

High Dynamic Range IF Amplifier



Features

- Ultra High Linearity
- 1.5 watt Typical @ P1dB
- Flat Gain Response
- Exceptional Unit-to-Unit Amplitude & Phase Repeatability
- Unconditionally Stable

Technical Specifications

Characteristic	TYPICAL Ta = +25 °C	MIN/MAX Ta = 0°C to +50 °C
Frequency	1 - 32 MHz	1 - 32 MHz
Gain (dB)	12	---
Power @ 1 dB Compression (dBm)	+33	+31 Min.
Output Third Order Intercept Point (dBm)	+48	---
Output Second Order Intercept Point (dBm)	+95	---
Reverse Isolation (dB)	23	---
VSWR	In	1.5:1
	Out	1.5:1
Noise Figure (dB)*	7.5	8.0 Max.
Power	Vdc	+24
	mA	625

*Noise Figure is measured and guaranteed only from 15 MHz to 32 MHz

Absolute Maximum (No Damage) Ratings

Operating Temperature	-20°C to +71°C
Storage Temperature	-55°C to +125°C
Case Temperature	+125 °C
DC Voltage	+25 Volts
Continuous RF Input Power	+20 dBm (1 minute max)
Short Term Input Power	0.5 Watt (3 µsec Max.)

Rev: October 9, 2023

ECNs:

Lowered IP3 to +48 dBm

Lowered IP2 to +95 dBm

Raised S11 S22 max to 2.0:1

Changed Reverse Isolation to 23 dB.

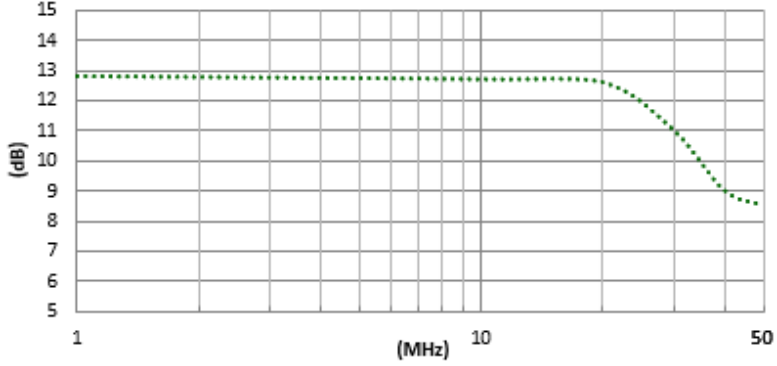
Increased supply current to 650 mA.

General Notes

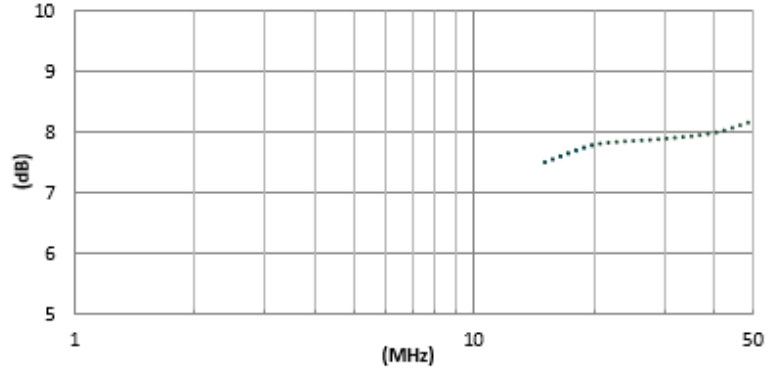
Cooling	Adequate heat sink required to ensure the mounting surface does not exceed the maximum operating temperature. Standard and custom options available upon request.
Typical Values	Data and graphs provided are an illustration of performance and not guaranteed.
Min./Max. Values	Specifications are guaranteed when tested in a 50 Ω (ohm) system with a DC supply voltage tolerance of ± 1%.
Revisions	Spectrum reserves the right to make revisions to both the product and/or the information contained within their datasheets without advanced notice.

Typical Performance Graphs

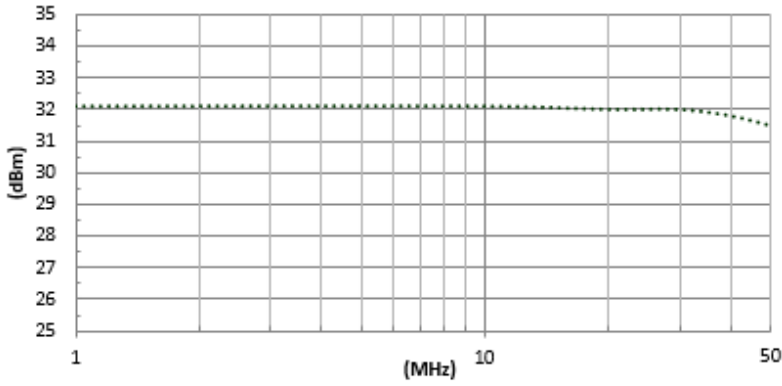
Gain



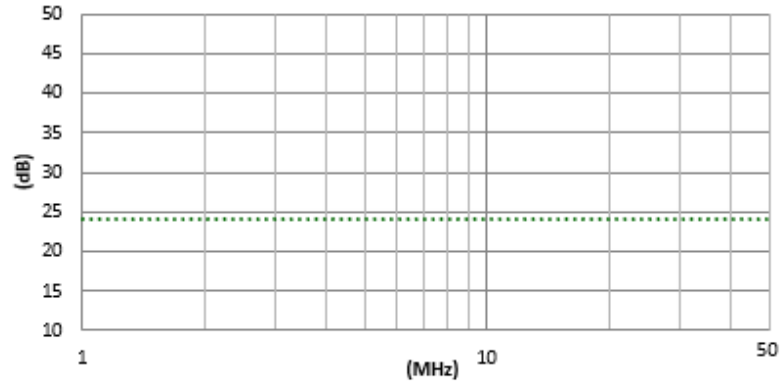
Noise Figure



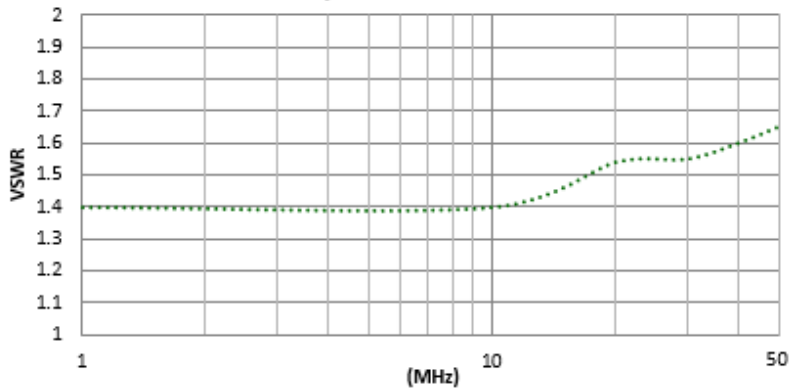
Output Power (1 dB Compression)



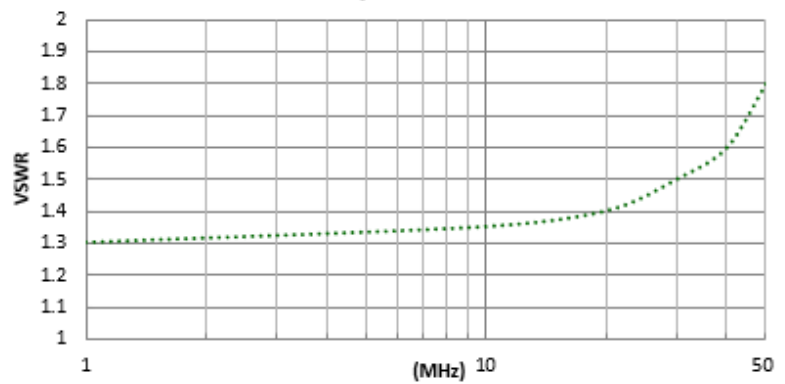
Reverse Isolation



Input VSWR



Output VSWR



Mechanical Specifications

Parameter	Specification	Comments
Package (non-hermetic)	API Dwg: 080-23142	3.900 (L) x 2.975 (W) x 0.746 (H) inches Nominal
Material	6061-T6 Al Alloy	Housing & Cover
Finish	Clear Iridite	MIL-DTL-5541F, Class 3
RF Input (J1) / Output (J2) Connectors	Captivated SMA Female	2-Hole Flange Mount
DC Power (+VDC)	Filtered Feed Thru	Solderable
Ground Terminal	Threaded Turret	Solderable

Outline Drawing
(For Reference Only)

