

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

SLNA-180-28-30-SMA is a broadband high gain GaAs PHEMT MMIC-based coaxial low noise amplifier, operating in the 0.1 to 18 GHz frequency range. The amplifier offers P1dB of 16 dBm typ and small signal gain of 28 dB typ, gain flatness of ± 2.5 dB typ and IP3 of 28 dBm typ. 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 (25 g) and small size (1.5"x1.0"x0.4").

Electrical Specifications (TA = $+25^{\circ}\text{C}$, DC Voltage = 12Volts, DC Current = 160mA)

Description	Min	Typ	Max	Unit
Frequency Range	0.1		18	GHz
Gain	25	28	31	dB
Gain Flatness		± 2.5	± 3	dB
Gain Variance at OTR*		± 1.5		dB
P1dB	+14	+16		dBm
Saturation Output Power	+16	+18		dBm
IP3	+27	+28		dBm
Reverse Isolation	40	50		dB
Spurious		-60		dBc
Noise Figure at 0.1 to 2.5 GHz		4	4.5	dB
Noise Figure at 2.5 to 16.5 GHz		3	3.5	dB
Noise Figure at 16.5 to 18 GHz		3.5	4	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	130	160	190	mA
Operating Temperature Range (OTR)	-40		+85	$^{\circ}\text{C}$

*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)	-55 to +85	$^{\circ}\text{C}$
Storage Temperature	-40 to +125	$^{\circ}\text{C}$



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 typ
- Small Signal Gain: 28 dB typ
- Gain Flatness: ± 2.5 dB typ
- Gain Variation Over the Temperature Range: ± 1.5 dB typ
- Output Psat: 18 dB typ
- IP3: 28 dBm typ
- Noise Figure: 3dB typ
- Reverse Isolation: 50 dB typ
- 50 Ohm Input and Output Matched
- -40 to $+85^{\circ}\text{C}$ 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

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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]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

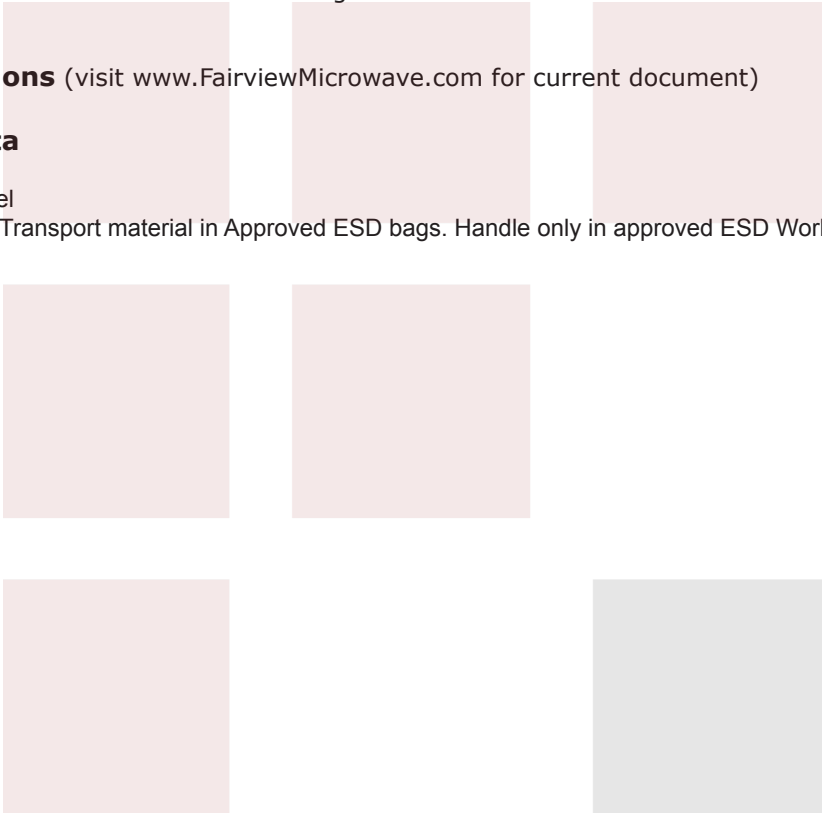
Operating Range	-40 to +85 deg C
Storage Range	-55 to +85 deg C

Compliance Certifications (visit www.FairviewMicrowave.com for current document)

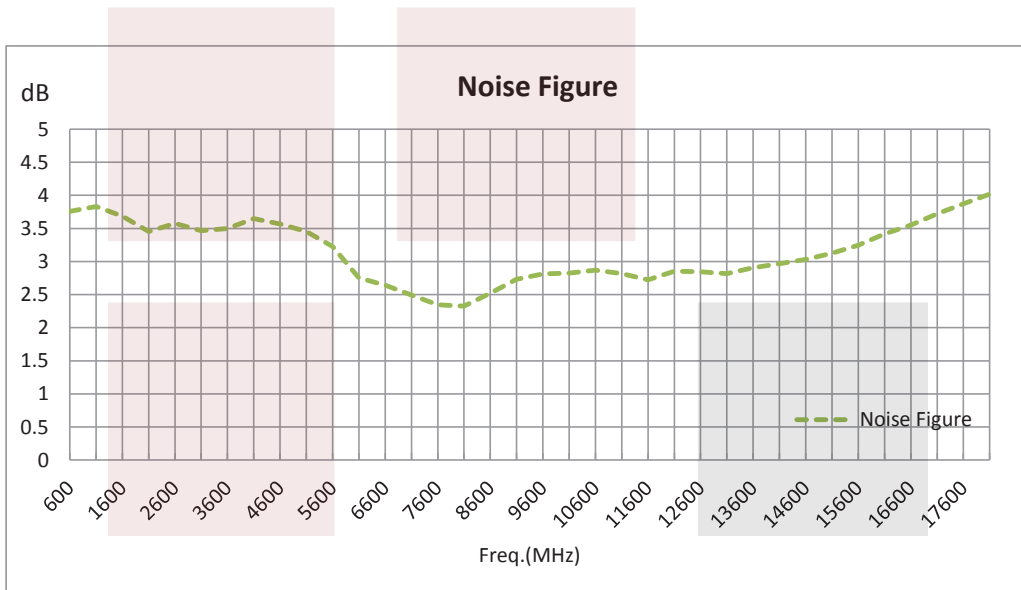
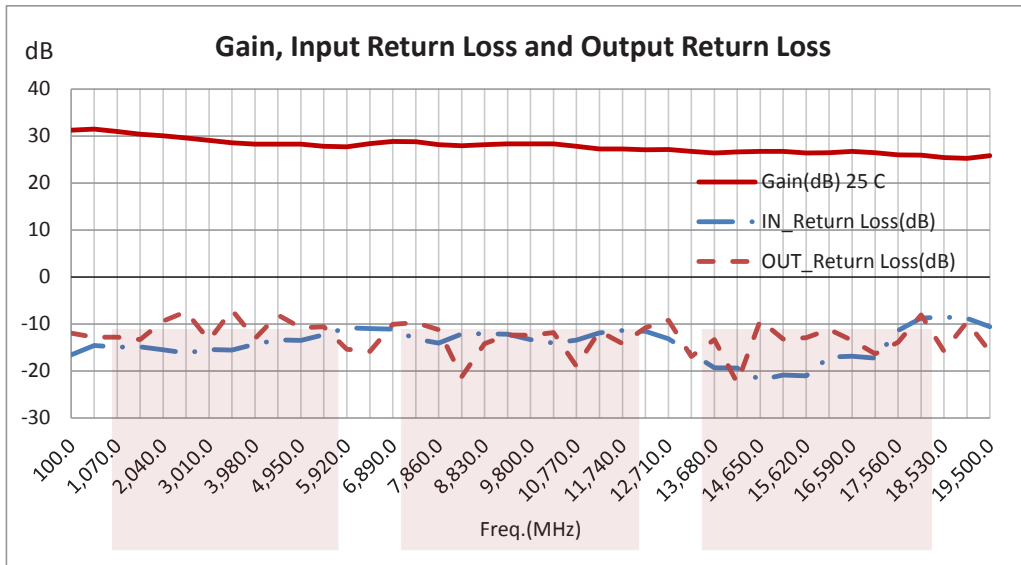
Plotted and Other Data

Notes:

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



Typical Performance Data

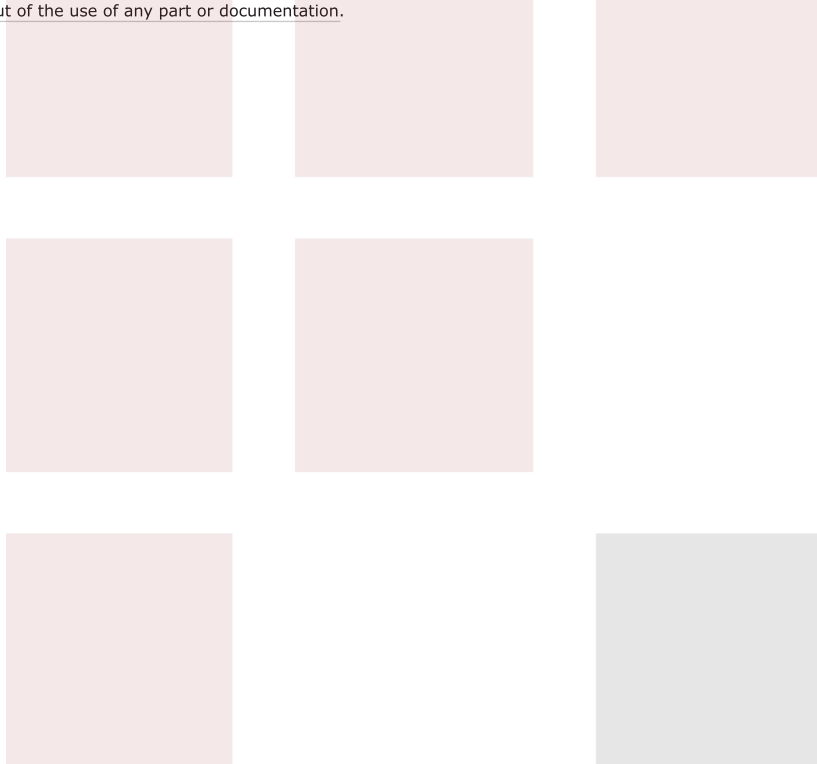


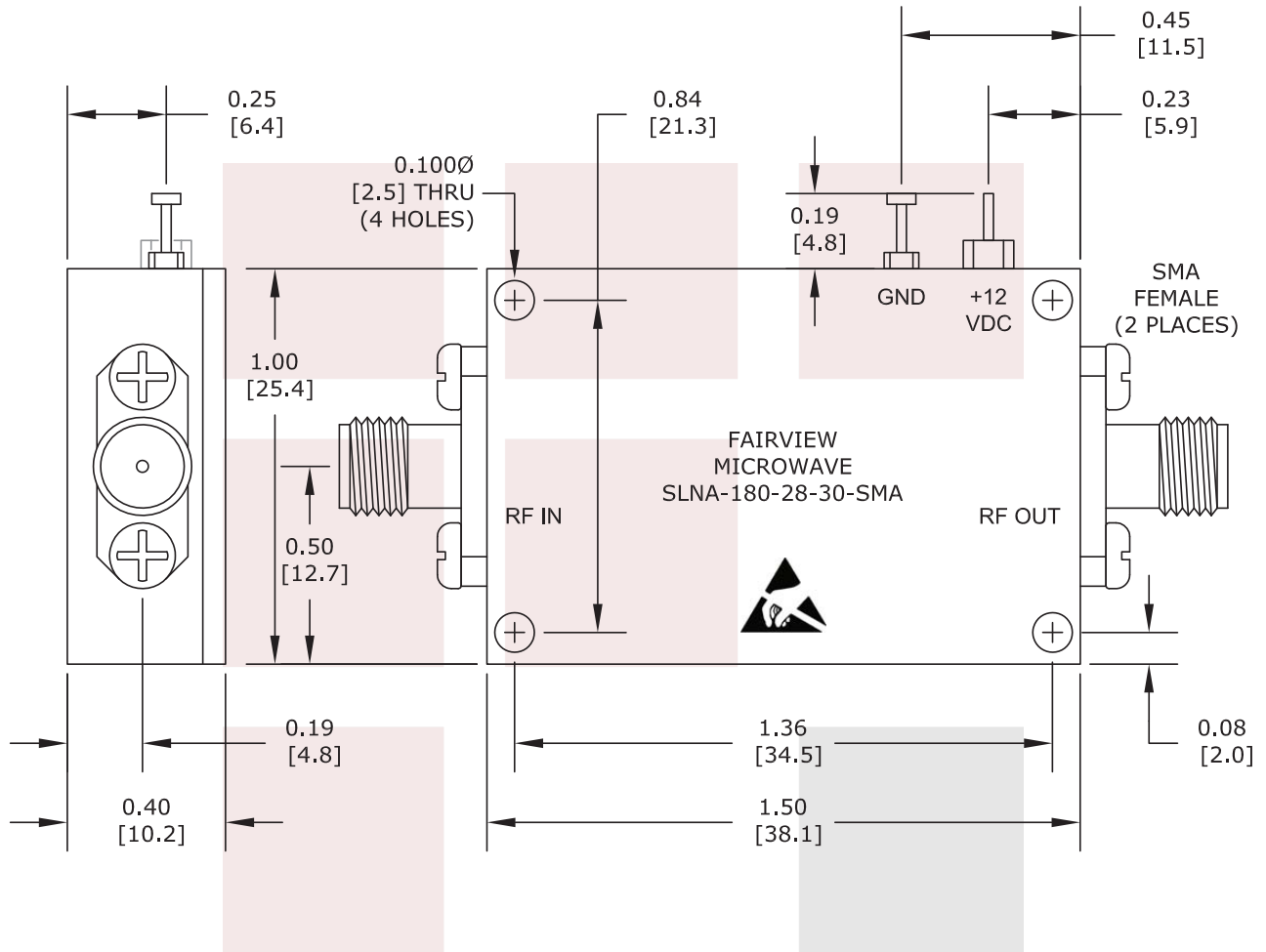
100 MHz to 18 GHz, Low Noise Broadband Amplifier with 18 dBm, 28 dB Gain, 28 dBm IP3 and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave 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, 28 dB Gain, 28 dBm IP3 and SMA SLNA-180-28-30-SMA](#)

URL: <http://www.fairviewmicrowave.com/100-mhz-18-ghz-low-noise-broadband-amplifier-slna-180-28-30-sma-p.aspx>

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

FAIRVIEW MICROWAVE INC. 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, 28 dB Gain, 28 dBm IP3 and SMA		DWG NO SLNA-180-28-30-SMA		CAGE CODE 3FKR5	
CAD FILE	062714	SHEET	SCALE	N/A	SIZE A 2233