

**CLPA-2G18G-1365-S** is a GaAs HBT Ultra Low Noise Amplifier in a miniature, hermetic module designed to operate between 2 and 18 GHz. This high dynamic range amplifier module provides 13.5 dB of gain, 5 dB noise figure and up to +22.5 dBm of OIP3 with a single supply of +5V.

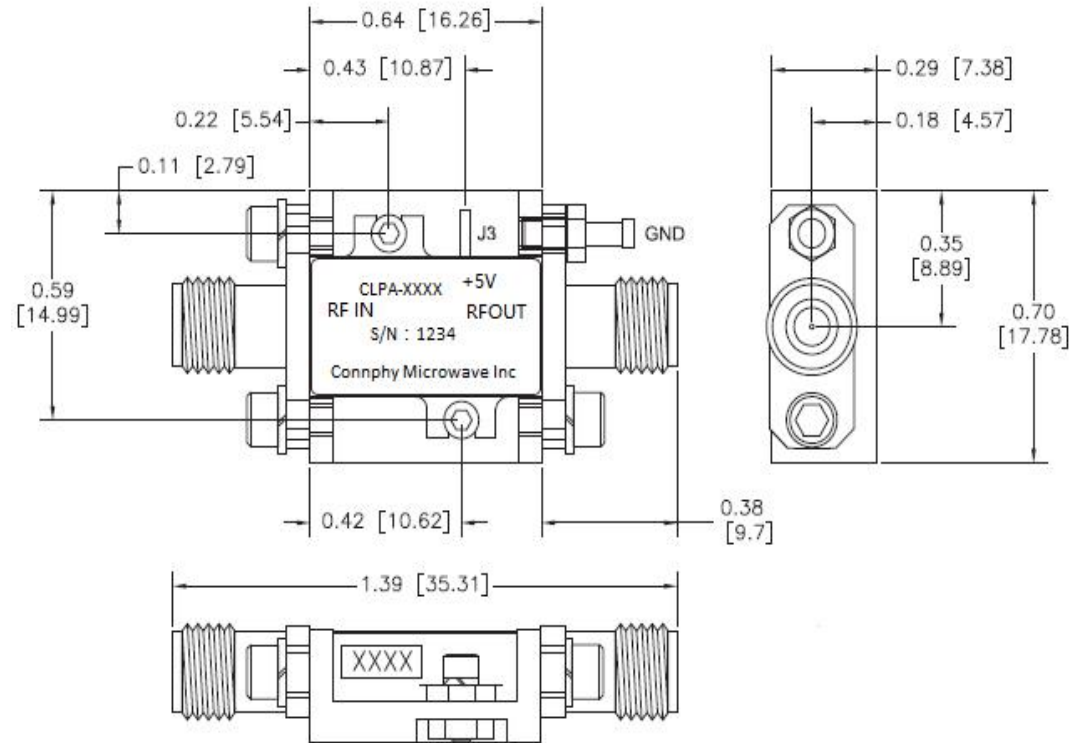
**Features:**

- Ultra Low Phase Noise: -160 dBc/Hz @ 10 kHz
- Gain: 13 dB
- Noise Figure: 6.5 dB

**Specifications:**


Frequency Range:	2.0-18.0 GHz
Gain:	12.5 dB Typ, 9 dB Min
Gain Flatness:	+/-2.2 dB Typ
Noise Figure:	6.5 dB Typ
P1dB:	13 dBm Typ, 8dBm Min
VSWR:	1.45 Typ
Psat:	16 dBm Typ
IP3:	20 dBm Typ
Phase Noise @ 100 Hz, Psat, 10 GHz:	-150 dBc/Hz Typ
Phase Noise @ 1 kHz, Psat, 10 GHz:	-150 dBc/Hz Typ
Phase Noise @ 10 kHz, Psat, 10 GHz:	-150 dBc/Hz Typ
Phase Noise @ 100 kHz, Psat, 10 GHz:	-160 dBc/Hz Typ
Single Supply Voltage:	+5V @ 80mA
RF Connectors:	SMA Female

**Mechanical Outline(Inches/mm) :**



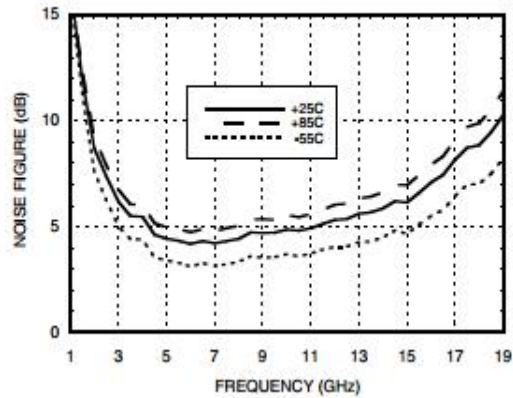
**Environmental Ratings:**

Temperature:	-25°C to +71 °C Operating
	-65 °C to +100 °C Non-Operating
Vibration:	MIL-STD-202F, Method 204D Cond. B
Altitude:	MIL-STD-202F, Method 105C Cond. B
Temperature Cycle:	MIL-STD-202F, Method 107D Cond. A

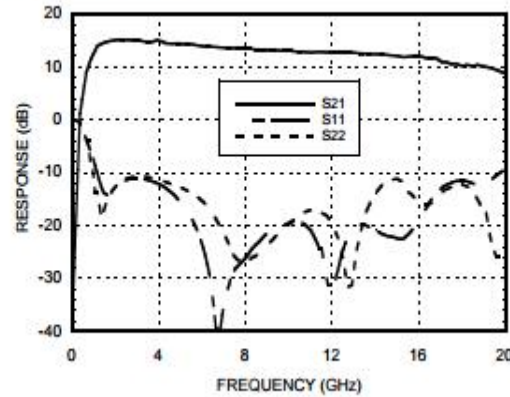
LOW PHASE NOISE AMPLIFIER			
CLPA-2G18G-1365-S			
DRAWN:	DWG NO.:	REV CODE: Rev.1.0	 <a href="http://www.connphy.com">www.connphy.com</a> <a href="mailto:sales@connphy.com">sales@connphy.com</a>
CHECKRD:	DATE: 08/07/15	SHEET : 1 OF 1	
ISSUED:	SIZE: A	SCALE : N / A	
			Notes: SPEC ARE SUBJECT TO CHANGE WITHOUT NOTICE.

## Typical Performance Data:

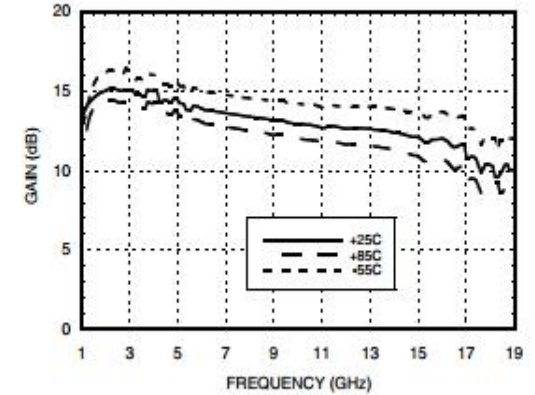
### Noise Figure vs. Temperature



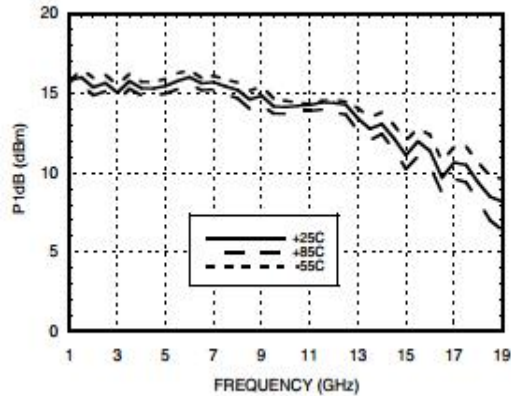
### Gain & Return Loss



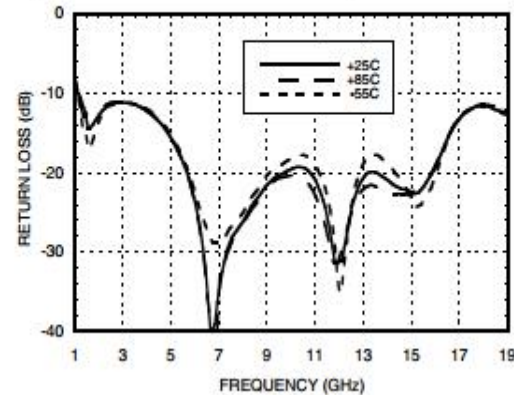
### Gain vs. Temperature



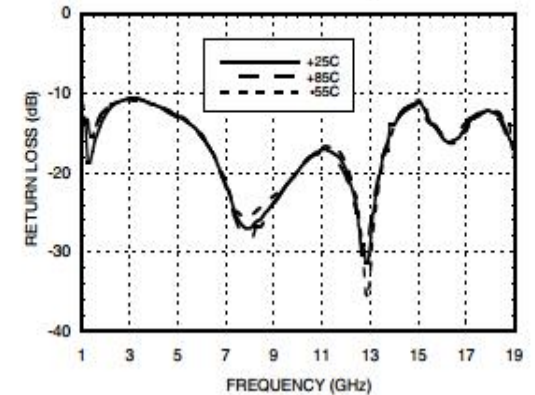
### P1dB vs. Temperature



### Input Return Loss vs. Temperature



### Output Return Loss vs. Temperature



## Environmental Ratings:

Temperature:	-25°C to +71 °C Operating
	-65 °C to +100 °C Non-Operating
Vibration:	MIL-STD-202F, Method 204D Cond. B
Altitude:	MIL-STD-202F, Method 105C Cond. B
Temperature Cycle:	MIL-STD-202F, Method 107D Cond. A

### LOW PHASE NOISE AMPLIFIER CLPA-2G18G-1365-S

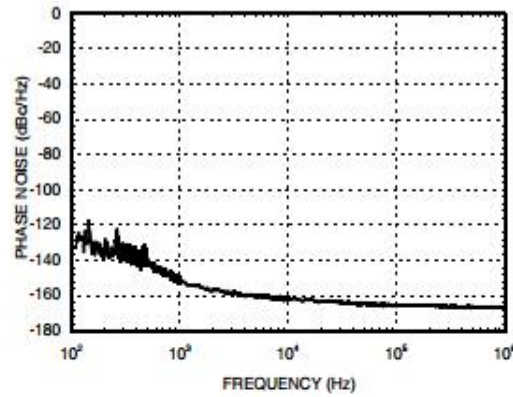
DRAWN:	DWG NO.:	REV CODE: Rev.1.0
CHECKRD:	DATE: 08/07/15	SHEET : 1 OF 1
ISSUED:	SIZE: A	SCALE : N / A

**CONNPHY**  
Microwave Inc.  
[www.connphy.com](http://www.connphy.com)  
[sales@connphy.com](mailto:sales@connphy.com)

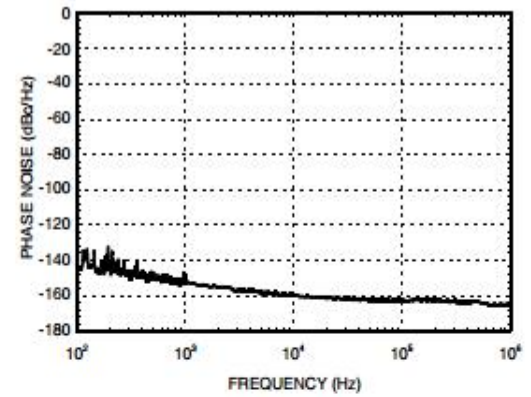
Notes: SPEC ARE SUBJECT TO  
CHANGE WITHOUT NOTICE.

## Typical Performance Data:

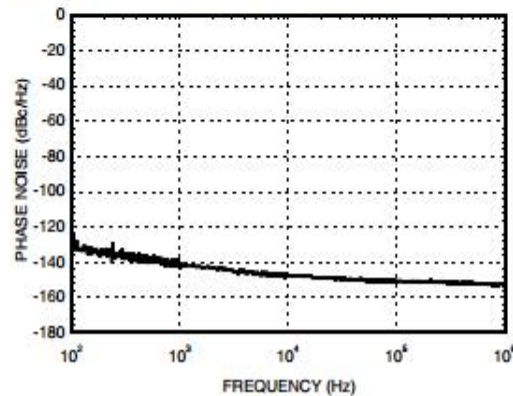
Phase Noise at Psat @ 2 GHz



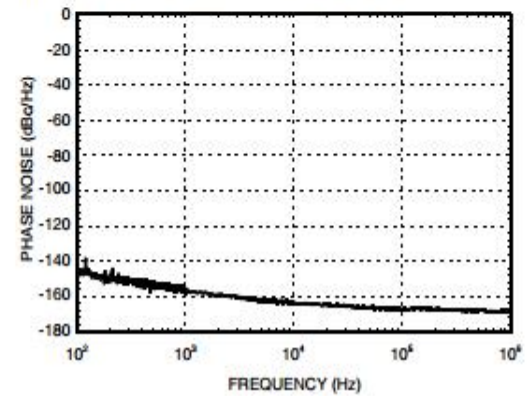
Phase Noise at Psat @ 12 GHz



Phase Noise at Psat @ 18 GHz



Phase Noise at P1dB @ 2 GHz



## Environmental Ratings:

Temperature:	-25°C to +71 °C Operating
	-65 °C to +100 °C Non-Operating
Vibration:	MIL-STD-202F, Method 204D Cond. B
Altitude:	MIL-STD-202F, Method 105C Cond. B
Temperature Cycle:	MIL-STD-202F, Method 107D Cond. A

### LOW PHASE NOISE AMPLIFIER

#### CLPA-2G18G-1365-S

DRAWN:	DWG NO.:	REV CODE: Rev.1.0
CHECKRD:	DATE: 08/07/15	SHEET : 1 OF 1
ISSUED:	SIZE: A	SCALE : N / A

**CONNPHY**  
Microwave Inc.

[www.connphy.com](http://www.connphy.com)  
[sales@connphy.com](mailto:sales@connphy.com)

Notes: SPEC ARE SUBJECT TO  
CHANGE WITHOUT NOTICE.