

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

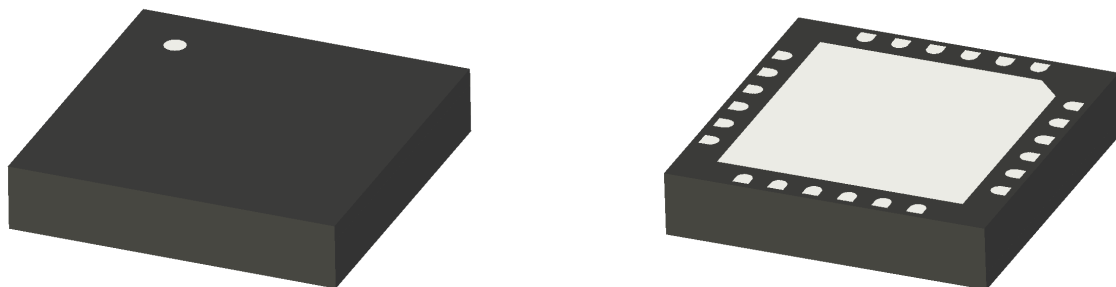
Features

- 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 m In GaAs PHEMT 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



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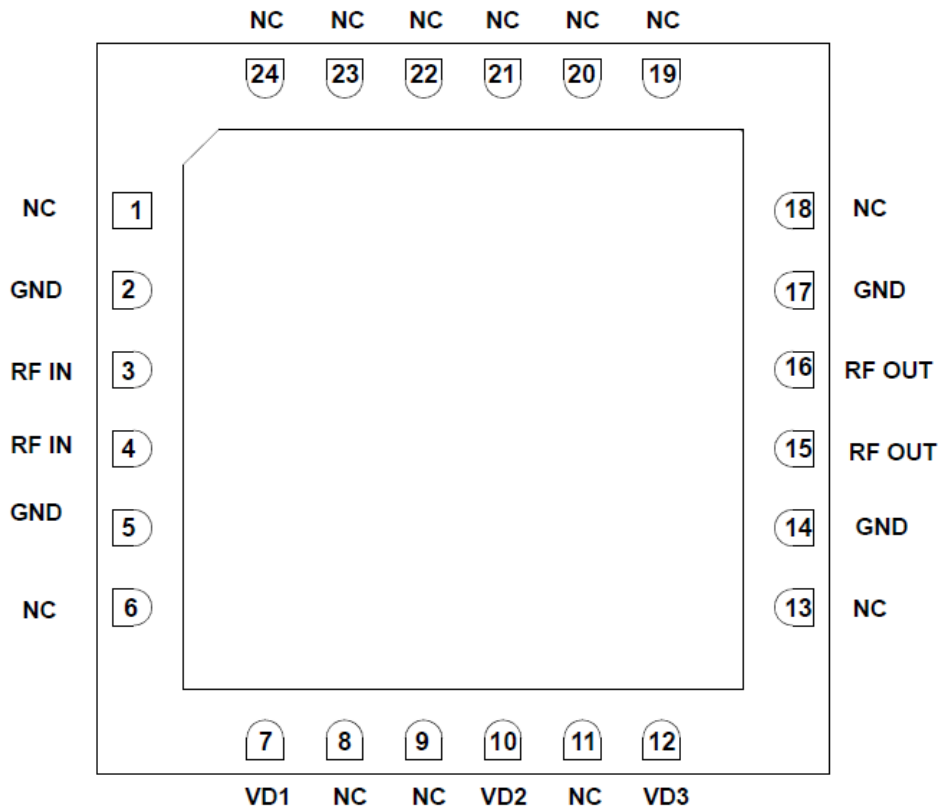


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Pin Configuration



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

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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

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Ordering Information

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



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Phone: 512-371-6159 | Fax: 512-351-8858
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REVISED: 07-31-24

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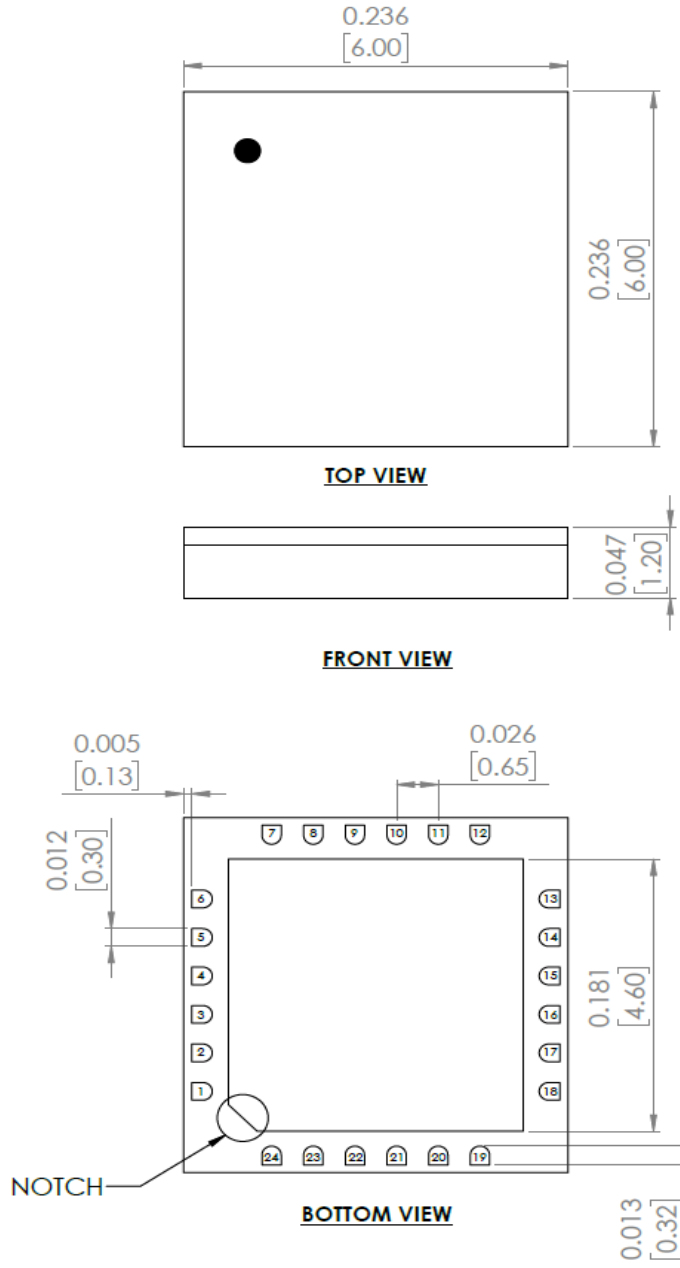
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Product Dimensions



Unit: inches[mm]

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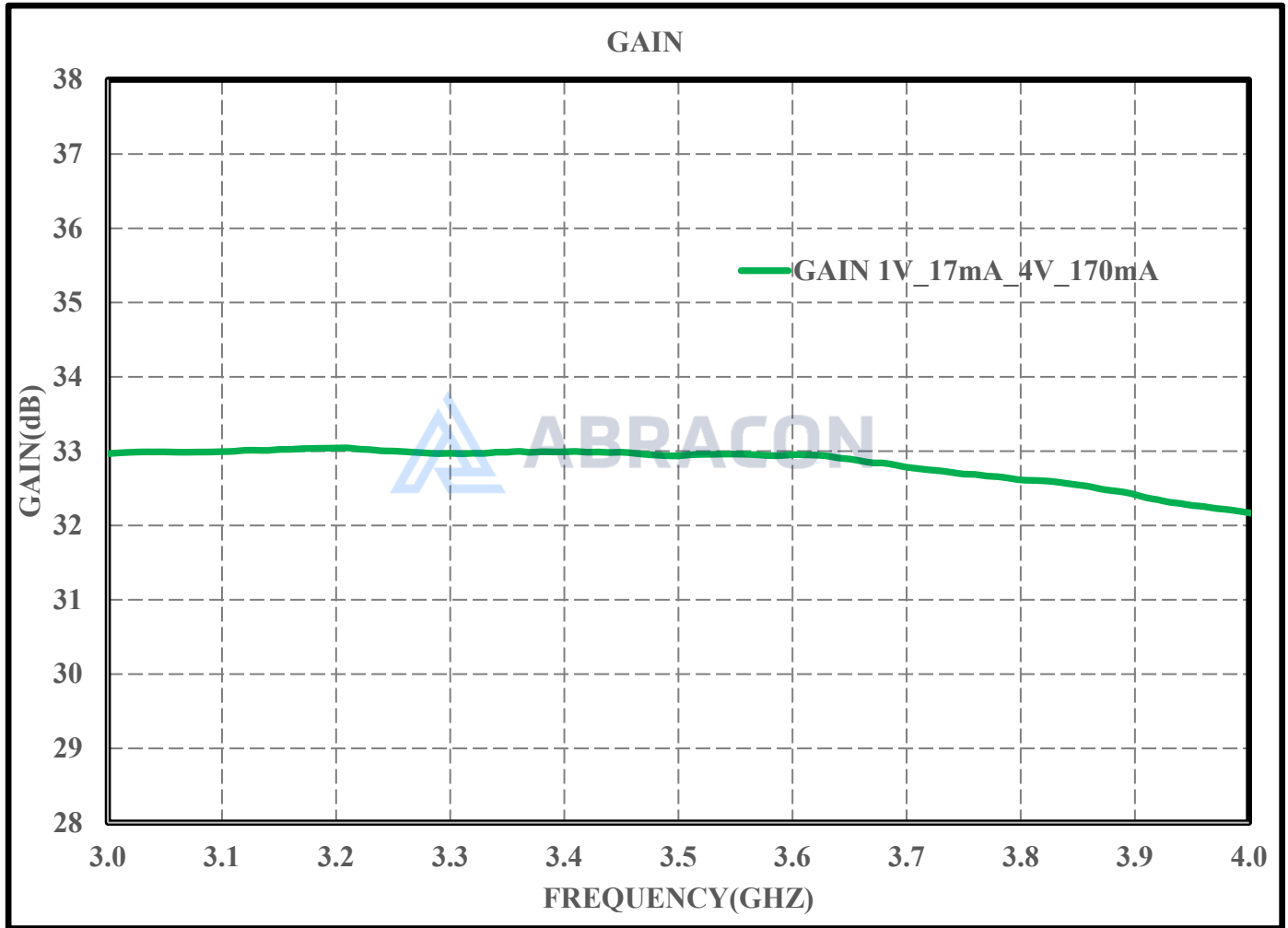
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Test Fixture Data



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

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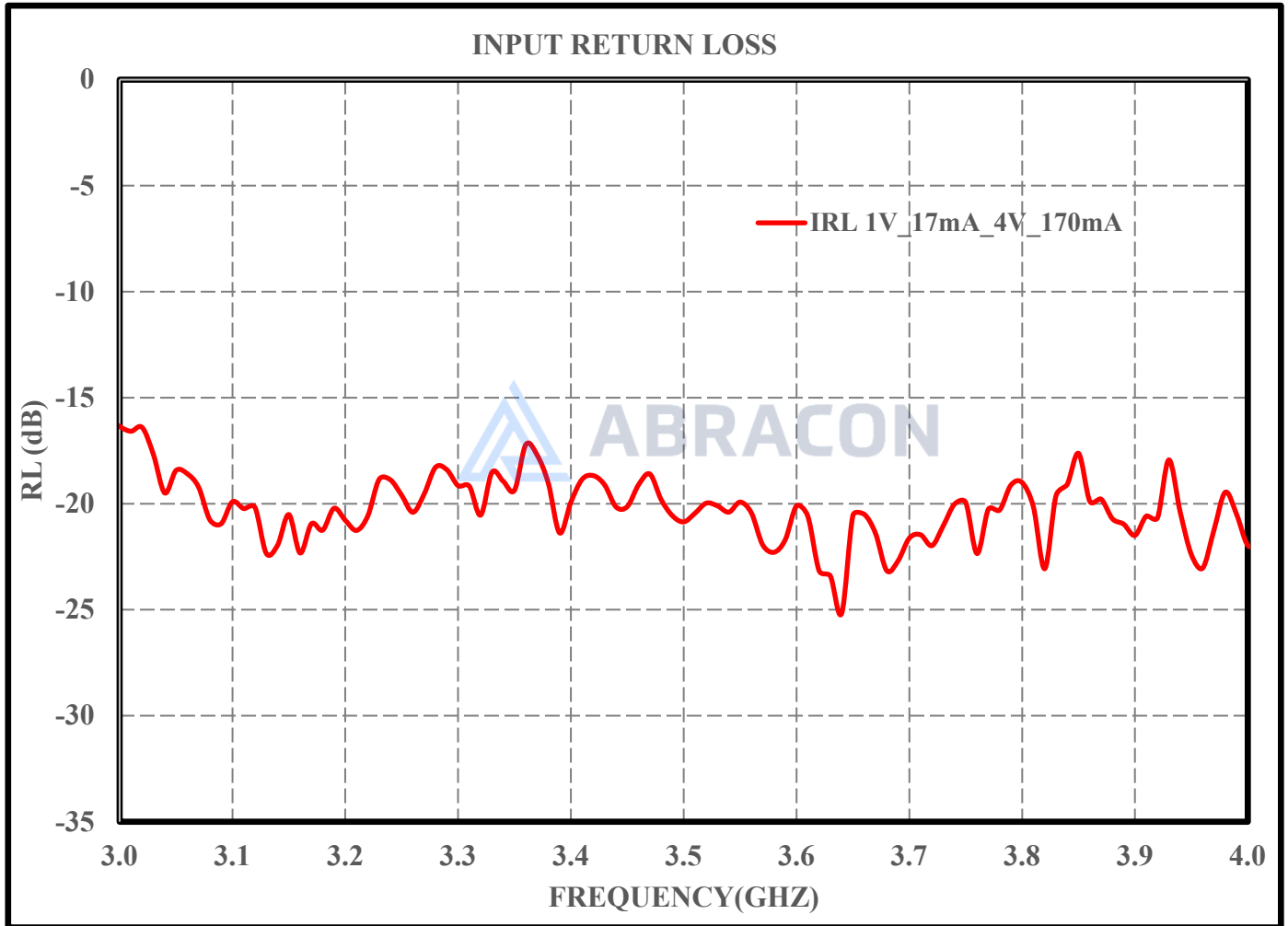
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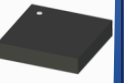
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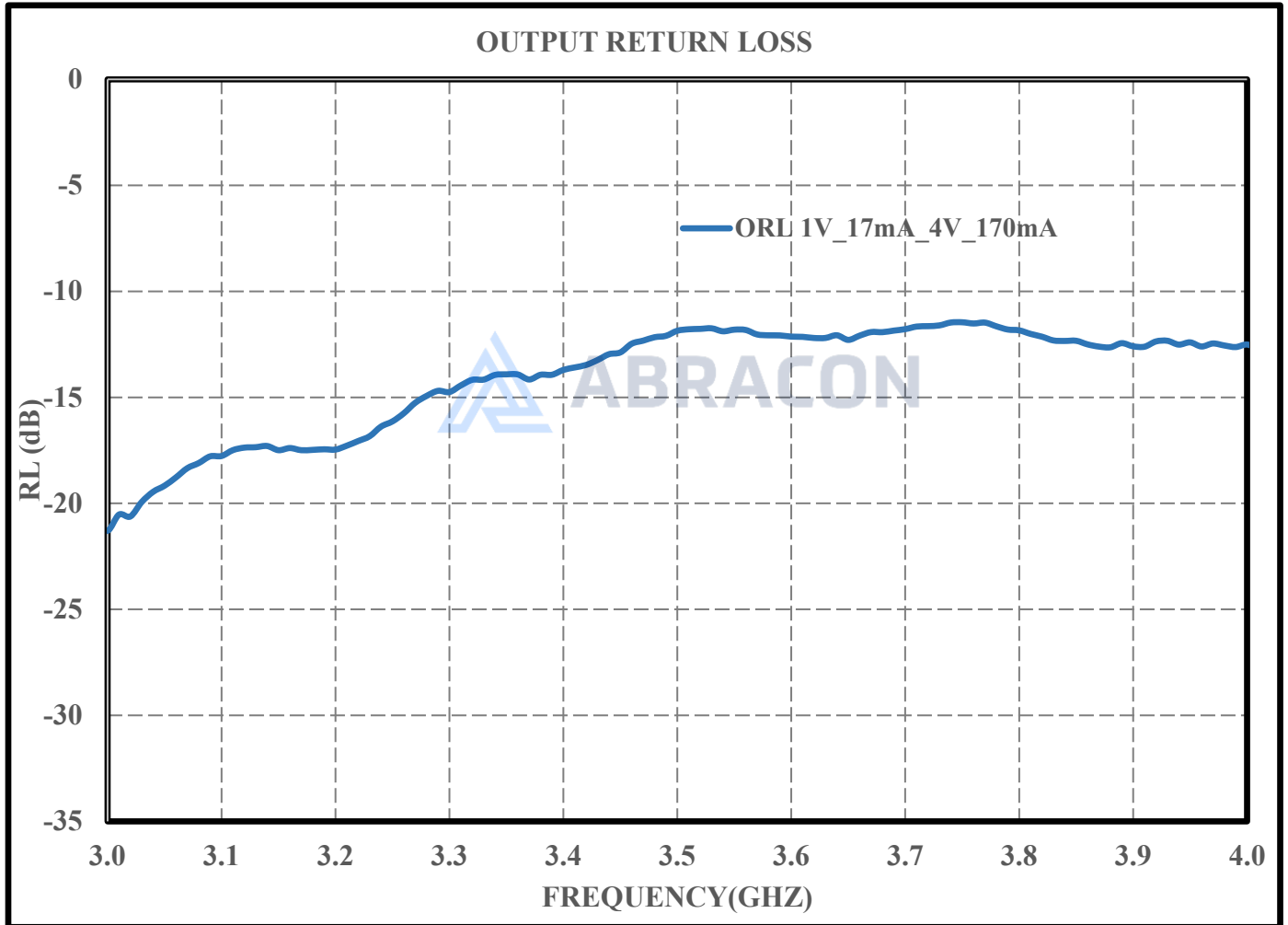
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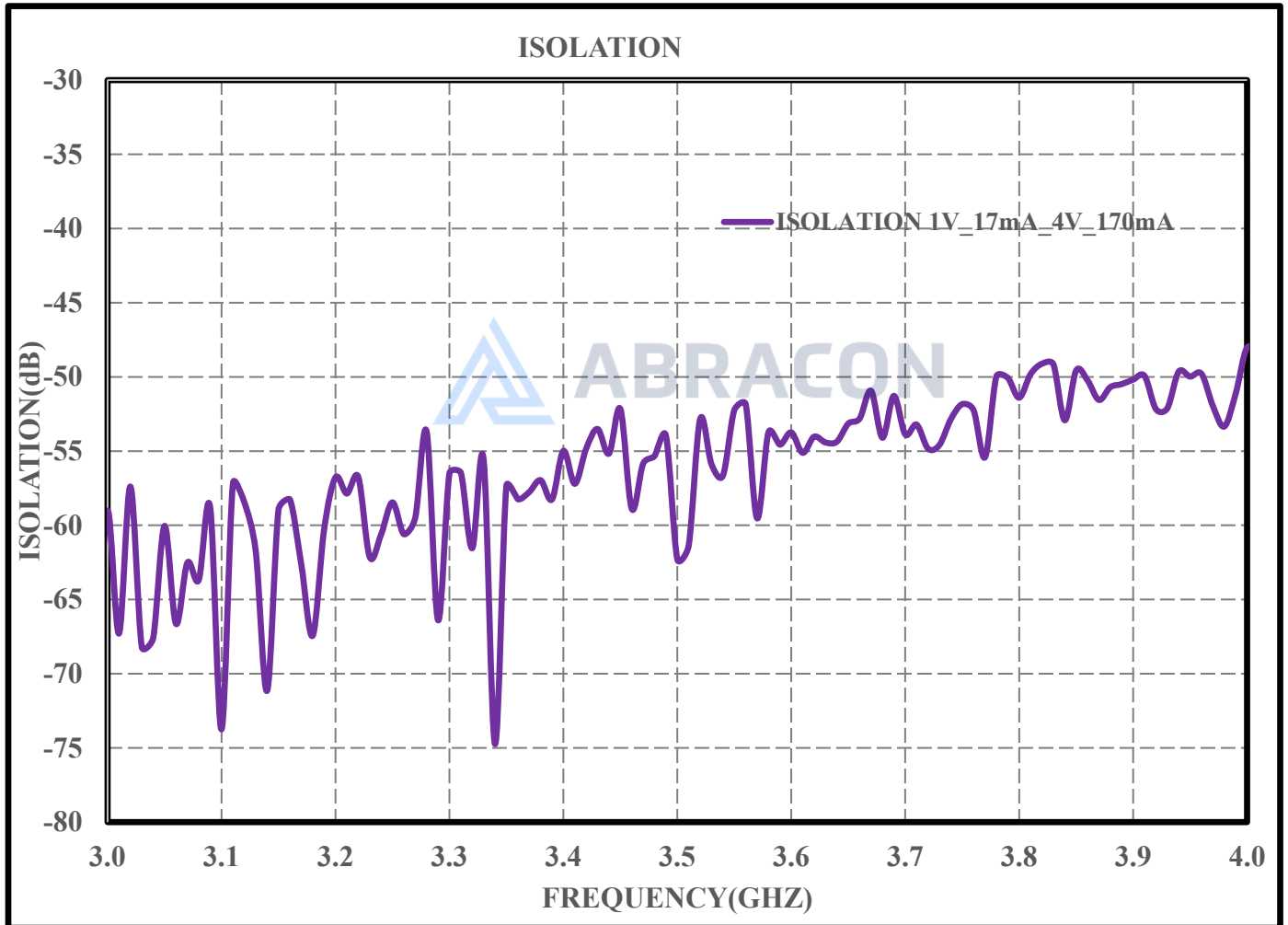
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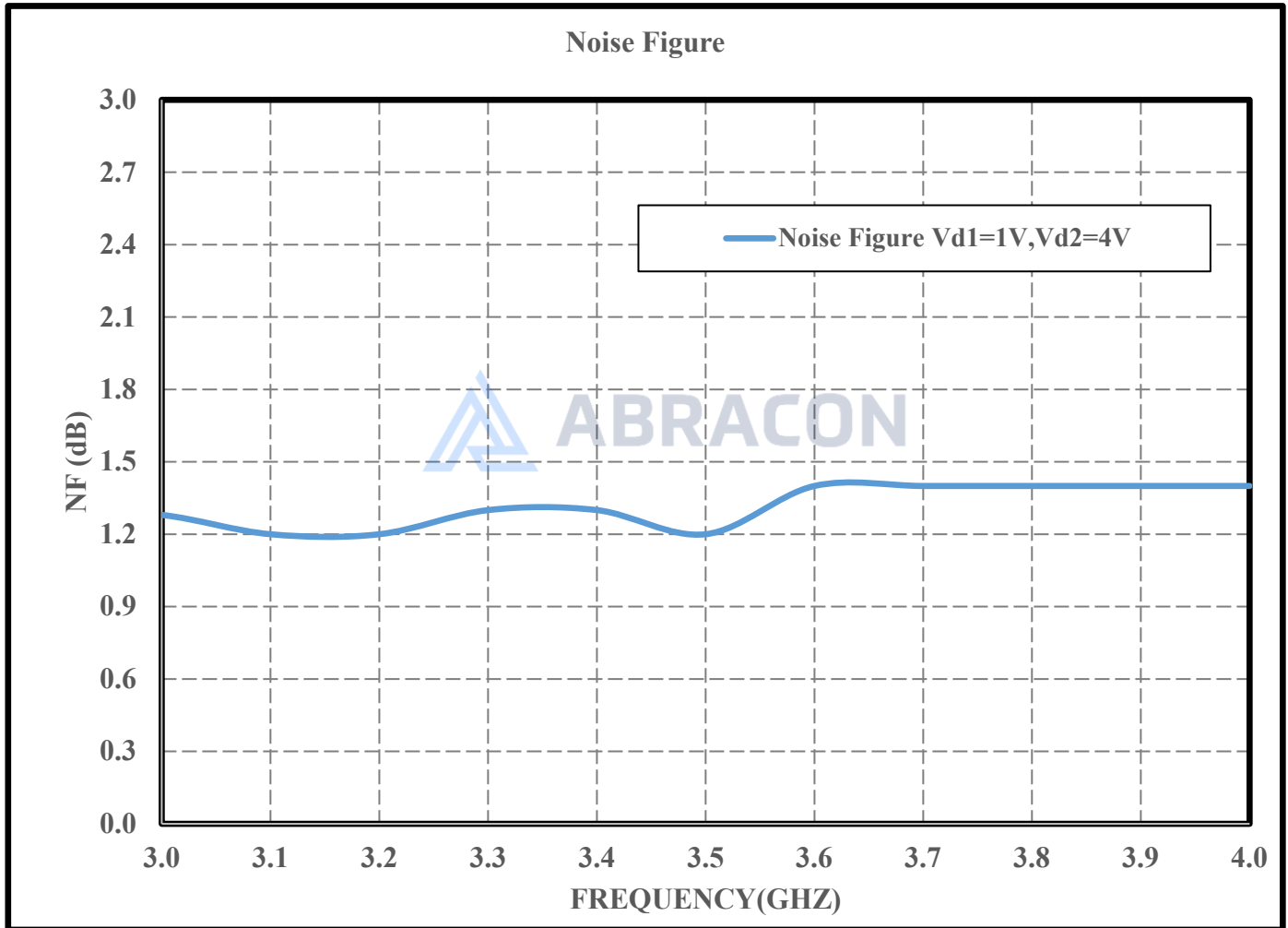


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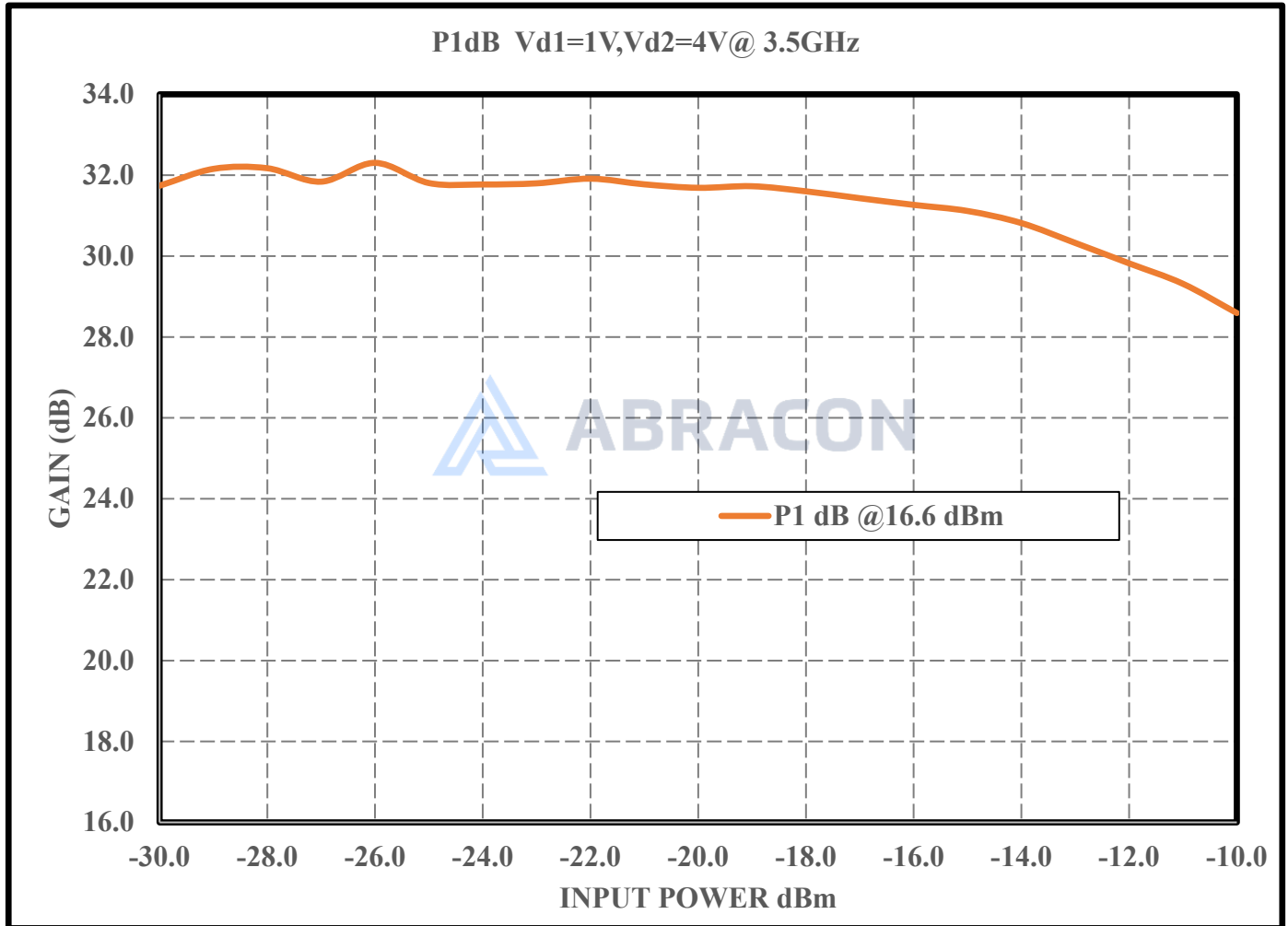
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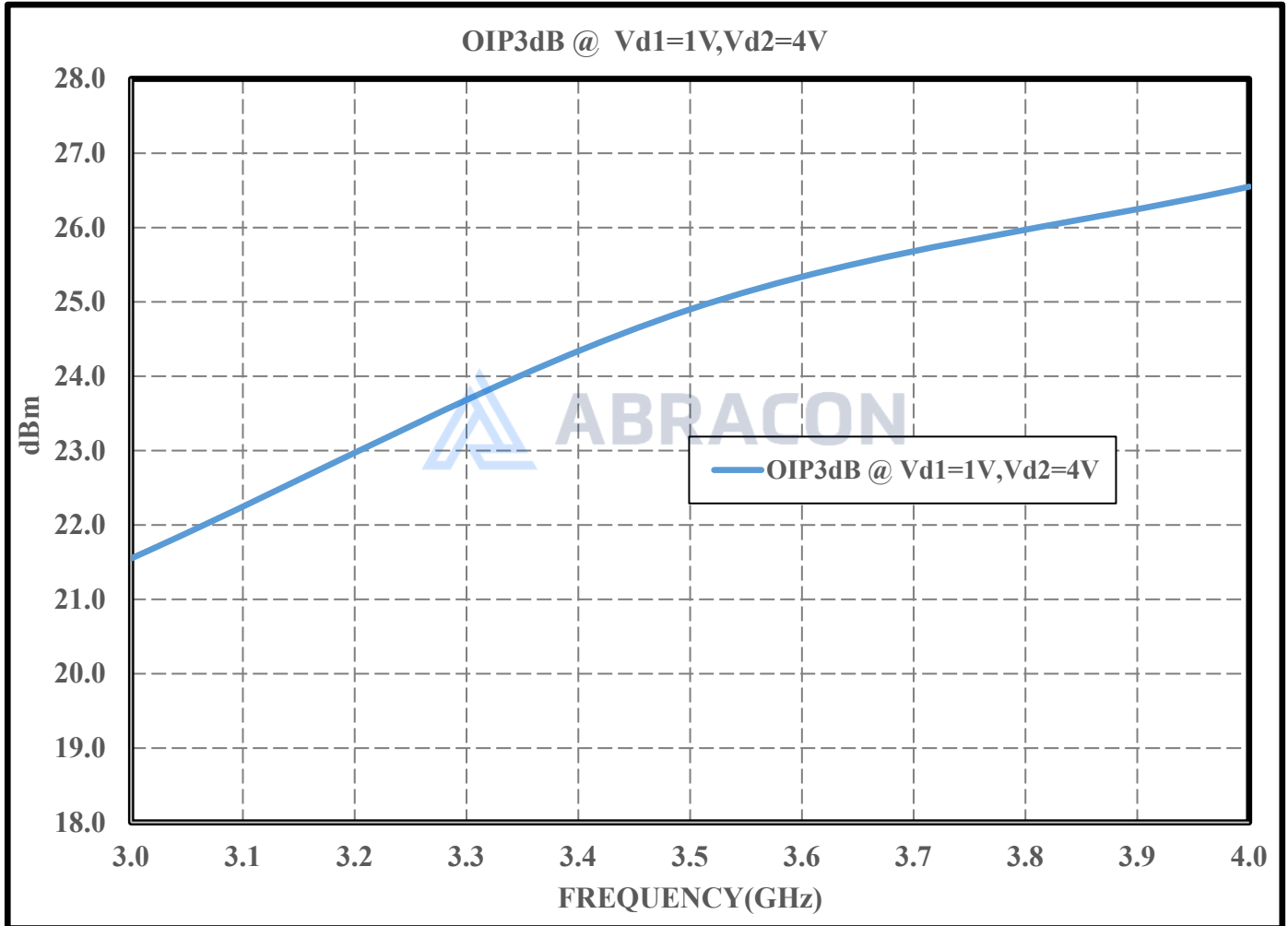
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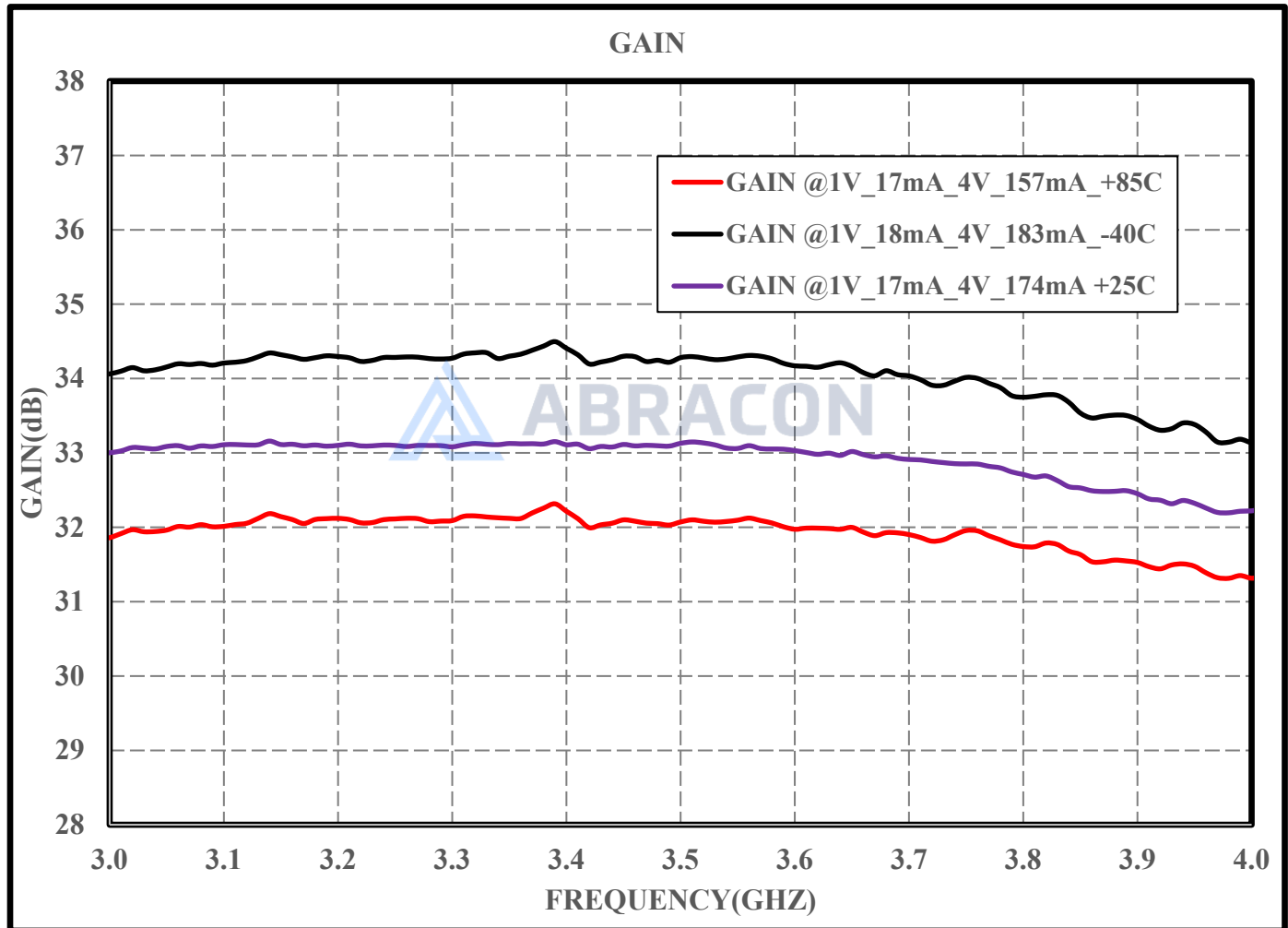
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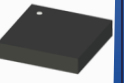
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Test Fixture Data Over the temperature



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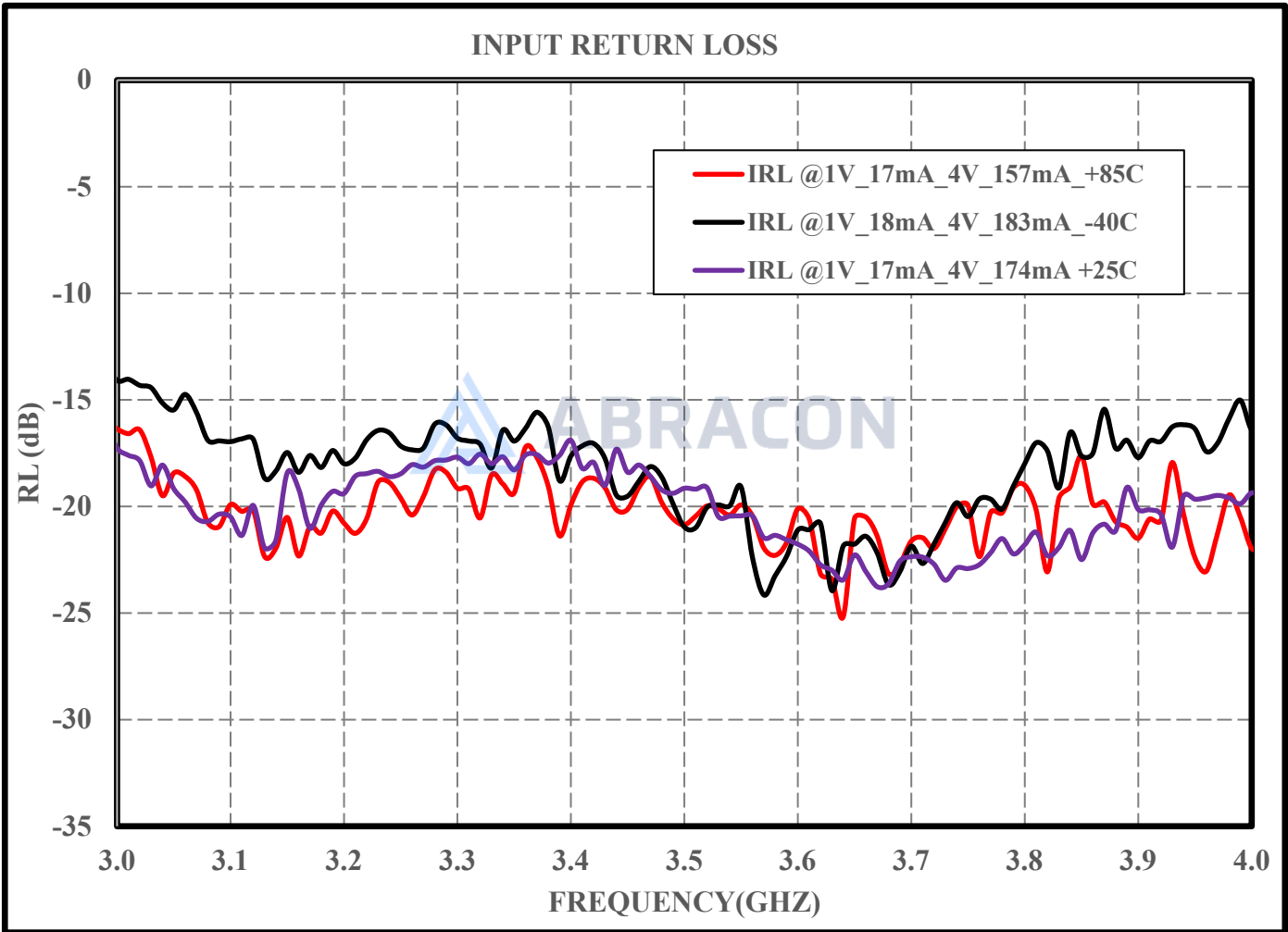
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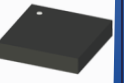
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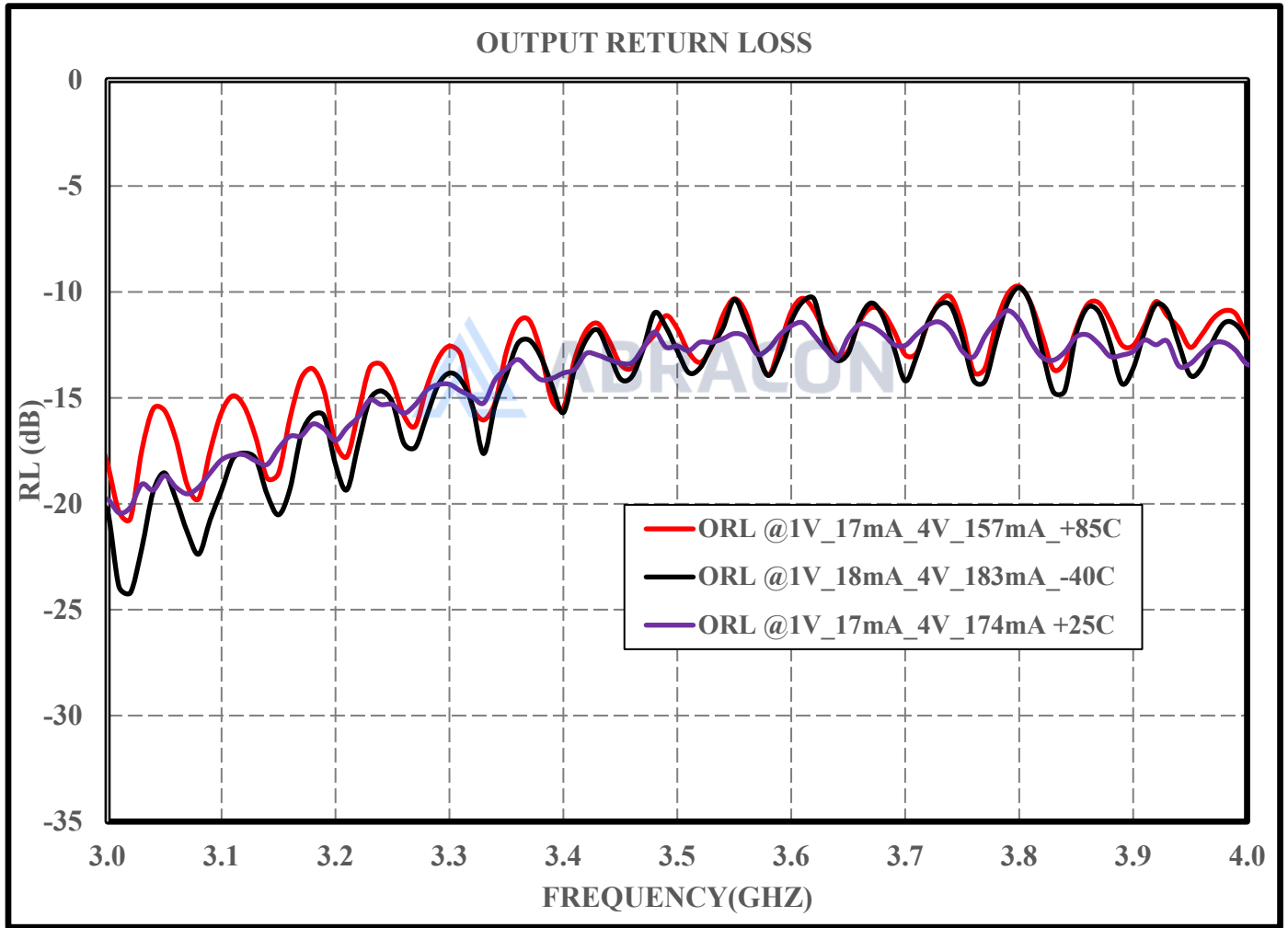
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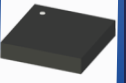
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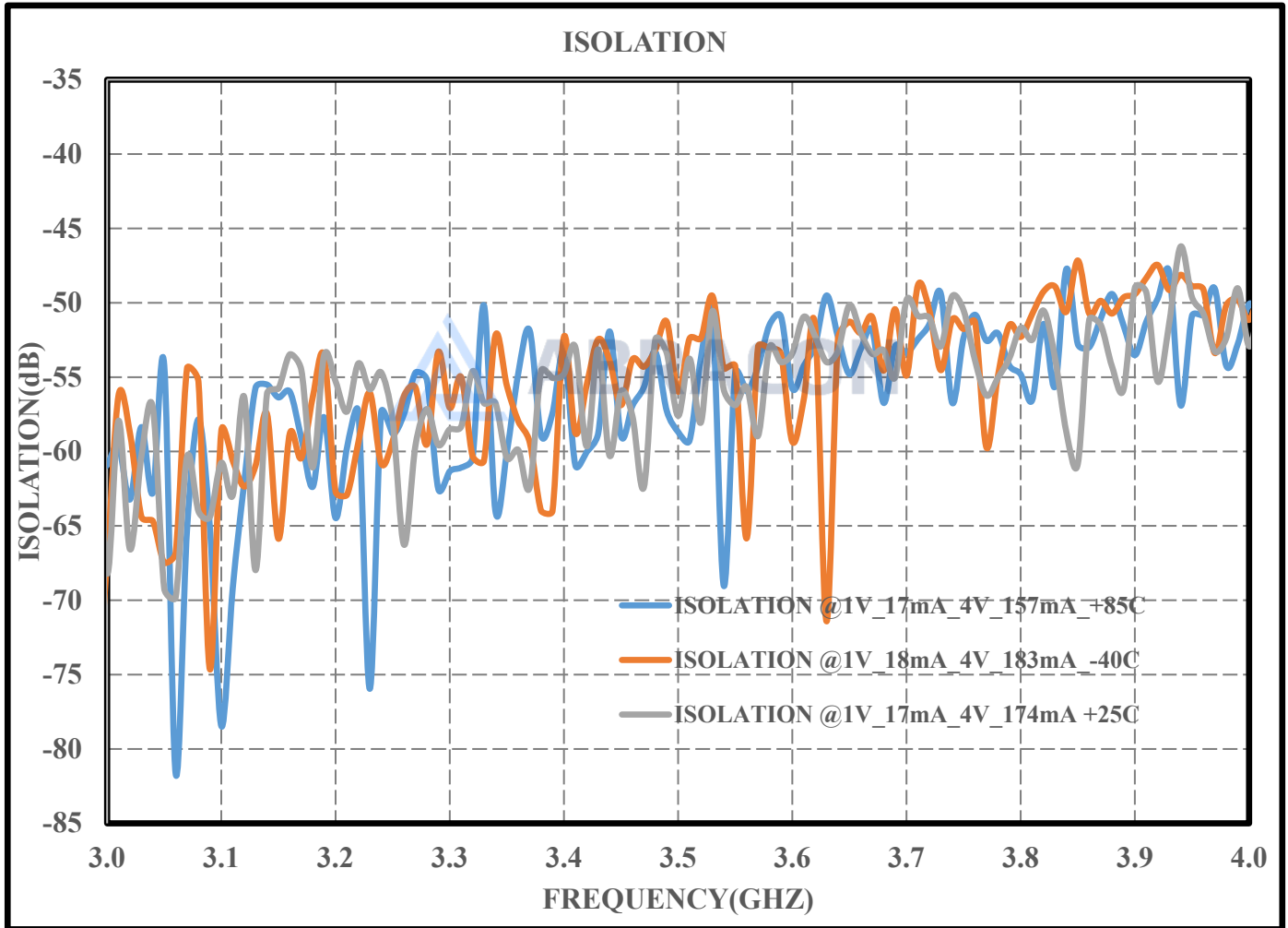


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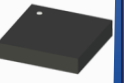
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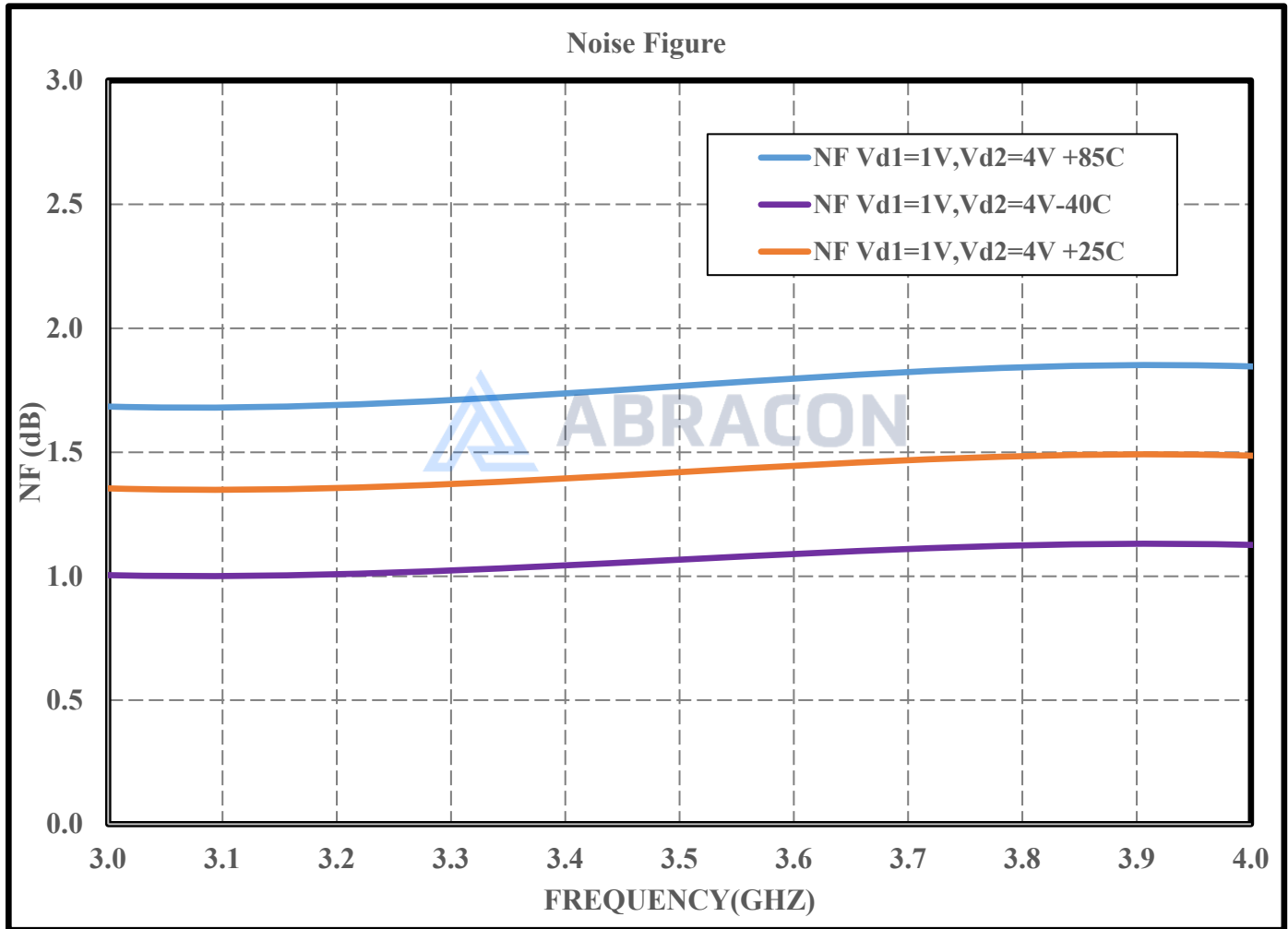
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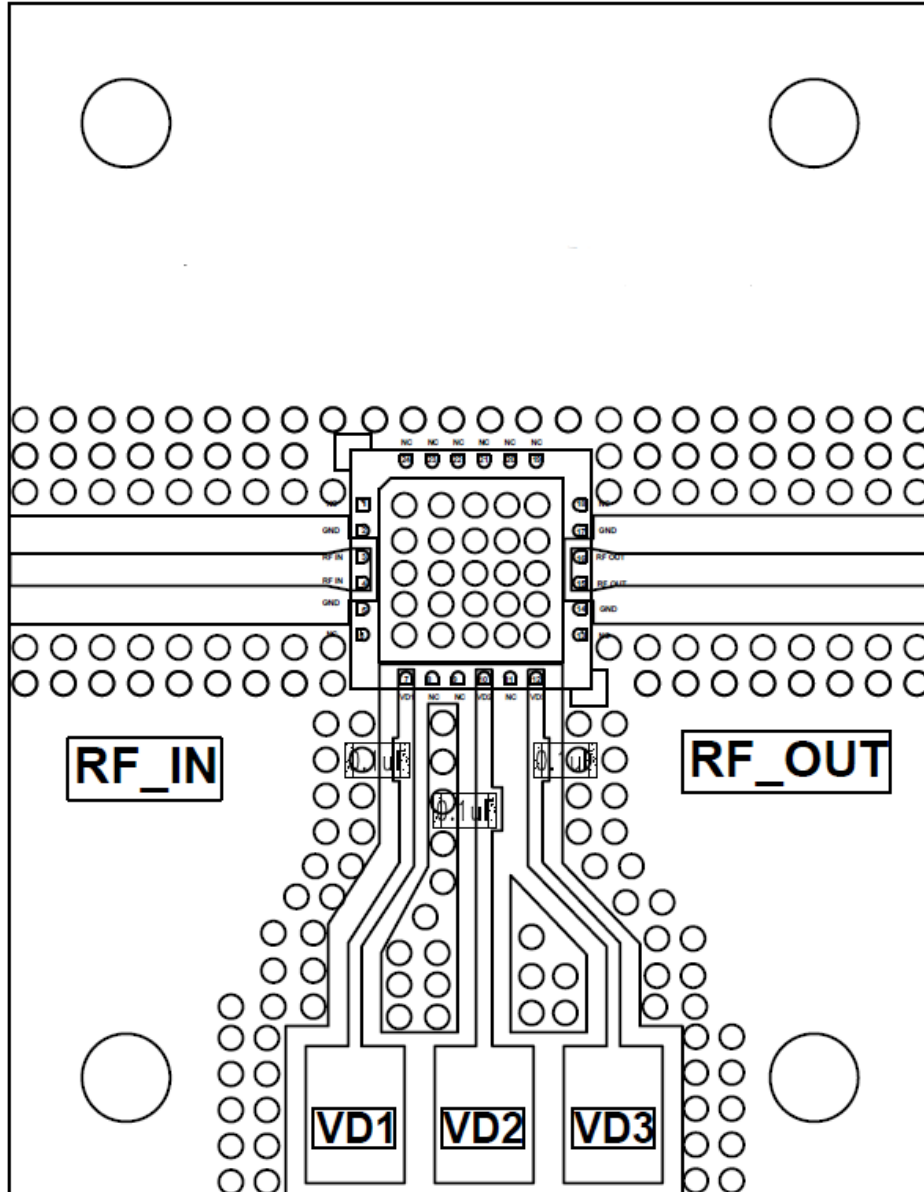


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Test Board Pattern



Capacitor value = 0.1uF (0603)

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Packaging

Packing Tubes

10pcs per tube, 50 tubes per box

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