

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Visit our website - *Click HERE*

Model # QB-101

Preliminary

Available as:

QB-101LF (Lead-free Design)

High Dynamic Range IF Amplifier



Features

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

Technical Specifications

Parameter		Typical T_C = +25 ºC	Min / Max T_C = 0ºC to +50ºC
Frequency		2 – 70 MHz	2 - 70 MHz
Gain (dB)		21.9 (± 0.7)	---
Gain vs. Temperature (dB)		---	+0.2 / -0.5
Gain Flatness (dB)		0.5	0.8 Max.
P_{OUT} @ 1dB Compression (dBm)		+32	+31 Min.
3rd Order Output Intercept Point (dBm)		+53	---
2nd Order Output Intercept Point (dBm)		+105	---
Reverse Isolation (dB)		32	31
VSWR	In	1.5:1	1.5:1 Max.
	Out	1.5:1	1.5:1 Max.
Noise Figure (dB)		4.0	4.5 Max.
Power	Vdc	+24	+24
	mA	420	420 Max.

Absolute (No Damage) Max Ratings

Parameter	Specification
Operating Case Temperature (T_C)	-20ºC to +71ºC
Storage Case Temperature (T_C)	-55ºC to +125ºC
DC Voltage @ 25°C	+26 Volts
Continuous RF Input Power	+13 dBm
Short Term RF Input Power	200 Milliwatts (1 Minute Max.)
Max. Peak Input Power	0.5 Watt (3 µsec Max.)

Rev Date: 01/20/2022
ECN: IP3 Value reduced to +53 dBm Typ
IP2 value reduced to +105 dBm Typ

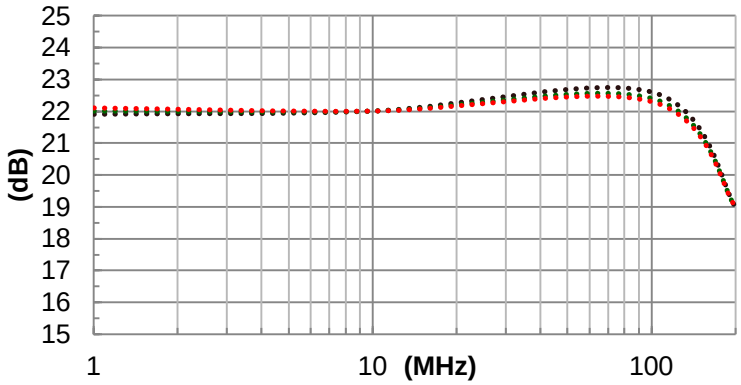
General Notes

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 ± 2%.
Revisions	API reserves the right to make revisions to both the product and/or the information contained within their datasheets without advanced notice.

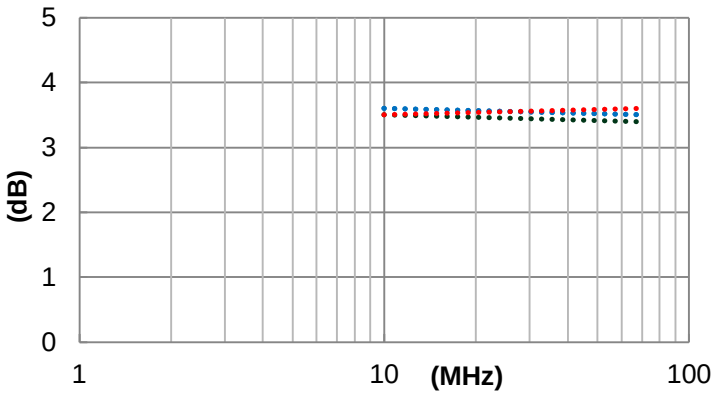
© API Technologies Corp. Proprietary Information | www.apitech.com | micro.apitech.com | +1.888.553.7531 | MicrowaveSales@apitech.com

Typical Performance Graphs

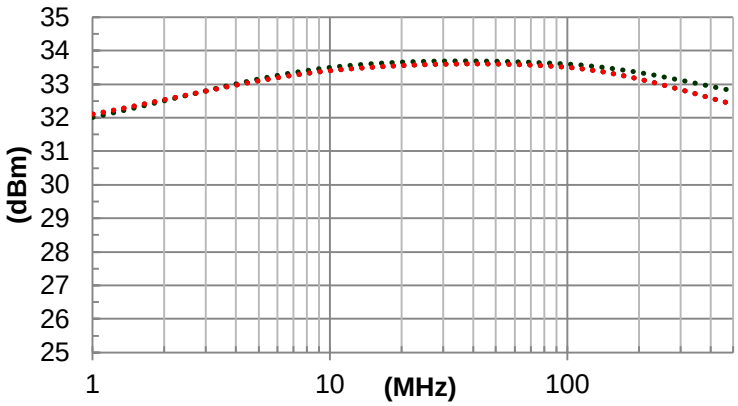
Gain



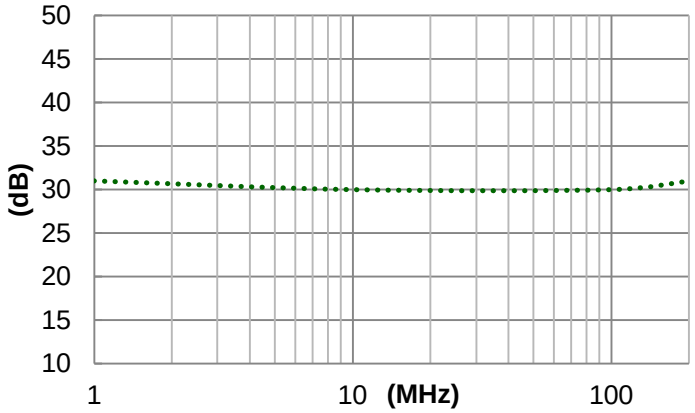
Noise Figure



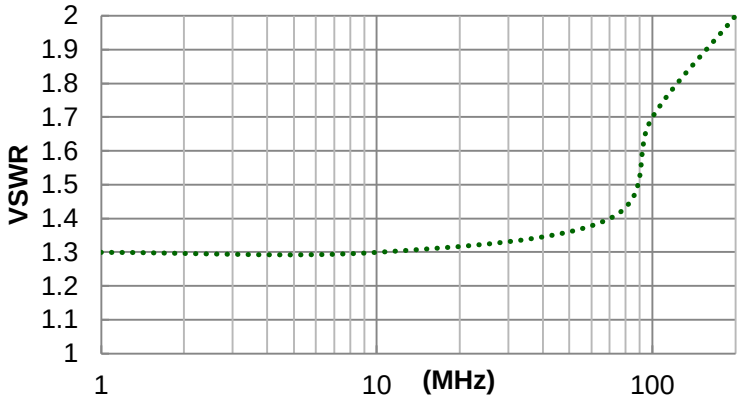
Output Power (1 dB Compression)



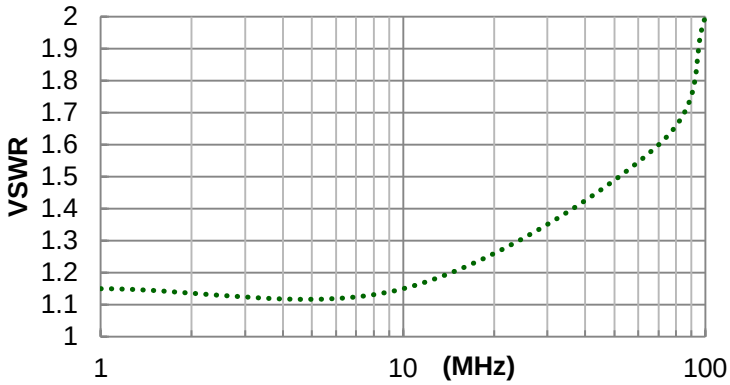
Reverse Isolation



Input VSWR



Output VSWR



0ºC +25ºC +50ºC

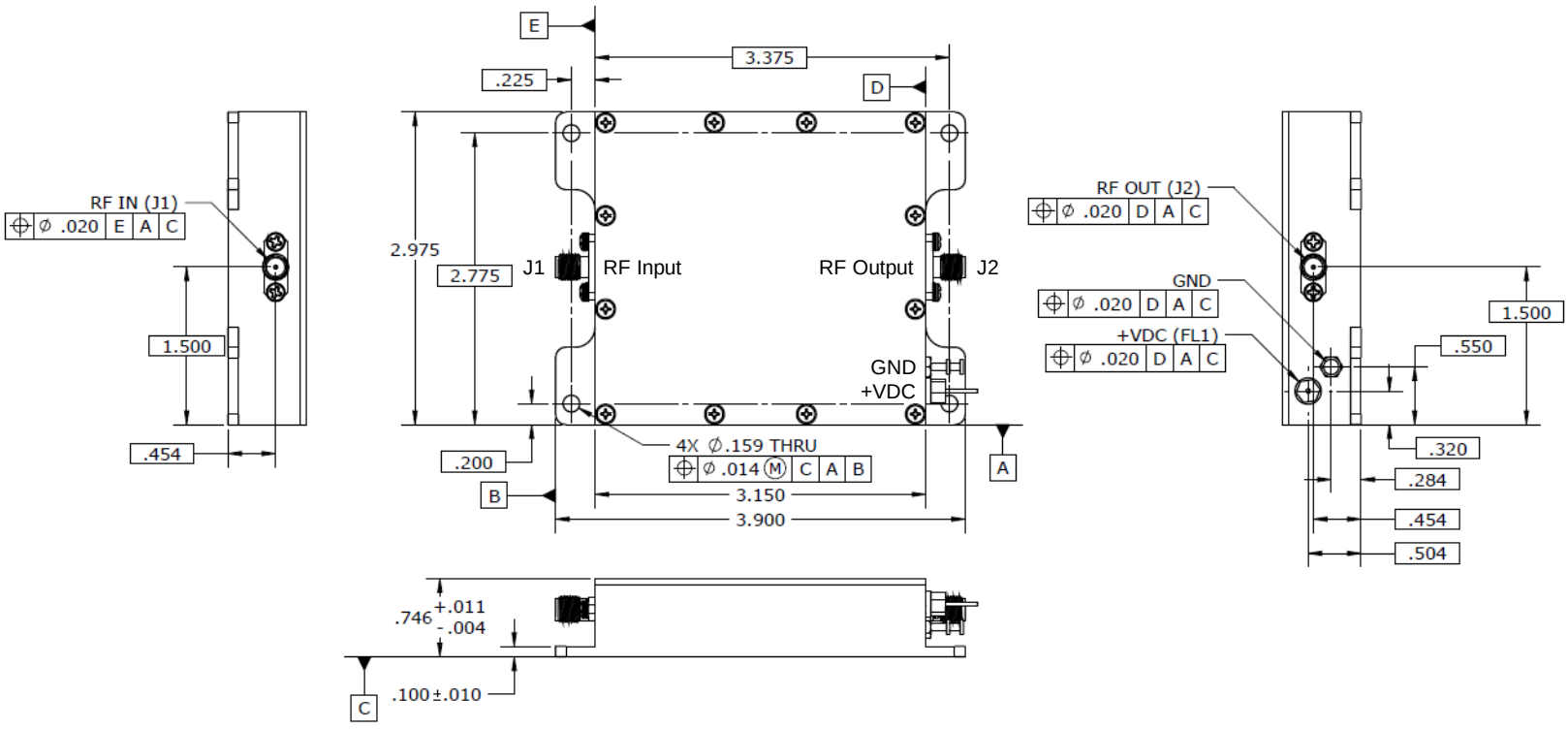
© API Technologies Corp. Proprietary Information | www.apitech.com | micro.apitech.com | +1.888.553.7531 | MicrowaveSales@apitech.com

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)



© API Technologies Corp. Proprietary Information | www.apitech.com | micro.apitech.com | +1.888.553.7531 | MicrowaveSales@apitech.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP