



Model xx/xxS1G18
15-50/10-40 Watts CW
0.7GHz-18.0GHz

The Model Series xx/xxS1G18 are portable, self-contained, air-cooled, dual-band, broadband, completely solid-state amplifiers designed for applications where instantaneous bandwidth, high gain and linearity are required.

The models are equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The digital display on the front panel indicates control status and reports of internal amplifier status. All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format, RS-232 hardwire and fiber optic, USB, and Ethernet.

These models are designed to have low spurious signals, exhibit very good linearity, and are extremely load tolerant which enables them to be used in many RF applications such as: RF susceptibility testing, antenna/component testing, and communication technology testing. They can be used as test instruments covering multiple frequency bands and are suitable for a variety of communication technologies such as CDMA, W-CDMA, TDMA, GSM, UWB, WiMAX etc.

These models have the ability to be upgraded at a later date to the highest power levels listed in the model configurations.

The export classification for most of these amplifiers is 3A001; two models are classified as EAR99 (indicated with an asterisk in the table below). 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.

Available Model Configurations

	15 watts, 0.7-6.0GHz	25 watts, 0.7-6.0GHz	50 watts, 0.7-6.0GHz
10 watts, 6.0-18.0GHz	15/10S1G18*	25/10S1G18*	50/10S1G18
20 watts, 6.0-18.0GHz	15/20S1G18	25/20S1G18	50/20S1G18
40 watts, 6.0-18.0GHz	15/40S1G18	25/40S1G18	50/40S1G18

*Export classification is EAR99.

SPECIFICATIONS COMMON TO ALL MODELS IN THE SERIES

INPUT FOR RATED OUTPUT 1.0 milliwatt maximum, 0 dBm

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.
*See Application Note #27.

MODULATION CAPABILITY..... Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal

SPURIOUS Minus 73 dBc typical

CONNECTORS

RF INPUT Type N (front panel)

RF OUTPUT (2) RF OUTPUTS (1 for each band) Type N (front panel)

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 (W x H x D) (Cabinet)..... 50.3 x 34.3 x 61 cm (19.8 x 13.5 x 24 in)
48.3 x 31.1 x 61 cm (19.0 x 12.25 x 24 in)

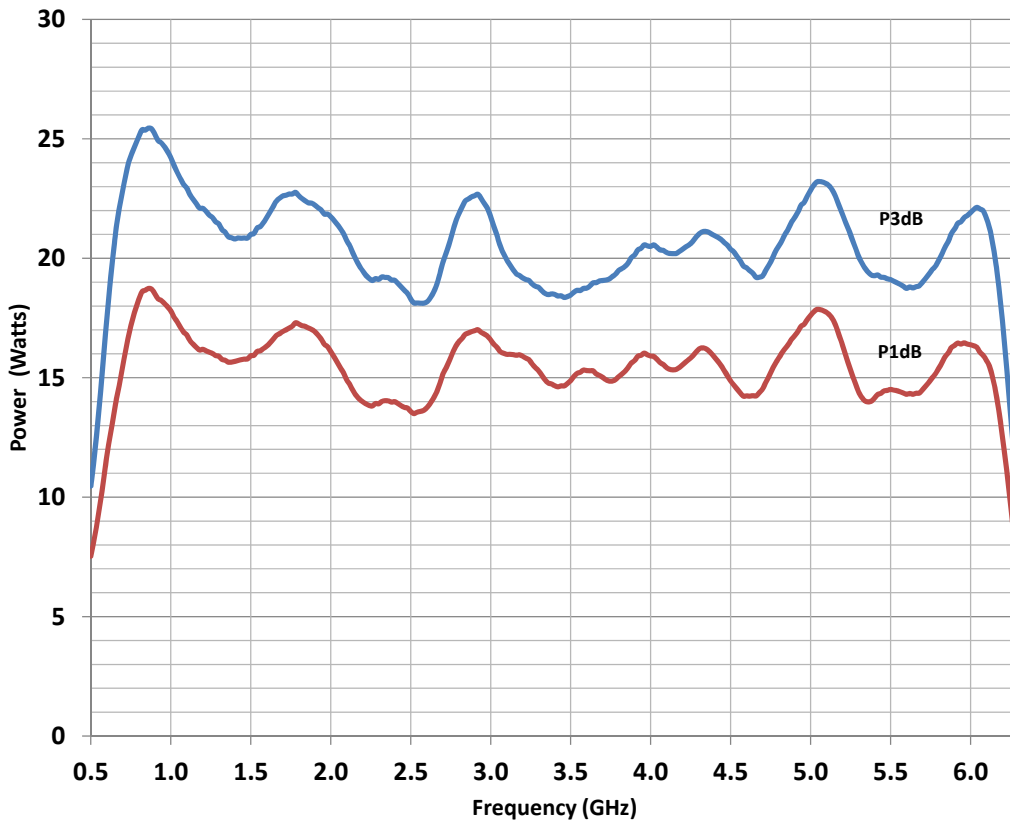
MODEL CONFIGURATIONS

Model	# of RF Outputs		RF Input & Output Connector Location		Cabinet
	1	2	Front	Rear	
Std		x	x		Yes
M1	x		x		Yes
M2	x			x	Yes
M3		x		x	Yes
M4	x		x		No
M5	x			x	No
M6		x	x		No
M7		x		x	No

SPECIFICATIONS, MODEL 15/xxS1G18, 0.7–6.0 GHz BAND

RATED POWER OUTPUT	15 watts minimum
POWER OUTPUT @ 3dB COMPRESSION	
Nominal	20 watts
Minimum	15 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal	15 watts
Minimum	12 watts
FLATNESS.....	±1.5 dB typical ±2.0 dB maximum
FREQUENCY RESPONSE	0.7–6.0GHz instantaneously
GAIN (at maximum setting)	43 dB minimum
HARMONIC DISTORTION.....	Minus 20 dBc maximum at 15 watts (1.0-6.0 GHz) Minus 15 dBc typical at 15 watts (0.7-1.0 GHz)
THIRD ORDER INTERCEPT POINT	48 dBm typical
NOISE FIGURE	10 dB typical
PRIMARY POWER (selected automatically).....	90-264 VAC 50/60 Hz, single phase 210 watts maximum

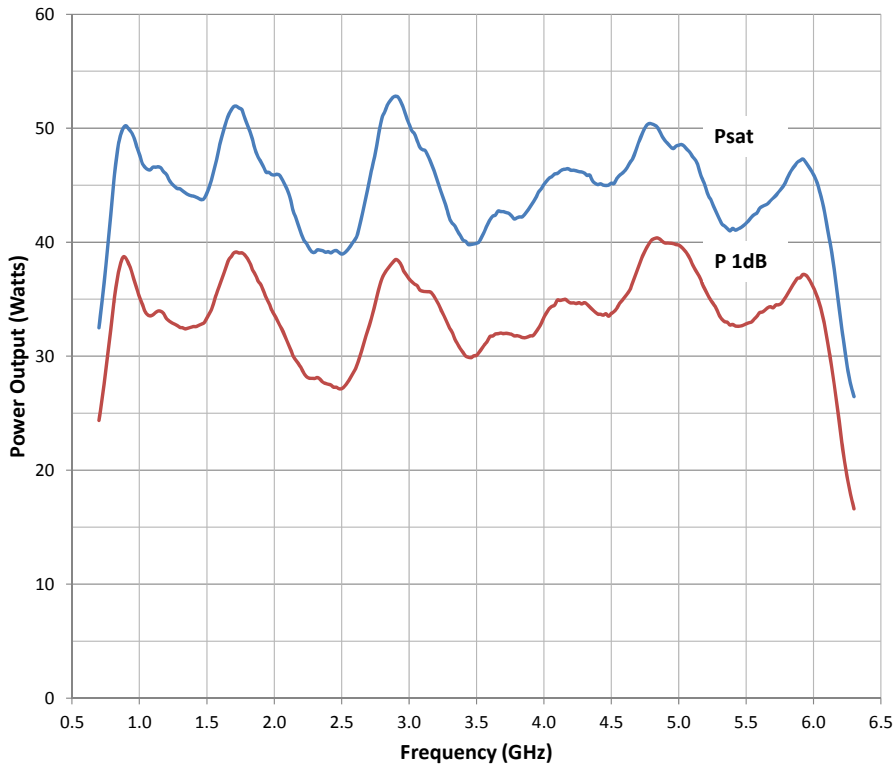
15/xxS1G18 TYPICAL POWER OUTPUT WITH 0.7-6.0GHz BAND SELECTED



SPECIFICATIONS, MODEL 25/XXS1G18, 0.7–6.0 GHz BAND SELECTED

RATED POWER OUTPUT	25 watts minimum
POWER OUTPUT @ 3dB COMPRESSION	
Nominal	30 watts
Minimum	25 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal	25 watts
Minimum	20 watts
FLATNESS.....	±1.5 dB typical ±2.0 dB maximum
FREQUENCY RESPONSE	0.7–6.0 GHz instantaneously
GAIN (at maximum setting)	46 dB minimum
THIRD ORDER INTERCEPT	51 dBm typical
NOISE FIGURE	10 dB typical
HARMONIC DISTORTION.....	Minus 20 dbc, max at 25 watts (1.0-6.0 GHz) Minus 15 dBc typical at 25 watts (0.7-1.0 GHz)
PRIMARY POWER	(Selected Automatically) 90-264 VAC 50/60 Hz, single phase 300 watts maximum

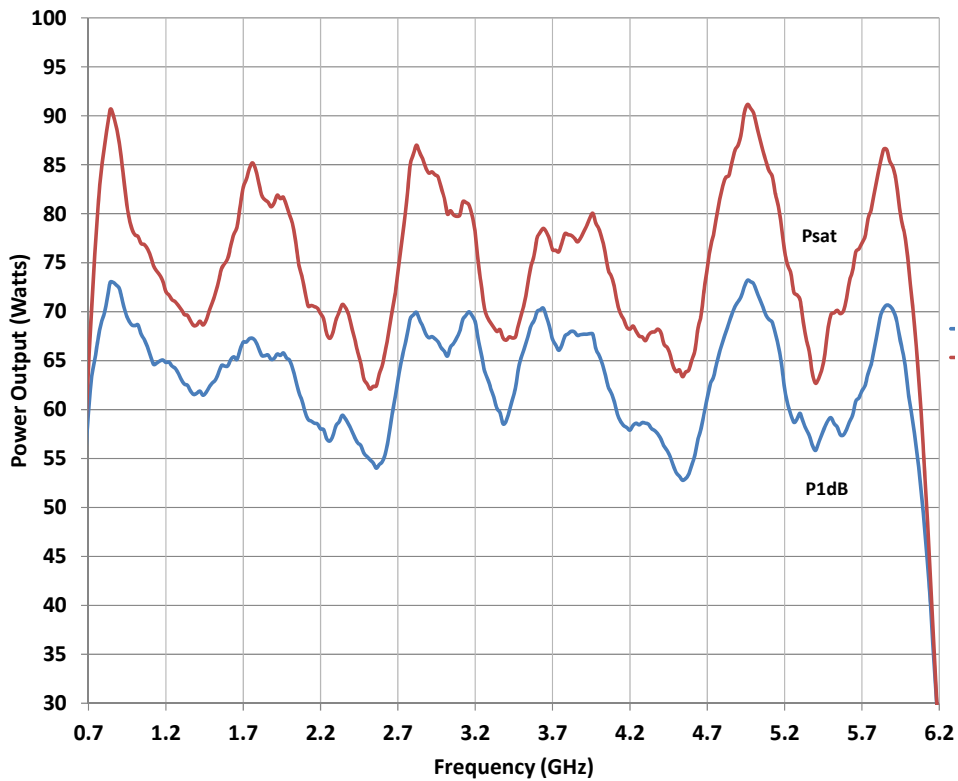
25/xxS1G18 TYPICAL POWER OUTPUT WITH 0.7-6.0GHz BAND SELECTED



SPECIFICATIONS, MODEL 50/XXS1G18, 0.7-6.0 GHz BAND SELECTED

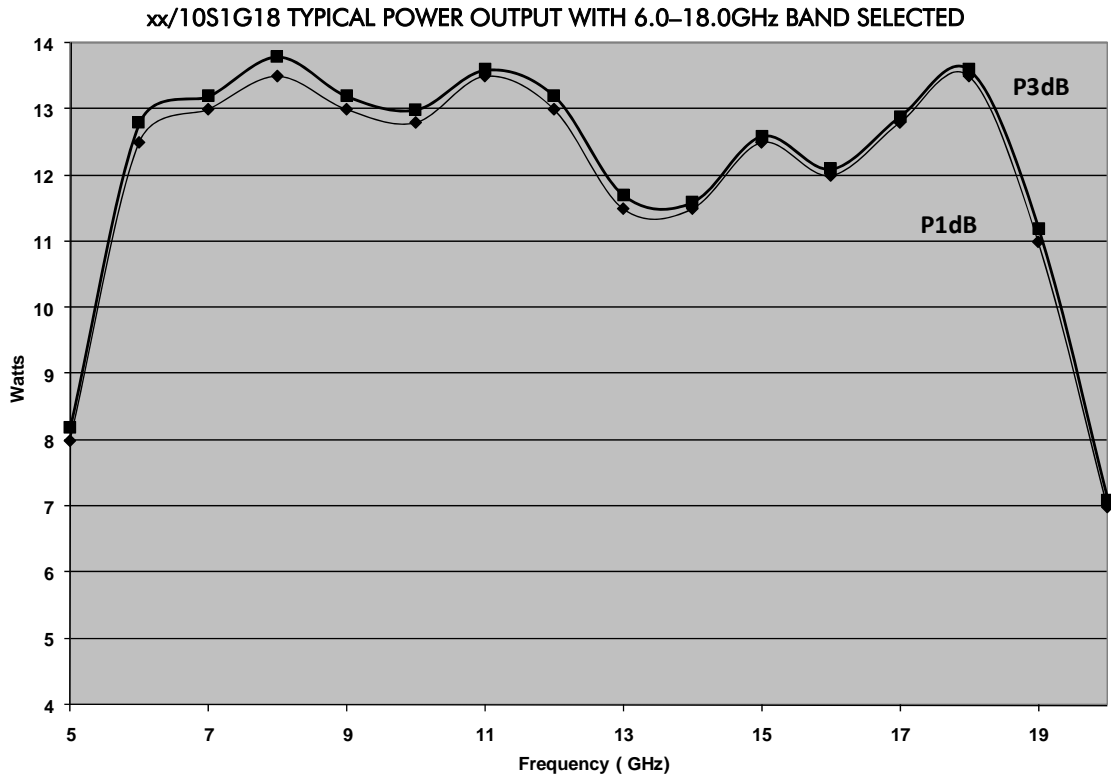
RATED POWER OUTPUT	50 watts minimum
POWER OUTPUT @ 3dB COMPRESSION	
Nominal	65 watts
Minimum	50 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal	50 watts
Minimum	40 watts
FLATNESS.....	±1.5 dB typical ±2.0 dB maximum
FREQUENCY RESPONSE	0.7-6.0 GHz instantaneously
GAIN (at maximum setting)	48 dB minimum
THIRD ORDER INTERCEPT	56 dBm typical
NOISE FIGURE	10 dB typical
HARMONIC DISTORTION.....	Minus 20 dBc max at 40 watts (1.0-6.0 GHz) Minus 15 dBc typical at 40 watts (0.7-1.0 GHz)
PRIMARY POWER (Selected Automatically)	90-264 VAC 50/60 Hz, single phase 525 watts maximum

50/xxS1G18 TYPICAL POWER OUTPUT WITH 0.7-6.0GHz BAND SELECTED



SPECIFICATIONS, MODEL xx/10S1G18, 6.0–18.0 GHz BAND

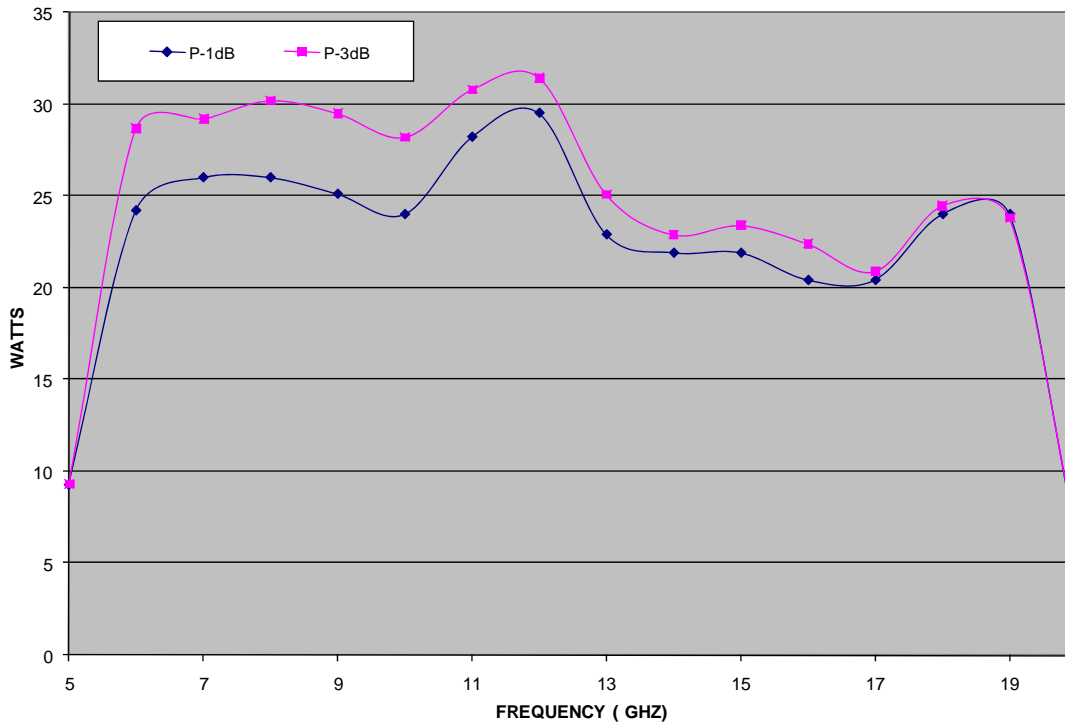
RATED POWER OUTPUT	10 watts minimum
POWER OUTPUT @ 3dB COMPRESSION	
Nominal	13 watts
Minimum	10 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal	12 watts
Minimum	9 watts
FLATNESS.....	±2.0 dB typical ±3.0 dB maximum
FREQUENCY RESPONSE	6.0–18.0 GHz instantaneously
GAIN (at maximum setting)	40 dB minimum
HARMONIC DISTORTION.....	Minus 20 dBc max at 10 watts
THIRD ORDER INTERCEPT POINT	47 dBm typical
PRIMARY POWER (selected automatically).....	90-264 VAC 50/60 Hz, single phase 550 watts maximum



SPECIFICATIONS, MODEL xx/20S1G18, 6.0–18.0 GHz BAND

RATED POWER OUTPUT	20 watts minimum
POWER OUTPUT @ 3dB COMPRESSION	
Nominal	25 watts
Minimum	20 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal	22 watts
Minimum	18 watts
FLATNESS	
@ 1 dB COMPRESSION	± 2.0 dB typical, ± 3.0 dB maximum
FREQUENCY RESPONSE	6.0–18.0 GHz instantaneously
GAIN (at maximum setting)	44 dB minimum
HARMONIC DISTORTION	Minus 20 dBc max
THIRD ORDER INTERCEPT POINT	49 dBm typical
PRIMARY POWER (selected automatically).....	90-264 VAC
	50/60 Hz, single phase
	600 watts maximum

XX/20S1G18 TYPICAL POWER OUTPUT WITH 6.0–18.0GHz BAND SELECTED



SPECIFICATIONS, MODEL xx/40S1G18, 6.0–18.0 GHz BAND

RATED POWER OUTPUT	40 watts minimum
POWER OUTPUT @ 3dB COMPRESSION	
Nominal	46 watts
Minimum	37 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal	40 watts
Minimum	30 watts
FLATNESS	
@ 1 dB COMPRESSION	±2.0 dB typical, ±3.0 dB maximum
FREQUENCY RESPONSE	6.0–18.0 GHz instantaneously
GAIN (at maximum setting)	48 dB minimum
HARMONIC DISTORTION	Minus 20 dBc max at 40 watts
THIRD ORDER INTERCEPT POINT	52 dBm typical
PRIMARY POWER (selected automatically).....	
	90-264 VAC
	50/60 Hz, single phase
	<1000 watts maximum

XX/40S1G18 TYPICAL POWER OUTPUT WITH 6.0–18.0GHz BAND SELECTED

