

**40 dB Gain 0.8 dB NF Low Noise High Gain Amplifier
Operating From 10 MHz to 1,000 MHz with 18 dBm
P1dB and SMA**

SLNA-010-40-08-SMA is a wideband low noise RF coaxial power amplifier operating in the 10 MHz to 1 GHz frequency range. The amplifier offers 0.8 dB typical noise figure, 18 dBm of P1dB and 40 dB small signal gain with the excellent gain flatness of ± 1 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 = 110mA)

Description	Min	Typ	Max	Unit
Frequency Range	10		1,000	MHz
Small Signal Gain	37	40		dB
Gain Flatness		± 1	± 1.25	dB
Gain Variance at OTR*		1.25		dB
Output at 1 dB Compression Point	+16	+18		dBm
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Noise Figure (50 MHz to 1,000 MHz)		0.8	1	dB
Input VSWR		1.45:1	1.65:1	
Output VSWR		1.3:1	1.5:1	
Reverse Isolation	50	55		dB
Operating DC Voltage	10	12	15	Volts
Operating DC Current	100	110	125	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.

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



Features:

- 10 MHz to 1 GHz Frequency Range
- P1dB: 18 dBm
- Flat Small Signal Gain: 40 dB
- Gain Flatness: ± 1 dB
- Noise Figure: 0.8dB typ
- Reverse Isolation: 55 dB
- 50 Ohm Input and Output Matched
- -40 to 85°C Operating Temperature
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Overvoltage Protection

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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Environmental Specifications

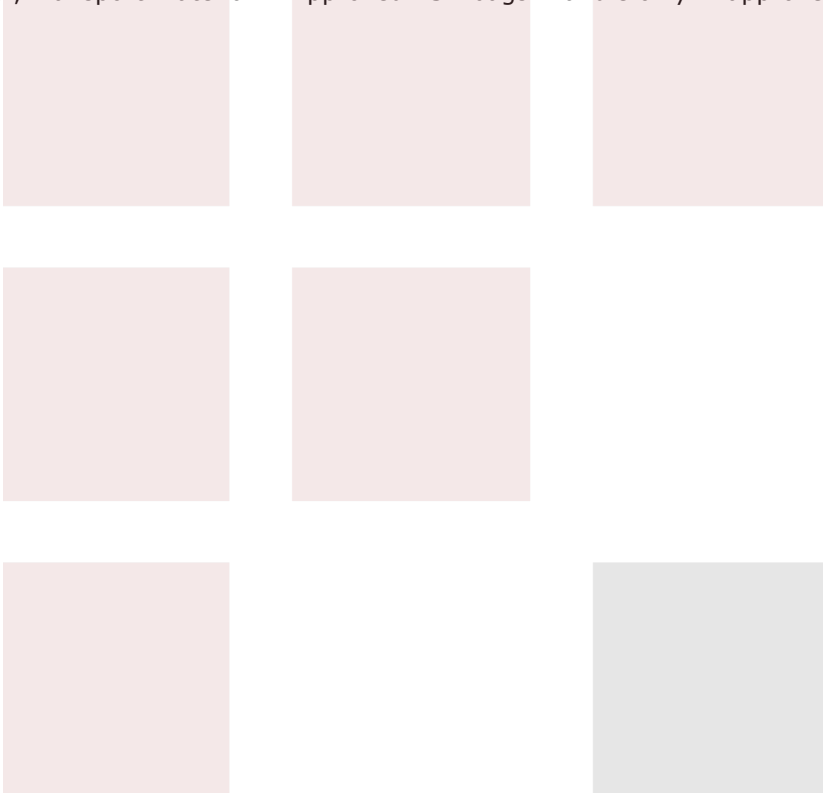
Temperature	
Operating Range	-40 to +85 deg C
Storage Range	-55 to +125 deg C

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

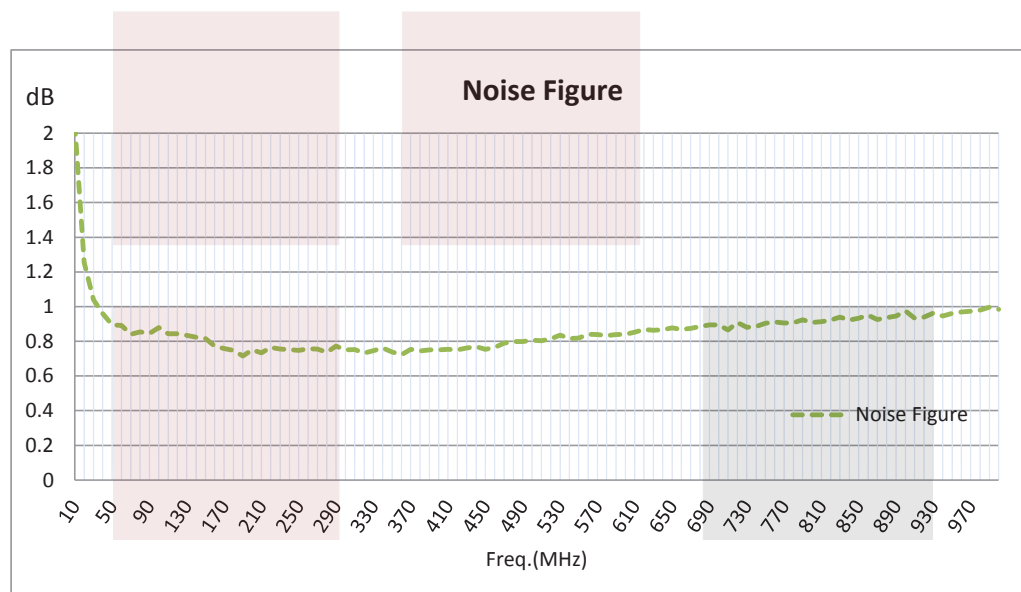
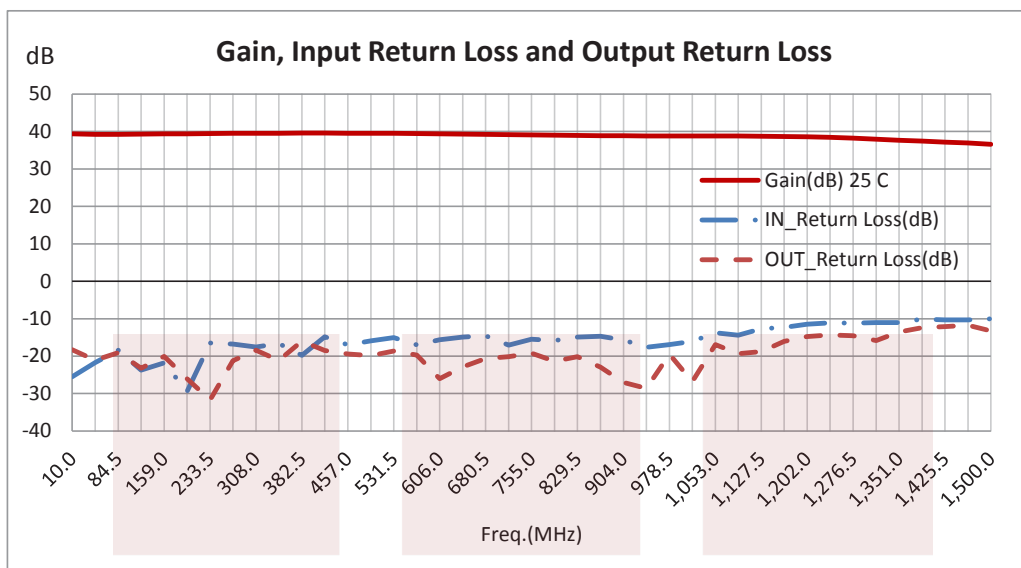
RoHS Compliant	Yes
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Plotted and Other Data

- 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



40 dB Gain 0.8 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: [40 dB Gain 0.8 dB NF Low Noise High Gain Amplifier Operating From 10 MHz to 1,000 MHz with 18 dBm P1dB and SMA SLNA-010-40-08-SMA](#)

URL: <http://www.fairviewmicrowave.com/0.8db-nf-low-noise-amplifier-40db-slna-010-40-08-sma-p.aspx>

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