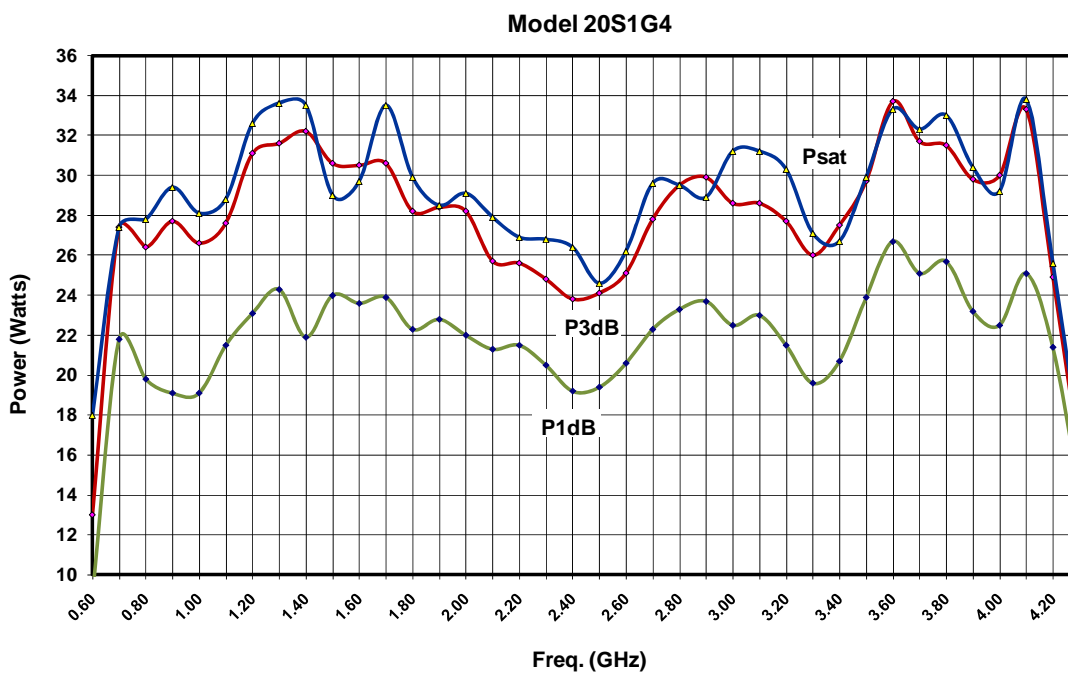




Model 20S1G4
M1 through M4
20 Watts CW
0.7GHz–4.2GHz

The Model 20S1G4 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 20S1G4, when used with a sweep generator, will provide a minimum of 20 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 20S1G4 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 over-temperature or power supply fault has occurred. The unit can be returned to operate when the condition has been cleared. The 20S1G4 includes digital control for both local and remote control of the amplifier. All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format, RS-232 hardwire and fiber optic, USB, and Ethernet. The bus interface connector is located on the back panel and positive control of local or remote operation is assured by a Local/Remote switch on the front panel of the amplifier.



Export Commodity Classification Number (ECCN), EAR99 items, do not require export control.

SPECIFICATIONS, MODEL 20S1G4

RATED POWER OUTPUT	20 watts minimum
POWER OUTPUT @ 3dB COMPRESSION	
Nominal	25 watts
Minimum	20 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal	22 watts
Minimum	18 watts
FLATNESS.....	±1.5 dB typical ±2.0 dB maximum
FREQUENCY RESPONSE	0.7–4.2GHz instantaneously
INPUT FOR RATED OUTPUT	1.0 milliwatt maximum
GAIN (at maximum setting)	43 dB minimum
GAIN ADJUSTMENT (Continuous Range)	10 dB minimum (4096 steps remote)
INPUT IMPEDANCE.....	50 ohms, VSWR 2.0:1 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. * See Application Note #27
MODULATION CAPABILITY.....	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal
HARMONIC DISTORTION.....	Minus 20 dBc maximum at 20 watts
SPURIOUS.....	Minus 73 dBc typical
THIRD ORDER INTERCEPT POINT	52 dBm typical
NOISE FIGURE	10 dB typical
PRIMARY POWER (selected automatically).....	90-132, 180-264 VAC 50/60 Hz, single phase 210 watts maximum
CONNECTORS	
RF.....	Type N female
REMOTE INTERFACES	
IEEE-488.....	24 pin female
RS-232	9 pin Subminiature D (female)
RS-232 (fiber optic)	Type ST
USB 2.0	Type B
Ethernet	RJ-45
SAFETY INTERLOCK.....	15 Pin Subminiature D
COOLING.....	Forced air (self contained fans)

MODEL	RF INPUT	OPTIONAL CONFIGURATIONS RF OUTPUT	WEIGHT	SIZE (W x H x D)
20S1G4	Type N female on front panel	Type N female on front panel	16.8 kg (37 lbs)	50.3 x 15.5 x 37.6 cm 19.8 x 6.1 x 14.8 in
20S1G4M1	Type N female on rear panel	Type N female on rear panel	16.8 kg (37 lbs)	50.3 x 15.5 x 37.6 cm 19.8 x 6.1 x 14.8 in
20S1G4M2	Same as 20S1G4 with enclosure removed for rack mounting		11.1 kg (24.5 lbs)	48.3 x 12.7 x 37.6 cm 19.0 x 5.0 x 14.8 in
20S1G4M3	Same as 20S1G4M1 with enclosure removed for rack mounting		11.1 kg (24.5 lbs)	48.3 x 12.7 x 37.6 cm 19.0 x 5.0 x 14.8 in
20S1G4M4	Obsolete July 2011; features incorporated into standard design		16.8 kg (37 lbs)	50.3 x 15.5 x 37.6 cm 19.8 x 6.1 x 14.8 in