rf/microwave instrumentation

Model 1000S1G2z5,
M1 through M3
1000 Watts CW
1.0–2.5GHz

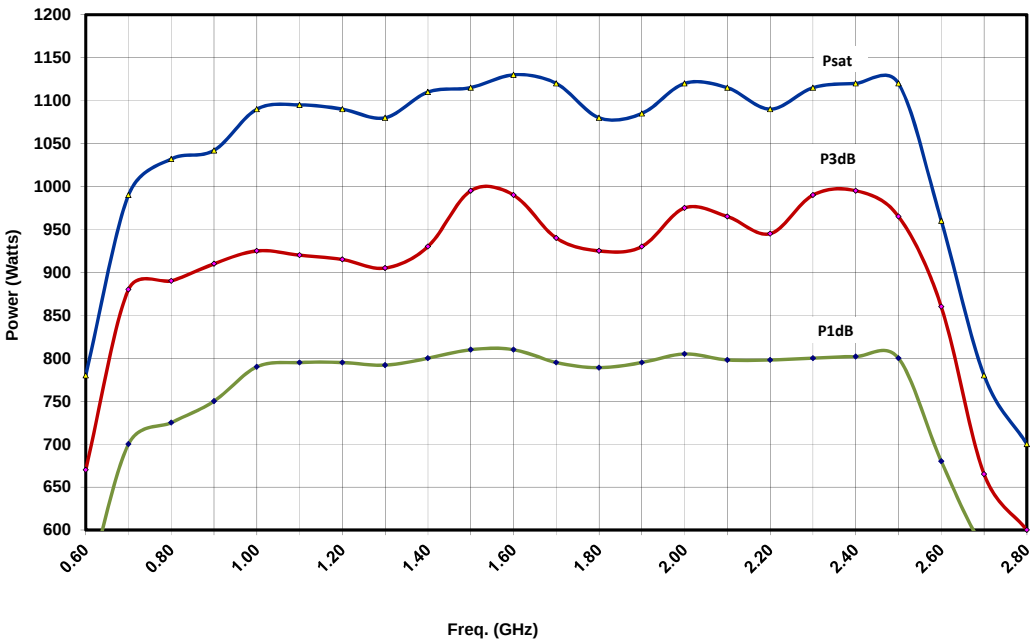
The Model 1000S1G2z5 is a solid state, self-contained, air-cooled, broadband amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Housed in a stylish contemporary cabinet, the unit is designed for benchtop use, but can be removed from the cabinet for immediate equipment rack mounting.

The 1000S1G2z5, when used with a sweep generator, will provide a minimum of 1000 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 1000S1G2z5 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 1000S1G2z5 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 EAR99. 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.

MODEL 1000S1G2z5 TYPICAL OUTPUT POWER



SPECIFICATIONS, MODEL 1000S1G2z5

RATED POWER OUTPUT.....1000 watts minimum

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

POWER OUTPUT @ 3dB COMPRESSSION
- Nominal.....950 watts
- Minimum.....900 watts

POWER OUTPUT @ 1dB COMPRESSION
- Nominal.....800 watts
- Minimum.....700 watts

AVERAGE OUTPUT POWER @ 3.2GHz AND ABOVE.....Less than 60 watts

FLATNESS.....±1.5 dB typical
±2.0 dB maximum

FREQUENCY RESPONSE.....1.0–2.5 GHz instantaneously

GAIN (at maximum setting).....60 dB minimum

GAIN ADJUSTMENT
- (Continuous Range).....20 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.....69 dBm typical

NOISE FIGURE.....10 dB typical

HARMONIC DISTORTION.....Minus 20 dBc max at 700 watts

SPURIOUS.....Minus 73 dBc Typ.

PHASE LINEARITY.....±1.0 deg/100 MHz, Typ

PRIMARY POWER (Selected Automatically).....200-264 VAC
50/60 Hz, single phase
4500 watts maximum

CONNECTORS
- RF INPUT.....Type N female
- RF OUTPUT.....Type 7/8 EIA 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.....EAR99

MODEL CONFIGURATIONS

MODEL	RF INPUT	RF OUTPUT	WEIGHT	SIZE (W x H x D)
1000S1G2z5	Type N female, front panel	Type 7/8 EIA female, front panel	148 kg (325 lbs)	50.3 x 127 x 61 cm 19.8 x 50 x 24 in
1000S1G2z5M1	Type N female, rear panel	Type 7/8 EIA female, rear panel	148 kg (325 lbs)	50.3 x 127 x 61 cm 19.8 x 50 x 24 in