



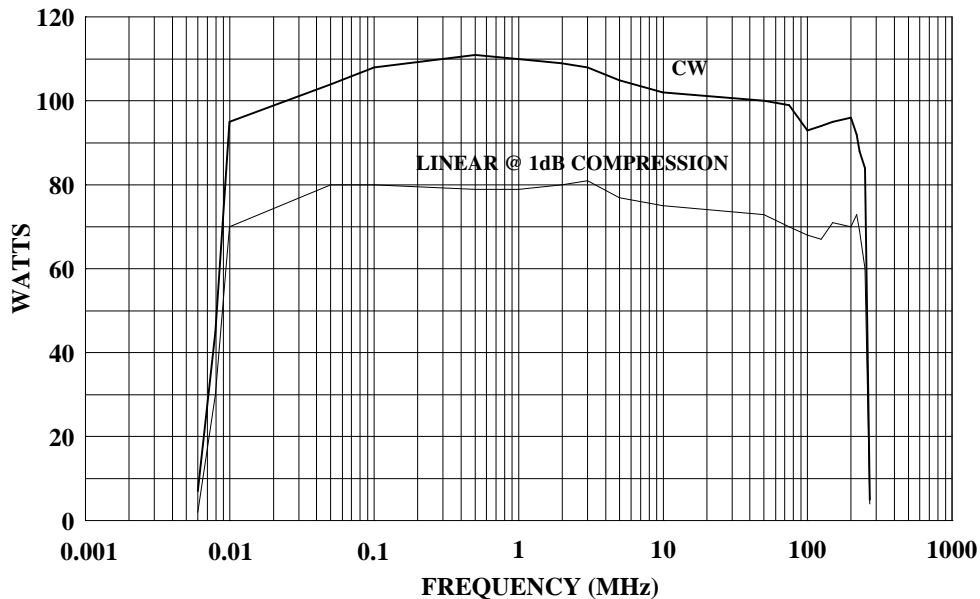
160 School House Road, Souderton, PA 18964-9990 USA  
Phone 215-723-8181•FAX 215-723-5688

MODEL 75A250A  
75 WATTS CW  
10 kHz - 250 MHz  
with Versions M1-M4

The Model 75A250A amplifier is a portable, self-contained, air-cooled, broadband, solid state amplifier unit designed for laboratory applications where instantaneous bandwidth, high gain and moderate power output are required. Utilization of push-pull MOSFET circuitry lowers distortion, improves stability and allows operation into any load impedance without damage. When used with an RF sweep generator, the 75A250A will provide a minimum of 75 watts of swept RF output power.

The Model 75A250A includes a front panel RF Gain Control, which permits the operator to conveniently set the amplifier's desired output level. Housed in a stylish contemporary enclosure, the unit provides instantaneous power for typical applications such as RF susceptibility testing, antenna and component testing, Watt-meter calibration and as a driver for higher power amplifiers. The 75A250A is powered by a high efficiency switching supply, with autoranging AC input circuitry which will automatically accept voltages from 90 to 135 VAC, or from 180 to 270 VAC, in the 47 to 63 Hz frequency range. The RF Amplifier stages are protected from over temperature by removing the DC voltage to them if an over temperature condition occurs due to a cooling blockage or fan failure. The digital display on the front panel indicates the operation status and any pending fault conditions when an over temperature or power supply fault has occurred. The unit can be returned to normal operation when the condition has been cleared; as with the other functions, this can be readily accomplished through a front panel switch. The unit also includes digital control for both local and remote control of the amplifier. The 8-bit RISC microprocessor controller board provides IEEE-488 (GPIB) and asynchronous full duplex RS-232 communication control of all amplifier functions.

#### 75A250 TYPICAL POWER OUTPUT



**SPECIFICATIONS**  
*Model 75A250A*

**POWER OUTPUT, CW**

Nominal ..... 100 watts  
 Minimum..... 75 watts  
 Linear @ 1 dB compression ..... 50 watts minimum

FLATNESS..... ± 1.0 dB maximum

FREQUENCY RESPONSE..... 10 kHz - 250 MHz instantaneously

INPUT FOR RATED OUTPUT ..... 1.0 milliwatt maximum

GAIN (at maximum setting)..... 49 dB minimum (See model configurations)

GAIN ADJUSTMENT (continuous range)..... 18 dB minimum

INPUT IMPEDANCE..... 50 ohms, VSWR 1.5:1 maximum

OUTPUT IMPEDANCE..... 50 ohms, VSWR 2.0:1 maximum

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)

MODULATION CAPABILITY..... Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal

NOISE FIGURE (above 1.0 MHz)..... 16 dB typical

HARMONIC DISTORTION..... Minus 20 dBc maximum at 50 watts

THIRD ORDER INTERCEPT POINT ..... 57 dBm typical

PRIMARY POWER..... 90-135/180-270 VAC  
 47 to 63 Hz, single phase 400 watts maximum

**CONNECTORS**

RF (Type)..... Type N female  
 (Location) ..... See Model Configurations table below

**REMOTE CONTROL**

IEEE-488 ..... 24 pin female  
 RS-232 ..... 9 pin subminiature D (female)

REMOTE INTERLOCK..... 15 pin subminiature D

COOLING ..... Forced air (self contained fans)

**MODEL CONFIGURATIONS**

MODEL NUMBER	RF CONNECTOR LOCATION	GAIN CONTROL	INSTRUMENT CASE	WEIGHT	SIZE (W x H x D)	OTHER
75A250A	Front Panel	Yes	Yes	20.5 kg (45.0 lb)	50.3 x 15.5 x 37.6 cm 19.8 x 6.1 x 14.8 in	n/a
75A250AM1	Rear Panel	Yes	No	16.0 kg (35.0 lb)	48.3 x 12.7 x 37.6 cm 19.0 x 5.0 x 14.8 in	n/a
75A250AM2	Rear Panel	Yes	Yes	20.5 kg (45.0 lb)	50.3 x 15.5 x 37.6 cm 19.8 x 6.1 x 14.8 in	n/a
75A250AM3	Front Panel	Yes	No	16.0 kg (35.0 lb)	48.3 x 12.7 x 37.6 cm 19.0 x 5.0 x 14.8 in	n/a
75A250AM4	Front Panel	Yes	Yes	20.5 kg (45.0 lb)	50.3 x 15.5 x 37.6 cm 19.8 x 6.1 x 14.8 in	Operate mode at circuit breaker on