

**100 MHz to 18 GHz, Low Noise Broadband Amplifier with 18 dBm, 14 dB Gain, 28 dBm IP3 and SMA**

SLNA-180-14-30-SMA is a broadband GaAs PHEMT MMIC-based coaxial low noise amplifier, operating in the 0.1 to 18 GHz frequency range. The amplifier offers 16 dBm of P1dB and 14 dB small signal gain, with the excellent gain flatness of  $\pm 1.5$  dB, along with 28 dBm of IP3 performance. This low noise amplifier requires only a single positive DC supply, is unconditionally stable, operates over the temperature range of -40°C to 85°C, and characterized by a light weight (0.8 g) and small size (1.2"x1.0"x0.4").

**Electrical Specifications** (TA = +25°C, DC Voltage = 12Volts, DC Current = 80mA)

Description	Min	Typ	Max	Unit
Frequency Range	0.1		18	GHz
Gain	12	14	16	dB
Gain Flatness		$\pm 1.5$		dB
Gain Variance at OTR*		$\pm 1$		dB
P1dB	+14	+16		dBm
Saturation Output Power	+16	+18		dBm
IP3	+27	+28		dBm
Reverse Isolation	28	40		dB
Spurious		-60		dBc
Noise Figure at 0.1 to 2 GHz		4	5	dB
Noise Figure at 2 to 15 GHz		3	4	dB
Noise Figure at 15 to 18 GHz		3.5	4.5	dB
Input VSWR		1.5:1	2:1	
Output VSWR		1.7:1	2:1	
Operating DC Voltage	10	12	15	Volts
Operating DC Current	65	80	95	mA
Operating Temperature Range (OTR)	-40		+85	°C

\*OTR= Base Plate Operating Temperature Range

**Absolute Maximum Rating**

Parameter	Rating	Units
Source Voltage	+18	Volts
RF input Power	+10	dBm
Operating Temperature (base-plate)	-40 to +85	°C
Storage Temperature	-55 to +125	°C



ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.



**Features:**

- 0.1 to 18 GHz Frequency Range
- P1dB: 16 dBm
- Small Signal Gain: 14 dB
- Gain Flatness:  $\pm 1.5$  dB
- Gain Variation Over the Temperature Range:  $\pm 1$  dB
- Output Psat: 18 dBm
- P1dB: 16 dBm
- IP3: 28 dBm
- Noise Figure Range: 3-4 dB
- Reverse Isolation: 40 dB
- 50 Ohm Input and Output Matched
- -40 to +85°C Operating Temperature
- Unconditionally Stable
- Single DC Positive Supply
- Built-in DC Voltage Regulator
- Small Size & Light Weight

**Applications:**

- Laboratory Applications
- R&D Labs
- Radar Systems
- Electronic Warfare
- Telecom Infrastructure
- Test Instrumentation
- Military & Space
- Communication Systems
- Satellite Communications
- Wireless Communications
- Unmanned Systems
- Microwave Radio Systems
- Low Noise Amplifier
- General Purpose Amplification
- RF Front Ends

Fairview Microwave  
1130 Junction Dr. #100  
Allen, TX 75013  
Tel: 1-800-715-4396 / (972) 649-6678  
Fax: (972) 649-6689  
[www.fairviewmicrowave.com](http://www.fairviewmicrowave.com)  
[sales@fairviewmicrowave.com](mailto:sales@fairviewmicrowave.com)

**Configuration**

- Connector 1 SMA Female
- Connector 2 SMA Female

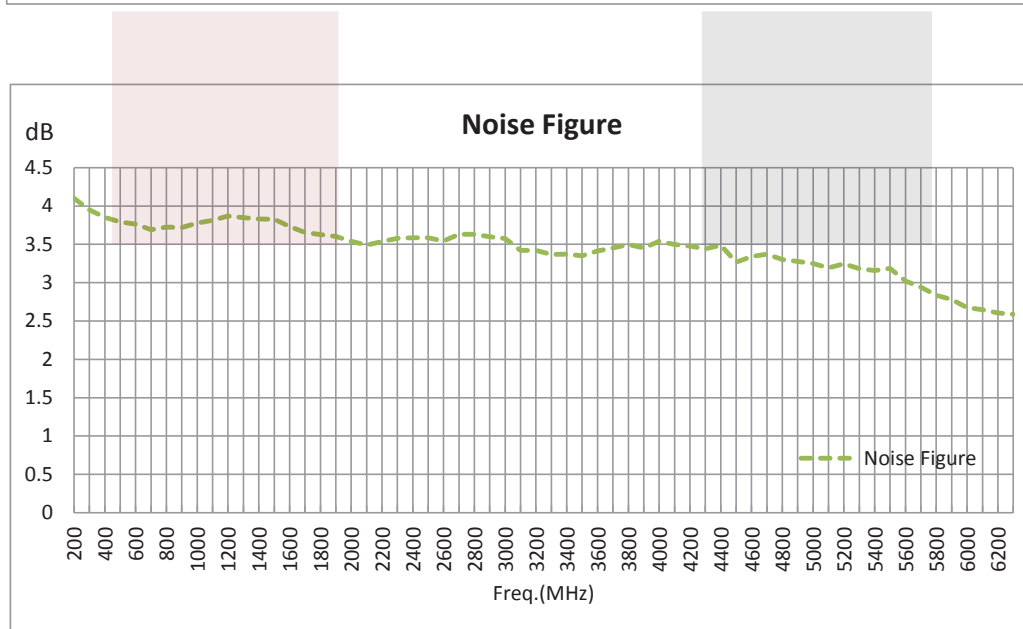
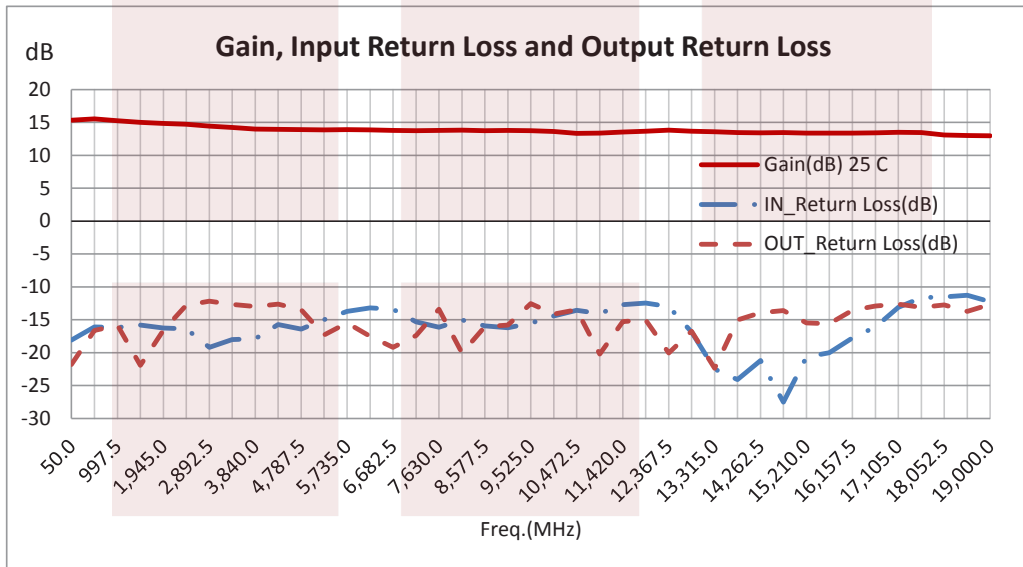
**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)

**Plotted and Other Data**

Notes:

- Values at 25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

**Power Data**



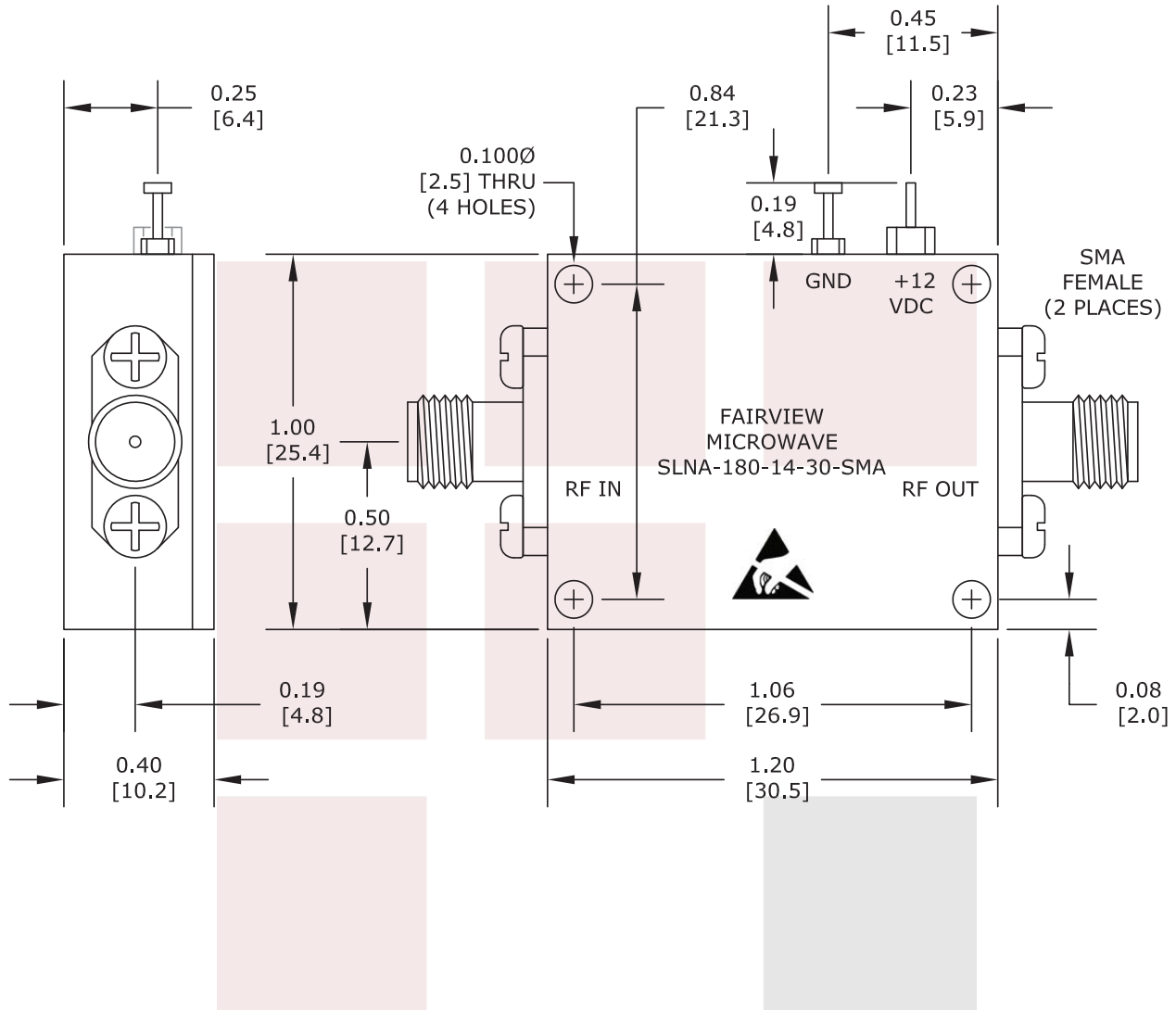
100 MHz to 18 GHz, Low Noise Broadband Amplifier with 18 dBm, 14 dB Gain, 28 dBm IP3 and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [100 MHz to 18 GHz, Low Noise Broadband Amplifier with 18 dBm, 14 dB Gain, 28 dBm IP3 and SMA SLNA-180-14-30-SMA](#)

URL: <http://www.fairviewmicrowave.com/100-mhz-18-ghz-low-noise-broadband-amplifier-slna-180-14-30-sma-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.





NOTE:  
 HEAT SINK REQUIRED FOR PROPER OPERATION,  
 UNIT IS COOLED BY CONDUCTING TO HEAT SINK.

<b>FAIRVIEW MICROWAVE INC.</b> ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM		NOTES: 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL. 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME. 3. DIMENSIONS ARE IN INCHES [mm].			
TITLE 100 MHz to 18 GHz, Low Noise Broadband Amplifier with 18 dBm, 14 dB Gain, 28 dBm IP3 and SMA		DWG NO SLNA-180-14-30-SMA		CAGE CODE 3FKR5	
CAD FILE	050914	SHEET	SCALE	N/A	SIZE A 2233