

# High Power Amplifiers



## Description

AHP series high power amplifiers are discrete and/or MMIC PHEMT based amplifiers that operate at the frequency range between 18 to 98 GHz for high output power applications. The amplifiers are offered in two categories, namely, standard and custom built. The custom built amplifiers are offered in various RF interfaces, including standard waveguide or coax connectors, for convenient system integration. The optional input and output integrated isolators are available to further improve the port return loss.

## Features

- High output power and IP3
- Up to full waveguide bandwidth
- Single power, compact and light weight
- Wide operational temperature range

## Applications

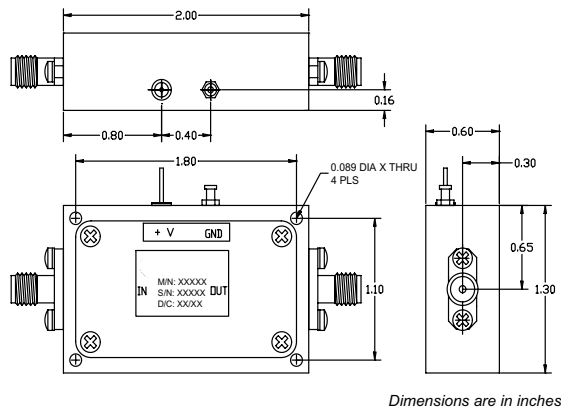
- Communication transceivers
- Radar front
- Power block for multiplier chains
- Transceiver subassemblies

## Specifications

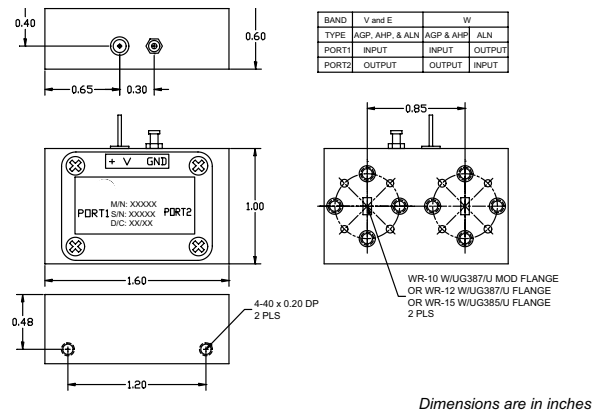
Model Number	Frequency (GHz)	P-1 (dBm/Min)	Gain (dB/typ)	Current(mA) (max @ 12V)	-40°C to +50°C VSWR	Outline
AHP-22092825 -01	18.0 - 26.5	28	25	550	2:1	WT-A-2
AHP-30052925 -01	27.0 - 32.0	29	25	650	2:1	WT-A-2
AHP-34043025 -01	32.0 - 36.0	30	25	1,100	2:1	WT-A-2
AHP-38043025 -01	36.0 - 40.0	30	25	900	2:1	WT-A-2
AHP-41082220 -01	37.0 - 45.0	22	20	500	2:1	WT-A-2
AHP-42042625 -01	40.0 - 44.0	26	25	1,500	2:1	WT-A-2
AHP-61101625 -01	55.0 - 65.0	16	25	200	2:1	WT-A-5
AHP-61181628 -01	52.0 - 70.0	16	28	200	2:1	WT-A-5
AHP-73062220 -01	71.0 - 76.0	22 (Psat)	28	700	2:1	WT-A-5 WT-A-11
AHP-83062120 -01	81.0 - 86.0	21 (Psat)	28	700	2:1	WT-A-5 VWT-A-11
AHP-94021818 -01	93.0 - 95.0	18	18	500	2:1	WT-A-5
AHP-94022424 -01	93.0 - 95.0	26 (Psat)	24	1,500	2:1	WT-A-14

All specifications are subject to change without notice.

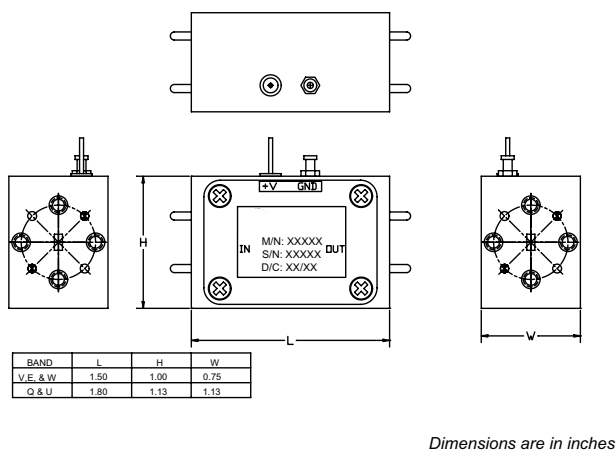
### Outline Drawings



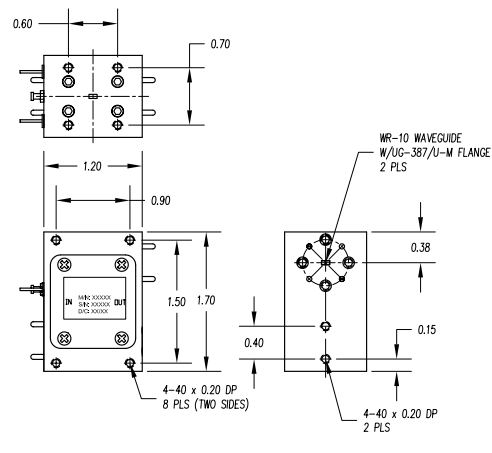
**WT-A-2**



**WT-A-5**



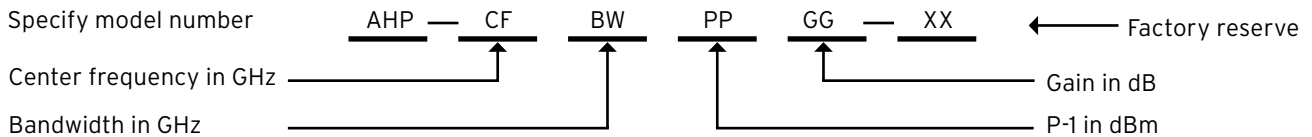
**WT-A-11**



**WT-A-14**

### Custom Built Amplifiers

The amplifiers with the performance other than listed above are available per customer's request. You may submit your specifications along with the model number per the following instructions.



Ordering Example: High power amplifier with center frequency 38 GHz, 2 GHz bandwidth, 33 dBm P-1 power and 25 dB gain, specify AHP-38023325-XX

All specifications are subject to change without notice.

# Low Noise Amplifier



## Description

ALN series low noise amplifiers are constructed with discrete or MMIC PHEMT devices that operate at the frequency range of 18 to 100 GHz. These amplifiers are especially designed for low noise applications. The amplifiers are offered in two categories, namely, standard and custom built. The custom built amplifiers are offered in various RF interfaces, including standard waveguide or coax connectors, for convenient system integration. Optional input and output integrated isolators are available to further improve the port return loss.

## Features

- Low noise figure
- Up to full waveguide bandwidth
- Single power and light weight
- Wide operational temperature range

## Applications

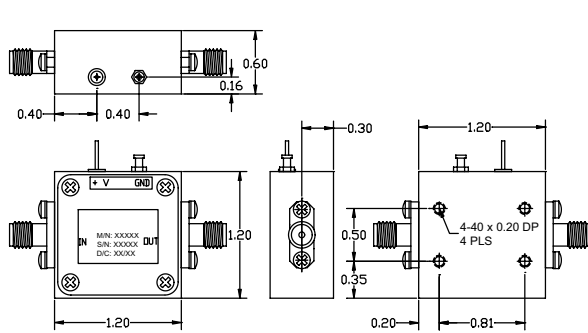
- Communication receivers
- Radar front
- Wideband radiometry
- Transceiver subassemblies

## Specifications

Model Number	Frequency (GHz)	BW (GHz)	Noise Figure (dBm/Min)	Gain, (dB)	Current(mA) (max @ 12V)	-40°C to +50°C VSWR (Typ)	Outline
ALN-22093515 -01 -02	18.0 - 26.5	8.5	3.5	15	100	2:1	WT-A-1 WT-A-3
ALN-22093530 -01 -02	18.0 - 26.5	8.5	3.5	30	200	2:1	WT-A-1 WT-A-3
ALN-33144020 -01 -02	26.5 - 40.0	13.5	4.5	20	100	2:1	WT-A-1 WT-A-3
ALN-33144030 -01 -02	26.5 - 40.0	13.5	4.5	30	200	2:1	WT-A-1 WT-A-3
ALN-61086015 -01	57.0 - 65.0	8.0	6.0	15	100	2:1	WT-A-5
ALN- 61086030 -01	57.0 - 65.0	8.0	6.0	30	150	2:1	WT-A-5
ALN-94046015 -01	92.0 - 96.0	4.0	6.0	15	50	2:1	WT-A-5
ALN-94046030 -01	92.0 - 96.0	4.0	6.0	30	100	2:1	WT-A-5

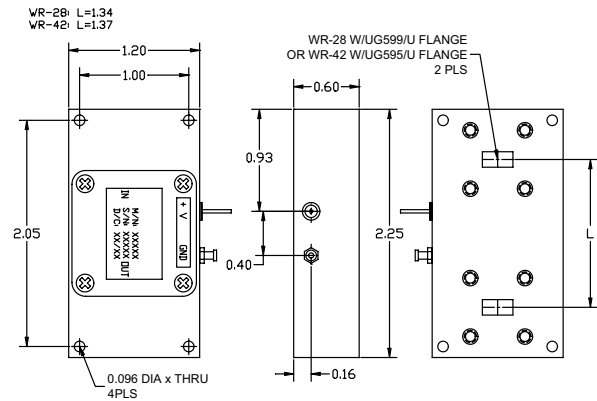
All specifications are subject to change without notice.

### Outline Drawings



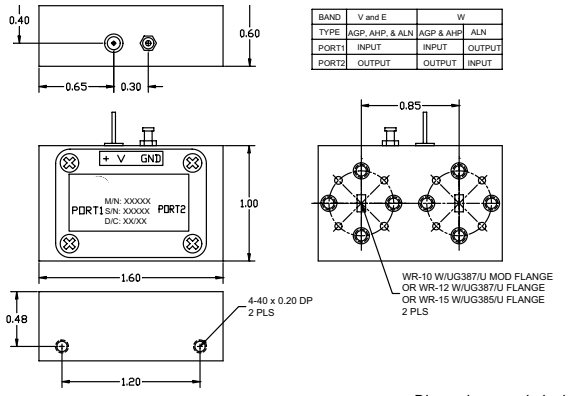
Dimensions are in inches

**WT-A-1**



Dimensions are in inches

**WT-A-3**

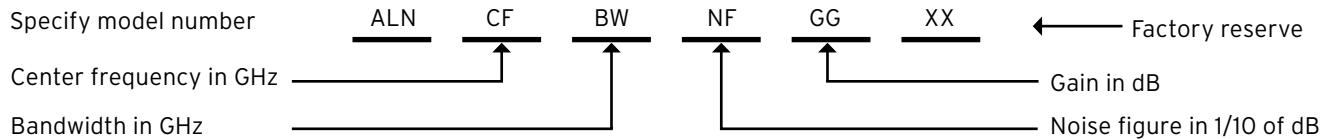


Dimensions are in inches

**WT-A-5**

### Custom Built Amplifiers

The amplifiers with the performance other than listed above are available per customer's request. You may submit your specifications along with the model number per the following instructions.



Ordering Example: Low noise amplifier with center frequency 42 GHz, 2 GHz bandwidth, 5.5 dB noise figure and 24 dB gain, specify ALN-42025524-XX

All specifications are subject to change without notice.

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