**Third Order Intercept Point**
IP3 ~ 63dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 104–240 VAC 50-60 Hz, Max current 15 Amps
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 95lbs (43Kg)
Dimensions
H = 13.12" (333.2mm)
D = 20.1" (510.1mm)
W = 16.71" (424.4mm)

# A-500 Power Amplifier

The A-500 Amplifier is a rugged source of RF power, useful for ultrasonics, HF transmitters, RFI/EMI, plasma equipment and general laboratory applications. The A-500 represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The A-500 produces 500 Watts of class A linear-power output over the entire frequency range from 300 KHz to 35 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 60 dB with a typical gain flatness of +/- 1.5 dB

The A-500 is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The A-500 is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS for excellent MTBF.

**Class of Operation**
Class A

**Frequency Range**
300KHz to 35 MHz

**Rated Power Output**
500Watts

**Saturated Power Output**
700 W  Maximum

**Power Gain**
60 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
0.5 mW  Max

**Input Impedance**
50 Ω  / VSWR 1.5:1 max

**Output Impedance**
50 Ω  / VSWR 1.25:1 max

**Harmonic Level**
< -23dBc

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

**Front Panel Meter**
Front panel indicates forward and reflected power

**Third Order Intercept Point**
IP3  ~ 63dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

AC : 104–240 VAC 50-60 Hz, Max current 15 Amps
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 190lbs (86Kg)
Dimensions
H = 25" (635mm)
D = 20" (432mm)
W = 17" (508mm)

# A-1000 Power Amplifier

The A1000 Amplifier is a rugged source of RF power, useful for ultrasonics, HF transmitters, RFI/EMI, plasma equipment and general laboratory applications. The A1000 represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The A1000 produces 1000 Watts of class A linear power output over the entire frequency range from 300 KHz to 35 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 60 dB with a typical gain flatness of +/- 1.5 dB

The A1000 is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The A1000 is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS FETs, de-rated to provide for excellent MTBF.

**Class of Operation**
Class A

**Frequency Range**
300KHz to 35 MHz

**Rated Power Output**
1000Watts

**Saturated Power Output**
1800 W  Maximum

**Power Gain**
60 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
1 mW  Max

**Input Impedance**
50 Ω  / VSWR 1.5:1 max

**Output Impedance**
50 Ω  / VSWR 1.25:1 max

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

**Front Panel Meter**
Front panel indicates forward and reflected power +/-5%

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

3 Phase 208 VAC  50-60 Hz, Max current 30 Amps
Temperature Range : 0 – 30° C
Cooling : Forced air.
Weight: 650lbs (295Kg)
Dimensions
30 x 24 x 62 inches Rack
762 x 210 x 1575 mm

# 325LA Power Amplifier

The 325LA Amplifier is a rugged source of RF power for HF and VHF transmitters, RFI / EMI testing, plasma equipment and general laboratory applications.

Utilizing solid state ruggedized MosFet devices, it features an internal RMS power meter and concurrently displays both forward and reverse power.

The 325LA produces 25 Watts of Class A linear power over the frequency range of 250 KHz to 150 MHz with low harmonic distortion. Operation over the entire frequency band is possible without the need for any switching, it is true instantaneous bandwidth. The unit is rated at 50 dB gain with a typical gain flatness of +/- 1.5 dB

The 325LA is a rugged amplifier built to withstand an input of +13 dBm (1.0V RMS) for all output load conditions including shorts and open circuits.

The unit amplifies inputs of AM, FM SSB, TV and all complex modulation forms with <-23 dBc harmonic distortion and low spurious content.


**Class of Operation**
Class A

**Frequency Range**
250KHz to 150 MHz

**Rated Power Output**
25 Watts

**Saturated Power Output**
50 W  Maximum

**Power Gain**
50 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
0.25 mW / -1.6dBm

**Input Impedance**
50 Ω  / VSWR 1.5:1 max

**Output Impedance**
50 Ω  / VSWR 2.1 max

**Harmonic Level**
<-23 dBc @ 20 Watts output

**Ruggedness**
∞:1 VSWR

**Source requirements**
Signal / function generator or oscillator capable of 0.25 mW into 50 Ω

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

**Front Panel Meter**
Front panel indicates forward and reflected power

**Third Order Intercept Point**
IP3 ~ 53 dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

100 –240 VAC  47-63 Hz, Max current 3 Amps
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 20lbs (9Kg)
Dimensions
(H x W x D)
7.5 x 9.5 x 12.5 inches
190.5 x 241 x 317.5 mm

# 350L Power Amplifier

The 350L Amplifier is a rugged source of RF power, useful for RFI/EMI, HF and VHF transmitters, plasma equipment, nuclear accelerators and general laboratory applications. The 350L represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The 350L produces 50 Watts of class A linear power output over the entire frequency range from 250 KHz to 150 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 50 dB with a typical gain flatness of +/- 1.5 dB

The 350L is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The 350L is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling pro-


**Class of Operation**
Class A

**Frequency Range**
250KHz to 150 MHz

**Rated Power Output**
50 Watts

**Saturated Power Output**
>90 W 250KHz to 150MHz
>100W 1MHz to 100MHz

**Power Gain**
47 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
1 mW / -1.6dBm

**Input Impedance**
50 Ω / VSWR 1.5:1 max

**Output Impedance**
50 Ω / VSWR 2.1 max

**Harmonic Level**
<-20 dBc

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive linear or reactive load.

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

**Front Panel Meter**
Front panel indicates forward and reflected power

**Third Order Intercept Point**
IP3 ~ 59 dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

100 –240 VAC 47-63 Hz, Max current 6 Amps
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 35lbs (16Kg)
Dimensions
H = 5.3" (134.5mm)
D = 18.4" (467mm)
W = 16.5" (420mm)

# 3100LA Power Amplifier

The 3100LA Amplifier is a rugged source of RF power, useful for RFI/EMI, HF and VHF transmitters, plasma equipment, nuclear accelerators and general laboratory applications. The 3100LA represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The 3100LA produces 100 Watts of class A linear power output over the entire frequency range from 250 KHz to 150 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 50 dB with a typical gain flatness of +/- 1.5 dB

The 3100LA is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The 3100LA is built to withstand a +13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS FETs, de-rated to provide for excellent MTBF figures.


**Class of Operation**
Class A

**Frequency Range**
250KHz to 150 MHz

**Rated Power Output**
100 Watts

**Saturated Power Output**
>125 W 250KHz to 150MHz
>150W 1MHz to 100MHz

**Power Gain**
50 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
1 mW

**Input Impedance**
50 Ω / VSWR 1.5:1 max

**Output Impedance**
50 Ω / VSWR 2.1 max

**Harmonic Level**
<-25 dBc @ 75W

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive linear or reactive load.

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

**Front Panel Meter**
Front panel indicates forward and reflected power

**Third Order Intercept Point**
IP3 ~ 59 dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

100 –240 VAC 47-63 Hz, Max current 12Amps
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 52lbs (23.6Kg)
Dimensions
H = 8.6" (218.2mm)
D = 20.1" (511mm)
W = 16.7" (424.4mm)

# 3200L Power Amplifier

The 3200L Amplifier is a rugged source of RF power, useful for RFI/EMI, HF and VHF transmitters, plasma equipment, nuclear accelerators and general laboratory applications. The 3200L represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The 3200L produces 200 Watts of class A linear power output over the entire frequency range from 250 KHz to 150 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 53 dB with a typical gain flatness of +/- 1.5 dB

The 3200L is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The 3200L is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS FETs, de-rated to provide for excellent MTBF figures.

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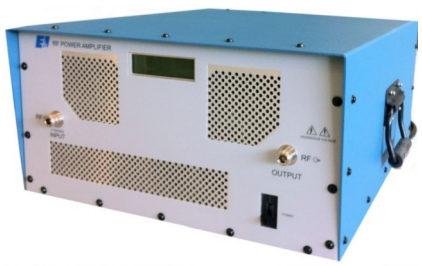

**Class of Operation**
Class A

**Frequency Range**
250KHz to 150 MHz

**Rated Power Output**
200 Watts

**Saturated Power Output**
>250 W 250KHz to 150MHz
>300W 1MHz to 100MHz

**Power Gain**
53 dB nominal

**Gain Flatness**
+/- 1.5 dB

**Input Power for Rated Output**
1 mW

**Input Impedance**
50 Ω / VSWR 1.5:1 max

**Output Impedance**
50 Ω / VSWR 2.1 max

**Harmonic Level**
<-25 dBc @ 150W

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive linear or reactive load.

**Protection:**
INPUT: unit will withstand up to +13dBm input without damage.

**Front Panel Meter**
Front panel indicates forward and reflected power

**Third Order Intercept Point**
IP3 ~ 62 dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

100 –240 VAC 47-63 Hz, Max current 25Amps
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 80lbs (36.3Kg)
Dimensions
H = 13.1" (333.2mm)
D = 20.5" (520.1mm)
W = 16.7" (424.4mm)

# 403LA Power Amplifier

The 403LA Broadband Amplifier is a rugged source of RF power suitable for a variety of UHF signal distribution and general laboratory applications. It is a compact fully solid state design. It features low-level intermodulation distortion and inherent protection against short and open circuit loads. The 403 LA amplifies the inputs of AM, FM, SSB, pulse and other complex modulations within its output and bandwidth capability.

Flexible Operation

The 403LA produces 3 Watts of Class A linear output power over a frequency range of 150 KHz to 300 MHz with a nominal gain of 37 dB (+/-2dB). In order to provide exceptionally low levels of IMD, highly linear RF devices are used, with feedback, in the driver and output amplifier stages. All harmonics are more than 25 dB below the fundamental frequency at 2.7 Watts Pout.

Rugged Design

An integral power supply allows for operation directly from an input of 115/230 V single phase. Both the power supply and the forced air cooling are conservatively designed for operation over a wide temperature range.

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**Class of Operation**
Class A

**Frequency Range**
150KHz to 300 MHz

**Rated Power Output**
3.0 Watts

**Power Gain**
37 dB nominal

**Gain Flatness**
+/- 2dB

**Input Power for Rated Output**
1 mW

**Input Impedance**
50 Ω / VSWR 1.5:1 max

**Output Impedance**
50 Ω / VSWR 2.5:1 max

**Harmonic Level**
<-25 dBc @ 2.7W

**Ruggedness**
∞:1 VSWR

**Noise Figure**
9 dB Typical

**Spurious Output:**
<-60dBc

**Third Order Intercept Point**
IP3 ~ 45 dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

100 –240 VAC 47-63 Hz, Max current 1Amps
Temperature Range : 0 – 45° C
Cooling : Forced air.
Weight: 7lbs (3.2Kg)
Dimensions
H = 3.5“ (88mm)
D = 10.5“ (267.5mm)
W = 6.2“ (157mm)

# 411LA Power Amplifier

The 411LA Amplifier is a rugged source of RF power for HF and VHF transmitters,RFI / EMI testing, plasma equipment and general laboratory applications.

Utilizing solid state ruggedized MosFet devices it features an internal RMS power meter and concurrently displays both forward and reverse power.

The 411LA produces 10 Watts of Class A linear power over the frequency range of 150 KHz to 300 MHz with low harmonic distortion. Operation over the entire frequency band is possible without the need for any switching, it is true instantaneous bandwidth. The unit is rated at 40 dB gain with a typical gain flatness of +/- 2.5 dB

The 411LA is a rugged amplifier built to withstand an input of +13 dBm (1.0V RMS) for all output load conditions including shorts and open circuits.

The unit amplifies inputs of AM, FM SSB, TV and all complex modulation forms with <-22 dBc harmonic distortion and low spurious content.


**Class of Operation**
Class A

**Frequency Range**
150KHz to 300 MHz

**Rated Power Output**
10 Watts

**Power Gain**
40 dB nominal

**Gain Flatness**
+/- 2.5dB

**Input Power for Rated Output**
1 mW

**Input Impedance**
50 Ω

**Output Impedance**
50 Ω

**Harmonic Level**
<-22 dBc @ 10W

**Ruggedness**
∞:1 VSWR

**Third Order Intercept Point**
IP3 ~ 49 dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

100 –240 VAC 47-63 Hz, Max current 3Amps
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 20lbs (10Kg)
Dimensions
H = 5.2“ (132mm)
D = 18.1“ (459.7mm)
W = 8“ (203.2mm)

# 525LA Power Amplifier

The 525LA Amplifier is a broad band rugged source of RF power, useful for RFI/EMI, power meter calibration, laser modulation and general laboratory applications. The 525LA amplifier represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The 525LA produces over 25 Watts of class A linear power output over the entire frequency range from 1MHz to 500MHz. with a power gain of 50 dB. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments, with a gain flatness of +/- 2.5 dB and a 3rd order intercept point of +56dBm

The 525LA is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM, FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The 525LA is built to withstand a +13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability.


**Class of Operation**
Class A

**Frequency Range**
1MHz to 500 MHz

**Rated Power Output**
25 Watts

**Saturated Power Output**
35 Watts

**Power Gain**
50 dB nominal

**Gain Flatness**
+/- 2.5dB

**Input Power for Rated Output**
1 mW

**Input Impedance**
50 Ω / 1.8:1 maximum

**Output Impedance**
50 Ω / 1.5:1 maximum

**Harmonic Level**
<-25 dBc

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load.

**Protection**
Input: Unit will withstand input signal of +13 dBm without damage (1.0 V rms max.) an infinite load VSWR.

**Front Panel**
Input and Output ports
On/Off Switch

**Third Order Intercept Point**
IP3 ~ 56 dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

100 –240 VAC 47-63 Hz
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 25lbs (12.5Kg)
Dimensions
H = 5.2" (132mm)
D = 18.1" (459.7mm)
W = 8" (203.2mm)

# 601L Power Amplifier

The 601L Broadband Amplifier is a rugged source of RF power suitable for a variety of UHF signal distribution and general laboratory applications. It is a compact fully solid state design. It features low-level intermodulation distortion and inherent protection against short and open circuit loads. The 601L amplifies the inputs of AM, FM, SSB, pulse and other complex modulations within its output and bandwidth capability.

Flexible Operation

The 601L produces 1 Watt of Class A linear output power over a frequency range of 500 KHz to 1000 MHz with a nominal gain of 40 dB (+/- 2.5dB). In order to provide exceptionally low levels of IMD, highly linear RF devices are used, with feedback, in the driver and output amplifier stages. All harmonics are more than 22 dB below the fundamental frequency at 1.0 Watt Pout.

Rugged Design

An integral power supply allows for operation directly from an input of 115/230 V single phase. Both the power supply and the forced air cooling are conservatively designed for operation over a wide temperature range.


**Class of Operation**
Class A

**Frequency Range**
500kHz to 1000 MHz

**Rated Power Output**
1 Watts (800KHz—1000MHz)

**Power Gain**
40 dB nominal

**Gain Flatness**
+/- 2.5dB

**Input Power for Rated Output**
**0.**1 mW

**Input Impedance**
50 Ω / 2.5:1

**Output Impedance**
50 Ω / 3.0:1

**Harmonic Level**
<-22 dBc

**Ruggedness**
∞:1 VSWR

**Noise figure**
10dB typical.

**Spurious Output**
<-60dBc

**Front Panel**
Controls: AC On/Off
Indicators: AC Power On
Connectors: RF Input/Output (BNC)

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

100 –240 VAC 47-63 Hz , 1A max
Temperature Range : 0 – 45° C
Cooling : Forced air.
Weight: 10lbs (5Kg)
Dimensions
H = 3.5" (89mm)
D = 15" (381.8mm)
W = 7.9" (201.4mm)

# 75A2 Power Amplifier

The 75A2 Amplifier is a rugged source of RF power, useful for ultrasonics, laser modulation, RFI/EMI, plasma equipment and general laboratory and phased array applications. The 75A2 represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The 75A2 produces 75 Watts of Class A linear power output over the entire frequency range from 300 KHz to 35 MHz, from each channel. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 50 dB with a typical gain flatness of +/ - 1.5 dB

The 75A2 is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The 75A2 is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS FETs, de-rated to provide for excellent MTBF figures.


**Class of Operation**
Class A

**Frequency Range**
300kHz to 75 MHz

**Rated Power Output**
75 Watts

**Saturated Power Output**
>100 Watts

**Power Gain**
50 dB nominal

**Gain Flatness**
+/- 1.5dB

**Input Power for Rated Output**
1 mW

**Input Impedance**
50 Ω / 1.5:1

**Output Impedance**
50 Ω / 1.25:1

**Harmonic Level**
<-25 dBc

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load or reactive load.

**Protection**
Input: Unit will withstand input signal of +13 dBm without damage (1.0 V rms) max. and infinite load VSWR.

**Front Panel Meters**
Two displays indicate up to 200 Watts into 50 displaying forward and reflected power simultaneously for each channel

**Third Order Intercept Point**
IP3 ~ 57 dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

85 –264 VAC 47-63 Hz
Temperature Range : 0 – 45° C
Cooling : Forced air.
Weight: 45bs (20.5Kg)
Dimensions
H = 5.2" (132mm)
D = 18.1" (459.7mm)
W = 16.5" (419.1mm)

# 100A2 Power Amplifier

The 100A2 Amplifier is a rugged source of RF power, useful for ultrasonics, laser modulation, RFI/EMI, plasma equipment and general laboratory and phased array applications. The 100A2 represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The 100A2 produces 100 Watts of Class A linear power output over the entire frequency range from 300 KHz to 12 MHz, from each channel. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 50 dB with a typical gain flatness of +/- 1.5 dB

The 100A2 is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The 100A2 is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged DMoS FETs, de-rated to provide for excellent MTBF figures.


**Class of Operation**
Class A

**Frequency Range**
300kHz to 12 MHz

**Rated Power Output**
100 Watts

**Saturated Power Output**
>120 Watts

**Power Gain**
50 dB nominal

**Gain Flatness**
+/- 1.5dB

**Input Power for Rated Output**
1 mW

**Input Impedance**
50 Ω / 1.5:1

**Output Impedance**
50 Ω / 1.25:1

**Harmonic Level**
<-25 dBc

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load or reactive load.

**Protection**
Input: Unit will withstand input signal of +13 dBm without damage (1.0 V rms) max. and infinite load VSWR.

**Front Panel Meters**
Two displays indicate up to 200 Watts into 50 displaying forward and reflected power simultaneously for each channel

**Third Order Intercept Point**
IP3 ~ 59 dBm

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

85 –264 VAC 47-63 Hz
Temperature Range : 0 – 45° C
Cooling : Forced air.
Weight: 45bs (20.5Kg)
Dimensions
H = 5.2" (132mm)
D = 18.1" (459.7mm)
W = 16.5" (419.1mm)

# 50AB6 Power Amplifier

The 50AB6 Amplifier is a rugged source of RF power, useful for ultrasonics, laser modulation, RFI/EMI, plasma equipment and general laboratory and phased array applications. The 50AB6 represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The 50AB6 produces 50 Watts of Class AB linear power output over the entire frequency range from 500 KHz to 3 MHz, from each channel. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 30 dB with a typical gain flatness of +/- 1.5 dB

The 50AB6 is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM. FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The 50AB6 is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition.

**Number of Channels**
6

**Class of Operation**
Class AB

**Frequency Range**
500kHz to 3 MHz

**Rated Power Output**
50 Watts

**Power Gain**
30 dB nominal

**Gain Flatness**
+/- 1.5dB

**Input Power for Rated Output**
1 mW

**Input Impedance**
50 Ω

**Output Impedance**
50 Ω

**Harmonic Level**
<-15 dBc

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load  or reactive load.

**Protection**
Input: Unit will withstand input signal of +13 dBm without damage (1.0 V rms) max. and infinite load VSWR.

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

85 –264 VAC  47-63 Hz
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 220bs (110Kg)
Dimensions
H = 51" (1295mm)
D = 30" (762mm)
W = 23.25" (591mm)

# 10AB61 Power Amplifier

The 10AB61 Amplifier is a rugged source of RF power, useful for ultrasonics, laser modulation, RFI/EMI, plasma equipment and general laboratory and phased array applications. The 50AB6 represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

The 10AB61 produces 10 Watts per channel that is controlled by a DC input of 0 to 10 Volts. The individual channels are phased matched to facilitate operation in phased array systems. The gain control is implemented by the control of the RF MosFet bias through a logrithmic amplifer. Thereby, reducing the phase change with power change.

RUGGEDNESS:

The 10AB61 is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition.

**Number of Channels**
61

**Class of Operation**
Class AB

**Frequency Range**
500kHz to 3 MHz

**Rated Power Output**
10 Watts

**Power Gain**
25 dB nominal

**Gain Flatness**
+/- 1.5dB

**Input Power for Rated Output**
1 mW

**Input Impedance**
50 Ω

**Output Impedance**
50 Ω

**Harmonic Level**
<-13 dBc

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load  or reactive load.

**Protection**
Input: Unit will withstand input signal of +13 dBm without damage (1.0 V rms) max. and infinite load VSWR.

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

200 –240 VAC  47-63 Hz
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 440bs (220Kg)
Dimensions
H = 51" (1295mm)
D = 30" (762mm)
W = 23.25" (591mm)

# 90AB8 Power Amplifier

The 90AB8 Amplifier is a rugged source of RF power, useful for ultrasonics, laser modulation, RFI/EMI, plasma equipment and general laboratory and phased array applications. The 50AB6 represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

The E&I 90AB8 is a broadband solid state amplifier system covering the frequency spectrum from 250 KHz to 150 MHz. It is rated at 90 watts of RF power per channel. A quasi linear Class AB design, the 90AB8 will amplify inputs of AM, FM, pulse and complex modulation signals. Each channel has 50 dB gain. Each channel has its own dedicated input and output. However, these maybe configured to a single input and single output to provide up to 700 watts

RUGGEDNESS:

The 90AB8 is built to withstand a 13 dBm input

**Number of Channels**
8

**Class of Operation**
Class AB

**Frequency Range**
250kHz to 150 MHz

**Rated Power Output**
90 Watts

**Power Gain**
50 dB nominal

**Gain Flatness**
+/- 1.5dB

**Input Power for Rated Output**
1 mW

**Input Impedance**
50 Ω

**Output Impedance**
50 Ω

**Ruggedness**
∞:1 VSWR

**Stability**
Unconditional into any passive load or reactive load.

**Protection**
Input: Unit will withstand input signal of +13 dBm without damage (1.0 V rms) max. and infinite load VSWR.

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

200 –240 VAC 47-63 Hz
Temperature Range : 0 – 40° C
Cooling : Forced air.
Weight: 395bs (200Kg)
Dimensions
H = 51" (1295mm)
D = 30" (762mm)
W = 23.25" (591mm)

# HI-Z Locked-On transformers

E&I HI-Z Locked-On series switchable impedance matching transformers are useful for ultrasonic, transducer, and laboratory applications. The HI-Z series enables one to match the 50 ohm impedance to drive higher impedances of 100, 200, 400 and 800 ohms. Allowing for maximum power transfer with manual select tap settings, the Locked-On series represents E&I's commitment to providing RF products of the highest quality, durability, and ruggedness.

# LO-Z Locked-On transformers

E&I LO-Z Locked-On series switchable impedance matching transformers are useful for ultrasonic, transducer, and laboratory applications. The LO-Z series enables one to match the 50 ohm impedance to drive impedances of 100, 50, 25, 12 and 6 ohms. Allowing for maximum power transfer with manual select tap settings, the Locked-On series represents E&I's commitment to providing RF products of the highest quality, durability, and ruggedness.


**Frequency Range**
500kHz to 5 MHz

**Maximum Power Output**
100 Watts

**Input Impedance**
50 Ω

**Output Impedance HI-Z**
50 Ω
100 Ω
200 Ω
400 Ω
800 Ω

**Output Impedance LO-Z**
6 Ω
12 Ω
25 Ω
50 Ω
100 Ω

**Connectors**
BNC

**Accessories Supplied**
The unit is supplied with an operations manual and AC line cord.

100 –240 VAC 47-63 Hz
Dimensions
H = 5.9" (150mm)
D = 15.75" (400mm)
W = 11.8" (300mm)

**Optional Features**
Hot Switchable
LCD Display
Both Hot Switchable and LCD Display

# Matching transformers

The JT series Step up / Step down transformers offer low cost, flexible solutions to impedance matching. The JT series transformers operate over a wide frequency band and allow you to increase peak to peak voltage without having to increase the power of your RF amplifier. Due to their compact size, they can easily by placed in close proximity to the load and therefore minimize any losses due to the Q of your network.


**Frequency Range**

10kHz to 5 MHz—JT-3, JT-100, JT-100

10kHz to 10 MHz—JT-12, JT-25

**Maximum Power Output**

150 Watts

**Input Impedance**

50 Ω

**Output Impedance**

| | |
|---|---|
| JT-3 | 3.1Ω |
| JT-6 | 5.5Ω |
| JT-12 | 12Ω |
| JT-25 | 25Ω |
| JT-100 | 100Ω |
| JT-200 | 200Ω |

**Connectors**

BNC

Dimensions

H = 120mm

D = 94mm

W = 120mm

# Power Indicators

Electronics & Innovation, Ltd. now provides you with the ability to measure forward and reflected power in one instrument. Simply place a PI in your system to accurately and efficiently determine your load power. Measurements are displayed via an LCD front panel display – they can also be downloaded to a pc through the RS232 connector, located on the rear panel.

Measuring the RF level of signal sources in the 10 KHz – 200MHz range and power levels up to 2000 Watts

- Simultaneous forward & reflected power measurement
- Measuring RMS power +/- 3% over entire frequency range
- Low insertion loss


**Frequency Range**
PI-2 , 10KHz—2MHz
PI-10 , 100KHz—10MHz
PI-30, 1MHz—30MHz
PI-150 , 1MHz—150MHz

**Maximum Power Output**
PI-2 , 2000 Watts
PI-10 , 200 Watts
PI-30, 300 Watts
PI-150 , 50 Watts

**Input Impedance**
50 Ω / 1.25:1 maximum

**Output Impedance**
50 Ω / 1.25:1 maximum

**Connectors**
BNC

Dimensions
H = 130mm
D = 150mm
W = 250mm