

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

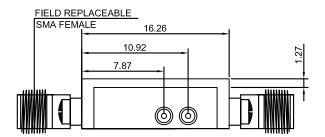
Microwave Radio Systems SATCOM GPS, PCS, Wi-Fi, 4G/5G Receiver Front End Test Bench Post Amp LNA

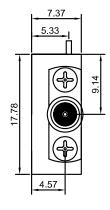
Description

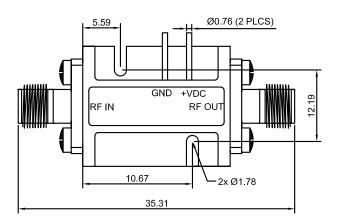
The LNA1716X-0.5GHz-6.0GHz-A is an ultra-wideband LNA with super low noise figure (<1.0dB, 0.8dB typical), low VSWR, and low flatness across the entire 0.1 to 6.0GHz band for use in many applications where lowest NF, VSWR and linearity are required.

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		<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 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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