HD Communications Corp.
Ronkonkoma, NY USA

Home of RFAmplifiers.com

Solid State Broadband High Power RF Amplifier

HD17142-XX

0.15 – 230 MHz / 25 - 500 Watt

The HD17142-XX series amplifiers are designed for ultra broadband high power linear applications. Suitable for laboratory, immunity testing and general applications, these amplifiers are utilizing push-pull MOSFET power devices that provide high gain, wide dynamic range, low distortions, and good 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/AB design
- Instantaneous ultra broadband
- Small form factor and lightweight Bench top or Rack
- Standard front panel manual gain adjust
- Suitable for CW/FM/PM/AM/Pulse/Digital modulations
- 50 Ohm Input/Output impedance
- High reliability and ruggedness



SPECIFICATIONS

Conditions: T=25° C

Parameter	Symbol	HD17142-25	HD17142-50	HD17142-100	HD17142-300	HD17142-500	Units	Range
Operating Frequency	BW	**0.15**			**230**		MHz	Min
Output Power CW	P_{Typ}	30	75	125	300	600	Watts	Typ
Output Power CW	P_{Sat}	**25**	**50**	**100**	**250**	**500**	Watts	Min
Output Power @ 1dB G.C.P	P_{1dB}	15	30	60	200	300	Watts	Min
Power Gain @ 1dB G.C.P	G_{1dB}	44	48	50	54	58	dB	Min
Gain Adjustment Range	FGA	25	25	25	25	25	dB	Nom
Small Signal Gain Flatness	ΔG	±1.5	±1.5	±1.5	±1.5	±2.0	dB	Max
Input/Output VSWR	S11/S22	-10	-10	-10	-10	-10	dB	Max
Third Order Intercept Point	IP3	+52	+57	+58	+61	+63	dBm	Typ
Harmonics @ 1dB G.C.P	H	-20	-20	-20	-20	-20	dBc	Typ
Spurious Signals	Spur	-60	-60	-60	-60	-60	dBc	Max
Noise Figure at full Gain	NF	10	10	10	10	10	dB	Max
Load VSWR @ P1dB G.C.P	Ψ	∞	∞	∞	∞	∞	-	Nom
Operating Voltage Range	VAC	ACA	ACA	ACA	ACB	ACB	VAC	Min
Power Consumption AC	P_d	160	300	500	1,200	2,000	Watts	Max
Dimensions		B2U	R2U	R3U	R5U	R5U	-	Nom
Weight		15	27	47	70	80	lb.	Max
Connectors RF In/Out (std.)		FCN	FCN	RCN	RCN	RCN	-	-
Option packages		Opt01 Opt02 Opt03 Opt04 Opt05 Opt06	Opt03 Opt04 Opt05 Opt06	Opt07 Opt08 Opt09 Opt10	Opt15 Opt16 Opt17 Opt18	Opt15 Opt16 Opt17 Opt18	-	-

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ENVIRONMENTAL SPECIFICATIONS

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	Tc	0		+50	°C
Non-operating Temperature	Tstg	-40		+85	°C
Relative humidity w/o cond.	RH	0		95	%
Altitude	ALT	10,000	30,000		Feet
Shock and Vibration	SH / VI		Airborne		-

Refer to table for systems options

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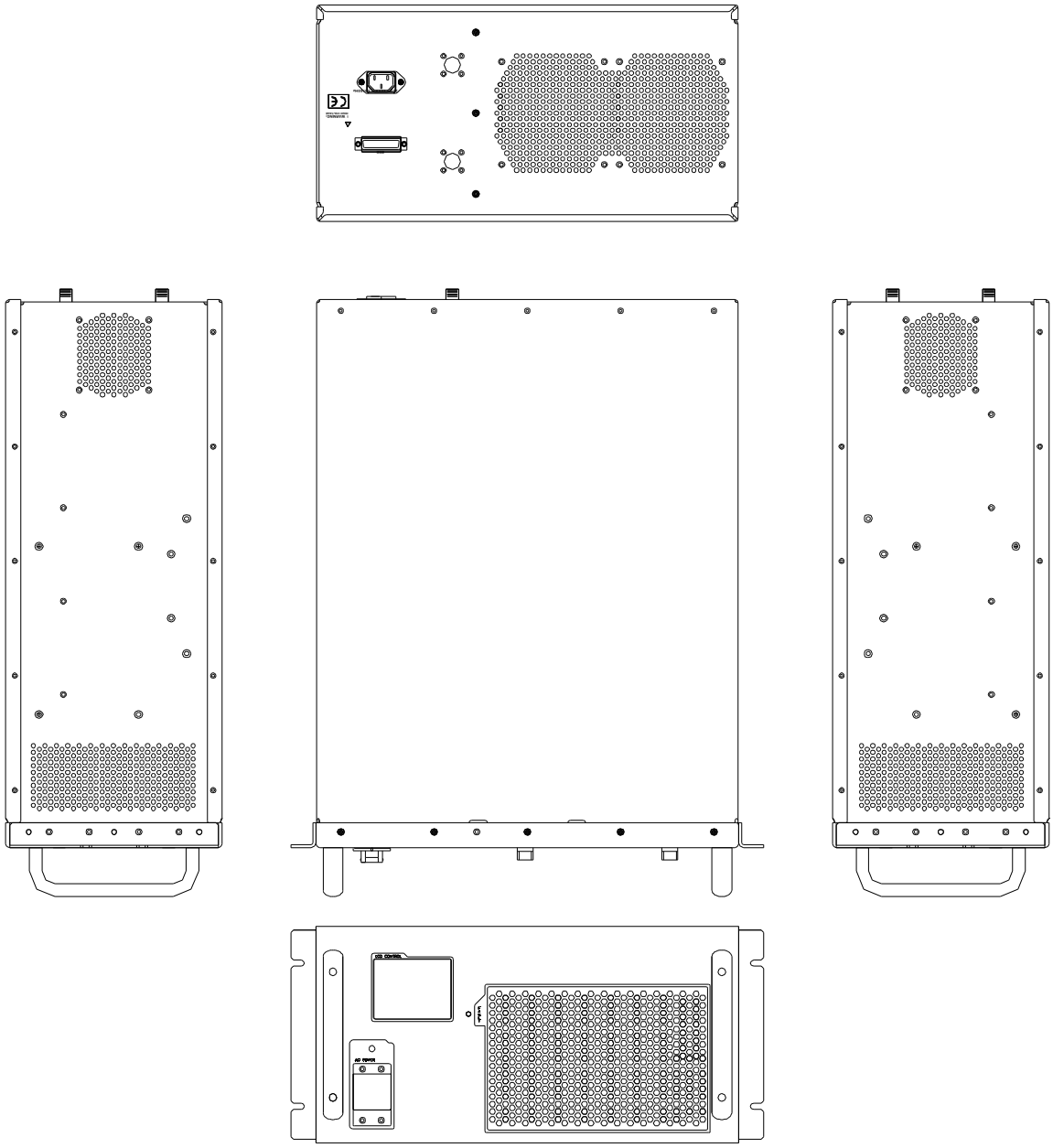
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AVAILABLE OPTIONS (Refer to table for systems options)

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.	Call
FCN	**051**	Front Panel Type-N female	N/C
RCN	**052**	Rear Panel Type-N female	N/C

SYSTEM OUTLINE SHOWN WITH OPTION PACKAGE 18



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