

### 2.5 dB NF, 6 GHz to 18 GHz, Low Noise Broadband Amplifier with 22 dBm, 38 dB Gain, 30 dBm IP3 and SMA

SLNA-180-38-25-SMA is a Broadband High Gain GaAs PHEMT MMIC-based coaxial Low Noise Amplifier, operating in the 6 to 18 GHz frequency range. The amplifier offers 2.5 dB Noise Figure, +22 dBm of P1dB and 38 dB small signal gain, with the gain flatness of  $\pm 2.0$  dB, along with +30 dBm pf IP3 performance. This low noise amplifier requires only a single positive DC supply, unconditionally stable, operates over the temperature range of  $-40^{\circ}\text{C}$  to  $+75^{\circ}\text{C}$ , and characterized by a light weight (25 g) and small size (1.2"x1.0"x0.4").

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

Description	Min	Typ	Max	Unit
Frequency Range	6		18	GHz
Gain	35	38	41	dB
Gain Flatness		$\pm 2$	$\pm 2.5$	dB
Gain Variation over OTR*		$\pm 2$		dB
P1dB	+20	+22		dBm
IP3	+27	+30		dBm
Reverse Isolation	40	45		dB
Spurious			-60	dBc
Noise Figure		2.5	3	dB
Input VSWR		1.8:1	2.5:1	
Output VSWR		1.8:1	2.5:1	
Operating DC Voltage	10	12	15	Vdc
Operating DC Current at Quiescent	250	280	320	mA
Operating DC Current at P1dB		300	380	mA
Operating Temperature Range (OTR)	-40		+75	$^{\circ}\text{C}$

\*OTR= Base Plate Operating Temperature Range

#### Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+16.5	Volts
RF input Power	+10	dBm
Operating Temperature (base-plate)	-40 to +75	$^{\circ}\text{C}$
Storage Temperature	-55 to +125	$^{\circ}\text{C}$



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



#### Features:

- 6 to 18 GHz Frequency Range
- Noise Figure: 2.5dB typ
- Small Signal Gain: 38 dB
- Gain Flatness:  $\pm 2.0$  dB
- Gain Variation Over the Temperature Range:  $\pm 2.0$  dB
- P1dB: +22 dBm
- IP3: +30 dBm
- 50 Ohm Input and Output Matched
- $-40$  to  $+75^{\circ}\text{C}$  Operating Temperature
- Unconditionally Stable
- Single DC Positive Supply
- Built-in DC Voltage Regulator
- Small Size & Light Weight

#### Applications:

- Laboratory Applications
- R&D Labs
- 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	0.0715 lbs [32.43 g]
Input Connector	SMA Female
Output Connector	SMA Female

**Environmental Specifications**

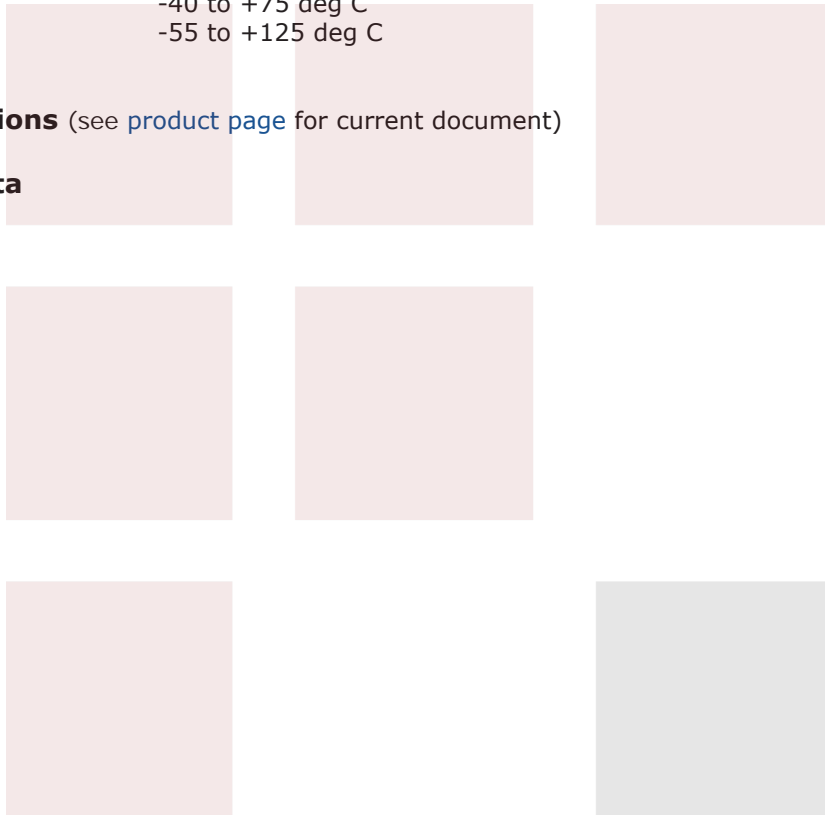
**Temperature**

Operating Range	-40 to +75 deg C
Storage Range	-55 to +125 deg C

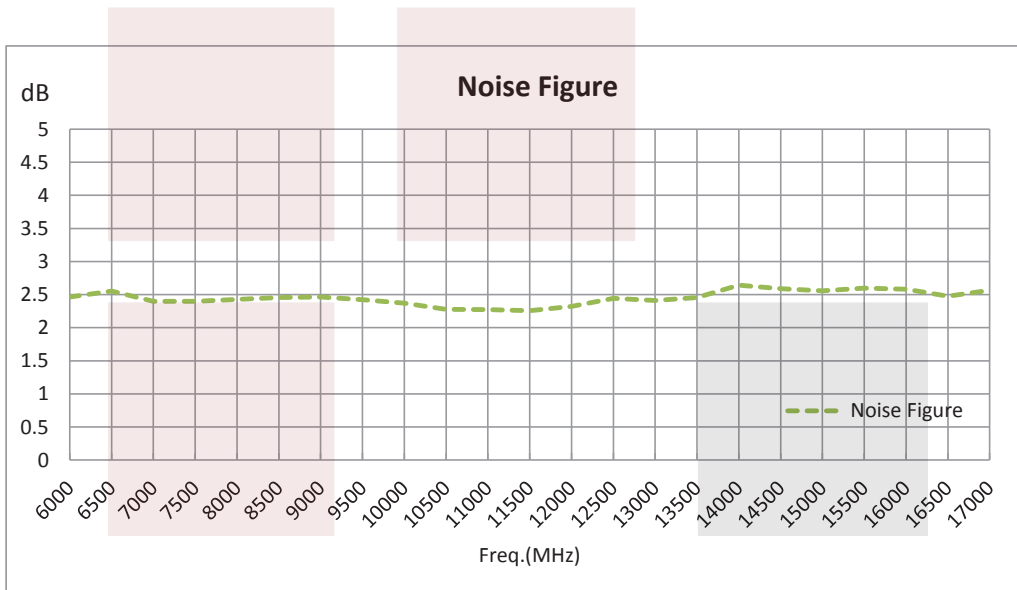
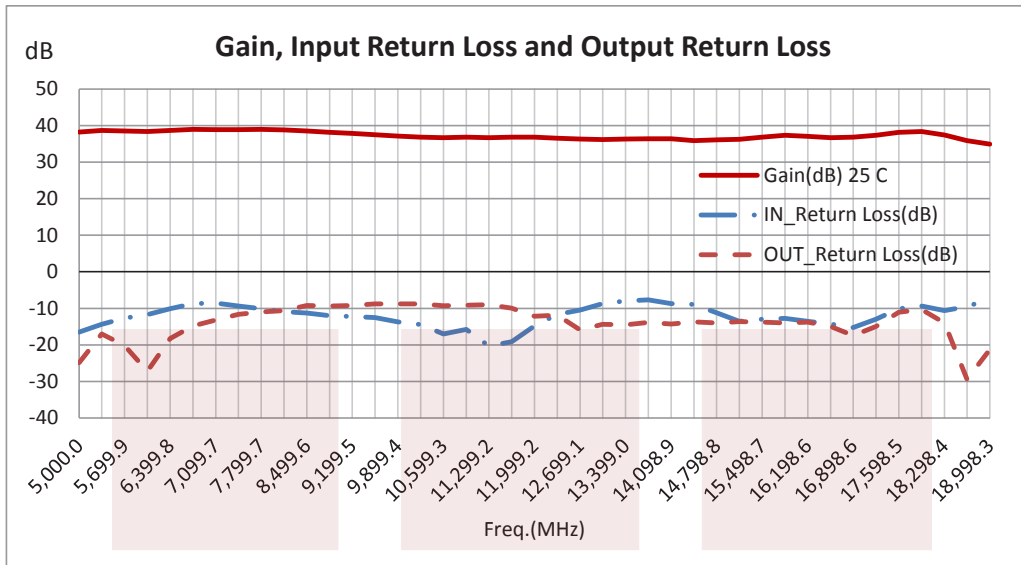
**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:



**Typical Performance Data**

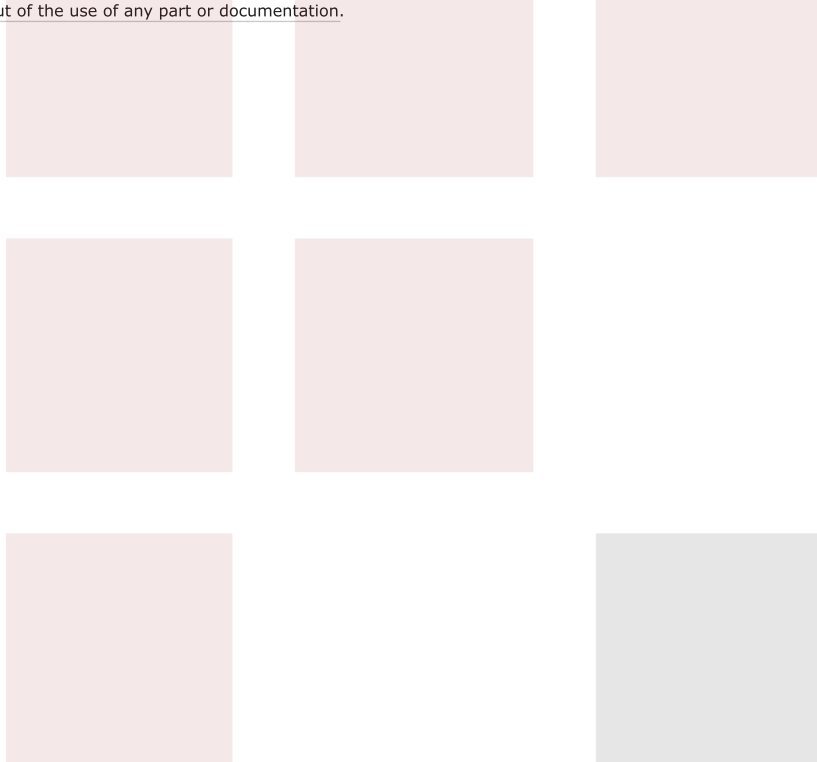


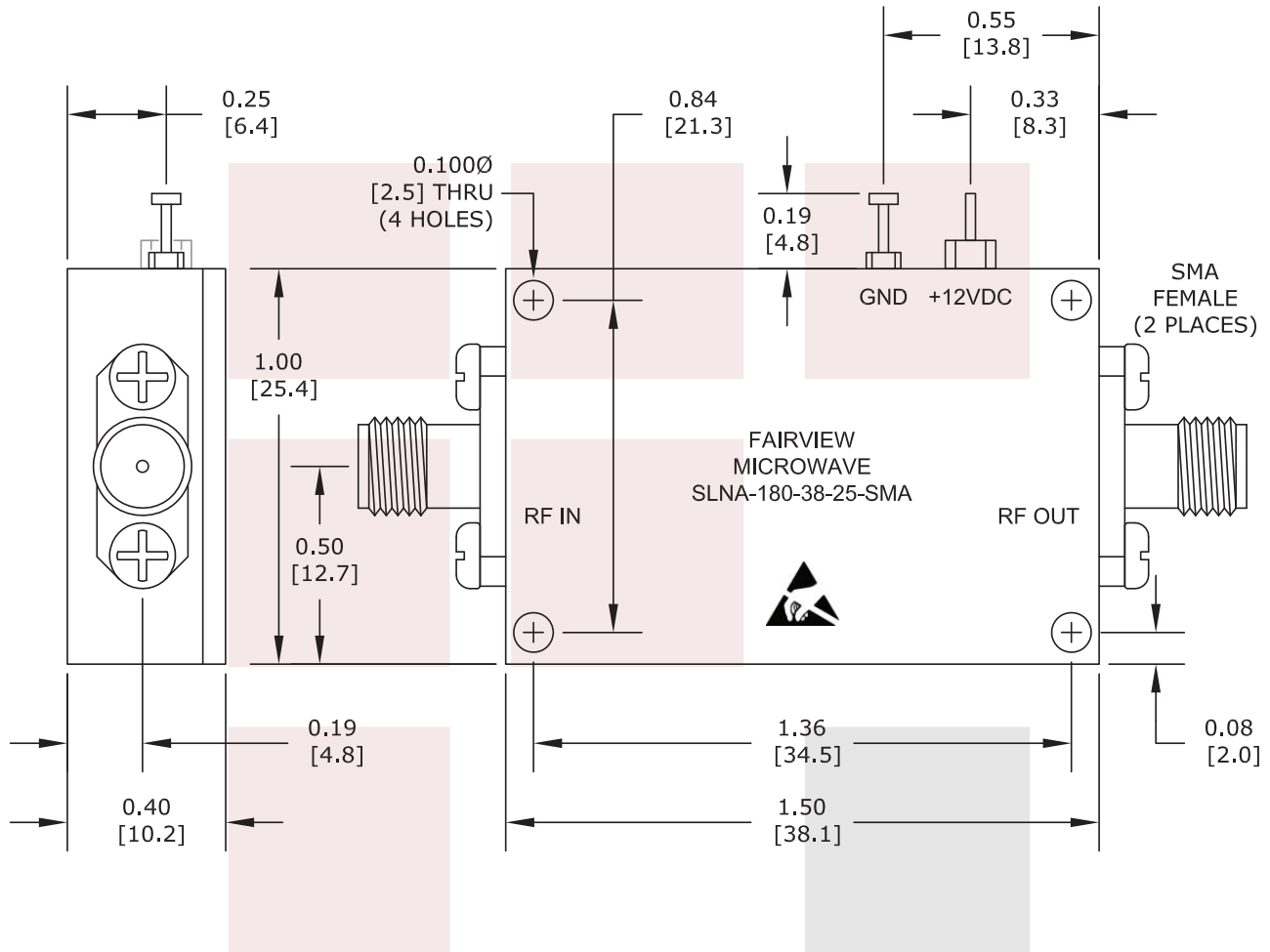
2.5 dB NF, 6 GHz to 18 GHz, Low Noise Broadband Amplifier with 22 dBm, 38 dB Gain, 30 dBm IP3 and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [2.5 dB NF, 6 GHz to 18 GHz, Low Noise Broadband Amplifier with 22 dBm, 38 dB Gain, 30 dBm IP3 and SMA SLNA-180-38-25-SMA](#)

URL: <https://www.fairviewmicrowave.com/6-18-ghz-low-noise-broadband-amplifier-slna-180-38-25-sma-p.aspx>

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

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TITLE 2.5 dB NF, 6 GHz to 18 GHz, Low Noise Broadband Amplifier with 22 dBm, 38 dB Gain, 30 dBm IP3 and SMA		DWG NO SLNA-180-38-25-SMA		CAGE CODE 3FKR5	
CAD FILE	081914	SHEET	SCALE	N/A	SIZE A 2233