AMPLIFIERS

## S31 Series Solid State Microwave Power Amplifiers

0.8 - 3.0 GHz • 5 Watts to 500 Watts

Instruments for Industry, S31 Series Solid State amplifiers are state-of-the-art amplifiers and provide outstanding RF performance. The S31 Series amplifiers operate over the frequency range from 0.8-3.0 GHz and can be supplied at power levels from 5 watts to 500 watts offering all the control and communication features needed for today's automated test systems. From the ground up, the S31 Series amplifiers are built to withstand rugged handling, whether it's being shipped to you or hauled around from site to site. They feature heavy-duty aluminum chassis construction with a modular approach for easy access and service.

Operation safety and ease of use are paramount in *IFI* product designs. The IFI S31 Series include a full complement of RF and hardware protection circuits including high VSWR, over-current, voltage protection, redundant thermal and airflow sensors for the module and the system level. In addition, the S31 series includes a state-of-the-art interface that is sophisticated, comprehensive, and yet simple to use.

The backlit LCD screen shows forward/reverse power indication, system status and self-diagnostic information. All the amplifiers operating parameters are simultaneously available in the amplifier front panel display as well as over the remote bus. Selection switches allow you to switch the amplifier to the desired mode of operation for local control if the unit is not being operated remotely.

For computer automation both an RS-232 and IEEE interface are provided as standard. To meet individual application needs, the S31 Series amplifiers can be easily customized with other options. With this capability and its reliable elegant design, the S31 series amplifiers are the perfect system for your applications.

#### **Features**

- Solid State Design
- Rugged Construction & High Reliability
- Instantaneous Broadband Frequency range
- Backlit screen
- Modular Design Construction
- Integrated Force Air Cooling
- Self-diagnostic circuitry
- IEEE-488 interface & RS232 Remote





Models &	Models & General Specifications:							
Model	Frequency	Rated Power	P1dB Power	Gain	Mains	Weight	Size	
Number	Range (GHz)	(watts minimum)	(watts minimum)	(dB min)	(kVA)	(Pounds)	(Inches)	
S31-5	0.8-3.0	5	5	37	.10	30 Lbs	5.25" H x 19" W x 24" D	
S31-10	0.8-3.0	10	8	40	.10	33 Lbs	5.25" H x 19" W x 24" D	
S31-20	0.8-3.0	20	15	43	.20	35 Lbs	5.25" H x 19" W x 24" D	
S31-25	0.8-3.0	25	20	44	.25	37 Lbs	5.25" H x 19" W x 24" D	
S31-40	0.8-3.0	40	30	46	.30	45 Lbs	5.25" H x 19" W x 24" D	
S31-50	0.8-3.0	50	40	47	.40	60 Lbs	7.00" H x 19" W x 24" D	
S31-75	0.8-3.0	75	60	49	.60	75 Lbs	7.00" H x 19" W x 24" D	
S31-100	0.8-3.0	100	80	50	0.8	80 Lbs	8.75" H x 19" W x 24" D	
S31-150	0.8-3.0	150	130	52	1.2	100 Lbs	8.75" H x 19" W x 24" D	
S31-200	0.8-3.0	200	150	53	1.5	120 Lbs	10.5" H x 19" W x 25" D	
S31-250	0.8-3.0	250	200	54	2.0	200 Lbs	2x 10.5" H x 19" W x 25" D	
S31-300	0.8-3.0	300	250	55	2.5	220 Lbs	2x 10.5" H x 19" W x 25" D	
S31-400	0.8-3.0	400	350	56	3.0	450 Lbs	Rack Integrated	
S31-500	0.8-3.0	500	450	57	4.0	500 Lbs	Rack Integrated	

### **Instruments For Industry**

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#### Standard Features for IFI S31 Series Solid State Amplifiers

Standard Features:

VSWR Reflected Power Protection, the unit operates without damage or oscillation into any magnitude of phase or load impedance, Open & Short Circuit Protection.

\* Alternate Prime Power (specify at time of order)

GPIB IEEE 488 & RS232 Remote Control

RF Sample Port on the Front Panel, 112R for rear panel

Internal Pre-amplification to obtain rated output power with an input level of 0 dBm or less.

Gain Control Local & Remote, 30dB range

RF Input/Output Connectors on the Front Panel, 118R for rear panel

Internal Systems Diagnostics & Status Indicators

Total/Operate Elapsed Time Metering in hours

RF Safety Interlock

Forward/Reflected Power Indication simultaneously on Front Panel display

IFI S31 Series Solid State Amplifier Specifications					
Frequency Range:	As Specified in Model Table				
Rated Output Power:	As Specified in Model Table				
Gain @ Rated Power:	As Specified in Model Table				
Prime Power:	As Required (Some are listed below)				
Input/output Impedance:	50 ohms				
RF Input/ Sample Connectors:	S31				
RF Output Connector:	Type N Female Other connectors available by request or specification				
Input VSWR:	2.0:1				
Output VSWR:	2.5:1				
Operating Temp:	0° to 50° C				
Non-operating Temp:	-40° to 70° C (50,000 feet max)				
Humidity:	95% without condensation				
Altitude:	10,000 feet				
Cooling System:	Air cooled, self contained				
Modulation:	AM,FM, Pulse				
Configuration:	Rack Mount as specified in Model Table, or Rack/Cabinet Integrated				
Spurious Outputs:	<-60 dBc nominal				
Harmonics:	-20dBc minimum @ Linear Power				

#### **Standard Prime Powers:**

100, 115, 120 VAC ±10% 50/60 Hz, single phase

220, 230, 240VAC ±10% 50/60 Hz, single phase

120/208 or 200/220/230/240 VAC  $\pm 10\%$  50/60 Hz, three phase Wye or Delta power is available

200/220/230/240VAC ±10% 50/60 Hz, three phase Wye or Delta power is available

Special Prime Powers other then listed are subject to availability

Some Available Options for IFI S31 Series Solid State Amplifiers					
Option 110-1E:	GPIB IEEE-488 RS232 and Ethernet Remote Control				
<b>Option 110-2:</b>	GPIB IEEE-488 and RS 422 Remote Control				
Option 110-3	GPIB IEEE-488 and RS 485 Remote Control				
Option 113:	Chassis slides for a 19" rack mounting				
Option 118A:	RF Input On Front Output On Rear				
Option 118B:	RF Input On Rear Output On Front				

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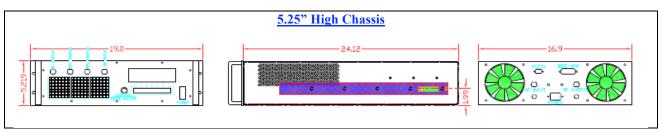
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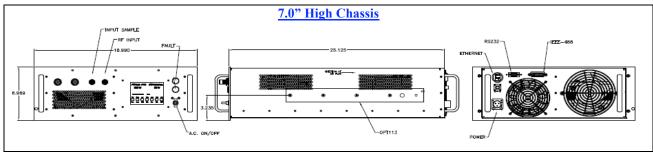
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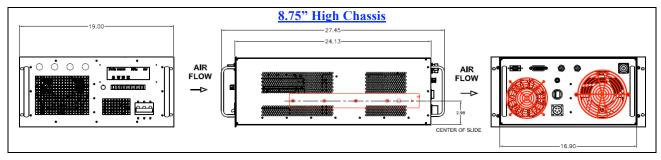
## S31 Series Solid State Microwave Power Amplifiers

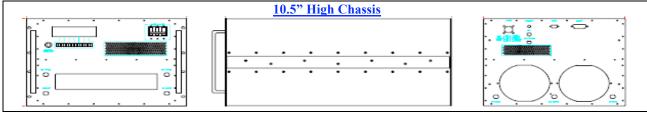
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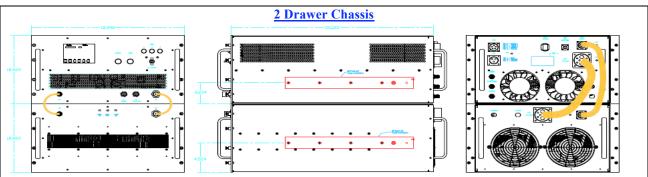
#### **Outline Configurations:**











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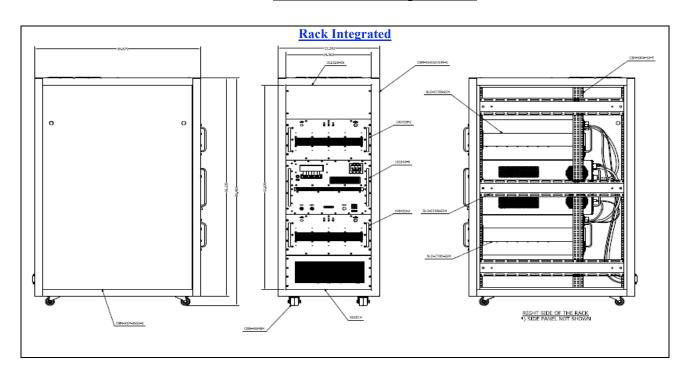
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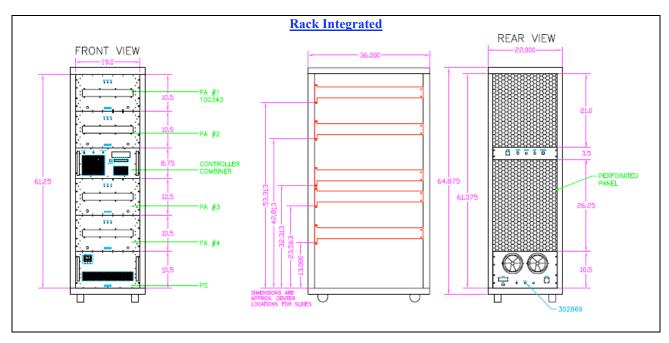
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#### **Rack Outline Configurations:**





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