

Full Waveguide Band Amplifiers (AFB)

Full Waveguide Band Amplifier

AFB series power, low-noise and general purpose amplifiers are constructed with MMIC PHEMT devices and provide state-of-the-art broadband performances in the frequency range from DC to 100 GHz. These full-band amplifiers are uniquely designed and configured to offer the highest power and/or lowest noise across a single or multiple waveguide bands. Various RF interfaces including standard waveguide and coax connectors, or their combinations, as well as waveguide orientations can be chosen by customers for system integration.

Applications

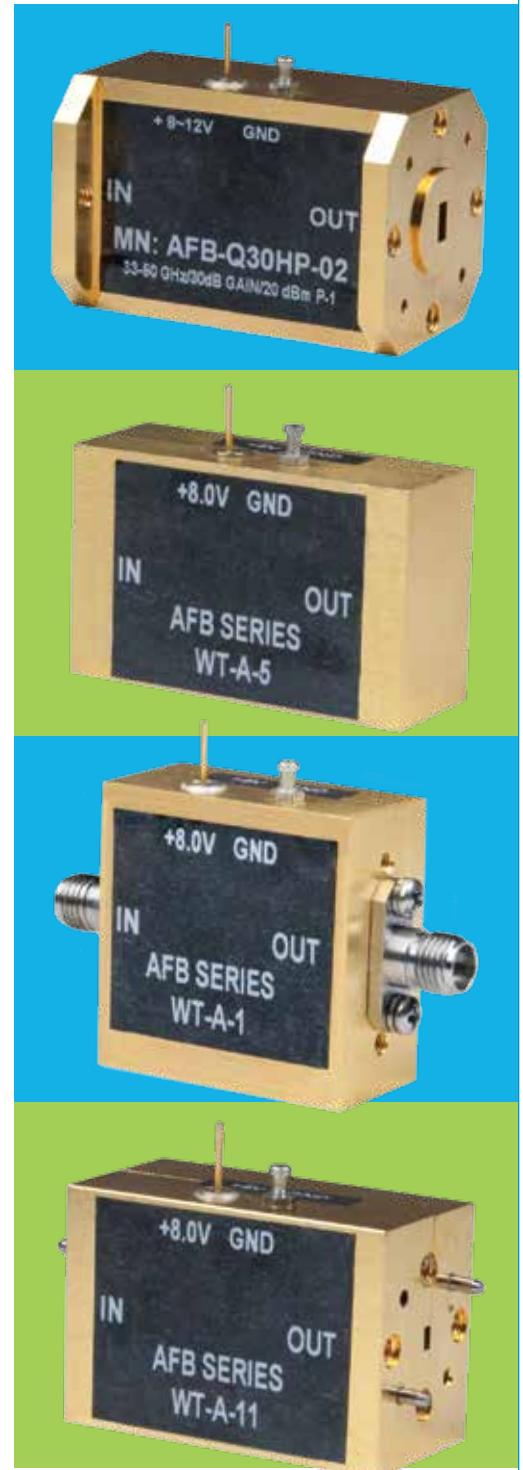
- Telecommunication
- Test and lab instrumentation
- Transceiver sub-assemblies

Features

- Broadband performance starting at DC covering full bands from Ka/K through W bands
- Ultra-low noise with gain choice
- Single DC power supply/internal regulated sequential biasing
- Compact size and light weight
- Variable I/O interface options

About Ducommun RF Products

Ducommun is a key supplier of millimeter wave components and sub-assemblies. Starting with our legacy of WiseWave Technologies, Ducommun has been actively designing and manufacturing millimeter wave products to meet the specific requirements of our customers. Along with our amplifier products, we manufacture mixers, up & down converters, multipliers, pin diode switches, coaxial switches, doppler & ranging radars. We also manufacture many passive components such as filters, diplexers, waveguide transitions, flanges, bulkhead adapters and waveguide to coax adapters.



FULL WAVEGUIDE BAND GENERAL PURPOSE AMPLIFIER

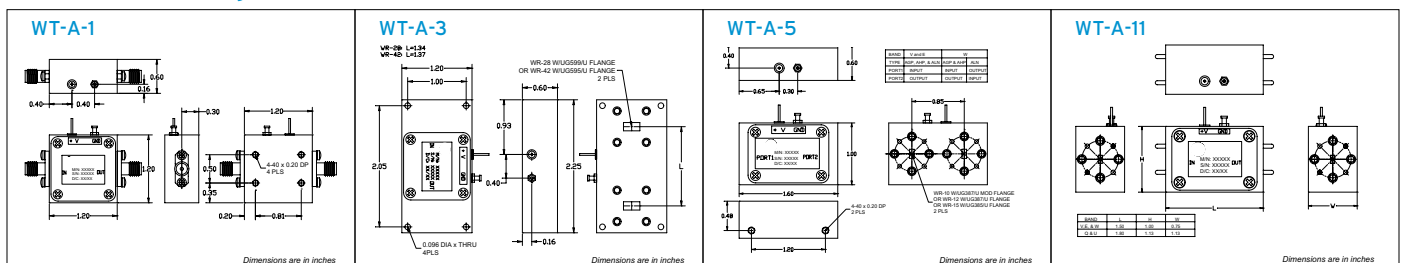
Model Number	Band	Frequency (GHz)	Noise Figure (Typ/Max, dB)	Gain, Flatness (Nominal, dB)	Current(mA) (Nominal @ 12V)	P1dB (dBm/Min)	-40°C to +50°C Outline
AFB-DCK30GP -01	DC-K	0.01 - 20	4.5 / 7.0	26, +/- 6.0	450	20.0	WT-A-1
AFB-DCKA25GP-01	DC-Ka	0.03 - 40	4.0 / 6.0	25, +/- 2.5	400	20.0	WT-A-2
AFB-KUK30GP -01	KU & K	12.4 - 26.5	3.0 / 4.5	30, +/- 2.0	500	20.0	WT-A-1
AFB-KKA30GP -01	K & Ka	18 - 40	4.0 / 6.0	30, +/- 2.0	350	20.0	WT-A-1

FULL WAVEGUIDE BAND POWER AMPLIFIER

Model Number	Band	Frequency (GHz)	Power P1dB (Typ/Min, dBm)	Gain, Flatness (Nominal, dB)	Current(mA) (Nominal @ 12 V)	-40°C to +50°C Outline
AFB-KA30HP -01 -02 -03	Ka	26.5 - 40	20.0 / 18.0	30, +/- 2.0	350	WT-A-1 WT-A-3 WT-A-11
AFB-Q30HP -01 -02	Q	33 - 50	20.0 / 18.0	30, +/- 2.0	500	WT-A-2 WT-A-11
AFB-U30HP -01 -02	U	40 - 60	14.0 / 12.0	30, +/- 2.0	300	WT-A-1 WT-A-11
AFB-V30HP -01 -02	V	50 - 75	15.0 / 12.0	30, +/- 3.0	200	WT-A-5 WT-A-11
AFB-E20HP -01 -02	E	60 - 90	14.0 / 12.0	20, +/- 3.0	250	WT-A-5 WT-A-11
AFB-W20HP -01 -02	W	75 - 100	13.0 / 10.0	20, +/- 3.0	250	WT-A-5 WT-A-11

FULL WAVEGUIDE BAND LOW NOISE AMPLIFIER

Model Number	Band	Frequency (GHz)	Noise Figure (Typ/Max, dB)	Gain, Flatness (Nominal, dB)	Current(mA) (Nominal @ 12V)	-40°C to +50°C Outline
AFB-KA30LN -01 -02 -03	Ka	26.5 - 40	2.0 / 4.0	30, +/- 2.0	150	WT-A-1 WT-A-3 WT-A-11
AFB-Q20LN -01 -02	Q	33 - 45	3.5 / 5.0	20, +/- 2.0	100	WT-A-1 WT-A-11
AFB-U30LN -01 -02	U	40 - 60	5.0 / 8.0	30, +/- 2.5	110	WT-A-1 WT-A-11
AFB-V30LN -01 -02	V	50 - 75	5.5 / 8.0	30, +/- 3.0	250	WT-A-5 WT-A-11
AFB-E30LN -01 -02	E	60 - 90	6.0 / 8.0	30, +/- 3.0	80	WT-A-5 WT-A-11
AFB-W30LN -01 -02	W	75 - 100	6.0 / 8.0	30, +/- 3.0	80	WT-A-5 WT-A-11

Outline Drawing


All specifications are subject to change without notice.

For more information, contact our sales team at 310.513.7200 or rfsales@ducommun.com