

The HD19943 is suitable for octave bandwidth and band specific high power CW and pulse applications. This amplifier utilizes high push-pull LDMOS power devices that provide wide frequency response, high gain, high peak power capability, and low distortions. Employing advanced broadband RF matching networks and combining techniques, EMI/RFI filters, and all qualified components achieve exceptional performance, long-term reliability and high efficiency. The amplifier is constructed of three modular drawers and is housed in a rack cabinet. Each LRU includes a universal voltage, single phase, power supply and a built in forced air-cooling system.

- Solid-state linear design
- Instantaneous broadband
- Suitable for CW and Pulse application
- Modular design
- 50 Ohm Input/Output impedance
- High reliability and ruggedness

ELECTRICAL SPECIFICATIONS @ T=25°C, 50 System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	500	400 - 1000	1000	MHz
Power Output CW	P _{sat}	1000			Watts
Power Output Pulse Duty cycle = 4%, Pulse width = 3uS typical	P _{pulse}	1500			Watts
Power Output @ 1dB G.C.P.	P _{1dB}	800			Watts
Gain @ P1dB G.C.P	G _{1dB}	60			dB
Input Power for 1500W pulse	P _{in}		0		dBm
Gain Flatness	G			±2.0	dB
Input/Output VSWR	S11/S22	-10			dB
Noise Figure	NF		10		dB
Third Order Intercept Point	IP3		+69		dBm
Harmonics @ 1dB G.C.P	H		-20		dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage (single phase)	VAC	180		260	VAC
AC Power Consumption @ 1000 W CW	P _d			5000	Watts

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	T _c	0		+50	°C
Non-operating Temperature	T _{stg}	-40		+85	°C
Relative humidity w/o condensation	RH	95			%
Altitude	ALT	10,000	30,000		Feet
Shock & Vibration	SH / VI		Airborne		

MECHANICAL SPECIFICATIONS

Dimensions W x H x D/ Weight with enclosure	23.5"x31"x25" / 250 lb.	Typ
Dimensions W x H x D / Weight w/o enclosure	19"x22.75"x22" / 180 lb.	Typ
RF Connectors FCN or RCN option	Type-N female front or rear panel	
Cooling	Built in forced-air system	

PROTECTIONS

Input Overdrive	+10 dBm	Max
Load VSWR	Infinite @ any angle	Nom
Thermal Overload	85°C shutdown	Max

HD Communications Corp.

Ronkonkoma, NY USA

Home of RFamplifiers.com

Solid State Broadband High Power RF Amplifier

HD19943

400 – 1000 MHz / 1000 Watt

AVAILABLE OPTIONS

Option	Number	Description	Price
FGA	061	Front panel manual gain adjustment 10 turns	Standard
LCD	062	Local: Front panel touch screen LCD controller including Fwd/Rev Power indication (dB or Watt scale), Gain Adjustment, ALC Fast/Slow & On/Off, Standby mode, Fault indication. Remote: Rear panel HPIB IEEE-488.2 or full duplex RS232 serial interface.	3,500
FCN	051	Front Panel Type-N	N/C
RCN	052	Rear Panel Type-N	N/C