

Dynamic Engineers Inc.

2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 USA TEL: 1-281-870-8822 EMAIL:Sales@DynamicEng.com

Features and Benefits

0.5 to 6.0GHz Frequency Range (usable to 100MHz) Gain Flatness <±0.8dB Typical N.F. <0.9dB Typical Gain 30dB +11V to +15V 115mA low DC power consumption Internal DC regulator Advance PHEMT Technology Reverse Voltage Protection MIL-883, MIL45208 construction and reliability Hermetic Seal Option

Typical Applications

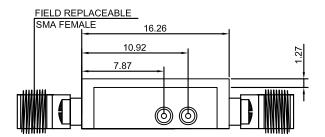
Microwave Radio Systems SATCOM GPS, PCS, Wi-Fi, 4G/5G Receiver Front End Test Bench Post Amp LNA

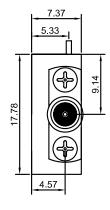
Description

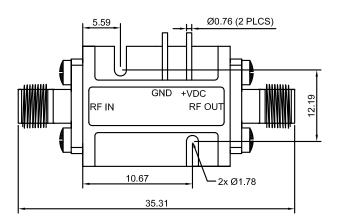
The LNA1716X-0.5GHz-6.0GHz-A is an ultra-wideband LNA with super low noise figure (<1.0dB, 0.8dB typical), low VSWR, and low flatness across the entire 0.1 to 6.0GHz band for use in many applications where lowest NF, VSWR and linearity are required.

Mechanical Drawing & Pin Connections

Drawing No:MD170004-2







Unit: mm 1mm=0.0394 inch

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Key Specifications at 23°C

Deremeter		Value		Unit	Note		
Parameter	Min.	Тур.	Max.				
Frequency	0.5		6.0	GHz	Customizable		
Gain	28	30	-	dB	Customizable		
Gain Flatness	-	±0.8	±1.0	dB	Customizable		
In/Out VSWR	-	1.50	2.20	-	Customizable		
Output P1dB	+10	+12	-	dBm	Customizable		
DC Power	+11	+12	+15	V@mA	@115 mA		
Noise Figure	-	0.8	1.0	dB			

Absolute Maximum Ratings

Parameter	Min.	Max.	Unit	Note		
Operating Temperature (Case)	-54	+85	C°	95% humidity, non-condensing		
Storage Temperature (Case)	-54	+115	C°	95% humidity, non-condensing		
RF Input Power	-	19	dBm	CW		
Die Junction Temp (Tj)	-	+150	C°	For GaAs devices		
Positive Supply Voltage		+16	V	At +V DC Pin		
Negative Voltage	-	-10	V	Reverse Voltage		

Typical Measured Data

TI 1 NE Loc	M 0.500dB/ 1.50dB			rcent of Spar		/FI SWR 1.000U/ 2.2	20U Tr 3 C	UT VSWR SWR 1.000U	1/ 12.00LL
4.00 3.00 2.00 1.60 1.00 2.00 0.00 2.00 0.00 2.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00		<u>x</u> <u>x</u>	>1. 500,000 M 2 1,000 3 3. 3,000 3 4: 4,000 3 5: 6,000 3	Hz 8.95 dB Hz 0.88 dB Hz 0.97 dB				1: 500.000 MHz 2: 1.000 BHz 3: 3.000 BHz 4: 4.000 BHz 5: 6.000 GHz 1: 500.000 MHz 2: 1.000 BHz 2: 1.000 BHz 2: 1.000 BHz 3: 3'UU SHZ 5: 6:000 BHz 5: 6:000 SHZ	
-0.50 -1.00 <u>Ch 1 Swps:</u> →Ch1: NFC5 St	3/3		SI	op 7.00000 GHz	200 300 Ch1 Swps 2 Ch1:NFCS Sta	3/3	-	Stop	7.00000 G
40.00 36.00 36.00 32.00 22.00 28.00 28.00 28.00 24.00 24.00 20.00 Ch 1 Swps:		B 	1: 500.000 // 2: 1.000 3 3: 3.000 5 4: 4: 4.000 3 > 5: 6:000 3 	Hz 31.33 dB Hz 30.62 dB Hz 30.45 dB	3500 3000 2500 2000 1500 500 500 500 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 500 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1	I 100.000 MHz —	2 10.0dBm Δ Δ Δ 3 4	1: 500.000 (HHz 2: 1.000 BHz 3: 3.000 BHz 4: 4.4.000 BHz > 5: 6.000 BHz 	12.07 c 12.19 c 12.51 c 5 7 7 7 7 7 7 7 00000 0
E50.00 E00.00 500.00 500.00 450.00 400.00 300.00 250.00 250.00 250.00 200.00	RBUPDELAY Delay	50.00pc/ 400pc						1: 500,000 MHz 2: 1000 GHz 3: 3000 GHz 4: 4000 GHz 75: 6:000 GHz 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5	337.25 (316.06) 299.87 (270.67 (354.44)

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