

2 GHz to 24 GHz, Medium Power Broadband Amplifier with 28 dBm, 12 dB Gain and 2.92mm



**SPA-210-12-004-K**

**Features**

- 2.0 GHz to 24 GHz Frequency Range
- Gain 12 dB typ
- Gain Flatness +/-0.75 dB typ
- P1dB 26 dBm typ
- Psat 28 dBm typ
- OIP3 35 dBm typ
- -40 to +85 Deg C operating range

**Applications**

- Test & Measurement
- Communications Links
- Driver Amplifier

**Description**

SPA-210-12-004-K is a broadband low noise high power amplifier that operates in the 2.0 GHz to 24 GHz Frequency Band. The amplifier is unconditionally stable and operates from a +12 VDC power supply. The coaxial connectorized amplifier operates in the -40 Deg C to +85 Deg C temperature range.

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

Description	Min	Typ	Max	Unit
Frequency Range	2		24	GHz
Gain	10	12	14	dB
Gain Flatness		±0.75	±1.25	dB
Gain Variation over OTR*		±1		dB
P1dB	+25	+26		dBm
Saturation Output Power	+27	+28		dBm
IP3	+32	+35		dBm
Reverse Isolation	20	30		dB
Spurious		-60		dBc
Noise Figure		4		dB
Noise Figure at 2 to 5 GHz		6.5	8	dB
Noise Figure at 5 to 20 GHz		3	4	dB
Noise Figure at 20 to 24 GHz		4	5	dB
Input VSWR		1.7:1	2.2:1	
Output VSWR		1.7:1	2.2:1	
Operating DC Voltage	10	12	15	Vdc
Operating DC Current	200	260	320	mA
Operating Temperature Range (OTR)	-40		+85	°C

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### Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+18	Volts
RF input Power	+23	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	1.2 in [30.48 mm]
Width	1 in [25.4 mm]
Height	0.4 in [10.16 mm]
Weight	0.059 lbs [26.76 g]
Input Connector	2.92mm Female
Output Connector	2.92mm Female

### Environmental Specifications

#### Temperature

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

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

CE Certification

### Plotted and Other Data

Notes:

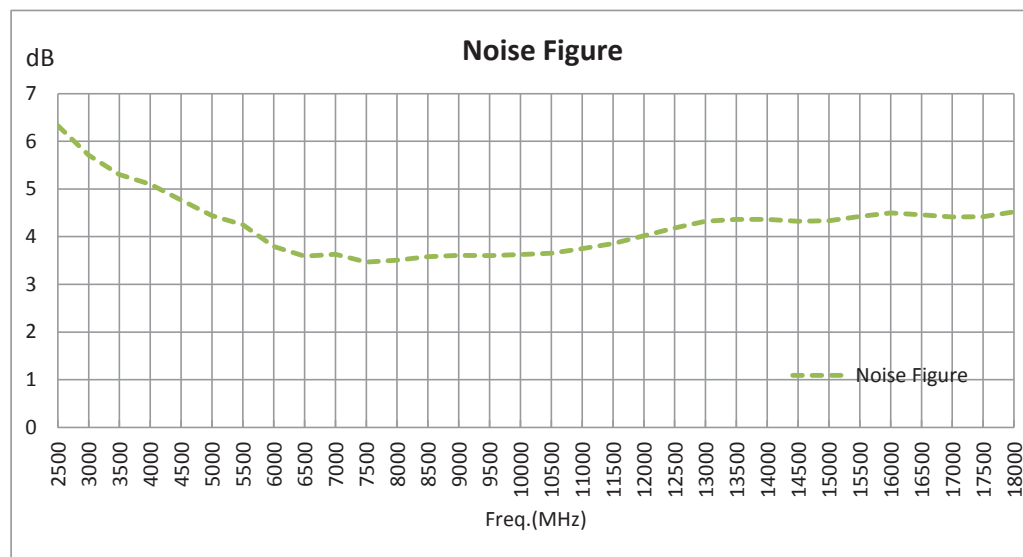
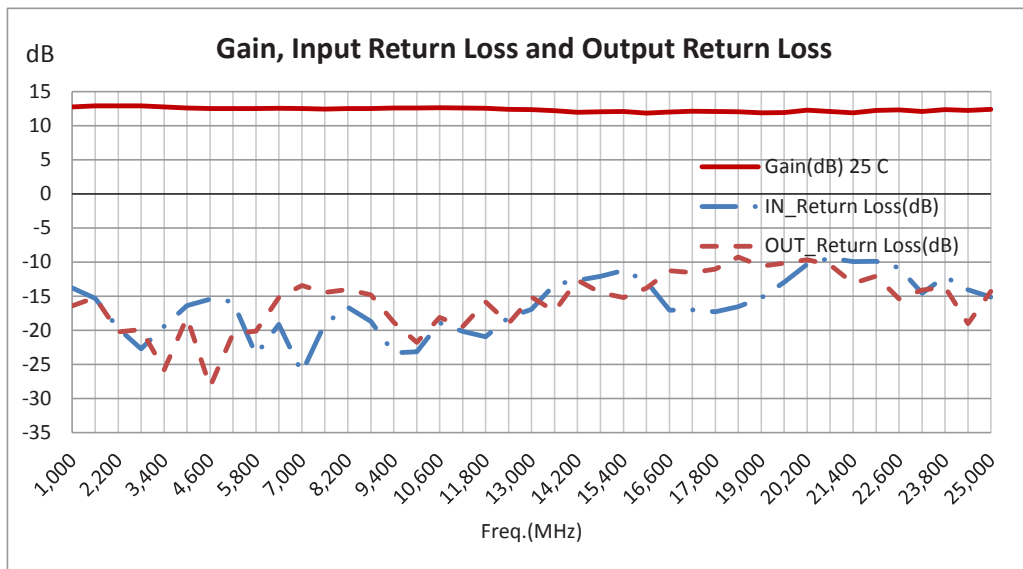
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**SPA-210-12-004-K**

**Functional Block Diagram**

Typical Performance Data Parameter, Typ Performance



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2 GHz to 24 GHz, Medium Power Broadband Amplifier with 28 dBm, 12 dB Gain and 2.92mm 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.

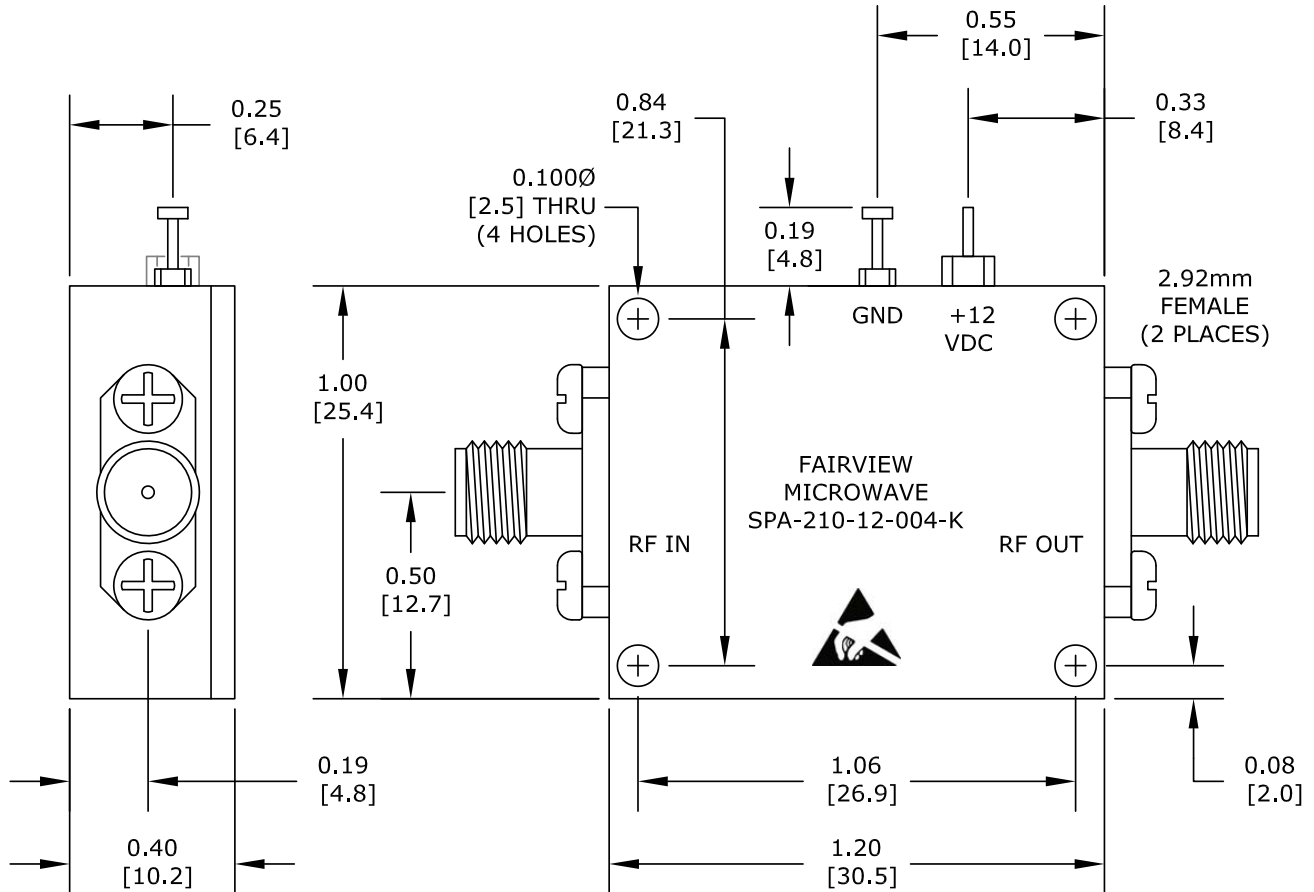
For additional information on this product, please click the following link: [2 GHz to 24 GHz, Medium Power Broadband Amplifier with 28 dBm, 12 dB Gain and 2.92mm SPA-210-12-004-K](https://www.fairviewmicrowave.com/2-24-ghz-broadband-amplifier-spa-210-12-004-k-p.aspx)

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# SPA-210-12-004-K CAD Drawing

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

<b>FAIRVIEW MICROWAVE INC.</b> 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		DWG NO SPA-210-12-004-K		CAGE CODE 3FKR5	
		CAD FILE 060815	SHEET	SCALE N/A	SIZE A 2233