rf/microwave instrumentation

Model 40S4G18,
M2, M4
40 Watts CW
4.2GHz–18GHz

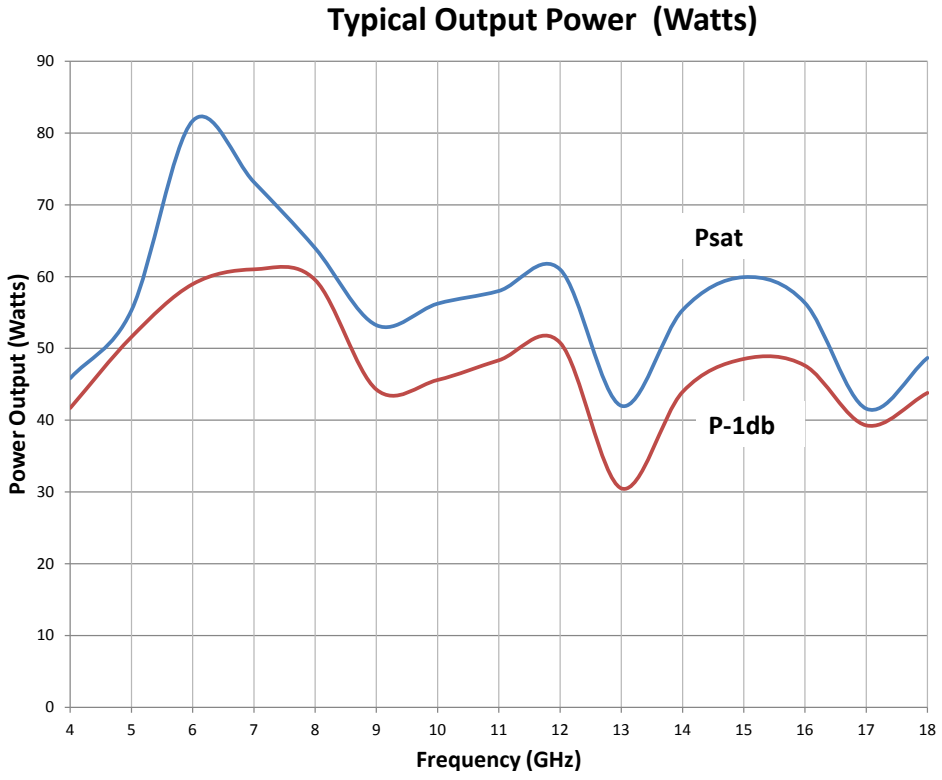
The Model 40S4G18 is a portable, self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. The Model 40S4G18, when used with a sweep generator, will provide a typical 45 watts of RF power instantaneously from 4.2 to 18 GHz.

The Model 40S4G18 is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a graphic Liquid Crystal Display, menu assigned softkeys, a single rotary knob, and a dedicated power on/off switch to offer extensive control and status reporting capability. The display provides gain setting and reports of internal amplifier status. Special features include a gain control and input overdrive protection.

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 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 Model 40S4G18 is designed to have low spurious signals, linearity and is extremely load tolerant which enables it to be used in many RF applications such as: RF susceptibility testing, antenna/component testing, and communication technology testing. 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, UWB, WiMAX etc.

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.



SPECIFICATIONS, 40S4G18

RATED POWER OUTPUT ..... 35 watts minimum, 45 watts typical

POWER OUTPUT @ 3dB COMPRESSION
- Nominal ..... 46 watts
- Minimum ..... 37 watts (5-18 GHz); 20 watts (4.2–5 GHz)

POWER OUTPUT @ 1dB COMPRESSION
- Nominal ..... 40 watts
- Minimum ..... 30 watts (5-18 GHz); 18 watts (4.2–5 GHz)

FLATNESS
- @1dB compression ..... ±2.0 dB typical, ±4 maximum
- @RFin=-20dBm ..... ±4 dB typical, ±5 dB maximum

FREQUENCY RESPONSE ..... 4.2–18 GHz instantaneously

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

GAIN (at maximum setting) ..... 48 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 35 watts (5-18 GHz); at 20 watts (4.2–5 GHz)

THIRD ORDER INTERCEPT POINT ..... 52 dBm typical

PRIMARY POWER (selected automatically) ..... 90-132, 180-264 VAC
50/60 Hz, single phase
<1000 watts maximum

CONNECTORS
- RF INPUT & OUTPUT ..... See Model Configurations
- 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)

SIZE ..... 50.3 X 24.9 X 54.6cm (19.8 x 9.8 x 21.5 in)

WEIGHT
- (with enclosure) ..... 41 kg (90 lb)
- (with enclosure removed for rack mounting) ..... 30 kg (68 lb)

EXPORT CLASSIFICATION 3A001

MODEL CONFIGURATIONS

MODEL	RF INPUT CONNECTOR	RF OUTPUT CONNECTOR
40S4G18	Precision N female, rear	Precision N female, rear
40S4G18M2	Precision N female, front	Precision N female, rear
40S4G18M4	Same as 40S4G18 but with enclosure removed for rack mounting.	

*Limited to 8–18GHz.