



Product/Process Change Notice - PCN 22_0226 Rev. -

Analog Devices, Inc. One Analog Way, Wilmington, MA 01887, USA

This notice is to inform you of a change that will be made to certain ADI products (see Appendix A) that you may have purchased in the last 2 years. **Any inquiries or requests with this PCN (additional data or samples) must be sent to ADI within 30 days of publication date.** ADI contact information is listed below.

PCN Title: ADRF5024 Data Sheet Revision

Publication Date: 03-Oct-2022

Effectivity Date: 03-Oct-2022 *(the earliest date that a customer could expect to receive changed material)*

Revision Description:

Initial Release.

Description Of Change:

Data Sheet Revision for ADRF5024:

1. Recommended power handling for 'Input at RFx' case added to Table 1.
2. AMR power handling for 'Input at RFx' case added to Table 2.
3. Power derating curve for low frequency (Figure 2) updated.

Reason For Change:

Values corrected to reflect actual recommendation and part performance.

Impact of the change (positive or negative) on fit, form, function & reliability:

No change to fit, form, function, or reliability.

Summary of Supporting Information:

Changes will be reflected in Rev. D of the Product Data Sheet. See attached data sheet comparison detail.

Supporting Documents

Attachment 1: Type: Datasheet Specification Comparison

ADI_PCN_22_0226_Rev_-_ADRF5024_Data Sheet Comparison.pdf

For questions on this PCN, please send an email to the regional contacts below or contact your local ADI sales representatives.

Americas:

PCN_Americas@analog.com

Europe:

PCN_Europe@analog.com

Japan:

PCN_Japan@analog.com

Rest of Asia:

PCN_ROA@analog.com

Appendix A - Affected ADI Models				
Added Parts On This Revision - Product Family / Model Number (2)				
ADRF5024 / ADRF5024BCCZN	ADRF5024 / ADRF5024BCCZN-R7			

Appendix B - Revision History			
Rev	Publish Date	Effectivity Date	Rev Description
Rev. -	03-Oct-2022	03-Oct-2022	Initial Release.

Analog Devices, Inc.

DocId:9022 Parent DocId:None Layout Rev:8

ADRF5024: Rec. Power Handling for Input at RFx Ports

Recommended Power Handling in Data Sheet Rev. C

RECOMMENDED OPERATING CONDITONS					
Supply Voltage					
Positive	V _{DD}		3.15	3.45	V
Negative	V _{SS}		-3.45	-3.15	V
Digital Control Voltage	V _{CTRL}		0	V _{DD}	V
RF Input Power ²	P _{IN}	f = 200 MHz to 40 GHz, T _{CASE} = 85°C ³			
Through Path		RF signal is applied to RFC or through connected RF1/RF2		27	dBm
Hot Switching		RF signal is present at RFC while switching between RF1 and RF2		27	dBm
Case Temperature	T _{CASE}		-40	+105	°C

¹ For input linearity performance over frequency, see Figure 13 to Figure 16.

² For power derating over frequency, see Figure 2 and Figure 3.

³ For 105°C operation, the power handling degrades from the T_{CASE} = 85°C specification by 3 dB.

Updated Recommended Power Handling with 'Input at RFx' specified in Data Sheet Rev. D

RECOMMENDED OPERATING CONDITONS					
Supply Voltage					
Positive	V _{DD}		3.15	3.45	V
Negative	V _{SS}		-3.45	-3.15	V
Digital Control Voltage	V _{CTRL}		0	V _{DD}	V
RF Input Power ²	P _{IN}	f = 200 MHz to 40 GHz, T _{CASE} = 85°C ³			
Input at RFC		RF signal is applied to RFC		27	dBm
Through Path		RF signal is present at RFC while switching between RF1 and RF2		27	dBm
Hot Switching				27	dBm
Input at RFx		RF signal is applied through connected RFx		26	dBm
Through Path		RF signal is present at RFx while switching between RF1 and RF2		26	dBm
Hot Switching				26	dBm
Case Temperature	T _{CASE}		-40	+105	°C

¹ For input linearity performance over frequency, see Figure 13 to Figure 16.

² For power derating over frequency, see Figure 2 and Figure 3. This power derating is applicable for insertion loss path and hot switching power specifications.

³ For 105°C operation, the power handling degrades from the T_{CASE} = 85°C specification by 3 dB.

ADRF5024: AMR Power Handling for Input at RFx

AMR Power Handling in Data Sheet Rev. C

Table 2.	
Parameter	Rating
Positive Supply Voltage	−0.3 V to +3.6 V
Negative Supply Voltage	−3.6 V to +0.3 V
Digital Control Input Voltage	
Voltage	−0.3 V to VDD + 0.3 V
Current	3 mA
RF Input Power ¹ (f = 200 MHz to 40 GHz, T _{CASE} = 85°C ²)	
Through Path	27.5 dBm
Hot Switching	27.5 dBm
RF Input Power Under Unbiased Condition ¹ (V _{DD} , V _{SS} = 0 V)	21 dBm
Temperature	
Junction, T _J	135°C
Storage Range	−65°C to +150°C
Reflow	260°C
ESD Sensitivity	
Human Body Model (HBM)	
RFC, RF1, and RF2 Pins	500 V
Digital Pins	2000 V
Charged Device Model (CDM)	1250 V

¹ For power derating vs. frequency, see Figure 2 and Figure 3. This power derating is applicable for insertion loss path and hot switching power specifications.

² For 105°C operation, the power handling degrades from the T_{CASE} = 85°C specification by 3 dB.

Updated AMR Power Handling with 'Input at RFx' specified in Data Sheet Rev. D

Table 2.	
Parameter	Rating
Positive Supply Voltage	−0.3 V to +3.6 V
Negative Supply Voltage	−3.6 V to +0.3 V
Digital Control Input Voltage	
Voltage	−0.3 V to VDD + 0.3 V
Current	3 mA
RF Input Power ¹ (f = 200 MHz to 40 GHz, T _{CASE} = 85°C ²)	
Input at RFC	
Through Path	27.5 dBm
Hot Switching	27.5 dBm
Input at RFx	
Through Path	26.5 dBm
Hot Switching	26.5 dBm
RF Input Power Under Unbiased Condition ¹ (V _{DD} , V _{SS} = 0 V)	21 dBm
Temperature	
Junction, T _J	135°C
Storage Range	−65°C to +150°C
Reflow	260°C
ESD Sensitivity	
Human Body Model (HBM)	
RFC, RF1, and RF2 Pins	500 V
Digital Pins	2000 V
Charged Device Model (CDM)	1250 V

¹ For power derating vs. frequency, see Figure 2 and Figure 3. This power derating is applicable for insertion loss path and hot switching power specifications.

² For 105°C operation, the power handling degrades from the T_{CASE} = 85°C specification by 3 dB.

ADRF5024: Power Derating Curve at Low Frequency

Low Frequency Power Derating in Data Sheet Rev. C

POWER DERATING CURVES

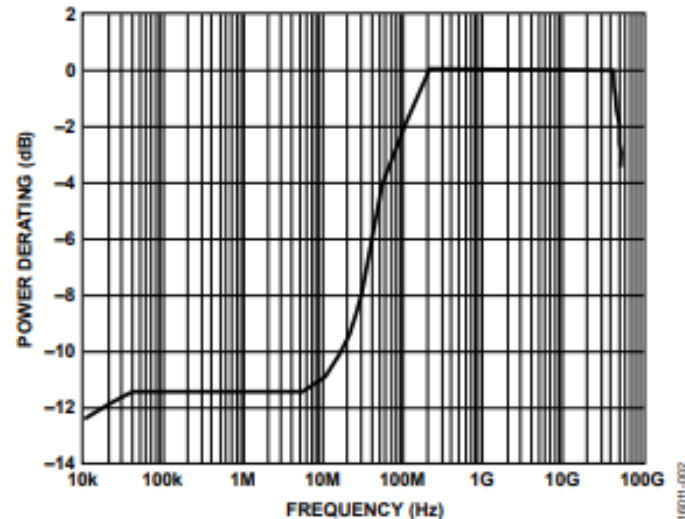
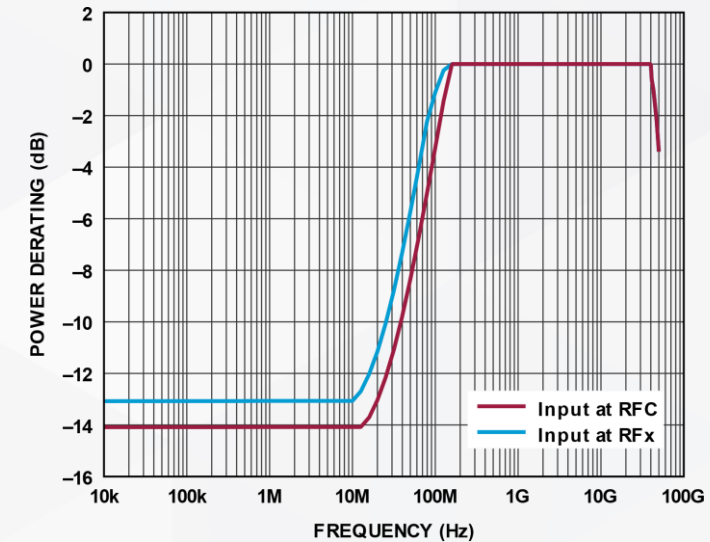


Figure 2. Power Derating vs. Frequency, Low Frequency Detail, $T_{CASE} = 85^{\circ}\text{C}$

Low Frequency Power Handling for 'Input at RFC' and 'Input at RFx' in Data Sheet Rev. D



2688 G322