

E-REON Low Noise Amplifier, 50 MHz–4 GHz, 36 dB gain, typ. 0.8 dB NF @ 900 MHz, +5 V, SMA-F, module

Compact wideband coaxial low noise amplifier module designed for operation from 50 MHz to 4 GHz. Typical performance at 900 MHz includes 36 dB gain, 0.8 dB noise figure, and +33 dBm output IP3.

FREQUENCY

50–4000 MHz

NOISE FIGURE

0.8 dB typ.

GAIN

36 dB typ.

SUPPLY

+5 VDC

HIGHLIGHTS

- Wideband operation: 50 MHz to 4 GHz
- Low noise figure: typ. 0.8 dB @ 900 MHz
- Gain: typ. 36 dB @ 900 MHz
- Output IP3: typ. +33 dBm
- +5 V supply operation
- SMA female RF connectors

APPLICATIONS

- Repeaters / DAS
- Mobile infrastructure
- LTE / WCDMA / CDMA / GSM
- General purpose wireless
- SDR & Ham Radio
- Test instrumentation



Image is for reference only. Final appearance depends on configuration and branding.

Handle RF connectors with care. Keep mating surfaces clean and protected

Electrical Summary

Typical values, unless otherwise noted

Parameter	Value	Unit	Notes
Frequency range	50–4000	MHz	Wideband coverage
Noise figure	0.8	dB	Typical @ 900 MHz
Small-signal gain	36	dB	Typical @ 900 MHz
Output P1dB	+22	dBm	Typical CW
Output IP3	+33	dBm	Typical @ 900 MHz
DC supply voltage	+5	VDC	Nominal supply

Absolute Maximum Ratings

Per source data

Parameter	Rating	Unit	Notes
Max device current	200	mA	Absolute maximum
Max device voltage	5.5	V	Absolute maximum
Max RF input power	25	dBm	Absolute maximum
Max dissipated power	660	mW	Absolute maximum
Operating temperature	−40 to +85	°C	Ambient
Storage temperature	−65 to +150	°C	Non-operating

Export Classification

EAR-99

Electrical Specifications

Test Conditions : +5V, I=95mA

Parameter	Condition	Min	Typ.	Max	Unit
Small signal power gain	0.9 GHz	33	36	40	dB
Small signal power gain	1.9 GHz	23	26	29	dB
Output power at 1 dB compression	0.9 GHz	17.4	22.6	—	dBm
Output power at 1 dB compression	1.9 GHz	—	22.7	—	dBm
Output third order intercept point	0.9 GHz	30.0	33.0	—	dBm
Output third order intercept point	1.9 GHz	—	35.0	—	dBm
Noise figure	0.9 GHz	—	0.8	1.0	dB
Noise figure	1.9 GHz	—	0.8	—	dB
Input return loss	0.9 GHz	13.0	16.0	—	dB
Input return loss	1.9 GHz	—	17.5	—	dB
Output return loss	0.9 GHz	14.5	17.5	—	dB
Output return loss	1.9 GHz	—	16.5	—	dB
Reverse isolation	0.9 GHz	—	23.5	—	dB
Reverse isolation	1.9 GHz	—	19.0	—	dB
Operating voltage	DC supply	3	5	5.25	V
Operating current (quiescent)	No RF	56	92	108	mA

Mechanical Specifications

Outline, connectors, materials, and reference drawing

Parameter	Value	Unit	Notes
RF input connector	SMA Female	—	50 Ω interface
RF output connector	SMA Female	—	50 Ω interface
DC connection	Solder pins	—	Two-pin DC connection shown on housing
Enclosure size	28.58 × 23.83 × 12.32	mm	Overall enclosure size
Housing material	Aluminum T-6061	—	Passivated
Finish	Clear chromate per MIL-C-5541 Type II, Class 3	—	Chem Conversion

Mechanical Drawing

Reference outline drawing

