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Solid State Broadband High Power RF Amplifier

HD19013

0.15 – 1000 MHz / 2 Watt

The HD19013 was designed for ultra broadband high power linear applications; this amplifier utilizes high power Silicon MOSFET devices that provide wide frequency response and dynamic range, high gain, low distortions, and good linearity. Employing advanced broadband RF matching networks and combining techniques, EMI/RFI filters, and all qualified components achieve exceptional performance, and high efficiency. The system includes a universal voltage, single phase, power supply and a built in forced air-cooling system.



- Solid-state linear design
- Instantaneous ultra broadband
- Small and lightweight
- Standard front panel manual gain adjust
- Suitable for CW/FM/PM/AM/Pulse/Digital modulation
- 50 Ohm Input/Output impedance
- High reliability and ruggedness
- MTBF: 10,000 hours

ELECTRICAL SPECIFICATIONS @ T=25°C

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	0.15		1000	MHz
Output Power CW	P_{Sat}	2	3		Watts
Output Power @ 1dB G.C.P	P_{1dB}	1	2		Watts
Power Gain @ 1dB G.C.P	G_{1dB}	30	34		dB
Input Power for nominal Pout	P_{in}		0		dBm
Small Signal Gain Flatness	ΔG			±1.5	dB
Gain Adjustment Range	FGA	25			dB
Input/Output VSWR	S11/S22	-10			dB
Third Order Intercept Point	IP3		+43		dBm
Harmonics @ P1dB G.C.P	H		-20		dBc
Noise Figure	NF		10		dB
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage (single phase)	VAC	100		240	VAC
AC Power Consumption	Pd		-	40	Watts

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	Tc	0		+50	°C
Non-operating Temperature	Tstg	-40		+85	°C
Relative humidity w/o condensation	RH	95			%
Altitude	ALT	10,000			Feet
Shock and Vibration	SV	GR-487			

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	8.5 x 3.5 x 16	Inch	Max
Weight	15	lb.	Max
RF Connectors Input/Output	Type-N female		
Cooling	Built in internal forced air cooling system		

PROTECTIONS

Input Overdrive	+10 dBm		Max
Load VSWR @ P1dB G.CP	Infinite @ any angle		Nom

Thermal Overload	85°C shutdown		Max

AVAILABLE OPTIONS (Refer to table for systems options)

Option	Number	Description	Price
FGA	**061**	Front panel 10 turns manual gain adjustment.	Standard
LCD	**062**	Touchscreen Digital Display, including Fwd/Rev Power indication (dB or Watt scale), Gain Adjustment, ALC Fast/Slow, On/Off, Standby mode, Fault indication, Rear panel HPIB IEEE-488.2 or Full Duplex RS232 remote interface.	3,500
FCN	**051**	Front Panel Type-N female	N/C
RCN	**052**	Rear Panel Type-N female	N/C

Available Option Packages: 01, 02, 03, 04, 05, 06

SYSTEM OUTLINE SHOWN WITH OPTION PACKAGE 09

