



# 产 品 手 册

仪器型号: AR功率放大器40s6g18c

西安安泰测试科技有限公司

仪器维修|租赁|销售|测试

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# Amplifiers

## Model 40S6G18C

### Features:

- 40 W CW, 6 - 18 GHz
- Class A design
- 100% mismatch tolerant
- Built-in fault monitoring and protection
- Remote control: Ethernet, USB, GPIB, fiber-optic serial, RS-232
- Modular design for easy maintenance and service
- Low acoustical noise

### Applications:

- EMC (military, aviation, automotive, commercial)
- Radiated and conducted EMC testing
- General purpose, antenna, and component testing
- CDMA, W-CDMA, TDMA, GSM, UWB, WiMAX etc.

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[www.arworld.us/amplifiers](http://www.arworld.us/amplifiers)

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ISO 9001:2015 Certified  
ISO 17025 :2017 Accredited



The Model 40S6G18C is a solid-state, Class A design, self-contained, air-cooled, broadband power amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. It will provide a minimum of 40 W across its operating bandwidth. Protection from input overdrive beyond 0 dBm is provided as well as protection from various failure conditions including over-temperature and power supply faults.

A front panel display indicates the operational status and fault conditions. All amplifier control functions, and status indications are available remotely using GPIB/IEEE-488, RS-232, fiber-optic serial, USB, or Ethernet. Interface connectors are located on the back panel. Local and remote operation is managed by a switch on the front panel.

This is a multiple purpose amplifier. The low level of spurious signals and linearity make it ideal for use as a driver in testing wireless and communication components and subsystems. By covering such a wide bandwidth, it 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.



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- 40 W
- 6 - 18 GHz

## Electrical Specifications

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Rated Power Output (6 - 18 GHz)	PSAT	40	60	>115	W
Input for Rated Output	Pin			1.0	mW
				0	dBm
Power Output @ 1 dB Compression	P1dB	25	45	>95	W
Power Output @ 3 dB Compression	P3dB	35	55	>110	W
Operating Frequency	BW	6.0		18.0	GHz
Gain (Small Signal)		51	53	57	dB
Gain Reduction Adjustment (when below compression)		10	15	20	dB
Flatness	$\Delta G$		$\pm 2.0$	$\pm 3.0$	dB
Input Impedance	Z in		50		Ohm
			2.0:1	2.5:1	VSWR
Output Impedance	Z out		50		Ohm
3 <sup>rd</sup> Order Intercept	IP3		+52		dBm
Harmonic Distortion @ 40 W	H2, H3		-25	-20	dBc
Power Consumption	PD			700	W
Modulation Capability		AM, FM or Pulse			

## Absolute Maximum Rating

Exceeding any of the limits listed here may result in permanent damage to the device.

Parameter	Minimum	Typical	Maximum	Unit
RF Drive		0	+13	dBm
RF Load		1:1	$\infty$	VSWR
RF Load Reflected Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.			100	%
AC Power (single phase)	100		240	VAC
	47		63	Hz
Ambient Temperature	+5	+25	+40	°C
Storage Temperature	-20		+50	°C
Altitude			2000	m
Shock/Vibration	Normal Truck Transport			



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### Mechanical Specifications

Parameters		Unit
Dimensions (With Cabinet) (W x H x D)	50.2 x 20.6 x 63.8	cm
	19.8 x 8.1 x 25.1	in
Dimensions (No Cabinet) – 4U for 19" Rack	48.3 x 18.8 x 63.8	cm
	19.0 x 7.0 x 25.1	in
Weight (With Cabinet)	31.75	kg
	70	lb
Weight (No Cabinet)	22.7	kg
	50	lb
Cooling	Forced air (self-contained fans) Side inlets / rear outlet $\Delta t = +7^{\circ}\text{C}$ (typical)	
Acoustical Noise (Measured @ 1 meter from the front)	60 (typical)	dBA

### Regulatory Compliance

Type	Standard
EMC	EN 61326-1
Safety	UL 61010-1
	CAN/CSA C22.2 #61010-1
	CENELEC EN 61010-1
RoHS	Directive 2011/65/EU
Export	3A001

### Connector interfaces

Function	Type
RF input	N female (50 $\Omega$ )
RF output	N female (50 $\Omega$ )
IEEE-488	24-pin female
RS-232	9-pin subminiature D female
RS-232 (fiber optic)	ST
USB 2.0	Type B
Ethernet	RJ-45
Interlock	15-pin subminiature D female

## Ordering Options

<u>40S6G18C</u>	-	-	<u>N</u>	-	-	<u>N</u>	-												
Model		RF IN Conn		RF OUT Conn		Enclosure		No Enclosure											
		Location, Type		Location, Type															
		<table><tr><th colspan="2">Connector</th></tr><tr><td>Front</td><td>F</td></tr><tr><td>Rear</td><td>R</td></tr></table>		Connector		Front	F	Rear	R	<table><tr><th colspan="2">Enclosure</th></tr><tr><td>Enclosure</td><td>E</td></tr><tr><td>No Enclosure</td><td>NE</td></tr></table>		Enclosure		Enclosure	E	No Enclosure	NE		
Connector																			
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Rear	R																		
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Enclosure	E																		
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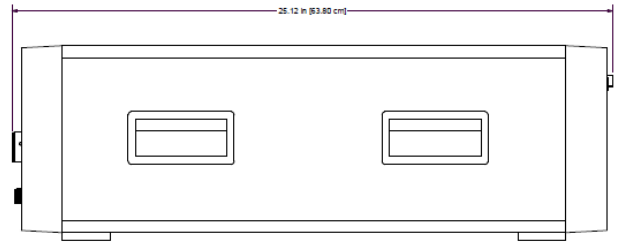
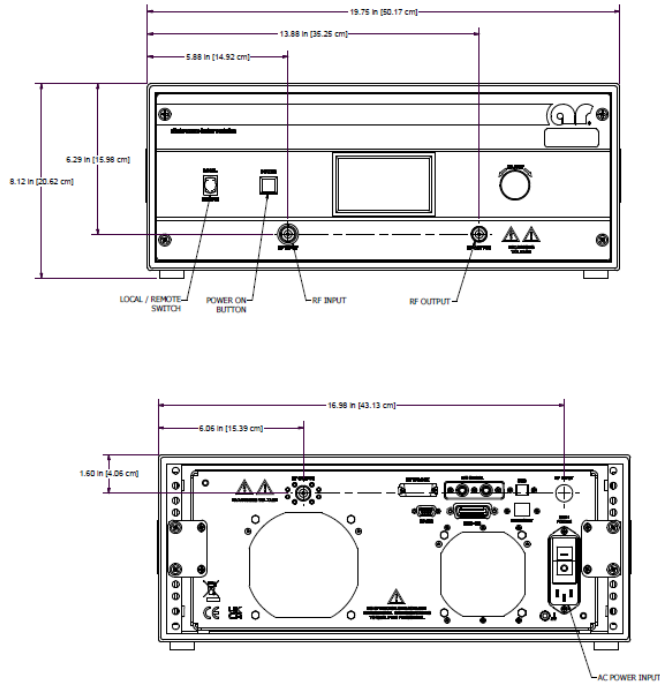


## Model 40S6G18C

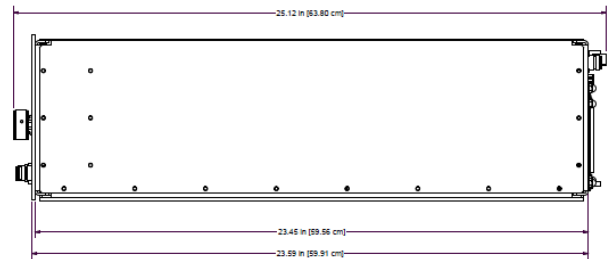
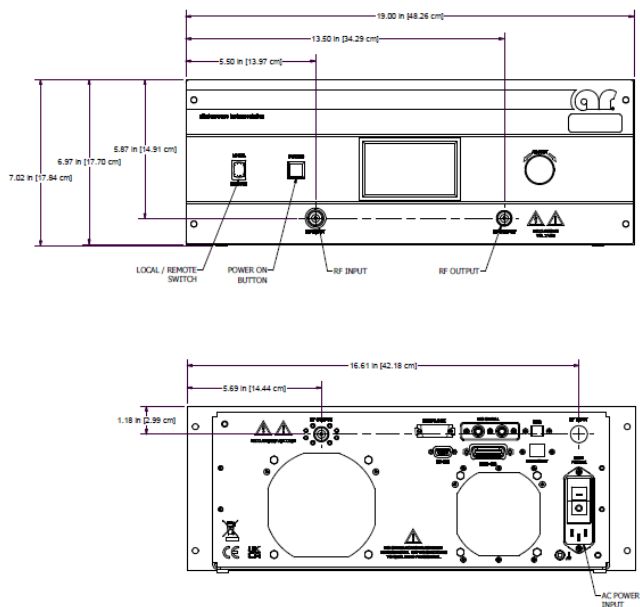
- 40 W
- 6 - 18 GHz

## Envelope Drawing

40S6G18C with Cabinet



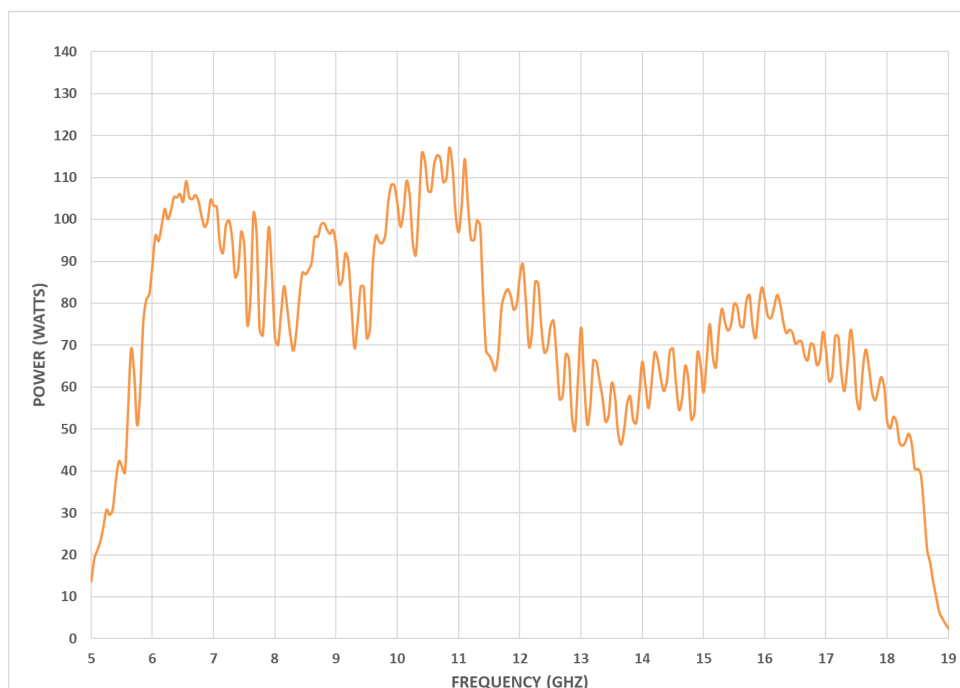
40S6G18C without Cabinet



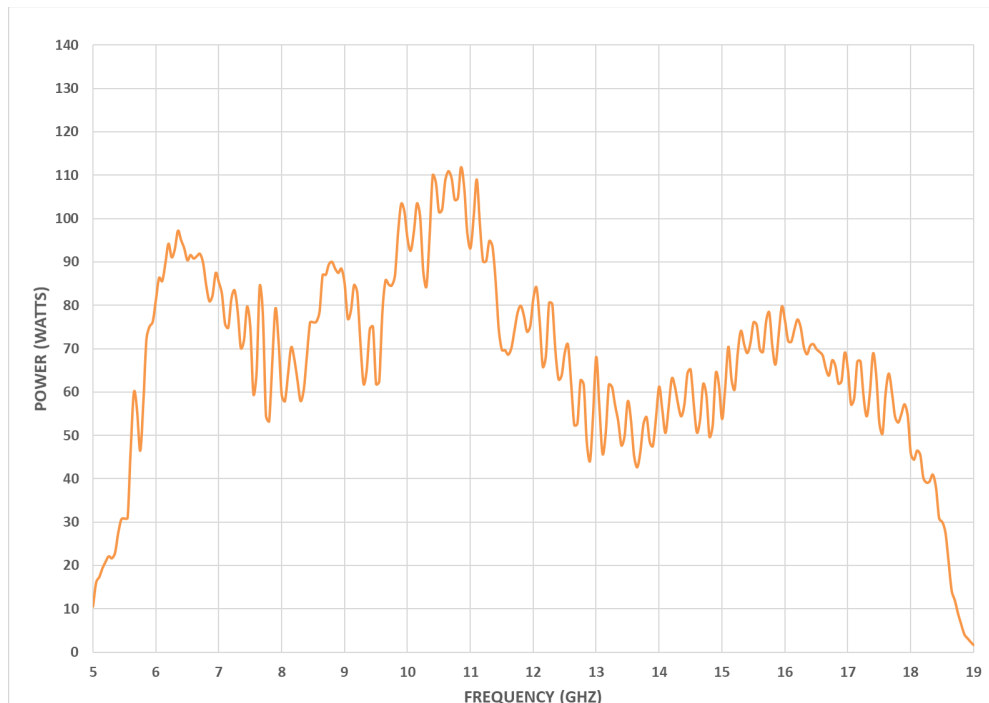
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TYPICAL PSAT POWER @ 0 dBm INPUT



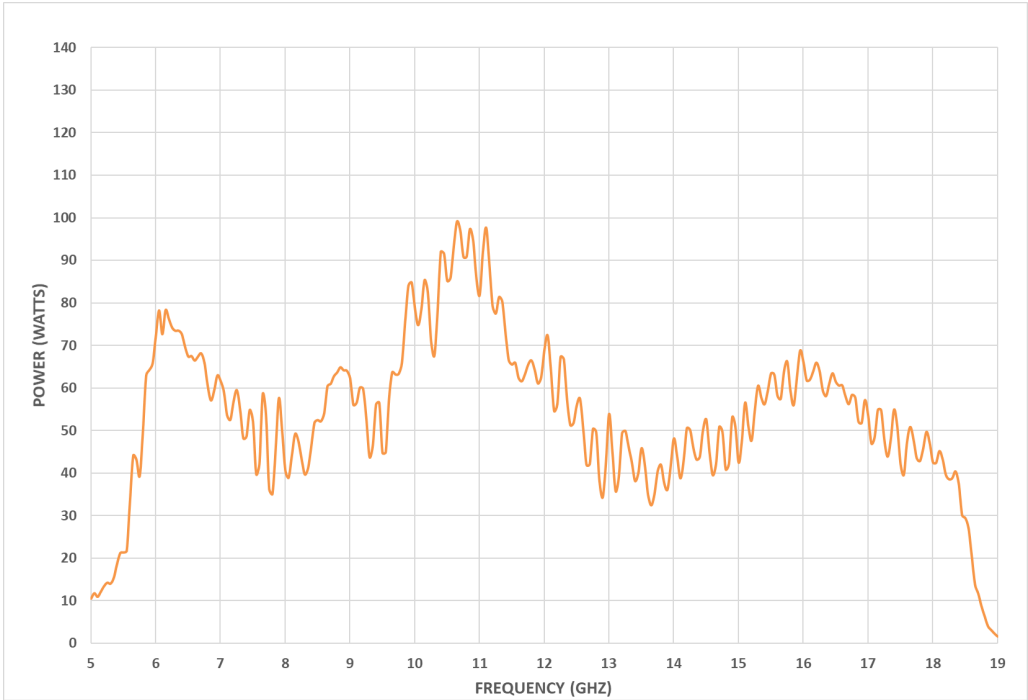
TYPICAL POWER @ P3 dB COMPRESSION



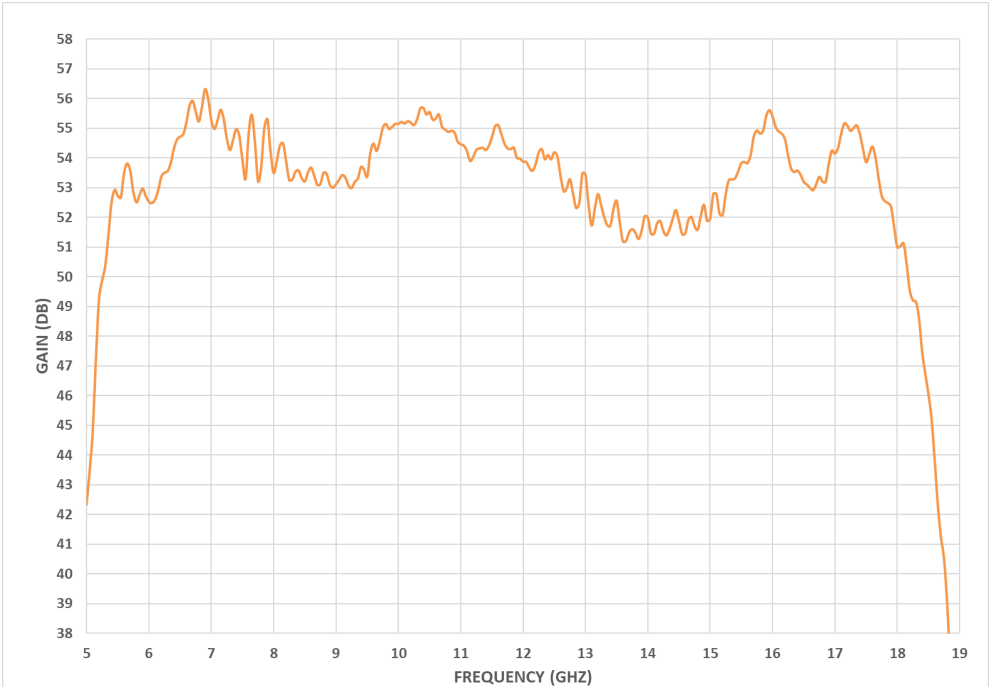
Model 40S6G18C

- 40 W
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TYPICAL POWER @ P1 dB COMPRESSION



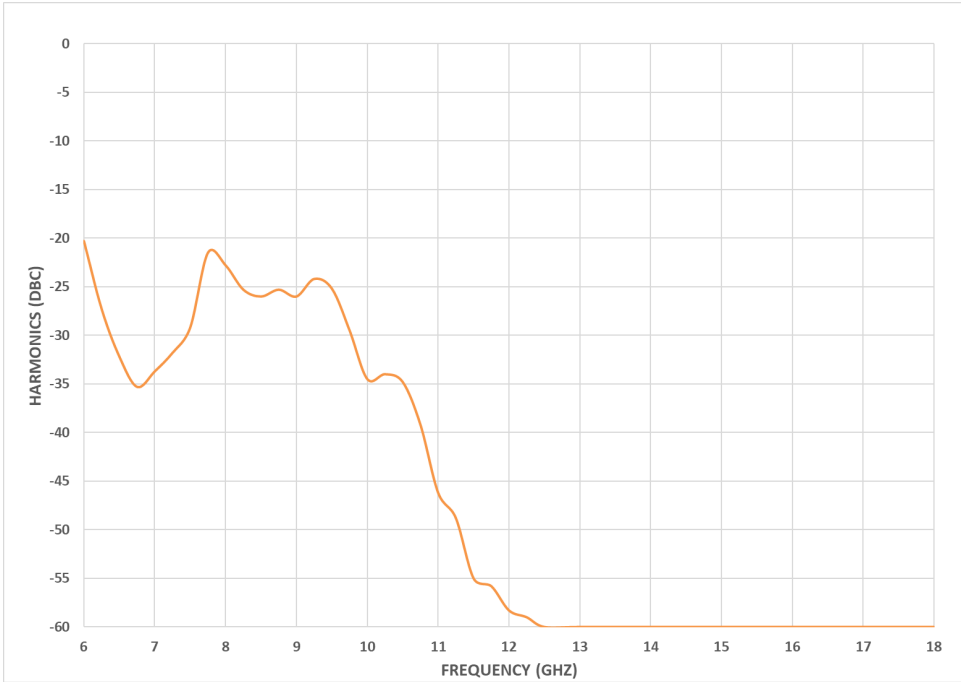
TYPICAL SMALL SIGNAL GAIN @ -20 dBm INPUT



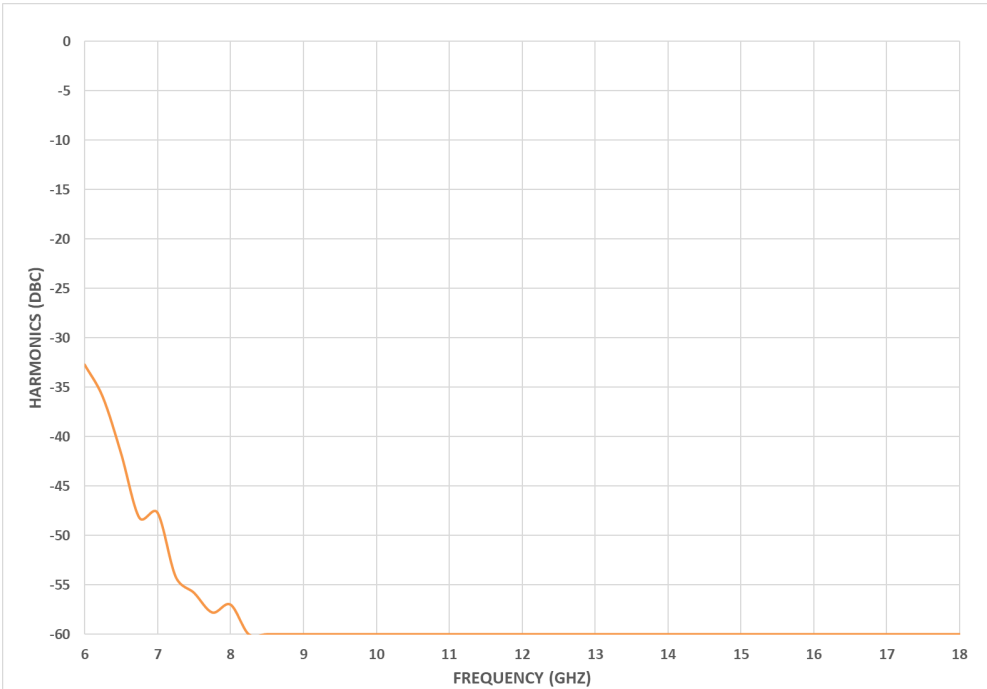
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TYPICAL 2<sup>nd</sup> HARMONIC @ 40 W OUTPUT



TYPICAL 3<sup>rd</sup> HARMONIC @ 40 W OUTPUT



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