

Model 100S1G6
M1 through M4
100 Watts CW
0.7GHz–6GHz



The Model 100S1G6 is a solid-state, Class A design, self-contained, air-cooled, broadband amplifier designed for applications where instantaneous bandwidth, high gain and linearity 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.

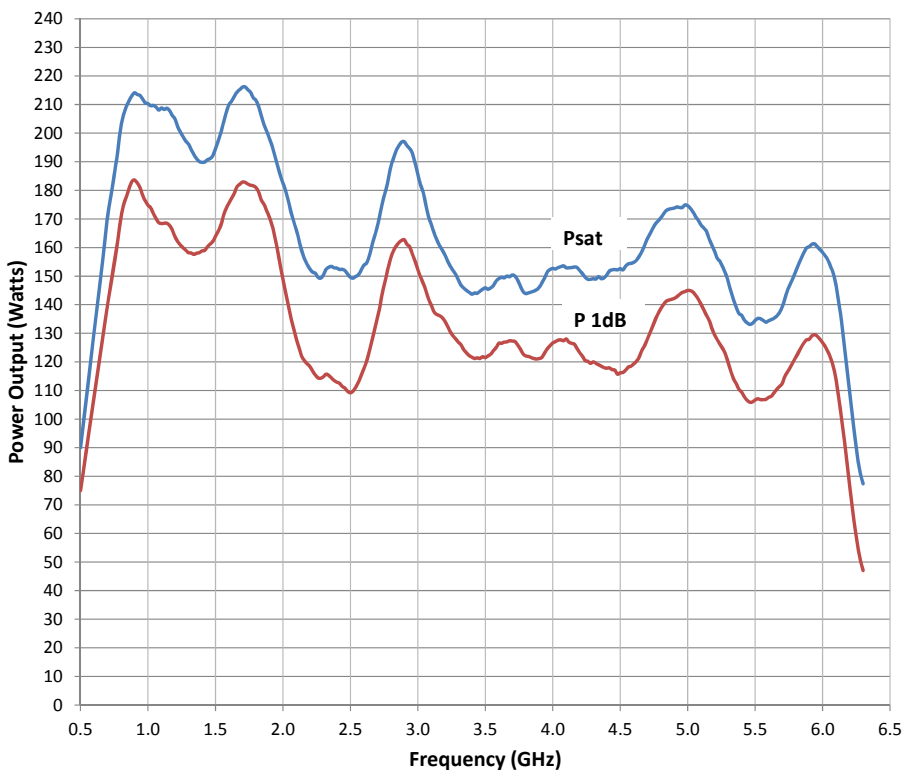
The 100S1G6, when used with a sweep generator, will provide a minimum of 100 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 100S1G6 is protected from RF input overdrive by an RF input leveling circuit which controls 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 if an over-temperature or power supply fault has occurred. The unit can be returned to operate when the condition has been cleared. 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.

The low level of spurious signals and linearity of the Model 100S1G6 make it ideal for use as a driver amplifier in testing wireless and communication components and subsystems. It can be used as a test instrument covering multiple frequency bands and is suitable for a variety of communication technologies such as CDMA, W-CDMA, TDMA, GSM etc. It is also suitable for EMC Test applications where undistorted modulation envelopes are desired.

The export classification for this equipment is 3A001. These commodities, technology or software are controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

100S1G6 Typical Power Output



SPECIFICATIONS, MODEL 100S1G6

RATED POWER OUTPUT	100 watts minimum (0.7–6.0 GHz)
INPUT FOR RATED OUTPUT	1.0 milliwatt maximum
POWER OUTPUT @ 3dB COMPRESSION	
Nominal	120 watts
Minimum	100 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal	100 watts
Minimum	80 watts
SMALL SIGNAL GAIN FLATNESS.....	±1.5 dB typical ±2.5 dB maximum
FREQUENCY RESPONSE	0.7–6 GHz instantaneously
GAIN (at maximum setting)	52 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
THIRD ORDER INTERCEPT	58 dBm typical
NOISE FIGURE	10 dB typical
HARMONIC DISTORTION	Minus 20 dBc maximum at 80 watts, (1.0-6.0 GHz) Minus 15 dBc typical at 80 watts, (0.7–1.0 GHz)
SPURIOUS	Minus 73 dBc Typ.
PHASE LINEARITY.....	±1.0 deg/100 MHz, Typ
PRIMARY POWER (Selected Automatically)	90-132, 180-264 VAC 50/60 Hz, single phase 1100 watts maximum
CONNECTORS	
RF.....	Type N female
REMOTE INTERFACES	
IEEE-488.....	24 pin
RS-232	9 pin Subminiature D
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)
EXPORT CLASSIFICATION	3A001

MODEL	MODEL CONFIGURATIONS		WEIGHT	SIZE (W x H x D)
	RF INPUT	RF OUTPUT		
100S1G6	Type N female, front panel	Type N female, front panel	45 kg (100 lbs)	50.3 x 30 x 61 cm 19.8 x 11.8 x 24 in
100S1G6M1	Type N female, rear panel	Type N female, rear panel	45 kg (100 lbs)	50.3 x 30 x 61 cm 19.8 x 11.8 x 24 in
100S1G6M2	Same as 100S1G6 with enclosure removed for rack mounting		34.5 kg (76 lbs)	48.3 x 26.7 x 61 cm 19.0 x 10.5 x 24 in
100S1G6M3	Same as 100S1G6M1 with enclosure removed for rack mounting		34.5 kg (76 lbs)	48.3 x 26.7 x 61 cm 19.0 x 10.5 x 24 in
100S1G6M4	100S1G6M3 in 20U rack, 2 (5U) vented panels, 1 (4U) blank panel		77 kg (170 lbs)	48.3 x 88.9 x 76.2 cm 19 x 35 x 30 in