HD Communications Corp.
Ronkonkoma, NY USA

Home of RFAmplifiers.com

Solid State Broadband High Power RF Amplifier

HD18839

2000 – 4000 MHz / 50 Watt

Web: http://www.rfamplifiers.com E-mail: sales@rfamplifiers.com

The HD18839 was designed for broadband high power S-Band linear applications; this amplifier utilizes high power GaAsFET devices that provide high gain, wide dynamic range, low distortions and excellent linearity. Exceptional performance, and high efficiency are achieved by employing advanced broadband RF matching networks and combining techniques, built in high quality power supply, EMI/RFI filters, machined housings and all qualified components. HD Communications Corp.'s ISO9001 Quality Assurance Program assures consistent performance and the highest reliability.

- 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

ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	2000		4000	MHz
Output Power CW	P_{Sat}	50	60		Watts
Output Power @ 1dB G.C.P	P_{1dB}	40			Watts
Power Gain @ 1dB G.C.P	G_{1dB}	48	0		dBm
Gain Adjustment Range	FGA	25			dB
Small Signal Gain Flatness	ΔG			±1.5	dB
Input/Output VSWR @ 50 Ω	S11/S22			2:1	
Third Order Intercept Point	IP3		+56		dBm
Harmonics @ 1dB G.C.P	H		-20		dBc
Noise Figure	NF			10	dB
Load VSWR	Ψ		∞		-
Spurious Signals	Spur		-60		dBc
Operating Voltage (single phase)	VAC	100		240	VAC
AC Power Consumption	Pd		350	400	Watts

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	19 x 5.25 x 22	Inch	Max
Weight	47	lb.	Max
RF Connectors Input/Output (refer to options)	Type-N female front or rear panel		
Cooling	Internal forced air		

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		

PROTECTIONS

Input Overdrive	+10 dBm	Max
Load VSWR programmable response	Infinite @ all load phase and amplitude	Nom
Thermal Overload	85°C shutdown	Max

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AVAILABLE 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