Model 50A15
50 Watt
20 KHz – 15 MHz

50-Watt Broadband Amplifier

- POWER UP TO 120 WATTS
- INSTANTANEOUS BANDWIDTH
- USEFUL 15 kHz TO 20 MHz
- LINEAR
- UNCONDITIONALLY STABLE
- LOW HARMONIC DISTORTION
- ADJUSTABLE GAIN

DESCRIPTION

Model 50A15 is a self-contained broadband amplifier designed for laboratory applications requiring instantaneous bandwidth, high gain, and moderate power output. When used with any signal or function generator, this reliable amplifier provides over 50 watts of linear power output from 20 kHz to 15 MHz. Useful power can be obtained from below 15 kHz to over 20 MHz. Power output up to 120 watts is available when operated in the saturated condition. Model 50A15 is unconditionally stable and will operate with any magnitude and phase of source and load impedance. The Model 50A15 will reproduce all types of input signals, including square waves, pulses, RF bursts, CW, AM, and FM modulation. Another valuable feature is the continuously variable attenuator, which enables the operator to adjust the amplifier gain over a 20 dB range to meet his specific requirements. The 50A15 employs the latest design technology, including all-solid-state circuitry, Amplifier Research's unique matching technique using emitter-ballasted transistors, and forced convection cooling.

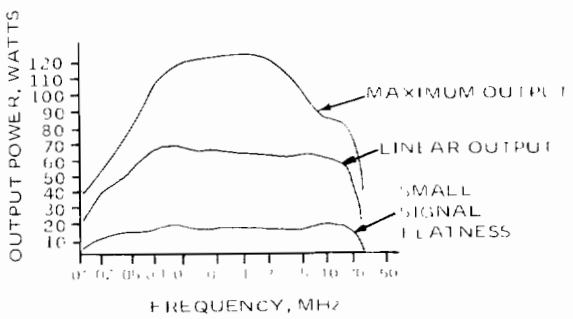
APPLICATIONS

- Antenna and Component Testing
- Equipment Calibration
- EMI Susceptibility Testing
- General Laboratory Use
- Ultrasonic Transducer Driving
- Driver for Frequency Multipliers and High Power Amplifiers
- Nuclear Magnetic Resonance Research
- Biological Research
- Electro-Optic Modulation

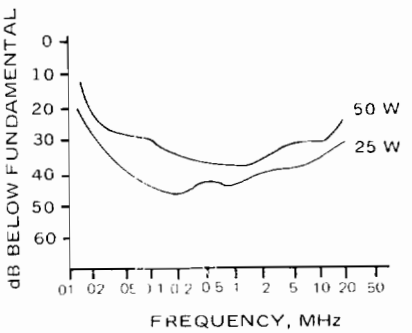
SPECIFICATIONS

POWER OUTPUT, LINEAR	50 watts cw minimum into 50 ohms with less than 1 dB compression
POWER OUTPUT, MAXIMUM	Up to 120 watts
FREQUENCY RESPONSE	20 kHz to 15 MHz instantaneously
FLATNESS	±1.0 dB
GAIN	Adjustable from less than 27 dB to greater than 47 dB by means of input attenuator
OUTPUT IMPEDANCE	50 ohms nominal
INPUT IMPEDANCE	50 ohms, VSWR 1.5:1 maximum
HARMONIC DISTORTION	Not less than 30 dB below fundamental at 40 watt output
INTERMODULATION DISTORTION	Third order intercept point 60 dBm, typical
MISMATCH TOLERANCE	Unconditionally stable; will operate without damage under any magnitude and phase of source and load impedance.
OVERDRIVE TOLERANCE	Will not be damaged by inputs up to 100 times rated input (20 dB overdrive)
PRIMARY POWER	115/230 VAC, 50/60 Hz
RF CONNECTORS	Input: Type BNC, female Output: Type BNC, female
WEIGHT	9 kilograms (20 lb)
SIZE	See outline drawing

TYPICAL POWER OUTPUT CHARACTERISTICS



TYPICAL RELATIVE HARMONIC DISTORTION



OUTLINE DIMENSIONS