STA-025-20-20-SMA
DATA SHEET

Bi-Directional Amplifier, High Power 5/20 Watts Linear/CW, 2.4 GHz to 2.5 GHz, 1 us switching, 20 dB Gain, SMA

The STA-025-20-20-SMA is an S-Band 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 2.4 to 2.5 GHz frequency range and offers 5 Watts typ Power for 802.11g and 20 Watts typ Power for 802.11b. High efficiency devices and advanced switching technology meets the requirements of some of the most demanding RF radio systems. The module provides 20 dB typical small signal gain with the gain flatness of ±0.5 dB typical. The connectorized SMA module is unconditionally stable, requires typically a +28V DC and operates over the temperature range of -40°C and +80°C.

Features:

- 2.4 GHz to 2.5 GHz Frequency Range
- 20 Watts typ Power for 802.11b
- 5 Watts typ Power for 802.11g
- Small Signal Gain: 20 dB min
- Gain Flatness: ±0.5 typical
- 50 Ohms Input and Output Matched
- Unconditionally Stable

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

Electrical Specifications (TA = +25°C, DC Voltage = 28Volts DC Current = 2,400mA)

Transmit

Description	Min	Typ	Max	Unit
Frequency Range	2.4		2.5	GHz
Power for 802.11b		20		Watts
Power for 802.11g		5		Watts
Gain	19	20	21	dB
Gain Flatness		±0.5	±1.3	dB
Input Return Loss		-12		dB
Operating DC Voltage	24	28	30	Volts
Current Draw 802.11b		2,400		mA
Current Draw 802.11g		900		mA
Switching Time		1	2	uSec

Receive

Description	Min	Typ	Max	Unit
1 dB Compression Point		+0		dBm
Gain		11		dB
Gain Flatness		±0.5	±1.3	dB
Input Return Loss		-10		dB
Noise Figure		2.5		dB
Current Draw		50	70	mA

Mechanical Specifications

Size

Length	3.33 in [84.58 mm]
Width	2.69 in [68.33 mm]
Height	0.69 in [17.53 mm]
Weight	0.812 lbs [368.32 g]

Environmental Specifications

Temperature

Operating Range	-40 to +80 deg C
Storage Range	-65 to +150 deg C
Altitude	0-30,000
Weatherproofing	IP 64 Rating

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

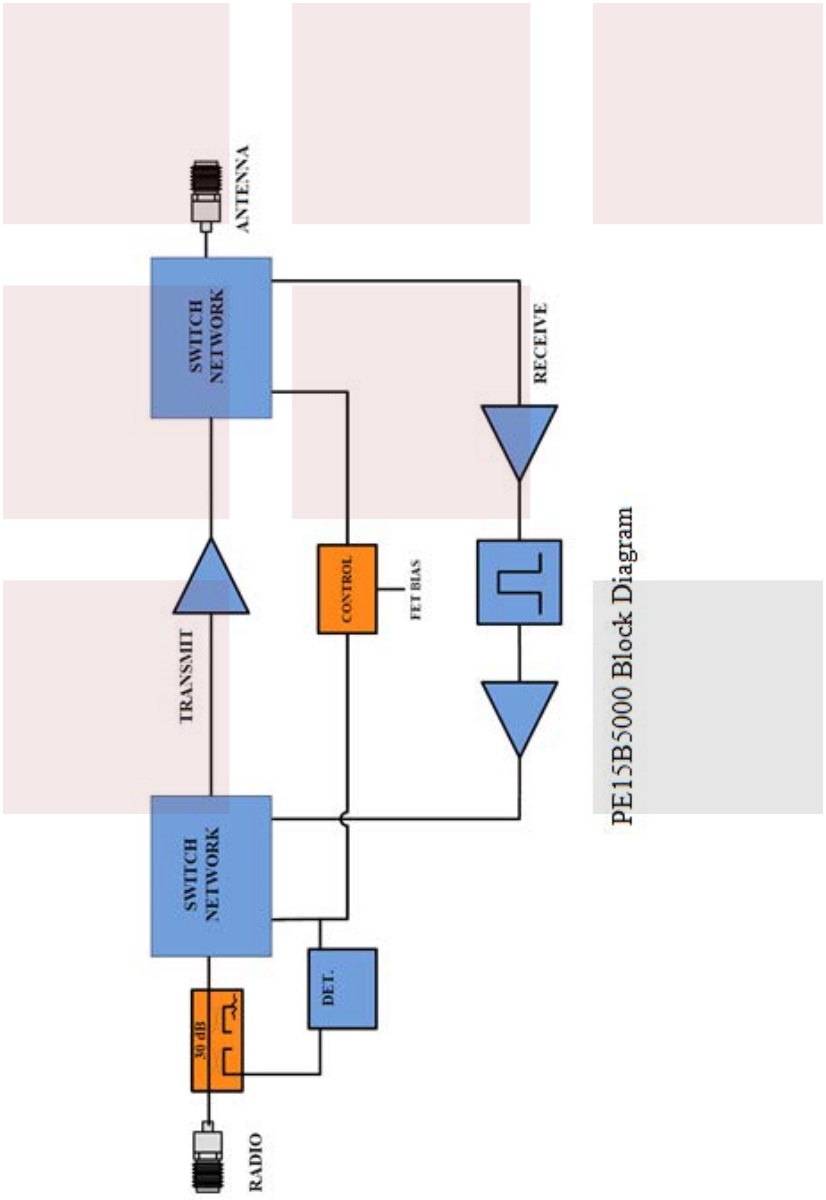
Not RoHS Compliant

Plotted and Other Data

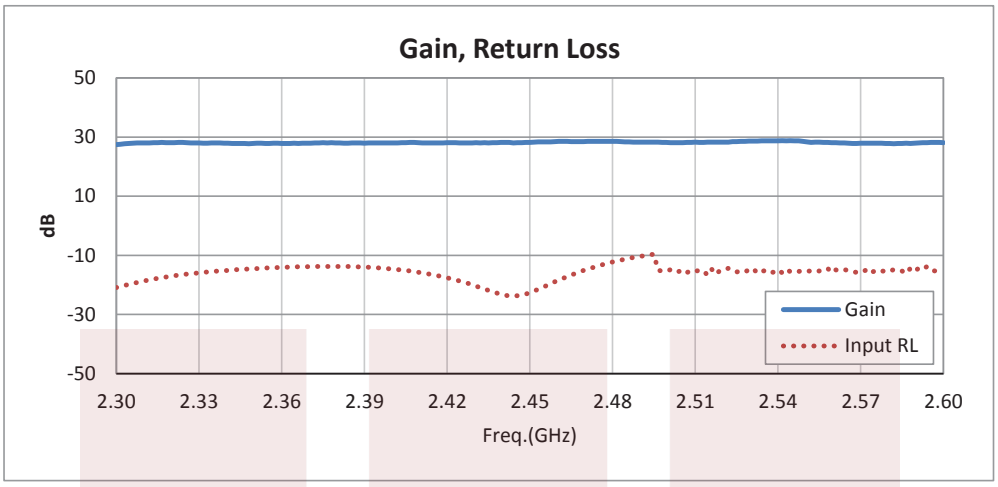
Notes:

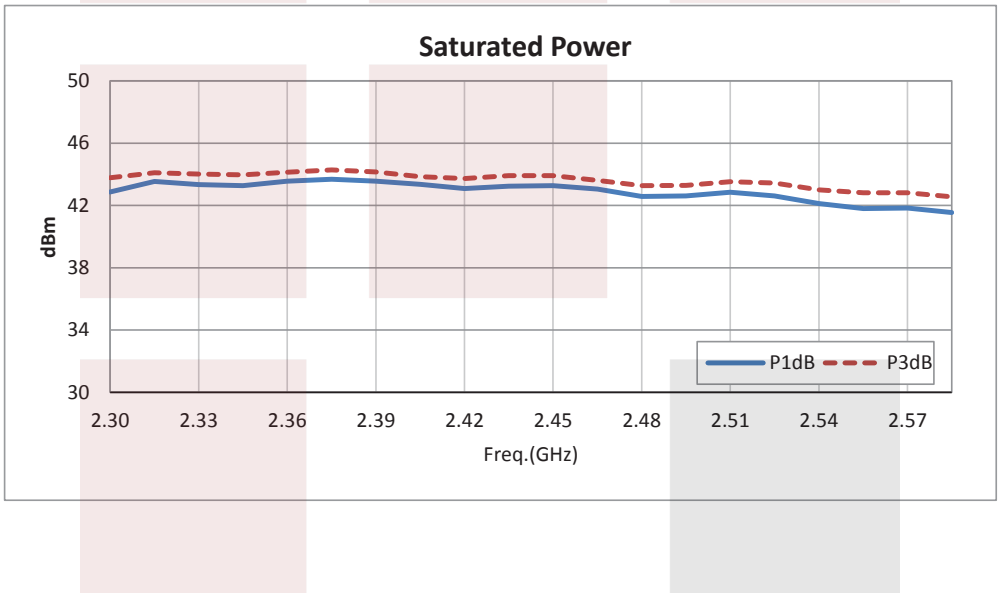
- Values at +25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.
- Heat Sink Required for Proper Operation, Unit is cooled by conduction to heat sink.

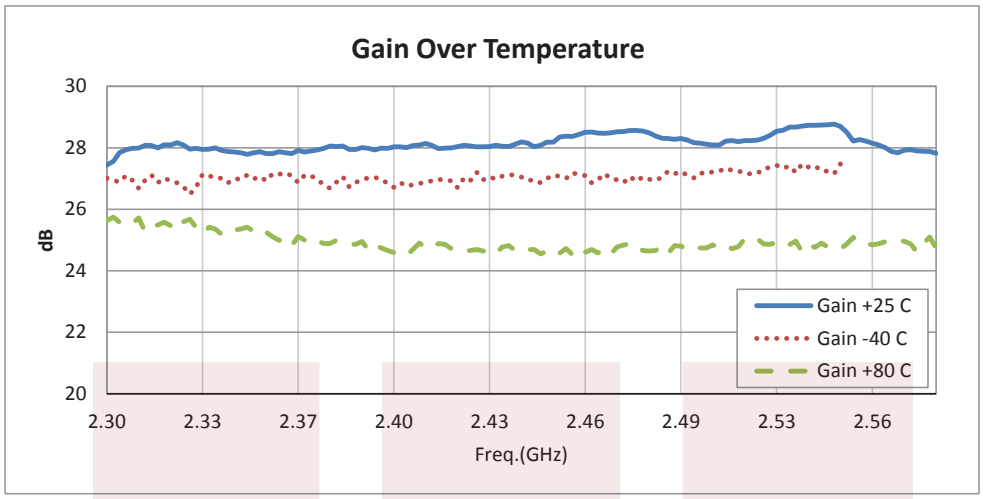
Block Diagram

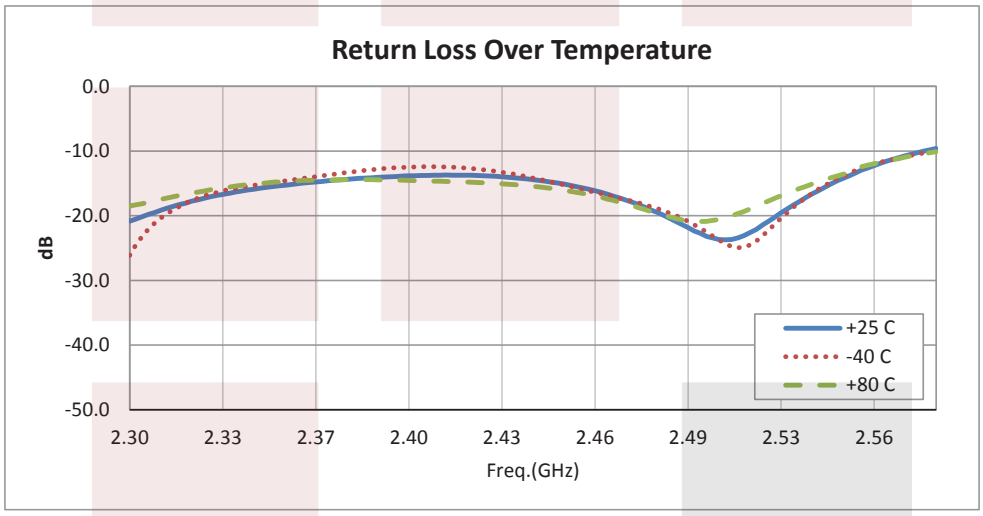


Typical Performance Data









Bi-Directional Amplifier, High Power 5/20 Watts Linear/CW, 2.4 GHz to 2.5 GHz, 1 us switching, 20 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 5/20 Watts Linear/CW, 2.4 GHz to 2.5 GHz, 1 us switching, 20 dB Gain, SMA STA-025-20-20-SMA

URL: http://www.fairviewmicrowave.com/bi-directional-amplifier-power-5-20-watts-linear-sta-025-20-20-sma-p.aspx

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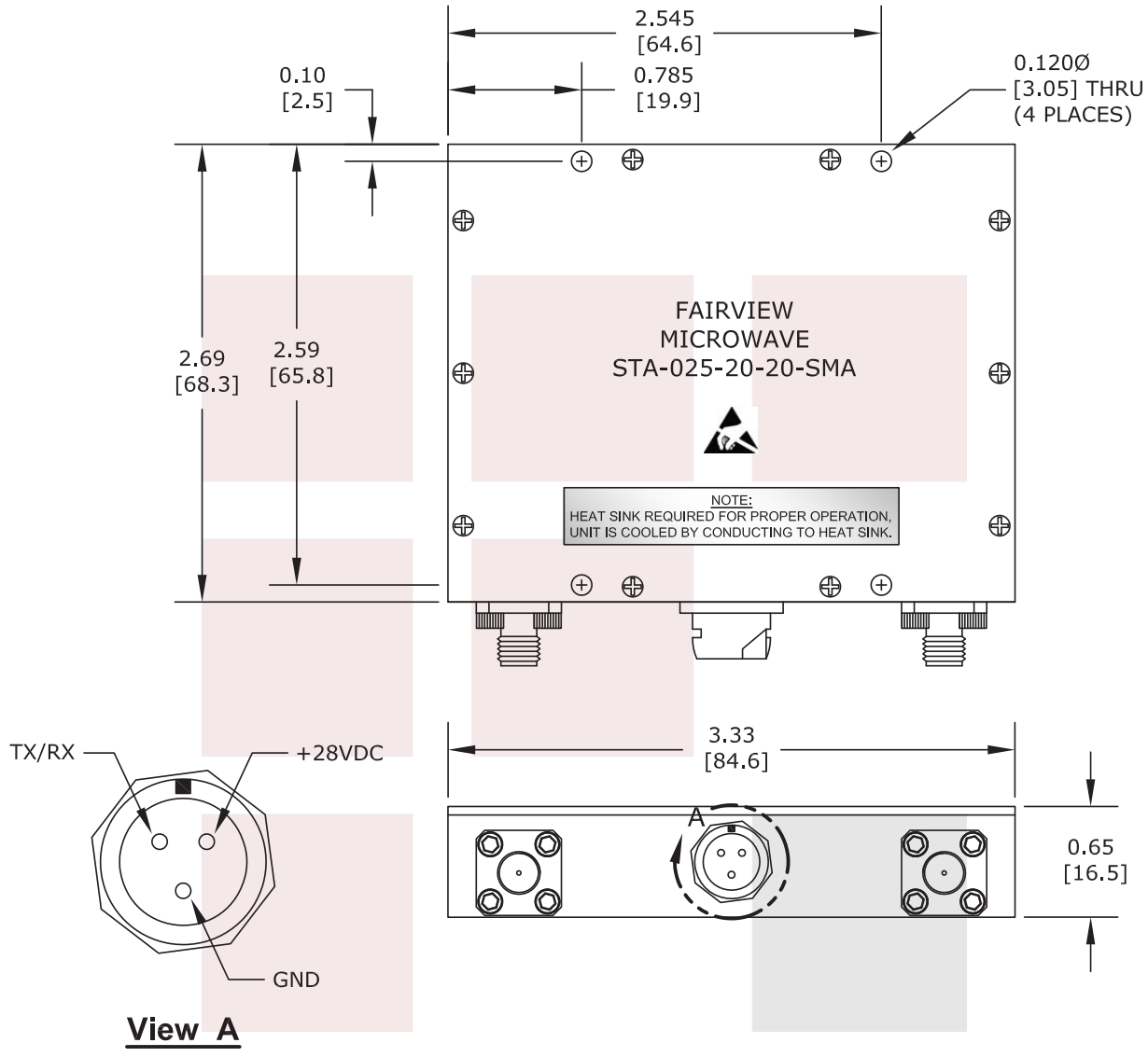

NOTE:
HEAT SINK REQUIRED FOR PROPER OPERATION, UNIT
IS COOLED BY CONDUCTING TO HEAT SINK.

PIN	DESCRIPTION	SPECIFICATION
+VDC	DC Supply	+28 VDC
TX/RX	Not Connected since AUTO SWITCHING is active	0 To +3 dBm
GND	---	---

FAIRVIEW MICROWAVE INC. 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].
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