

**Bi-Directional Amplifier, High Power 2/4 Watts
 Linear/CW, 30 MHz to 3 GHz, 1 us switching, 23 dB
 Gain, SMA**

The STA-030-23-05-SMA is a broadband bi-directional module that delivers high quality TX signals while amplifying the RX signal with an advanced LNA to produce the highest possible data rates. The amplifier operating in the 30 to 3000 MHz frequency range and offers 35 dBm typ Power. High efficiency devices and advanced switching technology meets the requirements of some of the most demanding RF radio systems. The module provides 23 dB typical small signal gain with the gain flatness of ± 1.0 dB typical. The connectorized SMA module is unconditionally stable, requires typically a +28V DC and operates over the temperature range of -20°C and +85°C.



Features:

- 30 MHz to 3000 MHz Frequency Range
- P1dB: 35 dBm typ
- Small Signal Gain: 23 dB min
- Gain Flatness: ± 1.0 typical
- 50 Ohms Input and Output Matched
- Unconditionally Stable

Electrical Specifications (TA = +25°C, DC Voltage = 28Volts DC Current = 600mA)

Transmit

Description	Min	Typ	Max	Unit
Frequency Range	0.03		3	GHz
Output at 1dB Compression Point	+33	+37		dBm
Output 3rd Intercept Point		+44		dBm
Power for 802.11b		4		Watts
Power for 802.11g		2		Watts
Gain	19	23		dB
Gain Flatness		± 1	± 2	dB
Spurious	-55	-60		dBc
Harmonics	-55	-60		dBc
Input Return Loss	-11	-16		dB
Operating DC Voltage	9	28	36	Volts
Switching Time		1	2	uSec

Receive

Description	Min	Typ	Max	Unit
1dB Compression Point	+20	+22		dBm
Gain		20		dB
Gain Flatness		± 1.5	± 2	dB
Input Return Loss	-7	-14		dB
Noise Figure		4		dB
Current Draw		200	250	mA

Mechanical Specifications

Size	
Length	3.25 in [82.55 mm]
Width	2 in [50.8 mm]
Height	1 in [25.4 mm]
Weight	0.375 lbs [170.1 g]

Environmental Specifications

Temperature	
Operating Range	-20 to +85 deg C
Storage Range	-55 to +100 deg C

Applications:

- L-band Military Radio
- Communication Systems
- High Gain Driver Power Amplifier
- High Gain Output Power Amplifier
- Unmanned Aerial Vehicles (UAV)
- Unmanned Ground Vehicles
- L and S Band Radar
- Commercial Air Traffic Control
- Weather and Earth Observation
- Satellites

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Altitude
Weatherproofing

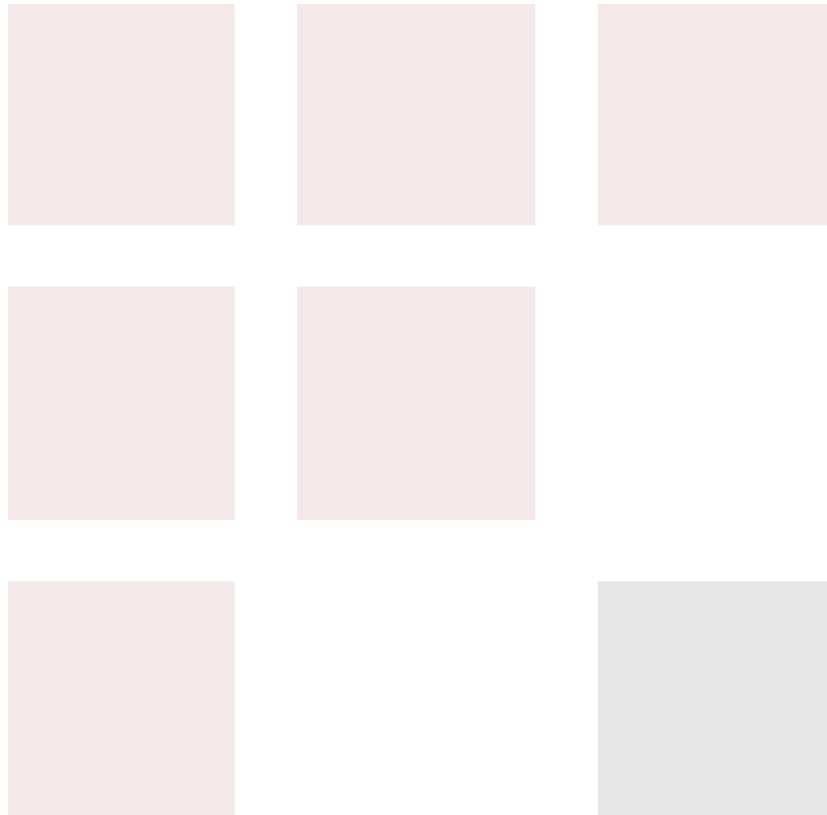
0-30,000
IP 64 Rating

Compliance Certifications (visit www.FairviewMicrowave.com for current document)
Not RoHS Compliant

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.
- Heat Sink Required for Proper Operation, Unit is cooled by conduction to heat sink.



Block Diagram

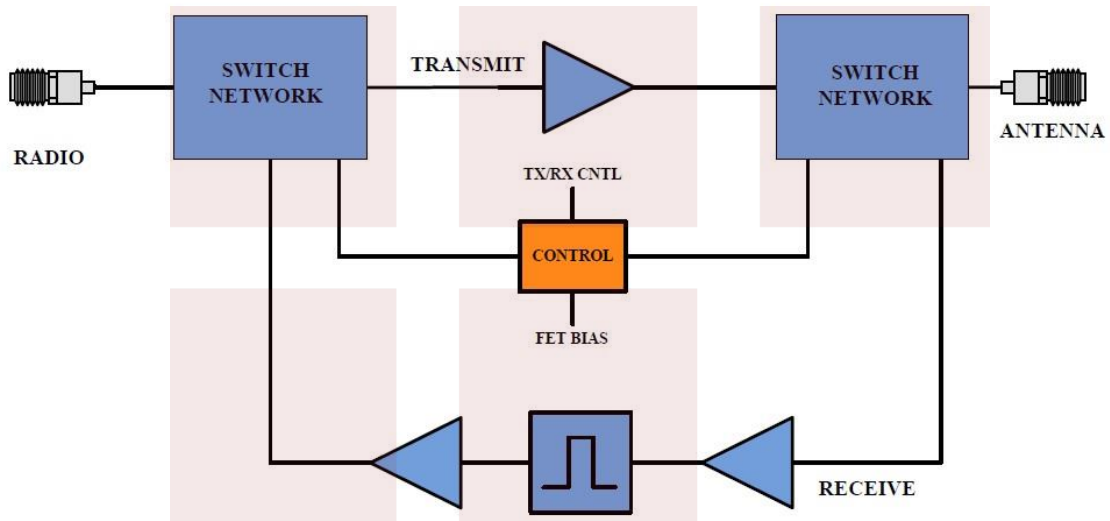
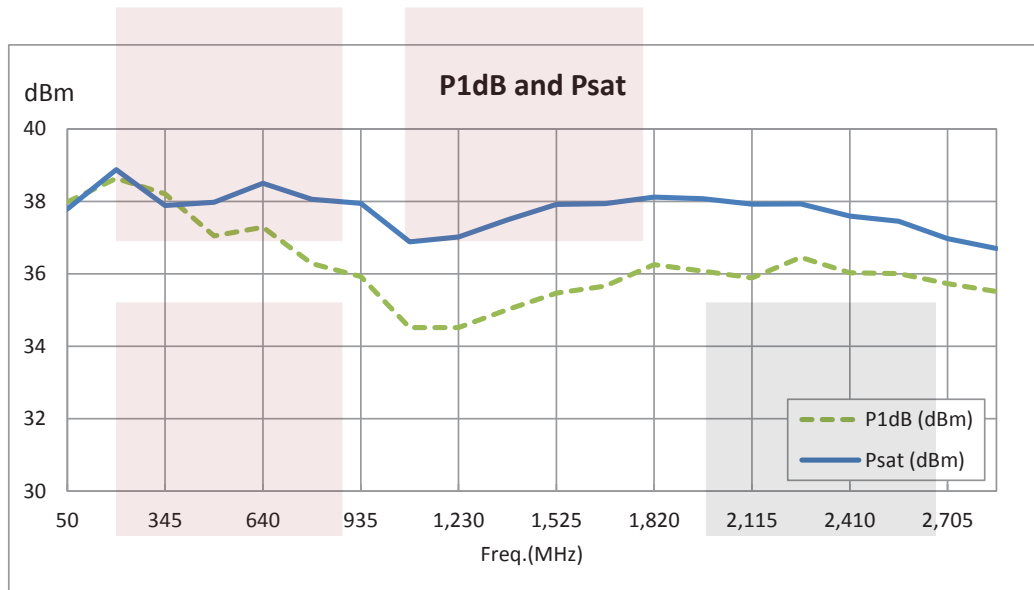
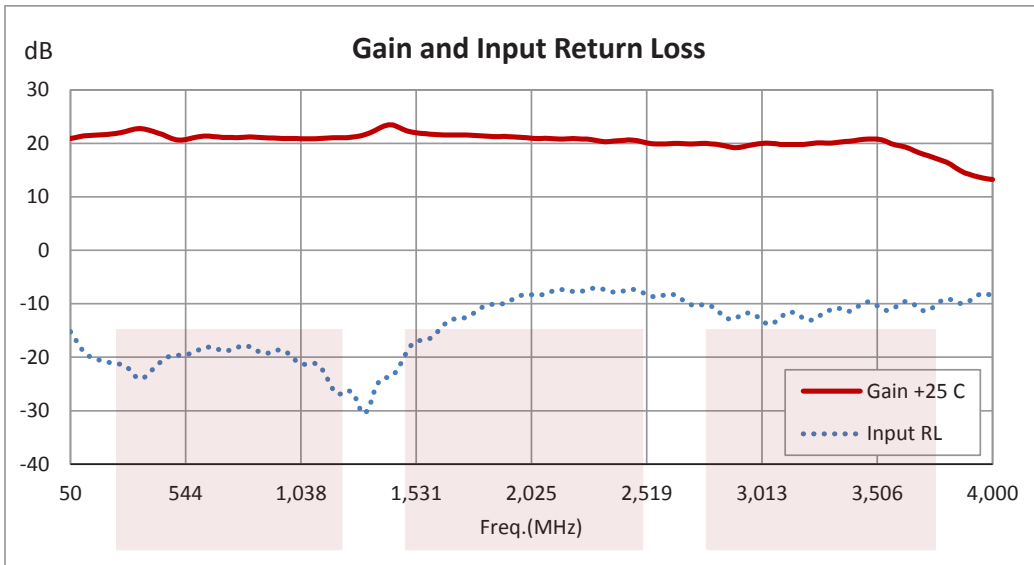
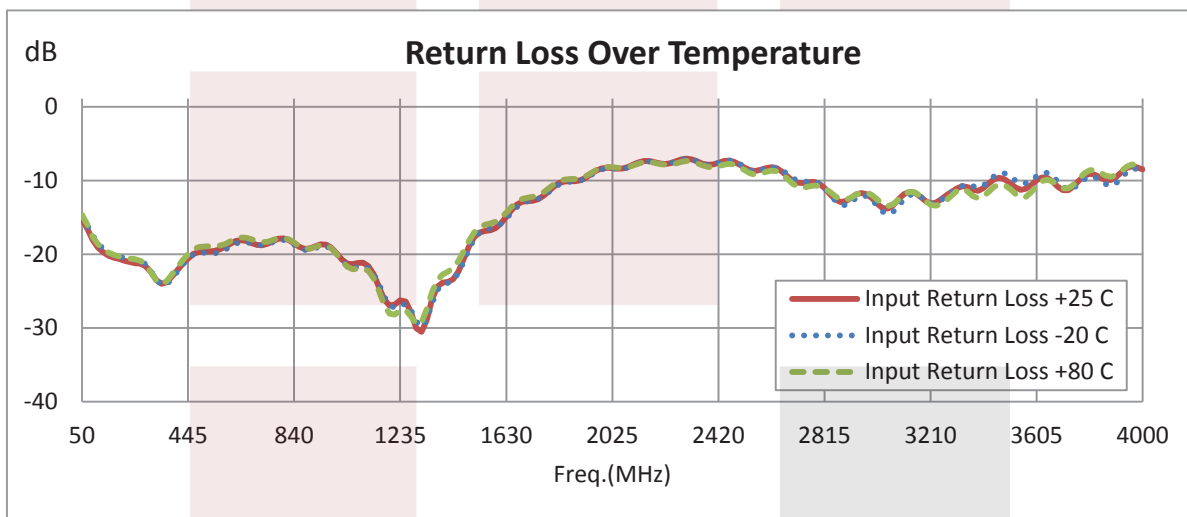
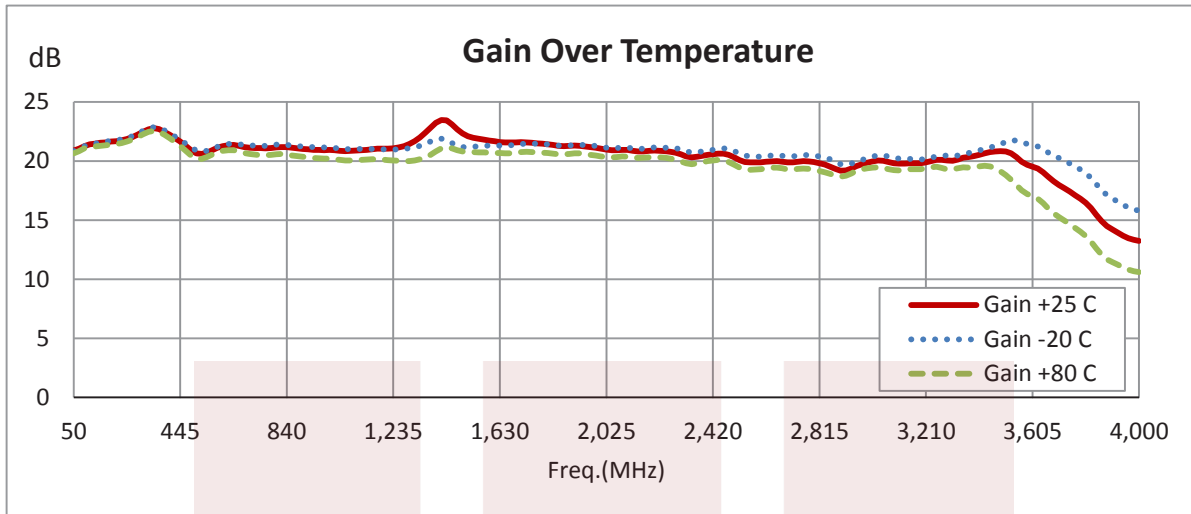


Fig 1. Block Diagram

Typical Performance Data



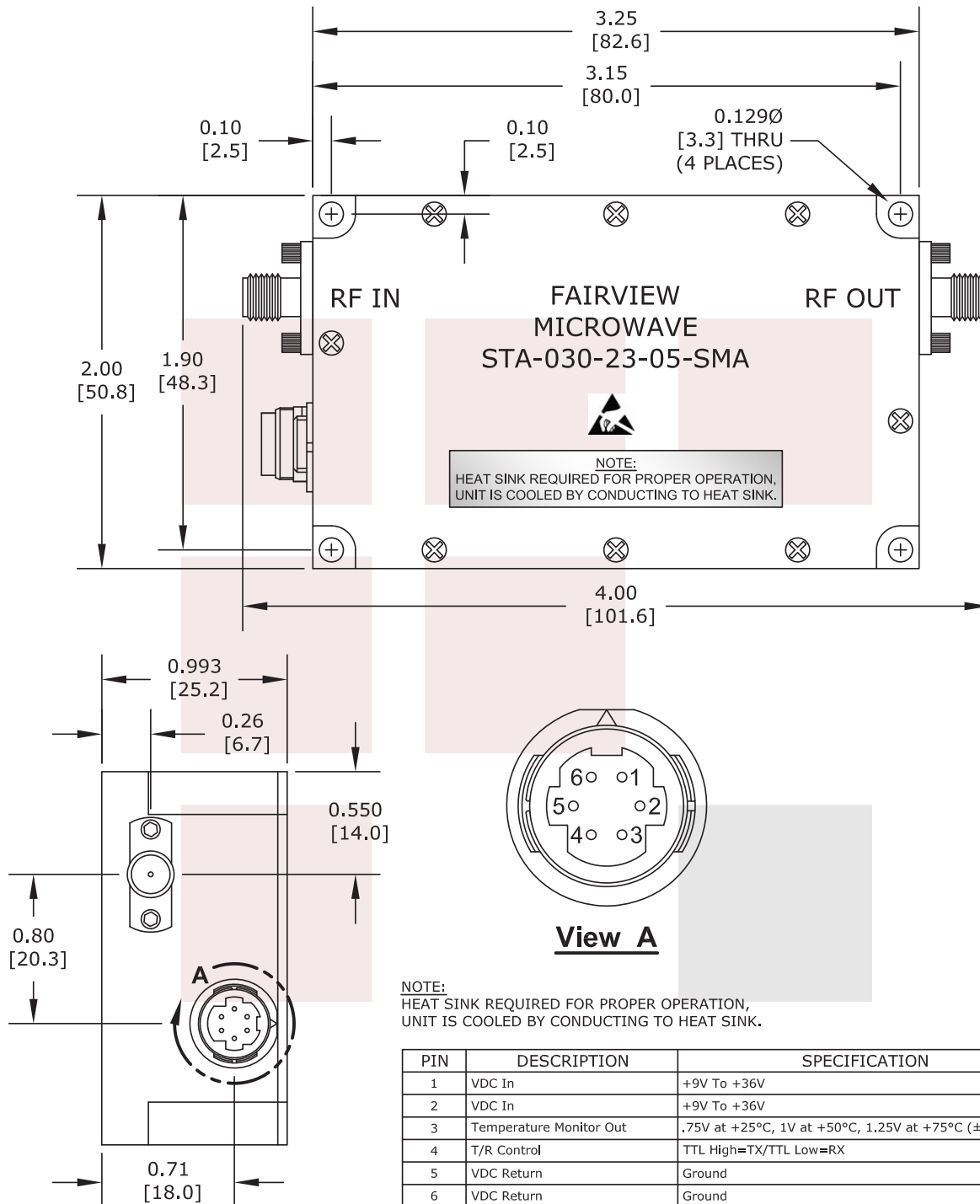


Bi-Directional Amplifier, High Power 2/4 Watts Linear/CW, 30 MHz to 3 GHz, 1 us switching, 23 dB Gain, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Bi-Directional Amplifier, High Power 2/4 Watts Linear/CW, 30 MHz to 3 GHz, 1 us switching, 23 dB Gain, SMA STA-030-23-05-SMA](http://www.fairviewmicrowave.com/bi-directional-amplifier-power-2-4-watts-linear-sta-030-23-05-sma)

URL: <http://www.fairviewmicrowave.com/bi-directional-amplifier-power-2-4-watts-linear-sta-030-23-05-sma-p.aspx>

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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
Bi-Directional Amplifier, High Power 2/4 Watts Linear/
CW, 30 MHz to 3 GHz, 1 us switching, 23 dB Gain,
SMA

DWG NO	STA-030-23-05-SMA	CAGE CODE	3FKR5		
CAD FILE	102014	SHEET	SCALE	N/A	SIZE A 2233