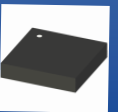


## 3.0 – 4.0 GHz Ultra Low Noise Amplifier



**ALND-WB-0010**

Request Samples



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**6.0 x 6.0 x 1.2 mm**  
**RoHS Compliant**

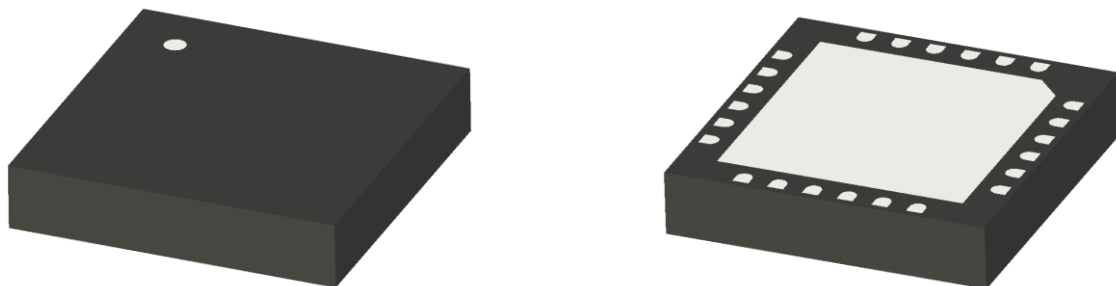
### Features

- Frequency range: 3.0 - 4.0 GHz
- Ultra-low noise figure < 1.25 dB
- High Gain ~ 32.5 dB
- 18 dBm Nominal P1 dB
- Input Return Loss >10 dB
- Output Return Loss >10 dB
- No external matching required
- DC Decoupled input and output
- 0.15-um InGaAs pHEMTs Technology
- QFN package dimension : 6.0 x 6.0 x 1.2 mm

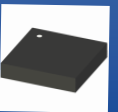
### Applications

- Electronic Warfare (EW)
- S Band Radar
- Phased Arrays
- Space
- Satellite Communications (Satcom)
- Point-to-Point Radios, Point-to-Multi-Point Radios & VSATS

### Product Image



# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



**ALND-WB-0010**

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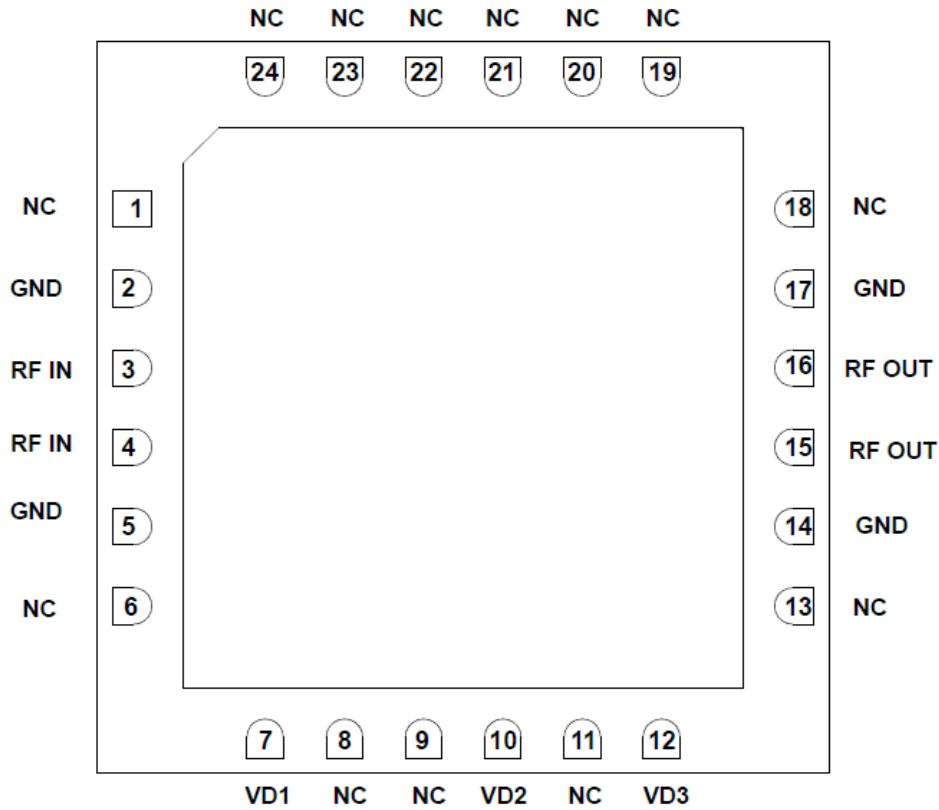


Check Inventory



6.0 x 6.0 x 1.2 mm  
RoHS Compliant

## Pin Configuration



## Absolute Maximum Ratings

Parameter	Absolute Maximum	Units
Positive Dc Voltage	+7	V
RF input power	+15	dBm
Supply Current	220	mA
Operating Temperature	-55 to +85	°C
Storage Temperature	-65 to +150	°C

1. Operation beyond these limits may cause permanent damage to the component

# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



ALND-WB-0010

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6.0 x 6.0 x 1.2 mm  
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## Electrical Specifications

Parameters Description	Unit	Minimum	Typical	Maximum
Frequency Range	GHz	3.0	-	4.0
Gain	dB	32	32.5	
Gain Flatness	dB	-	± 0.5	-
Noise Figure	dB	-	1.25	1.5
Input Return Loss	dB	10	13	-
Output Return Loss	dB	15	18	-
Output Power (P1 dB)	dBm	16	18	-
Saturated output power (Psat)	dBm	-	20	--
Output Third order Intercept (IP3)	dBm	-	26	-
Supply Current	mA	110	140	170

@Ta = 25°C, Zo = 50Ω; Vd1 = 1V, Vd2 = Vd3 = 4V

### NOTES:

1. Electrical specifications as measured in a test fixture

# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



**ALND-WB-0010**

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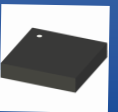


**6.0 x 6.0 x 1.2 mm**  
**RoHS Compliant**

## Ordering Information

Part Number	Description
ALND-WB-0010	3.0 – 4.0 GHz Ultra Low Noise Amplifier Packing: Bulk

# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



ALND-WB-0010

Request Samples

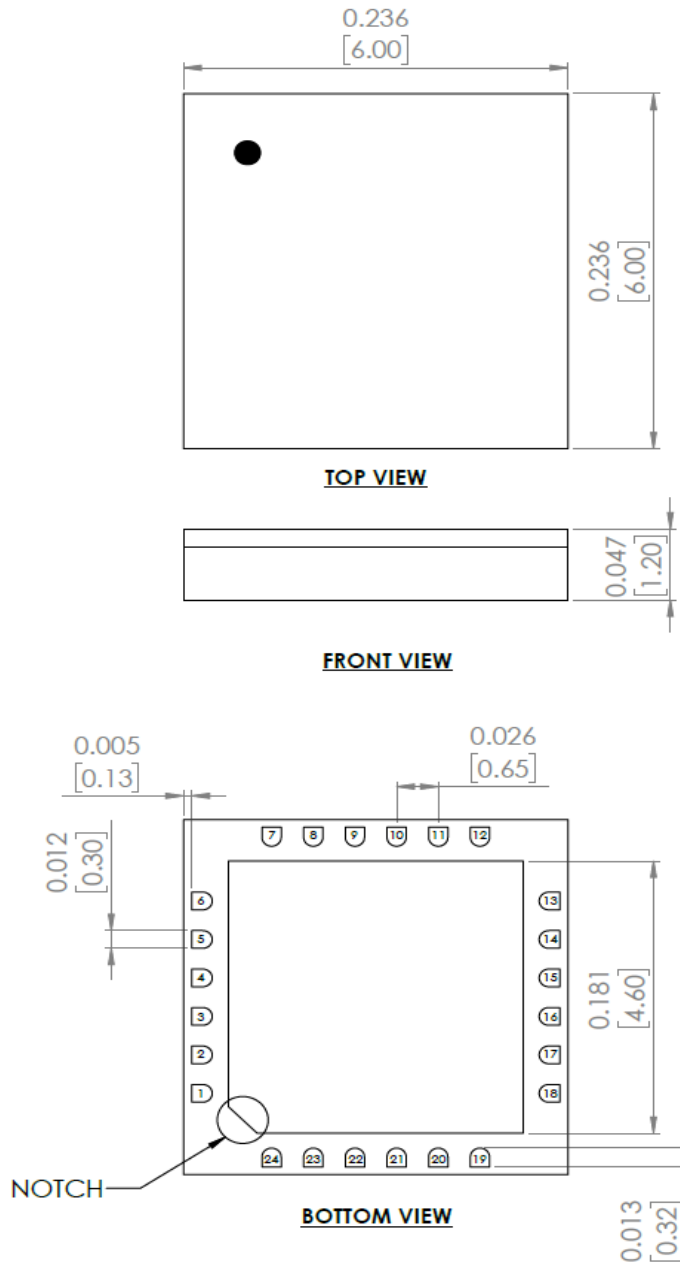


Check Inventory



6.0 x 6.0 x 1.2 mm  
RoHS Compliant

## Product Dimensions



Unit: inches[mm]

# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



ALND-WB-0010

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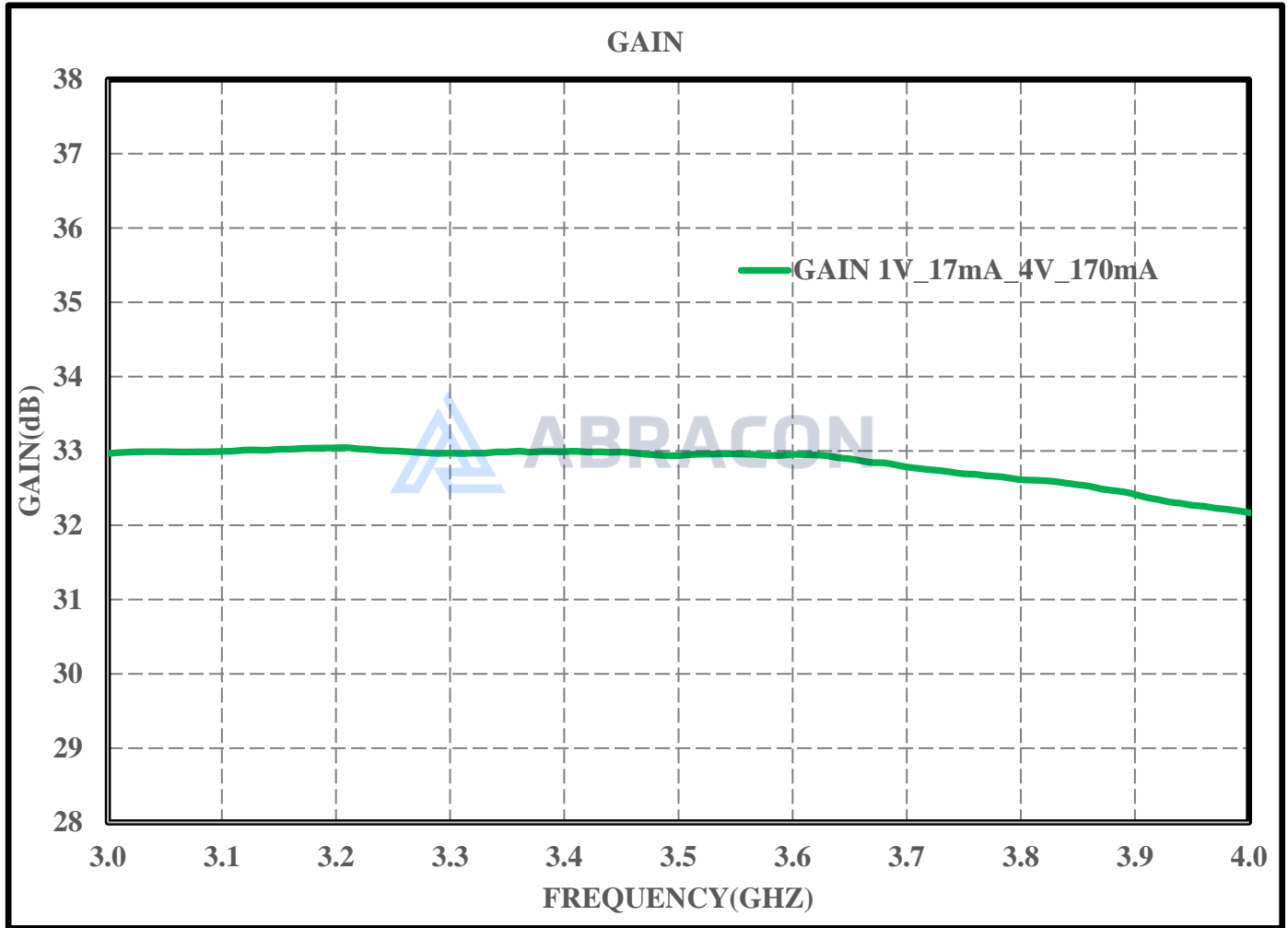


Check Inventory



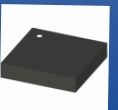
6.0 x 6.0 x 1.2 mm  
RoHS Compliant

## Test Fixture Data



Vd1 = 1V, Vd2 = Vd3 = 4V, Total Current = 140mA, Ta = 25°C

# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



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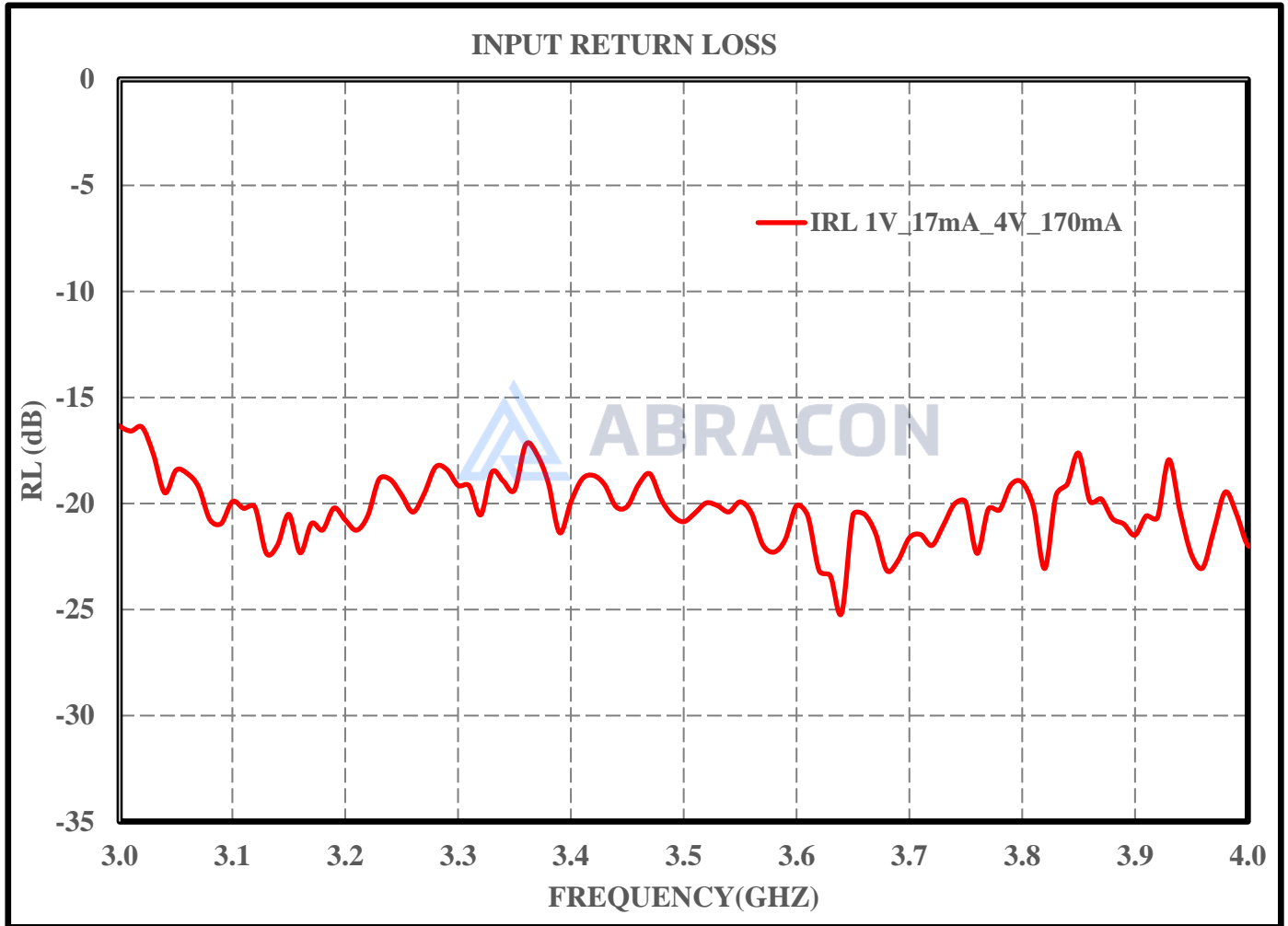
Request Samples



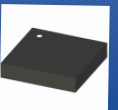
Check Inventory



6.0 x 6.0 x 1.2 mm  
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# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



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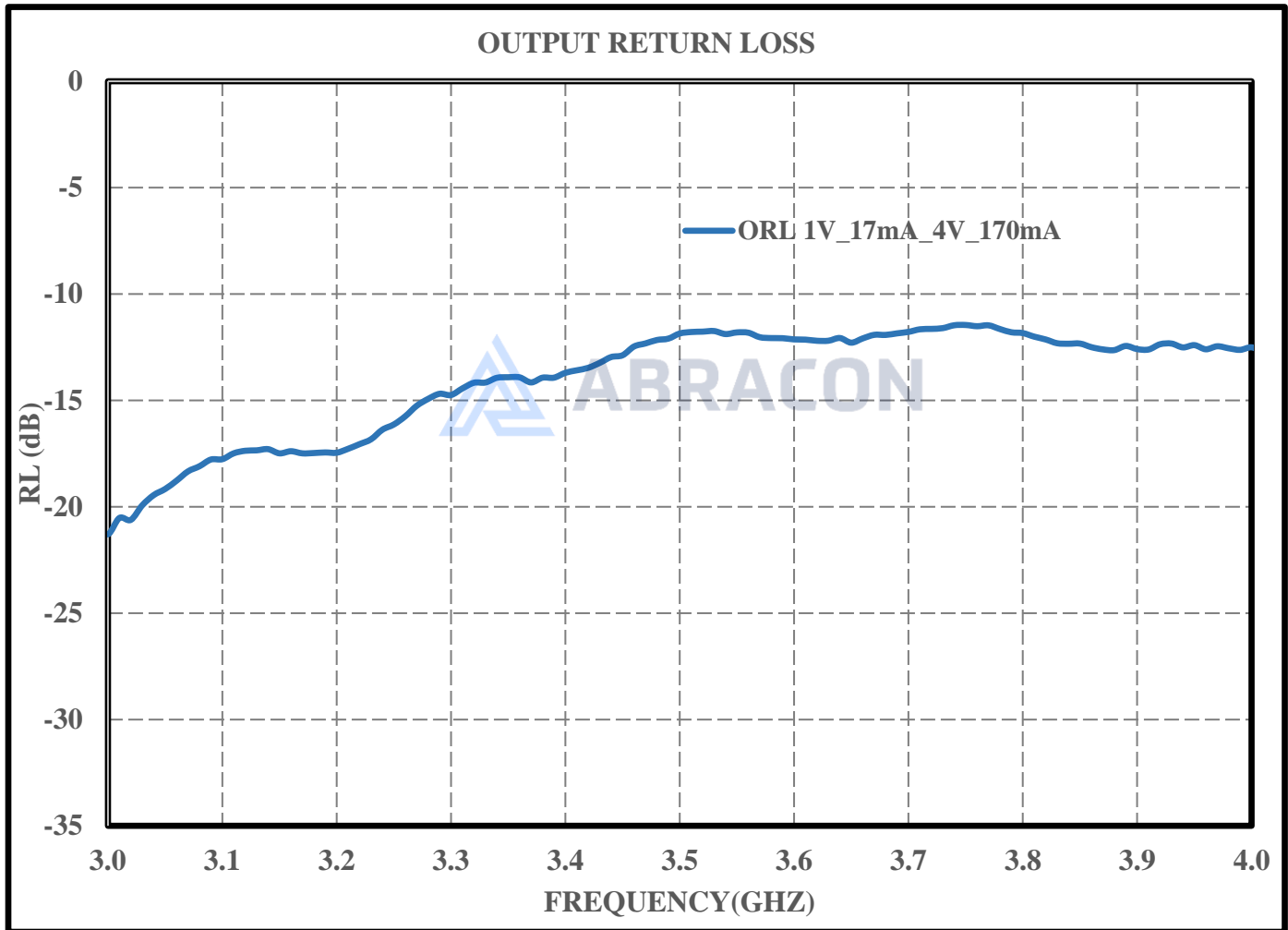
Request Samples



Check Inventory



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# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



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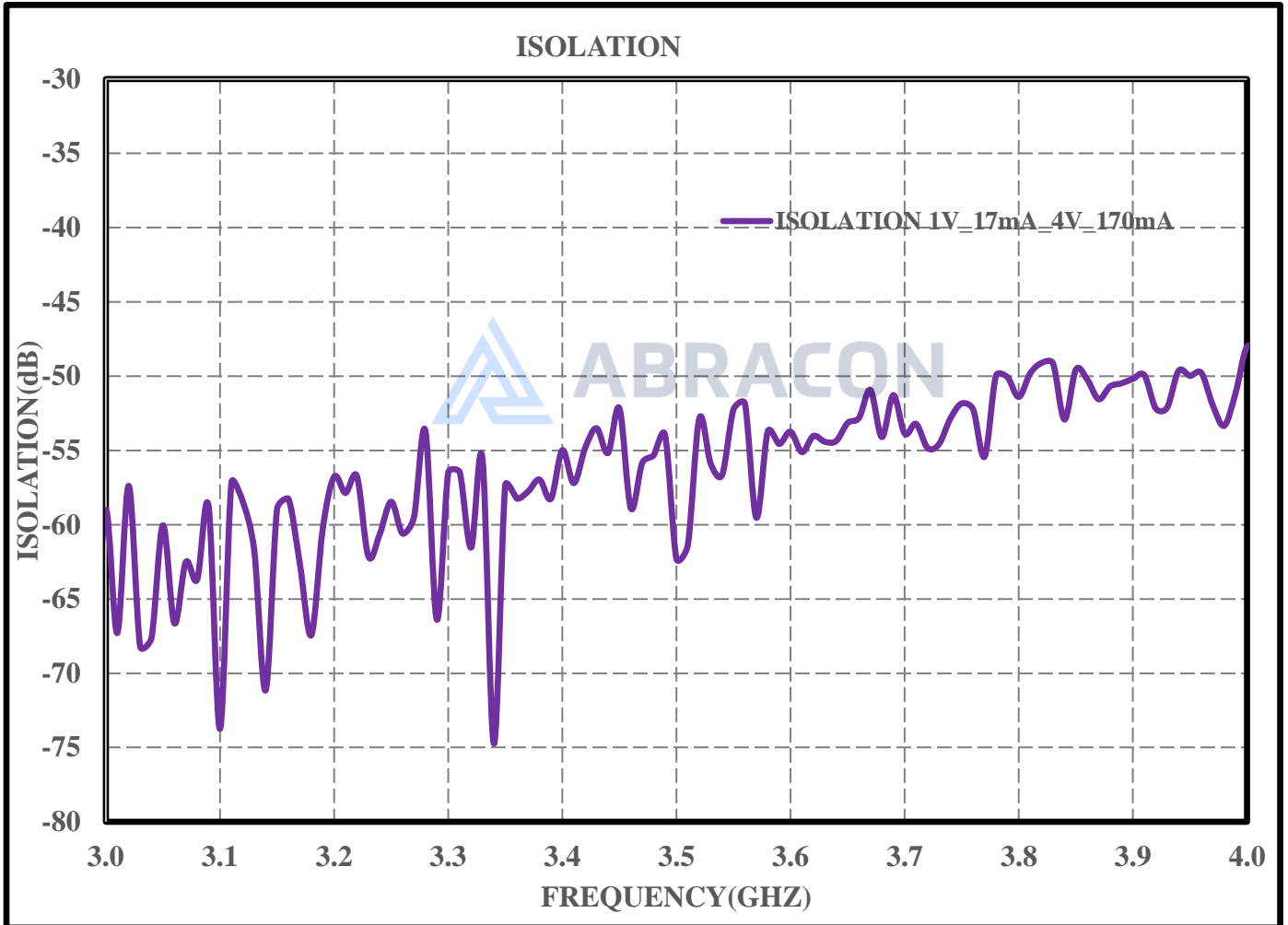
Request Samples



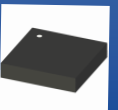
Check Inventory



6.0 x 6.0 x 1.2 mm  
RoHS Compliant



# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



ALND-WB-0010

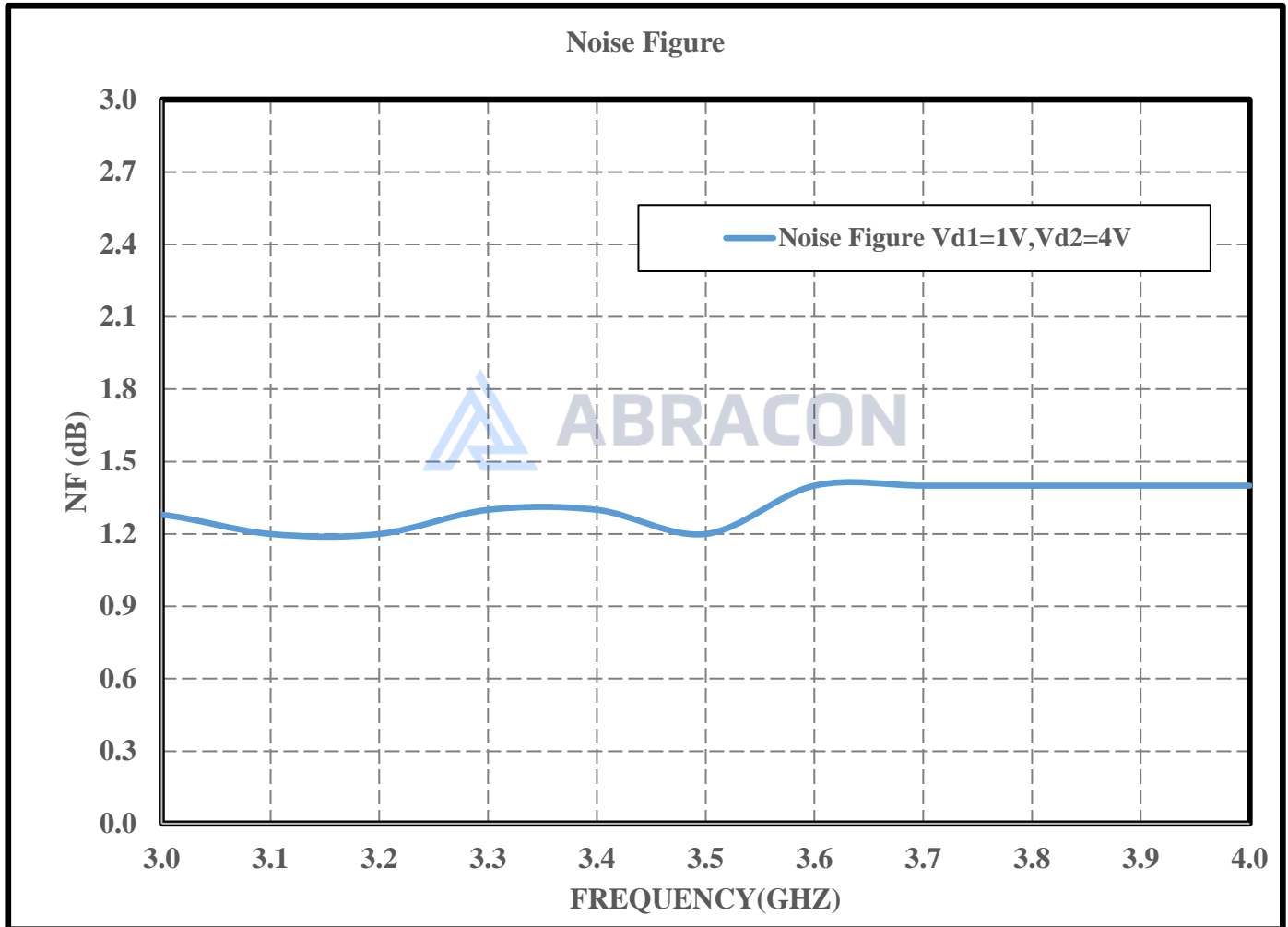
Request Samples



Check Inventory



6.0 x 6.0 x 1.2 mm  
RoHS Compliant



# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



ALND-WB-0010

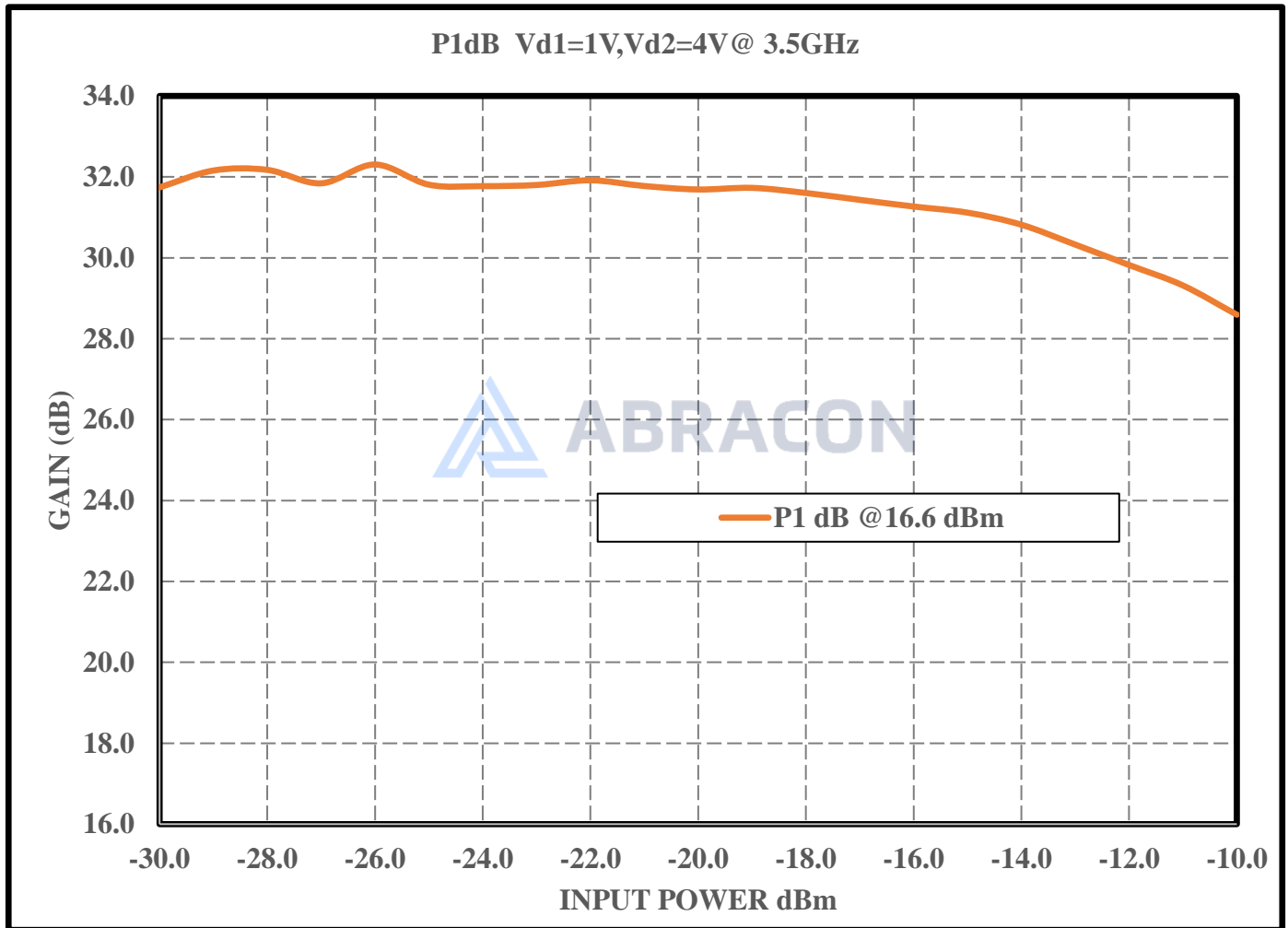
Request Samples



Check Inventory



6.0 x 6.0 x 1.2 mm  
RoHS Compliant



# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



ALND-WB-0010

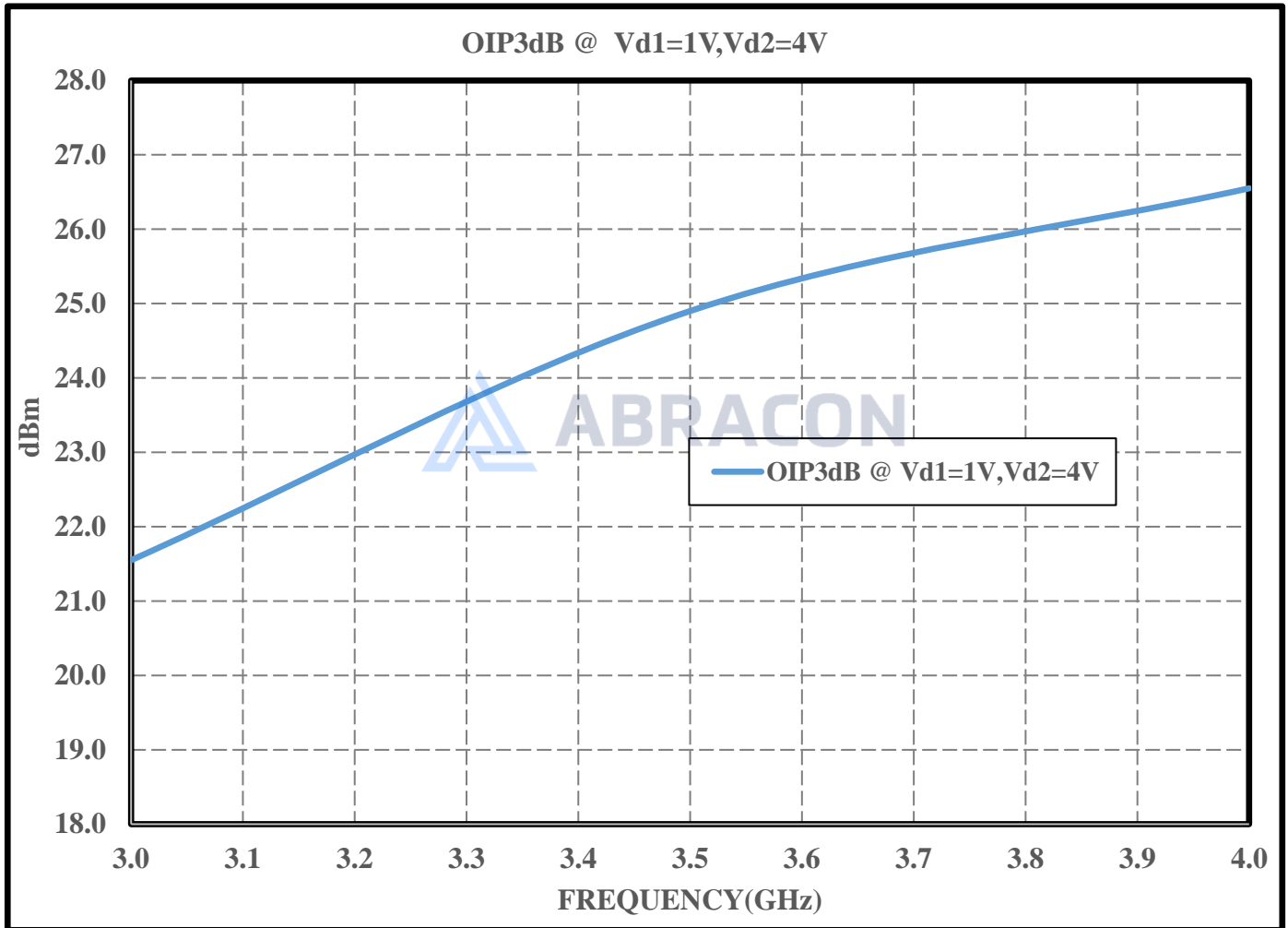
Request Samples



Check Inventory



6.0 x 6.0 x 1.2 mm  
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# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



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Request Samples

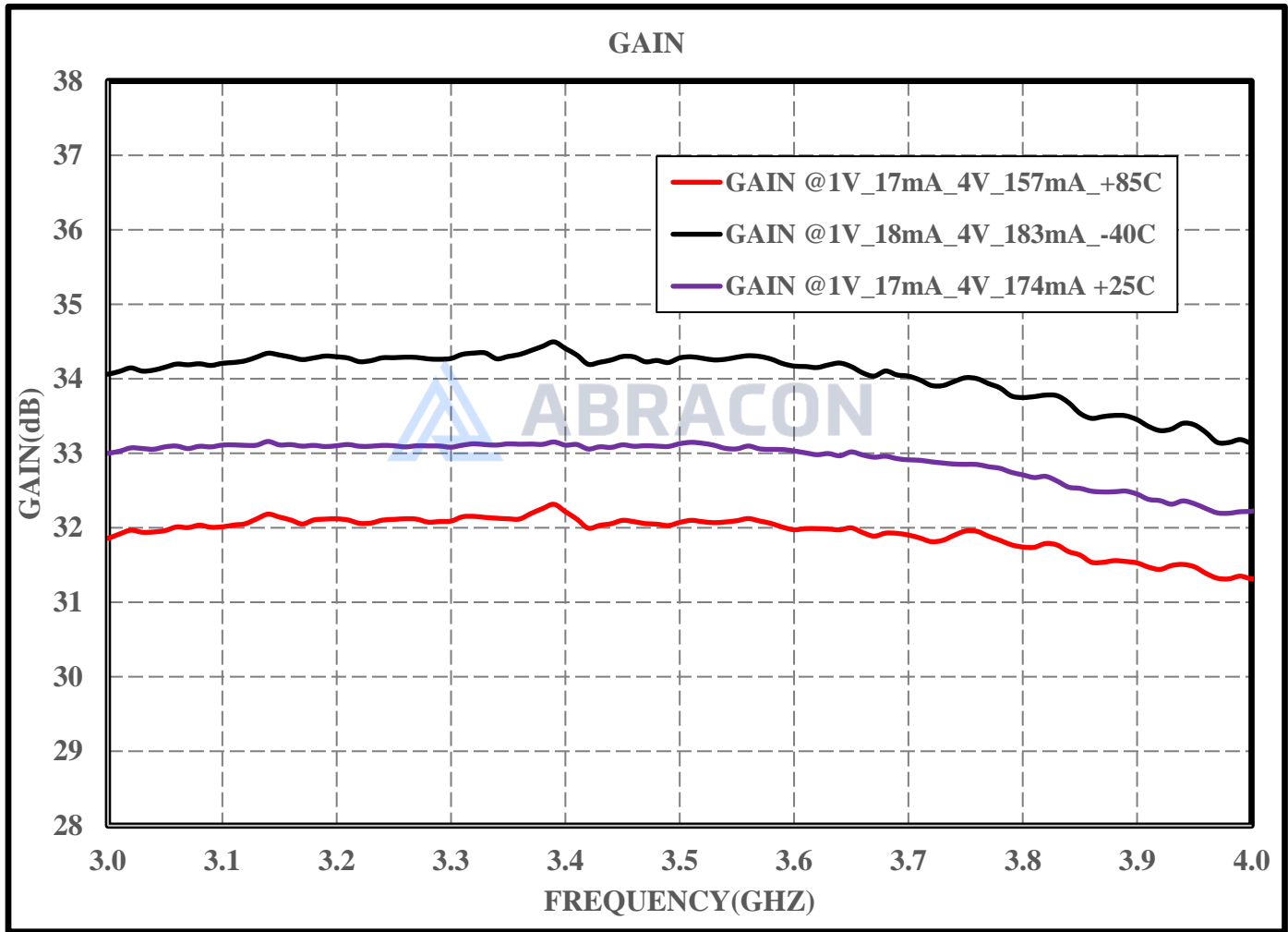


Check Inventory

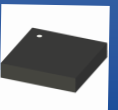


6.0 x 6.0 x 1.2 mm  
RoHS Compliant

## Test Fixture Data Over the temperature



# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



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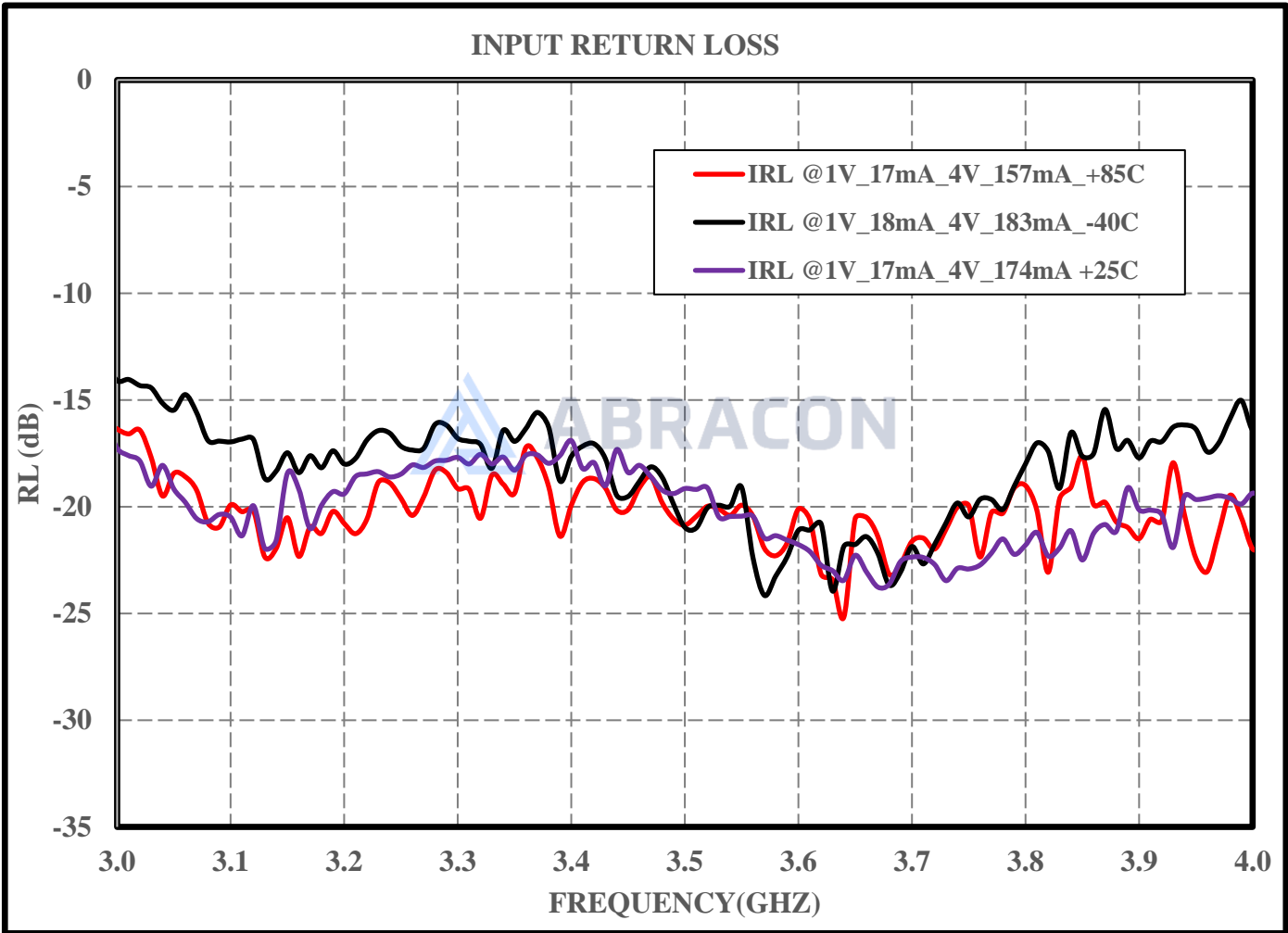
Request Samples



Check Inventory



6.0 x 6.0 x 1.2 mm  
RoHS Compliant



# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



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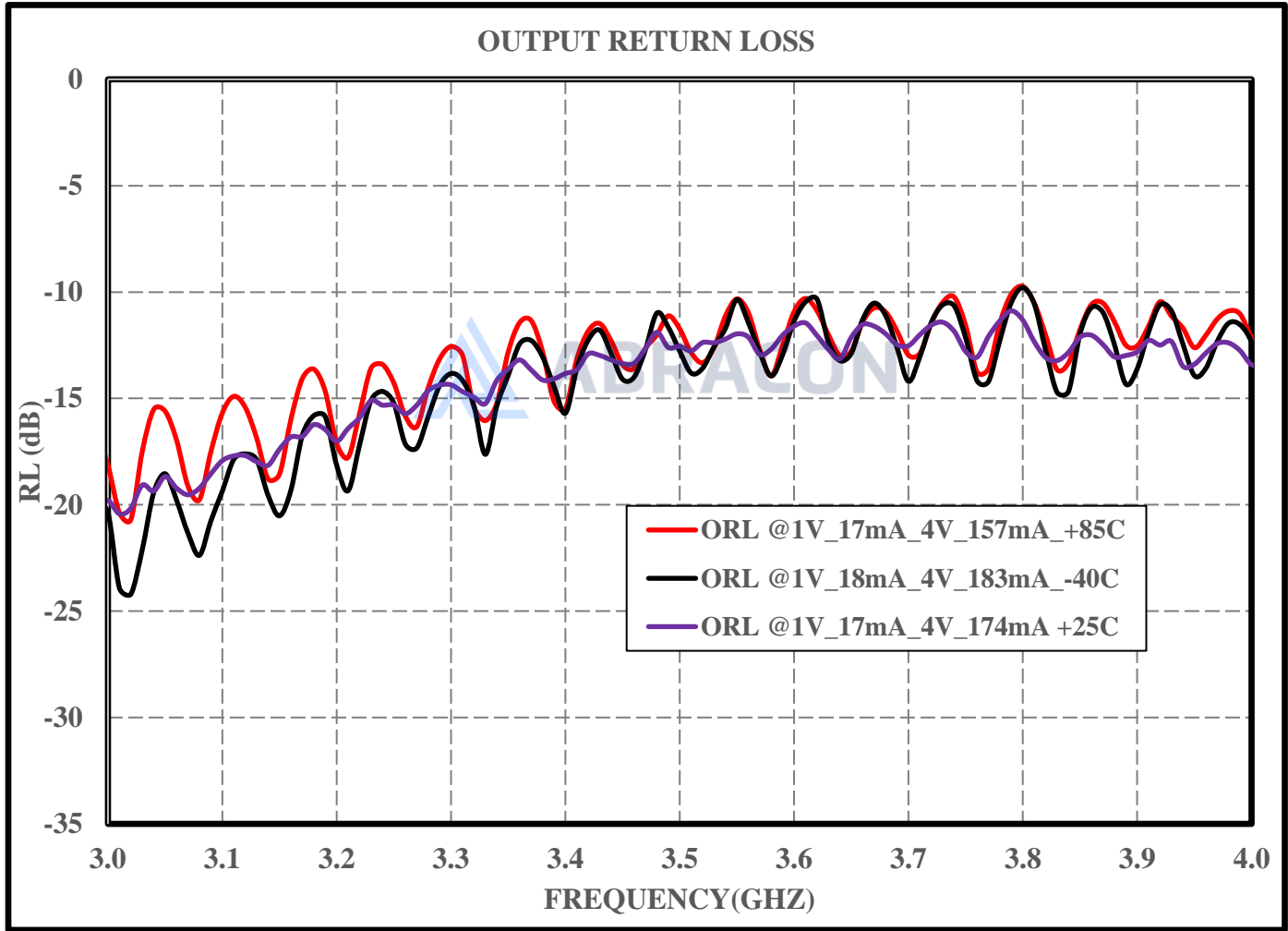
Request Samples



Check Inventory



6.0 x 6.0 x 1.2 mm  
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# 3.0 – 4.0 GHz Ultra Low Noise Amplifier



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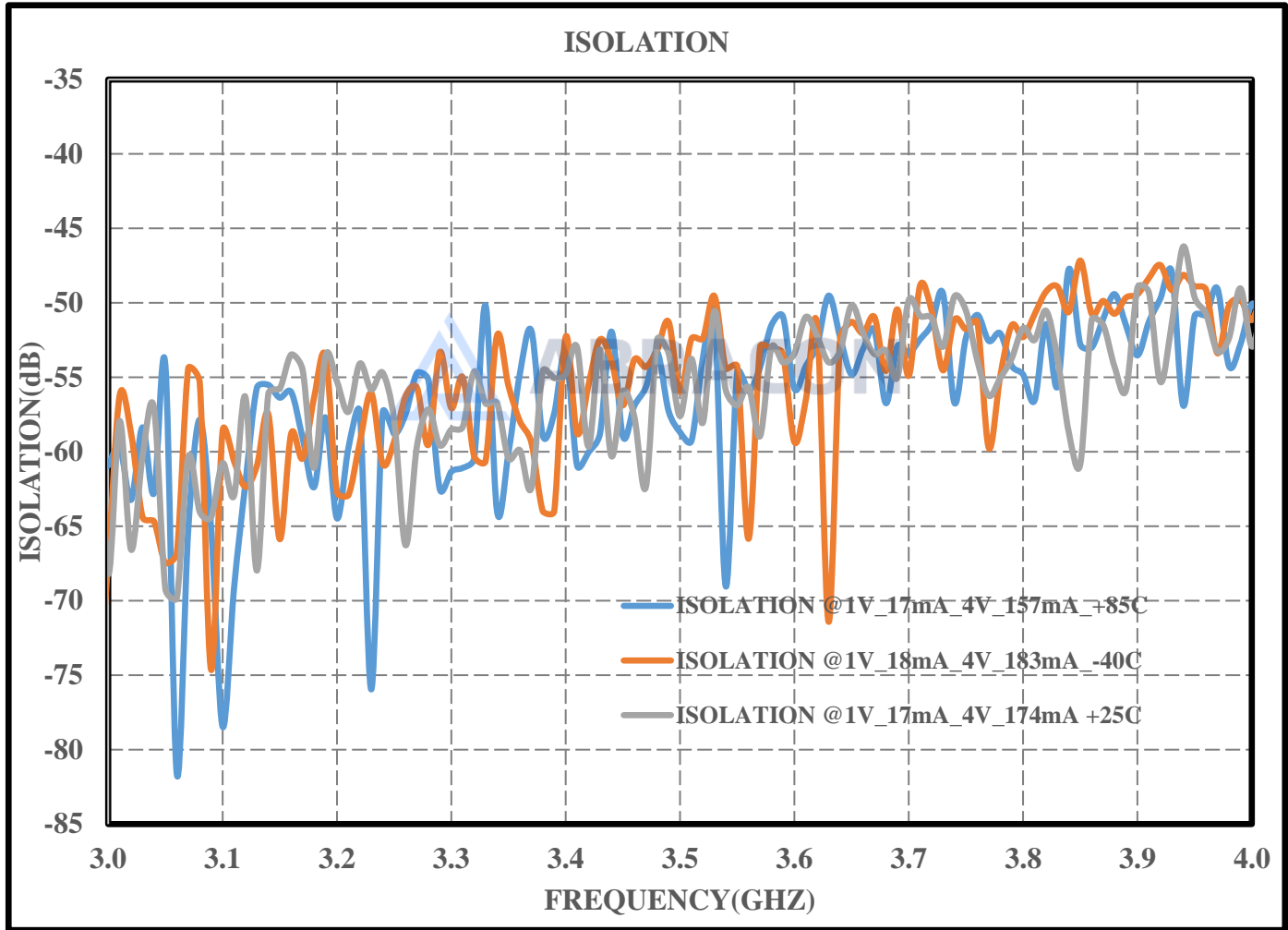
Request Samples



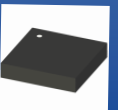
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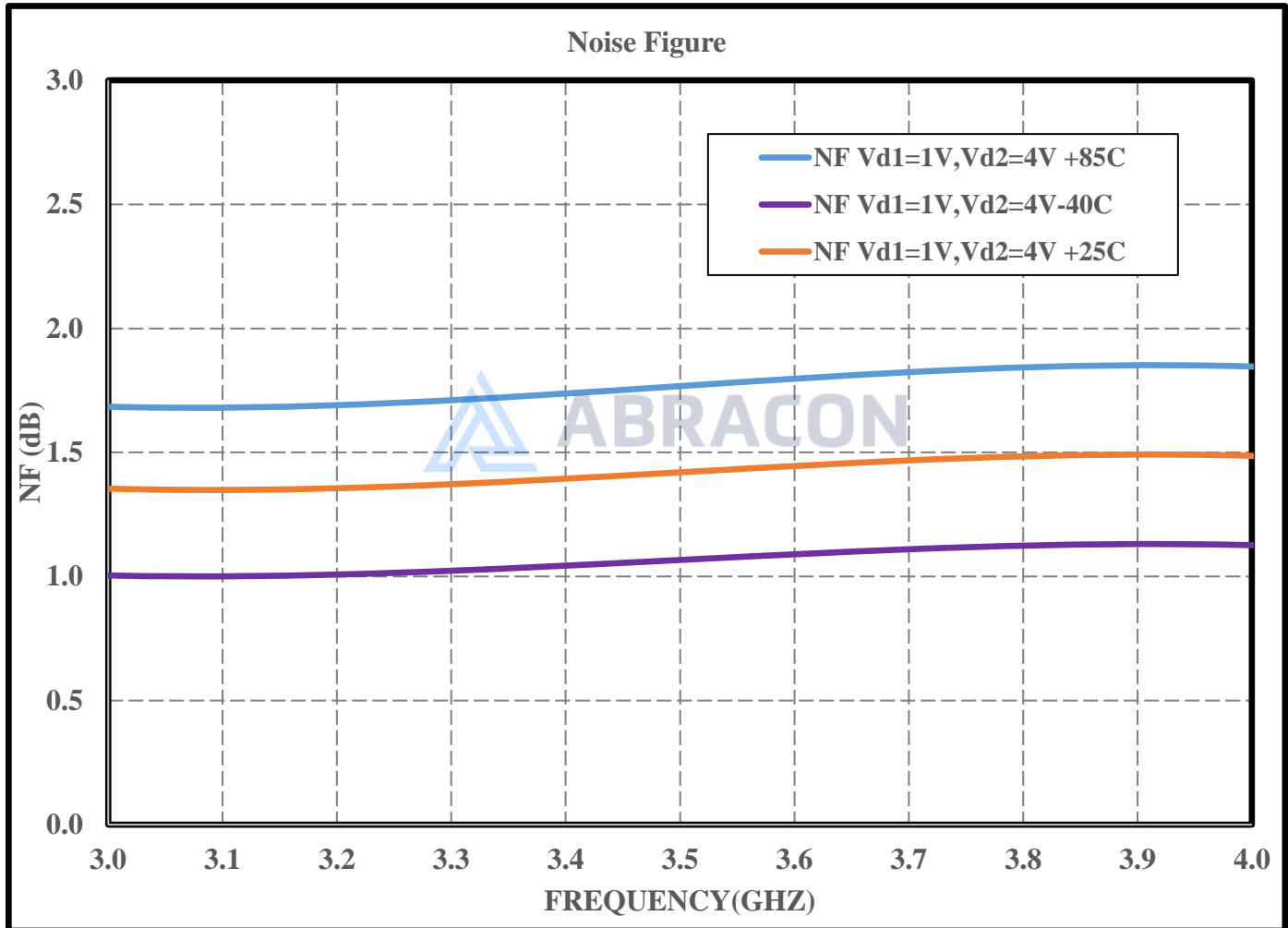
Request Samples



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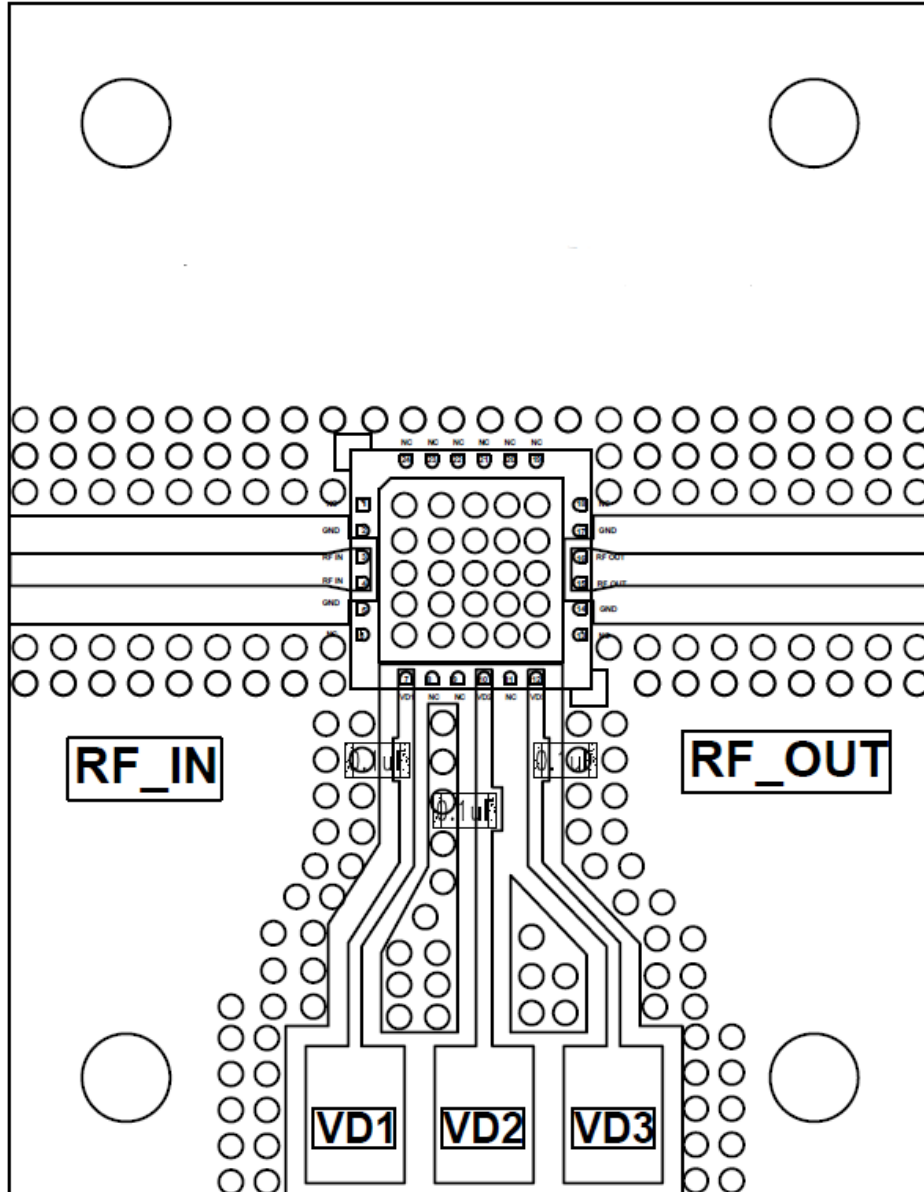


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6.0 x 6.0 x 1.2 mm  
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## Test Board Pattern



Capacitor value = 0.1uF (0603)

## 3.0 – 4.0 GHz Ultra Low Noise Amplifier



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### Packaging

#### Packing Tubes

10pcs per tube, 50 tubes per box

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