



Instruments For Industry

The Power Of Choice

Microwave

AMPLIFIERS

SMC1500 Solid State Microwave Power Amplifier

80 – 1000 MHz • 1.5kW • Compact Size – 7U & 3U • Solid State Reliability

The Instruments for Industry, SMC1500 Solid State amplifier is state-of-the-art and provides outstanding RF performance. The SMC1500 amplifier operates over the frequency range from 80 - 1000 MHz and supplies 1.5KW CW Power. From the ground up, the SMC1500 amplifier is built to withstand rugged handling, whether it's being shipped to you or hauled around from site to site. This series features heavy-duty aluminum chassis construction with a modular approach for easy access and service. The SMC1500 is perfectly suited for all Military / Avionic and EMC testing as well as general purpose industrial applications.

Operation safety and ease of use are paramount in IFI product designs. The SMC1500 amplifier includes 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 SMC1500 includes a state-of-the-art user interface that is sophisticated, comprehensive, and yet simple to use.

The color touchscreen shows forward/reverse power indication in watts or dBm, system status and self-diagnostic information. Peak power metering is incorporated to measure forward and reflected power while producing pulse power. All the amplifier 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 RS-232, USB, Ethernet and IEEE interfaces are provided as standard. To meet individual application needs, the SMC1500 Series amplifiers can be easily customized with other options. With this capability and its reliable elegant design, the SMC1500 series amplifiers are the perfect system for your applications.

Features

- Solid State Design
- Rugged Construction & High Reliability
- Instantaneous Broadband Frequency range
- Color Touchscreen
- Modular Design Construction
- Integrated Force Air Cooling
- Self-diagnostic circuitry
- IEEE-488 interface, USB, Ethernet & RS232 Remote
- Fan Speed Control: lower acoustic noise
- Peak power metering



MODEL 961-100		RF AMPLIFIER 1.0 - 6.0 GHz		IP 411000	
FWD: 185.0	RFL: 68.0	WATTS		GAIN 55 %	
		dBm			
PS1 0 V 0 A	PS2 0 V 0 A	STBY	FLT		
DUTY CYCLE 10 %	IPA1 0 A IPA2 0 A	OPRT	RST		
PLS WDT 9999.4 uS	PA1 0 A PA5 0 A				
REP RATE 100000 Hz	PA2 0 A PA6 0 A				
BAND 1 .1-6.0 GHz	PA3 0 A PA7 0 A	LOC	ALC		
	PA4 0 A PA8 0 A	RMT	OFF		
INTERNAL 32 DEG C	STBY HRS 179				
BASEPLATE 0 DEG C	OPRT HRS 59				
STATUS: STANDBY					
FAULT: NO FAULTS		GPIB 9			

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General Specifications:						
Model Number	Frequency Range (MHz)	Rated Power (watts minimum)	Gain (dB min)	Mains (kVA)	Weight (Pounds)	Size (Inches)
SMC1500	80 - 1000	1500	62	10.5	Power Supply: 50lbs RF Drawer; 140lbs	5.25”H x 19”W x 27”D 12.25”H x 19”W x 27”D

Standard Features for IFI SMC1500 Solid State Amplifier

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, USB, Ethernet 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 SMC1500 Solid State Amplifier Specifications

Frequency Range:	80 - 1000 MHz
Rated Output Power:	1500W
P1dB Power:	900W min, 1000W nominal
Gain @ Rated Power:	62 dB
Prime Power:	As Required (Some are listed below)
Input/output Impedance:	50 ohms
RF Input/ Sample Connectors:	Type N Female, unless specified otherwise
RF Output Connector:	Type 7/16 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:	Pulse, AM, FM
Configuration:	Rack Mountable
Spurious Outputs:	<-50 dBc nominal
Harmonics:	-20dBc minimum @ Linear Power



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Standard Prime Powers:

120/208 or 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 SMC1500 Series Solid State Amplifiers

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

Outline Configuration

