

**50 dB Gain 1 dB NF Low Noise High Gain Amplifier
 Operating From 10 MHz to 1,000 MHz with 18 dBm
 P1dB and SMA**

SLNA-010-50-10-SMA is a wideband low noise RF coaxial power amplifier operating in the 10 MHz to 1 GHz frequency range. The amplifier offers 1 dB typical noise figure, 18 dBm of P1dB and 50 dB small signal gain with gain flatness of ± 1.25 dB. This exceptional technical performance is achieved through the use of hybrid MIC design and advanced GaAs PHEMT devices. The low noise amplifier requires typically a +12V DC power supply. The connectorized SMA module is unconditionally stable and includes built-in voltage regulation, bias sequencing, and reverse bias protection for added reliability. The amplifier operates over the temperature range of -40°C and +85°C.

Electrical Specifications (TA = +25°C , DC Voltage = 12Volts , DC Current = 130mA)

Description	Min	Typ	Max	Unit
Frequency Range	10		1,000	MHz
Small Signal Gain	47	50		dB
Gain Flatness		± 1.25	± 1.5	dB
Gain Variance at OTR*		1.5		dB
Output at 1 dB Compression Point	+16	+18		dBm
Output at 1 dB Compression Point	+16	+18		dBm
Output 3rd Intercept Point	+26	+28		dBm
Noise Figure (50 MHz to 1,000 MHz)			1	1.1 dB
Input VSWR		1.5:1	1.7:1	
Output VSWR		1.6:1	1.8:1	
Reverse Isolation	60	65		dB
Spurious			-60	dBc
Operating DC Voltage	10	12	15	Volts
Operating DC Current	100	130	160	mA
Operating Temperature Range	-40		+85	°C

*OTR= Base Plate Operating Temperature Range

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+13	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:

- 10 MHz to 1 GHz Frequency Range
- P1dB: 18 dBm
- Flat Small Signal Gain: 50 dB
- Gain Flatness: ± 1.25 dB
- Gain Variance over OTR: ± 1.5 dB
- Noise Figure: 1 dB typ
- Reverse Isolation: 65 dB
- 50 Ohm Input and Output Matched
- -40 to 85°C Operating Temperature
- Unconditionally Stable
- Single DC Positive Supply
- Built-in Voltage Regulator

Applications:

- Laboratory Applications
- R&D Labs
- Military Radio
- Radar Systems
- Telecom Infrastructure
- Test Instrumentation
- Military & Space
- Communication Systems
- Wireless Communication
- Microwave Radio Systems
- Cellular Base Stations
- Low Noise Amplifier
- General Purpose Amplification
- General Purpose Wireless
- Wideband Gain Block
- IF Amplifier/RF Driver Amplifier
- RF Wideband Front Ends
- RF Pre-amplification

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Mechanical Specifications

Size

Length	1.5 in [38.1 mm]
Width	0.85 in [21.59 mm]
Height	0.375 in [9.53 mm]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-55 to +125 deg C

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

RoHS Compliant Yes

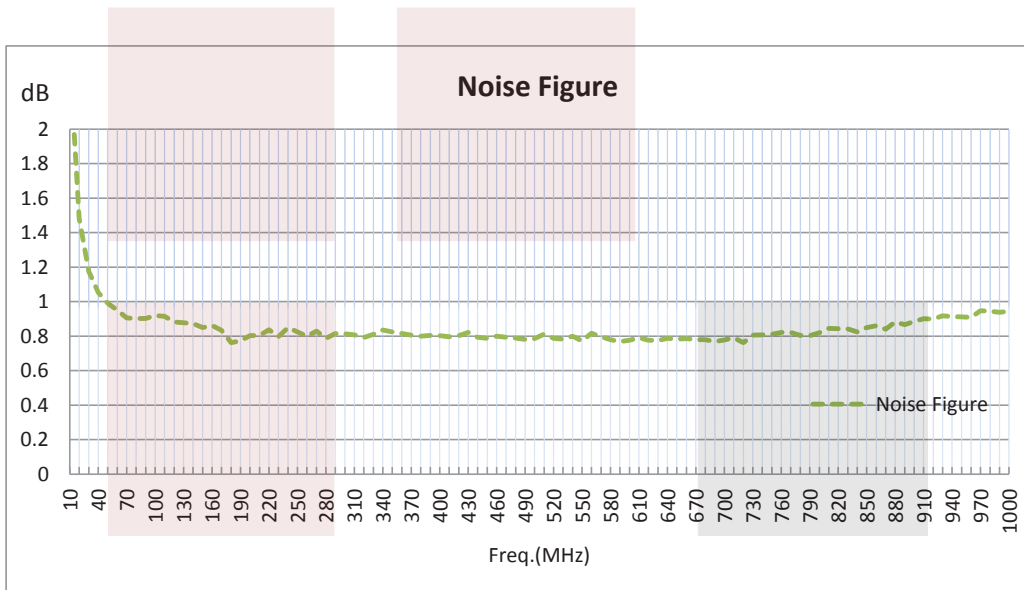
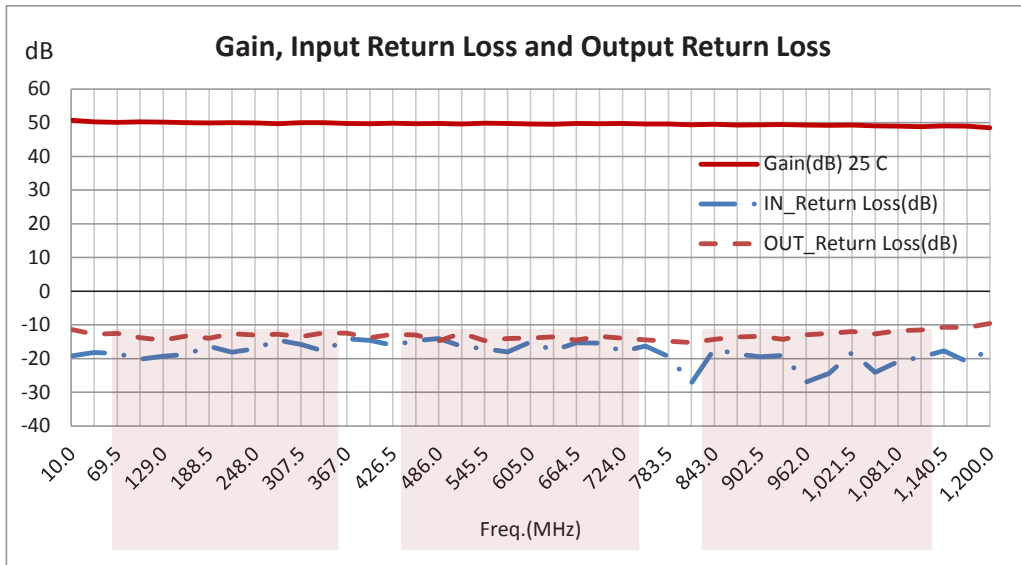
Plotted and Other Data

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

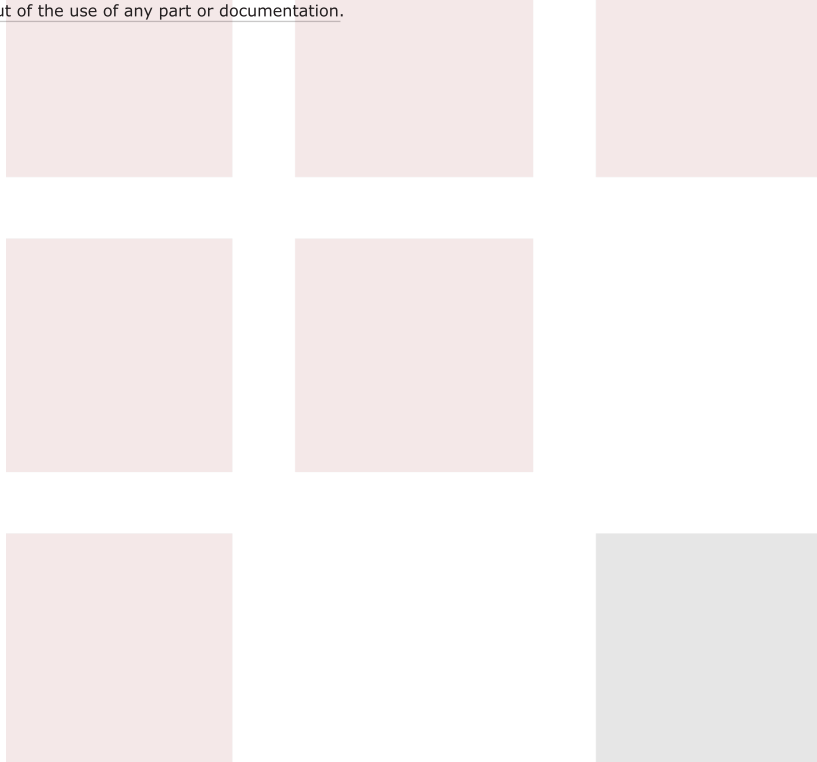


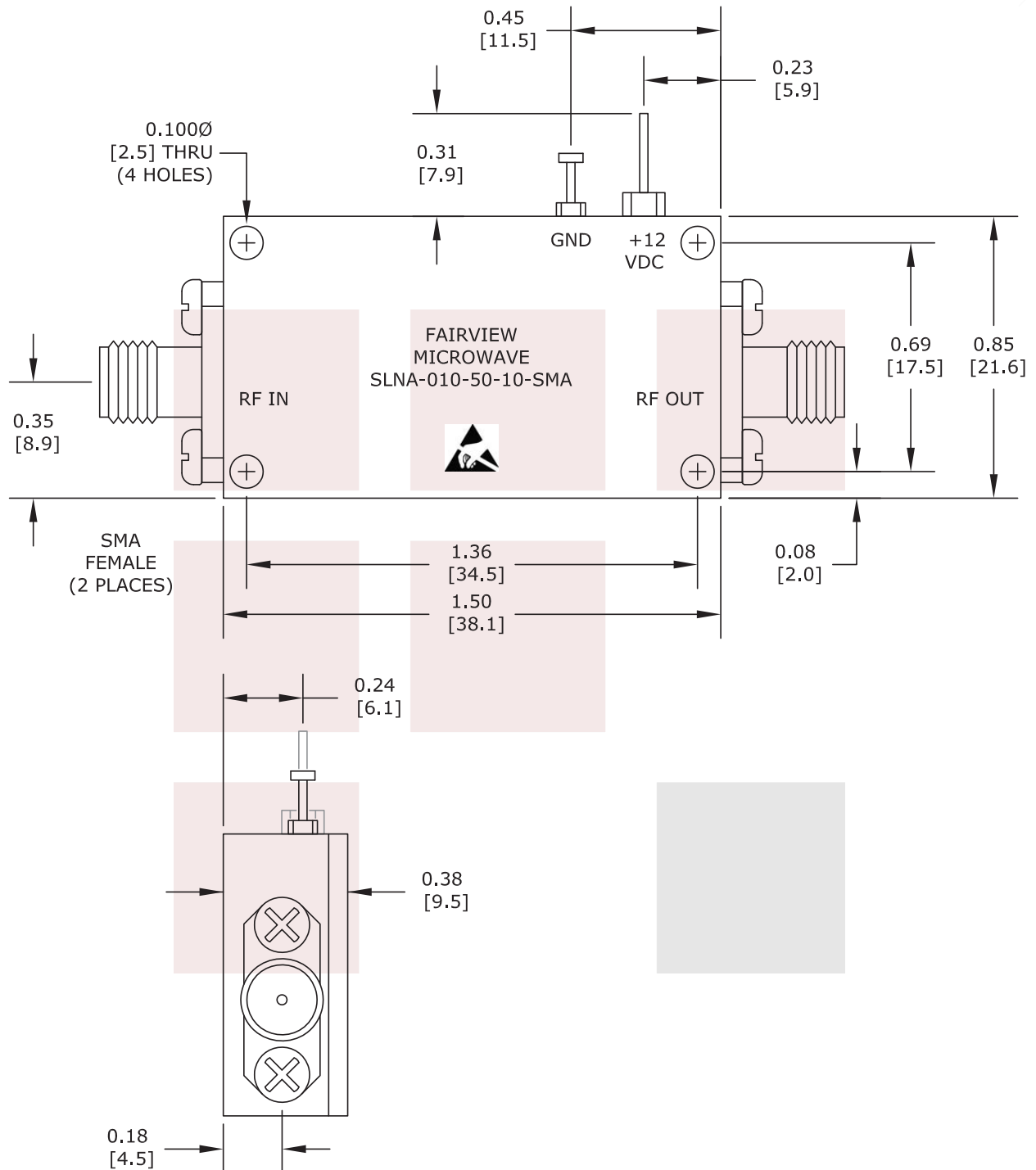
50 dB Gain 1 dB NF Low Noise High Gain Amplifier Operating From 10 MHz to 1,000 MHz with 18 dBm P1dB and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [50 dB Gain 1 dB NF Low Noise High Gain Amplifier Operating From 10 MHz to 1,000 MHz with 18 dBm P1dB and SMA SLNA-010-50-10-SMA](#)

URL: <http://www.fairviewmicrowave.com/50db-1db-nf-low-noise-high-gain-amplifier-slna-010-50-10-sma-p.aspx>

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TITLE 50 dB Gain 1 dB NF Low Noise High Gain Amplifier Operating From 10 MHz to 1,000 MHz with 18 dBm P1dB and SMA		DWG NO SLNA-010-50-10-SMA		CAGE CODE 3FKR5	
CAD FILE	100814	SHEET	SCALE	N/A	SIZE A 2233