HD Communications Corp.
Ronkonkoma, NY USA

Home of RFAmplifiers.com

Solid State Broadband High Power Amplifier

HD17563-15

800 – 4200 MHz / 13 Watt

The HD17563-15 is suitable for ultra broadband high power linear applications. This line-up amplifier utilizes advanced GaAsFET power devices that provide high gain, wide dynamic range and excellent linearity. Exceptional performance, long term reliability and high efficiency are achieved by employing advanced broadband RF matching networks and combining techniques, EMI/RFI filters, machined housings and qualified components.

- Solid-state Class A linear design
- Instantaneous ultra broadband
- Small and lightweight
- Suitable for all modulation types
- 50 Ohm Input/Output impedance
- High reliability and ruggedness

ELECTRICAL SPECIFICATIONS @ T=25°C, VDD=+13VDC; 50Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	800		4200	MHz
Power Output CW	P_{sat}	13	15		Watts
Power Output @ 1 dB G.C.P	P_{1dB}	10	12		Watts
Gain @ P1dB G.C.P	P_{1dB}	42			dB
Input Power for Rated Pout	P_{in}		0		dBm
Small Signal Gain Flatness	ΔG			±2.0	dB
Input/Output VSWR	S11/S22			2:1	-
Noise Figure	NF		7	10	dB
Third Order Intercept Point 2 – Tones, Pout=1W Avg., 500KHz spacing	TOI		+50		dBm
Harmonics @ 1dB G.C.P	H		-25		dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	VDD	12	13	15	VDC
Supply Current	IDD		8.0	10	Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	Refer outline drawing	Inch	Max
Weight	5.0	lb.	Max
RF Connectors In/Out	SMA female		
DC Connectors	Feed Thru		
Cooling	External Heatsink		

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	Tc	0		+50	°C
Storage Temperature	Tstg	-40		+85	°C
Relative humidity w/o condensation	RH	95			%
Altitude	ALT	10,000	30,000		Feet
Shock & Vibrations	SH / Vi		Airborne		

PROTECTIONS

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

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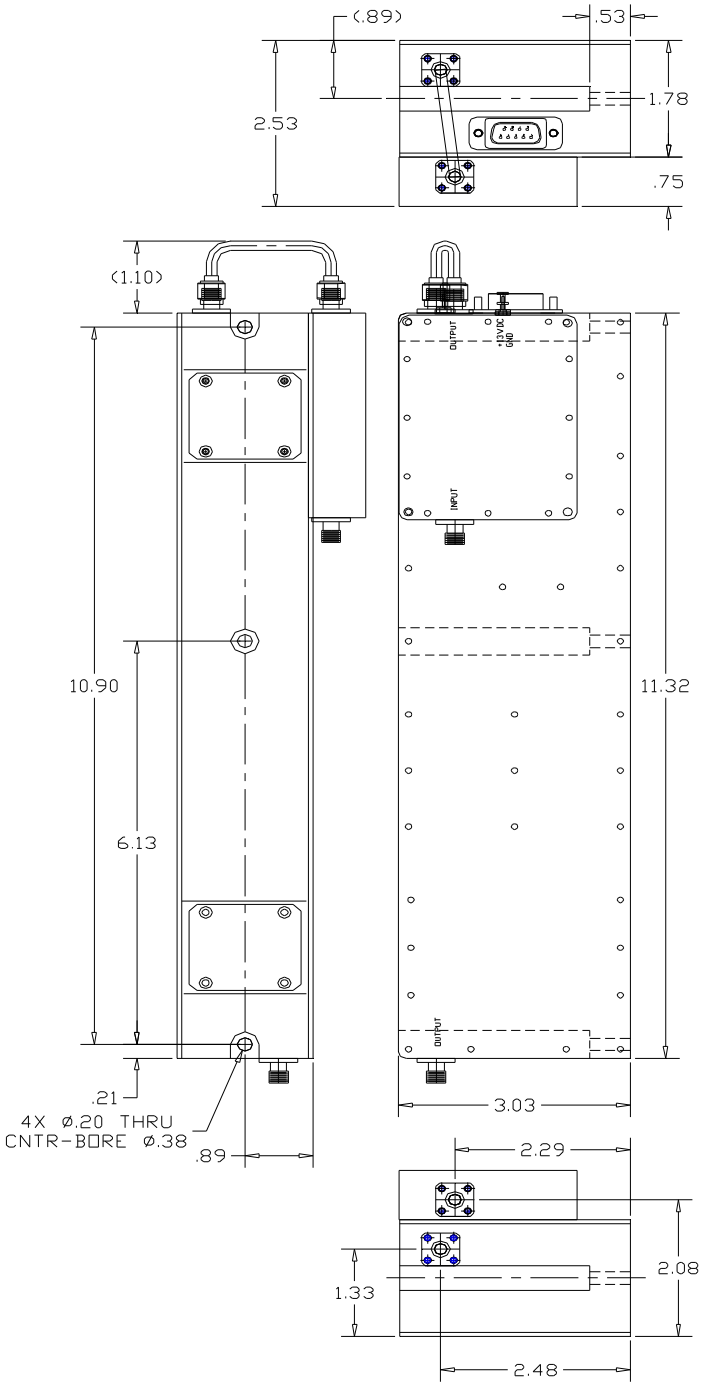
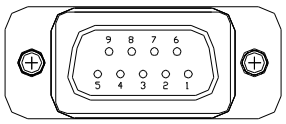
Outline drawing without heatsink





(D-Sub MALE WIRING CONNECTION)

PIN #	DESCRIPTION	WIRE#	COLOR
1	DC IN	20AWG	RED
2	DC IN	20AWG	RED
3	DC IN	20AWG	RED
4	DC IN	20AWG	RED
5	SHUTDOWN/TTL HI	24AWG	BRN
6	GND	20AWG	BLK
7	GND	20AWG	BLK
8	GND	20AWG	BLK
9	NC	NC	NC

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