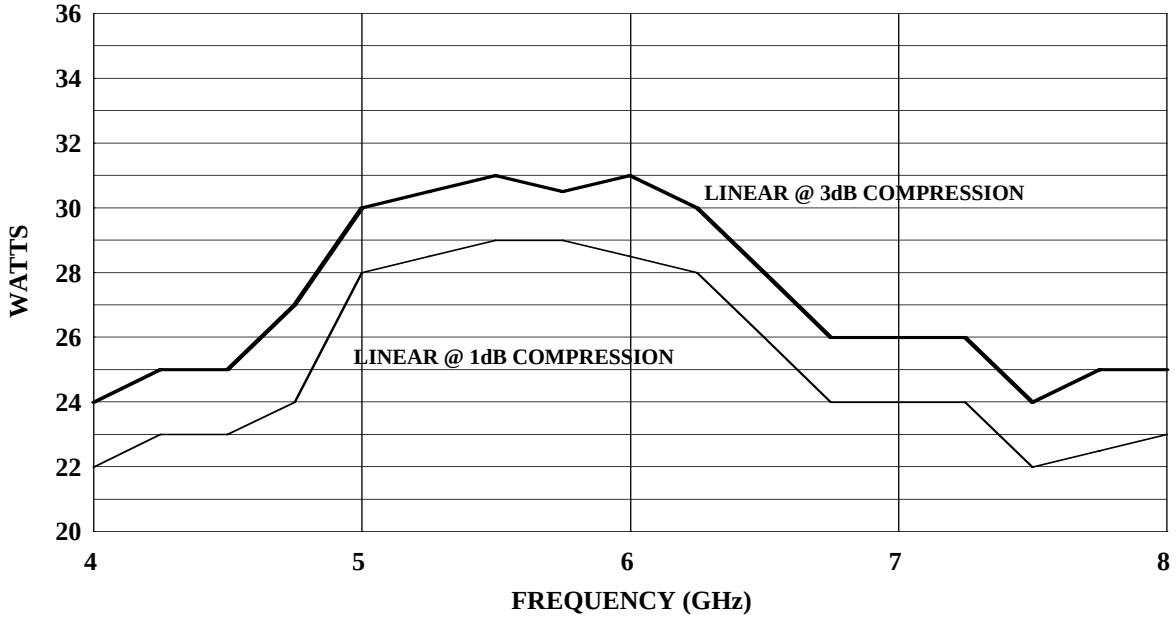
Model 30S5G7,
M1, M2, M3
30 watts CW
4.5–7.0 GHZ

The Model 30S5G7 is a solid state, self-contained, air-cooled, broadband amplifier designed for applications where instantaneous bandwidth and high gain are required. Housed in a stylish contemporary cabinet, the unit is designed for benchtop use, but can be removed from the cabinet for immediate equipment rack mounting. The 30S5G7, when used with a sweep generator, will provide a minimum of 30 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 30S5G7 is protected from RF input overdrive by an RF input leveling circuit which controls the RF input level to the RF amplifier first stage when the RF input level is increased above 0 dBm. The RF amplifier stages are protected from over temperature by removing the DC voltage to them if an over temperature condition occurs due to cooling blockage or fan failure. There is a digital display on the front panel to indicate the operate status and fault conditions when an overtemperature or power supply fault has occurred. The unit can be returned to operate when the condition has been cleared. The 30S5G7 includes digital control for both local and remote control of the amplifier. The control system is composed of a 16-bit RISC microcontroller board which handles primary functions of the amplifier and interprets commands sent to it from an 8-bit remote interface board. This 8-bit microprocessor controlled board provides both IEEE-488 (GPIB) and asynchronous, full duplex RS-232 control of all amplifier functions.

30S5G7 TYPICAL POWER OUTPUT



SPECIFICATIONS

RATED POWER OUTPUT ..... 30 watts minimum

POWER OUTPUT @ 3dB COMPRESSION
- Nominal ..... 30 watts
- Minimum ..... 26 watts minimum from 4.9–6.4 GHz
- Minimum ..... 24 watts minimum from 4.5–4.9 GHz, 6.4–7.0 GHz

POWER OUTPUT @ 1dB COMPRESSION
- Nominal ..... 28 watts
- Minimum ..... 24 watts minimum from 4.9–6.4 GHz
- Minimum ..... 22 watts minimum from 4.5–4.9 GHz, 6.4–7.0 GHz

FLATNESS ..... ±2.0 dB typical
±3.0 dB maximum

FREQUENCY RESPONSE ..... 4.5–7.0 GHz instantaneously

INPUT FOR RATE OUTPUT ..... 1.0 milliwatt maximum, 0 dBm

GAIN (at maximum setting) ..... 45 dB minimum

GAIN ADJUSTMENT (Continuous Range) ..... 10 dB minimum

INPUT IMPEDANCE ..... 50 ohms, VSWR 2.5:1 maximum

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.

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

HARMONIC DISTORTION ..... Minus 20 dBc maximum at 30 watts

THIRD ORDER INTERCEPT POINT ..... 55 dBm typical

PRIMARY POWER (selected automatically) ..... 90–132, 180–264 VAC
50/60 Hz, single phase
<550 watts maximum

CONNECTORS
- RF ..... 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)

OPTIONAL CONFIGURATIONS

MODEL NUMBER	RF INPUT	RF OUTPUT	WEIGHT	SIZE (W x H x D)
30S5G7	Type N female on front panel	Type N female on front panel	40 kg (89 lbs)	50.3 x 24.9 x 54.6 cm 19.8 x 9.8 x 21.5 in
30S5G7M1	Type N female on rear panel	Type N female on rear panel	40 kg (89 lbs)	50.3 x 24.9 x 54.6 cm 19.8 x 9.8 x 21.5 in
30S5G7M2	Same as 30S5G7 with enclosure removed for rack mounting		27 kg (60 lbs)	48.3 x 22.2 x 54.6 cm 19 x 8.75 x 21.5 in
30S5G7M3	Same as 30S5G7M1 with enclosure removed for rack mounting		27 kg (60 lbs)	48.3 x 22.2 x 54.6 cm 19 x 8.75 x 21.5 in