rf/microwave instrumentation

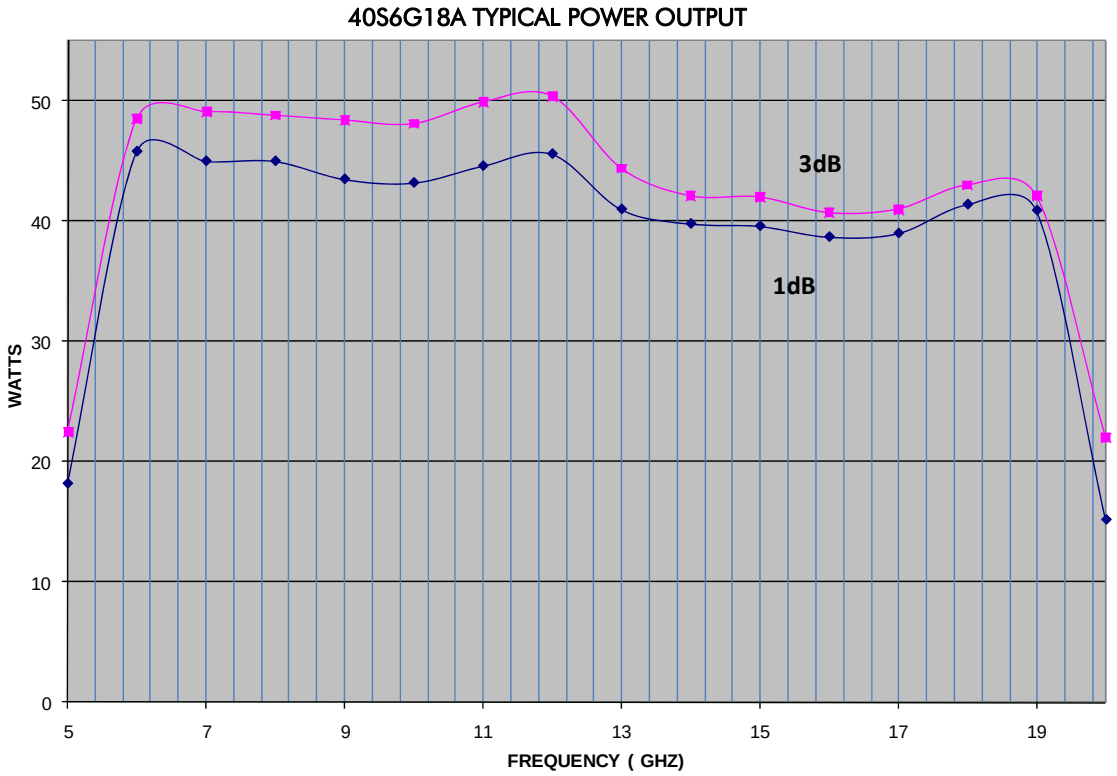
Model 40S6G18A, M1 through M3
40 Watts CW
6GHz–18GHz

The Model 40S6G18A 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 40S6G18A, when used with a sweep generator, will provide a minimum of 40 watts of RF power instantaneously from 6 to 18 GHz.

The Model 40S6G18A 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 40S6G18A 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.



SPECIFICATIONS, 40S6G18A

RATED POWER OUTPUT ..... 40 watts minimum

POWER OUTPUT @ 3dB COMPRESSION
- Nominal ..... 46 watts
- Minimum ..... 37 watts

POWER OUTPUT @ 1dB COMPRESSION
- Nominal ..... 40 watts
- Minimum ..... 34 watts

FLATNESS ..... ±2.0 dB typical
±3.0 dB maximum

FREQUENCY RESPONSE ..... 6–18 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 40 watts

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

PRIMARY POWER (selected automatically) ..... 90-132, 180-264 VAC
50/60 Hz, single phase
<600 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)

MODEL CONFIGURATIONS

MODEL	RF INPUT CONNECTOR	RF OUTPUT CONNECTOR
40S6G18A	Precision N female, rear	Precision N female, rear
40S6G18AM1	Precision N female, front	Precision N female, front
40S6G18AM2	Precision N female, front	Precision N female, rear
40S6G18AM3	Precision N female, front	Waveguide*, rear

*Limited to 8–18GHz.