

3 dB NF, 2 GHz to 18 GHz, Low Noise Broadband Amplifier with 15 dBm, 33 dB Gain and SMA

SLNA-180-33-30-SMA is a Broadband High Gain GaAs PHEMT MMIC-based coaxial Low Noise Amplifier, operating in the 2 to 18 GHz frequency range. The amplifier offers 3 dB Noise Figure, +15 dBm of P1dB and 33 dB small signal gain, with the gain flatness of ± 1.0 dB, along with +25 dBm of IP3 performance. This low noise amplifier requires only a single positive DC supply, unconditionally stable, operates over the temperature range of -40°C to +85°C, and characterized by a light weight (28 g) and small size (1.5"x1.0"x0.4").

Electrical Specifications (TA= 25°C, VDC1 = 12 Vdc)

Description	Min	Typ	Max	Unit
Frequency Range	2		18	GHz
Gain	30	33	38	dB
Gain Flatness		± 1	± 1.5	dB
Gain Variation over OTR*		± 1.5		dB
P1dB at 2 to 14 GHz	+13	+15		dBm
P1dB at 14 to 18 GHz	+11	+13		dBm
IP3 at 2 to 14 GHz	+22	+25		dBm
IP3 at 14 to 18 GHz	+20	+22		dBm
Reverse Isolation	35	55		dB
Spurious		-60		dBc
Noise Figure		3	4.2	dB
Input VSWR		1.7:1	2.2:1	
Output VSWR		1.8:1	2.5:1	
Operating DC Voltage 1	10	12	15	Volts
Operating DC Current	160	180	220	mA
Operating Temperature Range (OTR)	-40		+85	°C

*OTR= Base Plate Operating Temperature Range

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+15	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:

- 2 to 18 GHz Frequency Range
- Noise Figure: 3dB typ
- Small Signal Gain: 33 dB
- Gain Flatness: ± 1.0 dB
- Gain Variation Over the Temperature Range: ± 1.5 dB
- P1dB: +15 dBm
- IP3: +25 dBm
- 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
- 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

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Mechanical Specifications

Size

Length	1.5 in [38.1 mm]
Width	1 in [25.4 mm]
Height	0.4 in [10.16 mm]
Weight	0.0665 lbs [30.16 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

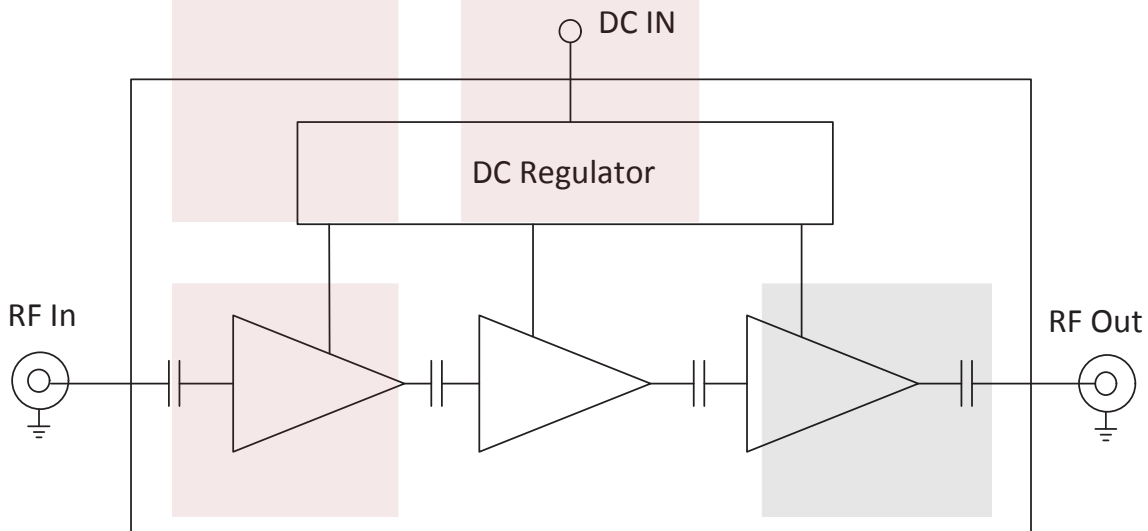
Operating Range	-40 to +85 deg C
Storage Range	-45 to +125 deg C

Compliance Certifications (see [product page](#) for current document)

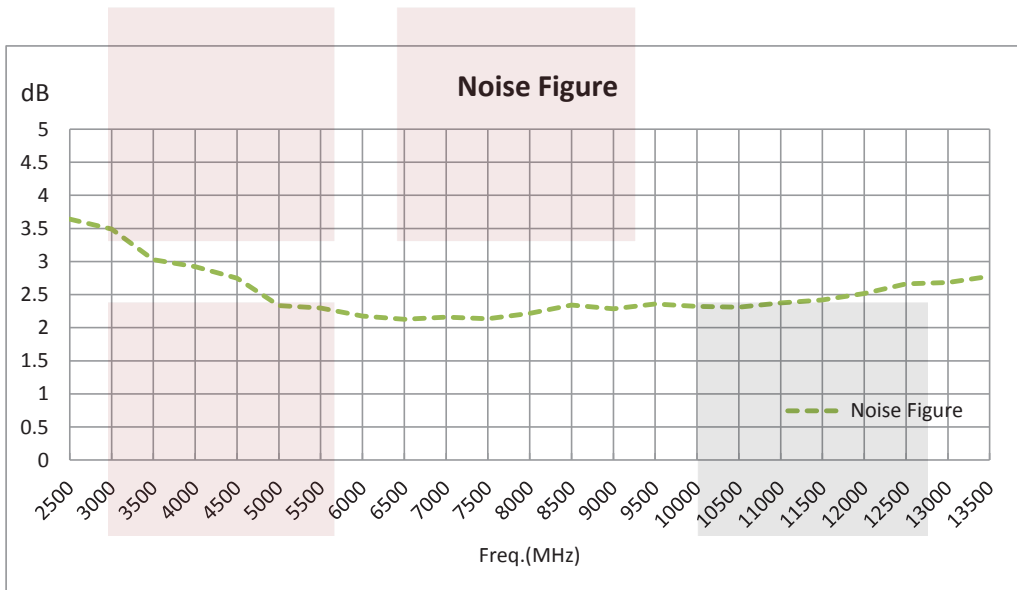
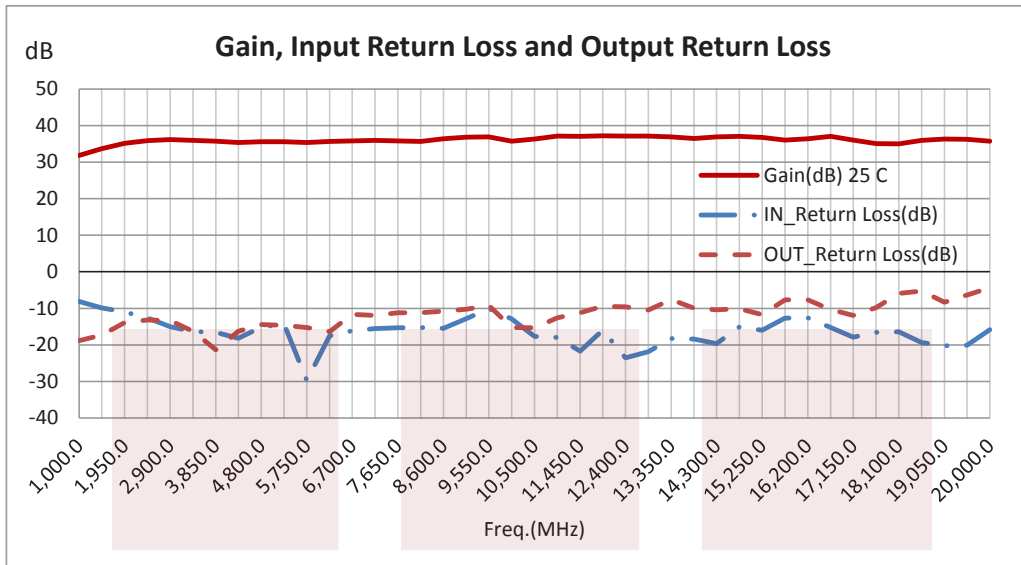
Plotted and Other Data

Notes:

Functional Block Diagram



Typical Performance Data

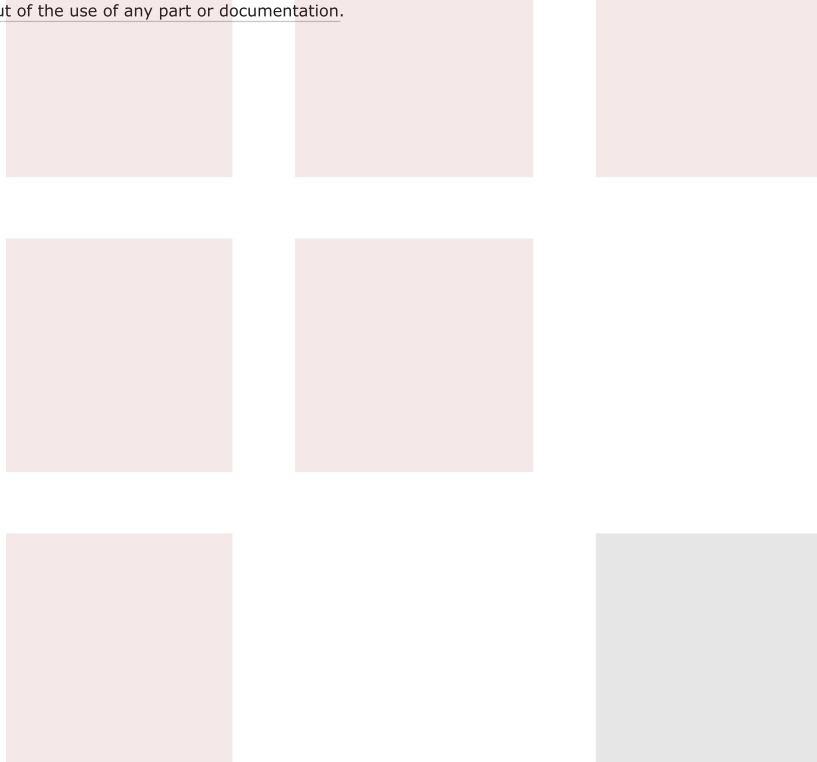


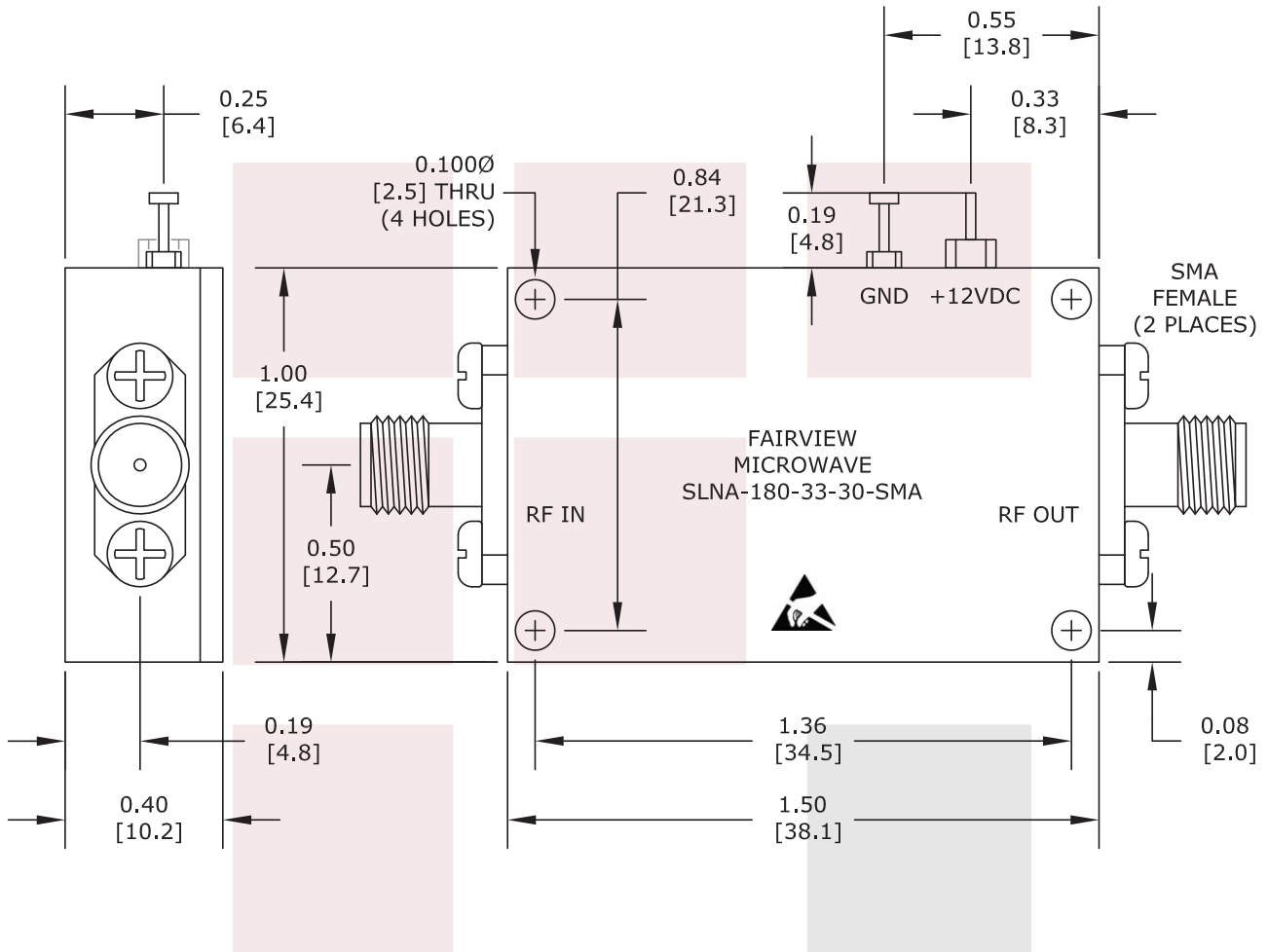
3 dB NF, 2 GHz to 18 GHz, Low Noise Broadband Amplifier with 15 dBm, 33 dB Gain and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [3 dB NF, 2 GHz to 18 GHz, Low Noise Broadband Amplifier with 15 dBm, 33 dB Gain and SMA SLNA-180-33-30-SMA](#)

URL: <https://www.fairviewmicrowave.com/2-18-ghz-low-noise-broadband-amplifier-slna-180-33-30-sma-p.aspx>

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TITLE 3 dB NF, 2 GHz to 18 GHz, Low Noise Broadband Amplifier with 15 dBm, 33 dB Gain and SMA		DWG NO SLNA-180-33-30-SMA		CAGE CODE 3FKR5	
CAD FILE 100814 SHEET		SCALE N/A		SIZE A 2233	