ADRF5025: Recommended Power Handling

Recommended Power Handling in Data Sheet Rev. B

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_{CTL}		0	V_{DD}	V
RF Input Power[2]	P_{IN}	f = 5 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 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_{CTL}		0	V_{DD}	V
RF Input Power[2]	P_{IN}	f = 10 MHz to 40 GHz, T_{CASE} = 85°C[3]			
Input at RFC					
Through Path		RF signal is applied to RFC		27	dBm
Hot Switching		RF signal is present at RFC while switching between RF1 and RF2		27	dBm
Input at RFx					
Through Path		RF signal is applied through connected RFx		26	dBm
Hot Switching		RF signal is present at RFx while switching between RF1 and RF2		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.
[3] For 105°C operation, the power handling degrades from the TCASE = 85°C specification by 3 dB.

ADRF5025: AMR Power Handling

AMR Power Handling in Data Sheet Rev. B

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 = 5 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	1000 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 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 = 10 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	1000 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.

ADRF5025: Power Derating Curve at Low Frequency

Low Frequency Power Derating in Data Sheet Rev. B

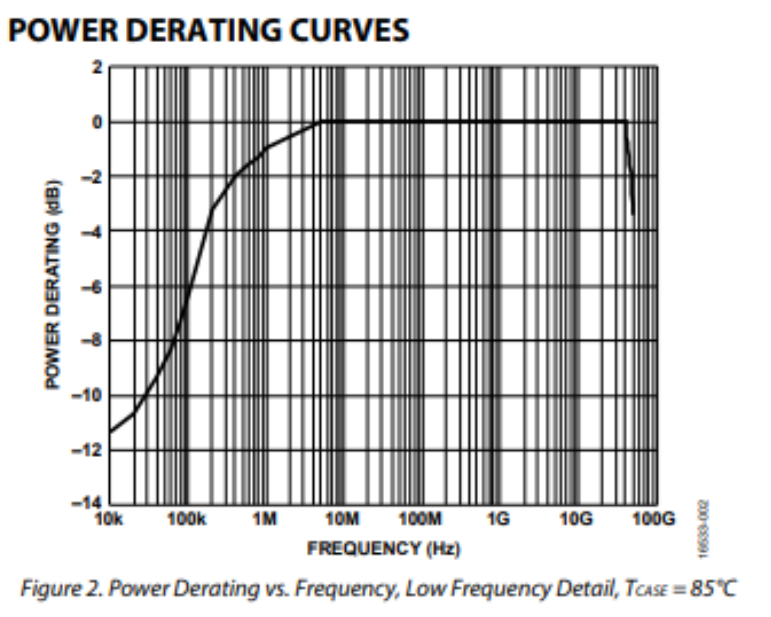

Figure 2. Power Derating vs. Frequency, Low Frequency Detail, T_{CASE} = 85°C

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