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MODEL 100S1G4
M1, M2, M3, M4, M5, M6, M7
100 WATTS CW
0.8 – 4.2 GHz

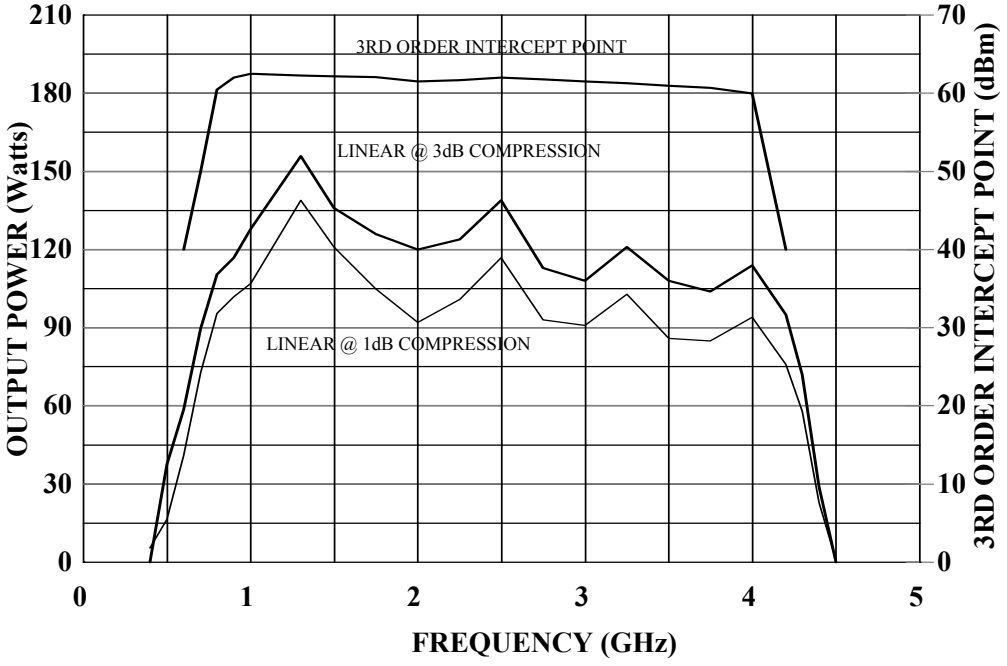
The Model 100S1G4 is a portable, self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Push-pull circuitry is utilized in all high power stages in the interest of lowering distortion and improving stability. The Model 100S1G4, when used with a sweep generator, will provide a minimum of 100 watts of RF power.

The Model 100S1G4 is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a digital display, menu assigned softkeys, a single rotary knob, and four dedicated switches (POWER, STANDBY, OPERATE and FAULT/RESET) to offer extensive control and status reporting capability. The display provides operational presentation of Forward Power and Reflected Power plus control status and reports of internal amplifier status. Special features include a gain control, internal/external automatic level control (ALC) with front panel control of the ALC threshold, pulse input capability and RF output level protection. Also included is an internal RF detector which provides an output for use in self-testing or operational modes.

All amplifier control functions and status indications are available remotely in GPIB / IEEE-488 and RS232 format. The buss interface connector is located on the back panel and positive control of local or remote operation is assured by a keylock on the front panel of the amplifier.

The low level of spurious signals and linearity of the Model 100S1G4 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.

100S1G4
Typical Performance



REV051704

SPECIFICATIONS
Model 100S1G4

RATED POWER OUTPUT ..... 100 WATTS MINIMUM

INPUT FOR RATED OUTPUT..... 1.0 MILLIWATT MAXIMUM

POWER OUTPUT @ 3dB COMPRESSSION
Nominal..... 120 watts
Minimum..... 90 watts

POWER OUTPUT @ 1dB COMPRESSION
Nominal..... 100 watts
Minimum..... 70 watts

FLATNESS..... ±1.5 dB typical
..... ±2.0 dB maximum
.....± 1dB with Internal Leveling

FREQUENCY RESPONSE ..... 0.8 – 4.2 GHz
..... instantaneously

GAIN (at maximum setting) ..... 50 dB minimum

GAIN ADJUSTMENT.....(Continuous Range)
.....15 dB minimum
..... (4096 steps remote)

INPUT IMPEDANCE ..... 50 ohms
..... VSWR 2.0:1 maximum

RF POWER DISPLAY.....0 – 150 Watts

OUTPUT IMPEDANCE ..... 50 ohms, nominal
..... VSWR 2.5:1 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

THIRD ORDER INTERCEPT

See chart. The third order intercept points for this chart have been determined using two tones spaced 1 MHz apart. This is typical for W-CDMA systems. Closer tone spacing such as 60 kHz generally provides about a 1db to 3db improvement in the IP.

HARMONIC DISTORTION.....Minus 20 dbc
.....max at 80 watts

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
.....1200 watts maximum

CONNECTORS
RF..... See Model Configurations
REMOTE INTERFACES
IEEE-488 .....24 pin
RS-232 .....9 pin Subminiature D
ALC & Pulse..... Type BNC on front panel

SAFETY INTERLOCK..... 15 pin Subminiature D

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

MODEL CONFIGURATIONS

MODEL NUMBER	RF INPUT TYPE	RF INPUT LOCATION	RF OUTPUT TYPE	RF OUTPUT LOCATION	INSTRUMENT CASE	WEIGHT	SIZE	OTHER
100S1G4	N FEM	FRONT	N FEM	FRONT	YES	86.2kg (190lbs)	50.3 x 47.0 x 61.0cm 19.8 x 18.5 x 24.0in	N/A
100S1G4M1	N FEM	REAR	N FEM	REAR	YES	86.2kg (190lbs)	50.3 x 47.0 x 61.0cm 19.8 x 18.5 x 24.0in	N/A
100S1G4M2	N FEM	FRONT	N FEM	FRONT	NO, (Rack Mount)	68.0kg (150lbs)	48.3 x 44.5 x 61.0cm 19.0 x 17.5 x 24.0in	N/A
100S1G4M3	N FEM	REAR	N FEM	REAR	NO, (Rack Mount)	68.0kg (150lbs)	48.3 x 44.5 x 61.0cm 19.0 x 17.5 x 24.0in	N/A
100S1G4M4	N FEM	FRONT	N FEM	REAR	YES	86.2KG (190lbs)	50.3 x 47.0 x 61.0cm 19.8 x 18.5 x 24.0in	N/A
100S1G4M5	N FEM	REAR	N FEM	REAR	NO, (Rack Mount)	68.0kg (150lbs)	48.3 x 44.5 x 61.0cm 19.0 x 17.5 x 24.0in	Modified for –55db ACP at +36 dbm output
100S1G4M6	N FEM	FRONT	N FEM	FRONT	NO, (Rack Mount)	68.0kg (150lbs)	48.3 x 44.5 x 61.0cm 19.0 x 17.5 x 24.0in	Modified for –55db ACP at +36 dbm output
*100S1G4M7	N FEM	FRONT	N FEM	FRONT	YES	86.2Kg (190lbs)	50.3 x 47.0 x 61.0cm 19.8 x 18.5 x 24.0in	

***The gain control can be used to optimize ACP performance**